Security Status Report

Date: 14-Aug-2020 13:57

420H1401.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1402.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1403.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1404.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1405.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1406.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1407.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1408.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1409.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1410.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1411.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1412.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1413.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1414.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1415.D	Data Locked	christopher, 14-Aug-2020 13:52

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIJ0042
Instrument: FID4
Calibration: DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIJ0042-IBL1	420J0203.D	NA	10/02/20 09:21
Instrument Blank	SIJ0042-IBL2	420J0204.D	NA	10/02/20 09:42
DIESEL ICV	SIJ0042-ICV1	420J0205.D	NA	10/02/20 10:02
MOIL ICV	SIJ0042-ICV2	420J0206.D	NA	10/02/20 10:22
A/S CREOSOTE 100	SIJ0042-CAL1	420J0207.D	NA	10/02/20 10:43
A/S CREOSOTE 250	SIJ0042-CAL2	420J0208.D	NA	10/02/20 11:04
A/S CREOSOTE 500	SIJ0042-CAL3	420J0209.D	NA	10/02/20 11:24
A/S CREOSOTE 1000	SIJ0042-CAL4	420J0210.D	NA	10/02/20 11:45
A/S CREOSOTE 2500	SIJ0042-CAL5	420J0211.D	NA	10/02/20 12:05
A/S CREOSOTE 5000	SIJ0042-CAL6	420J0212.D	NA	10/02/20 12:26
A/S CREOSOTE ICV	SIJ0042-ICV3	420J0213.D	NA	10/02/20 12:46
ZZZZZ	BII0597-BLK1	420J0214.D	Water	10/02/20 13:07
ZZZZZ	BII0597-BS1	420J0215.D	Water	10/02/20 13:27
ZZZZZ	BII0597-BSD1	420J0216.D	Water	10/02/20 13:48
ZZZZZ	20I0229-02	420J0217.D	Water	10/02/20 14:08
ZZZZZ	20I0229-03	420J0218.D	Water	10/02/20 14:29
ZZZZZ	20I0229-04	420J0219.D	Water	10/02/20 14:50
ZZZZZ	20I0229-05	420J0220.D	Water	10/02/20 15:10
ZZZZZ	20I0229-06	420J0221.D	Water	10/02/20 15:31
ZZZZZ	20I0229-07	420J0222.D	Water	10/02/20 15:51
ZZZZZ	20I0229-08	420J0223.D	Water	10/02/20 16:12
ZZZZZ	20I0229-09	420J0224.D	Water	10/02/20 16:32
ZZZZZ	20I0229-10	420J0225.D	Water	10/02/20 16:52
ZZZZZ	20I0229-11	420J0226.D	Water	10/02/20 17:13
DIESEL CCV	SIJ0042-CCV1	420J0227.D	NA	10/02/20 17:33
MOIL CCV	SIJ0042-CCV2	420J0228.D	NA	10/02/20 17:54
A/S CREOSOTE CCV	SIJ0042-CCV3	420J0229.D	NA	10/02/20 18:14
ZZZZZ	20I0229-12	420J0230.D	Water	10/02/20 18:35
ZZZZZ	20I0229-13	420J0231.D	Water	10/02/20 18:55
ZZZZZ	20I0229-14	420J0232.D	Water	10/02/20 19:16

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIJ0042	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20I0229-15	420J0233.D	Water	10/02/20 19:36
ZZZZZ	20I0229-16	420J0234.D	Water	10/02/20 19:57
ZZZZZ	20I0307-01	420J0235.D	Water	10/02/20 20:17
ZZZZZ	20I0307-02	420J0236.D	Water	10/02/20 20:37
ZZZZZ	20I0307-03	420J0237.D	Water	10/02/20 20:58
ZZZZZ	20I0307-04	420J0238.D	Water	10/02/20 21:18
DIESEL CCV	SIJ0042-CCV4	420J0239.D	NA	10/02/20 21:39
MOIL CCV	SIJ0042-CCV5	420J0240.D	NA	10/02/20 21:59
A/S CREOSOTE CCV	SIJ0042-CCV6	420J0241.D	NA	10/02/20 22:20
ZZZZZ	20I0350-01	420J0242.D	Water	10/02/20 22:40
ZZZZZ	20I0350-02	420J0243.D	Water	10/02/20 23:00
ZZZZZ	20I0350-03	420J0244.D	Water	10/02/20 23:21
ZZZZZ	20I0350-04	420J0245.D	Water	10/02/20 23:41
ZZZZZ	20I0350-05	420J0246.D	Water	10/03/20 00:02
ZZZZZ	20I0350-06	420J0247.D	Water	10/03/20 00:22
ZZZZZ	20I0350-07	420J0248.D	Water	10/03/20 00:42
ZZZZZ	20I0217-01	420J0249.D	Water	10/03/20 01:03
ZZZZZ	20I0217-02	420J0250.D	Water	10/03/20 01:23
DIESEL CCV	SIJ0042-CCV7	420J0252.D	NA	10/03/20 02:04
MOIL CCV	SIJ0042-CCV8	420J0253.D	NA	10/03/20 02:24

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIJ0042

Instrument: FID4
Calibration ID: DA00022

Printed: 10/11/2020 10:46:24AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIJ0042-IBL1	QC		1		I006239			
SIJ0042-IBL2	QC		2		I006241			
SIJ0042-ICV1	QC		3		I008275			
SIJ0042-ICV2	QC		4		I008935			
SIJ0042-CAL1	QC		5		I009068			
SIJ0042-CAL2	QC		6		I009067			
SIJ0042-CAL3	QC		7		I009066			
SIJ0042-CAL4	QC		8		I009064			
SIJ0042-CAL5	QC		9		I009065			
SIJ0042-CAL6	QC		10		I009005			
SIJ0042-ICV3	QC		11		I009064			
BII0597-BLK1	QC		12					
BII0597-BS1	QC		13					
BII0597-BSD1	QC		14					
20I0229-02	PH NW (Extractables) low lev	C 01	15				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-03	PH NW (Extractables) low lev	C 01	16				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-04	PH NW (Extractables) low lev	C 01	17				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-05	PH NW (Extractables) low lev	C 01	18				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-06	PH NW (Extractables) low lev	C 01	19				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-07	PH NW (Extractables) low lev	C 01	20				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-08	PH NW (Extractables) low lev	C 01	21				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san

Samples Loaded By Date Data Processed By Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIJ0042

Instrument: FID4
Calibration ID: DA00022

Printed: 10/11/2020 10:46:24AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
20I0229-09	PH NW (Extractables) low lev	C 01	22				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-10	PH NW (Extractables) low lev	C 01	23				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-11	PH NW (Extractables) low lev	C 01	24				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
SIJ0042-CCV1	QC		25		I008275			
SIJ0042-CCV2	QC		26		I008935			
SIJ0042-CCV3	QC		27		I009064			
20I0229-12	PH NW (Extractables) low lev	C 01	28				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-13	PH NW (Extractables) low lev	C 01	29				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-14	PH NW (Extractables) low lev	C 01	30				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-15	PH NW (Extractables) low lev	C 01	31				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-16	PH NW (Extractables) low lev	C 01	32				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0307-01	PH NW (Extractables) low lev	O 01	33				Joint Base Lewis McChord- Fort Lewis WA	Clin 1004
20I0307-02	PH NW (Extractables) low lev	O 01	34				Joint Base Lewis McChord- Fort Lewis WA	Clin 1004
20I0307-03	PH NW (Extractables) low lev	O 01	35				Joint Base Lewis McChord- Fort Lewis WA	Clin 1004
20I0307-04	PH NW (Extractables) low lev	O 01	36				Joint Base Lewis McChord- Fort Lewis WA	Clin 1004
SIJ0042-CCV4	QC		37		I008275			
SIJ0042-CCV5	QC		38		I008935			
SIJ0042-CCV6	QC		39		I009064			
20I0350-01	PH NW (Extractables) low lev	A 01	40				Geosyntec Consultants	
20I0350-02	PH NW (Extractables) low lev	A 01	41				Geosyntec Consultants	
20I0350-03	PH NW (Extractables) low lev	A 01	42				Geosyntec Consultants	

Samples Loaded By Date Data Processed By Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIJ0042

Instrument: FID4
Calibration ID: DA00022

Printed: 10/11/2020 10:46:24AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
20I0350-04	ʾH NW (Extractables) low lev	A 01	43				Geosyntec Consultants	
20I0350-05	ʾH NW (Extractables) low lev	A 01	44				Geosyntec Consultants	
20I0350-06	ʾH NW (Extractables) low lev	A 01	45				Geosyntec Consultants	
20I0350-07	ʾH NW (Extractables) low lev	A 01	46				Geosyntec Consultants	
20I0217-01	ʾH NW (Extractables) low lev	K 01	47				Joint Base Lewis McChord- Fort Lewis WA	Clin 1004
20I0217-02	ʾH NW (Extractables) low lev	K 01	48				Joint Base Lewis McChord- Fort Lewis WA	Clin 1004
SIJ0042-CCV7	QC		49		I008275			
SIJ0042-CCV8	QC		50		I008935			

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - fid4a.i\20201002.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	02-OCT-2020 08:41	420J0201.D	1	RINSE	
2	02-OCT-2020 09:01	420J0202.D	1	RINSE	
3	02-OCT-2020 09:21	420J0203.D	1	SEQ-IBL1	
4	02-OCT-2020 09:42	420J0204.D	1	SEQ-IBL2	
5	02-OCT-2020 10:02	420J0205.D	1	SEQ-ICV1	
6	02-OCT-2020 10:22	420J0206.D	1	SEQ-ICV2	
7	02-OCT-2020 10:43	420J0207.D	1	SEQ-CAL1	
8	02-OCT-2020 11:04	420J0208.D	1	SEQ-CAL2	
9	02-OCT-2020 11:24	420J0209.D	1	SEQ-CAL3	
10	02-OCT-2020 11:45	420J0210.D	1	SEQ-CAL4	
11	02-OCT-2020 12:05	420J0211.D	1	SEQ-CAL5	
12	02-OCT-2020 12:26	420J0212.D	1	SEQ-CAL6	
13	02-OCT-2020 12:46	420J0213.D	1	SEQ-ICV3	
14	02-OCT-2020 13:07	420J0214.D	1	BII0597-BLK1	
15	02-OCT-2020 13:27	420J0215.D	1	BII0597-BS1	
16	02-OCT-2020 13:48	420J0216.D	1	BII0597-BSD1	
17	02-OCT-2020 14:08	420J0217.D	1	20I0229-02	
18	02-OCT-2020 14:29	420J0218.D	1	20I0229-03	
19	02-OCT-2020 14:50	420J0219.D	1	20I0229-04	
20	02-OCT-2020 15:10	420J0220.D	1	20I0229-05	
21	02-OCT-2020 15:31	420J0221.D	1	20I0229-06	
22	02-OCT-2020 15:51	420J0222.D	1	20I0229-07	
23	02-OCT-2020 16:12	420J0223.D	1	20I0229-08	
24	02-OCT-2020 16:32	420J0224.D	1	20I0229-09	
25	02-OCT-2020 16:52	420J0225.D	1	20I0229-10	
26	02-OCT-2020 17:13	420J0226.D	1	20I0229-11	
27	02-OCT-2020 17:33	420J0227.D	1	SEQ-CCV1	
28	02-OCT-2020 17:54	420J0228.D	1	SEQ-CCV2	
29	02-OCT-2020 18:14	420J0229.D	1	SEQ-CCV3	
30	02-OCT-2020 18:35	420J0230.D	1	20I0229-12	
31	02-OCT-2020 18:55	420J0231.D	1	20I0229-13	
32	02-OCT-2020 19:16	420J0232.D	1	20I0229-14	
33	02-OCT-2020 19:36	420J0233.D	1	20I0229-15	
34	02-OCT-2020 19:57	420J0234.D	1	20I0229-16	
35	02-OCT-2020 20:17	420J0235.D	1	20I0307-01	
36	02-OCT-2020 20:37	420J0236.D	1	20I0307-02	
37	02-OCT-2020 20:58	420J0237.D	1	20I0307-03	
38	02-OCT-2020 21:18	420J0238.D	1	20I0307-04	
39	02-OCT-2020 21:39	420J0239.D	1	SEQ-CCV4	
40	02-OCT-2020 21:59	420J0240.D	1	SEQ-CCV5	
41	02-OCT-2020 22:20	420J0241.D	1	SEQ-CCV6	
42	02-OCT-2020 22:40	420J0242.D	1	20I0350-01	
43	02-OCT-2020 23:00	420J0243.D	1	20I0350-02	
44	02-OCT-2020 23:21	420J0244.D	1	20I0350-03	
45	02-OCT-2020 23:41	420J0245.D	1	20I0350-04	
46	03-OCT-2020 00:02	420J0246.D	1	20I0350-05	
47	03-OCT-2020 00:22	420J0247.D	1	20I0350-06	
48	03-OCT-2020 00:42	420J0248.D	1	20I0350-07	
49	03-OCT-2020 01:03	420J0249.D	1	20I0217-01	
50	03-OCT-2020 01:23	420J0250.D	200	20I0217-02	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201002.b

	Inject Date/Time	Filename	DF	LabID	ClientID
51	03-OCT-2020 01:44	420J0251.D	50	20I0217-02	
52	03-OCT-2020 02:04	420J0252.D	1	SEQ-CCV7	
53	03-OCT-2020 02:24	420J0253.D	1	SEQ-CCV8	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201002.b

ARI Job No.: RINS   Method: FID4TPH.m   Instrument: fid4a.i   Date: 02-OCT-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0841	420J0201.D	RINSE		1	NO MANUAL INTEGRATION
0901	420J0202.D	RINSE		1	NO MANUAL INTEGRATION
0921	420J0203.D	SEQ-IBL1		1	C40, Triacon Surr,
0942	420J0204.D	SEQ-IBL2		1	Triacon Surr,
1002	420J0205.D	SEQ-ICV1		1	o-terph,
1022	420J0206.D	SEQ-ICV2		1	Triacon Surr,
1043	420J0207.D	SEQ-CAL1		1	o-terph,
1104	420J0208.D	SEQ-CAL2		1	o-terph,
1124	420J0209.D	SEQ-CAL3		1	o-terph,
1145	420J0210.D	SEQ-CAL4		1	o-terph,
1205	420J0211.D	SEQ-CAL5		1	o-terph,
1226	420J0212.D	SEQ-CAL6		1	o-terph,
1246	420J0213.D	SEQ-ICV3		1	o-terph,
1307	420J0214.D	BII0597-BLK1		1	Triacon Surr,
1327	420J0215.D	BII0597-BS1		1	o-terph,
1348	420J0216.D	BII0597-BSD1		1	o-terph,
1408	420J0217.D	20I0229-02		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201002.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1429	420J0218.D	20I0229-03		1	NO MANUAL INTEGRATION
1450	420J0219.D	20I0229-04		1	NO MANUAL INTEGRATION
1510	420J0220.D	20I0229-05		1	NO MANUAL INTEGRATION
1531	420J0221.D	20I0229-06		1	NO MANUAL INTEGRATION
1551	420J0222.D	20I0229-07		1	Triacon Surr,
1612	420J0223.D	20I0229-08		1	NO MANUAL INTEGRATION
1632	420J0224.D	20I0229-09		1	NO MANUAL INTEGRATION
1652	420J0225.D	20I0229-10		1	NO MANUAL INTEGRATION
1713	420J0226.D	20I0229-11		1	NO MANUAL INTEGRATION
1733	420J0227.D	SEQ-CCV1		1	o-terph,
1754	420J0228.D	SEQ-CCV2		1	Triacon Surr,
1814	420J0229.D	SEQ-CCV3		1	o-terph,
1835	420J0230.D	20I0229-12		1	NO MANUAL INTEGRATION
1855	420J0231.D	20I0229-13		1	NO MANUAL INTEGRATION
1916	420J0232.D	20I0229-14		1	NO MANUAL INTEGRATION
1936	420J0233.D	20I0229-15		1	NO MANUAL INTEGRATION
1957	420J0234.D	20I0229-16		1	o-terph,
2017	420J0235.D	20I0307-01		1	o-terph, Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201002.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2037	420J0236.D	20I0307-02		1	o-terph, Triacon Surr,
2058	420J0237.D	20I0307-03		1	o-terph, Triacon Surr,
2118	420J0238.D	20I0307-04		1	o-terph, Triacon Surr,
2139	420J0239.D	SEQ-CCV4		1	o-terph,
2159	420J0240.D	SEQ-CCV5		1	Triacon Surr,
2220	420J0241.D	SEQ-CCV6		1	o-terph,
2240	420J0242.D	20I0350-01		1	NO MANUAL INTEGRATION
2300	420J0243.D	20I0350-02		1	o-terph,
2321	420J0244.D	20I0350-03		1	o-terph,
2341	420J0245.D	20I0350-04		1	o-terph, Triacon Surr,
0002	420J0246.D	20I0350-05		1	o-terph,
0022	420J0247.D	20I0350-06		1	o-terph,
0042	420J0248.D	20I0350-07		1	o-terph, Triacon Surr,
0103	420J0249.D	20I0217-01		1	o-terph, Triacon Surr,
0123	420J0250.D	20I0217-02		200	o-terph, Triacon Surr,
0144	420J0251.D	20I0217-02		50	NO MANUAL INTEGRATION
0204	420J0252.D	SEQ-CCV7		1	o-terph,
0224	420J0253.D	SEQ-CCV8		1	Triacon Surr,

Security Status Report

Date: 11-Oct-2020 10:45

420J0201.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0202.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0203.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0204.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0205.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0206.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0207.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0208.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0209.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0210.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0211.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0212.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0213.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0214.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0215.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0216.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0217.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0218.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0219.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0220.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0221.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0222.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0223.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0224.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0225.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0226.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0227.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0228.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0229.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0230.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0231.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0232.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0233.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0234.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0235.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0236.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0237.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0238.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0239.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0240.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0241.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0242.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0243.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0244.D	Data Locked	christopher, 11-Oct-2020 10:45

420J0245.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0246.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0247.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0248.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0249.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0250.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0251.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0252.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0253.D	Data Locked	christopher, 11-Oct-2020 10:45

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

Sequence: SII0042
Analyst: CTO Date:

Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor
20I0217-02	5	DCM	995	200				
20I0217-02	20	DCM	980	50				

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIK0016	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIK0016-IBL1	420K0203.D	NA	11/02/20 09:10
Instrument Blank	SIK0016-IBL2	420K0204.D	NA	11/02/20 09:30
DIESEL ICV	SIK0016-ICV1	420K0205.D	NA	11/02/20 09:50
MOIL ICV	SIK0016-ICV2	420K0206.D	NA	11/02/20 10:10
A/S LANDAU BUNKER C 100	SIK0016-CAL1	420K0207.D	NA	11/02/20 10:31
A/S LANDAU BUNKER C 250	SIK0016-CAL2	420K0208.D	NA	11/02/20 10:51
A/S LANDAU BUNKER C 500	SIK0016-CAL3	420K0209.D	NA	11/02/20 11:11
A/S LANDAU BUNKER C 1000	SIK0016-CAL4	420K0210.D	NA	11/02/20 11:32
A/S LANDAU BUNKER C 2500	SIK0016-CAL5	420K0211.D	NA	11/02/20 11:52
A/S LANDAU BUNKER C 5000	SIK0016-CAL6	420K0212.D	NA	11/02/20 12:13
A/S LANDAU BUNKER C	SIK0016-ICV3	420K0213.D	NA	11/02/20 12:33
ZZZZZ	20J0250-02	420K0214.D	Solid	11/02/20 12:53
ZZZZZ	20J0265-01	420K0215.D	Water	11/02/20 13:14
DIESEL CCV	SIK0016-CCV1	420K0216.D	NA	11/02/20 13:34
MOIL CCV	SIK0016-CCV2	420K0217.D	NA	11/02/20 13:55
A/S LANDAU BUNKER C	SIK0016-CCV3	420K0218.D	NA	11/02/20 14:15
ZZZZZ	BIJ0617-BLK1	420K0219.D	Water	11/02/20 14:36
ZZZZZ	BIJ0617-BS1	420K0220.D	Water	11/02/20 14:56
ZZZZZ	BIJ0617-BSD1	420K0221.D	Water	11/02/20 15:17
ZZZZZ	20J0265-02	420K0224.D	Water	11/02/20 16:18
ZZZZZ	20J0265-03	420K0225.D	Water	11/02/20 16:39
ZZZZZ	20J0265-04	420K0226.D	Water	11/02/20 16:59
ZZZZZ	20J0265-05	420K0227.D	Water	11/02/20 17:19
ZZZZZ	20J0265-06	420K0228.D	Water	11/02/20 17:40
ZZZZZ	20J0265-07	420K0229.D	Water	11/02/20 18:00
ZZZZZ	20J0265-08	420K0230.D	Water	11/02/20 18:21
ZZZZZ	20J0265-09	420K0231.D	Water	11/02/20 18:41
ZZZZZ	20J0265-10	420K0232.D	Water	11/02/20 19:01
ZZZZZ	20J0265-11	420K0233.D	Water	11/02/20 19:22
DIESEL CCV	SIK0016-CCV4	420K0234.D	NA	11/02/20 19:42

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIK0016	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MOIL CCV	SIK0016-CCV5	420K0235.D	NA	11/02/20 20:02
A/S LANDAU BUNKER C	SIK0016-CCV6	420K0236.D	NA	11/02/20 20:23

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIK0016

Instrument: FID4
Calibration ID: DA00022

Printed: 11/3/2020 9:50:19AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIK0016-IBL1	QC		1		I006239			
SIK0016-IBL2	QC		2		I006241			
SIK0016-ICV1	QC		3		I008275			
SIK0016-ICV2	QC		4		I008935			
SIK0016-CAL1	QC		5		I010265			
SIK0016-CAL2	QC		6		I010264			
SIK0016-CAL3	QC		7		I010263			
SIK0016-CAL4	QC		8		I010262			
SIK0016-CAL5	QC		9		I010261			
SIK0016-CAL6	QC		10		I010260			
SIK0016-ICV3	QC		11		I010263			
20J0250-02	PH NW (Extractables) low lev	A 01	12				Seattle Public Utilities	A/S Clean up version
20J0265-01	PH NW (Extractables) low lev	A 01	13				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
SIK0016-CCV1	QC		14		I008275			
SIK0016-CCV2	QC		15		I008935			
SIK0016-CCV3	QC		16		I010263			
BIJ0617-BLK1	QC		17					
BIJ0617-BS1	QC		18					
BIJ0617-BSD1	QC		19					
BIJ0617-MS1	QC		20					
BIJ0617-MSD1	QC		21					

Samples Loaded By Date Data Processed By Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIK0016

Instrument: FID4
Calibration ID: DA00022

Printed: 11/3/2020 9:50:19AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
20J0265-02	PH NW (Extractables) low lev	A 01	22				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-03	PH NW (Extractables) low lev	A 01	23				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-04	PH NW (Extractables) low lev	A 01	24				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-05	PH NW (Extractables) low lev	A 01	25				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-06	PH NW (Extractables) low lev	A 01	26				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-07	PH NW (Extractables) low lev	A 01	27				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-08	PH NW (Extractables) low lev	A 01	28				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-09	PH NW (Extractables) low lev	A 01	29				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-10	PH NW (Extractables) low lev	A 01	30				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-11	PH NW (Extractables) low lev	A 01	31				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
SIK0016-CCV4	QC		32		I008275			
SIK0016-CCV5	QC		33		I008935			
SIK0016-CCV6	QC		34		I010263			

Samples Loaded By Date Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - fid4a.i\20201102.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	02-NOV-2020 08:29	420K0201.D	1	RINSE	
2	02-NOV-2020 08:49	420K0202.D	1	RINSE	
3	02-NOV-2020 09:10	420K0203.D	1	SEQ-IBL1	
4	02-NOV-2020 09:30	420K0204.D	1	SEQ-IBL2	
5	02-NOV-2020 09:50	420K0205.D	1	SEQ-ICV1	
6	02-NOV-2020 10:10	420K0206.D	1	SEQ-ICV2	
7	02-NOV-2020 10:31	420K0207.D	1	SEQ-CAL1	
8	02-NOV-2020 10:51	420K0208.D	1	SEQ-CAL2	
9	02-NOV-2020 11:11	420K0209.D	1	SEQ-CAL3	
10	02-NOV-2020 11:32	420K0210.D	1	SEQ-CAL4	
11	02-NOV-2020 11:52	420K0211.D	1	SEQ-CAL5	
12	02-NOV-2020 12:13	420K0212.D	1	SEQ-CAL6	
13	02-NOV-2020 12:33	420K0213.D	1	SEQ-ICV3	
14	02-NOV-2020 12:53	420K0214.D	1	20J0250-02	
15	02-NOV-2020 13:14	420K0215.D	1	20J0265-01	
16	02-NOV-2020 13:34	420K0216.D	1	SEQ-CCV1	
17	02-NOV-2020 13:55	420K0217.D	1	SEQ-CCV2	
18	02-NOV-2020 14:15	420K0218.D	1	SEQ-CCV3	
19	02-NOV-2020 14:36	420K0219.D	1	BIJ0617-BLK1	
20	02-NOV-2020 14:56	420K0220.D	1	BIJ0617-BS1	
21	02-NOV-2020 15:17	420K0221.D	1	BIJ0617-BSD1	
22	02-NOV-2020 15:37	420K0222.D	1	BIJ0617-MS1	
23	02-NOV-2020 15:58	420K0223.D	1	BIJ0617-MSD1	
24	02-NOV-2020 16:18	420K0224.D	1	20J0265-02	
25	02-NOV-2020 16:39	420K0225.D	1	20J0265-03	
26	02-NOV-2020 16:59	420K0226.D	1	20J0265-04	
27	02-NOV-2020 17:19	420K0227.D	1	20J0265-05	
28	02-NOV-2020 17:40	420K0228.D	1	20J0265-06	
29	02-NOV-2020 18:00	420K0229.D	1	20J0265-07	
30	02-NOV-2020 18:21	420K0230.D	1	20J0265-08	
31	02-NOV-2020 18:41	420K0231.D	1	20J0265-09	
32	02-NOV-2020 19:01	420K0232.D	1	20J0265-10	
33	02-NOV-2020 19:22	420K0233.D	1	20J0265-11	
34	02-NOV-2020 19:42	420K0234.D	1	SEQ-CCV4	
35	02-NOV-2020 20:02	420K0235.D	1	SEQ-CCV5	
36	02-NOV-2020 20:23	420K0236.D	1	SEQ-CCV6	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201102.b

ARI Job No.: RINS   Method: FID4TPH.m   Instrument: fid4a.i   Date: 02-NOV-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0829	420K0201.D	RINSE		1	NO MANUAL INTEGRATION
0849	420K0202.D	RINSE		1	NO MANUAL INTEGRATION
0910	420K0203.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
0930	420K0204.D	SEQ-IBL2		1	NO MANUAL INTEGRATION
0950	420K0205.D	SEQ-ICV1		1	o-terph,
1010	420K0206.D	SEQ-ICV2		1	Triacon Surr,
1031	420K0207.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
1051	420K0208.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
1111	420K0209.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
1132	420K0210.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
1152	420K0211.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
1213	420K0212.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
1233	420K0213.D	SEQ-ICV3		1	NO MANUAL INTEGRATION
1253	420K0214.D	20J0250-02		1	o-terph, Triacon Surr,
1314	420K0215.D	20J0265-01		1	NO MANUAL INTEGRATION
1334	420K0216.D	SEQ-CCV1		1	o-terph,
1355	420K0217.D	SEQ-CCV2		1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201102.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1415	420K0218.D	SEQ-CCV3		1	NO MANUAL INTEGRATION
1436	420K0219.D	BIJ0617-BLK1		1	NO MANUAL INTEGRATION
1456	420K0220.D	BIJ0617-BS1		1	o-terph,
1517	420K0221.D	BIJ0617-BSD1		1	o-terph,
1537	420K0222.D	BIJ0617-MS1		1	o-terph,
1558	420K0223.D	BIJ0617-MSD1		1	o-terph,
1618	420K0224.D	20J0265-02		1	NO MANUAL INTEGRATION
1639	420K0225.D	20J0265-03		1	NO MANUAL INTEGRATION
1659	420K0226.D	20J0265-04		1	NO MANUAL INTEGRATION
1719	420K0227.D	20J0265-05		1	NO MANUAL INTEGRATION
1740	420K0228.D	20J0265-06		1	NO MANUAL INTEGRATION
1800	420K0229.D	20J0265-07		1	NO MANUAL INTEGRATION
1821	420K0230.D	20J0265-08		1	NO MANUAL INTEGRATION
1841	420K0231.D	20J0265-09		1	NO MANUAL INTEGRATION
1901	420K0232.D	20J0265-10		1	NO MANUAL INTEGRATION
1922	420K0233.D	20J0265-11		1	NO MANUAL INTEGRATION
1942	420K0234.D	SEQ-CCV4		1	o-terph,
2002	420K0235.D	SEQ-CCV5		1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201102.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2023	420K0236.D	SEQ-CCV6		1	NO MANUAL INTEGRATION

Security Status Report

Date: 03-Nov-2020 09:49

420K0201.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0202.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0203.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0204.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0205.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0206.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0207.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0208.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0209.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0210.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0211.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0212.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0213.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0214.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0215.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0216.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0217.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0218.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0219.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0220.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0221.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0222.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0223.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0224.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0225.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0226.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0227.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0228.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0229.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0230.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0231.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0232.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0233.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0234.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0235.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0236.D	Data Locked	christopher, 03-Nov-2020 09:38

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIK0381	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIK0381-IBL1	420K2703.D	NA	11/27/20 08:58
Instrument Blank	SIK0381-IBL2	420K2704.D	NA	11/27/20 09:18
DIESEL ICV	SIK0381-ICV1	420K2705.D	NA	11/27/20 09:38
MOIL ICV	SIK0381-ICV2	420K2706.D	NA	11/27/20 09:58
ZZZZZ	20K0352-01	420K2717.D	Water	11/27/20 10:18
DIESEL CCV	SIK0381-CCV1	420K2711.D	NA	11/27/20 11:39
MOIL CCV	SIK0381-CCV2	420K2712.D	NA	11/27/20 12:00
RT2	SIK0381-IBL3	420K2713.D	NA	11/27/20 12:52
IB2	SIK0381-IBL4	420K2714.D	NA	11/27/20 13:13
DIESEL	SIK0381-ICV3	420K2715.D	NA	11/27/20 13:33
MOIL	SIK0381-ICV4	420K2716.D	NA	11/27/20 13:53
ZZZZZ	BIK0721-BLK1	420K2718.D	Water	11/27/20 14:34
ZZZZZ	BIK0721-BS1	420K2719.D	Water	11/27/20 14:54
ZZZZZ	BIK0721-BSD1	420K2720.D	Water	11/27/20 15:15
DIESEL CCV	SIK0381-CCV3	420K2721.D	NA	11/27/20 15:35
MOIL CCV	SIK0381-CCV4	420K2722.D	NA	11/27/20 15:55
PP15-5	20K0126-02	420K2723.D	Solid	11/27/20 18:45
PP16-2.5	20K0126-06	420K2724.D	Solid	11/27/20 19:06
PP16-5	20K0126-07	420K2725.D	Solid	11/27/20 19:26
PP13-5	20K0126-12	420K2726.D	Solid	11/27/20 19:46
PP7-2.5	20K0126-16	420K2727.D	Solid	11/27/20 20:06
PP7-2.5	BIK0527-MS1	420K2728.D	Solid	11/27/20 20:26
PP7-2.5	BIK0527-MSD1	420K2729.D	Solid	11/27/20 20:47
PP7-7.5	20K0126-18	420K2730.D	Solid	11/27/20 21:07
PP3-5	20K0126-24	420K2731.D	Solid	11/27/20 21:27
PP13-2.5	20K0126-11	420K2732.D	Solid	11/27/20 21:48
DIESEL CCV	SIK0381-CCV5	420K2733.D	NA	11/27/20 22:08
MOIL CCV	SIK0381-CCV6	420K2734.D	NA	11/27/20 22:28
ZZZZZ	20K0008-16	420K2736.D	Solid	11/27/20 23:09
ZZZZZ	20K0188-01	420K2739.D	Solid	11/28/20 00:09

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc.

SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Sequence: SIK0381

Instrument: FID4

Calibration: DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0188-03	420K2742.D	Solid	11/28/20 01:10
ZZZZZ	20K0188-10	420K2743.D	Solid	11/28/20 01:30
ZZZZZ	20K0188-11	420K2744.D	Solid	11/28/20 01:50
ZZZZZ	20K0188-13	420K2745.D	Solid	11/28/20 02:10
ZZZZZ	20K0188-14	420K2746.D	Solid	11/28/20 02:31
ZZZZZ	20K0188-15	420K2747.D	Solid	11/28/20 02:51
ZZZZZ	20K0188-16	420K2748.D	Solid	11/28/20 03:11
DIESEL CCV	SIK0381-CCV7	420K2749.D	NA	11/28/20 03:31
MOIL CCV	SIK0381-CCV8	420K2750.D	NA	11/28/20 03:51
ZZZZZ	20K0188-17	420K2751.D	Solid	11/28/20 04:12
ZZZZZ	20K0188-21	420K2752.D	Solid	11/28/20 04:32
ZZZZZ	20K0078-11RE1	420K2753.D	Solid	11/28/20 04:52
ZZZZZ	BIK0776-BLK1	420K2754.D	Solid	11/28/20 05:12
ZZZZZ	BIK0776-BS1	420K2755.D	Solid	11/28/20 05:32
ZZZZZ	20K0387-02	420K2757.D	Solid	11/28/20 06:13
ZZZZZ	20K0387-03	420K2758.D	Solid	11/28/20 06:33
ZZZZZ	20K0388-01	420K2759.D	Solid	11/28/20 06:53
ZZZZZ	20K0388-04	420K2762.D	Solid	11/28/20 07:54
DIESEL CCV	SIK0381-CCV9	420K2763.D	NA	11/28/20 08:14
MOIL CCV	SIK0381-CCVA	420K2764.D	NA	11/28/20 08:34
ZZZZZ	20K0388-05	420K2765.D	Solid	11/28/20 08:54
DIESEL CCV	SIK0381-CCVB	420K2777.D	NA	11/28/20 12:57
MOIL CCV	SIK0381-CCVC	420K2778.D	NA	11/28/20 13:17

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ANALYSIS SEQUENCE

SIK0381

Instrument: FID4 Element Column ID: G004923
Calibration ID: DA00022

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIK0381-IBL1	Retention Time Standard	QC		1	I006239		
SIK0381-IBL2	Instrument Blank	QC		2	I006241		
SIK0381-ICV1	DIESEL ICV	QC		3	I008275		
SIK0381-ICV2	MOIL ICV	QC		4	I008935		
SIK0381-CCV1	DIESEL CCV	QC		5	I008275		
SIK0381-CCV2	MOIL CCV	QC		6	I008935		
SIK0381-IBL3	RT2	QC		7	I006239		
SIK0381-IBL4	IB2	QC		8	I006241		
SIK0381-ICV3	DIESEL	QC		9	I008275		
SIK0381-ICV4	MOIL	QC		10	I008935		
20K0352-01	STAR_003EFF_11232020	TPH NW (Extractables) low level	E 01	11			
BIK0721-BLK1	Blank	QC		12			
BIK0721-BS1	LCS	QC		13			
BIK0721-BSD1	LCS Dup	QC		14			
SIK0381-CCV3	DIESEL CCV	QC		15	I008275		
SIK0381-CCV4	MOIL CCV	QC		16	I008935		
20K0126-02	PP15-5	TPH NW (Extractables) low level	A 01	17			
20K0126-06	PP16-2.5	TPH NW (Extractables) low level	A 01	18			
20K0126-07	PP16-5	TPH NW (Extractables) low level	A 01	19			
20K0126-12	PP13-5	TPH NW (Extractables) low level	A 01	20			
20K0126-16	PP7-2.5	TPH NW (Extractables) low level	A 01	21			
BIK0527-MS1	Matrix Spike	QC		22			

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ANALYSIS SEQUENCE

SIK0381

Instrument: FID4 Element Column ID: G004923
Calibration ID: DA00022

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
BIK0527-MSD1	Matrix Spike Dup	QC		23			
20K0126-18	PP7-7.5	TPH NW (Extractables) low level	A 01	24			
20K0126-24	PP3-5	TPH NW (Extractables) low level	A 01	25			
20K0126-11	PP13-2.5	TPH NW (Extractables) low level	A 01	26			
SIK0381-CCV5	DIESEL CCV	QC		27	I008275		
SIK0381-CCV6	MOIL CCV	QC		28	I008935		
20K0008-16	PP18-10	TPH NW (Extractables) low level	A 02	29			
BIK0528-BLK1	Blank	QC		30			
BIK0528-BS1	LCS	QC		31			
20K0188-01	JSMPDI-039SC-A-00-01-20110	TPH NW (Extractables)	A 01	32			
BIK0528-MS1	Matrix Spike	QC		33			
BIK0528-MSD1	Matrix Spike Dup	QC		34			
20K0188-03	JSMPDI-039SC-B-02-04-20110	TPH NW (Extractables)	A 01	35			
20K0188-10	JSMPDI-044SC-A-00-01-20110	TPH NW (Extractables)	A 01	36			
20K0188-11	JSMPDI-044SC-A-10-11-20110	TPH NW (Extractables)	A 01	37			
20K0188-13	JSMPDI-044SC-B-02-04-20110	TPH NW (Extractables)	A 01	38			
20K0188-14	JSMPDI-044SC-B-04-06-20110	TPH NW (Extractables)	A 01	39			
20K0188-15	JSMPDI-044SC-B-06-08-20110	TPH NW (Extractables)	A 01	40			
20K0188-16	JSMPDI-044SC-B-08-10-20110	TPH NW (Extractables)	A 01	41			
SIK0381-CCV7	DIESEL CCV	QC		42	I008275		
SIK0381-CCV8	MOIL CCV	QC		43	I008935		
20K0188-17	JSMPDI-044SC-B-10-12-20110	TPH NW (Extractables)	A 01	44			

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ANALYSIS SEQUENCE

SIK0381

Instrument: FID4 Element Column ID: G004923
Calibration ID: DA00022

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
20K0188-21	SMPDI-1044SC-B-02-04-2011(	TPH NW (Extractables)	A 01	45			
20K0078-11RE1	BOL-LAI-05-S(1-2.5)-2020110	TPH NW (Extractables) low level	A 02	46			Added 11/30/2020 by JGR
BIK0776-BLK1	Blank	QC		47			
BIK0776-BS1	LCS	QC		48			
20K0387-02	PGW-V-208-11/2020	TPH NW (Extractables) low level	A 01	49			
20K0387-03	PGW-V-209-11/2020	TPH NW (Extractables) low level	A 01	50			
20K0388-01	PGW-V-112-11/2020	TPH NW (Extractables) low level	A 01	51			
20K0388-04	PGW-V-115-11/2020	TPH NW (Extractables) low level	A 01	52			
20K0388-06	PGW-V-117-11/2020	TPH NW (Extractables) low level	A 01	53			
SIK0381-CCV9	DIESEL CCV	QC		54	I008275		
SIK0381-CCVA	MOIL CCV	QC		55	I008935		
20K0388-05	PGW-V-116-11/2020	TPH NW (Extractables) low level	A 01	56			
SIK0381-CCVB	DIESEL CCV	QC		57	I008275		
SIK0381-CCVC	MOIL CCV	QC		58	I008935		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201127.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	27-NOV-2020 08:17	420K2701.D	1	RINSE	
2	27-NOV-2020 08:37	420K2702.D	1	RINSE	
3	27-NOV-2020 08:58	420K2703.D	1	SEQ-IBL1	
4	27-NOV-2020 09:18	420K2704.D	1	SEQ-IBL2	
5	27-NOV-2020 09:38	420K2705.D	1	SEQ-ICV1	
6	27-NOV-2020 09:58	420K2706.D	1	SEQ-ICV2	
7	27-NOV-2020 10:18	420K2707.D	1	20K0352-01	
8	27-NOV-2020 10:39	420K2708.D	1	BIK0721-BLK1	
9	27-NOV-2020 10:59	420K2709.D	1	BIK0721-BS1	
10	27-NOV-2020 11:19	420K2710.D	1	BIK0721-BSD1	
11	27-NOV-2020 11:39	420K2711.D	1	SEQ-CCV1	
12	27-NOV-2020 12:00	420K2712.D	1	SEQ-CCV2	
13	27-NOV-2020 12:52	420K2713.D	1	SIK0381-IBL1	
14	27-NOV-2020 13:13	420K2714.D	1	SEQ-IBL2	
15	27-NOV-2020 13:33	420K2715.D	1	SEQ-ICV1	
16	27-NOV-2020 13:53	420K2716.D	1	SEQ-ICV2	
17	27-NOV-2020 14:14	420K2717.D	1	20K0352-01	
18	27-NOV-2020 14:34	420K2718.D	1	BIK0721-BLK1	
19	27-NOV-2020 14:54	420K2719.D	1	BIK0721-BS1	
20	27-NOV-2020 15:15	420K2720.D	1	BIK0721-BSD1	
21	27-NOV-2020 15:35	420K2721.D	1	SEQ-CCV1	
22	27-NOV-2020 15:55	420K2722.D	1	SEQ-CCV2	
23	27-NOV-2020 18:45	420K2723.D	1	20K0126-02	
24	27-NOV-2020 19:06	420K2724.D	10	20K0126-06	
25	27-NOV-2020 19:26	420K2725.D	1	20K0126-07	
26	27-NOV-2020 19:46	420K2726.D	1	20K0126-12	
27	27-NOV-2020 20:06	420K2727.D	1	20K0126-16	
28	27-NOV-2020 20:26	420K2728.D	1	BIK0527-MS1	
29	27-NOV-2020 20:47	420K2729.D	1	BIK0527-MSD1	
30	27-NOV-2020 21:07	420K2730.D	1	20K0126-18	
31	27-NOV-2020 21:27	420K2731.D	1	20K0126-24	
32	27-NOV-2020 21:48	420K2732.D	50	20K0126-11	
33	27-NOV-2020 22:08	420K2733.D	1	SIK0381-CCV5	
34	27-NOV-2020 22:28	420K2734.D	1	SIK0381-CCV6	
35	27-NOV-2020 22:48	420K2735.D	10	20K0126-22	
36	27-NOV-2020 23:09	420K2736.D	5	20K008-16	
37	27-NOV-2020 23:29	420K2737.D	1	BIK0528-BLK1	
38	27-NOV-2020 23:49	420K2738.D	1	BIK0528-BS1	
39	28-NOV-2020 00:09	420K2739.D	1	20K0188-01	
40	28-NOV-2020 00:29	420K2740.D	1	BIK0528-MS1	
41	28-NOV-2020 00:50	420K2741.D	1	BIK0528-MSD1	
42	28-NOV-2020 01:10	420K2742.D	1	20K0188-03	
43	28-NOV-2020 01:30	420K2743.D	1	20K0188-10	
44	28-NOV-2020 01:50	420K2744.D	1	20K0188-11	
45	28-NOV-2020 02:10	420K2745.D	1	20K0188-13	

46	28-NOV-2020	02:31	420K2746.D	1	20K0188-14
47	28-NOV-2020	02:51	420K2747.D	1	20K0188-15
48	28-NOV-2020	03:11	420K2748.D	1	20K0188-16
49	28-NOV-2020	03:31	420K2749.D	1	SIK0381-CCV7
50	28-NOV-2020	03:51	420K2750.D	1	SIK0381-CCV8

	Inject Date/Time	Filename	DF	LabID	ClientID
51	28-NOV-2020 04:12	420K2751.D	1	20K0188-17	
52	28-NOV-2020 04:32	420K2752.D	1	20K0188-21	
53	28-NOV-2020 04:52	420K2753.D	10	20K0078-11	
54	28-NOV-2020 05:12	420K2754.D	1	BIK0776-BLK1	
55	28-NOV-2020 05:32	420K2755.D	1	BIK0776-BS1	
56	28-NOV-2020 05:52	420K2756.D	10	20K0387-01	
57	28-NOV-2020 06:13	420K2757.D	10	20K0387-02	
58	28-NOV-2020 06:33	420K2758.D	10	20K0387-03	
59	28-NOV-2020 06:53	420K2759.D	10	20K0388-01	
60	28-NOV-2020 07:13	420K2760.D	10	20K0388-02	
61	28-NOV-2020 07:33	420K2761.D	10	20K0388-03	
62	28-NOV-2020 07:54	420K2762.D	10	20K0388-04	
63	28-NOV-2020 08:14	420K2763.D	1	SIK0381-CCV9	
64	28-NOV-2020 08:34	420K2764.D	1	SIK0381-CCVA	
65	28-NOV-2020 08:54	420K2765.D	10	20K0388-05	
66	28-NOV-2020 09:14	420K2766.D	1	BIK0345-BLK1	
67	28-NOV-2020 09:35	420K2767.D	1	BIK0345-BS1	
68	28-NOV-2020 09:55	420K2768.D	1	20J0290-05	
69	28-NOV-2020 10:15	420K2769.D	1	BIK0568-BLK1	
70	28-NOV-2020 10:35	420K2770.D	1	BIK0568-BS1	
71	28-NOV-2020 10:56	420K2771.D	1	BIK0568-BSD1	
72	28-NOV-2020 11:16	420K2772.D	1	20K0154-01	
73	28-NOV-2020 11:36	420K2773.D	1	20K0154-02	
74	28-NOV-2020 11:56	420K2774.D	1	20K0154-04	
75	28-NOV-2020 12:16	420K2775.D	1	20K0154-05	
76	28-NOV-2020 12:37	420K2776.D	10	20K0388-06	
77	28-NOV-2020 12:57	420K2777.D	1	SIK0381-CCVB	
78	28-NOV-2020 13:17	420K2778.D	1	SIK0381-CCVC	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201127.b

Instrument: fid4a.i   Date: 27-NOV-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
0817	420K2701.D	RINSE	1	NO MANUAL INTEGRATION
0837	420K2702.D	RINSE	1	NO MANUAL INTEGRATION
0858	420K2703.D	SEQ-IBL1	1	NO MANUAL INTEGRATION
0918	420K2704.D	SEQ-IBL2	1	NO MANUAL INTEGRATION
0938	420K2705.D	SEQ-ICV1	1	o-terph,
0958	420K2706.D	SEQ-ICV2	1	Triacon Surr,
1018	420K2707.D	20K0352-01	1	NO MANUAL INTEGRATION
1039	420K2708.D	BIK0721-BLK1	1	NO MANUAL INTEGRATION
1059	420K2709.D	BIK0721-BS1	1	o-terph,
1119	420K2710.D	BIK0721-BSD1	1	o-terph,
1139	420K2711.D	SEQ-CCV1	1	o-terph,
1200	420K2712.D	SEQ-CCV2	1	Triacon Surr,
1252	420K2713.D	SIK0381-IBL1	1	NO MANUAL INTEGRATION
1313	420K2714.D	SEQ-IBL2	1	NO MANUAL INTEGRATION
1333	420K2715.D	SEQ-ICV1	1	o-terph,
1353	420K2716.D	SEQ-ICV2	1	Triacon Surr,
1414	420K2717.D	20K0352-01	1	NO MANUAL INTEGRATION

Instrument: fid4a.i Date: 27-NOV-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
1434	420K2718.D	BIK0721-BLK1	1	NO MANUAL INTEGRATION
1454	420K2719.D	BIK0721-BS1	1	o-terph,
1515	420K2720.D	BIK0721-BSD1	1	o-terph,
1535	420K2721.D	SEQ-CCV1	1	o-terph,
1555	420K2722.D	SEQ-CCV2	1	Triacon Surr,
1845	420K2723.D	20K0126-02	1	o-terph, Triacon Surr,
1906	420K2724.D	20K0126-06	10	o-terph, Triacon Surr,
1926	420K2725.D	20K0126-07	1	o-terph, Triacon Surr,
1946	420K2726.D	20K0126-12	1	o-terph, Triacon Surr,
2006	420K2727.D	20K0126-16	1	o-terph, Triacon Surr,
2026	420K2728.D	BIK0527-MS1	1	o-terph, Triacon Surr,
2047	420K2729.D	BIK0527-MSD1	1	NO MANUAL INTEGRATION
2107	420K2730.D	20K0126-18	1	o-terph, Triacon Surr,
2127	420K2731.D	20K0126-24	1	Triacon Surr,
2148	420K2732.D	20K0126-11	50	o-terph, Triacon Surr,
2208	420K2733.D	SIK0381-CCV5	1	o-terph,
2228	420K2734.D	SIK0381-CCV6	1	Triacon Surr,
2248	420K2735.D	20K0126-22	10	o-terph, Triacon Surr,

Instrument: fid4a.i Date: 27-NOV-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
2309	420K2736.D	20K008-16	5	o-terph, Triacon Surr,
2329	420K2737.D	BIK0528-BLK1	1	NO MANUAL INTEGRATION
2349	420K2738.D	BIK0528-BS1	1	o-terph,
0009	420K2739.D	20K0188-01	1	o-terph, Triacon Surr,
0029	420K2740.D	BIK0528-MS1	1	o-terph, Triacon Surr,
0050	420K2741.D	BIK0528-MSD1	1	o-terph, Triacon Surr,
0110	420K2742.D	20K0188-03	1	NO MANUAL INTEGRATION
0130	420K2743.D	20K0188-10	1	Triacon Surr,
0150	420K2744.D	20K0188-11	1	o-terph, Triacon Surr,
0210	420K2745.D	20K0188-13	1	o-terph, Triacon Surr,
0231	420K2746.D	20K0188-14	1	o-terph, Triacon Surr,
0251	420K2747.D	20K0188-15	1	o-terph, Triacon Surr,
0311	420K2748.D	20K0188-16	1	o-terph, Triacon Surr,
0331	420K2749.D	SIK0381-CCV7	1	o-terph,
0351	420K2750.D	SIK0381-CCV8	1	Triacon Surr,
0412	420K2751.D	20K0188-17	1	o-terph, Triacon Surr,
0432	420K2752.D	20K0188-21	1	o-terph, Triacon Surr,
0452	420K2753.D	20K0078-11	10	o-terph, Triacon Surr,

Instrument: fid4a.i Date: 28-NOV-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
0512	420K2754.D	BIK0776-BLK1	1	NO MANUAL INTEGRATION
0532	420K2755.D	BIK0776-BS1	1	o-terph,
0552	420K2756.D	20K0387-01	10	o-terph, Triacon Surr,
0613	420K2757.D	20K0387-02	10	o-terph, Triacon Surr,
0633	420K2758.D	20K0387-03	10	o-terph, Triacon Surr,
0653	420K2759.D	20K0388-01	10	o-terph, Triacon Surr,
0713	420K2760.D	20K0388-02	10	o-terph, Triacon Surr,
0733	420K2761.D	20K0388-03	10	o-terph, Triacon Surr,
0754	420K2762.D	20K0388-04	10	Triacon Surr,
0814	420K2763.D	SIK0381-CCV9	1	o-terph,
0834	420K2764.D	SIK0381-CCVA	1	Triacon Surr,
0854	420K2765.D	20K0388-05	10	Triacon Surr,
0914	420K2766.D	BIK0345-BLK1	1	NO MANUAL INTEGRATION
0935	420K2767.D	BIK0345-BS1	1	NO MANUAL INTEGRATION
0955	420K2768.D	20J0290-05	1	o-terph, Triacon Surr,
1015	420K2769.D	BIK0568-BLK1	1	NO MANUAL INTEGRATION
1035	420K2770.D	BIK0568-BS1	1	o-terph,
1056	420K2771.D	BIK0568-BSD1	1	o-terph,

Instrument: fid4a.i Date: 28-NOV-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
1116	420K2772.D	20K0154-01	1	o-terph, Triacon Surr,
1136	420K2773.D	20K0154-02	1	NO MANUAL INTEGRATION
1156	420K2774.D	20K0154-04	1	o-terph,
1216	420K2775.D	20K0154-05	1	Triacon Surr,
1237	420K2776.D	20K0388-06	10	o-terph, Triacon Surr,
1257	420K2777.D	SIK0381-CCVB	1	o-terph,
1317	420K2778.D	SIK0381-CCVC	1	Triacon Surr,

Security Status Report

Date: 02-Dec-2020 06:50

420K2701.D	Data Locked	van, 02-Dec-2020 06:50
420K2702.D	Data Locked	van, 02-Dec-2020 06:50
420K2703.D	Data Locked	van, 02-Dec-2020 06:50
420K2704.D	Data Locked	van, 02-Dec-2020 06:50
420K2705.D	Data Locked	van, 02-Dec-2020 06:50
420K2706.D	Data Locked	van, 02-Dec-2020 06:50
420K2707.D	Data Locked	van, 02-Dec-2020 06:50
420K2708.D	Data Locked	van, 02-Dec-2020 06:50
420K2709.D	Data Locked	van, 02-Dec-2020 06:50
420K2710.D	Data Locked	van, 02-Dec-2020 06:50
420K2711.D	Data Locked	van, 02-Dec-2020 06:50
420K2712.D	Data Locked	van, 02-Dec-2020 06:50
420K2713.D	Data Locked	van, 02-Dec-2020 06:50
420K2714.D	Data Locked	van, 02-Dec-2020 06:50
420K2715.D	Data Locked	van, 02-Dec-2020 06:50
420K2716.D	Data Locked	van, 02-Dec-2020 06:50
420K2717.D	Data Locked	van, 02-Dec-2020 06:50
420K2718.D	Data Locked	van, 02-Dec-2020 06:50
420K2719.D	Data Locked	van, 02-Dec-2020 06:50
420K2720.D	Data Locked	van, 02-Dec-2020 06:50
420K2721.D	Data Locked	van, 02-Dec-2020 06:50
420K2722.D	Data Locked	van, 02-Dec-2020 06:50
420K2723.D	Data Locked	van, 02-Dec-2020 06:50
420K2724.D	Data Locked	van, 02-Dec-2020 06:50
420K2725.D	Data Locked	van, 02-Dec-2020 06:50
420K2726.D	Data Locked	van, 02-Dec-2020 06:50
420K2727.D	Data Locked	van, 02-Dec-2020 06:50
420K2728.D	Data Locked	van, 02-Dec-2020 06:50
420K2729.D	Data Locked	van, 02-Dec-2020 06:50
420K2730.D	Data Locked	van, 02-Dec-2020 06:50
420K2731.D	Data Locked	van, 02-Dec-2020 06:50
420K2732.D	Data Locked	van, 02-Dec-2020 06:50
420K2733.D	Data Locked	van, 02-Dec-2020 06:50
420K2734.D	Data Locked	van, 02-Dec-2020 06:50
420K2735.D	Data Locked	van, 02-Dec-2020 06:50
420K2736.D	Data Locked	van, 02-Dec-2020 06:50
420K2737.D	Data Locked	van, 02-Dec-2020 06:50
420K2738.D	Data Locked	van, 02-Dec-2020 06:50
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420K2740.D	Data Locked	van, 02-Dec-2020 06:50
420K2741.D	Data Locked	van, 02-Dec-2020 06:50
420K2742.D	Data Locked	van, 02-Dec-2020 06:50
420K2743.D	Data Locked	van, 02-Dec-2020 06:50
420K2744.D	Data Locked	van, 02-Dec-2020 06:50

420K2745.D	Data Locked	van, 02-Dec-2020 06:50
420K2746.D	Data Locked	van, 02-Dec-2020 06:50
420K2747.D	Data Locked	van, 02-Dec-2020 06:50
420K2748.D	Data Locked	van, 02-Dec-2020 06:50
420K2749.D	Data Locked	van, 02-Dec-2020 06:50
420K2750.D	Data Locked	van, 02-Dec-2020 06:50
420K2751.D	Data Locked	van, 02-Dec-2020 06:50
420K2752.D	Data Locked	van, 02-Dec-2020 06:50
420K2753.D	Data Locked	van, 02-Dec-2020 06:50
420K2754.D	Data Locked	van, 02-Dec-2020 06:50
420K2755.D	Data Locked	van, 02-Dec-2020 06:50
420K2756.D	Data Locked	van, 02-Dec-2020 06:50
420K2757.D	Data Locked	van, 02-Dec-2020 06:50
420K2758.D	Data Locked	van, 02-Dec-2020 06:50
420K2759.D	Data Locked	van, 02-Dec-2020 06:50
420K2760.D	Data Locked	van, 02-Dec-2020 06:50
420K2761.D	Data Locked	van, 02-Dec-2020 06:50
420K2762.D	Data Locked	van, 02-Dec-2020 06:50
420K2763.D	Data Locked	van, 02-Dec-2020 06:50
420K2764.D	Data Locked	van, 02-Dec-2020 06:50
420K2765.D	Data Locked	van, 02-Dec-2020 06:50
420K2766.D	Data Locked	van, 02-Dec-2020 06:50
420K2767.D	Data Locked	van, 02-Dec-2020 06:50
420K2768.D	Data Locked	van, 02-Dec-2020 06:50
420K2769.D	Data Locked	van, 02-Dec-2020 06:50
420K2770.D	Data Locked	van, 02-Dec-2020 06:50
420K2771.D	Data Locked	van, 02-Dec-2020 06:50
420K2772.D	Data Locked	van, 02-Dec-2020 06:50
420K2773.D	Data Locked	van, 02-Dec-2020 06:50
420K2774.D	Data Locked	van, 02-Dec-2020 06:50
420K2775.D	Data Locked	van, 02-Dec-2020 06:50
420K2776.D	Data Locked	van, 02-Dec-2020 06:50
420K2777.D	Data Locked	van, 02-Dec-2020 06:50
420K2778.D	Data Locked	van, 02-Dec-2020 06:50

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0016	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIL0016-IBL1	420K2403.D	NA	11/24/20 08:20
Instrument Blank	SIL0016-IBL2	420K2404.D	NA	11/24/20 08:40
DIESEL ICV	SIL0016-ICV1	420K2405.D	NA	11/24/20 09:00
MOIL ICV	SIL0016-ICV2	420K2406.D	NA	11/24/20 09:21
ZZZZZ	20K0008-14	420K2407.D	Solid	11/24/20 09:41
ZZZZZ	20K0008-20	420K2408.D	Solid	11/24/20 10:01
ZZZZZ	20K0008-22	420K2410.D	Solid	11/24/20 10:42
ZZZZZ	20K0008-26	420K2411.D	Solid	11/24/20 11:02
ZZZZZ	20K0008-28	420K2412.D	Solid	11/24/20 11:23
ZZZZZ	20K0008-31	420K2413.D	Solid	11/24/20 11:43
ZZZZZ	20K0008-33	420K2414.D	Solid	11/24/20 12:04
ZZZZZ	20K0008-01	420K2416.D	Solid	11/24/20 12:44
DIESEL CCV	SIL0016-CCV1	420K2417.D	NA	11/24/20 13:05
MOIL CCV	SIL0016-CCV2	420K2418.D	NA	11/24/20 13:26
ZZZZZ	20K0008-07	420K2419.D	Solid	11/24/20 13:46
ZZZZZ	BIK0190-BLK1	420K2421.D	Water	11/24/20 14:27
ZZZZZ	BIK0190-BS1	420K2422.D	Water	11/24/20 14:48
ZZZZZ	BIK0190-BSD1	420K2423.D	Water	11/24/20 15:08
ZZZZZ	20K0078-03	420K2424.D	Water	11/24/20 15:28
ZZZZZ	20K0078-05	420K2425.D	Water	11/24/20 15:49
Blank	BIK0527-BLK1	420K2426.D	Solid	11/24/20 16:09
LCS	BIK0527-BS1	420K2427.D	Solid	11/24/20 16:30
ZZZZZ	20K0115-01	420K2428.D	Solid	11/24/20 16:50
ZZZZZ	20K0115-02	420K2429.D	Solid	11/24/20 17:10
ZZZZZ	20K0115-04	420K2430.D	Solid	11/24/20 17:30
ZZZZZ	20K0115-05	420K2431.D	Solid	11/24/20 17:51
ZZZZZ	20K0115-10	420K2432.D	Solid	11/24/20 18:11
PP15-2.5	20K0126-01	420K2433.D	Solid	11/24/20 18:31
DIESEL CCV	SIL0016-CCV3	420K2434.D	NA	11/24/20 18:52
MOIL CCV	SIL0016-CCV4	420K2435.D	NA	11/24/20 19:12

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0020	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIL0020-IBL1	420L0214.D	NA	12/02/20 13:24
Instrument Blank	SIL0020-IBL2	420L0215.D	NA	12/02/20 13:44
DIESEL ICV	SIL0020-ICV1	420L0216.D	NA	12/02/20 14:04
MOIL ICV	SIL0020-ICV2	420L0217.D	NA	12/02/20 14:24
ZZZZZ	20K0102-28RE1	420L0218.D	Solid	12/02/20 14:45
ZZZZZ	BIK0519-BLK1	420L0219.D	Water	12/02/20 15:05
ZZZZZ	BIK0519-BS1	420L0220.D	Water	12/02/20 15:25
ZZZZZ	20K0216-01	420L0221.D	Water	12/02/20 15:46
ZZZZZ	20K0216-03	420L0222.D	Water	12/02/20 16:06
ZZZZZ	20K0218-01	420L0223.D	Water	12/02/20 16:26
ZZZZZ	20K0223-01	420L0224.D	Water	12/02/20 16:46
ZZZZZ	20K0223-02	420L0225.D	Water	12/02/20 17:07
ZZZZZ	20K0223-03	420L0226.D	Water	12/02/20 17:27
ZZZZZ	20K0223-04	420L0227.D	Water	12/02/20 17:47
ZZZZZ	20K0223-05	420L0228.D	Water	12/02/20 18:07
ZZZZZ	20K0228-01	420L0229.D	Water	12/02/20 18:28
DIESEL CCV	SIL0020-CCV1	420L0230.D	NA	12/02/20 18:48
MOIL CCV	SIL0020-CCV2	420L0231.D	NA	12/02/20 19:08
PP3-2	20K0126-22	420L0232.D	Solid	12/02/20 19:28
ZZZZZ	20K0387-01	420L0233.D	Solid	12/02/20 19:49
ZZZZZ	20K0388-02	420L0234.D	Solid	12/02/20 20:09
ZZZZZ	20K0388-03	420L0235.D	Solid	12/02/20 20:29
ZZZZZ	20K0388-06	420L0236.D	Solid	12/02/20 20:49
ZZZZZ	20K0230-01	420L0237.D	Water	12/02/20 21:09
ZZZZZ	20K0234-01	420L0238.D	Water	12/02/20 21:29
ZZZZZ	20K0234-03	420L0239.D	Water	12/02/20 21:50
ZZZZZ	20K0234-05	420L0240.D	Water	12/02/20 22:10
ZZZZZ	20K0234-07	420L0241.D	Water	12/02/20 22:30
DIESEL CCV	SIL0020-CCV3	420L0242.D	NA	12/02/20 22:50
MOIL CCV	SIL0020-CCV4	420L0243.D	NA	12/02/20 23:10

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Sequence: SIL0020

SDG: 20K0126
Project: ICS-Former NW Cooperage
Instrument: FID4
Calibration: DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BIK0587-BLK1	420L0244.D	Solid	12/02/20 23:30
ZZZZZ	BIK0587-BS1	420L0245.D	Solid	12/02/20 23:50
ZZZZZ	20K0152-01	420L0246.D	Solid	12/03/20 00:10
ZZZZZ	20K0152-02	420L0247.D	Solid	12/03/20 00:31
ZZZZZ	20K0152-03	420L0248.D	Solid	12/03/20 00:51
ZZZZZ	20K0145-02	420L0251.D	Solid	12/03/20 01:51
ZZZZZ	20K0145-03	420L0252.D	Solid	12/03/20 02:11
ZZZZZ	20K0145-07	420L0253.D	Solid	12/03/20 02:31
ZZZZZ	20K0145-08	420L0254.D	Solid	12/03/20 02:51
ZZZZZ	20K0145-11	420L0255.D	Solid	12/03/20 03:11
ZZZZZ	20K0145-13	420L0256.D	Solid	12/03/20 03:31
DIESEL CCV	SIL0020-CCV5	420L0257.D	NA	12/03/20 03:51
MOIL CCV	SIL0020-CCV6	420L0258.D	NA	12/03/20 04:11
ZZZZZ	20K0203-09	420L0261.D	Solid	12/03/20 05:12
ZZZZZ	20K0203-10	420L0262.D	Solid	12/03/20 05:32
ZZZZZ	20K0203-12	420L0263.D	Solid	12/03/20 05:52
ZZZZZ	20K0203-20	420L0264.D	Solid	12/03/20 06:12
ZZZZZ	20K0203-21	420L0265.D	Solid	12/03/20 06:33
ZZZZZ	20K0203-24	420L0266.D	Solid	12/03/20 06:53
ZZZZZ	20K0203-25	420L0267.D	Solid	12/03/20 07:13
ZZZZZ	20K0203-26	420L0268.D	Solid	12/03/20 07:33
ZZZZZ	20K0203-27	420L0271.D	Solid	12/03/20 08:34
ZZZZZ	20K0203-29	420L0272.D	Solid	12/03/20 08:54
DIESEL CCV	SIL0020-CCV7	420L0273.D	NA	12/03/20 09:14
MOIL CCV	SIL0020-CCV8	420L0274.D	NA	12/03/20 09:34

Analytical Resources, Incorporated
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Printed: 12/3/2020 12:35:34PM

ANALYSIS SEQUENCE

SIL0020

Instrument: FID4 Element Column ID: G004923
Calibration ID: DA00022

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0020-IBL1	Retention Time Standard	QC		1	I006239		
SIL0020-IBL2	Instrument Blank	QC		2	I006241		
SIL0020-ICV1	DIESEL ICV	QC		3	I008275		
SIL0020-ICV2	MOIL ICV	QC		4	I008935		
20K0102-28RE1	JSMPDI-048SC-B-10-12-20110	TPH NW (Extractables)	A 01	5			Added 12/2/2020 by VTS
BIK0519-BLK1	Blank	QC		6			
BIK0519-BS1	LCS	QC		7			
20K0216-01	Influent	TPH NW (Extractables) low level	D 01	8			
20K0216-03	Effluent	TPH NW (Extractables) low level	D 01	9			
20K0218-01	Basin 4	TPH NW (Extractables) low level	D 01	10			
20K0223-01	DC2-2.18M	TPH NW (Extractables) low level	D 01	11			
20K0223-02	DC5-5.1M	TPH NW (Extractables) low level	D 01	12			
20K0223-03	DC11-OWS-11	TPH NW (Extractables) low level	D 01	13			
20K0223-04	DC12-12.58M	TPH NW (Extractables) low level	D 01	14			
20K0223-05	DC13-13.45M	TPH NW (Extractables) low level	D 01	15			
20K0228-01	MFC-6.2C	TPH NW (Extractables) low level	D 01	16			
SIL0020-CCV1	DIESEL CCV	QC		17	I008275		
SIL0020-CCV2	MOIL CCV	QC		18	I008935		
20K0126-22	PP3-2	TPH NW (Extractables) low level	A 01	19			
20K0387-01	PGW-V-207-11/2020	TPH NW (Extractables) low level	A 01	20			
20K0388-02	PGW-V-113-11/2020	TPH NW (Extractables) low level	A 01	21			
20K0388-03	PGW-V-114-11/2020	TPH NW (Extractables) low level	A 01	22			

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ANALYSIS SEQUENCE

SIL0020

Instrument: FID4 Element Column ID: G004923
Calibration ID: DA00022

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
20K0388-06	PGW-V-117-11/2020	TPH NW (Extractables) low level	A 01	23			
20K0230-01	SDE4/S1111220GRAB	TPH NW (Extractables) low level	B 01	24			
20K0234-01	P2A (2-448)	TPH NW (Extractables) low level	D 01	25			
20K0234-03	P26	TPH NW (Extractables) low level	D 01	26			
20K0234-05	P33	TPH NW (Extractables) low level	D 01	27			
20K0234-07	P36	TPH NW (Extractables) low level	D 01	28			
SIL0020-CCV3	DIESEL CCV	QC		29	I008275		
SIL0020-CCV4	MOIL CCV	QC		30	I008935		
BIK0587-BLK1	Blank	QC		31			
BIK0587-BS1	LCS	QC		32			
20K0152-01	SB-2020-013:1.5-11052020	TPH NW (Extractables) low level	B 01	33			
20K0152-02	SB-2020-013:6-11052020	TPH NW (Extractables) low level	B 01	34			
20K0152-03	SB-2020-013:11.5-11052020	TPH NW (Extractables) low level	B 01	35			
BIK0587-MS1	Matrix Spike	QC		36			
BIK0587-MSD1	Matrix Spike Dup	QC		37			
20K0145-02	PP1-5	TPH NW (Extractables) low level	A 01	38			
20K0145-03	PP1-7.5	TPH NW (Extractables) low level	A 01	39			
20K0145-07	PP2-5	TPH NW (Extractables) low level	A 01	40			
20K0145-08	PP2-7.5	TPH NW (Extractables) low level	A 01	41			
20K0145-11	PP5-2	TPH NW (Extractables) low level	A 01	42			
20K0145-13	PP5-8	TPH NW (Extractables) low level	A 01	43			
SIL0020-CCV5	DIESEL CCV	QC		44	I008275		

Analytical Resources, Incorporated
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ANALYSIS SEQUENCE

SIL0020

Instrument: FID4 Element Column ID: G004923
Calibration ID: DA00022

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0020-CCV6	MOIL CCV	QC		45	I008935		
BIK0701-BLK1	Blank	QC		46			
BIK0701-BS1	LCS	QC		47			
20K0203-09	JSMPDI-014SC-A-00-01-20110	TPH NW (Extractables)	A 02	48			
20K0203-10	JSMPDI-014SC-A-10-11-20110	TPH NW (Extractables)	A 02	49			
20K0203-12	JSMPDI-014SC-B-02-04-20110	TPH NW (Extractables)	A 02	50			
20K0203-20	JSMPDI-057SC-A-00-01-20110	TPH NW (Extractables)	A 02	51			
20K0203-21	JSMPDI-057SC-A-03-04-20110	TPH NW (Extractables)	A 02	52			
20K0203-24	JSMPDI-057SC-B-04-06-20110	TPH NW (Extractables)	A 02	53			
20K0203-25	JSMPDI-057SC-B-06-08-20110	TPH NW (Extractables)	A 02	54			
20K0203-26	JSMPDI-057SC-B-08-10-20110	TPH NW (Extractables)	A 02	55			
BIK0701-MS1	Matrix Spike	QC		56			
BIK0701-MSD1	Matrix Spike Dup	QC		57			
20K0203-27	JSMPDI-057SC-B-10-12-20110	TPH NW (Extractables)	A 02	58			
20K0203-29	SMPDI-1057SC-B-06-08-2011(	TPH NW (Extractables)	A 02	59			
SIL0020-CCV7	DIESEL CCV	QC		60	I008275		
SIL0020-CCV8	MOIL CCV	QC		61	I008935		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201202.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	02-DEC-2020 13:24	420L0214.D	1	SIL0020-IBL1	
2	02-DEC-2020 13:44	420L0215.D	1	SIL0020-IBL2	
3	02-DEC-2020 14:04	420L0216.D	1	SIL0020-ICV1	
4	02-DEC-2020 14:24	420L0217.D	1	SIL0020-ICV2	
5	02-DEC-2020 14:45	420L0218.D	1	20K0102-28	
6	02-DEC-2020 15:05	420L0219.D	1	BIK0519-BLK1	
7	02-DEC-2020 15:25	420L0220.D	1	BIK0519-BS1	
8	02-DEC-2020 15:46	420L0221.D	1	20K0216-01	
9	02-DEC-2020 16:06	420L0222.D	1	20K0216-03	
10	02-DEC-2020 16:26	420L0223.D	1	20K0218-01	
11	02-DEC-2020 16:46	420L0224.D	1	20K0223-01	
12	02-DEC-2020 17:07	420L0225.D	1	20K0223-02	
13	02-DEC-2020 17:27	420L0226.D	1	20K0223-03	
14	02-DEC-2020 17:47	420L0227.D	1	20K0223-04	
15	02-DEC-2020 18:07	420L0228.D	1	20K0223-05	
16	02-DEC-2020 18:28	420L0229.D	1	20K0228-01	
17	02-DEC-2020 18:48	420L0230.D	1	SIL0020-CCV1	
18	02-DEC-2020 19:08	420L0231.D	1	SIL0020-CCV2	
19	02-DEC-2020 19:28	420L0232.D	3	20K0126-22	
20	02-DEC-2020 19:49	420L0233.D	3	20K0387-01	
21	02-DEC-2020 20:09	420L0234.D	3	20K0388-02	
22	02-DEC-2020 20:29	420L0235.D	3	20K0388-03	
23	02-DEC-2020 20:49	420L0236.D	3	20K0388-06	
24	02-DEC-2020 21:09	420L0237.D	1	20K0230-01	
25	02-DEC-2020 21:29	420L0238.D	1	20K0234-01	
26	02-DEC-2020 21:50	420L0239.D	1	20K0234-03	
27	02-DEC-2020 22:10	420L0240.D	1	20K0234-05	
28	02-DEC-2020 22:30	420L0241.D	1	20K0234-07	
29	02-DEC-2020 22:50	420L0242.D	1	SIL0020-CCV3	
30	02-DEC-2020 23:10	420L0243.D	1	SIL0020-CCV4	
31	02-DEC-2020 23:30	420L0244.D	1	BIK0587-BLK1	
32	02-DEC-2020 23:50	420L0245.D	1	BIK0587-BS1	
33	03-DEC-2020 00:10	420L0246.D	1	20K0152-01	
34	03-DEC-2020 00:31	420L0247.D	1	20K0152-02	
35	03-DEC-2020 00:51	420L0248.D	1	20K0152-03	
36	03-DEC-2020 01:11	420L0249.D	1	BIK0587-MS1	
37	03-DEC-2020 01:31	420L0250.D	1	BIK0587-MSD1	
38	03-DEC-2020 01:51	420L0251.D	1	20K0145-02	
39	03-DEC-2020 02:11	420L0252.D	1	20K0145-03	
40	03-DEC-2020 02:31	420L0253.D	1	20K0145-07	
41	03-DEC-2020 02:51	420L0254.D	1	20K0145-08	
42	03-DEC-2020 03:11	420L0255.D	1	20K0145-11	
43	03-DEC-2020 03:31	420L0256.D	1	20K0145-13	
44	03-DEC-2020 03:51	420L0257.D	1	SIL0020-CCV5	
45	03-DEC-2020 04:11	420L0258.D	1	SIL0020-CCV6	

46	03-DEC-2020 04:32	420L0259.D	1	BIK0701-BLK1
47	03-DEC-2020 04:52	420L0260.D	1	BIK0701-BS1
48	03-DEC-2020 05:12	420L0261.D	1	20K0203-09
49	03-DEC-2020 05:32	420L0262.D	1	20K0203-10
50	03-DEC-2020 05:52	420L0263.D	1	20K0203-12

	Inject Date/Time	Filename	DF	LabID	ClientID
51	03-DEC-2020 06:12	420L0264.D	1	20K0203-20	
52	03-DEC-2020 06:33	420L0265.D	1	20K0203-21	
53	03-DEC-2020 06:53	420L0266.D	1	20K0203-24	
54	03-DEC-2020 07:13	420L0267.D	1	20K0203-25	
55	03-DEC-2020 07:33	420L0268.D	1	20K0203-26	
56	03-DEC-2020 07:53	420L0269.D	1	BIK0701-MS1	
57	03-DEC-2020 08:13	420L0270.D	1	BIK0701-MSD1	
58	03-DEC-2020 08:34	420L0271.D	1	20K0203-27	
59	03-DEC-2020 08:54	420L0272.D	1	20K0203-29	
60	03-DEC-2020 09:14	420L0273.D	1	SIL0020-CCV7	
61	03-DEC-2020 09:34	420L0274.D	1	SIL0020-CCV8	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201202.b

Instrument: fid4a.i   Date: 02-DEC-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
1324	420L0214.D	SIL0020-IBL1	1	NO MANUAL INTEGRATION
1344	420L0215.D	SIL0020-IBL2	1	NO MANUAL INTEGRATION
1404	420L0216.D	SIL0020-ICV1	1	o-terph,
1424	420L0217.D	SIL0020-ICV2	1	Triacon Surr,
1445	420L0218.D	20K0102-28	1	o-terph, Triacon Surr,
1505	420L0219.D	BIK0519-BLK1	1	NO MANUAL INTEGRATION
1525	420L0220.D	BIK0519-BS1	1	o-terph,
1546	420L0221.D	20K0216-01	1	o-terph, Triacon Surr,
1606	420L0222.D	20K0216-03	1	Triacon Surr,
1626	420L0223.D	20K0218-01	1	o-terph, Triacon Surr,
1646	420L0224.D	20K0223-01	1	Triacon Surr,
1707	420L0225.D	20K0223-02	1	NO MANUAL INTEGRATION
1727	420L0226.D	20K0223-03	1	o-terph, Triacon Surr,
1747	420L0227.D	20K0223-04	1	Triacon Surr,
1807	420L0228.D	20K0223-05	1	o-terph, Triacon Surr,
1828	420L0229.D	20K0228-01	1	o-terph, Triacon Surr,
1848	420L0230.D	SIL0020-CCV1	1	o-terph,

Instrument: fid4a.i Date: 02-DEC-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
1908	420L0231.D	SIL0020-CCV2	1	Triacon Surr,
1928	420L0232.D	20K0126-22	3	o-terph, Triacon Surr,
1949	420L0233.D	20K0387-01	3	o-terph, Triacon Surr,
2009	420L0234.D	20K0388-02	3	o-terph, Triacon Surr,
2029	420L0235.D	20K0388-03	3	o-terph, Triacon Surr,
2049	420L0236.D	20K0388-06	3	o-terph, Triacon Surr,
2109	420L0237.D	20K0230-01	1	o-terph, Triacon Surr,
2129	420L0238.D	20K0234-01	1	o-terph, Triacon Surr,
2150	420L0239.D	20K0234-03	1	NO MANUAL INTEGRATION
2210	420L0240.D	20K0234-05	1	NO MANUAL INTEGRATION
2230	420L0241.D	20K0234-07	1	NO MANUAL INTEGRATION
2250	420L0242.D	SIL0020-CCV3	1	o-terph,
2310	420L0243.D	SIL0020-CCV4	1	Triacon Surr,
2330	420L0244.D	BIK0587-BLK1	1	NO MANUAL INTEGRATION
2350	420L0245.D	BIK0587-BS1	1	o-terph,
0010	420L0246.D	20K0152-01	1	Triacon Surr,
0031	420L0247.D	20K0152-02	1	o-terph, Triacon Surr,
0051	420L0248.D	20K0152-03	1	o-terph, Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201202.b

Instrument: fid4a.i   Date: 03-DEC-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
0111	420L0249.D	BIK0587-MS1	1	o-terph,
0131	420L0250.D	BIK0587-MSD1	1	o-terph,
0151	420L0251.D	20K0145-02	1	Triacon Surr,
0211	420L0252.D	20K0145-03	1	Triacon Surr,
0231	420L0253.D	20K0145-07	1	Triacon Surr,
0251	420L0254.D	20K0145-08	1	NO MANUAL INTEGRATION
0311	420L0255.D	20K0145-11	1	o-terph, Triacon Surr,
0331	420L0256.D	20K0145-13	1	o-terph, Triacon Surr,
0351	420L0257.D	SIL0020-CCV5	1	o-terph,
0411	420L0258.D	SIL0020-CCV6	1	Triacon Surr,
0432	420L0259.D	BIK0701-BLK1	1	NO MANUAL INTEGRATION
0452	420L0260.D	BIK0701-BS1	1	o-terph,
0512	420L0261.D	20K0203-09	1	o-terph, Triacon Surr,
0532	420L0262.D	20K0203-10	1	o-terph, Triacon Surr,
0552	420L0263.D	20K0203-12	1	o-terph, Triacon Surr,
0612	420L0264.D	20K0203-20	1	o-terph, Triacon Surr,
0633	420L0265.D	20K0203-21	1	o-terph, Triacon Surr,
0653	420L0266.D	20K0203-24	1	o-terph, Triacon Surr,

Instrument: fid4a.i Date: 03-DEC-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
0713	420L0267.D	20K0203-25	1	NO MANUAL INTEGRATION
0733	420L0268.D	20K0203-26	1	NO MANUAL INTEGRATION
0753	420L0269.D	BIK0701-MS1	1	o-terph,
0813	420L0270.D	BIK0701-MSD1	1	o-terph,
0834	420L0271.D	20K0203-27	1	NO MANUAL INTEGRATION
0854	420L0272.D	20K0203-29	1	NO MANUAL INTEGRATION
0914	420L0273.D	SIL0020-CCV7	1	o-terph,
0934	420L0274.D	SIL0020-CCV8	1	Triacon Surr,

Security Status Report

Date: 03-Dec-2020 10:49

420L0214.D	Data Locked	van, 03-Dec-2020 10:49
420L0215.D	Data Locked	van, 03-Dec-2020 10:49
420L0216.D	Data Locked	van, 03-Dec-2020 10:49
420L0217.D	Data Locked	van, 03-Dec-2020 10:49
420L0218.D	Data Locked	van, 03-Dec-2020 10:49
420L0219.D	Data Locked	van, 03-Dec-2020 10:49
420L0220.D	Data Locked	van, 03-Dec-2020 10:49
420L0221.D	Data Locked	van, 03-Dec-2020 10:49
420L0222.D	Data Locked	van, 03-Dec-2020 10:49
420L0223.D	Data Locked	van, 03-Dec-2020 10:49
420L0224.D	Data Locked	van, 03-Dec-2020 10:49
420L0225.D	Data Locked	van, 03-Dec-2020 10:49
420L0226.D	Data Locked	van, 03-Dec-2020 10:49
420L0227.D	Data Locked	van, 03-Dec-2020 10:49
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420L0229.D	Data Locked	van, 03-Dec-2020 10:49
420L0230.D	Data Locked	van, 03-Dec-2020 10:49
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420L0245.D	Data Locked	van, 03-Dec-2020 10:49
420L0246.D	Data Locked	van, 03-Dec-2020 10:49
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420L0254.D	Data Locked	van, 03-Dec-2020 10:49
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420L0256.D	Data Locked	van, 03-Dec-2020 10:49
420L0257.D	Data Locked	van, 03-Dec-2020 10:49

420L0258.D	Data Locked	van, 03-Dec-2020 10:49
420L0259.D	Data Locked	van, 03-Dec-2020 10:49
420L0260.D	Data Locked	van, 03-Dec-2020 10:49
420L0261.D	Data Locked	van, 03-Dec-2020 10:49
420L0262.D	Data Locked	van, 03-Dec-2020 10:49
420L0263.D	Data Locked	van, 03-Dec-2020 10:49
420L0264.D	Data Locked	van, 03-Dec-2020 10:49
420L0265.D	Data Locked	van, 03-Dec-2020 10:49
420L0266.D	Data Locked	van, 03-Dec-2020 10:49
420L0267.D	Data Locked	van, 03-Dec-2020 10:49
420L0268.D	Data Locked	van, 03-Dec-2020 10:49
420L0269.D	Data Locked	van, 03-Dec-2020 10:49
420L0270.D	Data Locked	van, 03-Dec-2020 10:49
420L0271.D	Data Locked	van, 03-Dec-2020 10:49
420L0272.D	Data Locked	van, 03-Dec-2020 10:49
420L0273.D	Data Locked	van, 03-Dec-2020 10:49
420L0274.D	Data Locked	van, 03-Dec-2020 10:49

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Extract Dilution Bench Sheet

Sequence: SIL0020

Analyst: VB   Date: 12/2/2020

Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor
20K0285 -1, 2	100	DCM	900	10				
20K0291 -11, 16	100	dcm	900	10				
20K0387- 1	200	DCM	400	3				
20K0388 -1,2,3,6	200	DCM	400	3				

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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG/WO: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sequence: SIH0165 Instrument: FID4

Calibration: DA00022 Calibration Date: 10/25/2019

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIH0165-CCV1 (Solid)				Lab File ID: 420H1413.D			Analyzed: 08/14/20 11:59	
o-Terphenyl	90.000	88.1	85 - 115	6.33	6.66	-0.3300	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG/WO: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sequence: SIJ0042 Instrument: FID4

Calibration: DA00022 Calibration Date: 10/25/2019

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIJ0042-ICV1 (Water)				Lab File ID: 420J0205.D			Analyzed: 10/02/20 10:02	
o-Terphenyl	90.000	89.6	85 - 115	6.28	6.66	-0.3800	N/A	
SIJ0042-ICV3 (Water)				Lab File ID: 420J0213.D			Analyzed: 10/02/20 12:46	
o-Terphenyl	90.000	94.7	85 - 115	6.28	6.66	-0.3800	N/A	
SIJ0042-CCV1 (Water)				Lab File ID: 420J0227.D			Analyzed: 10/02/20 17:33	
o-Terphenyl	90.000	88.3	85 - 115	6.28	6.66	-0.3800	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIK0016	Instrument:	FID4
Calibration:	DA00022	Calibration Date:	10/25/2019

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIK0016-ICV1 (Water)				Lab File ID: 420K0205.D			Analyzed: 11/02/20 09:50	
o-Terphenyl	90.000	95.0	85 - 115	6.25	6.66	-0.4100	N/A	
SIK0016-ICV3 (Water)				Lab File ID: 420K0213.D			Analyzed: 11/02/20 12:33	
o-Terphenyl	22.500	101	85 - 115	6.23	6.66	-0.4300	N/A	
SIK0016-CCV1 (Water)				Lab File ID: 420K0216.D			Analyzed: 11/02/20 13:34	
o-Terphenyl	90.000	94.2	85 - 115	6.25	6.66	-0.4100	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG/WO: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sequence: SIK0381 Instrument: FID4

Calibration: DA00022 Calibration Date: 11/02/2020

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIK0381-IBL1 (Water)			Lab File ID: 420K2703.D			Analyzed: 11/27/20 08:58		
o-Terphenyl	100.00	106	50 - 150	6.2	6.66	-0.4600	N/A	
SIK0381-IBL2 (Water)			Lab File ID: 420K2704.D			Analyzed: 11/27/20 09:18		
o-Terphenyl	100.00	102	50 - 150	6.2	6.66	-0.4600	N/A	
SIK0381-ICV1 (Water)			Lab File ID: 420K2705.D			Analyzed: 11/27/20 09:38		
o-Terphenyl	90.000	97.3	85 - 115	6.2	6.66	-0.4600	N/A	
SIK0381-CCV1 (Water)			Lab File ID: 420K2711.D			Analyzed: 11/27/20 11:39		
o-Terphenyl	90.000	95.4	85 - 115	6.2	6.66	-0.4600	N/A	
SIK0381-IBL3 (Water)			Lab File ID: 420K2713.D			Analyzed: 11/27/20 12:52		
o-Terphenyl	100.00	107	50 - 150	6.2	6.66	-0.4600	N/A	
SIK0381-IBL4 (Water)			Lab File ID: 420K2714.D			Analyzed: 11/27/20 13:13		
o-Terphenyl	100.00	110	50 - 150	6.2	6.66	-0.4600	N/A	
SIK0381-ICV3 (Water)			Lab File ID: 420K2715.D			Analyzed: 11/27/20 13:33		
o-Terphenyl	90.000	96.4	85 - 115	6.2	6.66	-0.4600	N/A	
SIK0381-CCV3 (Water)			Lab File ID: 420K2721.D			Analyzed: 11/27/20 15:35		
o-Terphenyl	90.000	95.9	85 - 115	6.2	6.66	-0.4600	N/A	
20K0126-02 (Solid)			Lab File ID: 420K2723.D			Analyzed: 11/27/20 18:45		
o-Terphenyl	16.230	72.4	50 - 150	6.199	6.66	-0.4610	N/A	
20K0126-06 (Solid)			Lab File ID: 420K2724.D			Analyzed: 11/27/20 19:06		
o-Terphenyl	13.721	83.6	50 - 150	6.19	6.66	-0.4700	N/A	
20K0126-07 (Solid)			Lab File ID: 420K2725.D			Analyzed: 11/27/20 19:26		
o-Terphenyl	14.664	73.1	50 - 150	6.2	6.66	-0.4600	N/A	
20K0126-12 (Solid)			Lab File ID: 420K2726.D			Analyzed: 11/27/20 19:46		
o-Terphenyl	14.593	96.9	50 - 150	6.2	6.66	-0.4600	N/A	
20K0126-16 (Solid)			Lab File ID: 420K2727.D			Analyzed: 11/27/20 20:06		
o-Terphenyl	12.217	79.6	50 - 150	6.2	6.66	-0.4600	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG/WO: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sequence: SIK0381 Instrument: FID4

Calibration: DA00022 Calibration Date: 11/02/2020

Surrogate Compound	Spike Level mg/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BIK0527-MS1 (Solid)			Lab File ID: 420K2728.D			Analyzed: 11/27/20 20:26		
o-Terphenyl	12.230	81.0	50 - 150	6.2	6.66	-0.4600	N/A	
BIK0527-MSD1 (Solid)			Lab File ID: 420K2729.D			Analyzed: 11/27/20 20:47		
o-Terphenyl	12.230	73.6	50 - 150	6.2	6.66	-0.4600	N/A	
20K0126-18 (Solid)			Lab File ID: 420K2730.D			Analyzed: 11/27/20 21:07		
o-Terphenyl	14.549	84.8	50 - 150	6.2	6.66	-0.4600	N/A	
20K0126-24 (Solid)			Lab File ID: 420K2731.D			Analyzed: 11/27/20 21:27		
o-Terphenyl	14.056	80.0	50 - 150	6.2	6.66	-0.4600	N/A	
20K0126-11 (Solid)			Lab File ID: 420K2732.D			Analyzed: 11/27/20 21:48		
o-Terphenyl	14.650	93.3	50 - 150	6.18	6.66	-0.4800	N/A	
SIK0381-CCV5 (Water)			Lab File ID: 420K2733.D			Analyzed: 11/27/20 22:08		
o-Terphenyl	90.000	99.8	85 - 115	6.2	6.66	-0.4600	N/A	
SIK0381-CCV7 (Water)			Lab File ID: 420K2749.D			Analyzed: 11/28/20 03:31		
o-Terphenyl	90.000	102	85 - 115	6.2	6.66	-0.4600	N/A	
SIK0381-CCV9 (Water)			Lab File ID: 420K2763.D			Analyzed: 11/28/20 08:14		
o-Terphenyl	90.000	99.6	85 - 115	6.2	6.66	-0.4600	N/A	
SIK0381-CCVB (Water)			Lab File ID: 420K2777.D			Analyzed: 11/28/20 12:57		
o-Terphenyl	90.000	110	85 - 115	6.2	6.66	-0.4600	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0016	Instrument:	FID4
Calibration:	DA00022	Calibration Date:	11/02/2020

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0016-IBL1 (Solid)			Lab File ID: 420K2403.D			Analyzed: 11/24/20 08:20		
o-Terphenyl	100.00	102	50 - 150	6.2	6.66	-0.4600	N/A	
SIL0016-IBL2 (Solid)			Lab File ID: 420K2404.D			Analyzed: 11/24/20 08:40		
o-Terphenyl	100.00	112	50 - 150	6.21	6.66	-0.4500	N/A	
SIL0016-ICV1 (Solid)			Lab File ID: 420K2405.D			Analyzed: 11/24/20 09:00		
o-Terphenyl	90.000	94.2	85 - 115	6.2	6.66	-0.4600	N/A	
SIL0016-CCV1 (Solid)			Lab File ID: 420K2417.D			Analyzed: 11/24/20 13:05		
o-Terphenyl	90.000	97.0	85 - 115	6.2	6.66	-0.4600	N/A	
BIK0527-BLK1 (Solid)			Lab File ID: 420K2426.D			Analyzed: 11/24/20 16:09		
o-Terphenyl	11.250	96.4	50 - 150	6.2	6.66	-0.4600	N/A	
BIK0527-BS1 (Solid)			Lab File ID: 420K2427.D			Analyzed: 11/24/20 16:30		
o-Terphenyl	11.250	92.9	50 - 150	6.21	6.66	-0.4500	N/A	
20K0126-01 (Solid)			Lab File ID: 420K2433.D			Analyzed: 11/24/20 18:31		
o-Terphenyl	14.414	87.8	50 - 150	6.2	6.66	-0.4600	N/A	
SIL0016-CCV3 (Solid)			Lab File ID: 420K2434.D			Analyzed: 11/24/20 18:52		
o-Terphenyl	90.000	98.1	85 - 115	6.2	6.66	-0.4600	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0020	Instrument:	FID4
Calibration:	DA00022	Calibration Date:	11/02/2020

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0020-IBL1 (Water)				Lab File ID: 420L0214.D			Analyzed: 12/02/20 13:24	
o-Terphenyl	100.00	100	50 - 150	6.2	6.66	-0.4600	N/A	
SIL0020-IBL2 (Water)				Lab File ID: 420L0215.D			Analyzed: 12/02/20 13:44	
o-Terphenyl	100.00	97.2	50 - 150	6.19	6.66	-0.4700	N/A	
SIL0020-ICV1 (Water)				Lab File ID: 420L0216.D			Analyzed: 12/02/20 14:04	
o-Terphenyl	90.000	92.6	85 - 115	6.2	6.66	-0.4600	N/A	
SIL0020-CCV1 (Water)				Lab File ID: 420L0230.D			Analyzed: 12/02/20 18:48	
o-Terphenyl	90.000	93.0	85 - 115	6.19	6.66	-0.4700	N/A	
20K0126-22 (Solid)				Lab File ID: 420L0232.D			Analyzed: 12/02/20 19:28	
o-Terphenyl	12.340	66.7	50 - 150	6.18	6.66	-0.4800	N/A	
SIL0020-CCV3 (Water)				Lab File ID: 420L0242.D			Analyzed: 12/02/20 22:50	
o-Terphenyl	90.000	96.6	85 - 115	6.2	6.66	-0.4600	N/A	
SIL0020-CCV5 (Water)				Lab File ID: 420L0257.D			Analyzed: 12/03/20 03:51	
o-Terphenyl	90.000	95.7	85 - 115	6.19	6.66	-0.4700	N/A	
SIL0020-CCV7 (Water)				Lab File ID: 420L0273.D			Analyzed: 12/03/20 09:14	
o-Terphenyl	90.000	94.2	85 - 115	6.19	6.66	-0.4700	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PP15-2.5 20K0126-01	11/04/20 09:30	11/05/20 15:47	11/18/20 14:18	14	14	11/24/20 18:31	6	40	
PP15-5 20K0126-02	11/04/20 09:35	11/05/20 15:47	11/18/20 14:18	14	14	11/27/20 18:45	9	40	
PP16-2.5 20K0126-06	11/04/20 10:25	11/05/20 15:47	11/18/20 14:18	14	14	11/27/20 19:06	9	40	
PP16-5 20K0126-07	11/04/20 10:30	11/05/20 15:47	11/18/20 14:18	14	14	11/27/20 19:26	9	40	
PP13-2.5 20K0126-11	11/04/20 12:35	11/05/20 15:47	11/18/20 14:18	14	14	11/27/20 21:48	9	40	
PP13-5 20K0126-12	11/04/20 12:40	11/05/20 15:47	11/18/20 14:18	14	14	11/27/20 19:46	9	40	
PP7-2.5 20K0126-16	11/04/20 13:30	11/05/20 15:47	11/18/20 14:18	14	14	11/27/20 20:06	9	40	
PP7-7.5 20K0126-18	11/04/20 13:40	11/05/20 15:47	11/18/20 14:18	14	14	11/27/20 21:07	9	40	
PP3-2 20K0126-22	11/04/20 14:40	11/05/20 15:47	11/18/20 14:18	13	14	12/02/20 19:28	14	40	
PP3-5 20K0126-24	11/04/20 14:50	11/05/20 15:47	11/18/20 14:18	13	14	11/27/20 21:27	9	40	
Matrix Spike BIK0527-MS1	11/04/20 13:30	11/05/20 15:47	11/17/20 10:00	12	14	11/27/20 20:26	10	40	
Matrix Spike Dup BIK0527-MSD1	11/04/20 13:30	11/05/20 15:47	11/17/20 10:00	12	14	11/27/20 20:47	10	40	

* Indicates hold time exceedance.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

NWTPH-Dx

Laboratory: Analytical Resources, Inc.   SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc   Project: ICS-Former NW Cooperage

Matrix: Solid   Instrument: FID4

Analyte	MDL	RL	Units
Diesel Range Organics (C12-C24)	2.34	5.00	mg/kg
Motor Oil Range Organics (C24-C38)	2.99	10.0	mg/kg

METHOD DETECTION
AND REPORTING LIMITS

NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Water Instrument: FID4

Analyte	MDL	RL	Units
Diesel Range Organics (C12-C24)	0.033	0.100	mg/L
Motor Oil Range Organics (C24-C38)	0.056	0.200	mg/L

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP15-2.5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Solid	Laboratory ID:	20K0126-01 A	File ID:	20120807ECD7.D
Sampled:	11/04/20 09:30	Prepared:	11/18/20 11:50	Analyzed:	12/08/20 22:12
% Solids:	77.66	Preparation:	EPA 3546 (Microwave)	Initial/Final:	6.46 g Wet / 5 mL
Batch:	BIK0552	Sequence:	SIL0191	Calibration:	DL00019
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	19.9	8.0	19.9	U
11104-28-2	Aroclor 1221	1	1	19.9	8.0	19.9	U
11141-16-5	Aroclor 1232	1	1	19.9	8.0	19.9	U
53469-21-9	Aroclor 1242	1	1	19.9	8.0	19.9	U
12672-29-6	Aroclor 1248	1	1	19.9	8.0	19.9	U
11097-69-1	Aroclor 1254	1	1	19.9	8.0	19.9	U
11096-82-5	Aroclor 1260	1	1	19.9	9.2	19.9	U
37324-23-5	Aroclor 1262	1	1	19.9	9.2	19.9	U
11100-14-4	Aroclor 1268	1	1	19.9	9.2	19.9	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.866*	*27.2*	*68.3*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.866*	*28.8*	*72.3*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120807ECD7.D
Data file 2: /20201208.b/20201208.b/20120807ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0126-01RE1
Client ID:
Injection Date: 08-DEC-2020 22:12
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.011	-0.003	296241	5.396	-0.004	170258	28.9	29.8	3.2	Tetrachloro-m-xylene
13.195	-0.009	554013	13.941	-0.005	256144	27.3	29.2	6.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	72.3	74.6
Decachlorobiphenyl	68.3	72.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	702898	-10.6
Hexabromobiphenyl	2132987	1906830	-10.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	497630	-21.7
Hexabromobiphenyl	665758	533858	-19.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.608	-0.020	706	2.0	1	7.065	-0.008	1282	5.3
Aroclor-1016	2	6.987	-0.012	2312	2.1	2	7.659	-0.012	2329	4.3
Aroclor-1016	3	7.131	-0.018	3593	7.4	3	7.871	-0.009	698	3.4
Aroclor-1016	4	7.534	-0.010	1769	6.7	4	8.045	-0.010	570	4.6
	Total ~~Col1Ave (4 peaks):~~			~~4.5~~		~~Total Col2Ave (4 peaks):~~			~~4.4~~	RPD = 3
	Corrected Ave (3 peaks):			3.6		Corrected Ave (3 peaks):			4.1	RPD = 13
Aroclor-1221	1	3.976	0.005	269	2.9	1	---			0.0
Aroclor-1221	2	5.399	-0.007	394	3.0	2	6.083	0.009	2169	31.7
Aroclor-1221	3	5.668	-0.014	650	2.0	3	6.402	-0.015	1513	11.9
	Total ~~Col1Ave (3 peaks):~~			~~2.6~~			~~Col2Ave: <3 Quant Peaks~~			
Aroclor-1232	1	3.976	0.003	269	4.9	1	---			0.0
Aroclor-1232	2	6.608	-0.024	706	4.9	2	7.065	-0.011	1282	11.7
Aroclor-1232	3	6.987	-0.015	2312	4.9	3	7.659	-0.014	2329	10.1
Aroclor-1232	4	8.291	-0.018	2428	17.4	4	8.045	-0.012	570	10.9
	Total ~~Col1Ave (4 peaks):~~			~~8.0~~		~~Total Col2Ave (3 peaks):~~			~~10.9~~	~~R~~PD = 30
	Corrected Ave (3 peaks):			4.9			Corrected Ave: < 3 Peaks			
Aroclor-1242	1	6.608	-0.024	706	2.6	1	7.065	-0.011	1282	6.8
Aroclor-1242	2	6.987	-0.016	2312	2.7	2	7.659	-0.014	2329	5.3
Aroclor-1242	3	8.291	-0.018	2428	8.7	3	8.975	-0.016	998	5.8
Aroclor-1242	4	8.571	-0.032	1386	4.6	4	9.403	-0.025	1468	8.7
	Total ~~Col1Ave (4 peaks):~~			~~4.6~~		~~Total Col2Ave (4 peaks):~~			~~6.7~~	~~R~~PD = 36
	Corrected Ave (3 peaks):			3.3		Corrected Ave (3 peaks):			6.0	RPD = 58*
Aroclor-1248	1	7.473	-0.010	2777	7.6	1	8.144	0.007	2884	~~17~~.1
Aroclor-1248	2	7.939	-0.013	2638	4.7	2	8.547	-0.011	1534	6.9
Aroclor-1248	3	8.354	-0.008	4218	5.1	3	8.975	-0.012	998	3.2
Aroclor-1248	4	8.571	-0.026	1386	2.9	4	9.403	-0.020	1468	4.8
	Total Col1Ave (4 peaks):			5.1		Total Col2Ave (4 peaks):			8.0	RPD = 44*
	Corrected Ave (3 peaks):			4.3		Corrected Ave (3 peaks):			5.0	RPD = 15
Aroclor-1254	1	8.654	-0.018	4218	5.1	1	9.273	-0.012	1044	2.9
Aroclor-1254	2	8.724	-0.017	2747	6.1	2	9.403	0.025	1468	8.9
Aroclor-1254	3	9.045	0.006	9966	~~18~~.0	3	9.805	-0.011	170	0.7
Aroclor-1254	4	9.161	-0.014	4501	3.9	4	9.956	-0.011	1203	2.2
Aroclor-1254	5	9.848	-0.024	2503	3.3	5	10.205	0.008	1797	3.1
	Total Col1Ave (5 peaks):			7.3		Total Col2Ave (5 peaks):			3.6	RPD = 68*
	Corrected Ave (4 peaks):			4.6		Corrected Ave (4 peaks):			2.2	RPD = 69*
Aroclor-1260	1	10.382	-0.017	3618	4.9	1	11.028	-0.012	1488	4.6
Aroclor-1260	2	10.694	-0.027	7276	9.8	2	11.484	-0.019	6573	~~19~~.1
Aroclor-1260	3	11.056	-0.016	13339	6.9	3	11.744	-0.011	5167	5.9
Aroclor-1260	4	11.429	-0.045	117042	~~119~~.2	4	12.334	-0.008	2585	4.5
Aroclor-1260	5	11.569	-0.011	4861	11.4	NS	---			----
	Total Col1Ave (5 peaks):			30.4		Total Col2Ave (4 peaks):			8.5	RPD = 113*
	Corrected Ave (4 peaks):			8.3		Corrected Ave (3 peaks):			5.0	RPD = 49*
Aroclor-1262	1	10.415	0.010	7844	7.1	1	11.028	-0.016	1488	2.7
Aroclor-1262	2	11.056	-0.021	13339	5.3	2	11.744	-0.015	5167	4.2
Aroclor-1262	3	11.569	-0.017	4861	7.0	3	12.253	-0.023	4085	10.4
Aroclor-1262	4	11.636	-0.021	3684	4.0	4	13.055	-0.010	1195	2.7
	Total ~~Col1Ave (4 peaks):~~			~~5.9~~		~~Total Col2Ave (4 peaks):~~			~~5.0~~	~~RP~~D = 16
	Corrected Ave (3 peaks):			5.5		Corrected Ave (3 peaks):			3.2	RPD = 52*
Aroclor-1268	1	11.569	-0.019	4861	1.9	1	12.253	-0.020	4085	3.2
Aroclor-1268	2	11.636	-0.021	3684	1.4	2	12.334	-0.005	2585	1.8
Aroclor-1268	3	12.034	-0.004	3532	1.6	3	12.723	-0.007	438	0.4
Aroclor-1268	4	12.790	-0.023	7782	0.9	4	13.530	-0.016	2369	0.6
	Total Col~~1Ave (4 peaks):~~			~~1.4~~		~~Total Col2Ave (4 peaks):~~			~~1.5~~	~~RPD =~~ 4
	Corrected Ave (3 peaks):			1.3		Corrected Ave (3 peaks):			0.9	RPD = 31

Total PCB Area Col1 (5.114 - 13.105) = 560362 Col1 Total PCB = 0.1 ppm*

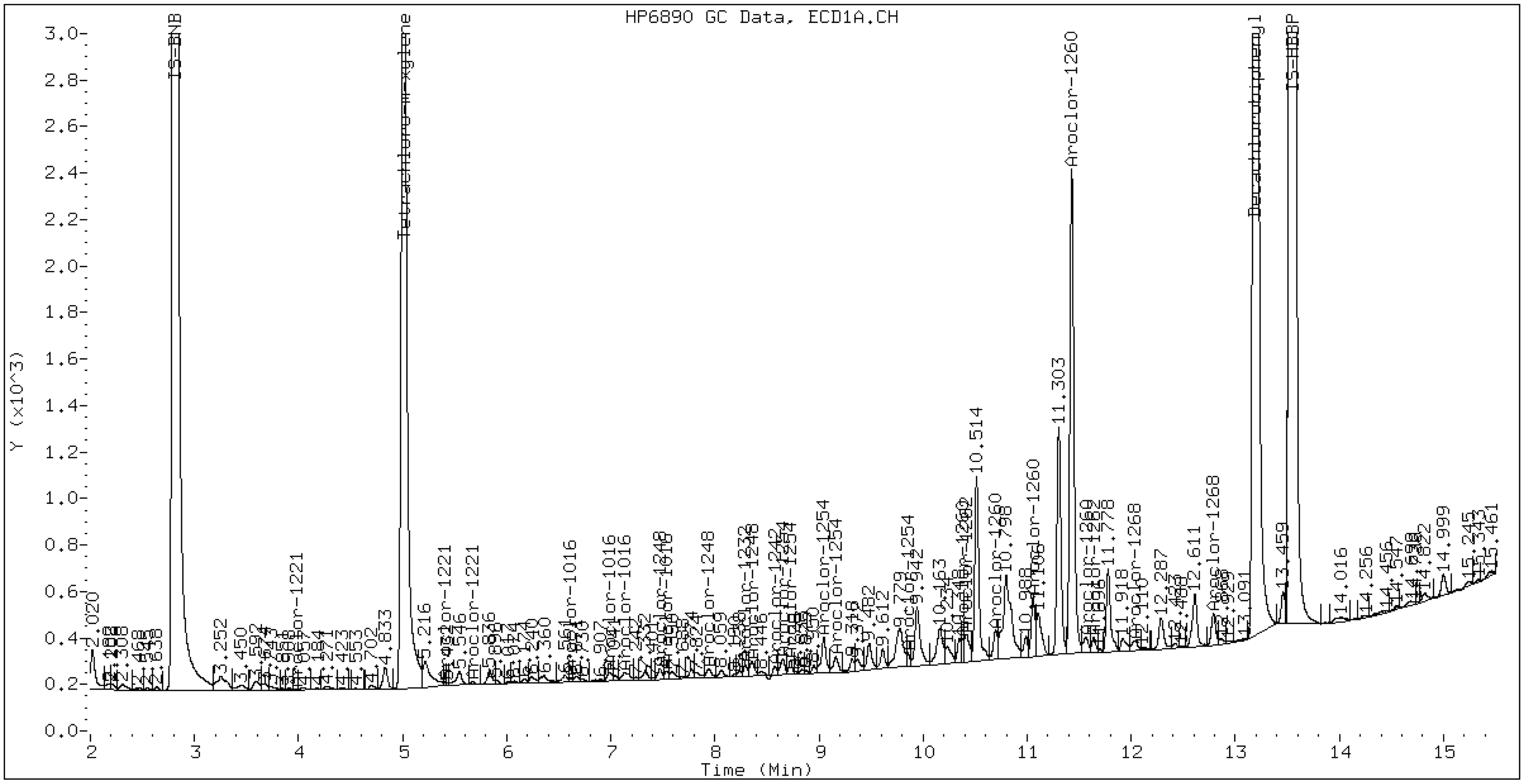
Total PCB Area Col2 (5.114 - 13.105) = 377991 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

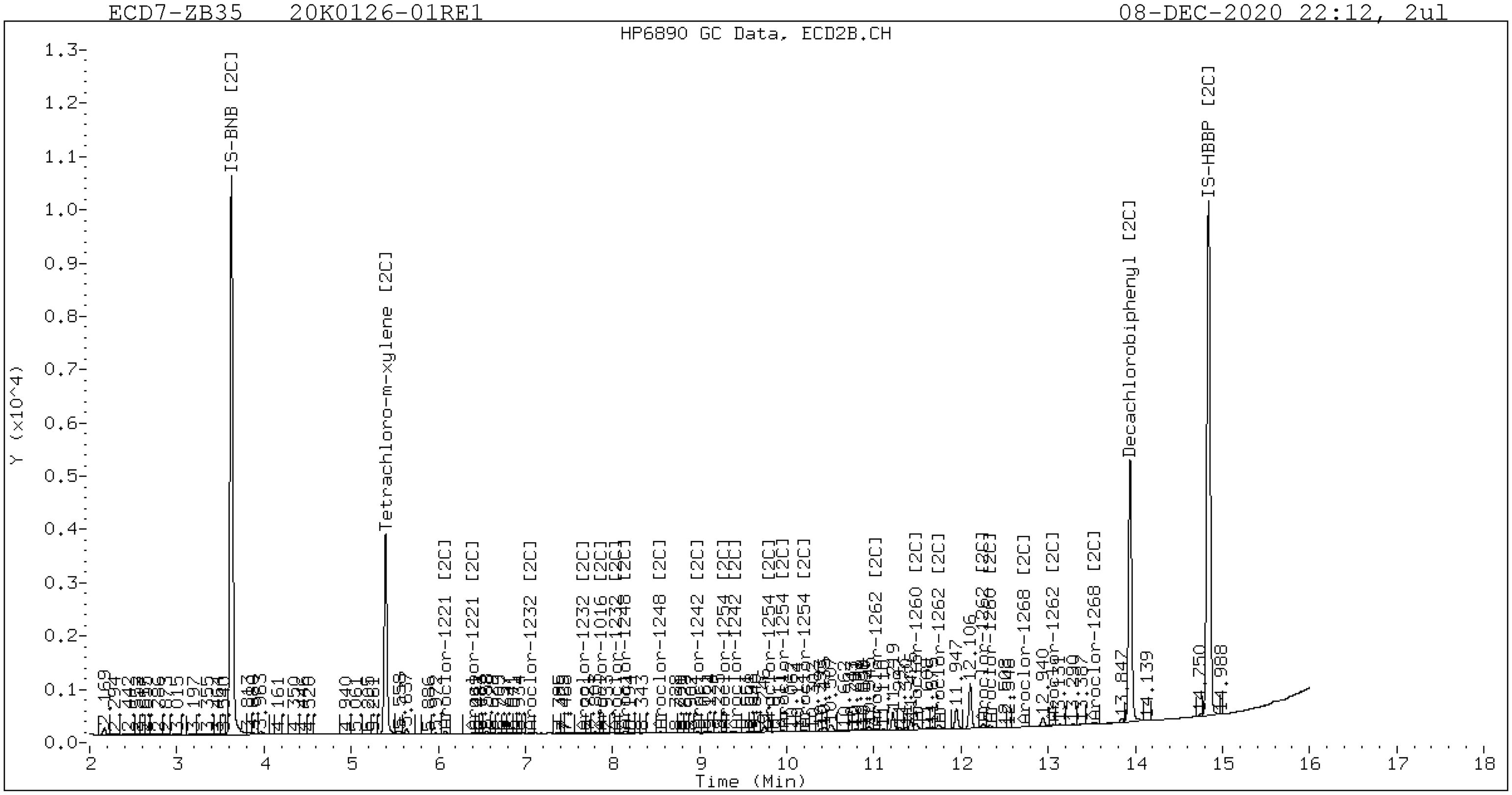
PCB Dual Column Chromatograms

ECD7-ZB5 20K0126-01RE1 08-DEC-2020 22:12, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0126-01RE1 08-DEC-2020 22:12, 2ul

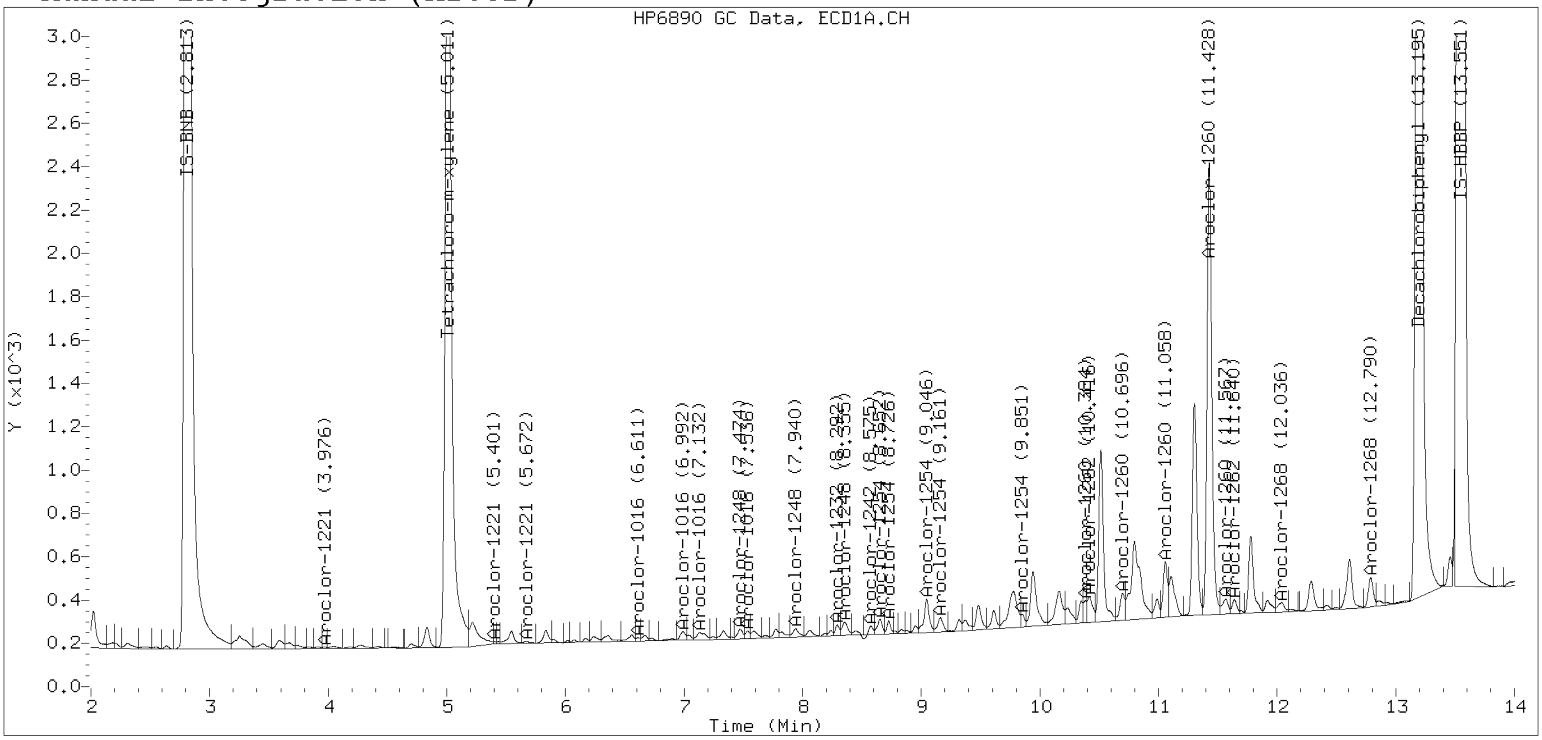


ZB-35 Manual Integration: YES

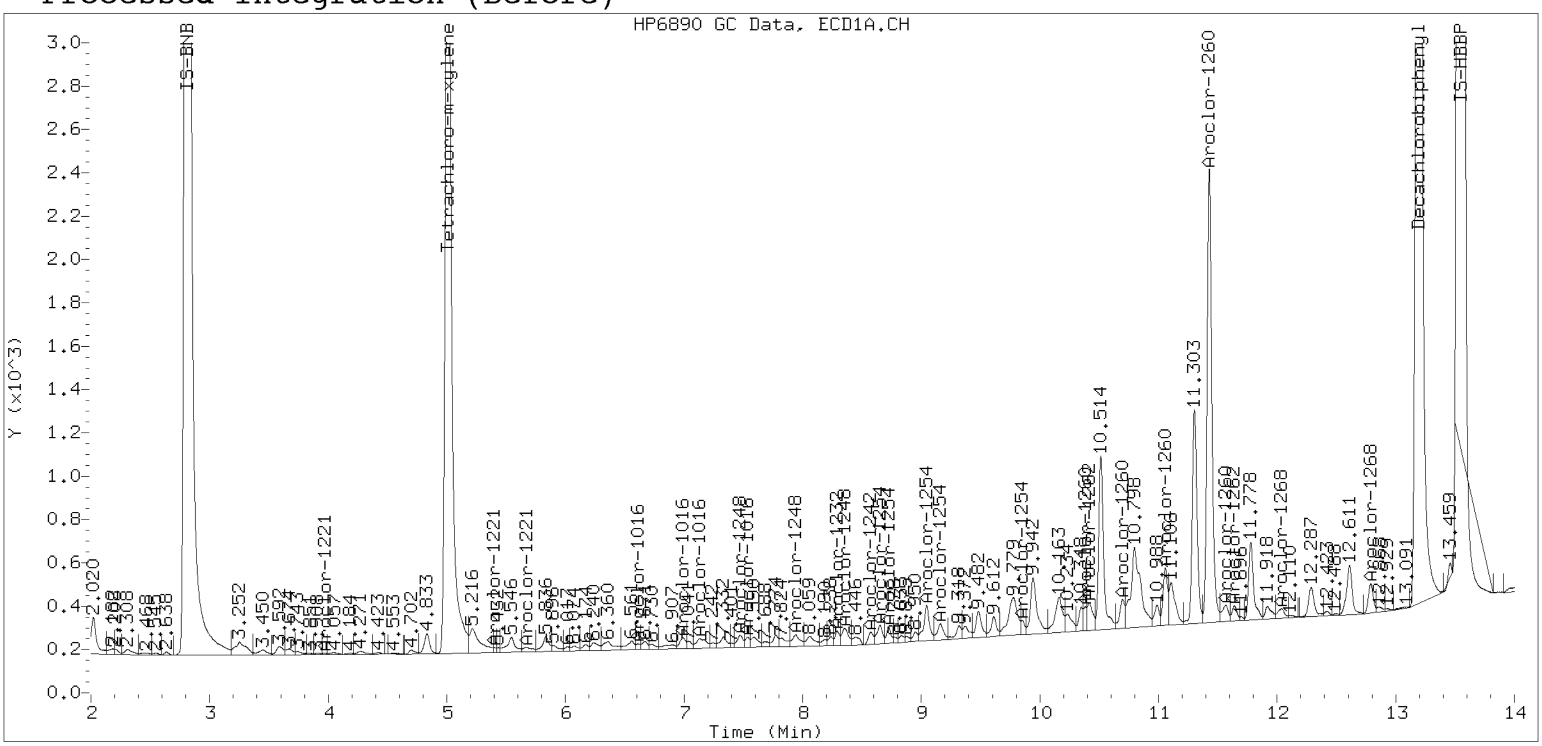
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201208.b/20120807ECD7.D   Injection Date: 08-DEC-2020 22:1

Manual Integration (After)



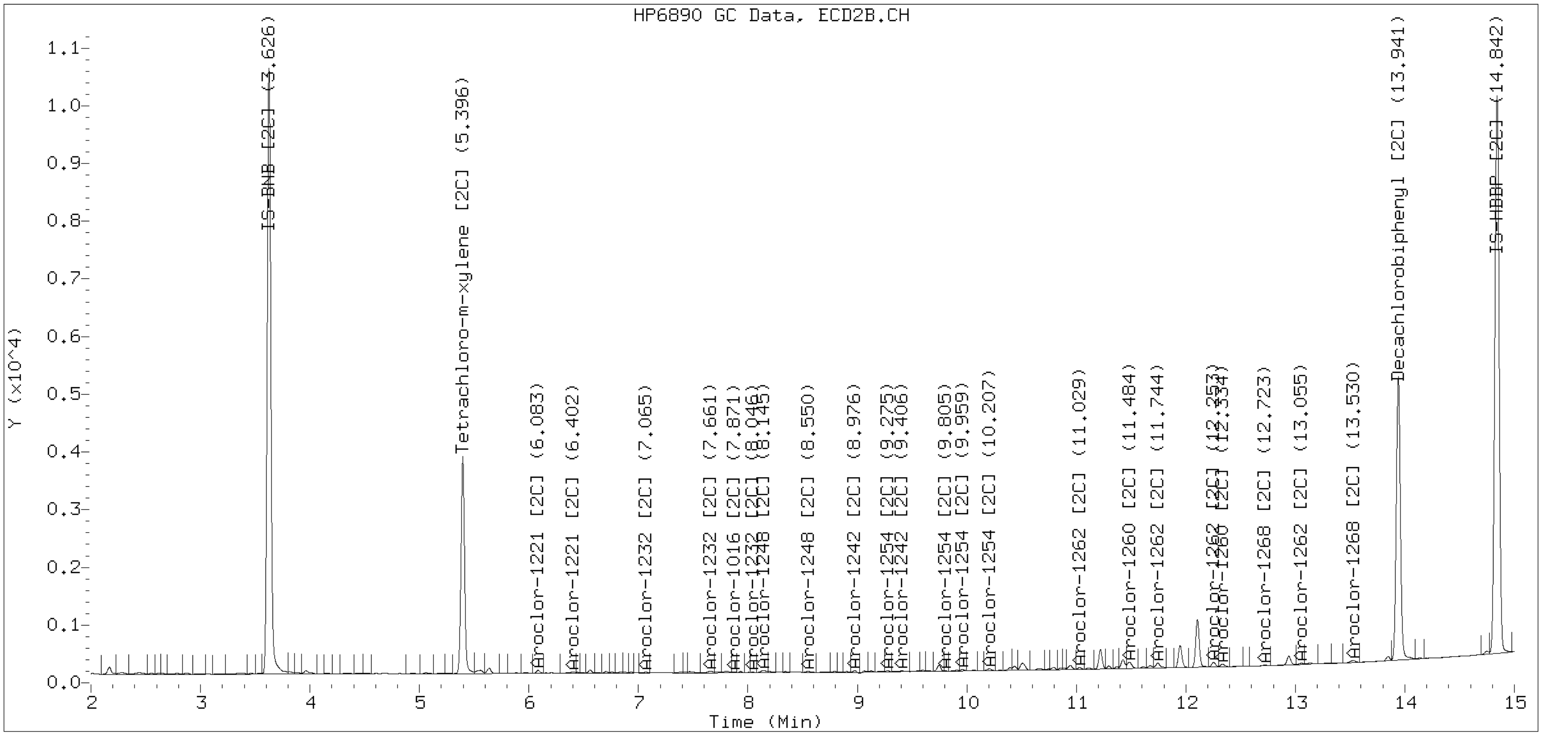
Processed Integration (Before)



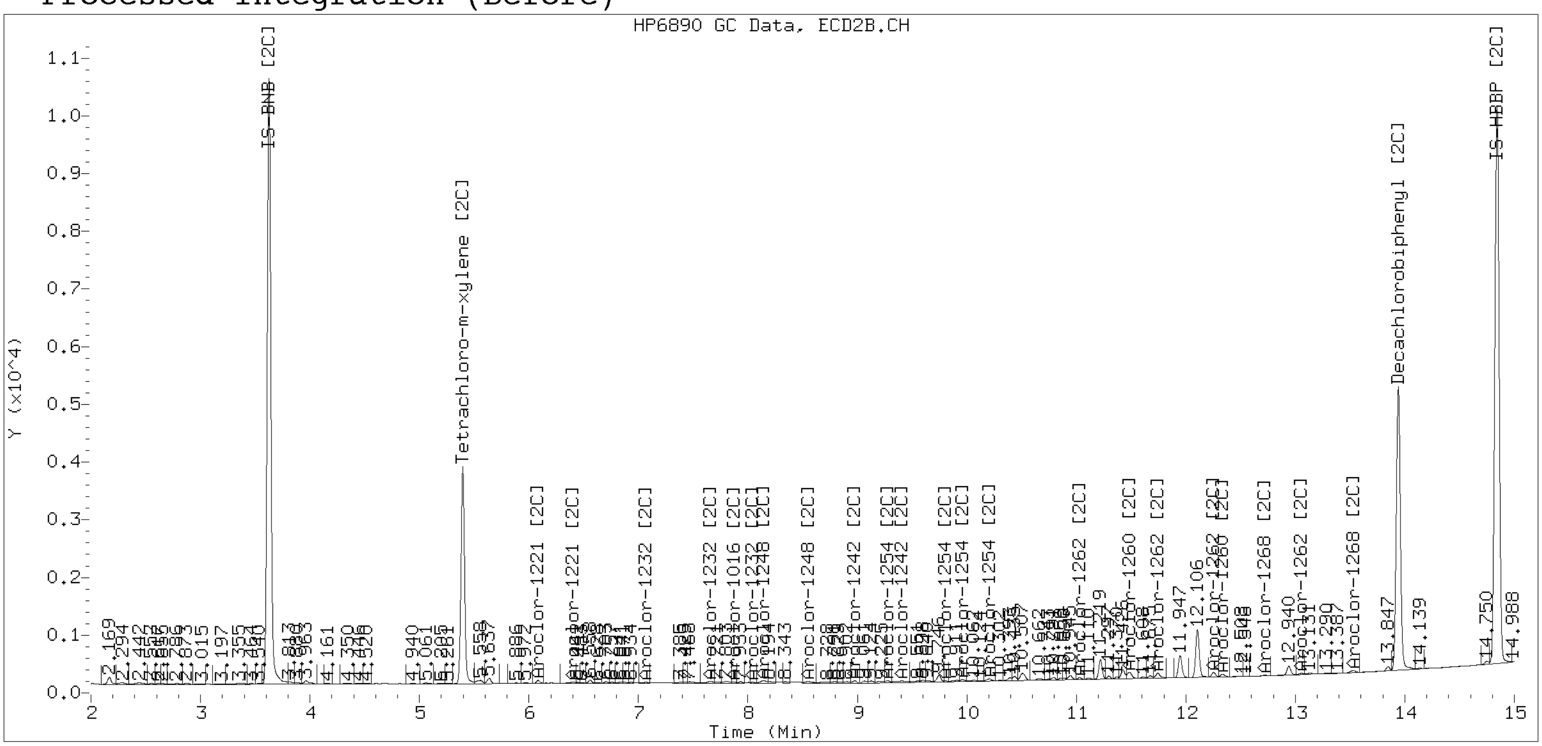
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/20201208.b/20201208.b/20120807ECD7.D Injection Date: 08-DEC-2

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP15-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	20K0126-02 A	File ID:	20120808ECD7.D
Sampled:	11/04/20 09:35	Prepared:	11/18/20 11:50	Analyzed:	12/08/20 22:32
% Solids:	68.97	Preparation:	EPA 3546 (Microwave)	Initial/Final:	7.28 g Wet / 5 mL
Batch:	BIK0552	Sequence:	SIL0191	Calibration:	DL00019
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	19.9	8.0	19.9	U
11104-28-2	Aroclor 1221	1	1	19.9	8.0	19.9	U
11141-16-5	Aroclor 1232	1	1	19.9	8.0	19.9	U
53469-21-9	Aroclor 1242	1	1	19.9	8.0	19.9	U
12672-29-6	Aroclor 1248	1	1	19.9	8.0	19.9	U
11097-69-1	Aroclor 1254	2	1	10.7	8.0	19.9	J
11096-82-5	Aroclor 1260	1	1	19.9	9.2	19.9	U
37324-23-5	Aroclor 1262	1	1	19.9	9.2	19.9	U
11100-14-4	Aroclor 1268	1	1	19.9	9.2	19.9	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.833*	*31.8*	*79.9*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.833*	*28.0*	*70.3*	*53 - 120*	
Decachlorobiphenyl	*2*	*39.833*	*35.3*	*88.5*	*40 - 133*	
Tetrachlorometaxylene	*2*	*39.833*	*30.2*	*75.8*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120808ECD7.D
Data file 2: /20201208.b/20201208.b/20120808ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0126-02RE1
Client ID:
Injection Date: 08-DEC-2020 22:32
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.012	-0.002	302222	5.397	-0.003	182262	28.1	30.3	7.5	Tetrachloro-m-xylene
13.202	-0.002	671559	13.945	-0.001	331166	32.0	35.4	10.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	70.3	75.8
Decachlorobiphenyl	79.9	88.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	736777	-6.3
Hexabromobiphenyl	2132987	1976728	-7.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	524435	-17.5
Hexabromobiphenyl	665758	568277	-14.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.670	0.043	1778	4.8	1	7.068	-0.005	463	1.8
Aroclor-1016	2	6.999	0.000	2143	1.8	2	7.666	-0.005	1344	2.3
Aroclor-1016	3	7.184	0.034	5575	11.0	3	7.872	-0.008	2996	13.8
Aroclor-1016	4	7.543	-0.001	15017	54.4	4	---			0.0
~~Total Col1Ave (4 peaks):~~				~~18.0~~	~~Total Col2Ave (3 peaks):~~				~~6.0~~	~~RPD~~ = 100*
Corrected Ave (3 peaks):				5.9		Corrected Ave: < 3 Peaks				
Aroclor-1221	1	3.971	-0.001	356	3.7	1	4.707	0.038	938	25.9
Aroclor-1221	2	5.366	-0.040	3012	22.2	2	6.086	0.012	3765	52.2
Aroclor-1221	3	5.672	-0.010	1498	4.3	3	6.403	-0.014	673	5.0
Total Col1Ave (3 peaks):				10.1	Total Col2Ave (3 peaks):				27.7	RPD = 93*
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks					
Aroclor-1232	1	3.971	-0.002	356	6.2	1	4.707	0.038	938	41.8
Aroclor-1232	2	6.670	0.039	1778	11.8	2	7.068	-0.008	463	4.0
Aroclor-1232	3	6.999	-0.002	2143	4.4	3	7.666	-0.006	1344	5.6
Aroclor-1232	4	8.303	-0.006	3344	22.9	4	8.154	0.096	6060	109.9
Total Col1Ave (4 peaks):				11.3	Total Col2Ave (4 peaks):				40.3	RPD = 112*
~~Corrected Ave (3 peaks):~~				~~7.4~~	~~Corrected Ave (3 peaks):~~				~~17.1~~	~~RPD~~ = 79*
Aroclor-1242	1	6.670	0.039	1778	6.2	1	7.068	-0.008	463	2.3
Aroclor-1242	2	6.999	-0.004	2143	2.4	2	7.666	-0.007	1344	2.9
Aroclor-1242	3	8.303	-0.006	3344	11.4	3	8.976	-0.015	5403	29.8
Aroclor-1242	4	8.618	0.015	4758	14.9	4	9.411	-0.016	8743	49.0
~~Total Col1Ave (4 peaks):~~				~~8.8~~	~~Total Col2Ave (4 peaks):~~				~~21.0~~	~~RPD~~ = 82*
Corrected Ave (3 peaks):				6.7	Corrected Ave (3 peaks):				11.7	RPD = 54*
Aroclor-1248	1	7.482	-0.001	5924	15.4	1	8.154	0.016	6060	34.1
Aroclor-1248	2	7.949	-0.003	4610	7.9	2	8.563	0.005	4417	19.0
Aroclor-1248	3	8.363	0.002	10161	11.8	3	8.976	-0.012	5403	16.3
Aroclor-1248	4	8.618	0.021	4758	9.6	4	9.411	-0.011	8743	26.9
Total Col1Ave (4 peaks):				11.2	Total Col2Ave (4 peaks):				24.1	RPD = 73*
Corrected Ave (3 peaks):				9.8	Corrected Ave (3 peaks):				20.7	RPD = 72*
Aroclor-1254	1	8.664	-0.008	9806	11.2	1	9.286	0.001	3946	10.5
Aroclor-1254	2	8.711	-0.029	2367	5.0	2	9.411	0.034	8743	50.4
Aroclor-1254	3	9.061	0.022	5732	9.9	3	9.807	-0.009	1477	6.0
Aroclor-1254	4	9.174	-0.002	8602	7.2	4	9.954	-0.013	5492	9.4
Aroclor-1254	5	9.866	-0.006	4521	5.7	5	10.214	0.017	10205	16.9
Total Col1Ave (5 peaks):				7.8	Total Col2Ave (5 peaks):				18.6	RPD = 82*
Corrected Ave (4 peaks):				6.9	Corrected Ave (4 peaks):				10.7	RPD = 43*
Aroclor-1260	1	10.399	-0.000	12854	16.7	1	11.038	-0.002	798	2.3
Aroclor-1260	2	10.721	-0.001	4178	5.4	2	11.504	0.000	2004	5.5
Aroclor-1260	3	11.070	-0.003	13625	6.8	3	11.754	-0.001	2497	2.7
Aroclor-1260	4	11.473	-0.002	7514	7.4	4	12.342	-0.000	1930	3.2
Aroclor-1260	5	11.580	-0.001	2775	6.3	NS	---			----
Total Col1Ave (5 peaks):				8.5	Total Col2Ave (4 peaks):				3.4	RPD = 86*
Corrected Ave (4 peaks):				6.5	Corrected Ave (3 peaks):				2.7	RPD = 82*
Aroclor-1262	1	10.399	-0.006	12854	11.1	1	11.038	-0.005	798	1.4
Aroclor-1262	2	11.070	-0.007	13625	5.3	2	11.754	-0.005	2497	1.9
Aroclor-1262	3	11.580	-0.006	2775	3.9	3	12.265	-0.010	2280	5.5
Aroclor-1262	4	11.650	-0.008	3547	3.8	4	13.062	-0.004	669	1.4
~~Total Col1Ave (4 peaks):~~				~~6.0~~	~~Total Col2Ave (4 peaks):~~				~~2.5~~	~~RPD~~ = 81*
Corrected Ave (3 peaks):				4.3	Corrected Ave (3 peaks):				1.6	RPD = 93*
Aroclor-1268	1	11.580	-0.008	2775	1.1	1	12.265	-0.008	2280	1.7
Aroclor-1268	2	11.650	-0.007	3547	1.3	2	12.342	0.003	1930	1.3
Aroclor-1268	3	12.035	-0.002	4730	2.1	3	12.727	-0.002	1646	1.3
Aroclor-1268	4	12.799	-0.013	9597	1.1	4	13.539	-0.007	1727	0.4
~~Total Col1Ave (4 peaks):~~				~~1.4~~	~~Total Col2Ave (4 peaks):~~				~~1.2~~	~~RPD~~ = 15

Corrected Ave (3 peaks): 1.1 Corrected Ave (3 peaks): 1.0 RPD = 11

Total PCB Area Col1 (5.114 - 13.105) = 372266 Col1 Total PCB = 0.0 ppm*

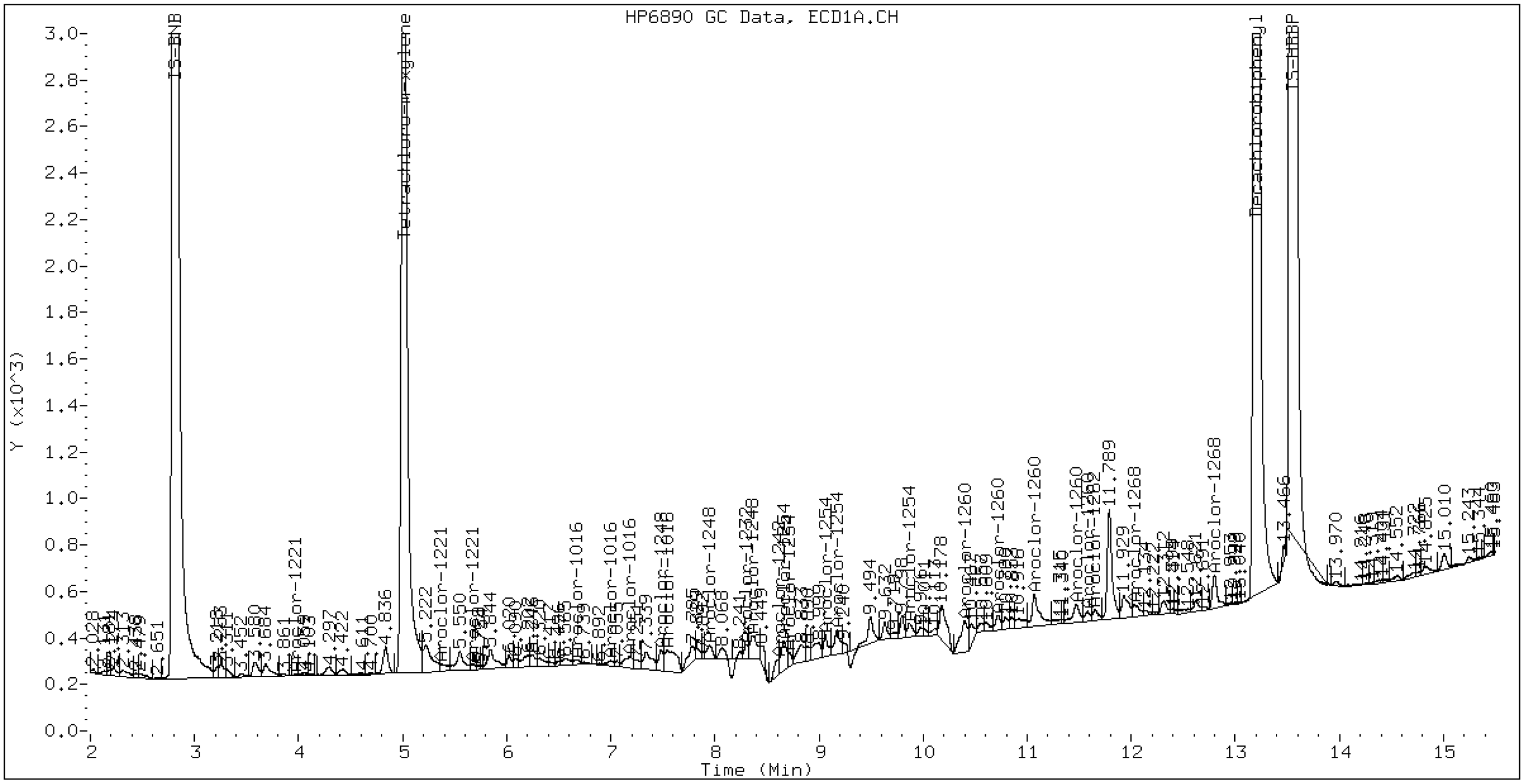
Total PCB Area Col2 (5.114 - 13.105) = 380898 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

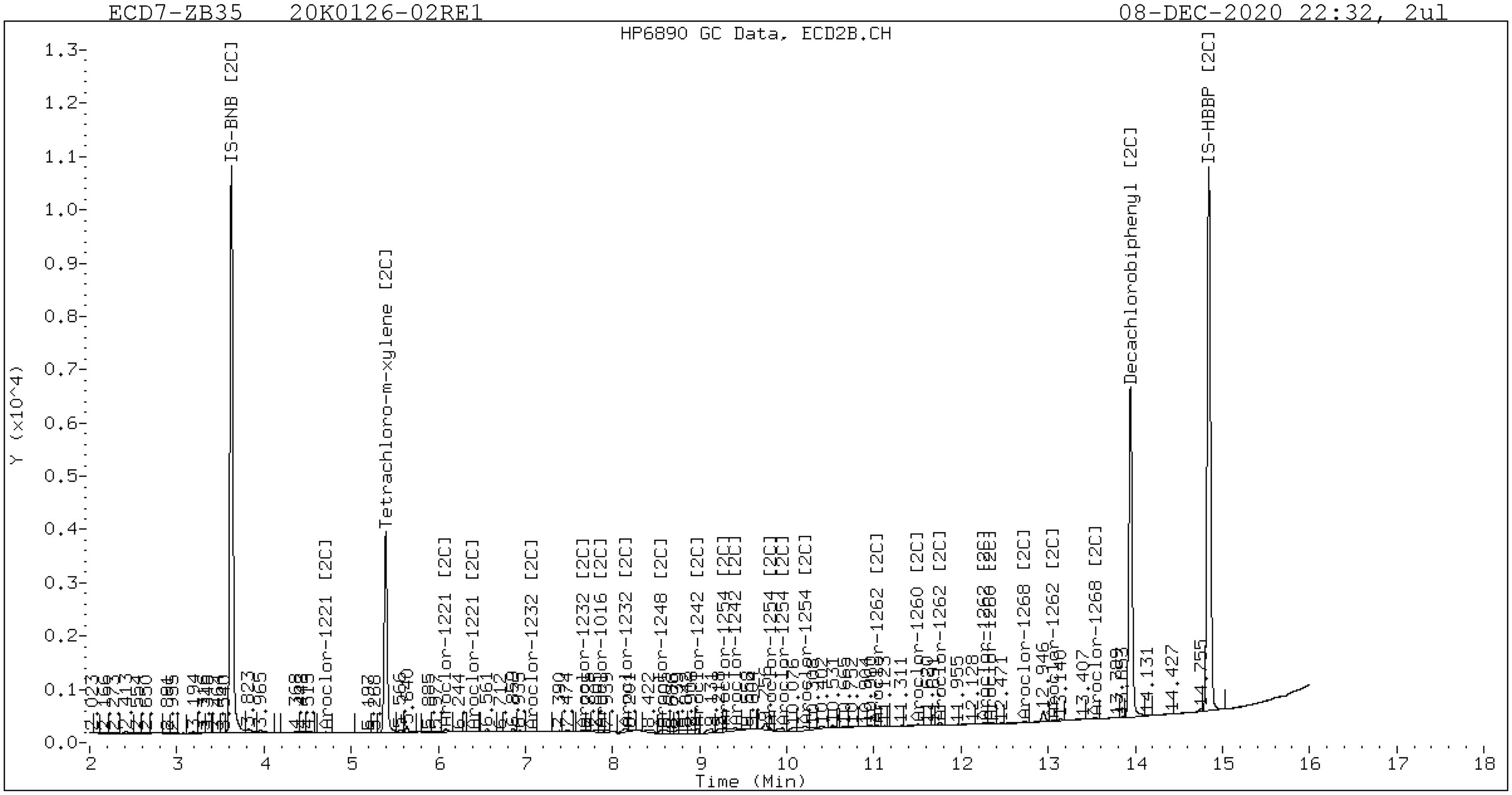
PCB Dual Column Chromatograms

ECD7-ZB5 20K0126-02RE1 08-DEC-2020 22:32, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0126-02RE1 08-DEC-2020 22:32, 2ul

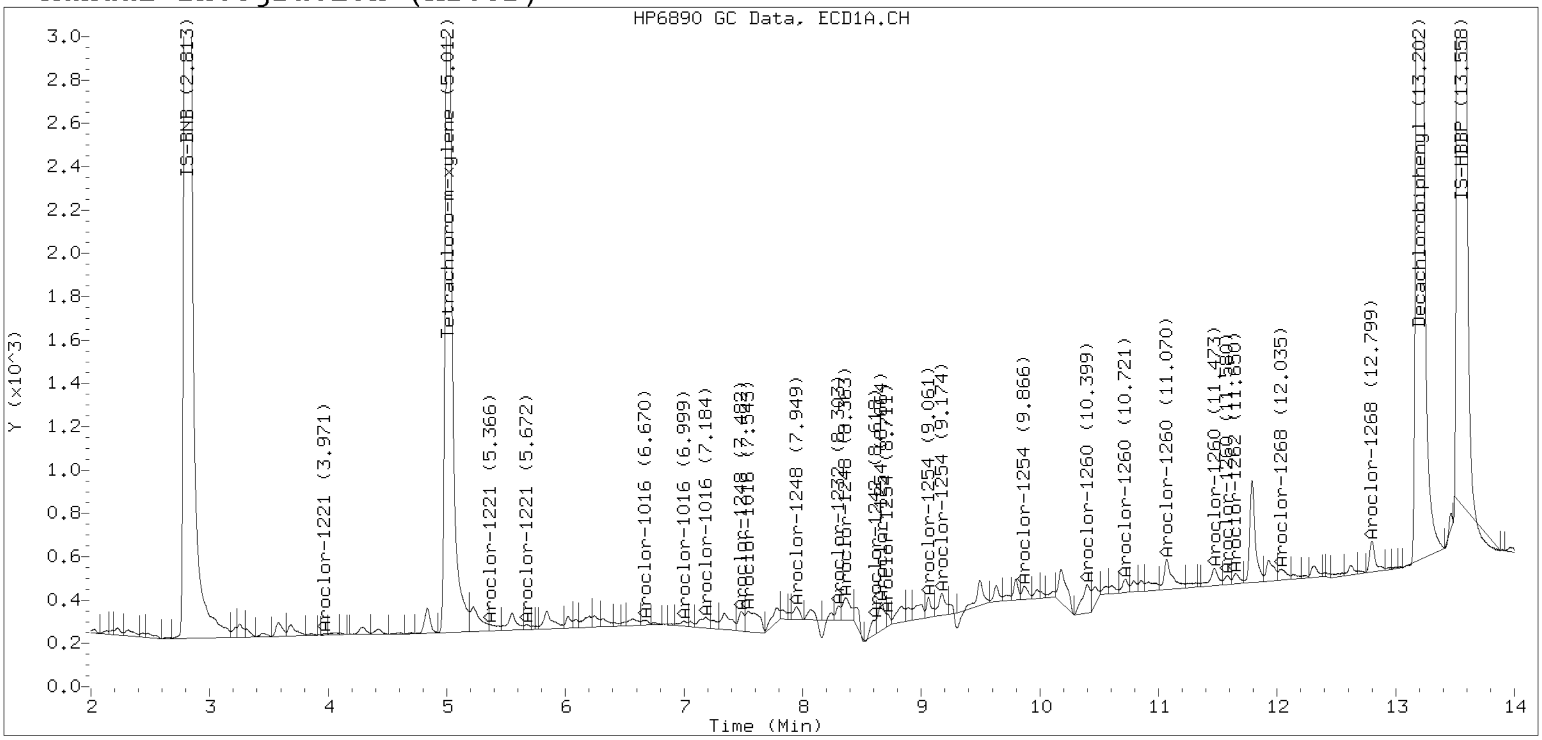


ZB-35 Manual Integration: NO

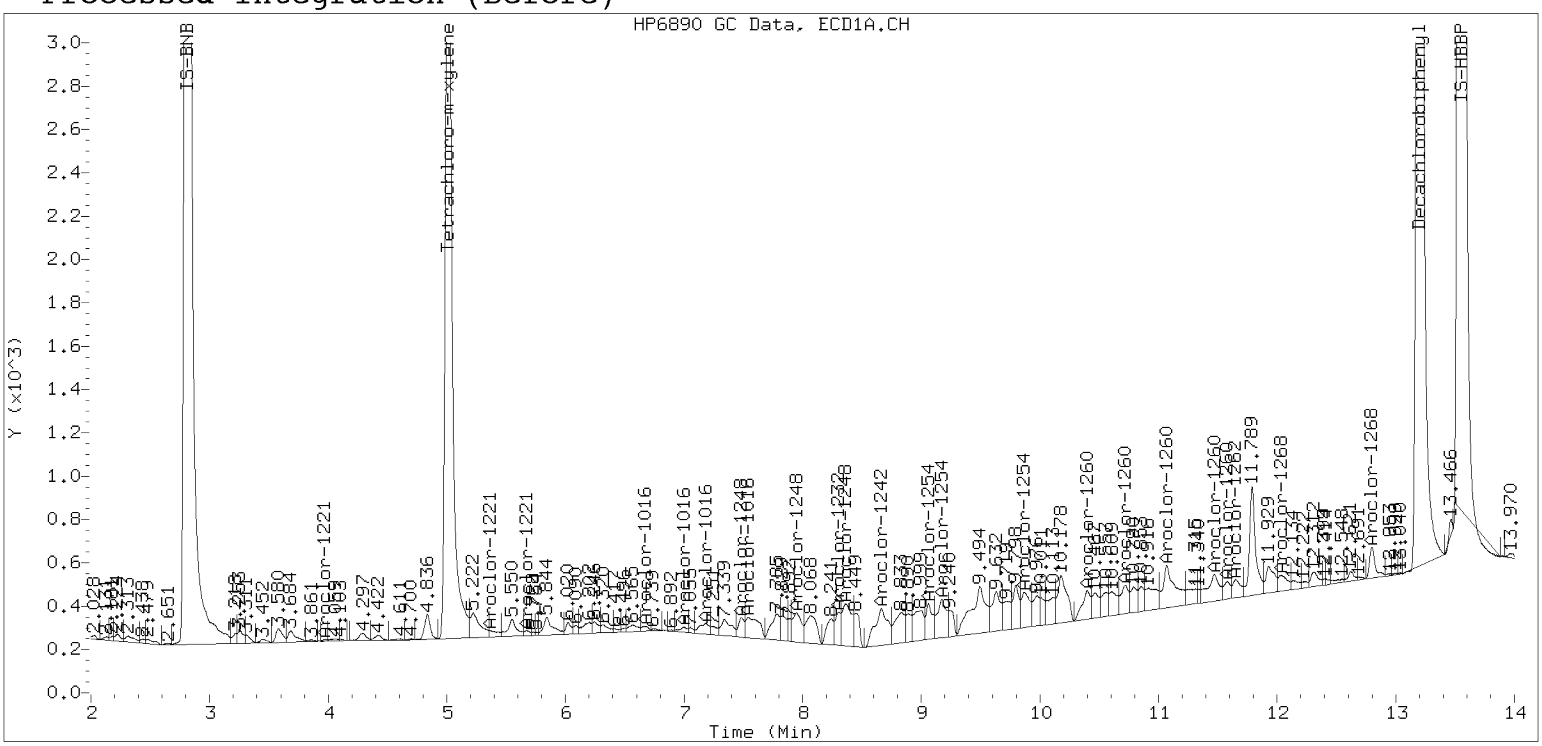
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201208.b/20120808ECD7.D   Injection Date: 08-DEC-2020 22:3

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP16-2.5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	20K0126-06 A	File ID:	20120804ECD7.D
Sampled:	11/04/20 10:25	Prepared:	11/18/20 11:50	Analyzed:	12/08/20 21:10
% Solids:	81.50	Preparation:	EPA 3546 (Microwave)	Initial/Final:	6.14 g Wet / 5 mL
Batch:	BIK0552	Sequence:	SIL0191	Calibration:	DL00019
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	10	200	79.9	200	U
11104-28-2	Aroclor 1221	1	10	200	79.9	200	U
11141-16-5	Aroclor 1232	1	10	200	79.9	200	U
53469-21-9	Aroclor 1242	1	10	200	79.9	200	U
12672-29-6	Aroclor 1248	2	10	9920	79.9	200	D
11097-69-1	Aroclor 1254	1	10	3980	79.9	200	D
11096-82-5	Aroclor 1260	2	10	1220	92.7	200	D
37324-23-5	Aroclor 1262	1	10	200	92.7	200	U
11100-14-4	Aroclor 1268	1	10	200	92.7	200	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.967*	*26.2*	*65.6*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.967*	*26.5*	*66.2*	*53 - 120*	
Decachlorobiphenyl	*2*	*39.967*	*22.7*	*56.9*	*40 - 133*	
Tetrachlorometaxylene	*2*	*39.967*	*27.4*	*68.5*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120804ECD7.D
Data file 2: /20201208.b/20201208.b/20120804ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0126-06RE1
Client ID:
Injection Date: 08-DEC-2020 21:10
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 10.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.007	-0.007	27480	5.394	-0.006	15376	2.6	2.7	3.5	Tetrachloro-m-xylene
13.192	-0.013	62627	13.940	-0.006	22707	2.6	2.3	14.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	66.2	68.5
Decachlorobiphenyl	65.6	56.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	711636	-9.5
Hexabromobiphenyl	2132987	2244029	5.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	489294	-23.0
Hexabromobiphenyl	665758	606199	-8.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.620	-0.008	124612	348.0	1	7.067	-0.006	109320	460.6
Aroclor-1016	2	6.992	-0.007	623165	546.1	2	7.663	-0.008	322193	601.4
Aroclor-1016	3	7.143	-0.006	232535	474.4	3	7.874	-0.006	85925	423.3
Aroclor-1016	4	7.540	-0.004	260184	976.1	4	8.047	-0.008	81953	673.3
Total Col1Ave (4 peaks):				586.2		Total Col2Ave (4 peaks):			539.6	RPD = 8
~~Corrected Ave (3 peaks):~~				~~456.2~~		~~Corrected Ave (3 peaks):~~			~~495.1~~	RPD = 8
Aroclor-1221	1	3.987	0.015	3579	38.7	1	4.666	-0.003	847	25.0
Aroclor-1221	2	5.395	-0.010	6417	49.0	2	6.067	-0.007	2998	44.6
Aroclor-1221	3	5.673	-0.009	37650	112.1	3	6.411	-0.006	18269	145.8
~~Total Col1Ave (3 peaks):~~				~~66.6~~		~~Total Col2Ave (3 peaks):~~			~~71.0~~	RPD = 8
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.987	0.014	3579	64.0	1	4.666	-0.003	847	40.4
Aroclor-1232	2	6.620	-0.012	124612	857.8	2	7.067	-0.009	109320	1011.3
Aroclor-1232	3	6.992	-0.010	623165	1312.7	3	7.663	-0.010	322193	1427.5
Aroclor-1232	4	8.296	-0.013	517634	3670.2	4	8.047	-0.010	81953	1592.9
~~Total Col1Ave (4 peaks):~~				~~1476.2~~		~~Total Col2Ave (4 peaks):~~			~~1018.0~~	RPD = 37
Corrected Ave (3 peaks):				744.8		Corrected Ave (3 peaks):			826.4	RPD = 10
Aroclor-1242	1	6.620	-0.012	124612	451.3	1	7.067	-0.009	109320	591.1
Aroclor-1242	2	6.992	-0.011	623165	731.8	2	7.663	-0.010	322193	752.0
Aroclor-1242	3	8.296	-0.013	517634	1831.1	3	8.979	-0.012	280019	1656.2
Aroclor-1242	4	8.585	-0.018	577911	1878.1	4	9.411	-0.016	307553	1848.1
Total Col1Ave (4 peaks):				1223.1		Total Col2Ave (4 peaks):			1211.8	RPD = 1
~~Corrected Ave (3 peaks):~~				~~1004.7~~		~~Corrected Ave (3 peaks):~~			~~999.8~~	RPD = 0
Aroclor-1248	1	7.478	-0.005	307873	829.4	1	8.132	-0.005	164584	992.1
Aroclor-1248	2	7.944	-0.008	473181	840.8	2	8.552	-0.006	229934	1059.1
Aroclor-1248	3	8.351	-0.010	718495	863.5	3	8.979	-0.009	280019	905.6
Aroclor-1248	4	8.585	-0.012	577911	1201.5	4	9.411	-0.011	307553	1014.7
Total Col1Ave (4 peaks):				933.8		Total Col2Ave (4 peaks):			992.8	RPD = 6
Corrected Ave (3 peaks):				844.6		Corrected Ave (3 peaks):			970.8	RPD = 14
Aroclor-1254	1	8.659	-0.013	359890	426.9	1	9.280	-0.005	150007	429.3
Aroclor-1254	2	8.731	-0.010	199959	437.9	2	9.411	0.033	307553	1900.5
Aroclor-1254	3	9.054	0.015	1298661	2313.2	3	9.809	-0.008	83931	362.7
Aroclor-1254	4	9.164	-0.012	419523	362.3	4	9.958	-0.009	179364	328.8
Aroclor-1254	5	9.861	-0.012	280704	365.3	5	10.184	-0.013	211696	375.8
Total Col1Ave (5 peaks):				781.1		Total Col2Ave (5 peaks):			679.4	RPD = 14
Corrected Ave (4 peaks):				398.1		Corrected Ave (4 peaks):			374.2	RPD = 6
Aroclor-1260	1	10.386	-0.013	89873	103.0	1	11.030	-0.010	42864	115.7
Aroclor-1260	2	10.710	-0.011	91206	104.7	2	11.497	-0.007	55815	143.0
Aroclor-1260	3	11.059	-0.013	279519	123.6	3	11.745	-0.010	116632	116.8
Aroclor-1260	4	11.462	-0.012	138215	119.6	4	12.336	-0.007	73619	113.5
Aroclor-1260	5	11.569	-0.011	56166	111.6	NS	---			----
Total Col1Ave (5 peaks):				112.5		Total Col2Ave (4 peaks):			122.3	RPD = 8
Corrected Ave (4 peaks):				109.7		Corrected Ave (3 peaks):			115.4	RPD = 5
Aroclor-1262	1	10.386	-0.019	89873	68.7	1	11.030	-0.013	42864	68.0
Aroclor-1262	2	11.059	-0.018	279519	95.0	2	11.745	-0.013	116632	84.2
Aroclor-1262	3	11.569	-0.017	56166	68.8	3	12.262	-0.013	35643	80.1
Aroclor-1262	4	11.641	-0.016	71685	67.0	4	13.053	-0.012	30961	61.5
~~Total Col1Ave (4 peaks):~~				~~74.8~~		~~Total Col2Ave (4 peaks):~~			~~73.5~~	RPD = 2
Corrected Ave (3 peaks):				68.1		Corrected Ave (3 peaks):			69.9	RPD = 3
Aroclor-1268	1	11.569	-0.019	56166	18.8	1	12.262	-0.011	35643	24.5
Aroclor-1268	2	11.641	-0.016	71685	22.4	2	12.336	-0.004	73619	46.3
Aroclor-1268	3	12.044	0.007	38104	14.8	3	12.721	-0.008	1528	1.1
Aroclor-1268	4	~~12.790~~	~~0.022~~	~~23170~~	~~2.3~~	~~4~~	~~13.530~~	~~-0.016~~	~~7749~~	1.8
Total Col1Ave (4 peaks):				14.6		Total Col2Ave (4 peaks):			18.4	RPD = 23

Corrected Ave (3 peaks): 12.0 Corrected Ave (3 peaks): 9.1 RPD = 27

Total PCB Area Col1 (5.114 - 13.105) = 11064254 Col1 Total PCB = 1.0 ppm*

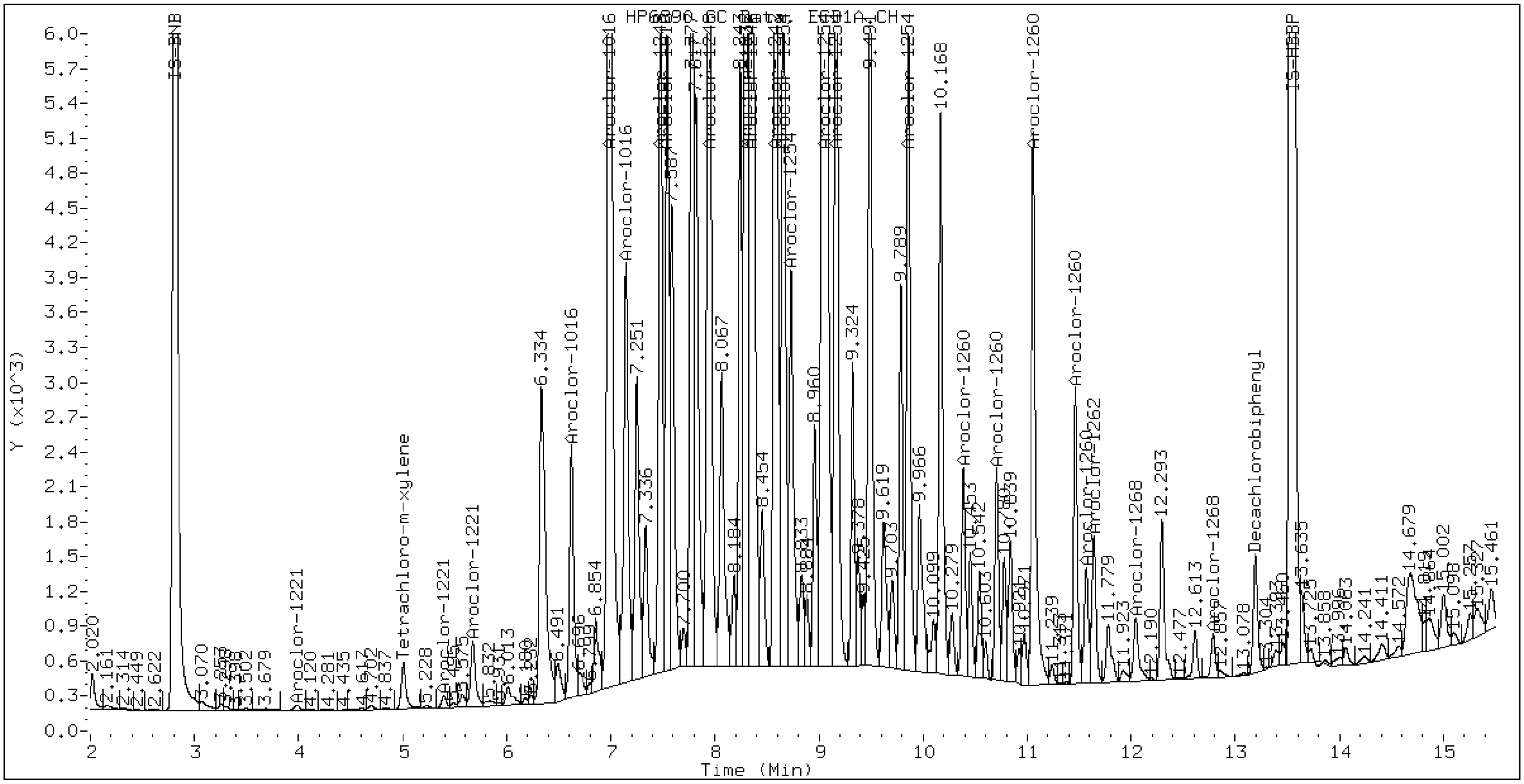
Total PCB Area Col2 (5.114 - 13.105) = 5176253 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

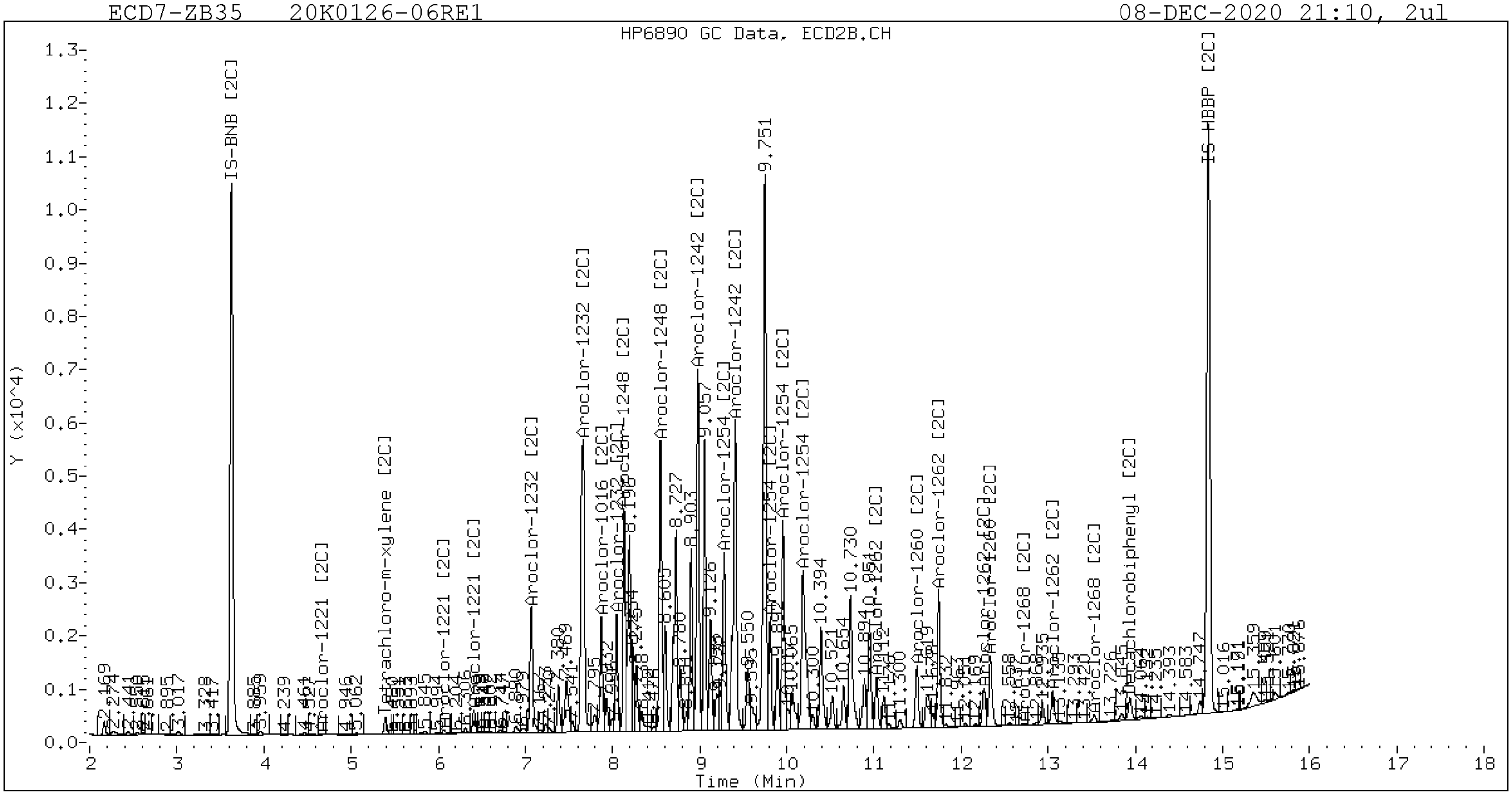
PCB Dual Column Chromatograms

ECD7-ZB5 20K0126-06RE1 08-DEC-2020 21:10, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0126-06RE1 08-DEC-2020 21:10, 2ul

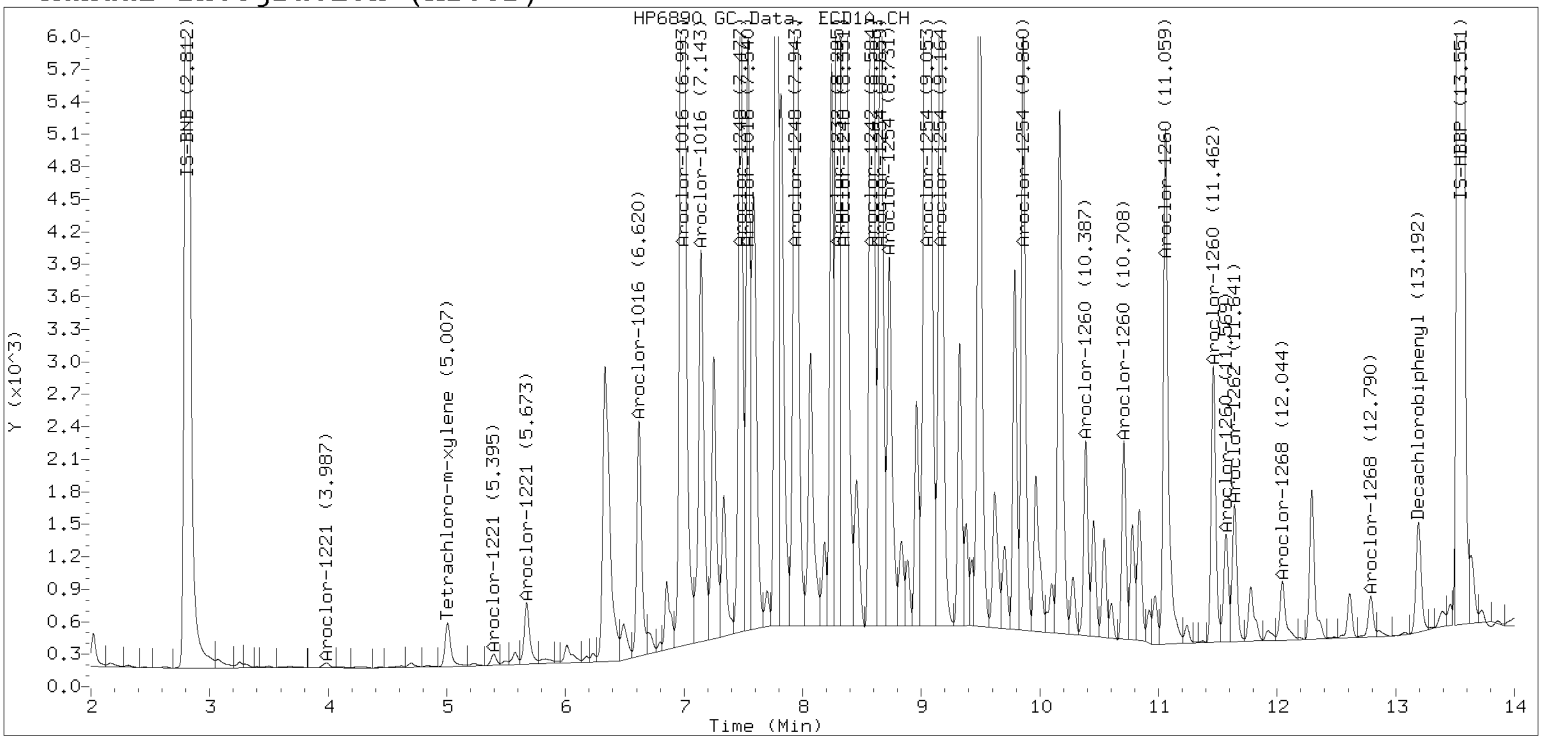


ZB-35 Manual Integration: NO

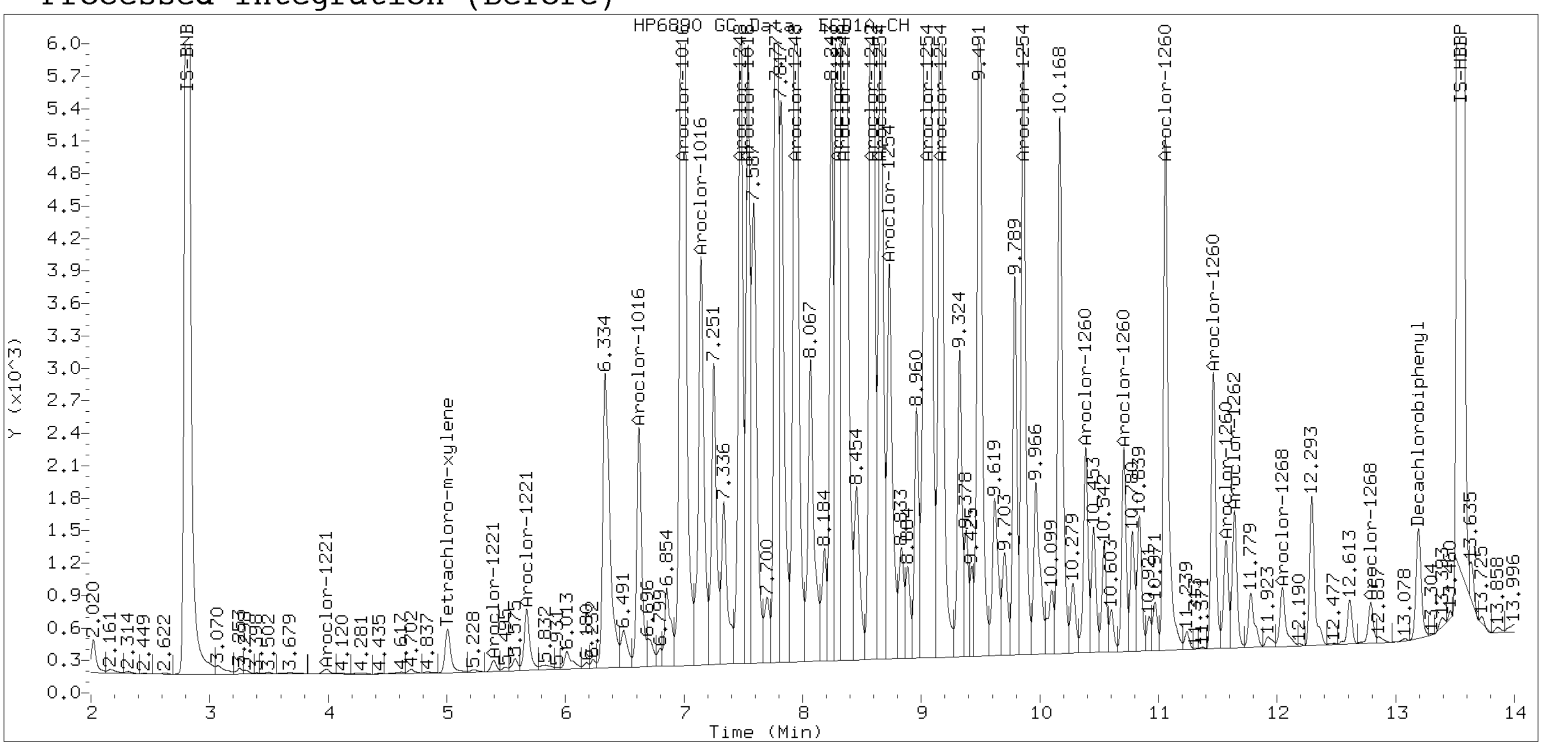
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201208.b/20120804ECD7.D   Injection Date: 08-DEC-2020 21:1

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP16-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	20K0126-07 A	File ID:	20120805ECD7.D
Sampled:	11/04/20 10:30	Prepared:	11/18/20 11:50	Analyzed:	12/08/20 21:31
% Solids:	76.64	Preparation:	EPA 3546 (Microwave)	Initial/Final:	6.56 g Wet / 5 mL
Batch:	BIK0552	Sequence:	SIL0191	Calibration:	DL00019
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	10	199	79.6	199	U
11104-28-2	Aroclor 1221	1	10	199	79.6	199	U
11141-16-5	Aroclor 1232	1	10	199	79.6	199	U
53469-21-9	Aroclor 1242	1	10	199	79.6	199	U
12672-29-6	Aroclor 1248	1	10	1580	79.6	199	D
11097-69-1	Aroclor 1254	1	10	883	79.6	199	D
11096-82-5	Aroclor 1260	1	10	270	92.3	199	D
37324-23-5	Aroclor 1262	1	10	199	92.3	199	U
11100-14-4	Aroclor 1268	1	10	199	92.3	199	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.781*	*31.5*	*79.2*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.781*	*27.9*	*70.1*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120805ECD7.D
Data file 2: /20201208.b/20201208.b/20120805ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0126-07RE1
Client ID:
Injection Date: 08-DEC-2020 21:31
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 10.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.009	-0.005	30970	5.396	-0.004	18663	2.8	3.0	7.9	Tetrachloro-m-xylene
13.200	-0.005	80407	13.946	-0.000	28487	3.2	2.6	18.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	70.1	75.9
Decachlorobiphenyl	79.2	65.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	757809	-3.7
Hexabromobiphenyl	2132987	2387151	11.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	536550	-15.6
Hexabromobiphenyl	665758	657878	-1.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

			ZB5 Col					ZB35 Col		
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.624	-0.003	27211	71.4	1	7.070	-0.003	17553	67.4
Aroclor-1016	2	6.995	-0.004	93306	76.8	2	7.664	-0.007	43200	73.5
Aroclor-1016	3	7.148	-0.002	43874	84.1	3	7.878	-0.002	12875	57.8
Aroclor-1016	4	7.544	-0.000	46108	162.4	4	8.052	-0.003	9730	72.9
Total Col1Ave (4 peaks):				98.7		Total Col2Ave (4 peaks):			67.9	RPD = 37
Corrected Ave (3 peaks):				77.4		Corrected Ave (3 peaks):			66.1	RPD = 16
Aroclor-1221	1	3.995	0.023	246	2.5	1	4.617	-0.052	386	10.4
Aroclor-1221	2	5.399	-0.006	695	5.0	2	6.077	0.003	525	7.1
Aroclor-1221	3	5.676	-0.006	6500	18.2	3	6.414	-0.003	3013	21.9
Total Col1Ave (3 peaks):				8.6		Total Col2Ave (3 peaks):			13.2	RPD = 42*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.995	0.022	246	4.1	1	4.617	-0.052	386	16.8
Aroclor-1232	2	6.624	-0.007	27211	175.9	2	7.070	-0.007	17553	148.1
Aroclor-1232	3	6.995	-0.007	93306	184.6	3	7.664	-0.008	43200	174.5
Aroclor-1232	4	8.302	-0.007	83613	556.7	4	8.052	-0.005	9730	172.5
Total Col1Ave (4 peaks):				230.3		Total Col2Ave (4 peaks):			120.0	RPD = 57*
Corrected Ave (3 peaks):				121.5		Corrected Ave (3 peaks):			112.4	RPD = 8
Aroclor-1242	1	6.624	-0.007	27211	92.6	1	7.070	-0.006	17553	86.5
Aroclor-1242	2	6.995	-0.008	93306	102.9	2	7.664	-0.009	43200	92.0
Aroclor-1242	3	8.302	-0.007	83613	277.8	3	8.985	-0.006	44200	238.4
Aroclor-1242	4	8.592	-0.010	91190	278.3	4	9.417	-0.010	49960	273.8
Total Col1Ave (4 peaks):				187.9		Total Col2Ave (4 peaks):			172.7	RPD = 8
Corrected Ave (3 peaks):				157.7		Corrected Ave (3 peaks):			139.0	RPD = 13
Aroclor-1248	1	7.481	-0.002	61651	156.0	1	8.136	-0.001	26719	146.9
Aroclor-1248	2	7.949	-0.003	90073	150.3	2	8.556	-0.002	33619	141.2
Aroclor-1248	3	8.361	-0.001	133412	150.6	3	8.985	-0.003	44200	130.3
Aroclor-1248	4	8.592	-0.004	91190	178.0	4	9.417	-0.006	49960	150.3
Total Col1Ave (4 peaks):				158.7		Total Col2Ave (4 peaks):			142.2	RPD = 11
Corrected Ave (3 peaks):				152.3		Corrected Ave (3 peaks):			139.5	RPD = 9
Aroclor-1254	1	8.668	-0.004	85245	94.9	1	9.287	0.002	31416	82.0
Aroclor-1254	2	8.737	-0.003	43994	90.5	2	9.417	0.039	49960	281.5
Aroclor-1254	3	9.061	0.022	182117	304.6	3	9.815	-0.001	17478	68.9
Aroclor-1254	4	9.173	-0.002	104424	84.7	4	9.966	-0.001	34452	57.6
Aroclor-1254	5	9.870	-0.002	69699	85.2	5	10.196	-0.001	43393	70.2
Total Col1Ave (5 peaks):				132.0		Total Col2Ave (5 peaks):			112.0	RPD = 16
Corrected Ave (4 peaks):				88.8		Corrected Ave (4 peaks):			69.7	RPD = 24
Aroclor-1260	1	10.398	-0.001	26006	28.0	1	11.039	-0.001	7946	19.8
Aroclor-1260	2	10.720	-0.002	27854	30.1	2	11.505	0.001	13121	31.0
Aroclor-1260	3	11.070	-0.003	61698	25.6	3	11.754	-0.002	20757	19.2
Aroclor-1260	4	11.473	-0.002	33472	27.2	4	12.344	0.002	14098	20.0
Aroclor-1260	5	11.580	-0.001	13345	24.9	NS	---			----
Total Col1Ave (5 peaks):				27.2		Total Col2Ave (4 peaks):			22.5	RPD = 19
Corrected Ave (4 peaks):				26.5		Corrected Ave (3 peaks):			19.7	RPD = 30
Aroclor-1262	1	10.398	-0.007	26006	18.7	1	11.039	-0.005	7946	11.6
Aroclor-1262	2	11.070	-0.008	61698	19.7	2	11.754	-0.005	20757	13.8
Aroclor-1262	3	11.580	-0.006	13345	15.4	3	12.272	-0.004	5919	12.3
Aroclor-1262	4	11.651	-0.006	17207	15.1	4	13.061	-0.005	5312	9.7
Total Col1Ave (4 peaks):				17.2		Total Col2Ave (4 peaks):			11.9	RPD = 37
Corrected Ave (3 peaks):				16.4		Corrected Ave (3 peaks):			11.2	RPD = 38
Aroclor-1268	1	11.580	-0.009	13345	4.2	1	12.272	-0.002	5919	3.7
Aroclor-1268	2	11.651	-0.006	17207	5.0	2	12.344	0.005	14098	8.2
Aroclor-1268	3	12.057	0.020	10616	3.9	3	12.769	0.040	288	0.2
Aroclor-1268	4	12.798	-0.014	10830	1.0	4	13.538	-0.008	1206	0.3
Total Col1Ave (4 peaks):				3.5		Total Col2Ave (4 peaks):			3.1	RPD = 13

Corrected Ave (3 peaks): 3.0 Corrected Ave (3 peaks): 1.4 RPD = 74*

Total PCB Area Col1 (5.114 - 13.105) = 2359849 Col1 Total PCB = 0.2 ppm*

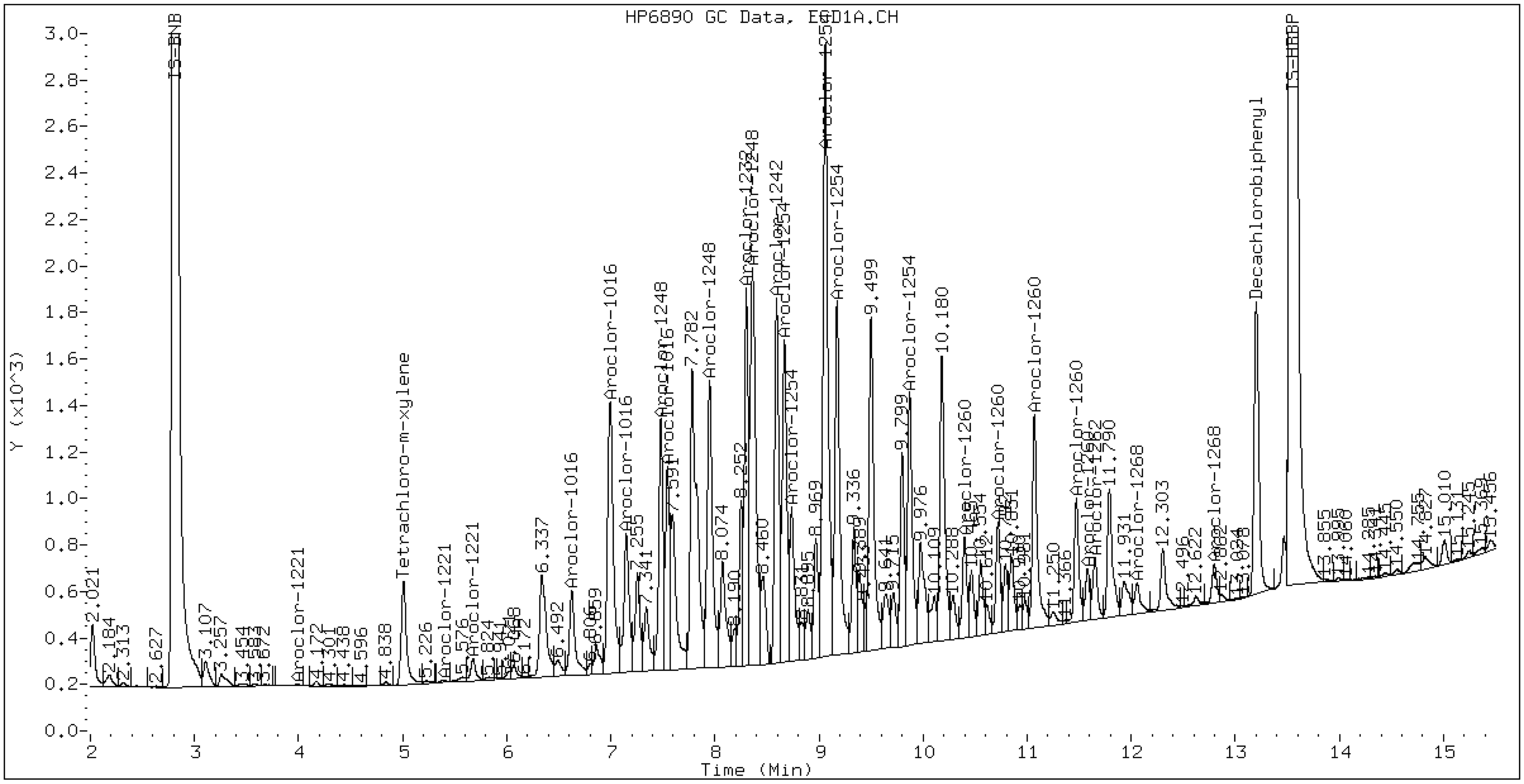
Total PCB Area Col2 (5.114 - 13.105) = 886830 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

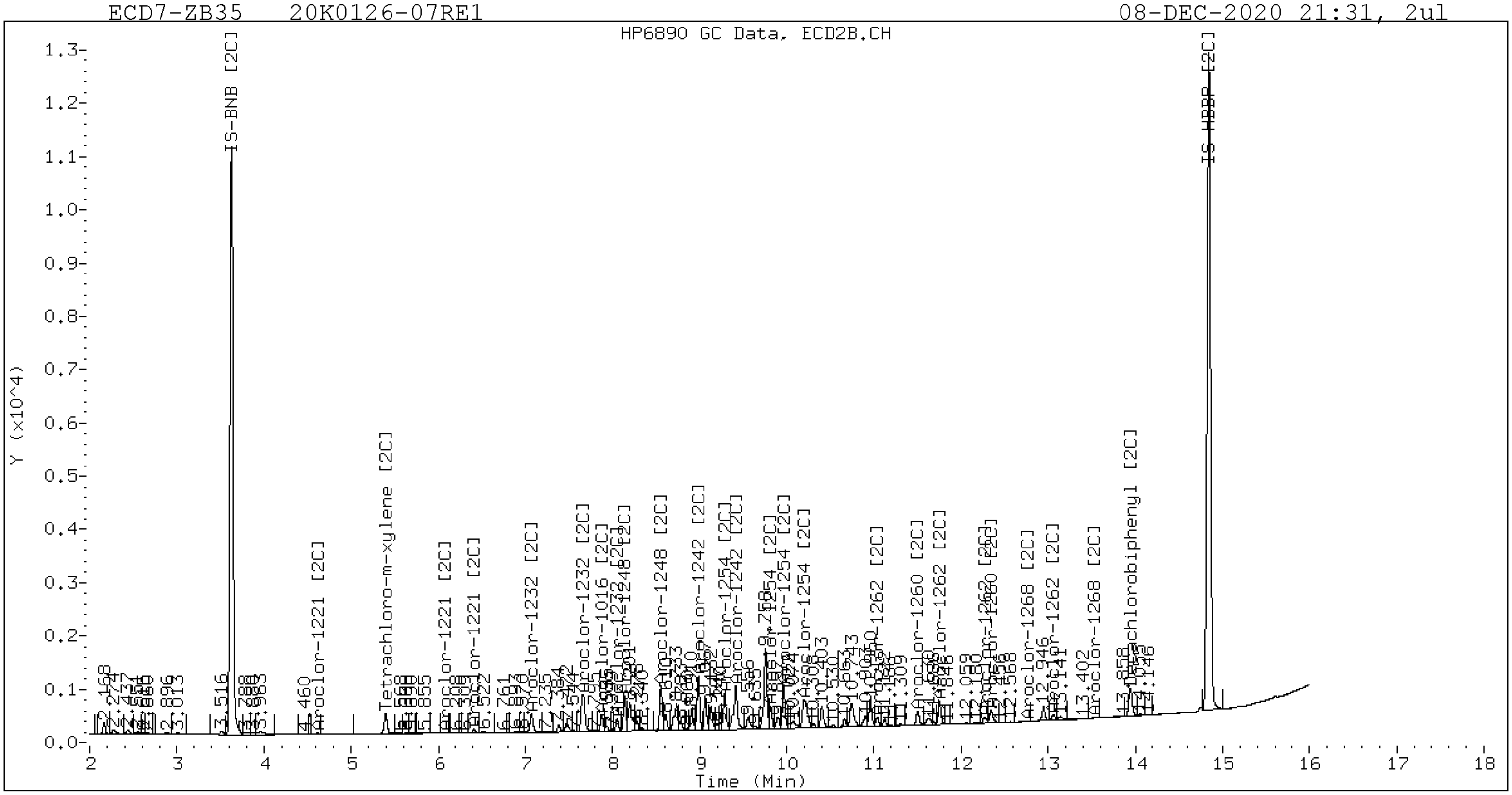
PCB Dual Column Chromatograms

ECD7-ZB5 20K0126-07RE1 08-DEC-2020 21:31, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0126-07RE1 08-DEC-2020 21:31, 2ul

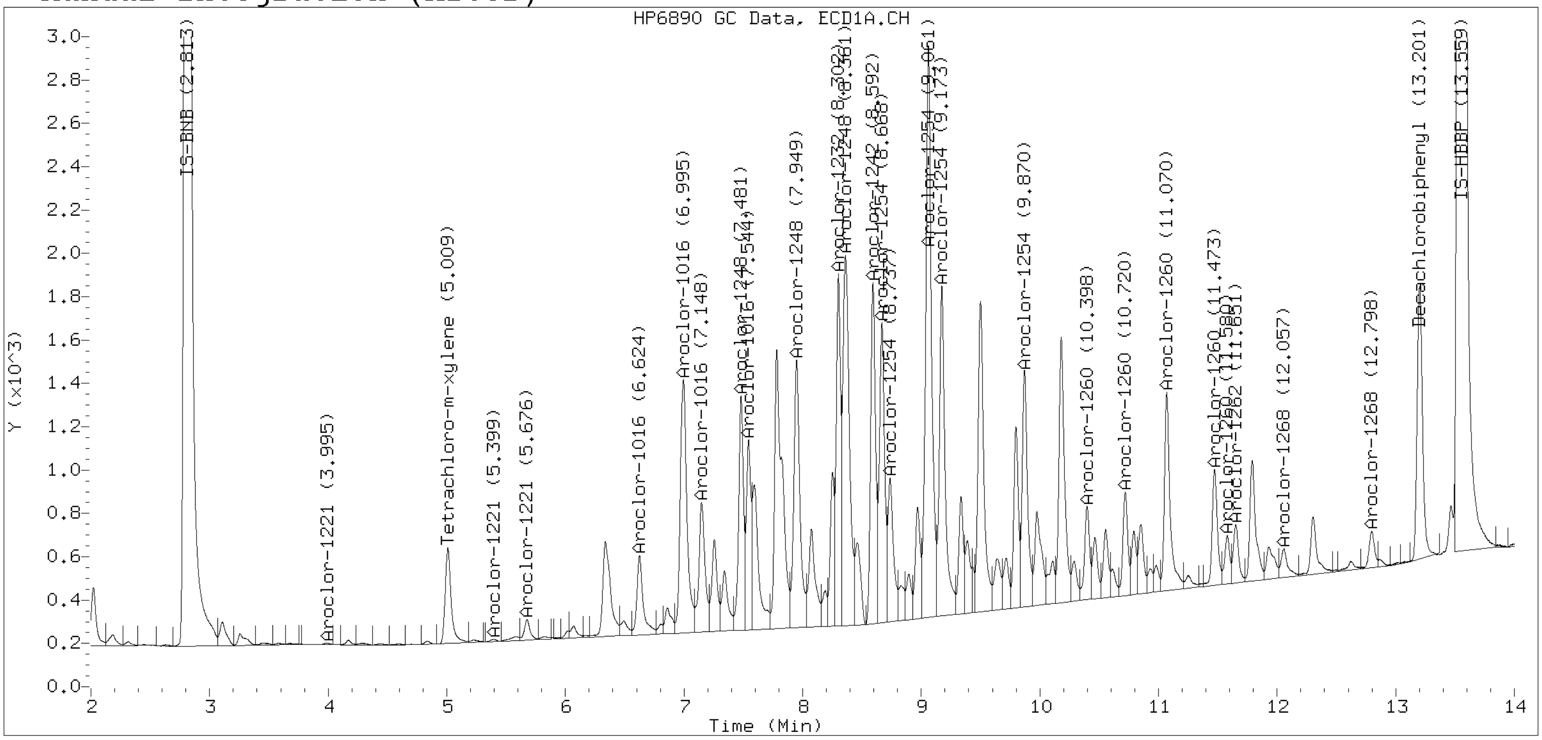


ZB-35 Manual Integration: NO

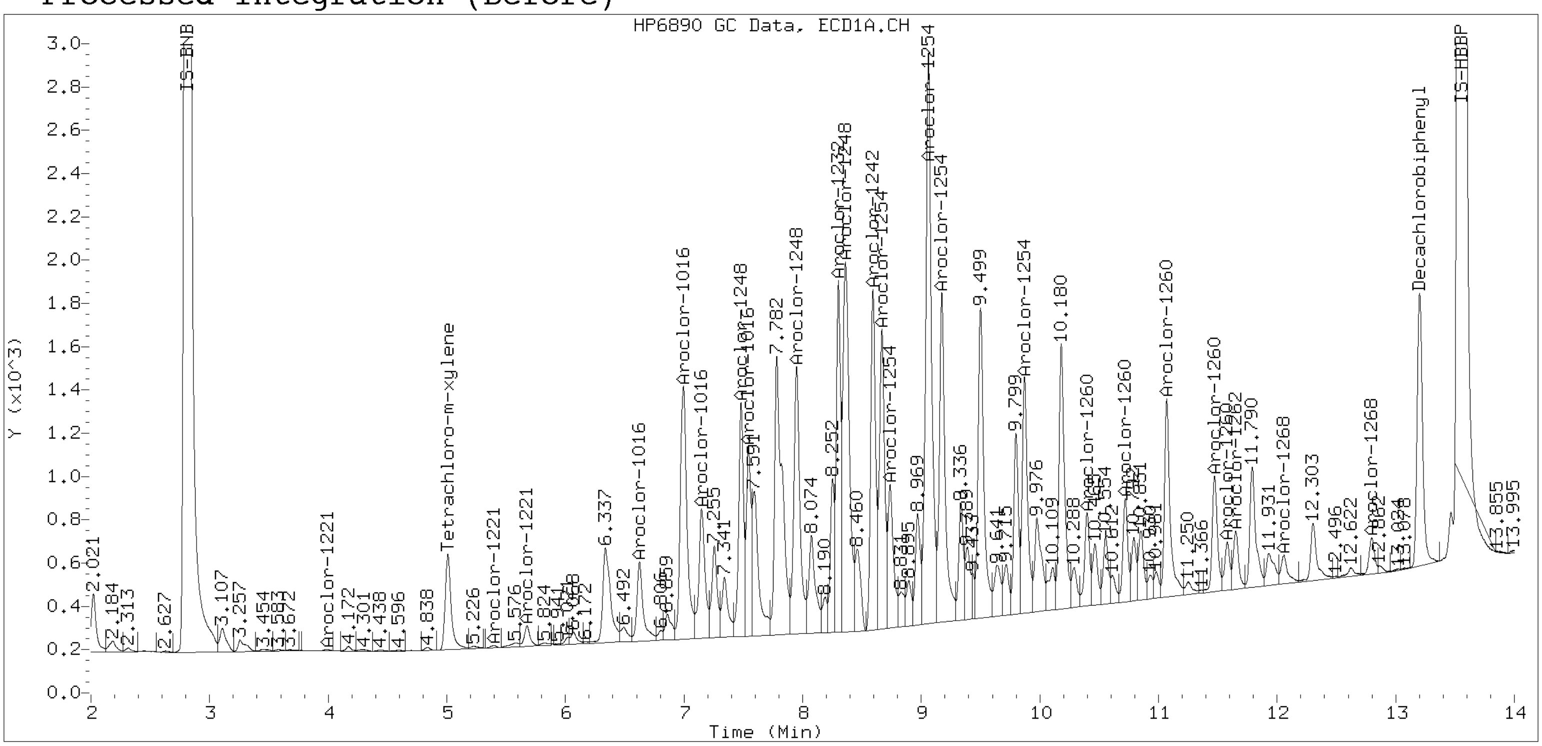
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201208.b/20120805ECD7.D   Injection Date: 08-DEC-2020 21:3

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP13-2.5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	20K0126-11 A	File ID:	20120809ECD7.D
Sampled:	11/04/20 12:35	Prepared:	11/18/20 11:50	Analyzed:	12/08/20 22:53
% Solids:	76.79	Preparation:	EPA 3546 (Microwave)	Initial/Final:	6.54 g Wet / 5 mL
Batch:	BIK0552	Sequence:	SIL0191	Calibration:	DL00019
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	19.9	8.0	19.9	U
11104-28-2	Aroclor 1221	1	1	19.9	8.0	19.9	U
11141-16-5	Aroclor 1232	1	1	19.9	8.0	19.9	U
53469-21-9	Aroclor 1242	1	1	19.9	8.0	19.9	U
12672-29-6	Aroclor 1248	1	1	19.9	8.0	19.9	U
11097-69-1	Aroclor 1254	1	1	19.9	8.0	19.9	U
11096-82-5	Aroclor 1260	1	1	19.9	9.2	19.9	U
37324-23-5	Aroclor 1262	1	1	19.9	9.2	19.9	U
11100-14-4	Aroclor 1268	1	1	19.9	9.2	19.9	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.824*	*25.3*	*63.6*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.824*	*23.9*	*60.0*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120809ECD7.D
Data file 2: /20201208.b/20201208.b/20120809ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0126-11RE1
Client ID:
Injection Date: 08-DEC-2020 22:53
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.002	-0.012	203574	5.389	-0.011	98786	24.0	22.9	4.9	Tetrachloro-m-xylene
13.185	-0.019	408625	13.933	-0.013	183142	25.4	26.6	4.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	60.0	57.1
Decachlorobiphenyl	63.6	66.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	581426	-26.1
Hexabromobiphenyl	2132987	1510674	-29.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	377033	-40.7
Hexabromobiphenyl	665758	418428	-37.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	6.640	0.012	3665	12.5	1	7.105	0.032	7324	40.0
Aroclor-1016	2	6.965	-0.034	1556	1.7	2	7.663	-0.008	1933	4.7
Aroclor-1016	3	7.153	0.003	1852	4.6	3	7.885	0.004	3590	23.0
Aroclor-1016	4	7.558	0.014	1485	6.8	4	8.057	0.002	3491	37.2
~~Total Col1Ave (4 peaks):~~					~~6.4~~	~~Total Col2Ave (4 peaks):~~			~~26.2~~	~~RPD = 121*~~
Corrected Ave (3 peaks):					4.4	Corrected Ave (3 peaks):			21.6	RPD = 133*
Aroclor-1221	1	4.034	0.062	1756	23.2	1	4.686	0.016	753	28.9
Aroclor-1221	2	5.394	-0.012	523	4.9	2	6.073	-0.001	1896	36.6
Aroclor-1221	3	5.667	-0.015	1602	5.8	3	6.424	0.007	2010	20.8
~~Total Col1Ave (3 peaks):~~					~~11.3~~	~~Total Col2Ave (3 peaks):~~			~~28.8~~	~~RPD = 87*~~
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.034	0.061	1756	38.4	1	4.686	0.016	753	46.7
Aroclor-1232	2	6.640	0.008	3665	30.9	2	7.105	0.028	7324	87.9
Aroclor-1232	3	7.025	0.024	788	2.0	3	7.663	-0.009	1933	11.1
Aroclor-1232	4	8.327	0.018	1775	15.4	4	8.057	-0.000	3491	88.1
Total Col1Ave (4 peaks):					21.7	Total Col2Ave (4 peaks):			58.4	RPD = 92*
~~Corrected Ave (3 peaks):~~					~~16.1~~	~~Corrected Ave (3 peaks):~~			~~48.6~~	~~RPD = 100*~~
Aroclor-1242	1	6.640	0.008	3665	16.2	1	7.105	0.028	7324	51.4
Aroclor-1242	2	7.025	0.022	788	1.1	2	7.663	-0.010	1933	5.9
Aroclor-1242	3	8.327	0.018	1775	7.7	3	9.004	0.013	1343	10.3
Aroclor-1242	4	8.640	0.037	1220	4.9	4	9.398	-0.029	558	4.4
~~Total Col1Ave (4 peaks):~~					~~7.5~~	~~Total Col2Ave (4 peaks):~~			~~18.0~~	~~RPD = 82*~~
Corrected Ave (3 peaks):					4.6	Corrected Ave (3 peaks):			6.8	RPD = 40*
Aroclor-1248	1	7.460	-0.024	1280	4.2	1	8.175	0.038	2810	22.0
Aroclor-1248	2	7.920	-0.032	2323	5.1	2	8.546	-0.012	2987	17.9
Aroclor-1248	3	8.327	-0.034	1775	2.6	3	9.004	0.016	1343	5.6
Aroclor-1248	4	8.559	-0.038	1504	3.8	4	9.398	-0.025	558	2.4
~~Total Col1Ave (4 peaks):~~					~~3.9~~	~~Total Col2Ave (4 peaks):~~			~~12.0~~	~~RPD = 101*~~
Corrected Ave (3 peaks):					3.6	Corrected Ave (3 peaks):			8.6	RPD = 83*
Aroclor-1254	1	8.640	-0.032	1220	1.8	1	9.266	-0.019	1844	6.8
Aroclor-1254	2	8.809	0.069	1167	3.1	2	9.398	0.020	558	4.5
Aroclor-1254	3	9.024	-0.015	2547	5.6	3	9.883	0.067	863	4.8
Aroclor-1254	4	9.141	-0.034	1346	1.4	4	9.948	-0.019	910	2.2
Aroclor-1254	5	9.892	0.019	4522	7.2	5	10.201	0.004	731	1.7
~~Total Col1Ave (5 peaks):~~					~~3.8~~	~~Total Col2Ave (5 peaks):~~			~~4.0~~	~~RPD = 5~~
Corrected Ave (4 peaks):					3.0	Corrected Ave (4 peaks):			3.3	RPD = 10
Aroclor-1260	1	10.359	-0.040	4632	7.9	1	11.037	-0.003	1550	6.1
Aroclor-1260	2	10.709	-0.012	2106	3.6	2	11.460	-0.044	2697	10.0
Aroclor-1260	3	11.095	0.022	15633	10.3	3	11.765	0.009	3344	4.9
Aroclor-1260	4	11.449	-0.025	1830	2.4	4	12.327	-0.016	873	1.9
Aroclor-1260	5	11.553	-0.027	2681	7.9	NS	---			----
Total Col1Ave (5 peaks):					6.4	Total Col2Ave (4 peaks):			5.7	RPD = 11
Corrected Ave (4 peaks):					$\boxed{5.4}$	Corrected Ave (3 peaks):			$\boxed{4.3}$	RPD = 24
Aroclor-1262	1	10.438	0.033	830	0.9	1	11.037	-0.007	1550	3.6
Aroclor-1262	2	11.095	0.017	15633	7.9	2	11.765	0.006	3344	3.5
Aroclor-1262	3	11.553	-0.033	2681	4.9	3	12.243	-0.032	3252	10.6
Aroclor-1262	4	11.631	-0.026	1829	2.5	4	13.123	0.058	1144	3.3
~~Total Col1Ave (4 peaks):~~					~~4.1~~	~~Total Col2Ave (4 peaks):~~			~~5.2~~	~~RPD = 25~~
Corrected Ave (3 peaks):					2.8	Corrected Ave (3 peaks):			3.5	RPD = 21
Aroclor-1268	1	11.553	-0.035	2681	1.3	1	12.243	-0.030	3252	3.2
Aroclor-1268	2	11.631	-0.026	1829	0.8	2	12.327	-0.012	873	0.8
Aroclor-1268	3	12.010	-0.027	1628	0.9	3	12.713	-0.016	382	0.4
Aroclor-1268	4	12.778	-0.034	4928	0.7	4	13.523	-0.023	1866	0.6
~~Total Col1Ave (4 peaks):~~					~~1.0~~	~~Total Col2Ave (4 peaks):~~			~~1.3~~	~~RPD = 27~~

Corrected Ave (3 peaks): 0.8 Corrected Ave (3 peaks): 0.6 RPD = 32

Total PCB Area Col1 (5.114 - 13.105) = 191833 Col1 Total PCB = 0.0 ppm*

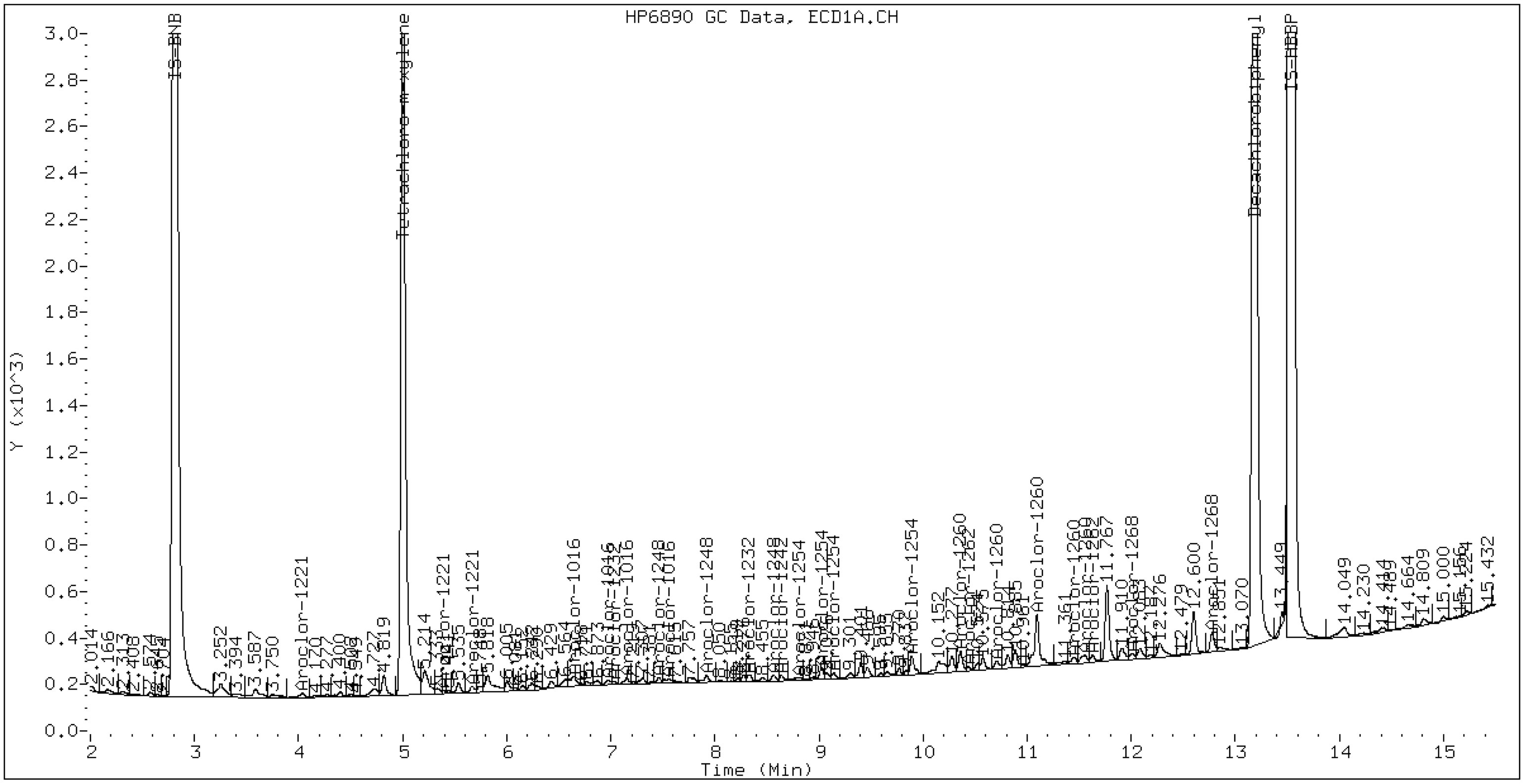
Total PCB Area Col2 (5.114 - 13.105) = 295192 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

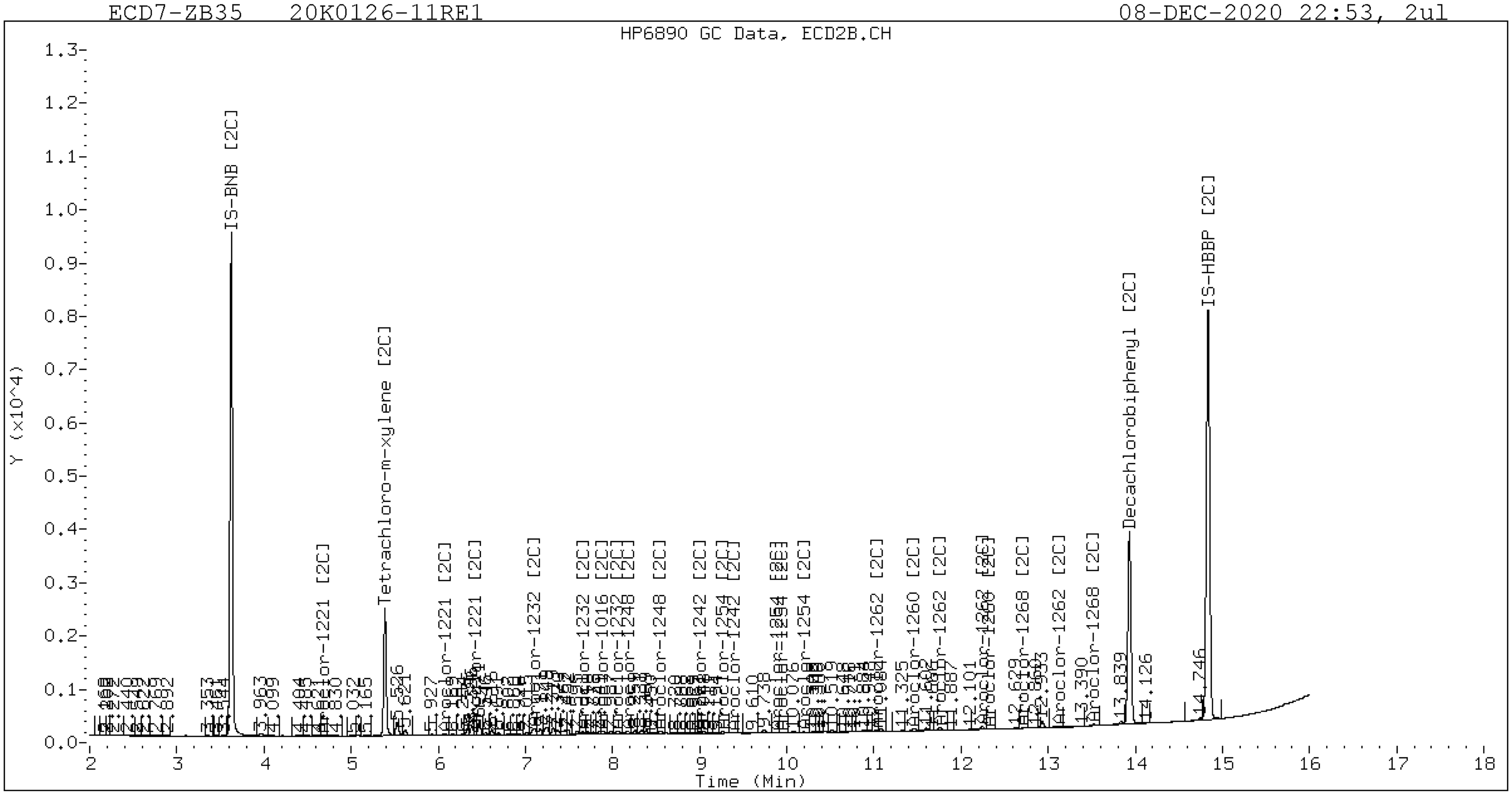
PCB Dual Column Chromatograms

ECD7-ZB5 20K0126-11RE1 08-DEC-2020 22:53, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0126-11RE1 08-DEC-2020 22:53, 2ul

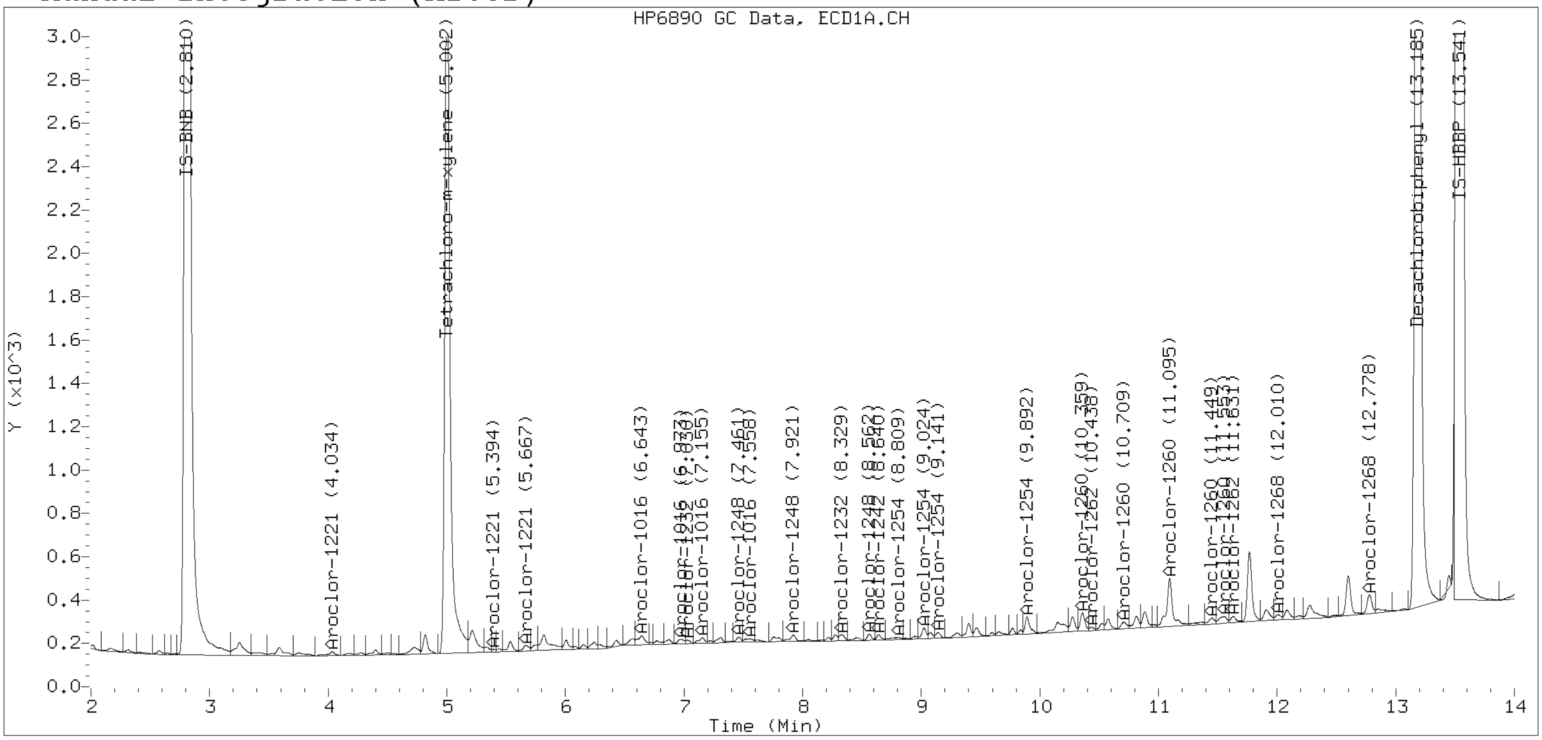


ZB-35 Manual Integration: YES

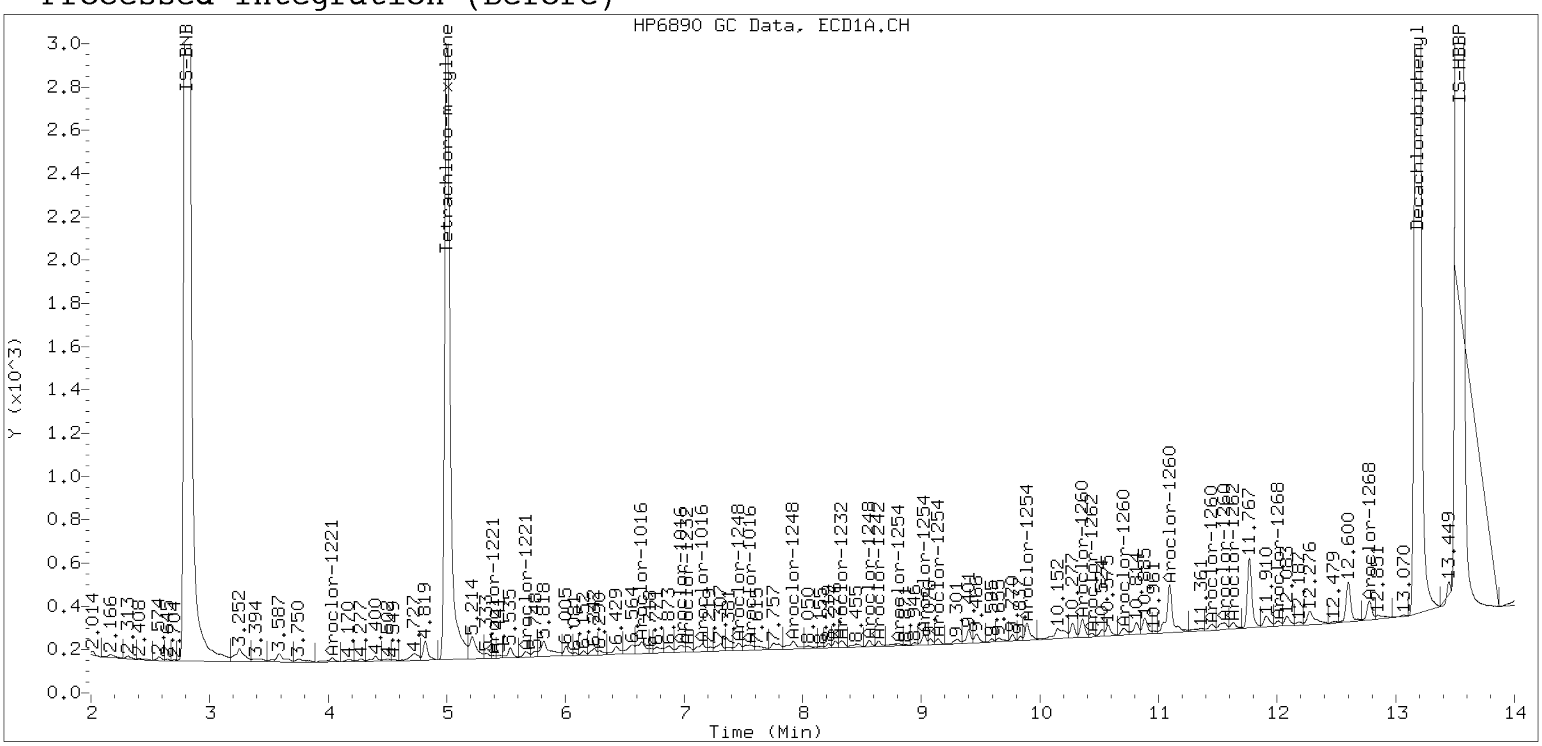
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201208.b/20120809ECD7.D   Injection Date: 08-DEC-2020 22:5

Manual Integration (After)



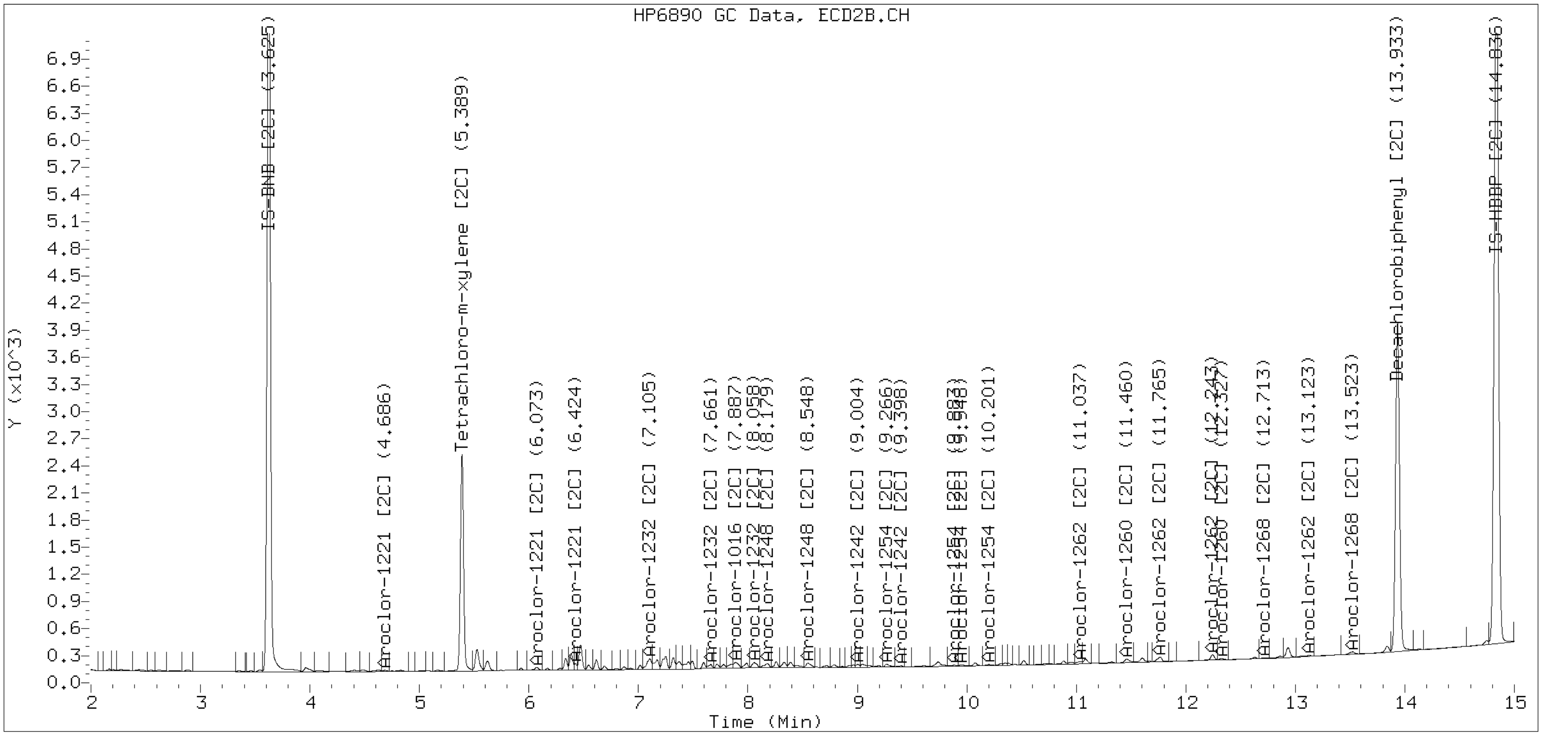
Processed Integration (Before)



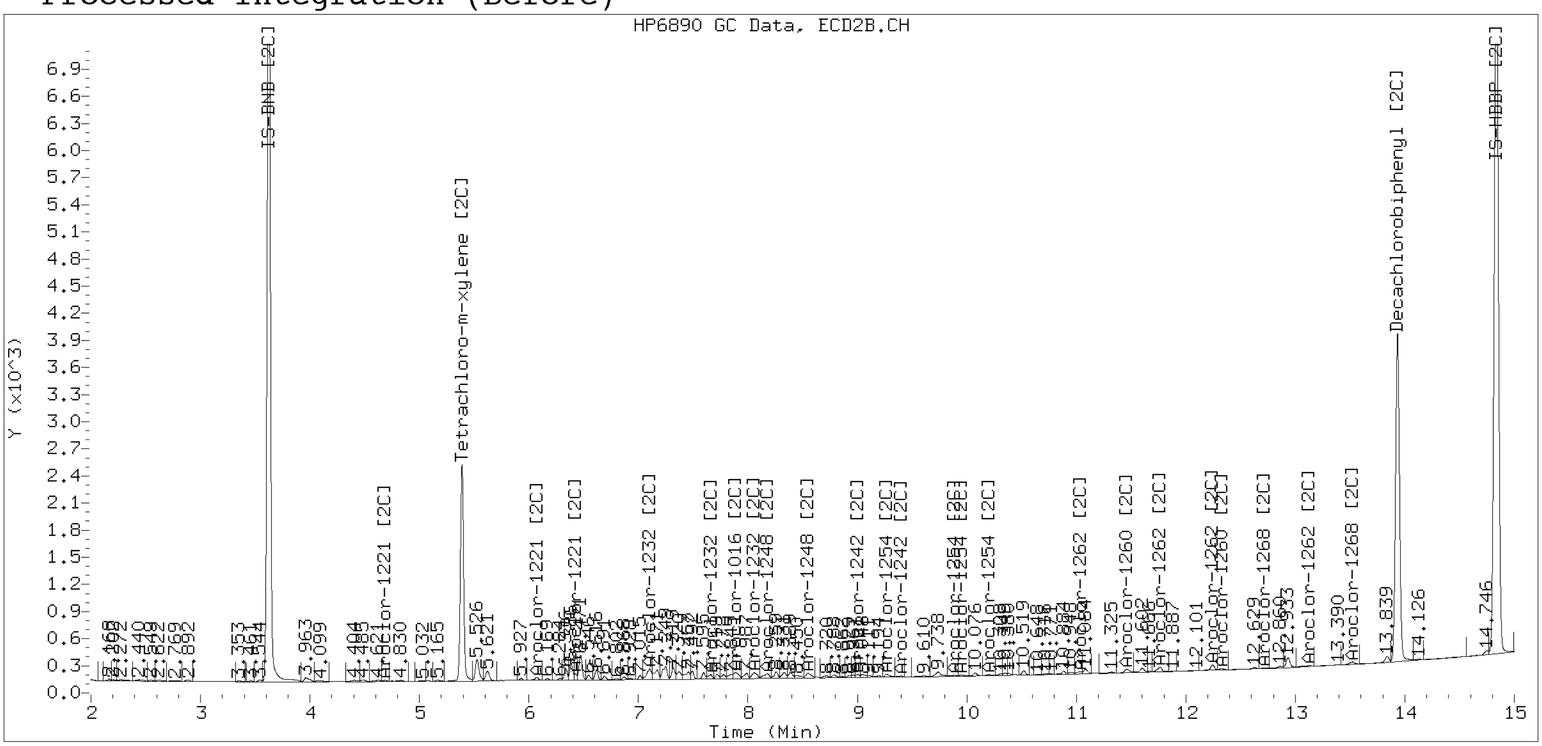
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/20201208.b/20201208.b/20120809ECD7.D   Injection Date: 08-DEC-2

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP13-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	20K0126-12 A	File ID:	20120810ECD7.D
Sampled:	11/04/20 12:40	Prepared:	11/18/20 11:50	Analyzed:	12/08/20 23:13
% Solids:	76.86	Preparation:	EPA 3546 (Microwave)	Initial/Final:	6.51 g Wet / 5 mL
Batch:	BIK0552	Sequence:	SIL0191	Calibration:	DL00019
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	20.0	8.0	20.0	U
11104-28-2	Aroclor 1221	1	1	20.0	8.0	20.0	U
11141-16-5	Aroclor 1232	1	1	20.0	8.0	20.0	U
53469-21-9	Aroclor 1242	1	1	20.0	8.0	20.0	U
12672-29-6	Aroclor 1248	2	1	20.0	8.0	20.0	U
11097-69-1	Aroclor 1254	2	1	20.0	8.0	20.0	U
11096-82-5	Aroclor 1260	1	1	20.0	9.3	20.0	U
37324-23-5	Aroclor 1262	1	1	20.0	9.3	20.0	U
11100-14-4	Aroclor 1268	1	1	20.0	9.3	20.0	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.971*	*51.5*	*129*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.971*	*26.1*	*65.3*	*53 - 120*	
Decachlorobiphenyl	*2*	*39.971*	*49.7*	*124*	*40 - 133*	
Tetrachlorometaxylene	*2*	*39.971*	*27.6*	*69.2*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120810ECD7.D
Data file 2: /20201208.b/20201208.b/20120810ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0126-12RE1
Client ID:
Injection Date: 08-DEC-2020 23:13
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.011	-0.004	284870	5.397	-0.002	168467	26.1	27.7	5.7	Tetrachloro-m-xylene
13.203	-0.002	628765	13.946	-0.000	294960	51.6	49.7	3.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	65.3	69.2
Decachlorobiphenyl	128.9	124.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	747800	-4.9
Hexabromobiphenyl	2132987	1147314	-46.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	531265	-16.4
Hexabromobiphenyl	665758	360740	-45.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

			ZB5 Col					ZB35 Col		
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.668	0.040	963	2.6	1	7.064	-0.009	322	1.2
Aroclor-1016	2	7.002	0.003	1408	1.2	2	7.664	-0.007	802	1.4
Aroclor-1016	3	7.140	-0.009	1002	1.9	3	7.877	-0.004	698	3.2
Aroclor-1016	4	7.544	0.000	1538	5.5	4	---			0.0
	Total Col1Ave (4 peaks):			2.8	Total Col2Ave (3 peaks):				1.9	RPD = 36
	Corrected Ave (3 peaks):			1.9			Corrected Ave: < 3 Peaks			
Aroclor-1221	1	3.992	0.021	717	7.4	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.084	0.009	2628	36.0
Aroclor-1221	3	5.678	-0.004	272	0.8	3	6.401	-0.016	1345	9.9
	Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	3.992	0.019	717	12.2	1	---			0.0
Aroclor-1232	2	6.668	0.037	963	6.3	2	7.064	-0.012	322	2.7
Aroclor-1232	3	7.002	0.000	1408	2.8	3	7.664	-0.009	802	3.3
Aroclor-1232	4	8.307	-0.002	3541	23.9	4	8.155	0.098	2084	37.3
	Total Col1Ave (4 peaks):			11.3	Total Col2Ave (3 peaks):				14.4	RPD = 24
	Corrected Ave (3 peaks):			7.1			Corrected Ave: < 3 Peaks			
Aroclor-1242	1	6.668	0.037	963	3.3	1	7.064	-0.012	322	1.6
Aroclor-1242	2	7.002	-0.001	1408	1.6	2	7.664	-0.009	802	1.7
Aroclor-1242	3	8.307	-0.002	3541	11.9	3	8.980	-0.011	1338	7.3
Aroclor-1242	4	8.580	-0.023	2784	8.6	4	9.410	-0.017	2596	14.4
	Total Col1Ave (4 peaks):			6.4	Total Col2Ave (4 peaks):				6.2	RPD = 2
	Corrected Ave (3 peaks):			4.5	Corrected Ave (3 peaks):				3.5	RPD = 24
Aroclor-1248	1	7.481	-0.002	2503	6.4	1	8.155	0.018	2084	11.6
Aroclor-1248	2	7.947	-0.005	3004	5.1	2	8.559	0.001	1940	8.2
Aroclor-1248	3	8.372	0.010	4994	5.7	3	8.980	-0.008	1338	4.0
Aroclor-1248	4	8.580	-0.017	2784	5.5	4	9.410	-0.013	2596	7.9
	Total Col1Ave (4 peaks):			5.7	Total Col2Ave (4 peaks):				7.9	RPD = 33
	Corrected Ave (3 peaks):			5.4	Corrected Ave (3 peaks):				6.7	RPD = 21
Aroclor-1254	1	8.662	-0.009	4423	5.0	1	9.284	-0.001	2270	6.0
Aroclor-1254	2	8.733	-0.007	2590	5.4	2	9.410	0.032	2596	~~14.8~~
Aroclor-1254	3	9.060	0.021	2802	4.7	3	9.808	-0.009	1388	5.5
Aroclor-1254	4	9.172	-0.004	1968	1.6	4	9.972	0.005	2184	3.7
Aroclor-1254	5	9.864	-0.008	3053	3.8	5	10.215	0.018	2612	4.3
	Total Col1Ave (5 peaks):			4.1	Total Col2Ave (5 peaks):				6.8	RPD = 50*
	Corrected Ave (4 peaks):			3.8	Corrected Ave (4 peaks):				4.9	RPD = 25
Aroclor-1260	1	10.397	-0.003	4452	10.0	1	11.035	-0.005	1394	6.3
Aroclor-1260	2	10.720	-0.001	3901	8.8	2	11.504	0.001	2198	9.5
Aroclor-1260	3	11.067	-0.005	10122	8.8	3	11.754	-0.002	2863	4.8
Aroclor-1260	4	11.467	-0.007	5714	9.7	4	12.345	0.002	1730	4.5
Aroclor-1260	5	11.576	-0.005	2160	8.4	NS	---			----
	Total Col1Ave (5 peaks):			9.1	Total Col2Ave (4 peaks):				6.3	RPD = 37
	Corrected Ave (4 peaks):			8.9	Corrected Ave (3 peaks):				5.2	RPD = 52*
Aroclor-1262	1	10.397	-0.009	4452	6.7	1	11.035	-0.009	1394	3.7
Aroclor-1262	2	11.067	-0.010	10122	6.7	2	11.754	-0.005	2863	3.5
Aroclor-1262	3	11.576	-0.010	2160	5.2	3	12.268	-0.007	2248	8.5
Aroclor-1262	4	11.647	-0.010	2258	4.1	4	13.060	-0.006	608	2.0
	Total Col1Ave (4 peaks):			5.7	Total Col2Ave (4 peaks):				4.4	RPD = 25
	Corrected Ave (3 peaks):			5.3	Corrected Ave (3 peaks):				3.1	RPD = 53*
Aroclor-1268	1	11.576	-0.013	2160	1.4	1	12.268	-0.005	2248	2.6
Aroclor-1268	2	11.647	-0.010	2258	1.4	2	12.345	0.006	1730	1.8
Aroclor-1268	3	12.029	-0.008	4985	3.8	3	12.723	-0.006	944	1.2
Aroclor-1268	4	12.801	-0.011	8247	1.6	4	13.540	-0.006	1774	0.7
	Total Col1Ave (4 peaks):			2.0	Total Col2Ave (4 peaks):				1.6	RPD = 26
	Corrected Ave (3 peaks):			1.5	Corrected Ave (3 peaks):				1.2	RPD = 17

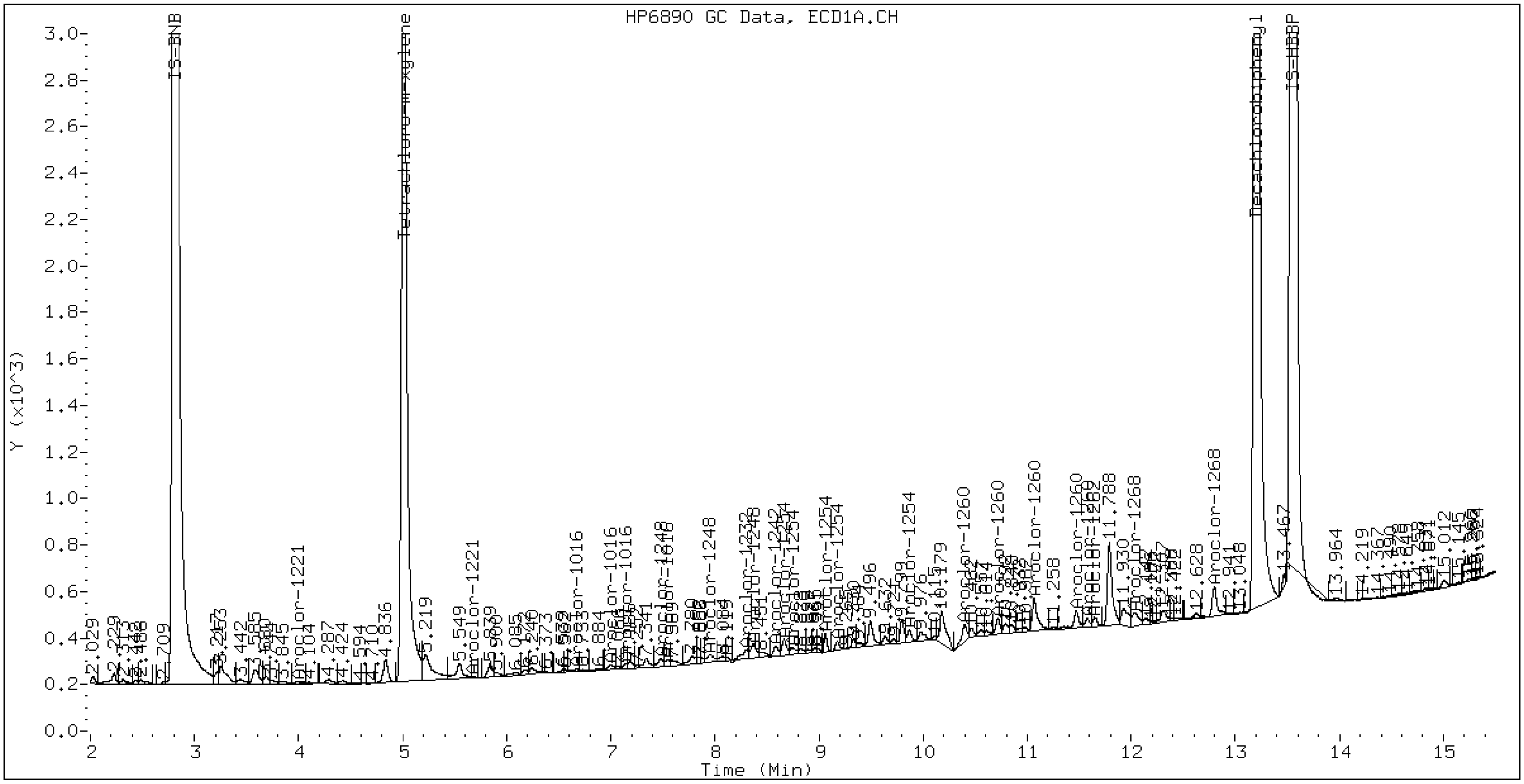
Total PCB Area Col1 (5.114 - 13.105) =	218132	Col1 Total PCB = 0.0 ppm*
Total PCB Area Col2 (5.114 - 13.105) =	263333	Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

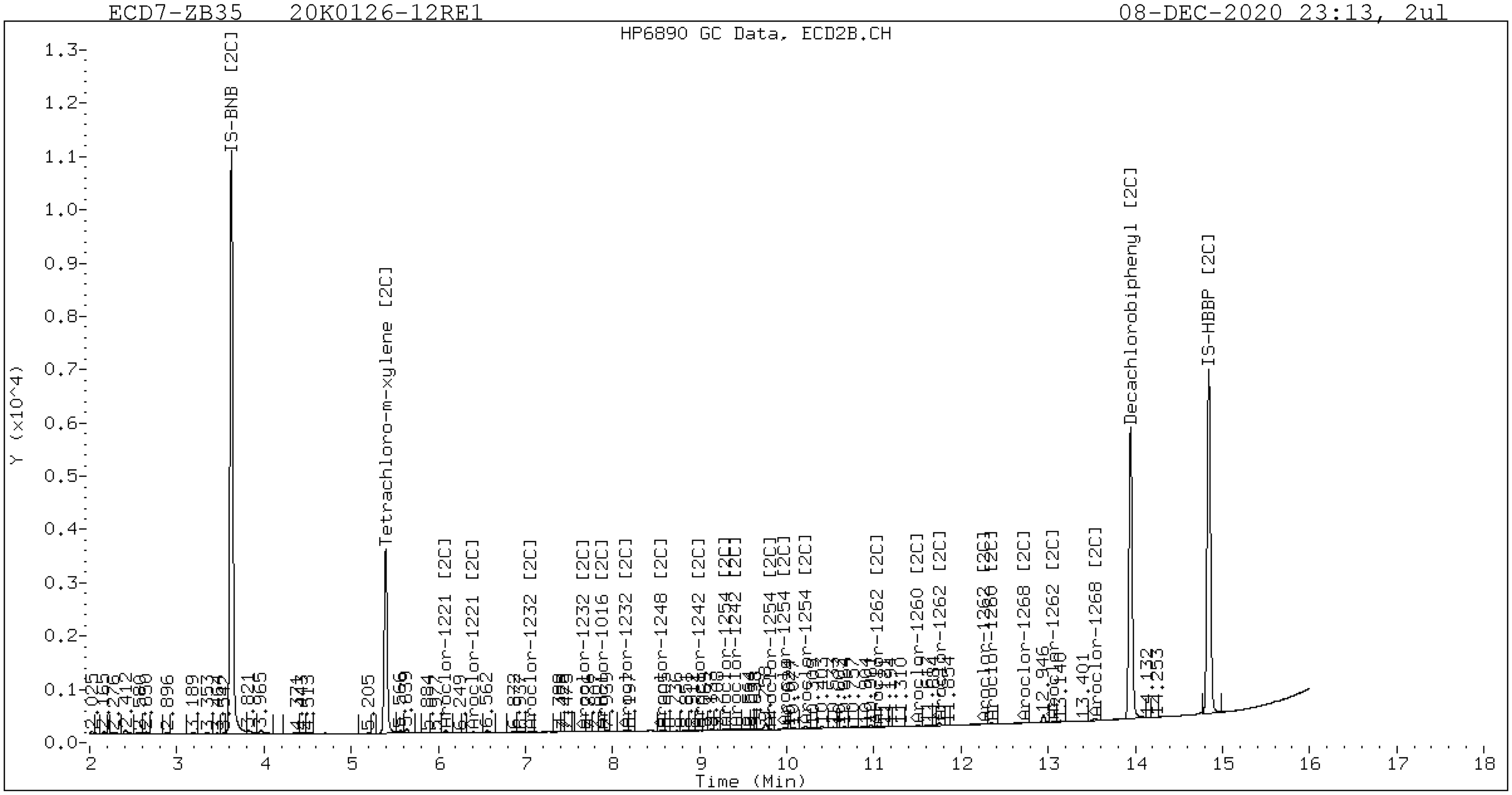
PCB Dual Column Chromatograms

ECD7-ZB5 20K0126-12RE1 08-DEC-2020 23:13, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0126-12RE1 08-DEC-2020 23:13, 2ul

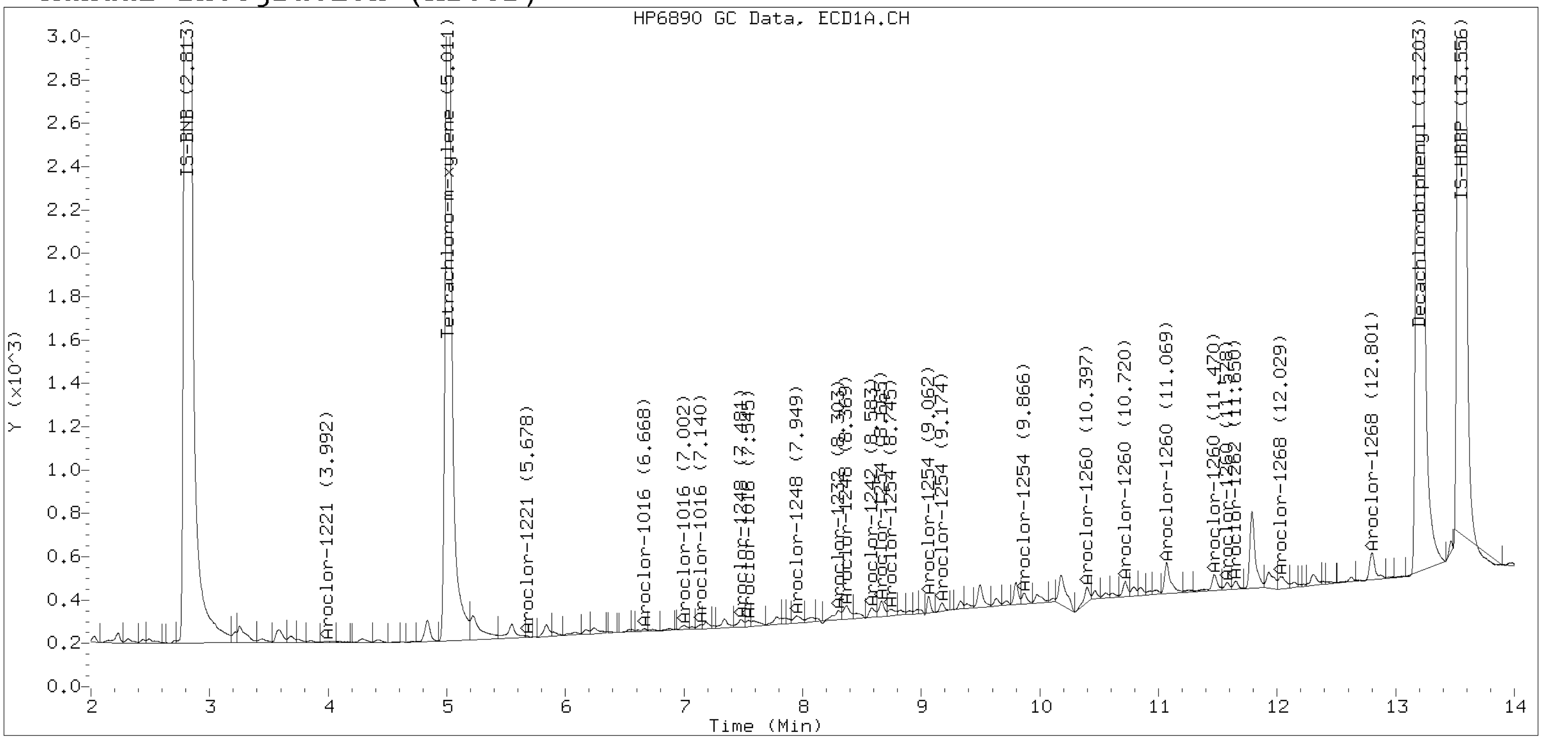


ZB-35 Manual Integration: YES

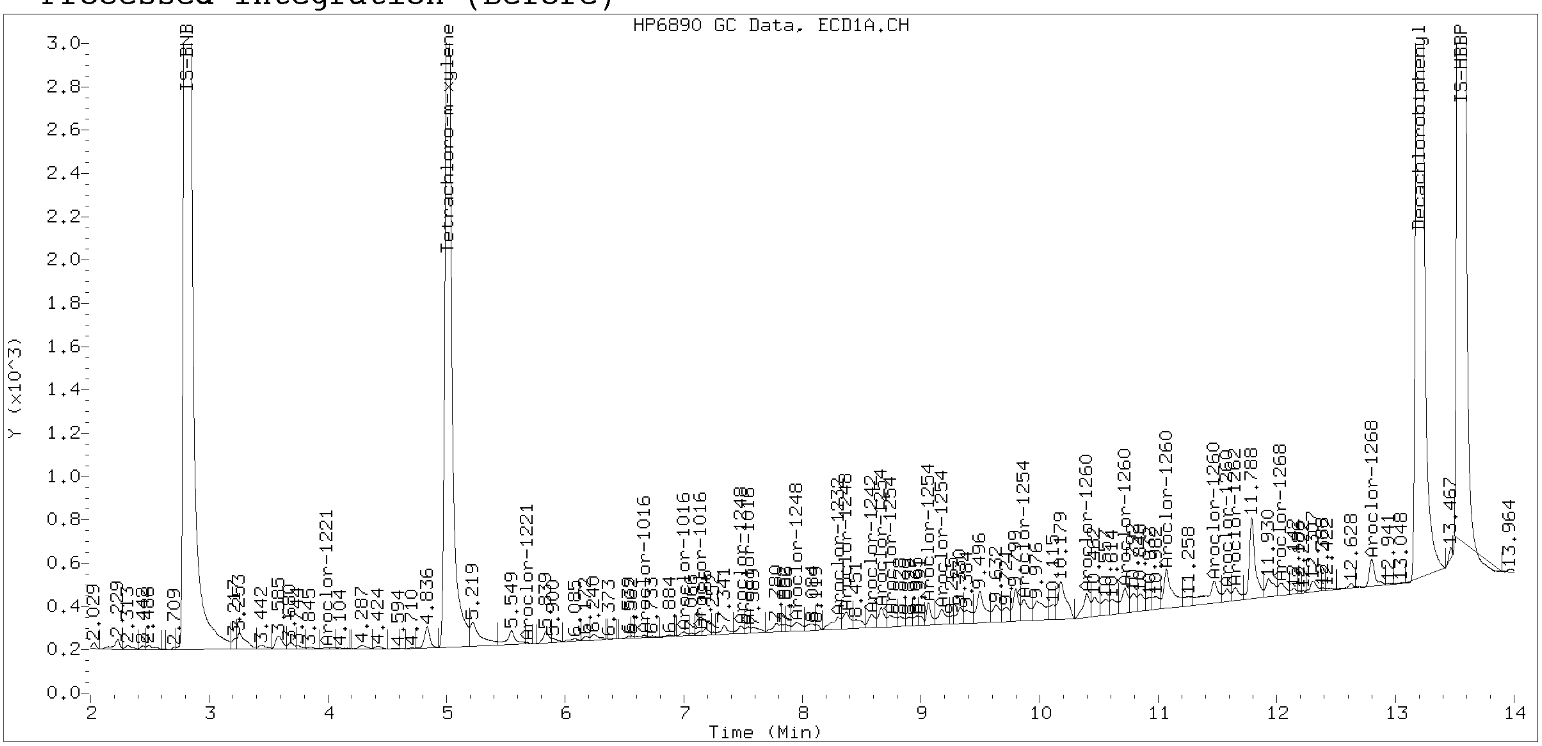
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201208.b/20120810ECD7.D   Injection Date: 08-DEC-2020 23:1

Manual Integration (After)



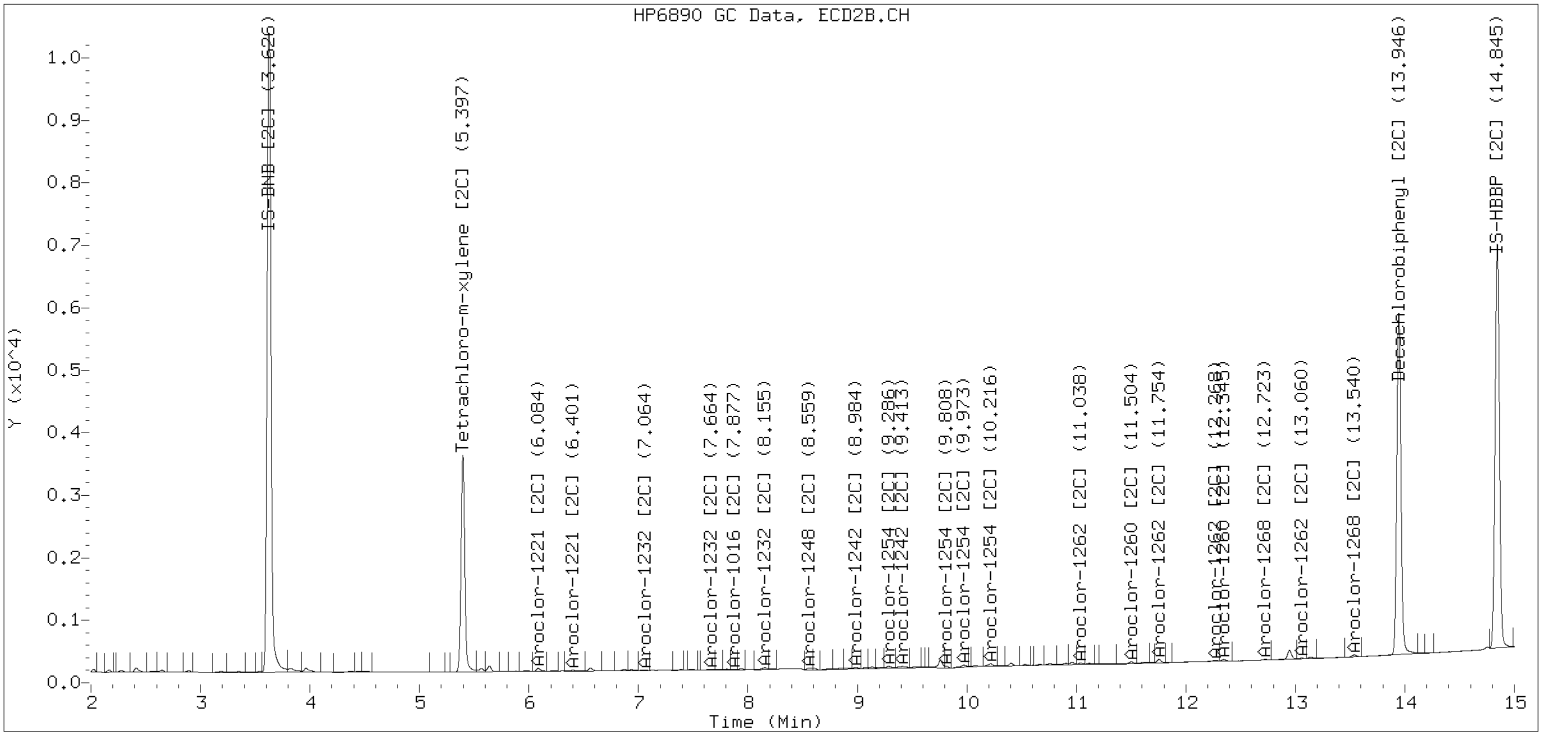
Processed Integration (Before)



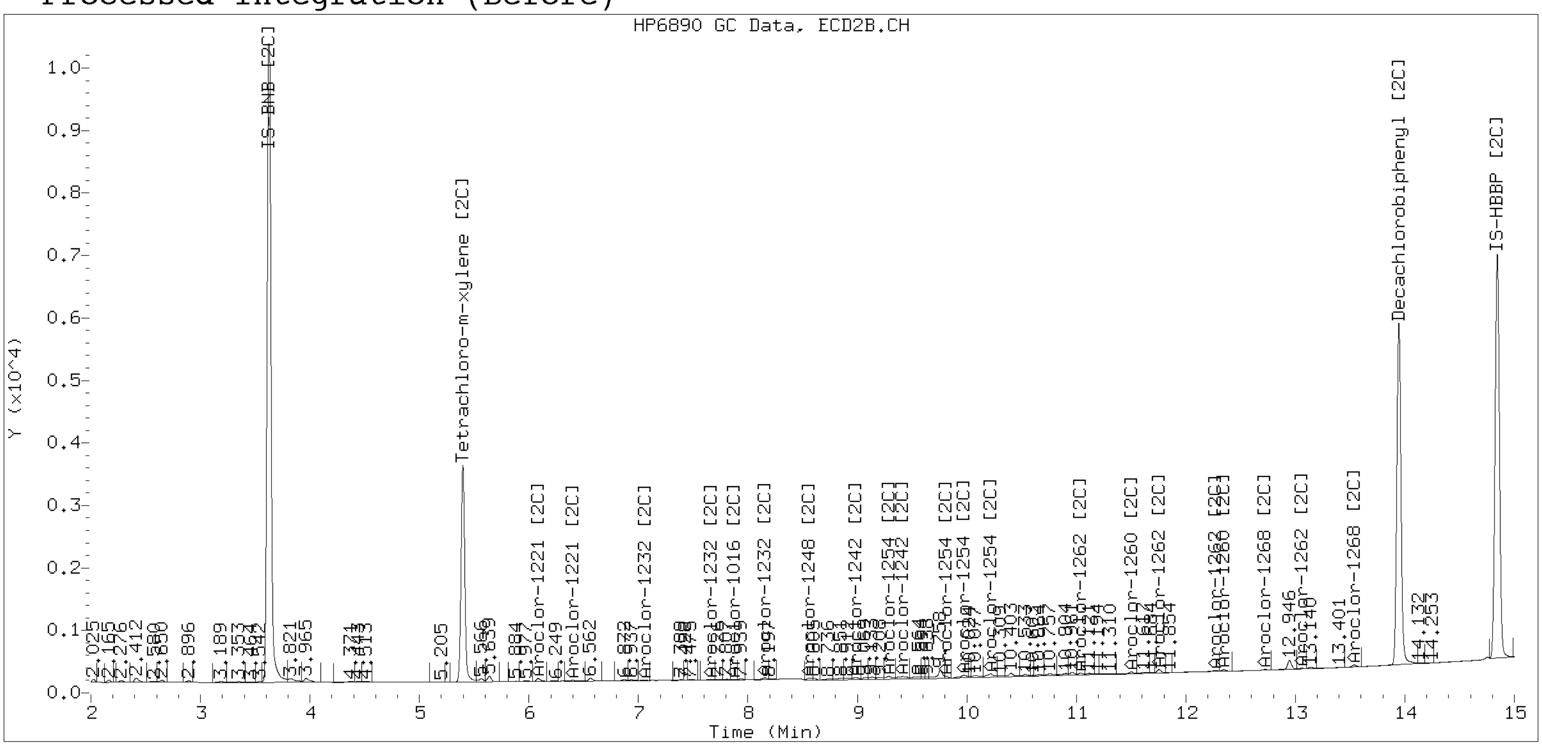
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/20201208.b/20201208.b/20120810ECD7.D   Injection Date: 08-DEC-2

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP7-2.5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	20K0126-16 A	File ID:	20120726ECD7.D
Sampled:	11/04/20 13:30	Prepared:	11/18/20 11:50	Analyzed:	12/08/20 01:51
% Solids:	91.99	Preparation:	EPA 3546 (Microwave)	Initial/Final:	5.46 g Wet / 5 mL
Batch:	BIK0552	Sequence:	SIL0131	Calibration:	DL00019
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	19.9	8.0	19.9	U
11104-28-2	Aroclor 1221	1	1	19.9	8.0	19.9	U
11141-16-5	Aroclor 1232	1	1	19.9	8.0	19.9	U
53469-21-9	Aroclor 1242	1	1	19.9	8.0	19.9	U
12672-29-6	Aroclor 1248	1	1	19.9	8.0	19.9	U
11097-69-1	Aroclor 1254	2	1	24.5	8.0	19.9	
11096-82-5	Aroclor 1260	1	1	100	9.2	19.9	
37324-23-5	Aroclor 1262	1	1	19.9	9.2	19.9	U
11100-14-4	Aroclor 1268	1	1	19.9	9.2	19.9	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.820*	*26.7*	*67.2*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.820*	*26.0*	*65.3*	*53 - 120*	
Decachlorobiphenyl	*2*	*39.820*	*30.8*	*77.3*	*40 - 133*	
Tetrachlorometaxylene	*2*	*39.820*	*26.3*	*66.0*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120726ECD7.D	ARI ID: 20K0126-16
Data file 2: /20201207.b/20201207.b/20120726ECD7.D	Client ID:
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m	Injection Date: 08-DEC-2020 01:51
Compound Sublist: PCB.sub	Report Date: 12/13/2020 14:24
Instrument, Inj. Vol.: ecd7.i, 2ul	Matrix: NONE
Quant Method: Internal Std	Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	-0.000	322627	5.399	-0.001	196753	26.1	26.4	0.9	Tetrachloro-m-xylene
13.203	-0.001	634356	13.945	-0.002	337426	26.9	30.9	14.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	65.3	66.0
Decachlorobiphenyl	67.2	77.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	846619	7.6
Hexabromobiphenyl	2132987	2221020	4.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	650616	2.4
Hexabromobiphenyl	665758	663371	-0.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.662	0.034	1759	4.1	1	7.072	-0.002	362	1.1
Aroclor-1016	2	6.996	-0.003	2080	1.5	2	7.665	-0.005	1386	1.9
Aroclor-1016	3	7.190	0.041	3385	5.8	3	7.879	-0.001	1039	3.8
Aroclor-1016	4	7.546	0.000	3081	9.7	4	8.031	-0.023	60822	375.8

~~Total Col1Ave (4 peaks): 5.3 Total Col2Ave (4 peaks): 95.7 RPD = 179*~~
Corrected Ave (3 peaks): 3.8 Corrected Ave (3 peaks): 2.3 RPD = 49*

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	3.961	-0.011	239	2.2	1	4.619	-0.050	2260	50.2
Aroclor-1221	2	5.345	-0.061	9127	58.6	2	6.088	0.013	4735	53.0
Aroclor-1221	3	5.667	-0.015	597	1.5	3	6.418	0.001	4980	29.9

~~Total Col1Ave (3 peaks): 20.8 Total Col2Ave (3 peaks): 44.4 RPD = 73*~~
Corrected Ave: < 3 Peaks Corrected Ave: < 3 Peaks

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	3.961	-0.012	239	3.6	1	4.619	-0.050	2260	81.2
Aroclor-1232	2	6.662	0.031	1759	10.2	2	7.072	-0.005	362	2.5
Aroclor-1232	3	6.996	-0.006	2080	3.7	3	7.665	-0.007	1386	4.6
Aroclor-1232	4	8.305	-0.004	2315	13.8	4	8.031	-0.026	60822	889.0

~~Total Col1Ave (4 peaks): 7.8 Total Col2Ave (4 peaks): 244.3 RPD = 188*~~
Corrected Ave (3 peaks): 5.8 Corrected Ave (3 peaks): 29.4 RPD = 134*

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.662	0.033	1759	5.4	1	7.072	-0.001	362	1.5
Aroclor-1242	2	6.996	-0.004	2080	2.1	2	7.665	-0.005	1386	2.4
Aroclor-1242	3	8.305	-0.001	2315	6.9	3	8.990	0.002	1282	5.7
Aroclor-1242	4	8.589	-0.011	12024	32.8	4	9.411	-0.011	3068	13.9

Total Col1Ave (4 peaks): 11.8 Total Col2Ave (4 peaks): 5.9 RPD = 67*
~~Corrected Ave (3 peaks): 4.8 Corrected Ave (3 peaks): 3.2 RPD = 39~~

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	7.482	-0.001	2935	6.6	1	8.153	0.016	2410	10.9
Aroclor-1248	2	7.955	0.002	2317	3.5	2	8.557	-0.001	835	2.9
Aroclor-1248	3	8.378	0.016	26237	26.5	3	8.990	0.002	1282	3.1
Aroclor-1248	4	8.589	-0.008	12024	21.0	4	9.411	-0.011	3068	7.6

~~Total Col1Ave (4 peaks): 14.4 Total Col2Ave (4 peaks): 6.1 RPD = 81*~~
Corrected Ave (3 peaks): 10.4 Corrected Ave (3 peaks): 4.5 RPD = 78*

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.669	-0.002	30740	30.6	1	9.286	-0.001	13610	29.3
Aroclor-1254	2	8.743	0.003	11663	21.5	2	9.381	0.001	3132	14.6
Aroclor-1254	3	9.049	0.009	8778	13.1	3	9.820	0.003	3380	11.0
Aroclor-1254	4	9.168	-0.007	35635	25.9	4	9.985	0.017	31641	43.6
Aroclor-1254	5	9.865	-0.007	45399	~~49.7~~	5	10.218	0.018	41908	~~55.9~~

Total Col1Ave (5 peaks): 28.2 Total Col2Ave (5 peaks): 30.9 RPD = 9
Corrected Ave (4 peaks): $\boxed{22.8}$ Corrected Ave (4 peaks): $\boxed{24.6}$ RPD = 8

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1260	1	10.399	-0.001	92336	106.9	1	11.038	-0.001	42411	104.6
Aroclor-1260	2	10.720	-0.001	89115	103.3	2	11.502	-0.002	44905	105.2
Aroclor-1260	3	11.071	-0.001	223707	99.9	3	11.754	-0.002	101619	93.0
Aroclor-1260	4	11.474	-0.000	99564	87.1	4	12.343	-0.000	63428	89.4
Aroclor-1260	5	11.581	0.000	52308	105.0	NS	---			----

Total Col1Ave (5 peaks): $\boxed{100.5}$ Total Col2Ave (4 peaks): $\boxed{98.0}$ RPD = 2
Corrected Ave (4 peaks): 98.8 Corrected Ave (3 peaks): 95.7 RPD = 3

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1262	1	10.399	-0.006	92336	71.3	1	11.038	-0.005	42411	61.5
Aroclor-1262	2	11.071	-0.006	223707	76.8	2	11.754	-0.005	101619	67.1
Aroclor-1262	3	11.581	-0.005	52308	64.7	3	12.270	-0.006	30792	63.3
Aroclor-1262	4	11.652	-0.005	66466	62.7	4	13.060	-0.005	25409	46.1

~~Total Col1Ave (4 peaks): 68.9 Total Col2Ave (4 peaks): 59.5 RPD = 15~~
Corrected Ave (3 peaks): 66.2 Corrected Ave (3 peaks): 57.0 RPD = 15

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1268	1	11.581	-0.008	52308	17.7	1	12.270	-0.003	30792	19.3
Aroclor-1268	2	11.652	-0.005	66466	21.0	2	12.343	0.004	63428	36.5
Aroclor-1268	3	12.056	0.018	32874	12.9	3	12.725	-0.004	1603	1.1
~~Aroclor-1268~~	~~4~~	~~12.800~~	~~-0.012~~	~~23401~~	~~2.3~~	~~4~~	~~13.539~~	~~-0.007~~	~~6881~~	~~1.4~~

Total Col1Ave (4 peaks): 13.5 Total Col2Ave (4 peaks): 14.6 RPD = 8

Corrected Ave (3 peaks):	11.0	Corrected Ave (3 peaks):	7.3	RPD = 41*

Total PCB Area Col1 (5.113 - 13.105) = 1969330 Col1 Total PCB = 0.2 ppm*

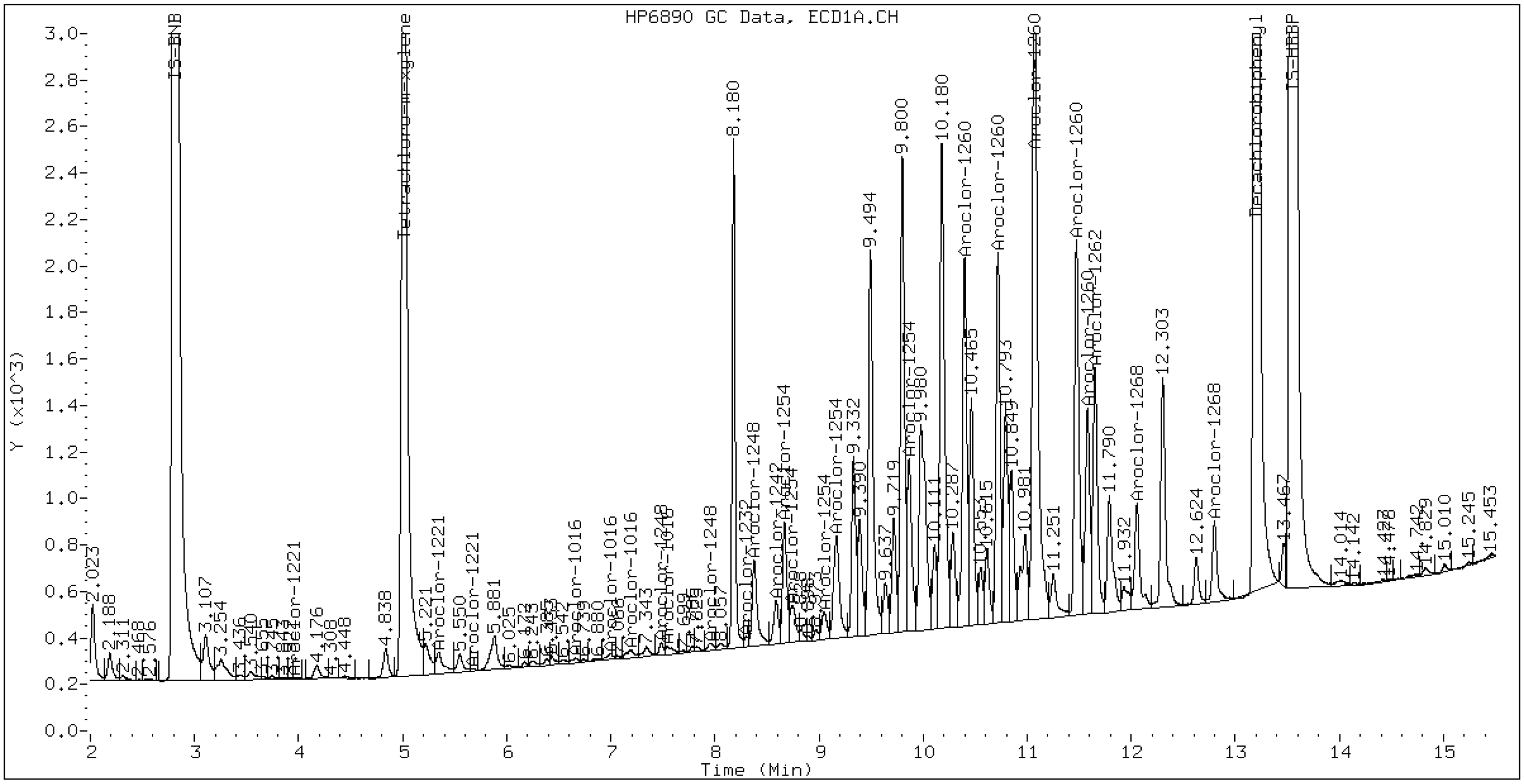
Total PCB Area Col2 (5.113 - 13.105) = 1776292 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

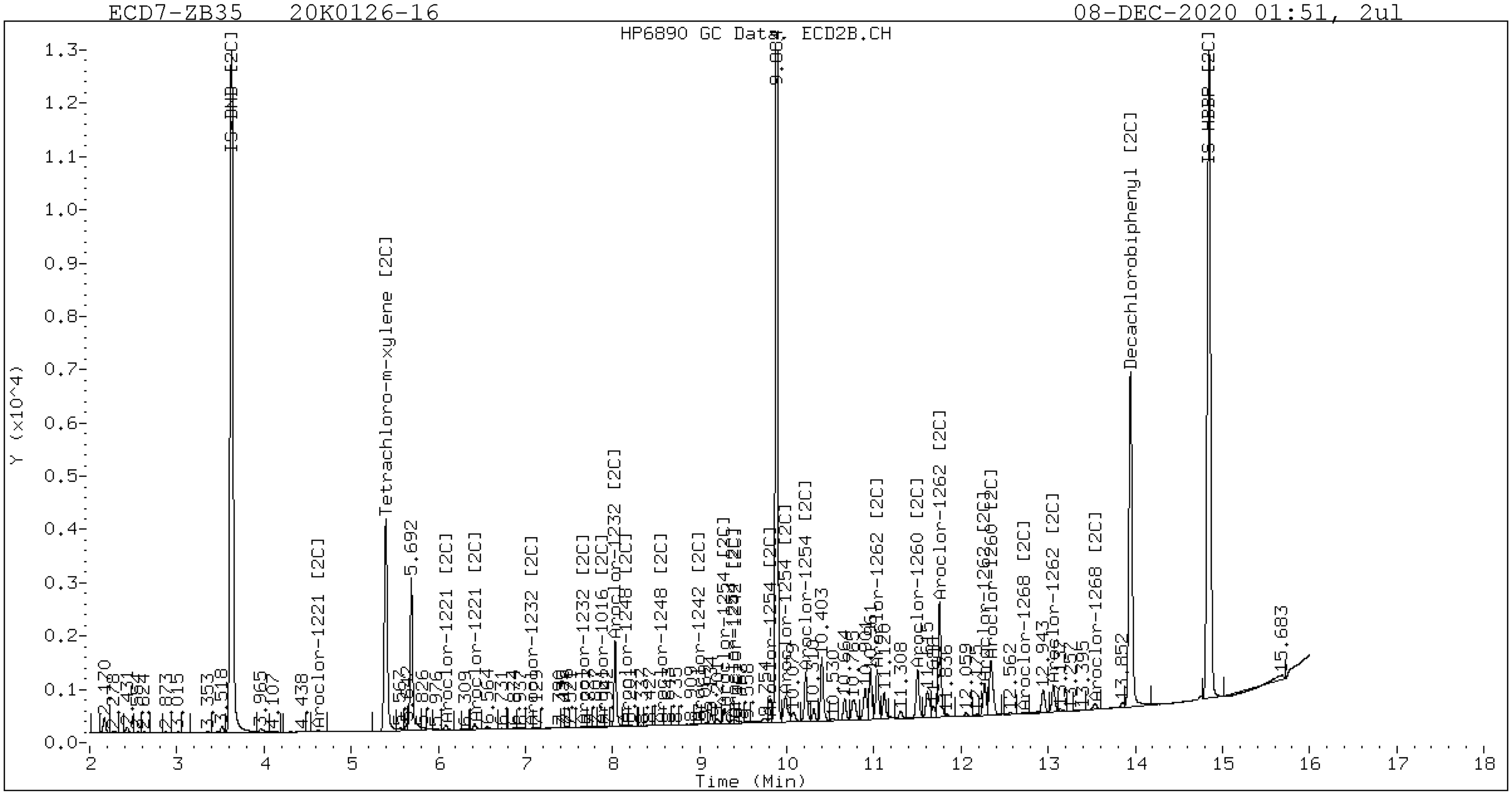
PCB Dual Column Chromatograms

ECD7-ZB5 20K0126-16 08-DEC-2020 01:51, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0126-16 08-DEC-2020 01:51, 2ul

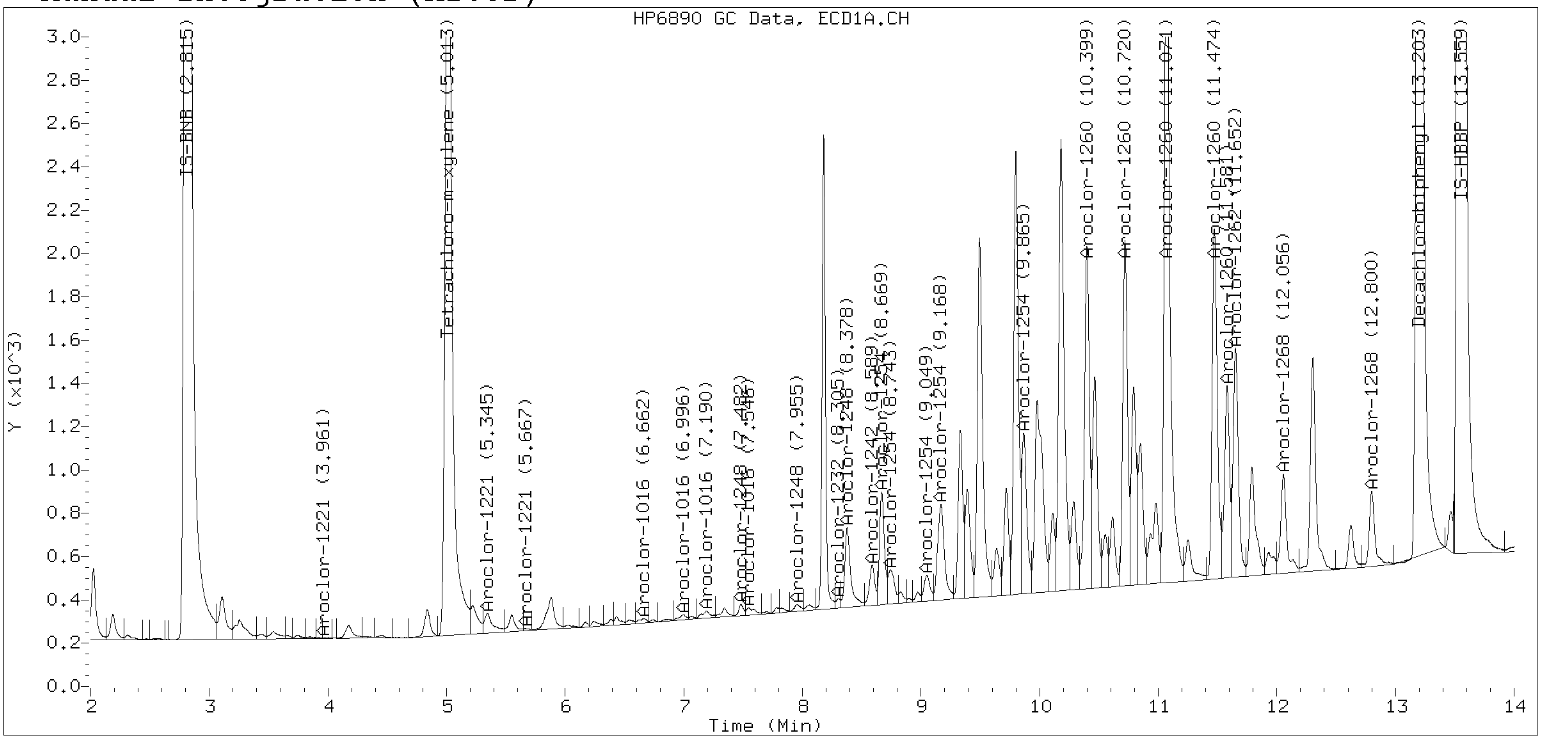


ZB-35 Manual Integration: NO

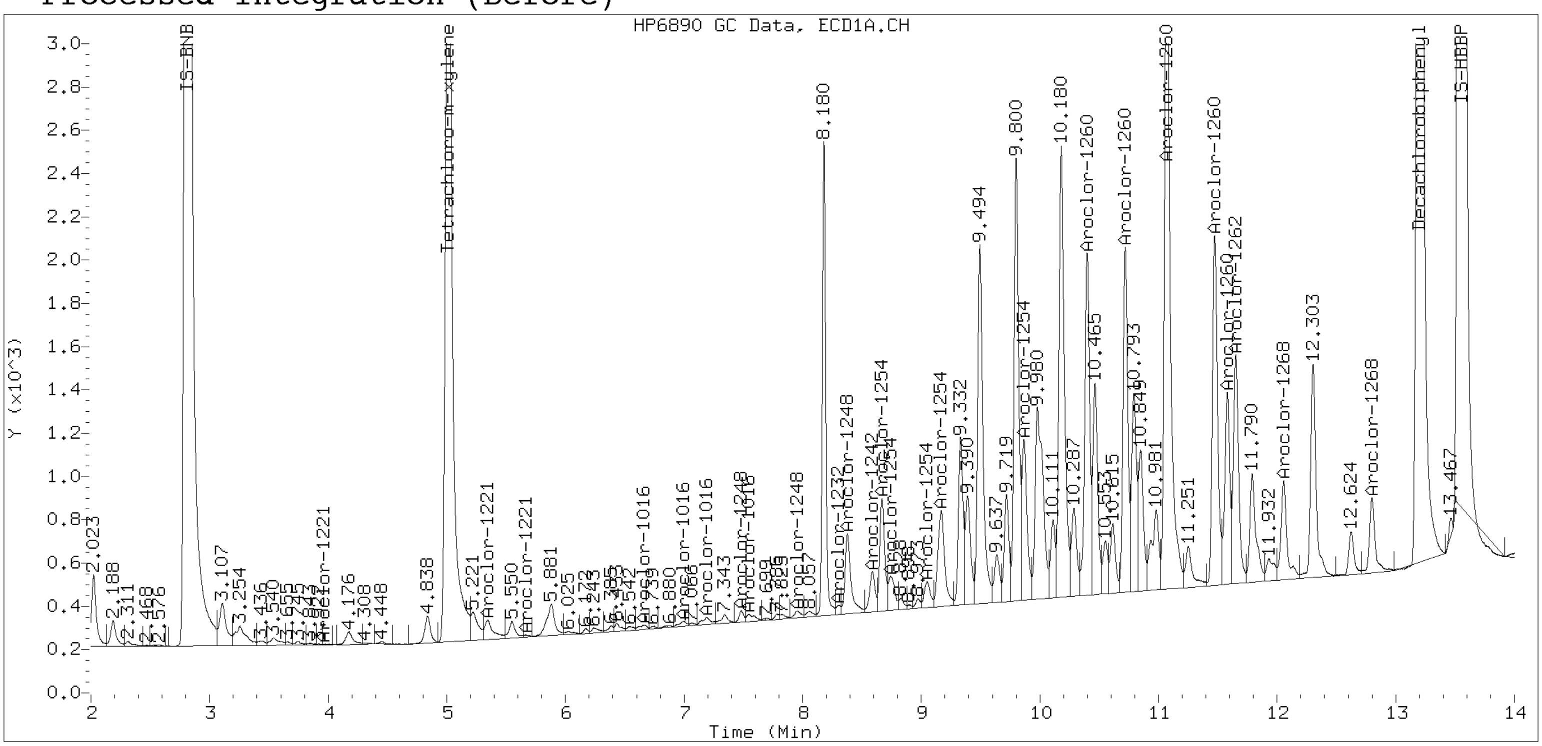
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120726ECD7.D   Injection Date: 08-DEC-2020 01:5

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP7-7.5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	20K0126-18 A	File ID:	20120811ECD7.D
Sampled:	11/04/20 13:40	Prepared:	11/18/20 11:50	Analyzed:	12/08/20 23:34
% Solids:	77.17	Preparation:	EPA 3546 (Microwave)	Initial/Final:	6.5 g Wet / 5 mL
Batch:	BIK0552	Sequence:	SIL0191	Calibration:	DL00019
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	19.9	8.0	19.9	U
11104-28-2	Aroclor 1221	1	1	19.9	8.0	19.9	U
11141-16-5	Aroclor 1232	1	1	19.9	8.0	19.9	U
53469-21-9	Aroclor 1242	1	1	19.9	8.0	19.9	U
12672-29-6	Aroclor 1248	1	1	14.6	8.0	19.9	J
11097-69-1	Aroclor 1254	2	1	20.8	8.0	19.9	
11096-82-5	Aroclor 1260	1	1	69.7	9.3	19.9	
37324-23-5	Aroclor 1262	1	1	19.9	9.3	19.9	U
11100-14-4	Aroclor 1268	1	1	19.9	9.3	19.9	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.872*	*26.7*	*66.9*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.872*	*25.5*	*64.0*	*53 - 120*	
Decachlorobiphenyl	*2*	*39.872*	*30.8*	*77.3*	*40 - 133*	
Tetrachlorometaxylene	*2*	*39.872*	*26.5*	*66.5*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120811ECD7.D
Data file 2: /20201208.b/20201208.b/20120811ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0126-18RE1
Client ID:
Injection Date: 08-DEC-2020 23:34
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	-0.001	282894	5.398	-0.002	169611	25.6	26.6	3.9	Tetrachloro-m-xylene
13.203	-0.002	618666	13.946	-0.000	297894	26.8	30.9	14.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	64.0	66.5
Decachlorobiphenyl	66.9	77.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	758193	-3.6
Hexabromobiphenyl	2132987	2173809	1.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	556192	-12.5
Hexabromobiphenyl	665758	585574	-12.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.623	-0.005	3840	10.1	1	7.072	-0.001	1668	6.2
Aroclor-1016	2	6.992	-0.007	8313	6.8	2	7.665	-0.006	3749	6.2
Aroclor-1016	3	7.148	-0.001	5997	11.5	3	7.879	-0.001	1940	8.4
Aroclor-1016	4	7.541	-0.003	3898	13.7	4	8.142	0.087	4276	30.9
Total Col1Ave (4 peaks):				10.5		Total Col2Ave (4 peaks):			12.9	RPD = 20
Corrected Ave (3 peaks):				9.5		Corrected Ave (3 peaks):			6.9	RPD = 31
Aroclor-1221	1	---			0.0	1	4.618	-0.052	694	18.0
Aroclor-1221	2	5.405	-0.001	1578	11.3	2	6.084	0.009	2989	39.1
Aroclor-1221	3	5.676	-0.007	1657	4.6	3	6.411	-0.006	1950	13.7
Col1Ave: <3 Quant Peaks						Col2Ave:			23.6	
Aroclor-1232	1	---			0.0	1	4.618	-0.052	694	29.2
Aroclor-1232	2	6.623	-0.008	3840	24.8	2	7.072	-0.005	1668	13.6
Aroclor-1232	3	6.992	-0.010	8313	16.4	3	7.665	-0.007	3749	14.6
Aroclor-1232	4	8.303	-0.006	6138	40.8	4	8.142	0.084	4276	73.1
Total Col1Ave (3 peaks):				27.4		Total Col2Ave (4 peaks):			32.6	RPD = 18
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			19.1	
Aroclor-1242	1	6.623	-0.008	3840	13.1	1	7.072	-0.004	1668	7.9
Aroclor-1242	2	6.992	-0.011	8313	9.2	2	7.665	-0.008	3749	7.7
Aroclor-1242	3	8.303	-0.006	6138	20.4	3	8.986	-0.005	3246	16.9
Aroclor-1242	4	8.592	-0.011	9628	29.4	4	9.418	-0.010	2483	13.1
Total Col1Ave (4 peaks):				18.0		Total Col2Ave (4 peaks):			11.4	RPD = 45*
Corrected Ave (3 peaks):				14.2		Corrected Ave (3 peaks):			9.6	RPD = 39
Aroclor-1248	1	7.481	-0.003	5423	13.7	1	8.142	0.004	4276	22.7
Aroclor-1248	2	7.953	0.001	6764	11.3	2	8.559	0.001	2535	10.3
Aroclor-1248	3	8.375	0.013	30023	33.9	3	8.986	-0.001	3246	9.2
Aroclor-1248	4	8.592	-0.005	9628	18.8	4	9.418	-0.005	2483	7.2
Total Col1Ave (4 peaks):				19.4		Total Col2Ave (4 peaks):			12.3	RPD = 44*
Corrected Ave (3 peaks):				14.6		Corrected Ave (3 peaks):			8.9	RPD = 48*
Aroclor-1254	1	8.667	-0.004	27899	31.1	1	9.285	0.000	11434	28.8
Aroclor-1254	2	8.736	-0.004	8052	16.6	2	9.379	0.002	2846	15.5
Aroclor-1254	3	9.027	-0.011	2945	4.9	3	9.816	-0.000	2682	10.2
Aroclor-1254	4	9.169	-0.007	20136	16.3	4	9.982	0.015	17966	29.0
Aroclor-1254	5	9.866	-0.006	28137	34.4	5	10.218	0.021	29062	45.4
Total Col1Ave (5 peaks):				20.6		Total Col2Ave (5 peaks):			25.8	RPD = 22
Corrected Ave (4 peaks):				17.2		Corrected Ave (4 peaks):			20.9	RPD = 19
Aroclor-1260	1	10.399	-0.000	63073	74.6	1	11.039	-0.001	27785	77.6
Aroclor-1260	2	10.720	-0.001	57044	67.6	2	11.503	-0.001	25150	66.7
Aroclor-1260	3	11.071	-0.002	156249	71.3	3	11.755	-0.001	65014	67.4
Aroclor-1260	4	11.474	-0.001	67206	60.0	4	12.343	0.001	39109	62.4
Aroclor-1260	5	11.580	-0.001	37123	76.2	NS	---			----
Total Col1Ave (5 peaks):				69.9		Total Col2Ave (4 peaks):			68.6	RPD = 2
Corrected Ave (4 peaks):				68.4		Corrected Ave (3 peaks):			65.5	RPD = 4
Aroclor-1262	1	10.399	-0.006	63073	49.7	1	11.039	-0.005	27785	45.7
Aroclor-1262	2	11.071	-0.007	156249	54.8	2	11.755	-0.004	65014	48.6
Aroclor-1262	3	11.580	-0.006	37123	46.9	3	12.272	-0.004	18674	43.5
Aroclor-1262	4	11.651	-0.007	48528	46.8	4	13.061	-0.005	16130	33.2
Total Col1Ave (4 peaks):				49.6		Total Col2Ave (4 peaks):			42.7	RPD = 15
Corrected Ave (3 peaks):				47.8		Corrected Ave (3 peaks):			40.8	RPD = 16
Aroclor-1268	1	11.580	-0.009	37123	12.8	1	12.272	-0.001	18674	13.3
Aroclor-1268	2	11.651	-0.006	48528	15.6	2	12.343	0.004	39109	25.5
Aroclor-1268	3	12.055	0.017	21885	8.8	3	12.726	-0.003	1459	1.1
Aroclor-1268	4	12.799	-0.013	17362	1.8	4	13.541	-0.005	4620	1.1
Total Col1Ave (4 peaks):				9.8		Total Col2Ave (4 peaks):			10.2	RPD = 5
Corrected Ave (3 peaks):				7.8		Corrected Ave (3 peaks):			5.2	RPD = 41*

Total PCB Area Col1 (5.114 - 13.105) = 1366708 Col1 Total PCB = 0.1 ppm*

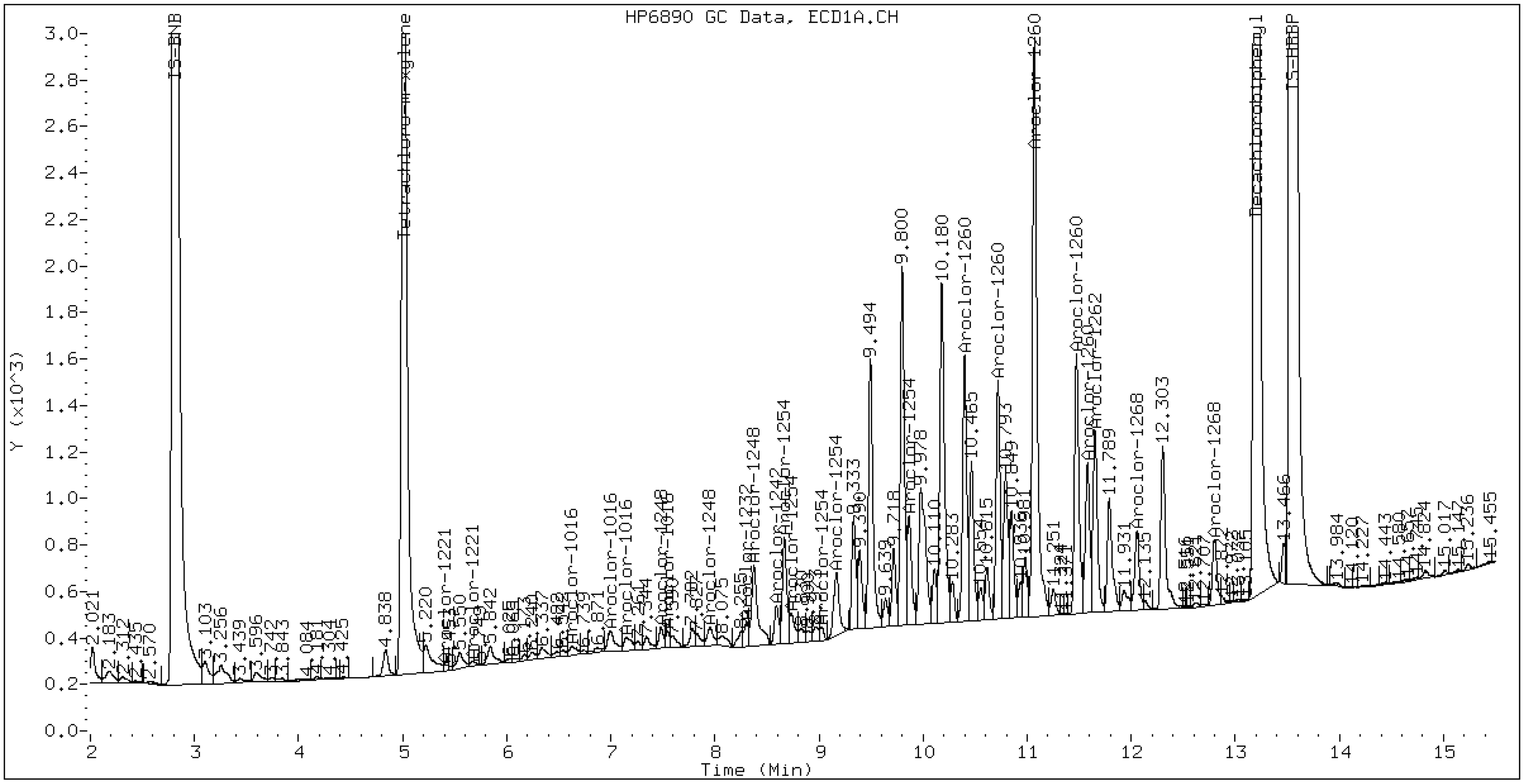
Total PCB Area Col2 (5.114 - 13.105) = 714012 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

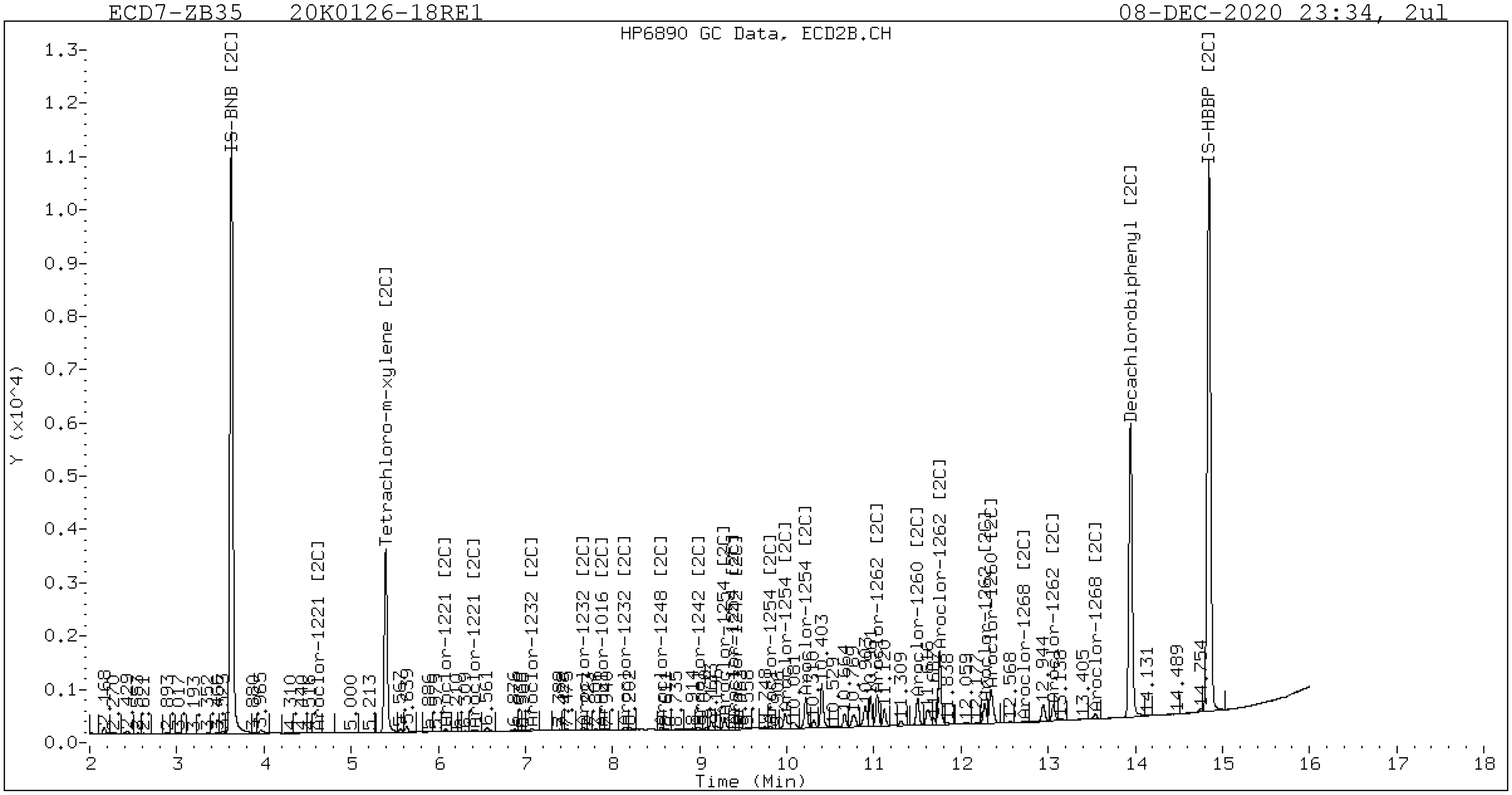
PCB Dual Column Chromatograms

ECD7-ZB5 20K0126-18RE1 08-DEC-2020 23:34, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0126-18RE1 08-DEC-2020 23:34, 2ul

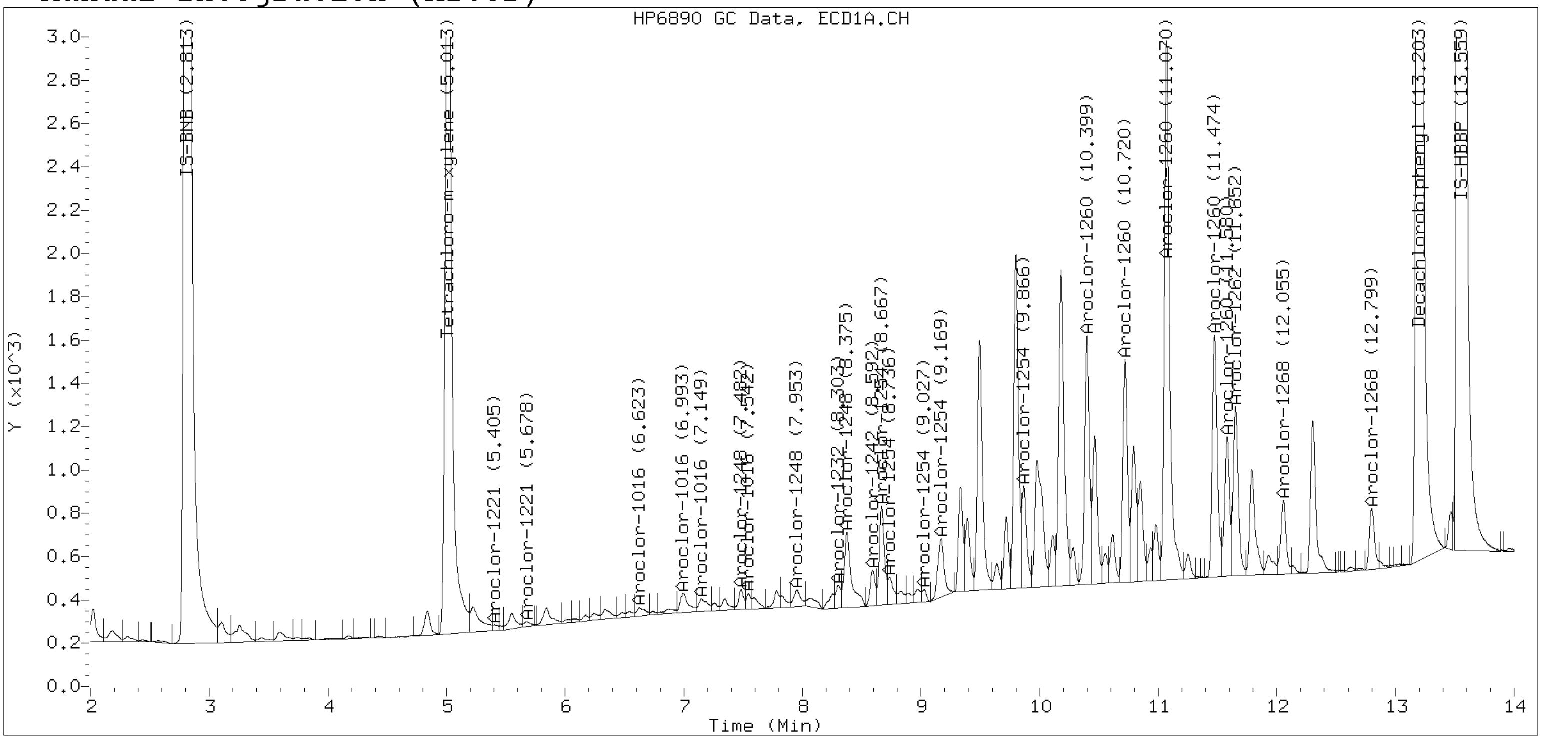


ZB-35 Manual Integration: NO

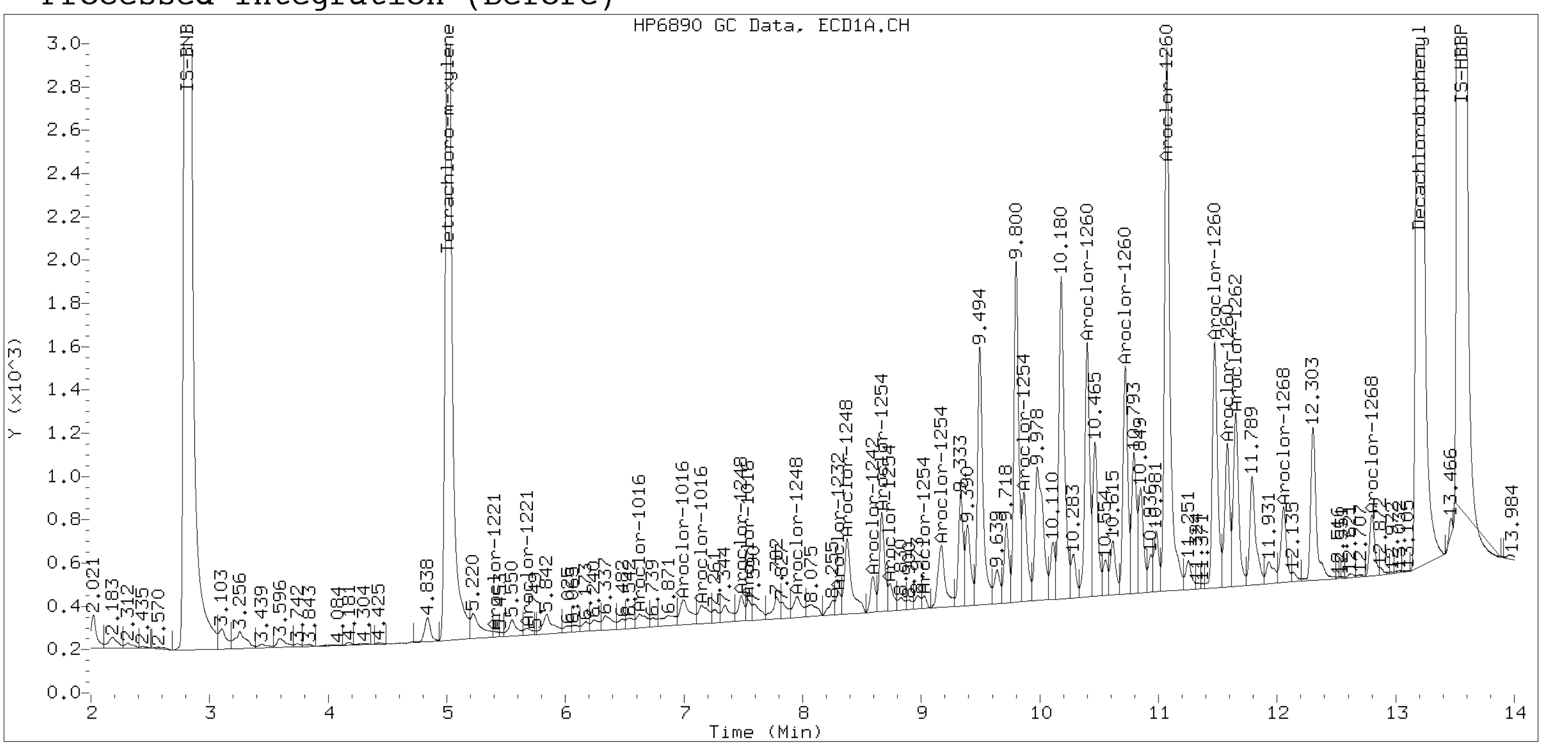
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201208.b/20120811ECD7.D   Injection Date: 08-DEC-2020 23:3

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP3-2

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix: Solid Laboratory ID: 20K0126-22 A File ID: 20120730ECD7.D

Sampled: 11/04/20 14:40 Prepared: 11/18/20 11:50 Analyzed: 12/08/20 03:14

% Solids: 91.17 Preparation: EPA 3546 (Microwave) Initial/Final: 5.51 g Wet / 5 mL

Batch: BIK0552 Sequence: SIL0131 Calibration: DL00019

Instrument: ECD7 Column 1: ZB5 Column 2: ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	19.9	8.0	19.9	U
11104-28-2	Aroclor 1221	1	1	19.9	8.0	19.9	U
11141-16-5	Aroclor 1232	1	1	19.9	8.0	19.9	U
53469-21-9	Aroclor 1242	1	1	19.9	8.0	19.9	U
12672-29-6	Aroclor 1248	1	1	19.9	8.0	19.9	U
11097-69-1	Aroclor 1254	1	1	24.4	8.0	19.9	
11096-82-5	Aroclor 1260	1	1	38.2	9.2	19.9	
37324-23-5	Aroclor 1262	1	1	19.9	9.2	19.9	U
11100-14-4	Aroclor 1268	1	1	19.9	9.2	19.9	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.813*	*25.1*	*63.1*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.813*	*25.8*	*64.7*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120730ECD7.D
Data file 2: /20201207.b/20201207.b/20120730ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0126-22
Client ID:
Injection Date: 08-DEC-2020 03:14
Report Date: 12/13/2020 14:24
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.012	-0.001	306938	5.398	-0.002	186261	25.9	27.1	4.5	Tetrachloro-m-xylene
13.185	-0.020	418449	13.933	-0.014	187981	25.2	26.6	5.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	64.7	67.7
Decachlorobiphenyl	63.1	66.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	812998	3.3
Hexabromobiphenyl	2132987	1560086	-26.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	599622	-5.6
Hexabromobiphenyl	665758	428932	-35.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	6.609	-0.019	449	1.1	1	7.059	-0.014	515	1.8
Aroclor-1016	2	6.995	-0.004	1725	1.3	2	7.649	-0.021	1866	2.8
Aroclor-1016	3	7.168	0.019	3336	6.0	3	7.882	0.001	718	2.9
Aroclor-1016	4	7.535	-0.010	2347	7.7	4	8.031	-0.023	83094	557.1
	Total Col1Ave (4 peaks):			4.0		Total Col2Ave (4 peaks):			141.2	RPD = 189*
	Corrected Ave (3 peaks):			2.8		Corrected Ave (3 peaks):			2.5	RPD = 11
Aroclor-1221	1	---			0.0	1	4.617	-0.052	418	10.1
Aroclor-1221	2	---			0.0	2	6.084	0.009	1868	22.7
Aroclor-1221	3	---			0.0	3	6.417	-0.000	4375	28.5
	Col1Ave: <3 Quant Peaks						Col2Ave:		20.4	
Aroclor-1232	1	---			0.0	1	4.617	-0.052	418	16.3
Aroclor-1232	2	6.609	-0.023	449	2.7	2	7.059	-0.017	515	3.9
Aroclor-1232	3	6.995	-0.006	1725	3.2	3	7.649	-0.023	1866	6.7
Aroclor-1232	4	8.286	-0.023	1871	11.6	4	8.031	-0.026	83094	1317.9
	Total Col1Ave (3 peaks):			5.8		Total Col2Ave (4 peaks):			336.2	RPD = 193*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			9.0	
Aroclor-1242	1	6.609	-0.020	449	1.4	1	7.059	-0.014	515	2.3
Aroclor-1242	2	6.995	-0.005	1725	1.8	2	7.649	-0.021	1866	3.6
Aroclor-1242	3	8.286	-0.019	1871	5.8	3	8.970	-0.018	1276	6.2
Aroclor-1242	4	8.567	-0.033	8606	24.5	4	9.406	-0.016	4939	24.2
	Total Col1Ave (4 peaks):			8.4		Total Col2Ave (4 peaks):			9.1	RPD = 8
	Corrected Ave (3 peaks):			3.0		Corrected Ave (3 peaks):			4.0	RPD = 29
Aroclor-1248	1	7.473	-0.010	4257	10.0	1	8.136	-0.001	2985	14.7
Aroclor-1248	2	7.934	-0.019	2179	3.4	2	8.550	-0.008	1646	6.2
Aroclor-1248	3	8.362	0.001	18731	19.7	3	8.970	-0.017	1276	3.4
Aroclor-1248	4	8.567	-0.030	8606	15.7	4	9.406	-0.016	4939	13.3
	Total Col1Ave (4 peaks):			12.2		Total Col2Ave (4 peaks):			9.4	RPD = 26
	Corrected Ave (3 peaks):			9.7		Corrected Ave (3 peaks):			7.6	RPD = 24
Aroclor-1254	1	8.652	-0.019	19994	20.8	1	9.275	-0.012	7766	18.1
Aroclor-1254	2	8.725	-0.015	13423	25.7	2	9.366	-0.014	5134	25.9
Aroclor-1254	3	9.022	-0.018	12197	19.0	3	9.804	-0.013	6056	21.4
Aroclor-1254	4	9.153	-0.023	39124	29.6	4	9.954	-0.014	16260	24.3
Aroclor-1254	5	9.843	-0.029	24030	27.4	5	10.204	0.004	17720	25.7
	Total Col1Ave (5 peaks):			$\boxed{24.5}$		Total Col2Ave (5 peaks):			$\boxed{23.1}$	RPD = 6
	Corrected Ave (4 peaks):			23.2		Corrected Ave (4 peaks):			22.4	RPD = 4
Aroclor-1260	1	10.377	-0.023	26103	43.0	1	11.023	-0.016	8783	33.5
Aroclor-1260	2	10.696	-0.025	22400	37.0	2	11.489	-0.014	11433	41.4
Aroclor-1260	3	11.048	-0.024	56371	35.8	3	11.740	-0.016	20675	29.3
Aroclor-1260	4	11.450	-0.024	29199	36.3	4	12.329	-0.015	13426	29.3
Aroclor-1260	5	11.559	-0.022	13965	39.9	NS	---			----
	Total Col1Ave (5 peaks):			$\boxed{38.4}$		Total Col2Ave (4 peaks):			$\boxed{33.4}$	RPD = 14
	Corrected Ave (4 peaks):			37.3		Corrected Ave (3 peaks):			30.7	RPD = 19
Aroclor-1262	1	10.377	-0.028	26103	28.7	1	11.023	-0.020	8783	19.7
Aroclor-1262	2	11.048	-0.029	56371	27.5	2	11.740	-0.019	20675	21.1
Aroclor-1262	3	11.559	-0.027	13965	24.6	3	12.256	-0.020	5738	18.2
Aroclor-1262	4	11.629	-0.028	15604	21.0	4	13.046	-0.019	4995	14.0
	Total Col1Ave (4 peaks):			25.4		Total Col2Ave (4 peaks):			18.3	RPD = 33
	Corrected Ave (3 peaks):			24.4		Corrected Ave (3 peaks):			17.3	RPD = 34
Aroclor-1268	1	11.559	-0.030	13965	6.7	1	12.256	-0.018	5738	5.6
Aroclor-1268	2	11.629	-0.028	15604	7.0	2	12.329	-0.011	13426	11.9
Aroclor-1268	3	12.030	-0.007	9648	5.4	3	12.712	-0.017	971	1.0
Aroclor-1268	4	12.779	-0.033	10382	1.5	4	13.526	-0.020	2969	0.9
	Total Col1Ave (4 peaks):			5.2		Total Col2Ave (4 peaks):			4.9	RPD = 6
	Corrected Ave (3 peaks):			4.5		Corrected Ave (3 peaks):			2.5	RPD = 57*

Total PCB Area Col1 (5.113 - 13.105) = 918360 Col1 Total PCB = 0.1 ppm*

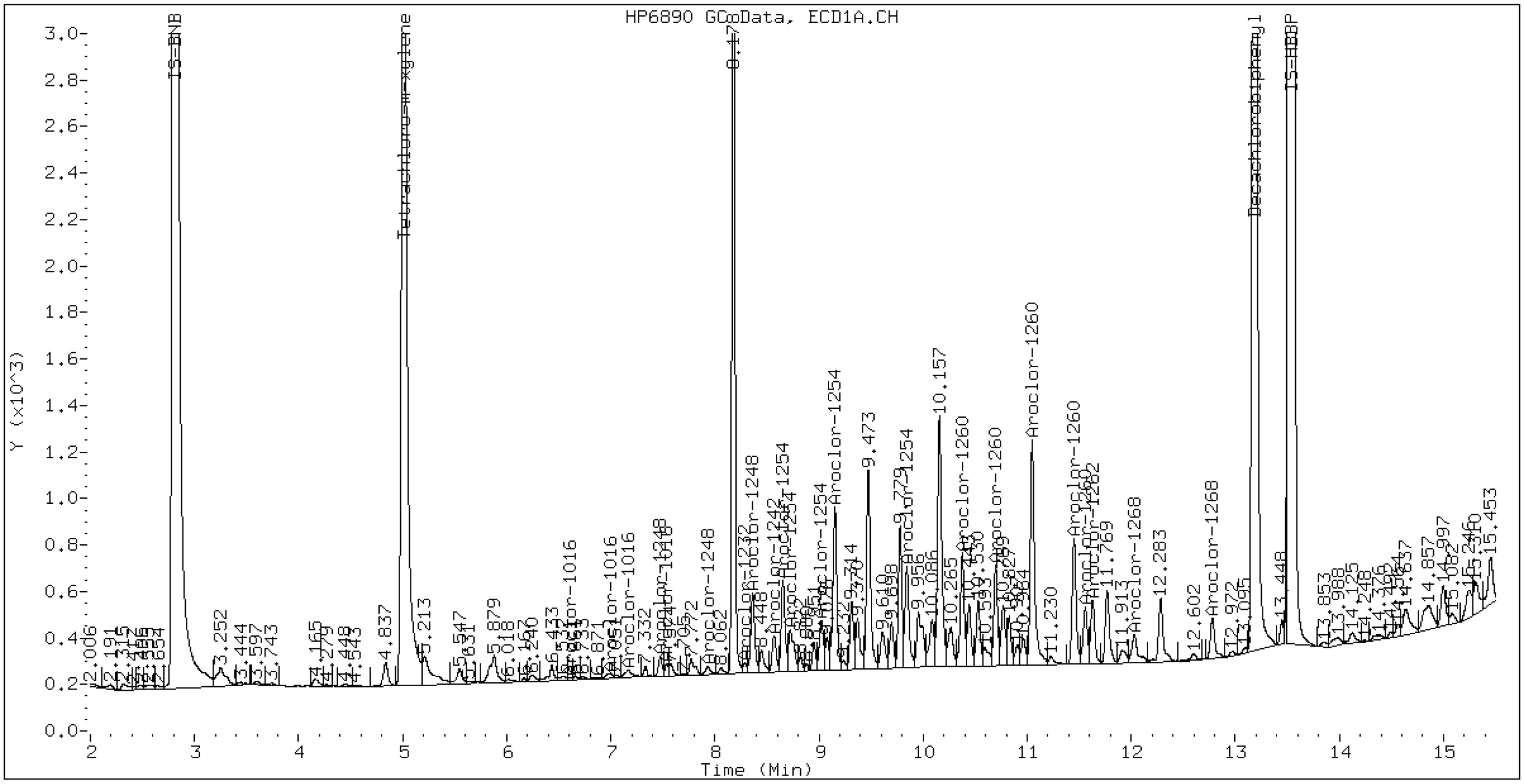
Total PCB Area Col2 (5.113 - 13.105) = 1577769 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

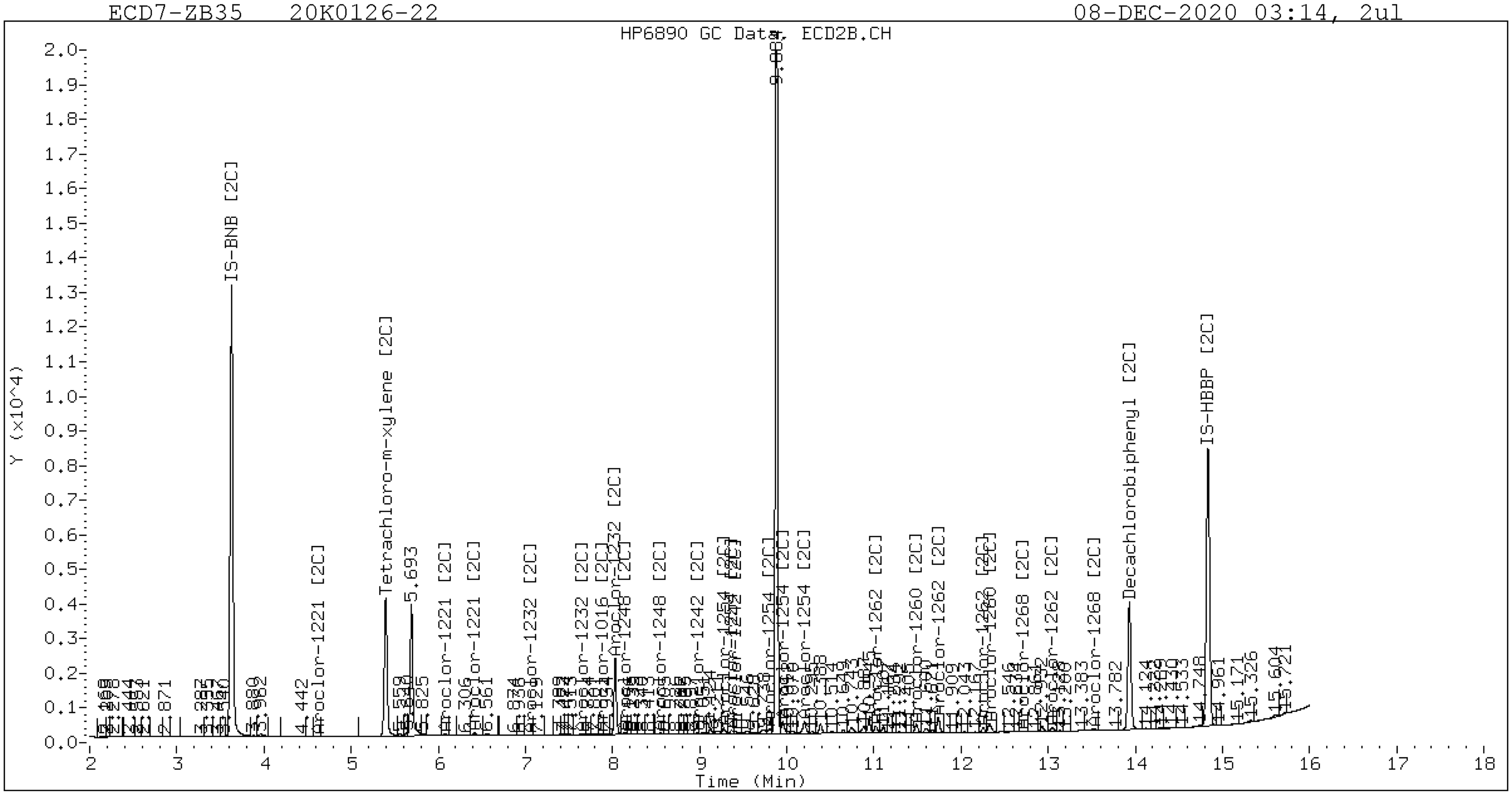
PCB Dual Column Chromatograms

ECD7-ZB5 20K0126-22 08-DEC-2020 03:14, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0126-22 08-DEC-2020 03:14, 2ul

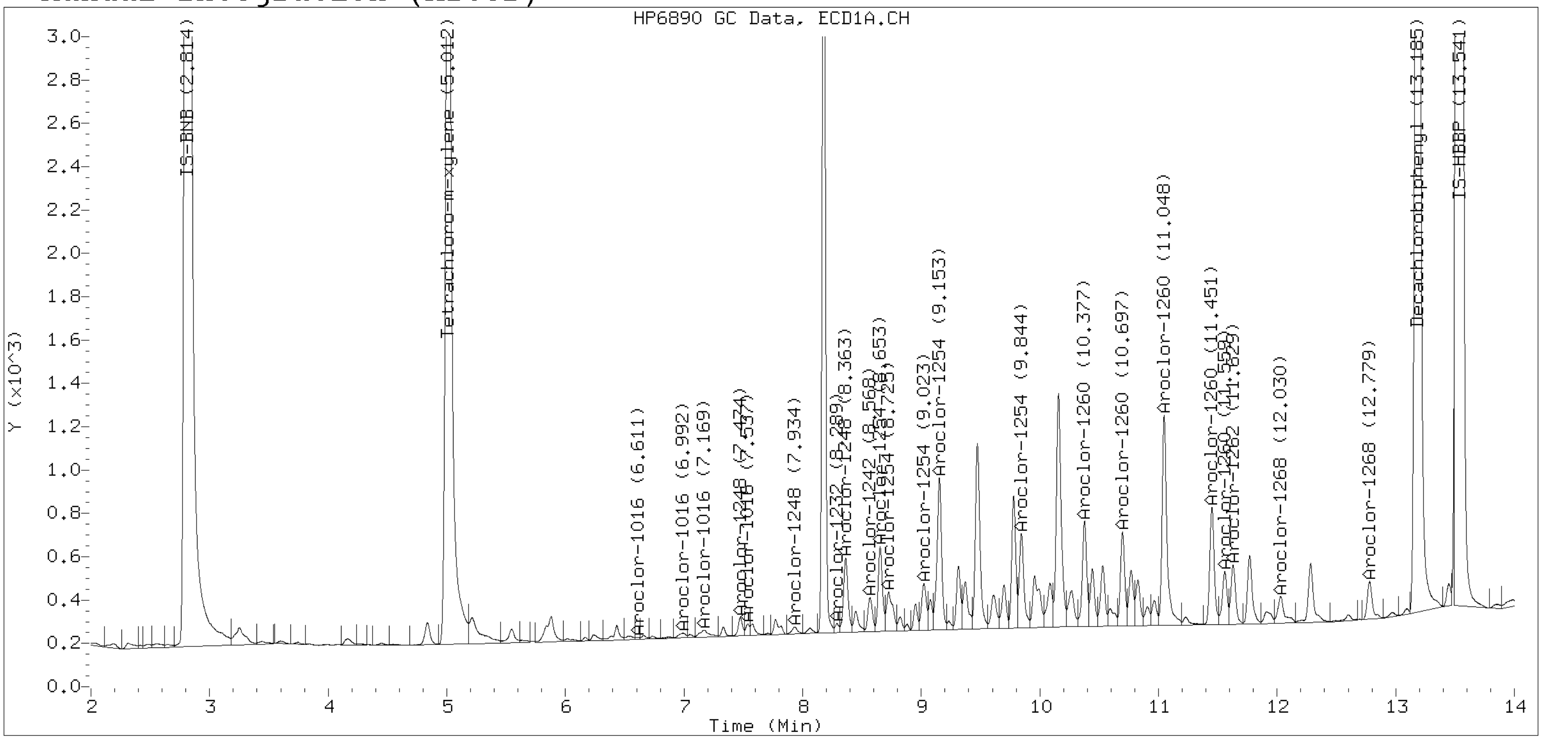


ZB-35 Manual Integration: NO

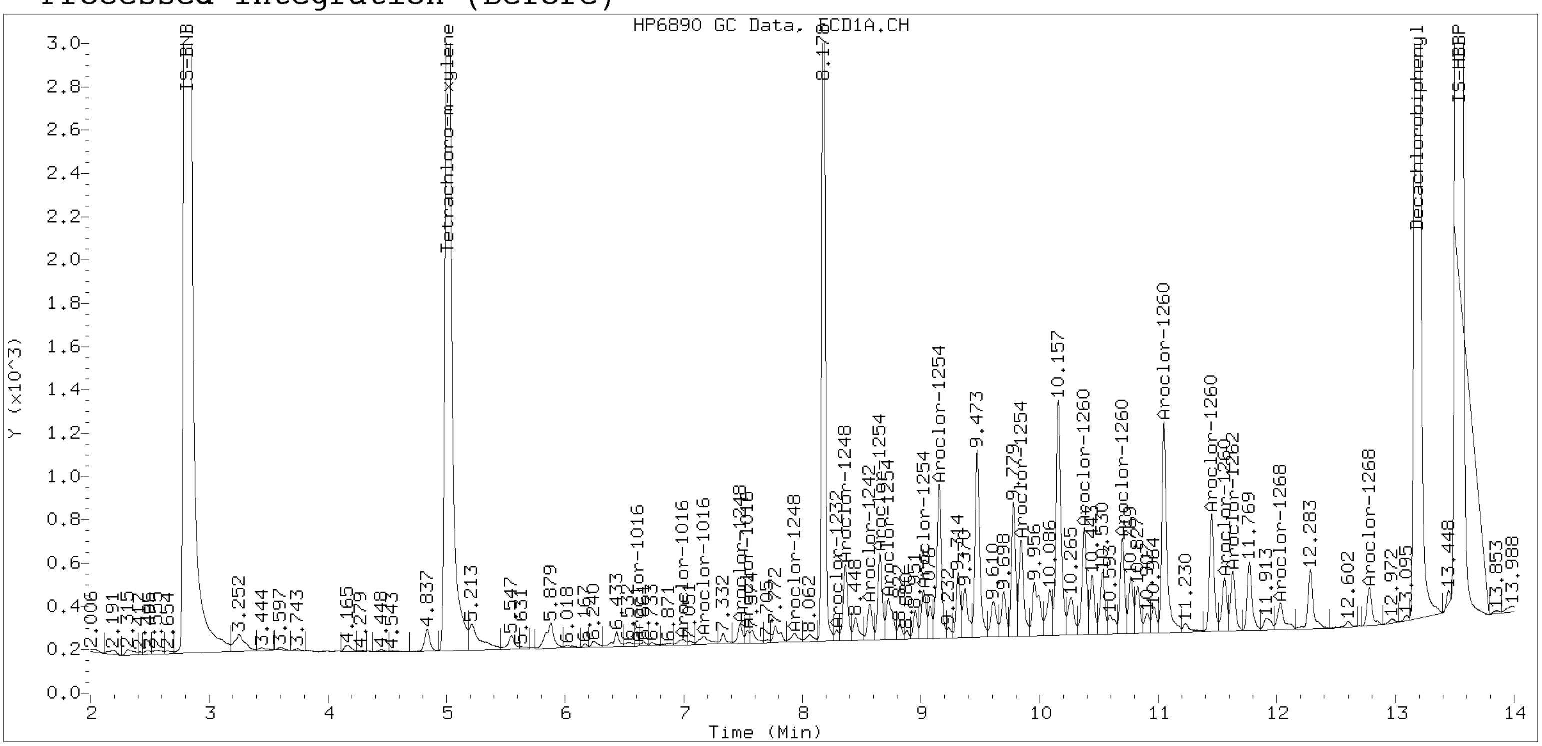
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120730ECD7.D   Injection Date: 08-DEC-2020 03:1

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP3-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix: Solid Laboratory ID: 20K0126-24 A File ID: 20120731ECD7.D

Sampled: 11/04/20 14:50 Prepared: 11/18/20 11:50 Analyzed: 12/08/20 03:34

% Solids: 79.88 Preparation: EPA 3546 (Microwave) Initial/Final: 6.26 g Wet / 5 mL

Batch: BIK0552 Sequence: SIL0131 Calibration: DL00019

Instrument: ECD7 Column 1: ZB5 Column 2: ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	20.0	8.0	20.0	U
11104-28-2	Aroclor 1221	1	1	20.0	8.0	20.0	U
11141-16-5	Aroclor 1232	1	1	20.0	8.0	20.0	U
53469-21-9	Aroclor 1242	1	1	20.0	8.0	20.0	U
12672-29-6	Aroclor 1248	1	1	20.0	8.0	20.0	U
11097-69-1	Aroclor 1254	1	1	20.0	8.0	20.0	U
11096-82-5	Aroclor 1260	1	1	20.0	9.3	20.0	U
37324-23-5	Aroclor 1262	1	1	20.0	9.3	20.0	U
11100-14-4	Aroclor 1268	1	1	20.0	9.3	20.0	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.996*	*28.4*	*71.1*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.996*	*27.5*	*68.9*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120731ECD7.D	ARI ID: 20K0126-24
Data file 2: /20201207.b/20201207.b/20120731ECD7.D	Client ID:
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m	Injection Date: 08-DEC-2020 03:34
Compound Sublist: PCB.sub	Report Date: 12/13/2020 14:24
Instrument, Inj. Vol.: ecd7.i, 2ul	Matrix: NONE
Quant Method: Internal Std	Dilution Factor: 1.0

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.012	-0.001	346015	5.398	-0.001	216899	27.5	28.6	3.9	Tetrachloro-m-xylene
13.203	-0.001	537568	13.945	-0.003	243378	28.4	29.5	3.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	68.9	71.6
Decachlorobiphenyl	71.1	73.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	861745	9.5
Hexabromobiphenyl	2132987	1778091	-16.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	661072	4.0
Hexabromobiphenyl	665758	501846	-24.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.670	0.042	1421	3.3	1	7.071	-0.002	355	1.1
Aroclor-1016	2	6.995	-0.004	576	0.4	2	7.726	0.056	1491	2.1
Aroclor-1016	3	7.137	-0.012	1116	1.9	3	7.938	0.057	1898	6.9
Aroclor-1016	4	7.540	-0.006	1526	4.7	4	8.030	-0.025	396995	2414.2
Total Col1Ave (4 peaks):				2.6		Total Col2Ave (4 peaks):			606.1	RPD = 198*
Corrected Ave (3 peaks):				1.9		Corrected Ave (3 peaks):			3.4	RPD = 58*
Aroclor-1221	1	3.910	-0.062	1060	9.5	1	4.683	0.014	481	10.5
Aroclor-1221	2	---			0.0	2	6.084	0.010	4883	53.8
Aroclor-1221	3	5.664	-0.018	1123	2.8	3	6.416	-0.001	3036	17.9
Col1Ave: <3 Quant Peaks						Col2Ave:			27.4	
Aroclor-1232	1	3.910	-0.063	1060	15.7	1	4.683	0.014	481	17.0
Aroclor-1232	2	6.670	0.038	1421	8.1	2	7.071	-0.005	355	2.4
Aroclor-1232	3	6.995	-0.007	576	1.0	3	7.726	0.053	1491	4.9
Aroclor-1232	4	8.298	-0.011	2758	16.1	4	8.030	-0.028	396995	5711.1
Total Col1Ave (4 peaks):				10.2		Total Col2Ave (4 peaks):			1433.9	RPD = 197*
Corrected Ave (3 peaks):				8.2		Corrected Ave (3 peaks):			8.1	RPD = 2
Aroclor-1242	1	6.670	0.041	1421	4.3	1	7.071	-0.002	355	1.4
Aroclor-1242	2	6.995	-0.006	576	0.6	2	7.726	0.056	1491	2.6
Aroclor-1242	3	8.298	-0.008	2758	8.1	3	---			0.0
Aroclor-1242	4	8.584	-0.016	3122	8.4	4	---			0.0
Total Col1Ave (4 peaks):				5.3		Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	7.482	-0.001	1330	3.0	1	8.153	0.016	1505	6.7
Aroclor-1248	2	7.954	0.001	3382	5.0	2	8.507	-0.051	1921	6.5
Aroclor-1248	3	8.371	0.009	6230	6.2	3	---			0.0
Aroclor-1248	4	8.584	-0.013	3122	5.4	4	---			0.0
Total Col1Ave (4 peaks):				4.9		Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.666	-0.005	3574	3.5	1	9.287	0.001	4364	9.2
Aroclor-1254	2	8.737	-0.003	3063	5.5	2	---			0.0
Aroclor-1254	3	9.058	0.018	3833	5.6	3	9.757	-0.060	7170	22.9
Aroclor-1254	4	9.171	-0.005	2976	2.1	4	9.899	-0.069	3268433	4434.8
Aroclor-1254	5	9.870	-0.003	1929	2.1	5	10.210	0.010	1335	1.8
Total Col1Ave (5 peaks):				3.8		Total Col2Ave (4 peaks):			1117.2	RPD = 199*
Corrected Ave (4 peaks):				3.3		Corrected Ave (3 peaks):			11.3	RPD = 109*
Aroclor-1260	1	10.396	-0.003	3557	5.1	1	11.041	0.001	1095	3.6
Aroclor-1260	2	10.716	-0.006	2243	3.2	2	11.506	0.002	1455	4.5
Aroclor-1260	3	11.067	-0.005	4029	2.2	3	11.754	-0.001	2291	2.8
Aroclor-1260	4	11.471	-0.004	2841	3.1	4	12.342	-0.002	1583	2.9
Aroclor-1260	5	11.576	-0.005	1458	3.7	NS	---			----
Total Col1Ave (5 peaks):				3.5		Total Col2Ave (4 peaks):			3.4	RPD = 1
Corrected Ave (4 peaks):				3.1		Corrected Ave (3 peaks):			3.1	RPD = 1
Aroclor-1262	1	10.396	-0.009	3557	3.4	1	11.041	-0.003	1095	2.1
Aroclor-1262	2	11.067	-0.010	4029	1.7	2	11.754	-0.005	2291	2.0
Aroclor-1262	3	11.576	-0.010	1458	2.3	3	12.259	-0.017	5359	14.6
Aroclor-1262	4	11.651	-0.007	1742	2.1	4	13.061	-0.005	610	1.5
Total Col1Ave (4 peaks):				2.4		Total Col2Ave (4 peaks):			5.0	RPD = 72*
Corrected Ave (3 peaks):				2.0		Corrected Ave (3 peaks):			1.9	RPD = 8
Aroclor-1268	1	11.576	-0.013	1458	0.6	1	12.259	-0.014	5359	4.4
Aroclor-1268	2	11.651	-0.006	1742	0.7	2	12.342	0.002	1583	1.2
Aroclor-1268	3	12.034	-0.003	2764	1.4	3	12.722	-0.007	500	0.5
Aroclor-1268	4	12.800	-0.013	8562	1.1	4	13.534	-0.012	3023	0.8
Total Col1Ave (4 peaks):				0.9		Total Col2Ave (4 peaks):			1.7	RPD = 60*
Corrected Ave (3 peaks):				0.8		Corrected Ave (3 peaks):			0.8	RPD = 5

Total PCB Area Col1 (5.113 - 13.105) = 719925 Col1 Total PCB = 0.1 ppm*

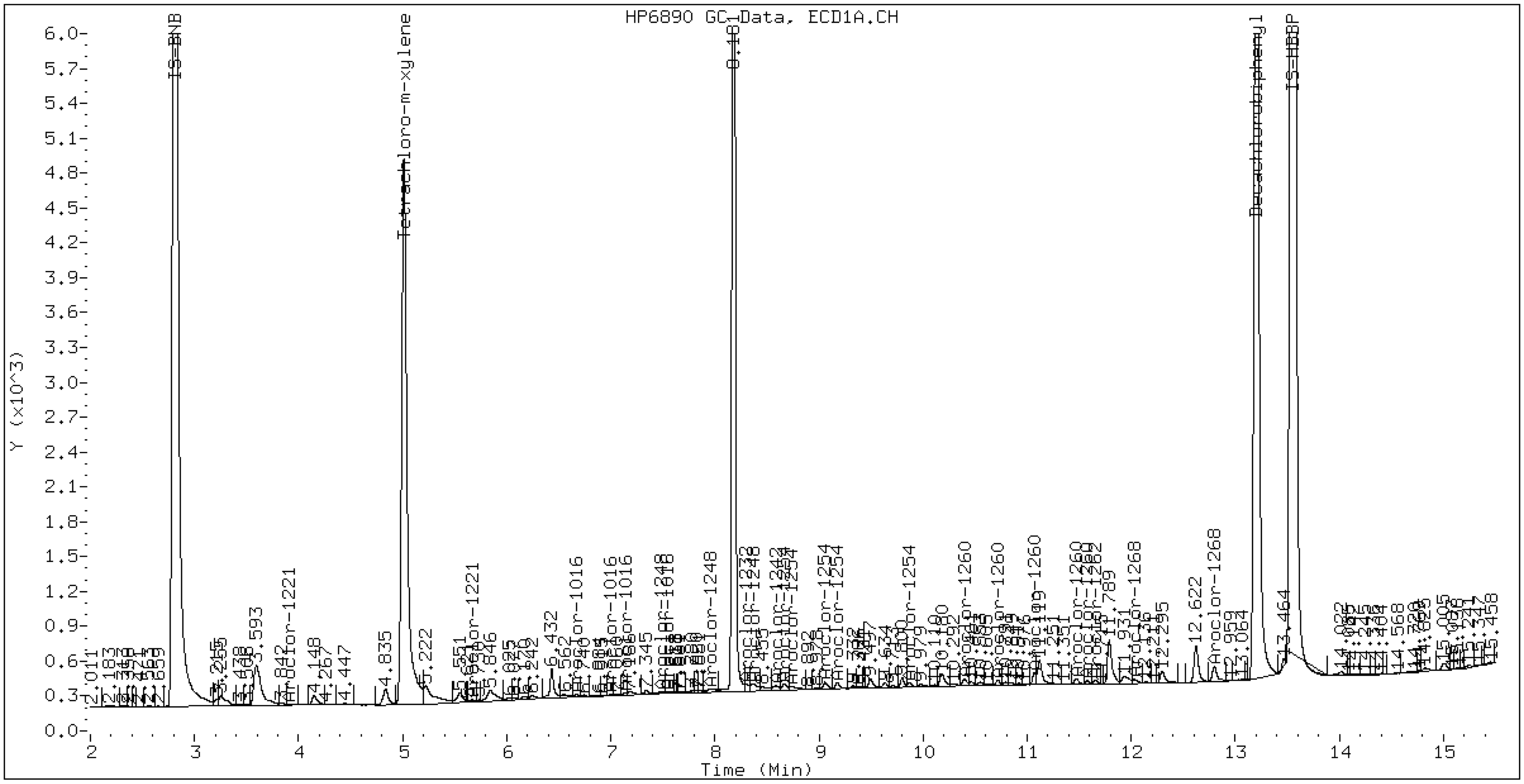
Total PCB Area Col2 (5.113 - 13.105) = 4643070 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

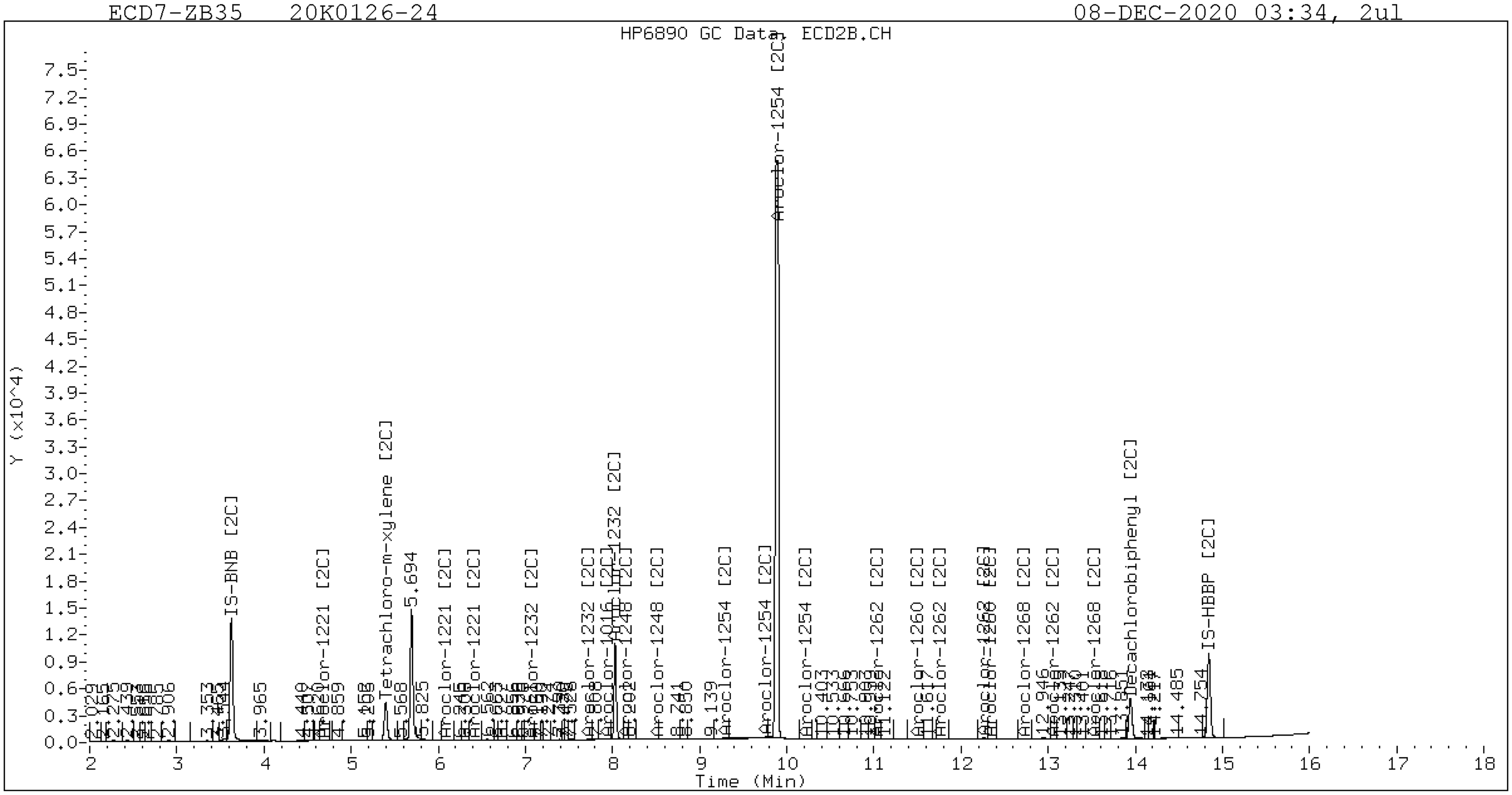
PCB Dual Column Chromatograms

ECD7-ZB5 20K0126-24 08-DEC-2020 03:34, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0126-24 08-DEC-2020 03:34, 2ul

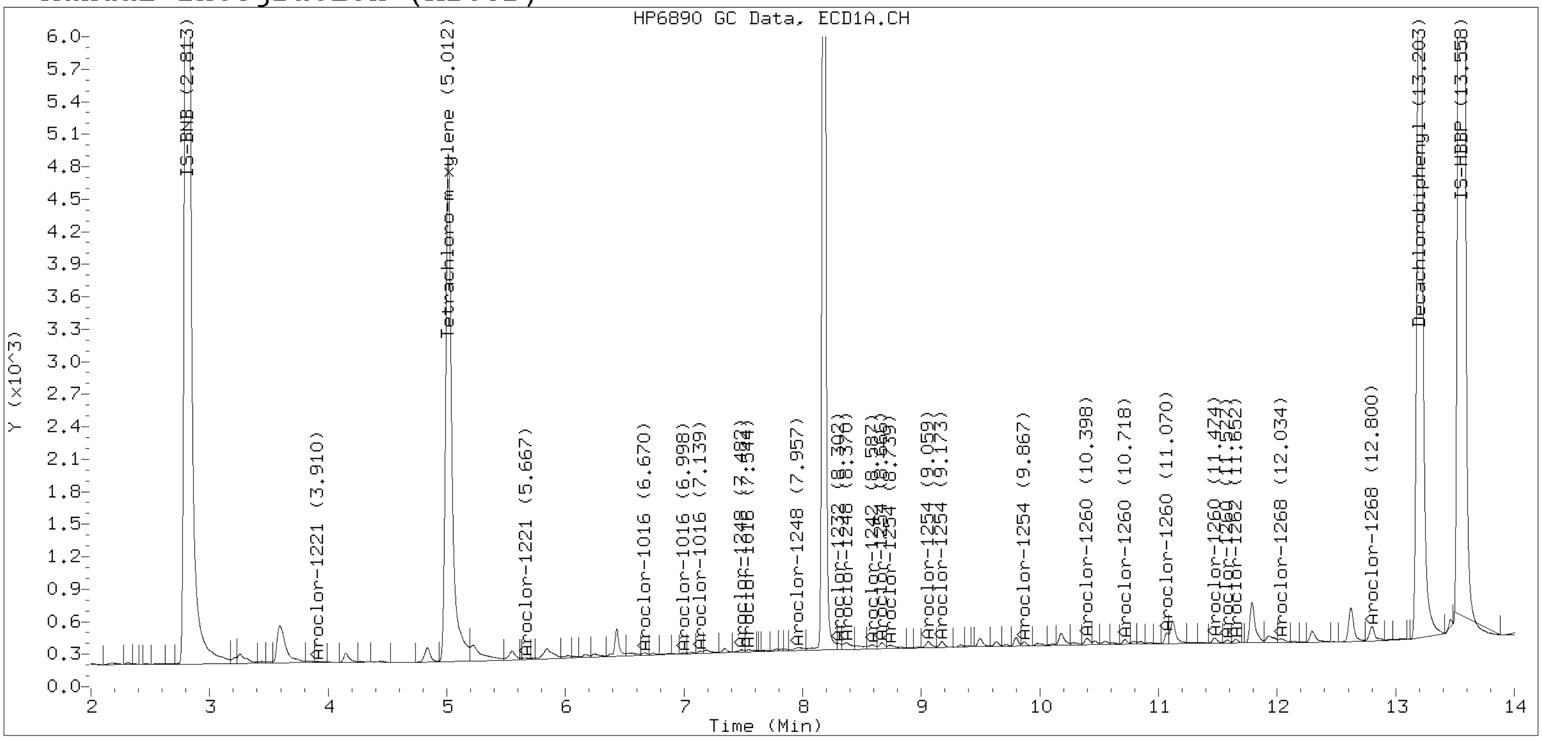


ZB-35 Manual Integration: YES

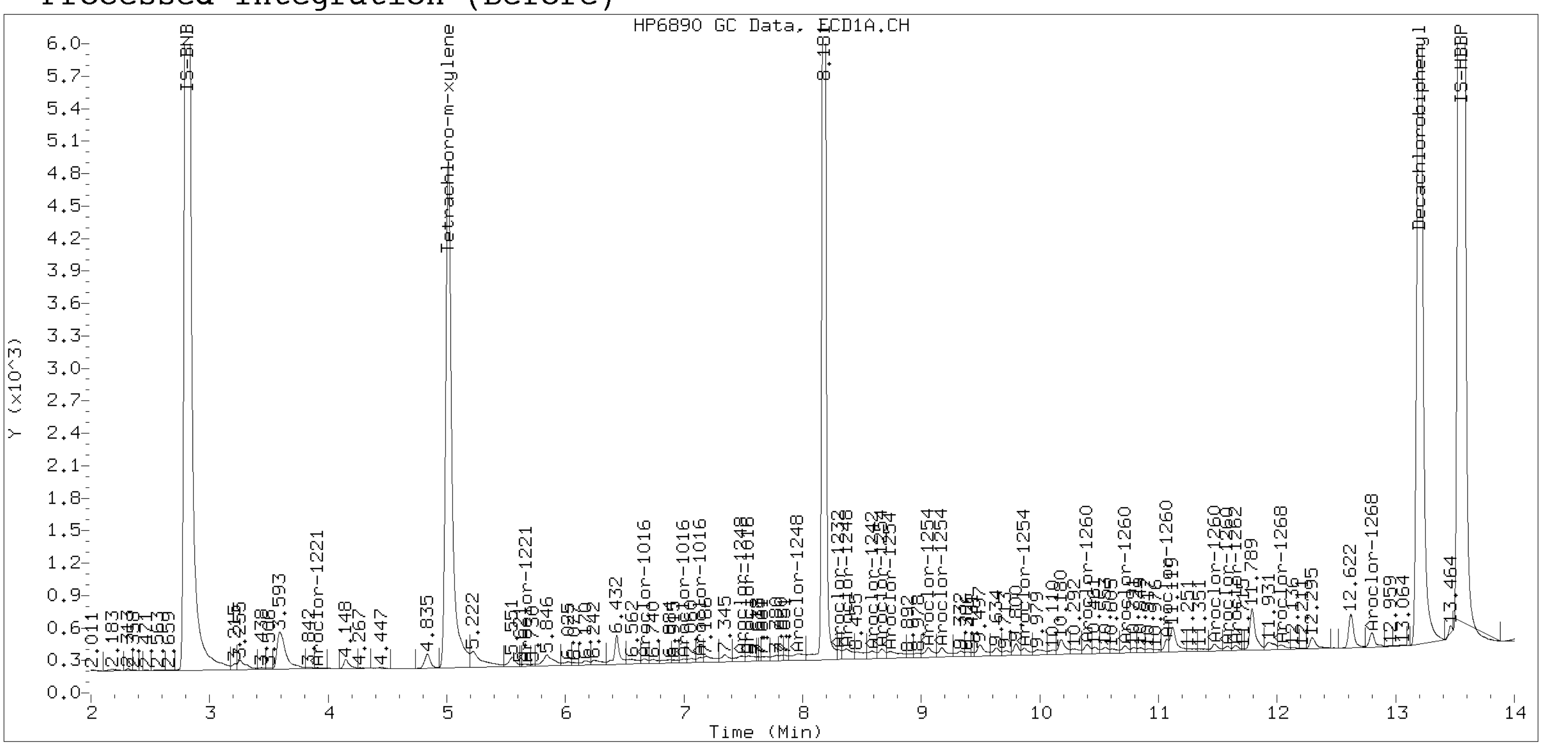
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120731ECD7.D   Injection Date: 08-DEC-2020 03:3

Manual Integration (After)



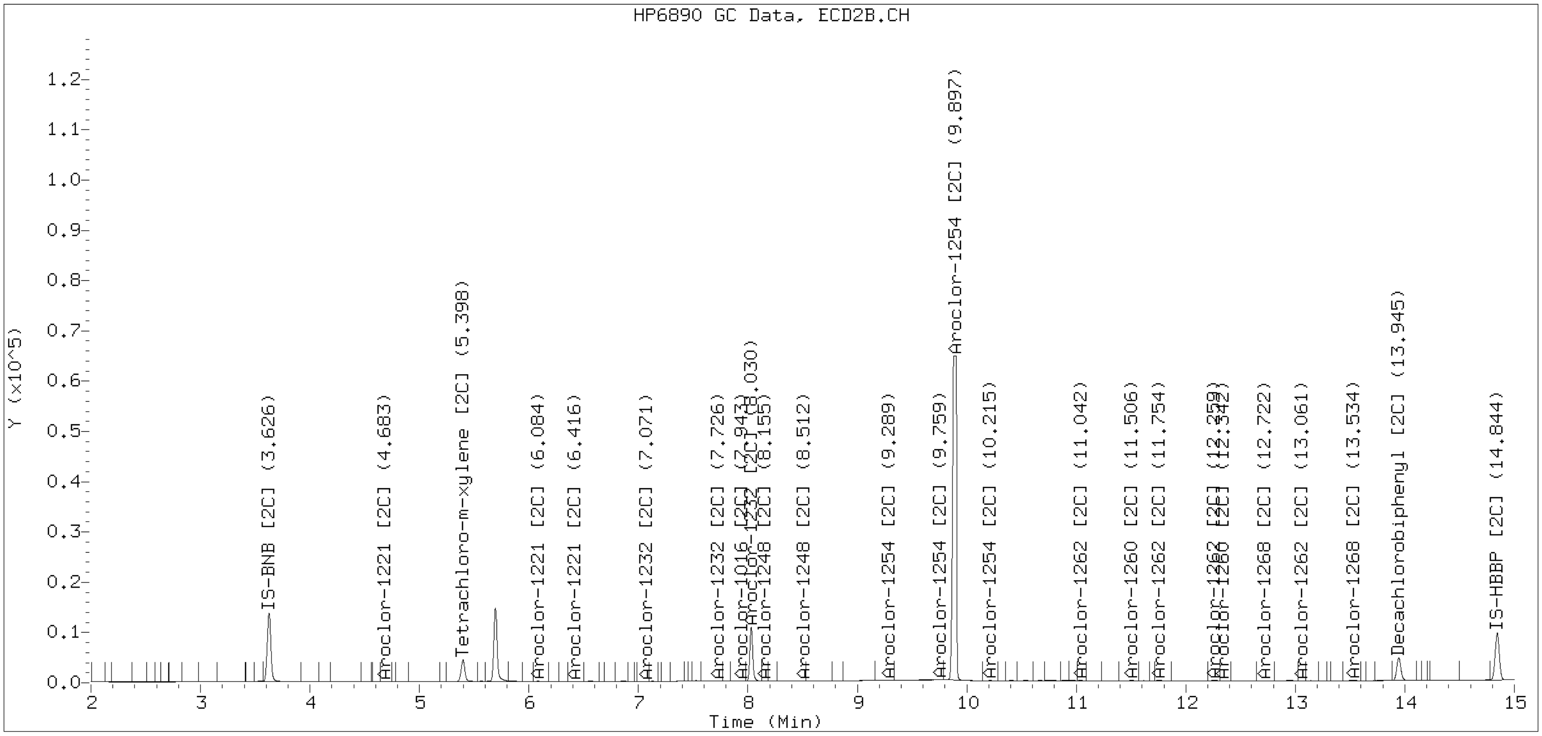
Processed Integration (Before)



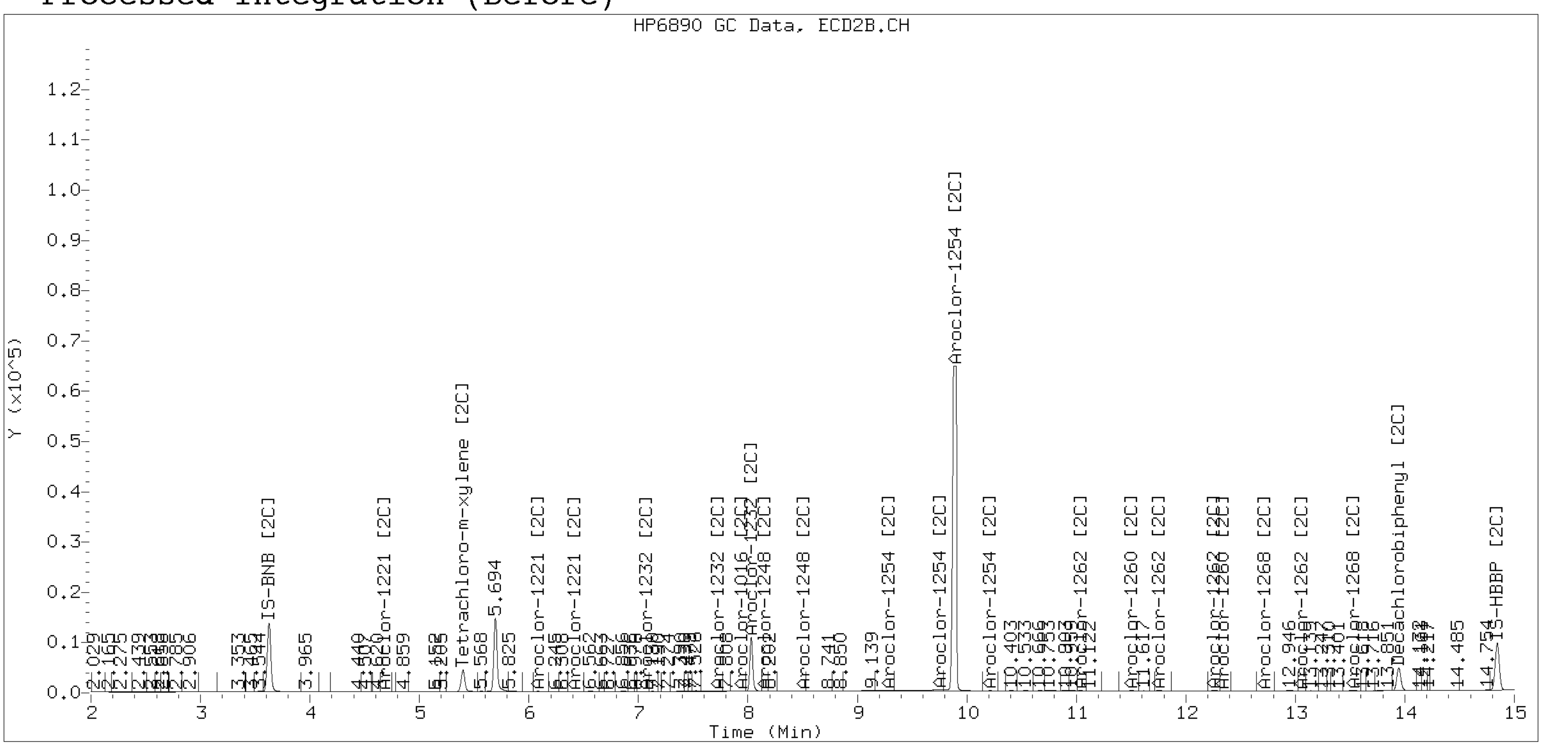
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/20201207.b/20201207.b/20120731ECD7.D Injection Date: 08-DEC-2

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Batch: BIK0552 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
PP15-2.5	20K0126-01	20120807ECD7.D	11/18/20 11:50	2020 Samples
PP15-5	20K0126-02	20120808ECD7.D	11/18/20 11:50	2020 Samples
PP16-2.5	20K0126-06	20120804ECD7.D	11/18/20 11:50	2020 Samples
PP16-5	20K0126-07	20120805ECD7.D	11/18/20 11:50	2020 Samples
PP13-2.5	20K0126-11	20120809ECD7.D	11/18/20 11:50	2020 Samples
PP13-5	20K0126-12	20120810ECD7.D	11/18/20 11:50	2020 Samples
PP7-2.5	20K0126-16	20120726ECD7.D	11/18/20 11:50	2020 Samples
PP7-7.5	20K0126-18	20120811ECD7.D	11/18/20 11:50	2020 Samples
PP3-2	20K0126-22	20120730ECD7.D	11/18/20 11:50	2020 Samples
PP3-5	20K0126-24	20120731ECD7.D	11/18/20 11:50	2020 Samples
Blank	BIK0552-BLK1	20120718ECD7.D	11/18/20 11:50	
LCS	BIK0552-BS1	20120719ECD7.D	11/18/20 11:50	
PP7-2.5	BIK0552-MS1	20120727ECD7.D	11/18/20 11:50	
PP7-2.5	BIK0552-MSD1	20120728ECD7.D	11/18/20 11:50	

~~Pre-Screen before SPE~~

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0552

Prepared using: EPA 3546 (Microwave)

8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L) in Solid

Matrix: Solid **Date Prepared:** 11/18/20 **Balance ID:** ______ **Set Up By:** CTO 11/18/20

Analysis: 8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)

Lab Number & Container	% Solids	Initial (g) Target Dry: 5 (Wet)	Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL)	(Opt) Silica Gel C/U (1:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
20K0126-01 A	77.7	(6.44)	6.46	5.0mL	5.0mL	1mL $\boxed{Y}$ N	5	1.0	Do Not Decant
20K0126-02 A	69.0	(7.25)	7.28	5.0mL	5.0mL	1mL $\boxed{Y}$ N	5	1.0	
20K0126-06 A	81.5	(6.14)	6.14	5.0mL	5.0mL	1mL $\boxed{Y}$ N	5	1.0	
20K0126-07 A	76.6	(6.52)	6.56	5.0mL	5.0mL	1mL $\boxed{Y}$ N	5	1.0	
20K0126-11 A	76.8	(6.51)	6.54	5.0mL	5.0mL	1mL $\boxed{Y}$ N	5	1.0	
20K0126-12 A	76.9	(6.51)	6.51	5.0mL	5.0mL	1mL $\boxed{Y}$ N	5	1.0	
20K0126-16 A	92.0	(5.44)	5.46	5.0mL	5.0mL	1mL $\boxed{Y}$ N	5	1.0	
20K0126-18 A	77.2	(6.48)	6.50	5.0mL	5.0mL	1mL $\boxed{Y}$ N	5	1.0	
20K0126-22 A	91.2	(5.48)	5.51	5.0mL	5.0mL	1mL $\boxed{Y}$ N	5	1.0	
20K0126-24 A	79.9	(6.26)	6.26	5.0mL	5.0mL	1mL $\boxed{Y}$ N	5	1.0	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 5 (Wet)	Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL)	(Opt) Silica Gel C/U (1:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BIK0552-BLK1	100.0	(5.00)	5.00	5.0mL	5.0mL	1mL $\boxed{Y}$ N	5	1.0	
BIK0552-BS1	100.0	(5.00)	5.00	5.0mL	5.0mL	1mL $\boxed{Y}$ N	5	1.0	
BIK0552-MS1	92.0	((5.44)	5.44	5.0mL	5.0mL	1mL $\boxed{Y}$ N	5	1.0	Use 20K0126-16
BIK0552-MSD1	92.0	((5.44)	5.44	5.0mL	5.0mL	1mL $\boxed{Y}$ N	5	1.0	Use 20K0126-16

MJL 11/18/20 — DM 12-7-20 — 11/18/20 1:50

Client ID Verified By — Date — Preparation Reviewed By — Date — Extraction Date and Time

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0552

Prepared using: EPA 3546 (Microwave)

8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L) in Solid

Prep Steps

Prep Steps
Microwave 1 2 3 — 11/18/20 CT Analyst/Date
KD 100°C Hexane Exchange (2 X 20 mL) 1 2 3 4 5 6 — CTO 11/28/20 Analyst/Date
TurboVap Pre Cleanups 1 2 3 4 5 — 12-7-20 DM Analyst/Date
TurboVap Post Cleanups 1 2 3 4 5 6 — 12-7-20 DM Analyst/Date
Vialing 12-7-20 DM Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CT/ Date: 11/18/20	
Anhydrous Sodium Sulfate	I014485
Neutral Glass Wool	I014414
1:1 Hexane/Acetone	I014594
Hexane	I009769
KD Analyst: CTO Date: 11/28/20	
Hexane	I009769
Neutral Glass Wool	I010014
Vialing Analyst: DM Date: 12-7-20	
Hexane	I009769
Concentrated Sulfuric Acid	I007088
Tetrabutylammonium hydrogensulfate (TBAS)	I010916
Sodium Sulfite	I006339
Silica Gel (SPE) Darts	I009985

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID		Vol uL	Analyst	Witness
Surrogate 2µg/mL	N	I010565 Exp: 02/14/2021	100µL	CT	
Spike 20µg/mL	1	I008526 Exp: 03/22/2021	125µL	CT	

(V) indicates a virtual standard combining two or more physical standards. In these cases the Standard ID refers to the virtual standard, not the parent standards.

If a Standard ID is missing, but should be present, check the standard definition in Element LIMS to be sure Standard Info 6 has the correct letter or number designator matching the vial designator inthe Standard ID column. If it is correct, check the batch and bench sheet in Element LIMS to be sure the correct standards are selected for surrogate(s) and spike(s).

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0552

Prepared using: EPA 3546 (Microwave)

8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L) in Solid

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3 inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in Refridgerator 05. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into E. flask using a funnel with neutral glasswool plug. 8. Re-homogenize and rinse with 1:1 Hexane/Acetone. 9. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 10. KD on 100° bath. 11. Exchange (2 X with 20mL) Hexane. 12. TurboVap. 13. Vial 5 mL into labelled scintillation vials using Hexane. Acid/Sulfur cleanups REQUIRED 14. TurboVap (if Silica Clean). 15. Vial with Hexane. A. Need Total Solids Y N B. Archive/Freeze Y N	

Printed: 11/18/2020 8:31:24AM

3017F

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PCB	Extraction Batch BIK0552

Total Solids Batch: BIK0352 (metals) Work Order(s): 20K0126

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 02.16.24.	11/18/20
☐ Standing Water Decanted (Not shared)=	
☒ Standing Water Homogenized (Shared samples)=02	11/18/20
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)= 30% 1/4" =22	11/18/20
~~☒~~ Organics (Leaves/sticks/grass)= 11/18/20	
☒ Oily, obvious fuel/sulfur odors= fuel odor =01, 06, 07, 11 (18) sulfur =12.	11/18/20
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / N	11/18/20
☒ Multiple Jars Y / N 1, 2, 6, 7, 11, 12, 16, 18, 22, 24 X 2	11/18/20
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

3056F

Batch: BIK0552
Batch Comment: **NONE**
Project: ICS-Former NW Cooperage
Project Comments: <G> Need J-flag Binary files for Aroclors .cdf
Need Acid/Silica Clean-ups for TPHDx if requested
Need MS/MSD if enough volume.
Need organic instrument files uploaded to the secure site for DMD (Raleigh Farlow).
</G>
Work Order:20K0126
Work Order Comments: <G> Need J-flag Binary files for Aroclors .cdf
Need Acid/Silica Clean-ups for TPHDx if requested
Need MS/MSD if enough volume.
Need organic instrument files uploaded to the secure site for DMD (Raleigh Farlow).
</G>
Sample: 20K0126-01
Sample Comments: **NONE**
Sample: 20K0126-02
Sample Comments: **NONE**
Sample: 20K0126-06
Sample Comments: **NONE**
Sample: 20K0126-07
Sample Comments: **NONE**
Sample: 20K0126-11
Sample Comments: **NONE**
Sample: 20K0126-12
Sample Comments: **NONE**
Sample: 20K0126-16
Sample Comments: **NONE**
Sample: 20K0126-18
Sample Comments: **NONE**
Sample: 20K0126-22
Sample Comments: **NONE**
Sample: 20K0126-24
Sample Comments: **NONE**

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Cleanup Batch:	CIL0075	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665A Sulfuric Acid Cleanup	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
PP3-5	20K0126-24	20120731ECD7.D	12/07/2020	
Matrix Spike Dup	BIK0552-MSD1	20120728ECD7.D	12/07/2020	
PP15-5	20K0126-02	20120808ECD7.D	12/07/2020	
PP13-5	20K0126-12	20120810ECD7.D	12/07/2020	
PP15-2.5	20K0126-01	20120807ECD7.D	12/07/2020	
Matrix Spike	BIK0552-MS1	20120727ECD7.D	12/07/2020	
LCS	BIK0552-BS1	20120719ECD7.D	12/07/2020	
Blank	BIK0552-BLK1	20120718ECD7.D	12/07/2020	
PP16-2.5	20K0126-06	20120804ECD7.D	12/07/2020	
PP3-2	20K0126-22	20120730ECD7.D	12/07/2020	
PP7-2.5	20K0126-16	20120726ECD7.D	12/07/2020	
PP7-7.5	20K0126-18	20120811ECD7.D	12/07/2020	
PP13-2.5	20K0126-11	20120809ECD7.D	12/07/2020	
PP16-5	20K0126-07	20120805ECD7.D	12/07/2020	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CIL0075

Matrix: Solid **Cleanup using: Organics - EPA 3665A Sulfuric Acid Cleanup** **Printed: 12/7/2020 1:17:41PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
20K0126-16	A	PP7-2.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-12	A	PP13-5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-02	A	PP15-5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-06	A	PP16-2.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-07	A	PP16-5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-11	A	PP13-2.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-01	A	PP15-2.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-18	A	PP7-7.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-22	A	PP3-2	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-24	A	PP3-5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
BIK0552-MSD1	-	Matrix Spike Dup	-	5	5	-	12/7/2020	DDM	
BIK0552-MS1	-	Matrix Spike	-	5	5	-	12/7/2020	DDM	
BIK0552-BLK1	-	Blank	-	5	5	-	12/7/2020	DDM	
BIK0552-BS1	-	LCS	-	5	5	-	12/7/2020	DDM	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Cleanup Batch:	CIL0076	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
PP13-5	20K0126-12	20120810ECD7.D	12/07/2020	
Blank	BIK0552-BLK1	20120718ECD7.D	12/07/2020	
LCS	BIK0552-BS1	20120719ECD7.D	12/07/2020	
Matrix Spike	BIK0552-MS1	20120727ECD7.D	12/07/2020	
PP7-7.5	20K0126-18	20120811ECD7.D	12/07/2020	
Matrix Spike Dup	BIK0552-MSD1	20120728ECD7.D	12/07/2020	
PP16-2.5	20K0126-06	20120804ECD7.D	12/07/2020	
PP13-2.5	20K0126-11	20120809ECD7.D	12/07/2020	
PP15-2.5	20K0126-01	20120807ECD7.D	12/07/2020	
PP15-5	20K0126-02	20120808ECD7.D	12/07/2020	
PP7-2.5	20K0126-16	20120726ECD7.D	12/07/2020	
PP3-5	20K0126-24	20120731ECD7.D	12/07/2020	
PP3-2	20K0126-22	20120730ECD7.D	12/07/2020	
PP16-5	20K0126-07	20120805ECD7.D	12/07/2020	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CIL0076

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup** **Printed: 12/7/2020 1:18:34PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
20K0126-24	A	PP3-5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-22	A	PP3-2	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-11	A	PP13-2.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-12	A	PP13-5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-16	A	PP7-2.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-18	A	PP7-7.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-01	A	PP15-2.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-02	A	PP15-5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-06	A	PP16-2.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-07	A	PP16-5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
BIK0552-MSD1	-	Matrix Spike Dup	-	5	5	-	12/7/2020	DDM	
BIK0552-MS1	-	Matrix Spike	-	5	5	-	12/7/2020	DDM	
BIK0552-BLK1	-	Blank	-	5	5	-	12/7/2020	DDM	
BIK0552-BS1	-	LCS	-	5	5	-	12/7/2020	DDM	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Cleanup Batch:	CIL0077	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
PP13-2.5	20K0126-11	20120809ECD7.D	12/07/2020	
Matrix Spike	BIK0552-MS1	20120727ECD7.D	12/07/2020	
LCS	BIK0552-BS1	20120719ECD7.D	12/07/2020	
Blank	BIK0552-BLK1	20120718ECD7.D	12/07/2020	
PP7-7.5	20K0126-18	20120811ECD7.D	12/07/2020	
PP7-2.5	20K0126-16	20120726ECD7.D	12/07/2020	
PP3-5	20K0126-24	20120731ECD7.D	12/07/2020	
PP3-2	20K0126-22	20120730ECD7.D	12/07/2020	
PP16-5	20K0126-07	20120805ECD7.D	12/07/2020	
PP16-2.5	20K0126-06	20120804ECD7.D	12/07/2020	
PP15-5	20K0126-02	20120808ECD7.D	12/07/2020	
PP15-2.5	20K0126-01	20120807ECD7.D	12/07/2020	
Matrix Spike Dup	BIK0552-MSD1	20120728ECD7.D	12/07/2020	
PP13-5	20K0126-12	20120810ECD7.D	12/07/2020	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CIL0077

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup** **Printed: 12/7/2020 1:19:22PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
20K0126-24	A	PP3-5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-22	A	PP3-2	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-11	A	PP13-2.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-12	A	PP13-5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-16	A	PP7-2.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-18	A	PP7-7.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-01	A	PP15-2.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-02	A	PP15-5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-06	A	PP16-2.5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
20K0126-07	A	PP16-5	A 02	5	5	82A PCB (20 ug/kg) or (MTCA 0.1 ug/	12/7/2020	DDM	
BIK0552-MSD1	-	Matrix Spike Dup	-	5	5	-	12/7/2020	DDM	
BIK0552-MS1	-	Matrix Spike	-	5	5	-	12/7/2020	DDM	
BIK0552-BLK1	-	Blank	-	5	5	-	12/7/2020	DDM	
BIK0552-BS1	-	LCS	-	5	5	-	12/7/2020	DDM	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
METHOD BLANK DATA SHEET
EPA 8082A

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc			Project:	ICS-Former NW Cooperage
Matrix:	Solid	Laboratory ID:	BIK0552-BLK1	File ID:	20120718ECD7.D
Sampled:	N/A	Prepared:	11/18/20 11:50	Analyzed:	12/07/20 23:07
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	5 g / 5 mL
Batch:	BIK0552	Sequence:	SIL0131	Calibration:	DL00019
Instrument:	ECD7	Column:	ZB5	Cleanups:	Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
12674-11-2	Aroclor 1016	1	20.0	U	8.0	20.0
11104-28-2	Aroclor 1221	1	20.0	U	8.0	20.0
11141-16-5	Aroclor 1232	1	20.0	U	8.0	20.0
53469-21-9	Aroclor 1242	1	20.0	U	8.0	20.0
12672-29-6	Aroclor 1248	1	20.0	U	8.0	20.0
11097-69-1	Aroclor 1254	1	20.0	U	8.0	20.0
11096-82-5	Aroclor 1260	1	20.0	U	9.3	20.0
37324-23-5	Aroclor 1262	1	20.0	U	9.3	20.0
11100-14-4	Aroclor 1268	1	20.0	U	9.3	20.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	40.000	34.5	86.2	40 - 133	
Tetrachlorometaxylene	40.000	36.3	90.8	53 - 120	
Decachlorobiphenyl [2C]	40.000	38.8	96.9	40 - 133	
Tetrachlorometaxylene [2C]	40.000	37.9	94.7	53 - 120	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120718ECD7.D
Data file 2: /20201207.b/20201207.b/20120718ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BIK0552-BLK1
Client ID:
Injection Date: 07-DEC-2020 23:07
Report Date: 12/13/2020 14:24
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.015	0.002	413759	5.399	-0.001	249887	36.3	37.9	4.2	Tetrachloro-m-xylene
13.206	0.001	857693	13.948	0.000	429886	34.5	38.8	11.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	90.8	94.7
Decachlorobiphenyl	86.2	96.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	781433	-0.7
Hexabromobiphenyl	2132987	2340300	9.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	575445	-9.4
Hexabromobiphenyl	665758	673995	1.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.663	0.035	2631	6.7	1	7.132	0.058	1705	6.1
Aroclor-1016	2	7.007	0.008	1057	0.8	2	7.646	-0.024	620	1.0
Aroclor-1016	3	7.142	-0.007	686	1.3	3	7.885	0.004	560	2.3
Aroclor-1016	4	7.523	-0.023	789	2.7	4	---			0.0
Total Col1Ave (4 peaks): 2.9						Total Col2Ave (3 peaks): 3.1 RPD = 9				
Corrected Ave (3 peaks): 1.6						Corrected Ave: < 3 Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.084	0.010	2690	34.0
Aroclor-1221	3	---			0.0	3	6.402	-0.015	752	5.1
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.663	0.032	2631	16.5	2	7.132	0.055	1705	13.4
Aroclor-1232	3	7.007	0.005	1057	2.0	3	7.646	-0.026	620	2.3
Aroclor-1232	4	8.365	0.056	1759	11.4	4	---			0.0
Total Col1Ave (3 peaks): 10.0						Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.663	0.034	2631	8.7	1	7.132	0.059	1705	7.8
Aroclor-1242	2	7.007	0.007	1057	1.1	2	7.646	-0.024	620	1.2
Aroclor-1242	3	8.365	0.060	1759	5.7	3	---			0.0
Aroclor-1242	4	8.580	-0.020	1112	3.3	4	---			0.0
Total Col1Ave (4 peaks): 4.7						Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	7.486	0.003	1438	3.5	1	---			0.0
Aroclor-1248	2	7.989	0.037	2254	3.6	2	---			0.0
Aroclor-1248	3	8.365	0.004	1759	1.9	3	---			0.0
Aroclor-1248	4	8.580	-0.017	1112	2.1	4	---			0.0
Total Col1Ave (4 peaks): 2.8						Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.580	-0.091	1112	1.2	1	---			0.0
Aroclor-1254	2	8.841	0.101	1031	2.1	2	---			0.0
Aroclor-1254	3	9.064	0.024	565	0.9	3	9.766	-0.052	624	2.3
Aroclor-1254	4	---			0.0	4	9.883	-0.085	4448	6.9
Aroclor-1254	5	9.881	0.009	486	0.6	5	---			0.0
Total Col1Ave (4 peaks): 1.2						Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	10.432	0.032	581	0.6	1	---			0.0
Aroclor-1260	2	10.710	-0.011	1130	1.2	2	---			0.0
Aroclor-1260	3	11.124	0.051	11219	4.8	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	11.581	0.001	2035	3.9	NS	---			----
Total Col1Ave (4 peaks): 2.6						Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.432	0.027	581	0.4	1	---			0.0
Aroclor-1262	2	11.124	0.046	11219	3.7	2	---			0.0
Aroclor-1262	3	11.581	-0.005	2035	2.4	3	---			0.0
Aroclor-1262	4	11.664	0.007	293	0.3	4	---			0.0
Total Col1Ave (4 peaks): 1.7						Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	11.581	-0.007	2035	0.7	1	---			0.0
Aroclor-1268	2	11.664	0.007	293	0.1	2	---			0.0
Aroclor-1268	3	12.029	-0.008	4474	1.7	3	12.729	-0.001	1365	0.9
Aroclor-1268	4	12.801	-0.011	18323	1.7	4	13.537	-0.009	3174	0.6
Total Col1Ave (4 peaks): 1.0						Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.113 - 13.105) = 216982 Col1 Total PCB = 0.0 ppm*

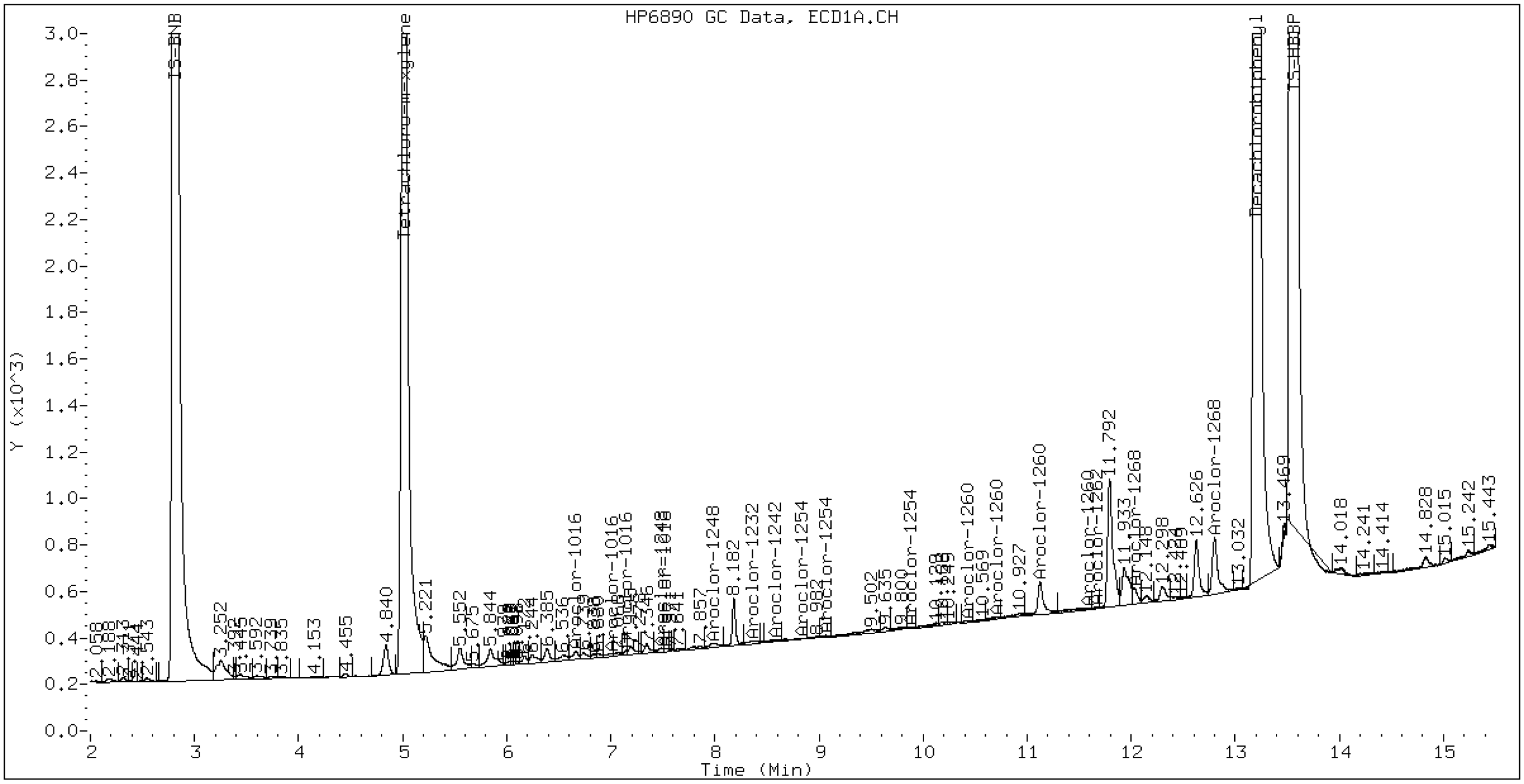
Total PCB Area Col2 (5.113 - 13.105) = 302864 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

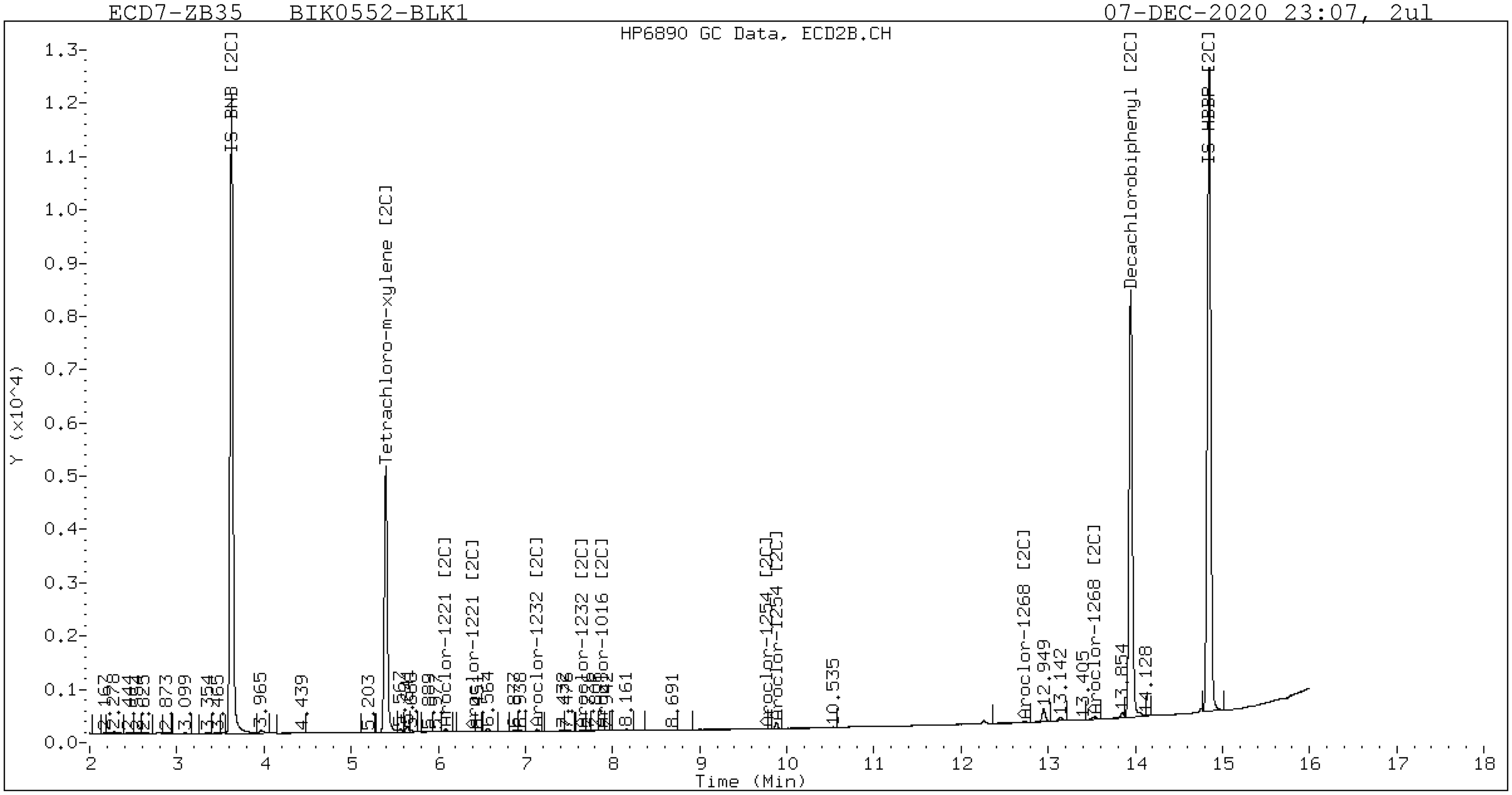
PCB Dual Column Chromatograms

ECD7-ZB5 BIK0552-BLK1 07-DEC-2020 23:07, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BIK0552-BLK1 07-DEC-2020 23:07, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	12/07/20 23:27
Batch:	BIK0552	Laboratory ID:	BIK0552-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	5 g / 5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Aroclor 1016 [2C]	500	398		79.7	52 - 120
Aroclor 1260 [2C]	500	404		80.9	57 - 120

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120719ECD7.D
Data file 2: /20201207.b/20201207.b/20120719ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BIK0552-BS1
Client ID:
Injection Date: 07-DEC-2020 23:27
Report Date: 12/13/2020 14:24
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	0.001	325886	5.398	-0.001	195592	27.6	27.9	1.2	Tetrachloro-m-xylene
13.205	0.000	675301	13.946	-0.001	341273	25.5	28.7	11.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	69.0	69.8
Decachlorobiphenyl	63.8	71.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	810420	3.0
Hexabromobiphenyl	2132987	2487732	16.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	611582	-3.8
Hexabromobiphenyl	665758	722747	8.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
	ZB5 Col					ZB35 Col					
Aroclor-1016	1	6.627	-0.001	147961	362.8	1	7.073	-0.001	113165	381.5	
Aroclor-1016	2	6.999	-0.000	472674	363.8	2	7.669	-0.001	266668	398.2	
Aroclor-1016	3	7.149	-0.000	196749	352.5	3	7.879	-0.001	100748	397.1	
Aroclor-1016	4	7.546	0.000	108200	356.5	4	8.053	-0.001	63431	417.0	
Total Col1Ave (4 peaks):				358.9		Total Col2Ave (4 peaks):			398.4		RPD = 10
Corrected Ave (3 peaks):				357.2		Corrected Ave (3 peaks):			392.2		RPD = 9
Aroclor-1221	1	3.968	-0.004	1219	11.6	1	---			0.0	
Aroclor-1221	2	5.400	-0.005	17056	114.4	2	6.073	-0.001	9341	111.2	
Aroclor-1221	3	5.679	-0.004	88293	230.9	3	6.414	-0.003	42929	274.1	
Total Col1Ave (3 peaks):				118.9		Col2Ave: <3 Quant Peaks					
Aroclor-1232	1	3.968	-0.006	1219	19.1	1	---			0.0	
Aroclor-1232	2	6.627	-0.004	147961	894.4	2	7.073	-0.004	113165	837.5	
Aroclor-1232	3	6.999	-0.003	472674	874.3	3	7.669	-0.004	266668	945.2	
Aroclor-1232	4	8.303	-0.006	29175	181.6	4	8.053	-0.004	63431	986.4	
Total Col1Ave (4 peaks):				492.4		Total Col2Ave (3 peaks):			923.0		RPD = 61*
Corrected Ave (3 peaks):				358.4		Corrected Ave: < 3 Peaks					
Aroclor-1242	1	6.627	-0.002	147961	470.6	1	7.073	-0.001	113165	489.5	
Aroclor-1242	2	6.999	-0.001	472674	487.4	2	7.669	-0.001	266668	498.0	
Aroclor-1242	3	8.303	-0.002	29175	90.6	3	8.979	-0.009	25872	122.4	
Aroclor-1242	4	8.593	-0.007	22861	65.2	4	9.422	-0.001	4299	20.7	
Total Col1Ave (4 peaks):				278.5		Total Col2Ave (4 peaks):			282.6		RPD = 1
Corrected Ave (3 peaks):				208.8		Corrected Ave (3 peaks):			210.9		RPD = 1
Aroclor-1248	1	7.483	-0.000	120075	284.1	1	8.137	-0.001	56716	273.5	
Aroclor-1248	2	7.952	-0.001	178459	278.4	2	8.558	-0.001	81898	301.8	
Aroclor-1248	3	8.377	0.016	144567	152.6	3	8.979	-0.009	25872	66.9	
Aroclor-1248	4	8.593	-0.004	22861	41.7	4	9.422	-0.001	4299	11.3	
Total Col1Ave (4 peaks):				189.2		Total Col2Ave (4 peaks):			163.4		RPD = 15
Corrected Ave (3 peaks):				157.6		Corrected Ave (3 peaks):			117.3		RPD = 29
Aroclor-1254	1	8.669	-0.002	136941	142.6	1	9.286	-0.000	54606	125.0	
Aroclor-1254	2	---			0.0	2	9.379	-0.000	1009	5.0	
Aroclor-1254	3	9.041	0.001	23397	36.6	3	9.818	0.000	8587	29.7	
Aroclor-1254	4	9.168	-0.008	128724	97.6	4	9.986	0.018	137123	201.1	
Aroclor-1254	5	9.867	-0.005	163419	186.8	5	10.219	0.019	180658	256.6	
Total Col1Ave (4 peaks):				115.9		Total Col2Ave (5 peaks):			123.5		RPD = 6
Corrected Ave (3 peaks):				92.3		Corrected Ave (4 peaks):			90.2		RPD = 2
Aroclor-1260	1	10.401	0.001	353813	365.8	1	11.039	-0.000	185485	419.9	
Aroclor-1260	2	10.722	0.001	348438	360.7	2	11.503	-0.001	184327	396.2	
Aroclor-1260	3	11.073	0.001	950952	379.3	3	11.755	-0.000	477375	401.1	
Aroclor-1260	4	11.476	0.002	435200	339.7	4	12.344	0.000	309555	400.3	
Aroclor-1260	5	11.582	0.002	216216	387.6	NS	---			----	
Total Col1Ave (5 peaks):				366.6		Total Col2Ave (4 peaks):			404.4		RPD = 10
Corrected Ave (4 peaks):				361.4		Corrected Ave (3 peaks):			399.2		RPD = 10
Aroclor-1262	1	10.401	-0.004	353813	243.8	1	11.039	-0.004	185485	246.9	
Aroclor-1262	2	11.073	-0.004	950952	291.4	2	11.755	-0.004	477375	289.1	
Aroclor-1262	3	11.582	-0.004	216216	238.8	3	12.273	-0.003	141465	266.8	
Aroclor-1262	4	11.654	-0.004	280200	236.1	4	13.062	-0.004	140618	234.2	
Total Col1Ave (4 peaks):				252.5		Total Col2Ave (4 peaks):			259.3		RPD = 3
Corrected Ave (3 peaks):				239.6		Corrected Ave (3 peaks):			249.3		RPD = 4
Aroclor-1268	1	11.582	-0.007	216216	65.4	1	12.273	-0.000	141465	81.5	
Aroclor-1268	2	11.654	-0.003	280200	78.9	2	12.344	0.005	309555	163.3	
Aroclor-1268	3	12.057	0.020	121848	42.7	3	12.725	-0.005	4758	3.0	
Aroclor-1268	4	12.802	-0.010	85516	7.6	4	13.540	-0.006	29454	5.6	
Total Col1Ave (4 peaks):				48.6		Total Col2Ave (4 peaks):			63.4		RPD = 26
Corrected Ave (3 peaks):				38.6		Corrected Ave (3 peaks):			30.0		RPD = 25

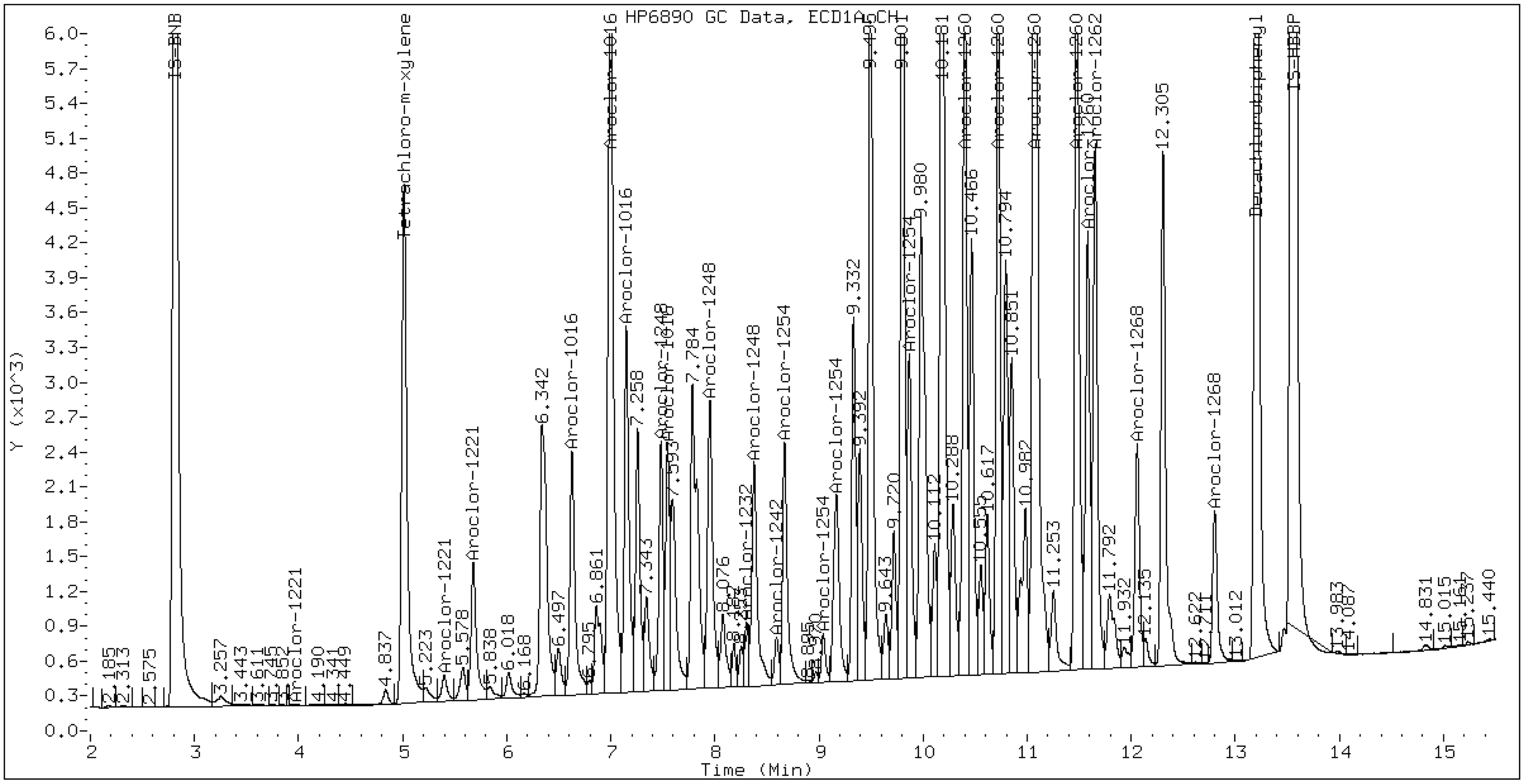
Total PCB Area Col1 (5.113 - 13.105) =	9322570	Col1 Total PCB = 0.8 ppm*
Total PCB Area Col2 (5.113 - 13.105) =	4540365	Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

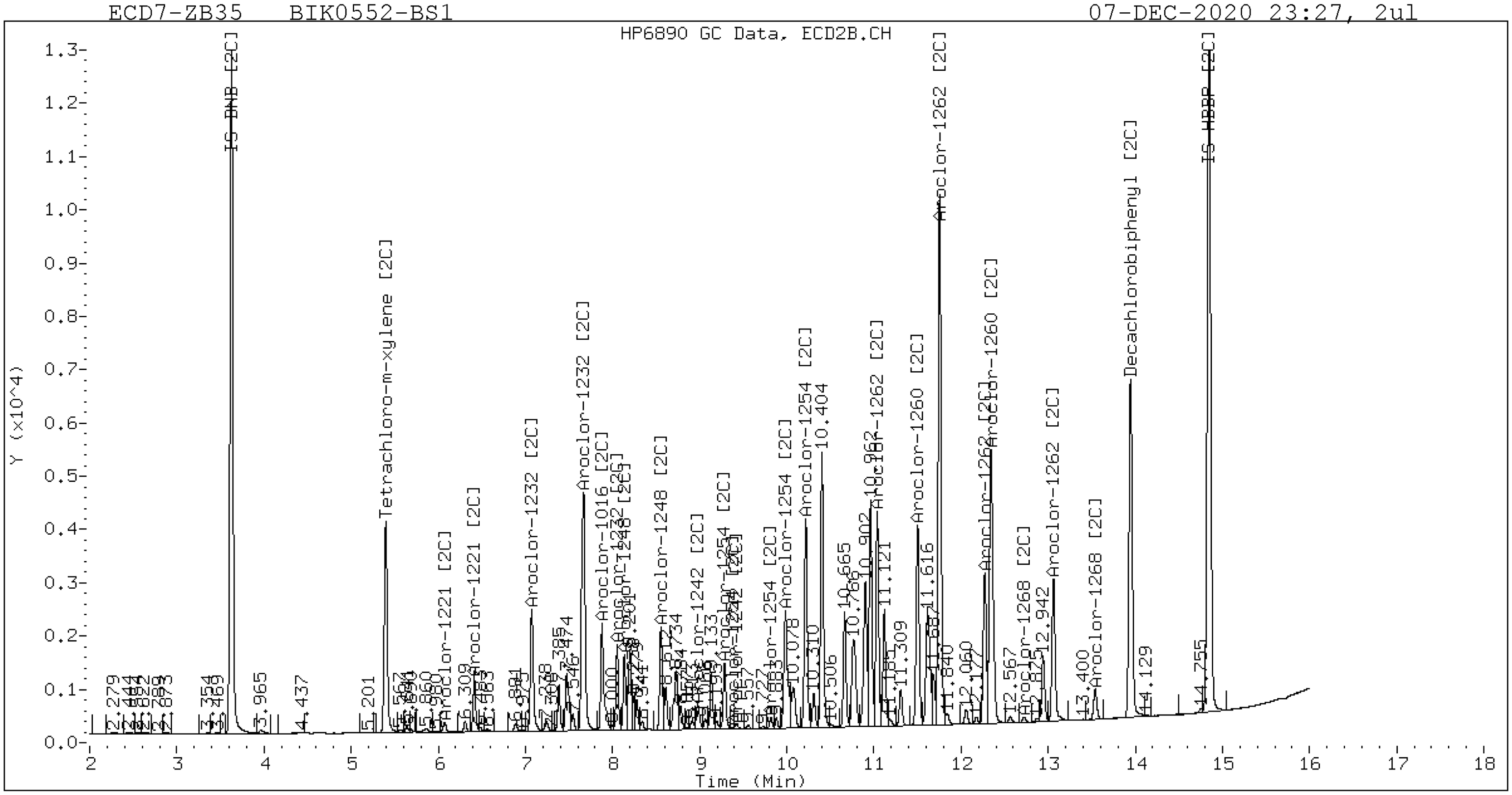
PCB Dual Column Chromatograms

ECD7-ZB5 BIK0552-BS1 07-DEC-2020 23:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BIK0552-BS1 07-DEC-2020 23:27, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP7-2.5

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	12/08/20 02:12
Batch:	BIK0552	Laboratory ID:	BIK0552-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	5.44 g / 5 mL	Source Sample:	PP7-2.5

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Aroclor 1016	500	ND	U	400		80.0	52 - 120
Aroclor 1260	500	100		549		89.8	57 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP7-2.5

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	12/08/20 02:32
Batch:	BIK0552	Laboratory ID:	BIK0552-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	5.44 g / 5 mL	Source Sample:	PP7-2.5

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor 1016	500	350		70.1	13.2	30	52 - 120
Aroclor 1260	500	493		78.7	10.7	30	57 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120727ECD7.D
Data file 2: /20201207.b/20201207.b/20120727ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BIK0552-MS1
Client ID:
Injection Date: 08-DEC-2020 02:12
Report Date: 12/13/2020 14:24
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.012	-0.001	336235	5.397	-0.002	207474	28.3	29.2	3.0	Tetrachloro-m-xylene
13.203	-0.001	658400	13.947	-0.001	344811	28.8	32.0	10.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	70.9	73.1
Decachlorobiphenyl	72.0	80.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	813572	3.4
Hexabromobiphenyl	2132987	2152044	0.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	619411	-2.5
Hexabromobiphenyl	665758	653846	-1.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

```
                           ZB5 Col                                   ZB35 Col
 Aroclor   Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
 =========================================================================================
 Aroclor-1016 1   6.626  -0.002    169827   414.8      1    7.072  -0.001   123759   411.9
 Aroclor-1016 2   6.999   0.000    518662   397.6      2    7.668  -0.001   299947   442.3
 Aroclor-1016 3   7.148  -0.001    218163   389.3      3    7.879  -0.002   119574   465.3
 Aroclor-1016 4   7.545  -0.001    121332   398.2      4    8.032  -0.022   404983  2628.5
       Total Col1Ave (4 peaks):   400.0       Total Col2Ave (4 peaks):   987.0   RPD = 85*
       Corrected Ave (3 peaks):   395.0       Corrected Ave (3 peaks):   439.8   RPD = 11

 Aroclor-1221 1   3.967  -0.005       896     8.5      1    4.618  -0.051     7950   185.7
 Aroclor-1221 2   5.399  -0.006     31208   208.5      2    6.078   0.004    15853   186.3
 Aroclor-1221 3   5.678  -0.004     94169   245.3      3    6.415  -0.002    56016   353.2
       Total Col1Ave (3 peaks):   154.1       Total Col2Ave (3 peaks):   241.7   RPD = 44*
       Corrected Ave: < 3 Peaks                      Corrected Ave: < 3 Peaks

 Aroclor-1232 1   3.967  -0.006       896    14.0      1    4.618  -0.051     7950   299.9
 Aroclor-1232 2   6.626  -0.005    169827  1022.5      2    7.072  -0.004   123759   904.4
 Aroclor-1232 3   6.999  -0.003    518662   955.7      3    7.668  -0.004   299947  1049.8
 Aroclor-1232 4   8.303  -0.006     38419   238.3      4    8.032  -0.025   404983  6217.9
       Total Col1Ave (4 peaks):   557.6       Total Col2Ave (4 peaks):  2118.0   RPD = 117*
       Corrected Ave (3 peaks):   402.6       Corrected Ave (3 peaks):   751.3   RPD = 60*

 Aroclor-1242 1   6.626  -0.003    169827   538.0      1    7.072  -0.001   123759   528.6
 Aroclor-1242 2   6.999  -0.001    518662   532.7      2    7.668  -0.001   299947   553.0
 Aroclor-1242 3   8.303  -0.003     38419   118.9      3    8.979  -0.009    39306   183.6
 Aroclor-1242 4   8.589  -0.011     50273   142.9      4    9.417  -0.005    26598   126.3
       Total Col1Ave (4 peaks):   333.1       Total Col2Ave (4 peaks):   347.9   RPD = 4
       Corrected Ave (3 peaks):   264.8       Corrected Ave (3 peaks):   279.5   RPD = 5

 Aroclor-1248 1   7.482  -0.001    135405   319.1      1    8.136  -0.001    70030   333.5
 Aroclor-1248 2   7.952  -0.001    200961   312.3      2    8.557  -0.001    99099   360.6
 Aroclor-1248 3   8.376   0.015    197603   207.7      3    8.979  -0.009    39306   100.4
 Aroclor-1248 4   8.589  -0.008     50273    91.4      4    9.417  -0.005    26598    69.3
       Total Col1Ave (4 peaks):   232.6       Total Col2Ave (4 peaks):   215.9   RPD = 7
       Corrected Ave (3 peaks):   203.8       Corrected Ave (3 peaks):   167.7   RPD = 19

 Aroclor-1254 1   8.668  -0.003    217219   225.4      1    9.285  -0.001    98178   222.0
 Aroclor-1254 2     ---                      0.0      2    9.379  -0.001    14981    73.1
 Aroclor-1254 3   9.040   0.000     41141    64.1      3    9.818   0.000    26314    89.8
 Aroclor-1254 4   9.168  -0.007    187247   141.4      4    9.985   0.017   211712   306.6
 Aroclor-1254 5   9.866  -0.006    222925   253.8      5   10.219   0.019   261826   367.1
       Total Col1Ave (4 peaks):   171.2       Total Col2Ave (5 peaks):   211.7   RPD = 21
       Corrected Ave (3 peaks):   143.6       Corrected Ave (4 peaks):   172.9   RPD = 18

 Aroclor-1260 1  10.400  -0.000    465024   555.7      1   11.039  -0.000   255975   640.6
 Aroclor-1260 2  10.721  -0.000    454503   543.9      2   11.502  -0.002   254652   605.0
 Aroclor-1260 3  11.073   0.000   1272734   586.8      3   11.755  -0.000   626624   582.0
 Aroclor-1260 4  11.475   0.000    556032   501.7      4   12.344   0.000   396049   566.1
 Aroclor-1260 5  11.580  -0.000    269498   558.4     NS    ---                       ----
       Total Col1Ave (5 peaks):   549.3       Total Col2Ave (4 peaks):   598.4   RPD = 9
       Corrected Ave (4 peaks):   539.9       Corrected Ave (3 peaks):   584.4   RPD = 8

 Aroclor-1262 1  10.400  -0.005    465024   370.5      1   11.039  -0.005   255975   376.7
 Aroclor-1262 2  11.073  -0.005   1272734   450.8      2   11.755  -0.004   626624   419.5
 Aroclor-1262 3  11.580  -0.006    269498   344.0      3   12.272  -0.004   187269   390.4
 Aroclor-1262 4  11.653  -0.004    348611   339.5      4   13.061  -0.004   177277   326.3
       Total Col1Ave (4 peaks):   376.2       Total Col2Ave (4 peaks):   378.2   RPD = 1
       Corrected Ave (3 peaks):   351.3       Corrected Ave (3 peaks):   364.5   RPD = 4

 Aroclor-1268 1  11.580  -0.008    269498    94.2      1   12.272  -0.001   187269   119.3
 Aroclor-1268 2  11.653  -0.004    348611   113.4      2   12.344   0.004   396049   231.0
 Aroclor-1268 3  12.057   0.019    147315    59.7      3   12.724  -0.005     6179     4.3
 Aroclor-1268 4  12.801  -0.012     87450     9.0      4   13.540  -0.006    37562     7.9
       Total Col1Ave (4 peaks):    69.1       Total Col2Ave (4 peaks):    90.6   RPD = 27
```

Corrected Ave (3 peaks): 54.3 Corrected Ave (3 peaks): 43.8 RPD = 21

Total PCB Area Col1 (5.113 - 13.105) = 12269326 Col1 Total PCB = 1.0 ppm*

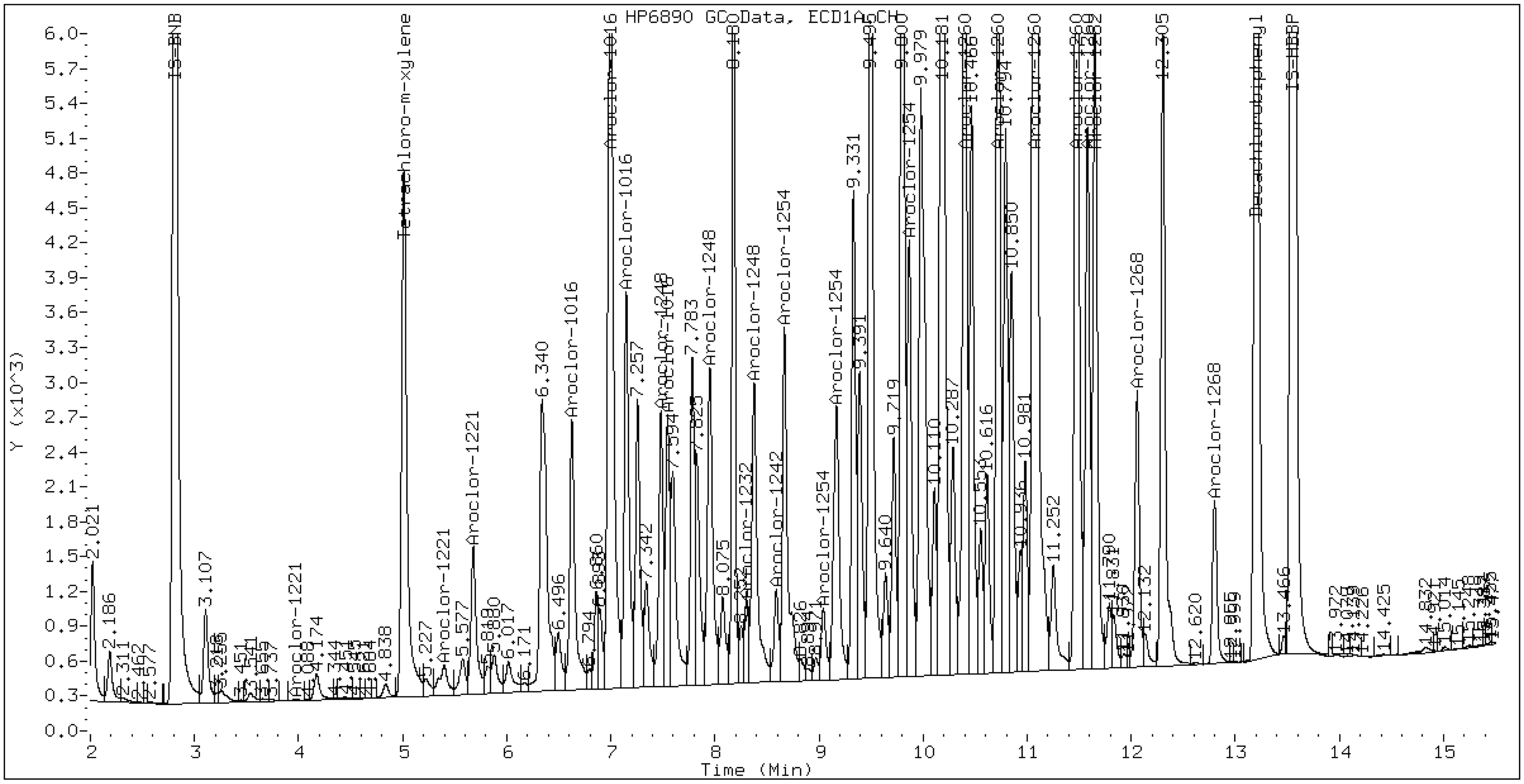
Total PCB Area Col2 (5.113 - 13.105) = 9941838 Col2 Total PCB = 1.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

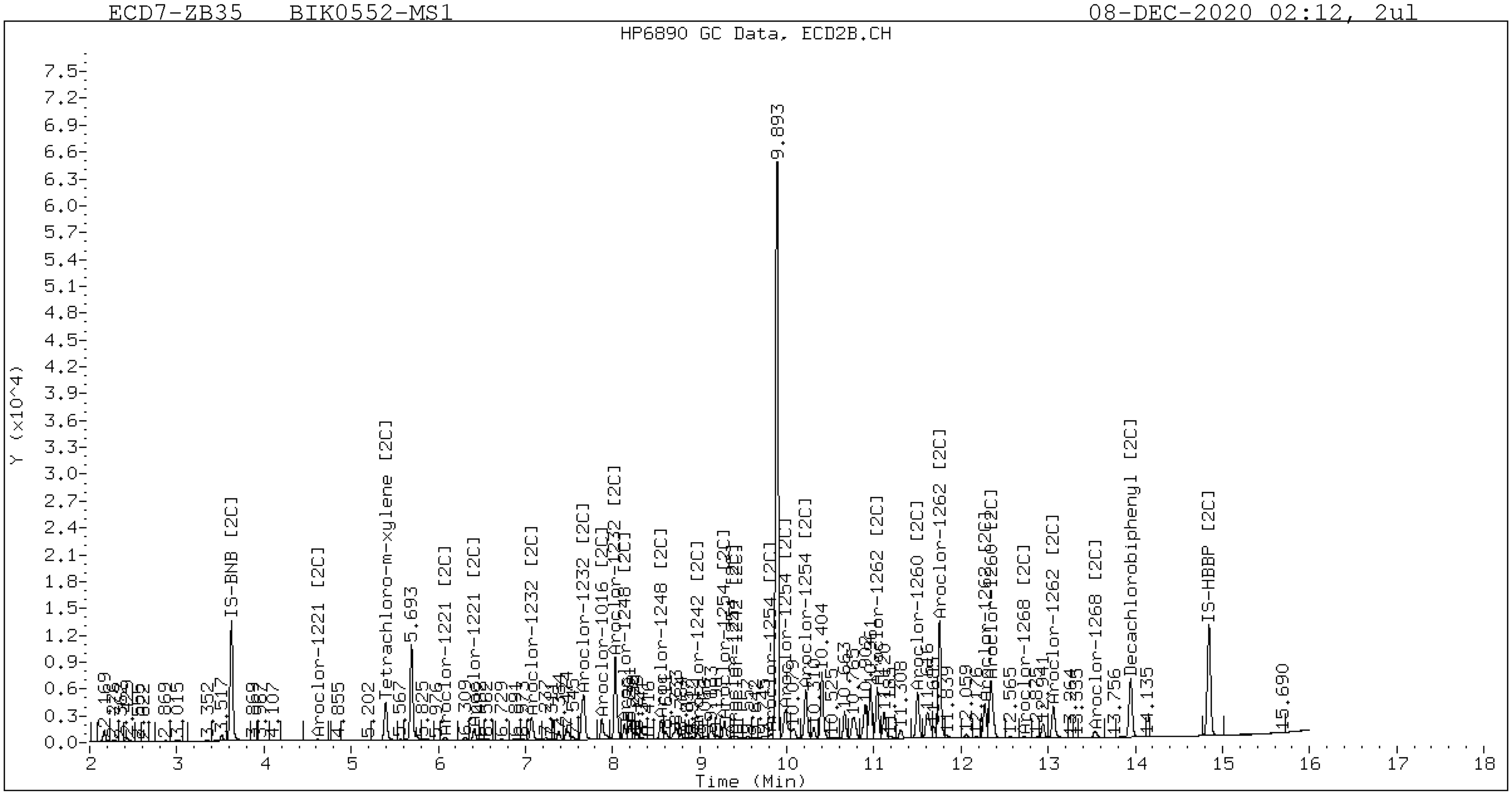
PCB Dual Column Chromatograms

ECD7-ZB5 BIK0552-MS1 08-DEC-2020 02:12, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 BIK0552-MS1 08-DEC-2020 02:12, 2ul

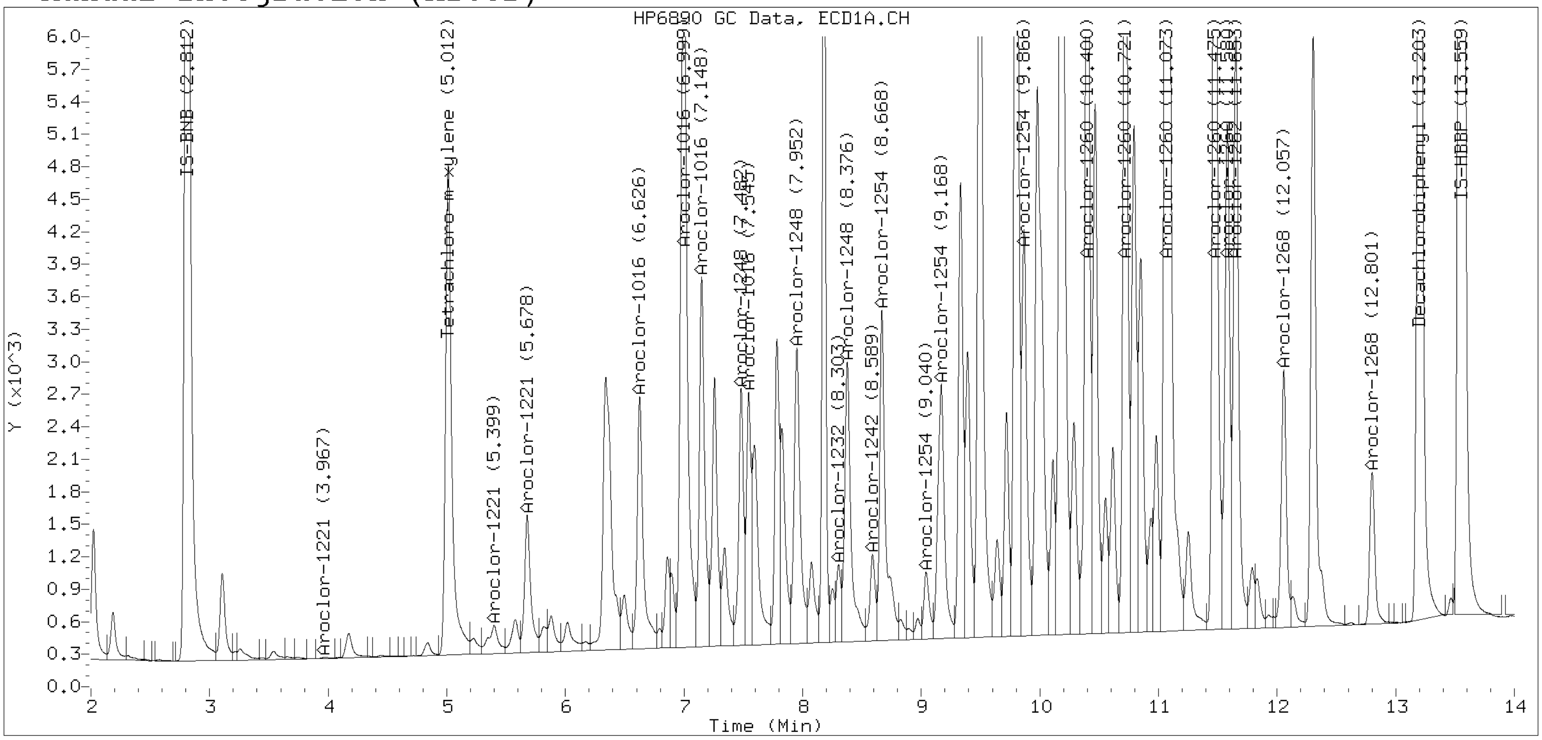


ZB-35 Manual Integration: NO

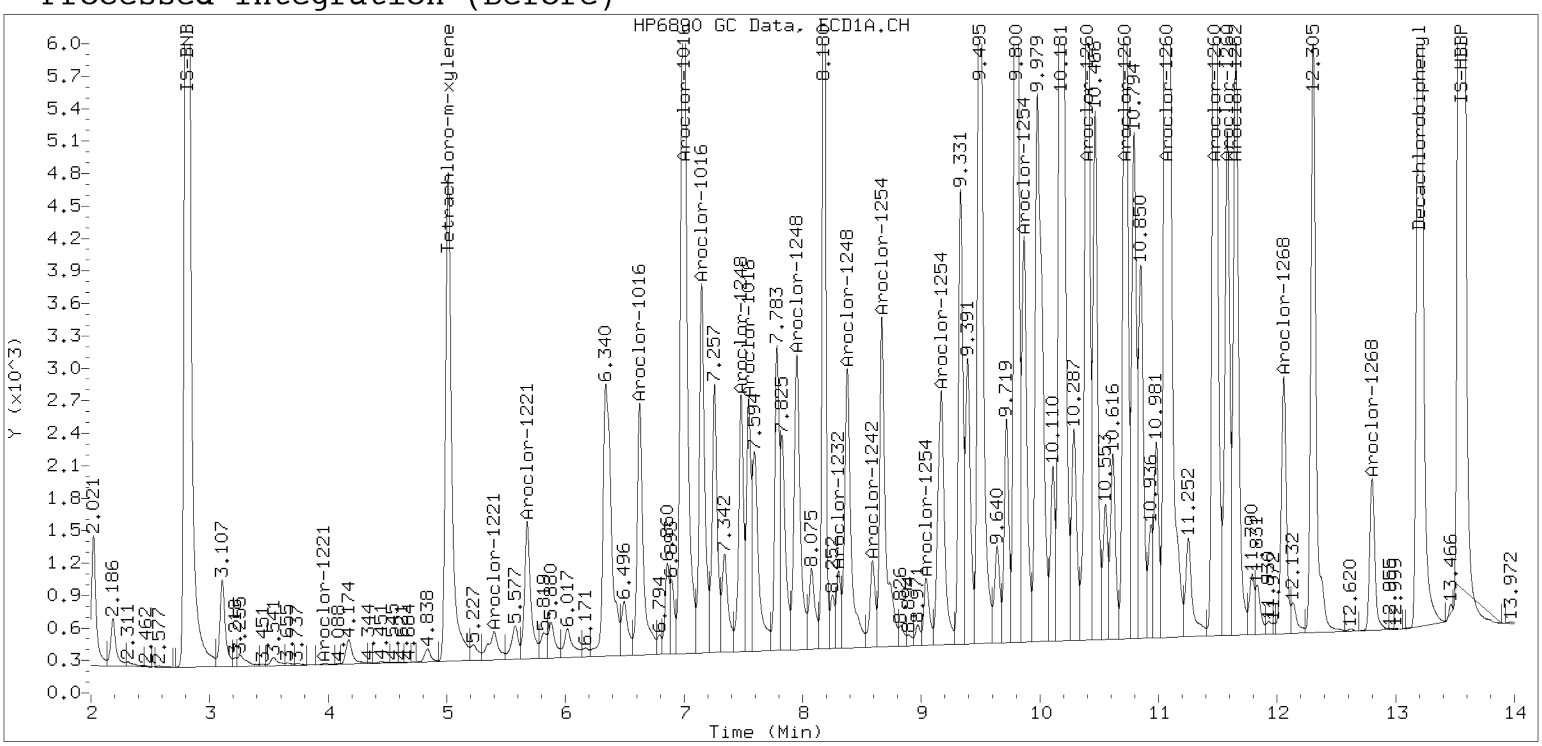
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120727ECD7.D   Injection Date: 08-DEC-2020 02:1

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120728ECD7.D
Data file 2: /20201207.b/20201207.b/20120728ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BIK0552-MSD1
Client ID:
Injection Date: 08-DEC-2020 02:32
Report Date: 12/13/2020 14:24
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	0.000	335101	5.398	-0.001	202523	26.6	26.8	0.6	Tetrachloro-m-xylene
13.204	-0.000	689880	13.946	-0.001	372614	27.2	31.8	15.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	66.6	67.0
Decachlorobiphenyl	67.9	79.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	862440	9.6
Hexabromobiphenyl	2132987	2388340	12.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	659074	3.7
Hexabromobiphenyl	665758	712168	7.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.627	-0.001	151176	348.3	1	7.073	-0.000	118695	371.3
Aroclor-1016	2	6.999	0.000	495778	358.5	2	7.668	-0.001	284602	394.4
Aroclor-1016	3	7.148	-0.001	205135	345.3	3	7.879	-0.002	109434	400.2
Aroclor-1016	4	7.545	-0.001	113035	349.9	4	8.037	-0.018	166649	1016.5
	Total Col1Ave (4 peaks):			350.5		Total Col2Ave (4 peaks):			545.6	RPD = 44*
	Corrected Ave (3 peaks):			347.9		Corrected Ave (3 peaks):			388.6	RPD = 11
Aroclor-1221	1	3.969	-0.003	1386	12.4	1	4.620	-0.049	5073	111.3
Aroclor-1221	2	5.400	-0.006	23333	147.0	2	6.076	0.002	12544	138.5
Aroclor-1221	3	5.678	-0.004	88413	217.2	3	6.415	-0.002	49570	293.7
	Total Col1Ave (3 peaks):			125.5		Total Col2Ave (3 peaks):			181.2	RPD = 36
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.969	-0.004	1386	20.5	1	4.620	-0.050	5073	179.8
Aroclor-1232	2	6.627	-0.005	151176	858.7	2	7.073	-0.003	118695	815.2
Aroclor-1232	3	6.999	-0.002	495778	861.7	3	7.668	-0.004	284602	936.1
Aroclor-1232	4	8.303	-0.006	32916	192.6	4	8.037	-0.021	166649	2404.7
	Total Col1Ave (4 peaks):			483.4		Total Col2Ave (4 peaks):			1083.9	RPD = 77*
	Corrected Ave (3 peaks):			357.2		Corrected Ave (3 peaks):			643.7	RPD = 57*
Aroclor-1242	1	6.627	-0.002	151176	451.8	1	7.073	0.000	118695	476.4
Aroclor-1242	2	6.999	-0.001	495778	480.4	2	7.668	-0.001	284602	493.2
Aroclor-1242	3	8.303	-0.003	32916	96.1	3	8.978	-0.009	29996	131.7
Aroclor-1242	4	8.590	-0.010	38292	102.7	4	9.417	-0.005	11277	50.3
	Total Col1Ave (4 peaks):			282.7		Total Col2Ave (4 peaks):			287.9	RPD = 2
	Corrected Ave (3 peaks):			216.9		Corrected Ave (3 peaks):			219.5	RPD = 1
Aroclor-1248	1	7.482	-0.001	126700	281.7	1	8.137	-0.001	63150	282.6
Aroclor-1248	2	7.951	-0.001	189691	278.1	2	8.557	-0.002	89766	306.9
Aroclor-1248	3	8.376	0.015	175275	173.8	3	8.978	-0.009	29996	72.0
Aroclor-1248	4	8.590	-0.007	38292	65.7	4	9.417	-0.005	11277	27.6
	Total Col1Ave (4 peaks):			199.8		Total Col2Ave (4 peaks):			172.3	RPD = 15
	Corrected Ave (3 peaks):			172.5		Corrected Ave (3 peaks):			127.4	RPD = 30
Aroclor-1254	1	8.668	-0.003	186621	182.6	1	9.285	-0.002	76454	162.5
Aroclor-1254	2	---			0.0	2	9.380	-0.000	5790	26.6
Aroclor-1254	3	9.040	0.000	34996	51.4	3	9.817	-0.000	14179	45.5
Aroclor-1254	4	9.168	-0.007	169664	120.9	4	9.985	0.017	186076	253.2
Aroclor-1254	5	9.866	-0.006	211738	227.4	5	10.218	0.018	241947	318.8
	Total Col1Ave (4 peaks):			145.6		Total Col2Ave (5 peaks):			161.3	RPD = 10
	Corrected Ave (3 peaks):			118.3		Corrected Ave (4 peaks):			121.9	RPD = 3
Aroclor-1260	1	10.399	-0.001	458217	493.4	1	11.038	-0.001	244819	562.5
Aroclor-1260	2	10.720	-0.001	449769	485.0	2	11.503	-0.001	246194	537.0
Aroclor-1260	3	11.072	0.000	1264691	525.4	3	11.755	-0.001	618168	527.2
Aroclor-1260	4	11.475	0.001	560073	455.4	4	12.342	-0.001	392275	514.8
Aroclor-1260	5	11.580	0.000	272529	508.8	NS	---			----
	Total Col1Ave (5 peaks):			493.6		Total Col2Ave (4 peaks):			535.4	RPD = 8
	Corrected Ave (4 peaks):			485.7		Corrected Ave (3 peaks):			526.3	RPD = 8
Aroclor-1262	1	10.399	-0.006	458217	328.9	1	11.038	-0.005	244819	330.8
Aroclor-1262	2	11.072	-0.005	1264691	403.7	2	11.755	-0.004	618168	380.0
Aroclor-1262	3	11.580	-0.006	272529	313.5	3	12.272	-0.004	183798	351.8
Aroclor-1262	4	11.653	-0.004	354344	311.0	4	13.060	-0.005	178762	302.1
	Total Col1Ave (4 peaks):			339.3		Total Col2Ave (4 peaks):			341.2	RPD = 1
	Corrected Ave (3 peaks):			317.8		Corrected Ave (3 peaks):			328.2	RPD = 3
Aroclor-1268	1	11.580	-0.008	272529	85.8	1	12.272	-0.002	183798	107.5
Aroclor-1268	2	11.653	-0.004	354344	103.9	2	12.342	0.003	392275	210.1
Aroclor-1268	3	12.056	0.018	149188	54.5	3	12.724	-0.006	6128	3.9
Aroclor-1268	4	12.802	-0.010	93137	8.6	4	13.539	-0.007	37170	7.1
	Total Col1Ave (4 peaks):			63.2		Total Col2Ave (4 peaks):			82.1	RPD = 26

Corrected Ave (3 peaks): 49.7 Corrected Ave (3 peaks): 39.5 RPD = 23

Total PCB Area Col1 (5.113 - 13.105) = 11577252 Col1 Total PCB = 0.9 ppm*

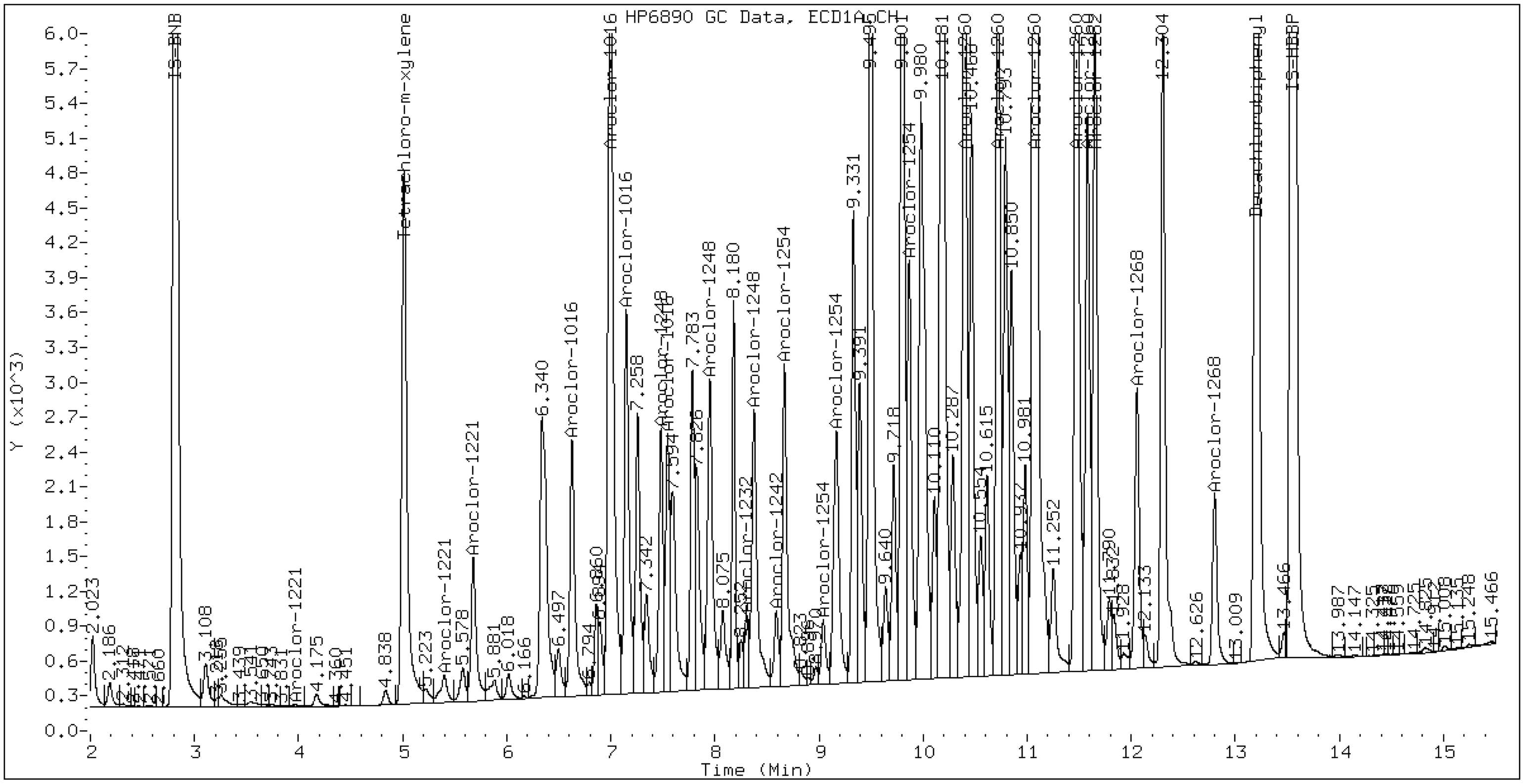
Total PCB Area Col2 (5.113 - 13.105) = 6867845 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

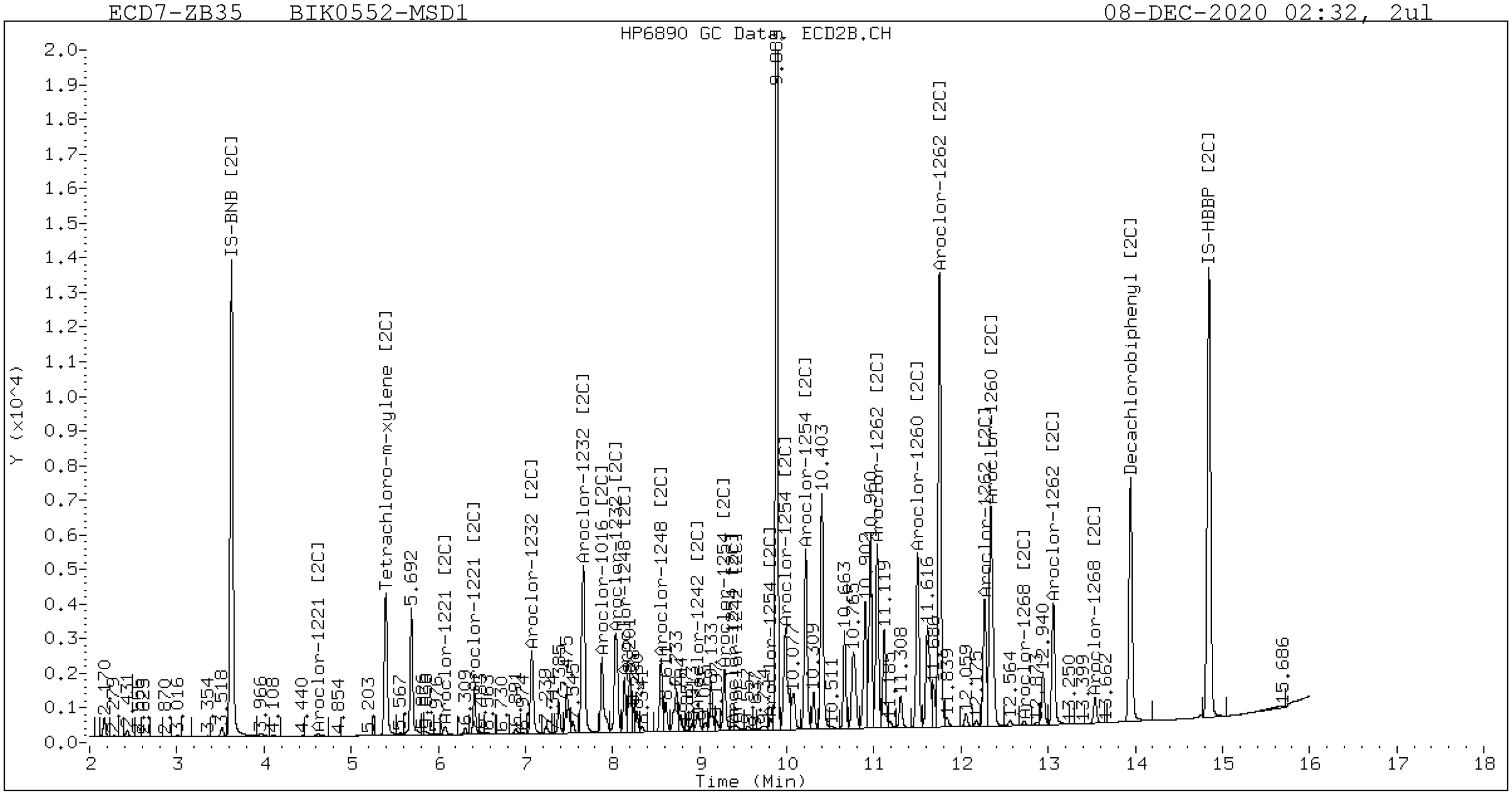
PCB Dual Column Chromatograms

ECD7-ZB5 BIK0552-MSD1 08-DEC-2020 02:32, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 BIK0552-MSD1 08-DEC-2020 02:32, 2ul

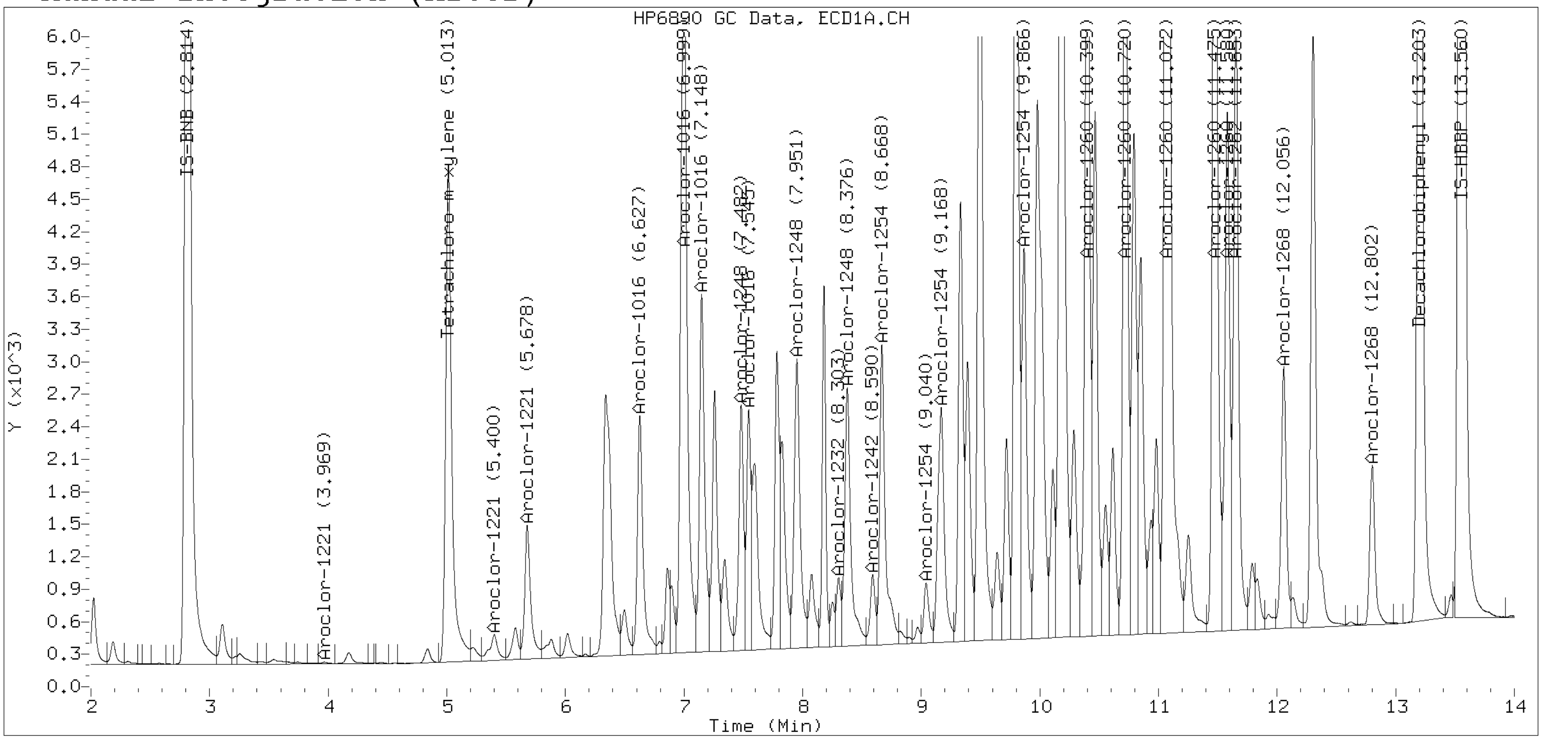


ZB-35 Manual Integration: NO

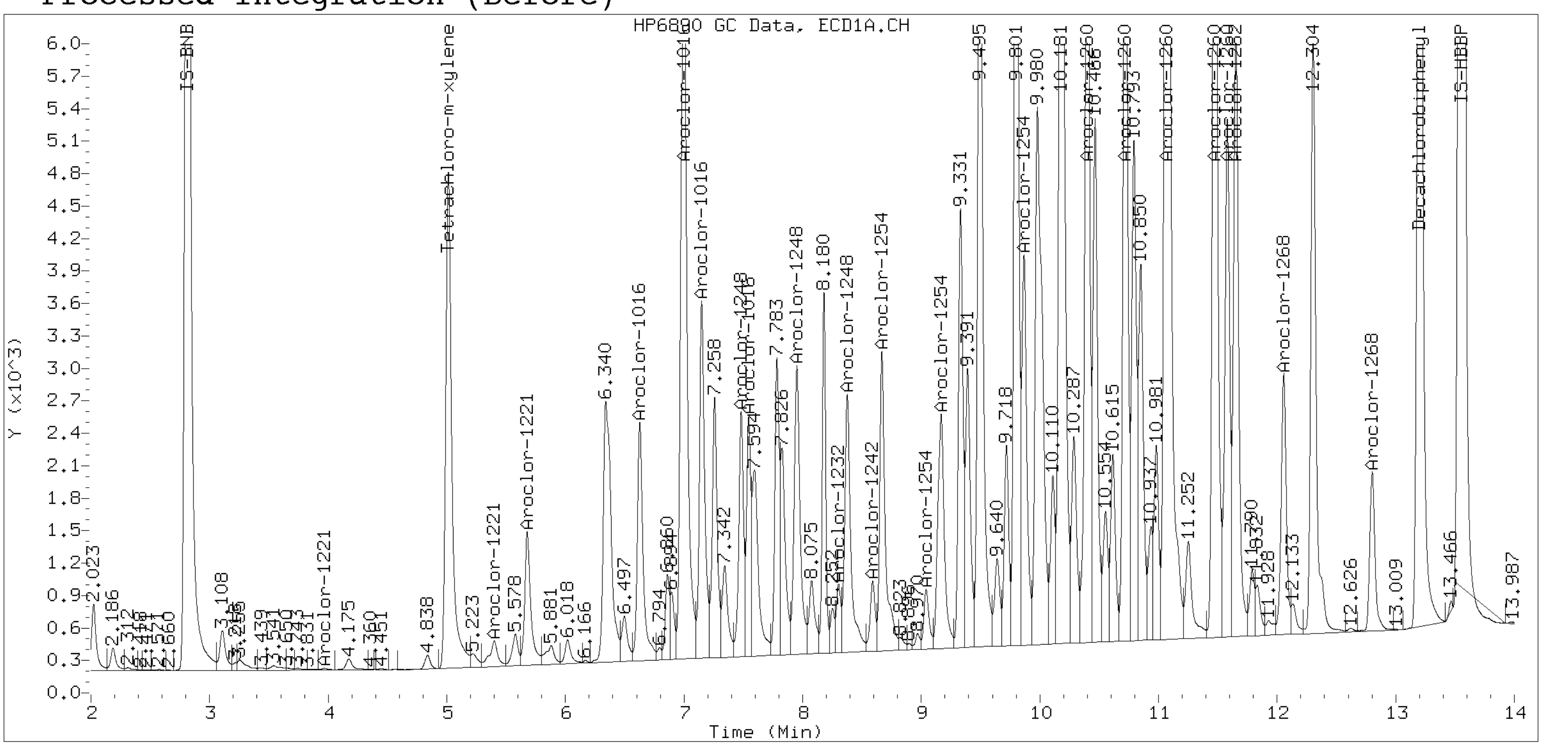
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120728ECD7.D   Injection Date: 08-DEC-2020 02:3

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00019	Instrument:	ECD7
Calibration Date:	12/04/2020	Column (1):	ZB5

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RRF		RRF		**RRF**		**RRF**		RRF		RRF
Aroclor 1016	250	6.014442E-02	20	7.584143E-02	50	6.707304E-02	1000	5.570891E-02	100	6.423001E-02	500	5.740282E-02
Aroclor 1260	250	3.888985E-02	20	4.188566E-02	50	0.0426375	1000	4.074348E-02	100	4.044385E-02	500	3.772896E-02
Decachlorobiphenyl	40	0.7878576	3.2	0.9603192	8	0.8478544			16	0.7983285	80	0.8575543
Tetrachlorometaxylene	40	1.192699	3.2	1.109	8	1.109784	160	1.245783	16	1.152502	80	1.188528

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00019	Instrument:	ECD7
Calibration Date:	12/04/2020	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RRF		RRF		RRF		RRF		RRF		RRF
Aroclor 1232									250	2.295964E-02		
Aroclor 1242	250	4.828508E-02										
Aroclor 1248			250	6.315092E-02								
Aroclor 1254					250	8.515398E-02						
Aroclor 1262							250	5.472412E-02				
Aroclor 1268									250	0.1684179		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00019	Instrument:	ECD7
Calibration Date:	12/04/2020	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016	0.0634001	11.7			RSD (20)	
Aroclor 1232		0.0			RSD (20)	
Aroclor 1242		0.0			RSD (20)	
Aroclor 1248		0.0			RSD (20)	
Aroclor 1254		0.0			RSD (20)	
Aroclor 1260	4.038822E-02	4.5			RSD (20)	
Aroclor 1262		0.0			RSD (20)	
Aroclor 1268		0.0			RSD (20)	
Decachlorobiphenyl	0.8503828	8.1			RSD (20)	
Tetrachlorometaxylene	1.166383	4.6			RSD (20)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00019	Instrument:	ECD7
Calibration Date:	12/04/2020	Column (2):	ZB35

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RRF		RRF		**RRF**		**RRF**		RRF		RRF
Aroclor 1016 [2C]	250	4.609222E-02	20	4.486078E-02	50	0.0434633	1000	4.434723E-02	100	4.504899E-02	500	0.045428
Aroclor 1260 [2C]	250	8.304447E-02	20	7.779723E-02	50	7.567688E-02	1000	8.156696E-02	100	7.897214E-02	500	7.951177E-02
Decachlorobiphenyl [2C]	40	1.404709	3.2	1.245863	8	1.192667			16	1.2785	80	1.460302
Tetrachlorometaxylene [2C]	40	0.9675103	3.2	0.8448913	8	0.8561071	160	0.9565922	16	0.9254635	80	0.9514523

Analytical Resources, Incorporated
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INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00019	Instrument:	ECD7
Calibration Date:	12/04/2020	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RRF		RRF		RRF		RRF		RRF		RRF
Aroclor 1232 [2C]									250	1.660351E-02		
Aroclor 1242 [2C]	250	3.878597E-02										
Aroclor 1248 [2C]			250	4.068484E-02								
Aroclor 1254 [2C]					250	0.0605432						
Aroclor 1262 [2C]							250	9.776166E-02				
Aroclor 1268 [2C]									250	0.2905151		

Analytical Resources, Incorporated
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INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00019	Instrument:	ECD7
Calibration Date:	12/04/2020	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016 [2C]	4.487342E-02	2.0			RSD (20)	
Aroclor 1232 [2C]		0.0			RSD (20)	
Aroclor 1242 [2C]		0.0			RSD (20)	
Aroclor 1248 [2C]		0.0			RSD (20)	
Aroclor 1254 [2C]		0.0			RSD (20)	
Aroclor 1260 [2C]	7.942824E-02	3.3			RSD (20)	
Aroclor 1262 [2C]		0.0			RSD (20)	
Aroclor 1268 [2C]		0.0			RSD (20)	
Decachlorobiphenyl [2C]	1.316408	8.5			RSD (20)	
Tetrachlorometaxylene [2C]	0.9170028	5.8			RSD (20)	

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Printed: 12/7/2020 2:31:58PM

ANALYSIS SEQUENCE

SIL0088

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: DL00019

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0088-CAL1	0.25PPM AR1660	QC		1	I007341	I007345	
SIL0088-CAL2	0.02PPM AR1660	QC		2	I007344	I007345	
SIL0088-CAL3	0.05PPM AR1660	QC		3	I007343	I007345	
SIL0088-CAL4	1.0PPM AR1660	QC		4	I007317	I007345	
SIL0088-CAL5	0.1PPM AR1660	QC		5	I007342	I007345	
SIL0088-CAL6	0.5PPM AR1660	QC		6	I007340	I007345	
SIL0088-CAL7	0.25PPM AR1242	QC		7	I007322	I007345	
SIL0088-CAL8	0.25PPM AR1248	QC		8	I007321	I007345	
SIL0088-CAL9	0.25PPM AR1254	QC		9	I007320	I007345	
SIL0088-CALA	0.25PPM AR2162	QC		10	I007319	I007345	
SIL0088-CALB	0.25PPM AR3268	QC		11	I010378	I007345	
SIL0088-SCV1	AR1660SCV1	QC		12	I005063	I007345	
SIL0088-SCV2	AR1242SCV2	QC		13	I005064	I007345	
SIL0088-SCV3	AR1248SCV3	QC		14	I005065	I007345	
SIL0088-SCV4	AR1254SCV4	QC		15	I005066	I007345	
SIL0088-SCV5	AR2162SCV5	QC		16	I005067	I007345	
SIL0088-SCV6	AR3268SCV6	QC		17	I005068	I007345	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201204.b

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3	03-DEC-2020 23:17	20120403ECD7.D	1	RINSE	
4	03-DEC-2020 23:37	20120404ECD7.D	1	RINSE	
5	03-DEC-2020 23:58	20120405ECD7.D	1	RINSE	
6	04-DEC-2020 00:18	20120406ECD7.D	1	RINSE	
7	04-DEC-2020 00:39	20120407ECD7.D	1	RINSE	
8	04-DEC-2020 00:59	20120408ECD7.D	1	IB	
9	04-DEC-2020 01:20	20120409ECD7.D	1	0.25PPMAR1660	
10	04-DEC-2020 01:40	20120410ECD7.D	1	0.02PPMAR1660	
11	04-DEC-2020 02:01	20120411ECD7.D	1	0.05PPMAR1660	
12	04-DEC-2020 02:22	20120412ECD7.D	1	1PPMAR1660	
13	04-DEC-2020 02:42	20120413ECD7.D	1	0.1PPMAR1660	
14	04-DEC-2020 03:03	20120414ECD7.D	1	0.5PPMAR1660	
15	04-DEC-2020 03:23	20120415ECD7.D	1	AR1242	
16	04-DEC-2020 03:44	20120416ECD7.D	1	AR1248	
17	04-DEC-2020 04:04	20120417ECD7.D	1	AR1254	
18	04-DEC-2020 04:25	20120418ECD7.D	1	AR2162	
19	04-DEC-2020 04:46	20120419ECD7.D	1	AR3268	
20	04-DEC-2020 05:06	20120420ECD7.D	1	AR1660SCV1	
21	04-DEC-2020 05:27	20120421ECD7.D	1	AR1242SCV2	
22	04-DEC-2020 05:47	20120422ECD7.D	1	AR1248SCV3	
23	04-DEC-2020 06:08	20120423ECD7.D	1	AR1254SCV4	
24	04-DEC-2020 06:28	20120424ECD7.D	1	AR2162SCV5	
25	04-DEC-2020 06:49	20120425ECD7.D	1	AR3268SCV6	
26	04-DEC-2020 07:10	20120426ECD7.D	1	DDT	
27	04-DEC-2020 07:30	20120427ECD7.D	1	BD	
28	04-DEC-2020 07:51	20120428ECD7.D	1	AR1254ICV1	
29	04-DEC-2020 08:11	20120429ECD7.D	1	AR1660ICV2	
30	04-DEC-2020 08:32	20120430ECD7.D	5	20K0101-41RE1	
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33	04-DEC-2020 09:34	20120433ECD7.D	1		
34	04-DEC-2020 09:54	20120434ECD7.D	1		
35	04-DEC-2020 10:15	20120435ECD7.D	1		
36	04-DEC-2020 10:35	20120436ECD7.D	1		
37	04-DEC-2020 10:56	20120437ECD7.D	1		
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47	04-DEC-2020 14:22	20120447ECD7.D	1		
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57	04-DEC-2020 17:48	20120457ECD7.D	1		
58	04-DEC-2020 18:08	20120458ECD7.D	1		
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61	04-DEC-2020 20:51	20120461ECD7.D	1		
62	04-DEC-2020 21:12	20120462ECD7.D	1		
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64	04-DEC-2020 21:53	20120464ECD7.D	1		
65	04-DEC-2020 22:14	20120465ECD7.D	1		
66	04-DEC-2020 22:34	20120466ECD7.D	1		
67	04-DEC-2020 22:55	20120467ECD7.D	1		
68	04-DEC-2020 23:15	20120468ECD7.D	1		
69	04-DEC-2020 23:36	20120469ECD7.D	1		
70	04-DEC-2020 23:56	20120470ECD7.D	1		
71	05-DEC-2020 00:17	20120471ECD7.D	1		
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73	05-DEC-2020 00:58	20120473ECD7.D	1		
74	05-DEC-2020 01:19	20120474ECD7.D	1		
75	05-DEC-2020 01:39	20120475ECD7.D	1		
76	05-DEC-2020 02:00	20120476ECD7.D	1		
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78	05-DEC-2020 02:41	20120478ECD7.D	1		
79	05-DEC-2020 03:02	20120479ECD7.D	1		
80	05-DEC-2020 03:22	20120480ECD7.D	1		
81	05-DEC-2020 03:43	20120481ECD7.D	1		
82	05-DEC-2020 04:03	20120482ECD7.D	1		
83	05-DEC-2020 04:24	20120483ECD7.D	1		
84	05-DEC-2020 04:44	20120484ECD7.D	1		
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87	05-DEC-2020 05:46	20120487ECD7.D	1		
88	05-DEC-2020 06:07	20120488ECD7.D	1		
89	05-DEC-2020 06:27	20120489ECD7.D	1		
90	05-DEC-2020 06:48	20120490ECD7.D	1		
91	05-DEC-2020 07:09	20120491ECD7.D	1		

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201204.b

ARI Job No.: IB   Method: PCB.m   Instrument: ecd7.i   Date: 04-DEC-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0059	20120408ECD7.D	IB		1	NO MANUAL INTEGRATION
0120	20120409ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
0140	20120410ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
0201	20120411ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
0222	20120412ECD7.D	1PPMAR1660		1	NO MANUAL INTEGRATION
0242	20120413ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
0303	20120414ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
0323	20120415ECD7.D	AR1242		1	NO MANUAL INTEGRATION
0344	20120416ECD7.D	AR1248		1	NO MANUAL INTEGRATION
0404	20120417ECD7.D	AR1254		1	NO MANUAL INTEGRATION
0425	20120418ECD7.D	AR2162		1	NO MANUAL INTEGRATION
0446	20120419ECD7.D	AR3268		1	NO MANUAL INTEGRATION
0506	20120420ECD7.D	AR1660SCV1		1	NO MANUAL INTEGRATION
0527	20120421ECD7.D	AR1242SCV2		1	NO MANUAL INTEGRATION
0547	20120422ECD7.D	AR1248SCV3		1	NO MANUAL INTEGRATION
0608	20120423ECD7.D	AR1254SCV4		1	NO MANUAL INTEGRATION
0628	20120424ECD7.D	AR2162SCV5		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201204.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0649	20120425ECD7.D	AR3268SCV6		1	NO MANUAL INTEGRATION
0710	20120426ECD7.D	DDT		1	2,4-DDT, 4,4-DDD,
0730	20120427ECD7.D	BD		1	NO MANUAL INTEGRATION

Security Status Report

Date: 07-Dec-2020 11:46

20120408ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
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20120412ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120413ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120414ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120415ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120416ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120417ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120418ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120419ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120420ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120421ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120422ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120423ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120424ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120425ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120426ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120427ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Last Edit : 05-Dec-2020 20:20 ecd7.i
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\20201204.b\20120410.D
Level 2: \\target\share\chem4\ecd7.i\20201204.b\20120411.D
Level 3: \\target\share\chem4\ecd7.i\20201204.b\20120413.D
Level 4: \\target\share\chem4\ecd7.i\20201204.b\20120409.D
Level 5: \\target\share\chem4\ecd7.i\20201204.b\20120414.D
Level 6: \\target\share\chem4\ecd7.i\20201204.b\20120412.D
Level 7: \\target\share\chem4\ecd7.i\20201204.b\20120419.D
Level 8: \\target\share\chem4\ecd7.i\20201204.b\20120426.D

	20.000	50.000	100.000	250.000	500.000	1000.000		
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	% RSD
	250.000	0.000e+00						
	Level 7	Level 8						
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01040	+++++					0.01040	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01472	+++++					0.01472	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03775	+++++					0.03775	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03104	+++++					0.03104	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09573	+++++					0.09573	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03178	+++++					0.03178	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03459	+++++					0.03459	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00628	+++++					0.00628	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Last Edit : 05-Dec-2020 20:20 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01633	+++++					0.01633	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05337	+++++					0.05337	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01586	+++++					0.01586	0.000
7 Aroclor-1016(1)	0.04665	0.04234	0.04121	0.03918	0.03684	0.03534		
	+++++	+++++					0.04026	10.133
(2)	0.15249	0.13375	0.12915	0.12099	0.11772	0.11555		
	+++++	+++++					0.12827	10.709
(3)	0.06744	0.06004	0.05600	0.05199	0.04876	0.04640		
	+++++	+++++					0.05510	14.128
(4)	0.03679	0.03216	0.03056	0.02842	0.02629	0.02556		
	+++++	+++++					0.02996	13.925
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04173	+++++					0.04173	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06327	+++++					0.06327	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09354	+++++					0.09354	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05407	+++++					0.05407	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Last Edit : 05-Dec-2020 20:20 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.09478	+++++	0.09478	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.05133	+++++	0.05133	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.06311	+++++	0.06311	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.13017	+++++	0.13017	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.08638	+++++	0.08638	0.000
9 Aroclor-1260(1)	0.03758	0.03331	0.03085	0.02941	0.02746	0.02802	+++++	+++++	0.03111	12.235
(2)	0.03591	0.03286	0.03098	0.02963	0.02807	0.02894	+++++	+++++	0.03106	9.362
(3)	0.06901	0.08466	0.08126	0.07902	0.07932	0.09052	+++++	+++++	0.08063	8.839
(4)	0.04586	0.04247	0.04071	0.03932	0.03801	0.04081	+++++	+++++	0.04120	6.640
(5)	0.02108	0.01988	0.01842	0.01707	0.01578	0.01542	+++++	+++++	0.01794	12.607
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.04666	+++++	0.04666	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Last Edit : 05-Dec-2020 20:20 ecd7.i
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2 / 0.000e+00 Level 8	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10494	+++++					0.10494	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02912	+++++					0.02912	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03817	+++++					0.03817	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10637	+++++					0.10637	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.11423	+++++					0.11423	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09168	+++++					0.09168	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.36138	+++++					0.36138	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1404					1404	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1643					1643	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1500					1500	0.000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	2504					2504	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Last Edit : 05-Dec-2020 20:20 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	2209					2209	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1001					1001	0.000
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 1 Tetrachloro-m-xylene	1.10900	1.10978	1.15250	1.19270	1.18853	1.24578		
	+++++	+++++					1.16638	4.565
$ 13 Decachlorobiphenyl	0.96032	0.84785	0.79833	0.78786	0.85755	+++++		
	+++++	+++++					0.85038	8.054

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m\PCB2.m
Last Edit : 05-Dec-2020 20:08 jrains
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120410.D
Level 2: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120411.D
Level 3: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120413.D
Level 4: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120409.D
Level 5: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120414.D
Level 6: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120412.D
Level 7: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120419.D
Level 8: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120426.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
1 Aroclor-1221 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00553	+++++					0.00553	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01099	+++++					0.01099	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02048	+++++					0.02048	0.000
4 Aroclor-1232 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00342	+++++					0.00342	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01767	+++++					0.01767	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03690	+++++					0.03690	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00841	+++++					0.00841	0.000
3 Aroclor-1242 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03024	+++++					0.03024	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m\PCB2.m
Last Edit : 05-Dec-2020 20:08 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07005	+++++					0.07005	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02764	+++++					0.02764	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02721	+++++					0.02721	0.000
6 Aroclor-1248 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02712	+++++					0.02712	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03550	+++++					0.03550	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05056	+++++					0.05056	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04956	+++++					0.04956	0.000
7 Aroclor-1016 [2C](1)	0.04249	0.03815	0.03888	0.03907	0.03820	0.03606		
	+++++	+++++					0.03881	5.400
(2)	0.08669	0.08472	0.08866	0.09095	0.08878	0.08577		
	+++++	+++++					0.08760	2.616
(3)	0.03243	0.03234	0.03309	0.03382	0.03369	0.03379		
	+++++	+++++					0.03319	2.055
(4)	0.01784	0.01865	0.01957	0.02052	0.02104	0.02177		
	+++++	+++++					0.01990	7.490

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m\PCB2.m
Last Edit : 05-Dec-2020 20:08 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
8 Aroclor-1254 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.05713	+++++	0.05713	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.02646	+++++	0.02646	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03784	+++++	0.03784	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.08919	+++++	0.08919	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.09211	+++++	0.09211	0.000
10 Aroclor-1262 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.08314	+++++	0.08314	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.18275	+++++	0.18275	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.05869	+++++	0.05869	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.06647	+++++	0.06647	0.000
9 Aroclor-1260 [2C](1)	0.04761	0.04704	0.04867	0.05095	0.04921	0.04985	+++++	+++++	0.04889	2.945
(2)	0.05097	0.04909	0.05117	0.05353	0.05196	0.05229	+++++	+++++	0.05150	2.901

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
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Quant Method : ISTD
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Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m\PCB2.m
Last Edit : 05-Dec-2020 20:08 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(3)	0.12396	0.12611	0.13274	0.13997	0.13090	0.13669		
	+++++	+++++					0.13173	4.631
(4)	0.08866	0.08046	0.08331	0.08773	0.08598	0.08744		
	+++++	+++++					0.08560	3.660
11 Aroclor-1268 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.19212	+++++					0.19212	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.20977	+++++					0.20977	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.17592	+++++					0.17592	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.58425	+++++					0.58425	0.000
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1439					1439	0.000
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	841					841	0.000
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	927					927	0.000
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	940					940	0.000
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	534					534	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m\PCB2.m
Last Edit : 05-Dec-2020 20:08 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene [2C]	0.84489	0.85611	0.92546	0.96751	0.95145	0.95659		
	+++++	+++++					0.91700	5.829
$ 13 Decachlorobiphenyl [2C]	1.24586	1.19267	1.27850	1.40471	1.46030	+++++		
	+++++	+++++					1.31641	8.512

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\20201204.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	20120409ECD7	20120410ECD7	20120411ECD7	20120412ECD7	20120413ECD7	20120414ECD7
INJ.DATE:	04-DEC-2020	04-DEC-2020	04-DEC-2020	04-DEC-2020	04-DEC-2020	04-DEC-2020
INJ.TIME:	01:20	01:40	02:01	02:22	02:42	03:03

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	2.817	2.817	2.816	2.816	2.816	2.815	2.817	2.717-2.917	2.816	0.001
$ 1 Tetrachloro-m-xylene	5.017	5.015	5.017	5.020	5.016	5.018	5.017	4.917-5.117	5.017	0.002
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	3.972	3.872-4.072	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.631	6.531-6.731	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	3.973	3.873-4.073	+++++	+++++
7 Aroclor-1016	6.631	6.631	6.631	6.632	6.630	6.631	6.631	6.531-6.731	6.631	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	7.487	7.387-7.587	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.675	8.575-8.775	+++++	+++++
9 Aroclor-1260	10.405	10.406	10.405	10.405	10.405	10.404	10.405	10.305-10.505	10.405	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.405	10.305-10.505	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.588	11.488-11.688	+++++	+++++
$ 13 Decachlorobiphenyl	13.210	13.209	13.208	13.221	13.208	13.215	13.210	13.110-13.310	13.212	0.005
* 12 IS-HBBP	13.565	13.564	13.565	13.564	13.564	13.564	13.565	13.465-13.665	13.564	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.661	8.611-8.711	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.200	9.150-9.250	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.666	9.616-9.716	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.075	8.975-9.175	+++++	+++++

Reviewer 1 ______________________ Date: ______________
Reviewer 2 ______________________ Date: ______________

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\20201204.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.644	9.544-9.744	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.135	10.035-10.235	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\20201204.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\20201204.b\20201204.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	20120409ECD7	20120410ECD7	20120411ECD7	20120412ECD7	20120413ECD7	20120414ECD7
INJ.DATE:	04-DEC-2020	04-DEC-2020	04-DEC-2020	04-DEC-2020	04-DEC-2020	04-DEC-2020
INJ.TIME:	01:20	01:40	02:01	02:22	02:42	03:03

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB [2C]	3.631	3.630	3.630	3.630	3.630	3.629	3.629	3.529-3.729	3.630	0.000
$ 2 Tetrachloro-m-xylene [	5.403	5.400	5.401	5.402	5.401	5.401	5.402	5.302-5.502	5.401	0.001
1 Aroclor-1221 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.669	4.569-4.769	+++++	+++++
4 Aroclor-1232 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.670	4.570-4.770	+++++	+++++
3 Aroclor-1242 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	7.076	6.976-7.176	+++++	+++++
6 Aroclor-1248 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	8.141	8.041-8.241	+++++	+++++
7 Aroclor-1016 [2C]	7.076	7.076	7.077	7.076	7.076	7.076	7.076	6.976-7.176	7.076	0.000
8 Aroclor-1254 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.291	9.191-9.391	+++++	+++++
10 Aroclor-1262 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.044	10.944-11.144	+++++	+++++
9 Aroclor-1260 [2C]	11.043	11.043	11.044	11.043	11.044	11.043	11.043	10.943-11.143	11.044	0.001
11 Aroclor-1268 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	12.273	12.173-12.373	+++++	+++++
$ 13 Decachlorobiphenyl [2C	13.951	13.950	13.951	13.953	13.950	13.955	13.951	13.851-14.051	13.952	0.002
* 12 IS-HBBP [2C]	14.852	14.852	14.851	14.851	14.852	14.853	14.852	14.752-14.952	14.852	0.001
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.764	9.714-9.814	+++++	+++++
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.398	9.348-9.448	+++++	+++++
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.079	9.979-10.179	+++++	+++++
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.537	10.437-10.637	+++++	+++++

Reviewer 1 ______________________ Date: ______________
Reviewer 2 ______________________ Date: ______________

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\20201204.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\20201204.b\20201204.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.956	10.856-11.056	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	7.178	7.078-7.278	+++++	+++++

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120408ECD7.D	ARI ID: IB
Data file 2: /20201204.b/20201204.b/20120408ECD7.D	Client ID:
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m	Injection Date: 04-DEC-2020 00:59
Compound Sublist: PCB.sub	Report Date: 12/07/2020 11:51
Instrument, Inj. Vol.: ecd7.i, 2ul	Matrix: NONE
Quant Method: Internal Std	Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.019	0.001	481214	5.402	-0.000	313804	42.3	43.2	2.1	Tetrachloro-m-xylene
13.211	0.000	888671	13.953	0.002	499150	38.0	44.3	15.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	105.8	108.1
Decachlorobiphenyl	95.1	110.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	779579	-0.9
Hexabromobiphenyl	2132987	2198068	3.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	633222	-0.4
Hexabromobiphenyl	665758	684184	2.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.629	-0.002	420	1.1	1	---			0.0
Aroclor-1016	2	7.002	-0.000	1462	1.2	2	---			0.0
Aroclor-1016	3	7.157	0.004	805	1.5	3	---			0.0
Aroclor-1016	4	7.553	0.004	909	3.1	4	---			0.0
Total Col1Ave (4 peaks):				1.7		Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	3.965	-0.007	838	8.3	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.087	0.013	3153	36.2
Aroclor-1221	3	5.676	-0.006	1179	3.2	3	6.406	-0.011	666	4.1
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.965	-0.008	838	13.7	1	---			0.0
Aroclor-1232	2	6.629	-0.002	420	2.6	2	---			0.0
Aroclor-1232	3	7.002	0.001	1462	2.8	3	---			0.0
Aroclor-1232	4	8.389	0.080	2617	16.9	4	---			0.0
Total Col1Ave (4 peaks):				9.0		Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.629	-0.002	420	1.4	1	---			0.0
Aroclor-1242	2	7.002	-0.001	1462	1.6	2	---			0.0
Aroclor-1242	3	8.389	0.080	2617	8.5	3	---			0.0
Aroclor-1242	4	8.588	-0.015	1703	5.1	4	---			0.0
Total Col1Ave (4 peaks):				4.1		Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	7.553	0.067	909	2.2	1	---			0.0
Aroclor-1248	2	7.987	0.031	596	1.0	2	---			0.0
Aroclor-1248	3	8.389	0.023	2617	2.9	3	---			0.0
Aroclor-1248	4	8.588	-0.013	1703	3.2	4	---			0.0
Total Col1Ave (4 peaks):				2.3		Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.588	-0.087	1703	1.8	1	---			0.0
Aroclor-1254	2	8.773	0.029	1332	2.7	2	---			0.0
Aroclor-1254	3	9.064	0.019	2127	3.5	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	9.869	-0.008	774	0.9	5	---			0.0
Total Col1Ave (4 peaks):				2.2		Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	10.413	0.009	680	0.8	1	11.040	-0.003	570	1.4
Aroclor-1260	2	10.729	0.002	1565	1.8	2	---			0.0
Aroclor-1260	3	11.129	0.050	59160	26.7	3	11.766	0.007	667	0.6
Aroclor-1260	4	11.480	-0.000	1522	1.3	4	12.267	-0.082	24032	32.8
Aroclor-1260	5	11.582	-0.004	698	1.4	NS	---			----
Total Col1Ave (5 peaks):				6.4	Total Col2Ave (3 peaks):				11.6	RPD = 57*
Corrected Ave (4 peaks):				1.3			Corrected Ave: < 3 Peaks			
Aroclor-1262	1	10.413	0.008	680	0.5	1	11.040	-0.004	570	0.8
Aroclor-1262	2	11.129	0.052	59160	20.5	2	11.766	0.007	667	0.4
Aroclor-1262	3	11.582	-0.004	698	0.9	3	12.267	-0.009	24032	47.9
Aroclor-1262	4	11.663	0.005	647	0.6	4	13.147	0.082	4224	7.4
Total Col1Ave (4 peaks):				5.6	Total Col2Ave (4 peaks):				14.1	RPD = 86*
Corrected Ave (3 peaks):				0.7	Corrected Ave (3 peaks):				2.9	RPD = 124*
Aroclor-1268	1	11.582	-0.006	698	0.2	1	12.267	-0.007	24032	14.6
Aroclor-1268	2	11.663	0.006	647	0.2	2	---			0.0
Aroclor-1268	3	12.034	-0.004	5131	2.0	3	12.735	0.005	1261	0.8
Aroclor-1268	4	12.804	-0.008	22675	2.3	4	13.522	-0.024	10057	2.0
Total Col1Ave (4 peaks):				1.2	Total Col2Ave (3 peaks):				5.8	RPD = 132*
Corrected Ave (3 peaks):				0.8			Corrected Ave: < 3 Peaks			

Total PCB Area Col1 (5.118 - 13.110) = 324859 Col1 Total PCB = 0.0 ppm*

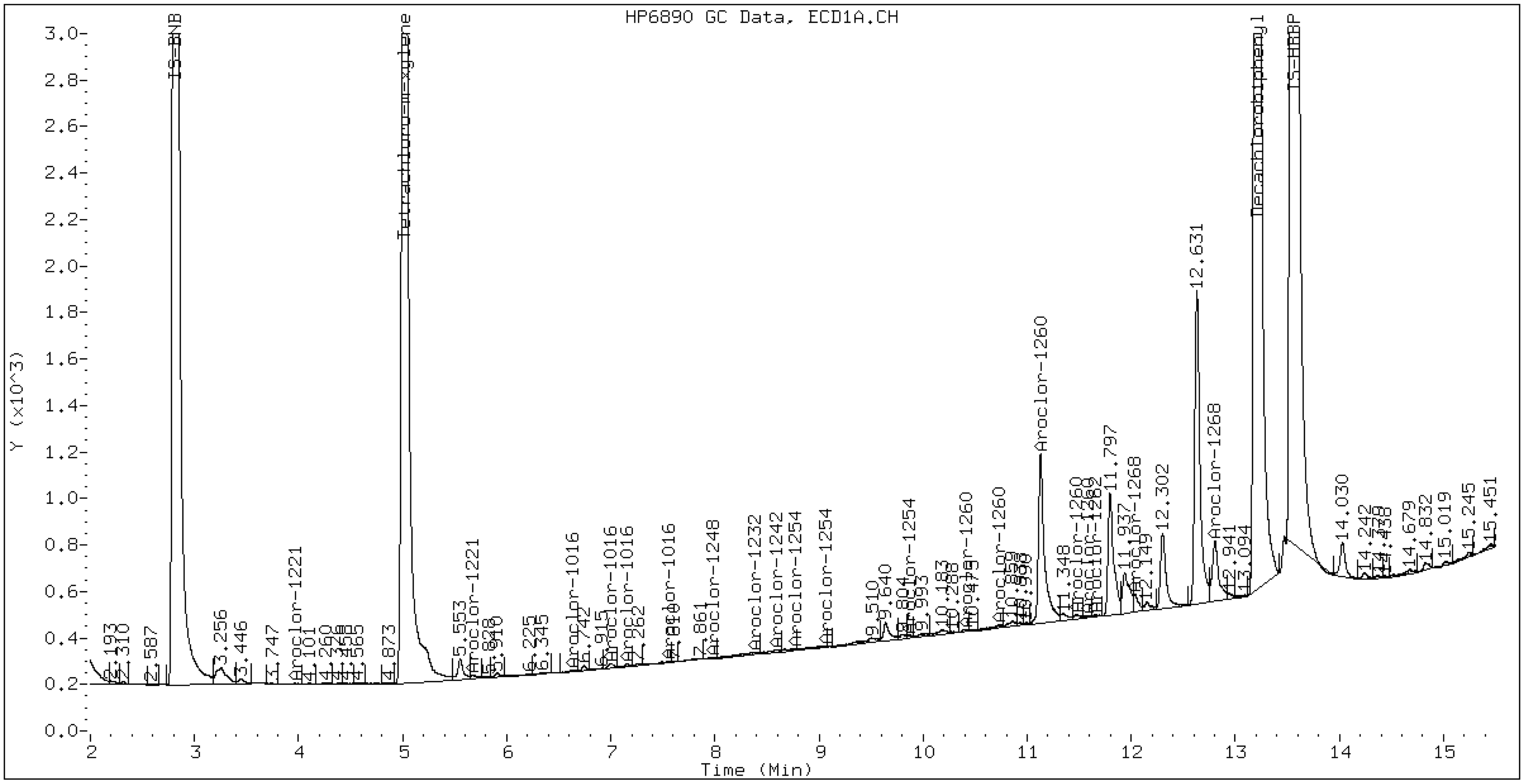
Total PCB Area Col2 (5.118 - 13.110) = 368775 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

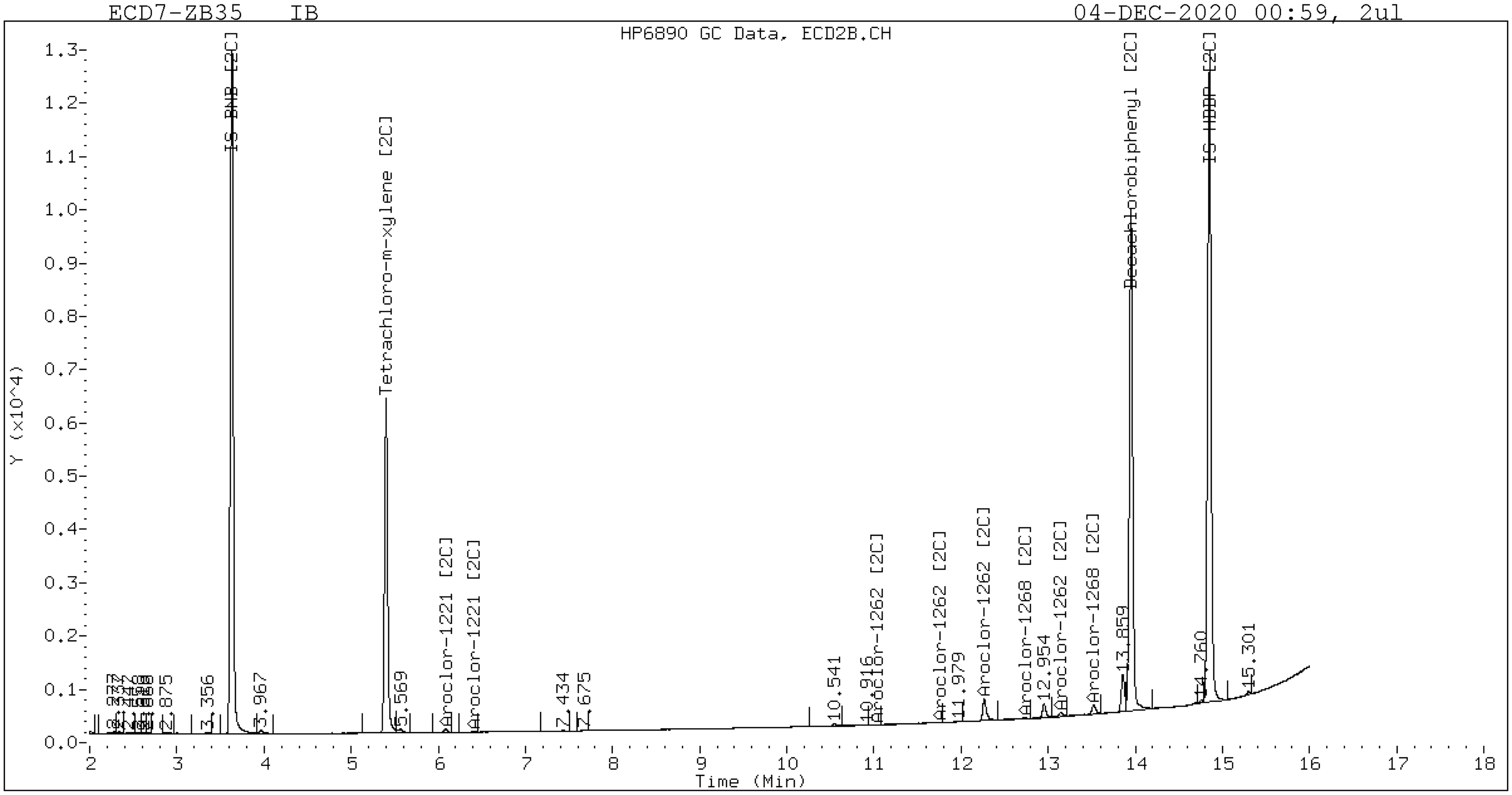
PCB Dual Column Chromatograms

ECD7-ZB5 IB 04-DEC-2020 00:59, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 IB 04-DEC-2020 00:59, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120409ECD7.D
Data file 2: /20201204.b/20201204.b/20120409ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 04-DEC-2020 01:20
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.017	-0.000	469134	5.403	0.000	307423	40.9	42.2	3.1	Tetrachloro-m-xylene
13.210	0.000	840245	13.951	0.001	467598	37.1	42.7	14.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	102.3	105.5
Decachlorobiphenyl	92.6	106.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	786676	0.0
Hexabromobiphenyl	2132987	2132987	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	635493	0.0
Hexabromobiphenyl	665758	665758	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak# (ZB5 Col)	RT	Shift	Area	Amount	Peak# (ZB35 Col)	RT	Shift	Area	Amount
Aroclor-1016	1	6.631	0.000	96315	243.3	1	7.076	0.000	77582	251.7
Aroclor-1016	2	7.002	-0.000	297428	235.8	2	7.673	0.001	180628	259.6
Aroclor-1016	3	7.153	0.000	127809	235.9	3	7.883	0.001	67171	254.8
Aroclor-1016	4	7.550	0.001	69875	237.1	4	8.057	0.000	40760	257.9

Total Col1Ave (4 peaks): 238.0 Total Col2Ave (4 peaks): 256.0 RPD = 7
Corrected Ave (3 peaks): 236.3 Corrected Ave (3 peaks): 254.8 RPD = 8

CalAmt %D: -4.8 CalAmt %D: 2.4

Aroclor	Peak# (ZB5 Col)	RT	Shift	Area	Amount	Peak# (ZB35 Col)	RT	Shift	Area	Amount
Aroclor-1260	1	10.405	0.001	196055	236.4	1	11.043	0.000	106010	260.6
Aroclor-1260	2	10.726	-0.000	197500	238.5	2	11.508	0.001	111366	259.8
Aroclor-1260	3	11.077	-0.002	526707	245.0	3	11.760	0.000	291200	265.6
Aroclor-1260	4	11.481	0.001	262069	238.6	4	12.349	0.000	182518	256.2
Aroclor-1260	5	11.587	0.001	113787	237.9	NS	---			----

Total Col1Ave (5 peaks): 239.3 Total Col2Ave (4 peaks): 260.6 RPD = 9
Corrected Ave (4 peaks): 237.8 Corrected Ave (3 peaks): 258.9 RPD = 8

CalAmt %D: -4.3 CalAmt %D: 4.2

Total PCB Area Col1 (5.118 - 13.110) = 5845573 Col1 Total PCB = 0.5 ppm*

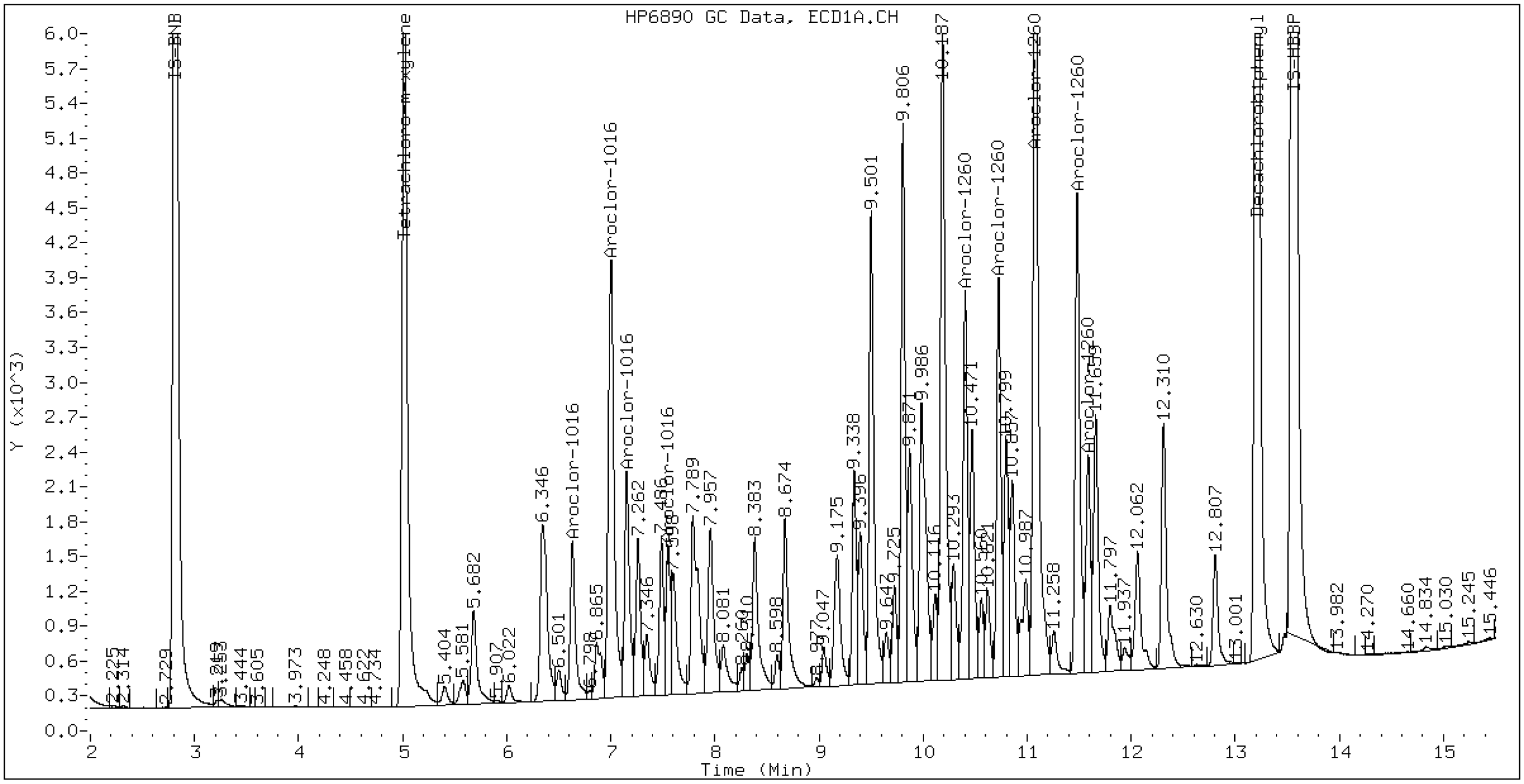
Total PCB Area Col2 (5.118 - 13.110) = 3084380 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

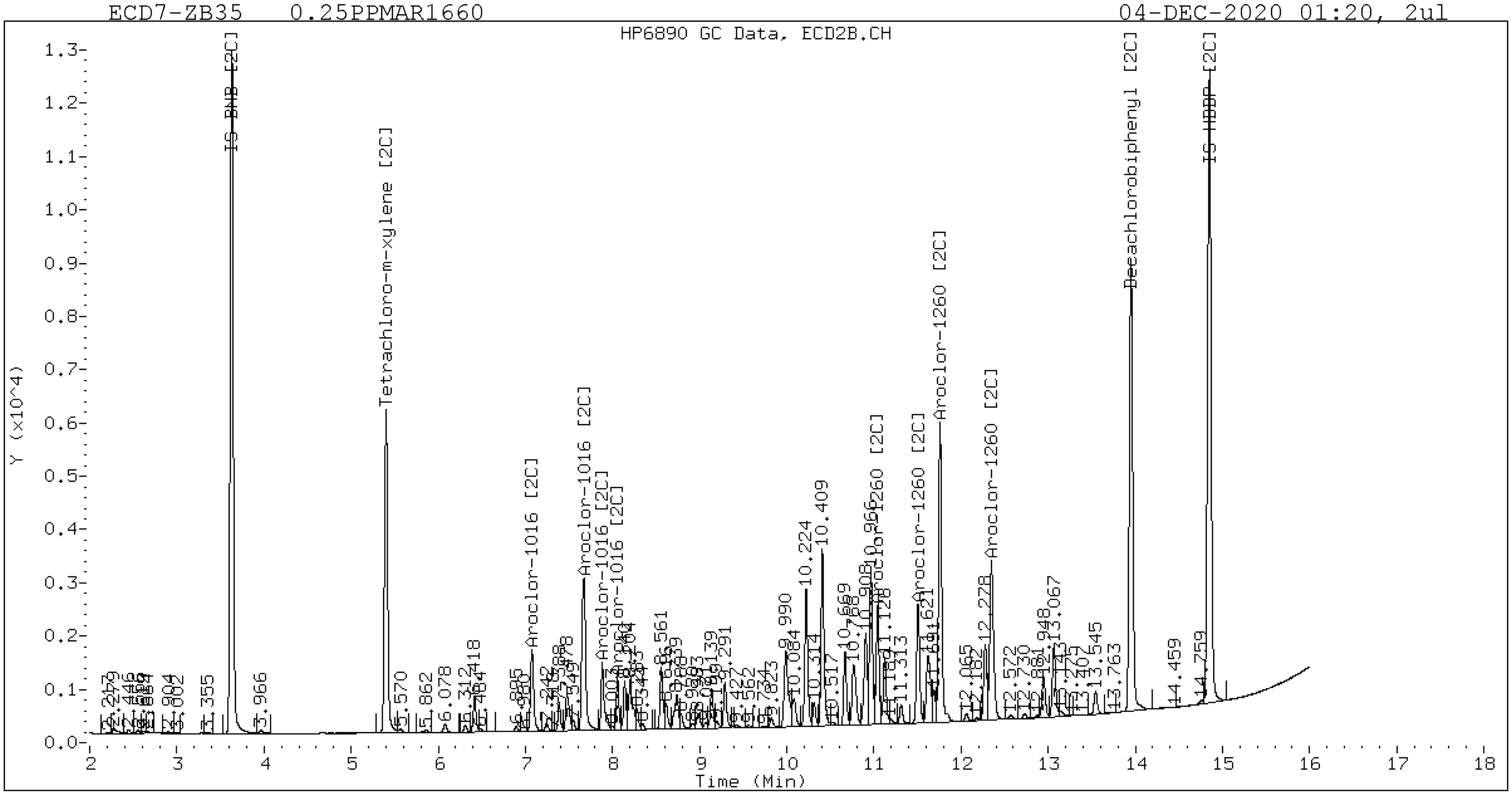
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1660 04-DEC-2020 01:20, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1660 04-DEC-2020 01:20, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120410ECD7.D
Data file 2: /20201204.b/20201204.b/20120410ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 04-DEC-2020 01:40
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.015	-0.002	34500	5.400	-0.002	21282	3.0	2.9	3.1	Tetrachloro-m-xylene
13.209	-0.001	83157	13.950	-0.000	33758	3.6	3.0	17.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	7.6	7.4
Decachlorobiphenyl	9.0	7.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	777728	-1.1
Hexabromobiphenyl	2132987	2164827	1.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	629726	-0.9
Hexabromobiphenyl	665758	677402	1.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.631	-0.000	9071	23.2	1	7.076	0.000	6689	21.9
Aroclor-1016	2	7.001	-0.001	29648	23.8	2	7.672	0.001	13648	19.8
Aroclor-1016	3	7.153	0.000	13112	24.5	3	7.884	0.002	5105	19.5
Aroclor-1016	4	7.550	0.001	7153	24.6	4	8.058	0.001	2808	17.9

Total Col1Ave (4 peaks): 24.0 Total Col2Ave (4 peaks): 19.8 RPD = 19
Corrected Ave (3 peaks): 23.8 Corrected Ave (3 peaks): 19.1 RPD = 22

CalAmt %D: 20.0 CalAmt %D: -1.1

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1260	1	10.406	0.002	20336	24.2	1	11.043	0.000	8063	19.5
Aroclor-1260	2	10.727	0.000	19435	23.1	2	11.508	0.001	8631	19.8
Aroclor-1260	3	11.078	-0.001	37347	17.1	3	11.761	0.001	20992	18.8
Aroclor-1260	4	11.481	0.000	24819	22.3	4	12.350	0.001	15014	20.7
Aroclor-1260	5	11.585	-0.000	11407	23.5	NS	---			----

Total Col1Ave (5 peaks): 22.0 Total Col2Ave (4 peaks): 19.7 RPD = 11
Corrected Ave (4 peaks): 21.5 Corrected Ave (3 peaks): 19.4 RPD = 10

CalAmt %D: 10.2 CalAmt %D: -1.5

Total PCB Area Col1 (5.118 - 13.110) = 766475 Col1 Total PCB = 0.1 ppm*

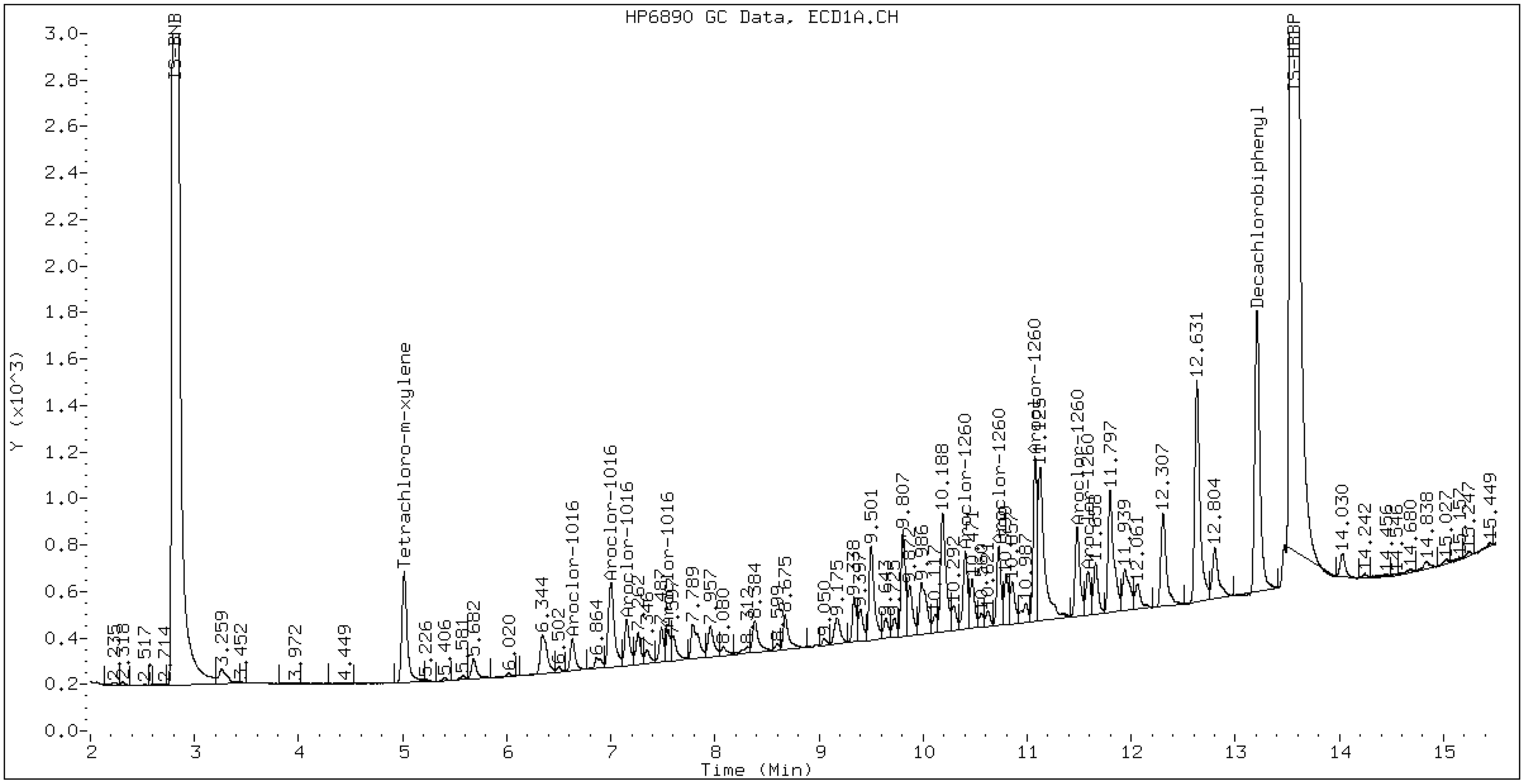
Total PCB Area Col2 (5.118 - 13.110) = 261860 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

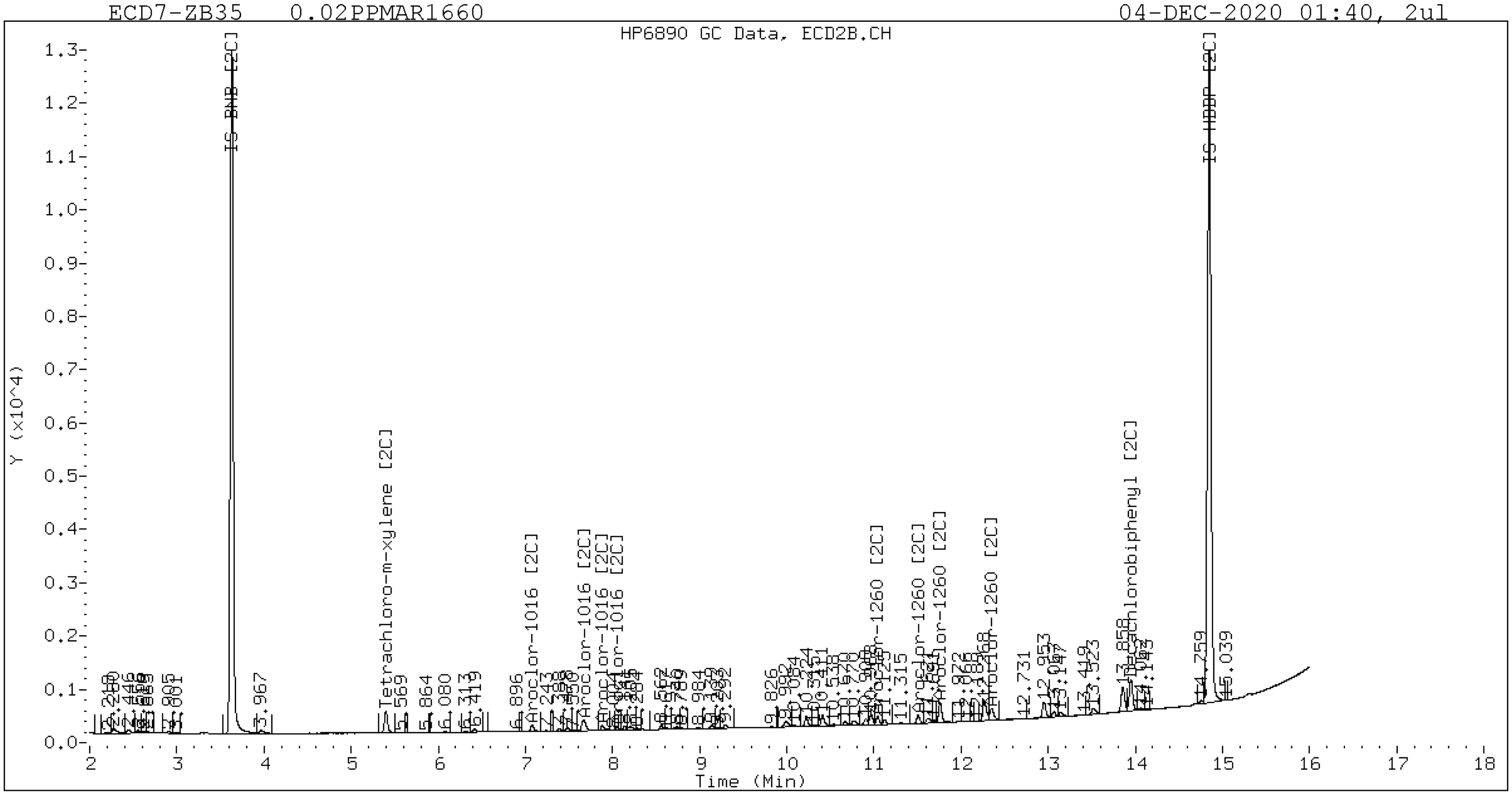
PCB Dual Column Chromatograms

ECD7-ZB5 0.02PPMAR1660 04-DEC-2020 01:40, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.02PPMAR1660 04-DEC-2020 01:40, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120411ECD7.D
Data file 2: /20201204.b/20201204.b/20120411ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 04-DEC-2020 02:01
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.017	-0.001	84531	5.401	-0.001	52854	7.6	7.5	1.9	Tetrachloro-m-xylene
13.208	-0.002	177596	13.951	0.000	77942	8.0	7.2	9.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	19.0	18.7
Decachlorobiphenyl	19.9	18.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	761689	-3.2
Hexabromobiphenyl	2132987	2094652	-1.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	617376	-2.9
Hexabromobiphenyl	665758	653510	-1.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.631	0.001	20155	52.6	1	7.077	0.001	14719	49.1
Aroclor-1016	2	7.001	-0.001	63674	52.1	2	7.673	0.002	32689	48.4
Aroclor-1016	3	7.153	0.001	28581	54.5	3	7.884	0.002	12477	48.7
Aroclor-1016	4	7.550	0.001	15312	53.7	4	8.058	0.002	7198	46.9
	Total Col1Ave (4 peaks):			53.2		Total Col2Ave (4 peaks):			48.3	RPD = 10
	Corrected Ave (3 peaks):			52.8		Corrected Ave (3 peaks):			48.0	RPD = 10
	CalAmt %D:			6.4		CalAmt %D:			-3.5	
Aroclor-1260	1	10.405	0.001	43614	53.5	1	11.044	0.001	19215	48.1
Aroclor-1260	2	10.726	0.000	43018	52.9	2	11.508	0.002	20050	47.7
Aroclor-1260	3	11.077	-0.002	110839	52.5	3	11.761	0.002	51510	47.9
Aroclor-1260	4	11.481	0.001	55605	51.5	4	12.350	0.002	32864	47.0
Aroclor-1260	5	11.587	0.001	26020	55.4	NS	---			----
	Total Col1Ave (5 peaks):			53.2		Total Col2Ave (4 peaks):			47.7	RPD = 11
	Corrected Ave (4 peaks):			52.6		Corrected Ave (3 peaks):			47.5	RPD = 10
	CalAmt %D:			6.4		CalAmt %D:			-4.7	

Total PCB Area Col1 (5.118 - 13.110) = 1336907 Col1 Total PCB = 0.1 ppm*

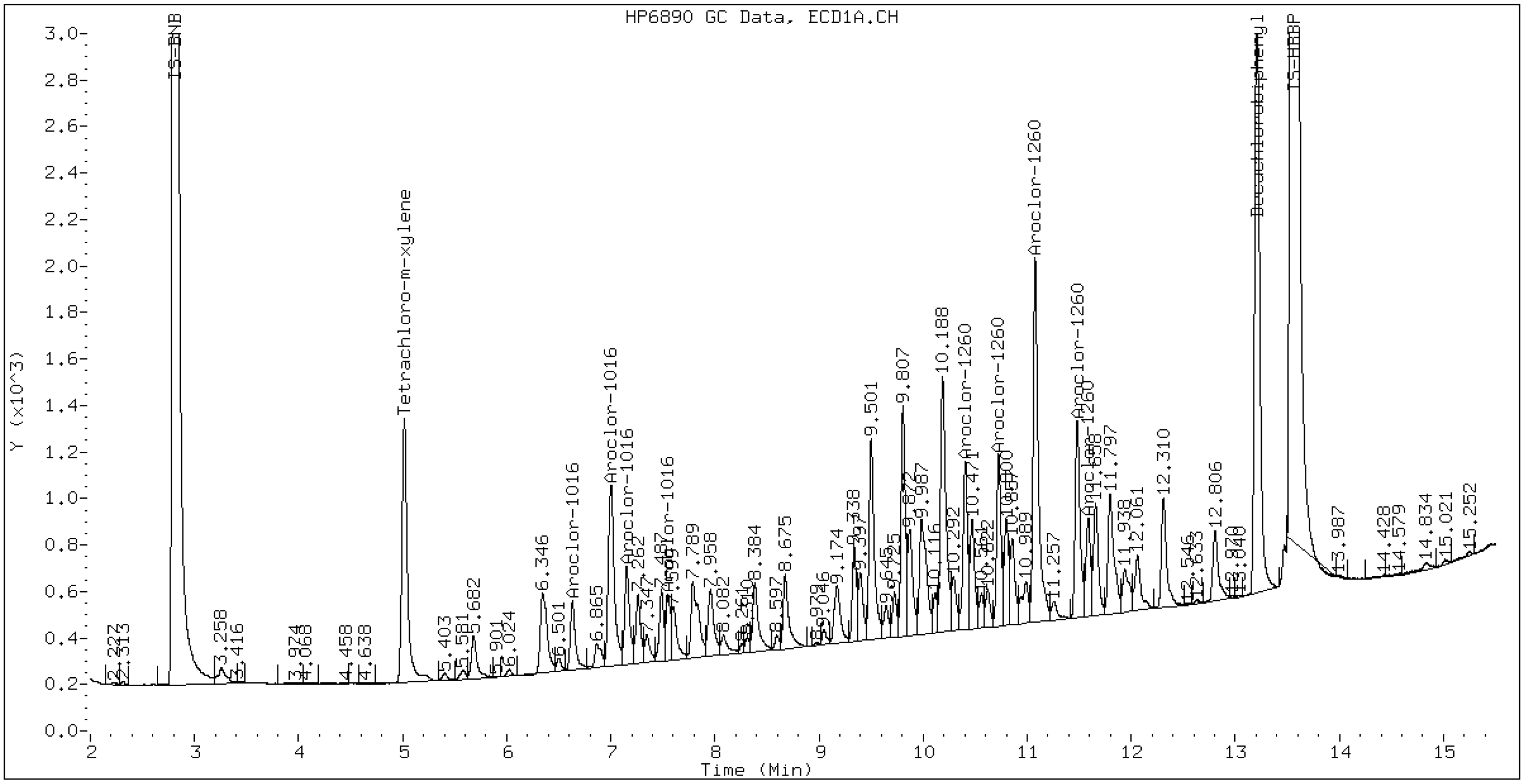
Total PCB Area Col2 (5.118 - 13.110) = 566725 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

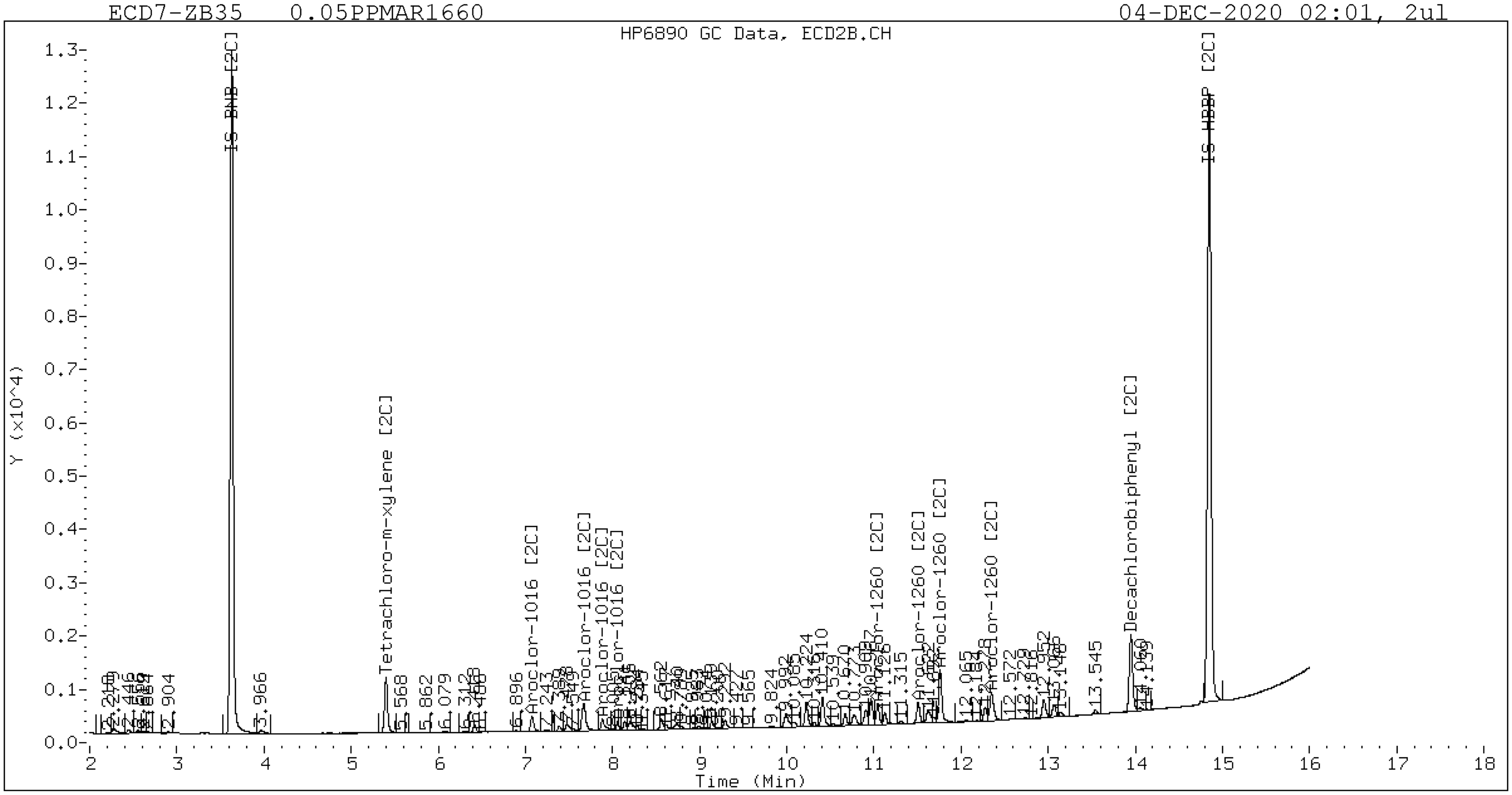
PCB Dual Column Chromatograms

ECD7-ZB5 0.05PPMAR1660 04-DEC-2020 02:01, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.05PPMAR1660 04-DEC-2020 02:01, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120412ECD7.D
Data file 2: /20201204.b/20201204.b/20120412ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1PPMAR1660
Client ID:
Injection Date: 04-DEC-2020 02:22
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.020	0.002	1911606	5.402	0.000	1187592	170.9	166.9	2.4	Tetrachloro-m-xylene
13.221	0.010	4334648	13.953	0.002	2095595	198.2	195.5	1.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	427.2	417.3
Decachlorobiphenyl	495.5	488.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	767231	-2.5
Hexabromobiphenyl	2132987	2057515	-3.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	620741	-2.3
Hexabromobiphenyl	665758	651315	-2.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.632	0.001	338881	877.7	1	7.076	0.000	279814	929.3
Aroclor-1016	2	7.003	0.000	1108158	900.8	2	7.672	0.001	665517	979.2
Aroclor-1016	3	7.153	0.000	444949	842.0	3	7.882	0.000	262161	1018.0
Aroclor-1016	4	7.550	0.001	245092	852.9	4	8.057	0.000	168915	1094.0

Total Col1Ave (4 peaks): 868.3 Total Col2Ave (4 peaks): 1005.1 RPD = 15
Corrected Ave (3 peaks): 857.5 Corrected Ave (3 peaks): 975.5 RPD = 13

CalAmt %D: -13.2 CalAmt %D: 0.5

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1260	1	10.405	0.001	720756	900.9	1	11.043	0.000	405816	1019.5
Aroclor-1260	2	10.727	0.000	744219	931.5	2	11.507	0.000	425746	1015.4
Aroclor-1260	3	11.080	0.001	2328188	1122.7	3	11.760	0.001	1112814	1037.6
Aroclor-1260	4	11.482	0.002	1049542	990.6	4	12.350	0.001	711913	1021.6
Aroclor-1260	5	11.586	-0.000	396690	859.7	NS	---			----

Total Col1Ave (5 peaks): 961.1 Total Col2Ave (4 peaks): 1023.5 RPD = 6
Corrected Ave (4 peaks): 920.7 Corrected Ave (3 peaks): 1018.8 RPD = 10

CalAmt %D: -3.9 CalAmt %D: 2.4

Total PCB Area Col1 (5.118 - 13.110) = 21329423 Col1 Total PCB = 1.9 ppm*

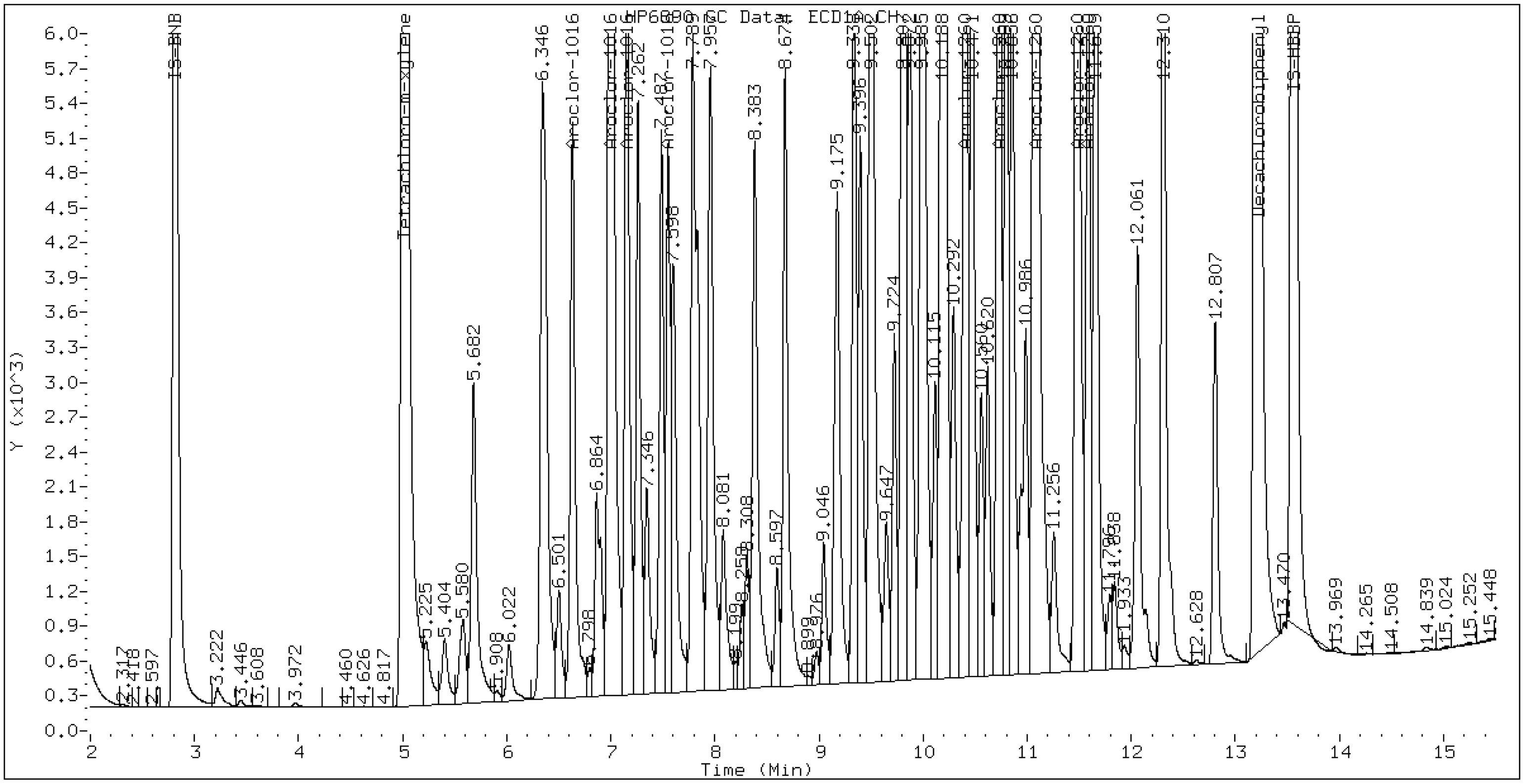
Total PCB Area Col2 (5.118 - 13.110) = 12060457 Col2 Total PCB = 2.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

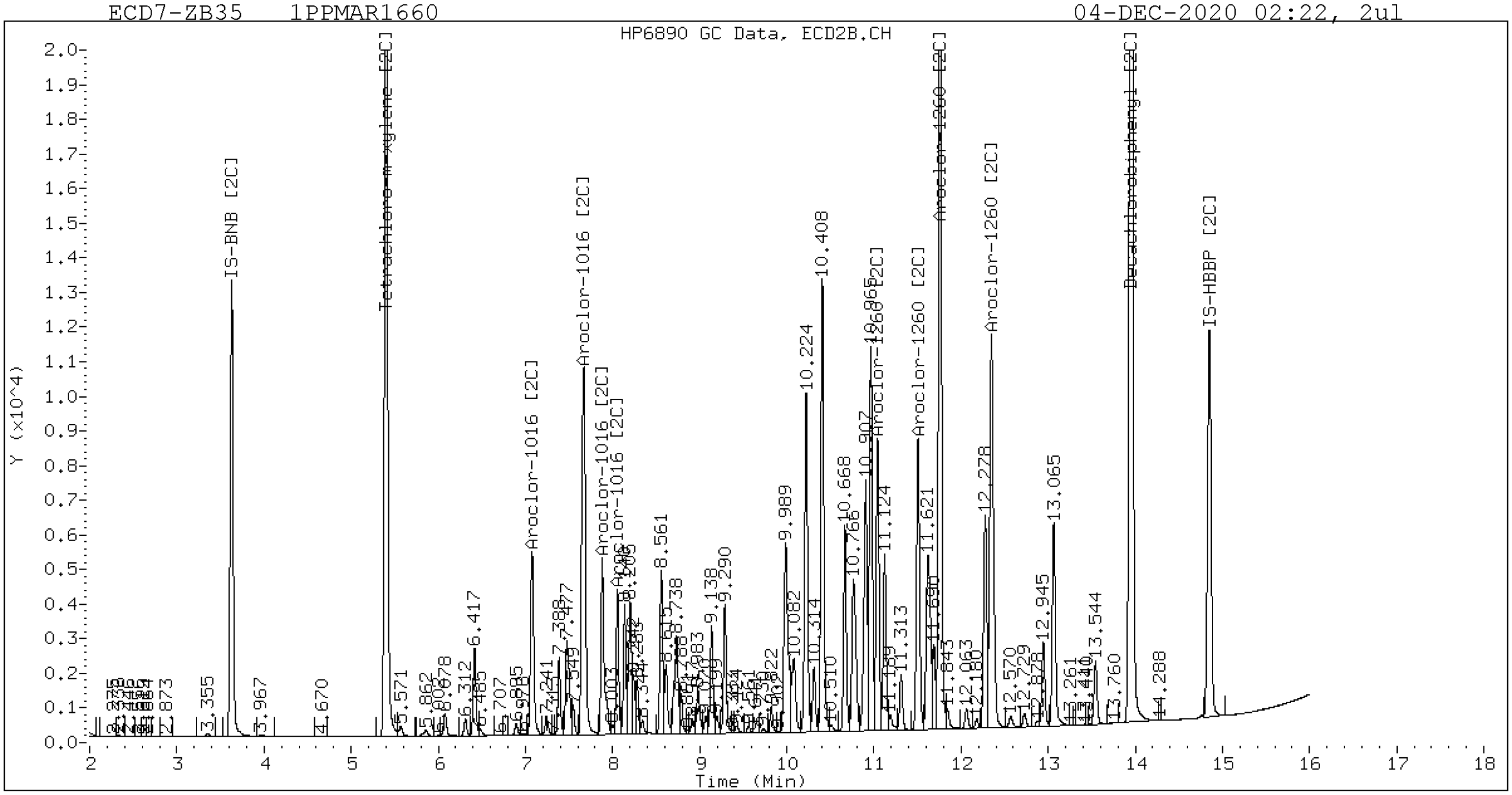
PCB Dual Column Chromatograms

ECD7-ZB5 1PPMAR1660 04-DEC-2020 02:22, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 1PPMAR1660 04-DEC-2020 02:22, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120413ECD7.D
Data file 2: /20201204.b/20201204.b/20120413ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 04-DEC-2020 02:42
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.001	180592	5.401	-0.001	117480	15.8	16.1	2.1	Tetrachloro-m-xylene
13.208	-0.002	346248	13.950	-0.001	174875	15.0	15.5	3.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	39.5	40.4
Decachlorobiphenyl	37.6	38.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	783478	-0.4
Hexabromobiphenyl	2132987	2168581	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	634709	-0.1
Hexabromobiphenyl	665758	683907	2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.630	-0.000	40359	102.4	1	7.076	-0.000	30843	100.2
Aroclor-1016	2	7.003	0.000	126484	100.7	2	7.672	0.001	70345	101.2
Aroclor-1016	3	7.151	-0.001	54846	101.6	3	7.883	0.001	26250	99.7
Aroclor-1016	4	7.550	0.001	29925	102.0	4	8.058	0.001	15527	98.3

Total Col1Ave (4 peaks): 101.7 Total Col2Ave (4 peaks): 99.9 RPD = 2
Corrected Ave (3 peaks): 101.4 Corrected Ave (3 peaks): 99.4 RPD = 2

CalAmt %D: 1.7 CalAmt %D: -0.1

Aroclor-1260	1	10.405	0.001	83628	99.2	1	11.044	0.001	41611	99.6
Aroclor-1260	2	10.726	-0.000	83965	99.7	2	11.508	0.002	43745	99.4
Aroclor-1260	3	11.077	-0.002	220285	100.8	3	11.760	0.001	113474	100.8
Aroclor-1260	4	11.481	0.001	110356	98.8	4	12.349	0.001	71218	97.3
Aroclor-1260	5	11.585	-0.000	49927	102.7	NS	---			----

Total Col1Ave (5 peaks): 100.2 Total Col2Ave (4 peaks): 99.3 RPD = 1
Corrected Ave (4 peaks): 99.6 Corrected Ave (3 peaks): 98.7 RPD = 1

CalAmt %D: 0.2 CalAmt %D: -0.7

Total PCB Area Col1 (5.118 - 13.110) = 2551562 Col1 Total PCB = 0.2 ppm*

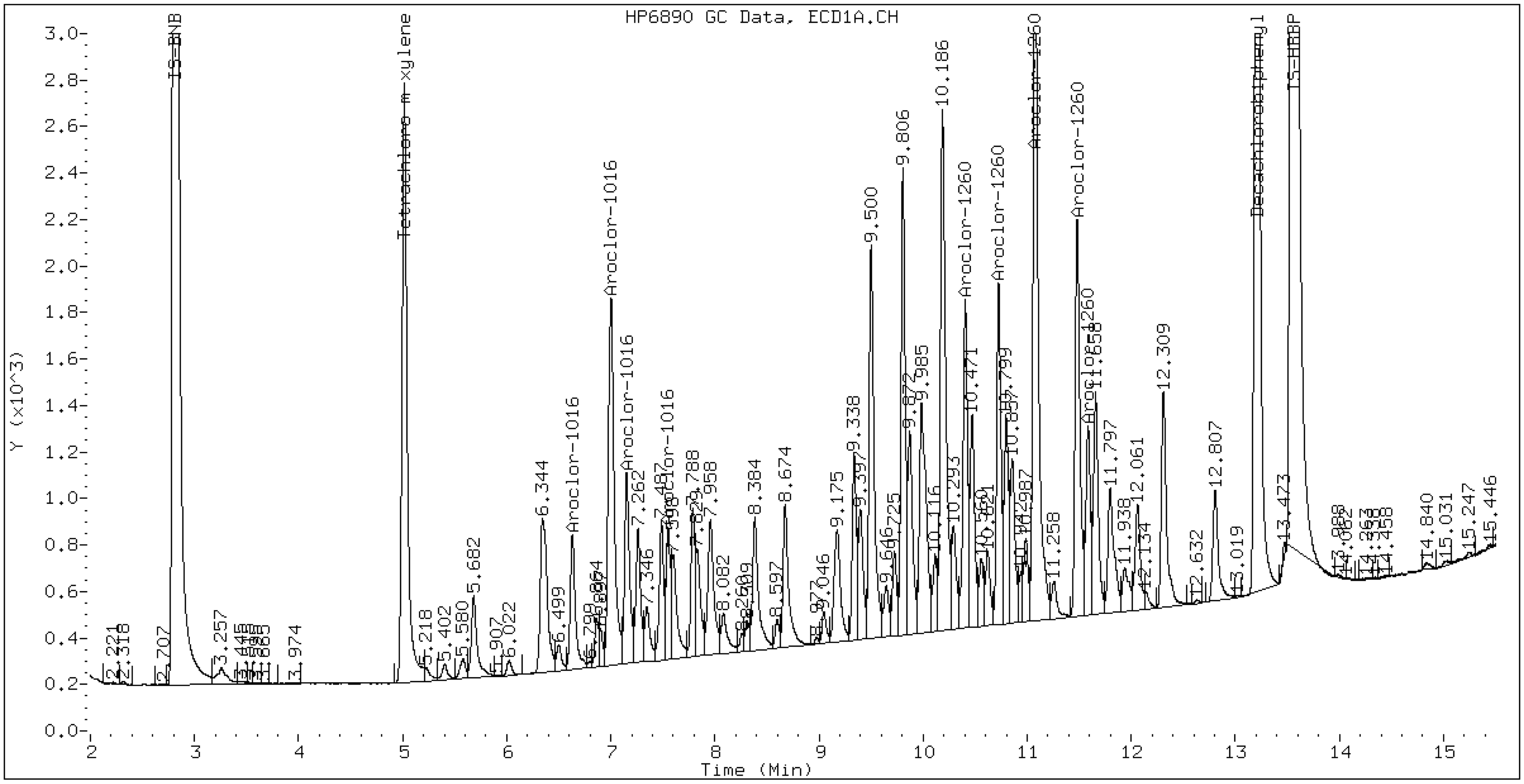
Total PCB Area Col2 (5.118 - 13.110) = 1208920 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

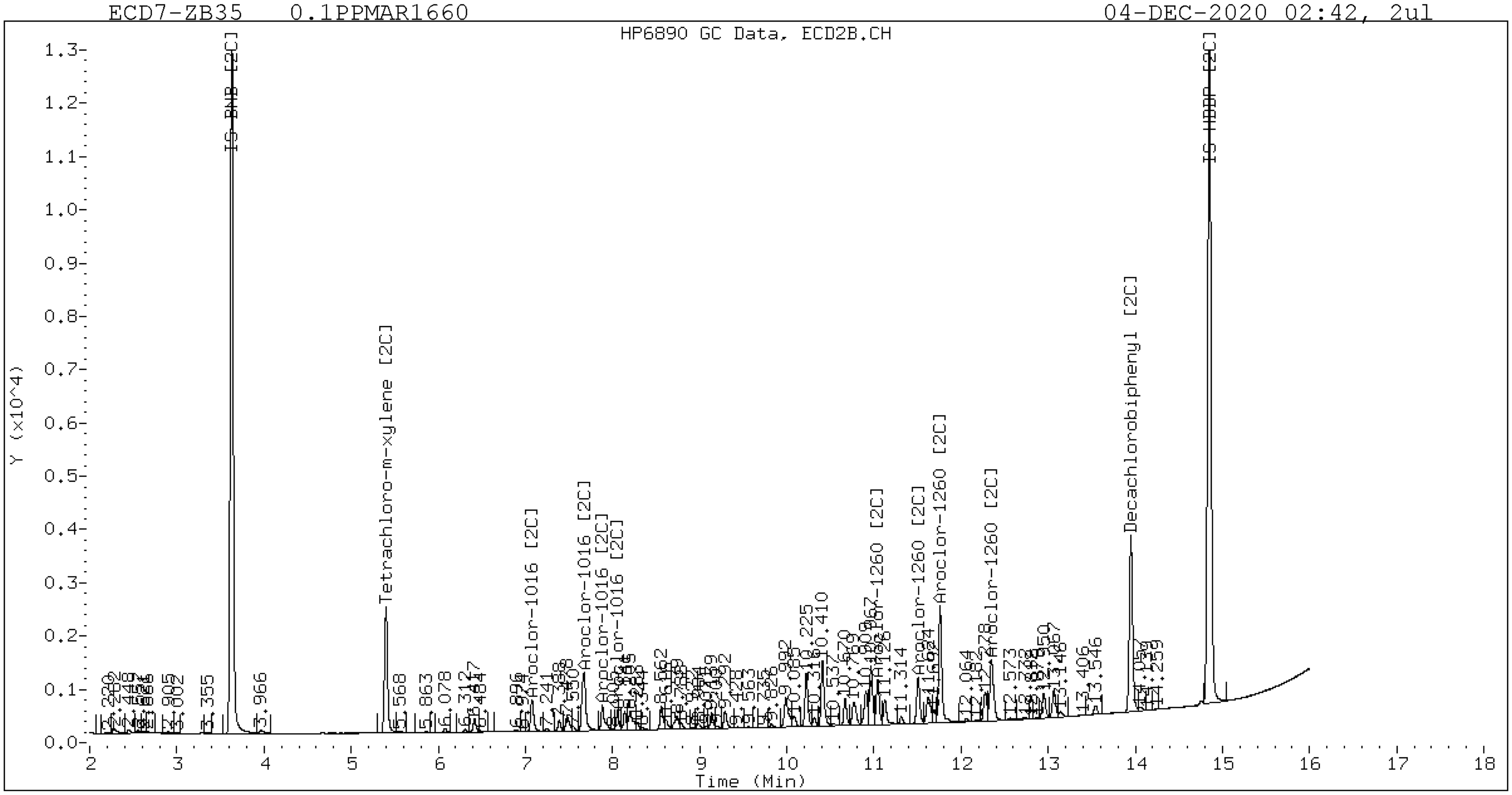
PCB Dual Column Chromatograms

ECD7-ZB5 0.1PPMAR1660 04-DEC-2020 02:42, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.1PPMAR1660 04-DEC-2020 02:42, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120414ECD7.D
Data file 2: /20201204.b/20201204.b/20120414ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 04-DEC-2020 03:03
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.018	0.000	923925	5.401	-0.001	596513	81.5	83.0	1.8	Tetrachloro-m-xylene
13.215	0.004	1841470	13.955	0.004	999245	80.7	88.7	9.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	203.8	207.5
Decachlorobiphenyl	201.7	221.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	777369	-1.2
Hexabromobiphenyl	2132987	2147351	0.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	626950	-1.3
Hexabromobiphenyl	665758	684273	2.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.631	0.000	178991	457.5	1	7.076	0.000	149700	492.2
Aroclor-1016	2	7.003	0.000	571937	458.9	2	7.671	0.000	347879	506.8
Aroclor-1016	3	7.152	0.000	236901	442.4	3	7.882	0.000	131995	507.5
Aroclor-1016	4	7.549	0.000	127750	438.8	4	8.057	0.000	82453	528.7
	Total Col1Ave (4 peaks):			449.4		Total Col2Ave (4 peaks):			508.8	RPD = 12
	Corrected Ave (3 peaks):			446.2		Corrected Ave (3 peaks):			502.1	RPD = 12
	CalAmt %D:			-10.1		CalAmt %D:			1.8	
Aroclor-1260	1	10.404	0.000	368595	441.4	1	11.043	0.000	210469	503.3
Aroclor-1260	2	10.726	0.000	376679	451.8	2	11.506	0.000	222213	504.4
Aroclor-1260	3	11.079	0.000	1064588	491.9	3	11.759	0.000	559812	496.9
Aroclor-1260	4	11.480	0.000	510179	461.4	4	12.349	0.000	367700	502.2
Aroclor-1260	5	11.586	0.000	211750	439.7	NS	---			----
	Total Col1Ave (5 peaks):			457.2		Total Col2Ave (4 peaks):			501.7	RPD = 9
	Corrected Ave (4 peaks):			448.6		Corrected Ave (3 peaks):			500.8	RPD = 11
	CalAmt %D:			-8.6		CalAmt %D:			0.3	

Total PCB Area Col1 (5.118 - 13.110) = 10992659 Col1 Total PCB = 1.0 ppm*

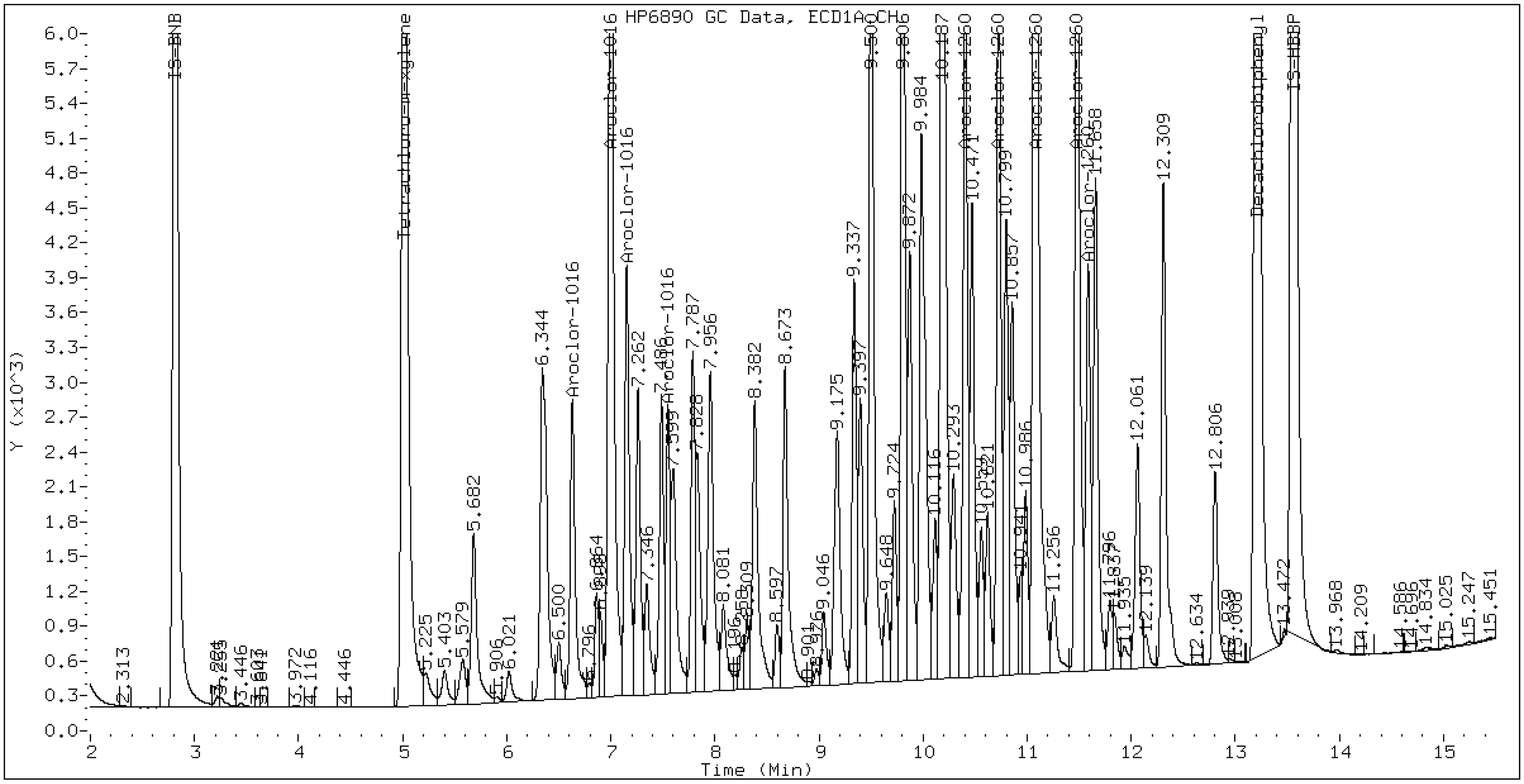
Total PCB Area Col2 (5.118 - 13.110) = 6128174 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

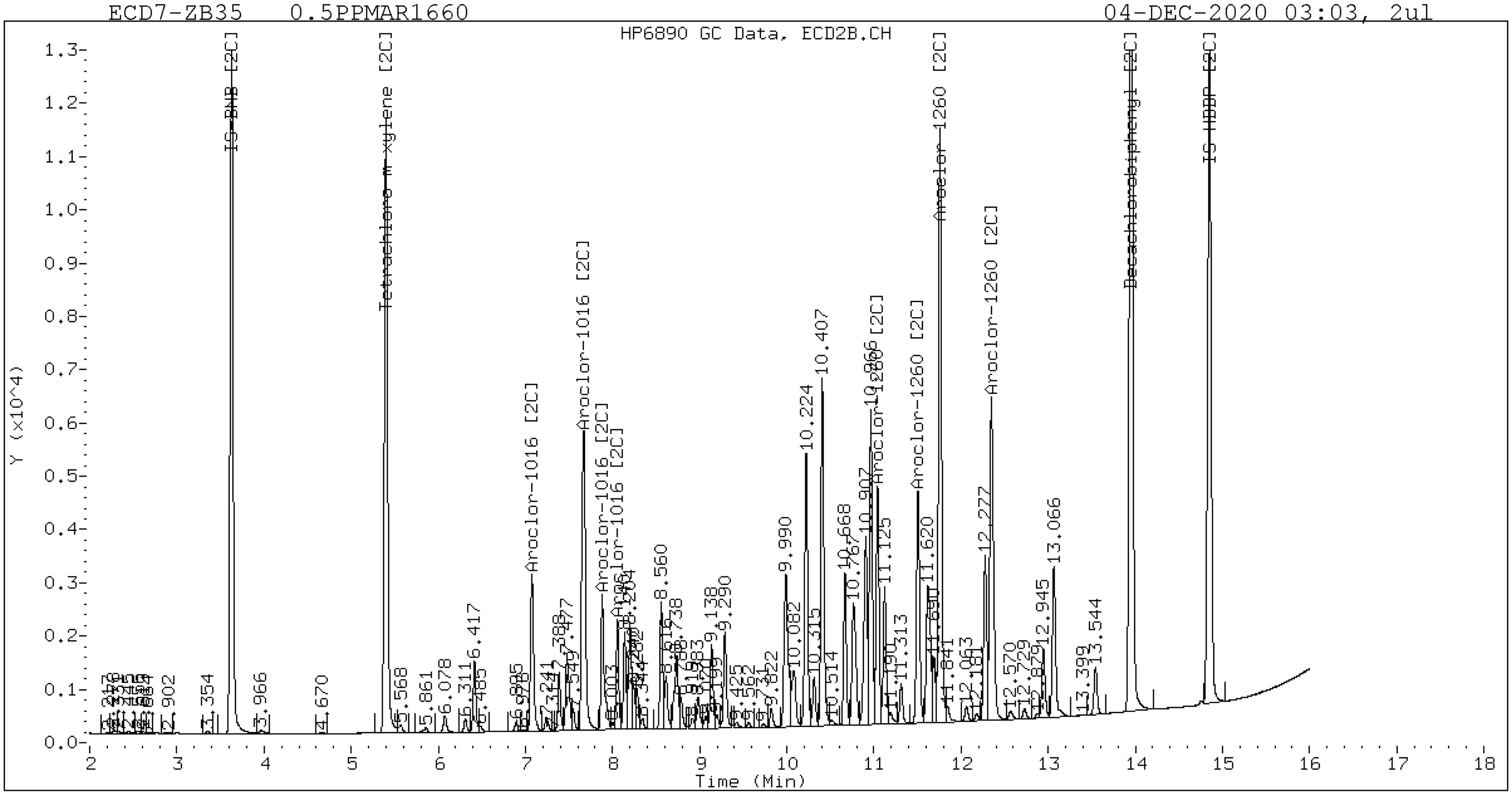
PCB Dual Column Chromatograms

ECD7-ZB5 0.5PPMAR1660 04-DEC-2020 03:03, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.5PPMAR1660 04-DEC-2020 03:03, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120415ECD7.D	ARI ID: AR1242
Data file 2: /20201204.b/20201204.b/20120415ECD7.D	Client ID:
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m	Injection Date: 04-DEC-2020 03:23
Compound Sublist: AR1242.sub	Report Date: 12/07/2020 11:51
Instrument, Inj. Vol.: ecd7.i, 2ul	Matrix: NONE
Quant Method: Internal Std	Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.017	-0.001	475624	5.401	-0.001	318630	40.8	43.3	6.2	Tetrachloro-m-xylene
13.210	0.000	879038	13.952	0.001	495702	37.5	43.3	14.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	101.9	108.4
Decachlorobiphenyl	93.7	108.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	800446	1.8
Hexabromobiphenyl	2132987	2206293	3.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	641302	0.9
Hexabromobiphenyl	665758	695866	4.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.631	0.000	77636	250.0	1	7.076	0.000	60604	250.0
Aroclor-1242	2	7.003	0.000	239466	250.0	2	7.673	0.000	140386	250.0
Aroclor-1242	3	8.309	0.000	79491	250.0	3	8.991	0.000	55399	250.0
Aroclor-1242	4	8.603	0.000	86527	250.0	4	9.427	0.000	54530	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.118 - 13.110) = 2034303 Col1 Total PCB = 0.2 ppm*

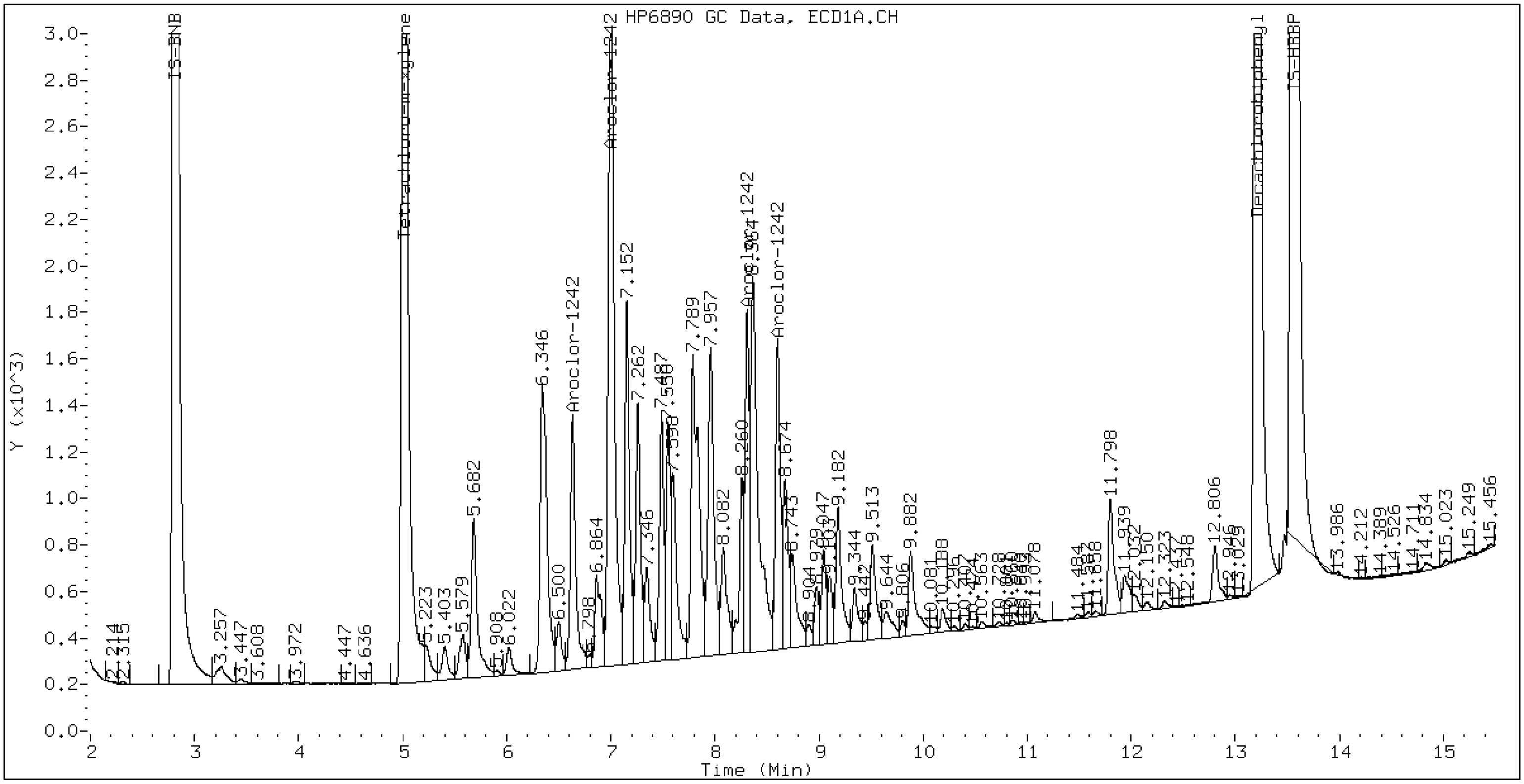
Total PCB Area Col2 (5.118 - 13.110) = 1234857 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

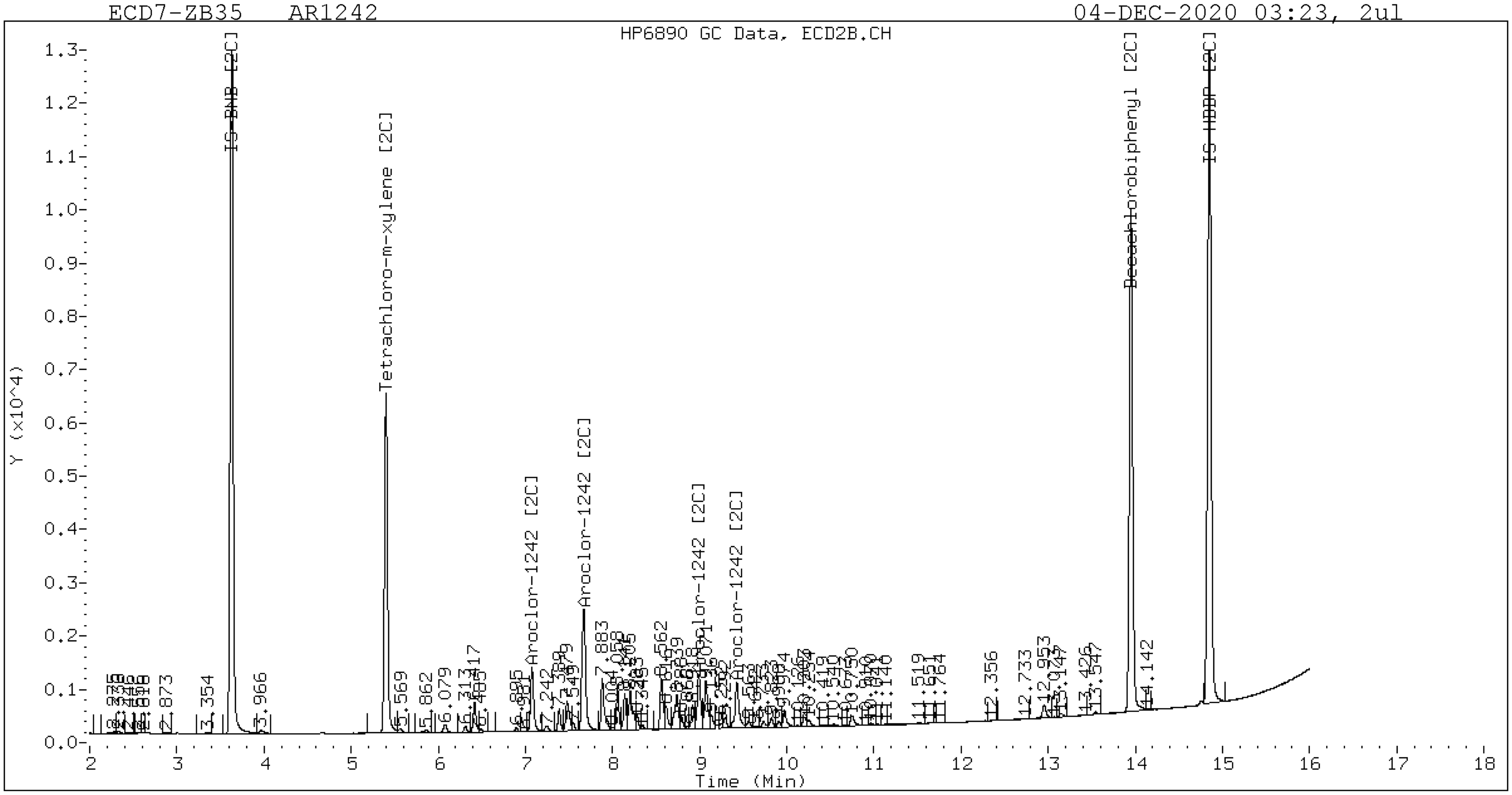
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242 04-DEC-2020 03:23, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242 04-DEC-2020 03:23, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120416ECD7.D	ARI ID: AR1248
Data file 2: /20201204.b/20201204.b/20120416ECD7.D	Client ID:
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m	Injection Date: 04-DEC-2020 03:44
Compound Sublist: AR1248.sub	Report Date: 12/07/2020 11:51
Instrument, Inj. Vol.: ecd7.i, 2ul	Matrix: NONE
Quant Method: Internal Std	Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.017	-0.001	457627	5.401	-0.001	303284	40.7	42.9	5.3	Tetrachloro-m-xylene
13.210	-0.001	855062	13.952	0.001	476979	37.8	43.2	13.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	101.8	107.3
Decachlorobiphenyl	94.6	107.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	770909	-2.0
Hexabromobiphenyl	2132987	2125806	-0.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	616259	-3.0
Hexabromobiphenyl	665758	671394	0.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	7.487	0.000	100524	250.0	1	8.141	0.000	52236	250.0
Aroclor-1248	2	7.956	0.000	152414	250.0	2	8.562	0.000	68362	250.0
Aroclor-1248	3	8.365	0.000	225346	250.0	3	8.991	0.000	97366	250.0
Aroclor-1248	4	8.602	0.000	130261	250.0	4	9.426	0.000	95441	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.118 - 13.110) = 2555384 Col1 Total PCB = 0.2 ppm*

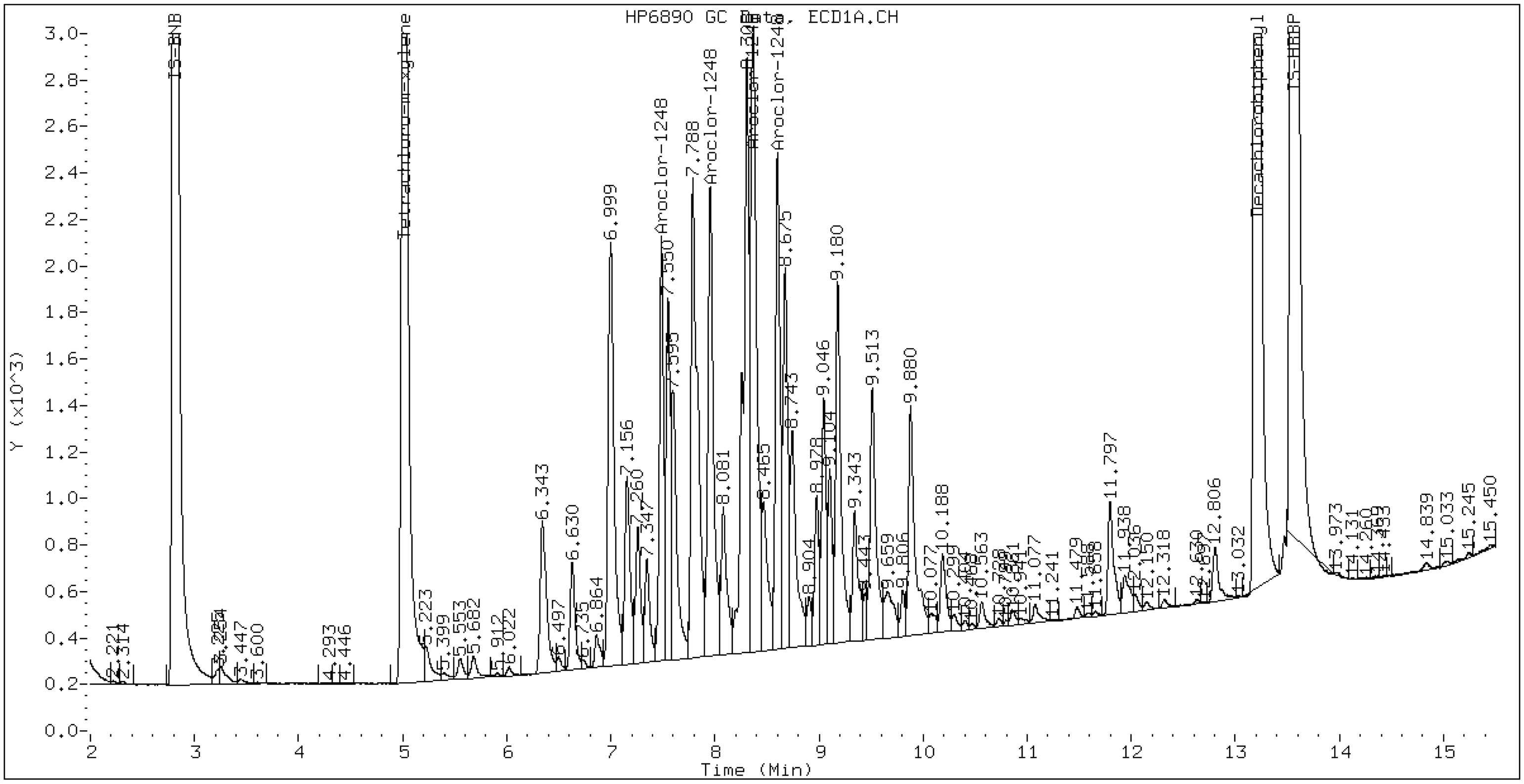
Total PCB Area Col2 (5.118 - 13.110) = 1467344 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

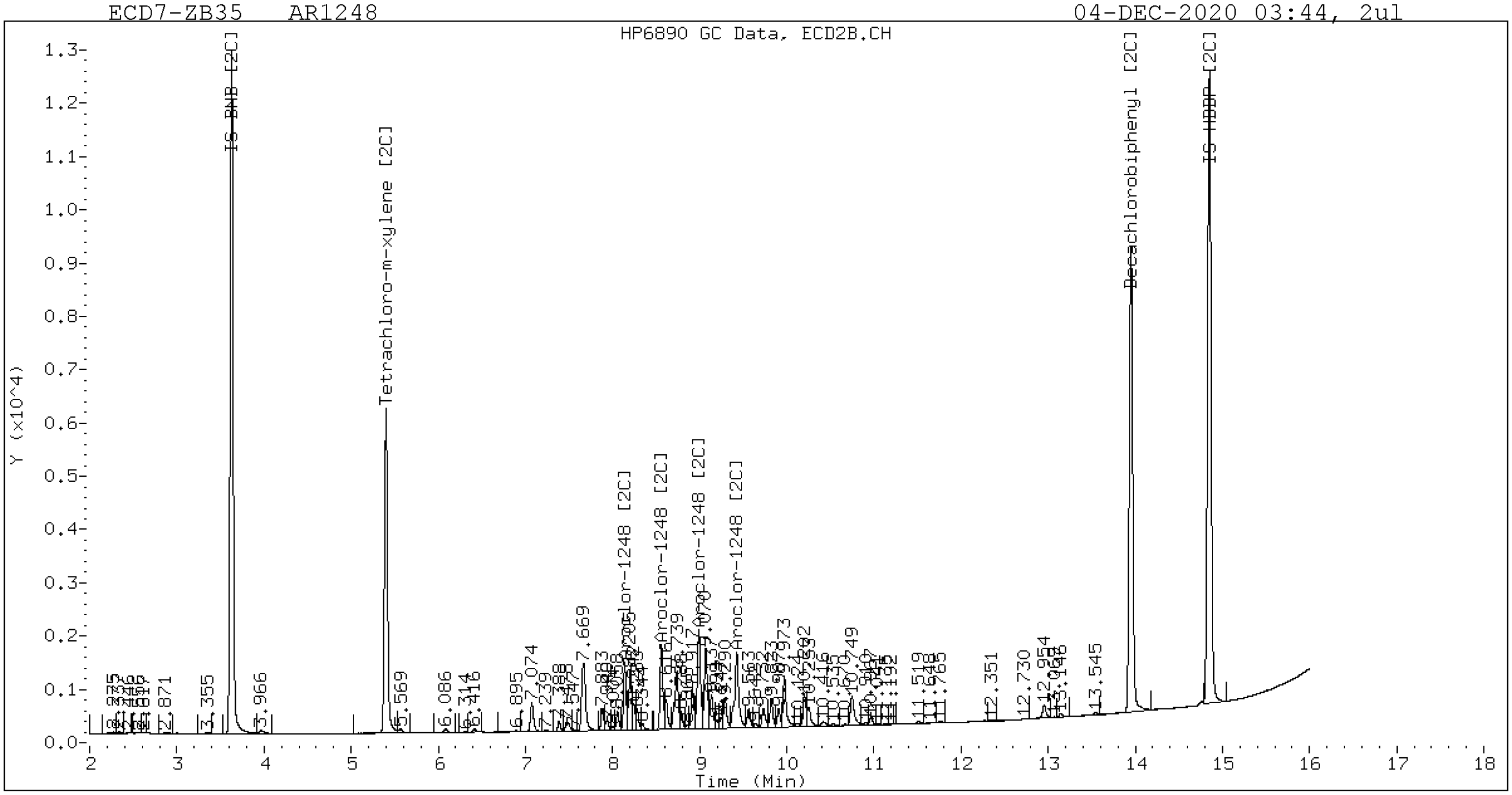
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248 04-DEC-2020 03:44, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248 04-DEC-2020 03:44, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120417ECD7.D
Data file 2: /20201204.b/20201204.b/20120417ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 04-DEC-2020 04:04
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.002	479430	5.401	-0.001	311865	41.4	42.6	2.8	Tetrachloro-m-xylene
13.210	-0.000	867479	13.953	0.002	492200	37.5	43.2	14.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.5	106.4
Decachlorobiphenyl	93.7	107.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	794434	1.0
Hexabromobiphenyl	2132987	2177140	2.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	639129	0.6
Hexabromobiphenyl	665758	692839	4.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.675	0.000	235296	250.0	1	9.291	0.000	114096	250.0
Aroclor-1254	2	8.743	0.000	127435	250.0	2	9.384	0.000	52845	250.0
Aroclor-1254	3	9.046	0.000	156684	250.0	3	9.823	0.000	75571	250.0
Aroclor-1254	4	9.180	0.000	323163	250.0	4	9.972	0.000	178132	250.0
Aroclor-1254	5	9.877	0.000	214441	250.0	5	10.205	0.000	183964	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.118 - 13.110) = 3465791 Col1 Total PCB = 0.3 ppm*

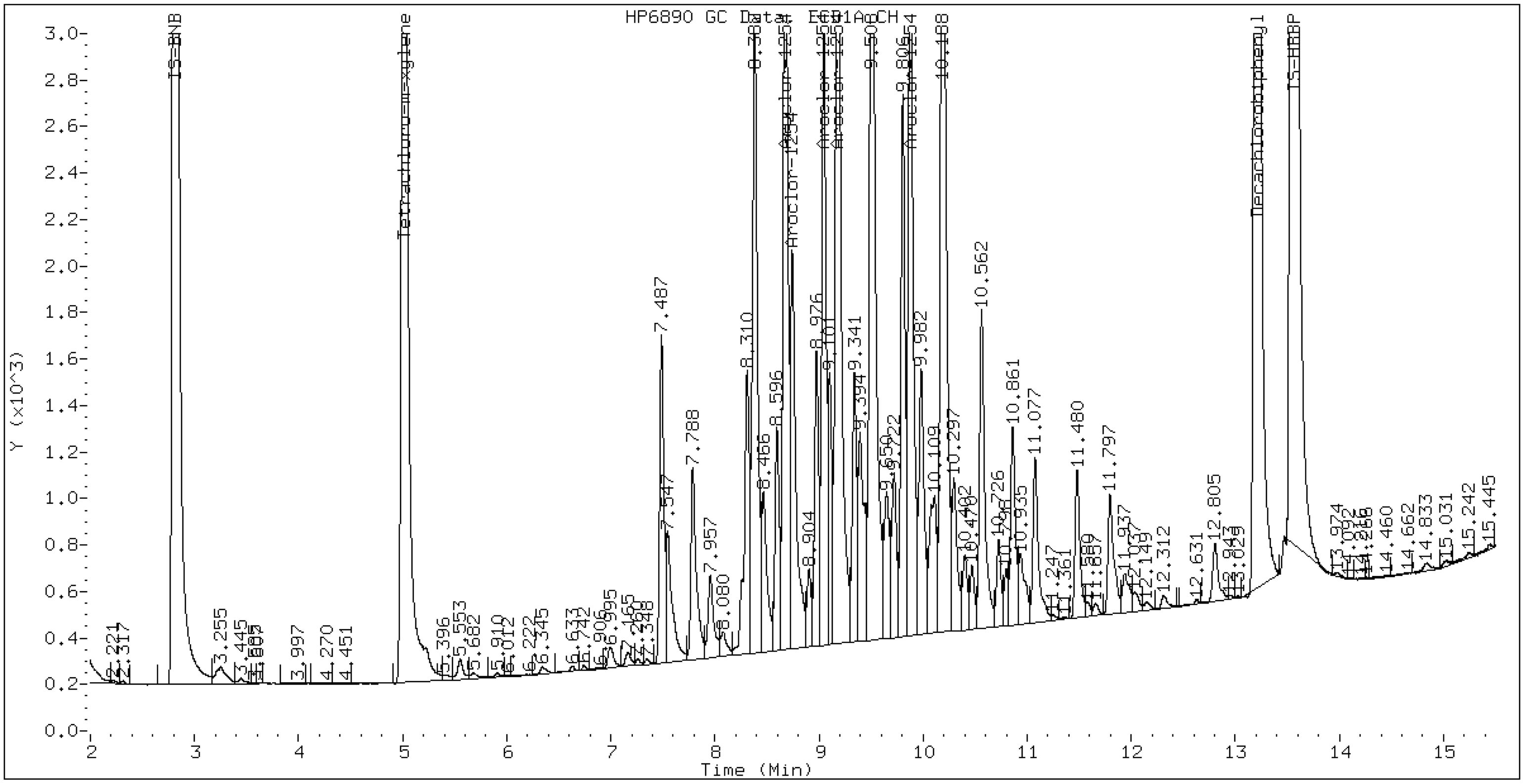
Total PCB Area Col2 (5.118 - 13.110) = 1886033 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

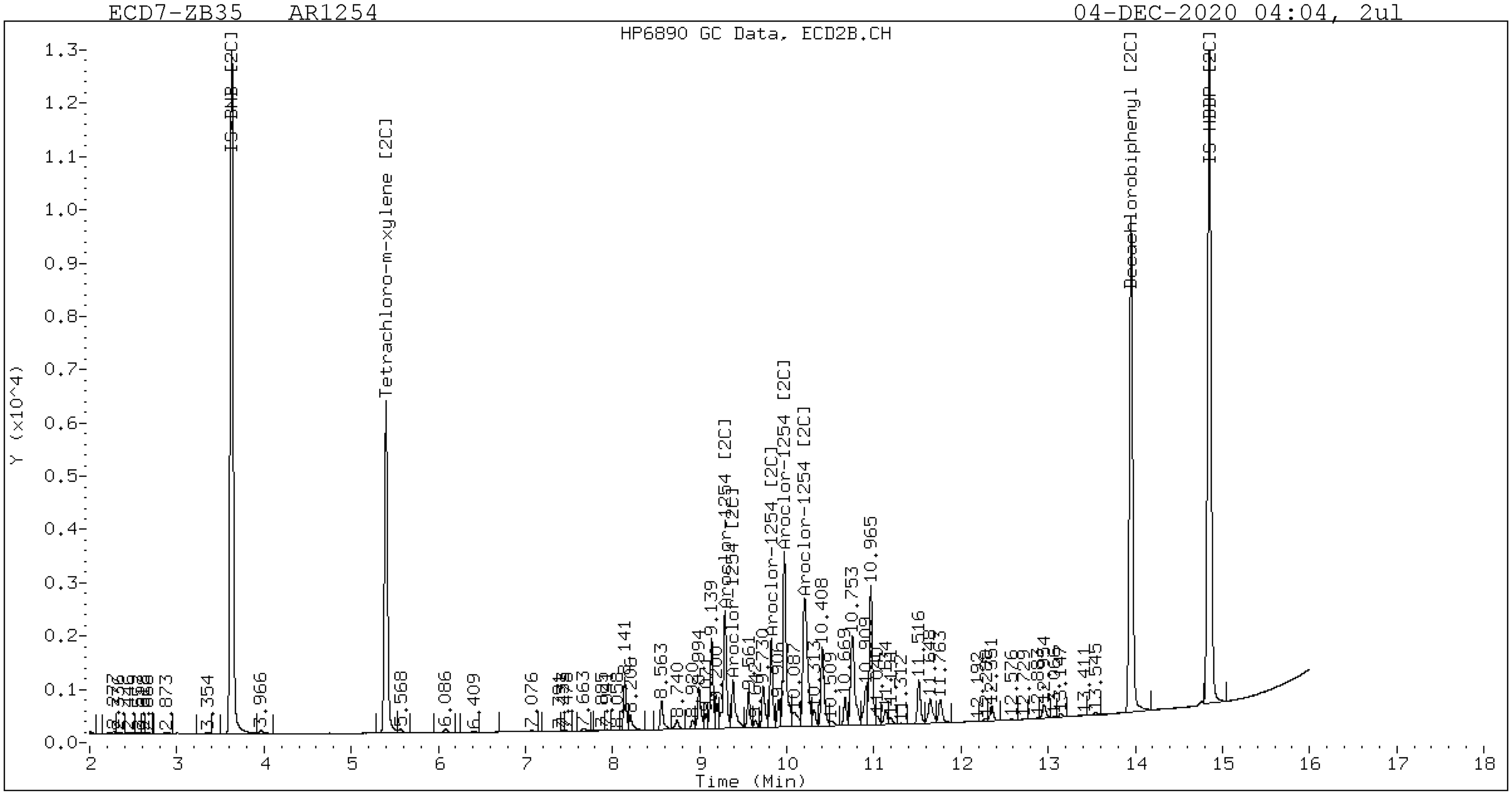
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254 04-DEC-2020 04:04, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254 04-DEC-2020 04:04, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120418ECD7.D
Data file 2: /20201204.b/20201204.b/20120418ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 04-DEC-2020 04:25
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.001	480815	5.401	-0.001	313973	41.2	42.4	3.0	Tetrachloro-m-xylene
13.210	0.000	854649	13.952	0.001	483991	36.0	41.6	14.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.0	106.1
Decachlorobiphenyl	90.1	104.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	800510	1.8
Hexabromobiphenyl	2132987	2231515	4.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	645401	1.6
Hexabromobiphenyl	665758	706623	6.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	3.972	0.000	26015	250.0	1	4.669	0.000	11154	250.0
Aroclor-1221	2	5.406	0.000	36825	250.0	2	6.074	0.000	22170	250.0
Aroclor-1221	3	5.682	0.000	94444	250.0	3	6.417	0.000	41315	250.0
	Total Col1Ave (3 peaks):			250.0		Total Col2Ave (3 peaks):			250.0	RPD = 0
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.405	0.000	325406	250.0	1	11.044	0.000	183589	250.0
Aroclor-1262	2	11.077	0.000	731826	250.0	2	11.759	0.000	403551	250.0
Aroclor-1262	3	11.586	0.000	203068	250.0	3	12.276	0.000	129598	250.0
Aroclor-1262	4	11.657	0.000	266171	250.0	4	13.065	0.000	146770	250.0
	Total Col1Ave (4 peaks):			250.0		Total Col2Ave (4 peaks):			250.0	RPD = 0
	Corrected Ave (3 peaks):			250.0		Corrected Ave (3 peaks):			250.0	RPD = 0

Total PCB Area Col1 (5.118 - 13.110) = 4840279 Col1 Total PCB = 0.4 ppm*

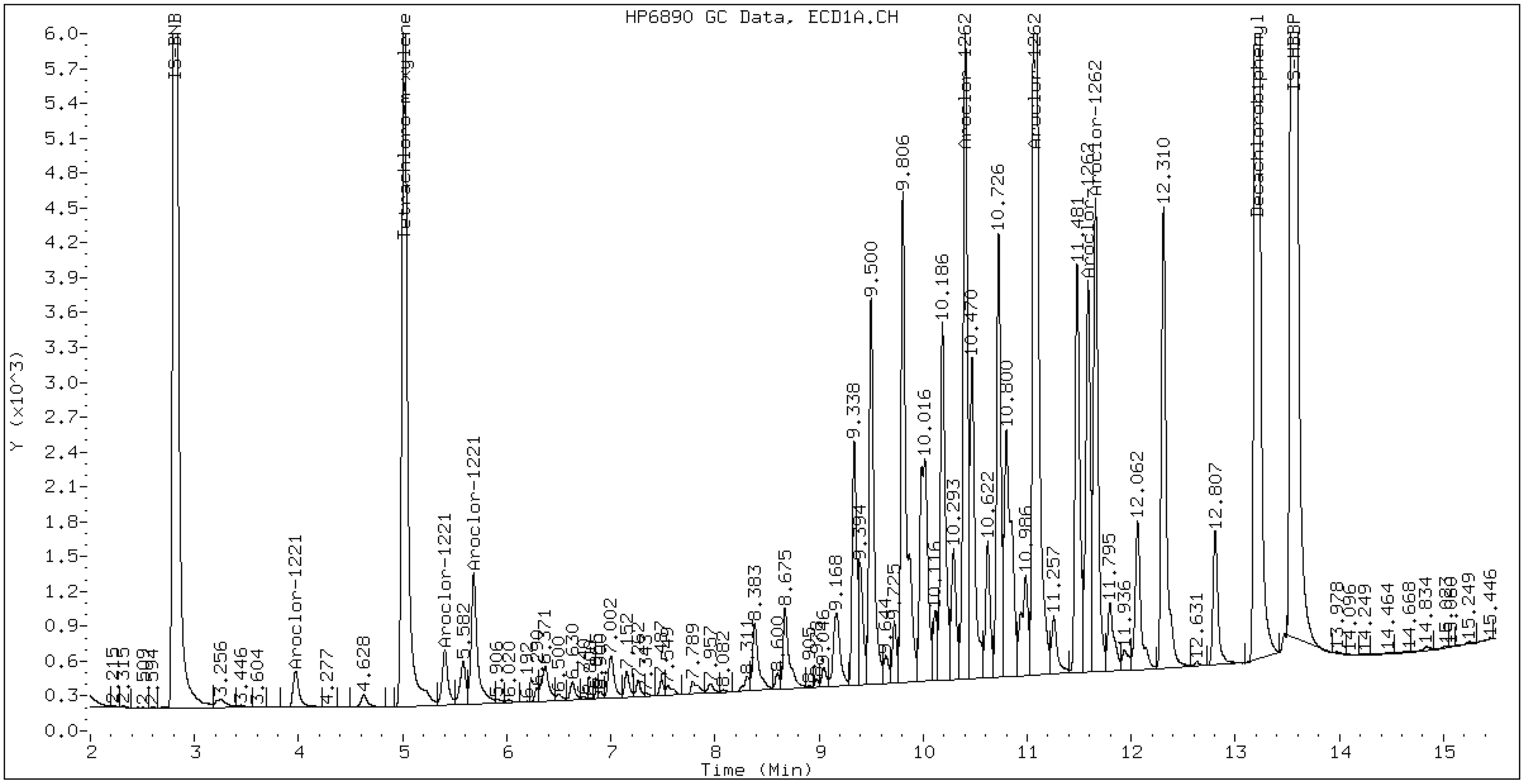
Total PCB Area Col2 (5.118 - 13.110) = 2639939 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

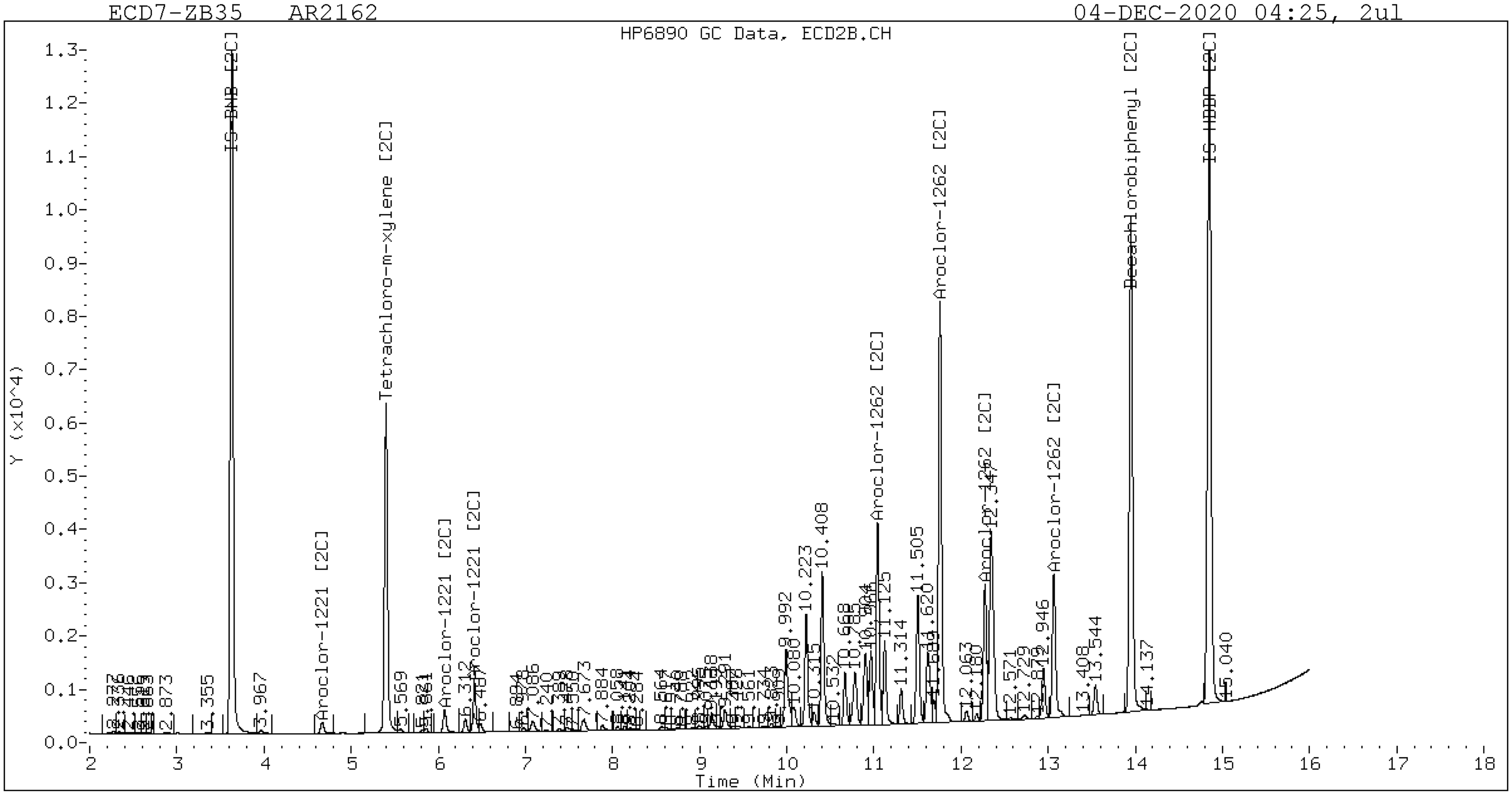
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162 04-DEC-2020 04:25, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162 04-DEC-2020 04:25, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120419ECD7.D
Data file 2: /20201204.b/20201204.b/20120419ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 04-DEC-2020 04:46
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.018	0.000	454273	5.402	0.000	302264	40.4	42.5	5.2	Tetrachloro-m-xylene
13.210	0.000	1269363	13.951	0.000	728736	56.7	65.0	13.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	100.9	106.3
Decachlorobiphenyl	141.8	162.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	771688	-1.9
Hexabromobiphenyl	2132987	2105027	-1.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	620134	-2.4
Hexabromobiphenyl	665758	680930	2.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	3.973	0.000	15156	250.0	1	4.670	0.000	6636	250.0
Aroclor-1232	2	6.631	0.000	39383	250.0	2	7.077	0.000	34251	250.0
Aroclor-1232	3	7.002	0.000	128697	250.0	3	7.672	0.000	71516	250.0
Aroclor-1232	4	8.309	0.000	38235	250.0	4	8.057	0.000	16302	250.0
	Total Col1Ave (4 peaks):			250.0		Total Col2Ave (4 peaks):			250.0	RPD = 0
	Corrected Ave (3 peaks):			250.0		Corrected Ave (3 peaks):			250.0	RPD = 0
Aroclor-1268	1	11.588	0.000	699749	250.0	1	12.273	0.000	408812	250.0
Aroclor-1268	2	11.657	0.000	751431	250.0	2	12.339	0.000	446370	250.0
Aroclor-1268	3	12.037	0.000	603108	250.0	3	12.729	0.000	374344	250.0
Aroclor-1268	4	12.812	0.000	2377265	250.0	4	13.546	0.000	1243229	250.0
	Total Col1Ave (4 peaks):			250.0		Total Col2Ave (4 peaks):			250.0	RPD = 0
	Corrected Ave (3 peaks):			250.0		Corrected Ave (3 peaks):			250.0	RPD = 0

Total PCB Area Col1 (5.118 - 13.110) = 6554617 Col1 Total PCB = 0.6 ppm*

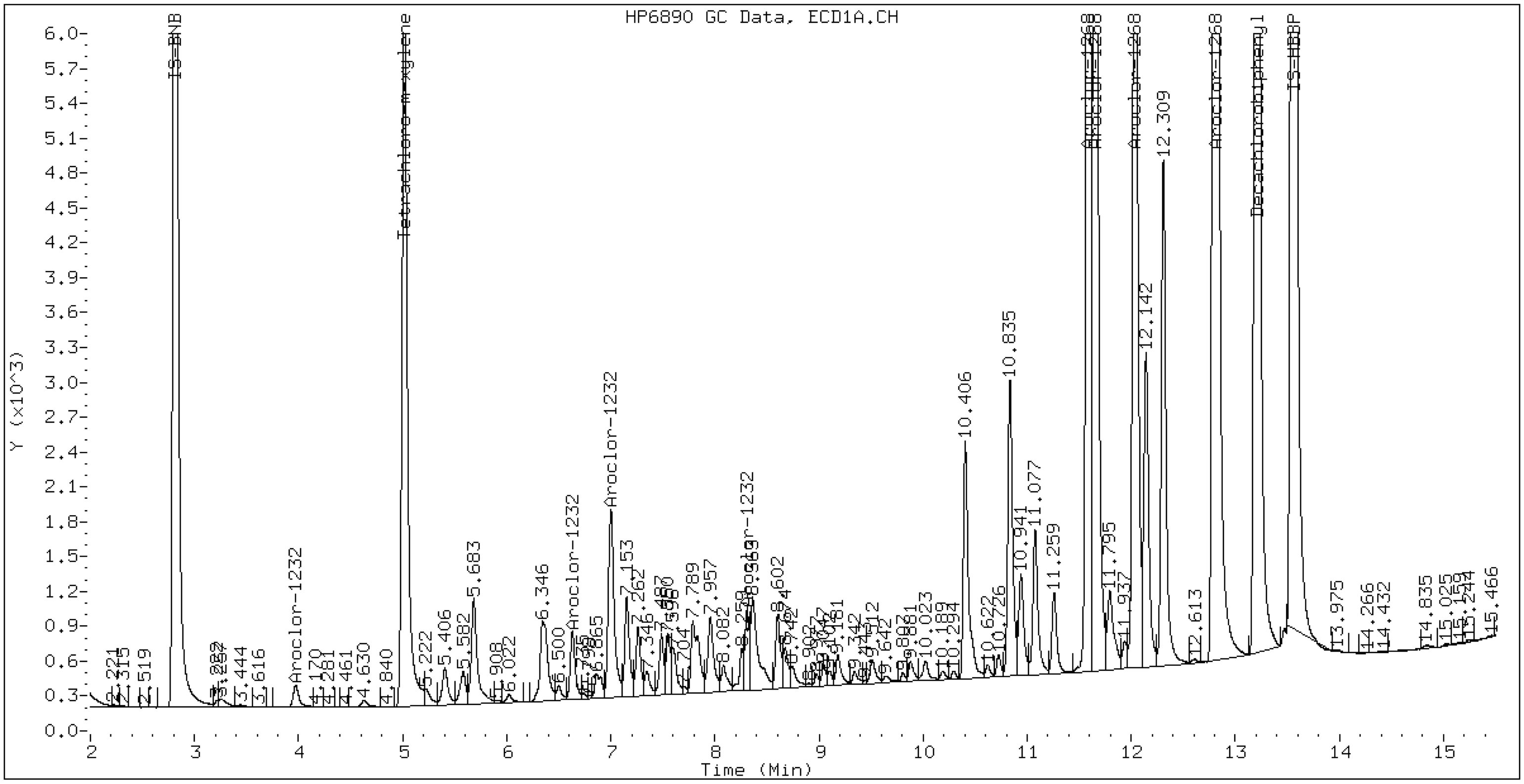
Total PCB Area Col2 (5.118 - 13.110) = 2521917 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

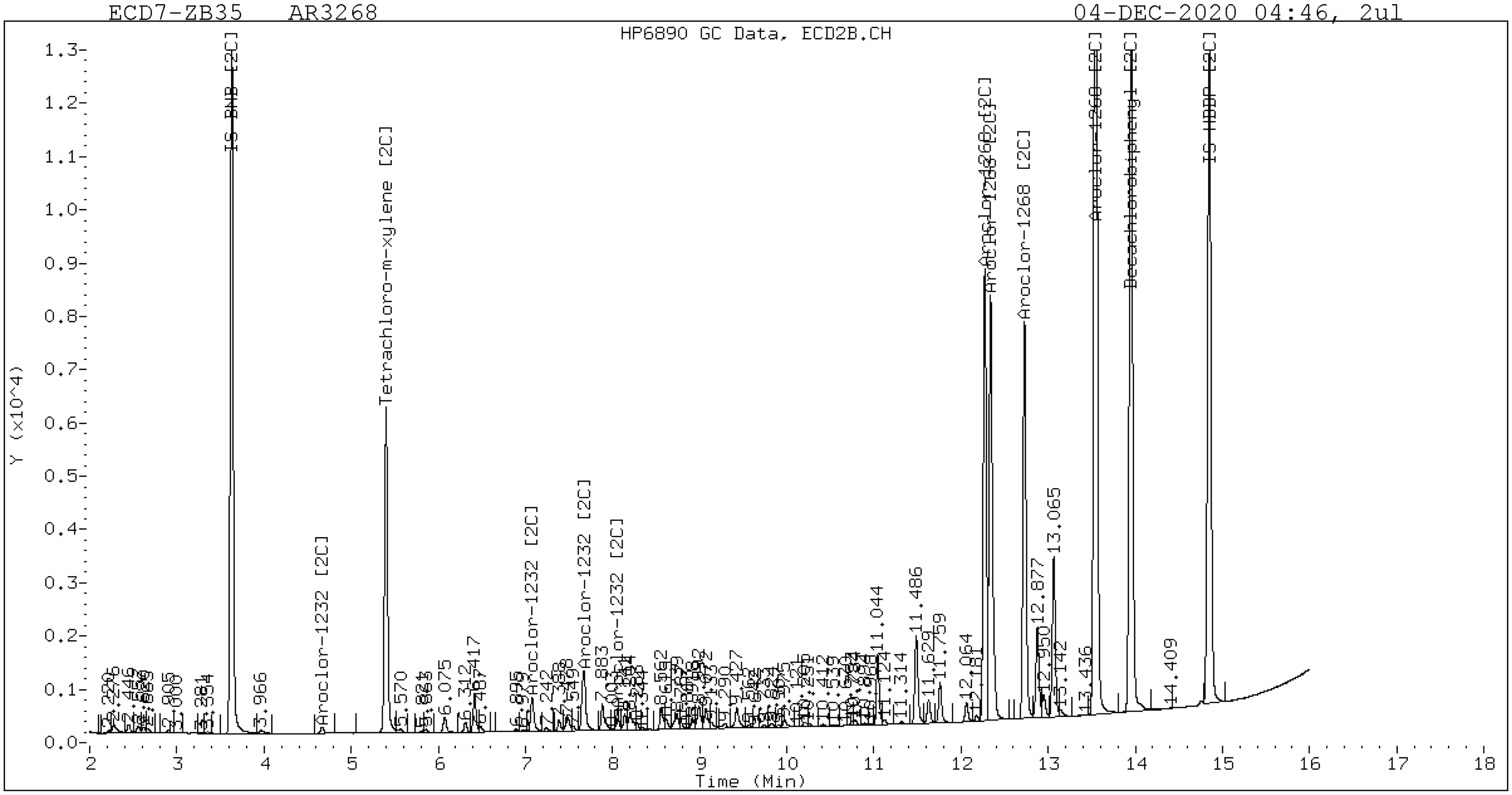
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268 04-DEC-2020 04:46, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268 04-DEC-2020 04:46, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120420ECD7.D	ARI ID: AR1660SCV1
Data file 2: /20201204.b/20201204.b/20120420ECD7.D	Client ID:
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m	Injection Date: 04-DEC-2020 05:06
Compound Sublist: PCB.sub	Report Date: 12/07/2020 11:52
Instrument, Inj. Vol.: ecd7.i, 2ul	Matrix: NONE
Quant Method: Internal Std	Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.018	0.000	522469	5.402	0.000	336381	45.0	46.0	2.2	Tetrachloro-m-xylene
13.210	-0.000	972568	13.950	-0.000	554258	41.8	48.2	14.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	112.6	115.1
Decachlorobiphenyl	104.6	120.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	795708	1.1
Hexabromobiphenyl	2132987	2186421	2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	637628	0.3
Hexabromobiphenyl	665758	698314	4.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

//target/share/chem4/ecd7.i/20201204.b/20120420ECD7.D AR1660SCV1

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.632	0.001	95528	238.6	1	7.077	0.001	76814	248.3
Aroclor-1016	2	7.002	-0.001	295416	231.5	2	7.673	0.002	175788	251.8
Aroclor-1016	3	7.153	0.000	127151	232.0	3	7.883	0.001	65410	247.3
Aroclor-1016	4	7.487	-0.062	76423	256.4	4	8.057	0.000	39803	251.0
Total Col1Ave (4 peaks):				239.6		Total Col2Ave (4 peaks):			249.6	RPD = 4
Corrected Ave (3 peaks):				234.0		Corrected Ave (3 peaks):			248.9	RPD = 6
Aroclor-1221	1	3.975	0.003	878	8.5	1	---			0.0
Aroclor-1221	2	5.404	-0.001	14963	102.2	2	6.079	0.005	9666	110.3
Aroclor-1221	3	5.683	0.001	68494	182.4	3	6.418	0.001	31755	194.5
Total Col1Ave (3 peaks):				97.7		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.975	0.002	878	14.0	1	---			0.0
Aroclor-1232	2	6.632	0.000	95528	588.1	2	7.077	-0.000	76814	545.3
Aroclor-1232	3	7.002	-0.000	295416	556.5	3	7.673	0.001	175788	597.6
Aroclor-1232	4	8.309	-0.000	19510	123.7	4	8.057	-0.000	39803	593.7
Total Col1Ave (4 peaks):				320.6		Total Col2Ave (3 peaks):			578.9	RPD = 57*
Corrected Ave (3 peaks):				231.4			Corrected Ave: < 3 Peaks			
Aroclor-1242	1	6.632	0.000	95528	309.4	1	7.077	0.000	76814	318.7
Aroclor-1242	2	7.002	-0.001	295416	310.2	2	7.673	0.000	175788	314.8
Aroclor-1242	3	8.309	0.000	19510	61.7	3	8.982	-0.009	19824	90.0
Aroclor-1242	4	8.597	-0.006	11788	34.3	4	9.430	0.002	2269	10.5
Total Col1Ave (4 peaks):				178.9		Total Col2Ave (4 peaks):			183.5	RPD = 3
Corrected Ave (3 peaks):				135.1		Corrected Ave (3 peaks):			138.4	RPD = 2
Aroclor-1248	1	7.487	0.000	76423	184.1	1	8.141	-0.000	36032	166.7
Aroclor-1248	2	7.957	0.001	122530	194.7	2	8.562	0.000	52014	183.8
Aroclor-1248	3	8.383	0.017	96065	103.3	3	8.982	-0.009	19824	49.2
Aroclor-1248	4	8.597	-0.005	11788	21.9	4	9.430	0.004	2269	5.7
Total Col1Ave (4 peaks):				126.0		Total Col2Ave (4 peaks):			101.4	RPD = 22
Corrected Ave (3 peaks):				103.1		Corrected Ave (3 peaks):			73.9	RPD = 33
Aroclor-1254	1	8.674	-0.001	81025	86.0	1	9.291	0.000	32530	71.4
Aroclor-1254	2	---			0.0	2	9.430	0.046	2269	10.8
Aroclor-1254	3	9.047	0.002	9960	15.9	3	9.824	0.001	3929	13.0
Aroclor-1254	4	9.170	-0.010	73847	57.0	4	9.991	0.019	84643	119.1
Aroclor-1254	5	9.871	-0.006	107932	125.6	5	10.224	0.019	114607	156.1
Total Col1Ave (4 peaks):				71.1		Total Col2Ave (5 peaks):			74.1	RPD = 4
Corrected Ave (3 peaks):				53.0		Corrected Ave (4 peaks):			53.6	RPD = 1
Aroclor-1260	1	10.405	0.001	223537	262.9	1	11.043	0.000	123924	290.4
Aroclor-1260	2	10.726	-0.000	221379	260.8	2	11.507	0.001	121258	269.7
Aroclor-1260	3	11.077	-0.002	596328	270.6	3	11.759	-0.000	319696	278.0
Aroclor-1260	4	11.480	0.000	273530	242.9	4	12.349	0.000	204231	273.3
Aroclor-1260	5	11.586	-0.000	132108	269.4	NS	---			----
Total Col1Ave (5 peaks):				261.3		Total Col2Ave (4 peaks):			277.9	RPD = 6
Corrected Ave (4 peaks):				259.0		Corrected Ave (3 peaks):			273.7	RPD = 6
Aroclor-1262	1	10.405	0.000	223537	175.3	1	11.043	-0.000	123924	170.8
Aroclor-1262	2	11.077	0.000	596328	207.9	2	11.759	0.000	319696	200.4
Aroclor-1262	3	11.586	-0.000	132108	166.0	3	12.277	0.001	87098	170.0
Aroclor-1262	4	11.658	0.001	176030	168.7	4	13.066	0.000	84509	145.7
Total Col1Ave (4 peaks):				179.5		Total Col2Ave (4 peaks):			171.7	RPD = 4
Corrected Ave (3 peaks):				170.0		Corrected Ave (3 peaks):			162.1	RPD = 5
Aroclor-1268	1	11.586	-0.003	132108	45.4	1	12.277	0.004	87098	51.9
Aroclor-1268	2	11.658	0.001	176030	56.4	2	12.349	0.010	204231	111.5
Aroclor-1268	3	12.062	0.025	90211	36.0	3	12.731	0.001	3573	2.3
Aroclor-1268	4	12.806	-0.006	57142	5.8	4	13.544	-0.002	17452	3.4
Total Col1Ave (4 peaks):				35.9		Total Col2Ave (4 peaks):			42.3	RPD = 16
Corrected Ave (3 peaks):				29.1		Corrected Ave (3 peaks):			19.2	RPD = 41*

Total PCB Area Col1 (5.118 - 13.110) = 5907925 Col1 Total PCB = 0.5 ppm*

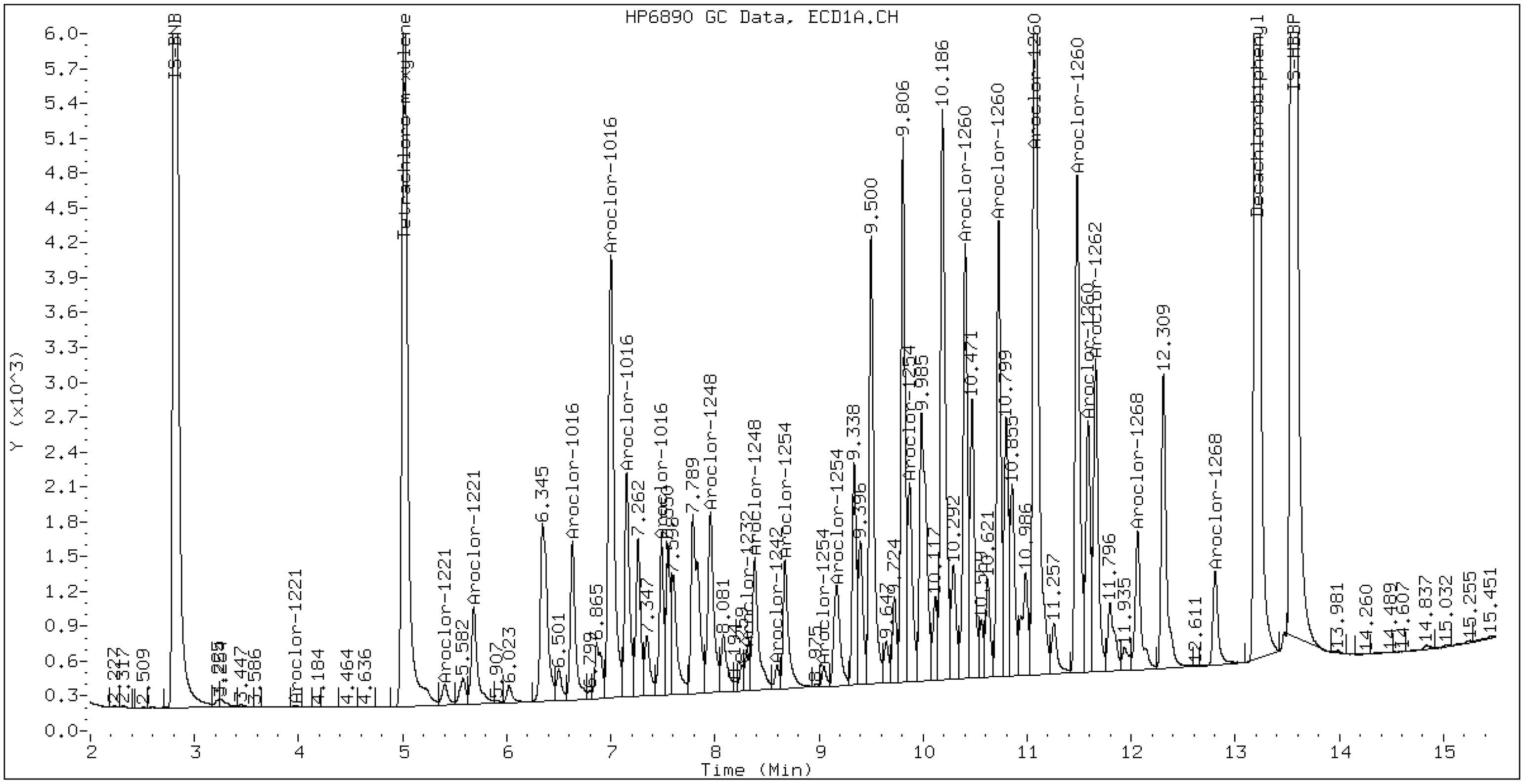
Total PCB Area Col2 (5.118 - 13.110) = 3169625 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

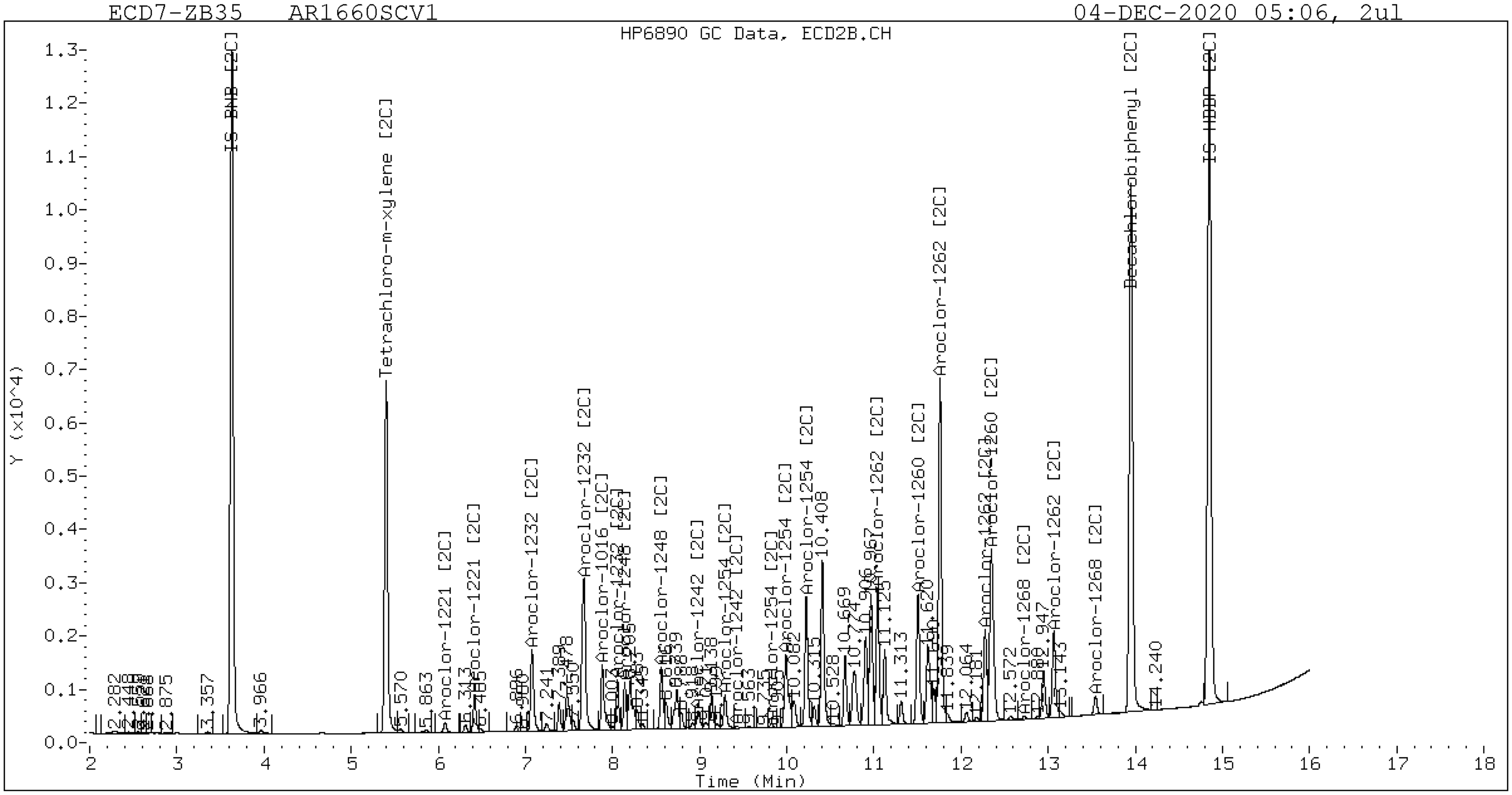
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV1 04-DEC-2020 05:06, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV1 04-DEC-2020 05:06, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120421ECD7.D
Data file 2: /20201204.b/20201204.b/20120421ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV2
Client ID:
Injection Date: 04-DEC-2020 05:27
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.001	491240	5.401	-0.001	325882	42.5	44.8	5.3	Tetrachloro-m-xylene
13.210	-0.000	945810	13.951	-0.000	538416	40.7	46.9	14.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	106.1	112.0
Decachlorobiphenyl	101.7	117.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	793550	0.9
Hexabromobiphenyl	2132987	2188269	2.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	634778	-0.1
Hexabromobiphenyl	665758	697627	4.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

```
//target/share/chem4/ecd7.i/20201204.b/20120421ECD7.D      AR1242SCV2                         page 2
                            ZB5 Col                                ZB35 Col
 Aroclor   Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
 ==========================================================================================
 Aroclor-1016 1   6.630  -0.000     74056   185.4      1    7.075  -0.001    58151   188.8
 Aroclor-1016 2   7.001  -0.001    226378   177.9      2    7.671  -0.000   131850   189.7
 Aroclor-1016 3   7.152   0.000     97975   179.2      3    7.883   0.001    49024   186.1
 Aroclor-1016 4   7.486  -0.063     61294   206.2      4    8.057   0.000    29614   187.6
       Total Col1Ave (4 peaks):   187.2       Total Col2Ave (4 peaks):   188.1   RPD = 0
       Corrected Ave (3 peaks):   180.9       Corrected Ave (3 peaks):   187.5   RPD = 4

 Aroclor-1221 1   3.975   0.003       555     5.4      1     ---                       0.0
 Aroclor-1221 2   5.403  -0.003     12058    82.6      2    6.078   0.004     8048    92.3
 Aroclor-1221 3   5.681  -0.001     53082   141.7      3    6.417   0.000    23791   146.4
       Total Col1Ave (3 peaks):    76.6                Col2Ave: <3 Quant Peaks

 Aroclor-1232 1   3.975   0.001       555     8.9      1     ---                       0.0
 Aroclor-1232 2   6.630  -0.001     74056   457.2      2    7.075  -0.002    58151   414.7
 Aroclor-1232 3   7.001  -0.000    226378   427.6      3    7.671  -0.001   131850   450.3
 Aroclor-1232 4   8.308  -0.001     74236   472.0      4    8.057  -0.000    29614   443.7
       Total Col1Ave (4 peaks):   341.4       Total Col2Ave (3 peaks):   436.2   RPD = 24
       Corrected Ave (3 peaks):   297.9                   Corrected Ave: < 3 Peaks

 Aroclor-1242 1   6.630  -0.001     74056   240.5      1    7.075  -0.001    58151   242.3
 Aroclor-1242 2   7.001  -0.002    226378   238.4      2    7.671  -0.001   131850   237.2
 Aroclor-1242 3   8.308  -0.001     74236   235.5      3    8.991  -0.000    50455   230.0
 Aroclor-1242 4   8.602  -0.001     75873   221.1      4    9.426  -0.001    50367   233.3
       Total Col1Ave (4 peaks):   233.9       Total Col2Ave (4 peaks):   235.7   RPD = 1
       Corrected Ave (3 peaks):   231.7       Corrected Ave (3 peaks):   233.5   RPD = 1

 Aroclor-1248 1   7.486  -0.000     61294   148.1      1    8.140  -0.001    28713   133.4
 Aroclor-1248 2   7.957   0.001    100565   160.2      2    8.561  -0.000    41996   149.1
 Aroclor-1248 3   8.365   0.000    159627   172.0      3    8.991  -0.001    50455   125.8
 Aroclor-1248 4   8.602   0.001     75873   141.5      4    9.426   0.000    50367   128.1
       Total Col1Ave (4 peaks):   155.5       Total Col2Ave (4 peaks):   134.1   RPD = 15
       Corrected Ave (3 peaks):   149.9       Corrected Ave (3 peaks):   129.1   RPD = 15

 Aroclor-1254 1   8.674  -0.001     57708    61.4      1    9.290  -0.000    18475    40.8
 Aroclor-1254 2   8.742  -0.001     39613    77.8      2    9.426   0.042    50367   239.9
 Aroclor-1254 3   9.046   0.000     30111    48.1      3    9.823   0.000    11321    37.7
 Aroclor-1254 4   9.180   0.000     56187    43.5      4    9.974   0.002    24173    34.2
 Aroclor-1254 5   9.880   0.003     34148    39.9      5   10.203  -0.002    23932    32.7
       Total Col1Ave (5 peaks):    54.1       Total Col2Ave (5 peaks):    77.1   RPD = 35
       Corrected Ave (4 peaks):    48.2       Corrected Ave (4 peaks):    36.3   RPD = 28

 Aroclor-1260 1  10.406   0.002      1571     1.8      1   10.967  -0.076     8147    19.1
 Aroclor-1260 2  10.723  -0.003      1628     1.9      2   11.519   0.013     1967     4.4
 Aroclor-1260 3  11.078  -0.002      4111     1.9      3   11.762   0.003     1178     1.0
 Aroclor-1260 4  11.480   0.000      2943     2.6      4   12.354   0.005      137     0.2
 Aroclor-1260 5  11.590   0.004       571     1.2      NS    ---                      ----
       Total Col1Ave (5 peaks):     1.9       Total Col2Ave (4 peaks):     6.2   RPD = 107*
       Corrected Ave (4 peaks):     1.7       Corrected Ave (3 peaks):     1.9   RPD = 9

 Aroclor-1262 1  10.406   0.001      1571     1.2      1   10.967  -0.077     8147    11.2
 Aroclor-1262 2  11.078   0.000      4111     1.4      2   11.762   0.004     1178     0.7
 Aroclor-1262 3  11.590   0.004       571     0.7      3   12.354   0.078      137     0.3
 Aroclor-1262 4  11.659   0.002       533     0.5      4   13.146   0.080     4808     8.3
       Total Col1Ave (4 peaks):     1.0       Total Col2Ave (4 peaks):     5.1   RPD = 136*
       Corrected Ave (3 peaks):     0.8       Corrected Ave (3 peaks):     3.1   RPD = 116*

 Aroclor-1268 1  11.590   0.001       571     0.2      1   12.354   0.081      137     0.1
 Aroclor-1268 2  11.659   0.002       533     0.2      2     ---                       0.0
 Aroclor-1268 3  12.032  -0.005      5531     2.2      3   12.733   0.004      972     0.6
 Aroclor-1268 4  12.805  -0.007     19913     2.0      4   13.544  -0.002     3078     0.6
       Total Col1Ave (4 peaks):     1.1       Total Col2Ave (3 peaks):     0.4   RPD = 89*
       Corrected Ave (3 peaks):     0.8                   Corrected Ave: < 3 Peaks
```

Total PCB Area Col1 (5.118 - 13.110) = 2078339 Col1 Total PCB = 0.2 ppm*

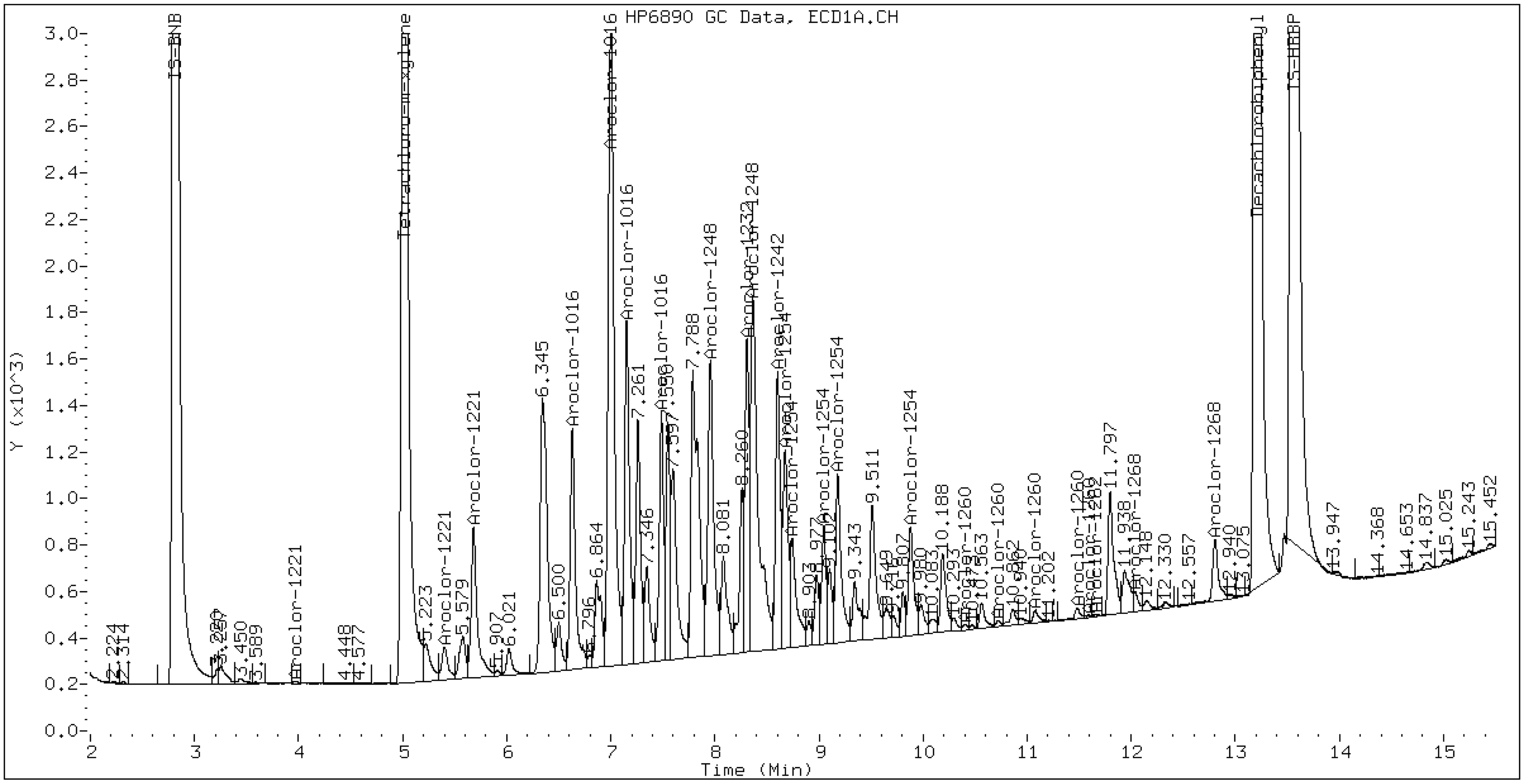
Total PCB Area Col2 (5.118 - 13.110) = 1247459 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

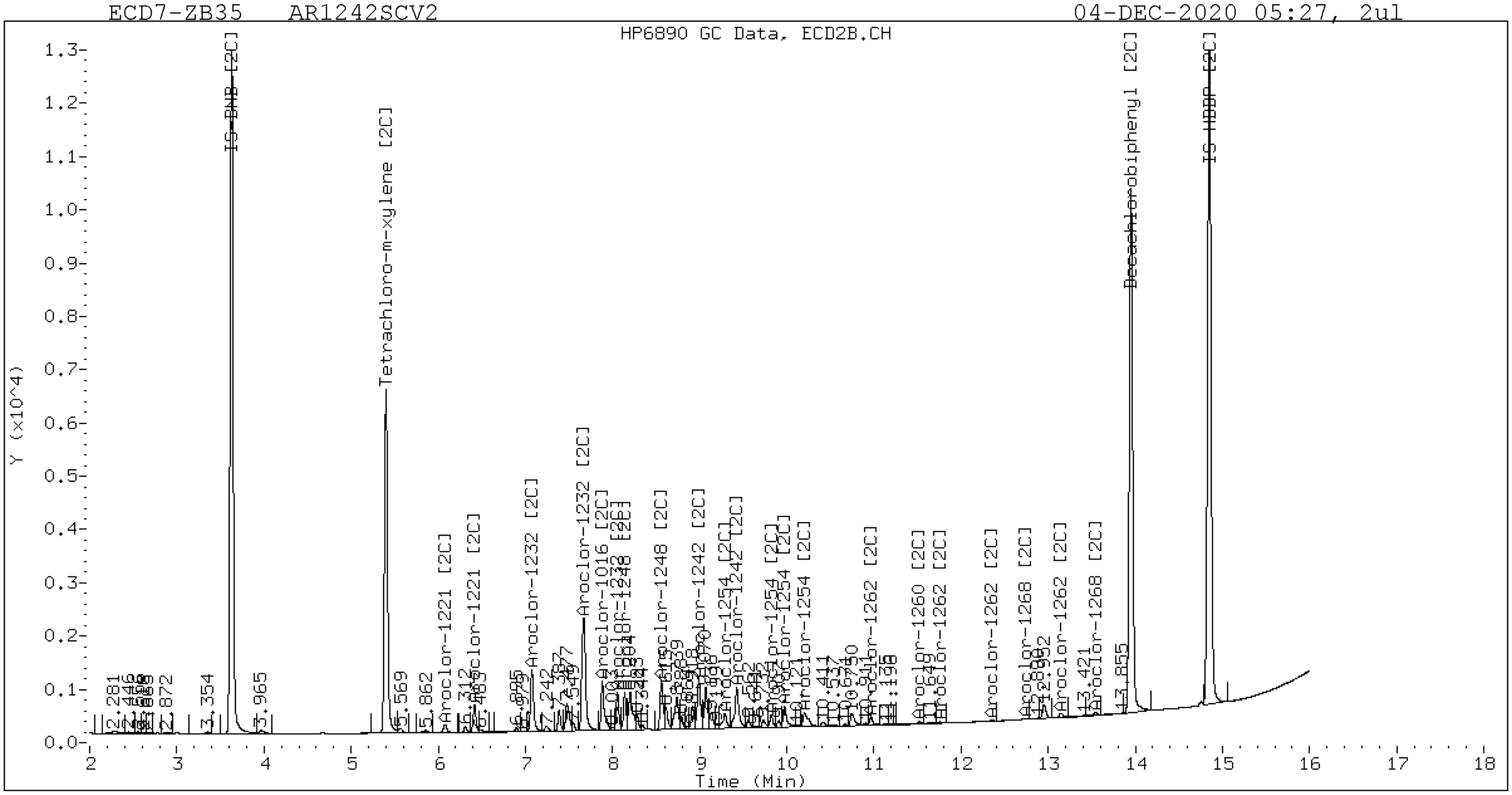
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV2 04-DEC-2020 05:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV2 04-DEC-2020 05:27, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120422ECD7.D
Data file 2: /20201204.b/20201204.b/20120422ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV3
Client ID:
Injection Date: 04-DEC-2020 05:47
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.001	519389	5.400	-0.002	333935	44.8	46.1	2.7	Tetrachloro-m-xylene
13.209	-0.001	967775	13.951	-0.000	548704	41.8	48.4	14.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	112.1	115.1
Decachlorobiphenyl	104.6	121.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	794644	1.0
Hexabromobiphenyl	2132987	2176927	2.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	632599	-0.5
Hexabromobiphenyl	665758	689113	3.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

```
//target/share/chem4/ecd7.i/20201204.b/20120422ECD7.D      AR1248SCV3                         page 2
                              ZB5 Col                                 ZB35 Col
 Aroclor   Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
 ===========================================================================================
 Aroclor-1016 1   6.630  -0.001     37848    94.6      1    7.074  -0.002    29752    97.0
 Aroclor-1016 2   6.998  -0.004    154133   121.0      2    7.669  -0.002    87378   126.1
 Aroclor-1016 3   7.154   0.002     62043   113.4      3    7.882   0.000    19776    75.3
 Aroclor-1016 4   7.486  -0.063     99147   333.1      4    8.057   0.000    16327   103.8
       Total Col1Ave (4 peaks):   165.5       Total Col2Ave (4 peaks):   100.6   RPD = 49*
       Corrected Ave (3 peaks):   109.7       Corrected Ave (3 peaks):    92.0   RPD = 17

 Aroclor-1221 1   3.970  -0.002       459     4.4      1     ---                       0.0
 Aroclor-1221 2   5.399  -0.007      4381    30.0      2    6.084   0.010     3982    45.8
 Aroclor-1221 3   5.681  -0.001     13045    34.8      3    6.416  -0.001     5950    36.7
       Total Col1Ave (3 peaks):    23.1                Col2Ave: <3 Quant Peaks

 Aroclor-1232 1   3.970  -0.003       459     7.4      1     ---                       0.0
 Aroclor-1232 2   6.630  -0.002     37848   233.3      2    7.074  -0.003    29752   212.9
 Aroclor-1232 3   6.998  -0.004    154133   290.8      3    7.669  -0.003    87378   299.4
 Aroclor-1232 4   8.308  -0.001    191286  1214.6      4    8.057  -0.000    16327   245.4
       Total Col1Ave (4 peaks):   436.5       Total Col2Ave (3 peaks):   252.6   RPD = 53*
       Corrected Ave (3 peaks):   177.1                     Corrected Ave: < 3 Peaks

 Aroclor-1242 1   6.630  -0.002     37848   122.8      1    7.074  -0.002    29752   124.4
 Aroclor-1242 2   6.998  -0.005    154133   162.1      2    7.669  -0.003    87378   157.7
 Aroclor-1242 3   8.308  -0.001    191286   606.0      3    8.990  -0.001    93110   426.0
 Aroclor-1242 4   8.601  -0.002    124142   361.3      4    9.425  -0.002    90178   419.1
       Total Col1Ave (4 peaks):   313.0       Total Col2Ave (4 peaks):   281.8   RPD = 10
       Corrected Ave (3 peaks):   215.4       Corrected Ave (3 peaks):   233.8   RPD = 8

 Aroclor-1248 1   7.486  -0.001     99147   239.2      1    8.140  -0.001    51725   241.2
 Aroclor-1248 2   7.956  -0.001    145861   232.1      2    8.561  -0.001    67176   239.3
 Aroclor-1248 3   8.366   0.001    215594   232.0      3    8.990  -0.001    93110   232.9
 Aroclor-1248 4   8.601  -0.000    124142   231.1      4    9.425  -0.001    90178   230.1
       Total Col1Ave (4 peaks):   233.6       Total Col2Ave (4 peaks):   235.9   RPD = 1
       Corrected Ave (3 peaks):   231.8       Corrected Ave (3 peaks):   234.1   RPD = 1

 Aroclor-1254 1   8.675  -0.001    105692   112.3      1    9.290  -0.001    29171    64.6
 Aroclor-1254 2   8.743  -0.001     73797   144.7      2    9.425   0.041    90178   431.0
 Aroclor-1254 3   9.045  -0.001     59822    95.4      3    9.822  -0.000    25001    83.6
 Aroclor-1254 4   9.180  -0.000    110698    85.6      4    9.972  -0.000    51389    72.9
 Aroclor-1254 5   9.879   0.002     83378    97.2      5   10.201  -0.005    30837    42.3
       Total Col1Ave (5 peaks):   107.0       Total Col2Ave (5 peaks):   138.9   RPD = 26
       Corrected Ave (4 peaks):    97.6       Corrected Ave (4 peaks):    65.8   RPD = 39

 Aroclor-1260 1  10.405   0.000      5157     6.1      1   11.043  -0.000     1687     4.0
 Aroclor-1260 2  10.726  -0.001      3873     4.6      2   11.516   0.009     2999     6.8
 Aroclor-1260 3  11.076  -0.003      9719     4.4      3   11.762   0.003     2801     2.5
 Aroclor-1260 4  11.480  -0.000      3945     3.5      4   12.351   0.002     2228     3.0
 Aroclor-1260 5  11.586  -0.000      3424     7.0     NS     ---                      ----
       Total Col1Ave (5 peaks):     5.1       Total Col2Ave (4 peaks):     4.1   RPD = 23
       Corrected Ave (4 peaks):     4.7       Corrected Ave (3 peaks):     3.2   RPD = 38

 Aroclor-1262 1  10.405  -0.000      5157     4.1      1   11.043  -0.000     1687     2.4
 Aroclor-1262 2  11.076  -0.001      9719     3.4      2   11.762   0.004     2801     1.8
 Aroclor-1262 3  11.586  -0.000      3424     4.3      3   12.276   0.000      409     0.8
 Aroclor-1262 4  11.656  -0.001      3749     3.6      4   13.067   0.002     1105     1.9
       Total Col1Ave (4 peaks):     3.8       Total Col2Ave (4 peaks):     1.7   RPD = 77*
       Corrected Ave (3 peaks):     3.7       Corrected Ave (3 peaks):     1.5   RPD = 84*

 Aroclor-1268 1  11.586  -0.003      3424     1.2      1   12.276   0.002      409     0.2
 Aroclor-1268 2  11.656  -0.001      3749     1.2      2   12.351   0.011     2228     1.2
 Aroclor-1268 3  12.034  -0.003      6957     2.8      3   12.729  -0.001     1375     0.9
 Aroclor-1268 4  12.804  -0.008     20500     2.1      4   13.545  -0.001     3684     0.7
       Total Col1Ave (4 peaks):     1.8       Total Col2Ave (4 peaks):     0.8   RPD = 80*
       Corrected Ave (3 peaks):     1.5       Corrected Ave (3 peaks):     0.6   RPD = 81*
```

Total PCB Area Col1 (5.118 - 13.110) = 2537125 Col1 Total PCB = 0.2 ppm*

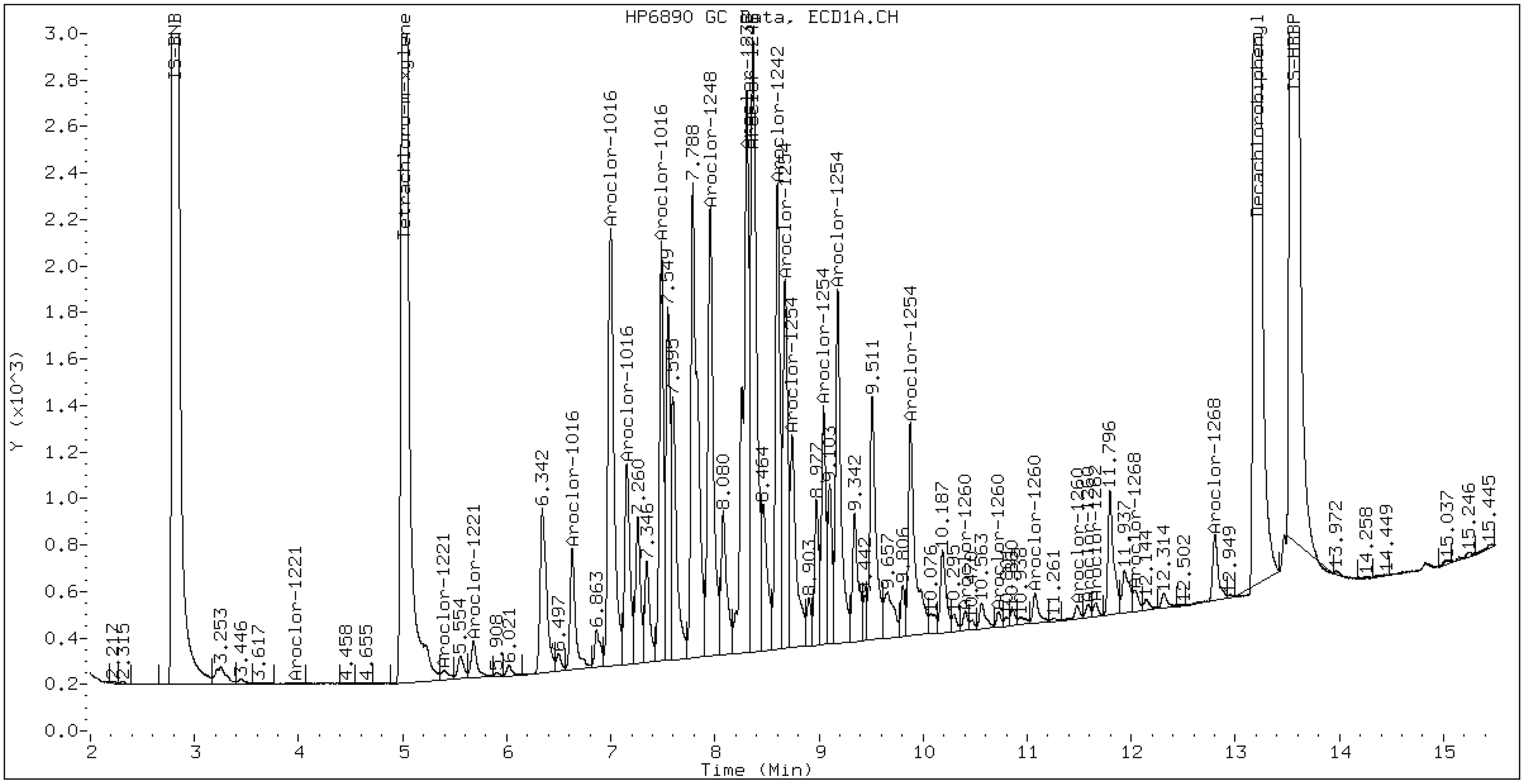
Total PCB Area Col2 (5.118 - 13.110) = 1484584 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

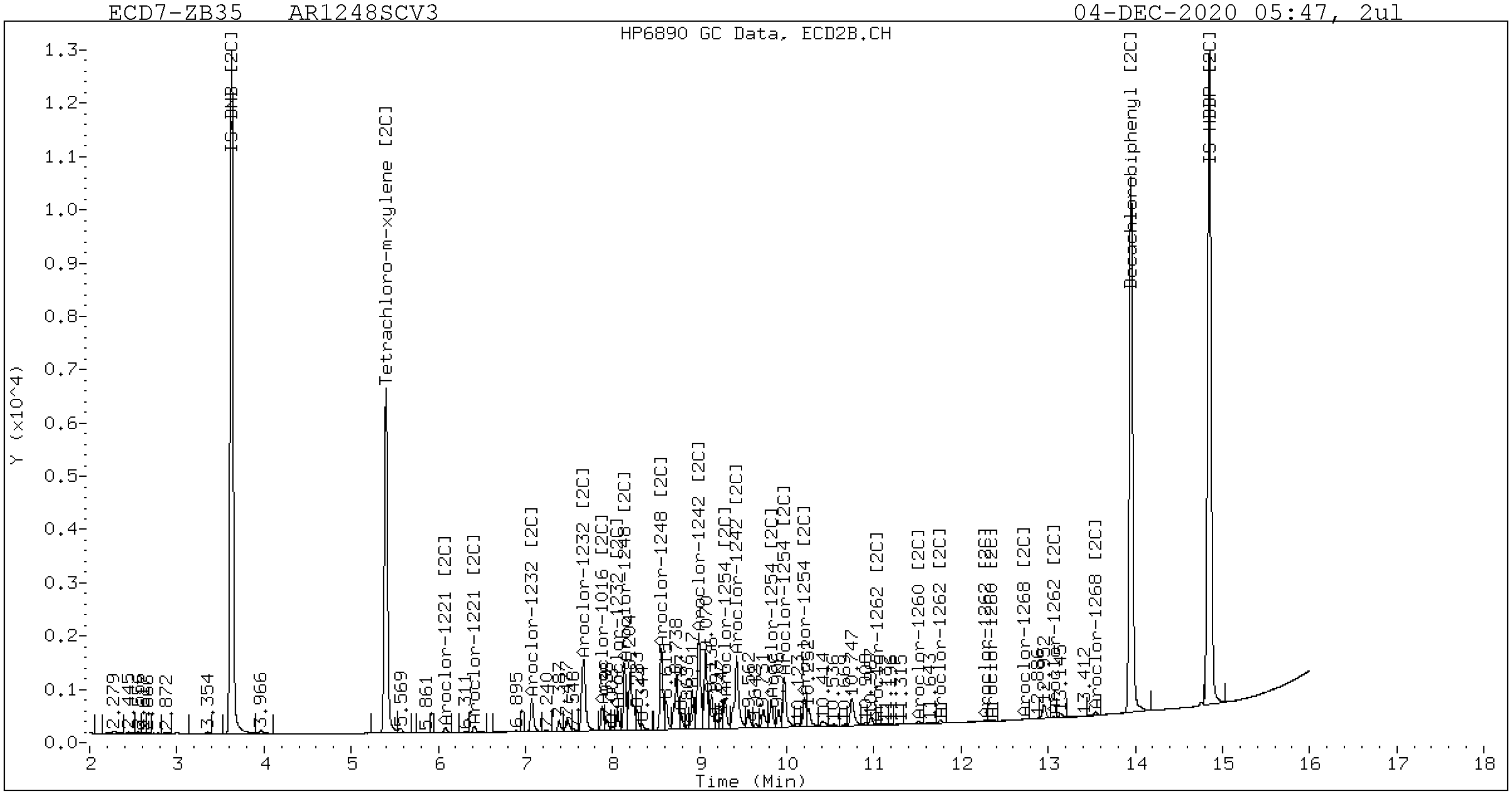
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV3 04-DEC-2020 05:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV3 04-DEC-2020 05:47, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120423ECD7.D
Data file 2: /20201204.b/20201204.b/20120423ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV4
Client ID:
Injection Date: 04-DEC-2020 06:08
Report Date: 12/07/2020 11:54
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.015	-0.002	497179	5.400	-0.002	321312	43.0	44.8	4.2	Tetrachloro-m-xylene
13.210	-0.000	933785	13.951	0.001	530860	41.1	47.2	13.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	107.5	112.1
Decachlorobiphenyl	102.8	118.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	792760	0.8
Hexabromobiphenyl	2132987	2135851	0.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	625033	-1.6
Hexabromobiphenyl	665758	683418	2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.631	0.001	1306	3.3	1	7.075	-0.001	750	2.5
Aroclor-1016	2	6.996	-0.007	6815	5.4	2	7.664	-0.007	2790	4.1
Aroclor-1016	3	7.162	0.010	4028	7.4	3	7.884	0.002	520	2.0
Aroclor-1016	4	7.487	-0.062	73107	246.2	4	8.058	0.002	262	1.7
	Total Col1Ave (4 peaks):			65.6		Total Col2Ave (4 peaks):			2.6	RPD = 185*
	Corrected Ave (3 peaks):			5.3		Corrected Ave (3 peaks):			2.1	RPD = 89*
Aroclor-1221	1	4.003	0.031	395	3.8	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.085	0.011	3137	36.5
Aroclor-1221	3	5.681	-0.001	1856	5.0	3	6.406	-0.011	842	5.3
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.003	0.030	395	6.3	1	---			0.0
Aroclor-1232	2	6.631	-0.000	1306	8.1	2	7.075	-0.002	750	5.4
Aroclor-1232	3	6.996	-0.006	6815	12.9	3	7.664	-0.008	2790	9.7
Aroclor-1232	4	8.309	-0.000	75318	479.4	4	8.058	0.001	262	4.0
	Total Col1Ave (4 peaks):			126.7		Total Col2Ave (3 peaks):			6.4	RPD = 181*
	Corrected Ave (3 peaks):			9.1			Corrected Ave: < 3 Peaks			
Aroclor-1242	1	6.631	-0.000	1306	4.2	1	7.075	-0.001	750	3.2
Aroclor-1242	2	6.996	-0.007	6815	7.2	2	7.664	-0.008	2790	5.1
Aroclor-1242	3	8.309	-0.000	75318	239.2	3	8.993	0.002	35817	165.8
Aroclor-1242	4	8.595	-0.007	51811	151.1	4	9.383	-0.044	51086	240.3
	Total Col1Ave (4 peaks):			100.4		Total Col2Ave (4 peaks):			103.6	RPD = 3
	Corrected Ave (3 peaks):			54.2		Corrected Ave (3 peaks):			58.0	RPD = 7
Aroclor-1248	1	7.487	0.000	73107	176.8	1	8.140	-0.001	37393	176.4
Aroclor-1248	2	7.956	-0.001	24544	39.1	2	8.562	0.000	23796	85.8
Aroclor-1248	3	8.382	0.017	184505	199.0	3	8.993	0.001	35817	90.7
Aroclor-1248	4	8.595	-0.006	51811	96.7	4	9.383	-0.043	51086	131.9
	Total Col1Ave (4 peaks):			127.9		Total Col2Ave (4 peaks):			121.2	RPD = 5
	Corrected Ave (3 peaks):			104.2		Corrected Ave (3 peaks):			102.8	RPD = 1
Aroclor-1254	1	8.674	-0.001	233167	248.3	1	9.290	-0.001	112499	252.1
Aroclor-1254	2	8.743	-0.001	127115	249.9	2	9.383	-0.001	51086	247.1
Aroclor-1254	3	9.045	-0.001	208920	334.0	3	9.822	-0.001	74276	251.3
Aroclor-1254	4	9.179	-0.001	314079	243.5	4	9.972	-0.000	171593	246.3
Aroclor-1254	5	9.876	-0.001	212269	248.0	5	10.204	-0.001	182042	253.0
	Total Col1Ave (5 peaks):			264.7		Total Col2Ave (5 peaks):			249.9	RPD = 6
	Corrected Ave (4 peaks):			247.4		Corrected Ave (4 peaks):			249.2	RPD = 1
Aroclor-1260	1	10.401	-0.004	21923	26.4	1	11.038	-0.005	7916	19.0
Aroclor-1260	2	10.726	-0.000	23351	28.2	2	11.515	0.009	42144	95.8
Aroclor-1260	3	11.076	-0.003	53107	24.7	3	11.761	0.002	26550	23.6
Aroclor-1260	4	11.479	-0.001	47458	43.1	4	12.350	0.001	15700	21.5
Aroclor-1260	5	11.657	0.071	3124	6.5	NS	---			----
	Total Col1Ave (5 peaks):			25.8		Total Col2Ave (4 peaks):			40.0	RPD = 43*
	Corrected Ave (4 peaks):			21.4		Corrected Ave (3 peaks):			21.3	RPD = 0
Aroclor-1262	1	10.401	-0.004	21923	17.6	1	11.038	-0.006	7916	11.1
Aroclor-1262	2	11.076	-0.001	53107	19.0	2	11.761	0.003	26550	17.0
Aroclor-1262	3	11.657	0.071	3124	4.0	3	12.286	0.011	1391	2.8
Aroclor-1262	4	---			0.0	4	13.066	0.001	907	1.6
	Total Col1Ave (3 peaks):			13.5		Total Col2Ave (4 peaks):			8.1	RPD = 50*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			5.2	
Aroclor-1268	1	11.657	0.069	3124	1.1	1	12.286	0.013	1391	0.8
Aroclor-1268	2	---			0.0	2	12.350	0.011	15700	8.8
Aroclor-1268	3	12.035	-0.002	6558	2.7	3	12.733	0.004	1075	0.7
Aroclor-1268	4	12.805	-0.008	19648	2.0	4	13.545	-0.001	2720	0.5
	Total Col1Ave (3 peaks):			1.9		Total Col2Ave (4 peaks):			2.7	RPD = 33
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			0.7	

Total PCB Area Col1 (5.118 - 13.110) = 3440587 Col1 Total PCB = 0.3 ppm*

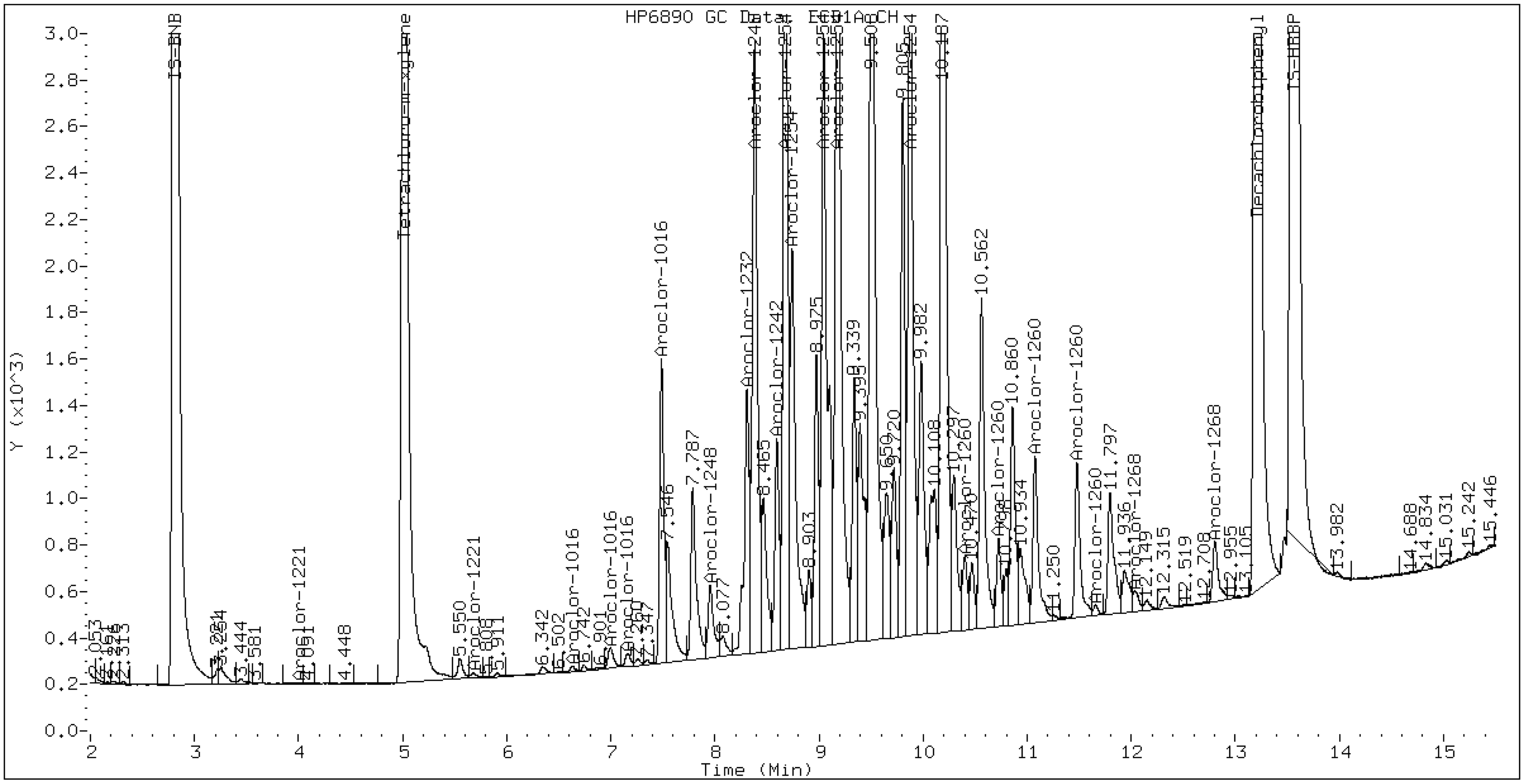
Total PCB Area Col2 (5.118 - 13.110) = 1870129 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

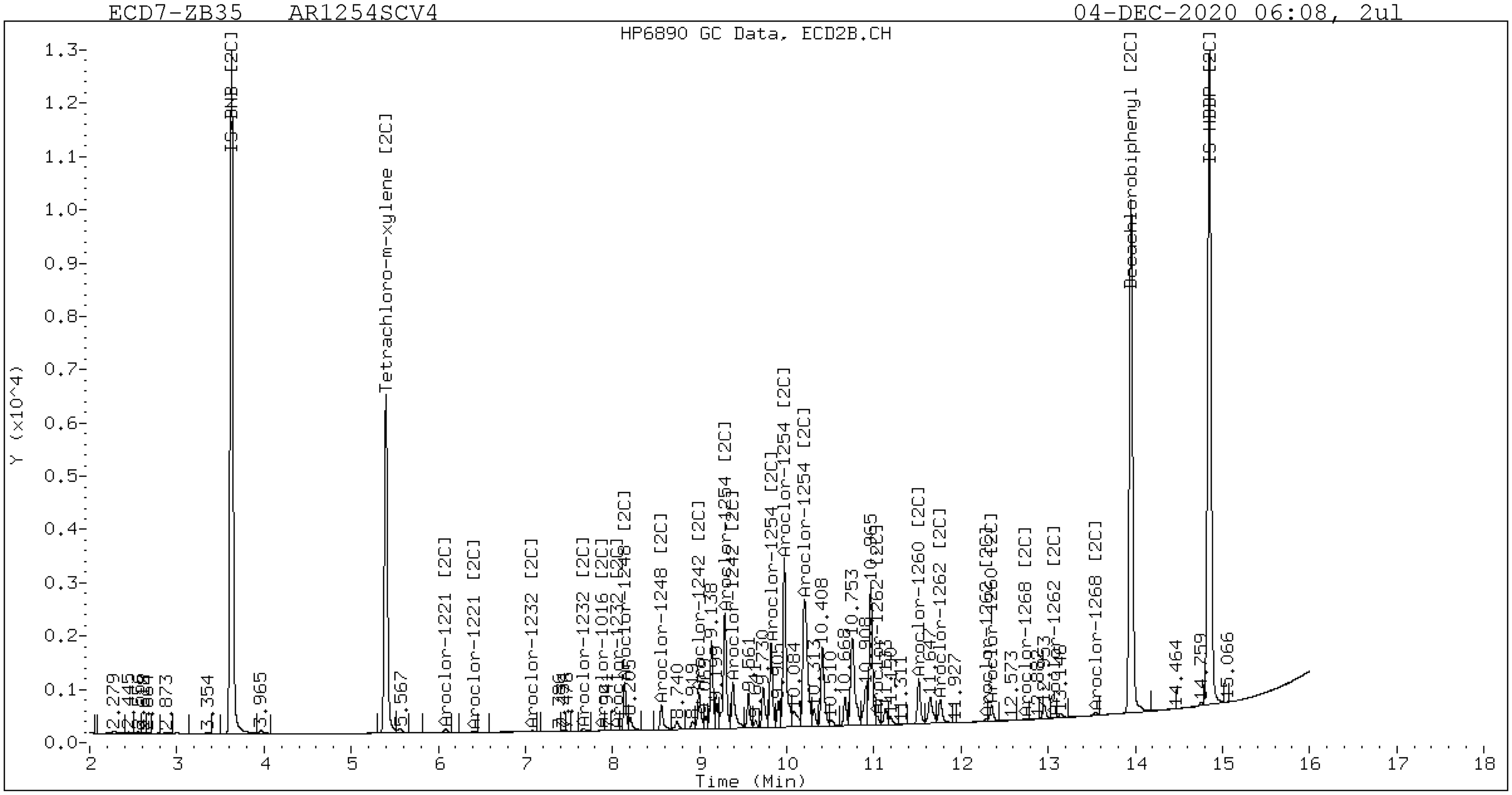
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV4 04-DEC-2020 06:08, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV4 04-DEC-2020 06:08, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120424ECD7.D
Data file 2: /20201204.b/20201204.b/20120424ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV5
Client ID:
Injection Date: 04-DEC-2020 06:28
Report Date: 12/07/2020 11:54
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.016	-0.002	500967	5.401	-0.002	328515	45.2	46.7	3.4	Tetrachloro-m-xylene
13.210	-0.001	948706	13.950	-0.001	538054	42.2	48.8	14.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	112.9	116.8
Decachlorobiphenyl	105.6	122.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	760705	-3.3
Hexabromobiphenyl	2132987	2113407	-0.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	613536	-3.5
Hexabromobiphenyl	665758	670231	0.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	6.630	-0.001	9332	24.4	1	7.086	0.010	12173	40.9	
Aroclor-1016	2	7.002	-0.001	27232	22.3	2	7.672	0.001	12687	18.9	
Aroclor-1016	3	7.152	-0.001	13232	25.3	3	7.884	0.002	5508	21.6	
Aroclor-1016	4	7.487	-0.063	6835	24.0	4	8.058	0.001	3069	20.1	
Total Col1Ave (4 peaks):					24.0	Total Col2Ave (4 peaks):				25.4	RPD = 6
Corrected Ave (3 peaks):					23.6	Corrected Ave (3 peaks):				20.2	RPD = 15
Aroclor-1221	1	3.972	0.000	25700	259.9	1	4.668	-0.001	10702	252.3	
Aroclor-1221	2	5.405	-0.000	35281	252.1	2	6.074	-0.001	21178	251.2	
Aroclor-1221	3	5.682	0.000	88675	247.0	3	6.416	-0.001	38842	247.2	
Total Col1Ave (3 peaks):					253.0	Total Col2Ave (3 peaks):				250.3	RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks					
Aroclor-1232	1	3.972	-0.001	25700	430.0	1	4.668	-0.001	10702	407.5	
Aroclor-1232	2	6.630	-0.001	9332	60.1	2	7.086	0.009	12173	89.8	
Aroclor-1232	3	7.002	0.000	27232	53.7	3	7.672	0.000	12687	44.8	
Aroclor-1232	4	8.310	0.002	7334	48.6	4	8.058	0.001	3069	47.6	
Total Col1Ave (4 peaks):					148.1	Total Col2Ave (4 peaks):				147.4	RPD = 0
Corrected Ave (3 peaks):					54.1	Corrected Ave (3 peaks):				60.7	RPD = 11
Aroclor-1242	1	6.630	-0.001	9332	31.6	1	7.086	0.010	12173	52.5	
Aroclor-1242	2	7.002	-0.001	27232	29.9	2	7.672	-0.000	12687	23.6	
Aroclor-1242	3	8.310	0.002	7334	24.3	3	8.994	0.003	3292	15.5	
Aroclor-1242	4	8.599	-0.004	6567	20.0	4	9.428	0.001	2788	13.4	
Total Col1Ave (4 peaks):					26.4	Total Col2Ave (4 peaks):				26.2	RPD = 1
Corrected Ave (3 peaks):					24.7	Corrected Ave (3 peaks):				17.5	RPD = 34
Aroclor-1248	1	7.487	-0.000	6835	17.2	1	8.141	0.000	2855	13.7	
Aroclor-1248	2	7.956	-0.001	6254	10.4	2	8.564	0.002	2760	10.1	
Aroclor-1248	3	8.383	0.018	42170	47.4	3	8.994	0.003	3292	8.5	
Aroclor-1248	4	8.599	-0.003	6567	12.8	4	9.428	0.002	2788	7.3	
Total Col1Ave (4 peaks):					22.0	Total Col2Ave (4 peaks):				9.9	RPD = 75*
Corrected Ave (3 peaks):					13.5	Corrected Ave (3 peaks):				8.7	RPD = 43*
Aroclor-1254	1	8.675	-0.001	49067	54.4	1	9.292	0.001	15668	35.8	
Aroclor-1254	2	---			0.0	2	9.385	0.001	1659	8.2	
Aroclor-1254	3	9.046	0.000	8681	14.5	3	9.824	0.001	3263	11.2	
Aroclor-1254	4	9.166	-0.014	53719	43.4	4	9.992	0.020	74632	109.1	
Aroclor-1254	5	9.806	-0.071	271469	330.5	5	10.224	0.019	90774	128.5	
Total Col1Ave (4 peaks):					110.7	Total Col2Ave (5 peaks):				58.6	RPD = 62*
Corrected Ave (3 peaks):					37.4	Corrected Ave (4 peaks):				41.1	RPD = 9
Aroclor-1260	1	10.405	0.001	311981	379.6	1	11.043	0.000	176982	432.1	
Aroclor-1260	2	10.726	-0.000	256156	312.2	2	11.506	-0.001	146726	340.1	
Aroclor-1260	3	11.077	-0.002	651962	306.1	3	11.760	0.001	355912	322.5	
Aroclor-1260	4	11.480	-0.000	205051	188.4	4	12.348	-0.001	245935	343.0	
Aroclor-1260	5	11.586	0.000	256602	541.4	NS	---			----	
Total Col1Ave (5 peaks):					345.5	Total Col2Ave (4 peaks):				359.4	RPD = 4
Corrected Ave (4 peaks):					296.6	Corrected Ave (3 peaks):				335.2	RPD = 12
Aroclor-1262	1	10.405	0.000	311981	253.1	1	11.043	-0.000	176982	254.1	
Aroclor-1262	2	11.077	-0.000	651962	235.2	2	11.760	0.001	355912	232.5	
Aroclor-1262	3	11.586	0.000	256602	333.6	3	12.274	-0.001	159148	323.7	
Aroclor-1262	4	11.657	-0.000	301603	299.1	4	13.067	0.001	141336	253.8	
Total Col1Ave (4 peaks):					280.2	Total Col2Ave (4 peaks):				266.0	RPD = 5
Corrected Ave (3 peaks):					262.5	Corrected Ave (3 peaks):				246.8	RPD = 6
Aroclor-1268	1	11.586	-0.002	256602	91.3	1	12.274	0.001	159148	98.9	
Aroclor-1268	2	11.657	0.000	301603	99.9	2	12.348	0.008	245935	139.9	
Aroclor-1268	3	12.060	0.023	116958	48.3	3	12.729	-0.000	9225	6.3	
Aroclor-1268	4	12.806	-0.006	110966	11.6	4	13.545	-0.001	44848	9.2	
Total Col1Ave (4 peaks):					62.8	Total Col2Ave (4 peaks):				63.6	RPD = 1

Corrected Ave (3 peaks): 50.4 Corrected Ave (3 peaks): 38.1 RPD = 28

Total PCB Area Col1 (5.118 - 13.110) = 4837083 Col1 Total PCB = 0.4 ppm*

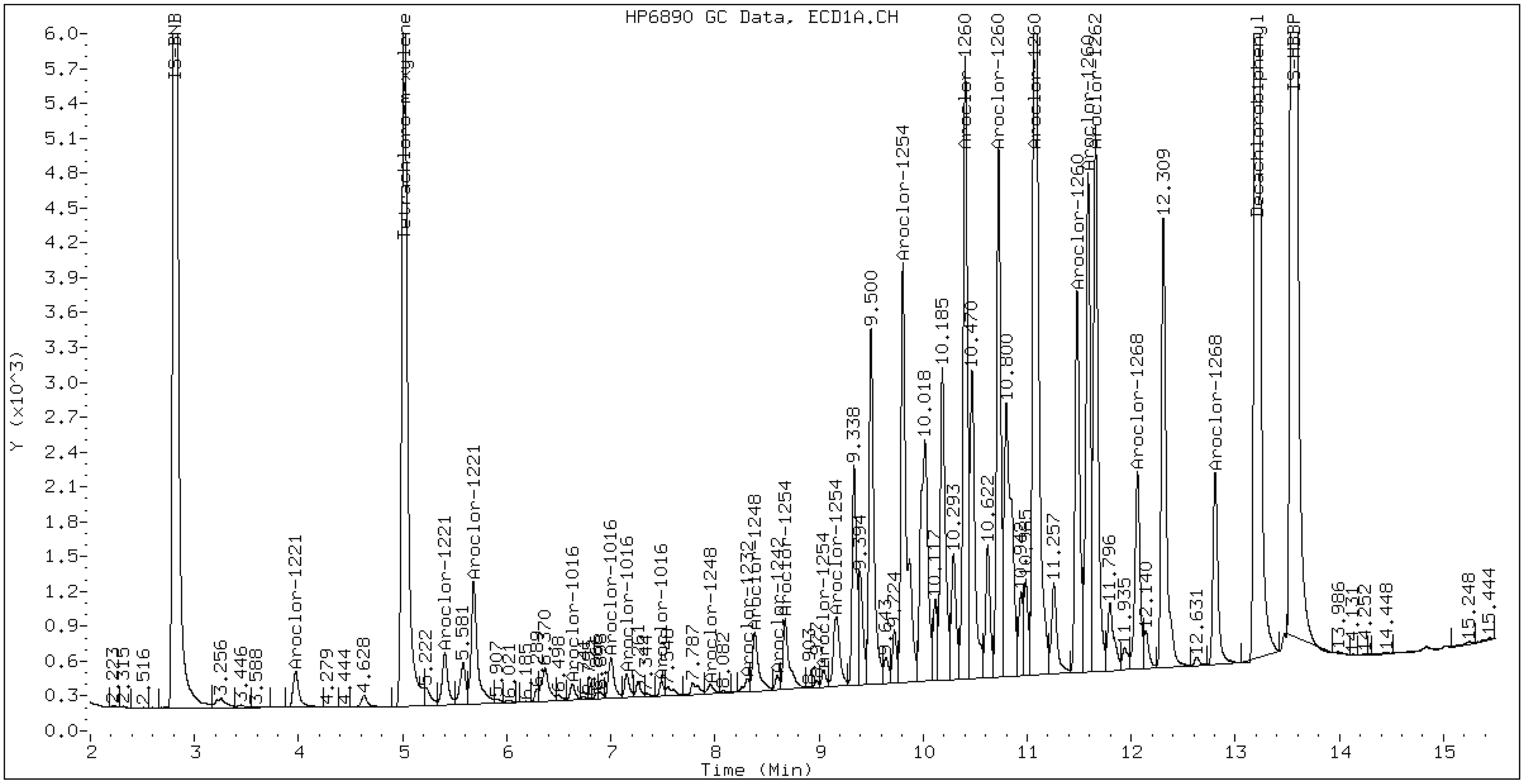
Total PCB Area Col2 (5.118 - 13.110) = 2627283 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

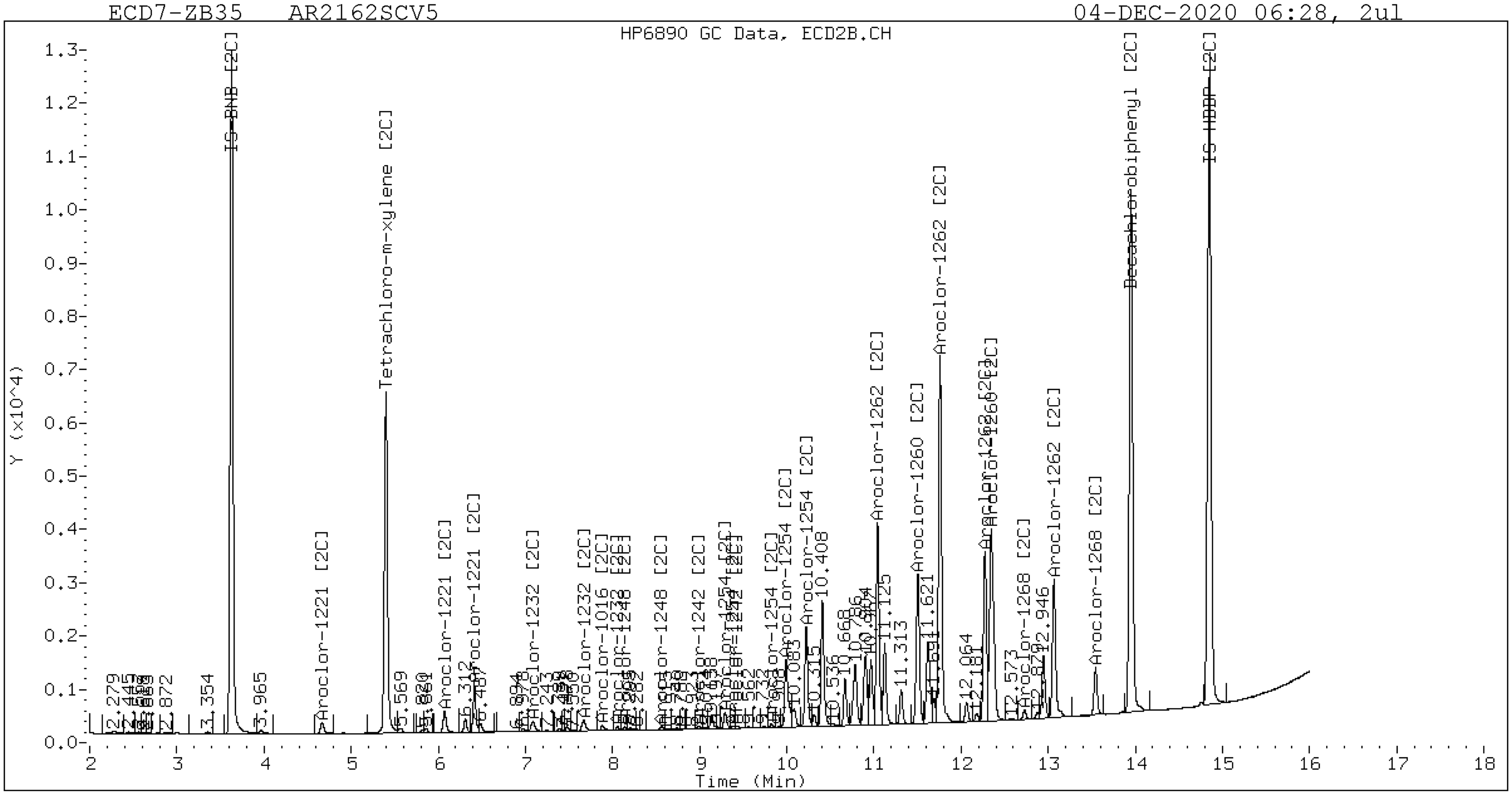
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV5 04-DEC-2020 06:28, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV5 04-DEC-2020 06:28, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120425ECD7.D
Data file 2: /20201204.b/20201204.b/20120425ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV6
Client ID:
Injection Date: 04-DEC-2020 06:49
Report Date: 12/07/2020 11:54
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.002	511511	5.400	-0.002	326478	45.5	45.9	0.8	Tetrachloro-m-xylene
13.210	0.000	1402408	13.950	-0.001	786093	61.5	69.8	12.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	113.8	114.8
Decachlorobiphenyl	153.8	174.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	770524	-2.1
Hexabromobiphenyl	2132987	2144827	0.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	620502	-2.4
Hexabromobiphenyl	665758	684700	2.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.630	-0.000	44327	114.3	1	7.076	-0.000	35634	118.4
Aroclor-1016	2	7.001	-0.002	133389	108.0	2	7.672	0.000	74142	109.1
Aroclor-1016	3	7.152	-0.000	58697	110.6	3	7.883	0.001	27953	108.6
Aroclor-1016	4	7.486	-0.063	32819	113.7	4	8.057	0.001	17125	111.0
Total Col1Ave (4 peaks):				111.6		Total Col2Ave (4 peaks):			111.8	RPD = 0
Corrected Ave (3 peaks):				110.8		Corrected Ave (3 peaks):			109.6	RPD = 1
Aroclor-1221	1	3.971	-0.001	15217	151.9	1	4.667	-0.002	6225	145.1
Aroclor-1221	2	5.404	-0.001	23065	162.7	2	6.075	0.000	14194	166.5
Aroclor-1221	3	5.682	-0.000	70892	195.0	3	6.416	-0.001	31775	200.0
Total Col1Ave (3 peaks):				169.9		Total Col2Ave (3 peaks):			170.5	RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.971	-0.002	15217	251.4	1	4.667	-0.002	6225	234.4
Aroclor-1232	2	6.630	-0.001	44327	281.8	2	7.076	-0.001	35634	259.9
Aroclor-1232	3	7.001	-0.001	133389	259.5	3	7.672	-0.000	74142	259.0
Aroclor-1232	4	8.308	-0.000	57707	377.9	4	8.057	0.000	17125	262.5
Total Col1Ave (4 peaks):				292.6		Total Col2Ave (4 peaks):			254.0	RPD = 14
Corrected Ave (3 peaks):				264.2		Corrected Ave (3 peaks):			251.1	RPD = 5
Aroclor-1242	1	6.630	-0.001	44327	148.3	1	7.076	-0.001	35634	151.9
Aroclor-1242	2	7.001	-0.002	133389	144.7	2	7.672	-0.001	74142	136.5
Aroclor-1242	3	8.308	-0.000	57707	188.5	3	8.992	0.001	25997	121.2
Aroclor-1242	4	8.603	-0.000	41786	125.4	4	9.428	0.001	25272	119.7
Total Col1Ave (4 peaks):				151.7		Total Col2Ave (4 peaks):			132.3	RPD = 14
Corrected Ave (3 peaks):				139.5		Corrected Ave (3 peaks):			125.8	RPD = 10
Aroclor-1248	1	7.486	-0.001	32819	81.7	1	8.140	-0.000	14105	67.0
Aroclor-1248	2	7.956	0.000	53707	88.1	2	8.562	0.001	21319	77.4
Aroclor-1248	3	8.364	-0.002	83942	93.2	3	8.992	0.000	25997	66.3
Aroclor-1248	4	8.603	0.001	41786	80.2	4	9.428	0.002	25272	65.7
Total Col1Ave (4 peaks):				85.8		Total Col2Ave (4 peaks):			69.1	RPD = 22
Corrected Ave (3 peaks):				83.3		Corrected Ave (3 peaks):			66.4	RPD = 23
Aroclor-1254	1	8.674	-0.002	23763	26.0	1	9.291	0.000	6551	14.8
Aroclor-1254	2	8.742	-0.001	15107	30.6	2	9.428	0.044	25272	123.1
Aroclor-1254	3	9.045	-0.000	9408	15.5	3	9.822	-0.000	3580	12.2
Aroclor-1254	4	9.181	0.001	18138	14.5	4	9.975	0.003	8171	11.8
Aroclor-1254	5	9.880	0.003	10355	12.4	5	10.210	0.005	7387	10.3
Total Col1Ave (5 peaks):				19.8		Total Col2Ave (5 peaks):			34.5	RPD = 54*
Corrected Ave (4 peaks):				17.1		Corrected Ave (4 peaks):			12.3	RPD = 33
Aroclor-1260	1	10.406	0.001	141643	169.8	1	11.044	0.001	61084	146.0
Aroclor-1260	2	10.726	-0.000	10799	13.0	2	11.487	-0.020	85617	194.2
Aroclor-1260	3	11.077	-0.003	85817	39.7	3	11.759	-0.000	37085	32.9
Aroclor-1260	4	11.481	0.000	2895	2.6	4	12.340	-0.009	438765	598.9
Aroclor-1260	5	11.588	0.002	702643	1460.8	NS	---			----
Total Col1Ave (5 peaks):				337.2		Total Col2Ave (4 peaks):			243.0	RPD = 32
Corrected Ave (4 peaks):				56.3		Corrected Ave (3 peaks):			124.4	RPD = 75*
Aroclor-1262	1	10.406	0.001	141643	113.2	1	11.044	0.001	61084	85.8
Aroclor-1262	2	11.077	-0.001	85817	30.5	2	11.759	0.000	37085	23.7
Aroclor-1262	3	11.588	0.002	702643	900.0	3	12.273	-0.003	405151	806.6
Aroclor-1262	4	11.657	-0.000	749121	732.0	4	13.065	-0.000	143614	252.5
Total Col1Ave (4 peaks):				443.9		Total Col2Ave (4 peaks):			292.1	RPD = 41*
Corrected Ave (3 peaks):				291.9		Corrected Ave (3 peaks):			120.7	RPD = 83*
Aroclor-1268	1	11.588	-0.000	702643	246.4	1	12.273	-0.000	405151	246.4
Aroclor-1268	2	11.657	-0.000	749121	244.6	2	12.340	0.000	438765	244.4
Aroclor-1268	3	12.037	-0.001	604557	246.0	3	12.729	0.000	371169	246.5
Aroclor-1268	4	12.812	-0.000	2402545	248.0	4	13.545	-0.001	1232367	246.5
Total Col1Ave (4 peaks):				246.2		Total Col2Ave (4 peaks):			245.9	RPD = 0

Corrected Ave (3 peaks): 245.6 Corrected Ave (3 peaks): 245.7 RPD = 0

Total PCB Area Col1 (5.118 - 13.110) = 6593528 Col1 Total PCB = 0.6 ppm*

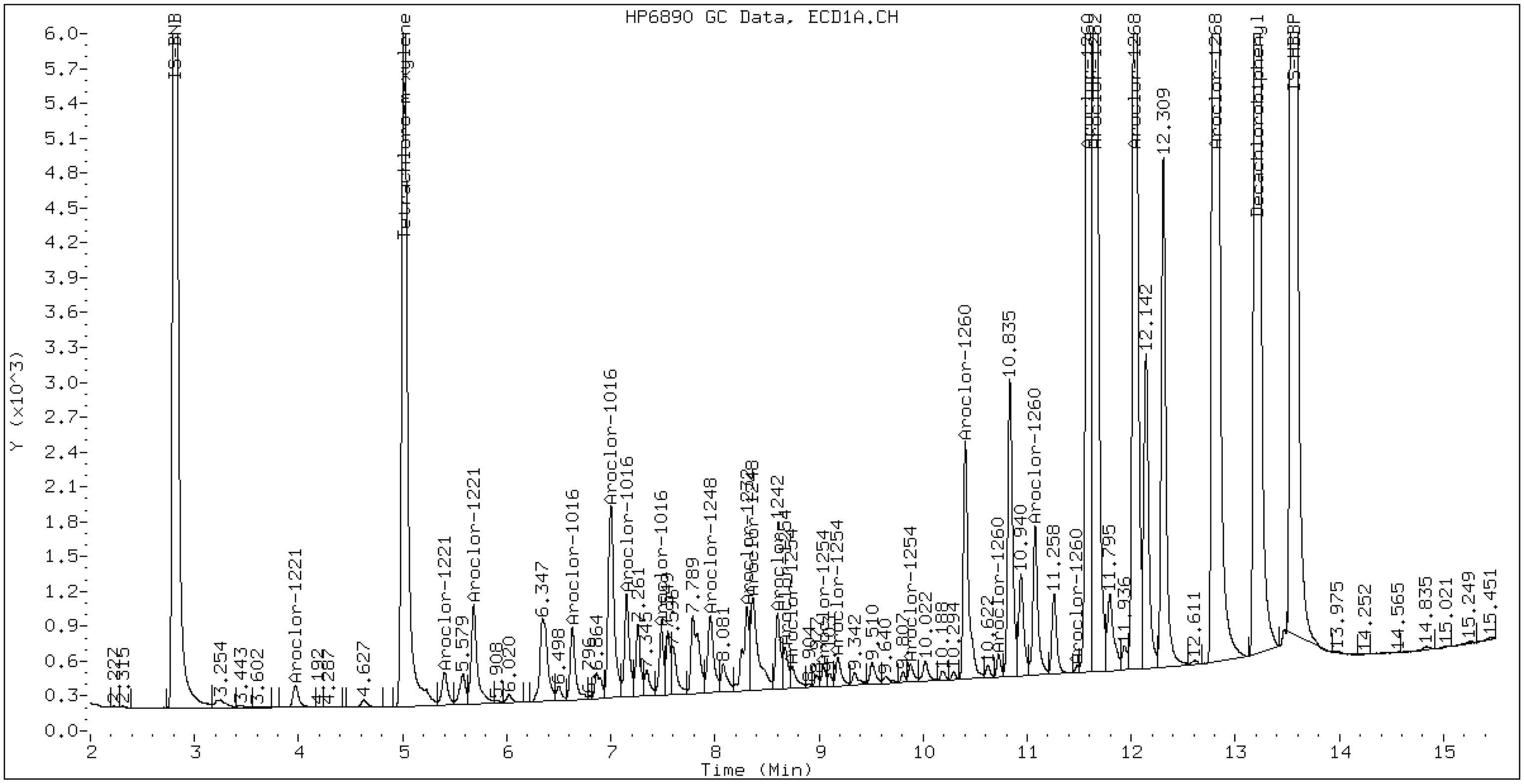
Total PCB Area Col2 (5.118 - 13.110) = 2531175 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

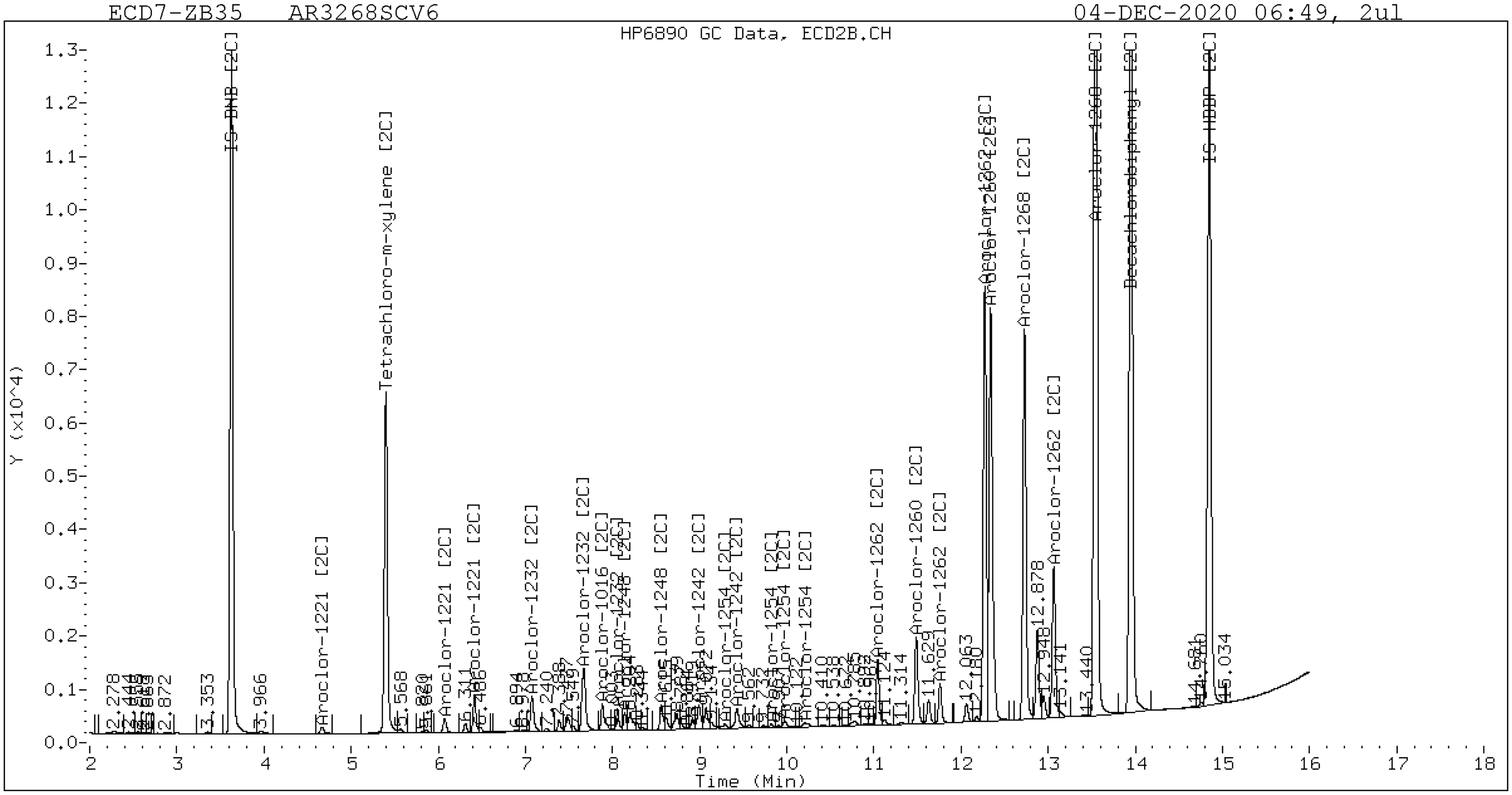
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV6 04-DEC-2020 06:49, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV6 04-DEC-2020 06:49, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /20201204.b/20120426ECD7.D   ARI ID: DDT

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
8.661	0.000	1410001	9.764	0.000	1143063	0.100	0.100	0.0	2,4-DDE
9.666	0.000	1506827	10.537	0.000	1494054	0.100	0.200#	66.7*	2,4-DDT
9.075	0.000	2515539	10.079	0.000	736020	0.100	0.100	0.0	4,4-DDE
9.644	0.000	2219102	10.537	0.000	1494054	0.100	0.200#	66.7*	4,4-DDD

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: BD
Instrument: ecd7.i   Data File: /20201204.b/20120427ECD7.D
Analysis Date: 04-DEC-2020 07:30   Init. Calib. Date: 04-DEC-2020

GC Column: ZB5   ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	9.072	69352
4,4-DDD	9.643	340456
4,4-DDT	10.137	1065684

Col 1: 4,4-DDT Percent Breakdown = 27.8 %

GC Column: ZB35   ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE [2C]	10.081	220
4,4-DDD/2,4-DDT [2C]	10.540	223900
4,4-DDT [2C]	10.959	432465

Col 2: 4,4-DDT Percent Breakdown = 34.1 %

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Calibration: DL00019

Sequence: SIL0088

SDG: 20K0126

Project: ICS-Former NW Cooperage

Laboratory ID: SIL0088-SCV1

Sequence Name: AR1660SCV1

Standard ID: I005063

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1016	250.00	240	-4.1	20.00
Aroclor 1016 [2C]	250.00	250	-0.2	20.00
Aroclor 1260	250.00	261	4.5	20.00
Aroclor 1260 [2C]	250.00	278	11.1	20.00
Decachlorobiphenyl	40.000	41.8	4.6	20.00
Tetrachlorometaxylene	40.000	45.0	12.6	20.00
Decachlorobiphenyl [2C]	40.000	48.2	20.6 *	20.00
Tetrachlorometaxylene [2C]	40.000	46.0	15.1	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120420ECD7.D
Data file 2: /20201204.b/20201204.b/20120420ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV1
Client ID:
Injection Date: 04-DEC-2020 05:06
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.018	0.000	522469	5.402	0.000	336381	45.0	46.0	2.2	Tetrachloro-m-xylene
13.210	-0.000	972568	13.950	-0.000	554258	41.8	48.2	14.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	112.6	115.1
Decachlorobiphenyl	104.6	120.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	795708	1.1
Hexabromobiphenyl	2132987	2186421	2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	637628	0.3
Hexabromobiphenyl	665758	698314	4.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

```
                        ZB5 Col                                ZB35 Col
Aroclor   Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
=========================================================================================
Aroclor-1016 1   6.632   0.001     95528   238.6      1    7.077   0.001    76814   248.3
Aroclor-1016 2   7.002  -0.001    295416   231.5      2    7.673   0.002   175788   251.8
Aroclor-1016 3   7.153   0.000    127151   232.0      3    7.883   0.001    65410   247.3
Aroclor-1016 4   7.487  -0.062     76423   256.4      4    8.057   0.000    39803   251.0
      Total Col1Ave (4 peaks):   239.6       Total Col2Ave (4 peaks):   249.6   RPD = 4
      Corrected Ave (3 peaks):   234.0       Corrected Ave (3 peaks):   248.9   RPD = 6

Aroclor-1221 1   3.975   0.003       878     8.5      1     ---                       0.0
Aroclor-1221 2   5.404  -0.001     14963   102.2      2    6.079   0.005     9666   110.3
Aroclor-1221 3   5.683   0.001     68494   182.4      3    6.418   0.001    31755   194.5
      Total Col1Ave (3 peaks):    97.7                Col2Ave: <3 Quant Peaks

Aroclor-1232 1   3.975   0.002       878    14.0      1     ---                       0.0
Aroclor-1232 2   6.632   0.000     95528   588.1      2    7.077  -0.000    76814   545.3
Aroclor-1232 3   7.002  -0.000    295416   556.5      3    7.673   0.001   175788   597.6
Aroclor-1232 4   8.309  -0.000     19510   123.7      4    8.057  -0.000    39803   593.7
      Total Col1Ave (4 peaks):   320.6       Total Col2Ave (3 peaks):   578.9   RPD = 57*
      Corrected Ave (3 peaks):   231.4                     Corrected Ave: < 3 Peaks

Aroclor-1242 1   6.632   0.000     95528   309.4      1    7.077   0.000    76814   318.7
Aroclor-1242 2   7.002  -0.001    295416   310.2      2    7.673   0.000   175788   314.8
Aroclor-1242 3   8.309   0.000     19510    61.7      3    8.982  -0.009    19824    90.0
Aroclor-1242 4   8.597  -0.006     11788    34.3      4    9.430   0.002     2269    10.5
      Total Col1Ave (4 peaks):   178.9       Total Col2Ave (4 peaks):   183.5   RPD = 3
      Corrected Ave (3 peaks):   135.1       Corrected Ave (3 peaks):   138.4   RPD = 2

Aroclor-1248 1   7.487   0.000     76423   184.1      1    8.141  -0.000    36032   166.7
Aroclor-1248 2   7.957   0.001    122530   194.7      2    8.562   0.000    52014   183.8
Aroclor-1248 3   8.383   0.017     96065   103.3      3    8.982  -0.009    19824    49.2
Aroclor-1248 4   8.597  -0.005     11788    21.9      4    9.430   0.004     2269     5.7
      Total Col1Ave (4 peaks):   126.0       Total Col2Ave (4 peaks):   101.4   RPD = 22
      Corrected Ave (3 peaks):   103.1       Corrected Ave (3 peaks):    73.9   RPD = 33

Aroclor-1254 1   8.674  -0.001     81025    86.0      1    9.291   0.000    32530    71.4
Aroclor-1254 2     ---                       0.0     2    9.430   0.046     2269    10.8
Aroclor-1254 3   9.047   0.002      9960    15.9      3    9.824   0.001     3929    13.0
Aroclor-1254 4   9.170  -0.010     73847    57.0      4    9.991   0.019    84643   119.1
Aroclor-1254 5   9.871  -0.006    107932   125.6      5   10.224   0.019   114607   156.1
      Total Col1Ave (4 peaks):    71.1       Total Col2Ave (5 peaks):    74.1   RPD = 4
      Corrected Ave (3 peaks):    53.0       Corrected Ave (4 peaks):    53.6   RPD = 1

Aroclor-1260 1  10.405   0.001    223537   262.9      1   11.043   0.000   123924   290.4
Aroclor-1260 2  10.726  -0.000    221379   260.8      2   11.507   0.001   121258   269.7
Aroclor-1260 3  11.077  -0.002    596328   270.6      3   11.759  -0.000   319696   278.0
Aroclor-1260 4  11.480   0.000    273530   242.9      4   12.349   0.000   204231   273.3
Aroclor-1260 5  11.586  -0.000    132108   269.4     NS     ---                      ----
      Total Col1Ave (5 peaks):   261.3       Total Col2Ave (4 peaks):   277.9   RPD = 6
      Corrected Ave (4 peaks):   259.0       Corrected Ave (3 peaks):   273.7   RPD = 6

Aroclor-1262 1  10.405   0.000    223537   175.3      1   11.043  -0.000   123924   170.8
Aroclor-1262 2  11.077   0.000    596328   207.9      2   11.759   0.000   319696   200.4
Aroclor-1262 3  11.586  -0.000    132108   166.0      3   12.277   0.001    87098   170.0
Aroclor-1262 4  11.658   0.001    176030   168.7      4   13.066   0.000    84509   145.7
      Total Col1Ave (4 peaks):   179.5       Total Col2Ave (4 peaks):   171.7   RPD = 4
      Corrected Ave (3 peaks):   170.0       Corrected Ave (3 peaks):   162.1   RPD = 5

Aroclor-1268 1  11.586  -0.003    132108    45.4      1   12.277   0.004    87098    51.9
Aroclor-1268 2  11.658   0.001    176030    56.4      2   12.349   0.010   204231   111.5
Aroclor-1268 3  12.062   0.025     90211    36.0      3   12.731   0.001     3573     2.3
Aroclor-1268 4  12.806  -0.006     57142     5.8      4   13.544  -0.002    17452     3.4
      Total Col1Ave (4 peaks):    35.9       Total Col2Ave (4 peaks):    42.3   RPD = 16
      Corrected Ave (3 peaks):    29.1       Corrected Ave (3 peaks):    19.2   RPD = 41*
```

Total PCB Area Col1 (5.118 - 13.110) = 5907925 Col1 Total PCB = 0.5 ppm*

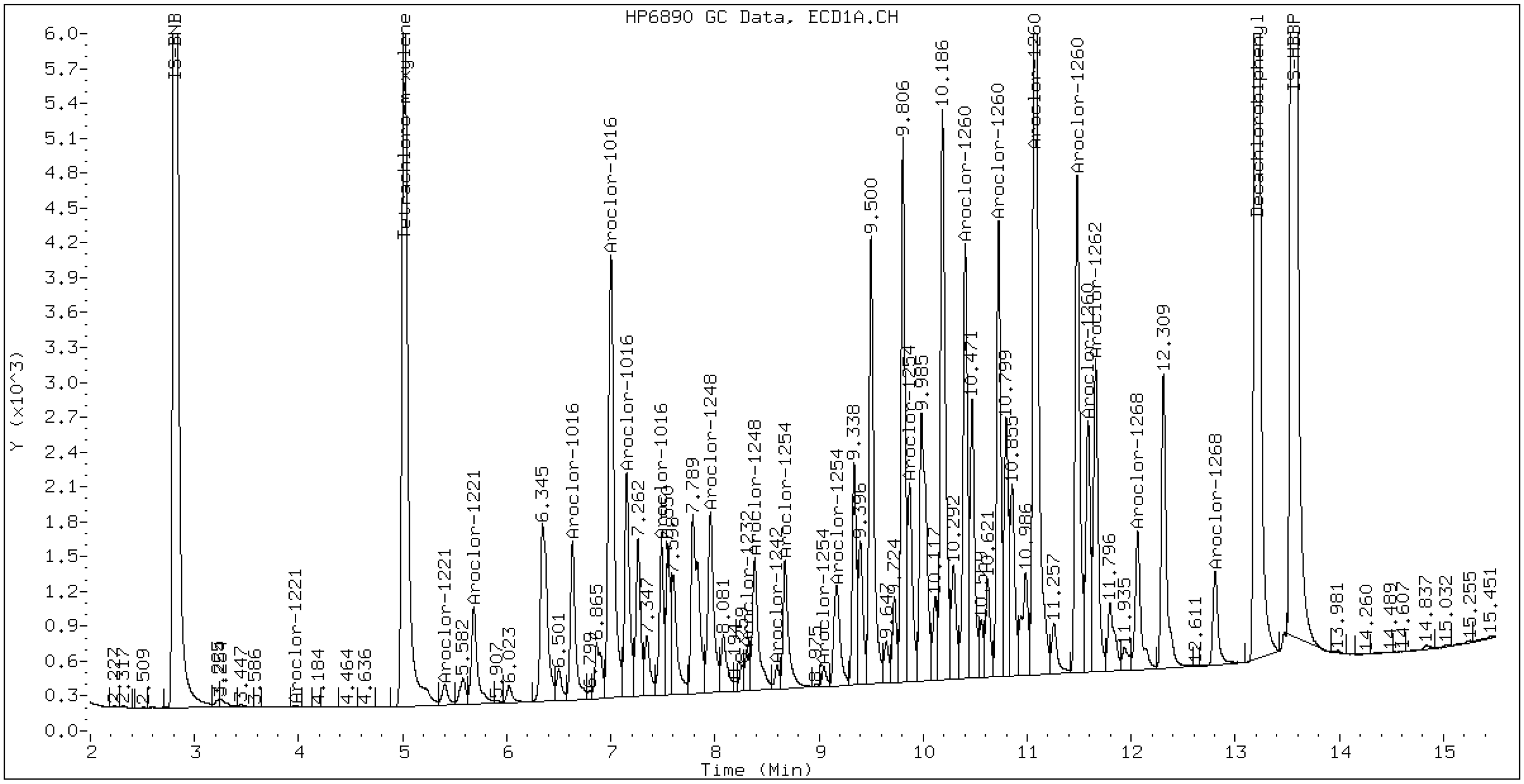
Total PCB Area Col2 (5.118 - 13.110) = 3169625 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

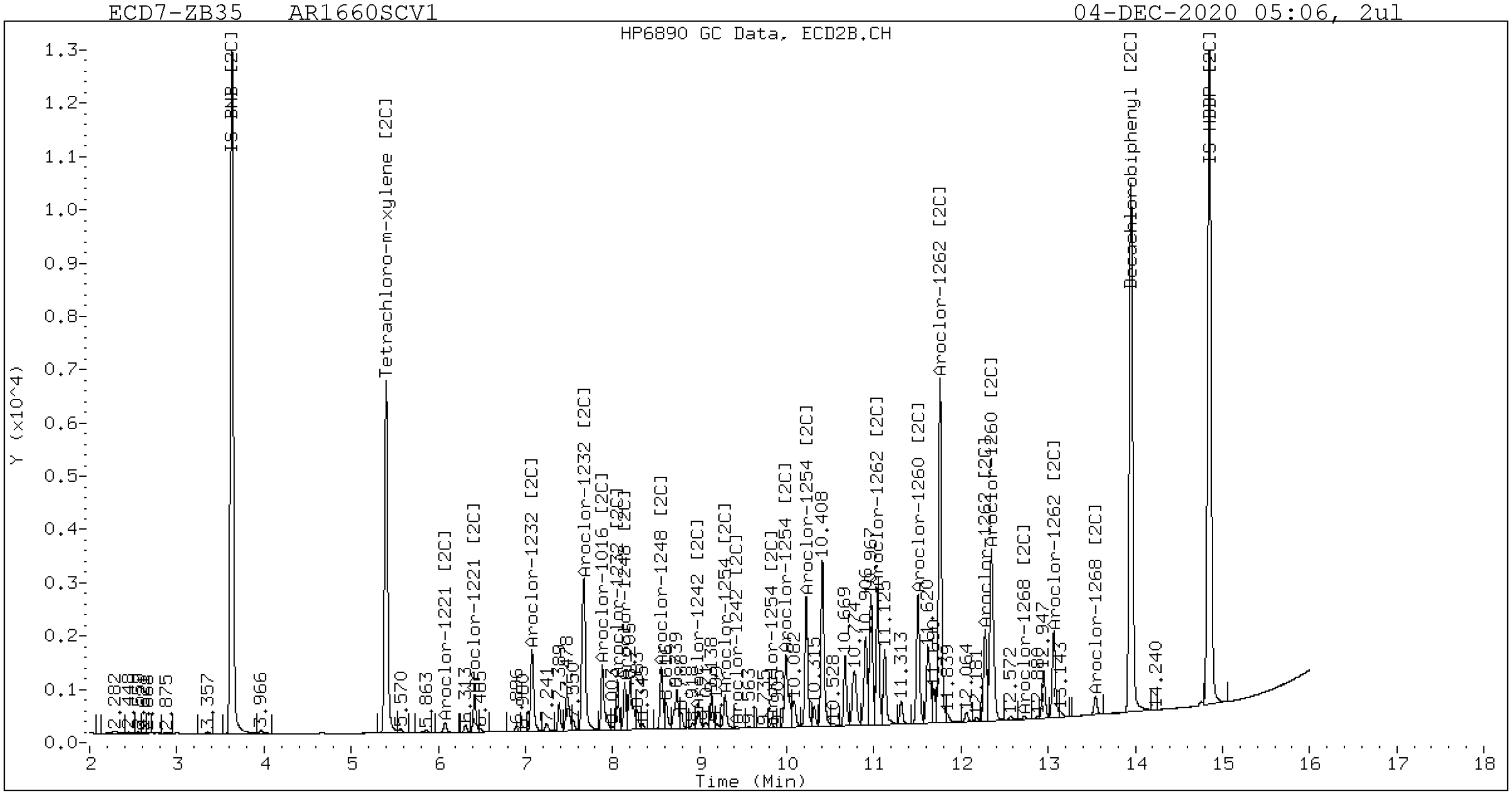
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV1 04-DEC-2020 05:06, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV1 04-DEC-2020 05:06, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: DL00019
Sequence: SIL0088

SDG: 20K0126
Project: ICS-Former NW Cooperage
Laboratory ID: SIL0088-SCV2
Sequence Name: AR1242SCV2
Standard ID: I005064

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1242	250.00	234	-6.4	20.00
Aroclor 1242 [2C]	250.00	236	-5.7	20.00
Decachlorobiphenyl	40.000	40.7	1.7	20.00
Tetrachlorometaxylene	40.000	42.5	6.1	20.00
Decachlorobiphenyl [2C]	40.000	46.9	17.3	20.00
Tetrachlorometaxylene [2C]	40.000	44.8	12.0	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120421ECD7.D
Data file 2: /20201204.b/20201204.b/20120421ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV2
Client ID:
Injection Date: 04-DEC-2020 05:27
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.001	491240	5.401	-0.001	325882	42.5	44.8	5.3	Tetrachloro-m-xylene
13.210	-0.000	945810	13.951	-0.000	538416	40.7	46.9	14.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	106.1	112.0
Decachlorobiphenyl	101.7	117.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	793550	0.9
Hexabromobiphenyl	2132987	2188269	2.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	634778	-0.1
Hexabromobiphenyl	665758	697627	4.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.630	-0.000	74056	185.4	1	7.075	-0.001	58151	188.8
Aroclor-1016	2	7.001	-0.001	226378	177.9	2	7.671	-0.000	131850	189.7
Aroclor-1016	3	7.152	0.000	97975	179.2	3	7.883	0.001	49024	186.1
Aroclor-1016	4	7.486	-0.063	61294	206.2	4	8.057	0.000	29614	187.6
	Total Col1Ave (4 peaks):				187.2	Total Col2Ave (4 peaks):			188.1	RPD = 0
	Corrected Ave (3 peaks):				180.9	Corrected Ave (3 peaks):			187.5	RPD = 4
Aroclor-1221	1	3.975	0.003	555	5.4	1	---			0.0
Aroclor-1221	2	5.403	-0.003	12058	82.6	2	6.078	0.004	8048	92.3
Aroclor-1221	3	5.681	-0.001	53082	141.7	3	6.417	0.000	23791	146.4
	Total Col1Ave (3 peaks):				76.6	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.975	0.001	555	8.9	1	---			0.0
Aroclor-1232	2	6.630	-0.001	74056	457.2	2	7.075	-0.002	58151	414.7
Aroclor-1232	3	7.001	-0.000	226378	427.6	3	7.671	-0.001	131850	450.3
Aroclor-1232	4	8.308	-0.001	74236	472.0	4	8.057	-0.000	29614	443.7
	Total Col1Ave (4 peaks):				341.4	Total Col2Ave (3 peaks):			436.2	RPD = 24
	Corrected Ave (3 peaks):				297.9		Corrected Ave: < 3 Peaks			
Aroclor-1242	1	6.630	-0.001	74056	240.5	1	7.075	-0.001	58151	242.3
Aroclor-1242	2	7.001	-0.002	226378	238.4	2	7.671	-0.001	131850	237.2
Aroclor-1242	3	8.308	-0.001	74236	235.5	3	8.991	-0.000	50455	230.0
Aroclor-1242	4	8.602	-0.001	75873	221.1	4	9.426	-0.001	50367	233.3
	Total Col1Ave (4 peaks):				233.9	Total Col2Ave (4 peaks):			235.7	RPD = 1
	Corrected Ave (3 peaks):				231.7	Corrected Ave (3 peaks):			233.5	RPD = 1
Aroclor-1248	1	7.486	-0.000	61294	148.1	1	8.140	-0.001	28713	133.4
Aroclor-1248	2	7.957	0.001	100565	160.2	2	8.561	-0.000	41996	149.1
Aroclor-1248	3	8.365	0.000	159627	172.0	3	8.991	-0.001	50455	125.8
Aroclor-1248	4	8.602	0.001	75873	141.5	4	9.426	0.000	50367	128.1
	Total Col1Ave (4 peaks):				155.5	Total Col2Ave (4 peaks):			134.1	RPD = 15
	Corrected Ave (3 peaks):				149.9	Corrected Ave (3 peaks):			129.1	RPD = 15
Aroclor-1254	1	8.674	-0.001	57708	61.4	1	9.290	-0.000	18475	40.8
Aroclor-1254	2	8.742	-0.001	39613	77.8	2	9.426	0.042	50367	239.9
Aroclor-1254	3	9.046	0.000	30111	48.1	3	9.823	0.000	11321	37.7
Aroclor-1254	4	9.180	0.000	56187	43.5	4	9.974	0.002	24173	34.2
Aroclor-1254	5	9.880	0.003	34148	39.9	5	10.203	-0.002	23932	32.7
	Total Col1Ave (5 peaks):				54.1	Total Col2Ave (5 peaks):			77.1	RPD = 35
	Corrected Ave (4 peaks):				48.2	Corrected Ave (4 peaks):			36.3	RPD = 28
Aroclor-1260	1	10.406	0.002	1571	1.8	1	10.967	-0.076	8147	19.1
Aroclor-1260	2	10.723	-0.003	1628	1.9	2	11.519	0.013	1967	4.4
Aroclor-1260	3	11.078	-0.002	4111	1.9	3	11.762	0.003	1178	1.0
Aroclor-1260	4	11.480	0.000	2943	2.6	4	12.354	0.005	137	0.2
Aroclor-1260	5	11.590	0.004	571	1.2	NS	---			----
	Total Col1Ave (5 peaks):				1.9	Total Col2Ave (4 peaks):			6.2	RPD = 107*
	Corrected Ave (4 peaks):				1.7	Corrected Ave (3 peaks):			1.9	RPD = 9
Aroclor-1262	1	10.406	0.001	1571	1.2	1	10.967	-0.077	8147	11.2
Aroclor-1262	2	11.078	0.000	4111	1.4	2	11.762	0.004	1178	0.7
Aroclor-1262	3	11.590	0.004	571	0.7	3	12.354	0.078	137	0.3
Aroclor-1262	4	11.659	0.002	533	0.5	4	13.146	0.080	4808	8.3
	Total Col1Ave (4 peaks):				1.0	Total Col2Ave (4 peaks):			5.1	RPD = 136*
	Corrected Ave (3 peaks):				0.8	Corrected Ave (3 peaks):			3.1	RPD = 116*
Aroclor-1268	1	11.590	0.001	571	0.2	1	12.354	0.081	137	0.1
Aroclor-1268	2	11.659	0.002	533	0.2	2	---			0.0
Aroclor-1268	3	12.032	-0.005	5531	2.2	3	12.733	0.004	972	0.6
Aroclor-1268	4	12.805	-0.007	19913	2.0	4	13.544	-0.002	3078	0.6
	Total Col1Ave (4 peaks):				1.1	Total Col2Ave (3 peaks):			0.4	RPD = 89*
	Corrected Ave (3 peaks):				0.8		Corrected Ave: < 3 Peaks			

Total PCB Area Col1 (5.118 - 13.110) = 2078339 Col1 Total PCB = 0.2 ppm*

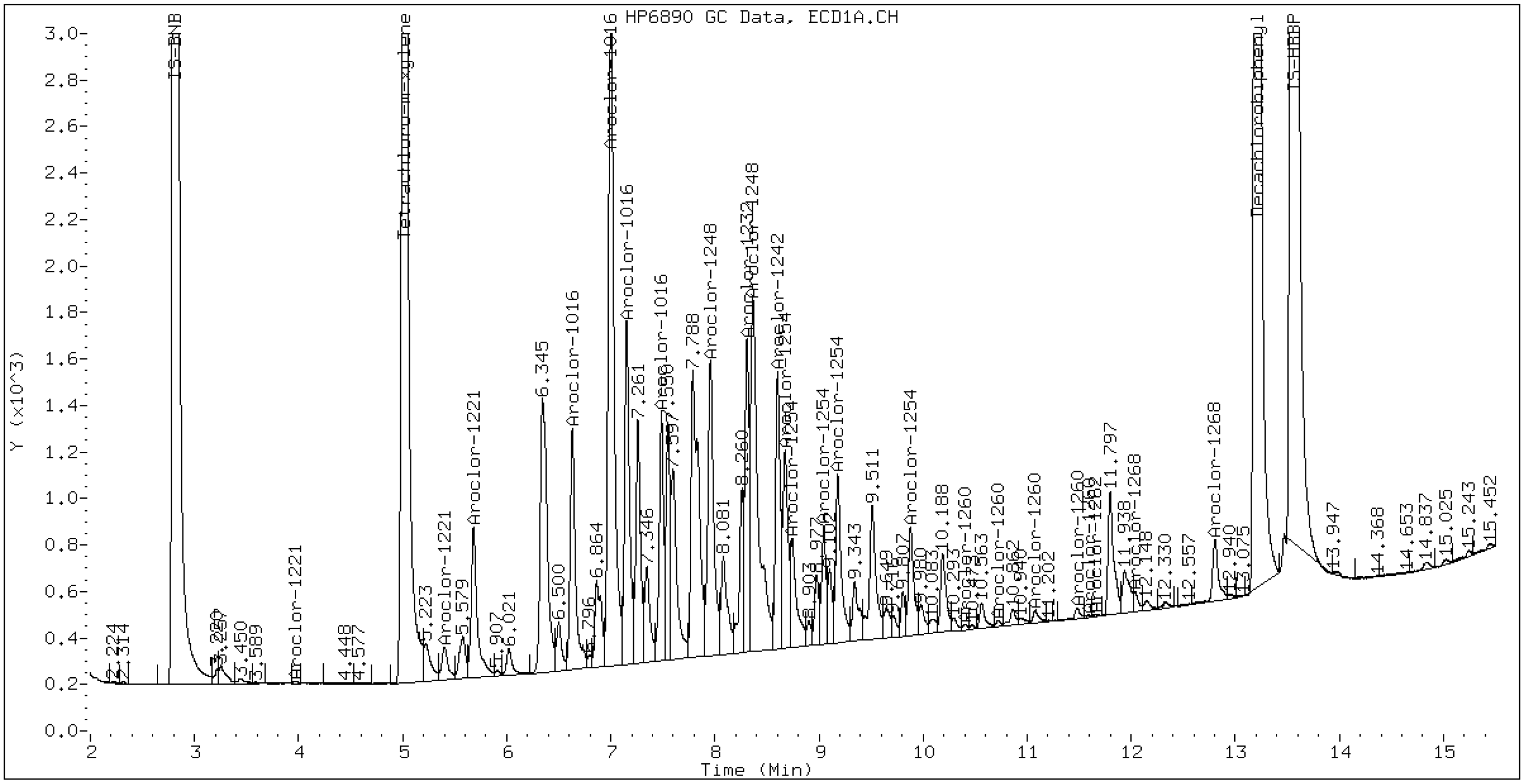
Total PCB Area Col2 (5.118 - 13.110) = 1247459 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

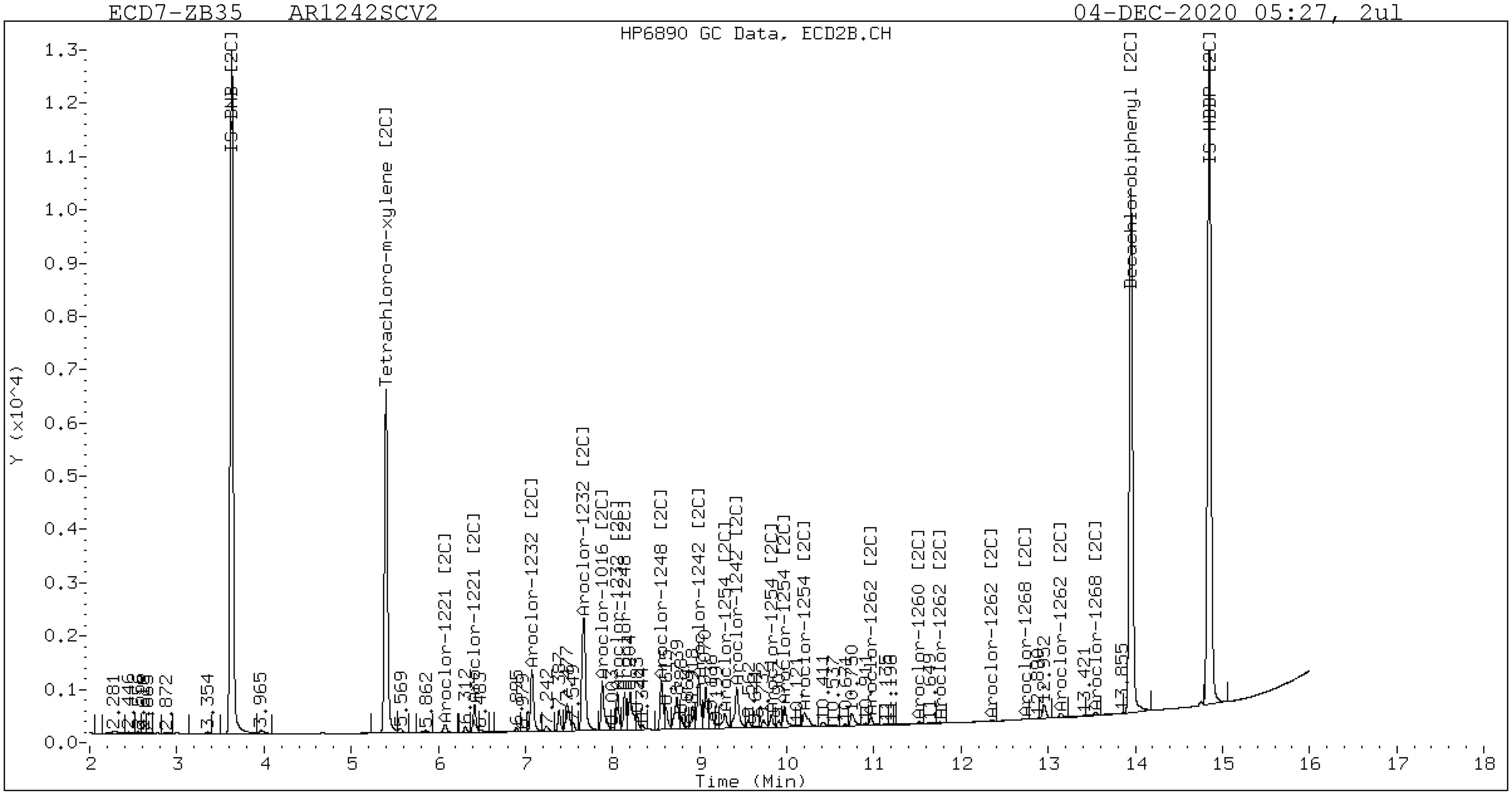
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV2 04-DEC-2020 05:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV2 04-DEC-2020 05:27, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Calibration: DL00019

Sequence: SIL0088

SDG: 20K0126

Project: ICS-Former NW Cooperage

Laboratory ID: SIL0088-SCV3

Sequence Name: AR1248SCV3

Standard ID: I005065

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1248	250.00	234	-6.6	20.00
Aroclor 1248 [2C]	250.00	236	-5.7	20.00
Decachlorobiphenyl	40.000	41.8	4.6	20.00
Tetrachlorometaxylene	40.000	44.8	12.1	20.00
Decachlorobiphenyl [2C]	40.000	48.4	21.0 *	20.00
Tetrachlorometaxylene [2C]	40.000	46.1	15.1	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120422ECD7.D
Data file 2: /20201204.b/20201204.b/20120422ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV3
Client ID:
Injection Date: 04-DEC-2020 05:47
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.016	-0.001	519389	5.400	-0.002	333935	44.8	46.1	2.7	Tetrachloro-m-xylene
13.209	-0.001	967775	13.951	-0.000	548704	41.8	48.4	14.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	112.1	115.1
Decachlorobiphenyl	104.6	121.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	794644	1.0
Hexabromobiphenyl	2132987	2176927	2.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	632599	-0.5
Hexabromobiphenyl	665758	689113	3.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.630	-0.001	37848	94.6	1	7.074	-0.002	29752	97.0
Aroclor-1016	2	6.998	-0.004	154133	121.0	2	7.669	-0.002	87378	126.1
Aroclor-1016	3	7.154	0.002	62043	113.4	3	7.882	0.000	19776	75.3
Aroclor-1016	4	7.486	-0.063	99147	333.1	4	8.057	0.000	16327	103.8
Total Col1Ave (4 peaks):				165.5		Total Col2Ave (4 peaks):			100.6	RPD = 49*
Corrected Ave (3 peaks):				109.7		Corrected Ave (3 peaks):			92.0	RPD = 17
Aroclor-1221	1	3.970	-0.002	459	4.4	1	---			0.0
Aroclor-1221	2	5.399	-0.007	4381	30.0	2	6.084	0.010	3982	45.8
Aroclor-1221	3	5.681	-0.001	13045	34.8	3	6.416	-0.001	5950	36.7
Total Col1Ave (3 peaks):				23.1		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.970	-0.003	459	7.4	1	---			0.0
Aroclor-1232	2	6.630	-0.002	37848	233.3	2	7.074	-0.003	29752	212.9
Aroclor-1232	3	6.998	-0.004	154133	290.8	3	7.669	-0.003	87378	299.4
Aroclor-1232	4	8.308	-0.001	191286	1214.6	4	8.057	-0.000	16327	245.4
Total Col1Ave (4 peaks):				436.5		Total Col2Ave (3 peaks):			252.6	RPD = 53*
Corrected Ave (3 peaks):				177.1		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.630	-0.002	37848	122.8	1	7.074	-0.002	29752	124.4
Aroclor-1242	2	6.998	-0.005	154133	162.1	2	7.669	-0.003	87378	157.7
Aroclor-1242	3	8.308	-0.001	191286	606.0	3	8.990	-0.001	93110	426.0
Aroclor-1242	4	8.601	-0.002	124142	361.3	4	9.425	-0.002	90178	419.1
Total Col1Ave (4 peaks):				313.0		Total Col2Ave (4 peaks):			281.8	RPD = 10
Corrected Ave (3 peaks):				215.4		Corrected Ave (3 peaks):			233.8	RPD = 8
Aroclor-1248	1	7.486	-0.001	99147	239.2	1	8.140	-0.001	51725	241.2
Aroclor-1248	2	7.956	-0.001	145861	232.1	2	8.561	-0.001	67176	239.3
Aroclor-1248	3	8.366	0.001	215594	232.0	3	8.990	-0.001	93110	232.9
Aroclor-1248	4	8.601	-0.000	124142	231.1	4	9.425	-0.001	90178	230.1
Total Col1Ave (4 peaks):				233.6		Total Col2Ave (4 peaks):			235.9	RPD = 1
Corrected Ave (3 peaks):				231.8		Corrected Ave (3 peaks):			234.1	RPD = 1
Aroclor-1254	1	8.675	-0.001	105692	112.3	1	9.290	-0.001	29171	64.6
Aroclor-1254	2	8.743	-0.001	73797	144.7	2	9.425	0.041	90178	431.0
Aroclor-1254	3	9.045	-0.001	59822	95.4	3	9.822	-0.000	25001	83.6
Aroclor-1254	4	9.180	-0.000	110698	85.6	4	9.972	-0.000	51389	72.9
Aroclor-1254	5	9.879	0.002	83378	97.2	5	10.201	-0.005	30837	42.3
Total Col1Ave (5 peaks):				107.0		Total Col2Ave (5 peaks):			138.9	RPD = 26
Corrected Ave (4 peaks):				97.6		Corrected Ave (4 peaks):			65.8	RPD = 39
Aroclor-1260	1	10.405	0.000	5157	6.1	1	11.043	-0.000	1687	4.0
Aroclor-1260	2	10.726	-0.001	3873	4.6	2	11.516	0.009	2999	6.8
Aroclor-1260	3	11.076	-0.003	9719	4.4	3	11.762	0.003	2801	2.5
Aroclor-1260	4	11.480	-0.000	3945	3.5	4	12.351	0.002	2228	3.0
Aroclor-1260	5	11.586	-0.000	3424	7.0	NS	---			----
Total Col1Ave (5 peaks):				5.1		Total Col2Ave (4 peaks):			4.1	RPD = 23
Corrected Ave (4 peaks):				4.7		Corrected Ave (3 peaks):			3.2	RPD = 38
Aroclor-1262	1	10.405	-0.000	5157	4.1	1	11.043	-0.000	1687	2.4
Aroclor-1262	2	11.076	-0.001	9719	3.4	2	11.762	0.004	2801	1.8
Aroclor-1262	3	11.586	-0.000	3424	4.3	3	12.276	0.000	409	0.8
Aroclor-1262	4	11.656	-0.001	3749	3.6	4	13.067	0.002	1105	1.9
Total Col1Ave (4 peaks):				3.8		Total Col2Ave (4 peaks):			1.7	RPD = 77*
Corrected Ave (3 peaks):				3.7		Corrected Ave (3 peaks):			1.5	RPD = 84*
Aroclor-1268	1	11.586	-0.003	3424	1.2	1	12.276	0.002	409	0.2
Aroclor-1268	2	11.656	-0.001	3749	1.2	2	12.351	0.011	2228	1.2
Aroclor-1268	3	12.034	-0.003	6957	2.8	3	12.729	-0.001	1375	0.9
Aroclor-1268	4	12.804	-0.008	20500	2.1	4	13.545	-0.001	3684	0.7
Total Col1Ave (4 peaks):				1.8		Total Col2Ave (4 peaks):			0.8	RPD = 80*
Corrected Ave (3 peaks):				1.5		Corrected Ave (3 peaks):			0.6	RPD = 81*

Total PCB Area Col1 (5.118 - 13.110) = 2537125 Col1 Total PCB = 0.2 ppm*

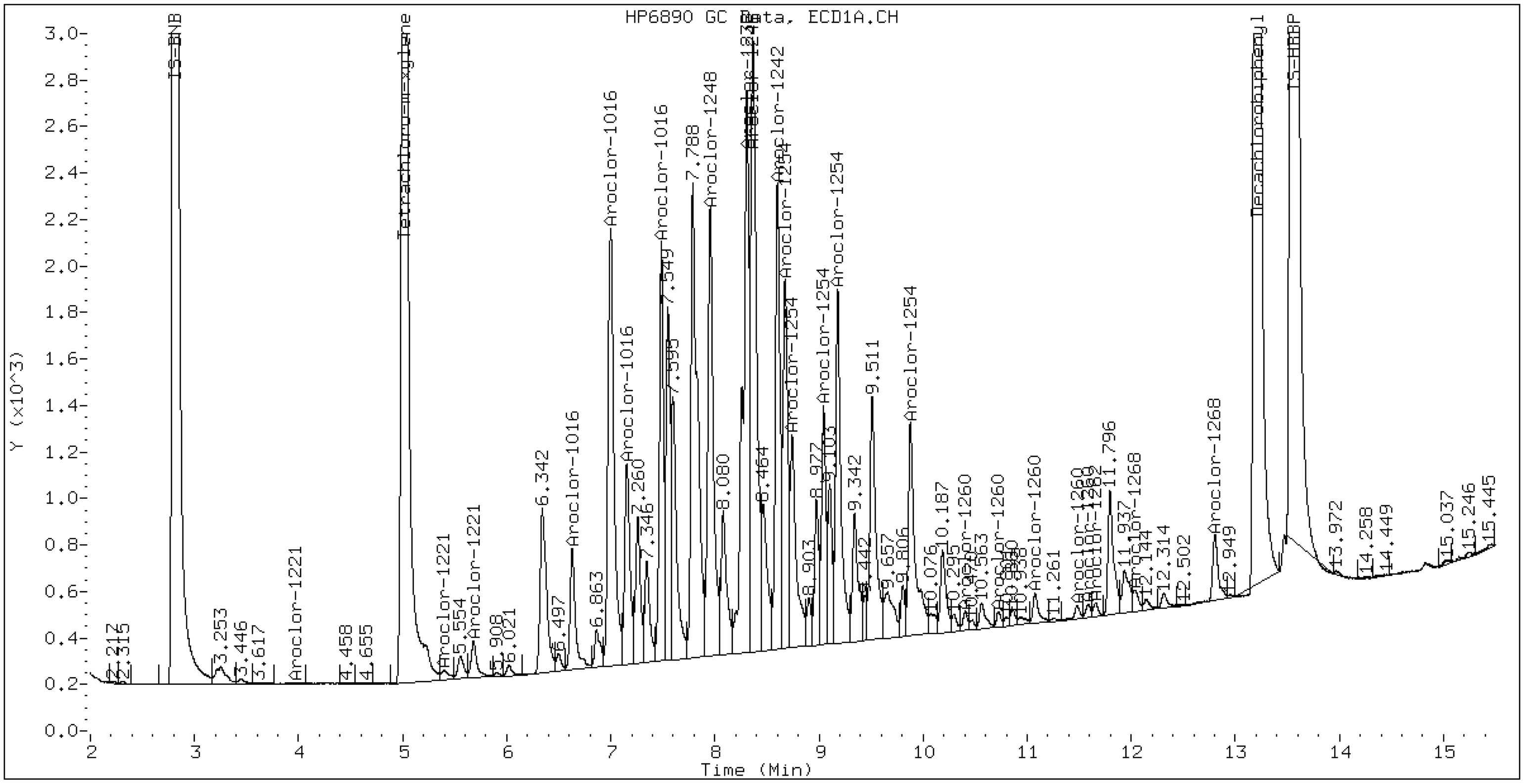
Total PCB Area Col2 (5.118 - 13.110) = 1484584 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

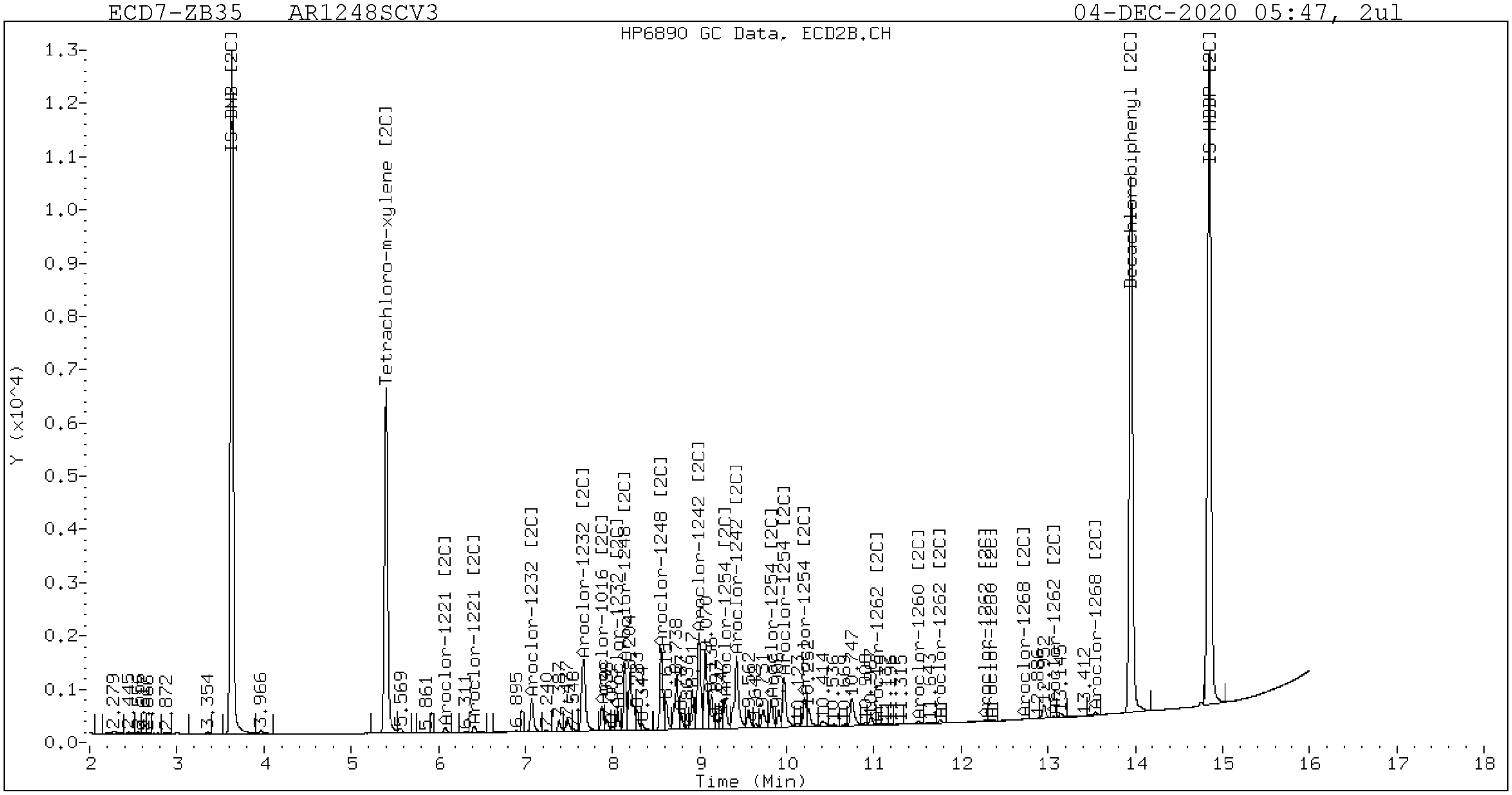
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV3 04-DEC-2020 05:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV3 04-DEC-2020 05:47, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: DL00019
Sequence: SIL0088

SDG: 20K0126
Project: ICS-Former NW Cooperage
Laboratory ID: SIL0088-SCV4
Sequence Name: AR1254SCV4
Standard ID: I005066

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1254	250.00	265	5.9	20.00
Aroclor 1254 [2C]	250.00	250	-0.03	20.00
Decachlorobiphenyl	40.000	41.1	2.8	20.00
Tetrachlorometaxylene	40.000	43.0	7.5	20.00
Decachlorobiphenyl [2C]	40.000	47.2	18.0	20.00
Tetrachlorometaxylene [2C]	40.000	44.8	12.1	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120423ECD7.D
Data file 2: /20201204.b/20201204.b/20120423ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV4
Client ID:
Injection Date: 04-DEC-2020 06:08
Report Date: 12/07/2020 11:54
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.015	-0.002	497179	5.400	-0.002	321312	43.0	44.8	4.2	Tetrachloro-m-xylene
13.210	-0.000	933785	13.951	0.001	530860	41.1	47.2	13.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	107.5	112.1
Decachlorobiphenyl	102.8	118.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	792760	0.8
Hexabromobiphenyl	2132987	2135851	0.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	625033	-1.6
Hexabromobiphenyl	665758	683418	2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

//target/share/chem4/ecd7.i/20201204.b/20120423ECD7.D AR1254SCV4

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
	ZB5 Col					ZB35 Col					
Aroclor-1016	1	6.631	0.001	1306	3.3	1	7.075	-0.001	750	2.5	
Aroclor-1016	2	6.996	-0.007	6815	5.4	2	7.664	-0.007	2790	4.1	
Aroclor-1016	3	7.162	0.010	4028	7.4	3	7.884	0.002	520	2.0	
Aroclor-1016	4	7.487	-0.062	73107	246.2	4	8.058	0.002	262	1.7	
	Total Col1Ave (4 peaks):				65.6	Total Col2Ave (4 peaks):				2.6	RPD = 185*
	Corrected Ave (3 peaks):				5.3	Corrected Ave (3 peaks):				2.1	RPD = 89*
Aroclor-1221	1	4.003	0.031	395	3.8	1	---			0.0	
Aroclor-1221	2	---			0.0	2	6.085	0.011	3137	36.5	
Aroclor-1221	3	5.681	-0.001	1856	5.0	3	6.406	-0.011	842	5.3	
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1232	1	4.003	0.030	395	6.3	1	---			0.0	
Aroclor-1232	2	6.631	-0.000	1306	8.1	2	7.075	-0.002	750	5.4	
Aroclor-1232	3	6.996	-0.006	6815	12.9	3	7.664	-0.008	2790	9.7	
Aroclor-1232	4	8.309	-0.000	75318	479.4	4	8.058	0.001	262	4.0	
	Total Col1Ave (4 peaks):				126.7	Total Col2Ave (3 peaks):				6.4	RPD = 181*
	Corrected Ave (3 peaks):				9.1	Corrected Ave: < 3 Peaks					
Aroclor-1242	1	6.631	-0.000	1306	4.2	1	7.075	-0.001	750	3.2	
Aroclor-1242	2	6.996	-0.007	6815	7.2	2	7.664	-0.008	2790	5.1	
Aroclor-1242	3	8.309	-0.000	75318	239.2	3	8.993	0.002	35817	165.8	
Aroclor-1242	4	8.595	-0.007	51811	151.1	4	9.383	-0.044	51086	240.3	
	Total Col1Ave (4 peaks):				100.4	Total Col2Ave (4 peaks):				103.6	RPD = 3
	Corrected Ave (3 peaks):				54.2	Corrected Ave (3 peaks):				58.0	RPD = 7
Aroclor-1248	1	7.487	0.000	73107	176.8	1	8.140	-0.001	37393	176.4	
Aroclor-1248	2	7.956	-0.001	24544	39.1	2	8.562	0.000	23796	85.8	
Aroclor-1248	3	8.382	0.017	184505	199.0	3	8.993	0.001	35817	90.7	
Aroclor-1248	4	8.595	-0.006	51811	96.7	4	9.383	-0.043	51086	131.9	
	Total Col1Ave (4 peaks):				127.9	Total Col2Ave (4 peaks):				121.2	RPD = 5
	Corrected Ave (3 peaks):				104.2	Corrected Ave (3 peaks):				102.8	RPD = 1
Aroclor-1254	1	8.674	-0.001	233167	248.3	1	9.290	-0.001	112499	252.1	
Aroclor-1254	2	8.743	-0.001	127115	249.9	2	9.383	-0.001	51086	247.1	
Aroclor-1254	3	9.045	-0.001	208920	334.0	3	9.822	-0.001	74276	251.3	
Aroclor-1254	4	9.179	-0.001	314079	243.5	4	9.972	-0.000	171593	246.3	
Aroclor-1254	5	9.876	-0.001	212269	248.0	5	10.204	-0.001	182042	253.0	
	Total Col1Ave (5 peaks):				264.7	Total Col2Ave (5 peaks):				249.9	RPD = 6
	Corrected Ave (4 peaks):				247.4	Corrected Ave (4 peaks):				249.2	RPD = 1
Aroclor-1260	1	10.401	-0.004	21923	26.4	1	11.038	-0.005	7916	19.0	
Aroclor-1260	2	10.726	-0.000	23351	28.2	2	11.515	0.009	42144	95.8	
Aroclor-1260	3	11.076	-0.003	53107	24.7	3	11.761	0.002	26550	23.6	
Aroclor-1260	4	11.479	-0.001	47458	43.1	4	12.350	0.001	15700	21.5	
Aroclor-1260	5	11.657	0.071	3124	6.5	NS	---			----	
	Total Col1Ave (5 peaks):				25.8	Total Col2Ave (4 peaks):				40.0	RPD = 43*
	Corrected Ave (4 peaks):				21.4	Corrected Ave (3 peaks):				21.3	RPD = 0
Aroclor-1262	1	10.401	-0.004	21923	17.6	1	11.038	-0.006	7916	11.1	
Aroclor-1262	2	11.076	-0.001	53107	19.0	2	11.761	0.003	26550	17.0	
Aroclor-1262	3	11.657	0.071	3124	4.0	3	12.286	0.011	1391	2.8	
Aroclor-1262	4	---			0.0	4	13.066	0.001	907	1.6	
	Total Col1Ave (3 peaks):				13.5	Total Col2Ave (4 peaks):				8.1	RPD = 50*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				5.2	
Aroclor-1268	1	11.657	0.069	3124	1.1	1	12.286	0.013	1391	0.8	
Aroclor-1268	2	---			0.0	2	12.350	0.011	15700	8.8	
Aroclor-1268	3	12.035	-0.002	6558	2.7	3	12.733	0.004	1075	0.7	
Aroclor-1268	4	12.805	-0.008	19648	2.0	4	13.545	-0.001	2720	0.5	
	Total Col1Ave (3 peaks):				1.9	Total Col2Ave (4 peaks):				2.7	RPD = 33
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				0.7	

Total PCB Area Col1 (5.118 - 13.110) = 3440587 Col1 Total PCB = 0.3 ppm*

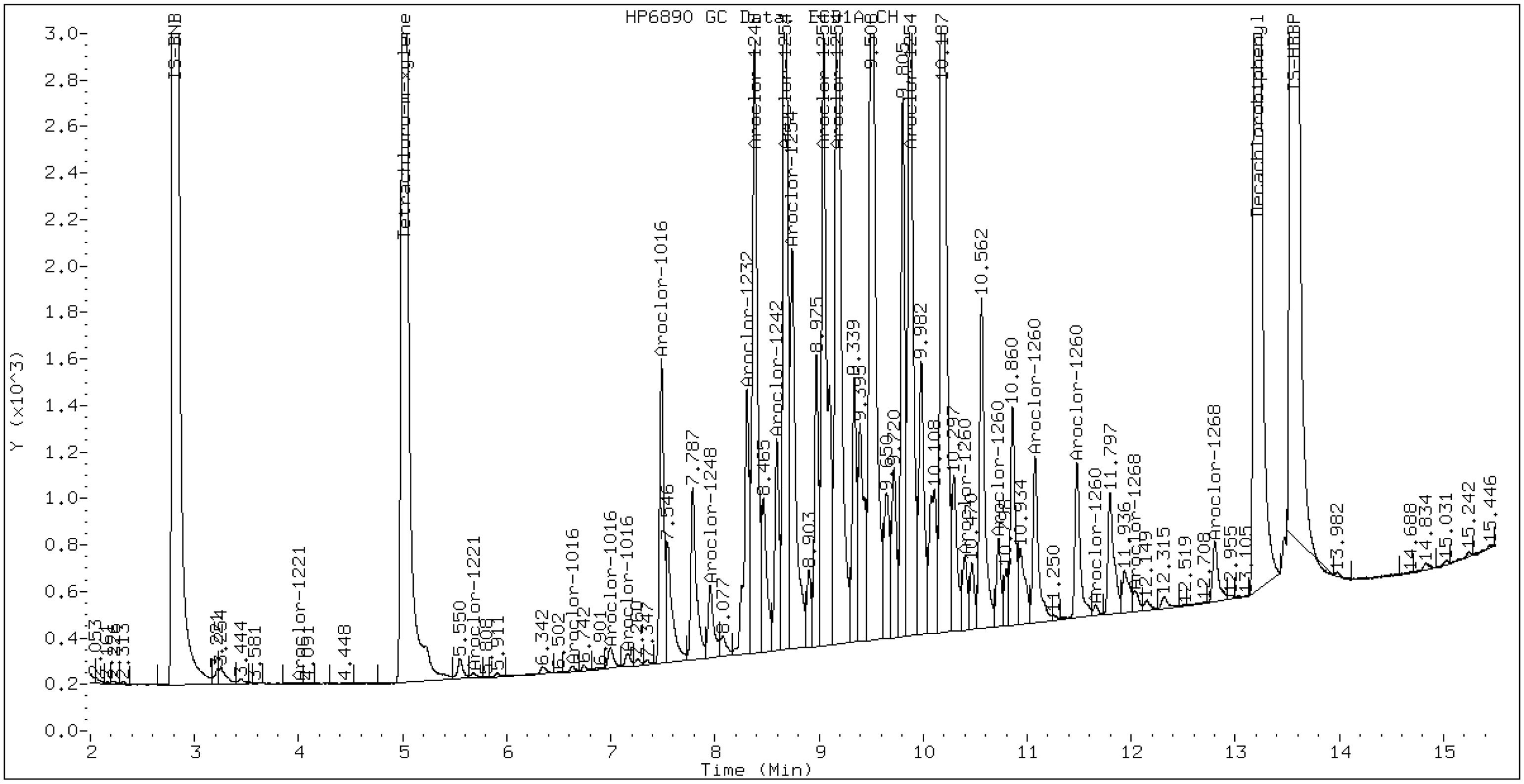
Total PCB Area Col2 (5.118 - 13.110) = 1870129 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

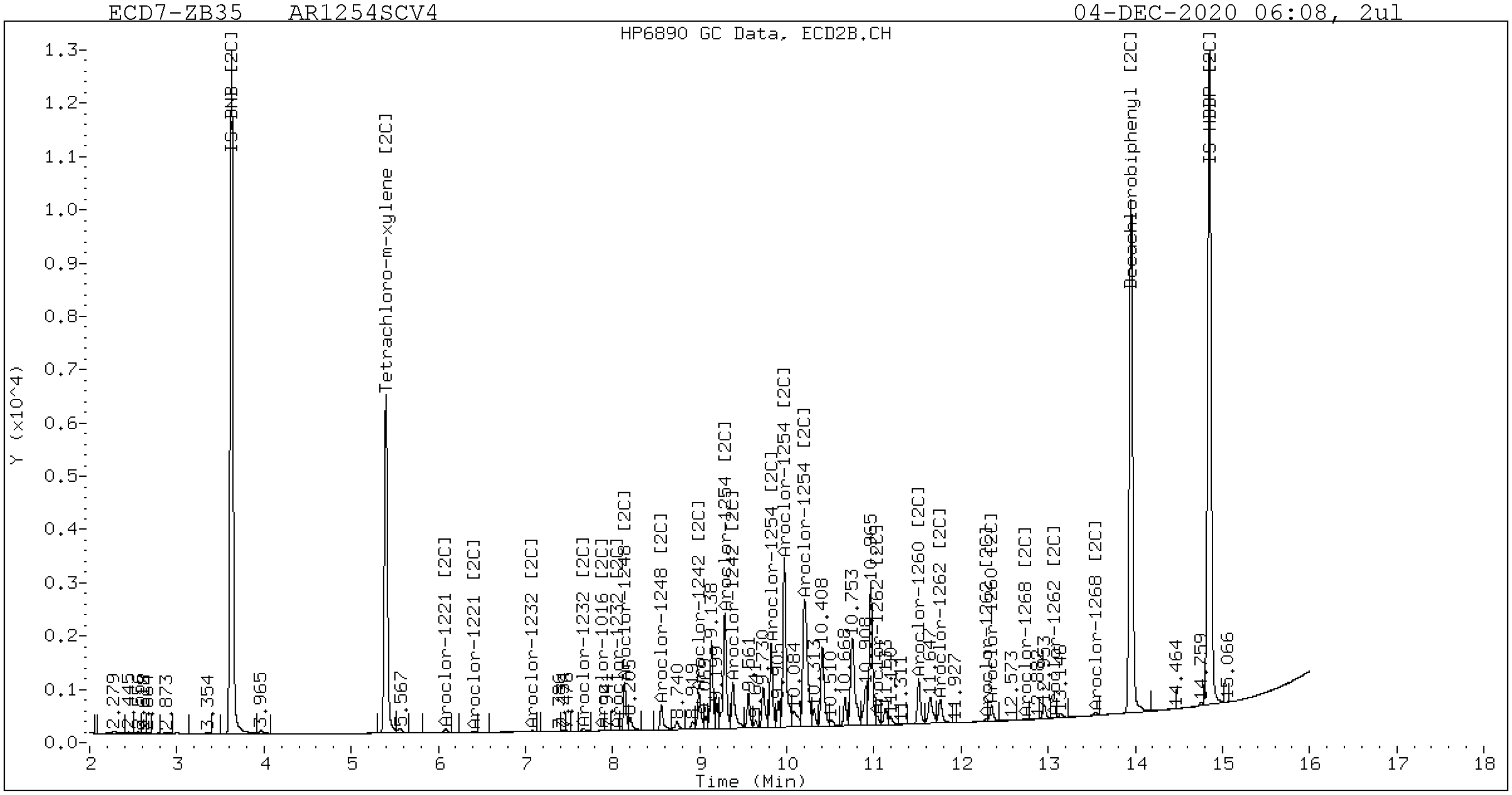
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV4 04-DEC-2020 06:08, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV4 04-DEC-2020 06:08, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: DL00019
Sequence: SIL0088

SDG: 20K0126
Project: ICS-Former NW Cooperage
Laboratory ID: SIL0088-SCV5
Sequence Name: AR2162SCV5
Standard ID: I005067

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT		QC LIMIT
Aroclor 1221	250.00	253	1.2		20.00
Aroclor 1221 [2C]	250.00	250	0.1		20.00
Aroclor 1262	250.00	280	12.1		20.00
Aroclor 1262 [2C]	250.00	266	6.4		20.00
Decachlorobiphenyl	40.000	42.2	5.6		20.00
Tetrachlorometaxylene	40.000	45.2	12.9		20.00
Decachlorobiphenyl [2C]	40.000	48.8	22.0	*	20.00
Tetrachlorometaxylene [2C]	40.000	46.7	16.8		20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120424ECD7.D
Data file 2: /20201204.b/20201204.b/20120424ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV5
Client ID:
Injection Date: 04-DEC-2020 06:28
Report Date: 12/07/2020 11:54
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.002	500967	5.401	-0.002	328515	45.2	46.7	3.4	Tetrachloro-m-xylene
13.210	-0.001	948706	13.950	-0.001	538054	42.2	48.8	14.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	112.9	116.8
Decachlorobiphenyl	105.6	122.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	760705	-3.3
Hexabromobiphenyl	2132987	2113407	-0.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	613536	-3.5
Hexabromobiphenyl	665758	670231	0.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.630	-0.001	9332	24.4	1	7.086	0.010	12173	40.9
Aroclor-1016	2	7.002	-0.001	27232	22.3	2	7.672	0.001	12687	18.9
Aroclor-1016	3	7.152	-0.001	13232	25.3	3	7.884	0.002	5508	21.6
Aroclor-1016	4	7.487	-0.063	6835	24.0	4	8.058	0.001	3069	20.1
Total Col1Ave (4 peaks):				24.0		Total Col2Ave (4 peaks):			25.4	RPD = 6
Corrected Ave (3 peaks):				23.6		Corrected Ave (3 peaks):			20.2	RPD = 15
Aroclor-1221	1	3.972	0.000	25700	259.9	1	4.668	-0.001	10702	252.3
Aroclor-1221	2	5.405	-0.000	35281	252.1	2	6.074	-0.001	21178	251.2
Aroclor-1221	3	5.682	0.000	88675	247.0	3	6.416	-0.001	38842	247.2
Total Col1Ave (3 peaks):				253.0		Total Col2Ave (3 peaks):			250.3	RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.972	-0.001	25700	430.0	1	4.668	-0.001	10702	407.5
Aroclor-1232	2	6.630	-0.001	9332	60.1	2	7.086	0.009	12173	89.8
Aroclor-1232	3	7.002	0.000	27232	53.7	3	7.672	0.000	12687	44.8
Aroclor-1232	4	8.310	0.002	7334	48.6	4	8.058	0.001	3069	47.6
Total Col1Ave (4 peaks):				148.1		Total Col2Ave (4 peaks):			147.4	RPD = 0
Corrected Ave (3 peaks):				54.1		Corrected Ave (3 peaks):			60.7	RPD = 11
Aroclor-1242	1	6.630	-0.001	9332	31.6	1	7.086	0.010	12173	52.5
Aroclor-1242	2	7.002	-0.001	27232	29.9	2	7.672	-0.000	12687	23.6
Aroclor-1242	3	8.310	0.002	7334	24.3	3	8.994	0.003	3292	15.5
Aroclor-1242	4	8.599	-0.004	6567	20.0	4	9.428	0.001	2788	13.4
Total Col1Ave (4 peaks):				26.4		Total Col2Ave (4 peaks):			26.2	RPD = 1
Corrected Ave (3 peaks):				24.7		Corrected Ave (3 peaks):			17.5	RPD = 34
Aroclor-1248	1	7.487	-0.000	6835	17.2	1	8.141	0.000	2855	13.7
Aroclor-1248	2	7.956	-0.001	6254	10.4	2	8.564	0.002	2760	10.1
Aroclor-1248	3	8.383	0.018	42170	47.4	3	8.994	0.003	3292	8.5
Aroclor-1248	4	8.599	-0.003	6567	12.8	4	9.428	0.002	2788	7.3
Total Col1Ave (4 peaks):				22.0		Total Col2Ave (4 peaks):			9.9	RPD = 75*
Corrected Ave (3 peaks):				13.5		Corrected Ave (3 peaks):			8.7	RPD = 43*
Aroclor-1254	1	8.675	-0.001	49067	54.4	1	9.292	0.001	15668	35.8
Aroclor-1254	2	---			0.0	2	9.385	0.001	1659	8.2
Aroclor-1254	3	9.046	0.000	8681	14.5	3	9.824	0.001	3263	11.2
Aroclor-1254	4	9.166	-0.014	53719	43.4	4	9.992	0.020	74632	109.1
Aroclor-1254	5	9.806	-0.071	271469	330.5	5	10.224	0.019	90774	128.5
Total Col1Ave (4 peaks):				110.7		Total Col2Ave (5 peaks):			58.6	RPD = 62*
Corrected Ave (3 peaks):				37.4		Corrected Ave (4 peaks):			41.1	RPD = 9
Aroclor-1260	1	10.405	0.001	311981	379.6	1	11.043	0.000	176982	432.1
Aroclor-1260	2	10.726	-0.000	256156	312.2	2	11.506	-0.001	146726	340.1
Aroclor-1260	3	11.077	-0.002	651962	306.1	3	11.760	0.001	355912	322.5
Aroclor-1260	4	11.480	-0.000	205051	188.4	4	12.348	-0.001	245935	343.0
Aroclor-1260	5	11.586	0.000	256602	541.4	NS	---			----
Total Col1Ave (5 peaks):				345.5		Total Col2Ave (4 peaks):			359.4	RPD = 4
Corrected Ave (4 peaks):				296.6		Corrected Ave (3 peaks):			335.2	RPD = 12
Aroclor-1262	1	10.405	0.000	311981	253.1	1	11.043	-0.000	176982	254.1
Aroclor-1262	2	11.077	-0.000	651962	235.2	2	11.760	0.001	355912	232.5
Aroclor-1262	3	11.586	0.000	256602	333.6	3	12.274	-0.001	159148	323.7
Aroclor-1262	4	11.657	-0.000	301603	299.1	4	13.067	0.001	141336	253.8
Total Col1Ave (4 peaks):				280.2		Total Col2Ave (4 peaks):			266.0	RPD = 5
Corrected Ave (3 peaks):				262.5		Corrected Ave (3 peaks):			246.8	RPD = 6
Aroclor-1268	1	11.586	-0.002	256602	91.3	1	12.274	0.001	159148	98.9
Aroclor-1268	2	11.657	0.000	301603	99.9	2	12.348	0.008	245935	139.9
Aroclor-1268	3	12.060	0.023	116958	48.3	3	12.729	-0.000	9225	6.3
Aroclor-1268	4	12.806	-0.006	110966	11.6	4	13.545	-0.001	44848	9.2
Total Col1Ave (4 peaks):				62.8		Total Col2Ave (4 peaks):			63.6	RPD = 1

Corrected Ave (3 peaks): 50.4 Corrected Ave (3 peaks): 38.1 RPD = 28

Total PCB Area Col1 (5.118 - 13.110) = 4837083 Col1 Total PCB = 0.4 ppm*

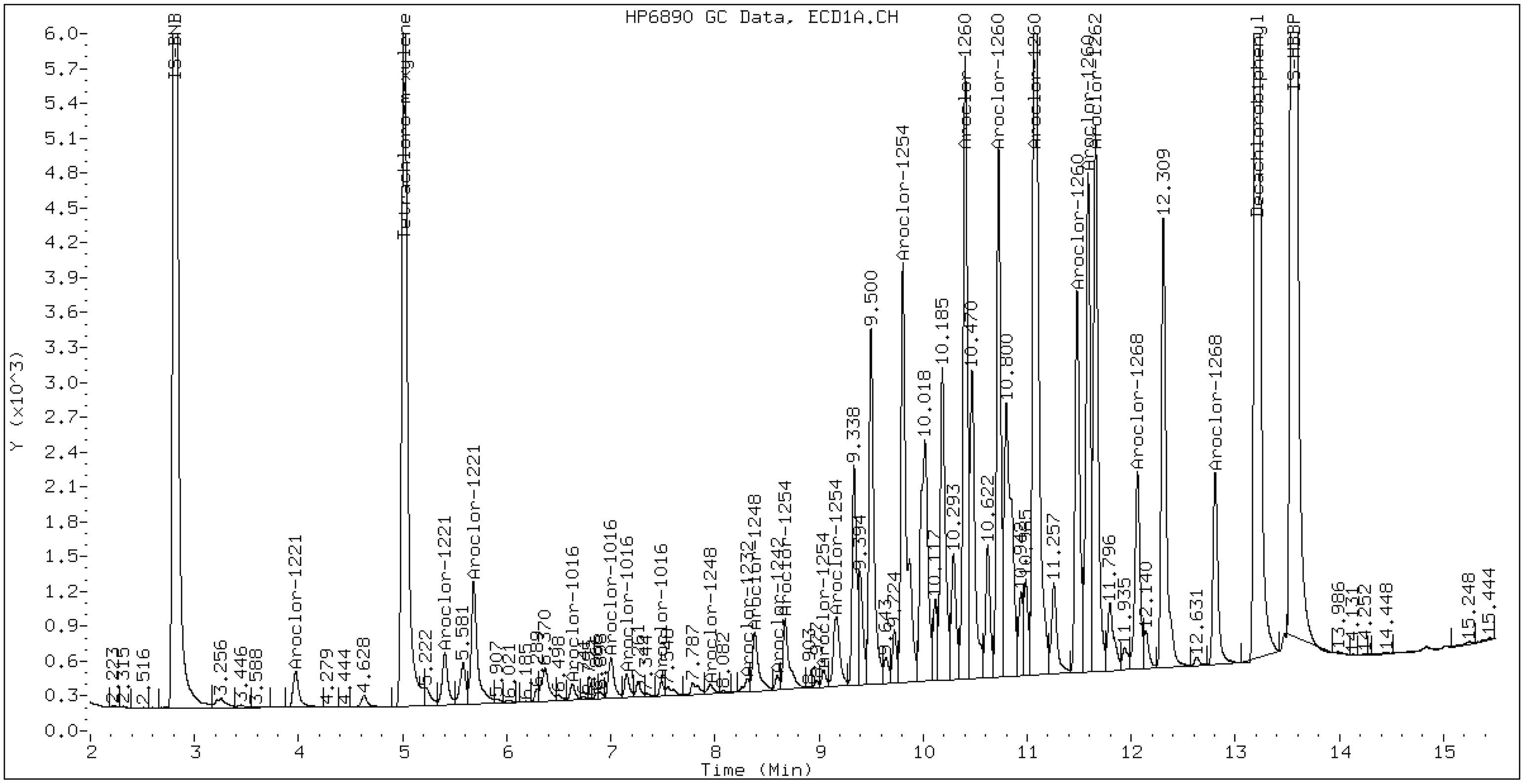
Total PCB Area Col2 (5.118 - 13.110) = 2627283 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

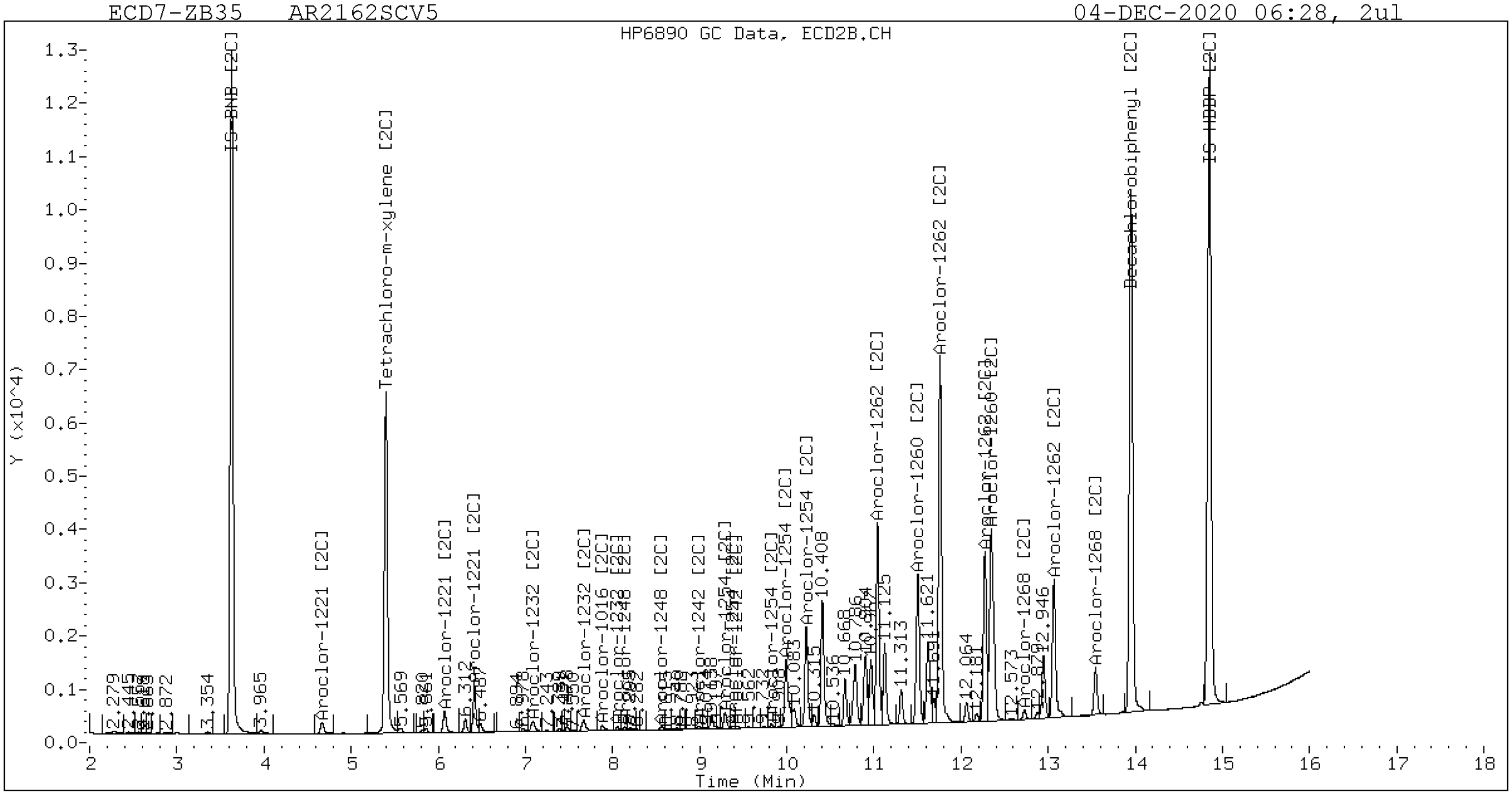
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV5 04-DEC-2020 06:28, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV5 04-DEC-2020 06:28, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: DL00019
Sequence: SIL0088

SDG: 20K0126
Project: ICS-Former NW Cooperage
Laboratory ID: SIL0088-SCV6
Sequence Name: AR3268SCV6
Standard ID: I005068

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1232	250.00	293	17.1	20.00
Aroclor 1232 [2C]	250.00	254	1.6	20.00
Aroclor 1268	250.00	246	-1.5	20.00
Aroclor 1268 [2C]	250.00	246	-1.6	20.00
Decachlorobiphenyl	40.000	61.5	53.8	20.00
Tetrachlorometaxylene	40.000	45.5	13.8	20.00
Decachlorobiphenyl [2C]	40.000	69.8	74.4	20.00
Tetrachlorometaxylene [2C]	40.000	45.9	14.8	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120425ECD7.D
Data file 2: /20201204.b/20201204.b/20120425ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV6
Client ID:
Injection Date: 04-DEC-2020 06:49
Report Date: 12/07/2020 11:54
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.002	511511	5.400	-0.002	326478	45.5	45.9	0.8	Tetrachloro-m-xylene
13.210	0.000	1402408	13.950	-0.001	786093	61.5	69.8	12.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	113.8	114.8
Decachlorobiphenyl	153.8	174.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	770524	-2.1
Hexabromobiphenyl	2132987	2144827	0.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	620502	-2.4
Hexabromobiphenyl	665758	684700	2.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.630	-0.000	44327	114.3	1	7.076	-0.000	35634	118.4
Aroclor-1016	2	7.001	-0.002	133389	108.0	2	7.672	0.000	74142	109.1
Aroclor-1016	3	7.152	-0.000	58697	110.6	3	7.883	0.001	27953	108.6
Aroclor-1016	4	7.486	-0.063	32819	113.7	4	8.057	0.001	17125	111.0
Total Col1Ave (4 peaks):				111.6		Total Col2Ave (4 peaks):			111.8	RPD = 0
Corrected Ave (3 peaks):				110.8		Corrected Ave (3 peaks):			109.6	RPD = 1
Aroclor-1221	1	3.971	-0.001	15217	151.9	1	4.667	-0.002	6225	145.1
Aroclor-1221	2	5.404	-0.001	23065	162.7	2	6.075	0.000	14194	166.5
Aroclor-1221	3	5.682	-0.000	70892	195.0	3	6.416	-0.001	31775	200.0
Total Col1Ave (3 peaks):				169.9		Total Col2Ave (3 peaks):			170.5	RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.971	-0.002	15217	251.4	1	4.667	-0.002	6225	234.4
Aroclor-1232	2	6.630	-0.001	44327	281.8	2	7.076	-0.001	35634	259.9
Aroclor-1232	3	7.001	-0.001	133389	259.5	3	7.672	-0.000	74142	259.0
Aroclor-1232	4	8.308	-0.000	57707	377.9	4	8.057	0.000	17125	262.5
Total Col1Ave (4 peaks):				292.6		Total Col2Ave (4 peaks):			254.0	RPD = 14
Corrected Ave (3 peaks):				264.2		Corrected Ave (3 peaks):			251.1	RPD = 5
Aroclor-1242	1	6.630	-0.001	44327	148.3	1	7.076	-0.001	35634	151.9
Aroclor-1242	2	7.001	-0.002	133389	144.7	2	7.672	-0.001	74142	136.5
Aroclor-1242	3	8.308	-0.000	57707	188.5	3	8.992	0.001	25997	121.2
Aroclor-1242	4	8.603	-0.000	41786	125.4	4	9.428	0.001	25272	119.7
Total Col1Ave (4 peaks):				151.7		Total Col2Ave (4 peaks):			132.3	RPD = 14
Corrected Ave (3 peaks):				139.5		Corrected Ave (3 peaks):			125.8	RPD = 10
Aroclor-1248	1	7.486	-0.001	32819	81.7	1	8.140	-0.000	14105	67.0
Aroclor-1248	2	7.956	0.000	53707	88.1	2	8.562	0.001	21319	77.4
Aroclor-1248	3	8.364	-0.002	83942	93.2	3	8.992	0.000	25997	66.3
Aroclor-1248	4	8.603	0.001	41786	80.2	4	9.428	0.002	25272	65.7
Total Col1Ave (4 peaks):				85.8		Total Col2Ave (4 peaks):			69.1	RPD = 22
Corrected Ave (3 peaks):				83.3		Corrected Ave (3 peaks):			66.4	RPD = 23
Aroclor-1254	1	8.674	-0.002	23763	26.0	1	9.291	0.000	6551	14.8
Aroclor-1254	2	8.742	-0.001	15107	30.6	2	9.428	0.044	25272	123.1
Aroclor-1254	3	9.045	-0.000	9408	15.5	3	9.822	-0.000	3580	12.2
Aroclor-1254	4	9.181	0.001	18138	14.5	4	9.975	0.003	8171	11.8
Aroclor-1254	5	9.880	0.003	10355	12.4	5	10.210	0.005	7387	10.3
Total Col1Ave (5 peaks):				19.8		Total Col2Ave (5 peaks):			34.5	RPD = 54*
Corrected Ave (4 peaks):				17.1		Corrected Ave (4 peaks):			12.3	RPD = 33
Aroclor-1260	1	10.406	0.001	141643	169.8	1	11.044	0.001	61084	146.0
Aroclor-1260	2	10.726	-0.000	10799	13.0	2	11.487	-0.020	85617	194.2
Aroclor-1260	3	11.077	-0.003	85817	39.7	3	11.759	-0.000	37085	32.9
Aroclor-1260	4	11.481	0.000	2895	2.6	4	12.340	-0.009	438765	598.9
Aroclor-1260	5	11.588	0.002	702643	1460.8	NS	---			----
Total Col1Ave (5 peaks):				337.2		Total Col2Ave (4 peaks):			243.0	RPD = 32
Corrected Ave (4 peaks):				56.3		Corrected Ave (3 peaks):			124.4	RPD = 75*
Aroclor-1262	1	10.406	0.001	141643	113.2	1	11.044	0.001	61084	85.8
Aroclor-1262	2	11.077	-0.001	85817	30.5	2	11.759	0.000	37085	23.7
Aroclor-1262	3	11.588	0.002	702643	900.0	3	12.273	-0.003	405151	806.6
Aroclor-1262	4	11.657	-0.000	749121	732.0	4	13.065	-0.000	143614	252.5
Total Col1Ave (4 peaks):				443.9		Total Col2Ave (4 peaks):			292.1	RPD = 41*
Corrected Ave (3 peaks):				291.9		Corrected Ave (3 peaks):			120.7	RPD = 83*
Aroclor-1268	1	11.588	-0.000	702643	246.4	1	12.273	-0.000	405151	246.4
Aroclor-1268	2	11.657	-0.000	749121	244.6	2	12.340	0.000	438765	244.4
Aroclor-1268	3	12.037	-0.001	604557	246.0	3	12.729	0.000	371169	246.5
Aroclor-1268	4	12.812	-0.000	2402545	248.0	4	13.545	-0.001	1232367	246.5
Total Col1Ave (4 peaks):				246.2		Total Col2Ave (4 peaks):			245.9	RPD = 0

Corrected Ave (3 peaks): 245.6 Corrected Ave (3 peaks): 245.7 RPD = 0

Total PCB Area Col1 (5.118 - 13.110) = 6593528 Col1 Total PCB = 0.6 ppm*

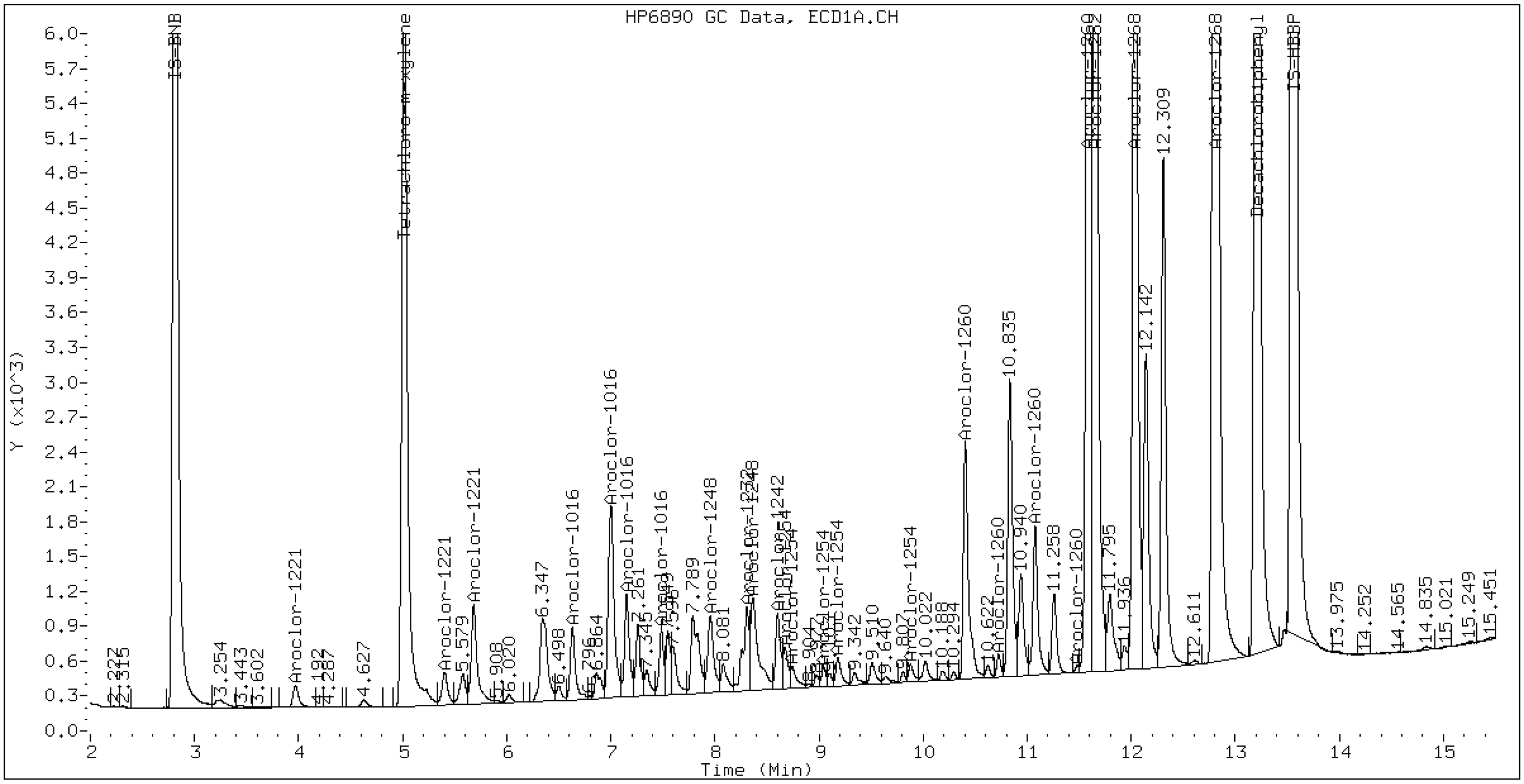
Total PCB Area Col2 (5.118 - 13.110) = 2531175 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

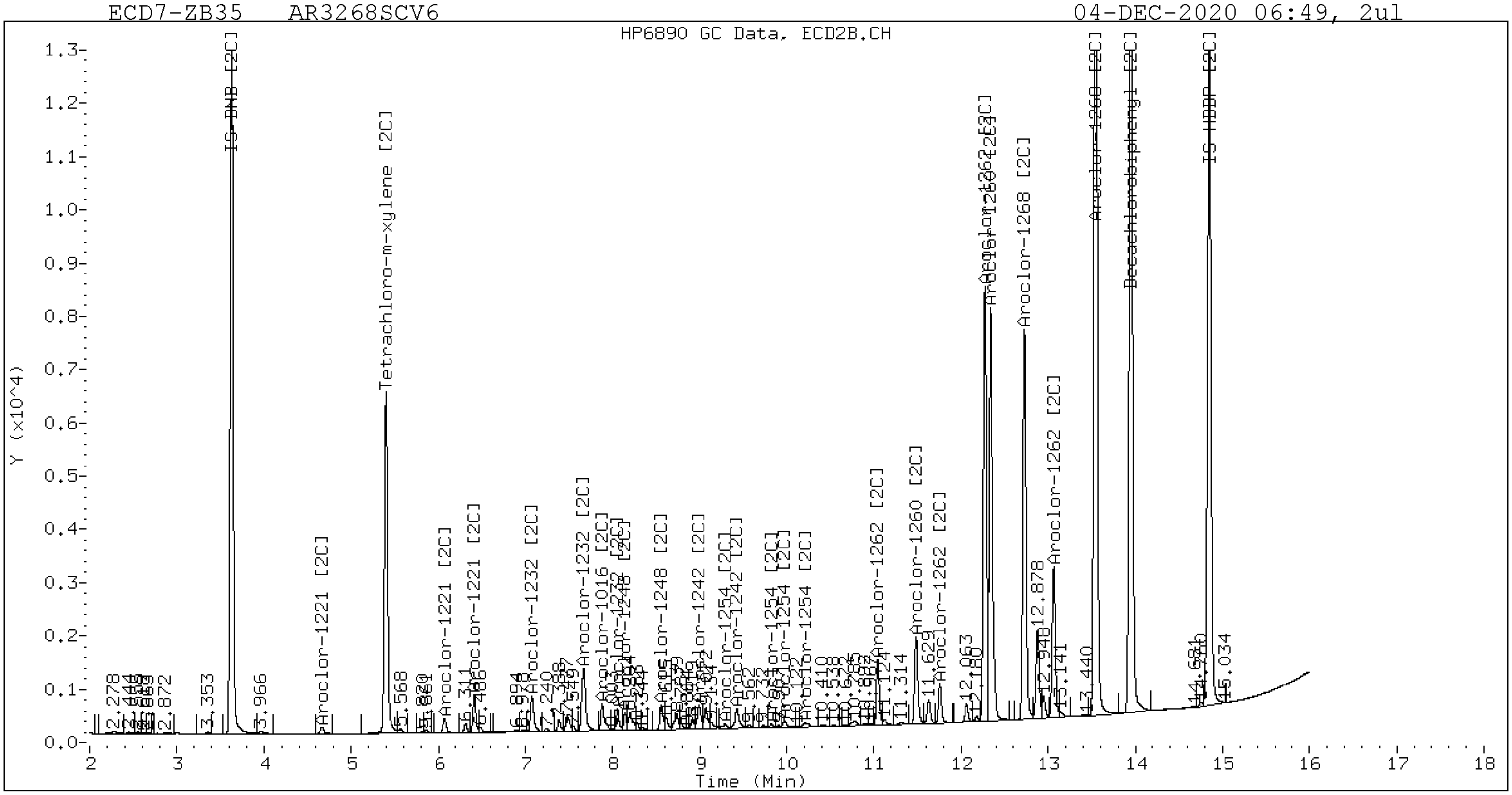
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV6 04-DEC-2020 06:49, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV6 04-DEC-2020 06:49, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120703ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0131	Injection Date:	12/07/20
Lab Sample ID:	SIL0131-ICV1	Injection Time:	08:26
Sequence Name:	AR1254ICV1		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	258	0.0851540	0.0880527		3.1	+/-20
Aroclor 1254 [2C]	A	250.00	262	0.0605432	0.0632949		4.6	+/-20
Decachlorobiphenyl	A	40.000	36.3	0.8503828	0.7713845		-9.3	+/-20
Tetrachlorometaxylene	A	40.000	41.2	1.1663830	1.2010120		3.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.7	1.3164080	1.3715220		4.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	43.8	0.9170028	1.0047400		9.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120703ECD7.D
Data file 2: /20201207.b/20201207.b/20120703ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 07-DEC-2020 08:26
Report Date: 12/09/2020 14:06
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	0.002	501703	5.400	0.000	315939	41.2	43.8	6.2	Tetrachloro-m-xylene
13.206	0.001	949265	13.947	0.000	505480	36.3	41.7	13.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.0	109.6
Decachlorobiphenyl	90.7	104.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	835467	6.2
Hexabromobiphenyl	2132987	2461198	15.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	628897	-1.0
Hexabromobiphenyl	665758	737108	10.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.673	0.000	266318	269.1	1	9.288	0.000	118015	262.8
Aroclor-1254	2	8.742	0.000	131999	246.2	2	9.381	0.000	54757	263.3
Aroclor-1254	3	9.043	0.000	169529	257.2	3	9.819	0.000	77213	259.6
Aroclor-1254	4	9.178	0.000	342575	252.0	4	9.970	0.000	179282	255.7
Aroclor-1254	5	9.874	0.000	239034	265.0	5	10.201	0.000	192701	266.1

Total Col1Ave (5 peaks): 257.9 Total Col2Ave (5 peaks): 261.5 RPD = 1
Corrected Ave (4 peaks): 255.1 Corrected Ave (4 peaks): 260.3 RPD = 2

CalAmt %D: 3.2 CalAmt %D: 4.6

Total PCB Area Col1 (5.114 - 13.105) = 3807536 Col1 Total PCB = 0.3 ppm*

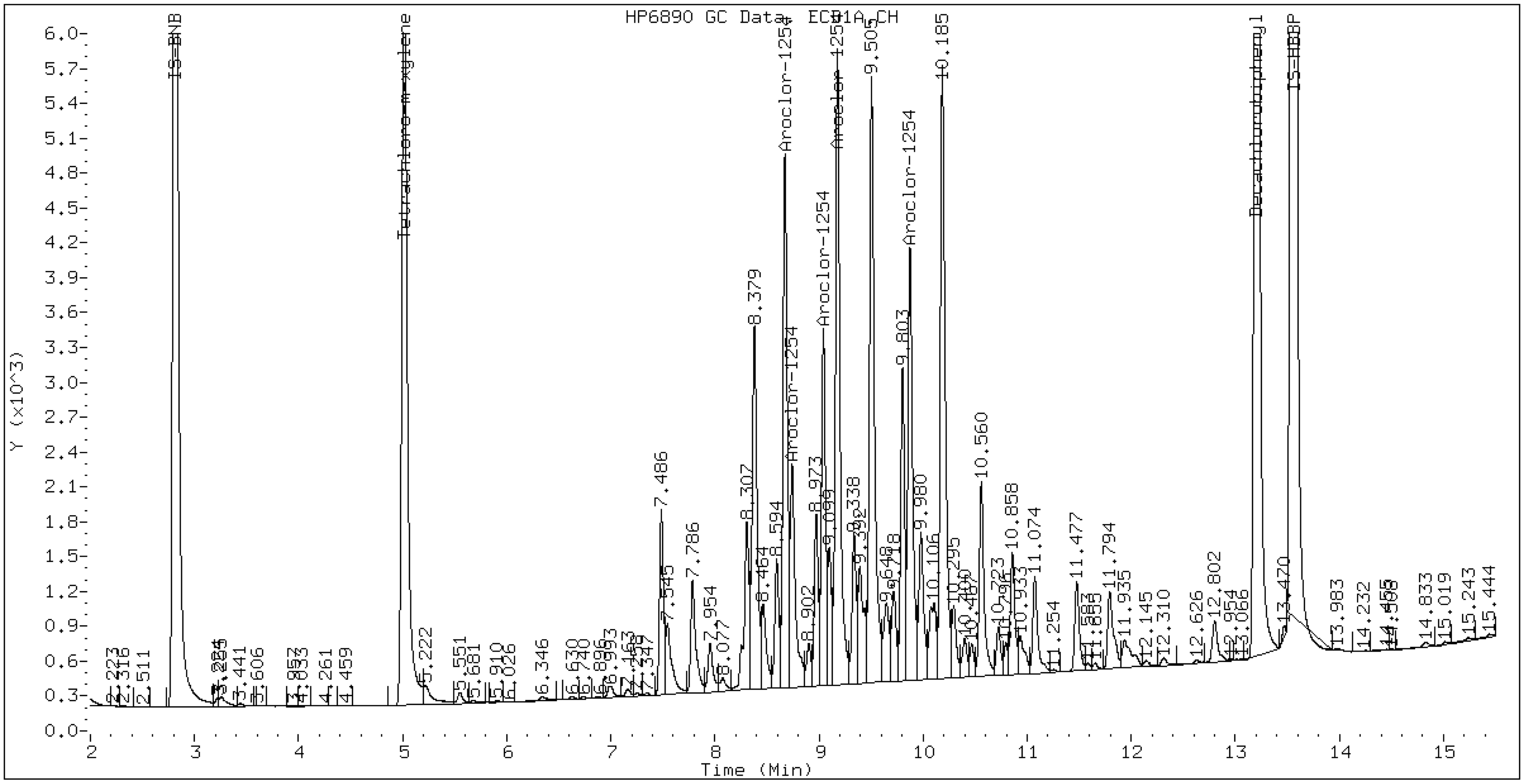
Total PCB Area Col2 (5.114 - 13.105) = 1936382 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

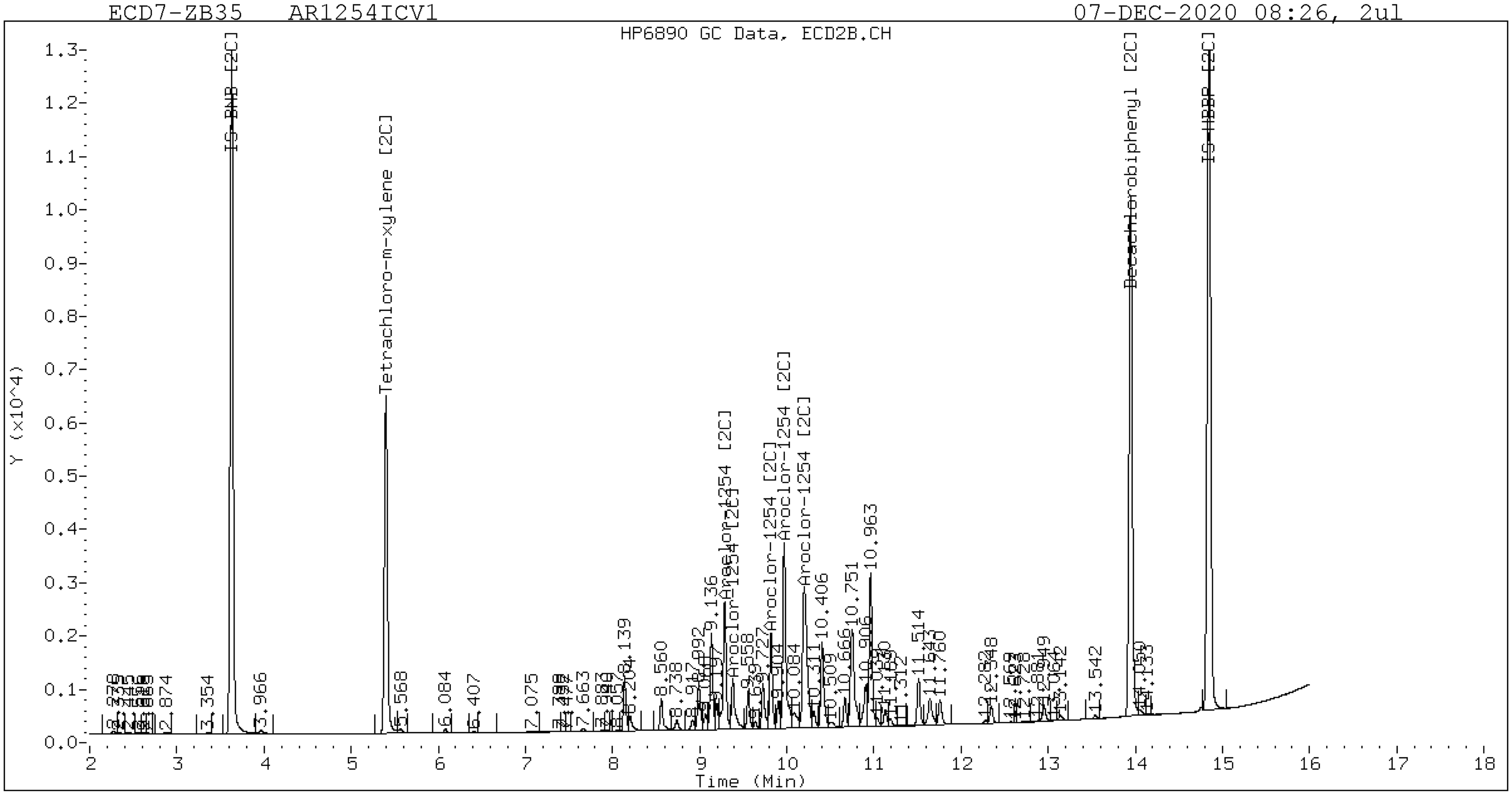
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 07-DEC-2020 08:26, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 07-DEC-2020 08:26, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage

Instrument ID: ECD7
Calibration: DL00019

Lab File ID: 20120704ECD7.D
Calibration Date: 12/04/2020

Sequence: SIL0131
Injection Date: 12/07/20

Lab Sample ID: SIL0131-ICV2
Injection Time: 08:47

Sequence Name: AR1660ICV2

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1016	A	250.00	247	0.0634001	0.0623994		-1.4	+/-20
Aroclor 1016 [2C]	A	250.00	263	0.0448734	0.0469814		5.2	+/-20
Aroclor 1260	A	250.00	229	0.0403882	0.0374916		-8.2	+/-20
Aroclor 1260 [2C]	A	250.00	230	0.0794282	0.0727301		-8.2	+/-20
Decachlorobiphenyl	A	40.000	35.6	0.8503828	0.7571784		-11.0	+/-20
Tetrachlorometaxylene	A	40.000	40.9	1.1663830	1.1940020		2.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.6	1.3164080	1.3047400		-1.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.9	0.9170028	0.9838412		7.3	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120704ECD7.D
Data file 2: /20201207.b/20201207.b/20120704ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 07-DEC-2020 08:47
Report Date: 12/09/2020 14:06
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	-0.000	467253	5.400	0.000	294079	40.9	42.9	4.7	Tetrachloro-m-xylene
13.206	0.001	888305	13.948	0.001	466616	35.6	39.6	10.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	102.4	107.3
Decachlorobiphenyl	89.0	99.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	782667	-0.5
Hexabromobiphenyl	2132987	2346356	10.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	597818	-5.9
Hexabromobiphenyl	665758	715263	7.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.628	0.001	98191	249.3	1	7.074	0.000	75810	261.4
Aroclor-1016	2	7.000	0.000	308050	245.5	2	7.670	0.000	170212	260.0
Aroclor-1016	3	7.150	0.001	131891	244.7	3	7.881	0.000	65052	262.3
Aroclor-1016	4	7.547	0.001	72342	246.8	4	8.055	0.000	40005	269.0
	Total Col1Ave (4 peaks):			246.5		Total Col2Ave (4 peaks):			263.2	RPD = 7
	Corrected Ave (3 peaks):			245.6		Corrected Ave (3 peaks):			261.2	RPD = 6
	CalAmt %D:			-1.4		CalAmt %D:			5.3	
Aroclor-1260	1	10.402	0.001	195608	214.4	1	11.041	0.000	95258	217.9
Aroclor-1260	2	10.723	0.002	210806	231.4	2	11.505	0.001	112279	243.8
Aroclor-1260	3	11.074	0.001	562661	237.9	3	11.757	0.002	266844	226.6
Aroclor-1260	4	11.477	0.001	285925	236.6	4	12.346	0.001	175883	229.8
Aroclor-1260	5	11.583	0.001	119510	227.1	NS	---			----
	Total Col1Ave (5 peaks):			229.5		Total Col2Ave (4 peaks):			229.5	RPD = 0
	Corrected Ave (4 peaks):			227.4		Corrected Ave (3 peaks):			224.8	RPD = 1
	CalAmt %D:			-8.2		CalAmt %D:			-8.2	

Total PCB Area Col1 (5.114 - 13.105) = 6060899 Col1 Total PCB = 0.5 ppm*

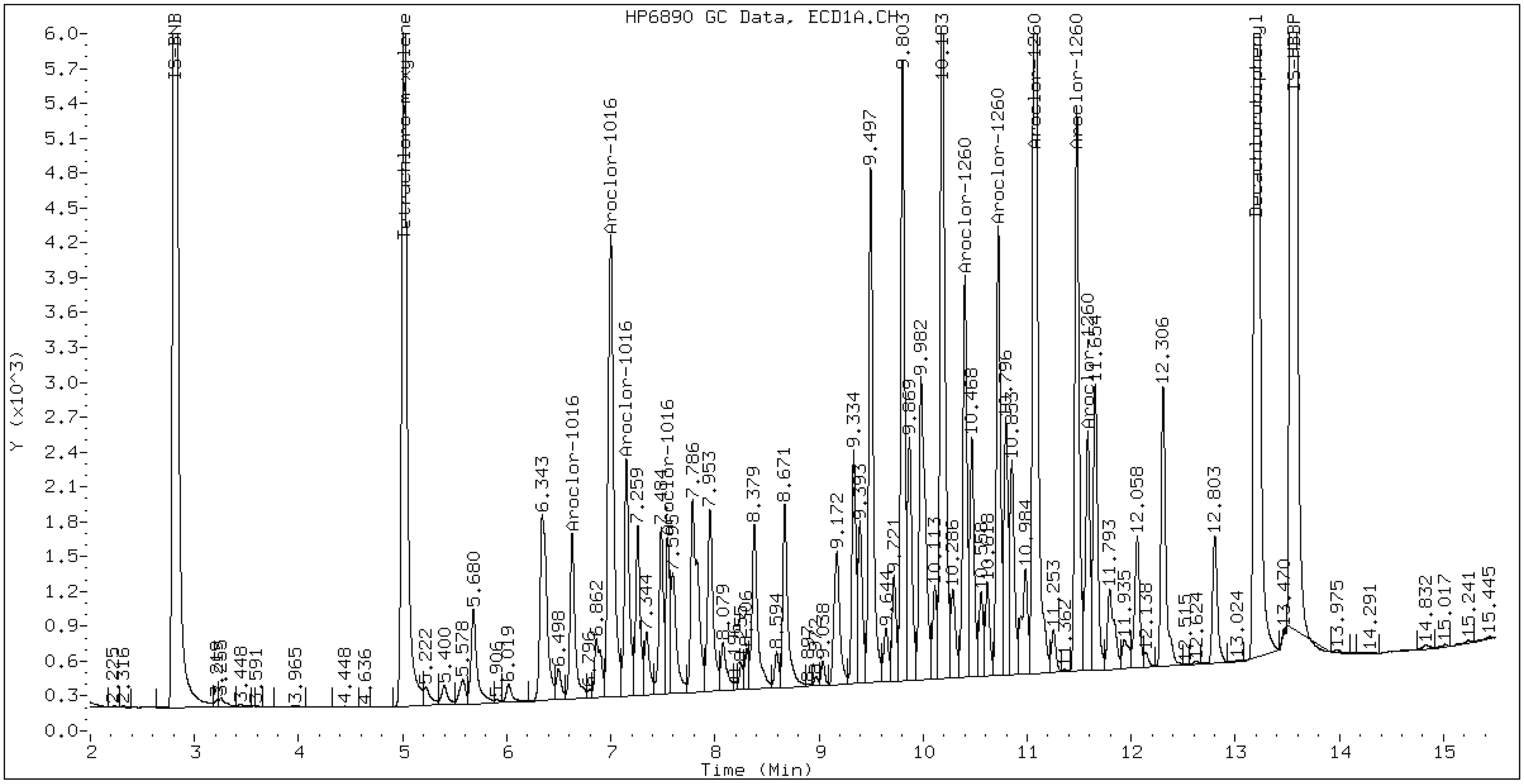
Total PCB Area Col2 (5.114 - 13.105) = 2965700 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

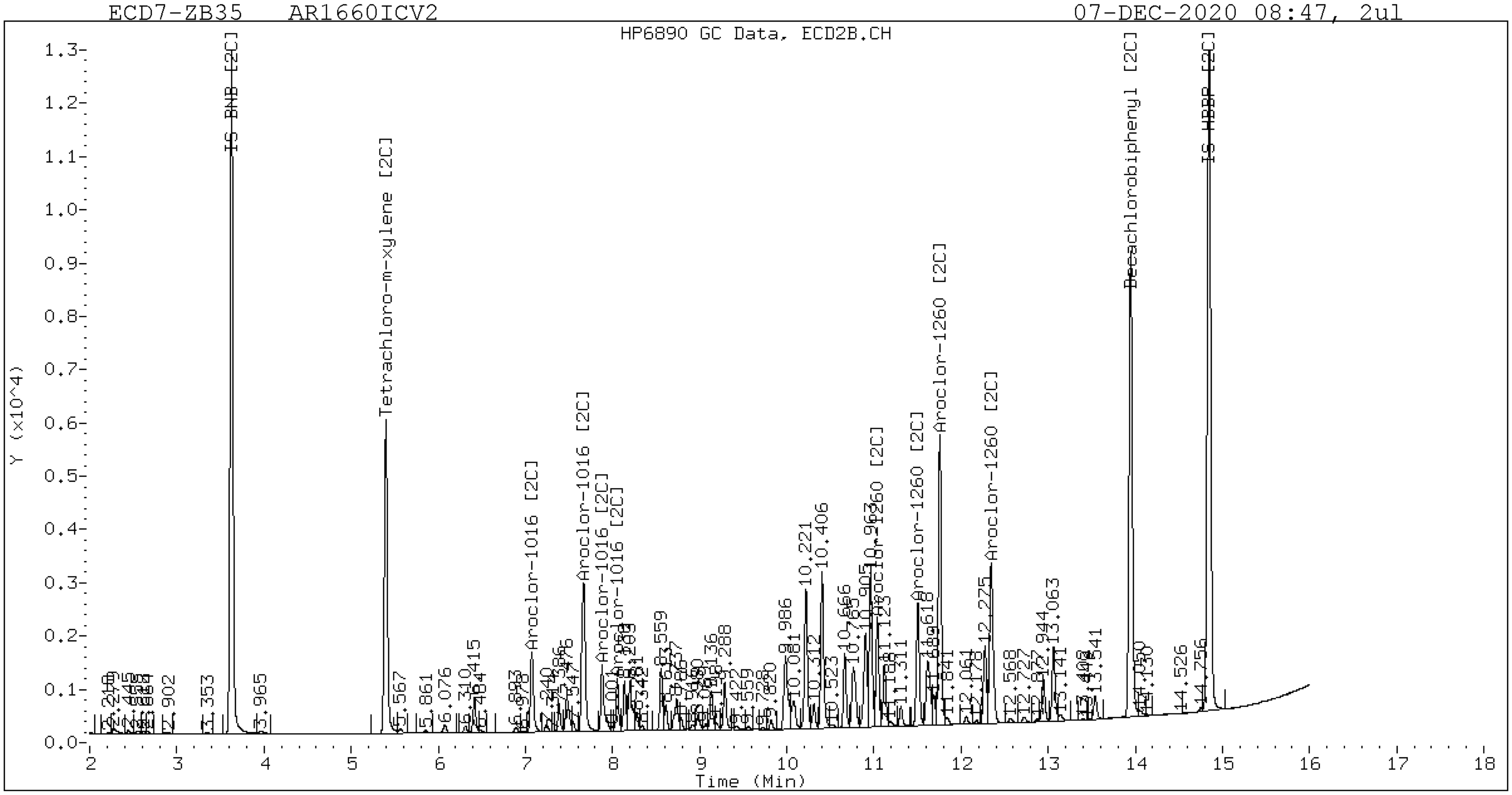
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 07-DEC-2020 08:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 07-DEC-2020 08:47, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8082A

Laboratory: Analytical Resources, Inc.

SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Instrument ID: ECD7

Calibration: DL00019

Lab File ID: 20120802ECD7.D

Calibration Date: 12/04/2020

Sequence: SIL0191

Injection Date: 12/08/20

Lab Sample ID: SIL0191-ICV1

Injection Time: 20:29

Sequence Name: AR1254ICV1

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	269	0.0851540	0.0925220		7.6	+/-20
Aroclor 1254 [2C]	A	250.00	271	0.0605432	0.0654444		8.4	+/-20
Decachlorobiphenyl	A	40.000	37.3	0.8503828	0.7928791		-6.8	+/-20
Tetrachlorometaxylene	A	40.000	45.0	1.1663830	1.3129		12.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.7	1.3164080	1.4386550		9.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	45.7	0.9170028	1.0468740		14.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120802ECD7.D
Data file 2: /20201208.b/20201208.b/20120802ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 08-DEC-2020 20:29
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	-0.000	499321	5.396	-0.003	301563	45.0	45.7	1.4	Tetrachloro-m-xylene
13.205	0.001	914751	13.945	-0.001	458316	37.3	43.7	15.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	112.6	114.2
Decachlorobiphenyl	93.2	109.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	760638	-3.3
Hexabromobiphenyl	2132987	2307416	8.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	576121	-9.3
Hexabromobiphenyl	665758	637145	-4.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.671	0.000	262114	290.9	1	9.285	0.000	113496	275.9
Aroclor-1254	2	8.740	0.000	130773	267.9	2	9.378	0.000	54275	284.8
Aroclor-1254	3	9.039	0.000	139568	232.6	3	9.817	0.000	69610	255.5
Aroclor-1254	4	9.175	0.000	332150	268.4	4	9.967	0.000	168229	261.9
Aroclor-1254	5	9.872	0.000	235016	286.2	5	10.197	0.000	183513	276.7

Total Col1Ave (5 peaks): 269.2 Total Col2Ave (5 peaks): 271.0 RPD = 1
Corrected Ave (4 peaks): 263.8 Corrected Ave (4 peaks): 267.5 RPD = 1

CalAmt %D: 7.7 CalAmt %D: 8.4

Total PCB Area Col1 (5.114 - 13.105) = 3728581 Col1 Total PCB = 0.3 ppm*

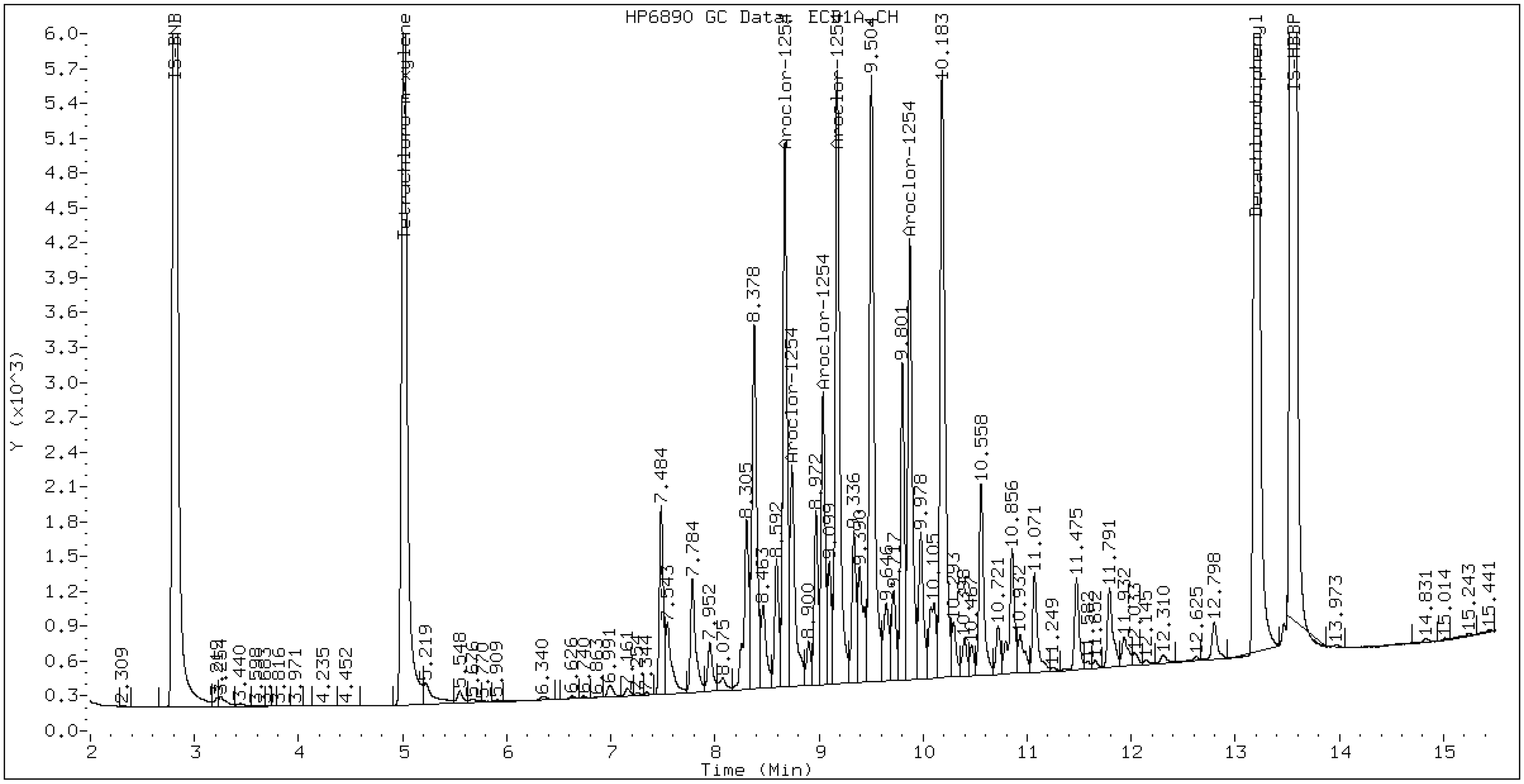
Total PCB Area Col2 (5.114 - 13.105) = 1839670 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

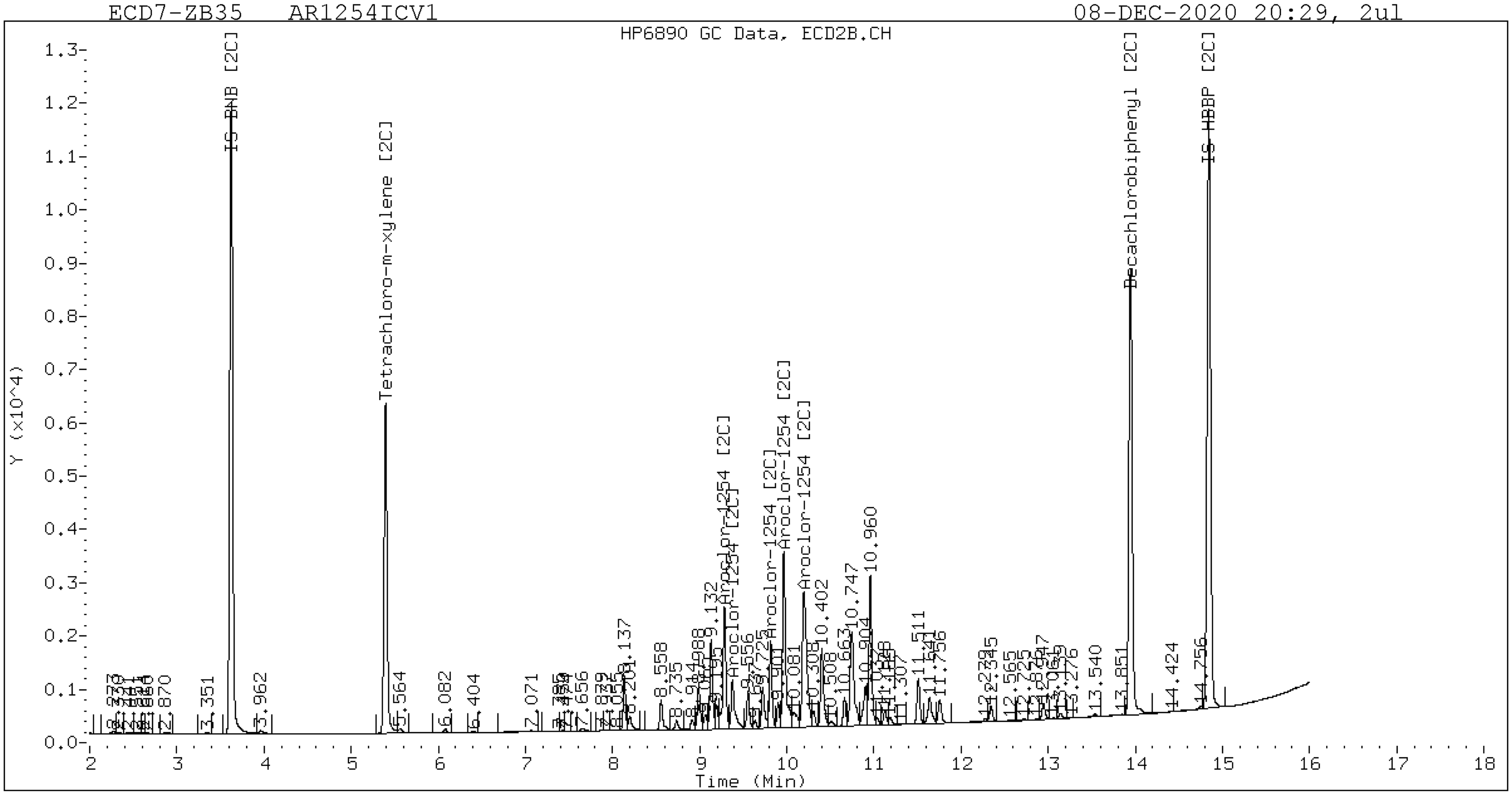
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 08-DEC-2020 20:29, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 08-DEC-2020 20:29, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ECD7
Calibration: DL00019
Lab File ID: 20120803ECD7.D
Calibration Date: 12/04/2020
Sequence: SIL0191
Injection Date: 12/08/20
Lab Sample ID: SIL0191-ICV2
Injection Time: 20:49
Sequence Name: AR1660ICV2

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1016	A	250.00	258	0.0634001	0.0666016		3.0	+/-20
Aroclor 1016 [2C]	A	250.00	273	0.0448734	0.0479871		9.1	+/-20
Aroclor 1260	A	250.00	244	0.0403882	0.0399528		-2.4	+/-20
Aroclor 1260 [2C]	A	250.00	236	0.0794282	0.0746025		-5.5	+/-20
Decachlorobiphenyl	A	40.000	37.6	0.8503828	0.8000993		-6.0	+/-20
Tetrachlorometaxylene	A	40.000	43.0	1.1663830	1.2552960		7.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.3	1.3164080	1.3579210		3.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.7	0.9170028	1.0252110		11.8	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120803ECD7.D
Data file 2: /20201208.b/20201208.b/20120803ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 08-DEC-2020 20:49
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.012	-0.002	441725	5.396	-0.003	277027	43.0	44.7	3.8	Tetrachloro-m-xylene
13.204	-0.000	855731	13.946	-0.000	416137	37.6	41.3	9.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	107.6	111.8
Decachlorobiphenyl	94.1	103.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	703778	-10.5
Hexabromobiphenyl	2132987	2139062	0.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	540429	-15.0
Hexabromobiphenyl	665758	612903	-7.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
	ZB5 Col					ZB35 Col				
Aroclor-1016	1	6.626	-0.002	95595	269.9	1	7.072	-0.002	72359	276.0
Aroclor-1016	2	6.998	-0.002	302428	268.0	2	7.668	-0.002	151724	256.4
Aroclor-1016	3	7.148	-0.001	127429	262.9	3	7.878	-0.002	62016	276.6
Aroclor-1016	4	7.542	-0.002	60457	229.4	4	8.053	-0.002	38071	283.2
Total Col1Ave (4 peaks):				257.5		Total Col2Ave (4 peaks):		273.1	RPD = 6	
Corrected Ave (3 peaks):				253.4		Corrected Ave (3 peaks):		269.7	RPD = 6	
CalAmt %D:				3.0		CalAmt %D:		9.2		
Aroclor-1260	1	10.398	-0.001	179634	216.0	1	11.038	-0.002	81049	216.4
Aroclor-1260	2	10.720	-0.001	207158	249.4	2	11.503	-0.001	104384	264.6
Aroclor-1260	3	11.071	-0.001	549568	254.9	3	11.754	-0.001	231388	229.3
Aroclor-1260	4	11.474	-0.001	281946	256.0	4	12.343	0.000	154730	236.0
Aroclor-1260	5	11.580	-0.001	117031	244.0	NS	---			----
Total Col1Ave (5 peaks):				244.0		Total Col2Ave (4 peaks):		236.5	RPD = 3	
Corrected Ave (4 peaks):				241.1		Corrected Ave (3 peaks):		227.2	RPD = 6	
CalAmt %D:				-2.4		CalAmt %D:		-5.4		

Total PCB Area Col1 (5.114 - 13.105) = 5916115 Col1 Total PCB = 0.6 ppm*

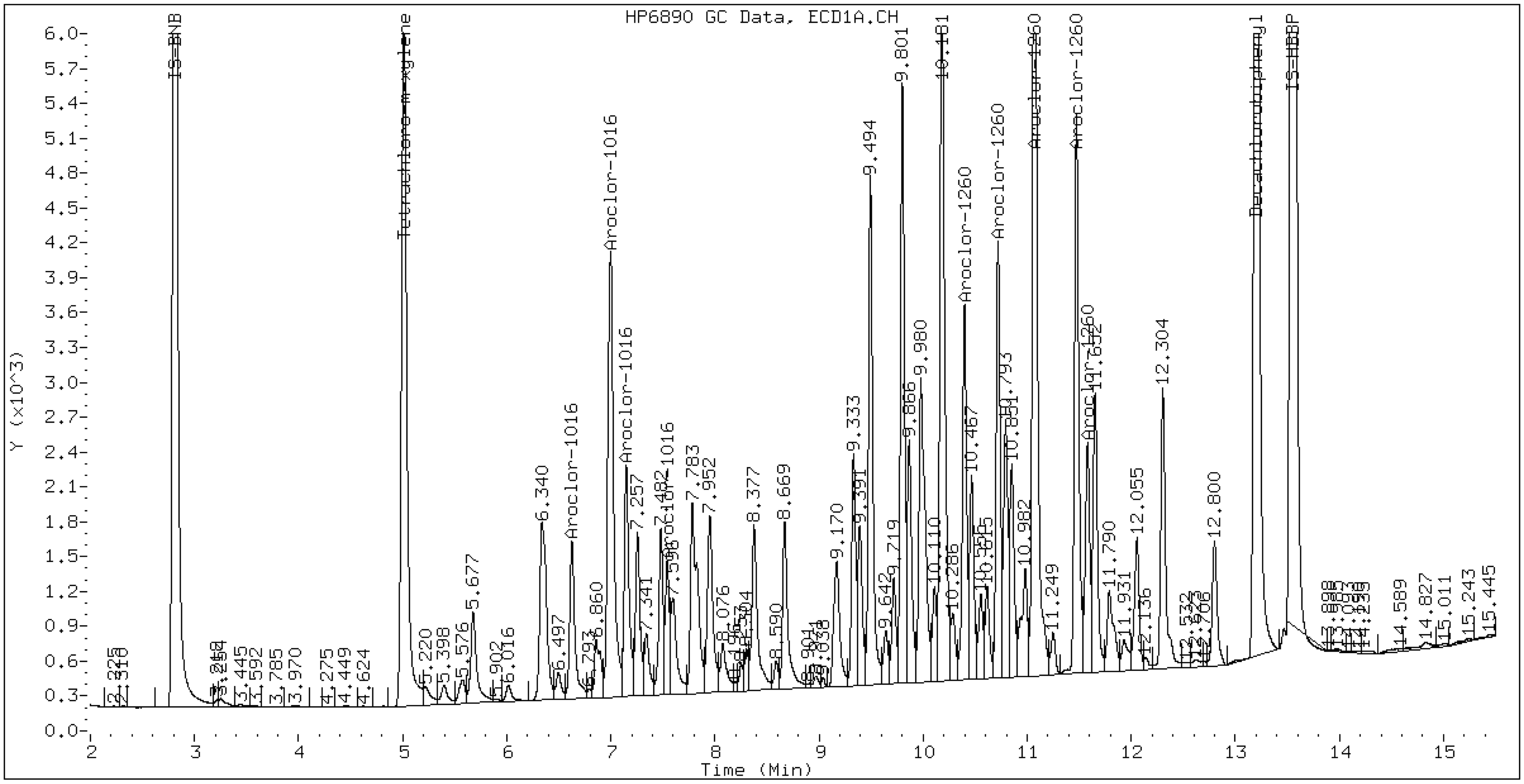
Total PCB Area Col2 (5.114 - 13.105) = 2704983 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

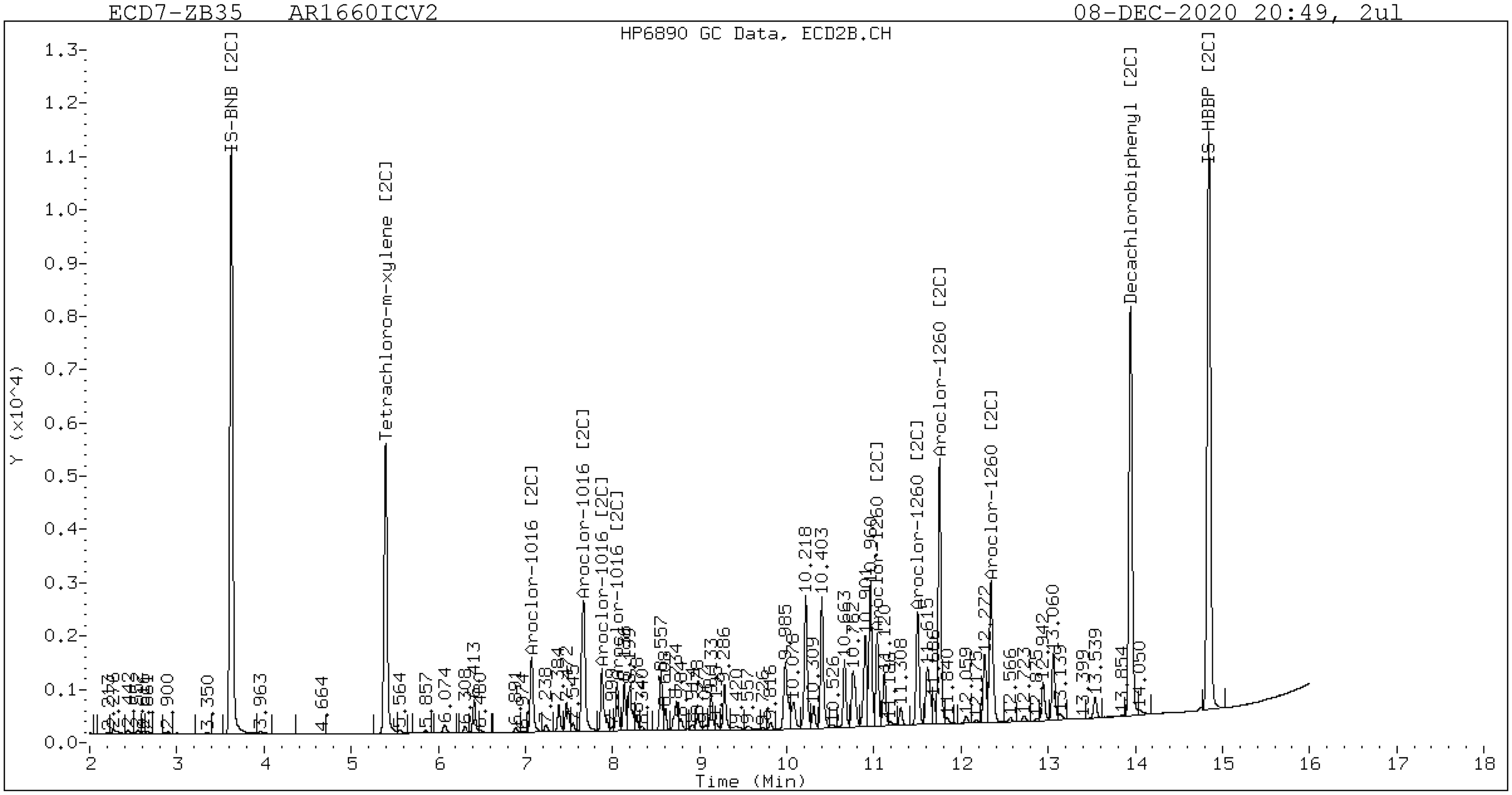
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 08-DEC-2020 20:49, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 08-DEC-2020 20:49, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120713ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0131	Injection Date:	12/07/20
Lab Sample ID:	SIL0131-CCV1	Injection Time:	16:44
Sequence Name:	AR1248CCV1		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	258	0.0631509	0.0653475		3.3	+/-20
Aroclor 1248 [2C]	A	250.00	259	0.0406848	0.0419079		3.4	+/-20
Decachlorobiphenyl	A	40.000	36.5	0.8503828	0.7760775		-8.8	+/-20
Tetrachlorometaxylene	A	40.000	40.7	1.1663830	1.1879280		1.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.7	1.3164080	1.3398630		1.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.8	0.9170028	1.0261080		12.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120713ECD7.D
Data file 2: /20201207.b/20201207.b/20120713ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 07-DEC-2020 16:44
Report Date: 12/09/2020 14:06
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.012	-0.002	475477	5.399	-0.001	302841	40.7	44.8	9.4	Tetrachloro-m-xylene
13.205	-0.000	851572	13.946	-0.001	427494	36.5	40.7	10.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	101.8	111.9
Decachlorobiphenyl	91.3	101.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	800515	1.8
Hexabromobiphenyl	2132987	2194554	2.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	590271	-7.1
Hexabromobiphenyl	665758	638116	-4.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	7.484	0.000	107331	257.1	1	8.138	0.000	52758	263.6
Aroclor-1248	2	7.953	0.000	166593	263.2	2	8.558	0.000	68215	260.4
Aroclor-1248	3	8.361	0.000	242696	259.3	3	8.988	0.000	91810	246.1
Aroclor-1248	4	8.596	0.000	137275	253.7	4	9.423	0.000	96430	263.7

Total Col1Ave (4 peaks): 258.3 Total Col2Ave (4 peaks): 258.5 RPD = 0
Corrected Ave (3 peaks): 256.7 Corrected Ave (3 peaks): 256.7 RPD = 0

CalAmt %D: 3.3 CalAmt %D: 3.4

Total PCB Area Col1 (5.114 - 13.105) = 2779647 Col1 Total PCB = 0.2 ppm*

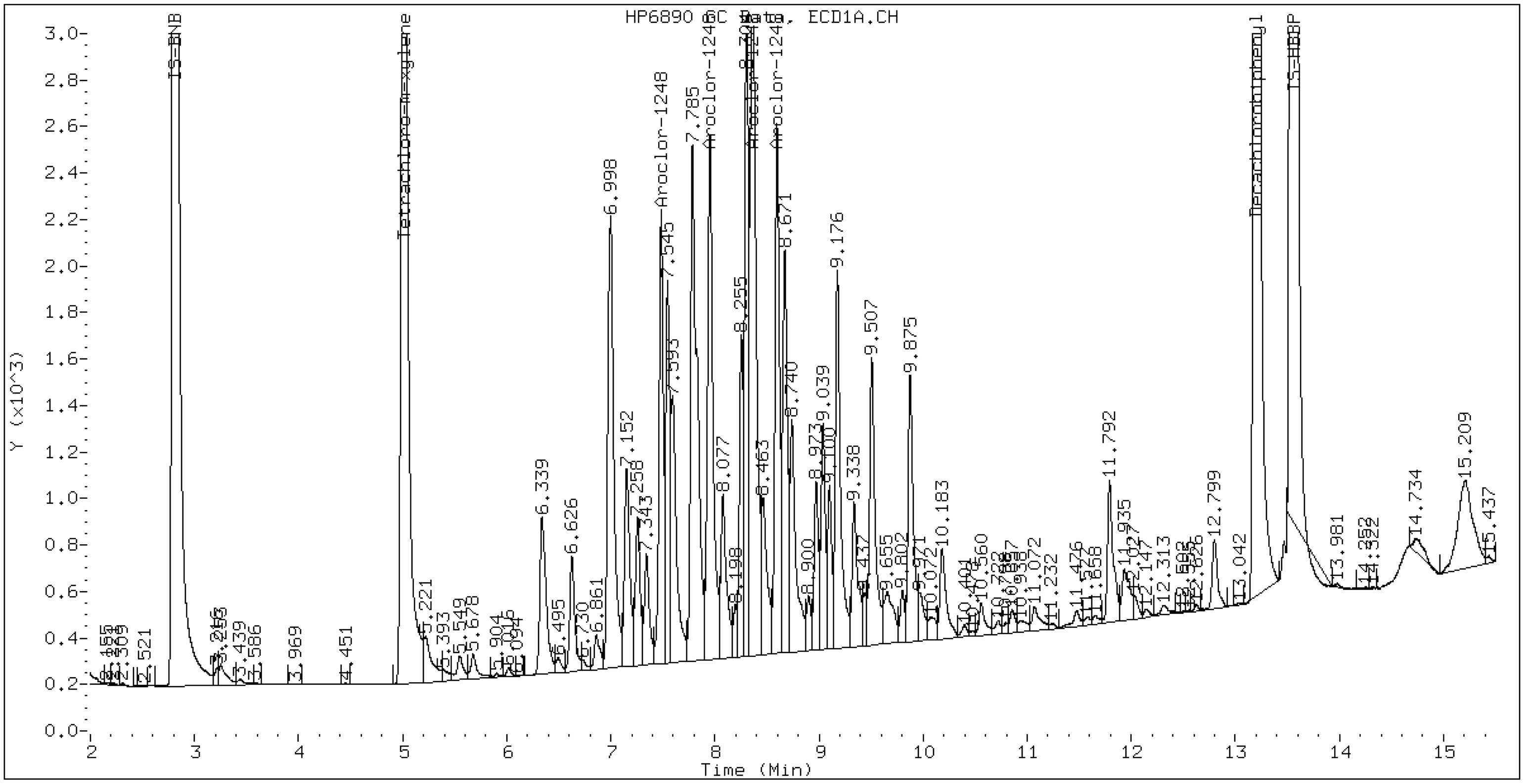
Total PCB Area Col2 (5.114 - 13.105) = 1430569 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

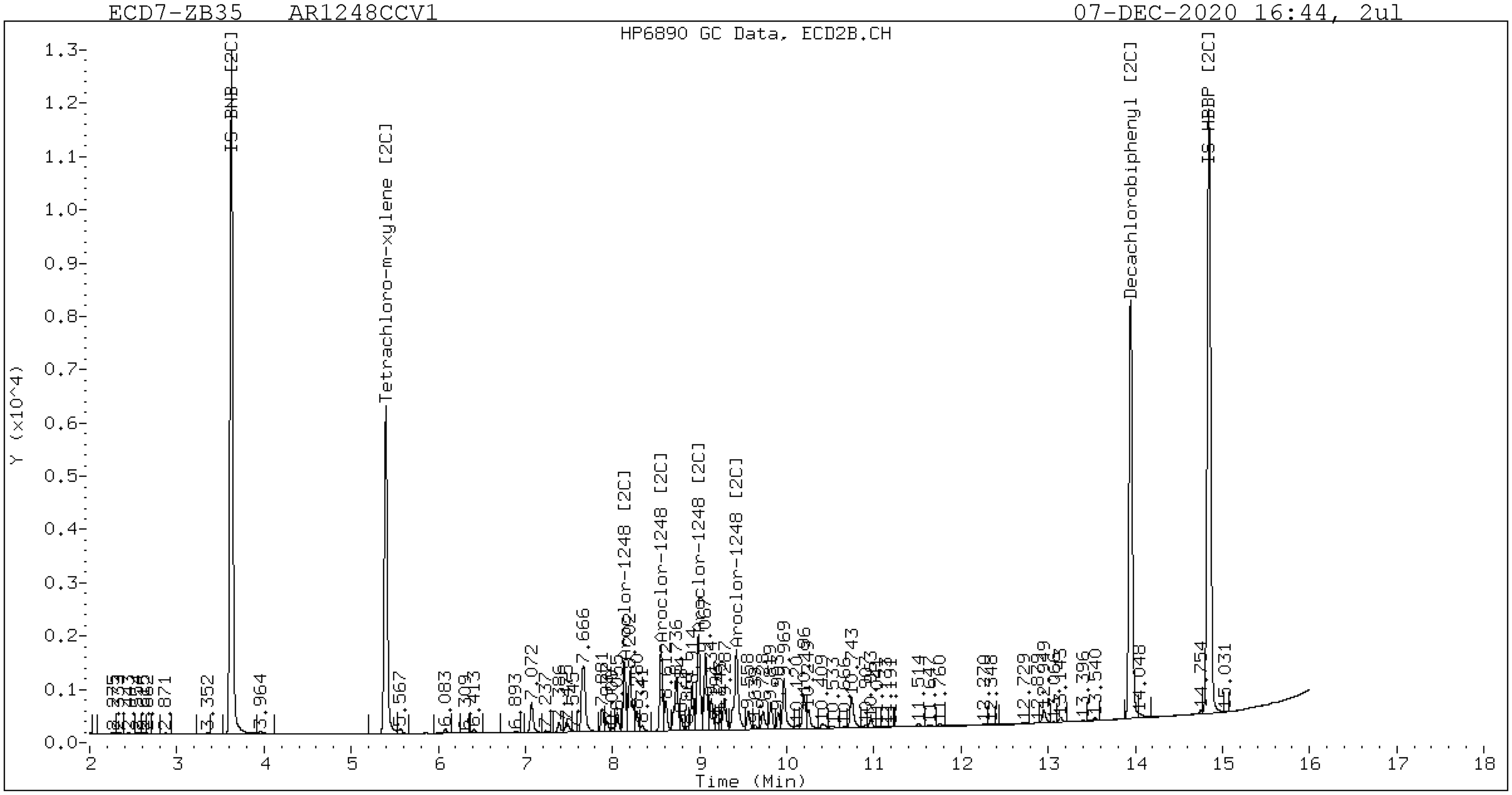
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 07-DEC-2020 16:44, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 07-DEC-2020 16:44, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ECD7
Calibration: DL00019
Lab File ID: 20120714ECD7.D
Calibration Date: 12/04/2020
Sequence: SIL0131
Injection Date: 12/07/20
Lab Sample ID: SIL0131-CCV2
Injection Time: 17:05
Sequence Name: AR1660CCV2

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	246	0.0634001	0.0622966		-1.6	+/-20
Aroclor 1016 [2C]	A	250.00	266	0.0448734	0.0474204		6.4	+/-20
Aroclor 1260	A	250.00	233	0.0403882	0.0382722		-6.6	+/-20
Aroclor 1260 [2C]	A	250.00	237	0.0794282	0.0748687		-5.2	+/-20
Decachlorobiphenyl	A	40.000	35.2	0.8503828	0.7478221		-12.0	+/-20
Tetrachlorometaxylene	A	40.000	40.5	1.1663830	1.1803270		1.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.9	1.3164080	1.2812010		-2.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	43.4	0.9170028	0.9941025		8.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120714ECD7.D
Data file 2: /20201207.b/20201207.b/20120714ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 07-DEC-2020 17:05
Report Date: 12/09/2020 14:06
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	0.000	472866	5.399	0.000	299201	40.5	43.4	6.9	Tetrachloro-m-xylene
13.205	0.000	857737	13.947	0.000	439874	35.2	38.9	10.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	101.2	108.4
Decachlorobiphenyl	87.9	97.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	801246	1.9
Hexabromobiphenyl	2132987	2293960	7.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	601952	-5.3
Hexabromobiphenyl	665758	686659	3.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.628	0.000	100625	249.6	1	7.074	0.000	77040	263.8
Aroclor-1016	2	6.999	0.000	314930	245.1	2	7.670	0.000	172650	261.9
Aroclor-1016	3	7.149	0.000	135225	245.0	3	7.881	0.000	66332	265.6
Aroclor-1016	4	7.546	0.000	73156	243.8	4	8.055	0.000	40788	272.4
	Total Col1Ave (4 peaks):			245.9		Total Col2Ave (4 peaks):			265.9	RPD = 8
	Corrected Ave (3 peaks):			244.6		Corrected Ave (3 peaks):			263.8	RPD = 8
		CalAmt %D:		-1.7			CalAmt %D:		6.4	
Aroclor-1260	1	10.401	0.000	195660	219.4	1	11.041	0.000	96280	229.4
Aroclor-1260	2	10.721	0.000	208488	234.1	2	11.504	0.000	111239	251.6
Aroclor-1260	3	11.073	0.000	565128	244.4	3	11.756	0.000	263142	232.7
Aroclor-1260	4	11.476	0.000	284154	240.5	4	12.345	0.000	171955	234.1
Aroclor-1260	5	11.582	0.000	118366	230.1	NS	---			----
	Total Col1Ave (5 peaks):			233.7		Total Col2Ave (4 peaks):			237.0	RPD = 1
	Corrected Ave (4 peaks):			231.0		Corrected Ave (3 peaks):			232.1	RPD = 0
		CalAmt %D:		-6.5			CalAmt %D:		-5.2	

Total PCB Area Col1 (5.114 - 13.105) = 6156291 Col1 Total PCB = 0.5 ppm*

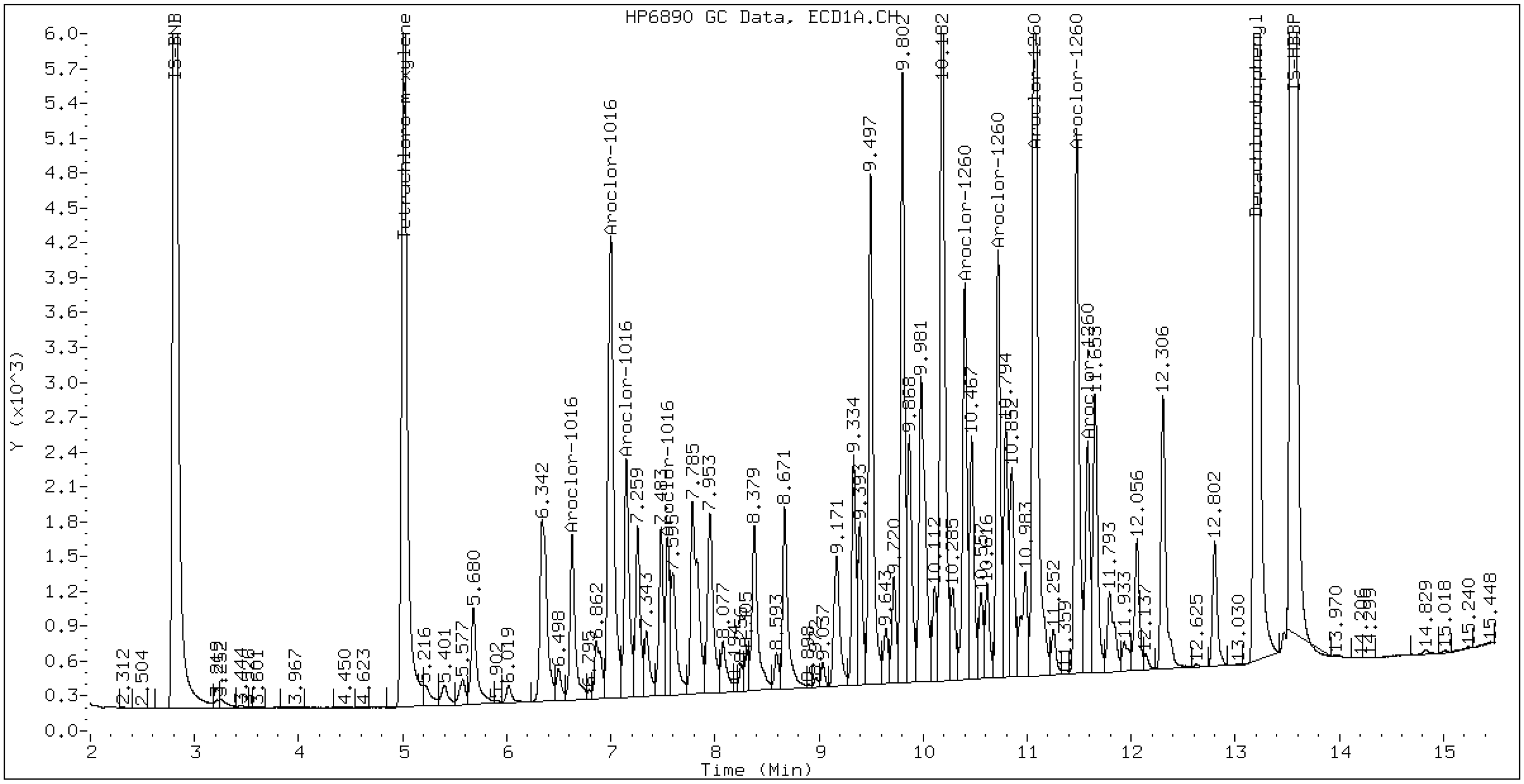
Total PCB Area Col2 (5.114 - 13.105) = 2974507 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

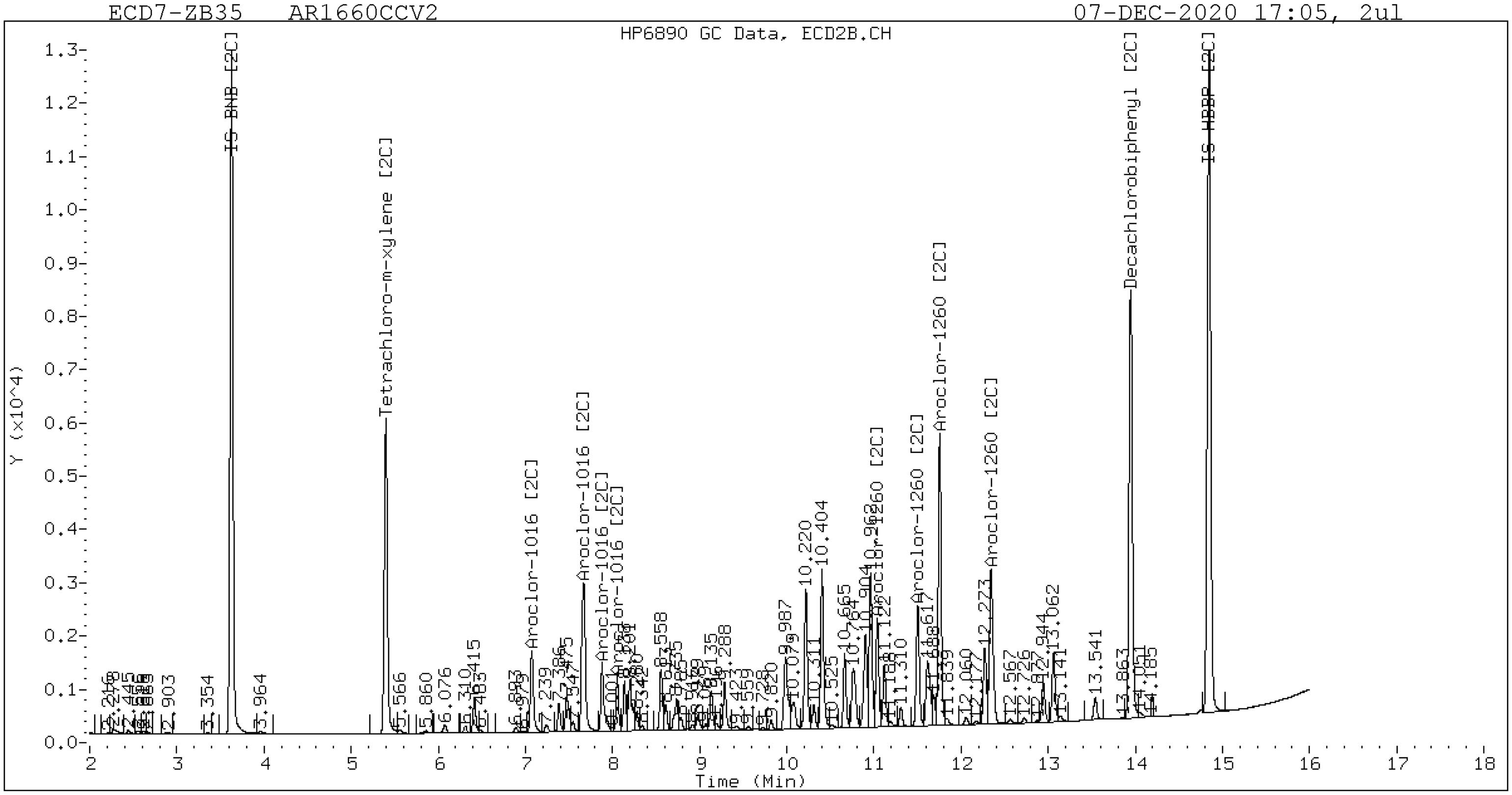
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 07-DEC-2020 17:05, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 07-DEC-2020 17:05, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ECD7
Calibration: DL00019
Lab File ID: 20120716ECD7.D
Calibration Date: 12/04/2020
Sequence: SIL0131
Injection Date: 12/07/20
Lab Sample ID: SIL0131-CCV3
Injection Time: 22:25
Sequence Name: AR1242CCV3

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	270	0.0482851	0.0515795		7.8	+/-20
Aroclor 1242 [2C]	A	250.00	266	0.0387860	0.0411437		6.5	+/-20
Decachlorobiphenyl	A	40.000	35.8	0.8503828	0.7623666		-10.5	+/-20
Tetrachlorometaxylene	A	40.000	42.2	1.1663830	1.2317390		5.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.0	1.3164080	1.3808740		5.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.6	0.9170028	1.0213190		11.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120716ECD7.D
Data file 2: /20201207.b/20201207.b/20120716ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 07-DEC-2020 22:25
Report Date: 12/13/2020 14:24
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.015	0.002	545020	5.399	-0.001	328512	42.2	44.6	5.3	Tetrachloro-m-xylene
13.207	0.003	984479	13.948	0.001	493985	35.9	42.0	15.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	105.6	111.4
Decachlorobiphenyl	89.6	104.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	884960	12.5
Hexabromobiphenyl	2132987	2582692	21.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	643309	1.2
Hexabromobiphenyl	665758	715467	7.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.629	0.000	90732	264.3	1	7.073	0.000	63557	261.4
Aroclor-1242	2	7.000	0.000	276732	261.3	2	7.670	0.000	147801	262.4
Aroclor-1242	3	8.306	0.000	96574	274.7	3	8.988	0.000	59149	266.1
Aroclor-1242	4	8.600	0.000	106534	278.4	4	9.422	0.000	60344	275.8

Total Col1Ave (4 peaks): 269.7 Total Col2Ave (4 peaks): 266.4 RPD = 1
Corrected Ave (3 peaks): 266.8 Corrected Ave (3 peaks): 263.3 RPD = 1

CalAmt %D: 7.9 CalAmt %D: 6.6

Total PCB Area Col1 (5.113 - 13.105) = 2571092 Col1 Total PCB = 0.2 ppm*

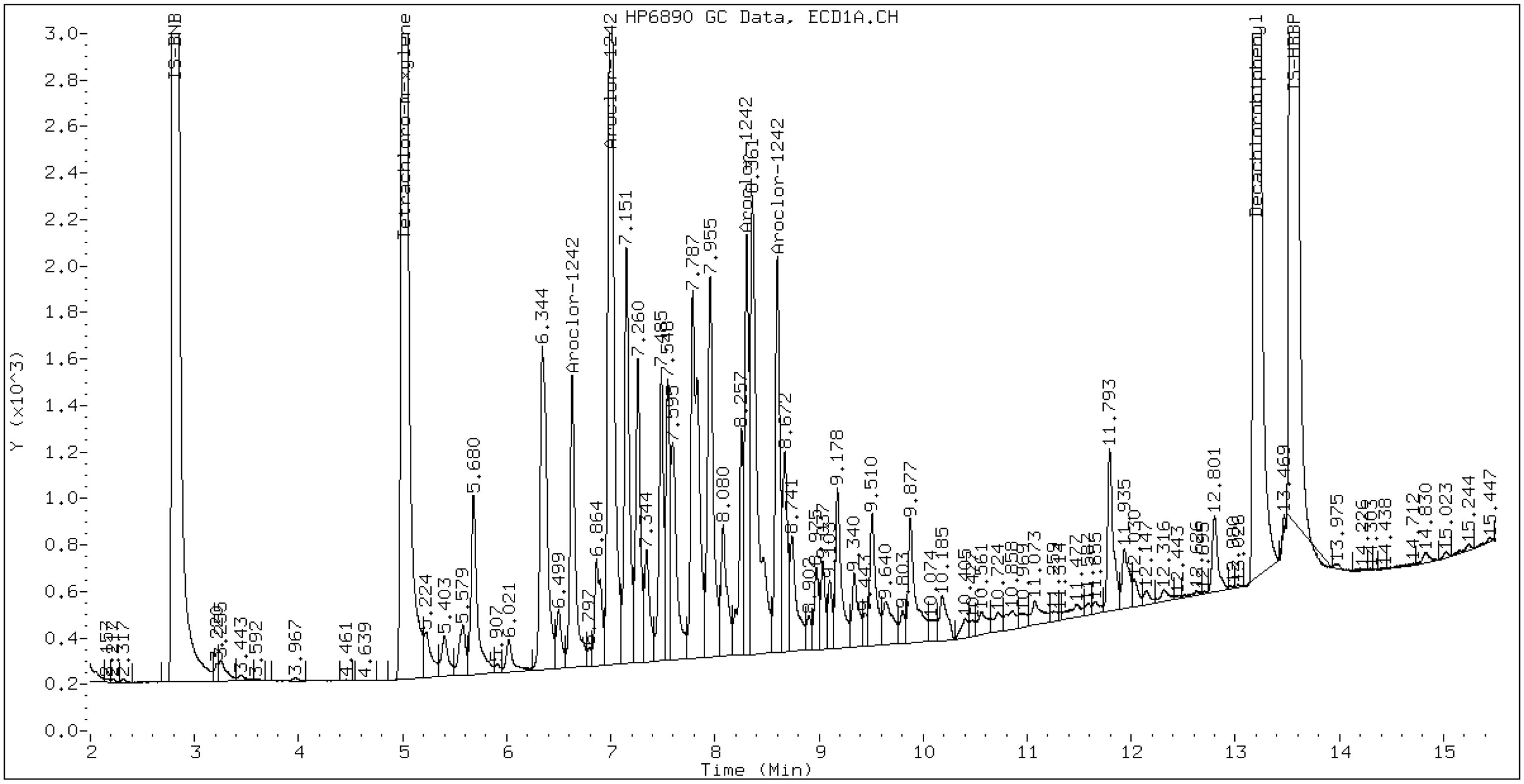
Total PCB Area Col2 (5.113 - 13.105) = 1315784 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

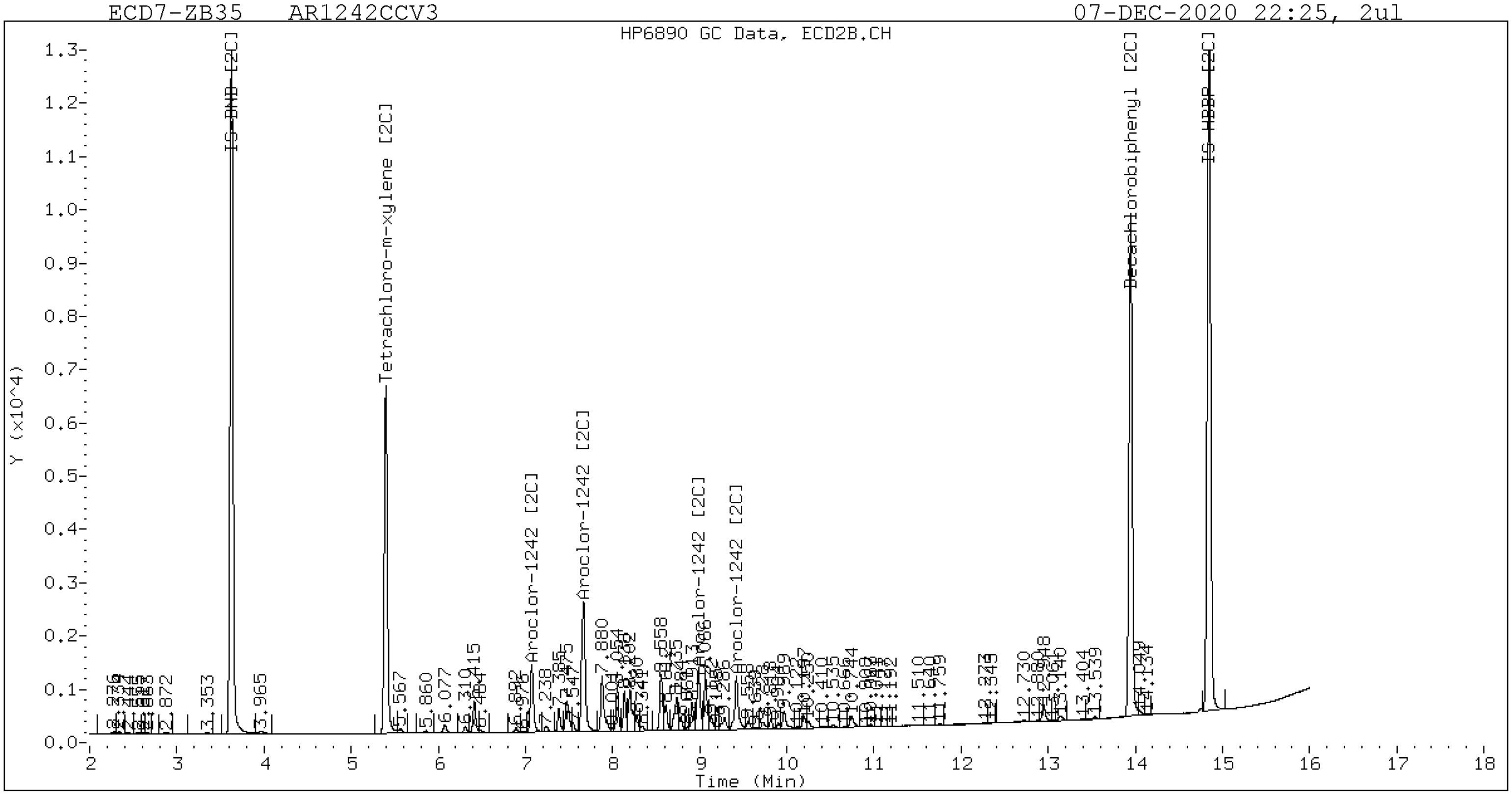
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 07-DEC-2020 22:25, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3 07-DEC-2020 22:25, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120717ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0131	Injection Date:	12/07/20
Lab Sample ID:	SIL0131-CCV4	Injection Time:	22:46
Sequence Name:	AR1660CCV4		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	245	0.0634001	0.0620920		-2.1	+/-20
Aroclor 1016 [2C]	A	250.00	264	0.0448734	0.0469938		5.7	+/-20
Aroclor 1260	A	250.00	228	0.0403882	0.0372760		-9.0	+/-20
Aroclor 1260 [2C]	A	250.00	236	0.0794282	0.0745732		-5.7	+/-20
Decachlorobiphenyl	A	40.000	35.1	0.8503828	0.7461983		-12.3	+/-20
Tetrachlorometaxylene	A	40.000	40.9	1.1663830	1.1916160		2.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.0	1.3164080	1.2835070		-2.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	43.2	0.9170028	0.9905732		8.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120717ECD7.D
Data file 2: /20201207.b/20201207.b/20120717ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 07-DEC-2020 22:46
Report Date: 12/13/2020 14:24
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.015	0.002	497806	5.400	0.000	308518	40.9	43.2	5.6	Tetrachloro-m-xylene
13.206	0.001	926363	13.946	-0.001	457085	35.1	39.0	10.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	102.2	108.0
Decachlorobiphenyl	87.7	97.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	835514	6.2
Hexabromobiphenyl	2132987	2482887	16.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	622908	-2.0
Hexabromobiphenyl	665758	712244	7.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.628	0.000	104961	249.6	1	7.073	-0.000	79139	261.9
Aroclor-1016	2	7.000	0.001	329079	245.6	2	7.669	-0.000	176280	258.5
Aroclor-1016	3	7.150	0.001	138630	240.9	3	7.880	-0.000	68402	264.7
Aroclor-1016	4	7.547	0.001	75814	242.3	4	8.054	-0.000	42089	271.6
Total Col1Ave (4 peaks):				244.6		Total Col2Ave (4 peaks):			264.2	RPD = 8
Corrected Ave (3 peaks):				242.9		Corrected Ave (3 peaks):			261.7	RPD = 7
CalAmt %D:				-2.2		CalAmt %D:			5.7	
Aroclor-1260	1	10.401	0.001	204913	212.2	1	11.040	0.001	97545	224.1
Aroclor-1260	2	10.722	0.001	222667	231.0	2	11.504	0.000	115959	252.9
Aroclor-1260	3	11.073	0.001	594212	237.4	3	11.755	-0.000	271740	231.7
Aroclor-1260	4	11.476	0.002	299498	234.2	4	12.344	0.001	178685	234.5
Aroclor-1260	5	11.582	0.002	124835	224.2	NS	---			----
Total Col1Ave (5 peaks):				227.8		Total Col2Ave (4 peaks):			235.8	RPD = 3
Corrected Ave (4 peaks):				225.4		Corrected Ave (3 peaks):			230.1	RPD = 2
CalAmt %D:				-8.9		CalAmt %D:			-5.7	

Total PCB Area Col1 (5.113 - 13.105) = 6423180 Col1 Total PCB = 0.5 ppm*

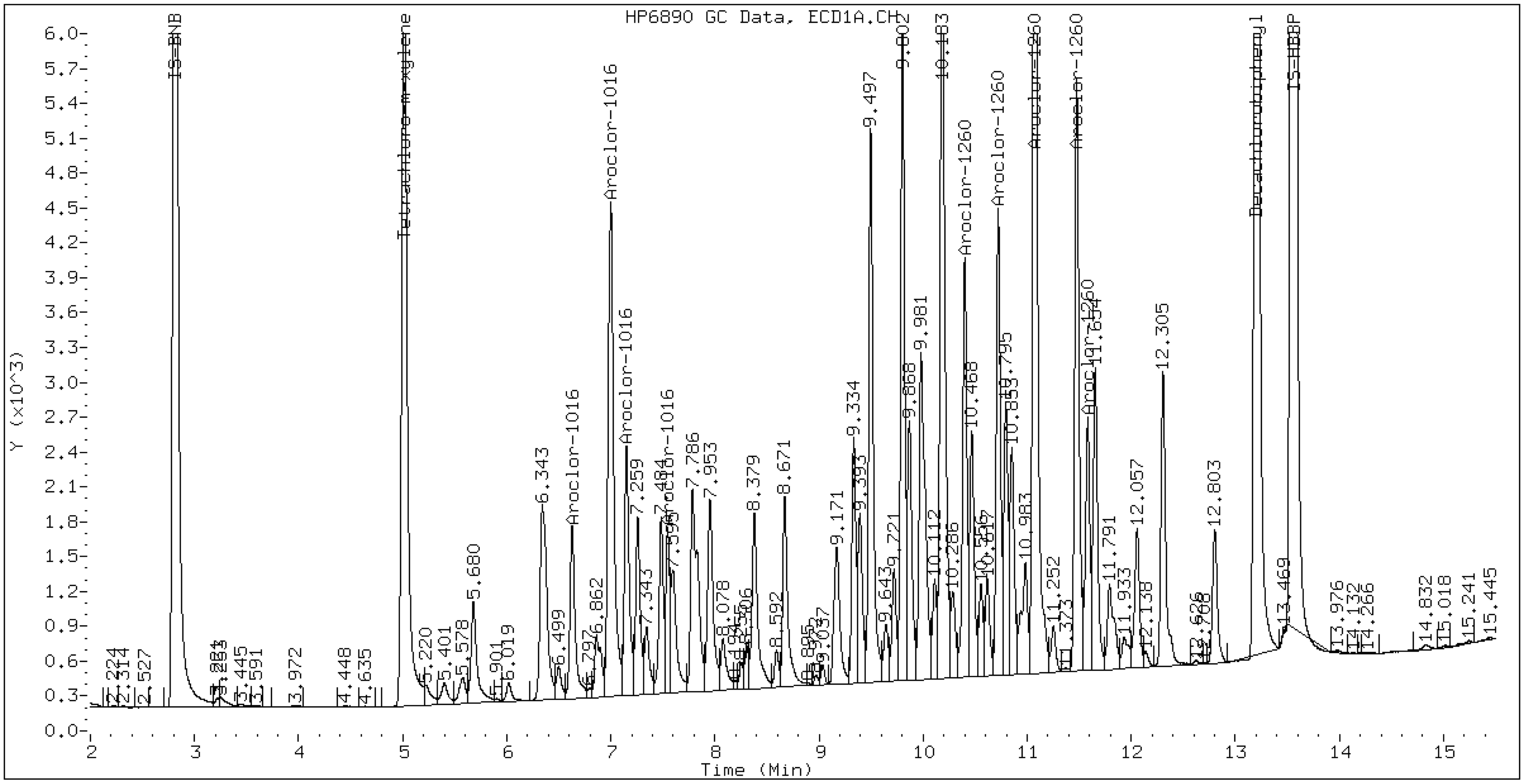
Total PCB Area Col2 (5.113 - 13.105) = 3075341 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

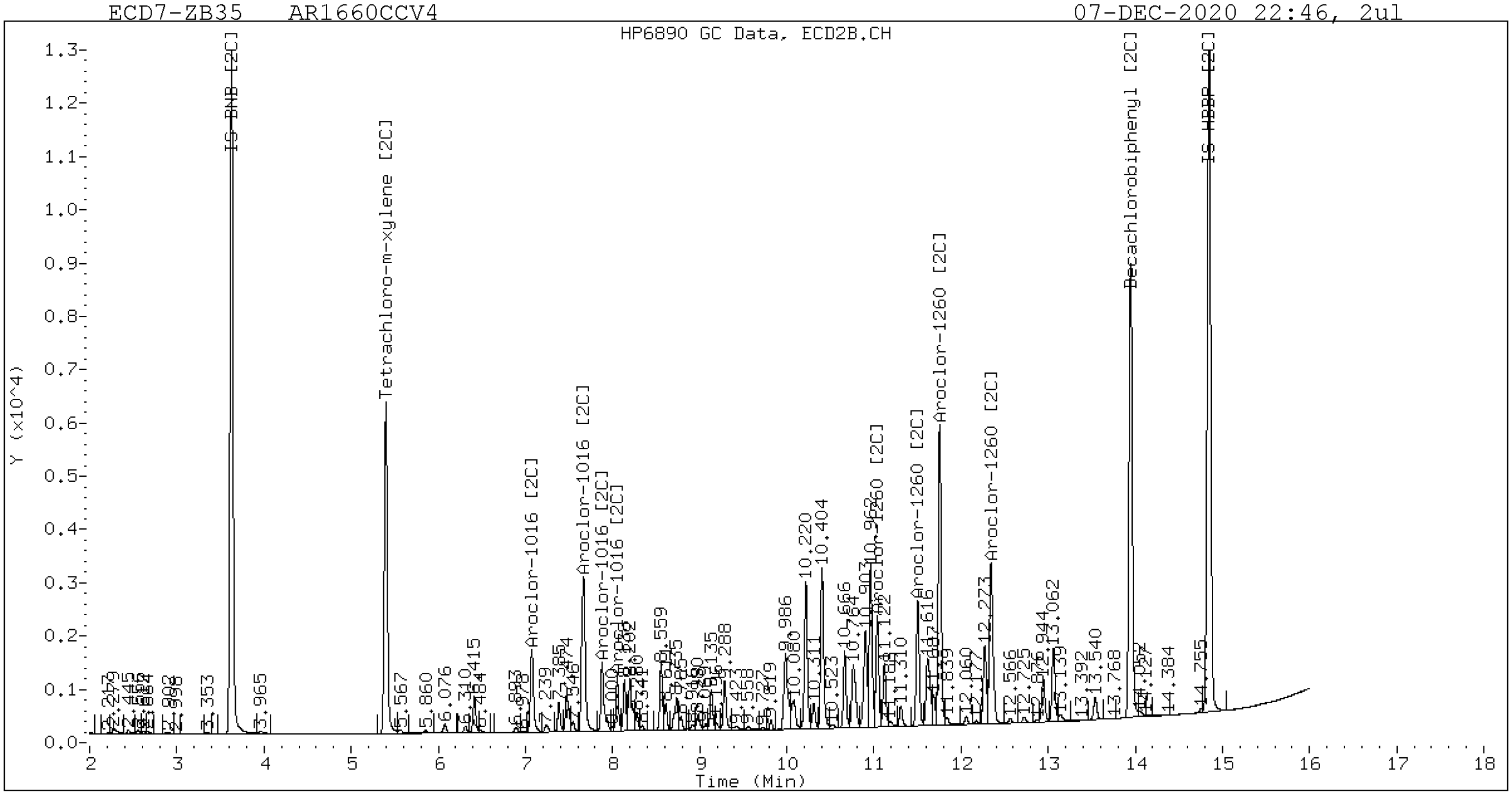
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 07-DEC-2020 22:46, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4 07-DEC-2020 22:46, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120732ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0131	Injection Date:	12/08/20
Lab Sample ID:	SIL0131-CCV5	Injection Time:	03:55
Sequence Name:	AR1254CCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	262	0.0851540	0.0891386		4.6	+/-20
Aroclor 1254 [2C]	A	250.00	252	0.0605432	0.0607143		1.0	+/-20
Decachlorobiphenyl	A	40.000	39.0	0.8503828	0.8288749		-2.5	+/-20
Tetrachlorometaxylene	A	40.000	42.3	1.1663830	1.2331570		5.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.4	1.3164080	1.4291680		8.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.3	0.9170028	1.0148360		10.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120732ECD7.D
Data file 2: /20201207.b/20201207.b/20120732ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 08-DEC-2020 03:55
Report Date: 12/13/2020 14:24
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	0.001	515445	5.399	0.000	325123	42.3	44.3	4.6	Tetrachloro-m-xylene
13.204	-0.000	854047	13.946	-0.002	413977	39.0	43.4	10.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	105.7	110.7
Decachlorobiphenyl	97.5	108.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	835976	6.3
Hexabromobiphenyl	2132987	2060738	-3.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	640740	0.8
Hexabromobiphenyl	665758	579326	-13.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.671	0.000	264013	266.6	1	9.287	0.000	117980	257.9
Aroclor-1254	2	8.740	0.000	140151	261.3	2	9.380	0.000	55300	261.0
Aroclor-1254	3	9.040	0.000	168028	254.8	3	9.817	0.000	75926	250.5
Aroclor-1254	4	9.176	0.000	348475	256.2	4	9.968	0.000	173797	243.3
Aroclor-1254	5	9.872	0.000	243672	270.0	5	10.200	0.000	184842	250.6

Total Col1Ave (5 peaks): 261.8 Total Col2Ave (5 peaks): 252.6 RPD = 4
Corrected Ave (4 peaks): 259.7 Corrected Ave (4 peaks): 250.6 RPD = 4

CalAmt %D: 4.7 CalAmt %D: 1.1

Total PCB Area Col1 (5.113 - 13.105) = 3869401 Col1 Total PCB = 0.3 ppm*

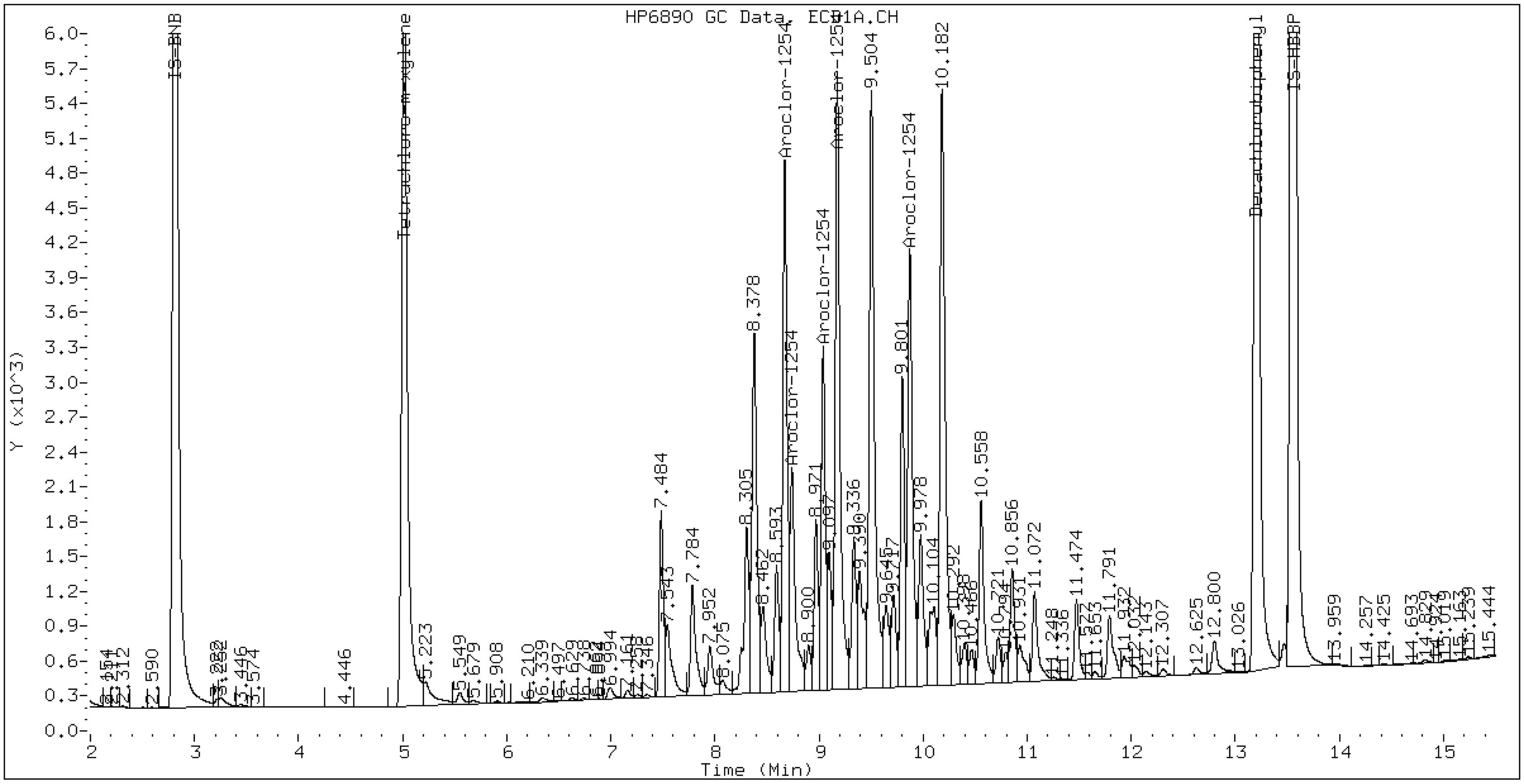
Total PCB Area Col2 (5.113 - 13.105) = 1908979 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

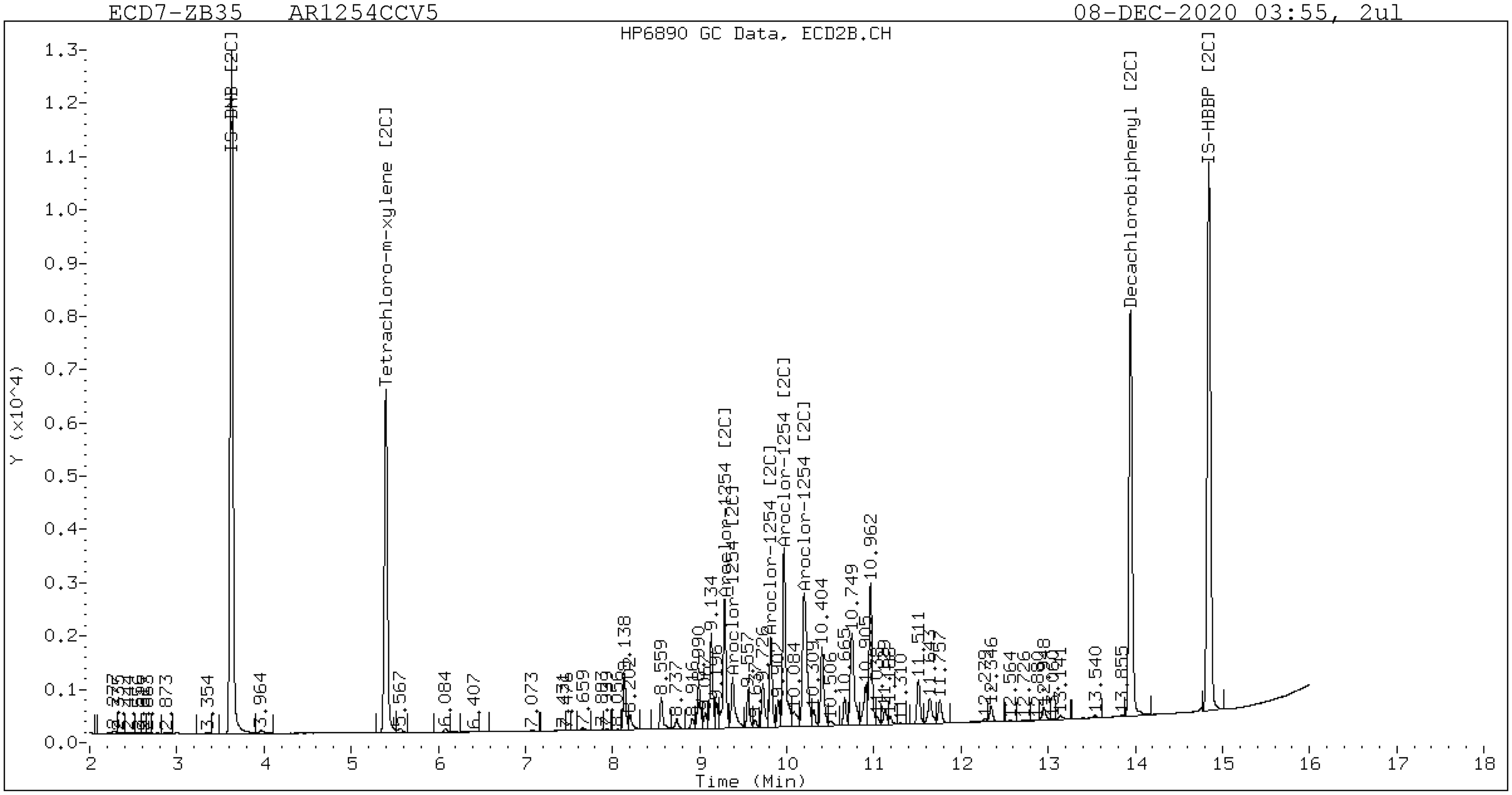
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 08-DEC-2020 03:55, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1254CCV5 08-DEC-2020 03:55, 2ul

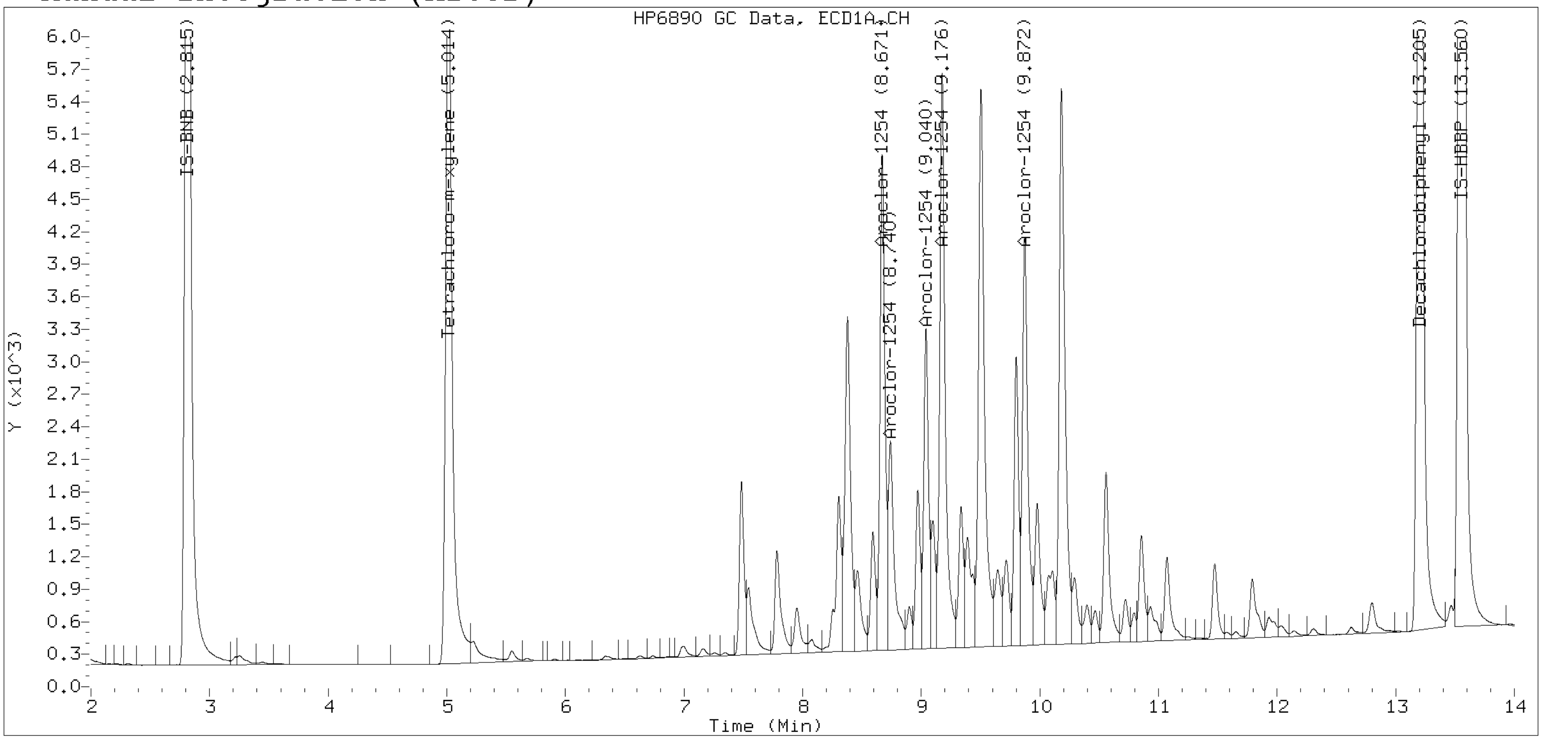


ZB-35 Manual Integration: NO

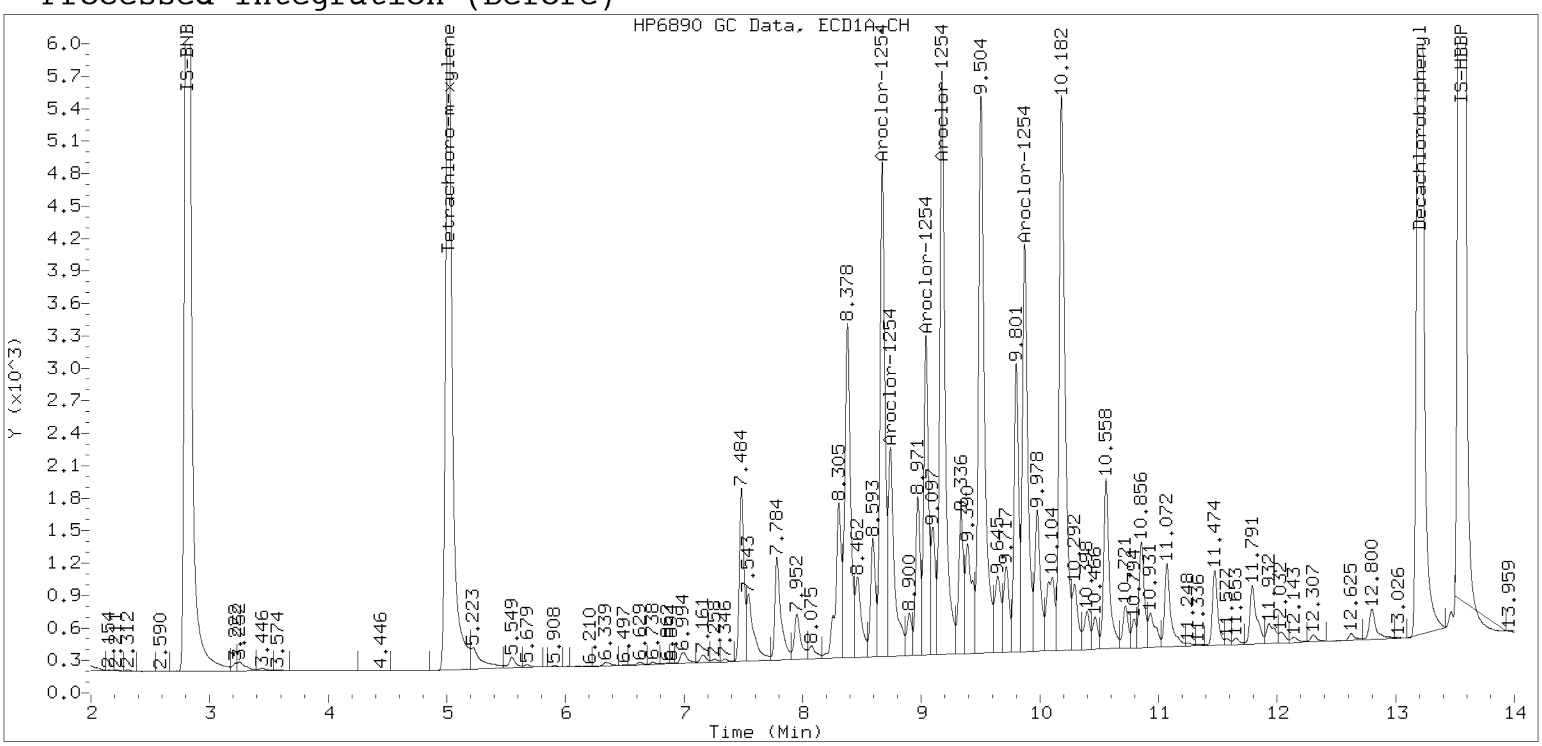
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120732ECD7.D   Injection Date: 08-DEC-2020 03:5

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ECD7
Calibration: DL00019
Lab File ID: 20120733ECD7.D
Calibration Date: 12/04/2020
Sequence: SIL0131
Injection Date: 12/08/20
Lab Sample ID: SIL0131-CCV6
Injection Time: 04:15
Sequence Name: AR1660CCV6

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	256	0.0634001	0.0650858		2.5	+/-20
Aroclor 1016 [2C]	A	250.00	268	0.0448734	0.0475955		7.3	+/-20
Aroclor 1260	A	250.00	260	0.0403882	0.0426696		3.9	+/-20
Aroclor 1260 [2C]	A	250.00	265	0.0794282	0.0837461		5.9	+/-20
Decachlorobiphenyl	A	40.000	38.2	0.8503828	0.8117096		-4.5	+/-20
Tetrachlorometaxylene	A	40.000	41.9	1.1663830	1.2215150		4.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.1	1.3164080	1.4174990		7.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	43.8	0.9170028	1.0029740		9.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120733ECD7.D
Data file 2: /20201207.b/20201207.b/20120733ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 08-DEC-2020 04:15
Report Date: 12/13/2020 14:24
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	0.000	498521	5.399	-0.001	318852	41.9	43.8	4.3	Tetrachloro-m-xylene
13.205	0.000	872589	13.945	-0.002	442517	38.2	43.1	12.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	104.7	109.4
Decachlorobiphenyl	95.5	107.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	816234	3.8
Hexabromobiphenyl	2132987	2150003	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	635813	0.1
Hexabromobiphenyl	665758	624363	-6.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.627	-0.001	106945	260.4	1	7.073	-0.001	82052	266.0
Aroclor-1016	2	6.999	-0.001	336424	257.1	2	7.669	-0.001	181550	260.8
Aroclor-1016	3	7.149	-0.000	142888	254.2	3	7.880	-0.001	70907	268.8
Aroclor-1016	4	7.545	-0.000	77808	254.5	4	8.054	-0.001	43764	276.7

Total Col1Ave (4 peaks): 256.5 Total Col2Ave (4 peaks): 268.1 RPD = 4
Corrected Ave (3 peaks): 255.2 Corrected Ave (3 peaks): 265.2 RPD = 4

CalAmt %D: 2.6 CalAmt %D: 7.2

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1260	1	10.400	-0.000	205113	245.3	1	11.039	-0.001	98100	257.1
Aroclor-1260	2	10.721	0.000	223615	267.9	2	11.503	-0.001	111426	277.2
Aroclor-1260	3	11.073	0.000	593907	274.1	3	11.755	-0.000	267249	260.0
Aroclor-1260	4	11.475	0.001	290853	262.7	4	12.344	0.000	176824	264.7
Aroclor-1260	5	11.581	0.001	119945	248.8	NS	---			----

Total Col1Ave (5 peaks): 259.7 Total Col2Ave (4 peaks): 264.7 RPD = 2
Corrected Ave (4 peaks): 256.2 Corrected Ave (3 peaks): 260.6 RPD = 2

CalAmt %D: 3.9 CalAmt %D: 5.9

Total PCB Area Col1 (5.113 - 13.105) = 6451630 Col1 Total PCB = 0.5 ppm*

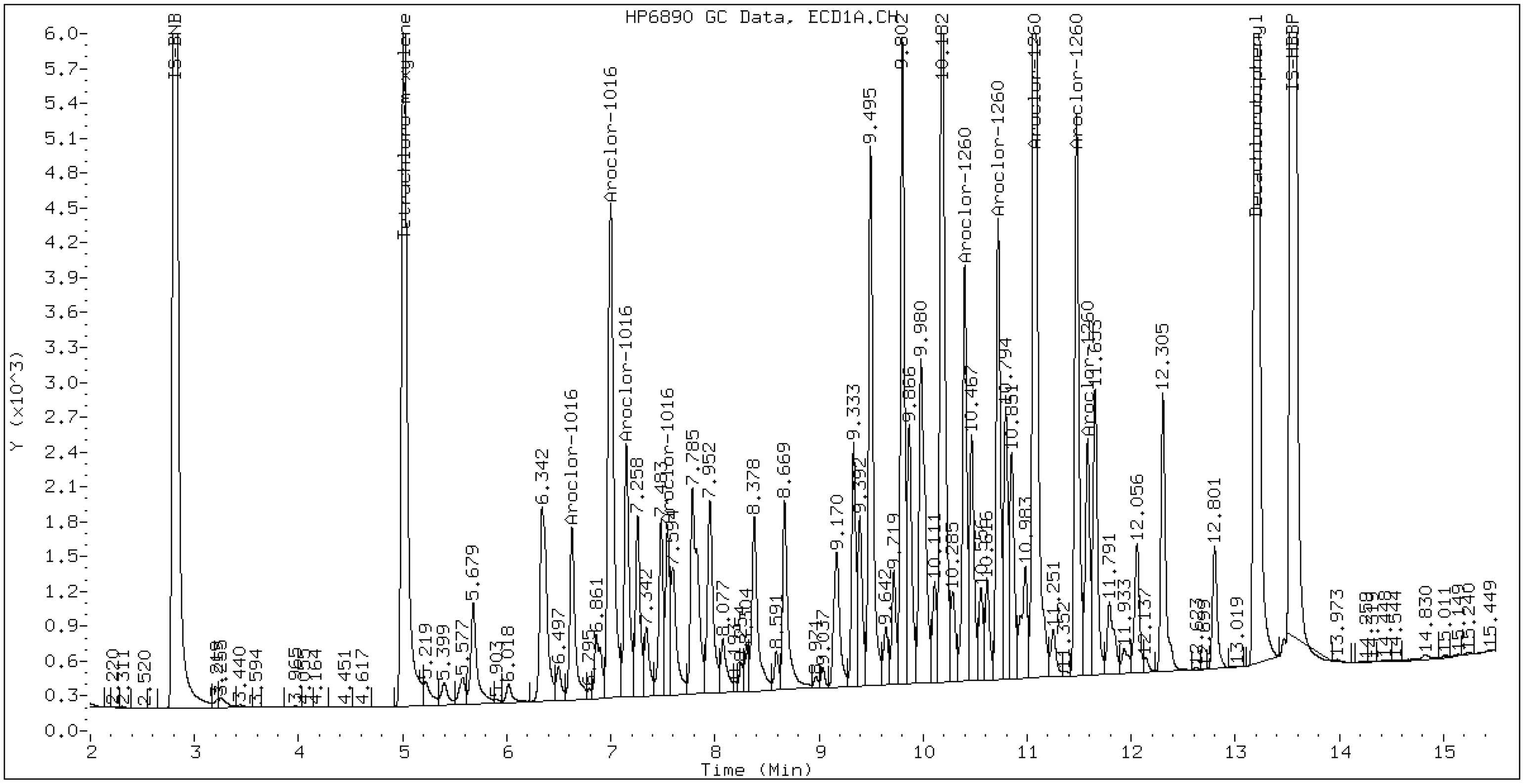
Total PCB Area Col2 (5.113 - 13.105) = 3106761 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

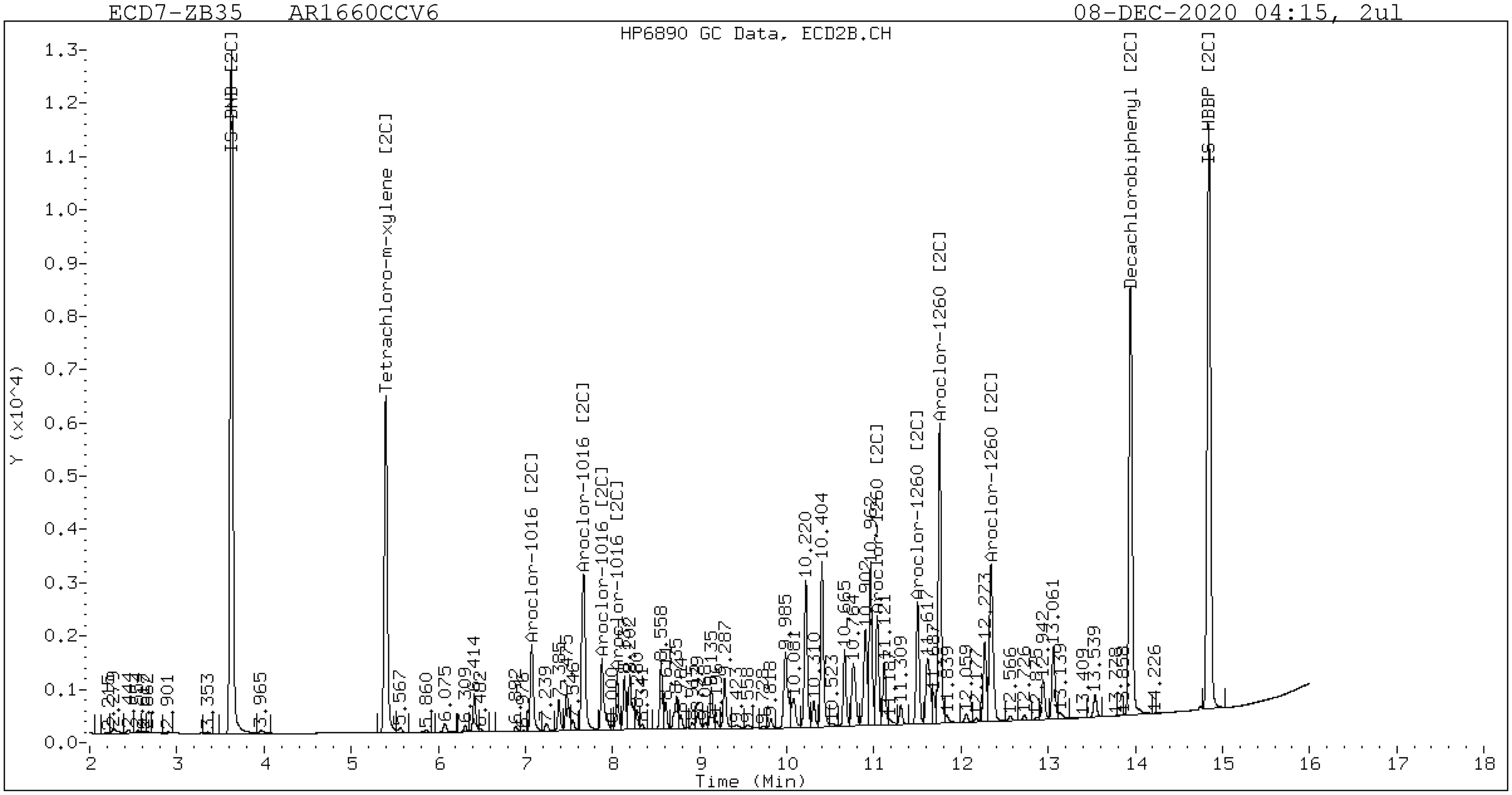
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 08-DEC-2020 04:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 08-DEC-2020 04:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ECD7
Calibration: DL00019
Lab File ID: 20120747ECD7.D
Calibration Date: 12/04/2020
Sequence: SIL0131
Injection Date: 12/08/20
Lab Sample ID: SIL0131-CCV7
Injection Time: 09:04
Sequence Name: AR1248CCV7

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	268	0.0631509	0.0679980		7.3	+/-20
Aroclor 1248 [2C]	A	250.00	258	0.0406848	0.0418287		3.1	+/-20
Decachlorobiphenyl	A	40.000	38.5	0.8503828	0.8191584		-3.8	+/-20
Tetrachlorometaxylene	A	40.000	41.6	1.1663830	1.2131550		4.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.7	1.3164080	1.4393400		9.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.6	0.9170028	1.0230060		11.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120747ECD7.D
Data file 2: /20201207.b/20201207.b/20120747ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV7
Client ID:
Injection Date: 08-DEC-2020 09:04
Report Date: 12/13/2020 14:25
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	0.001	498290	5.399	-0.000	324037	41.6	44.6	7.0	Tetrachloro-m-xylene
13.205	0.000	936457	13.950	0.003	485691	38.5	43.7	12.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	104.0	111.6
Decachlorobiphenyl	96.3	109.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	821478	4.4
Hexabromobiphenyl	2132987	2286388	7.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	633500	-0.3
Hexabromobiphenyl	665758	674880	1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	7.483	0.000	114029	266.1	1	8.137	0.000	56563	263.3
Aroclor-1248	2	7.953	0.000	177552	273.3	2	8.558	0.000	72252	257.0
Aroclor-1248	3	8.361	0.000	260405	271.1	3	8.988	0.000	99610	248.8
Aroclor-1248	4	8.597	0.000	146249	263.4	4	9.422	0.000	102806	262.0

Total Col1Ave (4 peaks): 268.5 Total Col2Ave (4 peaks): 257.8 RPD = 4
Corrected Ave (3 peaks): 266.9 Corrected Ave (3 peaks): 255.9 RPD = 4

CalAmt %D: 7.4 CalAmt %D: 3.1

Total PCB Area Col1 (5.113 - 13.105) = 2957621 Col1 Total PCB = 0.2 ppm*

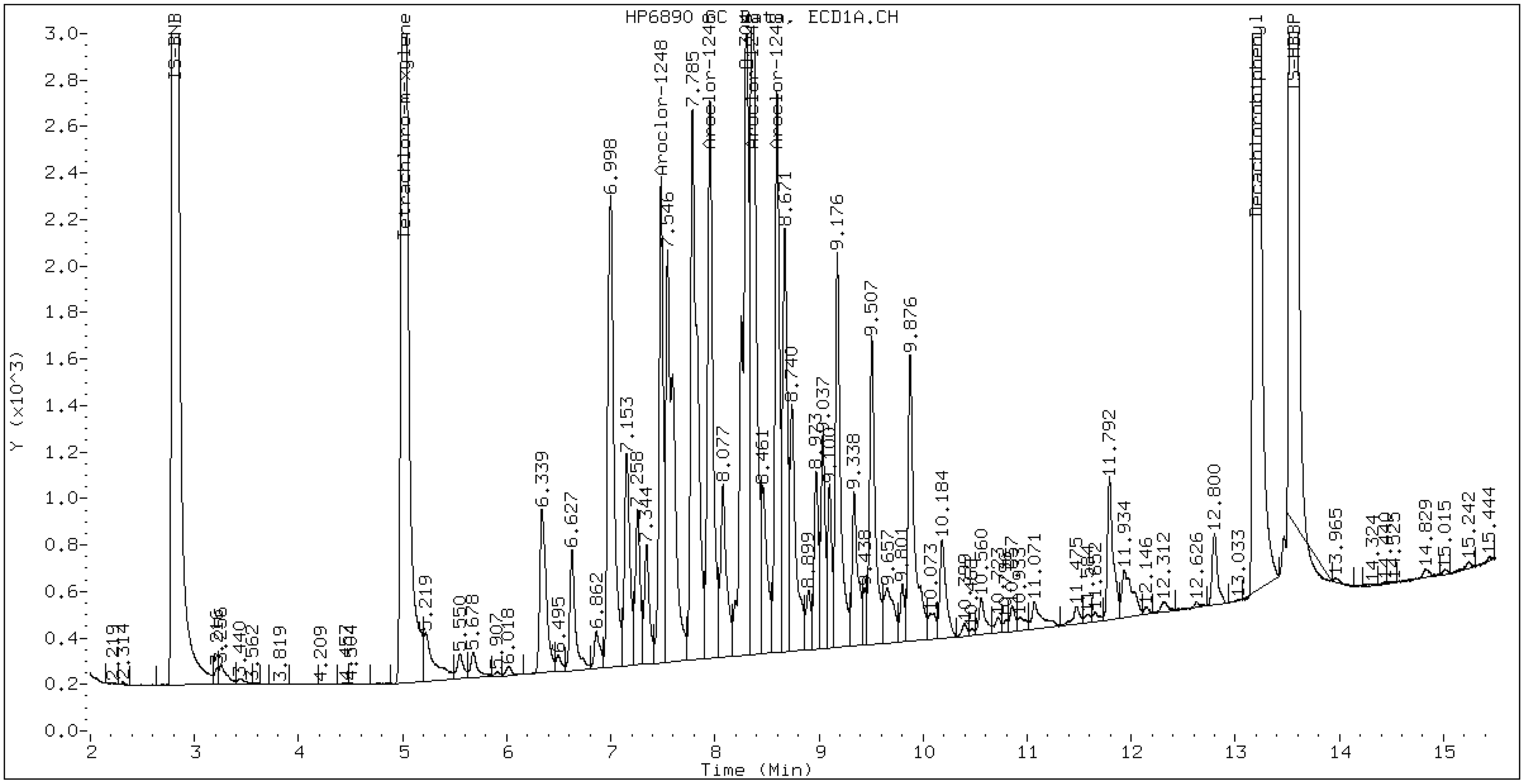
Total PCB Area Col2 (5.113 - 13.105) = 1525509 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

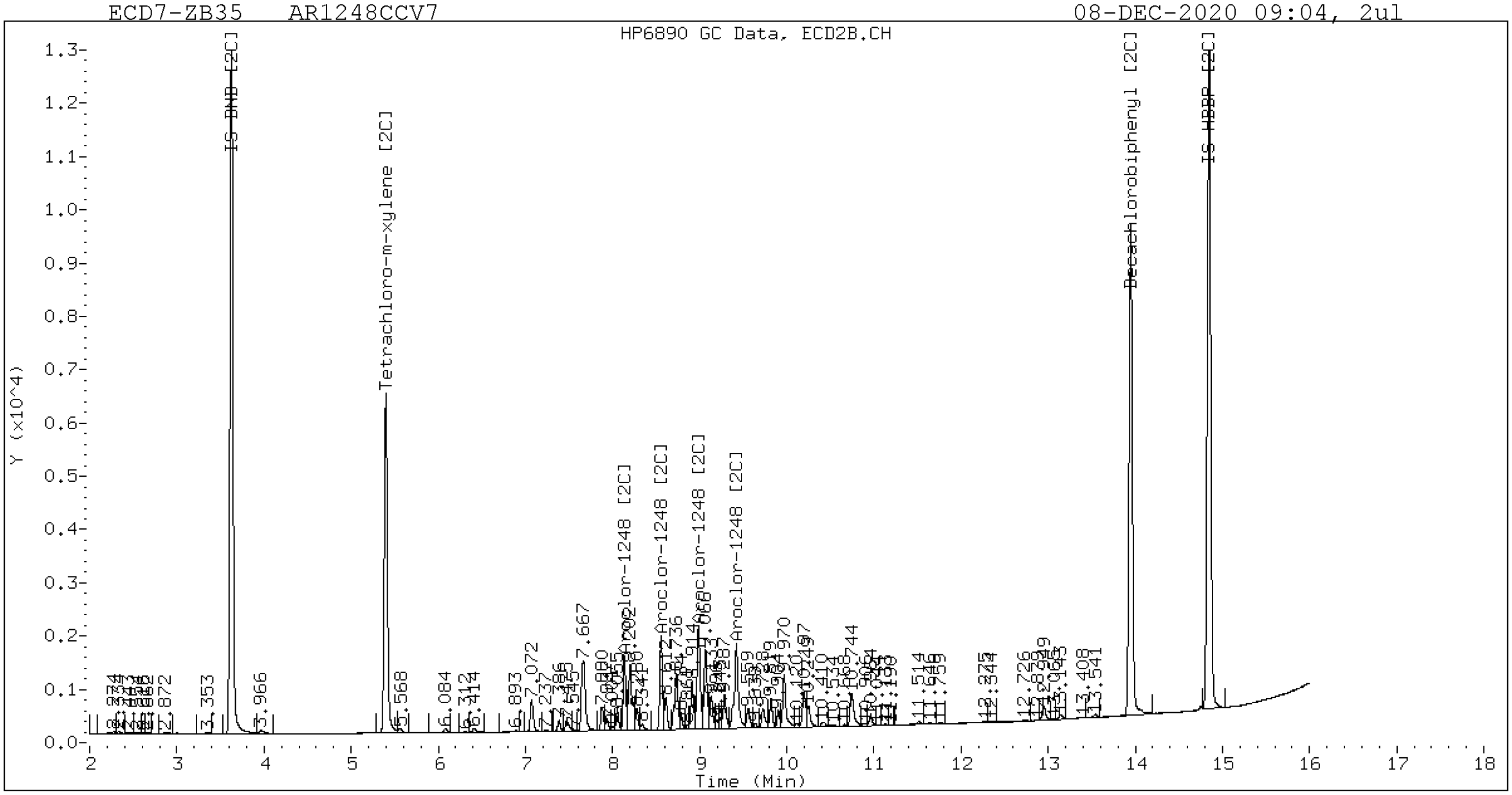
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV7 08-DEC-2020 09:04, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1248CCV7 08-DEC-2020 09:04, 2ul

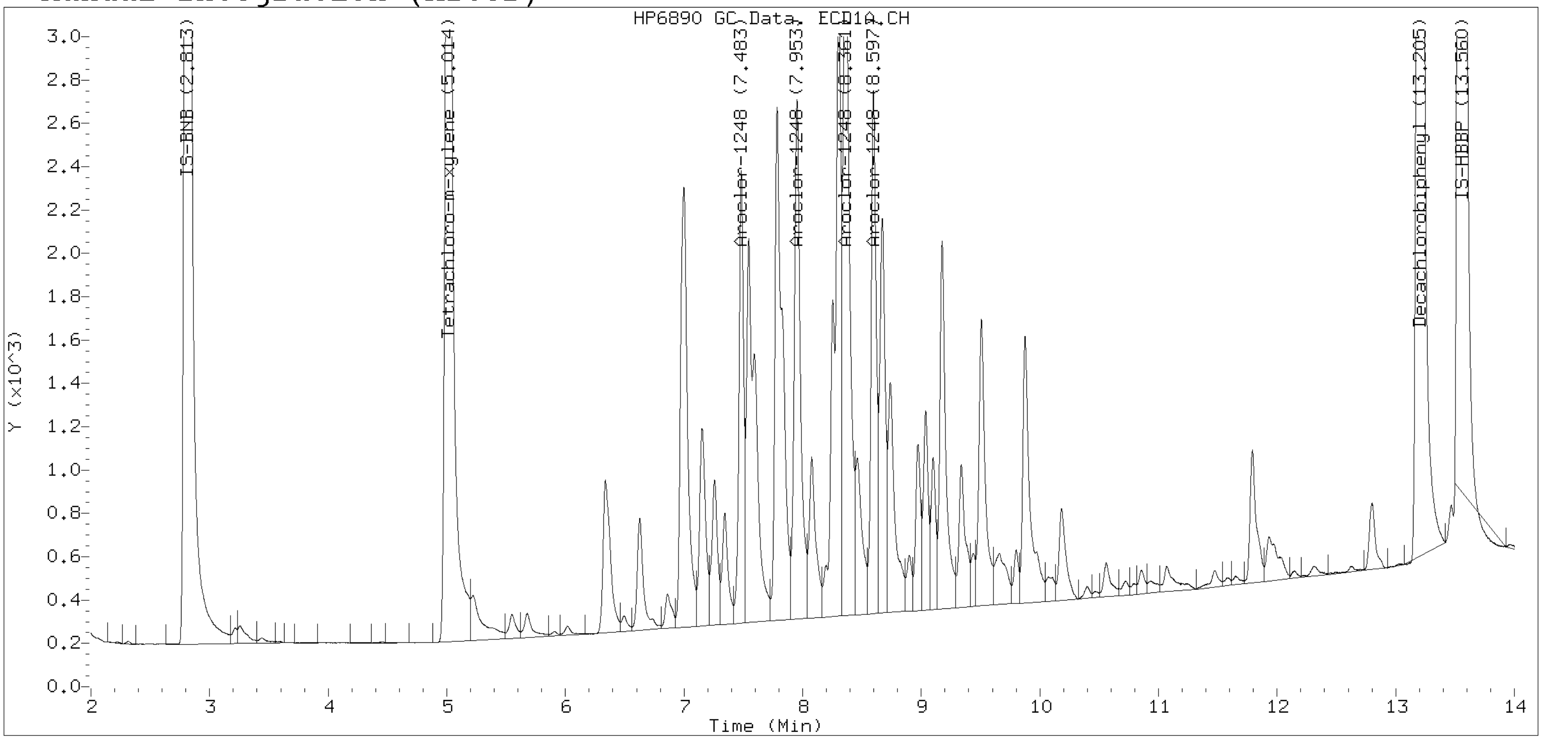


ZB-35 Manual Integration: NO

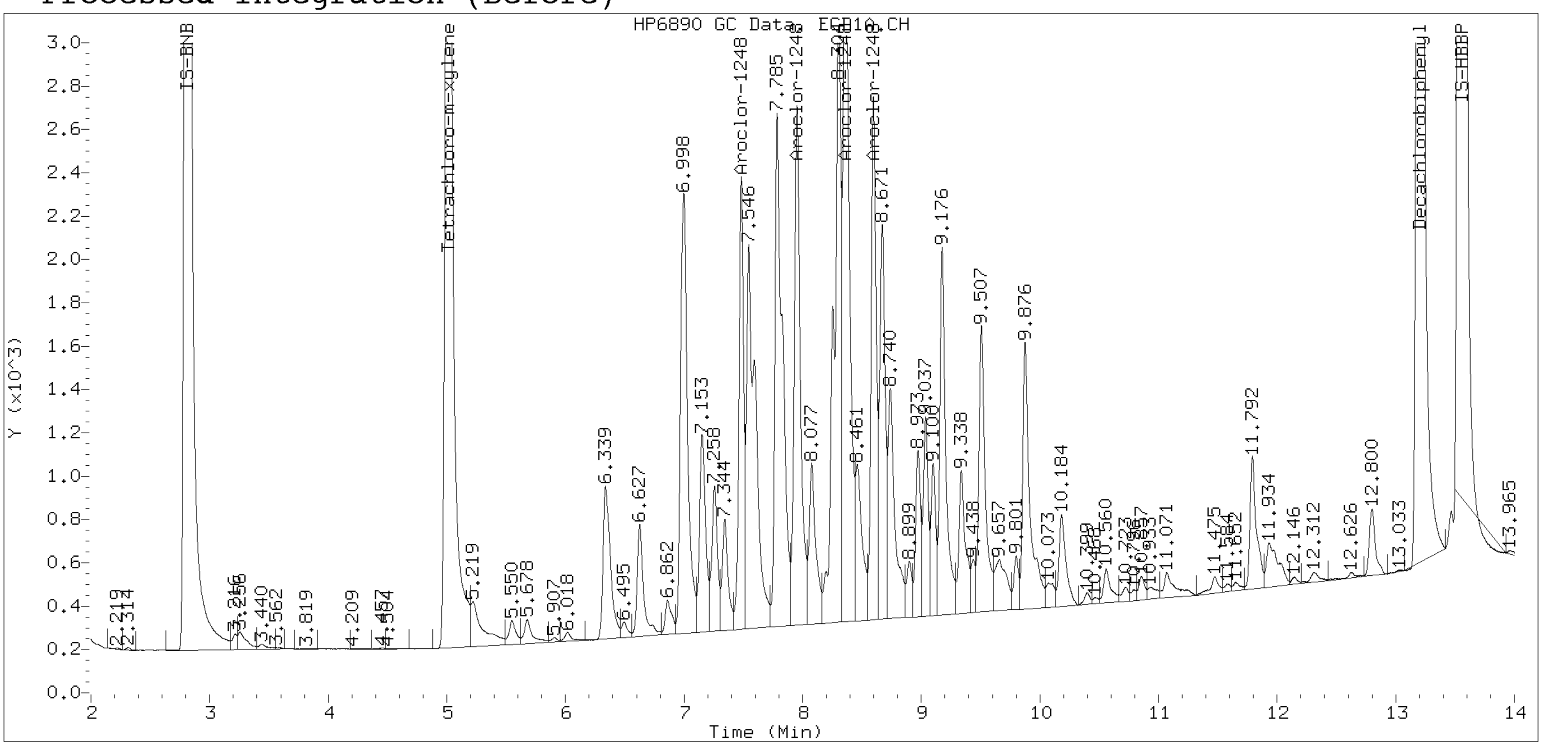
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120747ECD7.D   Injection Date: 08-DEC-2020 09:0

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ECD7
Calibration: DL00019
Lab File ID: 20120748ECD7.D
Calibration Date: 12/04/2020
Sequence: SIL0131
Injection Date: 12/08/20
Lab Sample ID: SIL0131-CCV8
Injection Time: 09:24
Sequence Name: AR1660CCV8

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	252	0.0634001	0.0641402		0.7	+/-20
Aroclor 1016 [2C]	A	250.00	271	0.0448734	0.0479681		8.4	+/-20
Aroclor 1260	A	250.00	240	0.0403882	0.0393312		-4.2	+/-20
Aroclor 1260 [2C]	A	250.00	248	0.0794282	0.0782008		-1.0	+/-20
Decachlorobiphenyl	A	40.000	36.6	0.8503828	0.7787135		-8.5	+/-20
Tetrachlorometaxylene	A	40.000	41.9	1.1663830	1.2219600		4.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.2	1.3164080	1.3896640		5.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	43.5	0.9170028	0.9981171		8.8	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120748ECD7.D
Data file 2: /20201207.b/20201207.b/20120748ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV8
Client ID:
Injection Date: 08-DEC-2020 09:24
Report Date: 12/13/2020 14:25
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	0.000	512682	5.399	0.000	326540	41.9	43.5	3.8	Tetrachloro-m-xylene
13.205	0.000	965287	13.947	0.000	502659	36.6	42.2	14.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	104.8	108.8
Decachlorobiphenyl	91.6	105.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	839114	6.7
Hexabromobiphenyl	2132987	2479184	16.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	654312	3.0
Hexabromobiphenyl	665758	723425	8.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.628	0.000	109189	258.6	1	7.074	0.000	84678	266.8
Aroclor-1016	2	6.999	0.000	341843	254.1	2	7.670	0.000	187553	261.8
Aroclor-1016	3	7.149	0.000	144812	250.5	3	7.881	0.000	74215	273.4
Aroclor-1016	4	7.546	0.000	76917	244.7	4	8.054	0.000	45880	281.9

Total Col1Ave (4 peaks): 252.0 Total Col2Ave (4 peaks): 271.0 RPD = 7
Corrected Ave (3 peaks): 249.8 Corrected Ave (3 peaks): 267.3 RPD = 7

CalAmt %D: 0.8 CalAmt %D: 8.4

Aroclor-1260	1	10.400	0.000	212003	219.9	1	11.039	0.000	106197	240.2
Aroclor-1260	2	10.721	0.000	232129	241.1	2	11.504	0.000	122367	262.8
Aroclor-1260	3	11.072	0.000	630724	252.4	3	11.755	0.000	289752	243.2
Aroclor-1260	4	11.474	0.000	316965	248.3	4	12.344	0.000	188839	244.0
Aroclor-1260	5	11.580	0.000	131762	237.0	NS	---			----

Total Col1Ave (5 peaks): 239.7 Total Col2Ave (4 peaks): 247.5 RPD = 3
Corrected Ave (4 peaks): 236.6 Corrected Ave (3 peaks): 242.5 RPD = 2

CalAmt %D: -4.1 CalAmt %D: -1.0

Total PCB Area Col1 (5.113 - 13.105) = 6723155 Col1 Total PCB = 0.5 ppm*

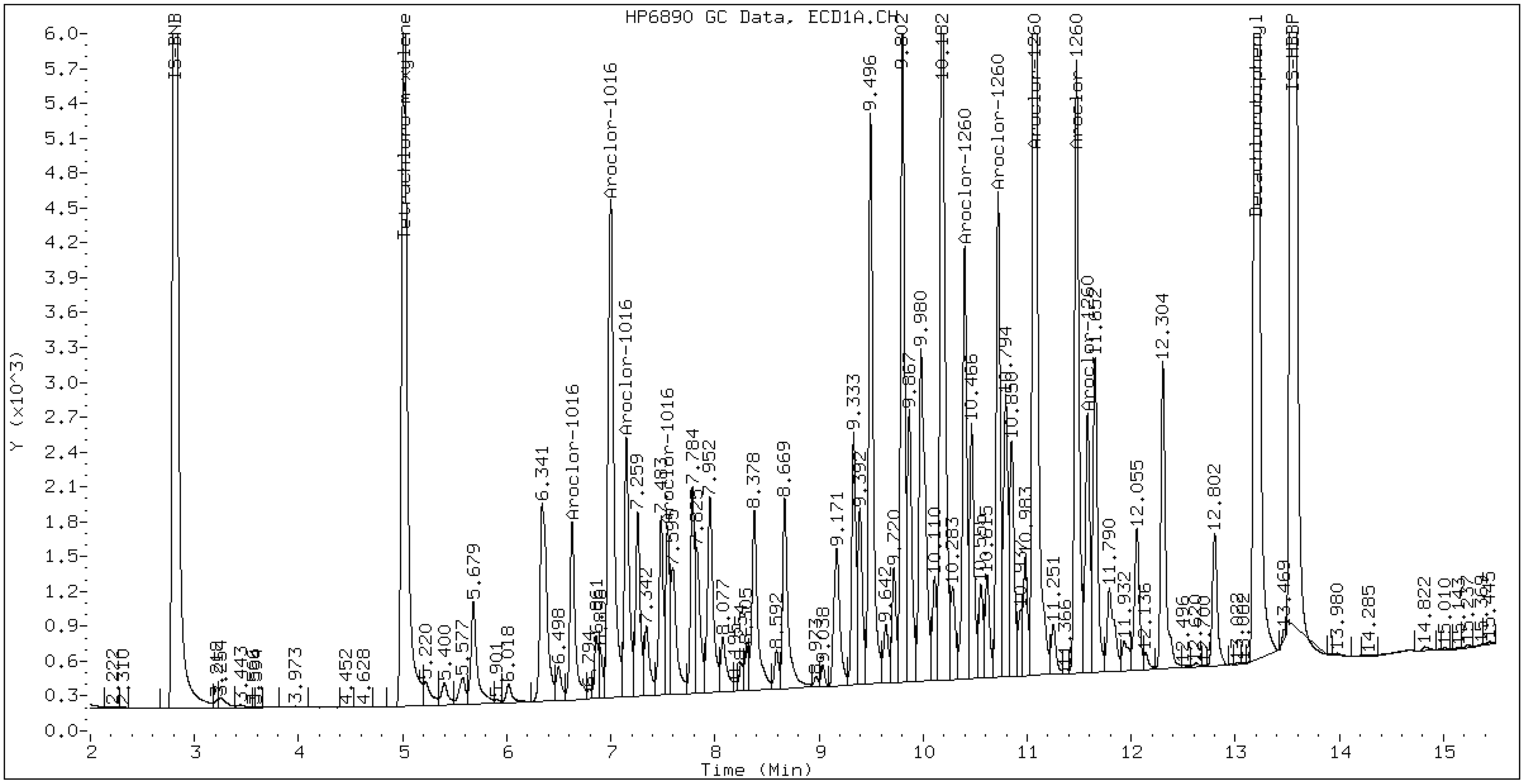
Total PCB Area Col2 (5.113 - 13.105) = 3287574 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

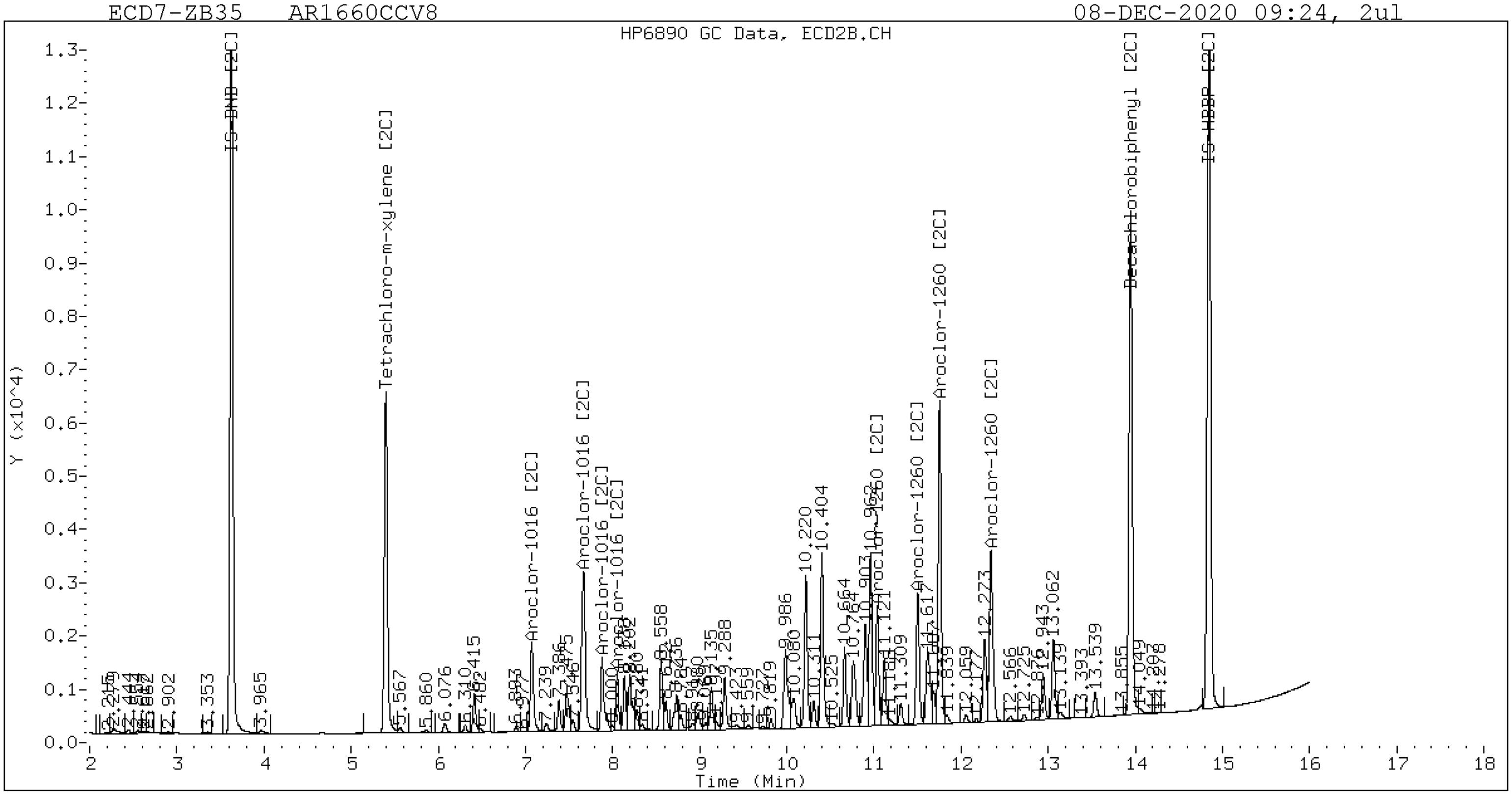
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV8 08-DEC-2020 09:24, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV8 08-DEC-2020 09:24, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120813ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0191	Injection Date:	12/09/20
Lab Sample ID:	SIL0191-CCV1	Injection Time:	00:15
Sequence Name:	AR1248CCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	274	0.0631509	0.0692707		9.6	+/-20
Aroclor 1248 [2C]	A	250.00	262	0.0406848	0.0424313		4.7	+/-20
Decachlorobiphenyl	A	40.000	37.5	0.8503828	0.7966423		-6.3	+/-20
Tetrachlorometaxylene	A	40.000	42.7	1.1663830	1.2444720		6.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.6	1.3164080	1.4021960		6.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.8	0.9170028	1.0281470		12.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120813ECD7.D
Data file 2: /20201208.b/20201208.b/20120813ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 09-DEC-2020 00:15
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	-0.001	466776	5.399	-0.001	289429	42.7	44.8	5.0	Tetrachloro-m-xylene
13.204	-0.000	901008	13.946	0.000	444039	37.5	42.6	12.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	106.7	112.1
Decachlorobiphenyl	93.7	106.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	750159	-4.6
Hexabromobiphenyl	2132987	2262014	6.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	563011	-11.4
Hexabromobiphenyl	665758	633348	-4.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	7.483	0.000	106758	272.8	1	8.137	0.000	51173	268.1
Aroclor-1248	2	7.952	0.000	165497	279.0	2	8.558	0.000	65382	261.7
Aroclor-1248	3	8.361	0.000	241064	274.8	3	8.988	0.000	88785	249.5
Aroclor-1248	4	8.597	0.000	136231	268.7	4	9.422	0.000	93276	267.4

Total Col1Ave (4 peaks): 273.8 Total Col2Ave (4 peaks): 261.7 RPD = 5
Corrected Ave (3 peaks): 272.1 Corrected Ave (3 peaks): 259.6 RPD = 5

CalAmt %D: 9.5 CalAmt %D: 4.7

Total PCB Area Col1 (5.114 - 13.105) = 2835111 Col1 Total PCB = 0.3 ppm*

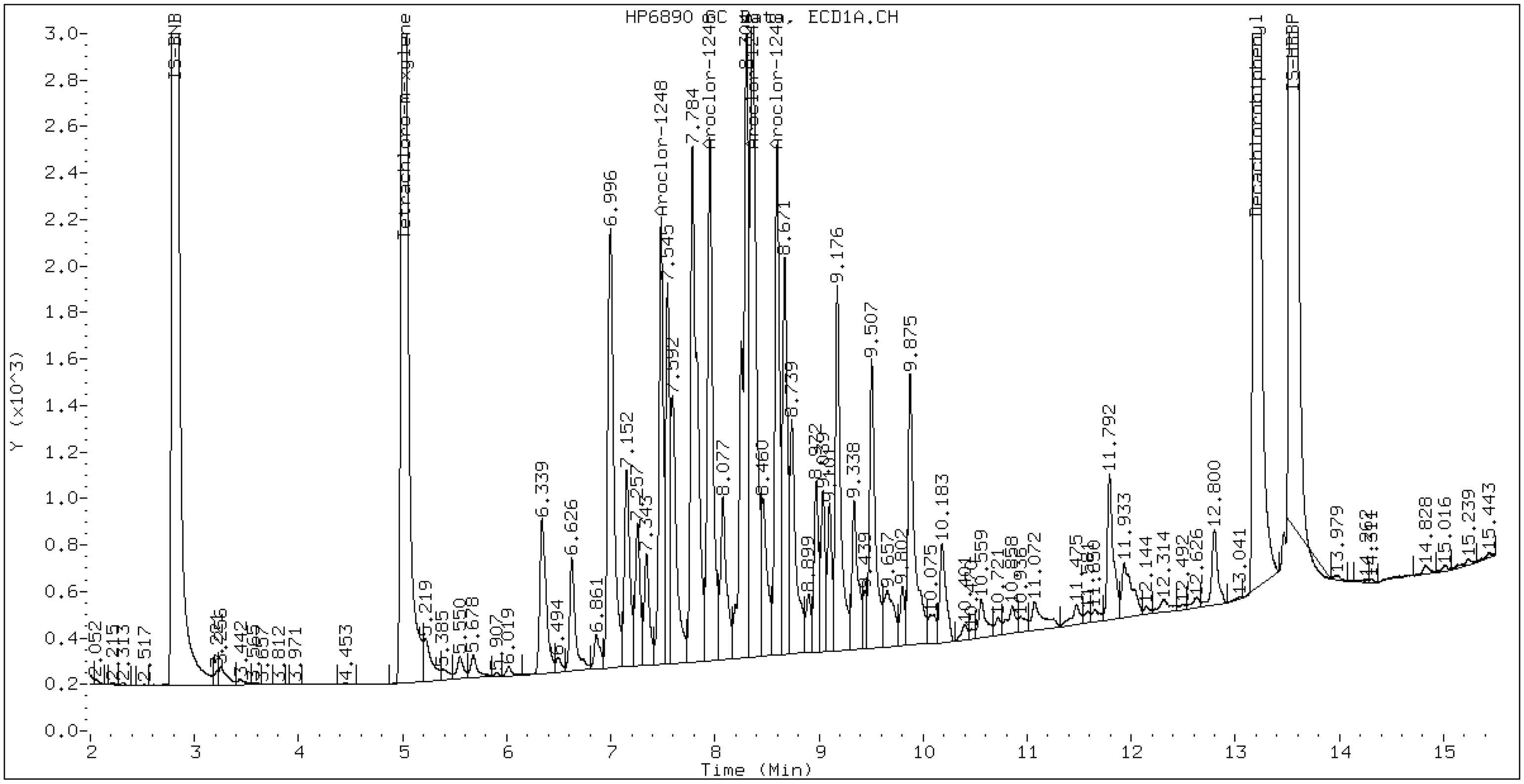
Total PCB Area Col2 (5.114 - 13.105) = 1374559 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

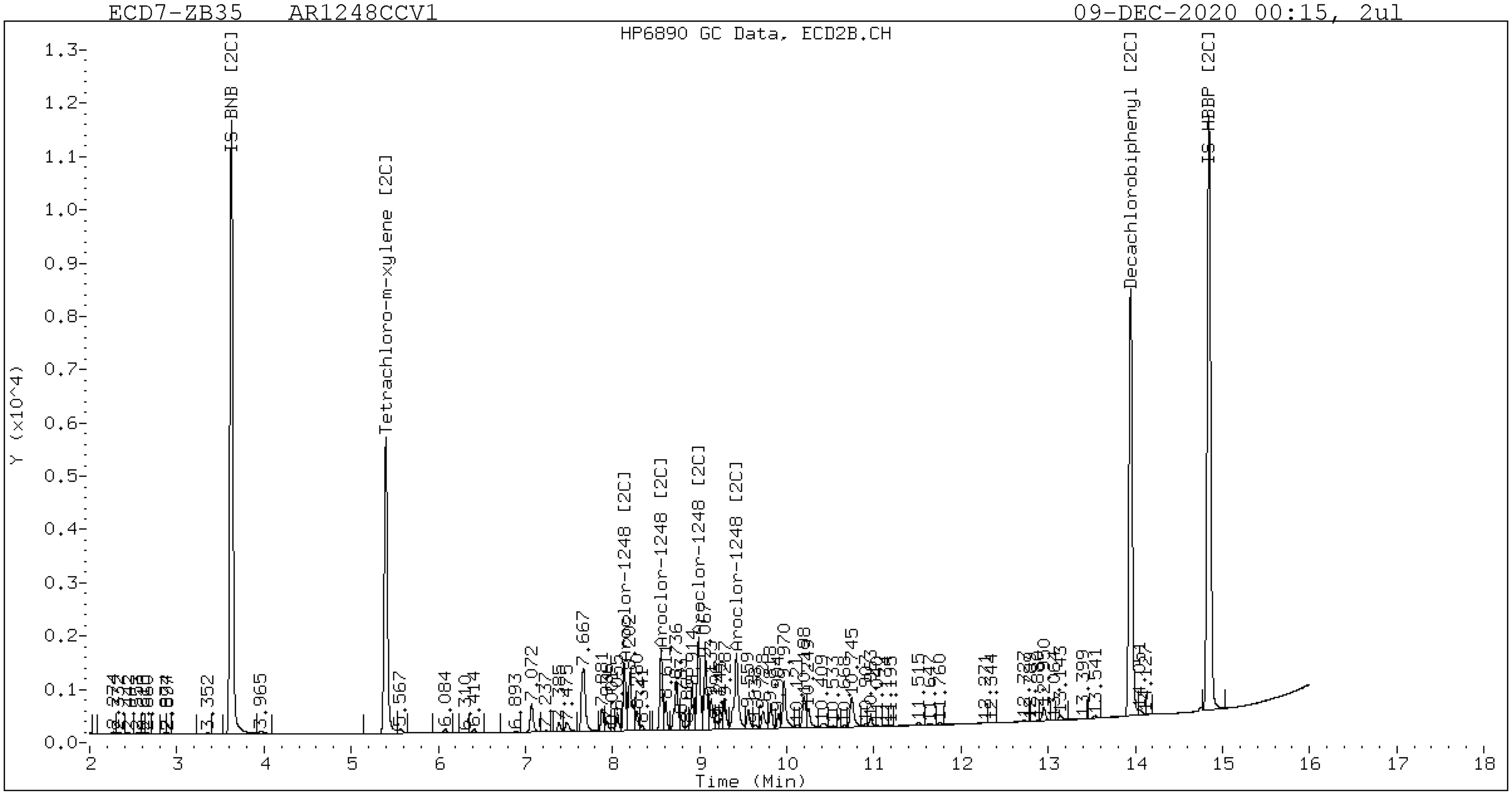
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 09-DEC-2020 00:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 09-DEC-2020 00:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ECD7
Calibration: DL00019
Lab File ID: 20120814ECD7.D
Calibration Date: 12/04/2020
Sequence: SIL0191
Injection Date: 12/09/20
Lab Sample ID: SIL0191-CCV2
Injection Time: 00:36
Sequence Name: AR1660CCV2

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	247	0.0634001	0.0635527		-1.2	+/-20
Aroclor 1016 [2C]	A	250.00	267	0.0448734	0.0467751		6.9	+/-20
Aroclor 1260	A	250.00	237	0.0403882	0.0388996		-5.2	+/-20
Aroclor 1260 [2C]	A	250.00	234	0.0794282	0.0738953		-6.3	+/-20
Decachlorobiphenyl	A	40.000	36.8	0.8503828	0.7817085		-8.0	+/-20
Tetrachlorometaxylene	A	40.000	41.2	1.1663830	1.2025230		3.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.7	1.3164080	1.3410370		1.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	43.8	0.9170028	1.0045180		9.5	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120814ECD7.D
Data file 2: /20201208.b/20201208.b/20120814ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 09-DEC-2020 00:36
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	0.000	427771	5.400	0.000	268825	41.2	43.8	6.1	Tetrachloro-m-xylene
13.205	0.000	850500	13.946	0.000	412415	36.8	40.7	10.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.1	109.5
Decachlorobiphenyl	91.9	101.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	711456	-9.6
Hexabromobiphenyl	2132987	2176003	2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	535232	-15.8
Hexabromobiphenyl	665758	615069	-7.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
	ZB5 Col					ZB35 Col				
Aroclor-1016	1	6.628	0.000	92389	258.0	1	7.073	0.000	70294	270.7
Aroclor-1016	2	6.999	0.000	289732	254.0	2	7.670	0.000	145309	247.9
Aroclor-1016	3	7.149	0.000	122720	250.4	3	7.881	0.000	60299	271.5
Aroclor-1016	4	7.544	0.000	60346	226.5	4	8.055	0.000	37042	278.2

Total Col1Ave (4 peaks): 247.2 Total Col2Ave (4 peaks): 267.1 RPD = 8
Corrected Ave (3 peaks): 243.6 Corrected Ave (3 peaks): 263.4 RPD = 8

CalAmt %D: -1.1 CalAmt %D: 6.8

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1260	1	10.399	0.000	176820	209.0	1	11.040	0.000	82719	220.1
Aroclor-1260	2	10.721	0.000	203083	240.4	2	11.504	0.000	101452	256.2
Aroclor-1260	3	11.072	0.000	548774	250.2	3	11.756	0.000	230149	227.3
Aroclor-1260	4	11.474	0.000	277224	247.4	4	12.343	0.000	153814	233.7
Aroclor-1260	5	11.581	0.000	116687	239.1	NS	---			----

Total Col1Ave (5 peaks): 237.2 Total Col2Ave (4 peaks): 234.3 RPD = 1
Corrected Ave (4 peaks): 234.0 Corrected Ave (3 peaks): 227.0 RPD = 3

CalAmt %D: -5.1 CalAmt %D: -6.3

Total PCB Area Col1 (5.114 - 13.105) = 5805448 Col1 Total PCB = 0.5 ppm*

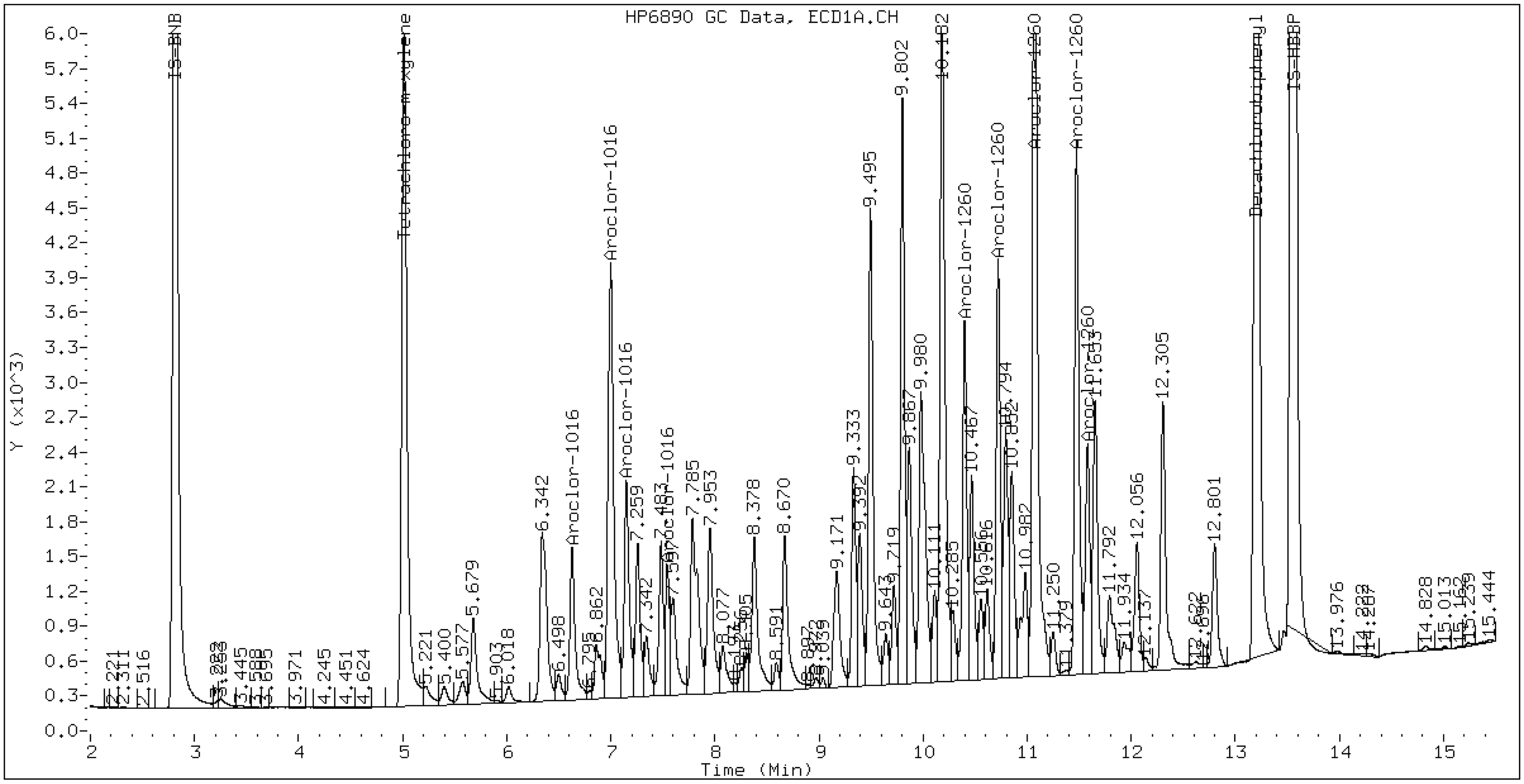
Total PCB Area Col2 (5.114 - 13.105) = 2658186 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

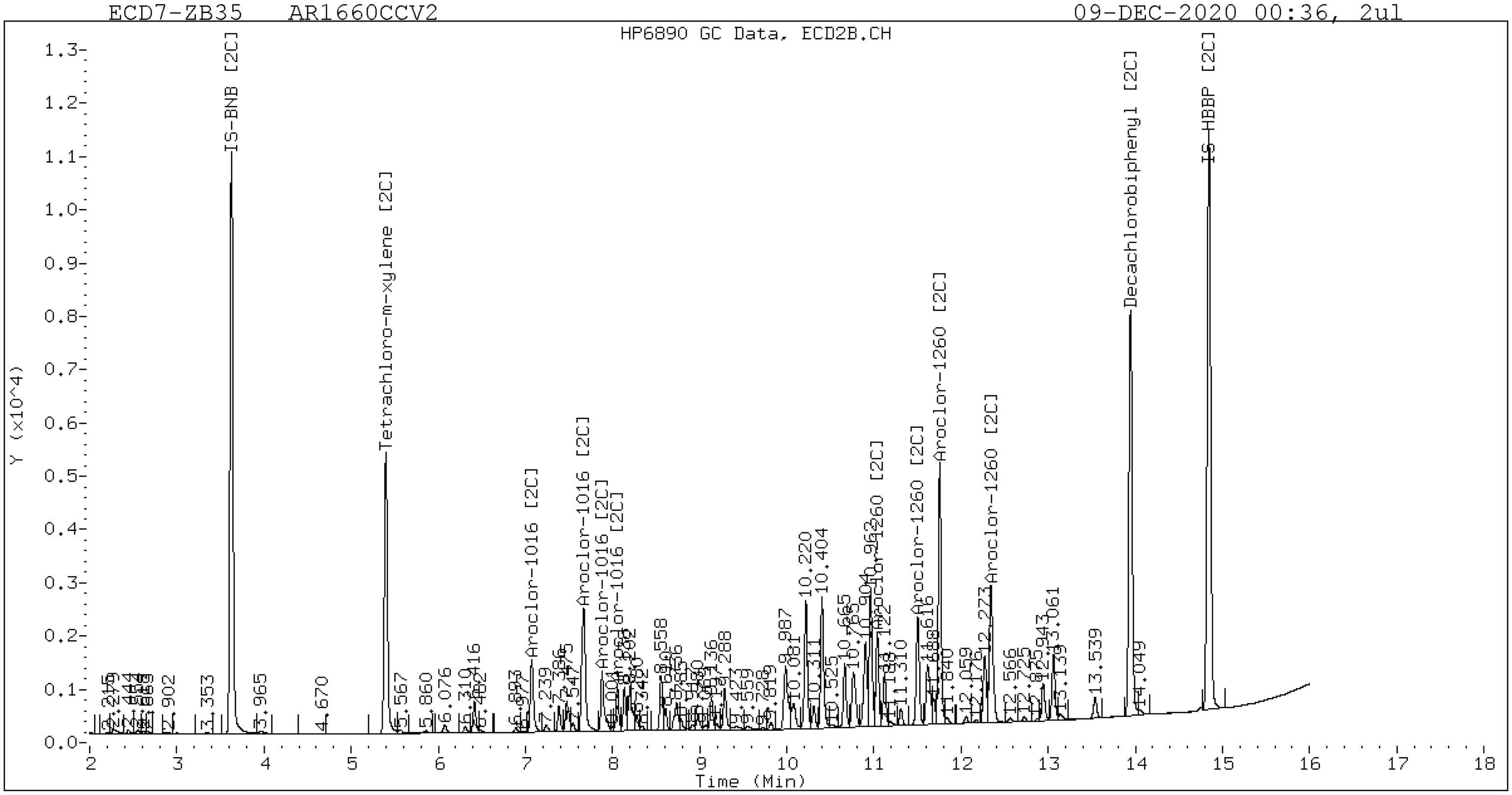
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 09-DEC-2020 00:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 09-DEC-2020 00:36, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0088	Instrument:	ECD7
		Calibration:	DL00019

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Cal Standard	SIL0088-CAL1	20120409ECD7.D	20120409ECD7.D	NA	12/04/20 01:20
Cal Standard	SIL0088-CAL2	20120410ECD7.D	20120410ECD7.D	NA	12/04/20 01:40
Cal Standard	SIL0088-CAL3	20120411ECD7.D	20120411ECD7.D	NA	12/04/20 02:01
Cal Standard	SIL0088-CAL4	20120412ECD7.D	20120412ECD7.D	NA	12/04/20 02:22
Cal Standard	SIL0088-CAL5	20120413ECD7.D	20120413ECD7.D	NA	12/04/20 02:42
Cal Standard	SIL0088-CAL6	20120414ECD7.D	20120414ECD7.D	NA	12/04/20 03:03
Cal Standard	SIL0088-CAL7	20120415ECD7.D	20120415ECD7.D	NA	12/04/20 03:23
Cal Standard	SIL0088-CAL8	20120416ECD7.D	20120416ECD7.D	NA	12/04/20 03:44
Cal Standard	SIL0088-CAL9	20120417ECD7.D	20120417ECD7.D	NA	12/04/20 04:04
Cal Standard	SIL0088-CALA	20120418ECD7.D	20120418ECD7.D	NA	12/04/20 04:25
Cal Standard	SIL0088-CALB	20120419ECD7.D	20120419ECD7.D	NA	12/04/20 04:46
Secondary Cal Check	SIL0088-SCV1	20120420ECD7.D	20120420ECD7.D	NA	12/04/20 05:06
Secondary Cal Check	SIL0088-SCV2	20120421ECD7.D	20120421ECD7.D	NA	12/04/20 05:27
Secondary Cal Check	SIL0088-SCV3	20120422ECD7.D	20120422ECD7.D	NA	12/04/20 05:47
Secondary Cal Check	SIL0088-SCV4	20120423ECD7.D	20120423ECD7.D	NA	12/04/20 06:08
Secondary Cal Check	SIL0088-SCV5	20120424ECD7.D	20120424ECD7.D	NA	12/04/20 06:28
Secondary Cal Check	SIL0088-SCV6	20120425ECD7.D	20120425ECD7.D	NA	12/04/20 06:49

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/7/2020 2:15:10PM

ANALYSIS SEQUENCE

SIL0088

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: DL00019

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0088-CAL1	0.25PPM AR1660	QC		1	I007341	I007345	
SIL0088-CAL2	0.02PPM AR1660	QC		2	I007344	I007345	
SIL0088-CAL3	0.05PPM AR1660	QC		3	I007343	I007345	
SIL0088-CAL4	1.0PPM AR1660	QC		4	I007317	I007345	
SIL0088-CAL5	0.1PPM AR1660	QC		5	I007342	I007345	
SIL0088-CAL6	0.5PPM AR1660	QC		6	I007340	I007345	
SIL0088-CAL7	0.25PPM AR1242	QC		7	I007322	I007345	
SIL0088-CAL8	0.25PPM AR1248	QC		8	I007321	I007345	
SIL0088-CAL9	0.25PPM AR1254	QC		9	I007320	I007345	
SIL0088-CALA	0.25PPM AR2162	QC		10	I007319	I007345	
SIL0088-CALB	0.25PPM AR3268	QC		11	I010378	I007345	
SIL0088-SCV1	AR1660SCV1	QC		12	I005063	I007345	
SIL0088-SCV2	AR1242SCV2	QC		13	I005064	I007345	
SIL0088-SCV3	AR1248SCV3	QC		14	I005065	I007345	
SIL0088-SCV4	AR1254SCV4	QC		15	I005066	I007345	
SIL0088-SCV5	AR2162SCV5	QC		16	I005067	I007345	
SIL0088-SCV6	AR3268SCV6	QC		17	I005068	I007345	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201204.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	03-DEC-2020 22:35	20120401ECD7.D	1	RINSE	
2	03-DEC-2020 22:56	20120402ECD7.D	1	RINSE	
3	03-DEC-2020 23:17	20120403ECD7.D	1	RINSE	
4	03-DEC-2020 23:37	20120404ECD7.D	1	RINSE	
5	03-DEC-2020 23:58	20120405ECD7.D	1	RINSE	
6	04-DEC-2020 00:18	20120406ECD7.D	1	RINSE	
7	04-DEC-2020 00:39	20120407ECD7.D	1	RINSE	
8	04-DEC-2020 00:59	20120408ECD7.D	1	IB	
9	04-DEC-2020 01:20	20120409ECD7.D	1	0.25PPMAR1660	
10	04-DEC-2020 01:40	20120410ECD7.D	1	0.02PPMAR1660	
11	04-DEC-2020 02:01	20120411ECD7.D	1	0.05PPMAR1660	
12	04-DEC-2020 02:22	20120412ECD7.D	1	1PPMAR1660	
13	04-DEC-2020 02:42	20120413ECD7.D	1	0.1PPMAR1660	
14	04-DEC-2020 03:03	20120414ECD7.D	1	0.5PPMAR1660	
15	04-DEC-2020 03:23	20120415ECD7.D	1	AR1242	
16	04-DEC-2020 03:44	20120416ECD7.D	1	AR1248	
17	04-DEC-2020 04:04	20120417ECD7.D	1	AR1254	
18	04-DEC-2020 04:25	20120418ECD7.D	1	AR2162	
19	04-DEC-2020 04:46	20120419ECD7.D	1	AR3268	
20	04-DEC-2020 05:06	20120420ECD7.D	1	AR1660SCV1	
21	04-DEC-2020 05:27	20120421ECD7.D	1	AR1242SCV2	
22	04-DEC-2020 05:47	20120422ECD7.D	1	AR1248SCV3	
23	04-DEC-2020 06:08	20120423ECD7.D	1	AR1254SCV4	
24	04-DEC-2020 06:28	20120424ECD7.D	1	AR2162SCV5	
25	04-DEC-2020 06:49	20120425ECD7.D	1	AR3268SCV6	
26	04-DEC-2020 07:10	20120426ECD7.D	1	DDT	
27	04-DEC-2020 07:30	20120427ECD7.D	1	BD	
28	04-DEC-2020 07:51	20120428ECD7.D	1	AR1254ICV1	
29	04-DEC-2020 08:11	20120429ECD7.D	1	AR1660ICV2	
30	04-DEC-2020 08:32	20120430ECD7.D	5	20K0101-41RE1	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201204.b

ARI Job No.: IB   Method: PCB.m   Instrument: ecd7.i   Date: 04-DEC-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0059	20120408ECD7.D	IB		1	NO MANUAL INTEGRATION
0120	20120409ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
0140	20120410ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
0201	20120411ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
0222	20120412ECD7.D	1PPMAR1660		1	NO MANUAL INTEGRATION
0242	20120413ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
0303	20120414ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
0323	20120415ECD7.D	AR1242		1	NO MANUAL INTEGRATION
0344	20120416ECD7.D	AR1248		1	NO MANUAL INTEGRATION
0404	20120417ECD7.D	AR1254		1	NO MANUAL INTEGRATION
0425	20120418ECD7.D	AR2162		1	NO MANUAL INTEGRATION
0446	20120419ECD7.D	AR3268		1	NO MANUAL INTEGRATION
0506	20120420ECD7.D	AR1660SCV1		1	NO MANUAL INTEGRATION
0527	20120421ECD7.D	AR1242SCV2		1	NO MANUAL INTEGRATION
0547	20120422ECD7.D	AR1248SCV3		1	NO MANUAL INTEGRATION
0608	20120423ECD7.D	AR1254SCV4		1	NO MANUAL INTEGRATION
0628	20120424ECD7.D	AR2162SCV5		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201204.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0649	20120425ECD7.D	AR3268SCV6		1	NO MANUAL INTEGRATION
0710	20120426ECD7.D	DDT		1	2,4-DDT, 4,4-DDD,
0730	20120427ECD7.D	BD		1	NO MANUAL INTEGRATION

Security Status Report

Date: 07-Dec-2020 11:46

20120408ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120409ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120410ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120411ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120412ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120413ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120414ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120415ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120416ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
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20120420ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120421ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120422ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120423ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120424ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120425ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120426ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120427ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIL0131
Instrument: ECD7
Calibration: DL00019

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SIL0131-ICV1	20120703ECD7.D	20120703ECD7.D	NA	12/07/20 08:26
Initial Cal Check	SIL0131-ICV2	20120704ECD7.D	20120704ECD7.D	NA	12/07/20 08:47
Calibration Check	SIL0131-CCV1	20120713ECD7.D	20120713ECD7.D	NA	12/07/20 16:44
Calibration Check	SIL0131-CCV2	20120714ECD7.D	20120714ECD7.D	NA	12/07/20 17:05
Calibration Check	SIL0131-CCV3	20120716ECD7.D	20120716ECD7.D	NA	12/07/20 22:25
Calibration Check	SIL0131-CCV4	20120717ECD7.D	20120717ECD7.D	NA	12/07/20 22:46
Blank	BIK0552-BLK1	20120718ECD7.D	20120718ECD7.D	Solid	12/07/20 23:07
LCS	BIK0552-BS1	20120719ECD7.D	20120719ECD7.D	Solid	12/07/20 23:27
PP7-2.5	20K0126-16	20120726ECD7.D	20120726ECD7.D	Solid	12/08/20 01:51
PP7-2.5	BIK0552-MS1	20120727ECD7.D	20120727ECD7.D	Solid	12/08/20 02:12
PP7-2.5	BIK0552-MSD1	20120728ECD7.D	20120728ECD7.D	Solid	12/08/20 02:32
PP3-2	20K0126-22	20120730ECD7.D	20120730ECD7.D	Solid	12/08/20 03:14
PP3-5	20K0126-24	20120731ECD7.D	20120731ECD7.D	Solid	12/08/20 03:34
Calibration Check	SIL0131-CCV5	20120732ECD7.D	20120732ECD7.D	NA	12/08/20 03:55
Calibration Check	SIL0131-CCV6	20120733ECD7.D	20120733ECD7.D	NA	12/08/20 04:15
Calibration Check	SIL0131-CCV7	20120747ECD7.D	20120747ECD7.D	NA	12/08/20 09:04
Calibration Check	SIL0131-CCV8	20120748ECD7.D	20120748ECD7.D	NA	12/08/20 09:24

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/14/2020 8:34:48AM

ANALYSIS SEQUENCE

SIL0131

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: DL00019

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0131-ICV1	AR1254ICV1	QC		1	I007320	I007345	
SIL0131-ICV2	AR1660ICV2	QC		2	I007341	I007345	
BIL0061-BLK1	Blank	QC		3		I007345	
BIL0061-BS1	LCS	QC		4		I007345	
20J0425-04	ID-ST1-101420	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	E 01	5		I007345	
20J0425-07	7th-ST3-101520	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	E 01	6		I007345	
BIL0121-BLK1	Blank	QC		7		I007345	
BIL0121-BS1	LCS	QC		8		I007345	
BIL0121-BSD1	LCS Dup	QC		9		I007345	
20L0021-01	LAI-06 (1-3)	8082A PCB Solid 2	A 01	10		I007345	For solids only
SIL0131-CCV1	AR1248CCV1	QC		11	I007321	I007345	
SIL0131-CCV2	AR1660CCV2	QC		12	I007341	I007345	
SIL0131-CCV3	AR1242CCV3	QC		13	I007322	I007345	
SIL0131-CCV4	AR1660CCV4	QC		14	I007341	I007345	
BIK0552-BLK1	Blank	QC		15		I007345	
BIK0552-BS1	LCS	QC		16		I007345	
20K0126-16	PP7-2.5	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	17		I007345	2020 Samples
BIK0552-MS1	Matrix Spike	QC		18		I007345	
BIK0552-MSD1	Matrix Spike Dup	QC		19		I007345	
20K0126-22	PP3-2	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	20		I007345	2020 Samples
20K0126-24	PP3-5	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	21		I007345	2020 Samples
SIL0131-CCV5	AR1254CCV5	QC		22	I007320	I007345	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/14/2020 8:34:48AM

ANALYSIS SEQUENCE

SIL0131

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: DL00019

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0131-CCV6	AR1660CCV6	QC		23	I007341	I007345	
BIK0599-BLK1	Blank	QC		24		I007345	
BIK0599-BS1	LCS	QC		25		I007345	
20K0145-02	PP1-5	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	26		I007345	2020 Samples
20K0145-03	PP1-7.5	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	27		I007345	2020 Samples
20K0145-07	PP2-5	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	28		I007345	2020 Samples
20K0145-08	PP2-7.5	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	29		I007345	2020 Samples
20K0145-11	PP5-2	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	30		I007345	2020 Samples
20K0145-13	PP5-8	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	31		I007345	2020 Samples
BIK0599-MS1	Matrix Spike	QC		32		I007345	
BIK0599-MSD1	Matrix Spike Dup	QC		33		I007345	
20K0145-17	P8-10S-5	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 01	34		I007345	2020 Samples
SIL0131-CCV7	AR1248CCV7	QC		35	I007321	I007345	
SIL0131-CCV8	AR1660CCV8	QC		36	I007341	I007345	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201207.b

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1	07-DEC-2020 07:45	20120701ECD7.D	1	DDTS	
2	07-DEC-2020 08:06	20120702ECD7.D	1	BD	
3	07-DEC-2020 08:26	20120703ECD7.D	1	AR1254ICV1	
4	07-DEC-2020 08:47	20120704ECD7.D	1	AR1660ICV2	
5	07-DEC-2020 13:59	20120705ECD7.D	1	BIL0061-BLK1	
6	07-DEC-2020 14:20	20120706ECD7.D	1	BIL0061-BS1	
7	07-DEC-2020 14:40	20120707ECD7.D	1	20J0425-04	
8	07-DEC-2020 15:01	20120708ECD7.D	1	20J00425-07	
9	07-DEC-2020 15:22	20120709ECD7.D	1	BIL0121-BLK1	
10	07-DEC-2020 15:42	20120710ECD7.D	1	BIL0121-BS1	
11	07-DEC-2020 16:03	20120711ECD7.D	1	BIL0121-BSD1	
12	07-DEC-2020 16:23	20120712ECD7.D	1	20L0021-01	
13	07-DEC-2020 16:44	20120713ECD7.D	1	AR1248CCV1	
14	07-DEC-2020 17:05	20120714ECD7.D	1	AR1660CCV2	
15	07-DEC-2020 22:05	20120715ECD7.D	1	RINSE	
16	07-DEC-2020 22:25	20120716ECD7.D	1	AR1242CCV3	
17	07-DEC-2020 22:46	20120717ECD7.D	1	AR1660CCV4	
18	07-DEC-2020 23:07	20120718ECD7.D	1	BIK0552-BLK1	
19	07-DEC-2020 23:27	20120719ECD7.D	1	BIK0552-BS1	
20	07-DEC-2020 23:48	20120720ECD7.D	1	20K0126-01	
21	08-DEC-2020 00:08	20120721ECD7.D	1	20K0126-02	
22	08-DEC-2020 00:29	20120722ECD7.D	1	20K0126-06	
23	08-DEC-2020 00:50	20120723ECD7.D	1	20K0126-07	
24	08-DEC-2020 01:10	20120724ECD7.D	1	20K0126-11	
25	08-DEC-2020 01:31	20120725ECD7.D	1	20K0126-12	
26	08-DEC-2020 01:51	20120726ECD7.D	1	20K0126-16	
27	08-DEC-2020 02:12	20120727ECD7.D	1	BIK0552-MS1	
28	08-DEC-2020 02:32	20120728ECD7.D	1	BIK0552-MSD1	
29	08-DEC-2020 02:53	20120729ECD7.D	1	20K0126-18	
30	08-DEC-2020 03:14	20120730ECD7.D	1	20K0126-22	
31	08-DEC-2020 03:34	20120731ECD7.D	1	20K0126-24	
32	08-DEC-2020 03:55	20120732ECD7.D	1	AR1254CCV5	
33	08-DEC-2020 04:15	20120733ECD7.D	1	AR1660CCV6	
34	08-DEC-2020 04:36	20120734ECD7.D	1	BIK0599-BLK1	
35	08-DEC-2020 04:57	20120735ECD7.D	1	BIK0599-BS1	
36	08-DEC-2020 05:17	20120736ECD7.D	1	20K0145-02	
37	08-DEC-2020 05:38	20120737ECD7.D	1	20K0145-03	
38	08-DEC-2020 05:58	20120738ECD7.D	1	20K0145-07	
39	08-DEC-2020 06:19	20120739ECD7.D	1	20K0145-08	
40	08-DEC-2020 06:40	20120740ECD7.D	1	20K0145-11	
41	08-DEC-2020 07:00	20120741ECD7.D	1	20K0145-13	
42	08-DEC-2020 07:21	20120742ECD7.D	1	BIK0599-MS1	
43	08-DEC-2020 07:41	20120743ECD7.D	1	BIK0599-MSD1	
44	08-DEC-2020 08:02	20120744ECD7.D	1	20K0145-15	
45	08-DEC-2020 08:23	20120745ECD7.D	1	20K0145-17	
46	08-DEC-2020 08:43	20120746ECD7.D	1	20K0152-09	
47	08-DEC-2020 09:04	20120747ECD7.D	1	AR1248CCV7	
48	08-DEC-2020 09:24	20120748ECD7.D	1	AR1660CCV8	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201207.b

ARI Job No.: DDTS   Method: PCB.m   Instrument: ecd7.i   Date: 07-DEC-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0745	20120701ECD7.D	DDTS		1	NO MANUAL INTEGRATION
0806	20120702ECD7.D	BD		1	NO MANUAL INTEGRATION
0826	20120703ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
0847	20120704ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1359	20120705ECD7.D	BIL0061-BLK1		1	NO MANUAL INTEGRATION
1420	20120706ECD7.D	BIL0061-BS1		1	NO MANUAL INTEGRATION
1440	20120707ECD7.D	20J0425-04		1	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268, IS-HBBP,
1501	20120708ECD7.D	20J00425-07		1	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268, IS-HBBP,
1522	20120709ECD7.D	BIL0121-BLK1		1	Aroclor-1016, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268,
1542	20120710ECD7.D	BIL0121-BS1		1	NO MANUAL INTEGRATION
1603	20120711ECD7.D	BIL0121-BSD1		1	NO MANUAL INTEGRATION
1623	20120712ECD7.D	20L0021-01		1	Aroclor-1260, IS-HBBP,
1644	20120713ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1705	20120714ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
0745	20120701ECD7.D	DDTS		1	NO MANUAL INTEGRATION
0806	20120702ECD7.D	BD		1	NO MANUAL INTEGRATION
0826	20120703ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201207.b\20201207.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0847	20120704ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1359	20120705ECD7.D	BIL0061-BLK1		1	NO MANUAL INTEGRATION
1420	20120706ECD7.D	BIL0061-BS1		1	NO MANUAL INTEGRATION
1440	20120707ECD7.D	20J0425-04		1	NO MANUAL INTEGRATION
1501	20120708ECD7.D	20J00425-07		1	NO MANUAL INTEGRATION
1522	20120709ECD7.D	BIL0121-BLK1		1	NO MANUAL INTEGRATION
1542	20120710ECD7.D	BIL0121-BS1		1	NO MANUAL INTEGRATION
1603	20120711ECD7.D	BIL0121-BSD1		1	NO MANUAL INTEGRATION
1623	20120712ECD7.D	20L0021-01		1	NO MANUAL INTEGRATION
1644	20120713ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1705	20120714ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION

Security Status Report

Date: 14-Dec-2020 08:43

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Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc.   SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc   Project: ICS-Former NW Cooperage

Sequence: SIL0191   Instrument: ECD7

Calibration: DL00019

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SIL0191-ICV1	20120802ECD7.D	20120802ECD7.D	NA	12/08/20 20:29
Initial Cal Check	SIL0191-ICV2	20120803ECD7.D	20120803ECD7.D	NA	12/08/20 20:49
PP16-2.5	20K0126-06	20120804ECD7.D	20120804ECD7.D	Solid	12/08/20 21:10
PP16-5	20K0126-07	20120805ECD7.D	20120805ECD7.D	Solid	12/08/20 21:31
PP15-2.5	20K0126-01	20120807ECD7.D	20120807ECD7.D	Solid	12/08/20 22:12
PP15-5	20K0126-02	20120808ECD7.D	20120808ECD7.D	Solid	12/08/20 22:32
PP13-2.5	20K0126-11	20120809ECD7.D	20120809ECD7.D	Solid	12/08/20 22:53
PP13-5	20K0126-12	20120810ECD7.D	20120810ECD7.D	Solid	12/08/20 23:13
PP7-7.5	20K0126-18	20120811ECD7.D	20120811ECD7.D	Solid	12/08/20 23:34
Calibration Check	SIL0191-CCV1	20120813ECD7.D	20120813ECD7.D	NA	12/09/20 00:15
Calibration Check	SIL0191-CCV2	20120814ECD7.D	20120814ECD7.D	NA	12/09/20 00:36

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SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG/WO: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage
Sequence: SIL0088 Instrument: ECD7
Calibration: DL00019 Calibration Date: 12/04/2020

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0088-SCV1 (Water)		Lab File ID: 20120420ECD7.D				Analyzed: 12/04/20 05:06		
Decachlorobiphenyl	40.000	105	80 - 120	13.209	13.2094	-0.0004	N/A	
Tetrachlorometaxylene	40.000	113	80 - 120	5.017	5.016667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	121	80 - 120	13.95	13.951	-0.0010	N/A	*
Tetrachlorometaxylene [2C]	40.000	115	80 - 120	5.402	5.401167	0.0008	N/A	
SIL0088-SCV2 (Water)		Lab File ID: 20120421ECD7.D				Analyzed: 12/04/20 05:27		
Decachlorobiphenyl	40.000	102	80 - 120	13.209	13.2094	-0.0004	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	5.016	5.016667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	117	80 - 120	13.95	13.951	-0.0010	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.4	5.401167	-0.0012	N/A	
SIL0088-SCV3 (Water)		Lab File ID: 20120422ECD7.D				Analyzed: 12/04/20 05:47		
Decachlorobiphenyl	40.000	105	80 - 120	13.209	13.2094	-0.0004	N/A	
Tetrachlorometaxylene	40.000	112	80 - 120	5.016	5.016667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	121	80 - 120	13.95	13.951	-0.0010	N/A	*
Tetrachlorometaxylene [2C]	40.000	115	80 - 120	5.4	5.401167	-0.0012	N/A	
SIL0088-SCV4 (Water)		Lab File ID: 20120423ECD7.D				Analyzed: 12/04/20 06:08		
Decachlorobiphenyl	40.000	103	80 - 120	13.209	13.2094	-0.0004	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.015	5.016667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	118	80 - 120	13.951	13.951	0.0000	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.399	5.401167	-0.0022	N/A	
SIL0088-SCV5 (Water)		Lab File ID: 20120424ECD7.D				Analyzed: 12/04/20 06:28		
Decachlorobiphenyl	40.000	106	80 - 120	13.209	13.2094	-0.0004	N/A	
Tetrachlorometaxylene	40.000	113	80 - 120	5.015	5.016667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	122	80 - 120	13.95	13.951	-0.0010	N/A	*
Tetrachlorometaxylene [2C]	40.000	117	80 - 120	5.4	5.401167	-0.0012	N/A	
SIL0088-SCV6 (Water)		Lab File ID: 20120425ECD7.D				Analyzed: 12/04/20 06:49		
Decachlorobiphenyl	40.000	154	80 - 200	13.21	13.2094	0.0006	N/A	
Tetrachlorometaxylene	40.000	114	80 - 120	5.015	5.016667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	174	80 - 200	13.949	13.951	-0.0020	N/A	
Tetrachlorometaxylene [2C]	40.000	115	80 - 120	5.399	5.401167	-0.0022	N/A	

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SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0131	Instrument:	ECD7
Calibration:	DL00019	Calibration Date:	12/04/2020

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0131-ICV1 (Solid)			Lab File ID: 20120703ECD7.D			Analyzed: 12/07/20 08:26		
Decachlorobiphenyl	40.000	90.8	80 - 120	13.206	13.2094	-0.0034	N/A	
Tetrachlorometaxylene	40.000	103	80 - 120	5.016	5.016667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	104	80 - 120	13.947	13.951	-0.0040	N/A	
Tetrachlorometaxylene [2C]	40.000	110	80 - 120	5.399	5.401167	-0.0022	N/A	
SIL0131-ICV2 (Solid)			Lab File ID: 20120704ECD7.D			Analyzed: 12/07/20 08:47		
Decachlorobiphenyl	40.000	89.0	80 - 120	13.206	13.2094	-0.0034	N/A	
Tetrachlorometaxylene	40.000	102	80 - 120	5.014	5.016667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	99.0	80 - 120	13.947	13.951	-0.0040	N/A	
Tetrachlorometaxylene [2C]	40.000	107	80 - 120	5.399	5.401167	-0.0022	N/A	
SIL0131-CCV1 (Solid)			Lab File ID: 20120713ECD7.D			Analyzed: 12/07/20 16:44		
Decachlorobiphenyl	40.000	91.3	80 - 120	13.205	13.2094	-0.0044	N/A	
Tetrachlorometaxylene	40.000	102	80 - 120	5.011	5.016667	-0.0057	N/A	
Decachlorobiphenyl [2C]	40.000	102	80 - 120	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.398	5.401167	-0.0032	N/A	
SIL0131-CCV2 (Solid)			Lab File ID: 20120714ECD7.D			Analyzed: 12/07/20 17:05		
Decachlorobiphenyl	40.000	88.0	80 - 120	13.205	13.2094	-0.0044	N/A	
Tetrachlorometaxylene	40.000	101	80 - 120	5.014	5.016667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	97.3	80 - 120	13.946	13.951	-0.0050	N/A	
Tetrachlorometaxylene [2C]	40.000	109	80 - 120	5.399	5.401167	-0.0022	N/A	
SIL0131-CCV3 (Solid)			Lab File ID: 20120716ECD7.D			Analyzed: 12/07/20 22:25		
Decachlorobiphenyl	40.000	89.5	80 - 120	13.207	13.2094	-0.0024	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	5.015	5.016667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	105	80 - 120	13.948	13.951	-0.0030	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.398	5.401167	-0.0032	N/A	
SIL0131-CCV4 (Solid)			Lab File ID: 20120717ECD7.D			Analyzed: 12/07/20 22:46		
Decachlorobiphenyl	40.000	87.8	80 - 120	13.205	13.2094	-0.0044	N/A	
Tetrachlorometaxylene	40.000	102	80 - 120	5.014	5.016667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	97.5	80 - 120	13.946	13.951	-0.0050	N/A	
Tetrachlorometaxylene [2C]	40.000	108	80 - 120	5.399	5.401167	-0.0022	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0131	Instrument:	ECD7
Calibration:	DL00019	Calibration Date:	12/04/2020

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BIK0552-BLK1 (Solid)			Lab File ID: 20120718ECD7.D			Analyzed: 12/07/20 23:07		
Decachlorobiphenyl	40.000	86.2	40 - 133	13.205	13.2094	-0.0044	N/A	
Tetrachlorometaxylene	40.000	90.8	53 - 120	5.014	5.016667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	96.9	40 - 133	13.947	13.951	-0.0040	N/A	
Tetrachlorometaxylene [2C]	40.000	94.7	53 - 120	5.398	5.401167	-0.0032	N/A	
BIK0552-BS1 (Solid)			Lab File ID: 20120719ECD7.D			Analyzed: 12/07/20 23:27		
Decachlorobiphenyl	40.000	63.8	40 - 133	13.205	13.2094	-0.0044	N/A	
Tetrachlorometaxylene	40.000	69.0	53 - 120	5.013	5.016667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	71.7	40 - 133	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	69.8	53 - 120	5.398	5.401167	-0.0032	N/A	
20K0126-16 (Solid)			Lab File ID: 20120726ECD7.D			Analyzed: 12/08/20 01:51		
Decachlorobiphenyl	39.820	67.2	40 - 133	13.203	13.2094	-0.0064	N/A	
Tetrachlorometaxylene	39.820	65.3	53 - 120	5.012	5.016667	-0.0047	N/A	
Decachlorobiphenyl [2C]	39.820	77.3	40 - 133	13.944	13.951	-0.0070	N/A	
Tetrachlorometaxylene [2C]	39.820	66.0	53 - 120	5.398	5.401167	-0.0032	N/A	
BIK0552-MS1 (Solid)			Lab File ID: 20120727ECD7.D			Analyzed: 12/08/20 02:12		
Decachlorobiphenyl	39.966	72.0	40 - 133	13.203	13.2094	-0.0064	N/A	
Tetrachlorometaxylene	39.966	70.9	53 - 120	5.012	5.016667	-0.0047	N/A	
Decachlorobiphenyl [2C]	39.966	80.1	40 - 133	13.946	13.951	-0.0050	N/A	
Tetrachlorometaxylene [2C]	39.966	73.1	53 - 120	5.397	5.401167	-0.0042	N/A	
BIK0552-MSD1 (Solid)			Lab File ID: 20120728ECD7.D			Analyzed: 12/08/20 02:32		
Decachlorobiphenyl	39.966	67.9	40 - 133	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	39.966	66.6	53 - 120	5.013	5.016667	-0.0037	N/A	
Decachlorobiphenyl [2C]	39.966	79.5	40 - 133	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	39.966	67.0	53 - 120	5.398	5.401167	-0.0032	N/A	
20K0126-22 (Solid)			Lab File ID: 20120730ECD7.D			Analyzed: 12/08/20 03:14		
Decachlorobiphenyl	39.813	63.1	40 - 133	13.185	13.2094	-0.0244	N/A	
Tetrachlorometaxylene	39.813	64.7	53 - 120	5.011	5.016667	-0.0057	N/A	
Decachlorobiphenyl [2C]	39.813	66.6	40 - 133	13.933	13.951	-0.0180	N/A	
Tetrachlorometaxylene [2C]	39.813	67.7	53 - 120	5.397	5.401167	-0.0042	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0131	Instrument:	ECD7
Calibration:	DL00019	Calibration Date:	12/04/2020

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
20K0126-24 (Solid)			Lab File ID: 20120731ECD7.D			Analyzed: 12/08/20 03:34		
Decachlorobiphenyl	39.996	71.1	40 - 133	13.203	13.2094	-0.0064	N/A	
Tetrachlorometaxylene	39.996	68.9	53 - 120	5.012	5.016667	-0.0047	N/A	
Decachlorobiphenyl [2C]	39.996	73.7	40 - 133	13.944	13.951	-0.0070	N/A	
Tetrachlorometaxylene [2C]	39.996	71.6	53 - 120	5.398	5.401167	-0.0032	N/A	
SIL0131-CCV5 (Solid)			Lab File ID: 20120732ECD7.D			Analyzed: 12/08/20 03:55		
Decachlorobiphenyl	40.000	97.5	80 - 120	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	5.014	5.016667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	109	80 - 120	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	111	80 - 120	5.399	5.401167	-0.0022	N/A	
SIL0131-CCV6 (Solid)			Lab File ID: 20120733ECD7.D			Analyzed: 12/08/20 04:15		
Decachlorobiphenyl	40.000	95.5	80 - 120	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	40.000	105	80 - 120	5.013	5.016667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	108	80 - 120	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	110	80 - 120	5.398	5.401167	-0.0032	N/A	
SIL0131-CCV7 (Solid)			Lab File ID: 20120747ECD7.D			Analyzed: 12/08/20 09:04		
Decachlorobiphenyl	40.000	96.3	80 - 120	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	40.000	104	80 - 120	5.013	5.016667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	109	80 - 120	13.949	13.951	-0.0020	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.399	5.401167	-0.0022	N/A	
SIL0131-CCV8 (Solid)			Lab File ID: 20120748ECD7.D			Analyzed: 12/08/20 09:24		
Decachlorobiphenyl	40.000	91.5	80 - 120	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	40.000	105	80 - 120	5.012	5.016667	-0.0047	N/A	
Decachlorobiphenyl [2C]	40.000	106	80 - 120	13.947	13.951	-0.0040	N/A	
Tetrachlorometaxylene [2C]	40.000	109	80 - 120	5.399	5.401167	-0.0022	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0191	Instrument:	ECD7
Calibration:	DL00019	Calibration Date:	12/04/2020

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0191-ICV1 (Solid)			Lab File ID: 20120802ECD7.D			Analyzed: 12/08/20 20:29		
Decachlorobiphenyl	40.000	93.3	80 - 120	13.205	13.2094	-0.0044	N/A	
Tetrachlorometaxylene	40.000	113	80 - 120	5.013	5.016667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	109	80 - 120	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	114	80 - 120	5.396	5.401167	-0.0052	N/A	
SIL0191-ICV2 (Solid)			Lab File ID: 20120803ECD7.D			Analyzed: 12/08/20 20:49		
Decachlorobiphenyl	40.000	94.0	80 - 120	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.011	5.016667	-0.0057	N/A	
Decachlorobiphenyl [2C]	40.000	103	80 - 120	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.396	5.401167	-0.0052	N/A	
20K0126-06 (Solid)			Lab File ID: 20120804ECD7.D			Analyzed: 12/08/20 21:10		
Decachlorobiphenyl	39.967	65.6	40 - 133	13.191	13.2094	-0.0184	N/A	
Tetrachlorometaxylene	39.967	66.2	53 - 120	5.007	5.016667	-0.0097	N/A	
Decachlorobiphenyl [2C]	39.967	56.9	40 - 133	13.939	13.951	-0.0120	N/A	
Tetrachlorometaxylene [2C]	39.967	68.5	53 - 120	5.393	5.401167	-0.0082	N/A	
20K0126-07 (Solid)			Lab File ID: 20120805ECD7.D			Analyzed: 12/08/20 21:31		
Decachlorobiphenyl	39.781	79.2	40 - 133	13.2	13.2094	-0.0094	N/A	
Tetrachlorometaxylene	39.781	70.1	53 - 120	5.009	5.016667	-0.0077	N/A	
Decachlorobiphenyl [2C]	39.781	65.8	40 - 133	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	39.781	75.9	53 - 120	5.395	5.401167	-0.0062	N/A	
20K0126-01 (Solid)			Lab File ID: 20120807ECD7.D			Analyzed: 12/08/20 22:12		
Decachlorobiphenyl	39.866	68.3	40 - 133	13.195	13.2094	-0.0144	N/A	
Tetrachlorometaxylene	39.866	72.3	53 - 120	5.011	5.016667	-0.0057	N/A	
Decachlorobiphenyl [2C]	39.866	72.9	40 - 133	13.94	13.951	-0.0110	N/A	
Tetrachlorometaxylene [2C]	39.866	74.6	53 - 120	5.395	5.401167	-0.0062	N/A	
20K0126-02 (Solid)			Lab File ID: 20120808ECD7.D			Analyzed: 12/08/20 22:32		
Decachlorobiphenyl	39.833	79.9	40 - 133	13.202	13.2094	-0.0074	N/A	
Tetrachlorometaxylene	39.833	70.3	53 - 120	5.012	5.016667	-0.0047	N/A	
Decachlorobiphenyl [2C]	39.833	88.5	40 - 133	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	39.833	75.8	53 - 120	5.396	5.401167	-0.0052	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0191	Instrument:	ECD7
Calibration:	DL00019	Calibration Date:	12/04/2020

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
20K0126-11 (Solid)			Lab File ID: 20120809ECD7.D			Analyzed: 12/08/20 22:53		
Decachlorobiphenyl	39.824	63.6	40 - 133	13.185	13.2094	-0.0244	N/A	
Tetrachlorometaxylene	39.824	60.0	53 - 120	5.002	5.016667	-0.0147	N/A	
Decachlorobiphenyl [2C]	39.824	66.5	40 - 133	13.933	13.951	-0.0180	N/A	
Tetrachlorometaxylene [2C]	39.824	57.1	53 - 120	5.388	5.401167	-0.0132	N/A	
20K0126-12 (Solid)			Lab File ID: 20120810ECD7.D			Analyzed: 12/08/20 23:13		
Decachlorobiphenyl	39.971	129	40 - 133	13.202	13.2094	-0.0074	N/A	
Tetrachlorometaxylene	39.971	65.3	53 - 120	5.01	5.016667	-0.0067	N/A	
Decachlorobiphenyl [2C]	39.971	124	40 - 133	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	39.971	69.2	53 - 120	5.397	5.401167	-0.0042	N/A	
20K0126-18 (Solid)			Lab File ID: 20120811ECD7.D			Analyzed: 12/08/20 23:34		
Decachlorobiphenyl	39.872	66.9	40 - 133	13.202	13.2094	-0.0074	N/A	
Tetrachlorometaxylene	39.872	64.0	53 - 120	5.012	5.016667	-0.0047	N/A	
Decachlorobiphenyl [2C]	39.872	77.3	40 - 133	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	39.872	66.5	53 - 120	5.397	5.401167	-0.0042	N/A	
SIL0191-CCV1 (Solid)			Lab File ID: 20120813ECD7.D			Analyzed: 12/09/20 00:15		
Decachlorobiphenyl	40.000	93.8	80 - 120	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	40.000	107	80 - 120	5.013	5.016667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	107	80 - 120	13.946	13.951	-0.0050	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.398	5.401167	-0.0032	N/A	
SIL0191-CCV2 (Solid)			Lab File ID: 20120814ECD7.D			Analyzed: 12/09/20 00:36		
Decachlorobiphenyl	40.000	92.0	80 - 120	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	40.000	103	80 - 120	5.014	5.016667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	102	80 - 120	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	110	80 - 120	5.399	5.401167	-0.0022	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0088	Instrument:	ECD7
		Calibration:	DL00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SIL0088-SCV1)	(Water)		Lab File ID: 20120420ECD7.D				Analyzed: 12/04/20 05:06		
1-Bromo-2-Nitrobenzene	795708	2.817	786676	2.816	101	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	2186421	13.563	2132987	13.564	103	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	637628	3.631	635493	3.63	100	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	698314	14.852	665758	14.851	105	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SIL0088-SCV2)	(Water)		Lab File ID: 20120421ECD7.D				Analyzed: 12/04/20 05:27		
1-Bromo-2-Nitrobenzene	793550	2.816	786676	2.816	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2188269	13.564	2132987	13.564	103	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	634778	3.628	635493	3.63	100	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	697627	14.852	665758	14.851	105	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SIL0088-SCV3)	(Water)		Lab File ID: 20120422ECD7.D				Analyzed: 12/04/20 05:47		
1-Bromo-2-Nitrobenzene	794644	2.814	786676	2.816	101	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	2176927	13.563	2132987	13.564	102	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	632599	3.628	635493	3.63	100	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	689113	14.851	665758	14.851	104	50 - 200	0.000	+/-0.50	
Secondary Cal Check (SIL0088-SCV4)	(Water)		Lab File ID: 20120423ECD7.D				Analyzed: 12/04/20 06:08		
1-Bromo-2-Nitrobenzene	792760	2.815	786676	2.816	101	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	2135851	13.564	2132987	13.564	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	625033	3.628	635493	3.63	98	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	683418	14.852	665758	14.851	103	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SIL0088-SCV5)	(Water)		Lab File ID: 20120424ECD7.D				Analyzed: 12/04/20 06:28		
1-Bromo-2-Nitrobenzene	760705	2.815	786676	2.816	97	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	2113407	13.564	2132987	13.564	99	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	613536	3.629	635493	3.63	97	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	670231	14.852	665758	14.851	101	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SIL0088-SCV6)	(Water)		Lab File ID: 20120425ECD7.D				Analyzed: 12/04/20 06:49		
1-Bromo-2-Nitrobenzene	770524	2.814	786676	2.816	98	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	2144827	13.563	2132987	13.564	101	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	620502	3.628	635493	3.63	98	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	684700	14.851	665758	14.851	103	50 - 200	0.000	+/-0.50	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sequence: SIL0131 Instrument: ECD7

Calibration: DL00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SIL0131-ICV1)		(Solid)	Lab File ID: 20120703ECD7.D				Analyzed: 12/07/20 08:26		
1-Bromo-2-Nitrobenzene	835467	2.815	835467	2.815	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2461198	13.561	2461198	13.561	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	628897	3.629	628897	3.629	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	737108	14.845	737108	14.845	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SIL0131-ICV2)		(Solid)	Lab File ID: 20120704ECD7.D				Analyzed: 12/07/20 08:47		
1-Bromo-2-Nitrobenzene	782667	2.815	835467	2.815	94	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2346356	13.561	2461198	13.561	95	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	597818	3.629	628897	3.629	95	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	715263	14.847	737108	14.845	97	50 - 200	0.002	+/-0.50	
Blank (BIK0552-BLK1)		(Solid)	Lab File ID: 20120718ECD7.D				Analyzed: 12/07/20 23:07		
1-Bromo-2-Nitrobenzene	781433	2.815	835467	2.815	94	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2340300	13.56	2461198	13.561	95	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	575445	3.628	628897	3.629	92	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	673995	14.849	737108	14.845	91	50 - 200	0.004	+/-0.50	
LCS (BIK0552-BS1)		(Solid)	Lab File ID: 20120719ECD7.D				Analyzed: 12/07/20 23:27		
1-Bromo-2-Nitrobenzene	810420	2.814	835467	2.815	97	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	2487732	13.56	2461198	13.561	101	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	611582	3.628	628897	3.629	97	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	722747	14.846	737108	14.845	98	50 - 200	0.001	+/-0.50	
PP7-2.5 (20K0126-16)		(Solid)	Lab File ID: 20120726ECD7.D				Analyzed: 12/08/20 01:51		
1-Bromo-2-Nitrobenzene	846619	2.814	782667	2.815	108	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	2221020	13.558	2346356	13.561	95	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	650616	3.628	597818	3.629	109	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	663371	14.847	715263	14.847	93	50 - 200	0.000	+/-0.50	
Matrix Spike (BIK0552-MS1)		(Solid)	Lab File ID: 20120727ECD7.D				Analyzed: 12/08/20 02:12		
1-Bromo-2-Nitrobenzene	813572	2.812	835467	2.815	97	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	2152044	13.558	2461198	13.561	87	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	619411	3.627	628897	3.629	98	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	653846	14.847	737108	14.845	89	50 - 200	0.002	+/-0.50	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sequence: SIL0131 Instrument: ECD7

Calibration: DL00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (BIK0552-MSD1)		(Solid)		Lab File ID: 20120728ECD7.D				Analyzed: 12/08/20 02:32	
1-Bromo-2-Nitrobenzene	862440	2.814	835467	2.815	103	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	2388340	13.56	2461198	13.561	97	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	659074	3.627	628897	3.629	105	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	712168	14.845	737108	14.845	97	50 - 200	0.000	+/-0.50	
PP3-2 (20K0126-22)		(Solid)		Lab File ID: 20120730ECD7.D				Analyzed: 12/08/20 03:14	
1-Bromo-2-Nitrobenzene	812998	2.814	782667	2.815	104	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1560086	13.542	2346356	13.561	66	50 - 200	-0.019	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	599622	3.629	597818	3.629	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	428932	14.835	715263	14.847	60	50 - 200	-0.012	+/-0.50	
PP3-5 (20K0126-24)		(Solid)		Lab File ID: 20120731ECD7.D				Analyzed: 12/08/20 03:34	
1-Bromo-2-Nitrobenzene	861745	2.812	782667	2.815	110	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	1778091	13.558	2346356	13.561	76	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	661072	3.626	597818	3.629	111	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	501846	14.844	715263	14.847	70	50 - 200	-0.003	+/-0.50	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sequence: SIL0191 Instrument: ECD7

Calibration: DL00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SIL0191-ICV1)		(Solid)	Lab File ID: 20120802ECD7.D				Analyzed: 12/08/20 20:29		
1-Bromo-2-Nitrobenzene	760638	2.813	760638	2.813	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2307416	13.56	2307416	13.56	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	576121	3.624	576121	3.624	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	637145	14.845	637145	14.845	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SIL0191-ICV2)		(Solid)	Lab File ID: 20120803ECD7.D				Analyzed: 12/08/20 20:49		
1-Bromo-2-Nitrobenzene	703778	2.812	760638	2.813	93	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	2139062	13.559	2307416	13.56	93	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	540429	3.625	576121	3.624	94	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	612903	14.845	637145	14.845	96	50 - 200	0.000	+/-0.50	
PP16-2.5 (20K0126-06)		(Solid)	Lab File ID: 20120804ECD7.D				Analyzed: 12/08/20 21:10		
1-Bromo-2-Nitrobenzene	711636	2.812	703778	2.812	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2244029	13.551	2139062	13.559	105	50 - 200	-0.008	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	489294	3.624	540429	3.625	91	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	606199	14.84	612903	14.845	99	50 - 200	-0.005	+/-0.50	
PP16-5 (20K0126-07)		(Solid)	Lab File ID: 20120805ECD7.D				Analyzed: 12/08/20 21:31		
1-Bromo-2-Nitrobenzene	757809	2.812	703778	2.812	108	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2387151	13.559	2139062	13.559	112	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	536550	3.625	540429	3.625	99	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	657878	14.847	612903	14.845	107	50 - 200	0.002	+/-0.50	
PP15-2.5 (20K0126-01)		(Solid)	Lab File ID: 20120807ECD7.D				Analyzed: 12/08/20 22:12		
1-Bromo-2-Nitrobenzene	702898	2.813	703778	2.812	100	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	1906830	13.551	2139062	13.559	89	50 - 200	-0.008	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	497630	3.626	540429	3.625	92	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	533858	14.841	612903	14.845	87	50 - 200	-0.004	+/-0.50	
PP15-5 (20K0126-02)		(Solid)	Lab File ID: 20120808ECD7.D				Analyzed: 12/08/20 22:32		
1-Bromo-2-Nitrobenzene	736777	2.812	703778	2.812	105	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1976728	13.557	2139062	13.559	92	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	524435	3.626	540429	3.625	97	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	568277	14.844	612903	14.845	93	50 - 200	-0.001	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sequence: SIL0191 Instrument: ECD7

Calibration: DL00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
PP13-2.5 (20K0126-11)		(Solid)		Lab File ID: 20120809ECD7.D			Analyzed: 12/08/20 22:53		
1-Bromo-2-Nitrobenzene	581426	2.81	703778	2.812	83	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	1510674	13.542	2139062	13.559	71	50 - 200	-0.017	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	377033	3.625	540429	3.625	70	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	418428	14.836	612903	14.845	68	50 - 200	-0.009	+/-0.50	
PP13-5 (20K0126-12)		(Solid)		Lab File ID: 20120810ECD7.D			Analyzed: 12/08/20 23:13		
1-Bromo-2-Nitrobenzene	747800	2.813	703778	2.812	106	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	1147314	13.555	2139062	13.559	54	50 - 200	-0.004	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	531265	3.626	540429	3.625	98	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	360740	14.844	612903	14.845	59	50 - 200	-0.001	+/-0.50	
PP7-7.5 (20K0126-18)		(Solid)		Lab File ID: 20120811ECD7.D			Analyzed: 12/08/20 23:34		
1-Bromo-2-Nitrobenzene	758193	2.812	703778	2.812	108	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2173809	13.558	2139062	13.559	102	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	556192	3.626	540429	3.625	103	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	585574	14.845	612903	14.845	96	50 - 200	0.000	+/-0.50	

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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 20K0126-16 File ID: 20120726ECD7.D

Sampled: 11/04/20 13:30 Prepared: 11/18/20 11:50 Analyzed: 12/08/20 01:51

Solids: 91.99 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BIK0552 Sequence: SIL0131

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	1	9.865	9.877	0.012	26443	22.7	7.6
	* 2	10.218	10.205	0.013	18734.2	24.5	
Aroclor 1260	* 1	11.58	11.58533	0.00533	111406	100	2.4
	2	12.343	12.349	0.006	63090.75	97.6	

* Column used for quantitation

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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 20K0126-22 File ID: 20120730ECD7.D

Sampled: 11/04/20 14:40 Prepared: 11/18/20 11:50 Analyzed: 12/08/20 03:14

Solids: 91.17 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BIK0552 Sequence: SIL0131

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	* 1	9.842	9.877	0.035	21753.6	24.4	5.9
	2	10.203	10.205	0.002	10587.2	23.0	
Aroclor 1260	* 1	11.558	11.58533	0.0273	29607.6	38.2	14.
	2	12.328	12.349	0.021	13579.25	33.2	

* Column used for quantitation

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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 20K0126-02 File ID: 20120808ECD7.D

Sampled: 11/04/20 09:35 Prepared: 11/18/20 11:50 Analyzed: 12/08/20 22:32

Solids: 68.97 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BIK0552 Sequence: SIL0191

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	1	9.866	9.877	0.011	6205.6	ND	N/A
	* 2	10.214	10.205	0.009	5972.6	10.7	

* Column used for quantitation

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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc			Project:	ICS-Former NW Cooperage
Matrix:	Soil	Laboratory ID:	20K0126-06	File ID:	20120804ECD7.D
Sampled:	11/04/20 10:25	Prepared:	11/18/20 11:50	Analyzed:	12/08/20 21:10
Solids:	81.50	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BIK0552	Sequence:	SIL0191		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.584	8.601	0.017	519365	9330	6.1
	* 2	9.41	9.426	0.016	245522.5	9920	
Aroclor 1254	* 1	9.86	9.877	0.017	511747.4	3980	6.2
	2	10.184	10.205	0.021	186510.2	3740	
Aroclor 1260	1	11.569	11.58533	0.0163	130995.8	1120	8.5
	* 2	12.335	12.349	0.014	72232.5	1220	

* Column used for quantitation

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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 20K0126-07 File ID: 20120805ECD7.D

Sampled: 11/04/20 10:30 Prepared: 11/18/20 11:50 Analyzed: 12/08/20 21:31

Solids: 76.64 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BIK0552 Sequence: SIL0191

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.592	8.601	0.009	94081.5	1580	11.4
	2	9.416	9.426	0.01	38624.5	1410	
Aroclor 1254	* 1	9.87	9.877	0.007	97095.8	883	24.1
	2	10.195	10.205	0.01	35339.8	693	
Aroclor 1260	* 1	11.579	11.58533	0.00633	32475	270	18.6
	2	12.344	12.349	0.005	13980.5	224	

* Column used for quantitation

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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 20K0126-18 File ID: 20120811ECD7.D

Sampled: 11/04/20 13:40 Prepared: 11/18/20 11:50 Analyzed: 12/08/20 23:34

Solids: 77.17 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BIK0552 Sequence: SIL0191

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.591	8.601	0.01	12959.5	14.6	48.5
	2	9.417	9.426	0.009	3135	8.9	
Aroclor 1254	1	9.866	9.877	0.011	17433.8	17.1	19.5
	* 2	10.218	10.205	0.013	12798	20.8	
Aroclor 1260	* 1	11.579	11.58533	0.00633	76139	69.7	2.
	2	12.343	12.349	0.006	39264.5	68.3	

* Column used for quantitation

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HOLDING TIME SUMMARY

Analysis: EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PP15-2.5 20K0126-01	11/04/20 09:30	11/05/20 15:47	11/18/20 11:50	14	14	12/08/20 22:12	20	40	
PP15-5 20K0126-02	11/04/20 09:35	11/05/20 15:47	11/18/20 11:50	14	14	12/08/20 22:32	20	40	
PP16-2.5 20K0126-06	11/04/20 10:25	11/05/20 15:47	11/18/20 11:50	14	14	12/08/20 21:10	20	40	
PP16-5 20K0126-07	11/04/20 10:30	11/05/20 15:47	11/18/20 11:50	14	14	12/08/20 21:31	20	40	
PP13-2.5 20K0126-11	11/04/20 12:35	11/05/20 15:47	11/18/20 11:50	13	14	12/08/20 22:53	20	40	
PP13-5 20K0126-12	11/04/20 12:40	11/05/20 15:47	11/18/20 11:50	13	14	12/08/20 23:13	20	40	
PP7-2.5 20K0126-16	11/04/20 13:30	11/05/20 15:47	11/18/20 11:50	13	14	12/08/20 01:51	20	40	
PP7-7.5 20K0126-18	11/04/20 13:40	11/05/20 15:47	11/18/20 11:50	13	14	12/08/20 23:34	20	40	
PP3-2 20K0126-22	11/04/20 14:40	11/05/20 15:47	11/18/20 11:50	13	14	12/08/20 03:14	20	40	
PP3-5 20K0126-24	11/04/20 14:50	11/05/20 15:47	11/18/20 11:50	13	14	12/08/20 03:34	20	40	
Matrix Spike BIK0552-MS1	11/04/20 13:30	11/05/20 15:47	11/18/20 11:50	13	14	12/08/20 02:12	20	40	
Matrix Spike Dup BIK0552-MSD1	11/04/20 13:30	11/05/20 15:47	11/18/20 11:50	13	14	12/08/20 02:32	20	40	

* Indicates hold time exceedance.

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METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Solid Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	8.0	20.0	ug/kg
Aroclor 1016 [2C]	8.0	20.0	ug/kg
Aroclor 1221	8.0	20.0	ug/kg
Aroclor 1221 [2C]	8.0	20.0	ug/kg
Aroclor 1232	8.0	20.0	ug/kg
Aroclor 1232 [2C]	8.0	20.0	ug/kg
Aroclor 1242	8.0	20.0	ug/kg
Aroclor 1242 [2C]	8.0	20.0	ug/kg
Aroclor 1248	8.0	20.0	ug/kg
Aroclor 1248 [2C]	8.0	20.0	ug/kg
Aroclor 1254	8.0	20.0	ug/kg
Aroclor 1254 [2C]	8.0	20.0	ug/kg
Aroclor 1260	9.3	20.0	ug/kg
Aroclor 1260 [2C]	9.3	20.0	ug/kg
Aroclor 1262	9.3	20.0	ug/kg
Aroclor 1262 [2C]	9.3	20.0	ug/kg
Aroclor 1268	9.3	20.0	ug/kg
Aroclor 1268 [2C]	9.3	20.0	ug/kg

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METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Water Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	0.018	0.100	ug/L
Aroclor 1016 [2C]	0.018	0.100	ug/L
Aroclor 1221	0.018	0.100	ug/L
Aroclor 1221 [2C]	0.018	0.100	ug/L
Aroclor 1232	0.018	0.100	ug/L
Aroclor 1232 [2C]	0.018	0.100	ug/L
Aroclor 1242	0.018	0.100	ug/L
Aroclor 1242 [2C]	0.018	0.100	ug/L
Aroclor 1248	0.018	0.100	ug/L
Aroclor 1248 [2C]	0.018	0.100	ug/L
Aroclor 1254	0.018	0.100	ug/L
Aroclor 1254 [2C]	0.018	0.100	ug/L
Aroclor 1260	0.017	0.100	ug/L
Aroclor 1260 [2C]	0.017	0.100	ug/L
Aroclor 1262	0.017	0.100	ug/L
Aroclor 1262 [2C]	0.017	0.100	ug/L
Aroclor 1268	0.017	0.100	ug/L
Aroclor 1268 [2C]	0.017	0.100	ug/L

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

PP15-2.5

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0126-01 C	SDG:	20K0126
Sampled:	11/04/20 09:30	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-043
% Solids:	77.66	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 14:54
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.209 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0758	1	0.00647	0.0308	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

PP15-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0126-02 C	SDG:	20K0126
Sampled:	11/04/20 09:35	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-049
% Solids:	68.97	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:07
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.269 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0859	1	0.00566	0.0269	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

PP16-2.5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0126-06 C	SDG:	20K0126
Sampled:	11/04/20 10:25	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-050
% Solids:	81.50	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:09
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.236 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.128	1	0.00546	0.0260	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

PP16-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0126-07 C	SDG:	20K0126
Sampled:	11/04/20 10:30	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-051
% Solids:	76.64	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:11
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.212 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0303	1	0.00646	0.0308	J

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

PP13-2.5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0126-11 C	SDG:	20K0126
Sampled:	11/04/20 12:35	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-052
% Solids:	76.79	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:14
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.212 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0379	1	0.00645	0.0307	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

PP13-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0126-12 C	SDG:	20K0126
Sampled:	11/04/20 12:40	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-053
% Solids:	76.86	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:16
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.255 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0427	1	0.00536	0.0255	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

PP7-2.5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0126-16 C	SDG:	20K0126
Sampled:	11/04/20 13:30	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-054
% Solids:	91.99	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:18
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.201 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.00668	1	0.00568	0.0270	J

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

PP7-7.5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0126-18 C	SDG:	20K0126
Sampled:	11/04/20 13:40	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-055
% Solids:	77.17	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:20
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.278 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0108	1	0.00489	0.0233	J

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

PP3-2

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0126-22 C	SDG:	20K0126
Sampled:	11/04/20 14:40	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-056
% Solids:	91.17	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:23
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.229 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0558	1	0.00503	0.0239	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

PP3-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0126-24 C	SDG:	20K0126
Sampled:	11/04/20 14:50	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-057
% Solids:	79.88	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:25
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.273 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0460	1	0.00481	0.0229	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 7471B

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Batch: BIK0465 Batch Matrix: Solid Preparation: SMM EPA 7471B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
PP15-2.5	20K0126-01	SMM 11-18-20-043	11/17/20 11:02	
PP15-5	20K0126-02	SMM 11-18-20-049	11/17/20 11:02	
PP16-2.5	20K0126-06	SMM 11-18-20-050	11/17/20 11:02	
PP16-5	20K0126-07	SMM 11-18-20-051	11/17/20 11:02	
PP13-2.5	20K0126-11	SMM 11-18-20-052	11/17/20 11:02	
PP13-5	20K0126-12	SMM 11-18-20-053	11/17/20 11:02	
PP7-2.5	20K0126-16	SMM 11-18-20-054	11/17/20 11:02	
PP7-7.5	20K0126-18	SMM 11-18-20-055	11/17/20 11:02	
PP3-2	20K0126-22	SMM 11-18-20-056	11/17/20 11:02	
PP3-5	20K0126-24	SMM 11-18-20-057	11/17/20 11:02	
Blank	BIK0465-BLK1	SMM 11-18-20-041	11/17/20 11:02	
LCS	BIK0465-BS1	SMM 11-18-20-042	11/17/20 11:02	
PP15-2.5	BIK0465-DUP1	SMM 11-18-20-044	11/17/20 11:02	
PP15-2.5	BIK0465-MS1	SMM 11-18-20-045	11/17/20 11:02	
PP15-2.5	BIK0465-MSD1	SMM 11-18-20-048	11/17/20 11:02	

BIK0465

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM
Analyst: SD
Bath Temp: 92°C
Start Time: 1230
Matrix: Soil
Date: 11/17/2020
End Time: 1350

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
20K126-1	C		0.209	50.0	1		
-2			0.269				
-6			0.236				
-7			0.212				
-11			0.212				
-12			0.255				
-16			0.201				
-18			0.278				
-22			0.229				
-24			0.273				
20K145-2			0.208				
-3			0.203				
-7			0.230				
-8			0.265				
-11			0.228				
-13			0.252				
-15			0.203				
-17			0.216				
20K196-1	A		0.205				
BIK465-BLK1	—		—				
-BS1	—		—				
-DUP1	—		0.211				20K126-1
-MS1	—		0.213				
-MSD1	—		0.213				
—	—	—	—	—	—	—	—

Chemical/Reagent ID:

HNO_3: T9356
H_2SO_4: I6551
HCl: —
5% $K_2S_2O_8$: I9312
5% $KMnO_4$: T9582
Digest Tube Lot: 2003055

5037F

Revision 007
6/18/09

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Blank

Form I
METHOD BLANK DATA SHEET
EPA 7471B
Total Metals

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Batch: BIK0465 Laboratory ID: BIK0465-BLK1 Prepared: 11/17/20 11:02

Matrix: Solid Preparation: SMM EPA 7471B Analyzed: 11/18/20 14:49

Sequence: SIK0284 Calibration: DK00044 Instrument: HYDRA

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	ND	1	0.00525	0.0250	U

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY

EPA 7471B

Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	11/18/20 14:51
Batch:	BIK0465	Laboratory ID:	BIK0465-BS1
Preparation:	SMM EPA 7471B	Sequence Name:	LCS
Initial/Final:	0.2 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Mercury	0.500	0.440		88.0	80 - 120

* Indicates values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP15-2.5

DUPLICATES

EPA 7471B

Total Metals

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Matrix: Solid
Laboratory ID: BIK0465-DUP1
Batch: BIK0465
Lab Source ID: 20K0126-01
Preparation: SMM EPA 7471B
Initial/Final: 0.211 g / 50 mL
Source Sample Name: PP15-2.5
% Solids: 77.66

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg dry)	C	DUPLICATE CONCENTRATION (mg/kg dry)	C	RPD %	Q
Mercury	20	0.0758		0.120	*	45.4	*

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP15-2.5

MS / MS DUPLICATE RECOVERY
EPA 7471B
Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	11/18/20 14:58
Batch:	BIK0465	Laboratory ID:	BIK0465-MS1
Preparation:	SMM EPA 7471B	Sequence Name:	Matrix Spike
Initial/Final:	0.213 g / 50 mL	Source Sample:	PP15-2.5

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Mercury	0.302	0.0758		0.439		120	75 - 125

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP15-2.5

MS / MS DUPLICATE RECOVERY
EPA 7471B
Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	11/18/20 15:05
Batch:	BIK0465	Laboratory ID:	BIK0465-MSD1
Preparation:	SMM EPA 7471B	Sequence Name:	Matrix Spike Dup
Initial/Final:	0.213 g / 50 mL	Source Sample:	PP15-2.5

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Mercury	0.302	0.468	*	130 *	6.45	20	75 - 125

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DK00044	Instrument:	HYDRA
Calibration Date:	11/18/2020 13:16		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Mercury	0	0	0.0001	5210000	0.0005	5030000	0.001	4867000	0.002	4871000	0.005	4812200

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DK00044	Instrument:	HYDRA
Calibration Date:	11/18/2020 13:16		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Mercury	4131700	49.1	1.0000		0.99	

DK00044
SIK0284

SMM 11-18-20

Method: ARI 5 ppb (NO 0.05) Operator: Admin Date of Analysis: 18 Nov 2020 13:05:35

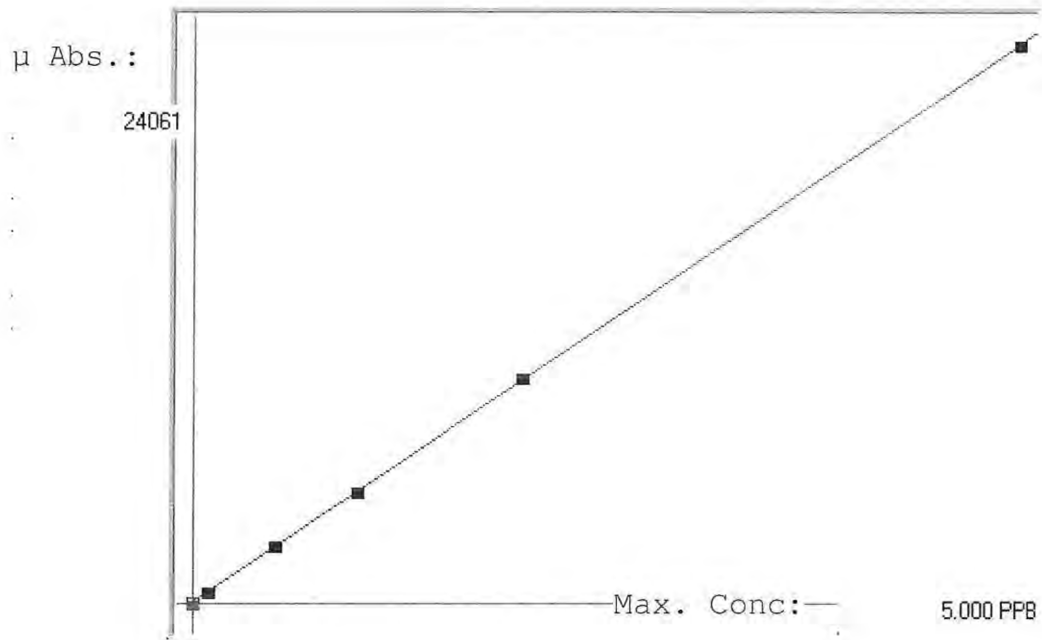
Sample ID	Mean	Units		Date	Method
SEQ-CAL1	31	PPB		18 Nov 2020 13:16:47	ARI 5 ppb (NO 0.05)
SEQ-CAL2	521	PPB		18 Nov 2020 13:19:02	ARI 5 ppb (NO 0.05)
SEQ-CAL3	2515	PPB		18 Nov 2020 13:21:17	ARI 5 ppb (NO 0.05)
SEQ-CAL4	4867	PPB		18 Nov 2020 13:23:32	ARI 5 ppb (NO 0.05)
SEQ-CAL5	9742	PPB		18 Nov 2020 13:25:46	ARI 5 ppb (NO 0.05)
SEQ-CAL6	24061	PPB		18 Nov 2020 13:28:00	ARI 5 ppb (NO 0.05)
SEQ-ICV	99.8% 3.9923	PPB	✓	18 Nov 2020 13:33:33	ARI 5 ppb (NO 0.05)
SEQ-ICB	-0.0209	PPB	✓	18 Nov 2020 13:35:46	ARI 5 ppb (NO 0.05)
SEQ-CRL	91.3% 0.0913	PPB	✓	18 Nov 2020 13:38:02	ARI 5 ppb (NO 0.05)
SEQ-CCV	99.5% 3.9792	PPB	✓	18 Nov 2020 13:40:18	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0229	PPB	✓	18 Nov 2020 13:42:31	ARI 5 ppb (NO 0.05)
BIK0376-BLK1	-0.0090	PPB	✓	18 Nov 2020 13:44:47	ARI 5 ppb (NO 0.05)
BIK0376-BS1	1.7796	PPB	✓ %R=88%	18 Nov 2020 13:47:01	ARI 5 ppb (NO 0.05)
20K0101-02	0.0091	PPB		18 Nov 2020 13:49:14	ARI 5 ppb (NO 0.05)
BIK0376-DUP1	0.0139	PPB	✓ no RPD	18 Nov 2020 13:51:27	ARI 5 ppb (NO 0.05)
BIK0376-MS1	1.1060	PPB	✓ %R=109.6%	18 Nov 2020 13:53:41	ARI 5 ppb (NO 0.05)
BIK0376-MSD1	1.0970	PPB	✓ %R=108.7%, RPD0.8	18 Nov 2020 13:55:54	ARI 5 ppb (NO 0.05)
20K0101-04	0.1900	PPB		18 Nov 2020 13:58:07	ARI 5 ppb (NO 0.05)
20K0101-07	0.0242	PPB		18 Nov 2020 14:00:21	ARI 5 ppb (NO 0.05)
20K0101-10	0.0564	PPB		18 Nov 2020 14:02:35	ARI 5 ppb (NO 0.05)
20K0101-13	0.0942	PPB		18 Nov 2020 14:04:49	ARI 5 ppb (NO 0.05)
SEQ-CCV	100.1% 4.0053	PPB	✓	18 Nov 2020 14:07:03	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0213	PPB	✓	18 Nov 2020 14:09:16	ARI 5 ppb (NO 0.05)
20K0101-15	0.0830	PPB		18 Nov 2020 14:11:33	ARI 5 ppb (NO 0.05)
20K0101-16	0.7332	PPB		18 Nov 2020 14:13:48	ARI 5 ppb (NO 0.05)
20K0101-18	0.8566	PPB		18 Nov 2020 14:16:03	ARI 5 ppb (NO 0.05)
20K0101-20	0.1603	PPB		18 Nov 2020 14:18:16	ARI 5 ppb (NO 0.05)
20K0101-22	0.1452	PPB		18 Nov 2020 14:20:29	ARI 5 ppb (NO 0.05)
20K0101-23	0.0176	PPB		18 Nov 2020 14:22:43	ARI 5 ppb (NO 0.05)
20K0101-24	0.0274	PPB		18 Nov 2020 14:24:56	ARI 5 ppb (NO 0.05)
20K0101-26	0.0342	PPB		18 Nov 2020 14:27:09	ARI 5 ppb (NO 0.05)
20K0101-27	0.4312	PPB		18 Nov 2020 14:29:23	ARI 5 ppb (NO 0.05)
20K0101-28	0.0270	PPB		18 Nov 2020 14:31:37	ARI 5 ppb (NO 0.05)
SEQ-CCV	98.0% 3.9183	PPB	✓	18 Nov 2020 14:33:50	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0247	PPB	✓	18 Nov 2020 14:36:03	ARI 5 ppb (NO 0.05)
20K0101-29	0.2792	PPB		18 Nov 2020 14:38:20	ARI 5 ppb (NO 0.05)
20K0101-30	0.0369	PPB		18 Nov 2020 14:40:34	ARI 5 ppb (NO 0.05)
20K0142-06	0.1268	PPB		18 Nov 2020 14:42:49	ARI 5 ppb (NO 0.05)
20K0142-07	0.1669	PPB		18 Nov 2020 14:45:04	ARI 5 ppb (NO 0.05)
20K0175-01	2.1814	PPB		18 Nov 2020 14:47:20	ARI 5 ppb (NO 0.05)
BIK0465-BLK1	-0.0188	PPB	✓	18 Nov 2020 14:49:33	ARI 5 ppb (NO 0.05)
BIK0465-BS1	1.7608	PPB	✓ %R=88%	18 Nov 2020 14:51:48	ARI 5 ppb (NO 0.05)
20K0126-01	0.2462	PPB		18 Nov 2020 14:54:02	ARI 5 ppb (NO 0.05)
BIK0465-DUP1	0.3946	PPB	× RPD HIGH	18 Nov 2020 14:56:16	ARI 5 ppb (NO 0.05)
BIK0465-MS1	1.4510	PPB	✓ %R=120%	18 Nov 2020 14:58:29	ARI 5 ppb (NO 0.05)
SEQ-CCV	95.7% 3.8280	PPB	✓	18 Nov 2020 15:00:43	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0245	PPB	✓	18 Nov 2020 15:02:56	ARI 5 ppb (NO 0.05)
BIK0465-MSD1	1.5477	PPB	× %R=HIGH, ✓RPD 6.4	18 Nov 2020 15:05:12	ARI 5 ppb (NO 0.05)
20K0126-02	0.3187	PPB		18 Nov 2020 15:07:26	ARI 5 ppb (NO 0.05)
20K0126-06	0.4920	PPB		18 Nov 2020 15:09:40	ARI 5 ppb (NO 0.05)
20K0126-07	0.0985	PPB		18 Nov 2020 15:11:54	ARI 5 ppb (NO 0.05)
20K0126-11	0.1234	PPB		18 Nov 2020 15:14:09	ARI 5 ppb (NO 0.05)
20K0126-12	0.1673	PPB		18 Nov 2020 15:16:24	ARI 5 ppb (NO 0.05)
20K0126-16	0.0247	PPB		18 Nov 2020 15:18:39	ARI 5 ppb (NO 0.05)
20K0126-18	0.0463	PPB		18 Nov 2020 15:20:52	ARI 5 ppb (NO 0.05)
20K0126-22	0.2331	PPB		18 Nov 2020 15:23:06	ARI 5 ppb (NO 0.05)
20K0126-24	0.2006	PPB		18 Nov 2020 15:25:20	ARI 5 ppb (NO 0.05)
SEQ-CCV	96.7% 3.8665	PPB	✓	18 Nov 2020 15:27:33	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0269	PPB	✓	18 Nov 2020 15:29:46	ARI 5 ppb (NO 0.05)
20K0145-02	0.6675	PPB		18 Nov 2020 15:32:03	ARI 5 ppb (NO 0.05)

SMM 11-18-20

Method: ARI 5 ppb (NO 0.05) Operator: Admin Date of Analysis: 18 Nov 2020 13:05:35

Sample ID	Mean	Units		Date	Method
20K0145-03	0.0653	PPB		18 Nov 2020 15:34:16	ARI 5 ppb (NO 0.05)
20K0145-07	0.0453	PPB		18 Nov 2020 15:36:30	ARI 5 ppb (NO 0.05)
20K0145-08	0.0323	PPB		18 Nov 2020 15:38:44	ARI 5 ppb (NO 0.05)
20K0145-11	0.1585	PPB		18 Nov 2020 15:40:58	ARI 5 ppb (NO 0.05)
20K0145-13	0.4098	PPB		18 Nov 2020 15:43:12	ARI 5 ppb (NO 0.05)
20K0145-15	1.8408	PPB		18 Nov 2020 15:45:27	ARI 5 ppb (NO 0.05)
20K0145-17	0.6843	PPB		18 Nov 2020 15:47:42	ARI 5 ppb (NO 0.05)
20K0196-01	0.1095	PPB		18 Nov 2020 15:49:57	ARI 5 ppb (NO 0.05)
BIK0530-BLK1	-0.0098	PPB		18 Nov 2020 15:52:11	ARI 5 ppb (NO 0.05)
SEQ-CCV	95.7% 3.8296	PPB		18 Nov 2020 15:54:24	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0251	PPB		18 Nov 2020 15:56:38	ARI 5 ppb (NO 0.05)
BIK0530-BS1	1.9226	PPB	%R=96%	18 Nov 2020 15:58:54	ARI 5 ppb (NO 0.05)
20K0131-01	0.0990	PPB		18 Nov 2020 16:01:09	ARI 5 ppb (NO 0.05)
BIK0530-DUP1	0.1407	PPB	DIFF < IRL	18 Nov 2020 16:03:22	ARI 5 ppb (NO 0.05)
BIK0530-MS1	1.2295	PPB	%R=113%	18 Nov 2020 16:05:36	ARI 5 ppb (NO 0.05)
20K0135-01	0.2493	PPB		18 Nov 2020 16:07:50	ARI 5 ppb (NO 0.05)
20K0135-02	0.1145	PPB		18 Nov 2020 16:10:04	ARI 5 ppb (NO 0.05)
20K0135-03	0.1639	PPB		18 Nov 2020 16:12:19	ARI 5 ppb (NO 0.05)
20K0201-02	0.0844	PPB		18 Nov 2020 16:14:34	ARI 5 ppb (NO 0.05)
20K0201-03	0.1521	PPB		18 Nov 2020 16:16:49	ARI 5 ppb (NO 0.05)
20K0201-04	0.0776	PPB		18 Nov 2020 16:19:04	ARI 5 ppb (NO 0.05)
SEQ-CCV	96.2% 3.8484	PPB		18 Nov 2020 16:21:19	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0273	PPB		18 Nov 2020 16:23:32	ARI 5 ppb (NO 0.05)
20K0201-05	0.2304	PPB		18 Nov 2020 16:25:49	ARI 5 ppb (NO 0.05)
20K0213-01	-0.0047	PPB		18 Nov 2020 16:28:03	ARI 5 ppb (NO 0.05)
20K0222-01	0.0116	PPB		18 Nov 2020 16:30:17	ARI 5 ppb (NO 0.05)
20K0238-01	1.5254	PPB		18 Nov 2020 16:32:31	ARI 5 ppb (NO 0.05)
20K0238-02	0.1083	PPB		18 Nov 2020 16:34:45	ARI 5 ppb (NO 0.05)
20K0238-03	1.9190	PPB		18 Nov 2020 16:37:00	ARI 5 ppb (NO 0.05)
20K0238-04	0.2089	PPB		18 Nov 2020 16:39:14	ARI 5 ppb (NO 0.05)
SEQ-CCV	96.6% 3.8651	PPB		18 Nov 2020 16:41:28	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0273	PPB		18 Nov 2020 16:43:41	ARI 5 ppb (NO 0.05)

ARI 5 ppb (NO 0.05)



Linear

A= 0.0000e+000

B= 2.0818e-004

C= -1.4748e-002

Rho= 0.9999889

Accept=Accepted

Accepted Date=

11/18/20 13:33

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
SEQ-CAL1 - Blank	0.000	-0.008	-0.008	31	3.742	27	30	36		
SEQ-CAL2 - 0.1 PPB	0.100	0.094	-0.006	520	0.2 %	519	521	522		
SEQ-CAL3 - 0.5 PPB	0.500	0.509	0.009	2514	0.4 %	2504	2513	2527		
SEQ-CAL4 - 1.0 PPB	1.000	0.998	-0.002	4867	1.1 %	4798	4878	4925		
SEQ-CAL5 - 2.0 PPB	2.000	2.013	0.013	9741	0.7 %	9773	9804	9648		
SEQ-CAL6 - 5.0 PPB	5.000	4.994	-0.006	24060	1.3 %	23624	24340	24218		

Mercury Analysis Log

Analyst: BC
Instrument: HYDRA
SEQ: S1K284
Date: 11/18/20
Page: 1 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
SEQ-CAL1	SMM	1X		
-CAL2				
-CAL3				
-CAL4				
-CAL5				
-CAL6				
-ICV			3.99	✓
-ICB			-0.0209	✓
-CRL			0.091	✓
-CCV			3.97	✓
-CCB			-0.0229	✓
B1K376-BLK1			-0.0090	✓
-BS1			1.77	✓ %R=88.9%
20K101-2			0.009	
B1K376-DUP1			0.013	✓ no RPD
-MS1			1.10	✓ %R=109.6%
-MSD1			1.09	✓ %R=108.7%, RPD=0.81
20K101-4				
-7				
-10				
-13				
SEQ-CCV			4.00	✓
-CCB			-0.0213	✓
20K101-15				
-16				
-18				
-20				
-22				
-23				
-24				

Chemical/Reagent ID:
10% $SnCl_2$: I10555
14% $NH_2OH/NaCl$: I8327

Standard ID:
Standard: I10681- I10686
ICV/CCV: I10687

Mercury Analysis Log

Analyst: BC
Instrument: HYDRA

Date: 11/18/20
Page: 2 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
20K101-26	SMM	1x		
-27				
-28				
SEQ-CCV			3.91	
-CCB			-0.0247	
20K101-29				
-30				
20K142-6				
-7				
20K175-1				
BK465-BLK1			-0.0188	✓
-BS1			1.76	✓ %R=88.0%
20K126-1			0.24	
BK465-DUP1			0.39	x RPD = HIGH
-MS1			1.45	✓ %R=120.4%
SEQ-CCV			3.82	✓
-CCB			-0.0245	✓
BK465-MSD1			1.54	x %R=130.1%, ✓RPD=6.4
20K126-2				
-6				
-7				
-11				
-12				
-16				
-18				
-22				
-24				
SEQ-CCV			3.86	✓
-CCB			-0.0269	✓
20K145-2				

Chemical/Reagent ID: —
10% $SnCl_2$:

14% NH_2OH/NaCl: —

Standard ID: —
Standard:

ICV/CCV: —

Mercury Analysis Log

Analyst: BC
Instrument: HYDRA

Date: 11/18/20
Page: 3 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
20K145-3	SMM	1X		
-7	↓	↓		
-8				
-11				
-13				
-15				
↓ -17				
20K196-1				
BIK530-BLK1			-0.0098	✓
SEQ-CCV			3.82	✓
↓ -CCB			-0.0251	✓
BIK530-BS1			1.92	✓ %R=96.1%
20K131-1			0.09	
BIK530-DUP1			0.14	✓ DIFF < 1 RL
↓ -MS1			1.22	✓ %R=113.0%
20K135-1				
-2				
↓ -3				
20K201-2				
-3				
↓ -4				
SEQ-CCV			3.84	✓
↓ -CCB			-0.0273	✓
20K201-5				
20K213-1				
20K222-1				
20K238-1				
-2				
-3				
↓ -4	↓	↓		

Chemical/Reagent ID: —
10% $SnCl_2$:

14% $NH_2OH/NaCl$: —

Standard ID: —
Standard:

ICV/CCV: —

SEQ-CCV	SMM	1X	3.86	✓
-CCB	↓	↓	-0.0273	✓

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INITIAL AND CONTINUING CALIBRATION CHECK

EPA 7471B

Laboratory: Analytical Resources, Inc.

SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Instrument ID: HYDRA

Calibration: DK00044

Control Limt: +/- 20.00%

Sequence: SIK0284

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SIK0284-ICV1	Mercury	0.0040000	0.00399	99.8	mg/L	EPA 7471B
SIK0284-CCV1	Mercury	0.0040000	0.00398	99.5	mg/L	EPA 7471B
SIK0284-CCV2	Mercury	0.0040000	0.00401	100	mg/L	EPA 7471B
SIK0284-CCV3	Mercury	0.0040000	0.00392	98.0	mg/L	EPA 7471B
SIK0284-CCV4	Mercury	0.0040000	0.00383	95.7	mg/L	EPA 7471B
SIK0284-CCV5	Mercury	0.0040000	0.00387	96.7	mg/L	EPA 7471B
SIK0284-CCV6	Mercury	0.0040000	0.00383	95.7	mg/L	EPA 7471B
SIK0284-CCV7	Mercury	0.0040000	0.00385	96.2	mg/L	EPA 7471B
SIK0284-CCV8	Mercury	0.0040000	0.00387	96.6	mg/L	EPA 7471B

* Values outside of QC limits

Analytical Resources, Incorporated
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INSTRUMENT BLANKS
EPA 7471B

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: HYDRA
Calibration: DK00044
Sequence: SIK0284
Date Analyzed: 11/18/20 13:35

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SIK0284-ICB1	Mercury	-0.000021	0.000021	0.000100	mg/L	
SIK0284-CCB1	Mercury	-0.000023	0.000021	0.000100	mg/L	
SIK0284-CCB2	Mercury	-0.000021	0.000021	0.000100	mg/L	
SIK0284-CCB3	Mercury	-0.000025	0.000021	0.000100	mg/L	
SIK0284-CCB4	Mercury	-0.000025	0.000021	0.000100	mg/L	
SIK0284-CCB5	Mercury	-0.000027	0.000021	0.000100	mg/L	
SIK0284-CCB6	Mercury	-0.000025	0.000021	0.000100	mg/L	
SIK0284-CCB7	Mercury	-0.000027	0.000021	0.000100	mg/L	
SIK0284-CCB8	Mercury	-0.000027	0.000021	0.000100	mg/L	

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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIK0284	Instrument:	HYDRA
		Calibration:	DK00044

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SIK0284-CAL1	SMM 11-18-20-001	NA	11/18/20 13:16
Cal Standard	SIK0284-CAL2	SMM 11-18-20-002	NA	11/18/20 13:19
Cal Standard	SIK0284-CAL3	SMM 11-18-20-003	NA	11/18/20 13:21
Cal Standard	SIK0284-CAL4	SMM 11-18-20-004	NA	11/18/20 13:23
Cal Standard	SIK0284-CAL5	SMM 11-18-20-005	NA	11/18/20 13:25
Cal Standard	SIK0284-CAL6	SMM 11-18-20-006	NA	11/18/20 13:28
Initial Cal Check	SIK0284-ICV1	SMM 11-18-20-007	NA	11/18/20 13:33
Initial Cal Blank	SIK0284-ICB1	SMM 11-18-20-008	NA	11/18/20 13:35
Instrument RL Check	SIK0284-CRL1	SMM 11-18-20-009	NA	11/18/20 13:38
Calibration Check	SIK0284-CCV1	SMM 11-18-20-010	NA	11/18/20 13:40
Calibration Blank	SIK0284-CCB1	SMM 11-18-20-011	NA	11/18/20 13:42
Calibration Check	SIK0284-CCV2	SMM 11-18-20-022	NA	11/18/20 14:07
Calibration Blank	SIK0284-CCB2	SMM 11-18-20-023	NA	11/18/20 14:09
Calibration Check	SIK0284-CCV3	SMM 11-18-20-034	NA	11/18/20 14:33
Calibration Blank	SIK0284-CCB3	SMM 11-18-20-035	NA	11/18/20 14:36
Blank	BIK0465-BLK1	SMM 11-18-20-041	Solid	11/18/20 14:49
LCS	BIK0465-BS1	SMM 11-18-20-042	Solid	11/18/20 14:51
PP15-2.5	20K0126-01	SMM 11-18-20-043	Solid	11/18/20 14:54
PP15-2.5	BIK0465-DUP1	SMM 11-18-20-044	Solid	11/18/20 14:56
PP15-2.5	BIK0465-MS1	SMM 11-18-20-045	Solid	11/18/20 14:58
Calibration Check	SIK0284-CCV4	SMM 11-18-20-046	NA	11/18/20 15:00
Calibration Blank	SIK0284-CCB4	SMM 11-18-20-047	NA	11/18/20 15:02
PP15-2.5	BIK0465-MSD1	SMM 11-18-20-048	Solid	11/18/20 15:05
PP15-5	20K0126-02	SMM 11-18-20-049	Solid	11/18/20 15:07
PP16-2.5	20K0126-06	SMM 11-18-20-050	Solid	11/18/20 15:09
PP16-5	20K0126-07	SMM 11-18-20-051	Solid	11/18/20 15:11
PP13-2.5	20K0126-11	SMM 11-18-20-052	Solid	11/18/20 15:14
PP13-5	20K0126-12	SMM 11-18-20-053	Solid	11/18/20 15:16
PP7-2.5	20K0126-16	SMM 11-18-20-054	Solid	11/18/20 15:18
PP7-7.5	20K0126-18	SMM 11-18-20-055	Solid	11/18/20 15:20

Analytical Resources, Incorporated
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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory: Analytical Resources, Inc.
SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage

Sequence: SIK0284
Instrument: HYDRA

Calibration: DK00044

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
PP3-2	20K0126-22	SMM 11-18-20-056	Solid	11/18/20 15:23
PP3-5	20K0126-24	SMM 11-18-20-057	Solid	11/18/20 15:25
Calibration Check	SIK0284-CCV5	SMM 11-18-20-058	NA	11/18/20 15:27
Calibration Blank	SIK0284-CCB5	SMM 11-18-20-059	NA	11/18/20 15:29
Calibration Check	SIK0284-CCV6	SMM 11-18-20-070	NA	11/18/20 15:54
Calibration Blank	SIK0284-CCB6	SMM 11-18-20-071	NA	11/18/20 15:56
Calibration Check	SIK0284-CCV7	SMM 11-18-20-082	NA	11/18/20 16:21
Calibration Blank	SIK0284-CCB7	SMM 11-18-20-083	NA	11/18/20 16:23
Calibration Check	SIK0284-CCV8	SMM 11-18-20-091	NA	11/18/20 16:41
Calibration Blank	SIK0284-CCB8	SMM 11-18-20-092	NA	11/18/20 16:43

DETECTION LEVEL STANDARD
EPA 7471B

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: HYDRA
Calibration: DK00044
Sequence: SIK0284
Lab Sample ID: SIK0284-CRL1

Analyte	True	Found	%R	Units	QC Limts
Mercury	0.000100	0.000091	91.3	mg/L	70 - 130

* Values outside of QC limits

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HOLDING TIME SUMMARY

Analysis: EPA 7471B

Laboratory: Analytical Resources, Inc. SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PP15-2.5 20K0126-01	11/04/20 09:30	11/05/20 15:47	11/17/20 11:02	13	28	11/18/20 14:54	14	28	
PP15-5 20K0126-02	11/04/20 09:35	11/05/20 15:47	11/17/20 11:02	13	28	11/18/20 15:07	14	28	
PP16-2.5 20K0126-06	11/04/20 10:25	11/05/20 15:47	11/17/20 11:02	13	28	11/18/20 15:09	14	28	
PP16-5 20K0126-07	11/04/20 10:30	11/05/20 15:47	11/17/20 11:02	13	28	11/18/20 15:11	14	28	
PP13-2.5 20K0126-11	11/04/20 12:35	11/05/20 15:47	11/17/20 11:02	12	28	11/18/20 15:14	14	28	
PP13-5 20K0126-12	11/04/20 12:40	11/05/20 15:47	11/17/20 11:02	12	28	11/18/20 15:16	14	28	
PP7-2.5 20K0126-16	11/04/20 13:30	11/05/20 15:47	11/17/20 11:02	12	28	11/18/20 15:18	14	28	
PP7-7.5 20K0126-18	11/04/20 13:40	11/05/20 15:47	11/17/20 11:02	12	28	11/18/20 15:20	14	28	
PP3-2 20K0126-22	11/04/20 14:40	11/05/20 15:47	11/17/20 11:02	12	28	11/18/20 15:23	14	28	
PP3-5 20K0126-24	11/04/20 14:50	11/05/20 15:47	11/17/20 11:02	12	28	11/18/20 15:25	14	28	
Duplicate BIK0465-DUP1	11/04/20 09:30	11/05/20 15:47	11/17/20 11:02	13	28	11/18/20 14:56	14	28	
Matrix Spike BIK0465-MS1	11/04/20 09:30	11/05/20 15:47	11/17/20 11:02	13	28	11/18/20 14:58	14	28	
Matrix Spike Dup BIK0465-MSD1	11/04/20 09:30	11/05/20 15:47	11/17/20 11:02	13	28	11/18/20 15:05	14	28	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 7471B

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Matrix: Solid
Instrument: HYDRA

Analyte	MDL	RL	Units
Mercury	0.00525	0.0250	mg/kg

BIK 352

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section Metals

Oven Identification: #7 Balance ID: C041235412

Samples in Oven: Date: 11/11/20 Time: 1525 Temp: 104°C Analyst: CA

Removed from Oven: Date: 11/12/20 Time: 0630 Temp: 107°C Analyst: CA

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
20K120-02	.998	10.772	8.435	—	✓
05	1.014	10.599	8.067		
20K126-01	1.013	10.457	8.347		
02	.993	10.609	7.625		
06	1.027	10.375	8.646		
07	1.013	10.401	8.208		
11	.990	10.596	8.366		
12	1.016	10.322	8.169		
16	1.001	10.950	10.153		
18	.982	10.236	8.123		
22	1.006	10.901	10.027		
24	1.018	10.736	8.781		
20K131-01	1.006	10.087	8.874		
20K135-01	1.002	10.079	7.651		
02	1.005	10.858	8.821		
03	1.012	10.425	8.538		
20K140-01	1.014	10.354	4.353		
20K175-01	1.006	10.799	4.897		

CA 11/11/20

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

5050F

Revision 003
11/20/09

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP15-2.5

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage

Matrix: Soil | Laboratory ID: 20K0126-01 C | SDG: 20K0126
Sampled: 11/04/20 09:30 | Prepared: 11/16/20 11:07 | File ID: I2201118A-055
% Solids: 77.66 | Preparation: SWC EPA 3050B | Analyzed: 11/18/20 18:19
Batch: BIK0408 | Sequence: SIK0278 | Initial/Final: 1.021 g Wet / 50 mL
Instrument: ICP2 | Calibration: DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	54.9	2	0.303	2.52	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP15-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0126-02 C	SDG:	20K0126
Sampled:	11/04/20 09:35	Prepared:	11/16/20 11:07	File ID:	I2201118A-052
% Solids:	68.97	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 18:07
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.01 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	10.1	2	0.345	2.87	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP16-2.5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0126-06 C	SDG:	20K0126
Sampled:	11/04/20 10:25	Prepared:	11/16/20 11:07	File ID:	I2201120b-019
% Solids:	81.50	Preparation:	SWC EPA 3050B	Analyzed:	11/20/20 15:59
Batch:	BIK0408	Sequence:	SIK0315	Initial/Final:	1.074 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00051

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	11800	200	27.4	228	D

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP16-5

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0126-07 C	SDG:	20K0126
Sampled:	11/04/20 10:30	Prepared:	11/16/20 11:07	File ID:	I2201118A-053
% Solids:	76.64	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 18:11
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.061 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	4.12	2	0.295	2.46	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C

Total Metals

PP13-2.5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0126-11 C	SDG:	20K0126
Sampled:	11/04/20 12:35	Prepared:	11/16/20 11:07	File ID:	I2201118A-063
% Solids:	76.79	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 18:58
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.034 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	25.5	2	0.302	2.52	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP13-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0126-12 C	SDG:	20K0126
Sampled:	11/04/20 12:40	Prepared:	11/16/20 11:07	File ID:	I2201118A-064
% Solids:	76.86	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 19:02
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.059 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	5.51	2	0.295	2.46	

Analytical Resources, Incorporated
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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP7-2.5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix: Soil | Laboratory ID: 20K0126-16 C | SDG: 20K0126

Sampled: 11/04/20 13:30 | Prepared: 11/16/20 11:07 | File ID: I2201118A-065

% Solids: 91.99 | Preparation: SWC EPA 3050B | Analyzed: 11/18/20 19:06

Batch: BIK0408 | Sequence: SIK0278 | Initial/Final: 1.006 g Wet / 50 mL

Instrument: ICP2 | Calibration: DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	2.93	2	0.259	2.16	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP7-7.5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0126-18 C	SDG:	20K0126
Sampled:	11/04/20 13:40	Prepared:	11/16/20 11:07	File ID:	I2201118A-066
% Solids:	77.17	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 19:10
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.063 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	2.29	2	0.293	2.44	J

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP3-2

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0126-22 C	SDG:	20K0126
Sampled:	11/04/20 14:40	Prepared:	11/16/20 11:07	File ID:	I2201118A-067
% Solids:	91.17	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 19:15
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.009 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	88.0	2	0.261	2.17	

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Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP3-5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0126-24 C	SDG:	20K0126
Sampled:	11/04/20 14:50	Prepared:	11/16/20 11:07	File ID:	I2201118A-068
% Solids:	79.88	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 19:19
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.031 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	15.1	2	0.291	2.43	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Batch: BIK0408 Batch Matrix: Solid Preparation: SWC EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
PP15-2.5	20K0126-01	I2201118A-055	11/16/20 11:07	
PP15-5	20K0126-02	I2201118A-052	11/16/20 11:07	
PP16-2.5	20K0126-06	I2201120b-019	11/16/20 11:07	
PP16-5	20K0126-07	I2201118A-053	11/16/20 11:07	
PP13-2.5	20K0126-11	I2201118A-063	11/16/20 11:07	
PP13-5	20K0126-12	I2201118A-064	11/16/20 11:07	
PP7-2.5	20K0126-16	I2201118A-065	11/16/20 11:07	
PP7-7.5	20K0126-18	I2201118A-066	11/16/20 11:07	
PP3-2	20K0126-22	I2201118A-067	11/16/20 11:07	
PP3-5	20K0126-24	I2201118A-068	11/16/20 11:07	
Blank	BIK0408-BLK1	I2201118A-016	11/16/20 11:07	
LCS	BIK0408-BS1	I2201118A-017	11/16/20 11:07	
PP15-2.5	BIK0408-DUP1	I2201118A-054	11/16/20 11:07	
PP15-2.5	BIK0408-MS1	I2201118A-056	11/16/20 11:07	
PP15-2.5	BIK0408-MSD1	I2201118A-057	11/16/20 11:07	

BIK0408

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: SD Date: 11/16/2020 Time: 11/16/20 1205 – 11/17/20 1005

Matrix: Soil Block ID: #6 Block Temp: 96°C Thermometer: 20-3

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Final Vol (mL)	Comments
20K126-1	C		1.021	50.0			
-2			1.010				
-6			1.074				
-7			1.061				
-11			1.034				
-12			1.059				
-16			1.006				
-18			1.063				
-22			1.009				
-24			1.031				
20K145-2			1.003				
-3			1.030				
-7			1.051				
-8			1.075				
-11			1.068				
-13			1.007				
-15			1.033				
-17			1.005				
20K175-1	A		1.024				
20K196-1			1.002				
BIK408-BLK1	–		–				
-BS1	–		–				
-DUP1	–		1.024				
-MS1	–		1.021				20K126-1
-MSD1	–		1.022				
–	–	–	–	–	–	–	–

Chemical/Reagent ID:

HNO3: I9356 1:1 HNO3: I10417 HCl: H10738 SD 11/17 H2O2: I9826

Tube Lot#: 2003055 Boiling Chip Lot#: – (DoD Only)

Form I

METHOD BLANK DATA SHEET

EPA 6010C

Total Metals

Blank

Laboratory: Analytical Resources, Inc.   SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc   Project: ICS-Former NW Cooperage

Batch: BIK0408   Laboratory ID: BIK0408-BLK1   Prepared: 11/16/20 11:07

Matrix: Solid   Preparation: SWC EPA 3050B   Analyzed: 11/18/20 15:02

Sequence: SIK0278   Calibration: DK00045   Instrument: ICP2

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	ND	2	0.240	2.00	U

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY

EPA 6010C

Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	11/18/20 15:06
Batch:	BIK0408	Laboratory ID:	BIK0408-BS1
Preparation:	SWC EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Lead	200	193		96.4	80 - 120

* Indicates values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP15-2.5

DUPLICATES

EPA 6010C

Total Metals

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Matrix: Solid
Laboratory ID: BIK0408-DUP1
Batch: BIK0408
Lab Source ID: 20K0126-01
Preparation: SWC EPA 3050B
Initial/Final: 1.024 g / 50 mL
Source Sample Name: PP15-2.5
% Solids: 77.66

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg dry)	C	DUPLICATE CONCENTRATION (mg/kg dry)	C	RPD %	Q
Lead	20	54.9		39.2	*	33.3	*

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP15-2.5

MS / MS DUPLICATE RECOVERY
EPA 6010C
Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	11/18/20 18:24
Batch:	BIK0408	Laboratory ID:	BIK0408-MS1
Preparation:	SWC EPA 3050B	Sequence Name:	Matrix Spike
Initial/Final:	1.021 g / 50 mL	Source Sample:	PP15-2.5

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Lead	252	54.9		263		82.5	75 - 125

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP15-2.5

MS / MS DUPLICATE RECOVERY
EPA 6010C
Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	11/18/20 18:28
Batch:	BIK0408	Laboratory ID:	BIK0408-MSD1
Preparation:	SWC EPA 3050B	Sequence Name:	Matrix Spike Dup
Initial/Final:	1.022 g / 50 mL	Source Sample:	PP15-2.5

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Lead	252	257		80.3	2.19	20	75 - 125

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6010C

Laboratory: Analytical Resources, Inc.

SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Calibration: DK00045

Instrument: ICP2

Calibration Date: 11/18/2020 13:51

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Lead	0	0	0		10	5187.25	0		0			

Analytical Resources, Incorporated
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INITIAL CALIBRATION DATA

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DK00045	Instrument:	ICP2
Calibration Date:	11/18/2020 13:51		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Lead	2593.625	141.4	1.0000			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: 11/12/20 Analysis Date: 11/18/20 Analyst: MB/TIK

LR Date: 11/12/20 Sequence: SIKØ278 Page: 1 of 4

All corrections made by analyst unless otherwise noted. MB 11/18/20

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CAL1	I10177		
		-CAL2	I10647		
		-CAL3	I10648		
		-CAL4	I10649		
		-CAL5	I10650		
		-ICV~~I~~1	I10589		
		-ICB1	I10177		
		-~~CCV~~ CRL1	I10665 ~~I10646~~		
		-IFA1	I10667		V↑
		-IFB1	I6931		
		-CCV1	I10589		
		-CCB1	I10177		
		BIKØ532-BLK1	TWC		
		↓ -BS1	↓		
	✓	2ØKØ255-Ø1	↓		Cr & Ni noisy / ScR almost noisy
		BIKØ4Ø8-BLK1	SWC	2	
		↓ -BS1		↓	
		2ØKØ175-Ø1		5	
		2ØKØ196-Ø1		2	Cr noisy Cr NR
		2ØKØ135-Ø1		5	As↓ NO As
		-Ø2			
		↓ -Ø3	↓	↓	↓ ↓
		SEQ-CCV2			

5076F
ICP-OES-02-Daily Run Log

Revision 001
2/10/17

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: ——— Analysis Date: 11/18/20 Analyst: MB / TH
LR Date: ——— Sequence: ——— Page: 2 of 4

All corrections made by analyst unless otherwise noted. TH 11/18/20

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments	
		SEQ-CCB2				
		BIKØ5Ø8-BLK1	LEN	5		
508-BS1 → 507-BLK1		BIKØ5Ø7-BLK1	↓	↓	Cr↑	
		2ØKØ215-Ø1			Cr<10x BLK	
		2ØKØ255-Ø1	TWC		Ni noisy	Ni: NTR
		2ØKØ196-Ø1REI	SWC	5	~~Cr<10x BLK~~	Cr only
	✓	2ØKØ135-Ø1REI	↓	10	As↓	
	✓	-Ø2REI		↓	↓	
	✓	↓ -Ø3REI				
		2ØKØ255-Ø1REI	TWC	2		Ni only
		SEQ-CCV3				
		↓ -CCB3				
	✓	EF#1 TEST1	—	5	(Blue cap) Cr↑	
	✓	EF#1 TEST2	—	↓		
		20K0196-01	LEN		Cr<10x BLK	
		20K0209-01	↓		↓	
		20K0210-01				
		20K0211-01				
		BIK0508-DUP1				
		20K0212-01				
		BIK0508-MS1				
	✓	OLD LEN BLK	↓	↓	Test only	
		SEQ-CCV4				

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11/18/20 Analyst: TH

LR Date: — Sequence: — Page: 3 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CCB4			
	✓	20K0135-01RE1	SWC	20	
	↓	-02RE1			
	↓	-03RE1		↓	
	✓	20K0126-06		5	Sn7LR
		-02		2	
		-07			
		BIK0408-DUP1			As↓ Cu,Pb RPD No As
		20K0126-01			
		BIK0408-MS1			Cu,Mn %R
		-MSD1	↓	↓	Cu,Zn %R
		SEQ-CCV5			Si↑
		-CCB5			
		BIK0507-DUP1	LEN	5	Cr<10xBLK
		20K0201-07			
		BIK0507-MS1	↓	↓	
		20K0126-11	SWC	2	
		-12			
		-16			
		-18			
		-22			
		-24	↓	↓	
		SEQ-CCV6			Si↑

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — **Analysis Date:** 11/18/20 **Analyst:** TH

LR Date: — **Sequence:** — **Page:** 4 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CCB6			
		20K0145-02	SWC	2	
		-03			
		-07			
		-08			
		-11			
		-13			
		-15			
		-17			
		SEQ-CCV7			Si ↑
		↓ -CCB7			Al ↓
		Rinse/DI			
		TH 11/18/20			

5076F
ICP-OES-02-Daily Run Log

Revision 001
2/10/17

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Analysis Begun

Start Time: 11/18/2020 1:50:53 PM
Plasma On Time: 11/18/2020 9:28:48 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==

Method Loaded
Method Name: ELMT7300bcESI2FAST
Method Last Saved: 11/18/2020 1:49:36 PM
IEC File: IEC111220A.iec
MSF File:
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

==

Sequence No.: 1
Autosampler Location: 1
Sample ID: SEQ-CAL1
Date Collected: 11/18/2020 1:51:01 PM
Data Type: Original

Nebulizer Parameters: SEQ-CAL1

Analyte	Back Pressure	Flow
All	234.0 kPa	0.65 L/min

Mean Data: SEQ-CAL1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1413794.7	6942.47	0.49%	100.0	%
ScR 361.383	151200.2	1251.27	0.83%	100.0	%
Ag 328.068†	-50.6	41.48	82.02%	[0.00]	mg/L
Al 308.215†	606.8	3.38	0.56%	[0.00]	mg/L
As 188.979†	-26.2	2.85	10.88%	[0.00]	mg/L
B 249.677†	-109.2	9.49	8.69%	[0.00]	mg/L
Ba 233.527†	57.0	2.72	4.78%	[0.00]	mg/L

Be 313.042†	1488.1	8.19	0.55%	[0.00]	mg/L
Ca 317.933†	37.7	6.29	16.70%	[0.00]	mg/L
Cd 228.802†	274.2	1.75	0.64%	[0.00]	mg/L
Co 228.616†	-188.3	2.57	1.36%	[0.00]	mg/L
Cr 267.716†	-282.9	1.67	0.59%	[0.00]	mg/L
Cu 324.752†	1655.1	8.74	0.53%	[0.00]	mg/L
Fe 273.955†	21.8	0.96	4.42%	[0.00]	mg/L
K 766.490†	146.2	26.68	18.25%	[0.00]	mg/L
Mg 279.077†	51.3	10.67	20.81%	[0.00]	mg/L
Mn 257.610†	345.3	3.49	1.01%	[0.00]	mg/L
Mo 202.031†	56.5	0.46	0.81%	[0.00]	mg/L
Na 589.592†	130.3	19.94	15.31%	[0.00]	mg/L
Na 330.237†	-141.8	2.22	1.57%	[0.00]	mg/L
Ni 231.604†	-13.3	1.85	13.94%	[0.00]	mg/L
Pb 220.353†	176.2	4.99	2.83%	[0.00]	mg/L
Sb 206.836†	49.7	2.27	4.56%	[0.00]	mg/L
Se 196.026†	-104.4	4.37	4.19%	[0.00]	mg/L
Si 288.158†	-23.3	6.53	28.00%	[0.00]	mg/L
Sn 189.927†	7.6	1.74	22.92%	[0.00]	mg/L
Sr 421.552†	824.2	27.53	3.34%	[0.00]	mg/L
Ti 334.903†	215.9	28.60	13.24%	[0.00]	mg/L
Tl 190.801†	87.7	1.17	1.33%	[0.00]	mg/L
V 292.402†	132.6	23.99	18.08%	[0.00]	mg/L
Zn 206.200†	24.1	2.39	9.91%	[0.00]	mg/L

==

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: SEQ-CAL2 **Date Collected: 11/18/2020 1:55:23 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL2

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: SEQ-CAL2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1416622.8	4079.98	0.29%	100.2	%
ScR 361.383	152515.2	357.45	0.23%	100.9	%
Ba 233.527†	35014.8	149.02	0.43%	[10]	mg/L
Cd 228.802†	170688.3	41.58	0.02%	[10]	mg/L
Co 228.616†	177356.9	364.11	0.21%	[10]	mg/L
Cr 267.716†	22723.8	83.31	0.37%	[10]	mg/L
Cu 324.752†	1553886.0	3682.93	0.24%	[10]	mg/L
Mn 257.610†	327348.3	697.06	0.21%	[10]	mg/L
V 292.402†	496081.9	5333.19	1.08%	[10]	mg/L

==

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: SEQ-CAL3 **Date Collected: 11/18/2020 1:57:24 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL3

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: SEQ-CAL3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1405633.1	1450.01	0.10%	99.42	%
ScR 361.383	146929.7	1275.16	0.87%	97.18	%
Ag 328.068†	134855.7	429.53	0.32%	[1.0]	mg/L
As 188.979†	6205.6	31.95	0.51%	[10]	mg/L
B 249.677†	57073.0	77.58	0.14%	[10]	mg/L
Be 313.042†	2261385.5	12029.78	0.53%	[5.0]	mg/L
Na 589.592†	432536.4	1596.72	0.37%	[50]	mg/L
Ni 231.604†	20734.8	40.97	0.20%	[10]	mg/L
Pb 220.353†	51872.5	314.24	0.61%	[10]	mg/L

Se 196.026†	6292.5	14.78	0.23%	[10]	mg/L
Sr 421.552†	2196752.3	11465.85	0.52%	[5]	mg/L
Tl 190.801†	12239.0	33.95	0.28%	[10]	mg/L
Zn 206.200†	16543.6	33.29	0.20%	[10]	mg/L

==

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: SEQ-CAL4 **Date Collected: 11/18/2020 2:00:41 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL4

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-CAL4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1456772.9	5719.54	0.39%	103.0	%
ScR 361.383	155457.2	287.84	0.19%	102.8	%
Mo 202.031†	109304.1	143.96	0.13%	[10]	mg/L
Sb 206.836†	18137.2	14.87	0.08%	[10]	mg/L
Si 288.158†	7589.7	61.05	0.80%	[10]	mg/L
Sn 189.927†	25984.1	60.19	0.23%	[10]	mg/L
Ti 334.903†	129843.6	358.00	0.28%	[10]	mg/L

==

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: SEQ-CAL5 **Date Collected: 11/18/2020 2:03:10 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL5

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-CAL5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1365574.8	7029.15	0.51%	96.59	%
ScR 361.383	155960.2	1429.93	0.92%	103.1	%
Al 308.215†	27760.9	275.50	0.99%	[30]	mg/L
Ca 317.933†	175511.5	491.65	0.28%	[30]	mg/L
Fe 273.955†	90980.5	1022.15	1.12%	[100]	mg/L
K 766.490†	111293.1	272.72	0.25%	[100]	mg/L
Mg 279.077†	21277.5	205.56	0.97%	[30]	mg/L
Na 330.237†	1776.9	12.45	0.70%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	134900	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	925.4	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	620.6	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	5707	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	3501	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	452300	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	5850	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	17070	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	17740	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	2272	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	155400	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	909.8	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1113	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	709.3	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	32730	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	10930	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	8651	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	17.77	0.00000	1.000000	

Ni 231.604	1	Lin Thru 0	0.0	2073	0.00000	1.000000
Pb 220.353	1	Lin Thru 0	0.0	5187	0.00000	1.000000
Sb 206.836	1	Lin Thru 0	0.0	1814	0.00000	1.000000
Se 196.026	1	Lin Thru 0	0.0	629.3	0.00000	1.000000
Si 288.158	1	Lin Thru 0	0.0	759.0	0.00000	1.000000
Sn 189.927	1	Lin Thru 0	0.0	2598	0.00000	1.000000
Sr 421.552	1	Lin Thru 0	0.0	439400	0.00000	1.000000
Ti 334.903	1	Lin Thru 0	0.0	12980	0.00000	1.000000
Tl 190.801	1	Lin Thru 0	0.0	1224	0.00000	1.000000
V 292.402	1	Lin Thru 0	0.0	49610	0.00000	1.000000
Zn 206.200	1	Lin Thru 0	0.0	1654	0.00000	1.000000

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Analysis Begun

Start Time: 11/18/2020 2:08:43 PM
Plasma On Time: 11/18/2020 9:28:48 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 7
Sample ID: SEQ-ICV1
Date Collected: 11/18/2020 2:08:51 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SEQ-ICV1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: SEQ-ICV1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1394888.3	98.66	%	0.205				0.21%
ScR 361.383	149634.2	98.96	%	0.571				0.58%
Ag 328.068†	139343.4	1.034	mg/L	0.0042	1.034	mg/L	0.0042	0.41%
Al 308.215†	1995.7	2.122	mg/L	0.0249	2.122	mg/L	0.0249	1.17%
As 188.979†	1185.7	1.941	mg/L	0.0039	1.941	mg/L	0.0039	0.20%
B 249.677†	5569.4	0.9746	mg/L	0.00814	0.9746	mg/L	0.00814	0.84%
Ba 233.527†	3528.4	1.007	mg/L	0.0067	1.007	mg/L	0.0067	0.66%
Be 313.042†	440466.4	0.9713	mg/L	0.00273	0.9713	mg/L	0.00273	0.28%
Ca 317.933†	11346.0	1.939	mg/L	0.0079	1.939	mg/L	0.0079	0.41%
Cd 228.802†	17155.7	0.9930	mg/L	0.00110	0.9930	mg/L	0.00110	0.11%
Co 228.616†	17332.6	0.9754	mg/L	0.00455	0.9754	mg/L	0.00455	0.47%
Cr 267.716†	2306.9	1.018	mg/L	0.0161	1.018	mg/L	0.0161	1.58%
Cu 324.752†	154820.8	0.9960	mg/L	0.00278	0.9960	mg/L	0.00278	0.28%
Fe 273.955†	1864.3	2.042	mg/L	0.0172	2.042	mg/L	0.0172	0.84%
K 766.490†	22013.0	19.78	mg/L	0.053	19.78	mg/L	0.053	0.27%
Mg 279.077†	1460.4	2.072	mg/L	0.0266	2.072	mg/L	0.0266	1.29%
Mn 257.610†	31365.4	0.9584	mg/L	0.00159	0.9584	mg/L	0.00159	0.17%
Mo 202.031†	10890.9	0.9963	mg/L	0.00492	0.9963	mg/L	0.00492	0.49%
Na 589.592†	425510.1	49.19	mg/L	0.042	49.19	mg/L	0.042	0.09%
Na 330.237†	905.7	50.80	mg/L	0.331	50.80	mg/L	0.331	0.65%
Ni 231.604†	2018.9	0.9749	mg/L	0.01070	0.9749	mg/L	0.01070	1.10%
Pb 220.353†	10558.7	2.037	mg/L	0.0116	2.037	mg/L	0.0116	0.57%
Sb 206.836†	3713.7	2.043	mg/L	0.0111	2.043	mg/L	0.0111	0.54%
Se 196.026†	1267.5	2.015	mg/L	0.0156	2.015	mg/L	0.0156	0.78%
Si 288.158†	1567.9	2.051	mg/L	0.0238	2.051	mg/L	0.0238	1.16%
Sn 189.927†	2559.0	0.9856	mg/L	0.00447	0.9856	mg/L	0.00447	0.45%
Sr 421.552†	427744.3	0.9736	mg/L	0.00099	0.9736	mg/L	0.00099	0.10%
Ti 334.903†	12909.5	0.9930	mg/L	0.00090	0.9930	mg/L	0.00090	0.09%
Tl 190.801†	2445.9	1.984	mg/L	0.0100	1.984	mg/L	0.0100	0.51%
V 292.402†	48757.7	0.9909	mg/L	0.01359	0.9909	mg/L	0.01359	1.37%
Zn 206.200†	1615.4	0.9760	mg/L	0.00790	0.9760	mg/L	0.00790	0.81%

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Sequence No.: 2 **Autosampler Location: 1**
Sample ID: SEQ-ICB1 **Date Collected: 11/18/2020 2:13:14 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-ICB1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-ICB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1421342.3	100.5	%	0.49				0.48%
ScR 361.383	151105.0	99.94	%	0.803				0.80%
Ag 328.068†	16.6	0.00012	mg/L	0.000151	0.00012	mg/L	0.000151	122.47%
Al 308.215†	22.1	0.02388	mg/L	0.013853	0.02388	mg/L	0.013853	58.00%
As 188.979†	4.1	0.00670	mg/L	0.002984	0.00670	mg/L	0.002984	44.52%
B 249.677†	41.4	0.00727	mg/L	0.000036	0.00727	mg/L	0.000036	0.49%
Ba 233.527†	0.5	0.00016	mg/L	0.001233	0.00016	mg/L	0.001233	793.24%
Be 313.042†	6.0	0.00001	mg/L	0.000069	0.00001	mg/L	0.000069	518.28%
Ca 317.933†	-6.5	-0.00112	mg/L	0.001043	-0.00112	mg/L	0.001043	93.52%
Cd 228.802†	1.6	0.00005	mg/L	0.000134	0.00005	mg/L	0.000134	277.60%
Co 228.616†	-2.1	-0.00012	mg/L	0.000166	-0.00012	mg/L	0.000166	137.04%
Cr 267.716†	3.6	0.00160	mg/L	0.004173	0.00160	mg/L	0.004173	261.28%
Cu 324.752†	7.6	0.00005	mg/L	0.000224	0.00005	mg/L	0.000224	461.26%
Fe 273.955†	0.5	0.00052	mg/L	0.001964	0.00052	mg/L	0.001964	379.73%
K 766.490†	56.1	0.05040	mg/L	0.063203	0.05040	mg/L	0.063203	125.40%
Mg 279.077†	-1.9	-0.00263	mg/L	0.009216	-0.00263	mg/L	0.009216	350.70%
Mn 257.610†	1.7	0.00005	mg/L	0.000119	0.00005	mg/L	0.000119	226.87%
Mo 202.031†	6.1	0.00056	mg/L	0.000367	0.00056	mg/L	0.000367	65.81%
Na 589.592†	-95.1	-0.01099	mg/L	0.004221	-0.01099	mg/L	0.004221	38.39%
Na 330.237†	1.2	0.06540	mg/L	0.573231	0.06540	mg/L	0.573231	876.47%
Ni 231.604†	-3.3	-0.00157	mg/L	0.004582	-0.00157	mg/L	0.004582	292.46%
Pb 220.353†	-3.4	-0.00064	mg/L	0.000273	-0.00064	mg/L	0.000273	42.69%
Sb 206.836†	2.1	0.00116	mg/L	0.001319	0.00116	mg/L	0.001319	113.66%
Se 196.026†	4.6	0.00724	mg/L	0.006652	0.00724	mg/L	0.006652	91.83%
Si 288.158†	-8.0	-0.01049	mg/L	0.006754	-0.01049	mg/L	0.006754	64.36%
Sn 189.927†	0.7	0.00025	mg/L	0.001337	0.00025	mg/L	0.001337	532.41%
Sr 421.552†	-3.9	-0.00001	mg/L	0.000121	-0.00001	mg/L	0.000121	>999.9%
Ti 334.903†	15.1	0.00116	mg/L	0.001814	0.00116	mg/L	0.001814	156.11%
Tl 190.801†	-2.3	-0.00187	mg/L	0.001664	-0.00187	mg/L	0.001664	89.09%
V 292.402†	-0.5	0.00000	mg/L	0.000511	0.00000	mg/L	0.000511	>999.9%
Zn 206.200†	5.2	0.00313	mg/L	0.001442	0.00313	mg/L	0.001442	46.05%

Sequence No.: 3
Sample ID: SEQ-CRL1

Autosampler Location: 301
Date Collected: 11/18/2020 2:17:30 PM
Data Type: Original

Dilution: 1X
Wash Time: 37

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CRL1

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: SEQ-CRL1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1427487.5	101.0	%	0.27				0.27%
ScR 361.383	153672.1	101.6	%	0.50				0.49%
Ag 328.068†	405.1	0.00300	mg/L	0.000086	0.00300	mg/L	0.000086	2.85%
Al 308.215†	75.5	0.08135	mg/L	0.006043	0.08135	mg/L	0.006043	7.43%
As 188.979†	33.3	0.05399	mg/L	0.008047	0.05399	mg/L	0.008047	14.90%
B 249.677†	191.4	0.03348	mg/L	0.001284	0.03348	mg/L	0.001284	3.83%
Ba 233.527†	23.3	0.00665	mg/L	0.000159	0.00665	mg/L	0.000159	2.39%
Be 313.042†	434.8	0.00095	mg/L	0.000072	0.00095	mg/L	0.000072	7.51%
Ca 317.933†	303.6	0.05189	mg/L	0.001757	0.05189	mg/L	0.001757	3.38%
Cd 228.802†	40.0	0.00199	mg/L	0.000113	0.00199	mg/L	0.000113	5.67%
Co 228.616†	50.4	0.00283	mg/L	0.000227	0.00283	mg/L	0.000227	8.03%
Cr 267.716†	19.4	0.00858	mg/L	0.001157	0.00858	mg/L	0.001157	13.49%
Cu 324.752†	464.6	0.00299	mg/L	0.000154	0.00299	mg/L	0.000154	5.16%
Fe 273.955†	49.8	0.05468	mg/L	0.003344	0.05468	mg/L	0.003344	6.11%
K 766.490†	500.6	0.4498	mg/L	0.04603	0.4498	mg/L	0.04603	10.23%
Mg 279.077†	37.7	0.05320	mg/L	0.005769	0.05320	mg/L	0.005769	10.84%
Mn 257.610†	132.5	0.00405	mg/L	0.000072	0.00405	mg/L	0.000072	1.79%
Mo 202.031†	51.1	0.00467	mg/L	0.000474	0.00467	mg/L	0.000474	10.16%
Na 589.592†	3436.8	0.3973	mg/L	0.00496	0.3973	mg/L	0.00496	1.25%
Na 330.237†	-4.5	-0.2578	mg/L	0.31832	-0.2578	mg/L	0.31832	123.49%
Ni 231.604†	21.0	0.01017	mg/L	0.000978	0.01017	mg/L	0.000978	9.62%
Pb 220.353†	109.8	0.02120	mg/L	0.000446	0.02120	mg/L	0.000446	2.10%
Sb 206.836†	92.9	0.05125	mg/L	0.001007	0.05125	mg/L	0.001007	1.96%
Se 196.026†	32.1	0.05103	mg/L	0.003708	0.05103	mg/L	0.003708	7.27%
Si 288.158†	76.0	0.09993	mg/L	0.010105	0.09993	mg/L	0.010105	10.11%
Sn 189.927†	53.3	0.02053	mg/L	0.001162	0.02053	mg/L	0.001162	5.66%
Sr 421.552†	392.7	0.00089	mg/L	0.000127	0.00089	mg/L	0.000127	14.25%
Ti 334.903†	121.4	0.00934	mg/L	0.000984	0.00934	mg/L	0.000984	10.53%
Tl 190.801†	61.1	0.04980	mg/L	0.001001	0.04980	mg/L	0.001001	2.01%
V 292.402†	126.0	0.00261	mg/L	0.000286	0.00261	mg/L	0.000286	10.94%
Zn 206.200†	36.8	0.02221	mg/L	0.002888	0.02221	mg/L	0.002888	13.00%

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Sequence No.: 4 **Autosampler Location: 302**
Sample ID: SEQ-IFA1 **Date Collected: 11/18/2020 2:21:46 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-IFA1

Analyte	Back Pressure	Flow
All	235.0 kPa	0.65 L/min

Mean Data: SEQ-IFA1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1385109.7	97.97	%	0.571				0.58%
ScR 361.383	150549.1	99.57	%	0.374				0.38%
Ag 328.068†	-105.2	-0.00079	mg/L	0.000146	-0.00079	mg/L	0.000146	18.54%
Al 308.215†	188376.5	203.6	mg/L	0.83	203.6	mg/L	0.83	0.41%
As 188.979†	38.9	0.06740	mg/L	0.003970	0.06740	mg/L	0.003970	5.89%
B 249.677†	-79.4	0.00588	mg/L	0.001389	0.00588	mg/L	0.001389	23.63%
Ba 233.527†	104.5	0.00118	mg/L	0.000795	0.00118	mg/L	0.000795	67.20%
Be 313.042†	38.6	0.00015	mg/L	0.000032	0.00015	mg/L	0.000032	21.42%
Ca 317.933†	580432.9	99.21	mg/L	0.451	99.21	mg/L	0.451	0.45%
Cd 228.802†	138.1	0.00163	mg/L	0.000269	0.00163	mg/L	0.000269	16.48%
Co 228.616†	-33.4	-0.00190	mg/L	0.000391	-0.00190	mg/L	0.000391	20.57%
Cr 267.716†	-12.3	-0.00427	mg/L	0.004219	-0.00427	mg/L	0.004219	98.73%
Cu 324.752†	-1007.1	0.00072	mg/L	0.000083	0.00072	mg/L	0.000083	11.53%
Fe 273.955†	180811.4	198.7	mg/L	1.04	198.7	mg/L	1.04	0.53%
K 766.490†	72.7	0.06532	mg/L	0.016139	0.06532	mg/L	0.016139	24.71%
Mg 279.077†	73446.2	103.4	mg/L	0.29	103.4	mg/L	0.29	0.28%
Mn 257.610†	164.9	0.00060	mg/L	0.000430	0.00060	mg/L	0.000430	71.78%
Mo 202.031†	73.2	0.00361	mg/L	0.000693	0.00361	mg/L	0.000693	19.21%
Na 589.592†	-155.1	-0.01793	mg/L	0.000783	-0.01793	mg/L	0.000783	4.37%
Na 330.237†	-17.2	-0.9702	mg/L	0.47701	-0.9702	mg/L	0.47701	49.17%
Ni 231.604†	-8.3	-0.00399	mg/L	0.002096	-0.00399	mg/L	0.002096	52.60%
Pb 220.353†	-227.3	-0.00609	mg/L	0.000908	-0.00609	mg/L	0.000908	14.91%
Sb 206.836†	22.6	0.01230	mg/L	0.005406	0.01230	mg/L	0.005406	43.95%
Se 196.026†	-72.2	0.00220	mg/L	0.004642	0.00220	mg/L	0.004642	211.05%
Si 288.158†	-32.6	-0.02977	mg/L	0.006270	-0.02977	mg/L	0.006270	21.06%
Sn 189.927†	-56.3	-0.00389	mg/L	0.000759	-0.00389	mg/L	0.000759	19.52%
Sr 421.552†	416.3	0.00095	mg/L	0.000033	0.00095	mg/L	0.000033	3.53%
Ti 334.903†	106.9	0.00296	mg/L	0.000884	0.00296	mg/L	0.000884	29.85%
Tl 190.801†	52.6	-0.02513	mg/L	0.002849	-0.02513	mg/L	0.002849	11.34%
V 292.402†	-1250.2	0.00968	mg/L	0.000803	0.00968	mg/L	0.000803	8.30%
Zn 206.200†	8.9	0.00262	mg/L	0.001083	0.00262	mg/L	0.001083	41.37%

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Sequence No.: 5
Sample ID: SEQ-IFB1

Autosampler Location: 303
Date Collected: 11/18/2020 2:26:17 PM
Data Type: Original

Dilution: 1X
Wash Time: 37

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-IFB1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: SEQ-IFB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1399202.0	98.97	%	0.250				0.25%
ScR 361.383	149535.6	98.90	%	0.374				0.38%
Ag 328.068†	140990.5	1.046	mg/L	0.0033	1.046	mg/L	0.0033	0.32%
Al 308.215†	188722.8	203.9	mg/L	0.50	203.9	mg/L	0.50	0.25%
As 188.979†	650.6	1.051	mg/L	0.0047	1.051	mg/L	0.0047	0.45%
B 249.677†	-61.3	0.00776	mg/L	0.001165	0.00776	mg/L	0.001165	15.02%
Ba 233.527†	3571.5	0.9905	mg/L	0.00350	0.9905	mg/L	0.00350	0.35%
Be 313.042†	442327.2	0.9756	mg/L	0.00149	0.9756	mg/L	0.00149	0.15%
Ca 317.933†	587150.0	100.4	mg/L	0.33	100.4	mg/L	0.33	0.33%
Cd 228.802†	16783.0	0.9710	mg/L	0.00405	0.9710	mg/L	0.00405	0.42%
Co 228.616†	16122.6	0.9088	mg/L	0.00365	0.9088	mg/L	0.00365	0.40%
Cr 267.716†	2279.0	1.003	mg/L	0.0073	1.003	mg/L	0.0073	0.73%
Cu 324.752†	155353.6	1.007	mg/L	0.0035	1.007	mg/L	0.0035	0.35%
Fe 273.955†	181460.6	199.4	mg/L	1.45	199.4	mg/L	1.45	0.73%
K 766.490†	107.7	0.09676	mg/L	0.042725	0.09676	mg/L	0.042725	44.16%
Mg 279.077†	71595.4	100.8	mg/L	0.20	100.8	mg/L	0.20	0.20%
Mn 257.610†	33001.7	1.004	mg/L	0.0024	1.004	mg/L	0.0024	0.24%
Mo 202.031†	78.2	0.00408	mg/L	0.000088	0.00408	mg/L	0.000088	2.17%
Na 589.592†	-164.9	-0.01906	mg/L	0.002688	-0.01906	mg/L	0.002688	14.10%
Na 330.237†	-20.4	-1.494	mg/L	0.2016	-1.494	mg/L	0.2016	13.49%
Ni 231.604†	1941.1	0.9366	mg/L	0.00844	0.9366	mg/L	0.00844	0.90%
Pb 220.353†	4885.7	0.9808	mg/L	0.00289	0.9808	mg/L	0.00289	0.30%
Sb 206.836†	1908.3	1.038	mg/L	0.0062	1.038	mg/L	0.0062	0.60%
Se 196.026†	571.2	1.025	mg/L	0.0016	1.025	mg/L	0.0016	0.16%
Si 288.158†	-20.1	-0.00933	mg/L	0.007626	-0.00933	mg/L	0.007626	81.78%
Sn 189.927†	-56.1	-0.00363	mg/L	0.001376	-0.00363	mg/L	0.001376	37.93%
Sr 421.552†	389.4	0.00089	mg/L	0.000005	0.00089	mg/L	0.000005	0.61%
Ti 334.903†	122.6	0.00385	mg/L	0.001054	0.00385	mg/L	0.001054	27.35%
Tl 190.801†	1210.8	0.9112	mg/L	0.00209	0.9112	mg/L	0.00209	0.23%
V 292.402†	46574.6	0.9808	mg/L	0.00880	0.9808	mg/L	0.00880	0.90%
Zn 206.200†	1586.4	0.9559	mg/L	0.00389	0.9559	mg/L	0.00389	0.41%

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Sequence No.: 6
Sample ID: SEQ-CCV1

Autosampler Location: 7
Date Collected: 11/18/2020 2:33:17 PM
Data Type: Original

Dilution: 1X
Wash Time: 200

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: SEQ-CCV1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1392139.6	98.47	%	0.075				0.08%
ScR 361.383	149601.3	98.94	%	0.361				0.37%
Ag 328.068†	139686.4	1.036	mg/L	0.0049	1.036	mg/L	0.0049	0.47%
Al 308.215†	1973.7	2.099	mg/L	0.0064	2.099	mg/L	0.0064	0.31%
As 188.979†	1175.3	1.924	mg/L	0.0119	1.924	mg/L	0.0119	0.62%
B 249.677†	5554.6	0.9720	mg/L	0.00536	0.9720	mg/L	0.00536	0.55%
Ba 233.527†	3551.4	1.013	mg/L	0.0052	1.013	mg/L	0.0052	0.51%
Be 313.042†	443547.2	0.9782	mg/L	0.00723	0.9782	mg/L	0.00723	0.74%
Ca 317.933†	12028.1	2.056	mg/L	0.0139	2.056	mg/L	0.0139	0.68%
Cd 228.802†	17167.3	0.9938	mg/L	0.00039	0.9938	mg/L	0.00039	0.04%
Co 228.616†	17347.5	0.9762	mg/L	0.00339	0.9762	mg/L	0.00339	0.35%
Cr 267.716†	2286.7	1.009	mg/L	0.0120	1.009	mg/L	0.0120	1.19%
Cu 324.752†	154988.9	0.9971	mg/L	0.00651	0.9971	mg/L	0.00651	0.65%
Fe 273.955†	1856.6	2.033	mg/L	0.0126	2.033	mg/L	0.0126	0.62%
K 766.490†	21734.2	19.53	mg/L	0.103	19.53	mg/L	0.103	0.53%
Mg 279.077†	1462.9	2.076	mg/L	0.0127	2.076	mg/L	0.0127	0.61%
Mn 257.610†	33064.4	1.010	mg/L	0.0056	1.010	mg/L	0.0056	0.55%
Mo 202.031†	10798.1	0.9878	mg/L	0.00399	0.9878	mg/L	0.00399	0.40%
Na 589.592†	421386.1	48.71	mg/L	0.131	48.71	mg/L	0.131	0.27%
Na 330.237†	911.2	51.11	mg/L	0.326	51.11	mg/L	0.326	0.64%
Ni 231.604†	2030.7	0.9806	mg/L	0.00640	0.9806	mg/L	0.00640	0.65%
Pb 220.353†	10470.4	2.020	mg/L	0.0088	2.020	mg/L	0.0088	0.44%
Sb 206.836†	3686.3	2.028	mg/L	0.0037	2.028	mg/L	0.0037	0.18%
Se 196.026†	1257.7	2.000	mg/L	0.0109	2.000	mg/L	0.0109	0.54%
Si 288.158†	1572.9	2.057	mg/L	0.0100	2.057	mg/L	0.0100	0.48%
Sn 189.927†	2536.6	0.9770	mg/L	0.00553	0.9770	mg/L	0.00553	0.57%
Sr 421.552†	427008.2	0.9719	mg/L	0.00563	0.9719	mg/L	0.00563	0.58%
Ti 334.903†	12966.5	0.9974	mg/L	0.00476	0.9974	mg/L	0.00476	0.48%
Tl 190.801†	2429.0	1.970	mg/L	0.0030	1.970	mg/L	0.0030	0.15%
V 292.402†	48148.6	0.9785	mg/L	0.00922	0.9785	mg/L	0.00922	0.94%
Zn 206.200†	1649.5	0.9966	mg/L	0.00765	0.9966	mg/L	0.00765	0.77%

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Sequence No.: 7
Sample ID: SEQ-CCB1

Autosampler Location: 1
Date Collected: 11/18/2020 2:38:37 PM
Data Type: Original

Dilution: 1X
Wash Time: 100

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB1

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: SEQ-CCB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1392108.1	98.47	%	0.159				0.16%
ScR 361.383	147195.9	97.35	%	0.334				0.34%
Ag 328.068†	-2.7	-0.00002	mg/L	0.000097	-0.00002	mg/L	0.000097	490.15%
Al 308.215†	21.5	0.02319	mg/L	0.015497	0.02319	mg/L	0.015497	66.83%
As 188.979†	1.3	0.00210	mg/L	0.006536	0.00210	mg/L	0.006536	310.88%
B 249.677†	26.0	0.00457	mg/L	0.001691	0.00457	mg/L	0.001691	37.02%
Ba 233.527†	2.2	0.00064	mg/L	0.001209	0.00064	mg/L	0.001209	190.23%
Be 313.042†	20.5	0.00005	mg/L	0.000059	0.00005	mg/L	0.000059	131.11%
Ca 317.933†	7.4	0.00126	mg/L	0.000466	0.00126	mg/L	0.000466	37.07%
Cd 228.802†	1.8	0.00009	mg/L	0.000149	0.00009	mg/L	0.000149	164.86%
Co 228.616†	-8.0	-0.00045	mg/L	0.000321	-0.00045	mg/L	0.000321	71.02%
Cr 267.716†	-1.7	-0.00076	mg/L	0.002488	-0.00076	mg/L	0.002488	326.75%
Cu 324.752†	46.2	0.00030	mg/L	0.000122	0.00030	mg/L	0.000122	41.18%
Fe 273.955†	2.5	0.00271	mg/L	0.002396	0.00271	mg/L	0.002396	88.54%
K 766.490†	20.9	0.01875	mg/L	0.029641	0.01875	mg/L	0.029641	158.05%
Mg 279.077†	-0.3	-0.00046	mg/L	0.015859	-0.00046	mg/L	0.015859	>999.9%
Mn 257.610†	-2.4	-0.00007	mg/L	0.000160	-0.00007	mg/L	0.000160	217.27%
Mo 202.031†	2.6	0.00024	mg/L	0.000561	0.00024	mg/L	0.000561	232.39%
Na 589.592†	-205.0	-0.02370	mg/L	0.004693	-0.02370	mg/L	0.004693	19.80%
Na 330.237†	-8.6	-0.4820	mg/L	1.84818	-0.4820	mg/L	1.84818	383.45%
Ni 231.604†	-4.2	-0.00203	mg/L	0.000618	-0.00203	mg/L	0.000618	30.48%
Pb 220.353†	-0.4	-0.00007	mg/L	0.000333	-0.00007	mg/L	0.000333	470.73%
Sb 206.836†	3.6	0.00201	mg/L	0.000657	0.00201	mg/L	0.000657	32.75%
Se 196.026†	4.4	0.00705	mg/L	0.001295	0.00705	mg/L	0.001295	18.36%
Si 288.158†	-10.1	-0.01327	mg/L	0.007067	-0.01327	mg/L	0.007067	53.25%
Sn 189.927†	0.4	0.00017	mg/L	0.000533	0.00017	mg/L	0.000533	308.46%
Sr 421.552†	-19.2	-0.00004	mg/L	0.000078	-0.00004	mg/L	0.000078	178.71%
Ti 334.903†	17.0	0.00131	mg/L	0.000299	0.00131	mg/L	0.000299	22.83%
Tl 190.801†	-2.8	-0.00232	mg/L	0.000179	-0.00232	mg/L	0.000179	7.72%
V 292.402†	4.1	0.00008	mg/L	0.000398	0.00008	mg/L	0.000398	506.28%
Zn 206.200†	4.2	0.00255	mg/L	0.000520	0.00255	mg/L	0.000520	20.42%

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Analysis Begun

Start Time: 11/18/2020 2:48:18 PM
Plasma On Time: 11/18/2020 9:28:48 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 304
Sample ID: BIK0532-BLK1
Date Collected: 11/18/2020 2:48:26 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: BIK0532-BLK1

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: BIK0532-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1434426.3	101.5	%	0.12				0.11%
ScR 361.383	153320.1	101.4	%	1.06				1.05%
Ag 328.068†	-6.6	-0.00005	mg/L	0.000142	-0.00005	mg/L	0.000142	290.76%
Al 308.215†	11.0	0.01191	mg/L	0.019357	0.01191	mg/L	0.019357	162.55%
As 188.979†	2.6	0.00418	mg/L	0.000480	0.00418	mg/L	0.000480	11.48%
B 249.677†	9.9	0.00174	mg/L	0.001600	0.00174	mg/L	0.001600	91.82%
Ba 233.527†	-0.2	-0.00006	mg/L	0.001055	-0.00006	mg/L	0.001055	>999.9%
Be 313.042†	-4.1	-0.00001	mg/L	0.000033	-0.00001	mg/L	0.000033	370.84%
Ca 317.933†	31.4	0.00537	mg/L	0.001796	0.00537	mg/L	0.001796	33.47%
Cd 228.802†	-0.7	-0.00007	mg/L	0.000163	-0.00007	mg/L	0.000163	233.50%
Co 228.616†	-5.1	-0.00029	mg/L	0.000147	-0.00029	mg/L	0.000147	50.29%
Cr 267.716†	3.9	0.00170	mg/L	0.003784	0.00170	mg/L	0.003784	221.98%
Cu 324.752†	31.0	0.00020	mg/L	0.000097	0.00020	mg/L	0.000097	48.89%
Fe 273.955†	2.4	0.00268	mg/L	0.004031	0.00268	mg/L	0.004031	150.48%
K 766.490†	15.9	0.01430	mg/L	0.010038	0.01430	mg/L	0.010038	70.21%
Mg 279.077†	5.4	0.00768	mg/L	0.006756	0.00768	mg/L	0.006756	88.01%
Mn 257.610†	3.1	0.00009	mg/L	0.000130	0.00009	mg/L	0.000130	137.66%
Mo 202.031†	2.9	0.00027	mg/L	0.000172	0.00027	mg/L	0.000172	64.10%
Na 589.592†	-181.8	-0.02101	mg/L	0.004093	-0.02101	mg/L	0.004093	19.48%
Na 330.237†	-20.9	-1.179	mg/L	0.0975	-1.179	mg/L	0.0975	8.27%
Ni 231.604†	0.9	0.00045	mg/L	0.002356	0.00045	mg/L	0.002356	528.02%
Pb 220.353†	1.1	0.00022	mg/L	0.001107	0.00022	mg/L	0.001107	492.99%
Sb 206.836†	-0.7	-0.00040	mg/L	0.000884	-0.00040	mg/L	0.000884	221.36%
Se 196.026†	2.8	0.00452	mg/L	0.007656	0.00452	mg/L	0.007656	169.41%
Si 288.158†	-5.8	-0.00766	mg/L	0.007560	-0.00766	mg/L	0.007560	98.68%
Sn 189.927†	1.3	0.00051	mg/L	0.000187	0.00051	mg/L	0.000187	36.74%
Sr 421.552†	-29.0	-0.00007	mg/L	0.000025	-0.00007	mg/L	0.000025	37.76%
Ti 334.903†	17.2	0.00132	mg/L	0.001219	0.00132	mg/L	0.001219	92.17%
Tl 190.801†	1.5	0.00125	mg/L	0.003002	0.00125	mg/L	0.003002	240.15%
V 292.402†	-3.9	-0.00007	mg/L	0.000314	-0.00007	mg/L	0.000314	478.66%
Zn 206.200†	3.9	0.00234	mg/L	0.001618	0.00234	mg/L	0.001618	69.26%

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Sequence No.: 2 **Autosampler Location: 305**
Sample ID: BIK0532-BS1 **Date Collected: 11/18/2020 2:52:48 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0532-BS1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: BIK0532-BS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1409551.7	99.70	%	0.294				0.29%
ScR 361.383	150894.4	99.80	%	0.364				0.36%
Ag 328.068†	70017.5	0.5193	mg/L	0.00102	0.5193	mg/L	0.00102	0.20%
Al 308.215†	1888.2	2.034	mg/L	0.0116	2.034	mg/L	0.0116	0.57%
As 188.979†	1189.4	1.913	mg/L	0.0178	1.913	mg/L	0.0178	0.93%
B 249.677†	2.2	-0.00010	mg/L	0.001040	-0.00010	mg/L	0.001040	>999.9%
Ba 233.527†	6779.6	1.936	mg/L	0.0173	1.936	mg/L	0.0173	0.90%
Be 313.042†	216173.0	0.4768	mg/L	0.00218	0.4768	mg/L	0.00218	0.46%
Ca 317.933†	54594.2	9.332	mg/L	0.0754	9.332	mg/L	0.0754	0.81%
Cd 228.802†	8267.8	0.4716	mg/L	0.00192	0.4716	mg/L	0.00192	0.41%
Co 228.616†	8259.6	0.4655	mg/L	0.00276	0.4655	mg/L	0.00276	0.59%
Cr 267.716†	1056.0	0.4633	mg/L	0.00591	0.4633	mg/L	0.00591	1.27%
Cu 324.752†	74080.4	0.4768	mg/L	0.00176	0.4768	mg/L	0.00176	0.37%
Fe 273.955†	1755.8	1.926	mg/L	0.0180	1.926	mg/L	0.0180	0.93%
K 766.490†	10344.5	9.295	mg/L	0.0318	9.295	mg/L	0.0318	0.34%
Mg 279.077†	7137.9	10.06	mg/L	0.053	10.06	mg/L	0.053	0.52%
Mn 257.610†	15261.1	0.4664	mg/L	0.00065	0.4664	mg/L	0.00065	0.14%
Mo 202.031†	14.2	0.00101	mg/L	0.000081	0.00101	mg/L	0.000081	8.09%
Na 589.592†	78260.7	9.047	mg/L	0.0318	9.047	mg/L	0.0318	0.35%
Na 330.237†	180.7	10.01	mg/L	0.102	10.01	mg/L	0.102	1.02%
Ni 231.604†	924.3	0.4455	mg/L	0.00724	0.4455	mg/L	0.00724	1.62%
Pb 220.353†	9909.6	1.911	mg/L	0.0141	1.911	mg/L	0.0141	0.74%
Sb 206.836†	6.9	-0.00268	mg/L	0.000947	-0.00268	mg/L	0.000947	35.37%
Se 196.026†	1219.0	1.938	mg/L	0.0124	1.938	mg/L	0.0124	0.64%
Si 288.158†	-3.2	-0.00080	mg/L	0.005877	-0.00080	mg/L	0.005877	736.82%
Sn 189.927†	-14.6	-0.00395	mg/L	0.000754	-0.00395	mg/L	0.000754	19.08%
Sr 421.552†	209439.6	0.4767	mg/L	0.00178	0.4767	mg/L	0.00178	0.37%
Ti 334.903†	57.8	0.00384	mg/L	0.001280	0.00384	mg/L	0.001280	33.37%
Tl 190.801†	2347.5	1.913	mg/L	0.0112	1.913	mg/L	0.0112	0.59%
V 292.402†	23056.0	0.4695	mg/L	0.00845	0.4695	mg/L	0.00845	1.80%
Zn 206.200†	750.8	0.4536	mg/L	0.00491	0.4536	mg/L	0.00491	1.08%

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Sequence No.: 3 **Autosampler Location: 306**
Sample ID: 20K0255-01 **Date Collected: 11/18/2020 2:57:04 PM**
Data Type: Original
Dilution: 1X DEL
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0255-01

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0255-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1371245.5	96.99	%	0.324				0.33%
ScR 361.383	143849.0	95.14	%	3.284				3.45%
Ag 328.068†	-67.0	-0.00050	mg/L	0.000285	-0.00050	mg/L	0.000285	57.26%
Al 308.215†	94.5	0.09901	mg/L	0.029966	0.09901	mg/L	0.029966	30.27%
As 188.979†	102.2	0.09326	mg/L	0.006043	0.09326	mg/L	0.006043	6.48%
B 249.677†	16038.4	2.810	mg/L	0.0904	2.810	mg/L	0.0904	3.22%
Ba 233.527†	372.7	0.1045	mg/L	0.00530	0.1045	mg/L	0.00530	5.07%
Be 313.042†	60.3	0.00014	mg/L	0.000113	0.00014	mg/L	0.000113	82.70%
Ca 317.933†	782944.4	133.8	mg/L	0.61	133.8	mg/L	0.61	0.46%
Cd 228.802†	215.0	0.00983	mg/L	0.000242	0.00983	mg/L	0.000242	2.46%
Co 228.616†	78.4	0.00436	mg/L	0.000058	0.00436	mg/L	0.000058	1.33%
Cr 267.716†	140.1	0.08960	mg/L	0.004134	0.08960	mg/L	0.004134	4.61%
Cu 324.752†	2892.6	0.01907	mg/L	0.000180	0.01907	mg/L	0.000180	0.94%
Fe 273.955†	11824.9	13.00	mg/L	0.278	13.00	mg/L	0.278	2.14%
K 766.490†	15762.9	14.16	mg/L	0.438	14.16	mg/L	0.438	3.09%
Mg 279.077†	2996.7	4.192	mg/L	0.1560	4.192	mg/L	0.1560	3.72%
Mn 257.610†	15260.6	0.4660	mg/L	0.01441	0.4660	mg/L	0.01441	3.09%
Mo 202.031†	1051.0	0.09382	mg/L	0.001215	0.09382	mg/L	0.001215	1.29%
Na 589.592†	2894449.8	334.6	mg/L	0.59	334.6	mg/L	0.59	0.18%
Na 330.237†	5740.7	323.1	mg/L	9.14	323.1	mg/L	9.14	2.83%
Ni 231.604†	530.8	0.2560	mg/L	0.01065	0.2560	mg/L	0.01065	4.16%
Pb 220.353†	-30.3	-0.00659	mg/L	0.000488	-0.00659	mg/L	0.000488	7.40%
Sb 206.836†	20.7	0.01007	mg/L	0.002592	0.01007	mg/L	0.002592	25.74%
Se 196.026†	24.8	0.02893	mg/L	0.002677	0.02893	mg/L	0.002677	9.25%
Si 288.158†	1676.5	2.210	mg/L	0.1029	2.210	mg/L	0.1029	4.66%
Sn 189.927†	-79.9	-0.00678	mg/L	0.001664	-0.00678	mg/L	0.001664	24.55%
Sr 421.552†	565456.5	1.287	mg/L	0.0036	1.287	mg/L	0.0036	0.28%
Ti 334.903†	146.5	0.00408	mg/L	0.002130	0.00408	mg/L	0.002130	52.24%
Tl 190.801†	-68.2	-0.03480	mg/L	0.001623	-0.03480	mg/L	0.001623	4.66%
V 292.402†	-73.0	0.00107	mg/L	0.000045	0.00107	mg/L	0.000045	4.22%
Zn 206.200†	36.1	0.01807	mg/L	0.001956	0.01807	mg/L	0.001956	10.82%

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Sequence No.: 4 **Autosampler Location: 307**
Sample ID: BIK0408-BLK1 **Date Collected: 11/18/2020 3:02:40 PM**
Data Type: Original
Dilution: 2X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0408-BLK1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: BIK0408-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1472063.7	104.1	%	0.42				0.40%
ScR 361.383	158292.1	104.7	%	1.04				1.00%
Ag 328.068†	24.0	0.00018	mg/L	0.000177	0.00036	mg/L	0.000354	99.43%
Al 308.215†	2.6	0.00284	mg/L	0.022405	0.00569	mg/L	0.044809	787.62%
As 188.979†	6.2	0.01001	mg/L	0.002907	0.02002	mg/L	0.005815	29.04%
B 249.677†	56.5	0.00991	mg/L	0.000765	0.01981	mg/L	0.001529	7.72%
Ba 233.527†	-2.9	-0.00081	mg/L	0.001625	-0.00163	mg/L	0.003250	199.42%
Be 313.042†	-64.3	-0.00014	mg/L	0.000022	-0.00028	mg/L	0.000045	15.82%
Ca 317.933†	41.4	0.00708	mg/L	0.002099	0.01417	mg/L	0.004198	29.63%
Cd 228.802†	-2.6	-0.00023	mg/L	0.000197	-0.00045	mg/L	0.000395	87.44%
Co 228.616†	-5.4	-0.00030	mg/L	0.000250	-0.00060	mg/L	0.000501	83.39%
Cr 267.716†	8.4	0.00369	mg/L	0.002509	0.00739	mg/L	0.005018	67.94%
Cu 324.752†	44.4	0.00029	mg/L	0.000070	0.00057	mg/L	0.000139	24.32%
Fe 273.955†	5.5	0.00601	mg/L	0.000364	0.01201	mg/L	0.000728	6.06%
K 766.490†	-3.3	-0.00294	mg/L	0.026314	-0.00588	mg/L	0.052627	895.78%
Mg 279.077†	3.4	0.00473	mg/L	0.008928	0.00946	mg/L	0.017856	188.73%
Mn 257.610†	-17.0	-0.00052	mg/L	0.000278	-0.00104	mg/L	0.000557	53.44%
Mo 202.031†	-3.0	-0.00028	mg/L	0.000042	-0.00056	mg/L	0.000085	15.20%
Na 589.592†	276.0	0.03191	mg/L	0.007491	0.06381	mg/L	0.014983	23.48%
Na 330.237†	2.2	0.1237	mg/L	0.13807	0.2475	mg/L	0.27614	111.59%
Ni 231.604†	-5.5	-0.00265	mg/L	0.000206	-0.00530	mg/L	0.000412	7.78%
Pb 220.353†	-0.9	-0.00017	mg/L	0.000178	-0.00034	mg/L	0.000356	105.94%
Sb 206.836†	-0.9	-0.00057	mg/L	0.000865	-0.00114	mg/L	0.001729	152.31%
Se 196.026†	3.3	0.00532	mg/L	0.008309	0.01064	mg/L	0.016618	156.15%
Si 288.158†	-2.5	-0.00336	mg/L	0.005922	-0.00672	mg/L	0.011845	176.22%
Sn 189.927†	5.9	0.00226	mg/L	0.000843	0.00452	mg/L	0.001687	37.35%
Sr 421.552†	-22.0	-0.00005	mg/L	0.000046	-0.00010	mg/L	0.000093	92.58%
Ti 334.903†	-15.2	-0.00117	mg/L	0.001331	-0.00235	mg/L	0.002661	113.28%
Tl 190.801†	-2.2	-0.00178	mg/L	0.000736	-0.00355	mg/L	0.001472	41.41%
V 292.402†	-4.2	-0.00006	mg/L	0.000333	-0.00012	mg/L	0.000665	574.26%
Zn 206.200†	4.0	0.00239	mg/L	0.001172	0.00478	mg/L	0.002345	49.01%

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Sequence No.: 5
Sample ID: BIK0408-BS1
Dilution: 2X
Wash Time: 37

Autosampler Location: 308
Date Collected: 11/18/2020 3:06:55 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: BIK0408-BS1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: BIK0408-BS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1425989.4	100.9	%	0.11				0.11%
ScR 361.383	154579.5	102.2	%	0.11				0.10%
Ag 328.068†	70198.9	0.5207	mg/L	0.00090	1.041	mg/L	0.0018	0.17%
Al 308.215†	1884.5	2.030	mg/L	0.0045	4.061	mg/L	0.0090	0.22%
As 188.979†	1199.9	1.929	mg/L	0.0048	3.859	mg/L	0.0095	0.25%
B 249.677†	31.7	0.00506	mg/L	0.002069	0.01012	mg/L	0.004138	40.87%
Ba 233.527†	6801.1	1.942	mg/L	0.0045	3.883	mg/L	0.0089	0.23%
Be 313.042†	213493.4	0.4708	mg/L	0.00138	0.9417	mg/L	0.00276	0.29%
Ca 317.933†	54458.3	9.309	mg/L	0.0642	18.62	mg/L	0.128	0.69%
Cd 228.802†	8301.2	0.4735	mg/L	0.00089	0.9470	mg/L	0.00177	0.19%
Co 228.616†	8374.5	0.4720	mg/L	0.00086	0.9439	mg/L	0.00171	0.18%
Cr 267.716†	1084.1	0.4757	mg/L	0.00485	0.9513	mg/L	0.00970	1.02%
Cu 324.752†	73993.9	0.4763	mg/L	0.00118	0.9526	mg/L	0.00237	0.25%
Fe 273.955†	1762.3	1.934	mg/L	0.0022	3.867	mg/L	0.0044	0.11%
K 766.490†	10222.9	9.186	mg/L	0.0865	18.37	mg/L	0.173	0.94%
Mg 279.077†	7122.4	10.04	mg/L	0.020	20.08	mg/L	0.040	0.20%
Mn 257.610†	15204.1	0.4646	mg/L	0.00368	0.9293	mg/L	0.00736	0.79%
Mo 202.031†	13.6	0.00095	mg/L	0.000234	0.00190	mg/L	0.000467	24.61%
Na 589.592†	77236.6	8.928	mg/L	0.0451	17.86	mg/L	0.090	0.51%
Na 330.237†	174.8	9.673	mg/L	0.4150	19.35	mg/L	0.830	4.29%
Ni 231.604†	941.4	0.4538	mg/L	0.00529	0.9075	mg/L	0.01059	1.17%
Pb 220.353†	9991.4	1.927	mg/L	0.0030	3.854	mg/L	0.0060	0.16%
Sb 206.836†	7.1	-0.00278	mg/L	0.000984	-0.00556	mg/L	0.001969	35.38%
Se 196.026†	1217.3	1.935	mg/L	0.0084	3.870	mg/L	0.0167	0.43%
Si 288.158†	-5.6	-0.00393	mg/L	0.002764	-0.00785	mg/L	0.005528	70.41%
Sn 189.927†	-12.7	-0.00322	mg/L	0.000494	-0.00645	mg/L	0.000989	15.34%
Sr 421.552†	206448.4	0.4699	mg/L	0.00208	0.9398	mg/L	0.00416	0.44%
Ti 334.903†	28.0	0.00154	mg/L	0.000454	0.00308	mg/L	0.000908	29.49%
Tl 190.801†	2364.3	1.927	mg/L	0.0133	3.854	mg/L	0.0265	0.69%
V 292.402†	22997.2	0.4684	mg/L	0.00342	0.9368	mg/L	0.00684	0.73%
Zn 206.200†	761.8	0.4602	mg/L	0.00057	0.9204	mg/L	0.00114	0.12%

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Sequence No.: 6 **Autosampler Location: 309**
Sample ID: 20K0175-01 **Date Collected: 11/18/2020 3:11:11 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0175-01

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: 20K0175-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1427239.0	101.0	%	0.55				0.54%
ScR 361.383	152948.9	101.2	%	0.17				0.17%
Ag 328.068†	520.9	0.00389	mg/L	0.000284	0.01944	mg/L	0.001422	7.31%
Al 308.215†	28228.1	30.50	mg/L	0.061	152.5	mg/L	0.31	0.20%
As 188.979†	6.3	0.04165	mg/L	0.004762	0.2083	mg/L	0.02381	11.43%
B 249.677†	584.1	0.1213	mg/L	0.00075	0.6063	mg/L	0.00373	0.61%
Ba 233.527†	2077.1	0.5653	mg/L	0.00025	2.826	mg/L	0.0013	0.04%
Be 313.042†	517.1	0.00089	mg/L	0.000382	0.00444	mg/L	0.001912	43.05%
Ca 317.933†	421412.9	72.03	mg/L	0.387	360.2	mg/L	1.94	0.54%
Cd 228.802†	316.0	0.01365	mg/L	0.000459	0.06826	mg/L	0.002295	3.36%
Co 228.616†	820.1	0.04305	mg/L	0.000356	0.2153	mg/L	0.00178	0.83%
Cr 267.716†	975.9	0.4284	mg/L	0.00206	2.142	mg/L	0.0103	0.48%
Cu 324.752†	165988.8	1.076	mg/L	0.0082	5.378	mg/L	0.0408	0.76%
Fe 273.955†	175221.7	192.6	mg/L	0.58	963.0	mg/L	2.92	0.30%
K 766.490†	2156.1	1.937	mg/L	0.0196	9.687	mg/L	0.0979	1.01%
Mg 279.077†	8542.3	11.98	mg/L	0.029	59.88	mg/L	0.145	0.24%
Mn 257.610†	883794.9	27.00	mg/L	0.032	135.0	mg/L	0.16	0.12%
Mo 202.031†	899.7	0.08092	mg/L	0.000743	0.4046	mg/L	0.00371	0.92%
Na 589.592†	10483.6	1.212	mg/L	0.0107	6.059	mg/L	0.0534	0.88%
Na 330.237†	55.9	0.6960	mg/L	0.30968	3.480	mg/L	1.5484	44.49%
Ni 231.604†	753.6	0.3635	mg/L	0.00167	1.817	mg/L	0.0083	0.46%
Pb 220.353†	3473.6	0.6636	mg/L	0.00696	3.318	mg/L	0.0348	1.05%
Sb 206.836†	34.5	0.01575	mg/L	0.001147	0.07876	mg/L	0.005735	7.28%
Se 196.026†	-12.6	0.04203	mg/L	0.002219	0.2102	mg/L	0.01109	5.28%
Si 288.158†	314.8	0.3967	mg/L	0.00447	1.984	mg/L	0.0223	1.13%
Sn 189.927†	442.3	0.1839	mg/L	0.00348	0.9196	mg/L	0.01742	1.89%
Sr 421.552†	93063.2	0.2118	mg/L	0.00040	1.059	mg/L	0.0020	0.19%
Ti 334.903†	22278.3	1.712	mg/L	0.0027	8.559	mg/L	0.0136	0.16%
Tl 190.801†	-25.5	-0.02890	mg/L	0.002589	-0.1445	mg/L	0.01295	8.96%
V 292.402†	4885.3	0.1305	mg/L	0.00260	0.6527	mg/L	0.01301	1.99%
Zn 206.200†	12663.7	7.653	mg/L	0.0178	38.26	mg/L	0.089	0.23%

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Sequence No.: 7 **Autosampler Location: 310**
Sample ID: 20K0196-01 **Date Collected: 11/18/2020 3:15:28 PM**
Data Type: Original

Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0196-01

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0196-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1450656.6	102.6	%	0.25				0.24%
ScR 361.383	155959.0	103.1	%	0.62				0.60%
Ag 328.068†	247.6	0.00184	mg/L	0.000372	0.00367	mg/L	0.000743	20.25%
Al 308.215†	1426.1	1.540	mg/L	0.0128	3.080	mg/L	0.0256	0.83%
As 188.979†	56.5	0.07994	mg/L	0.002704	0.1599	mg/L	0.00541	3.38%
B 249.677†	49042.3	8.601	mg/L	0.0320	17.20	mg/L	0.064	0.37%
Ba 233.527†	275.4	0.06705	mg/L	0.001021	0.1341	mg/L	0.00204	1.52%
Be 313.042†	260.4	0.00058	mg/L	0.000024	0.00117	mg/L	0.000049	4.19%
Ca 317.933†	172914.3	29.56	mg/L	0.081	59.11	mg/L	0.161	0.27%
Cd 228.802†	71.0	0.00161	mg/L	0.000053	0.00322	mg/L	0.000107	3.31%
Co 228.616†	294.3	0.01634	mg/L	0.000369	0.03267	mg/L	0.000738	2.26%
Cr 267.716†	306.6	0.1434	mg/L	0.00570	0.2868	mg/L	0.01141	3.98%
Cu 324.752†	541718.5	3.489	mg/L	0.0198	6.979	mg/L	0.0396	0.57%
Fe 273.955†	72892.7	80.12	mg/L	0.469	160.2	mg/L	0.94	0.59%
K 766.490†	802.1	0.7207	mg/L	0.00791	1.441	mg/L	0.0158	1.10%
Mg 279.077†	744.6	0.9968	mg/L	0.01684	1.994	mg/L	0.0337	1.69%
Mn 257.610†	19979.2	0.6093	mg/L	0.00162	1.219	mg/L	0.0032	0.27%
Mo 202.031†	381.7	0.03441	mg/L	0.000232	0.06882	mg/L	0.000465	0.68%
Na 589.592†	158142.8	18.28	mg/L	0.046	36.56	mg/L	0.092	0.25%
Na 330.237†	459.4	19.55	mg/L	0.177	39.09	mg/L	0.354	0.90%
Ni 231.604†	357.6	0.1725	mg/L	0.00162	0.3449	mg/L	0.00324	0.94%
Pb 220.353†	5432.9	1.037	mg/L	0.0020	2.075	mg/L	0.0040	0.19%
Sb 206.836†	25.8	0.01224	mg/L	0.003642	0.02448	mg/L	0.007284	29.76%
Se 196.026†	-2.2	0.01869	mg/L	0.010868	0.03738	mg/L	0.021737	58.15%
Si 288.158†	284.3	0.3733	mg/L	0.00776	0.7466	mg/L	0.01552	2.08%
Sn 189.927†	66.5	0.03094	mg/L	0.000885	0.06188	mg/L	0.001769	2.86%
Sr 421.552†	12674.3	0.02885	mg/L	0.000130	0.05770	mg/L	0.000260	0.45%
Ti 334.903†	1674.4	0.1273	mg/L	0.00122	0.2546	mg/L	0.00244	0.96%
Tl 190.801†	-14.3	-0.00866	mg/L	0.002566	-0.01732	mg/L	0.005131	29.63%
V 292.402†	-148.4	0.00770	mg/L	0.000292	0.01540	mg/L	0.000584	3.79%
Zn 206.200†	28939.6	17.49	mg/L	0.028	34.98	mg/L	0.056	0.16%

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Sequence No.: 8 **Autosampler Location: 311**
Sample ID: 20K0135-01 **Date Collected: 11/18/2020 3:20:07 PM**
Data Type: Original
Dilution: 5X
Wash Time: 60 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0135-01

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: 20K0135-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1492049.4	105.5	%	0.59				0.56%
ScR 361.383	160582.5	106.2	%	0.52				0.49%
Ag 328.068†	-101.5	-0.00069	mg/L	0.000576	-0.00346	mg/L	0.002880	83.16%
Al 308.215†	102106.6	110.3	mg/L	0.35	551.6	mg/L	1.74	0.31%
As 188.979†	-202.6	-0.1562	mg/L	0.00586	-0.7811	mg/L	0.02932	3.75%
B 249.677†	205.4	0.04730	mg/L	0.003920	0.2365	mg/L	0.01960	8.29%
Ba 233.527†	1780.5	0.4908	mg/L	0.00047	2.454	mg/L	0.0024	0.10%
Be 313.042†	872.2	0.00133	mg/L	0.000016	0.00664	mg/L	0.000082	1.23%
Ca 317.933†	98342.1	16.81	mg/L	0.092	84.05	mg/L	0.461	0.55%
Cd 228.802†	60.7	0.00292	mg/L	0.000145	0.01461	mg/L	0.000724	4.96%
Co 228.616†	1066.3	0.05266	mg/L	0.000463	0.2633	mg/L	0.00232	0.88%
Cr 267.716†	461.0	0.2071	mg/L	0.00132	1.035	mg/L	0.0066	0.64%
Cu 324.752†	20790.7	0.1377	mg/L	0.00172	0.6886	mg/L	0.00858	1.25%
Fe 273.955†	110527.6	121.5	mg/L	0.43	607.4	mg/L	2.14	0.35%
K 766.490†	6982.2	6.274	mg/L	0.0654	31.37	mg/L	0.327	1.04%
Mg 279.077†	24846.4	34.96	mg/L	0.128	174.8	mg/L	0.64	0.37%
Mn 257.610†	60475.3	1.845	mg/L	0.0067	9.224	mg/L	0.0336	0.36%
Mo 202.031†	32.1	0.00218	mg/L	0.000328	0.01089	mg/L	0.001642	15.08%
Na 589.592†	5588.4	0.6460	mg/L	0.00243	3.230	mg/L	0.0121	0.38%
Na 330.237†	-11.2	0.05910	mg/L	0.333940	0.2955	mg/L	1.66970	565.07%
Ni 231.604†	449.8	0.2169	mg/L	0.00133	1.084	mg/L	0.0067	0.62%
Pb 220.353†	14.6	0.02262	mg/L	0.000727	0.1131	mg/L	0.00363	3.21%
Sb 206.836†	2.0	0.00437	mg/L	0.001518	0.02183	mg/L	0.007590	34.77%
Se 196.026†	-31.8	0.02116	mg/L	0.002045	0.1058	mg/L	0.01023	9.67%
Si 288.158†	838.2	1.065	mg/L	0.0020	5.323	mg/L	0.0098	0.18%
Sn 189.927†	-13.3	-0.00020	mg/L	0.001621	-0.00098	mg/L	0.008107	830.10%
Sr 421.552†	63708.7	0.1450	mg/L	0.00036	0.7250	mg/L	0.00179	0.25%
Ti 334.903†	53016.9	4.082	mg/L	0.0127	20.41	mg/L	0.064	0.31%
Tl 190.801†	58.2	-0.01003	mg/L	0.002347	-0.05016	mg/L	0.011737	23.40%
V 292.402†	11515.1	0.2516	mg/L	0.00482	1.258	mg/L	0.0241	1.92%
Zn 206.200†	373.4	0.2253	mg/L	0.00038	1.126	mg/L	0.0019	0.17%

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Sequence No.: 9 Autosampler Location: 312
Sample ID: 20K0135-02 Date Collected: 11/18/2020 3:24:23 PM
Data Type: Original
Dilution: 5X
Wash Time: 37 Auto Dilution Factor: 1

Nebulizer Parameters: 20K0135-02

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: 20K0135-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1452080.9	102.7	%	0.34				0.33%
ScR 361.383	158986.7	105.1	%	0.82				0.78%
Ag 328.068†	-59.4	-0.00039	mg/L	0.000202	-0.00194	mg/L	0.001008	51.91%
Al 308.215†	93275.6	100.8	mg/L	0.35	503.9	mg/L	1.74	0.34%
As 188.979†	-192.8	-0.1496	mg/L	0.00425	-0.7481	mg/L	0.02127	2.84%
B 249.677†	120.1	0.02997	mg/L	0.001764	0.1499	mg/L	0.00882	5.89%
Ba 233.527†	1780.6	0.4941	mg/L	0.00317	2.471	mg/L	0.0158	0.64%
Be 313.042†	764.7	0.00117	mg/L	0.000076	0.00584	mg/L	0.000378	6.47%
Ca 317.933†	149698.8	25.59	mg/L	0.082	127.9	mg/L	0.41	0.32%
Cd 228.802†	65.5	0.00349	mg/L	0.000141	0.01743	mg/L	0.000707	4.06%
Co 228.616†	935.2	0.04535	mg/L	0.000188	0.2268	mg/L	0.00094	0.41%
Cr 267.716†	405.9	0.1815	mg/L	0.00314	0.9077	mg/L	0.01571	1.73%
Cu 324.752†	13318.7	0.08878	mg/L	0.000599	0.4439	mg/L	0.00299	0.67%
Fe 273.955†	89872.1	98.78	mg/L	0.464	493.9	mg/L	2.32	0.47%
K 766.490†	4318.7	3.880	mg/L	0.0254	19.40	mg/L	0.127	0.66%
Mg 279.077†	20253.9	28.50	mg/L	0.084	142.5	mg/L	0.42	0.30%
Mn 257.610†	55258.1	1.686	mg/L	0.0081	8.430	mg/L	0.0403	0.48%
Mo 202.031†	37.9	0.00265	mg/L	0.000522	0.01324	mg/L	0.002611	19.72%
Na 589.592†	6111.6	0.7065	mg/L	0.00574	3.532	mg/L	0.0287	0.81%
Na 330.237†	-1.8	0.5708	mg/L	0.25481	2.854	mg/L	1.2741	44.64%
Ni 231.604†	382.2	0.1843	mg/L	0.00278	0.9215	mg/L	0.01389	1.51%
Pb 220.353†	62.0	0.03092	mg/L	0.001110	0.1546	mg/L	0.00555	3.59%
Sb 206.836†	3.2	0.00526	mg/L	0.001837	0.02629	mg/L	0.009187	34.95%
Se 196.026†	-28.1	0.01583	mg/L	0.001368	0.07913	mg/L	0.006841	8.65%
Si 288.158†	1005.6	1.285	mg/L	0.0098	6.425	mg/L	0.0490	0.76%
Sn 189.927†	-21.7	-0.00188	mg/L	0.000984	-0.00940	mg/L	0.004921	52.35%
Sr 421.552†	52971.3	0.1206	mg/L	0.00033	0.6028	mg/L	0.00164	0.27%
Ti 334.903†	52430.3	4.037	mg/L	0.0123	20.18	mg/L	0.062	0.31%
Tl 190.801†	44.2	-0.01580	mg/L	0.003068	-0.07901	mg/L	0.015340	19.42%
V 292.402†	10024.3	0.2179	mg/L	0.00215	1.090	mg/L	0.0107	0.99%
Zn 206.200†	420.8	0.2537	mg/L	0.00171	1.268	mg/L	0.0086	0.68%

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Sequence No.: 10 **Autosampler Location: 313**
Sample ID: 20K0135-03 **Date Collected: 11/18/2020 3:28:39 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0135-03

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: 20K0135-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1441011.8	101.9	%	0.33				0.33%
ScR 361.383	156828.5	103.7	%	0.48				0.47%
Ag 328.068†	-12.7	-0.00004	mg/L	0.000202	-0.00022	mg/L	0.001009	460.77%
Al 308.215†	87104.2	94.12	mg/L	0.096	470.6	mg/L	0.48	0.10%
As 188.979†	-183.1	-0.1402	mg/L	0.00608	-0.7009	mg/L	0.03038	4.33%
B 249.677†	81.4	0.02361	mg/L	0.002370	0.1181	mg/L	0.01185	10.04%
Ba 233.527†	1824.6	0.5062	mg/L	0.00179	2.531	mg/L	0.0089	0.35%
Be 313.042†	687.6	0.00102	mg/L	0.000033	0.00508	mg/L	0.000167	3.29%
Ca 317.933†	137751.3	23.55	mg/L	0.091	117.7	mg/L	0.45	0.38%
Cd 228.802†	65.8	0.00334	mg/L	0.000193	0.01671	mg/L	0.000964	5.77%
Co 228.616†	936.6	0.04571	mg/L	0.000263	0.2286	mg/L	0.00131	0.57%
Cr 267.716†	398.7	0.1784	mg/L	0.00240	0.8921	mg/L	0.01200	1.35%
Cu 324.752†	14580.8	0.09704	mg/L	0.001013	0.4852	mg/L	0.00507	1.04%
Fe 273.955†	92549.3	101.7	mg/L	0.31	508.6	mg/L	1.53	0.30%
K 766.490†	4854.4	4.362	mg/L	0.0425	21.81	mg/L	0.213	0.98%
Mg 279.077†	20820.4	29.30	mg/L	0.051	146.5	mg/L	0.26	0.17%
Mn 257.610†	68052.0	2.077	mg/L	0.0104	10.38	mg/L	0.052	0.50%
Mo 202.031†	40.8	0.00294	mg/L	0.000325	0.01468	mg/L	0.001623	11.06%
Na 589.592†	6509.3	0.7525	mg/L	0.01427	3.762	mg/L	0.0714	1.90%
Na 330.237†	-6.7	0.2742	mg/L	0.26865	1.371	mg/L	1.3432	97.97%
Ni 231.604†	356.9	0.1721	mg/L	0.00308	0.8605	mg/L	0.01539	1.79%
Pb 220.353†	137.1	0.04349	mg/L	0.000866	0.2175	mg/L	0.00433	1.99%
Sb 206.836†	4.7	0.00593	mg/L	0.001436	0.02963	mg/L	0.007179	24.23%
Se 196.026†	-31.9	0.00886	mg/L	0.005541	0.04430	mg/L	0.027705	62.54%
Si 288.158†	838.1	1.066	mg/L	0.0071	5.330	mg/L	0.0353	0.66%
Sn 189.927†	-9.1	0.00251	mg/L	0.000895	0.01255	mg/L	0.004476	35.65%
Sr 421.552†	53410.9	0.1216	mg/L	0.00001	0.6078	mg/L	0.00005	0.01%
Ti 334.903†	50414.6	3.881	mg/L	0.0014	19.41	mg/L	0.007	0.04%
Tl 190.801†	37.7	-0.01814	mg/L	0.002158	-0.09071	mg/L	0.010788	11.89%
V 292.402†	9642.8	0.2108	mg/L	0.00130	1.054	mg/L	0.0065	0.62%
Zn 206.200†	368.5	0.2221	mg/L	0.00420	1.111	mg/L	0.0210	1.89%

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Sequence No.: 11 **Autosampler Location: 7**
Sample ID: SEQ-CCV2 **Date Collected: 11/18/2020 3:35:38 PM**
Data Type: Original
Dilution: 1X
Wash Time: 200 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV2

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-CCV2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1448281.1	102.4	%	0.91				0.89%
ScR 361.383	152882.0	101.1	%	0.14				0.14%
Ag 328.068†	140513.7	1.042	mg/L	0.0084	1.042	mg/L	0.0084	0.81%
Al 308.215†	1981.7	2.107	mg/L	0.0083	2.107	mg/L	0.0083	0.39%
As 188.979†	1192.7	1.952	mg/L	0.0244	1.952	mg/L	0.0244	1.25%
B 249.677†	5601.1	0.9801	mg/L	0.00318	0.9801	mg/L	0.00318	0.32%
Ba 233.527†	3523.1	1.005	mg/L	0.0081	1.005	mg/L	0.0081	0.81%
Be 313.042†	448096.2	0.9883	mg/L	0.00063	0.9883	mg/L	0.00063	0.06%
Ca 317.933†	11873.5	2.030	mg/L	0.0131	2.030	mg/L	0.0131	0.65%
Cd 228.802†	17103.7	0.9898	mg/L	0.01301	0.9898	mg/L	0.01301	1.31%
Co 228.616†	17430.9	0.9809	mg/L	0.00867	0.9809	mg/L	0.00867	0.88%
Cr 267.716†	2211.4	0.9765	mg/L	0.00584	0.9765	mg/L	0.00584	0.60%
Cu 324.752†	154754.4	0.9956	mg/L	0.01137	0.9956	mg/L	0.01137	1.14%
Fe 273.955†	1814.0	1.987	mg/L	0.0188	1.987	mg/L	0.0188	0.95%
K 766.490†	21977.4	19.75	mg/L	0.047	19.75	mg/L	0.047	0.24%
Mg 279.077†	1446.8	2.053	mg/L	0.0040	2.053	mg/L	0.0040	0.19%
Mn 257.610†	33249.8	1.016	mg/L	0.0038	1.016	mg/L	0.0038	0.37%
Mo 202.031†	10843.5	0.9920	mg/L	0.01065	0.9920	mg/L	0.01065	1.07%
Na 589.592†	433182.6	50.07	mg/L	0.040	50.07	mg/L	0.040	0.08%
Na 330.237†	912.9	51.20	mg/L	0.779	51.20	mg/L	0.779	1.52%
Ni 231.604†	1966.5	0.9497	mg/L	0.00708	0.9497	mg/L	0.00708	0.75%
Pb 220.353†	10594.8	2.044	mg/L	0.0236	2.044	mg/L	0.0236	1.16%
Sb 206.836†	3726.1	2.051	mg/L	0.0208	2.051	mg/L	0.0208	1.01%
Se 196.026†	1287.2	2.047	mg/L	0.0192	2.047	mg/L	0.0192	0.94%
Si 288.158†	1625.9	2.127	mg/L	0.0036	2.127	mg/L	0.0036	0.17%
Sn 189.927†	2595.4	0.9997	mg/L	0.01235	0.9997	mg/L	0.01235	1.23%
Sr 421.552†	432427.7	0.9842	mg/L	0.00084	0.9842	mg/L	0.00084	0.08%
Ti 334.903†	12980.5	0.9985	mg/L	0.00128	0.9985	mg/L	0.00128	0.13%
Tl 190.801†	2462.9	1.998	mg/L	0.0226	1.998	mg/L	0.0226	1.13%
V 292.402†	47535.6	0.9659	mg/L	0.01850	0.9659	mg/L	0.01850	1.91%
Zn 206.200†	1633.2	0.9867	mg/L	0.00527	0.9867	mg/L	0.00527	0.53%

Sequence No.: 12
Sample ID: SEQ-CCB2
Autosampler Location: 1
Date Collected: 11/18/2020 3:40:58 PM
Data Type: Original
Dilution: 1X
Wash Time: 100
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB2

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: SEQ-CCB2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1437182.0	101.7	%	0.19				0.19%
ScR 361.383	155334.4	102.7	%	0.42				0.41%
Ag 328.068†	8.2	0.00006	mg/L	0.000127	0.00006	mg/L	0.000127	208.56%
Al 308.215†	40.0	0.04319	mg/L	0.002230	0.04319	mg/L	0.002230	5.16%
As 188.979†	5.0	0.00808	mg/L	0.003045	0.00808	mg/L	0.003045	37.67%
B 249.677†	42.7	0.00748	mg/L	0.000456	0.00748	mg/L	0.000456	6.09%
Ba 233.527†	-1.6	-0.00045	mg/L	0.000731	-0.00045	mg/L	0.000731	162.31%
Be 313.042†	-25.0	-0.00006	mg/L	0.000058	-0.00006	mg/L	0.000058	105.08%
Ca 317.933†	-14.7	-0.00252	mg/L	0.004620	-0.00252	mg/L	0.004620	183.42%
Cd 228.802†	4.3	0.00020	mg/L	0.000270	0.00020	mg/L	0.000270	137.42%
Co 228.616†	-7.2	-0.00041	mg/L	0.000247	-0.00041	mg/L	0.000247	60.45%
Cr 267.716†	1.9	0.00083	mg/L	0.002118	0.00083	mg/L	0.002118	255.74%
Cu 324.752†	50.0	0.00032	mg/L	0.000117	0.00032	mg/L	0.000117	36.58%
Fe 273.955†	1.6	0.00179	mg/L	0.002562	0.00179	mg/L	0.002562	143.23%
K 766.490†	27.1	0.02432	mg/L	0.019243	0.02432	mg/L	0.019243	79.13%
Mg 279.077†	2.2	0.00305	mg/L	0.007666	0.00305	mg/L	0.007666	251.07%
Mn 257.610†	-9.6	-0.00029	mg/L	0.000099	-0.00029	mg/L	0.000099	33.85%
Mo 202.031†	4.9	0.00045	mg/L	0.000503	0.00045	mg/L	0.000503	112.29%
Na 589.592†	-253.8	-0.02934	mg/L	0.002498	-0.02934	mg/L	0.002498	8.51%
Na 330.237†	-7.4	-0.4171	mg/L	0.25621	-0.4171	mg/L	0.25621	61.42%
Ni 231.604†	-1.0	-0.00050	mg/L	0.003059	-0.00050	mg/L	0.003059	609.80%
Pb 220.353†	13.5	0.00262	mg/L	0.001237	0.00262	mg/L	0.001237	47.31%
Sb 206.836†	2.1	0.00117	mg/L	0.002228	0.00117	mg/L	0.002228	190.00%
Se 196.026†	-0.6	-0.00098	mg/L	0.004860	-0.00098	mg/L	0.004860	494.03%
Si 288.158†	-1.1	-0.00142	mg/L	0.007505	-0.00142	mg/L	0.007505	527.64%
Sn 189.927†	3.1	0.00120	mg/L	0.000685	0.00120	mg/L	0.000685	57.17%
Sr 421.552†	4.1	0.00001	mg/L	0.000079	0.00001	mg/L	0.000079	844.99%
Ti 334.903†	22.7	0.00174	mg/L	0.001851	0.00174	mg/L	0.001851	106.12%
Tl 190.801†	-1.1	-0.00090	mg/L	0.001795	-0.00090	mg/L	0.001795	200.06%
V 292.402†	-3.6	-0.00007	mg/L	0.000244	-0.00007	mg/L	0.000244	368.19%
Zn 206.200†	4.1	0.00246	mg/L	0.000917	0.00246	mg/L	0.000917	37.31%

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Analysis Begun

Start Time: 11/18/2020 3:55:01 PM
Plasma On Time: 11/18/2020 9:28:48 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 314
Sample ID: BIK0508-BLK1
Date Collected: 11/18/2020 3:55:10 PM
Data Type: Original
Dilution: 5X

Nebulizer Parameters: BIK0508-BLK1

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: BIK0508-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1445532.4	102.2	%	0.28				0.28%
ScR 361.383	154905.0	102.5	%	0.55				0.54%
Ag 328.068†	22.8	0.00017	mg/L	0.000159	0.00084	mg/L	0.000797	94.40%
Al 308.215†	23.0	0.02479	mg/L	0.008741	0.1239	mg/L	0.04371	35.26%
As 188.979†	3.5	0.00548	mg/L	0.002571	0.02738	mg/L	0.012857	46.95%
B 249.677†	198.8	0.03482	mg/L	0.002294	0.1741	mg/L	0.01147	6.59%
Ba 233.527†	6.1	0.00174	mg/L	0.001140	0.00872	mg/L	0.005699	65.32%
Be 313.042†	-17.3	-0.00004	mg/L	0.000014	-0.00019	mg/L	0.000068	35.95%
Ca 317.933†	898.9	0.1537	mg/L	0.00371	0.7683	mg/L	0.01854	2.41%
Cd 228.802†	1.5	0.00004	mg/L	0.000132	0.00022	mg/L	0.000662	306.82%
Co 228.616†	-11.7	-0.00066	mg/L	0.000152	-0.00328	mg/L	0.000761	23.21%
Cr 267.716†	-3.0	-0.00125	mg/L	0.001287	-0.00626	mg/L	0.006437	102.84%
Cu 324.752†	44.6	0.00029	mg/L	0.000108	0.00143	mg/L	0.000541	37.72%
Fe 273.955†	2.7	0.00295	mg/L	0.003272	0.01473	mg/L	0.016359	111.07%
K 766.490†	17.2	0.01542	mg/L	0.026090	0.07712	mg/L	0.130452	169.15%
Mg 279.077†	54.7	0.07703	mg/L	0.016680	0.3852	mg/L	0.08340	21.65%
Mn 257.610†	-3.3	-0.00010	mg/L	0.000126	-0.00050	mg/L	0.000631	125.13%
Mo 202.031†	-1.5	-0.00014	mg/L	0.000350	-0.00070	mg/L	0.001748	251.56%
Na 589.592†	6129.9	0.7086	mg/L	0.00497	3.543	mg/L	0.0248	0.70%
Na 330.237†	8.6	0.4815	mg/L	0.47374	2.407	mg/L	2.3687	98.39%
Ni 231.604†	-6.6	-0.00316	mg/L	0.001916	-0.01581	mg/L	0.009580	60.59%
Pb 220.353†	9.0	0.00175	mg/L	0.001036	0.00873	mg/L	0.005182	59.40%
Sb 206.836†	-3.7	-0.00202	mg/L	0.000992	-0.01010	mg/L	0.004959	49.08%
Se 196.026†	-0.0	-0.00002	mg/L	0.004071	-0.00011	mg/L	0.020355	>999.9%
Si 288.158†	26.5	0.03489	mg/L	0.005129	0.1744	mg/L	0.02565	14.70%
Sn 189.927†	3.7	0.00146	mg/L	0.000219	0.00730	mg/L	0.001095	14.99%
Sr 421.552†	99.4	0.00023	mg/L	0.000026	0.00113	mg/L	0.000131	11.59%
Ti 334.903†	-18.2	-0.00141	mg/L	0.002205	-0.00703	mg/L	0.011026	156.74%
Tl 190.801†	0.8	0.00071	mg/L	0.003269	0.00353	mg/L	0.016343	463.30%
V 292.402†	-9.2	-0.00018	mg/L	0.000387	-0.00092	mg/L	0.001935	210.14%
Zn 206.200†	13.9	0.00839	mg/L	0.001839	0.04197	mg/L	0.009197	21.92%

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Sequence No.: 2 **Autosampler Location: 315**
Sample ID: ~~BIK0508-BS1~~ BIK0507-BLK1 **Date Collected: 11/18/2020 3:59:32 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: ~~BIK0508-BS1~~ BIK0507-BLK1

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

MB 11/18/20

Mean Data: ~~BIK0508-BS1~~ BIK0507-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1365614.4	96.59	%	1.143				1.18%
ScR 361.383	153883.0	101.8	%	0.45				0.44%
Ag 328.068†	32.5	0.00024	mg/L	0.000311	0.00121	mg/L	0.001557	129.09%
Al 308.215†	20.0	0.02162	mg/L	0.011962	0.1081	mg/L	0.05981	55.33%
As 188.979†	7.9	0.01262	mg/L	0.002243	0.06309	mg/L	0.011213	17.77%
B 249.677†	196.4	0.03440	mg/L	0.001545	0.1720	mg/L	0.00772	4.49%
Ba 233.527†	9.2	0.00264	mg/L	0.000729	0.01319	mg/L	0.003645	27.64%
Be 313.042†	-36.3	-0.00008	mg/L	0.000031	-0.00040	mg/L	0.000156	38.48%
Ca 317.933†	633.0	0.1082	mg/L	0.00231	0.5410	mg/L	0.01156	2.14%
Cd 228.802†	9.0	0.00044	mg/L	0.000088	0.00219	mg/L	0.000438	19.96%
Co 228.616†	-21.1	-0.00119	mg/L	0.000192	-0.00596	mg/L	0.000959	16.11%
Cr 267.716†	8.7	0.03152	mg/L	0.002787	0.1576	mg/L	0.01393	8.84%
Cu 324.752†	172.8	0.00111	mg/L	0.000057	0.00556	mg/L	0.000285	5.14%
Fe 273.955†	1.3	0.00148	mg/L	0.000431	0.00741	mg/L	0.002156	29.08%
K 766.490†	87.1	0.07824	mg/L	0.026867	0.3912	mg/L	0.13433	34.34%
Mg 279.077†	21.9	0.03089	mg/L	0.013878	0.1545	mg/L	0.06939	44.92%
Mn 257.610†	1.1	0.00003	mg/L	0.000145	0.00017	mg/L	0.000726	428.58%
Mo 202.031†	-1.3	-0.00012	mg/L	0.000083	-0.00060	mg/L	0.000413	69.43%
Na 589.592†	2739421.2	316.7	mg/L	2.80	1583	mg/L	13.99	0.88%
Na 330.237†	5349.1	301.0	mg/L	1.22	1505	mg/L	6.08	0.40%
Ni 231.604†	-2.5	-0.00119	mg/L	0.003098	-0.00593	mg/L	0.015489	261.32%
Pb 220.353†	21.2	0.00410	mg/L	0.001061	0.02052	mg/L	0.005305	25.85%
Sb 206.836†	-3.5	-0.00200	mg/L	0.003715	-0.00999	mg/L	0.018573	185.86%
Se 196.026†	-3.3	-0.00531	mg/L	0.006407	-0.02657	mg/L	0.032037	120.57%
Si 288.158†	13.7	0.01806	mg/L	0.005487	0.09028	mg/L	0.027436	30.39%
Sn 189.927†	5.3	0.00205	mg/L	0.000827	0.01023	mg/L	0.004133	40.40%
Sr 421.552†	29.4	0.00007	mg/L	0.000091	0.00033	mg/L	0.000453	135.34%
Ti 334.903†	3.3	0.00025	mg/L	0.001629	0.00124	mg/L	0.008147	654.89%
Tl 190.801†	2.3	0.00187	mg/L	0.000584	0.00937	mg/L	0.002922	31.18%
V 292.402†	11.5	0.00026	mg/L	0.000451	0.00131	mg/L	0.002256	172.78%
Zn 206.200†	10.5	0.00636	mg/L	0.001667	0.03180	mg/L	0.008334	26.21%

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Sequence No.: 3 **Autosampler Location: 316**
Sample ID: 20K0215-01 **Date Collected: 11/18/2020 4:04:06 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0215-01

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0215-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1351633.3	95.60	%	0.109				0.11%
ScR 361.383	149012.6	98.55	%	0.280				0.28%
Ag 328.068†	-8.1	-0.00006	mg/L	0.000470	-0.00030	mg/L	0.002349	781.48%
Al 308.215†	107.0	0.1152	mg/L	0.01178	0.5759	mg/L	0.05892	10.23%
As 188.979†	19.8	0.02802	mg/L	0.001937	0.1401	mg/L	0.00969	6.91%
B 249.677†	277.9	0.04823	mg/L	0.000816	0.2412	mg/L	0.00408	1.69%
Ba 233.527†	196.3	0.05605	mg/L	0.001113	0.2802	mg/L	0.00557	1.99%
Be 313.042†	-5.9	-0.00001	mg/L	0.000046	-0.00007	mg/L	0.000232	337.12%
Ca 317.933†	46202.9	7.897	mg/L	0.0847	39.49	mg/L	0.423	1.07%
Cd 228.802†	323.8	0.01866	mg/L	0.000145	0.09328	mg/L	0.000724	0.78%
Co 228.616†	-16.2	-0.00093	mg/L	0.000260	-0.00463	mg/L	0.001300	28.10%
Cr 267.716†	-0.0	0.02752	mg/L	0.002832	0.1376	mg/L	0.01416	10.29%
Cu 324.752†	2211.9	0.01423	mg/L	0.000066	0.07113	mg/L	0.000331	0.47%
Fe 273.955†	29.3	0.03215	mg/L	0.006722	0.1608	mg/L	0.03361	20.91%
K 766.490†	821.1	0.7378	mg/L	0.05874	3.689	mg/L	0.2937	7.96%
Mg 279.077†	824.3	1.161	mg/L	0.0235	5.805	mg/L	0.1174	2.02%
Mn 257.610†	6523.8	0.1993	mg/L	0.00128	0.9964	mg/L	0.00641	0.64%
Mo 202.031†	7.9	0.00057	mg/L	0.000057	0.00287	mg/L	0.000287	9.99%
Na 589.592†	2763344.2	319.4	mg/L	0.87	1597	mg/L	4.33	0.27%
Na 330.237†	5371.5	301.5	mg/L	1.02	1507	mg/L	5.09	0.34%
Ni 231.604†	12.3	0.00592	mg/L	0.000867	0.02960	mg/L	0.004335	14.64%
Pb 220.353†	103.6	0.01998	mg/L	0.000678	0.09989	mg/L	0.003391	3.39%
Sb 206.836†	1.9	0.00104	mg/L	0.001028	0.00521	mg/L	0.005138	98.64%
Se 196.026†	-1.2	-0.00277	mg/L	0.003661	-0.01383	mg/L	0.018304	132.37%
Si 288.158†	572.8	0.7549	mg/L	0.00298	3.774	mg/L	0.0149	0.39%
Sn 189.927†	-6.6	-0.00114	mg/L	0.000481	-0.00571	mg/L	0.002405	42.13%
Sr 421.552†	10344.2	0.02354	mg/L	0.000152	0.1177	mg/L	0.00076	0.65%
Ti 334.903†	47.3	0.00322	mg/L	0.000757	0.01610	mg/L	0.003785	23.51%
Tl 190.801†	-11.5	-0.00825	mg/L	0.001781	-0.04126	mg/L	0.008906	21.58%
V 292.402†	15.9	0.00050	mg/L	0.000467	0.00250	mg/L	0.002336	93.51%
Zn 206.200†	3757.2	2.271	mg/L	0.0155	11.35	mg/L	0.078	0.68%

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Sequence No.: 4 **Autosampler Location: 317**
Sample ID: 20K0255-01 **Date Collected: 11/18/2020 4:08:38 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0255-01

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 20K0255-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1337979.3	94.64	%	0.458				0.48%
ScR 361.383	145162.4	96.01	%	0.501				0.52%
Ag 328.068†	-49.4	-0.00037	mg/L	0.000157	-0.00037	mg/L	0.000157	42.65%
Al 308.215†	115.2	0.1210	mg/L	0.00595	0.1210	mg/L	0.00595	4.92%
As 188.979†	112.0	0.09804	mg/L	0.001432	0.09804	mg/L	0.001432	1.46%
B 249.677†	17856.3	3.129	mg/L	0.0474	3.129	mg/L	0.0474	1.52%
Ba 233.527†	408.8	0.1146	mg/L	0.00274	0.1146	mg/L	0.00274	2.39%
Be 313.042†	40.5	0.00009	mg/L	0.000055	0.00009	mg/L	0.000055	57.91%
Ca 317.933†	905327.9	154.7	mg/L	0.91	154.7	mg/L	0.91	0.59%
Cd 228.802†	246.6	0.01131	mg/L	0.000352	0.01131	mg/L	0.000352	3.12%
Co 228.616†	87.2	0.00485	mg/L	0.000093	0.00485	mg/L	0.000093	1.92%
Cr 267.716†	144.6	0.09545	mg/L	0.002936	0.09545	mg/L	0.002936	3.08%
Cu 324.752†	3409.6	0.02245	mg/L	0.000234	0.02245	mg/L	0.000234	1.04%
Fe 273.955†	13247.7	14.56	mg/L	0.362	14.56	mg/L	0.362	2.49%
K 766.490†	17722.7	15.92	mg/L	0.224	15.92	mg/L	0.224	1.41%
Mg 279.077†	3370.5	4.715	mg/L	0.0668	4.715	mg/L	0.0668	1.42%
Mn 257.610†	17178.2	0.5245	mg/L	0.00718	0.5245	mg/L	0.00718	1.37%
Mo 202.031†	1216.5	0.1086	mg/L	0.00111	0.1086	mg/L	0.00111	1.02%
Na 589.592†	3302269.6	381.7	mg/L	2.68	381.7	mg/L	2.68	0.70%
Na 330.237†	6395.5	359.9	mg/L	5.80	359.9	mg/L	5.80	1.61%
Ni 231.604†	581.9	0.2807	mg/L	0.01047	0.2807	mg/L	0.01047	3.73%
Pb 220.353†	-13.8	-0.00351	mg/L	0.000525	-0.00351	mg/L	0.000525	14.95%
Sb 206.836†	20.3	0.00982	mg/L	0.000382	0.00982	mg/L	0.000382	3.90%
Se 196.026†	17.9	0.01616	mg/L	0.002162	0.01616	mg/L	0.002162	13.38%
Si 288.158†	1898.9	2.503	mg/L	0.0263	2.503	mg/L	0.0263	1.05%
Sn 189.927†	-88.1	-0.00617	mg/L	0.001443	-0.00617	mg/L	0.001443	23.37%
Sr 421.552†	643909.2	1.466	mg/L	0.0096	1.466	mg/L	0.0096	0.66%
Ti 334.903†	176.6	0.00528	mg/L	0.000330	0.00528	mg/L	0.000330	6.25%
Tl 190.801†	-75.9	-0.03787	mg/L	0.004017	-0.03787	mg/L	0.004017	10.61%
V 292.402†	-91.6	0.00097	mg/L	0.000293	0.00097	mg/L	0.000293	30.14%
Zn 206.200†	39.4	0.01947	mg/L	0.001263	0.01947	mg/L	0.001263	6.48%

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Sequence No.: 5 **Autosampler Location: 318**
Sample ID: 20K0196-01RE1 **Date Collected: 11/18/2020 4:13:28 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0196-01RE1

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: 20K0196-01RE1

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	1450821.1	102.6	%	0.51				0.50%
ScR 361.383	156031.6	103.2	%	0.68				0.66%
Ag 328.068†	97.2	0.00072	mg/L	0.000583	0.00360	mg/L	0.002913	80.83%
Al 308.215†	593.0	0.6404	mg/L	0.01017	3.202	mg/L	0.0508	1.59%
As 188.979†	29.0	0.04204	mg/L	0.006004	0.2102	mg/L	0.03002	14.28%
B 249.677†	19667.7	3.449	mg/L	0.0101	17.25	mg/L	0.050	0.29%
Ba 233.527†	116.2	0.02850	mg/L	0.001599	0.1425	mg/L	0.00799	5.61%
Be 313.042†	53.7	0.00012	mg/L	0.000067	0.00061	mg/L	0.000333	54.23%
Ca 317.933†	70988.6	12.13	mg/L	0.072	60.67	mg/L	0.358	0.59%
Cd 228.802†	26.4	0.00045	mg/L	0.000173	0.00225	mg/L	0.000864	38.33%
Co 228.616†	110.0	0.00610	mg/L	0.000175	0.03050	mg/L	0.000875	2.87%
Cr 267.716†	127.0	0.05933	mg/L	0.002859	0.2966	mg/L	0.01429	4.82%
Cu 324.752†	213791.5	1.377	mg/L	0.0074	6.886	mg/L	0.0370	0.54%
Fe 273.955†	29482.6	32.41	mg/L	0.294	162.0	mg/L	1.47	0.91%
K 766.490†	336.2	0.3021	mg/L	0.01098	1.510	mg/L	0.0549	3.64%
Mg 279.077†	305.9	0.4098	mg/L	0.00789	2.049	mg/L	0.0394	1.92%
Mn 257.610†	8136.7	0.2481	mg/L	0.00193	1.241	mg/L	0.0097	0.78%
Mo 202.031†	153.2	0.01381	mg/L	0.000272	0.06903	mg/L	0.001358	1.97%
Na 589.592†	62860.8	7.267	mg/L	0.2043	36.33	mg/L	1.021	2.81%
Na 330.237†	189.2	8.038	mg/L	1.0809	40.19	mg/L	5.405	13.45%
Ni 231.604†	148.5	0.07160	mg/L	0.001050	0.3580	mg/L	0.00525	1.47%
Pb 220.353†	2279.6	0.4355	mg/L	0.00058	2.178	mg/L	0.0029	0.13%
Sb 206.836†	7.9	0.00353	mg/L	0.000120	0.01764	mg/L	0.000598	3.39%
Se 196.026†	-1.7	0.00636	mg/L	0.003259	0.03178	mg/L	0.016295	51.27%
Si 288.158†	105.7	0.1388	mg/L	0.00359	0.6939	mg/L	0.01796	2.59%
Sn 189.927†	28.8	0.01328	mg/L	0.000991	0.06642	mg/L	0.004955	7.46%
Sr 421.552†	5273.1	0.01200	mg/L	0.000487	0.06001	mg/L	0.002437	4.06%
Ti 334.903†	661.4	0.05026	mg/L	0.000435	0.2513	mg/L	0.00217	0.86%
Tl 190.801†	-9.5	-0.00648	mg/L	0.001667	-0.03239	mg/L	0.008334	25.73%
V 292.402†	-75.4	0.00281	mg/L	0.000345	0.01407	mg/L	0.001725	12.26%
Zn 206.200†	11953.2	7.225	mg/L	0.0646	36.12	mg/L	0.323	0.89%

Sequence No.: 6
Sample ID: 20K0135-01RE1
Dilution: 10X
Wash Time: 37

DEL

Autosampler Location: 319
Date Collected: 11/18/2020 4:17:44 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0135-01RE1

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0135-01RE1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1434508.4	101.5	%	0.17				0.17%
ScR 361.383	154754.9	102.4	%	0.12				0.11%
Ag 328.068†	-56.3	-0.00039	mg/L	0.000353	-0.00387	mg/L	0.003534	91.28%
Al 308.215†	50996.4	55.10	mg/L	0.281	551.0	mg/L	2.81	0.51%
As 188.979†	-99.9	-0.07553	mg/L	0.003498	-0.7553	mg/L	0.03498	4.63%
B 249.677†	122.6	0.02706	mg/L	0.002451	0.2706	mg/L	0.02451	9.06%
Ba 233.527†	893.7	0.2464	mg/L	0.00150	2.464	mg/L	0.0150	0.61%
Be 313.042†	429.1	0.00064	mg/L	0.000106	0.00643	mg/L	0.001062	16.52%
Ca 317.933†	49044.3	8.383	mg/L	0.0381	83.83	mg/L	0.381	0.45%
Cd 228.802†	30.7	0.00147	mg/L	0.000038	0.01473	mg/L	0.000383	2.60%
Co 228.616†	537.7	0.02657	mg/L	0.000441	0.2657	mg/L	0.00441	1.66%
Cr 267.716†	232.5	0.1044	mg/L	0.00104	1.044	mg/L	0.0104	0.99%
Cu 324.752†	10764.1	0.07122	mg/L	0.000294	0.7122	mg/L	0.00294	0.41%
Fe 273.955†	54893.2	60.33	mg/L	0.321	603.3	mg/L	3.21	0.53%
K 766.490†	3508.3	3.152	mg/L	0.0297	31.52	mg/L	0.297	0.94%
Mg 279.077†	12412.9	17.47	mg/L	0.124	174.7	mg/L	1.24	0.71%
Mn 257.610†	30356.5	0.9261	mg/L	0.00762	9.261	mg/L	0.0762	0.82%
Mo 202.031†	20.8	0.00153	mg/L	0.000273	0.01527	mg/L	0.002728	17.87%
Na 589.592†	2954.4	0.3415	mg/L	0.00814	3.415	mg/L	0.0814	2.38%
Na 330.237†	-8.4	-0.1275	mg/L	0.29924	-1.275	mg/L	2.9924	234.61%
Ni 231.604†	220.4	0.1063	mg/L	0.00255	1.063	mg/L	0.0255	2.40%
Pb 220.353†	25.2	0.01477	mg/L	0.001291	0.1477	mg/L	0.01291	8.74%
Sb 206.836†	2.6	0.00308	mg/L	0.001499	0.03080	mg/L	0.014995	48.68%
Se 196.026†	-20.0	0.00391	mg/L	0.005486	0.03909	mg/L	0.054858	140.32%
Si 288.158†	460.8	0.5871	mg/L	0.00670	5.871	mg/L	0.0670	1.14%
Sn 189.927†	-4.2	0.00084	mg/L	0.001614	0.00844	mg/L	0.016136	191.18%
Sr 421.552†	32258.4	0.07342	mg/L	0.000464	0.7342	mg/L	0.00464	0.63%
Ti 334.903†	26627.9	2.050	mg/L	0.0100	20.50	mg/L	0.100	0.49%
Tl 190.801†	21.5	-0.01121	mg/L	0.002408	-0.1121	mg/L	0.02408	21.49%
V 292.402†	5860.6	0.1278	mg/L	0.00053	1.278	mg/L	0.0053	0.42%
Zn 206.200†	188.7	0.1138	mg/L	0.00316	1.138	mg/L	0.0316	2.77%

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Sequence No.: 7
Sample ID: 20K0135-02RE1
DEL
Dilution: 10X
Wash Time: 37

Autosampler Location: 320
Date Collected: 11/18/2020 4:22:00 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0135-02RE1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: 20K0135-02RE1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1420901.7	100.5	%	0.46				0.46%
ScR 361.383	152613.1	100.9	%	0.07				0.07%
Ag 328.068†	-38.5	-0.00026	mg/L	0.000162	-0.00260	mg/L	0.001620	62.26%
Al 308.215†	45683.1	49.36	mg/L	0.064	493.6	mg/L	0.64	0.13%
As 188.979†	-93.6	-0.07186	mg/L	0.003251	-0.7186	mg/L	0.03251	4.52%
B 249.677†	74.2	0.01722	mg/L	0.001014	0.1722	mg/L	0.01014	5.89%
Ba 233.527†	872.3	0.2422	mg/L	0.00073	2.422	mg/L	0.0073	0.30%
Be 313.042†	350.3	0.00052	mg/L	0.000010	0.00520	mg/L	0.000102	1.97%
Ca 317.933†	72333.1	12.36	mg/L	0.065	123.6	mg/L	0.65	0.52%
Cd 228.802†	31.5	0.00169	mg/L	0.000128	0.01686	mg/L	0.001276	7.57%
Co 228.616†	457.8	0.02220	mg/L	0.000207	0.2220	mg/L	0.00207	0.93%
Cr 267.716†	202.6	0.09050	mg/L	0.003176	0.9050	mg/L	0.03176	3.51%
Cu 324.752†	6593.6	0.04390	mg/L	0.000095	0.4390	mg/L	0.00095	0.22%
Fe 273.955†	43154.9	47.43	mg/L	0.096	474.3	mg/L	0.96	0.20%
K 766.490†	2129.0	1.913	mg/L	0.0092	19.13	mg/L	0.092	0.48%
Mg 279.077†	9822.1	13.82	mg/L	0.047	138.2	mg/L	0.47	0.34%
Mn 257.610†	27013.1	0.8242	mg/L	0.00067	8.242	mg/L	0.0067	0.08%
Mo 202.031†	19.5	0.00139	mg/L	0.000588	0.01390	mg/L	0.005882	42.31%
Na 589.592†	3059.3	0.3536	mg/L	0.00856	3.536	mg/L	0.0856	2.42%
Na 330.237†	-6.3	-0.02350	mg/L	0.688360	-0.2350	mg/L	6.88360	>999.9%
Ni 231.604†	182.7	0.08811	mg/L	0.001439	0.8811	mg/L	0.01439	1.63%
Pb 220.353†	45.3	0.01809	mg/L	0.000292	0.1809	mg/L	0.00292	1.61%
Sb 206.836†	0.4	0.00189	mg/L	0.000556	0.01886	mg/L	0.005560	29.47%
Se 196.026†	-11.3	0.01146	mg/L	0.013120	0.1146	mg/L	0.13120	114.46%
Si 288.158†	565.4	0.7253	mg/L	0.00669	7.253	mg/L	0.0669	0.92%
Sn 189.927†	-8.6	-0.00019	mg/L	0.001139	-0.00190	mg/L	0.011391	598.07%
Sr 421.552†	26273.2	0.05980	mg/L	0.000292	0.5980	mg/L	0.00292	0.49%
Ti 334.903†	25696.4	1.978	mg/L	0.0004	19.78	mg/L	0.004	0.02%
Tl 190.801†	13.7	-0.01427	mg/L	0.000468	-0.1427	mg/L	0.00468	3.28%
V 292.402†	4883.1	0.1061	mg/L	0.00081	1.061	mg/L	0.0081	0.76%
Zn 206.200†	203.4	0.1226	mg/L	0.00179	1.226	mg/L	0.0179	1.46%

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Sequence No.: 8 Autosampler Location: 321
Sample ID: 20K0135-03RE1 Date Collected: 11/18/2020 4:26:16 PM
Data Type: Original
Dilution: 10X DEL
Wash Time: 37 Auto Dilution Factor: 1

Nebulizer Parameters: 20K0135-03RE1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 20K0135-03RE1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1453136.5	102.8	%	0.53				0.52%
ScR 361.383	155130.9	102.6	%	1.17				1.14%
Ag 328.068†	-23.7	-0.00015	mg/L	0.000331	-0.00151	mg/L	0.003308	219.69%
Al 308.215†	42743.3	46.19	mg/L	0.402	461.9	mg/L	4.02	0.87%
As 188.979†	-94.5	-0.07565	mg/L	0.001699	-0.7565	mg/L	0.01699	2.25%
B 249.677†	50.5	0.01337	mg/L	0.000737	0.1337	mg/L	0.00737	5.51%
Ba 233.527†	904.6	0.2511	mg/L	0.00386	2.511	mg/L	0.0386	1.54%
Be 313.042†	289.7	0.00039	mg/L	0.000047	0.00388	mg/L	0.000474	12.21%
Ca 317.933†	67558.6	11.55	mg/L	0.090	115.5	mg/L	0.90	0.78%
Cd 228.802†	29.8	0.00155	mg/L	0.000089	0.01551	mg/L	0.000885	5.71%
Co 228.616†	471.1	0.02305	mg/L	0.000109	0.2305	mg/L	0.00109	0.47%
Cr 267.716†	195.4	0.08739	mg/L	0.001711	0.8739	mg/L	0.01711	1.96%
Cu 324.752†	7315.7	0.04863	mg/L	0.000209	0.4863	mg/L	0.00209	0.43%
Fe 273.955†	44978.4	49.44	mg/L	0.505	494.4	mg/L	5.05	1.02%
K 766.490†	2360.4	2.121	mg/L	0.0461	21.21	mg/L	0.461	2.18%
Mg 279.077†	10318.3	14.52	mg/L	0.104	145.2	mg/L	1.04	0.72%
Mn 257.610†	33744.9	1.030	mg/L	0.0082	10.30	mg/L	0.082	0.80%
Mo 202.031†	19.7	0.00140	mg/L	0.000225	0.01404	mg/L	0.002245	15.99%
Na 589.592†	3149.0	0.3640	mg/L	0.00487	3.640	mg/L	0.0487	1.34%
Na 330.237†	-6.4	-0.03827	mg/L	0.347134	-0.3827	mg/L	3.47134	906.96%
Ni 231.604†	173.5	0.08366	mg/L	0.001813	0.8366	mg/L	0.01813	2.17%
Pb 220.353†	92.2	0.02619	mg/L	0.001310	0.2619	mg/L	0.01310	5.00%
Sb 206.836†	0.3	0.00183	mg/L	0.002397	0.01832	mg/L	0.023974	130.83%
Se 196.026†	-13.4	0.00776	mg/L	0.005538	0.07756	mg/L	0.055384	71.41%
Si 288.158†	442.1	0.5636	mg/L	0.00682	5.636	mg/L	0.0682	1.21%
Sn 189.927†	0.4	0.00313	mg/L	0.001307	0.03129	mg/L	0.013069	41.77%
Sr 421.552†	26524.7	0.06037	mg/L	0.000479	0.6037	mg/L	0.00479	0.79%
Ti 334.903†	24938.5	1.920	mg/L	0.0157	19.20	mg/L	0.157	0.82%
Tl 190.801†	13.1	-0.01341	mg/L	0.002571	-0.1341	mg/L	0.02571	19.17%
V 292.402†	4828.1	0.1053	mg/L	0.00148	1.053	mg/L	0.0148	1.40%
Zn 206.200†	186.7	0.1126	mg/L	0.00131	1.126	mg/L	0.0131	1.16%

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Analysis Begun

Start Time: 11/18/2020 4:33:56 PM
Plasma On Time: 11/18/2020 9:28:48 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 322
Sample ID: 20K0255-01RE1
Date Collected: 11/18/2020 4:34:04 PM
Data Type: Original
Dilution: 2X

Nebulizer Parameters: 20K0255-01RE1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: 20K0255-01RE1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1376216.1	97.34	%	0.636				0.65%
ScR 361.383	148346.4	98.11	%	1.742				1.78%
Ag 328.068†	-11.0	-0.00008	mg/L	0.000590	-0.00016	mg/L	0.001179	722.68%
Al 308.215†	49.0	0.05117	mg/L	0.017934	0.1023	mg/L	0.03587	35.05%
As 188.979†	81.9	0.09158	mg/L	0.003482	0.1832	mg/L	0.00696	3.80%
B 249.677†	8773.5	1.537	mg/L	0.0065	3.074	mg/L	0.0130	0.42%
Ba 233.527†	205.5	0.05764	mg/L	0.000430	0.1153	mg/L	0.00086	0.75%
Be 313.042†	3.3	0.00001	mg/L	0.000032	0.00002	mg/L	0.000063	352.67%
Ca 317.933†	444336.1	75.95	mg/L	0.350	151.9	mg/L	0.70	0.46%
Cd 228.802†	134.1	0.00603	mg/L	0.000313	0.01206	mg/L	0.000626	5.19%
Co 228.616†	30.0	0.00165	mg/L	0.000280	0.00331	mg/L	0.000560	16.94%
Cr 267.716†	65.7	0.04431	mg/L	0.002532	0.08862	mg/L	0.005063	5.71%
Cu 324.752†	1725.6	0.01135	mg/L	0.000122	0.02270	mg/L	0.000243	1.07%
Fe 273.955†	6524.0	7.171	mg/L	0.0571	14.34	mg/L	0.114	0.80%
K 766.490†	8574.9	7.705	mg/L	0.0375	15.41	mg/L	0.075	0.49%
Mg 279.077†	1690.2	2.365	mg/L	0.0344	4.729	mg/L	0.0688	1.45%
Mn 257.610†	8561.6	0.2614	mg/L	0.00348	0.5229	mg/L	0.00696	1.33%
Mo 202.031†	616.5	0.05507	mg/L	0.000556	0.1101	mg/L	0.00111	1.01%
Na 589.592†	1602123.3	185.2	mg/L	1.69	370.4	mg/L	3.39	0.92%
Na 330.237†	3082.9	173.5	mg/L	2.56	347.0	mg/L	5.12	1.48%
Ni 231.604†	286.0	0.1379	mg/L	0.00073	0.2758	mg/L	0.00145	0.53%
Pb 220.353†	-0.8	-0.00058	mg/L	0.000411	-0.00116	mg/L	0.000821	70.65%
Sb 206.836†	8.8	0.00414	mg/L	0.003870	0.00828	mg/L	0.007740	93.50%
Se 196.026†	13.3	0.01518	mg/L	0.009032	0.03036	mg/L	0.018064	59.50%
Si 288.158†	958.6	1.264	mg/L	0.0161	2.527	mg/L	0.0322	1.27%
Sn 189.927†	-65.8	-0.01172	mg/L	0.000693	-0.02345	mg/L	0.001386	5.91%
Sr 421.552†	321257.0	0.7312	mg/L	0.00490	1.462	mg/L	0.0098	0.67%
Ti 334.903†	126.6	0.00566	mg/L	0.001059	0.01132	mg/L	0.002118	18.71%
Tl 190.801†	-58.0	-0.03550	mg/L	0.001393	-0.07100	mg/L	0.002785	3.92%
V 292.402†	-29.7	0.00078	mg/L	0.000113	0.00156	mg/L	0.000226	14.53%
Zn 206.200†	23.5	0.01206	mg/L	0.003122	0.02412	mg/L	0.006245	25.89%

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Analysis Begun

Start Time: 11/18/2020 4:39:34 PM
Plasma On Time: 11/18/2020 9:28:48 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 7
Sample ID: SEQ-CCV3
Date Collected: 11/18/2020 4:39:45 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SEQ-CCV3

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: SEQ-CCV3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1407027.4	99.52	%	0.336				0.34%
ScR 361.383	149709.3	99.01	%	0.874				0.88%
Ag 328.068†	142726.6	1.059	mg/L	0.0036	1.059	mg/L	0.0036	0.34%
Al 308.215†	1985.8	2.112	mg/L	0.0236	2.112	mg/L	0.0236	1.12%
As 188.979†	1176.6	1.927	mg/L	0.0093	1.927	mg/L	0.0093	0.49%
B 249.677†	5684.3	0.9946	mg/L	0.00801	0.9946	mg/L	0.00801	0.81%
Ba 233.527†	3558.8	1.015	mg/L	0.0063	1.015	mg/L	0.0063	0.62%
Be 313.042†	453399.6	1.000	mg/L	0.0030	1.000	mg/L	0.0030	0.30%
Ca 317.933†	11927.8	2.039	mg/L	0.0167	2.039	mg/L	0.0167	0.82%
Cd 228.802†	17005.4	0.9843	mg/L	0.00625	0.9843	mg/L	0.00625	0.64%
Co 228.616†	17432.0	0.9810	mg/L	0.00183	0.9810	mg/L	0.00183	0.19%
Cr 267.716†	2199.8	0.9715	mg/L	0.00582	0.9715	mg/L	0.00582	0.60%
Cu 324.752†	156018.6	1.004	mg/L	0.0043	1.004	mg/L	0.0043	0.43%
Fe 273.955†	1809.1	1.981	mg/L	0.0160	1.981	mg/L	0.0160	0.81%
K 766.490†	22273.3	20.01	mg/L	0.123	20.01	mg/L	0.123	0.62%
Mg 279.077†	1470.1	2.086	mg/L	0.0157	2.086	mg/L	0.0157	0.75%
Mn 257.610†	33744.1	1.031	mg/L	0.0074	1.031	mg/L	0.0074	0.72%
Mo 202.031†	10782.8	0.9864	mg/L	0.00269	0.9864	mg/L	0.00269	0.27%
Na 589.592†	443669.4	51.29	mg/L	0.325	51.29	mg/L	0.325	0.63%
Na 330.237†	925.6	51.92	mg/L	0.421	51.92	mg/L	0.421	0.81%
Ni 231.604†	1972.4	0.9525	mg/L	0.00636	0.9525	mg/L	0.00636	0.67%
Pb 220.353†	10491.0	2.024	mg/L	0.0015	2.024	mg/L	0.0015	0.07%
Sb 206.836†	3723.6	2.049	mg/L	0.0031	2.049	mg/L	0.0031	0.15%
Se 196.026†	1286.2	2.045	mg/L	0.0027	2.045	mg/L	0.0027	0.13%
Si 288.158†	1668.3	2.183	mg/L	0.0148	2.183	mg/L	0.0148	0.68%
Sn 189.927†	2579.7	0.9936	mg/L	0.00243	0.9936	mg/L	0.00243	0.25%
Sr 421.552†	440865.2	1.003	mg/L	0.0032	1.003	mg/L	0.0032	0.32%
Ti 334.903†	13087.8	1.007	mg/L	0.0031	1.007	mg/L	0.0031	0.31%
Tl 190.801†	2471.6	2.005	mg/L	0.0067	2.005	mg/L	0.0067	0.33%
V 292.402†	46806.4	0.9512	mg/L	0.00174	0.9512	mg/L	0.00174	0.18%
Zn 206.200†	1638.5	0.9899	mg/L	0.00606	0.9899	mg/L	0.00606	0.61%

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Sequence No.: 2
Sample ID: SEQ-CCB3

Autosampler Location: 1
Date Collected: 11/18/2020 4:45:11 PM
Data Type: Original

Dilution: 1X
Wash Time: 100

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB3

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCB3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1440159.3	101.9	%	0.23				0.23%
ScR 361.383	153210.6	101.3	%	0.86				0.85%
Ag 328.068†	-1.0	-0.00001	mg/L	0.000290	-0.00001	mg/L	0.000290	>999.9%
Al 308.215†	-9.5	-0.01028	mg/L	0.028296	-0.01028	mg/L	0.028296	275.18%
As 188.979†	4.1	0.00657	mg/L	0.002806	0.00657	mg/L	0.002806	42.72%
B 249.677†	45.0	0.00789	mg/L	0.001048	0.00789	mg/L	0.001048	13.29%
Ba 233.527†	-1.5	-0.00043	mg/L	0.000439	-0.00043	mg/L	0.000439	101.37%
Be 313.042†	-29.6	-0.00007	mg/L	0.000036	-0.00007	mg/L	0.000036	54.05%
Ca 317.933†	-7.3	-0.00125	mg/L	0.000617	-0.00125	mg/L	0.000617	49.35%
Cd 228.802†	1.1	0.00001	mg/L	0.000296	0.00001	mg/L	0.000296	>999.9%
Co 228.616†	-14.0	-0.00079	mg/L	0.000164	-0.00079	mg/L	0.000164	20.79%
Cr 267.716†	-2.7	-0.00121	mg/L	0.004493	-0.00121	mg/L	0.004493	371.17%
Cu 324.752†	76.0	0.00049	mg/L	0.000137	0.00049	mg/L	0.000137	28.05%
Fe 273.955†	-0.5	-0.00055	mg/L	0.002977	-0.00055	mg/L	0.002977	544.07%
K 766.490†	46.9	0.04216	mg/L	0.022924	0.04216	mg/L	0.022924	54.37%
Mg 279.077†	5.7	0.00801	mg/L	0.005626	0.00801	mg/L	0.005626	70.26%
Mn 257.610†	-1.7	-0.00005	mg/L	0.000096	-0.00005	mg/L	0.000096	190.82%
Mo 202.031†	2.3	0.00021	mg/L	0.000256	0.00021	mg/L	0.000256	119.73%
Na 589.592†	-30.4	-0.00352	mg/L	0.005031	-0.00352	mg/L	0.005031	142.93%
Na 330.237†	-12.8	-0.7233	mg/L	0.63348	-0.7233	mg/L	0.63348	87.58%
Ni 231.604†	-5.2	-0.00250	mg/L	0.001872	-0.00250	mg/L	0.001872	74.87%
Pb 220.353†	25.7	0.00495	mg/L	0.000938	0.00495	mg/L	0.000938	18.94%
Sb 206.836†	2.7	0.00154	mg/L	0.001171	0.00154	mg/L	0.001171	76.24%
Se 196.026†	1.8	0.00279	mg/L	0.003564	0.00279	mg/L	0.003564	127.87%
Si 288.158†	-2.7	-0.00353	mg/L	0.002888	-0.00353	mg/L	0.002888	81.78%
Sn 189.927†	2.9	0.00111	mg/L	0.001605	0.00111	mg/L	0.001605	144.95%
Sr 421.552†	-7.7	-0.00002	mg/L	0.000134	-0.00002	mg/L	0.000134	761.87%
Ti 334.903†	8.4	0.00065	mg/L	0.001399	0.00065	mg/L	0.001399	215.26%
Tl 190.801†	-4.5	-0.00371	mg/L	0.000639	-0.00371	mg/L	0.000639	17.24%
V 292.402†	9.7	0.00019	mg/L	0.000314	0.00019	mg/L	0.000314	167.09%
Zn 206.200†	5.4	0.00324	mg/L	0.001133	0.00324	mg/L	0.001133	34.97%

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Sequence No.: 3 **Autosampler Location: 323**
Sample ID: EF#1 TEST1 **Date Collected: 11/18/2020 4:49:27 PM**
DEL
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: EF#1 TEST1

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: EF#1 TEST1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1402379.4	99.19	%	0.482				0.49%
ScR 361.383	156331.8	103.4	%	0.11				0.10%
Ag 328.068†	-4.4	-0.00003	mg/L	0.000212	-0.00016	mg/L	0.001060	654.97%
Al 308.215†	-3.4	-0.00369	mg/L	0.012166	-0.01847	mg/L	0.060830	329.35%
As 188.979†	5.8	0.00933	mg/L	0.002853	0.04667	mg/L	0.014266	30.57%
B 249.677†	34.2	0.00600	mg/L	0.001394	0.03000	mg/L	0.006969	23.23%
Ba 233.527†	-1.7	-0.00047	mg/L	0.001045	-0.00237	mg/L	0.005225	220.03%
Be 313.042†	-61.6	-0.00014	mg/L	0.000036	-0.00068	mg/L	0.000182	26.65%
Ca 317.933†	15.6	0.00267	mg/L	0.003152	0.01333	mg/L	0.015762	118.25%
Cd 228.802†	8.7	0.00045	mg/L	0.000034	0.00225	mg/L	0.000169	7.52%
Co 228.616†	-19.4	-0.00110	mg/L	0.000304	-0.00549	mg/L	0.001522	27.73%
Cr 267.716†	12.3	0.03332	mg/L	0.002551	0.1666	mg/L	0.01275	7.66%
Cu 324.752†	164.1	0.00106	mg/L	0.000134	0.00528	mg/L	0.000670	12.69%
Fe 273.955†	2.3	0.00258	mg/L	0.001858	0.01290	mg/L	0.009291	72.00%
K 766.490†	69.9	0.06281	mg/L	0.033768	0.3141	mg/L	0.16884	53.76%
Mg 279.077†	4.2	0.00593	mg/L	0.004162	0.02964	mg/L	0.020811	70.20%
Mn 257.610†	-5.3	-0.00016	mg/L	0.000120	-0.00080	mg/L	0.000599	74.92%
Mo 202.031†	-0.7	-0.00006	mg/L	0.000176	-0.00031	mg/L	0.000880	287.15%
Na 589.592†	2761215.4	319.2	mg/L	5.26	1596	mg/L	26.29	1.65%
Na 330.237†	5383.2	302.9	mg/L	2.02	1515	mg/L	10.11	0.67%
Ni 231.604†	7.3	0.00354	mg/L	0.001363	0.01770	mg/L	0.006813	38.49%
Pb 220.353†	26.6	0.00513	mg/L	0.001100	0.02566	mg/L	0.005498	21.43%
Sb 206.836†	-1.3	-0.00079	mg/L	0.000819	-0.00395	mg/L	0.004095	103.76%
Se 196.026†	0.3	0.00053	mg/L	0.004087	0.00266	mg/L	0.020435	767.21%
Si 288.158†	-4.4	-0.00586	mg/L	0.011323	-0.02932	mg/L	0.056613	193.05%
Sn 189.927†	6.1	0.00233	mg/L	0.001179	0.01166	mg/L	0.005894	50.56%
Sr 421.552†	-16.8	-0.00004	mg/L	0.000029	-0.00019	mg/L	0.000144	75.21%
Ti 334.903†	7.5	0.00057	mg/L	0.001555	0.00286	mg/L	0.007773	271.50%
Tl 190.801†	-0.8	-0.00069	mg/L	0.002478	-0.00345	mg/L	0.012389	358.89%
V 292.402†	0.6	0.00005	mg/L	0.000583	0.00025	mg/L	0.002913	>999.9%
Zn 206.200†	4.9	0.00293	mg/L	0.000374	0.01467	mg/L	0.001868	12.73%

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Sequence No.: 4 **Autosampler Location: 324**
Sample ID: EF#1 TEST2 **Date Collected: 11/18/2020 4:54:01 PM**
DEL
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: EF#1 TEST2

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: EF#1 TEST2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1379833.6	97.60	%	0.166				0.17%
ScR 361.383	152907.6	101.1	%	0.56				0.55%
Ag 328.068†	37.9	0.00028	mg/L	0.000436	0.00140	mg/L	0.002181	155.29%
Al 308.215†	-6.1	-0.00656	mg/L	0.008191	-0.03279	mg/L	0.040953	124.88%
As 188.979†	5.5	0.00897	mg/L	0.002633	0.04484	mg/L	0.013166	29.36%
B 249.677†	20.4	0.00358	mg/L	0.001098	0.01789	mg/L	0.005490	30.69%
Ba 233.527†	-3.8	-0.00109	mg/L	0.001786	-0.00546	mg/L	0.008930	163.46%
Be 313.042†	-23.6	-0.00005	mg/L	0.000057	-0.00026	mg/L	0.000284	108.50%
Ca 317.933†	5.2	0.00089	mg/L	0.002262	0.00447	mg/L	0.011311	252.93%
Cd 228.802†	3.2	0.00013	mg/L	0.000207	0.00065	mg/L	0.001037	158.62%
Co 228.616†	-20.3	-0.00115	mg/L	0.000154	-0.00574	mg/L	0.000770	13.42%
Cr 267.716†	4.8	0.02965	mg/L	0.001077	0.1483	mg/L	0.00539	3.63%
Cu 324.752†	160.5	0.00103	mg/L	0.000174	0.00516	mg/L	0.000868	16.81%
Fe 273.955†	2.0	0.00220	mg/L	0.003984	0.01102	mg/L	0.019919	180.71%
K 766.490†	110.0	0.09880	mg/L	0.024788	0.4940	mg/L	0.12394	25.09%
Mg 279.077†	9.2	0.01298	mg/L	0.009838	0.06492	mg/L	0.049191	75.77%
Mn 257.610†	-6.1	-0.00019	mg/L	0.000161	-0.00093	mg/L	0.000806	86.70%
Mo 202.031†	2.2	0.00020	mg/L	0.000281	0.00102	mg/L	0.001407	138.46%
Na 589.592†	2721692.1	314.6	mg/L	12.92	1573	mg/L	64.60	4.11%
Na 330.237†	5272.3	296.7	mg/L	11.33	1484	mg/L	56.63	3.82%
Ni 231.604†	6.0	0.00291	mg/L	0.001506	0.01454	mg/L	0.007532	51.80%
Pb 220.353†	26.4	0.00509	mg/L	0.000257	0.02547	mg/L	0.001286	5.05%
Sb 206.836†	-1.3	-0.00074	mg/L	0.002741	-0.00368	mg/L	0.013703	371.91%
Se 196.026†	-0.4	-0.00063	mg/L	0.004018	-0.00314	mg/L	0.020088	639.16%
Si 288.158†	-0.6	-0.00086	mg/L	0.012060	-0.00430	mg/L	0.060302	>999.9%
Sn 189.927†	5.3	0.00204	mg/L	0.001465	0.01019	mg/L	0.007327	71.91%
Sr 421.552†	-12.4	-0.00003	mg/L	0.000066	-0.00014	mg/L	0.000330	233.33%
Ti 334.903†	14.4	0.00111	mg/L	0.001934	0.00555	mg/L	0.009670	174.10%
Tl 190.801†	-1.4	-0.00116	mg/L	0.000527	-0.00579	mg/L	0.002635	45.52%
V 292.402†	1.8	0.00005	mg/L	0.000111	0.00026	mg/L	0.000556	211.05%
Zn 206.200†	4.8	0.00291	mg/L	0.000945	0.01453	mg/L	0.004726	32.53%

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Analysis Begun

Start Time: 11/18/2020 5:02:37 PM
Logged In Analyst: Metals Instrument Controller
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/18/2020 9:28:48 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: 20K0196-01
Autosampler Location: 325
Date Collected: 11/18/2020 5:02:45 PM
Data Type: Original

Dilution: 5X

Nebulizer Parameters: 20K0196-01

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 20K0196-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1397441.1	98.84	%	0.147				0.15%
ScR 361.383	153402.2	101.5	%	0.73				0.72%
Ag 328.068†	-18.1	-0.00013	mg/L	0.000318	-0.00067	mg/L	0.001589	237.00%
Al 308.215†	61.8	0.06605	mg/L	0.008505	0.3303	mg/L	0.04253	12.88%
As 188.979†	65.7	0.08218	mg/L	0.001596	0.4109	mg/L	0.00798	1.94%
B 249.677†	84302.0	14.77	mg/L	0.021	73.85	mg/L	0.107	0.14%
Ba 233.527†	122.5	0.03498	mg/L	0.001143	0.1749	mg/L	0.00571	3.27%
Be 313.042†	-24.2	-0.00005	mg/L	0.000030	-0.00027	mg/L	0.000148	54.36%
Ca 317.933†	262393.1	44.85	mg/L	0.162	224.3	mg/L	0.81	0.36%
Cd 228.802†	63.0	0.00248	mg/L	0.000055	0.01241	mg/L	0.000276	2.23%
Co 228.616†	17.0	0.00094	mg/L	0.000259	0.00468	mg/L	0.001293	27.61%
Cr 267.716†	12.7	0.03638	mg/L	0.000661	0.1819	mg/L	0.00331	1.82%
Cu 324.752†	202000.3	1.300	mg/L	0.0075	6.500	mg/L	0.0377	0.58%
Fe 273.955†	15.3	0.01685	mg/L	0.000839	0.08425	mg/L	0.004196	4.98%
K 766.490†	1192.2	1.071	mg/L	0.0277	5.356	mg/L	0.1387	2.59%
Mg 279.077†	512.6	0.7141	mg/L	0.01232	3.570	mg/L	0.0616	1.73%
Mn 257.610†	3788.9	0.1158	mg/L	0.00093	0.5789	mg/L	0.00464	0.80%
Mo 202.031†	78.1	0.00637	mg/L	0.000118	0.03185	mg/L	0.000590	1.85%
Na 589.592†	3137664.2	362.7	mg/L	2.54	1814	mg/L	12.71	0.70%
Na 330.237†	6080.9	340.1	mg/L	0.30	1701	mg/L	1.48	0.09%
Ni 231.604†	105.5	0.05090	mg/L	0.001621	0.2545	mg/L	0.00810	3.18%
Pb 220.353†	1262.7	0.2415	mg/L	0.00100	1.208	mg/L	0.0050	0.41%
Sb 206.836†	13.8	0.00740	mg/L	0.003052	0.03698	mg/L	0.015260	41.27%
Se 196.026†	8.9	0.00929	mg/L	0.009398	0.04646	mg/L	0.046990	101.14%
Si 288.158†	714.1	0.9410	mg/L	0.01261	4.705	mg/L	0.0630	1.34%
Sn 189.927†	-43.9	-0.00886	mg/L	0.000232	-0.04429	mg/L	0.001159	2.62%
Sr 421.552†	16317.5	0.03714	mg/L	0.000112	0.1857	mg/L	0.00056	0.30%
Ti 334.903†	77.1	0.00355	mg/L	0.000839	0.01775	mg/L	0.004194	23.63%
Tl 190.801†	-43.6	-0.02876	mg/L	0.003161	-0.1438	mg/L	0.01581	10.99%
V 292.402†	17.4	0.00060	mg/L	0.000190	0.00299	mg/L	0.000952	31.88%
Zn 206.200†	9546.1	5.769	mg/L	0.0040	28.85	mg/L	0.020	0.07%

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Sequence No.: 2 **Autosampler Location: 326**
Sample ID: 20K0209-01 **Date Collected: 11/18/2020 5:07:26 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0209-01

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: 20K0209-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1368946.1	96.83	%	0.692				0.71%
ScR 361.383	153703.3	101.7	%	0.22				0.22%
Ag 328.068†	-12.9	-0.00010	mg/L	0.000225	-0.00048	mg/L	0.001125	234.11%
Al 308.215†	7.2	0.00531	mg/L	0.007155	0.02657	mg/L	0.035776	134.66%
As 188.979†	81.3	0.09045	mg/L	0.002596	0.4522	mg/L	0.01298	2.87%
B 249.677†	421.5	0.07315	mg/L	0.005771	0.3657	mg/L	0.02885	7.89%
Ba 233.527†	86.1	0.02211	mg/L	0.001172	0.1106	mg/L	0.00586	5.30%
Be 313.042†	-41.5	-0.00009	mg/L	0.000027	-0.00043	mg/L	0.000134	31.41%
Ca 317.933†	456800.5	78.08	mg/L	1.132	390.4	mg/L	5.66	1.45%
Cd 228.802†	58.9	0.00133	mg/L	0.000227	0.00664	mg/L	0.001135	17.09%
Co 228.616†	290.5	0.01635	mg/L	0.000442	0.08174	mg/L	0.002211	2.71%
Cr 267.716†	5.8	0.02607	mg/L	0.002171	0.1304	mg/L	0.01086	8.33%
Cu 324.752†	149.1	0.00157	mg/L	0.000240	0.00787	mg/L	0.001202	15.28%
Fe 273.955†	15536.7	17.08	mg/L	0.088	85.38	mg/L	0.438	0.51%
K 766.490†	682.6	0.6134	mg/L	0.00899	3.067	mg/L	0.0449	1.47%
Mg 279.077†	6786.0	9.548	mg/L	0.0633	47.74	mg/L	0.316	0.66%
Mn 257.610†	85057.2	2.598	mg/L	0.0200	12.99	mg/L	0.100	0.77%
Mo 202.031†	50.1	0.00313	mg/L	0.000487	0.01564	mg/L	0.002437	15.58%
Na 589.592†	2565045.4	296.5	mg/L	1.82	1483	mg/L	9.11	0.61%
Na 330.237†	4965.2	279.3	mg/L	1.67	1397	mg/L	8.33	0.60%
Ni 231.604†	242.6	0.1170	mg/L	0.00212	0.5851	mg/L	0.01059	1.81%
Pb 220.353†	18.7	0.00244	mg/L	0.000486	0.01221	mg/L	0.002428	19.88%
Sb 206.836†	4.8	0.00240	mg/L	0.002490	0.01200	mg/L	0.012448	103.77%
Se 196.026†	10.1	0.01287	mg/L	0.010236	0.06436	mg/L	0.051181	79.52%
Si 288.158†	2961.9	3.904	mg/L	0.0173	19.52	mg/L	0.087	0.44%
Sn 189.927†	-63.5	-0.01045	mg/L	0.001314	-0.05223	mg/L	0.006571	12.58%
Sr 421.552†	87409.6	0.1990	mg/L	0.00111	0.9948	mg/L	0.00553	0.56%
Ti 334.903†	94.0	0.00309	mg/L	0.000403	0.01543	mg/L	0.002014	13.05%
Tl 190.801†	-68.7	-0.04399	mg/L	0.003006	-0.2200	mg/L	0.01503	6.83%
V 292.402†	-126.3	0.00108	mg/L	0.000256	0.00542	mg/L	0.001282	23.67%
Zn 206.200†	514.9	0.3091	mg/L	0.00251	1.545	mg/L	0.0126	0.81%

Sequence No.: 3 **Autosampler Location: 327**
Sample ID: 20K0210-01 **Date Collected: 11/18/2020 5:11:58 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0210-01

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0210-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1348260.5	95.36	%	0.119				0.12%
ScR 361.383	150064.0	99.25	%	0.432				0.43%
Ag 328.068†	-60.4	-0.00045	mg/L	0.000516	-0.00225	mg/L	0.002580	114.77%
Al 308.215†	0.5	-0.00073	mg/L	0.010121	-0.00366	mg/L	0.050606	>999.9%
As 188.979†	91.7	0.09530	mg/L	0.002134	0.4765	mg/L	0.01067	2.24%
B 249.677†	468.8	0.08424	mg/L	0.001059	0.4212	mg/L	0.00530	1.26%
Ba 233.527†	54.4	0.01063	mg/L	0.001113	0.05317	mg/L	0.005567	10.47%
Be 313.042†	-40.9	-0.00008	mg/L	0.000025	-0.00038	mg/L	0.000124	32.14%
Ca 317.933†	586279.5	100.2	mg/L	0.39	501.1	mg/L	1.95	0.39%
Cd 228.802†	67.8	0.00116	mg/L	0.000237	0.00580	mg/L	0.001186	20.44%
Co 228.616†	264.6	0.01488	mg/L	0.000409	0.07439	mg/L	0.002047	2.75%
Cr 267.716†	1.3	0.02734	mg/L	0.003733	0.1367	mg/L	0.01867	13.65%
Cu 324.752†	7.1	0.00134	mg/L	0.000076	0.00671	mg/L	0.000379	5.65%
Fe 273.955†	30708.8	33.75	mg/L	0.259	168.8	mg/L	1.29	0.77%
K 766.490†	1152.3	1.035	mg/L	0.0239	5.177	mg/L	0.1194	2.31%
Mg 279.077†	5804.8	8.150	mg/L	0.0309	40.75	mg/L	0.154	0.38%
Mn 257.610†	89896.6	2.746	mg/L	0.0091	13.73	mg/L	0.045	0.33%
Mo 202.031†	55.9	0.00330	mg/L	0.000025	0.01649	mg/L	0.000125	0.76%
Na 589.592†	2736788.4	316.4	mg/L	1.64	1582	mg/L	8.22	0.52%
Na 330.237†	5255.0	295.7	mg/L	1.18	1479	mg/L	5.90	0.40%
Ni 231.604†	349.2	0.1684	mg/L	0.00502	0.8422	mg/L	0.02512	2.98%
Pb 220.353†	7.8	-0.00082	mg/L	0.001231	-0.00409	mg/L	0.006154	150.61%
Sb 206.836†	7.1	0.00365	mg/L	0.001643	0.01827	mg/L	0.008217	44.98%
Se 196.026†	11.2	0.01747	mg/L	0.005933	0.08734	mg/L	0.029666	33.97%
Si 288.158†	1539.8	2.030	mg/L	0.0305	10.15	mg/L	0.152	1.50%
Sn 189.927†	-77.7	-0.01196	mg/L	0.000871	-0.05978	mg/L	0.004357	7.29%
Sr 421.552†	81955.8	0.1865	mg/L	0.00032	0.9327	mg/L	0.00162	0.17%
Ti 334.903†	116.4	0.00364	mg/L	0.000463	0.01819	mg/L	0.002313	12.71%
Tl 190.801†	-80.6	-0.05017	mg/L	0.002891	-0.2509	mg/L	0.01445	5.76%
V 292.402†	-257.5	0.00022	mg/L	0.000146	0.00110	mg/L	0.000728	65.97%
Zn 206.200†	124.1	0.07221	mg/L	0.000791	0.3611	mg/L	0.00395	1.09%

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Sequence No.: 4
Sample ID: 20K0211-01

Dilution: 5X
Wash Time: 37

Autosampler Location: 328
Date Collected: 11/18/2020 5:16:30 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0211-01

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: 20K0211-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1364026.0	96.48	%	0.294				0.31%
ScR 361.383	147488.7	97.55	%	0.134				0.14%
Ag 328.068†	0.6	0.00000	mg/L	0.000020	0.00002	mg/L	0.000099	476.02%
Al 308.215†	-0.4	-0.00239	mg/L	0.013508	-0.01197	mg/L	0.067539	564.36%
As 188.979†	86.5	0.08971	mg/L	0.002991	0.4486	mg/L	0.01495	3.33%
B 249.677†	169.0	0.02802	mg/L	0.003114	0.1401	mg/L	0.01557	11.11%
Ba 233.527†	44.5	0.01228	mg/L	0.000476	0.06141	mg/L	0.002380	3.88%
Be 313.042†	-28.3	-0.00006	mg/L	0.000020	-0.00031	mg/L	0.000101	33.17%
Ca 317.933†	556681.8	95.15	mg/L	0.289	475.8	mg/L	1.44	0.30%
Cd 228.802†	54.6	0.00108	mg/L	0.000167	0.00542	mg/L	0.000835	15.41%
Co 228.616†	212.5	0.01195	mg/L	0.000342	0.05976	mg/L	0.001709	2.86%
Cr 267.716†	10.9	0.02821	mg/L	0.004070	0.1410	mg/L	0.02035	14.43%
Cu 324.752†	196.9	0.00130	mg/L	0.000271	0.00651	mg/L	0.001353	20.79%
Fe 273.955†	2585.4	2.842	mg/L	0.0192	14.21	mg/L	0.096	0.67%
K 766.490†	684.4	0.6149	mg/L	0.03560	3.075	mg/L	0.1780	5.79%
Mg 279.077†	7120.4	10.02	mg/L	0.061	50.12	mg/L	0.303	0.60%
Mn 257.610†	86822.8	2.652	mg/L	0.0205	13.26	mg/L	0.103	0.77%
Mo 202.031†	56.5	0.00341	mg/L	0.000078	0.01705	mg/L	0.000388	2.28%
Na 589.592†	2732978.0	315.9	mg/L	0.67	1580	mg/L	3.33	0.21%
Na 330.237†	5311.2	298.8	mg/L	2.16	1494	mg/L	10.81	0.72%
Ni 231.604†	173.9	0.08387	mg/L	0.001210	0.4194	mg/L	0.00605	1.44%
Pb 220.353†	4.7	0.00072	mg/L	0.001263	0.00361	mg/L	0.006317	175.17%
Sb 206.836†	-0.2	-0.00045	mg/L	0.001427	-0.00224	mg/L	0.007135	319.08%
Se 196.026†	19.9	0.02221	mg/L	0.004606	0.1110	mg/L	0.02303	20.74%
Si 288.158†	2312.4	3.048	mg/L	0.0089	15.24	mg/L	0.045	0.29%
Sn 189.927†	-73.1	-0.01111	mg/L	0.001356	-0.05554	mg/L	0.006779	12.21%
Sr 421.552†	68723.3	0.1564	mg/L	0.00041	0.7821	mg/L	0.00204	0.26%
Ti 334.903†	115.9	0.00387	mg/L	0.000647	0.01934	mg/L	0.003235	16.73%
Tl 190.801†	-79.1	-0.04978	mg/L	0.003835	-0.2489	mg/L	0.01917	7.70%
V 292.402†	-27.1	0.00152	mg/L	0.000269	0.00760	mg/L	0.001345	17.71%
Zn 206.200†	278.0	0.1654	mg/L	0.00164	0.8271	mg/L	0.00822	0.99%

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Sequence No.: 5 **Autosampler Location: 329**
Sample ID: BIK0508-DUP1 **Date Collected: 11/18/2020 5:21:19 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0508-DUP1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: BIK0508-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1448335.7	102.4	%	0.13				0.12%
ScR 361.383	153927.0	101.8	%	1.06				1.04%
Ag 328.068†	-53.7	-0.00041	mg/L	0.000412	-0.00203	mg/L	0.002058	101.52%
Al 308.215†	11.0	0.00893	mg/L	0.005584	0.04467	mg/L	0.027922	62.50%
As 188.979†	93.6	0.09595	mg/L	0.004478	0.4797	mg/L	0.02239	4.67%
B 249.677†	70.9	0.02618	mg/L	0.001520	0.1309	mg/L	0.00760	5.81%
Ba 233.527†	230.5	0.04118	mg/L	0.001716	0.2059	mg/L	0.00858	4.17%
Be 313.042†	23.0	0.00012	mg/L	0.000024	0.00060	mg/L	0.000120	20.06%
Ca 317.933†	612400.8	104.7	mg/L	1.31	523.4	mg/L	6.53	1.25%
Cd 228.802†	105.1	0.00036	mg/L	0.000372	0.00182	mg/L	0.001858	102.27%
Co 228.616†	559.9	0.03151	mg/L	0.000175	0.1575	mg/L	0.00087	0.55%
Cr 267.716†	-17.1	0.00559	mg/L	0.003921	0.02794	mg/L	0.019605	70.18%
Cu 324.752†	-1019.6	0.00026	mg/L	0.000129	0.00132	mg/L	0.000645	48.72%
Fe 273.955†	155265.9	170.7	mg/L	0.76	853.3	mg/L	3.78	0.44%
K 766.490†	1027.1	0.9229	mg/L	0.03803	4.614	mg/L	0.1901	4.12%
Mg 279.077†	5388.7	7.479	mg/L	0.0484	37.39	mg/L	0.242	0.65%
Mn 257.610†	96143.3	2.935	mg/L	0.0287	14.67	mg/L	0.144	0.98%
Mo 202.031†	38.7	0.00166	mg/L	0.000268	0.00829	mg/L	0.001339	16.14%
Na 589.592†	4280.5	0.4948	mg/L	0.05919	2.474	mg/L	0.2960	11.96%
Na 330.237†	-8.4	-0.7727	mg/L	0.22867	-3.864	mg/L	1.1433	29.59%
Ni 231.604†	531.4	0.2563	mg/L	0.00151	1.281	mg/L	0.0076	0.59%
Pb 220.353†	53.3	-0.00146	mg/L	0.002577	-0.00732	mg/L	0.012885	176.04%
Sb 206.836†	13.0	0.00701	mg/L	0.002293	0.03503	mg/L	0.011464	32.72%
Se 196.026†	-6.6	0.03128	mg/L	0.002050	0.1564	mg/L	0.01025	6.55%
Si 288.158†	3932.8	5.183	mg/L	0.0243	25.91	mg/L	0.121	0.47%
Sn 189.927†	-64.3	-0.00599	mg/L	0.002213	-0.02993	mg/L	0.011064	36.97%
Sr 421.552†	93584.6	0.2130	mg/L	0.00194	1.065	mg/L	0.0097	0.91%
Ti 334.903†	123.1	0.00392	mg/L	0.001136	0.01960	mg/L	0.005678	28.97%
Tl 190.801†	-74.4	-0.04441	mg/L	0.001583	-0.2221	mg/L	0.00792	3.56%
V 292.402†	-1314.5	-0.00536	mg/L	0.000227	-0.02680	mg/L	0.001135	4.23%
Zn 206.200†	1390.3	0.8375	mg/L	0.00806	4.188	mg/L	0.0403	0.96%

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Sequence No.: 6 **Autosampler Location: 330**
Sample ID: 20K0212-01 **Date Collected: 11/18/2020 5:25:58 PM**
Data Type: Original
Dilution: 5X
Wash Time: 60 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0212-01

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0212-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1426678.4	100.9	%	1.07				1.06%
ScR 361.383	154415.0	102.1	%	0.15				0.15%
Ag 328.068†	-19.4	-0.00015	mg/L	0.000268	-0.00076	mg/L	0.001339	177.02%
Al 308.215†	4.6	0.00231	mg/L	0.006826	0.01153	mg/L	0.034130	295.95%
As 188.979†	98.5	0.09532	mg/L	0.010030	0.4766	mg/L	0.05015	10.52%
B 249.677†	57.1	0.02653	mg/L	0.001550	0.1327	mg/L	0.00775	5.84%
Ba 233.527†	264.7	0.04726	mg/L	0.000848	0.2363	mg/L	0.00424	1.79%
Be 313.042†	28.1	0.00014	mg/L	0.000064	0.00070	mg/L	0.000321	46.15%
Ca 317.933†	707212.5	120.9	mg/L	0.77	604.4	mg/L	3.87	0.64%
Cd 228.802†	118.6	0.00037	mg/L	0.000463	0.00184	mg/L	0.002313	125.46%
Co 228.616†	631.2	0.03552	mg/L	0.000169	0.1776	mg/L	0.00085	0.48%
Cr 267.716†	-30.5	0.00173	mg/L	0.001011	0.00863	mg/L	0.005053	58.53%
Cu 324.752†	-1208.1	0.00008	mg/L	0.000071	0.00040	mg/L	0.000356	89.81%
Fe 273.955†	178622.1	196.3	mg/L	2.22	981.7	mg/L	11.10	1.13%
K 766.490†	1154.2	1.037	mg/L	0.0141	5.185	mg/L	0.0705	1.36%
Mg 279.077†	6125.4	8.500	mg/L	0.0408	42.50	mg/L	0.204	0.48%
Mn 257.610†	109497.1	3.342	mg/L	0.0076	16.71	mg/L	0.038	0.23%
Mo 202.031†	38.5	0.00135	mg/L	0.000237	0.00673	mg/L	0.001184	17.60%
Na 589.592†	3730.0	0.4312	mg/L	0.00330	2.156	mg/L	0.0165	0.77%
Na 330.237†	-9.6	-0.8866	mg/L	0.10517	-4.433	mg/L	0.5259	11.86%
Ni 231.604†	601.6	0.2902	mg/L	0.00472	1.451	mg/L	0.0236	1.63%
Pb 220.353†	55.2	-0.00288	mg/L	0.001341	-0.01439	mg/L	0.006705	46.60%
Sb 206.836†	27.0	0.01477	mg/L	0.001170	0.07384	mg/L	0.005852	7.92%
Se 196.026†	-16.5	0.02177	mg/L	0.005893	0.1089	mg/L	0.02947	27.07%
Si 288.158†	3642.5	4.800	mg/L	0.0961	24.00	mg/L	0.481	2.00%
Sn 189.927†	-69.7	-0.00519	mg/L	0.001577	-0.02594	mg/L	0.007886	30.40%
Sr 421.552†	106866.9	0.2432	mg/L	0.00085	1.216	mg/L	0.0042	0.35%
Ti 334.903†	120.7	0.00288	mg/L	0.000246	0.01438	mg/L	0.001231	8.55%
Tl 190.801†	-78.8	-0.04546	mg/L	0.002625	-0.2273	mg/L	0.01313	5.78%
V 292.402†	-1476.5	-0.00550	mg/L	0.000607	-0.02749	mg/L	0.003034	11.04%
Zn 206.200†	1578.0	0.9505	mg/L	0.00365	4.752	mg/L	0.0182	0.38%

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Sequence No.: 7 **Autosampler Location: 331**
Sample ID: BIK0508-MS1 **Date Collected: 11/18/2020 5:30:37 PM**
Data Type: Original
Dilution: 5X
Wash Time: 60 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0508-MS1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: BIK0508-MS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1406540.2	99.49	%	0.178				0.18%
ScR 361.383	149263.2	98.72	%	0.689				0.70%
Ag 328.068†	29843.6	0.2213	mg/L	0.00105	1.107	mg/L	0.0052	0.47%
Al 308.215†	823.5	0.8841	mg/L	0.01965	4.420	mg/L	0.0983	2.22%
As 188.979†	616.0	0.9279	mg/L	0.00611	4.640	mg/L	0.0306	0.66%
B 249.677†	55.9	0.02544	mg/L	0.001592	0.1272	mg/L	0.00796	6.26%
Ba 233.527†	3257.7	0.9018	mg/L	0.00451	4.509	mg/L	0.0226	0.50%
Be 313.042†	96192.3	0.2123	mg/L	0.00081	1.061	mg/L	0.0040	0.38%
Ca 317.933†	725747.1	124.1	mg/L	0.16	620.3	mg/L	0.81	0.13%
Cd 228.802†	3797.1	0.2104	mg/L	0.00086	1.052	mg/L	0.0043	0.41%
Co 228.616†	4286.7	0.2415	mg/L	0.00109	1.208	mg/L	0.0055	0.45%
Cr 267.716†	436.1	0.2064	mg/L	0.00339	1.032	mg/L	0.0170	1.64%
Cu 324.752†	31622.0	0.2114	mg/L	0.00119	1.057	mg/L	0.0059	0.56%
Fe 273.955†	179157.1	196.9	mg/L	0.61	984.6	mg/L	3.07	0.31%
K 766.490†	5813.2	5.223	mg/L	0.0080	26.12	mg/L	0.040	0.15%
Mg 279.077†	9246.0	12.90	mg/L	0.054	64.50	mg/L	0.269	0.42%
Mn 257.610†	117063.0	3.573	mg/L	0.0113	17.87	mg/L	0.057	0.32%
Mo 202.031†	42.2	0.00157	mg/L	0.000395	0.00787	mg/L	0.001977	25.12%
Na 589.592†	40042.2	4.629	mg/L	0.0255	23.14	mg/L	0.127	0.55%
Na 330.237†	67.4	3.382	mg/L	0.0187	16.91	mg/L	0.093	0.55%
Ni 231.604†	1008.1	0.4860	mg/L	0.00514	2.430	mg/L	0.0257	1.06%
Pb 220.353†	4374.1	0.8301	mg/L	0.00335	4.151	mg/L	0.0168	0.40%
Sb 206.836†	25.2	0.01092	mg/L	0.000296	0.05460	mg/L	0.001480	2.71%
Se 196.026†	531.2	0.8923	mg/L	0.00769	4.462	mg/L	0.0385	0.86%
Si 288.158†	4439.3	5.852	mg/L	0.0636	29.26	mg/L	0.318	1.09%
Sn 189.927†	-71.6	-0.00535	mg/L	0.000459	-0.02673	mg/L	0.002296	8.59%
Sr 421.552†	202644.0	0.4612	mg/L	0.00175	2.306	mg/L	0.0087	0.38%
Ti 334.903†	155.8	0.00536	mg/L	0.000829	0.02678	mg/L	0.004143	15.47%
Tl 190.801†	907.5	0.7581	mg/L	0.00444	3.790	mg/L	0.0222	0.59%
V 292.402†	8156.8	0.1907	mg/L	0.00174	0.9537	mg/L	0.00868	0.91%
Zn 206.200†	1888.6	1.138	mg/L	0.0053	5.691	mg/L	0.0264	0.46%

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Analysis Begun

Start Time: 11/18/2020 5:35:34 PM
Plasma On Time: 11/18/2020 9:28:48 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 332
Sample ID: OLD LEN BLK TEST DEL
Date Collected: 11/18/2020 5:35:42 PM
Data Type: Original
Dilution: 5X

Nebulizer Parameters: OLD LEN BLK TEST

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: OLD LEN BLK TEST

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1391304.2	98.41	%	0.529				0.54%
ScR 361.383	154137.7	101.9	%	1.14				1.12%
Ag 328.068†	5.1	0.00004	mg/L	0.000264	0.00019	mg/L	0.001321	695.49%
Al 308.215†	-53.1	-0.05742	mg/L	0.037028	-0.2871	mg/L	0.18514	64.48%
As 188.979†	4.8	0.00749	mg/L	0.002465	0.03746	mg/L	0.012326	32.91%
B 249.677†	230.0	0.04029	mg/L	0.001226	0.2014	mg/L	0.00613	3.04%
Ba 233.527†	19.9	0.00568	mg/L	0.000317	0.02841	mg/L	0.001587	5.59%
Be 313.042†	-77.2	-0.00017	mg/L	0.000040	-0.00085	mg/L	0.000202	23.61%
Ca 317.933†	1597.8	0.2731	mg/L	0.00507	1.366	mg/L	0.0254	1.86%
Cd 228.802†	4.6	0.00022	mg/L	0.000358	0.00109	mg/L	0.001792	164.38%
Co 228.616†	-25.6	-0.00144	mg/L	0.000087	-0.00720	mg/L	0.000435	6.04%
Cr 267.716†	12.9	0.03415	mg/L	0.003400	0.1707	mg/L	0.01700	9.96%
Cu 324.752†	201.4	0.00130	mg/L	0.000138	0.00649	mg/L	0.000692	10.67%
Fe 273.955†	32.9	0.03618	mg/L	0.029144	0.1809	mg/L	0.14572	80.56%
K 766.490†	136.7	0.1228	mg/L	0.03121	0.6142	mg/L	0.15603	25.40%
Mg 279.077†	55.2	0.07774	mg/L	0.005202	0.3887	mg/L	0.02601	6.69%
Mn 257.610†	8.7	0.00027	mg/L	0.000585	0.00133	mg/L	0.002924	219.26%
Mo 202.031†	4.0	0.00036	mg/L	0.000026	0.00180	mg/L	0.000129	7.17%
Na 589.592†	2817589.9	325.7	mg/L	1.79	1629	mg/L	8.95	0.55%
Na 330.237†	5316.7	299.2	mg/L	0.26	1496	mg/L	1.31	0.09%
Ni 231.604†	6.5	0.00312	mg/L	0.001861	0.01560	mg/L	0.009307	59.64%
Pb 220.353†	37.3	0.00719	mg/L	0.001284	0.03596	mg/L	0.006418	17.85%
Sb 206.836†	-1.0	-0.00065	mg/L	0.003673	-0.00324	mg/L	0.018366	566.51%
Se 196.026†	-3.1	-0.00495	mg/L	0.005826	-0.02473	mg/L	0.029130	117.78%
Si 288.158†	26.3	0.03464	mg/L	0.006005	0.1732	mg/L	0.03003	17.33%
Sn 189.927†	6.3	0.00247	mg/L	0.001059	0.01234	mg/L	0.005296	42.90%
Sr 421.552†	93.8	0.00021	mg/L	0.000042	0.00107	mg/L	0.000210	19.71%
Ti 334.903†	-24.3	-0.00189	mg/L	0.000821	-0.00944	mg/L	0.004106	43.51%
Tl 190.801†	-6.8	-0.00544	mg/L	0.002565	-0.02721	mg/L	0.012827	47.14%
V 292.402†	4.4	0.00014	mg/L	0.000284	0.00071	mg/L	0.001420	199.07%
Zn 206.200†	14.6	0.00880	mg/L	0.002332	0.04400	mg/L	0.011661	26.50%

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Sequence No.: 2 Autosampler Location: 7
Sample ID: SEQ-CCV4 Date Collected: 11/18/2020 5:40:21 PM
Data Type: Original
Dilution: 1X
Wash Time: 37 Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV4

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCV4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1429206.8	101.1	%	0.39				0.39%
ScR 361.383	151339.9	100.1	%	0.84				0.84%
Ag 328.068†	141883.0	1.052	mg/L	0.0015	1.052	mg/L	0.0015	0.15%
Al 308.215†	1935.0	2.057	mg/L	0.0290	2.057	mg/L	0.0290	1.41%
As 188.979†	1184.8	1.940	mg/L	0.0106	1.940	mg/L	0.0106	0.55%
B 249.677†	5593.9	0.9788	mg/L	0.00814	0.9788	mg/L	0.00814	0.83%
Ba 233.527†	3539.7	1.010	mg/L	0.0109	1.010	mg/L	0.0109	1.08%
Be 313.042†	453586.3	1.000	mg/L	0.0084	1.000	mg/L	0.0084	0.84%
Ca 317.933†	11989.1	2.049	mg/L	0.0098	2.049	mg/L	0.0098	0.48%
Cd 228.802†	17067.7	0.9878	mg/L	0.00726	0.9878	mg/L	0.00726	0.73%
Co 228.616†	17520.5	0.9860	mg/L	0.00300	0.9860	mg/L	0.00300	0.30%
Cr 267.716†	2163.5	0.9554	mg/L	0.00749	0.9554	mg/L	0.00749	0.78%
Cu 324.752†	154926.3	0.9967	mg/L	0.00326	0.9967	mg/L	0.00326	0.33%
Fe 273.955†	1816.4	1.989	mg/L	0.0185	1.989	mg/L	0.0185	0.93%
K 766.490†	22034.7	19.80	mg/L	0.178	19.80	mg/L	0.178	0.90%
Mg 279.077†	1468.6	2.084	mg/L	0.0332	2.084	mg/L	0.0332	1.60%
Mn 257.610†	33683.9	1.029	mg/L	0.0101	1.029	mg/L	0.0101	0.98%
Mo 202.031†	10806.3	0.9886	mg/L	0.00853	0.9886	mg/L	0.00853	0.86%
Na 589.592†	437789.9	50.61	mg/L	0.603	50.61	mg/L	0.603	1.19%
Na 330.237†	909.0	50.99	mg/L	0.295	50.99	mg/L	0.295	0.58%
Ni 231.604†	1951.0	0.9422	mg/L	0.00874	0.9422	mg/L	0.00874	0.93%
Pb 220.353†	10637.0	2.052	mg/L	0.0182	2.052	mg/L	0.0182	0.89%
Sb 206.836†	3735.7	2.057	mg/L	0.0123	2.057	mg/L	0.0123	0.60%
Se 196.026†	1305.5	2.076	mg/L	0.0108	2.076	mg/L	0.0108	0.52%
Si 288.158†	1671.1	2.186	mg/L	0.0235	2.186	mg/L	0.0235	1.08%
Sn 189.927†	2622.9	1.010	mg/L	0.0073	1.010	mg/L	0.0073	0.72%
Sr 421.552†	435996.7	0.9924	mg/L	0.01020	0.9924	mg/L	0.01020	1.03%
Ti 334.903†	13001.9	1.000	mg/L	0.0084	1.000	mg/L	0.0084	0.84%
Tl 190.801†	2488.6	2.019	mg/L	0.0139	2.019	mg/L	0.0139	0.69%
V 292.402†	47047.6	0.9560	mg/L	0.01315	0.9560	mg/L	0.01315	1.38%
Zn 206.200†	1649.9	0.9968	mg/L	0.00558	0.9968	mg/L	0.00558	0.56%

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Sequence No.: 3
Sample ID: SEQ-CCB4

Autosampler Location: 1
Date Collected: 11/18/2020 5:45:41 PM
Data Type: Original

Dilution: 1X
Wash Time: 100

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB4

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: SEQ-CCB4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1398011.0	98.88	%	0.301				0.30%
ScR 361.383	149862.8	99.12	%	0.143				0.14%
Ag 328.068†	-11.7	-0.00009	mg/L	0.000294	-0.00009	mg/L	0.000294	339.05%
Al 308.215†	-14.8	-0.01597	mg/L	0.027607	-0.01597	mg/L	0.027607	172.82%
As 188.979†	3.8	0.00615	mg/L	0.004551	0.00615	mg/L	0.004551	73.95%
B 249.677†	33.0	0.00579	mg/L	0.001653	0.00579	mg/L	0.001653	28.57%
Ba 233.527†	0.8	0.00024	mg/L	0.000376	0.00024	mg/L	0.000376	158.35%
Be 313.042†	-16.2	-0.00004	mg/L	0.000091	-0.00004	mg/L	0.000091	251.65%
Ca 317.933†	-10.2	-0.00174	mg/L	0.003424	-0.00174	mg/L	0.003424	196.67%
Cd 228.802†	2.4	0.00010	mg/L	0.000066	0.00010	mg/L	0.000066	67.27%
Co 228.616†	-23.0	-0.00130	mg/L	0.000282	-0.00130	mg/L	0.000282	21.64%
Cr 267.716†	-6.4	-0.00283	mg/L	0.002241	-0.00283	mg/L	0.002241	79.28%
Cu 324.752†	83.3	0.00054	mg/L	0.000126	0.00054	mg/L	0.000126	23.58%
Fe 273.955†	2.5	0.00278	mg/L	0.004470	0.00278	mg/L	0.004470	161.03%
K 766.490†	57.0	0.05122	mg/L	0.020665	0.05122	mg/L	0.020665	40.34%
Mg 279.077†	3.2	0.00455	mg/L	0.005904	0.00455	mg/L	0.005904	129.83%
Mn 257.610†	0.4	0.00001	mg/L	0.000014	0.00001	mg/L	0.000014	112.74%
Mo 202.031†	5.1	0.00047	mg/L	0.000242	0.00047	mg/L	0.000242	51.66%
Na 589.592†	464.8	0.05372	mg/L	0.012781	0.05372	mg/L	0.012781	23.79%
Na 330.237†	-3.5	-0.1968	mg/L	0.26235	-0.1968	mg/L	0.26235	133.28%
Ni 231.604†	-5.1	-0.00246	mg/L	0.001451	-0.00246	mg/L	0.001451	58.87%
Pb 220.353†	35.7	0.00688	mg/L	0.000640	0.00688	mg/L	0.000640	9.30%
Sb 206.836†	3.5	0.00204	mg/L	0.001634	0.00204	mg/L	0.001634	80.11%
Se 196.026†	0.8	0.00130	mg/L	0.001876	0.00130	mg/L	0.001876	144.14%
Si 288.158†	-2.5	-0.00329	mg/L	0.003628	-0.00329	mg/L	0.003628	110.22%
Sn 189.927†	9.4	0.00362	mg/L	0.000220	0.00362	mg/L	0.000220	6.07%
Sr 421.552†	11.4	0.00003	mg/L	0.000031	0.00003	mg/L	0.000031	118.51%
Ti 334.903†	29.1	0.00224	mg/L	0.002525	0.00224	mg/L	0.002525	112.64%
Tl 190.801†	-4.4	-0.00359	mg/L	0.001506	-0.00359	mg/L	0.001506	41.96%
V 292.402†	10.7	0.00020	mg/L	0.000094	0.00020	mg/L	0.000094	47.59%
Zn 206.200†	5.3	0.00320	mg/L	0.001319	0.00320	mg/L	0.001319	41.22%

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Sequence No.: 4 **Autosampler Location: 333**
Sample ID: 20K0135-01RE1 **Date Collected: 11/18/2020 5:49:57 PM**
Data Type: Original
DEL
Dilution: 20X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0135-01RE1

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0135-01RE1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1408345.7	99.61	%	0.219				0.22%
ScR 361.383	150127.0	99.29	%	0.495				0.50%
Ag 328.068†	-34.5	-0.00024	mg/L	0.000237	-0.00482	mg/L	0.004730	98.22%
Al 308.215†	25897.1	27.98	mg/L	0.046	559.7	mg/L	0.92	0.16%
As 188.979†	-52.2	-0.04054	mg/L	0.006042	-0.8107	mg/L	0.12085	14.91%
B 249.677†	30.4	0.00806	mg/L	0.002252	0.1611	mg/L	0.04503	27.95%
Ba 233.527†	451.7	0.1246	mg/L	0.00161	2.493	mg/L	0.0322	1.29%
Be 313.042†	168.2	0.00022	mg/L	0.000022	0.00437	mg/L	0.000433	9.90%
Ca 317.933†	24414.3	4.173	mg/L	0.0110	83.46	mg/L	0.219	0.26%
Cd 228.802†	12.2	0.00058	mg/L	0.000075	0.01150	mg/L	0.001490	12.96%
Co 228.616†	260.8	0.01279	mg/L	0.000047	0.2559	mg/L	0.00094	0.37%
Cr 267.716†	118.7	0.05320	mg/L	0.002710	1.064	mg/L	0.0542	5.09%
Cu 324.752†	5443.5	0.03599	mg/L	0.000202	0.7199	mg/L	0.00403	0.56%
Fe 273.955†	27315.2	30.02	mg/L	0.048	600.5	mg/L	0.97	0.16%
K 766.490†	1778.0	1.598	mg/L	0.0544	31.95	mg/L	1.088	3.40%
Mg 279.077†	6305.4	8.873	mg/L	0.0219	177.5	mg/L	0.44	0.25%
Mn 257.610†	15488.7	0.4725	mg/L	0.00218	9.451	mg/L	0.0437	0.46%
Mo 202.031†	7.4	0.00048	mg/L	0.000422	0.00970	mg/L	0.008438	86.99%
Na 589.592†	1644.3	0.1901	mg/L	0.00509	3.801	mg/L	0.1018	2.68%
Na 330.237†	-1.5	0.09100	mg/L	0.659203	1.820	mg/L	13.1841	724.44%
Ni 231.604†	107.5	0.05182	mg/L	0.003156	1.036	mg/L	0.0631	6.09%
Pb 220.353†	34.5	0.01172	mg/L	0.000422	0.2344	mg/L	0.00843	3.60%
Sb 206.836†	2.0	0.00196	mg/L	0.001456	0.03912	mg/L	0.029130	74.46%
Se 196.026†	-9.5	0.00280	mg/L	0.003468	0.05597	mg/L	0.069365	123.92%
Si 288.158†	281.0	0.3601	mg/L	0.00830	7.201	mg/L	0.1659	2.30%
Sn 189.927†	0.2	0.00133	mg/L	0.002469	0.02660	mg/L	0.049389	185.67%
Sr 421.552†	16577.9	0.03773	mg/L	0.000207	0.7547	mg/L	0.00413	0.55%
Ti 334.903†	13581.2	1.046	mg/L	0.0041	20.91	mg/L	0.083	0.39%
Tl 190.801†	3.3	-0.01197	mg/L	0.000901	-0.2394	mg/L	0.01801	7.52%
V 292.402†	2935.2	0.06401	mg/L	0.000591	1.280	mg/L	0.0118	0.92%
Zn 206.200†	96.2	0.05803	mg/L	0.001908	1.161	mg/L	0.0382	3.29%

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Sequence No.: 5 **Autosampler Location: 334**
Sample ID: 20K0135-02RE1 **Date Collected: 11/18/2020 5:54:13 PM**
DEL
Data Type: Original
Dilution: 20X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0135-02RE1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 20K0135-02RE1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1425460.8	100.8	%	0.64				0.63%
ScR 361.383	151780.8	100.4	%	0.35				0.35%
Ag 328.068†	-28.6	-0.00020	mg/L	0.000307	-0.00399	mg/L	0.006147	153.93%
Al 308.215†	23196.7	25.06	mg/L	0.118	501.3	mg/L	2.37	0.47%
As 188.979†	-49.5	-0.03921	mg/L	0.003345	-0.7843	mg/L	0.06689	8.53%
B 249.677†	7.7	0.00344	mg/L	0.002140	0.06884	mg/L	0.042798	62.17%
Ba 233.527†	448.8	0.1247	mg/L	0.00308	2.493	mg/L	0.0615	2.47%
Be 313.042†	152.7	0.00021	mg/L	0.000044	0.00419	mg/L	0.000879	21.00%
Ca 317.933†	36754.0	6.282	mg/L	0.0182	125.6	mg/L	0.36	0.29%
Cd 228.802†	13.3	0.00072	mg/L	0.000241	0.01446	mg/L	0.004826	33.38%
Co 228.616†	219.9	0.01054	mg/L	0.000221	0.2109	mg/L	0.00442	2.10%
Cr 267.716†	100.6	0.04494	mg/L	0.001292	0.8988	mg/L	0.02585	2.88%
Cu 324.752†	3381.2	0.02249	mg/L	0.000286	0.4498	mg/L	0.00573	1.27%
Fe 273.955†	21701.0	23.85	mg/L	0.152	477.0	mg/L	3.04	0.64%
K 766.490†	1097.8	0.9864	mg/L	0.03526	19.73	mg/L	0.705	3.57%
Mg 279.077†	5045.6	7.100	mg/L	0.0644	142.0	mg/L	1.29	0.91%
Mn 257.610†	13904.5	0.4242	mg/L	0.00340	8.485	mg/L	0.0681	0.80%
Mo 202.031†	15.2	0.00119	mg/L	0.000138	0.02372	mg/L	0.002753	11.61%
Na 589.592†	1669.7	0.1930	mg/L	0.00204	3.860	mg/L	0.0407	1.06%
Na 330.237†	-4.3	-0.07655	mg/L	0.704804	-1.531	mg/L	14.0961	920.75%
Ni 231.604†	90.6	0.04370	mg/L	0.003553	0.8740	mg/L	0.07105	8.13%
Pb 220.353†	37.9	0.01208	mg/L	0.000988	0.2415	mg/L	0.01976	8.18%
Sb 206.836†	3.4	0.00276	mg/L	0.001227	0.05515	mg/L	0.024535	44.49%
Se 196.026†	-6.9	0.00386	mg/L	0.003207	0.07725	mg/L	0.064132	83.02%
Si 288.158†	319.3	0.4106	mg/L	0.01672	8.212	mg/L	0.3344	4.07%
Sn 189.927†	-0.5	0.00140	mg/L	0.000855	0.02802	mg/L	0.017104	61.05%
Sr 421.552†	13518.4	0.03077	mg/L	0.000240	0.6154	mg/L	0.00480	0.78%
Ti 334.903†	13174.3	1.014	mg/L	0.0056	20.29	mg/L	0.113	0.56%
Tl 190.801†	6.0	-0.00803	mg/L	0.003235	-0.1607	mg/L	0.06471	40.28%
V 292.402†	2456.8	0.05339	mg/L	0.000618	1.068	mg/L	0.0124	1.16%
Zn 206.200†	107.4	0.06473	mg/L	0.001853	1.295	mg/L	0.0371	2.86%

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Sequence No.: 6 **Autosampler Location: 335**
Sample ID: 20K0135-03RE1 **Date Collected: 11/18/2020 5:58:29 PM**
DEL **Data Type: Original**
Dilution: 20X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0135-03RE1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: 20K0135-03RE1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1452159.4	102.7	%	0.32				0.31%
ScR 361.383	156748.0	103.7	%	0.78				0.76%
Ag 328.068†	24.5	0.00019	mg/L	0.000070	0.00388	mg/L	0.001402	36.16%
Al 308.215†	21401.5	23.12	mg/L	0.131	462.5	mg/L	2.63	0.57%
As 188.979†	-49.2	-0.04049	mg/L	0.004679	-0.8097	mg/L	0.09358	11.56%
B 249.677†	24.3	0.00651	mg/L	0.000543	0.1303	mg/L	0.01087	8.34%
Ba 233.527†	452.5	0.1256	mg/L	0.00149	2.512	mg/L	0.0298	1.19%
Be 313.042†	142.0	0.00019	mg/L	0.000095	0.00376	mg/L	0.001893	50.30%
Ca 317.933†	34334.8	5.869	mg/L	0.0160	117.4	mg/L	0.32	0.27%
Cd 228.802†	13.4	0.00071	mg/L	0.000089	0.01411	mg/L	0.001770	12.54%
Co 228.616†	229.8	0.01118	mg/L	0.000099	0.2236	mg/L	0.00198	0.89%
Cr 267.716†	100.5	0.04484	mg/L	0.001811	0.8967	mg/L	0.03621	4.04%
Cu 324.752†	3676.4	0.02443	mg/L	0.000260	0.4886	mg/L	0.00521	1.07%
Fe 273.955†	22528.0	24.76	mg/L	0.215	495.2	mg/L	4.31	0.87%
K 766.490†	1201.8	1.080	mg/L	0.0211	21.60	mg/L	0.422	1.95%
Mg 279.077†	5519.6	7.768	mg/L	0.0604	155.4	mg/L	1.21	0.78%
Mn 257.610†	17164.1	0.5238	mg/L	0.00231	10.48	mg/L	0.046	0.44%
Mo 202.031†	7.3	0.00047	mg/L	0.000188	0.00933	mg/L	0.003768	40.38%
Na 589.592†	1685.8	0.1949	mg/L	0.00454	3.897	mg/L	0.0909	2.33%
Na 330.237†	-12.7	-0.5554	mg/L	0.19184	-11.11	mg/L	3.837	34.54%
Ni 231.604†	83.9	0.04046	mg/L	0.002451	0.8093	mg/L	0.04901	6.06%
Pb 220.353†	64.8	0.01670	mg/L	0.001205	0.3340	mg/L	0.02409	7.21%
Sb 206.836†	-2.0	-0.00024	mg/L	0.002612	-0.00488	mg/L	0.052239	>999.9%
Se 196.026†	-7.9	0.00206	mg/L	0.005013	0.04115	mg/L	0.100263	243.67%
Si 288.158†	234.4	0.2993	mg/L	0.00738	5.986	mg/L	0.1477	2.47%
Sn 189.927†	2.8	0.00259	mg/L	0.000644	0.05182	mg/L	0.012877	24.85%
Sr 421.552†	13396.4	0.03049	mg/L	0.000038	0.6098	mg/L	0.00076	0.12%
Ti 334.903†	12624.3	0.9719	mg/L	0.00769	19.44	mg/L	0.154	0.79%
Tl 190.801†	3.1	-0.00951	mg/L	0.001985	-0.1902	mg/L	0.03970	20.87%
V 292.402†	2409.9	0.05265	mg/L	0.000603	1.053	mg/L	0.0121	1.15%
Zn 206.200†	97.6	0.05882	mg/L	0.001291	1.176	mg/L	0.0258	2.19%

Sequence No.: 7
Sample ID: 20K0126-06 DEL
Dilution: 5X
Wash Time: 37

Autosampler Location: 336
Date Collected: 11/18/2020 6:02:45 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0126-06

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: 20K0126-06

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1411863.7	99.86	%	0.309				0.31%
ScR 361.383	154163.6	102.0	%	0.09				0.09%
Ag 328.068†	1759.0	0.01306	mg/L	0.000260	0.06531	mg/L	0.001302	1.99%
Al 308.215†	24847.5	26.85	mg/L	0.027	134.2	mg/L	0.14	0.10%
As 188.979†	58.4	0.1605	mg/L	0.01005	0.8025	mg/L	0.05027	6.26%
B 249.677†	65.4	0.02508	mg/L	0.004023	0.1254	mg/L	0.02012	16.04%
Ba 233.527†	530.2	0.1306	mg/L	0.00181	0.6528	mg/L	0.00904	1.39%
Be 313.042†	205.3	0.00027	mg/L	0.000007	0.00135	mg/L	0.000035	2.55%
Ca 317.933†	81497.9	13.93	mg/L	0.048	69.65	mg/L	0.238	0.34%
Cd 228.802†	105.9	0.00337	mg/L	0.000092	0.01684	mg/L	0.000459	2.72%
Co 228.616†	185.0	0.00696	mg/L	0.000094	0.03482	mg/L	0.000470	1.35%
Cr 267.716†	162.0	0.1323	mg/L	0.00063	0.6614	mg/L	0.00317	0.48%
Cu 324.752†	3759813.3	24.20	mg/L	0.020	121.0	mg/L	0.10	0.08%
Fe 273.955†	130366.2	143.3	mg/L	1.04	716.4	mg/L	5.20	0.73%
K 766.490†	2138.8	1.922	mg/L	0.0221	9.609	mg/L	0.1103	1.15%
Mg 279.077†	5449.8	7.597	mg/L	0.0184	37.98	mg/L	0.092	0.24%
Mn 257.610†	34145.0	1.046	mg/L	0.0033	5.228	mg/L	0.0167	0.32%
Mo 202.031†	42.6	0.00355	mg/L	0.000517	0.01776	mg/L	0.002586	14.56%
Na 589.592†	47294.1	5.467	mg/L	0.0030	27.34	mg/L	0.015	0.05%
Na 330.237†	87.9	5.185	mg/L	0.3886	25.93	mg/L	1.943	7.49%
Ni 231.604†	2169.7	1.070	mg/L	0.0021	5.351	mg/L	0.0107	0.20%
Pb 220.353†	190447.5	36.68	mg/L	0.081	183.4	mg/L	0.41	0.22%
Sb 206.836†	49301.6	28.76	mg/L	0.119	143.8	mg/L	0.60	0.41%
Se 196.026†	-47.7	-0.02401	mg/L	0.002089	-0.1200	mg/L	0.01045	8.70%
Si 288.158†	736.9	-0.7029	mg/L	0.02530	-3.514	mg/L	0.1265	3.60%
Sn 189.927†	481317.5	185.2	mg/L	0.11	926.2	mg/L	0.57	0.06%
Sr 421.552†	62286.7	0.1418	mg/L	0.00010	0.7088	mg/L	0.00052	0.07%
Ti 334.903†	23623.4	1.819	mg/L	0.0014	9.093	mg/L	0.0068	0.07%
Tl 190.801†	55.2	0.01646	mg/L	0.001490	0.08231	mg/L	0.007448	9.05%
V 292.402†	3512.0	0.09056	mg/L	0.002167	0.4528	mg/L	0.01083	2.39%
Zn 206.200†	479.3	0.2912	mg/L	0.00134	1.456	mg/L	0.0067	0.46%

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Sequence No.: 8 **Autosampler Location: 337**
Sample ID: 20K0126-02 **Date Collected: 11/18/2020 6:07:03 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0126-02

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0126-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1430055.1	101.2	%	0.33				0.33%
ScR 361.383	153593.6	101.6	%	0.73				0.72%
Ag 328.068†	-139.9	-0.00097	mg/L	0.000098	-0.00195	mg/L	0.000196	10.08%
Al 308.215†	77238.7	83.45	mg/L	0.339	166.9	mg/L	0.68	0.41%
As 188.979†	-261.2	-0.2162	mg/L	0.00222	-0.4325	mg/L	0.00445	1.03%
B 249.677†	76.2	0.02276	mg/L	0.002267	0.04552	mg/L	0.004534	9.96%
Ba 233.527†	917.4	0.2472	mg/L	0.00340	0.4943	mg/L	0.00680	1.38%
Be 313.042†	580.2	0.00064	mg/L	0.000055	0.00127	mg/L	0.000109	8.58%
Ca 317.933†	186497.4	31.88	mg/L	0.139	63.76	mg/L	0.278	0.44%
Cd 228.802†	58.4	0.00358	mg/L	0.000154	0.00716	mg/L	0.000307	4.29%
Co 228.616†	616.6	0.02487	mg/L	0.000335	0.04974	mg/L	0.000670	1.35%
Cr 267.716†	247.2	0.1153	mg/L	0.00162	0.2307	mg/L	0.00324	1.40%
Cu 324.752†	15095.1	0.1002	mg/L	0.00038	0.2003	mg/L	0.00077	0.38%
Fe 273.955†	92375.4	101.5	mg/L	0.27	203.1	mg/L	0.54	0.27%
K 766.490†	4182.9	3.758	mg/L	0.0620	7.517	mg/L	0.1239	1.65%
Mg 279.077†	11601.8	16.29	mg/L	0.041	32.59	mg/L	0.082	0.25%
Mn 257.610†	29863.2	0.9103	mg/L	0.00341	1.821	mg/L	0.0068	0.37%
Mo 202.031†	72.2	0.00584	mg/L	0.000212	0.01168	mg/L	0.000425	3.64%
Na 589.592†	103744.2	11.99	mg/L	0.036	23.99	mg/L	0.072	0.30%
Na 330.237†	201.5	12.30	mg/L	0.136	24.61	mg/L	0.273	1.11%
Ni 231.604†	103.7	0.05004	mg/L	0.000471	0.1001	mg/L	0.00094	0.94%
Pb 220.353†	292.0	0.07052	mg/L	0.001369	0.1410	mg/L	0.00274	1.94%
Sb 206.836†	62.4	0.04240	mg/L	0.017969	0.08479	mg/L	0.035938	42.38%
Se 196.026†	-32.4	0.00368	mg/L	0.006011	0.00736	mg/L	0.012021	163.43%
Si 288.158†	794.3	0.9884	mg/L	0.02265	1.977	mg/L	0.0453	2.29%
Sn 189.927†	294.1	0.1214	mg/L	0.06288	0.2429	mg/L	0.12577	51.78%
Sr 421.552†	168800.5	0.3842	mg/L	0.00151	0.7684	mg/L	0.00302	0.39%
Ti 334.903†	70755.1	5.448	mg/L	0.0174	10.90	mg/L	0.035	0.32%
Tl 190.801†	22.8	-0.02990	mg/L	0.001604	-0.05980	mg/L	0.003208	5.37%
V 292.402†	12381.5	0.2636	mg/L	0.00233	0.5272	mg/L	0.00466	0.88%
Zn 206.200†	290.6	0.1748	mg/L	0.00229	0.3496	mg/L	0.00458	1.31%

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Sequence No.: 9 **Autosampler Location: 338**
Sample ID: 20K0126-07 **Date Collected: 11/18/2020 6:11:19 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0126-07

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: 20K0126-07

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1451158.8	102.6	%	0.35				0.34%
ScR 361.383	153557.2	101.6	%	0.36				0.35%
Ag 328.068†	-152.2	-0.00105	mg/L	0.000170	-0.00211	mg/L	0.000339	16.12%
Al 308.215†	67738.2	73.19	mg/L	0.152	146.4	mg/L	0.30	0.21%
As 188.979†	-249.7	-0.2067	mg/L	0.00762	-0.4133	mg/L	0.01524	3.69%
B 249.677†	106.6	0.02642	mg/L	0.001164	0.05284	mg/L	0.002328	4.41%
Ba 233.527†	776.9	0.2091	mg/L	0.00111	0.4183	mg/L	0.00222	0.53%
Be 313.042†	691.5	0.00077	mg/L	0.000052	0.00153	mg/L	0.000104	6.80%
Ca 317.933†	191934.1	32.81	mg/L	0.298	65.61	mg/L	0.596	0.91%
Cd 228.802†	56.5	0.00366	mg/L	0.000109	0.00733	mg/L	0.000218	2.98%
Co 228.616†	737.8	0.03199	mg/L	0.000378	0.06398	mg/L	0.000755	1.18%
Cr 267.716†	284.8	0.1309	mg/L	0.00381	0.2618	mg/L	0.00761	2.91%
Cu 324.752†	14917.8	0.09846	mg/L	0.000172	0.1969	mg/L	0.00034	0.17%
Fe 273.955†	78812.1	86.62	mg/L	0.610	173.2	mg/L	1.22	0.70%
K 766.490†	4083.3	3.669	mg/L	0.0430	7.338	mg/L	0.0859	1.17%
Mg 279.077†	11084.7	15.57	mg/L	0.081	31.15	mg/L	0.162	0.52%
Mn 257.610†	27520.8	0.8390	mg/L	0.00491	1.678	mg/L	0.0098	0.59%
Mo 202.031†	125.4	0.01070	mg/L	0.000268	0.02140	mg/L	0.000537	2.51%
Na 589.592†	136344.1	15.76	mg/L	0.097	31.52	mg/L	0.195	0.62%
Na 330.237†	267.8	16.00	mg/L	0.690	32.01	mg/L	1.379	4.31%
Ni 231.604†	110.8	0.05342	mg/L	0.002901	0.1068	mg/L	0.00580	5.43%
Pb 220.353†	107.8	0.03348	mg/L	0.001244	0.06695	mg/L	0.002488	3.72%
Sb 206.836†	8.1	0.01136	mg/L	0.002722	0.02271	mg/L	0.005445	23.97%
Se 196.026†	-23.9	0.00902	mg/L	0.005332	0.01804	mg/L	0.010665	59.11%
Si 288.158†	1009.2	1.274	mg/L	0.0045	2.548	mg/L	0.0091	0.36%
Sn 189.927†	56.5	0.03010	mg/L	0.003235	0.06020	mg/L	0.006471	10.75%
Sr 421.552†	154687.2	0.3521	mg/L	0.00085	0.7042	mg/L	0.00171	0.24%
Ti 334.903†	68697.0	5.289	mg/L	0.0119	10.58	mg/L	0.024	0.22%
Tl 190.801†	11.5	-0.03439	mg/L	0.002334	-0.06877	mg/L	0.004668	6.79%
V 292.402†	14601.0	0.3066	mg/L	0.00407	0.6133	mg/L	0.00815	1.33%
Zn 206.200†	302.8	0.1822	mg/L	0.00191	0.3643	mg/L	0.00382	1.05%

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Sequence No.: 10 **Autosampler Location: 339**
Sample ID: BIK0408-DUP1 **Date Collected: 11/18/2020 6:15:35 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0408-DUP1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: BIK0408-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1483579.1	104.9	%	0.29				0.28%
ScR 361.383	160678.0	106.3	%	0.61				0.58%
Ag 328.068†	-138.7	-0.00095	mg/L	0.000081	-0.00190	mg/L	0.000162	8.52%
Al 308.215†	113220.5	122.3	mg/L	0.56	244.7	mg/L	1.12	0.46%
As 188.979†	-291.1	-0.2359	mg/L	0.00704	-0.4717	mg/L	0.01408	2.99%
B 249.677†	135.5	0.04114	mg/L	0.001538	0.08227	mg/L	0.003076	3.74%
Ba 233.527†	2009.0	0.5469	mg/L	0.00367	1.094	mg/L	0.0073	0.67%
Be 313.042†	1116.7	0.00170	mg/L	0.000028	0.00339	mg/L	0.000055	1.63%
Ca 317.933†	229439.0	39.22	mg/L	0.131	78.44	mg/L	0.261	0.33%
Cd 228.802†	105.2	0.00473	mg/L	0.000192	0.00946	mg/L	0.000385	4.06%
Co 228.616†	1066.2	0.04909	mg/L	0.000624	0.09818	mg/L	0.001248	1.27%
Cr 267.716†	325.3	0.1550	mg/L	0.00534	0.3100	mg/L	0.01067	3.44%
Cu 324.752†	67405.0	0.4399	mg/L	0.00188	0.8799	mg/L	0.00376	0.43%
Fe 273.955†	167829.2	184.5	mg/L	1.39	368.9	mg/L	2.77	0.75%
K 766.490†	8289.8	7.449	mg/L	0.0269	14.90	mg/L	0.054	0.36%
Mg 279.077†	21118.6	29.66	mg/L	0.146	59.32	mg/L	0.292	0.49%
Mn 257.610†	49166.7	1.499	mg/L	0.0081	2.997	mg/L	0.0161	0.54%
Mo 202.031†	76.1	0.00589	mg/L	0.000262	0.01178	mg/L	0.000525	4.46%
Na 589.592†	79858.1	9.231	mg/L	0.0510	18.46	mg/L	0.102	0.55%
Na 330.237†	144.5	9.102	mg/L	0.1550	18.20	mg/L	0.310	1.70%
Ni 231.604†	235.6	0.1136	mg/L	0.00189	0.2272	mg/L	0.00379	1.67%
Pb 220.353†	1523.8	0.3117	mg/L	0.00210	0.6233	mg/L	0.00419	0.67%
Sb 206.836†	27.7	0.02437	mg/L	0.001468	0.04875	mg/L	0.002935	6.02%
Se 196.026†	-47.7	0.01687	mg/L	0.006344	0.03373	mg/L	0.012687	37.61%
Si 288.158†	1058.4	1.331	mg/L	0.0065	2.662	mg/L	0.0131	0.49%
Sn 189.927†	490.4	0.1986	mg/L	0.00299	0.3971	mg/L	0.00599	1.51%
Sr 421.552†	251620.7	0.5727	mg/L	0.00263	1.145	mg/L	0.0053	0.46%
Ti 334.903†	78608.8	6.052	mg/L	0.0211	12.10	mg/L	0.042	0.35%
Tl 190.801†	41.6	-0.03177	mg/L	0.002087	-0.06354	mg/L	0.004173	6.57%
V 292.402†	14808.0	0.3239	mg/L	0.00338	0.6479	mg/L	0.00677	1.04%
Zn 206.200†	788.5	0.4756	mg/L	0.00216	0.9511	mg/L	0.00432	0.45%

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Sequence No.: 11
Sample ID: 20K0126-01

Dilution: 2X
Wash Time: 37

Autosampler Location: 340
Date Collected: 11/18/2020 6:19:51 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0126-01

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: 20K0126-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1459525.2	103.2	%	0.11				0.10%
ScR 361.383	157562.8	104.2	%	0.47				0.45%
Ag 328.068†	-128.8	-0.00088	mg/L	0.000157	-0.00176	mg/L	0.000313	17.84%
Al 308.215†	107085.7	115.7	mg/L	0.43	231.4	mg/L	0.87	0.37%
As 188.979†	-292.8	-0.2460	mg/L	0.01417	-0.4919	mg/L	0.02835	5.76%
B 249.677†	116.5	0.03589	mg/L	0.001876	0.07178	mg/L	0.003751	5.23%
Ba 233.527†	1799.3	0.4896	mg/L	0.00064	0.9793	mg/L	0.00127	0.13%
Be 313.042†	1071.6	0.00160	mg/L	0.000019	0.00320	mg/L	0.000039	1.21%
Ca 317.933†	227311.5	38.85	mg/L	0.234	77.71	mg/L	0.468	0.60%
Cd 228.802†	93.4	0.00447	mg/L	0.000091	0.00895	mg/L	0.000182	2.03%
Co 228.616†	1017.6	0.04665	mg/L	0.000452	0.09329	mg/L	0.000903	0.97%
Cr 267.716†	297.5	0.1414	mg/L	0.00398	0.2828	mg/L	0.00796	2.81%
Cu 324.752†	85210.6	0.5538	mg/L	0.00515	1.108	mg/L	0.0103	0.93%
Fe 273.955†	151224.3	166.2	mg/L	0.93	332.4	mg/L	1.86	0.56%
K 766.490†	7430.2	6.676	mg/L	0.0425	13.35	mg/L	0.085	0.64%
Mg 279.077†	19459.6	27.33	mg/L	0.217	54.67	mg/L	0.434	0.79%
Mn 257.610†	49640.7	1.513	mg/L	0.0096	3.027	mg/L	0.0193	0.64%
Mo 202.031†	73.3	0.00567	mg/L	0.000146	0.01134	mg/L	0.000291	2.57%
Na 589.592†	80490.1	9.304	mg/L	0.0641	18.61	mg/L	0.128	0.69%
Na 330.237†	147.5	9.250	mg/L	0.1759	18.50	mg/L	0.352	1.90%
Ni 231.604†	233.7	0.1127	mg/L	0.00218	0.2255	mg/L	0.00436	1.93%
Pb 220.353†	2166.3	0.4349	mg/L	0.00169	0.8699	mg/L	0.00337	0.39%
Sb 206.836†	108.7	0.07243	mg/L	0.001683	0.1449	mg/L	0.00337	2.32%
Se 196.026†	-51.2	0.00358	mg/L	0.007366	0.00716	mg/L	0.014731	205.67%
Si 288.158†	1193.6	1.507	mg/L	0.0156	3.014	mg/L	0.0312	1.04%
Sn 189.927†	1530.2	0.5986	mg/L	0.00337	1.197	mg/L	0.0067	0.56%
Sr 421.552†	235968.2	0.5371	mg/L	0.00306	1.074	mg/L	0.0061	0.57%
Ti 334.903†	76509.0	5.890	mg/L	0.0278	11.78	mg/L	0.056	0.47%
Tl 190.801†	33.9	-0.03485	mg/L	0.002120	-0.06970	mg/L	0.004240	6.08%
V 292.402†	14762.8	0.3206	mg/L	0.00558	0.6412	mg/L	0.01116	1.74%
Zn 206.200†	750.0	0.4523	mg/L	0.00375	0.9046	mg/L	0.00751	0.83%

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Sequence No.: 12 **Autosampler Location: 341**
Sample ID: BIK0408-MS1 **Date Collected: 11/18/2020 6:24:07 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0408-MS1

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: BIK0408-MS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1444043.5	102.1	%	0.33				0.33%
ScR 361.383	154352.3	102.1	%	0.34				0.33%
Ag 328.068†	65704.4	0.4874	mg/L	0.00143	0.9748	mg/L	0.00287	0.29%
Al 308.215†	111737.6	120.7	mg/L	0.18	241.5	mg/L	0.37	0.15%
As 188.979†	783.7	1.481	mg/L	0.0111	2.962	mg/L	0.0222	0.75%
B 249.677†	128.6	0.03732	mg/L	0.000588	0.07463	mg/L	0.001176	1.58%
Ba 233.527†	8162.1	2.307	mg/L	0.0093	4.613	mg/L	0.0187	0.41%
Be 313.042†	202001.7	0.4449	mg/L	0.00040	0.8897	mg/L	0.00080	0.09%
Ca 317.933†	275940.4	47.17	mg/L	0.151	94.33	mg/L	0.302	0.32%
Cd 228.802†	7948.8	0.4532	mg/L	0.00134	0.9065	mg/L	0.00269	0.30%
Co 228.616†	8669.3	0.4781	mg/L	0.00218	0.9562	mg/L	0.00437	0.46%
Cr 267.716†	1254.0	0.5605	mg/L	0.00414	1.121	mg/L	0.0083	0.74%
Cu 324.752†	138340.8	0.8957	mg/L	0.00335	1.791	mg/L	0.0067	0.37%
Fe 273.955†	149793.9	164.6	mg/L	0.85	329.3	mg/L	1.71	0.52%
K 766.490†	17607.8	15.82	mg/L	0.072	31.64	mg/L	0.144	0.45%
Mg 279.077†	27037.1	38.02	mg/L	0.142	76.04	mg/L	0.283	0.37%
Mn 257.610†	60746.3	1.853	mg/L	0.0070	3.706	mg/L	0.0141	0.38%
Mo 202.031†	84.5	0.00641	mg/L	0.000048	0.01281	mg/L	0.000096	0.75%
Na 589.592†	166285.9	19.22	mg/L	0.060	38.44	mg/L	0.120	0.31%
Na 330.237†	317.3	18.63	mg/L	0.205	37.26	mg/L	0.410	1.10%
Ni 231.604†	1067.7	0.5147	mg/L	0.00276	1.029	mg/L	0.0055	0.54%
Pb 220.353†	10713.9	2.085	mg/L	0.0095	4.169	mg/L	0.0190	0.45%
Sb 206.836†	34.5	0.02205	mg/L	0.002434	0.04409	mg/L	0.004869	11.04%
Se 196.026†	1086.2	1.811	mg/L	0.0137	3.623	mg/L	0.0274	0.76%
Si 288.158†	1076.9	1.361	mg/L	0.0310	2.722	mg/L	0.0621	2.28%
Sn 189.927†	512.3	0.2083	mg/L	0.00080	0.4166	mg/L	0.00161	0.39%
Sr 421.552†	441012.6	1.004	mg/L	0.0013	2.008	mg/L	0.0027	0.13%
Ti 334.903†	74874.6	5.764	mg/L	0.0069	11.53	mg/L	0.014	0.12%
Tl 190.801†	2185.3	1.718	mg/L	0.0046	3.435	mg/L	0.0092	0.27%
V 292.402†	34039.0	0.7132	mg/L	0.00454	1.426	mg/L	0.0091	0.64%
Zn 206.200†	1437.9	0.8678	mg/L	0.00471	1.736	mg/L	0.0094	0.54%

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Sequence No.: 13 **Autosampler Location: 342**
Sample ID: BIK0408-MSD1 **Date Collected: 11/18/2020 6:28:47 PM**
Data Type: Original
Dilution: 2X
Wash Time: 60 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0408-MSD1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BIK0408-MSD1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1448818.7	102.5	%	0.80				0.78%
ScR 361.383	154485.7	102.2	%	0.20				0.20%
Ag 328.068†	68815.9	0.5105	mg/L	0.00333	1.021	mg/L	0.0067	0.65%
Al 308.215†	92585.6	100.0	mg/L	0.29	200.1	mg/L	0.59	0.29%
As 188.979†	878.8	1.618	mg/L	0.0103	3.236	mg/L	0.0207	0.64%
B 249.677†	79.2	0.02822	mg/L	0.000658	0.05645	mg/L	0.001317	2.33%
Ba 233.527†	8113.0	2.293	mg/L	0.0022	4.586	mg/L	0.0044	0.10%
Be 313.042†	214602.8	0.4726	mg/L	0.00213	0.9453	mg/L	0.00425	0.45%
Ca 317.933†	274711.1	46.96	mg/L	0.152	93.91	mg/L	0.304	0.32%
Cd 228.802†	8396.4	0.4785	mg/L	0.00117	0.9571	mg/L	0.00235	0.25%
Co 228.616†	9224.6	0.5100	mg/L	0.00129	1.020	mg/L	0.0026	0.25%
Cr 267.716†	1331.5	0.5956	mg/L	0.00529	1.191	mg/L	0.0106	0.89%
Cu 324.752†	124761.5	0.8083	mg/L	0.00796	1.617	mg/L	0.0159	0.98%
Fe 273.955†	147015.0	161.6	mg/L	1.49	323.2	mg/L	2.97	0.92%
K 766.490†	15810.8	14.21	mg/L	0.067	28.41	mg/L	0.135	0.47%
Mg 279.077†	21696.5	30.49	mg/L	0.118	60.98	mg/L	0.236	0.39%
Mn 257.610†	66787.6	2.037	mg/L	0.0145	4.075	mg/L	0.0290	0.71%
Mo 202.031†	81.0	0.00619	mg/L	0.000286	0.01239	mg/L	0.000572	4.62%
Na 589.592†	168174.3	19.44	mg/L	0.085	38.88	mg/L	0.170	0.44%
Na 330.237†	322.9	18.91	mg/L	0.211	37.82	mg/L	0.422	1.12%
Ni 231.604†	1128.4	0.5439	mg/L	0.00176	1.088	mg/L	0.0035	0.32%
Pb 220.353†	10514.4	2.041	mg/L	0.0139	4.083	mg/L	0.0279	0.68%
Sb 206.836†	42.6	0.02506	mg/L	0.001391	0.05012	mg/L	0.002781	5.55%
Se 196.026†	1160.3	1.922	mg/L	0.0082	3.843	mg/L	0.0165	0.43%
Si 288.158†	1191.0	1.515	mg/L	0.0254	3.029	mg/L	0.0507	1.67%
Sn 189.927†	348.8	0.1452	mg/L	0.00087	0.2904	mg/L	0.00173	0.60%
Sr 421.552†	412976.0	0.9400	mg/L	0.00227	1.880	mg/L	0.0045	0.24%
Ti 334.903†	70957.5	5.462	mg/L	0.0151	10.92	mg/L	0.030	0.28%
Tl 190.801†	2302.9	1.823	mg/L	0.0070	3.646	mg/L	0.0140	0.38%
V 292.402†	35724.7	0.7463	mg/L	0.01271	1.493	mg/L	0.0254	1.70%
Zn 206.200†	1341.4	0.8095	mg/L	0.00259	1.619	mg/L	0.0052	0.32%

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Sequence No.: 14 **Autosampler Location: 7**
Sample ID: SEQ-CCV5 **Date Collected: 11/18/2020 6:34:27 PM**
Data Type: Original
Dilution: 1X
Wash Time: 120 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV5

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-CCV5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1408427.3	99.62	%	0.658				0.66%
ScR 361.383	149904.7	99.14	%	0.284				0.29%
Ag 328.068†	144107.2	1.069	mg/L	0.0046	1.069	mg/L	0.0046	0.43%
Al 308.215†	2006.4	2.134	mg/L	0.0419	2.134	mg/L	0.0419	1.96%
As 188.979†	1192.9	1.954	mg/L	0.0260	1.954	mg/L	0.0260	1.33%
B 249.677†	5674.9	0.9929	mg/L	0.00734	0.9929	mg/L	0.00734	0.74%
Ba 233.527†	3619.5	1.033	mg/L	0.0029	1.033	mg/L	0.0029	0.28%
Be 313.042†	465413.2	1.027	mg/L	0.0043	1.027	mg/L	0.0043	0.42%
Ca 317.933†	12258.8	2.095	mg/L	0.0193	2.095	mg/L	0.0193	0.92%
Cd 228.802†	17246.8	0.9982	mg/L	0.00321	0.9982	mg/L	0.00321	0.32%
Co 228.616†	17726.3	0.9975	mg/L	0.00464	0.9975	mg/L	0.00464	0.47%
Cr 267.716†	2205.6	0.9740	mg/L	0.00593	0.9740	mg/L	0.00593	0.61%
Cu 324.752†	156198.8	1.005	mg/L	0.0035	1.005	mg/L	0.0035	0.35%
Fe 273.955†	1889.4	2.070	mg/L	0.0889	2.070	mg/L	0.0889	4.30%
K 766.490†	22418.8	20.14	mg/L	0.107	20.14	mg/L	0.107	0.53%
Mg 279.077†	1524.1	2.162	mg/L	0.0039	2.162	mg/L	0.0039	0.18%
Mn 257.610†	34679.8	1.060	mg/L	0.0048	1.060	mg/L	0.0048	0.46%
Mo 202.031†	10944.7	1.001	mg/L	0.0093	1.001	mg/L	0.0093	0.93%
Na 589.592†	446109.8	51.57	mg/L	0.419	51.57	mg/L	0.419	0.81%
Na 330.237†	915.8	51.36	mg/L	0.154	51.36	mg/L	0.154	0.30%
Ni 231.604†	1993.8	0.9628	mg/L	0.00650	0.9628	mg/L	0.00650	0.68%
Pb 220.353†	10819.8	2.087	mg/L	0.0157	2.087	mg/L	0.0157	0.75%
Sb 206.836†	3785.2	2.084	mg/L	0.0124	2.084	mg/L	0.0124	0.59%
Se 196.026†	1316.4	2.093	mg/L	0.0160	2.093	mg/L	0.0160	0.77%
Si 288.158†	1707.9	2.234	mg/L	0.0199	2.234	mg/L	0.0199	0.89%
Sn 189.927†	2702.3	1.041	mg/L	0.0104	1.041	mg/L	0.0104	1.00%
Sr 421.552†	445009.8	1.013	mg/L	0.0046	1.013	mg/L	0.0046	0.45%
Ti 334.903†	13332.2	1.026	mg/L	0.0032	1.026	mg/L	0.0032	0.32%
Tl 190.801†	2533.6	2.055	mg/L	0.0185	2.055	mg/L	0.0185	0.90%
V 292.402†	47103.7	0.9573	mg/L	0.01006	0.9573	mg/L	0.01006	1.05%
Zn 206.200†	1695.3	1.024	mg/L	0.0045	1.024	mg/L	0.0045	0.44%

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Sequence No.: 15 **Autosampler Location: 1**
Sample ID: SEQ-CCB5 **Date Collected: 11/18/2020 6:39:47 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB5

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: SEQ-CCB5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1383527.2	97.86	%	0.189				0.19%
ScR 361.383	146936.6	97.18	%	0.031				0.03%
Ag 328.068†	44.4	0.00033	mg/L	0.000354	0.00033	mg/L	0.000354	107.59%
Al 308.215†	-28.6	-0.03098	mg/L	0.011410	-0.03098	mg/L	0.011410	36.84%
As 188.979†	4.2	0.00684	mg/L	0.009220	0.00684	mg/L	0.009220	134.75%
B 249.677†	11.9	0.00209	mg/L	0.000773	0.00209	mg/L	0.000773	36.96%
Ba 233.527†	-1.2	-0.00034	mg/L	0.001657	-0.00034	mg/L	0.001657	492.61%
Be 313.042†	-8.9	-0.00002	mg/L	0.000024	-0.00002	mg/L	0.000024	116.52%
Ca 317.933†	-9.6	-0.00164	mg/L	0.003023	-0.00164	mg/L	0.003023	184.40%
Cd 228.802†	0.6	-0.00001	mg/L	0.000137	-0.00001	mg/L	0.000137	>999.9%
Co 228.616†	-28.4	-0.00160	mg/L	0.000151	-0.00160	mg/L	0.000151	9.43%
Cr 267.716†	-14.7	-0.00646	mg/L	0.002972	-0.00646	mg/L	0.002972	45.99%
Cu 324.752†	162.0	0.00104	mg/L	0.000459	0.00104	mg/L	0.000459	44.08%
Fe 273.955†	3.4	0.00374	mg/L	0.003990	0.00374	mg/L	0.003990	106.73%
K 766.490†	65.6	0.05895	mg/L	0.021311	0.05895	mg/L	0.021311	36.15%
Mg 279.077†	4.9	0.00690	mg/L	0.001787	0.00690	mg/L	0.001787	25.90%
Mn 257.610†	2.0	0.00006	mg/L	0.000046	0.00006	mg/L	0.000046	73.40%
Mo 202.031†	7.5	0.00068	mg/L	0.000156	0.00068	mg/L	0.000156	22.81%
Na 589.592†	-297.8	-0.03443	mg/L	0.004235	-0.03443	mg/L	0.004235	12.30%
Na 330.237†	-8.1	-0.4549	mg/L	0.78619	-0.4549	mg/L	0.78619	172.81%
Ni 231.604†	-4.7	-0.00225	mg/L	0.004333	-0.00225	mg/L	0.004333	192.87%
Pb 220.353†	36.9	0.00710	mg/L	0.000846	0.00710	mg/L	0.000846	11.93%
Sb 206.836†	8.2	0.00472	mg/L	0.001314	0.00472	mg/L	0.001314	27.82%
Se 196.026†	3.7	0.00589	mg/L	0.002654	0.00589	mg/L	0.002654	45.08%
Si 288.158†	-8.9	-0.01180	mg/L	0.015593	-0.01180	mg/L	0.015593	132.09%
Sn 189.927†	24.1	0.00927	mg/L	0.000941	0.00927	mg/L	0.000941	10.16%
Sr 421.552†	15.3	0.00003	mg/L	0.000061	0.00003	mg/L	0.000061	175.56%
Ti 334.903†	24.4	0.00188	mg/L	0.001236	0.00188	mg/L	0.001236	65.71%
Tl 190.801†	-3.9	-0.00314	mg/L	0.001917	-0.00314	mg/L	0.001917	60.99%
V 292.402†	25.7	0.00048	mg/L	0.000560	0.00048	mg/L	0.000560	117.74%
Zn 206.200†	6.0	0.00363	mg/L	0.001277	0.00363	mg/L	0.001277	35.18%

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Sequence No.: 16 **Autosampler Location: 343**
Sample ID: BIK0507-DUP1 **Date Collected: 11/18/2020 6:44:03 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0507-DUP1

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: BIK0507-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1368145.6	96.77	%	1.320				1.36%
ScR 361.383	143734.8	95.06	%	0.512				0.54%
Ag 328.068†	-46.5	-0.00035	mg/L	0.000294	-0.00173	mg/L	0.001469	85.13%
Al 308.215†	153.6	0.1652	mg/L	0.01442	0.8258	mg/L	0.07211	8.73%
As 188.979†	18.3	0.02507	mg/L	0.005303	0.1254	mg/L	0.02652	21.15%
B 249.677†	57.2	0.00919	mg/L	0.001082	0.04595	mg/L	0.005410	11.77%
Ba 233.527†	132.9	0.03796	mg/L	0.001921	0.1898	mg/L	0.00960	5.06%
Be 313.042†	104.7	0.00023	mg/L	0.000069	0.00115	mg/L	0.000346	30.04%
Ca 317.933†	53133.1	9.082	mg/L	0.0366	45.41	mg/L	0.183	0.40%
Cd 228.802†	15.6	0.00060	mg/L	0.000165	0.00299	mg/L	0.000823	27.52%
Co 228.616†	60.0	0.00337	mg/L	0.000342	0.01685	mg/L	0.001711	10.15%
Cr 267.716†	-12.1	0.02263	mg/L	0.001131	0.1132	mg/L	0.00566	5.00%
Cu 324.752†	898.9	0.00577	mg/L	0.000212	0.02886	mg/L	0.001060	3.67%
Fe 273.955†	36.7	0.04032	mg/L	0.003249	0.2016	mg/L	0.01624	8.06%
K 766.490†	798.6	0.7176	mg/L	0.03161	3.588	mg/L	0.1581	4.41%
Mg 279.077†	1244.5	1.753	mg/L	0.0116	8.767	mg/L	0.0578	0.66%
Mn 257.610†	8105.8	0.2476	mg/L	0.00229	1.238	mg/L	0.0115	0.92%
Mo 202.031†	11.3	0.00086	mg/L	0.000214	0.00429	mg/L	0.001068	24.86%
Na 589.592†	2817239.5	325.7	mg/L	0.90	1628	mg/L	4.51	0.28%
Na 330.237†	5381.9	302.9	mg/L	1.37	1514	mg/L	6.86	0.45%
Ni 231.604†	9.8	0.00472	mg/L	0.000748	0.02358	mg/L	0.003738	15.85%
Pb 220.353†	38.1	0.00735	mg/L	0.001910	0.03677	mg/L	0.009548	25.97%
Sb 206.836†	3.2	0.00189	mg/L	0.001893	0.00944	mg/L	0.009464	100.28%
Se 196.026†	2.2	0.00257	mg/L	0.001499	0.01285	mg/L	0.007495	58.33%
Si 288.158†	1035.9	1.365	mg/L	0.0172	6.825	mg/L	0.0858	1.26%
Sn 189.927†	-0.4	0.00146	mg/L	0.000812	0.00729	mg/L	0.004059	55.72%
Sr 421.552†	19892.6	0.04528	mg/L	0.000275	0.2264	mg/L	0.00137	0.61%
Ti 334.903†	53.3	0.00363	mg/L	0.000902	0.01813	mg/L	0.004509	24.87%
Tl 190.801†	-20.9	-0.01578	mg/L	0.001083	-0.07890	mg/L	0.005413	6.86%
V 292.402†	17.4	0.00057	mg/L	0.000615	0.00286	mg/L	0.003073	107.29%
Zn 206.200†	21.3	0.01262	mg/L	0.000808	0.06311	mg/L	0.004042	6.40%

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Sequence No.: 17 **Autosampler Location: 344**
Sample ID: 20K0201-07 **Date Collected: 11/18/2020 6:48:36 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0201-07

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 20K0201-07

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1410265.4	99.75	%	0.865				0.87%
ScR 361.383	149005.7	98.55	%	1.037				1.05%
Ag 328.068†	-25.7	-0.00019	mg/L	0.000491	-0.00095	mg/L	0.002456	257.77%
Al 308.215†	169.8	0.1826	mg/L	0.01629	0.9130	mg/L	0.08143	8.92%
As 188.979†	17.1	0.02318	mg/L	0.007554	0.1159	mg/L	0.03777	32.59%
B 249.677†	53.7	0.00855	mg/L	0.000698	0.04276	mg/L	0.003488	8.16%
Ba 233.527†	132.6	0.03786	mg/L	0.001090	0.1893	mg/L	0.00545	2.88%
Be 313.042†	66.9	0.00015	mg/L	0.000045	0.00073	mg/L	0.000226	31.02%
Ca 317.933†	52784.2	9.022	mg/L	0.1055	45.11	mg/L	0.528	1.17%
Cd 228.802†	15.0	0.00057	mg/L	0.000241	0.00287	mg/L	0.001206	42.06%
Co 228.616†	64.3	0.00361	mg/L	0.000324	0.01806	mg/L	0.001622	8.98%
Cr 267.716†	-7.5	0.02400	mg/L	0.001776	0.1200	mg/L	0.00888	7.40%
Cu 324.752†	884.7	0.00568	mg/L	0.000157	0.02840	mg/L	0.000786	2.77%
Fe 273.955†	35.5	0.03897	mg/L	0.006459	0.1949	mg/L	0.03229	16.57%
K 766.490†	857.4	0.7704	mg/L	0.02000	3.852	mg/L	0.1000	2.60%
Mg 279.077†	1248.1	1.759	mg/L	0.0204	8.793	mg/L	0.1018	1.16%
Mn 257.610†	8016.4	0.2449	mg/L	0.00286	1.224	mg/L	0.0143	1.17%
Mo 202.031†	13.5	0.00106	mg/L	0.000357	0.00528	mg/L	0.001785	33.82%
Na 589.592†	2752031.7	318.1	mg/L	3.47	1591	mg/L	17.35	1.09%
Na 330.237†	5306.1	298.6	mg/L	3.11	1493	mg/L	15.54	1.04%
Ni 231.604†	4.7	0.00228	mg/L	0.003558	0.01138	mg/L	0.017792	156.40%
Pb 220.353†	44.8	0.00867	mg/L	0.002167	0.04333	mg/L	0.010835	25.00%
Sb 206.836†	2.2	0.00126	mg/L	0.001914	0.00630	mg/L	0.009570	151.86%
Se 196.026†	-3.3	-0.00621	mg/L	0.004526	-0.03104	mg/L	0.022632	72.92%
Si 288.158†	1065.1	1.404	mg/L	0.0160	7.018	mg/L	0.0801	1.14%
Sn 189.927†	0.7	0.00188	mg/L	0.000528	0.00939	mg/L	0.002639	28.09%
Sr 421.552†	19493.2	0.04437	mg/L	0.000504	0.2218	mg/L	0.00252	1.14%
Ti 334.903†	68.1	0.00476	mg/L	0.002539	0.02382	mg/L	0.012693	53.29%
Tl 190.801†	-19.0	-0.01426	mg/L	0.001609	-0.07128	mg/L	0.008045	11.29%
V 292.402†	40.7	0.00106	mg/L	0.000369	0.00528	mg/L	0.001843	34.91%
Zn 206.200†	22.6	0.01342	mg/L	0.000725	0.06709	mg/L	0.003623	5.40%

Sequence No.: 18
Sample ID: BIK0507-MS1

Dilution: 5X
Wash Time: 37

Autosampler Location: 345
Date Collected: 11/18/2020 6:53:08 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0507-MS1

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BIK0507-MS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1376186.4	97.34	%	0.213				0.22%
ScR 361.383	151744.5	100.4	%	0.94				0.93%
Ag 328.068†	29835.3	0.2213	mg/L	0.00104	1.106	mg/L	0.0052	0.47%
Al 308.215†	960.0	1.034	mg/L	0.0176	5.170	mg/L	0.0879	1.70%
As 188.979†	530.2	0.8483	mg/L	0.00309	4.242	mg/L	0.0155	0.36%
B 249.677†	50.2	0.00777	mg/L	0.000771	0.03883	mg/L	0.003853	9.92%
Ba 233.527†	3042.2	0.8686	mg/L	0.00579	4.343	mg/L	0.0290	0.67%
Be 313.042†	92099.0	0.2031	mg/L	0.00166	1.016	mg/L	0.0083	0.82%
Ca 317.933†	74517.3	12.74	mg/L	0.012	63.69	mg/L	0.060	0.09%
Cd 228.802†	3640.6	0.2075	mg/L	0.00042	1.037	mg/L	0.0021	0.20%
Co 228.616†	3624.0	0.2042	mg/L	0.00024	1.021	mg/L	0.0012	0.12%
Cr 267.716†	442.1	0.2201	mg/L	0.00179	1.101	mg/L	0.0089	0.81%
Cu 324.752†	32385.9	0.2084	mg/L	0.00070	1.042	mg/L	0.0035	0.34%
Fe 273.955†	764.5	0.8388	mg/L	0.01223	4.194	mg/L	0.0611	1.46%
K 766.490†	5572.0	5.007	mg/L	0.0662	25.03	mg/L	0.331	1.32%
Mg 279.077†	4249.0	5.989	mg/L	0.0446	29.95	mg/L	0.223	0.74%
Mn 257.610†	14317.9	0.4375	mg/L	0.00415	2.187	mg/L	0.0207	0.95%
Mo 202.031†	19.7	0.00150	mg/L	0.000604	0.00751	mg/L	0.003021	40.25%
Na 589.592†	2678488.7	309.6	mg/L	3.18	1548	mg/L	15.92	1.03%
Na 330.237†	5099.4	286.9	mg/L	1.40	1434	mg/L	7.01	0.49%
Ni 231.604†	402.4	0.1940	mg/L	0.00301	0.9698	mg/L	0.01504	1.55%
Pb 220.353†	4298.5	0.8291	mg/L	0.00120	4.145	mg/L	0.0060	0.14%
Sb 206.836†	2.9	-0.00110	mg/L	0.002211	-0.00551	mg/L	0.011053	200.74%
Se 196.026†	545.3	0.8658	mg/L	0.01296	4.329	mg/L	0.0648	1.50%
Si 288.158†	1011.4	1.334	mg/L	0.0023	6.671	mg/L	0.0116	0.17%
Sn 189.927†	-5.5	0.00017	mg/L	0.000586	0.00085	mg/L	0.002928	343.61%
Sr 421.552†	106952.4	0.2434	mg/L	0.00185	1.217	mg/L	0.0093	0.76%
Ti 334.903†	64.1	0.00421	mg/L	0.000471	0.02106	mg/L	0.002356	11.19%
Tl 190.801†	964.1	0.7869	mg/L	0.00259	3.934	mg/L	0.0130	0.33%
V 292.402†	9480.1	0.1933	mg/L	0.00245	0.9667	mg/L	0.01227	1.27%
Zn 206.200†	356.2	0.2149	mg/L	0.00258	1.075	mg/L	0.0129	1.20%

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Sequence No.: 19 **Autosampler Location: 346**
Sample ID: 20K0126-11 **Date Collected: 11/18/2020 6:58:03 PM**
Data Type: Original
Dilution: 2X
Wash Time: 60 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0126-11

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 20K0126-11

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1422913.2	100.6	%	0.13				0.13%
ScR 361.383	155397.5	102.8	%	0.34				0.33%
Ag 328.068†	-120.1	-0.00082	mg/L	0.000356	-0.00164	mg/L	0.000712	43.56%
Al 308.215†	76105.2	82.23	mg/L	0.268	164.5	mg/L	0.54	0.33%
As 188.979†	-141.4	-0.03632	mg/L	0.003587	-0.07265	mg/L	0.007174	9.88%
B 249.677†	58.7	0.01984	mg/L	0.000592	0.03968	mg/L	0.001185	2.99%
Ba 233.527†	977.3	0.2640	mg/L	0.00151	0.5280	mg/L	0.00303	0.57%
Be 313.042†	732.3	0.00089	mg/L	0.000019	0.00177	mg/L	0.000037	2.10%
Ca 317.933†	204494.9	34.95	mg/L	0.202	69.91	mg/L	0.404	0.58%
Cd 228.802†	95.9	0.00445	mg/L	0.000137	0.00890	mg/L	0.000274	3.08%
Co 228.616†	802.8	0.03593	mg/L	0.000391	0.07185	mg/L	0.000782	1.09%
Cr 267.716†	208.7	0.09733	mg/L	0.004193	0.1947	mg/L	0.00839	4.31%
Cu 324.752†	18365.2	0.1213	mg/L	0.00043	0.2426	mg/L	0.00087	0.36%
Fe 273.955†	93806.5	103.1	mg/L	0.48	206.2	mg/L	0.96	0.47%
K 766.490†	5396.9	4.849	mg/L	0.0042	9.698	mg/L	0.0083	0.09%
Mg 279.077†	14529.8	20.42	mg/L	0.042	40.84	mg/L	0.084	0.21%
Mn 257.610†	37197.3	1.134	mg/L	0.0054	2.269	mg/L	0.0109	0.48%
Mo 202.031†	56.3	0.00428	mg/L	0.000393	0.00855	mg/L	0.000786	9.19%
Na 589.592†	62126.2	7.182	mg/L	0.0330	14.36	mg/L	0.066	0.46%
Na 330.237†	109.0	6.909	mg/L	0.1141	13.82	mg/L	0.228	1.65%
Ni 231.604†	224.8	0.1084	mg/L	0.00248	0.2168	mg/L	0.00496	2.29%
Pb 220.353†	977.6	0.2022	mg/L	0.00101	0.4044	mg/L	0.00202	0.50%
Sb 206.836†	2.3	0.00833	mg/L	0.004577	0.01665	mg/L	0.009154	54.97%
Se 196.026†	-25.0	0.01509	mg/L	0.014572	0.03019	mg/L	0.029144	96.54%
Si 288.158†	786.2	0.9827	mg/L	0.00584	1.965	mg/L	0.0117	0.59%
Sn 189.927†	10.4	0.01266	mg/L	0.002365	0.02532	mg/L	0.004730	18.68%
Sr 421.552†	151620.9	0.3451	mg/L	0.00125	0.6902	mg/L	0.00251	0.36%
Ti 334.903†	66646.7	5.131	mg/L	0.0154	10.26	mg/L	0.031	0.30%
Tl 190.801†	17.0	-0.03277	mg/L	0.000662	-0.06553	mg/L	0.001325	2.02%
V 292.402†	14012.1	0.2971	mg/L	0.00398	0.5941	mg/L	0.00797	1.34%
Zn 206.200†	873.1	0.5268	mg/L	0.00066	1.054	mg/L	0.0013	0.12%

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Sequence No.: 20
Sample ID: 20K0126-12

Dilution: 2X
Wash Time: 37

Autosampler Location: 347
Date Collected: 11/18/2020 7:02:21 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0126-12

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 20K0126-12

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1451106.1	102.6	%	0.46				0.45%
ScR 361.383	154714.0	102.3	%	0.41				0.40%
Ag 328.068†	-72.6	-0.00048	mg/L	0.000045	-0.00096	mg/L	0.000089	9.32%
Al 308.215†	73518.2	79.43	mg/L	0.174	158.9	mg/L	0.35	0.22%
As 188.979†	-238.7	-0.1807	mg/L	0.00470	-0.3614	mg/L	0.00941	2.60%
B 249.677†	53.4	0.01696	mg/L	0.002542	0.03392	mg/L	0.005085	14.99%
Ba 233.527†	864.7	0.2345	mg/L	0.00170	0.4689	mg/L	0.00339	0.72%
Be 313.042†	554.3	0.00063	mg/L	0.000060	0.00126	mg/L	0.000119	9.46%
Ca 317.933†	190475.6	32.56	mg/L	0.120	65.12	mg/L	0.240	0.37%
Cd 228.802†	58.2	0.00367	mg/L	0.000162	0.00735	mg/L	0.000324	4.41%
Co 228.616†	583.6	0.02298	mg/L	0.000150	0.04596	mg/L	0.000299	0.65%
Cr 267.716†	202.7	0.09387	mg/L	0.004560	0.1877	mg/L	0.00912	4.86%
Cu 324.752†	13031.6	0.08623	mg/L	0.000708	0.1725	mg/L	0.00142	0.82%
Fe 273.955†	77557.0	85.24	mg/L	0.342	170.5	mg/L	0.68	0.40%
K 766.490†	4599.4	4.133	mg/L	0.0564	8.265	mg/L	0.1127	1.36%
Mg 279.077†	12144.2	17.07	mg/L	0.052	34.14	mg/L	0.103	0.30%
Mn 257.610†	24908.9	0.7592	mg/L	0.00184	1.518	mg/L	0.0037	0.24%
Mo 202.031†	49.4	0.00373	mg/L	0.000360	0.00747	mg/L	0.000721	9.65%
Na 589.592†	81993.3	9.478	mg/L	0.0305	18.96	mg/L	0.061	0.32%
Na 330.237†	153.1	9.578	mg/L	0.3008	19.16	mg/L	0.602	3.14%
Ni 231.604†	98.9	0.04769	mg/L	0.002959	0.09538	mg/L	0.005917	6.20%
Pb 220.353†	158.7	0.04488	mg/L	0.001106	0.08976	mg/L	0.002213	2.47%
Sb 206.836†	-3.9	0.00511	mg/L	0.002078	0.01023	mg/L	0.004156	40.64%
Se 196.026†	-20.1	0.01675	mg/L	0.007785	0.03350	mg/L	0.015570	46.48%
Si 288.158†	1031.7	1.302	mg/L	0.0133	2.604	mg/L	0.0266	1.02%
Sn 189.927†	-18.9	0.00112	mg/L	0.000929	0.00224	mg/L	0.001858	82.99%
Sr 421.552†	157785.3	0.3591	mg/L	0.00101	0.7183	mg/L	0.00202	0.28%
Ti 334.903†	70943.7	5.462	mg/L	0.0060	10.92	mg/L	0.012	0.11%
Tl 190.801†	15.1	-0.03432	mg/L	0.001461	-0.06864	mg/L	0.002921	4.26%
V 292.402†	11408.7	0.2420	mg/L	0.00058	0.4840	mg/L	0.00115	0.24%
Zn 206.200†	303.7	0.1827	mg/L	0.00059	0.3653	mg/L	0.00118	0.32%

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Sequence No.: 21
Sample ID: 20K0126-16

Dilution: 2X
Wash Time: 37

Autosampler Location: 348
Date Collected: 11/18/2020 7:06:37 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0126-16

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 20K0126-16

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1478629.6	104.6	%	0.38				0.36%
ScR 361.383	157956.5	104.5	%	0.38				0.36%
Ag 328.068†	-155.2	-0.00107	mg/L	0.000278	-0.00213	mg/L	0.000557	26.13%
Al 308.215†	65325.7	70.58	mg/L	0.379	141.2	mg/L	0.76	0.54%
As 188.979†	-329.0	-0.2951	mg/L	0.00428	-0.5903	mg/L	0.00856	1.45%
B 249.677†	-0.4	0.00984	mg/L	0.001919	0.01968	mg/L	0.003839	19.51%
Ba 233.527†	763.8	0.2023	mg/L	0.00119	0.4047	mg/L	0.00237	0.59%
Be 313.042†	678.2	0.00065	mg/L	0.000047	0.00129	mg/L	0.000094	7.31%
Ca 317.933†	204350.4	34.93	mg/L	0.185	69.86	mg/L	0.370	0.53%
Cd 228.802†	63.3	0.00442	mg/L	0.000341	0.00884	mg/L	0.000681	7.70%
Co 228.616†	859.6	0.03687	mg/L	0.000221	0.07374	mg/L	0.000441	0.60%
Cr 267.716†	286.5	0.1317	mg/L	0.00296	0.2635	mg/L	0.00593	2.25%
Cu 324.752†	12137.5	0.08118	mg/L	0.000342	0.1624	mg/L	0.00068	0.42%
Fe 273.955†	98003.1	107.7	mg/L	1.00	215.4	mg/L	2.00	0.93%
K 766.490†	4461.4	4.009	mg/L	0.0384	8.017	mg/L	0.0768	0.96%
Mg 279.077†	15750.3	22.14	mg/L	0.088	44.28	mg/L	0.176	0.40%
Mn 257.610†	31560.1	0.9621	mg/L	0.00488	1.924	mg/L	0.0098	0.51%
Mo 202.031†	56.7	0.00429	mg/L	0.000402	0.00859	mg/L	0.000805	9.37%
Na 589.592†	43469.1	5.025	mg/L	0.0386	10.05	mg/L	0.077	0.77%
Na 330.237†	68.3	4.967	mg/L	0.5114	9.935	mg/L	1.0229	10.30%
Ni 231.604†	153.3	0.07388	mg/L	0.002505	0.1478	mg/L	0.00501	3.39%
Pb 220.353†	85.7	0.02713	mg/L	0.001323	0.05426	mg/L	0.002646	4.88%
Sb 206.836†	-5.2	0.00548	mg/L	0.002262	0.01096	mg/L	0.004524	41.29%
Se 196.026†	-29.3	0.00608	mg/L	0.006728	0.01215	mg/L	0.013456	110.72%
Si 288.158†	912.7	1.136	mg/L	0.0104	2.272	mg/L	0.0208	0.92%
Sn 189.927†	-22.0	0.00077	mg/L	0.001138	0.00154	mg/L	0.002275	147.98%
Sr 421.552†	133179.5	0.3031	mg/L	0.00190	0.6063	mg/L	0.00380	0.63%
Ti 334.903†	82912.9	6.384	mg/L	0.0266	12.77	mg/L	0.053	0.42%
Tl 190.801†	17.5	-0.03189	mg/L	0.004024	-0.06377	mg/L	0.008047	12.62%
V 292.402†	16351.1	0.3450	mg/L	0.00497	0.6900	mg/L	0.00994	1.44%
Zn 206.200†	356.5	0.2146	mg/L	0.00249	0.4291	mg/L	0.00498	1.16%

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Sequence No.: 22 **Autosampler Location: 349**
Sample ID: 20K0126-18 **Date Collected: 11/18/2020 7:10:53 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0126-18

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 20K0126-18

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1473196.3	104.2	%	0.35				0.34%
ScR 361.383	159878.2	105.7	%	0.39				0.36%
Ag 328.068†	-103.0	-0.00069	mg/L	0.000388	-0.00137	mg/L	0.000775	56.48%
Al 308.215†	67333.6	72.75	mg/L	0.075	145.5	mg/L	0.15	0.10%
As 188.979†	-318.3	-0.2860	mg/L	0.00692	-0.5720	mg/L	0.01385	2.42%
B 249.677†	36.1	0.01288	mg/L	0.000309	0.02575	mg/L	0.000619	2.40%
Ba 233.527†	724.8	0.1960	mg/L	0.00259	0.3919	mg/L	0.00518	1.32%
Be 313.042†	601.4	0.00055	mg/L	0.000052	0.00110	mg/L	0.000104	9.48%
Ca 317.933†	176242.1	30.12	mg/L	0.055	60.25	mg/L	0.110	0.18%
Cd 228.802†	51.1	0.00438	mg/L	0.000062	0.00876	mg/L	0.000123	1.41%
Co 228.616†	701.3	0.02847	mg/L	0.000465	0.05694	mg/L	0.000931	1.63%
Cr 267.716†	231.6	0.1057	mg/L	0.00196	0.2113	mg/L	0.00392	1.86%
Cu 324.752†	12545.6	0.08258	mg/L	0.000336	0.1652	mg/L	0.00067	0.41%
Fe 273.955†	68006.8	74.75	mg/L	0.349	149.5	mg/L	0.70	0.47%
K 766.490†	3917.9	3.520	mg/L	0.0539	7.041	mg/L	0.1078	1.53%
Mg 279.077†	10761.8	15.13	mg/L	0.049	30.25	mg/L	0.099	0.33%
Mn 257.610†	19909.7	0.6066	mg/L	0.00252	1.213	mg/L	0.0050	0.42%
Mo 202.031†	59.2	0.00470	mg/L	0.000470	0.00940	mg/L	0.000940	10.01%
Na 589.592†	56695.5	6.554	mg/L	0.0155	13.11	mg/L	0.031	0.24%
Na 330.237†	102.7	6.864	mg/L	0.1610	13.73	mg/L	0.322	2.35%
Ni 231.604†	100.3	0.04833	mg/L	0.001416	0.09666	mg/L	0.002831	2.93%
Pb 220.353†	27.9	0.01875	mg/L	0.001155	0.03749	mg/L	0.002311	6.16%
Sb 206.836†	-6.9	0.00446	mg/L	0.001595	0.00892	mg/L	0.003189	35.76%
Se 196.026†	-21.4	0.00955	mg/L	0.002287	0.01910	mg/L	0.004574	23.95%
Si 288.158†	1034.0	1.298	mg/L	0.0213	2.596	mg/L	0.0426	1.64%
Sn 189.927†	-17.9	0.00136	mg/L	0.001511	0.00273	mg/L	0.003023	110.87%
Sr 421.552†	140914.2	0.3207	mg/L	0.00055	0.6415	mg/L	0.00111	0.17%
Ti 334.903†	79192.4	6.097	mg/L	0.0041	12.19	mg/L	0.008	0.07%
Tl 190.801†	19.9	-0.03045	mg/L	0.001912	-0.06090	mg/L	0.003824	6.28%
V 292.402†	14944.2	0.3118	mg/L	0.00405	0.6237	mg/L	0.00809	1.30%
Zn 206.200†	292.9	0.1762	mg/L	0.00241	0.3524	mg/L	0.00481	1.37%

Sequence No.: 23
Sample ID: 20K0126-22
Dilution: 2X
Wash Time: 37

Autosampler Location: 350
Date Collected: 11/18/2020 7:15:09 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0126-22

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 20K0126-22

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1426450.2	100.9	%	0.42				0.42%
ScR 361.383	154048.1	101.9	%	0.74				0.72%
Ag 328.068†	-16.2	-0.00004	mg/L	0.000347	-0.00009	mg/L	0.000695	802.77%
Al 308.215†	106323.6	114.9	mg/L	0.89	229.8	mg/L	1.79	0.78%
As 188.979†	-262.8	-0.2094	mg/L	0.00542	-0.4188	mg/L	0.01083	2.59%
B 249.677†	90.0	0.02949	mg/L	0.001871	0.05897	mg/L	0.003741	6.34%
Ba 233.527†	1750.4	0.4785	mg/L	0.00565	0.9570	mg/L	0.01130	1.18%
Be 313.042†	1079.7	0.00161	mg/L	0.000055	0.00323	mg/L	0.000109	3.38%
Ca 317.933†	725699.7	124.0	mg/L	1.43	248.1	mg/L	2.86	1.15%
Cd 228.802†	162.6	0.00762	mg/L	0.000085	0.01524	mg/L	0.000170	1.12%
Co 228.616†	1232.5	0.05715	mg/L	0.000568	0.1143	mg/L	0.00114	0.99%
Cr 267.716†	481.3	0.2157	mg/L	0.00281	0.4315	mg/L	0.00562	1.30%
Cu 324.752†	48507.9	0.3166	mg/L	0.00171	0.6331	mg/L	0.00342	0.54%
Fe 273.955†	133260.3	146.5	mg/L	1.08	292.9	mg/L	2.16	0.74%
K 766.490†	7341.1	6.596	mg/L	0.0686	13.19	mg/L	0.137	1.04%
Mg 279.077†	31355.5	44.10	mg/L	0.273	88.21	mg/L	0.546	0.62%
Mn 257.610†	65808.2	2.007	mg/L	0.0154	4.015	mg/L	0.0308	0.77%
Mo 202.031†	134.3	0.00958	mg/L	0.000759	0.01915	mg/L	0.001519	7.93%
Na 589.592†	49223.1	5.690	mg/L	0.0467	11.38	mg/L	0.093	0.82%
Na 330.237†	74.9	5.211	mg/L	0.3073	10.42	mg/L	0.615	5.90%
Ni 231.604†	414.6	0.1999	mg/L	0.00223	0.3998	mg/L	0.00447	1.12%
Pb 220.353†	4101.7	0.8097	mg/L	0.00909	1.619	mg/L	0.0182	1.12%
Sb 206.836†	14.9	0.01546	mg/L	0.002704	0.03091	mg/L	0.005408	17.49%
Se 196.026†	-25.4	0.02894	mg/L	0.008477	0.05788	mg/L	0.016953	29.29%
Si 288.158†	922.3	1.147	mg/L	0.0022	2.295	mg/L	0.0045	0.19%
Sn 189.927†	-30.7	0.01354	mg/L	0.001127	0.02708	mg/L	0.002254	8.32%
Sr 421.552†	201641.9	0.4590	mg/L	0.00330	0.9179	mg/L	0.00659	0.72%
Ti 334.903†	87995.6	6.770	mg/L	0.0476	13.54	mg/L	0.095	0.70%
Tl 190.801†	-11.2	-0.06117	mg/L	0.002388	-0.1223	mg/L	0.00478	3.90%
V 292.402†	14828.9	0.3221	mg/L	0.00332	0.6443	mg/L	0.00664	1.03%
Zn 206.200†	1289.4	0.7760	mg/L	0.00585	1.552	mg/L	0.0117	0.75%

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Sequence No.: 24
Sample ID: 20K0126-24
Dilution: 2X
Wash Time: 37

Autosampler Location: 351
Date Collected: 11/18/2020 7:19:26 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0126-24

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 20K0126-24

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1436689.6	101.6	%	0.56				0.55%
ScR 361.383	154492.4	102.2	%	0.41				0.40%
Ag 328.068†	-140.7	-0.00097	mg/L	0.000093	-0.00194	mg/L	0.000186	9.57%
Al 308.215†	70179.8	75.82	mg/L	0.341	151.6	mg/L	0.68	0.45%
As 188.979†	-264.2	-0.2332	mg/L	0.00366	-0.4665	mg/L	0.00731	1.57%
B 249.677†	52.1	0.01823	mg/L	0.001400	0.03645	mg/L	0.002799	7.68%
Ba 233.527†	1022.5	0.2773	mg/L	0.00034	0.5547	mg/L	0.00069	0.12%
Be 313.042†	566.3	0.00054	mg/L	0.000032	0.00108	mg/L	0.000063	5.87%
Ca 317.933†	200725.3	34.31	mg/L	0.189	68.62	mg/L	0.378	0.55%
Cd 228.802†	61.3	0.00378	mg/L	0.000119	0.00756	mg/L	0.000238	3.14%
Co 228.616†	631.0	0.02612	mg/L	0.000103	0.05225	mg/L	0.000207	0.40%
Cr 267.716†	198.8	0.09379	mg/L	0.002563	0.1876	mg/L	0.00513	2.73%
Cu 324.752†	14846.2	0.09856	mg/L	0.000244	0.1971	mg/L	0.00049	0.25%
Fe 273.955†	91171.9	100.2	mg/L	0.70	200.4	mg/L	1.40	0.70%
K 766.490†	3189.5	2.866	mg/L	0.0188	5.732	mg/L	0.0376	0.66%
Mg 279.077†	11728.9	16.47	mg/L	0.037	32.95	mg/L	0.073	0.22%
Mn 257.610†	24492.0	0.7463	mg/L	0.00524	1.493	mg/L	0.0105	0.70%
Mo 202.031†	66.0	0.00523	mg/L	0.000171	0.01045	mg/L	0.000342	3.27%
Na 589.592†	81223.5	9.389	mg/L	0.0760	18.78	mg/L	0.152	0.81%
Na 330.237†	150.2	9.316	mg/L	0.0757	18.63	mg/L	0.151	0.81%
Ni 231.604†	109.8	0.05292	mg/L	0.000688	0.1058	mg/L	0.00138	1.30%
Pb 220.353†	582.1	0.1245	mg/L	0.00269	0.2491	mg/L	0.00537	2.16%
Sb 206.836†	2.0	0.00820	mg/L	0.001253	0.01639	mg/L	0.002507	15.29%
Se 196.026†	-26.7	0.00955	mg/L	0.014101	0.01909	mg/L	0.028202	147.73%
Si 288.158†	1012.4	1.280	mg/L	0.0140	2.559	mg/L	0.0280	1.10%
Sn 189.927†	-22.1	0.00004	mg/L	0.000627	0.00009	mg/L	0.001255	>999.9%
Sr 421.552†	159897.1	0.3639	mg/L	0.00141	0.7279	mg/L	0.00282	0.39%
Ti 334.903†	67538.1	5.200	mg/L	0.0115	10.40	mg/L	0.023	0.22%
Tl 190.801†	6.3	-0.03915	mg/L	0.000763	-0.07830	mg/L	0.001526	1.95%
V 292.402†	13651.1	0.2889	mg/L	0.00283	0.5778	mg/L	0.00565	0.98%
Zn 206.200†	538.9	0.3248	mg/L	0.00213	0.6496	mg/L	0.00427	0.66%

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Sequence No.: 25 **Autosampler Location: 7**
Sample ID: SEQ-CCV6 **Date Collected: 11/18/2020 7:25:05 PM**
Data Type: Original
Dilution: 1X
Wash Time: 120 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV6

Analyte	Back Pressure	Flow
All	245.0 kPa	0.65 L/min

Mean Data: SEQ-CCV6

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1457156.6	103.1	%	0.42				0.40%
ScR 361.383	153966.8	101.8	%	1.00				0.98%
Ag 328.068†	143164.4	1.062	mg/L	0.0096	1.062	mg/L	0.0096	0.90%
Al 308.215†	1949.1	2.073	mg/L	0.0239	2.073	mg/L	0.0239	1.15%
As 188.979†	1182.0	1.936	mg/L	0.0082	1.936	mg/L	0.0082	0.42%
B 249.677†	5632.1	0.9854	mg/L	0.00792	0.9854	mg/L	0.00792	0.80%
Ba 233.527†	3612.0	1.030	mg/L	0.0080	1.030	mg/L	0.0080	0.78%
Be 313.042†	461546.6	1.018	mg/L	0.0026	1.018	mg/L	0.0026	0.25%
Ca 317.933†	12007.9	2.052	mg/L	0.0203	2.052	mg/L	0.0203	0.99%
Cd 228.802†	17038.8	0.9862	mg/L	0.00640	0.9862	mg/L	0.00640	0.65%
Co 228.616†	17593.6	0.9901	mg/L	0.01019	0.9901	mg/L	0.01019	1.03%
Cr 267.716†	2151.2	0.9500	mg/L	0.01470	0.9500	mg/L	0.01470	1.55%
Cu 324.752†	154672.5	0.9951	mg/L	0.00778	0.9951	mg/L	0.00778	0.78%
Fe 273.955†	1815.1	1.988	mg/L	0.0264	1.988	mg/L	0.0264	1.33%
K 766.490†	22031.8	19.80	mg/L	0.168	19.80	mg/L	0.168	0.85%
Mg 279.077†	1506.9	2.138	mg/L	0.0160	2.138	mg/L	0.0160	0.75%
Mn 257.610†	34677.5	1.060	mg/L	0.0063	1.060	mg/L	0.0063	0.59%
Mo 202.031†	10804.9	0.9885	mg/L	0.00428	0.9885	mg/L	0.00428	0.43%
Na 589.592†	443859.6	51.31	mg/L	0.364	51.31	mg/L	0.364	0.71%
Na 330.237†	912.3	51.16	mg/L	0.383	51.16	mg/L	0.383	0.75%
Ni 231.604†	1963.4	0.9482	mg/L	0.00973	0.9482	mg/L	0.00973	1.03%
Pb 220.353†	10710.6	2.066	mg/L	0.0050	2.066	mg/L	0.0050	0.24%
Sb 206.836†	3756.4	2.068	mg/L	0.0051	2.068	mg/L	0.0051	0.25%
Se 196.026†	1325.9	2.108	mg/L	0.0064	2.108	mg/L	0.0064	0.30%
Si 288.158†	1723.0	2.254	mg/L	0.0112	2.254	mg/L	0.0112	0.50%
Sn 189.927†	2681.4	1.033	mg/L	0.0047	1.033	mg/L	0.0047	0.46%
Sr 421.552†	440622.2	1.003	mg/L	0.0056	1.003	mg/L	0.0056	0.56%
Ti 334.903†	13202.9	1.016	mg/L	0.0045	1.016	mg/L	0.0045	0.45%
Tl 190.801†	2522.2	2.046	mg/L	0.0082	2.046	mg/L	0.0082	0.40%
V 292.402†	45800.5	0.9308	mg/L	0.00316	0.9308	mg/L	0.00316	0.34%
Zn 206.200†	1697.1	1.025	mg/L	0.0068	1.025	mg/L	0.0068	0.66%

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Sequence No.: 26 **Autosampler Location: 1**
Sample ID: SEQ-CCB6 **Date Collected: 11/18/2020 7:30:25 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB6

Analyte	**Back Pressure**	**Flow**
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCB6

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	1420112.6	100.4	%	0.23				0.23%
ScR 361.383	152731.5	101.0	%	0.67				0.66%
Ag 328.068†	-9.7	-0.00007	mg/L	0.000305	-0.00007	mg/L	0.000305	426.28%
Al 308.215†	-57.0	-0.06158	mg/L	0.013544	-0.06158	mg/L	0.013544	22.00%
As 188.979†	5.8	0.00942	mg/L	0.003421	0.00942	mg/L	0.003421	36.30%
B 249.677†	-0.5	-0.00007	mg/L	0.000897	-0.00007	mg/L	0.000897	>999.9%
Ba 233.527†	-0.9	-0.00026	mg/L	0.000179	-0.00026	mg/L	0.000179	68.43%
Be 313.042†	-49.6	-0.00011	mg/L	0.000081	-0.00011	mg/L	0.000081	73.58%
Ca 317.933†	-8.4	-0.00143	mg/L	0.001053	-0.00143	mg/L	0.001053	73.72%
Cd 228.802†	5.2	0.00024	mg/L	0.000136	0.00024	mg/L	0.000136	57.27%
Co 228.616†	-35.7	-0.00202	mg/L	0.000046	-0.00202	mg/L	0.000046	2.26%
Cr 267.716†	-1.5	-0.00068	mg/L	0.001580	-0.00068	mg/L	0.001580	231.53%
Cu 324.752†	136.3	0.00088	mg/L	0.000073	0.00088	mg/L	0.000073	8.30%
Fe 273.955†	-2.1	-0.00230	mg/L	0.002947	-0.00230	mg/L	0.002947	128.11%
K 766.490†	41.6	0.03741	mg/L	0.011998	0.03741	mg/L	0.011998	32.07%
Mg 279.077†	-2.1	-0.00292	mg/L	0.010685	-0.00292	mg/L	0.010685	366.31%
Mn 257.610†	2.1	0.00007	mg/L	0.000071	0.00007	mg/L	0.000071	107.77%
Mo 202.031†	9.6	0.00088	mg/L	0.000211	0.00088	mg/L	0.000211	24.02%
Na 589.592†	-186.0	-0.02150	mg/L	0.005801	-0.02150	mg/L	0.005801	26.98%
Na 330.237†	-7.7	-0.4327	mg/L	1.07091	-0.4327	mg/L	1.07091	247.52%
Ni 231.604†	-11.3	-0.00545	mg/L	0.003682	-0.00545	mg/L	0.003682	67.57%
Pb 220.353†	42.9	0.00825	mg/L	0.000215	0.00825	mg/L	0.000215	2.61%
Sb 206.836†	7.7	0.00429	mg/L	0.002377	0.00429	mg/L	0.002377	55.44%
Se 196.026†	2.6	0.00407	mg/L	0.007957	0.00407	mg/L	0.007957	195.73%
Si 288.158†	-3.9	-0.00523	mg/L	0.016477	-0.00523	mg/L	0.016477	315.28%
Sn 189.927†	15.6	0.00602	mg/L	0.000794	0.00602	mg/L	0.000794	13.18%
Sr 421.552†	-5.0	-0.00001	mg/L	0.000009	-0.00001	mg/L	0.000009	76.80%
Ti 334.903†	36.3	0.00280	mg/L	0.001181	0.00280	mg/L	0.001181	42.20%
Tl 190.801†	-4.3	-0.00353	mg/L	0.002286	-0.00353	mg/L	0.002286	64.80%
V 292.402†	17.6	0.00035	mg/L	0.000201	0.00035	mg/L	0.000201	57.42%
Zn 206.200†	5.5	0.00335	mg/L	0.001407	0.00335	mg/L	0.001407	42.01%

Sequence No.: 27
Sample ID: 20K0145-02
Autosampler Location: 352
Date Collected: 11/18/2020 7:34:41 PM
Data Type: Original
Dilution: 2X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0145-02

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 20K0145-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1431197.1	101.2	%	0.35				0.34%
ScR 361.383	153978.4	101.8	%	0.22				0.22%
Ag 328.068†	-79.5	-0.00051	mg/L	0.000267	-0.00102	mg/L	0.000533	52.15%
Al 308.215†	80112.9	86.56	mg/L	0.091	173.1	mg/L	0.18	0.11%
As 188.979†	-299.6	-0.2598	mg/L	0.00631	-0.5196	mg/L	0.01263	2.43%
B 249.677†	19.8	0.01545	mg/L	0.000364	0.03090	mg/L	0.000729	2.36%
Ba 233.527†	800.6	0.2098	mg/L	0.00240	0.4197	mg/L	0.00480	1.14%
Be 313.042†	739.5	0.00084	mg/L	0.000038	0.00169	mg/L	0.000076	4.47%
Ca 317.933†	268641.4	45.92	mg/L	0.257	91.84	mg/L	0.514	0.56%
Cd 228.802†	92.6	0.00523	mg/L	0.000170	0.01045	mg/L	0.000339	3.25%
Co 228.616†	912.8	0.04035	mg/L	0.000029	0.08071	mg/L	0.000057	0.07%
Cr 267.716†	1086.8	0.4852	mg/L	0.00814	0.9703	mg/L	0.01627	1.68%
Cu 324.752†	26124.8	0.1721	mg/L	0.00088	0.3441	mg/L	0.00177	0.51%
Fe 273.955†	116999.3	128.6	mg/L	0.64	257.2	mg/L	1.28	0.50%
K 766.490†	4521.5	4.063	mg/L	0.0212	8.125	mg/L	0.0423	0.52%
Mg 279.077†	19161.3	26.94	mg/L	0.008	53.87	mg/L	0.017	0.03%
Mn 257.610†	38765.0	1.182	mg/L	0.0016	2.364	mg/L	0.0032	0.13%
Mo 202.031†	110.3	0.00894	mg/L	0.000738	0.01789	mg/L	0.001477	8.25%
Na 589.592†	72775.6	8.413	mg/L	0.0113	16.83	mg/L	0.023	0.13%
Na 330.237†	132.2	8.140	mg/L	0.3580	16.28	mg/L	0.716	4.40%
Ni 231.604†	185.9	0.08961	mg/L	0.002254	0.1792	mg/L	0.00451	2.52%
Pb 220.353†	716.9	0.1522	mg/L	0.00021	0.3043	mg/L	0.00042	0.14%
Sb 206.836†	9.7	0.00715	mg/L	0.001630	0.01430	mg/L	0.003259	22.80%
Se 196.026†	-27.5	0.01930	mg/L	0.009649	0.03860	mg/L	0.019297	49.99%
Si 288.158†	919.4	1.149	mg/L	0.0121	2.297	mg/L	0.0242	1.05%
Sn 189.927†	32.3	0.02349	mg/L	0.001820	0.04699	mg/L	0.003640	7.75%
Sr 421.552†	154199.7	0.3510	mg/L	0.00061	0.7019	mg/L	0.00123	0.17%
Ti 334.903†	79563.7	6.125	mg/L	0.0096	12.25	mg/L	0.019	0.16%
Tl 190.801†	18.8	-0.03504	mg/L	0.003924	-0.07007	mg/L	0.007849	11.20%
V 292.402†	15142.4	0.3261	mg/L	0.00425	0.6523	mg/L	0.00849	1.30%
Zn 206.200†	2086.0	1.260	mg/L	0.0052	2.519	mg/L	0.0104	0.41%

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Sequence No.: 28
Sample ID: 20K0145-03

Dilution: 2X
Wash Time: 37

Autosampler Location: 353
Date Collected: 11/18/2020 7:38:58 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0145-03

Analyte	Back Pressure	Flow
All	244.0 kPa	0.65 L/min

Mean Data: 20K0145-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1465149.2	103.6	%	0.27				0.26%
ScR 361.383	156236.6	103.3	%	0.44				0.43%
Ag 328.068†	-108.0	-0.00074	mg/L	0.000070	-0.00147	mg/L	0.000139	9.46%
Al 308.215†	60492.8	65.36	mg/L	0.242	130.7	mg/L	0.48	0.37%
As 188.979†	-259.0	-0.2289	mg/L	0.00737	-0.4577	mg/L	0.01475	3.22%
B 249.677†	36.2	0.01381	mg/L	0.001523	0.02762	mg/L	0.003045	11.03%
Ba 233.527†	638.5	0.1702	mg/L	0.00074	0.3404	mg/L	0.00148	0.44%
Be 313.042†	686.3	0.00087	mg/L	0.000020	0.00174	mg/L	0.000039	2.24%
Ca 317.933†	184114.3	31.47	mg/L	0.093	62.94	mg/L	0.186	0.30%
Cd 228.802†	52.3	0.00363	mg/L	0.000233	0.00726	mg/L	0.000466	6.42%
Co 228.616†	613.1	0.02529	mg/L	0.000220	0.05057	mg/L	0.000439	0.87%
Cr 267.716†	259.5	0.1181	mg/L	0.00161	0.2361	mg/L	0.00322	1.36%
Cu 324.752†	16280.7	0.1071	mg/L	0.00097	0.2141	mg/L	0.00195	0.91%
Fe 273.955†	75250.2	82.71	mg/L	0.722	165.4	mg/L	1.44	0.87%
K 766.490†	3789.6	3.405	mg/L	0.0418	6.810	mg/L	0.0835	1.23%
Mg 279.077†	14071.1	19.79	mg/L	0.068	39.57	mg/L	0.135	0.34%
Mn 257.610†	24601.6	0.7499	mg/L	0.00385	1.500	mg/L	0.0077	0.51%
Mo 202.031†	48.3	0.00362	mg/L	0.000262	0.00723	mg/L	0.000523	7.23%
Na 589.592†	51234.6	5.923	mg/L	0.0292	11.85	mg/L	0.058	0.49%
Na 330.237†	88.5	5.755	mg/L	0.2214	11.51	mg/L	0.443	3.85%
Ni 231.604†	142.5	0.06870	mg/L	0.001429	0.1374	mg/L	0.00286	2.08%
Pb 220.353†	383.0	0.08478	mg/L	0.001527	0.1696	mg/L	0.00305	1.80%
Sb 206.836†	-2.9	0.00482	mg/L	0.003209	0.00964	mg/L	0.006419	66.57%
Se 196.026†	-15.6	0.01873	mg/L	0.001722	0.03746	mg/L	0.003444	9.19%
Si 288.158†	882.3	1.109	mg/L	0.0038	2.219	mg/L	0.0077	0.35%
Sn 189.927†	-16.7	0.00158	mg/L	0.002015	0.00317	mg/L	0.004029	127.22%
Sr 421.552†	126265.5	0.2874	mg/L	0.00141	0.5748	mg/L	0.00282	0.49%
Ti 334.903†	66371.1	5.110	mg/L	0.0120	10.22	mg/L	0.024	0.24%
Tl 190.801†	14.5	-0.02814	mg/L	0.004577	-0.05628	mg/L	0.009154	16.27%
V 292.402†	12356.3	0.2613	mg/L	0.00419	0.5227	mg/L	0.00838	1.60%
Zn 206.200†	864.2	0.5215	mg/L	0.00188	1.043	mg/L	0.0038	0.36%

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Sequence No.: 29 **Autosampler Location: 354**
Sample ID: 20K0145-07 **Date Collected: 11/18/2020 7:43:14 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0145-07

Analyte	Back Pressure	Flow
All	244.0 kPa	0.65 L/min

Mean Data: 20K0145-07

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1488469.0	105.3	%	0.54				0.52%
ScR 361.383	160028.6	105.8	%	0.66				0.63%
Ag 328.068†	-91.2	-0.00062	mg/L	0.000049	-0.00123	mg/L	0.000097	7.88%
Al 308.215†	56492.8	61.04	mg/L	0.123	122.1	mg/L	0.25	0.20%
As 188.979†	-242.7	-0.2193	mg/L	0.00213	-0.4386	mg/L	0.00426	0.97%
B 249.677†	12.8	0.00858	mg/L	0.002100	0.01715	mg/L	0.004201	24.49%
Ba 233.527†	852.4	0.2329	mg/L	0.00192	0.4659	mg/L	0.00384	0.82%
Be 313.042†	557.5	0.00064	mg/L	0.000031	0.00127	mg/L	0.000062	4.90%
Ca 317.933†	152471.6	26.06	mg/L	0.178	52.12	mg/L	0.356	0.68%
Cd 228.802†	43.3	0.00323	mg/L	0.000048	0.00647	mg/L	0.000095	1.47%
Co 228.616†	761.2	0.03453	mg/L	0.000417	0.06906	mg/L	0.000835	1.21%
Cr 267.716†	184.2	0.08448	mg/L	0.003807	0.1690	mg/L	0.00761	4.51%
Cu 324.752†	11494.9	0.07593	mg/L	0.000581	0.1519	mg/L	0.00116	0.77%
Fe 273.955†	64948.1	71.38	mg/L	0.240	142.8	mg/L	0.48	0.34%
K 766.490†	3274.5	2.942	mg/L	0.0307	5.885	mg/L	0.0614	1.04%
Mg 279.077†	11544.0	16.23	mg/L	0.092	32.46	mg/L	0.184	0.57%
Mn 257.610†	19594.7	0.5971	mg/L	0.00295	1.194	mg/L	0.0059	0.49%
Mo 202.031†	51.5	0.00404	mg/L	0.000170	0.00809	mg/L	0.000340	4.20%
Na 589.592†	40784.3	4.715	mg/L	0.0156	9.429	mg/L	0.0313	0.33%
Na 330.237†	69.4	4.681	mg/L	0.1769	9.362	mg/L	0.3539	3.78%
Ni 231.604†	113.8	0.05484	mg/L	0.001576	0.1097	mg/L	0.00315	2.87%
Pb 220.353†	46.8	0.01962	mg/L	0.001127	0.03924	mg/L	0.002253	5.74%
Sb 206.836†	-7.6	0.00199	mg/L	0.002806	0.00398	mg/L	0.005613	140.95%
Se 196.026†	-17.5	0.01124	mg/L	0.009554	0.02248	mg/L	0.019108	84.99%
Si 288.158†	882.8	1.115	mg/L	0.0096	2.230	mg/L	0.0192	0.86%
Sn 189.927†	-15.4	0.00087	mg/L	0.001102	0.00174	mg/L	0.002204	126.57%
Sr 421.552†	124130.5	0.2825	mg/L	0.00061	0.5651	mg/L	0.00122	0.22%
Ti 334.903†	59914.4	4.613	mg/L	0.0165	9.226	mg/L	0.0330	0.36%
Tl 190.801†	15.7	-0.02451	mg/L	0.001357	-0.04902	mg/L	0.002714	5.54%
V 292.402†	11402.8	0.2402	mg/L	0.00038	0.4804	mg/L	0.00076	0.16%
Zn 206.200†	429.5	0.2589	mg/L	0.00124	0.5177	mg/L	0.00248	0.48%

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Sequence No.: 30
Sample ID: 20K0145-08

Dilution: 2X
Wash Time: 37

Autosampler Location: 355
Date Collected: 11/18/2020 7:47:30 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0145-08

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 20K0145-08

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1471791.3	104.1	%	0.60				0.58%
ScR 361.383	159132.8	105.2	%	0.15				0.14%
Ag 328.068†	-162.5	-0.00113	mg/L	0.000289	-0.00226	mg/L	0.000579	25.64%
Al 308.215†	74588.8	80.59	mg/L	0.262	161.2	mg/L	0.52	0.33%
As 188.979†	-276.5	-0.2440	mg/L	0.00476	-0.4880	mg/L	0.00953	1.95%
B 249.677†	51.0	0.01617	mg/L	0.001014	0.03235	mg/L	0.002029	6.27%
Ba 233.527†	871.1	0.2369	mg/L	0.00056	0.4739	mg/L	0.00112	0.24%
Be 313.042†	709.9	0.00080	mg/L	0.000047	0.00159	mg/L	0.000094	5.87%
Ca 317.933†	175662.1	30.03	mg/L	0.059	60.05	mg/L	0.119	0.20%
Cd 228.802†	48.4	0.00363	mg/L	0.000077	0.00727	mg/L	0.000154	2.12%
Co 228.616†	703.3	0.02994	mg/L	0.000451	0.05987	mg/L	0.000902	1.51%
Cr 267.716†	217.4	0.09969	mg/L	0.001899	0.1994	mg/L	0.00380	1.90%
Cu 324.752†	14594.7	0.09609	mg/L	0.001083	0.1922	mg/L	0.00217	1.13%
Fe 273.955†	73149.0	80.40	mg/L	0.216	160.8	mg/L	0.43	0.27%
K 766.490†	4595.0	4.129	mg/L	0.0649	8.257	mg/L	0.1298	1.57%
Mg 279.077†	13604.2	19.13	mg/L	0.045	38.26	mg/L	0.091	0.24%
Mn 257.610†	19788.8	0.6028	mg/L	0.00280	1.206	mg/L	0.0056	0.46%
Mo 202.031†	58.2	0.00455	mg/L	0.000767	0.00910	mg/L	0.001535	16.86%
Na 589.592†	90995.1	10.52	mg/L	0.043	21.04	mg/L	0.086	0.41%
Na 330.237†	175.2	10.80	mg/L	0.335	21.60	mg/L	0.669	3.10%
Ni 231.604†	109.4	0.05275	mg/L	0.002231	0.1055	mg/L	0.00446	4.23%
Pb 220.353†	21.7	0.01911	mg/L	0.001082	0.03822	mg/L	0.002164	5.66%
Sb 206.836†	-2.6	0.00584	mg/L	0.001236	0.01168	mg/L	0.002473	21.17%
Se 196.026†	-28.4	0.00263	mg/L	0.008062	0.00526	mg/L	0.016125	306.72%
Si 288.158†	878.5	1.102	mg/L	0.0087	2.204	mg/L	0.0174	0.79%
Sn 189.927†	-19.3	0.00046	mg/L	0.000995	0.00092	mg/L	0.001991	217.21%
Sr 421.552†	158669.0	0.3611	mg/L	0.00141	0.7223	mg/L	0.00282	0.39%
Ti 334.903†	69453.6	5.347	mg/L	0.0088	10.69	mg/L	0.018	0.17%
Tl 190.801†	22.1	-0.02941	mg/L	0.002113	-0.05883	mg/L	0.004226	7.18%
V 292.402†	14790.2	0.3099	mg/L	0.00258	0.6198	mg/L	0.00516	0.83%
Zn 206.200†	321.9	0.1937	mg/L	0.00292	0.3875	mg/L	0.00584	1.51%

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Sequence No.: 31
Sample ID: 20K0145-11

Dilution: 2X
Wash Time: 37

Autosampler Location: 356
Date Collected: 11/18/2020 7:51:46 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0145-11

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 20K0145-11

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1452621.5	102.7	%	0.50				0.49%
ScR 361.383	157521.8	104.2	%	0.38				0.37%
Ag 328.068†	-78.9	-0.00050	mg/L	0.000112	-0.00101	mg/L	0.000224	22.19%
Al 308.215†	89357.3	96.55	mg/L	0.414	193.1	mg/L	0.83	0.43%
As 188.979†	-272.6	-0.2335	mg/L	0.01014	-0.4671	mg/L	0.02029	4.34%
B 249.677†	39.4	0.01404	mg/L	0.001348	0.02807	mg/L	0.002697	9.61%
Ba 233.527†	1586.6	0.4411	mg/L	0.00121	0.8822	mg/L	0.00243	0.28%
Be 313.042†	852.7	0.00108	mg/L	0.000056	0.00215	mg/L	0.000112	5.22%
Ca 317.933†	208524.9	35.64	mg/L	0.056	71.29	mg/L	0.113	0.16%
Cd 228.802†	93.5	0.00615	mg/L	0.000341	0.01230	mg/L	0.000683	5.55%
Co 228.616†	773.3	0.03369	mg/L	0.000338	0.06739	mg/L	0.000675	1.00%
Cr 267.716†	274.4	0.1242	mg/L	0.00274	0.2484	mg/L	0.00547	2.20%
Cu 324.752†	29666.6	0.1931	mg/L	0.00098	0.3862	mg/L	0.00196	0.51%
Fe 273.955†	74107.7	81.45	mg/L	0.154	162.9	mg/L	0.31	0.19%
K 766.490†	3203.5	2.878	mg/L	0.0294	5.757	mg/L	0.0589	1.02%
Mg 279.077†	14194.3	19.96	mg/L	0.061	39.92	mg/L	0.123	0.31%
Mn 257.610†	20895.4	0.6365	mg/L	0.00216	1.273	mg/L	0.0043	0.34%
Mo 202.031†	75.6	0.00604	mg/L	0.000414	0.01208	mg/L	0.000829	6.86%
Na 589.592†	67855.0	7.844	mg/L	0.0337	15.69	mg/L	0.067	0.43%
Na 330.237†	128.2	7.903	mg/L	0.6100	15.81	mg/L	1.220	7.72%
Ni 231.604†	141.2	0.06807	mg/L	0.002328	0.1361	mg/L	0.00466	3.42%
Pb 220.353†	717.4	0.1571	mg/L	0.00060	0.3142	mg/L	0.00119	0.38%
Sb 206.836†	-3.1	0.00532	mg/L	0.001191	0.01064	mg/L	0.002382	22.39%
Se 196.026†	-24.4	0.01388	mg/L	0.006483	0.02775	mg/L	0.012965	46.72%
Si 288.158†	1123.8	1.424	mg/L	0.0047	2.848	mg/L	0.0095	0.33%
Sn 189.927†	-11.9	0.00435	mg/L	0.001029	0.00870	mg/L	0.002059	23.67%
Sr 421.552†	195463.4	0.4449	mg/L	0.00149	0.8898	mg/L	0.00298	0.33%
Ti 334.903†	70679.5	5.442	mg/L	0.0143	10.88	mg/L	0.029	0.26%
Tl 190.801†	23.6	-0.03432	mg/L	0.003195	-0.06864	mg/L	0.006389	9.31%
V 292.402†	15512.2	0.3248	mg/L	0.00303	0.6497	mg/L	0.00606	0.93%
Zn 206.200†	1550.9	0.9365	mg/L	0.00206	1.873	mg/L	0.0041	0.22%

Sequence No.: 32
Sample ID: 20K0145-13

Dilution: 2X
Wash Time: 37

Autosampler Location: 357
Date Collected: 11/18/2020 7:56:02 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0145-13

Analyte	Back Pressure	Flow
All	243.0 kPa	0.65 L/min

Mean Data: 20K0145-13

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1471973.0	104.1	%	0.24				0.23%
ScR 361.383	157043.6	103.9	%	0.51				0.49%
Ag 328.068†	-82.3	-0.00054	mg/L	0.000081	-0.00108	mg/L	0.000163	15.14%
Al 308.215†	85213.5	92.07	mg/L	0.537	184.1	mg/L	1.07	0.58%
As 188.979†	-287.1	-0.2508	mg/L	0.00438	-0.5016	mg/L	0.00876	1.75%
B 249.677†	65.1	0.01743	mg/L	0.000176	0.03486	mg/L	0.000352	1.01%
Ba 233.527†	1154.0	0.3190	mg/L	0.00405	0.6381	mg/L	0.00811	1.27%
Be 313.042†	802.6	0.00104	mg/L	0.000096	0.00209	mg/L	0.000193	9.23%
Ca 317.933†	202801.8	34.66	mg/L	0.244	69.33	mg/L	0.489	0.70%
Cd 228.802†	49.4	0.00395	mg/L	0.000232	0.00789	mg/L	0.000464	5.88%
Co 228.616†	884.1	0.03965	mg/L	0.000196	0.07930	mg/L	0.000392	0.49%
Cr 267.716†	255.4	0.1146	mg/L	0.00096	0.2291	mg/L	0.00192	0.84%
Cu 324.752†	25514.2	0.1659	mg/L	0.00019	0.3319	mg/L	0.00039	0.12%
Fe 273.955†	64945.3	71.38	mg/L	0.858	142.8	mg/L	1.72	1.20%
K 766.490†	5436.2	4.885	mg/L	0.0641	9.769	mg/L	0.1282	1.31%
Mg 279.077†	16496.2	23.21	mg/L	0.104	46.43	mg/L	0.208	0.45%
Mn 257.610†	21467.6	0.6541	mg/L	0.00312	1.308	mg/L	0.0062	0.48%
Mo 202.031†	62.5	0.00481	mg/L	0.000576	0.00962	mg/L	0.001151	11.97%
Na 589.592†	84786.0	9.801	mg/L	0.0484	19.60	mg/L	0.097	0.49%
Na 330.237†	158.8	9.909	mg/L	0.5989	19.82	mg/L	1.198	6.04%
Ni 231.604†	142.7	0.06878	mg/L	0.003260	0.1376	mg/L	0.00652	4.74%
Pb 220.353†	21.4	0.02250	mg/L	0.001468	0.04499	mg/L	0.002936	6.53%
Sb 206.836†	-11.0	0.00120	mg/L	0.002434	0.00240	mg/L	0.004867	202.75%
Se 196.026†	-20.1	0.01630	mg/L	0.006861	0.03259	mg/L	0.013722	42.10%
Si 288.158†	1240.8	1.577	mg/L	0.0083	3.154	mg/L	0.0166	0.53%
Sn 189.927†	-25.8	-0.00109	mg/L	0.000796	-0.00218	mg/L	0.001592	73.09%
Sr 421.552†	200299.1	0.4559	mg/L	0.00302	0.9118	mg/L	0.00603	0.66%
Ti 334.903†	72876.2	5.611	mg/L	0.0401	11.22	mg/L	0.080	0.71%
Tl 190.801†	26.0	-0.03111	mg/L	0.003783	-0.06222	mg/L	0.007567	12.16%
V 292.402†	13973.0	0.2929	mg/L	0.00385	0.5859	mg/L	0.00770	1.31%
Zn 206.200†	398.3	0.2398	mg/L	0.00463	0.4796	mg/L	0.00926	1.93%

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Sequence No.: 33
Sample ID: 20K0145-15

Dilution: 2X
Wash Time: 37

Autosampler Location: 358
Date Collected: 11/18/2020 8:00:18 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0145-15

Analyte	Back Pressure	Flow
All	244.0 kPa	0.65 L/min

Mean Data: 20K0145-15

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1507957.3	106.7	%	0.67				0.63%
ScR 361.383	162062.1	107.2	%	0.07				0.06%
Ag 328.068†	-87.0	-0.00056	mg/L	0.000215	-0.00111	mg/L	0.000430	38.65%
Al 308.215†	105073.5	113.5	mg/L	0.14	227.1	mg/L	0.28	0.12%
As 188.979†	-387.0	-0.3440	mg/L	0.00547	-0.6880	mg/L	0.01094	1.59%
B 249.677†	53.7	0.02408	mg/L	0.000701	0.04815	mg/L	0.001402	2.91%
Ba 233.527†	1666.1	0.4530	mg/L	0.00426	0.9061	mg/L	0.00852	0.94%
Be 313.042†	1070.7	0.00147	mg/L	0.000044	0.00295	mg/L	0.000089	3.02%
Ca 317.933†	300382.9	51.34	mg/L	0.286	102.7	mg/L	0.57	0.56%
Cd 228.802†	103.0	0.00620	mg/L	0.000034	0.01240	mg/L	0.000067	0.54%
Co 228.616†	1480.8	0.06984	mg/L	0.000745	0.1397	mg/L	0.00149	1.07%
Cr 267.716†	504.7	0.2268	mg/L	0.00237	0.4535	mg/L	0.00474	1.04%
Cu 324.752†	31240.0	0.2057	mg/L	0.00133	0.4113	mg/L	0.00267	0.65%
Fe 273.955†	141823.9	155.9	mg/L	0.22	311.8	mg/L	0.43	0.14%
K 766.490†	7330.4	6.587	mg/L	0.0340	13.17	mg/L	0.068	0.52%
Mg 279.077†	34939.9	49.17	mg/L	0.047	98.34	mg/L	0.095	0.10%
Mn 257.610†	83135.7	2.537	mg/L	0.0041	5.073	mg/L	0.0082	0.16%
Mo 202.031†	83.6	0.00611	mg/L	0.000417	0.01221	mg/L	0.000833	6.82%
Na 589.592†	36407.8	4.209	mg/L	0.0028	8.417	mg/L	0.0056	0.07%
Na 330.237†	51.1	4.082	mg/L	0.5045	8.165	mg/L	1.0090	12.36%
Ni 231.604†	550.1	0.2652	mg/L	0.00391	0.5305	mg/L	0.00782	1.47%
Pb 220.353†	646.9	0.1429	mg/L	0.00143	0.2859	mg/L	0.00286	1.00%
Sb 206.836†	1.9	0.00936	mg/L	0.000646	0.01872	mg/L	0.001291	6.90%
Se 196.026†	-42.9	0.01155	mg/L	0.005529	0.02310	mg/L	0.011057	47.87%
Si 288.158†	870.3	1.072	mg/L	0.0191	2.143	mg/L	0.0383	1.79%
Sn 189.927†	-21.6	0.00438	mg/L	0.001353	0.00876	mg/L	0.002706	30.90%
Sr 421.552†	135018.7	0.3073	mg/L	0.00031	0.6146	mg/L	0.00063	0.10%
Ti 334.903†	97314.7	7.492	mg/L	0.0096	14.98	mg/L	0.019	0.13%
Tl 190.801†	32.6	-0.03863	mg/L	0.003449	-0.07727	mg/L	0.006898	8.93%
V 292.402†	17109.1	0.3699	mg/L	0.00747	0.7397	mg/L	0.01494	2.02%
Zn 206.200†	941.2	0.5675	mg/L	0.00446	1.135	mg/L	0.0089	0.79%

Sequence No.: 34
Sample ID: 20K0145-17

Dilution: 2X
Wash Time: 37

Autosampler Location: 359
Date Collected: 11/18/2020 8:04:34 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0145-17

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 20K0145-17

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1502977.4	106.3	%	0.26				0.24%
ScR 361.383	162283.3	107.3	%	0.20				0.19%
Ag 328.068†	-22.7	-0.00009	mg/L	0.000092	-0.00018	mg/L	0.000184	100.97%
Al 308.215†	68173.6	73.65	mg/L	0.358	147.3	mg/L	0.72	0.49%
As 188.979†	-315.9	-0.2796	mg/L	0.00854	-0.5592	mg/L	0.01707	3.05%
B 249.677†	17.3	0.01381	mg/L	0.001476	0.02762	mg/L	0.002951	10.68%
Ba 233.527†	1919.0	0.5308	mg/L	0.00423	1.062	mg/L	0.0085	0.80%
Be 313.042†	753.0	0.00089	mg/L	0.000009	0.00178	mg/L	0.000018	1.02%
Ca 317.933†	205171.6	35.07	mg/L	0.171	70.14	mg/L	0.343	0.49%
Cd 228.802†	125.5	0.00770	mg/L	0.000154	0.01539	mg/L	0.000309	2.00%
Co 228.616†	926.9	0.04094	mg/L	0.000172	0.08187	mg/L	0.000344	0.42%
Cr 267.716†	825.8	0.3697	mg/L	0.00114	0.7393	mg/L	0.00227	0.31%
Cu 324.752†	109005.6	0.7050	mg/L	0.00131	1.410	mg/L	0.0026	0.19%
Fe 273.955†	107216.9	117.8	mg/L	0.77	235.7	mg/L	1.54	0.65%
K 766.490†	6405.1	5.755	mg/L	0.0492	11.51	mg/L	0.098	0.85%
Mg 279.077†	17154.1	24.11	mg/L	0.137	48.23	mg/L	0.273	0.57%
Mn 257.610†	35841.9	1.093	mg/L	0.0064	2.186	mg/L	0.0128	0.59%
Mo 202.031†	62.1	0.00476	mg/L	0.000581	0.00951	mg/L	0.001162	12.21%
Na 589.592†	44790.3	5.178	mg/L	0.0375	10.36	mg/L	0.075	0.73%
Na 330.237†	88.3	5.494	mg/L	0.6008	10.99	mg/L	1.202	10.94%
Ni 231.604†	172.6	0.08321	mg/L	0.001840	0.1664	mg/L	0.00368	2.21%
Pb 220.353†	4111.3	0.8029	mg/L	0.00402	1.606	mg/L	0.0080	0.50%
Sb 206.836†	13.0	0.01109	mg/L	0.001968	0.02217	mg/L	0.003936	17.75%
Se 196.026†	-24.7	0.01752	mg/L	0.004662	0.03503	mg/L	0.009325	26.62%
Si 288.158†	1056.4	1.328	mg/L	0.0060	2.655	mg/L	0.0120	0.45%
Sn 189.927†	20.6	0.01713	mg/L	0.000588	0.03425	mg/L	0.001175	3.43%
Sr 421.552†	171078.4	0.3894	mg/L	0.00166	0.7788	mg/L	0.00333	0.43%
Ti 334.903†	80855.9	6.225	mg/L	0.0192	12.45	mg/L	0.038	0.31%
Tl 190.801†	23.4	-0.02815	mg/L	0.002575	-0.05630	mg/L	0.005149	9.15%
V 292.402†	14865.6	0.3182	mg/L	0.00147	0.6364	mg/L	0.00294	0.46%
Zn 206.200†	2965.0	1.791	mg/L	0.0112	3.583	mg/L	0.0224	0.63%

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Sequence No.: 35
Sample ID: SEQ-CCV7

Autosampler Location: 7
Date Collected: 11/18/2020 8:10:13 PM
Data Type: Original

Dilution: 1X
Wash Time: 120

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV7

Analyte	Back Pressure	Flow
All	243.0 kPa	0.65 L/min

Mean Data: SEQ-CCV7

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1446189.9	102.3	%	0.57				0.55%
ScR 361.383	155083.6	102.6	%	0.54				0.53%
Ag 328.068†	143123.4	1.062	mg/L	0.0024	1.062	mg/L	0.0024	0.23%
Al 308.215†	1870.5	1.988	mg/L	0.0059	1.988	mg/L	0.0059	0.30%
As 188.979†	1145.1	1.876	mg/L	0.0091	1.876	mg/L	0.0091	0.49%
B 249.677†	5524.2	0.9665	mg/L	0.00137	0.9665	mg/L	0.00137	0.14%
Ba 233.527†	3523.1	1.005	mg/L	0.0045	1.005	mg/L	0.0045	0.44%
Be 313.042†	452477.2	0.9981	mg/L	0.00515	0.9981	mg/L	0.00515	0.52%
Ca 317.933†	11716.9	2.003	mg/L	0.0121	2.003	mg/L	0.0121	0.61%
Cd 228.802†	16773.3	0.9710	mg/L	0.00620	0.9710	mg/L	0.00620	0.64%
Co 228.616†	17292.8	0.9732	mg/L	0.00410	0.9732	mg/L	0.00410	0.42%
Cr 267.716†	2122.9	0.9376	mg/L	0.00809	0.9376	mg/L	0.00809	0.86%
Cu 324.752†	154302.3	0.9927	mg/L	0.00345	0.9927	mg/L	0.00345	0.35%
Fe 273.955†	1759.9	1.928	mg/L	0.0188	1.928	mg/L	0.0188	0.98%
K 766.490†	21822.0	19.61	mg/L	0.128	19.61	mg/L	0.128	0.65%
Mg 279.077†	1464.3	2.078	mg/L	0.0212	2.078	mg/L	0.0212	1.02%
Mn 257.610†	33792.1	1.033	mg/L	0.0050	1.033	mg/L	0.0050	0.49%
Mo 202.031†	10549.8	0.9651	mg/L	0.00734	0.9651	mg/L	0.00734	0.76%
Na 589.592†	442288.5	51.13	mg/L	0.442	51.13	mg/L	0.442	0.87%
Na 330.237†	903.3	50.66	mg/L	0.542	50.66	mg/L	0.542	1.07%
Ni 231.604†	1920.9	0.9276	mg/L	0.00575	0.9276	mg/L	0.00575	0.62%
Pb 220.353†	10403.4	2.007	mg/L	0.0166	2.007	mg/L	0.0166	0.83%
Sb 206.836†	3665.4	2.018	mg/L	0.0104	2.018	mg/L	0.0104	0.52%
Se 196.026†	1272.9	2.024	mg/L	0.0102	2.024	mg/L	0.0102	0.50%
Si 288.158†	1688.1	2.209	mg/L	0.0153	2.209	mg/L	0.0153	0.69%
Sn 189.927†	2603.5	1.003	mg/L	0.0094	1.003	mg/L	0.0094	0.94%
Sr 421.552†	435518.2	0.9913	mg/L	0.00485	0.9913	mg/L	0.00485	0.49%
Ti 334.903†	12964.0	0.9973	mg/L	0.00571	0.9973	mg/L	0.00571	0.57%
Tl 190.801†	2461.1	1.996	mg/L	0.0171	1.996	mg/L	0.0171	0.86%
V 292.402†	45267.1	0.9199	mg/L	0.00429	0.9199	mg/L	0.00429	0.47%
Zn 206.200†	1636.7	0.9889	mg/L	0.00602	0.9889	mg/L	0.00602	0.61%

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Sequence No.: 36 **Autosampler Location: 1**
Sample ID: SEQ-CCB7 **Date Collected: 11/18/2020 8:15:33 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB7

Analyte	Back Pressure	Flow
All	244.0 kPa	0.65 L/min

Mean Data: SEQ-CCB7

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1470792.1	104.0	%	0.51				0.49%
ScR 361.383	156326.4	103.4	%	0.93				0.90%
Ag 328.068†	-5.7	-0.00004	mg/L	0.000040	-0.00004	mg/L	0.000040	94.98%
Al 308.215†	-96.8	-0.1046	mg/L	0.01584	-0.1046	mg/L	0.01584	15.14%
As 188.979†	6.5	0.01053	mg/L	0.004915	0.01053	mg/L	0.004915	46.67%
B 249.677†	8.8	0.00154	mg/L	0.001994	0.00154	mg/L	0.001994	129.18%
Ba 233.527†	-3.2	-0.00093	mg/L	0.000373	-0.00093	mg/L	0.000373	40.09%
Be 313.042†	-84.0	-0.00019	mg/L	0.000069	-0.00019	mg/L	0.000069	37.31%
Ca 317.933†	4.5	0.00077	mg/L	0.002528	0.00077	mg/L	0.002528	326.81%
Cd 228.802†	-2.3	-0.00021	mg/L	0.000085	-0.00021	mg/L	0.000085	40.75%
Co 228.616†	-30.6	-0.00173	mg/L	0.000157	-0.00173	mg/L	0.000157	9.09%
Cr 267.716†	13.5	0.00593	mg/L	0.003479	0.00593	mg/L	0.003479	58.70%
Cu 324.752†	124.6	0.00080	mg/L	0.000029	0.00080	mg/L	0.000029	3.63%
Fe 273.955†	7.3	0.00803	mg/L	0.005692	0.00803	mg/L	0.005692	70.89%
K 766.490†	46.2	0.04148	mg/L	0.029123	0.04148	mg/L	0.029123	70.21%
Mg 279.077†	8.5	0.01204	mg/L	0.001842	0.01204	mg/L	0.001842	15.31%
Mn 257.610†	-2.6	-0.00008	mg/L	0.000134	-0.00008	mg/L	0.000134	169.05%
Mo 202.031†	5.8	0.00053	mg/L	0.000285	0.00053	mg/L	0.000285	53.71%
Na 589.592†	-269.1	-0.03111	mg/L	0.011010	-0.03111	mg/L	0.011010	35.39%
Na 330.237†	-2.5	-0.1400	mg/L	0.91222	-0.1400	mg/L	0.91222	651.52%
Ni 231.604†	-2.7	-0.00128	mg/L	0.001831	-0.00128	mg/L	0.001831	142.68%
Pb 220.353†	42.9	0.00825	mg/L	0.000134	0.00825	mg/L	0.000134	1.63%
Sb 206.836†	2.2	0.00116	mg/L	0.001948	0.00116	mg/L	0.001948	168.03%
Se 196.026†	2.3	0.00356	mg/L	0.006399	0.00356	mg/L	0.006399	179.93%
Si 288.158†	-3.2	-0.00432	mg/L	0.008341	-0.00432	mg/L	0.008341	193.23%
Sn 189.927†	10.0	0.00386	mg/L	0.000438	0.00386	mg/L	0.000438	11.35%
Sr 421.552†	-14.6	-0.00003	mg/L	0.000053	-0.00003	mg/L	0.000053	160.28%
Ti 334.903†	28.5	0.00219	mg/L	0.002012	0.00219	mg/L	0.002012	91.86%
Tl 190.801†	-7.7	-0.00624	mg/L	0.002695	-0.00624	mg/L	0.002695	43.21%
V 292.402†	7.7	0.00020	mg/L	0.000334	0.00020	mg/L	0.000334	168.52%
Zn 206.200†	3.2	0.00192	mg/L	0.001418	0.00192	mg/L	0.001418	73.67%

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Sequence No.: 37 **Autosampler Location: 9**
Sample ID: RINSE - 1 **Date Collected: 11/18/2020 8:19:49 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: RINSE - 1

Analyte	**Back Pressure**	**Flow**
All	243.0 kPa	0.65 L/min

Mean Data: RINSE - 1

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	1461651.6	103.4	%	0.19				0.19%
ScR 361.383	158137.1	104.6	%	1.04				1.00%
Ag 328.068†	38.3	0.00028	mg/L	0.000163	0.00028	mg/L	0.000163	57.28%
Al 308.215†	-79.4	-0.08581	mg/L	0.023234	-0.08581	mg/L	0.023234	27.08%
As 188.979†	3.8	0.00608	mg/L	0.003656	0.00608	mg/L	0.003656	60.11%
B 249.677†	11.6	0.00205	mg/L	0.000460	0.00205	mg/L	0.000460	22.50%
Ba 233.527†	-1.9	-0.00053	mg/L	0.000423	-0.00053	mg/L	0.000423	79.80%
Be 313.042†	-70.3	-0.00016	mg/L	0.000073	-0.00016	mg/L	0.000073	46.62%
Ca 317.933†	3.4	0.00058	mg/L	0.001031	0.00058	mg/L	0.001031	179.09%
Cd 228.802†	-3.3	-0.00024	mg/L	0.000242	-0.00024	mg/L	0.000242	103.02%
Co 228.616†	-31.4	-0.00177	mg/L	0.000175	-0.00177	mg/L	0.000175	9.89%
Cr 267.716†	1.5	0.00067	mg/L	0.003555	0.00067	mg/L	0.003555	530.43%
Cu 324.752†	144.5	0.00093	mg/L	0.000106	0.00093	mg/L	0.000106	11.37%
Fe 273.955†	3.8	0.00417	mg/L	0.005465	0.00417	mg/L	0.005465	131.13%
K 766.490†	18.2	0.01636	mg/L	0.056215	0.01636	mg/L	0.056215	343.71%
Mg 279.077†	2.4	0.00341	mg/L	0.003381	0.00341	mg/L	0.003381	99.26%
Mn 257.610†	-3.5	-0.00011	mg/L	0.000109	-0.00011	mg/L	0.000109	101.87%
Mo 202.031†	3.2	0.00029	mg/L	0.000055	0.00029	mg/L	0.000055	18.94%
Na 589.592†	-262.8	-0.03038	mg/L	0.001362	-0.03038	mg/L	0.001362	4.48%
Na 330.237†	-1.0	-0.05677	mg/L	0.810138	-0.05677	mg/L	0.810138	>999.9%
Ni 231.604†	2.0	0.00099	mg/L	0.000908	0.00099	mg/L	0.000908	92.13%
Pb 220.353†	44.7	0.00860	mg/L	0.000687	0.00860	mg/L	0.000687	7.99%
Sb 206.836†	-1.5	-0.00077	mg/L	0.001182	-0.00077	mg/L	0.001182	152.53%
Se 196.026†	-2.4	-0.00387	mg/L	0.004061	-0.00387	mg/L	0.004061	104.83%
Si 288.158†	-1.7	-0.00223	mg/L	0.014197	-0.00223	mg/L	0.014197	636.83%
Sn 189.927†	11.3	0.00436	mg/L	0.000166	0.00436	mg/L	0.000166	3.80%
Sr 421.552†	-25.6	-0.00006	mg/L	0.000059	-0.00006	mg/L	0.000059	101.61%
Ti 334.903†	17.5	0.00135	mg/L	0.001232	0.00135	mg/L	0.001232	91.34%
Tl 190.801†	-1.9	-0.00154	mg/L	0.005452	-0.00154	mg/L	0.005452	355.10%
V 292.402†	7.4	0.00016	mg/L	0.000234	0.00016	mg/L	0.000234	150.78%
Zn 206.200†	4.8	0.00292	mg/L	0.000549	0.00292	mg/L	0.000549	18.79%

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Sequence No.: 38 **Autosampler Location: 9**
Sample ID: RINSE - 2 **Date Collected: 11/18/2020 8:24:05 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: RINSE - 2

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: RINSE - 2

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1442510.8	102.0	%	0.31				0.30%
ScR 361.383	154349.7	102.1	%	0.55				0.54%
Ag 328.068†	-13.2	-0.00010	mg/L	0.000163	-0.00010	mg/L	0.000163	166.27%
Al 308.215†	-80.1	-0.08654	mg/L	0.011348	-0.08654	mg/L	0.011348	13.11%
As 188.979†	5.9	0.00964	mg/L	0.007645	0.00964	mg/L	0.007645	79.33%
B 249.677†	-2.6	-0.00045	mg/L	0.002244	-0.00045	mg/L	0.002244	498.39%
Ba 233.527†	-2.9	-0.00082	mg/L	0.000413	-0.00082	mg/L	0.000413	50.32%
Be 313.042†	-55.2	-0.00012	mg/L	0.000022	-0.00012	mg/L	0.000022	18.30%
Ca 317.933†	1.9	0.00032	mg/L	0.000819	0.00032	mg/L	0.000819	254.56%
Cd 228.802†	-4.3	-0.00032	mg/L	0.000327	-0.00032	mg/L	0.000327	102.34%
Co 228.616†	-34.6	-0.00196	mg/L	0.000131	-0.00196	mg/L	0.000131	6.72%
Cr 267.716†	-8.6	-0.00378	mg/L	0.001677	-0.00378	mg/L	0.001677	44.42%
Cu 324.752†	102.5	0.00066	mg/L	0.000097	0.00066	mg/L	0.000097	14.64%
Fe 273.955†	0.9	0.00095	mg/L	0.002949	0.00095	mg/L	0.002949	311.67%
K 766.490†	44.2	0.03970	mg/L	0.027241	0.03970	mg/L	0.027241	68.62%
Mg 279.077†	3.4	0.00473	mg/L	0.020415	0.00473	mg/L	0.020415	431.94%
Mn 257.610†	0.5	0.00002	mg/L	0.000074	0.00002	mg/L	0.000074	480.10%
Mo 202.031†	0.5	0.00005	mg/L	0.000144	0.00005	mg/L	0.000144	292.66%
Na 589.592†	-281.1	-0.03250	mg/L	0.007103	-0.03250	mg/L	0.007103	21.86%
Na 330.237†	-4.4	-0.2508	mg/L	0.74586	-0.2508	mg/L	0.74586	297.44%
Ni 231.604†	-0.8	-0.00039	mg/L	0.001802	-0.00039	mg/L	0.001802	463.63%
Pb 220.353†	45.7	0.00879	mg/L	0.001720	0.00879	mg/L	0.001720	19.58%
Sb 206.836†	-2.4	-0.00124	mg/L	0.001923	-0.00124	mg/L	0.001923	155.16%
Se 196.026†	-3.7	-0.00590	mg/L	0.003953	-0.00590	mg/L	0.003953	67.04%
Si 288.158†	-6.6	-0.00882	mg/L	0.009107	-0.00882	mg/L	0.009107	103.30%
Sn 189.927†	8.8	0.00340	mg/L	0.001032	0.00340	mg/L	0.001032	30.34%
Sr 421.552†	-10.0	-0.00002	mg/L	0.000062	-0.00002	mg/L	0.000062	272.39%
Ti 334.903†	31.3	0.00241	mg/L	0.000803	0.00241	mg/L	0.000803	33.28%
Tl 190.801†	-3.9	-0.00317	mg/L	0.001101	-0.00317	mg/L	0.001101	34.77%
V 292.402†	-2.6	-0.00008	mg/L	0.000188	-0.00008	mg/L	0.000188	239.84%
Zn 206.200†	5.6	0.00340	mg/L	0.000577	0.00340	mg/L	0.000577	16.96%

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Sequence No.: 39 **Autosampler Location: 9**
Sample ID: RINSE - 3 **Date Collected: 11/18/2020 8:28:21 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: RINSE - 3

Analyte	**Back Pressure**	**Flow**
All	241.0 kPa	0.65 L/min

Mean Data: RINSE - 3

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	1427070.9	100.9	%	0.45				0.45%
ScR 361.383	152095.2	100.6	%	0.41				0.40%
Ag 328.068†	-24.3	-0.00018	mg/L	0.000249	-0.00018	mg/L	0.000249	138.40%
Al 308.215†	-85.1	-0.09198	mg/L	0.017407	-0.09198	mg/L	0.017407	18.93%
As 188.979†	5.5	0.00883	mg/L	0.001144	0.00883	mg/L	0.001144	12.96%
B 249.677†	-7.4	-0.00129	mg/L	0.000762	-0.00129	mg/L	0.000762	58.91%
Ba 233.527†	-0.8	-0.00024	mg/L	0.001684	-0.00024	mg/L	0.001684	696.43%
Be 313.042†	-75.3	-0.00017	mg/L	0.000022	-0.00017	mg/L	0.000022	13.31%
Ca 317.933†	9.7	0.00166	mg/L	0.002506	0.00166	mg/L	0.002506	150.95%
Cd 228.802†	-6.8	-0.00046	mg/L	0.000216	-0.00046	mg/L	0.000216	46.87%
Co 228.616†	-32.6	-0.00184	mg/L	0.000153	-0.00184	mg/L	0.000153	8.31%
Cr 267.716†	-0.6	-0.00026	mg/L	0.001027	-0.00026	mg/L	0.001027	397.98%
Cu 324.752†	117.2	0.00075	mg/L	0.000136	0.00075	mg/L	0.000136	18.01%
Fe 273.955†	3.4	0.00376	mg/L	0.000103	0.00376	mg/L	0.000103	2.73%
K 766.490†	17.7	0.01587	mg/L	0.014877	0.01587	mg/L	0.014877	93.77%
Mg 279.077†	2.9	0.00406	mg/L	0.003585	0.00406	mg/L	0.003585	88.29%
Mn 257.610†	-1.9	-0.00006	mg/L	0.000016	-0.00006	mg/L	0.000016	28.11%
Mo 202.031†	2.2	0.00020	mg/L	0.000262	0.00020	mg/L	0.000262	130.72%
Na 589.592†	-328.0	-0.03791	mg/L	0.007116	-0.03791	mg/L	0.007116	18.77%
Na 330.237†	-6.9	-0.3888	mg/L	0.75023	-0.3888	mg/L	0.75023	192.96%
Ni 231.604†	-3.5	-0.00170	mg/L	0.000571	-0.00170	mg/L	0.000571	33.64%
Pb 220.353†	43.8	0.00841	mg/L	0.000474	0.00841	mg/L	0.000474	5.64%
Sb 206.836†	-0.9	-0.00048	mg/L	0.001146	-0.00048	mg/L	0.001146	240.72%
Se 196.026†	-3.1	-0.00494	mg/L	0.006615	-0.00494	mg/L	0.006615	133.85%
Si 288.158†	-1.9	-0.00252	mg/L	0.007380	-0.00252	mg/L	0.007380	293.16%
Sn 189.927†	9.0	0.00347	mg/L	0.001315	0.00347	mg/L	0.001315	37.94%
Sr 421.552†	-3.3	-0.00001	mg/L	0.000068	-0.00001	mg/L	0.000068	916.08%
Ti 334.903†	12.2	0.00094	mg/L	0.001311	0.00094	mg/L	0.001311	139.59%
Tl 190.801†	-6.3	-0.00512	mg/L	0.001817	-0.00512	mg/L	0.001817	35.52%
V 292.402†	3.3	0.00007	mg/L	0.000430	0.00007	mg/L	0.000430	650.84%
Zn 206.200†	6.9	0.00414	mg/L	0.000336	0.00414	mg/L	0.000336	8.10%

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Sequence No.: 40 **Autosampler Location: 9**
Sample ID: RINSE - 4 **Date Collected: 11/18/2020 8:32:37 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: RINSE - 4

Analyte	Back Pressure	Flow
All	243.0 kPa	0.65 L/min

Mean Data: RINSE - 4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1470391.0	104.0	%	1.02				0.98%
ScR 361.383	156727.2	103.7	%	0.31				0.30%
Ag 328.068†	13.0	0.00010	mg/L	0.000222	0.00010	mg/L	0.000222	231.32%
Al 308.215†	-100.9	-0.1091	mg/L	0.01311	-0.1091	mg/L	0.01311	12.02%
As 188.979†	4.2	0.00676	mg/L	0.006509	0.00676	mg/L	0.006509	96.24%
B 249.677†	7.3	0.00127	mg/L	0.000501	0.00127	mg/L	0.000501	39.32%
Ba 233.527†	-2.2	-0.00063	mg/L	0.001259	-0.00063	mg/L	0.001259	198.34%
Be 313.042†	-129.2	-0.00029	mg/L	0.000065	-0.00029	mg/L	0.000065	22.90%
Ca 317.933†	2.5	0.00043	mg/L	0.000284	0.00043	mg/L	0.000284	65.83%
Cd 228.802†	-7.5	-0.00048	mg/L	0.000179	-0.00048	mg/L	0.000179	37.01%
Co 228.616†	-31.3	-0.00177	mg/L	0.000147	-0.00177	mg/L	0.000147	8.34%
Cr 267.716†	8.3	0.00363	mg/L	0.001277	0.00363	mg/L	0.001277	35.14%
Cu 324.752†	75.9	0.00049	mg/L	0.000125	0.00049	mg/L	0.000125	25.69%
Fe 273.955†	2.3	0.00251	mg/L	0.001919	0.00251	mg/L	0.001919	76.35%
K 766.490†	49.2	0.04422	mg/L	0.013121	0.04422	mg/L	0.013121	29.67%
Mg 279.077†	5.8	0.00815	mg/L	0.009852	0.00815	mg/L	0.009852	120.85%
Mn 257.610†	-14.8	-0.00045	mg/L	0.000078	-0.00045	mg/L	0.000078	17.35%
Mo 202.031†	-1.3	-0.00012	mg/L	0.000077	-0.00012	mg/L	0.000077	65.14%
Na 589.592†	-347.4	-0.04016	mg/L	0.007882	-0.04016	mg/L	0.007882	19.63%
Na 330.237†	0.3	0.01620	mg/L	0.498222	0.01620	mg/L	0.498222	>999.9%
Ni 231.604†	-0.6	-0.00028	mg/L	0.001040	-0.00028	mg/L	0.001040	366.58%
Pb 220.353†	39.8	0.00765	mg/L	0.001110	0.00765	mg/L	0.001110	14.51%
Sb 206.836†	-3.0	-0.00167	mg/L	0.001717	-0.00167	mg/L	0.001717	103.03%
Se 196.026†	3.2	0.00498	mg/L	0.006488	0.00498	mg/L	0.006488	130.38%
Si 288.158†	4.5	0.00587	mg/L	0.000988	0.00587	mg/L	0.000988	16.84%
Sn 189.927†	9.4	0.00360	mg/L	0.001380	0.00360	mg/L	0.001380	38.34%
Sr 421.552†	-40.9	-0.00009	mg/L	0.000085	-0.00009	mg/L	0.000085	90.90%
Ti 334.903†	20.7	0.00159	mg/L	0.001686	0.00159	mg/L	0.001686	105.91%
Tl 190.801†	-9.8	-0.00796	mg/L	0.000998	-0.00796	mg/L	0.000998	12.54%
V 292.402†	-5.3	-0.00008	mg/L	0.000281	-0.00008	mg/L	0.000281	352.29%
Zn 206.200†	5.1	0.00309	mg/L	0.001731	0.00309	mg/L	0.001731	56.05%

===

Sequence No.: 41 **Autosampler Location: 10**
Sample ID: DI - 1 **Date Collected: 11/18/2020 8:36:53 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: DI - 1

Analyte	Back Pressure	Flow
All	243.0 kPa	0.65 L/min

Mean Data: DI - 1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1544329.9	109.2	%	0.36				0.33%
ScR 361.383	164292.4	108.7	%	1.25				1.15%
Ag 328.068†	-15.4	-0.00011	mg/L	0.000187	-0.00011	mg/L	0.000187	163.86%
Al 308.215†	-108.8	-0.1176	mg/L	0.01523	-0.1176	mg/L	0.01523	12.96%
As 188.979†	7.3	0.01178	mg/L	0.000404	0.01178	mg/L	0.000404	3.43%
B 249.677†	-4.7	-0.00083	mg/L	0.001480	-0.00083	mg/L	0.001480	178.80%
Ba 233.527†	-3.4	-0.00098	mg/L	0.002256	-0.00098	mg/L	0.002256	231.36%
Be 313.042†	-130.0	-0.00029	mg/L	0.000038	-0.00029	mg/L	0.000038	13.34%
Ca 317.933†	-15.3	-0.00261	mg/L	0.001980	-0.00261	mg/L	0.001980	75.92%
Cd 228.802†	-10.8	-0.00071	mg/L	0.000100	-0.00071	mg/L	0.000100	14.08%
Co 228.616†	-20.9	-0.00118	mg/L	0.000157	-0.00118	mg/L	0.000157	13.30%
Cr 267.716†	22.6	0.00996	mg/L	0.001339	0.00996	mg/L	0.001339	13.44%
Cu 324.752†	35.0	0.00023	mg/L	0.000049	0.00023	mg/L	0.000049	21.97%
Fe 273.955†	2.8	0.00313	mg/L	0.000959	0.00313	mg/L	0.000959	30.63%
K 766.490†	-13.1	-0.01180	mg/L	0.013451	-0.01180	mg/L	0.013451	114.03%
Mg 279.077†	0.3	0.00043	mg/L	0.004342	0.00043	mg/L	0.004342	>999.9%
Mn 257.610†	-25.9	-0.00079	mg/L	0.000171	-0.00079	mg/L	0.000171	21.65%
Mo 202.031†	-1.5	-0.00014	mg/L	0.000203	-0.00014	mg/L	0.000203	148.88%
Na 589.592†	-227.7	-0.02632	mg/L	0.002083	-0.02632	mg/L	0.002083	7.92%
Na 330.237†	0.5	0.02643	mg/L	0.121126	0.02643	mg/L	0.121126	458.28%
Ni 231.604†	-4.7	-0.00229	mg/L	0.001900	-0.00229	mg/L	0.001900	82.93%
Pb 220.353†	43.4	0.00837	mg/L	0.000402	0.00837	mg/L	0.000402	4.80%
Sb 206.836†	-6.4	-0.00367	mg/L	0.000543	-0.00367	mg/L	0.000543	14.78%
Se 196.026†	2.6	0.00412	mg/L	0.008247	0.00412	mg/L	0.008247	200.09%
Si 288.158†	12.3	0.01619	mg/L	0.007928	0.01619	mg/L	0.007928	48.96%
Sn 189.927†	7.9	0.00304	mg/L	0.001170	0.00304	mg/L	0.001170	38.45%
Sr 421.552†	-90.9	-0.00021	mg/L	0.000030	-0.00021	mg/L	0.000030	14.69%
Ti 334.903†	8.0	0.00061	mg/L	0.000743	0.00061	mg/L	0.000743	121.77%
Tl 190.801†	-8.6	-0.00695	mg/L	0.002912	-0.00695	mg/L	0.002912	41.91%
V 292.402†	3.0	0.00013	mg/L	0.000626	0.00013	mg/L	0.000626	482.77%
Zn 206.200†	4.8	0.00292	mg/L	0.001051	0.00292	mg/L	0.001051	35.96%

Sequence No.: 42 **Autosampler Location: 10**
Sample ID: DI - 2 **Date Collected: 11/18/2020 8:41:08 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: DI - 2

Analyte	**Back Pressure**	**Flow**
All	241.0 kPa	0.65 L/min

Mean Data: DI - 2

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	1514991.2	107.2	%	0.70				0.66%
ScR 361.383	163543.4	108.2	%	0.87				0.80%
Ag 328.068†	-39.4	-0.00029	mg/L	0.000017	-0.00029	mg/L	0.000017	5.88%
Al 308.215†	-108.9	-0.1176	mg/L	0.01386	-0.1176	mg/L	0.01386	11.79%
As 188.979†	5.5	0.00889	mg/L	0.005377	0.00889	mg/L	0.005377	60.51%
B 249.677†	-8.9	-0.00157	mg/L	0.002182	-0.00157	mg/L	0.002182	139.39%
Ba 233.527†	-6.5	-0.00185	mg/L	0.000708	-0.00185	mg/L	0.000708	38.32%
Be 313.042†	-126.8	-0.00028	mg/L	0.000083	-0.00028	mg/L	0.000083	29.68%
Ca 317.933†	-8.8	-0.00151	mg/L	0.002210	-0.00151	mg/L	0.002210	146.32%
Cd 228.802†	-9.3	-0.00061	mg/L	0.000079	-0.00061	mg/L	0.000079	12.97%
Co 228.616†	-21.5	-0.00121	mg/L	0.000407	-0.00121	mg/L	0.000407	33.62%
Cr 267.716†	21.4	0.00943	mg/L	0.004833	0.00943	mg/L	0.004833	51.26%
Cu 324.752†	50.3	0.00032	mg/L	0.000163	0.00032	mg/L	0.000163	50.31%
Fe 273.955†	-0.9	-0.00091	mg/L	0.001235	-0.00091	mg/L	0.001235	135.35%
K 766.490†	27.3	0.02455	mg/L	0.011358	0.02455	mg/L	0.011358	46.27%
Mg 279.077†	-2.2	-0.00310	mg/L	0.007399	-0.00310	mg/L	0.007399	238.72%
Mn 257.610†	-19.3	-0.00059	mg/L	0.000146	-0.00059	mg/L	0.000146	24.76%
Mo 202.031†	-7.5	-0.00069	mg/L	0.000352	-0.00069	mg/L	0.000352	51.16%
Na 589.592†	-245.9	-0.02843	mg/L	0.000358	-0.02843	mg/L	0.000358	1.26%
Na 330.237†	-6.5	-0.3687	mg/L	0.51306	-0.3687	mg/L	0.51306	139.15%
Ni 231.604†	-3.9	-0.00188	mg/L	0.002085	-0.00188	mg/L	0.002085	110.82%
Pb 220.353†	43.2	0.00832	mg/L	0.001126	0.00832	mg/L	0.001126	13.52%
Sb 206.836†	-6.6	-0.00377	mg/L	0.002669	-0.00377	mg/L	0.002669	70.78%
Se 196.026†	-0.9	-0.00150	mg/L	0.003675	-0.00150	mg/L	0.003675	244.52%
Si 288.158†	4.7	0.00624	mg/L	0.006327	0.00624	mg/L	0.006327	101.41%
Sn 189.927†	9.2	0.00352	mg/L	0.001197	0.00352	mg/L	0.001197	33.99%
Sr 421.552†	-50.6	-0.00012	mg/L	0.000075	-0.00012	mg/L	0.000075	65.02%
Ti 334.903†	-2.8	-0.00022	mg/L	0.001100	-0.00022	mg/L	0.001100	507.69%
Tl 190.801†	-8.3	-0.00674	mg/L	0.002191	-0.00674	mg/L	0.002191	32.52%
V 292.402†	-19.6	-0.00033	mg/L	0.000150	-0.00033	mg/L	0.000150	45.33%
Zn 206.200†	4.0	0.00242	mg/L	0.000680	0.00242	mg/L	0.000680	28.08%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DK00051	Instrument:	ICP2
Calibration Date:	11/20/2020 15:03		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Lead	0	0	0		10	4600.557	0		0			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DK00051	Instrument:	ICP2
Calibration Date:	11/20/2020 15:03		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Lead	2300.279	141.4	1.0000			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: 11/12/20 Analysis Date: 11/20/2020 Analyst: TH
LR Date: 11/12/20 Sequence: SIK0315 Page: 1 of 2

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
	✓	SEQ-CAL1	—		
		-CAL2			
		-CAL3			
		-CAL4			
		-CAL5			
		-CAL1	I10177		
		-CAL2	I10647		
		-CAL3	I10648		
		-CAL4	I10649		
		-CAL5	I10650		
		-ICV1	I10589		
		-ICB1	I10177		
		-CRL1	I10665		
		-IFA1	I10667		Co, Se↓ As, Sn, Tl, V ↑
		-IFB1	I6931		As, Sn↑ Se↓
		-CCV1	I10589		
		-CCB1	I10177		
		BIK0529-BLK1	SWC	2	Ca, Fe, Mg only
		20K0126-06		200	
	✓	20K0286-01		50	Fe?LR
		-02		100	
		-03			
		-04			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11/20/2020 Analyst: YLt

LR Date: — Sequence: — Page: 2 of 2

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		20K0286-05	SWC	100	
		↓ -01	↓	↓	
		BIK0529-BS1	↓	2	Ca, Fe, Mg only
		SEQ-CCV2			
		↓ -CCB2			
		Rinse/DI			

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

11/20/2020 11:46:24 AM Hg ReAlign... Actual peak offset (nm): 0.001
Drift (nm): 0.002 Slit adjustment: 9

Analysis Begun

Start Time: 11/20/2020 11:50:29 AM
Plasma On Time: 11/20/2020 10:22:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\BLKS.sif
Batch ID:
Results Data Set: I2201120
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded
Method Name: ELMT7300bcESI2FAST
Method Last Saved: 11/18/2020 1:49:36 PM
IEC File: IEC111220_A.iec
MSF File:
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

~~**Sequence No.: 1**~~
~~**Autosampler Location: 1**~~
~~**Sample ID: B1**~~
~~**Date Collected: 11/20/2020 11:50:39 AM**~~
TH 11-20-20
~~**Data Type: Original**~~
~~**Dilution: 1X**~~

~~**Nebulizer Parameters: B1**~~

~~Analyte~~	~~Back Pressure~~	~~Flow~~
~~All~~	~~232.0 kPa~~	~~0.65 L/min~~

==

Analysis Begun

Start Time: 11/20/2020 2:35:16 PM
Plasma On Time: 11/20/2020 10:22:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1120.sif
Batch ID:
Results Data Set: I2201120b
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==

Sequence No.: 1
Autosampler Location: 1
Sample ID: SEQ-CAL1 DEL
Date Collected: 11/20/2020 2:35:24 PM
Data Type: Original

Nebulizer Parameters: SEQ-CAL1

Analyte	Back Pressure	Flow
All	245.0 kPa	0.65 L/min

Mean Data: SEQ-CAL1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1455677.2	4495.25	0.31%	100.0	%
ScR 361.383	168037.6	352.95	0.21%	100.0	%
Ag 328.068†	240.4	19.57	8.14%	[0.00]	mg/L
Al 308.215†	-218.5	9.16	4.19%	[0.00]	mg/L
As 188.979†	46.8	0.23	0.48%	[0.00]	mg/L
B 249.677†	-141.1	2.94	2.08%	[0.00]	mg/L
Ba 233.527†	-19.9	0.91	4.58%	[0.00]	mg/L
Be 313.042†	1236.7	25.55	2.07%	[0.00]	mg/L
Ca 317.933†	37.5	13.72	36.58%	[0.00]	mg/L
Cd 228.802†	299.4	1.93	0.64%	[0.00]	mg/L
Co 228.616†	-300.2	7.07	2.35%	[0.00]	mg/L
Cr 267.716†	-253.2	7.77	3.07%	[0.00]	mg/L
Cu 324.752†	1810.2	20.16	1.11%	[0.00]	mg/L
Fe 273.955†	20.5	1.03	5.03%	[0.00]	mg/L
K 766.490†	67.7	14.23	21.03%	[0.00]	mg/L
Mg 279.077†	113.9	6.38	5.61%	[0.00]	mg/L
Mn 257.610†	144.5	3.53	2.44%	[0.00]	mg/L
Mo 202.031†	46.1	2.33	5.05%	[0.00]	mg/L
Na 589.592†	-390.1	25.97	6.66%	[0.00]	mg/L
Na 330.237†	-84.1	5.78	6.87%	[0.00]	mg/L
Ni 231.604†	-9.0	6.00	66.48%	[0.00]	mg/L
Pb 220.353†	236.7	1.79	0.76%	[0.00]	mg/L
Sb 206.836†	29.8	3.48	11.68%	[0.00]	mg/L
Se 196.026†	-182.8	2.09	1.14%	[0.00]	mg/L
Si 288.158†	-94.0	5.17	5.50%	[0.00]	mg/L
Sn 189.927†	79.9	2.46	3.08%	[0.00]	mg/L
Sr 421.552†	583.8	18.75	3.21%	[0.00]	mg/L
Ti 334.903†	292.6	6.90	2.36%	[0.00]	mg/L
Tl 190.801†	150.5	0.89	0.59%	[0.00]	mg/L
V 292.402†	148.9	9.52	6.39%	[0.00]	mg/L
Zn 206.200†	34.8	1.84	5.28%	[0.00]	mg/L

==

Sequence No.: 2
Sample ID: SEQ-CAL2
DEL
Wash Time: 37

Autosampler Location: 2
Date Collected: 11/20/2020 2:39:46 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CAL2

Analyte	Back Pressure	Flow
All	245.0 kPa	0.65 L/min

Mean Data: SEQ-CAL2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1437165.2	4449.84	0.31%	98.73	%
ScR 361.383	171600.1	643.97	0.38%	102.1	%
Ba 233.527†	34847.8	16.53	0.05%	[10]	mg/L
Cd 228.802†	165262.2	1283.64	0.78%	[10]	mg/L
Co 228.616†	139927.9	761.48	0.54%	[10]	mg/L
Cr 267.716†	24782.6	25.11	0.10%	[10]	mg/L
Cu 324.752†	1607959.5	1865.49	0.12%	[10]	mg/L
Mn 257.610†	304333.1	1789.96	0.59%	[10]	mg/L
V 292.402†	453929.3	3558.05	0.78%	[10]	mg/L

==

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: SEQ-CAL3 **Date Collected: 11/20/2020 2:42:01 PM**
DEL **Data Type: Original**
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL3

Analyte	Back Pressure	Flow
All	247.0 kPa	0.65 L/min

Mean Data: SEQ-CAL3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1442527.8	15062.69	1.04%	99.10	%
ScR 361.383	167451.8	509.00	0.30%	99.65	%
Ag 328.068†	136587.2	1657.47	1.21%	[1.0]	mg/L
As 188.979†	4273.7	51.80	1.21%	[10]	mg/L
B 249.677†	62473.2	285.21	0.46%	[10]	mg/L
Be 313.042†	2424253.8	6497.70	0.27%	[5.0]	mg/L
Na 589.592†	396272.1	1557.22	0.39%	[50]	mg/L
Ni 231.604†	19297.2	245.94	1.27%	[10]	mg/L
Pb 220.353†	45941.8	424.82	0.92%	[10]	mg/L
Se 196.026†	4358.0	45.38	1.04%	[10]	mg/L
Sr 421.552†	2098851.4	6742.76	0.32%	[5]	mg/L
Tl 190.801†	11097.9	135.62	1.22%	[10]	mg/L
Zn 206.200†	13979.9	84.39	0.60%	[10]	mg/L

==

Sequence No.: 4
Sample ID: SEQ-CAL4
DEL
Wash Time: 37

Autosampler Location: 4
Date Collected: 11/20/2020 2:45:18 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CAL4

Analyte	Back Pressure	Flow
All	248.0 kPa	0.65 L/min

Mean Data: SEQ-CAL4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1473112.8	7116.21	0.48%	101.2	%
ScR 361.383	175645.4	1961.01	1.12%	104.5	%
Mo 202.031†	95495.7	307.73	0.32%	[10]	mg/L
Sb 206.836†	16461.7	79.64	0.48%	[10]	mg/L
Si 288.158†	7801.6	106.06	1.36%	[10]	mg/L
Sn 189.927†	23191.5	93.56	0.40%	[10]	mg/L
Ti 334.903†	126175.7	1304.10	1.03%	[10]	mg/L

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Sequence No.: 5 **Autosampler Location: 5**
Sample ID: SEQ-CAL5 **Date Collected: 11/20/2020 2:47:47 PM**
DEL **Data Type: Original**
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL5

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: SEQ-CAL5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1389405.2	4723.43	0.34%	95.45	%
ScR 361.383	175246.8	561.97	0.32%	104.3	%
Al 308.215†	22093.8	47.88	0.22%	[30]	mg/L
Ca 317.933†	179131.5	606.79	0.34%	[30]	mg/L
Fe 273.955†	101423.1	499.28	0.49%	[100]	mg/L
K 766.490†	103022.0	376.23	0.37%	[100]	mg/L
Mg 279.077†	22762.8	75.39	0.33%	[30]	mg/L
Na 330.237†	1949.7	7.56	0.39%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	136600	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	736.5	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	427.4	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	6247	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	3485	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	484900	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	5971	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	16530	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	13990	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	2478	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	160800	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1014	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1030	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	758.8	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	30430	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	9550	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	7925	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	19.50	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	1930	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	4594	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	1646	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	435.8	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	780.2	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	2319	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	419800	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	12620	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1110	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	45390	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	1398	0.00000	1.000000	

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Analysis Begun

Start Time: 11/20/2020 3:03:12 PM
Plasma On Time: 11/20/2020 10:22:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1120.sif
Batch ID:
Results Data Set: I2201120b
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 1
Sample ID: SEQ-CAL1
Date Collected: 11/20/2020 3:03:20 PM
Data Type: Original

Nebulizer Parameters: SEQ-CAL1

Analyte	Back Pressure	Flow
All	247.0 kPa	0.65 L/min

Mean Data: SEQ-CAL1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1429502.5	3395.87	0.24%	100.0	%
ScR 361.383	172576.3	1428.90	0.83%	100.0	%
Ag 328.068†	220.9	23.29	10.54%	[0.00]	mg/L
Al 308.215†	-216.9	12.77	5.89%	[0.00]	mg/L
As 188.979†	37.3	1.19	3.20%	[0.00]	mg/L
B 249.677†	-210.6	10.09	4.79%	[0.00]	mg/L
Ba 233.527†	-16.6	2.43	14.69%	[0.00]	mg/L
Be 313.042†	1242.2	7.52	0.61%	[0.00]	mg/L
Ca 317.933†	39.1	11.73	30.01%	[0.00]	mg/L
Cd 228.802†	297.2	2.64	0.89%	[0.00]	mg/L
Co 228.616†	-298.7	4.15	1.39%	[0.00]	mg/L
Cr 267.716†	-103.6	2.43	2.34%	[0.00]	mg/L
Cu 324.752†	1780.6	37.62	2.11%	[0.00]	mg/L
Fe 273.955†	22.4	3.35	14.95%	[0.00]	mg/L
K 766.490†	135.9	25.70	18.92%	[0.00]	mg/L
Mg 279.077†	112.5	3.61	3.20%	[0.00]	mg/L
Mn 257.610†	136.7	3.00	2.19%	[0.00]	mg/L
Mo 202.031†	47.9	1.65	3.45%	[0.00]	mg/L
Na 589.592†	-394.3	35.07	8.90%	[0.00]	mg/L
Na 330.237†	-98.5	4.38	4.45%	[0.00]	mg/L
Ni 231.604†	-1.7	3.37	196.43%	[0.00]	mg/L
Pb 220.353†	235.1	0.25	0.11%	[0.00]	mg/L
Sb 206.836†	28.3	2.68	9.46%	[0.00]	mg/L
Se 196.026†	-181.5	1.57	0.86%	[0.00]	mg/L
Si 288.158†	-96.5	4.78	4.95%	[0.00]	mg/L
Sn 189.927†	83.9	2.61	3.12%	[0.00]	mg/L
Sr 421.552†	593.6	21.14	3.56%	[0.00]	mg/L
Ti 334.903†	294.6	21.95	7.45%	[0.00]	mg/L
Tl 190.801†	149.4	4.45	2.98%	[0.00]	mg/L
V 292.402†	149.8	12.69	8.47%	[0.00]	mg/L
Zn 206.200†	54.9	0.54	0.99%	[0.00]	mg/L

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Sequence No.: 2
Sample ID: SEQ-CAL2

Wash Time: 37

Autosampler Location: 2
Date Collected: 11/20/2020 3:07:43 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CAL2

Analyte	Back Pressure	Flow
All	248.0 kPa	0.65 L/min

Mean Data: SEQ-CAL2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1469368.4	4990.44	0.34%	102.8	%
ScR 361.383	174797.8	497.51	0.28%	101.3	%
Ba 233.527†	35292.8	98.46	0.28%	[10]	mg/L
Cd 228.802†	161462.0	23.47	0.01%	[10]	mg/L
Co 228.616†	137251.1	392.92	0.29%	[10]	mg/L
Cr 267.716†	51590.9	154.28	0.30%	[10]	mg/L
Cu 324.752†	1577865.1	3319.46	0.21%	[10]	mg/L
Mn 257.610†	309920.7	1192.87	0.38%	[10]	mg/L
V 292.402†	839683.4	409.74	0.05%	[10]	mg/L

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Sequence No.: 3 **Autosampler Location: 3**
Sample ID: SEQ-CAL3 **Date Collected: 11/20/2020 3:09:44 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL3

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: SEQ-CAL3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1447044.3	6115.97	0.42%	101.2	%
ScR 361.383	169022.6	462.82	0.27%	97.94	%
Ag 328.068†	135303.3	200.39	0.15%	[1.0]	mg/L
As 188.979†	4215.5	32.69	0.78%	[10]	mg/L
B 249.677†	37642.5	110.72	0.29%	[10]	mg/L
Be 313.042†	2485300.6	11608.17	0.47%	[5.0]	mg/L
Na 589.592†	404559.0	3776.14	0.93%	[50]	mg/L
Ni 231.604†	19831.1	169.18	0.85%	[10]	mg/L
Pb 220.353†	46005.6	236.19	0.51%	[10]	mg/L
Se 196.026†	4358.7	30.30	0.70%	[10]	mg/L
Sr 421.552†	2143516.0	12534.66	0.58%	[5]	mg/L
Tl 190.801†	11086.8	75.39	0.68%	[10]	mg/L
Zn 206.200†	14152.1	11.06	0.08%	[10]	mg/L

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Sequence No.: 4 **Autosampler Location: 4**
Sample ID: SEQ-CAL4 **Date Collected: 11/20/2020 3:13:01 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL4

Analyte	**Back Pressure**	**Flow**
All	250.0 kPa	0.65 L/min

Mean Data: SEQ-CAL4

Analyte	**Mean Corrected Intensity**	**Std.Dev.**	**RSD**	**Conc.**	**Calib Units**
ScA 357.253	1495436.9	405.06	0.03%	104.6	%
ScR 361.383	177257.5	232.65	0.13%	102.7	%
Mo 202.031†	94020.0	292.30	0.31%	[10]	mg/L
Sb 206.836†	16078.3	17.85	0.11%	[10]	mg/L
Si 288.158†	8004.1	81.78	1.02%	[10]	mg/L
Sn 189.927†	22704.0	84.40	0.37%	[10]	mg/L
Ti 334.903†	130125.7	75.82	0.06%	[10]	mg/L

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Sequence No.: 5 **Autosampler Location: 5**
Sample ID: SEQ-CAL5 **Date Collected: 11/20/2020 3:15:30 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL5

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: SEQ-CAL5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1363916.2	4677.92	0.34%	95.41	%
ScR 361.383	172349.4	755.74	0.44%	99.87	%
Al 308.215†	22722.6	56.09	0.25%	[30]	mg/L
Ca 317.933†	188168.7	484.61	0.26%	[30]	mg/L
Fe 273.955†	106690.2	532.68	0.50%	[100]	mg/L
K 766.490†	108247.8	393.10	0.36%	[100]	mg/L
Mg 279.077†	23835.7	50.91	0.21%	[30]	mg/L
Na 330.237†	2045.9	8.22	0.40%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	135300	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	757.4	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	421.6	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	3764	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	3529	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	497100	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	6272	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	16150	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	13730	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	5159	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	157800	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1067	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1082	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	794.5	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	30990	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	9402	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	8091	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	20.46	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	1983	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	4601	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	1608	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	435.9	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	800.4	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	2270	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	428700	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	13010	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1109	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	83970	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	1415	0.00000	1.000000	

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Analysis Begun

Start Time: 11/20/2020 3:21:09 PM
Plasma On Time: 11/20/2020 10:22:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1120.sif
Batch ID:
Results Data Set: I2201120b
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 7
Sample ID: SEQ-ICV1
Date Collected: 11/20/2020 3:21:17 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SEQ-ICV1

Analyte	Back Pressure	Flow
All	250.0 kPa	0.65 L/min

Mean Data: SEQ-ICV1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1460517.5	102.2	%	0.42				0.42%
ScR 361.383	168501.1	97.64	%	0.110				0.11%
Ag 328.068†	135249.0	0.9999	mg/L	0.00109	0.9999	mg/L	0.00109	0.11%
Al 308.215†	1552.2	2.014	mg/L	0.0084	2.014	mg/L	0.0084	0.42%
As 188.979†	780.1	1.882	mg/L	0.0103	1.882	mg/L	0.0103	0.55%
B 249.677†	3806.1	1.010	mg/L	0.0101	1.010	mg/L	0.0101	1.00%
Ba 233.527†	3663.6	1.037	mg/L	0.0041	1.037	mg/L	0.0041	0.40%
Be 313.042†	503077.4	1.009	mg/L	0.0033	1.009	mg/L	0.0033	0.33%
Ca 317.933†	13048.4	2.080	mg/L	0.0079	2.080	mg/L	0.0079	0.38%
Cd 228.802†	16630.2	1.018	mg/L	0.0072	1.018	mg/L	0.0072	0.71%
Co 228.616†	13630.5	0.9912	mg/L	0.00514	0.9912	mg/L	0.00514	0.52%
Cr 267.716†	5375.9	1.041	mg/L	0.0036	1.041	mg/L	0.0036	0.35%
Cu 324.752†	154883.5	0.9813	mg/L	0.00031	0.9813	mg/L	0.00031	0.03%
Fe 273.955†	2185.8	2.041	mg/L	0.0180	2.041	mg/L	0.0180	0.88%
K 766.490†	21142.0	19.53	mg/L	0.104	19.53	mg/L	0.104	0.53%
Mg 279.077†	1629.7	2.065	mg/L	0.0066	2.065	mg/L	0.0066	0.32%
Mn 257.610†	32365.6	1.045	mg/L	0.0026	1.045	mg/L	0.0026	0.25%
Mo 202.031†	9436.1	1.004	mg/L	0.0073	1.004	mg/L	0.0073	0.73%
Na 589.592†	412624.8	51.00	mg/L	0.183	51.00	mg/L	0.183	0.36%
Na 330.237†	1078.9	52.57	mg/L	0.288	52.57	mg/L	0.288	0.55%
Ni 231.604†	2005.6	1.013	mg/L	0.0099	1.013	mg/L	0.0099	0.97%
Pb 220.353†	9257.8	2.014	mg/L	0.0073	2.014	mg/L	0.0073	0.36%
Sb 206.836†	3414.9	2.120	mg/L	0.0125	2.120	mg/L	0.0125	0.59%
Se 196.026†	878.8	2.017	mg/L	0.0033	2.017	mg/L	0.0033	0.16%
Si 288.158†	1715.9	2.128	mg/L	0.0105	2.128	mg/L	0.0105	0.49%
Sn 189.927†	2314.5	1.020	mg/L	0.0040	1.020	mg/L	0.0040	0.39%
Sr 421.552†	435542.7	1.016	mg/L	0.0042	1.016	mg/L	0.0042	0.42%
Ti 334.903†	13445.3	1.032	mg/L	0.0052	1.032	mg/L	0.0052	0.51%
Tl 190.801†	2269.9	2.032	mg/L	0.0089	2.032	mg/L	0.0089	0.44%
V 292.402†	85883.2	1.031	mg/L	0.0045	1.031	mg/L	0.0045	0.43%
Zn 206.200†	1408.3	0.9946	mg/L	0.00655	0.9946	mg/L	0.00655	0.66%

Sequence No.: 2
Sample ID: SEQ-ICB1
Autosampler Location: 1
Date Collected: 11/20/2020 3:25:41 PM
Data Type: Original
Dilution: 1X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-ICB1

Analyte	Back Pressure	Flow
All	250.0 kPa	0.65 L/min

Mean Data: SEQ-ICB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1449083.1	101.4	%	0.37				0.37%
ScR 361.383	176079.3	102.0	%	0.30				0.30%
Ag 328.068†	-13.9	-0.00010	mg/L	0.000197	-0.00010	mg/L	0.000197	192.39%
Al 308.215†	-14.1	-0.01860	mg/L	0.001876	-0.01860	mg/L	0.001876	10.08%
As 188.979†	2.3	0.00552	mg/L	0.006527	0.00552	mg/L	0.006527	118.22%
B 249.677†	10.8	0.00287	mg/L	0.001219	0.00287	mg/L	0.001219	42.54%
Ba 233.527†	-8.2	-0.00233	mg/L	0.001946	-0.00233	mg/L	0.001946	83.47%
Be 313.042†	-16.1	-0.00003	mg/L	0.000054	-0.00003	mg/L	0.000054	163.42%
Ca 317.933†	8.1	0.00129	mg/L	0.001214	0.00129	mg/L	0.001214	94.21%
Cd 228.802†	2.9	0.00014	mg/L	0.000121	0.00014	mg/L	0.000121	84.54%
Co 228.616†	-3.8	-0.00028	mg/L	0.000057	-0.00028	mg/L	0.000057	20.32%
Cr 267.716†	-1.9	-0.00037	mg/L	0.000904	-0.00037	mg/L	0.000904	242.66%
Cu 324.752†	27.0	0.00017	mg/L	0.000166	0.00017	mg/L	0.000166	97.53%
Fe 273.955†	-3.9	-0.00363	mg/L	0.002061	-0.00363	mg/L	0.002061	56.79%
K 766.490†	8.2	0.00755	mg/L	0.001344	0.00755	mg/L	0.001344	17.80%
Mg 279.077†	1.0	0.00121	mg/L	0.003781	0.00121	mg/L	0.003781	312.85%
Mn 257.610†	4.9	0.00016	mg/L	0.000171	0.00016	mg/L	0.000171	107.55%
Mo 202.031†	9.3	0.00099	mg/L	0.000215	0.00099	mg/L	0.000215	21.63%
Na 589.592†	24.8	0.00307	mg/L	0.005061	0.00307	mg/L	0.005061	164.82%
Na 330.237†	13.2	0.6444	mg/L	0.48099	0.6444	mg/L	0.48099	74.64%
Ni 231.604†	6.7	0.00337	mg/L	0.000799	0.00337	mg/L	0.000799	23.71%
Pb 220.353†	1.1	0.00022	mg/L	0.001169	0.00022	mg/L	0.001169	523.27%
Sb 206.836†	-0.0	0.00000	mg/L	0.001614	0.00000	mg/L	0.001614	>999.9%
Se 196.026†	0.2	0.00051	mg/L	0.007285	0.00051	mg/L	0.007285	>999.9%
Si 288.158†	1.9	0.00236	mg/L	0.005125	0.00236	mg/L	0.005125	217.25%
Sn 189.927†	-0.4	-0.00016	mg/L	0.000999	-0.00016	mg/L	0.000999	614.91%
Sr 421.552†	-15.0	-0.00003	mg/L	0.000049	-0.00003	mg/L	0.000049	139.31%
Ti 334.903†	4.8	0.00037	mg/L	0.001386	0.00037	mg/L	0.001386	377.65%
Tl 190.801†	2.1	0.00194	mg/L	0.000469	0.00194	mg/L	0.000469	24.14%
V 292.402†	22.5	0.00027	mg/L	0.000161	0.00027	mg/L	0.000161	60.50%
Zn 206.200†	-0.2	-0.00017	mg/L	0.000058	-0.00017	mg/L	0.000058	34.80%

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Sequence No.: 3 **Autosampler Location: 301**
Sample ID: SEQ-CRL1 **Date Collected: 11/20/2020 3:29:57 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CRL1

Analyte	Back Pressure	Flow
All	248.0 kPa	0.65 L/min

Mean Data: SEQ-CRL1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1449029.0	101.4	%	0.37				0.36%
ScR 361.383	172117.0	99.73	%	0.661				0.66%
Ag 328.068†	388.4	0.00287	mg/L	0.000197	0.00287	mg/L	0.000197	6.84%
Al 308.215†	35.7	0.04696	mg/L	0.010336	0.04696	mg/L	0.010336	22.01%
As 188.979†	21.9	0.05211	mg/L	0.002998	0.05211	mg/L	0.002998	5.75%
B 249.677†	117.9	0.03125	mg/L	0.002225	0.03125	mg/L	0.002225	7.12%
Ba 233.527†	15.2	0.00428	mg/L	0.001969	0.00428	mg/L	0.001969	45.96%
Be 313.042†	460.6	0.00092	mg/L	0.000030	0.00092	mg/L	0.000030	3.28%
Ca 317.933†	282.1	0.04498	mg/L	0.003030	0.04498	mg/L	0.003030	6.74%
Cd 228.802†	33.8	0.00175	mg/L	0.000187	0.00175	mg/L	0.000187	10.68%
Co 228.616†	41.9	0.00304	mg/L	0.000318	0.00304	mg/L	0.000318	10.47%
Cr 267.716†	46.1	0.00894	mg/L	0.002198	0.00894	mg/L	0.002198	24.59%
Cu 324.752†	439.2	0.00278	mg/L	0.000107	0.00278	mg/L	0.000107	3.83%
Fe 273.955†	49.1	0.04598	mg/L	0.002130	0.04598	mg/L	0.002130	4.63%
K 766.490†	398.0	0.3676	mg/L	0.05811	0.3676	mg/L	0.05811	15.81%
Mg 279.077†	36.5	0.04599	mg/L	0.009798	0.04599	mg/L	0.009798	21.30%
Mn 257.610†	128.2	0.00414	mg/L	0.000017	0.00414	mg/L	0.000017	0.41%
Mo 202.031†	45.6	0.00485	mg/L	0.000336	0.00485	mg/L	0.000336	6.92%
Na 589.592†	3429.7	0.4239	mg/L	0.00773	0.4239	mg/L	0.00773	1.82%
Na 330.237†	24.6	1.195	mg/L	0.5396	1.195	mg/L	0.5396	45.14%
Ni 231.604†	22.5	0.01139	mg/L	0.003580	0.01139	mg/L	0.003580	31.44%
Pb 220.353†	94.9	0.02066	mg/L	0.000764	0.02066	mg/L	0.000764	3.70%
Sb 206.836†	77.2	0.04802	mg/L	0.000229	0.04802	mg/L	0.000229	0.48%
Se 196.026†	21.5	0.04943	mg/L	0.005029	0.04943	mg/L	0.005029	10.17%
Si 288.158†	84.0	0.1047	mg/L	0.00754	0.1047	mg/L	0.00754	7.20%
Sn 189.927†	39.7	0.01750	mg/L	0.000852	0.01750	mg/L	0.000852	4.87%
Sr 421.552†	406.9	0.00095	mg/L	0.000017	0.00095	mg/L	0.000017	1.80%
Ti 334.903†	80.5	0.00617	mg/L	0.000510	0.00617	mg/L	0.000510	8.26%
Tl 190.801†	53.2	0.04794	mg/L	0.001546	0.04794	mg/L	0.001546	3.22%
V 292.402†	233.3	0.00285	mg/L	0.000074	0.00285	mg/L	0.000074	2.60%
Zn 206.200†	28.2	0.01990	mg/L	0.001433	0.01990	mg/L	0.001433	7.20%

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Sequence No.: 4 **Autosampler Location: 302**
Sample ID: SEQ-IFA1 **Date Collected: 11/20/2020 3:34:13 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-IFA1

Analyte	Back Pressure	Flow
All	250.0 kPa	0.65 L/min

Mean Data: SEQ-IFA1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1418601.6	99.24	%	0.540				0.54%
ScR 361.383	169429.9	98.18	%	0.260				0.26%
Ag 328.068†	-47.3	-0.00035	mg/L	0.000453	-0.00035	mg/L	0.000453	129.88%
Al 308.215†	160622.8	212.1	mg/L	1.16	212.1	mg/L	1.16	0.55%
As 188.979†	173.9	0.4167	mg/L	0.00517	0.4167	mg/L	0.00517	1.24%
B 249.677†	90.2	0.04382	mg/L	0.002579	0.04382	mg/L	0.002579	5.89%
Ba 233.527†	110.4	0.00252	mg/L	0.002060	0.00252	mg/L	0.002060	81.65%
Be 313.042†	111.3	0.00022	mg/L	0.000035	0.00022	mg/L	0.000035	16.09%
Ca 317.933†	623597.5	99.42	mg/L	0.613	99.42	mg/L	0.613	0.62%
Cd 228.802†	158.5	0.00098	mg/L	0.000090	0.00098	mg/L	0.000090	9.17%
Co 228.616†	-162.4	-0.01185	mg/L	0.000246	-0.01185	mg/L	0.000246	2.08%
Cr 267.716†	-12.4	-0.00145	mg/L	0.001108	-0.00145	mg/L	0.001108	76.65%
Cu 324.752†	-1072.9	0.00041	mg/L	0.000116	0.00041	mg/L	0.000116	28.49%
Fe 273.955†	212537.4	199.2	mg/L	1.87	199.2	mg/L	1.87	0.94%
K 766.490†	34.6	0.03193	mg/L	0.015510	0.03193	mg/L	0.015510	48.57%
Mg 279.077†	83216.3	104.6	mg/L	1.07	104.6	mg/L	1.07	1.02%
Mn 257.610†	219.2	0.00257	mg/L	0.000146	0.00257	mg/L	0.000146	5.69%
Mo 202.031†	67.5	0.00407	mg/L	0.000212	0.00407	mg/L	0.000212	5.22%
Na 589.592†	67.6	0.00835	mg/L	0.007002	0.00835	mg/L	0.007002	83.83%
Na 330.237†	5.2	0.2493	mg/L	0.16225	0.2493	mg/L	0.16225	65.08%
Ni 231.604†	-12.4	-0.00625	mg/L	0.001120	-0.00625	mg/L	0.001120	17.92%
Pb 220.353†	-256.2	-0.01585	mg/L	0.001613	-0.01585	mg/L	0.001613	10.18%
Sb 206.836†	6.3	0.00441	mg/L	0.003759	0.00441	mg/L	0.003759	85.27%
Se 196.026†	-174.3	-0.2801	mg/L	0.01192	-0.2801	mg/L	0.01192	4.25%
Si 288.158†	-45.2	-0.04372	mg/L	0.009869	-0.04372	mg/L	0.009869	22.57%
Sn 189.927†	106.0	0.06451	mg/L	0.002234	0.06451	mg/L	0.002234	3.46%
Sr 421.552†	390.1	0.00091	mg/L	0.000078	0.00091	mg/L	0.000078	8.62%
Ti 334.903†	73.8	0.00039	mg/L	0.000471	0.00039	mg/L	0.000471	121.32%
Tl 190.801†	266.8	0.1690	mg/L	0.00393	0.1690	mg/L	0.00393	2.32%
V 292.402†	265.4	0.01795	mg/L	0.000222	0.01795	mg/L	0.000222	1.24%
Zn 206.200†	29.6	0.01818	mg/L	0.000626	0.01818	mg/L	0.000626	3.44%

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Sequence No.: 5 | **Autosampler Location: 303**
Sample ID: SEQ-IFB1 | **Date Collected: 11/20/2020 3:38:44 PM**
Data Type: Original

Dilution: 1X
Wash Time: 37 | **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-IFB1

Analyte	Back Pressure	Flow
All	250.0 kPa	0.65 L/min

Mean Data: SEQ-IFB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1423473.3	99.58	%	0.175				0.18%
ScR 361.383	172140.2	99.75	%	0.595				0.60%
Ag 328.068†	145021.1	1.072	mg/L	0.0039	1.072	mg/L	0.0039	0.37%
Al 308.215†	153394.3	202.5	mg/L	0.55	202.5	mg/L	0.55	0.27%
As 188.979†	611.7	1.453	mg/L	0.0111	1.453	mg/L	0.0111	0.76%
B 249.677†	113.9	0.04888	mg/L	0.001695	0.04888	mg/L	0.001695	3.47%
Ba 233.527†	3629.0	0.9985	mg/L	0.00767	0.9985	mg/L	0.00767	0.77%
Be 313.042†	497589.7	0.9984	mg/L	0.00262	0.9984	mg/L	0.00262	0.26%
Ca 317.933†	635886.6	101.4	mg/L	0.64	101.4	mg/L	0.64	0.63%
Cd 228.802†	16575.4	1.012	mg/L	0.0048	1.012	mg/L	0.0048	0.47%
Co 228.616†	12722.2	0.9267	mg/L	0.00153	0.9267	mg/L	0.00153	0.17%
Cr 267.716†	5349.0	1.037	mg/L	0.0067	1.037	mg/L	0.0067	0.64%
Cu 324.752†	165710.4	1.058	mg/L	0.0056	1.058	mg/L	0.0056	0.53%
Fe 273.955†	214055.1	200.6	mg/L	1.48	200.6	mg/L	1.48	0.74%
K 766.490†	49.3	0.04556	mg/L	0.030222	0.04556	mg/L	0.030222	66.34%
Mg 279.077†	80186.2	100.8	mg/L	0.23	100.8	mg/L	0.23	0.23%
Mn 257.610†	31940.6	1.026	mg/L	0.0047	1.026	mg/L	0.0047	0.46%
Mo 202.031†	67.3	0.00406	mg/L	0.000243	0.00406	mg/L	0.000243	5.99%
Na 589.592†	42.4	0.00524	mg/L	0.003228	0.00524	mg/L	0.003228	61.62%
Na 330.237†	11.5	0.2148	mg/L	0.33783	0.2148	mg/L	0.33783	157.30%
Ni 231.604†	1896.6	0.9568	mg/L	0.00078	0.9568	mg/L	0.00078	0.08%
Pb 220.353†	4420.3	0.9993	mg/L	0.00469	0.9993	mg/L	0.00469	0.47%
Sb 206.836†	1739.3	1.068	mg/L	0.0062	1.068	mg/L	0.0062	0.58%
Se 196.026†	286.9	0.7752	mg/L	0.00969	0.7752	mg/L	0.00969	1.25%
Si 288.158†	-44.2	-0.03844	mg/L	0.004389	-0.03844	mg/L	0.004389	11.42%
Sn 189.927†	114.3	0.06852	mg/L	0.001475	0.06852	mg/L	0.001475	2.15%
Sr 421.552†	339.3	0.00079	mg/L	0.000098	0.00079	mg/L	0.000098	12.33%
Ti 334.903†	74.0	0.00003	mg/L	0.000681	0.00003	mg/L	0.000681	>999.9%
Tl 190.801†	1358.7	1.148	mg/L	0.0054	1.148	mg/L	0.0054	0.47%
V 292.402†	85124.1	1.036	mg/L	0.0048	1.036	mg/L	0.0048	0.46%
Zn 206.200†	1357.6	0.9562	mg/L	0.00734	0.9562	mg/L	0.00734	0.77%

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Sequence No.: 6 **Autosampler Location: 7**
Sample ID: SEQ-CCV1 **Date Collected: 11/20/2020 3:45:44 PM**
Data Type: Original
Dilution: 1X
Wash Time: 200 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV1

Analyte	Back Pressure	Flow
All	250.0 kPa	0.65 L/min

Mean Data: SEQ-CCV1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1457016.1	101.9	%	0.93				0.92%
ScR 361.383	170895.2	99.03	%	0.711				0.72%
Ag 328.068†	142001.9	1.050	mg/L	0.0125	1.050	mg/L	0.0125	1.19%
Al 308.215†	1544.3	2.003	mg/L	0.0219	2.003	mg/L	0.0219	1.09%
As 188.979†	780.2	1.882	mg/L	0.0166	1.882	mg/L	0.0166	0.88%
B 249.677†	3727.2	0.9889	mg/L	0.00318	0.9889	mg/L	0.00318	0.32%
Ba 233.527†	3579.4	1.013	mg/L	0.0026	1.013	mg/L	0.0026	0.25%
Be 313.042†	500180.3	1.004	mg/L	0.0035	1.004	mg/L	0.0035	0.35%
Ca 317.933†	12993.1	2.072	mg/L	0.0096	2.072	mg/L	0.0096	0.46%
Cd 228.802†	16682.8	1.022	mg/L	0.0109	1.022	mg/L	0.0109	1.06%
Co 228.616†	13684.7	0.9951	mg/L	0.01124	0.9951	mg/L	0.01124	1.13%
Cr 267.716†	5337.0	1.034	mg/L	0.0041	1.034	mg/L	0.0041	0.40%
Cu 324.752†	161572.7	1.024	mg/L	0.0102	1.024	mg/L	0.0102	1.00%
Fe 273.955†	2172.1	2.028	mg/L	0.0088	2.028	mg/L	0.0088	0.43%
K 766.490†	21055.2	19.45	mg/L	0.082	19.45	mg/L	0.082	0.42%
Mg 279.077†	1623.5	2.057	mg/L	0.0156	2.057	mg/L	0.0156	0.76%
Mn 257.610†	31981.6	1.032	mg/L	0.0070	1.032	mg/L	0.0070	0.68%
Mo 202.031†	9740.1	1.036	mg/L	0.0055	1.036	mg/L	0.0055	0.53%
Na 589.592†	412627.1	51.00	mg/L	0.117	51.00	mg/L	0.117	0.23%
Na 330.237†	1057.0	51.51	mg/L	0.356	51.51	mg/L	0.356	0.69%
Ni 231.604†	1983.4	1.001	mg/L	0.0028	1.001	mg/L	0.0028	0.28%
Pb 220.353†	9543.0	2.076	mg/L	0.0104	2.076	mg/L	0.0104	0.50%
Sb 206.836†	3413.3	2.119	mg/L	0.0176	2.119	mg/L	0.0176	0.83%
Se 196.026†	884.7	2.031	mg/L	0.0201	2.031	mg/L	0.0201	0.99%
Si 288.158†	1696.8	2.104	mg/L	0.0252	2.104	mg/L	0.0252	1.20%
Sn 189.927†	2337.2	1.030	mg/L	0.0089	1.030	mg/L	0.0089	0.86%
Sr 421.552†	432606.5	1.009	mg/L	0.0009	1.009	mg/L	0.0009	0.09%
Ti 334.903†	13320.3	1.022	mg/L	0.0028	1.022	mg/L	0.0028	0.27%
Tl 190.801†	2286.8	2.048	mg/L	0.0138	2.048	mg/L	0.0138	0.67%
V 292.402†	85408.3	1.025	mg/L	0.0112	1.025	mg/L	0.0112	1.09%
Zn 206.200†	1373.6	0.9701	mg/L	0.00433	0.9701	mg/L	0.00433	0.45%

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Sequence No.: 7 **Autosampler Location: 1**
Sample ID: SEQ-CCB1 **Date Collected: 11/20/2020 3:51:04 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB1

Analyte	Back Pressure	Flow
All	250.0 kPa	0.65 L/min

Mean Data: SEQ-CCB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1464122.1	102.4	%	0.30				0.29%
ScR 361.383	174667.0	101.2	%	1.03				1.01%
Ag 328.068†	40.8	0.00030	mg/L	0.000137	0.00030	mg/L	0.000137	45.50%
Al 308.215†	-15.0	-0.01975	mg/L	0.019851	-0.01975	mg/L	0.019851	100.54%
As 188.979†	0.9	0.00224	mg/L	0.004354	0.00224	mg/L	0.004354	194.71%
B 249.677†	3.3	0.00089	mg/L	0.000586	0.00089	mg/L	0.000586	66.25%
Ba 233.527†	-10.2	-0.00290	mg/L	0.000690	-0.00290	mg/L	0.000690	23.83%
Be 313.042†	8.1	0.00002	mg/L	0.000010	0.00002	mg/L	0.000010	63.23%
Ca 317.933†	8.3	0.00133	mg/L	0.000675	0.00133	mg/L	0.000675	50.84%
Cd 228.802†	3.5	0.00021	mg/L	0.000186	0.00021	mg/L	0.000186	90.47%
Co 228.616†	0.7	0.00005	mg/L	0.000394	0.00005	mg/L	0.000394	755.18%
Cr 267.716†	-0.6	-0.00012	mg/L	0.000842	-0.00012	mg/L	0.000842	709.43%
Cu 324.752†	24.5	0.00016	mg/L	0.000070	0.00016	mg/L	0.000070	45.32%
Fe 273.955†	-1.7	-0.00161	mg/L	0.001567	-0.00161	mg/L	0.001567	97.47%
K 766.490†	-19.1	-0.01761	mg/L	0.039352	-0.01761	mg/L	0.039352	223.41%
Mg 279.077†	-3.3	-0.00413	mg/L	0.008332	-0.00413	mg/L	0.008332	201.64%
Mn 257.610†	14.2	0.00046	mg/L	0.000171	0.00046	mg/L	0.000171	37.29%
Mo 202.031†	4.7	0.00050	mg/L	0.000588	0.00050	mg/L	0.000588	118.32%
Na 589.592†	-24.1	-0.00298	mg/L	0.001048	-0.00298	mg/L	0.001048	35.12%
Na 330.237†	17.7	0.8630	mg/L	0.16258	0.8630	mg/L	0.16258	18.84%
Ni 231.604†	6.1	0.00308	mg/L	0.000566	0.00308	mg/L	0.000566	18.41%
Pb 220.353†	3.4	0.00073	mg/L	0.000617	0.00073	mg/L	0.000617	84.68%
Sb 206.836†	-1.0	-0.00061	mg/L	0.001616	-0.00061	mg/L	0.001616	263.67%
Se 196.026†	-3.4	-0.00775	mg/L	0.010145	-0.00775	mg/L	0.010145	130.97%
Si 288.158†	-12.0	-0.01501	mg/L	0.002888	-0.01501	mg/L	0.002888	19.24%
Sn 189.927†	1.1	0.00047	mg/L	0.000752	0.00047	mg/L	0.000752	161.56%
Sr 421.552†	12.4	0.00003	mg/L	0.000050	0.00003	mg/L	0.000050	173.99%
Ti 334.903†	-5.0	-0.00038	mg/L	0.001225	-0.00038	mg/L	0.001225	318.77%
Tl 190.801†	4.5	0.00407	mg/L	0.002022	0.00407	mg/L	0.002022	49.73%
V 292.402†	6.4	0.00008	mg/L	0.000127	0.00008	mg/L	0.000127	169.02%
Zn 206.200†	2.5	0.00178	mg/L	0.001980	0.00178	mg/L	0.001980	111.38%

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Sequence No.: 8 **Autosampler Location: 304**
Sample ID: BIK0529-BLK1 **Date Collected: 11/20/2020 3:55:20 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0529-BLK1

Analyte	Back Pressure	Flow
All	248.0 kPa	0.65 L/min

Mean Data: BIK0529-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1460183.9	102.1	%	0.31				0.30%
ScR 361.383	174162.6	100.9	%	0.32				0.32%
Ag 328.068†	-8.4	-0.00006	mg/L	0.000357	-0.00012	mg/L	0.000715	577.44%
Al 308.215†	-25.6	-0.03383	mg/L	0.020680	-0.06766	mg/L	0.041359	61.13%
As 188.979†	1.1	0.00266	mg/L	0.003825	0.00532	mg/L	0.007649	143.83%
B 249.677†	-3.2	-0.00086	mg/L	0.001493	-0.00172	mg/L	0.002986	174.04%
Ba 233.527†	-12.4	-0.00352	mg/L	0.000966	-0.00704	mg/L	0.001933	27.45%
Be 313.042†	-11.0	-0.00002	mg/L	0.000054	-0.00005	mg/L	0.000108	238.31%
Ca 317.933†	63.3	0.01009	mg/L	0.002549	0.02019	mg/L	0.005098	25.25%
Cd 228.802†	-0.9	-0.00007	mg/L	0.000112	-0.00013	mg/L	0.000223	166.53%
Co 228.616†	7.6	0.00055	mg/L	0.000137	0.00110	mg/L	0.000275	24.97%
Cr 267.716†	-5.7	-0.00111	mg/L	0.001233	-0.00222	mg/L	0.002467	110.92%
Cu 324.752†	-9.0	-0.00006	mg/L	0.000167	-0.00011	mg/L	0.000334	293.97%
Fe 273.955†	-2.6	-0.00240	mg/L	0.001921	-0.00481	mg/L	0.003842	79.96%
K 766.490†	-60.0	-0.05547	mg/L	0.016176	-0.1109	mg/L	0.03235	29.16%
Mg 279.077†	0.2	0.00026	mg/L	0.010167	0.00051	mg/L	0.020335	>999.9%
Mn 257.610†	11.5	0.00037	mg/L	0.000133	0.00074	mg/L	0.000267	35.90%
Mo 202.031†	-1.5	-0.00016	mg/L	0.000177	-0.00032	mg/L	0.000354	111.14%
Na 589.592†	27.7	0.00342	mg/L	0.006614	0.00684	mg/L	0.013228	193.27%
Na 330.237†	5.9	0.2854	mg/L	0.43221	0.5707	mg/L	0.86441	151.46%
Ni 231.604†	10.4	0.00526	mg/L	0.001406	0.01052	mg/L	0.002811	26.73%
Pb 220.353†	-4.9	-0.00107	mg/L	0.001420	-0.00213	mg/L	0.002840	133.17%
Sb 206.836†	-4.0	-0.00247	mg/L	0.002247	-0.00493	mg/L	0.004494	91.15%
Se 196.026†	-0.2	-0.00040	mg/L	0.002358	-0.00081	mg/L	0.004717	585.82%
Si 288.158†	-0.4	-0.00054	mg/L	0.012131	-0.00108	mg/L	0.024262	>999.9%
Sn 189.927†	-0.5	-0.00022	mg/L	0.000246	-0.00044	mg/L	0.000493	111.03%
Sr 421.552†	-23.2	-0.00005	mg/L	0.000064	-0.00011	mg/L	0.000128	118.17%
Ti 334.903†	0.6	0.00004	mg/L	0.000113	0.00009	mg/L	0.000226	261.32%
Tl 190.801†	-1.2	-0.00103	mg/L	0.000477	-0.00206	mg/L	0.000954	46.40%
V 292.402†	14.9	0.00017	mg/L	0.000059	0.00034	mg/L	0.000119	34.94%
Zn 206.200†	4.1	0.00290	mg/L	0.001899	0.00580	mg/L	0.003798	65.45%

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Sequence No.: 9 **Autosampler Location: 305**
Sample ID: 20K0126-06 **Date Collected: 11/20/2020 3:59:36 PM**
Data Type: Original
Dilution: 200X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0126-06

Analyte	Back Pressure	Flow
All	250.0 kPa	0.65 L/min

Mean Data: 20K0126-06

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1464046.3	102.4	%	0.40				0.39%
ScR 361.383	173770.4	100.7	%	0.74				0.73%
Ag 328.068†	11.4	0.00009	mg/L	0.000170	0.01705	mg/L	0.034015	199.51%
Al 308.215†	500.0	0.6600	mg/L	0.01748	132.0	mg/L	3.50	2.65%
As 188.979†	-0.7	0.00003	mg/L	0.004263	0.00596	mg/L	0.852648	>999.9%
B 249.677†	-3.8	-0.00063	mg/L	0.000910	-0.1265	mg/L	0.18203	143.90%
Ba 233.527†	5.0	0.00086	mg/L	0.000294	0.1724	mg/L	0.05876	34.08%
Be 313.042†	12.2	0.00002	mg/L	0.000009	0.00363	mg/L	0.001865	51.35%
Ca 317.933†	2367.9	0.3775	mg/L	0.00385	75.50	mg/L	0.770	1.02%
Cd 228.802†	8.4	0.00048	mg/L	0.000090	0.09526	mg/L	0.017939	18.83%
Co 228.616†	9.9	0.00064	mg/L	0.000267	0.1272	mg/L	0.05349	42.06%
Cr 267.716†	4.9	0.00262	mg/L	0.001653	0.5233	mg/L	0.33052	63.16%
Cu 324.752†	103769.0	0.6578	mg/L	0.00197	131.6	mg/L	0.39	0.30%
Fe 273.955†	4138.3	3.879	mg/L	0.0226	775.7	mg/L	4.53	0.58%
K 766.490†	54.2	0.05011	mg/L	0.019328	10.02	mg/L	3.866	38.57%
Mg 279.077†	166.3	0.2070	mg/L	0.00365	41.40	mg/L	0.729	1.76%
Mn 257.610†	916.6	0.02965	mg/L	0.000446	5.931	mg/L	0.0892	1.50%
Mo 202.031†	-2.4	-0.00027	mg/L	0.000105	-0.05394	mg/L	0.021042	39.01%
Na 589.592†	1142.2	0.1412	mg/L	0.00105	28.23	mg/L	0.210	0.75%
Na 330.237†	13.6	0.6681	mg/L	1.00445	133.6	mg/L	200.89	150.34%
Ni 231.604†	63.5	0.03259	mg/L	0.001703	6.519	mg/L	0.3405	5.22%
Pb 220.353†	4760.4	1.034	mg/L	0.0040	206.7	mg/L	0.81	0.39%
Sb 206.836†	1042.7	0.6922	mg/L	0.01052	138.4	mg/L	2.10	1.52%
Se 196.026†	-3.2	-0.00595	mg/L	0.004700	-1.190	mg/L	0.9401	79.00%
Si 288.158†	16.0	-0.02642	mg/L	0.008058	-5.283	mg/L	1.6117	30.51%
Sn 189.927†	11668.1	5.139	mg/L	0.0268	1028	mg/L	5.37	0.52%
Sr 421.552†	1704.9	0.00398	mg/L	0.000048	0.7954	mg/L	0.00967	1.22%
Ti 334.903†	575.2	0.04419	mg/L	0.001412	8.837	mg/L	0.2824	3.20%
Tl 190.801†	4.4	0.00322	mg/L	0.002219	0.6444	mg/L	0.44377	68.86%
V 292.402†	208.9	0.00283	mg/L	0.000251	0.5668	mg/L	0.05016	8.85%
Zn 206.200†	13.5	0.00957	mg/L	0.000797	1.913	mg/L	0.1594	8.33%

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Sequence No.: 10 **Autosampler Location: 306**
Sample ID: 20K0286-01 **Date Collected: 11/20/2020 4:03:52 PM**
DEL
Data Type: Original
Dilution: 50X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0286-01

Analyte	Back Pressure	Flow
All	250.0 kPa	0.65 L/min

Mean Data: 20K0286-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1485543.3	103.9	%	0.61				0.59%
ScR 361.383	176961.5	102.5	%	0.31				0.30%
Ag 328.068†	-44.6	-0.00033	mg/L	0.000336	-0.01635	mg/L	0.016787	102.66%
Al 308.215†	-77.8	-0.1034	mg/L	0.01323	-5.172	mg/L	0.6615	12.79%
As 188.979†	89.7	0.2287	mg/L	0.00802	11.43	mg/L	0.401	3.51%
B 249.677†	155.1	0.08056	mg/L	0.002610	4.028	mg/L	0.1305	3.24%
Ba 233.527†	213.8	0.00278	mg/L	0.000842	0.1391	mg/L	0.04211	30.27%
Be 313.042†	90.0	0.00016	mg/L	0.000019	0.00783	mg/L	0.000945	12.08%
Ca 317.933†	165.2	0.02634	mg/L	0.001706	1.317	mg/L	0.0853	6.48%
Cd 228.802†	192.9	0.00179	mg/L	0.000456	0.08926	mg/L	0.022783	25.53%
Co 228.616†	60.0	0.00435	mg/L	0.000366	0.2177	mg/L	0.01829	8.40%
Cr 267.716†	910.6	0.2161	mg/L	0.00238	10.81	mg/L	0.119	1.10%
Cu 324.752†	24545.5	0.1717	mg/L	0.00019	8.585	mg/L	0.0097	0.11%
Fe 273.955†	427142.3	400.4	mg/L	1.85	20020	mg/L	92.67	0.46%
K 766.490†	-18.5	-0.01706	mg/L	0.005613	-0.8532	mg/L	0.28065	32.89%
Mg 279.077†	203.0	0.01593	mg/L	0.005769	0.7966	mg/L	0.28844	36.21%
Mn 257.610†	74281.9	2.391	mg/L	0.0201	119.6	mg/L	1.01	0.84%
Mo 202.031†	113.5	0.01207	mg/L	0.000394	0.6033	mg/L	0.01972	3.27%
Na 589.592†	49.1	0.00607	mg/L	0.000802	0.3034	mg/L	0.04009	13.21%
Na 330.237†	1.7	0.07323	mg/L	0.194304	3.662	mg/L	9.7152	265.32%
Ni 231.604†	127.3	0.06419	mg/L	0.002938	3.210	mg/L	0.1469	4.58%
Pb 220.353†	133.6	0.00171	mg/L	0.002392	0.08532	mg/L	0.119618	140.20%
Sb 206.836†	34.7	0.01905	mg/L	0.005752	0.9525	mg/L	0.28761	30.20%
Se 196.026†	-135.6	-0.1864	mg/L	0.01047	-9.322	mg/L	0.5236	5.62%
Si 288.158†	549.4	0.6861	mg/L	0.03147	34.30	mg/L	1.573	4.59%
Sn 189.927†	146.0	0.06430	mg/L	0.001484	3.215	mg/L	0.0742	2.31%
Sr 421.552†	-88.1	-0.00021	mg/L	0.000099	-0.01027	mg/L	0.004935	48.05%
Ti 334.903†	77.0	0.00586	mg/L	0.001004	0.2930	mg/L	0.05020	17.13%
Tl 190.801†	152.8	0.1377	mg/L	0.00406	6.884	mg/L	0.2032	2.95%
V 292.402†	794.4	0.04094	mg/L	0.000226	2.047	mg/L	0.0113	0.55%
Zn 206.200†	42.1	0.02976	mg/L	0.001784	1.488	mg/L	0.0892	5.99%

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Analysis Begun

Start Time: 11/20/2020 4:09:40 PM
Logged In Analyst: Metals Instrument Controller
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 11/20/2020 10:22:06 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1120.sif
Batch ID:
Results Data Set: I2201120b
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: 20K0286-02

Autosampler Location: 307
Date Collected: 11/20/2020 4:09:48 PM
Data Type: Original

Dilution: 100X

Nebulizer Parameters: 20K0286-02

Analyte	Back Pressure	Flow
All	248.0 kPa	0.65 L/min

Mean Data: 20K0286-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1473477.0	103.1	%	0.36				0.35%
ScR 361.383	174444.6	101.1	%	1.00				0.99%
Ag 328.068†	-28.9	-0.00021	mg/L	0.000324	-0.02128	mg/L	0.032441	152.46%
Al 308.215†	611.3	0.8065	mg/L	0.01080	80.65	mg/L	1.080	1.34%
As 188.979†	35.6	0.08834	mg/L	0.005948	8.834	mg/L	0.5948	6.73%
B 249.677†	69.0	0.03191	mg/L	0.002506	3.191	mg/L	0.2506	7.85%
Ba 233.527†	78.8	0.00236	mg/L	0.002036	0.2360	mg/L	0.20362	86.27%
Be 313.042†	73.6	0.00014	mg/L	0.000044	0.01411	mg/L	0.004407	31.22%
Ca 317.933†	212.0	0.03380	mg/L	0.001923	3.380	mg/L	0.1923	5.69%
Cd 228.802†	67.1	0.00061	mg/L	0.000202	0.06088	mg/L	0.020230	33.23%
Co 228.616†	44.8	0.00328	mg/L	0.000487	0.3275	mg/L	0.04873	14.88%
Cr 267.716†	3787.3	0.7476	mg/L	0.00995	74.76	mg/L	0.995	1.33%
Cu 324.752†	12141.2	0.08253	mg/L	0.000820	8.253	mg/L	0.0820	0.99%
Fe 273.955†	147505.9	138.3	mg/L	1.03	13830	mg/L	102.60	0.74%
K 766.490†	-23.8	-0.02195	mg/L	0.024569	-2.195	mg/L	2.4569	111.95%
Mg 279.077†	94.0	0.03751	mg/L	0.020208	3.751	mg/L	2.0208	53.87%
Mn 257.610†	35456.6	1.142	mg/L	0.0044	114.2	mg/L	0.44	0.38%
Mo 202.031†	182.4	0.01940	mg/L	0.000178	1.940	mg/L	0.0178	0.92%
Na 589.592†	-18.3	-0.00226	mg/L	0.005729	-0.2256	mg/L	0.57288	253.90%
Na 330.237†	5.4	0.2096	mg/L	0.37136	20.96	mg/L	37.136	177.17%
Ni 231.604†	105.2	0.05308	mg/L	0.002106	5.308	mg/L	0.2106	3.97%
Pb 220.353†	49.8	0.00323	mg/L	0.001540	0.3230	mg/L	0.15398	47.67%
Sb 206.836†	20.1	-0.00028	mg/L	0.001283	-0.02807	mg/L	0.128251	456.83%
Se 196.026†	-45.4	-0.06091	mg/L	0.010972	-6.091	mg/L	1.0972	18.01%
Si 288.158†	230.1	0.2881	mg/L	0.00639	28.81	mg/L	0.639	2.22%
Sn 189.927†	53.3	0.02347	mg/L	0.000082	2.347	mg/L	0.0082	0.35%
Sr 421.552†	65.1	0.00015	mg/L	0.000079	0.01517	mg/L	0.007893	52.02%
Ti 334.903†	96.6	0.00722	mg/L	0.001562	0.7218	mg/L	0.15622	21.64%
Tl 190.801†	54.5	0.04829	mg/L	0.004732	4.829	mg/L	0.4732	9.80%
V 292.402†	221.8	0.01824	mg/L	0.000318	1.824	mg/L	0.0318	1.74%
Zn 206.200†	216.6	0.1531	mg/L	0.00193	15.31	mg/L	0.193	1.26%

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Analysis Begun

Start Time: 11/20/2020 4:17:09 PM
Plasma On Time: 11/20/2020 10:22:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1120.sif
Batch ID:
Results Data Set: I2201120b
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 308
Sample ID: 20K0286-03
Date Collected: 11/20/2020 4:17:18 PM
Data Type: Original
Dilution: 100X

Nebulizer Parameters: 20K0286-03

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: 20K0286-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1473468.0	103.1	%	0.48				0.46%
ScR 361.383	178405.5	103.4	%	0.59				0.57%
Ag 328.068†	-78.3	-0.00058	mg/L	0.000362	-0.05781	mg/L	0.036238	62.68%
Al 308.215†	97.4	0.1278	mg/L	0.00389	12.78	mg/L	0.389	3.04%
As 188.979†	41.4	0.1022	mg/L	0.00960	10.22	mg/L	0.960	9.39%
B 249.677†	69.3	0.03397	mg/L	0.002076	3.397	mg/L	0.2076	6.11%
Ba 233.527†	89.3	0.00248	mg/L	0.000711	0.2480	mg/L	0.07105	28.65%
Be 313.042†	51.1	0.00010	mg/L	0.000003	0.00952	mg/L	0.000323	3.39%
Ca 317.933†	114.3	0.01823	mg/L	0.000741	1.823	mg/L	0.0741	4.06%
Cd 228.802†	83.0	0.00106	mg/L	0.000099	0.1063	mg/L	0.00992	9.33%
Co 228.616†	46.2	0.00339	mg/L	0.000347	0.3388	mg/L	0.03475	10.26%
Cr 267.716†	4745.0	0.9353	mg/L	0.00963	93.53	mg/L	0.963	1.03%
Cu 324.752†	12705.0	0.08690	mg/L	0.000097	8.690	mg/L	0.0097	0.11%
Fe 273.955†	168586.3	158.0	mg/L	2.21	15800	mg/L	221.43	1.40%
K 766.490†	-59.7	-0.05514	mg/L	0.044876	-5.514	mg/L	4.4876	81.39%
Mg 279.077†	81.0	0.00925	mg/L	0.009106	0.9245	mg/L	0.91061	98.50%
Mn 257.610†	33228.8	1.070	mg/L	0.0144	107.0	mg/L	1.44	1.35%
Mo 202.031†	336.2	0.03576	mg/L	0.000363	3.576	mg/L	0.0363	1.02%
Na 589.592†	3.6	0.00045	mg/L	0.010432	0.04469	mg/L	1.043192	>999.9%
Na 330.237†	1.7	0.07404	mg/L	0.417942	7.404	mg/L	41.7942	564.49%
Ni 231.604†	99.6	0.05022	mg/L	0.001234	5.022	mg/L	0.1234	2.46%
Pb 220.353†	43.0	0.00067	mg/L	0.001183	0.06686	mg/L	0.118318	176.97%
Sb 206.836†	22.8	-0.00185	mg/L	0.001447	-0.1847	mg/L	0.14471	78.35%
Se 196.026†	-53.6	-0.07360	mg/L	0.003987	-7.360	mg/L	0.3987	5.42%
Si 288.158†	229.6	0.2878	mg/L	0.01565	28.78	mg/L	1.565	5.44%
Sn 189.927†	62.3	0.02745	mg/L	0.001349	2.745	mg/L	0.1349	4.91%
Sr 421.552†	21.3	0.00005	mg/L	0.000086	0.00497	mg/L	0.008602	173.25%
Ti 334.903†	61.6	0.00447	mg/L	0.000440	0.4472	mg/L	0.04398	9.83%
Tl 190.801†	63.8	0.05676	mg/L	0.001221	5.676	mg/L	0.1221	2.15%
V 292.402†	248.4	0.02130	mg/L	0.000231	2.130	mg/L	0.0231	1.08%
Zn 206.200†	37.3	0.02642	mg/L	0.001967	2.642	mg/L	0.1967	7.44%

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Sequence No.: 2 **Autosampler Location: 309**
Sample ID: 20K0286-04 **Date Collected: 11/20/2020 4:21:40 PM**
Data Type: Original

Dilution: 100X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0286-04

Analyte	Back Pressure	Flow
All	248.0 kPa	0.65 L/min

Mean Data: 20K0286-04

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1468066.5	102.7	%	0.62				0.61%
ScR 361.383	176866.1	102.5	%	0.85				0.83%
Ag 328.068†	-79.6	-0.00059	mg/L	0.000209	-0.05875	mg/L	0.020912	35.60%
Al 308.215†	75.5	0.09935	mg/L	0.022135	9.935	mg/L	2.2135	22.28%
As 188.979†	40.1	0.1013	mg/L	0.00689	10.13	mg/L	0.689	6.79%
B 249.677†	65.6	0.03308	mg/L	0.001012	3.308	mg/L	0.1012	3.06%
Ba 233.527†	127.2	0.01305	mg/L	0.001212	1.305	mg/L	0.1212	9.28%
Be 313.042†	-18.8	-0.00005	mg/L	0.000062	-0.00481	mg/L	0.006168	128.12%
Ca 317.933†	120.8	0.01926	mg/L	0.002575	1.926	mg/L	0.2575	13.37%
Cd 228.802†	82.2	0.00098	mg/L	0.000346	0.09835	mg/L	0.034552	35.13%
Co 228.616†	30.5	0.00221	mg/L	0.000126	0.2214	mg/L	0.01260	5.69%
Cr 267.716†	316.5	0.07714	mg/L	0.001905	7.714	mg/L	0.1905	2.47%
Cu 324.752†	11481.0	0.07918	mg/L	0.000820	7.918	mg/L	0.0820	1.03%
Fe 273.955†	169840.2	159.2	mg/L	0.86	15920	mg/L	85.87	0.54%
K 766.490†	-6.9	-0.00639	mg/L	0.011777	-0.6386	mg/L	1.17771	184.42%
Mg 279.077†	79.9	0.00526	mg/L	0.007285	0.5264	mg/L	0.72848	138.38%
Mn 257.610†	28372.4	0.9132	mg/L	0.00415	91.32	mg/L	0.415	0.45%
Mo 202.031†	51.8	0.00551	mg/L	0.000267	0.5507	mg/L	0.02670	4.85%
Na 589.592†	21.9	0.00271	mg/L	0.001173	0.2712	mg/L	0.11725	43.24%
Na 330.237†	-1.4	-0.08236	mg/L	0.392245	-8.236	mg/L	39.2245	476.24%
Ni 231.604†	60.2	0.03034	mg/L	0.002591	3.034	mg/L	0.2591	8.54%
Pb 220.353†	59.0	0.00196	mg/L	0.001100	0.1956	mg/L	0.10997	56.23%
Sb 206.836†	4.4	0.00190	mg/L	0.001778	0.1896	mg/L	0.17780	93.80%
Se 196.026†	-56.2	-0.07929	mg/L	0.010366	-7.929	mg/L	1.0366	13.07%
Si 288.158†	201.3	0.2513	mg/L	0.01690	25.13	mg/L	1.690	6.72%
Sn 189.927†	59.8	0.02633	mg/L	0.000948	2.633	mg/L	0.0948	3.60%
Sr 421.552†	71.3	0.00017	mg/L	0.000068	0.01662	mg/L	0.006759	40.66%
Ti 334.903†	27.4	0.00209	mg/L	0.000621	0.2088	mg/L	0.06209	29.73%
Tl 190.801†	63.4	0.05710	mg/L	0.001757	5.710	mg/L	0.1757	3.08%
V 292.402†	331.8	0.01640	mg/L	0.000139	1.640	mg/L	0.0139	0.85%
Zn 206.200†	53.3	0.03763	mg/L	0.000919	3.763	mg/L	0.0919	2.44%

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Sequence No.: 3 **Autosampler Location: 310**
Sample ID: 20K0286-05 **Date Collected: 11/20/2020 4:25:56 PM**
Data Type: Original
Dilution: 100X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0286-05

Analyte	Back Pressure	Flow
All	250.0 kPa	0.65 L/min

Mean Data: 20K0286-05

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1474927.0	103.2	%	0.36				0.34%
ScR 361.383	176345.3	102.2	%	0.54				0.53%
Ag 328.068†	-57.1	-0.00042	mg/L	0.000226	-0.04205	mg/L	0.022564	53.66%
Al 308.215†	59.4	0.07795	mg/L	0.021757	7.795	mg/L	2.1757	27.91%
As 188.979†	44.1	0.1116	mg/L	0.00476	11.16	mg/L	0.476	4.26%
B 249.677†	86.6	0.04061	mg/L	0.007924	4.061	mg/L	0.7924	19.51%
Ba 233.527†	81.9	-0.00262	mg/L	0.001161	-0.2621	mg/L	0.11607	44.28%
Be 313.042†	5.9	-0.00000	mg/L	0.000019	-0.00005	mg/L	0.001929	>999.9%
Ca 317.933†	80.0	0.01276	mg/L	0.002282	1.276	mg/L	0.2282	17.88%
Cd 228.802†	92.9	0.00116	mg/L	0.000021	0.1159	mg/L	0.00205	1.77%
Co 228.616†	42.5	0.00309	mg/L	0.000321	0.3094	mg/L	0.03211	10.38%
Cr 267.716†	926.8	0.1973	mg/L	0.00250	19.73	mg/L	0.250	1.27%
Cu 324.752†	12836.4	0.08857	mg/L	0.000565	8.857	mg/L	0.0565	0.64%
Fe 273.955†	190954.0	179.0	mg/L	1.53	17900	mg/L	153.06	0.86%
K 766.490†	-23.6	-0.02184	mg/L	0.020157	-2.184	mg/L	2.0157	92.28%
Mg 279.077†	93.4	0.01088	mg/L	0.005442	1.088	mg/L	0.5442	49.99%
Mn 257.610†	36059.6	1.161	mg/L	0.0073	116.1	mg/L	0.73	0.63%
Mo 202.031†	146.3	0.01555	mg/L	0.000706	1.555	mg/L	0.0706	4.54%
Na 589.592†	27.8	0.00344	mg/L	0.003250	0.3439	mg/L	0.32504	94.51%
Na 330.237†	1.6	0.06910	mg/L	0.169157	6.910	mg/L	16.9157	244.80%
Ni 231.604†	83.8	0.04224	mg/L	0.002137	4.224	mg/L	0.2137	5.06%
Pb 220.353†	54.5	-0.00012	mg/L	0.000337	-0.01154	mg/L	0.033673	291.83%
Sb 206.836†	6.6	0.00117	mg/L	0.003085	0.1168	mg/L	0.30846	264.11%
Se 196.026†	-62.0	-0.08648	mg/L	0.014499	-8.648	mg/L	1.4499	16.77%
Si 288.158†	236.9	0.2960	mg/L	0.03078	29.60	mg/L	3.078	10.40%
Sn 189.927†	65.3	0.02878	mg/L	0.001998	2.878	mg/L	0.1998	6.94%
Sr 421.552†	142.0	0.00033	mg/L	0.000068	0.03313	mg/L	0.006782	20.47%
Ti 334.903†	46.5	0.00351	mg/L	0.000552	0.3513	mg/L	0.05516	15.70%
Tl 190.801†	71.0	0.06382	mg/L	0.002084	6.382	mg/L	0.2084	3.27%
V 292.402†	402.0	0.01958	mg/L	0.000139	1.958	mg/L	0.0139	0.71%
Zn 206.200†	39.8	0.02813	mg/L	0.000803	2.813	mg/L	0.0803	2.85%

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Sequence No.: 4 **Autosampler Location: 311**
Sample ID: 20K0286-01 **Date Collected: 11/20/2020 4:30:12 PM**
Data Type: Original
Dilution: 100X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0286-01

Analyte	**Back Pressure**	**Flow**
All	250.0 kPa	0.65 L/min

Mean Data: 20K0286-01

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	1466514.4	102.6	%	0.51				0.50%
ScR 361.383	174978.5	101.4	%	0.80				0.79%
Ag 328.068†	-90.1	-0.00066	mg/L	0.000104	-0.06645	mg/L	0.010408	15.66%
Al 308.215†	-38.2	-0.05073	mg/L	0.041187	-5.073	mg/L	4.1187	81.18%
As 188.979†	45.4	0.1153	mg/L	0.00419	11.53	mg/L	0.419	3.64%
B 249.677†	91.2	0.04327	mg/L	0.001544	4.327	mg/L	0.1544	3.57%
Ba 233.527†	93.1	-0.00156	mg/L	0.001402	-0.1564	mg/L	0.14022	89.65%
Be 313.042†	25.7	0.00004	mg/L	0.000035	0.00402	mg/L	0.003530	87.75%
Ca 317.933†	144.3	0.02301	mg/L	0.003059	2.301	mg/L	0.3059	13.30%
Cd 228.802†	100.8	0.00130	mg/L	0.000185	0.1303	mg/L	0.01848	14.18%
Co 228.616†	29.8	0.00216	mg/L	0.000520	0.2160	mg/L	0.05199	24.07%
Cr 267.716†	439.9	0.1044	mg/L	0.00125	10.44	mg/L	0.125	1.20%
Cu 324.752†	11782.8	0.08248	mg/L	0.000715	8.248	mg/L	0.0715	0.87%
Fe 273.955†	206511.1	193.6	mg/L	2.75	19360	mg/L	275.03	1.42%
K 766.490†	-30.3	-0.02799	mg/L	0.008382	-2.799	mg/L	0.8382	29.95%
Mg 279.077†	97.9	0.00738	mg/L	0.006488	0.7377	mg/L	0.64883	87.96%
Mn 257.610†	35727.8	1.150	mg/L	0.0133	115.0	mg/L	1.33	1.16%
Mo 202.031†	52.8	0.00561	mg/L	0.000239	0.5610	mg/L	0.02388	4.26%
Na 589.592†	14.1	0.00174	mg/L	0.000625	0.1744	mg/L	0.06248	35.83%
Na 330.237†	3.0	0.1420	mg/L	0.06503	14.20	mg/L	6.503	45.79%
Ni 231.604†	70.4	0.03551	mg/L	0.002181	3.551	mg/L	0.2181	6.14%
Pb 220.353†	66.6	0.00125	mg/L	0.000509	0.1248	mg/L	0.05095	40.84%
Sb 206.836†	11.0	0.00559	mg/L	0.001178	0.5591	mg/L	0.11776	21.06%
Se 196.026†	-67.1	-0.09374	mg/L	0.008234	-9.374	mg/L	0.8234	8.78%
Si 288.158†	254.8	0.3182	mg/L	0.01897	31.82	mg/L	1.897	5.96%
Sn 189.927†	66.5	0.02932	mg/L	0.001553	2.932	mg/L	0.1553	5.30%
Sr 421.552†	-14.3	-0.00003	mg/L	0.000090	-0.00333	mg/L	0.009019	271.01%
Ti 334.903†	39.8	0.00303	mg/L	0.001989	0.3033	mg/L	0.19888	65.57%
Tl 190.801†	77.2	0.06959	mg/L	0.004033	6.959	mg/L	0.4033	5.80%
V 292.402†	368.9	0.01961	mg/L	0.000114	1.961	mg/L	0.0114	0.58%
Zn 206.200†	21.3	0.01507	mg/L	0.000356	1.507	mg/L	0.0356	2.36%

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Sequence No.: 5
Sample ID: BIK0529-BS1
Dilution: 2X
Wash Time: 37

Autosampler Location: 312
Date Collected: 11/20/2020 4:34:28 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: BIK0529-BS1

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: BIK0529-BS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1464182.0	102.4	%	0.33				0.32%
ScR 361.383	173978.2	100.8	%	0.69				0.68%
Ag 328.068†	67730.4	0.5007	mg/L	0.00063	1.001	mg/L	0.0013	0.13%
Al 308.215†	1348.5	1.774	mg/L	0.0094	3.548	mg/L	0.0187	0.53%
As 188.979†	808.6	1.917	mg/L	0.0041	3.834	mg/L	0.0082	0.21%
B 249.677†	3.0	0.00035	mg/L	0.000980	0.00070	mg/L	0.001961	279.47%
Ba 233.527†	6470.2	1.833	mg/L	0.0130	3.665	mg/L	0.0259	0.71%
Be 313.042†	223778.2	0.4490	mg/L	0.00392	0.8980	mg/L	0.00783	0.87%
Ca 317.933†	55872.4	8.908	mg/L	0.0618	17.82	mg/L	0.124	0.69%
Cd 228.802†	7739.1	0.4666	mg/L	0.00275	0.9331	mg/L	0.00550	0.59%
Co 228.616†	6189.5	0.4508	mg/L	0.00148	0.9015	mg/L	0.00296	0.33%
Cr 267.716†	2443.0	0.4715	mg/L	0.00214	0.9430	mg/L	0.00428	0.45%
Cu 324.752†	72883.1	0.4620	mg/L	0.00145	0.9240	mg/L	0.00289	0.31%
Fe 273.955†	1983.5	1.856	mg/L	0.0155	3.711	mg/L	0.0309	0.83%
K 766.490†	9079.0	8.387	mg/L	0.0830	16.77	mg/L	0.166	0.99%
Mg 279.077†	7487.6	9.424	mg/L	0.0343	18.85	mg/L	0.069	0.36%
Mn 257.610†	13788.2	0.4451	mg/L	0.00573	0.8901	mg/L	0.01147	1.29%
Mo 202.031†	12.4	0.00104	mg/L	0.000557	0.00208	mg/L	0.001114	53.53%
Na 589.592†	70435.1	8.705	mg/L	0.1063	17.41	mg/L	0.213	1.22%
Na 330.237†	196.9	9.464	mg/L	0.1924	18.93	mg/L	0.385	2.03%
Ni 231.604†	884.0	0.4455	mg/L	0.00097	0.8910	mg/L	0.00193	0.22%
Pb 220.353†	8648.3	1.881	mg/L	0.0044	3.761	mg/L	0.0088	0.23%
Sb 206.836†	-4.6	-0.00944	mg/L	0.003925	-0.01888	mg/L	0.007851	41.59%
Se 196.026†	797.0	1.829	mg/L	0.0104	3.658	mg/L	0.0209	0.57%
Si 288.158†	-21.4	-0.02354	mg/L	0.003468	-0.04708	mg/L	0.006936	14.73%
Sn 189.927†	4.0	0.00337	mg/L	0.001009	0.00673	mg/L	0.002018	29.98%
Sr 421.552†	193707.9	0.4518	mg/L	0.00487	0.9037	mg/L	0.00974	1.08%
Ti 334.903†	31.6	0.00183	mg/L	0.000033	0.00367	mg/L	0.000066	1.79%
Tl 190.801†	2116.8	1.905	mg/L	0.0006	3.809	mg/L	0.0012	0.03%
V 292.402†	38979.8	0.4678	mg/L	0.00114	0.9355	mg/L	0.00229	0.24%
Zn 206.200†	620.6	0.4382	mg/L	0.00087	0.8764	mg/L	0.00174	0.20%

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Sequence No.: 6 **Autosampler Location: 7**
Sample ID: SEQ-CCV2 **Date Collected: 11/20/2020 4:38:44 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV2

Analyte	**Back Pressure**	**Flow**
All	251.0 kPa	0.65 L/min

Mean Data: SEQ-CCV2

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	1470470.0	102.9	%	0.71				0.69%
ScR 361.383	173242.3	100.4	%	0.68				0.68%
Ag 328.068†	135799.1	1.004	mg/L	0.0024	1.004	mg/L	0.0024	0.24%
Al 308.215†	1502.6	1.948	mg/L	0.0260	1.948	mg/L	0.0260	1.34%
As 188.979†	790.7	1.907	mg/L	0.0161	1.907	mg/L	0.0161	0.85%
B 249.677†	3735.5	0.9911	mg/L	0.00565	0.9911	mg/L	0.00565	0.57%
Ba 233.527†	3526.5	0.9980	mg/L	0.00518	0.9980	mg/L	0.00518	0.52%
Be 313.042†	499924.7	1.003	mg/L	0.0008	1.003	mg/L	0.0008	0.08%
Ca 317.933†	12936.0	2.062	mg/L	0.0033	2.062	mg/L	0.0033	0.16%
Cd 228.802†	16916.6	1.036	mg/L	0.0048	1.036	mg/L	0.0048	0.47%
Co 228.616†	13741.2	0.9993	mg/L	0.00292	0.9993	mg/L	0.00292	0.29%
Cr 267.716†	5318.7	1.030	mg/L	0.0039	1.030	mg/L	0.0039	0.38%
Cu 324.752†	155821.8	0.9872	mg/L	0.00069	0.9872	mg/L	0.00069	0.07%
Fe 273.955†	2176.4	2.032	mg/L	0.0078	2.032	mg/L	0.0078	0.38%
K 766.490†	20840.5	19.25	mg/L	0.061	19.25	mg/L	0.061	0.32%
Mg 279.077†	1626.5	2.061	mg/L	0.0074	2.061	mg/L	0.0074	0.36%
Mn 257.610†	31911.0	1.030	mg/L	0.0051	1.030	mg/L	0.0051	0.49%
Mo 202.031†	9584.3	1.019	mg/L	0.0090	1.019	mg/L	0.0090	0.89%
Na 589.592†	409902.8	50.66	mg/L	0.212	50.66	mg/L	0.212	0.42%
Na 330.237†	1053.6	51.34	mg/L	0.476	51.34	mg/L	0.476	0.93%
Ni 231.604†	1962.0	0.9907	mg/L	0.00298	0.9907	mg/L	0.00298	0.30%
Pb 220.353†	9431.5	2.052	mg/L	0.0082	2.052	mg/L	0.0082	0.40%
Sb 206.836†	3420.7	2.124	mg/L	0.0163	2.124	mg/L	0.0163	0.77%
Se 196.026†	885.1	2.032	mg/L	0.0090	2.032	mg/L	0.0090	0.44%
Si 288.158†	1671.5	2.073	mg/L	0.0213	2.073	mg/L	0.0213	1.03%
Sn 189.927†	2380.8	1.049	mg/L	0.0072	1.049	mg/L	0.0072	0.69%
Sr 421.552†	429553.8	1.002	mg/L	0.0028	1.002	mg/L	0.0028	0.28%
Ti 334.903†	13282.9	1.020	mg/L	0.0024	1.020	mg/L	0.0024	0.24%
Tl 190.801†	2317.6	2.075	mg/L	0.0189	2.075	mg/L	0.0189	0.91%
V 292.402†	86979.8	1.044	mg/L	0.0057	1.044	mg/L	0.0057	0.55%
Zn 206.200†	1380.2	0.9748	mg/L	0.00574	0.9748	mg/L	0.00574	0.59%

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Sequence No.: 7 **Autosampler Location: 1**
Sample ID: SEQ-CCB2 **Date Collected: 11/20/2020 4:44:04 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB2

Analyte	Back Pressure	Flow
All	250.0 kPa	0.65 L/min

Mean Data: SEQ-CCB2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1469422.5	102.8	%	0.51				0.50%
ScR 361.383	175795.4	101.9	%	0.40				0.39%
Ag 328.068†	-63.5	-0.00047	mg/L	0.000133	-0.00047	mg/L	0.000133	28.36%
Al 308.215†	-19.7	-0.02597	mg/L	0.006704	-0.02597	mg/L	0.006704	25.81%
As 188.979†	4.3	0.01022	mg/L	0.004587	0.01022	mg/L	0.004587	44.87%
B 249.677†	5.2	0.00139	mg/L	0.001455	0.00139	mg/L	0.001455	104.42%
Ba 233.527†	-20.7	-0.00586	mg/L	0.001044	-0.00586	mg/L	0.001044	17.82%
Be 313.042†	11.5	0.00002	mg/L	0.000042	0.00002	mg/L	0.000042	184.70%
Ca 317.933†	4.6	0.00073	mg/L	0.001056	0.00073	mg/L	0.001056	144.83%
Cd 228.802†	8.9	0.00049	mg/L	0.000012	0.00049	mg/L	0.000012	2.47%
Co 228.616†	2.6	0.00019	mg/L	0.000256	0.00019	mg/L	0.000256	136.28%
Cr 267.716†	-0.4	-0.00007	mg/L	0.001071	-0.00007	mg/L	0.001071	>999.9%
Cu 324.752†	-10.8	-0.00007	mg/L	0.000045	-0.00007	mg/L	0.000045	64.98%
Fe 273.955†	-2.8	-0.00262	mg/L	0.003061	-0.00262	mg/L	0.003061	116.79%
K 766.490†	-68.4	-0.06321	mg/L	0.022579	-0.06321	mg/L	0.022579	35.72%
Mg 279.077†	7.2	0.00905	mg/L	0.002205	0.00905	mg/L	0.002205	24.37%
Mn 257.610†	6.8	0.00022	mg/L	0.000108	0.00022	mg/L	0.000108	49.41%
Mo 202.031†	8.1	0.00086	mg/L	0.000377	0.00086	mg/L	0.000377	43.71%
Na 589.592†	-26.1	-0.00323	mg/L	0.000793	-0.00323	mg/L	0.000793	24.56%
Na 330.237†	2.7	0.1339	mg/L	0.40593	0.1339	mg/L	0.40593	303.09%
Ni 231.604†	17.3	0.00874	mg/L	0.002664	0.00874	mg/L	0.002664	30.47%
Pb 220.353†	0.2	0.00004	mg/L	0.000887	0.00004	mg/L	0.000887	>999.9%
Sb 206.836†	-6.4	-0.00393	mg/L	0.001241	-0.00393	mg/L	0.001241	31.56%
Se 196.026†	-2.3	-0.00521	mg/L	0.005603	-0.00521	mg/L	0.005603	107.62%
Si 288.158†	-22.3	-0.02786	mg/L	0.005464	-0.02786	mg/L	0.005464	19.62%
Sn 189.927†	6.6	0.00291	mg/L	0.001140	0.00291	mg/L	0.001140	39.11%
Sr 421.552†	20.9	0.00005	mg/L	0.000075	0.00005	mg/L	0.000075	154.64%
Ti 334.903†	-1.5	-0.00012	mg/L	0.001020	-0.00012	mg/L	0.001020	882.61%
Tl 190.801†	3.3	0.00295	mg/L	0.001394	0.00295	mg/L	0.001394	47.21%
V 292.402†	10.3	0.00012	mg/L	0.000160	0.00012	mg/L	0.000160	130.53%
Zn 206.200†	1.1	0.00081	mg/L	0.000396	0.00081	mg/L	0.000396	48.84%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00015	Instrument:	ICP2
Calibration Date:	12/03/2020 14:04		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Lead	0	0	0		10	7156.317	0		0			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00015	Instrument:	ICP2
Calibration Date:	12/03/2020 14:04		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Lead	3578.159	141.4	1.0000			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: 12/2/2020 Analysis Date: 12/3/2020 Analyst: SD
LR Date: 12/2/2020 Sequence: SIL0061 Page: 1 of 4
CALIB.: DL00015

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CAL1	I10813		
		-CAL2	I11038		
		-CAL3	I11039		
		-CAL4	I11040		
		-CAL5	I11041		
		-ICV1	I10589		
		-ICB1	I10813		
		-CRL1	I10665		
		-IFA1	I10667		
		-IFB1	I6931		
CV→CCV1		-CCV1	I10589		
CB→CCB1		-CCB1	I10813		Mo↑
		BIK0446-BLK2	TWC		Ag & V only
		20K0325-02		20	
		-03			
		-04			
		SEQ-IBL1	—		
		BIK0408-DUP2	SWC	2	As only
		20K0126-01			
		BIK0408-MS2			
		-MSD2			
		BIK0446-BS2	TWC		Ag & V only
		SEQ-CCV2			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: – Analysis Date: 12/3/2020 Analyst: SD
LR Date: – Sequence: – Page: 2 of 4

All corrections made by analyst unless otherwise noted. SD 12/3/2020

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CCB2			
		BIK0645-BLK1	TWC		
		20K0286-04	LEN	5	
		↓ -05	↓	↓	
		BIK0594-DUP1	↓	↓	
		20K0287-01	↓	↓	
		BIK0594-MS1	↓	↓	
		BIK0529-DUP1	SWC	2	
		20K0222-01	↓	↓	
		BIK0529-MS1	↓	↓	Ag %R ↓
		BIK0645-BS1	TWC		
		SEQ-CCV3			
		↓ -CCB3			
		BIK0738-BLK1	LEN	5	No Pb
		BIL0040-BLK1	TWC		No Pb, Fe, Mg, Zn
		20K0326-01	↓		No Pb, Zn
		20K0345-01	↓		No Zn No Pb
		20K0327-01	LEN	5	↓
		20K0328-01	↓	↓	↓
		20K0335-01	TWC	↓	No Pb, Zn
		20K0411-01	TWC	↓	↓
		SEQ-IBL2			
		BIL0040-BS1	TWC		No Fe, Mg, Pb, Zn

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — **Analysis Date:** 12/3/2020 **Analyst:** SD

LR Date: — **Sequence:** — **Page:** 3 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CCV4			B, Fe, K, Mg, Na, Pb, Sb, Se, Si, Sn, Sr, Zn ↑
		-CCB4			
	✓	-CAL3			
		-CAL2			
		-CAL5			
		-CCV5			Sb, Si, Sn ↑
		-CCB5			
	✓	20K0183-01	SWC	2	Fe > LR ; R.R @ 5x
		-02			
		-03			
		-04			
		20K0199-01	LEN	5	
		-02			
		-03			
		20K0200-01			
		-02			
		-03			
		SEQ-CCV6			Sb + Sn ↑
		-CCB6			
		BIL0006-BLK1	LEN	5	
		20K0394-02			
		-03			
		20K0408-01			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — Analysis Date: 12/3/2020 Analyst: SD

LR Date: — Sequence: — Page: 4 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		20K409-01	LEN	5	
		BIL0006-DUP1	↓	↓	
		20K0394-01			
		BIL0006-MS1			
		20K0237-05	TWC		
		20K0213-01	SWC	2	SCR NOISY No Ba, Cr
		SEQ-CCV7			Sb & Sn↑
		↓ -CCB7			
		20K0238-01	SWC	2	
		-02	↓	↓	
	✓	-03			Fe>LR; R.R@5x
		↓ -04			
		BIK0645-DUP1	TWC		
		20K0258-01	↓		
		BIK0645-MS1			
		20K0261-01			SCR NOISY No Cr, Ni, Zn
		20K0183-01	SWC	5	
		SEQ-ICB3			
		-CCV8			Sb, Si, Sn, Ti↑
		↓ -CCB8			Al↓
		RINSE/DI			
			SD 12/3/2020		

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

===

12/3/2020 8:54:17 AM Hg ReAlign... Actual peak offset (nm): 0.003
Drift (nm): 0.000 Slit adjustment: 0

===

===

Analysis Begun

Start Time: 12/3/2020 8:58:05 AM
Plasma On Time: 12/3/2020 8:08:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\BLKS.sif
Batch ID:
Results Data Set: I2201203
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

===

Method Loaded
Method Name: ELMT7300bcESI2FAST
Method Last Saved: 12/3/2020 8:52:33 AM
IEC File: IEC120220.iec
MSF File:
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

===

~~**Sequence No.: 1**~~
~~**Autosampler Location: 1**~~
~~**Sample ID: B1**~~ TH 12-03-20
~~**Date Collected: 12/3/2020 8:58:16 AM**~~
~~**Data Type: Original**~~
~~**Dilution: 1X**~~

~~**Nebulizer Parameters: B1**~~

~~Analyte~~	~~Back Pressure~~	~~Flow~~
~~All~~	~~232.0 kPa~~	~~0.65 L/min~~

==

Analysis Begun

Start Time: 12/3/2020 2:04:14 PM **Plasma On Time: 12/3/2020 8:08:06 AM**
Logged In Analyst: Metals Instrument Controller **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: SEQ-CAL1 **Date Collected: 12/3/2020 2:04:23 PM**
Data Type: Original

Nebulizer Parameters: SEQ-CAL1

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: SEQ-CAL1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2168827.5	11709.79	0.54%	100.0	%
ScR 361.383	232660.8	246.09	0.11%	100.0	%
Ag 328.068†	426.1	51.72	12.14%	[0.00]	mg/L
Al 308.215†	-483.0	15.35	3.18%	[0.00]	mg/L
As 188.979†	-4.8	3.12	65.27%	[0.00]	mg/L
B 249.677†	-287.4	7.63	2.65%	[0.00]	mg/L
Ba 233.527†	7.5	0.96	12.71%	[0.00]	mg/L
Be 313.042†	1587.8	22.81	1.44%	[0.00]	mg/L
Ca 317.933†	421.1	14.03	3.33%	[0.00]	mg/L
Cd 228.802†	251.6	3.45	1.37%	[0.00]	mg/L
Co 228.616†	73.8	7.18	9.73%	[0.00]	mg/L
Cr 267.716†	-162.0	4.55	2.81%	[0.00]	mg/L
Cu 324.752†	1593.7	24.75	1.55%	[0.00]	mg/L
Fe 273.955†	35.9	2.09	5.81%	[0.00]	mg/L
K 766.490†	148.9	35.48	23.83%	[0.00]	mg/L
Mg 279.077†	-260.3	7.80	3.00%	[0.00]	mg/L
Mn 257.610†	185.6	2.76	1.49%	[0.00]	mg/L
Mo 202.031†	51.0	6.41	12.56%	[0.00]	mg/L
Na 589.592†	56.6	53.35	94.26%	[0.00]	mg/L
Na 330.237†	-232.4	8.39	3.61%	[0.00]	mg/L
Ni 231.604†	-103.3	7.61	7.37%	[0.00]	mg/L
Pb 220.353†	-0.8	0.67	87.44%	[0.00]	mg/L
Sb 206.836†	177.7	3.29	1.85%	[0.00]	mg/L
Se 196.026†	-29.9	4.40	14.70%	[0.00]	mg/L
Si 288.158†	-810.7	6.20	0.77%	[0.00]	mg/L
Sn 189.927†	-7.4	2.50	33.83%	[0.00]	mg/L
Sr 421.552†	1077.5	24.10	2.24%	[0.00]	mg/L
Ti 334.903†	89.3	35.51	39.78%	[0.00]	mg/L
Tl 190.801†	-13.9	2.99	21.59%	[0.00]	mg/L
V 292.402†	1643.2	31.62	1.92%	[0.00]	mg/L
Zn 206.200†	12.6	2.18	17.26%	[0.00]	mg/L

==

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: SEQ-CAL2 **Date Collected: 12/3/2020 2:08:47 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL2

Analyte	Back Pressure	Flow
All	234.0 kPa	0.65 L/min

Mean Data: SEQ-CAL2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2134782.5	21837.50	1.02%	98.43	%
ScR 361.383	227164.1	2032.64	0.89%	97.64	%
Ba 233.527†	71664.0	495.65	0.69%	[10]	mg/L
Cd 228.802†	300207.5	2008.73	0.67%	[10]	mg/L
Co 228.616†	343979.5	3727.95	1.08%	[10]	mg/L
Cr 267.716†	84548.7	621.35	0.73%	[10]	mg/L
Cu 324.752†	2113310.2	14337.72	0.68%	[10]	mg/L
Mn 257.610†	484229.9	3609.97	0.75%	[10]	mg/L
V 292.402†	1609948.1	12795.94	0.79%	[10]	mg/L

==

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: SEQ-CAL3 **Date Collected: 12/3/2020 2:10:48 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL3

Analyte	**Back Pressure**	**Flow**
All	233.0 kPa	0.65 L/min

Mean Data: SEQ-CAL3

Analyte	**Mean Corrected Intensity**	**Std.Dev.**	**RSD**	**Conc.**	**Calib Units**
ScA 357.253	2135404.9	7044.35	0.33%	98.46	%
ScR 361.383	229436.4	725.35	0.32%	98.61	%
Ag 328.068†	172045.9	335.07	0.19%	[1.0]	mg/L
As 188.979†	14489.1	73.76	0.51%	[10]	mg/L
B 249.677†	49732.3	518.05	1.04%	[10]	mg/L
Be 313.042†	3523954.9	16192.45	0.46%	[5.0]	mg/L
Na 589.592†	251237.0	2903.04	1.16%	[50]	mg/L
Ni 231.604†	34875.1	328.49	0.94%	[10]	mg/L
Pb 220.353†	71563.2	119.51	0.17%	[10]	mg/L
Se 196.026†	11684.2	81.58	0.70%	[10]	mg/L
Sr 421.552†	2474197.0	8368.13	0.34%	[5]	mg/L
Tl 190.801†	18596.5	122.59	0.66%	[10]	mg/L
Zn 206.200†	34926.6	222.12	0.64%	[10]	mg/L

==

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: SEQ-CAL4 **Date Collected: 12/3/2020 2:13:21 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL4

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-CAL4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2167257.3	9919.62	0.46%	99.93	%
ScR 361.383	229351.8	1317.88	0.57%	98.58	%
Mo 202.031†	135920.6	522.29	0.38%	[10]	mg/L
Sb 206.836†	24372.4	111.27	0.46%	[10]	mg/L
Si 288.158†	15540.1	81.31	0.52%	[10]	mg/L
Sn 189.927†	38288.0	249.42	0.65%	[10]	mg/L
Ti 334.903†	189864.9	1045.47	0.55%	[10]	mg/L

==

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: SEQ-CAL5 **Date Collected: 12/3/2020 2:15:50 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL5

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-CAL5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1997062.1	13366.11	0.67%	92.08	%
ScR 361.383	224737.9	364.28	0.16%	96.59	%
Al 308.215†	36795.5	113.95	0.31%	[30]	mg/L
Ca 317.933†	334162.2	1666.96	0.50%	[30]	mg/L
Fe 273.955†	154759.9	769.95	0.50%	[100]	mg/L
K 766.490†	150954.3	760.44	0.50%	[100]	mg/L
Mg 279.077†	42927.3	221.61	0.52%	[30]	mg/L
Na 330.237†	2286.5	9.18	0.40%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	172000	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1227	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1449	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	4973	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	7166	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	704800	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	11140	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	30020	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	34400	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	8455	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	211300	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1548	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1510	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1431	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	48420	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	13590	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	5025	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	22.86	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3488	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7156	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2437	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1168	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1554	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3829	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	494800	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	18990	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1860	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	161000	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3493	0.00000	1.000000	

==

Analysis Begun

Start Time: 12/3/2020 2:20:59 PM
Plasma On Time: 12/3/2020 8:08:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==

Sequence No.: 1
Autosampler Location: 7
Sample ID: SEQ-ICV1
Date Collected: 12/3/2020 2:21:07 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SEQ-ICV1

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: SEQ-ICV1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2142050.3	98.77	%	0.343				0.35%
ScR 361.383	229262.3	98.54	%	0.169				0.17%
Ag 328.068†	180124.4	1.047	mg/L	0.0016	1.047	mg/L	0.0016	0.15%
Al 308.215†	2542.5	2.043	mg/L	0.0064	2.043	mg/L	0.0064	0.31%
As 188.979†	2788.5	2.033	mg/L	0.0043	2.033	mg/L	0.0043	0.21%
B 249.677†	5075.2	1.017	mg/L	0.0049	1.017	mg/L	0.0049	0.48%
Ba 233.527†	6947.9	0.9680	mg/L	0.00306	0.9680	mg/L	0.00306	0.32%
Be 313.042†	707782.0	1.003	mg/L	0.0052	1.003	mg/L	0.0052	0.52%
Ca 317.933†	21966.5	1.895	mg/L	0.0173	1.895	mg/L	0.0173	0.91%
Cd 228.802†	29795.3	0.9845	mg/L	0.00175	0.9845	mg/L	0.00175	0.18%
Co 228.616†	33048.1	0.9588	mg/L	0.00069	0.9588	mg/L	0.00069	0.07%
Cr 267.716†	8191.6	0.9687	mg/L	0.00120	0.9687	mg/L	0.00120	0.12%
Cu 324.752†	206187.4	0.9753	mg/L	0.00555	0.9753	mg/L	0.00555	0.57%
Fe 273.955†	3187.4	2.055	mg/L	0.0106	2.055	mg/L	0.0106	0.51%
K 766.490†	30508.5	20.21	mg/L	0.104	20.21	mg/L	0.104	0.51%
Mg 279.077†	2918.8	2.056	mg/L	0.0071	2.056	mg/L	0.0071	0.35%
Mn 257.610†	45265.1	0.9350	mg/L	0.00448	0.9350	mg/L	0.00448	0.48%
Mo 202.031†	13515.3	0.9943	mg/L	0.00569	0.9943	mg/L	0.00569	0.57%
Na 589.592†	255837.9	50.92	mg/L	0.454	50.92	mg/L	0.454	0.89%
Na 330.237†	1195.4	52.12	mg/L	0.254	52.12	mg/L	0.254	0.49%
Ni 231.604†	3497.0	1.004	mg/L	0.0028	1.004	mg/L	0.0028	0.28%
Pb 220.353†	14319.0	2.002	mg/L	0.0091	2.002	mg/L	0.0091	0.46%
Sb 206.836†	5266.8	2.159	mg/L	0.0012	2.159	mg/L	0.0012	0.05%
Se 196.026†	2391.2	2.046	mg/L	0.0184	2.046	mg/L	0.0184	0.90%
Si 288.158†	3244.3	2.093	mg/L	0.0068	2.093	mg/L	0.0068	0.33%
Sn 189.927†	3878.7	1.015	mg/L	0.0022	1.015	mg/L	0.0022	0.21%
Sr 421.552†	502700.1	1.016	mg/L	0.0090	1.016	mg/L	0.0090	0.88%
Ti 334.903†	19026.8	1.001	mg/L	0.0045	1.001	mg/L	0.0045	0.45%
Tl 190.801†	3770.4	2.020	mg/L	0.0096	2.020	mg/L	0.0096	0.48%
V 292.402†	156706.3	0.9777	mg/L	0.00228	0.9777	mg/L	0.00228	0.23%
Zn 206.200†	3457.5	0.9900	mg/L	0.00186	0.9900	mg/L	0.00186	0.19%

Sequence No.: 2
Sample ID: SEQ-ICB1

Autosampler Location: 1
Date Collected: 12/3/2020 2:26:53 PM
Data Type: Original

Dilution: 1X
Wash Time: 120

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-ICB1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-ICB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2105694.7	97.09	%	0.720				0.74%
ScR 361.383	224532.4	96.51	%	0.597				0.62%
Ag 328.068†	52.4	0.00030	mg/L	0.000443	0.00030	mg/L	0.000443	145.48%
Al 308.215†	-11.3	-0.00930	mg/L	0.007769	-0.00930	mg/L	0.007769	83.50%
As 188.979†	8.1	0.00577	mg/L	0.000792	0.00577	mg/L	0.000792	13.73%
B 249.677†	6.9	0.00140	mg/L	0.001363	0.00140	mg/L	0.001363	97.14%
Ba 233.527†	2.7	0.00038	mg/L	0.001517	0.00038	mg/L	0.001517	398.31%
Be 313.042†	78.2	0.00011	mg/L	0.000006	0.00011	mg/L	0.000006	5.56%
Ca 317.933†	0.3	0.00001	mg/L	0.001537	0.00001	mg/L	0.001537	>999.9%
Cd 228.802†	2.6	0.00006	mg/L	0.000179	0.00006	mg/L	0.000179	297.39%
Co 228.616†	2.7	0.00008	mg/L	0.000029	0.00008	mg/L	0.000029	38.17%
Cr 267.716†	-9.6	-0.00114	mg/L	0.000651	-0.00114	mg/L	0.000651	57.18%
Cu 324.752†	35.2	0.00016	mg/L	0.000148	0.00016	mg/L	0.000148	89.92%
Fe 273.955†	3.7	0.00238	mg/L	0.001827	0.00238	mg/L	0.001827	76.69%
K 766.490†	-20.5	-0.01360	mg/L	0.030671	-0.01360	mg/L	0.030671	225.54%
Mg 279.077†	-1.0	-0.00068	mg/L	0.004429	-0.00068	mg/L	0.004429	653.16%
Mn 257.610†	7.7	0.00016	mg/L	0.000090	0.00016	mg/L	0.000090	56.58%
Mo 202.031†	66.1	0.00486	mg/L	0.000893	0.00486	mg/L	0.000893	18.37%
Na 589.592†	-61.3	-0.01219	mg/L	0.006049	-0.01219	mg/L	0.006049	49.60%
Na 330.237†	-5.6	-0.2426	mg/L	0.25242	-0.2426	mg/L	0.25242	104.03%
Ni 231.604†	-9.3	-0.00267	mg/L	0.000362	-0.00267	mg/L	0.000362	13.54%
Pb 220.353†	-3.5	-0.00050	mg/L	0.000333	-0.00050	mg/L	0.000333	66.95%
Sb 206.836†	7.2	0.00297	mg/L	0.002263	0.00297	mg/L	0.002263	76.16%
Se 196.026†	6.7	0.00573	mg/L	0.001486	0.00573	mg/L	0.001486	25.93%
Si 288.158†	-39.0	-0.02512	mg/L	0.004541	-0.02512	mg/L	0.004541	18.08%
Sn 189.927†	-2.1	-0.00056	mg/L	0.000660	-0.00056	mg/L	0.000660	117.92%
Sr 421.552†	90.4	0.00018	mg/L	0.000086	0.00018	mg/L	0.000086	47.17%
Ti 334.903†	33.2	0.00174	mg/L	0.001299	0.00174	mg/L	0.001299	74.44%
Tl 190.801†	1.0	0.00052	mg/L	0.002274	0.00052	mg/L	0.002274	435.75%
V 292.402†	56.6	0.00035	mg/L	0.000221	0.00035	mg/L	0.000221	62.91%
Zn 206.200†	0.9	0.00025	mg/L	0.000441	0.00025	mg/L	0.000441	177.07%

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Sequence No.: 3 **Autosampler Location: 301**
Sample ID: SEQ-CRL1 **Date Collected: 12/3/2020 2:31:09 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CRL1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-CRL1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2147741.5	99.03	%	0.500				0.50%
ScR 361.383	228789.8	98.34	%	0.122				0.12%
Ag 328.068†	549.7	0.00320	mg/L	0.000179	0.00320	mg/L	0.000179	5.59%
Al 308.215†	61.7	0.05015	mg/L	0.002715	0.05015	mg/L	0.002715	5.41%
As 188.979†	72.2	0.05078	mg/L	0.000775	0.05078	mg/L	0.000775	1.53%
B 249.677†	161.6	0.03243	mg/L	0.001308	0.03243	mg/L	0.001308	4.03%
Ba 233.527†	46.2	0.00644	mg/L	0.000383	0.00644	mg/L	0.000383	5.95%
Be 313.042†	710.8	0.00100	mg/L	0.000028	0.00100	mg/L	0.000028	2.77%
Ca 317.933†	722.8	0.06435	mg/L	0.001530	0.06435	mg/L	0.001530	2.38%
Cd 228.802†	65.7	0.00197	mg/L	0.000174	0.00197	mg/L	0.000174	8.82%
Co 228.616†	97.7	0.00282	mg/L	0.000238	0.00282	mg/L	0.000238	8.45%
Cr 267.716†	67.6	0.00800	mg/L	0.000592	0.00800	mg/L	0.000592	7.40%
Cu 324.752†	576.9	0.00273	mg/L	0.000087	0.00273	mg/L	0.000087	3.19%
Fe 273.955†	79.2	0.05114	mg/L	0.003316	0.05114	mg/L	0.003316	6.48%
K 766.490†	726.7	0.4814	mg/L	0.01682	0.4814	mg/L	0.01682	3.49%
Mg 279.077†	50.6	0.03543	mg/L	0.004208	0.03543	mg/L	0.004208	11.88%
Mn 257.610†	185.2	0.00382	mg/L	0.000060	0.00382	mg/L	0.000060	1.56%
Mo 202.031†	74.8	0.00550	mg/L	0.000296	0.00550	mg/L	0.000296	5.37%
Na 589.592†	2365.1	0.4707	mg/L	0.00511	0.4707	mg/L	0.00511	1.08%
Na 330.237†	8.6	0.3692	mg/L	0.22777	0.3692	mg/L	0.22777	61.70%
Ni 231.604†	27.7	0.00799	mg/L	0.000843	0.00799	mg/L	0.000843	10.55%
Pb 220.353†	142.4	0.01992	mg/L	0.000417	0.01992	mg/L	0.000417	2.09%
Sb 206.836†	124.0	0.05093	mg/L	0.001857	0.05093	mg/L	0.001857	3.65%
Se 196.026†	58.8	0.05028	mg/L	0.002824	0.05028	mg/L	0.002824	5.62%
Si 288.158†	145.3	0.09345	mg/L	0.006023	0.09345	mg/L	0.006023	6.45%
Sn 189.927†	74.1	0.01939	mg/L	0.001433	0.01939	mg/L	0.001433	7.39%
Sr 421.552†	561.9	0.00114	mg/L	0.000101	0.00114	mg/L	0.000101	8.91%
Ti 334.903†	160.3	0.00843	mg/L	0.000687	0.00843	mg/L	0.000687	8.15%
Tl 190.801†	94.3	0.05069	mg/L	0.001427	0.05069	mg/L	0.001427	2.81%
V 292.402†	424.8	0.00267	mg/L	0.000240	0.00267	mg/L	0.000240	8.99%
Zn 206.200†	69.5	0.01991	mg/L	0.001365	0.01991	mg/L	0.001365	6.85%

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Sequence No.: 4 **Autosampler Location: 302**
Sample ID: SEQ-IFA1 **Date Collected: 12/3/2020 2:35:25 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-IFA1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-IFA1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2049366.3	94.49	%	0.209				0.22%
ScR 361.383	214181.6	92.06	%	0.350				0.38%
Ag 328.068†	73.0	0.00042	mg/L	0.000385	0.00042	mg/L	0.000385	91.08%
Al 308.215†	257432.0	209.9	mg/L	1.34	209.9	mg/L	1.34	0.64%
As 188.979†	0.7	-0.00134	mg/L	0.006183	-0.00134	mg/L	0.006183	462.61%
B 249.677†	87.1	0.00054	mg/L	0.003283	0.00054	mg/L	0.003283	603.61%
Ba 233.527†	215.3	0.00073	mg/L	0.000517	0.00073	mg/L	0.000517	71.28%
Be 313.042†	131.3	0.00020	mg/L	0.000020	0.00020	mg/L	0.000020	10.25%
Ca 317.933†	1125982.2	101.1	mg/L	0.31	101.1	mg/L	0.31	0.30%
Cd 228.802†	69.0	0.00229	mg/L	0.000160	0.00229	mg/L	0.000160	6.96%
Co 228.616†	73.3	-0.00149	mg/L	0.000142	-0.00149	mg/L	0.000142	9.54%
Cr 267.716†	-30.2	0.00056	mg/L	0.001492	0.00056	mg/L	0.001492	264.75%
Cu 324.752†	-1578.9	0.00047	mg/L	0.000119	0.00047	mg/L	0.000119	25.32%
Fe 273.955†	314141.2	203.0	mg/L	0.26	203.0	mg/L	0.26	0.13%
K 766.490†	111.0	0.07353	mg/L	0.033917	0.07353	mg/L	0.033917	46.13%
Mg 279.077†	152981.4	106.8	mg/L	0.34	106.8	mg/L	0.34	0.32%
Mn 257.610†	132.6	-0.00039	mg/L	0.000022	-0.00039	mg/L	0.000022	5.61%
Mo 202.031†	99.9	0.00450	mg/L	0.000909	0.00450	mg/L	0.000909	20.19%
Na 589.592†	-65.0	-0.01293	mg/L	0.008361	-0.01293	mg/L	0.008361	64.64%
Na 330.237†	-21.9	-0.9562	mg/L	0.33288	-0.9562	mg/L	0.33288	34.81%
Ni 231.604†	-8.1	-0.00222	mg/L	0.002336	-0.00222	mg/L	0.002336	105.31%
Pb 220.353†	-445.3	-0.00746	mg/L	0.001392	-0.00746	mg/L	0.001392	18.66%
Sb 206.836†	228.6	0.07910	mg/L	0.002381	0.07910	mg/L	0.002381	3.01%
Se 196.026†	29.8	0.01721	mg/L	0.003351	0.01721	mg/L	0.003351	19.47%
Si 288.158†	-55.7	0.04259	mg/L	0.002921	0.04259	mg/L	0.002921	6.86%
Sn 189.927†	-133.3	-0.01630	mg/L	0.000937	-0.01630	mg/L	0.000937	5.75%
Sr 421.552†	488.1	0.00099	mg/L	0.000109	0.00099	mg/L	0.000109	11.02%
Ti 334.903†	119.9	0.00195	mg/L	0.001015	0.00195	mg/L	0.001015	52.08%
Tl 190.801†	-27.8	-0.01490	mg/L	0.004487	-0.01490	mg/L	0.004487	30.11%
V 292.402†	-1230.9	-0.00446	mg/L	0.000122	-0.00446	mg/L	0.000122	2.74%
Zn 206.200†	16.4	0.00471	mg/L	0.001077	0.00471	mg/L	0.001077	22.89%

Sequence No.: 5
Sample ID: SEQ-IFB1
Autosampler Location: 303
Date Collected: 12/3/2020 2:39:57 PM
Data Type: Original
Dilution: 1X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-IFB1

Analyte	Back Pressure	Flow
All	234.0 kPa	0.65 L/min

Mean Data: SEQ-IFB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2068392.1	95.37	%	0.800				0.84%
ScR 361.383	223060.1	95.87	%	1.320				1.38%
Ag 328.068†	178163.6	1.036	mg/L	0.0075	1.036	mg/L	0.0075	0.72%
Al 308.215†	255644.1	208.5	mg/L	1.69	208.5	mg/L	1.69	0.81%
As 188.979†	1457.6	1.004	mg/L	0.0129	1.004	mg/L	0.0129	1.29%
B 249.677†	101.3	0.00023	mg/L	0.001371	0.00023	mg/L	0.001371	603.18%
Ba 233.527†	7189.1	0.9723	mg/L	0.01336	0.9723	mg/L	0.01336	1.37%
Be 313.042†	721193.1	1.022	mg/L	0.0083	1.022	mg/L	0.0083	0.81%
Ca 317.933†	1153325.3	103.5	mg/L	0.68	103.5	mg/L	0.68	0.66%
Cd 228.802†	29142.7	0.9669	mg/L	0.00622	0.9669	mg/L	0.00622	0.64%
Co 228.616†	31984.5	0.9259	mg/L	0.00902	0.9259	mg/L	0.00902	0.97%
Cr 267.716†	8385.0	0.9959	mg/L	0.01377	0.9959	mg/L	0.01377	1.38%
Cu 324.752†	204181.9	0.9745	mg/L	0.00995	0.9745	mg/L	0.00995	1.02%
Fe 273.955†	317835.7	205.4	mg/L	1.71	205.4	mg/L	1.71	0.83%
K 766.490†	160.9	0.1066	mg/L	0.03168	0.1066	mg/L	0.03168	29.72%
Mg 279.077†	147829.2	103.2	mg/L	0.81	103.2	mg/L	0.81	0.79%
Mn 257.610†	46520.8	0.9577	mg/L	0.00807	0.9577	mg/L	0.00807	0.84%
Mo 202.031†	94.4	0.00410	mg/L	0.000440	0.00410	mg/L	0.000440	10.71%
Na 589.592†	-51.9	-0.01033	mg/L	0.012992	-0.01033	mg/L	0.012992	125.77%
Na 330.237†	-0.4	-0.3718	mg/L	0.07245	-0.3718	mg/L	0.07245	19.48%
Ni 231.604†	3414.0	0.9797	mg/L	0.01326	0.9797	mg/L	0.01326	1.35%
Pb 220.353†	6734.9	0.9962	mg/L	0.00782	0.9962	mg/L	0.00782	0.79%
Sb 206.836†	2876.0	1.155	mg/L	0.0116	1.155	mg/L	0.0116	1.00%
Se 196.026†	1219.8	1.035	mg/L	0.0128	1.035	mg/L	0.0128	1.24%
Si 288.158†	-5.8	0.09238	mg/L	0.006587	0.09238	mg/L	0.006587	7.13%
Sn 189.927†	-139.3	-0.01696	mg/L	0.000558	-0.01696	mg/L	0.000558	3.29%
Sr 421.552†	485.2	0.00098	mg/L	0.000068	0.00098	mg/L	0.000068	6.94%
Ti 334.903†	122.2	0.00177	mg/L	0.000403	0.00177	mg/L	0.000403	22.73%
Tl 190.801†	1773.9	0.9450	mg/L	0.01317	0.9450	mg/L	0.01317	1.39%
V 292.402†	150749.2	0.9434	mg/L	0.00914	0.9434	mg/L	0.00914	0.97%
Zn 206.200†	3389.3	0.9705	mg/L	0.01424	0.9705	mg/L	0.01424	1.47%

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Sequence No.: 6 Autosampler Location: 7
Sample ID: SEQ-CCV 1 Date Collected: 12/3/2020 2:46:45 PM
Data Type: Original
Dilution: 1X
Wash Time: 200 Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV 1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

SKD 12-03-20

Mean Data: SEQ-CCV 1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2147857.0	99.03	%	0.244				0.25%
ScR 361.383	224587.2	96.53	%	1.414				1.46%
Ag 328.068†	179376.5	1.043	mg/L	0.0050	1.043	mg/L	0.0050	0.48%
Al 308.215†	2573.4	2.068	mg/L	0.0349	2.068	mg/L	0.0349	1.69%
As 188.979†	2736.2	1.999	mg/L	0.0065	1.999	mg/L	0.0065	0.32%
B 249.677†	5164.8	1.035	mg/L	0.0236	1.035	mg/L	0.0236	2.28%
Ba 233.527†	7083.8	0.9869	mg/L	0.02130	0.9869	mg/L	0.02130	2.16%
Be 313.042†	710385.3	1.006	mg/L	0.0152	1.006	mg/L	0.0152	1.51%
Ca 317.933†	22338.6	1.928	mg/L	0.0247	1.928	mg/L	0.0247	1.28%
Cd 228.802†	29514.6	0.9754	mg/L	0.00520	0.9754	mg/L	0.00520	0.53%
Co 228.616†	33145.5	0.9616	mg/L	0.00601	0.9616	mg/L	0.00601	0.62%
Cr 267.716†	8354.0	0.9880	mg/L	0.02160	0.9880	mg/L	0.02160	2.19%
Cu 324.752†	204029.8	0.9651	mg/L	0.00330	0.9651	mg/L	0.00330	0.34%
Fe 273.955†	3245.7	2.093	mg/L	0.0495	2.093	mg/L	0.0495	2.37%
K 766.490†	31176.7	20.65	mg/L	0.287	20.65	mg/L	0.287	1.39%
Mg 279.077†	2983.7	2.101	mg/L	0.0408	2.101	mg/L	0.0408	1.94%
Mn 257.610†	46272.2	0.9558	mg/L	0.01332	0.9558	mg/L	0.01332	1.39%
Mo 202.031†	13395.2	0.9855	mg/L	0.00298	0.9855	mg/L	0.00298	0.30%
Na 589.592†	264481.3	52.64	mg/L	0.295	52.64	mg/L	0.295	0.56%
Na 330.237†	1207.8	52.65	mg/L	0.919	52.65	mg/L	0.919	1.75%
Ni 231.604†	3552.3	1.020	mg/L	0.0215	1.020	mg/L	0.0215	2.11%
Pb 220.353†	14213.4	1.988	mg/L	0.0104	1.988	mg/L	0.0104	0.52%
Sb 206.836†	5159.0	2.115	mg/L	0.0041	2.115	mg/L	0.0041	0.20%
Se 196.026†	2343.9	2.005	mg/L	0.0105	2.005	mg/L	0.0105	0.52%
Si 288.158†	3274.9	2.113	mg/L	0.0355	2.113	mg/L	0.0355	1.68%
Sn 189.927†	3813.9	0.9978	mg/L	0.00286	0.9978	mg/L	0.00286	0.29%
Sr 421.552†	518366.6	1.048	mg/L	0.0105	1.048	mg/L	0.0105	1.01%
Ti 334.903†	19333.3	1.017	mg/L	0.0183	1.017	mg/L	0.0183	1.80%
Tl 190.801†	3696.6	1.981	mg/L	0.0093	1.981	mg/L	0.0093	0.47%
V 292.402†	156059.9	0.9738	mg/L	0.00446	0.9738	mg/L	0.00446	0.46%
Zn 206.200†	3538.0	1.013	mg/L	0.0229	1.013	mg/L	0.0229	2.26%

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Sequence No.: 7 **Autosampler Location: 1**
Sample ID: SEQ-CCB 1 **Date Collected: 12/3/2020 2:52:27 PM**
Data Type: Original
Dilution: 1X
Wash Time: 120 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB 1

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

SKD 12-03-20

Mean Data: SEQ-CCB 1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2117077.0	97.61	%	0.143				0.15%
ScR 361.383	225463.0	96.91	%	0.780				0.81%
Ag 328.068†	53.3	0.00031	mg/L	0.000231	0.00031	mg/L	0.000231	74.60%
Al 308.215†	-7.1	-0.00588	mg/L	0.018910	-0.00588	mg/L	0.018910	321.78%
As 188.979†	-0.4	-0.00022	mg/L	0.003163	-0.00022	mg/L	0.003163	>999.9%
B 249.677†	-0.3	-0.00004	mg/L	0.002546	-0.00004	mg/L	0.002546	>999.9%
Ba 233.527†	-3.5	-0.00048	mg/L	0.000460	-0.00048	mg/L	0.000460	95.58%
Be 313.042†	68.4	0.00010	mg/L	0.000037	0.00010	mg/L	0.000037	38.73%
Ca 317.933†	0.1	-0.00002	mg/L	0.001677	-0.00002	mg/L	0.001677	>999.9%
Cd 228.802†	6.1	0.00020	mg/L	0.000085	0.00020	mg/L	0.000085	41.58%
Co 228.616†	2.2	0.00006	mg/L	0.000113	0.00006	mg/L	0.000113	179.06%
Cr 267.716†	-6.4	-0.00075	mg/L	0.000527	-0.00075	mg/L	0.000527	70.02%
Cu 324.752†	62.3	0.00029	mg/L	0.000123	0.00029	mg/L	0.000123	41.98%
Fe 273.955†	0.3	0.00021	mg/L	0.001110	0.00021	mg/L	0.001110	534.74%
K 766.490†	11.9	0.00787	mg/L	0.034422	0.00787	mg/L	0.034422	437.44%
Mg 279.077†	-13.9	-0.00964	mg/L	0.012371	-0.00964	mg/L	0.012371	128.38%
Mn 257.610†	6.0	0.00012	mg/L	0.000109	0.00012	mg/L	0.000109	87.36%
Mo 202.031†	70.3	0.00517	mg/L	0.000794	0.00517	mg/L	0.000794	15.35%
Na 589.592†	-128.0	-0.02548	mg/L	0.003225	-0.02548	mg/L	0.003225	12.66%
Na 330.237†	8.8	0.3838	mg/L	0.24468	0.3838	mg/L	0.24468	63.75%
Ni 231.604†	-5.8	-0.00165	mg/L	0.001362	-0.00165	mg/L	0.001362	82.31%
Pb 220.353†	-2.1	-0.00029	mg/L	0.000224	-0.00029	mg/L	0.000224	76.50%
Sb 206.836†	8.3	0.00341	mg/L	0.001596	0.00341	mg/L	0.001596	46.85%
Se 196.026†	6.4	0.00546	mg/L	0.006212	0.00546	mg/L	0.006212	113.78%
Si 288.158†	-29.6	-0.01904	mg/L	0.003482	-0.01904	mg/L	0.003482	18.29%
Sn 189.927†	1.2	0.00031	mg/L	0.001231	0.00031	mg/L	0.001231	395.04%
Sr 421.552†	64.9	0.00013	mg/L	0.000020	0.00013	mg/L	0.000020	15.33%
Ti 334.903†	14.8	0.00078	mg/L	0.000622	0.00078	mg/L	0.000622	80.03%
Tl 190.801†	3.3	0.00180	mg/L	0.001595	0.00180	mg/L	0.001595	88.75%
V 292.402†	32.2	0.00020	mg/L	0.000170	0.00020	mg/L	0.000170	84.17%
Zn 206.200†	4.0	0.00115	mg/L	0.000715	0.00115	mg/L	0.000715	62.01%

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Analysis Begun

Start Time: 12/3/2020 3:05:46 PM
Plasma On Time: 12/3/2020 8:08:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 304
Sample ID: BIK0446-BLK2
Date Collected: 12/3/2020 3:05:55 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: BIK0446-BLK2

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0446-BLK2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2148199.0	99.05	%	0.174				0.18%
ScR 361.383	226222.0	97.23	%	1.773				1.82%
Ag 328.068†	38.4	0.00022	mg/L	0.000031	0.00022	mg/L	0.000031	13.68%
Al 308.215†	-5.1	-0.00417	mg/L	0.015639	-0.00417	mg/L	0.015639	375.47%
As 188.979†	-0.2	-0.00009	mg/L	0.000424	-0.00009	mg/L	0.000424	447.50%
B 249.677†	1.1	0.00023	mg/L	0.002760	0.00023	mg/L	0.002760	>999.9%
Ba 233.527†	0.2	0.00003	mg/L	0.000164	0.00003	mg/L	0.000164	558.27%
Be 313.042†	37.5	0.00005	mg/L	0.000020	0.00005	mg/L	0.000020	38.10%
Ca 317.933†	61.5	0.00552	mg/L	0.001838	0.00552	mg/L	0.001838	33.33%
Cd 228.802†	3.2	0.00011	mg/L	0.000107	0.00011	mg/L	0.000107	100.94%
Co 228.616†	-5.8	-0.00017	mg/L	0.000081	-0.00017	mg/L	0.000081	47.15%
Cr 267.716†	-2.3	-0.00028	mg/L	0.000954	-0.00028	mg/L	0.000954	346.77%
Cu 324.752†	30.7	0.00014	mg/L	0.000108	0.00014	mg/L	0.000108	74.33%
Fe 273.955†	6.8	0.00438	mg/L	0.000579	0.00438	mg/L	0.000579	13.22%
K 766.490†	33.6	0.02229	mg/L	0.021742	0.02229	mg/L	0.021742	97.55%
Mg 279.077†	1.7	0.00119	mg/L	0.018245	0.00119	mg/L	0.018245	>999.9%
Mn 257.610†	67.3	0.00139	mg/L	0.000172	0.00139	mg/L	0.000172	12.40%
Mo 202.031†	4.7	0.00034	mg/L	0.000254	0.00034	mg/L	0.000254	73.86%
Na 589.592†	-158.0	-0.03144	mg/L	0.003534	-0.03144	mg/L	0.003534	11.24%
Na 330.237†	2.5	0.1107	mg/L	0.22375	0.1107	mg/L	0.22375	202.04%
Ni 231.604†	-1.2	-0.00035	mg/L	0.001672	-0.00035	mg/L	0.001672	470.93%
Pb 220.353†	-1.4	-0.00020	mg/L	0.001291	-0.00020	mg/L	0.001291	659.04%
Sb 206.836†	-3.6	-0.00146	mg/L	0.001529	-0.00146	mg/L	0.001529	104.72%
Se 196.026†	2.9	0.00247	mg/L	0.000825	0.00247	mg/L	0.000825	33.41%
Si 288.158†	-13.2	-0.00846	mg/L	0.012849	-0.00846	mg/L	0.012849	151.81%
Sn 189.927†	-0.3	-0.00009	mg/L	0.000332	-0.00009	mg/L	0.000332	376.88%
Sr 421.552†	36.4	0.00007	mg/L	0.000110	0.00007	mg/L	0.000110	148.89%
Ti 334.903†	12.6	0.00066	mg/L	0.001008	0.00066	mg/L	0.001008	151.87%
Tl 190.801†	-2.0	-0.00108	mg/L	0.002491	-0.00108	mg/L	0.002491	230.61%
V 292.402†	-18.7	-0.00012	mg/L	0.000049	-0.00012	mg/L	0.000049	42.13%
Zn 206.200†	7.0	0.00200	mg/L	0.000165	0.00200	mg/L	0.000165	8.23%

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Sequence No.: 2 **Autosampler Location: 305**
Sample ID: 20K0325-02 **Date Collected: 12/3/2020 3:10:17 PM**
Data Type: Original
Dilution: 20X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0325-02

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0325-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2193093.5	101.1	%	0.54				0.54%
ScR 361.383	232971.2	100.1	%	1.19				1.19%
Ag 328.068†	64.3	0.00037	mg/L	0.000128	0.00747	mg/L	0.002556	34.20%
Al 308.215†	18.2	0.01482	mg/L	0.010886	0.2965	mg/L	0.21772	73.44%
As 188.979†	4.0	0.00278	mg/L	0.003196	0.05552	mg/L	0.063924	115.13%
B 249.677†	15.4	0.00298	mg/L	0.000643	0.05959	mg/L	0.012853	21.57%
Ba 233.527†	4.6	0.00064	mg/L	0.000757	0.01276	mg/L	0.015131	118.55%
Be 313.042†	-21.5	-0.00003	mg/L	0.000074	-0.00059	mg/L	0.001476	248.47%
Ca 317.933†	2198.5	0.1973	mg/L	0.00410	3.947	mg/L	0.0821	2.08%
Cd 228.802†	2.9	0.00009	mg/L	0.000038	0.00176	mg/L	0.000765	43.41%
Co 228.616†	-1.7	-0.00005	mg/L	0.000006	-0.00101	mg/L	0.000115	11.40%
Cr 267.716†	3.1	0.00036	mg/L	0.000541	0.00720	mg/L	0.010813	150.08%
Cu 324.752†	2648.8	0.01253	mg/L	0.000131	0.2507	mg/L	0.00263	1.05%
Fe 273.955†	28.3	0.01827	mg/L	0.000415	0.3653	mg/L	0.00830	2.27%
K 766.490†	458.6	0.3038	mg/L	0.01833	6.075	mg/L	0.3666	6.03%
Mg 279.077†	83.8	0.05855	mg/L	0.006581	1.171	mg/L	0.1316	11.24%
Mn 257.610†	17.5	0.00036	mg/L	0.000061	0.00723	mg/L	0.001224	16.92%
Mo 202.031†	7.7	0.00056	mg/L	0.000438	0.01126	mg/L	0.008753	77.77%
Na 589.592†	48665.2	9.685	mg/L	0.1294	193.7	mg/L	2.59	1.34%
Na 330.237†	218.8	9.565	mg/L	0.6570	191.3	mg/L	13.14	6.87%
Ni 231.604†	22.3	0.00638	mg/L	0.002444	0.1277	mg/L	0.04888	38.28%
Pb 220.353†	-12.4	-0.00175	mg/L	0.000720	-0.03504	mg/L	0.014399	41.09%
Sb 206.836†	-2.3	-0.00096	mg/L	0.000638	-0.01917	mg/L	0.012761	66.57%
Se 196.026†	1.3	0.00108	mg/L	0.001356	0.02151	mg/L	0.027121	126.07%
Si 288.158†	278.3	0.1791	mg/L	0.01277	3.582	mg/L	0.2554	7.13%
Sn 189.927†	0.1	0.00007	mg/L	0.000357	0.00137	mg/L	0.007134	522.00%
Sr 421.552†	356.5	0.00072	mg/L	0.000039	0.01441	mg/L	0.000776	5.38%
Ti 334.903†	2.4	0.00012	mg/L	0.000959	0.00235	mg/L	0.019186	815.52%
Tl 190.801†	0.1	0.00008	mg/L	0.000414	0.00153	mg/L	0.008276	539.89%
V 292.402†	-67.3	-0.00042	mg/L	0.000022	-0.00832	mg/L	0.000448	5.38%
Zn 206.200†	30.1	0.00862	mg/L	0.000988	0.1723	mg/L	0.01976	11.46%

Sequence No.: 3
Sample ID: 20K0325-03
Dilution: 20X
Wash Time: 37

Autosampler Location: 306
Date Collected: 12/3/2020 3:14:33 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0325-03

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: 20K0325-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2227330.4	102.7	%	0.23				0.23%
ScR 361.383	236023.2	101.4	%	0.65				0.64%
Ag 328.068†	33.3	0.00019	mg/L	0.000155	0.00387	mg/L	0.003098	80.07%
Al 308.215†	2.1	0.00171	mg/L	0.015521	0.03411	mg/L	0.310416	910.04%
As 188.979†	-1.0	-0.00072	mg/L	0.001766	-0.01450	mg/L	0.035328	243.65%
B 249.677†	30.1	0.00591	mg/L	0.001937	0.1183	mg/L	0.03874	32.76%
Ba 233.527†	1.2	0.00016	mg/L	0.000196	0.00316	mg/L	0.003919	124.04%
Be 313.042†	-36.5	-0.00005	mg/L	0.000019	-0.00103	mg/L	0.000385	37.50%
Ca 317.933†	5481.0	0.4921	mg/L	0.00144	9.841	mg/L	0.0288	0.29%
Cd 228.802†	0.1	0.00001	mg/L	0.000092	0.00020	mg/L	0.001845	945.33%
Co 228.616†	0.3	0.00001	mg/L	0.000029	0.00015	mg/L	0.000572	391.18%
Cr 267.716†	23.7	0.00280	mg/L	0.000728	0.05609	mg/L	0.014553	25.94%
Cu 324.752†	1648.3	0.00780	mg/L	0.000122	0.1560	mg/L	0.00244	1.57%
Fe 273.955†	32.4	0.02095	mg/L	0.002951	0.4189	mg/L	0.05901	14.09%
K 766.490†	126.1	0.08356	mg/L	0.011657	1.671	mg/L	0.2331	13.95%
Mg 279.077†	148.1	0.1035	mg/L	0.00834	2.070	mg/L	0.1668	8.06%
Mn 257.610†	26.6	0.00055	mg/L	0.000032	0.01096	mg/L	0.000630	5.75%
Mo 202.031†	2.7	0.00019	mg/L	0.000147	0.00376	mg/L	0.002931	77.94%
Na 589.592†	2508.0	0.4991	mg/L	0.00627	9.983	mg/L	0.1255	1.26%
Na 330.237†	25.3	1.103	mg/L	0.3739	22.06	mg/L	7.477	33.89%
Ni 231.604†	18.0	0.00514	mg/L	0.000258	0.1029	mg/L	0.00516	5.02%
Pb 220.353†	-1.8	-0.00026	mg/L	0.001014	-0.00520	mg/L	0.020277	389.65%
Sb 206.836†	-10.5	-0.00434	mg/L	0.001123	-0.08678	mg/L	0.022466	25.89%
Se 196.026†	5.3	0.00449	mg/L	0.005305	0.08982	mg/L	0.106098	118.13%
Si 288.158†	339.4	0.2185	mg/L	0.00057	4.370	mg/L	0.0113	0.26%
Sn 189.927†	-1.5	-0.00029	mg/L	0.000608	-0.00589	mg/L	0.012167	206.51%
Sr 421.552†	945.4	0.00191	mg/L	0.000114	0.03821	mg/L	0.002272	5.95%
Ti 334.903†	-3.8	-0.00022	mg/L	0.000412	-0.00443	mg/L	0.008242	185.98%
Tl 190.801†	-0.6	-0.00031	mg/L	0.001873	-0.00611	mg/L	0.037456	612.98%
V 292.402†	-49.1	-0.00029	mg/L	0.000131	-0.00588	mg/L	0.002628	44.69%
Zn 206.200†	12.2	0.00350	mg/L	0.000254	0.07002	mg/L	0.005086	7.26%

Sequence No.: 4
Sample ID: 20K0325-04
Dilution: 20X
Wash Time: 37

Autosampler Location: 307
Date Collected: 12/3/2020 3:18:49 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0325-04

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0325-04

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2209896.8	101.9	%	0.46				0.45%
ScR 361.383	235592.3	101.3	%	0.25				0.25%
Ag 328.068†	59.7	0.00035	mg/L	0.000101	0.00694	mg/L	0.002018	29.08%
Al 308.215†	-2.7	-0.00216	mg/L	0.008491	-0.04328	mg/L	0.169819	392.34%
As 188.979†	1.4	0.00100	mg/L	0.001527	0.01990	mg/L	0.030531	153.41%
B 249.677†	8.5	0.00149	mg/L	0.001494	0.02978	mg/L	0.029875	100.33%
Ba 233.527†	-2.0	-0.00028	mg/L	0.000499	-0.00555	mg/L	0.009985	180.02%
Be 313.042†	17.9	0.00003	mg/L	0.000021	0.00051	mg/L	0.000416	80.99%
Ca 317.933†	408.8	0.03650	mg/L	0.000235	0.7300	mg/L	0.00471	0.65%
Cd 228.802†	1.8	0.00006	mg/L	0.000106	0.00118	mg/L	0.002128	180.96%
Co 228.616†	5.5	0.00016	mg/L	0.000088	0.00315	mg/L	0.001767	56.15%
Cr 267.716†	11.3	0.00134	mg/L	0.000138	0.02682	mg/L	0.002758	10.29%
Cu 324.752†	15980.7	0.07562	mg/L	0.000449	1.512	mg/L	0.0090	0.59%
Fe 273.955†	30.3	0.01957	mg/L	0.000650	0.3914	mg/L	0.01300	3.32%
K 766.490†	2613.5	1.731	mg/L	0.0463	34.63	mg/L	0.925	2.67%
Mg 279.077†	7.4	0.00515	mg/L	0.009477	0.1030	mg/L	0.18954	184.03%
Mn 257.610†	19.4	0.00040	mg/L	0.000120	0.00801	mg/L	0.002395	29.91%
Mo 202.031†	0.6	0.00004	mg/L	0.000197	0.00084	mg/L	0.003943	471.04%
Na 589.592†	238484.6	47.46	mg/L	0.474	949.2	mg/L	9.48	1.00%
Na 330.237†	1076.5	47.08	mg/L	1.129	941.6	mg/L	22.58	2.40%
Ni 231.604†	8.2	0.00236	mg/L	0.000431	0.04715	mg/L	0.008622	18.29%
Pb 220.353†	-6.6	-0.00104	mg/L	0.000594	-0.02075	mg/L	0.011887	57.28%
Sb 206.836†	-4.8	-0.00201	mg/L	0.000390	-0.04013	mg/L	0.007801	19.44%
Se 196.026†	7.2	0.00618	mg/L	0.001740	0.1236	mg/L	0.03480	28.15%
Si 288.158†	551.3	0.3548	mg/L	0.00187	7.096	mg/L	0.0375	0.53%
Sn 189.927†	0.8	0.00021	mg/L	0.001141	0.00412	mg/L	0.022819	553.33%
Sr 421.552†	23.4	0.00005	mg/L	0.000106	0.00095	mg/L	0.002129	225.24%
Ti 334.903†	6.0	0.00031	mg/L	0.001132	0.00628	mg/L	0.022633	360.36%
Tl 190.801†	3.0	0.00161	mg/L	0.001826	0.03226	mg/L	0.036519	113.20%
V 292.402†	-18.6	-0.00011	mg/L	0.000290	-0.00220	mg/L	0.005791	262.79%
Zn 206.200†	24.1	0.00690	mg/L	0.001060	0.1379	mg/L	0.02121	15.38%

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Sequence No.: 5
Sample ID: SEQ-IBL1

Autosampler Location: 308
Date Collected: 12/3/2020 3:23:20 PM
Data Type: Original

Dilution: 1X
Wash Time: 37

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-IBL1

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-IBL1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2176580.5	100.4	%	0.56				0.56%
ScR 361.383	230675.8	99.15	%	0.203				0.21%
Ag 328.068†	33.4	0.00019	mg/L	0.000321	0.00019	mg/L	0.000321	165.20%
Al 308.215†	1.4	0.00117	mg/L	0.006139	0.00117	mg/L	0.006139	525.04%
As 188.979†	3.2	0.00233	mg/L	0.001590	0.00233	mg/L	0.001590	68.36%
B 249.677†	-3.2	-0.00063	mg/L	0.000661	-0.00063	mg/L	0.000661	104.20%
Ba 233.527†	6.3	0.00088	mg/L	0.000811	0.00088	mg/L	0.000811	91.65%
Be 313.042†	-6.4	-0.00001	mg/L	0.000028	-0.00001	mg/L	0.000028	336.09%
Ca 317.933†	0.6	0.00006	mg/L	0.001080	0.00006	mg/L	0.001080	>999.9%
Cd 228.802†	1.3	0.00003	mg/L	0.000100	0.00003	mg/L	0.000100	313.85%
Co 228.616†	-1.9	-0.00006	mg/L	0.000167	-0.00006	mg/L	0.000167	298.15%
Cr 267.716†	1.9	0.00022	mg/L	0.001022	0.00022	mg/L	0.001022	463.48%
Cu 324.752†	-6.1	-0.00003	mg/L	0.000210	-0.00003	mg/L	0.000210	723.70%
Fe 273.955†	0.7	0.00047	mg/L	0.001654	0.00047	mg/L	0.001654	348.39%
K 766.490†	6.4	0.00426	mg/L	0.019593	0.00426	mg/L	0.019593	459.92%
Mg 279.077†	0.2	0.00016	mg/L	0.016121	0.00016	mg/L	0.016121	>999.9%
Mn 257.610†	0.8	0.00002	mg/L	0.000047	0.00002	mg/L	0.000047	294.40%
Mo 202.031†	0.3	0.00002	mg/L	0.000733	0.00002	mg/L	0.000733	>999.9%
Na 589.592†	-99.7	-0.01984	mg/L	0.006242	-0.01984	mg/L	0.006242	31.46%
Na 330.237†	5.9	0.2589	mg/L	0.13473	0.2589	mg/L	0.13473	52.04%
Ni 231.604†	-6.4	-0.00185	mg/L	0.001749	-0.00185	mg/L	0.001749	94.72%
Pb 220.353†	-0.3	-0.00004	mg/L	0.000547	-0.00004	mg/L	0.000547	>999.9%
Sb 206.836†	-7.5	-0.00308	mg/L	0.001425	-0.00308	mg/L	0.001425	46.21%
Se 196.026†	5.0	0.00424	mg/L	0.004604	0.00424	mg/L	0.004604	108.59%
Si 288.158†	-6.5	-0.00419	mg/L	0.008088	-0.00419	mg/L	0.008088	192.91%
Sn 189.927†	-4.0	-0.00106	mg/L	0.000653	-0.00106	mg/L	0.000653	61.73%
Sr 421.552†	50.3	0.00010	mg/L	0.000042	0.00010	mg/L	0.000042	40.89%
Ti 334.903†	19.4	0.00102	mg/L	0.001034	0.00102	mg/L	0.001034	101.10%
Tl 190.801†	0.3	0.00019	mg/L	0.001031	0.00019	mg/L	0.001031	546.30%
V 292.402†	-65.1	-0.00040	mg/L	0.000094	-0.00040	mg/L	0.000094	23.28%
Zn 206.200†	0.6	0.00016	mg/L	0.000226	0.00016	mg/L	0.000226	142.31%

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Sequence No.: 6
Sample ID: BIK0408-DUP2

Dilution: 2X
Wash Time: 37

Autosampler Location: 309
Date Collected: 12/3/2020 3:27:35 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0408-DUP2

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0408-DUP2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2236296.2	103.1	%	0.42				0.41%
ScR 361.383	236186.4	101.5	%	1.04				1.02%
Ag 328.068†	-100.2	-0.00065	mg/L	0.000087	-0.00130	mg/L	0.000174	13.39%
Al 308.215†	163283.1	133.2	mg/L	1.25	266.3	mg/L	2.50	0.94%
As 188.979†	-1020.7	0.06922	mg/L	0.006463	0.1384	mg/L	0.01293	9.34%
B 249.677†	305.5	0.03391	mg/L	0.002416	0.06783	mg/L	0.004832	7.12%
Ba 233.527†	4132.7	0.5486	mg/L	0.00687	1.097	mg/L	0.0137	1.25%
Be 313.042†	1893.8	0.00208	mg/L	0.000034	0.00416	mg/L	0.000068	1.64%
Ca 317.933†	485265.0	43.56	mg/L	0.499	87.13	mg/L	0.997	1.14%
Cd 228.802†	76.2	0.00576	mg/L	0.000276	0.01153	mg/L	0.000552	4.79%
Co 228.616†	2195.6	0.04784	mg/L	0.000437	0.09568	mg/L	0.000874	0.91%
Cr 267.716†	1332.8	0.1633	mg/L	0.00147	0.3265	mg/L	0.00294	0.90%
Cu 324.752†	88811.2	0.4269	mg/L	0.00236	0.8539	mg/L	0.00473	0.55%
Fe 273.955†	303828.9	196.3	mg/L	1.96	392.6	mg/L	3.92	1.00%
K 766.490†	12526.4	8.298	mg/L	0.0722	16.60	mg/L	0.144	0.87%
Mg 279.077†	44045.3	30.72	mg/L	0.289	61.44	mg/L	0.577	0.94%
Mn 257.610†	72618.3	1.497	mg/L	0.0160	2.995	mg/L	0.0320	1.07%
Mo 202.031†	91.8	0.00571	mg/L	0.000234	0.01143	mg/L	0.000469	4.10%
Na 589.592†	56110.4	11.17	mg/L	0.146	22.33	mg/L	0.292	1.31%
Na 330.237†	239.0	11.62	mg/L	0.167	23.23	mg/L	0.333	1.43%
Ni 231.604†	439.8	0.1262	mg/L	0.00397	0.2523	mg/L	0.00793	3.14%
Pb 220.353†	1936.0	0.3023	mg/L	0.00134	0.6046	mg/L	0.00268	0.44%
Sb 206.836†	165.5	0.06736	mg/L	0.001943	0.1347	mg/L	0.00389	2.88%
Se 196.026†	17.3	0.01005	mg/L	0.004469	0.02010	mg/L	0.008939	44.47%
Si 288.158†	26827.2	17.30	mg/L	0.183	34.60	mg/L	0.366	1.06%
Sn 189.927†	622.4	0.1734	mg/L	0.00198	0.3468	mg/L	0.00396	1.14%
Sr 421.552†	330339.9	0.6676	mg/L	0.00752	1.335	mg/L	0.0150	1.13%
Ti 334.903†	130918.6	6.893	mg/L	0.0527	13.79	mg/L	0.105	0.76%
Tl 190.801†	-14.9	-0.00959	mg/L	0.005444	-0.01917	mg/L	0.010888	56.79%
V 292.402†	55056.0	0.3431	mg/L	0.00265	0.6862	mg/L	0.00531	0.77%
Zn 206.200†	1700.9	0.4870	mg/L	0.00526	0.9740	mg/L	0.01052	1.08%

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Sequence No.: 7 | **Autosampler Location: 310**
Sample ID: 20K0126-01 | **Date Collected: 12/3/2020 3:31:37 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 | **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0126-01

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: 20K0126-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2244042.1	103.5	%	0.49				0.47%
ScR 361.383	239260.9	102.8	%	0.49				0.48%
Ag 328.068†	-46.1	-0.00034	mg/L	0.000149	-0.00068	mg/L	0.000299	44.27%
Al 308.215†	150053.9	122.4	mg/L	0.28	244.7	mg/L	0.55	0.23%
As 188.979†	-977.2	0.05320	mg/L	0.005872	0.1064	mg/L	0.01174	11.04%
B 249.677†	256.0	0.02595	mg/L	0.000129	0.05190	mg/L	0.000257	0.50%
Ba 233.527†	3597.2	0.4773	mg/L	0.00180	0.9546	mg/L	0.00361	0.38%
Be 313.042†	1765.5	0.00192	mg/L	0.000032	0.00385	mg/L	0.000064	1.66%
Ca 317.933†	475688.8	42.70	mg/L	0.125	85.40	mg/L	0.250	0.29%
Cd 228.802†	64.3	0.00523	mg/L	0.000115	0.01046	mg/L	0.000229	2.19%
Co 228.616†	2049.2	0.04477	mg/L	0.000375	0.08953	mg/L	0.000749	0.84%
Cr 267.716†	1187.5	0.1453	mg/L	0.00076	0.2905	mg/L	0.00152	0.52%
Cu 324.752†	108043.6	0.5170	mg/L	0.00296	1.034	mg/L	0.0059	0.57%
Fe 273.955†	266105.5	171.9	mg/L	1.28	343.9	mg/L	2.56	0.74%
K 766.490†	10804.5	7.157	mg/L	0.0342	14.31	mg/L	0.068	0.48%
Mg 279.077†	41802.1	29.16	mg/L	0.121	58.32	mg/L	0.241	0.41%
Mn 257.610†	70890.3	1.462	mg/L	0.0019	2.924	mg/L	0.0037	0.13%
Mo 202.031†	89.5	0.00558	mg/L	0.000036	0.01115	mg/L	0.000071	0.64%
Na 589.592†	55439.7	11.03	mg/L	0.068	22.07	mg/L	0.136	0.62%
Na 330.237†	234.1	11.33	mg/L	0.415	22.67	mg/L	0.830	3.66%
Ni 231.604†	421.0	0.1208	mg/L	0.00193	0.2416	mg/L	0.00386	1.60%
Pb 220.353†	2793.5	0.4197	mg/L	0.00168	0.8394	mg/L	0.00336	0.40%
Sb 206.836†	202.3	0.08608	mg/L	0.000783	0.1722	mg/L	0.00157	0.91%
Se 196.026†	15.9	0.00893	mg/L	0.006702	0.01785	mg/L	0.013404	75.09%
Si 288.158†	27016.7	17.41	mg/L	0.078	34.83	mg/L	0.156	0.45%
Sn 189.927†	2172.3	0.5779	mg/L	0.00162	1.156	mg/L	0.0032	0.28%
Sr 421.552†	302340.5	0.6110	mg/L	0.00165	1.222	mg/L	0.0033	0.27%
Ti 334.903†	123124.3	6.483	mg/L	0.0181	12.97	mg/L	0.036	0.28%
Tl 190.801†	-17.2	-0.01079	mg/L	0.002069	-0.02157	mg/L	0.004139	19.18%
V 292.402†	52551.7	0.3272	mg/L	0.00189	0.6545	mg/L	0.00378	0.58%
Zn 206.200†	1592.6	0.4560	mg/L	0.00262	0.9120	mg/L	0.00524	0.57%

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Sequence No.: 8 **Autosampler Location: 311**
Sample ID: BIK0408-MS2 **Date Collected: 12/3/2020 3:35:39 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0408-MS2

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0408-MS2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2243918.1	103.5	%	0.99				0.96%
ScR 361.383	234787.8	100.9	%	0.57				0.56%
Ag 328.068†	82243.4	0.4780	mg/L	0.00478	0.9560	mg/L	0.00956	1.00%
Al 308.215†	165209.8	134.7	mg/L	0.67	269.4	mg/L	1.34	0.50%
As 188.979†	1632.4	1.886	mg/L	0.0059	3.773	mg/L	0.0119	0.32%
B 249.677†	292.5	0.03297	mg/L	0.001360	0.06594	mg/L	0.002720	4.13%
Ba 233.527†	17391.1	2.400	mg/L	0.0078	4.800	mg/L	0.0157	0.33%
Be 313.042†	340318.7	0.4815	mg/L	0.00220	0.9630	mg/L	0.00440	0.46%
Ca 317.933†	605944.2	54.36	mg/L	0.517	108.7	mg/L	1.03	0.95%
Cd 228.802†	14143.1	0.4665	mg/L	0.00552	0.9329	mg/L	0.01105	1.18%
Co 228.616†	17352.9	0.4886	mg/L	0.00574	0.9772	mg/L	0.01149	1.18%
Cr 267.716†	5244.0	0.6251	mg/L	0.00074	1.250	mg/L	0.0015	0.12%
Cu 324.752†	186193.4	0.8872	mg/L	0.00853	1.774	mg/L	0.0171	0.96%
Fe 273.955†	283798.0	183.4	mg/L	1.28	366.8	mg/L	2.55	0.70%
K 766.490†	26445.6	17.52	mg/L	0.069	35.04	mg/L	0.138	0.39%
Mg 279.077†	56178.3	39.21	mg/L	0.154	78.42	mg/L	0.308	0.39%
Mn 257.610†	92986.4	1.918	mg/L	0.0131	3.837	mg/L	0.0262	0.68%
Mo 202.031†	102.5	0.00623	mg/L	0.000438	0.01246	mg/L	0.000876	7.03%
Na 589.592†	109991.4	21.89	mg/L	0.230	43.78	mg/L	0.460	1.05%
Na 330.237†	482.1	22.06	mg/L	0.274	44.12	mg/L	0.548	1.24%
Ni 231.604†	2058.4	0.5900	mg/L	0.00156	1.180	mg/L	0.0031	0.26%
Pb 220.353†	15494.5	2.198	mg/L	0.0243	4.397	mg/L	0.0487	1.11%
Sb 206.836†	167.7	0.06437	mg/L	0.003351	0.1287	mg/L	0.00670	5.21%
Se 196.026†	2152.6	1.836	mg/L	0.0119	3.673	mg/L	0.0238	0.65%
Si 288.158†	21933.2	14.16	mg/L	0.024	28.31	mg/L	0.048	0.17%
Sn 189.927†	718.9	0.2006	mg/L	0.00265	0.4012	mg/L	0.00529	1.32%
Sr 421.552†	578815.0	1.170	mg/L	0.0070	2.339	mg/L	0.0139	0.59%
Ti 334.903†	128666.9	6.774	mg/L	0.0190	13.55	mg/L	0.038	0.28%
Tl 190.801†	3306.5	1.772	mg/L	0.0187	3.545	mg/L	0.0373	1.05%
V 292.402†	124280.7	0.7747	mg/L	0.00886	1.549	mg/L	0.0177	1.14%
Zn 206.200†	3272.3	0.9370	mg/L	0.00152	1.874	mg/L	0.0030	0.16%

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Sequence No.: 9
Sample ID: BIK0408-MSD2

Dilution: 2X
Wash Time: 37

Autosampler Location: 312
Date Collected: 12/3/2020 3:39:44 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0408-MSD2

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0408-MSD2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2263794.0	104.4	%	0.50				0.48%
ScR 361.383	237268.2	102.0	%	0.39				0.38%
Ag 328.068†	80951.4	0.4705	mg/L	0.00260	0.9410	mg/L	0.00520	0.55%
Al 308.215†	129560.8	105.7	mg/L	0.32	211.3	mg/L	0.64	0.30%
As 188.979†	1729.7	1.850	mg/L	0.0095	3.701	mg/L	0.0190	0.51%
B 249.677†	223.8	0.01997	mg/L	0.001949	0.03994	mg/L	0.003897	9.76%
Ba 233.527†	15871.4	2.190	mg/L	0.0064	4.380	mg/L	0.0127	0.29%
Be 313.042†	330911.8	0.4682	mg/L	0.00199	0.9364	mg/L	0.00398	0.42%
Ca 317.933†	564196.7	50.62	mg/L	0.524	101.2	mg/L	1.05	1.03%
Cd 228.802†	13907.5	0.4583	mg/L	0.00219	0.9166	mg/L	0.00438	0.48%
Co 228.616†	16943.4	0.4787	mg/L	0.00207	0.9573	mg/L	0.00413	0.43%
Cr 267.716†	5056.6	0.6026	mg/L	0.00242	1.205	mg/L	0.0048	0.40%
Cu 324.752†	155112.4	0.7397	mg/L	0.00284	1.479	mg/L	0.0057	0.38%
Fe 273.955†	258902.2	167.3	mg/L	0.90	334.6	mg/L	1.80	0.54%
K 766.490†	22248.2	14.74	mg/L	0.098	29.48	mg/L	0.196	0.67%
Mg 279.077†	43590.5	30.42	mg/L	0.120	60.83	mg/L	0.241	0.40%
Mn 257.610†	93889.2	1.937	mg/L	0.0034	3.875	mg/L	0.0068	0.18%
Mo 202.031†	97.8	0.00605	mg/L	0.000167	0.01210	mg/L	0.000333	2.75%
Na 589.592†	106098.8	21.12	mg/L	0.109	42.23	mg/L	0.219	0.52%
Na 330.237†	466.3	21.24	mg/L	0.246	42.48	mg/L	0.492	1.16%
Ni 231.604†	1975.8	0.5664	mg/L	0.00344	1.133	mg/L	0.0069	0.61%
Pb 220.353†	14058.7	1.990	mg/L	0.0096	3.979	mg/L	0.0192	0.48%
Sb 206.836†	155.8	0.05852	mg/L	0.000339	0.1170	mg/L	0.00068	0.58%
Se 196.026†	2120.4	1.809	mg/L	0.0164	3.618	mg/L	0.0328	0.91%
Si 288.158†	23319.7	15.05	mg/L	0.029	30.10	mg/L	0.059	0.19%
Sn 189.927†	426.9	0.1233	mg/L	0.00125	0.2466	mg/L	0.00250	1.02%
Sr 421.552†	506755.8	1.024	mg/L	0.0050	2.048	mg/L	0.0099	0.49%
Ti 334.903†	111188.4	5.854	mg/L	0.0247	11.71	mg/L	0.049	0.42%
Tl 190.801†	3278.1	1.757	mg/L	0.0102	3.514	mg/L	0.0204	0.58%
V 292.402†	118474.6	0.7386	mg/L	0.00419	1.477	mg/L	0.0084	0.57%
Zn 206.200†	2771.4	0.7936	mg/L	0.00008	1.587	mg/L	0.0002	0.01%

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Sequence No.: 10 **Autosampler Location: 313**
Sample ID: BIK0446-BS2 **Date Collected: 12/3/2020 3:43:49 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0446-BS2

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0446-BS2

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2286963.8	105.4	%	0.34				0.32%
ScR 361.383	242215.4	104.1	%	0.35				0.34%
Ag 328.068†	87244.6	0.5072	mg/L	0.00203	0.5072	mg/L	0.00203	0.40%
Al 308.215†	2441.4	1.977	mg/L	0.0133	1.977	mg/L	0.0133	0.67%
As 188.979†	2770.0	1.910	mg/L	0.0089	1.910	mg/L	0.0089	0.47%
B 249.677†	20.6	0.00297	mg/L	0.001559	0.00297	mg/L	0.001559	52.46%
Ba 233.527†	13335.2	1.860	mg/L	0.0093	1.860	mg/L	0.0093	0.50%
Be 313.042†	337457.1	0.4780	mg/L	0.00280	0.4780	mg/L	0.00280	0.59%
Ca 317.933†	105292.4	9.414	mg/L	0.0011	9.414	mg/L	0.0011	0.01%
Cd 228.802†	14087.3	0.4610	mg/L	0.00164	0.4610	mg/L	0.00164	0.36%
Co 228.616†	15616.7	0.4537	mg/L	0.00176	0.4537	mg/L	0.00176	0.39%
Cr 267.716†	3906.1	0.4617	mg/L	0.00261	0.4617	mg/L	0.00261	0.56%
Cu 324.752†	96684.7	0.4574	mg/L	0.00221	0.4574	mg/L	0.00221	0.48%
Fe 273.955†	3019.3	1.949	mg/L	0.0089	1.949	mg/L	0.0089	0.46%
K 766.490†	14645.2	9.702	mg/L	0.0175	9.702	mg/L	0.0175	0.18%
Mg 279.077†	14357.0	10.04	mg/L	0.048	10.04	mg/L	0.048	0.47%
Mn 257.610†	22759.9	0.4701	mg/L	0.00327	0.4701	mg/L	0.00327	0.70%
Mo 202.031†	6591.1	0.4847	mg/L	0.00040	0.4847	mg/L	0.00040	0.08%
Na 589.592†	49892.3	9.929	mg/L	0.1240	9.929	mg/L	0.1240	1.25%
Na 330.237†	246.2	10.60	mg/L	0.366	10.60	mg/L	0.366	3.45%
Ni 231.604†	1627.3	0.4685	mg/L	0.00323	0.4685	mg/L	0.00323	0.69%
Pb 220.353†	13639.8	1.907	mg/L	0.0103	1.907	mg/L	0.0103	0.54%
Sb 206.836†	4998.7	2.046	mg/L	0.0059	2.046	mg/L	0.0059	0.29%
Se 196.026†	2247.4	1.922	mg/L	0.0096	1.922	mg/L	0.0096	0.50%
Si 288.158†	54.6	0.04581	mg/L	0.006933	0.04581	mg/L	0.006933	15.14%
Sn 189.927†	-28.6	-0.00488	mg/L	0.001030	-0.00488	mg/L	0.001030	21.09%
Sr 421.552†	242663.3	0.4904	mg/L	0.00188	0.4904	mg/L	0.00188	0.38%
Ti 334.903†	51.1	0.00179	mg/L	0.000574	0.00179	mg/L	0.000574	32.10%
Tl 190.801†	3610.3	1.938	mg/L	0.0032	1.938	mg/L	0.0032	0.17%
V 292.402†	73674.7	0.4599	mg/L	0.00230	0.4599	mg/L	0.00230	0.50%
Zn 206.200†	1602.8	0.4590	mg/L	0.00298	0.4590	mg/L	0.00298	0.65%

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Sequence No.: 11 **Autosampler Location: 7**
Sample ID: SEQ-CCV2 **Date Collected: 12/3/2020 3:48:05 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV2

Analyte	Back Pressure	Flow
All	234.0 kPa	0.65 L/min

Mean Data: SEQ-CCV2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2243186.3	103.4	%	0.26				0.25%
ScR 361.383	241096.9	103.6	%	1.03				1.00%
Ag 328.068†	172265.8	1.001	mg/L	0.0072	1.001	mg/L	0.0072	0.72%
Al 308.215†	2443.7	1.963	mg/L	0.0164	1.963	mg/L	0.0164	0.84%
As 188.979†	2657.0	1.938	mg/L	0.0019	1.938	mg/L	0.0019	0.10%
B 249.677†	4923.5	0.9865	mg/L	0.01465	0.9865	mg/L	0.01465	1.48%
Ba 233.527†	6662.1	0.9282	mg/L	0.01077	0.9282	mg/L	0.01077	1.16%
Be 313.042†	682641.1	0.9669	mg/L	0.00378	0.9669	mg/L	0.00378	0.39%
Ca 317.933†	21169.4	1.826	mg/L	0.0086	1.826	mg/L	0.0086	0.47%
Cd 228.802†	28157.5	0.9304	mg/L	0.00528	0.9304	mg/L	0.00528	0.57%
Co 228.616†	31765.0	0.9215	mg/L	0.00571	0.9215	mg/L	0.00571	0.62%
Cr 267.716†	7868.2	0.9305	mg/L	0.01117	0.9305	mg/L	0.01117	1.20%
Cu 324.752†	195215.6	0.9234	mg/L	0.00484	0.9234	mg/L	0.00484	0.52%
Fe 273.955†	3022.8	1.949	mg/L	0.0207	1.949	mg/L	0.0207	1.06%
K 766.490†	29230.8	19.36	mg/L	0.191	19.36	mg/L	0.191	0.98%
Mg 279.077†	2822.2	1.988	mg/L	0.0215	1.988	mg/L	0.0215	1.08%
Mn 257.610†	43799.8	0.9047	mg/L	0.00586	0.9047	mg/L	0.00586	0.65%
Mo 202.031†	12849.1	0.9453	mg/L	0.00626	0.9453	mg/L	0.00626	0.66%
Na 589.592†	249213.4	49.60	mg/L	0.527	49.60	mg/L	0.527	1.06%
Na 330.237†	1151.7	50.21	mg/L	0.459	50.21	mg/L	0.459	0.92%
Ni 231.604†	3325.1	0.9551	mg/L	0.01040	0.9551	mg/L	0.01040	1.09%
Pb 220.353†	13668.1	1.911	mg/L	0.0113	1.911	mg/L	0.0113	0.59%
Sb 206.836†	5007.8	2.053	mg/L	0.0045	2.053	mg/L	0.0045	0.22%
Se 196.026†	2297.2	1.965	mg/L	0.0117	1.965	mg/L	0.0117	0.59%
Si 288.158†	3141.3	2.027	mg/L	0.0126	2.027	mg/L	0.0126	0.62%
Sn 189.927†	3733.9	0.9768	mg/L	0.00211	0.9768	mg/L	0.00211	0.22%
Sr 421.552†	483921.6	0.9779	mg/L	0.00933	0.9779	mg/L	0.00933	0.95%
Ti 334.903†	18269.2	0.9612	mg/L	0.00687	0.9612	mg/L	0.00687	0.71%
Tl 190.801†	3618.5	1.939	mg/L	0.0075	1.939	mg/L	0.0075	0.39%
V 292.402†	149722.4	0.9342	mg/L	0.00608	0.9342	mg/L	0.00608	0.65%
Zn 206.200†	3338.8	0.9560	mg/L	0.01344	0.9560	mg/L	0.01344	1.41%

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Sequence No.: 12 **Autosampler Location: 1**
Sample ID: SEQ-CCB2 **Date Collected: 12/3/2020 3:53:46 PM**
Data Type: Original
Dilution: 1X
Wash Time: 120 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB2

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-CCB2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2253346.1	103.9	%	0.31				0.30%
ScR 361.383	240552.8	103.4	%	0.32				0.31%
Ag 328.068†	50.1	0.00029	mg/L	0.000255	0.00029	mg/L	0.000255	87.74%
Al 308.215†	18.3	0.01489	mg/L	0.008263	0.01489	mg/L	0.008263	55.49%
As 188.979†	4.3	0.00301	mg/L	0.001294	0.00301	mg/L	0.001294	42.92%
B 249.677†	18.0	0.00362	mg/L	0.001086	0.00362	mg/L	0.001086	29.95%
Ba 233.527†	8.0	0.00112	mg/L	0.000076	0.00112	mg/L	0.000076	6.77%
Be 313.042†	-21.8	-0.00003	mg/L	0.000023	-0.00003	mg/L	0.000023	76.09%
Ca 317.933†	-10.4	-0.00094	mg/L	0.001048	-0.00094	mg/L	0.001048	111.06%
Cd 228.802†	-0.9	-0.00004	mg/L	0.000056	-0.00004	mg/L	0.000056	134.30%
Co 228.616†	-4.5	-0.00013	mg/L	0.000044	-0.00013	mg/L	0.000044	33.78%
Cr 267.716†	-4.4	-0.00052	mg/L	0.000629	-0.00052	mg/L	0.000629	119.87%
Cu 324.752†	-58.2	-0.00028	mg/L	0.000127	-0.00028	mg/L	0.000127	45.66%
Fe 273.955†	3.0	0.00193	mg/L	0.002847	0.00193	mg/L	0.002847	147.34%
K 766.490†	-22.5	-0.01491	mg/L	0.032094	-0.01491	mg/L	0.032094	215.20%
Mg 279.077†	-2.3	-0.00159	mg/L	0.015086	-0.00159	mg/L	0.015086	949.16%
Mn 257.610†	-8.9	-0.00018	mg/L	0.000144	-0.00018	mg/L	0.000144	78.39%
Mo 202.031†	49.0	0.00361	mg/L	0.000975	0.00361	mg/L	0.000975	27.02%
Na 589.592†	-151.0	-0.03006	mg/L	0.008955	-0.03006	mg/L	0.008955	29.79%
Na 330.237†	14.8	0.6469	mg/L	0.23479	0.6469	mg/L	0.23479	36.30%
Ni 231.604†	2.5	0.00071	mg/L	0.001748	0.00071	mg/L	0.001748	246.08%
Pb 220.353†	3.0	0.00043	mg/L	0.001545	0.00043	mg/L	0.001545	360.50%
Sb 206.836†	-8.7	-0.00356	mg/L	0.000820	-0.00356	mg/L	0.000820	23.06%
Se 196.026†	8.1	0.00697	mg/L	0.002654	0.00697	mg/L	0.002654	38.09%
Si 288.158†	13.9	0.00892	mg/L	0.002252	0.00892	mg/L	0.002252	25.25%
Sn 189.927†	2.5	0.00066	mg/L	0.001002	0.00066	mg/L	0.001002	152.67%
Sr 421.552†	-15.6	-0.00003	mg/L	0.000055	-0.00003	mg/L	0.000055	174.67%
Ti 334.903†	13.6	0.00071	mg/L	0.001401	0.00071	mg/L	0.001401	196.68%
Tl 190.801†	5.5	0.00297	mg/L	0.001570	0.00297	mg/L	0.001570	52.78%
V 292.402†	-64.1	-0.00040	mg/L	0.000095	-0.00040	mg/L	0.000095	23.84%
Zn 206.200†	-1.9	-0.00054	mg/L	0.001040	-0.00054	mg/L	0.001040	190.79%

User canceled analysis.

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Analysis Begun

Start Time: 12/3/2020 3:58:12 PM
Plasma On Time: 12/3/2020 8:08:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 13
Autosampler Location: 314
Sample ID: BIK0645-BLK1
Date Collected: 12/3/2020 3:58:13 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: BIK0645-BLK1

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: BIK0645-BLK1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2249542.8	103.7	%	0.75				0.72%
ScR 361.383	238381.7	102.5	%	0.23				0.23%
Ag 328.068†	23.0	0.00013	mg/L	0.000329	0.00013	mg/L	0.000329	246.12%
Al 308.215†	6.2	0.00506	mg/L	0.007903	0.00506	mg/L	0.007903	156.22%
As 188.979†	-0.4	-0.00029	mg/L	0.001835	-0.00029	mg/L	0.001835	630.09%
B 249.677†	15.7	0.00315	mg/L	0.001758	0.00315	mg/L	0.001758	55.72%
Ba 233.527†	1.9	0.00026	mg/L	0.000116	0.00026	mg/L	0.000116	44.12%
Be 313.042†	-45.8	-0.00006	mg/L	0.000000	-0.00006	mg/L	0.000000	0.59%
Ca 317.933†	28.9	0.00259	mg/L	0.001868	0.00259	mg/L	0.001868	72.05%
Cd 228.802†	-1.0	-0.00003	mg/L	0.000106	-0.00003	mg/L	0.000106	328.43%
Co 228.616†	-6.6	-0.00019	mg/L	0.000161	-0.00019	mg/L	0.000161	83.98%
Cr 267.716†	1.1	0.00013	mg/L	0.000796	0.00013	mg/L	0.000796	612.48%
Cu 324.752†	-59.3	-0.00028	mg/L	0.000056	-0.00028	mg/L	0.000056	20.13%
Fe 273.955†	13.1	0.00846	mg/L	0.001975	0.00846	mg/L	0.001975	23.35%
K 766.490†	1.5	0.00102	mg/L	0.038670	0.00102	mg/L	0.038670	>999.9%
Mg 279.077†	4.8	0.00334	mg/L	0.008220	0.00334	mg/L	0.008220	246.06%
Mn 257.610†	-5.9	-0.00012	mg/L	0.000166	-0.00012	mg/L	0.000166	134.75%
Mo 202.031†	5.3	0.00039	mg/L	0.000093	0.00039	mg/L	0.000093	23.73%
Na 589.592†	-186.9	-0.03719	mg/L	0.007986	-0.03719	mg/L	0.007986	21.47%
Na 330.237†	10.6	0.4620	mg/L	0.41435	0.4620	mg/L	0.41435	89.69%
Ni 231.604†	1.7	0.00047	mg/L	0.002363	0.00047	mg/L	0.002363	498.97%
Pb 220.353†	-3.8	-0.00052	mg/L	0.000569	-0.00052	mg/L	0.000569	108.40%
Sb 206.836†	-11.6	-0.00477	mg/L	0.001675	-0.00477	mg/L	0.001675	35.09%
Se 196.026†	6.1	0.00523	mg/L	0.002291	0.00523	mg/L	0.002291	43.83%
Si 288.158†	20.7	0.01332	mg/L	0.004501	0.01332	mg/L	0.004501	33.79%
Sn 189.927†	2.3	0.00059	mg/L	0.000394	0.00059	mg/L	0.000394	66.84%
Sr 421.552†	-13.4	-0.00003	mg/L	0.000080	-0.00003	mg/L	0.000080	293.32%
Ti 334.903†	1.7	0.00009	mg/L	0.000383	0.00009	mg/L	0.000383	424.92%
Tl 190.801†	0.6	0.00033	mg/L	0.000816	0.00033	mg/L	0.000816	246.05%
V 292.402†	-92.0	-0.00057	mg/L	0.000228	-0.00057	mg/L	0.000228	39.97%
Zn 206.200†	3.6	0.00102	mg/L	0.000727	0.00102	mg/L	0.000727	71.50%

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Sequence No.: 14 **Autosampler Location: 315**
Sample ID: 20K0286-04 **Date Collected: 12/3/2020 4:02:29 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0286-04

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: 20K0286-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2174997.2	100.3	%	0.87				0.87%
ScR 361.383	236740.8	101.8	%	1.42				1.40%
Ag 328.068†	54.1	0.00022	mg/L	0.000057	0.00110	mg/L	0.000285	25.99%
Al 308.215†	-14.4	0.02877	mg/L	0.015509	0.1439	mg/L	0.07754	53.90%
As 188.979†	-1.5	-0.00101	mg/L	0.005355	-0.00505	mg/L	0.026777	530.67%
B 249.677†	138.4	0.01399	mg/L	0.001265	0.06995	mg/L	0.006326	9.04%
Ba 233.527†	2159.0	0.2785	mg/L	0.00481	1.392	mg/L	0.0241	1.73%
Be 313.042†	25.4	0.00005	mg/L	0.000031	0.00024	mg/L	0.000154	64.60%
Ca 317.933†	7281.0	0.6536	mg/L	0.00854	3.268	mg/L	0.0427	1.31%
Cd 228.802†	33.6	0.00114	mg/L	0.000179	0.00572	mg/L	0.000893	15.62%
Co 228.616†	305.4	0.00594	mg/L	0.000099	0.02972	mg/L	0.000496	1.67%
Cr 267.716†	-8.1	0.00449	mg/L	0.001251	0.02245	mg/L	0.006256	27.87%
Cu 324.752†	-1471.9	0.00009	mg/L	0.000062	0.00046	mg/L	0.000308	67.68%
Fe 273.955†	251426.8	162.5	mg/L	3.54	812.3	mg/L	17.69	2.18%
K 766.490†	242.8	0.1608	mg/L	0.00699	0.8042	mg/L	0.03493	4.34%
Mg 279.077†	214.3	0.09365	mg/L	0.002613	0.4682	mg/L	0.01306	2.79%
Mn 257.610†	47689.2	0.9838	mg/L	0.01999	4.919	mg/L	0.1000	2.03%
Mo 202.031†	4.4	0.00031	mg/L	0.000337	0.00156	mg/L	0.001685	108.08%
Na 589.592†	1421966.3	283.0	mg/L	4.51	1415	mg/L	22.56	1.59%
Na 330.237†	6551.9	286.4	mg/L	4.02	1432	mg/L	20.08	1.40%
Ni 231.604†	85.4	0.02451	mg/L	0.001034	0.1225	mg/L	0.00517	4.22%
Pb 220.353†	36.1	-0.00143	mg/L	0.001029	-0.00717	mg/L	0.005144	71.70%
Sb 206.836†	54.9	0.01089	mg/L	0.001670	0.05443	mg/L	0.008348	15.34%
Se 196.026†	-8.3	-0.00794	mg/L	0.005653	-0.03972	mg/L	0.028265	71.16%
Si 288.158†	491.1	0.3596	mg/L	0.00418	1.798	mg/L	0.0209	1.16%
Sn 189.927†	-9.4	-0.00232	mg/L	0.000530	-0.01159	mg/L	0.002651	22.87%
Sr 421.552†	2527.3	0.00511	mg/L	0.000207	0.02554	mg/L	0.001036	4.06%
Ti 334.903†	2.9	0.00012	mg/L	0.000544	0.00062	mg/L	0.002722	438.62%
Tl 190.801†	-23.9	-0.01286	mg/L	0.001747	-0.06428	mg/L	0.008735	13.59%
V 292.402†	-1050.8	-0.00398	mg/L	0.000183	-0.01988	mg/L	0.000916	4.61%
Zn 206.200†	1795.5	0.5141	mg/L	0.00860	2.570	mg/L	0.0430	1.67%

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Sequence No.: 15 **Autosampler Location: 316**
Sample ID: 20K0286-05 **Date Collected: 12/3/2020 4:07:01 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0286-05

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: 20K0286-05

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2168139.9	99.97	%	0.360				0.36%
ScR 361.383	237820.6	102.2	%	1.38				1.35%
Ag 328.068†	62.7	-0.00004	mg/L	0.000086	-0.00022	mg/L	0.000431	195.17%
Al 308.215†	-20.1	0.02289	mg/L	0.002884	0.1145	mg/L	0.01442	12.60%
As 188.979†	-5.5	-0.00382	mg/L	0.002193	-0.01911	mg/L	0.010967	57.38%
B 249.677†	127.9	0.01251	mg/L	0.003764	0.06256	mg/L	0.018819	30.08%
Ba 233.527†	247.5	0.01245	mg/L	0.000153	0.06226	mg/L	0.000765	1.23%
Be 313.042†	-31.1	-0.00003	mg/L	0.000041	-0.00016	mg/L	0.000205	129.66%
Ca 317.933†	4773.7	0.4285	mg/L	0.00535	2.143	mg/L	0.0267	1.25%
Cd 228.802†	30.7	0.00105	mg/L	0.000279	0.00526	mg/L	0.001397	26.58%
Co 228.616†	192.1	0.00278	mg/L	0.000024	0.01392	mg/L	0.000122	0.88%
Cr 267.716†	-4.3	0.00375	mg/L	0.000351	0.01873	mg/L	0.001755	9.37%
Cu 324.752†	-1371.1	0.00035	mg/L	0.000092	0.00176	mg/L	0.000459	26.02%
Fe 273.955†	243774.5	157.5	mg/L	1.53	787.6	mg/L	7.66	0.97%
K 766.490†	363.9	0.2411	mg/L	0.03726	1.205	mg/L	0.1863	15.46%
Mg 279.077†	262.7	0.1391	mg/L	0.00295	0.6954	mg/L	0.01477	2.12%
Mn 257.610†	207018.0	4.274	mg/L	0.0458	21.37	mg/L	0.229	1.07%
Mo 202.031†	-8.0	-0.00060	mg/L	0.000313	-0.00300	mg/L	0.001567	52.19%
Na 589.592†	1466577.9	291.9	mg/L	7.16	1459	mg/L	35.78	2.45%
Na 330.237†	6554.4	286.7	mg/L	2.58	1433	mg/L	12.92	0.90%
Ni 231.604†	56.7	0.01627	mg/L	0.000766	0.08134	mg/L	0.003831	4.71%
Pb 220.353†	36.6	-0.00117	mg/L	0.000888	-0.00585	mg/L	0.004442	76.00%
Sb 206.836†	51.5	0.00984	mg/L	0.001369	0.04918	mg/L	0.006844	13.92%
Se 196.026†	-4.1	-0.00703	mg/L	0.001553	-0.03515	mg/L	0.007767	22.10%
Si 288.158†	12.5	0.06761	mg/L	0.005592	0.3381	mg/L	0.02796	8.27%
Sn 189.927†	-3.9	-0.00092	mg/L	0.000545	-0.00462	mg/L	0.002723	58.90%
Sr 421.552†	4009.8	0.00810	mg/L	0.000141	0.04052	mg/L	0.000707	1.75%
Ti 334.903†	-9.1	-0.00050	mg/L	0.000310	-0.00248	mg/L	0.001548	62.28%
Tl 190.801†	-32.3	-0.01739	mg/L	0.003062	-0.08695	mg/L	0.015310	17.61%
V 292.402†	-1123.2	-0.00450	mg/L	0.000128	-0.02251	mg/L	0.000639	2.84%
Zn 206.200†	9.8	0.00281	mg/L	0.000799	0.01404	mg/L	0.003994	28.43%

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Sequence No.: 16
Sample ID: BIK0594-DUP1

Dilution: 5X
Wash Time: 37

Autosampler Location: 317
Date Collected: 12/3/2020 4:11:33 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0594-DUP1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0594-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2170529.9	100.1	%	0.43				0.43%
ScR 361.383	239086.2	102.8	%	0.48				0.46%
Ag 328.068†	93.7	0.00054	mg/L	0.000100	0.00271	mg/L	0.000502	18.55%
Al 308.215†	23.7	0.01925	mg/L	0.003616	0.09623	mg/L	0.018080	18.79%
As 188.979†	-3.9	-0.00277	mg/L	0.001748	-0.01387	mg/L	0.008741	63.02%
B 249.677†	362.0	0.07245	mg/L	0.000046	0.3623	mg/L	0.00023	0.06%
Ba 233.527†	11.6	0.00157	mg/L	0.000334	0.00786	mg/L	0.001668	21.23%
Be 313.042†	-36.6	-0.00005	mg/L	0.000009	-0.00025	mg/L	0.000044	17.15%
Ca 317.933†	55219.2	4.957	mg/L	0.0355	24.79	mg/L	0.178	0.72%
Cd 228.802†	1.1	0.00005	mg/L	0.000157	0.00026	mg/L	0.000784	307.00%
Co 228.616†	-3.6	-0.00010	mg/L	0.000137	-0.00052	mg/L	0.000683	130.82%
Cr 267.716†	10.8	-0.00099	mg/L	0.001156	-0.00494	mg/L	0.005781	117.03%
Cu 324.752†	2913.3	0.01314	mg/L	0.000095	0.06571	mg/L	0.000477	0.73%
Fe 273.955†	15.6	0.01006	mg/L	0.005136	0.05032	mg/L	0.025678	51.03%
K 766.490†	668.7	0.4430	mg/L	0.01092	2.215	mg/L	0.0546	2.47%
Mg 279.077†	112963.3	78.95	mg/L	0.604	394.7	mg/L	3.02	0.77%
Mn 257.610†	1570.0	0.03215	mg/L	0.000257	0.1607	mg/L	0.00128	0.80%
Mo 202.031†	73.2	0.00435	mg/L	0.000468	0.02175	mg/L	0.002342	10.77%
Na 589.592†	1337580.1	266.2	mg/L	1.41	1331	mg/L	7.06	0.53%
Na 330.237†	5991.2	262.0	mg/L	1.71	1310	mg/L	8.54	0.65%
Ni 231.604†	5.1	0.00147	mg/L	0.001613	0.00734	mg/L	0.008066	109.87%
Pb 220.353†	-13.2	-0.00186	mg/L	0.000485	-0.00928	mg/L	0.002426	26.13%
Sb 206.836†	15.7	0.00641	mg/L	0.002346	0.03203	mg/L	0.011730	36.62%
Se 196.026†	14.4	0.01186	mg/L	0.005183	0.05930	mg/L	0.025917	43.70%
Si 288.158†	836.4	0.5494	mg/L	0.00355	2.747	mg/L	0.0177	0.65%
Sn 189.927†	-16.2	-0.00332	mg/L	0.000741	-0.01658	mg/L	0.003707	22.36%
Sr 421.552†	12414.7	0.02509	mg/L	0.000234	0.1254	mg/L	0.00117	0.93%
Ti 334.903†	7.2	0.00016	mg/L	0.000156	0.00079	mg/L	0.000779	98.54%
Tl 190.801†	-5.3	-0.00284	mg/L	0.002370	-0.01419	mg/L	0.011852	83.50%
V 292.402†	-96.1	-0.00059	mg/L	0.000145	-0.00293	mg/L	0.000726	24.77%
Zn 206.200†	9.7	0.00278	mg/L	0.001534	0.01392	mg/L	0.007671	55.11%

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Sequence No.: 17
Sample ID: 20K0287-01

Dilution: 5X
Wash Time: 37

Autosampler Location: 318
Date Collected: 12/3/2020 4:16:05 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0287-01

Analyte	**Back Pressure**	**Flow**
All	232.0 kPa	0.65 L/min

Mean Data: 20K0287-01

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2184303.4	100.7	%	0.17				0.17%
ScR 361.383	233035.3	100.2	%	0.26				0.25%
Ag 328.068†	71.7	0.00041	mg/L	0.000163	0.00207	mg/L	0.000814	39.39%
Al 308.215†	21.1	0.01715	mg/L	0.004168	0.08576	mg/L	0.020838	24.30%
As 188.979†	-4.6	-0.00326	mg/L	0.001335	-0.01630	mg/L	0.006674	40.93%
B 249.677†	377.1	0.07548	mg/L	0.001182	0.3774	mg/L	0.00591	1.57%
Ba 233.527†	4.9	0.00063	mg/L	0.000339	0.00317	mg/L	0.001696	53.49%
Be 313.042†	-6.6	-0.00001	mg/L	0.000039	-0.00004	mg/L	0.000195	486.97%
Ca 317.933†	57945.4	5.202	mg/L	0.0443	26.01	mg/L	0.221	0.85%
Cd 228.802†	7.8	0.00027	mg/L	0.000080	0.00136	mg/L	0.000399	29.28%
Co 228.616†	1.6	0.00005	mg/L	0.000155	0.00023	mg/L	0.000775	330.16%
Cr 267.716†	-1.9	-0.00260	mg/L	0.000896	-0.01300	mg/L	0.004479	34.45%
Cu 324.752†	2982.4	0.01344	mg/L	0.000165	0.06719	mg/L	0.000826	1.23%
Fe 273.955†	2.9	0.00189	mg/L	0.002063	0.00943	mg/L	0.010315	109.40%
K 766.490†	773.9	0.5127	mg/L	0.02042	2.563	mg/L	0.1021	3.98%
Mg 279.077†	118345.4	82.71	mg/L	0.183	413.5	mg/L	0.91	0.22%
Mn 257.610†	1629.5	0.03336	mg/L	0.000132	0.1668	mg/L	0.00066	0.40%
Mo 202.031†	75.4	0.00446	mg/L	0.000219	0.02230	mg/L	0.001096	4.91%
Na 589.592†	1381300.1	274.9	mg/L	2.99	1374	mg/L	14.96	1.09%
Na 330.237†	6260.6	273.8	mg/L	1.20	1369	mg/L	5.99	0.44%
Ni 231.604†	-4.4	-0.00124	mg/L	0.001135	-0.00622	mg/L	0.005676	91.27%
Pb 220.353†	-12.5	-0.00176	mg/L	0.000487	-0.00879	mg/L	0.002436	27.72%
Sb 206.836†	15.8	0.00647	mg/L	0.001126	0.03233	mg/L	0.005628	17.41%
Se 196.026†	6.6	0.00519	mg/L	0.005532	0.02597	mg/L	0.027660	106.51%
Si 288.158†	843.0	0.5542	mg/L	0.00214	2.771	mg/L	0.0107	0.39%
Sn 189.927†	-15.6	-0.00313	mg/L	0.000950	-0.01566	mg/L	0.004751	30.33%
Sr 421.552†	12949.1	0.02617	mg/L	0.000068	0.1308	mg/L	0.00034	0.26%
Ti 334.903†	6.7	0.00013	mg/L	0.001084	0.00063	mg/L	0.005419	859.75%
Tl 190.801†	-6.1	-0.00327	mg/L	0.002053	-0.01637	mg/L	0.010266	62.72%
V 292.402†	-118.0	-0.00073	mg/L	0.000020	-0.00364	mg/L	0.000101	2.77%
Zn 206.200†	19.3	0.00551	mg/L	0.000815	0.02756	mg/L	0.004077	14.79%

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Sequence No.: 18
Sample ID: BIK0594-MS1
Dilution: 5X
Wash Time: 37

Autosampler Location: 319
Date Collected: 12/3/2020 4:20:36 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: BIK0594-MS1

Analyte	Back Pressure	Flow
All	234.0 kPa	0.65 L/min

Mean Data: BIK0594-MS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2164403.3	99.80	%	0.571				0.57%
ScR 361.383	239741.8	103.0	%	0.40				0.39%
Ag 328.068†	34402.8	0.2000	mg/L	0.00160	0.9999	mg/L	0.00798	0.80%
Al 308.215†	981.1	0.7979	mg/L	0.00465	3.989	mg/L	0.0232	0.58%
As 188.979†	1129.3	0.7791	mg/L	0.00907	3.896	mg/L	0.0454	1.16%
B 249.677†	377.9	0.07501	mg/L	0.001261	0.3751	mg/L	0.00631	1.68%
Ba 233.527†	5241.2	0.7309	mg/L	0.00228	3.655	mg/L	0.0114	0.31%
Be 313.042†	131290.6	0.1860	mg/L	0.00089	0.9298	mg/L	0.00446	0.48%
Ca 317.933†	99604.4	8.929	mg/L	0.1168	44.64	mg/L	0.584	1.31%
Cd 228.802†	5776.8	0.1891	mg/L	0.00027	0.9453	mg/L	0.00136	0.14%
Co 228.616†	6216.7	0.1806	mg/L	0.00087	0.9029	mg/L	0.00437	0.48%
Cr 267.716†	1563.4	0.1824	mg/L	0.00196	0.9122	mg/L	0.00982	1.08%
Cu 324.752†	40402.2	0.1906	mg/L	0.00138	0.9528	mg/L	0.00692	0.73%
Fe 273.955†	1176.3	0.7593	mg/L	0.00486	3.797	mg/L	0.0243	0.64%
K 766.490†	6497.0	4.304	mg/L	0.0172	21.52	mg/L	0.086	0.40%
Mg 279.077†	123131.8	86.05	mg/L	0.438	430.3	mg/L	2.19	0.51%
Mn 257.610†	10396.5	0.2145	mg/L	0.00124	1.072	mg/L	0.0062	0.58%
Mo 202.031†	80.7	0.00475	mg/L	0.000472	0.02377	mg/L	0.002359	9.92%
Na 589.592†	1400813.3	278.8	mg/L	2.49	1394	mg/L	12.47	0.89%
Na 330.237†	6233.2	272.5	mg/L	1.43	1363	mg/L	7.15	0.52%
Ni 231.604†	636.1	0.1823	mg/L	0.00180	0.9116	mg/L	0.00898	0.98%
Pb 220.353†	5407.5	0.7560	mg/L	0.00387	3.780	mg/L	0.0194	0.51%
Sb 206.836†	23.0	0.00745	mg/L	0.001555	0.03724	mg/L	0.007776	20.88%
Se 196.026†	939.8	0.8034	mg/L	0.00490	4.017	mg/L	0.0245	0.61%
Si 288.158†	851.0	0.5639	mg/L	0.00240	2.820	mg/L	0.0120	0.43%
Sn 189.927†	-23.3	-0.00443	mg/L	0.000889	-0.02215	mg/L	0.004447	20.08%
Sr 421.552†	107895.6	0.2180	mg/L	0.00134	1.090	mg/L	0.0067	0.61%
Ti 334.903†	17.2	0.00048	mg/L	0.000683	0.00240	mg/L	0.003417	142.40%
Tl 190.801†	1358.0	0.7286	mg/L	0.00562	3.643	mg/L	0.0281	0.77%
V 292.402†	29030.5	0.1810	mg/L	0.00137	0.9052	mg/L	0.00685	0.76%
Zn 206.200†	647.8	0.1855	mg/L	0.00055	0.9275	mg/L	0.00276	0.30%

Sequence No.: 19
Sample ID: BIK0529-DUP1
Dilution: 2X
Wash Time: 37

Autosampler Location: 320
Date Collected: 12/3/2020 4:25:08 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: BIK0529-DUP1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0529-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2265180.2	104.4	%	0.20				0.19%
ScR 361.383	241528.7	103.8	%	1.17				1.12%
Ag 328.068†	43.0	0.00022	mg/L	0.000143	0.00045	mg/L	0.000285	63.99%
Al 308.215†	873.3	0.7124	mg/L	0.00739	1.425	mg/L	0.0148	1.04%
As 188.979†	-5.1	0.00106	mg/L	0.001716	0.00212	mg/L	0.003433	161.77%
B 249.677†	1493.2	0.2997	mg/L	0.00676	0.5994	mg/L	0.01351	2.25%
Ba 233.527†	236.9	0.03275	mg/L	0.000994	0.06551	mg/L	0.001988	3.03%
Be 313.042†	-21.0	-0.00003	mg/L	0.000033	-0.00007	mg/L	0.000065	95.11%
Ca 317.933†	36104.6	3.241	mg/L	0.0067	6.483	mg/L	0.0134	0.21%
Cd 228.802†	4.7	0.00018	mg/L	0.000041	0.00036	mg/L	0.000082	23.11%
Co 228.616†	58.9	0.00160	mg/L	0.000149	0.00320	mg/L	0.000297	9.30%
Cr 267.716†	23.1	0.00266	mg/L	0.000817	0.00532	mg/L	0.001634	30.69%
Cu 324.752†	7994.7	0.03789	mg/L	0.000224	0.07578	mg/L	0.000448	0.59%
Fe 273.955†	2997.3	1.937	mg/L	0.0295	3.873	mg/L	0.0590	1.52%
K 766.490†	971.8	0.6438	mg/L	0.03123	1.288	mg/L	0.0625	4.85%
Mg 279.077†	2533.5	1.771	mg/L	0.0270	3.542	mg/L	0.0540	1.52%
Mn 257.610†	14093.2	0.2910	mg/L	0.00263	0.5820	mg/L	0.00525	0.90%
Mo 202.031†	29.6	0.00211	mg/L	0.000247	0.00422	mg/L	0.000495	11.74%
Na 589.592†	24048.1	4.786	mg/L	0.0473	9.572	mg/L	0.0946	0.99%
Na 330.237†	116.9	5.079	mg/L	0.4349	10.16	mg/L	0.870	8.56%
Ni 231.604†	21.7	0.00622	mg/L	0.001712	0.01244	mg/L	0.003424	27.53%
Pb 220.353†	117.1	0.01645	mg/L	0.000442	0.03290	mg/L	0.000885	2.69%
Sb 206.836†	-8.1	-0.00343	mg/L	0.000702	-0.00686	mg/L	0.001405	20.49%
Se 196.026†	7.4	0.00582	mg/L	0.003224	0.01164	mg/L	0.006448	55.38%
Si 288.158†	860.8	0.5565	mg/L	0.00532	1.113	mg/L	0.0106	0.96%
Sn 189.927†	-3.0	-0.00019	mg/L	0.000384	-0.00037	mg/L	0.000767	207.32%
Sr 421.552†	26445.4	0.05344	mg/L	0.000475	0.1069	mg/L	0.00095	0.89%
Ti 334.903†	791.6	0.04155	mg/L	0.000498	0.08310	mg/L	0.000996	1.20%
Tl 190.801†	3.3	0.00177	mg/L	0.001884	0.00354	mg/L	0.003768	106.41%
V 292.402†	395.8	0.00249	mg/L	0.000186	0.00497	mg/L	0.000373	7.50%
Zn 206.200†	390.8	0.1119	mg/L	0.00213	0.2238	mg/L	0.00427	1.91%

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Sequence No.: 20
Sample ID: 20K0222-01
Dilution: 2X
Wash Time: 37

Autosampler Location: 321
Date Collected: 12/3/2020 4:29:24 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0222-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0222-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2265323.5	104.4	%	0.41				0.39%
ScR 361.383	238725.9	102.6	%	0.22				0.21%
Ag 328.068†	64.2	0.00035	mg/L	0.000187	0.00069	mg/L	0.000375	54.21%
Al 308.215†	902.0	0.7358	mg/L	0.00270	1.472	mg/L	0.0054	0.37%
As 188.979†	-1.9	0.00341	mg/L	0.002583	0.00682	mg/L	0.005166	75.78%
B 249.677†	1444.9	0.2900	mg/L	0.00197	0.5800	mg/L	0.00393	0.68%
Ba 233.527†	243.7	0.03371	mg/L	0.000114	0.06742	mg/L	0.000227	0.34%
Be 313.042†	-38.1	-0.00006	mg/L	0.000026	-0.00012	mg/L	0.000052	44.81%
Ca 317.933†	36594.4	3.285	mg/L	0.0109	6.570	mg/L	0.0218	0.33%
Cd 228.802†	8.7	0.00030	mg/L	0.000112	0.00060	mg/L	0.000224	37.05%
Co 228.616†	52.8	0.00142	mg/L	0.000038	0.00284	mg/L	0.000077	2.70%
Cr 267.716†	23.1	0.00266	mg/L	0.000398	0.00532	mg/L	0.000796	14.96%
Cu 324.752†	7277.9	0.03450	mg/L	0.000021	0.06899	mg/L	0.000041	0.06%
Fe 273.955†	2945.5	1.903	mg/L	0.0167	3.807	mg/L	0.0333	0.88%
K 766.490†	1304.1	0.8639	mg/L	0.00830	1.728	mg/L	0.0166	0.96%
Mg 279.077†	2436.7	1.703	mg/L	0.0035	3.406	mg/L	0.0070	0.21%
Mn 257.610†	14286.1	0.2950	mg/L	0.00101	0.5900	mg/L	0.00201	0.34%
Mo 202.031†	28.1	0.00200	mg/L	0.000212	0.00400	mg/L	0.000425	10.62%
Na 589.592†	23575.5	4.692	mg/L	0.0264	9.384	mg/L	0.0528	0.56%
Na 330.237†	113.0	4.908	mg/L	0.3684	9.817	mg/L	0.7369	7.51%
Ni 231.604†	25.4	0.00726	mg/L	0.001309	0.01453	mg/L	0.002618	18.02%
Pb 220.353†	117.4	0.01650	mg/L	0.000435	0.03301	mg/L	0.000870	2.64%
Sb 206.836†	-11.2	-0.00470	mg/L	0.001371	-0.00941	mg/L	0.002743	29.15%
Se 196.026†	6.8	0.00528	mg/L	0.001611	0.01057	mg/L	0.003222	30.50%
Si 288.158†	857.2	0.5542	mg/L	0.00674	1.108	mg/L	0.0135	1.22%
Sn 189.927†	-5.3	-0.00075	mg/L	0.000301	-0.00151	mg/L	0.000602	39.90%
Sr 421.552†	19784.9	0.03998	mg/L	0.000124	0.07997	mg/L	0.000249	0.31%
Ti 334.903†	811.5	0.04260	mg/L	0.001413	0.08520	mg/L	0.002827	3.32%
Tl 190.801†	1.7	0.00089	mg/L	0.001871	0.00179	mg/L	0.003741	209.43%
V 292.402†	376.7	0.00237	mg/L	0.000280	0.00473	mg/L	0.000560	11.84%
Zn 206.200†	384.8	0.1102	mg/L	0.00066	0.2203	mg/L	0.00131	0.59%

Sequence No.: 21
Sample ID: BIK0529-MS1

Dilution: 2X
Wash Time: 37

Autosampler Location: 322
Date Collected: 12/3/2020 4:33:40 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0529-MS1

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: BIK0529-MS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2262694.5	104.3	%	0.54				0.52%
ScR 361.383	241959.8	104.0	%	1.32				1.27%
Ag 328.068†	58948.9	0.3427	mg/L	0.00227	0.6853	mg/L	0.00453	0.66%
Al 308.215†	2922.4	2.379	mg/L	0.0306	4.757	mg/L	0.0612	1.29%
As 188.979†	2580.5	1.785	mg/L	0.0096	3.569	mg/L	0.0192	0.54%
B 249.677†	1519.9	0.3036	mg/L	0.00300	0.6073	mg/L	0.00600	0.99%
Ba 233.527†	12306.8	1.716	mg/L	0.0244	3.432	mg/L	0.0487	1.42%
Be 313.042†	318421.5	0.4510	mg/L	0.00160	0.9021	mg/L	0.00320	0.35%
Ca 317.933†	136534.3	12.23	mg/L	0.082	24.46	mg/L	0.164	0.67%
Cd 228.802†	13153.0	0.4305	mg/L	0.00390	0.8609	mg/L	0.00780	0.91%
Co 228.616†	14701.6	0.4269	mg/L	0.00207	0.8539	mg/L	0.00415	0.49%
Cr 267.716†	3439.5	0.4065	mg/L	0.00460	0.8130	mg/L	0.00920	1.13%
Cu 324.752†	95393.1	0.4515	mg/L	0.00272	0.9031	mg/L	0.00545	0.60%
Fe 273.955†	5449.5	3.519	mg/L	0.0553	7.039	mg/L	0.1106	1.57%
K 766.490†	13981.7	9.262	mg/L	0.0698	18.52	mg/L	0.140	0.75%
Mg 279.077†	15728.3	10.99	mg/L	0.133	21.99	mg/L	0.267	1.21%
Mn 257.610†	33483.9	0.6916	mg/L	0.00304	1.383	mg/L	0.0061	0.44%
Mo 202.031†	44.9	0.00298	mg/L	0.000404	0.00596	mg/L	0.000808	13.55%
Na 589.592†	70441.8	14.02	mg/L	0.145	28.04	mg/L	0.289	1.03%
Na 330.237†	327.1	14.12	mg/L	0.237	28.24	mg/L	0.474	1.68%
Ni 231.604†	1533.1	0.4394	mg/L	0.00742	0.8788	mg/L	0.01485	1.69%
Pb 220.353†	12720.2	1.778	mg/L	0.0132	3.557	mg/L	0.0264	0.74%
Sb 206.836†	12.2	0.00074	mg/L	0.002246	0.00147	mg/L	0.004492	305.12%
Se 196.026†	2099.8	1.796	mg/L	0.0025	3.591	mg/L	0.0050	0.14%
Si 288.158†	808.9	0.5335	mg/L	0.00682	1.067	mg/L	0.0136	1.28%
Sn 189.927†	-25.3	-0.00429	mg/L	0.000560	-0.00858	mg/L	0.001121	13.06%
Sr 421.552†	245505.8	0.4961	mg/L	0.00300	0.9923	mg/L	0.00601	0.61%
Ti 334.903†	691.9	0.03583	mg/L	0.000798	0.07166	mg/L	0.001596	2.23%
Tl 190.801†	2390.3	1.281	mg/L	0.0028	2.563	mg/L	0.0056	0.22%
V 292.402†	67568.6	0.4213	mg/L	0.00259	0.8426	mg/L	0.00518	0.61%
Zn 206.200†	1824.8	0.5225	mg/L	0.00626	1.045	mg/L	0.0125	1.20%

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Sequence No.: 22 **Autosampler Location: 323**
Sample ID: BIK0645-BS1 **Date Collected: 12/3/2020 4:37:56 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0645-BS1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0645-BS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2187773.7	100.9	%	0.45				0.45%
ScR 361.383	233081.1	100.2	%	0.46				0.46%
Ag 328.068†	90591.3	0.5266	mg/L	0.00480	0.5266	mg/L	0.00480	0.91%
Al 308.215†	2504.1	2.037	mg/L	0.0126	2.037	mg/L	0.0126	0.62%
As 188.979†	2902.2	2.003	mg/L	0.0160	2.003	mg/L	0.0160	0.80%
B 249.677†	16.2	0.00159	mg/L	0.001852	0.00159	mg/L	0.001852	116.59%
Ba 233.527†	13985.0	1.950	mg/L	0.0108	1.950	mg/L	0.0108	0.55%
Be 313.042†	351658.8	0.4981	mg/L	0.00224	0.4981	mg/L	0.00224	0.45%
Ca 317.933†	111271.1	9.954	mg/L	0.0580	9.954	mg/L	0.0580	0.58%
Cd 228.802†	14659.0	0.4797	mg/L	0.00476	0.4797	mg/L	0.00476	0.99%
Co 228.616†	16350.1	0.4749	mg/L	0.00533	0.4749	mg/L	0.00533	1.12%
Cr 267.716†	4130.0	0.4882	mg/L	0.00289	0.4882	mg/L	0.00289	0.59%
Cu 324.752†	99832.6	0.4725	mg/L	0.00517	0.4725	mg/L	0.00517	1.09%
Fe 273.955†	3146.3	2.031	mg/L	0.0185	2.031	mg/L	0.0185	0.91%
K 766.490†	15434.9	10.22	mg/L	0.024	10.22	mg/L	0.024	0.23%
Mg 279.077†	15143.1	10.58	mg/L	0.064	10.58	mg/L	0.064	0.61%
Mn 257.610†	23682.8	0.4892	mg/L	0.00321	0.4892	mg/L	0.00321	0.66%
Mo 202.031†	22.1	0.00135	mg/L	0.000029	0.00135	mg/L	0.000029	2.12%
Na 589.592†	52701.5	10.49	mg/L	0.049	10.49	mg/L	0.049	0.46%
Na 330.237†	246.3	10.59	mg/L	0.172	10.59	mg/L	0.172	1.62%
Ni 231.604†	1712.3	0.4908	mg/L	0.00169	0.4908	mg/L	0.00169	0.34%
Pb 220.353†	14271.6	1.995	mg/L	0.0256	1.995	mg/L	0.0256	1.28%
Sb 206.836†	22.3	0.00402	mg/L	0.001539	0.00402	mg/L	0.001539	38.31%
Se 196.026†	2365.3	2.023	mg/L	0.0220	2.023	mg/L	0.0220	1.09%
Si 288.158†	-13.0	0.00378	mg/L	0.001007	0.00378	mg/L	0.001007	26.62%
Sn 189.927†	-24.9	-0.00461	mg/L	0.000525	-0.00461	mg/L	0.000525	11.38%
Sr 421.552†	256091.9	0.5175	mg/L	0.00133	0.5175	mg/L	0.00133	0.26%
Ti 334.903†	25.9	0.00084	mg/L	0.000164	0.00084	mg/L	0.000164	19.62%
Tl 190.801†	3780.9	2.029	mg/L	0.0238	2.029	mg/L	0.0238	1.17%
V 292.402†	76750.0	0.4786	mg/L	0.00507	0.4786	mg/L	0.00507	1.06%
Zn 206.200†	1706.4	0.4887	mg/L	0.00221	0.4887	mg/L	0.00221	0.45%

Sequence No.: 23
Sample ID: SEQ-CCV3
Autosampler Location: 7
Date Collected: 12/3/2020 4:42:12 PM
Data Type: Original
Dilution: 1X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV3

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-CCV3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2177811.0	100.4	%	0.71				0.71%
ScR 361.383	230841.3	99.22	%	0.711				0.72%
Ag 328.068†	177349.8	1.031	mg/L	0.0096	1.031	mg/L	0.0096	0.93%
Al 308.215†	2515.5	2.021	mg/L	0.0083	2.021	mg/L	0.0083	0.41%
As 188.979†	2719.5	1.984	mg/L	0.0098	1.984	mg/L	0.0098	0.50%
B 249.677†	5099.2	1.022	mg/L	0.0079	1.022	mg/L	0.0079	0.77%
Ba 233.527†	6869.7	0.9571	mg/L	0.00450	0.9571	mg/L	0.00450	0.47%
Be 313.042†	701783.8	0.9940	mg/L	0.00446	0.9940	mg/L	0.00446	0.45%
Ca 317.933†	21470.5	1.851	mg/L	0.0064	1.851	mg/L	0.0064	0.34%
Cd 228.802†	28936.4	0.9561	mg/L	0.00914	0.9561	mg/L	0.00914	0.96%
Co 228.616†	32568.9	0.9449	mg/L	0.01050	0.9449	mg/L	0.01050	1.11%
Cr 267.716†	8142.2	0.9629	mg/L	0.00464	0.9629	mg/L	0.00464	0.48%
Cu 324.752†	201389.5	0.9526	mg/L	0.00810	0.9526	mg/L	0.00810	0.85%
Fe 273.955†	3108.9	2.005	mg/L	0.0118	2.005	mg/L	0.0118	0.59%
K 766.490†	30287.7	20.06	mg/L	0.058	20.06	mg/L	0.058	0.29%
Mg 279.077†	2913.9	2.052	mg/L	0.0097	2.052	mg/L	0.0097	0.47%
Mn 257.610†	44963.6	0.9287	mg/L	0.00441	0.9287	mg/L	0.00441	0.48%
Mo 202.031†	13148.6	0.9673	mg/L	0.00612	0.9673	mg/L	0.00612	0.63%
Na 589.592†	255909.6	50.93	mg/L	0.216	50.93	mg/L	0.216	0.42%
Na 330.237†	1188.1	51.79	mg/L	0.182	51.79	mg/L	0.182	0.35%
Ni 231.604†	3398.5	0.9762	mg/L	0.00443	0.9762	mg/L	0.00443	0.45%
Pb 220.353†	13997.3	1.957	mg/L	0.0149	1.957	mg/L	0.0149	0.76%
Sb 206.836†	5128.4	2.102	mg/L	0.0136	2.102	mg/L	0.0136	0.65%
Se 196.026†	2346.5	2.007	mg/L	0.0165	2.007	mg/L	0.0165	0.82%
Si 288.158†	3207.6	2.070	mg/L	0.0020	2.070	mg/L	0.0020	0.10%
Sn 189.927†	3818.5	0.9989	mg/L	0.00513	0.9989	mg/L	0.00513	0.51%
Sr 421.552†	502538.4	1.016	mg/L	0.0036	1.016	mg/L	0.0036	0.35%
Ti 334.903†	18728.1	0.9853	mg/L	0.00449	0.9853	mg/L	0.00449	0.46%
Tl 190.801†	3709.8	1.988	mg/L	0.0068	1.988	mg/L	0.0068	0.34%
V 292.402†	153867.5	0.9601	mg/L	0.00851	0.9601	mg/L	0.00851	0.89%
Zn 206.200†	3453.9	0.9890	mg/L	0.00384	0.9890	mg/L	0.00384	0.39%

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Sequence No.: 24 **Autosampler Location: 1**
Sample ID: SEQ-CCB3 **Date Collected: 12/3/2020 4:47:53 PM**
Data Type: Original
Dilution: 1X
Wash Time: 120 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB3

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-CCB3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2209836.0	101.9	%	0.39				0.38%
ScR 361.383	233130.3	100.2	%	0.81				0.81%
Ag 328.068†	47.6	0.00028	mg/L	0.000125	0.00028	mg/L	0.000125	45.29%
Al 308.215†	11.0	0.00893	mg/L	0.013959	0.00893	mg/L	0.013959	156.29%
As 188.979†	0.1	0.00009	mg/L	0.001666	0.00009	mg/L	0.001666	>999.9%
B 249.677†	0.4	0.00009	mg/L	0.001034	0.00009	mg/L	0.001034	>999.9%
Ba 233.527†	1.1	0.00015	mg/L	0.000259	0.00015	mg/L	0.000259	169.53%
Be 313.042†	27.2	0.00004	mg/L	0.000036	0.00004	mg/L	0.000036	92.50%
Ca 317.933†	-3.2	-0.00029	mg/L	0.001775	-0.00029	mg/L	0.001775	607.32%
Cd 228.802†	0.3	0.00001	mg/L	0.000009	0.00001	mg/L	0.000009	129.26%
Co 228.616†	-0.8	-0.00002	mg/L	0.000109	-0.00002	mg/L	0.000109	469.39%
Cr 267.716†	-4.8	-0.00057	mg/L	0.000553	-0.00057	mg/L	0.000553	97.58%
Cu 324.752†	8.4	0.00004	mg/L	0.000067	0.00004	mg/L	0.000067	174.54%
Fe 273.955†	3.8	0.00246	mg/L	0.001813	0.00246	mg/L	0.001813	73.70%
K 766.490†	-18.3	-0.01213	mg/L	0.034976	-0.01213	mg/L	0.034976	288.22%
Mg 279.077†	4.8	0.00343	mg/L	0.007222	0.00343	mg/L	0.007222	210.62%
Mn 257.610†	-1.3	-0.00003	mg/L	0.000082	-0.00003	mg/L	0.000082	300.77%
Mo 202.031†	54.8	0.00403	mg/L	0.000380	0.00403	mg/L	0.000380	9.43%
Na 589.592†	-30.8	-0.00613	mg/L	0.010289	-0.00613	mg/L	0.010289	167.81%
Na 330.237†	6.2	0.2720	mg/L	0.55356	0.2720	mg/L	0.55356	203.53%
Ni 231.604†	-5.7	-0.00163	mg/L	0.002609	-0.00163	mg/L	0.002609	159.96%
Pb 220.353†	-8.7	-0.00122	mg/L	0.000461	-0.00122	mg/L	0.000461	37.91%
Sb 206.836†	-4.6	-0.00189	mg/L	0.001439	-0.00189	mg/L	0.001439	76.05%
Se 196.026†	3.3	0.00279	mg/L	0.003415	0.00279	mg/L	0.003415	122.21%
Si 288.158†	-7.4	-0.00476	mg/L	0.001199	-0.00476	mg/L	0.001199	25.21%
Sn 189.927†	1.8	0.00046	mg/L	0.001276	0.00046	mg/L	0.001276	278.17%
Sr 421.552†	12.3	0.00002	mg/L	0.000110	0.00002	mg/L	0.000110	441.96%
Ti 334.903†	10.7	0.00056	mg/L	0.000293	0.00056	mg/L	0.000293	52.08%
Tl 190.801†	0.2	0.00010	mg/L	0.001073	0.00010	mg/L	0.001073	>999.9%
V 292.402†	-7.8	-0.00005	mg/L	0.000152	-0.00005	mg/L	0.000152	325.78%
Zn 206.200†	1.6	0.00046	mg/L	0.000640	0.00046	mg/L	0.000640	138.16%

User canceled analysis.

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Analysis Begun

Start Time: 12/3/2020 4:52:50 PM
Logged In Analyst: Metals Instrument Controller
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 12/3/2020 8:08:06 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 25
Sample ID: BIK0738-BLK1
Autosampler Location: 324
Date Collected: 12/3/2020 4:52:52 PM
Data Type: Original

Dilution: 5X

Nebulizer Parameters: BIK0738-BLK1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0738-BLK1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2069987.0	95.44	%	0.625				0.66%
ScR 361.383	220464.0	94.76	%	0.625				0.66%
Ag 328.068†	105.5	0.00061	mg/L	0.000109	0.00307	mg/L	0.000546	17.79%
Al 308.215†	-64.0	-0.05222	mg/L	0.018625	-0.2611	mg/L	0.09312	35.67%
As 188.979†	-3.2	-0.00212	mg/L	0.002620	-0.01059	mg/L	0.013102	123.70%
B 249.677†	259.1	0.05212	mg/L	0.002322	0.2606	mg/L	0.01161	4.46%
Ba 233.527†	12.9	0.00180	mg/L	0.000756	0.00901	mg/L	0.003781	41.98%
Be 313.042†	130.8	0.00018	mg/L	0.000041	0.00092	mg/L	0.000204	22.29%
Ca 317.933†	1891.5	0.1698	mg/L	0.00114	0.8488	mg/L	0.00569	0.67%
Cd 228.802†	13.3	0.00046	mg/L	0.000203	0.00228	mg/L	0.001015	44.59%
Co 228.616†	13.5	0.00039	mg/L	0.000126	0.00195	mg/L	0.000631	32.39%
Cr 267.716†	-17.1	-0.00202	mg/L	0.000272	-0.01010	mg/L	0.001360	13.47%
Cu 324.752†	400.4	0.00189	mg/L	0.000225	0.00947	mg/L	0.001127	11.90%
Fe 273.955†	9.0	0.00581	mg/L	0.001880	0.02907	mg/L	0.009399	32.34%
K 766.490†	170.1	0.1127	mg/L	0.03174	0.5633	mg/L	0.15872	28.17%
Mg 279.077†	-9.0	-0.00630	mg/L	0.008889	-0.03151	mg/L	0.044447	141.05%
Mn 257.610†	9.0	0.00019	mg/L	0.000031	0.00093	mg/L	0.000157	16.83%
Mo 202.031†	12.1	0.00089	mg/L	0.000176	0.00444	mg/L	0.000882	19.84%
Na 589.592†	1502104.3	298.9	mg/L	0.77	1495	mg/L	3.85	0.26%
Na 330.237†	6878.6	300.8	mg/L	2.38	1504	mg/L	11.89	0.79%
Ni 231.604†	5.9	0.00168	mg/L	0.000683	0.00842	mg/L	0.003415	40.56%
Pb 220.353†	-3.8	-0.00055	mg/L	0.001192	-0.00277	mg/L	0.005962	215.52%
Sb 206.836†	15.1	0.00625	mg/L	0.000396	0.03123	mg/L	0.001980	6.34%
Se 196.026†	5.7	0.00483	mg/L	0.003121	0.02413	mg/L	0.015603	64.67%
Si 288.158†	-45.3	-0.02912	mg/L	0.004497	-0.1456	mg/L	0.02249	15.45%
Sn 189.927†	1.3	0.00036	mg/L	0.001513	0.00182	mg/L	0.007565	415.37%
Sr 421.552†	361.5	0.00073	mg/L	0.000046	0.00365	mg/L	0.000230	6.31%
Ti 334.903†	15.6	0.00081	mg/L	0.000527	0.00406	mg/L	0.002637	64.88%
Tl 190.801†	-0.1	-0.00004	mg/L	0.003376	-0.00022	mg/L	0.016881	>999.9%
V 292.402†	203.0	0.00125	mg/L	0.000084	0.00627	mg/L	0.000420	6.70%
Zn 206.200†	12.9	0.00370	mg/L	0.000722	0.01851	mg/L	0.003609	19.50%

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Sequence No.: 26
Sample ID: BIL0040-BLK1

Dilution: 1X
Wash Time: 37

Autosampler Location: 325
Date Collected: 12/3/2020 4:57:25 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIL0040-BLK1

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: BIL0040-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2072148.5	95.54	%	0.395				0.41%
ScR 361.383	223177.6	95.92	%	0.427				0.45%
Ag 328.068†	109.3	0.00064	mg/L	0.000165	0.00064	mg/L	0.000165	26.00%
Al 308.215†	-54.8	-0.04474	mg/L	0.027929	-0.04474	mg/L	0.027929	62.42%
As 188.979†	2.2	0.00167	mg/L	0.001572	0.00167	mg/L	0.001572	94.34%
B 249.677†	-28.3	-0.00566	mg/L	0.000678	-0.00566	mg/L	0.000678	11.98%
Ba 233.527†	4.1	0.00057	mg/L	0.000662	0.00057	mg/L	0.000662	116.28%
Be 313.042†	95.8	0.00013	mg/L	0.000035	0.00013	mg/L	0.000035	26.00%
Ca 317.933†	87.8	0.00785	mg/L	0.002288	0.00785	mg/L	0.002288	29.17%
Cd 228.802†	9.7	0.00031	mg/L	0.000095	0.00031	mg/L	0.000095	30.29%
Co 228.616†	9.4	0.00027	mg/L	0.000138	0.00027	mg/L	0.000138	51.16%
Cr 267.716†	-5.9	-0.00069	mg/L	0.000942	-0.00069	mg/L	0.000942	135.89%
Cu 324.752†	344.2	0.00163	mg/L	0.000109	0.00163	mg/L	0.000109	6.72%
Fe 273.955†	11.0	0.00712	mg/L	0.000855	0.00712	mg/L	0.000855	12.01%
K 766.490†	-1.3	-0.00088	mg/L	0.030950	-0.00088	mg/L	0.030950	>999.9%
Mg 279.077†	-22.8	-0.01593	mg/L	0.006400	-0.01593	mg/L	0.006400	40.17%
Mn 257.610†	13.3	0.00028	mg/L	0.000121	0.00028	mg/L	0.000121	43.74%
Mo 202.031†	10.6	0.00078	mg/L	0.000662	0.00078	mg/L	0.000662	85.05%
Na 589.592†	181.6	0.03615	mg/L	0.015807	0.03615	mg/L	0.015807	43.73%
Na 330.237†	-17.1	-0.7475	mg/L	0.98123	-0.7475	mg/L	0.98123	131.26%
Ni 231.604†	-8.2	-0.00236	mg/L	0.000277	-0.00236	mg/L	0.000277	11.75%
Pb 220.353†	-12.9	-0.00182	mg/L	0.001070	-0.00182	mg/L	0.001070	58.87%
Sb 206.836†	12.1	0.00499	mg/L	0.000439	0.00499	mg/L	0.000439	8.80%
Se 196.026†	5.9	0.00502	mg/L	0.002109	0.00502	mg/L	0.002109	41.98%
Si 288.158†	-77.9	-0.05010	mg/L	0.003469	-0.05010	mg/L	0.003469	6.93%
Sn 189.927†	-5.2	-0.00135	mg/L	0.001240	-0.00135	mg/L	0.001240	91.63%
Sr 421.552†	95.4	0.00019	mg/L	0.000035	0.00019	mg/L	0.000035	17.98%
Ti 334.903†	24.3	0.00128	mg/L	0.000223	0.00128	mg/L	0.000223	17.42%
Tl 190.801†	1.1	0.00059	mg/L	0.003408	0.00059	mg/L	0.003408	575.55%
V 292.402†	178.7	0.00111	mg/L	0.000053	0.00111	mg/L	0.000053	4.80%
Zn 206.200†	7.9	0.00227	mg/L	0.000051	0.00227	mg/L	0.000051	2.24%

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Sequence No.: 27 **Autosampler Location: 326**
Sample ID: 20K0326-01 **Date Collected: 12/3/2020 5:01:41 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0326-01

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0326-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2063266.7	95.13	%	0.412				0.43%
ScR 361.383	223173.1	95.92	%	0.692				0.72%
Ag 328.068†	117.1	0.00068	mg/L	0.000123	0.00068	mg/L	0.000123	18.04%
Al 308.215†	1473.6	1.201	mg/L	0.0114	1.201	mg/L	0.0114	0.95%
As 188.979†	2.9	0.00204	mg/L	0.001704	0.00204	mg/L	0.001704	83.71%
B 249.677†	4629.4	0.9307	mg/L	0.01918	0.9307	mg/L	0.01918	2.06%
Ba 233.527†	32.0	0.00445	mg/L	0.000139	0.00445	mg/L	0.000139	3.12%
Be 313.042†	81.5	0.00011	mg/L	0.000028	0.00011	mg/L	0.000028	24.90%
Ca 317.933†	24317.4	2.183	mg/L	0.0278	2.183	mg/L	0.0278	1.27%
Cd 228.802†	10.3	0.00033	mg/L	0.000045	0.00033	mg/L	0.000045	13.42%
Co 228.616†	7.3	0.00021	mg/L	0.000032	0.00021	mg/L	0.000032	15.11%
Cr 267.716†	-16.5	-0.00196	mg/L	0.000420	-0.00196	mg/L	0.000420	21.38%
Cu 324.752†	553.8	0.00262	mg/L	0.000206	0.00262	mg/L	0.000206	7.87%
Fe 273.955†	9.4	0.00608	mg/L	0.000977	0.00608	mg/L	0.000977	16.05%
K 766.490†	821.0	0.5439	mg/L	0.02241	0.5439	mg/L	0.02241	4.12%
Mg 279.077†	363.1	0.2538	mg/L	0.00433	0.2538	mg/L	0.00433	1.71%
Mn 257.610†	584.6	0.01206	mg/L	0.000147	0.01206	mg/L	0.000147	1.22%
Mo 202.031†	16.3	0.00116	mg/L	0.000439	0.00116	mg/L	0.000439	37.88%
Na 589.592†	74780.0	14.88	mg/L	0.322	14.88	mg/L	0.322	2.16%
Na 330.237†	325.1	14.21	mg/L	0.690	14.21	mg/L	0.690	4.86%
Ni 231.604†	-5.7	-0.00162	mg/L	0.000500	-0.00162	mg/L	0.000500	30.94%
Pb 220.353†	-3.3	-0.00011	mg/L	0.000377	-0.00011	mg/L	0.000377	342.91%
Sb 206.836†	14.2	0.00583	mg/L	0.001653	0.00583	mg/L	0.001653	28.34%
Se 196.026†	1.8	0.00133	mg/L	0.004014	0.00133	mg/L	0.004014	301.00%
Si 288.158†	345.5	0.2228	mg/L	0.00272	0.2228	mg/L	0.00272	1.22%
Sn 189.927†	-6.3	-0.00123	mg/L	0.000589	-0.00123	mg/L	0.000589	47.75%
Sr 421.552†	3711.1	0.00750	mg/L	0.000182	0.00750	mg/L	0.000182	2.42%
Ti 334.903†	11.1	0.00049	mg/L	0.000773	0.00049	mg/L	0.000773	158.01%
Tl 190.801†	1.1	0.00060	mg/L	0.001307	0.00060	mg/L	0.001307	216.53%
V 292.402†	173.5	0.00107	mg/L	0.000114	0.00107	mg/L	0.000114	10.66%
Zn 206.200†	70.3	0.02014	mg/L	0.001072	0.02014	mg/L	0.001072	5.32%

Sequence No.: 28
Sample ID: 20K0345-01

Autosampler Location: 327
Date Collected: 12/3/2020 5:05:57 PM
Data Type: Original

Dilution: 1X
Wash Time: 37

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0345-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0345-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2079991.8	95.90	%	0.285				0.30%
ScR 361.383	226851.2	97.50	%	0.533				0.55%
Ag 328.068†	289.5	0.00168	mg/L	0.000118	0.00168	mg/L	0.000118	7.02%
Al 308.215†	110.5	0.09009	mg/L	0.005368	0.09009	mg/L	0.005368	5.96%
As 188.979†	7.2	0.00510	mg/L	0.000838	0.00510	mg/L	0.000838	16.43%
B 249.677†	-10.7	-0.00218	mg/L	0.002487	-0.00218	mg/L	0.002487	114.15%
Ba 233.527†	13.4	0.00186	mg/L	0.000357	0.00186	mg/L	0.000357	19.21%
Be 313.042†	67.3	0.00010	mg/L	0.000022	0.00010	mg/L	0.000022	23.29%
Ca 317.933†	322.7	0.02874	mg/L	0.001201	0.02874	mg/L	0.001201	4.18%
Cd 228.802†	12.3	0.00039	mg/L	0.000081	0.00039	mg/L	0.000081	20.82%
Co 228.616†	18.8	0.00054	mg/L	0.000246	0.00054	mg/L	0.000246	45.20%
Cr 267.716†	-4.7	-0.00055	mg/L	0.000476	-0.00055	mg/L	0.000476	86.03%
Cu 324.752†	3070072.1	14.53	mg/L	0.010	14.53	mg/L	0.010	0.07%
Fe 273.955†	70.5	0.04553	mg/L	0.003606	0.04553	mg/L	0.003606	7.92%
K 766.490†	71.6	0.04745	mg/L	0.050429	0.04745	mg/L	0.050429	106.28%
Mg 279.077†	-25.7	-0.01794	mg/L	0.004148	-0.01794	mg/L	0.004148	23.12%
Mn 257.610†	35.6	0.00075	mg/L	0.000086	0.00075	mg/L	0.000086	11.46%
Mo 202.031†	32.0	0.00236	mg/L	0.000451	0.00236	mg/L	0.000451	19.14%
Na 589.592†	68655.1	13.66	mg/L	0.105	13.66	mg/L	0.105	0.76%
Na 330.237†	305.3	13.18	mg/L	0.390	13.18	mg/L	0.390	2.96%
Ni 231.604†	5.2	0.00151	mg/L	0.001304	0.00151	mg/L	0.001304	86.33%
Pb 220.353†	637.4	0.06759	mg/L	0.002148	0.06759	mg/L	0.002148	3.18%
Sb 206.836†	29.9	0.01240	mg/L	0.001508	0.01240	mg/L	0.001508	12.16%
Se 196.026†	17.0	0.01453	mg/L	0.002968	0.01453	mg/L	0.002968	20.43%
Si 288.158†	60.1	0.03853	mg/L	0.010425	0.03853	mg/L	0.010425	27.05%
Sn 189.927†	79.5	0.02079	mg/L	0.000716	0.02079	mg/L	0.000716	3.44%
Sr 421.552†	194.8	0.00039	mg/L	0.000094	0.00039	mg/L	0.000094	23.90%
Ti 334.903†	19.2	0.00101	mg/L	0.000691	0.00101	mg/L	0.000691	68.40%
Tl 190.801†	-0.0	-0.00002	mg/L	0.001503	-0.00002	mg/L	0.001503	>999.9%
V 292.402†	34.4	0.00021	mg/L	0.000184	0.00021	mg/L	0.000184	85.69%
Zn 206.200†	1677.2	0.4802	mg/L	0.00238	0.4802	mg/L	0.00238	0.49%

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Sequence No.: 29
Sample ID: 20K0327-01

Dilution: 5X
Wash Time: 37

Autosampler Location: 328
Date Collected: 12/3/2020 5:10:14 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0327-01

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0327-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1933440.8	89.15	%	0.338				0.38%
ScR 361.383	213144.1	91.61	%	0.396				0.43%
Ag 328.068†	116.8	0.00040	mg/L	0.000125	0.00198	mg/L	0.000624	31.53%
Al 308.215†	-99.8	-0.06060	mg/L	0.002893	-0.3030	mg/L	0.01447	4.77%
As 188.979†	0.2	-0.00141	mg/L	0.000991	-0.00705	mg/L	0.004956	70.26%
B 249.677†	1369.6	0.2672	mg/L	0.00262	1.336	mg/L	0.0131	0.98%
Ba 233.527†	161.5	0.01010	mg/L	0.000951	0.05049	mg/L	0.004754	9.42%
Be 313.042†	176.3	0.00025	mg/L	0.000023	0.00126	mg/L	0.000116	9.19%
Ca 317.933†	898113.1	80.63	mg/L	1.152	403.1	mg/L	5.76	1.43%
Cd 228.802†	52.9	0.00188	mg/L	0.000194	0.00938	mg/L	0.000969	10.33%
Co 228.616†	839.3	0.02288	mg/L	0.000094	0.1144	mg/L	0.00047	0.41%
Cr 267.716†	-35.2	-0.00249	mg/L	0.000805	-0.01246	mg/L	0.004025	32.29%
Cu 324.752†	-147.1	0.00283	mg/L	0.000325	0.01416	mg/L	0.001624	11.47%
Fe 273.955†	129502.6	83.68	mg/L	0.392	418.4	mg/L	1.96	0.47%
K 766.490†	1085.3	0.7189	mg/L	0.02922	3.595	mg/L	0.1461	4.06%
Mg 279.077†	19185.9	13.39	mg/L	0.033	66.93	mg/L	0.167	0.25%
Mn 257.610†	143656.6	2.966	mg/L	0.0146	14.83	mg/L	0.073	0.49%
Mo 202.031†	71.3	0.00385	mg/L	0.000258	0.01924	mg/L	0.001292	6.72%
Na 589.592†	1533748.7	305.2	mg/L	1.02	1526	mg/L	5.12	0.34%
Na 330.237†	6945.7	303.7	mg/L	1.84	1519	mg/L	9.18	0.60%
Ni 231.604†	498.5	0.1429	mg/L	0.00256	0.7147	mg/L	0.01282	1.79%
Pb 220.353†	16.0	-0.00111	mg/L	0.000739	-0.00557	mg/L	0.003694	66.28%
Sb 206.836†	57.1	0.01729	mg/L	0.001813	0.08647	mg/L	0.009066	10.48%
Se 196.026†	22.0	0.00985	mg/L	0.005696	0.04923	mg/L	0.028479	57.85%
Si 288.158†	2662.3	1.764	mg/L	0.0044	8.818	mg/L	0.0221	0.25%
Sn 189.927†	-122.3	-0.01719	mg/L	0.000080	-0.08597	mg/L	0.000400	0.47%
Sr 421.552†	90066.7	0.1820	mg/L	0.00083	0.9101	mg/L	0.00414	0.46%
Ti 334.903†	74.4	0.00044	mg/L	0.001280	0.00219	mg/L	0.006401	291.89%
Tl 190.801†	-10.8	-0.00595	mg/L	0.001884	-0.02975	mg/L	0.009421	31.67%
V 292.402†	-207.7	0.00001	mg/L	0.000121	0.00007	mg/L	0.000603	904.07%
Zn 206.200†	292.9	0.08385	mg/L	0.001726	0.4192	mg/L	0.00863	2.06%

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Sequence No.: 30
Sample ID: 20K0328-01
Dilution: 5X
Wash Time: 37

Autosampler Location: 329
Date Collected: 12/3/2020 5:14:47 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0328-01

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: 20K0328-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1943455.8	89.61	%	0.106				0.12%
ScR 361.383	216245.6	92.94	%	0.682				0.73%
Ag 328.068†	178.4	0.00083	mg/L	0.000246	0.00416	mg/L	0.001229	29.56%
Al 308.215†	-74.1	-0.05944	mg/L	0.007993	-0.2972	mg/L	0.03996	13.45%
As 188.979†	5.0	0.00177	mg/L	0.000811	0.00885	mg/L	0.004057	45.86%
B 249.677†	285.4	0.05438	mg/L	0.002998	0.2719	mg/L	0.01499	5.51%
Ba 233.527†	93.4	0.01159	mg/L	0.000515	0.05797	mg/L	0.002577	4.45%
Be 313.042†	222.2	0.00031	mg/L	0.000009	0.00156	mg/L	0.000043	2.72%
Ca 317.933†	1017927.5	91.39	mg/L	1.191	456.9	mg/L	5.96	1.30%
Cd 228.802†	37.7	0.00132	mg/L	0.000166	0.00659	mg/L	0.000828	12.57%
Co 228.616†	545.3	0.01575	mg/L	0.000075	0.07873	mg/L	0.000376	0.48%
Cr 267.716†	-10.1	-0.00200	mg/L	0.001180	-0.01001	mg/L	0.005898	58.92%
Cu 324.752†	482.6	0.00240	mg/L	0.000176	0.01198	mg/L	0.000882	7.36%
Fe 273.955†	7053.6	4.558	mg/L	0.0367	22.79	mg/L	0.184	0.81%
K 766.490†	1461.7	0.9683	mg/L	0.03410	4.841	mg/L	0.1705	3.52%
Mg 279.077†	14927.3	10.44	mg/L	0.014	52.18	mg/L	0.071	0.14%
Mn 257.610†	104681.4	2.162	mg/L	0.0041	10.81	mg/L	0.021	0.19%
Mo 202.031†	77.6	0.00419	mg/L	0.000462	0.02094	mg/L	0.002312	11.05%
Na 589.592†	1502680.3	299.1	mg/L	3.43	1495	mg/L	17.15	1.15%
Na 330.237†	6793.2	297.0	mg/L	1.74	1485	mg/L	8.72	0.59%
Ni 231.604†	333.7	0.09569	mg/L	0.001283	0.4785	mg/L	0.00642	1.34%
Pb 220.353†	-4.3	-0.00079	mg/L	0.001387	-0.00394	mg/L	0.006936	176.06%
Sb 206.836†	24.8	0.00967	mg/L	0.001235	0.04833	mg/L	0.006177	12.78%
Se 196.026†	28.9	0.01553	mg/L	0.003886	0.07767	mg/L	0.019429	25.01%
Si 288.158†	6378.4	4.133	mg/L	0.0249	20.67	mg/L	0.125	0.60%
Sn 189.927†	-126.8	-0.01641	mg/L	0.001881	-0.08204	mg/L	0.009403	11.46%
Sr 421.552†	91520.4	0.1849	mg/L	0.00124	0.9247	mg/L	0.00622	0.67%
Ti 334.903†	93.3	0.00097	mg/L	0.000743	0.00484	mg/L	0.003713	76.65%
Tl 190.801†	-0.4	-0.00028	mg/L	0.003059	-0.00138	mg/L	0.015297	>999.9%
V 292.402†	283.6	0.00183	mg/L	0.000032	0.00916	mg/L	0.000158	1.72%
Zn 206.200†	1331.6	0.3812	mg/L	0.00077	1.906	mg/L	0.0039	0.20%

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Sequence No.: 31 **Autosampler Location: 330**
Sample ID: 20K0335-01 **Date Collected: 12/3/2020 5:19:20 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0335-01

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0335-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1786505.1	82.37	%	0.148				0.18%
ScR 361.383	205703.9	88.41	%	0.326				0.37%
Ag 328.068†	147.6	0.00086	mg/L	0.000201	0.00428	mg/L	0.001006	23.51%
Al 308.215†	-96.2	-0.08051	mg/L	0.010939	-0.4025	mg/L	0.05470	13.59%
As 188.979†	12.3	0.00777	mg/L	0.000591	0.03883	mg/L	0.002953	7.61%
B 249.677†	34666.8	6.971	mg/L	0.0441	34.85	mg/L	0.220	0.63%
Ba 233.527†	21.3	0.00273	mg/L	0.000370	0.01365	mg/L	0.001852	13.57%
Be 313.042†	181.8	0.00025	mg/L	0.000050	0.00127	mg/L	0.000251	19.82%
Ca 317.933†	254775.3	22.87	mg/L	0.221	114.4	mg/L	1.11	0.97%
Cd 228.802†	31.5	0.00104	mg/L	0.000073	0.00522	mg/L	0.000366	7.01%
Co 228.616†	48.0	0.00139	mg/L	0.000148	0.00697	mg/L	0.000740	10.61%
Cr 267.716†	-34.9	-0.00412	mg/L	0.000599	-0.02062	mg/L	0.002994	14.52%
Cu 324.752†	1038.8	0.00488	mg/L	0.000095	0.02440	mg/L	0.000476	1.95%
Fe 273.955†	458.8	0.2964	mg/L	0.00287	1.482	mg/L	0.0143	0.97%
K 766.490†	4489.8	2.974	mg/L	0.0351	14.87	mg/L	0.175	1.18%
Mg 279.077†	155.2	0.1097	mg/L	0.00589	0.5486	mg/L	0.02943	5.36%
Mn 257.610†	1371.9	0.02833	mg/L	0.000057	0.1417	mg/L	0.00029	0.20%
Mo 202.031†	1562.1	0.1146	mg/L	0.00039	0.5729	mg/L	0.00193	0.34%
Na 589.592†	11428867.1	2275	mg/L	20.98	11370	mg/L	104.88	0.92%
Na 330.237†	53838.9	2355	mg/L	15.72	11770	mg/L	78.61	0.67%
Ni 231.604†	142.5	0.04088	mg/L	0.000859	0.2044	mg/L	0.00429	2.10%
Pb 220.353†	37.0	0.00512	mg/L	0.001434	0.02561	mg/L	0.007170	27.99%
Sb 206.836†	40.6	0.01658	mg/L	0.002075	0.08291	mg/L	0.010374	12.51%
Se 196.026†	12.4	0.00873	mg/L	0.009035	0.04363	mg/L	0.045177	103.56%
Si 288.158†	-77.0	-0.04563	mg/L	0.003519	-0.2282	mg/L	0.01759	7.71%
Sn 189.927†	-72.4	-0.01471	mg/L	0.000306	-0.07354	mg/L	0.001530	2.08%
Sr 421.552†	16517.6	0.03338	mg/L	0.000200	0.1669	mg/L	0.00100	0.60%
Ti 334.903†	41.5	0.00110	mg/L	0.000909	0.00551	mg/L	0.004543	82.49%
Tl 190.801†	3.8	0.00227	mg/L	0.002738	0.01136	mg/L	0.013691	120.47%
V 292.402†	445.2	0.00287	mg/L	0.000138	0.01436	mg/L	0.000692	4.82%
Zn 206.200†	400.8	0.1147	mg/L	0.00104	0.5737	mg/L	0.00522	0.91%

Sequence No.: 32 **Autosampler Location: 331**
Sample ID: 20K0411-01 **Date Collected: 12/3/2020 5:24:21 PM**
Data Type: Original
Dilution: 5X
Wash Time: 60 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0411-01

Analyte	**Back Pressure**	**Flow**
All	232.0 kPa	0.65 L/min

Mean Data: 20K0411-01

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	1883417.0	86.84	%	0.490				0.56%
ScR 361.383	214172.5	92.05	%	1.042				1.13%
Ag 328.068†	115.5	0.00066	mg/L	0.000146	0.00329	mg/L	0.000729	22.18%
Al 308.215†	-81.7	-0.06686	mg/L	0.008994	-0.3343	mg/L	0.04497	13.45%
As 188.979†	10.7	0.00699	mg/L	0.001692	0.03493	mg/L	0.008461	24.23%
B 249.677†	59474.3	11.96	mg/L	0.119	59.79	mg/L	0.597	1.00%
Ba 233.527†	10.8	0.00120	mg/L	0.000397	0.00602	mg/L	0.001985	32.95%
Be 313.042†	157.2	0.00022	mg/L	0.000071	0.00109	mg/L	0.000357	32.59%
Ca 317.933†	264498.0	23.75	mg/L	0.238	118.7	mg/L	1.19	1.00%
Cd 228.802†	30.1	0.00097	mg/L	0.000196	0.00487	mg/L	0.000981	20.14%
Co 228.616†	28.9	0.00083	mg/L	0.000235	0.00413	mg/L	0.001177	28.52%
Cr 267.716†	-22.2	-0.00266	mg/L	0.001025	-0.01331	mg/L	0.005127	38.52%
Cu 324.752†	1316.0	0.00624	mg/L	0.000066	0.03121	mg/L	0.000332	1.06%
Fe 273.955†	1022.6	0.6607	mg/L	0.00971	3.304	mg/L	0.0485	1.47%
K 766.490†	2443.5	1.619	mg/L	0.0219	8.094	mg/L	0.1093	1.35%
Mg 279.077†	886.0	0.6196	mg/L	0.01008	3.098	mg/L	0.0504	1.63%
Mn 257.610†	7380.7	0.1524	mg/L	0.00134	0.7621	mg/L	0.00672	0.88%
Mo 202.031†	318.0	0.02302	mg/L	0.000049	0.1151	mg/L	0.00025	0.21%
Na 589.592†	4692706.0	933.9	mg/L	13.38	4670	mg/L	66.89	1.43%
Na 330.237†	21438.0	937.6	mg/L	9.33	4688	mg/L	46.63	0.99%
Ni 231.604†	18.8	0.00541	mg/L	0.001647	0.02706	mg/L	0.008234	30.43%
Pb 220.353†	63.6	0.00882	mg/L	0.001086	0.04412	mg/L	0.005432	12.31%
Sb 206.836†	35.0	0.01428	mg/L	0.004432	0.07140	mg/L	0.022158	31.04%
Se 196.026†	10.7	0.00710	mg/L	0.005473	0.03552	mg/L	0.027366	77.04%
Si 288.158†	-70.2	-0.04019	mg/L	0.009523	-0.2010	mg/L	0.04762	23.69%
Sn 189.927†	-61.9	-0.01182	mg/L	0.000778	-0.05909	mg/L	0.003889	6.58%
Sr 421.552†	14210.2	0.02872	mg/L	0.000200	0.1436	mg/L	0.00100	0.70%
Ti 334.903†	40.1	0.00107	mg/L	0.000733	0.00533	mg/L	0.003664	68.69%
Tl 190.801†	1.8	0.00099	mg/L	0.003822	0.00494	mg/L	0.019109	386.61%
V 292.402†	369.0	0.00232	mg/L	0.000049	0.01158	mg/L	0.000247	2.13%
Zn 206.200†	68.1	0.01949	mg/L	0.000983	0.09744	mg/L	0.004916	5.05%

Sequence No.: 33
Sample ID: SEQ-IBL2
Autosampler Location: 332
Date Collected: 12/3/2020 5:29:18 PM
Data Type: Original

Dilution: 1X
Wash Time: 60
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-IBL2

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: SEQ-IBL2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2020775.1	93.17	%	0.294				0.32%
ScR 361.383	217404.7	93.44	%	0.678				0.73%
Ag 328.068†	74.0	0.00043	mg/L	0.000221	0.00043	mg/L	0.000221	51.43%
Al 308.215†	-77.2	-0.06297	mg/L	0.008343	-0.06297	mg/L	0.008343	13.25%
As 188.979†	4.1	0.00288	mg/L	0.001891	0.00288	mg/L	0.001891	65.56%
B 249.677†	104.8	0.02110	mg/L	0.003186	0.02110	mg/L	0.003186	15.10%
Ba 233.527†	2.0	0.00027	mg/L	0.000348	0.00027	mg/L	0.000348	128.18%
Be 313.042†	103.2	0.00014	mg/L	0.000016	0.00014	mg/L	0.000016	11.15%
Ca 317.933†	53.5	0.00476	mg/L	0.000366	0.00476	mg/L	0.000366	7.68%
Cd 228.802†	14.4	0.00046	mg/L	0.000108	0.00046	mg/L	0.000108	23.18%
Co 228.616†	7.5	0.00022	mg/L	0.000284	0.00022	mg/L	0.000284	131.05%
Cr 267.716†	-21.2	-0.00250	mg/L	0.000649	-0.00250	mg/L	0.000649	25.93%
Cu 324.752†	385.9	0.00183	mg/L	0.000094	0.00183	mg/L	0.000094	5.16%
Fe 273.955†	7.3	0.00468	mg/L	0.000804	0.00468	mg/L	0.000804	17.19%
K 766.490†	51.7	0.03428	mg/L	0.032238	0.03428	mg/L	0.032238	94.04%
Mg 279.077†	-52.7	-0.03683	mg/L	0.004904	-0.03683	mg/L	0.004904	13.32%
Mn 257.610†	17.7	0.00037	mg/L	0.000206	0.00037	mg/L	0.000206	56.32%
Mo 202.031†	4.1	0.00031	mg/L	0.000085	0.00031	mg/L	0.000085	27.97%
Na 589.592†	1417.1	0.2820	mg/L	0.02919	0.2820	mg/L	0.02919	10.35%
Na 330.237†	-20.4	-0.8918	mg/L	0.33082	-0.8918	mg/L	0.33082	37.09%
Ni 231.604†	-16.4	-0.00470	mg/L	0.000430	-0.00470	mg/L	0.000430	9.15%
Pb 220.353†	-4.0	-0.00059	mg/L	0.000049	-0.00059	mg/L	0.000049	8.28%
Sb 206.836†	17.9	0.00740	mg/L	0.001309	0.00740	mg/L	0.001309	17.70%
Se 196.026†	8.8	0.00756	mg/L	0.006605	0.00756	mg/L	0.006605	87.39%
Si 288.158†	-102.0	-0.06563	mg/L	0.004171	-0.06563	mg/L	0.004171	6.36%
Sn 189.927†	-0.7	-0.00018	mg/L	0.001259	-0.00018	mg/L	0.001259	681.72%
Sr 421.552†	144.7	0.00029	mg/L	0.000065	0.00029	mg/L	0.000065	22.08%
Ti 334.903†	10.6	0.00056	mg/L	0.000407	0.00056	mg/L	0.000407	72.93%
Tl 190.801†	1.8	0.00095	mg/L	0.000847	0.00095	mg/L	0.000847	89.52%
V 292.402†	218.4	0.00135	mg/L	0.000131	0.00135	mg/L	0.000131	9.72%
Zn 206.200†	4.0	0.00115	mg/L	0.000559	0.00115	mg/L	0.000559	48.42%

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Sequence No.: 34 **Autosampler Location: 333**
Sample ID: BIL0040-BS1 **Date Collected: 12/3/2020 5:33:34 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIL0040-BS1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIL0040-BS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2022393.2	93.25	%	0.933				1.00%
ScR 361.383	216573.8	93.09	%	0.529				0.57%
Ag 328.068†	98768.1	0.5741	mg/L	0.00312	0.5741	mg/L	0.00312	0.54%
Al 308.215†	2636.3	2.144	mg/L	0.0056	2.144	mg/L	0.0056	0.26%
As 188.979†	3201.6	2.209	mg/L	0.0242	2.209	mg/L	0.0242	1.10%
B 249.677†	58.8	0.01001	mg/L	0.002940	0.01001	mg/L	0.002940	29.38%
Ba 233.527†	15016.6	2.094	mg/L	0.0154	2.094	mg/L	0.0154	0.73%
Be 313.042†	373707.4	0.5293	mg/L	0.00203	0.5293	mg/L	0.00203	0.38%
Ca 317.933†	120031.2	10.74	mg/L	0.042	10.74	mg/L	0.042	0.39%
Cd 228.802†	16032.9	0.5245	mg/L	0.00324	0.5245	mg/L	0.00324	0.62%
Co 228.616†	17946.5	0.5213	mg/L	0.00439	0.5213	mg/L	0.00439	0.84%
Cr 267.716†	4448.1	0.5258	mg/L	0.00537	0.5258	mg/L	0.00537	1.02%
Cu 324.752†	107952.2	0.5109	mg/L	0.00337	0.5109	mg/L	0.00337	0.66%
Fe 273.955†	3375.7	2.179	mg/L	0.0190	2.179	mg/L	0.0190	0.87%
K 766.490†	16906.9	11.20	mg/L	0.071	11.20	mg/L	0.071	0.63%
Mg 279.077†	16354.3	11.43	mg/L	0.078	11.43	mg/L	0.078	0.68%
Mn 257.610†	25372.2	0.5241	mg/L	0.00372	0.5241	mg/L	0.00372	0.71%
Mo 202.031†	28.7	0.00180	mg/L	0.000408	0.00180	mg/L	0.000408	22.62%
Na 589.592†	56822.2	11.31	mg/L	0.121	11.31	mg/L	0.121	1.07%
Na 330.237†	242.1	10.40	mg/L	0.170	10.40	mg/L	0.170	1.63%
Ni 231.604†	1813.4	0.5197	mg/L	0.00535	0.5197	mg/L	0.00535	1.03%
Pb 220.353†	15692.2	2.194	mg/L	0.0124	2.194	mg/L	0.0124	0.57%
Sb 206.836†	43.4	0.01226	mg/L	0.002396	0.01226	mg/L	0.002396	19.54%
Se 196.026†	2623.4	2.244	mg/L	0.0181	2.244	mg/L	0.0181	0.81%
Si 288.158†	-90.4	-0.04508	mg/L	0.008653	-0.04508	mg/L	0.008653	19.19%
Sn 189.927†	-30.7	-0.00598	mg/L	0.000435	-0.00598	mg/L	0.000435	7.28%
Sr 421.552†	274611.4	0.5550	mg/L	0.00553	0.5550	mg/L	0.00553	1.00%
Ti 334.903†	13.8	0.00016	mg/L	0.000062	0.00016	mg/L	0.000062	39.64%
Tl 190.801†	4173.4	2.239	mg/L	0.0192	2.239	mg/L	0.0192	0.86%
V 292.402†	83623.3	0.5215	mg/L	0.00299	0.5215	mg/L	0.00299	0.57%
Zn 206.200†	1838.7	0.5265	mg/L	0.00340	0.5265	mg/L	0.00340	0.65%

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Sequence No.: 35 **Autosampler Location: 7**
Sample ID: SEQ-CCV4 **Date Collected: 12/3/2020 5:37:51 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV4

Analyte	**Back Pressure**	**Flow**
All	233.0 kPa	0.65 L/min

Mean Data: SEQ-CCV4

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2037662.6	93.95	%	0.716				0.76%
ScR 361.383	213290.4	91.67	%	0.936				1.02%
Ag 328.068†	185833.8	1.080	mg/L	0.0103	1.080	mg/L	0.0103	0.96%
Al 308.215†	2714.1	2.180	mg/L	0.0158	2.180	mg/L	0.0158	0.73%
As 188.979†	3005.6	2.192	mg/L	0.0271	2.192	mg/L	0.0271	1.24%
B 249.677†	5608.5	1.124	mg/L	0.0093	1.124	mg/L	0.0093	0.83%
Ba 233.527†	7697.1	1.072	mg/L	0.0106	1.072	mg/L	0.0106	0.99%
Be 313.042†	752576.6	1.066	mg/L	0.0074	1.066	mg/L	0.0074	0.70%
Ca 317.933†	24309.0	2.101	mg/L	0.0076	2.101	mg/L	0.0076	0.36%
Cd 228.802†	31546.4	1.042	mg/L	0.0102	1.042	mg/L	0.0102	0.98%
Co 228.616†	36980.9	1.073	mg/L	0.0085	1.073	mg/L	0.0085	0.79%
Cr 267.716†	9118.2	1.078	mg/L	0.0128	1.078	mg/L	0.0128	1.19%
Cu 324.752†	211356.2	0.9998	mg/L	0.00956	0.9998	mg/L	0.00956	0.96%
Fe 273.955†	3451.6	2.226	mg/L	0.0174	2.226	mg/L	0.0174	0.78%
K 766.490†	34008.8	22.53	mg/L	0.145	22.53	mg/L	0.145	0.64%
Mg 279.077†	3248.6	2.288	mg/L	0.0228	2.288	mg/L	0.0228	1.00%
Mn 257.610†	49902.4	1.031	mg/L	0.0127	1.031	mg/L	0.0127	1.23%
Mo 202.031†	14723.8	1.083	mg/L	0.0114	1.083	mg/L	0.0114	1.05%
Na 589.592†	283077.6	56.34	mg/L	0.937	56.34	mg/L	0.937	1.66%
Na 330.237†	1272.2	55.45	mg/L	0.352	55.45	mg/L	0.352	0.63%
Ni 231.604†	3786.8	1.088	mg/L	0.0097	1.088	mg/L	0.0097	0.89%
Pb 220.353†	15981.1	2.235	mg/L	0.0216	2.235	mg/L	0.0216	0.97%
Sb 206.836†	5616.8	2.302	mg/L	0.0234	2.302	mg/L	0.0234	1.01%
Se 196.026†	2628.2	2.248	mg/L	0.0296	2.248	mg/L	0.0296	1.32%
Si 288.158†	3431.6	2.214	mg/L	0.0140	2.214	mg/L	0.0140	0.63%
Sn 189.927†	4238.0	1.109	mg/L	0.0100	1.109	mg/L	0.0100	0.90%
Sr 421.552†	554802.1	1.121	mg/L	0.0142	1.121	mg/L	0.0142	1.26%
Ti 334.903†	20611.8	1.084	mg/L	0.0072	1.084	mg/L	0.0072	0.66%
Tl 190.801†	4081.7	2.187	mg/L	0.0228	2.187	mg/L	0.0228	1.04%
V 292.402†	163763.5	1.022	mg/L	0.0106	1.022	mg/L	0.0106	1.04%
Zn 206.200†	3880.5	1.111	mg/L	0.0111	1.111	mg/L	0.0111	1.00%

Sequence No.: 36
Sample ID: SEQ-CCB4
Autosampler Location: 1
Date Collected: 12/3/2020 5:43:19 PM
Data Type: Original
Dilution: 1X
Wash Time: 120
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB4

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-CCB4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2029979.0	93.60	%	0.482				0.52%
ScR 361.383	215970.0	92.83	%	0.318				0.34%
Ag 328.068†	162.7	0.00095	mg/L	0.000297	0.00095	mg/L	0.000297	31.34%
Al 308.215†	-55.6	-0.04538	mg/L	0.011460	-0.04538	mg/L	0.011460	25.25%
As 188.979†	5.1	0.00368	mg/L	0.000684	0.00368	mg/L	0.000684	18.61%
B 249.677†	14.2	0.00291	mg/L	0.002372	0.00291	mg/L	0.002372	81.54%
Ba 233.527†	9.1	0.00126	mg/L	0.001139	0.00126	mg/L	0.001139	90.27%
Be 313.042†	170.3	0.00024	mg/L	0.000051	0.00024	mg/L	0.000051	21.47%
Ca 317.933†	45.9	0.00405	mg/L	0.000599	0.00405	mg/L	0.000599	14.80%
Cd 228.802†	14.6	0.00047	mg/L	0.000081	0.00047	mg/L	0.000081	17.26%
Co 228.616†	21.0	0.00061	mg/L	0.000039	0.00061	mg/L	0.000039	6.46%
Cr 267.716†	-29.2	-0.00345	mg/L	0.000910	-0.00345	mg/L	0.000910	26.40%
Cu 324.752†	380.6	0.00180	mg/L	0.000091	0.00180	mg/L	0.000091	5.08%
Fe 273.955†	7.6	0.00487	mg/L	0.001000	0.00487	mg/L	0.001000	20.53%
K 766.490†	23.0	0.01520	mg/L	0.003687	0.01520	mg/L	0.003687	24.25%
Mg 279.077†	-42.6	-0.02974	mg/L	0.016252	-0.02974	mg/L	0.016252	54.64%
Mn 257.610†	14.9	0.00031	mg/L	0.000121	0.00031	mg/L	0.000121	39.23%
Mo 202.031†	44.0	0.00324	mg/L	0.000919	0.00324	mg/L	0.000919	28.40%
Na 589.592†	470.5	0.09363	mg/L	0.000415	0.09363	mg/L	0.000415	0.44%
Na 330.237†	-18.4	-0.8042	mg/L	0.40668	-0.8042	mg/L	0.40668	50.57%
Ni 231.604†	-11.4	-0.00326	mg/L	0.001846	-0.00326	mg/L	0.001846	56.62%
Pb 220.353†	-7.2	-0.00102	mg/L	0.000390	-0.00102	mg/L	0.000390	38.06%
Sb 206.836†	24.6	0.01013	mg/L	0.001688	0.01013	mg/L	0.001688	16.67%
Se 196.026†	10.0	0.00855	mg/L	0.001850	0.00855	mg/L	0.001850	21.64%
Si 288.158†	-117.0	-0.07532	mg/L	0.005267	-0.07532	mg/L	0.005267	6.99%
Sn 189.927†	-0.0	-0.00001	mg/L	0.000537	-0.00001	mg/L	0.000537	>999.9%
Sr 421.552†	161.6	0.00033	mg/L	0.000066	0.00033	mg/L	0.000066	20.32%
Ti 334.903†	24.3	0.00128	mg/L	0.001556	0.00128	mg/L	0.001556	122.04%
Tl 190.801†	-2.2	-0.00121	mg/L	0.002419	-0.00121	mg/L	0.002419	200.37%
V 292.402†	223.7	0.00138	mg/L	0.000176	0.00138	mg/L	0.000176	12.80%
Zn 206.200†	2.1	0.00061	mg/L	0.000393	0.00061	mg/L	0.000393	64.41%

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Analysis Begun

Start Time: 12/3/2020 5:49:11 PM
Plasma On Time: 12/3/2020 8:08:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: SEQ-CAL3
Date Collected: 12/3/2020 5:49:12 PM
Data Type: Original

Nebulizer Parameters: SEQ-CAL3

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

DEL

Mean Data: SEQ-CAL3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2046889.5	5783.58	0.28%	94.38	%
ScR 361.383	218867.8	886.90	0.41%	94.07	%
Ag 328.068†	185077.2	1236.03	0.67%	[1.0]	mg/L
As 188.979†	15626.1	142.44	0.91%	[10]	mg/L
B 249.677†	53532.3	369.50	0.69%	[10]	mg/L
Be 313.042†	3686101.0	50565.46	1.37%	[5.0]	mg/L
Na 589.592†	277943.5	4023.42	1.45%	[50]	mg/L
Ni 231.604†	36014.2	210.64	0.58%	[10]	mg/L
Pb 220.353†	77052.6	565.30	0.73%	[10]	mg/L
Se 196.026†	12809.9	86.57	0.68%	[10]	mg/L
Sr 421.552†	2680994.0	39053.01	1.46%	[5]	mg/L
Tl 190.801†	20157.9	73.66	0.37%	[10]	mg/L
Zn 206.200†	37366.9	308.26	0.82%	[10]	mg/L

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Sequence No.: 2
Sample ID: SEQ-CAL2 **Date Collected: 12/3/2020 5:51:45 PM**
Data Type: Original

Nebulizer Parameters: SEQ-CAL2

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

DEL

Mean Data: SEQ-CAL2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2066421.1	23888.60	1.16%	95.28	%
ScR 361.383	220053.5	1386.12	0.63%	94.58	%
Ba 233.527†	73704.4	413.81	0.56%	[10]	mg/L
Cd 228.802†	308379.9	4086.79	1.33%	[10]	mg/L
Co 228.616†	360735.8	4602.11	1.28%	[10]	mg/L
Cr 267.716†	87542.2	563.52	0.64%	[10]	mg/L
Cu 324.752†	2146483.8	18091.80	0.84%	[10]	mg/L
Mn 257.610†	502807.5	2509.64	0.50%	[10]	mg/L
V 292.402†	1656068.8	17271.45	1.04%	[10]	mg/L

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Sequence No.: 3
Sample ID: SEQ-CAL5 **Date Collected: 12/3/2020 5:53:30 PM**
Data Type: Original

Nebulizer Parameters: SEQ-CAL5

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

DEL

Mean Data: SEQ-CAL5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1892609.6	4458.38	0.24%	87.26	%
ScR 361.383	214061.7	2111.71	0.99%	92.01	%
Al 308.215†	40063.8	520.01	1.30%	[30]	mg/L
Ca 317.933†	366592.4	1560.05	0.43%	[30]	mg/L
Fe 273.955†	165006.6	1103.01	0.67%	[100]	mg/L
K 766.490†	166249.6	549.12	0.33%	[100]	mg/L
Mg 279.077†	47954.1	597.03	1.24%	[30]	mg/L
Na 330.237†	2419.5	16.41	0.68%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	185100	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1335	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1563	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	5353	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	7370	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	737200	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	12220	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	30840	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	36070	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	8754	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	214600	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1650	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1662	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1598	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	50280	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	13590	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	5559	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	24.19	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3601	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7705	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2437	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1281	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1554	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3829	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	536200	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	18990	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2016	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	165600	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3737	0.00000	1.000000	

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Analysis Begun

Start Time: 12/3/2020 5:56:28 PM **Plasma On Time: 12/3/2020 8:08:06 AM**
Logged In Analyst: Metals Instrument Controller **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 7**
Sample ID: SEQ-CCV5 **Date Collected: 12/3/2020 5:56:29 PM**
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SEQ-CCV5

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-CCV5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2038939.8	94.01	%	0.406				0.43%
ScR 361.383	212039.5	91.14	%	0.353				0.39%
Ag 328.068†	184613.0	0.9976	mg/L	0.00073	0.9976	mg/L	0.00073	0.07%
Al 308.215†	2728.7	2.011	mg/L	0.0062	2.011	mg/L	0.0062	0.31%
As 188.979†	2982.3	2.027	mg/L	0.0100	2.027	mg/L	0.0100	0.49%
B 249.677†	5687.9	1.059	mg/L	0.0012	1.059	mg/L	0.0012	0.11%
Ba 233.527†	7734.5	1.048	mg/L	0.0015	1.048	mg/L	0.0015	0.14%
Be 313.042†	759346.2	1.028	mg/L	0.0085	1.028	mg/L	0.0085	0.82%
Ca 317.933†	24417.4	1.922	mg/L	0.0081	1.922	mg/L	0.0081	0.42%
Cd 228.802†	31226.3	1.005	mg/L	0.0003	1.005	mg/L	0.0003	0.03%
Co 228.616†	36703.1	1.015	mg/L	0.0041	1.015	mg/L	0.0041	0.40%
Cr 267.716†	9172.9	1.048	mg/L	0.0005	1.048	mg/L	0.0005	0.05%
Cu 324.752†	208974.7	0.9732	mg/L	0.00421	0.9732	mg/L	0.00421	0.43%
Fe 273.955†	3464.3	2.095	mg/L	0.0066	2.095	mg/L	0.0066	0.32%
K 766.490†	34274.5	20.62	mg/L	0.167	20.62	mg/L	0.167	0.81%
Mg 279.077†	3277.5	2.068	mg/L	0.0008	2.068	mg/L	0.0008	0.04%
Mn 257.610†	50351.1	1.002	mg/L	0.0107	1.002	mg/L	0.0107	1.07%
Mo 202.031†	14583.9	1.073	mg/L	0.0064	1.073	mg/L	0.0064	0.60%
Na 589.592†	287552.9	51.73	mg/L	0.365	51.73	mg/L	0.365	0.71%
Na 330.237†	1279.8	52.72	mg/L	0.184	52.72	mg/L	0.184	0.35%
Ni 231.604†	3789.0	1.054	mg/L	0.0027	1.054	mg/L	0.0027	0.25%
Pb 220.353†	15854.2	2.059	mg/L	0.0135	2.059	mg/L	0.0135	0.66%
Sb 206.836†	5574.9	2.285	mg/L	0.0046	2.285	mg/L	0.0046	0.20%
Se 196.026†	2613.6	2.039	mg/L	0.0040	2.039	mg/L	0.0040	0.20%
Si 288.158†	3436.2	2.217	mg/L	0.0105	2.217	mg/L	0.0105	0.48%
Sn 189.927†	4214.7	1.103	mg/L	0.0073	1.103	mg/L	0.0073	0.66%
Sr 421.552†	560720.1	1.046	mg/L	0.0089	1.046	mg/L	0.0089	0.85%
Ti 334.903†	20724.1	1.090	mg/L	0.0072	1.090	mg/L	0.0072	0.66%
Tl 190.801†	4059.5	2.007	mg/L	0.0104	2.007	mg/L	0.0104	0.52%
V 292.402†	162418.2	0.9855	mg/L	0.00171	0.9855	mg/L	0.00171	0.17%
Zn 206.200†	3940.1	1.055	mg/L	0.0020	1.055	mg/L	0.0020	0.19%

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Sequence No.: 2 **Autosampler Location: 1**
Sample ID: SEQ-CCB5 **Date Collected: 12/3/2020 6:01:58 PM**
Data Type: Original
Dilution: 1X
Wash Time: 120 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB5

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: SEQ-CCB5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2015886.5	92.95	%	0.394				0.42%
ScR 361.383	218380.9	93.86	%	1.164				1.24%
Ag 328.068†	93.3	0.00050	mg/L	0.000469	0.00050	mg/L	0.000469	92.91%
Al 308.215†	-74.4	-0.05580	mg/L	0.009036	-0.05580	mg/L	0.009036	16.19%
As 188.979†	0.7	0.00060	mg/L	0.002167	0.00060	mg/L	0.002167	358.68%
B 249.677†	8.8	0.00167	mg/L	0.000622	0.00167	mg/L	0.000622	37.14%
Ba 233.527†	0.8	0.00011	mg/L	0.000143	0.00011	mg/L	0.000143	129.82%
Be 313.042†	111.7	0.00015	mg/L	0.000062	0.00015	mg/L	0.000062	41.42%
Ca 317.933†	29.7	0.00238	mg/L	0.001364	0.00238	mg/L	0.001364	57.27%
Cd 228.802†	16.7	0.00054	mg/L	0.000142	0.00054	mg/L	0.000142	26.31%
Co 228.616†	14.4	0.00040	mg/L	0.000146	0.00040	mg/L	0.000146	36.81%
Cr 267.716†	-19.9	-0.00227	mg/L	0.001083	-0.00227	mg/L	0.001083	47.80%
Cu 324.752†	388.7	0.00181	mg/L	0.000061	0.00181	mg/L	0.000061	3.37%
Fe 273.955†	3.4	0.00203	mg/L	0.001264	0.00203	mg/L	0.001264	62.17%
K 766.490†	41.1	0.02475	mg/L	0.021111	0.02475	mg/L	0.021111	85.30%
Mg 279.077†	-54.2	-0.03385	mg/L	0.001302	-0.03385	mg/L	0.001302	3.85%
Mn 257.610†	8.5	0.00017	mg/L	0.000111	0.00017	mg/L	0.000111	65.10%
Mo 202.031†	53.3	0.00392	mg/L	0.000864	0.00392	mg/L	0.000864	22.03%
Na 589.592†	224.3	0.04035	mg/L	0.005641	0.04035	mg/L	0.005641	13.98%
Na 330.237†	-9.1	-0.3768	mg/L	1.16544	-0.3768	mg/L	1.16544	309.31%
Ni 231.604†	-10.8	-0.00300	mg/L	0.000762	-0.00300	mg/L	0.000762	25.41%
Pb 220.353†	-3.8	-0.00051	mg/L	0.000978	-0.00051	mg/L	0.000978	190.00%
Sb 206.836†	22.3	0.00920	mg/L	0.001190	0.00920	mg/L	0.001190	12.93%
Se 196.026†	2.0	0.00154	mg/L	0.003705	0.00154	mg/L	0.003705	241.04%
Si 288.158†	-90.8	-0.05845	mg/L	0.009840	-0.05845	mg/L	0.009840	16.83%
Sn 189.927†	-0.1	-0.00003	mg/L	0.000843	-0.00003	mg/L	0.000843	>999.9%
Sr 421.552†	126.6	0.00024	mg/L	0.000089	0.00024	mg/L	0.000089	37.63%
Ti 334.903†	33.0	0.00174	mg/L	0.000607	0.00174	mg/L	0.000607	34.95%
Tl 190.801†	-1.9	-0.00092	mg/L	0.002422	-0.00092	mg/L	0.002422	263.84%
V 292.402†	237.4	0.00143	mg/L	0.000218	0.00143	mg/L	0.000218	15.25%
Zn 206.200†	-0.7	-0.00019	mg/L	0.000779	-0.00019	mg/L	0.000779	408.91%

User canceled analysis.

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Analysis Begun

Start Time: 12/3/2020 6:06:42 PM
Plasma On Time: 12/3/2020 8:08:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 3
Autosampler Location: 334
Sample ID: 20K0183-01
Date Collected: 12/3/2020 6:06:44 PM
Data Type: Original
Dilution: 2X

Nebulizer Parameters: 20K0183-01

Analyte	**Back Pressure**	**Flow**
All	232.0 kPa	0.65 L/min

DEL

Mean Data: 20K0183-01

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2055959.4	94.80	%	0.420				0.44%
ScR 361.383	221695.4	95.29	%	0.171				0.18%
Ag 328.068†	214.7	0.00025	mg/L	0.000233	0.00049	mg/L	0.000466	94.07%
Al 308.215†	295183.2	221.1	mg/L	1.46	442.2	mg/L	2.92	0.66%
As 188.979†	387.0	1.620	mg/L	0.0097	3.239	mg/L	0.0194	0.60%
B 249.677†	225.9	0.00779	mg/L	0.001141	0.01558	mg/L	0.002282	14.64%
Ba 233.527†	7683.9	0.9998	mg/L	0.00366	2.000	mg/L	0.0073	0.37%
Be 313.042†	4087.9	0.00440	mg/L	0.000066	0.00881	mg/L	0.000132	1.50%
Ca 317.933†	830210.4	67.94	mg/L	0.574	135.9	mg/L	1.15	0.85%
Cd 228.802†	386.0	0.01156	mg/L	0.000082	0.02312	mg/L	0.000163	0.71%
Co 228.616†	5464.8	0.1240	mg/L	0.00098	0.2481	mg/L	0.00196	0.79%
Cr 267.716†	2762.0	0.3210	mg/L	0.00210	0.6420	mg/L	0.00420	0.65%
Cu 324.752†	98821.6	0.4700	mg/L	0.00190	0.9401	mg/L	0.00380	0.40%
Fe 273.955†	491660.0	298.0	mg/L	1.57	595.9	mg/L	3.14	0.53%
K 766.490†	34045.0	20.48	mg/L	0.175	40.96	mg/L	0.350	0.85%
Mg 279.077†	92848.9	58.02	mg/L	0.391	116.0	mg/L	0.78	0.67%
Mn 257.610†	554524.2	11.02	mg/L	0.075	22.05	mg/L	0.150	0.68%
Mo 202.031†	149.0	0.00921	mg/L	0.000608	0.01843	mg/L	0.001216	6.60%
Na 589.592†	42822.5	7.703	mg/L	0.0377	15.41	mg/L	0.075	0.49%
Na 330.237†	135.5	7.612	mg/L	0.3050	15.22	mg/L	0.610	4.01%
Ni 231.604†	877.5	0.2437	mg/L	0.00099	0.4874	mg/L	0.00198	0.41%
Pb 220.353†	814.1	0.1600	mg/L	0.00145	0.3199	mg/L	0.00290	0.91%
Sb 206.836†	334.4	0.1375	mg/L	0.00105	0.2750	mg/L	0.00210	0.76%
Se 196.026†	25.1	0.00509	mg/L	0.007634	0.01018	mg/L	0.015267	149.94%
Si 288.158†	22185.3	14.37	mg/L	0.036	28.74	mg/L	0.072	0.25%
Sn 189.927†	-125.8	-0.01534	mg/L	0.000358	-0.03069	mg/L	0.000716	2.33%
Sr 421.552†	269246.9	0.5021	mg/L	0.00431	1.004	mg/L	0.0086	0.86%
Ti 334.903†	232093.5	12.22	mg/L	0.073	24.44	mg/L	0.147	0.60%
Tl 190.801†	-50.0	-0.02801	mg/L	0.002992	-0.05602	mg/L	0.005984	10.68%
V 292.402†	106029.6	0.6416	mg/L	0.00296	1.283	mg/L	0.0059	0.46%
Zn 206.200†	3734.2	0.9993	mg/L	0.00428	1.999	mg/L	0.0086	0.43%

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Sequence No.: 4 **Autosampler Location: 335**
Sample ID: 20K0183-02 **Date Collected: 12/3/2020 6:10:48 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0183-02

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0183-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2063920.1	95.16	%	0.430				0.45%
ScR 361.383	220830.2	94.92	%	0.291				0.31%
Ag 328.068†	69.3	0.00021	mg/L	0.000367	0.00042	mg/L	0.000734	174.06%
Al 308.215†	218970.4	164.0	mg/L	0.46	328.0	mg/L	0.93	0.28%
As 188.979†	-932.4	0.5414	mg/L	0.01410	1.083	mg/L	0.0282	2.60%
B 249.677†	205.8	0.01332	mg/L	0.003360	0.02664	mg/L	0.006719	25.22%
Ba 233.527†	4106.2	0.5284	mg/L	0.00196	1.057	mg/L	0.0039	0.37%
Be 313.042†	2836.7	0.00306	mg/L	0.000050	0.00611	mg/L	0.000100	1.63%
Ca 317.933†	552293.5	45.20	mg/L	0.311	90.39	mg/L	0.621	0.69%
Cd 228.802†	163.3	0.00811	mg/L	0.000032	0.01623	mg/L	0.000064	0.39%
Co 228.616†	3279.9	0.06902	mg/L	0.000143	0.1380	mg/L	0.00029	0.21%
Cr 267.716†	2241.5	0.2611	mg/L	0.00196	0.5222	mg/L	0.00392	0.75%
Cu 324.752†	46242.0	0.2214	mg/L	0.00151	0.4429	mg/L	0.00301	0.68%
Fe 273.955†	330143.2	200.1	mg/L	0.23	400.2	mg/L	0.45	0.11%
K 766.490†	18359.6	11.04	mg/L	0.044	22.09	mg/L	0.088	0.40%
Mg 279.077†	68141.5	42.58	mg/L	0.214	85.15	mg/L	0.428	0.50%
Mn 257.610†	136889.4	2.720	mg/L	0.0155	5.440	mg/L	0.0310	0.57%
Mo 202.031†	140.6	0.00914	mg/L	0.000670	0.01828	mg/L	0.001340	7.33%
Na 589.592†	42329.9	7.615	mg/L	0.1085	15.23	mg/L	0.217	1.42%
Na 330.237†	129.4	7.152	mg/L	0.0933	14.30	mg/L	0.187	1.30%
Ni 231.604†	828.6	0.2301	mg/L	0.00113	0.4603	mg/L	0.00226	0.49%
Pb 220.353†	53.7	0.04833	mg/L	0.000339	0.09667	mg/L	0.000677	0.70%
Sb 206.836†	229.1	0.09743	mg/L	0.001089	0.1949	mg/L	0.00218	1.12%
Se 196.026†	11.7	0.00326	mg/L	0.007905	0.00652	mg/L	0.015810	242.51%
Si 288.158†	19952.6	12.87	mg/L	0.032	25.74	mg/L	0.065	0.25%
Sn 189.927†	-104.9	-0.01492	mg/L	0.001318	-0.02984	mg/L	0.002635	8.83%
Sr 421.552†	227910.5	0.4250	mg/L	0.00386	0.8501	mg/L	0.00771	0.91%
Ti 334.903†	192503.7	10.14	mg/L	0.046	20.27	mg/L	0.093	0.46%
Tl 190.801†	-19.4	-0.01176	mg/L	0.003742	-0.02352	mg/L	0.007484	31.82%
V 292.402†	73675.8	0.4452	mg/L	0.00202	0.8905	mg/L	0.00404	0.45%
Zn 206.200†	1720.3	0.4604	mg/L	0.00085	0.9208	mg/L	0.00170	0.18%

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Sequence No.: 5
Sample ID: 20K0183-03

Dilution: 2X
Wash Time: 37

Autosampler Location: 336
Date Collected: 12/3/2020 6:14:51 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0183-03

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0183-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2065452.0	95.23	%	0.278				0.29%
ScR 361.383	221659.7	95.27	%	0.945				0.99%
Ag 328.068†	25.8	-0.00004	mg/L	0.000452	-0.00009	mg/L	0.000905	>999.9%
Al 308.215†	233757.9	175.1	mg/L	1.17	350.1	mg/L	2.34	0.67%
As 188.979†	-974.1	0.4906	mg/L	0.00572	0.9813	mg/L	0.01144	1.17%
B 249.677†	220.3	0.01307	mg/L	0.001122	0.02614	mg/L	0.002245	8.59%
Ba 233.527†	4158.2	0.5330	mg/L	0.00581	1.066	mg/L	0.0116	1.09%
Be 313.042†	3192.7	0.00348	mg/L	0.000099	0.00697	mg/L	0.000198	2.84%
Ca 317.933†	558305.8	45.69	mg/L	0.251	91.37	mg/L	0.502	0.55%
Cd 228.802†	164.3	0.00828	mg/L	0.000162	0.01655	mg/L	0.000324	1.96%
Co 228.616†	3877.1	0.08564	mg/L	0.000389	0.1713	mg/L	0.00078	0.45%
Cr 267.716†	2396.5	0.2792	mg/L	0.00321	0.5584	mg/L	0.00642	1.15%
Cu 324.752†	48326.7	0.2319	mg/L	0.00181	0.4639	mg/L	0.00362	0.78%
Fe 273.955†	359527.9	217.9	mg/L	2.26	435.8	mg/L	4.52	1.04%
K 766.490†	19892.7	11.97	mg/L	0.086	23.93	mg/L	0.171	0.72%
Mg 279.077†	74842.4	46.76	mg/L	0.232	93.52	mg/L	0.463	0.50%
Mn 257.610†	150668.4	2.994	mg/L	0.0116	5.988	mg/L	0.0232	0.39%
Mo 202.031†	124.1	0.00786	mg/L	0.000167	0.01573	mg/L	0.000335	2.13%
Na 589.592†	52110.9	9.374	mg/L	0.0422	18.75	mg/L	0.084	0.45%
Na 330.237†	178.3	9.137	mg/L	0.2600	18.27	mg/L	0.520	2.84%
Ni 231.604†	894.3	0.2484	mg/L	0.00311	0.4968	mg/L	0.00623	1.25%
Pb 220.353†	71.1	0.05322	mg/L	0.000568	0.1064	mg/L	0.00114	1.07%
Sb 206.836†	247.3	0.1030	mg/L	0.00129	0.2061	mg/L	0.00258	1.25%
Se 196.026†	18.0	0.00788	mg/L	0.005048	0.01575	mg/L	0.010097	64.10%
Si 288.158†	23449.0	15.13	mg/L	0.136	30.26	mg/L	0.271	0.90%
Sn 189.927†	-105.8	-0.01514	mg/L	0.000822	-0.03029	mg/L	0.001645	5.43%
Sr 421.552†	238779.8	0.4453	mg/L	0.00302	0.8906	mg/L	0.00605	0.68%
Ti 334.903†	188442.0	9.923	mg/L	0.0508	19.85	mg/L	0.102	0.51%
Tl 190.801†	-33.5	-0.01899	mg/L	0.003435	-0.03798	mg/L	0.006869	18.09%
V 292.402†	78810.8	0.4767	mg/L	0.00362	0.9533	mg/L	0.00724	0.76%
Zn 206.200†	1671.6	0.4473	mg/L	0.00351	0.8947	mg/L	0.00701	0.78%

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Sequence No.: 6
Sample ID: 20K0183-04

Dilution: 2X
Wash Time: 37

Autosampler Location: 337
Date Collected: 12/3/2020 6:18:54 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0183-04

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0183-04

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2061264.0	95.04	%	0.663				0.70%
ScR 361.383	220292.3	94.68	%	0.435				0.46%
Ag 328.068†	-29.5	-0.00026	mg/L	0.000165	-0.00051	mg/L	0.000330	64.47%
Al 308.215†	229193.5	171.6	mg/L	0.67	343.3	mg/L	1.34	0.39%
As 188.979†	-1050.1	0.4220	mg/L	0.01745	0.8441	mg/L	0.03489	4.13%
B 249.677†	285.2	0.02745	mg/L	0.001704	0.05489	mg/L	0.003407	6.21%
Ba 233.527†	4605.3	0.5976	mg/L	0.00132	1.195	mg/L	0.0026	0.22%
Be 313.042†	2870.2	0.00297	mg/L	0.000025	0.00594	mg/L	0.000050	0.84%
Ca 317.933†	657862.0	53.83	mg/L	0.224	107.7	mg/L	0.45	0.42%
Cd 228.802†	149.3	0.00797	mg/L	0.000178	0.01593	mg/L	0.000357	2.24%
Co 228.616†	3167.6	0.06680	mg/L	0.000953	0.1336	mg/L	0.00191	1.43%
Cr 267.716†	2382.7	0.2768	mg/L	0.00120	0.5536	mg/L	0.00240	0.43%
Cu 324.752†	64037.9	0.3039	mg/L	0.00045	0.6078	mg/L	0.00090	0.15%
Fe 273.955†	311707.3	188.9	mg/L	1.51	377.8	mg/L	3.01	0.80%
K 766.490†	24175.8	14.54	mg/L	0.024	29.08	mg/L	0.048	0.16%
Mg 279.077†	79388.0	49.61	mg/L	0.161	99.23	mg/L	0.322	0.32%
Mn 257.610†	109813.2	2.181	mg/L	0.0084	4.363	mg/L	0.0169	0.39%
Mo 202.031†	228.2	0.01536	mg/L	0.000083	0.03073	mg/L	0.000166	0.54%
Na 589.592†	73869.6	13.29	mg/L	0.055	26.58	mg/L	0.110	0.41%
Na 330.237†	281.7	13.36	mg/L	0.172	26.71	mg/L	0.344	1.29%
Ni 231.604†	708.8	0.1969	mg/L	0.00246	0.3938	mg/L	0.00493	1.25%
Pb 220.353†	303.7	0.08342	mg/L	0.001712	0.1668	mg/L	0.00342	2.05%
Sb 206.836†	249.2	0.1057	mg/L	0.00109	0.2115	mg/L	0.00219	1.03%
Se 196.026†	25.4	0.01369	mg/L	0.002521	0.02738	mg/L	0.005043	18.42%
Si 288.158†	24032.8	15.49	mg/L	0.039	30.99	mg/L	0.078	0.25%
Sn 189.927†	-93.1	-0.01040	mg/L	0.002949	-0.02079	mg/L	0.005898	28.37%
Sr 421.552†	293125.6	0.5467	mg/L	0.00259	1.093	mg/L	0.0052	0.47%
Ti 334.903†	185113.5	9.747	mg/L	0.0257	19.49	mg/L	0.051	0.26%
Tl 190.801†	-13.9	-0.00925	mg/L	0.004911	-0.01851	mg/L	0.009821	53.06%
V 292.402†	85831.1	0.5187	mg/L	0.00139	1.037	mg/L	0.0028	0.27%
Zn 206.200†	1840.5	0.4925	mg/L	0.00233	0.9851	mg/L	0.00466	0.47%

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Sequence No.: 7
Sample ID: 20K0199-01

Dilution: 5X
Wash Time: 37

Autosampler Location: 338
Date Collected: 12/3/2020 6:22:57 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0199-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0199-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1984292.4	91.49	%	0.561				0.61%
ScR 361.383	215708.3	92.71	%	0.728				0.79%
Ag 328.068†	161.5	0.00080	mg/L	0.000169	0.00400	mg/L	0.000843	21.08%
Al 308.215†	64.0	0.04788	mg/L	0.004614	0.2394	mg/L	0.02307	9.64%
As 188.979†	30.0	0.01937	mg/L	0.003486	0.09683	mg/L	0.017428	18.00%
B 249.677†	167.9	0.02952	mg/L	0.001384	0.1476	mg/L	0.00692	4.69%
Ba 233.527†	444.8	0.06025	mg/L	0.001198	0.3012	mg/L	0.00599	1.99%
Be 313.042†	198.5	0.00027	mg/L	0.000017	0.00133	mg/L	0.000085	6.44%
Ca 317.933†	127516.1	10.44	mg/L	0.069	52.18	mg/L	0.347	0.67%
Cd 228.802†	38.1	0.00115	mg/L	0.000137	0.00575	mg/L	0.000683	11.89%
Co 228.616†	314.9	0.00871	mg/L	0.000213	0.04356	mg/L	0.001067	2.45%
Cr 267.716†	-14.9	-0.00203	mg/L	0.001216	-0.01017	mg/L	0.006079	59.75%
Cu 324.752†	3658.2	0.01702	mg/L	0.000080	0.08509	mg/L	0.000401	0.47%
Fe 273.955†	85.3	0.05170	mg/L	0.003883	0.2585	mg/L	0.01941	7.51%
K 766.490†	1519.7	0.9141	mg/L	0.04443	4.571	mg/L	0.2222	4.86%
Mg 279.077†	5190.6	3.250	mg/L	0.0183	16.25	mg/L	0.092	0.56%
Mn 257.610†	38505.0	0.7658	mg/L	0.00431	3.829	mg/L	0.0216	0.56%
Mo 202.031†	32.1	0.00216	mg/L	0.000146	0.01082	mg/L	0.000728	6.73%
Na 589.592†	1531312.4	275.5	mg/L	2.77	1377	mg/L	13.83	1.00%
Na 330.237†	6732.3	278.2	mg/L	0.66	1391	mg/L	3.32	0.24%
Ni 231.604†	2.8	0.00079	mg/L	0.002377	0.00394	mg/L	0.011884	301.79%
Pb 220.353†	95.9	0.01243	mg/L	0.000385	0.06214	mg/L	0.001926	3.10%
Sb 206.836†	38.8	0.01589	mg/L	0.001455	0.07947	mg/L	0.007275	9.15%
Se 196.026†	8.6	0.00528	mg/L	0.005952	0.02638	mg/L	0.029758	112.82%
Si 288.158†	4466.6	2.880	mg/L	0.0184	14.40	mg/L	0.092	0.64%
Sn 189.927†	-27.2	-0.00520	mg/L	0.002152	-0.02599	mg/L	0.010762	41.41%
Sr 421.552†	48544.2	0.09053	mg/L	0.000654	0.4527	mg/L	0.00327	0.72%
Ti 334.903†	73.6	0.00342	mg/L	0.000450	0.01711	mg/L	0.002249	13.14%
Tl 190.801†	-4.7	-0.00238	mg/L	0.001332	-0.01192	mg/L	0.006660	55.85%
V 292.402†	352.4	0.00212	mg/L	0.000207	0.01062	mg/L	0.001037	9.76%
Zn 206.200†	142.7	0.03819	mg/L	0.000050	0.1909	mg/L	0.00025	0.13%

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Sequence No.: 8 **Autosampler Location: 339**
Sample ID: 20K0199-02 **Date Collected: 12/3/2020 6:27:31 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0199-02

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0199-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2002001.4	92.31	%	0.457				0.50%
ScR 361.383	215170.3	92.48	%	0.397				0.43%
Ag 328.068†	190.2	0.00096	mg/L	0.000212	0.00479	mg/L	0.001060	22.12%
Al 308.215†	42.4	0.03169	mg/L	0.007107	0.1585	mg/L	0.03554	22.43%
As 188.979†	13.9	0.00893	mg/L	0.002219	0.04463	mg/L	0.011093	24.86%
B 249.677†	230.1	0.04124	mg/L	0.002675	0.2062	mg/L	0.01338	6.49%
Ba 233.527†	446.8	0.06052	mg/L	0.000723	0.3026	mg/L	0.00362	1.20%
Be 313.042†	225.7	0.00030	mg/L	0.000036	0.00152	mg/L	0.000181	11.93%
Ca 317.933†	125166.1	10.24	mg/L	0.052	51.21	mg/L	0.262	0.51%
Cd 228.802†	28.2	0.00087	mg/L	0.000034	0.00437	mg/L	0.000172	3.93%
Co 228.616†	324.7	0.00899	mg/L	0.000131	0.04493	mg/L	0.000657	1.46%
Cr 267.716†	-33.0	-0.00408	mg/L	0.000868	-0.02040	mg/L	0.004339	21.27%
Cu 324.752†	2494.6	0.01160	mg/L	0.000098	0.05800	mg/L	0.000491	0.85%
Fe 273.955†	108.6	0.06582	mg/L	0.003173	0.3291	mg/L	0.01587	4.82%
K 766.490†	1531.3	0.9211	mg/L	0.03460	4.605	mg/L	0.1730	3.76%
Mg 279.077†	4945.2	3.096	mg/L	0.0158	15.48	mg/L	0.079	0.51%
Mn 257.610†	36608.6	0.7281	mg/L	0.00277	3.640	mg/L	0.0138	0.38%
Mo 202.031†	29.7	0.00199	mg/L	0.000289	0.00995	mg/L	0.001445	14.52%
Na 589.592†	1548053.9	278.5	mg/L	2.46	1392	mg/L	12.28	0.88%
Na 330.237†	6796.6	280.9	mg/L	1.09	1405	mg/L	5.44	0.39%
Ni 231.604†	-1.1	-0.00030	mg/L	0.000753	-0.00152	mg/L	0.003767	248.44%
Pb 220.353†	9.4	0.00120	mg/L	0.000427	0.00601	mg/L	0.002136	35.55%
Sb 206.836†	27.3	0.01123	mg/L	0.000576	0.05613	mg/L	0.002881	5.13%
Se 196.026†	15.5	0.01067	mg/L	0.002718	0.05335	mg/L	0.013589	25.47%
Si 288.158†	4205.7	2.712	mg/L	0.0157	13.56	mg/L	0.079	0.58%
Sn 189.927†	-29.4	-0.00580	mg/L	0.001075	-0.02901	mg/L	0.005374	18.52%
Sr 421.552†	46116.4	0.08601	mg/L	0.000256	0.4300	mg/L	0.00128	0.30%
Ti 334.903†	41.5	0.00175	mg/L	0.000247	0.00873	mg/L	0.001237	14.18%
Tl 190.801†	0.9	0.00038	mg/L	0.001950	0.00188	mg/L	0.009752	519.76%
V 292.402†	290.5	0.00174	mg/L	0.000189	0.00871	mg/L	0.000943	10.83%
Zn 206.200†	126.5	0.03384	mg/L	0.001274	0.1692	mg/L	0.00637	3.77%

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Sequence No.: 9 **Autosampler Location: 340**
Sample ID: 20K0199-03 **Date Collected: 12/3/2020 6:32:03 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0199-03

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0199-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1979290.5	91.26	%	0.732				0.80%
ScR 361.383	216057.7	92.86	%	0.764				0.82%
Ag 328.068†	186.5	0.00095	mg/L	0.000206	0.00475	mg/L	0.001030	21.67%
Al 308.215†	76.3	0.05706	mg/L	0.007941	0.2853	mg/L	0.03971	13.92%
As 188.979†	16.2	0.01033	mg/L	0.003550	0.05165	mg/L	0.017750	34.36%
B 249.677†	163.4	0.02852	mg/L	0.001747	0.1426	mg/L	0.00874	6.13%
Ba 233.527†	431.7	0.05848	mg/L	0.001010	0.2924	mg/L	0.00505	1.73%
Be 313.042†	187.4	0.00025	mg/L	0.000020	0.00125	mg/L	0.000102	8.13%
Ca 317.933†	125420.9	10.26	mg/L	0.130	51.32	mg/L	0.648	1.26%
Cd 228.802†	36.5	0.00114	mg/L	0.000085	0.00568	mg/L	0.000427	7.52%
Co 228.616†	289.4	0.00801	mg/L	0.000312	0.04005	mg/L	0.001561	3.90%
Cr 267.716†	-32.7	-0.00401	mg/L	0.001244	-0.02004	mg/L	0.006222	31.05%
Cu 324.752†	2803.3	0.01304	mg/L	0.000177	0.06519	mg/L	0.000883	1.35%
Fe 273.955†	67.0	0.04060	mg/L	0.002939	0.2030	mg/L	0.01470	7.24%
K 766.490†	1434.8	0.8631	mg/L	0.01964	4.315	mg/L	0.0982	2.28%
Mg 279.077†	4893.7	3.063	mg/L	0.0276	15.32	mg/L	0.138	0.90%
Mn 257.610†	30232.7	0.6013	mg/L	0.00919	3.006	mg/L	0.0460	1.53%
Mo 202.031†	27.7	0.00184	mg/L	0.000085	0.00922	mg/L	0.000427	4.63%
Na 589.592†	1576581.4	283.6	mg/L	2.78	1418	mg/L	13.91	0.98%
Na 330.237†	6783.1	280.3	mg/L	4.07	1402	mg/L	20.34	1.45%
Ni 231.604†	-1.5	-0.00042	mg/L	0.001952	-0.00209	mg/L	0.009759	467.63%
Pb 220.353†	26.7	0.00345	mg/L	0.000545	0.01727	mg/L	0.002727	15.79%
Sb 206.836†	38.6	0.01586	mg/L	0.000945	0.07930	mg/L	0.004726	5.96%
Se 196.026†	10.3	0.00670	mg/L	0.004385	0.03348	mg/L	0.021926	65.48%
Si 288.158†	4891.9	3.153	mg/L	0.0260	15.77	mg/L	0.130	0.83%
Sn 189.927†	-26.8	-0.00510	mg/L	0.000751	-0.02552	mg/L	0.003753	14.70%
Sr 421.552†	42257.3	0.07881	mg/L	0.001220	0.3940	mg/L	0.00610	1.55%
Ti 334.903†	36.1	0.00146	mg/L	0.001272	0.00728	mg/L	0.006358	87.38%
Tl 190.801†	-2.6	-0.00132	mg/L	0.000456	-0.00659	mg/L	0.002281	34.61%
V 292.402†	319.0	0.00191	mg/L	0.000138	0.00957	mg/L	0.000689	7.20%
Zn 206.200†	139.9	0.03745	mg/L	0.000726	0.1872	mg/L	0.00363	1.94%

Sequence No.: 10
Sample ID: 20K0200-01
Dilution: 5X
Wash Time: 37

Autosampler Location: 341
Date Collected: 12/3/2020 6:36:35 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0200-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0200-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1979787.7	91.28	%	0.238				0.26%
ScR 361.383	216876.8	93.22	%	0.414				0.44%
Ag 328.068†	94.6	0.00044	mg/L	0.000127	0.00219	mg/L	0.000634	28.99%
Al 308.215†	-60.6	-0.04552	mg/L	0.002744	-0.2276	mg/L	0.01372	6.03%
As 188.979†	21.3	0.01336	mg/L	0.001824	0.06682	mg/L	0.009119	13.65%
B 249.677†	157.9	0.02902	mg/L	0.001753	0.1451	mg/L	0.00876	6.04%
Ba 233.527†	329.2	0.04449	mg/L	0.000675	0.2225	mg/L	0.00338	1.52%
Be 313.042†	133.2	0.00018	mg/L	0.000059	0.00089	mg/L	0.000293	32.95%
Ca 317.933†	224928.1	18.41	mg/L	0.309	92.03	mg/L	1.543	1.68%
Cd 228.802†	30.5	0.00093	mg/L	0.000079	0.00463	mg/L	0.000394	8.51%
Co 228.616†	246.9	0.00683	mg/L	0.000221	0.03417	mg/L	0.001104	3.23%
Cr 267.716†	-33.2	-0.00626	mg/L	0.000643	-0.03130	mg/L	0.003217	10.28%
Cu 324.752†	695.9	0.00261	mg/L	0.000160	0.01306	mg/L	0.000801	6.14%
Fe 273.955†	136.0	0.08240	mg/L	0.001847	0.4120	mg/L	0.00923	2.24%
K 766.490†	1426.1	0.8578	mg/L	0.01304	4.289	mg/L	0.0652	1.52%
Mg 279.077†	124366.1	77.81	mg/L	0.660	389.0	mg/L	3.30	0.85%
Mn 257.610†	38964.2	0.7747	mg/L	0.00718	3.873	mg/L	0.0359	0.93%
Mo 202.031†	76.7	0.00441	mg/L	0.000404	0.02207	mg/L	0.002018	9.14%
Na 589.592†	1583030.0	284.8	mg/L	1.64	1424	mg/L	8.20	0.58%
Na 330.237†	6875.2	284.2	mg/L	2.57	1421	mg/L	12.84	0.90%
Ni 231.604†	-0.4	-0.00010	mg/L	0.001087	-0.00049	mg/L	0.005436	>999.9%
Pb 220.353†	755.6	0.09804	mg/L	0.000417	0.4902	mg/L	0.00208	0.42%
Sb 206.836†	43.2	0.01768	mg/L	0.002329	0.08842	mg/L	0.011646	13.17%
Se 196.026†	15.7	0.01010	mg/L	0.005501	0.05052	mg/L	0.027504	54.44%
Si 288.158†	1090.9	0.7192	mg/L	0.00666	3.596	mg/L	0.0333	0.93%
Sn 189.927†	-47.1	-0.00893	mg/L	0.000434	-0.04467	mg/L	0.002171	4.86%
Sr 421.552†	41163.4	0.07677	mg/L	0.000615	0.3838	mg/L	0.00307	0.80%
Ti 334.903†	37.0	0.00115	mg/L	0.000474	0.00575	mg/L	0.002371	41.20%
Tl 190.801†	-5.3	-0.00267	mg/L	0.000776	-0.01335	mg/L	0.003879	29.05%
V 292.402†	267.3	0.00161	mg/L	0.000142	0.00803	mg/L	0.000711	8.86%
Zn 206.200†	26.9	0.00721	mg/L	0.000603	0.03604	mg/L	0.003016	8.37%

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Sequence No.: 11
Sample ID: 20K0200-02

Dilution: 5X
Wash Time: 37

Autosampler Location: 342
Date Collected: 12/3/2020 6:41:07 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0200-02

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0200-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1995408.7	92.00	%	0.652				0.71%
ScR 361.383	215683.7	92.70	%	0.355				0.38%
Ag 328.068†	128.7	0.00061	mg/L	0.000374	0.00305	mg/L	0.001872	61.31%
Al 308.215†	-65.9	-0.04944	mg/L	0.007606	-0.2472	mg/L	0.03803	15.38%
As 188.979†	7.8	0.00480	mg/L	0.001600	0.02402	mg/L	0.008001	33.31%
B 249.677†	121.4	0.02220	mg/L	0.000989	0.1110	mg/L	0.00495	4.46%
Ba 233.527†	206.4	0.02783	mg/L	0.000228	0.1391	mg/L	0.00114	0.82%
Be 313.042†	121.8	0.00016	mg/L	0.000026	0.00082	mg/L	0.000130	15.85%
Ca 317.933†	216451.9	17.71	mg/L	0.127	88.57	mg/L	0.637	0.72%
Cd 228.802†	31.4	0.00099	mg/L	0.000133	0.00497	mg/L	0.000665	13.39%
Co 228.616†	340.3	0.00942	mg/L	0.000208	0.04711	mg/L	0.001039	2.21%
Cr 267.716†	-28.0	-0.00564	mg/L	0.001166	-0.02821	mg/L	0.005829	20.66%
Cu 324.752†	691.9	0.00261	mg/L	0.000192	0.01306	mg/L	0.000960	7.35%
Fe 273.955†	266.9	0.1617	mg/L	0.00367	0.8086	mg/L	0.01836	2.27%
K 766.490†	1287.5	0.7744	mg/L	0.00707	3.872	mg/L	0.0353	0.91%
Mg 279.077†	121599.0	76.07	mg/L	0.554	380.4	mg/L	2.77	0.73%
Mn 257.610†	44786.5	0.8906	mg/L	0.00640	4.453	mg/L	0.0320	0.72%
Mo 202.031†	78.3	0.00456	mg/L	0.000254	0.02281	mg/L	0.001271	5.57%
Na 589.592†	1556221.7	280.0	mg/L	2.23	1400	mg/L	11.16	0.80%
Na 330.237†	6625.0	273.8	mg/L	1.47	1369	mg/L	7.35	0.54%
Ni 231.604†	-3.3	-0.00092	mg/L	0.001068	-0.00460	mg/L	0.005340	116.16%
Pb 220.353†	3539.6	0.4593	mg/L	0.00430	2.297	mg/L	0.0215	0.94%
Sb 206.836†	35.7	0.01459	mg/L	0.001490	0.07297	mg/L	0.007450	10.21%
Se 196.026†	16.6	0.01078	mg/L	0.002592	0.05392	mg/L	0.012961	24.04%
Si 288.158†	1087.9	0.7175	mg/L	0.00154	3.588	mg/L	0.0077	0.21%
Sn 189.927†	-47.7	-0.00920	mg/L	0.000215	-0.04598	mg/L	0.001075	2.34%
Sr 421.552†	39188.9	0.07309	mg/L	0.000478	0.3654	mg/L	0.00239	0.65%
Ti 334.903†	48.6	0.00179	mg/L	0.000841	0.00896	mg/L	0.004207	46.95%
Tl 190.801†	-13.4	-0.00669	mg/L	0.002428	-0.03346	mg/L	0.012139	36.28%
V 292.402†	155.2	0.00093	mg/L	0.000124	0.00466	mg/L	0.000618	13.26%
Zn 206.200†	39.1	0.01047	mg/L	0.000485	0.05236	mg/L	0.002426	4.63%

Sequence No.: 12
Sample ID: 20K0200-03
Autosampler Location: 343
Date Collected: 12/3/2020 6:45:39 PM
Data Type: Original

Dilution: 5X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0200-03

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: 20K0200-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1974460.6	91.04	%	0.583				0.64%
ScR 361.383	214330.0	92.12	%	0.553				0.60%
Ag 328.068†	105.7	0.00057	mg/L	0.000354	0.00286	mg/L	0.001769	61.91%
Al 308.215†	-62.4	-0.04686	mg/L	0.000921	-0.2343	mg/L	0.00460	1.96%
As 188.979†	12.4	0.00764	mg/L	0.002605	0.03818	mg/L	0.013026	34.12%
B 249.677†	67.9	0.01264	mg/L	0.000624	0.06321	mg/L	0.003122	4.94%
Ba 233.527†	141.1	0.01894	mg/L	0.000680	0.09468	mg/L	0.003400	3.59%
Be 313.042†	120.8	0.00016	mg/L	0.000026	0.00081	mg/L	0.000130	16.12%
Ca 317.933†	286238.9	23.42	mg/L	0.053	117.1	mg/L	0.27	0.23%
Cd 228.802†	31.3	0.00098	mg/L	0.000231	0.00488	mg/L	0.001156	23.71%
Co 228.616†	-4.6	-0.00013	mg/L	0.000234	-0.00066	mg/L	0.001171	177.54%
Cr 267.716†	-30.2	-0.00718	mg/L	0.001250	-0.03590	mg/L	0.006249	17.40%
Cu 324.752†	768.2	0.00252	mg/L	0.000131	0.01258	mg/L	0.000654	5.19%
Fe 273.955†	-2.2	-0.00136	mg/L	0.003249	-0.00681	mg/L	0.016244	238.54%
K 766.490†	1081.9	0.6508	mg/L	0.02836	3.254	mg/L	0.1418	4.36%
Mg 279.077†	208261.4	130.3	mg/L	0.96	651.4	mg/L	4.81	0.74%
Mn 257.610†	25.5	0.00006	mg/L	0.000119	0.00028	mg/L	0.000593	213.06%
Mo 202.031†	96.4	0.00515	mg/L	0.000248	0.02575	mg/L	0.001240	4.82%
Na 589.592†	1559039.7	280.5	mg/L	2.45	1402	mg/L	12.27	0.87%
Na 330.237†	6734.0	278.3	mg/L	1.60	1392	mg/L	7.98	0.57%
Ni 231.604†	-18.1	-0.00500	mg/L	0.000483	-0.02498	mg/L	0.002415	9.67%
Pb 220.353†	-8.0	-0.00106	mg/L	0.001467	-0.00530	mg/L	0.007336	138.41%
Sb 206.836†	40.1	0.01641	mg/L	0.002099	0.08205	mg/L	0.010495	12.79%
Se 196.026†	16.8	0.01119	mg/L	0.003695	0.05593	mg/L	0.018475	33.03%
Si 288.158†	132.2	0.1058	mg/L	0.00966	0.5292	mg/L	0.04831	9.13%
Sn 189.927†	-61.6	-0.01179	mg/L	0.001244	-0.05894	mg/L	0.006219	10.55%
Sr 421.552†	32506.8	0.06062	mg/L	0.000537	0.3031	mg/L	0.00268	0.89%
Ti 334.903†	46.1	0.00141	mg/L	0.000396	0.00706	mg/L	0.001979	28.04%
Tl 190.801†	-13.6	-0.00676	mg/L	0.000922	-0.03378	mg/L	0.004609	13.64%
V 292.402†	222.5	0.00134	mg/L	0.000130	0.00668	mg/L	0.000650	9.73%
Zn 206.200†	13.7	0.00367	mg/L	0.001387	0.01836	mg/L	0.006933	37.76%

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Sequence No.: 13 **Autosampler Location: 7**
Sample ID: SEQ-CCV6 **Date Collected: 12/3/2020 6:50:11 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV6

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-CCV6

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2063972.2	95.17	%	0.142				0.15%
ScR 361.383	216920.0	93.23	%	0.775				0.83%
Ag 328.068†	185869.3	1.004	mg/L	0.0006	1.004	mg/L	0.0006	0.06%
Al 308.215†	2693.9	1.985	mg/L	0.0115	1.985	mg/L	0.0115	0.58%
As 188.979†	3026.4	2.052	mg/L	0.0004	2.052	mg/L	0.0004	0.02%
B 249.677†	5622.0	1.046	mg/L	0.0078	1.046	mg/L	0.0078	0.74%
Ba 233.527†	7625.7	1.033	mg/L	0.0076	1.033	mg/L	0.0076	0.73%
Be 313.042†	755548.8	1.023	mg/L	0.0034	1.023	mg/L	0.0034	0.33%
Ca 317.933†	23877.8	1.877	mg/L	0.0071	1.877	mg/L	0.0071	0.38%
Cd 228.802†	31474.7	1.013	mg/L	0.0032	1.013	mg/L	0.0032	0.32%
Co 228.616†	37108.0	1.027	mg/L	0.0008	1.027	mg/L	0.0008	0.08%
Cr 267.716†	9055.5	1.034	mg/L	0.0083	1.034	mg/L	0.0083	0.80%
Cu 324.752†	208983.1	0.9732	mg/L	0.00275	0.9732	mg/L	0.00275	0.28%
Fe 273.955†	3382.8	2.046	mg/L	0.0203	2.046	mg/L	0.0203	0.99%
K 766.490†	33378.1	20.08	mg/L	0.140	20.08	mg/L	0.140	0.70%
Mg 279.077†	3262.2	2.058	mg/L	0.0075	2.058	mg/L	0.0075	0.36%
Mn 257.610†	49495.3	0.9846	mg/L	0.00613	0.9846	mg/L	0.00613	0.62%
Mo 202.031†	14678.4	1.080	mg/L	0.0009	1.080	mg/L	0.0009	0.08%
Na 589.592†	286241.2	51.49	mg/L	0.745	51.49	mg/L	0.745	1.45%
Na 330.237†	1262.7	52.02	mg/L	0.156	52.02	mg/L	0.156	0.30%
Ni 231.604†	3698.2	1.029	mg/L	0.0077	1.029	mg/L	0.0077	0.75%
Pb 220.353†	16025.5	2.081	mg/L	0.0033	2.081	mg/L	0.0033	0.16%
Sb 206.836†	5629.1	2.308	mg/L	0.0033	2.308	mg/L	0.0033	0.14%
Se 196.026†	2656.5	2.073	mg/L	0.0023	2.073	mg/L	0.0023	0.11%
Si 288.158†	3409.0	2.199	mg/L	0.0160	2.199	mg/L	0.0160	0.73%
Sn 189.927†	4282.3	1.120	mg/L	0.0026	1.120	mg/L	0.0026	0.23%
Sr 421.552†	549562.9	1.025	mg/L	0.0071	1.025	mg/L	0.0071	0.69%
Ti 334.903†	20303.8	1.068	mg/L	0.0037	1.068	mg/L	0.0037	0.34%
Tl 190.801†	4106.4	2.030	mg/L	0.0060	2.030	mg/L	0.0060	0.30%
V 292.402†	163672.3	0.9930	mg/L	0.00053	0.9930	mg/L	0.00053	0.05%
Zn 206.200†	3902.8	1.045	mg/L	0.0082	1.045	mg/L	0.0082	0.78%

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Sequence No.: 14
Sample ID: SEQ-CCB6

Autosampler Location: 1
Date Collected: 12/3/2020 6:55:38 PM
Data Type: Original

Dilution: 1X
Wash Time: 120

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB6

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-CCB6

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2072801.1	95.57	%	0.475				0.50%
ScR 361.383	221139.0	95.05	%	0.152				0.16%
Ag 328.068†	139.5	0.00075	mg/L	0.000329	0.00075	mg/L	0.000329	43.71%
Al 308.215†	-43.0	-0.03226	mg/L	0.018699	-0.03226	mg/L	0.018699	57.96%
As 188.979†	2.0	0.00144	mg/L	0.002695	0.00144	mg/L	0.002695	186.62%
B 249.677†	-23.3	-0.00431	mg/L	0.001242	-0.00431	mg/L	0.001242	28.83%
Ba 233.527†	0.7	0.00009	mg/L	0.000215	0.00009	mg/L	0.000215	228.41%
Be 313.042†	127.7	0.00017	mg/L	0.000026	0.00017	mg/L	0.000026	15.38%
Ca 317.933†	34.8	0.00279	mg/L	0.000984	0.00279	mg/L	0.000984	35.30%
Cd 228.802†	18.2	0.00058	mg/L	0.000134	0.00058	mg/L	0.000134	23.17%
Co 228.616†	15.9	0.00044	mg/L	0.000220	0.00044	mg/L	0.000220	49.96%
Cr 267.716†	-27.4	-0.00313	mg/L	0.000768	-0.00313	mg/L	0.000768	24.53%
Cu 324.752†	391.0	0.00182	mg/L	0.000089	0.00182	mg/L	0.000089	4.90%
Fe 273.955†	3.2	0.00191	mg/L	0.000888	0.00191	mg/L	0.000888	46.52%
K 766.490†	45.9	0.02762	mg/L	0.032355	0.02762	mg/L	0.032355	117.14%
Mg 279.077†	-30.6	-0.01909	mg/L	0.008655	-0.01909	mg/L	0.008655	45.33%
Mn 257.610†	20.3	0.00040	mg/L	0.000108	0.00040	mg/L	0.000108	26.74%
Mo 202.031†	47.1	0.00347	mg/L	0.001395	0.00347	mg/L	0.001395	40.23%
Na 589.592†	316.6	0.05696	mg/L	0.009972	0.05696	mg/L	0.009972	17.51%
Na 330.237†	-16.1	-0.6646	mg/L	0.57152	-0.6646	mg/L	0.57152	86.00%
Ni 231.604†	-16.4	-0.00456	mg/L	0.001347	-0.00456	mg/L	0.001347	29.56%
Pb 220.353†	-13.1	-0.00172	mg/L	0.000726	-0.00172	mg/L	0.000726	42.21%
Sb 206.836†	21.6	0.00891	mg/L	0.001424	0.00891	mg/L	0.001424	15.99%
Se 196.026†	7.7	0.00604	mg/L	0.004974	0.00604	mg/L	0.004974	82.31%
Si 288.158†	-112.8	-0.07259	mg/L	0.001791	-0.07259	mg/L	0.001791	2.47%
Sn 189.927†	-0.4	-0.00010	mg/L	0.000315	-0.00010	mg/L	0.000315	304.18%
Sr 421.552†	126.9	0.00024	mg/L	0.000078	0.00024	mg/L	0.000078	32.80%
Ti 334.903†	26.3	0.00138	mg/L	0.001538	0.00138	mg/L	0.001538	111.19%
Tl 190.801†	1.6	0.00082	mg/L	0.002504	0.00082	mg/L	0.002504	305.69%
V 292.402†	196.6	0.00118	mg/L	0.000263	0.00118	mg/L	0.000263	22.35%
Zn 206.200†	1.9	0.00050	mg/L	0.000507	0.00050	mg/L	0.000507	101.66%

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Sequence No.: 15 **Autosampler Location: 344**
Sample ID: BIL0006-BLK1 **Date Collected: 12/3/2020 6:59:54 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIL0006-BLK1

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: BIL0006-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2022688.8	93.26	%	0.955				1.02%
ScR 361.383	212072.1	91.15	%	0.755				0.83%
Ag 328.068†	126.7	0.00068	mg/L	0.000132	0.00342	mg/L	0.000662	19.32%
Al 308.215†	-87.5	-0.06554	mg/L	0.004847	-0.3277	mg/L	0.02423	7.39%
As 188.979†	2.5	0.00167	mg/L	0.002412	0.00837	mg/L	0.012060	144.09%
B 249.677†	46.6	0.00875	mg/L	0.001925	0.04375	mg/L	0.009627	22.00%
Ba 233.527†	7.5	0.00101	mg/L	0.000526	0.00507	mg/L	0.002629	51.86%
Be 313.042†	190.2	0.00026	mg/L	0.000022	0.00128	mg/L	0.000108	8.42%
Ca 317.933†	902.8	0.07382	mg/L	0.002298	0.3691	mg/L	0.01149	3.11%
Cd 228.802†	16.0	0.00051	mg/L	0.000136	0.00256	mg/L	0.000682	26.65%
Co 228.616†	18.1	0.00050	mg/L	0.000194	0.00250	mg/L	0.000971	38.86%
Cr 267.716†	-24.9	-0.00284	mg/L	0.001056	-0.01421	mg/L	0.005279	37.15%
Cu 324.752†	490.2	0.00228	mg/L	0.000091	0.01142	mg/L	0.000457	4.00%
Fe 273.955†	7.8	0.00469	mg/L	0.001089	0.02346	mg/L	0.005447	23.22%
K 766.490†	167.3	0.1006	mg/L	0.01709	0.5031	mg/L	0.08546	16.99%
Mg 279.077†	-40.7	-0.02545	mg/L	0.007174	-0.1272	mg/L	0.03587	28.19%
Mn 257.610†	24.9	0.00050	mg/L	0.000098	0.00248	mg/L	0.000490	19.81%
Mo 202.031†	14.8	0.00109	mg/L	0.000336	0.00545	mg/L	0.001678	30.81%
Na 589.592†	1508076.1	271.3	mg/L	2.52	1356	mg/L	12.62	0.93%
Na 330.237†	6482.7	267.9	mg/L	0.93	1340	mg/L	4.64	0.35%
Ni 231.604†	0.3	0.00008	mg/L	0.002774	0.00042	mg/L	0.013871	>999.9%
Pb 220.353†	-2.6	-0.00037	mg/L	0.001251	-0.00184	mg/L	0.006256	340.19%
Sb 206.836†	19.0	0.00786	mg/L	0.003354	0.03929	mg/L	0.016772	42.69%
Se 196.026†	3.7	0.00287	mg/L	0.002514	0.01437	mg/L	0.012572	87.48%
Si 288.158†	-123.1	-0.07923	mg/L	0.005670	-0.3961	mg/L	0.02835	7.16%
Sn 189.927†	-0.9	-0.00022	mg/L	0.000795	-0.00110	mg/L	0.003976	361.90%
Sr 421.552†	239.1	0.00045	mg/L	0.000051	0.00223	mg/L	0.000257	11.54%
Ti 334.903†	16.9	0.00089	mg/L	0.000420	0.00443	mg/L	0.002100	47.38%
Tl 190.801†	-1.8	-0.00090	mg/L	0.001913	-0.00452	mg/L	0.009565	211.69%
V 292.402†	231.8	0.00139	mg/L	0.000096	0.00695	mg/L	0.000481	6.92%
Zn 206.200†	4.3	0.00115	mg/L	0.001122	0.00577	mg/L	0.005609	97.26%

Sequence No.: 16 **Autosampler Location: 345**
Sample ID: 20K0394-02 **Date Collected: 12/3/2020 7:04:26 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0394-02

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0394-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1970941.4	90.88	%	0.509				0.56%
ScR 361.383	215273.4	92.53	%	0.282				0.30%
Ag 328.068†	148.0	0.00077	mg/L	0.000124	0.00387	mg/L	0.000621	16.06%
Al 308.215†	169.4	0.1268	mg/L	0.00460	0.6339	mg/L	0.02298	3.62%
As 188.979†	62.6	0.04018	mg/L	0.003544	0.2009	mg/L	0.01772	8.82%
B 249.677†	65.9	0.01138	mg/L	0.000631	0.05688	mg/L	0.003156	5.55%
Ba 233.527†	255.5	0.03453	mg/L	0.001021	0.1726	mg/L	0.00511	2.96%
Be 313.042†	158.8	0.00021	mg/L	0.000032	0.00105	mg/L	0.000162	15.36%
Ca 317.933†	153061.2	12.53	mg/L	0.051	62.63	mg/L	0.255	0.41%
Cd 228.802†	57.0	0.00167	mg/L	0.000192	0.00836	mg/L	0.000960	11.48%
Co 228.616†	89.7	0.00247	mg/L	0.000148	0.01235	mg/L	0.000738	5.98%
Cr 267.716†	490.6	0.05593	mg/L	0.000617	0.2797	mg/L	0.00309	1.10%
Cu 324.752†	136716.0	0.6369	mg/L	0.00426	3.185	mg/L	0.0213	0.67%
Fe 273.955†	334.6	0.2028	mg/L	0.00339	1.014	mg/L	0.0170	1.67%
K 766.490†	1528.2	0.9192	mg/L	0.01508	4.596	mg/L	0.0754	1.64%
Mg 279.077†	1489.9	0.9329	mg/L	0.00243	4.665	mg/L	0.0121	0.26%
Mn 257.610†	14122.4	0.2809	mg/L	0.00157	1.404	mg/L	0.0079	0.56%
Mo 202.031†	31.6	0.00212	mg/L	0.000275	0.01062	mg/L	0.001373	12.93%
Na 589.592†	1570753.0	282.6	mg/L	2.74	1413	mg/L	13.71	0.97%
Na 330.237†	6663.8	275.4	mg/L	0.75	1377	mg/L	3.76	0.27%
Ni 231.604†	8.3	0.00232	mg/L	0.001736	0.01161	mg/L	0.008680	74.78%
Pb 220.353†	5.2	-0.00012	mg/L	0.000675	-0.00060	mg/L	0.003373	565.27%
Sb 206.836†	34.5	0.01336	mg/L	0.001556	0.06679	mg/L	0.007779	11.65%
Se 196.026†	10.8	0.00718	mg/L	0.005141	0.03588	mg/L	0.025707	71.65%
Si 288.158†	2243.7	1.448	mg/L	0.0034	7.239	mg/L	0.0171	0.24%
Sn 189.927†	-36.9	-0.00734	mg/L	0.000493	-0.03668	mg/L	0.002464	6.72%
Sr 421.552†	29490.2	0.05500	mg/L	0.000319	0.2750	mg/L	0.00159	0.58%
Ti 334.903†	92.2	0.00430	mg/L	0.000260	0.02152	mg/L	0.001302	6.05%
Tl 190.801†	-2.1	-0.00110	mg/L	0.001726	-0.00552	mg/L	0.008629	156.30%
V 292.402†	404.2	0.00266	mg/L	0.000115	0.01329	mg/L	0.000573	4.31%
Zn 206.200†	89.4	0.02394	mg/L	0.000572	0.1197	mg/L	0.00286	2.39%

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Sequence No.: 17 **Autosampler Location: 346**
Sample ID: 20K0394-03 **Date Collected: 12/3/2020 7:08:59 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0394-03

Analyte	**Back Pressure**	**Flow**
All	232.0 kPa	0.65 L/min

Mean Data: 20K0394-03

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	1999882.6	92.21	%	0.313				0.34%
ScR 361.383	212200.3	91.21	%	0.385				0.42%
Ag 328.068†	235.0	0.00123	mg/L	0.000345	0.00617	mg/L	0.001723	27.95%
Al 308.215†	54.4	0.04071	mg/L	0.007235	0.2036	mg/L	0.03618	17.77%
As 188.979†	219.5	0.1405	mg/L	0.00202	0.7023	mg/L	0.01011	1.44%
B 249.677†	34.8	0.00610	mg/L	0.002620	0.03049	mg/L	0.013102	42.97%
Ba 233.527†	262.7	0.03556	mg/L	0.000540	0.1778	mg/L	0.00270	1.52%
Be 313.042†	201.8	0.00027	mg/L	0.000008	0.00135	mg/L	0.000042	3.12%
Ca 317.933†	81346.4	6.657	mg/L	0.0204	33.28	mg/L	0.102	0.31%
Cd 228.802†	140.9	0.00394	mg/L	0.000112	0.01972	mg/L	0.000562	2.85%
Co 228.616†	105.2	0.00291	mg/L	0.000124	0.01454	mg/L	0.000620	4.27%
Cr 267.716†	653.4	0.07450	mg/L	0.001051	0.3725	mg/L	0.00525	1.41%
Cu 324.752†	1386402.6	6.459	mg/L	0.0482	32.29	mg/L	0.241	0.75%
Fe 273.955†	154.7	0.09381	mg/L	0.002159	0.4691	mg/L	0.01080	2.30%
K 766.490†	1872.0	1.126	mg/L	0.0173	5.630	mg/L	0.0867	1.54%
Mg 279.077†	1177.6	0.7379	mg/L	0.00314	3.690	mg/L	0.0157	0.43%
Mn 257.610†	19575.1	0.3893	mg/L	0.00259	1.947	mg/L	0.0130	0.67%
Mo 202.031†	16.1	0.00108	mg/L	0.000309	0.00538	mg/L	0.001544	28.73%
Na 589.592†	1622019.2	291.8	mg/L	2.08	1459	mg/L	10.39	0.71%
Na 330.237†	6937.5	286.7	mg/L	0.69	1434	mg/L	3.47	0.24%
Ni 231.604†	3.2	0.00090	mg/L	0.003219	0.00451	mg/L	0.016097	356.72%
Pb 220.353†	68.1	-0.00057	mg/L	0.000778	-0.00283	mg/L	0.003888	137.25%
Sb 206.836†	34.7	0.01318	mg/L	0.000678	0.06589	mg/L	0.003391	5.15%
Se 196.026†	14.1	0.01016	mg/L	0.001240	0.05080	mg/L	0.006198	12.20%
Si 288.158†	935.3	0.6055	mg/L	0.00275	3.028	mg/L	0.0137	0.45%
Sn 189.927†	-23.5	-0.00493	mg/L	0.000484	-0.02463	mg/L	0.002422	9.84%
Sr 421.552†	24850.6	0.04635	mg/L	0.000265	0.2317	mg/L	0.00133	0.57%
Ti 334.903†	50.8	0.00238	mg/L	0.000409	0.01188	mg/L	0.002043	17.20%
Tl 190.801†	1.6	0.00076	mg/L	0.000916	0.00382	mg/L	0.004581	120.01%
V 292.402†	259.0	0.00185	mg/L	0.000137	0.00925	mg/L	0.000687	7.43%
Zn 206.200†	199.6	0.05342	mg/L	0.000863	0.2671	mg/L	0.00432	1.62%

Sequence No.: 18
Sample ID: 20K0408-01
Autosampler Location: 347
Date Collected: 12/3/2020 7:13:31 PM
Data Type: Original

Dilution: 5X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0408-01

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0408-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1941312.0	89.51	%	0.562				0.63%
ScR 361.383	212018.8	91.13	%	0.718				0.79%
Ag 328.068†	153.5	0.00063	mg/L	0.000291	0.00315	mg/L	0.001454	46.13%
Al 308.215†	-95.6	-0.06230	mg/L	0.012328	-0.3115	mg/L	0.06164	19.79%
As 188.979†	4.2	0.00153	mg/L	0.002888	0.00765	mg/L	0.014442	188.74%
B 249.677†	75.0	0.00859	mg/L	0.000651	0.04297	mg/L	0.003254	7.57%
Ba 233.527†	116.0	0.00985	mg/L	0.000467	0.04924	mg/L	0.002334	4.74%
Be 313.042†	211.5	0.00029	mg/L	0.000016	0.00143	mg/L	0.000080	5.56%
Ca 317.933†	845400.1	69.18	mg/L	0.780	345.9	mg/L	3.90	1.13%
Cd 228.802†	44.5	0.00153	mg/L	0.000193	0.00763	mg/L	0.000964	12.63%
Co 228.616†	694.5	0.01855	mg/L	0.000068	0.09277	mg/L	0.000341	0.37%
Cr 267.716†	-33.7	-0.00342	mg/L	0.000908	-0.01712	mg/L	0.004540	26.52%
Cu 324.752†	399.8	0.00342	mg/L	0.000168	0.01712	mg/L	0.000841	4.91%
Fe 273.955†	62151.9	37.67	mg/L	0.157	188.3	mg/L	0.78	0.42%
K 766.490†	1666.9	1.003	mg/L	0.0131	5.013	mg/L	0.0655	1.31%
Mg 279.077†	14885.6	9.305	mg/L	0.0906	46.52	mg/L	0.453	0.97%
Mn 257.610†	104943.0	2.087	mg/L	0.0225	10.43	mg/L	0.112	1.08%
Mo 202.031†	66.3	0.00371	mg/L	0.000136	0.01854	mg/L	0.000682	3.68%
Na 589.592†	1443106.1	259.6	mg/L	4.04	1298	mg/L	20.19	1.56%
Na 330.237†	6283.4	259.6	mg/L	1.33	1298	mg/L	6.64	0.51%
Ni 231.604†	424.5	0.1179	mg/L	0.00178	0.5894	mg/L	0.00888	1.51%
Pb 220.353†	-0.8	-0.00163	mg/L	0.000867	-0.00813	mg/L	0.004336	53.37%
Sb 206.836†	45.4	0.01581	mg/L	0.000732	0.07904	mg/L	0.003661	4.63%
Se 196.026†	24.6	0.01183	mg/L	0.003901	0.05914	mg/L	0.019507	32.99%
Si 288.158†	5433.9	3.529	mg/L	0.0276	17.65	mg/L	0.138	0.78%
Sn 189.927†	-119.4	-0.01851	mg/L	0.001212	-0.09257	mg/L	0.006062	6.55%
Sr 421.552†	85082.1	0.1587	mg/L	0.00142	0.7934	mg/L	0.00709	0.89%
Ti 334.903†	93.5	0.00194	mg/L	0.001031	0.00969	mg/L	0.005153	53.21%
Tl 190.801†	-0.8	-0.00051	mg/L	0.002768	-0.00257	mg/L	0.013838	537.65%
V 292.402†	56.1	0.00092	mg/L	0.000152	0.00460	mg/L	0.000761	16.55%
Zn 206.200†	539.7	0.1444	mg/L	0.00231	0.7222	mg/L	0.01153	1.60%

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Sequence No.: 19 **Autosampler Location: 348**
Sample ID: 20K0409-01 **Date Collected: 12/3/2020 7:18:03 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0409-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0409-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1923695.0	88.70	%	0.363				0.41%
ScR 361.383	204223.2	87.78	%	0.949				1.08%
Ag 328.068†	172.2	0.00072	mg/L	0.000162	0.00360	mg/L	0.000812	22.55%
Al 308.215†	-119.1	-0.08912	mg/L	0.012259	-0.4456	mg/L	0.06129	13.76%
As 188.979†	0.2	-0.00128	mg/L	0.001352	-0.00641	mg/L	0.006759	105.49%
B 249.677†	81.3	0.01339	mg/L	0.000602	0.06695	mg/L	0.003009	4.49%
Ba 233.527†	111.0	0.01428	mg/L	0.000454	0.07139	mg/L	0.002270	3.18%
Be 313.042†	242.5	0.00032	mg/L	0.000055	0.00162	mg/L	0.000274	16.85%
Ca 317.933†	956737.8	78.29	mg/L	0.769	391.5	mg/L	3.85	0.98%
Cd 228.802†	42.9	0.00146	mg/L	0.000237	0.00728	mg/L	0.001186	16.30%
Co 228.616†	510.3	0.01411	mg/L	0.000134	0.07055	mg/L	0.000668	0.95%
Cr 267.716†	-29.9	-0.00439	mg/L	0.000396	-0.02193	mg/L	0.001982	9.04%
Cu 324.752†	648.1	0.00296	mg/L	0.000059	0.01482	mg/L	0.000293	1.98%
Fe 273.955†	1237.9	0.7502	mg/L	0.00720	3.751	mg/L	0.0360	0.96%
K 766.490†	1383.6	0.8322	mg/L	0.03697	4.161	mg/L	0.1849	4.44%
Mg 279.077†	17265.4	10.81	mg/L	0.197	54.04	mg/L	0.987	1.83%
Mn 257.610†	111150.1	2.211	mg/L	0.0393	11.05	mg/L	0.196	1.78%
Mo 202.031†	77.6	0.00438	mg/L	0.000091	0.02190	mg/L	0.000456	2.08%
Na 589.592†	1485428.7	267.2	mg/L	5.01	1336	mg/L	25.03	1.87%
Na 330.237†	6352.4	262.5	mg/L	4.88	1313	mg/L	24.39	1.86%
Ni 231.604†	287.8	0.07993	mg/L	0.000616	0.3996	mg/L	0.00308	0.77%
Pb 220.353†	-4.4	-0.00062	mg/L	0.000838	-0.00311	mg/L	0.004190	134.61%
Sb 206.836†	29.4	0.01187	mg/L	0.003872	0.05936	mg/L	0.019359	32.61%
Se 196.026†	30.6	0.01572	mg/L	0.002647	0.07861	mg/L	0.013237	16.84%
Si 288.158†	4162.3	2.705	mg/L	0.0258	13.52	mg/L	0.129	0.95%
Sn 189.927†	-123.9	-0.01803	mg/L	0.000786	-0.09014	mg/L	0.003929	4.36%
Sr 421.552†	102334.2	0.1909	mg/L	0.00237	0.9543	mg/L	0.01184	1.24%
Ti 334.903†	92.7	0.00150	mg/L	0.000766	0.00751	mg/L	0.003831	51.03%
Tl 190.801†	1.4	0.00060	mg/L	0.000496	0.00301	mg/L	0.002482	82.49%
V 292.402†	381.4	0.00231	mg/L	0.000042	0.01153	mg/L	0.000209	1.82%
Zn 206.200†	356.5	0.09540	mg/L	0.000173	0.4770	mg/L	0.00087	0.18%

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Sequence No.: 20
Sample ID: BIL0006-DUP1

Dilution: 5X
Wash Time: 37

Autosampler Location: 349
Date Collected: 12/3/2020 7:22:35 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIL0006-DUP1

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: BIL0006-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1941714.5	89.53	%	0.680				0.76%
ScR 361.383	211195.3	90.77	%	0.809				0.89%
Ag 328.068†	142.4	0.00075	mg/L	0.000176	0.00375	mg/L	0.000882	23.52%
Al 308.215†	161.9	0.1212	mg/L	0.00383	0.6059	mg/L	0.01913	3.16%
As 188.979†	28.8	0.01798	mg/L	0.000432	0.08990	mg/L	0.002160	2.40%
B 249.677†	52.7	0.00799	mg/L	0.001061	0.03997	mg/L	0.005303	13.27%
Ba 233.527†	322.5	0.04348	mg/L	0.000673	0.2174	mg/L	0.00336	1.55%
Be 313.042†	225.6	0.00030	mg/L	0.000074	0.00151	mg/L	0.000369	24.43%
Ca 317.933†	356376.2	29.16	mg/L	0.317	145.8	mg/L	1.58	1.09%
Cd 228.802†	65.0	0.00203	mg/L	0.000154	0.01014	mg/L	0.000768	7.57%
Co 228.616†	95.4	0.00263	mg/L	0.000287	0.01316	mg/L	0.001434	10.89%
Cr 267.716†	826.2	0.09428	mg/L	0.000843	0.4714	mg/L	0.00422	0.89%
Cu 324.752†	204160.5	0.9511	mg/L	0.00609	4.756	mg/L	0.0305	0.64%
Fe 273.955†	203.8	0.1236	mg/L	0.00340	0.6178	mg/L	0.01698	2.75%
K 766.490†	1653.3	0.9945	mg/L	0.01292	4.972	mg/L	0.0646	1.30%
Mg 279.077†	1809.7	1.133	mg/L	0.0154	5.665	mg/L	0.0770	1.36%
Mn 257.610†	10650.4	0.2118	mg/L	0.00262	1.059	mg/L	0.0131	1.24%
Mo 202.031†	49.7	0.00320	mg/L	0.000038	0.01599	mg/L	0.000188	1.17%
Na 589.592†	1637686.7	294.6	mg/L	2.22	1473	mg/L	11.11	0.75%
Na 330.237†	7022.5	290.2	mg/L	1.13	1451	mg/L	5.63	0.39%
Ni 231.604†	10.5	0.00293	mg/L	0.000909	0.01465	mg/L	0.004547	31.05%
Pb 220.353†	10.1	0.00012	mg/L	0.001347	0.00062	mg/L	0.006735	>999.9%
Sb 206.836†	42.7	0.01613	mg/L	0.001702	0.08066	mg/L	0.008511	10.55%
Se 196.026†	19.5	0.01269	mg/L	0.002688	0.06343	mg/L	0.013440	21.19%
Si 288.158†	4510.0	2.909	mg/L	0.0323	14.54	mg/L	0.162	1.11%
Sn 189.927†	-69.6	-0.01284	mg/L	0.000687	-0.06421	mg/L	0.003433	5.35%
Sr 421.552†	51627.8	0.09628	mg/L	0.001284	0.4814	mg/L	0.00642	1.33%
Ti 334.903†	79.3	0.00290	mg/L	0.000249	0.01449	mg/L	0.001244	8.59%
Tl 190.801†	2.6	0.00123	mg/L	0.002957	0.00617	mg/L	0.014786	239.78%
V 292.402†	370.4	0.00260	mg/L	0.000047	0.01300	mg/L	0.000237	1.83%
Zn 206.200†	139.7	0.03739	mg/L	0.001501	0.1869	mg/L	0.00751	4.02%

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Sequence No.: 21
Sample ID: 20K0394-01

Dilution: 5X
Wash Time: 37

Autosampler Location: 350
Date Collected: 12/3/2020 7:27:08 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0394-01

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0394-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1965361.5	90.62	%	0.113				0.12%
ScR 361.383	209691.8	90.13	%	0.918				1.02%
Ag 328.068†	134.6	0.00071	mg/L	0.000251	0.00355	mg/L	0.001257	35.42%
Al 308.215†	135.6	0.1015	mg/L	0.00494	0.5075	mg/L	0.02468	4.86%
As 188.979†	26.4	0.01643	mg/L	0.000419	0.08216	mg/L	0.002094	2.55%
B 249.677†	40.1	0.00579	mg/L	0.002080	0.02897	mg/L	0.010398	35.89%
Ba 233.527†	289.9	0.03909	mg/L	0.000870	0.1955	mg/L	0.00435	2.23%
Be 313.042†	202.2	0.00027	mg/L	0.000039	0.00135	mg/L	0.000196	14.47%
Ca 317.933†	314673.0	25.75	mg/L	0.284	128.8	mg/L	1.42	1.10%
Cd 228.802†	58.2	0.00181	mg/L	0.000037	0.00907	mg/L	0.000184	2.02%
Co 228.616†	75.7	0.00209	mg/L	0.000141	0.01044	mg/L	0.000707	6.78%
Cr 267.716†	721.2	0.08230	mg/L	0.000093	0.4115	mg/L	0.00047	0.11%
Cu 324.752†	177676.3	0.8278	mg/L	0.00105	4.139	mg/L	0.0052	0.13%
Fe 273.955†	184.3	0.1117	mg/L	0.00040	0.5585	mg/L	0.00201	0.36%
K 766.490†	1504.5	0.9050	mg/L	0.03280	4.525	mg/L	0.1640	3.62%
Mg 279.077†	1585.4	0.9925	mg/L	0.01304	4.962	mg/L	0.0652	1.31%
Mn 257.610†	9409.0	0.1871	mg/L	0.00158	0.9356	mg/L	0.00791	0.85%
Mo 202.031†	43.8	0.00282	mg/L	0.000227	0.01409	mg/L	0.001135	8.06%
Na 589.592†	1510326.2	271.7	mg/L	4.34	1358	mg/L	21.71	1.60%
Na 330.237†	6412.3	265.0	mg/L	0.90	1325	mg/L	4.48	0.34%
Ni 231.604†	14.9	0.00414	mg/L	0.002705	0.02069	mg/L	0.013524	65.35%
Pb 220.353†	8.1	0.00002	mg/L	0.000850	0.00009	mg/L	0.004250	>999.9%
Sb 206.836†	28.0	0.01027	mg/L	0.002351	0.05133	mg/L	0.011754	22.90%
Se 196.026†	16.6	0.01068	mg/L	0.002577	0.05339	mg/L	0.012883	24.13%
Si 288.158†	4139.0	2.669	mg/L	0.0268	13.35	mg/L	0.134	1.00%
Sn 189.927†	-65.0	-0.01226	mg/L	0.001241	-0.06129	mg/L	0.006206	10.13%
Sr 421.552†	45737.8	0.08530	mg/L	0.000774	0.4265	mg/L	0.00387	0.91%
Ti 334.903†	55.1	0.00177	mg/L	0.000896	0.00886	mg/L	0.004478	50.52%
Tl 190.801†	-1.5	-0.00080	mg/L	0.002099	-0.00399	mg/L	0.010496	262.84%
V 292.402†	315.9	0.00223	mg/L	0.000172	0.01113	mg/L	0.000858	7.71%
Zn 206.200†	131.0	0.03507	mg/L	0.001140	0.1753	mg/L	0.00570	3.25%

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Sequence No.: 22
Sample ID: BIL0006-MS1

Dilution: 5X
Wash Time: 37

Autosampler Location: 351
Date Collected: 12/3/2020 7:31:41 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIL0006-MS1

Analyte	**Back Pressure**	**Flow**
All	231.0 kPa	0.65 L/min

Mean Data: BIL0006-MS1

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	1941138.1	89.50	%	0.366				0.41%
ScR 361.383	209861.2	90.20	%	0.755				0.84%
Ag 328.068†	39189.5	0.2118	mg/L	0.00096	1.059	mg/L	0.0048	0.45%
Al 308.215†	1288.5	0.9626	mg/L	0.00967	4.813	mg/L	0.0483	1.00%
As 188.979†	1339.7	0.8567	mg/L	0.00650	4.283	mg/L	0.0325	0.76%
B 249.677†	57.4	0.00811	mg/L	0.001339	0.04055	mg/L	0.006693	16.50%
Ba 233.527†	6357.0	0.8618	mg/L	0.00630	4.309	mg/L	0.0315	0.73%
Be 313.042†	149991.3	0.2031	mg/L	0.00075	1.015	mg/L	0.0038	0.37%
Ca 317.933†	404646.8	33.10	mg/L	0.135	165.5	mg/L	0.67	0.41%
Cd 228.802†	6686.6	0.2131	mg/L	0.00133	1.066	mg/L	0.0066	0.62%
Co 228.616†	7356.5	0.2038	mg/L	0.00076	1.019	mg/L	0.0038	0.37%
Cr 267.716†	2649.2	0.3024	mg/L	0.00138	1.512	mg/L	0.0069	0.46%
Cu 324.752†	258496.7	1.204	mg/L	0.0029	6.022	mg/L	0.0147	0.24%
Fe 273.955†	1530.7	0.9268	mg/L	0.00698	4.634	mg/L	0.0349	0.75%
K 766.490†	8322.1	5.006	mg/L	0.0405	25.03	mg/L	0.202	0.81%
Mg 279.077†	8311.6	5.201	mg/L	0.0263	26.01	mg/L	0.131	0.51%
Mn 257.610†	20509.8	0.4080	mg/L	0.00085	2.040	mg/L	0.0043	0.21%
Mo 202.031†	59.0	0.00377	mg/L	0.000068	0.01887	mg/L	0.000338	1.79%
Na 589.592†	1691590.3	304.3	mg/L	0.91	1522	mg/L	4.56	0.30%
Na 330.237†	7189.8	297.1	mg/L	1.34	1485	mg/L	6.72	0.45%
Ni 231.604†	734.7	0.2039	mg/L	0.00454	1.020	mg/L	0.0227	2.22%
Pb 220.353†	6356.0	0.8240	mg/L	0.00476	4.120	mg/L	0.0238	0.58%
Sb 206.836†	47.6	0.01597	mg/L	0.001476	0.07987	mg/L	0.007379	9.24%
Se 196.026†	1105.8	0.8602	mg/L	0.00758	4.301	mg/L	0.0379	0.88%
Si 288.158†	4662.4	3.012	mg/L	0.0146	15.06	mg/L	0.073	0.49%
Sn 189.927†	-80.4	-0.01490	mg/L	0.001085	-0.07449	mg/L	0.005423	7.28%
Sr 421.552†	161826.8	0.3018	mg/L	0.00179	1.509	mg/L	0.0089	0.59%
Ti 334.903†	71.2	0.00226	mg/L	0.000416	0.01130	mg/L	0.002080	18.40%
Tl 190.801†	1602.4	0.7929	mg/L	0.00062	3.965	mg/L	0.0031	0.08%
V 292.402†	33778.2	0.2051	mg/L	0.00030	1.026	mg/L	0.0015	0.14%
Zn 206.200†	904.0	0.2420	mg/L	0.00080	1.210	mg/L	0.0040	0.33%

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Sequence No.: 23 **Autosampler Location: 352**
Sample ID: 20K0237-05 **Date Collected: 12/3/2020 7:36:14 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0237-05

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: 20K0237-05

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2033858.4	93.78	%	0.489				0.52%
ScR 361.383	216184.3	92.92	%	0.421				0.45%
Ag 328.068†	159.2	0.00086	mg/L	0.000301	0.00086	mg/L	0.000301	35.01%
Al 308.215†	58.0	0.04342	mg/L	0.006517	0.04342	mg/L	0.006517	15.01%
As 188.979†	2.0	0.00162	mg/L	0.001363	0.00162	mg/L	0.001363	84.38%
B 249.677†	-21.1	-0.00476	mg/L	0.002228	-0.00476	mg/L	0.002228	46.77%
Ba 233.527†	73.2	0.00980	mg/L	0.000825	0.00980	mg/L	0.000825	8.43%
Be 313.042†	118.3	0.00016	mg/L	0.000051	0.00016	mg/L	0.000051	32.47%
Ca 317.933†	130717.9	10.70	mg/L	0.046	10.70	mg/L	0.046	0.43%
Cd 228.802†	28.9	0.00093	mg/L	0.000039	0.00093	mg/L	0.000039	4.24%
Co 228.616†	20.9	0.00056	mg/L	0.000112	0.00056	mg/L	0.000112	19.74%
Cr 267.716†	-18.0	-0.00206	mg/L	0.001078	-0.00206	mg/L	0.001078	52.44%
Cu 324.752†	11633.4	0.05421	mg/L	0.000431	0.05421	mg/L	0.000431	0.80%
Fe 273.955†	431.1	0.2613	mg/L	0.00320	0.2613	mg/L	0.00320	1.23%
K 766.490†	754.0	0.4535	mg/L	0.02654	0.4535	mg/L	0.02654	5.85%
Mg 279.077†	277.2	0.1733	mg/L	0.00571	0.1733	mg/L	0.00571	3.29%
Mn 257.610†	470.6	0.00936	mg/L	0.000189	0.00936	mg/L	0.000189	2.02%
Mo 202.031†	29.8	0.00202	mg/L	0.000232	0.00202	mg/L	0.000232	11.46%
Na 589.592†	6987.5	1.257	mg/L	0.0283	1.257	mg/L	0.0283	2.25%
Na 330.237†	13.6	0.5389	mg/L	0.52352	0.5389	mg/L	0.52352	97.15%
Ni 231.604†	-14.7	-0.00407	mg/L	0.002033	-0.00407	mg/L	0.002033	49.94%
Pb 220.353†	-4.1	-0.00061	mg/L	0.000509	-0.00061	mg/L	0.000509	82.97%
Sb 206.836†	19.3	0.00789	mg/L	0.000961	0.00789	mg/L	0.000961	12.17%
Se 196.026†	3.2	0.00161	mg/L	0.000229	0.00161	mg/L	0.000229	14.21%
Si 288.158†	1976.4	1.274	mg/L	0.0072	1.274	mg/L	0.0072	0.57%
Sn 189.927†	-28.3	-0.00543	mg/L	0.000938	-0.00543	mg/L	0.000938	17.28%
Sr 421.552†	27992.0	0.05220	mg/L	0.000441	0.05220	mg/L	0.000441	0.85%
Ti 334.903†	101.0	0.00486	mg/L	0.000752	0.00486	mg/L	0.000752	15.49%
Tl 190.801†	3.2	0.00157	mg/L	0.001812	0.00157	mg/L	0.001812	115.45%
V 292.402†	370.8	0.00224	mg/L	0.000097	0.00224	mg/L	0.000097	4.36%
Zn 206.200†	236.8	0.06338	mg/L	0.002121	0.06338	mg/L	0.002121	3.35%

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Sequence No.: 24 Autosampler Location: 353
Sample ID: 20K0213-01 Date Collected: 12/3/2020 7:40:30 PM
Data Type: Original
Dilution: 2X
Wash Time: 37 Auto Dilution Factor: 1

Nebulizer Parameters: 20K0213-01

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: 20K0213-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1930905.6	89.03	%	0.241				0.27%
ScR 361.383	206893.8	88.93	%	4.164				4.68%
Ag 328.068†	605.0	0.00326	mg/L	0.000164	0.00651	mg/L	0.000328	5.04%
Al 308.215†	3356.6	2.515	mg/L	0.0376	5.030	mg/L	0.0752	1.49%
As 188.979†	5.4	0.00204	mg/L	0.002969	0.00409	mg/L	0.005939	145.26%
B 249.677†	582.3	0.1075	mg/L	0.00236	0.2151	mg/L	0.00472	2.19%
Ba 233.527†	4751.3	0.6432	mg/L	0.01270	1.286	mg/L	0.0254	1.98%
Be 313.042†	-765.9	-0.00099	mg/L	0.000078	-0.00199	mg/L	0.000155	7.81%
Ca 317.933†	44049.3	3.604	mg/L	0.0215	7.208	mg/L	0.0431	0.60%
Cd 228.802†	844.1	0.02740	mg/L	0.000235	0.05479	mg/L	0.000470	0.86%
Co 228.616†	171.1	0.00450	mg/L	0.000209	0.00899	mg/L	0.000417	4.64%
Cr 267.716†	66108.5	7.552	mg/L	0.0656	15.10	mg/L	0.131	0.87%
Cu 324.752†	67445.5	0.3149	mg/L	0.00110	0.6297	mg/L	0.00220	0.35%
Fe 273.955†	16761.2	10.16	mg/L	0.247	20.32	mg/L	0.494	2.43%
K 766.490†	535.0	0.3218	mg/L	0.01793	0.6436	mg/L	0.03587	5.57%
Mg 279.077†	1699.7	1.069	mg/L	0.0107	2.139	mg/L	0.0213	1.00%
Mn 257.610†	3802.0	0.07553	mg/L	0.001445	0.1511	mg/L	0.00289	1.91%
Mo 202.031†	904.2	0.06646	mg/L	0.000108	0.1329	mg/L	0.00022	0.16%
Na 589.592†	2255.0	0.4057	mg/L	0.01255	0.8113	mg/L	0.02511	3.09%
Na 330.237†	3.6	-0.8432	mg/L	0.82706	-1.686	mg/L	1.6541	98.09%
Ni 231.604†	176.5	0.04919	mg/L	0.001740	0.09838	mg/L	0.003480	3.54%
Pb 220.353†	-24.6	0.01190	mg/L	0.000747	0.02381	mg/L	0.001494	6.28%
Sb 206.836†	416.2	0.06836	mg/L	0.001178	0.1367	mg/L	0.00236	1.72%
Se 196.026†	3.2	0.00218	mg/L	0.003776	0.00435	mg/L	0.007552	173.58%
Si 288.158†	1051.1	0.7139	mg/L	0.01538	1.428	mg/L	0.0308	2.15%
Sn 189.927†	26.1	0.00758	mg/L	0.000320	0.01516	mg/L	0.000640	4.22%
Sr 421.552†	931669.2	1.738	mg/L	0.0064	3.475	mg/L	0.0128	0.37%
Ti 334.903†	1927.8	0.09983	mg/L	0.002700	0.1997	mg/L	0.00540	2.70%
Tl 190.801†	3.6	-0.00086	mg/L	0.003812	-0.00172	mg/L	0.007623	442.93%
V 292.402†	-4122.6	0.00407	mg/L	0.000376	0.00814	mg/L	0.000751	9.23%
Zn 206.200†	10356.4	2.772	mg/L	0.0487	5.543	mg/L	0.0975	1.76%

Sequence No.: 25 Autosampler Location: 7
Sample ID: SEQ-CCV7 Date Collected: 12/3/2020 7:44:47 PM
Data Type: Original
Dilution: 1X
Wash Time: 37 Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV7

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-CCV7

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1990946.5	91.80	%	0.193				0.21%
ScR 361.383	207996.3	89.40	%	0.345				0.39%
Ag 328.068†	187283.8	1.012	mg/L	0.0015	1.012	mg/L	0.0015	0.15%
Al 308.215†	2695.8	1.986	mg/L	0.0097	1.986	mg/L	0.0097	0.49%
As 188.979†	2987.4	2.028	mg/L	0.0065	2.028	mg/L	0.0065	0.32%
B 249.677†	5669.1	1.055	mg/L	0.0082	1.055	mg/L	0.0082	0.77%
Ba 233.527†	7667.1	1.039	mg/L	0.0045	1.039	mg/L	0.0045	0.44%
Be 313.042†	757783.1	1.026	mg/L	0.0058	1.026	mg/L	0.0058	0.56%
Ca 317.933†	23822.8	1.872	mg/L	0.0170	1.872	mg/L	0.0170	0.91%
Cd 228.802†	31234.4	1.005	mg/L	0.0024	1.005	mg/L	0.0024	0.24%
Co 228.616†	37201.0	1.029	mg/L	0.0009	1.029	mg/L	0.0009	0.08%
Cr 267.716†	9084.2	1.038	mg/L	0.0051	1.038	mg/L	0.0051	0.49%
Cu 324.752†	210617.2	0.9808	mg/L	0.00302	0.9808	mg/L	0.00302	0.31%
Fe 273.955†	3375.1	2.041	mg/L	0.0157	2.041	mg/L	0.0157	0.77%
K 766.490†	34077.5	20.50	mg/L	0.078	20.50	mg/L	0.078	0.38%
Mg 279.077†	3211.6	2.027	mg/L	0.0094	2.027	mg/L	0.0094	0.46%
Mn 257.610†	50205.5	0.9987	mg/L	0.00367	0.9987	mg/L	0.00367	0.37%
Mo 202.031†	14714.2	1.083	mg/L	0.0015	1.083	mg/L	0.0015	0.14%
Na 589.592†	294598.6	53.00	mg/L	0.200	53.00	mg/L	0.200	0.38%
Na 330.237†	1269.3	52.29	mg/L	0.350	52.29	mg/L	0.350	0.67%
Ni 231.604†	3678.3	1.023	mg/L	0.0076	1.023	mg/L	0.0076	0.74%
Pb 220.353†	15925.4	2.068	mg/L	0.0034	2.068	mg/L	0.0034	0.17%
Sb 206.836†	5627.3	2.307	mg/L	0.0034	2.307	mg/L	0.0034	0.15%
Se 196.026†	2637.1	2.058	mg/L	0.0095	2.058	mg/L	0.0095	0.46%
Si 288.158†	3405.1	2.197	mg/L	0.0053	2.197	mg/L	0.0053	0.24%
Sn 189.927†	4262.4	1.115	mg/L	0.0016	1.115	mg/L	0.0016	0.15%
Sr 421.552†	559894.4	1.044	mg/L	0.0041	1.044	mg/L	0.0041	0.40%
Ti 334.903†	20468.5	1.077	mg/L	0.0062	1.077	mg/L	0.0062	0.58%
Tl 190.801†	4129.2	2.041	mg/L	0.0031	2.041	mg/L	0.0031	0.15%
V 292.402†	163238.0	0.9904	mg/L	0.00172	0.9904	mg/L	0.00172	0.17%
Zn 206.200†	3895.8	1.043	mg/L	0.0062	1.043	mg/L	0.0062	0.59%

Sequence No.: 26
Sample ID: SEQ-CCB7

Autosampler Location: 1
Date Collected: 12/3/2020 7:50:14 PM
Data Type: Original

Dilution: 1X
Wash Time: 120

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB7

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-CCB7

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2005748.7	92.48	%	0.502				0.54%
ScR 361.383	210743.8	90.58	%	0.890				0.98%
Ag 328.068†	180.2	0.00097	mg/L	0.000395	0.00097	mg/L	0.000395	40.60%
Al 308.215†	-68.0	-0.05102	mg/L	0.026288	-0.05102	mg/L	0.026288	51.52%
As 188.979†	-1.9	-0.00122	mg/L	0.001738	-0.00122	mg/L	0.001738	142.94%
B 249.677†	-35.5	-0.00657	mg/L	0.001459	-0.00657	mg/L	0.001459	22.22%
Ba 233.527†	-2.8	-0.00038	mg/L	0.000294	-0.00038	mg/L	0.000294	76.62%
Be 313.042†	178.5	0.00024	mg/L	0.000016	0.00024	mg/L	0.000016	6.52%
Ca 317.933†	36.6	0.00291	mg/L	0.001499	0.00291	mg/L	0.001499	51.49%
Cd 228.802†	18.3	0.00059	mg/L	0.000068	0.00059	mg/L	0.000068	11.40%
Co 228.616†	22.9	0.00064	mg/L	0.000150	0.00064	mg/L	0.000150	23.59%
Cr 267.716†	-32.3	-0.00368	mg/L	0.001097	-0.00368	mg/L	0.001097	29.76%
Cu 324.752†	516.3	0.00240	mg/L	0.000207	0.00240	mg/L	0.000207	8.59%
Fe 273.955†	9.9	0.00599	mg/L	0.000721	0.00599	mg/L	0.000721	12.03%
K 766.490†	60.2	0.03622	mg/L	0.032635	0.03622	mg/L	0.032635	90.11%
Mg 279.077†	-35.0	-0.02186	mg/L	0.003634	-0.02186	mg/L	0.003634	16.62%
Mn 257.610†	23.3	0.00046	mg/L	0.000011	0.00046	mg/L	0.000011	2.44%
Mo 202.031†	57.2	0.00421	mg/L	0.000552	0.00421	mg/L	0.000552	13.13%
Na 589.592†	295.7	0.05320	mg/L	0.008063	0.05320	mg/L	0.008063	15.16%
Na 330.237†	-24.5	-1.013	mg/L	0.1517	-1.013	mg/L	0.1517	14.98%
Ni 231.604†	-23.8	-0.00658	mg/L	0.001749	-0.00658	mg/L	0.001749	26.57%
Pb 220.353†	-2.2	-0.00031	mg/L	0.001175	-0.00031	mg/L	0.001175	379.39%
Sb 206.836†	31.3	0.01288	mg/L	0.002271	0.01288	mg/L	0.002271	17.63%
Se 196.026†	6.1	0.00477	mg/L	0.004249	0.00477	mg/L	0.004249	89.10%
Si 288.158†	-133.5	-0.08591	mg/L	0.009839	-0.08591	mg/L	0.009839	11.45%
Sn 189.927†	3.6	0.00095	mg/L	0.001036	0.00095	mg/L	0.001036	108.60%
Sr 421.552†	177.4	0.00033	mg/L	0.000072	0.00033	mg/L	0.000072	21.63%
Ti 334.903†	-3.7	-0.00020	mg/L	0.001018	-0.00020	mg/L	0.001018	518.40%
Tl 190.801†	0.1	0.00006	mg/L	0.000119	0.00006	mg/L	0.000119	183.20%
V 292.402†	279.9	0.00168	mg/L	0.000167	0.00168	mg/L	0.000167	9.95%
Zn 206.200†	3.7	0.00100	mg/L	0.000721	0.00100	mg/L	0.000721	72.26%

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Sequence No.: 27 **Autosampler Location: 354**
Sample ID: 20K0238-01 **Date Collected: 12/3/2020 7:54:30 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0238-01

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: 20K0238-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2016631.4	92.98	%	0.671				0.72%
ScR 361.383	215143.8	92.47	%	0.848				0.92%
Ag 328.068†	1211.7	0.00636	mg/L	0.000049	0.01273	mg/L	0.000099	0.78%
Al 308.215†	96907.2	72.60	mg/L	0.376	145.2	mg/L	0.75	0.52%
As 188.979†	-696.8	0.06681	mg/L	0.011286	0.1336	mg/L	0.02257	16.89%
B 249.677†	1329.3	0.2262	mg/L	0.00111	0.4525	mg/L	0.00222	0.49%
Ba 233.527†	8891.8	1.179	mg/L	0.0098	2.358	mg/L	0.0197	0.83%
Be 313.042†	1131.6	0.00112	mg/L	0.000060	0.00225	mg/L	0.000120	5.33%
Ca 317.933†	468940.9	38.37	mg/L	0.043	76.75	mg/L	0.086	0.11%
Cd 228.802†	809.3	0.02860	mg/L	0.000204	0.05720	mg/L	0.000407	0.71%
Co 228.616†	2996.7	0.07119	mg/L	0.000136	0.1424	mg/L	0.00027	0.19%
Cr 267.716†	4783.9	0.5517	mg/L	0.00585	1.103	mg/L	0.0117	1.06%
Cu 324.752†	427025.3	1.996	mg/L	0.0052	3.993	mg/L	0.0103	0.26%
Fe 273.955†	316901.9	192.1	mg/L	0.63	384.1	mg/L	1.25	0.33%
K 766.490†	10121.0	6.088	mg/L	0.0537	12.18	mg/L	0.107	0.88%
Mg 279.077†	46493.3	29.03	mg/L	0.307	58.06	mg/L	0.615	1.06%
Mn 257.610†	122329.0	2.431	mg/L	0.0147	4.863	mg/L	0.0294	0.60%
Mo 202.031†	874.4	0.06339	mg/L	0.000067	0.1268	mg/L	0.00013	0.11%
Na 589.592†	159081.2	28.62	mg/L	0.306	57.24	mg/L	0.611	1.07%
Na 330.237†	780.2	28.88	mg/L	0.522	57.76	mg/L	1.044	1.81%
Ni 231.604†	1682.6	0.4672	mg/L	0.00603	0.9345	mg/L	0.01205	1.29%
Pb 220.353†	12972.5	1.696	mg/L	0.0049	3.392	mg/L	0.0098	0.29%
Sb 206.836†	211.4	0.07622	mg/L	0.003498	0.1524	mg/L	0.00700	4.59%
Se 196.026†	13.0	0.00504	mg/L	0.004990	0.01007	mg/L	0.009980	99.06%
Si 288.158†	14262.3	9.228	mg/L	0.0824	18.46	mg/L	0.165	0.89%
Sn 189.927†	526.8	0.1466	mg/L	0.00147	0.2932	mg/L	0.00295	1.01%
Sr 421.552†	185761.4	0.3464	mg/L	0.00300	0.6929	mg/L	0.00600	0.87%
Ti 334.903†	86950.5	4.578	mg/L	0.0167	9.156	mg/L	0.0333	0.36%
Tl 190.801†	-28.8	-0.01563	mg/L	0.001160	-0.03127	mg/L	0.002319	7.42%
V 292.402†	38186.2	0.2340	mg/L	0.00036	0.4681	mg/L	0.00071	0.15%
Zn 206.200†	43645.3	11.68	mg/L	0.163	23.36	mg/L	0.326	1.40%

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Sequence No.: 28 **Autosampler Location: 355**
Sample ID: 20K0238-02 **Date Collected: 12/3/2020 7:57:48 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0238-02

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: 20K0238-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2007069.4	92.54	%	0.339				0.37%
ScR 361.383	209395.1	90.00	%	0.195				0.22%
Ag 328.068†	202.7	0.00084	mg/L	0.000473	0.00168	mg/L	0.000946	56.42%
Al 308.215†	93882.8	70.32	mg/L	0.284	140.6	mg/L	0.57	0.40%
As 188.979†	-853.1	0.06441	mg/L	0.011350	0.1288	mg/L	0.02270	17.62%
B 249.677†	478.5	0.07031	mg/L	0.000707	0.1406	mg/L	0.00141	1.01%
Ba 233.527†	6801.6	0.9026	mg/L	0.00335	1.805	mg/L	0.0067	0.37%
Be 313.042†	1434.4	0.00149	mg/L	0.000041	0.00299	mg/L	0.000081	2.71%
Ca 317.933†	763334.2	62.47	mg/L	0.277	124.9	mg/L	0.55	0.44%
Cd 228.802†	162.2	0.00789	mg/L	0.000075	0.01578	mg/L	0.000150	0.95%
Co 228.616†	2108.2	0.04600	mg/L	0.000504	0.09199	mg/L	0.001007	1.09%
Cr 267.716†	3778.8	0.4345	mg/L	0.00267	0.8689	mg/L	0.00533	0.61%
Cu 324.752†	267532.4	1.251	mg/L	0.0057	2.502	mg/L	0.0115	0.46%
Fe 273.955†	230192.3	139.5	mg/L	1.18	279.0	mg/L	2.36	0.84%
K 766.490†	10193.4	6.131	mg/L	0.0135	12.26	mg/L	0.027	0.22%
Mg 279.077†	62684.5	39.18	mg/L	0.179	78.36	mg/L	0.359	0.46%
Mn 257.610†	164128.4	3.263	mg/L	0.0144	6.526	mg/L	0.0288	0.44%
Mo 202.031†	574.6	0.04084	mg/L	0.001081	0.08168	mg/L	0.002162	2.65%
Na 589.592†	85232.1	15.33	mg/L	0.101	30.67	mg/L	0.203	0.66%
Na 330.237†	368.9	15.03	mg/L	0.402	30.06	mg/L	0.804	2.67%
Ni 231.604†	928.2	0.2578	mg/L	0.00307	0.5155	mg/L	0.00615	1.19%
Pb 220.353†	2513.0	0.3407	mg/L	0.00188	0.6814	mg/L	0.00376	0.55%
Sb 206.836†	165.7	0.06371	mg/L	0.001531	0.1274	mg/L	0.00306	2.40%
Se 196.026†	19.1	0.00717	mg/L	0.007344	0.01435	mg/L	0.014687	102.37%
Si 288.158†	17886.8	11.55	mg/L	0.037	23.11	mg/L	0.073	0.32%
Sn 189.927†	4.6	0.01491	mg/L	0.000764	0.02983	mg/L	0.001527	5.12%
Sr 421.552†	242036.3	0.4514	mg/L	0.00146	0.9028	mg/L	0.00291	0.32%
Ti 334.903†	103500.7	5.448	mg/L	0.0302	10.90	mg/L	0.060	0.55%
Tl 190.801†	-23.6	-0.01297	mg/L	0.001777	-0.02594	mg/L	0.003553	13.70%
V 292.402†	41926.6	0.2550	mg/L	0.00139	0.5100	mg/L	0.00278	0.55%
Zn 206.200†	13069.6	3.498	mg/L	0.0142	6.995	mg/L	0.0285	0.41%

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Sequence No.: 29 **Autosampler Location: 356**
Sample ID: 20K0238-03 **Date Collected: 12/3/2020 8:01:51 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0238-03

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

DEL

Mean Data: 20K0238-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2013297.8	92.83	%	1.203				1.30%
ScR 361.383	213874.6	91.93	%	0.557				0.61%
Ag 328.068†	1854.7	0.00975	mg/L	0.000169	0.01951	mg/L	0.000337	1.73%
Al 308.215†	122677.4	91.91	mg/L	0.344	183.8	mg/L	0.69	0.37%
As 188.979†	-842.6	0.1005	mg/L	0.01128	0.2010	mg/L	0.02256	11.22%
B 249.677†	1636.2	0.2768	mg/L	0.00521	0.5536	mg/L	0.01043	1.88%
Ba 233.527†	12819.8	1.701	mg/L	0.0036	3.402	mg/L	0.0072	0.21%
Be 313.042†	1339.3	0.00132	mg/L	0.000026	0.00263	mg/L	0.000051	1.96%
Ca 317.933†	484321.2	39.63	mg/L	0.242	79.26	mg/L	0.483	0.61%
Cd 228.802†	1164.4	0.04129	mg/L	0.000733	0.08257	mg/L	0.001466	1.77%
Co 228.616†	4520.8	0.1099	mg/L	0.00200	0.2197	mg/L	0.00399	1.82%
Cr 267.716†	46715.6	5.344	mg/L	0.0299	10.69	mg/L	0.060	0.56%
Cu 324.752†	602319.6	2.816	mg/L	0.0075	5.633	mg/L	0.0150	0.27%
Fe 273.955†	441974.0	267.9	mg/L	2.07	535.7	mg/L	4.13	0.77%
K 766.490†	9066.7	5.454	mg/L	0.0048	10.91	mg/L	0.010	0.09%
Mg 279.077†	50071.4	31.25	mg/L	0.154	62.50	mg/L	0.308	0.49%
Mn 257.610†	173490.8	3.449	mg/L	0.0349	6.897	mg/L	0.0698	1.01%
Mo 202.031†	1490.2	0.1087	mg/L	0.00084	0.2173	mg/L	0.00168	0.77%
Na 589.592†	44981.6	8.092	mg/L	0.1052	16.18	mg/L	0.210	1.30%
Na 330.237†	327.9	8.621	mg/L	0.4926	17.24	mg/L	0.985	5.71%
Ni 231.604†	4991.5	1.386	mg/L	0.0076	2.772	mg/L	0.0151	0.55%
Pb 220.353†	17468.8	2.291	mg/L	0.0276	4.582	mg/L	0.0551	1.20%
Sb 206.836†	476.7	0.1179	mg/L	0.00434	0.2358	mg/L	0.00869	3.69%
Se 196.026†	7.7	-0.00002	mg/L	0.001577	-0.00005	mg/L	0.003154	>999.9%
Si 288.158†	15047.6	9.774	mg/L	0.0272	19.55	mg/L	0.054	0.28%
Sn 189.927†	731.4	0.2008	mg/L	0.00338	0.4016	mg/L	0.00677	1.69%
Sr 421.552†	190268.3	0.3548	mg/L	0.00317	0.7097	mg/L	0.00635	0.89%
Ti 334.903†	109765.8	5.778	mg/L	0.0384	11.56	mg/L	0.077	0.66%
Tl 190.801†	-39.6	-0.02313	mg/L	0.004651	-0.04625	mg/L	0.009301	20.11%
V 292.402†	46637.4	0.3041	mg/L	0.00076	0.6082	mg/L	0.00152	0.25%
Zn 206.200†	62073.3	16.61	mg/L	0.094	33.22	mg/L	0.188	0.57%

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Sequence No.: 30 **Autosampler Location: 357**
Sample ID: 20K0238-04 **Date Collected: 12/3/2020 8:05:08 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0238-04

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0238-04

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2031548.8	93.67	%	0.362				0.39%
ScR 361.383	213763.1	91.88	%	0.660				0.72%
Ag 328.068†	255.4	0.00126	mg/L	0.000039	0.00252	mg/L	0.000077	3.06%
Al 308.215†	70077.7	52.49	mg/L	0.048	105.0	mg/L	0.10	0.09%
As 188.979†	-620.5	0.05927	mg/L	0.003761	0.1185	mg/L	0.00752	6.35%
B 249.677†	266.3	0.03883	mg/L	0.000278	0.07765	mg/L	0.000557	0.72%
Ba 233.527†	3624.5	0.4773	mg/L	0.00231	0.9546	mg/L	0.00462	0.48%
Be 313.042†	1137.6	0.00116	mg/L	0.000011	0.00232	mg/L	0.000022	0.95%
Ca 317.933†	402874.5	32.97	mg/L	0.046	65.94	mg/L	0.091	0.14%
Cd 228.802†	156.7	0.00699	mg/L	0.000076	0.01397	mg/L	0.000151	1.08%
Co 228.616†	1652.2	0.03661	mg/L	0.000264	0.07321	mg/L	0.000528	0.72%
Cr 267.716†	2830.8	0.3256	mg/L	0.00189	0.6512	mg/L	0.00379	0.58%
Cu 324.752†	149783.3	0.7010	mg/L	0.00337	1.402	mg/L	0.0067	0.48%
Fe 273.955†	165206.0	100.1	mg/L	0.71	200.2	mg/L	1.42	0.71%
K 766.490†	7948.0	4.781	mg/L	0.0557	9.562	mg/L	0.1113	1.16%
Mg 279.077†	42462.5	26.54	mg/L	0.124	53.08	mg/L	0.249	0.47%
Mn 257.610†	86690.6	1.723	mg/L	0.0066	3.446	mg/L	0.0131	0.38%
Mo 202.031†	430.6	0.03086	mg/L	0.000543	0.06171	mg/L	0.001086	1.76%
Na 589.592†	21992.9	3.956	mg/L	0.0205	7.913	mg/L	0.0410	0.52%
Na 330.237†	94.1	3.609	mg/L	0.2578	7.218	mg/L	0.5156	7.14%
Ni 231.604†	646.3	0.1795	mg/L	0.00053	0.3590	mg/L	0.00105	0.29%
Pb 220.353†	2772.6	0.3712	mg/L	0.00184	0.7424	mg/L	0.00367	0.49%
Sb 206.836†	143.5	0.05618	mg/L	0.001856	0.1124	mg/L	0.00371	3.30%
Se 196.026†	25.6	0.01588	mg/L	0.008203	0.03176	mg/L	0.016406	51.66%
Si 288.158†	5954.4	3.857	mg/L	0.0270	7.713	mg/L	0.0539	0.70%
Sn 189.927†	69.1	0.02578	mg/L	0.000747	0.05156	mg/L	0.001493	2.90%
Sr 421.552†	145463.6	0.2713	mg/L	0.00074	0.5426	mg/L	0.00149	0.27%
Ti 334.903†	77329.5	4.071	mg/L	0.0112	8.143	mg/L	0.0225	0.28%
Tl 190.801†	-15.0	-0.00852	mg/L	0.003040	-0.01705	mg/L	0.006080	35.66%
V 292.402†	35541.9	0.2159	mg/L	0.00068	0.4319	mg/L	0.00137	0.32%
Zn 206.200†	10992.1	2.942	mg/L	0.0133	5.883	mg/L	0.0265	0.45%

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Sequence No.: 31
Sample ID: BIK0645-DUP1

Dilution: 1X
Wash Time: 37

Autosampler Location: 358
Date Collected: 12/3/2020 8:09:11 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0645-DUP1

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: BIK0645-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2017680.4	93.03	%	0.520				0.56%
ScR 361.383	212900.2	91.51	%	0.444				0.49%
Ag 328.068†	140.2	0.00076	mg/L	0.000184	0.00076	mg/L	0.000184	24.31%
Al 308.215†	181.3	0.1358	mg/L	0.00191	0.1358	mg/L	0.00191	1.40%
As 188.979†	11.7	0.00811	mg/L	0.000671	0.00811	mg/L	0.000671	8.28%
B 249.677†	74.8	0.01200	mg/L	0.000385	0.01200	mg/L	0.000385	3.21%
Ba 233.527†	111.6	0.01498	mg/L	0.000659	0.01498	mg/L	0.000659	4.40%
Be 313.042†	227.5	0.00030	mg/L	0.000013	0.00030	mg/L	0.000013	4.12%
Ca 317.933†	154491.1	12.64	mg/L	0.141	12.64	mg/L	0.141	1.12%
Cd 228.802†	31.2	0.00098	mg/L	0.000213	0.00098	mg/L	0.000213	21.87%
Co 228.616†	20.0	0.00053	mg/L	0.000033	0.00053	mg/L	0.000033	6.27%
Cr 267.716†	-23.2	-0.00271	mg/L	0.000652	-0.00271	mg/L	0.000652	24.04%
Cu 324.752†	2660.2	0.01239	mg/L	0.000299	0.01239	mg/L	0.000299	2.41%
Fe 273.955†	625.6	0.3791	mg/L	0.00386	0.3791	mg/L	0.00386	1.02%
K 766.490†	2787.1	1.676	mg/L	0.0151	1.676	mg/L	0.0151	0.90%
Mg 279.077†	4011.2	2.509	mg/L	0.0062	2.509	mg/L	0.0062	0.25%
Mn 257.610†	1184.1	0.02354	mg/L	0.000132	0.02354	mg/L	0.000132	0.56%
Mo 202.031†	41.7	0.00284	mg/L	0.000211	0.00284	mg/L	0.000211	7.42%
Na 589.592†	27071.0	4.870	mg/L	0.0385	4.870	mg/L	0.0385	0.79%
Na 330.237†	94.4	3.851	mg/L	0.3524	3.851	mg/L	0.3524	9.15%
Ni 231.604†	-10.6	-0.00293	mg/L	0.003052	-0.00293	mg/L	0.003052	104.27%
Pb 220.353†	15.4	0.00200	mg/L	0.000931	0.00200	mg/L	0.000931	46.57%
Sb 206.836†	25.0	0.01024	mg/L	0.001191	0.01024	mg/L	0.001191	11.63%
Se 196.026†	10.9	0.00743	mg/L	0.002394	0.00743	mg/L	0.002394	32.23%
Si 288.158†	4789.8	3.085	mg/L	0.0122	3.085	mg/L	0.0122	0.40%
Sn 189.927†	-37.5	-0.00747	mg/L	0.000478	-0.00747	mg/L	0.000478	6.40%
Sr 421.552†	39571.0	0.07380	mg/L	0.000280	0.07380	mg/L	0.000280	0.38%
Ti 334.903†	161.3	0.00795	mg/L	0.000480	0.00795	mg/L	0.000480	6.04%
Tl 190.801†	0.4	0.00021	mg/L	0.000578	0.00021	mg/L	0.000578	276.61%
V 292.402†	469.6	0.00283	mg/L	0.000170	0.00283	mg/L	0.000170	6.00%
Zn 206.200†	546.1	0.1462	mg/L	0.00006	0.1462	mg/L	0.00006	0.04%

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Sequence No.: 32 Autosampler Location: 359
Sample ID: 20K0258-01 Date Collected: 12/3/2020 8:13:27 PM
Data Type: Original
Dilution: 1X
Wash Time: 37 Auto Dilution Factor: 1

Nebulizer Parameters: 20K0258-01

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: 20K0258-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2017730.5	93.03	%	0.346				0.37%
ScR 361.383	213414.8	91.73	%	0.312				0.34%
Ag 328.068†	48.4	0.00026	mg/L	0.000220	0.00026	mg/L	0.000220	84.53%
Al 308.215†	203.1	0.1521	mg/L	0.00395	0.1521	mg/L	0.00395	2.60%
As 188.979†	14.0	0.00950	mg/L	0.003602	0.00950	mg/L	0.003602	37.90%
B 249.677†	83.3	0.01358	mg/L	0.000691	0.01358	mg/L	0.000691	5.09%
Ba 233.527†	109.1	0.01464	mg/L	0.001194	0.01464	mg/L	0.001194	8.16%
Be 313.042†	215.4	0.00029	mg/L	0.000031	0.00029	mg/L	0.000031	10.87%
Ca 317.933†	155176.4	12.70	mg/L	0.038	12.70	mg/L	0.038	0.30%
Cd 228.802†	27.8	0.00086	mg/L	0.000161	0.00086	mg/L	0.000161	18.69%
Co 228.616†	18.8	0.00050	mg/L	0.000217	0.00050	mg/L	0.000217	43.53%
Cr 267.716†	-18.1	-0.00213	mg/L	0.001747	-0.00213	mg/L	0.001747	82.03%
Cu 324.752†	2670.4	0.01243	mg/L	0.000305	0.01243	mg/L	0.000305	2.45%
Fe 273.955†	602.2	0.3649	mg/L	0.00309	0.3649	mg/L	0.00309	0.85%
K 766.490†	2875.0	1.729	mg/L	0.0308	1.729	mg/L	0.0308	1.78%
Mg 279.077†	3986.4	2.494	mg/L	0.0257	2.494	mg/L	0.0257	1.03%
Mn 257.610†	1155.3	0.02297	mg/L	0.000098	0.02297	mg/L	0.000098	0.43%
Mo 202.031†	35.5	0.00239	mg/L	0.000139	0.00239	mg/L	0.000139	5.83%
Na 589.592†	27062.5	4.868	mg/L	0.0641	4.868	mg/L	0.0641	1.32%
Na 330.237†	92.8	3.785	mg/L	0.1158	3.785	mg/L	0.1158	3.06%
Ni 231.604†	-11.2	-0.00309	mg/L	0.000714	-0.00309	mg/L	0.000714	23.09%
Pb 220.353†	17.5	0.00228	mg/L	0.001198	0.00228	mg/L	0.001198	52.65%
Sb 206.836†	23.7	0.00969	mg/L	0.001582	0.00969	mg/L	0.001582	16.32%
Se 196.026†	10.7	0.00730	mg/L	0.005472	0.00730	mg/L	0.005472	74.96%
Si 288.158†	4803.0	3.093	mg/L	0.0303	3.093	mg/L	0.0303	0.98%
Sn 189.927†	-37.1	-0.00737	mg/L	0.000384	-0.00737	mg/L	0.000384	5.20%
Sr 421.552†	39329.0	0.07335	mg/L	0.000407	0.07335	mg/L	0.000407	0.56%
Ti 334.903†	150.2	0.00736	mg/L	0.000070	0.00736	mg/L	0.000070	0.95%
Tl 190.801†	5.5	0.00272	mg/L	0.000861	0.00272	mg/L	0.000861	31.60%
V 292.402†	418.3	0.00252	mg/L	0.000103	0.00252	mg/L	0.000103	4.08%
Zn 206.200†	537.7	0.1439	mg/L	0.00197	0.1439	mg/L	0.00197	1.37%

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Sequence No.: 33 **Autosampler Location: 360**
Sample ID: BIK0645-MS1 **Date Collected: 12/3/2020 8:17:43 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0645-MS1

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: BIK0645-MS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2000797.8	92.25	%	1.099				1.19%
ScR 361.383	207635.0	89.24	%	0.359				0.40%
Ag 328.068†	102536.5	0.5541	mg/L	0.00499	0.5541	mg/L	0.00499	0.90%
Al 308.215†	3057.8	2.284	mg/L	0.0075	2.284	mg/L	0.0075	0.33%
As 188.979†	3341.9	2.139	mg/L	0.0251	2.139	mg/L	0.0251	1.17%
B 249.677†	88.2	0.01259	mg/L	0.002675	0.01259	mg/L	0.002675	21.24%
Ba 233.527†	16160.4	2.191	mg/L	0.0093	2.191	mg/L	0.0093	0.43%
Be 313.042†	394575.6	0.5343	mg/L	0.00034	0.5343	mg/L	0.00034	0.06%
Ca 317.933†	282774.7	23.10	mg/L	0.123	23.10	mg/L	0.123	0.53%
Cd 228.802†	16418.3	0.5232	mg/L	0.00440	0.5232	mg/L	0.00440	0.84%
Co 228.616†	18793.4	0.5205	mg/L	0.00520	0.5205	mg/L	0.00520	1.00%
Cr 267.716†	4734.7	0.5405	mg/L	0.00260	0.5405	mg/L	0.00260	0.48%
Cu 324.752†	112586.4	0.5246	mg/L	0.00399	0.5246	mg/L	0.00399	0.76%
Fe 273.955†	4132.4	2.502	mg/L	0.0119	2.502	mg/L	0.0119	0.48%
K 766.490†	20763.9	12.49	mg/L	0.020	12.49	mg/L	0.020	0.16%
Mg 279.077†	21559.5	13.49	mg/L	0.073	13.49	mg/L	0.073	0.54%
Mn 257.610†	28478.9	0.5665	mg/L	0.00304	0.5665	mg/L	0.00304	0.54%
Mo 202.031†	55.2	0.00355	mg/L	0.000503	0.00355	mg/L	0.000503	14.18%
Na 589.592†	89603.7	16.12	mg/L	0.132	16.12	mg/L	0.132	0.82%
Na 330.237†	375.0	15.25	mg/L	0.201	15.25	mg/L	0.201	1.32%
Ni 231.604†	1881.0	0.5221	mg/L	0.00302	0.5221	mg/L	0.00302	0.58%
Pb 220.353†	16174.8	2.100	mg/L	0.0129	2.100	mg/L	0.0129	0.61%
Sb 206.836†	47.7	0.01383	mg/L	0.003088	0.01383	mg/L	0.003088	22.34%
Se 196.026†	2750.7	2.145	mg/L	0.0225	2.145	mg/L	0.0225	1.05%
Si 288.158†	4973.6	3.216	mg/L	0.0094	3.216	mg/L	0.0094	0.29%
Sn 189.927†	-58.0	-0.01082	mg/L	0.000741	-0.01082	mg/L	0.000741	6.85%
Sr 421.552†	335342.5	0.6254	mg/L	0.00184	0.6254	mg/L	0.00184	0.29%
Ti 334.903†	160.3	0.00733	mg/L	0.000633	0.00733	mg/L	0.000633	8.63%
Tl 190.801†	4319.6	2.138	mg/L	0.0239	2.138	mg/L	0.0239	1.12%
V 292.402†	86888.1	0.5268	mg/L	0.00497	0.5268	mg/L	0.00497	0.94%
Zn 206.200†	2523.6	0.6755	mg/L	0.00303	0.6755	mg/L	0.00303	0.45%

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Sequence No.: 34 **Autosampler Location: 361**
Sample ID: 20K0261-01 **Date Collected: 12/3/2020 8:22:00 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0261-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0261-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2197484.2	101.3	%	0.61				0.60%
ScR 361.383	204037.3	87.70	%	5.027				5.73%
Ag 328.068†	4582.9	0.02476	mg/L	0.000281	0.02476	mg/L	0.000281	1.13%
Al 308.215†	1519.2	1.138	mg/L	0.0184	1.138	mg/L	0.0184	1.61%
As 188.979†	3.8	0.00264	mg/L	0.002625	0.00264	mg/L	0.002625	99.53%
B 249.677†	86606.6	16.17	mg/L	0.044	16.17	mg/L	0.044	0.27%
Ba 233.527†	2544.7	0.3451	mg/L	0.01284	0.3451	mg/L	0.01284	3.72%
Be 313.042†	-11144.4	-0.01512	mg/L	0.000166	-0.01512	mg/L	0.000166	1.10%
Ca 317.933†	131860.4	10.78	mg/L	0.076	10.78	mg/L	0.076	0.70%
Cd 228.802†	-17.4	-0.00058	mg/L	0.000212	-0.00058	mg/L	0.000212	36.60%
Co 228.616†	4.6	0.00006	mg/L	0.000095	0.00006	mg/L	0.000095	154.24%
Cr 267.716†	-8.3	-0.00098	mg/L	0.001743	-0.00098	mg/L	0.001743	178.57%
Cu 324.752†	4117.2	0.01919	mg/L	0.000272	0.01919	mg/L	0.000272	1.42%
Fe 273.955†	617.2	0.3740	mg/L	0.01304	0.3740	mg/L	0.01304	3.49%
K 766.490†	169839.3	102.2	mg/L	0.29	102.2	mg/L	0.29	0.28%
Mg 279.077†	2094.0	1.310	mg/L	0.0326	1.310	mg/L	0.0326	2.49%
Mn 257.610†	700.6	0.01392	mg/L	0.000614	0.01392	mg/L	0.000614	4.41%
Mo 202.031†	28.5	0.00192	mg/L	0.000439	0.00192	mg/L	0.000439	22.88%
Na 589.592†	19973.4	3.593	mg/L	0.0256	3.593	mg/L	0.0256	0.71%
Na 330.237†	64.7	2.669	mg/L	0.9386	2.669	mg/L	0.9386	35.17%
Ni 231.604†	-22.3	-0.00619	mg/L	0.002752	-0.00619	mg/L	0.002752	44.46%
Pb 220.353†	-5.5	-0.00043	mg/L	0.000416	-0.00043	mg/L	0.000416	97.82%
Sb 206.836†	2.6	0.00104	mg/L	0.001776	0.00104	mg/L	0.001776	170.49%
Se 196.026†	10.4	0.00724	mg/L	0.005308	0.00724	mg/L	0.005308	73.35%
Si 288.158†	14432.3	9.289	mg/L	0.0503	9.289	mg/L	0.0503	0.54%
Sn 189.927†	-8.8	-0.00033	mg/L	0.001302	-0.00033	mg/L	0.001302	391.11%
Sr 421.552†	21801.7	0.04066	mg/L	0.000037	0.04066	mg/L	0.000037	0.09%
Ti 334.903†	77.7	0.00363	mg/L	0.000867	0.00363	mg/L	0.000867	23.90%
Tl 190.801†	-1.4	-0.00068	mg/L	0.001846	-0.00068	mg/L	0.001846	271.79%
V 292.402†	185.7	0.00112	mg/L	0.000021	0.00112	mg/L	0.000021	1.91%
Zn 206.200†	49.4	0.01323	mg/L	0.001113	0.01323	mg/L	0.001113	8.41%

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Sequence No.: 35 **Autosampler Location: 362**
Sample ID: 20K0183-01 **Date Collected: 12/3/2020 8:26:16 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0183-01

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: 20K0183-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2014674.5	92.89	%	0.138				0.15%
ScR 361.383	209628.1	90.10	%	2.454				2.72%
Ag 328.068†	141.9	0.00038	mg/L	0.000217	0.00192	mg/L	0.001086	56.45%
Al 308.215†	120117.1	89.96	mg/L	0.582	449.8	mg/L	2.91	0.65%
As 188.979†	104.4	0.6239	mg/L	0.00741	3.120	mg/L	0.0371	1.19%
B 249.677†	244.4	0.03168	mg/L	0.003687	0.1584	mg/L	0.01843	11.64%
Ba 233.527†	3180.1	0.4142	mg/L	0.01216	2.071	mg/L	0.0608	2.94%
Be 313.042†	1791.7	0.00197	mg/L	0.000134	0.00984	mg/L	0.000669	6.80%
Ca 317.933†	336419.3	27.53	mg/L	0.200	137.6	mg/L	1.00	0.73%
Cd 228.802†	171.0	0.00530	mg/L	0.000178	0.02651	mg/L	0.000892	3.36%
Co 228.616†	2284.2	0.05218	mg/L	0.000320	0.2609	mg/L	0.00160	0.61%
Cr 267.716†	1127.5	0.1309	mg/L	0.00371	0.6545	mg/L	0.01854	2.83%
Cu 324.752†	39748.0	0.1890	mg/L	0.00062	0.9452	mg/L	0.00308	0.33%
Fe 273.955†	198168.1	120.1	mg/L	0.17	600.5	mg/L	0.83	0.14%
K 766.490†	14029.3	8.439	mg/L	0.0847	42.19	mg/L	0.423	1.00%
Mg 279.077†	40509.8	25.32	mg/L	0.709	126.6	mg/L	3.55	2.80%
Mn 257.610†	231174.6	4.596	mg/L	0.0308	22.98	mg/L	0.154	0.67%
Mo 202.031†	76.6	0.00491	mg/L	0.000126	0.02455	mg/L	0.000632	2.58%
Na 589.592†	17984.8	3.235	mg/L	0.0258	16.18	mg/L	0.129	0.80%
Na 330.237†	35.7	2.286	mg/L	0.1803	11.43	mg/L	0.901	7.89%
Ni 231.604†	344.7	0.09574	mg/L	0.005242	0.4787	mg/L	0.02621	5.48%
Pb 220.353†	333.9	0.06549	mg/L	0.000479	0.3275	mg/L	0.00240	0.73%
Sb 206.836†	149.3	0.06139	mg/L	0.001630	0.3070	mg/L	0.00815	2.66%
Se 196.026†	16.0	0.00652	mg/L	0.004122	0.03262	mg/L	0.020610	63.18%
Si 288.158†	9186.6	5.951	mg/L	0.1422	29.75	mg/L	0.711	2.39%
Sn 189.927†	-70.4	-0.01129	mg/L	0.001095	-0.05644	mg/L	0.005475	9.70%
Sr 421.552†	111078.2	0.2072	mg/L	0.00225	1.036	mg/L	0.0113	1.09%
Ti 334.903†	94247.6	4.963	mg/L	0.0217	24.81	mg/L	0.108	0.44%
Tl 190.801†	-30.8	-0.01660	mg/L	0.004210	-0.08301	mg/L	0.021051	25.36%
V 292.402†	43039.5	0.2604	mg/L	0.00092	1.302	mg/L	0.0046	0.35%
Zn 206.200†	1580.3	0.4229	mg/L	0.01228	2.115	mg/L	0.0614	2.90%

Sequence No.: 36
Sample ID: SEQ-IBL3
Autosampler Location: 363
Date Collected: 12/3/2020 8:30:18 PM
Data Type: Original
Dilution: 1X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-IBL3

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: SEQ-IBL3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1986256.6	91.58	%	0.241				0.26%
ScR 361.383	208407.3	89.58	%	0.495				0.55%
Ag 328.068†	144.5	0.00078	mg/L	0.000064	0.00078	mg/L	0.000064	8.25%
Al 308.215†	-82.8	-0.06204	mg/L	0.022668	-0.06204	mg/L	0.022668	36.54%
As 188.979†	4.5	0.00293	mg/L	0.003377	0.00293	mg/L	0.003377	115.09%
B 249.677†	74.5	0.01398	mg/L	0.001837	0.01398	mg/L	0.001837	13.14%
Ba 233.527†	-0.1	-0.00001	mg/L	0.001090	-0.00001	mg/L	0.001090	>999.9%
Be 313.042†	166.6	0.00022	mg/L	0.000007	0.00022	mg/L	0.000007	3.28%
Ca 317.933†	66.3	0.00537	mg/L	0.000389	0.00537	mg/L	0.000389	7.25%
Cd 228.802†	23.6	0.00075	mg/L	0.000131	0.00075	mg/L	0.000131	17.53%
Co 228.616†	21.2	0.00059	mg/L	0.000238	0.00059	mg/L	0.000238	40.44%
Cr 267.716†	-33.5	-0.00383	mg/L	0.000237	-0.00383	mg/L	0.000237	6.18%
Cu 324.752†	494.2	0.00230	mg/L	0.000229	0.00230	mg/L	0.000229	9.95%
Fe 273.955†	19.2	0.01161	mg/L	0.000993	0.01161	mg/L	0.000993	8.56%
K 766.490†	91.8	0.05524	mg/L	0.018195	0.05524	mg/L	0.018195	32.94%
Mg 279.077†	-53.2	-0.03331	mg/L	0.015294	-0.03331	mg/L	0.015294	45.92%
Mn 257.610†	32.8	0.00065	mg/L	0.000105	0.00065	mg/L	0.000105	16.17%
Mo 202.031†	8.7	0.00064	mg/L	0.000271	0.00064	mg/L	0.000271	42.38%
Na 589.592†	-68.2	-0.01227	mg/L	0.008007	-0.01227	mg/L	0.008007	65.23%
Na 330.237†	-21.4	-0.8843	mg/L	0.15379	-0.8843	mg/L	0.15379	17.39%
Ni 231.604†	-19.2	-0.00532	mg/L	0.001598	-0.00532	mg/L	0.001598	30.07%
Pb 220.353†	-4.8	-0.00065	mg/L	0.000575	-0.00065	mg/L	0.000575	88.26%
Sb 206.836†	21.9	0.00906	mg/L	0.001098	0.00906	mg/L	0.001098	12.12%
Se 196.026†	1.2	0.00094	mg/L	0.003677	0.00094	mg/L	0.003677	391.61%
Si 288.158†	-145.1	-0.09336	mg/L	0.005456	-0.09336	mg/L	0.005456	5.84%
Sn 189.927†	-3.2	-0.00084	mg/L	0.000870	-0.00084	mg/L	0.000870	103.82%
Sr 421.552†	149.9	0.00028	mg/L	0.000051	0.00028	mg/L	0.000051	18.39%
Ti 334.903†	6.3	0.00033	mg/L	0.002287	0.00033	mg/L	0.002287	693.39%
Tl 190.801†	-0.1	-0.00006	mg/L	0.001559	-0.00006	mg/L	0.001559	>999.9%
V 292.402†	249.1	0.00149	mg/L	0.000237	0.00149	mg/L	0.000237	15.88%
Zn 206.200†	3.4	0.00090	mg/L	0.000380	0.00090	mg/L	0.000380	42.21%

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Sequence No.: 37 **Autosampler Location: 7**
Sample ID: SEQ-CCV8 **Date Collected: 12/3/2020 8:34:34 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV8

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-CCV8

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2002778.0	92.34	%	0.627				0.68%
ScR 361.383	208168.4	89.47	%	0.069				0.08%
Ag 328.068†	190106.6	1.027	mg/L	0.0009	1.027	mg/L	0.0009	0.09%
Al 308.215†	2743.6	2.022	mg/L	0.0084	2.022	mg/L	0.0084	0.42%
As 188.979†	3023.6	2.054	mg/L	0.0054	2.054	mg/L	0.0054	0.26%
B 249.677†	5885.0	1.095	mg/L	0.0069	1.095	mg/L	0.0069	0.63%
Ba 233.527†	7716.9	1.045	mg/L	0.0034	1.045	mg/L	0.0034	0.33%
Be 313.042†	770166.7	1.043	mg/L	0.0039	1.043	mg/L	0.0039	0.37%
Ca 317.933†	24218.2	1.903	mg/L	0.0056	1.903	mg/L	0.0056	0.30%
Cd 228.802†	31551.6	1.015	mg/L	0.0064	1.015	mg/L	0.0064	0.63%
Co 228.616†	37831.0	1.047	mg/L	0.0051	1.047	mg/L	0.0051	0.49%
Cr 267.716†	9201.0	1.051	mg/L	0.0038	1.051	mg/L	0.0038	0.36%
Cu 324.752†	212399.6	0.9891	mg/L	0.00143	0.9891	mg/L	0.00143	0.14%
Fe 273.955†	3384.4	2.047	mg/L	0.0032	2.047	mg/L	0.0032	0.15%
K 766.490†	34756.4	20.91	mg/L	0.097	20.91	mg/L	0.097	0.47%
Mg 279.077†	3269.1	2.063	mg/L	0.0157	2.063	mg/L	0.0157	0.76%
Mn 257.610†	50977.5	1.014	mg/L	0.0063	1.014	mg/L	0.0063	0.62%
Mo 202.031†	14807.2	1.089	mg/L	0.0029	1.089	mg/L	0.0029	0.26%
Na 589.592†	298346.2	53.67	mg/L	0.347	53.67	mg/L	0.347	0.65%
Na 330.237†	1285.9	52.98	mg/L	0.518	52.98	mg/L	0.518	0.98%
Ni 231.604†	3703.0	1.030	mg/L	0.0030	1.030	mg/L	0.0030	0.29%
Pb 220.353†	16102.3	2.091	mg/L	0.0037	2.091	mg/L	0.0037	0.18%
Sb 206.836†	5701.8	2.338	mg/L	0.0047	2.338	mg/L	0.0047	0.20%
Se 196.026†	2694.1	2.102	mg/L	0.0117	2.102	mg/L	0.0117	0.56%
Si 288.158†	3445.4	2.223	mg/L	0.0066	2.223	mg/L	0.0066	0.30%
Sn 189.927†	4330.9	1.133	mg/L	0.0058	1.133	mg/L	0.0058	0.51%
Sr 421.552†	576343.8	1.075	mg/L	0.0064	1.075	mg/L	0.0064	0.59%
Ti 334.903†	20915.0	1.100	mg/L	0.0030	1.100	mg/L	0.0030	0.27%
Tl 190.801†	4181.6	2.067	mg/L	0.0015	2.067	mg/L	0.0015	0.07%
V 292.402†	166046.1	1.007	mg/L	0.0027	1.007	mg/L	0.0027	0.27%
Zn 206.200†	3975.8	1.064	mg/L	0.0067	1.064	mg/L	0.0067	0.63%

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Sequence No.: 38 **Autosampler Location: 1**
Sample ID: SEQ-CCB8 **Date Collected: 12/3/2020 8:40:02 PM**
Data Type: Original
Dilution: 1X
Wash Time: 120 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB8

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-CCB8

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2012163.8	92.78	%	0.242				0.26%
ScR 361.383	211883.6	91.07	%	0.424				0.47%
Ag 328.068†	121.1	0.00065	mg/L	0.000184	0.00065	mg/L	0.000184	28.08%
Al 308.215†	-102.7	-0.07700	mg/L	0.007223	-0.07700	mg/L	0.007223	9.38%
As 188.979†	4.5	0.00286	mg/L	0.002329	0.00286	mg/L	0.002329	81.46%
B 249.677†	5.2	0.00102	mg/L	0.000376	0.00102	mg/L	0.000376	36.82%
Ba 233.527†	0.4	0.00006	mg/L	0.000577	0.00006	mg/L	0.000577	>999.9%
Be 313.042†	199.0	0.00027	mg/L	0.000020	0.00027	mg/L	0.000020	7.66%
Ca 317.933†	57.6	0.00466	mg/L	0.000821	0.00466	mg/L	0.000821	17.64%
Cd 228.802†	18.7	0.00059	mg/L	0.000237	0.00059	mg/L	0.000237	40.17%
Co 228.616†	17.3	0.00048	mg/L	0.000036	0.00048	mg/L	0.000036	7.47%
Cr 267.716†	-36.5	-0.00417	mg/L	0.001155	-0.00417	mg/L	0.001155	27.67%
Cu 324.752†	498.3	0.00232	mg/L	0.000081	0.00232	mg/L	0.000081	3.50%
Fe 273.955†	4.5	0.00271	mg/L	0.000623	0.00271	mg/L	0.000623	23.04%
K 766.490†	13.3	0.00798	mg/L	0.016681	0.00798	mg/L	0.016681	208.94%
Mg 279.077†	-71.9	-0.04493	mg/L	0.008947	-0.04493	mg/L	0.008947	19.91%
Mn 257.610†	27.6	0.00055	mg/L	0.000121	0.00055	mg/L	0.000121	22.11%
Mo 202.031†	51.7	0.00380	mg/L	0.001083	0.00380	mg/L	0.001083	28.50%
Na 589.592†	-95.2	-0.01712	mg/L	0.005028	-0.01712	mg/L	0.005028	29.36%
Na 330.237†	-28.7	-1.188	mg/L	0.5628	-1.188	mg/L	0.5628	47.36%
Ni 231.604†	-21.7	-0.00601	mg/L	0.000661	-0.00601	mg/L	0.000661	11.01%
Pb 220.353†	-4.5	-0.00061	mg/L	0.000528	-0.00061	mg/L	0.000528	85.92%
Sb 206.836†	28.4	0.01170	mg/L	0.000698	0.01170	mg/L	0.000698	5.97%
Se 196.026†	2.7	0.00214	mg/L	0.005737	0.00214	mg/L	0.005737	268.31%
Si 288.158†	-138.6	-0.08924	mg/L	0.001029	-0.08924	mg/L	0.001029	1.15%
Sn 189.927†	-4.1	-0.00107	mg/L	0.000913	-0.00107	mg/L	0.000913	85.46%
Sr 421.552†	120.5	0.00022	mg/L	0.000013	0.00022	mg/L	0.000013	5.91%
Ti 334.903†	1.7	0.00009	mg/L	0.000272	0.00009	mg/L	0.000272	313.86%
Tl 190.801†	-0.4	-0.00021	mg/L	0.001712	-0.00021	mg/L	0.001712	800.36%
V 292.402†	305.3	0.00183	mg/L	0.000018	0.00183	mg/L	0.000018	0.96%
Zn 206.200†	4.1	0.00109	mg/L	0.000993	0.00109	mg/L	0.000993	91.19%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: DK00045
Control Limt: +/- 10.00%
Sequence: SIK0278

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SIK0278-ICV1	Lead	2.0000	2.04	102	mg/L	EPA 6010C
SIK0278-CCV1	Lead	2.0000	2.02	101	mg/L	EPA 6010C
SIK0278-CCV2	Lead	2.0000	2.04	102	mg/L	EPA 6010C
SIK0278-CCV3	Lead	2.0000	2.02	101	mg/L	EPA 6010C
SIK0278-CCV4	Lead	2.0000	2.05	103	mg/L	EPA 6010C
SIK0278-CCV5	Lead	2.0000	2.09	104	mg/L	EPA 6010C
SIK0278-CCV6	Lead	2.0000	2.07	103	mg/L	EPA 6010C
SIK0278-CCV7	Lead	2.0000	2.01	100	mg/L	EPA 6010C

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Instrument ID: ICP2

Control Limt: +/- 10.00%

SDG: 20K0126

Project: ICS-Former NW Cooperage

Calibration: DK00051

Sequence: SIK0315

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SIK0315-ICV1	Lead	2.0000	2.01	101	mg/L	EPA 6010C
SIK0315-CCV1	Lead	2.0000	2.08	104	mg/L	EPA 6010C
SIK0315-CCV2	Lead	2.0000	2.05	103	mg/L	EPA 6010C

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Instrument ID: ICP2
Control Limt: +/- 10.00%

SDG: 20K0126
Project: ICS-Former NW Cooperage
Calibration: DL00015
Sequence: SIL0061

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SIL0061-ICV1	Lead	2.0000	2.00	100	mg/L	EPA 6010C
SIL0061-CCV1	Lead	2.0000	1.99	99.4	mg/L	EPA 6010C
SIL0061-CCV2	Lead	2.0000	1.91	95.6	mg/L	EPA 6010C
SIL0061-CCV3	Lead	2.0000	1.96	97.9	mg/L	EPA 6010C
SIL0061-CCV4	Lead	2.0000	2.23	112	mg/L	EPA 6010C
SIL0061-CCV5	Lead	2.0000	2.06	103	mg/L	EPA 6010C
SIL0061-CCV6	Lead	2.0000	2.08	104	mg/L	EPA 6010C
SIL0061-CCV7	Lead	2.0000	2.07	103	mg/L	EPA 6010C
SIL0061-CCV8	Lead	2.0000	2.09	105	mg/L	EPA 6010C

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Instrument ID: ICP2 Calibration: DK00045

Sequence: SIK0278 Date Analyzed: 11/18/20 14:13

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SIK0278-ICB1	Lead	-0.0006	0.0024	0.0200	mg/L	
SIK0278-CCB1	Lead	-0.00007	0.0024	0.0200	mg/L	
SIK0278-CCB2	Lead	0.0026	0.0024	0.0200	mg/L	
SIK0278-CCB3	Lead	0.0050	0.0024	0.0200	mg/L	
SIK0278-CCB4	Lead	0.0069	0.0024	0.0200	mg/L	
SIK0278-CCB5	Lead	0.0071	0.0024	0.0200	mg/L	
SIK0278-CCB6	Lead	0.0082	0.0024	0.0200	mg/L	
SIK0278-CCB7	Lead	0.0083	0.0024	0.0200	mg/L	

Analytical Resources, Incorporated
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INSTRUMENT BLANKS
EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Instrument ID: ICP2 Calibration: DK00051

Sequence: SIK0315 Date Analyzed: 11/20/20 15:25

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SIK0315-ICB1	Lead	0.0002	0.0024	0.0200	mg/L	
SIK0315-CCB1	Lead	0.0007	0.0024	0.0200	mg/L	
SIK0315-CCB2	Lead	0.00004	0.0024	0.0200	mg/L	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: DL00015
Sequence: SIL0061
Date Analyzed: 12/03/20 14:26

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SIL0061-ICB1	Lead	-0.0005	0.0024	0.0200	mg/L	
SIL0061-CCB1	Lead	-0.0003	0.0024	0.0200	mg/L	
SIL0061-IBL1	Lead	-0.00004	0.0024	0.0200	mg/L	
SIL0061-CCB2	Lead	0.0004	0.0024	0.0200	mg/L	
SIL0061-CCB3	Lead	-0.0012	0.0024	0.0200	mg/L	
SIL0061-IBL2	Lead	-0.0006	0.0024	0.0200	mg/L	
SIL0061-CCB4	Lead	-0.0010	0.0024	0.0200	mg/L	
SIL0061-CCB5	Lead	-0.0005	0.0024	0.0200	mg/L	
SIL0061-CCB6	Lead	-0.0017	0.0024	0.0200	mg/L	
SIL0061-CCB7	Lead	-0.0003	0.0024	0.0200	mg/L	
SIL0061-IBL3	Lead	-0.0007	0.0024	0.0200	mg/L	
SIL0061-CCB8	Lead	-0.0006	0.0024	0.0200	mg/L	

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Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIK0278	Instrument:	ICP2
		Calibration:	DK00045

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SIK0278-CAL1	I2201118A-001	NA	11/18/20 13:51
CAL 1 - LOW CHECK	SIK0278-CAL2	I2201118A-002	NA	11/18/20 13:55
CAL 2	SIK0278-CAL3	I2201118A-003	NA	11/18/20 13:57
CAL 3	SIK0278-CAL4	I2201118A-004	NA	11/18/20 14:00
CAL 4	SIK0278-CAL5	I2201118A-005	NA	11/18/20 14:03
Initial Cal Check	SIK0278-ICV1	I2201118A-006	NA	11/18/20 14:08
Initial Cal Blank	SIK0278-ICB1	I2201118A-007	NA	11/18/20 14:13
Instrument RL Check	SIK0278-CRL1	I2201118A-008	NA	11/18/20 14:17
Interference Check A	SIK0278-IFA1	I2201118A-009	NA	11/18/20 14:21
Interference Check B	SIK0278-IFB1	I2201118A-010	NA	11/18/20 14:26
Calibration Check	SIK0278-CCV1	I2201118A-011	NA	11/18/20 14:33
Calibration Blank	SIK0278-CCB1	I2201118A-012	NA	11/18/20 14:38
Blank	BIK0408-BLK1	I2201118A-016	Solid	11/18/20 15:02
LCS	BIK0408-BS1	I2201118A-017	Solid	11/18/20 15:06
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0196-01	I2201118A-019	Solid	11/18/20 15:15
ZZZZZ	20K0196-01	I2201118A-019	Solid	11/18/20 15:15
ZZZZZ	20K0196-01	I2201118A-019	Solid	11/18/20 15:15
ZZZZZ	20K0196-01	I2201118A-019	Solid	11/18/20 15:15
ZZZZZ	20K0196-01	I2201118A-019	Solid	11/18/20 15:15

Analytical Resources, Incorporated
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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIK0278
Instrument: ICP2
Calibration: DK00045

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0196-01	I2201118A-019	Solid	11/18/20 15:15
ZZZZZ	20K0196-01	I2201118A-019	Solid	11/18/20 15:15
ZZZZZ	20K0135-01	I2201118A-020	Solid	11/18/20 15:20
ZZZZZ	20K0135-01	I2201118A-020	Solid	11/18/20 15:20
ZZZZZ	20K0135-01	I2201118A-020	Solid	11/18/20 15:20
ZZZZZ	20K0135-01	I2201118A-020	Solid	11/18/20 15:20
ZZZZZ	20K0135-01	I2201118A-020	Solid	11/18/20 15:20
ZZZZZ	20K0135-01	I2201118A-020	Solid	11/18/20 15:20
ZZZZZ	20K0135-02	I2201118A-021	Solid	11/18/20 15:24
ZZZZZ	20K0135-02	I2201118A-021	Solid	11/18/20 15:24
ZZZZZ	20K0135-02	I2201118A-021	Solid	11/18/20 15:24
ZZZZZ	20K0135-02	I2201118A-021	Solid	11/18/20 15:24
ZZZZZ	20K0135-02	I2201118A-021	Solid	11/18/20 15:24
ZZZZZ	20K0135-02	I2201118A-021	Solid	11/18/20 15:24
ZZZZZ	20K0135-03	I2201118A-022	Solid	11/18/20 15:28
ZZZZZ	20K0135-03	I2201118A-022	Solid	11/18/20 15:28
ZZZZZ	20K0135-03	I2201118A-022	Solid	11/18/20 15:28
ZZZZZ	20K0135-03	I2201118A-022	Solid	11/18/20 15:28
ZZZZZ	20K0135-03	I2201118A-022	Solid	11/18/20 15:28
ZZZZZ	20K0135-03	I2201118A-022	Solid	11/18/20 15:28
Calibration Check	SIK0278-CCV2	I2201118A-023	NA	11/18/20 15:35
Calibration Blank	SIK0278-CCB2	I2201118A-024	NA	11/18/20 15:40
ZZZZZ	20K0215-01	I2201118A-027	Solid	11/18/20 16:04
ZZZZZ	20K0215-01	I2201118A-027	Solid	11/18/20 16:04
ZZZZZ	20K0215-01	I2201118A-027	Solid	11/18/20 16:04
ZZZZZ	20K0215-01	I2201118A-027	Solid	11/18/20 16:04
ZZZZZ	20K0215-01	I2201118A-027	Solid	11/18/20 16:04
ZZZZZ	20K0215-01	I2201118A-027	Solid	11/18/20 16:04
ZZZZZ	20K0215-01	I2201118A-027	Solid	11/18/20 16:04
ZZZZZ	20K0196-01RE1	I2201118A-029	Solid	11/18/20 16:13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIK0278
Instrument: ICP2
Calibration: DK00045

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SIK0278-CCV3	I2201118A-034	NA	11/18/20 16:39
Calibration Blank	SIK0278-CCB3	I2201118A-035	NA	11/18/20 16:45
ZZZZZ	20K0196-01	I2201118A-038	Solid	11/18/20 17:02
ZZZZZ	20K0196-01	I2201118A-038	Solid	11/18/20 17:02
ZZZZZ	20K0196-01	I2201118A-038	Solid	11/18/20 17:02
ZZZZZ	20K0196-01	I2201118A-038	Solid	11/18/20 17:02
ZZZZZ	20K0196-01	I2201118A-038	Solid	11/18/20 17:02
ZZZZZ	20K0196-01	I2201118A-038	Solid	11/18/20 17:02
ZZZZZ	20K0196-01	I2201118A-038	Solid	11/18/20 17:02
ZZZZZ	20K0209-01	I2201118A-039	Solid	11/18/20 17:07
ZZZZZ	20K0209-01	I2201118A-039	Solid	11/18/20 17:07
ZZZZZ	20K0209-01	I2201118A-039	Solid	11/18/20 17:07
ZZZZZ	20K0209-01	I2201118A-039	Solid	11/18/20 17:07
ZZZZZ	20K0209-01	I2201118A-039	Solid	11/18/20 17:07
ZZZZZ	20K0210-01	I2201118A-040	Solid	11/18/20 17:11
ZZZZZ	20K0210-01	I2201118A-040	Solid	11/18/20 17:11
ZZZZZ	20K0210-01	I2201118A-040	Solid	11/18/20 17:11
ZZZZZ	20K0210-01	I2201118A-040	Solid	11/18/20 17:11
ZZZZZ	20K0210-01	I2201118A-040	Solid	11/18/20 17:11
ZZZZZ	20K0211-01	I2201118A-041	Solid	11/18/20 17:16
ZZZZZ	20K0211-01	I2201118A-041	Solid	11/18/20 17:16
ZZZZZ	20K0211-01	I2201118A-041	Solid	11/18/20 17:16
ZZZZZ	20K0211-01	I2201118A-041	Solid	11/18/20 17:16
ZZZZZ	20K0211-01	I2201118A-041	Solid	11/18/20 17:16
ZZZZZ	20K0212-01	I2201118A-043	Solid	11/18/20 17:25
ZZZZZ	20K0212-01	I2201118A-043	Solid	11/18/20 17:25
ZZZZZ	20K0212-01	I2201118A-043	Solid	11/18/20 17:25
ZZZZZ	20K0212-01	I2201118A-043	Solid	11/18/20 17:25
ZZZZZ	20K0212-01	I2201118A-043	Solid	11/18/20 17:25
Calibration Check	SIK0278-CCV4	I2201118A-046	NA	11/18/20 17:40

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage
Sequence: SIK0278 Instrument: ICP2
Calibration: DK00045

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SIK0278-CCB4	I2201118A-047	NA	11/18/20 17:45
PP15-5	20K0126-02	I2201118A-052	Solid	11/18/20 18:07
PP16-5	20K0126-07	I2201118A-053	Solid	11/18/20 18:11
PP15-2.5	BIK0408-DUP1	I2201118A-054	Solid	11/18/20 18:15
PP15-2.5	20K0126-01	I2201118A-055	Solid	11/18/20 18:19
PP15-2.5	BIK0408-MS1	I2201118A-056	Solid	11/18/20 18:24
PP15-2.5	BIK0408-MSD1	I2201118A-057	Solid	11/18/20 18:28
Calibration Check	SIK0278-CCV5	I2201118A-058	NA	11/18/20 18:34
Calibration Blank	SIK0278-CCB5	I2201118A-059	NA	11/18/20 18:39
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
PP13-2.5	20K0126-11	I2201118A-063	Solid	11/18/20 18:58
PP13-5	20K0126-12	I2201118A-064	Solid	11/18/20 19:02
PP7-2.5	20K0126-16	I2201118A-065	Solid	11/18/20 19:06
PP7-7.5	20K0126-18	I2201118A-066	Solid	11/18/20 19:10
PP3-2	20K0126-22	I2201118A-067	Solid	11/18/20 19:15
PP3-5	20K0126-24	I2201118A-068	Solid	11/18/20 19:19
Calibration Check	SIK0278-CCV6	I2201118A-069	NA	11/18/20 19:25
Calibration Blank	SIK0278-CCB6	I2201118A-070	NA	11/18/20 19:30
ZZZZZ	20K0145-02	I2201118A-071	Solid	11/18/20 19:34
ZZZZZ	20K0145-03	I2201118A-072	Solid	11/18/20 19:38
ZZZZZ	20K0145-07	I2201118A-073	Solid	11/18/20 19:43
ZZZZZ	20K0145-08	I2201118A-074	Solid	11/18/20 19:47
ZZZZZ	20K0145-11	I2201118A-075	Solid	11/18/20 19:51

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIK0278	Instrument:	ICP2
		Calibration:	DK00045

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0145-13	I2201118A-076	Solid	11/18/20 19:56
ZZZZZ	20K0145-15	I2201118A-077	Solid	11/18/20 20:00
ZZZZZ	20K0145-17	I2201118A-078	Solid	11/18/20 20:04
Calibration Check	SIK0278-CCV7	I2201118A-079	NA	11/18/20 20:10
Calibration Blank	SIK0278-CCB7	I2201118A-080	NA	11/18/20 20:15

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIK0315	Instrument:	ICP2
		Calibration:	DK00051

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SIK0315-CAL1	I2201120b-006	NA	11/20/20 15:03
CAL 1 - LOW CHECK	SIK0315-CAL2	I2201120b-007	NA	11/20/20 15:07
CAL 2	SIK0315-CAL3	I2201120b-008	NA	11/20/20 15:09
CAL 3	SIK0315-CAL4	I2201120b-009	NA	11/20/20 15:13
CAL 4	SIK0315-CAL5	I2201120b-010	NA	11/20/20 15:15
Initial Cal Check	SIK0315-ICV1	I2201120b-011	NA	11/20/20 15:21
Initial Cal Blank	SIK0315-ICB1	I2201120b-012	NA	11/20/20 15:25
Instrument RL Check	SIK0315-CRL1	I2201120b-013	NA	11/20/20 15:29
Interference Check A	SIK0315-IFA1	I2201120b-014	NA	11/20/20 15:34
Interference Check B	SIK0315-IFB1	I2201120b-015	NA	11/20/20 15:38
Calibration Check	SIK0315-CCV1	I2201120b-016	NA	11/20/20 15:45
Calibration Blank	SIK0315-CCB1	I2201120b-017	NA	11/20/20 15:51
ZZZZZ	BIK0529-BLK1	I2201120b-018	Solid	11/20/20 15:55
PP16-2.5	20K0126-06	I2201120b-019	Solid	11/20/20 15:59
ZZZZZ	BIK0529-BS1	I2201120b-026	Solid	11/20/20 16:34
Calibration Check	SIK0315-CCV2	I2201120b-027	NA	11/20/20 16:38
Calibration Blank	SIK0315-CCB2	I2201120b-028	NA	11/20/20 16:44

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIL0061
Instrument: ICP2
Calibration: DL00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SIL0061-CAL1	I2201203A-001	NA	12/03/20 14:04
CAL 1 - LOW CHECK	SIL0061-CAL2	I2201203A-002	NA	12/03/20 14:08
CAL 2	SIL0061-CAL3	I2201203A-003	NA	12/03/20 14:10
CAL 3	SIL0061-CAL4	I2201203A-004	NA	12/03/20 14:13
CAL 4	SIL0061-CAL5	I2201203A-005	NA	12/03/20 14:15
Initial Cal Check	SIL0061-ICV1	I2201203A-006	NA	12/03/20 14:21
Initial Cal Blank	SIL0061-ICB1	I2201203A-007	NA	12/03/20 14:26
Instrument RL Check	SIL0061-CRL1	I2201203A-008	NA	12/03/20 14:31
Interference Check A	SIL0061-IFA1	I2201203A-009	NA	12/03/20 14:35
Interference Check B	SIL0061-IFB1	I2201203A-010	NA	12/03/20 14:39
Calibration Check	SIL0061-CCV1	I2201203A-011	NA	12/03/20 14:46
Calibration Blank	SIL0061-CCB1	I2201203A-012	NA	12/03/20 14:52
RINSE	SIL0061-IBL1	I2201203A-017	NA	12/03/20 15:23
Calibration Check	SIL0061-CCV2	I2201203A-023	NA	12/03/20 15:48
Calibration Blank	SIL0061-CCB2	I2201203A-024	NA	12/03/20 15:53
ZZZZZ	BIK0645-BLK1	I2201203A-025	Water	12/03/20 15:58
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0061	Instrument:	ICP2
		Calibration:	DL00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	BIK0645-BS1	I2201203A-034	Water	12/03/20 16:37
Calibration Check	SIL0061-CCV3	I2201203A-035	NA	12/03/20 16:42
Calibration Blank	SIL0061-CCB3	I2201203A-036	NA	12/03/20 16:47
ZZZZZ	20K0326-01	I2201203A-039	Water	12/03/20 17:01
ZZZZZ	20K0327-01	I2201203A-041	Solid	12/03/20 17:10
ZZZZZ	20K0327-01	I2201203A-041	Solid	12/03/20 17:10
ZZZZZ	20K0327-01	I2201203A-041	Solid	12/03/20 17:10
ZZZZZ	20K0327-01	I2201203A-041	Solid	12/03/20 17:10
ZZZZZ	20K0328-01	I2201203A-042	Solid	12/03/20 17:14
ZZZZZ	20K0328-01	I2201203A-042	Solid	12/03/20 17:14
ZZZZZ	20K0328-01	I2201203A-042	Solid	12/03/20 17:14

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIL0061
Instrument: ICP2
Calibration: DL00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0328-01	I2201203A-042	Solid	12/03/20 17:14
ZZZZZ	20K0335-01	I2201203A-043	Water	12/03/20 17:19
ZZZZZ	20K0411-01	I2201203A-044	Water	12/03/20 17:24
Instrument Blank	SIL0061-IBL2	I2201203A-045	NA	12/03/20 17:29
Calibration Check	SIL0061-CCV4	I2201203A-047	NA	12/03/20 17:37
Calibration Blank	SIL0061-CCB4	I2201203A-048	NA	12/03/20 17:43
Calibration Check	SIL0061-CCV5	I2201203A-052	NA	12/03/20 17:56
Calibration Blank	SIL0061-CCB5	I2201203A-053	NA	12/03/20 18:01
ZZZZZ	20K0183-02	I2201203A-055	Solid	12/03/20 18:10
ZZZZZ	20K0183-02	I2201203A-055	Solid	12/03/20 18:10
ZZZZZ	20K0183-03	I2201203A-056	Solid	12/03/20 18:14
ZZZZZ	20K0183-03	I2201203A-056	Solid	12/03/20 18:14
ZZZZZ	20K0183-04	I2201203A-057	Solid	12/03/20 18:18
ZZZZZ	20K0183-04	I2201203A-057	Solid	12/03/20 18:18
ZZZZZ	20K0199-01	I2201203A-058	Solid	12/03/20 18:22
ZZZZZ	20K0199-01	I2201203A-058	Solid	12/03/20 18:22
ZZZZZ	20K0199-02	I2201203A-059	Solid	12/03/20 18:27
ZZZZZ	20K0199-02	I2201203A-059	Solid	12/03/20 18:27
ZZZZZ	20K0199-03	I2201203A-060	Solid	12/03/20 18:32
ZZZZZ	20K0199-03	I2201203A-060	Solid	12/03/20 18:32
ZZZZZ	20K0200-01	I2201203A-061	Solid	12/03/20 18:36
ZZZZZ	20K0200-01	I2201203A-061	Solid	12/03/20 18:36
ZZZZZ	20K0200-02	I2201203A-062	Solid	12/03/20 18:41
ZZZZZ	20K0200-02	I2201203A-062	Solid	12/03/20 18:41
ZZZZZ	20K0200-03	I2201203A-063	Solid	12/03/20 18:45
ZZZZZ	20K0200-03	I2201203A-063	Solid	12/03/20 18:45
Calibration Check	SIL0061-CCV6	I2201203A-064	NA	12/03/20 18:50
Calibration Blank	SIL0061-CCB6	I2201203A-065	NA	12/03/20 18:55
ZZZZZ	20K0394-02	I2201203A-067	Solid	12/03/20 19:04
ZZZZZ	20K0394-02	I2201203A-067	Solid	12/03/20 19:04

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIL0061
Instrument: ICP2
Calibration: DL00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0394-02	I2201203A-067	Solid	12/03/20 19:04
ZZZZZ	20K0394-02	I2201203A-067	Solid	12/03/20 19:04
ZZZZZ	20K0394-02	I2201203A-067	Solid	12/03/20 19:04
ZZZZZ	20K0394-02	I2201203A-067	Solid	12/03/20 19:04
ZZZZZ	20K0394-02	I2201203A-067	Solid	12/03/20 19:04
ZZZZZ	20K0394-03	I2201203A-068	Solid	12/03/20 19:08
ZZZZZ	20K0394-03	I2201203A-068	Solid	12/03/20 19:08
ZZZZZ	20K0394-03	I2201203A-068	Solid	12/03/20 19:08
ZZZZZ	20K0394-03	I2201203A-068	Solid	12/03/20 19:08
ZZZZZ	20K0394-03	I2201203A-068	Solid	12/03/20 19:08
ZZZZZ	20K0394-03	I2201203A-068	Solid	12/03/20 19:08
ZZZZZ	20K0394-03	I2201203A-068	Solid	12/03/20 19:08
ZZZZZ	20K0408-01	I2201203A-069	Solid	12/03/20 19:13
ZZZZZ	20K0408-01	I2201203A-069	Solid	12/03/20 19:13
ZZZZZ	20K0408-01	I2201203A-069	Solid	12/03/20 19:13
ZZZZZ	20K0408-01	I2201203A-069	Solid	12/03/20 19:13
ZZZZZ	20K0408-01	I2201203A-069	Solid	12/03/20 19:13
ZZZZZ	20K0409-01	I2201203A-070	Solid	12/03/20 19:18
ZZZZZ	20K0409-01	I2201203A-070	Solid	12/03/20 19:18
ZZZZZ	20K0409-01	I2201203A-070	Solid	12/03/20 19:18
ZZZZZ	20K0409-01	I2201203A-070	Solid	12/03/20 19:18
ZZZZZ	20K0409-01	I2201203A-070	Solid	12/03/20 19:18
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0061	Instrument:	ICP2
		Calibration:	DL00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0213-01	I2201203A-075	Solid	12/03/20 19:40
ZZZZZ	20K0213-01	I2201203A-075	Solid	12/03/20 19:40
ZZZZZ	20K0213-01	I2201203A-075	Solid	12/03/20 19:40
ZZZZZ	20K0213-01	I2201203A-075	Solid	12/03/20 19:40
ZZZZZ	20K0213-01	I2201203A-075	Solid	12/03/20 19:40
Calibration Check	SIL0061-CCV7	I2201203A-076	NA	12/03/20 19:44
Calibration Blank	SIL0061-CCB7	I2201203A-077	NA	12/03/20 19:50
ZZZZZ	20K0238-01	I2201203A-078	Solid	12/03/20 19:54
ZZZZZ	20K0238-01	I2201203A-078	Solid	12/03/20 19:54
ZZZZZ	20K0238-01	I2201203A-078	Solid	12/03/20 19:54
ZZZZZ	20K0238-01	I2201203A-078	Solid	12/03/20 19:54
ZZZZZ	20K0238-02	I2201203A-079	Solid	12/03/20 19:57
ZZZZZ	20K0238-02	I2201203A-079	Solid	12/03/20 19:57
ZZZZZ	20K0238-02	I2201203A-079	Solid	12/03/20 19:57
ZZZZZ	20K0238-02	I2201203A-079	Solid	12/03/20 19:57
ZZZZZ	20K0238-04	I2201203A-081	Solid	12/03/20 20:05
ZZZZZ	20K0238-04	I2201203A-081	Solid	12/03/20 20:05
ZZZZZ	20K0238-04	I2201203A-081	Solid	12/03/20 20:05
ZZZZZ	20K0238-04	I2201203A-081	Solid	12/03/20 20:05
ZZZZZ	20K0258-01	I2201203A-083	Water	12/03/20 20:13
ZZZZZ	20K0258-01	I2201203A-083	Water	12/03/20 20:13
ZZZZZ	20K0258-01	I2201203A-083	Water	12/03/20 20:13
ZZZZZ	20K0183-01	I2201203A-086	Solid	12/03/20 20:26
ZZZZZ	20K0183-01	I2201203A-086	Solid	12/03/20 20:26
Instrument Blank	SIL0061-IBL3	I2201203A-087	NA	12/03/20 20:30
Calibration Check	SIL0061-CCV8	I2201203A-088	NA	12/03/20 20:34
Calibration Blank	SIL0061-CCB8	I2201203A-089	NA	12/03/20 20:40

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage

Instrument ID: ICP2
Calibration: DK00045

Sequence: SIK0278
Standard ID: I010667

Lab Sample ID	Analyte	True	Found	%R	Units
SIK0278-IFA1	Lead	0	-0.0061		mg/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: Analytical Resources, Inc.   SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc   Project: ICS-Former NW Cooperage

Instrument ID: ICP2   Calibration: DK00045

Sequence: SIK0278   Standard ID: I010667

Lab Sample ID	Analyte	True	Found	%R	Units
SIK0278-IFB1	Lead	1.0000	0.9808	98.1	mg/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: Analytical Resources, Inc.

SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Instrument ID: ICP2

Calibration: DK00051

Sequence: SIK0315

Standard ID: I010667

Lab Sample ID	Analyte	True	Found	%R	Units
SIK0315-IFA1	Lead	0	-0.0159		mg/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: DK00051
Sequence: SIK0315
Standard ID: I010667

Lab Sample ID	Analyte	True	Found	%R	Units
SIK0315-IFB1	Lead	1.0000	0.9993	99.9	mg/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: DL00015
Sequence: SIL0061
Standard ID: I010667

Lab Sample ID	Analyte	True	Found	%R	Units
SIL0061-IFA1	Lead	0	-0.0075		mg/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: DL00015
Sequence: SIL0061
Standard ID: I010667

Lab Sample ID	Analyte	True	Found	%R	Units
SIL0061-IFB1	Lead	1.0000	0.9962	99.6	mg/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTER-ELEMENT CORRECTION FACTORS

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument:	ICP2	IEC Date:	12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Sb
Aluminum				-0.248834		
Arsenic	188.98		0.024798			
Barium	233.53		0.008625	0.140186		
Cadmium	228.8					
Chromium	267.72			-0.035454	0.028625	
Copper				-0.043429	0.008126	
Lead	220.35	-0.29953		0.039965		
Manganese	257.61	0.007007		0.006282	0.003479	
Nickel	231.6					-1.022571
Selenium	196.03		0.081709			
Silver	328.07					
Zinc	206.2					

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTER-ELEMENT CORRECTION FACTORS

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Instrument: ICP2 IEC Date: 12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		As	Ba	Be	Cd	Cr
Aluminum						
Arsenic	188.98					1.655524
Barium	233.53					
Cadmium	228.8	4.46437				
Chromium	267.72					
Copper						-0.035547
Lead	220.35					-2.014266
Manganese	257.61					
Nickel	231.6					
Selenium	196.03					
Silver	328.07					
Zinc	206.2					

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTER-ELEMENT CORRECTION FACTORS

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Instrument: ICP2 IEC Date: 12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Co	Cu	Pb	Mn	Mo
Aluminum						18.16733
Arsenic	188.98	-1.127911				3.610309
Barium	233.53	-0.124877				
Cadmium	228.8	0.156246				
Chromium	267.72	-0.170521			0.310897	
Copper		-0.206732				0.408373
Lead	220.35	-0.160377	1.479952			
Manganese	257.61			-0.21682		
Nickel	231.6	0.49217				
Selenium	196.03				0.813286	
Silver	328.07				0.095187	
Zinc	206.2			-0.042156		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTER-ELEMENT CORRECTION FACTORS

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Instrument: ICP2 IEC Date: 12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Ni	K	Si	Ag	Tl
Aluminum						
Arsenic	188.98					
Barium	233.53	0.095217			0.67157	
Cadmium	228.8	-0.832508				
Chromium	267.72					
Copper						
Lead	220.35	-0.149057				
Manganese	257.61					0.12352
Nickel	231.6					
Selenium	196.03					
Silver	328.07					
Zinc	206.2					

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTER-ELEMENT CORRECTION FACTORS

Laboratory:	Analytical Resources, Inc.	SDG:	20K0126
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument:	ICP2	IEC Date:	12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Sn	Ti	V	Zn	
Aluminum			1.456667	11.60996		
Arsenic	188.98		-112.3948			
Barium	233.53			0.572325		
Cadmium	228.8			0.05035		
Chromium	267.72					
Copper			0.233423			
Lead	220.35					
Manganese	257.61			-0.021953		
Nickel	231.6					
Selenium	196.03					
Silver	328.07			-0.214248		
Zinc	206.2					

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DETECTION LEVEL STANDARD
EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: DK00045
Sequence: SIK0278
Lab Sample ID: SIK0278-CRL1

Analyte	True	Found	%R	Units	QC Limts
Lead	0.0200	0.0212	106	mg/L	50 - 150

* Values outside of QC limits

DETECTION LEVEL STANDARD
EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage
Instrument ID: ICP2 Calibration: DK00051
Sequence: SIK0315 Lab Sample ID: SIK0315-CRL1

Analyte	True	Found	%R	Units	QC Limts
Lead	0.0200	0.0207	103	mg/L	50 - 150

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DETECTION LEVEL STANDARD
EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0126
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: DL00015
Sequence: SIL0061
Lab Sample ID: SIL0061-CRL1

Analyte	True	Found	%R	Units	QC Limts
Lead	0.0200	0.0199	99.6	mg/L	50 - 150

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PP15-2.5 20K0126-01	11/04/20 09:30	11/05/20 15:47	11/16/20 11:07	12	180	11/18/20 18:19	14	180	
PP15-5 20K0126-02	11/04/20 09:35	11/05/20 15:47	11/16/20 11:07	12	180	11/18/20 18:07	14	180	
PP16-2.5 20K0126-06	11/04/20 10:25	11/05/20 15:47	11/16/20 11:07	12	180	11/20/20 15:59	16	180	
PP16-5 20K0126-07	11/04/20 10:30	11/05/20 15:47	11/16/20 11:07	12	180	11/18/20 18:11	14	180	
PP13-2.5 20K0126-11	11/04/20 12:35	11/05/20 15:47	11/16/20 11:07	11	180	11/18/20 18:58	14	180	
PP13-5 20K0126-12	11/04/20 12:40	11/05/20 15:47	11/16/20 11:07	11	180	11/18/20 19:02	14	180	
PP7-2.5 20K0126-16	11/04/20 13:30	11/05/20 15:47	11/16/20 11:07	11	180	11/18/20 19:06	14	180	
PP7-7.5 20K0126-18	11/04/20 13:40	11/05/20 15:47	11/16/20 11:07	11	180	11/18/20 19:10	14	180	
PP3-2 20K0126-22	11/04/20 14:40	11/05/20 15:47	11/16/20 11:07	11	180	11/18/20 19:15	14	180	
PP3-5 20K0126-24	11/04/20 14:50	11/05/20 15:47	11/16/20 11:07	11	180	11/18/20 19:19	14	180	
Duplicate BIK0408-DUP1	11/04/20 09:30	11/05/20 15:47	11/16/20 11:07	12	180	11/18/20 18:15	14	180	
Matrix Spike BIK0408-MS1	11/04/20 09:30	11/05/20 15:47	11/16/20 11:07	12	180	11/18/20 18:24	14	180	
Matrix Spike Dup BIK0408-MSD1	11/04/20 09:30	11/05/20 15:47	11/16/20 11:07	12	180	11/18/20 18:28	14	180	

* Indicates hold time exceedance.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Solid Instrument: ICP2

Analyte	MDL	RL	Units
Lead	0.240	2.00	mg/kg

Analytical Resources, Incorporated
Analytical Chemists and Consultants

METHOD DETECTION
AND REPORTING LIMITS
EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 20K0126

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Water Instrument: ICP2

Analyte	MDL	RL	Units
Lead	0.0024	0.0200	mg/L

Analytical Resources, Incorporated
Analytical Chemists and Consultants

16 December 2020

Matt Dalton
Dalton, Olmsted & Fuglevand, Inc
6034 N Star Rd
Ferndale, WA 98248

RE: ICS-Former NW Cooperage

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
20K0145	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amanda Volgardsen Johnson, Project Manager

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

COC # 7

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

ARI Assigned Number: 20K0145	Turn-around Requested: Normal	Date: 11/7/20	
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466	Page: 1	of 2
Client Contact: Matt Dalton / Dave Cooper		No. of Coolers: 3	Cooler Temps: See CRF
Client Project Name: ICS/Former NW Cooperage			
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti		

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
PP1-2.5	11/5/2020	1245	soil	1-8oz 2-4oz											X	
PP1-5	11/5/2020	1250	soil	1-8oz 2-4oz	X	X	X	X								
PP1-7.5	11/5/2020	1255	soil	1-8oz 2-4oz	X	X	X	X								
PP1-10	11/5/2020	1300	soil	1-8oz 2-4oz											X	
PP1-12.5	11/5/2020	1305	soil	1-8oz 2-4oz											X	
PP2-2.5	11/5/2020	1130	soil	1-8oz 2-4oz											X	
PP2-5	11/5/2020	1135	soil	1-8oz 2-4oz	X	X	X	X								
PP2-7.5	11/5/2020	1140	soil	1-8oz 2-4oz	X	X	X	X								
PP2-10	11/5/2020	1145	soil	1-8oz 2-4oz											X	
PP2-12.5	11/5/2020	1150	soil	1-8oz 2-4oz											X	
PP5-2	11/5/2020	1000	soil	1-8oz 2-4oz	X	X	X	X								
PP5-4	11/5/2020	1005	soil	1-8oz 2-4oz											X	

Comments/Special Instructions	Relinquished by	Received by	Relinquished by	Received by
(1) Based on total metals	(Signature) DG Cooper	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: DG Cooper	Printed Name: Jacob Walter	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 11/7/20 1100	Date & Time: 11/07/2020 1100	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 20K0145	Turn-around Requested: Normal	Date: 11/7/20	
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466	Page: 2 of 2	
Client Contact: Matt Dalton / Dave Cooper		No. of Coolers: 3	Cooler Temps: See CRF
Client Project Name: ICS/Former NW Cooperage			
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)							ARCHIVE	Notes/Comments
PP5-8	11/5/2020	1010	soil	1-8oz 2-4oz	X	X	X	X									
PP5-12	11/5/2020	1015	soil	1-8oz 2-4oz												X	
P8-10S-1	11/6/2020	0820	soil	1-8oz 2-4oz	X	X	X	X									
P8-10S-2.5	11/6/2020	0825	soil	1-8oz 2-4oz												X	
P8-10S-5	11/6/2020	0830	soil	1-8oz 2-4oz	X	X	X	X									
P8-10S-7.5	11/6/2020	0835	soil	1-8oz 2-4oz												X	

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) Based on total metals	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: DG Cooper	Printed Name: Jacob Walter	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 11/7/20 1100	Date & Time: 11/07/2020 1100	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: DOF

Project Name: ICS / Former MW Cooperage

COC No(s): NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No: 20K0145

Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1100 — 0.1 0.5 0.9

If cooler temperature is out of compliance fill out form 00070F — JSn 11/07/2020 — Temp Gun ID#: D00 5206

Cooler Accepted by: JSn Date: ~~11/06/20~~ Time: 1100

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:			
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Were the sample(s) split by ARI? NA YES Date/Time: Equipment: Split by:

Samples Logged by: SC Date: 11/9/2020 Time: 1004 Labels checked by: SC

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale, WA 98248	Project Manager: Matt Dalton	12/16/2020 14:30

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
20K0145-01	PP1-2.5	Solid	11/05/20 12:45	11/07/20 11:00
20K0145-02	PP1-5	Solid	11/05/20 12:50	11/07/20 11:00
20K0145-03	PP1-7.5	Solid	11/05/20 12:55	11/07/20 11:00
20K0145-04	PP1-10	Solid	11/05/20 13:00	11/07/20 11:00
20K0145-05	PP1-12.5	Solid	11/05/20 13:05	11/07/20 11:00
20K0145-06	PP2-2.5	Solid	11/05/20 11:30	11/07/20 11:00
20K0145-07	PP2-5	Solid	11/05/20 11:35	11/07/20 11:00
20K0145-08	PP2-7.5	Solid	11/05/20 11:40	11/07/20 11:00
20K0145-09	PP2-10	Solid	11/05/20 11:45	11/07/20 11:00
20K0145-10	PP2-12.5	Solid	11/05/20 11:50	11/07/20 11:00
20K0145-11	PP5-2	Solid	11/05/20 10:00	11/07/20 11:00
20K0145-12	PP5-4	Solid	11/05/20 10:05	11/07/20 11:00
20K0145-13	PP5-8	Solid	11/05/20 10:10	11/07/20 11:00
20K0145-14	PP5-12	Solid	11/05/20 10:15	11/07/20 11:00
20K0145-15	P8-10S-1	Solid	11/06/20 08:20	11/07/20 11:00
20K0145-16	P8-10S-2.5	Solid	11/06/20 08:25	11/07/20 11:00
20K0145-17	P8-10S-5	Solid	11/06/20 08:30	11/07/20 11:00
20K0145-18	P8-10S-7.5	Solid	11/06/20 08:35	11/07/20 11:00

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Dec-2020 14:30

Case Narrative

Sample receipt

Samples as listed on the preceding page were received 07-Nov-2020 11:00 under ARI work order 20K0145. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The samples were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits.

The blank spike and/or blank spike duplicate (BS/LCS/BSD/LCSD) percent recoveries and RPD were within control limits.

PCB Aroclors - EPA Method SW8082A

The samples were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements, with the exception of SIL0088-SCV1/SCV3/SCV5 which are outside of control limits high for the second column surrogate Decachlorobiphenyl. Data was reported from passing columns. No corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

A matrix spike and matrix spike duplicate were prepared in conjunction with sample PP 5-8. The matrix spike/matrix spike duplicate percent recoveries were within QC limits.

Total Hg - EPA Method 7471B

The samples were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank was clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Total Lead - EPA Method 6010C

The samples were digested and analyzed within the recommended holding times.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Dec-2020 14:30

Case Narrative

Initial and continuing calibrations were within method requirements.

The method blank was clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Case Narrative

Analytical Resources, Incorporated
Analytical Chemists and Consultants

QUALIFIERS AND NOTES

Qualifier	Definition
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
J	Estimated concentration value detected below the reporting limit.
D	The reported value is from a dilution
B	This analyte was detected in the method blank.
*	Flagged value is not within established control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP1-5

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0145-02 A	SDG:	20K0145
Sampled:	11/05/20 12:50	Prepared:	11/19/20 14:38	File ID:	420L0251.D
% Solids:	88.92	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/03/20 01:51
Batch:	BIK0587	Sequence:	SIL0020	Initial/Final:	10.01 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	DA00022

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	5.62	U	2.63	5.62
RRO	Motor Oil Range Organics (C24-C38)	1	18.9		3.36	11.2

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	12.639	9.08	71.8	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0251.D

Page 1

Date : 03-DEC-2020 01:51

Client ID:

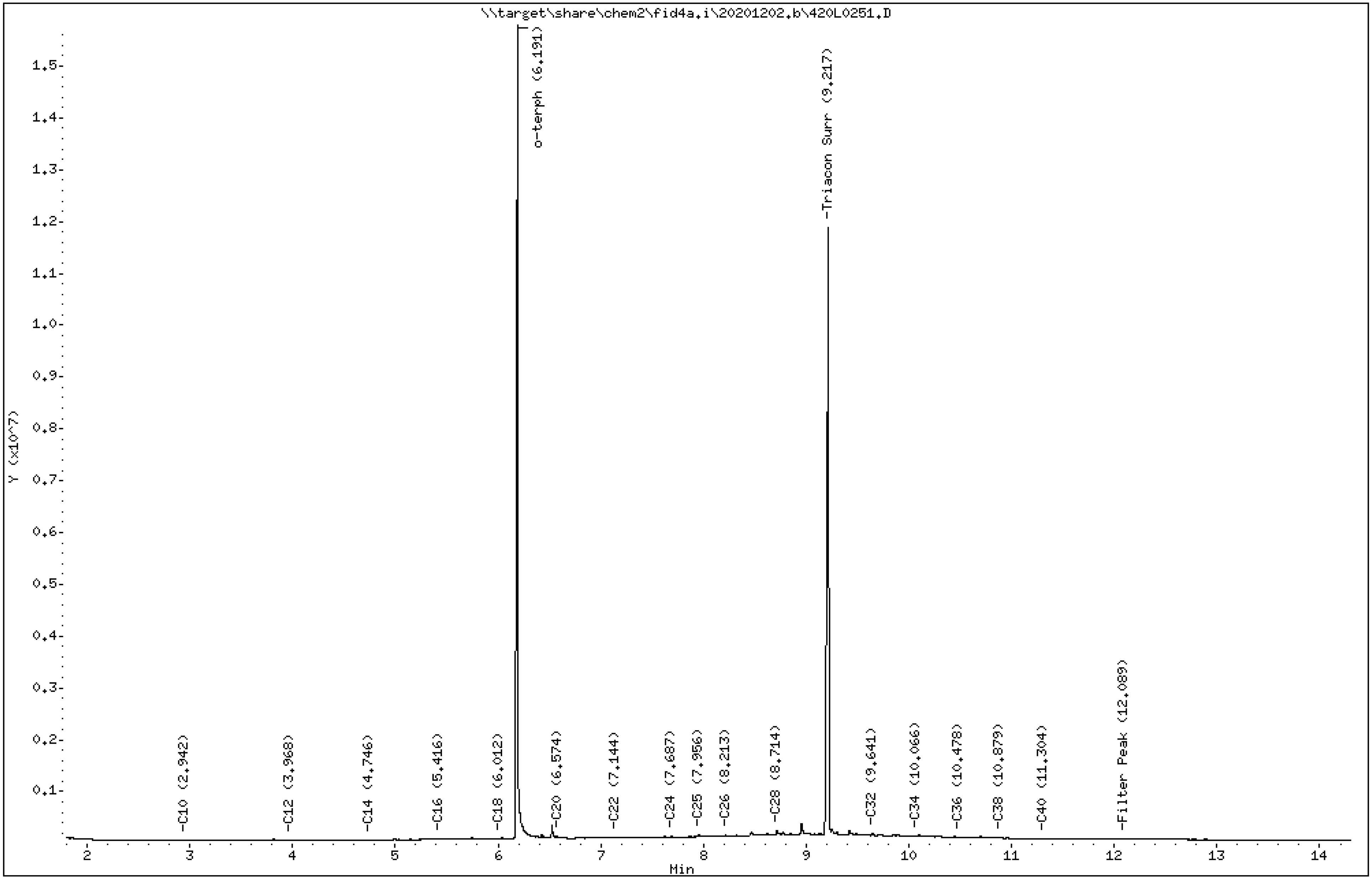
Instrument: fid4a.i

Sample Info: 20K0145-02

Operator: JGR/CTO/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0251.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: 20K0145-02
Client ID:
Injection: 03-DEC-2020 01:51
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.853	-0.029	51367	203063	WATPHD	(C12-C24)	6416727	40.3
C10	2.942	-0.031	335	148	WATPHM	(C24-C38)	17023934	168.3
C12	3.968	0.002	2395	1053	AK102	(C10-C25)	7117144	36.4
C14	4.746	-0.002	7429	5896	AK103	(C25-C36)	15284514	208.8
C16	5.416	0.003	16577	9871	OR.DIES	(C10-C28)	11996544	61.2
C18	6.012	0.002	30876	50399				
C20	6.574	-0.006	71811	130347	JET-A	(C10-C18)	1700271	10.3
C22	7.144	0.002	56106	89536				
C24	7.687	-0.003	70537	131377				
C25	7.956	-0.003	105309	280360				
C26	8.213	-0.005	95865	150847				
C28	8.714	-0.009	185358	320589				
C32	9.641	-0.006	144738	326360				
C34	10.066	-0.002	80079	94512				
Filter Peak	12.089	-0.007	16294	8936	BUNKERC	(C10-C38)	23535198	596.2
C36	10.478	0.004	59434	52729				
C38	10.879	0.004	42123	12572				
C40	11.304	0.001	27566	12381				
o-terph	6.191	-0.005	15731817	16548709				
Triacon Surr	9.217	-0.005	11689659	14145922	NAS DIES	(C10-C24)	6511263	33.4

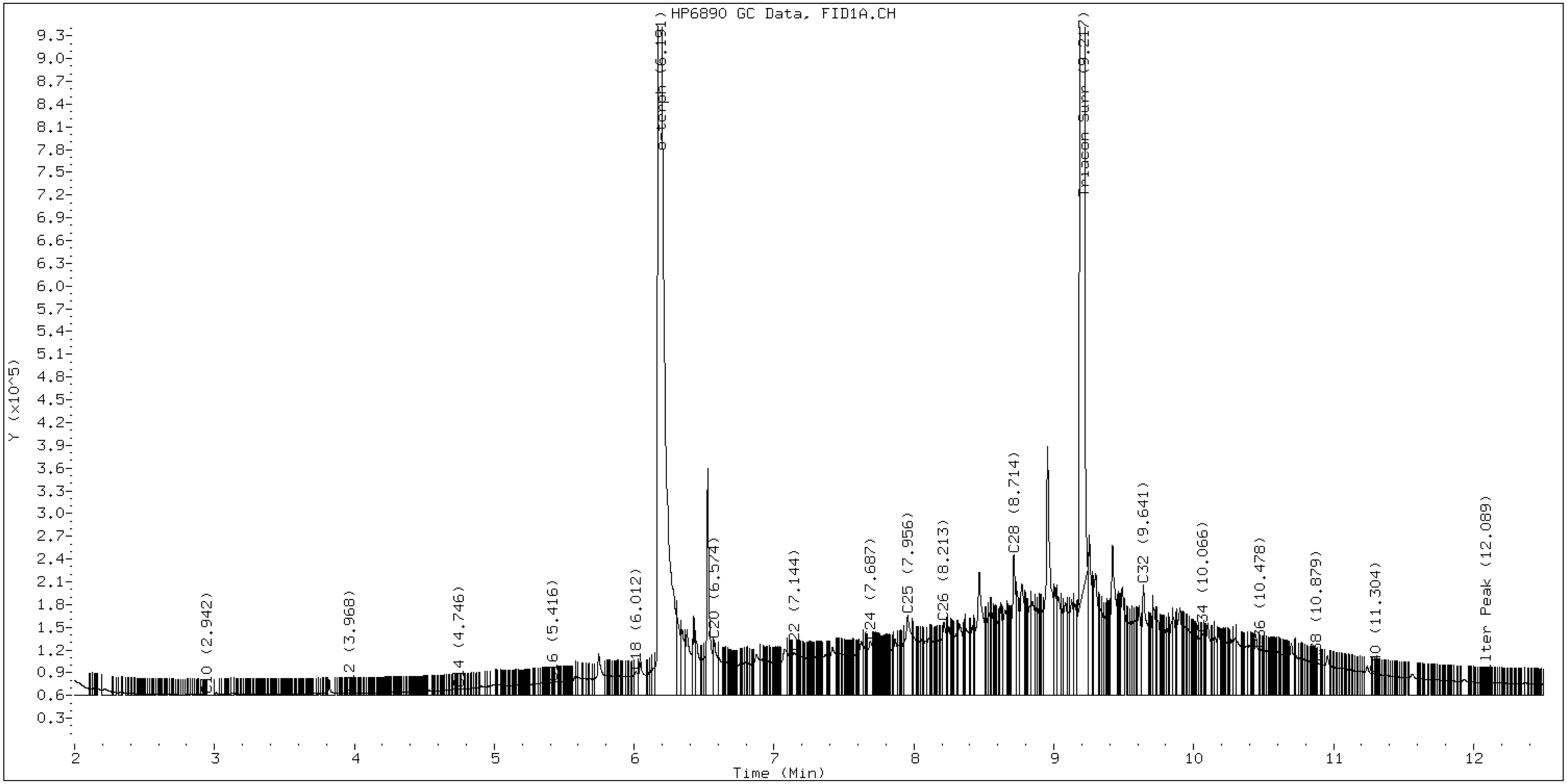
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	16548709	80.8	
Triacontane	14145922	95.3	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

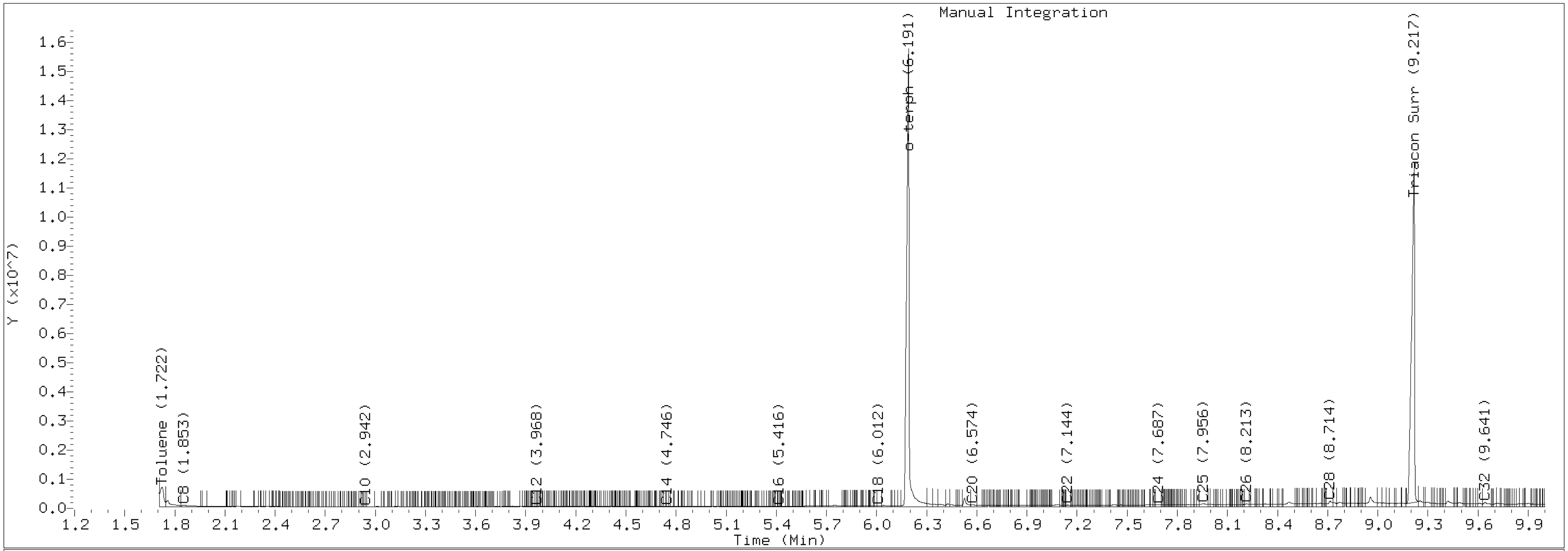
Datafile: FID4A, 20201202.b/420L0251.D 20K0145-02

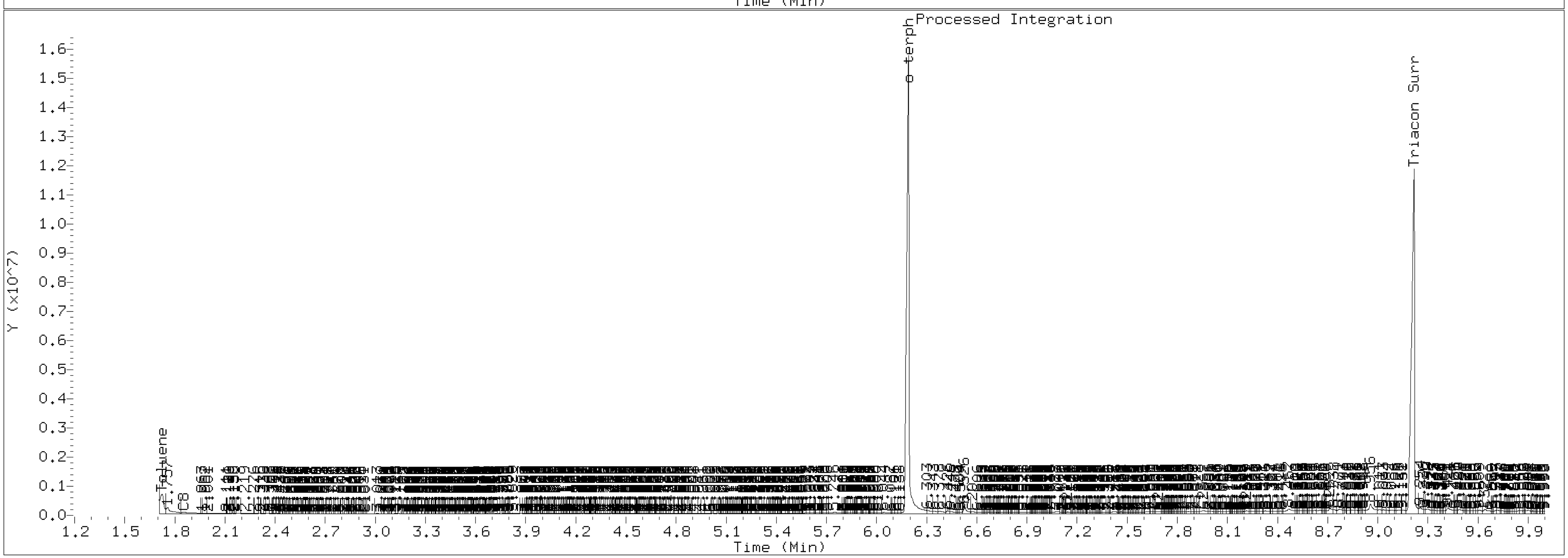


TPH Manual Integrations Report

Datafile: FID4A, 20201202.b/420L0251.D Injection: 03-DEC-2020 01:51

Lab ID:20K0145-02





Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP1-7.5

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0145-03 A	SDG:	20K0145
Sampled:	11/05/20 12:55	Prepared:	11/19/20 14:38	File ID:	420L0252.D
% Solids:	83.19	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/03/20 02:11
Batch:	BIK0587	Sequence:	SIL0020	Initial/Final:	10.01 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	DA00022

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	6.00	U	2.81	6.00
RRO	Motor Oil Range Organics (C24-C38)	1	15.6		3.59	12.0

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	13.510	13.4	99.2	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0252.D

Date : 03-DEC-2020 02:11

Client ID:

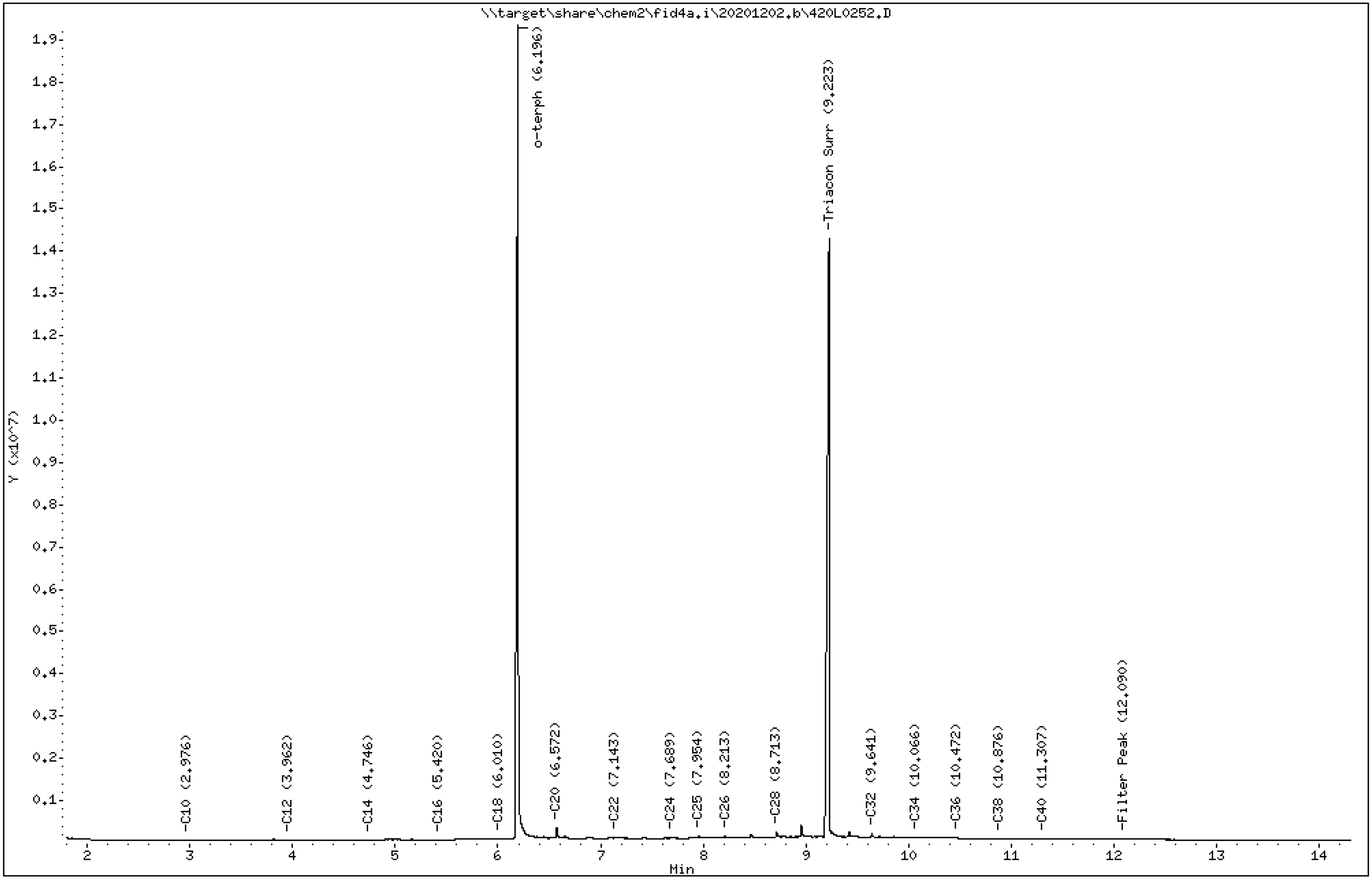
Instrument: fid4a.i

Sample Info: 20K0145-03

Operator: JGR/CTO/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0252.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: 20K0145-03
Client ID:
Injection: 03-DEC-2020 02:11
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.854	-0.028	52511	209965	WATPHD	(C12-C24)	6183682	38.8
C10	2.976	0.003	264	152	WATPHM	(C24-C38)	13105829	129.5
C12	3.962	-0.004	2614	519	AK102	(C10-C25)	6793729	34.8
C14	4.746	-0.003	7179	5653	AK103	(C25-C36)	11616394	158.7
C16	5.420	0.007	12708	5687	OR.DIES	(C10-C28)	10291604	52.5
C18	6.010	-0.000	25826	49969				
C20	6.572	-0.008	284515	473191	JET-A	(C10-C18)	1516880	9.1
C22	7.143	0.001	56978	50365				
C24	7.689	-0.001	63259	138424				
C25	7.954	-0.005	93122	184407				
C26	8.213	-0.005	90248	153182				
C28	8.713	-0.010	191046	316343				
C32	9.641	-0.006	147530	233966				
C34	10.066	-0.003	64416	133735				
Filter Peak	12.090	-0.006	18015	14330	BUNKERC	(C10-C38)	19416735	491.8
C36	10.472	-0.002	49586	36706				
C38	10.876	0.000	36684	7322				
C40	11.307	0.005	25950	14190				
o-terph	6.196	-0.000	19292548	22841978				
Triacon Surr	9.223	0.000	14127768	19769226	NAS DIES	(C10-C24)	6310906	32.3

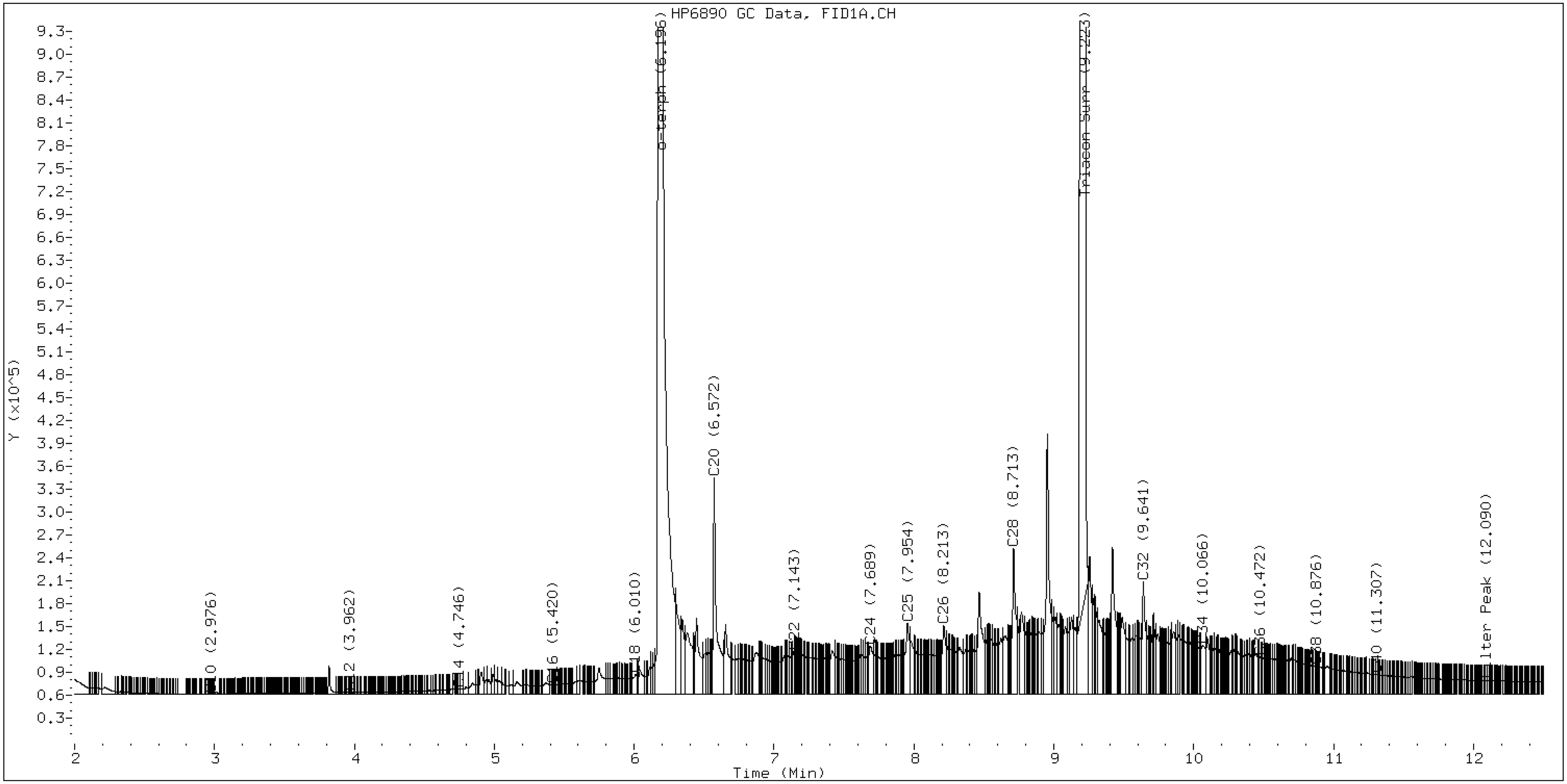
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	22841978	111.6	
Triacontane	19769226	133.2	M

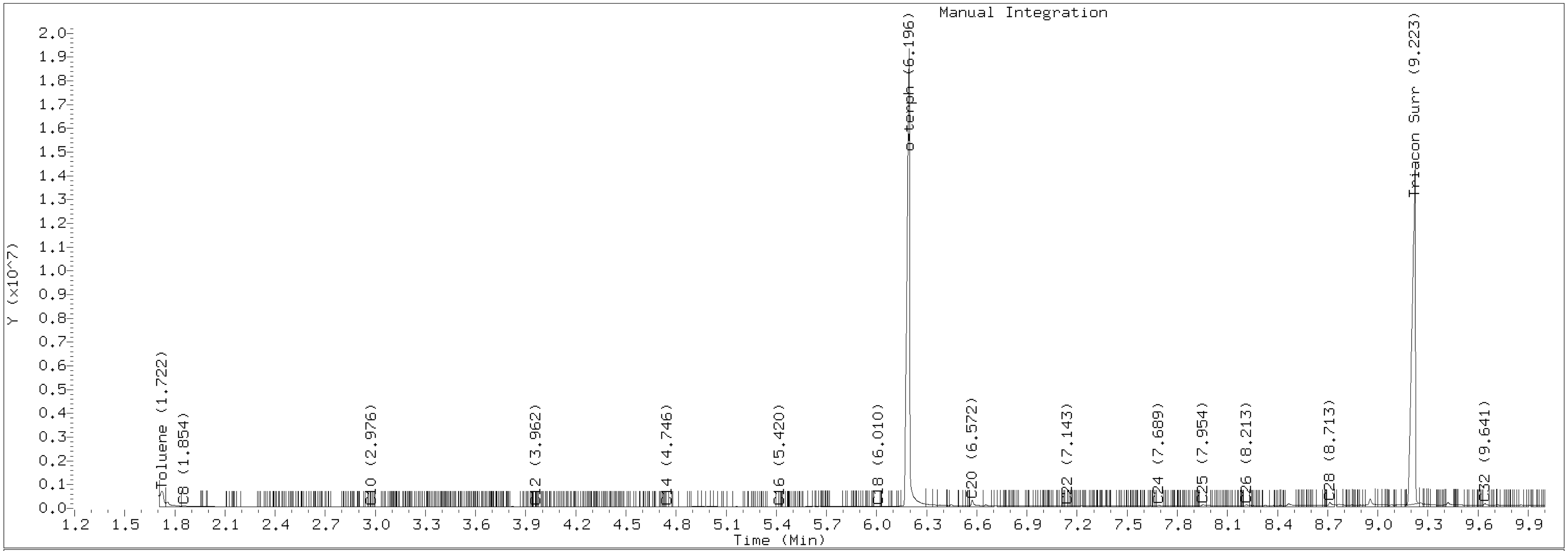
M Indicates the peak was manually integrated

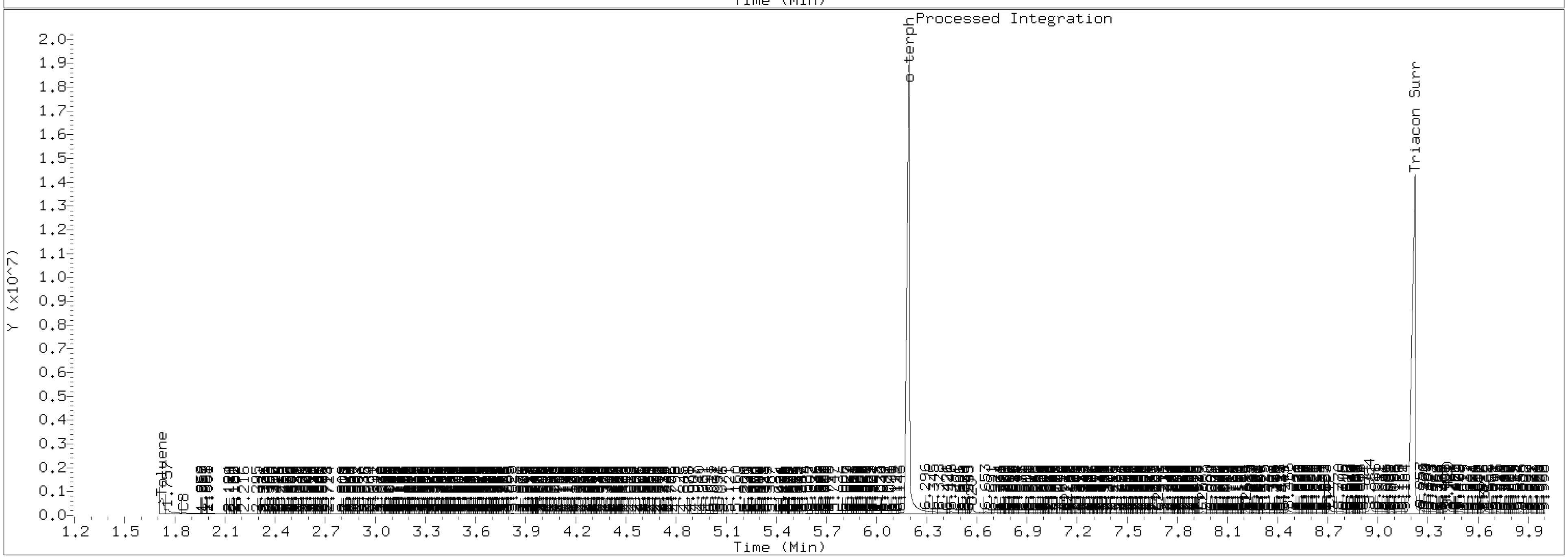
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201202.b/420L0252.D 20K0145-03



TPH Manual Integrations Report
Datafile: FID4A, 20201202.b/420L0252.D Injection: 03-DEC-2020 02:11
Lab ID:20K0145-03





Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP2-5

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0145-07 A	SDG:	20K0145
Sampled:	11/05/20 11:35	Prepared:	11/19/20 14:38	File ID:	420L0253.D
% Solids:	82.75	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/03/20 02:31
Batch:	BIK0587	Sequence:	SIL0020	Initial/Final:	10.06 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	DA00022

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	6.01	U	2.81	6.01
RRO	Motor Oil Range Organics (C24-C38)	1	14.2		3.59	12.0

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	13.514	10.9	80.4	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0253.D

Page 1

Date : 03-DEC-2020 02:31

Client ID:

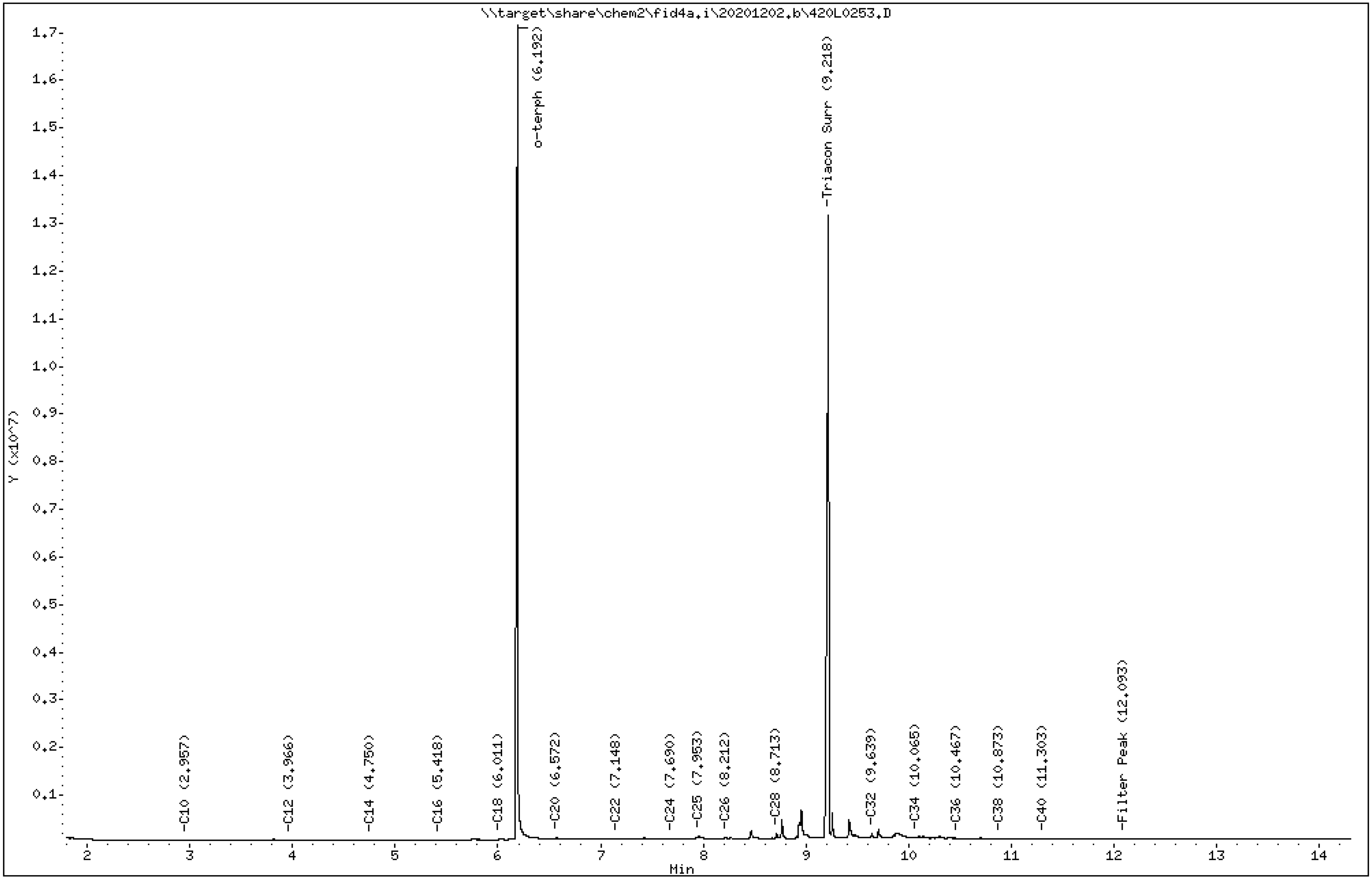
Instrument: fid4a.i

Sample Info: 20K0145-07

Operator: JGR/CTO/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0253.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: 20K0145-07
Client ID:
Injection: 03-DEC-2020 02:31
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.854	-0.028	53509	210705	WATPHD	(C12-C24)	3423898	21.5
C10	2.957	-0.016	263	131	WATPHM	(C24-C38)	11915418	117.8
C12	3.966	0.000	3386	1667	AK102	(C10-C25)	3692278	18.9
C14	4.750	0.002	7800	1168	AK103	(C25-C36)	11027954	150.6
C16	5.418	0.005	10744	1609	OR.DIES	(C10-C28)	6482609	33.1
C18	6.011	0.001	16375	41785				
C20	6.572	-0.008	43896	82500	JET-A	(C10-C18)	1185331	7.1
C22	7.148	0.006	30337	74511				
C24	7.690	0.000	37600	93857				
C25	7.953	-0.006	97793	290925				
C26	8.212	-0.006	61383	117887				
C28	8.713	-0.010	153860	179819				
C32	9.639	-0.008	136403	154596				
C34	10.065	-0.004	55778	72386				
Filter Peak	12.093	-0.003	20271	18205	BUNKERC	(C10-C38)	15454259	391.5
C36	10.467	-0.007	37984	40714				
C38	10.873	-0.002	28970	18783				
C40	11.303	0.000	24769	16003				
o-terph	6.192	-0.004	17101652	18516904				
Triacon Surr	9.218	-0.005	13024133	16114978	NAS DIES	(C10-C24)	3538841	18.1

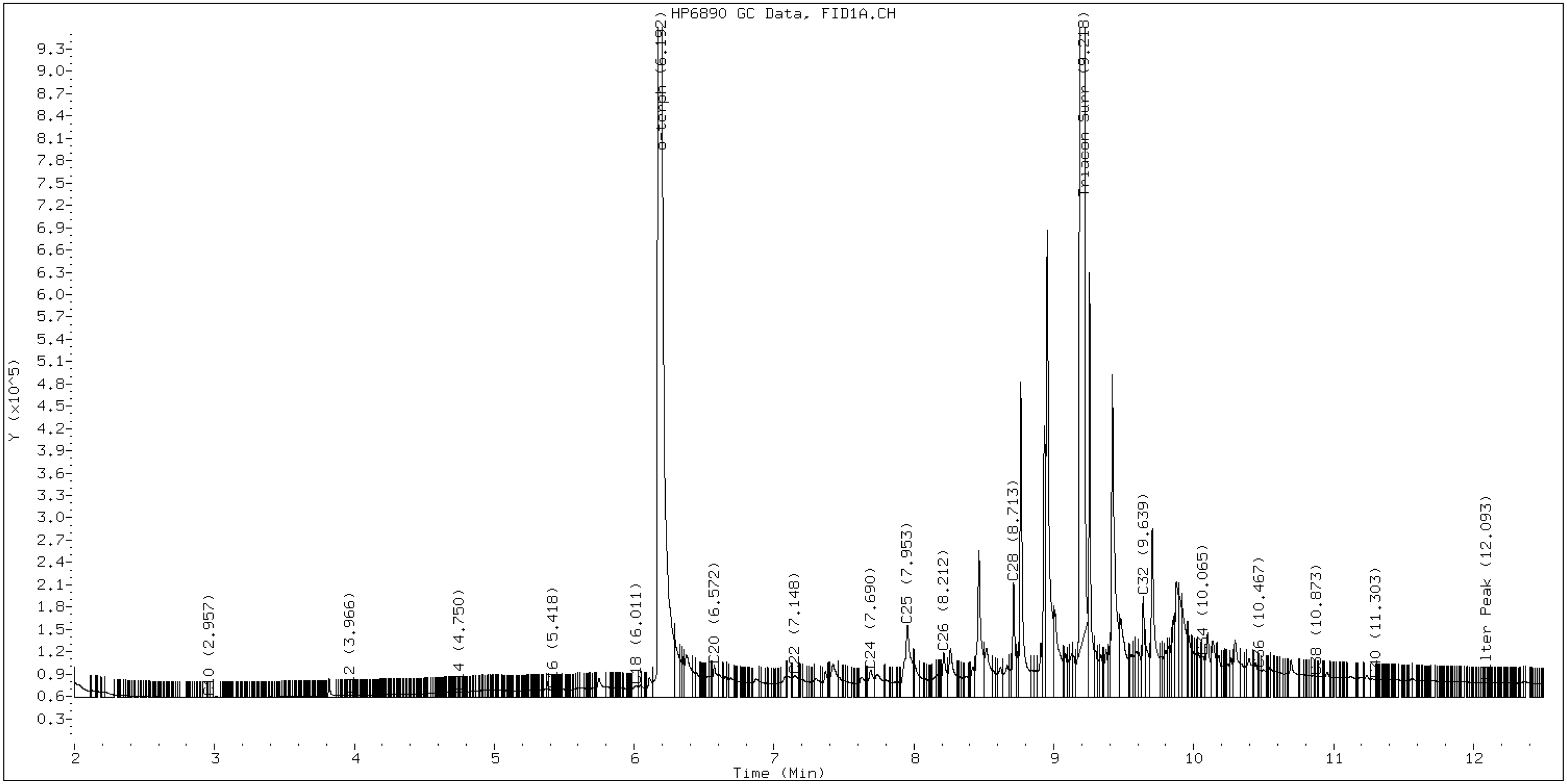
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	18516904	90.5	
Triacontane	16114978	108.6	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

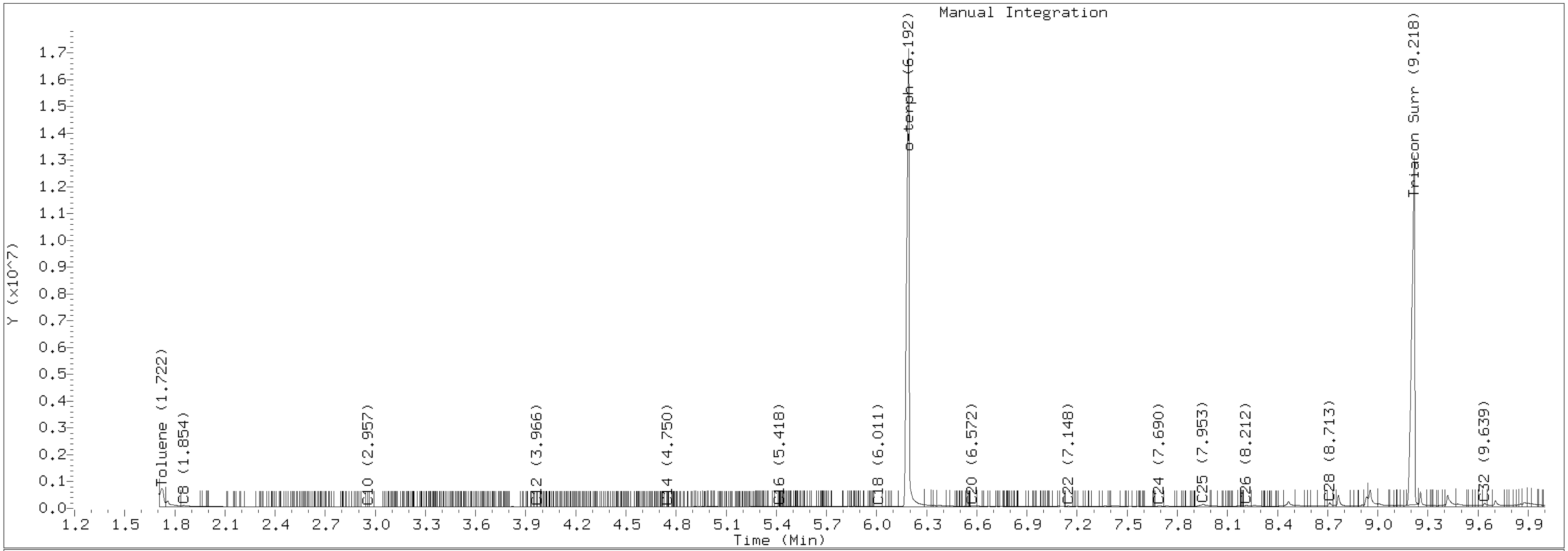
Datafile: FID4A, 20201202.b/420L0253.D 20K0145-07

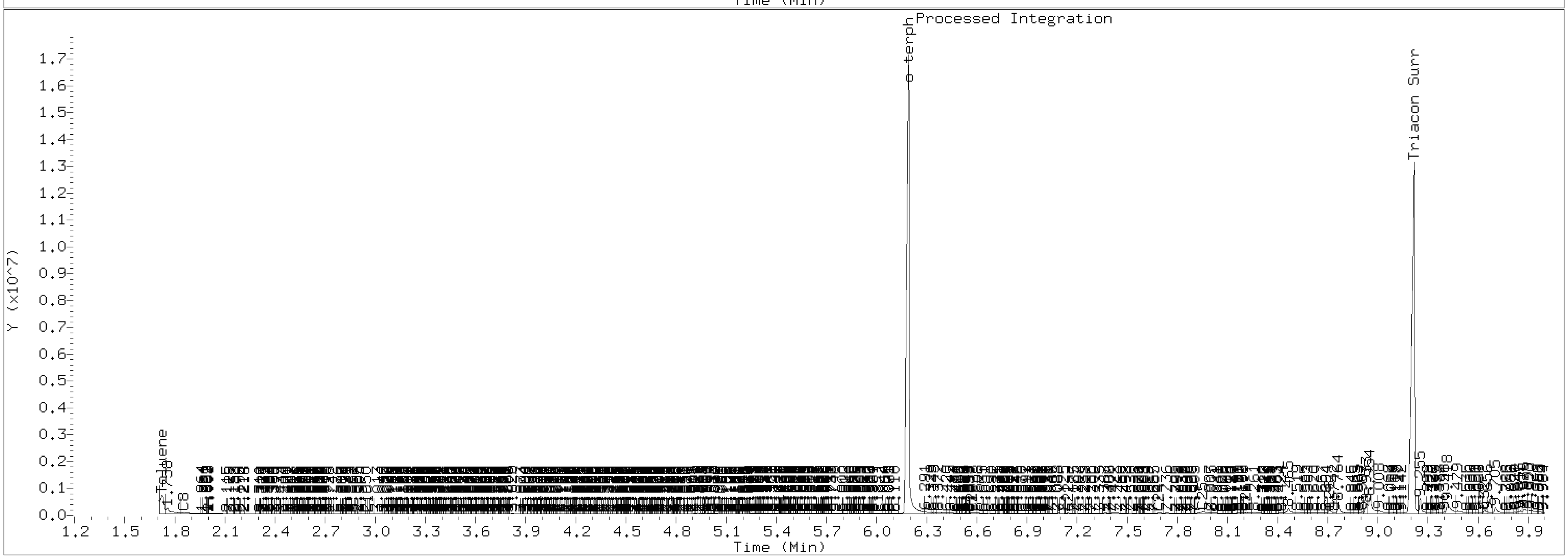


TPH Manual Integrations Report

Datafile: FID4A, 20201202.b/420L0253.D Injection: 03-DEC-2020 02:31

Lab ID:20K0145-07





Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP2-7.5

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0145-08 A	SDG:	20K0145
Sampled:	11/05/20 11:40	Prepared:	11/19/20 14:38	File ID:	420L0254.D
% Solids:	76.66	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/03/20 02:51
Batch:	BIK0587	Sequence:	SIL0020	Initial/Final:	10.04 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	DA00022

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	6.50	U	3.04	6.50
RRO	Motor Oil Range Organics (C24-C38)	1	13.0	U	3.88	13.0

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	14.617	16.7	114	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0254.D

Date : 03-DEC-2020 02:51

Client ID:

Sample Info: 20K0145-08

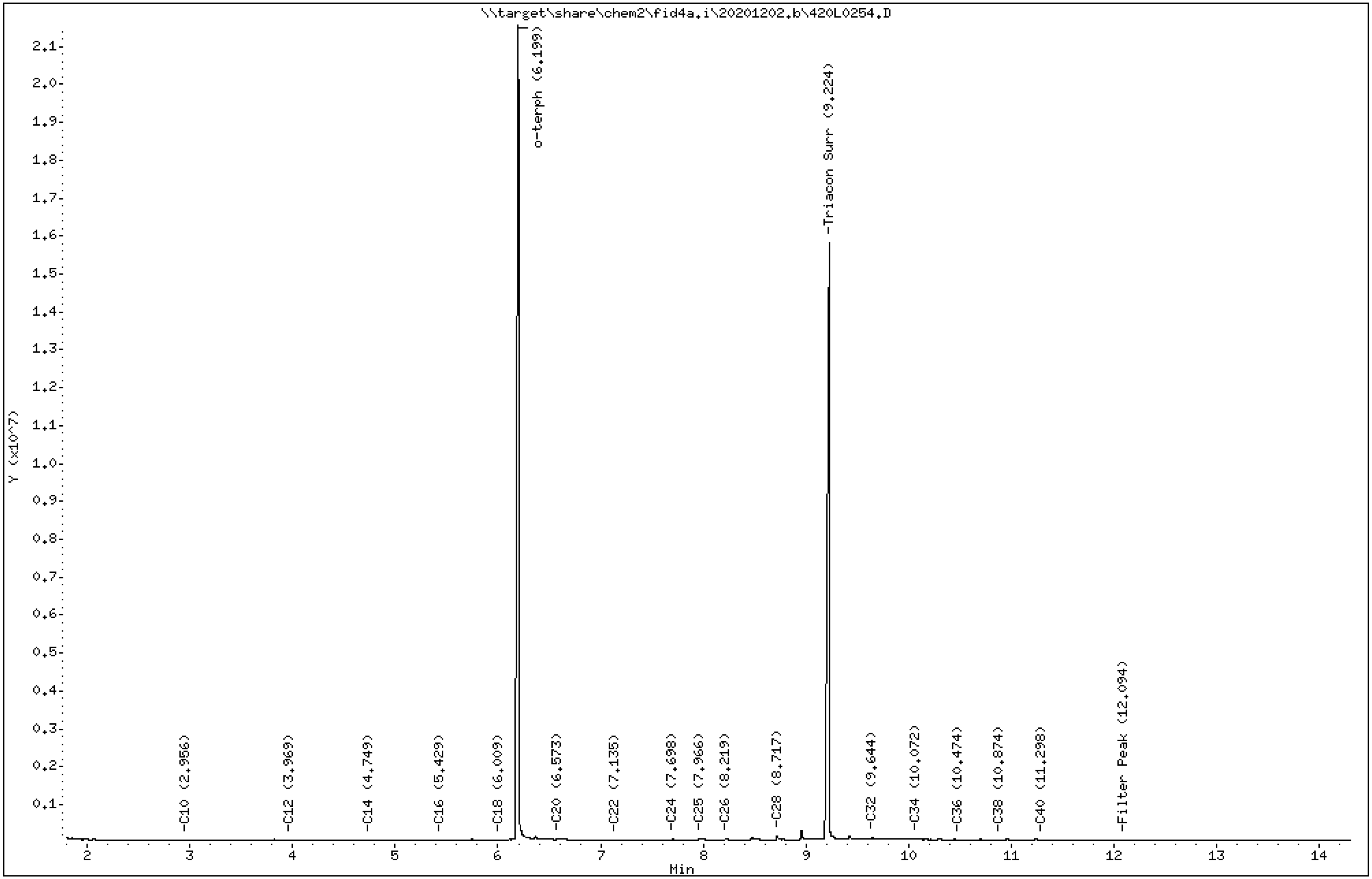
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: JGR/CTO/VTS

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0254.D   ARI ID: 20K0145-08
Method: 20201202.b\FID4TPH.m   Client ID:
Instrument: fid4a.i, JGR/CTO/VTS   Injection: 03-DEC-2020 02:51
Report Date: 12/03/2020   Dilution Factor: 1
Macro: 09-SEP-2019   RT Std: 419H1603.D
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.854	-0.028	54748	152859	WATPHD	(C12-C24)	2673444	16.8
C10	2.956	-0.018	353	178	WATPHM	(C24-C38)	3940141	38.9
C12	3.969	0.002	3471	1367	AK102	(C10-C25)	2903460	14.9
C14	4.749	0.000	8248	2460	AK103	(C25-C36)	3482310	47.6
C16	5.429	0.017	11202	5538	OR.DIES	(C10-C28)	3835040	19.6
C18	6.009	-0.001	12976	31116				
C20	6.573	-0.008	40589	72374	JET-A	(C10-C18)	1161230	7.0
C22	7.135	-0.007	12950	4507				
C24	7.698	0.008	19772	27791				
C25	7.966	0.008	36752	66461				
C26	8.219	0.000	31150	80654				
C28	8.717	-0.006	105120	167720				
C32	9.644	-0.003	75520	179381				
C34	10.072	0.003	20395	39296				
Filter Peak	12.094	-0.002	14176	11946	BUNKERC	(C10-C38)	6763635	171.3
C36	10.474	-0.001	16488	13915				
C38	10.874	-0.002	16928	5067				
C40	11.298	-0.005	16565	9102				
o-terph	6.199	0.003	21507388	26362131				
Triacon Surr	9.224	0.002	15763654	23103574	NAS DIES	(C10-C24)	2823494	14.5

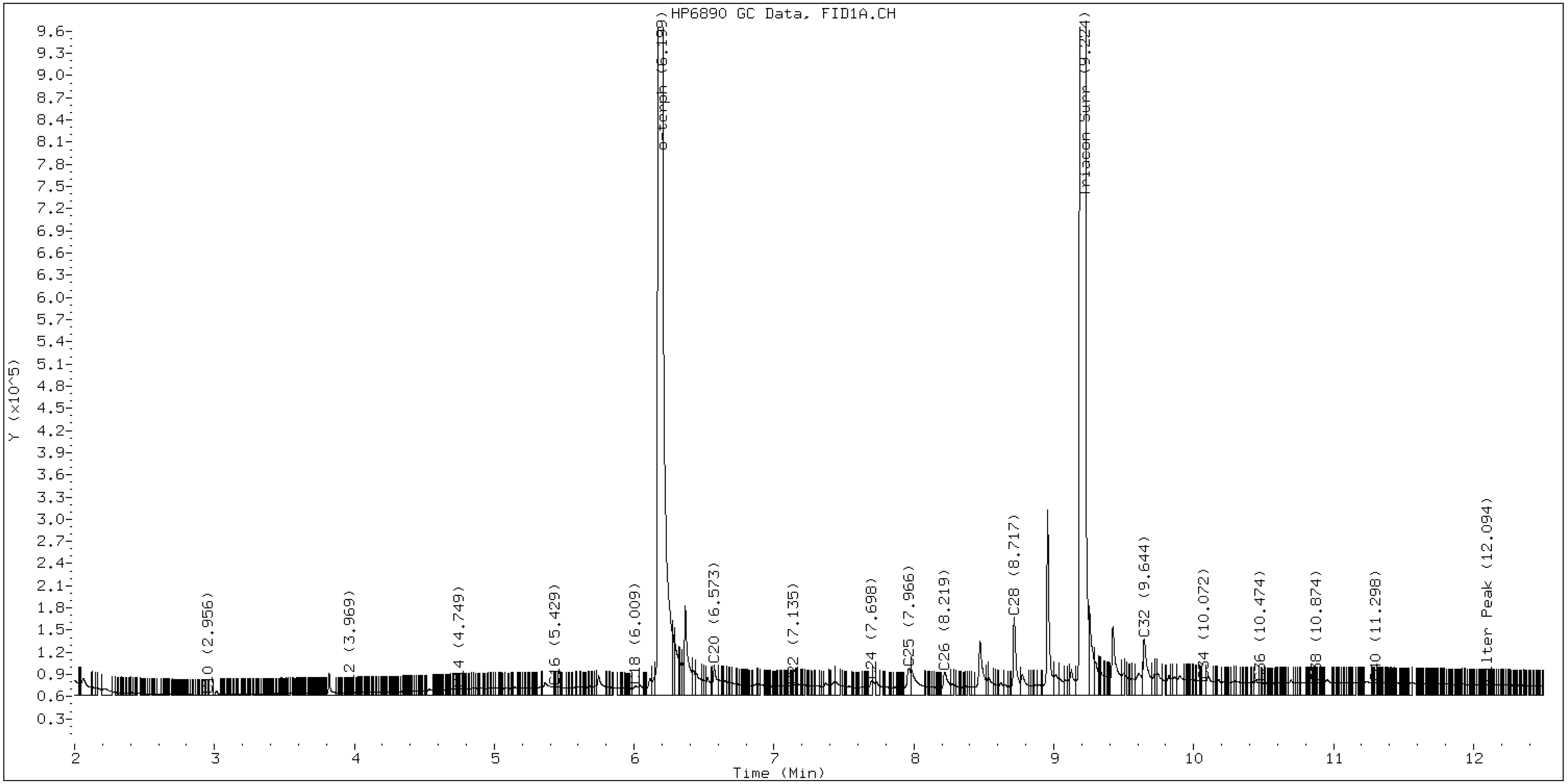
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount
o-Terphenyl	26362131	128.8
Triacontane	23103574	155.7

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201202.b/420L0254.D 20K0145-08



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP5-2

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0145-11 A	SDG:	20K0145
Sampled:	11/05/20 10:00	Prepared:	11/19/20 14:38	File ID:	420L0255.D
% Solids:	74.45	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/03/20 03:11
Batch:	BIK0587	Sequence:	SIL0020	Initial/Final:	10 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	DA00022

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	29.4		3.14	6.72
RRO	Motor Oil Range Organics (C24-C38)	1	68.6		4.02	13.4

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	15.111	13.2	87.6	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0255.D

Date : 03-DEC-2020 03:11

Client ID:

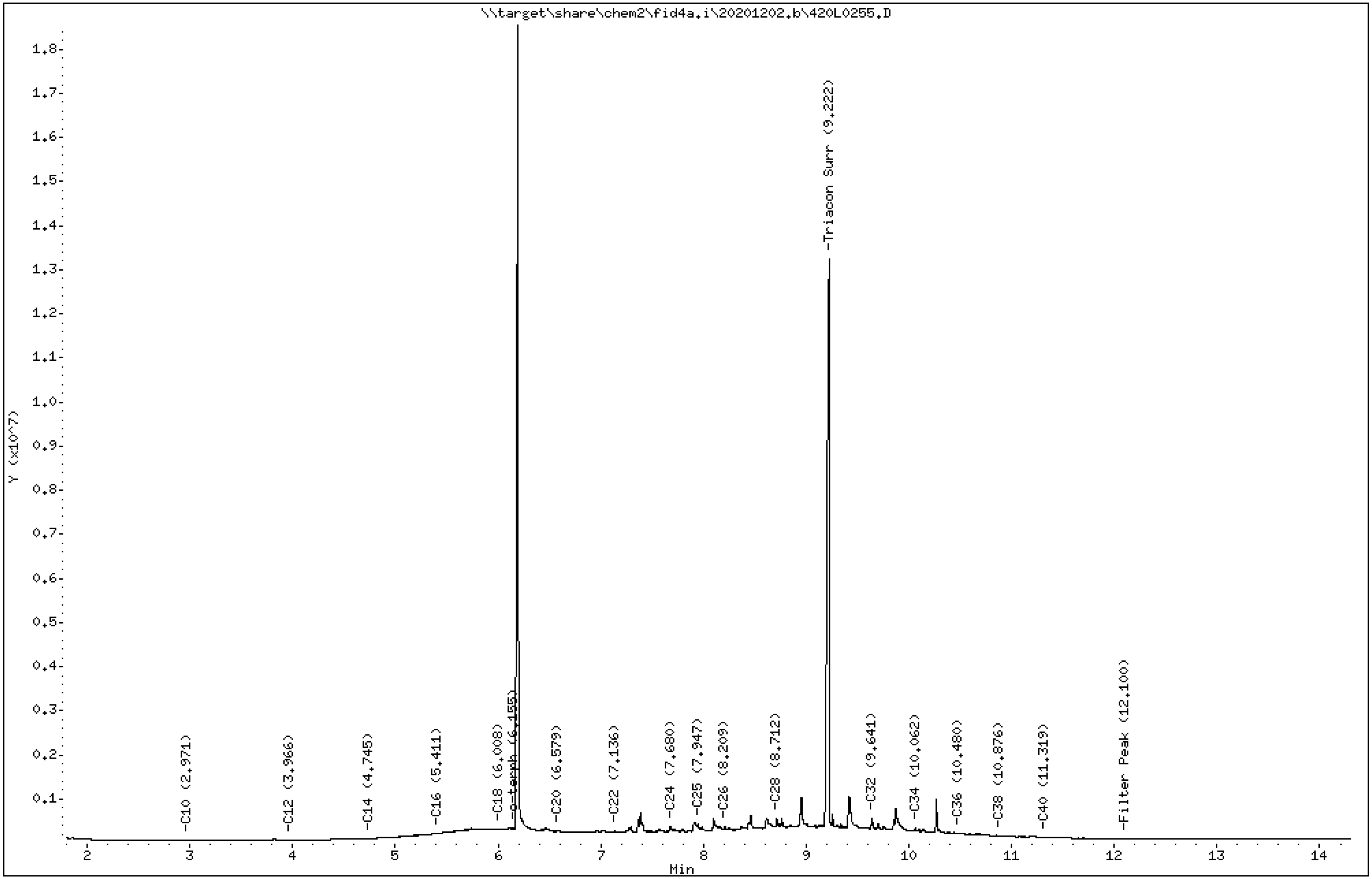
Instrument: fid4a.i

Sample Info: 20K0145-11

Operator: JGR/CTO/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0255.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: 20K0145-11
Client ID:
Injection: 03-DEC-2020 03:11
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.873	-0.009	46394	145961	WATPHD	(C12-C24)	34864866	218.8
C10	2.971	-0.002	941	437	WATPHM	(C24-C38)	51657077	510.6
C12	3.966	0.000	8940	6971	AK102	(C10-C25)	37107832	189.8
C14	4.745	-0.004	33892	13518	AK103	(C25-C36)	47095112	643.3
C16	5.411	-0.001	154775	46258	OR.DIES	(C10-C28)	53073405	270.8
C18	6.008	-0.002	258832	265924				
C20	6.579	-0.001	214192	114874	JET-A	(C10-C18)	13404967	80.8
C22	7.136	-0.006	203368	280652				
C24	7.680	-0.010	306705	676840				
C25	7.947	-0.011	387559	631830				
C26	8.209	-0.010	318722	532098				
C28	8.712	-0.011	490925	715119				
C32	9.641	-0.006	486329	1051087				
C34	10.062	-0.006	264541	458710				
Filter Peak	12.100	0.004	29171	20271	BUNKERC	(C10-C38)	86917020	2201.7
C36	10.480	0.006	150260	44896				
C38	10.876	0.001	96534	52411				
C40	11.319	0.016	56740	31110				
o-terph	6.195	-0.001	18218314	20188502				
Triacon Surr	9.222	-0.001	12849360	18040343	NAS DIES	(C10-C24)	35259943	180.7

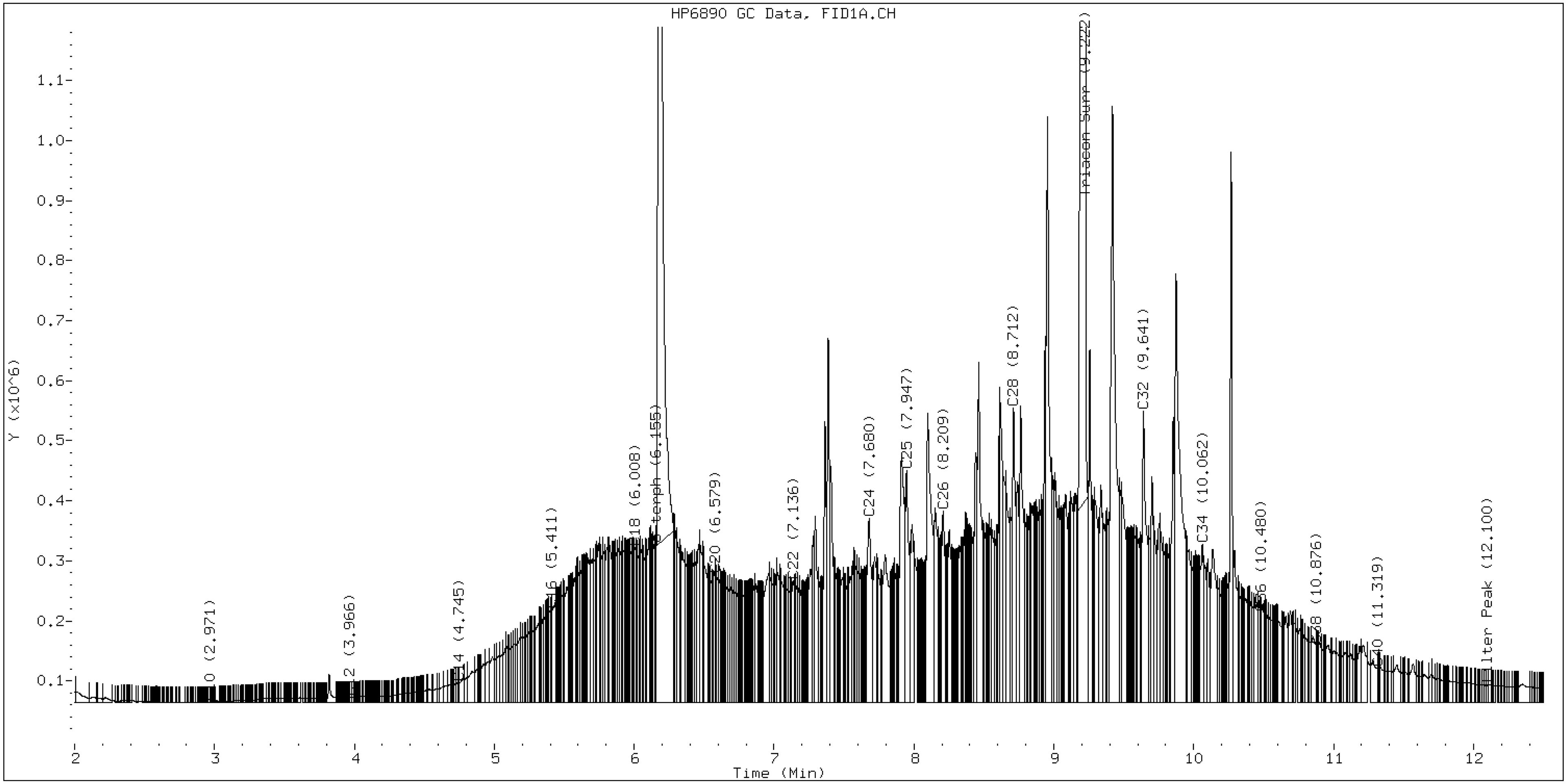
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	20188502	98.6	M
Triacontane	18040343	121.6	M

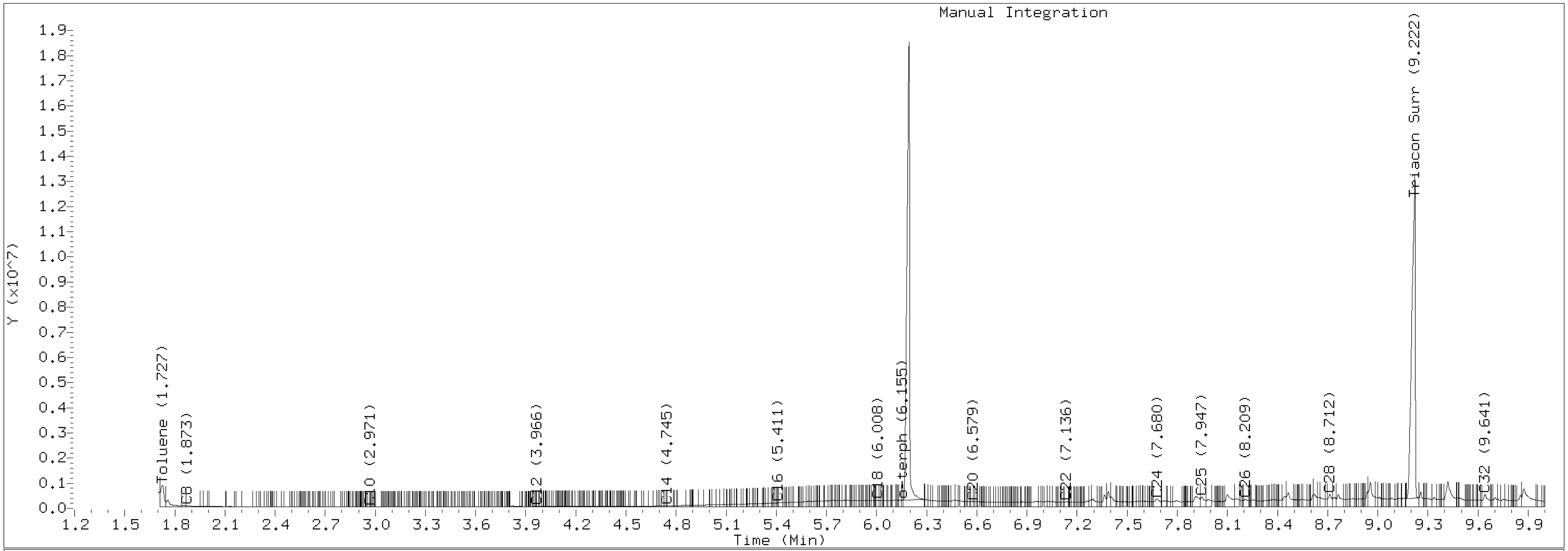
M Indicates the peak was manually integrated

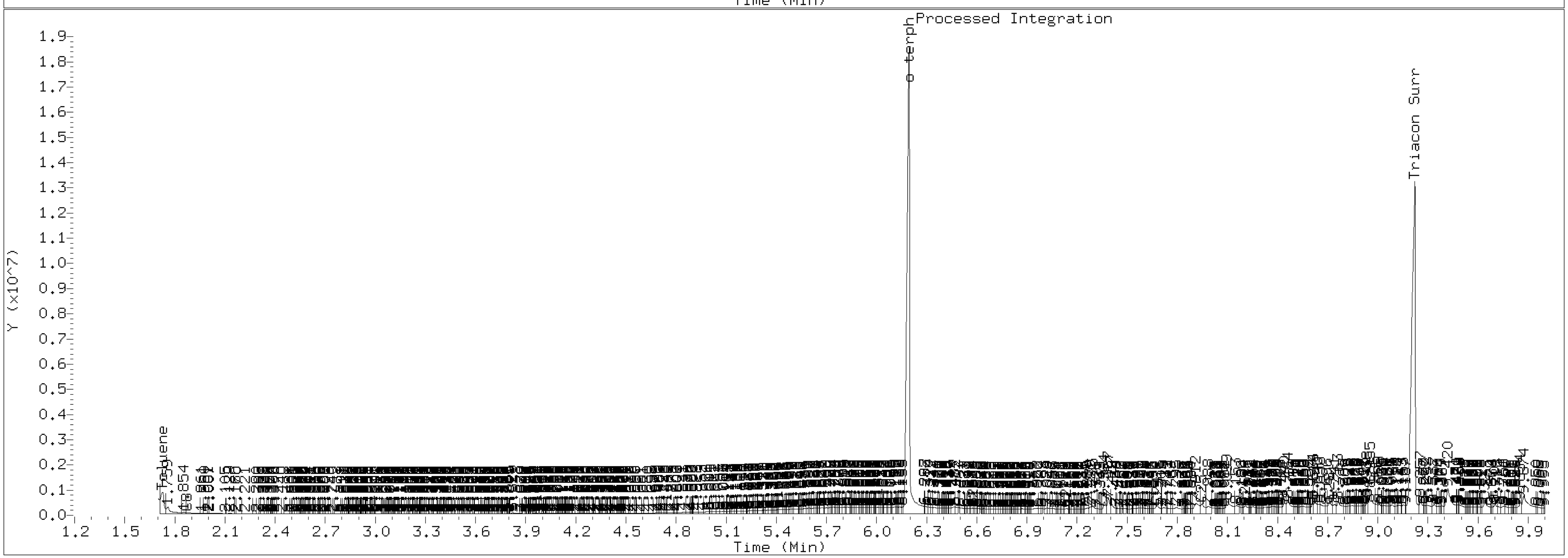
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201202.b/420L0255.D 20K0145-11



TPH Manual Integrations Report
Datafile: FID4A, 20201202.b/420L0255.D Injection: 03-DEC-2020 03:11
Lab ID:20K0145-11





Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP5-8

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0145-13 A	SDG:	20K0145
Sampled:	11/05/20 10:10	Prepared:	11/19/20 14:38	File ID:	420L0256.D
% Solids:	70.83	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/03/20 03:31
Batch:	BIK0587	Sequence:	SIL0020	Initial/Final:	10.02 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	DA00022

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	7.05	U	3.30	7.05
RRO	Motor Oil Range Organics (C24-C38)	1	19.0		4.21	14.1

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	15.851	11.8	74.7	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0256.D

Page 1

Date : 03-DEC-2020 03:31

Client ID:

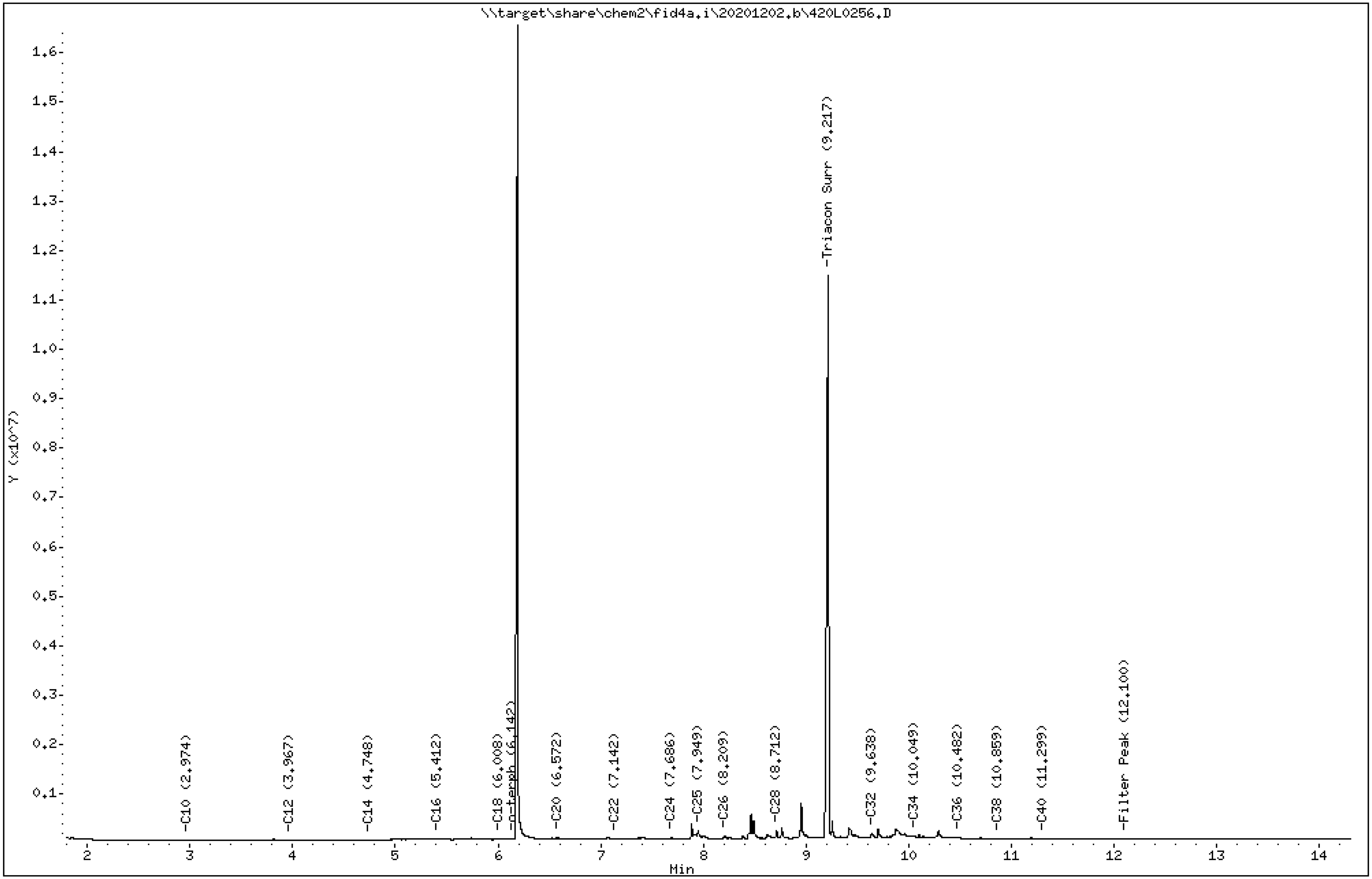
Instrument: fid4a.i

Sample Info: 20K0145-13

Operator: JGR/CTO/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0256.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: 20K0145-13
Client ID:
Injection: 03-DEC-2020 03:31
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.852	-0.029	56095	207630	WATPHD	(C12-C24)	4524996	28.4
C10	2.974	0.001	318	117	WATPHM	(C24-C38)	13673888	135.2
C12	3.967	0.001	3783	2054	AK102	(C10-C25)	5150527	26.3
C14	4.748	-0.000	10542	2621	AK103	(C25-C36)	12375048	169.0
C16	5.412	-0.000	15653	5447	OR.DIES	(C10-C28)	9228934	47.1
C18	6.008	-0.002	27336	56578				
C20	6.572	-0.008	43559	51972	JET-A	(C10-C18)	1639730	9.9
C22	7.142	0.001	35924	76308				
C24	7.686	-0.004	51705	84731				
C25	7.949	-0.009	203265	322852				
C26	8.209	-0.009	87784	176382				
C28	8.712	-0.011	196673	237985				
C32	9.638	-0.009	150568	242585				
C34	10.049	-0.019	72608	151810				
Filter Peak	12.100	0.004	21714	7587	BUNKERC	(C10-C38)	18358002	465.0
C36	10.482	0.008	43253	12944				
C38	10.859	-0.016	36274	48232				
C40	11.299	-0.004	28863	37073				
o-terph	6.192	-0.004	16443019	17187314				
Triacon Surr	9.217	-0.006	11357300	15430623	NAS DIES	(C10-C24)	4684114	24.0

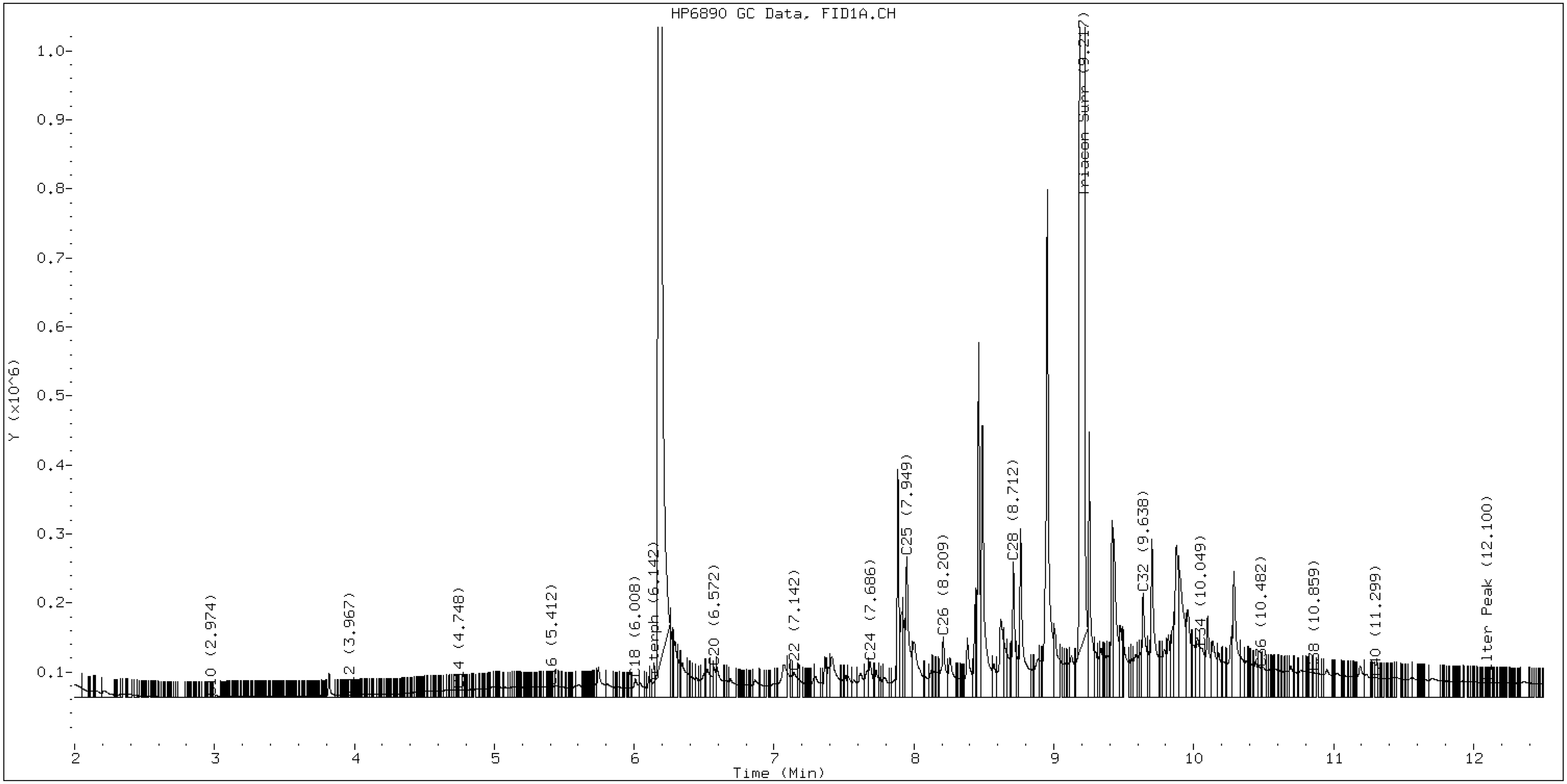
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount
o-Terphenyl	17187314	84.0 M
Triacontane	15430623	104.0 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

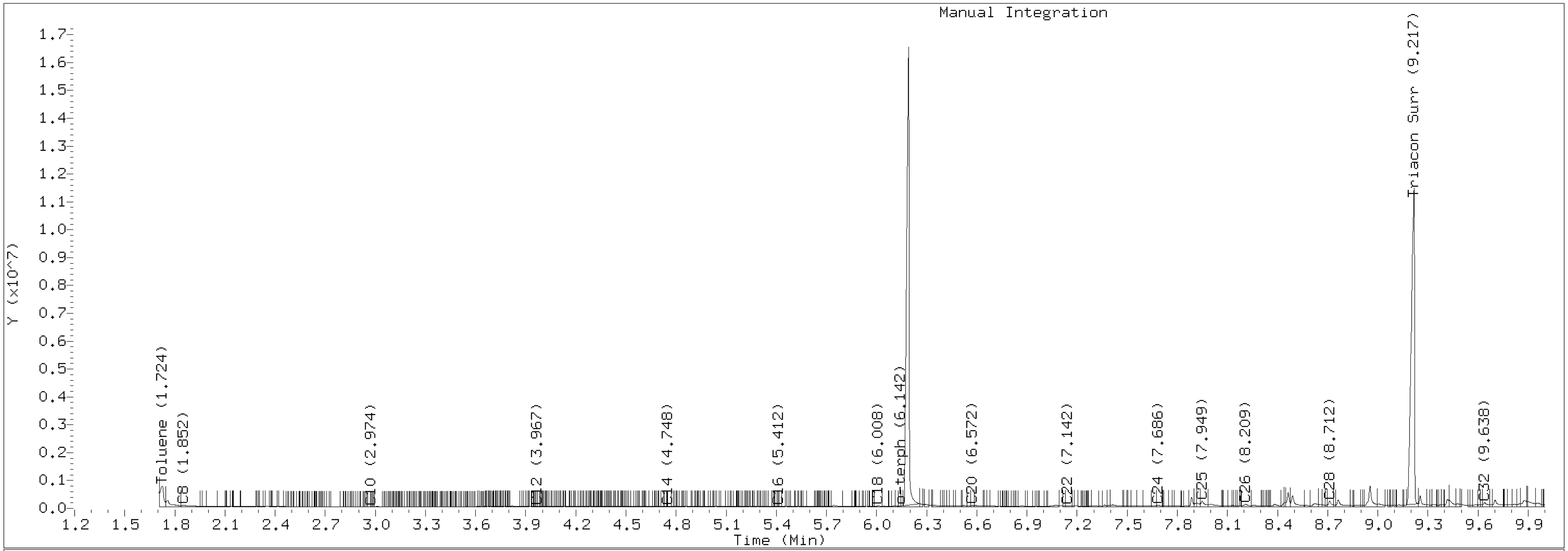
Datafile: FID4A, 20201202.b/420L0256.D 20K0145-13

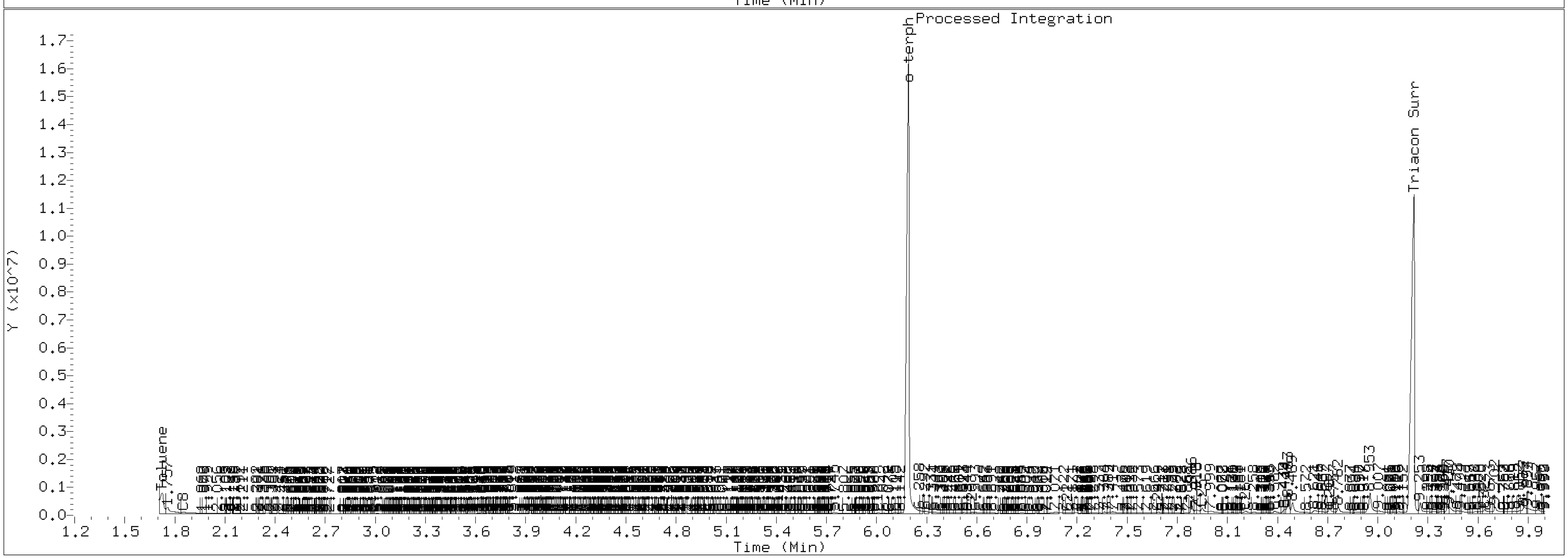


TPH Manual Integrations Report

Datafile: FID4A, 20201202.b/420L0256.D Injection: 03-DEC-2020 03:31

Lab ID:20K0145-13





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10S-1

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0145-15 A	SDG:	20K0145
Sampled:	11/06/20 08:20	Prepared:	11/20/20 16:45	File ID:	420K2908.D
% Solids:	94.87	Preparation:	EPA 3546 (Microwave)	Analyzed:	11/29/20 20:05
Batch:	BIK0629	Sequence:	SIK0411	Initial/Final:	10.11 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	DA00022

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	50	1500	D	122	261
RRO	Motor Oil Range Organics (C24-C38)	50	3100	D	156	521

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	11.729	9.90	84.4	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20201129.b\420K2908.D

Date : 29-NOV-2020 20:05

Client ID:

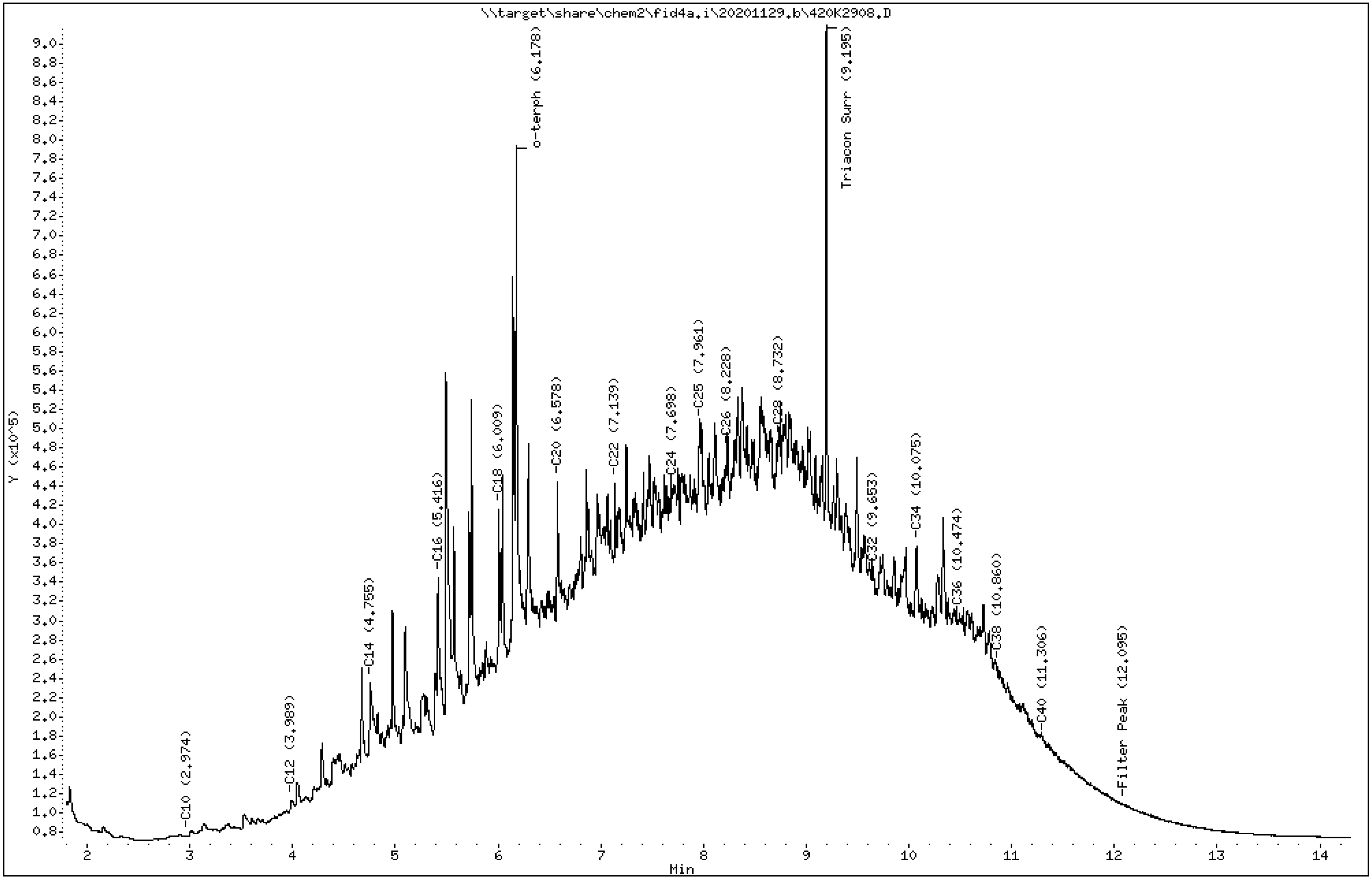
Instrument: fid4a.i

Sample Info: 20K0145-15RE1,50

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201129.b/420K2908.D
Method: 20201129.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: 20K0145-15RE1
Client ID:
Injection: 29-NOV-2020 20:05
Dilution Factor: 50
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.829	-0.042	55628	207410	WATPHD	(C12-C24)	45935127	288.3
C10	2.974	0.005	4463	1958	WATPHM	(C24-C38)	60079411	593.9
C12	3.989	0.025	40725	54965	AK102	(C10-C25)	50506282	258.4
C14	4.755	0.007	163743	357580	AK103	(C25-C36)	51844951	708.2
C16	5.416	0.002	273192	403825	OR.DIES	(C10-C28)	70580907	360.1
C18	6.009	-0.003	344108	595195				
C20	6.578	-0.005	372569	649876	JET-A	(C10-C18)	17128606	103.3
C22	7.139	-0.005	371873	557481				
C24	7.698	0.005	362657	126155				
C25	7.961	-0.000	433084	415817				
C26	8.228	0.005	403653	156413				
C28	8.732	0.005	414901	346838				
C32	9.653	-0.002	273703	108930				
C34	10.075	-0.004	305426	476829				
Filter Peak	12.095	-0.003	37255	14681	BUNKERC	(C10-C38)	107053263	2711.8
C36	10.474	-0.008	227114	101644				
C38	10.860	-0.012	181266	105142				
C40	11.306	-0.008	105550	67675				
o-terph	6.178	-0.020	452881	385893				
Triacon Surr	9.195	-0.035	514200	398028	NAS DIES	(C10-C24)	46973852	240.7

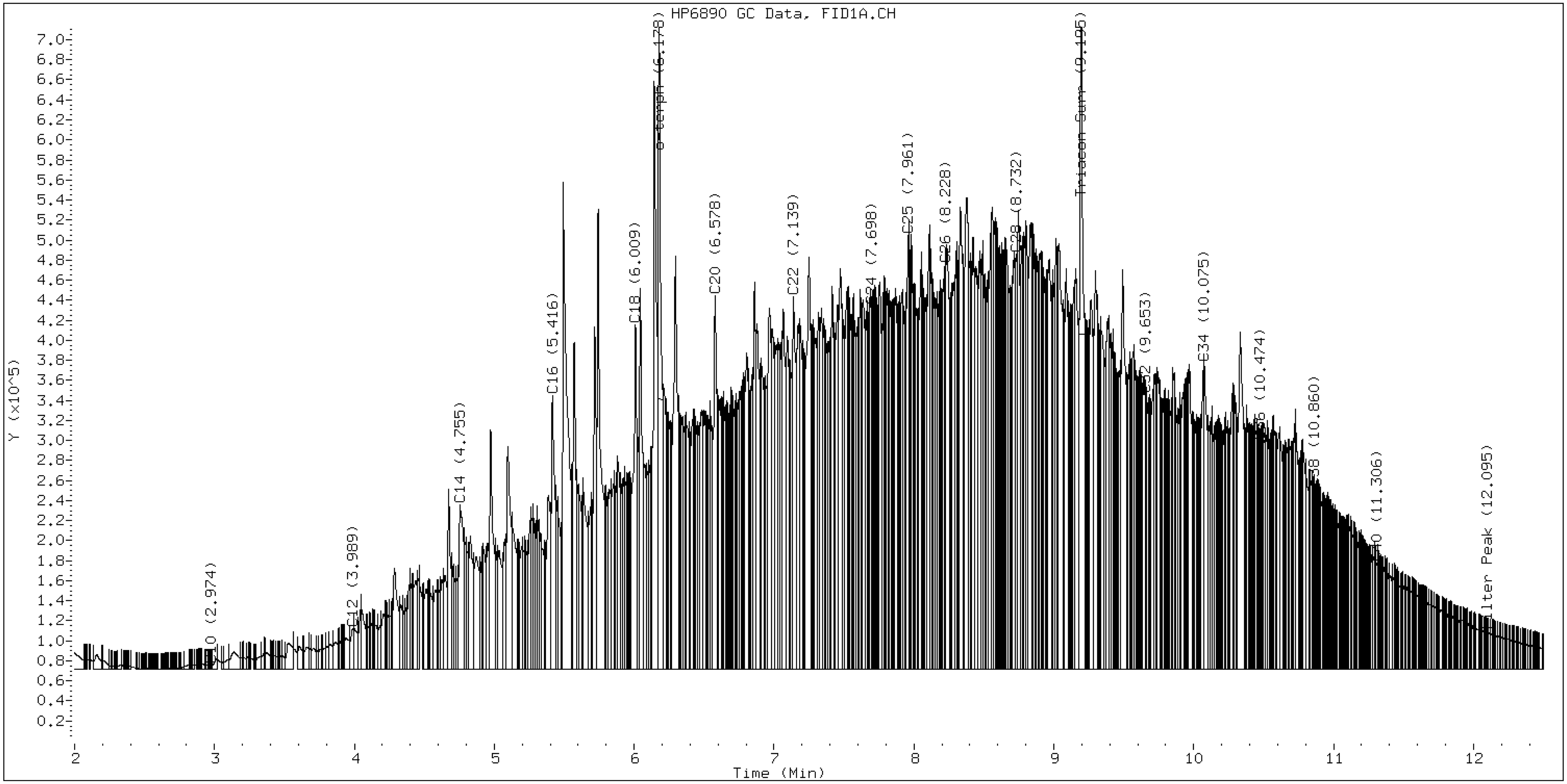
Range Times: NW Diesel(3.964 - 7.693) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.87) AK103(7.96 - 10.48) OR Diesel(2.97 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	385893	1.9	M
Triacontane	398028	2.7	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

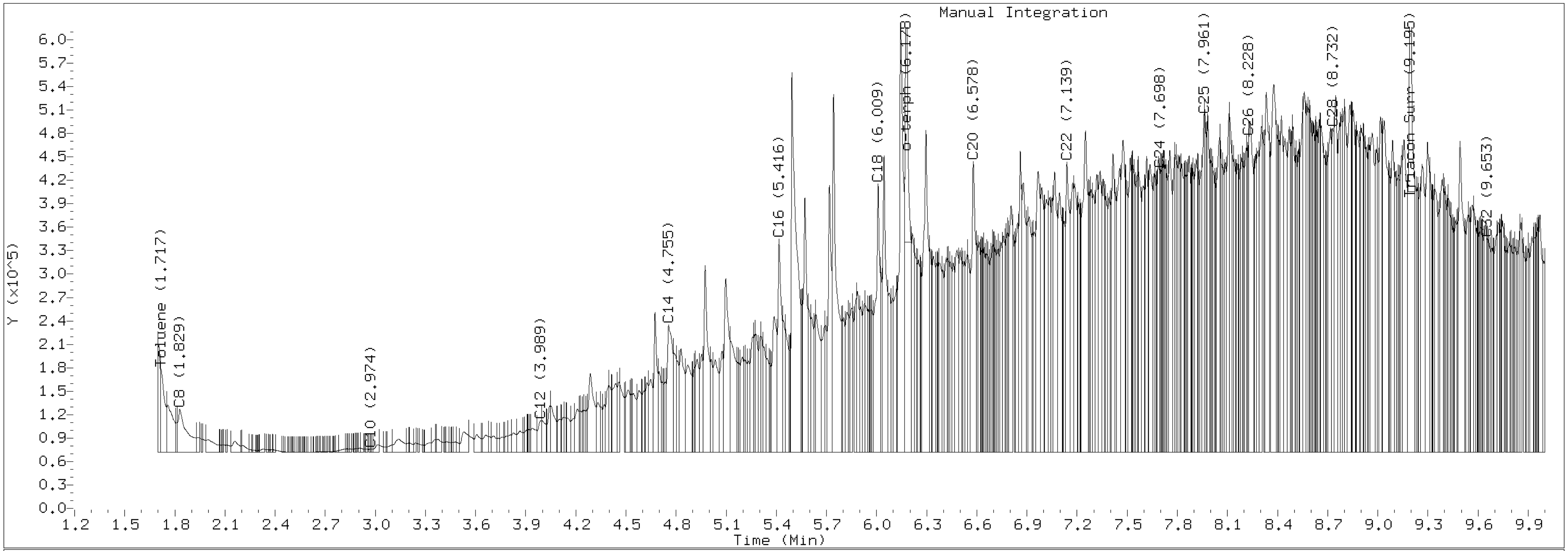
Datafile: FID4A, 20201129.b/420K2908.D 20K0145-15RE1

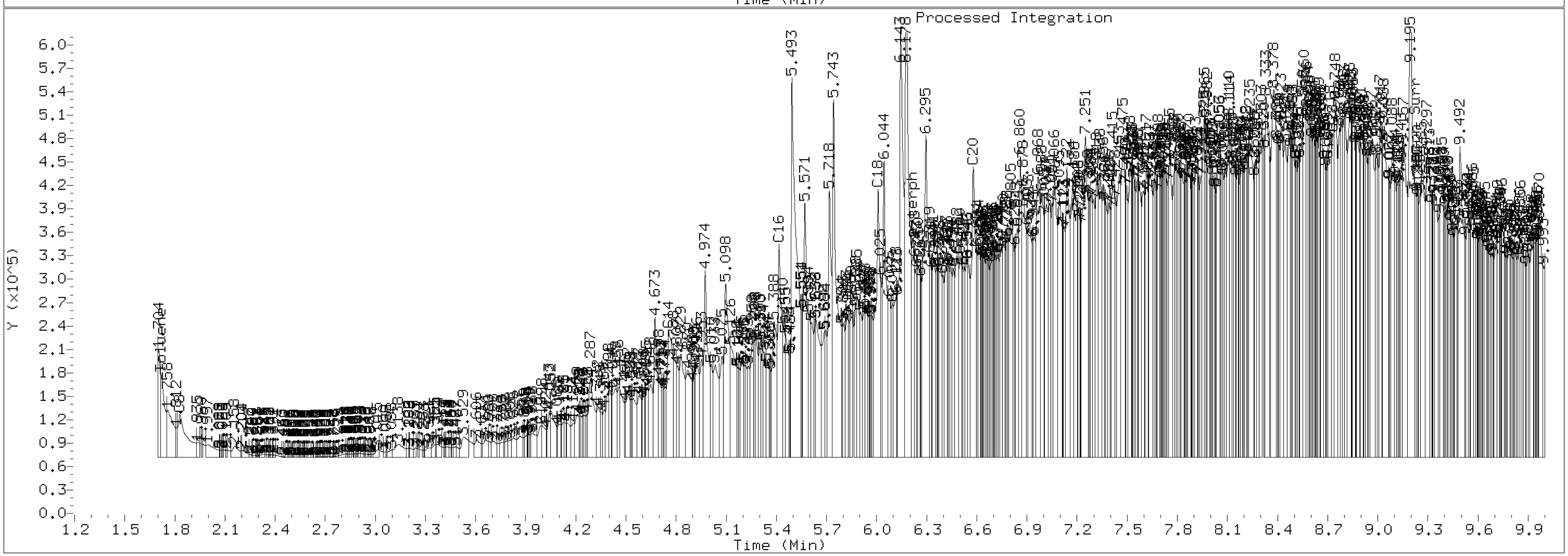


TPH Manual Integrations Report

Datafile: FID4A, 20201129.b/420K2908.D Injection: 29-NOV-2020 20:05

Lab ID:20K0145-15RE1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10S-5

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0145-17 A	SDG:	20K0145
Sampled:	11/06/20 08:30	Prepared:	11/20/20 16:45	File ID:	420K2833.D
% Solids:	93.16	Preparation:	EPA 3546 (Microwave)	Analyzed:	11/29/20 03:09
Batch:	BIK0629	Sequence:	SIK0413	Initial/Final:	10.17 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	DA00022

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	102		2.47	5.28
RRO	Motor Oil Range Organics (C24-C38)	1	218		3.16	10.6

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	11.874	9.74	82.0	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20201128.b\420K2833.D

Date : 29-NOV-2020 03:09

Client ID:

Sample Info: 20K0145-17

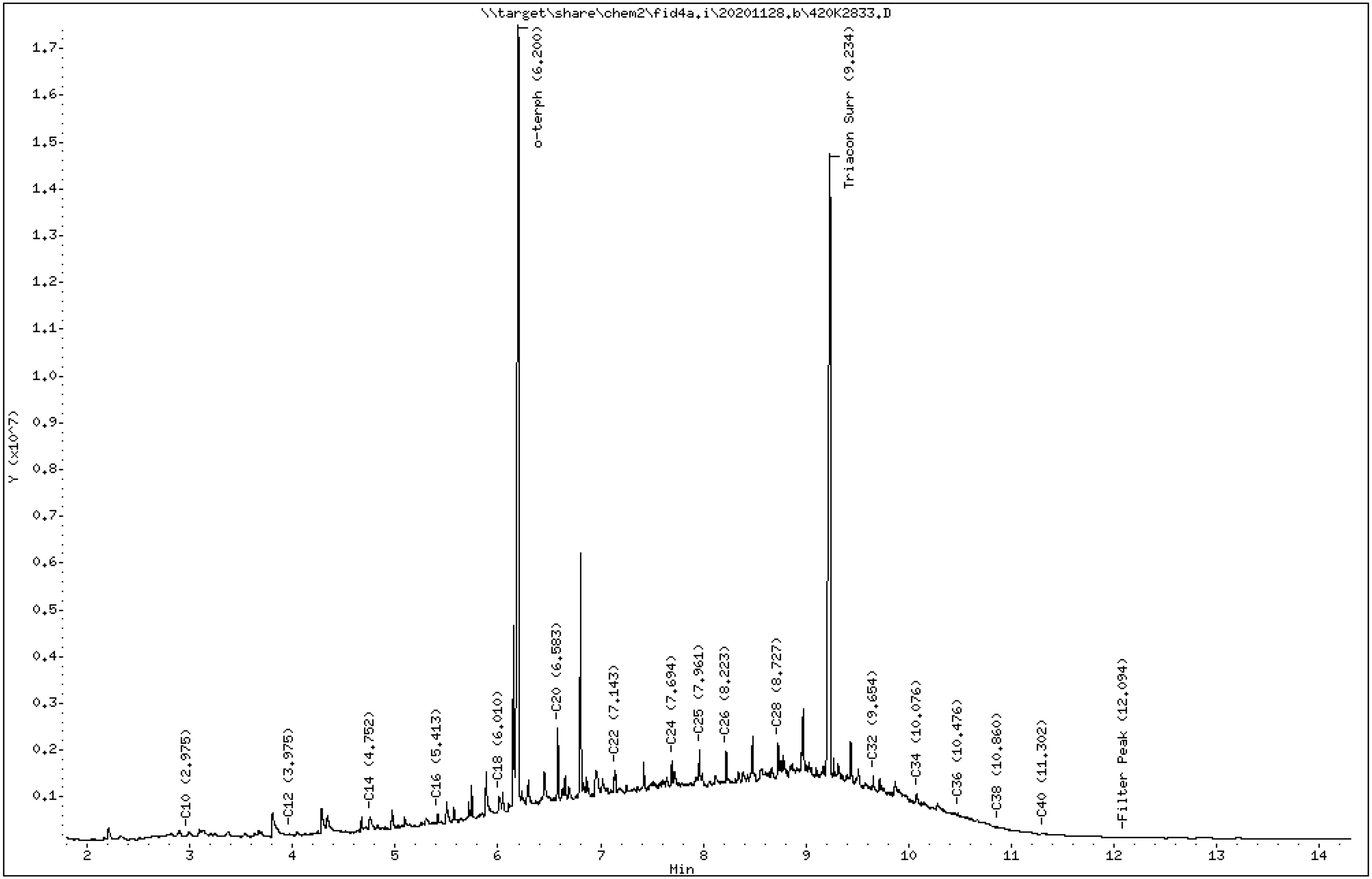
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201128.b/420K2833.D
Method: 20201128.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: 20K0145-17
Client ID:
Injection: 29-NOV-2020 03:09
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.905	-0.004	25681	41531	WATPHD	(C12-C24)	154559211	970.0
C10	2.975	-0.006	108274	125416	WATPHM	(C24-C38)	208720001	2063.1
C12	3.975	0.008	132812	328022	AK102	(C10-C25)	174718645	893.7
C14	4.752	0.004	488437	517612	AK103	(C25-C36)	188538108	2575.4
C16	5.413	-0.001	557793	816824	OR.DIES	(C10-C28)	244715165	1248.6
C18	6.010	-0.003	949903	1405979				
C20	6.583	-0.001	2390357	3111345	JET-A	(C10-C18)	52587734	317.1
C22	7.143	-0.002	1504997	1804531				
C24	7.694	0.000	1696469	2320640				
C25	7.961	-0.001	1939404	2584229				
C26	8.223	-0.001	1913412	2124763				
C28	8.727	-0.001	2081668	4010968				
C32	9.654	-0.001	1368599	2020870				
C34	10.076	-0.002	986094	2656638				
Filter Peak	12.094	-0.006	56707	19719	BUNKERC	(C10-C38)	371647049	9414.2
C36	10.476	-0.001	571883	696572				
C38	10.860	-0.003	302632	339293				
C40	11.302	-0.001	143788	383262				
o-terph	6.200	-0.001	16580256	18893238				
Triacon Surr	9.234	0.002	13297819	17301370	NAS DIES	(C10-C24)	162927047	834.9

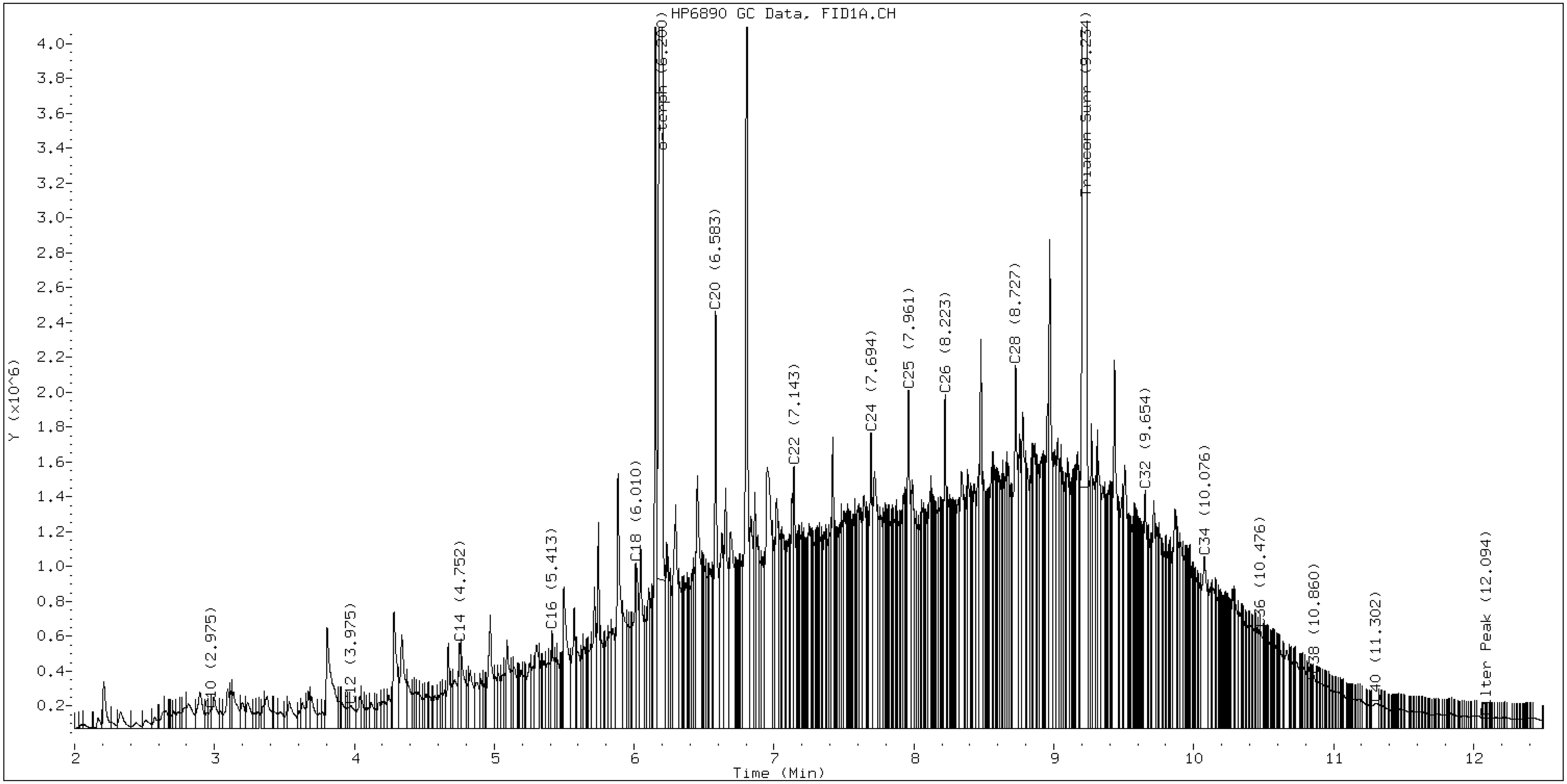
Range Times: NW Diesel(3.967 - 7.693) AK102(2.98 - 7.96) Jet A(2.98 - 6.01)
NW M.Oil(7.69 - 10.86) AK103(7.96 - 10.48) OR Diesel(2.98 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	18893238	92.3	M
Triacontane	17301370	116.6	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

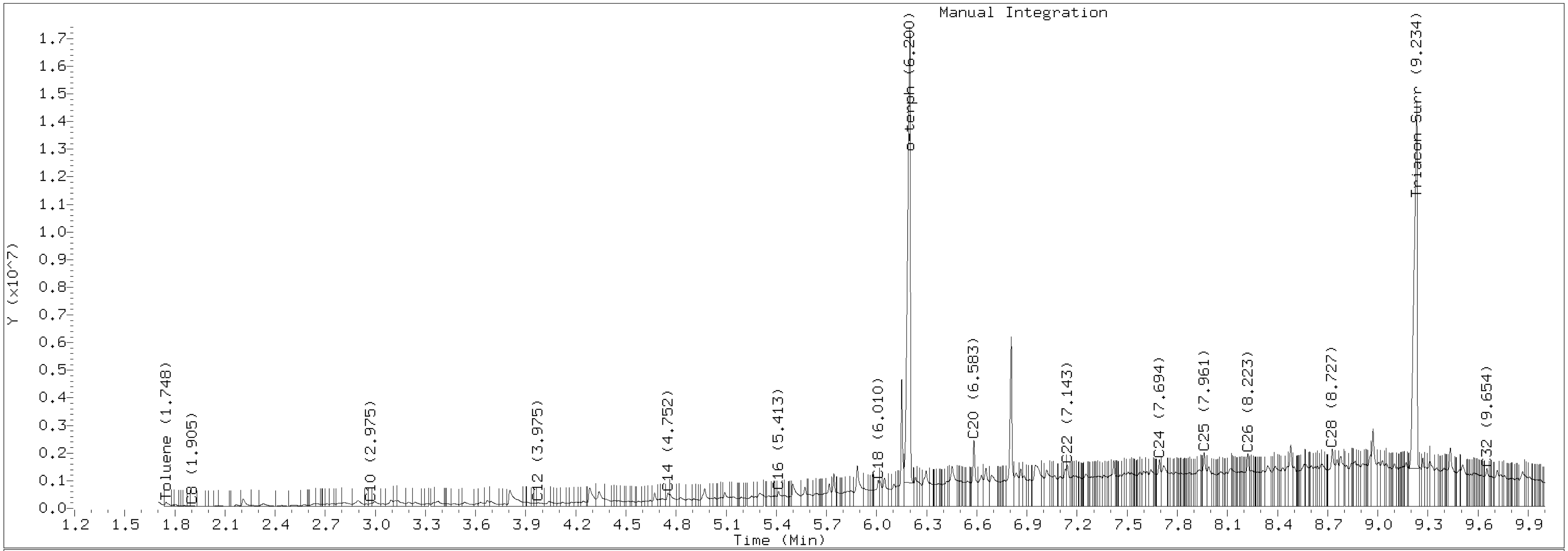
Datafile: FID4A, 20201128.b/420K2833.D 20K0145-17

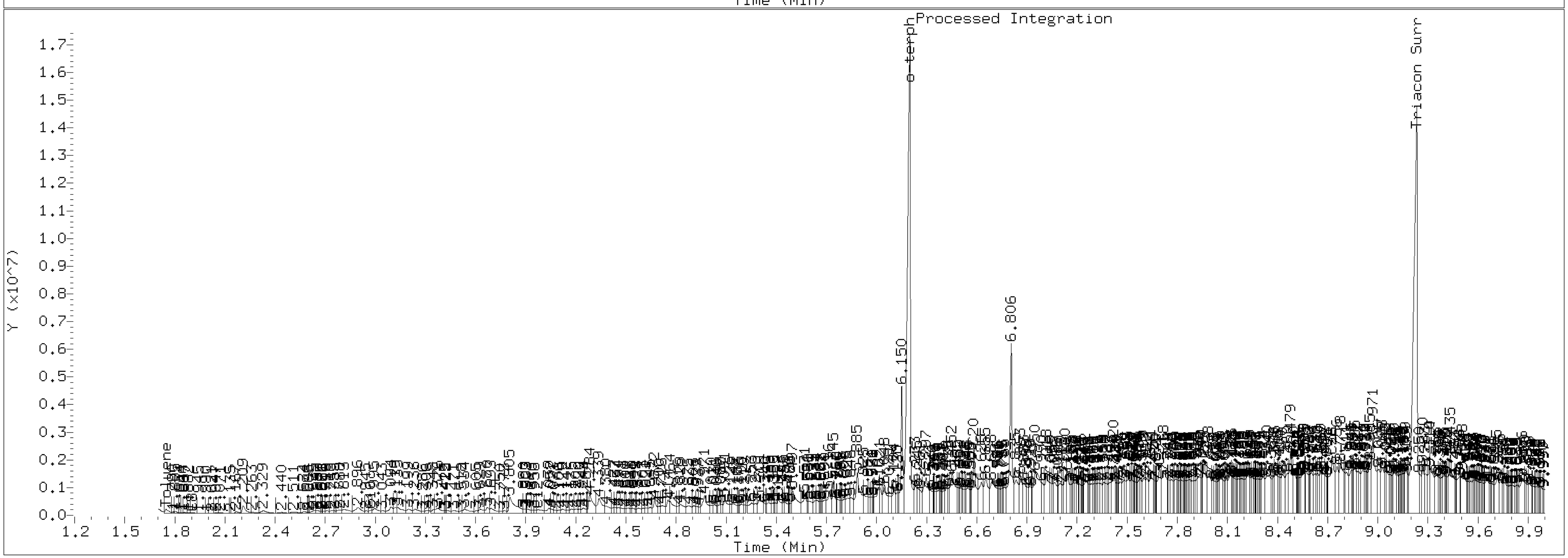


TPH Manual Integrations Report

Datafile: FID4A, 20201128.b/420K2833.D Injection: 29-NOV-2020 03:09

Lab ID:20K0145-17





Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Batch: BIK0587 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
PP1-5	20K0145-02	420L0251.D	11/19/20 14:38	
PP1-7.5	20K0145-03	420L0252.D	11/19/20 14:38	
PP2-5	20K0145-07	420L0253.D	11/19/20 14:38	
PP2-7.5	20K0145-08	420L0254.D	11/19/20 14:38	
PP5-2	20K0145-11	420L0255.D	11/19/20 14:38	
PP5-8	20K0145-13	420L0256.D	11/19/20 14:38	
Blank	BIK0587-BLK1	420L0244.D	11/19/20 14:38	
LCS	BIK0587-BS1	420L0245.D	11/19/20 14:38	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0587

Prepared using: EPA 3546 (Microwave)

TPH NW (Extractables) low level in Solid (Version:)
TPH NW (Extractables) low level in Solid

Matrix: Solid **Date Prepared:** 11/19/20 **Balance ID:** B14662614 **Set Up By:** CTO 11/19/20

The following standards may be missing from this batch!

Designator	Description
QLS 18	QLS Spike

Analysis: TPH NW (Extractables) low level

Lab Number & Container	Initial (g) Target Wet: 10 (Wet)	Actual	Acid C/U (1:1) Y/N	Silica Gel C/U (1:1) Y/N	Final Effective Vol (mL)	Vol to Lab	Extraction Comments
20K0145-02 A	(10.000)	10.01	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0145-03 A	(10.000)	10.01	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0145-07 A	(10.000)	10.06	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0145-08 A	(10.000)	10.04	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0145-11 A	(10.000)	10.00	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0145-13 A	(10.000)	10.02	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0152-01 B	(10.000)	10.07	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0152-02 B	(10.000)	10.04	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0152-03 B	(10.000)	10.00	(1:1) Y / N	(1:1) Y / N	1	1.0	

Batch QC

Lab Number	Initial (g) Target Wet: 10 (Wet)	Actual	Acid C/U (1:1) Y/N	Silica Gel C/U (1:1) Y/N	Final Effective Vol (mL)	Vol to Lab	Extraction Comments
BIK0587-BLK1	(10.000)	10.00	(1:1) Y / N	(1:1) Y / N	1	1.0	
BIK0587-BS1	(10.000)	10.00	(1:1) Y / N	(1:1) Y / N	1	1.0	
BIK0587-MS1	(10.000)	10.00	(1:1) Y / N	(1:1) Y / N	1	1.0	Use 20K0152-03
BIK0587-MSD1	(10.000)	10.00	(1:1) Y / N	(1:1) Y / N	1	1.0	Use 20K0152-03

11/19/20
Client ID Verified By Date

BH 11/20/20
Preparation Reviewed By Date

11/19/20 14:38
Extraction Date and Time

Printed: 11/19/2020 8:31:57AM

3066F

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0587

Prepared using: EPA 3546 (Microwave)

TPH NW (Extractables) low level in Solid (Version:)
TPH NW (Extractables) low level in Solid

Prep Steps

Microwave
JY 1 2 3
DR 11/19/20
Analyst/Date
TurboVap
~~Pre Acid/Silica Clean~~
1 2 3 4 5 6
BH 11/20/20
Analyst/Date
Vialing
BH 11/20/20
Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: DR / JY Date: 11/19/20	
Methylene Chloride	I010666
Anhydrous Sodium Sulfate	I010014
Neutral Glass Wool	I010485
Vialing Analyst: BH Date: 11/20/20	
Methylene Chloride	I010666
~~Concentrated Sulfuric Acid~~	
~~0% Silica Gel~~	

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 1125µg/mL	P 1009825 Exp: 04/17/2021	100µL	DR	JY
Spike 15000µg/mL	11 1009822 Exp: 04/20/2021	100µL	DR	JY

(V) indicates a virtual standard combining two or more physical standards. In these cases the Standard ID refers to the virtual standard, not the parent standards.

If a Standard ID is missing, but should be present, check the standard definition in Element LIMS to be sure Standard Info 6 has the correct letter or number designator matching the vial designator inthe Standard ID column. If it is correct, check the batch and bench sheet in Element LIMS to be sure the correct standards are selected for surrogate(s) and spike(s).

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0587

Prepared using: EPA 3546 (Microwave)

TPH NW (Extractables) low level in Solid (Version:)
TPH NW (Extractables) low level in Solid

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh into 100mL beakers-dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM to the vessel until the solvent is 1 inch above soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then let cool 15 min. in Refridgerator 05. Re-homogenize while cool. 7. Collect into turbo tube with sm. funnel containing glasswool and 1 Inch sodium sulfate. 8. Add (2) 10mL DCM rinses to vessel and transfer to turbo tube. 9. TurboVap. 10. Acid/Silica Clean-up?= Y / $\boxed{N}$ 11. Vial in DCM. A. Need Total Solids $\boxed{Y}$ / N B. Archive/Freeze Y / $\boxed{N}$	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: TPHD	Extraction Batch B1K0587

Total Solids Batch: ______ Work Order(s): 20K0145, 152

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Batch: BIK0587
Batch Comment: **NONE**
Project: ICS-Former NW Cooperage
Project Comments: <G> Need J-flag Binary files for Aroclors .cdf
Need Acid/Silica Clean-ups for TPHDx if requested
Need MS/MSD if enough volume.
Need organic instrument files uploaded to the secure site for DMD (Raleigh Farlow).
</G>
Work Order:20K0145
Work Order Comments: <G> Need J-flag Binary files for Aroclors .cdf
Need Acid/Silica Clean-ups for TPHDx if requested
Need MS/MSD if enough volume.
Need organic instrument files uploaded to the secure site for DMD (Raleigh Farlow).
</G>
Sample: 20K0145-02
Sample Comments: **NONE**
Sample: 20K0145-03
Sample Comments: **NONE**
Sample: 20K0145-07
Sample Comments: **NONE**
Sample: 20K0145-08
Sample Comments: **NONE**
Sample: 20K0145-11
Sample Comments: **NONE**
Sample: 20K0145-13
Sample Comments: **NONE**
Project: Lower Duwamish
Project Comments: MS/MSD for < than 6 samples is equal to analytical cost, 6-15 samples is equal to 1/2 the analytical. TBs charged at analytical. 1st metals element per method $40 (excl. Hg), each add $10.
<M> MS/MSD, PS </M> <E> MS/MSD </E>
Work Order:20K0152
Work Order Comments: MS/MSD for < than 6 samples is equal to analytical cost, 6-15 samples is equal to 1/2 the analytical. TBs charged at analytical. 1st metals element per method $40 (excl. Hg), each add $10.
<M> MS/MSD, PS </M> <E> MS/MSD </E>
Sample: 20K0152-01
Sample Comments: **NONE**
Sample: 20K0152-02
Sample Comments: **NONE**
Sample: 20K0152-03
Sample Comments: **NONE**

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Batch: BIK0629 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
P8-10S-1	20K0145-15	420K2908.D	11/20/20 16:45	
P8-10S-5	20K0145-17	420K2833.D	11/20/20 16:45	
Blank	BIK0629-BLK1	420K2823.D	11/20/20 16:45	
LCS	BIK0629-BS1	420K2824.D	11/20/20 16:45	
LCS Dup	BIK0629-BSD1	420K2825.D	11/20/20 16:45	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0629

Prepared using: EPA 3546 (Microwave)

TPH NW (Extractables) low level in Solid (Version:)
TPH NW (Extractables) low level in Solid

Matrix: Solid **Date Prepared:** 11/2φ/2φ **Balance ID:** B146462614 **Set Up By:** 11/20/20

The following standards may be missing from this batch!

Designator	Description
QLS 18	QLS Spike

Analysis: TPH NW (Extractables) low level

Lab Number & Container	Initial (g) Target Wet: 10 (Wet) Actual	Acid C/U (1:1) Y / N	Silica Gel C/U (1:1) Y / N	Final Effective Vol (mL)	Vol to Lab	Extraction Comments
20K0120-06 A	(10.000) 1φ.17	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0120-07 A	(10.000) 1φ.φ5	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0120-08 A	(10.000) 1φ.16	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0120-09 A	(10.000) 1φ.φ5	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0142-06 B	(10.000) 1φ.13	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0142-07 B	(10.000) 1φ.φ6	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0145-15 A	(10.000) 1φ.11	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0145-17 A	(10.000) 1φ.17	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0152-09 B	(10.000) 1φ.15	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0152-10 B	(10.000) 1φ.φ6 ~~1φ.φ6~~	CTO 11/20/20 (1:1) Y / N	(1:1) Y / N	1	1.0	
20K0152-11 B	(10.000) 1φ.φ7	(1:1) Y / N	(1:1) Y / N	1	1.0	
17 - 20K0152-12 B	(10.000) 1φ.23	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0152-13 B	(10.000) 1φ.17	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0152-14 B	(10.000) 10.12	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0152-15 B	(10.000) 1φ.21	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0152-16 B	(10.000) 1φ.1φ	(1:1) Y / N	(1:1) Y / N	1	1.0	
20K0152-17 A	(10.000) 1φ.15	(1:1) Y / N	(1:1) Y / N	1	1.0	
D - 20K0152-18 A	(10.000) 1φ.1φ	(1:1) Y / N	(1:1) Y / N	1	1.0	
D - 20K0152-19 A	(10.000) 1φ.13	(1:1) Y / N	(1:1) Y / N	1	1.0	

Batch QC

Lab Number	Initial (g) Target Wet: 10 (Wet) Actual	Acid C/U (1:1) Y / N	Silica Gel C/U (1:1) Y / N	Final Effective Vol (mL)	Vol to Lab	Extraction Comments
BIK0629-BLK1	(10.000) 1φ.φφ	(1:1) Y / N	(1:1) Y / N	1	1.0	
BIK0629-BS1	(10.000) 1φ.φφ	(1:1) Y / N	(1:1) Y / N	1	1.0	
BIK0629-BSD1	(10.000) 10.φφ	(1:1) Y / N	(1:1) Y / N	1	1.0	
BIK0629-MS1	(10.000) 1φ.φ6	(1:1) Y / N	(1:1) Y / N	1	1.0	Use 20K0152-09
BIK0629-MSD1	(10.000) 1φ.φ5	(1:1) Y / N	(1:1) Y / N	1	1.0	Use 20K0152-09

CTO 11/20/20
Client ID verified By Date

11/21/20
Preparation Reviewed By Date

11/20/20 16:45
Extraction Date and Time

Printed: 11/20/2020 8:56:00AM

3066F
Page 1 of 2

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0629

Prepared using: EPA 3546 (Microwave)

TPH NW (Extractables) low level in Solid (Version:)
TPH NW (Extractables) low level in Solid

Prep Steps
Microwave
1 2 3
11/24/20
Analyst/Date
TurboVap Pre Acid/Silica Clean
1 2 3 4 5
11/21/20
Analyst/Date
Vialing
11/21/20
Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst:	Date: 11/24/20
Methylene Chloride	I0106679
Anhydrous Sodium Sulfate	I010747
Neutral Glass Wool	I010014
Vialing Analyst:	Date: 11/21/20
Methylene Chloride	I10679
~~Concentrated Sulfuric Acid~~	
~~0% Silica Gel~~	

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 1125µg/ml	P 1009825 Exp: 04-17-2021	100µL		BT
Spike 15000µg/mL	11 1009822 Exp: 04/20/2021	100µL		BT

(V) indicates a virtual standard combining two or more physical standards. In these cases the Standard ID refers to the virtual standard, not the parent standards.

If a Standard ID is missing, but should be present, check the standard definition in Element LIMS to be sure Standard Info 6 has the correct letter or number designator matching the vial designator inthe Standard ID column. If it is correct, check the batch and bench sheet in Element LIMS to be sure the correct standards are selected for surrogate(s) and spike(s).

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0629

Prepared using: EPA 3546 (Microwave)

TPH NW (Extractables) low level in Solid (Version:)
TPH NW (Extractables) low level in Solid

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh into 100mL beakers-dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM to the vessel until the solvent is 1 inch above soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then let cool 15 min. in Refridgerator 05. Re-homogenize while cool. 7. Collect into turbo tube with sm. funnel containing glasswool and 1 Inch sodium sulfate. 8. Add (2) 10mL DCM rinses to vessel and transfer to turbo tube. 9. TurboVap. 10. Acid/Silica Clean-up?= Y / N. 11. Vial in DCM. A. Need Total Solids Y / N B. Archive/Freeze Y / N	

Batch: BIK0629
Batch Comment: **NONE**
Project: Longacres
Project Comments: **NONE**
Work Order:20K0142
Work Order Comments: <E> BS/BSD</E>
Sample: 20K0142-06
Sample Comments: **NONE**
Sample: 20K0142-07
Sample Comments: **NONE**
Project: ICS-Former NW Cooperage
Project Comments: <G> Need J-flag Binary files for Aroclors .cdf
Need Acid/Silica Clean-ups for TPHDx if requested
Need MS/MSD if enough volume.
Need organic instrument files uploaded to the secure site for DMD (Raleigh Farlow).
</G>
Work Order:20K0145
Work Order Comments: <G> Need J-flag Binary files for Aroclors .cdf
Need Acid/Silica Clean-ups for TPHDx if requested
Need MS/MSD if enough volume.
Need organic instrument files uploaded to the secure site for DMD (Raleigh Farlow).
</G>
Sample: 20K0145-15
Sample Comments: **NONE**
Sample: 20K0145-17
Sample Comments: **NONE**
Project: Lower Duwamish
Project Comments: MS/MSD for < than 6 samples is equal to analytical cost, 6-15 samples is equal to 1/2 the analytical. TBs charged at analytical. 1st metals element per method $40 (excl. Hg), each add $10.
<M> MS/MSD, PS </M> <E> MS/MSD </E>
Work Order:20K0152
Work Order Comments: MS/MSD for < than 6 samples is equal to analytical cost, 6-15 samples is equal to 1/2 the analytical. TBs charged at analytical. 1st metals element per method $40 (excl. Hg), each add $10.
<M> MS/MSD, PS </M> <E> MS/MSD </E>
Sample: 20K0152-09
Sample Comments: **NONE**
Sample: 20K0152-10
Sample Comments: **NONE**
Sample: 20K0152-11
Sample Comments: **NONE**
Sample: 20K0152-12
Sample Comments: **NONE**
Sample: 20K0152-13
Sample Comments: **NONE**
Sample: 20K0152-14
Sample Comments: **NONE**
Sample: 20K0152-15
Sample Comments: **NONE**

Sample: 20K0152-16
Sample Comments: **NONE**
Sample: 20K0152-17
Sample Comments: **NONE**
Sample: 20K0152-18
Sample Comments: **NONE**
Sample: 20K0152-19
Sample Comments: **NONE**
Project: Longacres
Project Comments: **NONE**
Work Order:20K0120
Work Order Comments: <E> BS/BSD, MS/MSD a solid sample</E>
Sample: 20K0120-06
Sample Comments: **NONE**
Sample: 20K0120-07
Sample Comments: **NONE**
Sample: 20K0120-08
Sample Comments: **NONE**
Sample: 20K0120-09
Sample Comments: **NONE**

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: TPHD   Extraction Batch B1K0629

Total Solids Batch: ______   Work Order(s): B1K0152

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

3056F

Revision 15
07/01/19

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: TPHD	Extraction Batch B1K0629

Total Solids Batch: ______ Work Order(s): 20K0142

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

3056F

Revision 15
07/01/19

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: TPHD Extraction Batch BIK0629

Total Solids Batch: ______ Work Order(s): 20K0129

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

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Revision 15
07/01/19

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: TPHD Extraction Batch BLK0629

Total Solids Batch: BLK0682 Work Order(s): ~~BLK0682~~ CTO 11/19/20 20K0145

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 02, 03, 07, 08, 11, 17	CTO 11/19/20
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? 15: small~med ½-1in.	CTO 11/19/20
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= 15, 17: fuel	CTO 11/19/20
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

3056F

Revision 15
07/01/19

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
METHOD BLANK DATA SHEET
NWTPH-Dx

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc			Project:	ICS-Former NW Cooperage
Matrix:	Solid	Laboratory ID:	BIK0587-BLK1	File ID:	420L0244.D
Sampled:	N/A	Prepared:	11/19/20 14:38	Analyzed:	12/02/20 23:30
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 1 mL
Batch:	BIK0587	Sequence:	SIL0020	Calibration:	DA00022
Instrument:	FID4	Column:	RTX-1		

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg wet)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	5.00	U	2.34	5.00
RRO	Motor Oil Range Organics (C24-C38)	1	10.0	U	2.99	10.0

SURROGATES	ADDED: (mg/kg wet)	FOUND: (mg/kg wet)	% REC	QC LIMITS	Q
o-Terphenyl	11.250	9.37	83.3	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0244.D

Page 1

Date : 02-DEC-2020 23:30

Client ID:

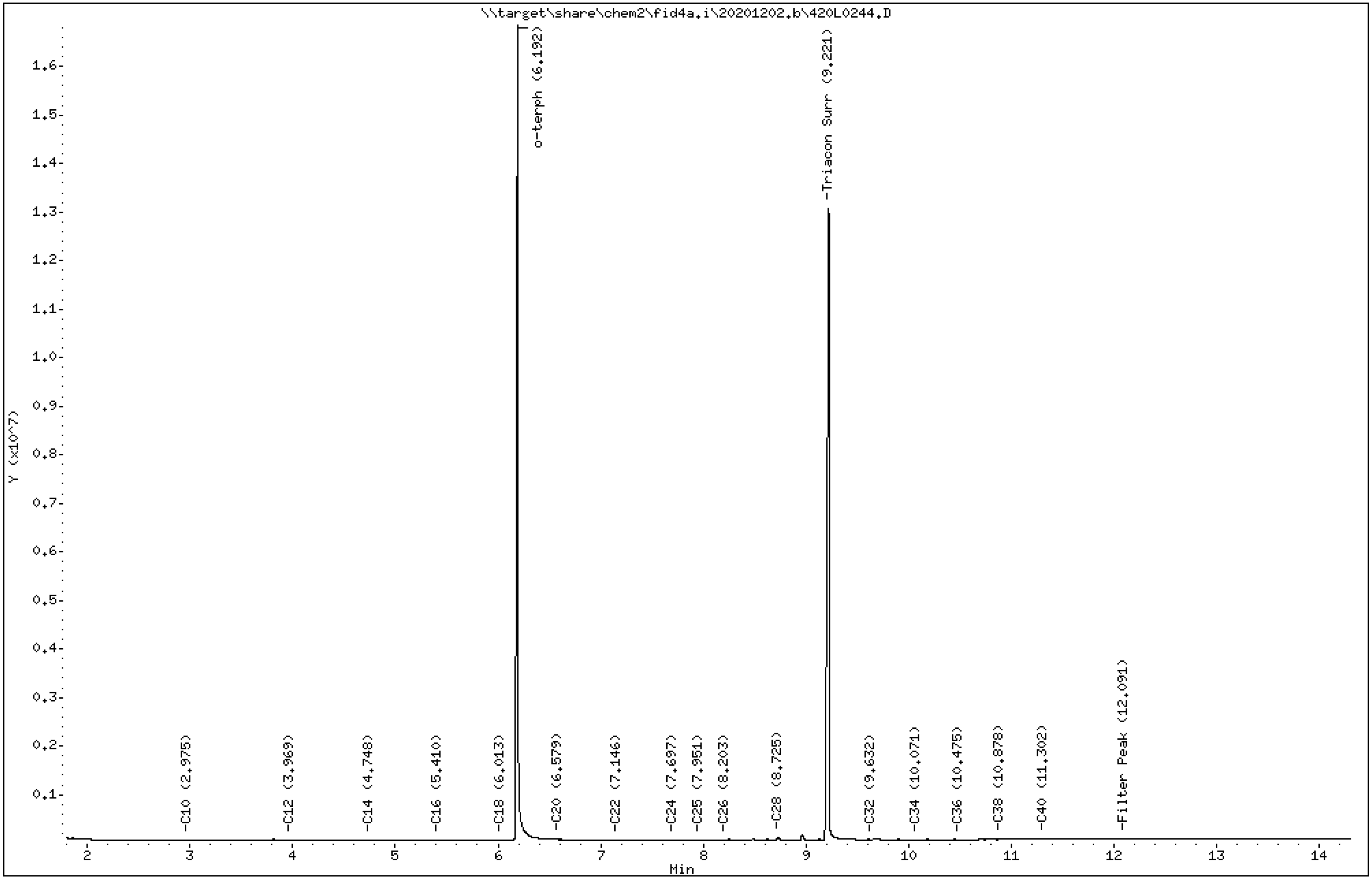
Instrument: fid4a.i

Sample Info: BIK0587-BLK1

Operator: JGR/CTO/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0244.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: BIK0587-BLK1
Client ID:
Injection: 02-DEC-2020 23:30
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.855	-0.027	48704	193759	WATPHD	(C12-C24)	1307765	8.2
C10	2.975	0.001	894	298	WATPHM	(C24-C38)	1830065	18.1
C12	3.969	0.003	2182	748	AK102	(C10-C25)	1476414	7.6
C14	4.748	-0.000	3444	1691	AK103	(C25-C36)	1474724	20.1
C16	5.410	-0.003	3672	726	OR.DIES	(C10-C28)	1795164	9.2
C18	6.013	0.003	3062	757				
C20	6.579	-0.001	15116	3013	JET-A	(C10-C18)	489746	3.0
C22	7.146	0.004	8331	4097				
C24	7.697	0.007	7227	3128				
C25	7.951	-0.008	2540	500				
C26	8.203	-0.015	2576	1510				
C28	8.725	0.002	62052	108525				
C32	9.632	-0.015	10645	2647				
C34	10.071	0.002	9157	8611				
Filter Peak	12.091	-0.005	15310	14484	BUNKERC	(C10-C38)	3263633	82.7
C36	10.475	0.001	12061	4185				
C38	10.878	0.003	14498	8621				
C40	11.302	-0.001	15762	9442				
o-terph	6.192	-0.004	16793112	19188287				
Triacon Surr	9.221	-0.002	13015401	17706217	NAS DIES	(C10-C24)	1433568	7.3

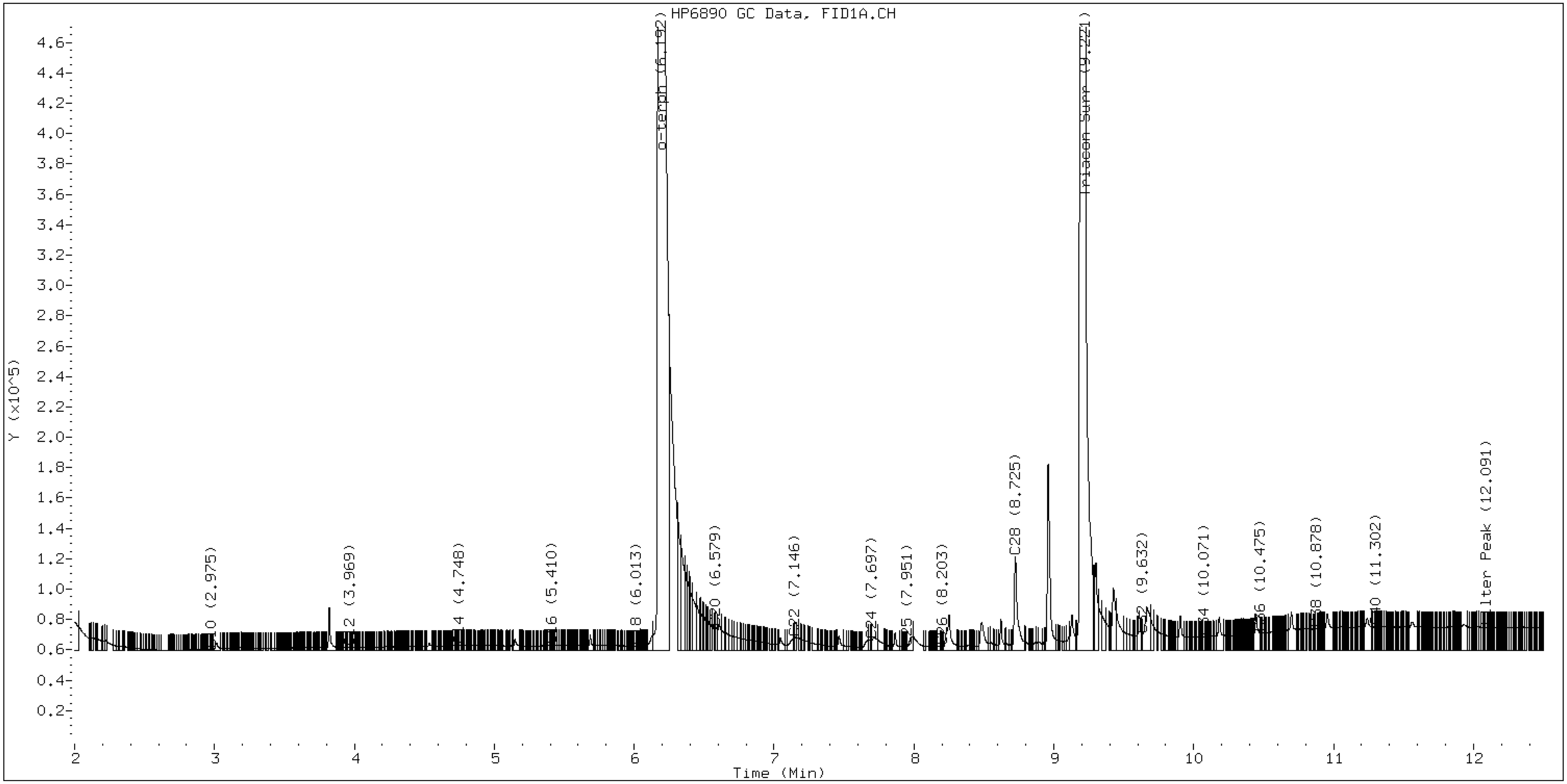
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount
o-Terphenyl	19188287	93.7
Triacontane	17706217	119.3

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201202.b/420L0244.D BIK0587-BLK1



Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

NWTPH-Dx

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc			Project:	ICS-Former NW Cooperage
Matrix:	Solid	Laboratory ID:	BIK0629-BLK1	File ID:	420K2823.D
Sampled:	N/A	Prepared:	11/20/20 16:45	Analyzed:	11/28/20 23:49
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 1 mL
Batch:	BIK0629	Sequence:	SIK0413	Calibration:	DA00022
Instrument:	FID4	Column:	RTX-1		

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg wet)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	5.00	U	2.34	5.00
RRO	Motor Oil Range Organics (C24-C38)	1	10.0	U	2.99	10.0

SURROGATES	ADDED: (mg/kg wet)	FOUND: (mg/kg wet)	% REC	QC LIMITS	Q
o-Terphenyl	11.250	8.94	79.5	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20201128.b\420K2823.D

Page 1

Date : 28-NOV-2020 23:49

Client ID:

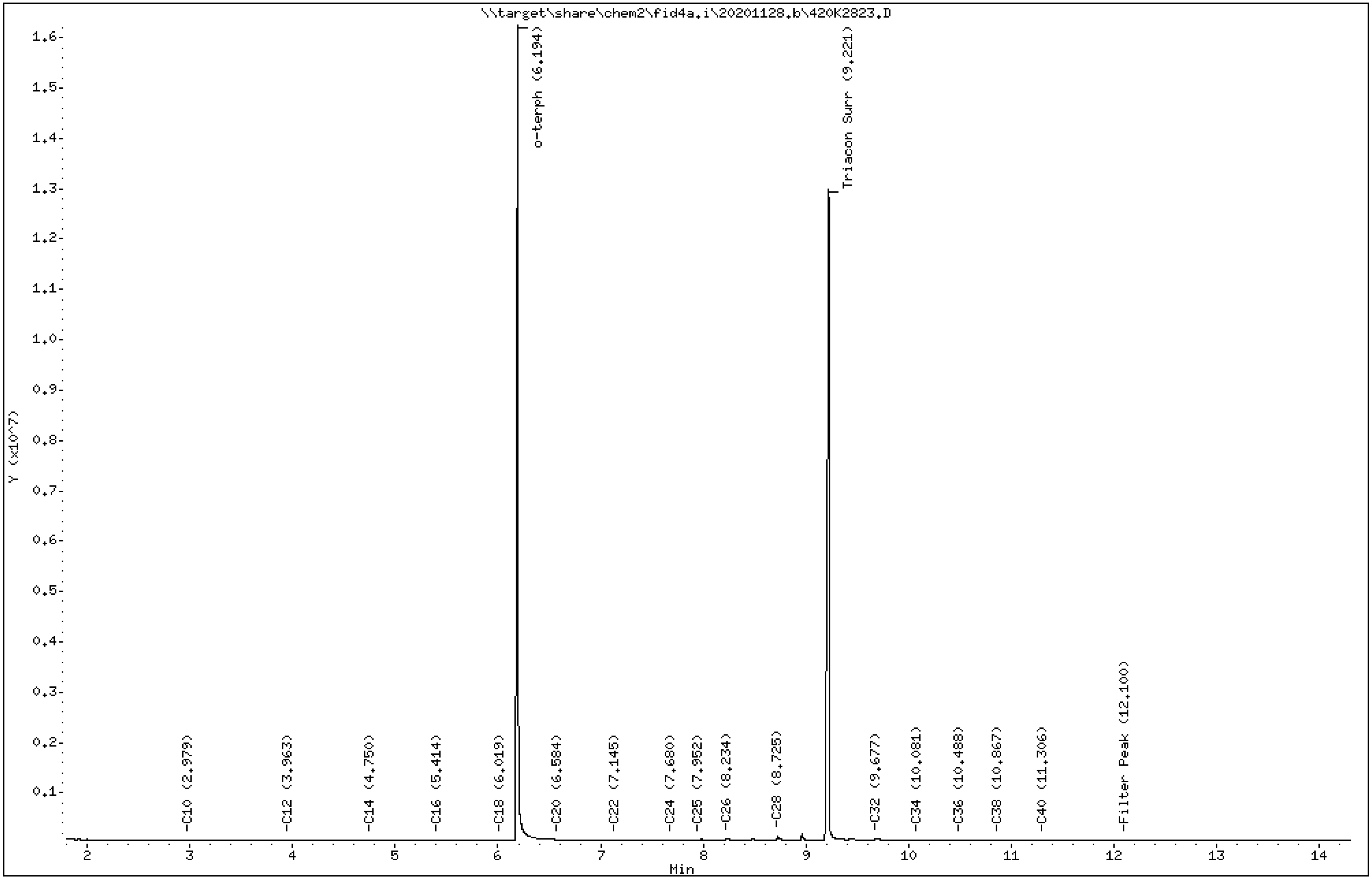
Instrument: fid4a.i

Sample Info: BIK0629-BLK1

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201128.b/420K2823.D
Method: 20201128.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: BIK0629-BLK1
Client ID:
Injection: 28-NOV-2020 23:49
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.918	0.010	15050	49607	WATPHD	(C12-C24)	1268386	8.0
C10	2.979	-0.002	886	572	WATPHM	(C24-C38)	1222718	12.1
C12	3.963	-0.004	1992	1907	AK102	(C10-C25)	1359178	7.0
C14	4.750	0.001	3028	2518	AK103	(C25-C36)	1079346	14.7
C16	5.414	-0.000	3332	2736	OR.DIES	(C10-C28)	1699360	8.7
C18	6.019	0.005	1649	1043				
C20	6.584	0.000	12240	13018	JET-A	(C10-C18)	349648	2.1
C22	7.145	-0.000	2979	738				
C24	7.680	-0.014	3192	3032				
C25	7.952	-0.010	1420	273				
C26	8.234	0.010	24929	64744				
C28	8.725	-0.003	79852	91950				
C32	9.677	0.022	21595	102884				
C34	10.081	0.003	3579	3631				
Filter Peak	12.100	0.000	8278	4945	BUNKERC	(C10-C38)	2570355	65.1
C36	10.488	0.010	4619	5352				
C38	10.867	0.004	6575	1956				
C40	11.306	0.004	8087	5220				
o-terph	6.194	-0.006	16192592	18300543				
Triacon Surr	9.221	-0.010	12934545	16582076	NAS DIES	(C10-C24)	1347637	6.9

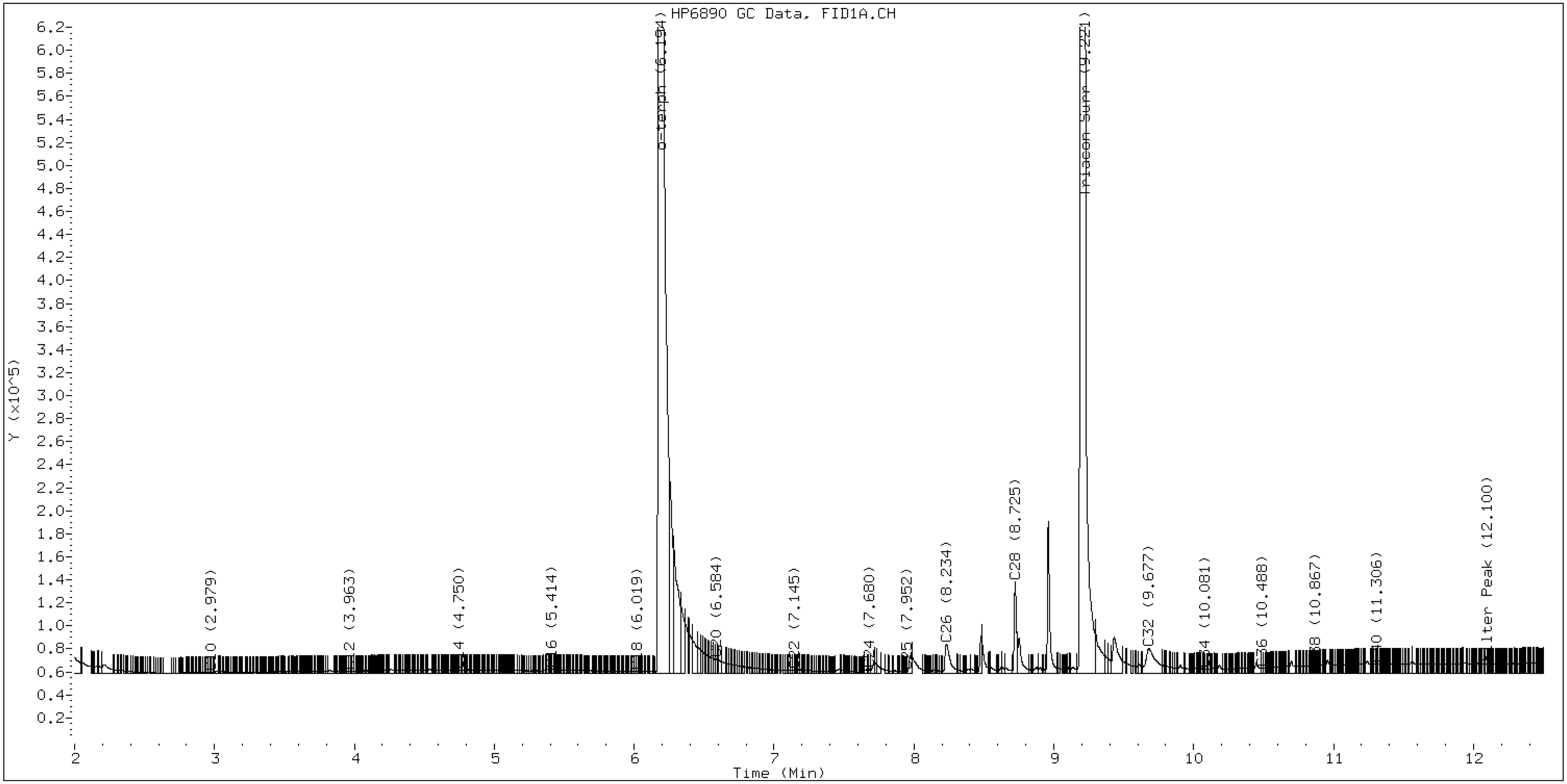
Range Times: NW Diesel(3.967 - 7.693) AK102(2.98 - 7.96) Jet A(2.98 - 6.01)
NW M.Oil(7.69 - 10.86) AK103(7.96 - 10.48) OR Diesel(2.98 - 8.73)

Surrogate	Area	Amount
o-Terphenyl	18300543	89.4
Triacontane	16582076	111.8

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201128.b/420K2823.D BIK0629-BLK1



Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY
NWTPH-Dx

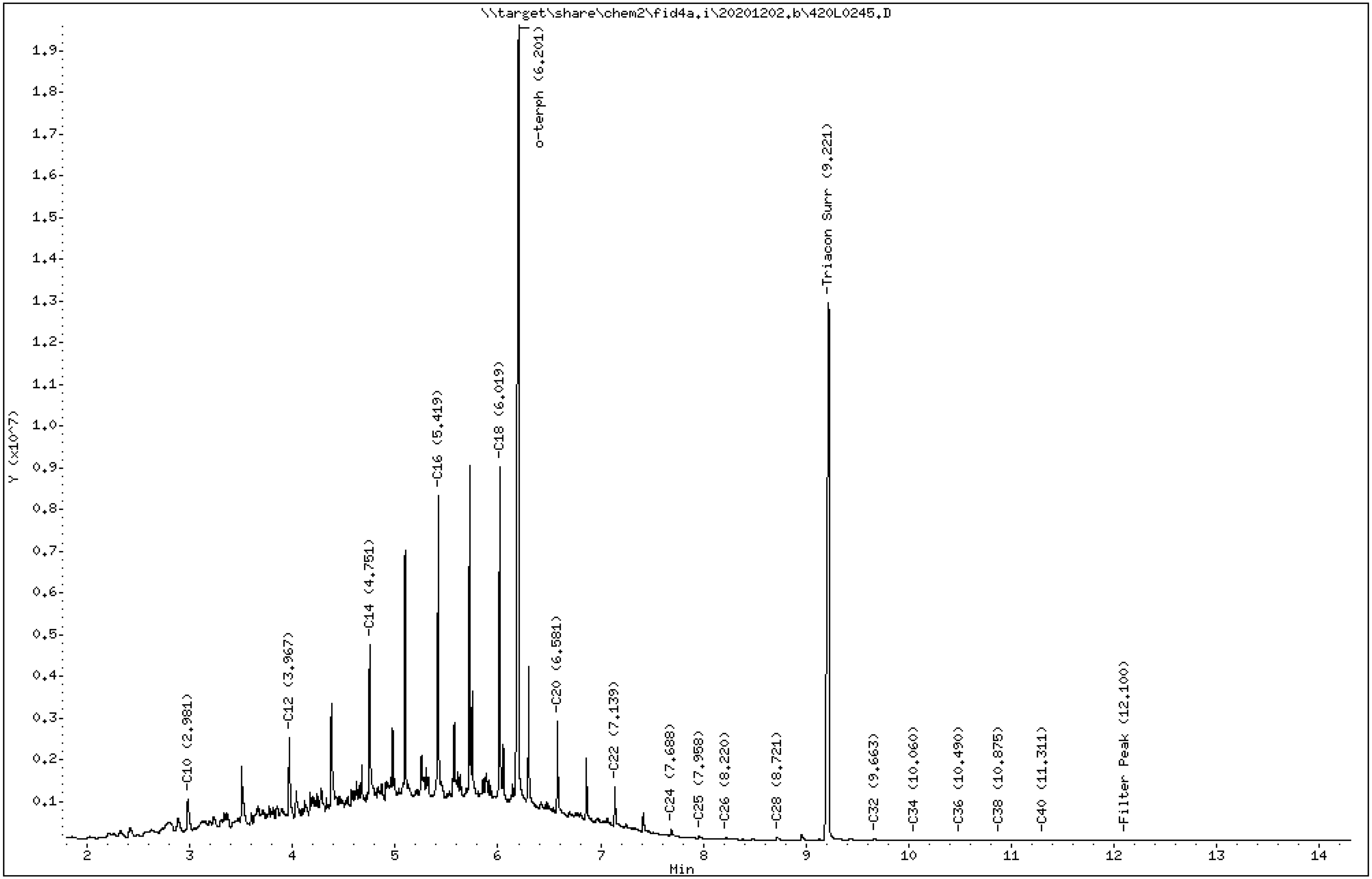
Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Matrix: Solid
Analyzed: 12/02/20 23:50
Batch: BIK0587
Laboratory ID: BIK0587-BS1
Preparation: EPA 3546 (Microwave)
Sequence Name: LCS
Initial/Final: 10 g / 1 mL

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Diesel Range Organics (C12-C24)	150	139		92.5	63 - 120

* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0245.D
Date : 02-DEC-2020 23:50
Client ID:
Sample Info: BIK0587-BS1
Column phase: RTX-1

Instrument: fid4a.i
Operator: JGR/CTO/VTS
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0245.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: BIK0587-BS1
Client ID:
Injection: 02-DEC-2020 23:50
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.851	-0.030	96810	357284	WATPHD	(C12-C24)	221190563	1388.2
C10	2.981	0.007	977336	2059742	WATPHM	(C24-C38)	2696102	26.7
C12	3.967	0.001	2446523	3112576	AK102	(C10-C25)	257827950	1318.9
C14	4.751	0.002	4696917	5475571	AK103	(C25-C36)	1919385	26.2
C16	5.419	0.006	8279336	8918433	OR.DIES	(C10-C28)	259082846	1321.9
C18	6.019	0.009	8959988	10059477				
C20	6.581	0.000	2865115	3190231	JET-A	(C10-C18)	199705028	1204.1
C22	7.139	-0.003	1282992	1574640				
C24	7.688	-0.002	258270	561643				
C25	7.958	-0.000	104318	282798				
C26	8.220	0.001	56961	103125				
C28	8.721	-0.001	76997	124128				
C32	9.663	0.016	24155	83267				
C34	10.060	-0.009	317	157				
Filter Peak	12.100	0.004	7301	3978	BUNKERC	(C10-C38)	259852771	6582.4
C36	10.490	0.015	2670	1846				
C38	10.875	-0.000	5272	2873				
C40	11.311	0.009	6545	2917				
o-terph	6.201	0.005	18276059	20870302				
Triacon Surr	9.221	-0.002	12905726	18997715	NAS DIES	(C10-C24)	257156669	1317.8

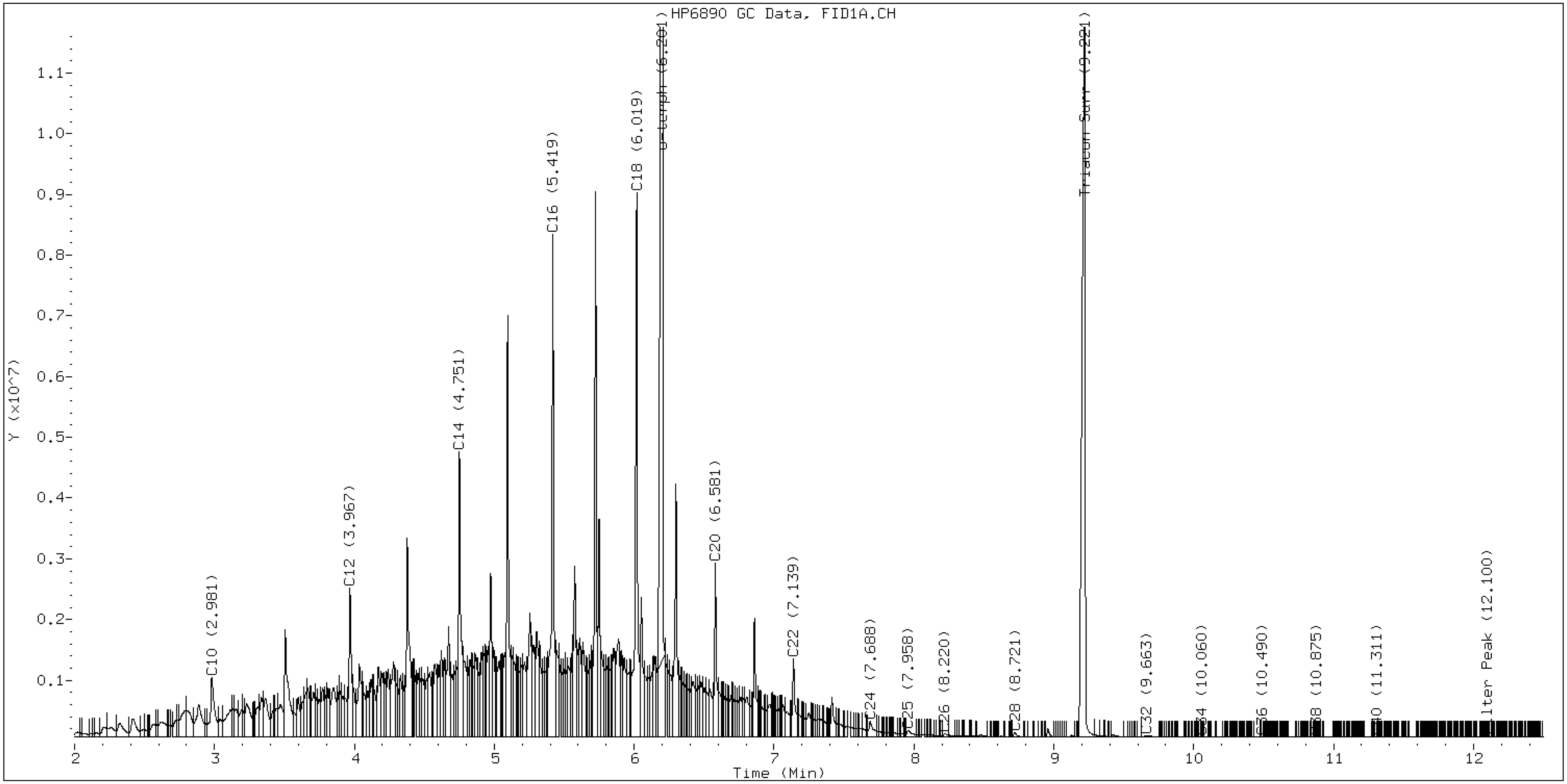
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	20870302	102.0	M
Triacontane	18997715	128.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

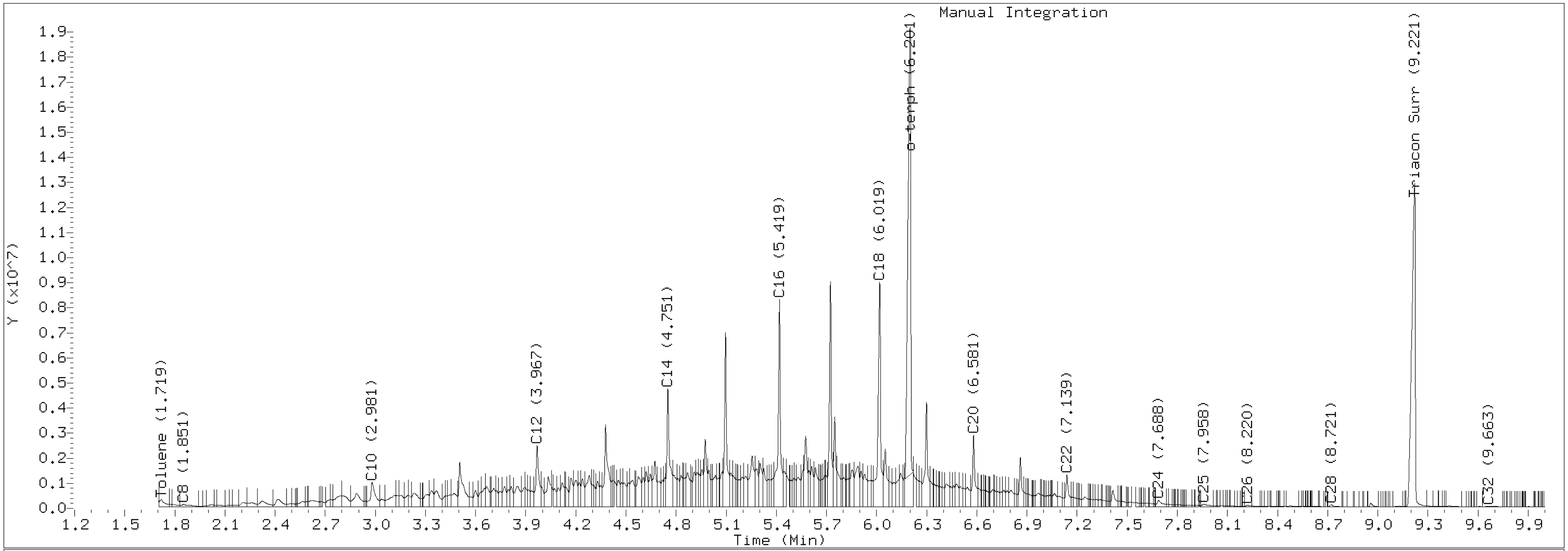
Datafile: FID4A, 20201202.b/420L0245.D BIK0587-BS1

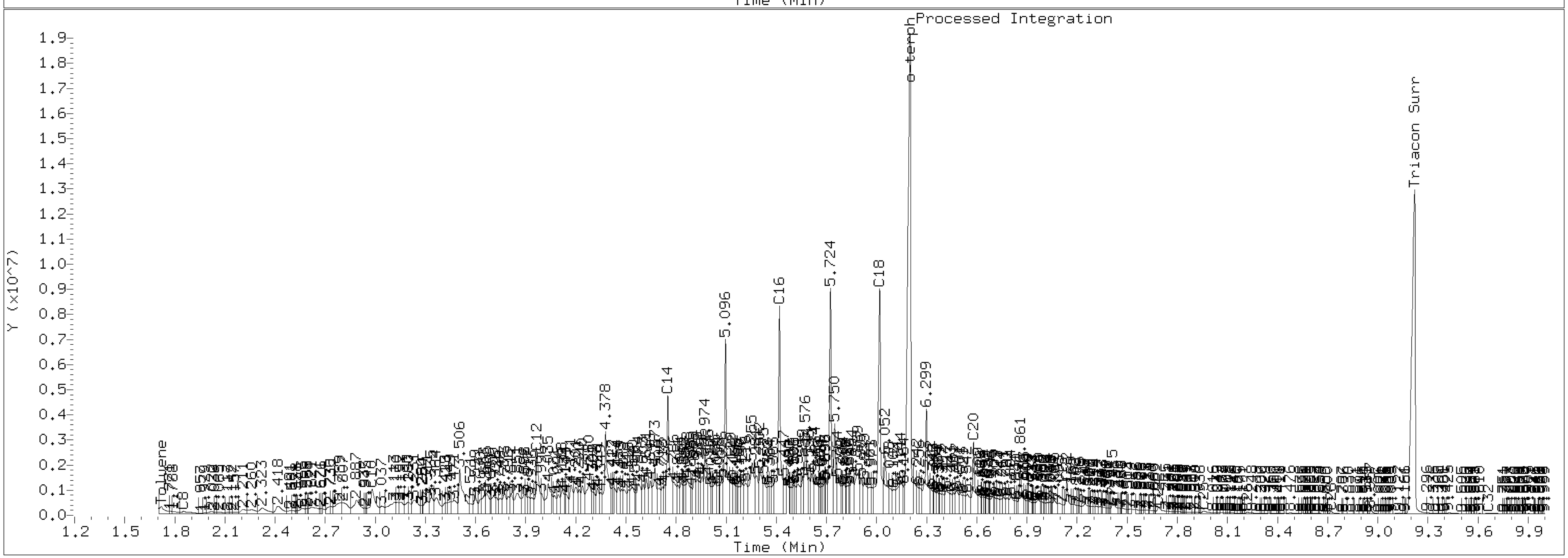


TPH Manual Integrations Report

Datafile: FID4A, 20201202.b/420L0245.D Injection: 02-DEC-2020 23:50

Lab ID:BIK0587-BS1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Matrix: Solid
Analyzed: 11/29/20 00:09
Batch: BIK0629
Laboratory ID: BIK0629-BS1
Preparation: EPA 3546 (Microwave)
Sequence Name: LCS
Initial/Final: 10 g / 1 mL

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Diesel Range Organics (C12-C24)	150	137		91.6	63 - 120

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (mg/kg wet)	LCSD CONCENTRATION (mg/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Diesel Range Organics (C12-C24)	150	151		100	9.24	30	63 - 120

* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201128.b\420K2824.D

Date : 29-NOV-2020 00:09

Client ID:

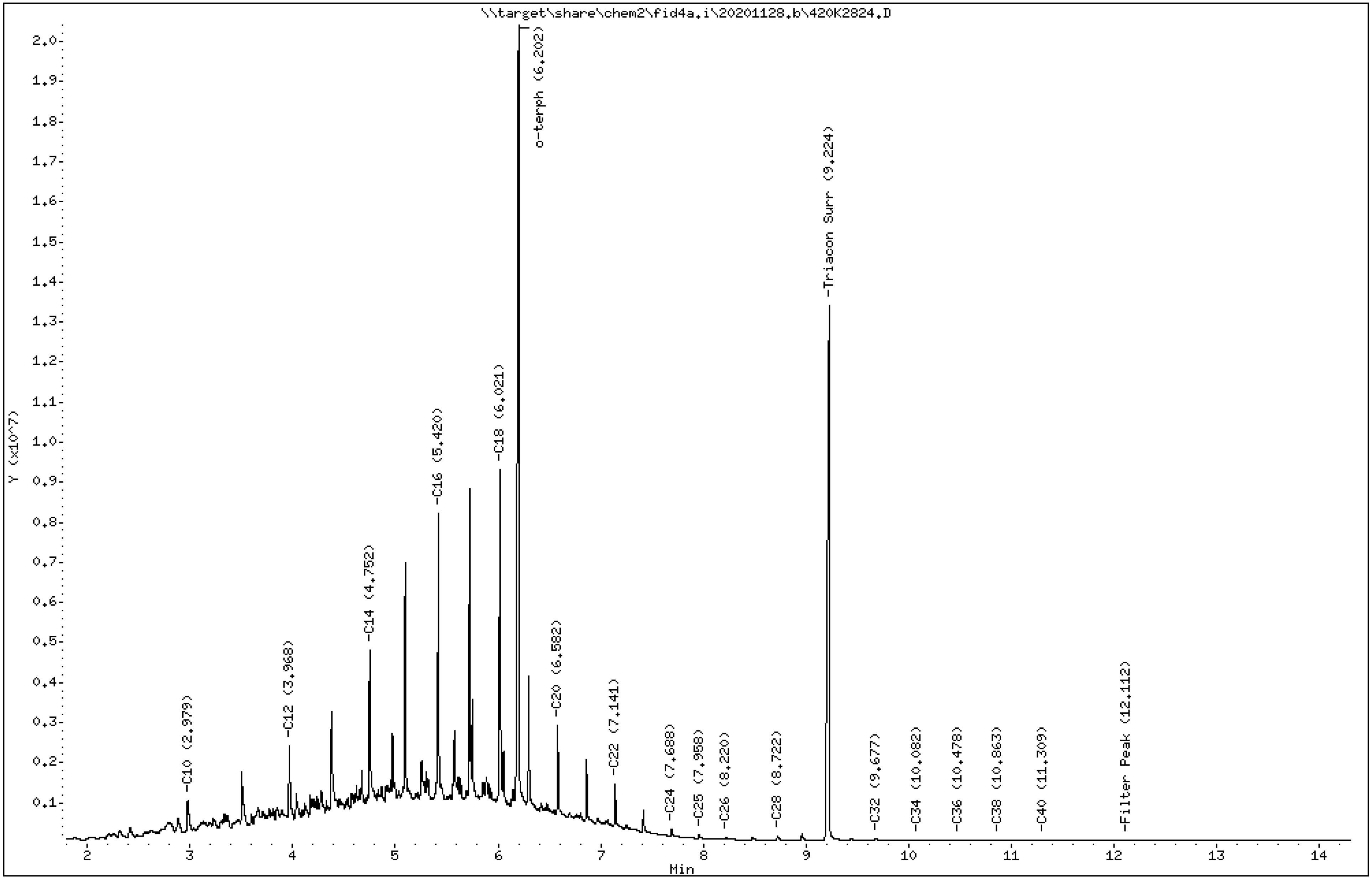
Sample Info: BIK0629-BS1

Column phase: RTX-1

Instrument: fid4a.i

Operator: JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201128.b/420K2824.D
Method: 20201128.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: BIK0629-BS1
Client ID:
Injection: 29-NOV-2020 00:09
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.881	-0.028	66000	188181	WATPHD	(C12-C24)	218942656	1374.1
C10	2.979	-0.002	989813	2026534	WATPHM	(C24-C38)	2535017	25.1
C12	3.968	0.001	2355975	3049134	AK102	(C10-C25)	255004403	1304.4
C14	4.752	0.003	4738962	5666462	AK103	(C25-C36)	1853333	25.3
C16	5.420	0.006	8172335	8786350	OR.DIES	(C10-C28)	256316943	1307.7
C18	6.021	0.007	9247808	9655576				
C20	6.582	-0.001	2858421	2924826	JET-A	(C10-C18)	197996195	1193.8
C22	7.141	-0.004	1406624	1595705				
C24	7.688	-0.005	289514	494731				
C25	7.958	-0.004	130176	306053				
C26	8.220	-0.004	79886	199156				
C28	8.722	-0.006	106064	152257				
C32	9.677	0.021	21963	28411				
C34	10.082	0.003	290	130				
Filter Peak	12.112	0.011	5206	3334	BUNKERC	(C10-C38)	256923031	6508.1
C36	10.478	0.001	1547	1038				
C38	10.863	-0.000	3883	3403				
C40	11.309	0.006	5011	3476				
o-terph	6.202	0.001	19349899	21840821				
Triacon Surr	9.224	-0.008	13342338	18489391	NAS DIES	(C10-C24)	254388015	1303.6

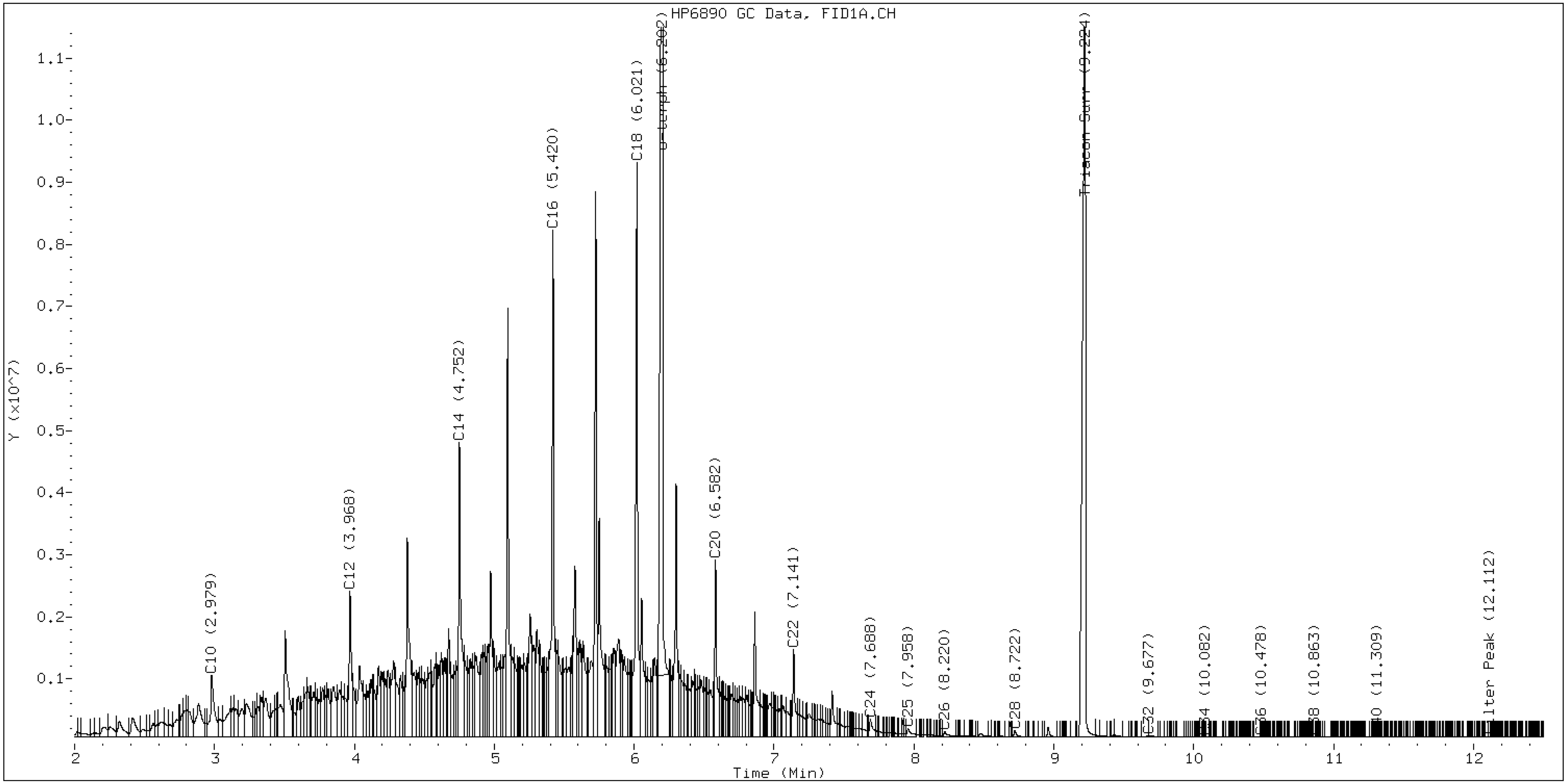
Range Times: NW Diesel(3.967 - 7.693) AK102(2.98 - 7.96) Jet A(2.98 - 6.01)
NW M.Oil(7.69 - 10.86) AK103(7.96 - 10.48) OR Diesel(2.98 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	21840821	106.7	M
Triacontane	18489391	124.6	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

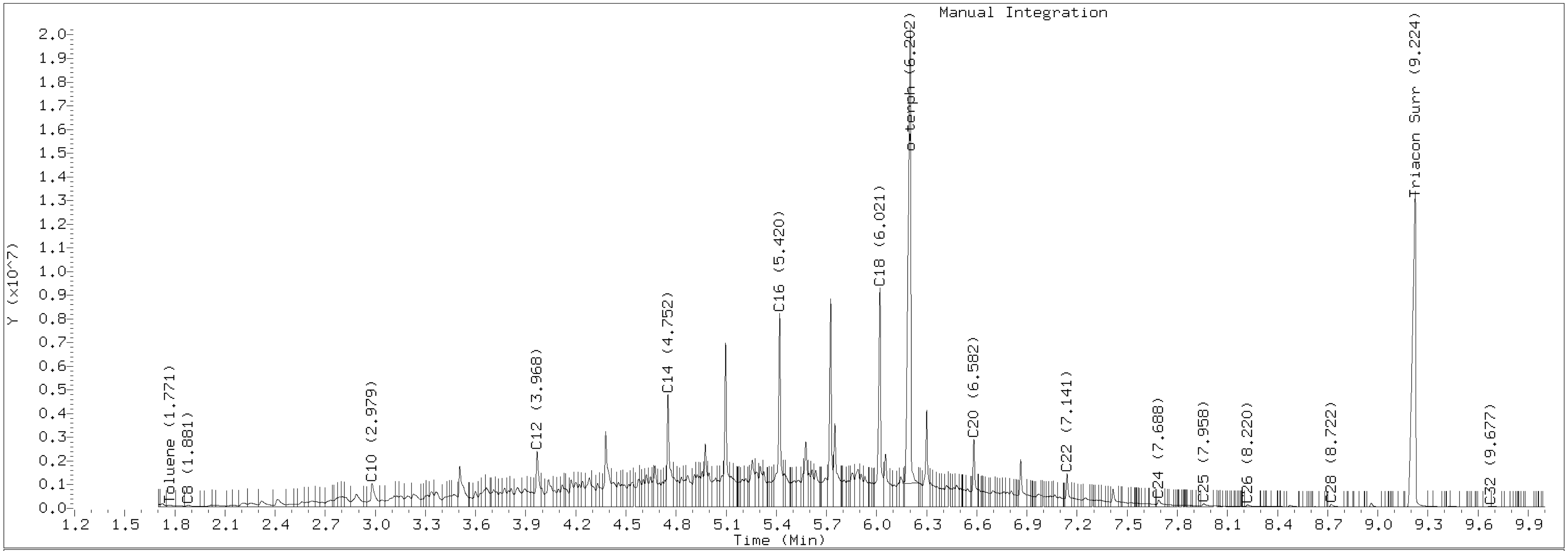
Datafile: FID4A, 20201128.b/420K2824.D BIK0629-BS1

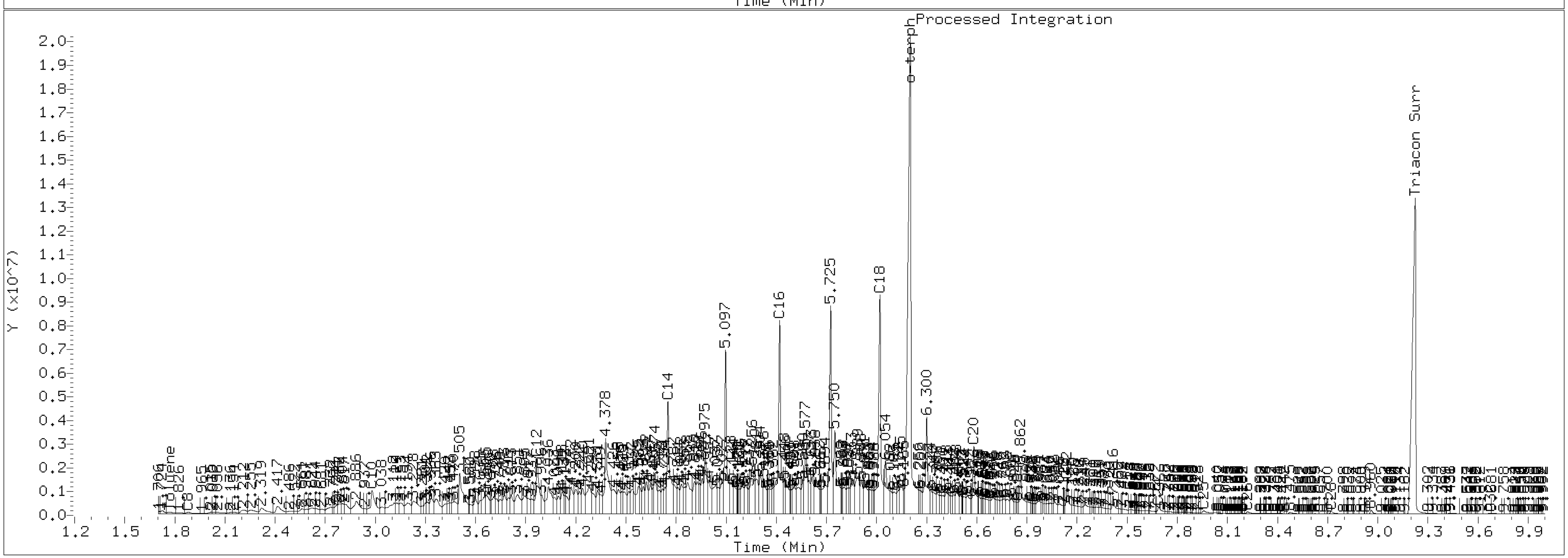


TPH Manual Integrations Report

Datafile: FID4A, 20201128.b/420K2824.D Injection: 29-NOV-2020 00:09

Lab ID:BIK0629-BS1





Data File: \\target\share\chem2\fid4a.i\20201128.b\420K2825.D

Page 1

Date : 29-NOV-2020 00:29

Client ID:

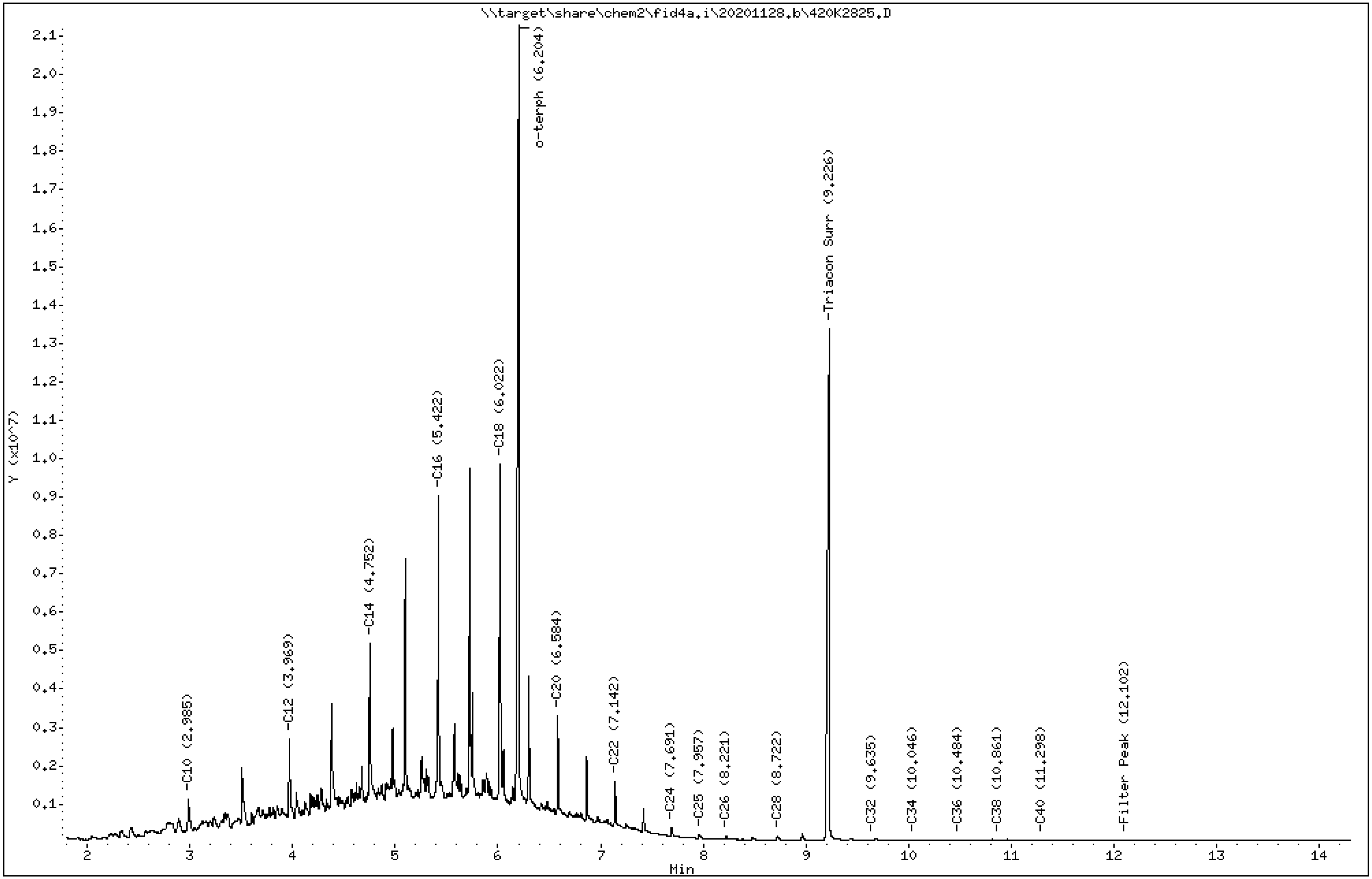
Instrument: fid4a.i

Sample Info: BIK0629-BSD1

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201128.b/420K2825.D — ARI ID: BIK0629-BSD1
Method: 20201128.b\FID4TPH.m — Client ID:
Instrument: fid4a.i, JGR — Injection: 29-NOV-2020 00:29
Report Date: 11/30/2020 — Dilution Factor: 1
Macro: 09-SEP-2019 — RT Std: 419H1603.D
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.911	0.002	77289	119794	WATPHD	(C12-C24)	240159437	1507.2
C10	2.985	0.004	1084726	2168497	WATPHM	(C24-C38)	2909023	28.8
C12	3.969	0.002	2644720	3347474	AK102	(C10-C25)	279233760	1428.4
C14	4.752	0.004	5127840	5972372	AK103	(C25-C36)	2096767	28.6
C16	5.422	0.007	8972767	10327440	OR.DIES	(C10-C28)	280781318	1432.6
C18	6.022	0.008	9799101	10274427				
C20	6.584	0.001	3250272	3569531	JET-A	(C10-C18)	215647908	1300.3
C22	7.142	-0.004	1518123	1731714				
C24	7.691	-0.003	329684	587471				
C25	7.957	-0.004	157123	305389				
C26	8.221	-0.003	104004	234851				
C28	8.722	-0.006	120835	169025				
C32	9.635	-0.020	2235	662				
C34	10.046	-0.033	277	231				
Filter Peak	12.102	0.002	4426	1952	BUNKERC	(C10-C38)	281394937	7128.0
C36	10.484	0.006	1300	854				
C38	10.861	-0.003	3267	2724				
C40	11.298	-0.004	4579	2244				
o-terph	6.204	0.004	20061471	22344723				
Triacon Surr	9.226	-0.006	13316079	19241947	NAS DIES	(C10-C24)	278485915	1427.0

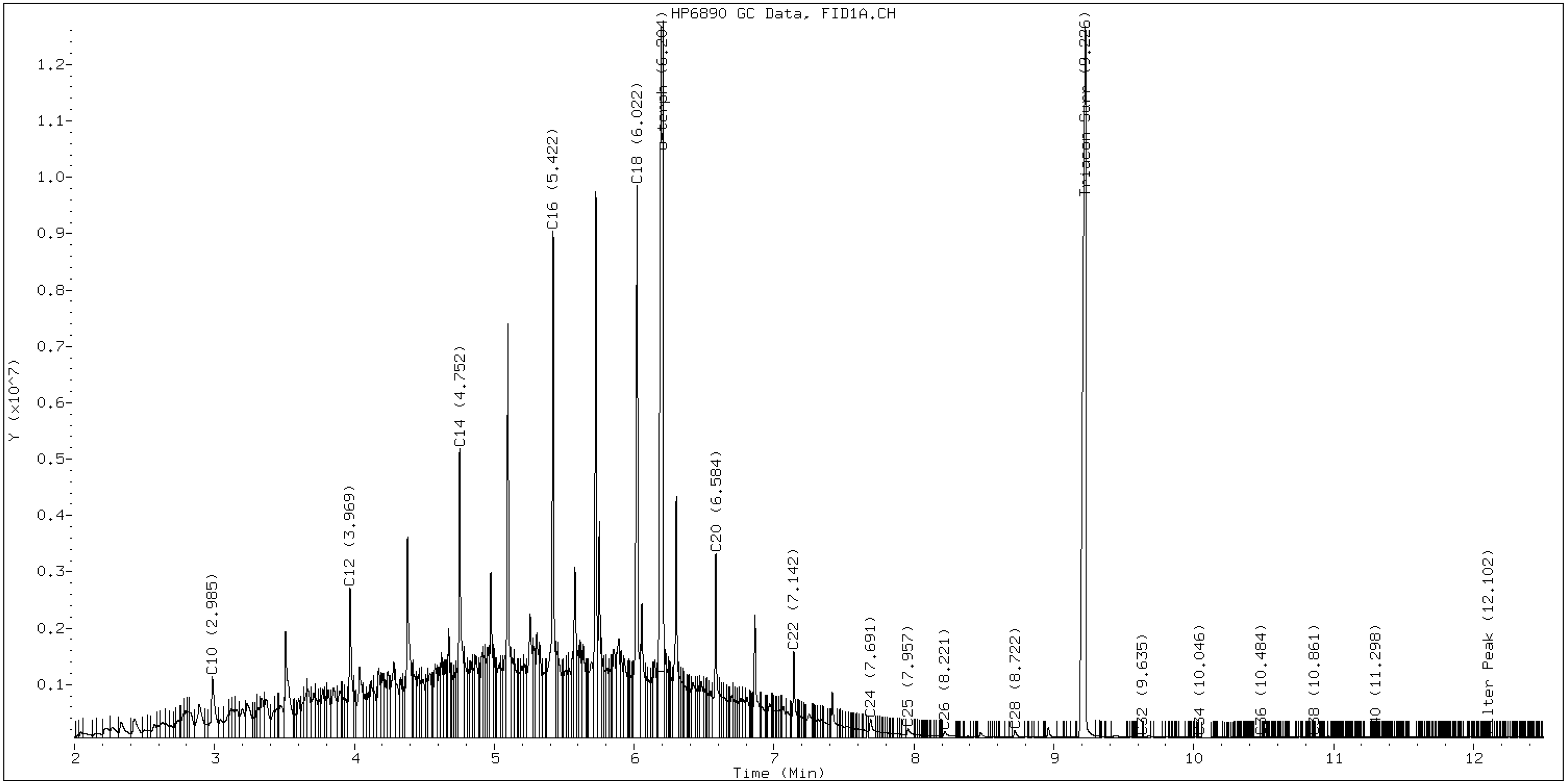
Range Times: NW Diesel(3.967 - 7.693) AK102(2.98 - 7.96) Jet A(2.98 - 6.01)
NW M.Oil(7.69 - 10.86) AK103(7.96 - 10.48) OR Diesel(2.98 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	22344723	109.2	M
Triacontane	19241947	129.7	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

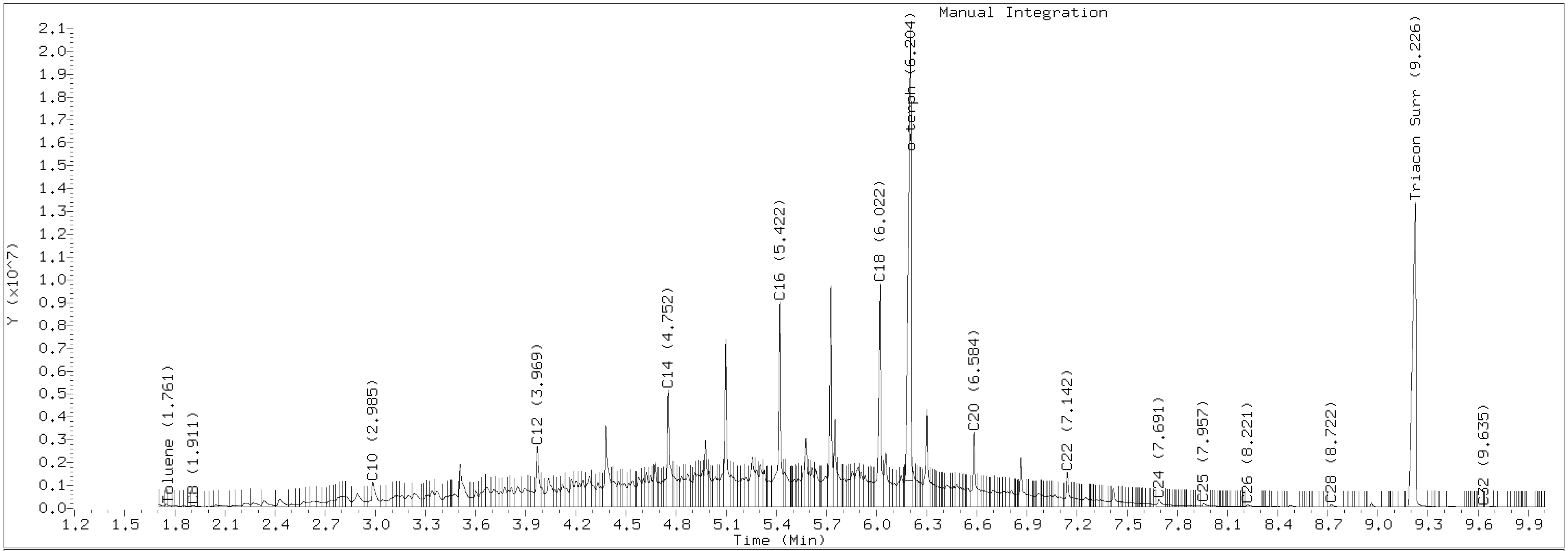
Datafile: FID4A, 20201128.b/420K2825.D BIK0629-BSD1

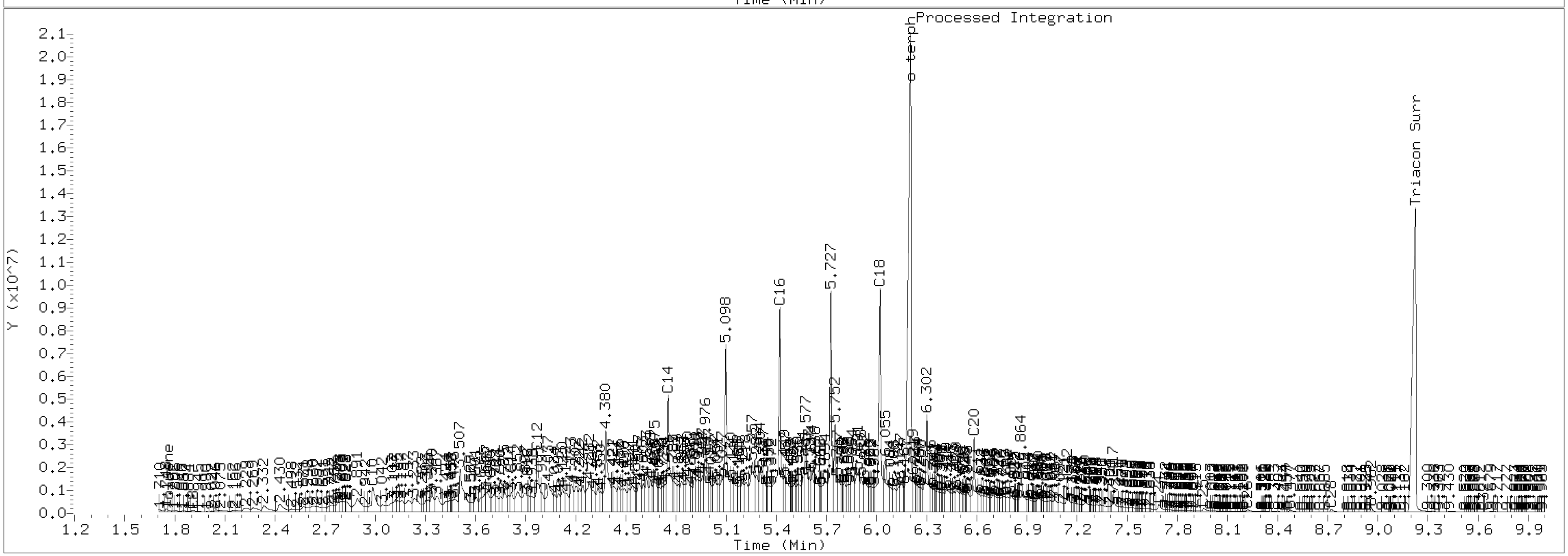


TPH Manual Integrations Report

Datafile: FID4A, 20201128.b/420K2825.D Injection: 29-NOV-2020 00:29

Lab ID:BIK0629-BSD1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	CJ00089	Instrument:	FID4
Calibration Date:	10/29/2019	Column (1):	RTX-1

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)	50	182114.3	100	162168.4	250	151655.3	500	152220	1000	153066.8	2500	154795.4
o-Terphenyl	9	207237.8	18	202348.9	45	199293.8	90	202627.8	180	206915.5	450	209787.6

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	CJ00089	Instrument:	FID4
Calibration Date:	10/29/2019	Column (1):	RTX-1

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Motor Oil Range Organics (C24-C38)	100	135784.6	250	138615.1	500	128616.3	1000	130458.6	2500	132749.3	5000	129568.6

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	CJ00089	Instrument:	FID4
Calibration Date:	10/29/2019	Column (1):	RTX-1

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	CJ00089	Instrument:	FID4
Calibration Date:	10/29/2019	Column (1):	RTX-1

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	CJ00089	Instrument:	FID4
Calibration Date:	10/29/2019	Column (1):	RTX-1

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Diesel Range Organics (C12-C24)	159336.7	7.4			RSD (20)	
Motor Oil Range Organics (C24-C38)	132632.1	2.9			RSD (20)	
o-Terphenyl	204701.9	1.9			RSD (20)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SHJ0406

Printed: 10/30/2019 7:24:06AM

Instrument: FID4
Calibration ID: CJ00089
Element Column ID: G004925

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SHJ0406-IBL1	Retention Time Standard	QC		1	H006806		
SHJ0406-IBL2	Instrument Blank	QC		2	H007457		
SHJ0406-CAL1	DIESEL 50	QC		3	H010495		
SHJ0406-CAL2	DIESEL 100	QC		4	H010496		
SHJ0406-CAL3	DIESEL 250	QC		5	H010497		
SHJ0406-CAL4	DIESEL 500	QC		6	H010498		
SHJ0406-CAL5	DIESEL 1000	QC		7	H010499		
SHJ0406-CAL6	DIESEL 2500	QC		8	H009367		
SHJ0406-SCV1	DIESEL SCV	QC		9	H008294		
SHJ0406-CAL7	MOIL 100	QC		10	H008395		
SHJ0406-CAL8	MOIL 250	QC		11	H008396		
SHJ0406-CAL9	MOIL 500	QC		12	H008397		
SHJ0406-CALA	MOIL 1000	QC		13	H007659		
SHJ0406-CALB	MOIL 2500	QC		14	H008398		
SHJ0406-CALC	MOIL 5000	QC		15	H007458		
SHJ0406-SCV2	MOIL SCV	QC		16	H008399		
SHJ0406-CALD	AK103 100	QC		17	H010478		
SHJ0406-CALE	AK103 250	QC		18	H010479		
SHJ0406-CALF	AK103 500	QC		19	H010480		
SHJ0406-CALG	AK103 1000	QC		20	H010481		
SHJ0406-CALH	AK103 2500	QC		21	H010482		
SHJ0406-CALI	AK103 5000	QC		22	H008608		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SHJ0406

Printed: 10/30/2019 7:24:06AM

Instrument: FID4
Calibration ID: CJ00089

Element Column ID: G004925

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SHJ0406-SCV3	AK103 SCV	QC		23	H008400		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	25-OCT-2019 11:37	419J2501.D	1	RINSE	
2	25-OCT-2019 11:55	419J2502.D	1	RINSE	
3	25-OCT-2019 12:30	419J2503.D	1	RINSE	
4	25-OCT-2019 12:51	419J2504.D	1	RINSE	
5	25-OCT-2019 13:11	419J2505.D	1	SHJ0406-IBL1	
6	25-OCT-2019 13:31	419J2506.D	1	SHJ0406-IBL2	
7	25-OCT-2019 13:52	419J2507.D	1	SHJ0406-CAL1	
8	25-OCT-2019 14:12	419J2508.D	1	SHJ0406-CAL2	
9	25-OCT-2019 14:32	419J2509.D	1	SHJ0406-CAL3	
10	25-OCT-2019 14:53	419J2510.D	1	SHJ0406-CAL4	
11	25-OCT-2019 15:13	419J2511.D	1	SHJ0406-CAL5	
12	25-OCT-2019 15:32	419J2512.D	1	SHJ0406-CAL6	
13	25-OCT-2019 15:52	419J2513.D	1	SHJ0406-SCV1	
14	25-OCT-2019 16:12	419J2514.D	1	SHJ0406-CAL7	
15	25-OCT-2019 16:33	419J2515.D	1	SHJ0406-CAL8	
16	25-OCT-2019 16:53	419J2516.D	1	SHJ0406-CAL9	
17	25-OCT-2019 17:13	419J2517.D	1	SHJ0406-CALA	
18	25-OCT-2019 17:34	419J2518.D	1	SHJ0406-CALB	
19	25-OCT-2019 17:54	419J2519.D	1	SHJ0406-CALC	
20	25-OCT-2019 18:14	419J2520.D	1	SHJ0406-SCV2	
21	25-OCT-2019 18:35	419J2521.D	1	SHJ0406-CALD	
22	25-OCT-2019 18:55	419J2522.D	1	SHJ0406-CALE	
23	25-OCT-2019 19:15	419J2523.D	1	SHJ0406-CALF	
24	25-OCT-2019 19:34	419J2524.D	1	SHJ0406-CALG	
25	25-OCT-2019 19:54	419J2525.D	1	SHJ0406-CALH	
26	25-OCT-2019 20:15	419J2526.D	1	SHJ0406-CALI	
27	25-OCT-2019 20:35	419J2527.D	1	SHJ0406-SCV3	
28	25-OCT-2019 20:55	419J2528.D	1	SHJ0406-ICV1	
29	25-OCT-2019 21:16	419J2529.D	1	SHJ0406-ICV2	
30	25-OCT-2019 21:36	419J2530.D	1	BHJ0711-BLK1	
31	25-OCT-2019 21:56	419J2531.D	1	BHJ0711-BS1	
32	25-OCT-2019 22:16	419J2532.D	1	19J0373-01	
33	25-OCT-2019 22:35	419J2533.D	1	19J0373-02	
34	25-OCT-2019 22:55	419J2534.D	1	19J0373-03	
35	25-OCT-2019 23:16	419J2535.D	1	19J0373-04	
36	25-OCT-2019 23:36	419J2536.D	1	19J0373-05	
37	25-OCT-2019 23:57	419J2537.D	1	19J0373-06	
38	26-OCT-2019 00:17	419J2538.D	1	19J0373-07	
39	26-OCT-2019 00:37	419J2539.D	1	19J0373-08	
40	26-OCT-2019 00:58	419J2540.D	1	SHJ0406-CCV1	
41	26-OCT-2019 01:18	419J2541.D	1	SHJ0406-CCV2	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 25-OCT-2019

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1137	419J2501.D	RINSE		1	NO MANUAL INTEGRATION
1155	419J2502.D	RINSE		1	NO MANUAL INTEGRATION
1230	419J2503.D	RINSE		1	NO MANUAL INTEGRATION
1251	419J2504.D	RINSE		1	NO MANUAL INTEGRATION
1311	419J2505.D	SHJ0406-IBL1		1	NO MANUAL INTEGRATION
1331	419J2506.D	SHJ0406-IBL2		1	NO MANUAL INTEGRATION
1352	419J2507.D	SHJ0406-CAL1		1	NO MANUAL INTEGRATION
1412	419J2508.D	SHJ0406-CAL2		1	o-terph,
1432	419J2509.D	SHJ0406-CAL3		1	NO MANUAL INTEGRATION
1453	419J2510.D	SHJ0406-CAL4		1	o-terph,
1513	419J2511.D	SHJ0406-CAL5		1	o-terph,
1532	419J2512.D	SHJ0406-CAL6		1	o-terph,
1552	419J2513.D	SHJ0406-SCV1		1	NO MANUAL INTEGRATION
1612	419J2514.D	SHJ0406-CAL7		1	Triacon Surr,
1633	419J2515.D	SHJ0406-CAL8		1	Triacon Surr,
1653	419J2516.D	SHJ0406-CAL9		1	Triacon Surr,
1713	419J2517.D	SHJ0406-CALA		1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1734	419J2518.D	SHJ0406-CALB		1	Triacon Surr,
1754	419J2519.D	SHJ0406-CALC		1	Triacon Surr,
1814	419J2520.D	SHJ0406-SCV2		1	Triacon Surr,
1835	419J2521.D	SHJ0406-CALD		1	Triacon Surr,
1855	419J2522.D	SHJ0406-CALE		1	Triacon Surr,
1915	419J2523.D	SHJ0406-CALF		1	Triacon Surr,
1934	419J2524.D	SHJ0406-CALG		1	Triacon Surr,
1954	419J2525.D	SHJ0406-CALH		1	Triacon Surr,
2015	419J2526.D	SHJ0406-CALI		1	Triacon Surr,
2035	419J2527.D	SHJ0406-SCV3		1	Triacon Surr,
2055	419J2528.D	SHJ0406-ICV1		1	o-terph,
2116	419J2529.D	SHJ0406-ICV2		1	Triacon Surr,
2136	419J2530.D	BHJ0711-BLK1		1	NO MANUAL INTEGRATION
2156	419J2531.D	BHJ0711-BS1		1	o-terph,
2216	419J2532.D	19J0373-01		1	Triacon Surr,
2235	419J2533.D	19J0373-02		1	NO MANUAL INTEGRATION
2255	419J2534.D	19J0373-03		1	Triacon Surr,
2316	419J2535.D	19J0373-04		1	Triacon Surr,

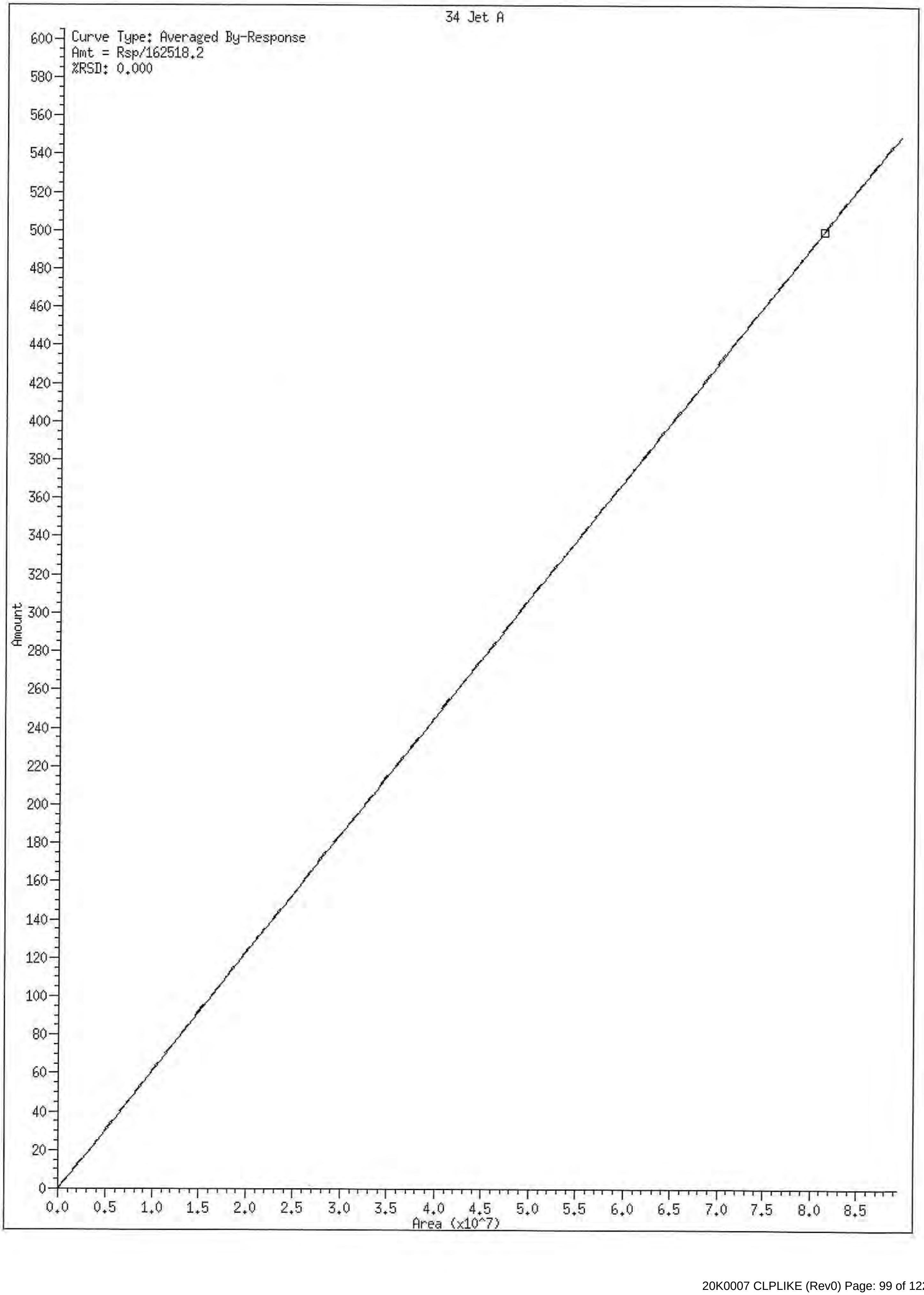
MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2336	419J2536.D	19J0373-05		1	o-terph, Triacon Surr,
2357	419J2537.D	19J0373-06		1	Triacon Surr,
0017	419J2538.D	19J0373-07		1	Triacon Surr,
0037	419J2539.D	19J0373-08		1	Triacon Surr,
0058	419J2540.D	SHJ0406-CCV1		1	o-terph,
0118	419J2541.D	SHJ0406-CCV2		1	Triacon Surr,

Security Status Report

Date: 30-Oct-2019 07:25

419J2507.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2508.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2509.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2510.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2511.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2512.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2513.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2514.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2515.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2516.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2517.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2518.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2519.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2520.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2521.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2522.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2523.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2524.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2525.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2526.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2527.D	Data Locked	jrains, 30-Oct-2019 07:20


34 Jet A
Curve Type: Averaged By-Response
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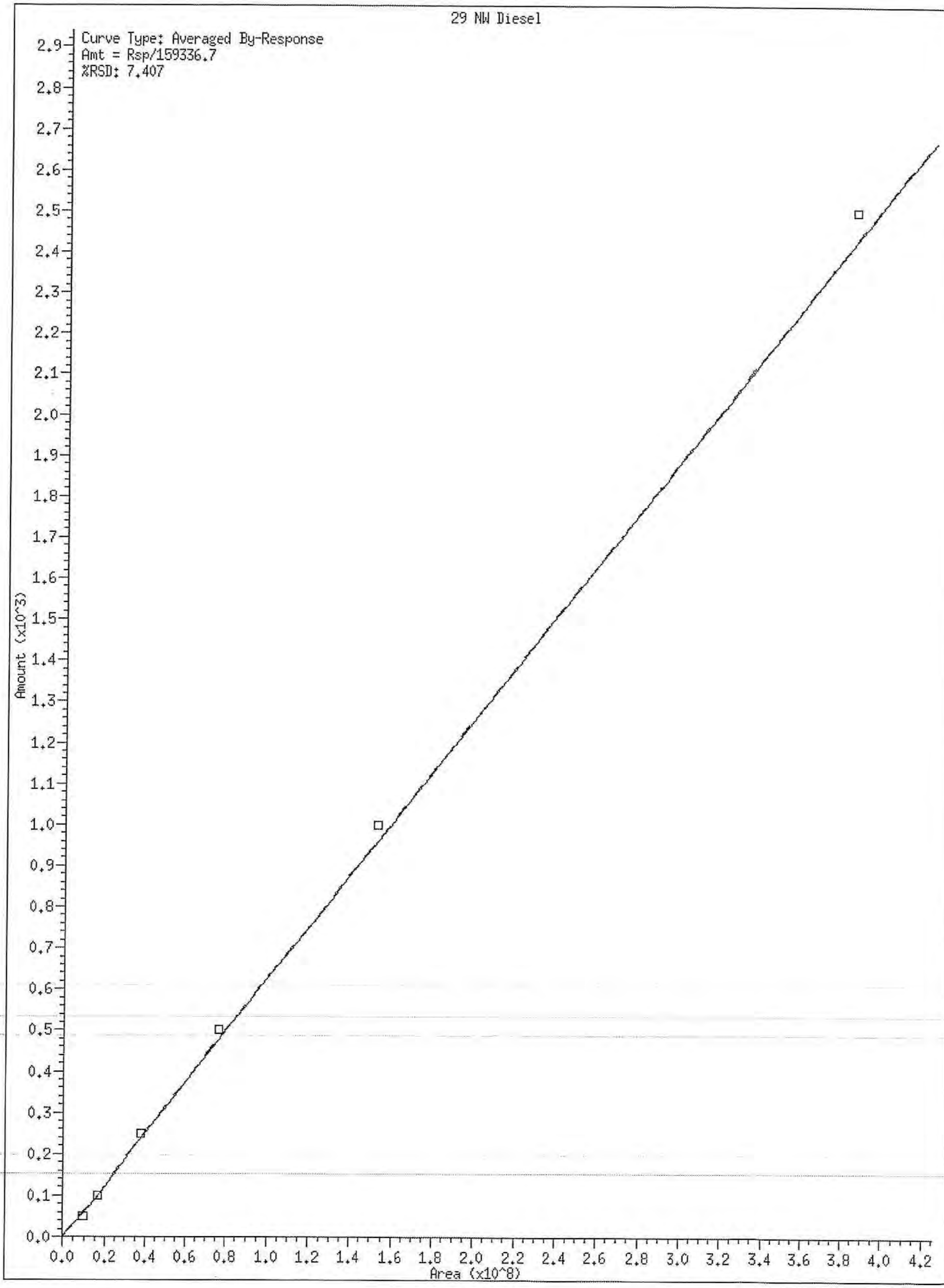
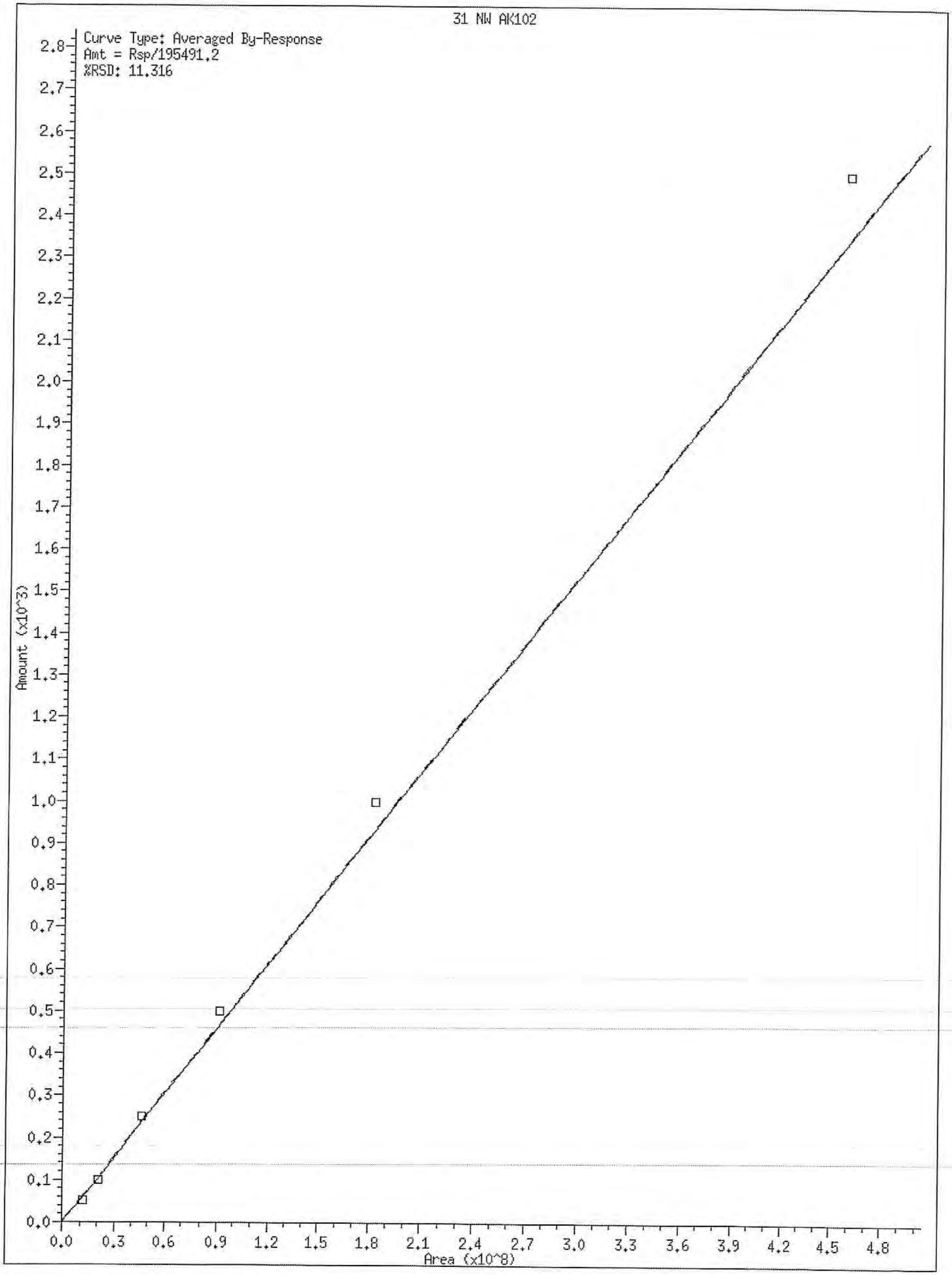
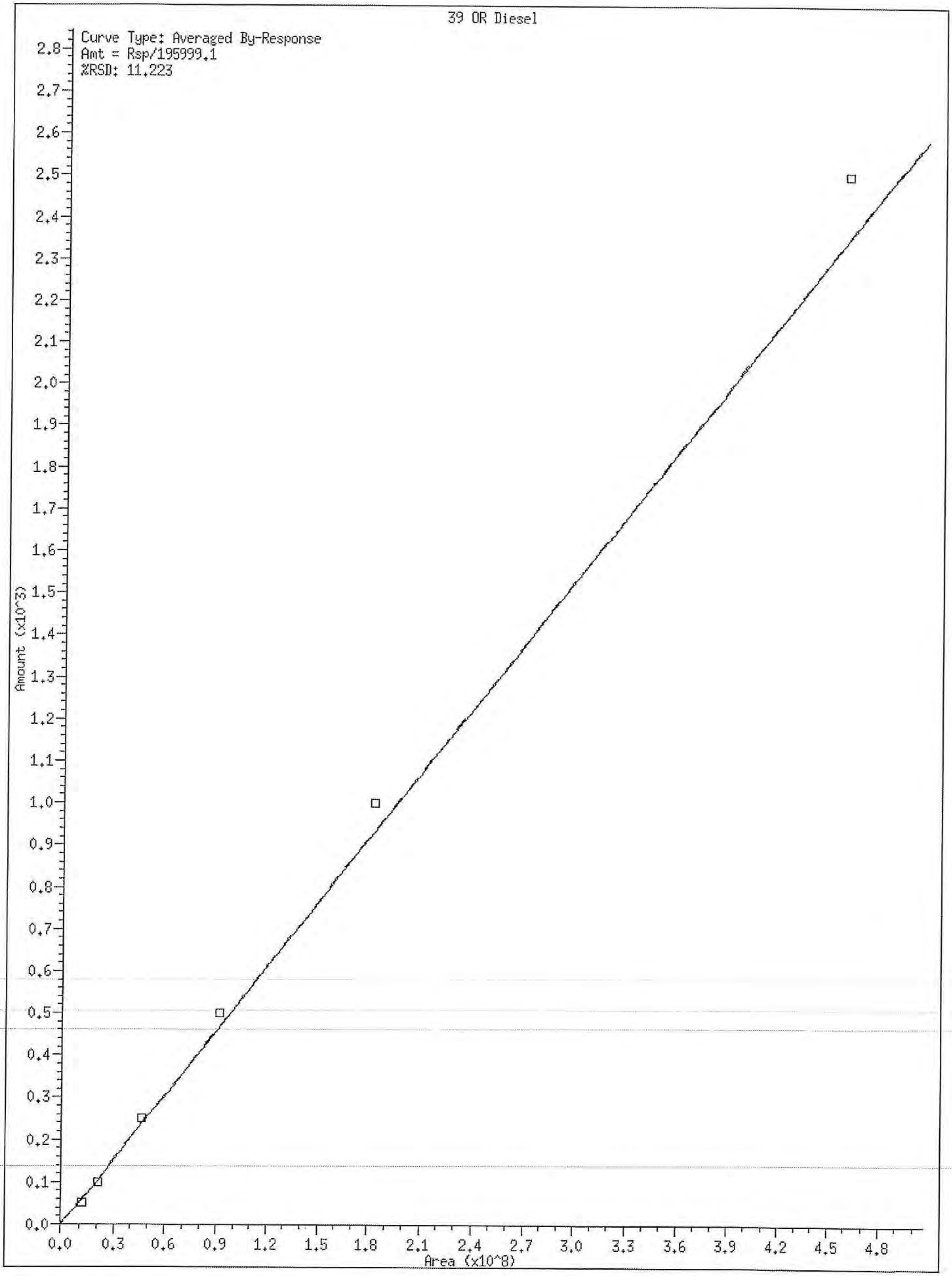
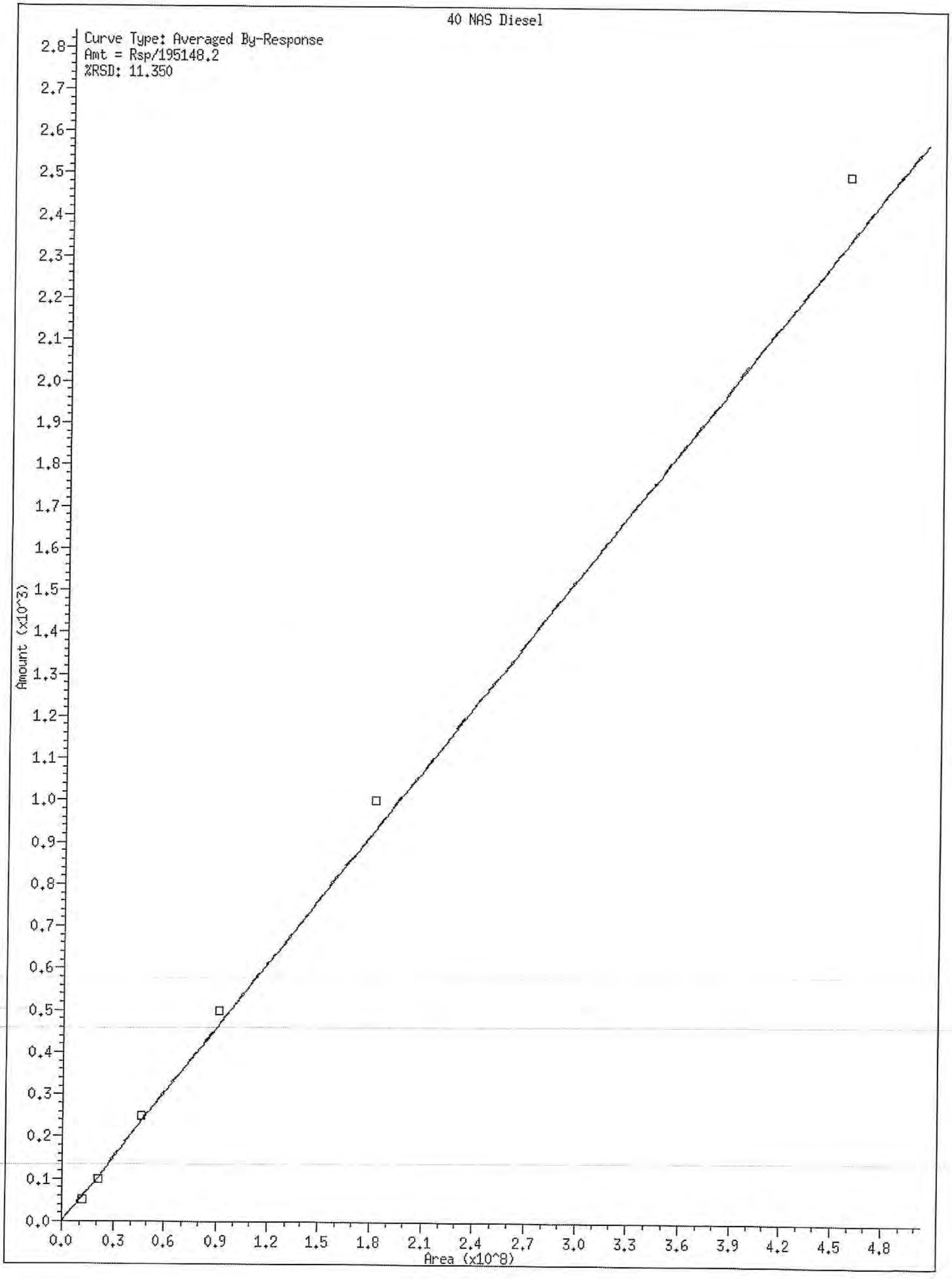
%RSD: 0.000
Amount
Area (x10^7)

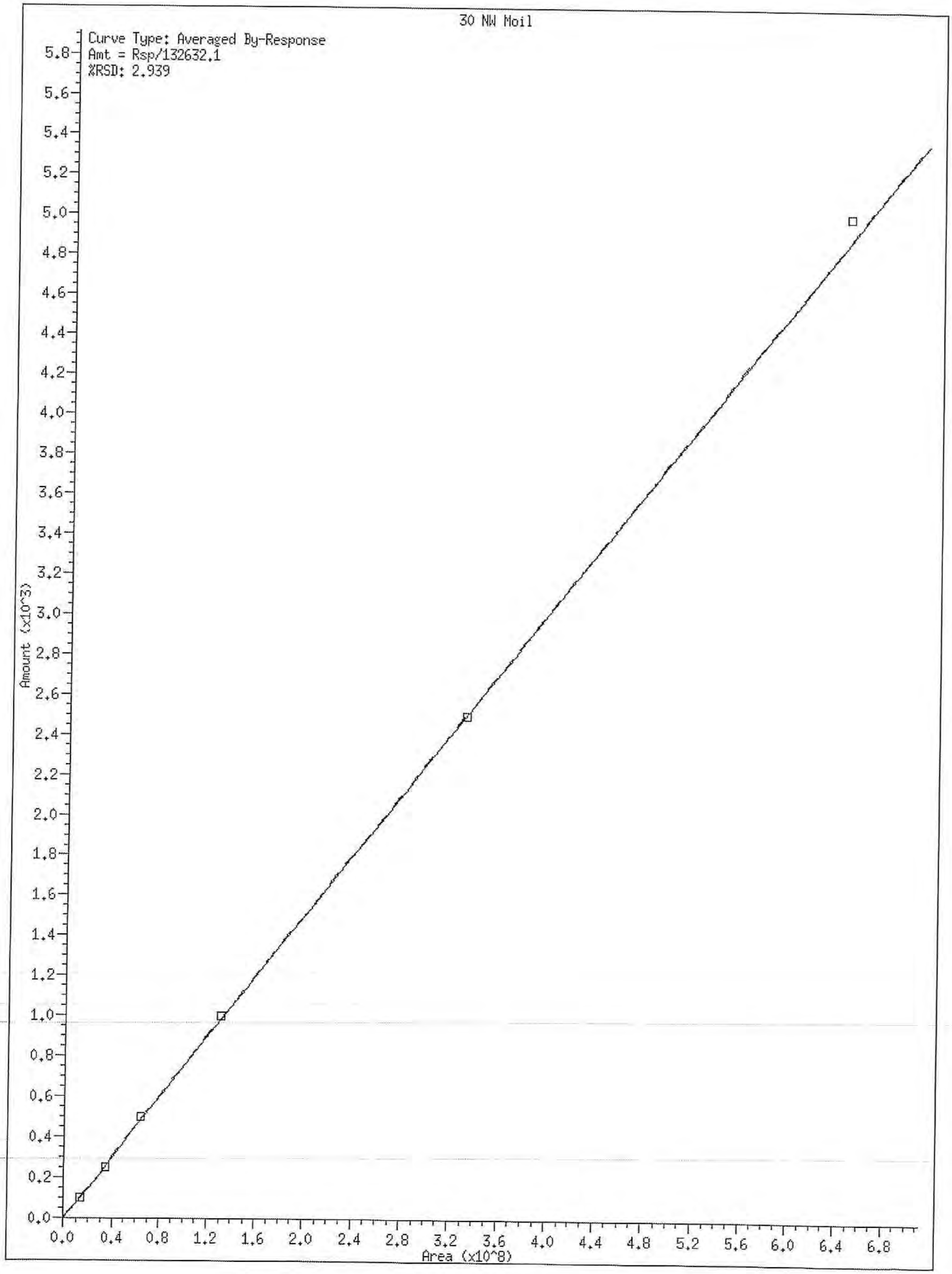

29 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/159336.7
%RSD: 7.407
Amount (x10^3)
Area (x10^8)

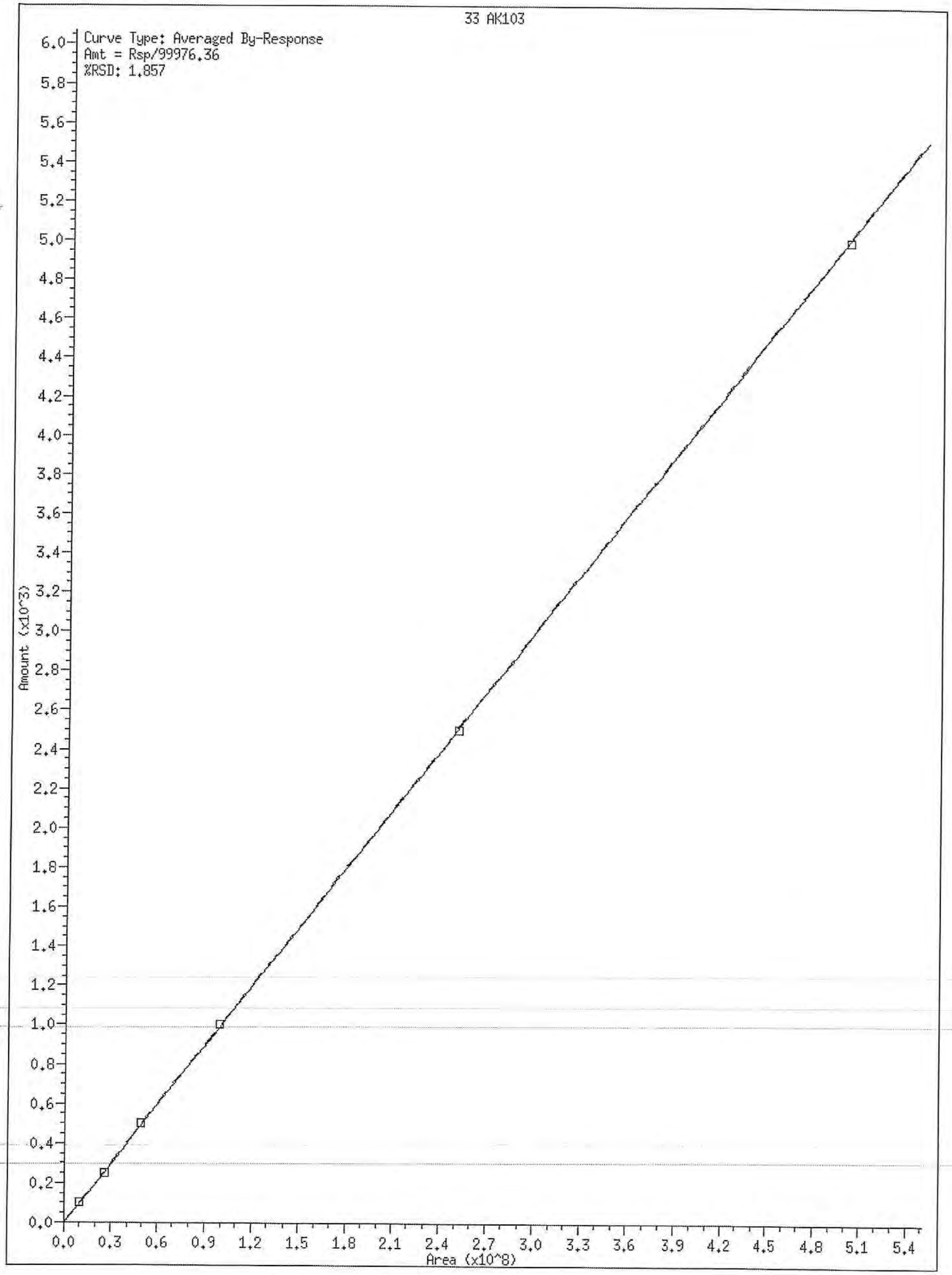

31 NW AK102
Curve Type: Averaged By-Response
Amt = Rsp/195491.2
%RSD: 11.316
Amount (x10^3)
Area (x10^8)

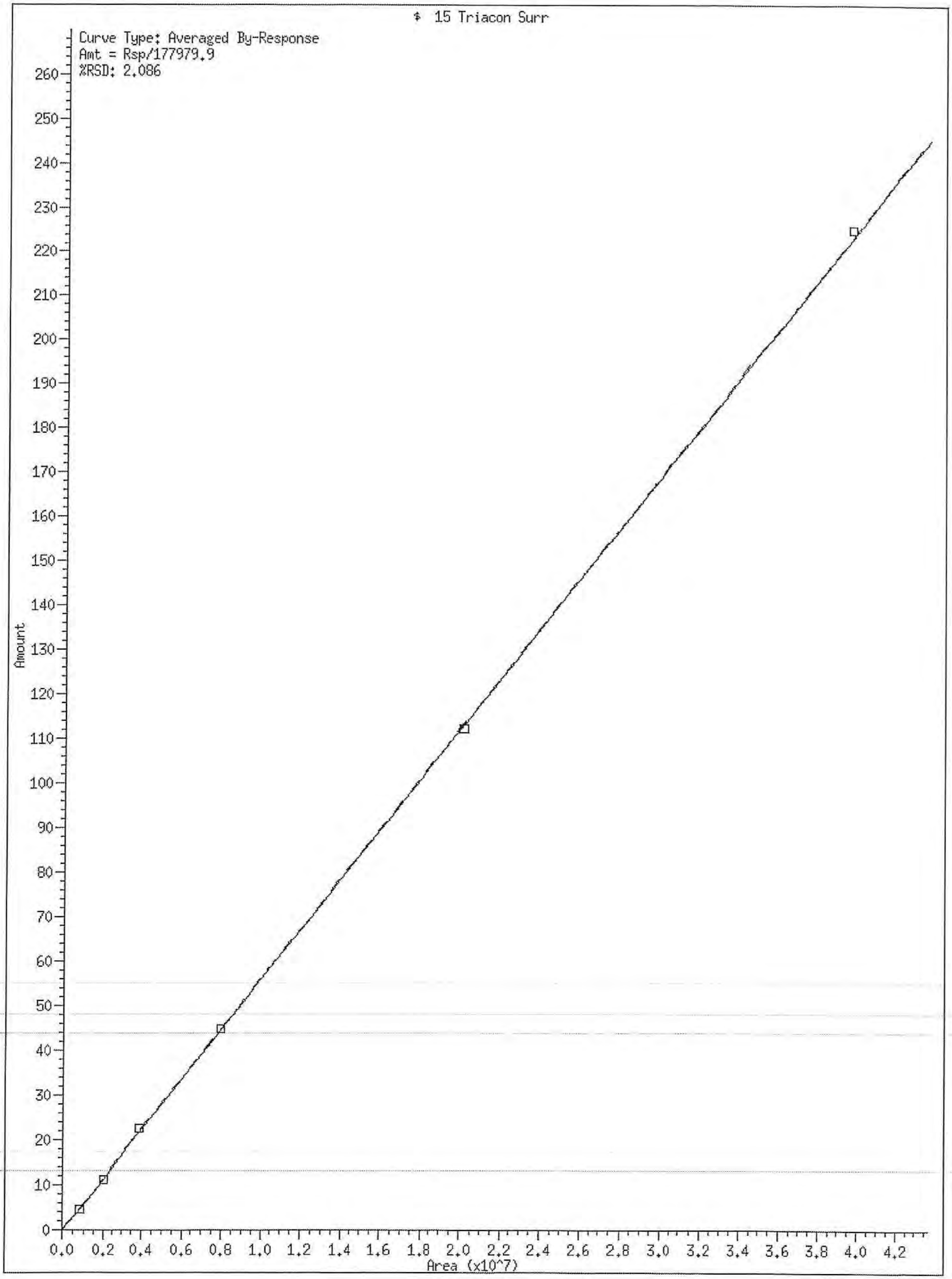

39 OR Diesel
Curve Type: Averaged By-Response
Amt = Rsp/195999.1
%RSD: 11.223
Amount (x10^3)
Area (x10^8)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8

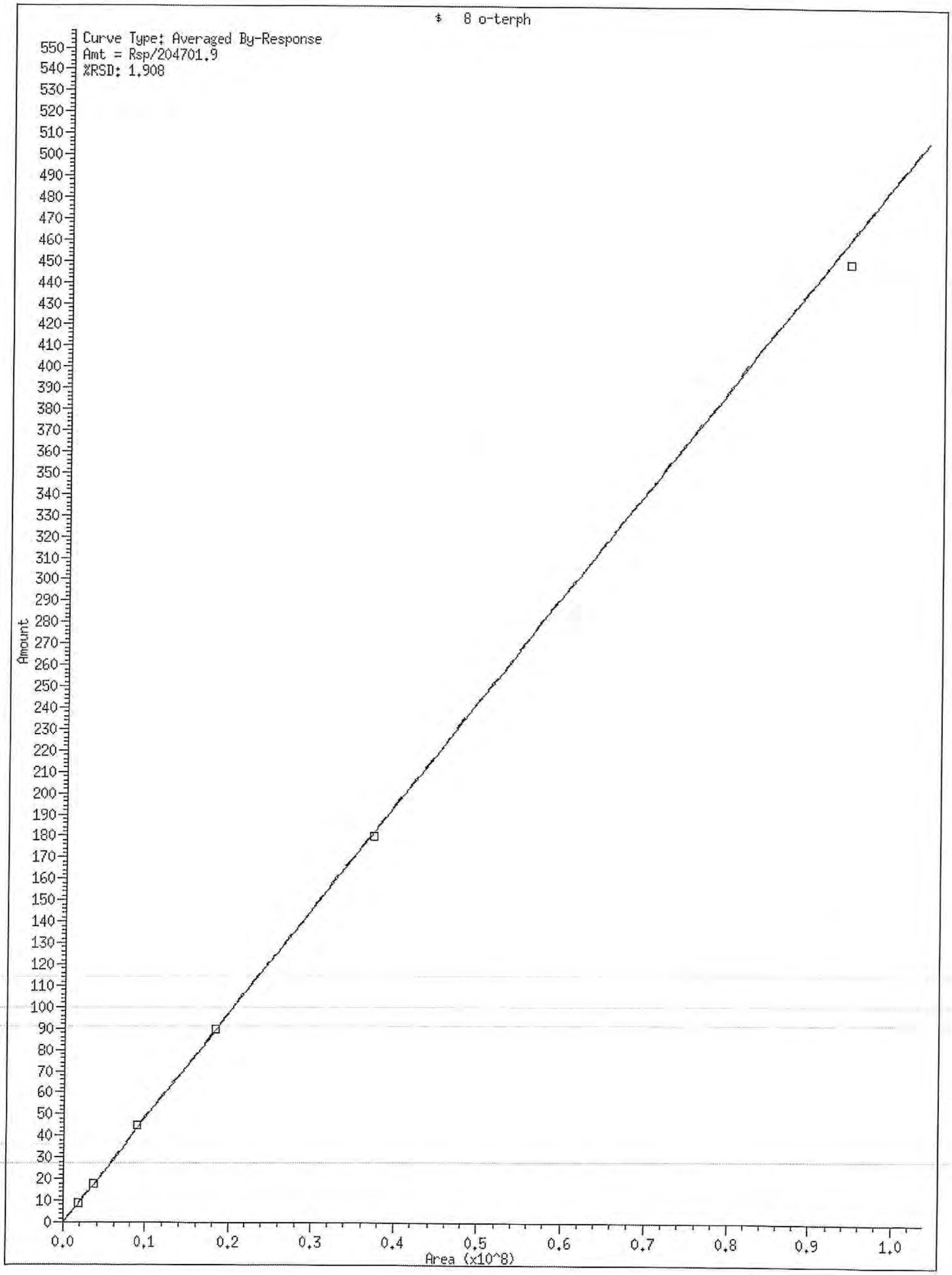


40 NAS Diesel
Curve Type: Averaged By-Response
Amt = Rsp/195148.2
%RSD: 11.350
Amount (x10^3)
Area (x10^8)


30 NW Moil
Curve Type: Averaged By-Response
Amt = Rsp/132632.1
%RSD: 2.939
Amount (x10^3)
Area (x10^8)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.4
6.8


33 AK103
Curve Type: Averaged By-Response
Amt = Rsp/99976.36
%RSD: 1.857
Amount (x10^3)
Area (x10^8)


$ 15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/177979.9
%RSD: 2.086
Amount
Area (x10^7)


$ 8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/204701.9
%RSD: 1.908
Amount
Area (x10^8)

Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2505.D

Date : 25-OCT-2019 13:11

Client ID:

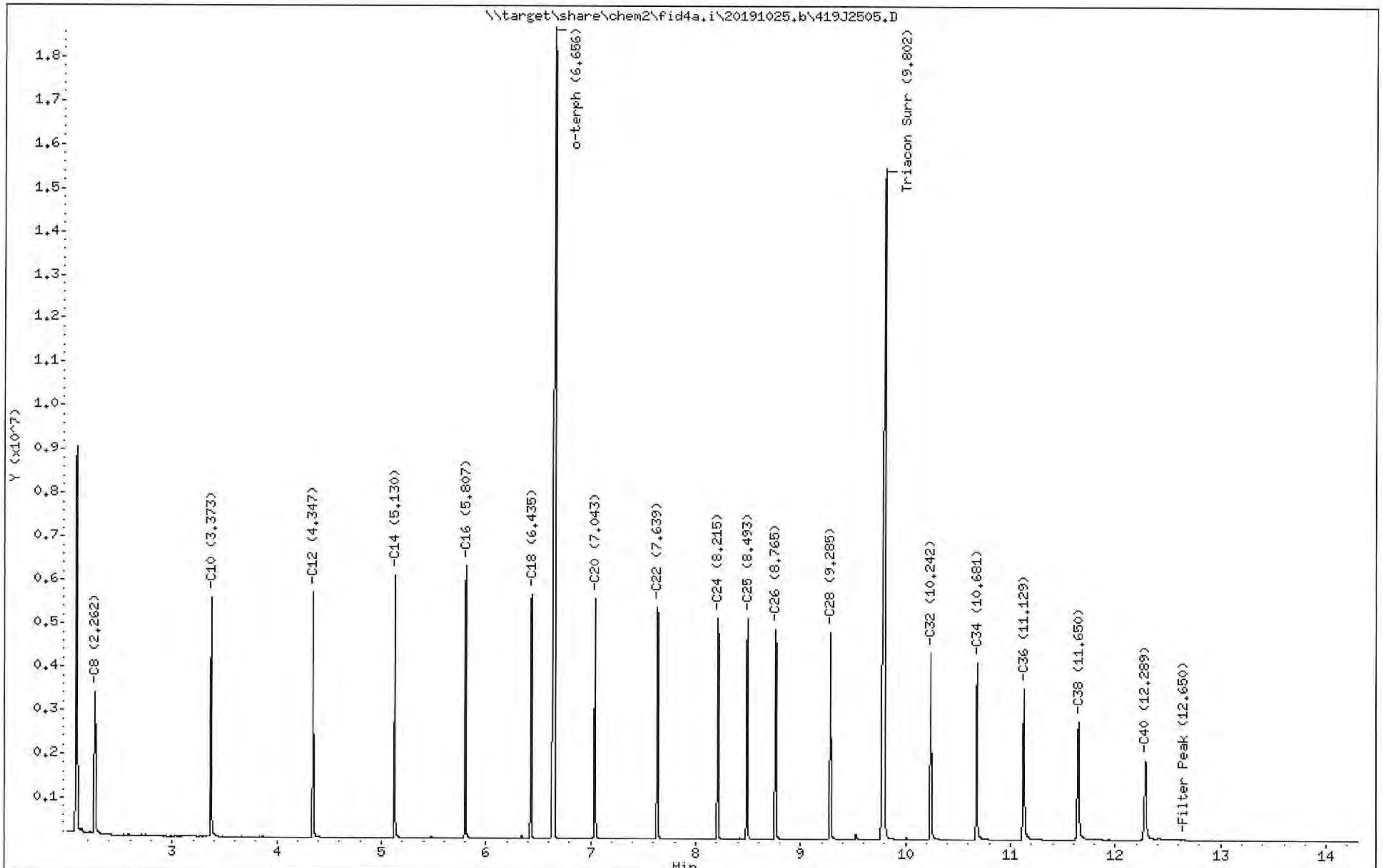
Sample Info: SHJ0406-IBL1

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2505.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-IBL1
Client ID:
Injection: 25-OCT-2019 13:11
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.262	0.000	3356579	3932199	WATPHD	(C12-C24)	22628592	142.0
C10	3.373	0.000	5539104	3757340	WATPHM	(C24-C38)	26475519	199.6
C12	4.347	0.000	5663708	3683615	AK102	(C10-C25)	30812271	157.6
C14	5.130	0.000	6079967	3652238	AK103	(C25-C36)	22405219	224.1
C16	5.807	0.000	6277766	3707382	OR.DIES	(C10-C28)	41957167	214.1
C18	6.435	0.000	5635635	3612752				
C20	7.043	0.000	5539938	3702605				
C22	7.639	0.000	5339005	3727404				
C24	8.215	0.000	5097157	3674684				
C25	8.493	0.000	5111690	3698652				
C26	8.765	0.000	4851792	3662117				
C28	9.285	0.000	4782484	3718632				
C32	10.242	0.000	4326930	3643795				
C34	10.681	0.000	4092240	3584940				
Filter Peak	12.650	0.000	16931	63954	CREOSOT	(C12-C22)	18936204	4854.3
C36	11.129	0.000	3493562	3625484				
C38	11.650	0.000	2741525	3745220				
C40	12.289	0.000	1889635	2977724				
o-terph	6.656	0.000	18648694	20337624				
Triacon Surr	9.802	0.000	15433087	21196653	NAS DIES	(C10-C24)	30787335	157.8

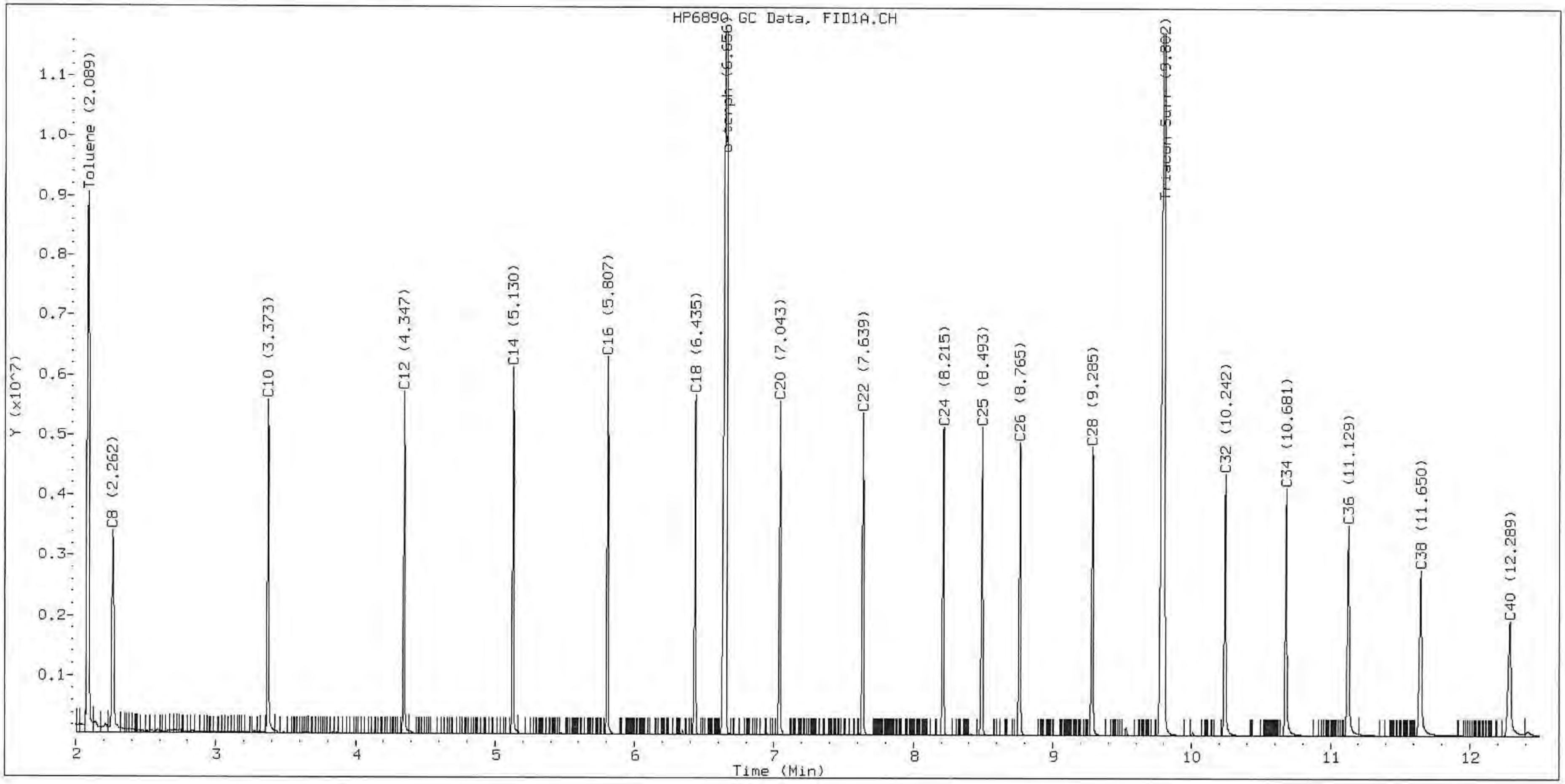
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	20337624	99.4
Triacontane	21196653	119.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2505.D SHJ0406-IBL1



Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2506.D

Date : 25-OCT-2019 13:31

Client ID:

Sample Info: SHJ0406-IBL2

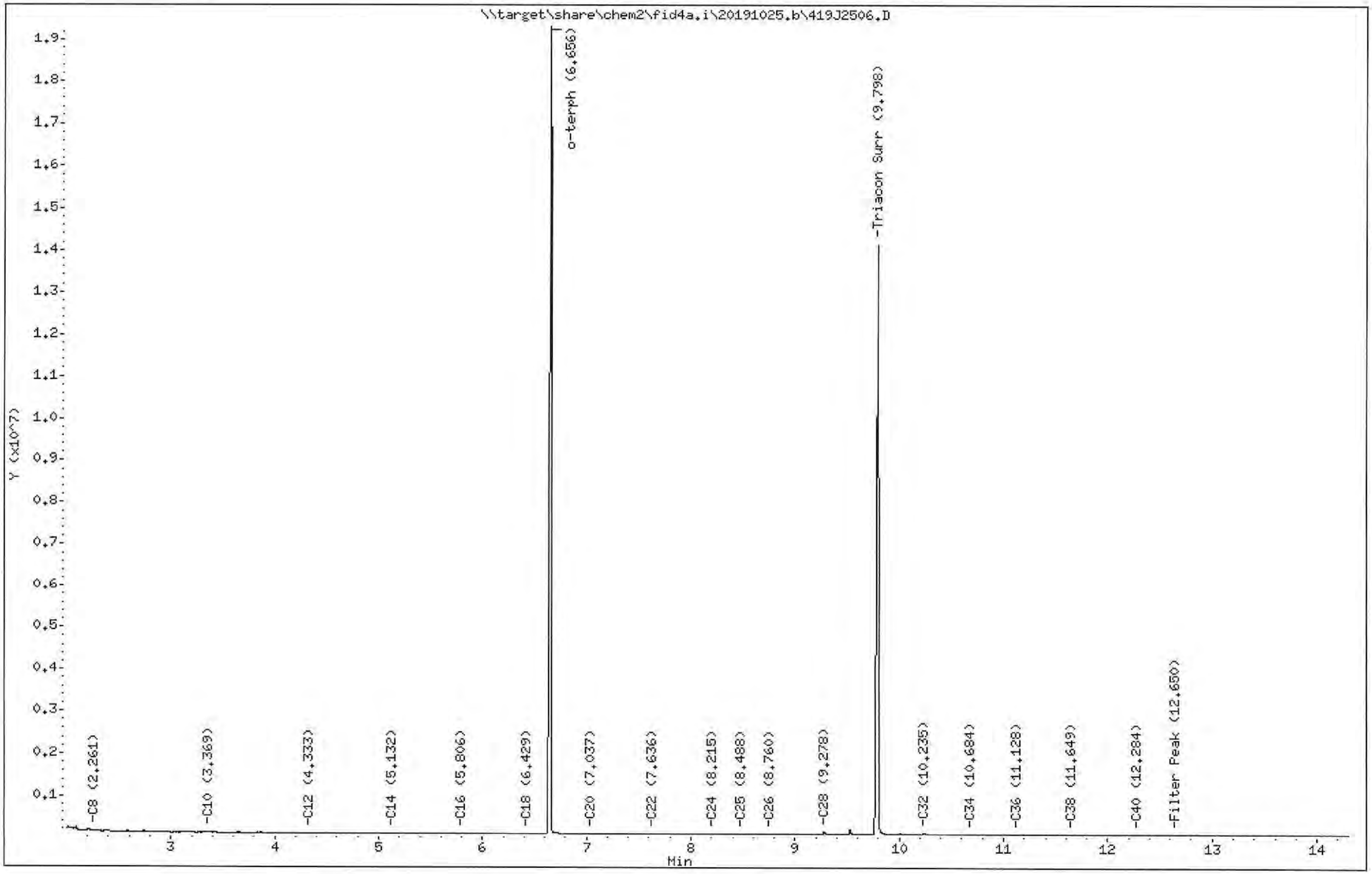
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2506.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-IBL2
Client ID:
Injection: 25-OCT-2019 13:31
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.261	-0.001	72509	76139	WATPHD	(C12-C24)	658319	4.1
C10	3.369	-0.004	30567	51207	WATPHM	(C24-C38)	758430	5.7
C12	4.333	-0.014	10639	19318	AK102	(C10-C25)	1520072	7.8
C14	5.132	0.003	5359	3169	AK103	(C25-C36)	566941	5.7
C16	5.806	-0.002	4115	5242	OR.DIES	(C10-C28)	1655230	8.4
C18	6.429	-0.006	2667	2060				
C20	7.037	-0.006	2150	2136				
C22	7.636	-0.002	7003	7700				
C24	8.215	0.000	1821	532				
C25	8.488	-0.005	1855	1750				
C26	8.760	-0.005	1926	1661				
C28	9.278	-0.007	68571	64137				
C32	10.235	-0.007	43108	83259				
C34	10.684	0.003	2246	1101				
Filter Peak	12.650	-0.001	8815	2632	CREOSOT	(C12-C22)	608888	156.1
C36	11.128	-0.001	4708	2306				
C38	11.649	-0.001	6915	2738				
C40	12.284	-0.005	8323	7406				
o-terph	6.656	-0.001	19264239	20580998				
Triacon Surr	9.798	-0.004	14079902	17993211	NAS DIES	(C10-C24)	1505820	7.7

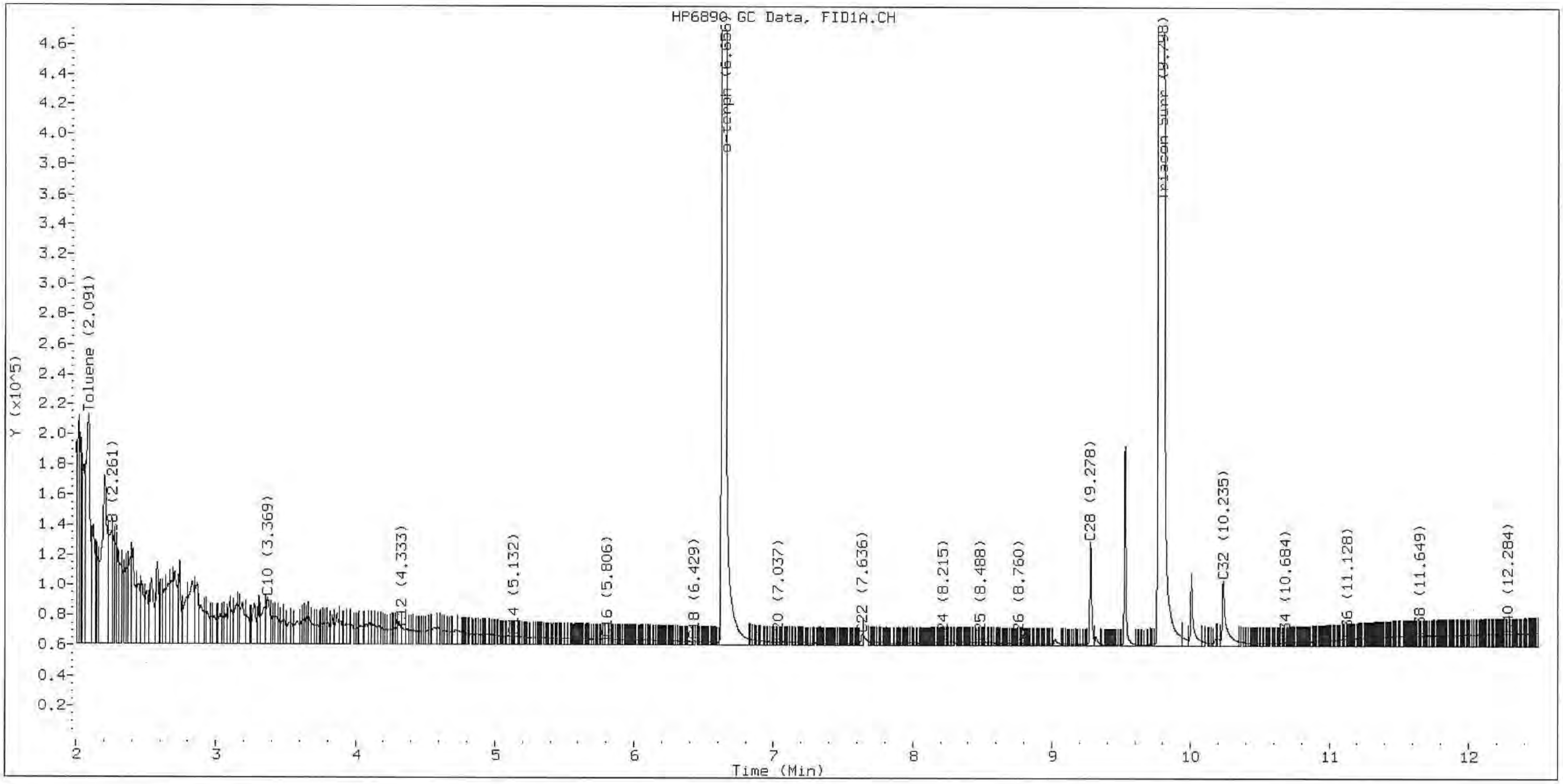
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	20580998	100.5
Triacontane	17993211	101.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2506.D SHJ0406-IBL2



Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2507.D

Date : 25-OCT-2019 13:52

Client ID:

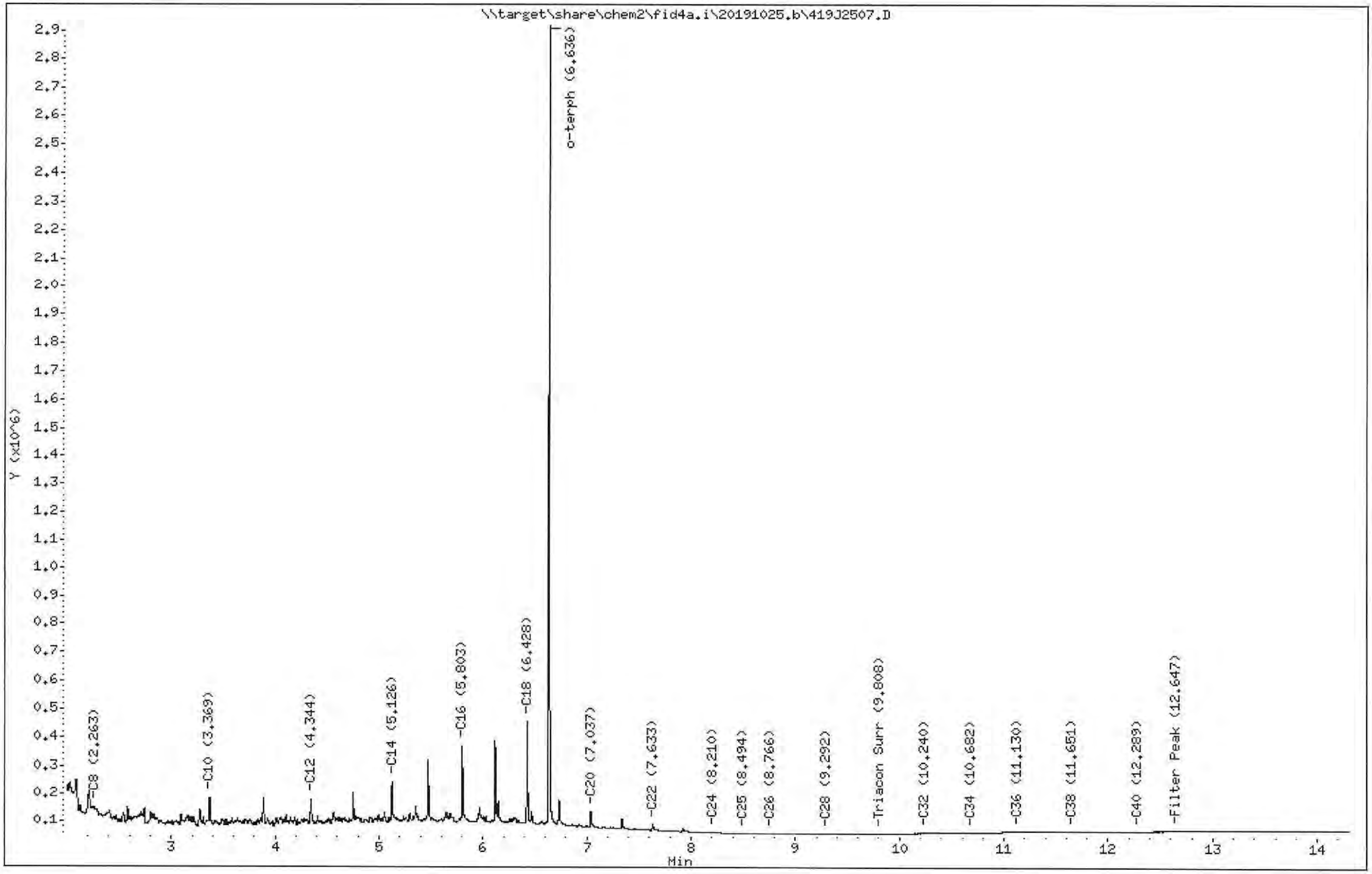
Sample Info: SHJ0406-CAL1

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2507.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL1
Client ID:
Injection: 25-OCT-2019 13:52
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	94181	68499	WATPHD	(C12-C24)	9105717	57.1
C10	3.369	-0.004	130777	159818	WATPHM	(C24-C38)	651398	4.9
C12	4.344	-0.003	124752	202412	AK102	(C10-C25)	11867629	60.7
C14	5.126	-0.003	188715	181186	AK103	(C25-C36)	363608	3.6
C16	5.803	-0.004	314329	331178	OR.DIES	(C10-C28)	11884580	60.6
C18	6.428	-0.007	400639	334718				
C20	7.037	-0.006	83282	126537				
C22	7.633	-0.006	34959	59242				
C24	8.210	-0.005	6227	12090				
C25	8.494	0.001	1850	2300				
C26	8.766	0.001	428	167				
C28	9.292	0.007	424	156				
C32	10.240	-0.002	2740	1341				
C34	10.682	0.001	5209	2827				
Filter Peak	12.647	-0.003	12268	7963	CREOSOT	(C12-C22)	8913896	2285.1
C36	11.130	0.001	8291	3309				
C38	11.651	0.001	10488	3653				
C40	12.289	0.000	11687	5838				
o-terph	6.636	-0.021	2823547	1865140				
Triacon Surr	9.808	0.006	1874	1287	NAS DIES	(C10-C24)	11851657	60.7

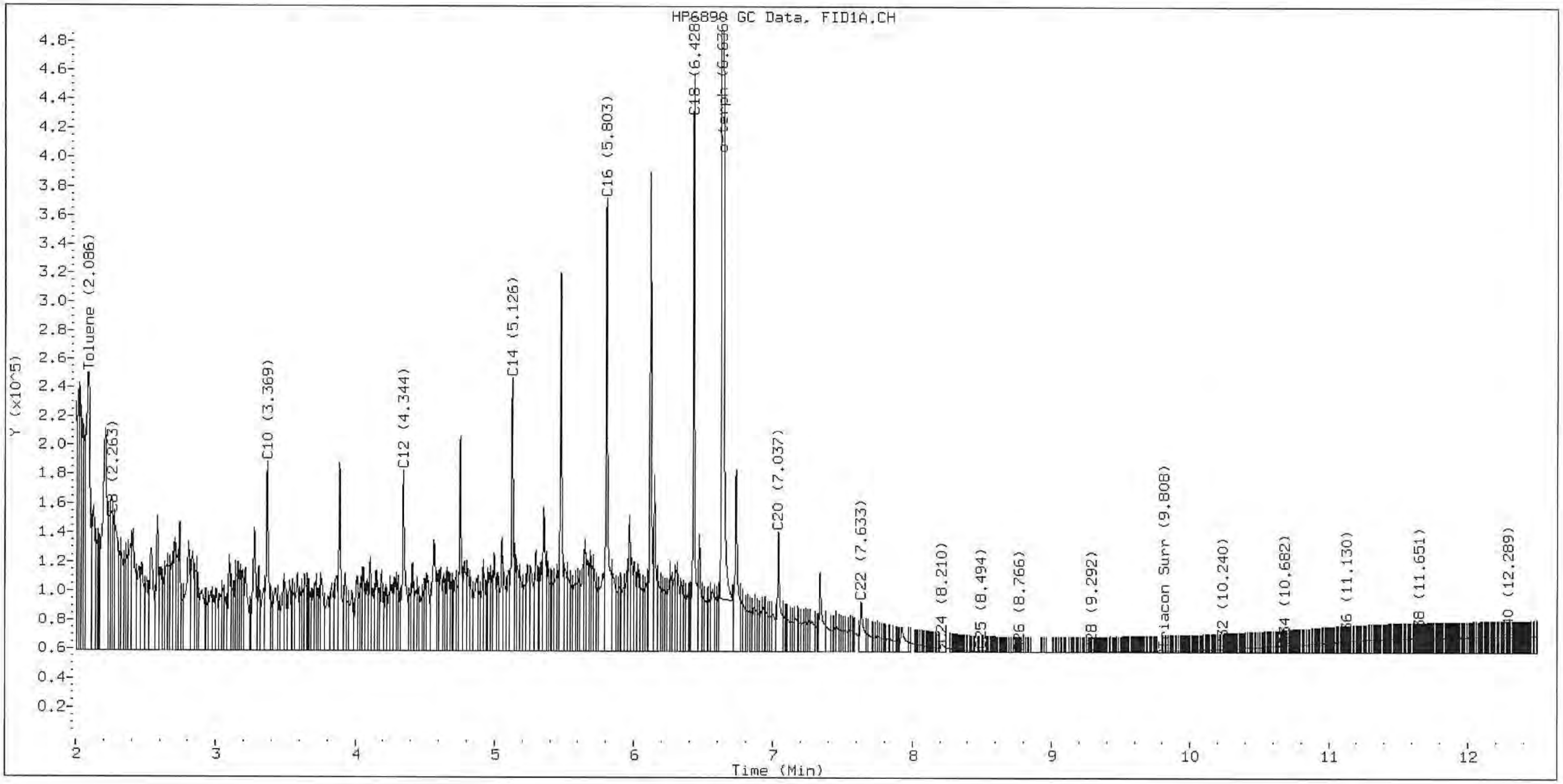
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	1865140	9.1
Triacontane	1287	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2507.D SHJ0406-CAL1



Report Date : 30-Oct-2019 07:52

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	419J2507	419J2508	419J2509	419J2510	419J2511	419J2512
INJ.DATE:	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019
INJ.TIME:	13:52	14:12	14:32	14:53	15:13	15:32

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	2.086	2.091	2.092	2.084	2.085	2.093	2.089	1.989-2.189	2.089	0.004
38 NewCpnd_31	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
41 Mineral Spirits	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
2 C8	2.263	2.252	2.253	2.254	2.254	2.254	2.262	2.162-2.362	2.255	0.004
3 C10	3.369	3.367	3.368	3.368	3.368	3.371	3.373	3.323-3.423	3.368	0.001
4 C12	4.344	4.344	4.344	4.344	4.346	4.351	4.347	4.297-4.397	4.345	0.003
5 C14	5.126	5.126	5.126	5.127	5.129	5.137	5.130	5.080-5.180	5.128	0.004
6 C16	5.803	5.802	5.803	5.805	5.809	5.818	5.807	5.757-5.857	5.807	0.006
7 C18	6.428	6.429	6.431	6.434	6.439	6.452	6.435	6.385-6.485	6.435	0.009
$ 8 o-terph	6.636	6.640	6.646	6.655	6.669	6.696	6.656	6.606-6.706	6.657	0.023
9 C20	7.037	7.036	7.036	7.037	7.040	7.047	7.043	6.993-7.093	7.039	0.004
10 C22	7.633	7.631	7.631	7.631	7.633	7.637	7.639	7.589-7.689	7.633	0.002
11 C24	8.210	8.209	8.208	8.207	8.207	8.207	8.215	8.165-8.265	8.208	0.001
12 C25	8.494	8.489	8.488	8.485	8.486	8.485	8.493	8.443-8.543	8.488	0.003
13 C26	8.766	8.762	8.761	8.759	8.758	8.756	8.765	8.715-8.815	8.760	0.004
14 C28	9.292	9.288	9.287	9.281	9.279	9.279	9.285	9.235-9.335	9.284	0.005

Reviewer 1 ______________________ Date: ____________
Reviewer 2 ______________________ Date: ____________

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 15 Triacon Surr	9.808	9.805	9.803	9.798	9.806	9.800	9.802	9.752-9.852	9.803	0.004
16 C32	10.240	10.242	10.248	10.245	10.243	10.242	10.242	10.192-10.292	10.243	0.003
17 C34	10.682	10.678	10.683	10.684	10.687	10.677	10.681	10.631-10.731	10.682	0.004
18 Filter Peak	12.647	12.646	12.650	12.646	12.649	12.650	12.650	12.550-12.750	12.648	0.002
19 C36	11.130	11.127	11.127	11.131	11.127	11.129	11.129	11.079-11.179	11.128	0.002
20 C38	11.651	11.646	11.648	11.653	11.653	11.651	11.650	11.600-11.700	11.650	0.003
21 C40	12.289	12.291	12.292	12.287	12.283	12.288	12.289	12.239-12.339	12.288	0.003
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 ACreosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++
39 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
40 NAS Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	419J2514	419J2515	419J2516	419J2517	419J2518	419J2519
INJ.DATE:	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019
INJ.TIME:	16:12	16:33	16:53	17:13	17:34	17:54

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	2.092	2.092	2.092	2.093	2.092	2.092	2.089	1.989-2.189	2.092	0.000
38 NewCpnd_31	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
41 Mineral Spirits	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
2 C8	2.263	2.262	2.263	2.263	2.250	2.251	2.262	2.162-2.362	2.259	0.007
3 C10	3.376	3.377	3.376	3.376	3.371	3.369	3.373	3.323-3.423	3.374	0.003
4 C12	4.368	4.332	4.334	4.333	4.343	4.344	4.347	4.297-4.397	4.342	0.014
5 C14	5.134	5.134	5.125	5.127	5.126	5.126	5.130	5.080-5.180	5.129	0.004
6 C16	5.805	5.808	5.805	5.803	5.802	5.802	5.807	5.757-5.857	5.804	0.002
7 C18	6.435	6.432	6.439	6.428	6.427	6.427	6.435	6.385-6.485	6.431	0.005
$ 8 o-terph	6.651	6.657	6.659	6.633	6.655	6.656	6.656	6.606-6.706	6.652	0.009
9 C20	7.038	7.038	7.036	7.048	7.051	7.035	7.043	6.993-7.093	7.041	0.006
10 C22	7.642	7.644	7.632	7.632	7.632	7.633	7.639	7.589-7.689	7.636	0.005
11 C24	8.214	8.212	8.215	8.217	8.215	8.219	8.215	8.165-8.265	8.215	0.002
12 C25	8.500	8.497	8.500	8.495	8.491	8.490	8.493	8.443-8.543	8.495	0.004
13 C26	8.760	8.767	8.760	8.769	8.765	8.770	8.765	8.715-8.815	8.765	0.005
14 C28	9.288	9.294	9.277	9.280	9.285	9.281	9.285	9.235-9.335	9.284	0.006

Reviewer 1 ______________________ Date: __________
Reviewer 2 ______________________ Date: __________

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 15 Triacon Surr	9.771	9.775	9.781	9.790	9.809	9.836	9.802	9.752-9.852	9.794	0.025
16 C32	10.243	10.233	10.235	10.238	10.249	10.237	10.242	10.192-10.292	10.239	0.006
17 C34	10.679	10.680	10.682	10.681	10.679	10.683	10.681	10.631-10.731	10.681	0.002
18 Filter Peak	12.652	12.648	12.655	12.648	12.650	12.666	12.650	12.550-12.750	12.653	0.007
19 C36	11.126	11.134	11.129	11.132	11.125	11.132	11.129	11.079-11.179	11.129	0.004
20 C38	11.652	11.650	11.655	11.651	11.649	11.647	11.650	11.600-11.700	11.651	0.002
21 C40	12.297	12.292	12.291	12.291	12.289	12.283	12.289	12.239-12.339	12.291	0.005
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 ACreosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++
39 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
40 NAS Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

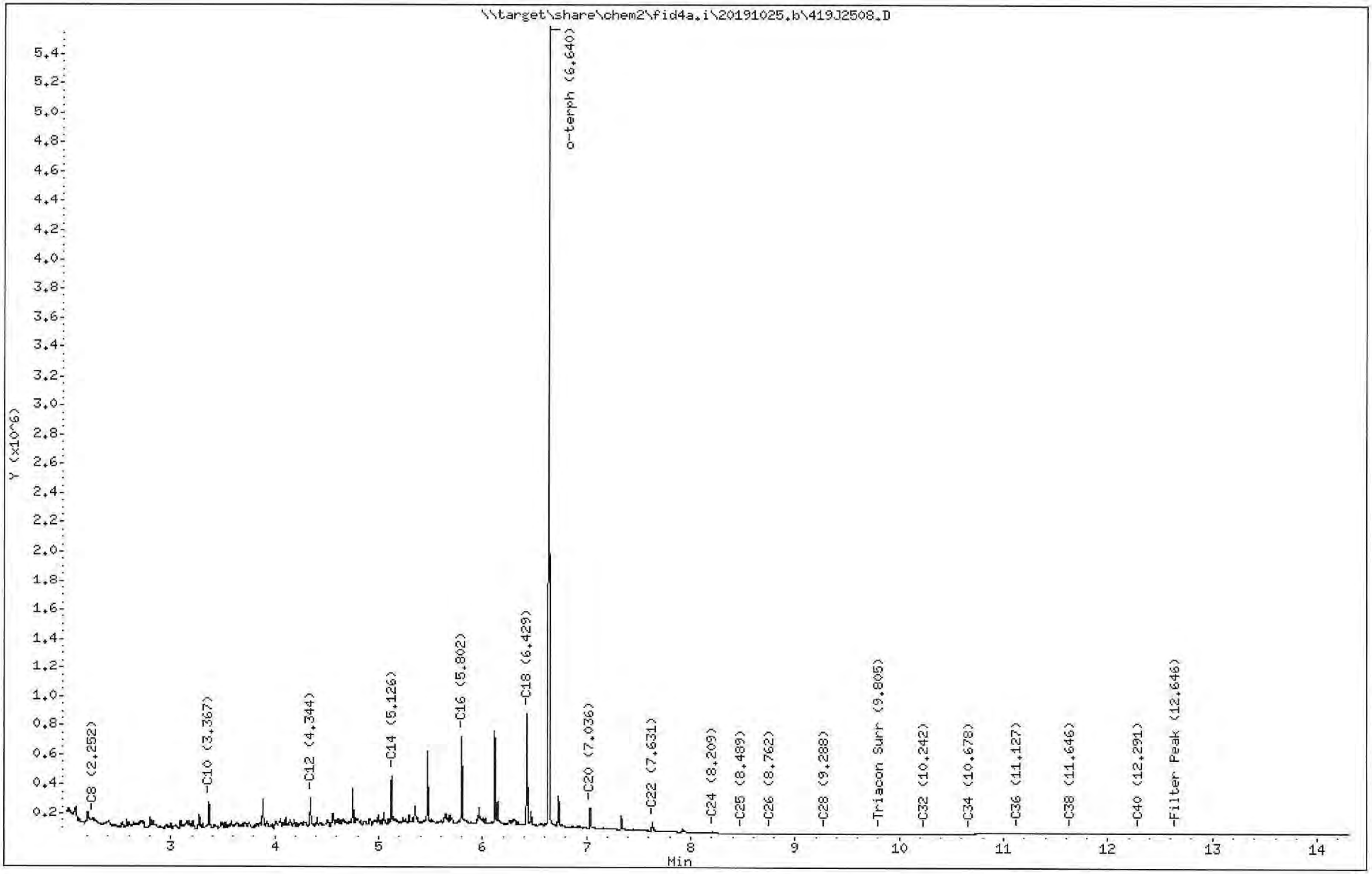
Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2508.D
Date : 25-OCT-2019 14:12
Client ID:
Sample Info: SHJ0406-CAL2

Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2508.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL2
Client ID:
Injection: 25-OCT-2019 14:12
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.252	-0.010	100789	199426	WATPHD	(C12-C24)	16216844	101.8
C10	3.367	-0.006	219354	239129	WATPHM	(C24-C38)	605463	4.6
C12	4.344	-0.003	250355	355289	AK102	(C10-C25)	20356499	104.1
C14	5.126	-0.004	400436	340538	AK103	(C25-C36)	329685	3.3
C16	5.802	-0.005	670430	513156	OR.DIES	(C10-C28)	20386032	104.0
C18	6.429	-0.006	830433	585845				
C20	7.036	-0.007	189557	206229				
C22	7.631	-0.007	81567	107164				
C24	8.209	-0.006	13975	32117				
C25	8.489	-0.004	4286	7117				
C26	8.762	-0.002	1237	1115				
C28	9.288	0.003	364	105				
C32	10.242	0.000	2184	855				
C34	10.678	-0.003	4506	5051				
Filter Peak	12.646	-0.005	11019	4947	CREOSOT	(C12-C22)	15825625	4056.9
C36	11.127	-0.002	7155	1771				
C38	11.646	-0.004	9240	6899				
C40	12.291	0.002	10430	5163				
o-terph	6.640	-0.017	5468385	3642280				
Triacon Surr	9.805	0.003	1078	368	NAS DIES	(C10-C24)	20331247	104.2

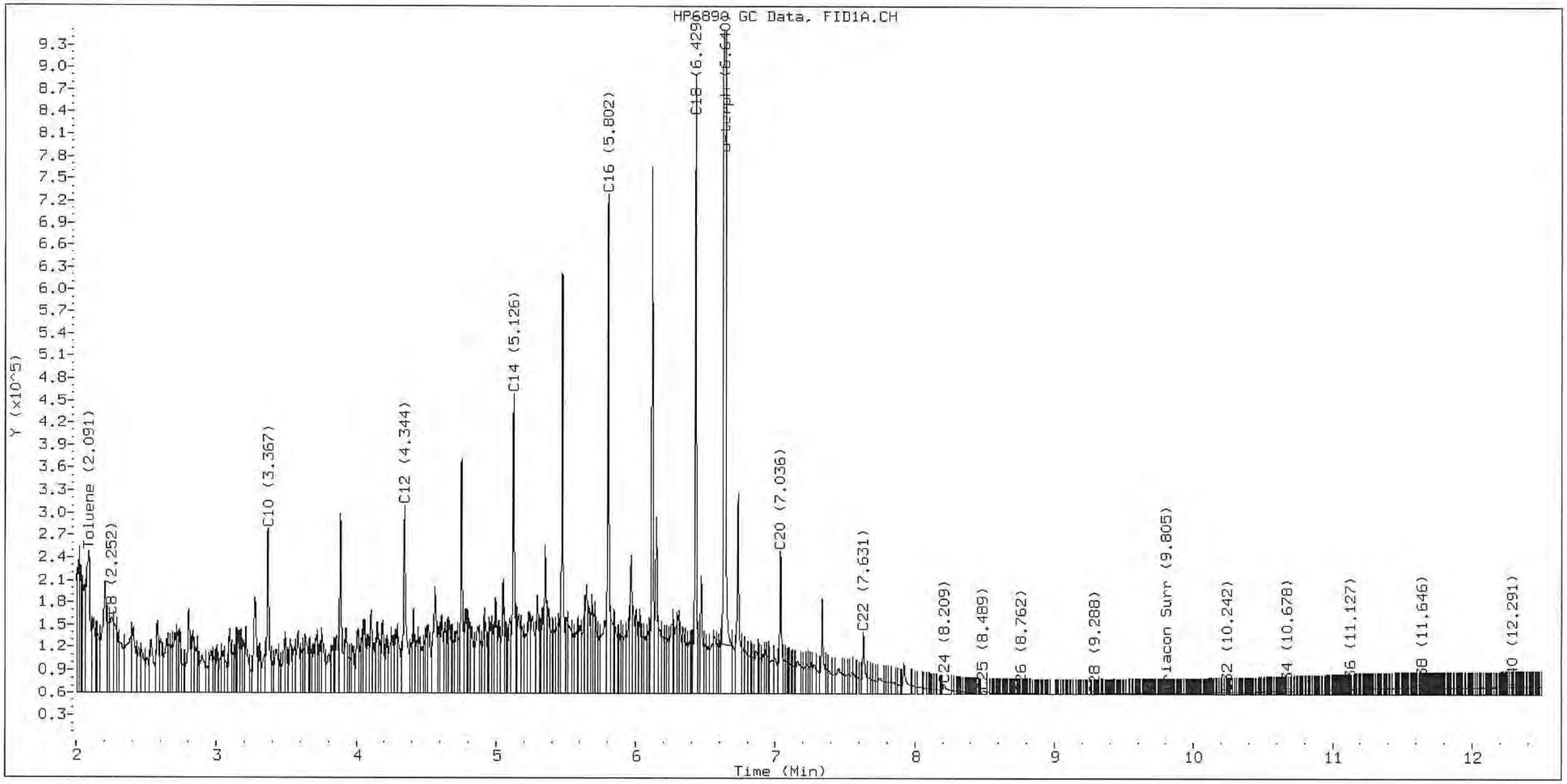
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	3642280	17.8 M
Triacontane	368	0.0

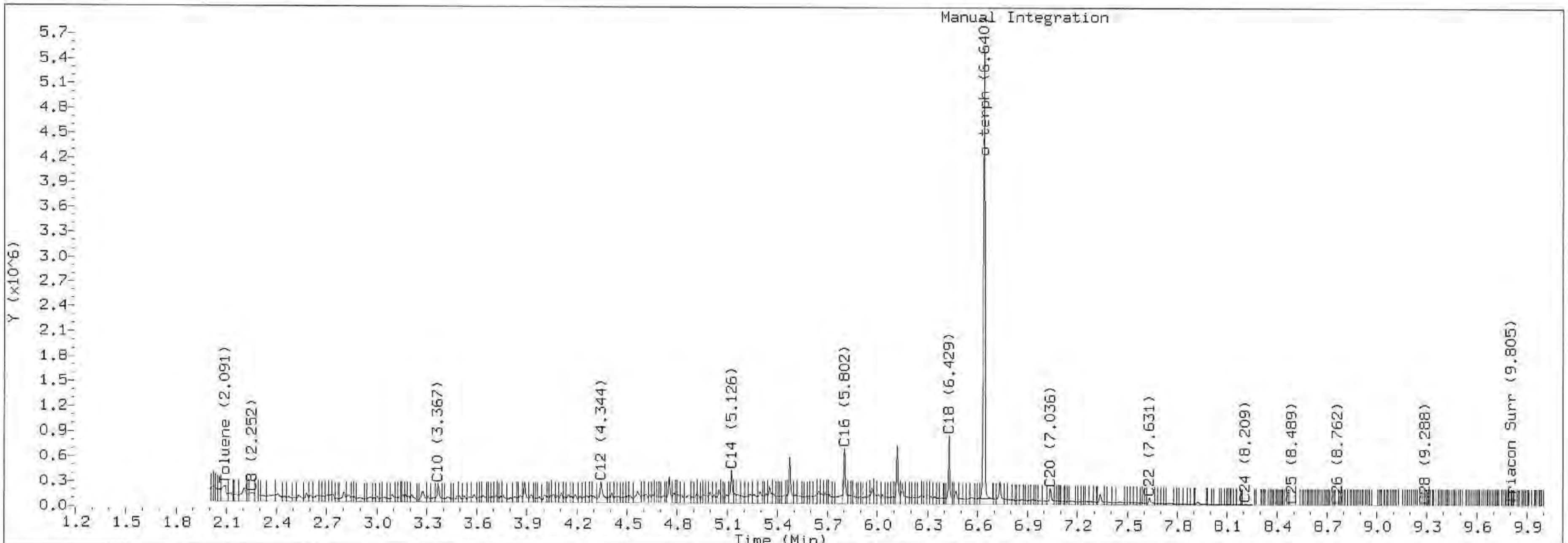
M Indicates the peak was manually integrated

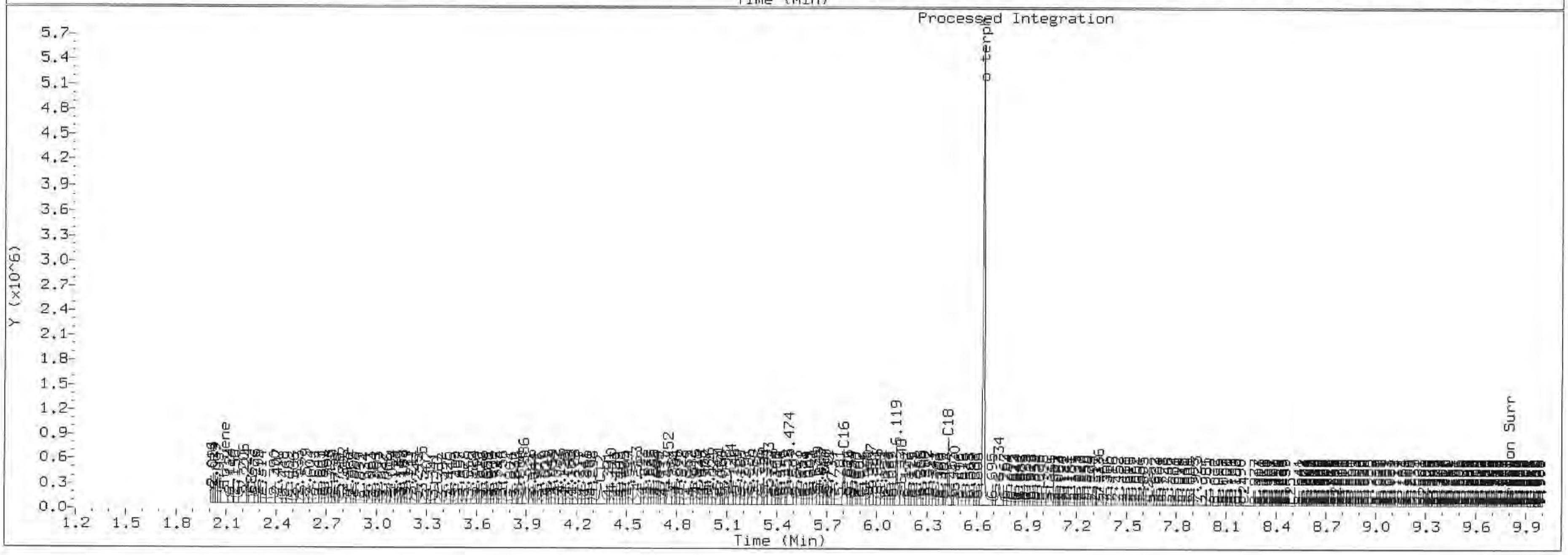
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2508.D SHJ0406-CAL2



TPH Manual Integrations Report
Datafile: FID4A, 20191025.b/419J2508.D Injection: 25-OCT-2019 14:12
Lab ID:SHJ0406-CAL2





Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2509.D

Date : 25-OCT-2019 14:32

Client ID:

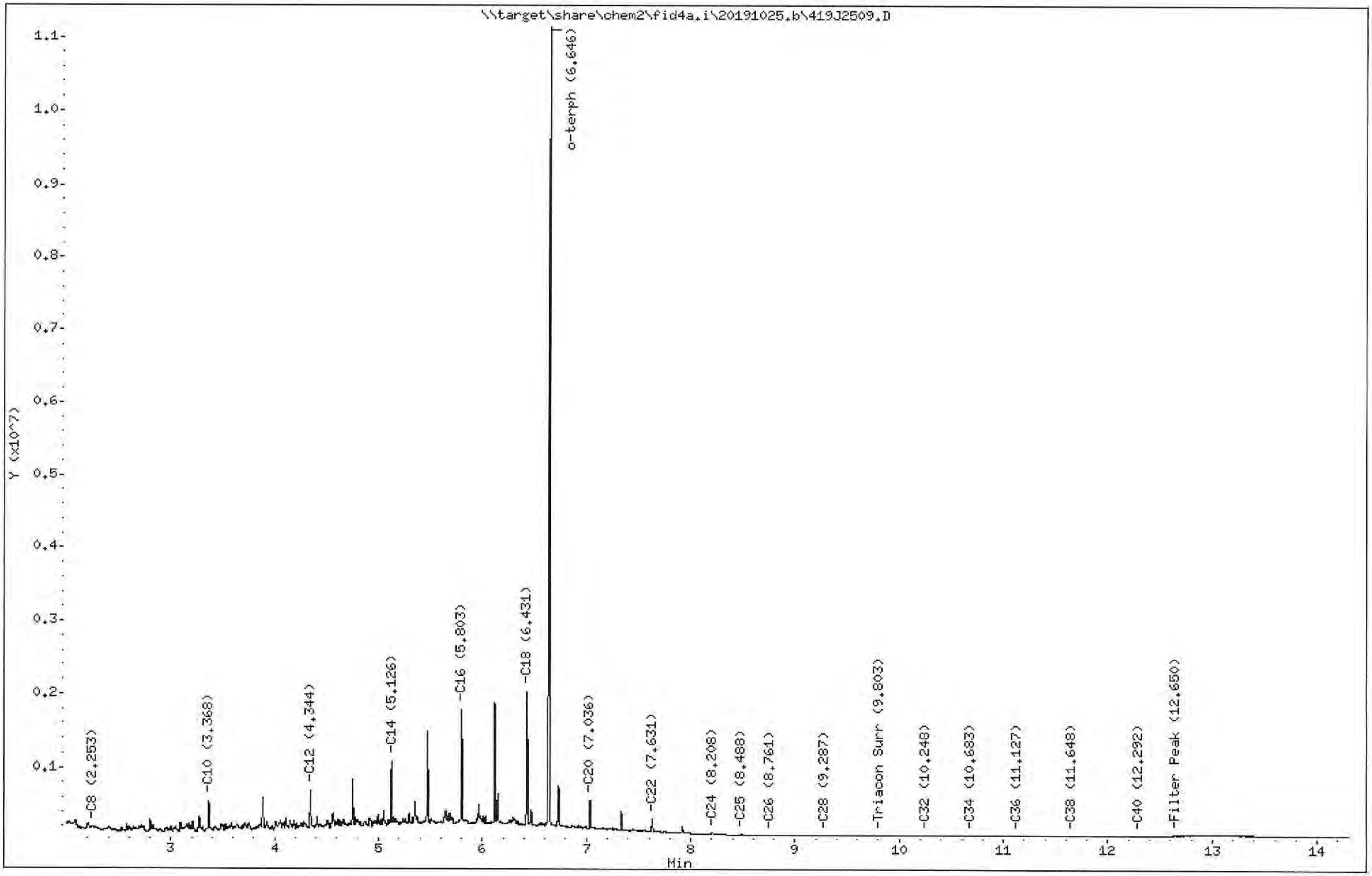
Sample Info: SHJ0406-CAL3

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2509.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL3
Client ID:
Injection: 25-OCT-2019 14:32
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.253	-0.009	118722	240565	WATPHD	(C12-C24)	37913827	237.9
C10	3.368	-0.005	483544	476749	WATPHM	(C24-C38)	575858	4.3
C12	4.344	-0.003	627626	779062	AK102	(C10-C25)	46188702	236.3
C14	5.126	-0.004	1022309	790022	AK103	(C25-C36)	284914	2.8
C16	5.803	-0.004	1736531	1218478	OR.DIES	(C10-C28)	46284811	236.1
C18	6.431	-0.004	1970150	1409422				
C20	7.036	-0.007	509531	494893				
C22	7.631	-0.008	243435	281583				
C24	8.208	-0.007	43836	95774				
C25	8.488	-0.005	13614	32431				
C26	8.761	-0.004	4384	8919				
C28	9.287	0.001	605	214				
C32	10.248	0.006	1381	707				
C34	10.683	0.001	3151	1389				
Filter Peak	12.650	-0.000	9358	3271	CREOSOT	(C12-C22)	36811374	9436.7
C36	11.127	-0.002	5536	1099				
C38	11.648	-0.002	7679	4193				
C40	12.292	0.003	8799	4362				
o-terph	6.646	-0.010	10937727	8968221				
Triacon Surr	9.803	0.001	295	103	NAS DIES	(C10-C24)	46106144	236.3

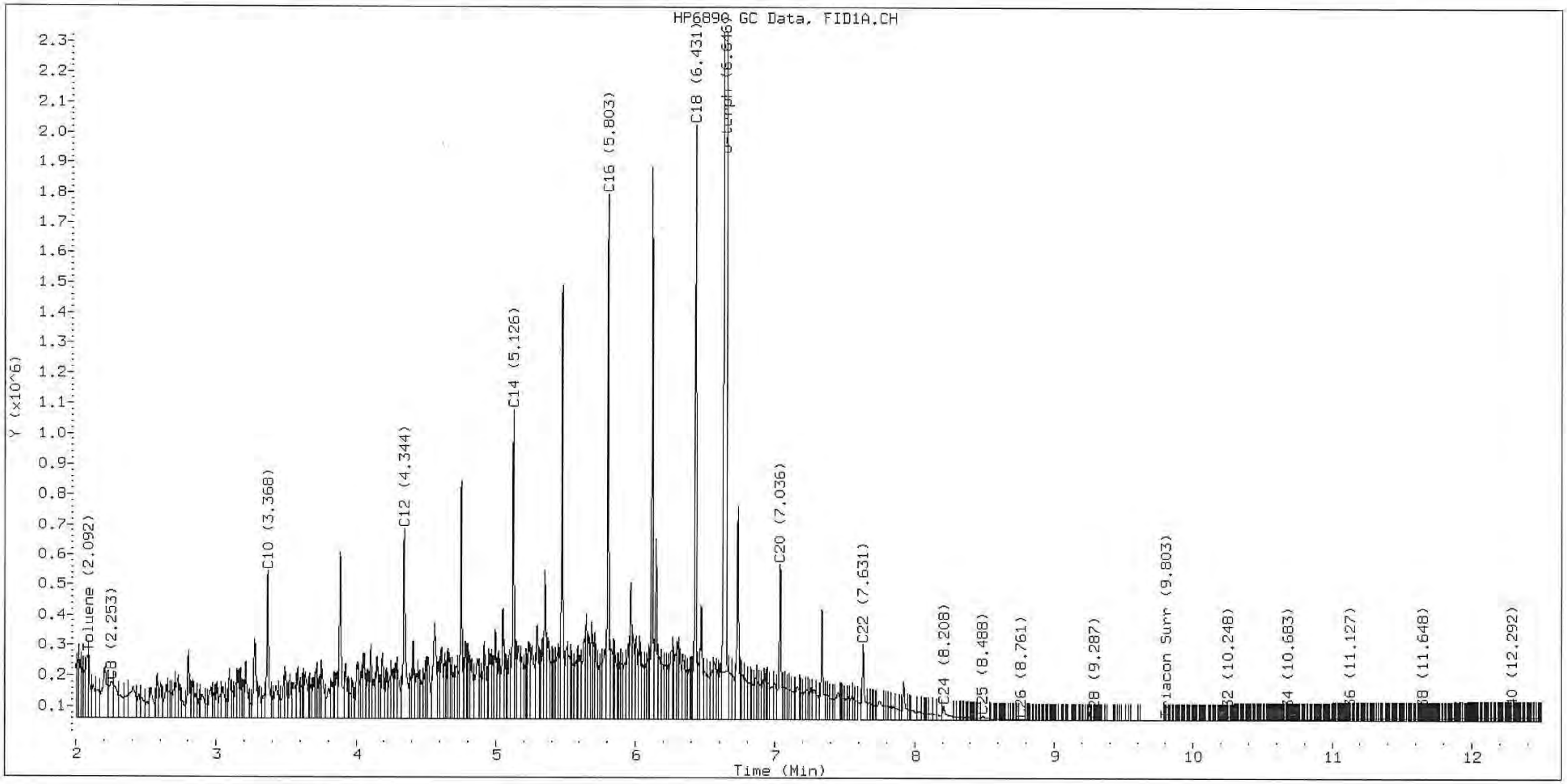
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	8968221	43.8
Triacontane	103	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2509.D SHJ0406-CAL3



Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2510.D

Date : 25-OCT-2019 14:53

Client ID:

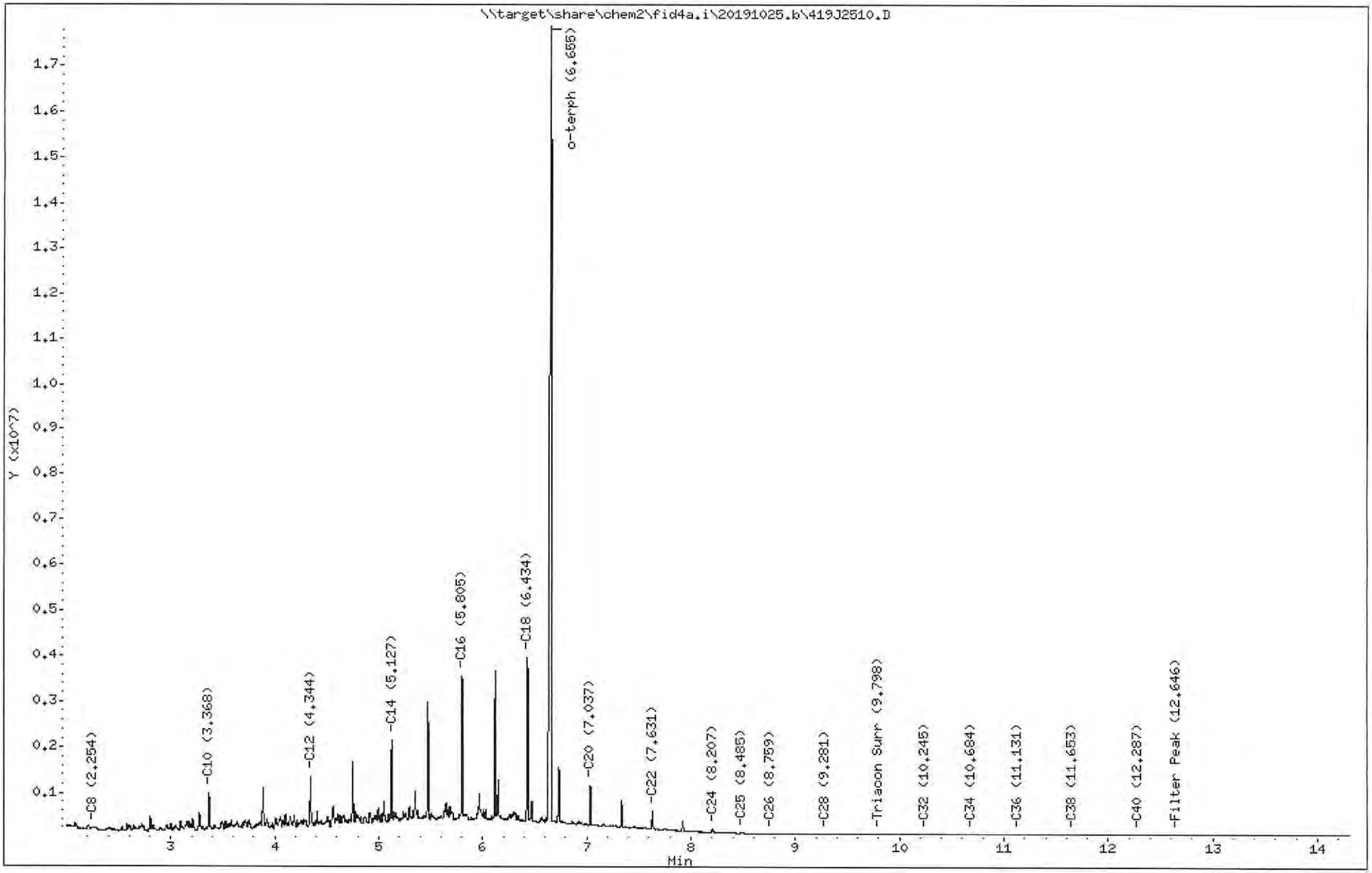
Sample Info: SHJ0406-CAL4

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2510.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL4
Client ID:
Injection: 25-OCT-2019 14:53
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.254	-0.009	133720	272365	WATPHD	(C12-C24)	76110005	477.7
C10	3.368	-0.005	913330	831182	WATPHM	(C24-C38)	747310	5.6
C12	4.344	-0.004	1278885	1502773	AK102	(C10-C25)	90903979	465.0
C14	5.127	-0.003	2082835	1580085	AK103	(C25-C36)	436439	4.4
C16	5.805	-0.002	3492654	2476612	OR.DIES	(C10-C28)	91160529	465.1
C18	6.434	-0.001	3902008	2902073				
C20	7.037	-0.006	1095165	935641				
C22	7.631	-0.008	544650	574105				
C24	8.207	-0.008	109625	202080				
C25	8.485	-0.008	35990	71794				
C26	8.759	-0.006	12661	25763				
C28	9.281	-0.004	1585	1856				
C32	10.245	0.003	1048	453				
C34	10.684	0.002	3071	1964				
Filter Peak	12.646	-0.004	3825	2093	CREOSOT	(C12-C22)	73861119	18934.4
C36	11.131	0.002	4915	3154				
C38	11.653	0.003	5457	2692				
C40	12.287	-0.002	4261	1483				
o-terph	6.655	-0.001	17508754	18236498				
Triacon Surr	9.798	-0.004	325	112	NAS DIES	(C10-C24)	90741143	465.0

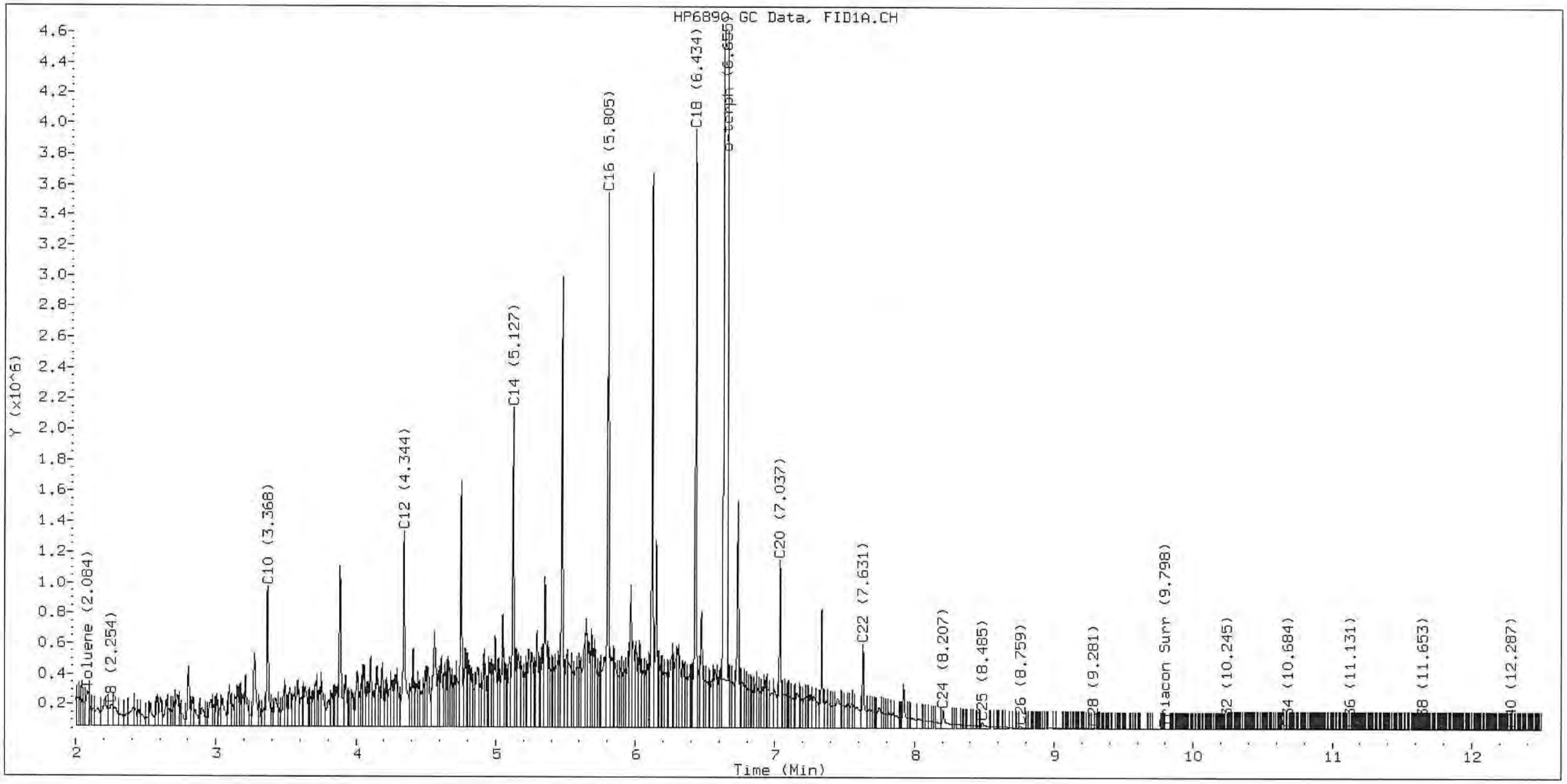
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	18236498	89.1 M
Triacontane	112	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2510.D SHJ0406-CAL4



TPH Manual Integrations Report
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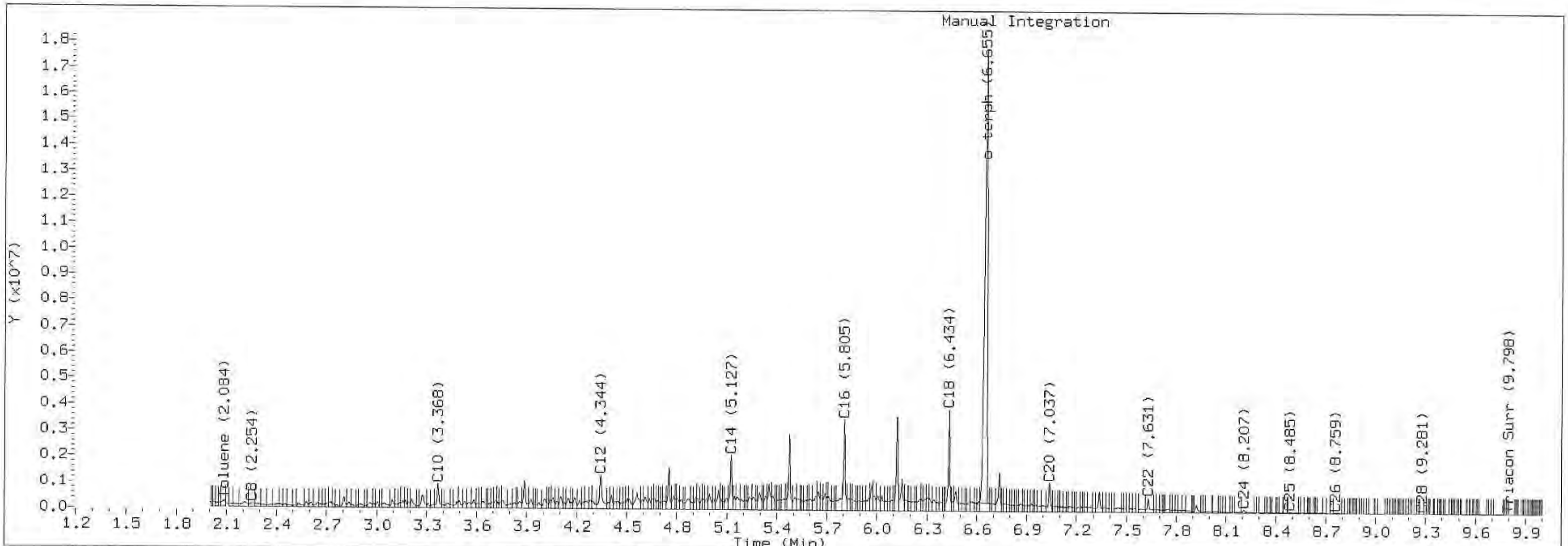
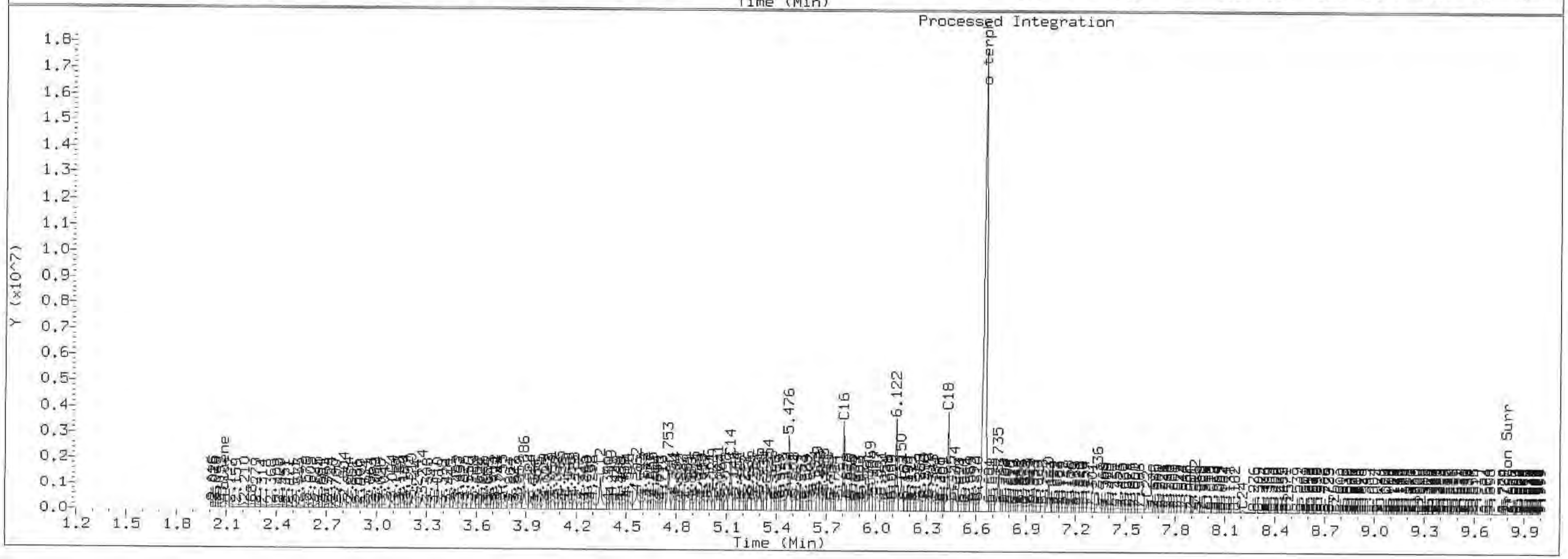
Lab ID:SHJ0406-CAL4





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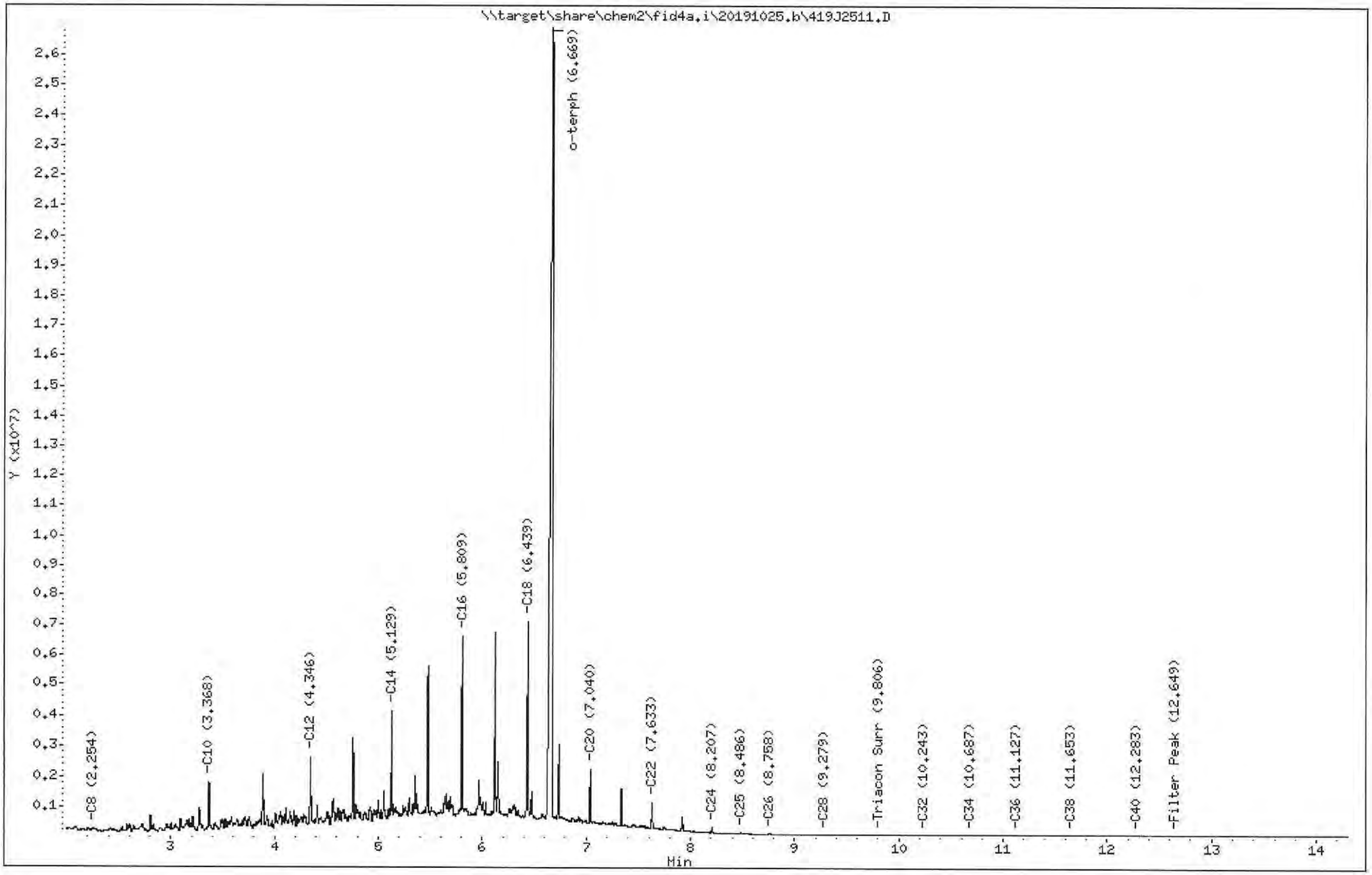
Date : 25-OCT-2019 15:13
Client ID:
Sample Info: SHJ0406-CAL5

Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2511.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL5
Client ID:
Injection: 25-OCT-2019 15:13
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.254	-0.008	179896	310888	WATPHD	(C12-C24)	153066747	960.6
C10	3.368	-0.005	1739085	1592987	WATPHM	(C24-C38)	1270800	9.6
C12	4.346	-0.001	2582378	2992597	AK102	(C10-C25)	181956494	930.8
C14	5.129	-0.000	4119910	3175625	AK103	(C25-C36)	821445	8.2
C16	5.809	0.002	6560457	4974499	OR.DIES	(C10-C28)	182680399	932.0
C18	6.439	0.005	7062206	6028122				
C20	7.040	-0.003	2215368	1892870				
C22	7.633	-0.006	1144174	997771				
C24	8.207	-0.008	250003	385382				
C25	8.486	-0.007	89395	162170				
C26	8.758	-0.007	33365	80915				
C28	9.279	-0.006	6648	16116				
C32	10.243	0.001	219	113				
C34	10.687	0.005	471	169				
Filter Peak	12.649	-0.001	3299	1299	CREOSOT	(C12-C22)	148274267	38010.4
C36	11.127	-0.002	1506	512				
C38	11.653	0.003	2117	932				
C40	12.283	-0.006	2712	1056				
o-terph	6.669	0.013	26284682	37244787				
Triacon Surr	9.806	0.004	1398	1069	NAS DIES	(C10-C24)	181561688	930.4

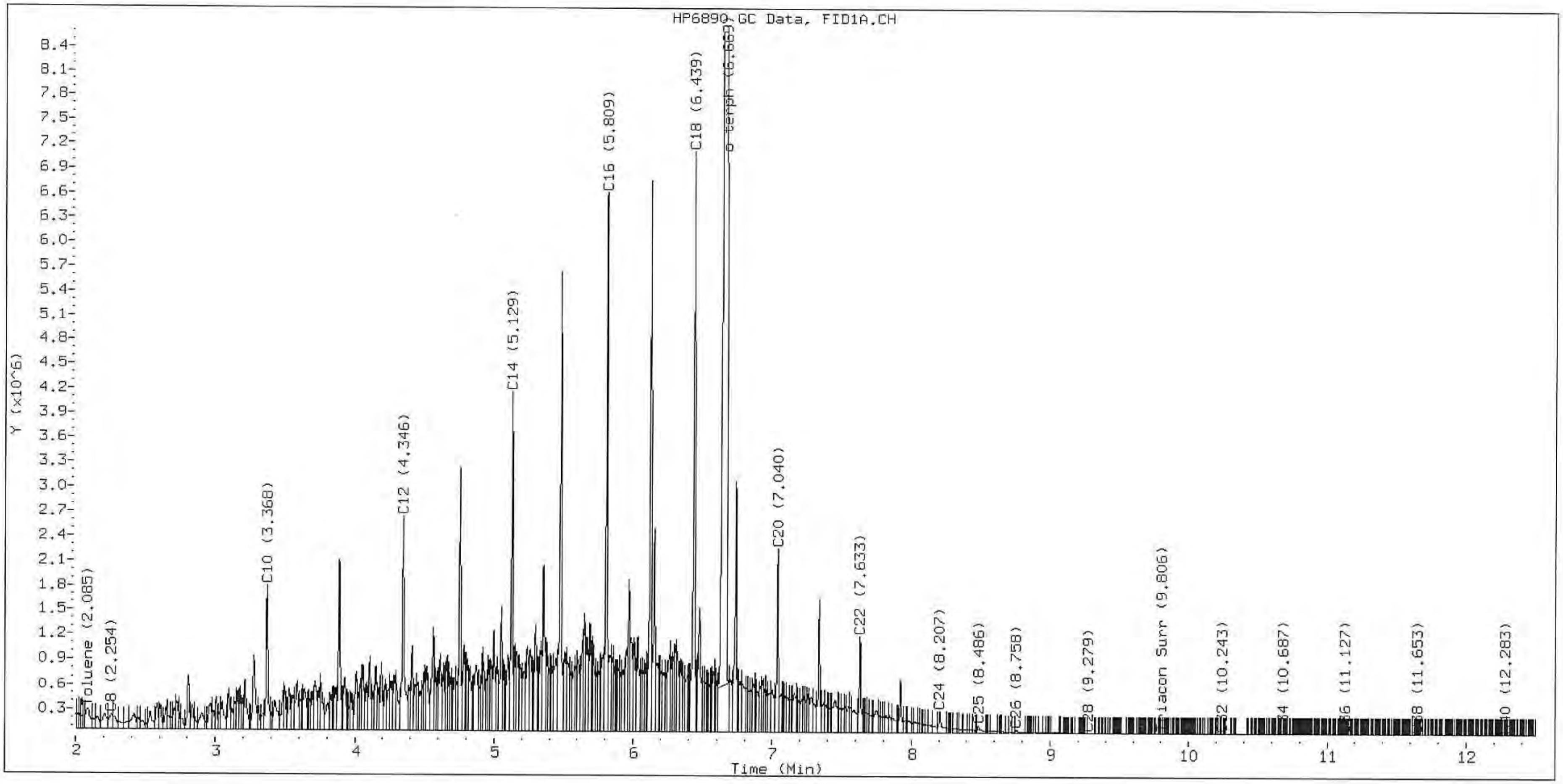
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	37244787	181.9	M
Triacontane	1069	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

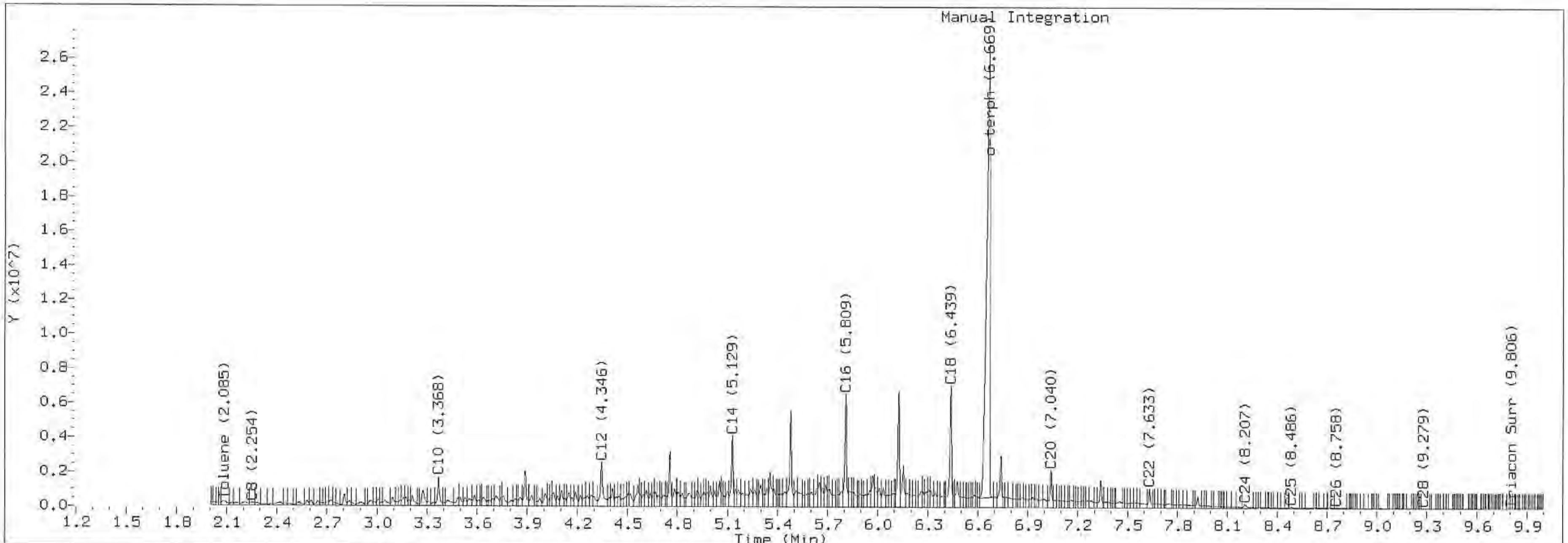
Datafile: FID4A, 20191025.b/419J2511.D SHJ0406-CAL5

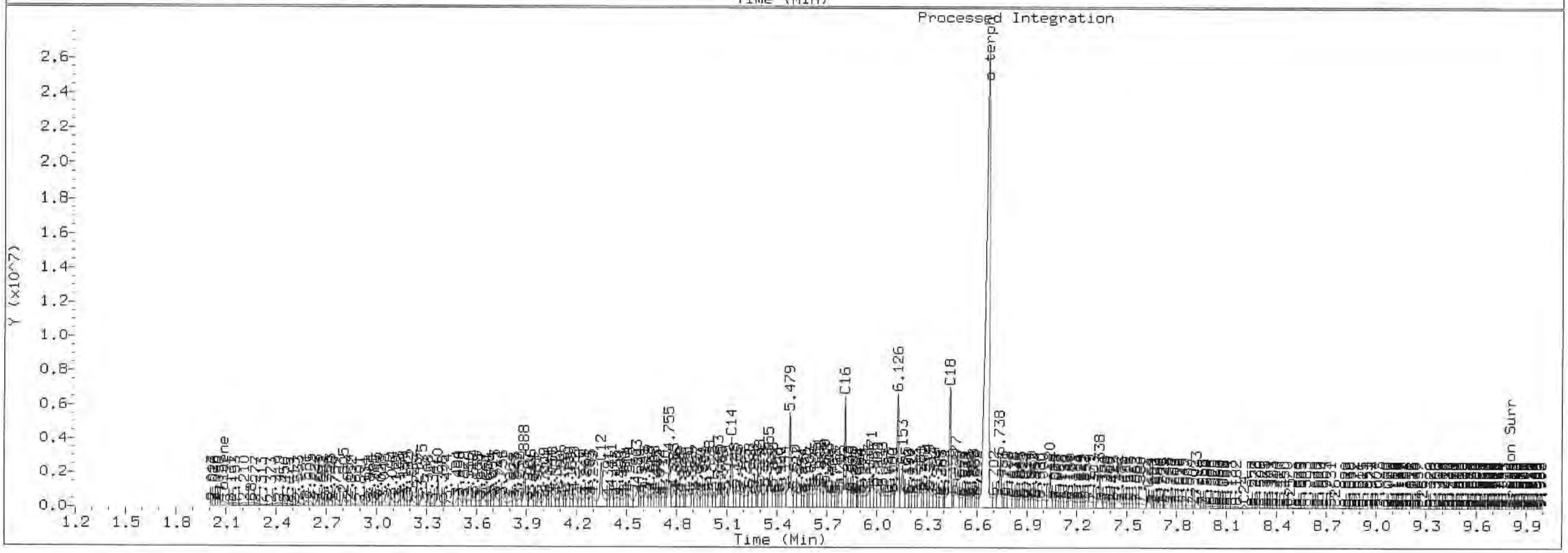


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2511.D Injection: 25-OCT-2019 15:13

Lab ID:SHJ0406-CAL5





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Date : 25-OCT-2019 15:32

Client ID:

Sample Info: SHJ0406-CAL6

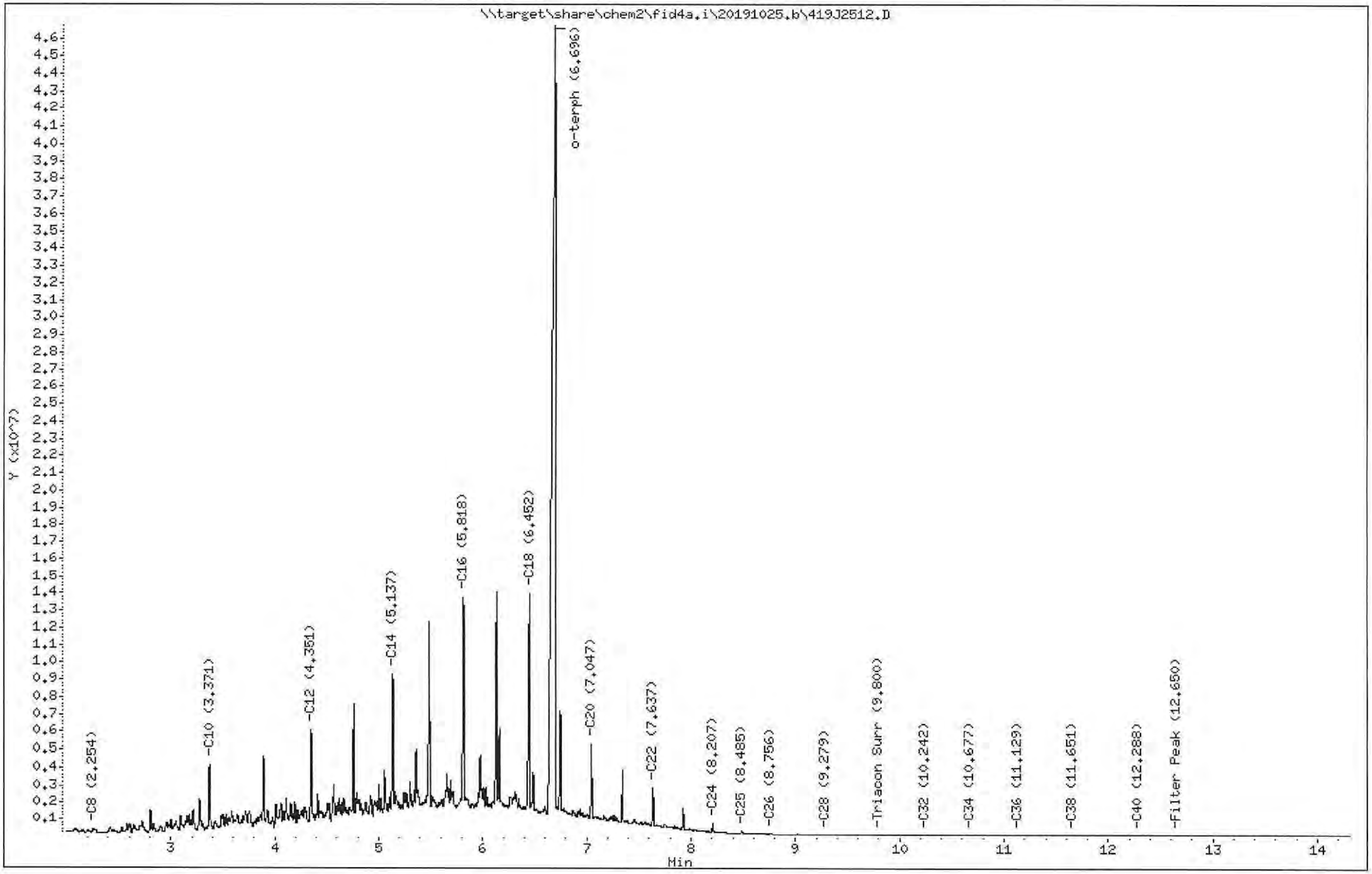
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2512.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL6
Client ID:
Injection: 25-OCT-2019 15:32
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.254	-0.008	310597	486343	WATPHD	(C12-C24)	386988567	2428.7
C10	3.371	-0.002	4067321	3926897	WATPHM	(C24-C38)	3326156	25.1
C12	4.351	0.004	6051560	7536066	AK102	(C10-C25)	458776536	2346.8
C14	5.137	0.007	9257057	8197076	AK103	(C25-C36)	2148648	21.5
C16	5.818	0.011	13762212	12844924	OR.DIES	(C10-C28)	460755382	2350.8
C18	6.452	0.017	13977204	16316405				
C20	7.047	0.004	5292354	4776661				
C22	7.637	-0.002	2821591	2512756				
C24	8.207	-0.007	692936	731199				
C25	8.485	-0.008	261257	416815				
C26	8.756	-0.009	100686	191231				
C28	9.279	-0.006	17823	35082				
C32	10.242	-0.001	483	193				
C34	10.677	-0.004	847	428				
Filter Peak	12.650	-0.001	5215	3893	CREOSOT	(C12-C22)	374231679	95935.0
C36	11.129	0.000	2243	1721				
C38	11.651	0.001	3497	1043				
C40	12.288	-0.001	4517	2473				
o-terph	6.696	0.039	45134516	94404433				
Triacon Surr	9.800	-0.002	2320	892	NAS DIES	(C10-C24)	457687210	2345.3

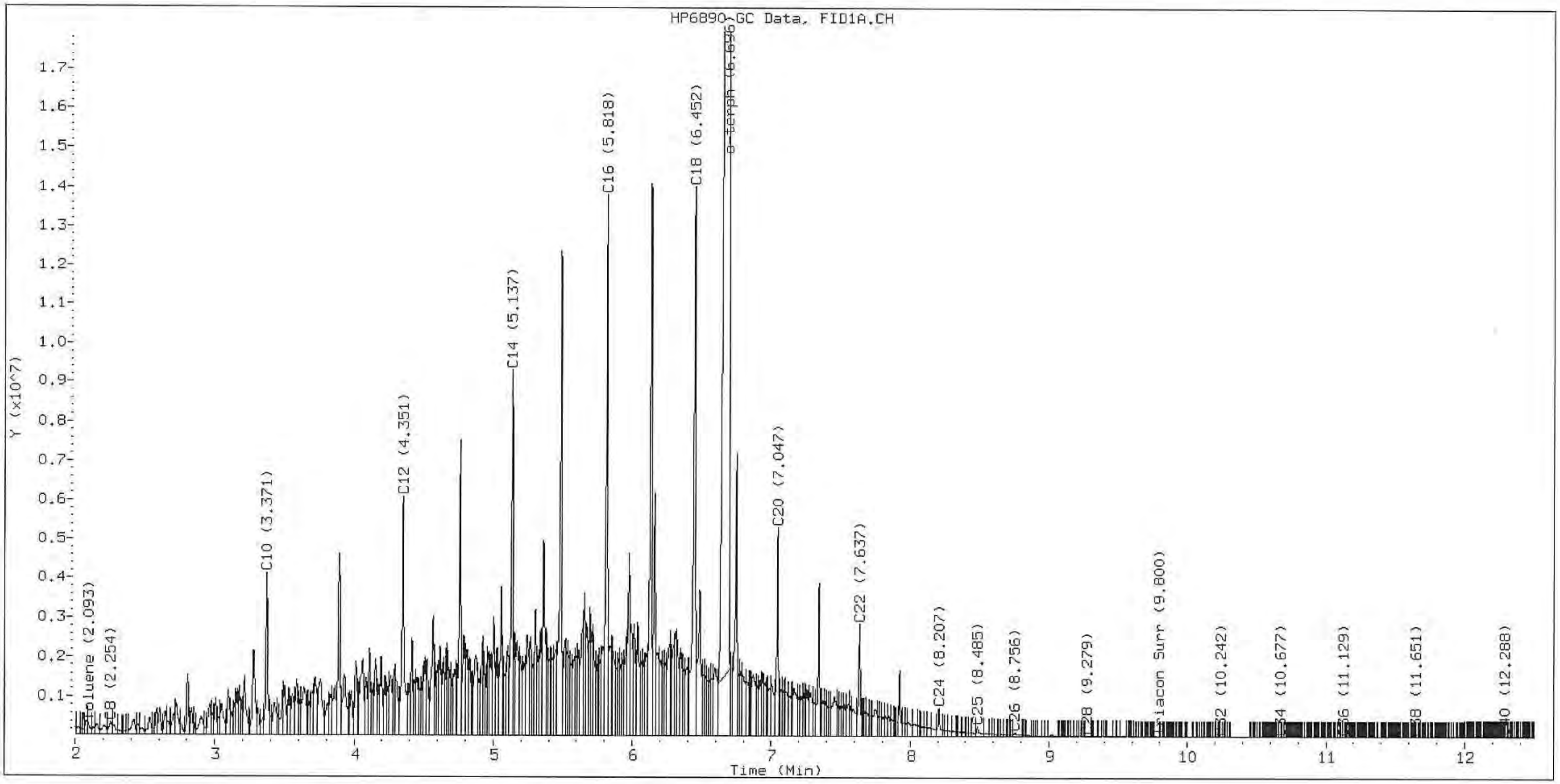
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	94404433	461.2	M
Triacontane	892	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

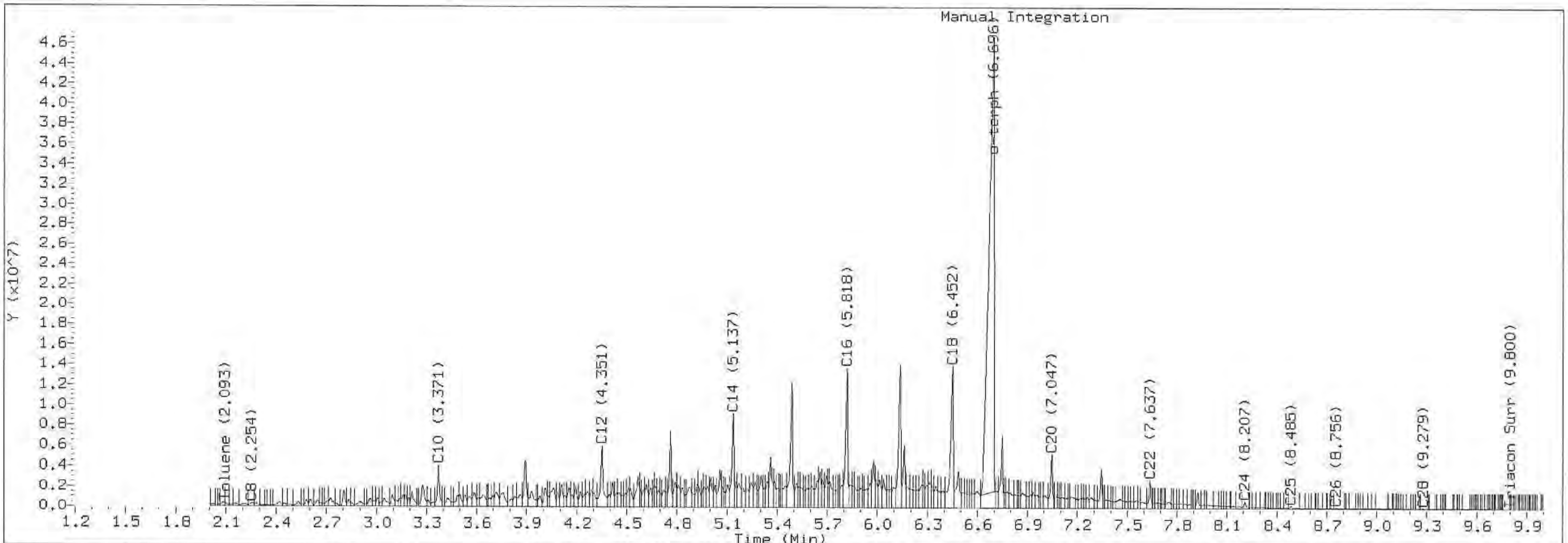
Datafile: FID4A, 20191025.b/419J2512.D SHJ0406-CAL6

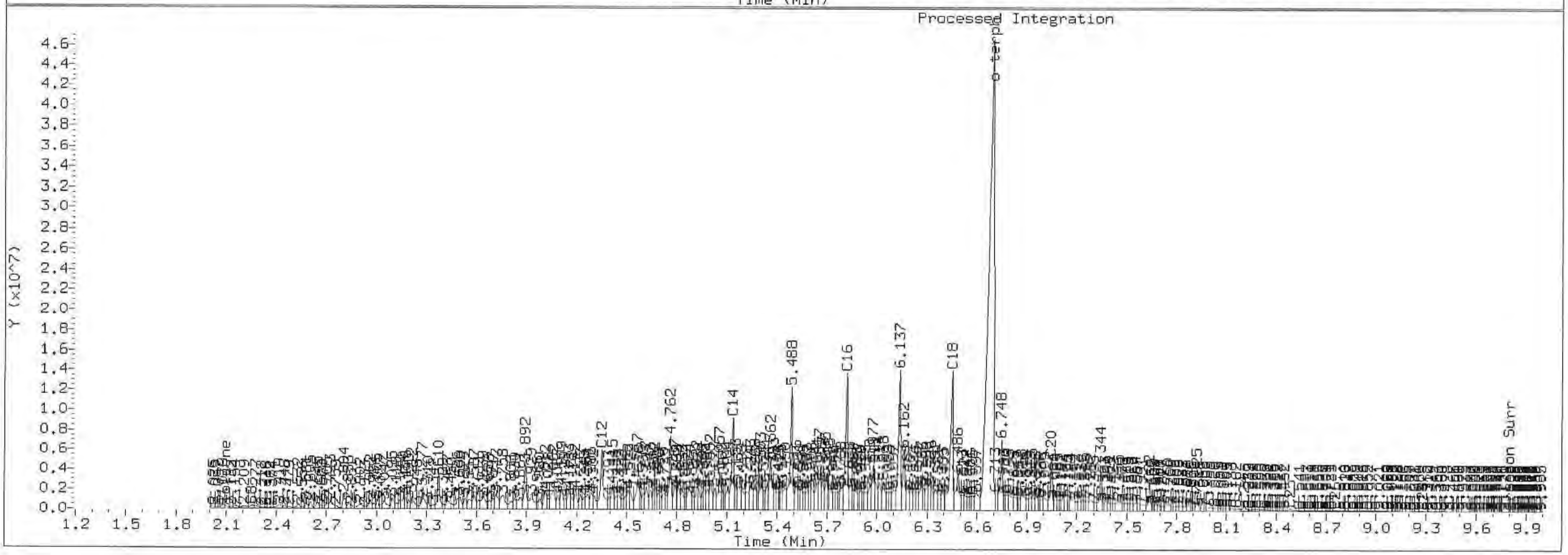


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2512.D Injection: 25-OCT-2019 15:32

Lab ID:SHJ0406-CAL6





Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2513.D

Page 1

Date : 25-OCT-2019 15:52

Client ID:

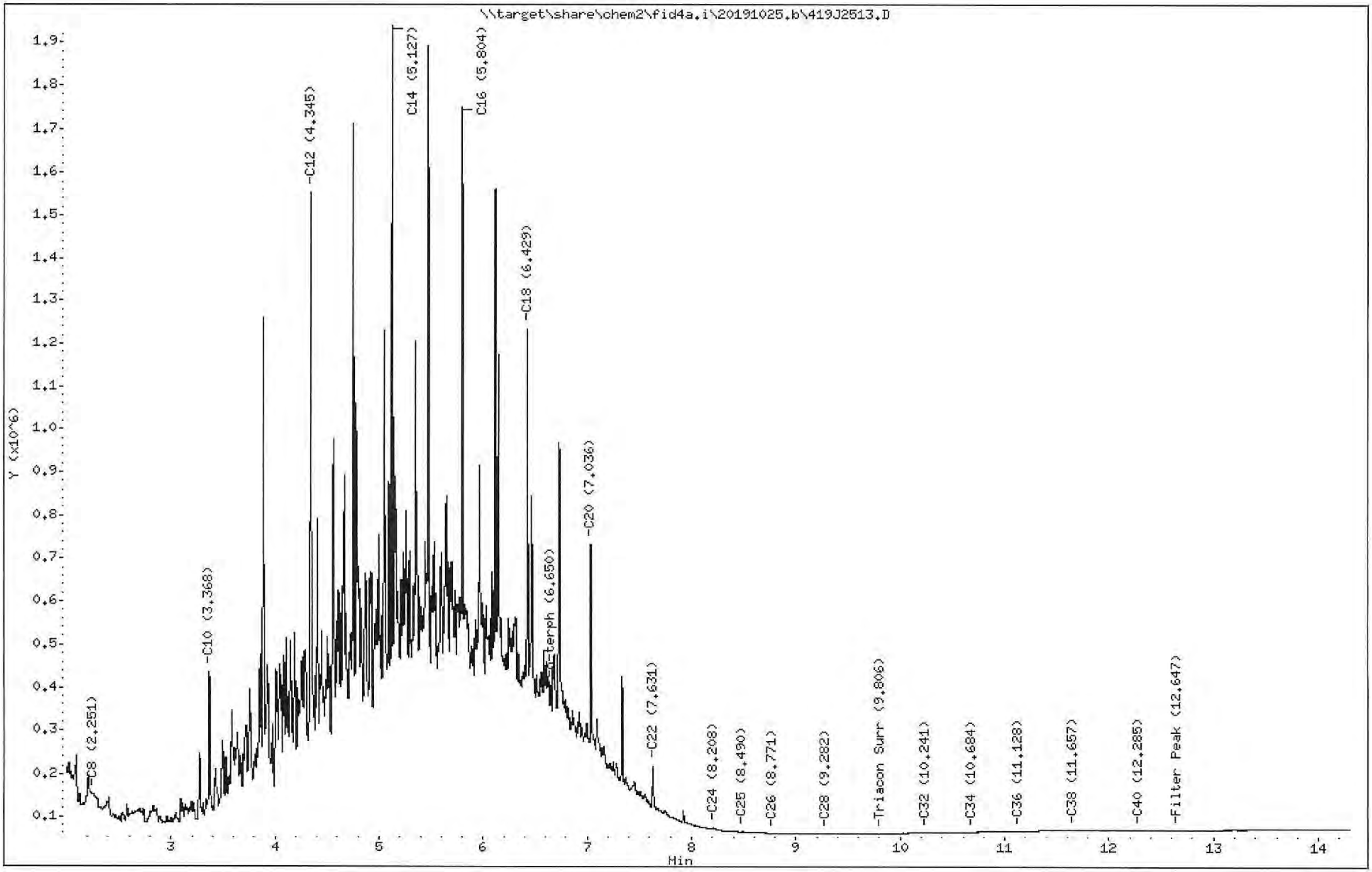
Instrument: fid4a.i

Sample Info: SHJ0406-SCV1

Operator: CTO/SH/VTS/JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2513.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV1
Client ID:
Injection: 25-OCT-2019 15:52
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.251	-0.011	94961	147864	WATPHD	(C12-C24)	81454017	511.2
C10	3.368	-0.005	379319	401979	WATPHM	(C24-C38)	639731	4.8
C12	4.345	-0.002	1496096	1990616	AK102	(C10-C25)	97704414	499.8
C14	5.127	-0.002	1881566	1510979	AK103	(C25-C36)	332991	3.3
C16	5.804	-0.003	1693335	1468242	OR.DIES	(C10-C28)	97755450	498.8
C18	6.429	-0.006	1178327	1173671				
C20	7.036	-0.007	676475	771884				
C22	7.631	-0.008	162529	245982				
C24	8.208	-0.007	16269	46701				
C25	8.490	-0.003	4835	8168				
C26	8.771	0.006	1378	465				
C28	9.282	-0.003	218	122				
C32	10.241	-0.001	2076	410				
C34	10.684	0.003	4334	2137				
Filter Peak	12.647	-0.003	10515	4189	CREOSOT	(C12-C22)	80554511	20650.3
C36	11.128	-0.001	6869	2744				
C38	11.657	0.008	8764	3056				
C40	12.285	-0.004	9988	4995				
o-terph	6.650	-0.007	347314	350999				
Triacon Surr	9.806	0.003	1146	388	NAS DIES	(C10-C24)	97645351	500.4

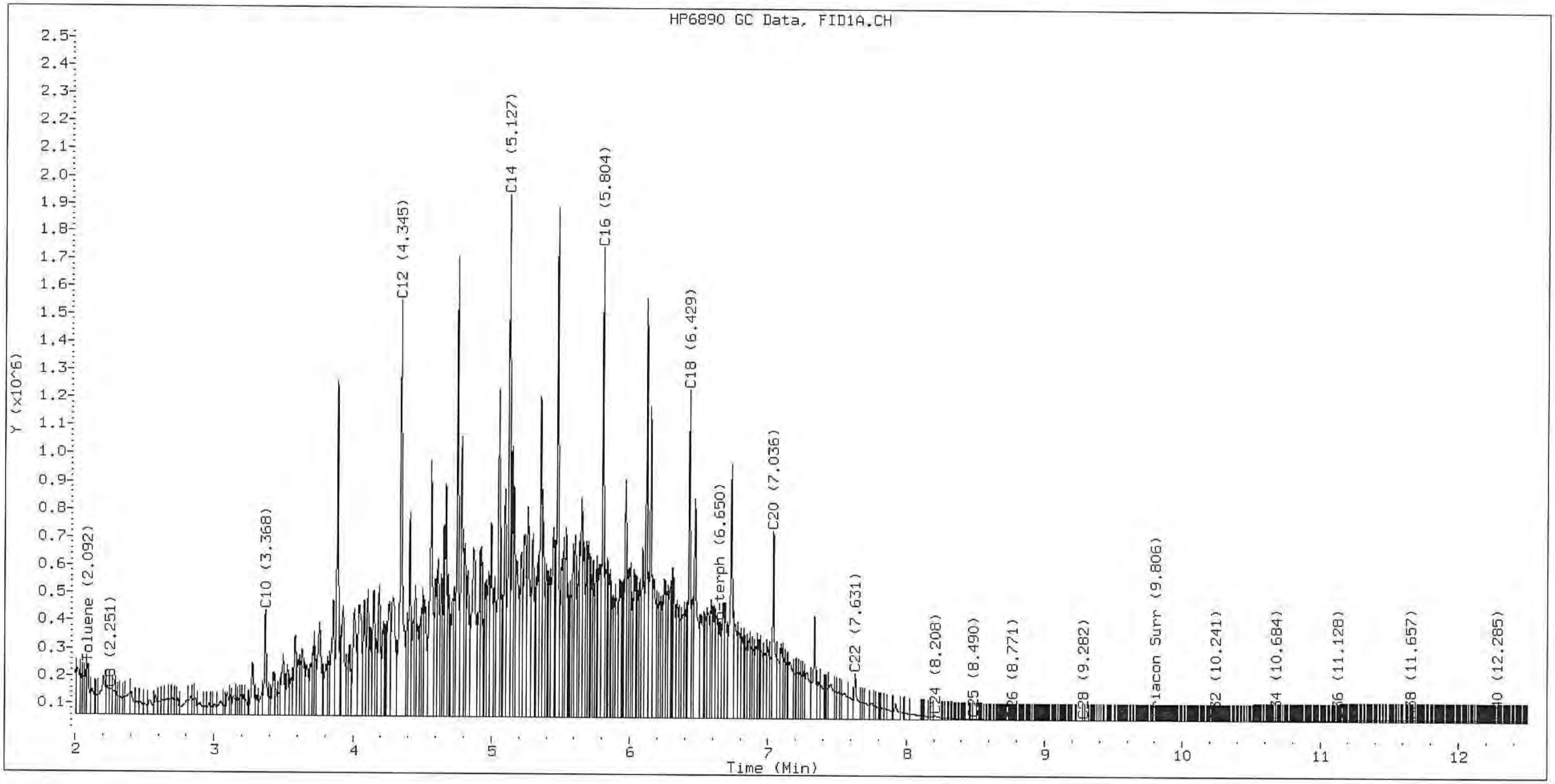
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	350999	1.7
Triacontane	388	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2513.D SHJ0406-SCV1



Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2514.D

Date : 25-OCT-2019 16:12

Client ID:

Sample Info: SHJ0406-CAL7

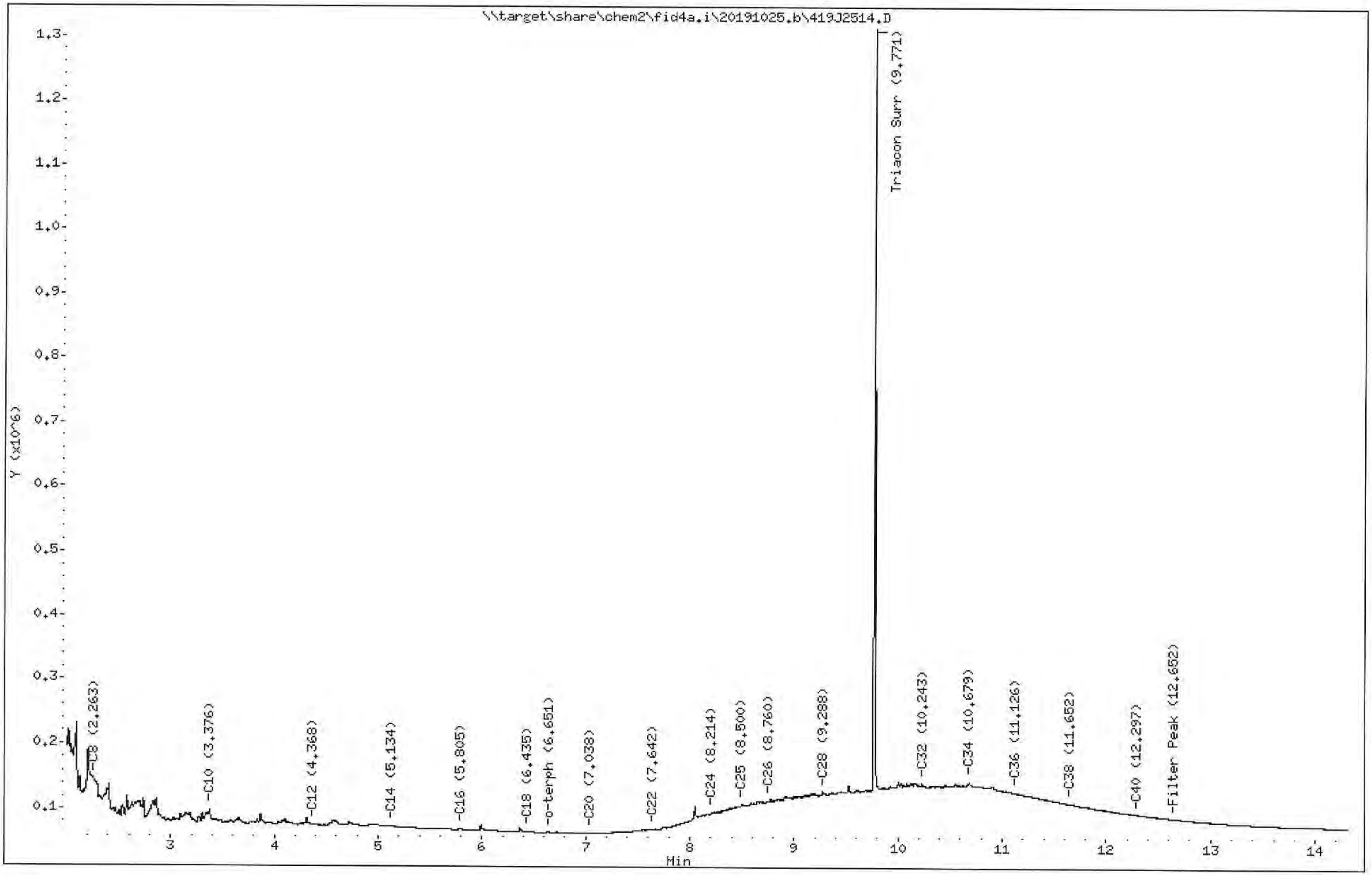
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2514.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL7
Client ID:
Injection: 25-OCT-2019 16:12
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	85024	58523	WATPHD	(C12-C24)	1690231	10.6
C10	3.376	0.003	37002	76813	WATPHM	(C24-C38)	13578464	102.4
C12	4.368	0.021	13222	16848	AK102	(C10-C25)	3173344	16.2
C14	5.134	0.004	9789	3901	AK103	(C25-C36)	11330395	113.3
C16	5.805	-0.002	5337	2891	OR.DIES	(C10-C28)	6258620	31.9
C18	6.435	0.000	1861	887				
C20	7.038	-0.005	431	243				
C22	7.642	0.003	6248	1558				
C24	8.214	-0.001	36357	52641				
C25	8.500	0.007	49017	43098				
C26	8.760	-0.005	55671	27607				
C28	9.288	0.003	67768	33791				
C32	10.243	0.001	81940	56823				
C34	10.679	-0.002	85222	51016				
Filter Peak	12.652	0.002	27566	19236	CREOSOT	(C12-C22)	959454	246.0
C36	11.126	-0.003	69343	27714				
C38	11.652	0.002	52690	33941				
C40	12.297	0.009	34497	15508				
o-terph	6.651	-0.006	941	547				
Triacon Surr	9.771	-0.031	1179904	816812	NAS DIES	(C10-C24)	2749900	14.1

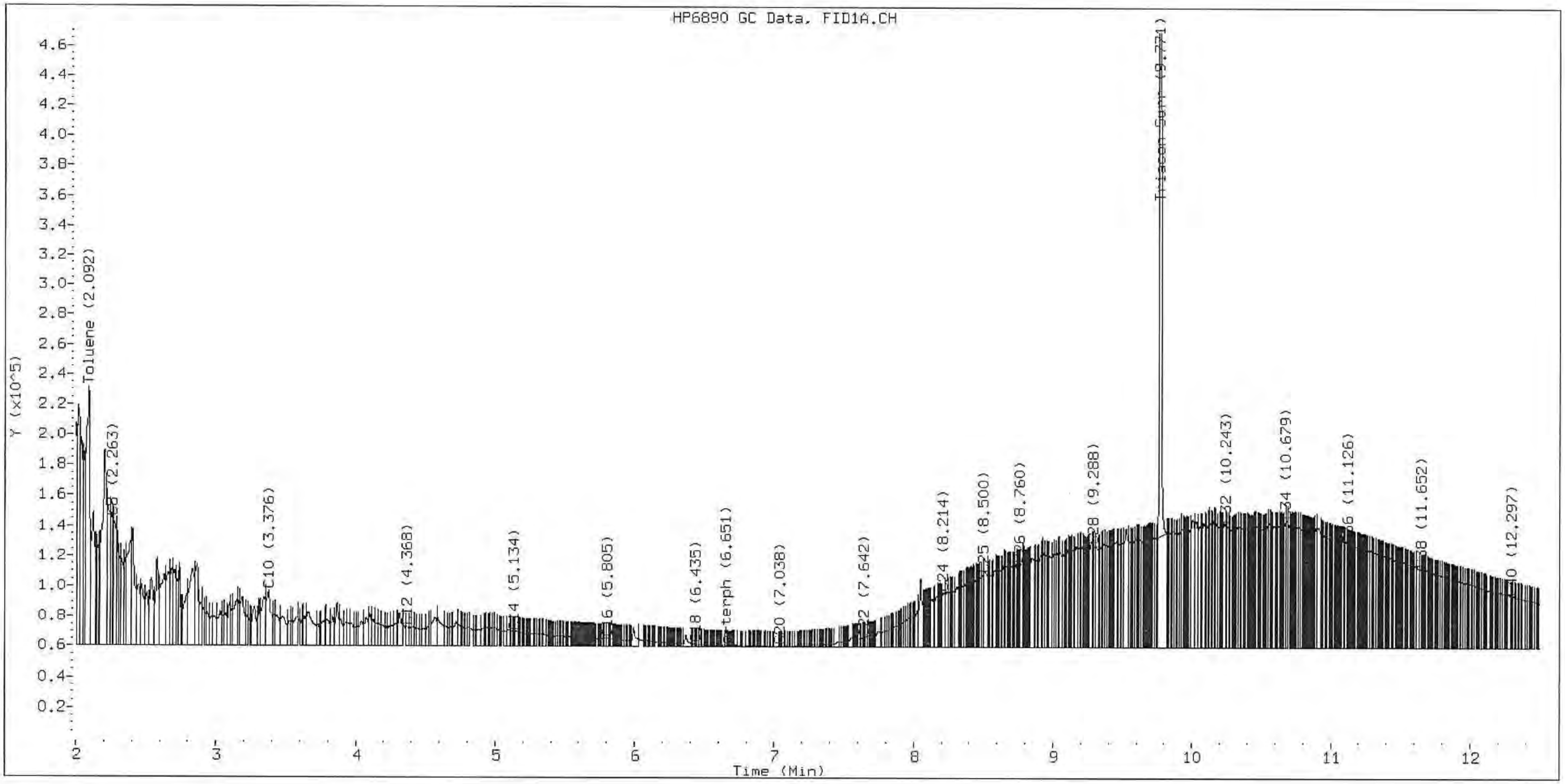
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	547	0.0
Triacontane	816812	4.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

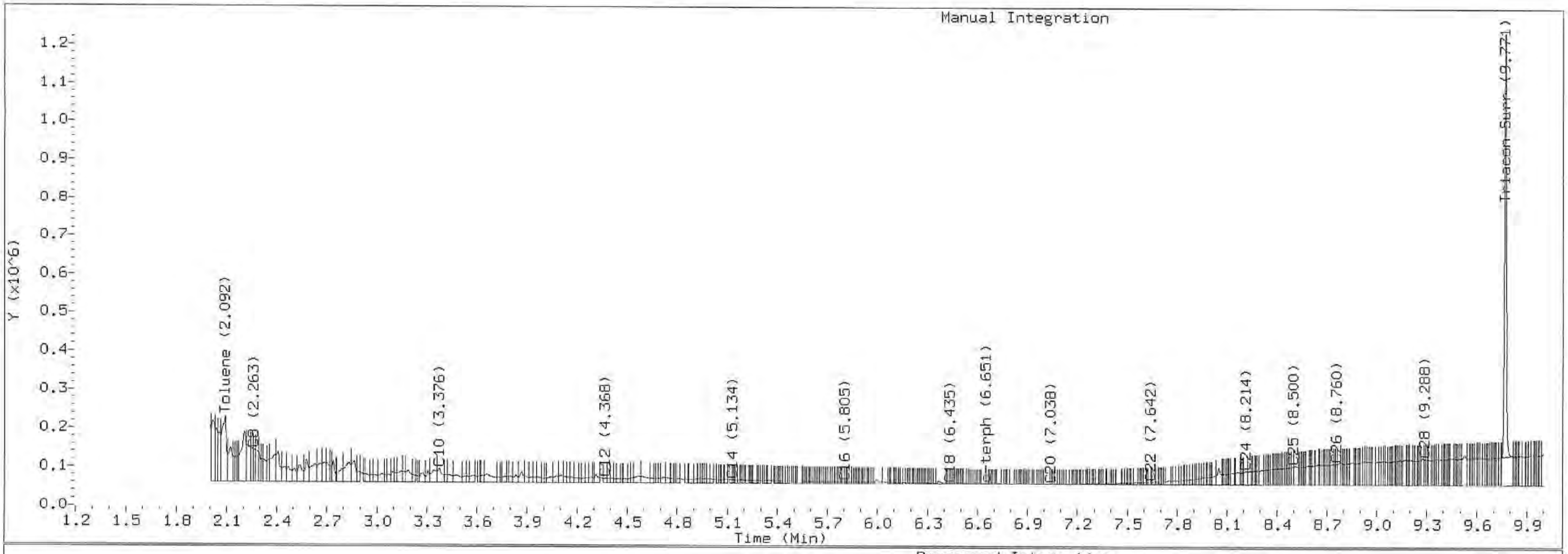
Datafile: FID4A, 20191025.b/419J2514.D SHJ0406-CAL7

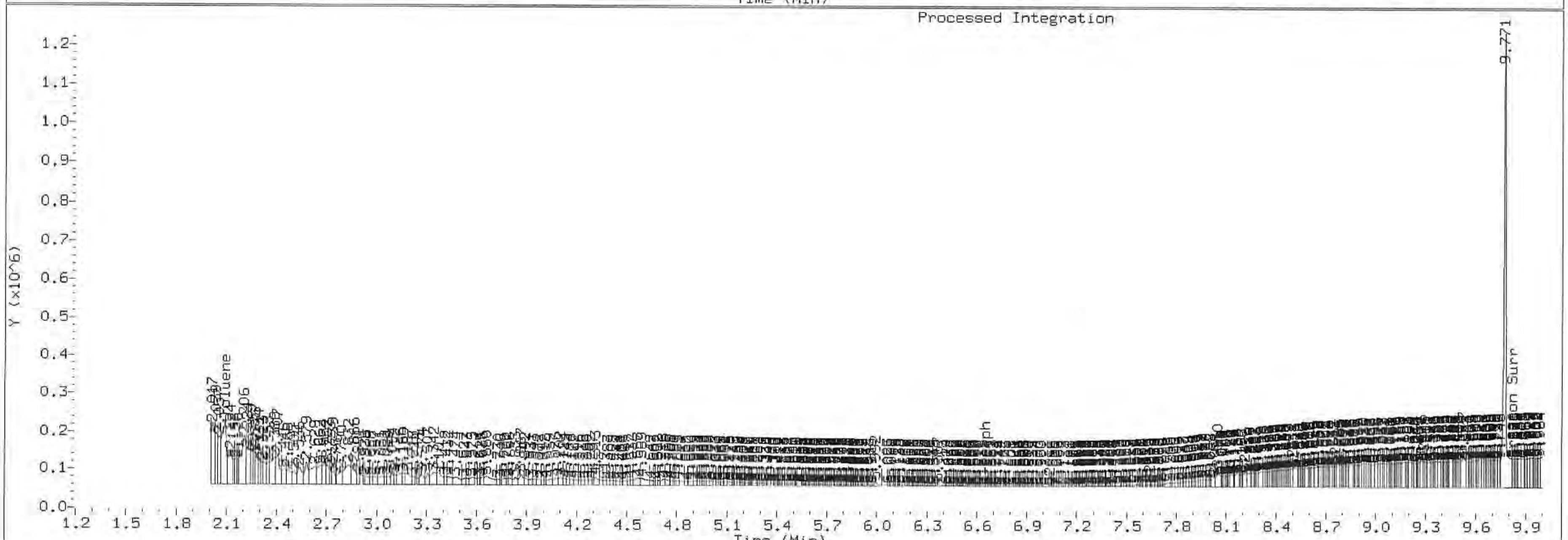


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2514.D Injection: 25-OCT-2019 16:12

Lab ID:SHJ0406-CAL7





Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2515.D

Date : 25-OCT-2019 16:33

Client ID:

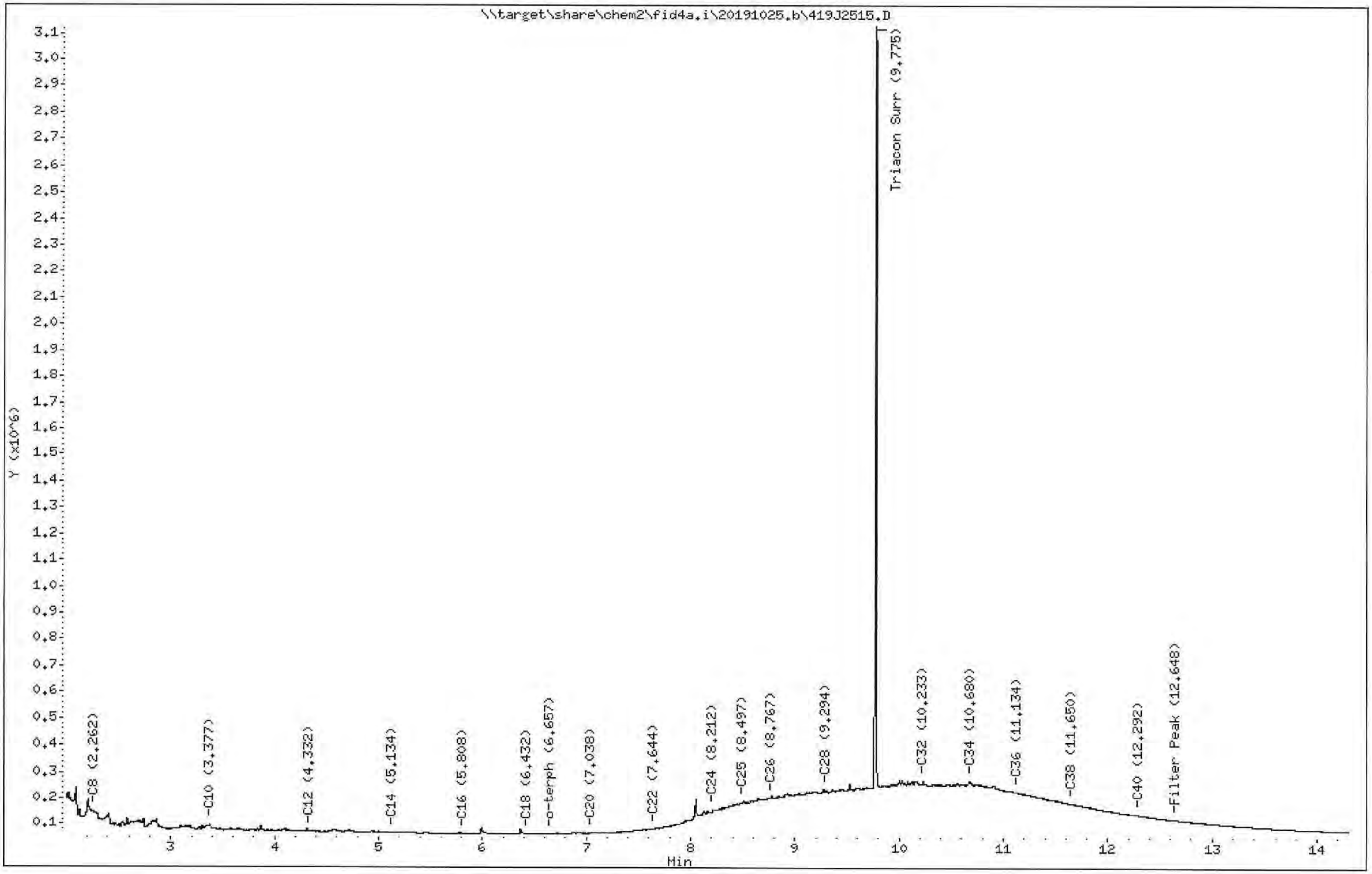
Instrument: fid4a.i

Sample Info: SHJ0406-CAL8

Operator: CTO/SH/VTS/JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2515.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL8
Client ID:
Injection: 25-OCT-2019 16:33
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.262	0.000	86050	63363	WATPHD	(C12-C24)	2977110	18.7
C10	3.377	0.004	37018	79239	WATPHM	(C24-C38)	34653776	261.3
C12	4.332	-0.015	11427	15714	AK102	(C10-C25)	5054179	25.9
C14	5.134	0.004	5154	2057	AK103	(C25-C36)	29175058	291.8
C16	5.808	0.001	2486	1818	OR.DIES	(C10-C28)	13169508	67.2
C18	6.432	-0.002	1168	783				
C20	7.038	-0.005	3772	4551				
C22	7.644	0.005	20883	5211				
C24	8.212	-0.002	97111	92984				
C25	8.497	0.004	127743	100149				
C26	8.767	0.003	144937	36089				
C28	9.294	0.009	174099	155043				
C32	10.233	-0.009	209275	335982				
C34	10.680	-0.001	211521	464774				
Filter Peak	12.648	-0.002	60945	24237	CREOSOT	(C12-C22)	985245	252.6
C36	11.134	0.005	168788	75681				
C38	11.650	0.000	122780	30685				
C40	12.292	0.003	80017	15993				
o-terph	6.657	0.001	951	796				
Triacon Surr	9.775	-0.027	2879377	2052387	NAS DIES	(C10-C24)	3922564	20.1

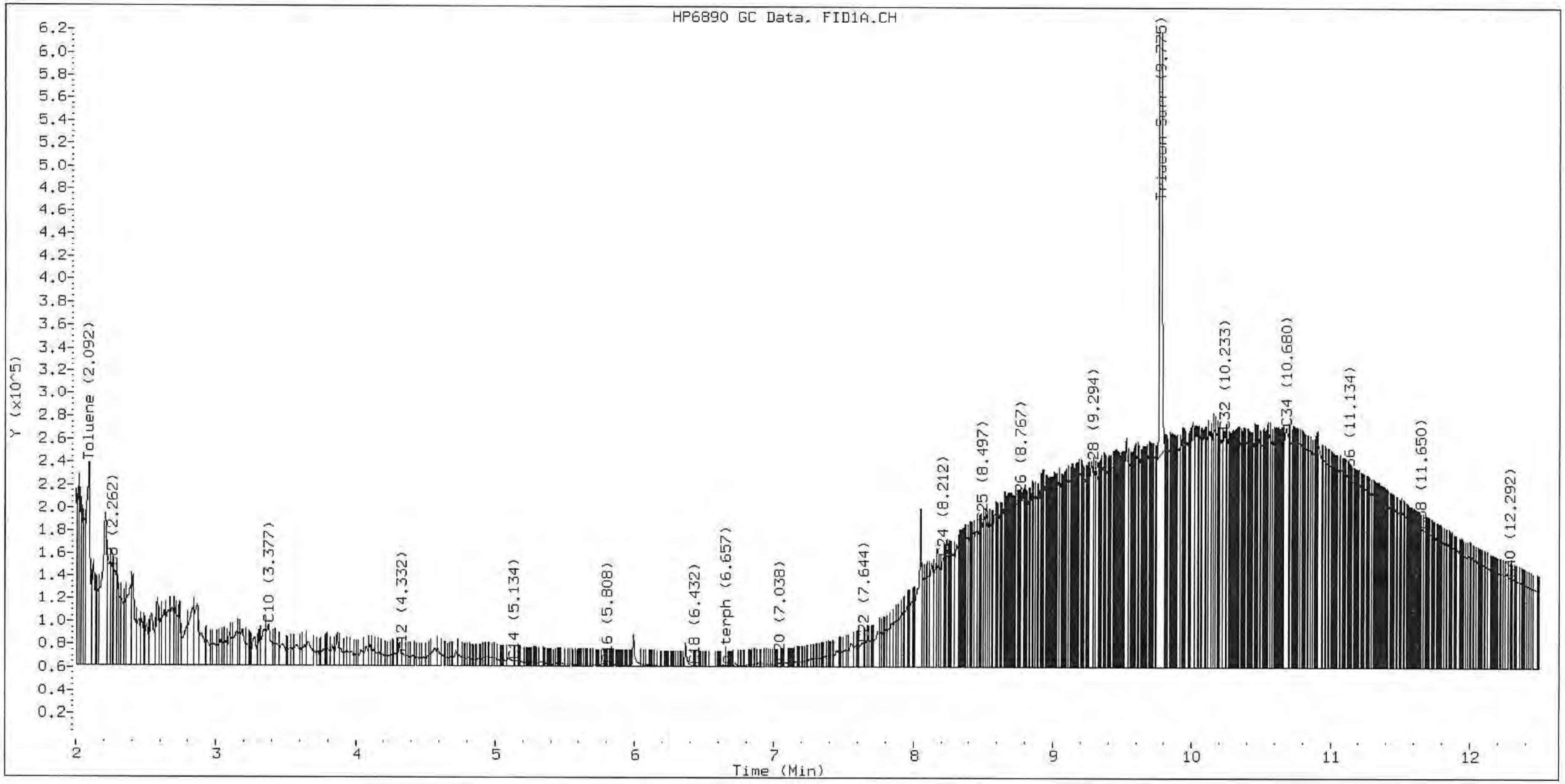
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	796	0.0
Triacontane	2052387	11.5 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

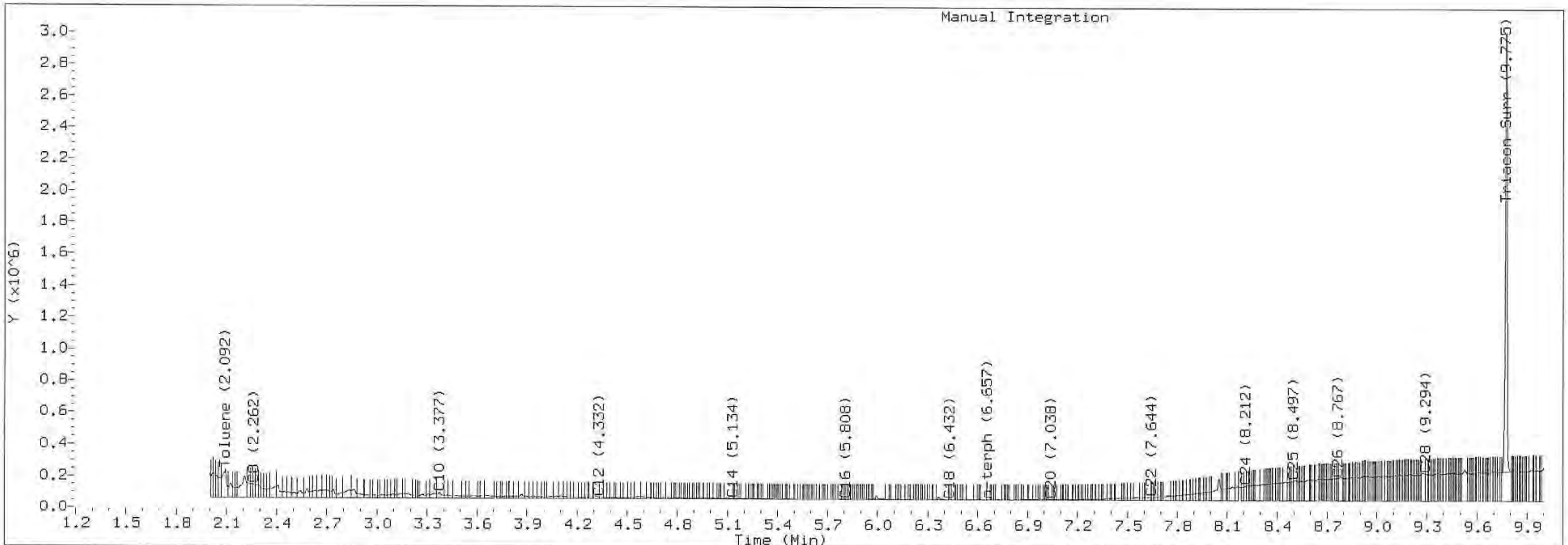
Datafile: FID4A, 20191025.b/419J2515.D SHJ0406-CAL8

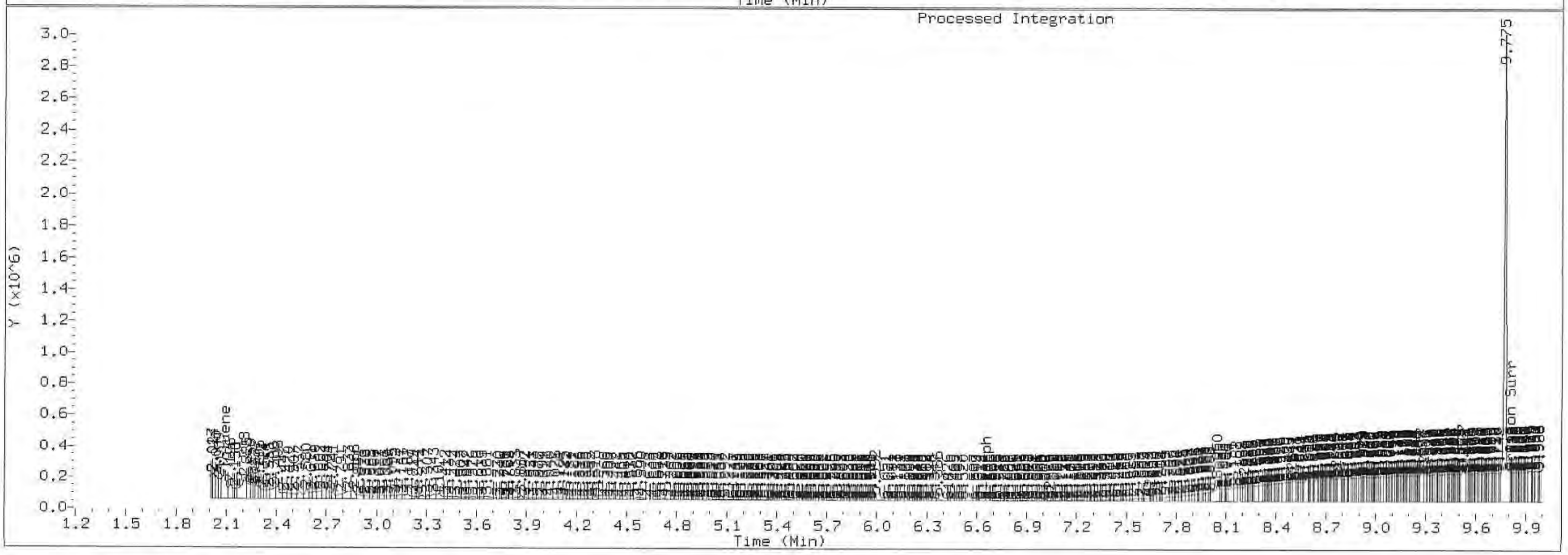


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2515.D Injection: 25-OCT-2019 16:33

Lab ID:SHJ0406-CAL8





Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2516.D

Date : 25-OCT-2019 16:53

Client ID:

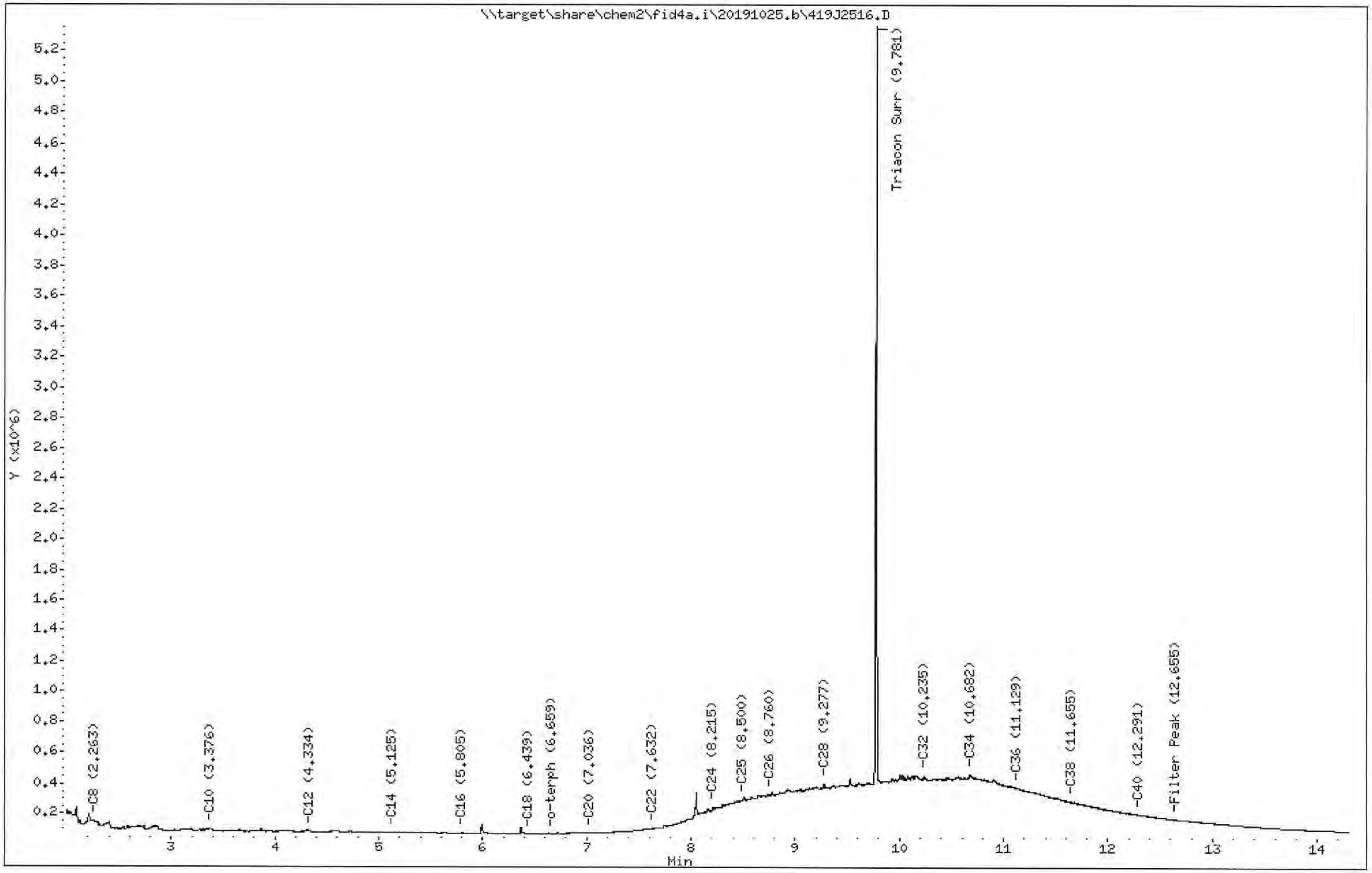
Sample Info: SHJ0406-CAL9

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2516.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL9
Client ID:
Injection: 25-OCT-2019 16:53
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	85054	58529	WATPHD	(C12-C24)	5661873	35.5
C10	3.376	0.003	38337	74763	WATPHM	(C24-C38)	64308153	484.9
C12	4.334	-0.013	14490	20832	AK102	(C10-C25)	8794999	45.0
C14	5.125	-0.004	9491	6950	AK103	(C25-C36)	54037059	540.5
C16	5.805	-0.002	4594	3625	OR.DIES	(C10-C28)	23868061	121.8
C18	6.439	0.004	1696	642				
C20	7.036	-0.007	7504	9871				
C22	7.632	-0.007	42646	55918				
C24	8.215	0.001	187247	321321				
C25	8.500	0.007	242499	189952				
C26	8.760	-0.005	272862	175979				
C28	9.277	-0.008	344800	562248				
C32	10.235	-0.007	399681	717669				
C34	10.682	0.001	410565	682394				
Filter Peak	12.655	0.004	112959	178875	CREOSOT	(C12-C22)	1771420	454.1
C36	11.129	-0.000	318612	63696				
C38	11.655	0.005	227739	158292				
C40	12.291	0.002	146308	65396				
o-terph	6.659	0.002	1793	1646				
Triacon Surr	9.781	-0.021	4947832	3881047	NAS DIES	(C10-C24)	6718189	34.4

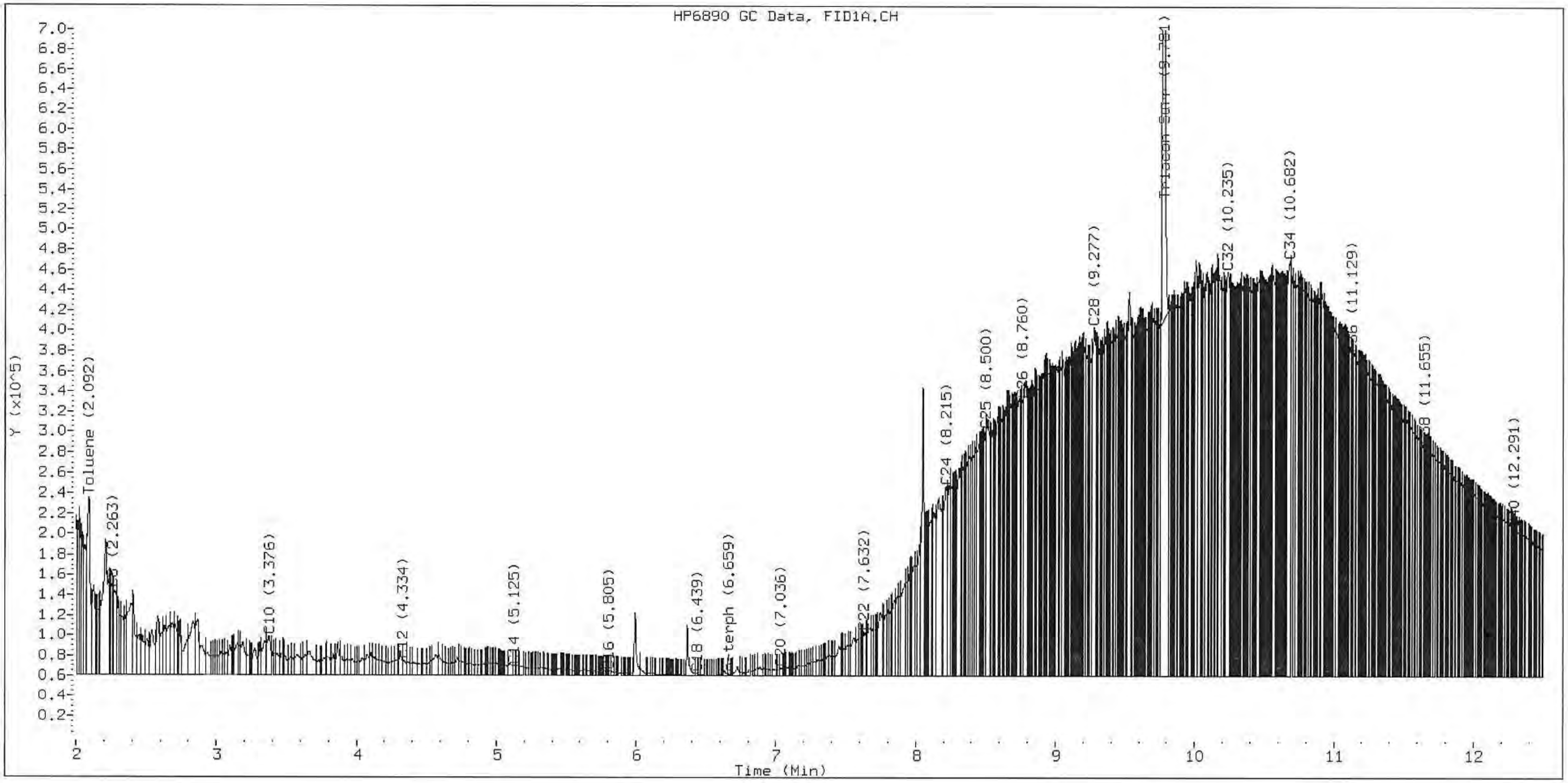
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	1646	0.0
Triacontane	3881047	21.8 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

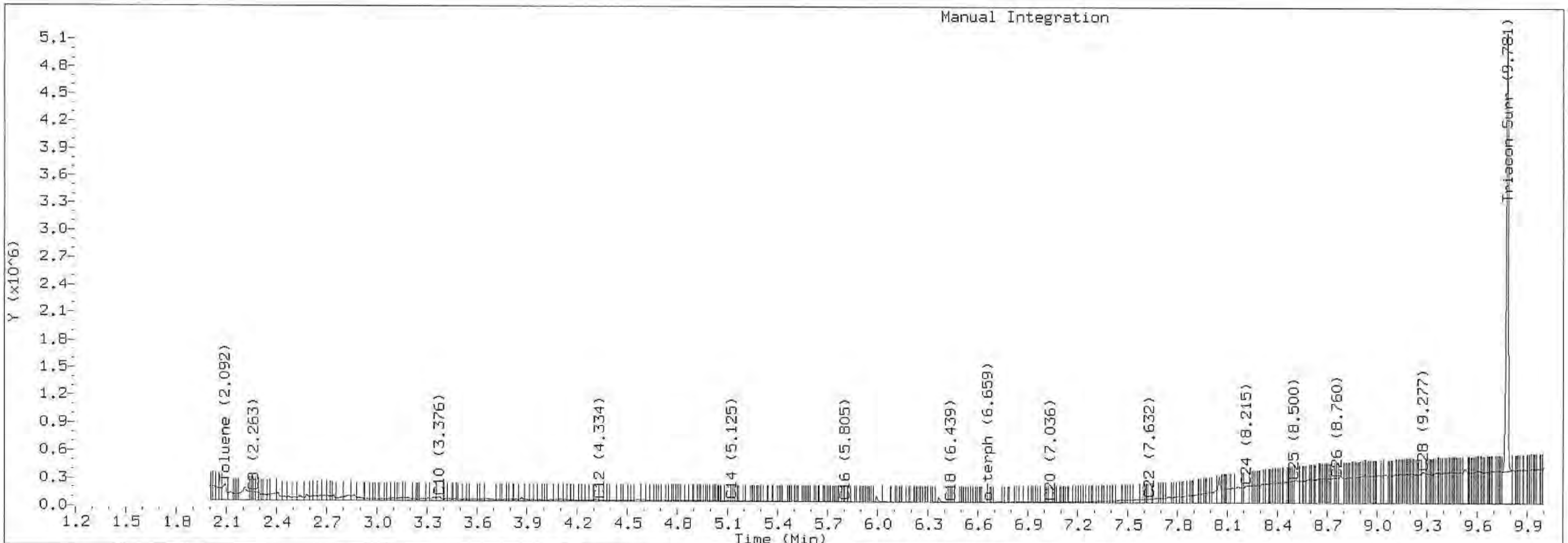
Datafile: FID4A, 20191025.b/419J2516.D SHJ0406-CAL9

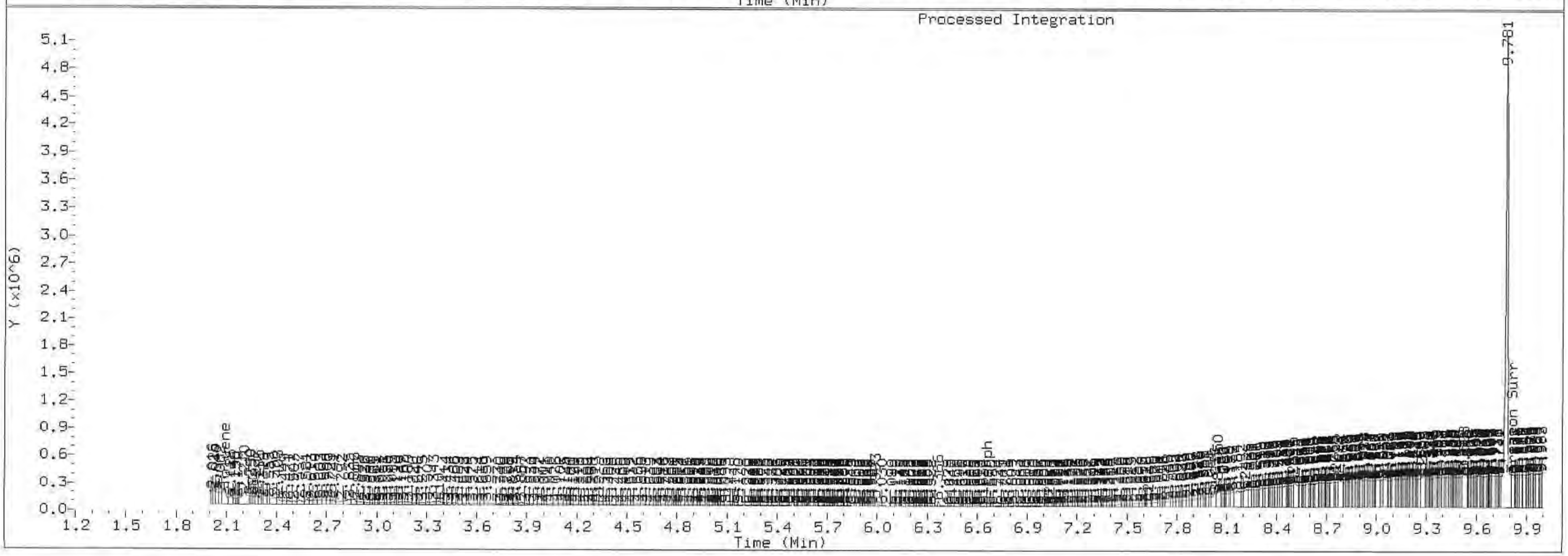


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2516.D Injection: 25-OCT-2019 16:53

Lab ID:SHJ0406-CAL9





Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2517.D

Date : 25-OCT-2019 17:13

Client ID:

Sample Info: SHJ0406-CALA

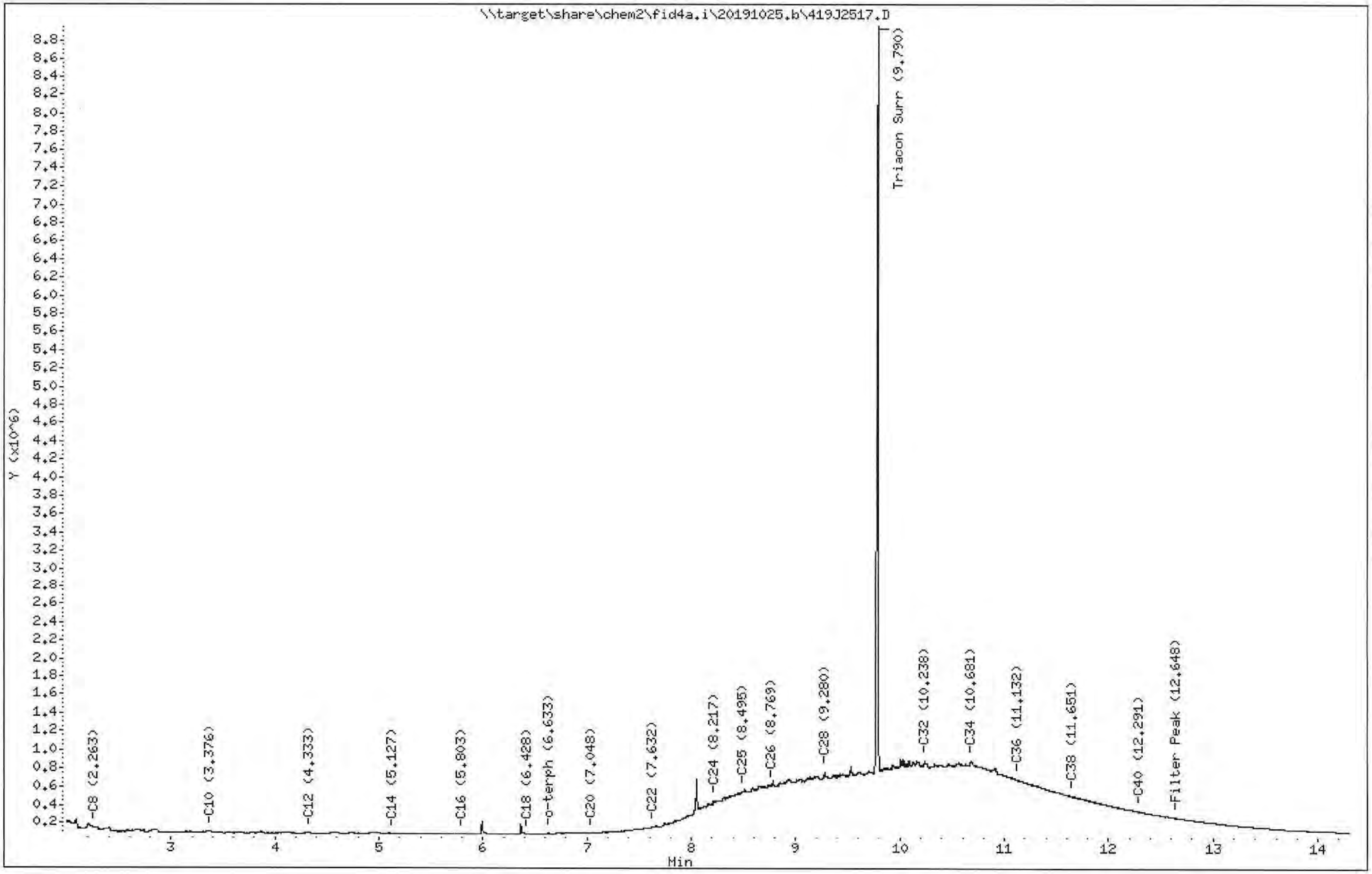
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2517.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALA
Client ID:
Injection: 25-OCT-2019 17:13
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	78760	49973	WATPHD	(C12-C24)	11050301	69.4
C10	3.376	0.003	33282	53155	WATPHM	(C24-C38)	130458600	983.6
C12	4.333	-0.014	8330	11675	AK102	(C10-C25)	16134883	82.5
C14	5.127	-0.003	6869	8015	AK103	(C25-C36)	110338631	1103.6
C16	5.803	-0.004	4269	6183	OR.DIES	(C10-C28)	47155868	240.6
C18	6.428	-0.006	4035	4694				
C20	7.048	0.005	16630	12336				
C22	7.632	-0.007	93050	108452				
C24	8.217	0.002	386378	321791				
C25	8.495	0.002	491396	292213				
C26	8.769	0.005	557751	166690				
C28	9.280	-0.005	695698	804868				
C32	10.238	-0.005	823126	997439				
C34	10.681	-0.000	821771	761528				
Filter Peak	12.648	-0.002	202612	170825	CREOSOT	(C12-C22)	2854310	731.7
C36	11.132	0.003	625826	249171				
C38	11.651	0.001	444433	177367				
C40	12.291	0.002	276466	164427				
o-terph	6.633	-0.023	11730	15135				
Triacon Surr	9.790	-0.012	8190520	7927188	NAS DIES	(C10-C24)	11670623	59.8

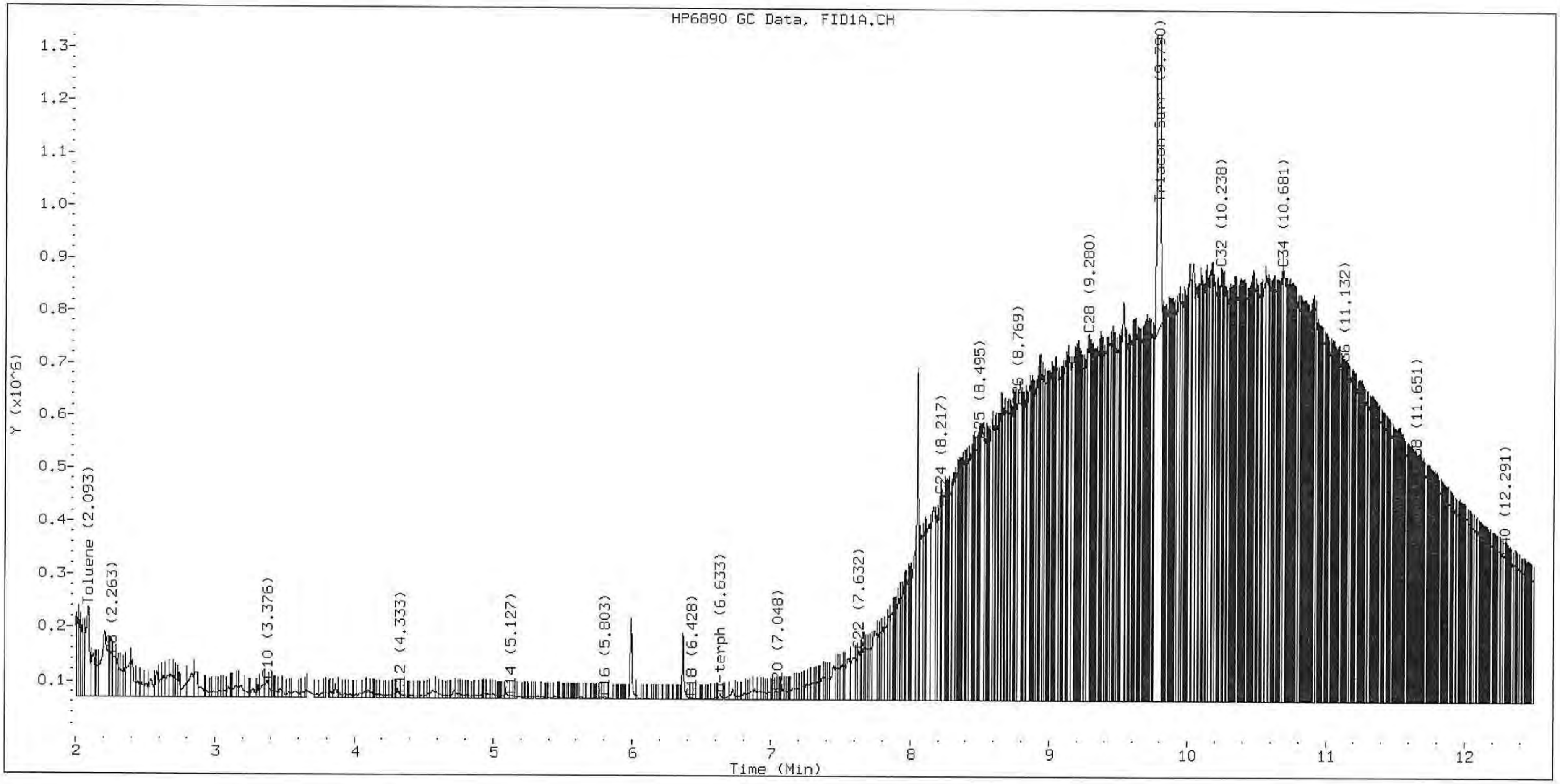
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	15135	0.1
Triacontane	7927188	44.5 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

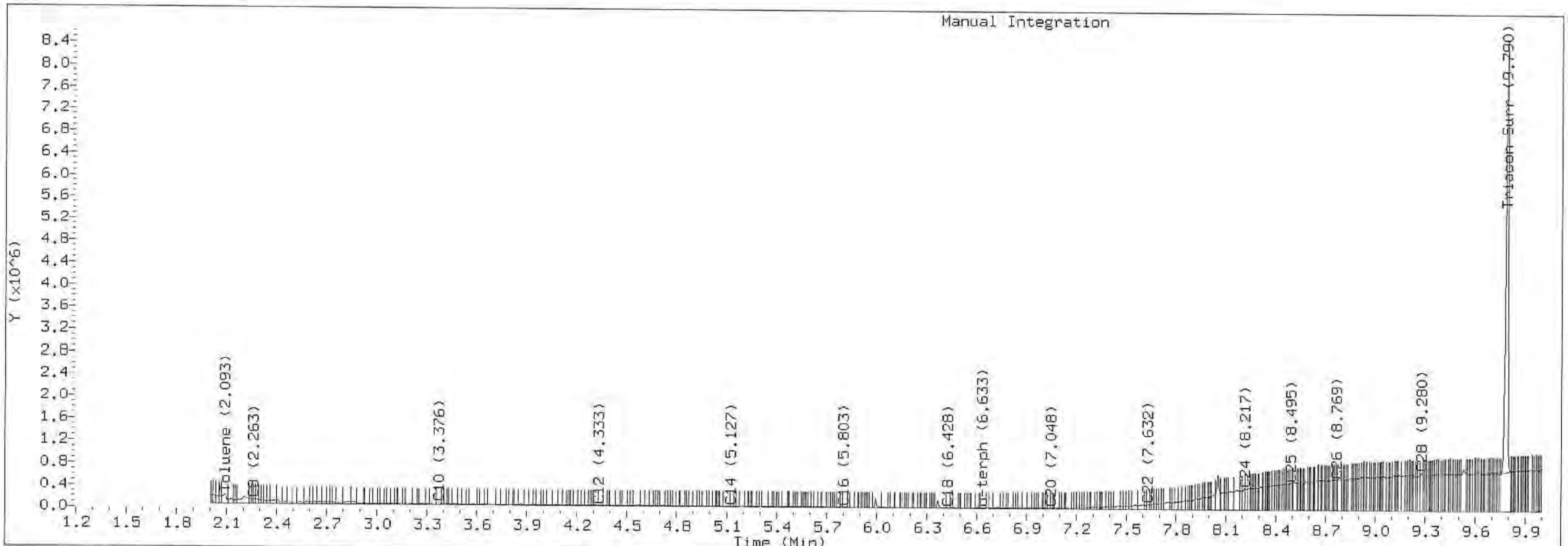
Datafile: FID4A, 20191025.b/419J2517.D SHJ0406-CALA

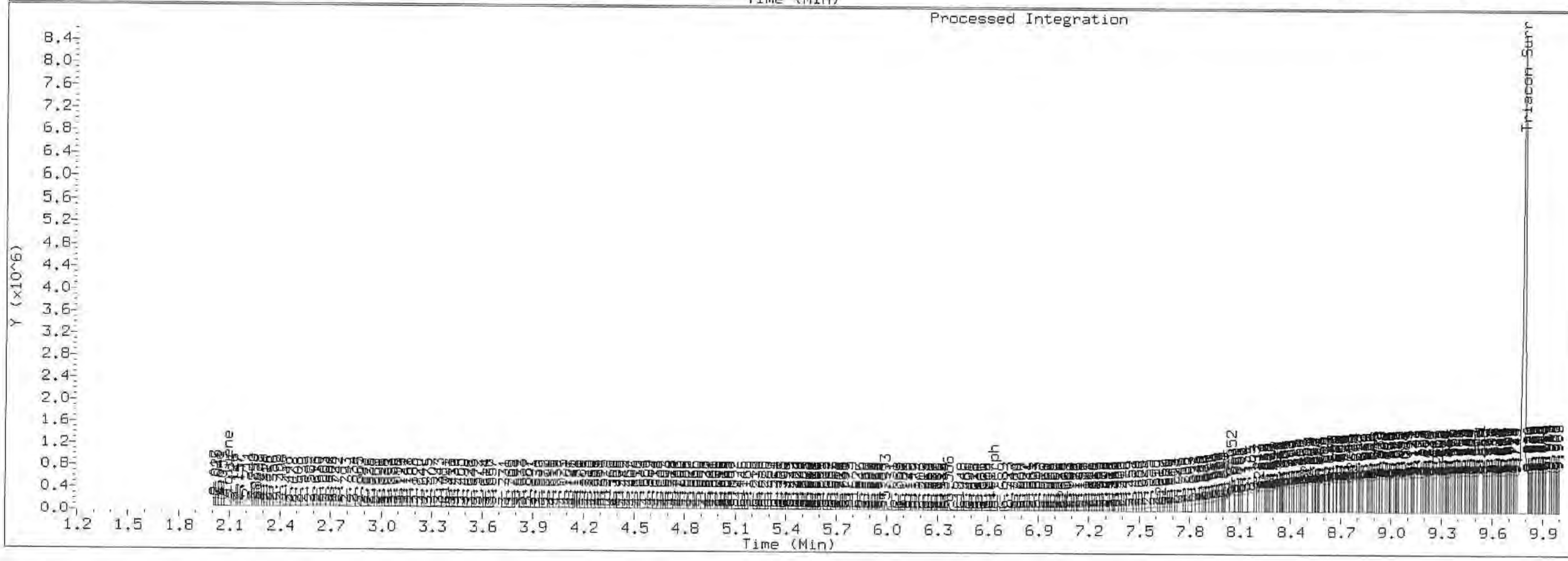


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2517.D Injection: 25-OCT-2019 17:13

Lab ID:SHJ0406-CALA





Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2518.D

Date : 25-OCT-2019 17:34

Client ID:

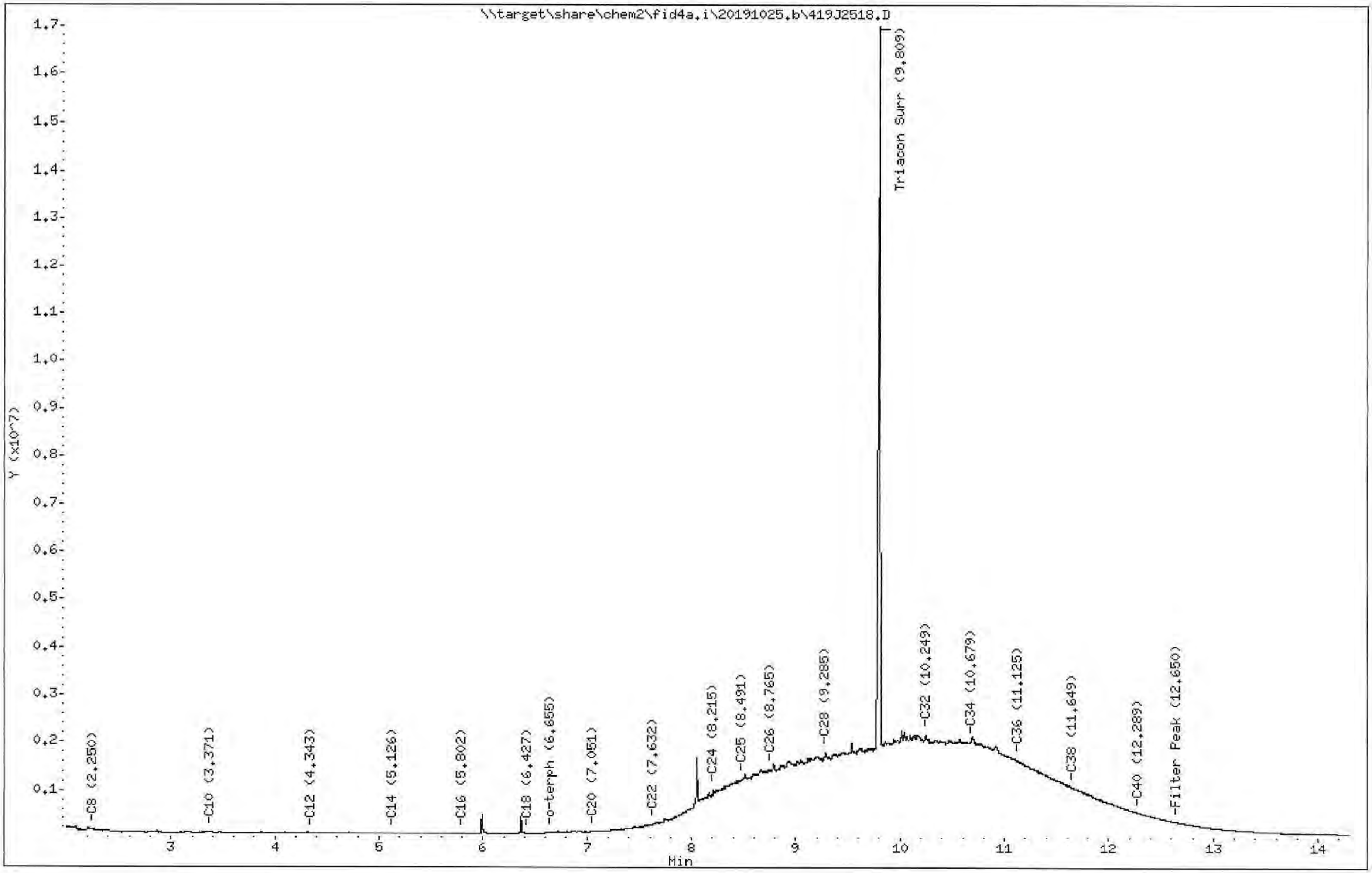
Sample Info: SHJ0406-CALB

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2518.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALB
Client ID:
Injection: 25-OCT-2019 17:34
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.250	-0.012	77817	116710	WATPHD	(C12-C24)	27251753	171.0
C10	3.371	-0.002	31760	39598	WATPHM	(C24-C38)	331873325	2502.2
C12	4.343	-0.004	6520	6156	AK102	(C10-C25)	38872526	198.8
C14	5.126	-0.004	7874	9340	AK103	(C25-C36)	281447225	2815.1
C16	5.802	-0.005	7984	9771	OR.DIES	(C10-C28)	115893490	591.3
C18	6.427	-0.007	14076	14289				
C20	7.051	0.008	46537	34495				
C22	7.632	-0.007	235207	295349				
C24	8.215	0.000	955047	900361				
C25	8.491	-0.002	1184503	236628				
C26	8.765	0.000	1401067	1730192				
C28	9.285	-0.001	1743563	2775911				
C32	10.249	0.007	2106415	3055227				
C34	10.679	-0.002	1974576	1267121				
Filter Peak	12.650	-0.001	278159	124338	CREOSOT	(C12-C22)	6708937	1719.8
C36	11.125	-0.004	1581807	1021345				
C38	11.649	-0.001	1027941	256759				
C40	12.289	0.000	486929	193205				
o-terph	6.655	-0.002	18811	15731				
Triacon Surr	9.809	0.007	15056726	20120024	NAS DIES	(C10-C24)	27786026	142.4

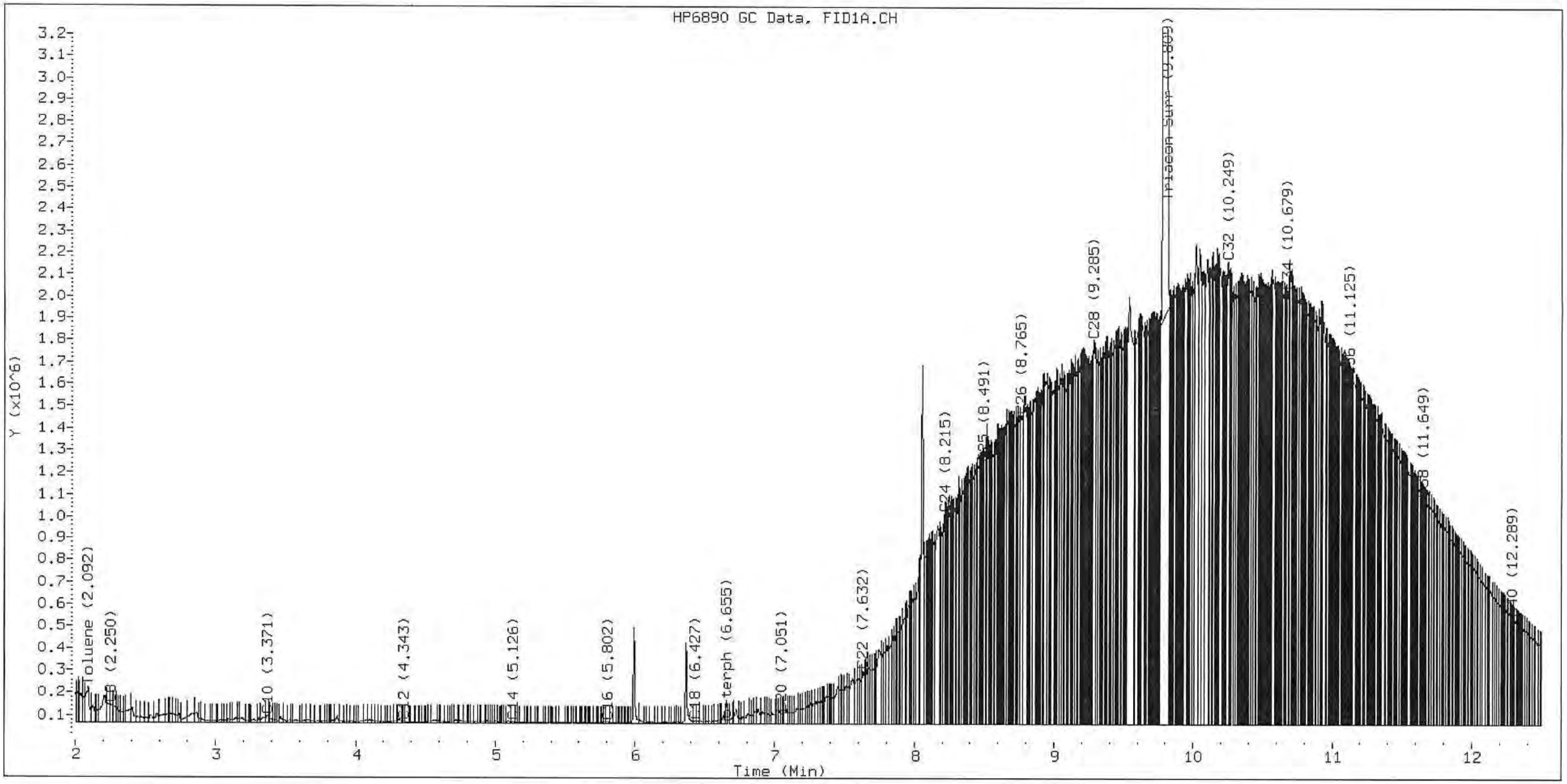
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	15731	0.1	
Triacontane	20120024	113.0	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

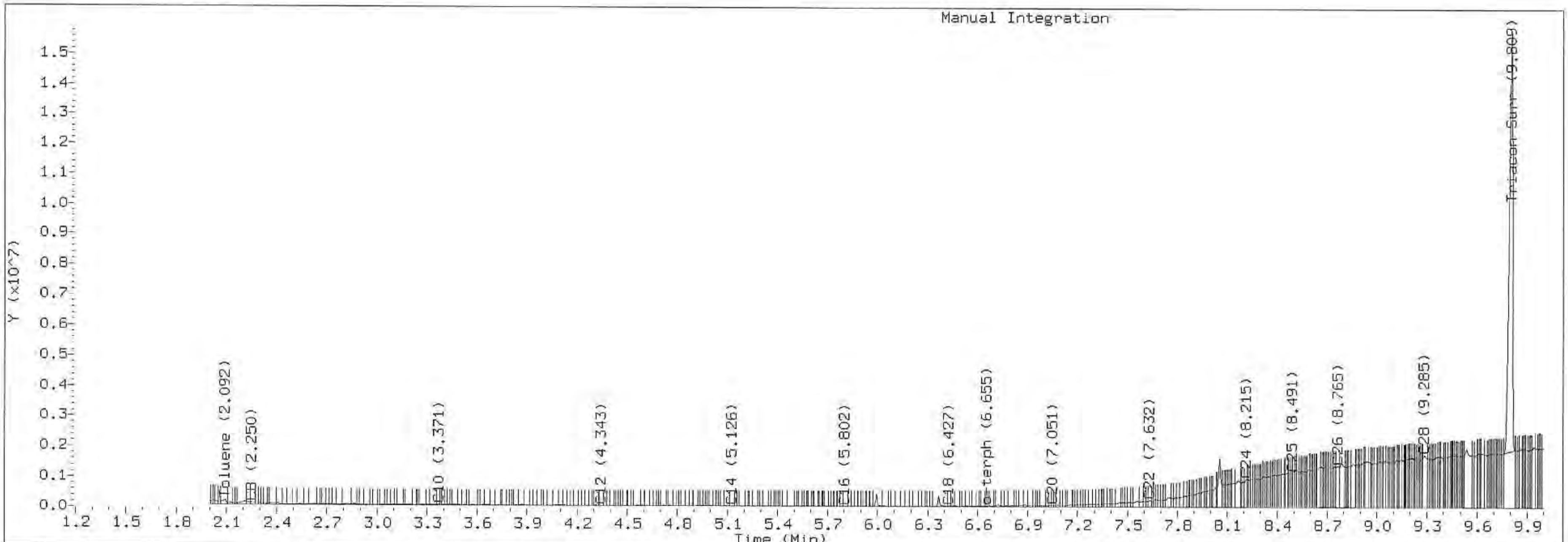
Datafile: FID4A, 20191025.b/419J2518.D SHJ0406-CALB

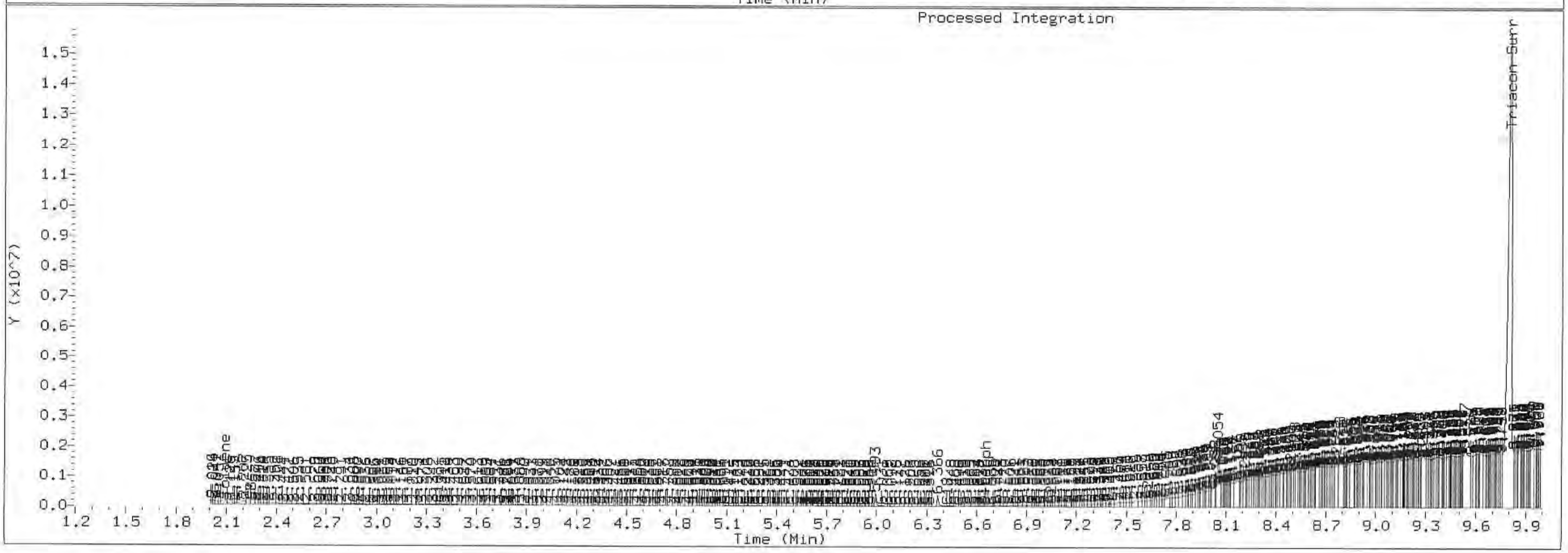


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2518.D Injection: 25-OCT-2019 17:34

Lab ID:SHJ0406-CALB





Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2519.D

Date : 25-OCT-2019 17:54

Client ID:

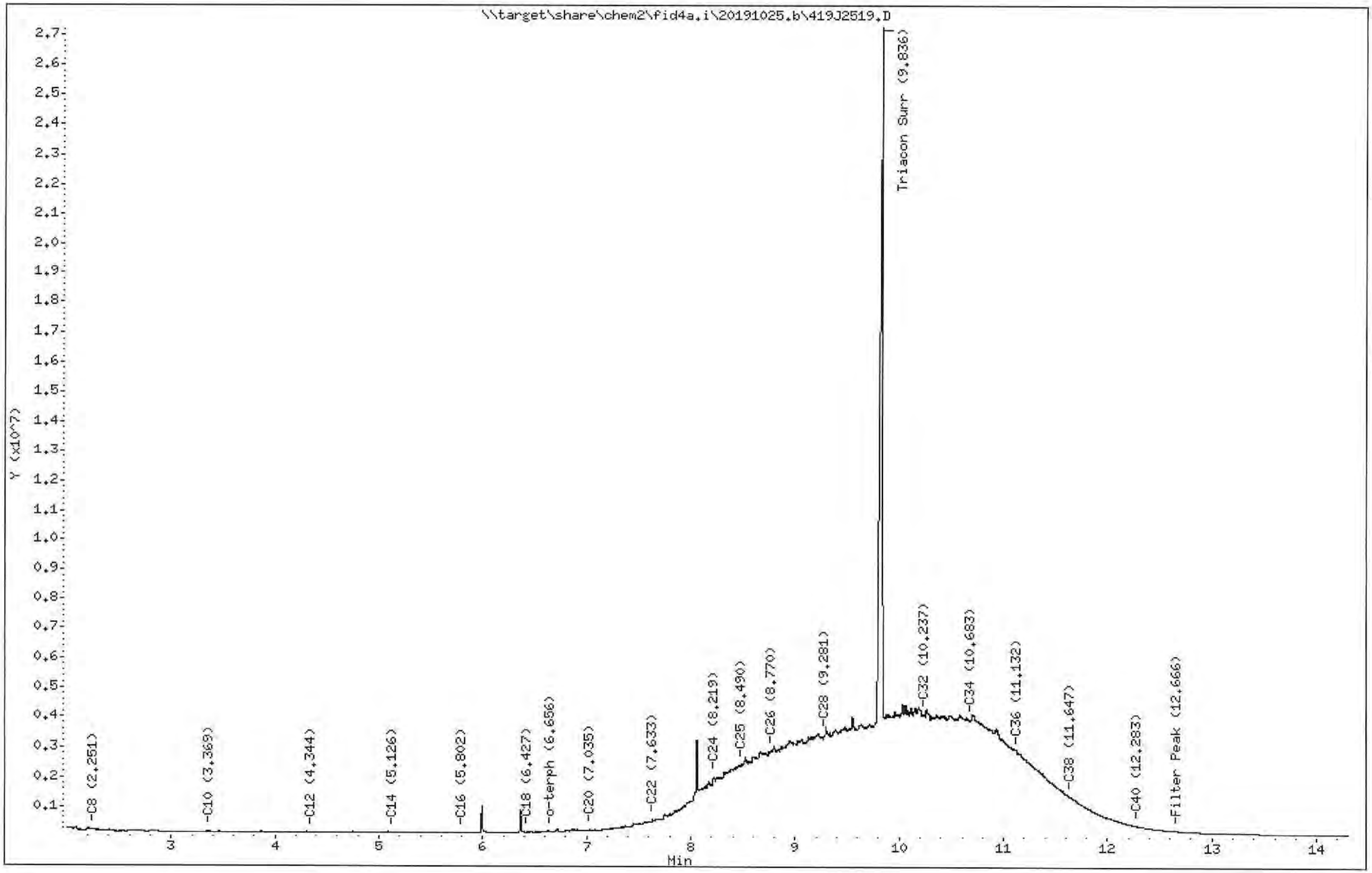
Sample Info: SHJ0406-CALC

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2519.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALC
Client ID:
Injection: 25-OCT-2019 17:54
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.251	-0.011	83410	131526	WATPHD	(C12-C24)	54951988	344.9
C10	3.369	-0.004	40067	53627	WATPHM	(C24-C38)	647842842	4884.5
C12	4.344	-0.003	8504	8688	AK102	(C10-C25)	79702569	407.7
C14	5.126	-0.004	19567	26129	AK103	(C25-C36)	565644605	5657.8
C16	5.802	-0.006	21777	24178	OR.DIES	(C10-C28)	235116720	1199.6
C18	6.427	-0.008	35077	33036				
C20	7.035	-0.008	119620	119856				
C22	7.633	-0.006	481948	602675				
C24	8.219	0.004	1952483	1661789				
C25	8.490	-0.003	2383743	592688				
C26	8.770	0.005	2837167	1694204				
C28	9.281	-0.005	3377335	3333438				
C32	10.237	-0.006	4076731	3428537				
C34	10.683	0.002	3869795	1544856				
Filter Peak	12.666	0.015	116179	102746	CREOSOT	(C12-C22)	14260161	3655.6
C36	11.132	0.003	2846055	707761				
C38	11.647	-0.002	1313112	715795				
C40	12.283	-0.006	302346	281489				
o-terph	6.656	-0.001	43010	66343				
Triacon Surr	9.836	0.034	23293566	39698048	NAS DIES	(C10-C24)	55485985	284.3

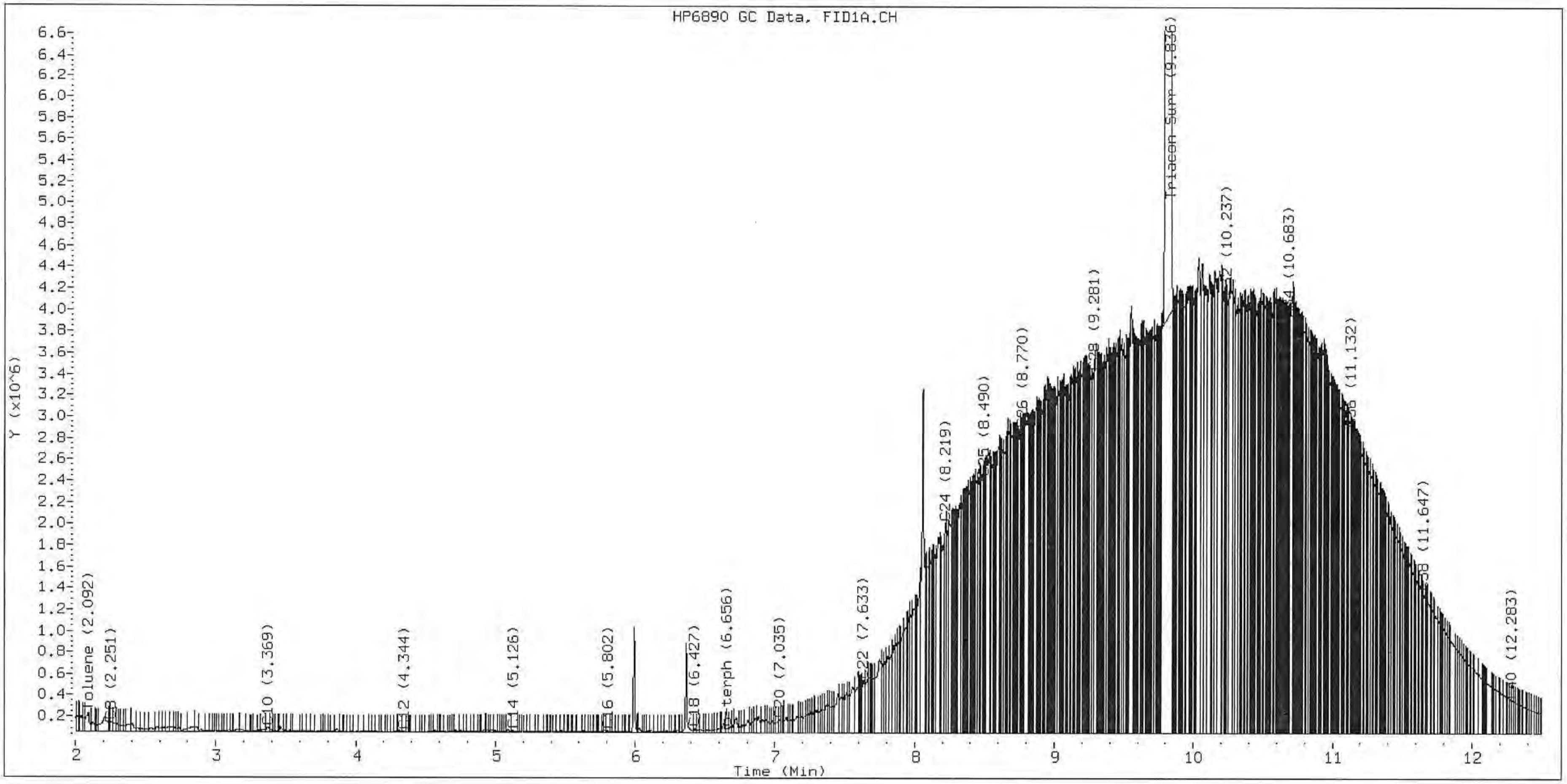
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	66343	0.3	
Triacontane	39698048	223.0	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

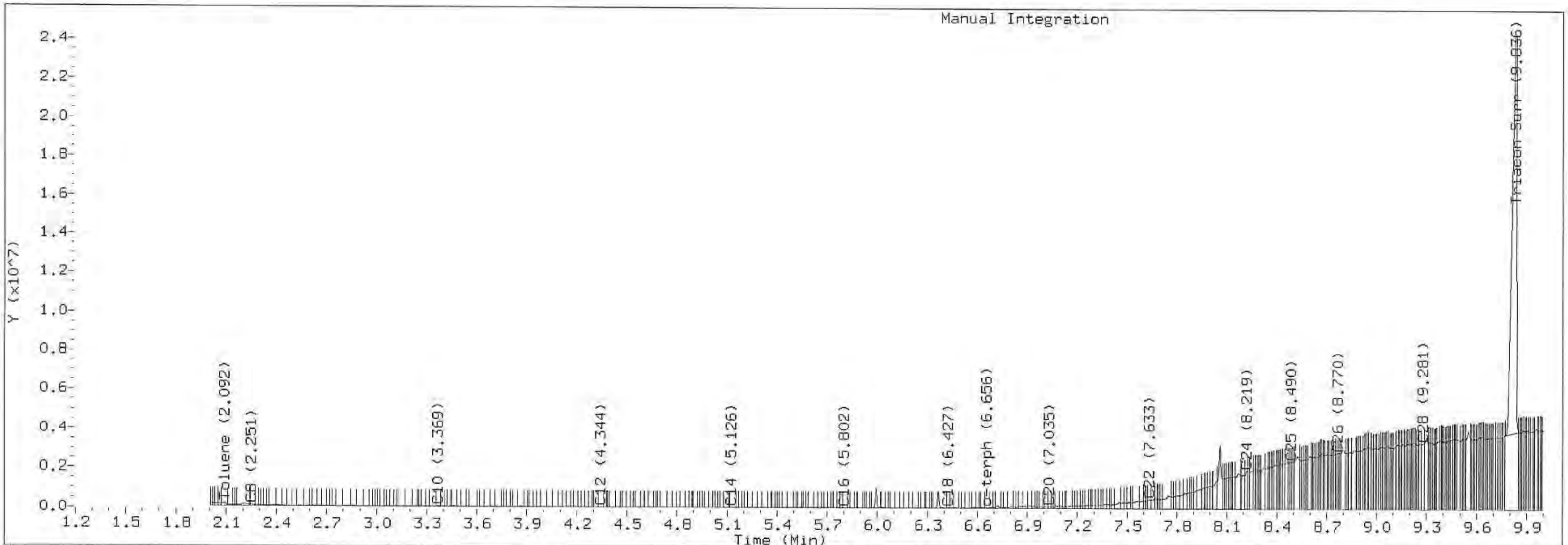
Datafile: FID4A, 20191025.b/419J2519.D SHJ0406-CALC

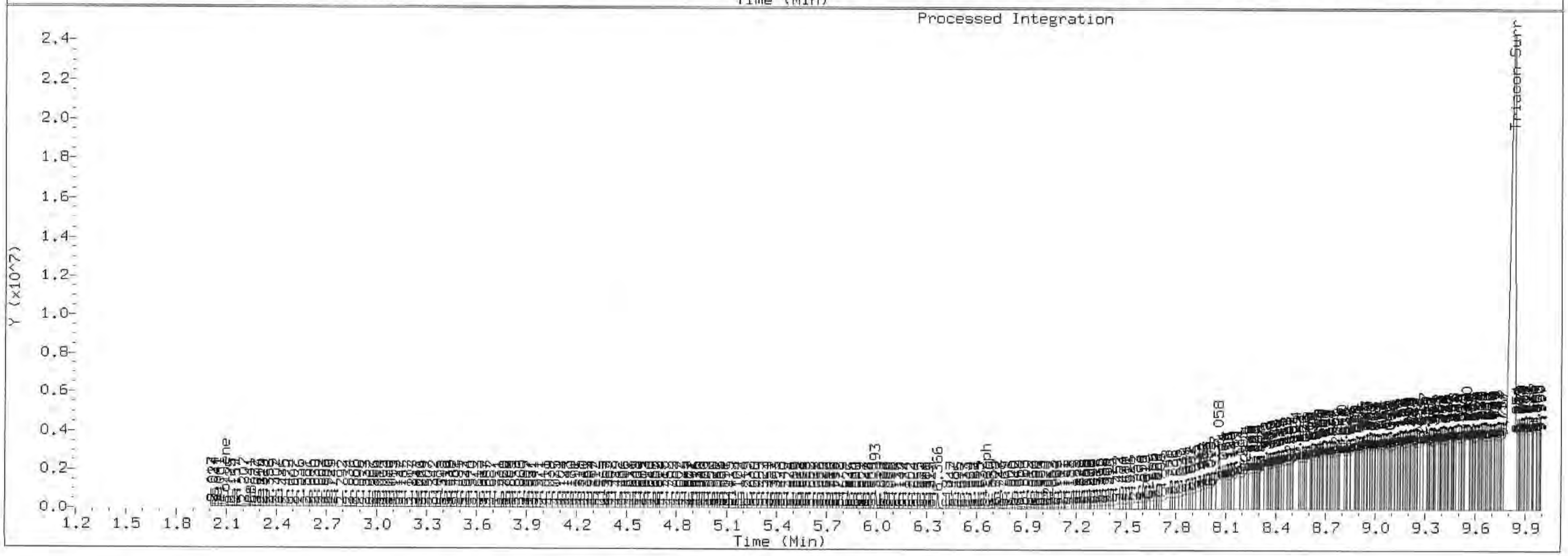


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2519.D Injection: 25-OCT-2019 17:54

Lab ID:SHJ0406-CALC





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Date : 25-OCT-2019 18:14

Client ID:

Sample Info: SHJ0406-SCV2

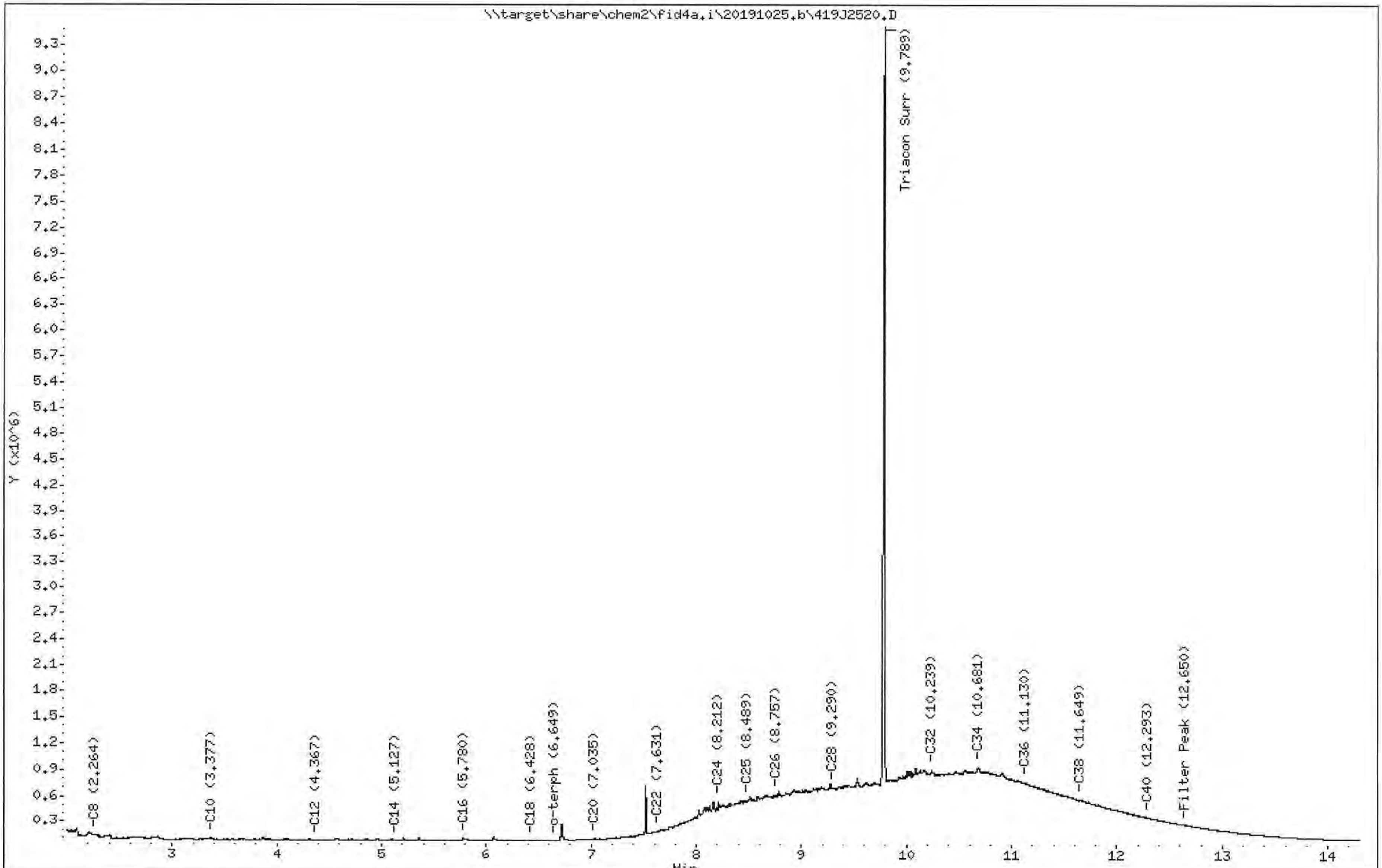
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2520.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV2
Client ID:
Injection: 25-OCT-2019 18:14
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	61386	42202	WATPHD	(C12-C24)	14006466	87.9
C10	3.377	0.004	28038	52387	WATPHM	(C24-C38)	135195593	1019.3
C12	4.367	0.020	3146	3151	AK102	(C10-C25)	18822986	96.3
C14	5.127	-0.003	4143	4458	AK103	(C25-C36)	113030798	1130.6
C16	5.780	-0.027	35494	74348	OR.DIES	(C10-C28)	49340102	251.7
C18	6.428	-0.007	6156	6874				
C20	7.035	-0.008	26093	30304				
C22	7.631	-0.008	127794	247657				
C24	8.212	-0.003	471017	746279				
C25	8.489	-0.004	491516	98217				
C26	8.757	-0.008	557900	550938				
C28	9.290	0.005	640615	223711				
C32	10.239	-0.004	847729	1306304				
C34	10.681	-0.000	865603	764427				
Filter Peak	12.650	-0.000	213232	84835	CREOSOT	(C12-C22)	3605357	924.2
C36	11.130	0.001	692159	413129				
C38	11.649	-0.001	503231	200454				
C40	12.293	0.004	305287	287895				
o-terph	6.649	-0.008	4022	3699				
Triacon Surr	9.789	-0.013	8762887	8519530	NAS DIES	(C10-C24)	14444503	74.0

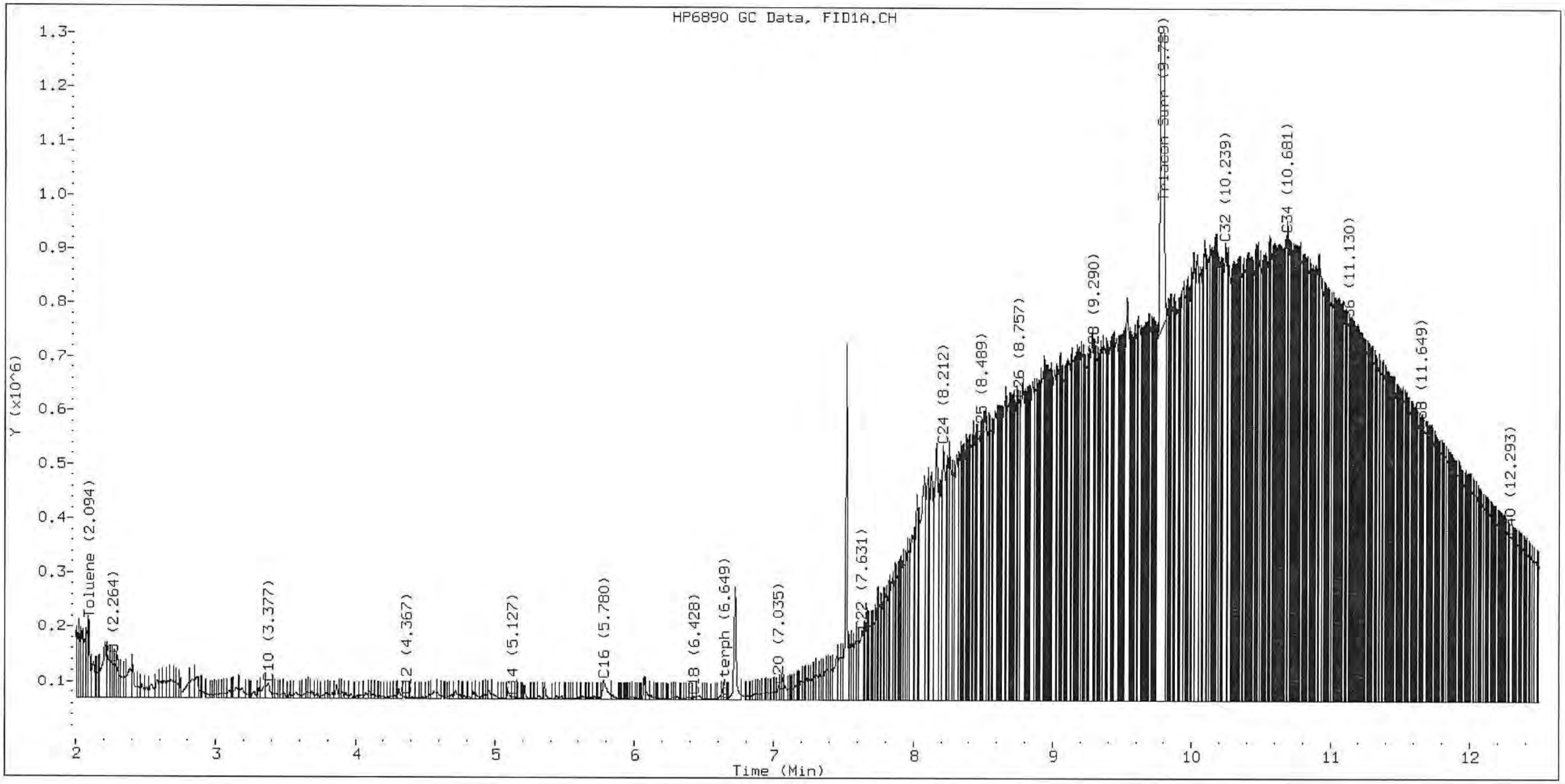
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	3699	0.0
Triacontane	8519530	47.9 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

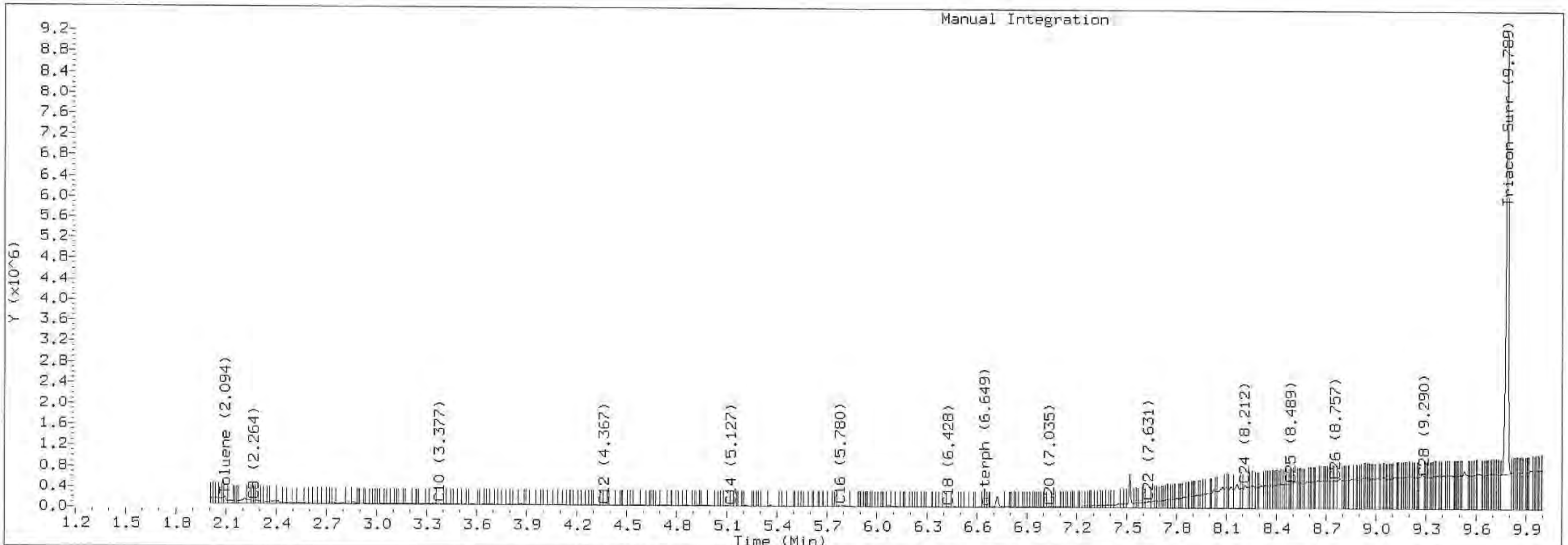
Datafile: FID4A, 20191025.b/419J2520.D SHJ0406-SCV2

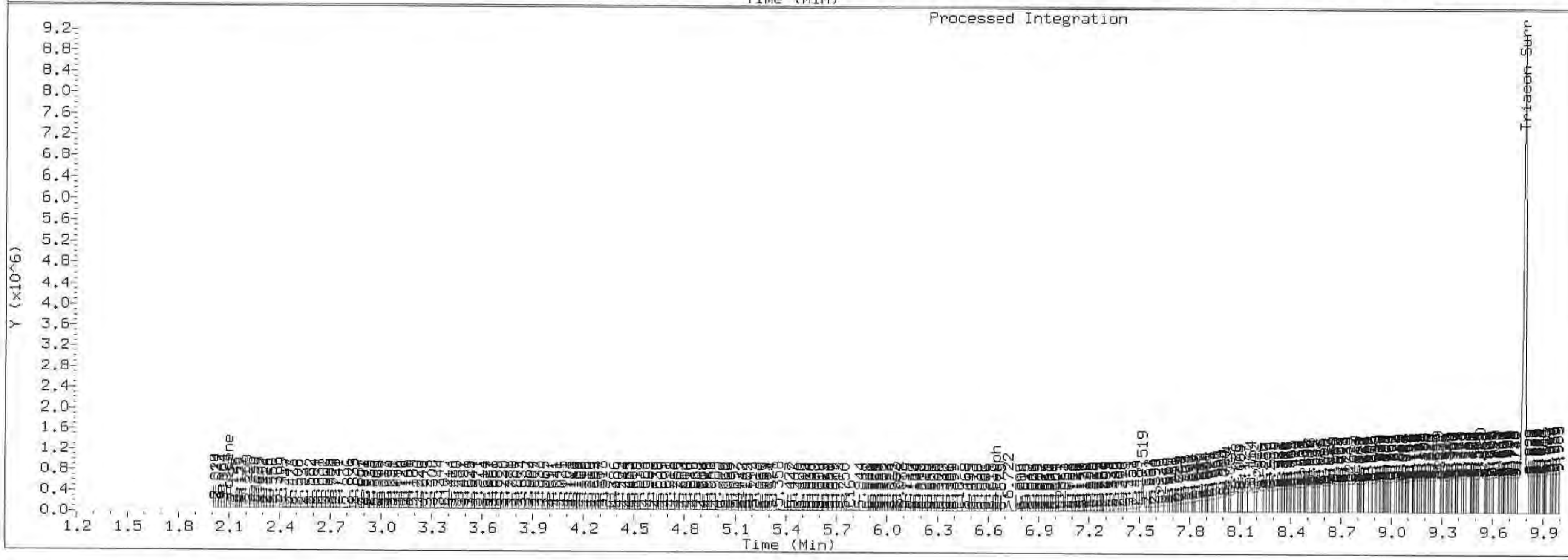


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2520.D Injection: 25-OCT-2019 18:14

Lab ID:SHJ0406-SCV2





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Date : 25-OCT-2019 18:35

Client ID:

Sample Info: SHJ0406-CALD

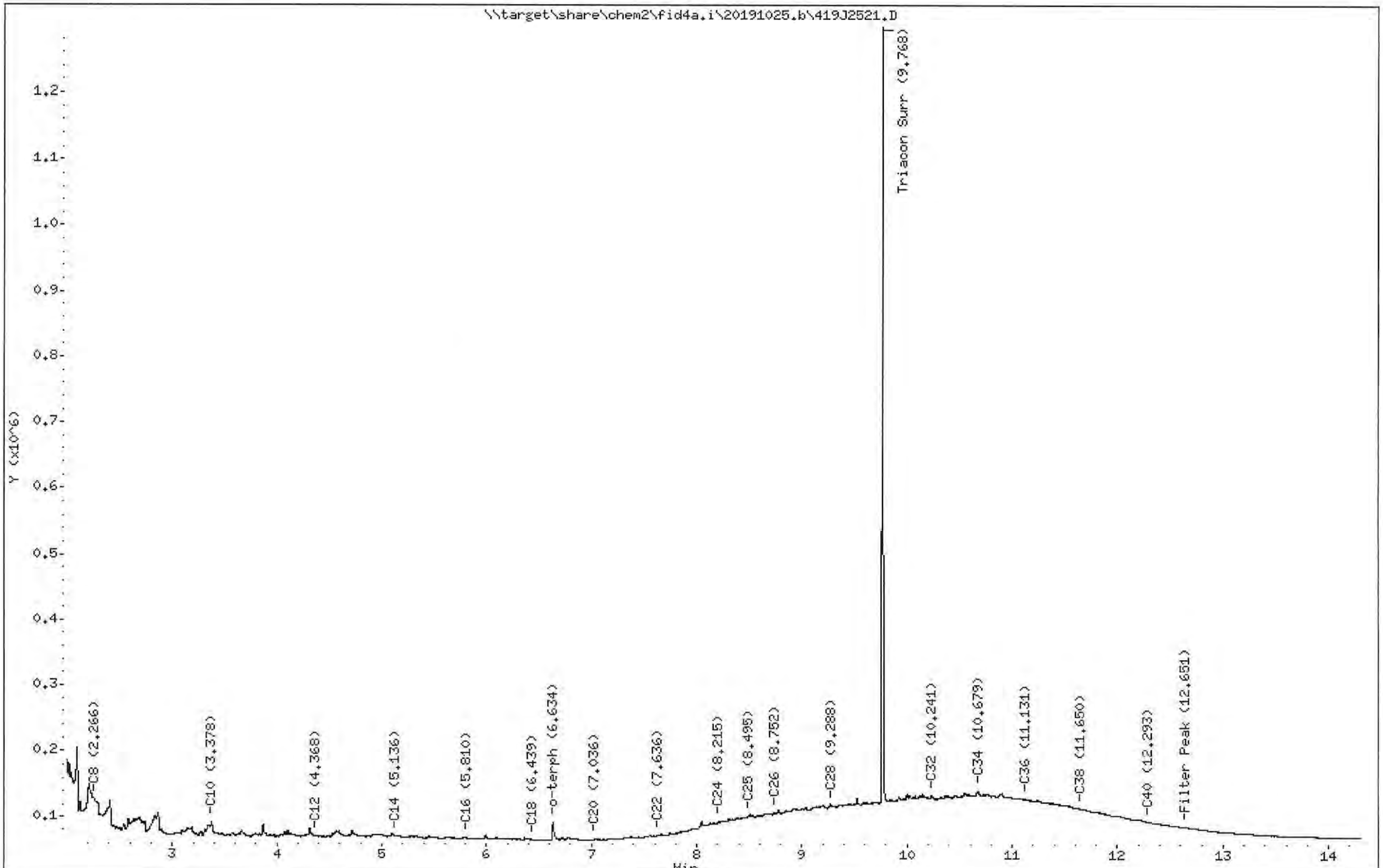
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2521.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALD
Client ID:
Injection: 25-OCT-2019 18:35
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.266	0.003	63130	43308	WATPHD	(C12-C24)	1323968	8.3
C10	3.378	0.005	28879	54645	WATPHM	(C24-C38)	12086307	91.1
C12	4.368	0.021	6558	8293	AK102	(C10-C25)	2265512	11.6
C14	5.136	0.007	6204	3069	AK103	(C25-C36)	9919700	99.2
C16	5.810	0.003	3258	3063	OR.DIES	(C10-C28)	4756055	24.3
C18	6.439	0.004	920	449				
C20	7.036	-0.007	1277	1180				
C22	7.636	-0.003	8777	15968				
C24	8.215	0.000	31726	51380				
C25	8.495	0.002	39977	33338				
C26	8.752	-0.012	45255	53640				
C28	9.288	0.003	56620	22552				
C32	10.241	-0.002	70490	38594				
C34	10.679	-0.002	78226	83978				
Filter Peak	12.651	0.000	22108	8817	CREOSOT	(C12-C22)	689259	176.7
C36	11.131	0.002	66508	16608				
C38	11.650	0.000	52851	23597				
C40	12.293	0.004	31673	31207				
o-terph	6.634	-0.022	28829	34405				
Triacon Surr	9.768	-0.034	1173387	818277	NAS DIES	(C10-C24)	1907173	9.8

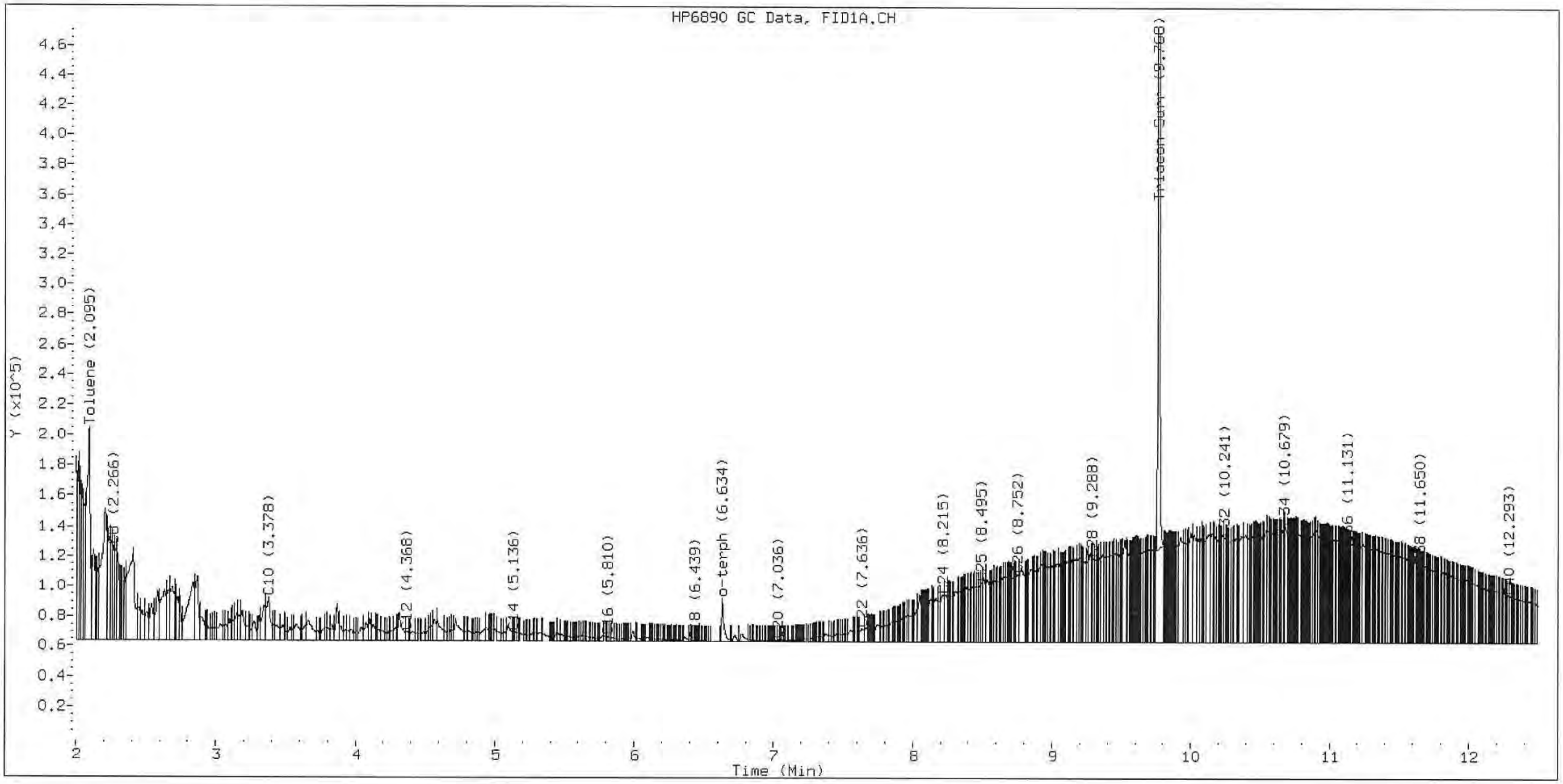
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	34405	0.2
Triacontane	818277	4.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2521.D SHJ0406-CALD



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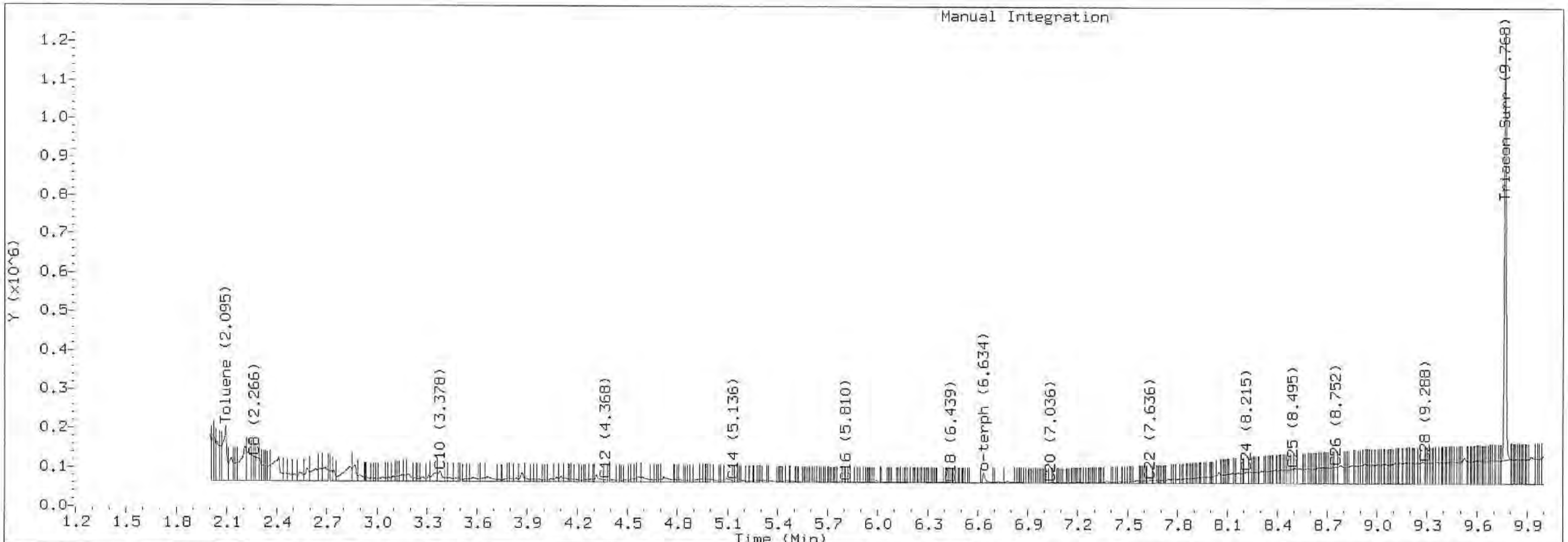
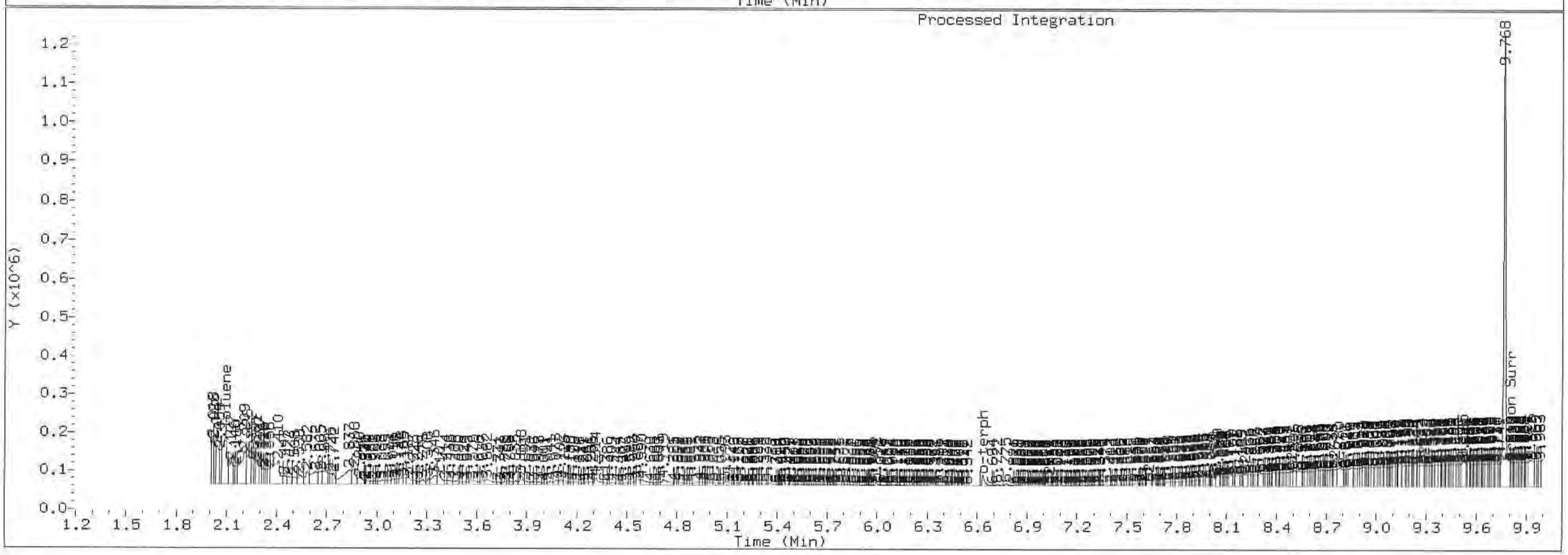
Lab ID:SHJ0406-CALD





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Page 1

Date : 25-OCT-2019 18:55

Client ID:

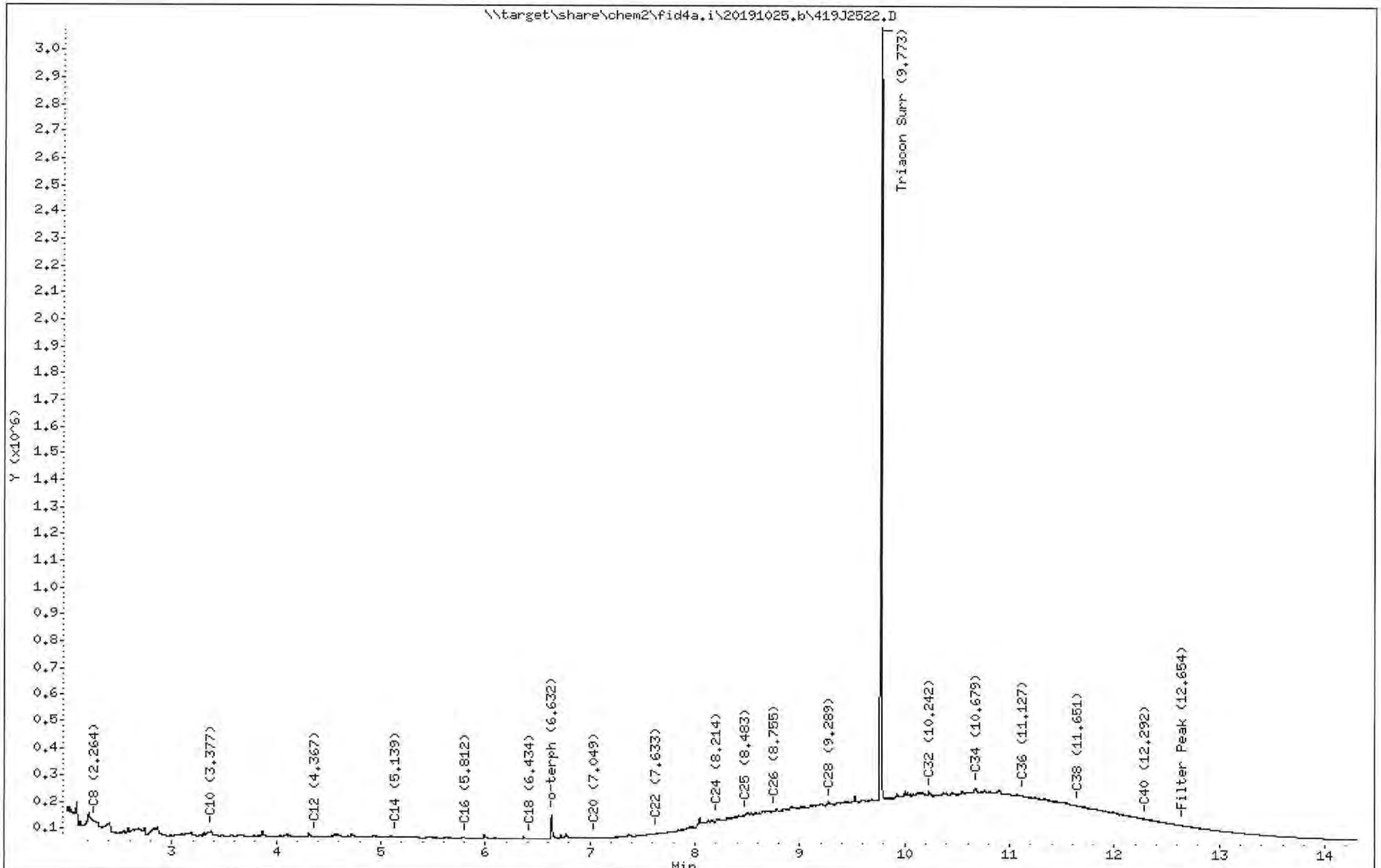
Instrument: fid4a.i

Sample Info: SHJ0406-CALE

Operator: CTO/SH/VTS/JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2522.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALE
Client ID:
Injection: 25-OCT-2019 18:55
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	61078	41904	WATPHD	(C12-C24)	2795528	17.5
C10	3.377	0.004	26802	52996	WATPHM	(C24-C38)	31324226	236.2
C12	4.367	0.019	5459	4798	AK102	(C10-C25)	4178110	21.4
C14	5.139	0.010	4962	3160	AK103	(C25-C36)	25813764	258.2
C16	5.812	0.005	2520	1321	OR.DIES	(C10-C28)	10680396	54.5
C18	6.434	-0.000	1311	882				
C20	7.049	0.006	4759	2820				
C22	7.633	-0.005	24172	52812				
C24	8.214	-0.001	79717	62122				
C25	8.483	-0.010	96553	61766				
C26	8.755	-0.010	114382	67845				
C28	9.289	0.004	142997	64203				
C32	10.242	0.000	182878	81971				
C34	10.679	-0.002	200985	321864				
Filter Peak	12.654	0.004	63611	28452	CREOSOT	(C12-C22)	1041017	266.9
C36	11.127	-0.001	175707	78840				
C38	11.651	0.001	139085	55402				
C40	12.292	0.004	88908	61716				
o-terph	6.632	-0.024	91544	90689				
Triacon Surr	9.773	-0.029	2869605	2058184	NAS DIES	(C10-C24)	3295502	16.9

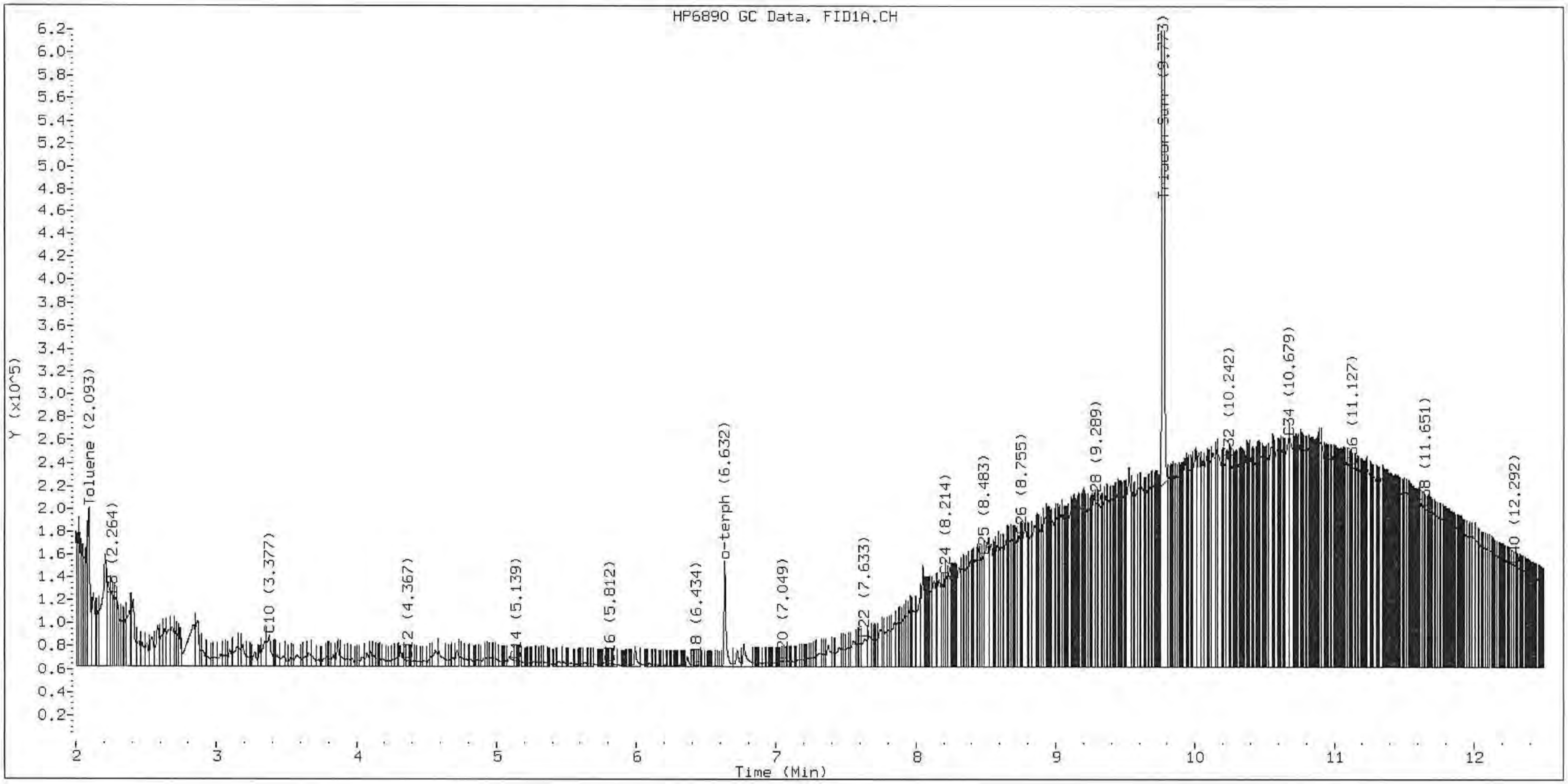
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	90689	0.4
Triacontane	2058184	11.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

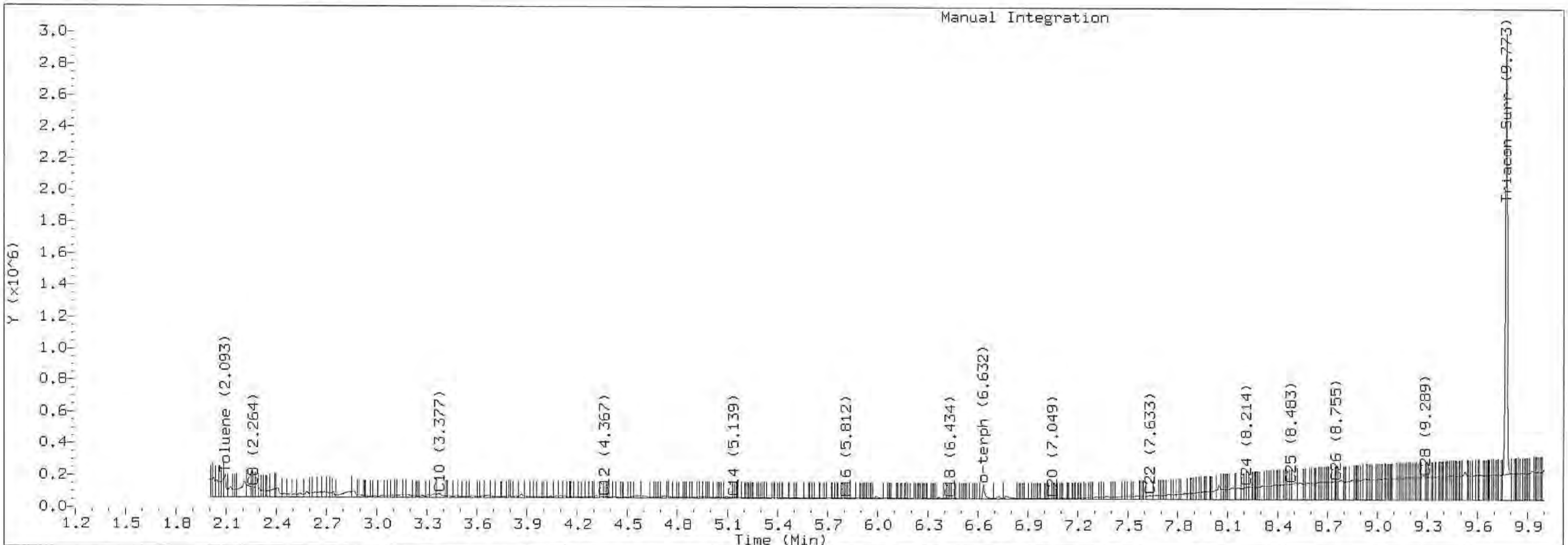
Datafile: FID4A, 20191025.b/419J2522.D SHJ0406-CALE

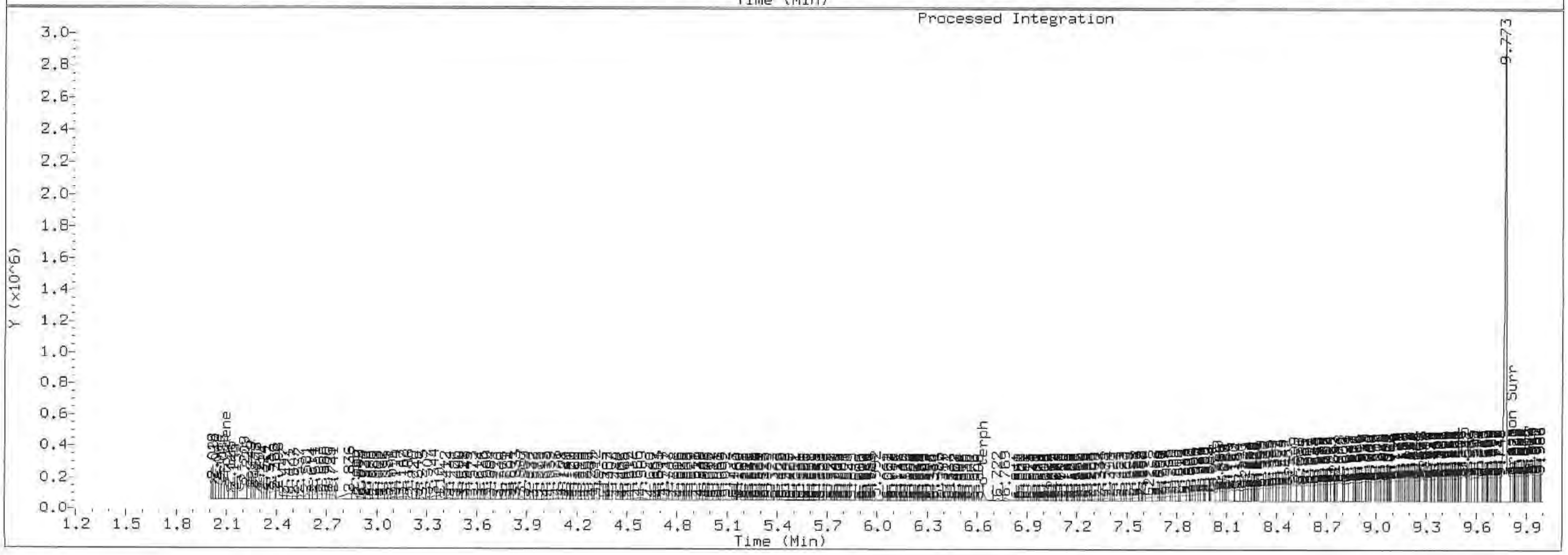


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2522.D Injection: 25-OCT-2019 18:55

Lab ID:SHJ0406-CALE





Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2523.D

Page 1

Date : 25-OCT-2019 19:15

Client ID:

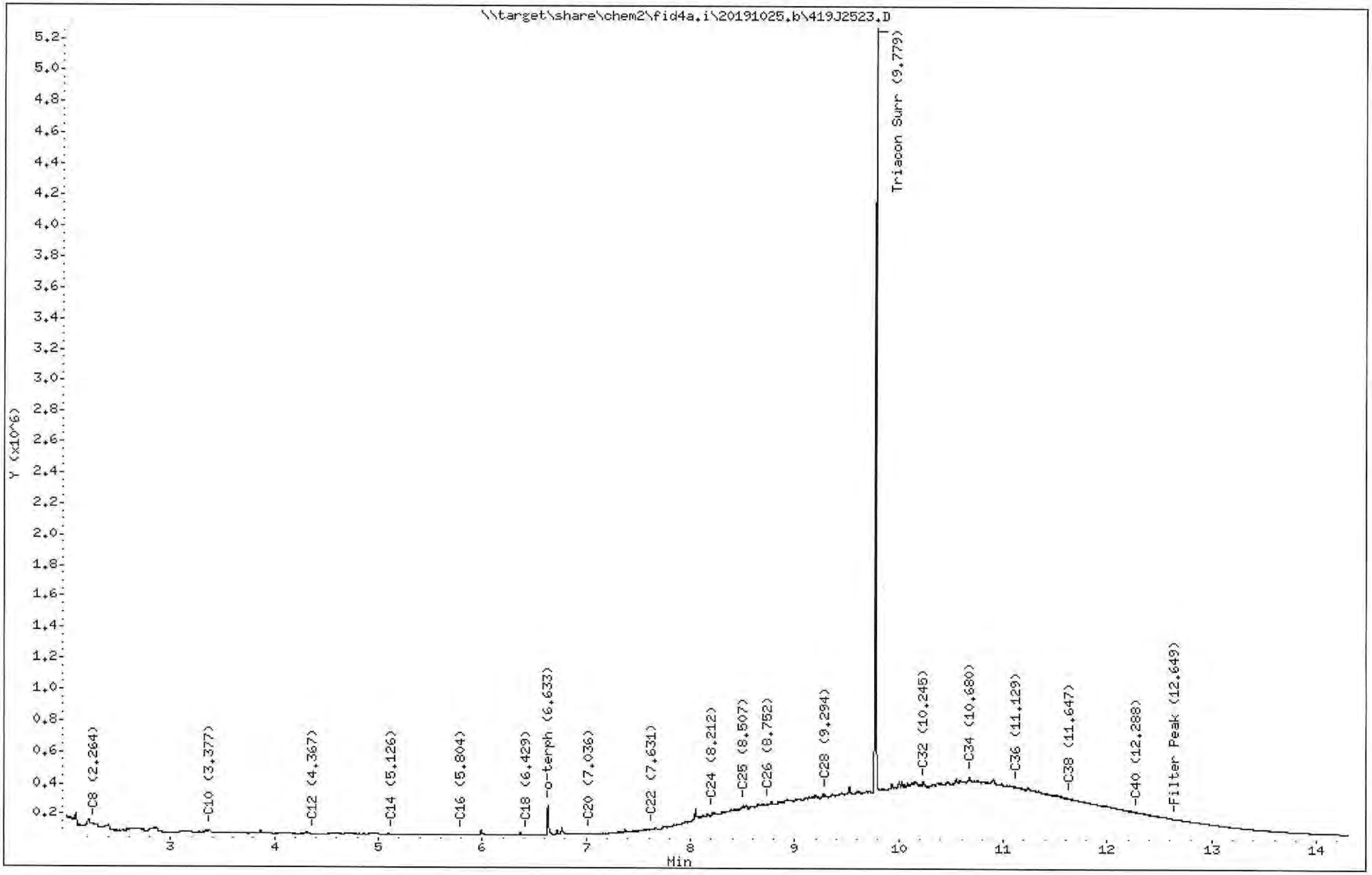
Instrument: fid4a.i

Sample Info: SHJ0406-CALF

Operator: CTO/SH/VTS/JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2523.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALF
Client ID:
Injection: 25-OCT-2019 19:15
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	65663	48530	WATPHD	(C12-C24)	5014916	31.5
C10	3.377	0.004	28749	58345	WATPHM	(C24-C38)	59779944	450.7
C12	4.367	0.020	3969	3466	AK102	(C10-C25)	7200245	36.8
C14	5.126	-0.004	3228	1712	AK103	(C25-C36)	49058982	490.7
C16	5.804	-0.004	2893	3236	OR.DIES	(C10-C28)	19724552	100.6
C18	6.429	-0.005	2246	2256				
C20	7.036	-0.007	10796	11147				
C22	7.631	-0.008	48129	85760				
C24	8.212	-0.003	157019	245696				
C25	8.507	0.014	210068	574409				
C26	8.752	-0.013	221185	294582				
C28	9.294	0.008	276194	178596				
C32	10.245	0.003	351165	209719				
C34	10.680	-0.001	394703	898701				
Filter Peak	12.649	-0.002	125409	50077	CREOSOT	(C12-C22)	1560946	400.2
C36	11.129	-0.000	332260	99465				
C38	11.647	-0.003	258943	64646				
C40	12.288	-0.001	170438	84522				
o-terph	6.633	-0.024	198416	176995				
Triacon Surr	9.779	-0.024	4910254	3941895	NAS DIES	(C10-C24)	5534721	28.4

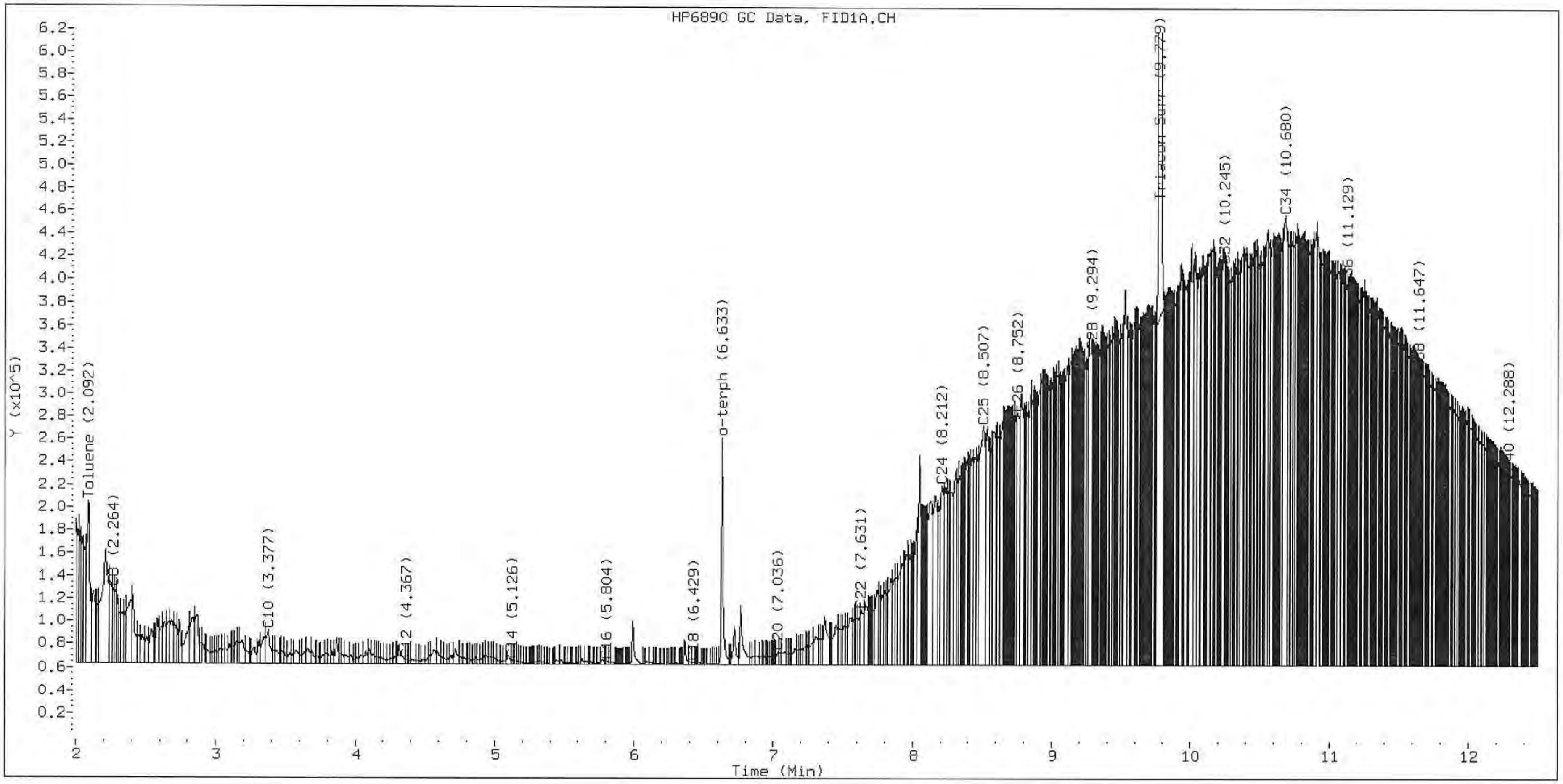
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	176995	0.9
Triacontane	3941895	22.1 M

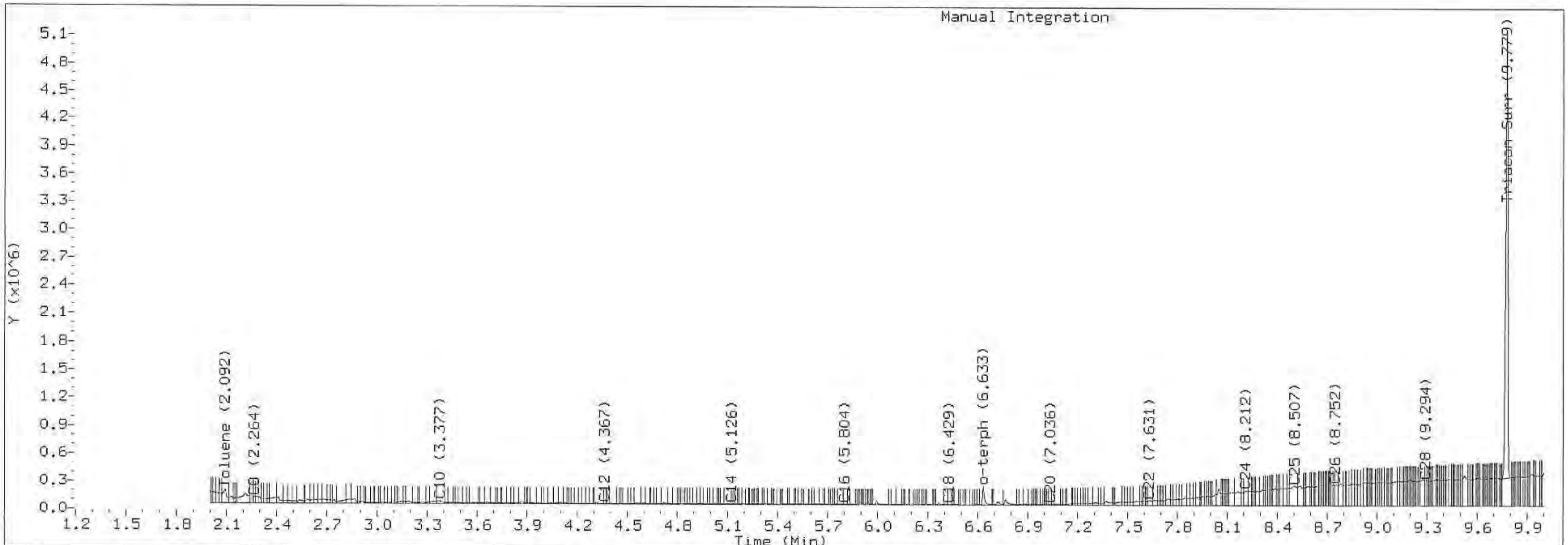
M Indicates the peak was manually integrated

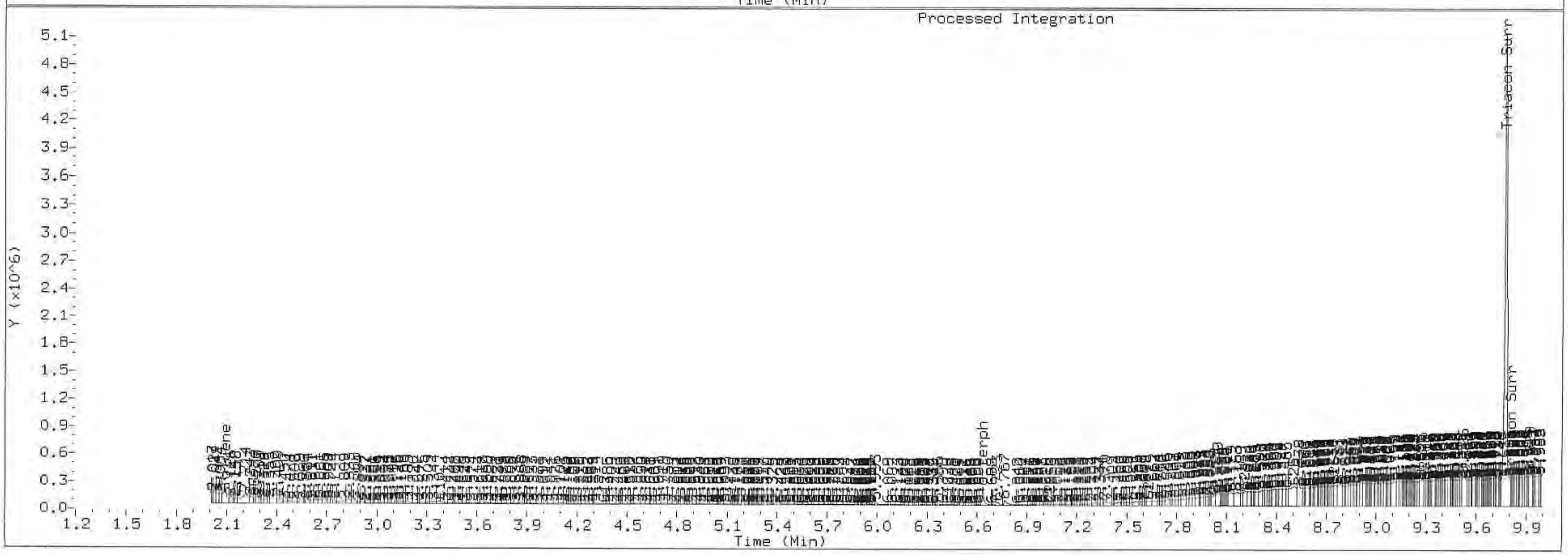
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2523.D SHJ0406-CALF



TPH Manual Integrations Report
Datafile: FID4A, 20191025.b/419J2523.D Injection: 25-OCT-2019 19:15
Lab ID:SHJ0406-CALF





Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2524.D

Date : 25-OCT-2019 19:34

Client ID:

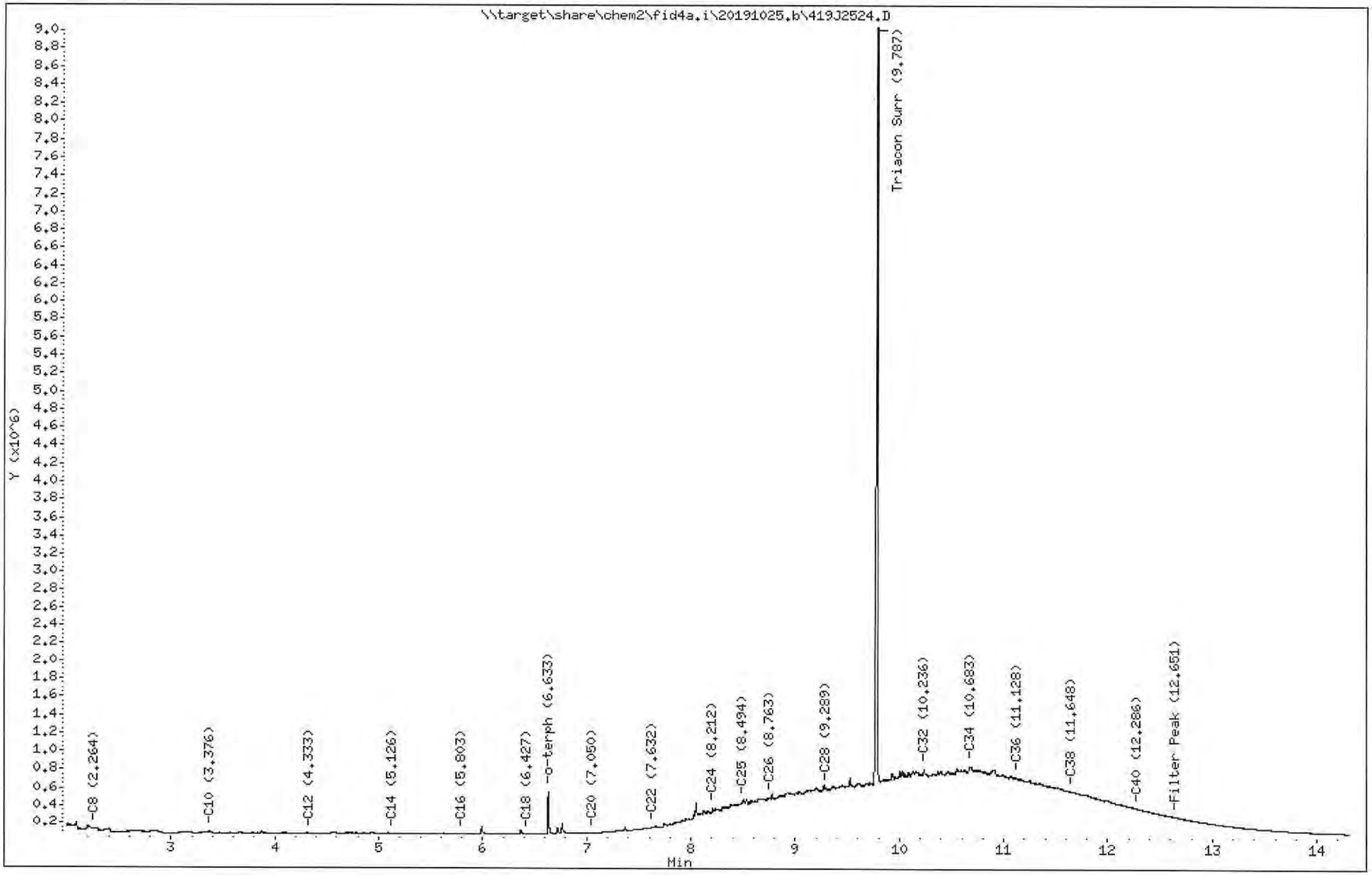
Sample Info: SHJ0406-CALG

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2524.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALG
Client ID:
Injection: 25-OCT-2019 19:34
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	59182	43398	WATPHD	(C12-C24)	9693002	60.8
C10	3.376	0.003	26004	47549	WATPHM	(C24-C38)	119379277	900.1
C12	4.333	-0.015	5078	6418	AK102	(C10-C25)	13482675	69.0
C14	5.126	-0.004	4037	3451	AK103	(C25-C36)	98534931	985.6
C16	5.803	-0.004	5499	6876	OR.DIES	(C10-C28)	38197703	194.9
C18	6.427	-0.008	4829	4807				
C20	7.050	0.007	20128	16414				
C22	7.632	-0.007	95273	191460				
C24	8.212	-0.003	309198	497796				
C25	8.494	0.001	394056	249031				
C26	8.763	-0.001	429806	171737				
C28	9.289	0.004	544145	135929				
C32	10.236	-0.006	748503	1187882				
C34	10.683	0.001	785420	196129				
Filter Peak	12.651	0.000	222539	110925	CREOSOT	(C12-C22)	2913792	747.0
C36	11.128	-0.000	665475	297953				
C38	11.648	-0.001	517415	384389				
C40	12.286	-0.003	322103	175432				
o-terph	6.633	-0.024	489788	368237				
Triacon Surr	9.787	-0.015	8362676	7933666	NAS DIES	(C10-C24)	10069630	51.6

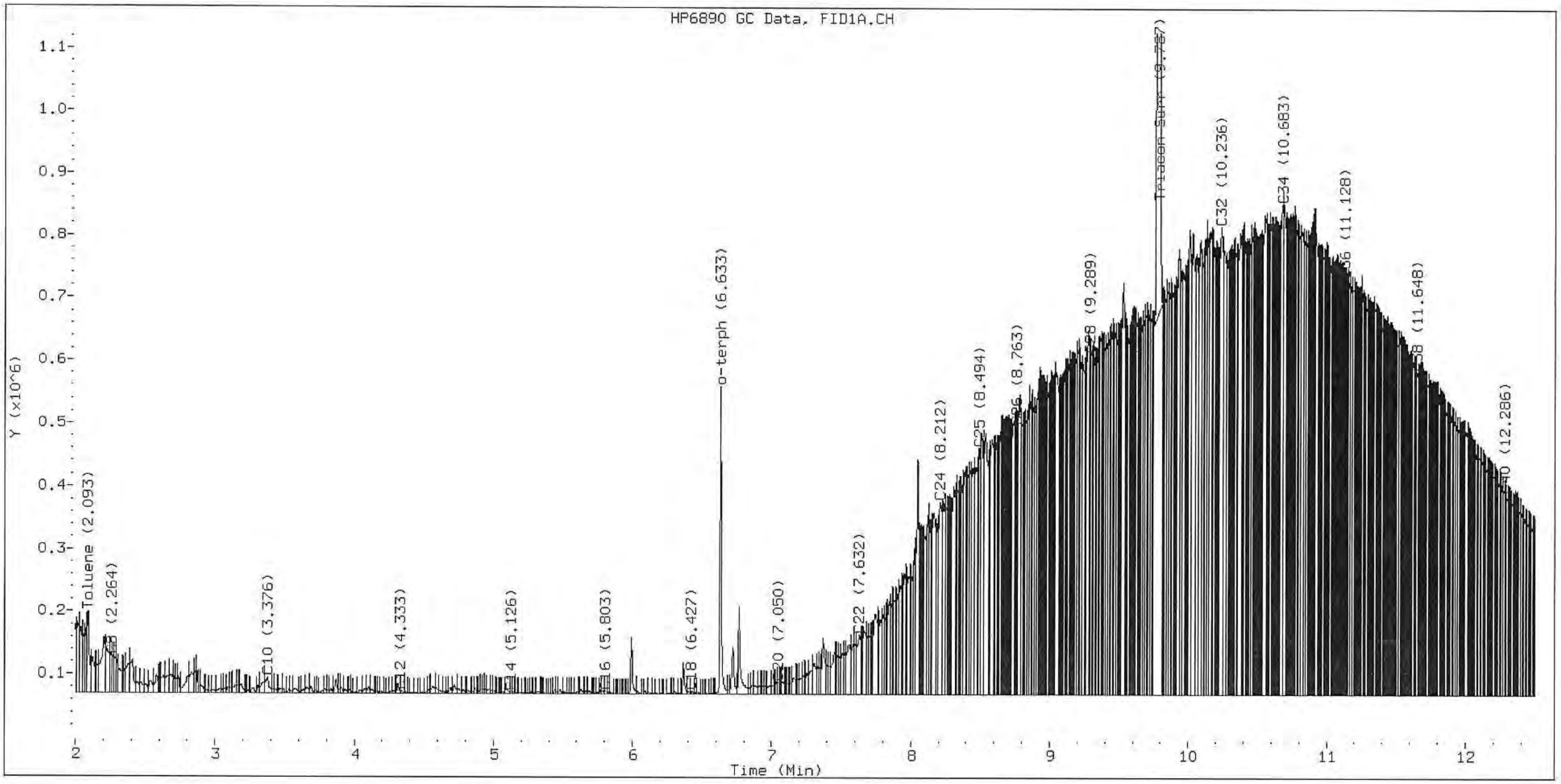
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	368237	1.8
Triacontane	7933666	44.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2524.D SHJ0406-CALG



TPH Manual Integrations Report
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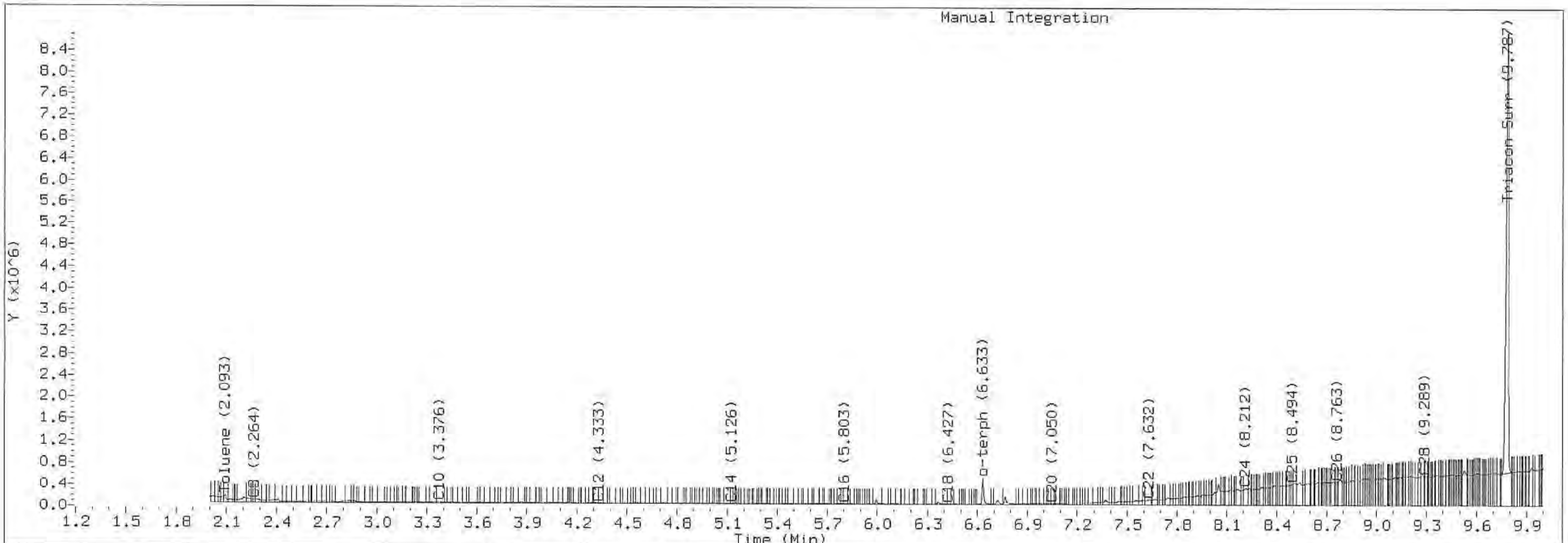
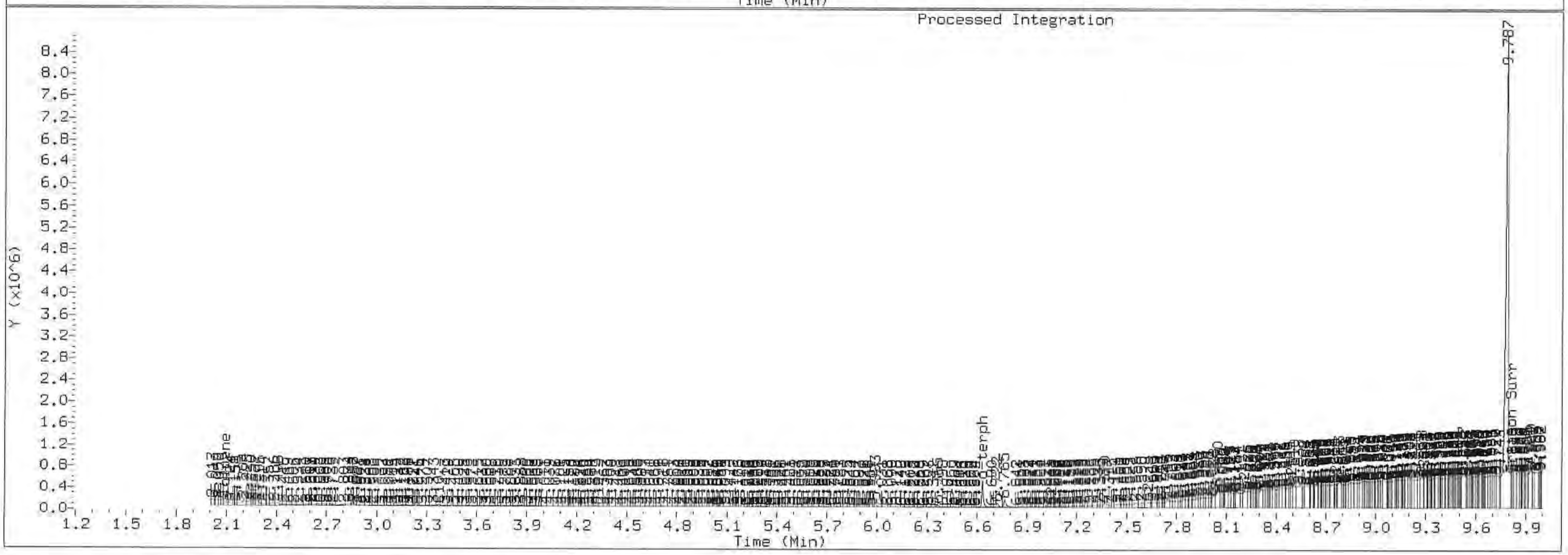
Lab ID:SHJ0406-CALG





Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2525.D

Date : 25-OCT-2019 19:54

Client ID:

Sample Info: SHJ0406-CALH

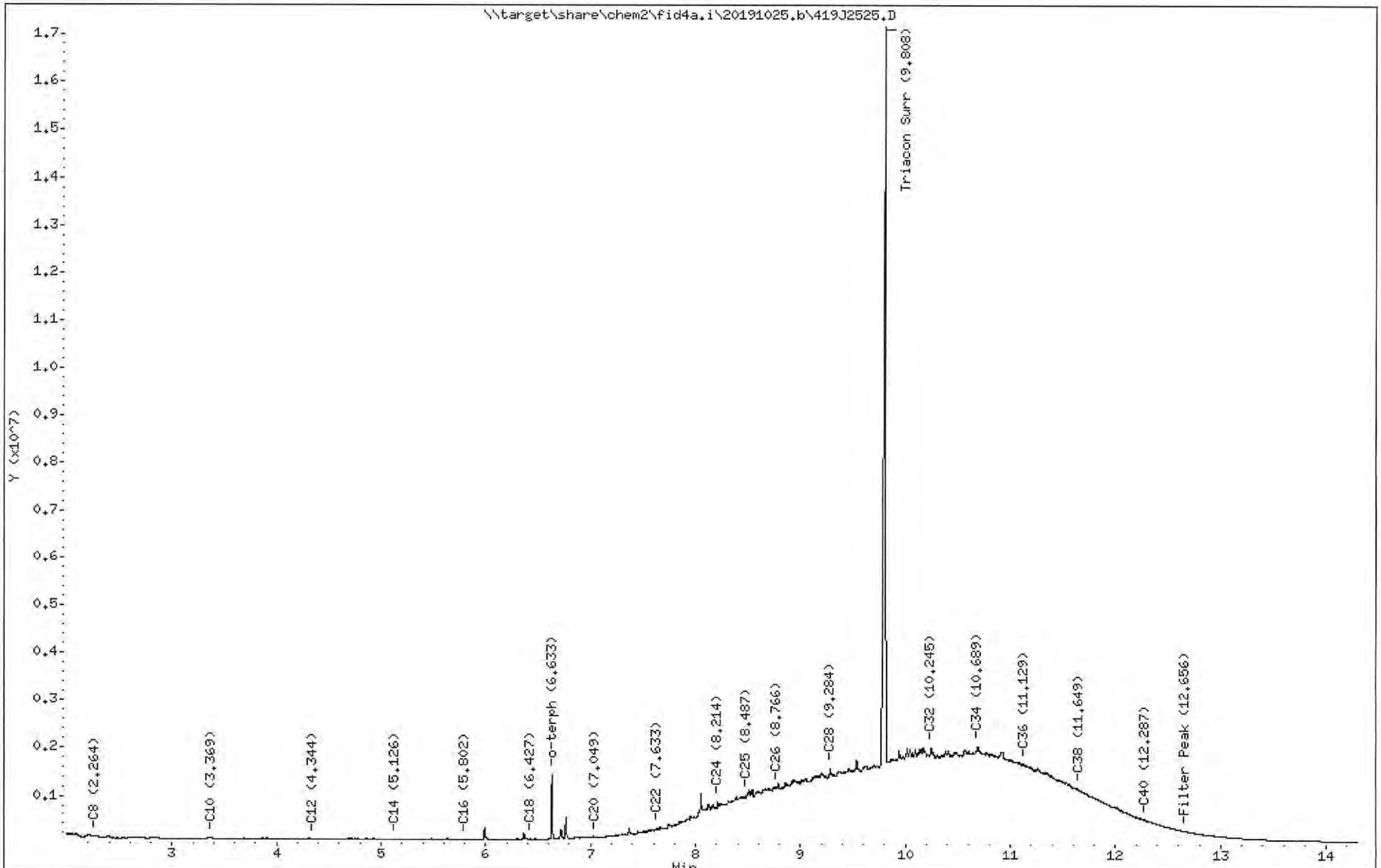
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2525.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALH
Client ID:
Injection: 25-OCT-2019 19:54
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	56415	38567	WATPHD	(C12-C24)	26301815	165.1
C10	3.369	-0.003	27712	41157	WATPHM	(C24-C38)	301341214	2272.0
C12	4.344	-0.003	5882	6952	AK102	(C10-C25)	35690614	182.6
C14	5.126	-0.003	7507	9244	AK103	(C25-C36)	251232894	2512.9
C16	5.802	-0.005	13222	14374	OR.DIES	(C10-C28)	99037801	505.3
C18	6.427	-0.008	19180	20067				
C20	7.049	0.006	65385	59588				
C22	7.633	-0.006	263262	368137				
C24	8.214	-0.001	822366	1422767				
C25	8.487	-0.006	962652	426588				
C26	8.766	0.002	1133629	505360				
C28	9.284	-0.002	1509428	2436681				
C32	10.245	0.003	1957482	3059346				
C34	10.689	0.008	1976148	4422245				
Filter Peak	12.656	0.006	231984	148698	CREOSOT	(C12-C22)	8248980	2114.6
C36	11.129	-0.000	1621407	646645				
C38	11.649	-0.000	1113973	443976				
C40	12.287	-0.002	466123	386816				
o-terph	6.633	-0.024	1387955	962768				
Triacon Surr	9.808	0.006	15482951	20436973	NAS DIES	(C10-C24)	26712775	136.9

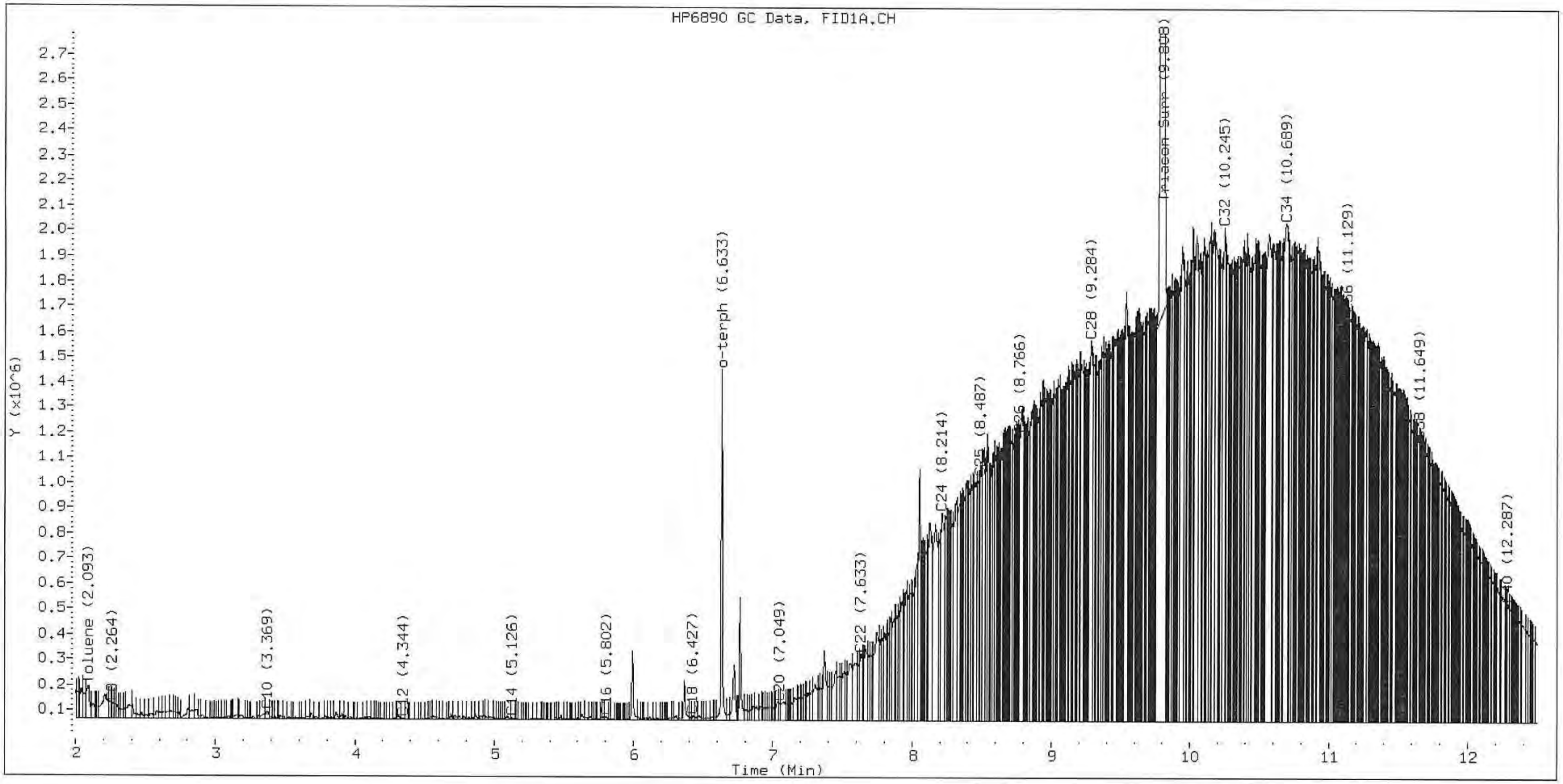
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	962768	4.7	
Triacontane	20436973	114.8	M

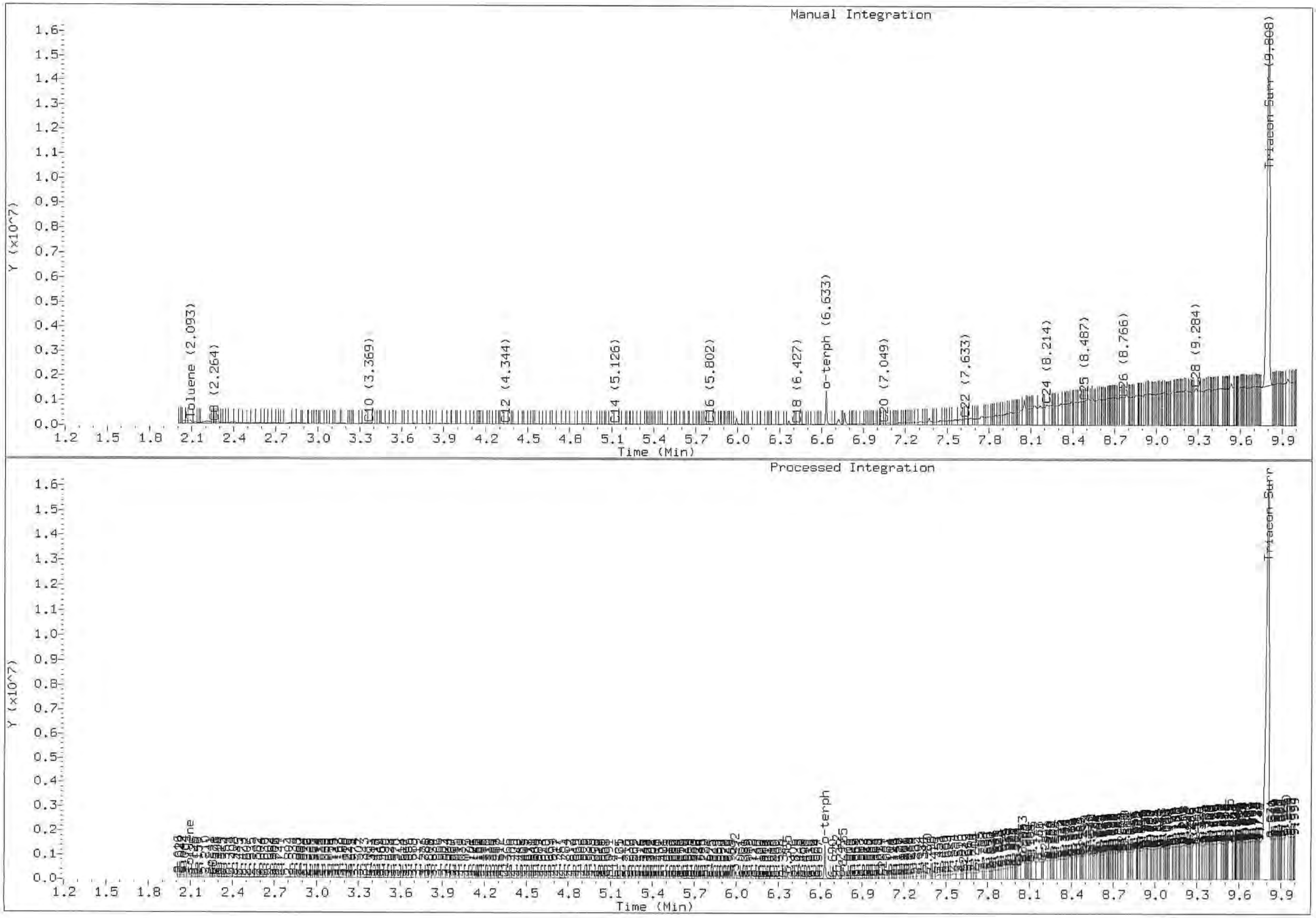
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2525.D SHJ0406-CALH



TPH Manual Integrations Report
Datafile: FID4A, 20191025.b/419J2525.D Injection: 25-OCT-2019 19:54
Lab ID:SHJ0406-CALH



Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2526.D

Date : 25-OCT-2019 20:15

Client ID:

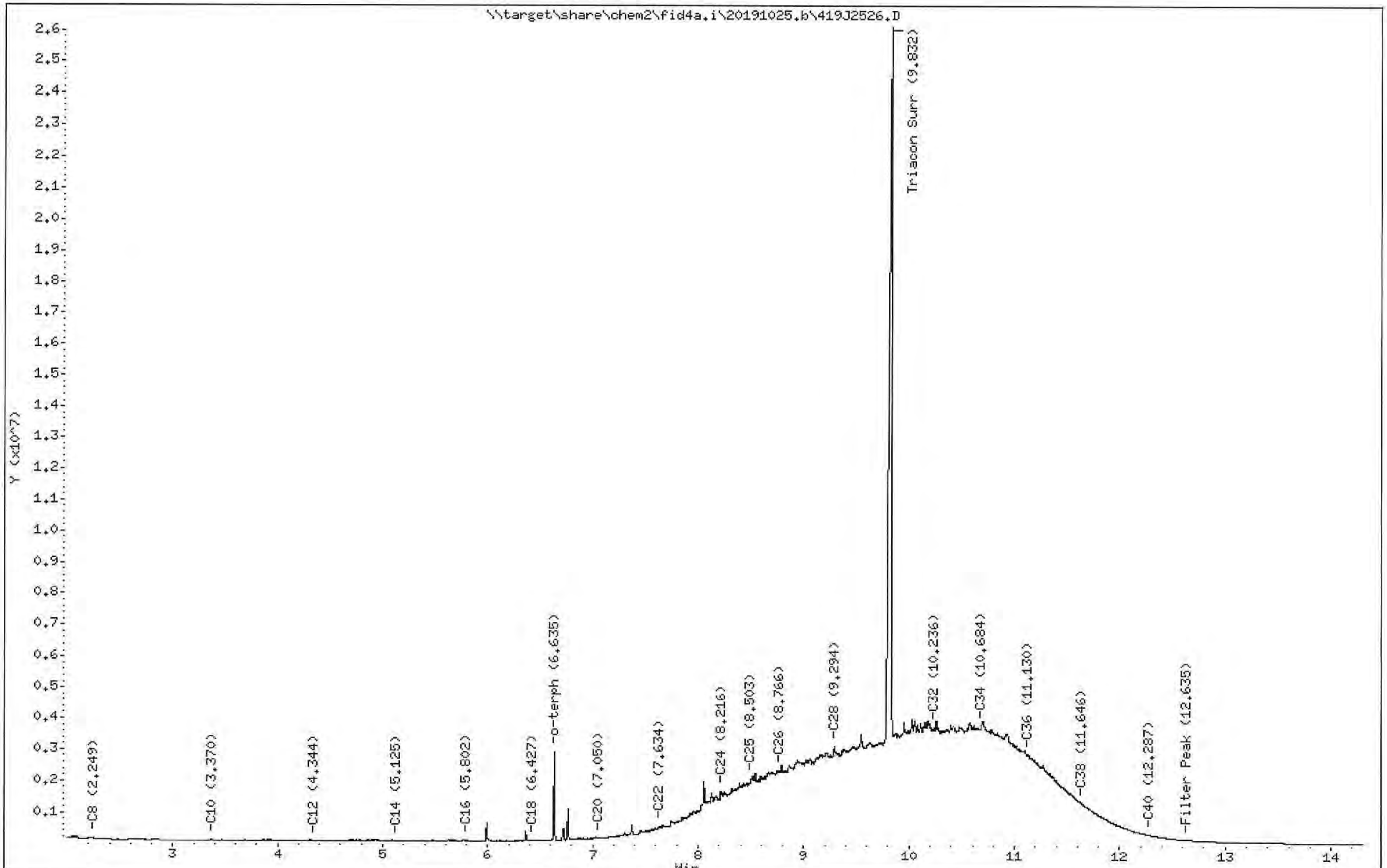
Instrument: fid4a.i

Sample Info: SHJ0406-CALI

Operator: CTO/SH/VTS/JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2526.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALI
Client ID:
Injection: 25-OCT-2019 20:15
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.249	-0.013	68157	97437	WATPHD	(C12-C24)	53373864	335.0
C10	3.370	-0.003	37579	47410	WATPHM	(C24-C38)	579217404	4367.1
C12	4.344	-0.003	10600	10459	AK102	(C10-C25)	72516526	370.9
C14	5.125	-0.004	18160	20643	AK103	(C25-C36)	501300122	5014.2
C16	5.802	-0.005	31467	33333	OR.DIES	(C10-C28)	201523108	1028.2
C18	6.427	-0.008	46016	47297				
C20	7.050	0.007	139853	120986				
C22	7.634	-0.005	536997	729929				
C24	8.216	0.002	1657695	1800915				
C25	8.503	0.010	2055767	2566063				
C26	8.766	0.002	2309434	1601749				
C28	9.294	0.008	3108955	5845567				
C32	10.236	-0.006	3694253	3475497				
C34	10.684	0.002	3746349	1670889				
Filter Peak	12.635	-0.015	125409	273331	CREOSOT	(C12-C22)	16636154	4264.7
C36	11.130	0.002	2854299	995118				
C38	11.646	-0.003	1329722	1616024				
C40	12.287	-0.002	293577	286952				
o-terph	6.635	-0.022	2904255	1975795				
Triacon Surr	9.832	0.030	22638379	40251878	NAS DIES	(C10-C24)	53915002	276.3

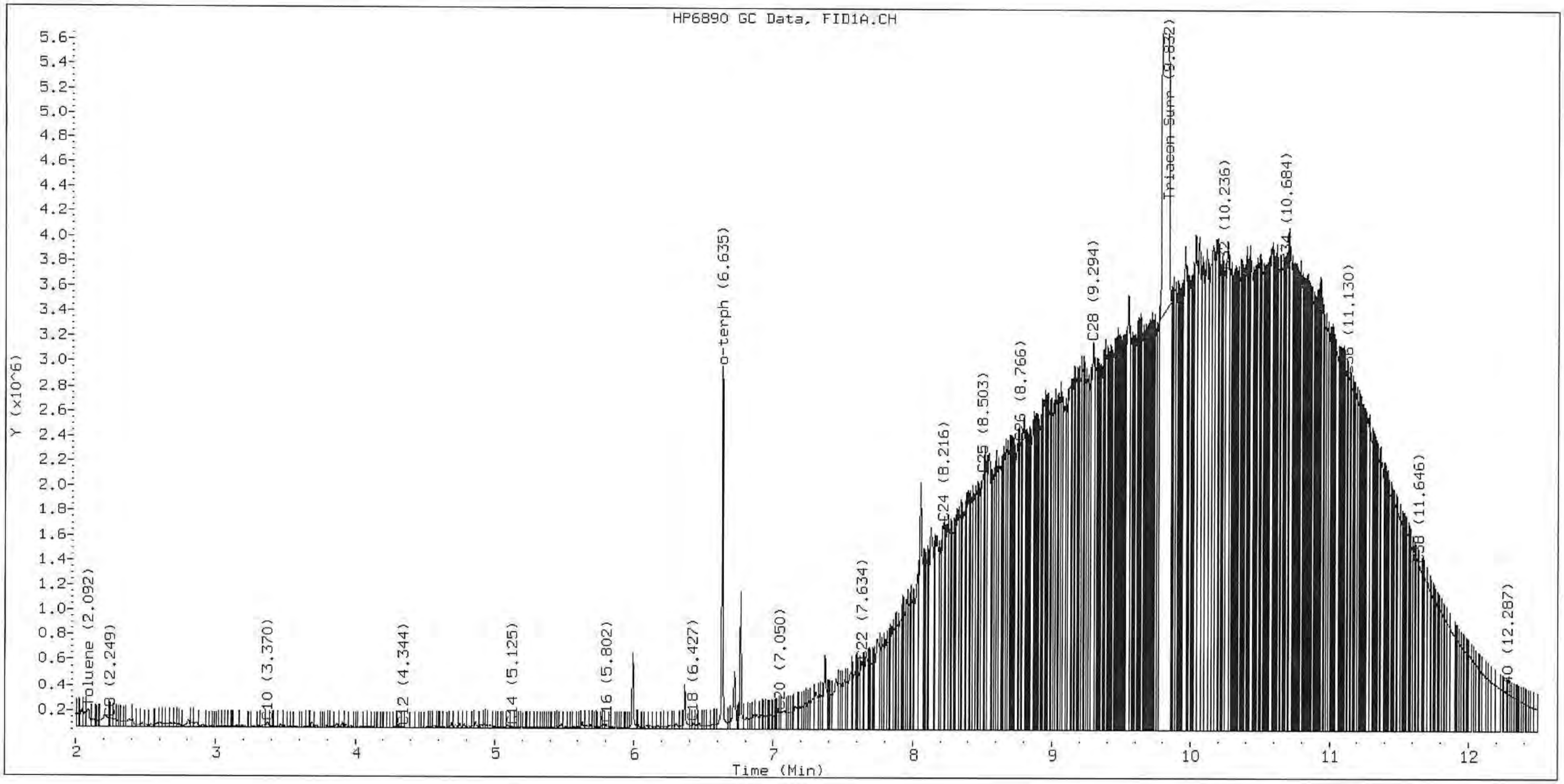
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	1975795	9.7
Triacontane	40251878	226.2 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

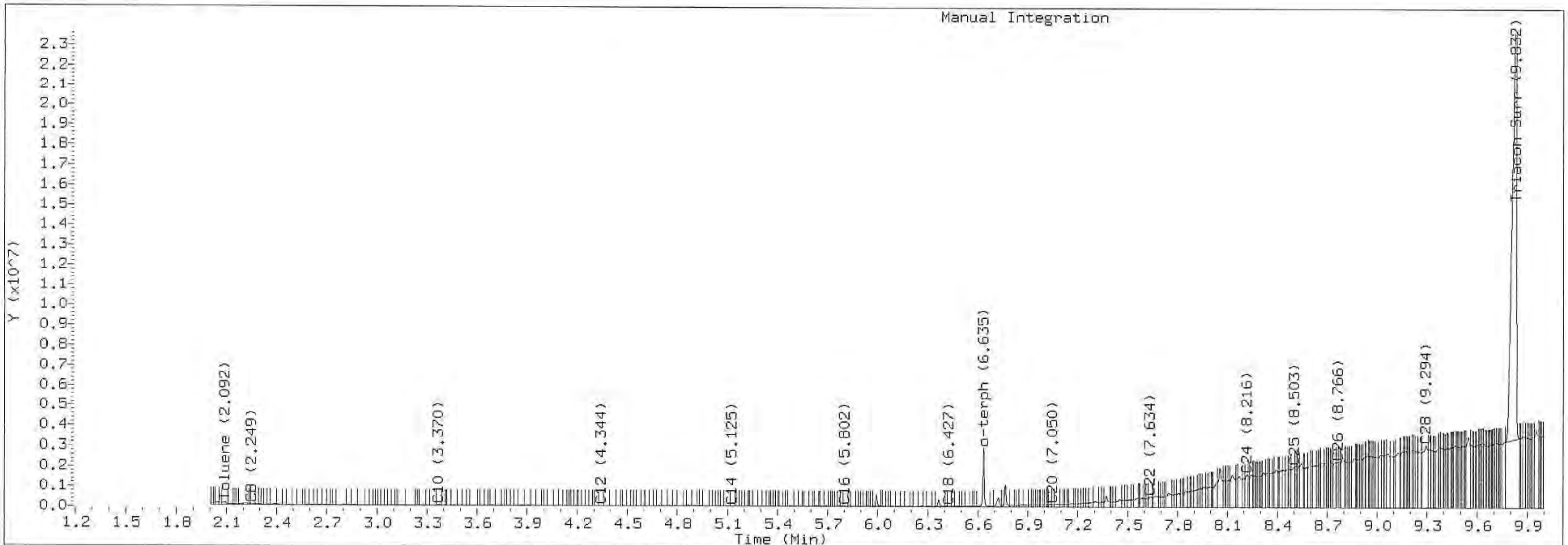
Datafile: FID4A, 20191025.b/419J2526.D SHJ0406-CALI

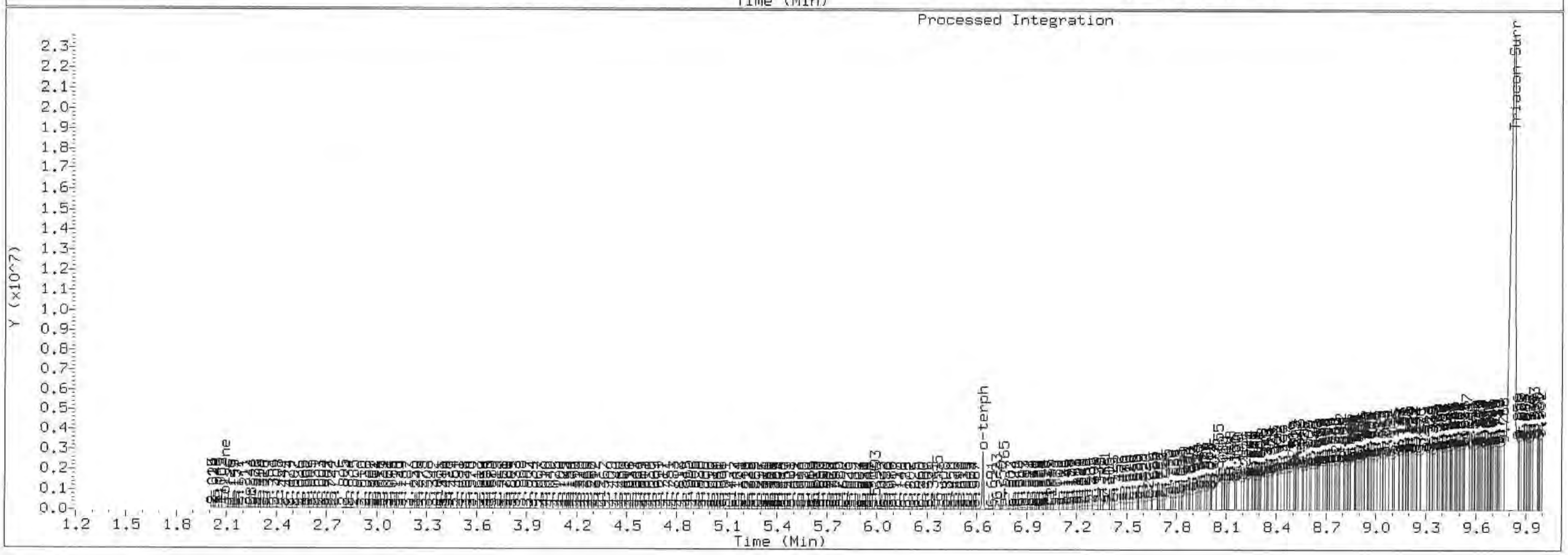


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2526.D Injection: 25-OCT-2019 20:15

Lab ID:SHJ0406-CALI





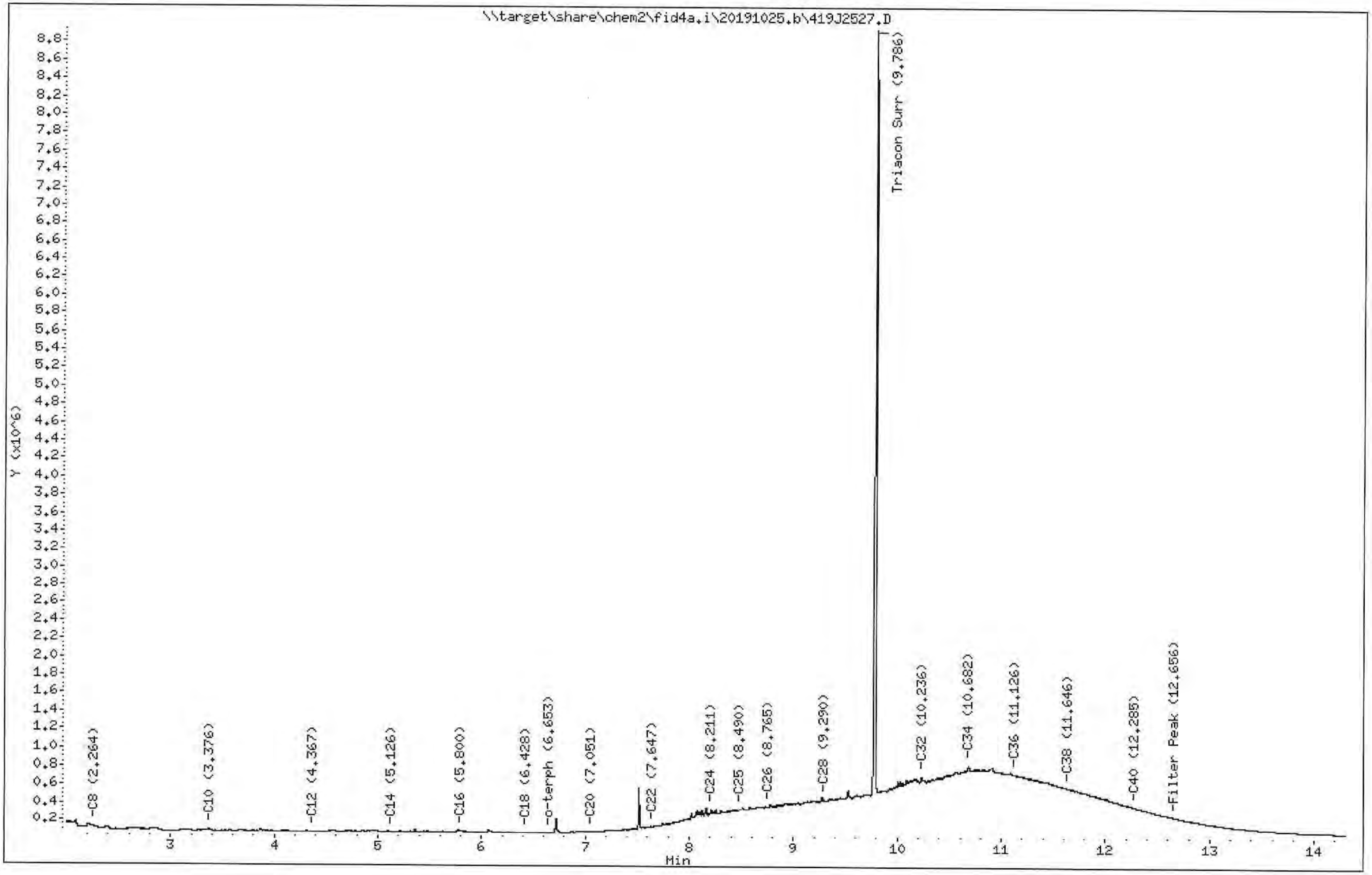
Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2527.D
Date : 25-OCT-2019 20:35
Client ID:
Sample Info: SHJ0406-SCV3

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25

Page 1



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2527.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
ARI ID: SHJ0406-SCV3
Client ID:
Injection: 25-OCT-2019 20:35
Dilution Factor: 1
RT Std: 419H1603.D
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	53471	36749	WATPHD	(C12-C24)	9151453	57.4
C10	3.376	0.003	25610	47191	WATPHM	(C24-C38)	105205257	793.2
C12	4.367	0.020	4177	4443	AK102	(C10-C25)	12217213	62.5
C14	5.126	-0.003	5782	7745	AK103	(C25-C36)	83900022	839.2
C16	5.800	-0.007	18027	25221	OR.DIES	(C10-C28)	30254236	154.4
C18	6.428	-0.007	5074	5462				
C20	7.051	0.008	15134	10036				
C22	7.647	0.008	76708	26745				
C24	8.211	-0.004	290822	446061				
C25	8.490	-0.003	283476	98752				
C26	8.765	0.000	315420	126036				
C28	9.290	0.004	395912	118500				
C32	10.236	-0.006	661365	1079458				
C34	10.682	0.001	769683	230477				
Filter Peak	12.656	0.006	214849	128159	CREOSOT	(C12-C22)	2946608	755.4
C36	11.126	-0.002	688686	308098				
C38	11.646	-0.004	543124	322331				
C40	12.285	-0.004	325522	178450				
o-terph	6.653	-0.003	2619	2570				
Triacon Surr	9.786	-0.016	8421327	7592281	NAS DIES	(C10-C24)	9621264	49.3

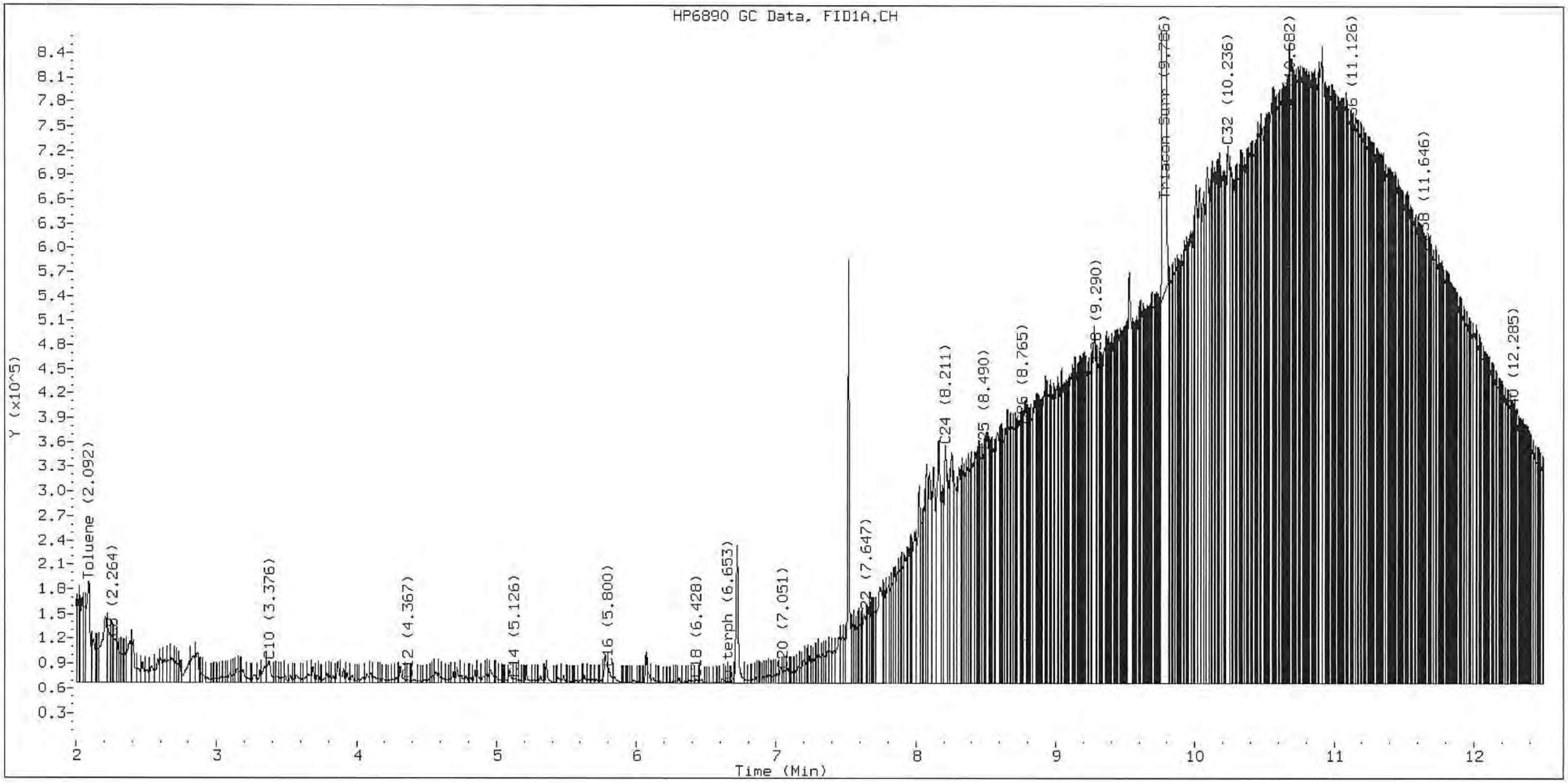
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	2570	0.0
Triacontane	7592281	42.7 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

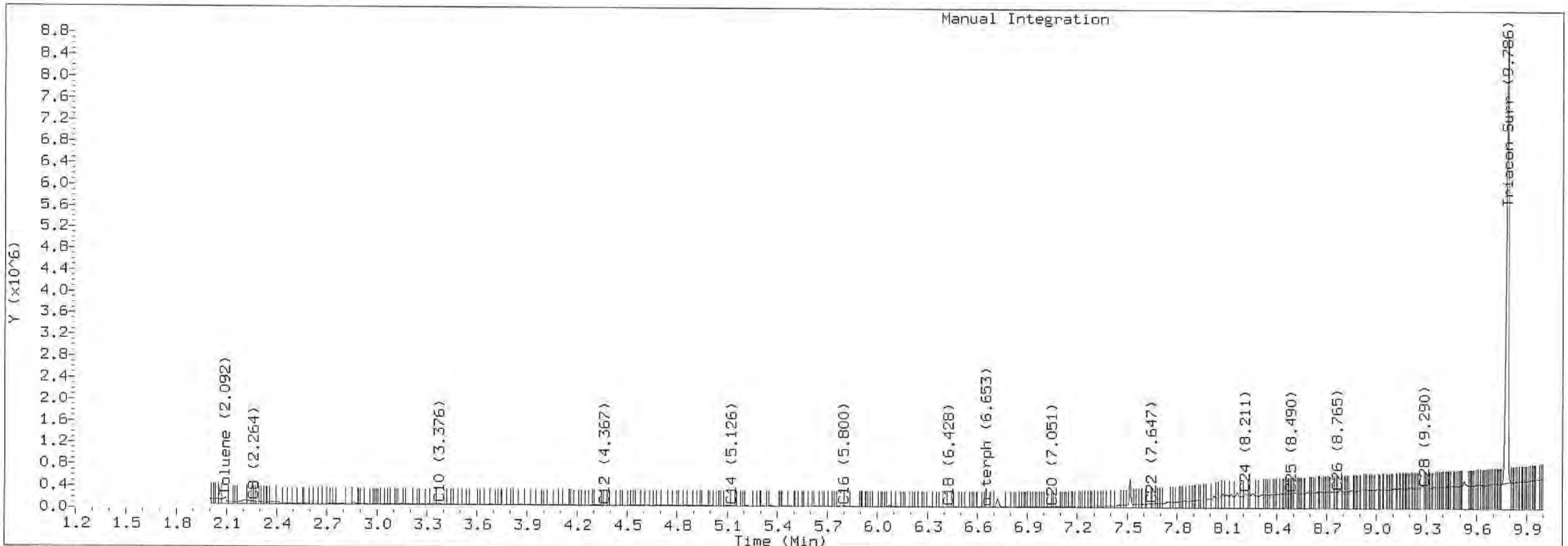
Datafile: FID4A, 20191025.b/419J2527.D SHJ0406-SCV3

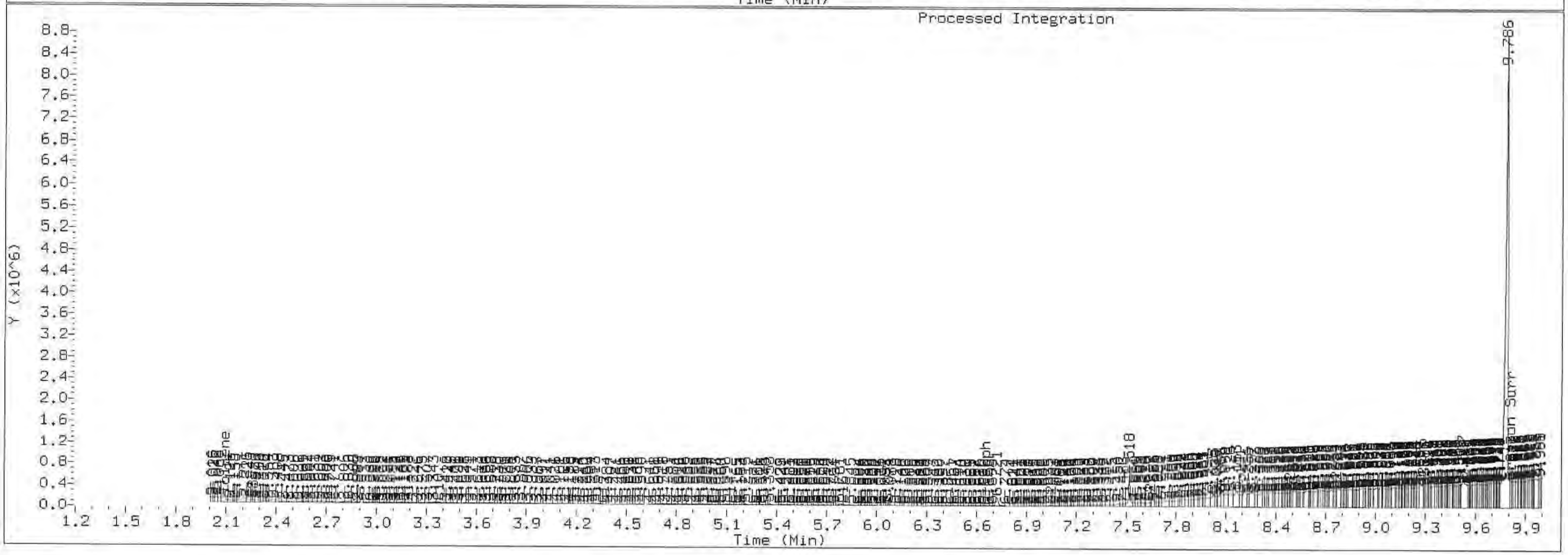


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2527.D Injection: 25-OCT-2019 20:35

Lab ID:SHJ0406-SCV3





Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191119.b/419K1907.D
Method: 20191119.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 11/20/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHK0260-ICV3
Client ID:
Injection: 19-NOV-2019 15:10
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.258	-0.008	251291	294712	WATPHD	(C12-C24)	42051010	263.9
C10	3.371	-0.003	4406335	3424876	WATPHM	(C24-C38)	496216	3.7
C12	4.346	-0.001	4634910	4478760	AK102	(C10-C25)	82254431	420.8
C14	5.126	-0.002	3015617	2044036	AK103	(C25-C36)	286196	2.9
C16	5.801	-0.005	604553	490104	OR.DIES	(C10-C28)	82288476	419.8
C18	6.426	-0.007	88855	83248				
C20	7.035	-0.006	27599	35934	JET-A	(C10-C18)	81259124	500.0
C22	7.631	-0.006	14833	25191				
C24	8.208	-0.005	6203	10027				
C25	8.490	-0.002	3298	4254				
C26	8.761	-0.002	1681	2107				
C28	9.291	0.006	225	122				
C32	10.242	0.000	1787	779				
C34	10.677	-0.003	4152	2235				
Filter Peak	12.648	0.002	7181	4285	CREOSOT	(C12-C22)	41927190	817.4
C36	11.126	0.000	5955	3830				
C38	11.639	-0.004	6373	4434				
C40	12.278	0.002	7499	4100				
o-terph	6.651	-0.002	16020002	16763037				
Triacon Surr	9.804	0.002	747	319	NAS DIES	(C10-C24)	82236143	421.4

Range Times: NW Diesel(4.346 - 8.213) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.64) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	16763037	81.9
Triacontane	319	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	51292.5	15-NOV-2019

Data File: \\target\share\chem2\fid4a.i\20191119.b\419K1907.D

Date : 19-NOV-2019 15:10

Client ID:

Sample Info: SHK0260-ICV3

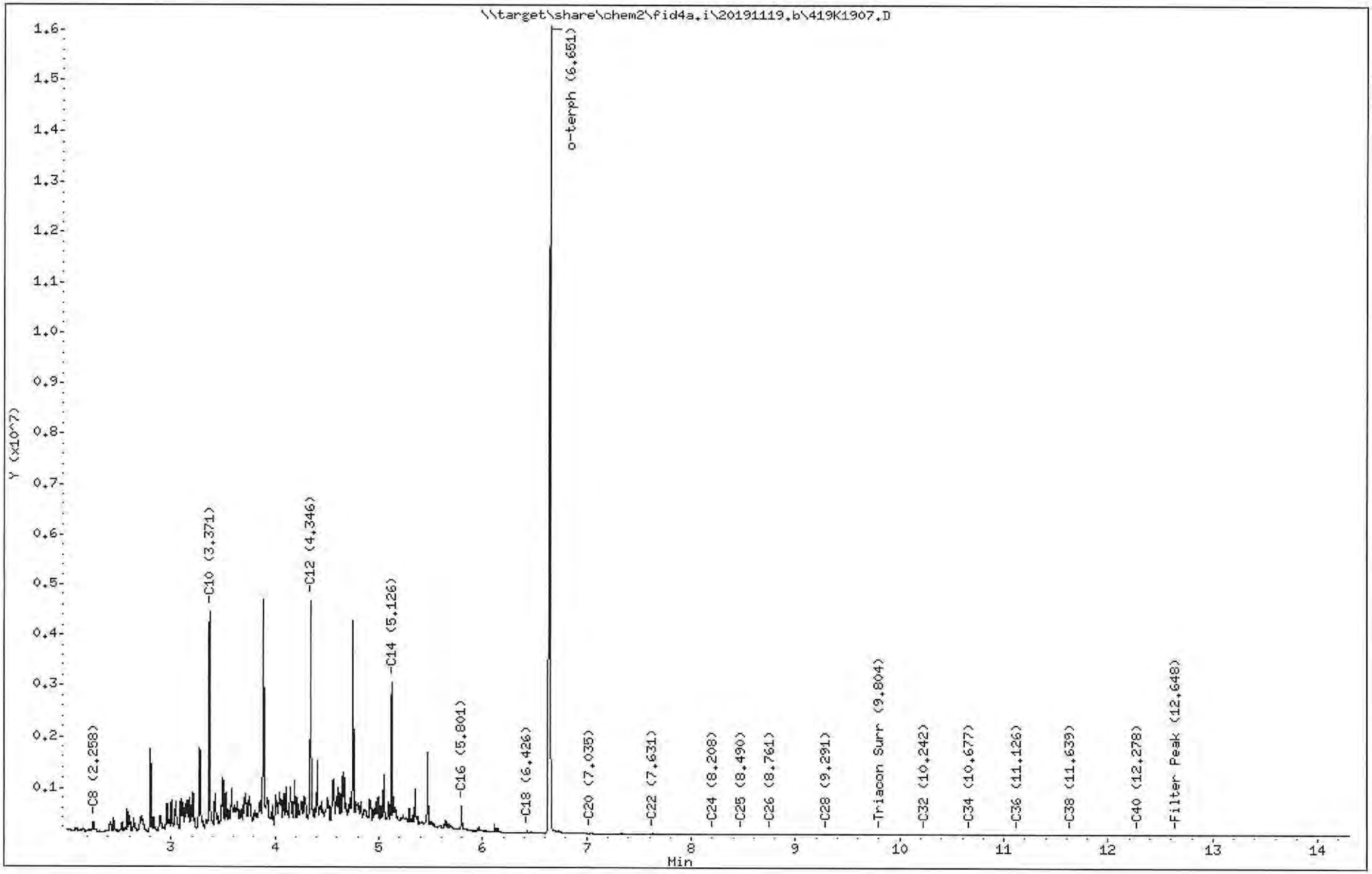
Column phase: RTX-1

Page 1

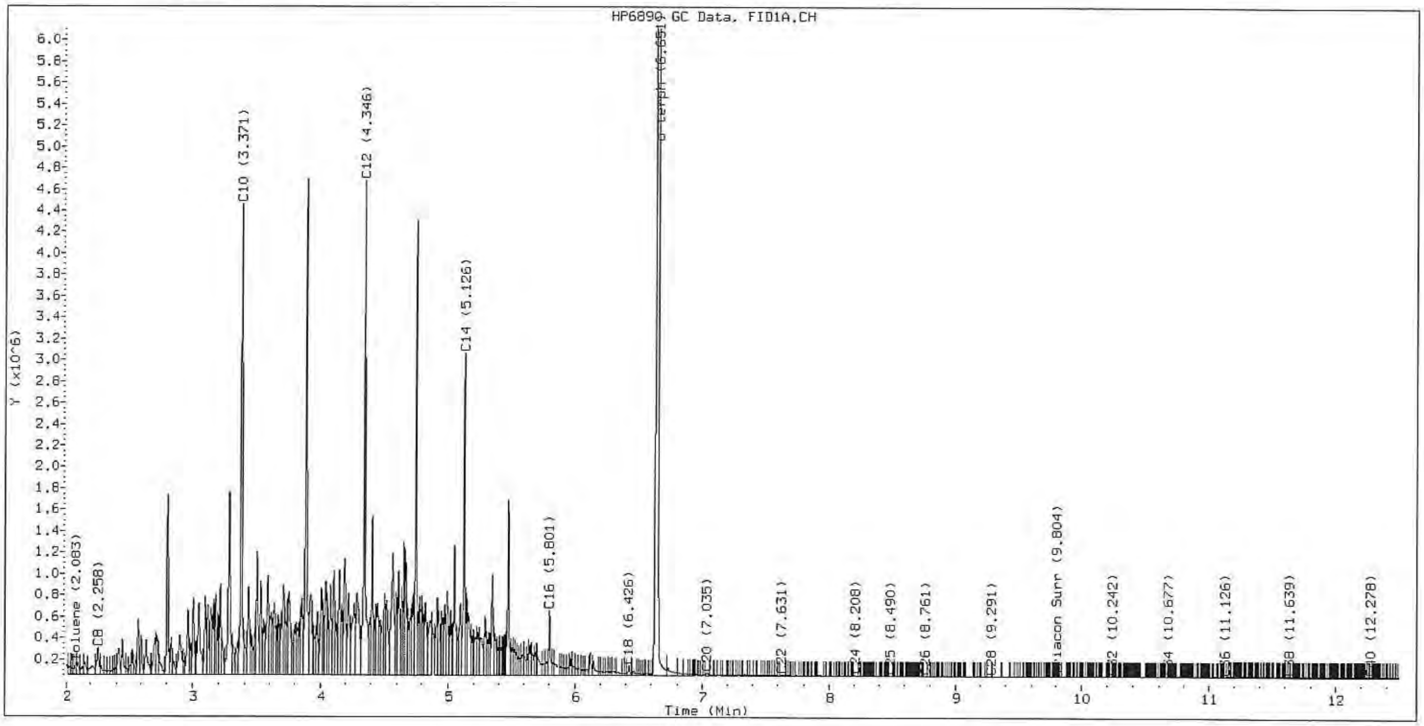
Instrument: fid4a.i

Operator: CTO

Column diameter: 0.25



Datafile: FID4A, 20191119.b/419K1907.D SHK0260-ICV3



Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)	50	182114.3	100	162168.4	250	151655.3	500	152220	1000	153066.8	2500	154795.4
o-Terphenyl	9	207237.8	18	202348.9	45	199293.8	90	202627.8	180	206915.5	450	209787.6

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)												
o-Terphenyl												

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)												
Motor Oil Range Organics (C24-C38)	100	110475.2	250	98102.84	500	98974	1000	101521.1	2500	101127.1	5000	96795.9
o-Terphenyl												

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)												

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

Compound	Level 25		Level 26		Level 27		Level 28		Level 29		Level 30	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)												

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

Compound	Level 31		Level 32		Level 33		Level 34		Level 35		Level 36	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)												

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

Compound	Level 37		Level 38		Level 39		Level 40		Level 41		Level 42	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)												

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Diesel Range Organics (C12-C24)	159336.7	7.4			RSD (20)	
Diesel Range Organics (C12-C24)	159336.7	7.4			RSD (20)	
Motor Oil Range Organics (C24-C38)	101166	4.8			RSD (20)	
o-Terphenyl	204701.9	1.9			RSD (20)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 10/30/2019 7:24:06AM

ANALYSIS SEQUENCE

SHJ0406

Instrument: FID4
Calibration ID: CJ00089

Element Column ID: G004925

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SHJ0406-IBL1	Retention Time Standard	QC		1	H006806		
SHJ0406-IBL2	Instrument Blank	QC		2	H007457		
SHJ0406-CAL1	DIESEL 50	QC		3	H010495		
SHJ0406-CAL2	DIESEL 100	QC		4	H010496		
SHJ0406-CAL3	DIESEL 250	QC		5	H010497		
SHJ0406-CAL4	DIESEL 500	QC		6	H010498		
SHJ0406-CAL5	DIESEL 1000	QC		7	H010499		
SHJ0406-CAL6	DIESEL 2500	QC		8	H009367		
SHJ0406-SCV1	DIESEL SCV	QC		9	H008294		
SHJ0406-CAL7	MOIL 100	QC		10	H008395		
SHJ0406-CAL8	MOIL 250	QC		11	H008396		
SHJ0406-CAL9	MOIL 500	QC		12	H008397		
SHJ0406-CALA	MOIL 1000	QC		13	H007659		
SHJ0406-CALB	MOIL 2500	QC		14	H008398		
SHJ0406-CALC	MOIL 5000	QC		15	H007458		
SHJ0406-SCV2	MOIL SCV	QC		16	H008399		
SHJ0406-CALD	AK103 100	QC		17	H010478		
SHJ0406-CALE	AK103 250	QC		18	H010479		
SHJ0406-CALF	AK103 500	QC		19	H010480		
SHJ0406-CALG	AK103 1000	QC		20	H010481		
SHJ0406-CALH	AK103 2500	QC		21	H010482		
SHJ0406-CALI	AK103 5000	QC		22	H008608		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SHJ0406

Printed: 10/30/2019 7:24:06AM

Instrument: FID4
Calibration ID: CJ00089

Element Column ID: G004925

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SHJ0406-SCV3	AK103 SCV	QC		23	H008400		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	25-OCT-2019 11:37	419J2501.D	1	RINSE	
2	25-OCT-2019 11:55	419J2502.D	1	RINSE	
3	25-OCT-2019 12:30	419J2503.D	1	RINSE	
4	25-OCT-2019 12:51	419J2504.D	1	RINSE	
5	25-OCT-2019 13:11	419J2505.D	1	SHJ0406-IBL1	
6	25-OCT-2019 13:31	419J2506.D	1	SHJ0406-IBL2	
7	25-OCT-2019 13:52	419J2507.D	1	SHJ0406-CAL1	
8	25-OCT-2019 14:12	419J2508.D	1	SHJ0406-CAL2	
9	25-OCT-2019 14:32	419J2509.D	1	SHJ0406-CAL3	
10	25-OCT-2019 14:53	419J2510.D	1	SHJ0406-CAL4	
11	25-OCT-2019 15:13	419J2511.D	1	SHJ0406-CAL5	
12	25-OCT-2019 15:32	419J2512.D	1	SHJ0406-CAL6	
13	25-OCT-2019 15:52	419J2513.D	1	SHJ0406-SCV1	
14	25-OCT-2019 16:12	419J2514.D	1	SHJ0406-CAL7	
15	25-OCT-2019 16:33	419J2515.D	1	SHJ0406-CAL8	
16	25-OCT-2019 16:53	419J2516.D	1	SHJ0406-CAL9	
17	25-OCT-2019 17:13	419J2517.D	1	SHJ0406-CALA	
18	25-OCT-2019 17:34	419J2518.D	1	SHJ0406-CALB	
19	25-OCT-2019 17:54	419J2519.D	1	SHJ0406-CALC	
20	25-OCT-2019 18:14	419J2520.D	1	SHJ0406-SCV2	
21	25-OCT-2019 18:35	419J2521.D	1	SHJ0406-CALD	
22	25-OCT-2019 18:55	419J2522.D	1	SHJ0406-CALE	
23	25-OCT-2019 19:15	419J2523.D	1	SHJ0406-CALF	
24	25-OCT-2019 19:34	419J2524.D	1	SHJ0406-CALG	
25	25-OCT-2019 19:54	419J2525.D	1	SHJ0406-CALH	
26	25-OCT-2019 20:15	419J2526.D	1	SHJ0406-CALI	
27	25-OCT-2019 20:35	419J2527.D	1	SHJ0406-SCV3	
28	25-OCT-2019 20:55	419J2528.D	1	SHJ0406-ICV1	
29	25-OCT-2019 21:16	419J2529.D	1	SHJ0406-ICV2	
30	25-OCT-2019 21:36	419J2530.D	1	BHJ0711-BLK1	
31	25-OCT-2019 21:56	419J2531.D	1	BHJ0711-BS1	
32	25-OCT-2019 22:16	419J2532.D	1	19J0373-01	
33	25-OCT-2019 22:35	419J2533.D	1	19J0373-02	
34	25-OCT-2019 22:55	419J2534.D	1	19J0373-03	
35	25-OCT-2019 23:16	419J2535.D	1	19J0373-04	
36	25-OCT-2019 23:36	419J2536.D	1	19J0373-05	
37	25-OCT-2019 23:57	419J2537.D	1	19J0373-06	
38	26-OCT-2019 00:17	419J2538.D	1	19J0373-07	
39	26-OCT-2019 00:37	419J2539.D	1	19J0373-08	
40	26-OCT-2019 00:58	419J2540.D	1	SHJ0406-CCV1	
41	26-OCT-2019 01:18	419J2541.D	1	SHJ0406-CCV2	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 25-OCT-2019

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1137	419J2501.D	RINSE		1	NO MANUAL INTEGRATION
1155	419J2502.D	RINSE		1	NO MANUAL INTEGRATION
1230	419J2503.D	RINSE		1	NO MANUAL INTEGRATION
1251	419J2504.D	RINSE		1	NO MANUAL INTEGRATION
1311	419J2505.D	SHJ0406-IBL1		1	NO MANUAL INTEGRATION
1331	419J2506.D	SHJ0406-IBL2		1	NO MANUAL INTEGRATION
1352	419J2507.D	SHJ0406-CAL1		1	NO MANUAL INTEGRATION
1412	419J2508.D	SHJ0406-CAL2		1	o-terph,
1432	419J2509.D	SHJ0406-CAL3		1	NO MANUAL INTEGRATION
1453	419J2510.D	SHJ0406-CAL4		1	o-terph,
1513	419J2511.D	SHJ0406-CAL5		1	o-terph,
1532	419J2512.D	SHJ0406-CAL6		1	o-terph,
1552	419J2513.D	SHJ0406-SCV1		1	NO MANUAL INTEGRATION
1612	419J2514.D	SHJ0406-CAL7		1	Triacon Surr,
1633	419J2515.D	SHJ0406-CAL8		1	Triacon Surr,
1653	419J2516.D	SHJ0406-CAL9		1	Triacon Surr,
1713	419J2517.D	SHJ0406-CALA		1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1734	419J2518.D	SHJ0406-CALB		1	Triacon Surr,
1754	419J2519.D	SHJ0406-CALC		1	Triacon Surr,
1814	419J2520.D	SHJ0406-SCV2		1	Triacon Surr,
1835	419J2521.D	SHJ0406-CALD		1	Triacon Surr,
1855	419J2522.D	SHJ0406-CALE		1	Triacon Surr,
1915	419J2523.D	SHJ0406-CALF		1	Triacon Surr,
1934	419J2524.D	SHJ0406-CALG		1	Triacon Surr,
1954	419J2525.D	SHJ0406-CALH		1	Triacon Surr,
2015	419J2526.D	SHJ0406-CALI		1	Triacon Surr,
2035	419J2527.D	SHJ0406-SCV3		1	Triacon Surr,
2055	419J2528.D	SHJ0406-ICV1		1	o-terph,
2116	419J2529.D	SHJ0406-ICV2		1	Triacon Surr,
2136	419J2530.D	BHJ0711-BLK1		1	NO MANUAL INTEGRATION
2156	419J2531.D	BHJ0711-BS1		1	o-terph,
2216	419J2532.D	19J0373-01		1	Triacon Surr,
2235	419J2533.D	19J0373-02		1	NO MANUAL INTEGRATION
2255	419J2534.D	19J0373-03		1	Triacon Surr,
2316	419J2535.D	19J0373-04		1	Triacon Surr,

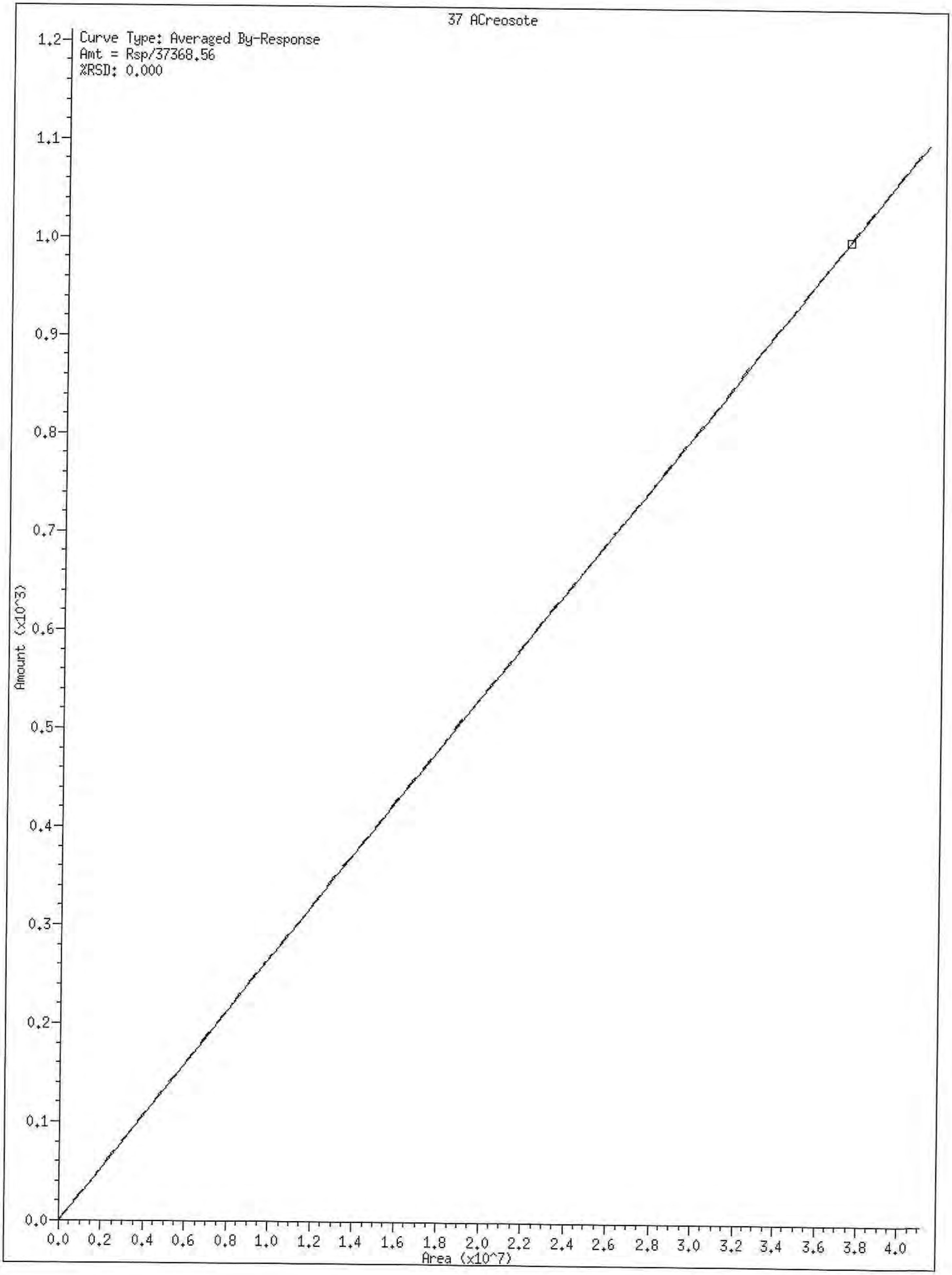
MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2336	419J2536.D	19J0373-05		1	o-terph, Triacon Surr,
2357	419J2537.D	19J0373-06		1	Triacon Surr,
0017	419J2538.D	19J0373-07		1	Triacon Surr,
0037	419J2539.D	19J0373-08		1	Triacon Surr,
0058	419J2540.D	SHJ0406-CCV1		1	o-terph,
0118	419J2541.D	SHJ0406-CCV2		1	Triacon Surr,

Security Status Report

Date: 30-Oct-2019 07:25

419J2507.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2508.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2509.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2510.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2511.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2512.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2513.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2514.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2515.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2516.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2517.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2518.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2519.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2520.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2521.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2522.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2523.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2524.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2525.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2526.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2527.D	Data Locked	jrains, 30-Oct-2019 07:20


37 ACreosote
Curve Type: Averaged By-Response
Amt = Rsp/37368.56
%RSD: 0.000
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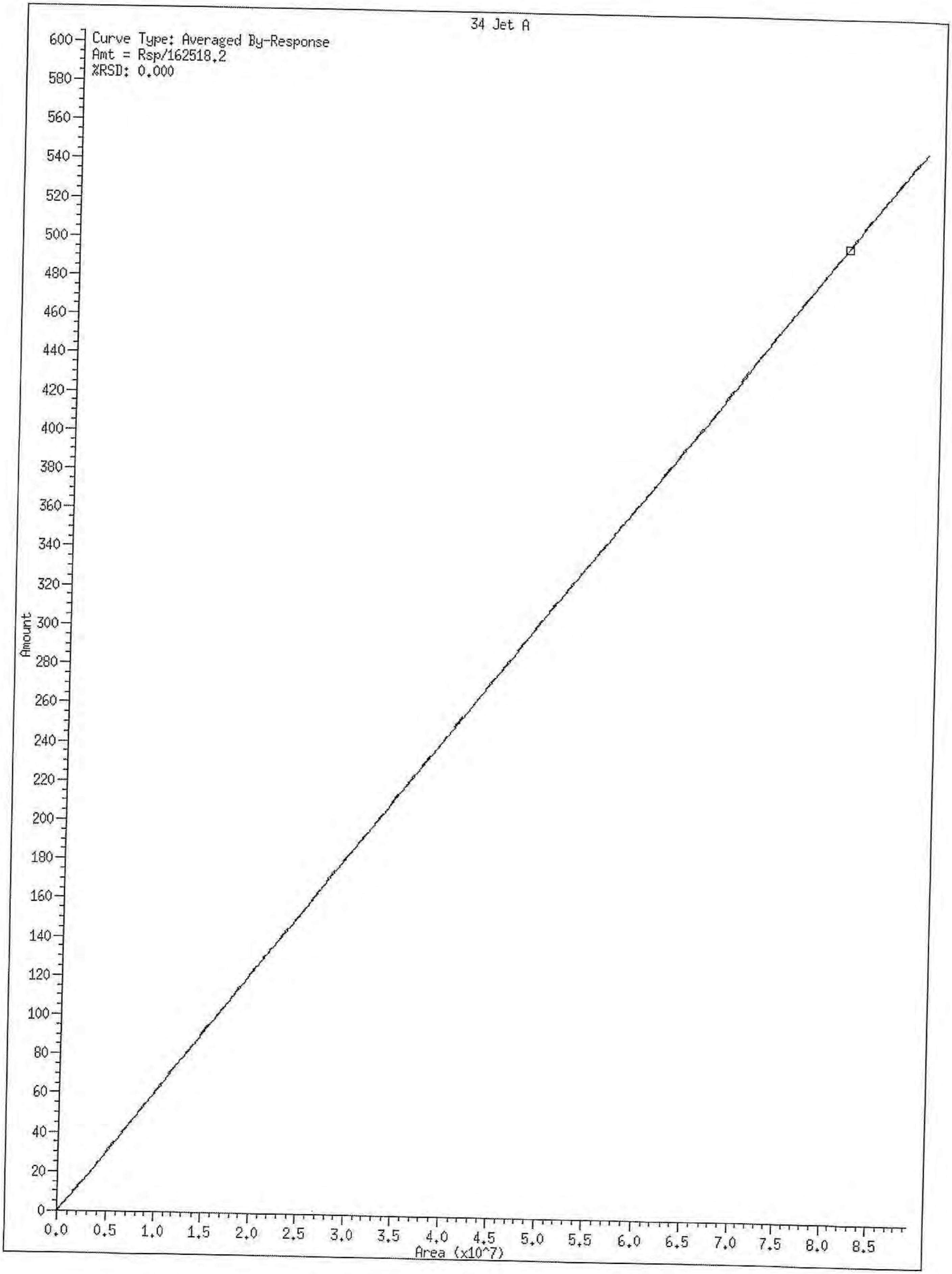
Area (x10^7)


34 Jet A
Curve Type: Averaged By-Response
Amt = Rsp/162518.2
%RSD: 0.000
Amount
Area (x10^7)
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40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
420
440
460
480
500
520
540
560
580
600
0.0
0.5
1.0
1.5
2.0
2.5
3.0
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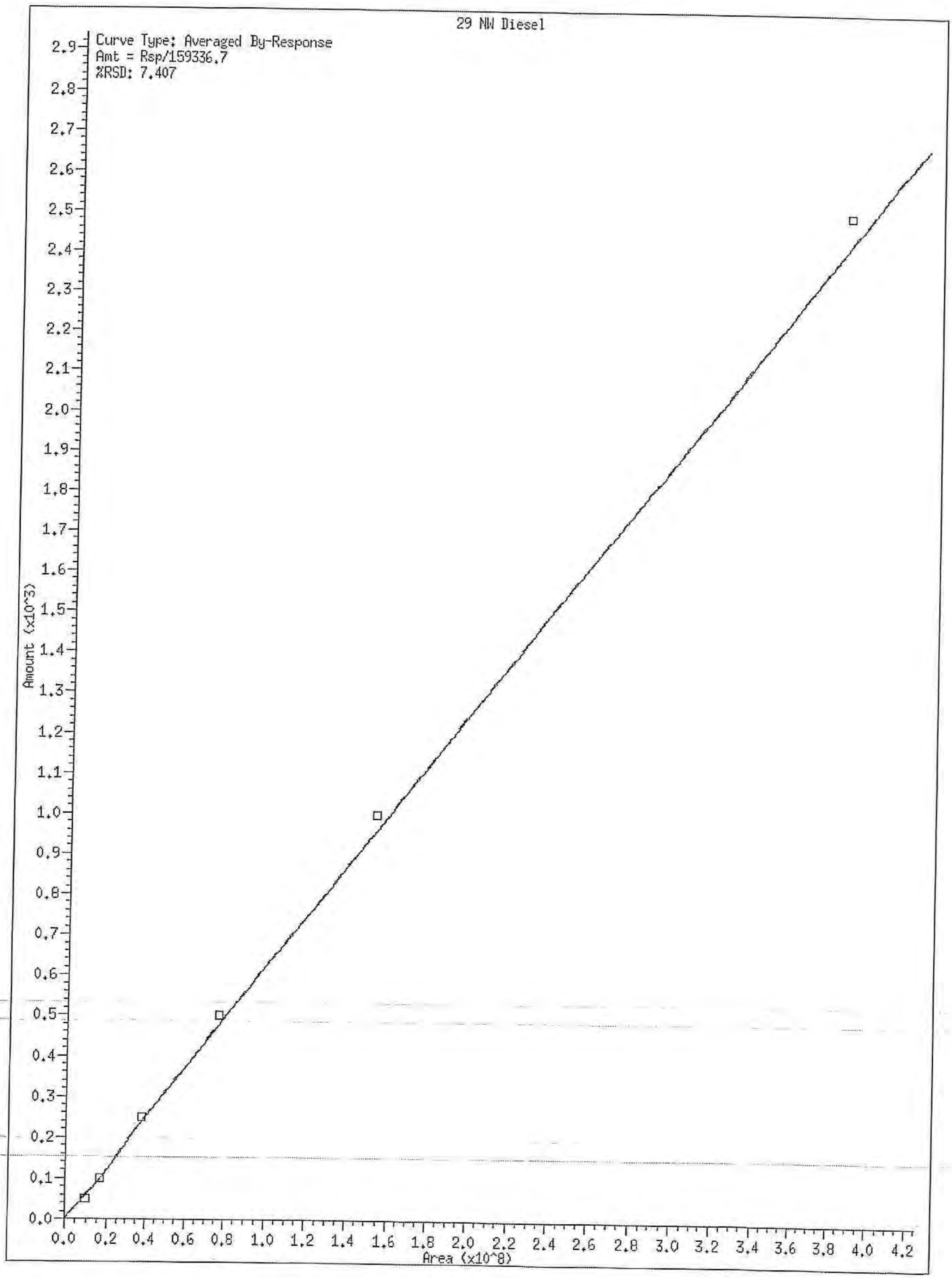
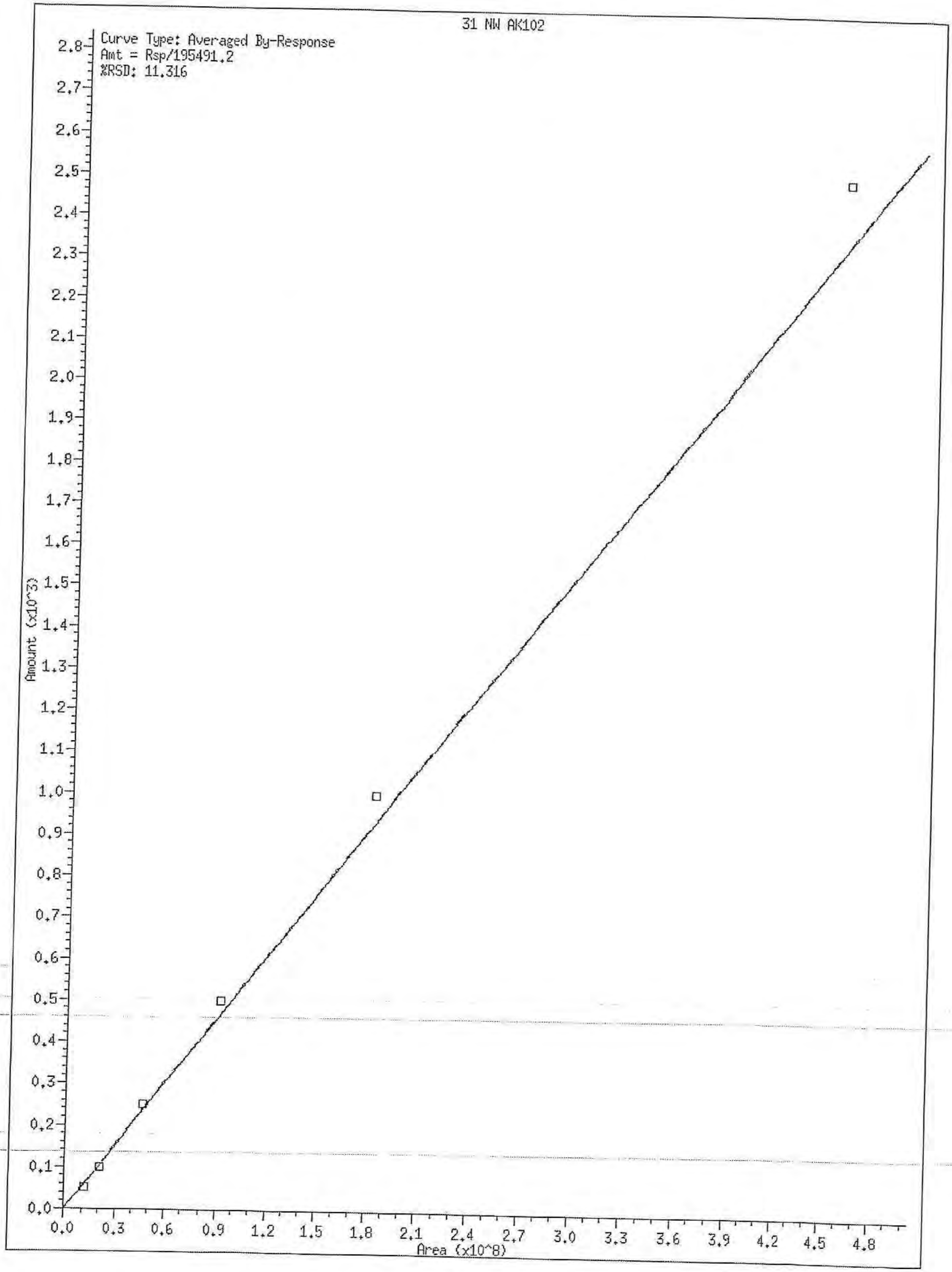

29 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/159336.7
%RSD: 7.407
Amount (x10^3)
Area (x10^8)


31 NW AK102
Curve Type: Averaged By-Response
Amt = Rsp/195491.2
%RSD: 11.316
Amount (x10^3)
Area (x10^8)
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
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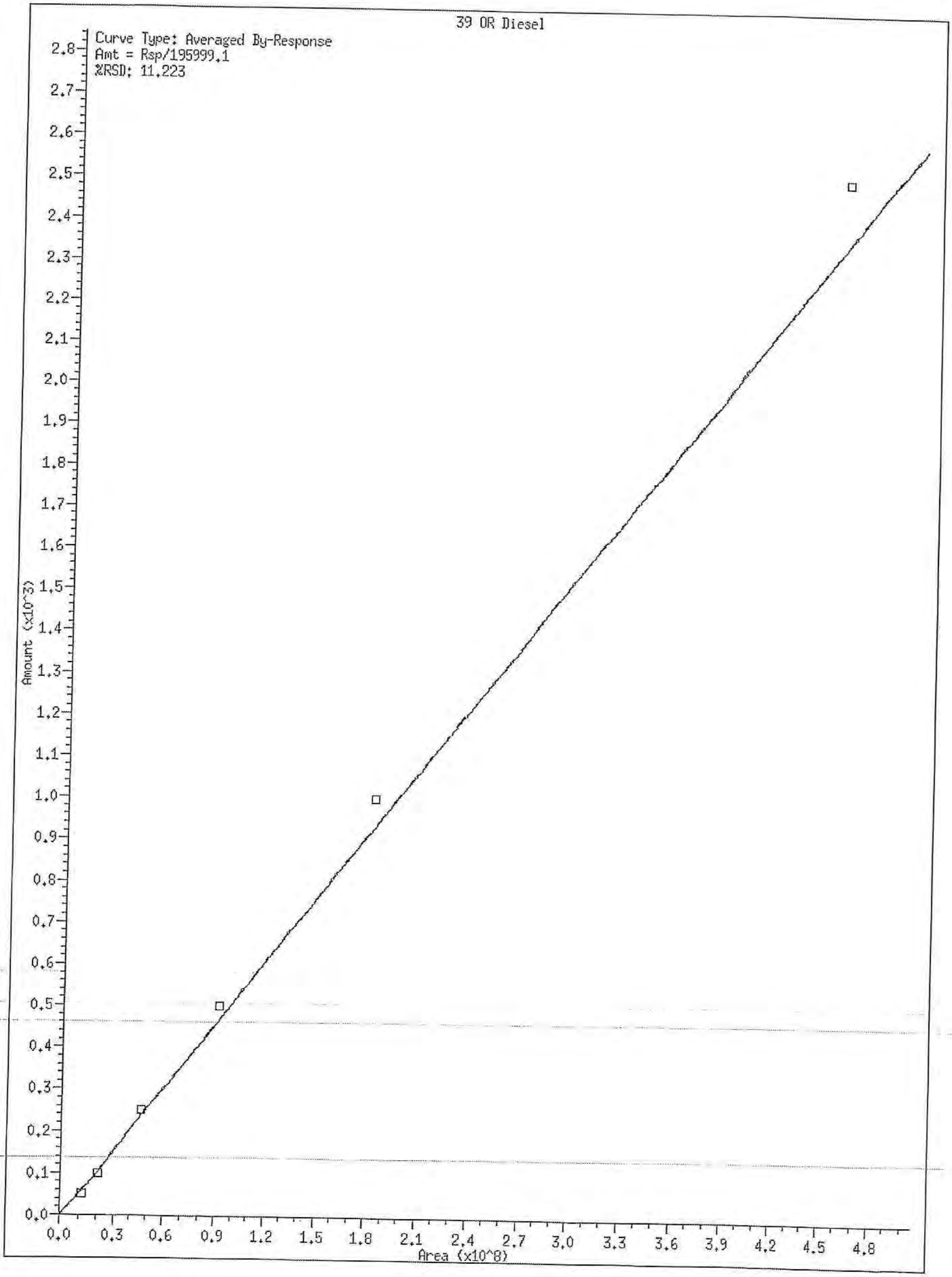
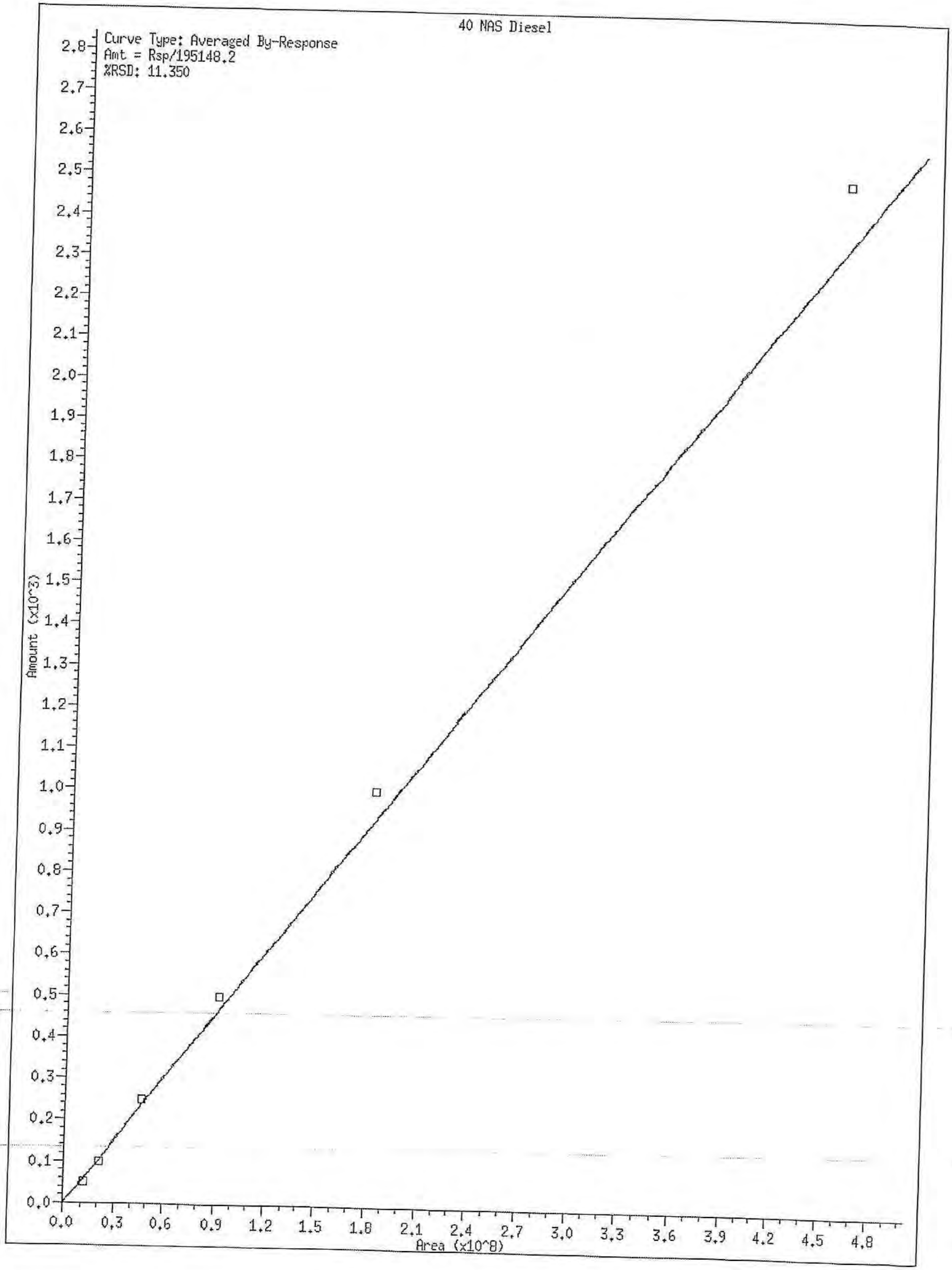
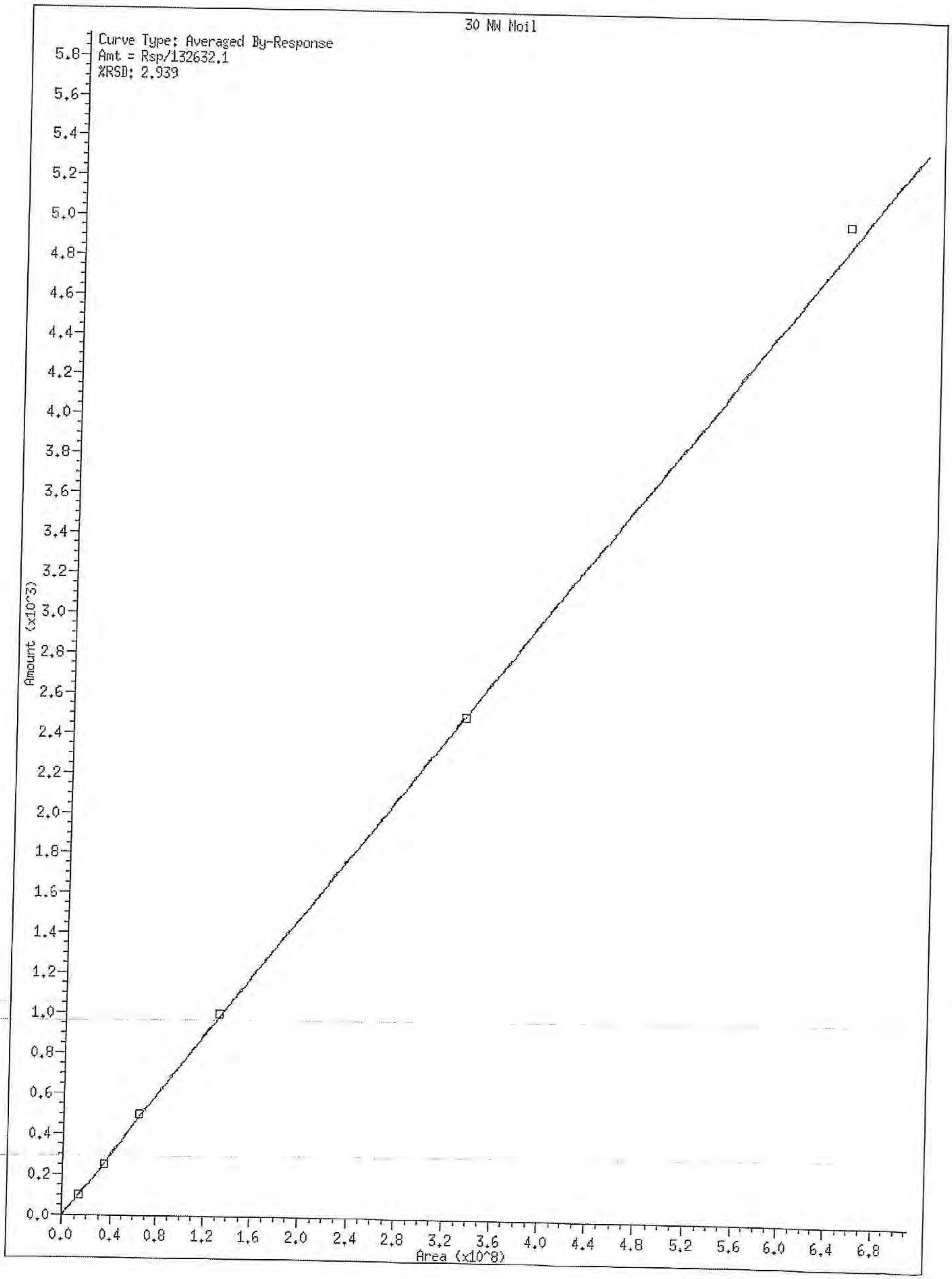
4.2
4.5
4.8


39 OR Diesel
Curve Type: Averaged By-Response
Amt = Rsp/195999.1
%RSD: 11.223
Amount (x10^3)
Area (x10^8)



40 NAS Diesel
Curve Type: Averaged By-Response
Amt = Rsp/195148.2
%RSD: 11.350
Amount (x10^3)
Area (x10^8)


30 NW Moil
Curve Type: Averaged By-Response
Amt = Rsp/132632.1
%RSD: 2.939
Amount (x10^3)
Area (x10^8)
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5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
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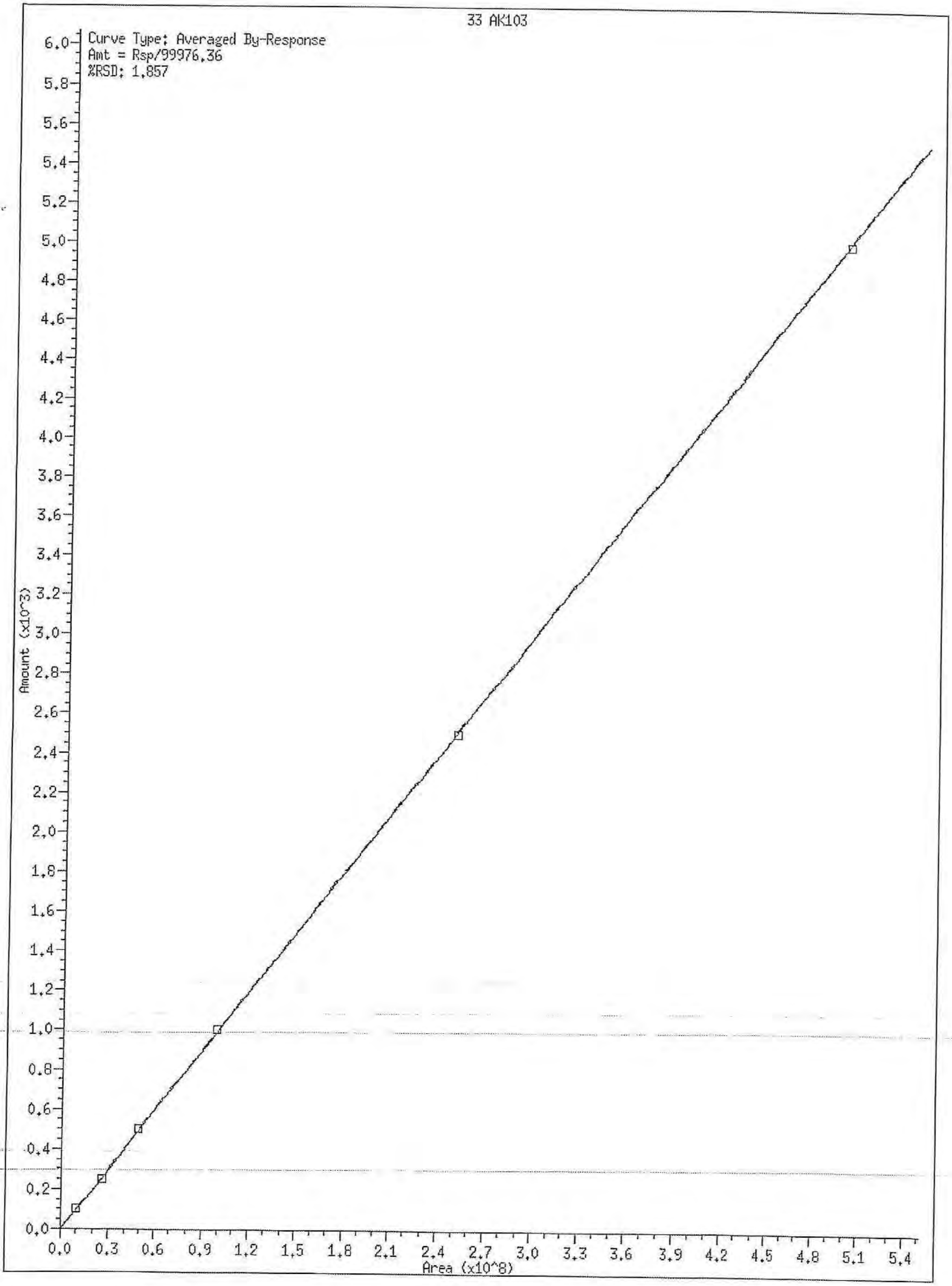
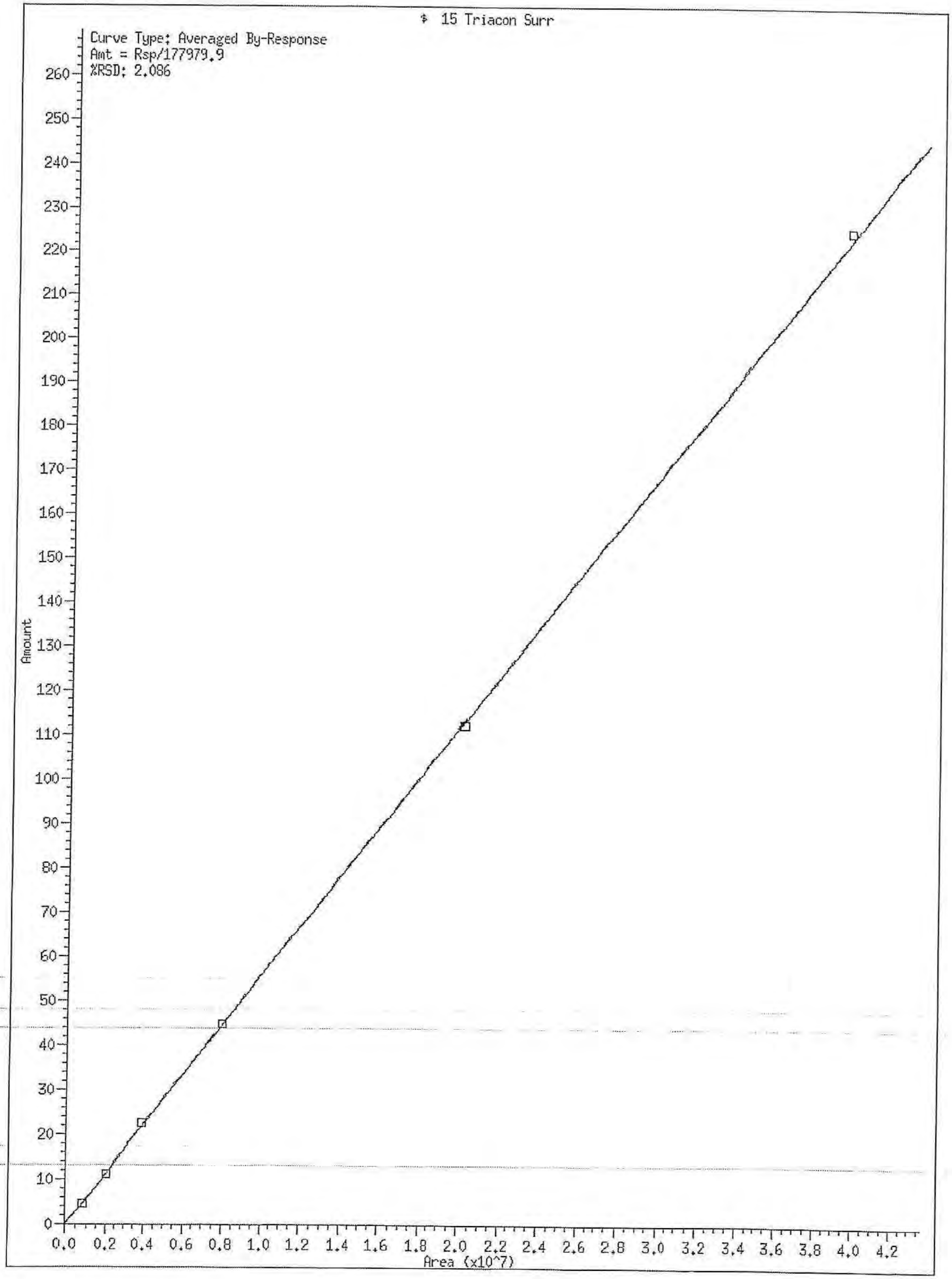

33 AK103
Curve Type: Averaged By-Response
Amt = Rsp/99976.36
%RSD: 1.857
Amount (x10^3)
Area (x10^8)


$ 15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/177979.9
%RSD: 2.086
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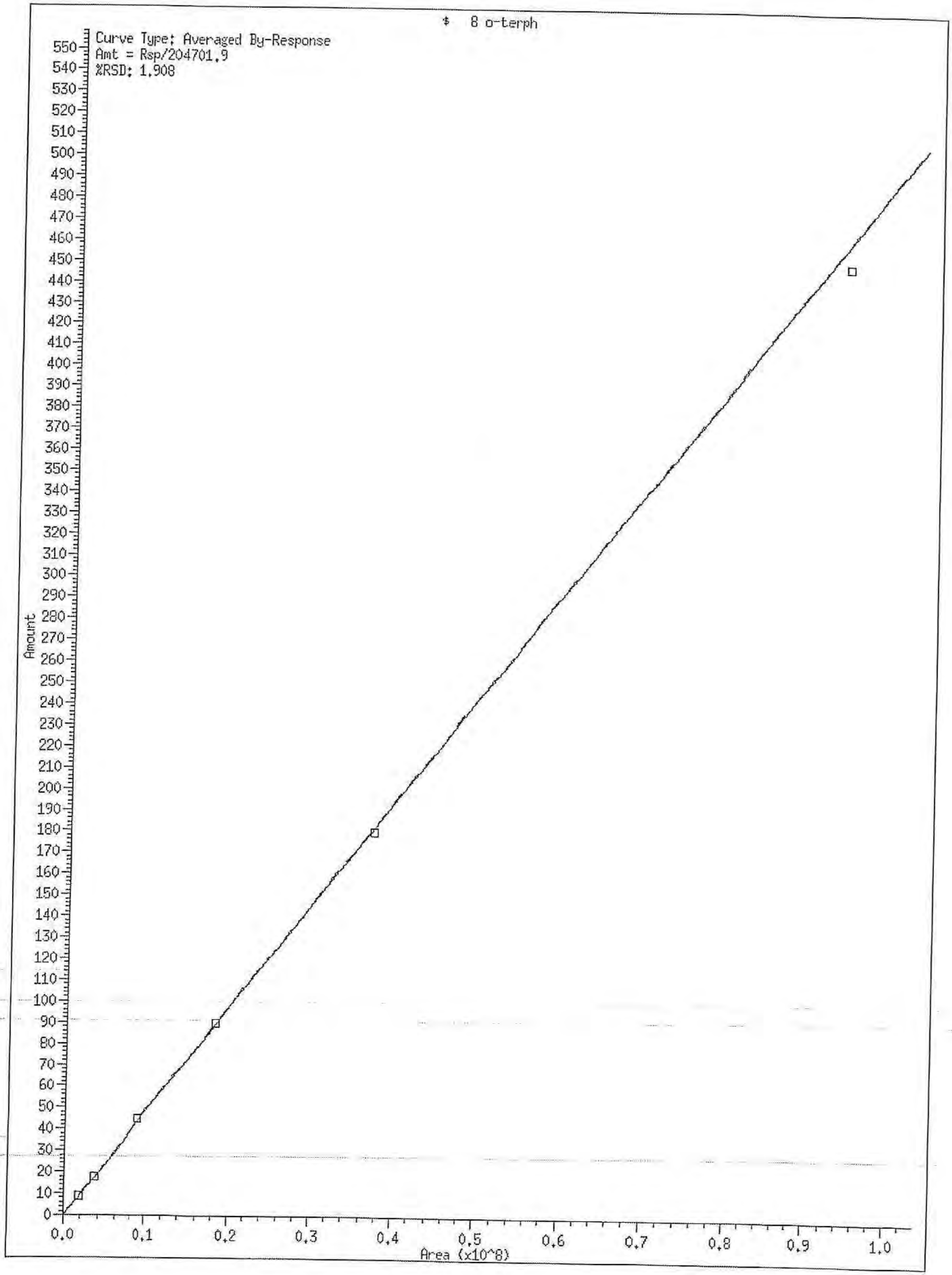
Area (x10^7)


$ 8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/204701.9
%RSD: 1.908
Amount
Area (x10^8)

Report Date : 30-Oct-2019 07:52

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	419J2507	419J2508	419J2509	419J2510	419J2511	419J2512
INJ.DATE:	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019
INJ.TIME:	13:52	14:12	14:32	14:53	15:13	15:32

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	2.086	2.091	2.092	2.084	2.085	2.093	2.089	1.989-2.189	2.089	0.004
38 NewCpnd_31	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
41 Mineral Spirits	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
2 C8	2.263	2.252	2.253	2.254	2.254	2.254	2.262	2.162-2.362	2.255	0.004
3 C10	3.369	3.367	3.368	3.368	3.368	3.371	3.373	3.323-3.423	3.368	0.001
4 C12	4.344	4.344	4.344	4.344	4.346	4.351	4.347	4.297-4.397	4.345	0.003
5 C14	5.126	5.126	5.126	5.127	5.129	5.137	5.130	5.080-5.180	5.128	0.004
6 C16	5.803	5.802	5.803	5.805	5.809	5.818	5.807	5.757-5.857	5.807	0.006
7 C18	6.428	6.429	6.431	6.434	6.439	6.452	6.435	6.385-6.485	6.435	0.009
$ 8 o-terph	6.636	6.640	6.646	6.655	6.669	6.696	6.656	6.606-6.706	6.657	0.023
9 C20	7.037	7.036	7.036	7.037	7.040	7.047	7.043	6.993-7.093	7.039	0.004
10 C22	7.633	7.631	7.631	7.631	7.633	7.637	7.639	7.589-7.689	7.633	0.002
11 C24	8.210	8.209	8.208	8.207	8.207	8.207	8.215	8.165-8.265	8.208	0.001
12 C25	8.494	8.489	8.488	8.485	8.486	8.485	8.493	8.443-8.543	8.488	0.003
13 C26	8.766	8.762	8.761	8.759	8.758	8.756	8.765	8.715-8.815	8.760	0.004
14 C28	9.292	9.288	9.287	9.281	9.279	9.279	9.285	9.235-9.335	9.284	0.005

Reviewer 1 ______________________ Date: ____________
Reviewer 2 ______________________ Date: ____________

Report Date : 30-Oct-2019 07:52

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 15 Triacon Surr	9.808	9.805	9.803	9.798	9.806	9.800	9.802	9.752-9.852	9.803	0.004
16 C32	10.240	10.242	10.248	10.245	10.243	10.242	10.242	10.192-10.292	10.243	0.003
17 C34	10.682	10.678	10.683	10.684	10.687	10.677	10.681	10.631-10.731	10.682	0.004
18 Filter Peak	12.647	12.646	12.650	12.646	12.649	12.650	12.650	12.550-12.750	12.648	0.002
19 C36	11.130	11.127	11.127	11.131	11.127	11.129	11.129	11.079-11.179	11.128	0.002
20 C38	11.651	11.646	11.648	11.653	11.653	11.651	11.650	11.600-11.700	11.650	0.003
21 C40	12.289	12.291	12.292	12.287	12.283	12.288	12.289	12.239-12.339	12.288	0.003
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 ACreosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++
39 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
40 NAS Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

Report Date : 30-Oct-2019 07:53

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	419J2514	419J2515	419J2516	419J2517	419J2518	419J2519
INJ.DATE:	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019
INJ.TIME:	16:12	16:33	16:53	17:13	17:34	17:54

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	2.092	2.092	2.092	2.093	2.092	2.092	2.089	1.989-2.189	2.092	0.000
	38 NewCpnd_31	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
	35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
	41 Mineral Spirits	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
	2 C8	2.263	2.262	2.263	2.263	2.250	2.251	2.262	2.162-2.362	2.259	0.007
	3 C10	3.376	3.377	3.376	3.376	3.371	3.369	3.373	3.323-3.423	3.374	0.003
	4 C12	4.368	4.332	4.334	4.333	4.343	4.344	4.347	4.297-4.397	4.342	0.014
	5 C14	5.134	5.134	5.125	5.127	5.126	5.126	5.130	5.080-5.180	5.129	0.004
	6 C16	5.805	5.808	5.805	5.803	5.802	5.802	5.807	5.757-5.857	5.804	0.002
	7 C18	6.435	6.432	6.439	6.428	6.427	6.427	6.435	6.385-6.485	6.431	0.005
S	8 o-terph	6.651	6.657	6.659	6.633	6.655	6.656	6.656	6.606-6.706	6.652	0.009
	9 C20	7.038	7.038	7.036	7.048	7.051	7.035	7.043	6.993-7.093	7.041	0.006
	10 C22	7.642	7.644	7.632	7.632	7.632	7.633	7.639	7.589-7.689	7.636	0.005
	11 C24	8.214	8.212	8.215	8.217	8.215	8.219	8.215	8.165-8.265	8.215	0.002
	12 C25	8.500	8.497	8.500	8.495	8.491	8.490	8.493	8.443-8.543	8.495	0.004
	13 C26	8.760	8.767	8.760	8.769	8.765	8.770	8.765	8.715-8.815	8.765	0.005
	14 C28	9.288	9.294	9.277	9.280	9.285	9.281	9.285	9.235-9.335	9.284	0.006

Reviewer 1 ______________________ Date: ______________
Reviewer 2 ______________________ Date: ______________

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$	15 Triacon Surr	9.771	9.775	9.781	9.790	9.809	9.836	9.802	9.752-9.852	9.794	0.025
	16 C32	10.243	10.233	10.235	10.230	10.249	10.237	10.242	10.192-10.292	10.239	0.006
	17 C34	10.679	10.680	10.682	10.681	10.679	10.683	10.681	10.631-10.731	10.681	0.002
	18 Filter Peak	12.652	12.648	12.655	12.648	12.650	12.666	12.650	12.550-12.750	12.653	0.007
	19 C36	11.126	11.134	11.129	11.132	11.125	11.132	11.129	11.079-11.179	11.129	0.004
	20 C38	11.652	11.650	11.655	11.651	11.649	11.647	11.650	11.600-11.700	11.651	0.002
	21 C40	12.297	12.292	12.291	12.291	12.289	12.283	12.289	12.239-12.339	12.291	0.005
	29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
	37 ACreosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
	34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
	30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
	31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
	32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
	33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
	36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++
	39 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
	40 NAS Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2505.D

Date : 25-OCT-2019 13:11

Client ID:

Sample Info: SHJ0406-IBL1

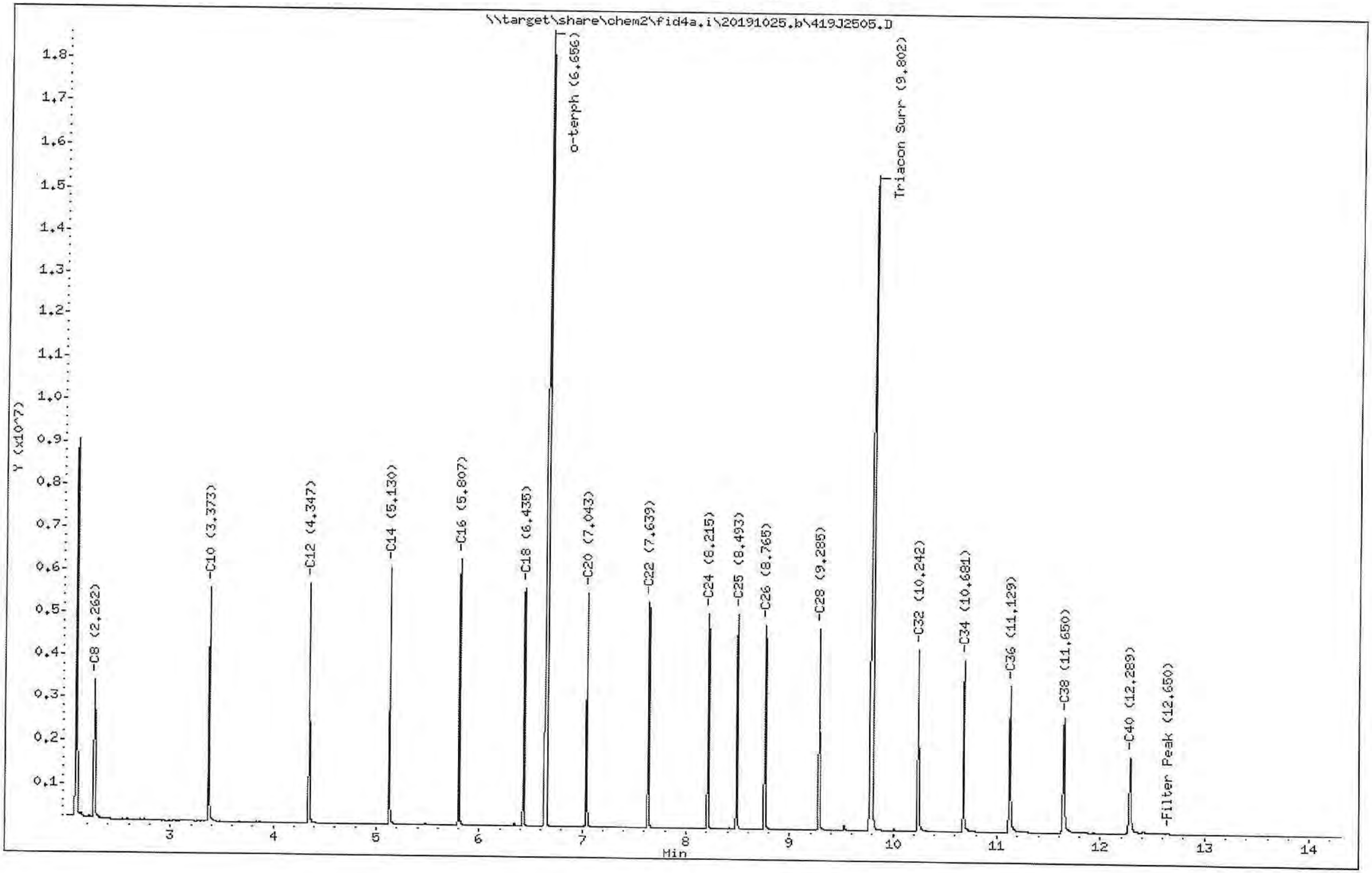
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2505.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-IBL1
Client ID:
Injection: 25-OCT-2019 13:11
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.262	0.000	3356579	3932199	WATPHD	(C12-C24)	22628592	142.0
C10	3.373	0.000	5539104	3757340	WATPHM	(C24-C38)	26475519	199.6
C12	4.347	0.000	5663708	3683615	AK102	(C10-C25)	30812271	157.6
C14	5.130	0.000	6079967	3652238	AK103	(C25-C36)	22405219	224.1
C16	5.807	0.000	6277766	3707382	OR.DIES	(C10-C28)	41957167	214.1
C18	6.435	0.000	5635635	3612752				
C20	7.043	0.000	5539938	3702605				
C22	7.639	0.000	5339005	3727404				
C24	8.215	0.000	5097157	3674684				
C25	8.493	0.000	5111690	3698652				
C26	8.765	0.000	4851792	3662117				
C28	9.285	0.000	4782484	3718632				
C32	10.242	0.000	4326930	3643795				
C34	10.681	0.000	4092240	3584940				
Filter Peak	12.650	0.000	16931	63954	CREOSOT	(C12-C22)	18936204	4854.3
C36	11.129	0.000	3493562	3625484				
C38	11.650	0.000	2741525	3745220				
C40	12.289	0.000	1889635	2977724				
o-terph	6.656	0.000	18648694	20337624				
Triacon Surr	9.802	0.000	15433087	21196653	NAS DIES	(C10-C24)	30787335	157.8

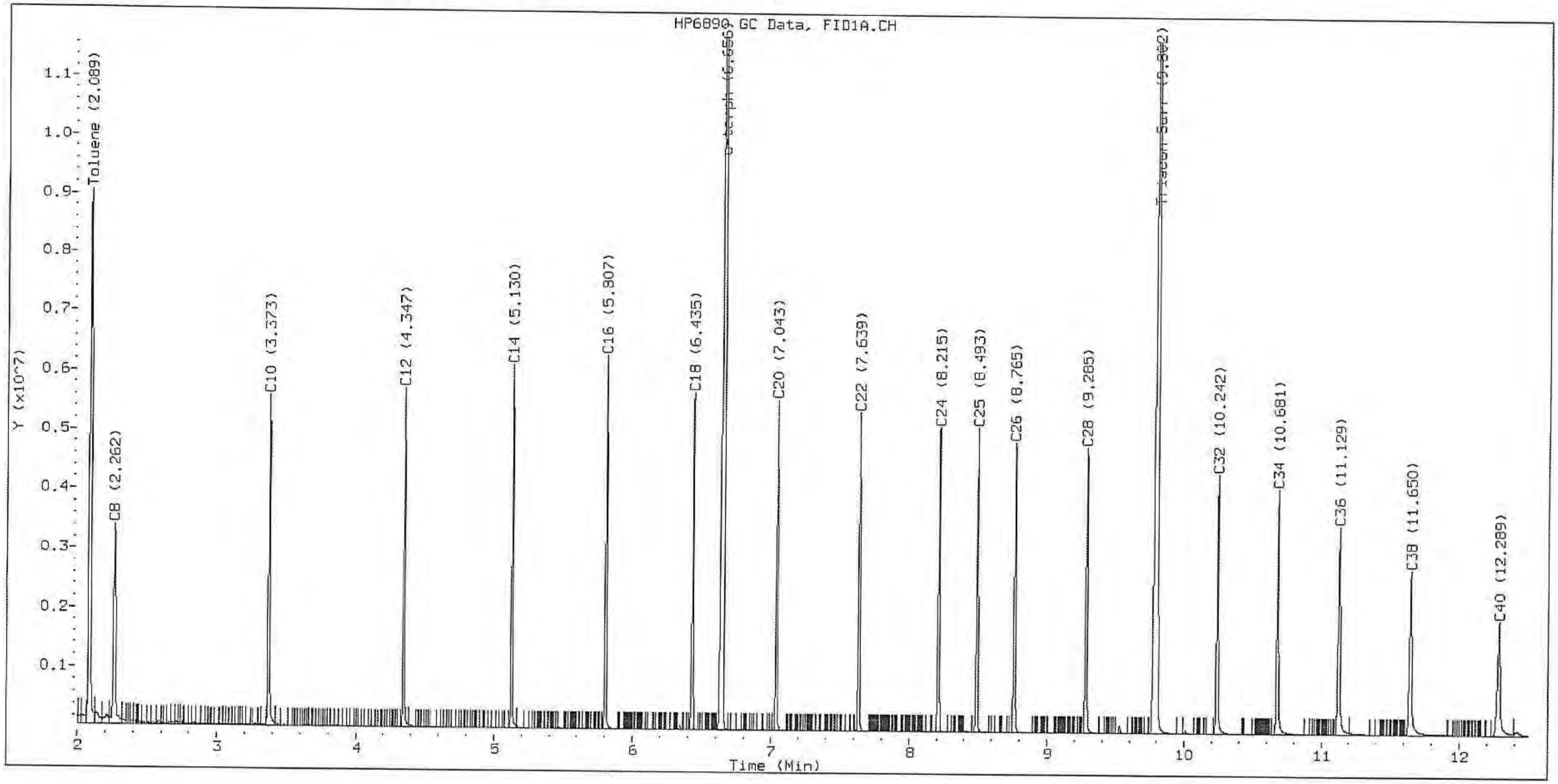
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	20337624	99.4
Triacontane	21196653	119.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2505.D SHJ0406-IBL1



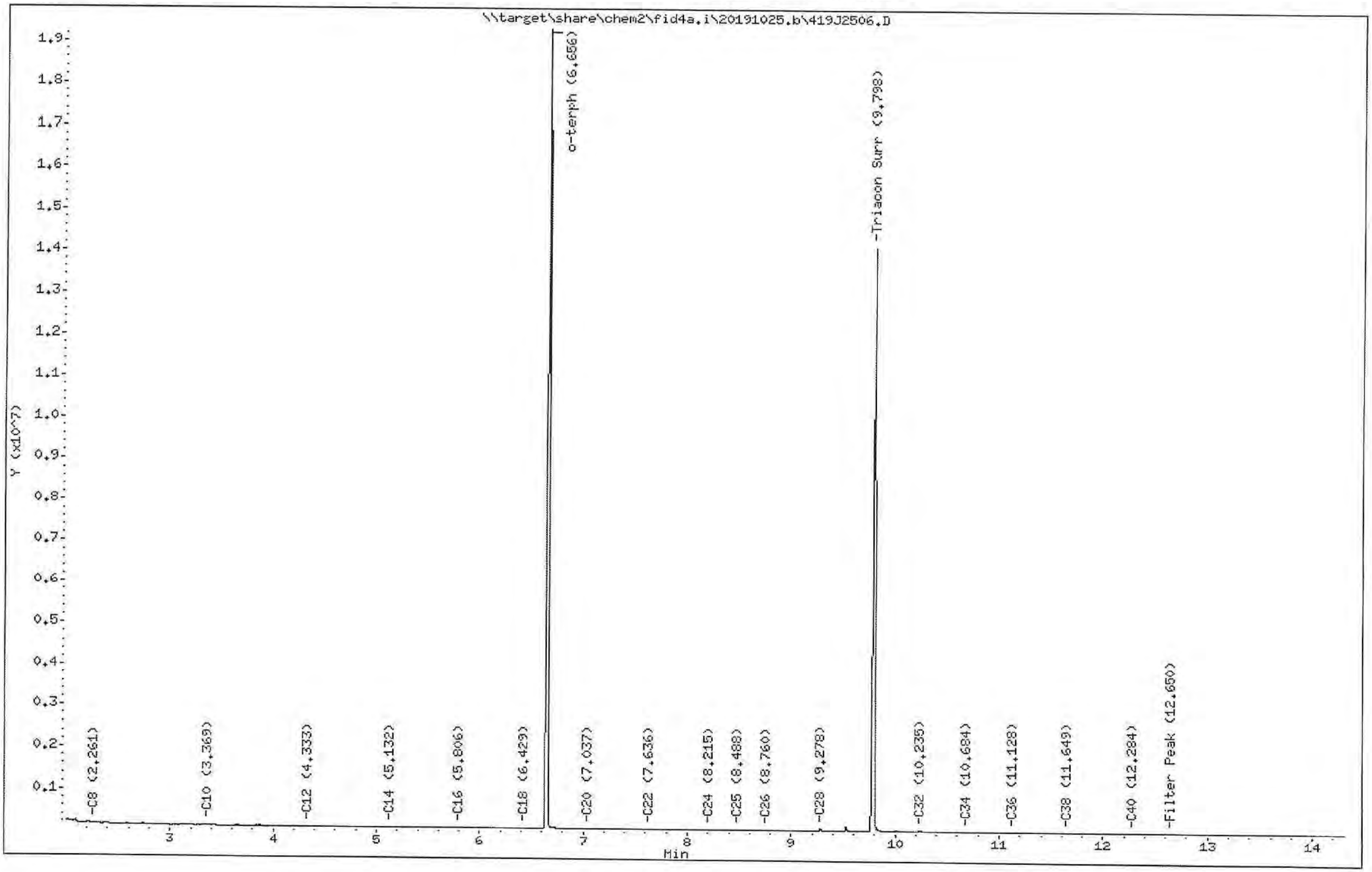
Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2506.D
Date : 25-OCT-2019 13:31
Client ID:
Sample Info: SHJ0406-IBL2

Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2506.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-IBL2
Client ID:
Injection: 25-OCT-2019 13:31
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.261	-0.001	72509	76139	WATPHD	(C12-C24)	658319	4.1
C10	3.369	-0.004	30567	51207	WATPHM	(C24-C38)	758430	5.7
C12	4.333	-0.014	10639	19318	AK102	(C10-C25)	1520072	7.8
C14	5.132	0.003	5359	3169	AK103	(C25-C36)	566941	5.7
C16	5.806	-0.002	4115	5242	OR.DIES	(C10-C28)	1655230	8.4
C18	6.429	-0.006	2667	2060				
C20	7.037	-0.006	2150	2136				
C22	7.636	-0.002	7003	7700				
C24	8.215	0.000	1821	532				
C25	8.488	-0.005	1855	1750				
C26	8.760	-0.005	1926	1661				
C28	9.278	-0.007	68571	64137				
C32	10.235	-0.007	43108	83259				
C34	10.684	0.003	2246	1101				
Filter Peak	12.650	-0.001	8815	2632	CREOSOT	(C12-C22)	608888	156.1
C36	11.128	-0.001	4708	2306				
C38	11.649	-0.001	6915	2738				
C40	12.284	-0.005	8323	7406				
o-terph	6.656	-0.001	19264239	20580998				
Triacon Surr	9.798	-0.004	14079902	17993211	NAS DIES	(C10-C24)	1505820	7.7

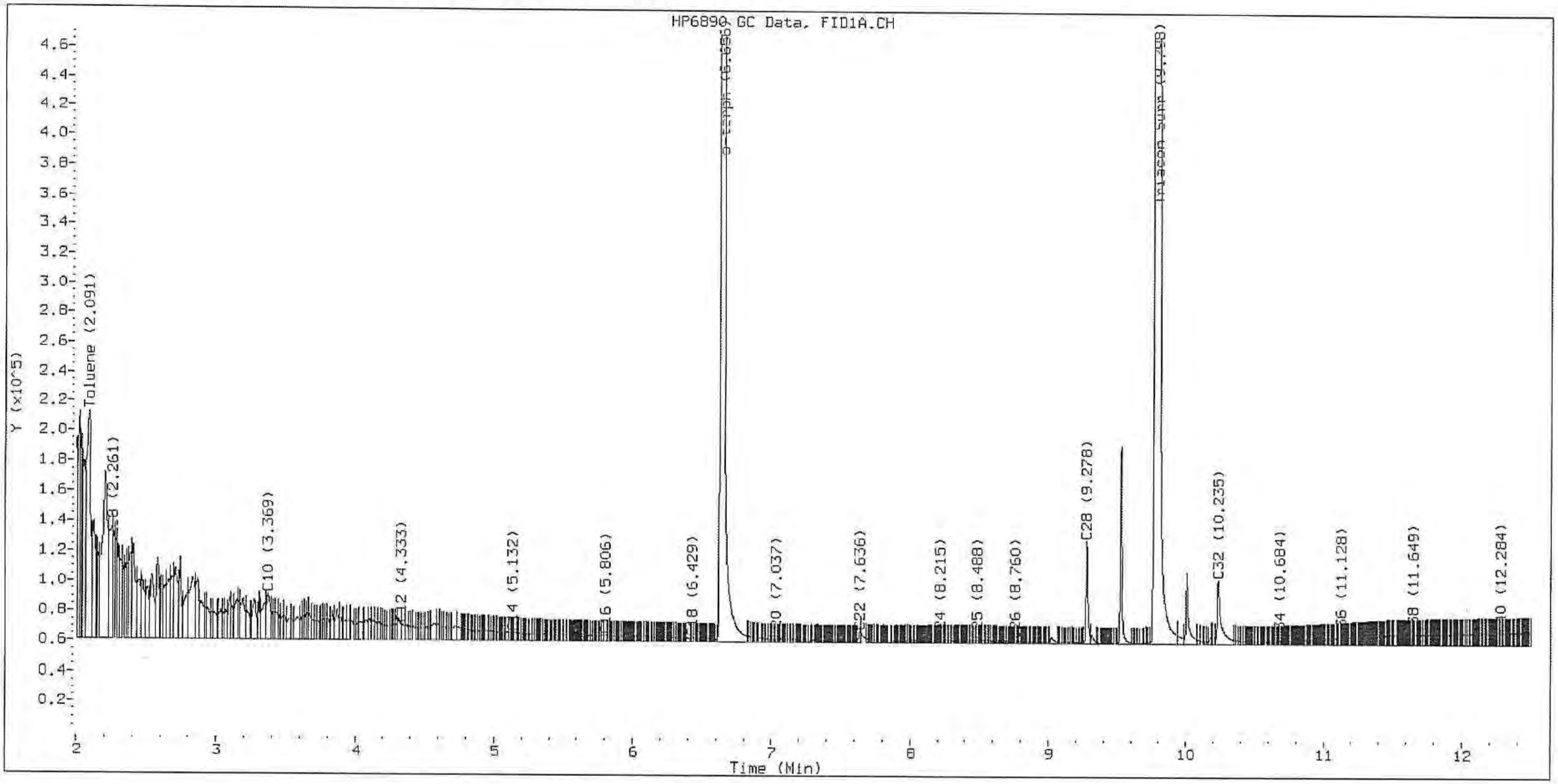
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	20580998	100.5
Triacontane	17993211	101.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2506.D SHJ0406-IBL2



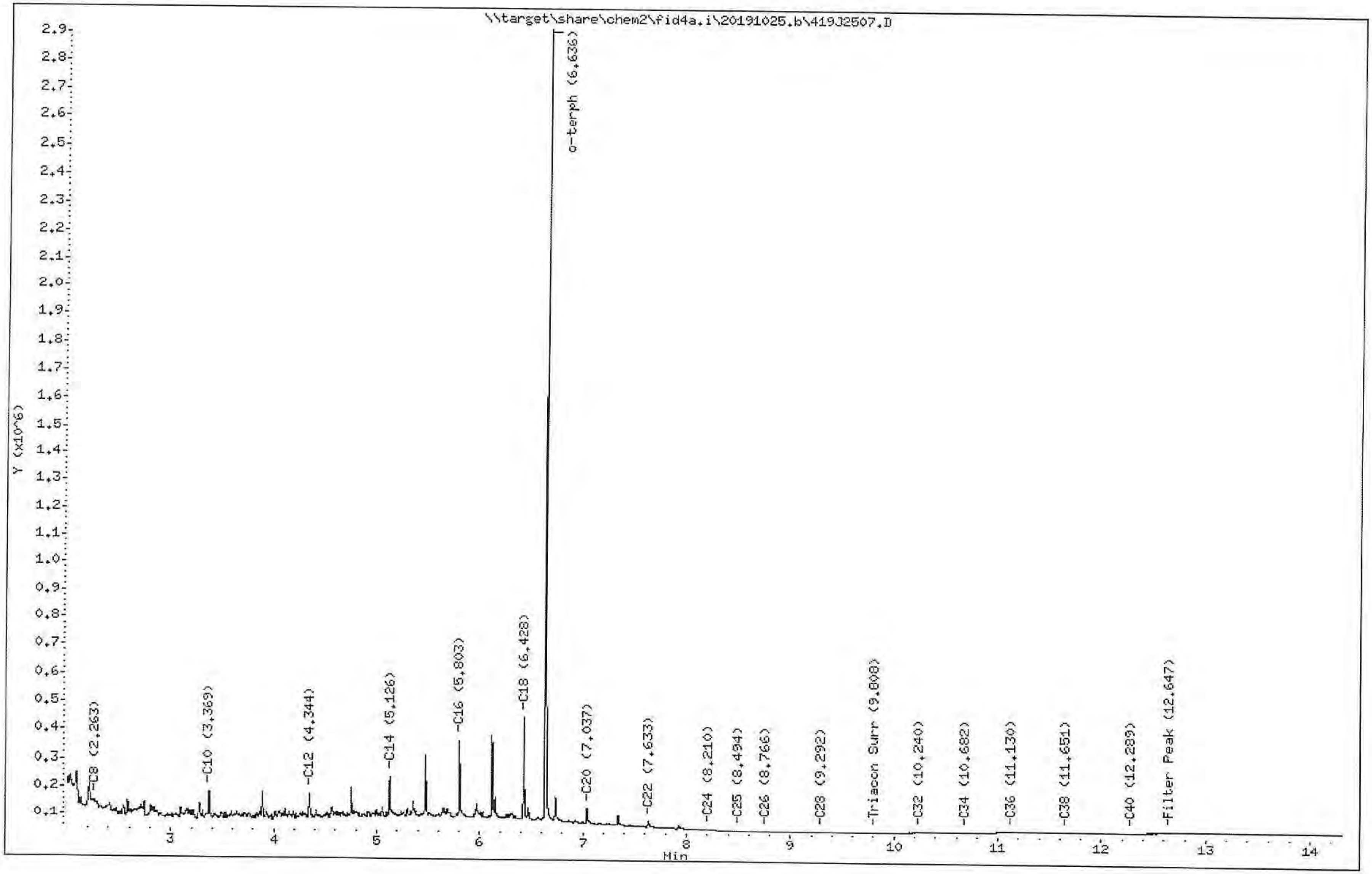
Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2507.D
Date : 25-OCT-2019 13:52
Client ID:
Sample Info: SHJ0406-CAL1

Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2507.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL1
Client ID:
Injection: 25-OCT-2019 13:52
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	94181	68499	WATPHD	(C12-C24)	9105717	57.1
C10	3.369	-0.004	130777	159818	WATPHM	(C24-C38)	651398	4.9
C12	4.344	-0.003	124752	202412	AK102	(C10-C25)	11867629	60.7
C14	5.126	-0.003	188715	181186	AK103	(C25-C36)	363608	3.6
C16	5.803	-0.004	314329	331178	OR.DIES	(C10-C28)	11884580	60.6
C18	6.428	-0.007	400639	334718				
C20	7.037	-0.006	83282	126537				
C22	7.633	-0.006	34959	59242				
C24	8.210	-0.005	6227	12090				
C25	8.494	0.001	1850	2300				
C26	8.766	0.001	428	167				
C28	9.292	0.007	424	156				
C32	10.240	-0.002	2740	1341				
C34	10.682	0.001	5209	2827				
Filter Peak	12.647	-0.003	12268	7963	CREOSOT	(C12-C22)	8913896	2285.1
C36	11.130	0.001	8291	3309				
C38	11.651	0.001	10488	3653				
C40	12.289	0.000	11687	5838				
o-terph	6.636	-0.021	2823547	1865140				
Triacon Surr	9.808	0.006	1874	1287	NAS DIES	(C10-C24)	11851657	60.7

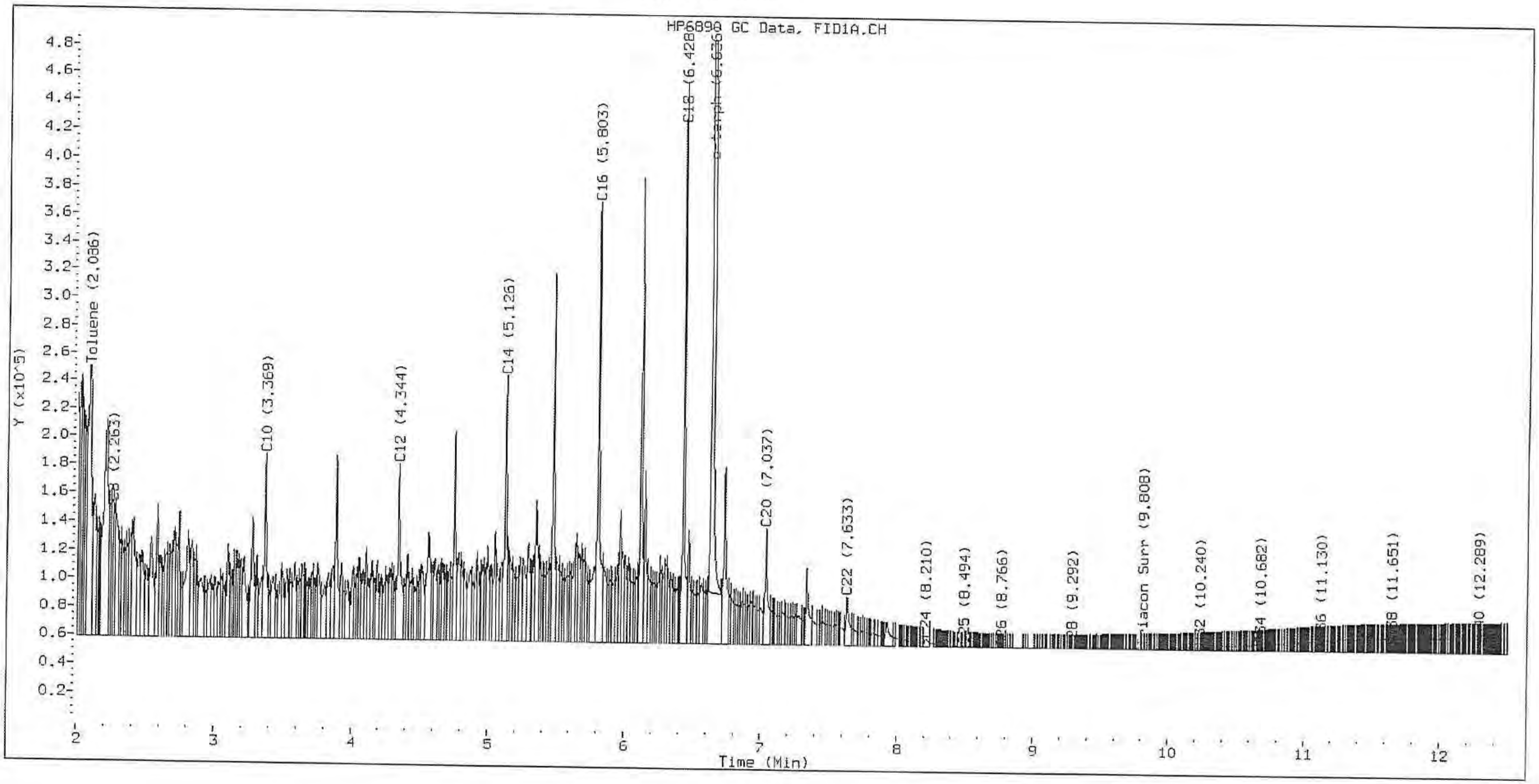
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	1865140	9.1
Triacontane	1287	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2507.D SHJ0406-CAL1



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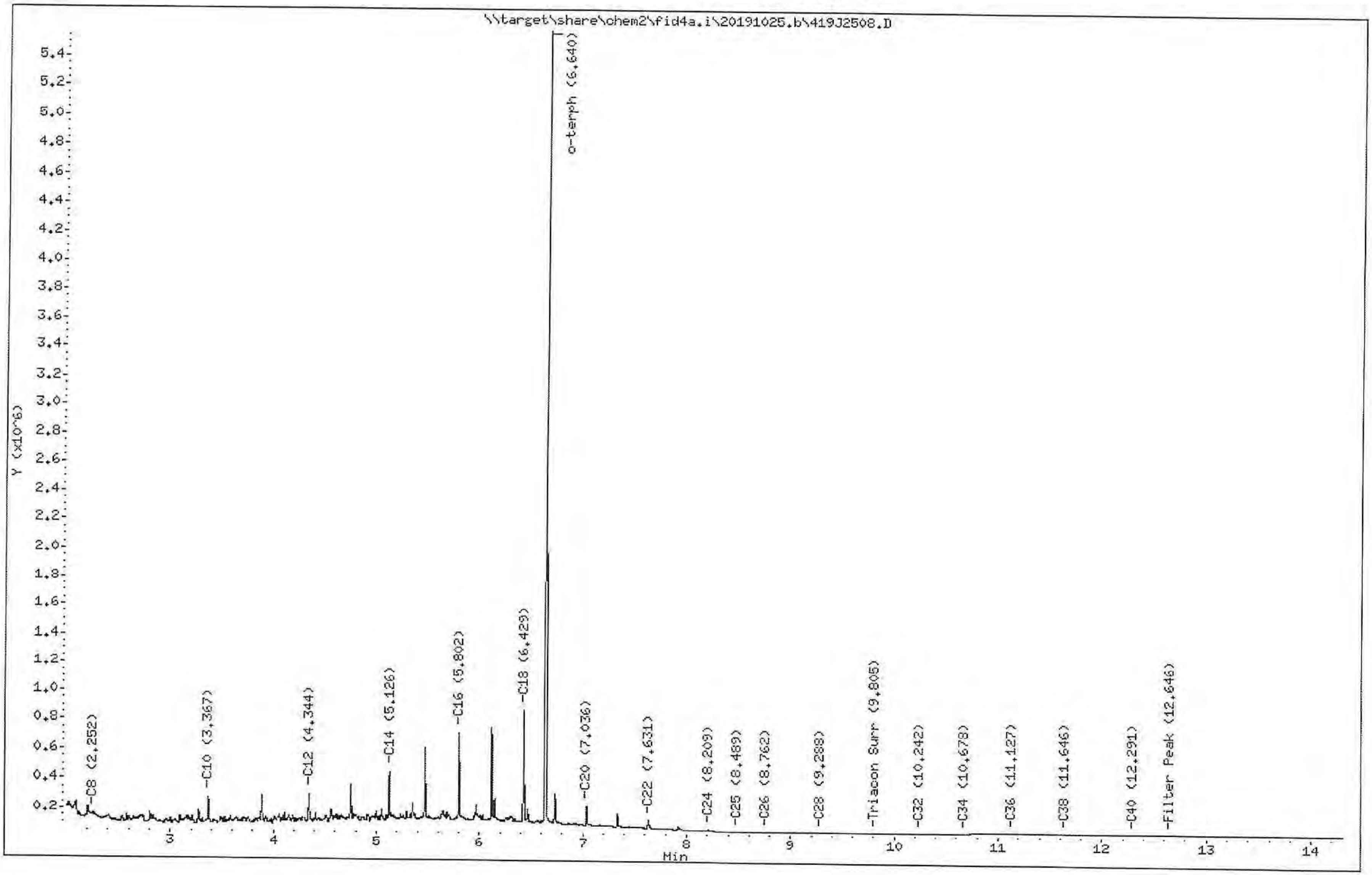
Date : 25-OCT-2019 14:12
Client ID:
Sample Info: SHJ0406-CAL2

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2508.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL2
Client ID:
Injection: 25-OCT-2019 14:12
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.252	-0.010	100789	199426	WATPHD	(C12-C24)	16216844	101.8
C10	3.367	-0.006	219354	239129	WATPHM	(C24-C38)	605463	4.6
C12	4.344	-0.003	250355	355289	AK102	(C10-C25)	20356499	104.1
C14	5.126	-0.004	400436	340538	AK103	(C25-C36)	329685	3.3
C16	5.802	-0.005	670430	513156	OR.DIES	(C10-C28)	20386032	104.0
C18	6.429	-0.006	830433	585845				
C20	7.036	-0.007	189557	206229				
C22	7.631	-0.007	81567	107164				
C24	8.209	-0.006	13975	32117				
C25	8.489	-0.004	4286	7117				
C26	8.762	-0.002	1237	1115				
C28	9.288	0.003	364	105				
C32	10.242	0.000	2184	855				
C34	10.678	-0.003	4506	5051				
Filter Peak	12.646	-0.005	11019	4947	CREOSOT	(C12-C22)	15825625	4056.9
C36	11.127	-0.002	7155	1771				
C38	11.646	-0.004	9240	6899				
C40	12.291	0.002	10430	5163				
o-terph	6.640	-0.017	5468385	3642280				
Triacon Surr	9.805	0.003	1078	368	NAS DIES	(C10-C24)	20331247	104.2

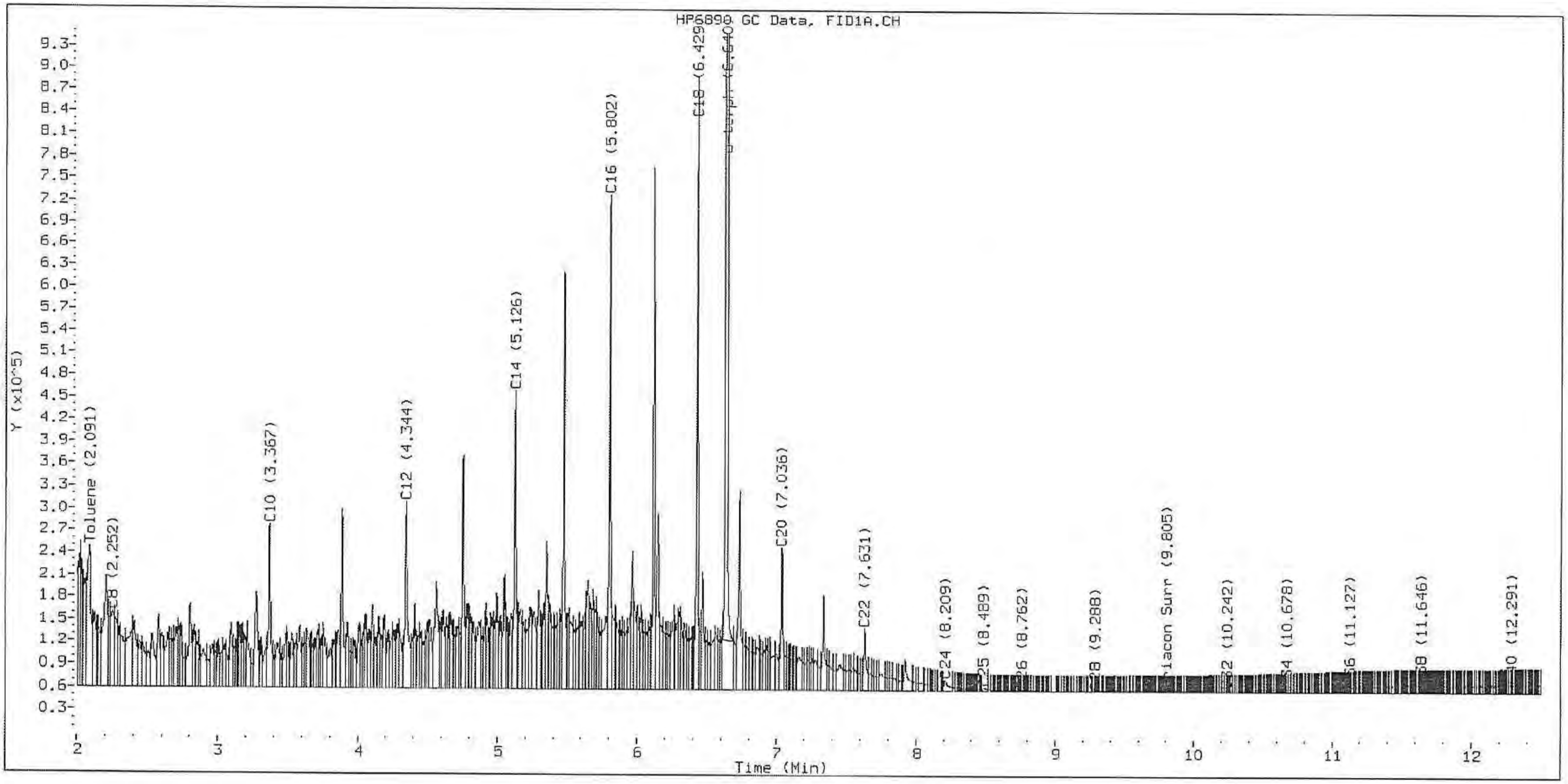
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	3642280	17.8 M
Triacontane	368	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

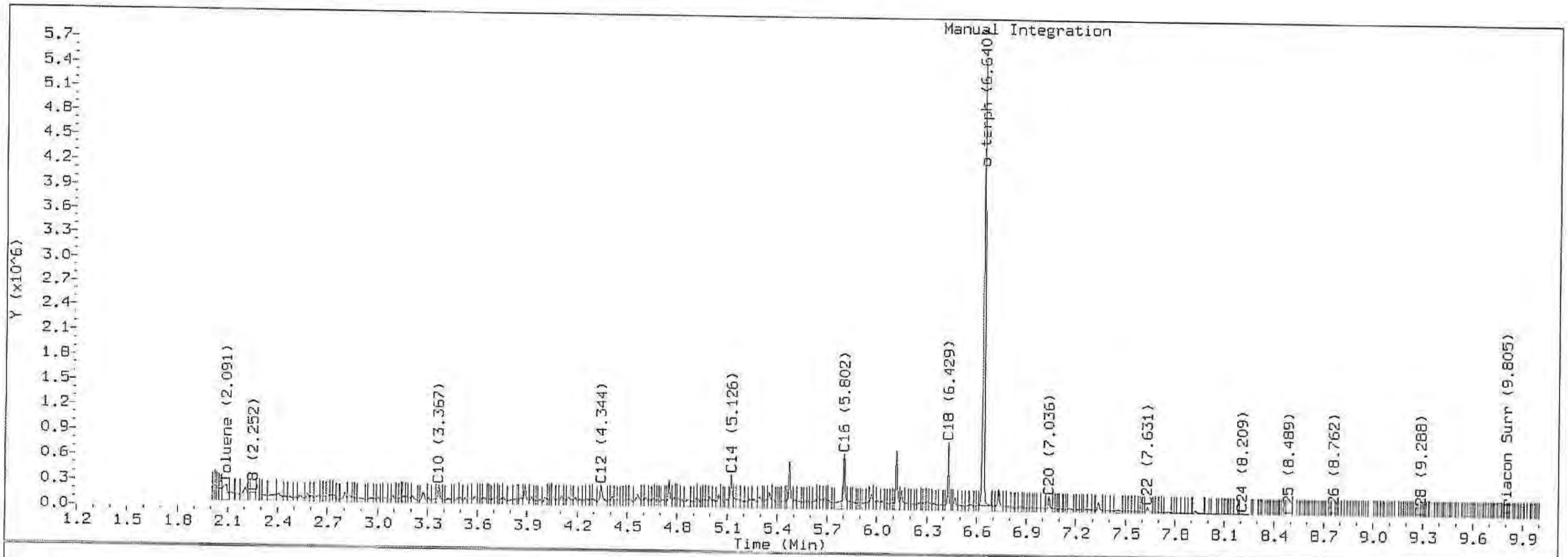
Datafile: FID4A, 20191025.b/419J2508.D SHJ0406-CAL2

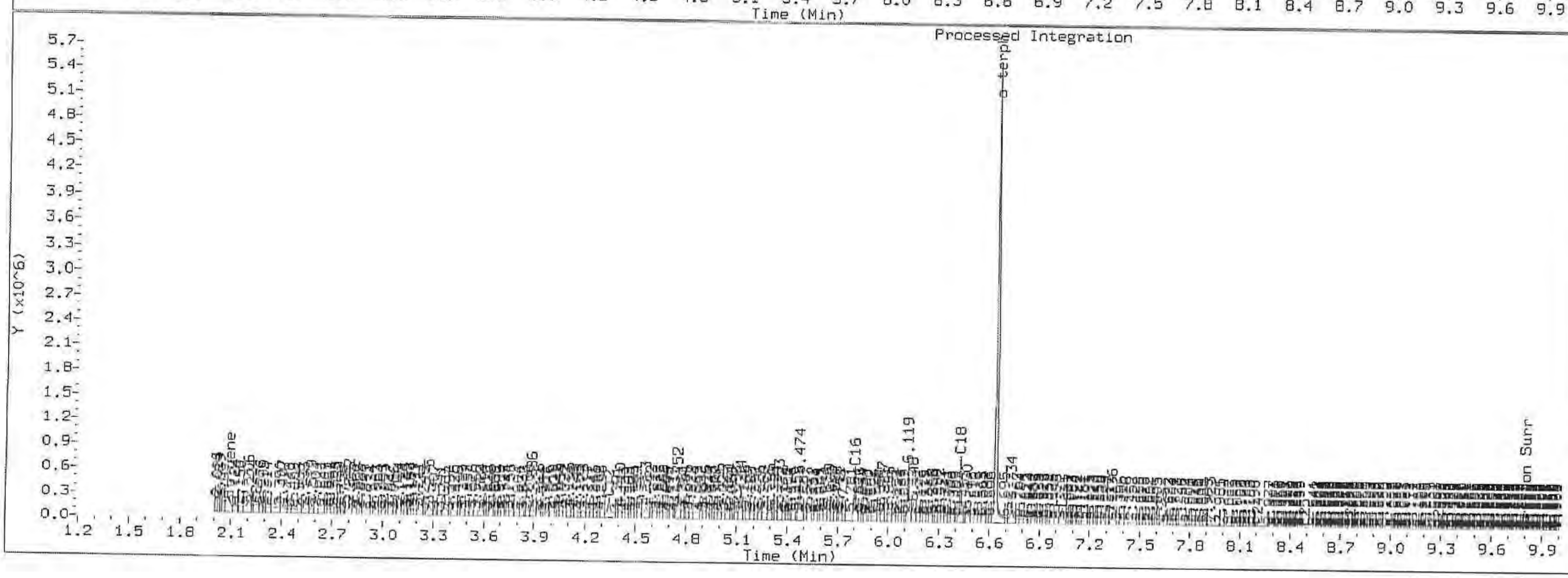


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2508.D Injection: 25-OCT-2019 14:12

Lab ID:SHJ0406-CAL2





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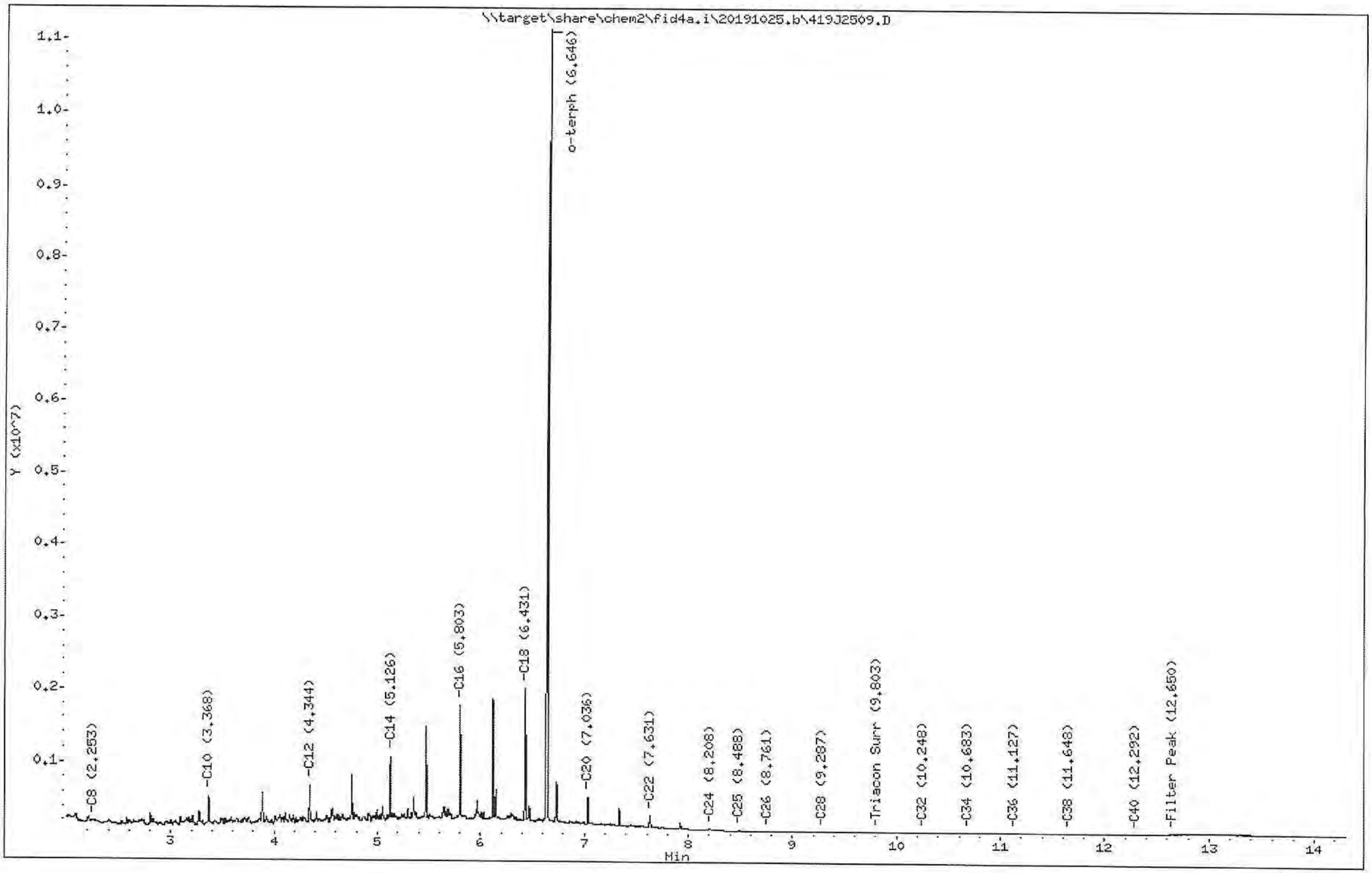
Date : 25-OCT-2019 14:32
Client ID:
Sample Info: SHJ0406-CAL3

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25

Page 1



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2509.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL3
Client ID:
Injection: 25-OCT-2019 14:32
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.253	-0.009	118722	240565	WATPHD	(C12-C24)	37913827	237.9
C10	3.368	-0.005	483544	476749	WATPHM	(C24-C38)	575858	4.3
C12	4.344	-0.003	627626	779062	AK102	(C10-C25)	46188702	236.3
C14	5.126	-0.004	1022309	790022	AK103	(C25-C36)	284914	2.8
C16	5.803	-0.004	1736531	1218478	OR.DIES	(C10-C28)	46284811	236.1
C18	6.431	-0.004	1970150	1409422				
C20	7.036	-0.007	509531	494893				
C22	7.631	-0.008	243435	281583				
C24	8.208	-0.007	43836	95774				
C25	8.488	-0.005	13614	32431				
C26	8.761	-0.004	4384	8919				
C28	9.287	0.001	605	214				
C32	10.248	0.006	1381	707				
C34	10.683	0.001	3151	1389				
Filter Peak	12.650	-0.000	9358	3271	CREOSOT	(C12-C22)	36811374	9436.7
C36	11.127	-0.002	5536	1099				
C38	11.648	-0.002	7679	4193				
C40	12.292	0.003	8799	4362				
o-terph	6.646	-0.010	10937727	8968221				
Triacon Surr	9.803	0.001	295	103	NAS DIES	(C10-C24)	46106144	236.3

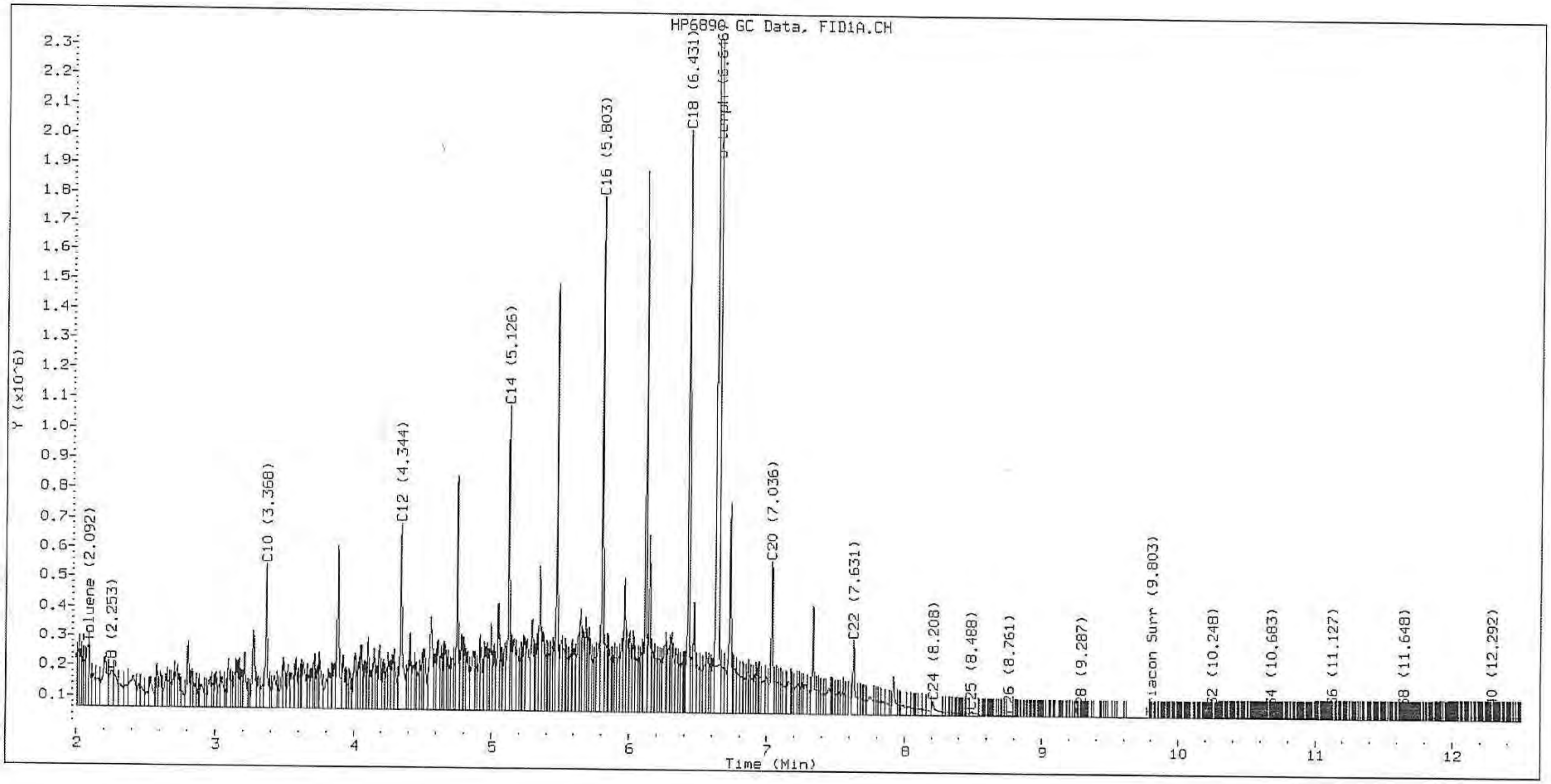
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	8968221	43.8
Triacontane	103	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2509.D SHJ0406-CAL3



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Date : 25-OCT-2019 14:53
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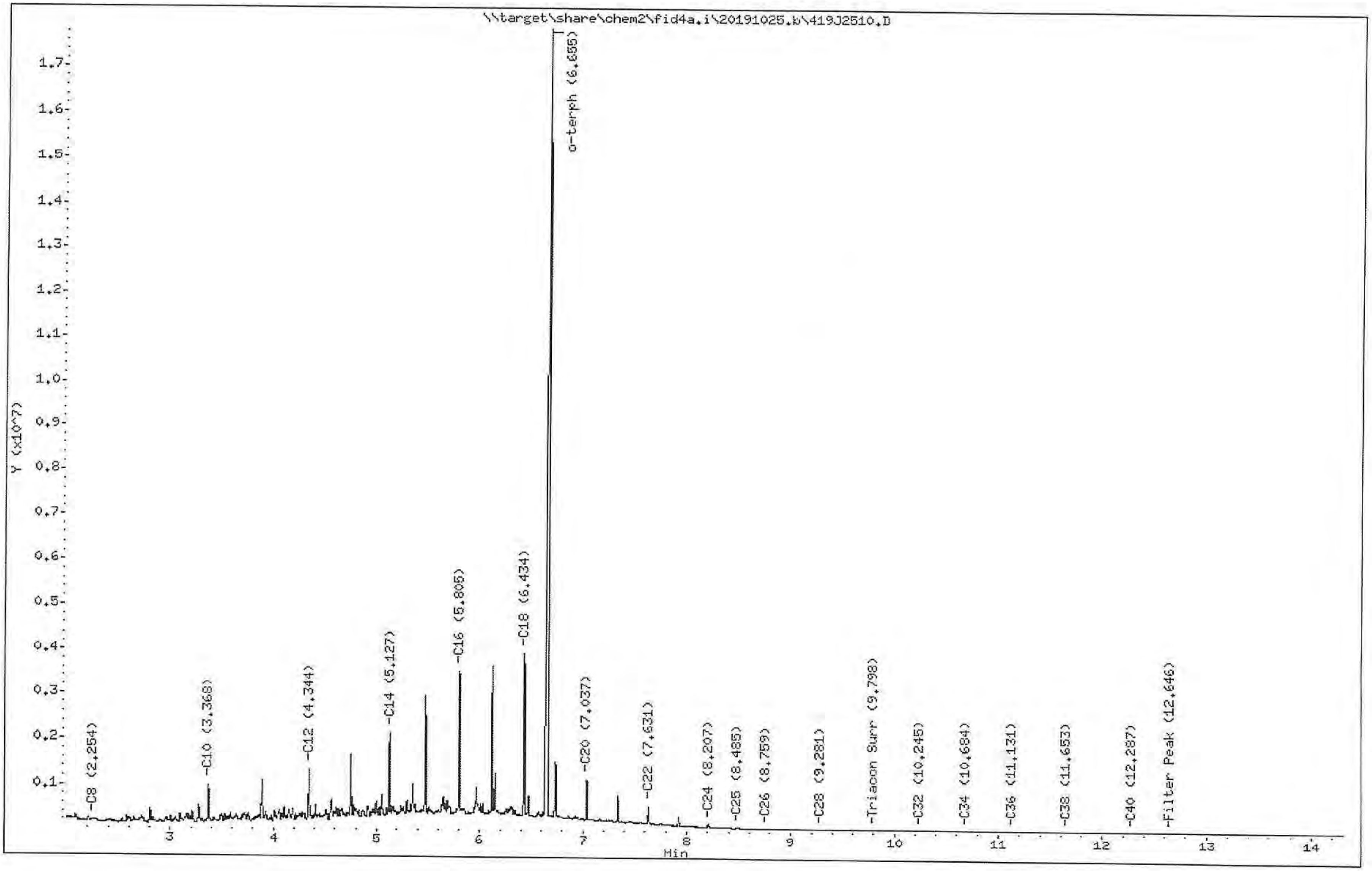
Sample Info: SHJ0406-CAL4

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2510.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL4
Client ID:
Injection: 25-OCT-2019 14:53
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.254	-0.009	133720	272365	WATPHD	(C12-C24)	76110005	477.7
C10	3.368	-0.005	913330	831182	WATPHM	(C24-C38)	747310	5.6
C12	4.344	-0.004	1278885	1502773	AK102	(C10-C25)	90903979	465.0
C14	5.127	-0.003	2082835	1580085	AK103	(C25-C36)	436439	4.4
C16	5.805	-0.002	3492654	2476612	OR.DIES	(C10-C28)	91160529	465.1
C18	6.434	-0.001	3902008	2902073				
C20	7.037	-0.006	1095165	935641				
C22	7.631	-0.008	544650	574105				
C24	8.207	-0.008	109625	202080				
C25	8.485	-0.008	35990	71794				
C26	8.759	-0.006	12661	25763				
C28	9.281	-0.004	1585	1856				
C32	10.245	0.003	1048	453				
C34	10.684	0.002	3071	1964				
Filter Peak	12.646	-0.004	3825	2093	CREOSOT	(C12-C22)	73861119	18934.4
C36	11.131	0.002	4915	3154				
C38	11.653	0.003	5457	2692				
C40	12.287	-0.002	4261	1483				
o-terph	6.655	-0.001	17508754	18236498				
Triacon Surr	9.798	-0.004	325	112	NAS DIES	(C10-C24)	90741143	465.0

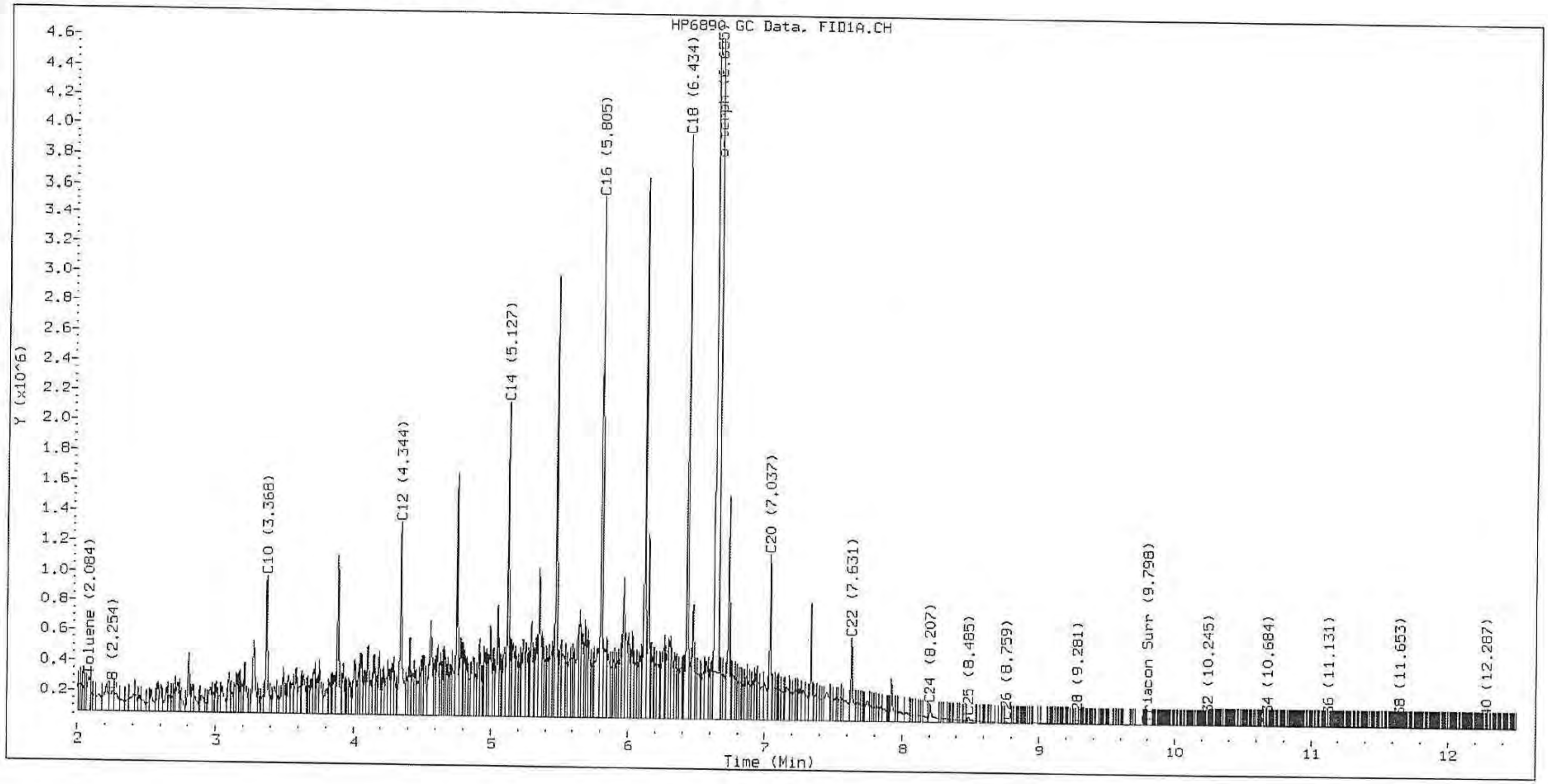
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	18236498	89.1 M
Triacontane	112	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

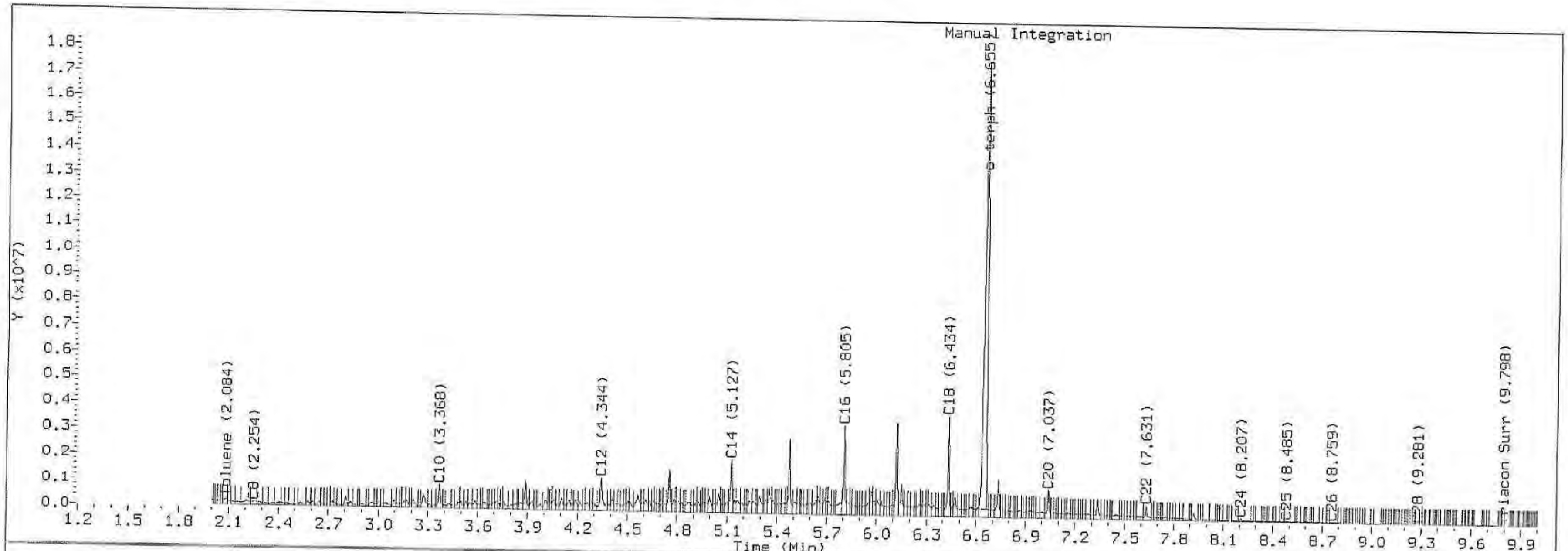
Datafile: FID4A, 20191025.b/419J2510.D SHJ0406-CAL4

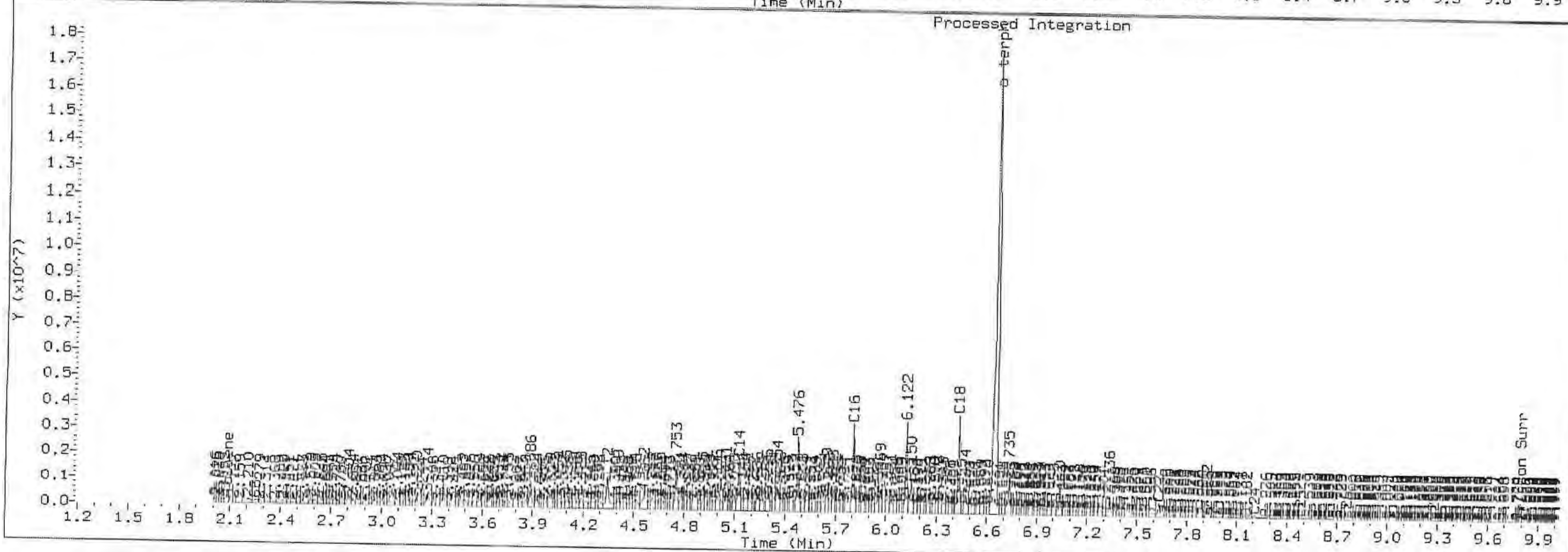


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2510.D Injection: 25-OCT-2019 14:53

Lab ID:SHJ0406-CAL4





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Date : 25-OCT-2019 15:13

Client ID:

Sample Info: SHJ0406-CAL5

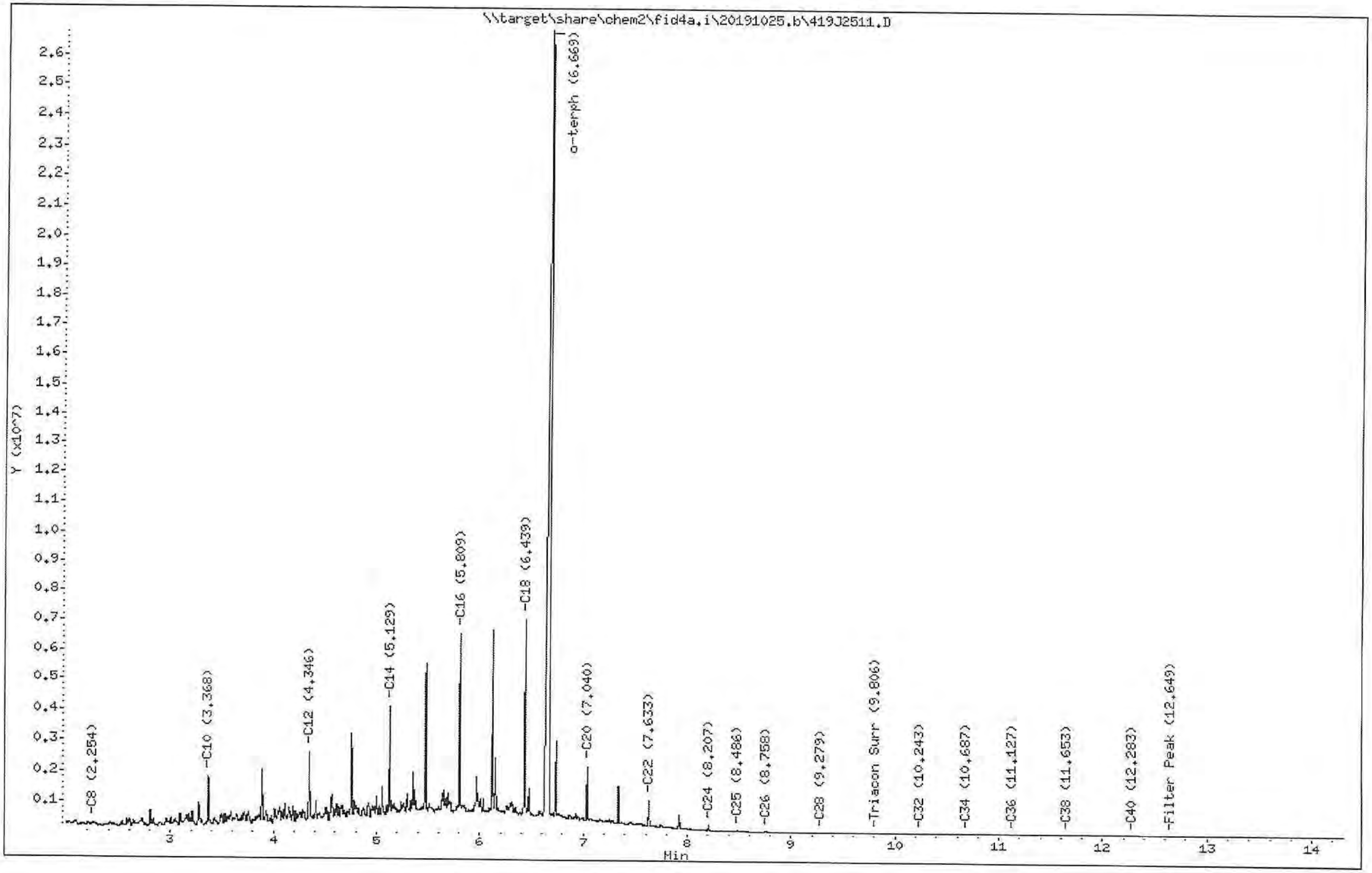
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2511.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL5
Client ID:
Injection: 25-OCT-2019 15:13
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.254	-0.008	179896	310888	WATPHD	(C12-C24)	153066747	960.6
C10	3.368	-0.005	1739085	1592987	WATPHM	(C24-C38)	1270800	9.6
C12	4.346	-0.001	2582378	2992597	AK102	(C10-C25)	181956494	930.8
C14	5.129	-0.000	4119910	3175625	AK103	(C25-C36)	821445	8.2
C16	5.809	0.002	6560457	4974499	OR.DIES	(C10-C28)	182680399	932.0
C18	6.439	0.005	7062206	6028122				
C20	7.040	-0.003	2215368	1892870				
C22	7.633	-0.006	1144174	997771				
C24	8.207	-0.008	250003	385382				
C25	8.486	-0.007	89395	162170				
C26	8.758	-0.007	33365	80915				
C28	9.279	-0.006	6648	16116				
C32	10.243	0.001	219	113				
C34	10.687	0.005	471	169				
Filter Peak	12.649	-0.001	3299	1299	CREOSOT	(C12-C22)	148274267	38010.4
C36	11.127	-0.002	1506	512				
C38	11.653	0.003	2117	932				
C40	12.283	-0.006	2712	1056				
o-terph	6.669	0.013	26284682	37244787				
Triacon Surr	9.806	0.004	1398	1069	NAS DIES	(C10-C24)	181561688	930.4

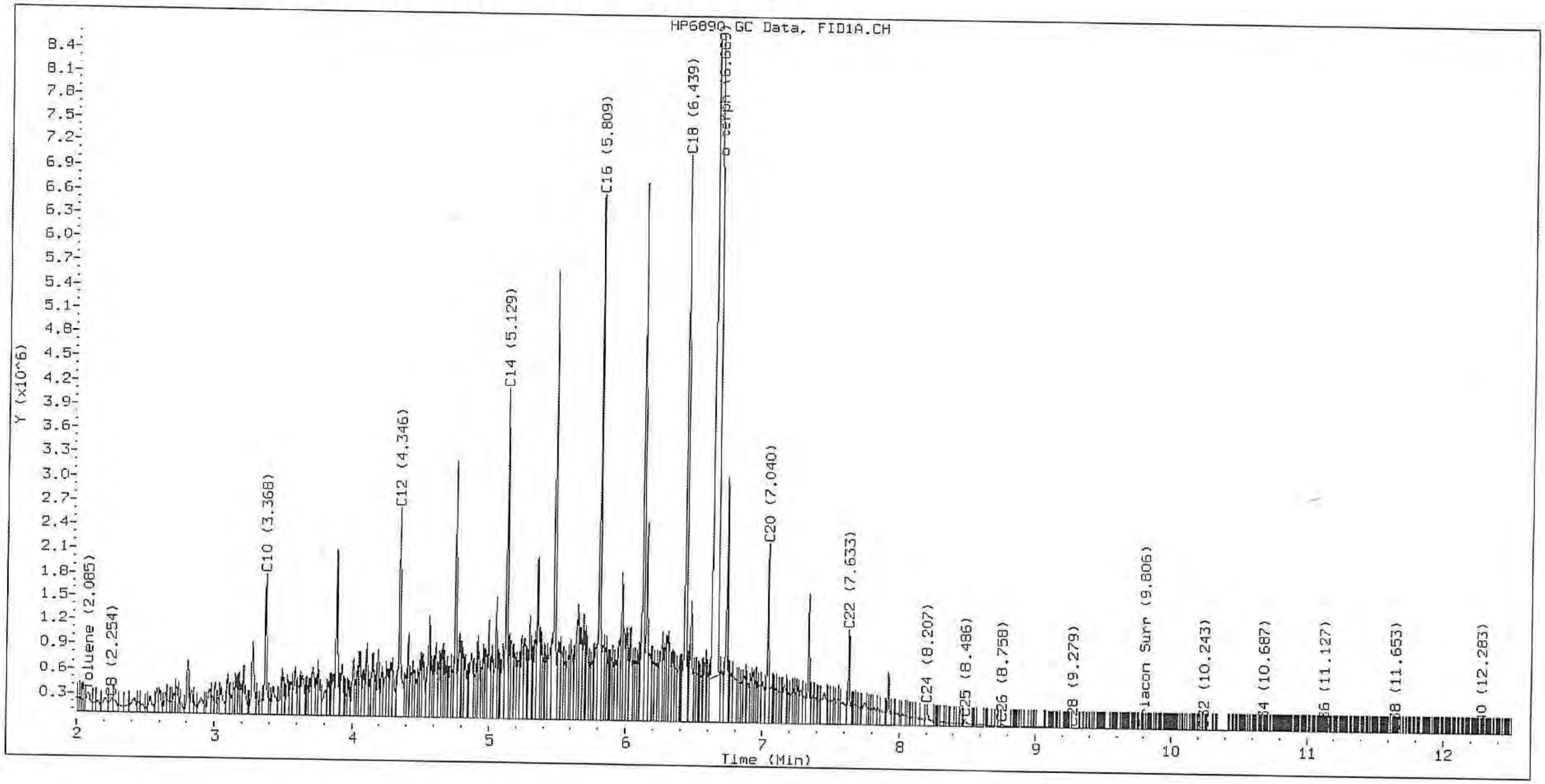
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	37244787	181.9	M
Triacontane	1069	0.0	

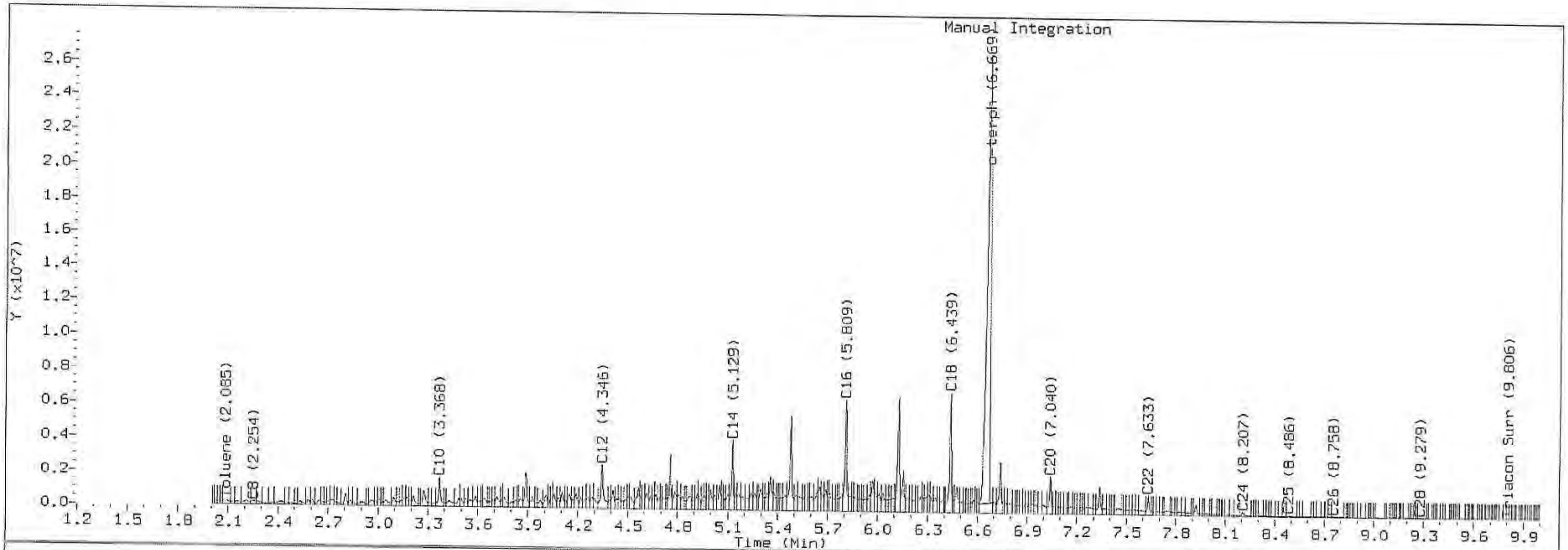
M Indicates the peak was manually integrated

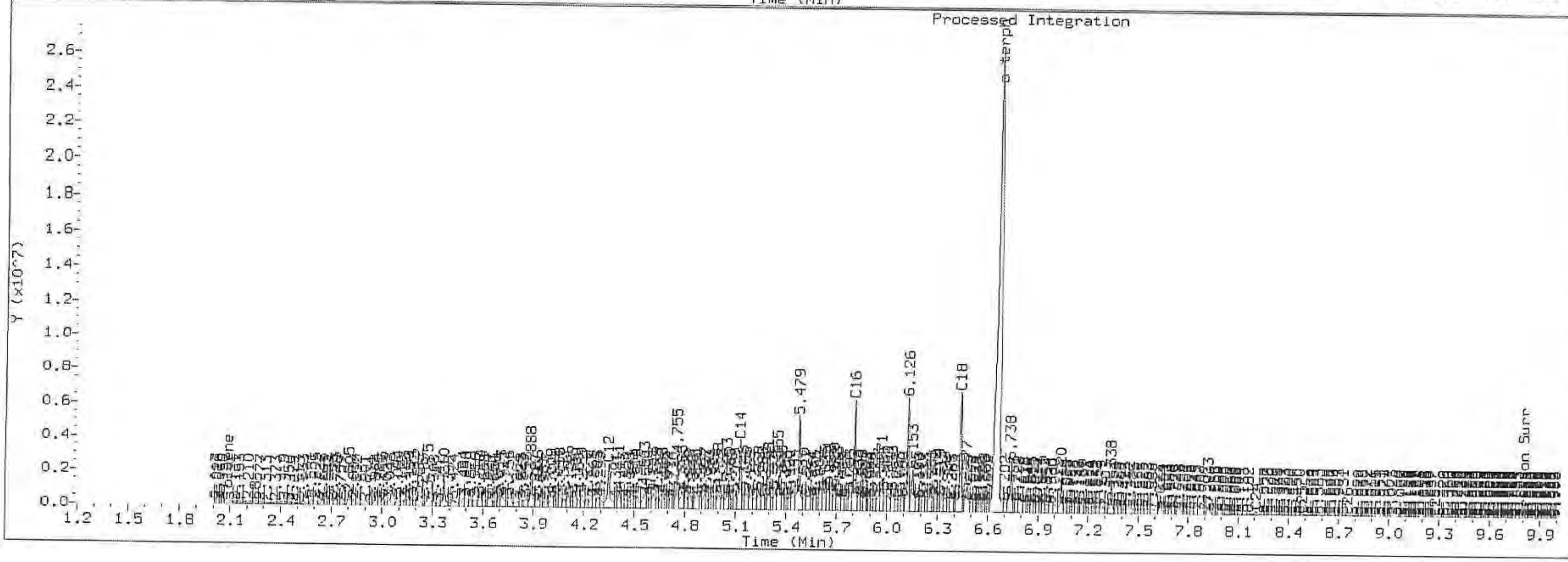
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2511.D SHJ0406-CAL5



TPH Manual Integrations Report
Datafile: FID4A, 20191025.b/419J2511.D Injection: 25-OCT-2019 15:13
Lab ID:SHJ0406-CAL5





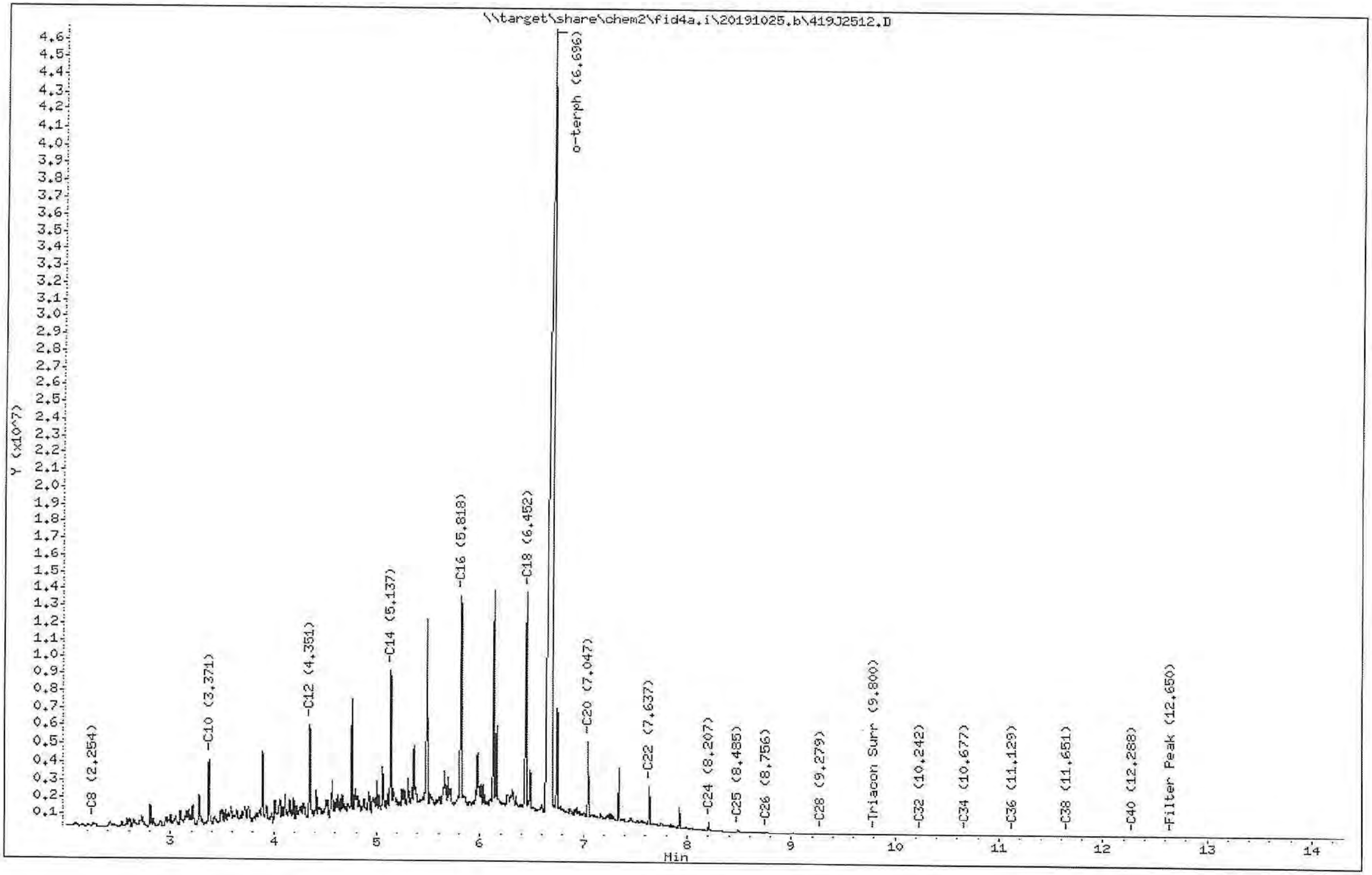
Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2512.D
Date : 25-OCT-2019 15:32
Client ID:
Sample Info: SHJ0406-CAL6

Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2512.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL6
Client ID:
Injection: 25-OCT-2019 15:32
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.254	-0.008	310597	486343	WATPHD	(C12-C24)	386988567	2428.7
C10	3.371	-0.002	4067321	3926897	WATPHM	(C24-C38)	3326156	25.1
C12	4.351	0.004	6051560	7536066	AK102	(C10-C25)	458776536	2346.8
C14	5.137	0.007	9257057	8197076	AK103	(C25-C36)	2148648	21.5
C16	5.818	0.011	13762212	12844924	OR.DIES	(C10-C28)	460755382	2350.8
C18	6.452	0.017	13977204	16316405				
C20	7.047	0.004	5292354	4776661				
C22	7.637	-0.002	2821591	2512756				
C24	8.207	-0.007	692936	731199				
C25	8.485	-0.008	261257	416815				
C26	8.756	-0.009	100686	191231				
C28	9.279	-0.006	17823	35082				
C32	10.242	-0.001	483	193				
C34	10.677	-0.004	847	428				
Filter Peak	12.650	-0.001	5215	3893	CREOSOT	(C12-C22)	374231679	95935.0
C36	11.129	0.000	2243	1721				
C38	11.651	0.001	3497	1043				
C40	12.288	-0.001	4517	2473				
o-terph	6.696	0.039	45134516	94404433				
Triacon Surr	9.800	-0.002	2320	892	NAS DIES	(C10-C24)	457687210	2345.3

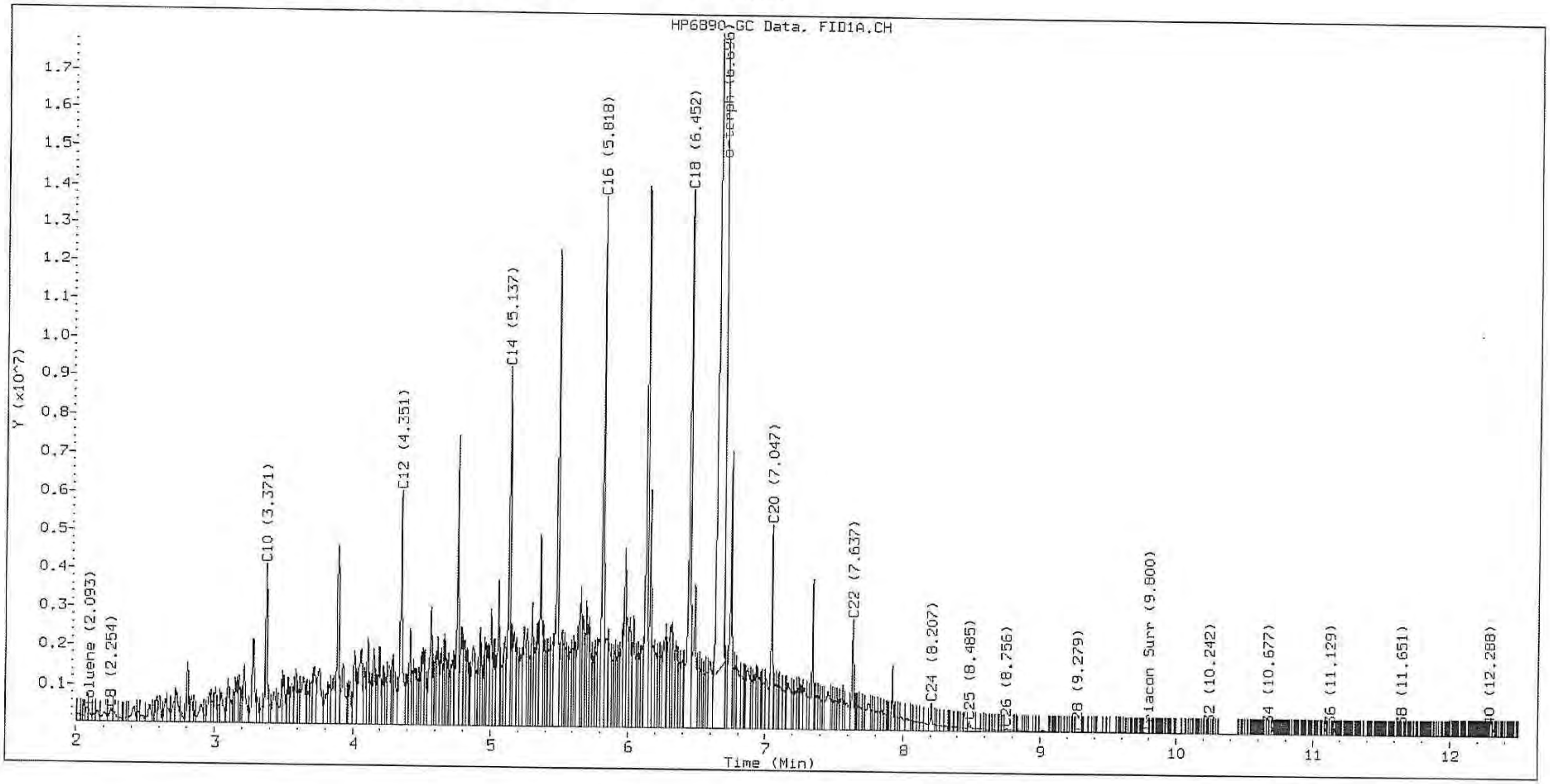
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	94404433	461.2	M
Triacontane	892	0.0	

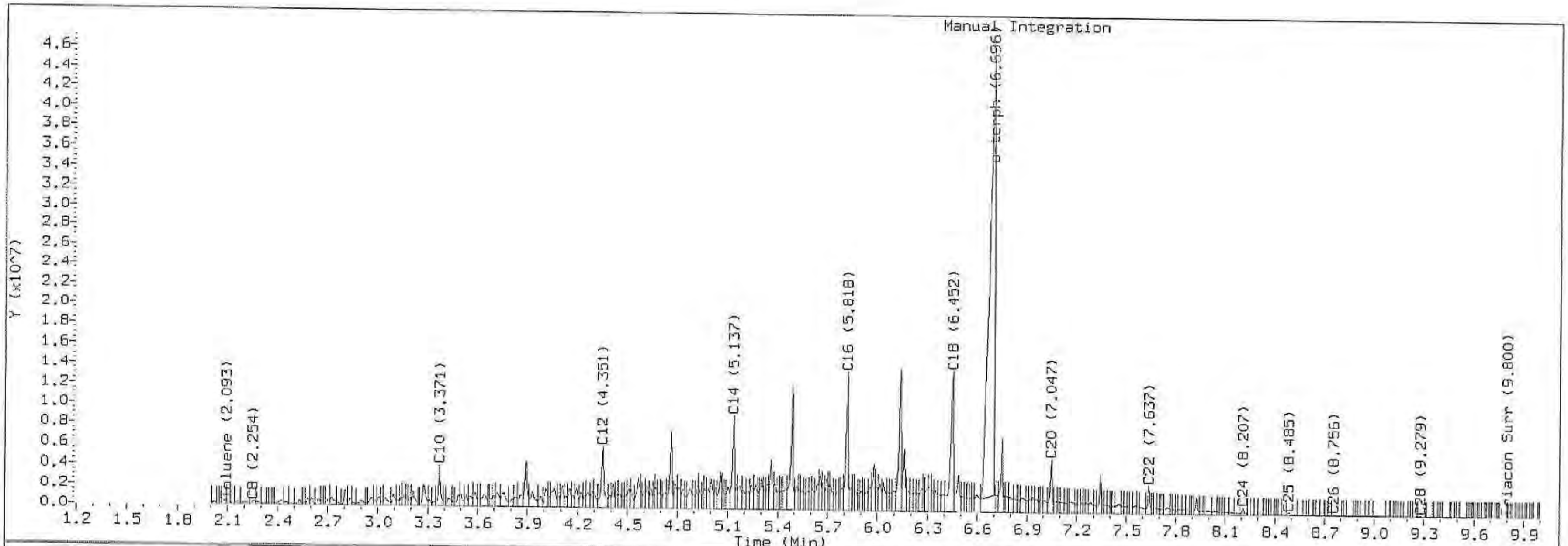
M Indicates the peak was manually integrated

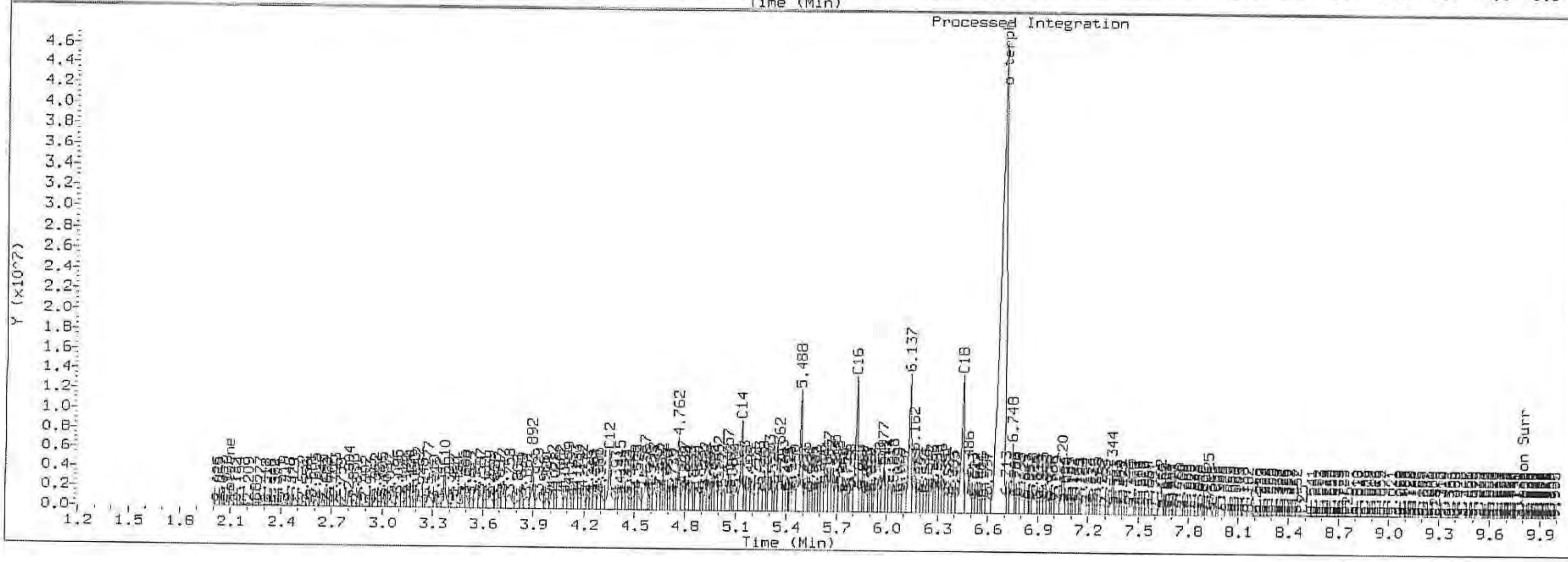
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2512.D SHJ0406-CAL6



TPH Manual Integrations Report
Datafile: FID4A, 20191025.b/419J2512.D Injection: 25-OCT-2019 15:32
Lab ID:SHJ0406-CAL6



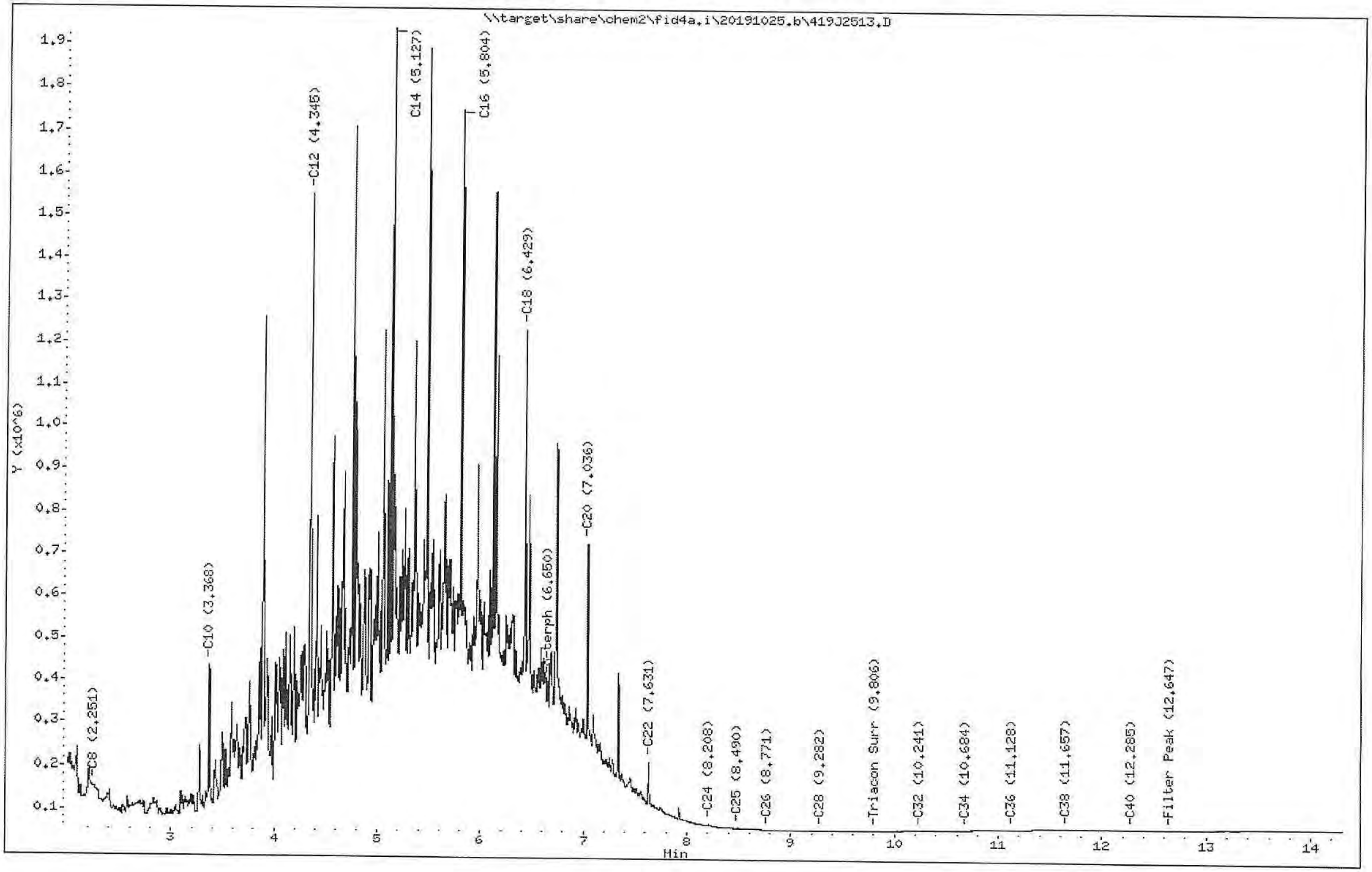


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2513.D
Date : 25-OCT-2019 15:52
Client ID:
Sample Info: SHJ0406-SCV1

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2513.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV1
Client ID:
Injection: 25-OCT-2019 15:52
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.251	-0.011	94961	147864	WATPHD	(C12-C24)	81454017	511.2
C10	3.368	-0.005	379319	401979	WATPHM	(C24-C38)	639731	4.8
C12	4.345	-0.002	1496096	1990616	AK102	(C10-C25)	97704414	499.8
C14	5.127	-0.002	1881566	1510979	AK103	(C25-C36)	332991	3.3
C16	5.804	-0.003	1693335	1468242	OR.DIES	(C10-C28)	97755450	498.8
C18	6.429	-0.006	1178327	1173671				
C20	7.036	-0.007	676475	771884				
C22	7.631	-0.008	162529	245982				
C24	8.208	-0.007	16269	46701				
C25	8.490	-0.003	4835	8168				
C26	8.771	0.006	1378	465				
C28	9.282	-0.003	218	122				
C32	10.241	-0.001	2076	410				
C34	10.684	0.003	4334	2137				
Filter Peak	12.647	-0.003	10515	4189	CREOSOT	(C12-C22)	80554511	20650.3
C36	11.128	-0.001	6869	2744				
C38	11.657	0.008	8764	3056				
C40	12.285	-0.004	9988	4995				
o-terph	6.650	-0.007	347314	350999				
Triacon Surr	9.806	0.003	1146	388	NAS DIES	(C10-C24)	97645351	500.4

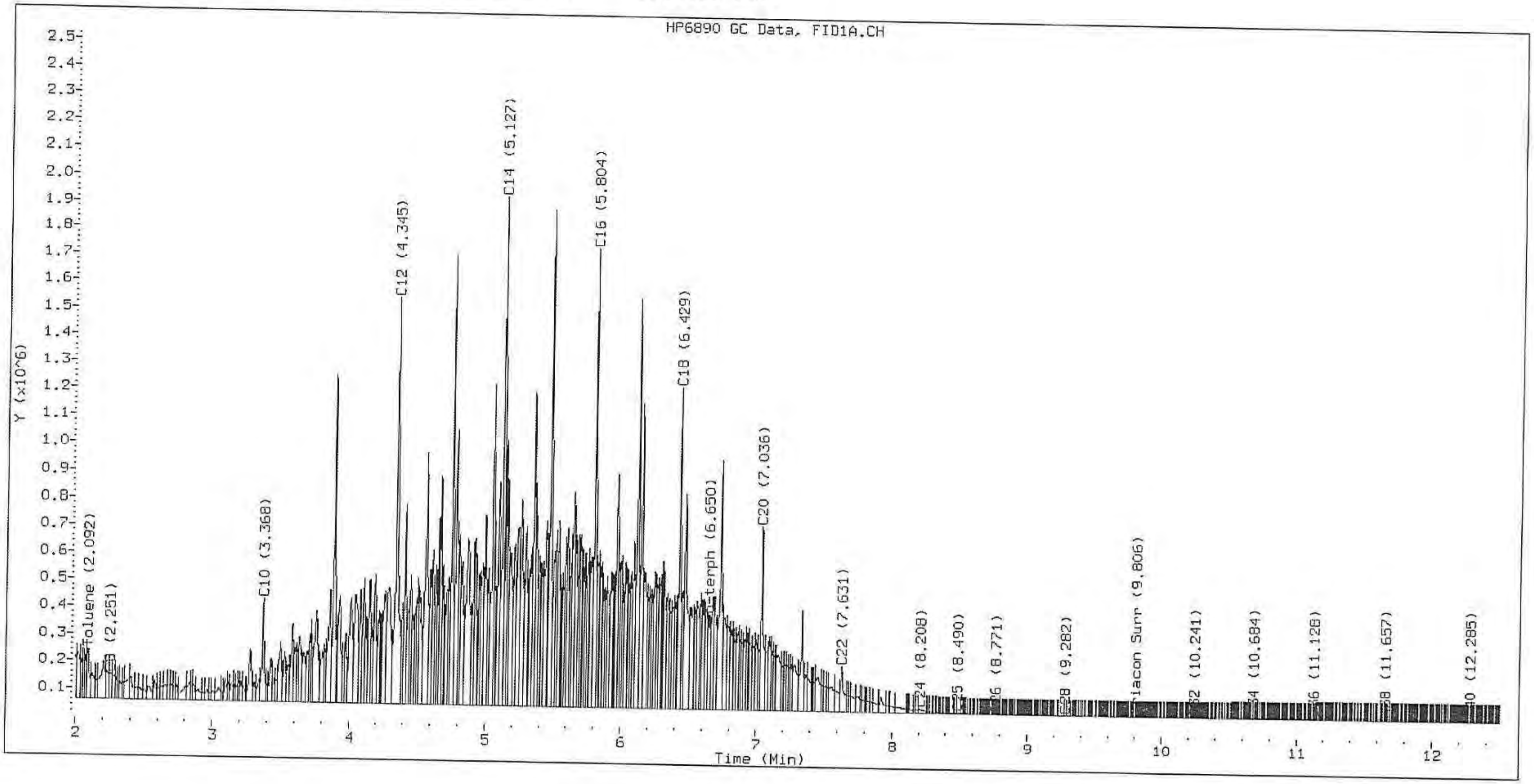
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	350999	1.7
Triacontane	388	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2513.D SHJ0406-SCV1



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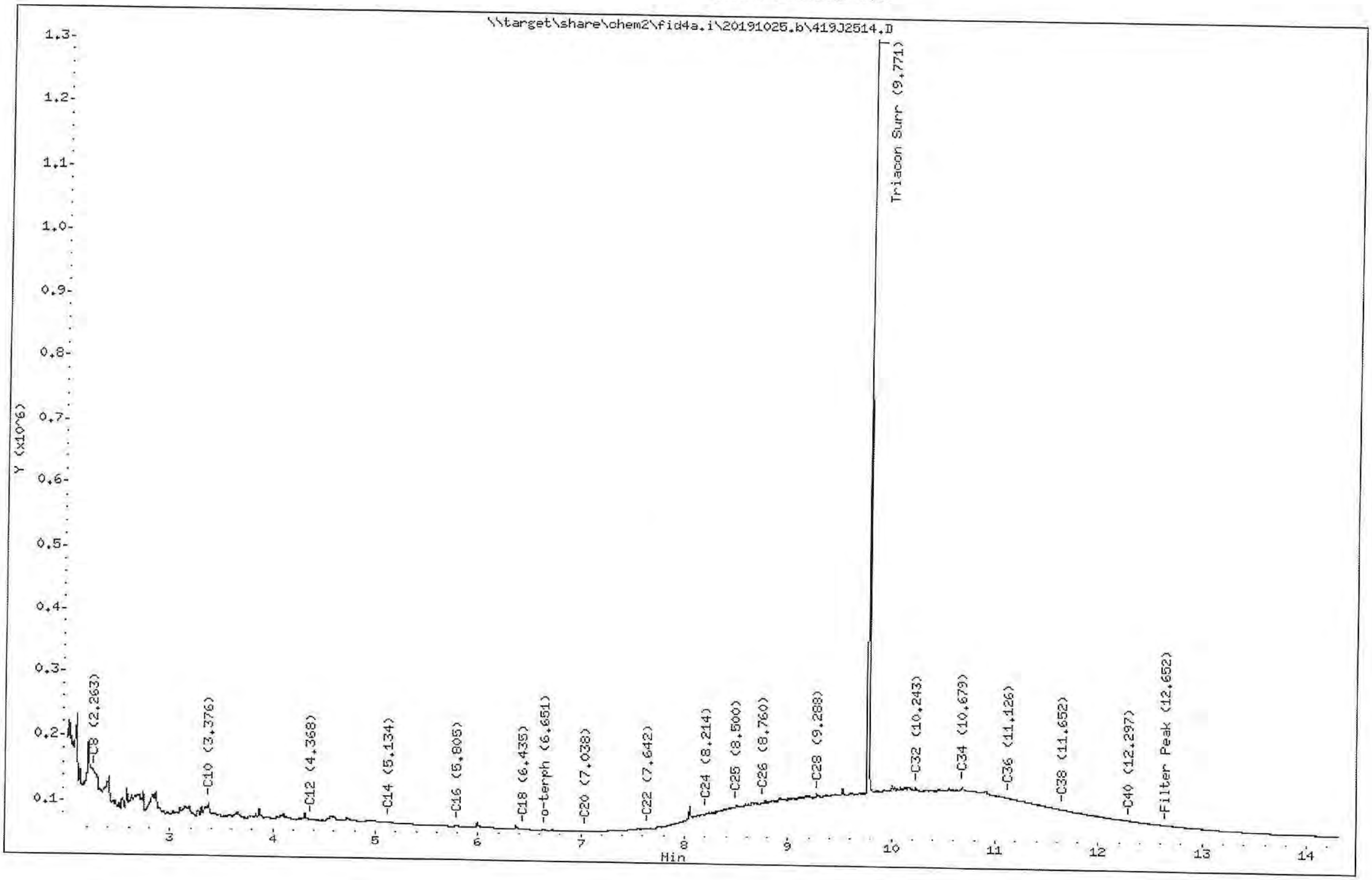
Date : 25-OCT-2019 16:12
Client ID:
Sample Info: SHJ0406-CAL7

Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2514.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL7
Client ID:
Injection: 25-OCT-2019 16:12
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	85024	58523	WATPHD	(C12-C24)	1690231	10.6
C10	3.376	0.003	37002	76813	WATPHM	(C24-C38)	13578464	102.4
C12	4.368	0.021	13222	16848	AK102	(C10-C25)	3173344	16.2
C14	5.134	0.004	9789	3901	AK103	(C25-C36)	11330395	113.3
C16	5.805	-0.002	5337	2891	OR.DIES	(C10-C28)	6258620	31.9
C18	6.435	0.000	1861	887				
C20	7.038	-0.005	431	243				
C22	7.642	0.003	6248	1558				
C24	8.214	-0.001	36357	52641				
C25	8.500	0.007	49017	43098				
C26	8.760	-0.005	55671	27607				
C28	9.288	0.003	67768	33791				
C32	10.243	0.001	81940	56823				
C34	10.679	-0.002	85222	51016				
Filter Peak	12.652	0.002	27566	19236	CREOSOT	(C12-C22)	959454	246.0
C36	11.126	-0.003	69343	27714				
C38	11.652	0.002	52690	33941				
C40	12.297	0.009	34497	15508				
o-terph	6.651	-0.006	941	547				
Triacon Surr	9.771	-0.031	1179904	816812	NAS DIES	(C10-C24)	2749900	14.1

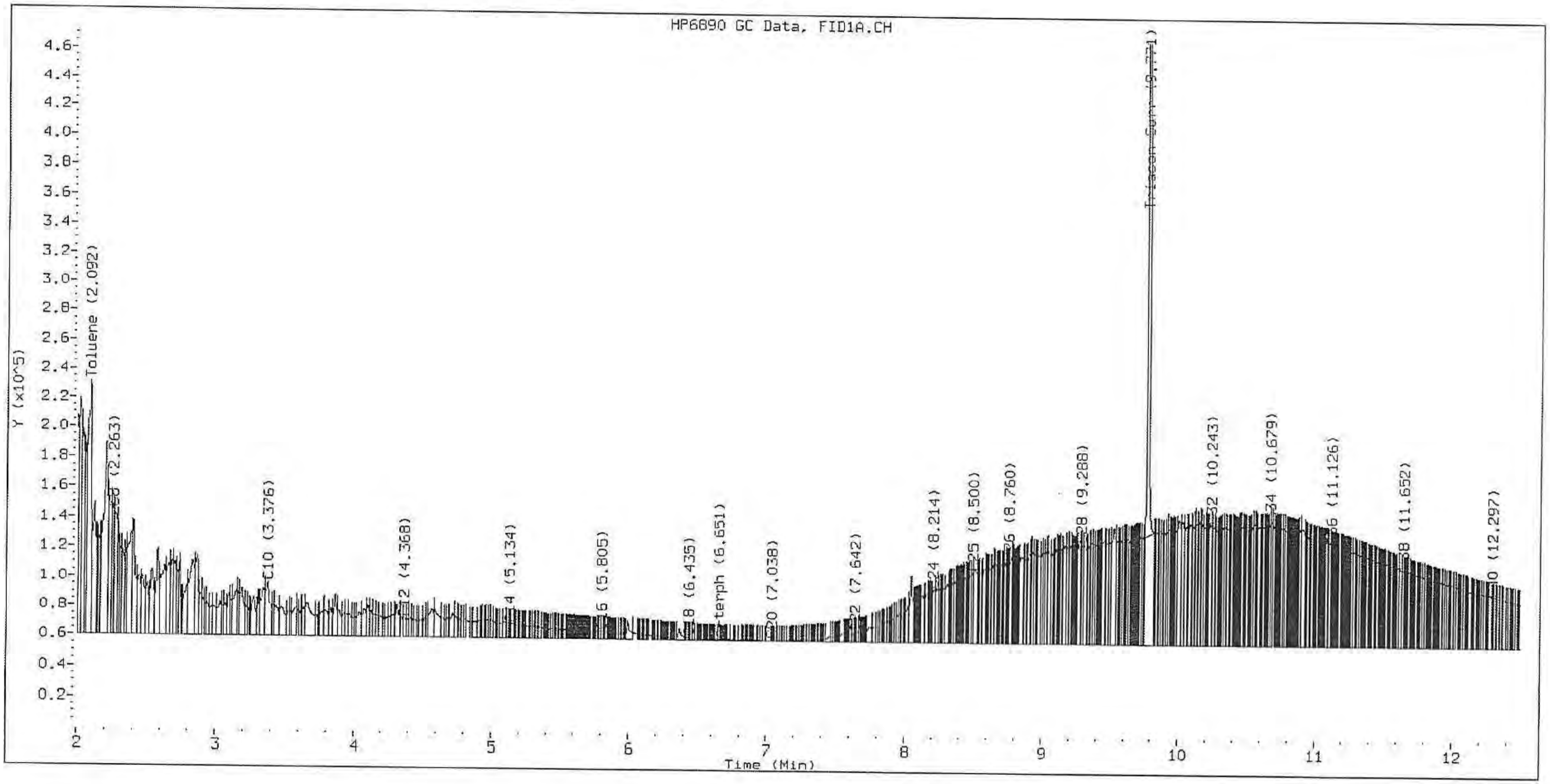
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	547	0.0
Triacontane	816812	4.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2514.D SHJ0406-CAL7



TPH Manual Integrations Report
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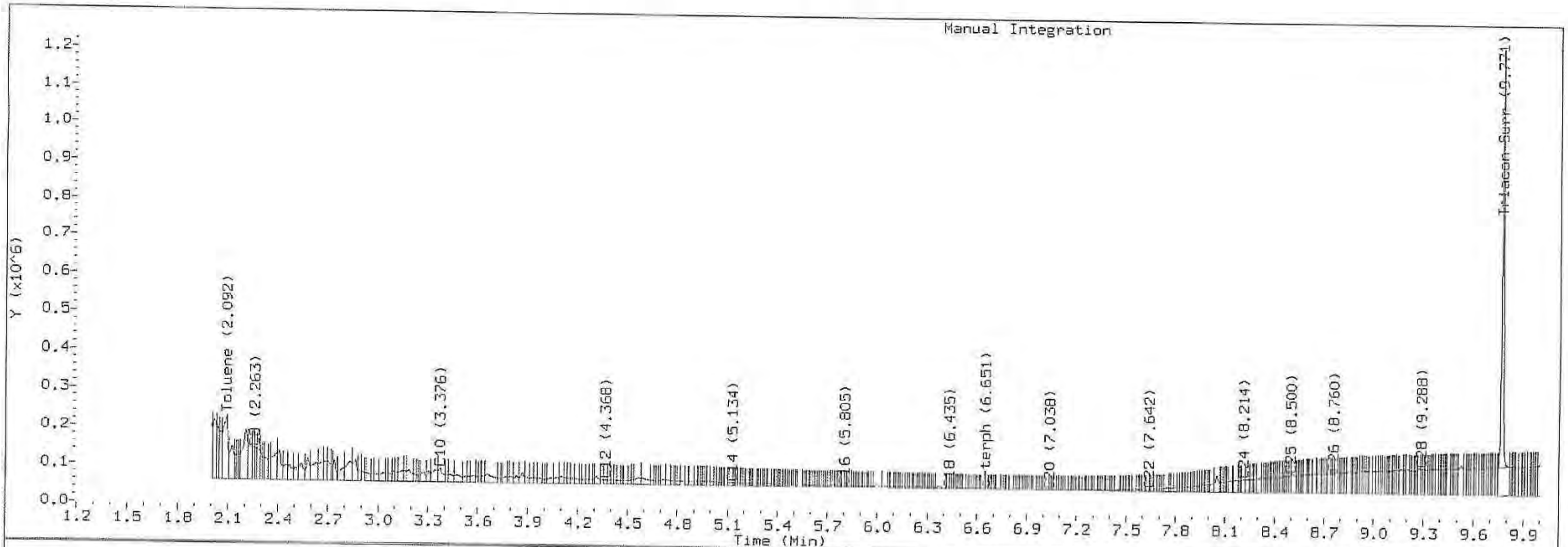
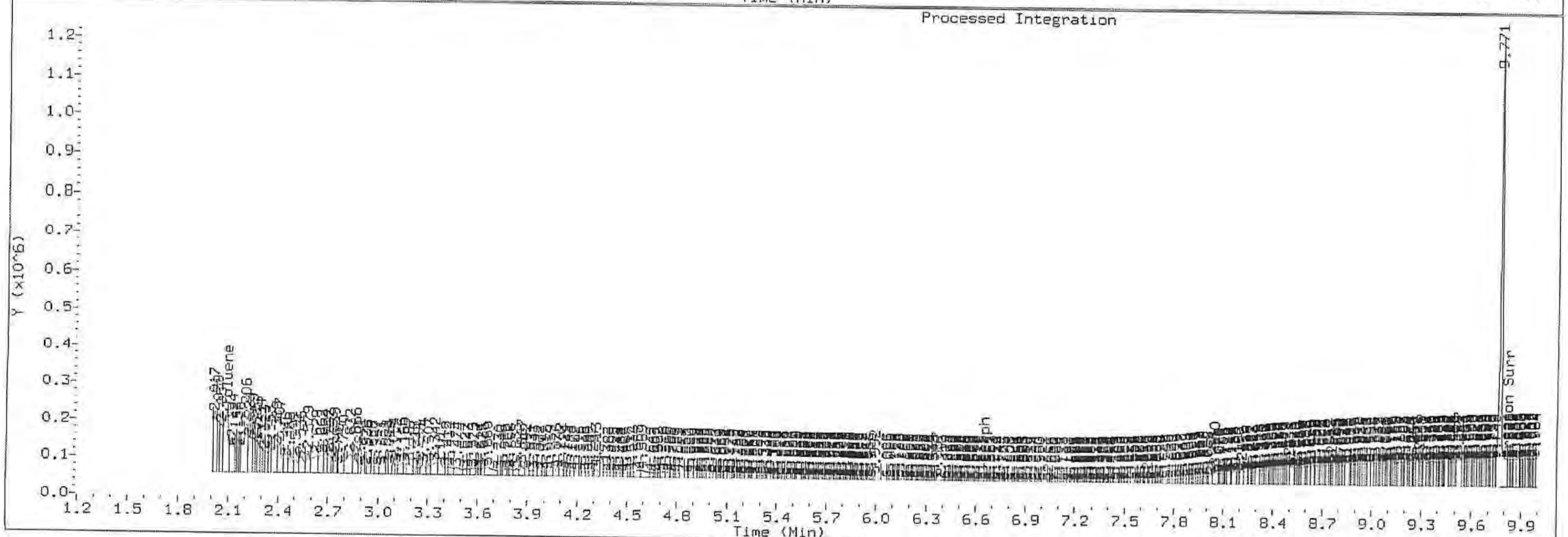
Lab ID:SHJ0406-CAL7





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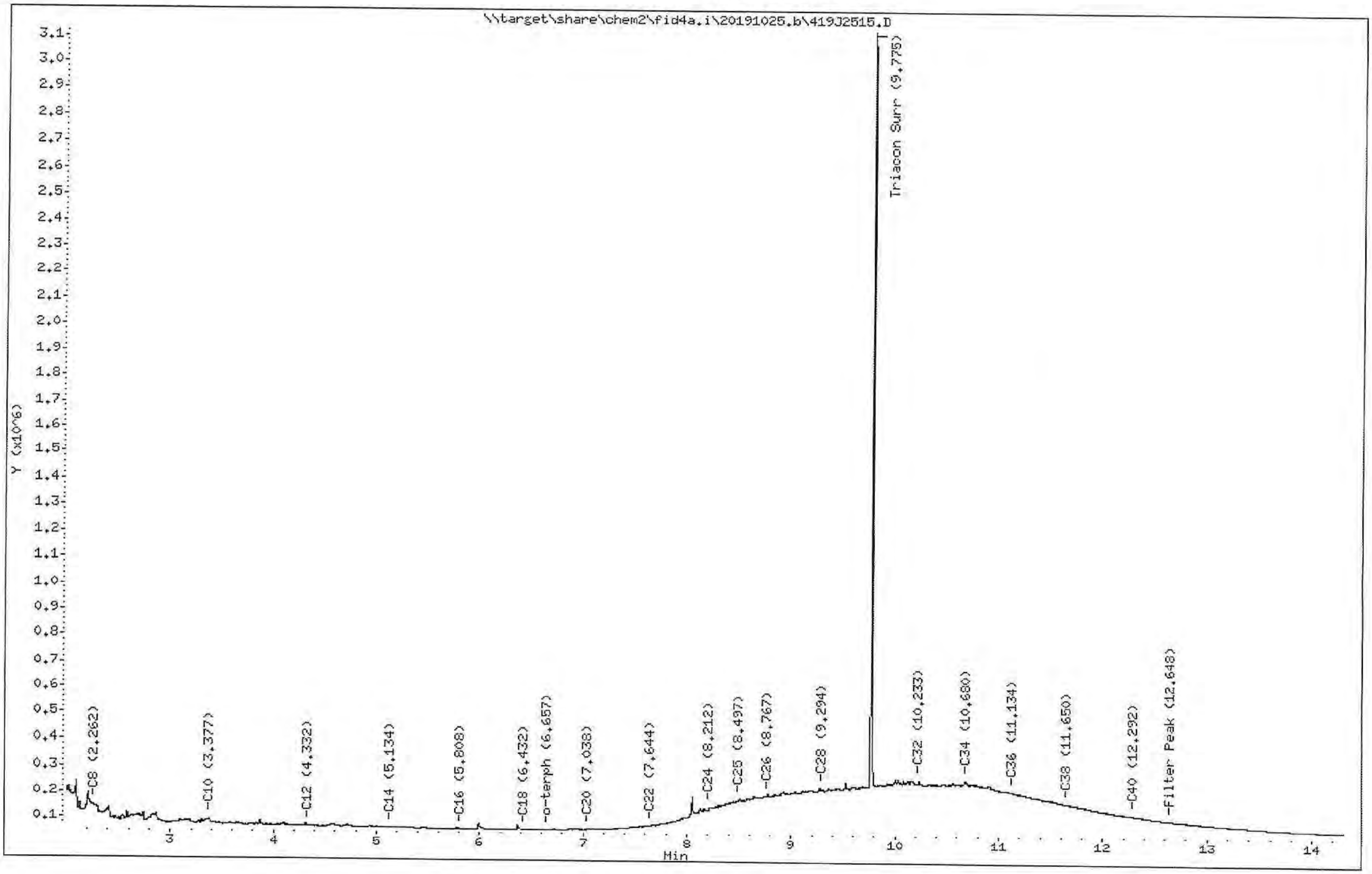
Date : 25-OCT-2019 16:33
Client ID:
Sample Info: SHJ0406-CAL8

Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2515.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
ARI ID: SHJ0406-CAL8
Client ID:
Injection: 25-OCT-2019 16:33
Dilution Factor: 1
RT Std: 419H1603.D
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.262	0.000	86050	63363	WATPHD	(C12-C24)	2977110	18.7
C10	3.377	0.004	37018	79239	WATPHM	(C24-C38)	34653776	261.3
C12	4.332	-0.015	11427	15714	AK102	(C10-C25)	5054179	25.9
C14	5.134	0.004	5154	2057	AK103	(C25-C36)	29175058	291.8
C16	5.808	0.001	2486	1818	OR.DIES	(C10-C28)	13169508	67.2
C18	6.432	-0.002	1168	783				
C20	7.038	-0.005	3772	4551				
C22	7.644	0.005	20883	5211				
C24	8.212	-0.002	97111	92984				
C25	8.497	0.004	127743	100149				
C26	8.767	0.003	144937	36089				
C28	9.294	0.009	174099	155043				
C32	10.233	-0.009	209275	335982				
C34	10.680	-0.001	211521	464774				
Filter Peak	12.648	-0.002	60945	24237	CREOSOT	(C12-C22)	985245	252.6
C36	11.134	0.005	168788	75681				
C38	11.650	0.000	122780	30685				
C40	12.292	0.003	80017	15993				
o-terph	6.657	0.001	951	796				
Triacon Surr	9.775	-0.027	2879377	2052387	NAS DIES	(C10-C24)	3922564	20.1

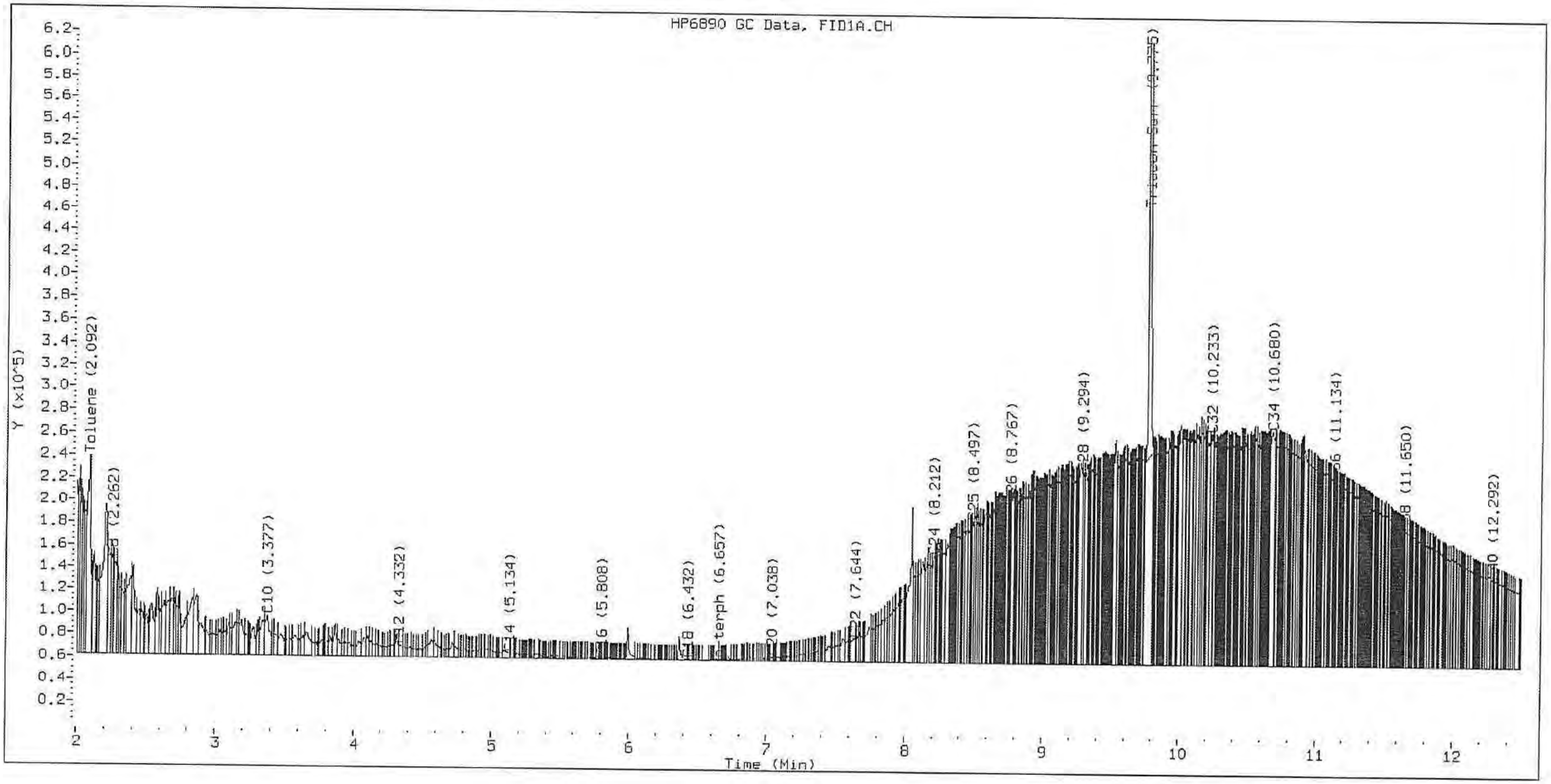
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	796	0.0
Triacontane	2052387	11.5 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

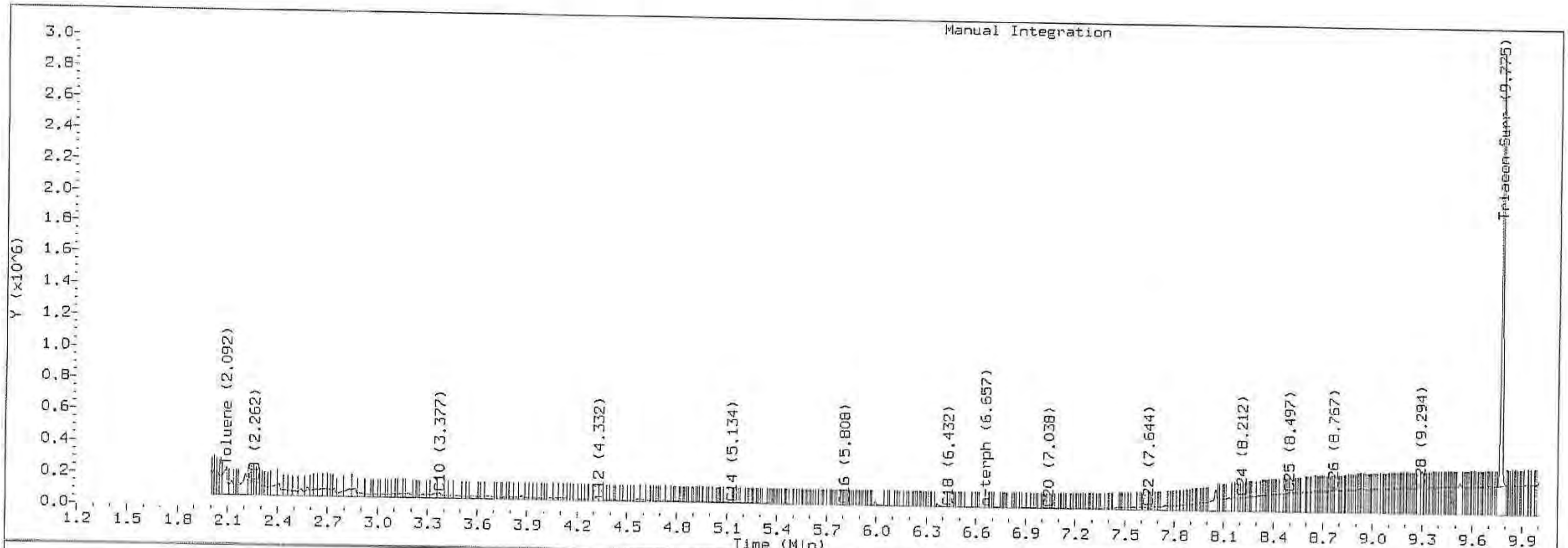
Datafile: FID4A, 20191025.b/419J2515.D SHJ0406-CAL8

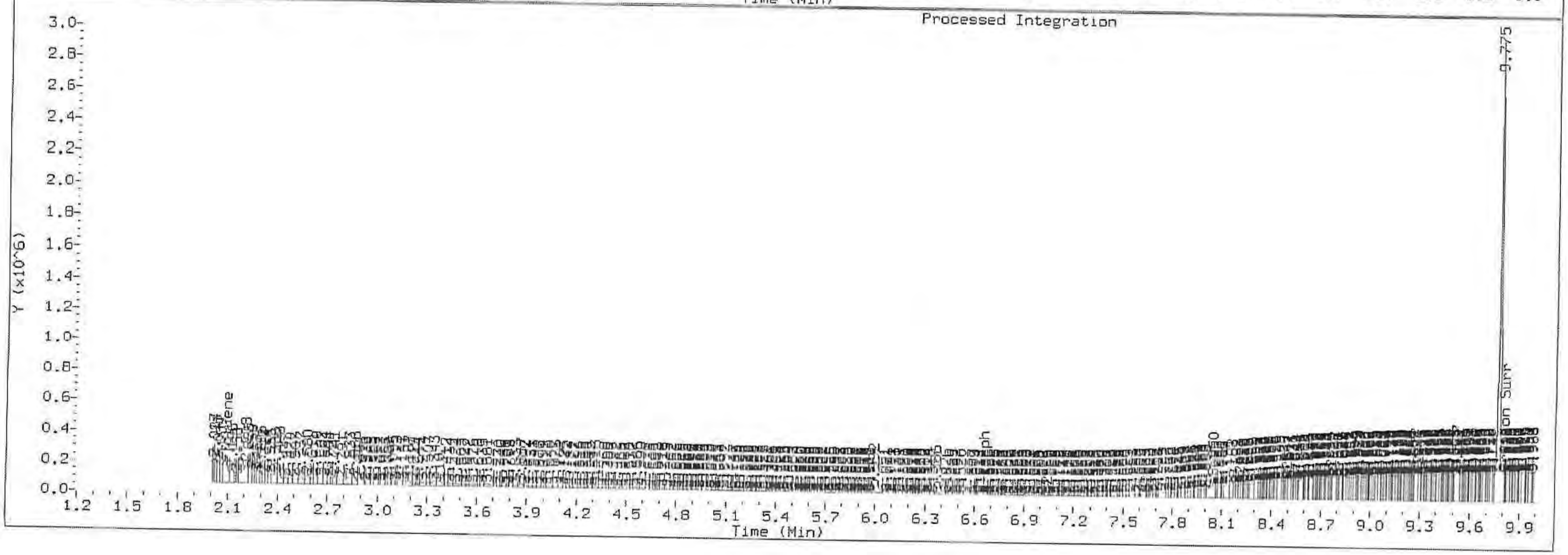


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2515.D Injection: 25-OCT-2019 16:33

Lab ID:SHJ0406-CAL8





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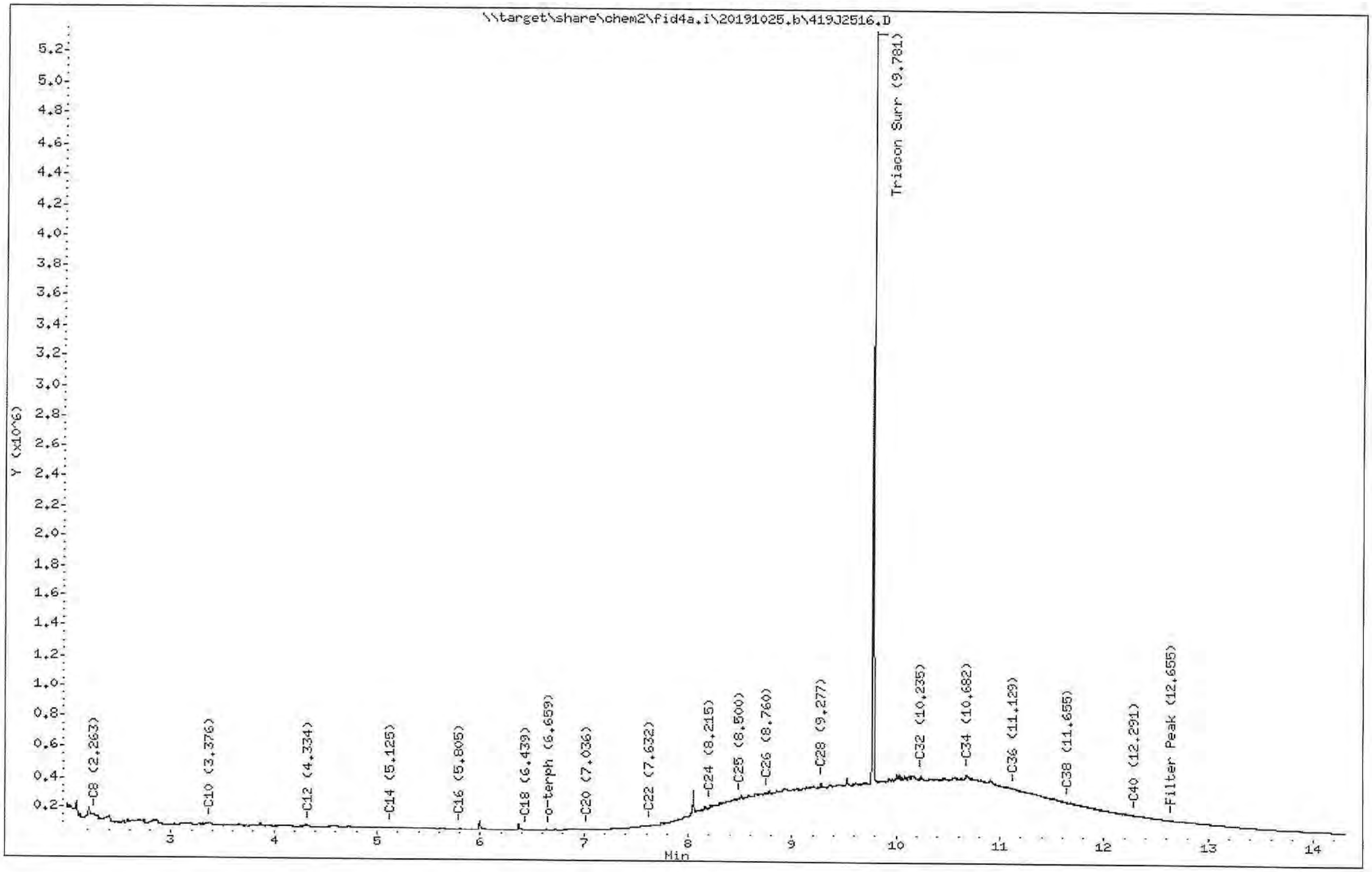
Date : 25-OCT-2019 16:53
Client ID:
Sample Info: SHJ0406-CAL9

Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2516.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL9
Client ID:
Injection: 25-OCT-2019 16:53
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	85054	58529	WATPHD	(C12-C24)	5661873	35.5
C10	3.376	0.003	38337	74763	WATPHM	(C24-C38)	64308153	484.9
C12	4.334	-0.013	14490	20832	AK102	(C10-C25)	8794999	45.0
C14	5.125	-0.004	9491	6950	AK103	(C25-C36)	54037059	540.5
C16	5.805	-0.002	4594	3625	OR.DIES	(C10-C28)	23868061	121.8
C18	6.439	0.004	1696	642				
C20	7.036	-0.007	7504	9871				
C22	7.632	-0.007	42646	55918				
C24	8.215	0.001	187247	321321				
C25	8.500	0.007	242499	189952				
C26	8.760	-0.005	272862	175979				
C28	9.277	-0.008	344800	562248				
C32	10.235	-0.007	399681	717669				
C34	10.682	0.001	410565	682394				
Filter Peak	12.655	0.004	112959	178875	CREOSOT	(C12-C22)	1771420	454.1
C36	11.129	-0.000	318612	63696				
C38	11.655	0.005	227739	158292				
C40	12.291	0.002	146308	65396				
o-terph	6.659	0.002	1793	1646				
Triacon Surr	9.781	-0.021	4947832	3881047	NAS DIES	(C10-C24)	6718189	34.4

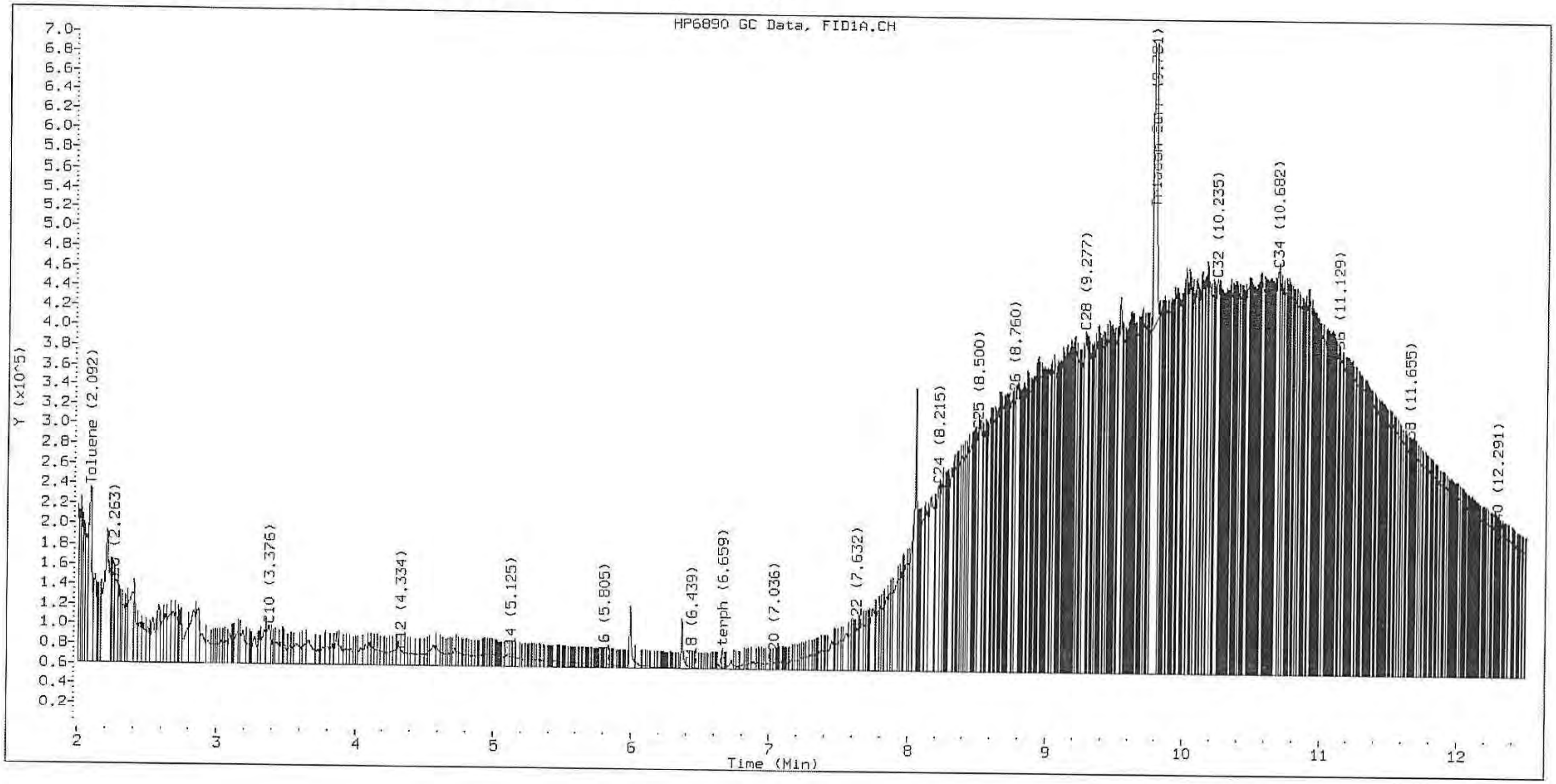
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	1646	0.0
Triacontane	3881047	21.8 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

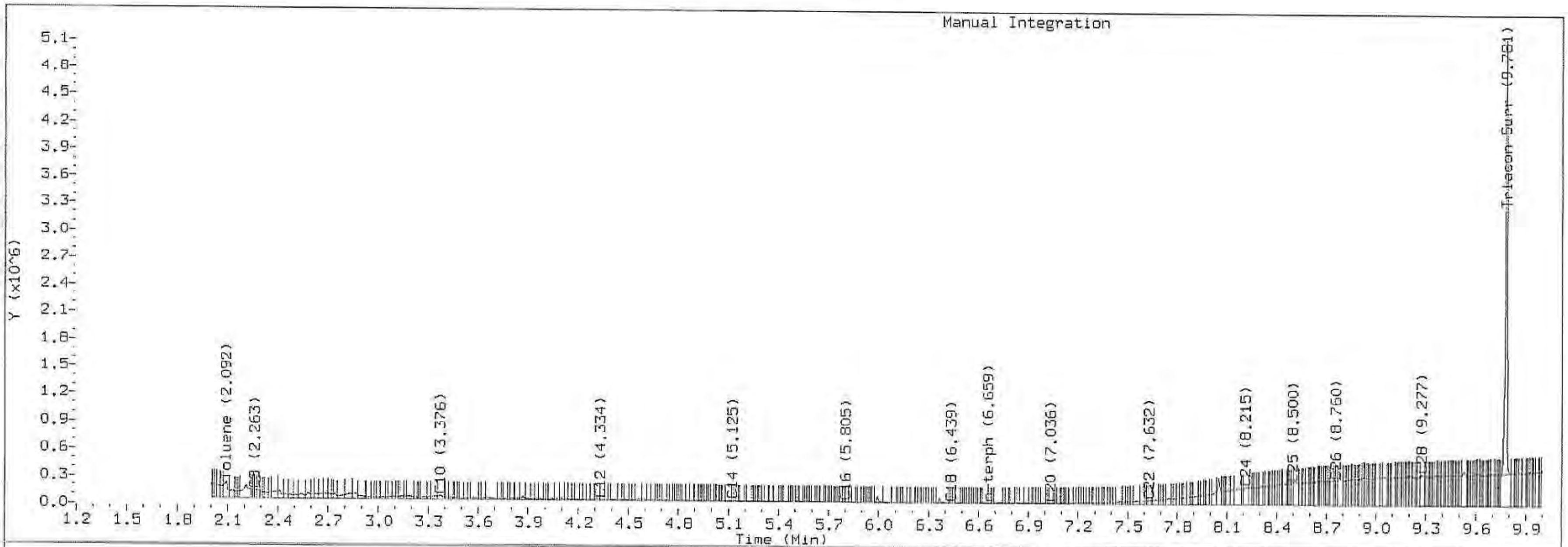
Datafile: FID4A, 20191025.b/419J2516.D SHJ0406-CAL9

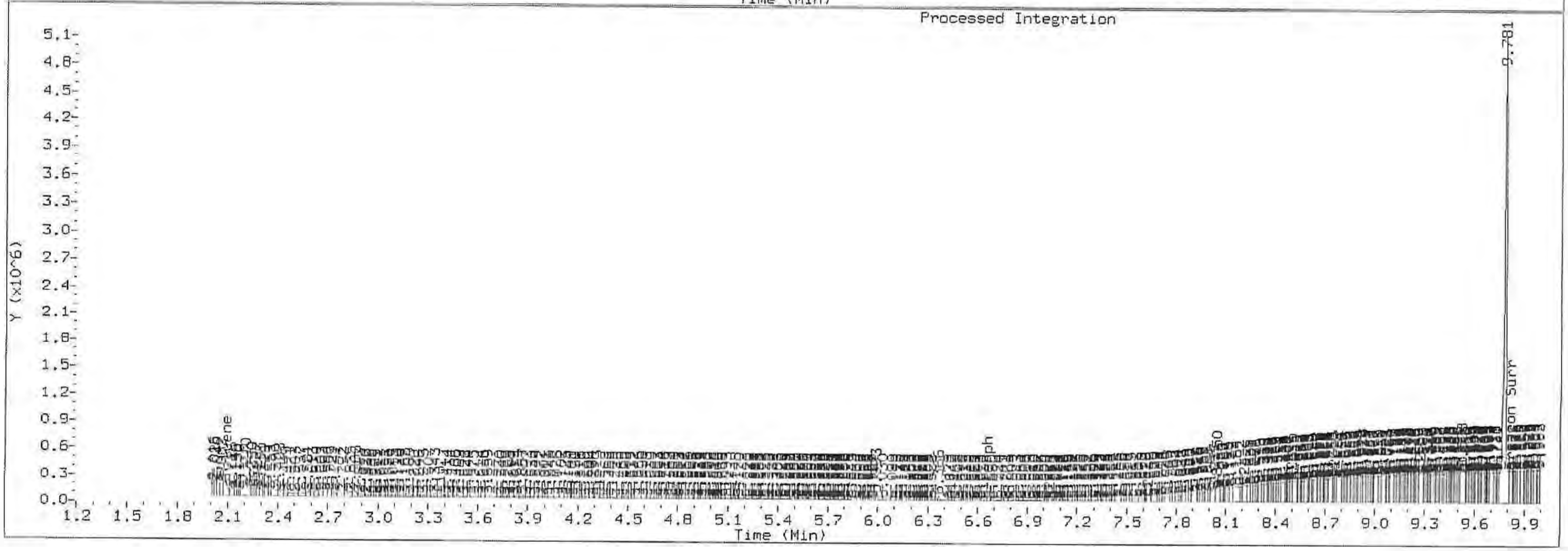


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2516.D Injection: 25-OCT-2019 16:53

Lab ID:SHJ0406-CAL9





Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2517.D

Page 1

Date : 25-OCT-2019 17:13

Client ID:

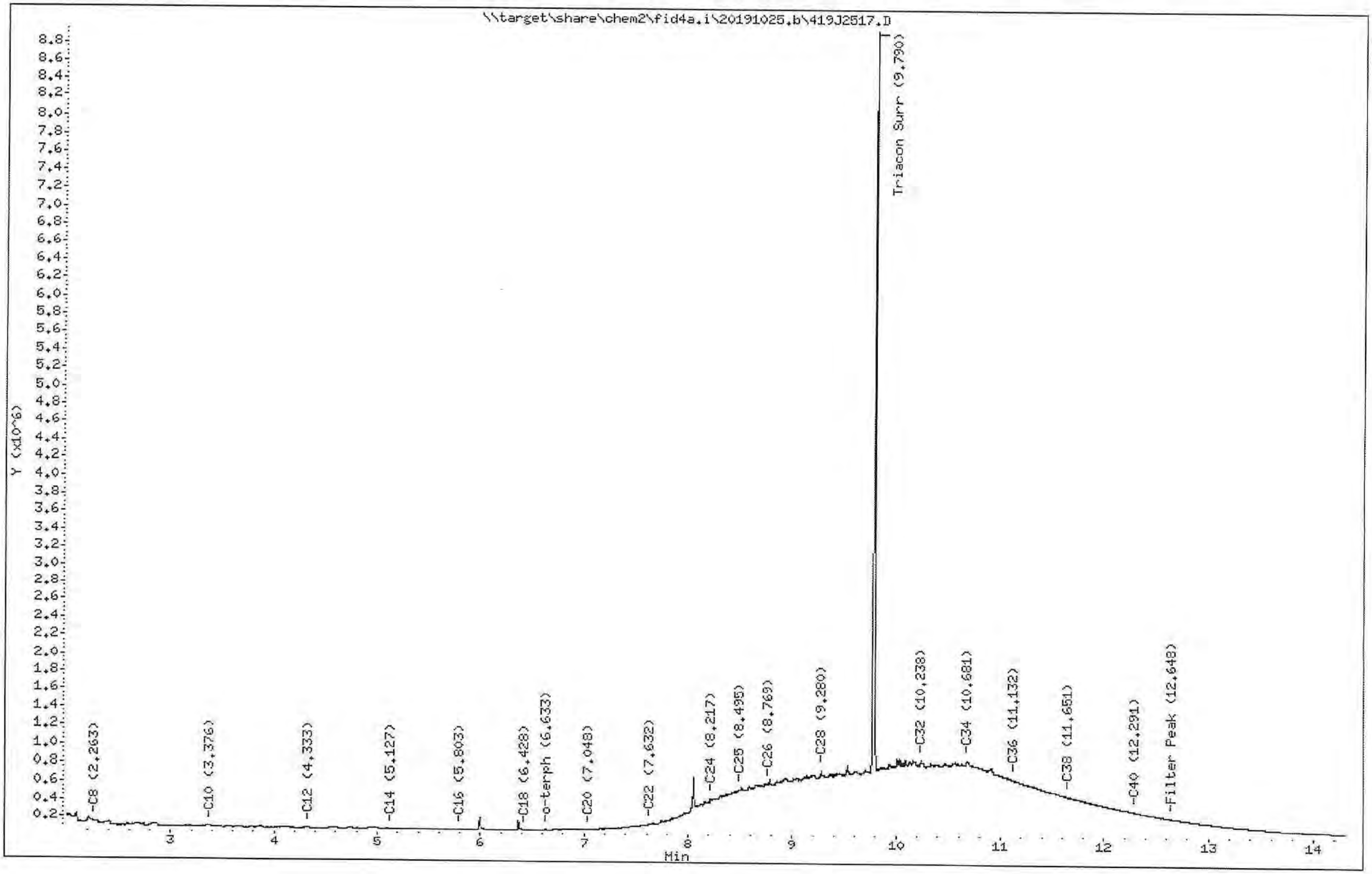
Sample Info: SHJ0406-CALA

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2517.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALA
Client ID:
Injection: 25-OCT-2019 17:13
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	78760	49973	WATPHD	(C12-C24)	11050301	69.4
C10	3.376	0.003	33282	53155	WATPHM	(C24-C38)	130458600	983.6
C12	4.333	-0.014	8330	11675	AK102	(C10-C25)	16134883	82.5
C14	5.127	-0.003	6869	8015	AK103	(C25-C36)	110338631	1103.6
C16	5.803	-0.004	4269	6183	OR.DIES	(C10-C28)	47155868	240.6
C18	6.428	-0.006	4035	4694				
C20	7.048	0.005	16630	12336				
C22	7.632	-0.007	93050	108452				
C24	8.217	0.002	386378	321791				
C25	8.495	0.002	491396	292213				
C26	8.769	0.005	557751	166690				
C28	9.280	-0.005	695698	804868				
C32	10.238	-0.005	823126	997439				
C34	10.681	-0.000	821771	761528				
Filter Peak	12.648	-0.002	202612	170825	CREOSOT	(C12-C22)	2854310	731.7
C36	11.132	0.003	625826	249171				
C38	11.651	0.001	444433	177367				
C40	12.291	0.002	276466	164427				
o-terph	6.633	-0.023	11730	15135				
Triacon Surr	9.790	-0.012	8190520	7927188	NAS DIES	(C10-C24)	11670623	59.8

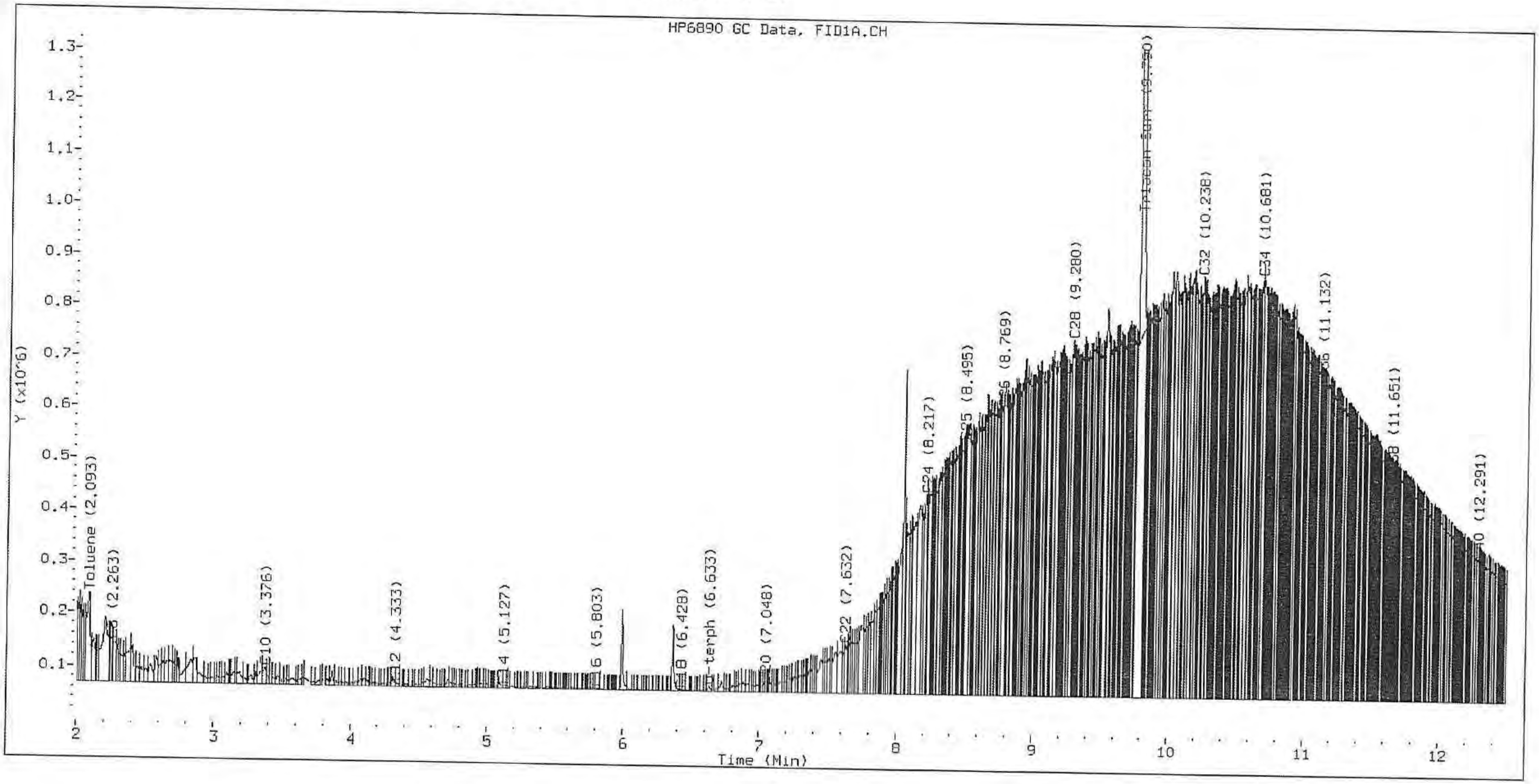
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	15135	0.1
Triacontane	7927188	44.5 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

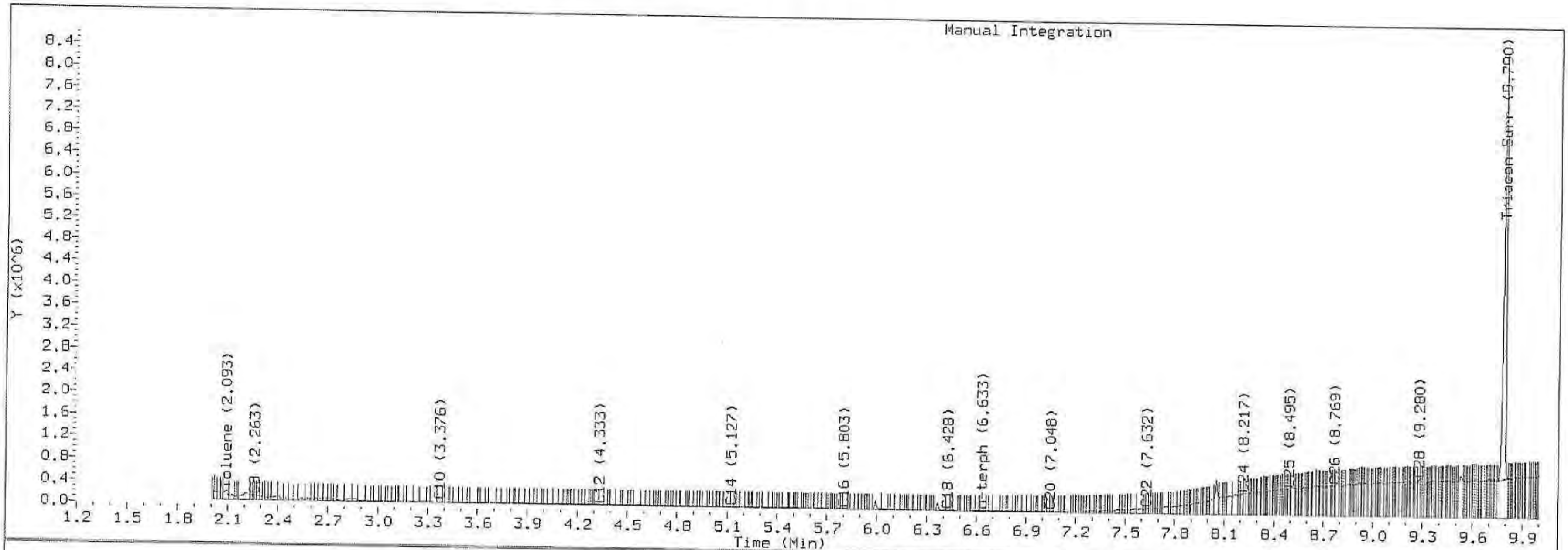
Datafile: FID4A, 20191025.b/419J2517.D SHJ0406-CALA

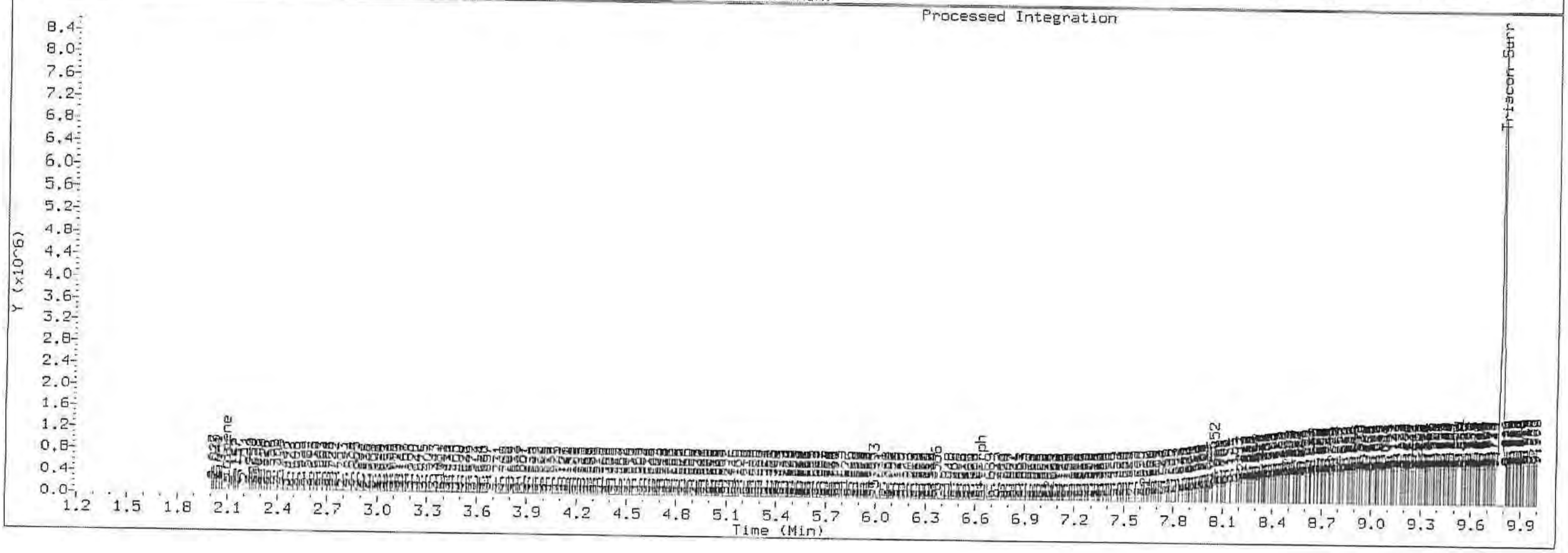


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2517.D Injection: 25-OCT-2019 17:13

Lab ID:SHJ0406-CALA

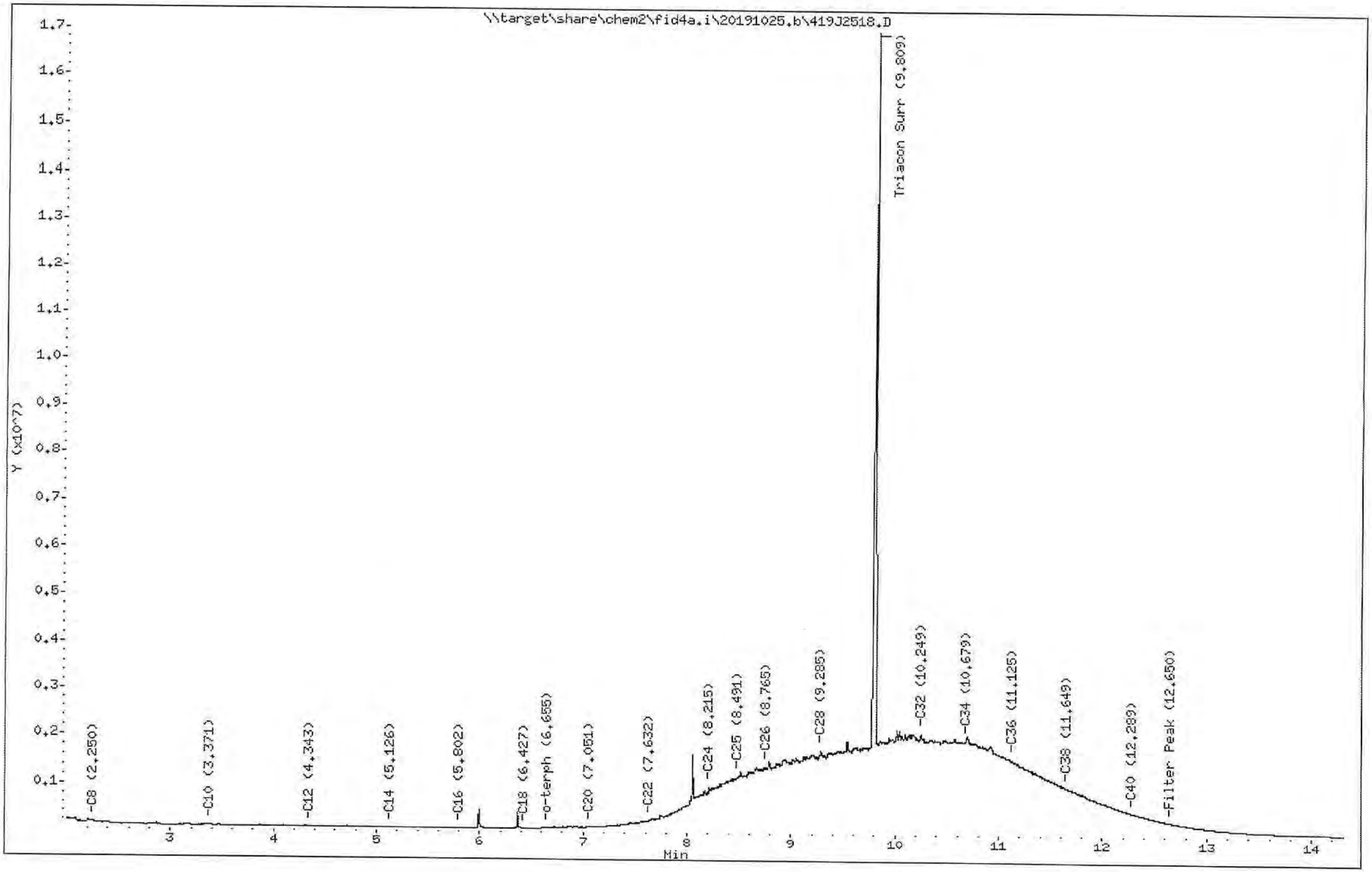




Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2518.D
Date : 25-OCT-2019 17:34
Client ID:
Sample Info: SHJ0406-CALB
Column phase: RTX-1

Page 1

Instrument: fid4a.i
Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2518.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALB
Client ID:
Injection: 25-OCT-2019 17:34
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.250	-0.012	77817	116710	WATPHD	(C12-C24)	27251753	171.0
C10	3.371	-0.002	31760	39598	WATPHM	(C24-C38)	331873325	2502.2
C12	4.343	-0.004	6520	6156	AK102	(C10-C25)	38872526	198.8
C14	5.126	-0.004	7874	9340	AK103	(C25-C36)	281447225	2815.1
C16	5.802	-0.005	7984	9771	OR.DIES	(C10-C28)	115893490	591.3
C18	6.427	-0.007	14076	14289				
C20	7.051	0.008	46537	34495				
C22	7.632	-0.007	235207	295349				
C24	8.215	0.000	955047	900361				
C25	8.491	-0.002	1184503	236628				
C26	8.765	0.000	1401067	1730192				
C28	9.285	-0.001	1743563	2775911				
C32	10.249	0.007	2106415	3055227				
C34	10.679	-0.002	1974576	1267121				
Filter Peak	12.650	-0.001	278159	124338	CREOSOT	(C12-C22)	6708937	1719.8
C36	11.125	-0.004	1581807	1021345				
C38	11.649	-0.001	1027941	256759				
C40	12.289	0.000	486929	193205				
o-terph	6.655	-0.002	18811	15731				
Triacon Surr	9.809	0.007	15056726	20120024	NAS DIES	(C10-C24)	27786026	142.4

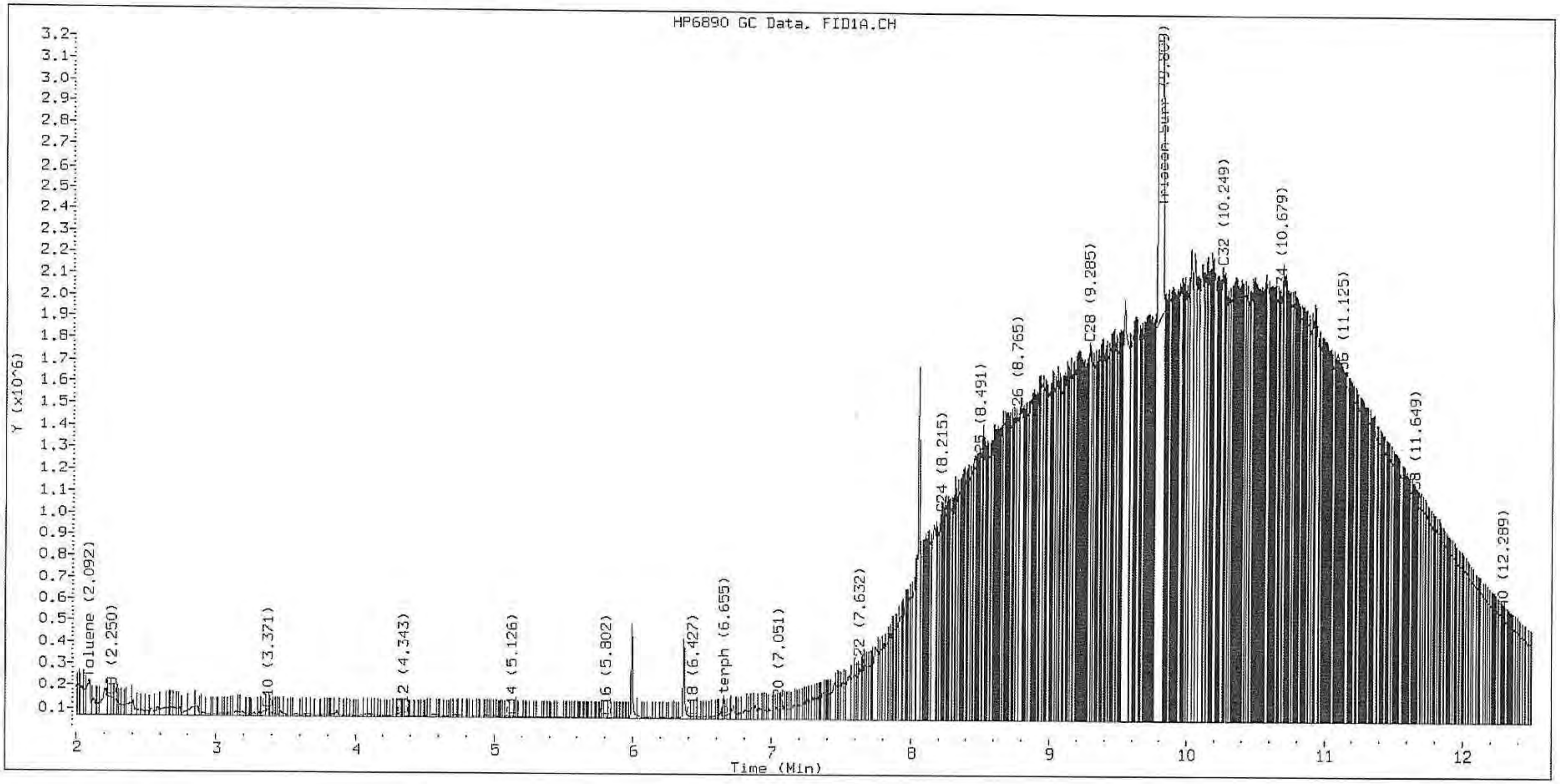
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	15731	0.1
Triacontane	20120024	113.0 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

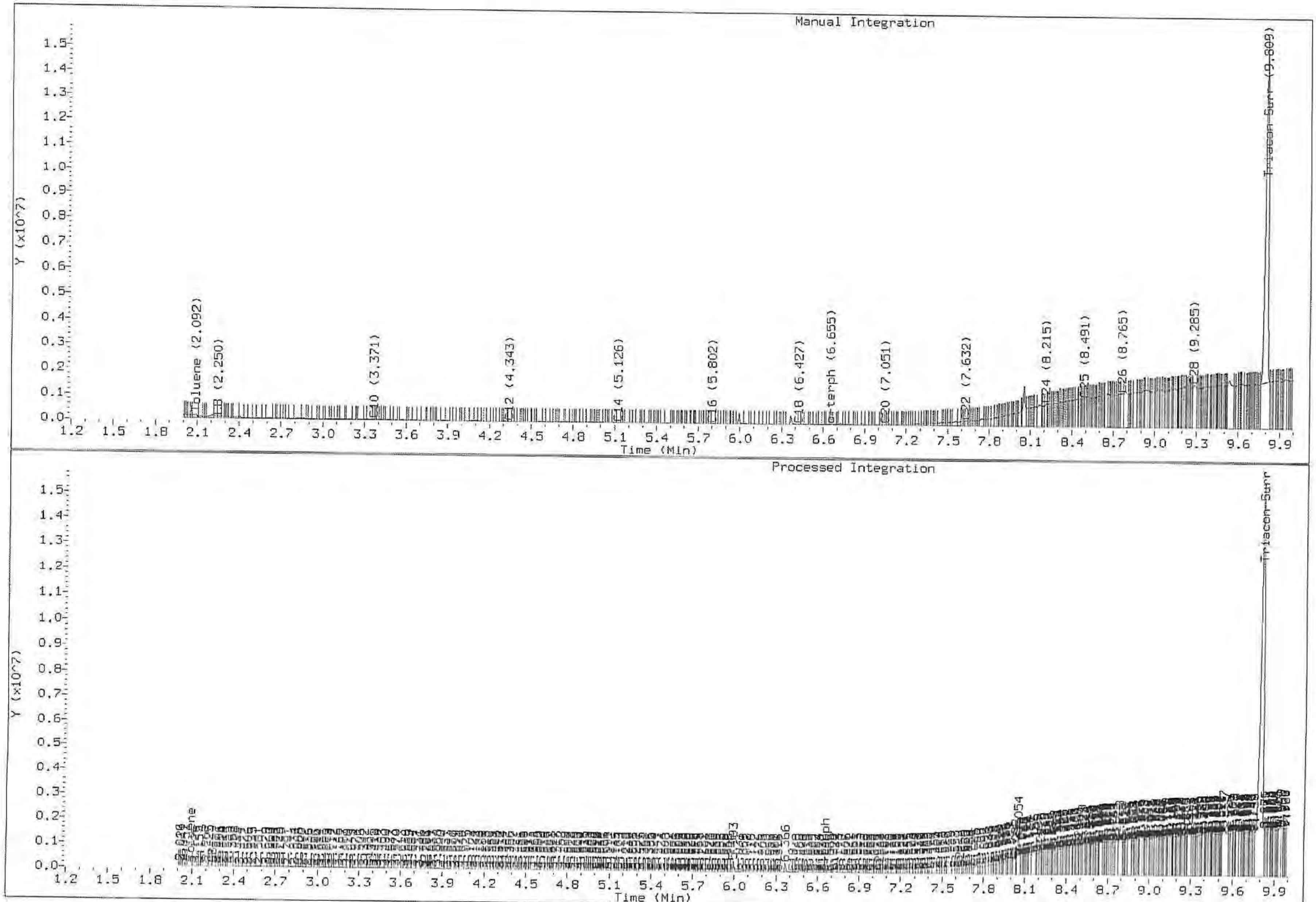
Datafile: FID4A, 20191025.b/419J2518.D SHJ0406-CALB



TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2518.D Injection: 25-OCT-2019 17:34

Lab ID:SHJ0406-CALB



Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2519.D

Date : 25-OCT-2019 17:54

Client ID:

Sample Info: SHJ0406-CALC

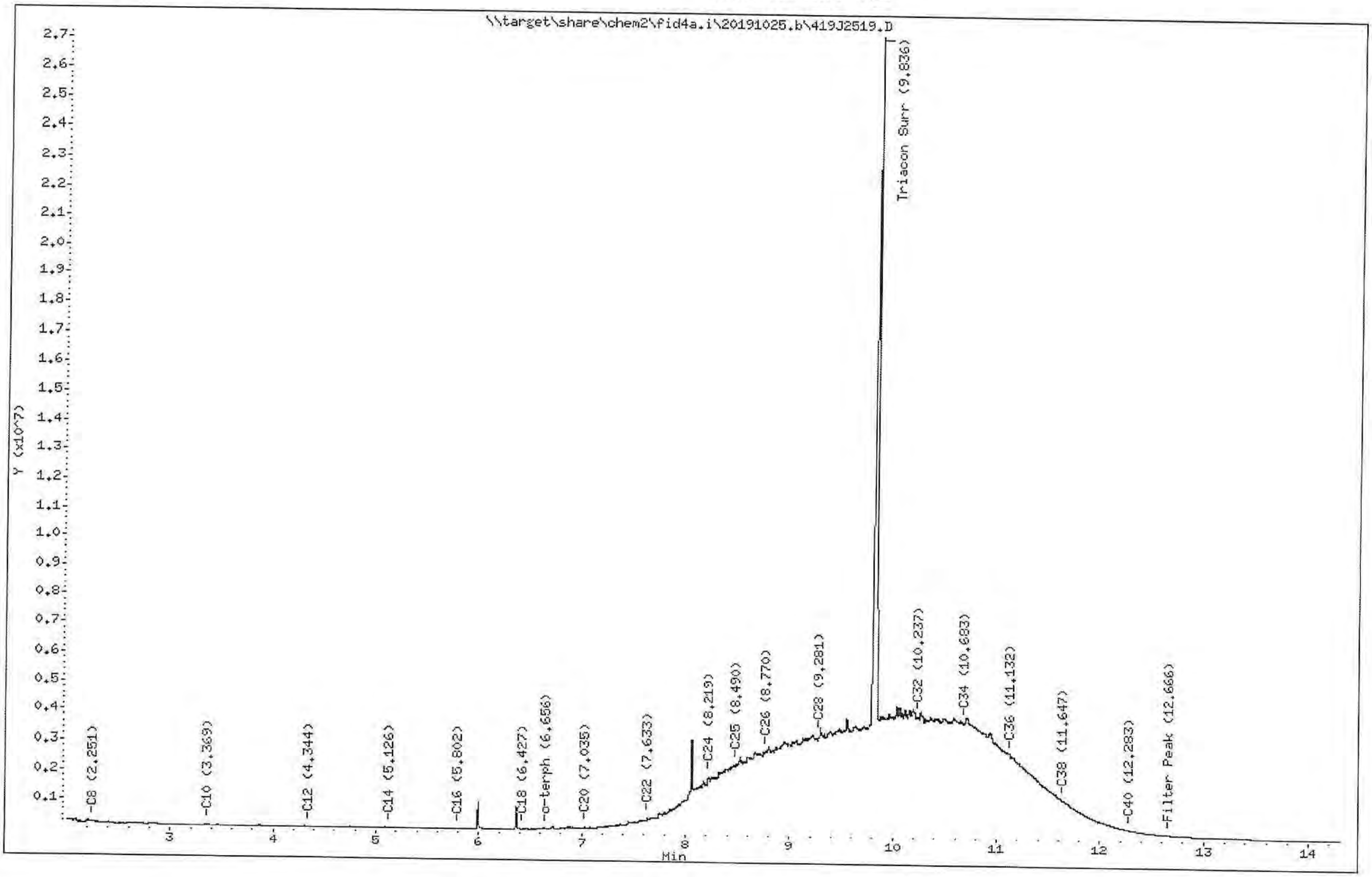
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2519.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALC
Client ID:
Injection: 25-OCT-2019 17:54
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.251	-0.011	83410	131526	WATPHD	(C12-C24)	54951988	344.9
C10	3.369	-0.004	40067	53627	WATPHM	(C24-C38)	647842842	4884.5
C12	4.344	-0.003	8504	8688	AK102	(C10-C25)	79702569	407.7
C14	5.126	-0.004	19567	26129	AK103	(C25-C36)	565644605	5657.8
C16	5.802	-0.006	21777	24178	OR.DIES	(C10-C28)	235116720	1199.6
C18	6.427	-0.008	35077	33036				
C20	7.035	-0.008	119620	119856				
C22	7.633	-0.006	481948	602675				
C24	8.219	0.004	1952483	1661789				
C25	8.490	-0.003	2383743	592688				
C26	8.770	0.005	2837167	1694204				
C28	9.281	-0.005	3377335	3333438				
C32	10.237	-0.006	4076731	3428537				
C34	10.683	0.002	3869795	1544856				
Filter Peak	12.666	0.015	116179	102746	CREOSOT	(C12-C22)	14260161	3655.6
C36	11.132	0.003	2846055	707761				
C38	11.647	-0.002	1313112	715795				
C40	12.283	-0.006	302346	281489				
o-terph	6.656	-0.001	43010	66343				
Triacon Surr	9.836	0.034	23293566	39698048	NAS DIES	(C10-C24)	55485985	284.3

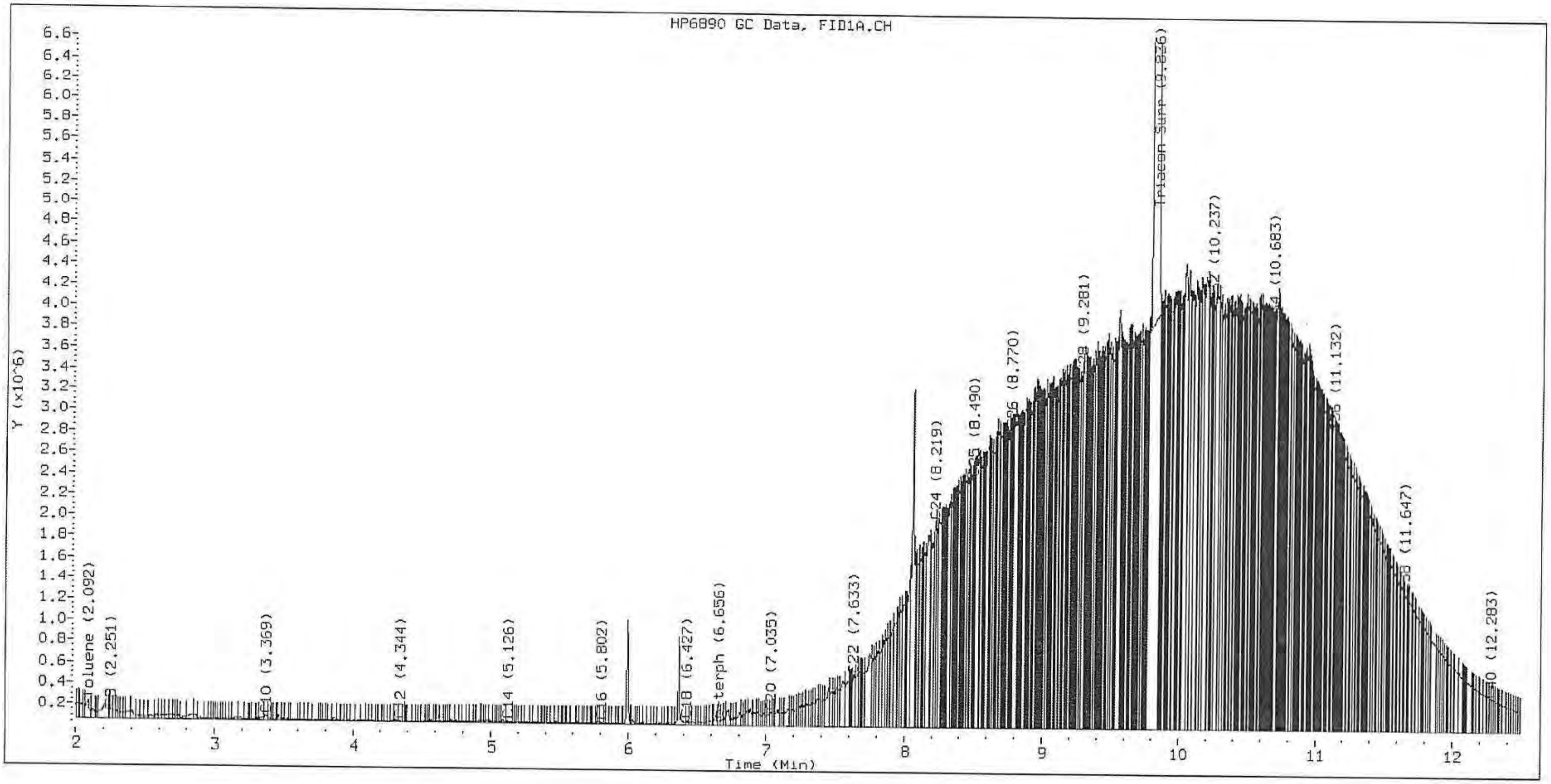
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	66343	0.3
Triacontane	39698048	223.0 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

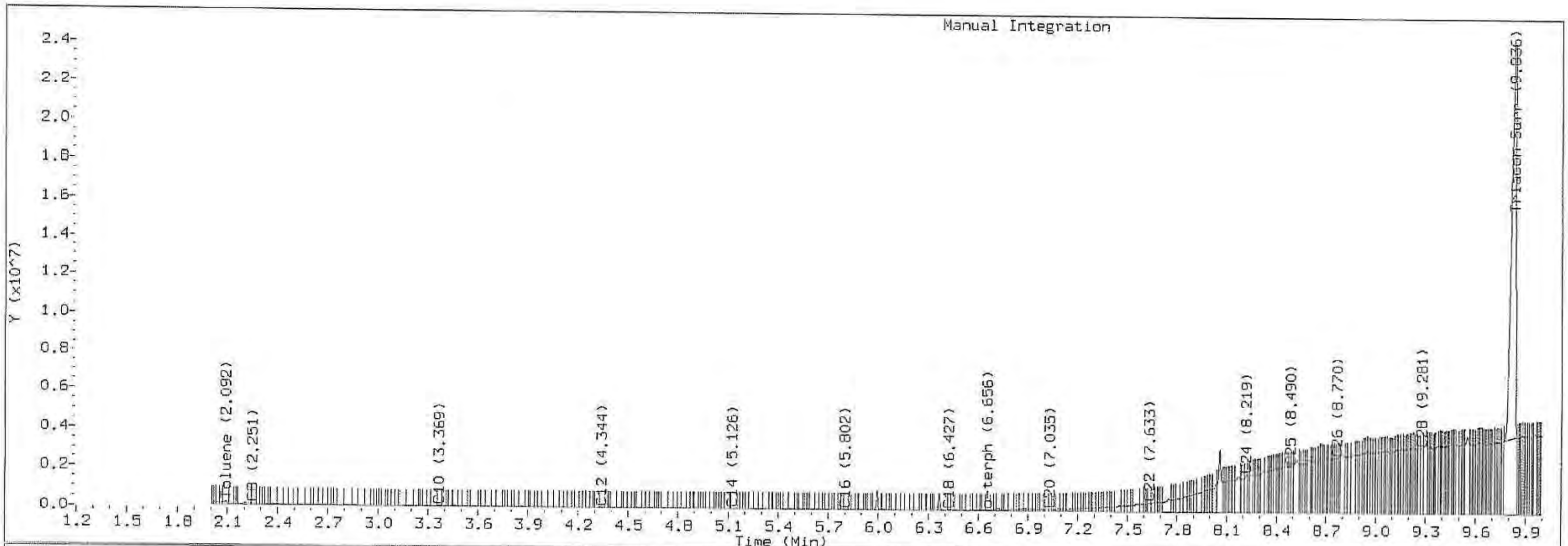
Datafile: FID4A, 20191025.b/419J2519.D SHJ0406-CALC

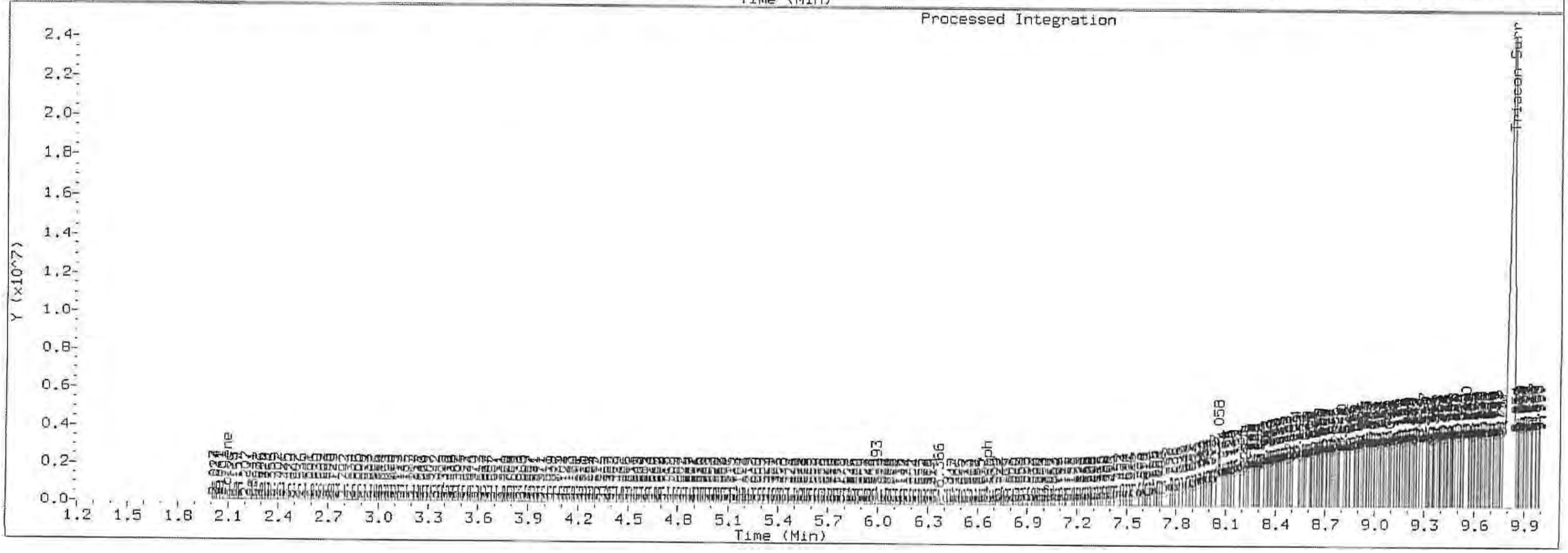


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2519.D Injection: 25-OCT-2019 17:54

Lab ID:SHJ0406-CALC



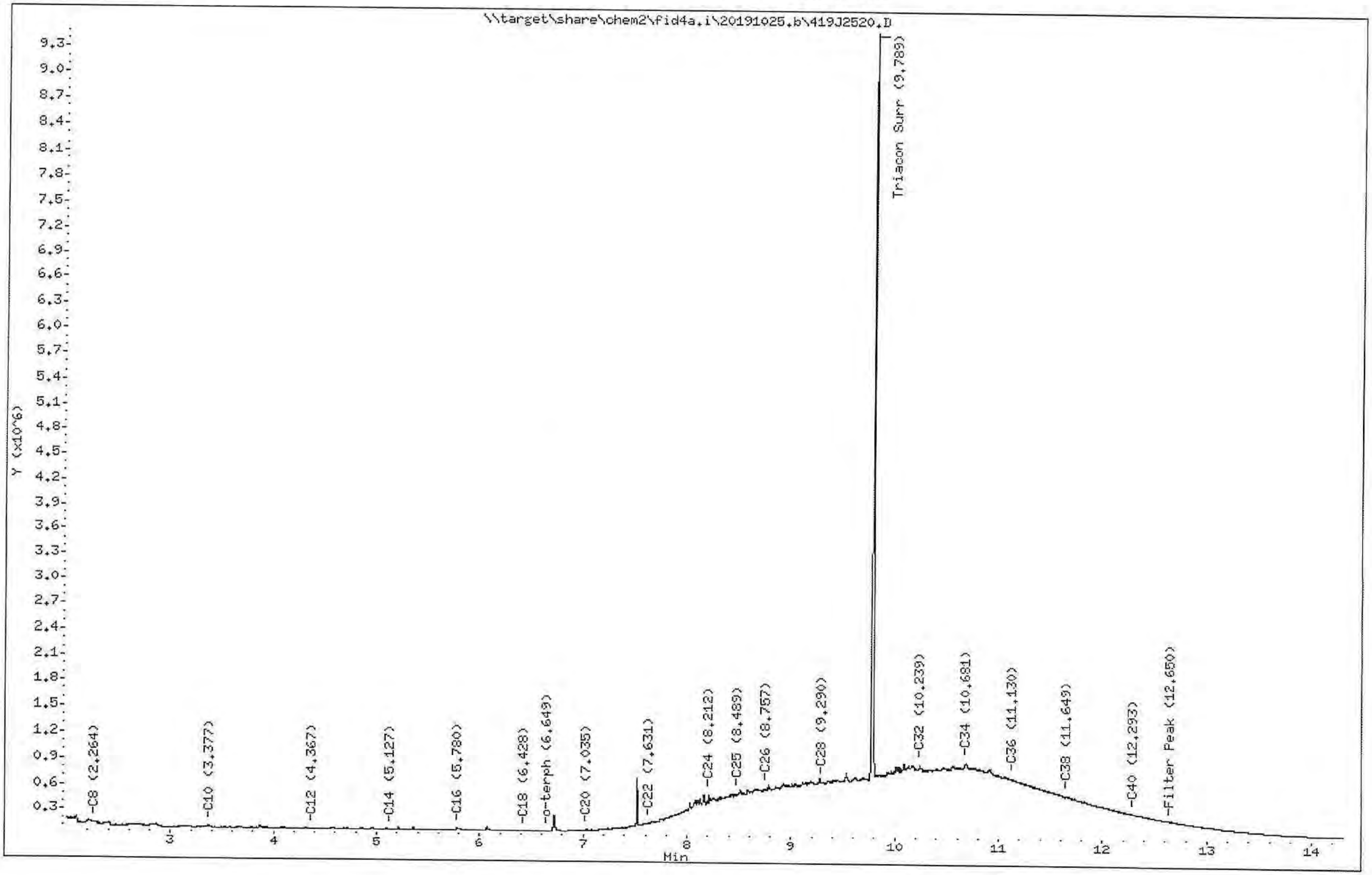


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2520.D
Date : 25-OCT-2019 18:14
Client ID:
Sample Info: SHJ0406-SCV2

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2520.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV2
Client ID:
Injection: 25-OCT-2019 18:14
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	61386	42202	WATPHD	(C12-C24)	14006466	87.9
C10	3.377	0.004	28038	52387	WATPHM	(C24-C38)	135195593	1019.3
C12	4.367	0.020	3146	3151	AK102	(C10-C25)	18822986	96.3
C14	5.127	-0.003	4143	4458	AK103	(C25-C36)	113030798	1130.6
C16	5.780	-0.027	35494	74348	OR.DIES	(C10-C28)	49340102	251.7
C18	6.428	-0.007	6156	6874				
C20	7.035	-0.008	26093	30304				
C22	7.631	-0.008	127794	247657				
C24	8.212	-0.003	471017	746279				
C25	8.489	-0.004	491516	98217				
C26	8.757	-0.008	557900	550938				
C28	9.290	0.005	640615	223711				
C32	10.239	-0.004	847729	1306304				
C34	10.681	-0.000	865603	764427				
Filter Peak	12.650	-0.000	213232	84835	CREOSOT	(C12-C22)	3605357	924.2
C36	11.130	0.001	692159	413129				
C38	11.649	-0.001	503231	200454				
C40	12.293	0.004	305287	287895				
o-terph	6.649	-0.008	4022	3699				
Triacon Surr	9.789	-0.013	8762887	8519530	NAS DIES	(C10-C24)	14444503	74.0

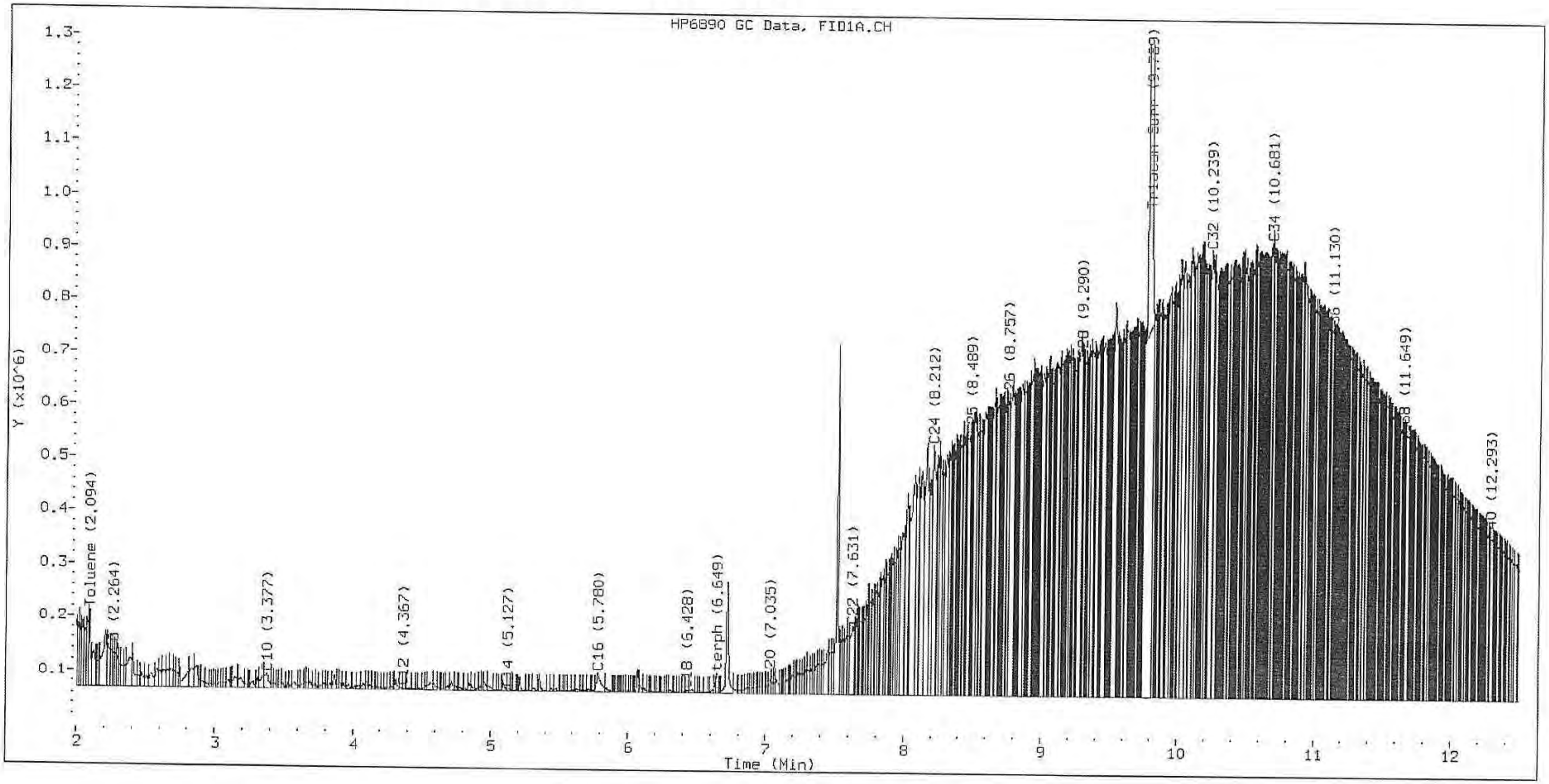
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	3699	0.0
Triacontane	8519530	47.9 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

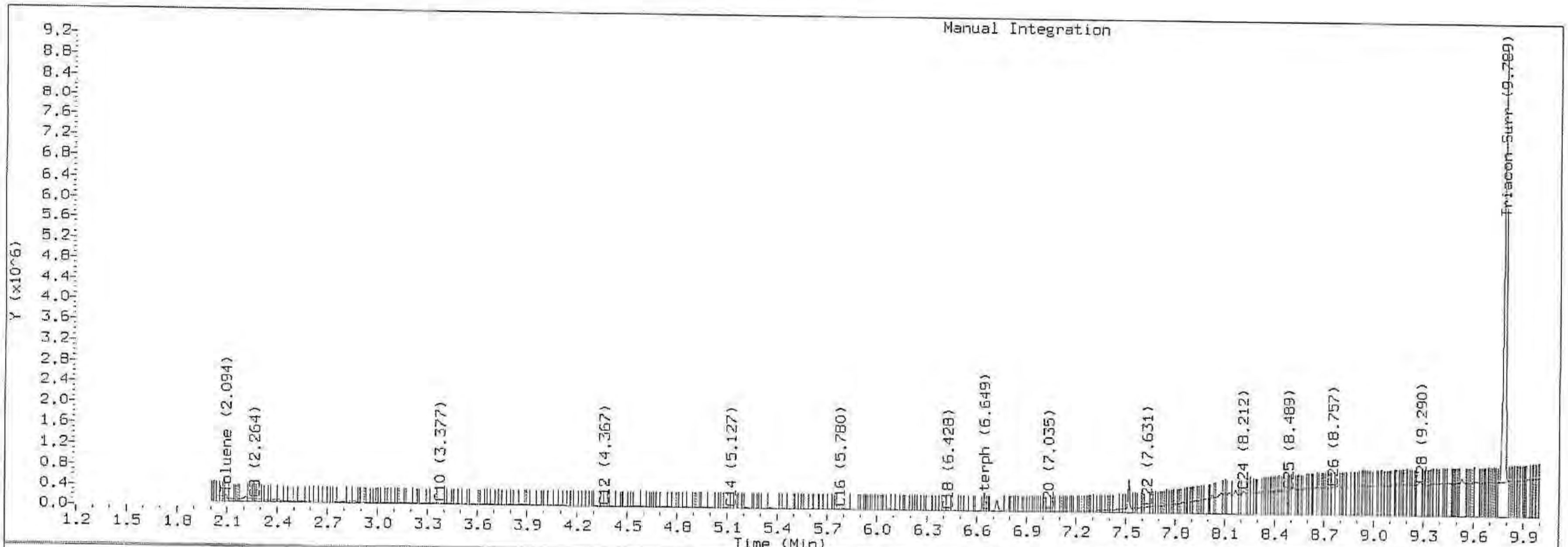
Datafile: FID4A, 20191025.b/419J2520.D SHJ0406-SCV2

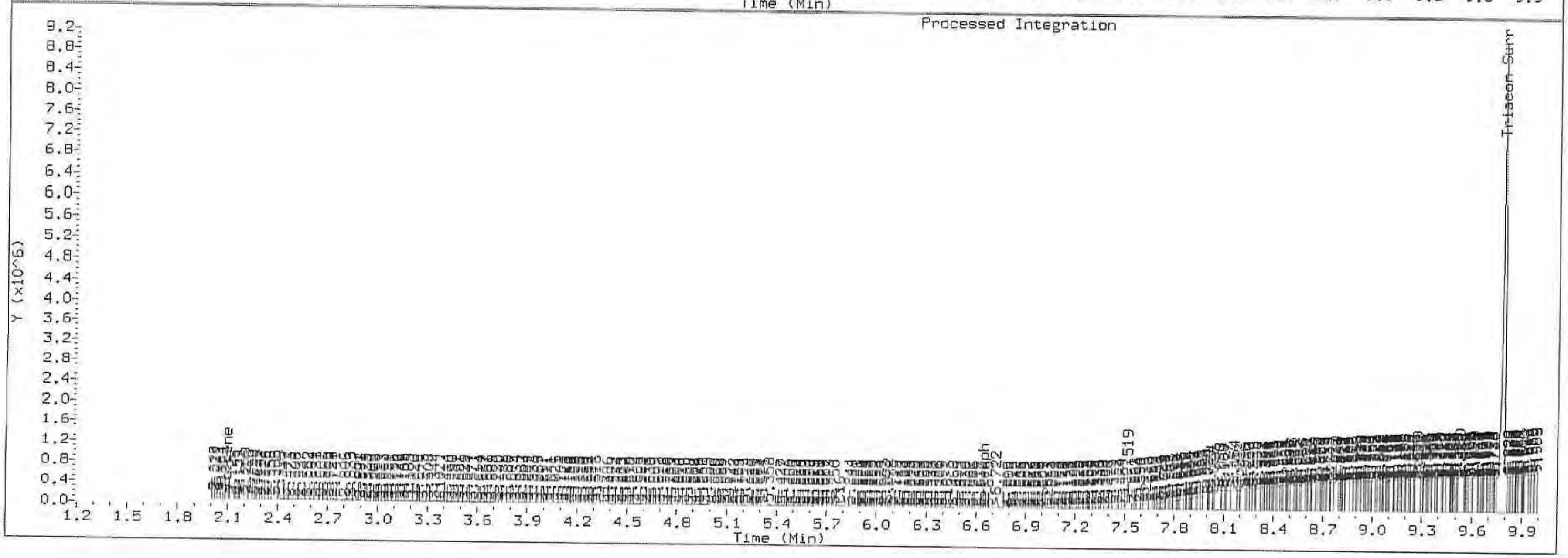


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2520.D Injection: 25-OCT-2019 18:14

Lab ID:SHJ0406-SCV2





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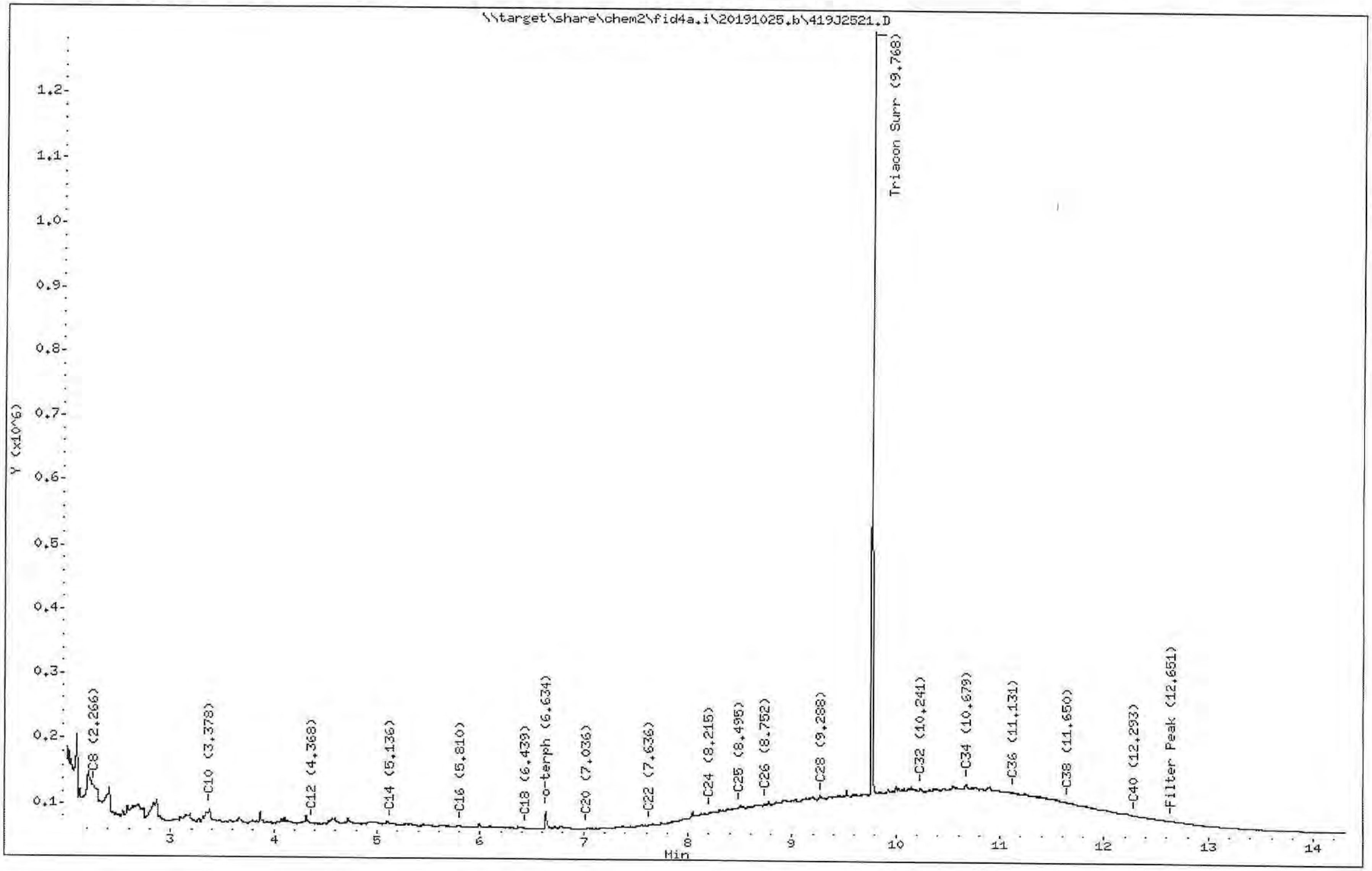
Date : 25-OCT-2019 18:35
Client ID:
Sample Info: SHJ0406-CALD

Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2521.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019

ARI ID: SHJ0406-CALD
Client ID:
Injection: 25-OCT-2019 18:35
Dilution Factor: 1
RT Std: 419H1603.D

Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.266	0.003	63130	43308	WATPHD	(C12-C24)	1323968	8.3
C10	3.378	0.005	28879	54645	WATPHM	(C24-C38)	12086307	91.1
C12	4.368	0.021	6558	8293	AK102	(C10-C25)	2265512	11.6
C14	5.136	0.007	6204	3069	AK103	(C25-C36)	9919700	99.2
C16	5.810	0.003	3258	3063	OR.DIES	(C10-C28)	4756055	24.3
C18	6.439	0.004	920	449				
C20	7.036	-0.007	1277	1180				
C22	7.636	-0.003	8777	15968				
C24	8.215	0.000	31726	51380				
C25	8.495	0.002	39977	33338				
C26	8.752	-0.012	45255	53640				
C28	9.288	0.003	56620	22552				
C32	10.241	-0.002	70490	38594				
C34	10.679	-0.002	78226	83978				
Filter Peak	12.651	0.000	22108	8817	CREOSOT	(C12-C22)	689259	176.7
C36	11.131	0.002	66508	16608				
C38	11.650	0.000	52851	23597				
C40	12.293	0.004	31673	31207				
o-terph	6.634	-0.022	28829	34405				
Triacon Surr	9.768	-0.034	1173387	818277	NAS DIES	(C10-C24)	1907173	9.8

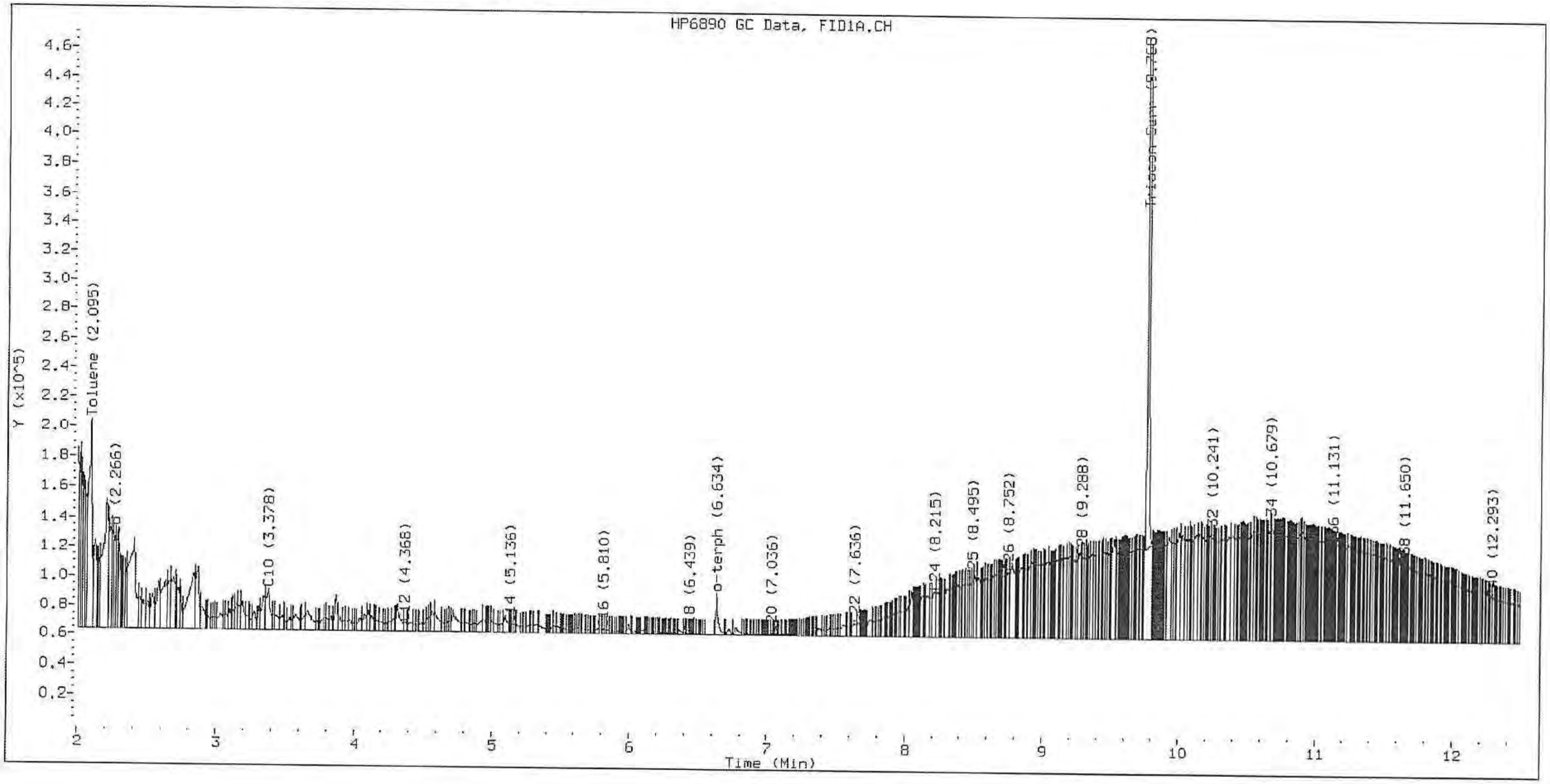
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	34405	0.2
Triacontane	818277	4.6 M

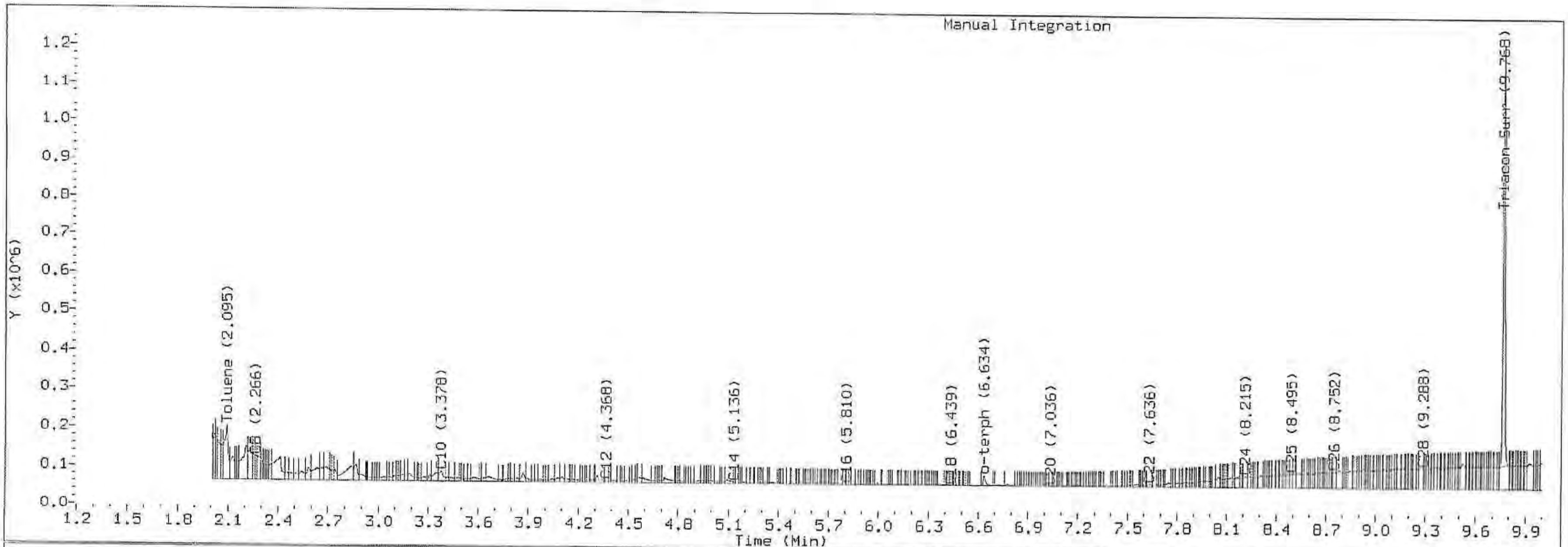
M Indicates the peak was manually integrated

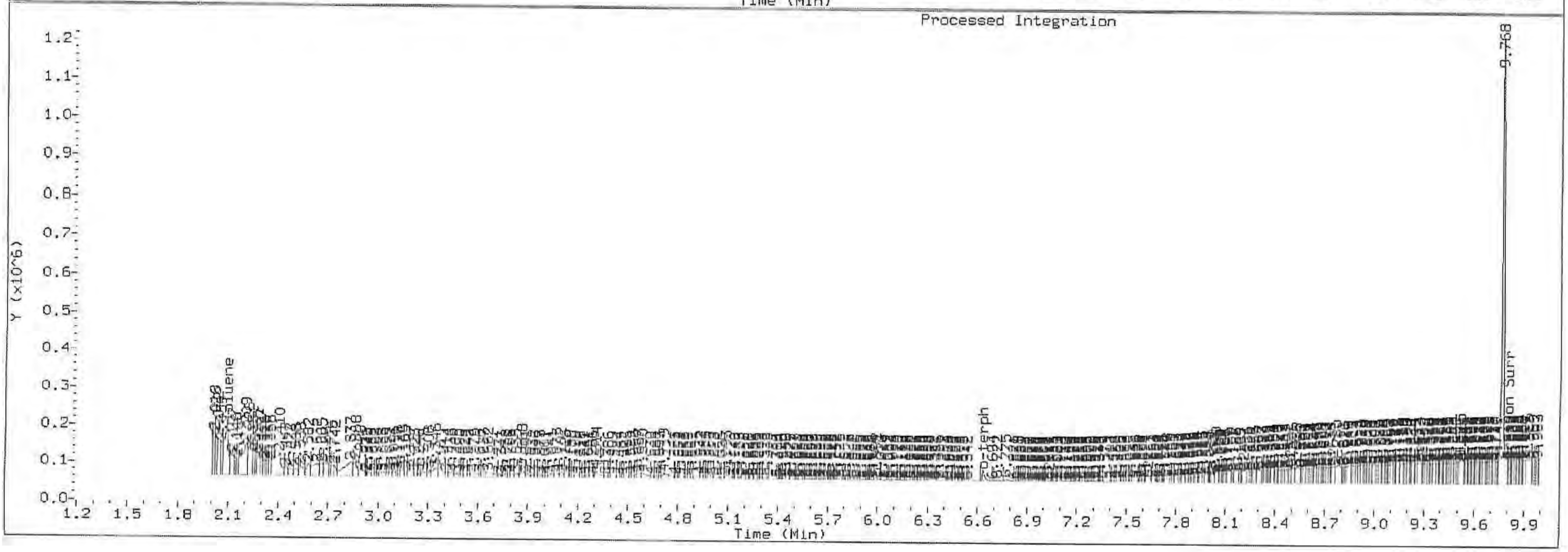
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2521.D SHJ0406-CALD



TPH Manual Integrations Report
Datafile: FID4A, 20191025.b/419J2521.D Injection: 25-OCT-2019 18:35
Lab ID:SHJ0406-CALD





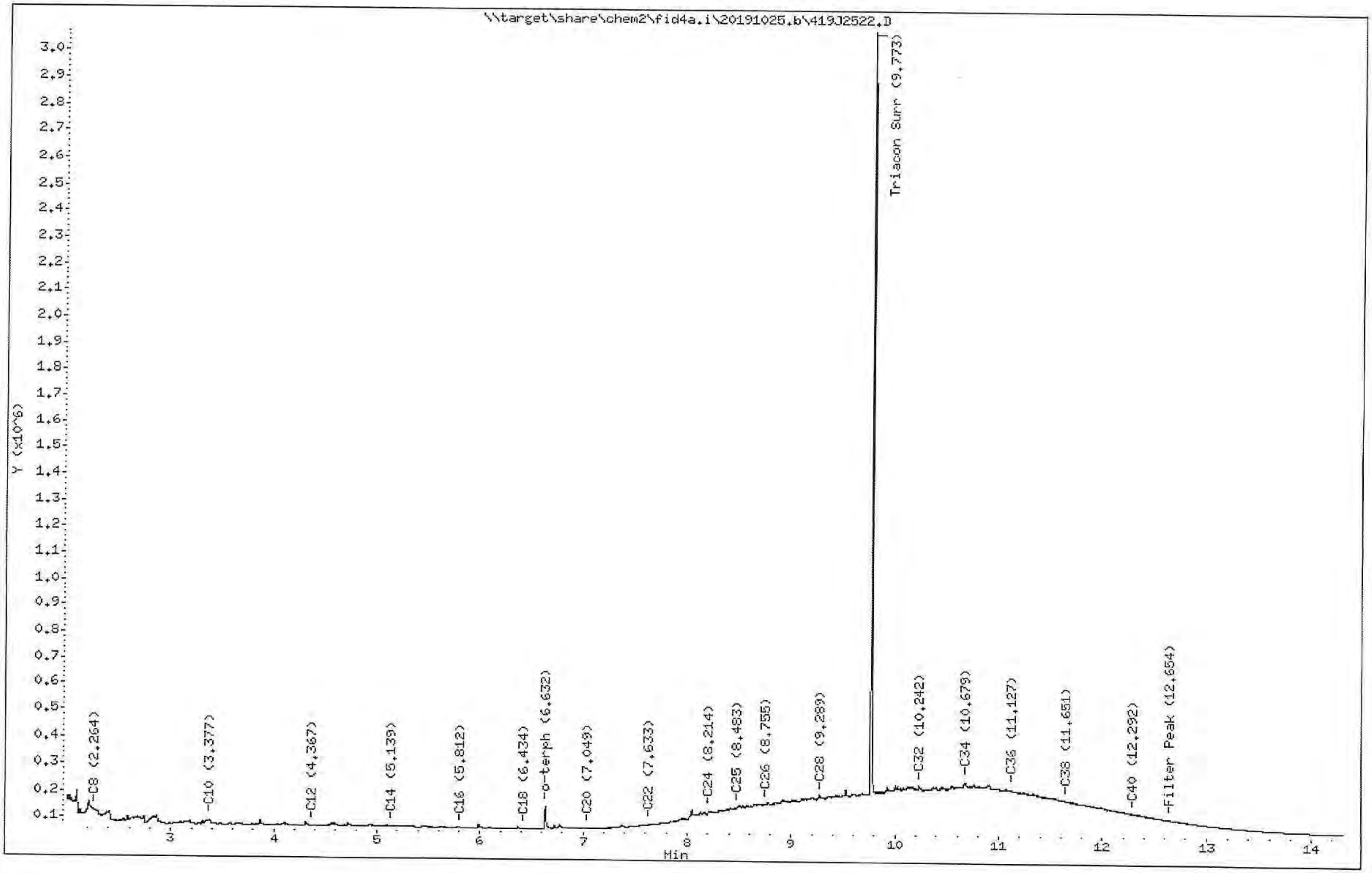
Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2522.D
Date : 25-OCT-2019 18:55
Client ID:
Sample Info: SHJ0406-CALE

Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2522.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALE
Client ID:
Injection: 25-OCT-2019 18:55
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	61078	41904	WATPHD	(C12-C24)	2795528	17.5
C10	3.377	0.004	26802	52996	WATPHM	(C24-C38)	31324226	236.2
C12	4.367	0.019	5459	4798	AK102	(C10-C25)	4178110	21.4
C14	5.139	0.010	4962	3160	AK103	(C25-C36)	25813764	258.2
C16	5.812	0.005	2520	1321	OR.DIES	(C10-C28)	10680396	54.5
C18	6.434	-0.000	1311	882				
C20	7.049	0.006	4759	2820				
C22	7.633	-0.005	24172	52812				
C24	8.214	-0.001	79717	62122				
C25	8.483	-0.010	96553	61766				
C26	8.755	-0.010	114382	67845				
C28	9.289	0.004	142997	64203				
C32	10.242	0.000	182878	81971				
C34	10.679	-0.002	200985	321864				
Filter Peak	12.654	0.004	63611	28452	CREOSOT	(C12-C22)	1041017	266.9
C36	11.127	-0.001	175707	78840				
C38	11.651	0.001	139085	55402				
C40	12.292	0.004	88908	61716				
o-terph	6.632	-0.024	91544	90689				
Triacon Surr	9.773	-0.029	2869605	2058184	NAS DIES	(C10-C24)	3295502	16.9

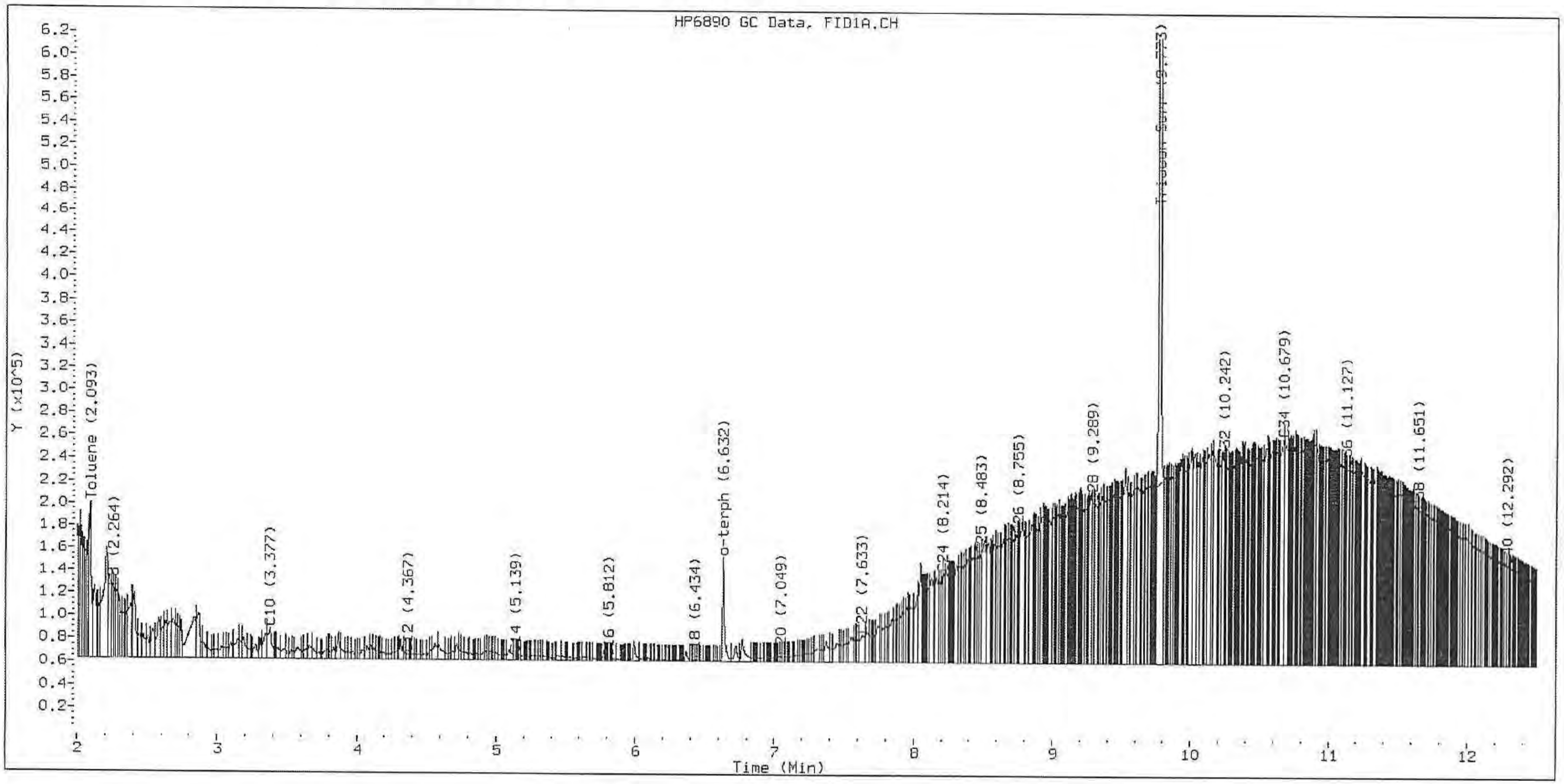
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	90689	0.4
Triacontane	2058184	11.6 M

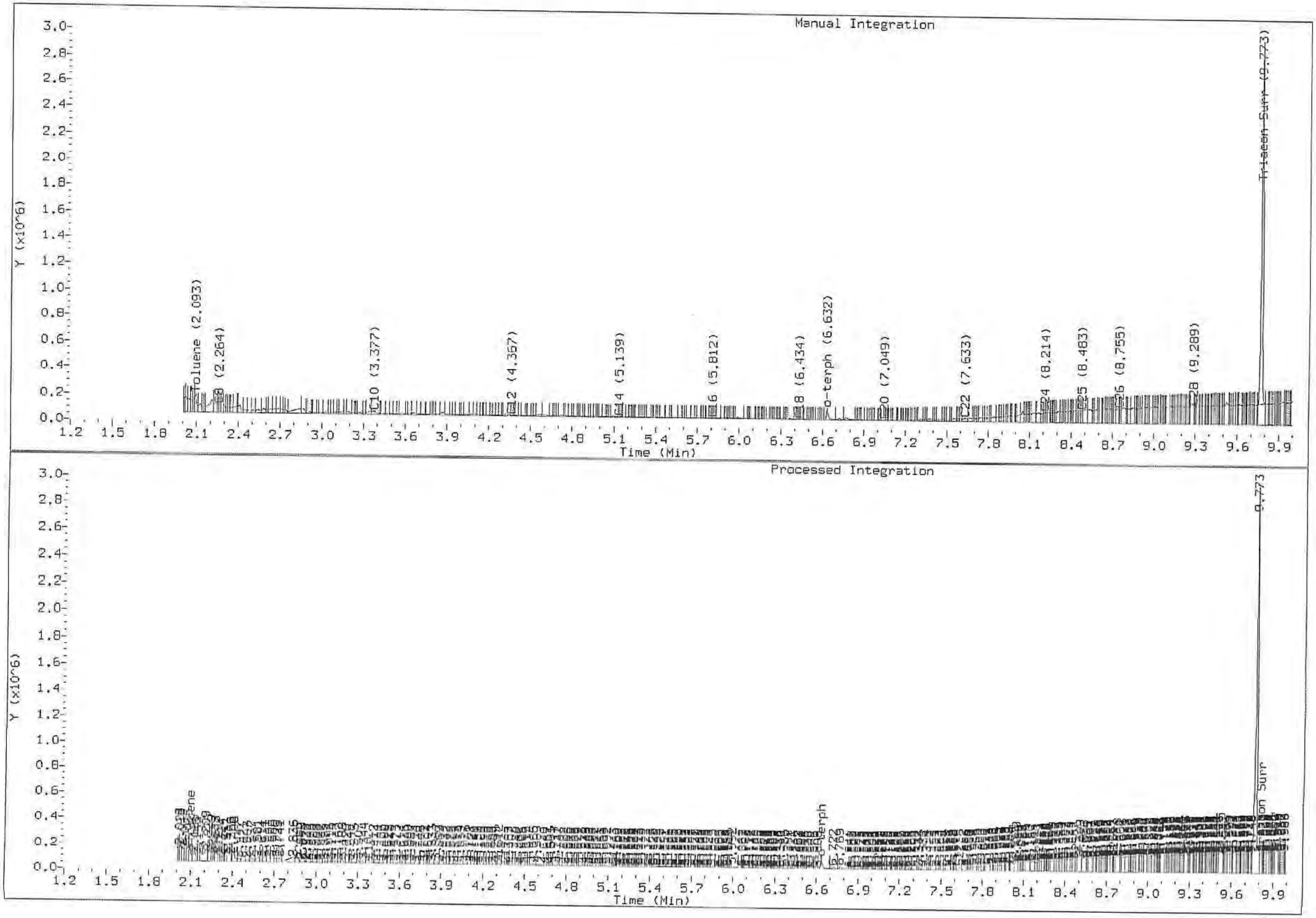
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2522.D SHJ0406-CALE



TPH Manual Integrations Report
Datafile: FID4A, 20191025.b/419J2522.D Injection: 25-OCT-2019 18:55
Lab ID:SHJ0406-CALE



Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2523.D

Date : 25-OCT-2019 19:15

Client ID:

Sample Info: SHJ0406-CALF

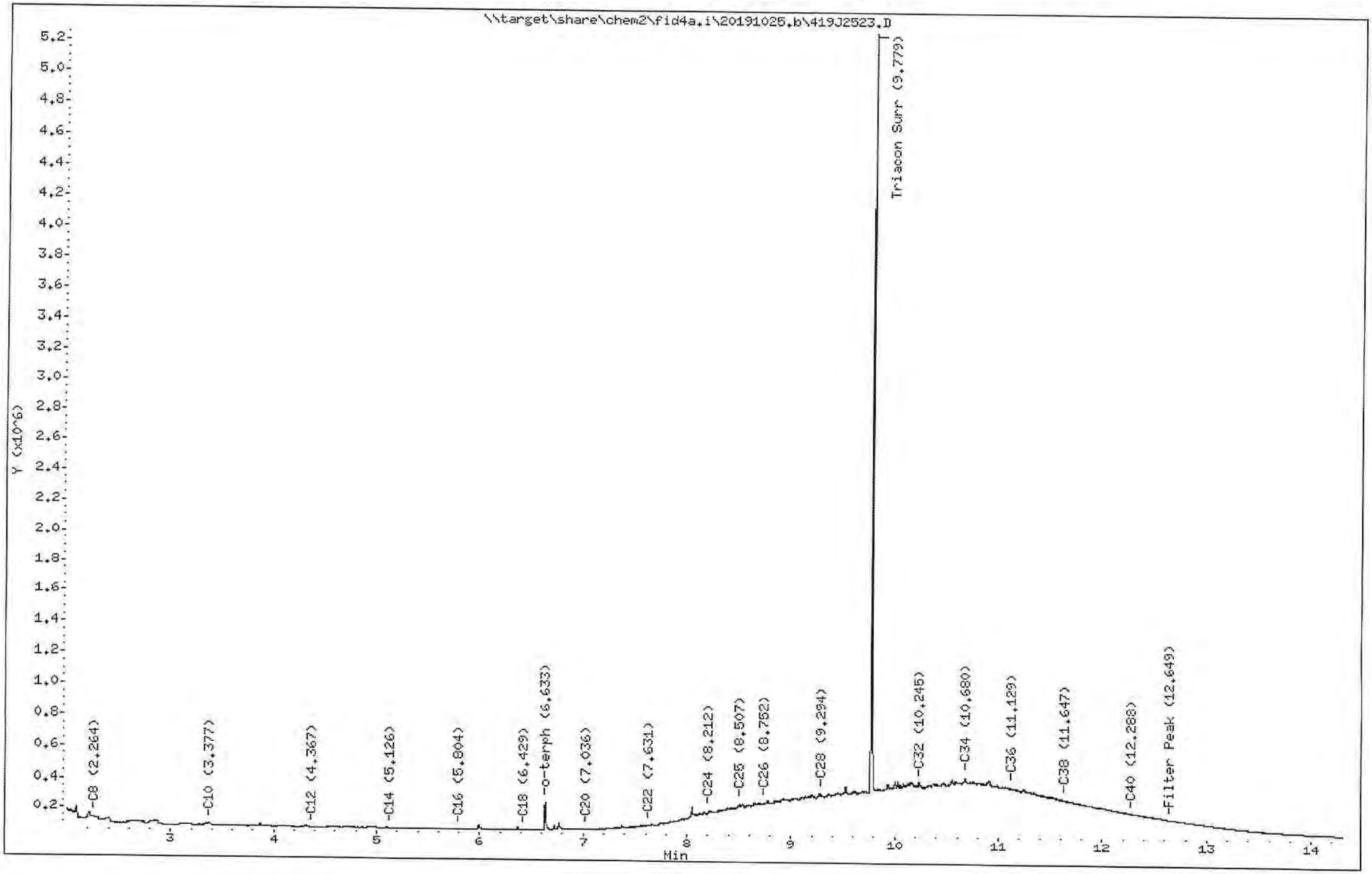
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2523.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALF
Client ID:
Injection: 25-OCT-2019 19:15
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	65663	48530	WATPHD	(C12-C24)	5014916	31.5
C10	3.377	0.004	28749	58345	WATPHM	(C24-C38)	59779944	450.7
C12	4.367	0.020	3969	3466	AK102	(C10-C25)	7200245	36.8
C14	5.126	-0.004	3228	1712	AK103	(C25-C36)	49058982	490.7
C16	5.804	-0.004	2893	3236	OR.DIES	(C10-C28)	19724552	100.6
C18	6.429	-0.005	2246	2256				
C20	7.036	-0.007	10796	11147				
C22	7.631	-0.008	48129	85760				
C24	8.212	-0.003	157019	245696				
C25	8.507	0.014	210068	574409				
C26	8.752	-0.013	221185	294582				
C28	9.294	0.008	276194	178596				
C32	10.245	0.003	351165	209719				
C34	10.680	-0.001	394703	898701				
Filter Peak	12.649	-0.002	125409	50077	CREOSOT	(C12-C22)	1560946	400.2
C36	11.129	-0.000	332260	99465				
C38	11.647	-0.003	258943	64646				
C40	12.288	-0.001	170438	84522				
o-terph	6.633	-0.024	198416	176995				
Triacon Surr	9.779	-0.024	4910254	3941895	NAS DIES	(C10-C24)	5534721	28.4

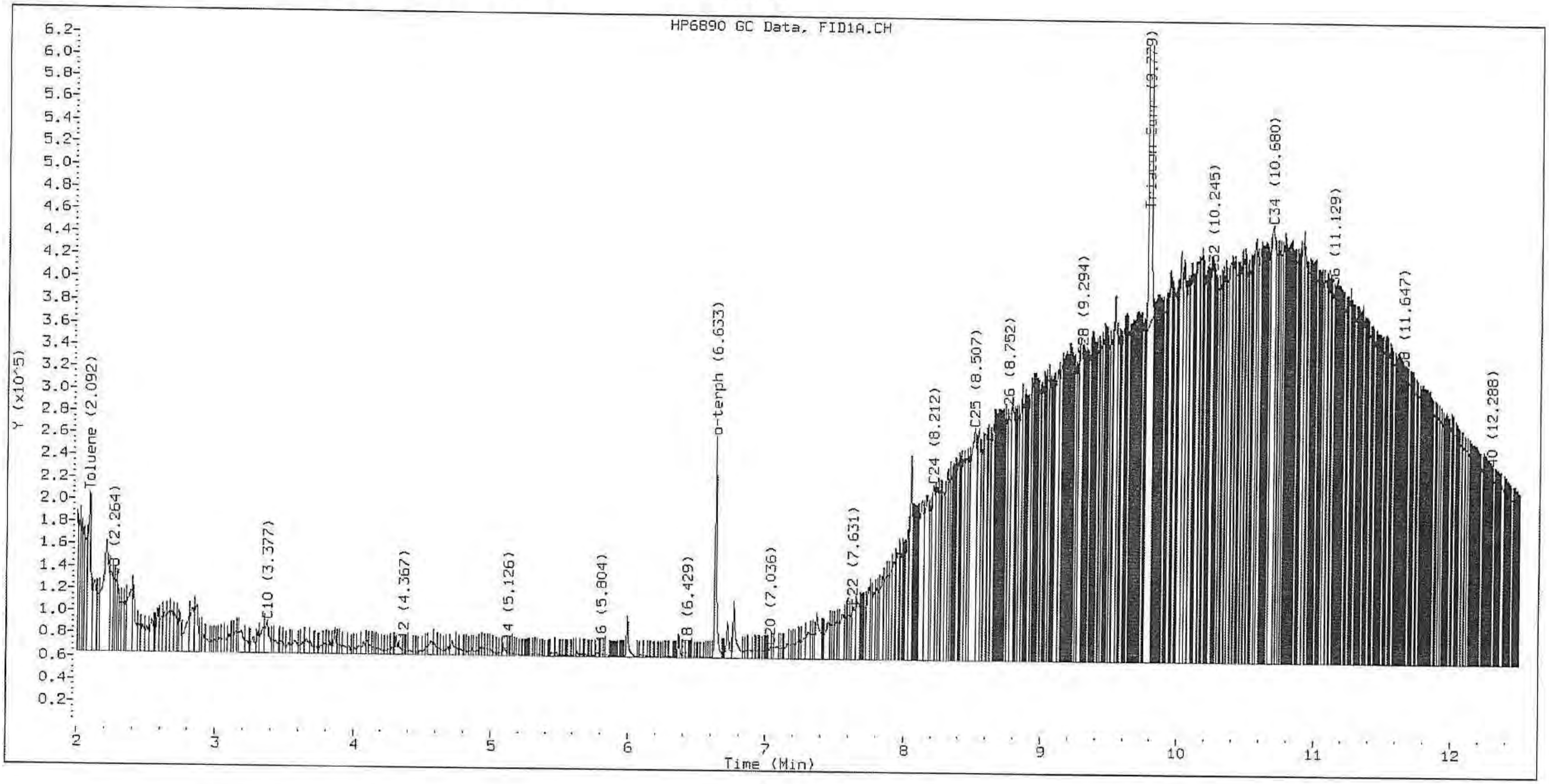
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	176995	0.9
Triacontane	3941895	22.1 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

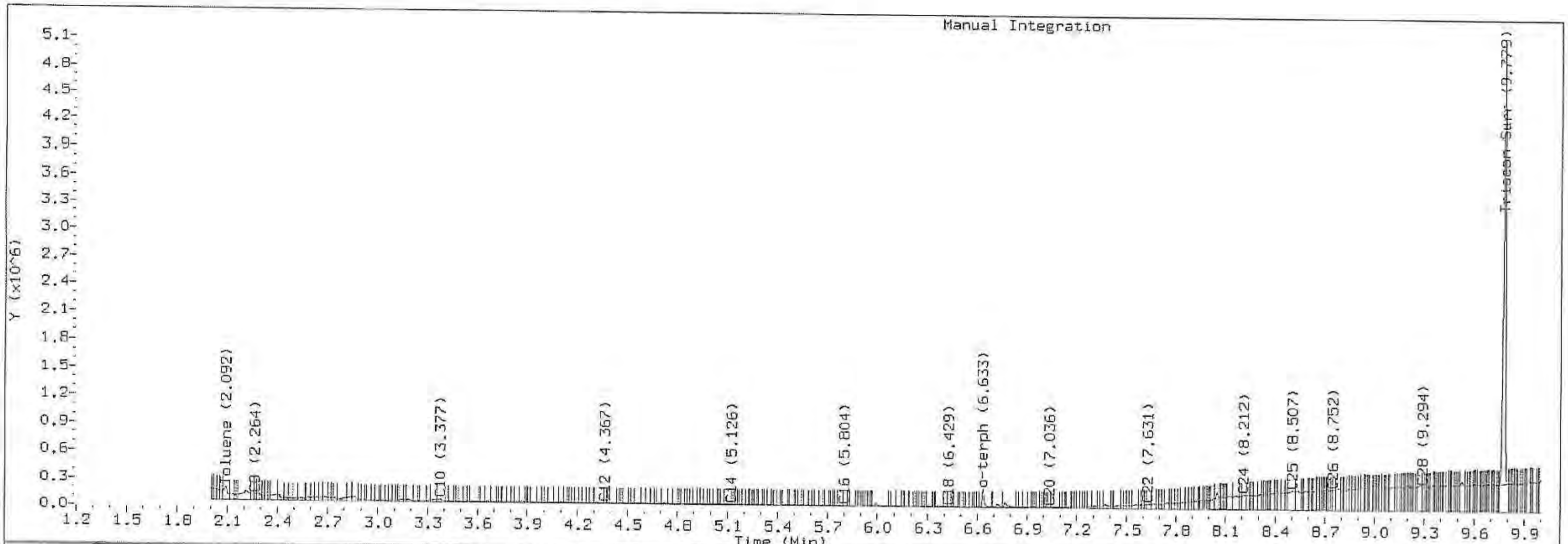
Datafile: FID4A, 20191025.b/419J2523.D SHJ0406-CALF

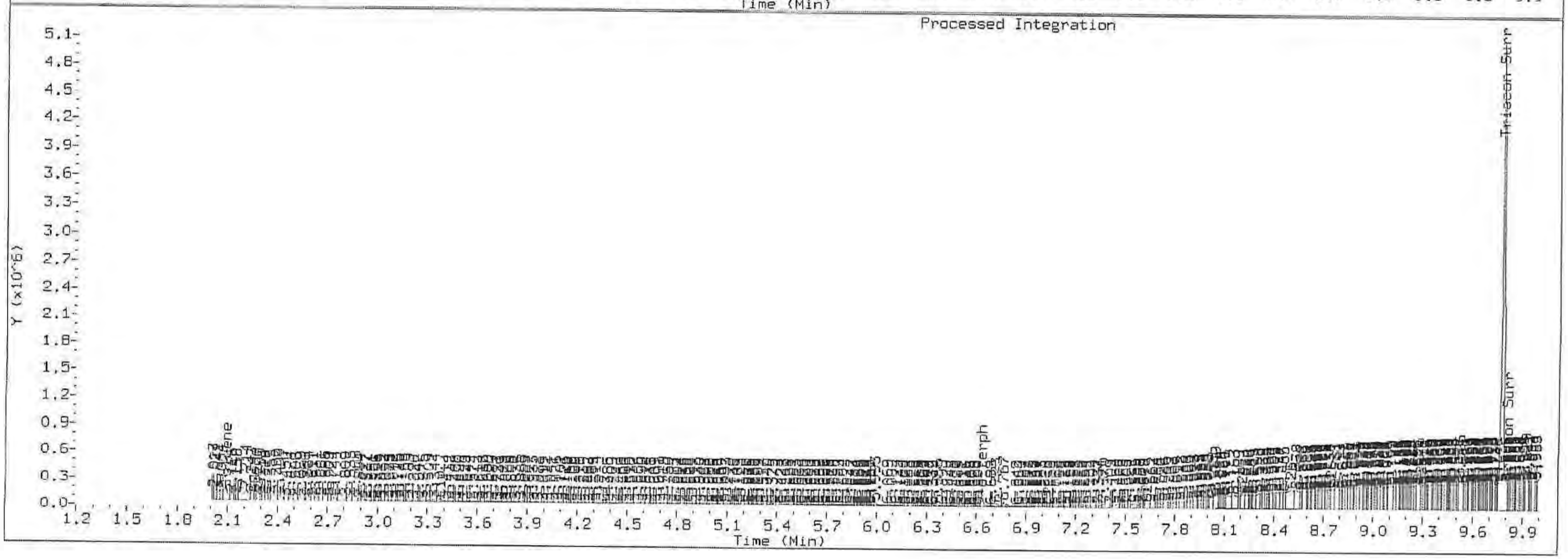


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2523.D Injection: 25-OCT-2019 19:15

Lab ID:SHJ0406-CALF





Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2524.D

Date : 25-OCT-2019 19:34

Client ID:

Sample Info: SHJ0406-CALG

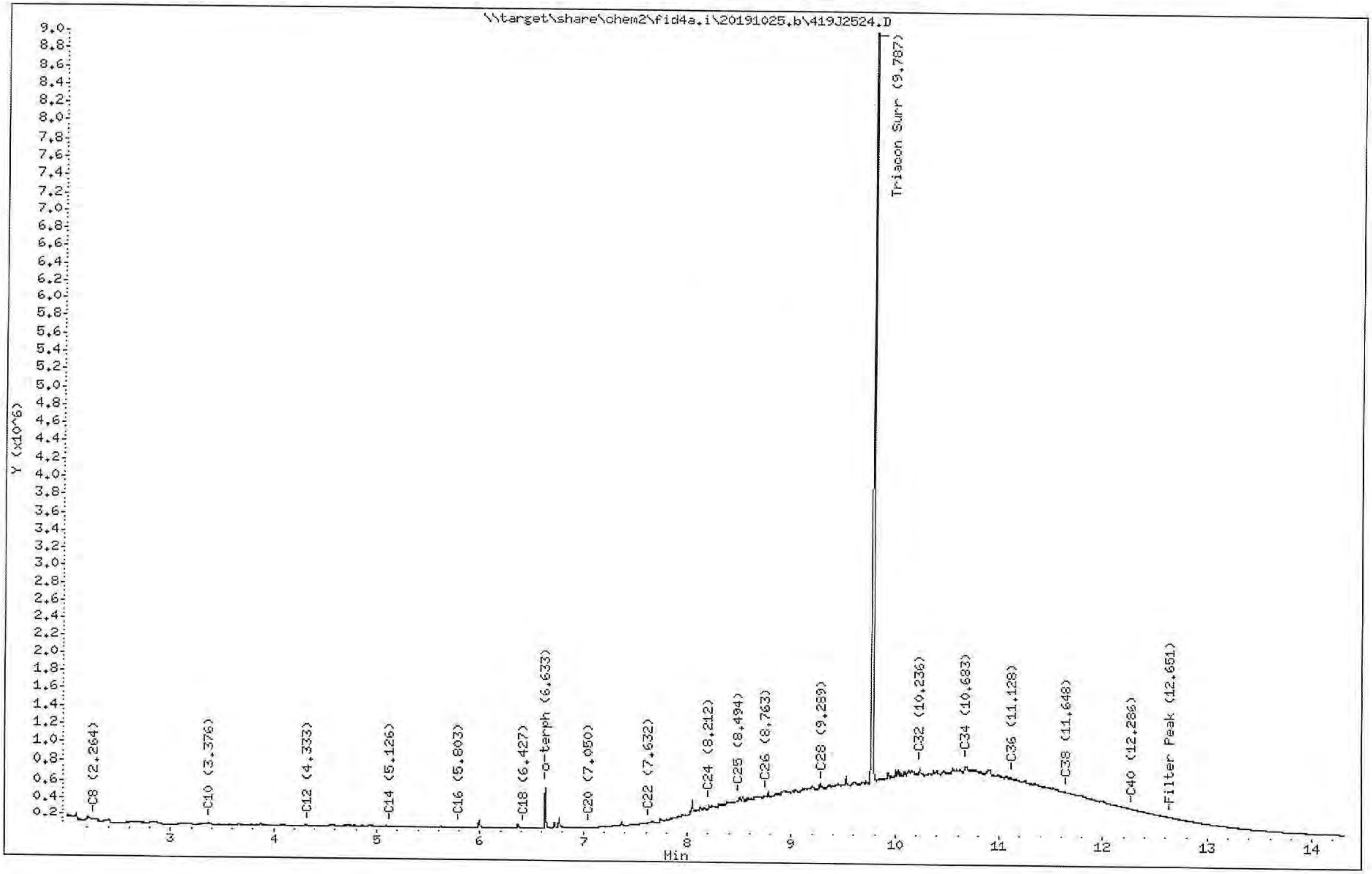
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2524.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALG
Client ID:
Injection: 25-OCT-2019 19:34
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	59182	43398	WATPHD	(C12-C24)	9693002	60.8
C10	3.376	0.003	26004	47549	WATPHM	(C24-C38)	119379277	900.1
C12	4.333	-0.015	5078	6418	AK102	(C10-C25)	13482675	69.0
C14	5.126	-0.004	4037	3451	AK103	(C25-C36)	98534931	985.6
C16	5.803	-0.004	5499	6876	OR.DIES	(C10-C28)	38197703	194.9
C18	6.427	-0.008	4829	4807				
C20	7.050	0.007	20128	16414				
C22	7.632	-0.007	95273	191460				
C24	8.212	-0.003	309198	497796				
C25	8.494	0.001	394056	249031				
C26	8.763	-0.001	429806	171737				
C28	9.289	0.004	544145	135929				
C32	10.236	-0.006	748503	1187882				
C34	10.683	0.001	785420	196129				
Filter Peak	12.651	0.000	222539	110925	CREOSOT	(C12-C22)	2913792	747.0
C36	11.128	-0.000	665475	297953				
C38	11.648	-0.001	517415	384389				
C40	12.286	-0.003	322103	175432				
o-terph	6.633	-0.024	489788	368237				
Triacon Surr	9.787	-0.015	8362676	7933666	NAS DIES	(C10-C24)	10069630	51.6

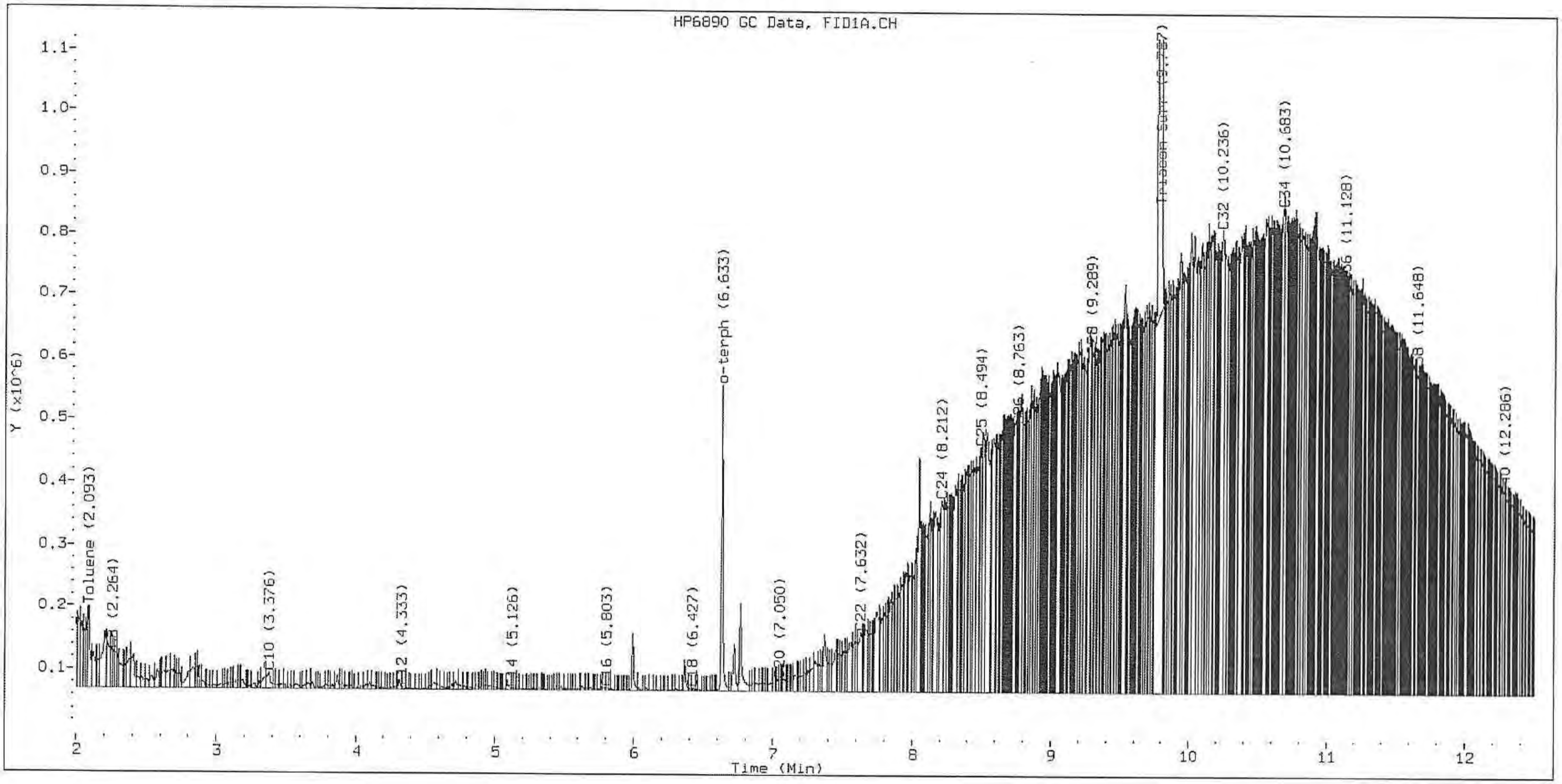
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	368237	1.8
Triacontane	7933666	44.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

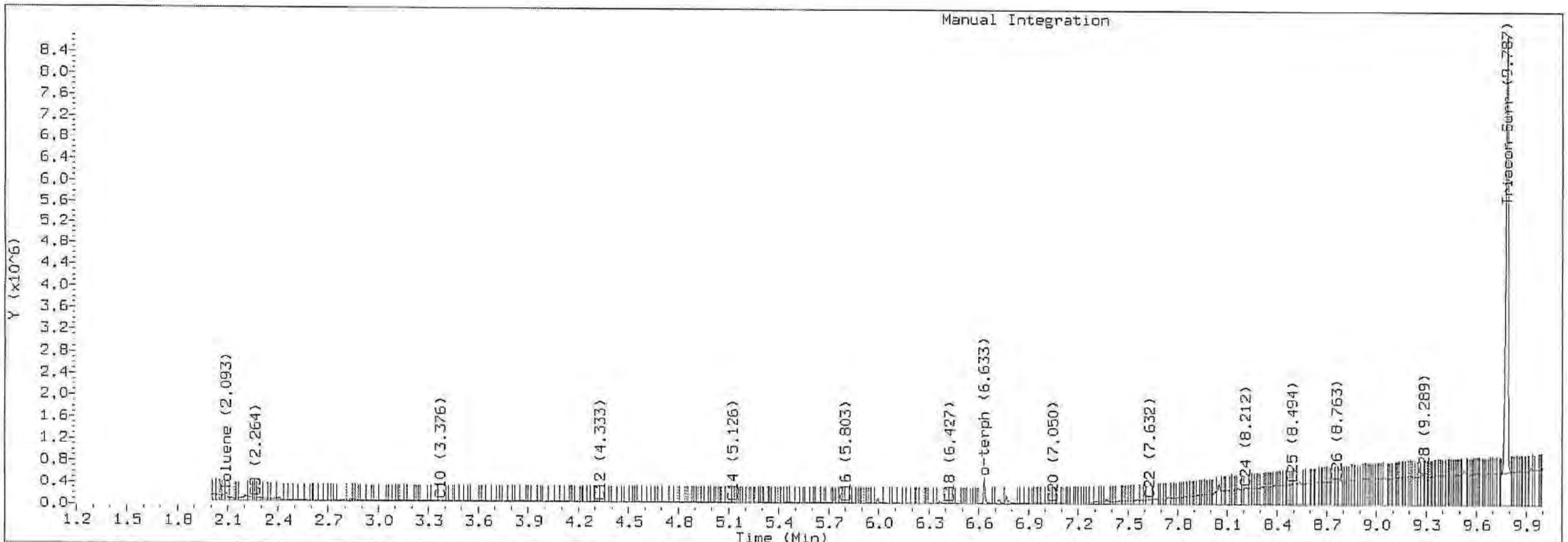
Datafile: FID4A, 20191025.b/419J2524.D SHJ0406-CALG

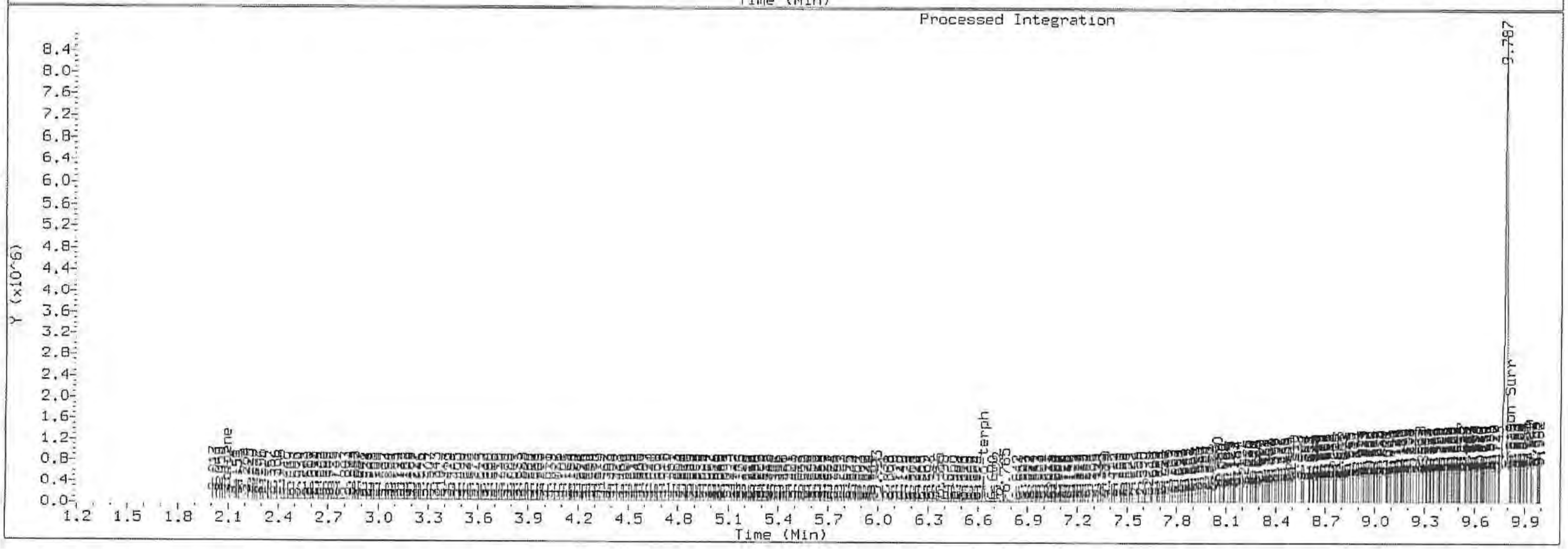


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2524.D Injection: 25-OCT-2019 19:34

Lab ID:SHJ0406-CALG



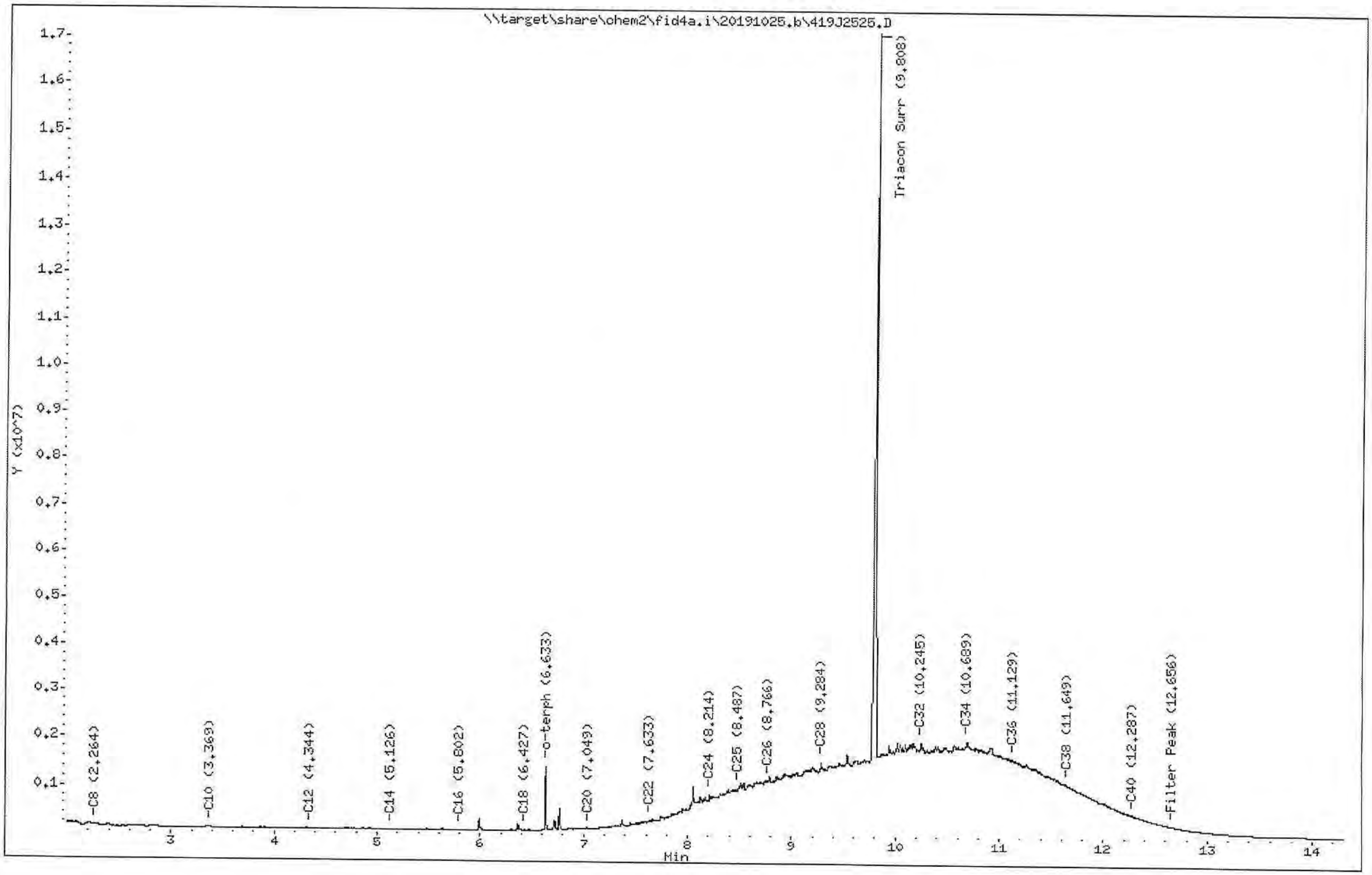


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2525.D
Date : 25-OCT-2019 19:54
Client ID:
Sample Info: SHJ0406-CALH

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2525.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALH
Client ID:
Injection: 25-OCT-2019 19:54
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	56415	38567	WATPHD	(C12-C24)	26301815	165.1
C10	3.369	-0.003	27712	41157	WATPHM	(C24-C38)	301341214	2272.0
C12	4.344	-0.003	5882	6952	AK102	(C10-C25)	35690614	182.6
C14	5.126	-0.003	7507	9244	AK103	(C25-C36)	251232894	2512.9
C16	5.802	-0.005	13222	14374	OR.DIES	(C10-C28)	99037801	505.3
C18	6.427	-0.008	19180	20067				
C20	7.049	0.006	65385	59588				
C22	7.633	-0.006	263262	368137				
C24	8.214	-0.001	822366	1422767				
C25	8.487	-0.006	962652	426588				
C26	8.766	0.002	1133629	505360				
C28	9.284	-0.002	1509428	2436681				
C32	10.245	0.003	1957482	3059346				
C34	10.689	0.008	1976148	4422245				
Filter Peak	12.656	0.006	231984	148698	CREOSOT	(C12-C22)	8248980	2114.6
C36	11.129	-0.000	1621407	646645				
C38	11.649	-0.000	1113973	443976				
C40	12.287	-0.002	466123	386816				
o-terph	6.633	-0.024	1387955	962768				
Triacon Surr	9.808	0.006	15482951	20436973	NAS DIES	(C10-C24)	26712775	136.9

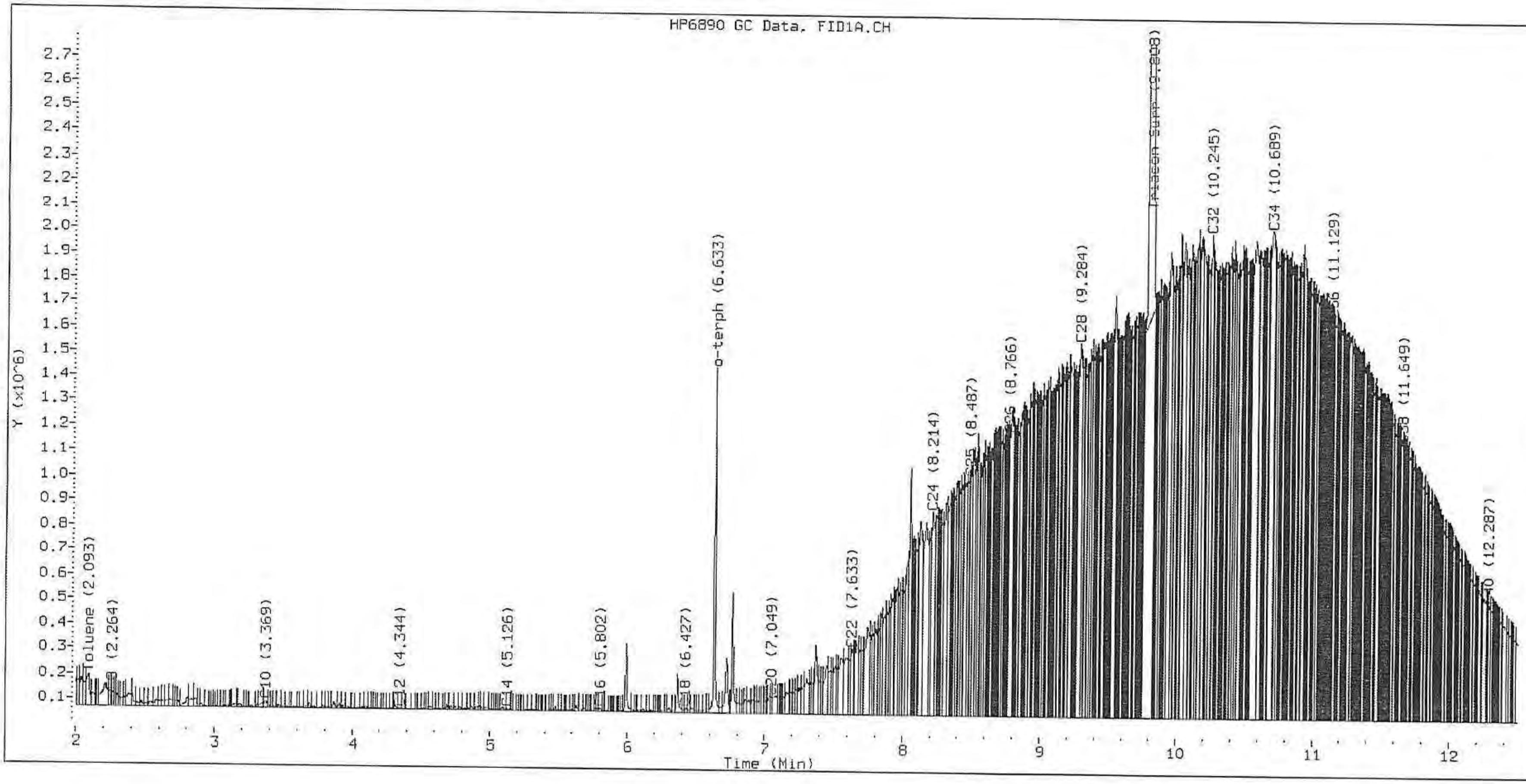
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	962768	4.7
Triacontane	20436973	114.8 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

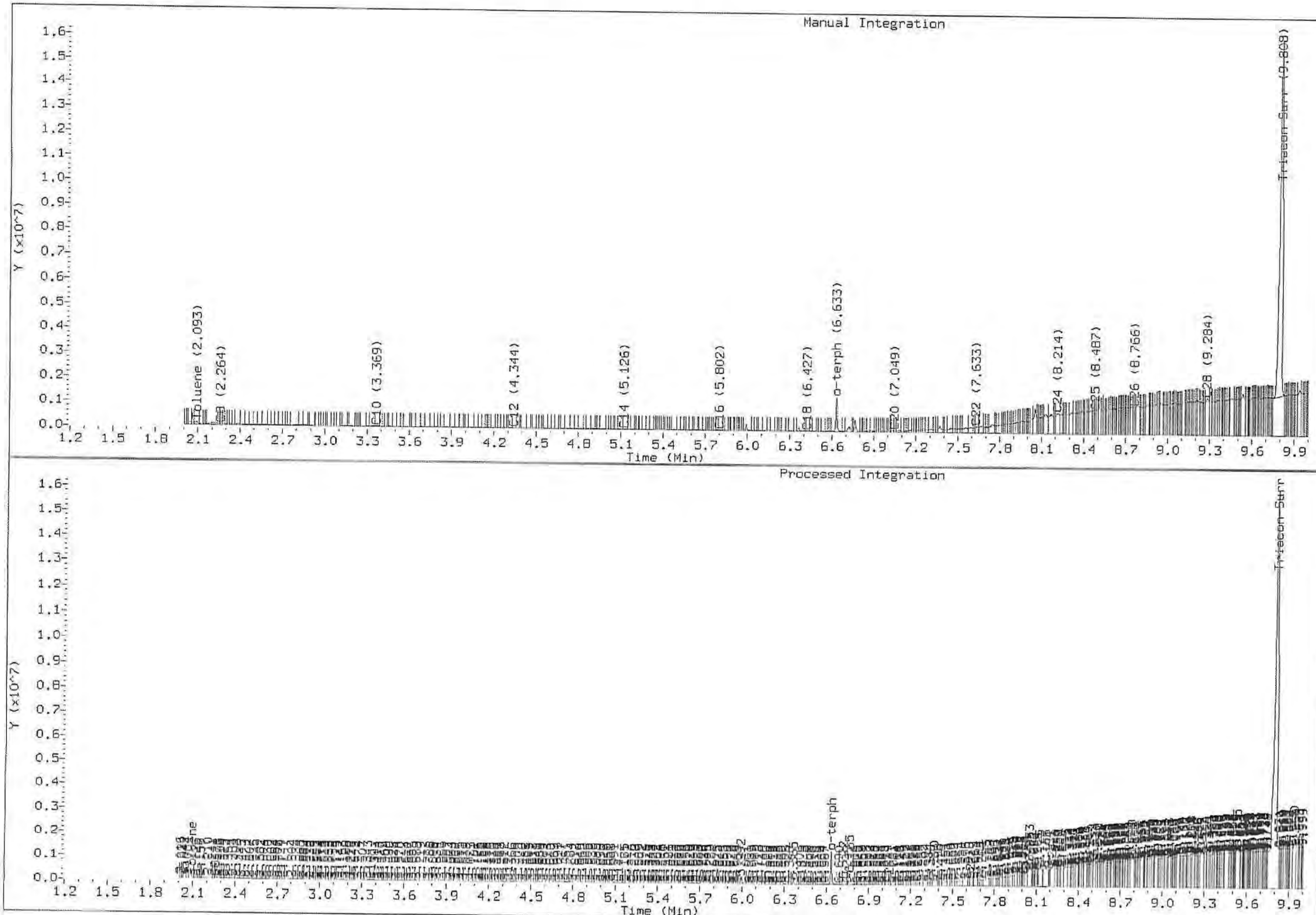
Datafile: FID4A, 20191025.b/419J2525.D SHJ0406-CALH



TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2525.D Injection: 25-OCT-2019 19:54

Lab ID:SHJ0406-CALH



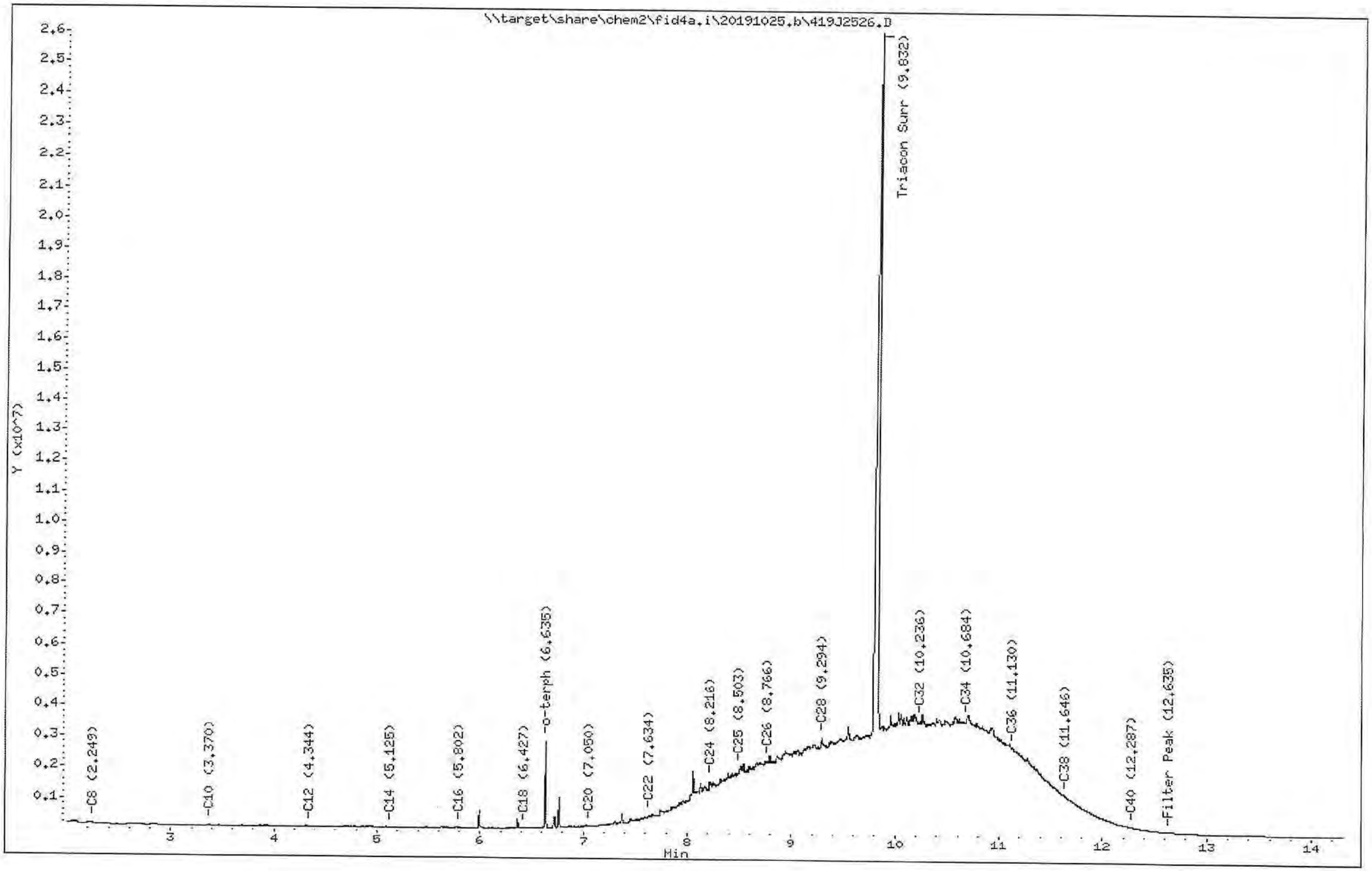
Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2526.D
Date : 25-OCT-2019 20:15
Client ID:
Sample Info: SHJ0406-CALI

Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2526.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALI
Client ID:
Injection: 25-OCT-2019 20:15
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.249	-0.013	68157	97437	WATPHD	(C12-C24)	53373864	335.0
C10	3.370	-0.003	37579	47410	WATPHM	(C24-C38)	579217404	4367.1
C12	4.344	-0.003	10600	10459	AK102	(C10-C25)	72516526	370.9
C14	5.125	-0.004	18160	20643	AK103	(C25-C36)	501300122	5014.2
C16	5.802	-0.005	31467	33333	OR.DIES	(C10-C28)	201523108	1028.2
C18	6.427	-0.008	46016	47297				
C20	7.050	0.007	139853	120986				
C22	7.634	-0.005	536997	729929				
C24	8.216	0.002	1657695	1800915				
C25	8.503	0.010	2055767	2566063				
C26	8.766	0.002	2309434	1601749				
C28	9.294	0.008	3108955	5845567				
C32	10.236	-0.006	3694253	3475497				
C34	10.684	0.002	3746349	1670889				
Filter Peak	12.635	-0.015	125409	273331	CREOSOT	(C12-C22)	16636154	4264.7
C36	11.130	0.002	2854299	995118				
C38	11.646	-0.003	1329722	1616024				
C40	12.287	-0.002	293577	286952				
o-terph	6.635	-0.022	2904255	1975795				
Triacon Surr	9.832	0.030	22638379	40251878	NAS DIES	(C10-C24)	53915002	276.3

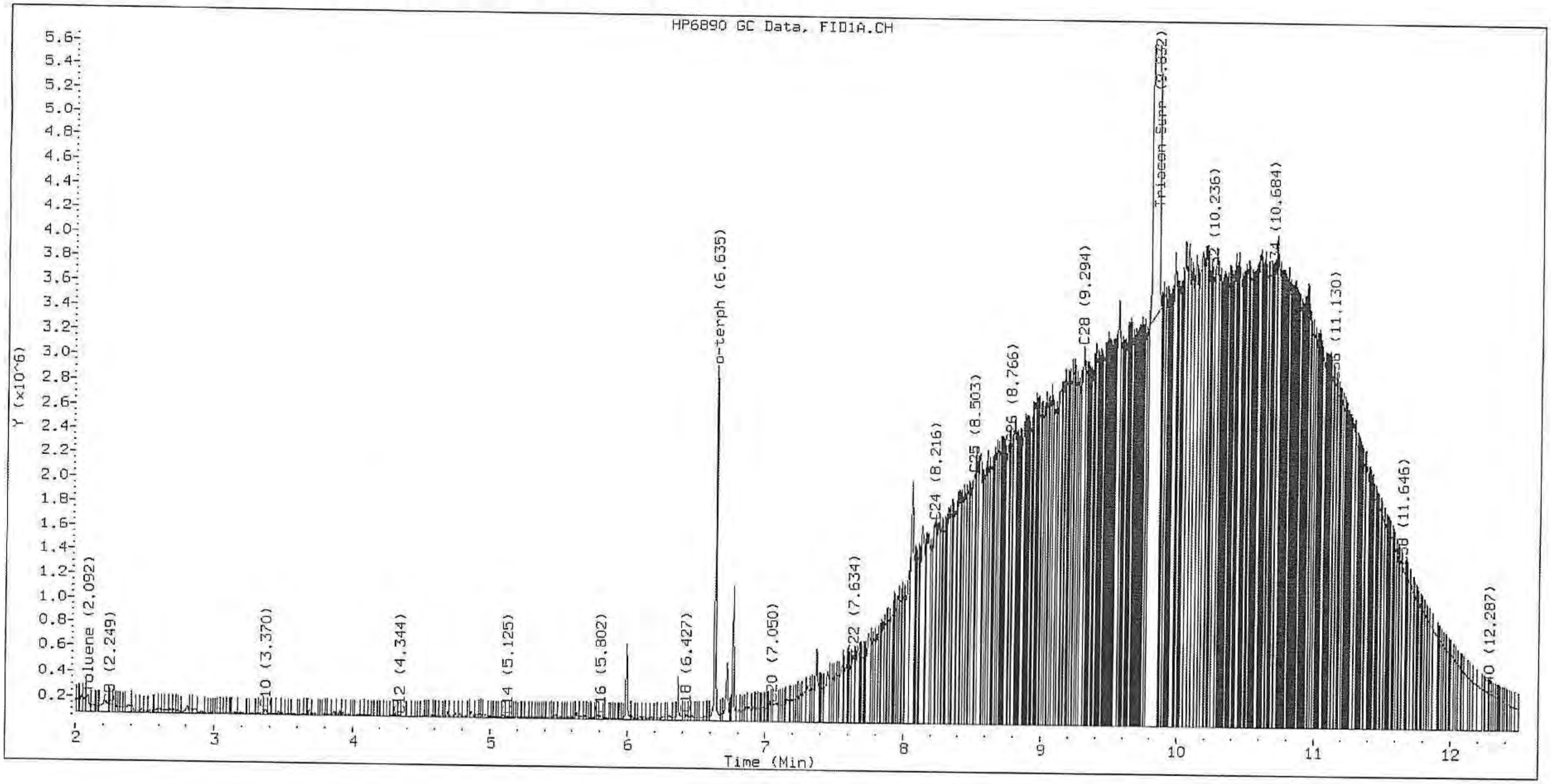
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	1975795	9.7	
Triacontane	40251878	226.2	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

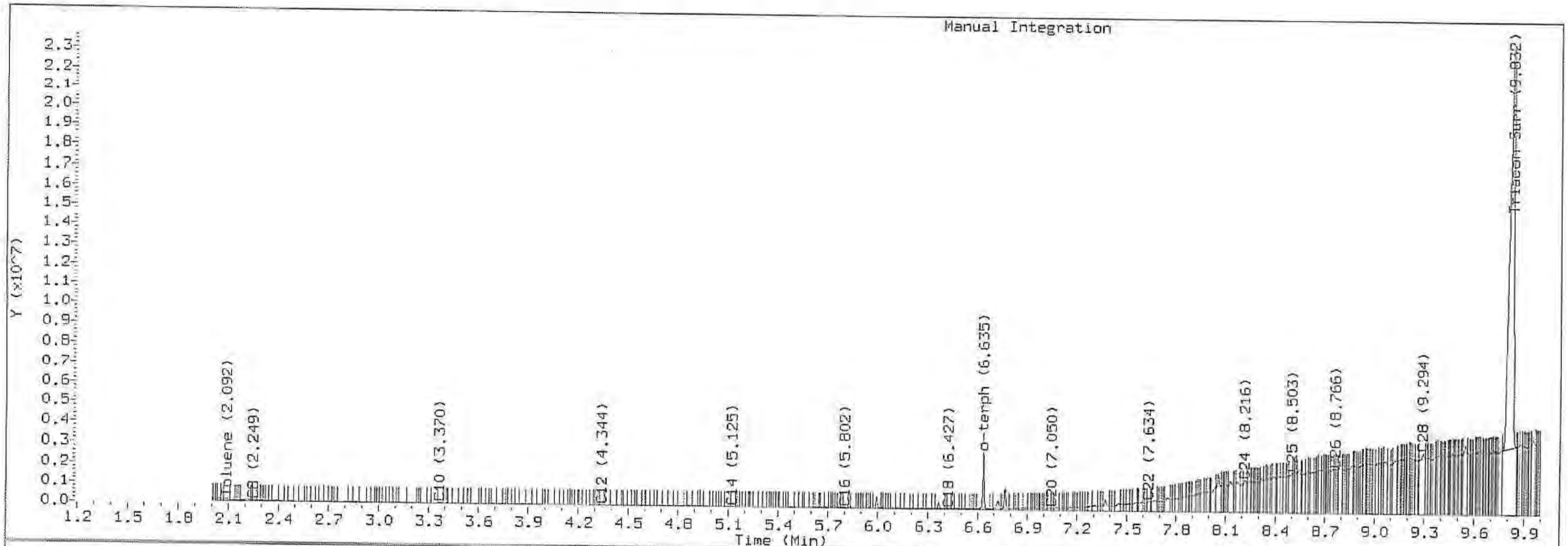
Datafile: FID4A, 20191025.b/419J2526.D SHJ0406-CALI

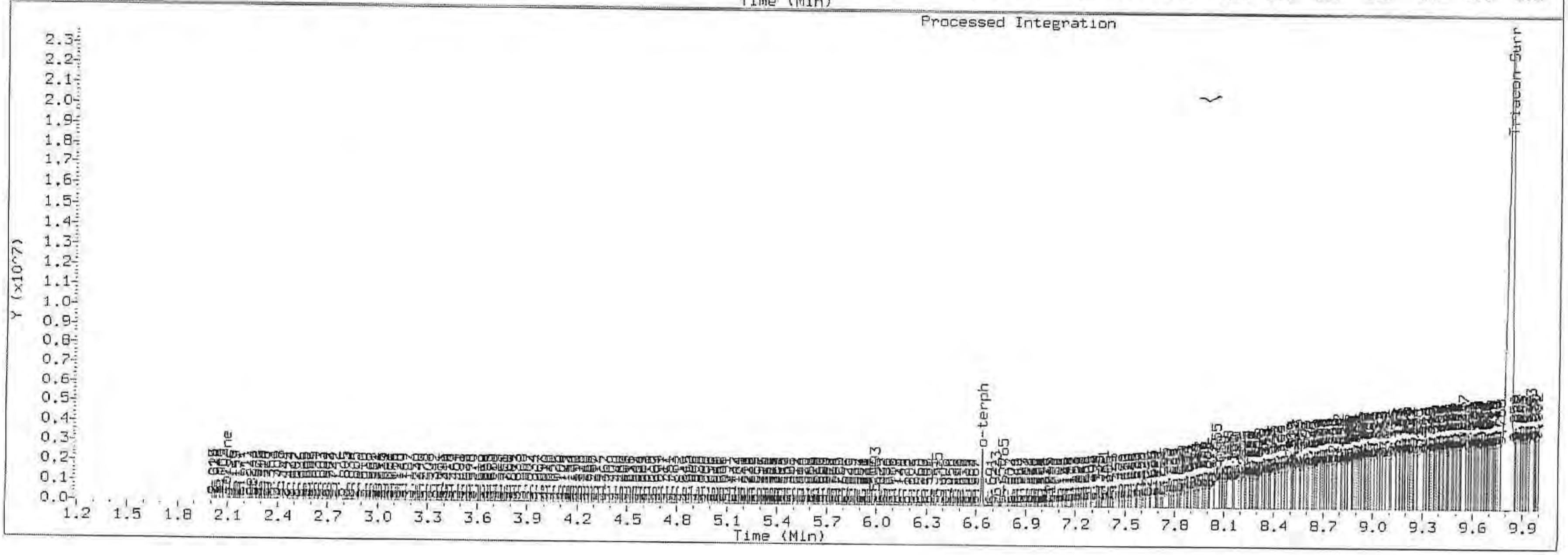


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2526.D Injection: 25-OCT-2019 20:15

Lab ID:SHJ0406-CALI





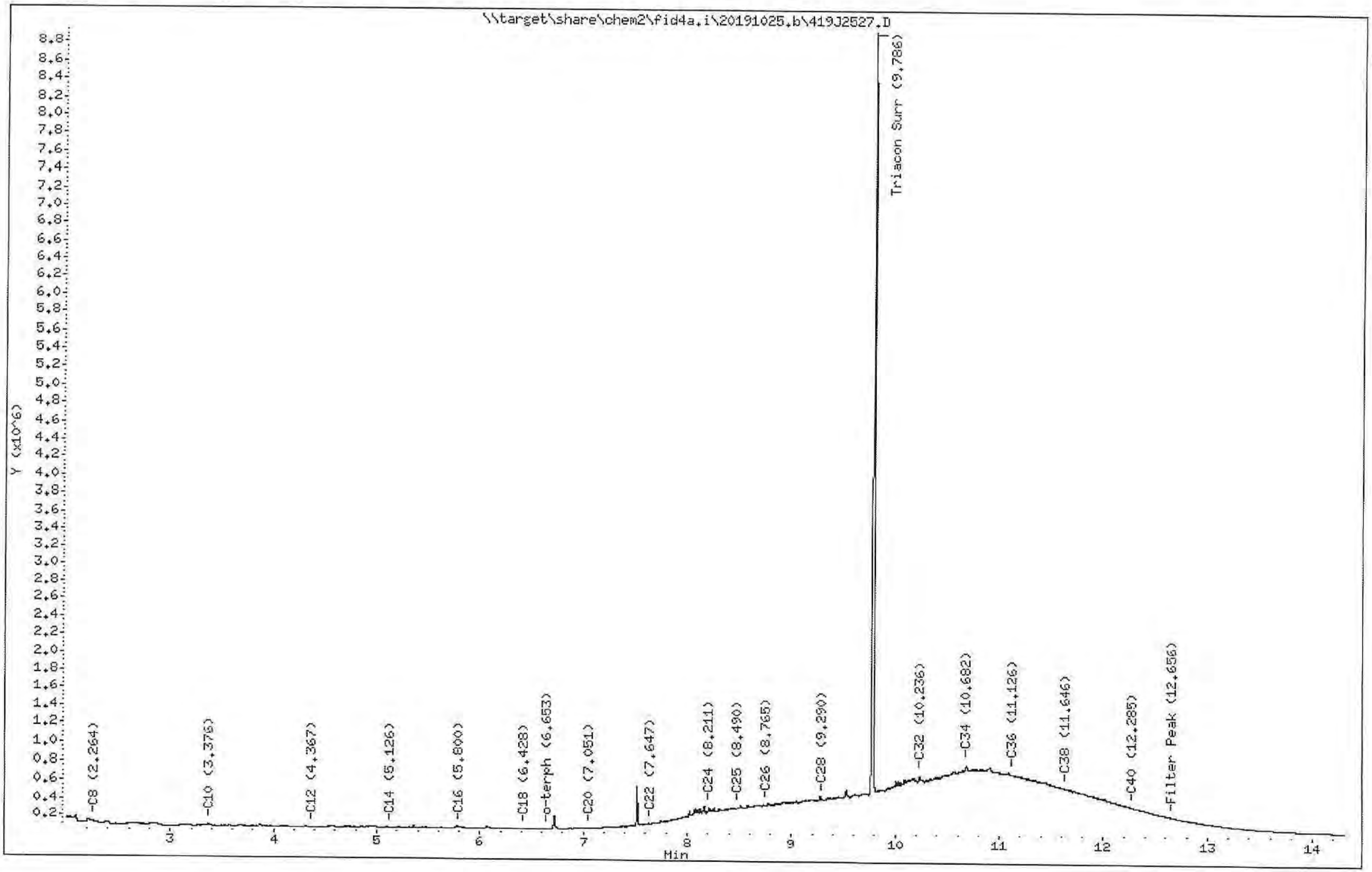
Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2527.D
Date : 25-OCT-2019 20:35
Client ID:
Sample Info: SHJ0406-SCV3

Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2527.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV3
Client ID:
Injection: 25-OCT-2019 20:35
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	53471	36749	WATPHD	(C12-C24)	9151453	57.4
C10	3.376	0.003	25610	47191	WATPHM	(C24-C38)	105205257	793.2
C12	4.367	0.020	4177	4443	AK102	(C10-C25)	12217213	62.5
C14	5.126	-0.003	5782	7745	AK103	(C25-C36)	83900022	839.2
C16	5.800	-0.007	18027	25221	OR.DIES	(C10-C28)	30254236	154.4
C18	6.428	-0.007	5074	5462				
C20	7.051	0.008	15134	10036				
C22	7.647	0.008	76708	26745				
C24	8.211	-0.004	290822	446061				
C25	8.490	-0.003	283476	98752				
C26	8.765	0.000	315420	126036				
C28	9.290	0.004	395912	118500				
C32	10.236	-0.006	661365	1079458				
C34	10.682	0.001	769683	230477				
Filter Peak	12.656	0.006	214849	128159	CREOSOT	(C12-C22)	2946608	755.4
C36	11.126	-0.002	688686	308098				
C38	11.646	-0.004	543124	322331				
C40	12.285	-0.004	325522	178450				
o-terph	6.653	-0.003	2619	2570				
Triacon Surr	9.786	-0.016	8421327	7592281	NAS DIES	(C10-C24)	9621264	49.3

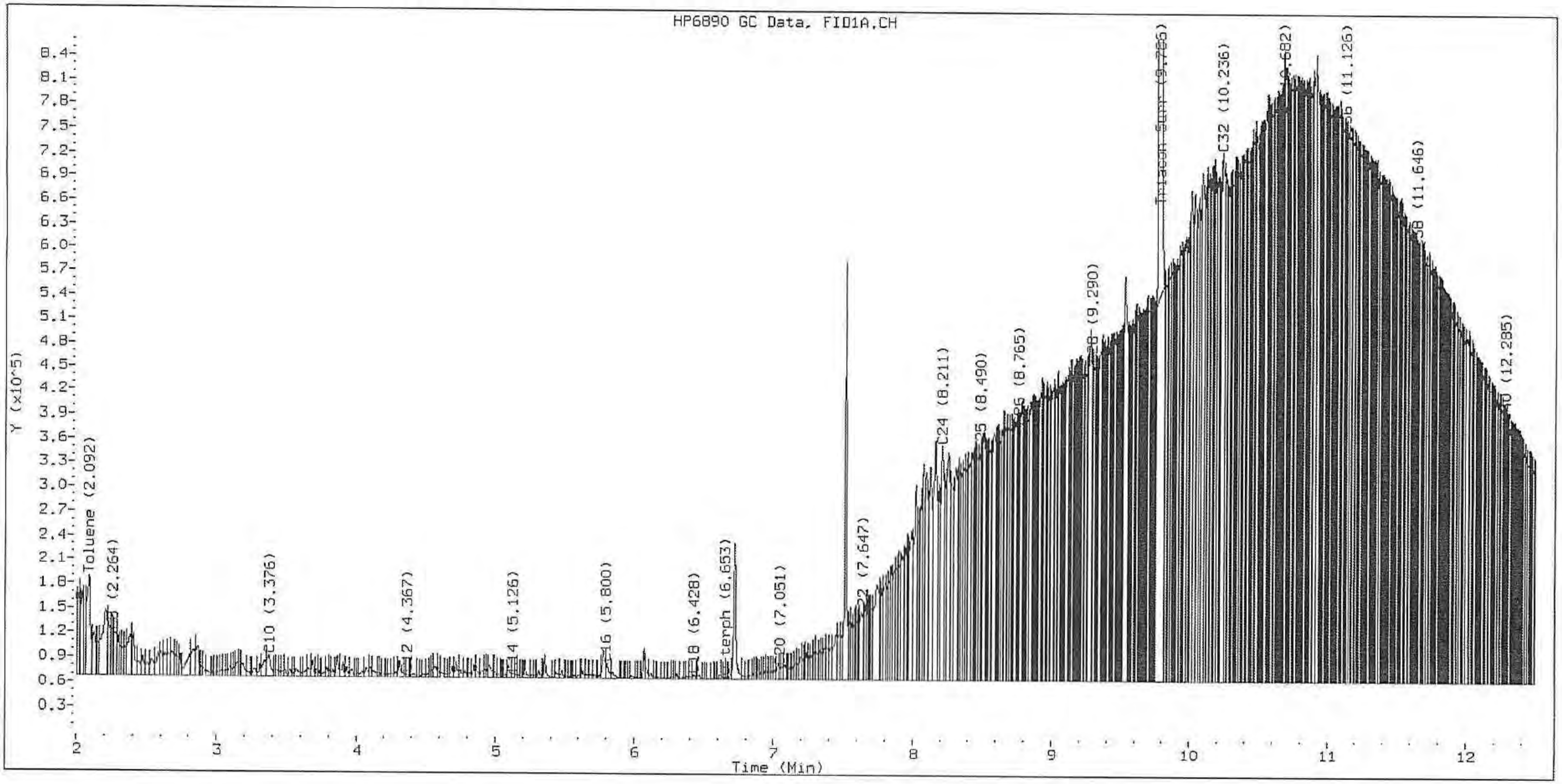
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	2570	0.0
Triacontane	7592281	42.7 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

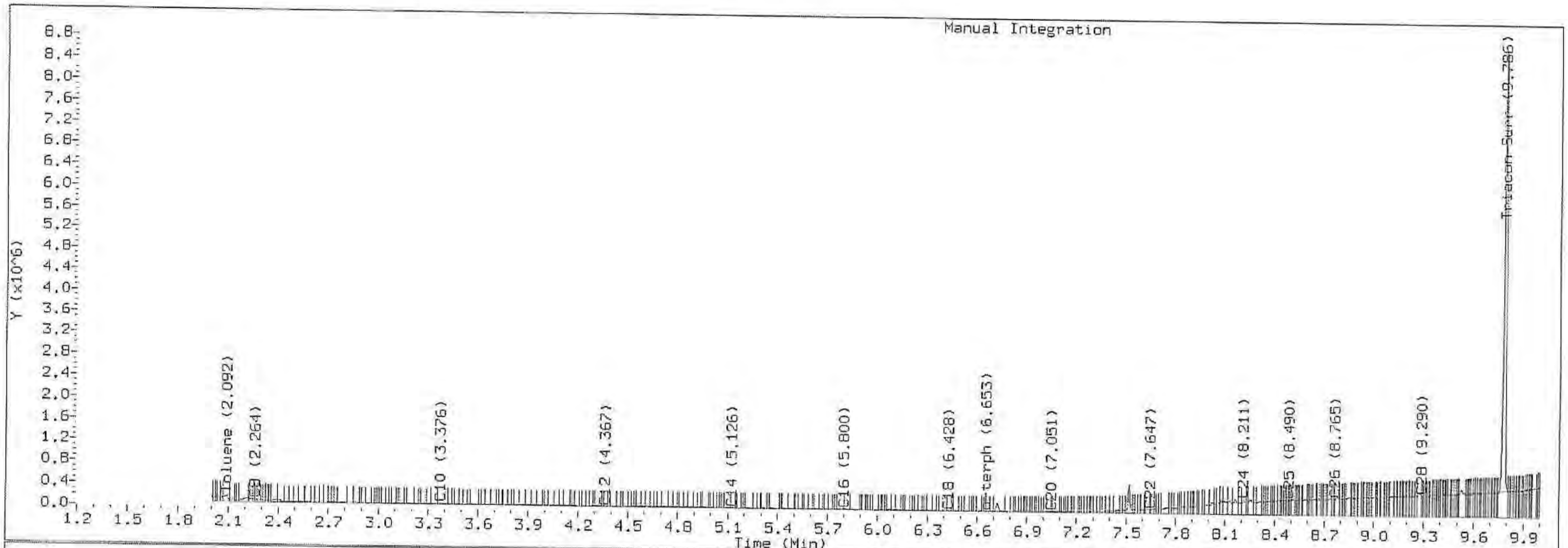
Datafile: FID4A, 20191025.b/419J2527.D SHJ0406-SCV3

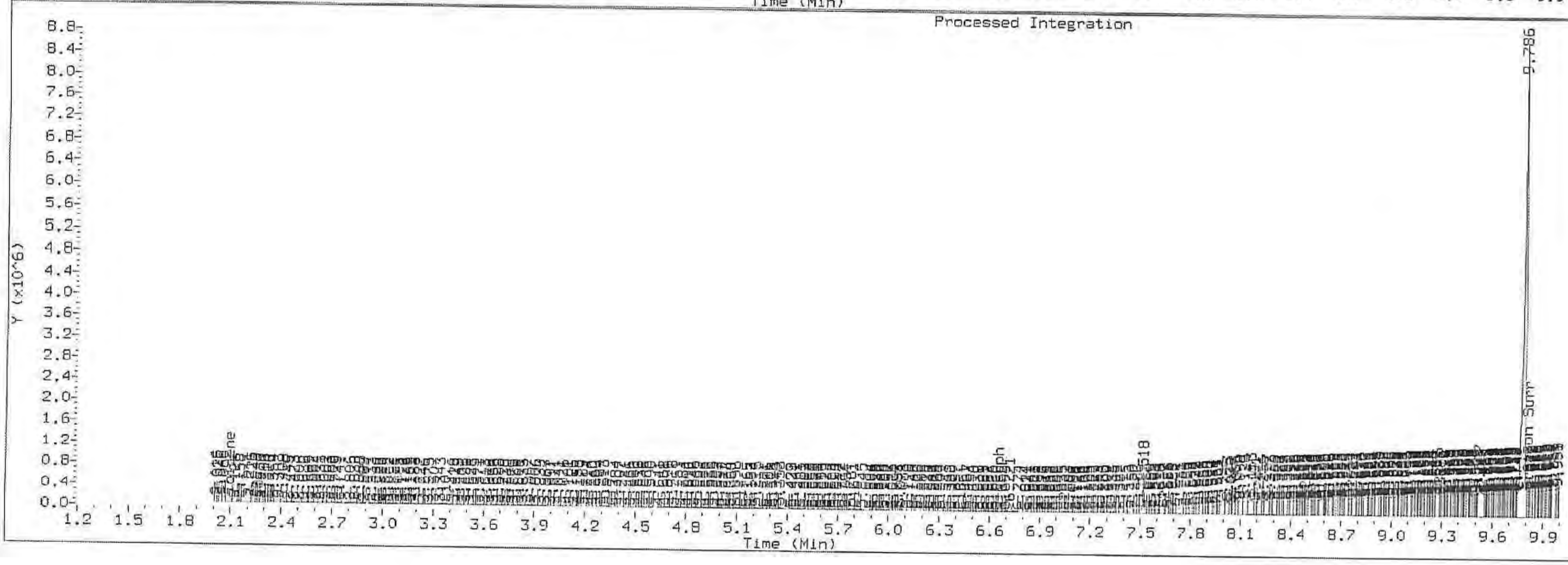


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2527.D Injection: 25-OCT-2019 20:35

Lab ID:SHJ0406-SCV3





Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191119.b/419K1907.D
Method: 20191119.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 11/20/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHK0260-ICV3
Client ID:
Injection: 19-NOV-2019 15:10
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.258	-0.008	251291	294712	WATPHD	(C12-C24)	42051010	263.9
C10	3.371	-0.003	4406335	3424876	WATPHM	(C24-C38)	496216	3.7
C12	4.346	-0.001	4634910	4478760	AK102	(C10-C25)	82254431	420.8
C14	5.126	-0.002	3015617	2044036	AK103	(C25-C36)	286196	2.9
C16	5.801	-0.005	604553	490104	OR.DIES	(C10-C28)	82288476	419.8
C18	6.426	-0.007	88855	83248				
C20	7.035	-0.006	27599	35934	JET-A	(C10-C18)	81259124	500.0
C22	7.631	-0.006	14833	25191				
C24	8.208	-0.005	6203	10027				
C25	8.490	-0.002	3298	4254				
C26	8.761	-0.002	1681	2107				
C28	9.291	0.006	225	122				
C32	10.242	0.000	1787	779				
C34	10.677	-0.003	4152	2235				
Filter Peak	12.648	0.002	7181	4285	CREOSOT	(C12-C22)	41927190	817.4
C36	11.126	0.000	5955	3830				
C38	11.639	-0.004	6373	4434				
C40	12.278	0.002	7499	4100				
o-terph	6.651	-0.002	16020002	16763037				
Triacon Surr	9.804	0.002	747	319	NAS DIES	(C10-C24)	82236143	421.4

Range Times: NW Diesel(4.346 - 8.213) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.64) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	16763037	81.9
Triacontane	319	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	51292.5	15-NOV-2019

Data File: \\target\share\chem2\fid4a.i\20191119.b\419K1907.D

Page 1

Date : 19-NOV-2019 15:10

Client ID:

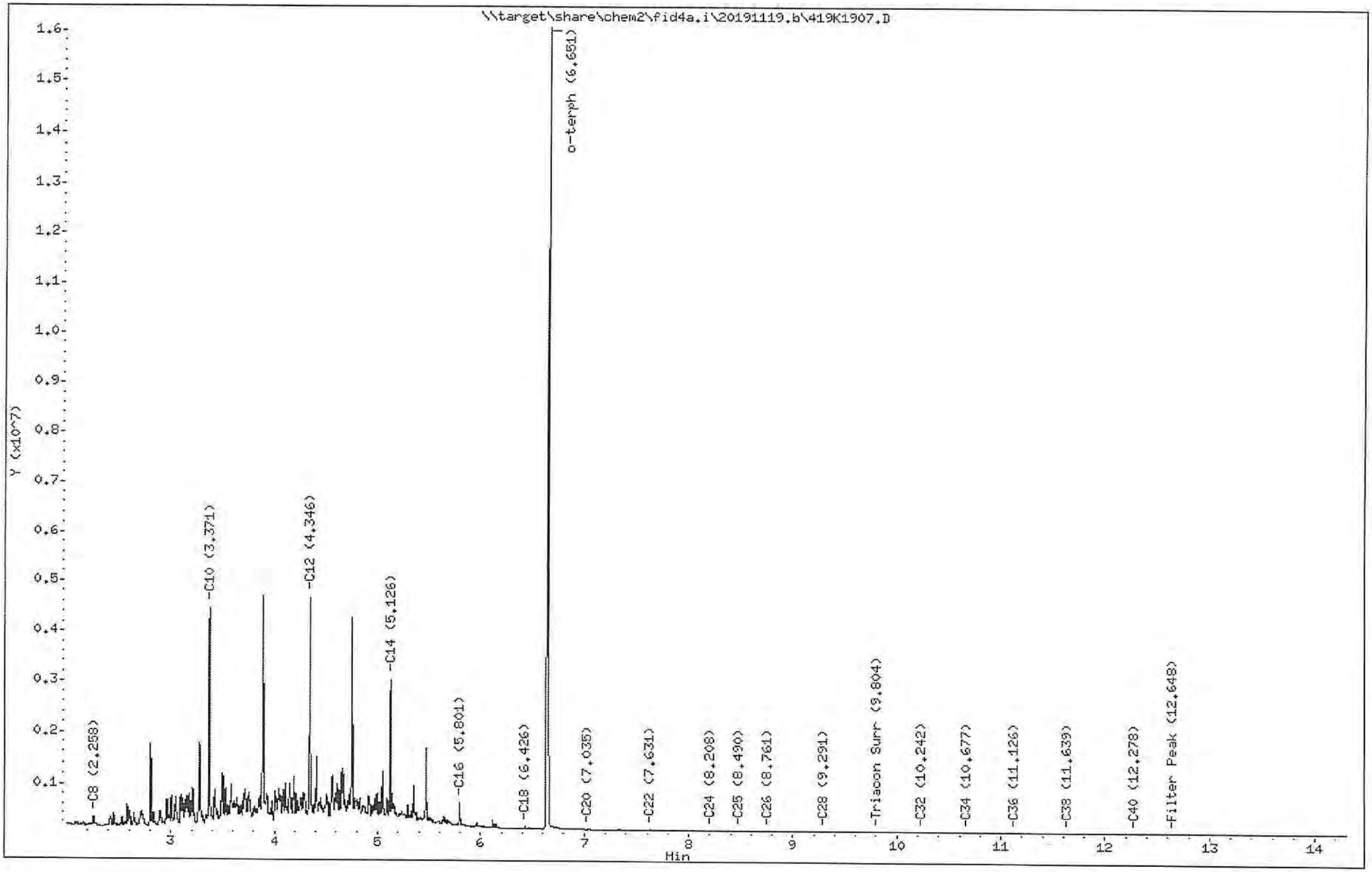
Instrument: fid4a.i

Sample Info: SHK0260-ICV3

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Data File: \\target\share\chem2\fid4a.i\20200107.b\420A0707.D

Page 1

Date : 07-JAN-2020 10:42

Client ID:

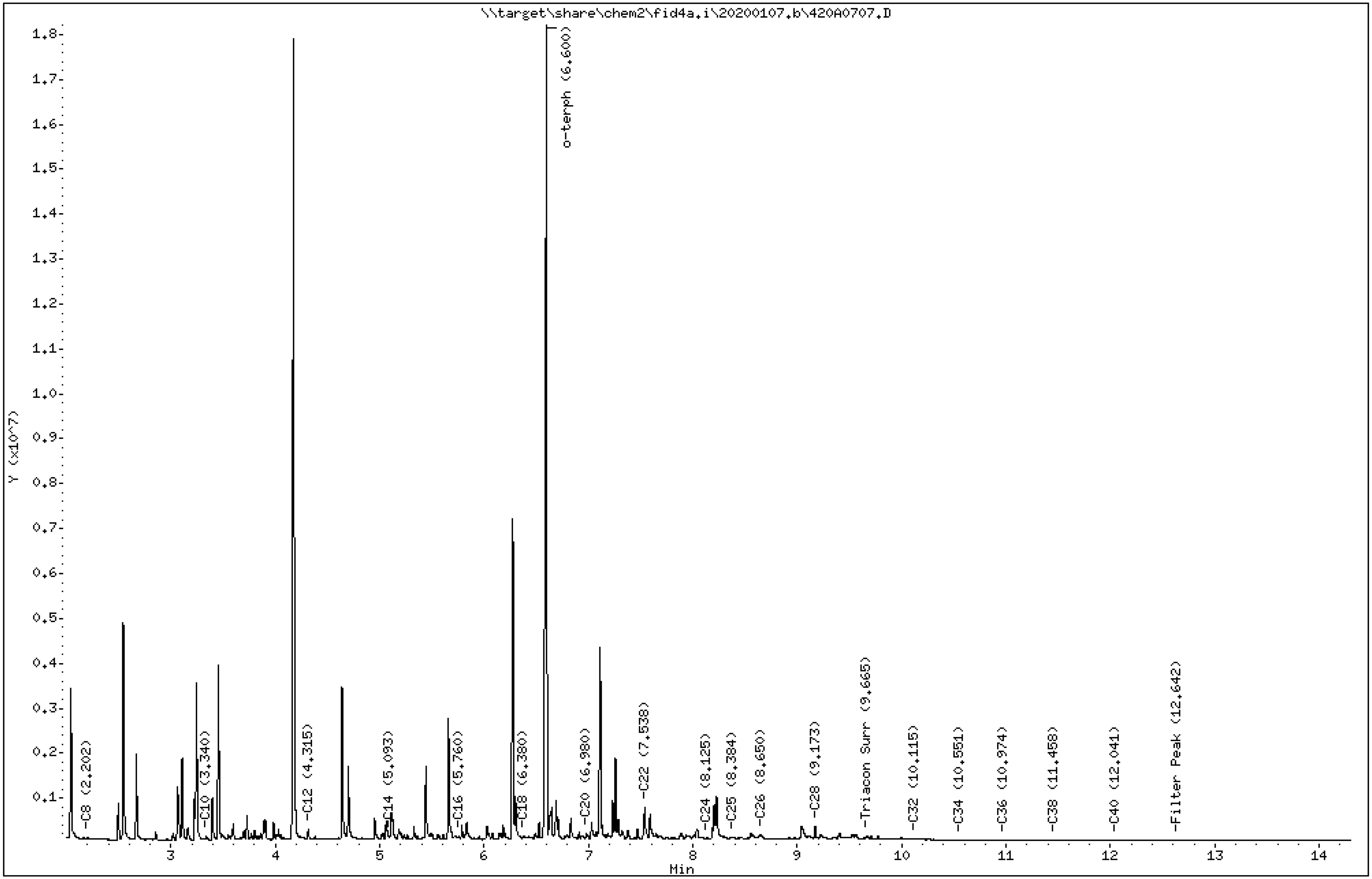
Instrument: fid4a.i

Sample Info: SIA0065-ICV3

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200107.b/420A0707.D
Method: 20200107.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 01/08/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIA0065-ICV3
Client ID:
Injection: 07-JAN-2020 10:42
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.202	-0.016	48618	163148	WATPHD	(C12-C24)	39749068	249.5
C10	3.340	-0.003	90097	100393	WATPHM	(C24-C38)	8921905	67.3
C12	4.315	-0.003	247325	289347	AK102	(C10-C25)	67305313	344.3
C14	5.093	-0.003	88277	57691	AK103	(C25-C36)	6259973	62.6
C16	5.760	-0.005	76989	75637	OR.DIES	(C10-C28)	70713708	360.8
C18	6.380	-0.002	84390	113269				
C20	6.980	0.003	144985	120115	JET-A	(C10-C18)	47725210	293.7
C22	7.538	-0.024	728303	910269				
C24	8.125	-0.002	43865	44718				
C25	8.384	-0.017	65153	88015				
C26	8.650	-0.017	124266	355575				
C28	9.173	-0.007	310713	322767				
C32	10.115	-0.005	18488	10140				
C34	10.551	-0.003	12121	8350				
Filter Peak	12.642	-0.014	5310	3162	CREOSOT	(C12-C22)	37368560	1000.0
C36	10.974	-0.004	10765	7465				
C38	11.458	0.001	10672	2663				
C40	12.041	-0.000	6716	3626				
o-terph	6.600	0.002	18150486	20216219				
Triacon Surr	9.665	-0.021	100173	177367	NAS DIES	(C10-C24)	64884221	332.5

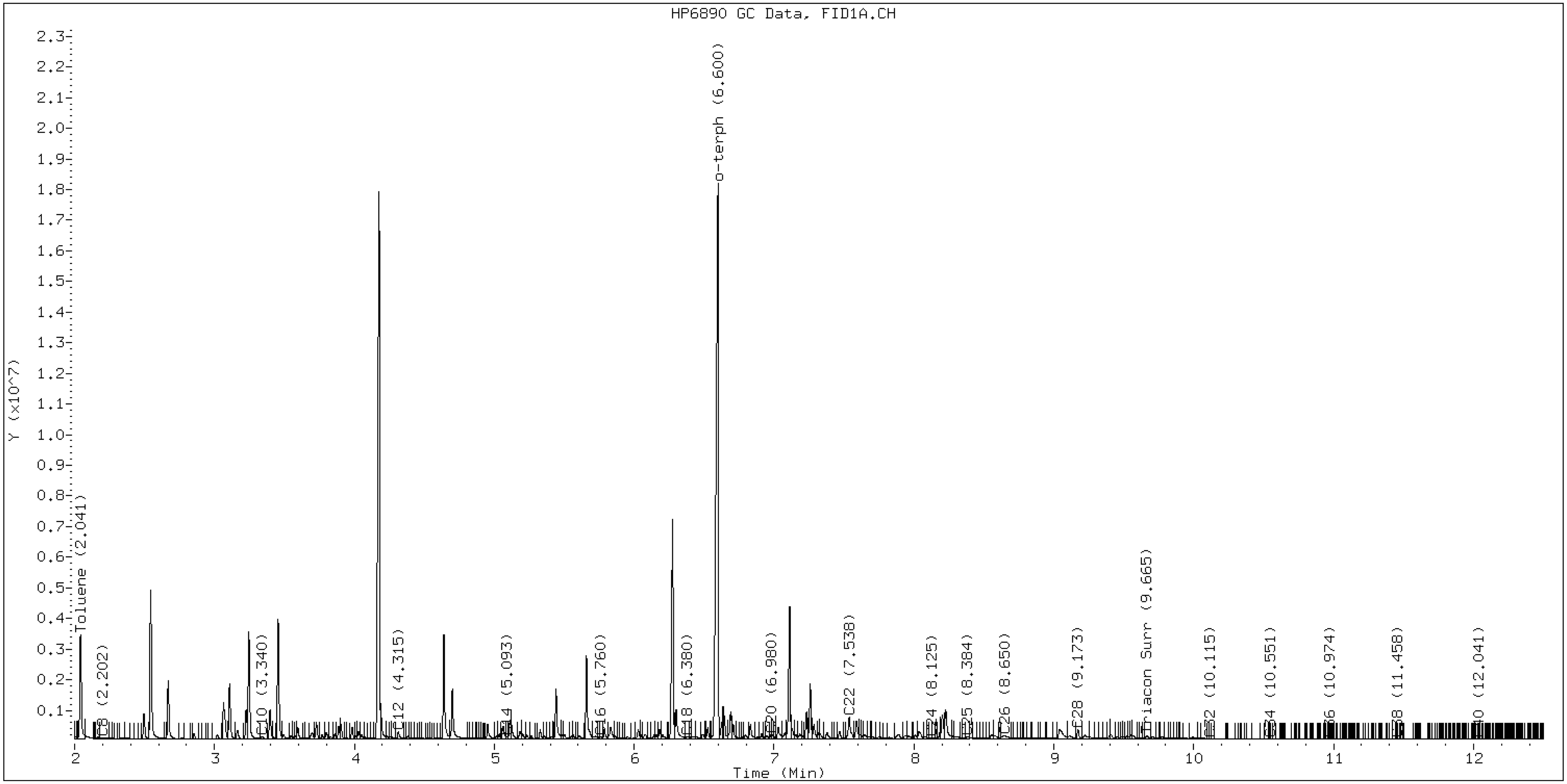
Range Times: NW Diesel(4.318 - 8.127) AK102(3.34 - 8.40) Jet A(3.34 - 6.38)
NW M.Oil(8.13 - 11.46) AK103(8.40 - 10.98) OR Diesel(3.34 - 9.18)

Surrogate	Area	Amount
o-Terphenyl	20216219	98.8
Triacontane	177367	1.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	37368.6	15-NOV-2019

Datafile: FID4A, 20200107.b/420A0707.D SIA0065-ICV3



Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIC0179

Instrument: FID4
Calibration ID: DA00022

Printed: 3/16/2020 10:35:50AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
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SIC0179-IBL2	QC		2		I000651			
SIC0179-CAL1	QC		3		H009812			
SIC0179-CAL2	QC		4		H009811			
SIC0179-CAL3	QC		5		H009810			
SIC0179-CAL4	QC		6		H009809			
SIC0179-CAL5	QC		7		H009808			
SIC0179-CAL6	QC		8		H009807			
SIC0179-SCV1	QC		9		H009809			

Samples Loaded By Date Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200313b.b

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2	13-MAR-2020 13:38	420C1311.D	1	RINSE	
3	13-MAR-2020 13:58	420C1312.D	1	SEQ-IBL1	
4	13-MAR-2020 14:17	420C1313.D	1	SEQ-IBL2	
5	13-MAR-2020 14:37	420C1314.D	1	SEQ-CAL1	
6	13-MAR-2020 14:56	420C1315.D	1	SEQ-CAL2	
7	13-MAR-2020 15:15	420C1316.D	1	SEQ-CAL3	
8	13-MAR-2020 15:35	420C1317.D	1	SEQ-CAL4	
9	13-MAR-2020 15:54	420C1318.D	1	SEQ-CAL5	
10	13-MAR-2020 16:13	420C1319.D	1	SEQ-CAL6	
11	13-MAR-2020 16:33	420C1320.D	1	SEQ-SCV1	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200313b.b

ARI Job No.: RINS   Method: b\FID4TPH.m   Instrument: fid4a.i   Date: 13-MAR-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1319	420C1310.D	RINSE		1	NO MANUAL INTEGRATION
1338	420C1311.D	RINSE		1	NO MANUAL INTEGRATION
1358	420C1312.D	SEQ-IBL1		1	C14, C16, C40,
1417	420C1313.D	SEQ-IBL2		1	NO MANUAL INTEGRATION
1437	420C1314.D	SEQ-CAL1		1	C20, o-terph,
1456	420C1315.D	SEQ-CAL2		1	o-terph,
1515	420C1316.D	SEQ-CAL3		1	o-terph,
1535	420C1317.D	SEQ-CAL4		1	o-terph,
1554	420C1318.D	SEQ-CAL5		1	o-terph,
1613	420C1319.D	SEQ-CAL6		1	o-terph,
1633	420C1320.D	SEQ-SCV1		1	o-terph,

Security Status Report

Date: 16-Mar-2020 10:37

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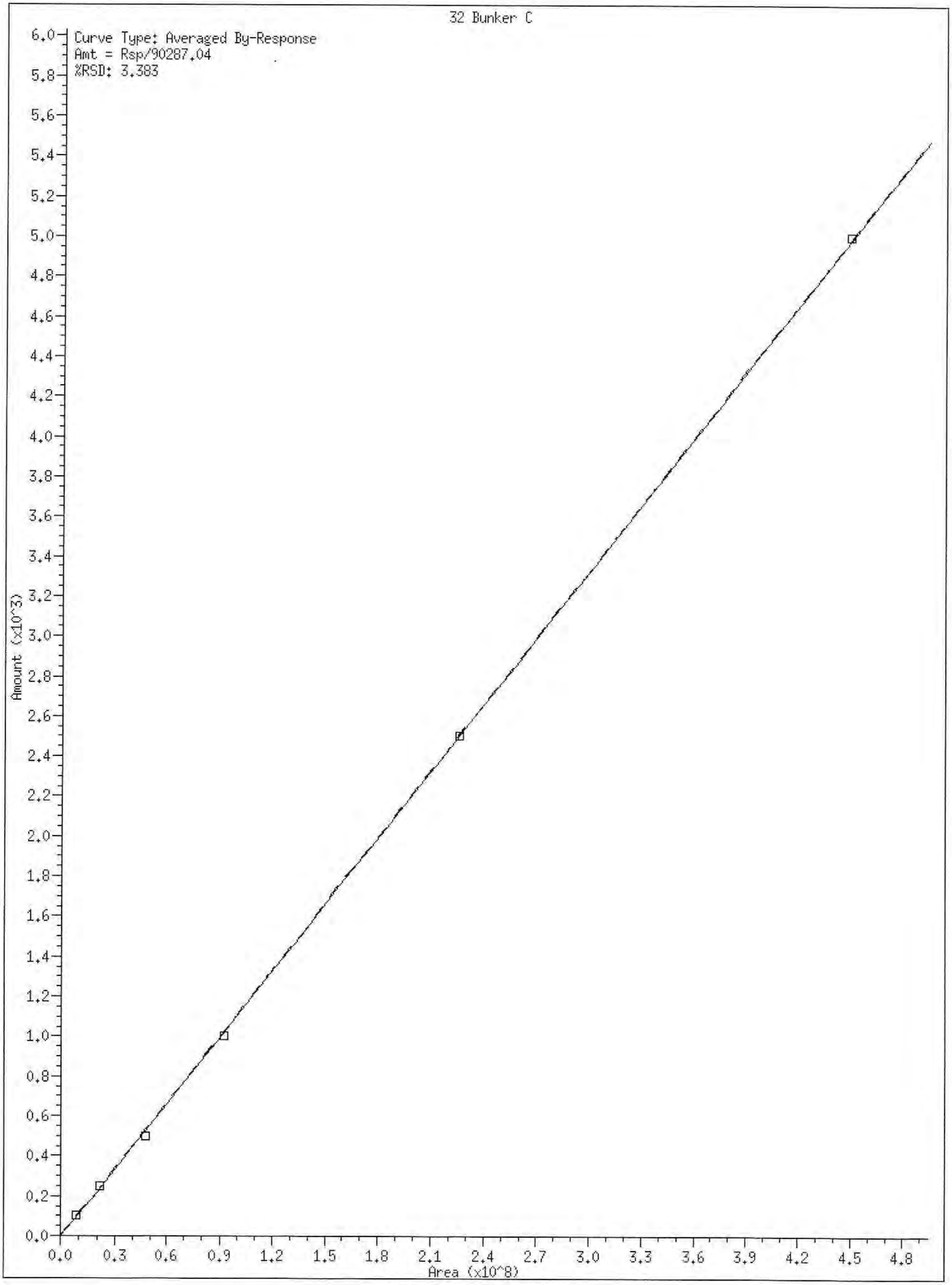
420C1320.D	Data Locked	christopher, 16-Mar-2020 10:37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Area (x10^8)
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2.7
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Data File: \\target\share\chem2\fid4a.i\20200313b.b\420C1312.D

Date : 13-MAR-2020 13:58

Client ID:

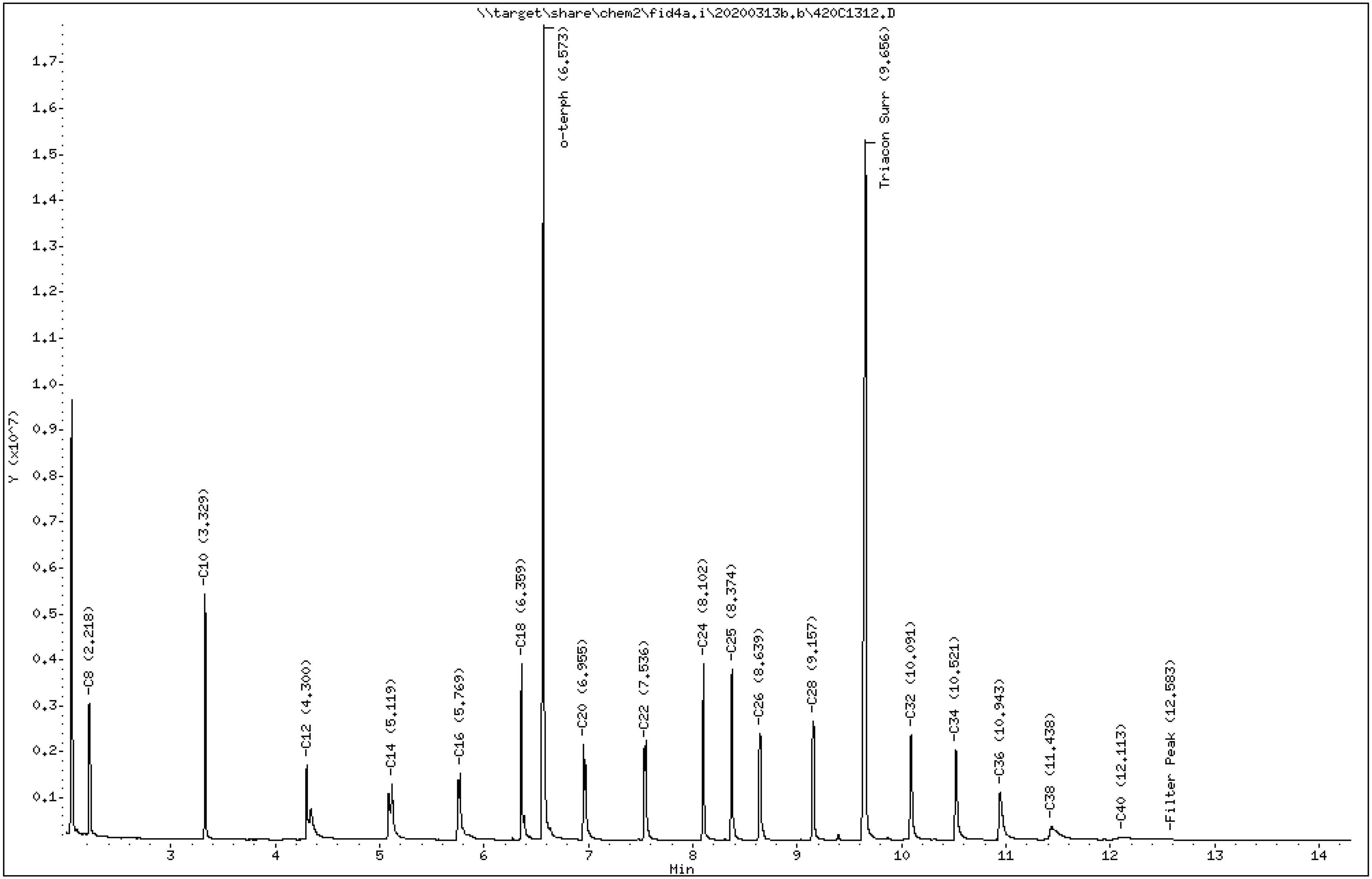
Sample Info: SEQ-IBL1

Column phase: RTX-1

Instrument: fid4a.i

Operator: JGR/CTO

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200313b.b/420C1312.D
Method: 20200313b.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO
Report Date: 03/16/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-IBL1
Client ID:
Injection: 13-MAR-2020 13:58
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.218	0.000	2976230	4258439	WATPHD	(C12-C24)	25653686	161.0
C10	3.329	0.000	5344126	3820334	WATPHM	(C24-C38)	24648964	185.8
C12	4.300	0.000	1627839	1465465	AK102	(C10-C25)	33671106	172.2
C14	5.119	0.000	1211179	2316863	AK103	(C25-C36)	22381765	223.9
C16	5.769	0.000	1467779	2055226	OR.DIES	(C10-C28)	45134921	230.3
C18	6.359	0.000	3826171	2734269				
C20	6.955	0.000	2088529	1719914	JET-A	(C10-C18)	20940040	128.8
C22	7.536	0.000	2056324	1623779				
C24	8.102	0.000	3838521	3671153				
C25	8.374	0.000	3714467	3687728				
C26	8.639	0.000	2319360	1780980				
C28	9.157	0.000	2575228	1984332				
C32	10.091	0.000	2278132	3706147				
C34	10.521	0.000	1957102	3424532				
Filter Peak	12.583	0.000	15498	11459	BUNKERC	(C10-C38)	58214945	644.8
C36	10.943	0.000	1054808	3160882				
C38	11.438	0.000	297596	868760				
C40	12.113	0.000	42933	427810				
o-terph	6.573	0.000	17734649	19762248				
Triacon Surr	9.656	0.000	15228657	21480068	NAS DIES	(C10-C24)	33565981	172.0

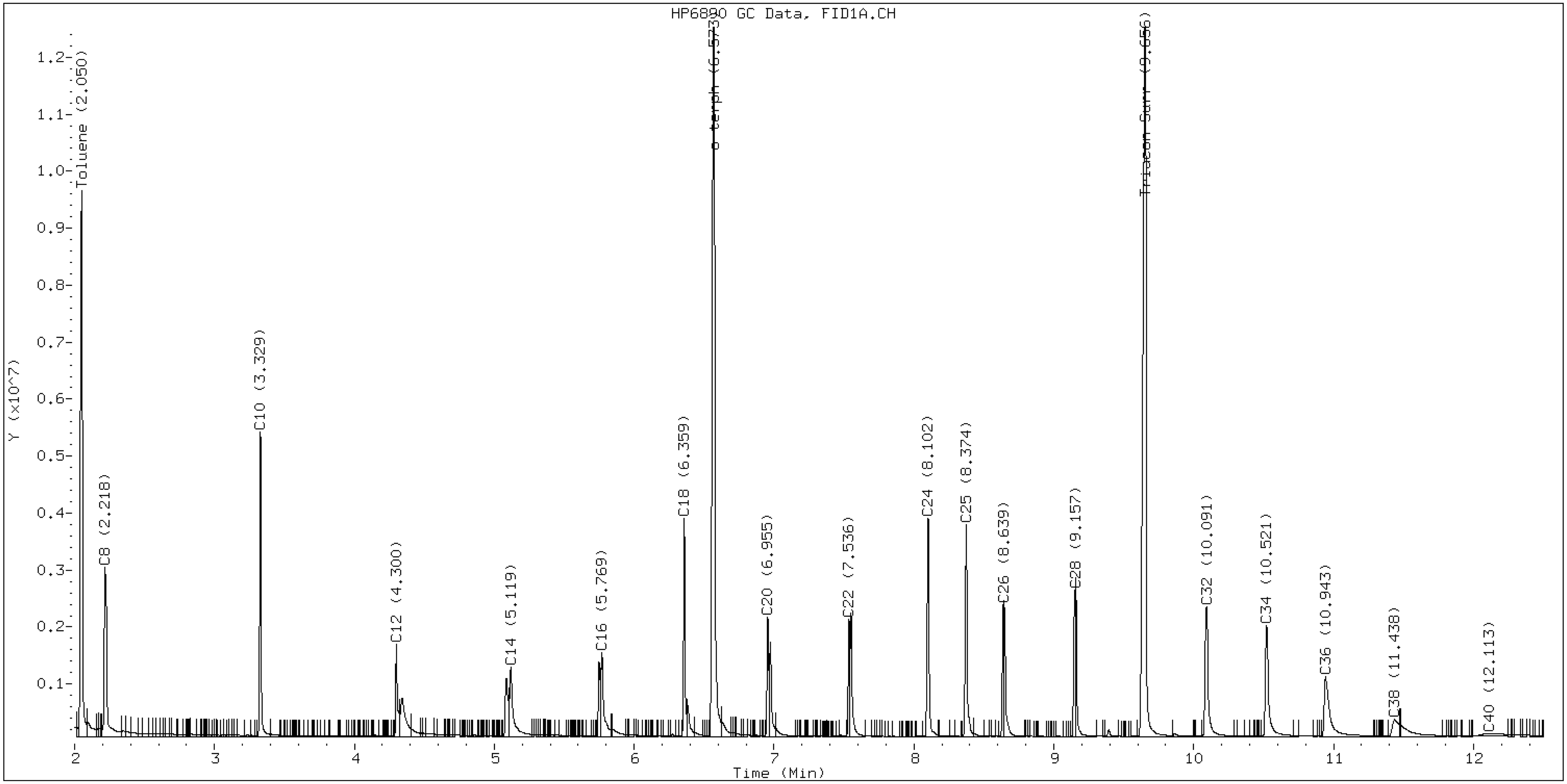
Range Times: NW Diesel(4.300 - 8.102) AK102(3.33 - 8.37) Jet A(3.33 - 6.36)
NW M.Oil(8.10 - 11.44) AK103(8.37 - 10.94) OR Diesel(3.33 - 9.16)

Surrogate	Area	Amount
o-Terphenyl	19762248	96.5
Triacontane	21480068	120.7

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	90287.0	13-MAR-2020

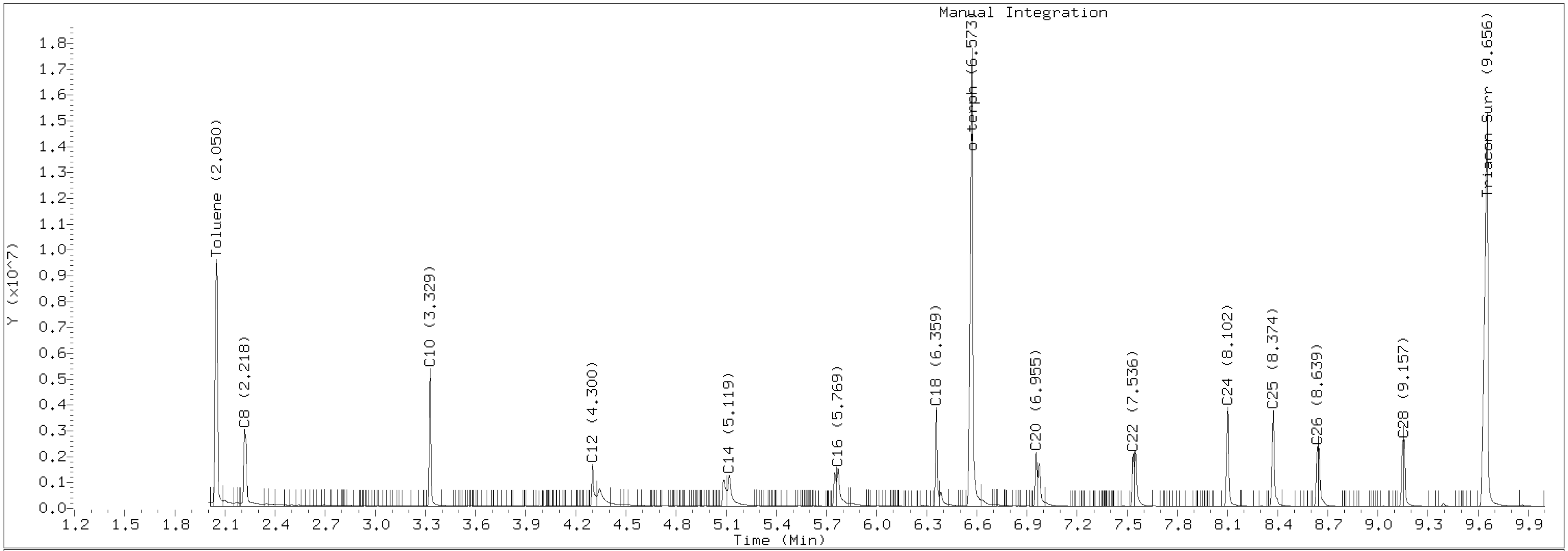
Datafile: FID4A, 20200313b.b/420C1312.D SEQ-IBL1

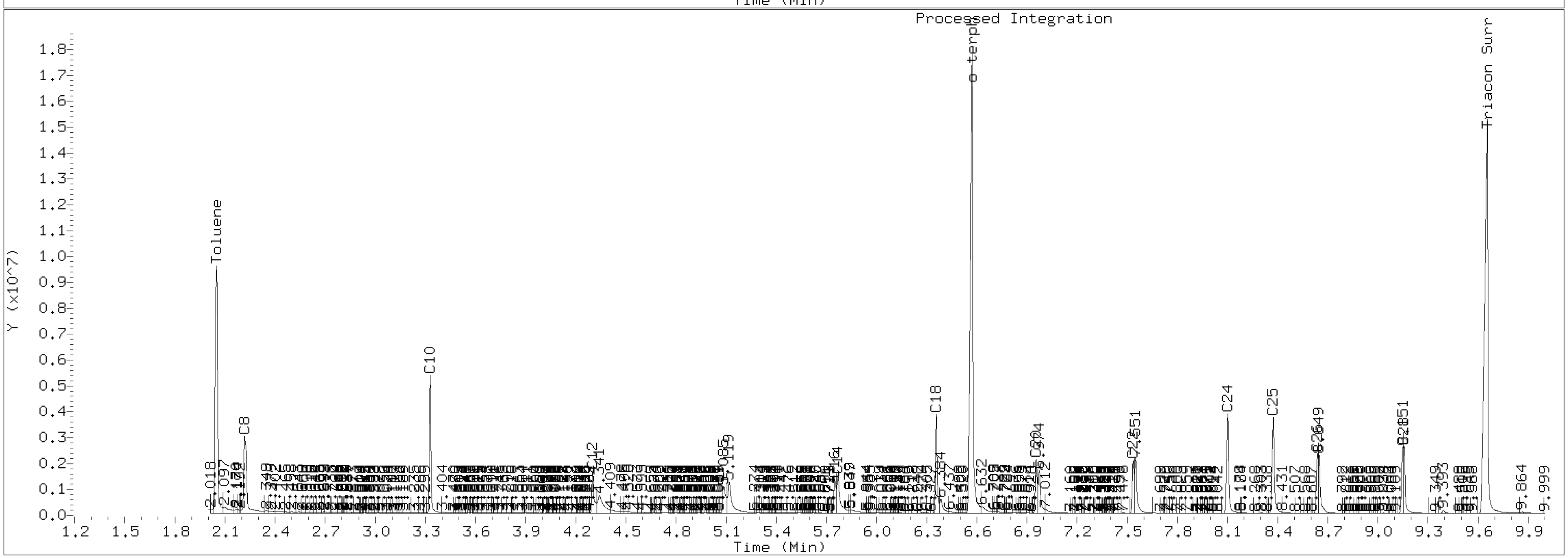


TPH Manual Integrations Report

Datafile: FID4A, 20200313b.b/420C1312.D Injection: 13-MAR-2020 13:58

Lab ID:SEQ-IBL1





Data File: \\target\share\chem2\fid4a.i\20200313b.b\420C1313.D

Date : 13-MAR-2020 14:17

Client ID:

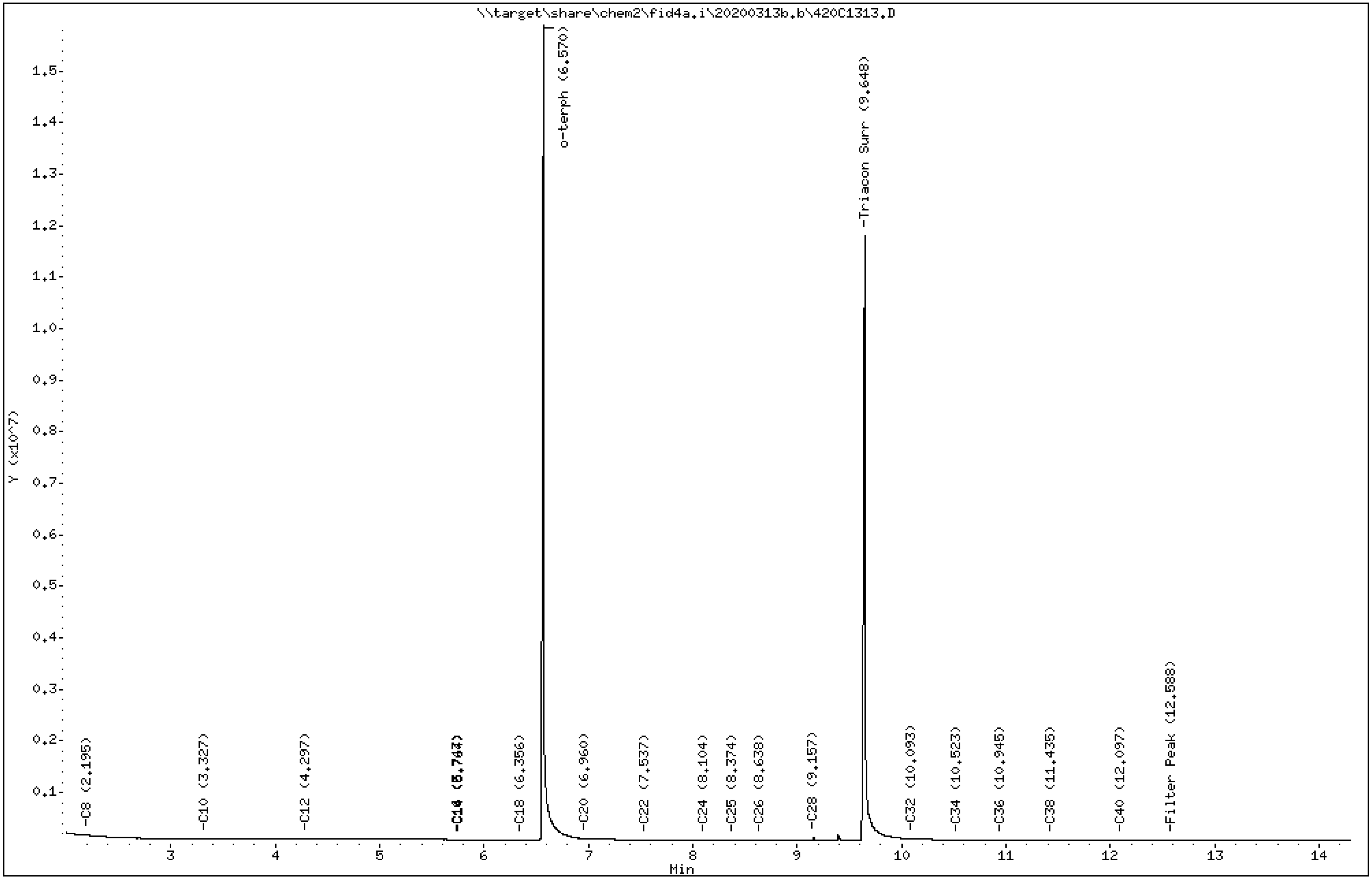
Instrument: fid4a.i

Sample Info: SEQ-IBL2

Operator: JGR/CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200313b.b/420C1313.D
Method: 20200313b.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO
Report Date: 03/16/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-IBL2
Client ID:
Injection: 13-MAR-2020 14:17
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.195	-0.023	101964	220885	WATPHD	(C12-C24)	4394210	27.6
C10	3.327	-0.002	23471	39087	WATPHM	(C24-C38)	1967673	14.8
C12	4.297	-0.003	21590	18255	AK102	(C10-C25)	5527366	28.3
C14	5.764	0.646	12422	5561	AK103	(C25-C36)	1745508	17.5
C16	5.747	-0.023	12369	2467	OR.DIES	(C10-C28)	5623934	28.7
C18	6.356	-0.003	8501	4208				
C20	6.960	0.005	31175	16901	JET-A	(C10-C18)	2939860	18.1
C22	7.537	0.001	5711	4529				
C24	8.104	0.002	2800	1652				
C25	8.374	-0.000	1751	510				
C26	8.638	-0.001	937	696				
C28	9.157	-0.000	47642	54613				
C32	10.093	0.002	26114	21739				
C34	10.523	0.002	10438	2073				
Filter Peak	12.588	0.006	5962	3842	BUNKERC	(C10-C38)	7477104	82.8
C36	10.945	0.002	7658	3422				
C38	11.435	-0.003	7168	3926				
C40	12.097	-0.015	6296	3463				
o-terph	6.570	-0.003	15826099	17209481				
Triacon Surr	9.648	-0.008	11725247	15722765	NAS DIES	(C10-C24)	5509432	28.2

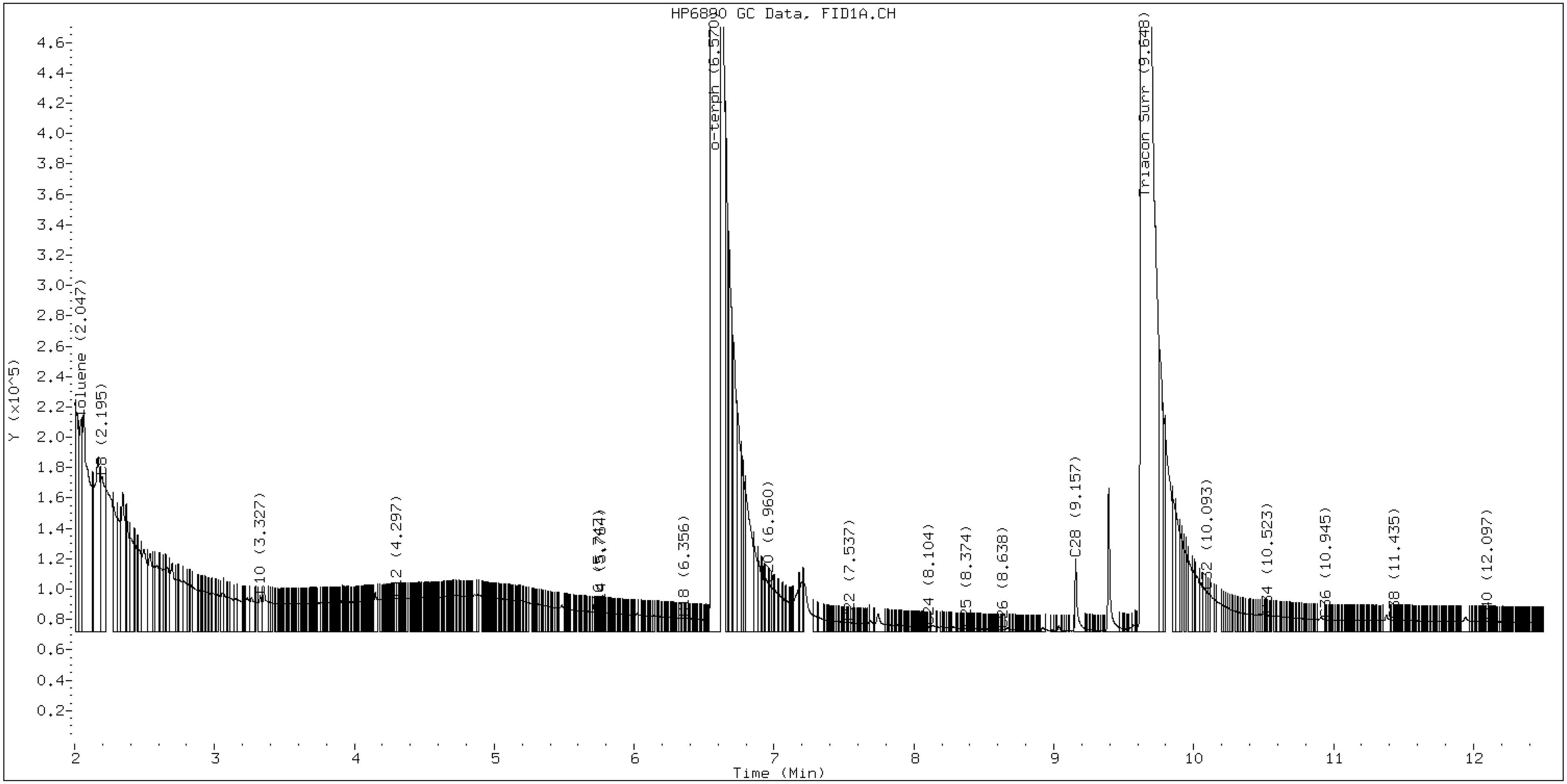
Range Times: NW Diesel(4.300 - 8.102) AK102(3.33 - 8.37) Jet A(3.33 - 6.36)
NW M.Oil(8.10 - 11.44) AK103(8.37 - 10.94) OR Diesel(3.33 - 9.16)

Surrogate	Area	Amount
o-Terphenyl	17209481	84.1
Triacontane	15722765	88.3

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	90287.0	13-MAR-2020

Datafile: FID4A, 20200313b.b/420C1313.D SEQ-IBL2



Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SID0108

Instrument: FID4
Calibration ID: DA00022

Printed: 4/20/2020 7:51:03AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SID0108-IBL1	QC		1		H010802			
SID0108-IBL2	QC		2		I000651			
SID0108-CAL1	QC		3		I003251			
SID0108-CAL2	QC		4		I003252			
SID0108-CAL3	QC		5		I003253			
SID0108-CAL4	QC		6		I003254			
SID0108-CAL5	QC		7		I003255			
SID0108-CAL6	QC		8		I003037			
SID0108-SCV1	QC		9		I003274			

Samples Loaded By Date Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200408.b

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2	08-APR-2020 08:37	420D0802.D	1	RINSE	
3	08-APR-2020 08:56	420D0803.D	1	RINSE	
4	08-APR-2020 09:16	420D0804.D	1	RINSE	
5	08-APR-2020 09:35	420D0805.D	1	SEQ-IBL1	
6	08-APR-2020 09:54	420D0806.D	1	SEQ-IBL2	
7	08-APR-2020 10:14	420D0807.D	1	SEQ-CAL1	
8	08-APR-2020 10:33	420D0808.D	1	SEQ-CAL2	
9	08-APR-2020 10:53	420D0809.D	1	SEQ-CAL3	
10	08-APR-2020 11:12	420D0810.D	1	SEQ-CAL4	
11	08-APR-2020 11:32	420D0811.D	1	SEQ-CAL5	
12	08-APR-2020 11:51	420D0812.D	1	SEQ-CAL6	
13	08-APR-2020 12:11	420D0813.D	1	SEQ-SCV1	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200408.b

ARI Job No.: RINS   Method: FID4TPH.m   Instrument: fid4a.i   Date: 08-APR-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0818	420D0801.D	RINSE		1	NO MANUAL INTEGRATION
0837	420D0802.D	RINSE		1	NO MANUAL INTEGRATION
0856	420D0803.D	RINSE		1	NO MANUAL INTEGRATION
0916	420D0804.D	RINSE		1	NO MANUAL INTEGRATION
0935	420D0805.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
0954	420D0806.D	SEQ-IBL2		1	NO MANUAL INTEGRATION
1014	420D0807.D	SEQ-CAL1		1	Triacon Surr,
1033	420D0808.D	SEQ-CAL2		1	Triacon Surr,
1053	420D0809.D	SEQ-CAL3		1	Triacon Surr,
1112	420D0810.D	SEQ-CAL4		1	Triacon Surr,
1132	420D0811.D	SEQ-CAL5		1	Triacon Surr,
1151	420D0812.D	SEQ-CAL6		1	Triacon Surr,
1211	420D0813.D	SEQ-SCV1		1	Triacon Surr,

Security Status Report

Date: 20-Apr-2020 07:47

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420D0802.D	Data Locked	christopher, 20-Apr-2020 07:45
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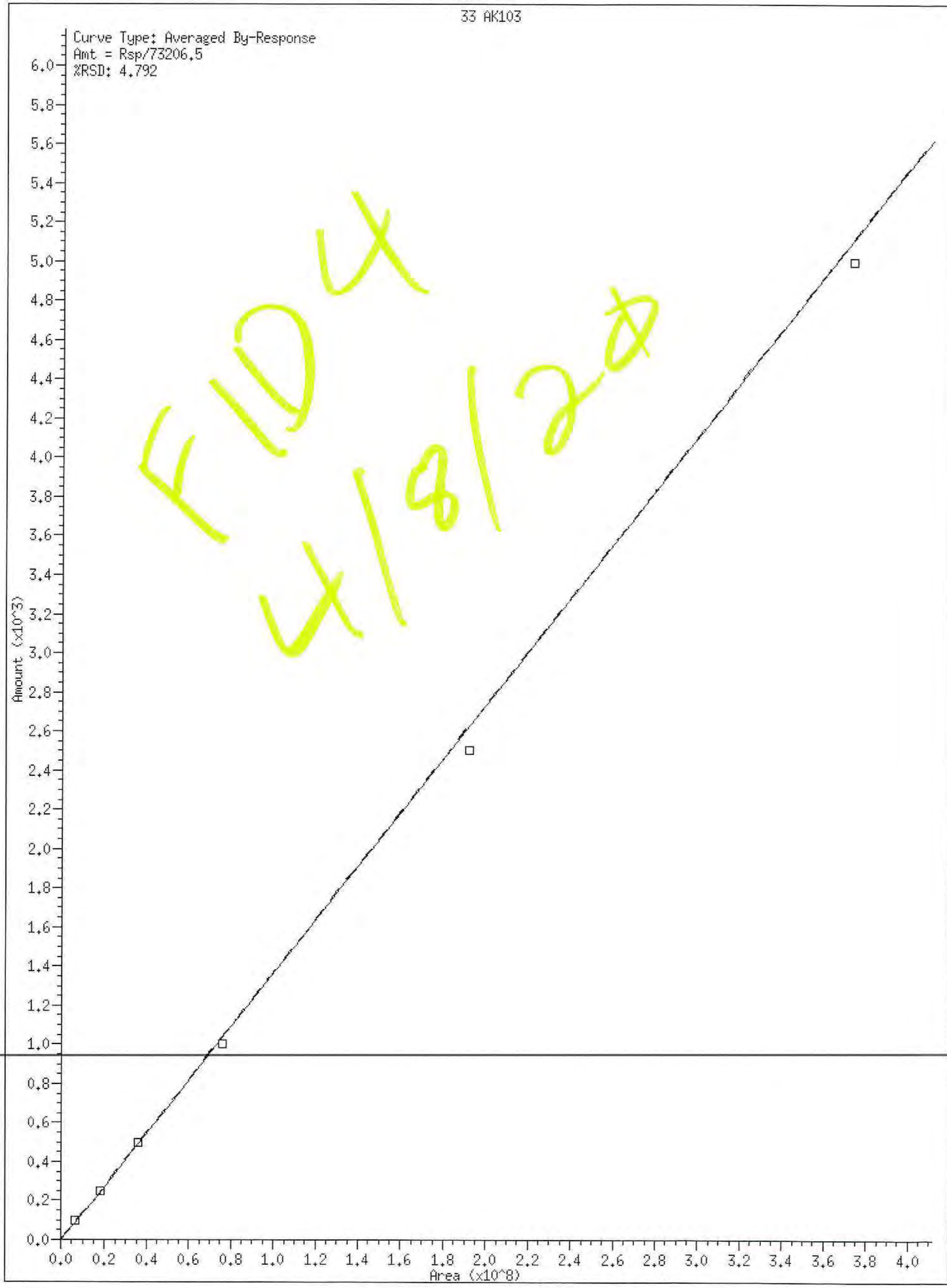
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FID 4
4/8/20
Amount (x10^3)
Area (x10^8)

Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0805.D

Page 1

Date : 08-APR-2020 09:35

Client ID:

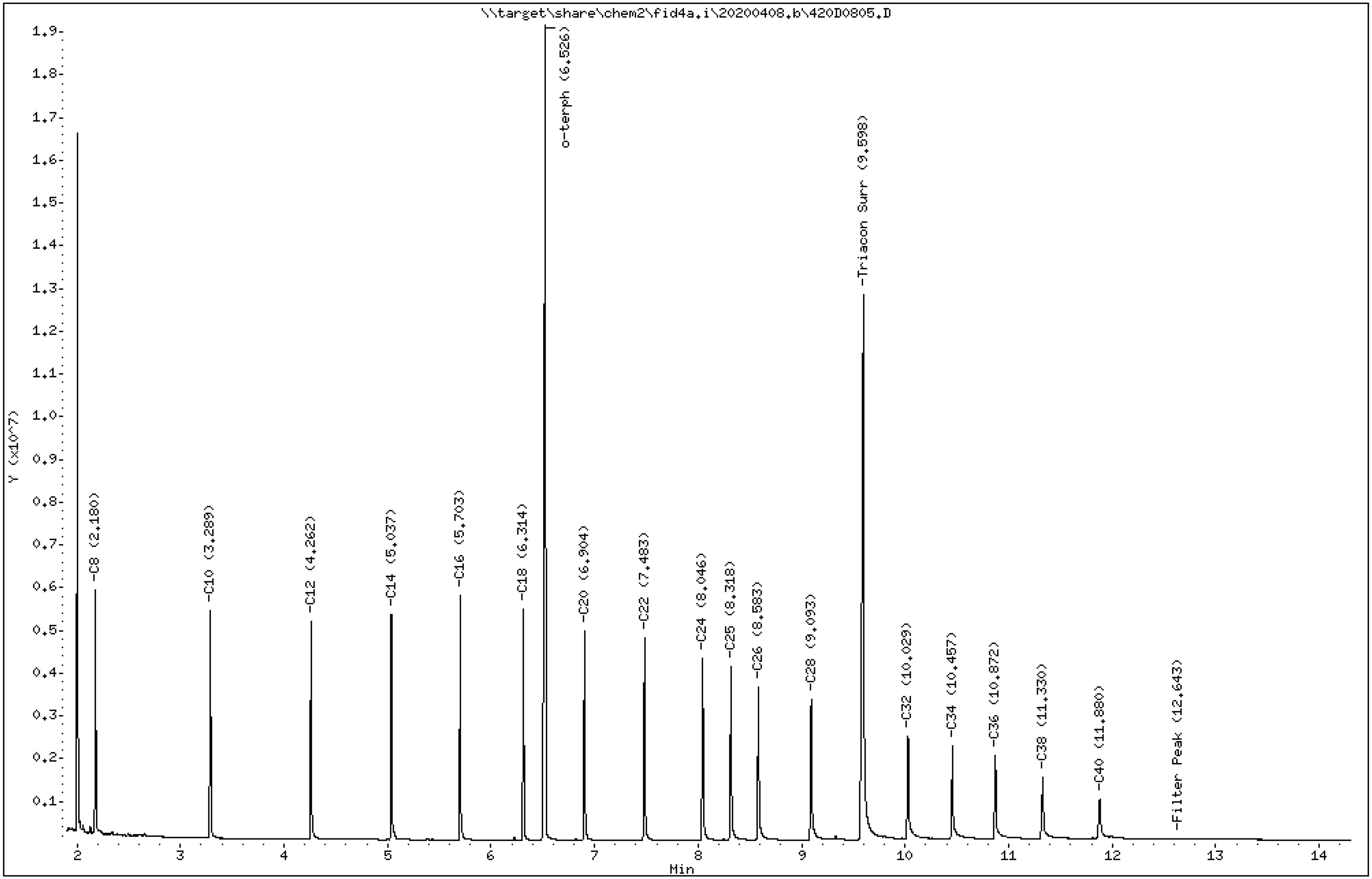
Instrument: fid4a.i

Sample Info: SEQ-IBL1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0805.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
ARI ID: SEQ-IBL1
Client ID:
Injection: 08-APR-2020 09:35
Dilution Factor: 1
RT Std: 419H1603.D
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.180	0.000	5854578	3880900	WATPHD	(C12-C24)	23844320	149.6
C10	3.289	0.000	5366559	4126403	WATPHM	(C24-C38)	25592918	193.0
C12	4.262	0.000	5124561	3862358	AK102	(C10-C25)	33609761	171.9
C14	5.037	0.000	5288886	3763422	AK103	(C25-C36)	22232777	303.7
C16	5.703	0.000	5732523	3728447	OR.DIES	(C10-C28)	44736298	228.2
C18	6.314	0.000	5411782	3657526				
C20	6.904	0.000	4900797	3740470	JET-A	(C10-C18)	22288154	137.1
C22	7.483	0.000	4744655	3709257				
C24	8.046	0.000	4260497	3629044				
C25	8.318	0.000	4069494	3709557				
C26	8.583	0.000	3584730	3671884				
C28	9.093	0.000	3305135	3592573				
C32	10.029	0.000	2427612	3418058				
C34	10.457	0.000	2206236	2535109				
Filter Peak	12.643	0.000	24370	14568	CREOSOT	(C12-C22)	20184280	489.5
C36	10.872	0.000	1991705	2941804				
C38	11.330	0.000	1466266	2825666				
C40	11.880	0.000	962855	1921380				
o-terph	6.526	0.000	19078927	20504006				
Triacon Surr	9.598	0.000	12764177	20099945	NAS DIES	(C10-C24)	33554764	171.9

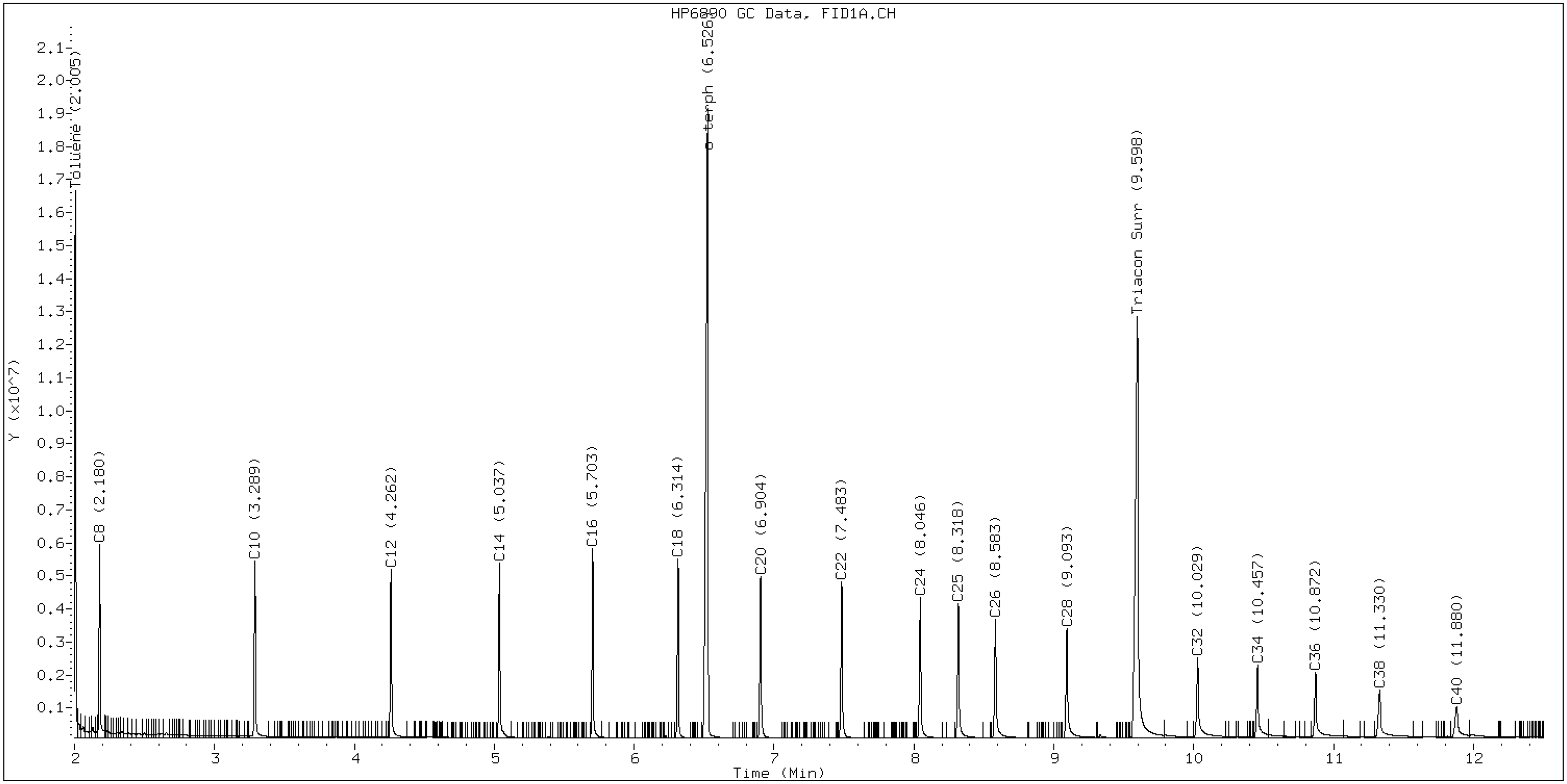
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount
o-Terphenyl	20504006	100.2
Triacontane	20099945	112.9

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200408.b/420D0805.D SEQ-IBL1



Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0806.D

Page 1

Date : 08-APR-2020 09:54

Client ID:

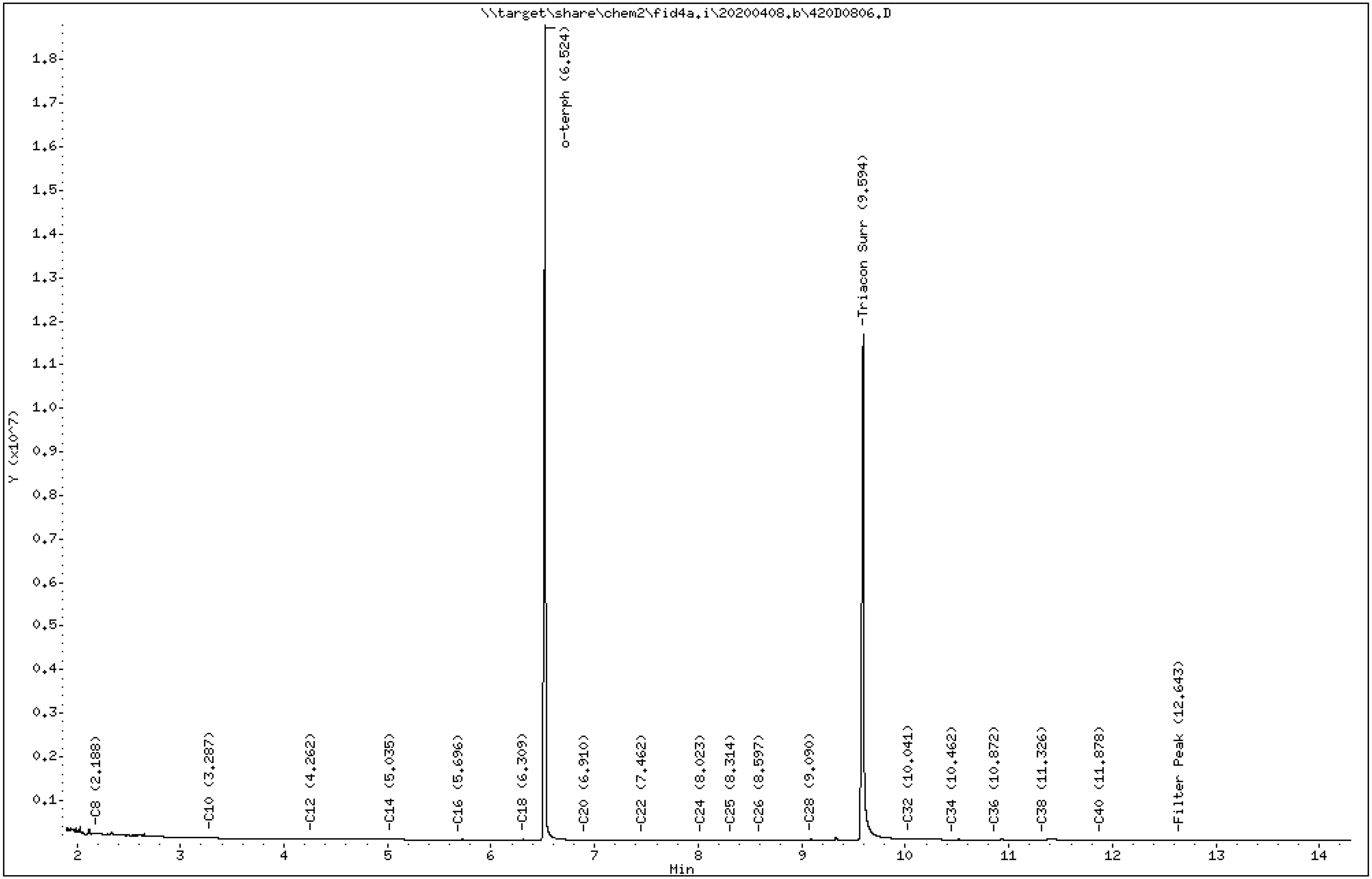
Instrument: fid4a.i

Sample Info: SEQ-IBL2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0806.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-IBL2
Client ID:
Injection: 08-APR-2020 09:54
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.188	0.008	156546	216359	WATPHD	(C12-C24)	2059708	12.9
C10	3.287	-0.002	70586	177016	WATPHM	(C24-C38)	2023092	15.3
C12	4.262	-0.001	31694	27721	AK102	(C10-C25)	4136621	21.2
C14	5.035	-0.002	17658	7042	AK103	(C25-C36)	1615485	22.1
C16	5.696	-0.007	12809	8245	OR.DIES	(C10-C28)	4264948	21.8
C18	6.309	-0.005	24517	27940				
C20	6.910	0.006	6999	5164	JET-A	(C10-C18)	3753376	23.1
C22	7.462	-0.022	4699	4900				
C24	8.023	-0.022	2331	3320				
C25	8.314	-0.004	531	126				
C26	8.597	0.013	9349	6545				
C28	9.090	-0.003	44536	62849				
C32	10.041	0.012	33011	55502				
C34	10.462	0.005	14086	9836				
Filter Peak	12.643	0.000	14153	3524	CREOSOT	(C12-C22)	1999313	48.5
C36	10.872	0.000	14385	7864				
C38	11.326	-0.004	15213	8324				
C40	11.878	-0.002	14557	10126				
o-terph	6.524	-0.002	18718308	20250783				
Triacon Surr	9.594	-0.004	11617864	16294307	NAS DIES	(C10-C24)	4126955	21.1

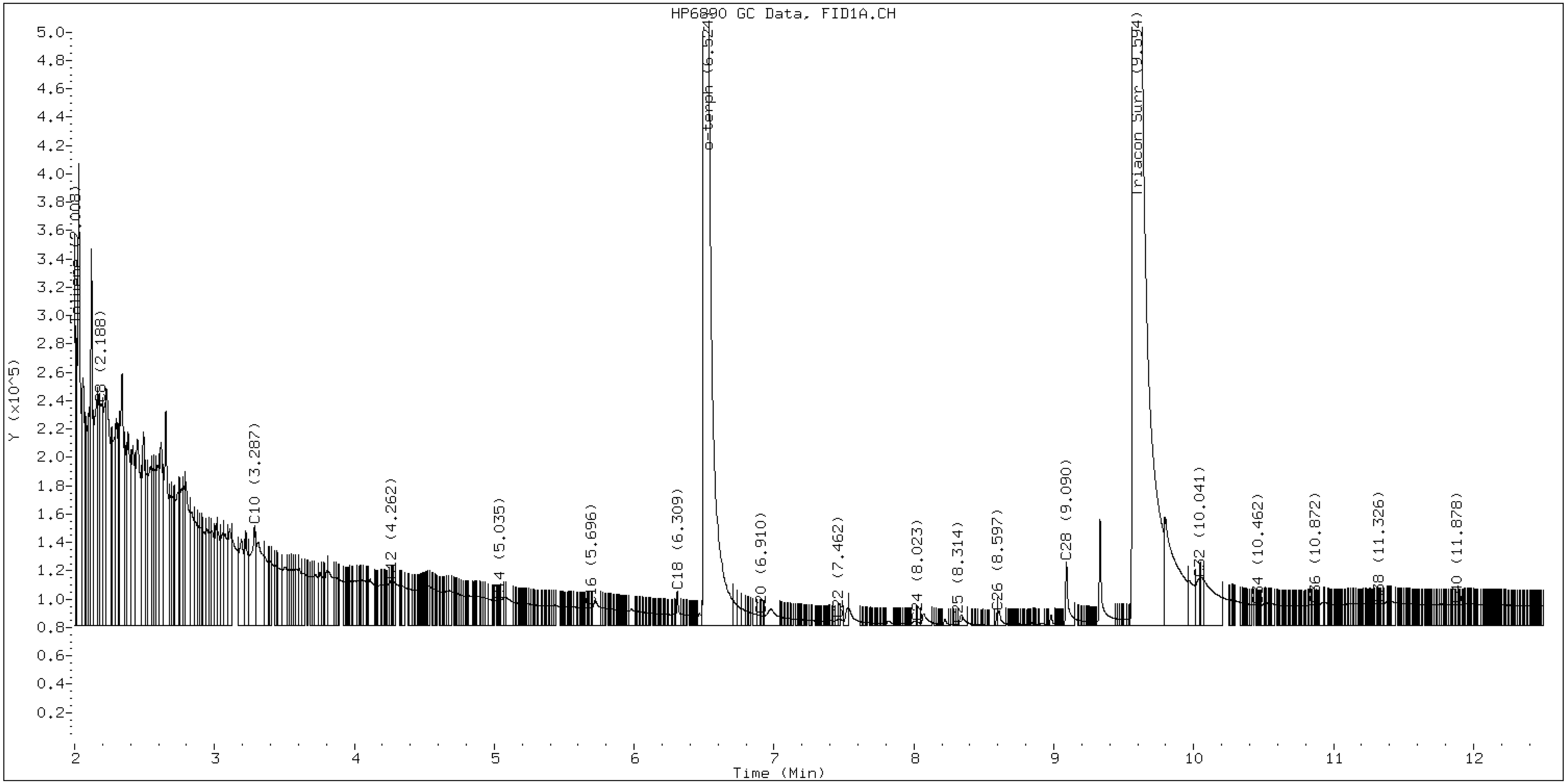
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount
o-Terphenyl	20250783	98.9
Triacontane	16294307	91.6

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200408.b/420D0806.D SEQ-IBL2



Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0807.D

Page 1

Date : 08-APR-2020 10:14

Client ID:

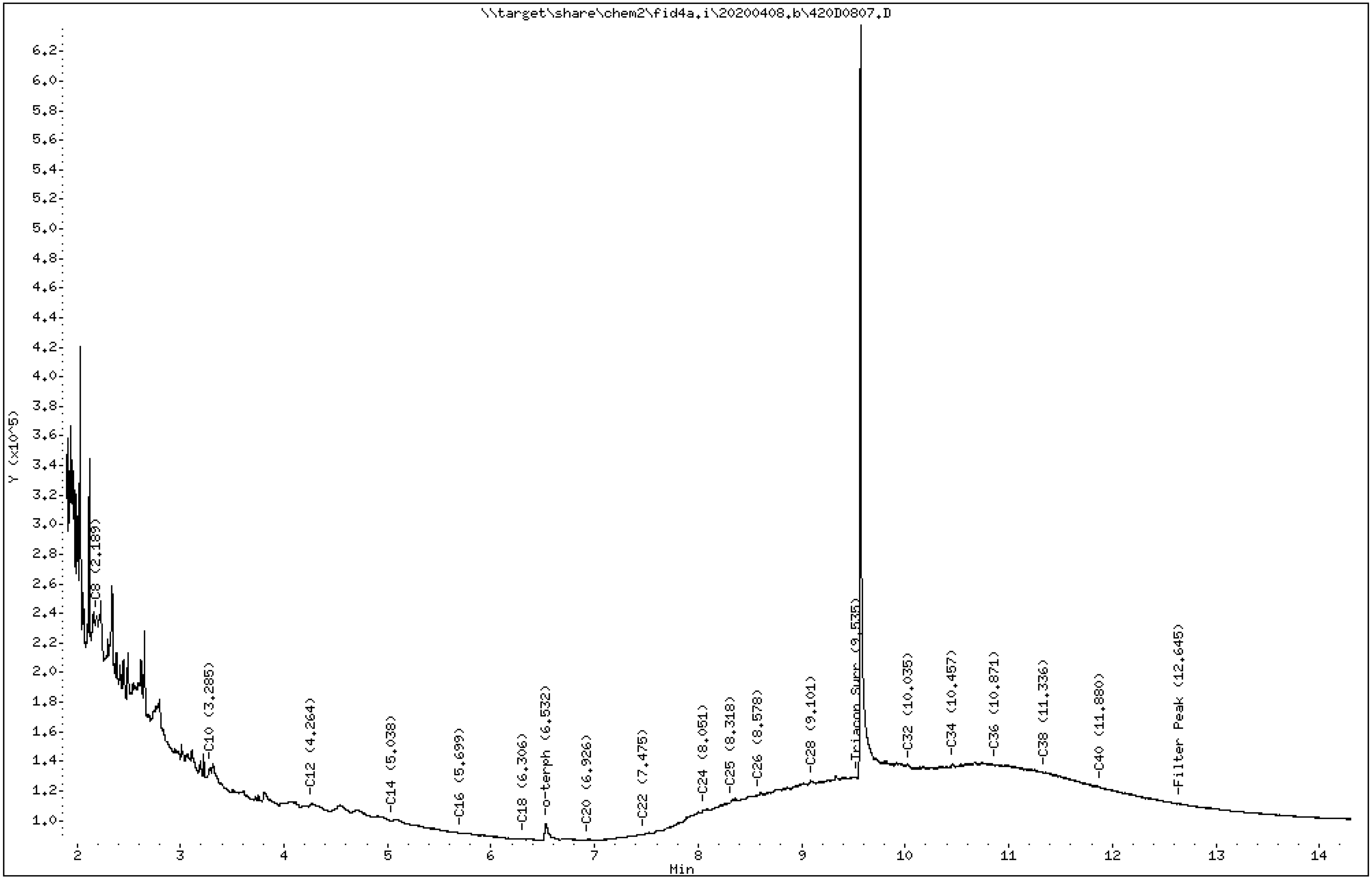
Instrument: fid4a.i

Sample Info: SEQ-CAL1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0807.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL1
Client ID:
Injection: 08-APR-2020 10:14
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.189	0.009	152083	238009	WATPHD	(C12-C24)	1535455	9.6
C10	3.285	-0.004	49113	104559	WATPHM	(C24-C38)	8187148	61.7
C12	4.264	0.002	24631	8600	AK102	(C10-C25)	3445901	17.6
C14	5.038	0.001	13117	3929	AK103	(C25-C36)	6705828	91.6
C16	5.699	-0.004	4845	2404	OR.DIES	(C10-C28)	5120557	26.1
C18	6.306	-0.008	853	562				
C20	6.926	0.022	403	144	JET-A	(C10-C18)	2755712	17.0
C22	7.475	-0.008	3796	753				
C24	8.051	0.006	20077	24027				
C25	8.318	-0.000	26103	25417				
C26	8.578	-0.005	30795	28994				
C28	9.101	0.007	39800	29577				
C32	10.035	0.006	50014	24947				
C34	10.457	-0.000	51363	30680				
Filter Peak	12.645	0.002	24706	12307	CREOSOT	(C12-C22)	1140595	27.7
C36	10.871	-0.000	50437	10078				
C38	11.336	0.007	45528	18190				
C40	11.880	-0.000	36310	26801				
o-terph	6.532	0.007	11031	27133				
Triacon Surr	9.568	-0.030	508463	647323	NAS DIES	(C10-C24)	3228669	16.5

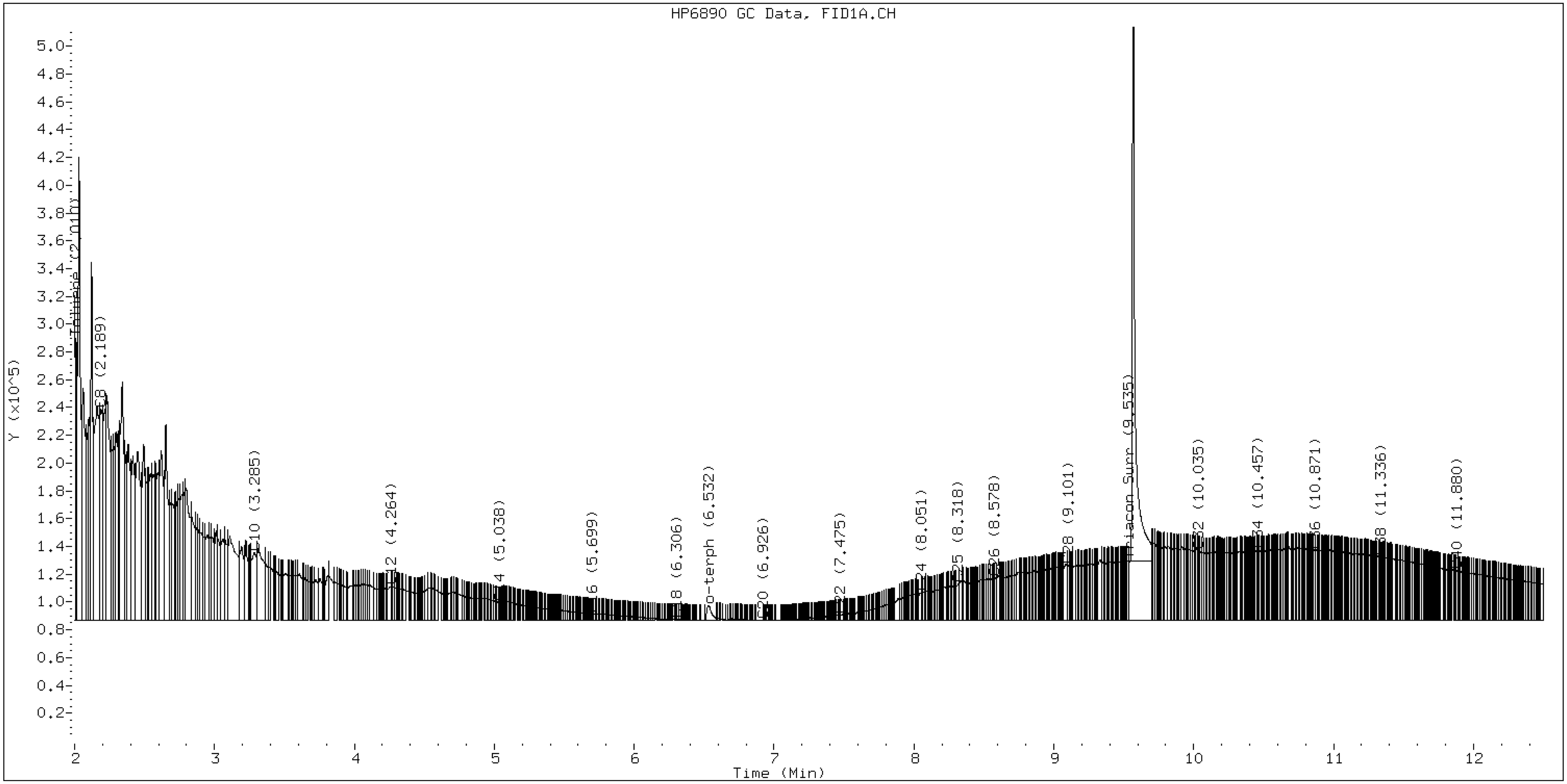
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount	
o-Terphenyl	27133	0.1	
Triacontane	647323	3.6	M

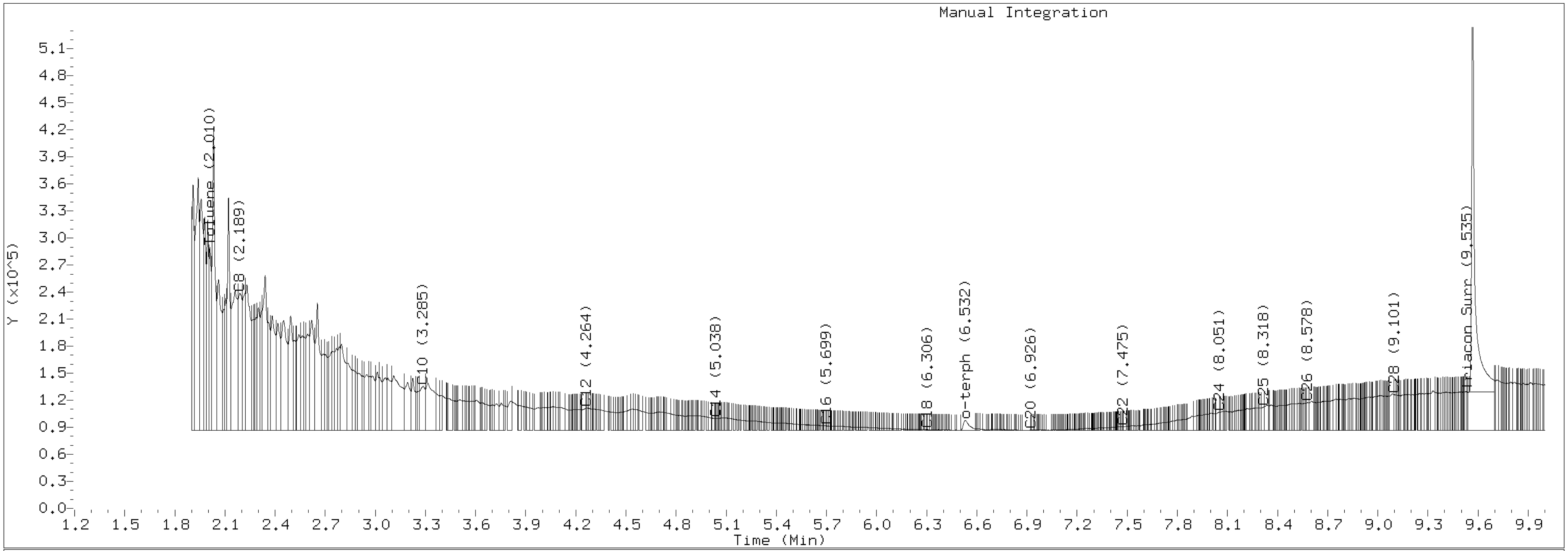
M Indicates the peak was manually integrated

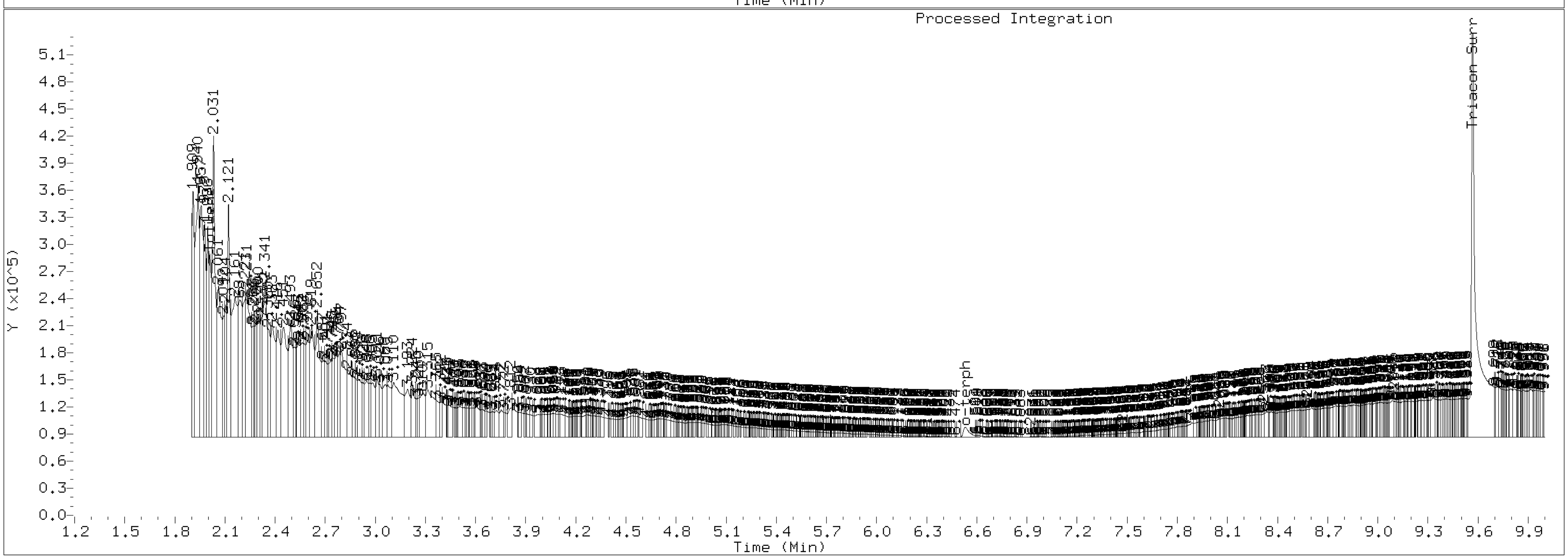
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200408.b/420D0807.D   SEQ-CAL1



TPH Manual Integrations Report
Datafile: FID4A, 20200408.b/420D0807.D Injection: 08-APR-2020 10:14
Lab ID:SEQ-CAL1





Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0808.D

Page 1

Date : 08-APR-2020 10:33

Client ID:

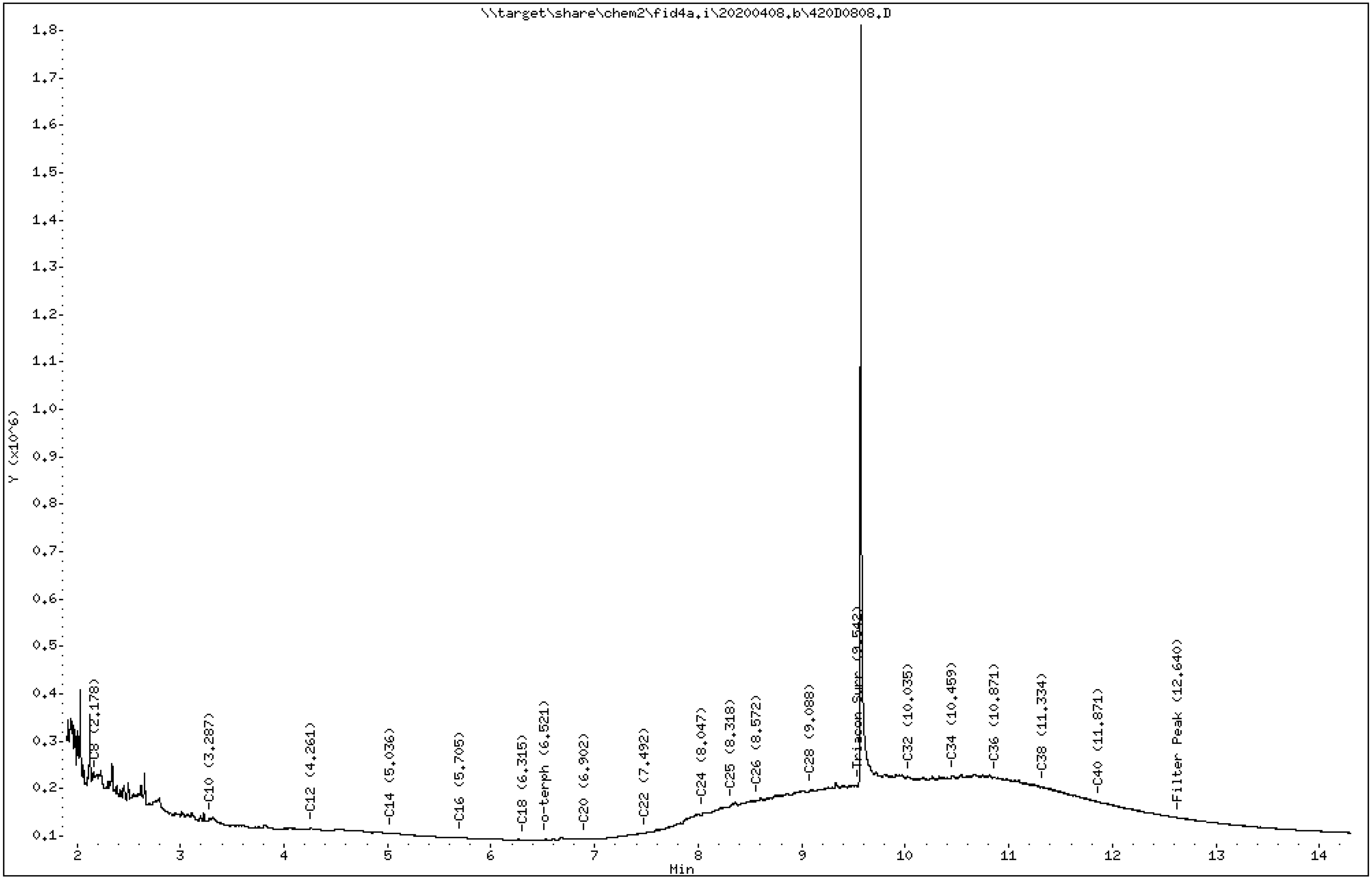
Instrument: fid4a.i

Sample Info: SEQ-CAL2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0808.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL2
Client ID:
Injection: 08-APR-2020 10:33
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.178	-0.002	134647	73580	WATPHD	(C12-C24)	2623184	16.5
C10	3.287	-0.002	46105	122146	WATPHM	(C24-C38)	21976708	165.7
C12	4.261	-0.002	24803	7411	AK102	(C10-C25)	4928461	25.2
C14	5.036	-0.002	13595	4064	AK103	(C25-C36)	18150509	247.9
C16	5.705	0.002	4392	1091	OR.DIES	(C10-C28)	9615128	49.1
C18	6.315	0.001	704	324				
C20	6.902	-0.002	1947	564	JET-A	(C10-C18)	2725859	16.8
C22	7.492	0.008	15580	19522				
C24	8.047	0.001	58155	84697				
C25	8.318	-0.001	74518	58671				
C26	8.572	-0.012	84650	75814				
C28	9.088	-0.006	107472	173683				
C32	10.035	0.006	132361	33044				
C34	10.459	0.002	134858	26944				
Filter Peak	12.640	-0.003	47344	30546	CREOSOT	(C12-C22)	1399069	33.9
C36	10.871	-0.001	131911	72256				
C38	11.334	0.004	111289	44355				
C40	11.871	-0.009	81830	69040				
o-terph	6.521	-0.005	2000	1847				
Triacon Surr	9.571	-0.027	1605783	1635426	NAS DIES	(C10-C24)	4280523	21.9

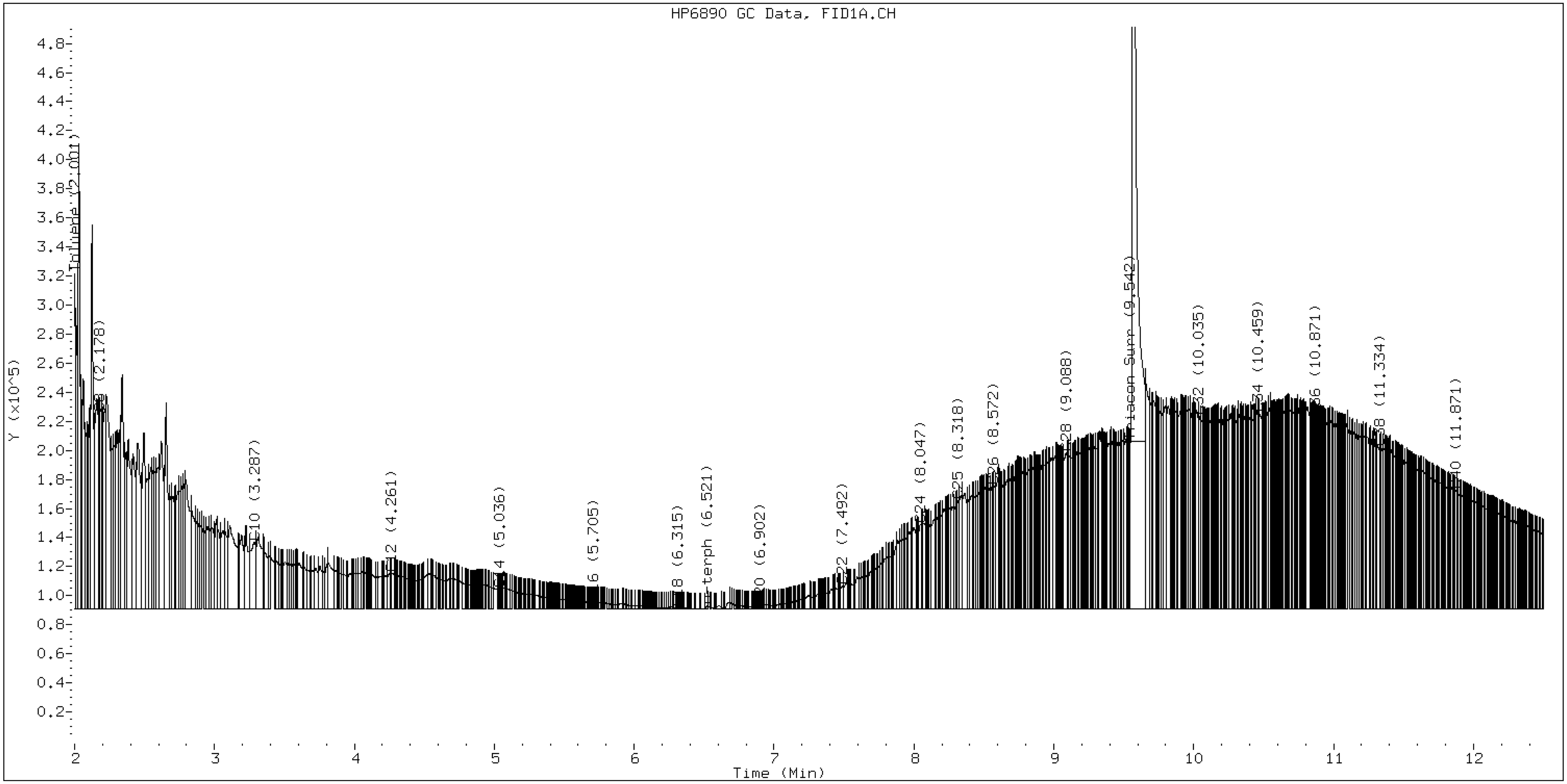
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount	
o-Terphenyl	1847	0.0	
Triacontane	1635426	9.2	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200408.b/420D0808.D SEQ-CAL2



TPH Manual Integrations Report
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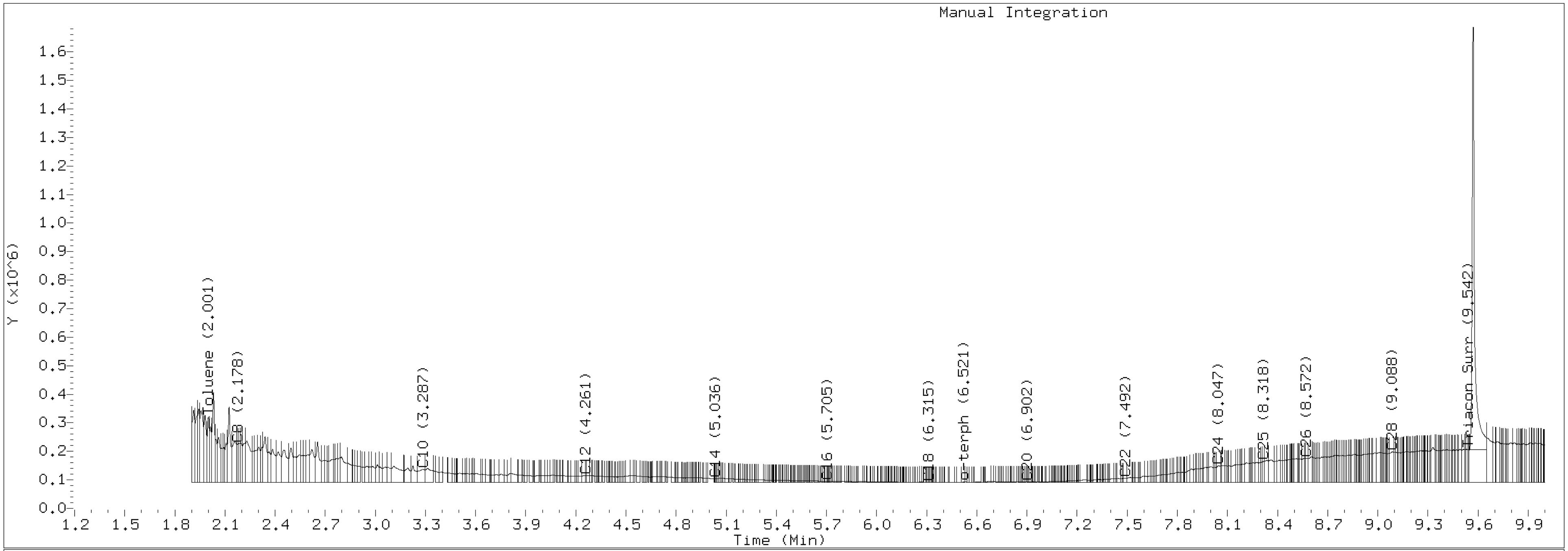
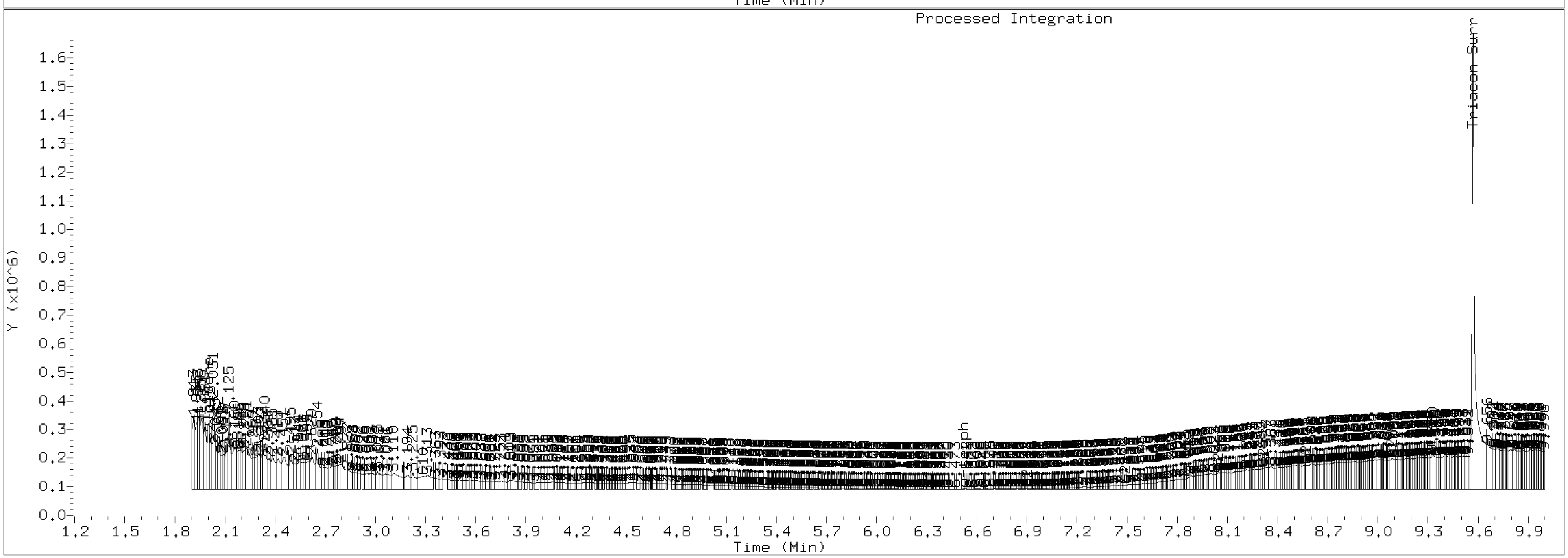
Lab ID:SEQ-CAL2





Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0809.D

Date : 08-APR-2020 10:53

Client ID:

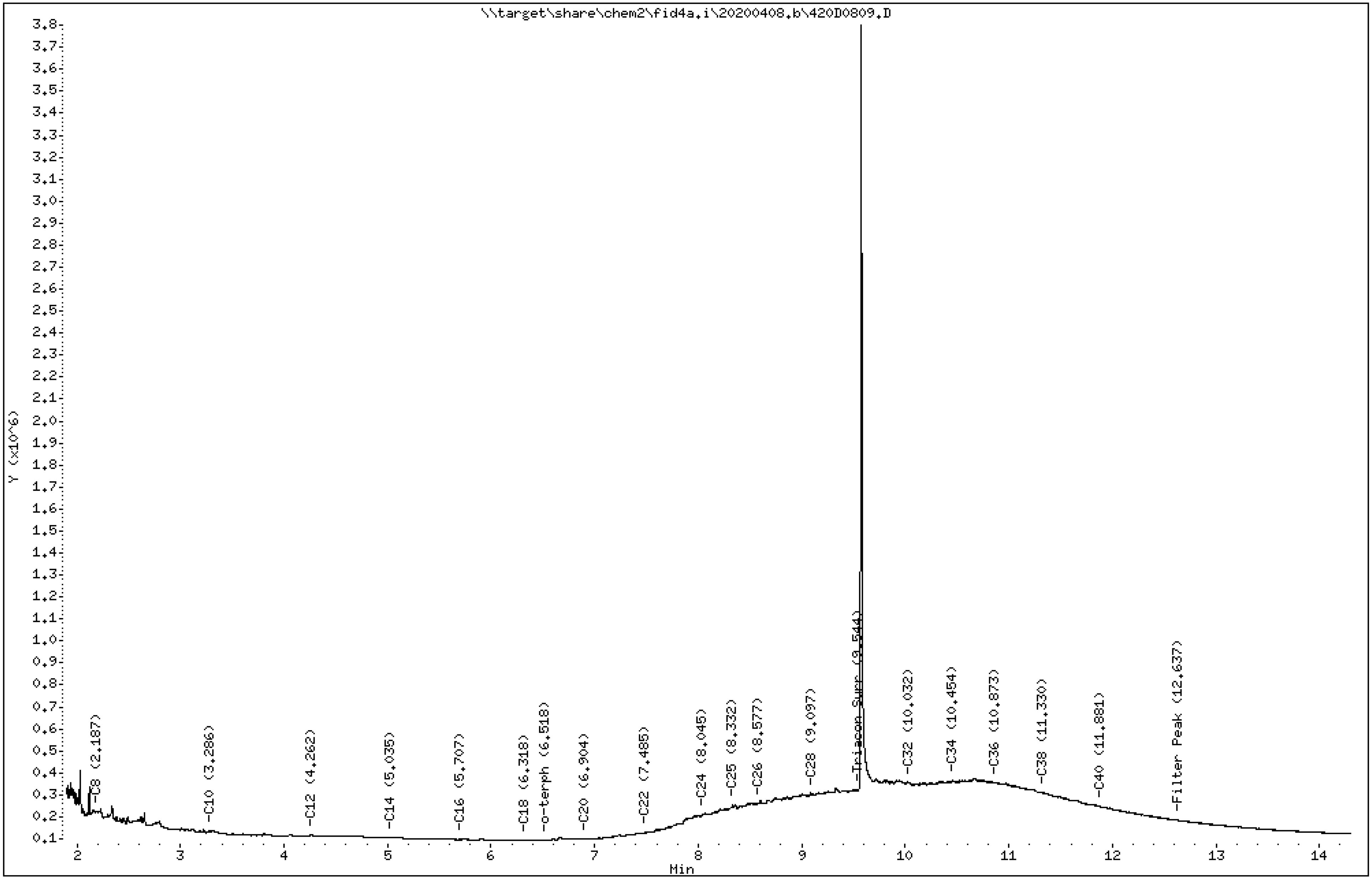
Instrument: fid4a.i

Sample Info: SEQ-CAL3

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0809.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL3
Client ID:
Injection: 08-APR-2020 10:53
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.187	0.008	132882	207304	WATPHD	(C12-C24)	4342009	27.3
C10	3.286	-0.003	42399	113652	WATPHM	(C24-C38)	43844245	330.6
C12	4.262	-0.001	22449	12283	AK102	(C10-C25)	7087402	36.3
C14	5.035	-0.002	11190	3340	AK103	(C25-C36)	36073165	492.8
C16	5.707	0.004	3267	2527	OR.DIES	(C10-C28)	16362271	83.5
C18	6.318	0.004	681	133				
C20	6.904	0.000	6652	3976	JET-A	(C10-C18)	2369101	14.6
C22	7.485	0.002	34909	34936				
C24	8.045	-0.001	120276	161719				
C25	8.332	0.013	159437	386100				
C26	8.577	-0.007	169330	100501				
C28	9.097	0.003	209523	62632				
C32	10.032	0.003	261757	91098				
C34	10.454	-0.003	275210	390226				
Filter Peak	12.637	-0.006	90381	62764	CREOSOT	(C12-C22)	1706405	41.4
C36	10.873	0.002	261055	143153				
C38	11.330	0.000	214958	53639				
C40	11.881	0.001	152861	45740				
o-terph	6.518	-0.007	2459	1835				
Triacon Surr	9.577	-0.022	3480038	3443389	NAS DIES	(C10-C24)	5836700	29.9

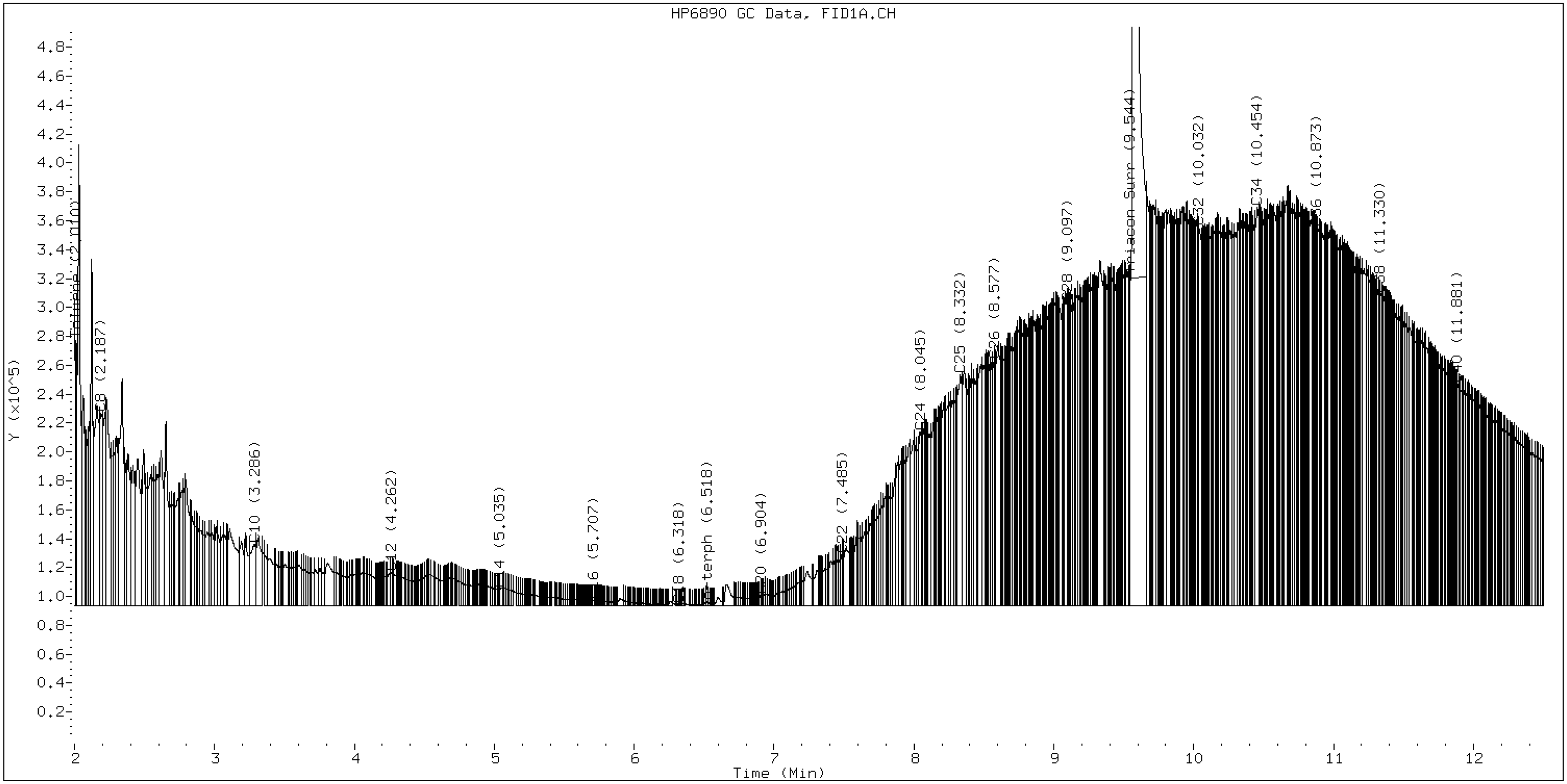
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount	
o-Terphenyl	1835	0.0	
Triacontane	3443389	19.3	M

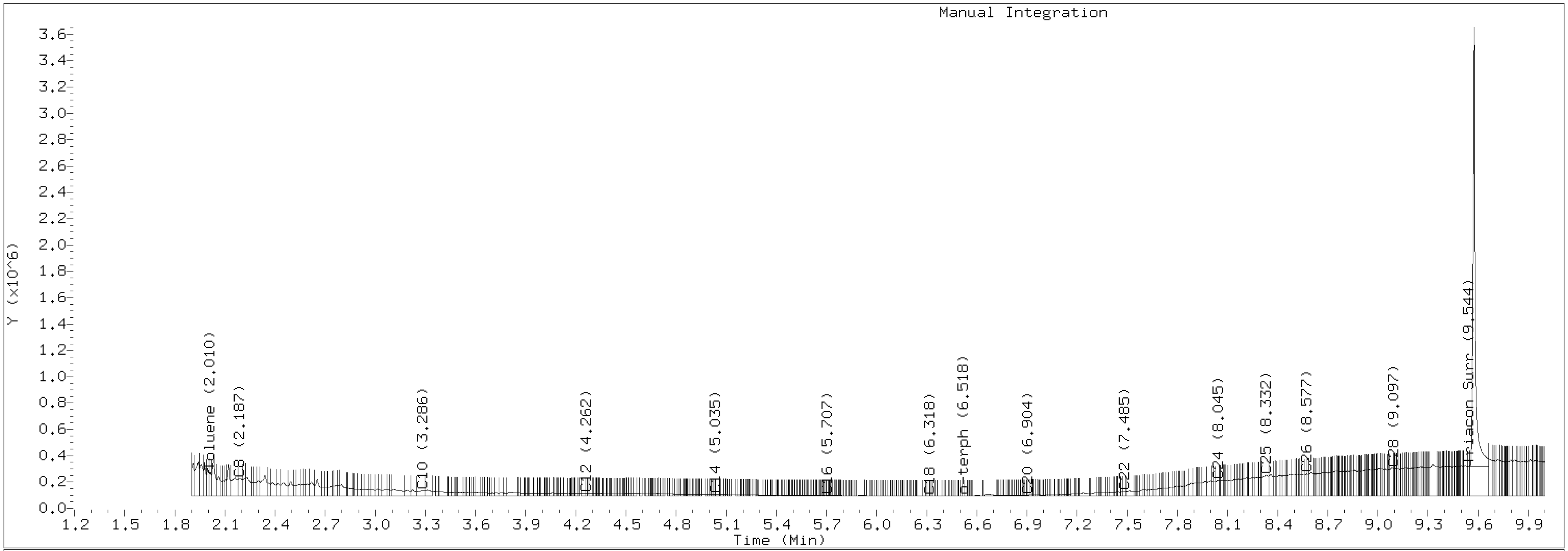
M Indicates the peak was manually integrated

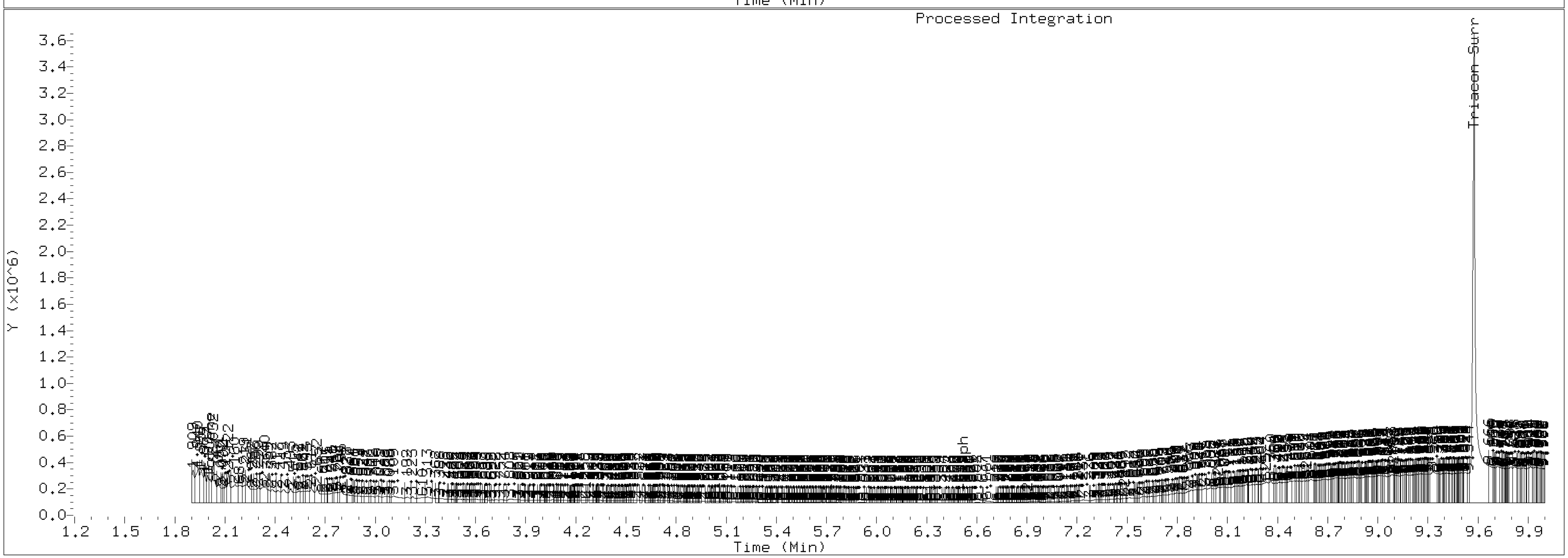
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200408.b/420D0809.D SEQ-CAL3



TPH Manual Integrations Report
Datafile: FID4A, 20200408.b/420D0809.D Injection: 08-APR-2020 10:53
Lab ID:SEQ-CAL3





Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0810.D

Page 1

Date : 08-APR-2020 11:12

Client ID:

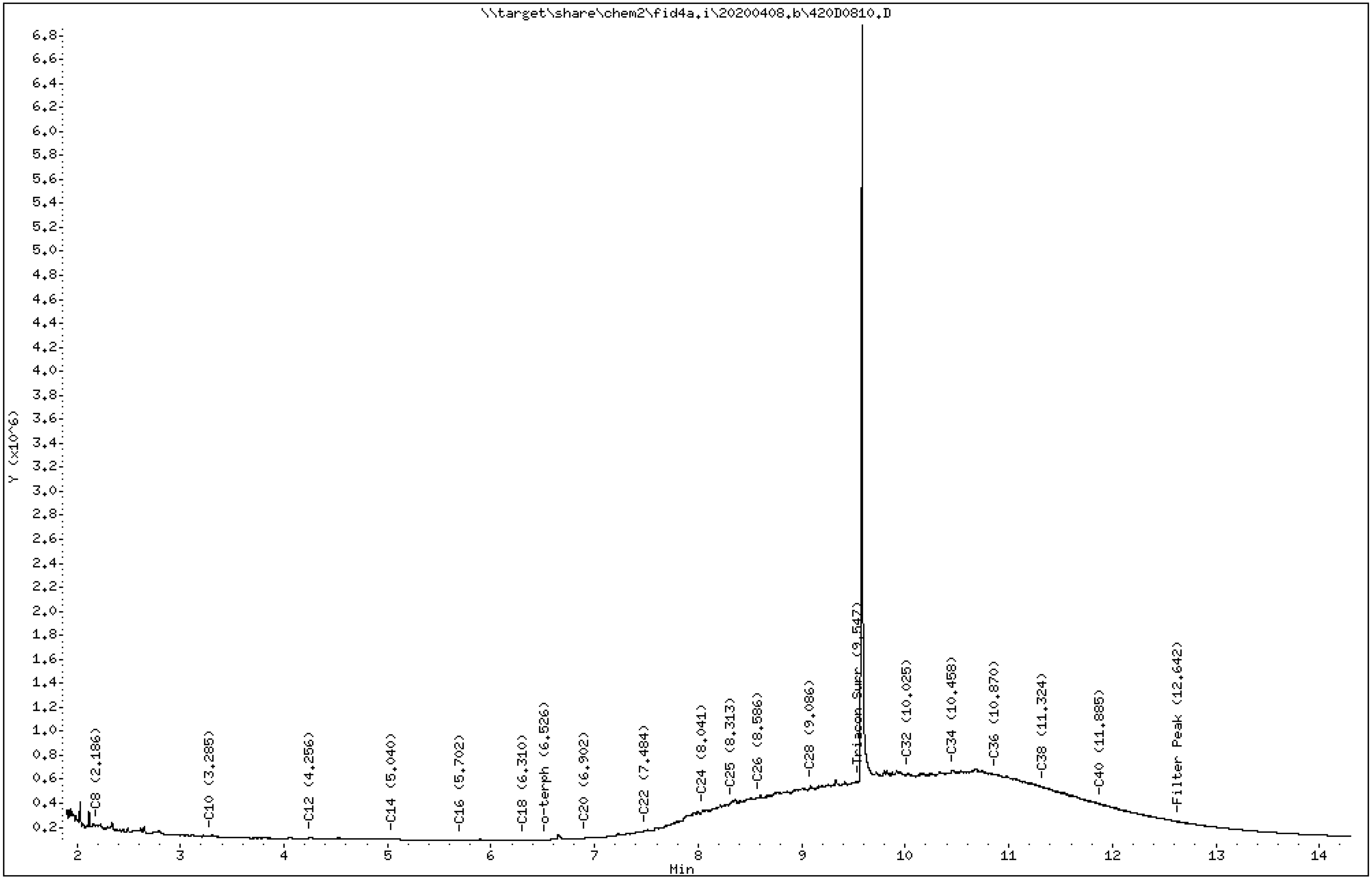
Instrument: fid4a.i

Sample Info: SEQ-CAL4

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0810.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL4
Client ID:
Injection: 08-APR-2020 11:12
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.186	0.006	128234	148626	WATPHD	(C12-C24)	7988871	50.1
C10	3.285	-0.004	38172	74427	WATPHM	(C24-C38)	91762086	691.9
C12	4.256	-0.006	19290	11388	AK102	(C10-C25)	11765512	60.2
C14	5.040	0.003	8973	3968	AK103	(C25-C36)	75818758	1035.7
C16	5.702	-0.001	2111	1115	OR.DIES	(C10-C28)	31382092	160.1
C18	6.310	-0.004	1425	541				
C20	6.902	-0.002	17908	16066	JET-A	(C10-C18)	1797246	11.1
C22	7.484	0.001	76596	83679				
C24	8.041	-0.004	252638	326752				
C25	8.313	-0.005	310545	242222				
C26	8.586	0.003	355023	176377				
C28	9.086	-0.007	458742	774018				
C32	10.025	-0.004	563176	363288				
C34	10.458	0.001	584411	838839				
Filter Peak	12.642	-0.001	154787	92080	CREOSOT	(C12-C22)	2517795	61.1
C36	10.870	-0.001	551148	355915				
C38	11.324	-0.006	444543	374976				
C40	11.885	0.005	302889	255171				
o-terph	6.526	0.001	3457	1149				
Triacon Surr	9.585	-0.014	6299099	7009097	NAS DIES	(C10-C24)	9175138	47.0

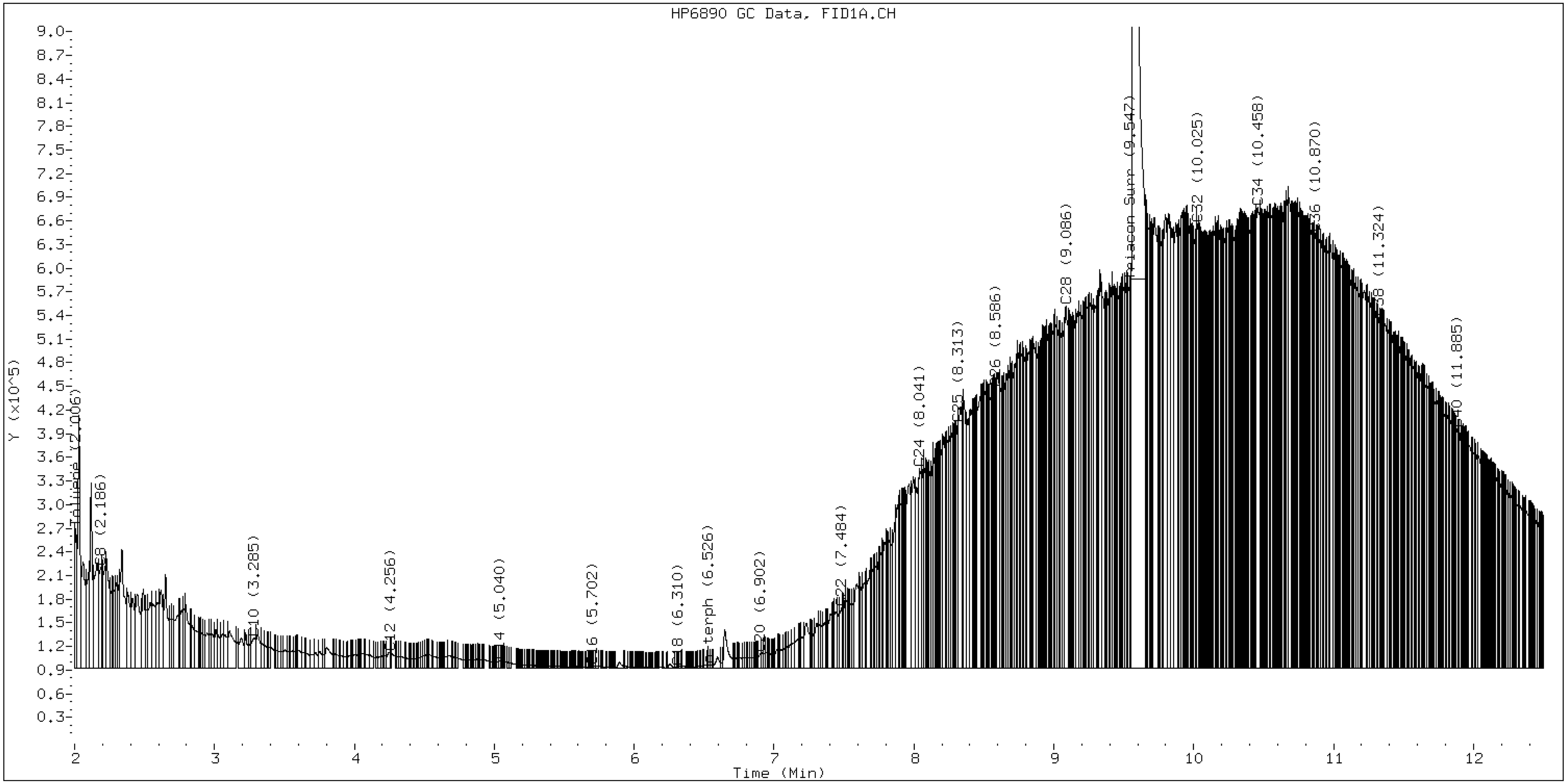
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount	
o-Terphenyl	1149	0.0	
Triacontane	7009097	39.4	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

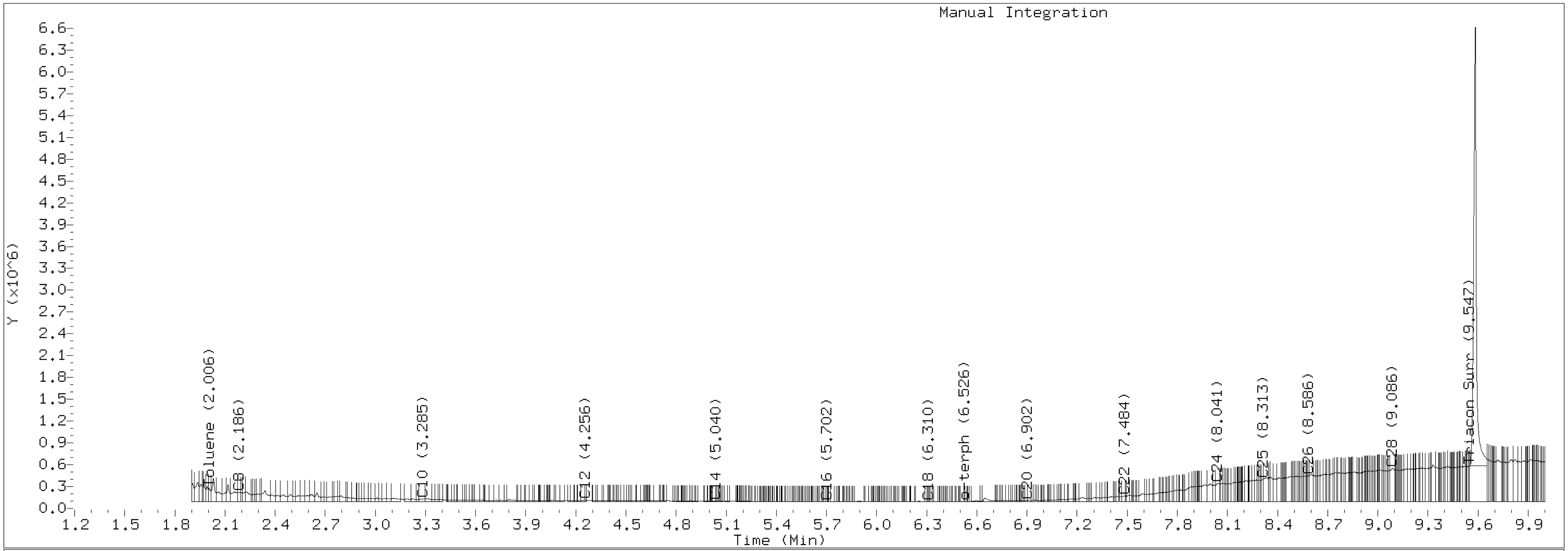
Datafile: FID4A, 20200408.b/420D0810.D SEQ-CAL4

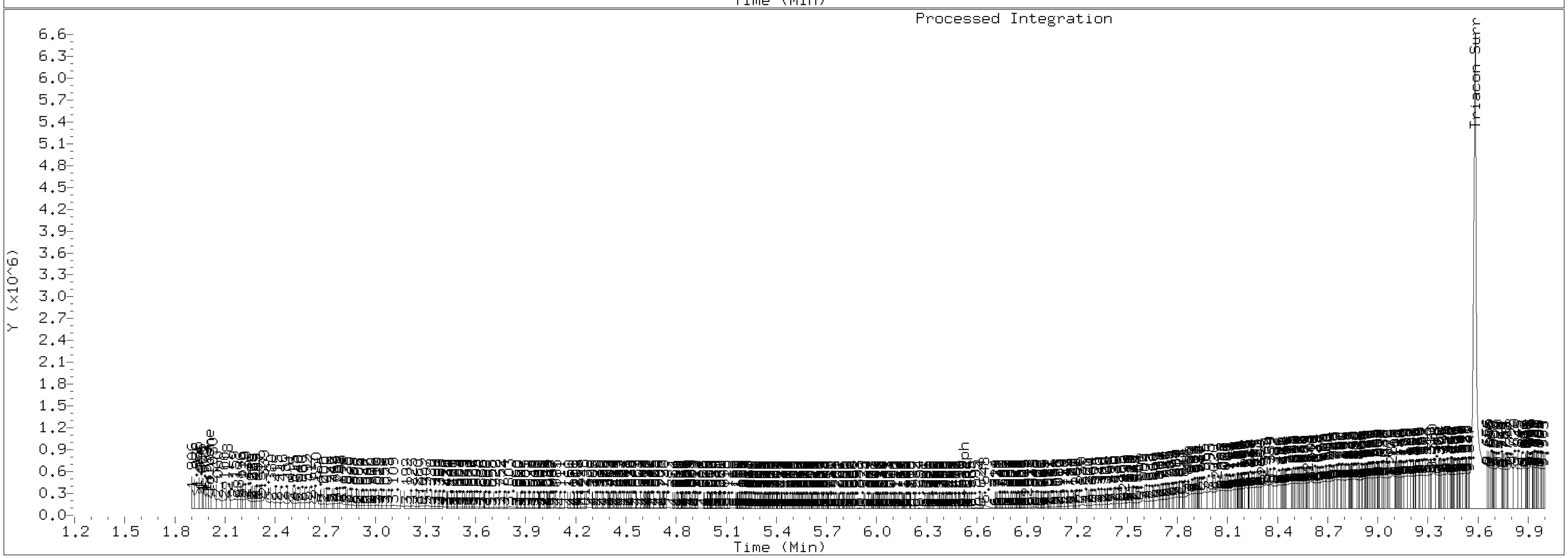


TPH Manual Integrations Report

Datafile: FID4A, 20200408.b/420D0810.D Injection: 08-APR-2020 11:12

Lab ID:SEQ-CAL4





Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0811.D

Page 1

Date : 08-APR-2020 11:32

Client ID:

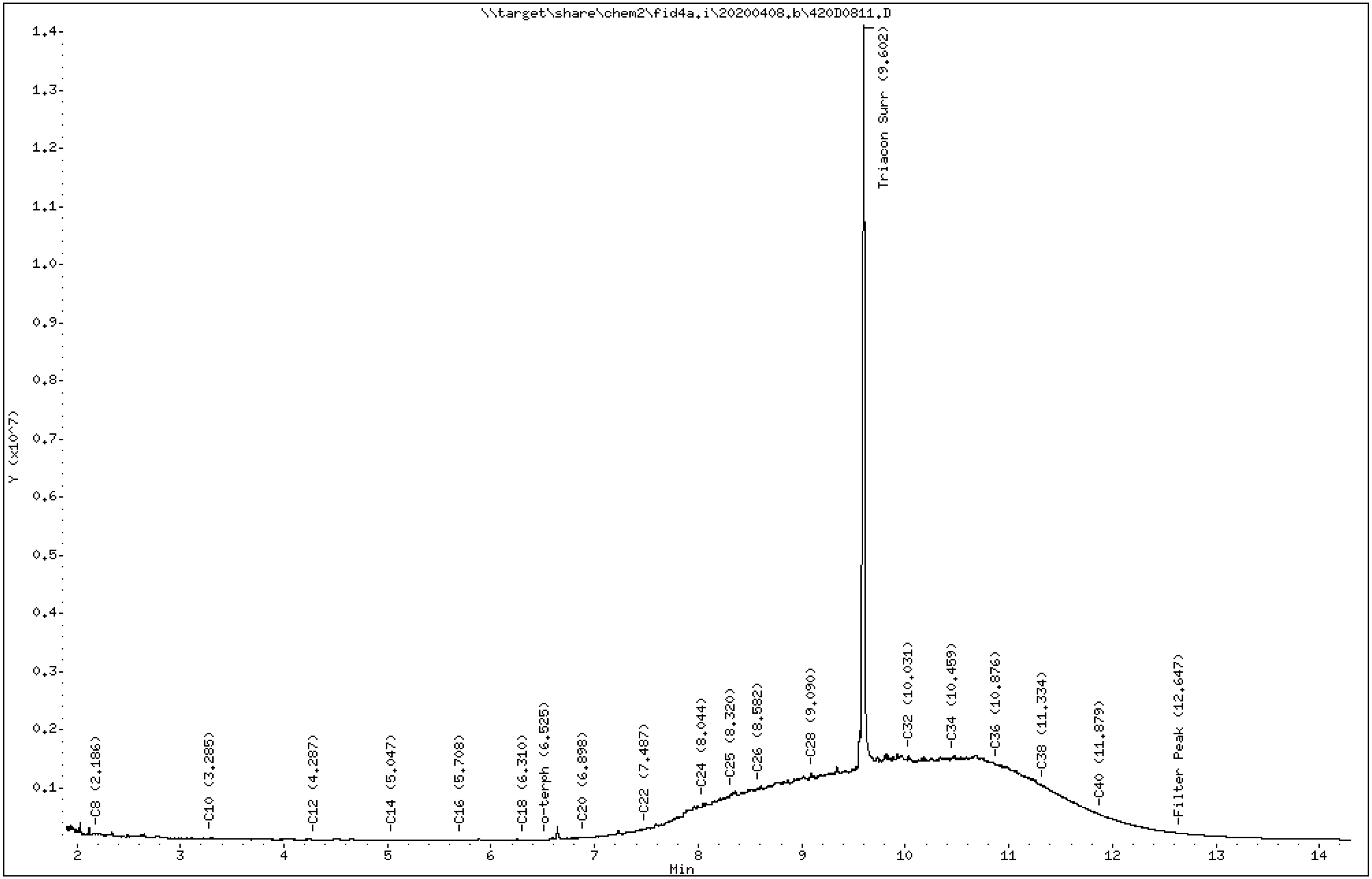
Instrument: fid4a.i

Sample Info: SEQ-CAL5

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0811.D	ARI ID: SEQ-CAL5
Method: 20200408.b\FID4TPH.m	Client ID:
Instrument: fid4a.i, CTO	Injection: 08-APR-2020 11:32
Report Date: 04/20/2020	Dilution Factor: 1
Macro: 09-SEP-2019	RT Std: 419H1603.D

Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.186	0.006	113560	125040	WATPHD	(C12-C24)	19771771	124.1
C10	3.285	-0.004	36541	95337	WATPHM	(C24-C38)	227849225	1717.9
C12	4.287	0.024	10394	7178	AK102	(C10-C25)	27372288	140.0
C14	5.047	0.009	4777	3830	AK103	(C25-C36)	191958289	2622.1
C16	5.708	0.004	6173	14774	OR.DIES	(C10-C28)	76383536	389.7
C18	6.310	-0.004	7574	8190				
C20	6.898	-0.006	50377	68943	JET-A	(C10-C18)	1465725	9.0
C22	7.487	0.004	195618	285006				
C24	8.044	-0.002	633495	967446				
C25	8.320	0.002	789714	921627				
C26	8.582	-0.001	892143	574635				
C28	9.090	-0.003	1146036	1667580				
C32	10.031	0.002	1460342	1849029				
C34	10.459	0.001	1442041	715490				
Filter Peak	12.647	0.004	121440	172075	CREOSOT	(C12-C22)	5678297	137.7
C36	10.876	0.004	1305970	520950				
C38	11.334	0.004	930225	554909				
C40	11.879	-0.001	446132	330870				
o-terph	6.525	-0.001	10861	10718				
Triacon Surr	9.602	0.004	12555669	16658090	NAS DIES	(C10-C24)	20733131	106.2

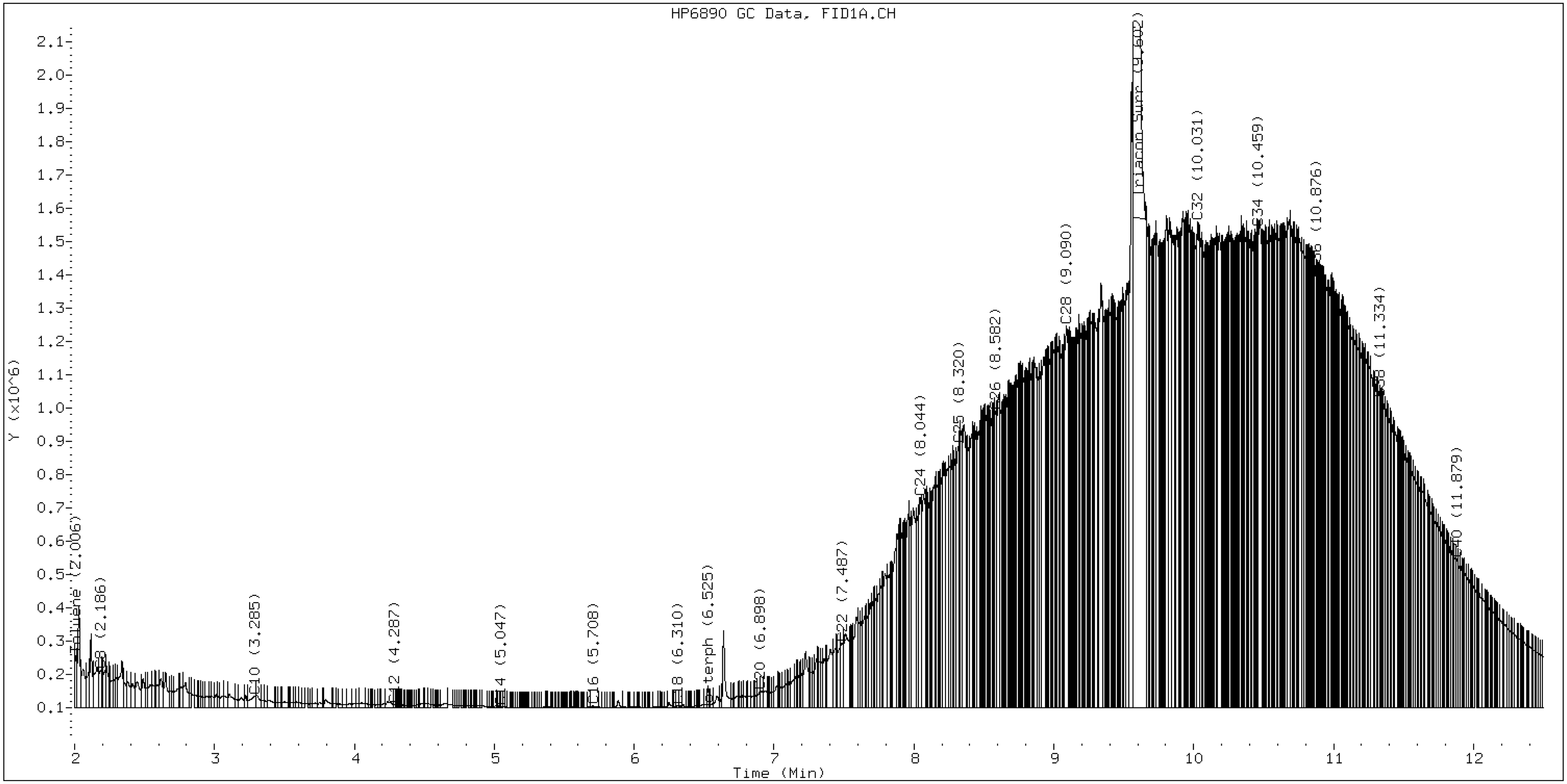
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount	
o-Terphenyl	10718	0.1	
Triacontane	16658090	93.6	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200408.b/420D0811.D SEQ-CAL5



TPH Manual Integrations Report
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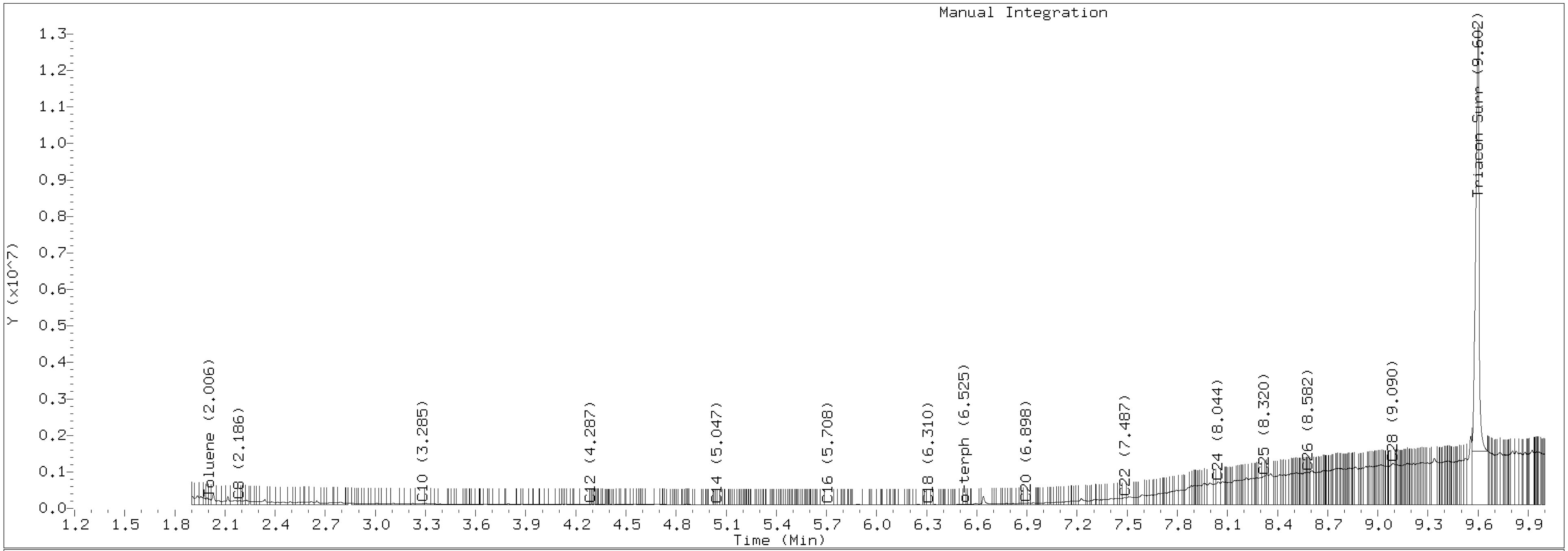
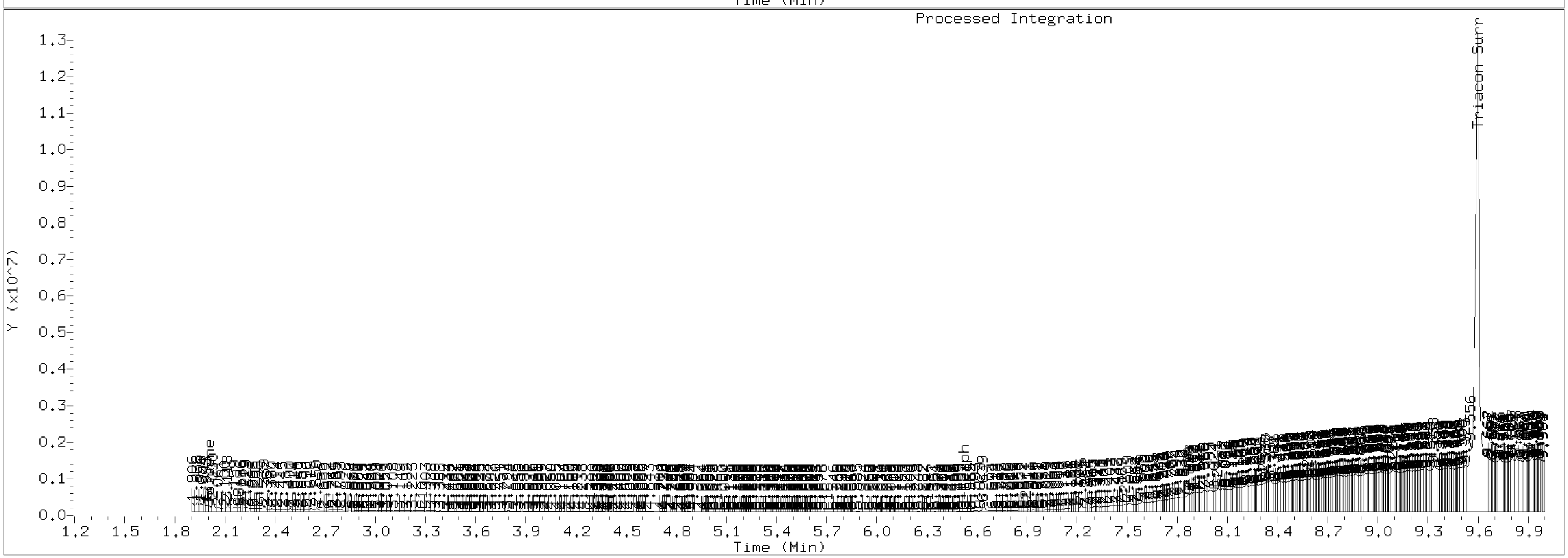
Lab ID:SEQ-CAL5





Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0812.D

Date : 08-APR-2020 11:51

Client ID:

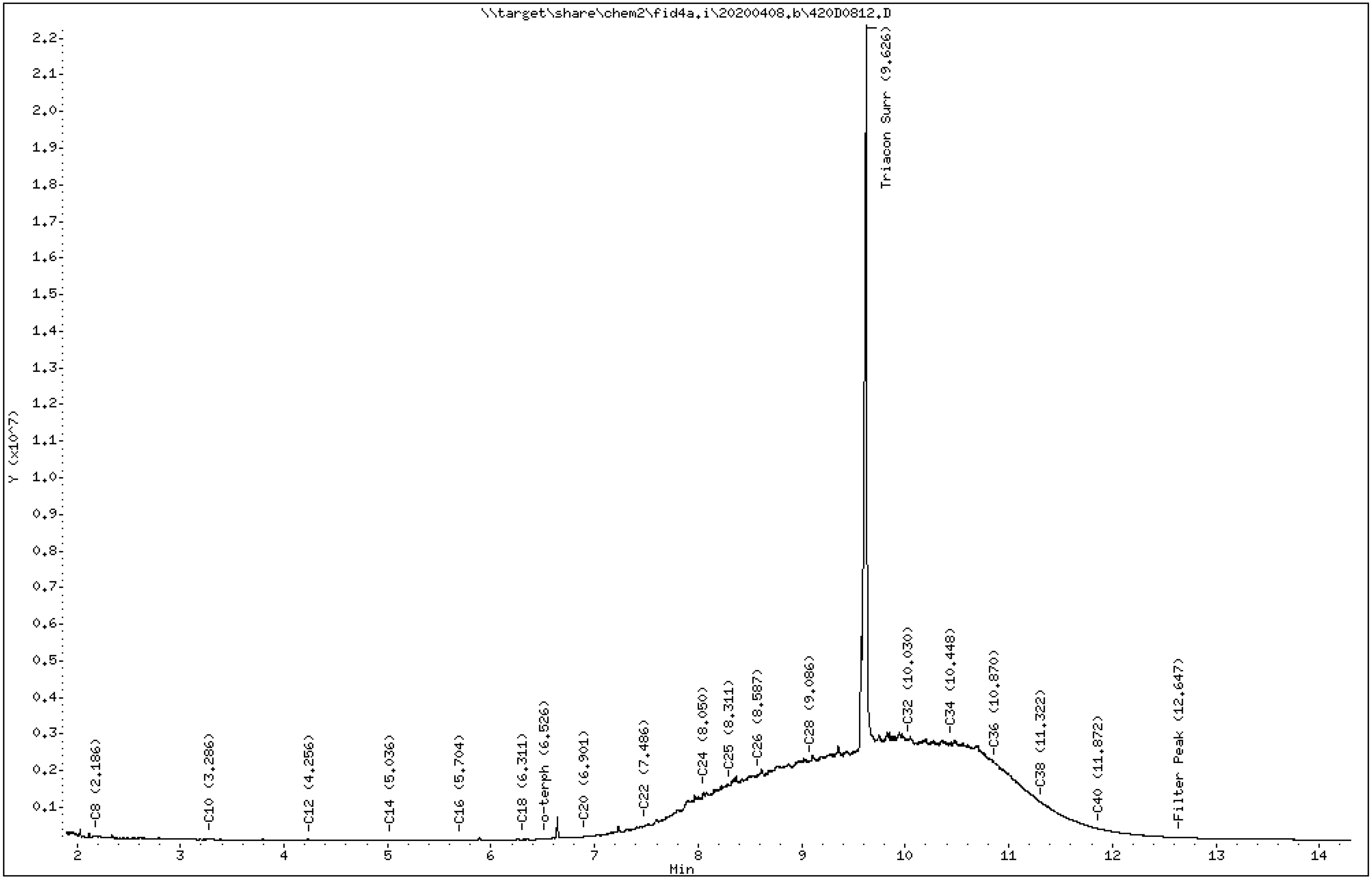
Instrument: fid4a.i

Sample Info: SEQ-CAL6

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0812.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL6
Client ID:
Injection: 08-APR-2020 11:51
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.186	0.006	104064	109223	WATPHD	(C12-C24)	40416857	253.7
C10	3.286	-0.003	36956	80325	WATPHM	(C24-C38)	424850865	3203.2
C12	4.256	-0.007	12507	16346	AK102	(C10-C25)	54410917	278.3
C14	5.036	-0.001	8003	15931	AK103	(C25-C36)	374151503	5110.9
C16	5.704	0.001	16810	29811	OR.DIES	(C10-C28)	152172505	776.4
C18	6.311	-0.003	24372	26022				
C20	6.901	-0.003	112613	157357	JET-A	(C10-C18)	1722106	10.6
C22	7.486	0.002	399638	286806				
C24	8.050	0.004	1290743	1158755				
C25	8.311	-0.007	1510553	527958				
C26	8.587	0.004	1796919	714430				
C28	9.086	-0.007	2157837	862033				
C32	10.030	0.001	2725510	951638				
C34	10.448	-0.009	2673996	2899255				
Filter Peak	12.647	0.004	73309	79546	CREOSOT	(C12-C22)	11787364	285.8
C36	10.870	-0.002	2091703	1355589				
C38	11.322	-0.008	1014606	947975				
C40	11.872	-0.008	311238	395324				
o-terph	6.526	0.001	31009	30512				
Triacon Surr	9.626	0.028	19358318	32512150	NAS DIES	(C10-C24)	41151308	210.9

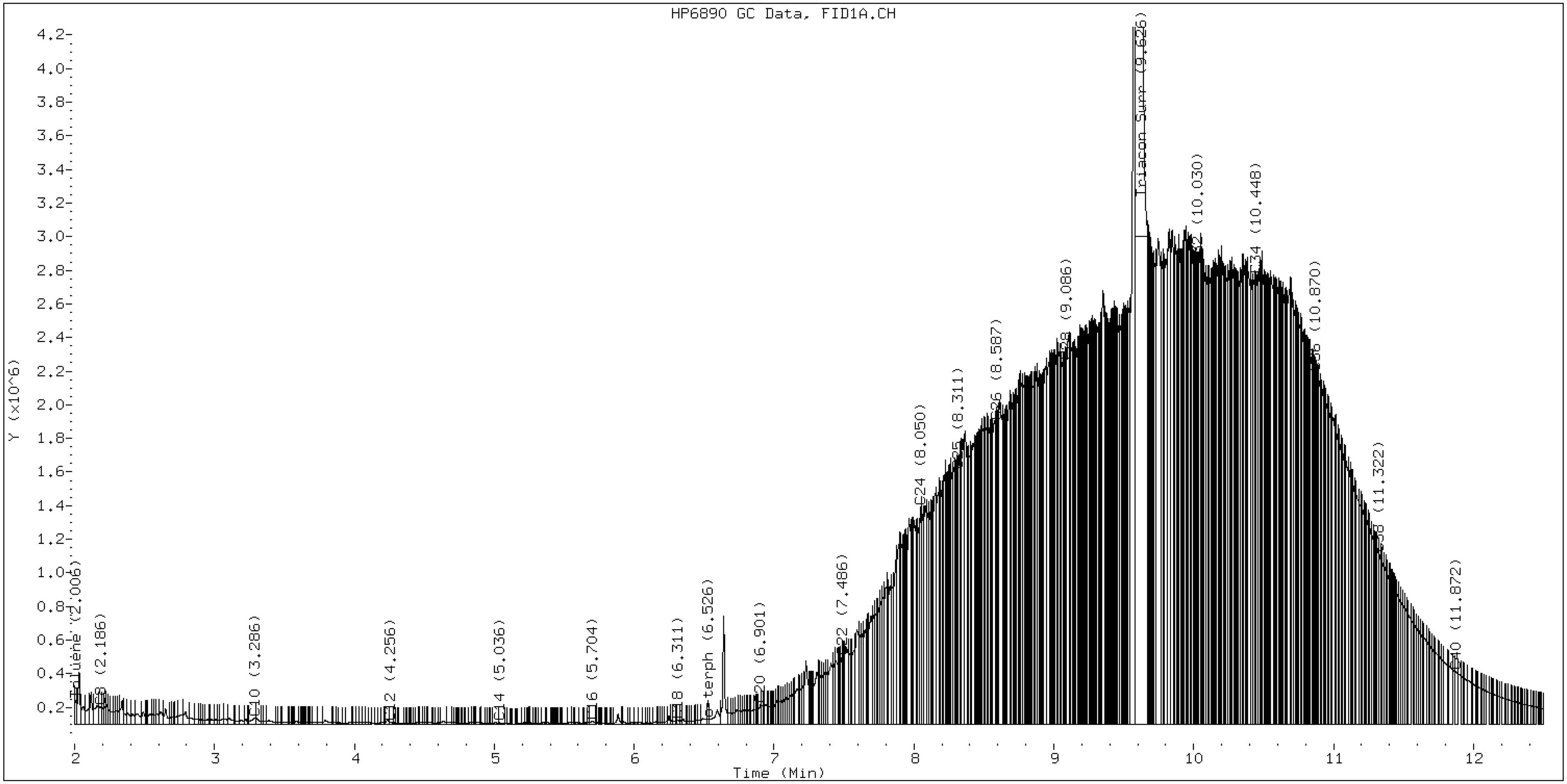
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount	
o-Terphenyl	30512	0.1	
Triacontane	32512150	182.7	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

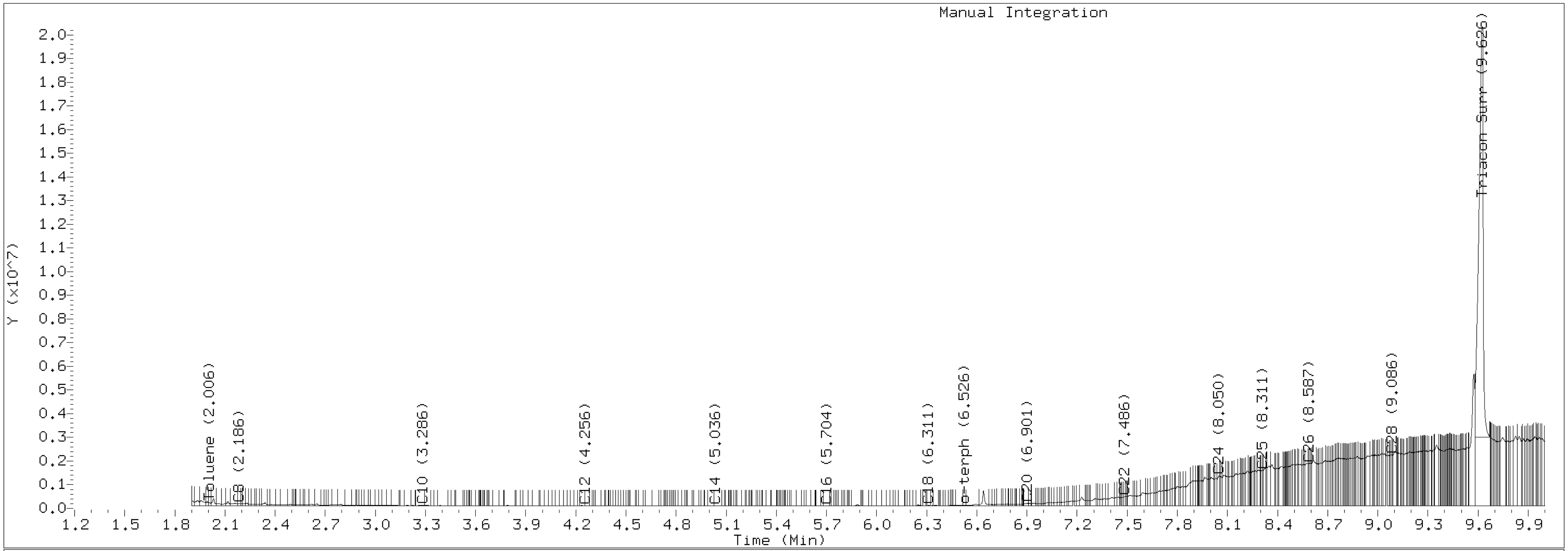
Datafile: FID4A, 20200408.b/420D0812.D SEQ-CAL6

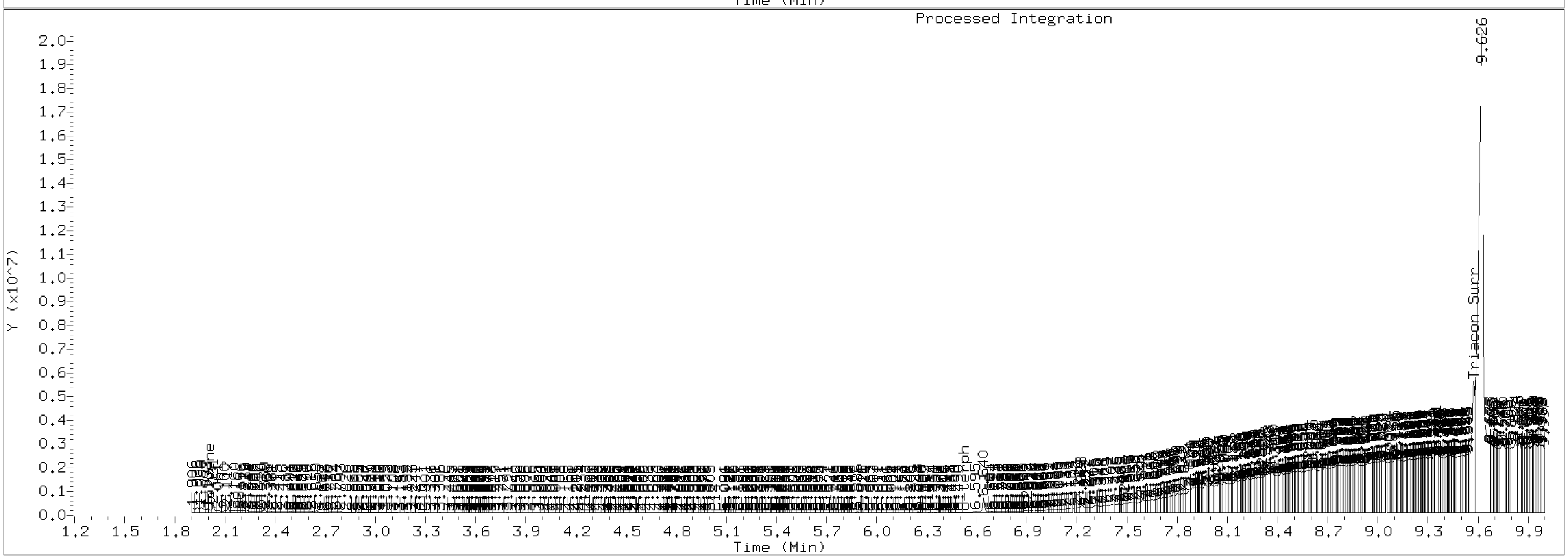


TPH Manual Integrations Report

Datafile: FID4A, 20200408.b/420D0812.D Injection: 08-APR-2020 11:51

Lab ID:SEQ-CAL6





Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIE0162

Instrument: FID4
Calibration ID: DA00022

Printed: 5/20/2020 8:39:25AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIE0162-IBL1	QC		1		H010802			
SIE0162-IBL2	QC		2		I000651			
SIE0162-ICV1	QC		3		I002687			
SIE0162-ICV2	QC		4		H010706			
BIE0305-BLK1	QC		5					
BIE0305-BS1	QC		6					
BIE0305-BSD1	QC		7					
20E0185-01	PH NW (Extractables) low lev	A 02	8				The Boeing Company [Auburn]	
SIE0162-CCV1	QC		9		I002687			
SIE0162-CCV2	QC		10		H010706			
SIE0162-CAL1	QC		11		H011231			
BIE0254-BLK1	QC		12					
BIE0254-BS1	QC		13					
BIE0254-BSD1	QC		14					
20E0096-02	PH NW (Extractables) low lev	A 01	15				The Boeing Company	
20E0096-04	PH NW (Extractables) low lev	A 01	16				The Boeing Company	
20E0096-06	PH NW (Extractables) low lev	A 01	17				The Boeing Company	
20E0096-08	PH NW (Extractables) low lev	A 01	18				The Boeing Company	
20E0096-10	PH NW (Extractables) low lev	A 01	19				The Boeing Company	
20E0096-12	PH NW (Extractables) low lev	A 01	20				The Boeing Company	
20E0096-14	PH NW (Extractables) low lev	A 01	21				The Boeing Company	

Samples Loaded By Date Data Processed By Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIE0162

Instrument: FID4
Calibration ID: DA00022

Printed: 5/20/2020 8:39:25AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
20E0096-16	PH NW (Extractables) low lev	A 01	22				The Boeing Company	
BIE0254-MS1	QC		23					
BIE0254-MSD1	QC		24					
SIE0162-CCV3	QC		25		I002687			
SIE0162-CCV4	QC		26		H010706			
SIE0162-CCV5	QC		27		H011231			
20E0096-18	PH NW (Extractables) low lev	A 01	28				The Boeing Company	
20E0096-20	PH NW (Extractables) low lev	A 01	29				The Boeing Company	
20E0096-22	PH NW (Extractables) low lev	A 01	30				The Boeing Company	
BIE0248-BLK1	QC		31					
BIE0248-BS1	QC		32					
BIE0248-BSD1	QC		33					
20E0096-01	PH NW (Extractables) low lev	A 01	34				The Boeing Company	
20E0096-03	PH NW (Extractables) low lev	A 01	35				The Boeing Company	
20E0096-05	PH NW (Extractables) low lev	A 01	36				The Boeing Company	
20E0096-07	PH NW (Extractables) low lev	A 01	37				The Boeing Company	
20E0096-09	PH NW (Extractables) low lev	A 01	38				The Boeing Company	
SIE0162-CCV6	QC		39		I002687			
SIE0162-CCV7	QC		40		H010706			
SIE0162-CCV8	QC		41		H011231			
20E0096-11	PH NW (Extractables) low lev	A 01	42				The Boeing Company	

Samples Loaded By　　　Date　　　Data Processed By　　　Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIE0162

Instrument: FID4
Calibration ID: DA00022

Printed: 5/20/2020 8:39:25AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
20E0096-13	PH NW (Extractables) low lev	A 01	43				The Boeing Company	
20E0096-15	PH NW (Extractables) low lev	A 01	44				The Boeing Company	
BIE0248-MS1	QC		45					
BIE0248-MSD1	QC		46					
20E0096-17	PH NW (Extractables) low lev	B 01	47				The Boeing Company	
20E0096-19	PH NW (Extractables) low lev	A 01	48				The Boeing Company	
20E0096-21	PH NW (Extractables) low lev	A 01	49				The Boeing Company	
BIE0282-BLK1	QC		50					
BIE0282-BS1	QC		51					
BIE0282-BSD1	QC		52					
20E0151-01	PH NW (Extractables) low lev	F 01	53				The Boeing Company [North Boeing Field]	
20E0160-01	PH NW (Extractables) low lev	C 01	54				Davis Wire Corporation	
SIE0162-CCV9	QC		55		I002687			
SIE0162-CCVA	QC		56		H010706			
SIE0162-CCVB	QC		57		H011231			

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200519.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	19-MAY-2020 06:44	420E1901.D	1	RINSE	
2	19-MAY-2020 07:03	420E1902.D	1	RINSE	
3	19-MAY-2020 07:23	420E1903.D	1	SIE0162-IBL1	
4	19-MAY-2020 07:42	420E1904.D	1	SIE0162-IBL2	
5	19-MAY-2020 08:02	420E1905.D	1	SIE0162-ICV1	
6	19-MAY-2020 08:21	420E1906.D	1	SIE0162-ICV2	
7	19-MAY-2020 08:41	420E1907.D	1	BIE0305-BLK1	
8	19-MAY-2020 09:00	420E1908.D	1	BIE0305-BS1	
9	19-MAY-2020 09:20	420E1909.D	1	BIE0305-BSD1	
10	19-MAY-2020 09:39	420E1910.D	1	20E0185-01	
11	19-MAY-2020 09:59	420E1911.D	1	SIE0162-CCV1	
12	19-MAY-2020 10:19	420E1912.D	1	SIE0162-CCV2	
13	19-MAY-2020 11:05	420E1913.D	1	SIE0162-CAL1	
14	19-MAY-2020 11:24	420E1914.D	1	BIE0254-BLK1	
15	19-MAY-2020 11:44	420E1915.D	1	BIE0254-BS1	
16	19-MAY-2020 12:03	420E1916.D	1	BIE0254-BSD1	
17	19-MAY-2020 12:23	420E1917.D	1	20E0096-02	
18	19-MAY-2020 12:43	420E1918.D	1	20E0096-04	
19	19-MAY-2020 13:02	420E1919.D	1	20E0096-06	
20	19-MAY-2020 13:22	420E1920.D	1	20E0096-08	
21	19-MAY-2020 13:42	420E1921.D	1	20E0096-10	
22	19-MAY-2020 14:01	420E1922.D	1	20E0096-12	
23	19-MAY-2020 14:21	420E1923.D	1	20E0096-14	
24	19-MAY-2020 14:41	420E1924.D	1	20E0096-16	
25	19-MAY-2020 15:00	420E1925.D	1	BIE0254-MS1	
26	19-MAY-2020 15:20	420E1926.D	1	BIE0254-MSD1	
27	19-MAY-2020 15:40	420E1927.D	1	SIE0162-CCV3	
28	19-MAY-2020 15:59	420E1928.D	1	SIE0162-CCV4	
29	19-MAY-2020 16:19	420E1929.D	1	SIE0162-CCV5	
30	19-MAY-2020 16:39	420E1930.D	1	20E0096-18	
31	19-MAY-2020 16:58	420E1931.D	1	20E0096-20	
32	19-MAY-2020 17:18	420E1932.D	1	20E0096-22	
33	19-MAY-2020 17:37	420E1933.D	1	BIE0248-BLK1	
34	19-MAY-2020 17:57	420E1934.D	1	BIE0248-BS1	
35	19-MAY-2020 18:16	420E1935.D	1	BIE0248-BSD1	
36	19-MAY-2020 18:36	420E1936.D	1	20E0096-01	
37	19-MAY-2020 18:55	420E1937.D	1	20E0096-03	
38	19-MAY-2020 19:15	420E1938.D	1	20E0096-05	
39	19-MAY-2020 19:34	420E1939.D	1	20E0096-07	
40	19-MAY-2020 19:54	420E1940.D	1	20E0096-09	
41	19-MAY-2020 20:13	420E1941.D	1	SIE0162-CCV6	
42	19-MAY-2020 20:33	420E1942.D	1	SIE0162-CCV7	
43	19-MAY-2020 20:52	420E1943.D	1	SIE0162-CCV8	
44	19-MAY-2020 21:12	420E1944.D	1	20E0096-11	
45	19-MAY-2020 21:31	420E1945.D	1	20E0096-13	
46	19-MAY-2020 21:50	420E1946.D	1	20E0096-15	
47	19-MAY-2020 22:10	420E1947.D	1	BIE0248-MS1	
48	19-MAY-2020 22:29	420E1948.D	1	BIE0248-MSD1	
49	19-MAY-2020 22:49	420E1949.D	1	20E0096-17	
50	20-MAY-2020 23:08	420E1950.D	1	20E0096-19	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200519.b

	Inject Date/Time	Filename	DF	LabID	ClientID
51	20-MAY-2020 23:28	420E1951.D	1	20E0096-21	
52	20-MAY-2020 23:47	420E1952.D	1	BIE0282-BLK1	
53	20-MAY-2020 00:07	420E1953.D	1	BIE0282-BS1	
54	20-MAY-2020 00:26	420E1954.D	1	BIE0282-BSD1	
55	20-MAY-2020 00:46	420E1955.D	1	20E0151-01	
56	20-MAY-2020 01:05	420E1956.D	1	20E0160-01	
57	20-MAY-2020 01:25	420E1957.D	1	SIE0162-CCV9	
58	20-MAY-2020 01:44	420E1958.D	1	SIE0162-CCVA	
59	20-MAY-2020 02:03	420E1959.D	1	SIE0162-CCVB	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200519.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 19-MAY-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0644	420E1901.D	RINSE		1	o-terph,
0703	420E1902.D	RINSE		1	Triacon Surr,
0723	420E1903.D	SIE0162-IBL1		1	NO MANUAL INTEGRATION
0742	420E1904.D	SIE0162-IBL2		1	NO MANUAL INTEGRATION
0802	420E1905.D	SIE0162-ICV1		1	o-terph,
0821	420E1906.D	SIE0162-ICV2		1	Triacon Surr,
0841	420E1907.D	BIE0305-BLK1		1	NO MANUAL INTEGRATION
0900	420E1908.D	BIE0305-BS1		1	o-terph,
0920	420E1909.D	BIE0305-BSD1		1	o-terph,
0939	420E1910.D	20E0185-01		1	NO MANUAL INTEGRATION
0959	420E1911.D	SIE0162-CCV1		1	o-terph,
1019	420E1912.D	SIE0162-CCV2		1	Triacon Surr,
1105	420E1913.D	SIE0162-CAL1		1	NO MANUAL INTEGRATION
1124	420E1914.D	BIE0254-BLK1		1	NO MANUAL INTEGRATION
1144	420E1915.D	BIE0254-BS1		1	o-terph,
1203	420E1916.D	BIE0254-BSD1		1	o-terph,
1223	420E1917.D	20E0096-02		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200519.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1243	420E1918.D	20E0096-04		1	NO MANUAL INTEGRATION
1302	420E1919.D	20E0096-06		1	NO MANUAL INTEGRATION
1322	420E1920.D	20E0096-08		1	NO MANUAL INTEGRATION
1342	420E1921.D	20E0096-10		1	NO MANUAL INTEGRATION
1401	420E1922.D	20E0096-12		1	o-terph,
1421	420E1923.D	20E0096-14		1	NO MANUAL INTEGRATION
1441	420E1924.D	20E0096-16		1	NO MANUAL INTEGRATION
1500	420E1925.D	BIE0254-MS1		1	o-terph,
1520	420E1926.D	BIE0254-MSD1		1	o-terph,
1540	420E1927.D	SIE0162-CCV3		1	o-terph,
1559	420E1928.D	SIE0162-CCV4		1	Triacon Surr,
1619	420E1929.D	SIE0162-CCV5		1	NO MANUAL INTEGRATION
1639	420E1930.D	20E0096-18		1	NO MANUAL INTEGRATION
1658	420E1931.D	20E0096-20		1	NO MANUAL INTEGRATION
1718	420E1932.D	20E0096-22		1	NO MANUAL INTEGRATION
1737	420E1933.D	BIE0248-BLK1		1	NO MANUAL INTEGRATION
1757	420E1934.D	BIE0248-BS1		1	o-terph,
1816	420E1935.D	BIE0248-BSD1		1	o-terph,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200519.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1836	420E1936.D	20E0096-01		1	NO MANUAL INTEGRATION
1855	420E1937.D	20E0096-03		1	NO MANUAL INTEGRATION
1915	420E1938.D	20E0096-05		1	o-terph,
1934	420E1939.D	20E0096-07		1	NO MANUAL INTEGRATION
1954	420E1940.D	20E0096-09		1	NO MANUAL INTEGRATION
2013	420E1941.D	SIE0162-CCV6		1	o-terph,
2033	420E1942.D	SIE0162-CCV7		1	Triacon Surr,
2052	420E1943.D	SIE0162-CCV8		1	NO MANUAL INTEGRATION
2112	420E1944.D	20E0096-11		1	o-terph,
2131	420E1945.D	20E0096-13		1	NO MANUAL INTEGRATION
2150	420E1946.D	20E0096-15		1	NO MANUAL INTEGRATION
2210	420E1947.D	BIE0248-MS1		1	o-terph,
2229	420E1948.D	BIE0248-MSD1		1	o-terph,
2249	420E1949.D	20E0096-17		1	NO MANUAL INTEGRATION
2308	420E1950.D	20E0096-19		1	o-terph,
2328	420E1951.D	20E0096-21		1	NO MANUAL INTEGRATION
2347	420E1952.D	BIE0282-BLK1		1	NO MANUAL INTEGRATION
0007	420E1953.D	BIE0282-BS1		1	o-terph,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200519.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0026	420E1954.D	BIE0282-BSD1		1	o-terph,
0046	420E1955.D	20E0151-01		1	NO MANUAL INTEGRATION
0105	420E1956.D	20E0160-01		1	o-terph,
0125	420E1957.D	SIE0162-CCV9		1	o-terph,
0144	420E1958.D	SIE0162-CCVA		1	Triacon Surr,
0203	420E1959.D	SIE0162-CCVB		1	NO MANUAL INTEGRATION

Security Status Report

Date: 20-May-2020 08:42

420E1901.D	Data Locked	christopher, 19-May-2020 11:37
420E1902.D	Data Locked	christopher, 19-May-2020 11:37
420E1903.D	Data Locked	christopher, 20-May-2020 08:20
420E1904.D	Data Locked	christopher, 19-May-2020 11:37
420E1905.D	Data Locked	christopher, 19-May-2020 11:37
420E1906.D	Data Locked	christopher, 19-May-2020 11:37
420E1907.D	Data Locked	christopher, 19-May-2020 11:37
420E1908.D	Data Locked	christopher, 19-May-2020 11:37
420E1909.D	Data Locked	christopher, 19-May-2020 11:37
420E1910.D	Data Locked	christopher, 19-May-2020 11:37
420E1911.D	Data Locked	christopher, 19-May-2020 11:37
420E1912.D	Data Locked	christopher, 19-May-2020 11:37
420E1913.D	Data Locked	christopher, 20-May-2020 08:20
420E1914.D	Data Locked	christopher, 20-May-2020 08:20
420E1915.D	Data Locked	christopher, 20-May-2020 08:20
420E1916.D	Data Locked	christopher, 20-May-2020 08:20
420E1917.D	Data Locked	christopher, 20-May-2020 08:20
420E1918.D	Data Locked	christopher, 20-May-2020 08:20
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420E1923.D	Data Locked	christopher, 20-May-2020 08:20
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420E1927.D	Data Locked	christopher, 20-May-2020 08:20
420E1928.D	Data Locked	christopher, 20-May-2020 08:20
420E1929.D	Data Locked	christopher, 20-May-2020 08:20
420E1930.D	Data Locked	christopher, 20-May-2020 08:20
420E1931.D	Data Locked	christopher, 20-May-2020 08:20
420E1932.D	Data Locked	christopher, 20-May-2020 08:20
420E1933.D	Data Locked	christopher, 20-May-2020 08:20
420E1934.D	Data Locked	christopher, 20-May-2020 08:20
420E1935.D	Data Locked	christopher, 20-May-2020 08:20
420E1936.D	Data Locked	christopher, 20-May-2020 08:20
420E1937.D	Data Locked	christopher, 20-May-2020 08:20
420E1938.D	Data Locked	christopher, 20-May-2020 08:20
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420E1941.D	Data Locked	christopher, 20-May-2020 08:20
420E1942.D	Data Locked	christopher, 20-May-2020 08:20
420E1943.D	Data Locked	christopher, 20-May-2020 08:20
420E1944.D	Data Locked	christopher, 20-May-2020 08:20

420E1945.D	Data Locked	christopher, 20-May-2020 08:20
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420E1947.D	Data Locked	christopher, 20-May-2020 08:20
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420E1952.D	Data Locked	christopher, 20-May-2020 08:20
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420E1954.D	Data Locked	christopher, 20-May-2020 08:20
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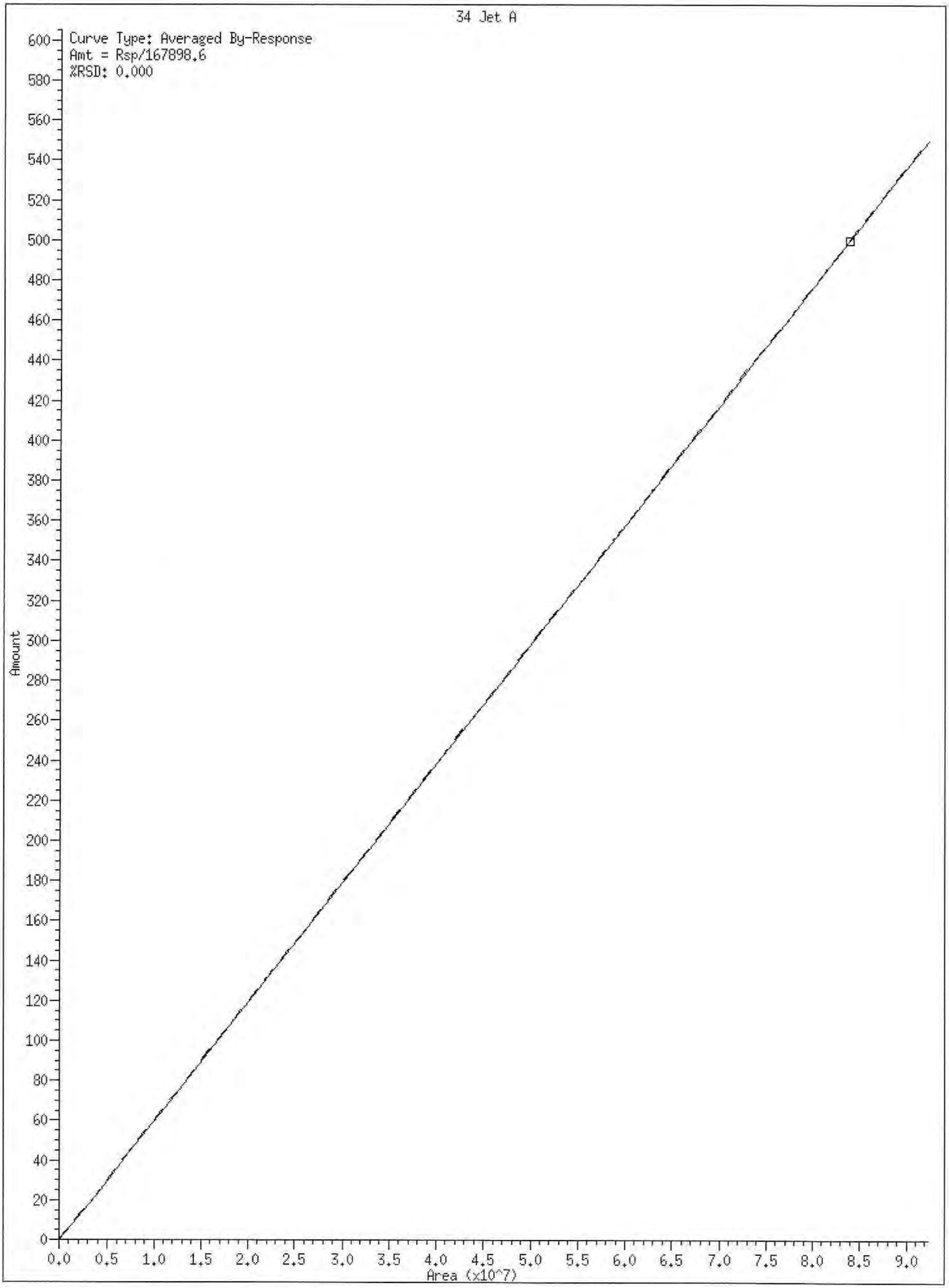

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Amount
Area (x10^7)

Data File: \\target\share\chem2\fid4a.i\20200519.b\420E1913.D

Date : 19-MAY-2020 11:05

Client ID:

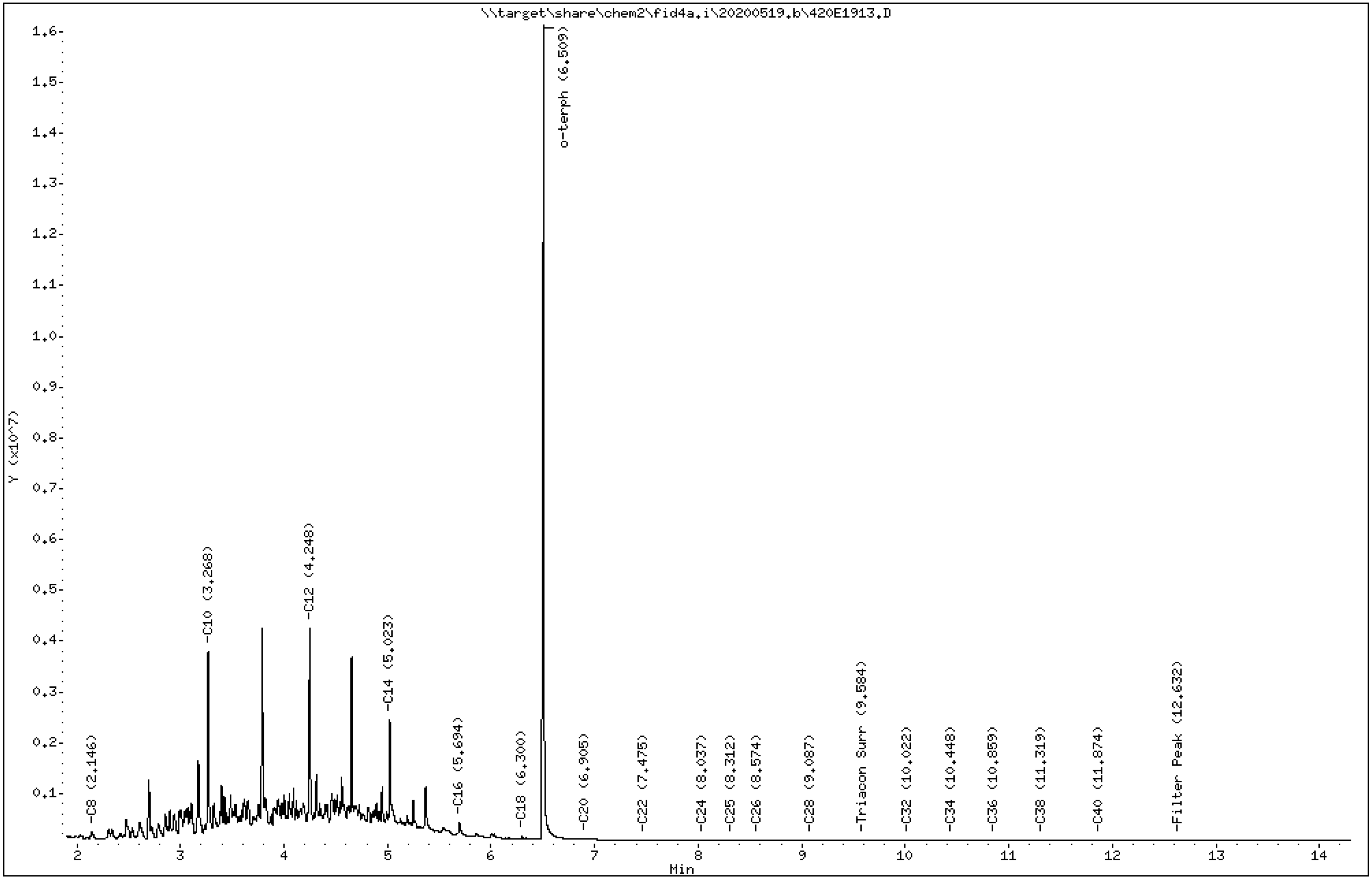
Instrument: fid4a.i

Sample Info: SIE0162-CAL1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200519.b/420E1913.D
Method: 20200519.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 05/20/2020
Macro: 09-SEP-2019
ARI ID: SIE0162-CAL1
Client ID:
Injection: 19-MAY-2020 11:05
Dilution Factor: 1
RT Std: 419H1603.D
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.146	-0.014	162537	351667	WATPHD	(C12-C24)	43793314	274.8
C10	3.268	-0.006	3727060	3670074	WATPHM	(C24-C38)	298844	2.3
C12	4.248	-0.001	4175422	4596909	AK102	(C10-C25)	84977552	434.7
C14	5.023	-0.002	2366943	3478731	AK103	(C25-C36)	181563	2.5
C16	5.694	0.002	346661	872220	OR.DIES	(C10-C28)	85015601	433.8
C18	6.300	-0.002	67502	81701				
C20	6.905	0.012	18076	12457	JET-A	(C10-C18)	83949325	500.0
C22	7.475	0.003	7015	3124				
C24	8.037	0.002	2567	632				
C25	8.312	0.005	1720	641				
C26	8.574	0.002	577	179				
C28	9.087	0.004	278	137				
C32	10.022	0.002	985	413				
C34	10.448	-0.000	2249	1187				
Filter Peak	12.632	0.002	3646	2855	CREOSOT	(C12-C22)	43649163	1058.5
C36	10.859	-0.001	3434	1815				
C38	11.319	0.004	4203	2291				
C40	11.874	0.007	4118	1219				
o-terph	6.509	-0.003	16049011	17223619				
Triacon Surr	9.584	-0.003	924	375	NAS DIES	(C10-C24)	84956580	435.3

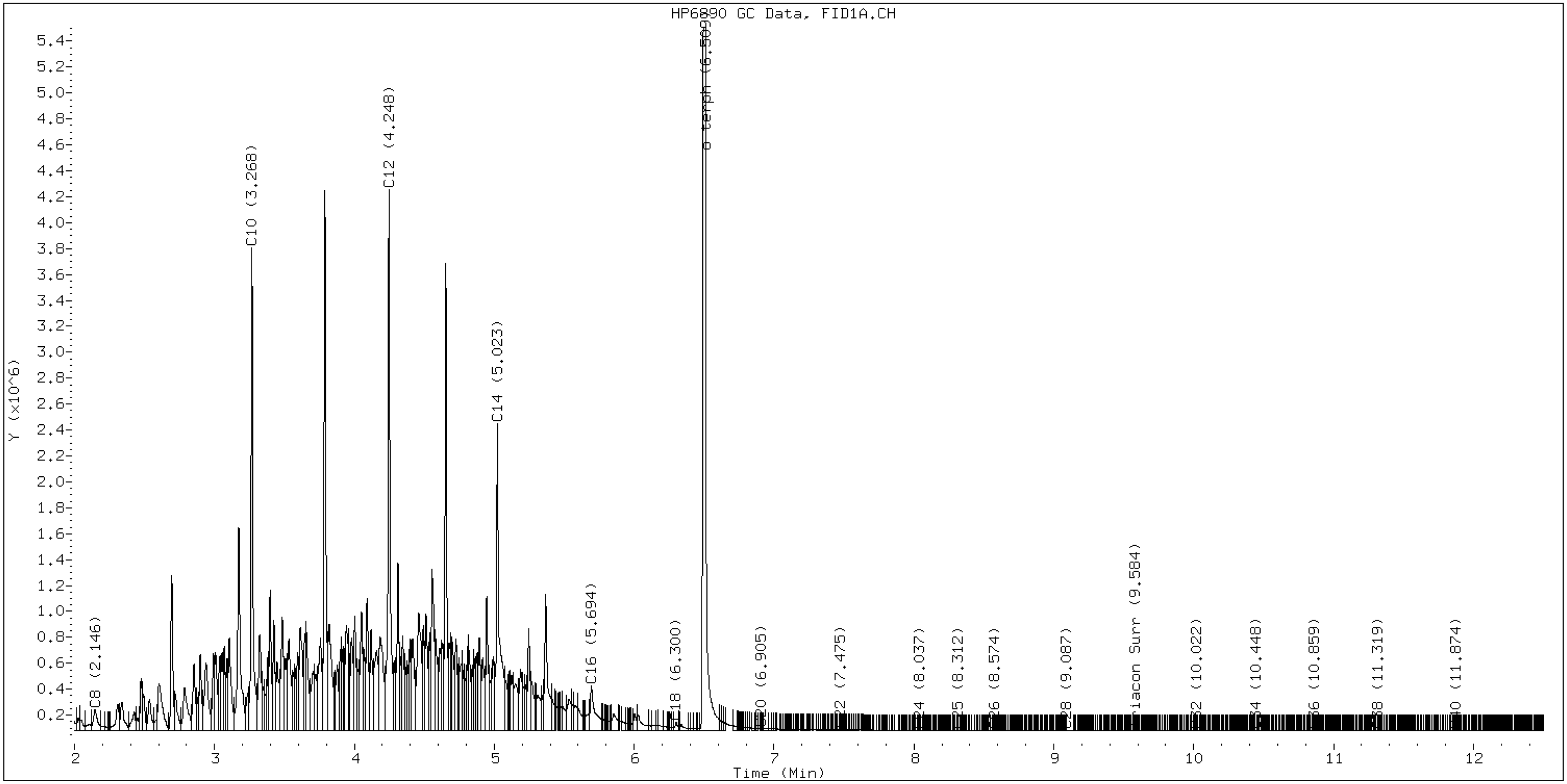
Range Times: NW Diesel(4.249 - 8.035) AK102(3.27 - 8.31) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.32) AK103(8.31 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount
o-Terphenyl	17223619	84.1
Triacontane	375	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200519.b/420E1913.D SIE0162-CAL1



Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIF0018

Instrument: FID4
Calibration ID: DA00022

Printed: 6/2/2020 12:49:08PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIF0018-IBL1	QC		1		H010802			
SIF0018-IBL2	QC		2		I000651			
SIF0018-CAL1	QC		3		I004752			
SIF0018-CAL2	QC		4		I004753			
SIF0018-CAL3	QC		5		I004754			
SIF0018-CAL4	QC		6		I004755			
SIF0018-CAL5	QC		7		I004756			
SIF0018-CAL6	QC		8		I003778			
SIF0018-SCV1	QC		9		I004757			

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200602.b

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2	02-JUN-2020 07:59	420F0202.D	1	RINSE	
3	02-JUN-2020 08:19	420F0203.D	1	SIF0018-IBL1	
4	02-JUN-2020 08:38	420F0204.D	1	SIF0018-IBL2	
5	02-JUN-2020 08:58	420F0205.D	1	SIF0018-CAL1	
6	02-JUN-2020 09:17	420F0206.D	1	SIF0018-CAL2	
7	02-JUN-2020 09:37	420F0207.D	1	SIF0018-CAL3	
8	02-JUN-2020 09:56	420F0208.D	1	SIF0018-CAL4	
9	02-JUN-2020 10:16	420F0209.D	1	SIF0018-CAL5	
10	02-JUN-2020 10:36	420F0210.D	1	SIF0018-CAL6	
11	02-JUN-2020 10:55	420F0211.D	1	SIF0018-SCV1	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200602.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 02-JUN-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0740	420F0201.D	RINSE		1	NO MANUAL INTEGRATION
0759	420F0202.D	RINSE		1	NO MANUAL INTEGRATION
0819	420F0203.D	SIF0018-IBL1		1	NO MANUAL INTEGRATION
0838	420F0204.D	SIF0018-IBL2		1	NO MANUAL INTEGRATION
0858	420F0205.D	SIF0018-CAL1		1	Triacon Surr,
0917	420F0206.D	SIF0018-CAL2		1	Triacon Surr,
0937	420F0207.D	SIF0018-CAL3		1	Triacon Surr,
0956	420F0208.D	SIF0018-CAL4		1	Triacon Surr,
1016	420F0209.D	SIF0018-CAL5		1	Triacon Surr,
1036	420F0210.D	SIF0018-CAL6		1	Triacon Surr,
1055	420F0211.D	SIF0018-SCV1		1	Triacon Surr,

Security Status Report

Date: 02-Jun-2020 12:52

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420F0207.D	Data Locked	christopher, 02-Jun-2020 12:51
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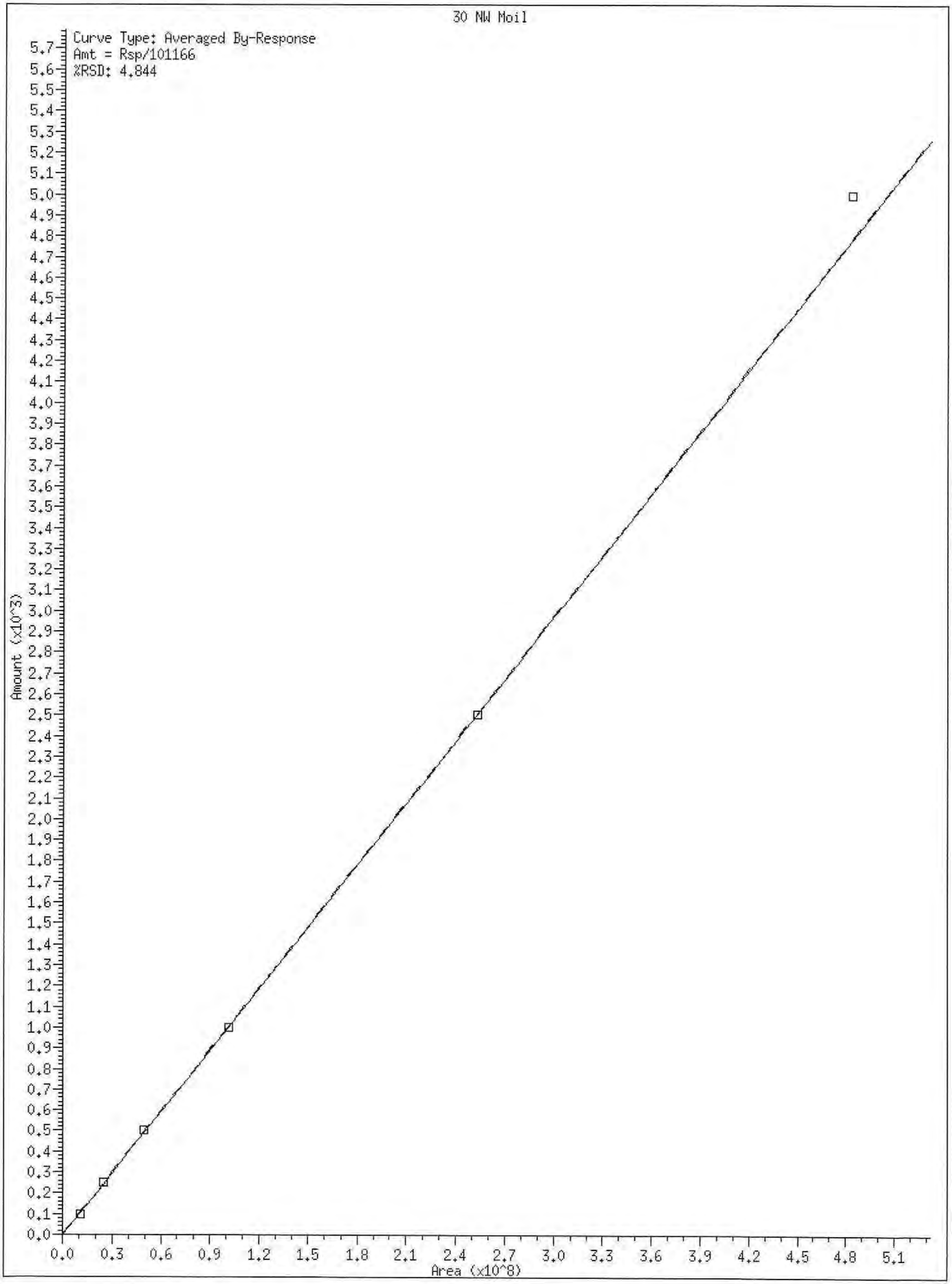
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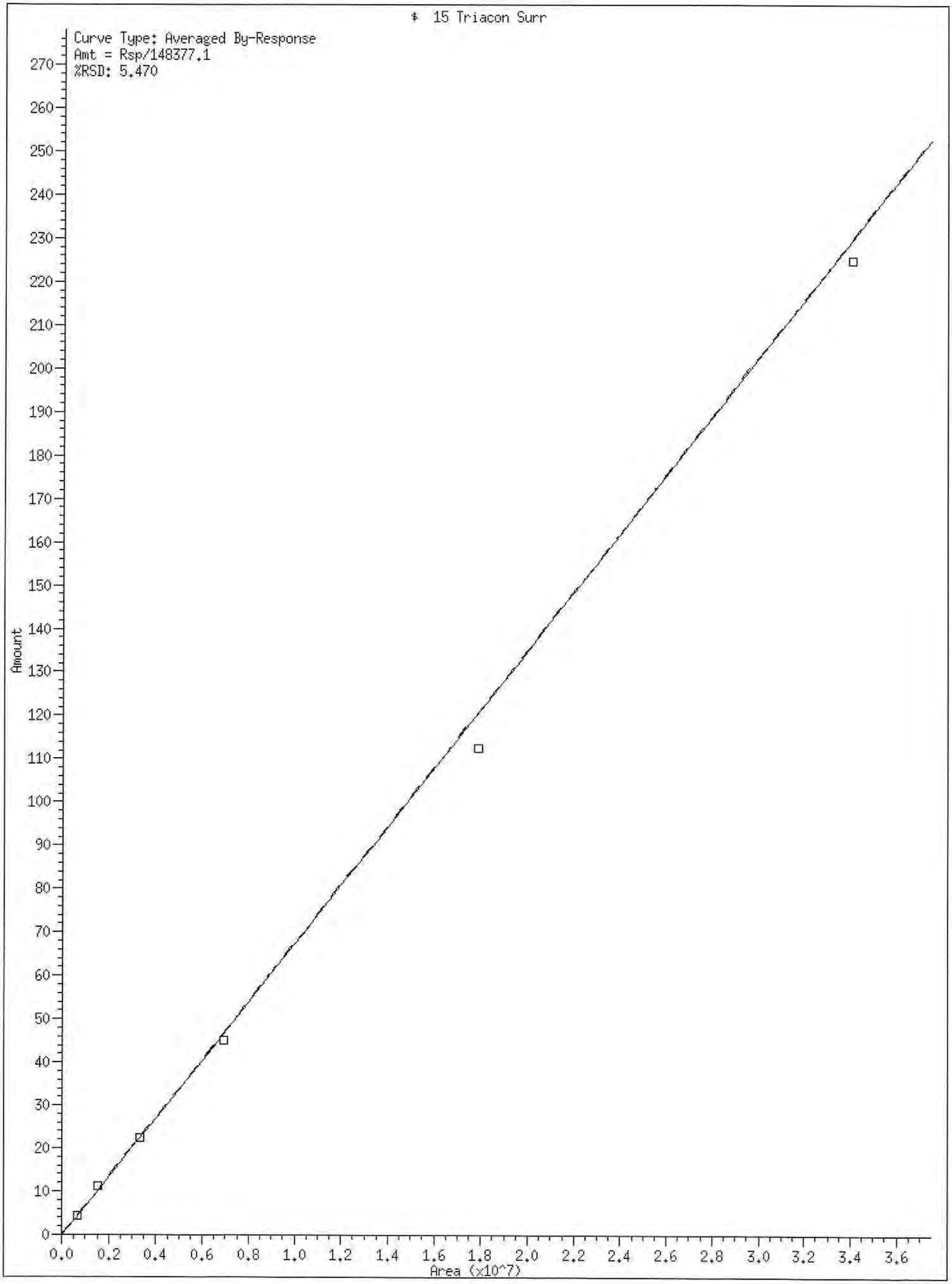
Area (x10^8)


$ 15 Triacon Surr
Curve Type: Averaged By-Response
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%RSD: 5.470
Amount
Area (x10^7)

Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0203.D

Page 1

Date : 02-JUN-2020 08:19

Client ID:

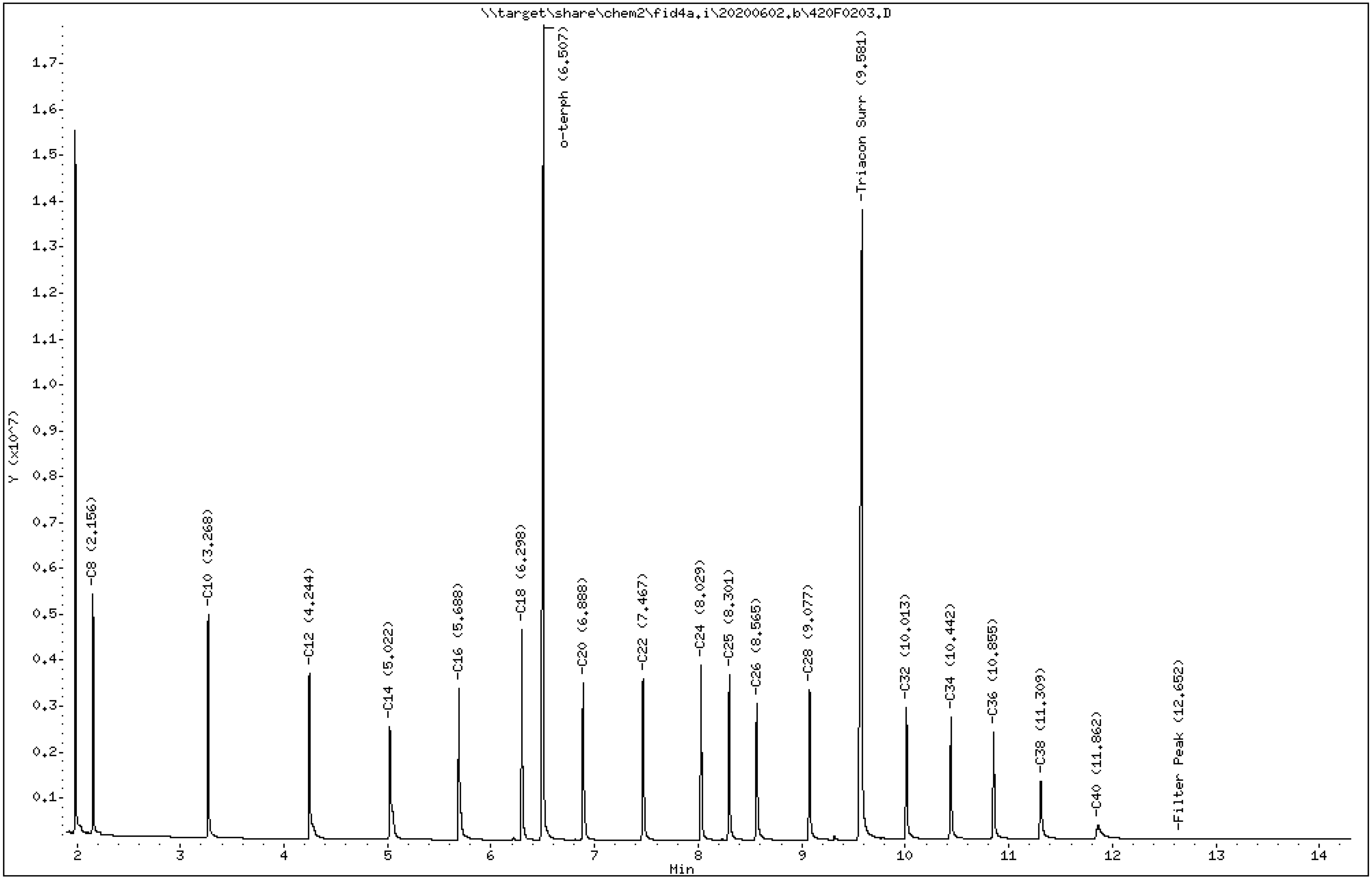
Instrument: fid4a.i

Sample Info: SIF0018-IBL1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0203.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-IBL1
Client ID:
Injection: 02-JUN-2020 08:19
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.156	0.000	5355192	4028421	WATPHD	(C12-C24)	22818714	143.2
C10	3.268	0.000	4929332	4012342	WATPHM	(C24-C38)	23499770	232.3
C12	4.244	0.000	3648375	2898492	AK102	(C10-C25)	32299571	165.2
C14	5.022	0.000	2469047	2611753	AK103	(C25-C36)	20714599	283.0
C16	5.688	0.000	3293885	3376329	OR.DIES	(C10-C28)	42576768	217.2
C18	6.298	0.000	4585796	3403299				
C20	6.888	0.000	3419868	3390012	JET-A	(C10-C18)	21587777	128.6
C22	7.467	0.000	3501351	3461600				
C24	8.029	0.000	3816488	3373518				
C25	8.301	0.000	3598800	3438765				
C26	8.565	0.000	2983968	3399421				
C28	9.077	0.000	3266476	3362299				
C32	10.013	0.000	2880768	3301828				
C34	10.442	0.000	2669792	3096709				
Filter Peak	12.652	0.000	21186	7385	CREOSOT	(C12-C22)	19416290	470.8
C36	10.855	0.000	2366492	3017794				
C38	11.309	0.000	1282280	2537029				
C40	11.862	0.000	332084	1739109				
o-terph	6.507	0.000	17759087	19250772				
Triacon Surr	9.581	0.000	13722128	19528338	NAS DIES	(C10-C24)	32267307	165.3

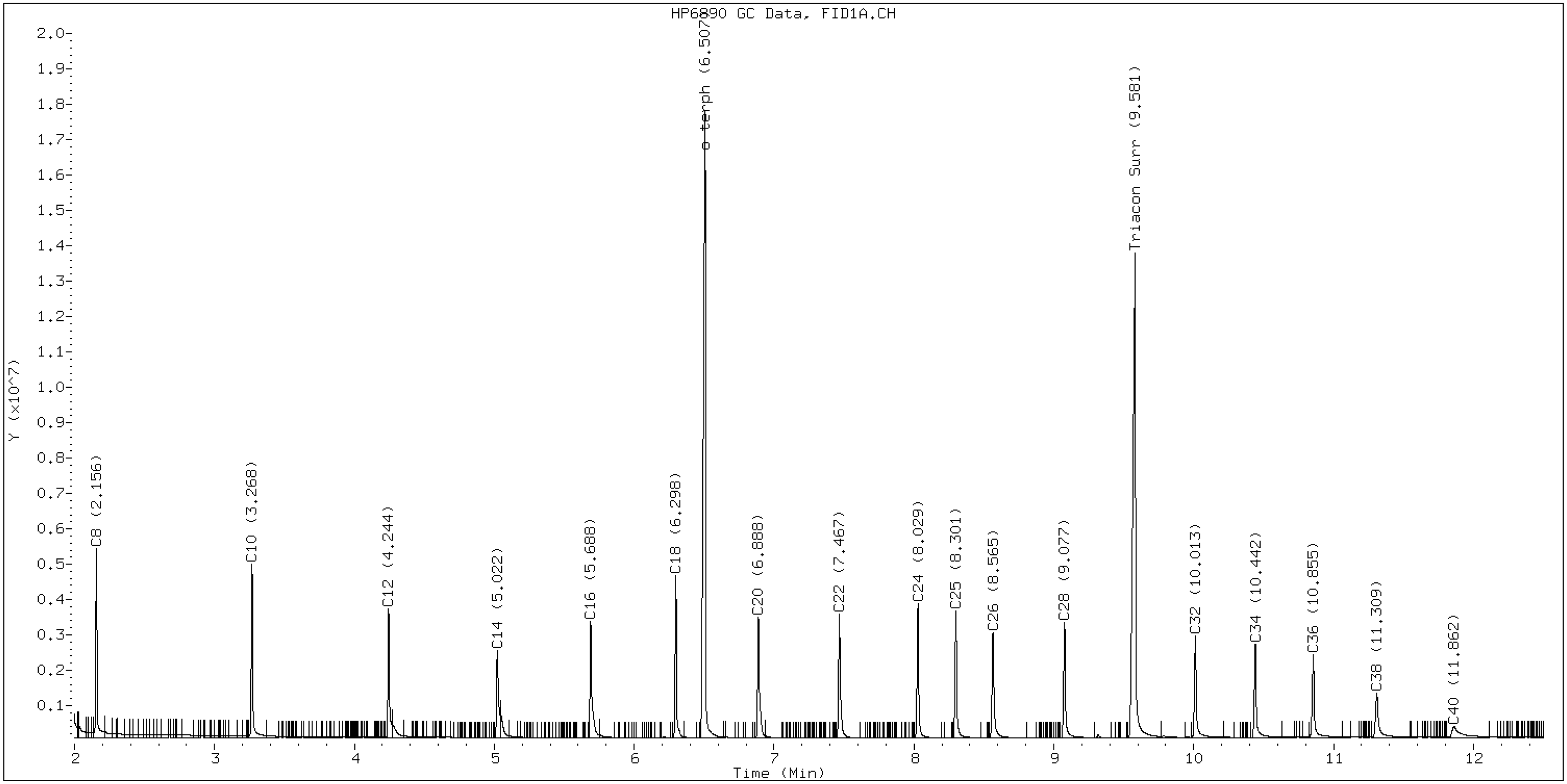
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount
o-Terphenyl	19250772	94.0
Triacontane	19528338	131.6

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200602.b/420F0203.D SIF0018-IBL1



Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0204.D

Date : 02-JUN-2020 08:38

Client ID:

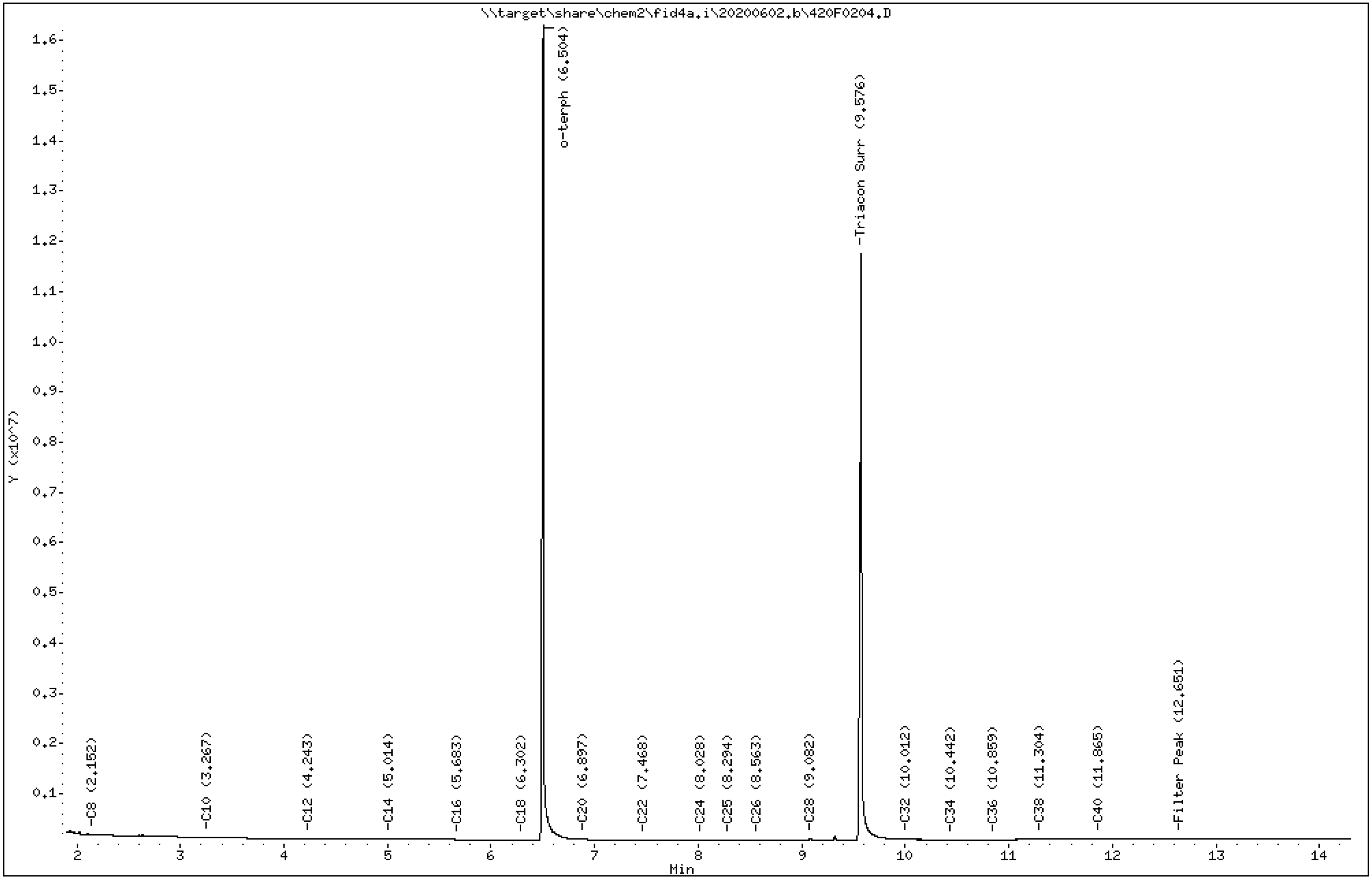
Sample Info: SIF0018-IBL2

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0204.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-IBL2
Client ID:
Injection: 02-JUN-2020 08:38
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.152	-0.003	116720	322381	WATPHD	(C12-C24)	3533716	22.2
C10	3.267	-0.001	56124	109426	WATPHM	(C24-C38)	1474603	14.6
C12	4.243	-0.001	30150	13517	AK102	(C10-C25)	5497571	28.1
C14	5.014	-0.008	22108	20838	AK103	(C25-C36)	1111901	15.2
C16	5.683	-0.005	13417	7376	OR.DIES	(C10-C28)	5561088	28.4
C18	6.302	0.004	8282	6554				
C20	6.897	0.008	15268	9037	JET-A	(C10-C18)	3852356	22.9
C22	7.468	0.002	3677	2659				
C24	8.028	-0.001	1288	376				
C25	8.294	-0.007	805	727				
C26	8.563	-0.002	378	139				
C28	9.082	0.005	31186	44237				
C32	10.012	-0.001	16600	15536				
C34	10.442	-0.000	10597	4224				
Filter Peak	12.651	-0.001	16079	8841	CREOSOT	(C12-C22)	3469521	84.1
C36	10.859	0.004	12136	4837				
C38	11.304	-0.005	14999	9721				
C40	11.865	0.003	15845	9483				
o-terph	6.504	-0.003	16231603	17734069				
Triacon Surr	9.576	-0.005	11669958	15560412	NAS DIES	(C10-C24)	5488260	28.1

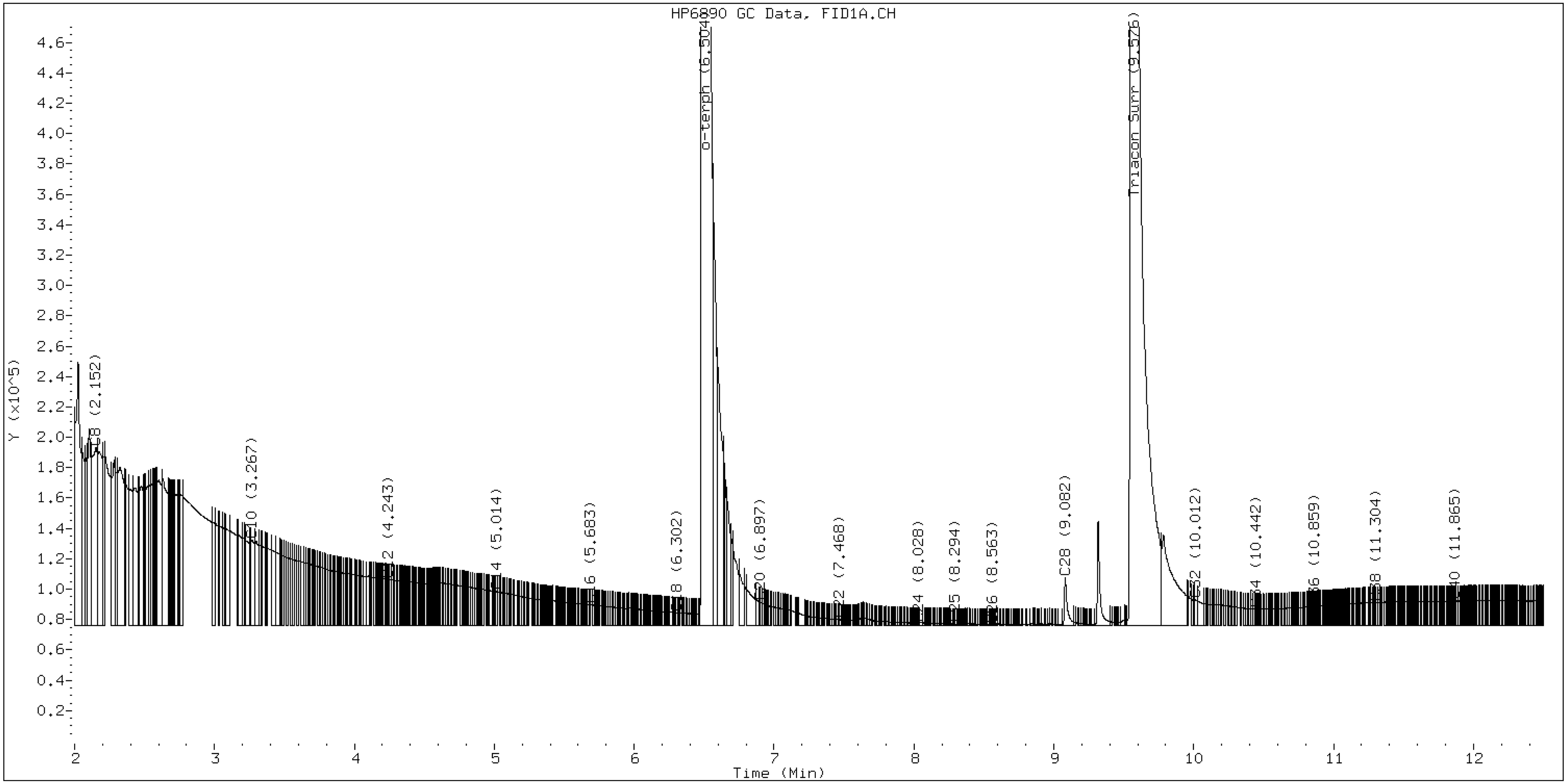
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount
o-Terphenyl	17734069	86.6
Triacontane	15560412	104.9

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200602.b/420F0204.D SIF0018-IBL2



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Date : 02-JUN-2020 08:58

Client ID:

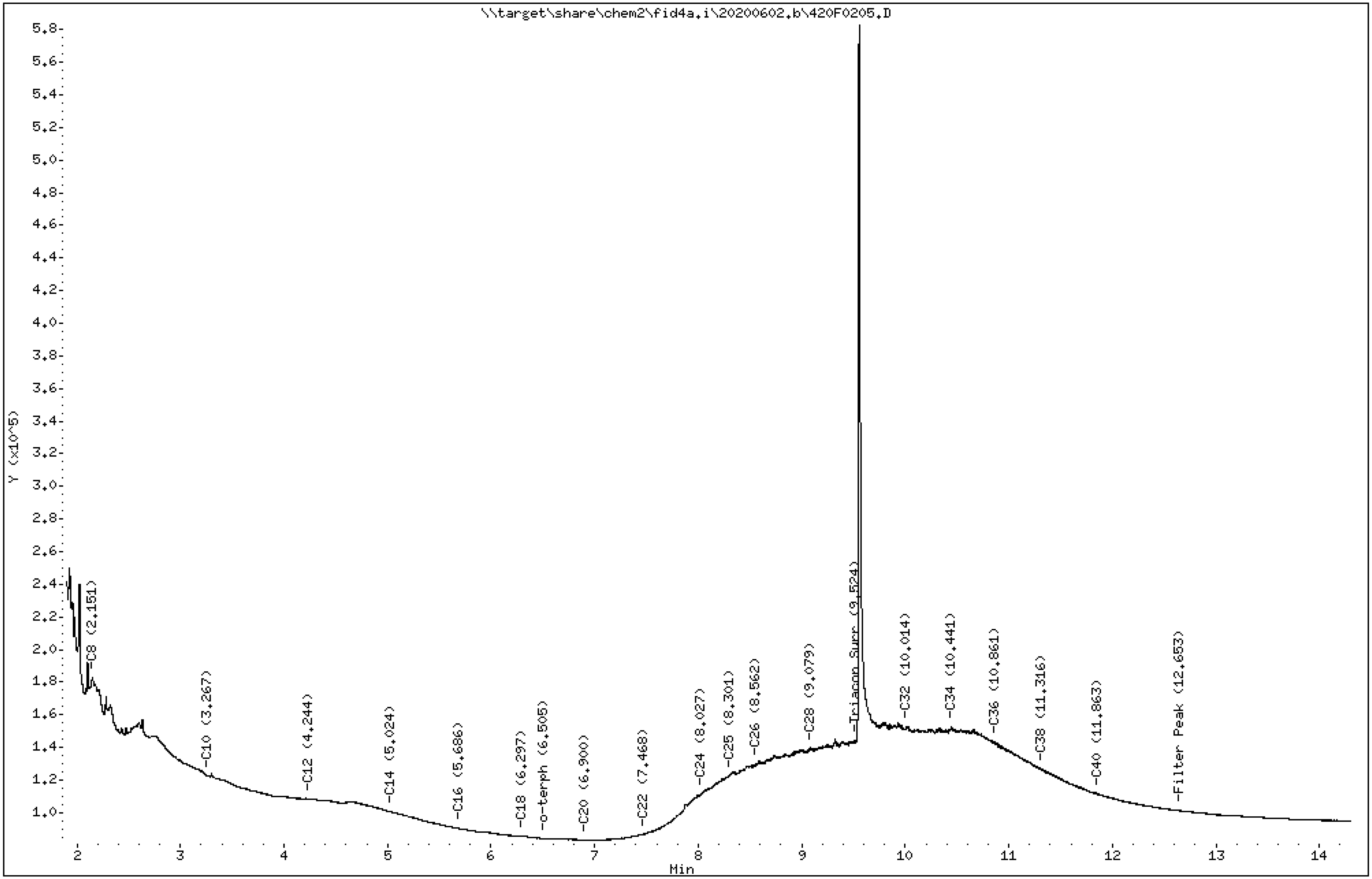
Instrument: fid4a.i

Sample Info: SIF0018-CAL1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0205.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-CAL1
Client ID:
Injection: 02-JUN-2020 08:58
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.151	-0.005	99980	217759	WATPHD	(C12-C24)	2058424	12.9
C10	3.267	-0.001	39589	29601	WATPHM	(C24-C38)	11047515	109.2
C12	4.244	-0.001	25508	17793	AK102	(C10-C25)	4072327	20.8
C14	5.024	0.003	17563	10459	AK103	(C25-C36)	9356465	127.8
C16	5.686	-0.002	7220	3247	OR.DIES	(C10-C28)	6554980	33.4
C18	6.297	-0.001	2600	2106				
C20	6.900	0.012	302	196	JET-A	(C10-C18)	3118295	18.6
C22	7.468	0.001	3759	1459				
C24	8.027	-0.002	28105	24801				
C25	8.301	0.000	39391	25449				
C26	8.562	-0.003	47032	11725				
C28	9.079	0.003	56481	28105				
C32	10.014	0.002	69879	38102				
C34	10.441	-0.001	69476	34247				
Filter Peak	12.653	0.001	18229	12666	CREOSOT	(C12-C22)	1520804	36.9
C36	10.861	0.006	60542	41919				
C38	11.316	0.007	43480	28015				
C40	11.863	0.001	28191	8434				
o-terph	6.505	-0.001	1238	750				
Triacon Surr	9.554	-0.026	438731	632528	NAS DIES	(C10-C24)	3725496	19.1

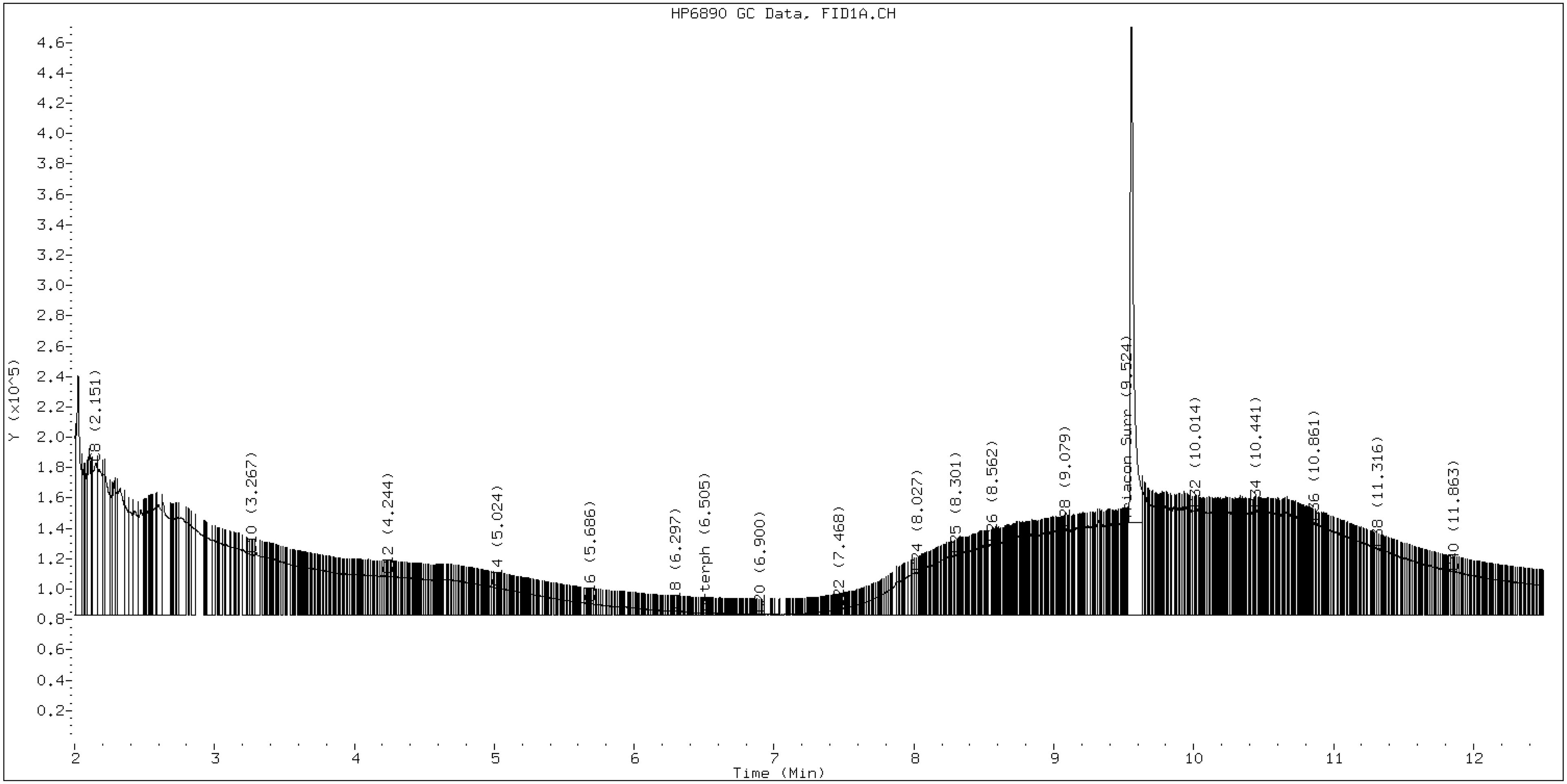
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	750	0.0	
Triacontane	632528	4.3	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

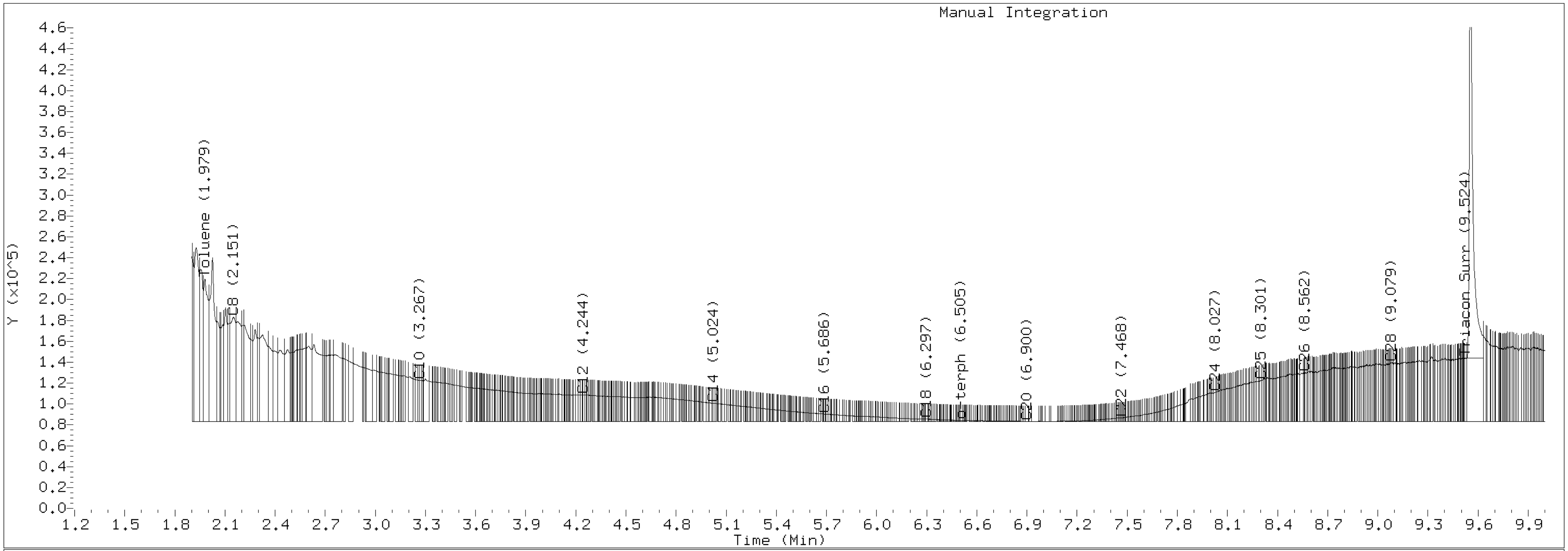
Datafile: FID4A, 20200602.b/420F0205.D   SIF0018-CAL1

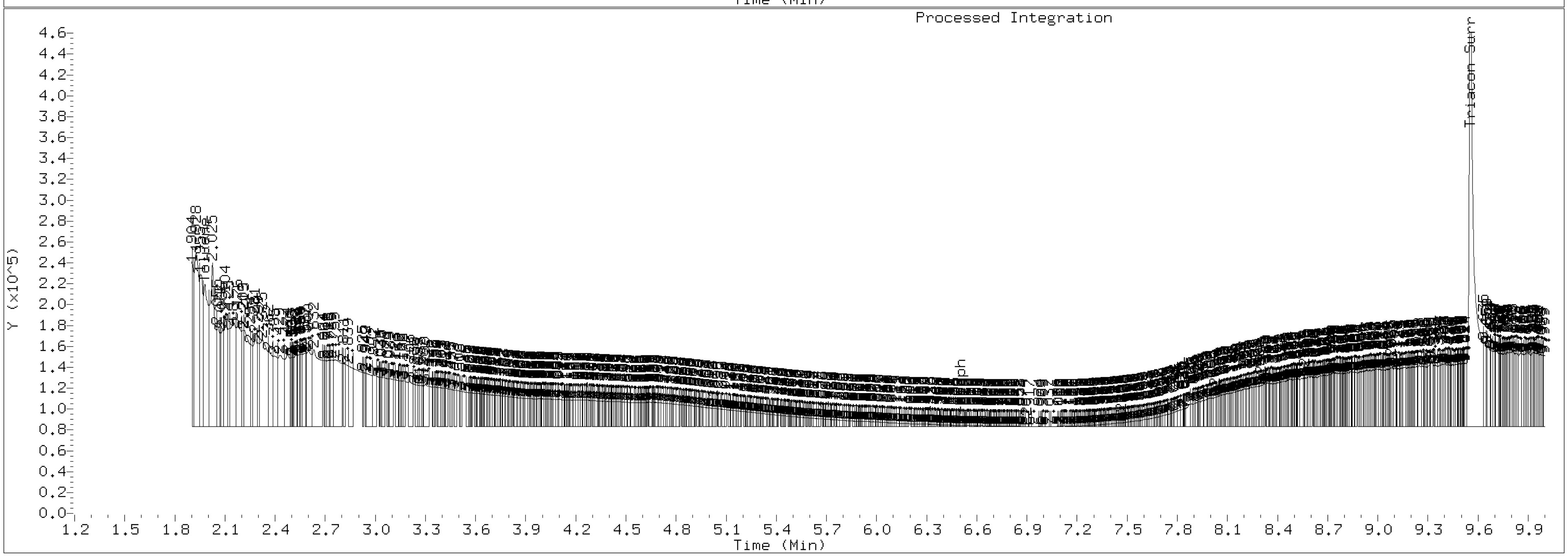


TPH Manual Integrations Report

Datafile: FID4A, 20200602.b/420F0205.D Injection: 02-JUN-2020 08:58

Lab ID:SIF0018-CAL1





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Page 1

Date : 02-JUN-2020 09:17

Client ID:

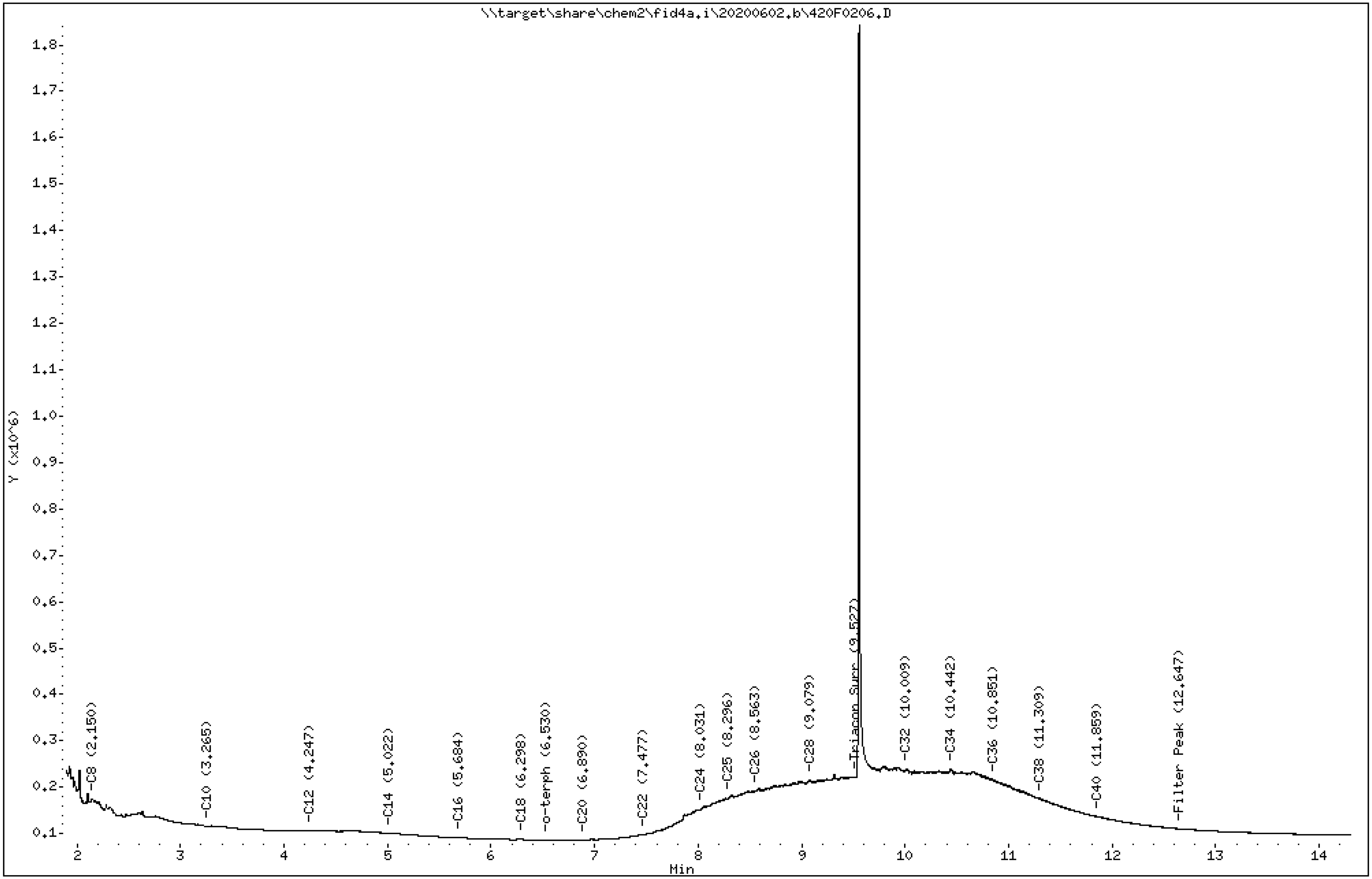
Instrument: fid4a.i

Sample Info: SIF0018-CAL2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0206.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-CAL2
Client ID:
Injection: 02-JUN-2020 09:17
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.150	-0.006	89858	185422	WATPHD	(C12-C24)	2712070	17.0
C10	3.265	-0.003	30146	13534	WATPHM	(C24-C38)	24525710	242.4
C12	4.247	0.002	20913	5217	AK102	(C10-C25)	4830477	24.7
C14	5.022	0.000	14927	5202	AK103	(C25-C36)	21012310	287.0
C16	5.684	-0.004	5316	3160	OR.DIES	(C10-C28)	10587317	54.0
C18	6.298	-0.001	1804	867				
C20	6.890	0.002	868	325	JET-A	(C10-C18)	2431354	14.5
C22	7.477	0.010	11963	10299				
C24	8.031	0.002	68912	56553				
C25	8.296	-0.005	90908	49681				
C26	8.563	-0.002	106529	37089				
C28	9.079	0.002	128296	51107				
C32	10.009	-0.003	153736	84024				
C34	10.442	0.000	152153	67959				
Filter Peak	12.647	-0.005	24724	15926	CREOSOT	(C12-C22)	1339051	32.5
C36	10.851	-0.004	129949	77218				
C38	11.309	0.000	88878	57220				
C40	11.859	-0.002	51003	42869				
o-terph	6.530	0.023	286	110				
Triacon Surr	9.553	-0.027	1618248	1548362	NAS DIES	(C10-C24)	4003518	20.5

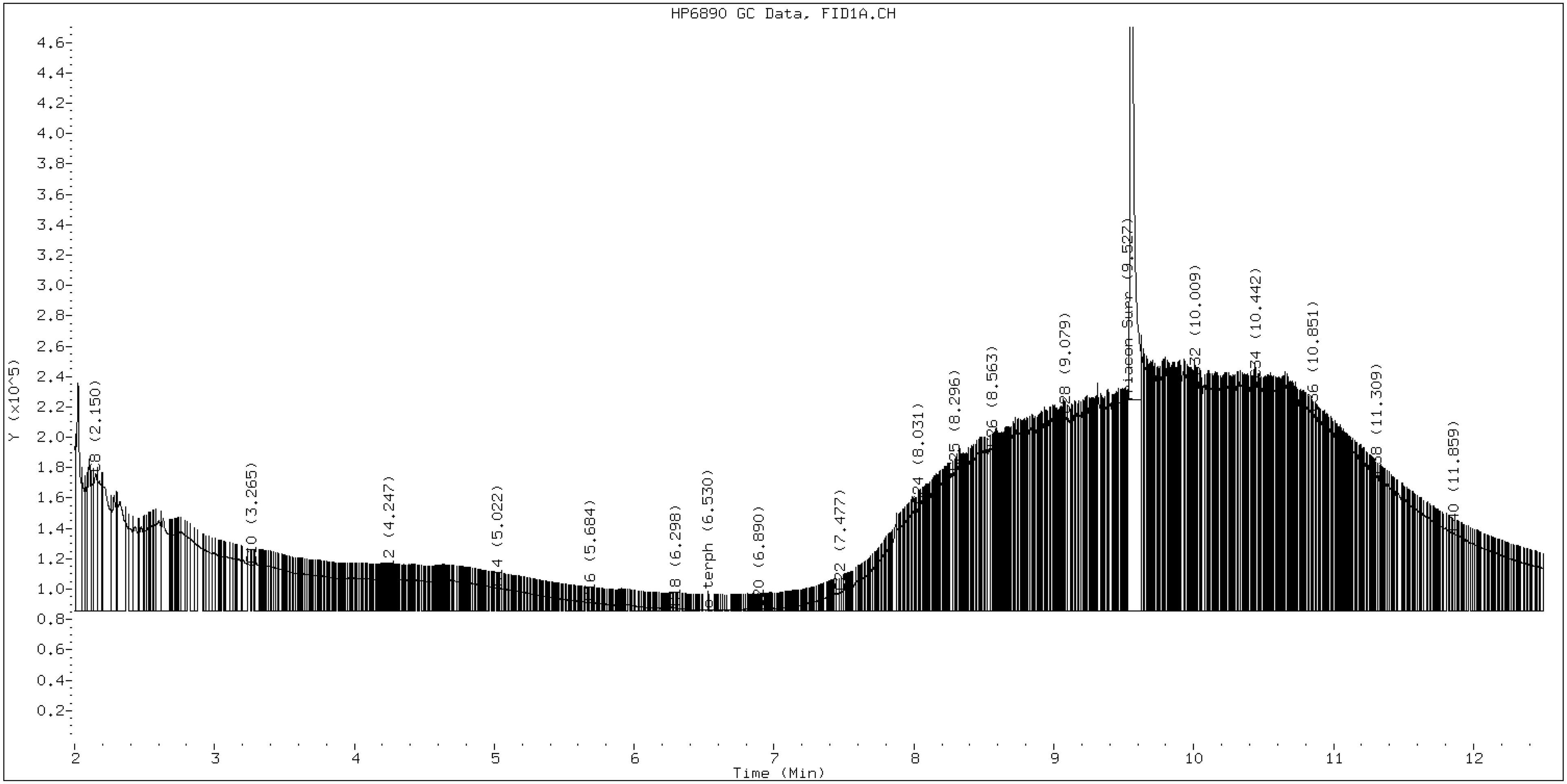
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	110	0.0	
Triacontane	1548362	10.4	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200602.b/420F0206.D SIF0018-CAL2



TPH Manual Integrations Report
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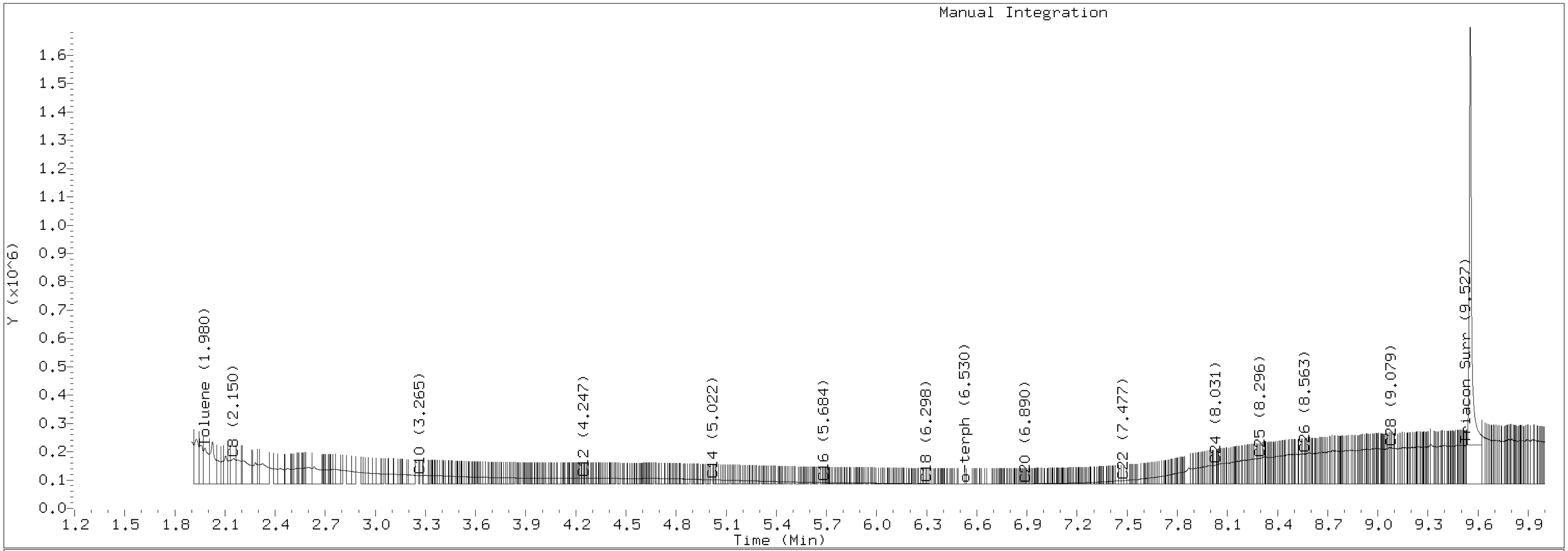
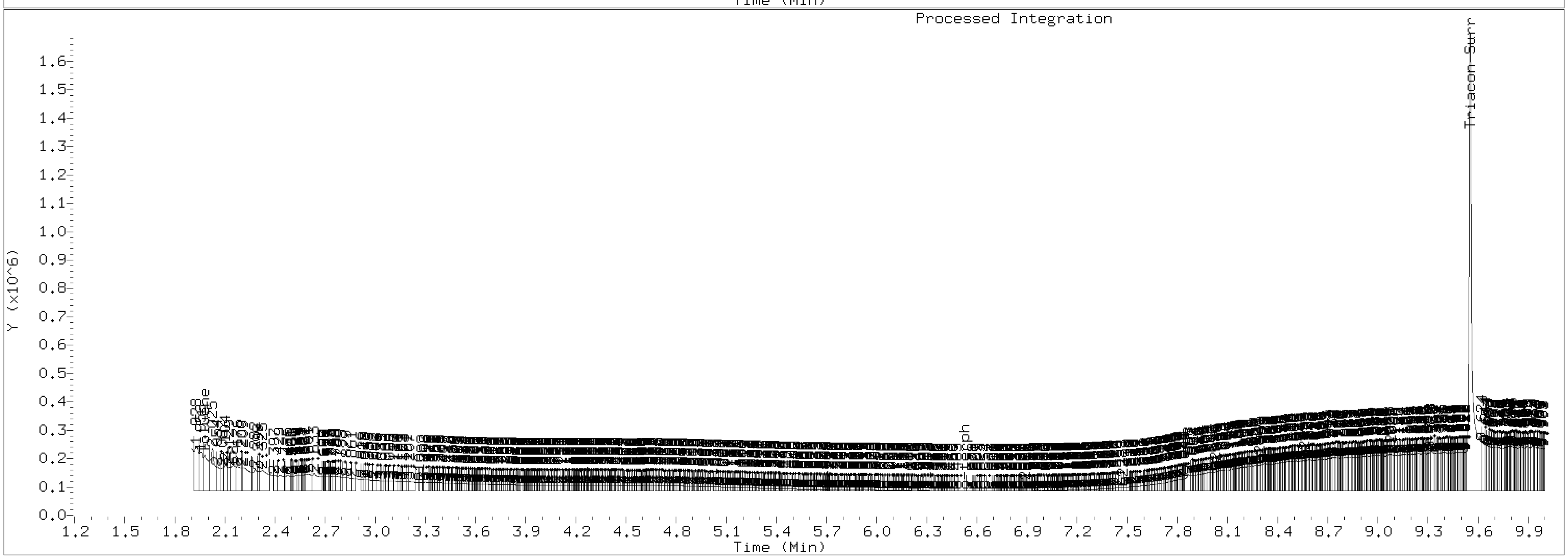
Lab ID:SIF0018-CAL2





Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0207.D

Date : 02-JUN-2020 09:37

Client ID:

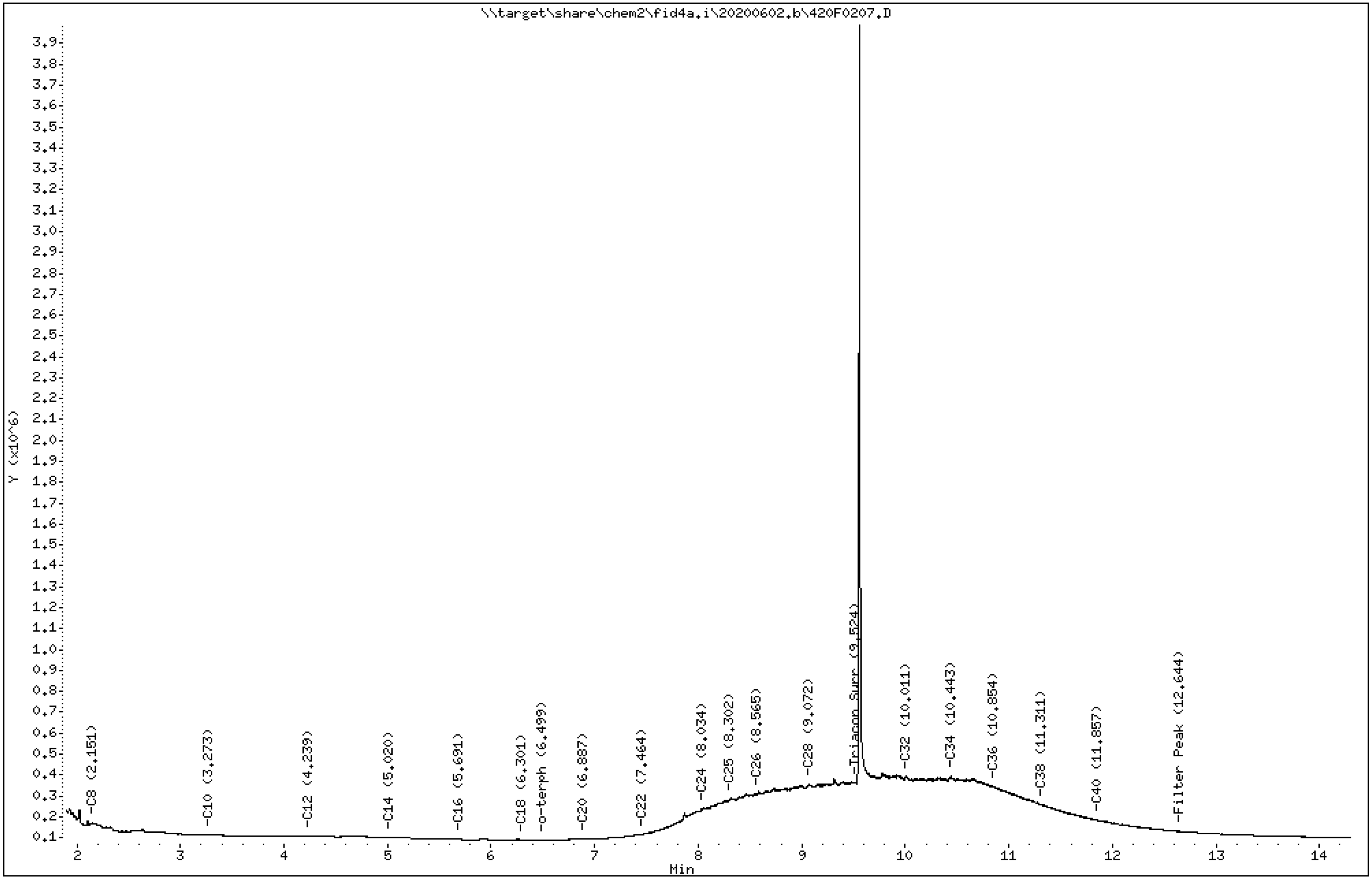
Instrument: fid4a.i

Sample Info: SIF0018-CAL3

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0207.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-CAL3
Client ID:
Injection: 02-JUN-2020 09:37
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.151	-0.005	83340	181737	WATPHD	(C12-C24)	4669475	29.3
C10	3.273	0.004	24124	29803	WATPHM	(C24-C38)	49486995	489.2
C12	4.239	-0.005	17851	9766	AK102	(C10-C25)	7430681	38.0
C14	5.020	-0.001	13143	9087	AK103	(C25-C36)	42295515	577.8
C16	5.691	0.003	3577	1419	OR.DIES	(C10-C28)	19434570	99.2
C18	6.301	0.003	1747	1733				
C20	6.887	-0.001	3928	772	JET-A	(C10-C18)	2089833	12.4
C22	7.464	-0.003	28742	14145				
C24	8.034	0.005	150683	195060				
C25	8.302	0.001	193725	142733				
C26	8.565	0.000	222104	154233				
C28	9.072	-0.005	269216	379539				
C32	10.011	-0.001	303243	166080				
C34	10.443	0.001	305814	210777				
Filter Peak	12.644	-0.008	43077	59185	CREOSOT	(C12-C22)	1595428	38.7
C36	10.854	-0.001	253799	113868				
C38	11.311	0.002	172045	186385				
C40	11.857	-0.005	96077	71008				
o-terph	6.499	-0.008	250	102				
Triacon Surr	9.559	-0.022	3627992	3323417	NAS DIES	(C10-C24)	5759449	29.5

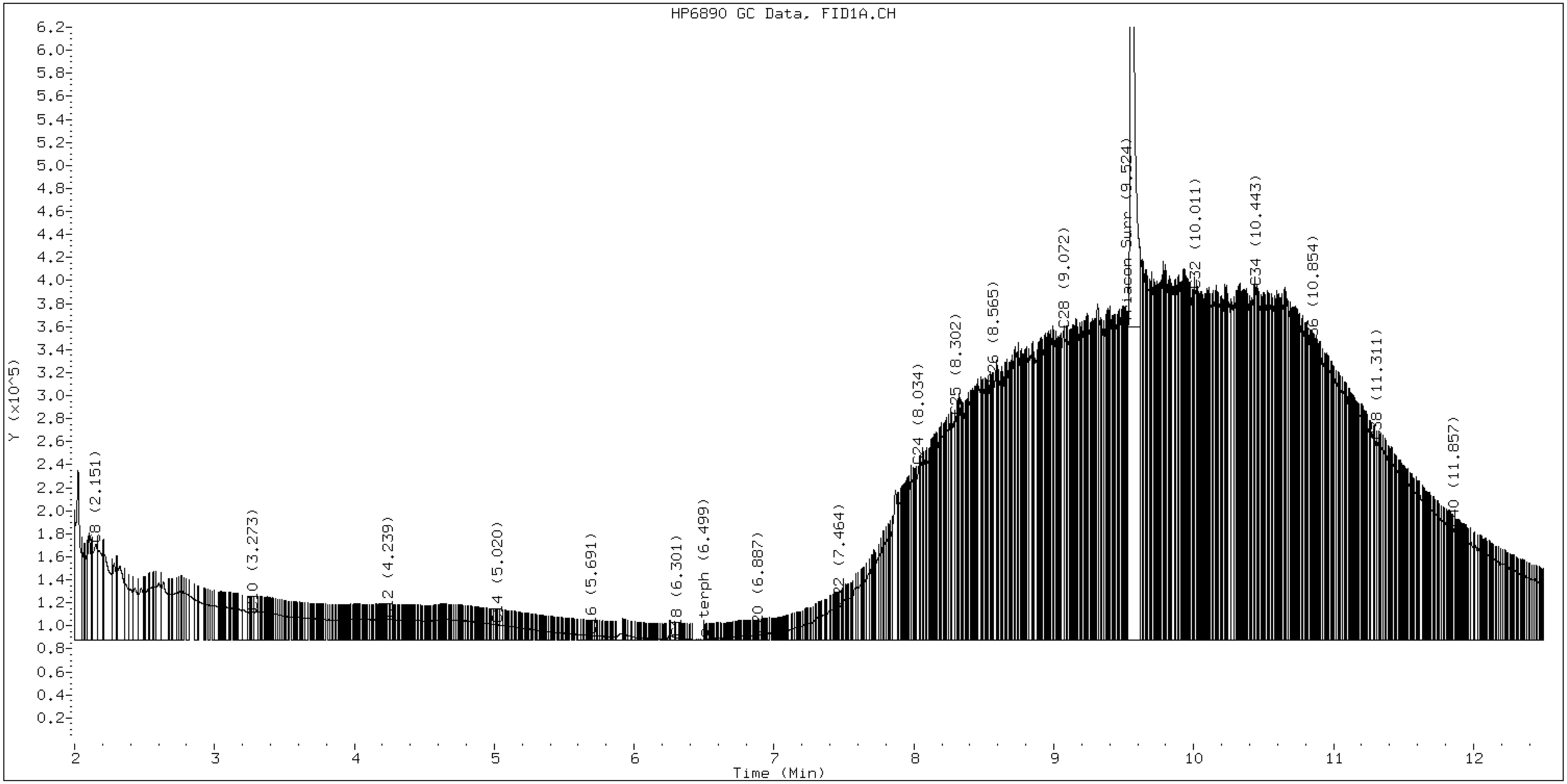
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	102	0.0	
Triacontane	3323417	22.4	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200602.b/420F0207.D SIF0018-CAL3



TPH Manual Integrations Report
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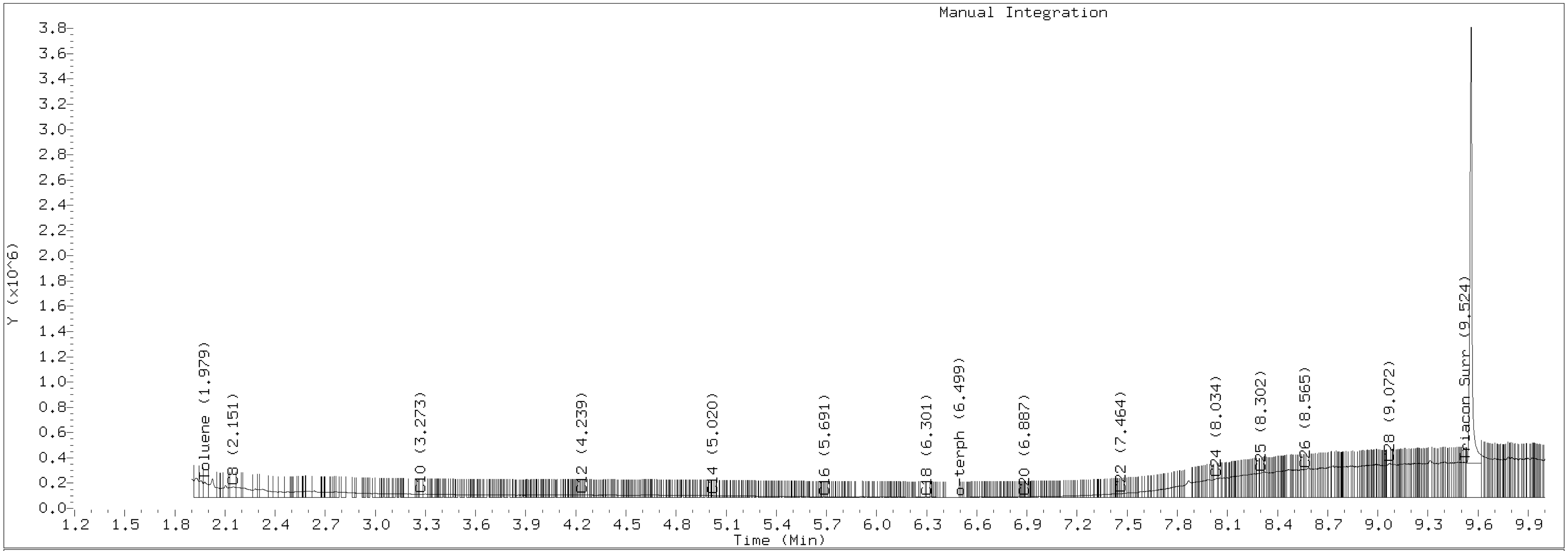
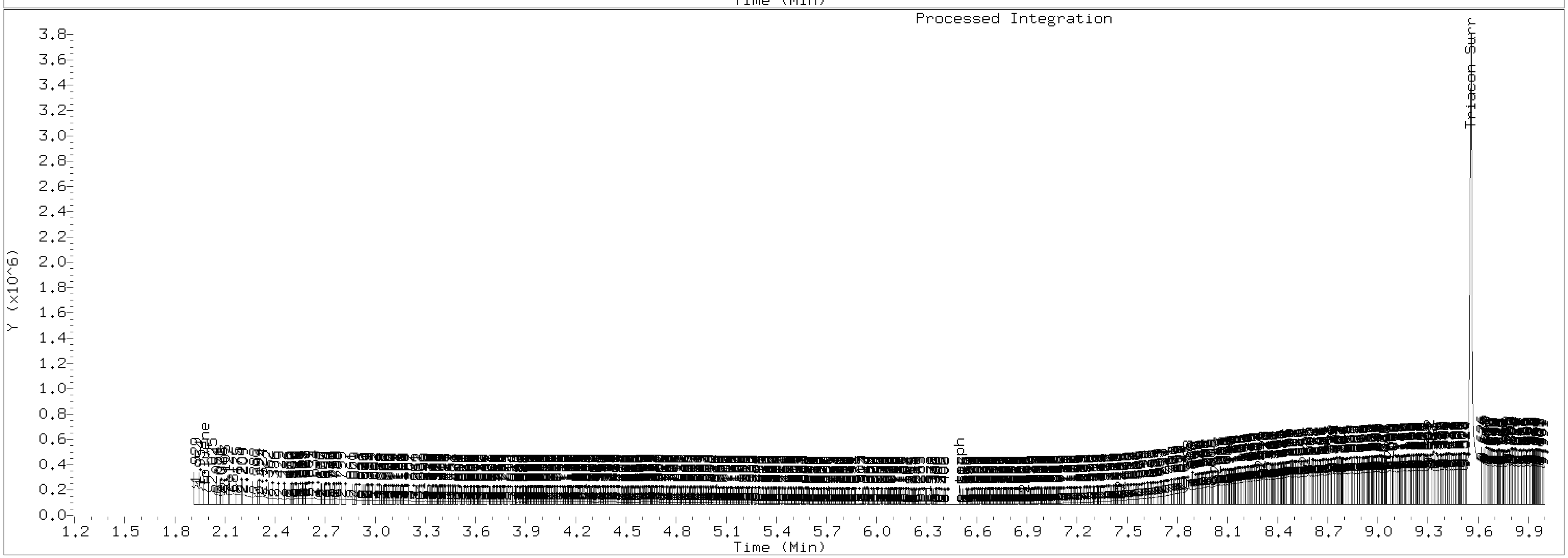
Lab ID:SIF0018-CAL3





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Page 1

Date : 02-JUN-2020 09:56

Client ID:

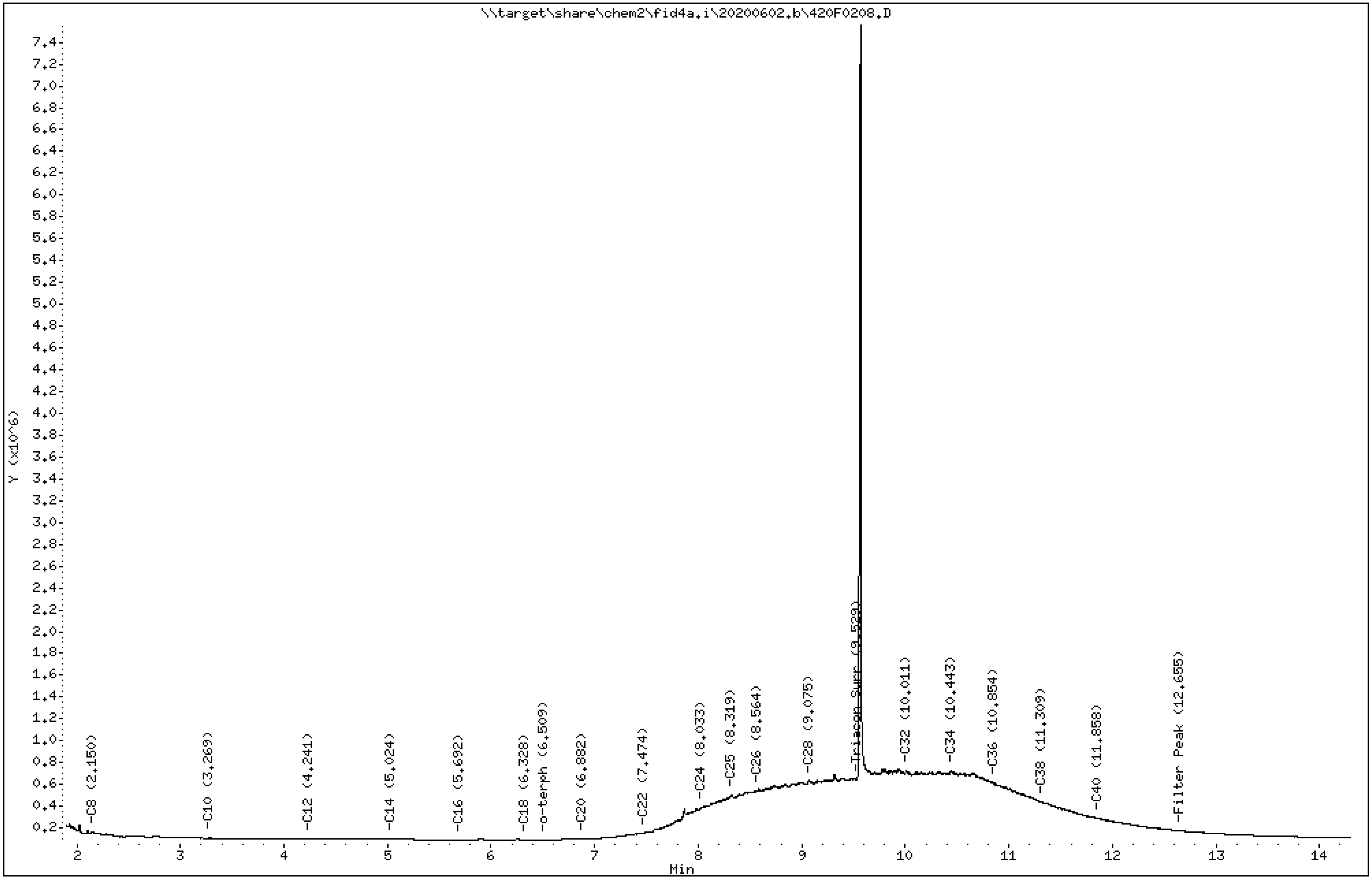
Instrument: fid4a.i

Sample Info: SIF0018-CAL4

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0208.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-CAL4
Client ID:
Injection: 02-JUN-2020 09:56
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.150	-0.006	74771	134338	WATPHD	(C12-C24)	8555448	53.7
C10	3.269	0.001	18936	30862	WATPHM	(C24-C38)	101521093	1003.5
C12	4.241	-0.003	13823	8198	AK102	(C10-C25)	12841862	65.7
C14	5.024	0.002	10299	9083	AK103	(C25-C36)	86804393	1185.7
C16	5.692	0.004	1790	930	OR.DIES	(C10-C28)	37125765	189.4
C18	6.328	0.029	1582	935				
C20	6.882	-0.006	11147	11817	JET-A	(C10-C18)	1615268	9.6
C22	7.474	0.008	67672	77092				
C24	8.033	0.004	306185	439125				
C25	8.319	0.018	416111	1127058				
C26	8.564	-0.001	451269	313667				
C28	9.075	-0.001	539909	295930				
C32	10.011	-0.001	639854	440607				
C34	10.443	0.001	639844	540147				
Filter Peak	12.655	0.004	86624	68681	CREOSOT	(C12-C22)	2251661	54.6
C36	10.854	-0.001	524868	130805				
C38	11.309	-0.001	353422	105615				
C40	11.858	-0.004	204852	161643				
o-terph	6.509	0.002	1937	664				
Triacon Surr	9.567	-0.014	6918042	6925867	NAS DIES	(C10-C24)	9387862	48.1

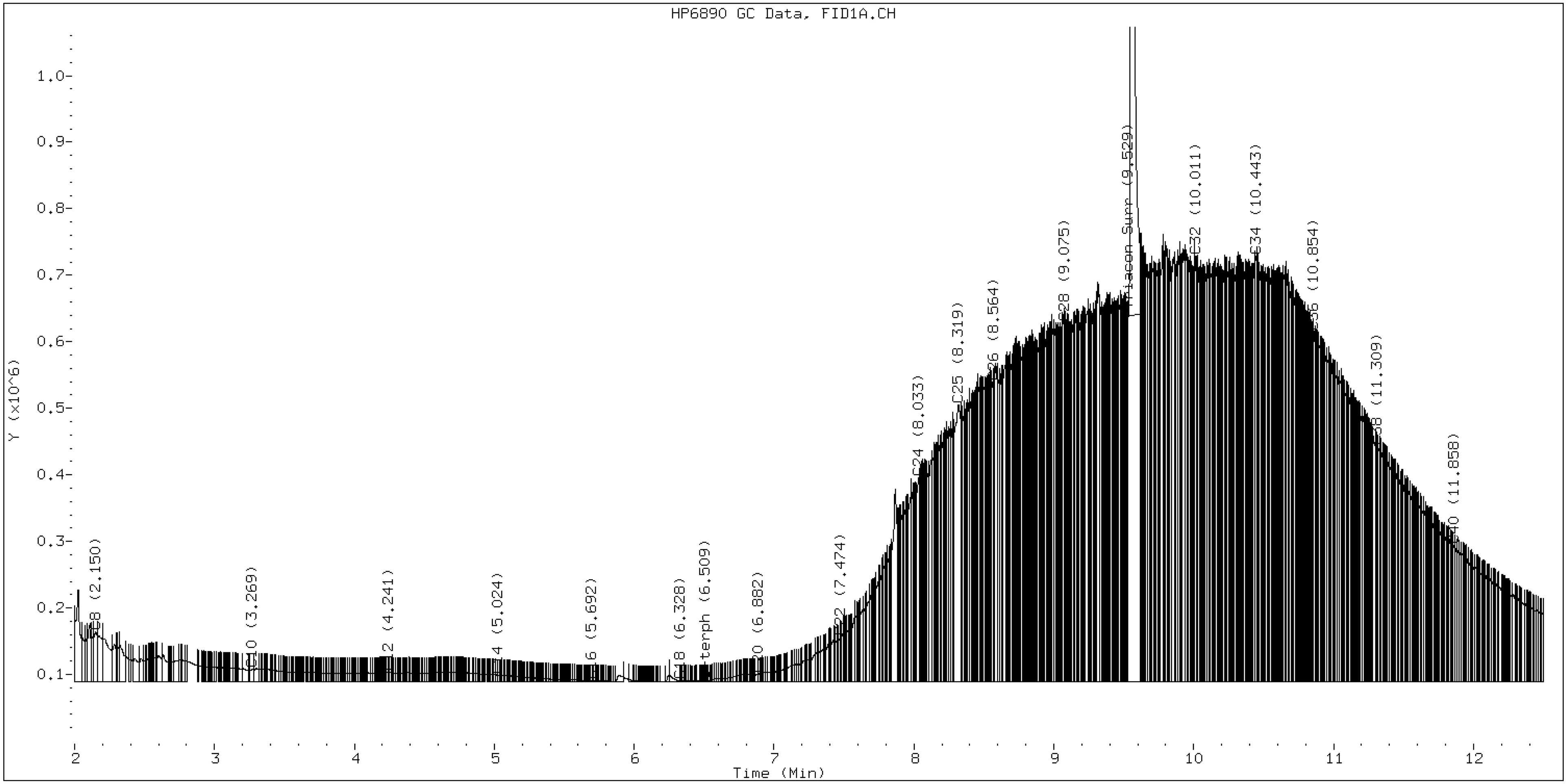
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	664	0.0	
Triacontane	6925867	46.7	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200602.b/420F0208.D SIF0018-CAL4



TPH Manual Integrations Report
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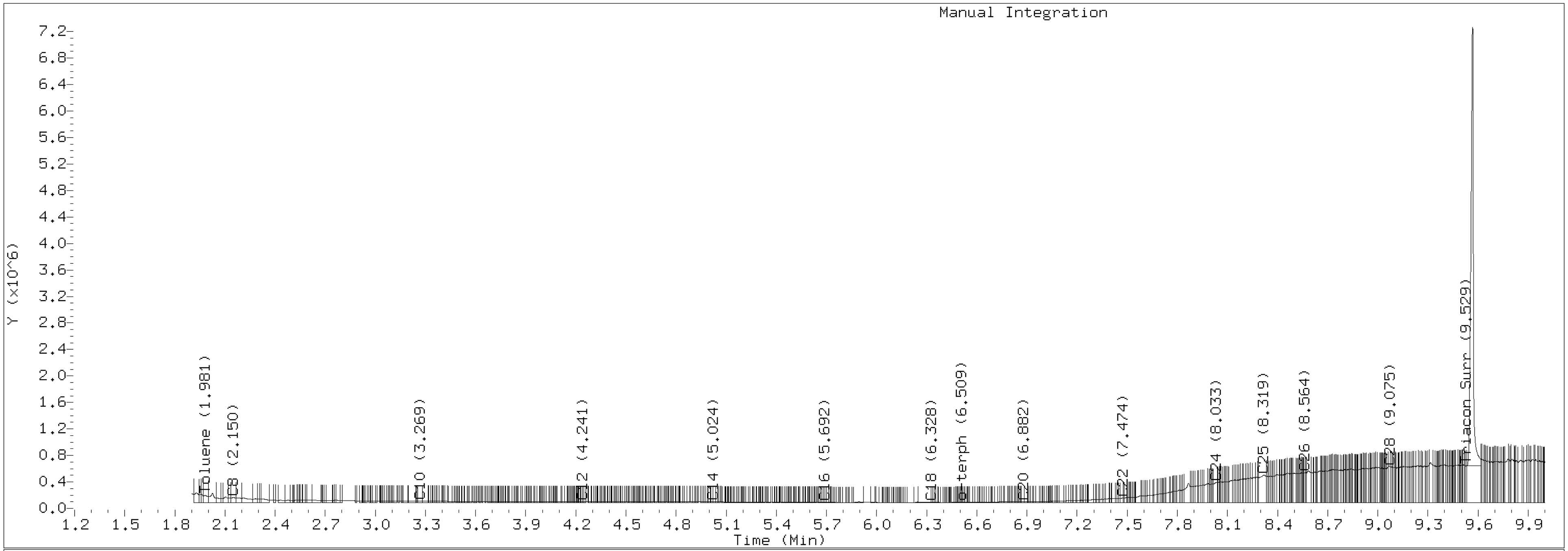
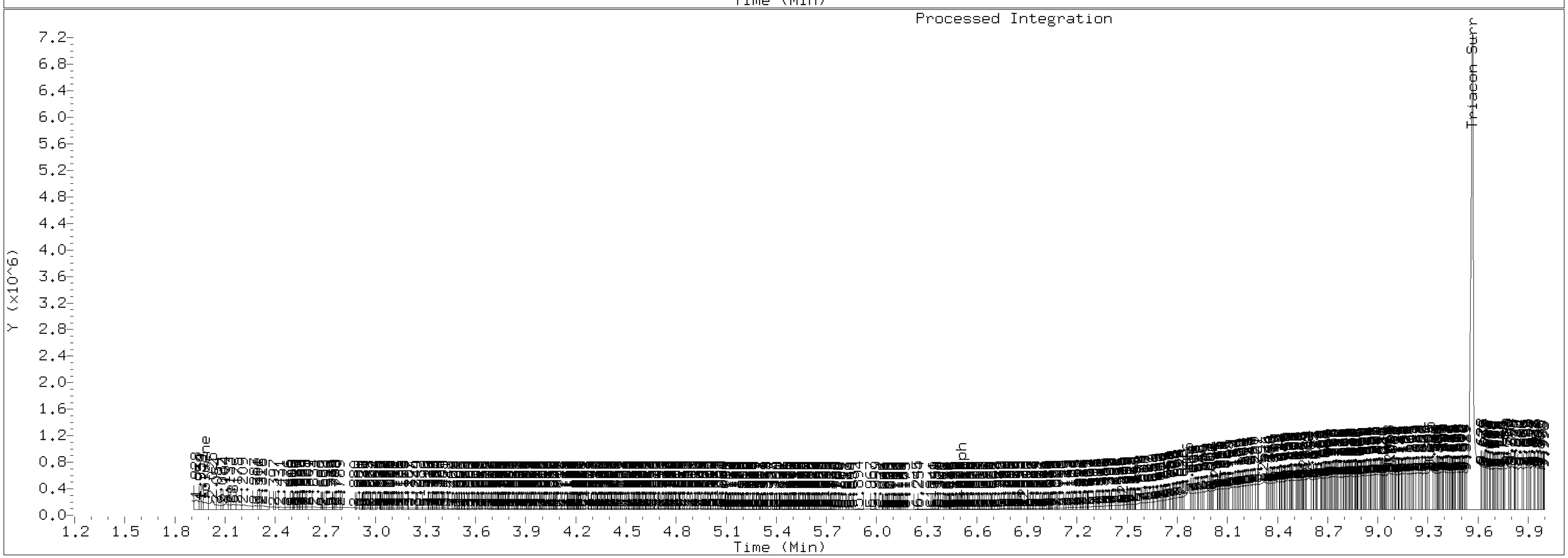
Lab ID:SIF0018-CAL4





Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0209.D

Date : 02-JUN-2020 10:16

Client ID:

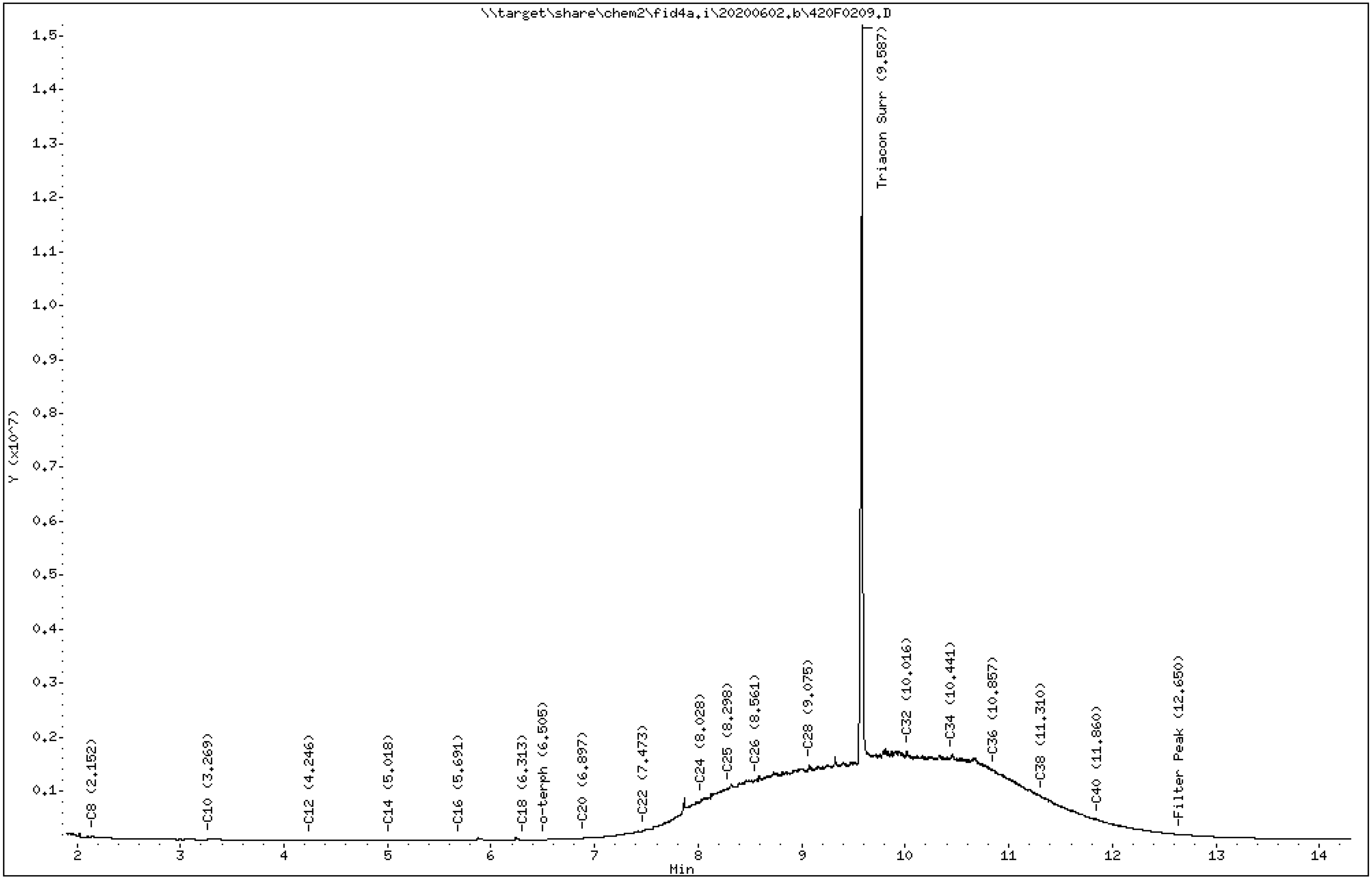
Instrument: fid4a.i

Sample Info: SIF0018-CAL5

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0209.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-CAL5
Client ID:
Injection: 02-JUN-2020 10:16
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.152	-0.004	67731	187221	WATPHD	(C12-C24)	20822485	130.7
C10	3.269	0.000	15304	22992	WATPHM	(C24-C38)	252817754	2499.0
C12	4.246	0.002	8746	2596	AK102	(C10-C25)	30167989	154.3
C14	5.018	-0.004	7386	6763	AK103	(C25-C36)	216864710	2962.4
C16	5.691	0.003	1016	400	OR.DIES	(C10-C28)	91347766	466.1
C18	6.313	0.015	5888	3404				
C20	6.897	0.009	42706	72168	JET-A	(C10-C18)	1226841	7.3
C22	7.473	0.006	175100	153872				
C24	8.028	-0.001	763007	660412				
C25	8.298	-0.003	971912	386849				
C26	8.561	-0.004	1127303	613889				
C28	9.075	-0.002	1382437	951882				
C32	10.016	0.004	1653735	2165722				
C34	10.441	-0.000	1559614	615531				
Filter Peak	12.650	-0.001	105709	42002	CREOSOT	(C12-C22)	4802696	116.5
C36	10.857	0.002	1298073	1024006				
C38	11.310	0.001	808749	281747				
C40	11.860	-0.001	376098	494366				
o-terph	6.505	-0.001	10128	3504				
Triacon Surr	9.587	0.006	13686611	17883640	NAS DIES	(C10-C24)	21349343	109.4

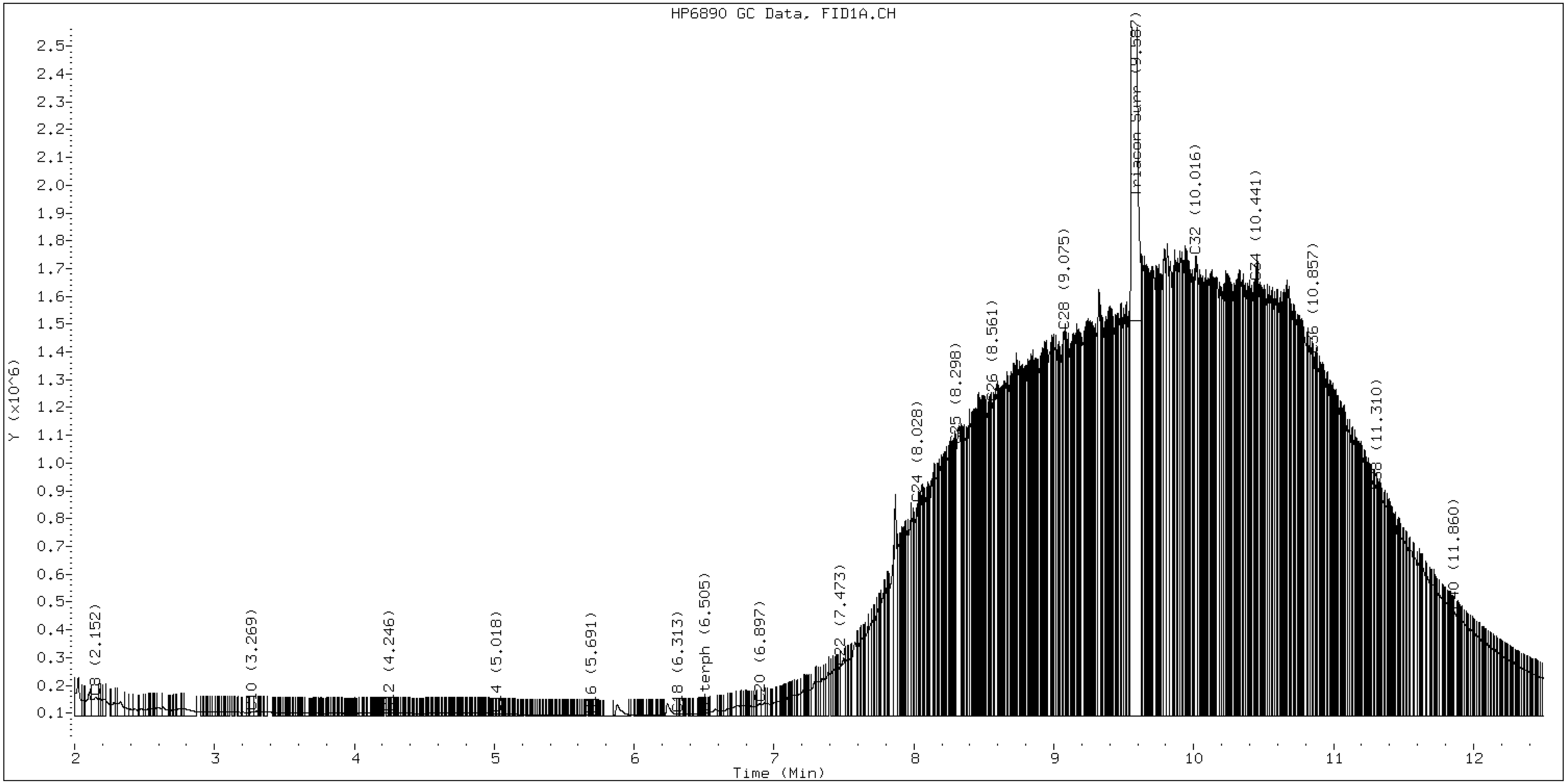
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	3504	0.0	
Triacontane	17883640	120.5	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200602.b/420F0209.D   SIF0018-CAL5



TPH Manual Integrations Report

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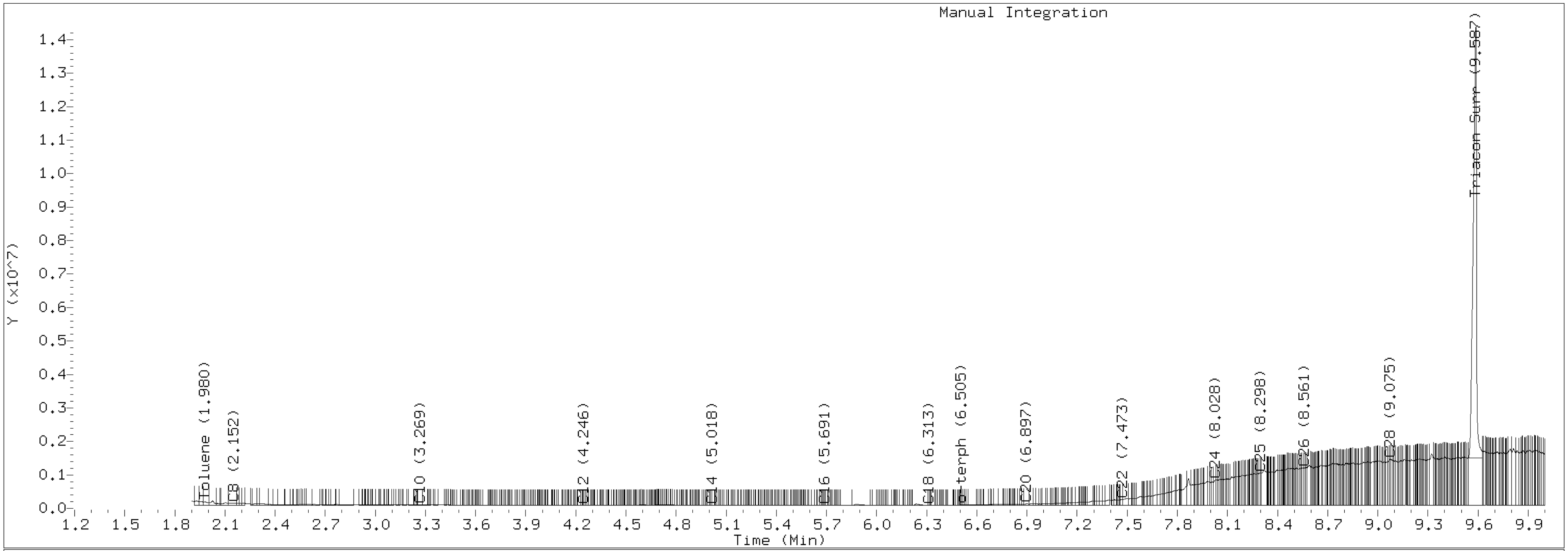
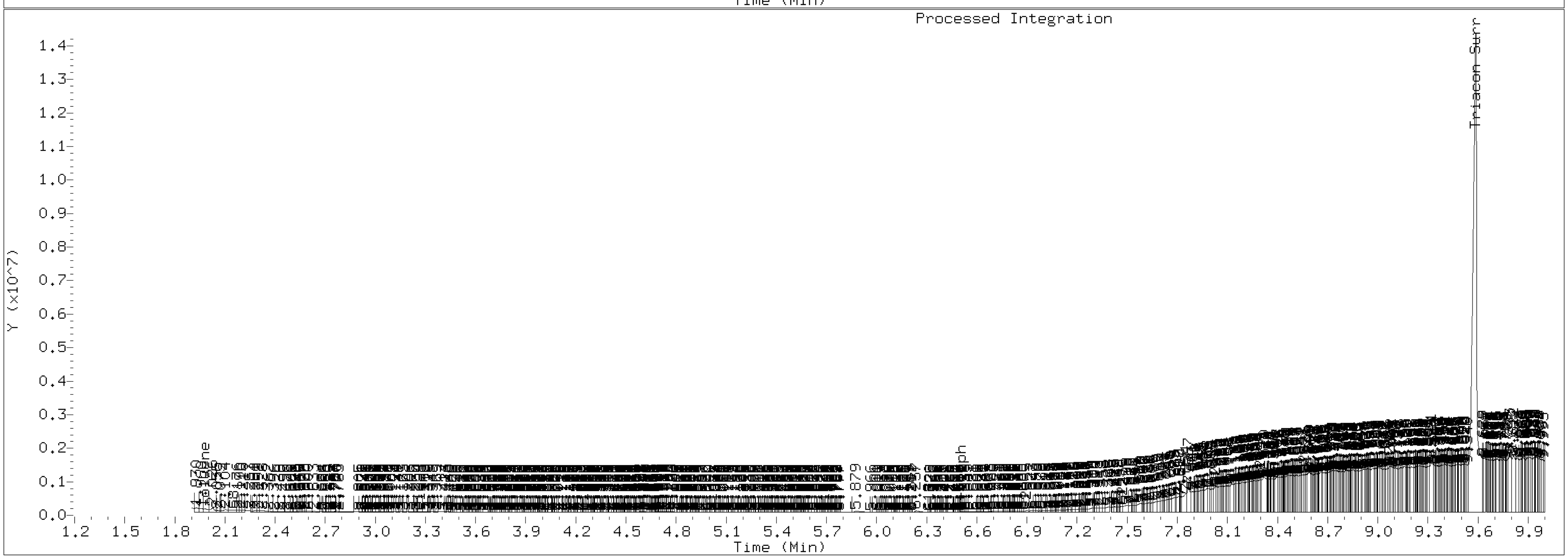
Lab ID:SIF0018-CAL5





Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0210.D

Date : 02-JUN-2020 10:36

Client ID:

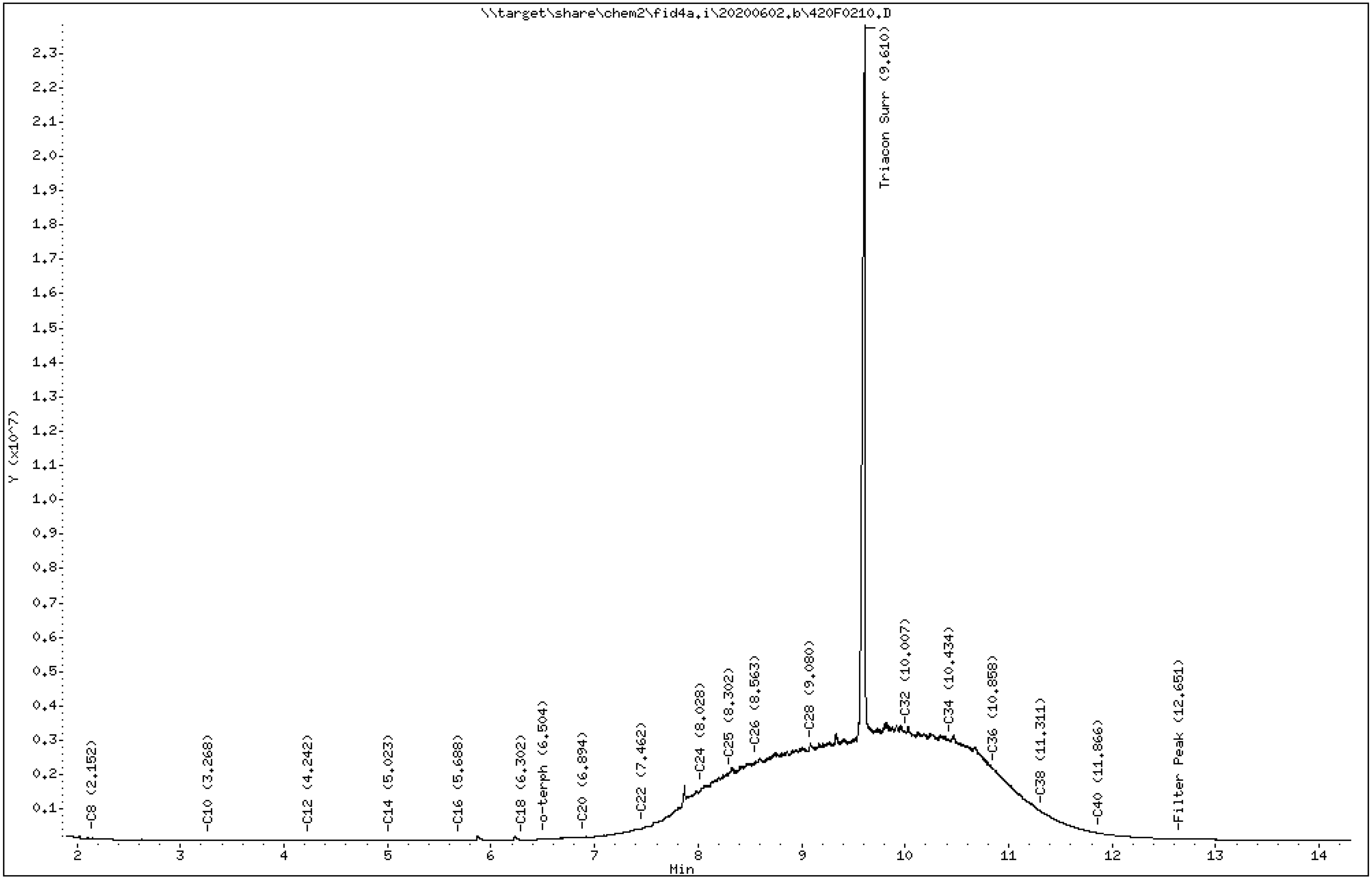
Instrument: fid4a.i

Sample Info: SIF0018-CAL6

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0210.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-CAL6
Client ID:
Injection: 02-JUN-2020 10:36
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.152	-0.004	59759	152130	WATPHD	(C12-C24)	42097067	264.2
C10	3.268	-0.000	10906	13309	WATPHM	(C24-C38)	483979490	4784.0
C12	4.242	-0.002	3837	2144	AK102	(C10-C25)	60128324	307.6
C14	5.023	0.001	5263	2575	AK103	(C25-C36)	432878704	5913.1
C16	5.688	-0.000	5016	3894	OR.DIES	(C10-C28)	184154148	939.6
C18	6.302	0.004	14889	15133				
C20	6.894	0.006	90358	170510	JET-A	(C10-C18)	1118951	6.7
C22	7.462	-0.004	348837	170286				
C24	8.028	-0.001	1514675	949832				
C25	8.302	0.001	1962082	1344009				
C26	8.563	-0.002	2289043	1251416				
C28	9.080	0.003	2750480	953261				
C32	10.007	-0.005	3143736	1251600				
C34	10.434	-0.008	2911308	1732712				
Filter Peak	12.651	-0.000	36927	34124	CREOSOT	(C12-C22)	10157950	246.3
C36	10.858	0.003	2076086	2039708				
C38	11.311	0.001	852892	501049				
C40	11.866	0.004	208322	233733				
o-terph	6.504	-0.003	25014	7430				
Triacon Surr	9.610	0.029	20463550	34084629	NAS DIES	(C10-C24)	42231077	216.4

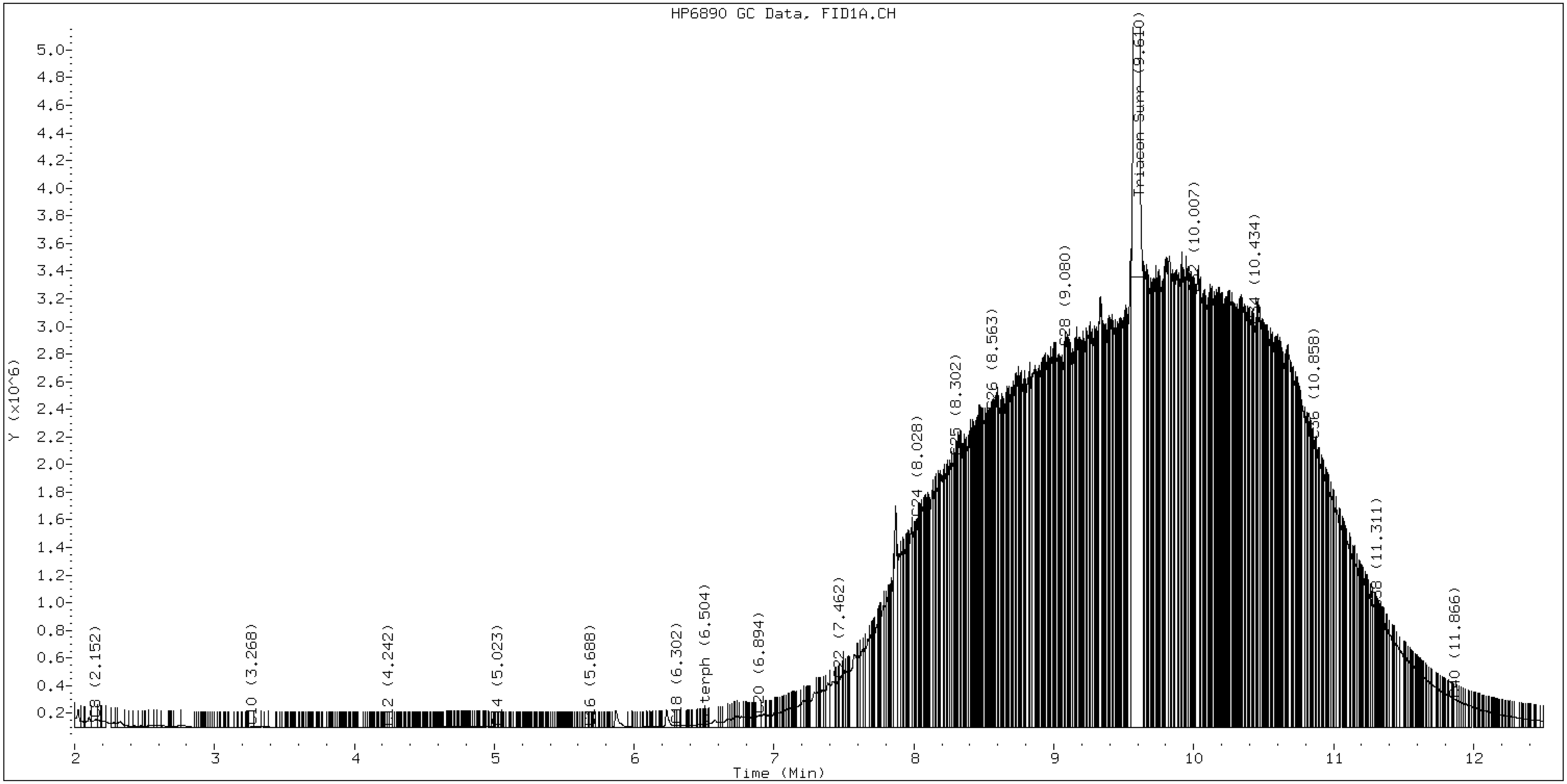
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	7430	0.0	
Triacontane	34084629	229.7	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200602.b/420F0210.D   SIF0018-CAL6



TPH Manual Integrations Report

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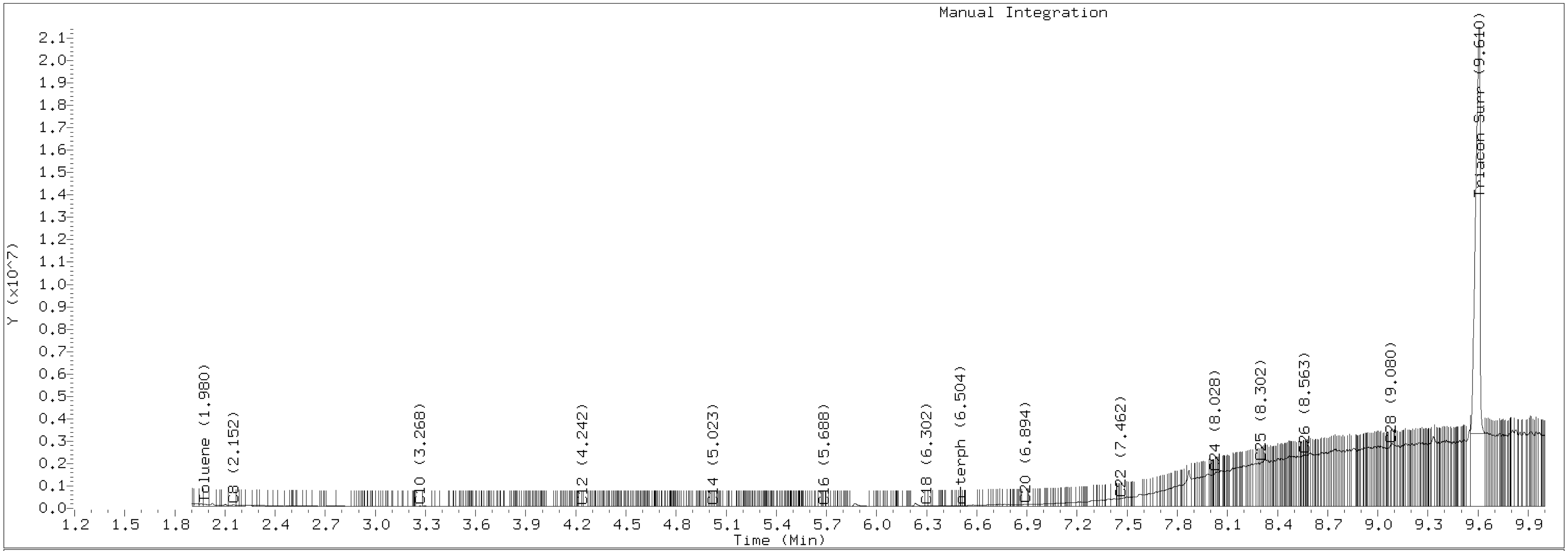
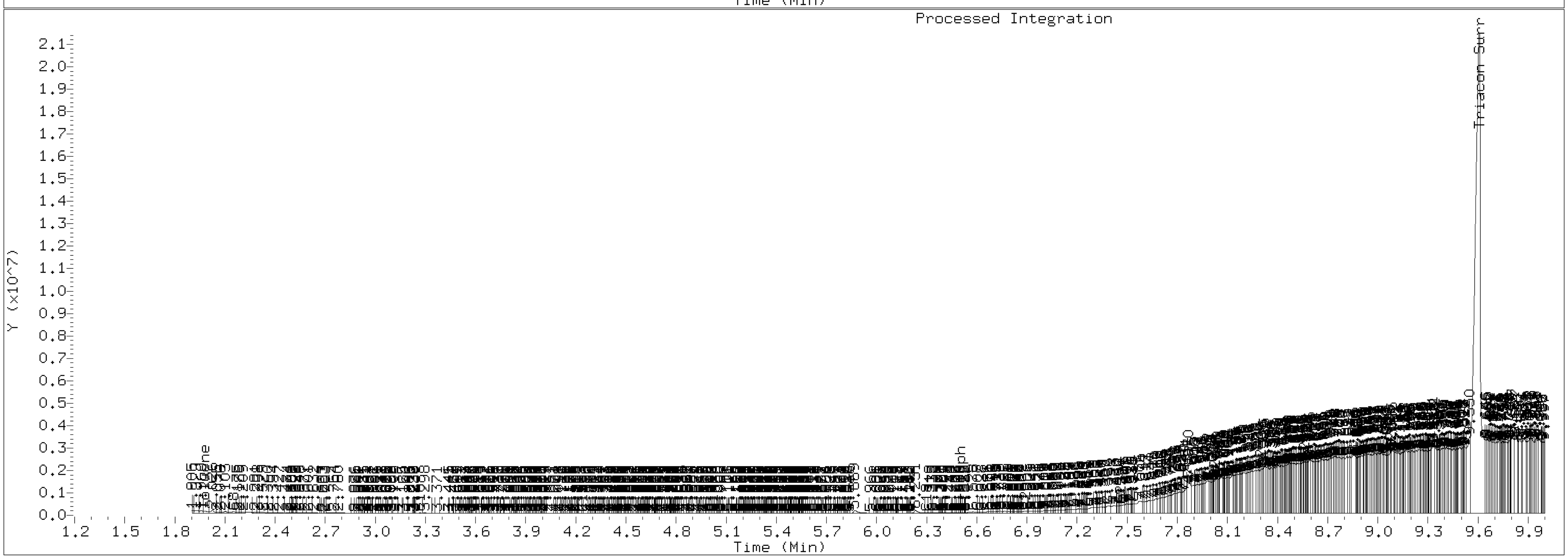
Lab ID:SIF0018-CAL6





Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0211.D

Page 1

Date : 02-JUN-2020 10:55

Client ID:

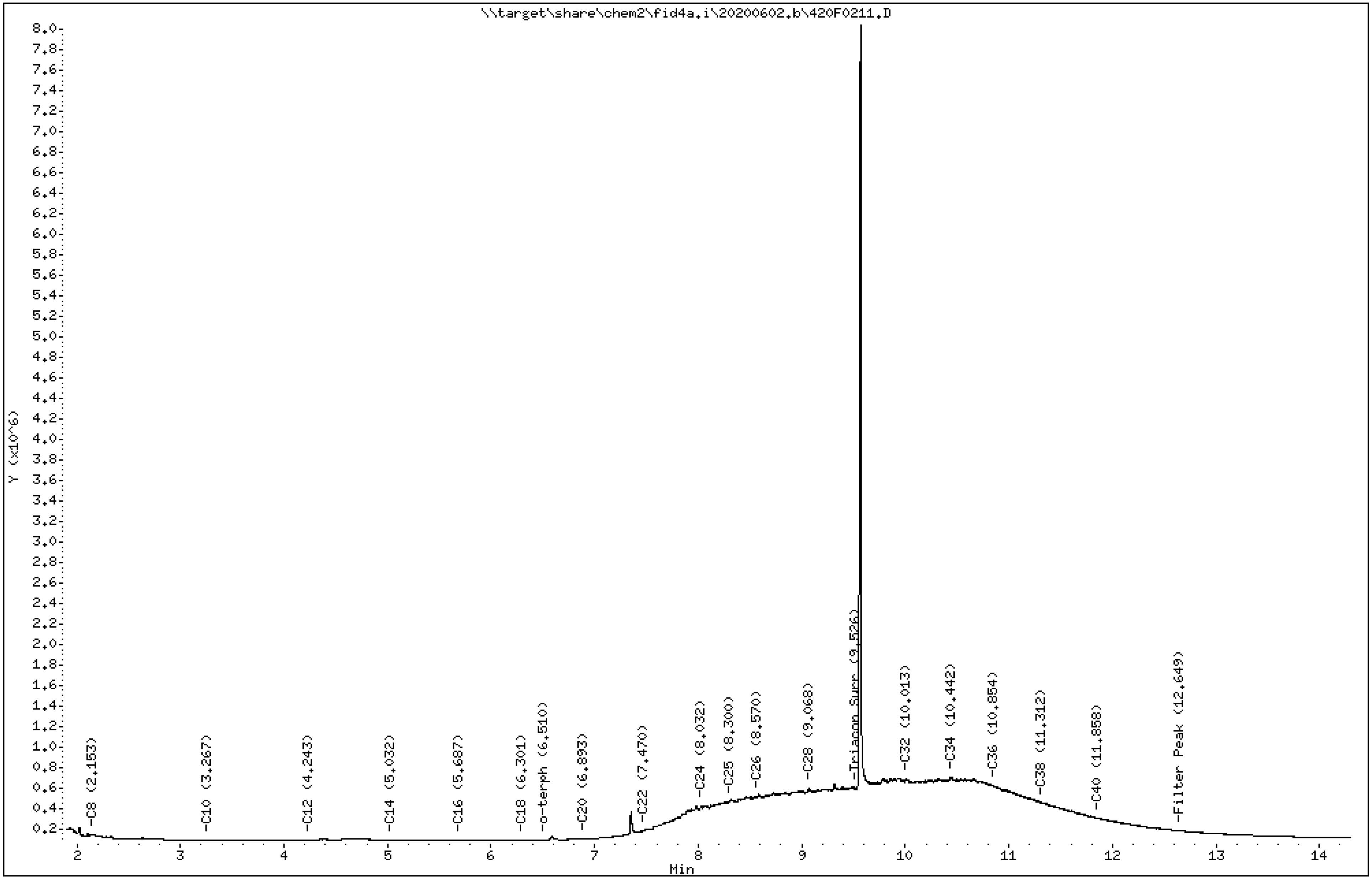
Instrument: fid4a.i

Sample Info: SIF0018-SCV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0211.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-SCV1
Client ID:
Injection: 02-JUN-2020 10:55
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.153	-0.003	53793	112352	WATPHD	(C12-C24)	10130617	63.6
C10	3.267	-0.001	3184	1798	WATPHM	(C24-C38)	96339891	952.3
C12	4.243	-0.001	6309	3433	AK102	(C10-C25)	13696411	70.1
C14	5.032	0.010	5041	1965	AK103	(C25-C36)	81704578	1116.1
C16	5.687	-0.002	418	225	OR.DIES	(C10-C28)	36730595	187.4
C18	6.301	0.002	1584	1331				
C20	6.893	0.005	13152	18749	JET-A	(C10-C18)	637720	3.8
C22	7.470	0.003	92369	58795				
C24	8.032	0.002	330875	354349				
C25	8.300	-0.001	376891	169098				
C26	8.570	0.005	421264	147085				
C28	9.068	-0.008	508527	807405				
C32	10.013	0.001	600890	237363				
C34	10.442	0.001	608272	242751				
Filter Peak	12.649	-0.003	94447	119849	CREOSOT	(C12-C22)	2566539	62.2
C36	10.854	-0.001	530087	263622				
C38	11.312	0.002	366594	183102				
C40	11.858	-0.003	220172	173259				
o-terph	6.510	0.003	2949	1966				
Triacon Surr	9.567	-0.013	7460477	7161172	NAS DIES	(C10-C24)	10346316	53.0

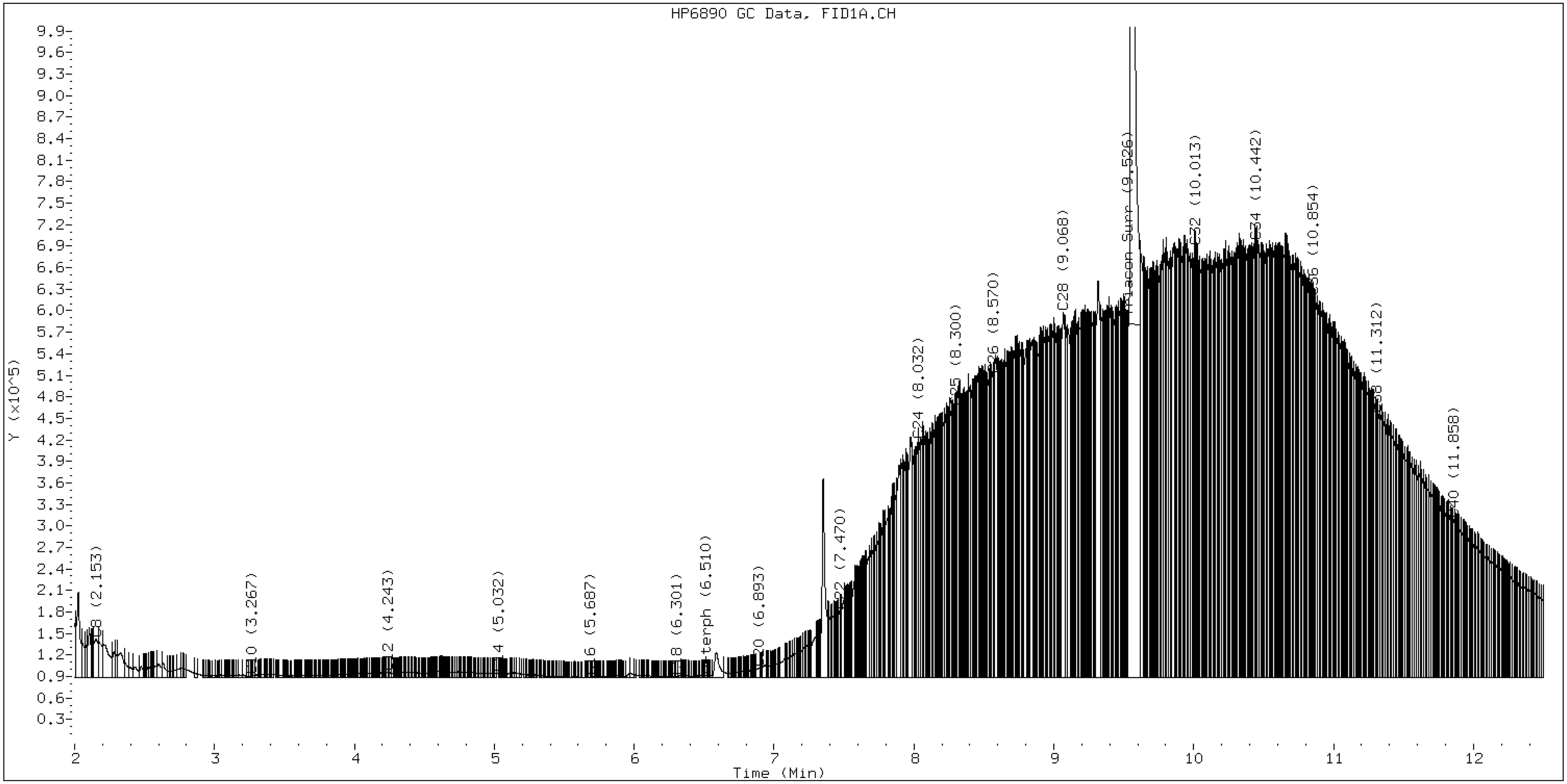
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	1966	0.0	
Triacontane	7161172	48.3	M

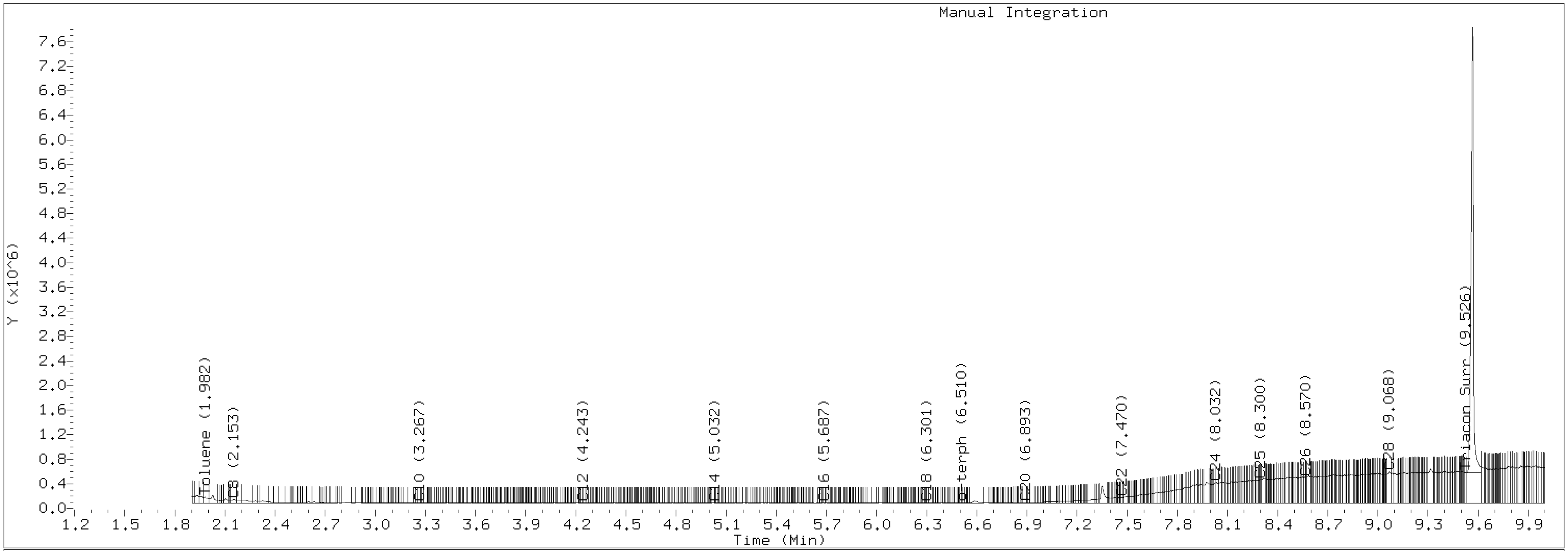
M Indicates the peak was manually integrated

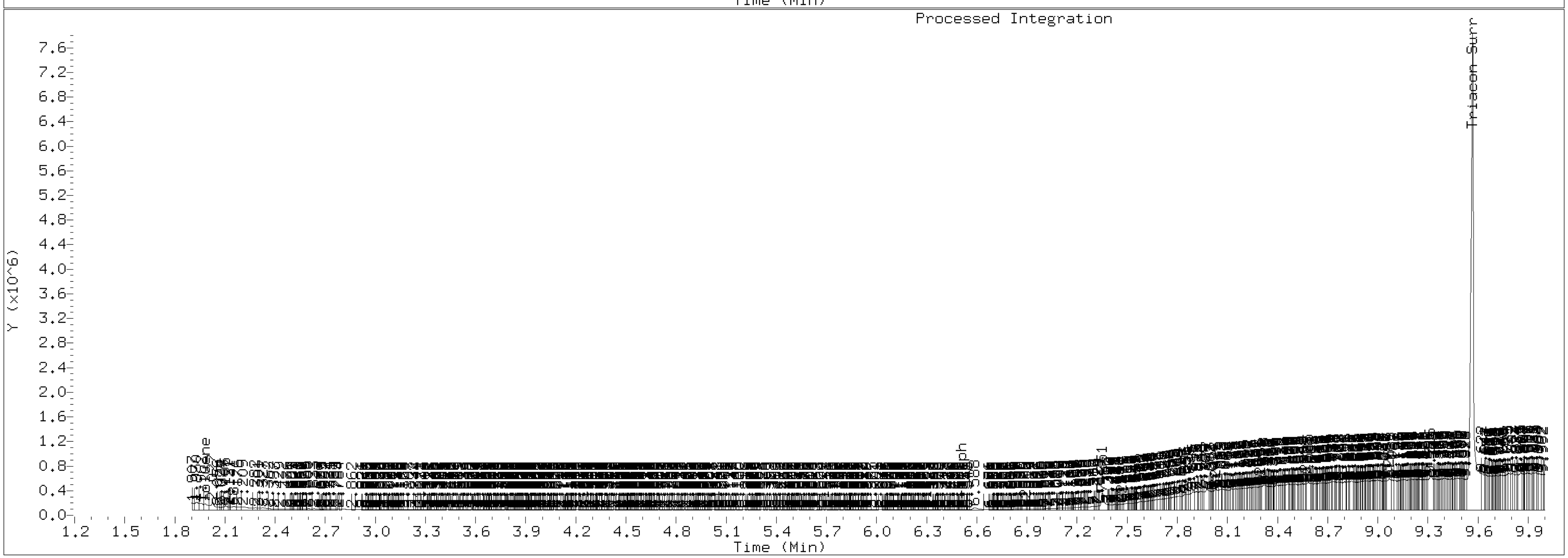
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200602.b/420F0211.D SIF0018-SCV1



TPH Manual Integrations Report
Datafile: FID4A, 20200602.b/420F0211.D Injection: 02-JUN-2020 10:55
Lab ID:SIF0018-SCV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIH0092

Instrument: FID4
Calibration ID: DA00022

Printed: 8/10/2020 2:51:30PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
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SIH0092-IBL2	QC		2		I006241			
SIH0092-CAL1	QC		3		I006988			
SIH0092-CAL2	QC		4		I006987			
SIH0092-CAL3	QC		5		I006986			
SIH0092-CAL4	QC		6		I006985			
SIH0092-CAL5	QC		7		I006984			
SIH0092-CAL6	QC		8		I006965			

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200810.b

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2	10-AUG-2020 08:30	420H1002.D	1	RINSE	
3	10-AUG-2020 08:50	420H1003.D	1	SEQ-IBL1	
4	10-AUG-2020 09:10	420H1004.D	1	SEQ-IBL2	
5	10-AUG-2020 09:30	420H1005.D	1	SEQ-ICV1	
6	10-AUG-2020 09:49	420H1006.D	1	SEQ-ICV2	
7	10-AUG-2020 10:09	420H1007.D	1	I006965	
8	10-AUG-2020 11:44	420H1008.D	1	SEQ-CAL1	
9	10-AUG-2020 12:03	420H1009.D	1	SEQ-CAL2	
10	10-AUG-2020 12:23	420H1010.D	1	SEQ-CAL3	
11	10-AUG-2020 12:43	420H1011.D	1	SEQ-CAL4	
12	10-AUG-2020 13:02	420H1012.D	1	SEQ-CAL5	
13	10-AUG-2020 13:22	420H1013.D	1	SEQ-CAL6	
14	10-AUG-2020 15:15	420H1014.D	1	BIH0129-BLK1	
15	10-AUG-2020 15:34	420H1015.D	1	BIH0129-BS1	
16	10-AUG-2020 15:54	420H1016.D	1	20H0053-01	
17	10-AUG-2020 16:14	420H1017.D	1	20H0058-01	
18	10-AUG-2020 16:34	420H1018.D	1	20H0058-02	
19	10-AUG-2020 16:53	420H1019.D	1	20H0058-03	
20	10-AUG-2020 17:13	420H1020.D	1	20H0060-01	
21	10-AUG-2020 17:33	420H1021.D	1	20H0060-02	
22	10-AUG-2020 17:52	420H1022.D	1	20H0060-03	
23	10-AUG-2020 18:12	420H1023.D	1	BIH0058-BLK1	
24	10-AUG-2020 18:32	420H1024.D	1	BIH0058-BS1	
25	10-AUG-2020 18:52	420H1025.D	1	20G0289-03	
26	10-AUG-2020 19:11	420H1026.D	1	20G0291-01	
27	10-AUG-2020 19:31	420H1027.D	1	SEQ-CCV1	
28	10-AUG-2020 19:51	420H1028.D	1	SEQ-CCV2	
29	10-AUG-2020 20:11	420H1029.D	1	SEQ-ICV3	
30	10-AUG-2020 20:30	420H1030.D	1	BIH0100-BLK1	
31	10-AUG-2020 20:50	420H1031.D	1	BIH0100-BS1	
32	10-AUG-2020 21:10	420H1032.D	1	BIH0100-BSD1	
33	10-AUG-2020 21:29	420H1033.D	1	20G0287-01	
34	10-AUG-2020 21:49	420H1034.D	1	BIH0100-MS1	
35	10-AUG-2020 22:09	420H1035.D	1	BIH0100-MSD1	
36	10-AUG-2020 22:28	420H1036.D	1	BIH0113-BLK1	
37	10-AUG-2020 22:48	420H1037.D	1	BIH0113-BS1	
38	10-AUG-2020 23:08	420H1038.D	1	BIH0113-BSD1	
39	10-AUG-2020 23:27	420H1039.D	1	20H0047-01	
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41	11-AUG-2020 00:06	420H1041.D	1	20H0047-03	
42	11-AUG-2020 00:26	420H1042.D	1	SEQ-CCV3	
43	11-AUG-2020 00:46	420H1043.D	1	SEQ-CCV4	
44	11-AUG-2020 01:05	420H1044.D	1	SEQ-CCV5	
45	11-AUG-2020 01:25	420H1045.D	1	BIH0166-BLK1	
46	11-AUG-2020 01:44	420H1046.D	1	BIH0166-BS1	
47	11-AUG-2020 02:04	420H1047.D	1	BIH0166-BSD1	
48	11-AUG-2020 02:23	420H1048.D	1	20H0082-01	
49	11-AUG-2020 02:43	420H1049.D	1	BIH0166-MS1	
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53	11-AUG-2020 04:01	420H1053.D	1	20H0082-04	
54	11-AUG-2020 04:21	420H1054.D	1	20H0082-05	
55	11-AUG-2020 04:40	420H1055.D	1	20H0082-06	
56	11-AUG-2020 05:00	420H1056.D	1	20H0082-07	
57	11-AUG-2020 05:19	420H1057.D	1	20H0082-08	
58	11-AUG-2020 05:39	420H1058.D	1	20H0082-09	
59	11-AUG-2020 05:58	420H1059.D	1	SEQ-CCV6	
60	11-AUG-2020 06:18	420H1060.D	1	SEQ-CCV7	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200810.b

ARI Job No.: RINS   Method: FID4TPH.m   Instrument: fid4a.i   Date: 10-AUG-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
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0830	420H1002.D	RINSE		1	NO MANUAL INTEGRATION
0850	420H1003.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
0910	420H1004.D	SEQ-IBL2		1	NO MANUAL INTEGRATION
0930	420H1005.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0949	420H1006.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
1009	420H1007.D	I006965		1	NO MANUAL INTEGRATION
1144	420H1008.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
1203	420H1009.D	SEQ-CAL2		1	o-terph,
1223	420H1010.D	SEQ-CAL3		1	o-terph,
1243	420H1011.D	SEQ-CAL4		1	o-terph,
1302	420H1012.D	SEQ-CAL5		1	o-terph,
1322	420H1013.D	SEQ-CAL6		1	o-terph,

Security Status Report

Date: 10-Aug-2020 15:38

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420H1003.D	Data Locked	christopher, 10-Aug-2020 15:38
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420H1010.D	Data Locked	christopher, 10-Aug-2020 15:38
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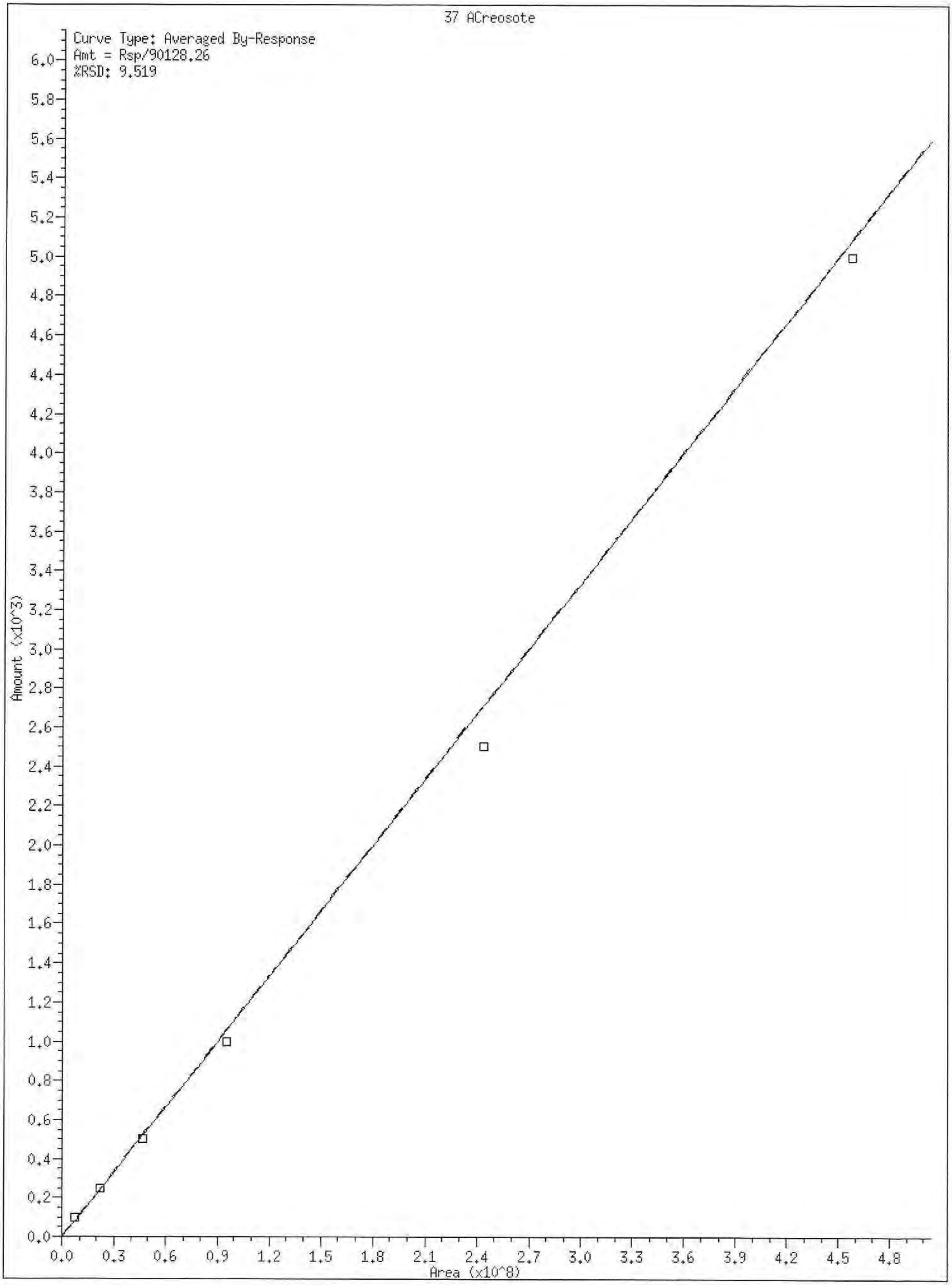
37 ACreosote
Curve Type: Averaged By-Response
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Area (x10^8)
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5.2
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4.6
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4.0
3.8
3.6
3.4
3.2
3.0
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2.6
2.4
2.2
2.0
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0.9
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4.8

Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1003.D

Date : 10-AUG-2020 08:50

Client ID:

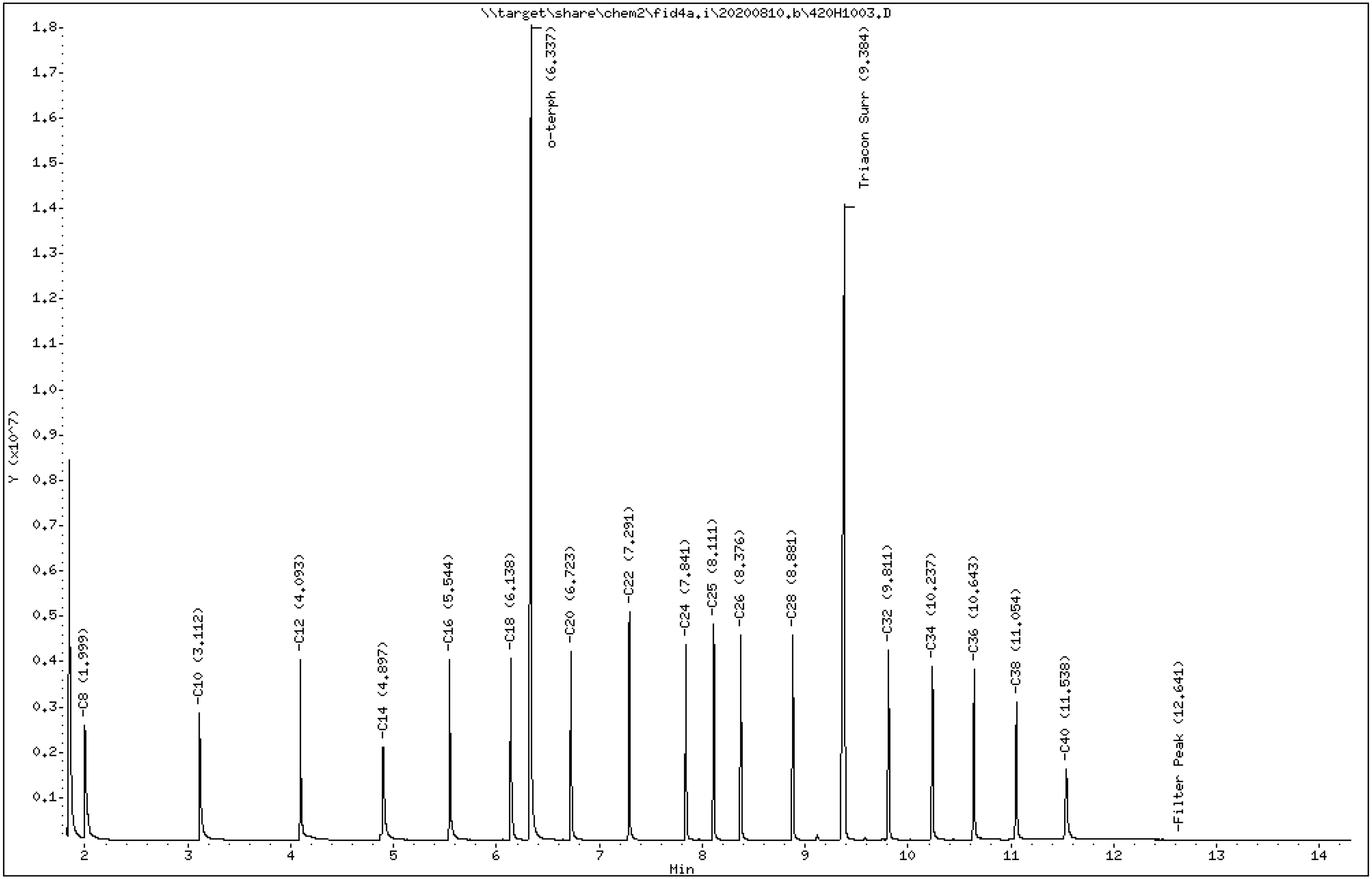
Instrument: fid4a.i

Sample Info: SEQ-IBL1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1003.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-IBL1
Client ID:
Injection: 10-AUG-2020 08:50
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.999	0.000	2540721	3264726	WATPHD	(C12-C24)	22306304	140.0
C10	3.112	0.000	2810194	3442755	WATPHM	(C24-C38)	26298631	260.0
C12	4.093	0.000	3978222	2976186	AK102	(C10-C25)	29087658	148.8
C14	4.897	0.000	2063035	3357028	AK103	(C25-C36)	22563075	308.2
C16	5.544	0.000	3983822	3466435	OR.DIES	(C10-C28)	40321674	205.7
C18	6.138	0.000	4016286	3502383				
C20	6.723	0.000	4164481	3619197	JET-A	(C10-C18)	18085569	107.7
C22	7.291	0.000	5031917	3645250				
C24	7.841	0.000	4315294	3204971				
C25	8.111	0.000	4771856	3679162				
C26	8.376	0.000	4526404	3716371				
C28	8.881	0.000	4514102	3764243				
C32	9.811	0.000	4195592	3775835				
C34	10.237	0.000	3847931	3544071				
Filter Peak	12.641	0.000	14794	6644	CREOSOT	(C12-C22)	19024422	211.1
C36	10.643	0.000	3772310	3456667				
C38	11.054	0.000	3044407	3312686				
C40	11.538	0.000	1563052	2782086				
o-terph	6.337	0.000	17989088	19759793				
Triacon Surr	9.384	0.000	14032526	21215524	NAS DIES	(C10-C24)	28998485	148.6

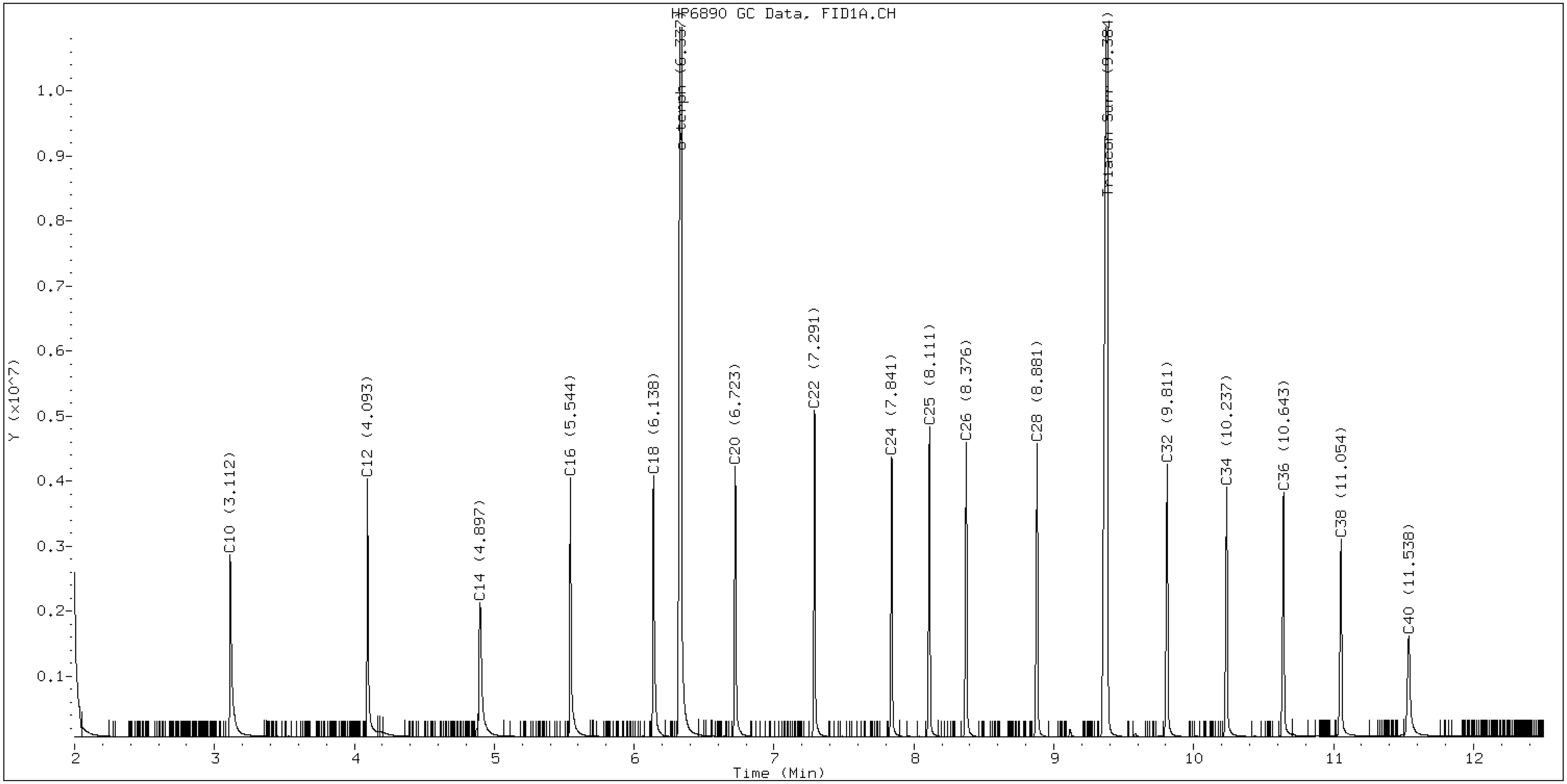
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount
o-Terphenyl	19759793	96.5
Triacontane	21215524	143.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

Datafile: FID4A, 20200810.b/420H1003.D SEQ-IBL1



Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1004.D

Page 1

Date : 10-AUG-2020 09:10

Client ID:

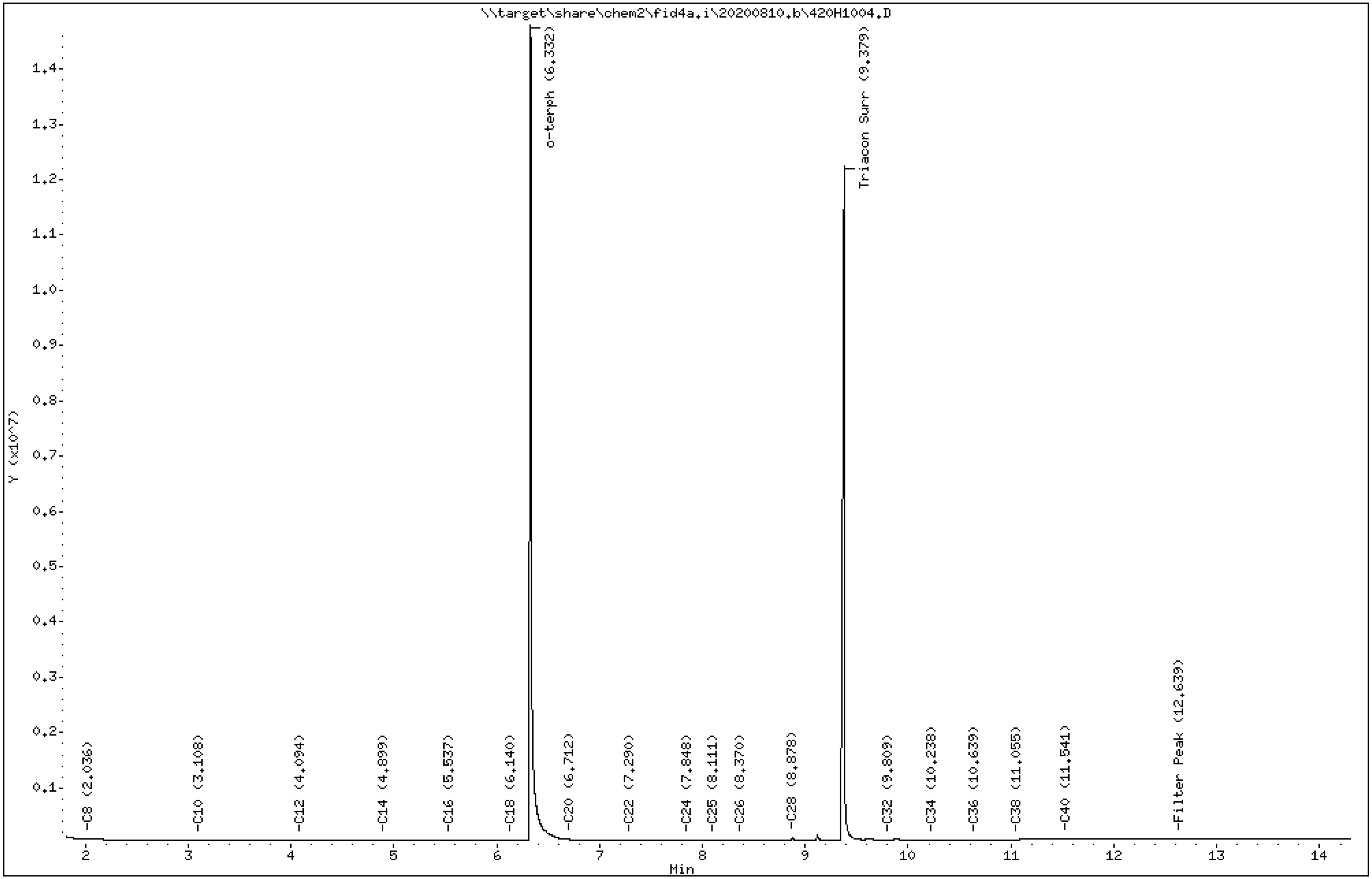
Instrument: fid4a.i

Sample Info: SEQ-IBL2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1004.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-IBL2
Client ID:
Injection: 10-AUG-2020 09:10
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.036	0.037	17008	10175	WATPHD	(C12-C24)	1331558	8.4
C10	3.108	-0.005	5021	2233	WATPHM	(C24-C38)	996053	9.8
C12	4.094	0.001	7426	3680	AK102	(C10-C25)	1724501	8.8
C14	4.899	0.001	4565	910	AK103	(C25-C36)	714743	9.8
C16	5.537	-0.007	2052	1468	OR.DIES	(C10-C28)	1799717	9.2
C18	6.140	0.002	1105	606				
C20	6.712	-0.011	12436	11107	JET-A	(C10-C18)	777990	4.6
C22	7.290	-0.000	2229	1416				
C24	7.848	0.006	1012	430				
C25	8.111	-0.000	658	573				
C26	8.370	-0.005	358	107				
C28	8.878	-0.004	40640	60459				
C32	9.809	-0.001	5465	5260				
C34	10.238	0.000	5599	2503				
Filter Peak	12.639	-0.001	14778	9572	CREOSOT	(C12-C22)	1289747	14.3
C36	10.639	-0.005	9656	22858				
C38	11.055	0.001	12241	5462				
C40	11.541	0.003	14617	10157				
o-terph	6.332	-0.005	14738078	18875440				
Triacon Surr	9.379	-0.005	12182512	16667134	NAS DIES	(C10-C24)	1715942	8.8

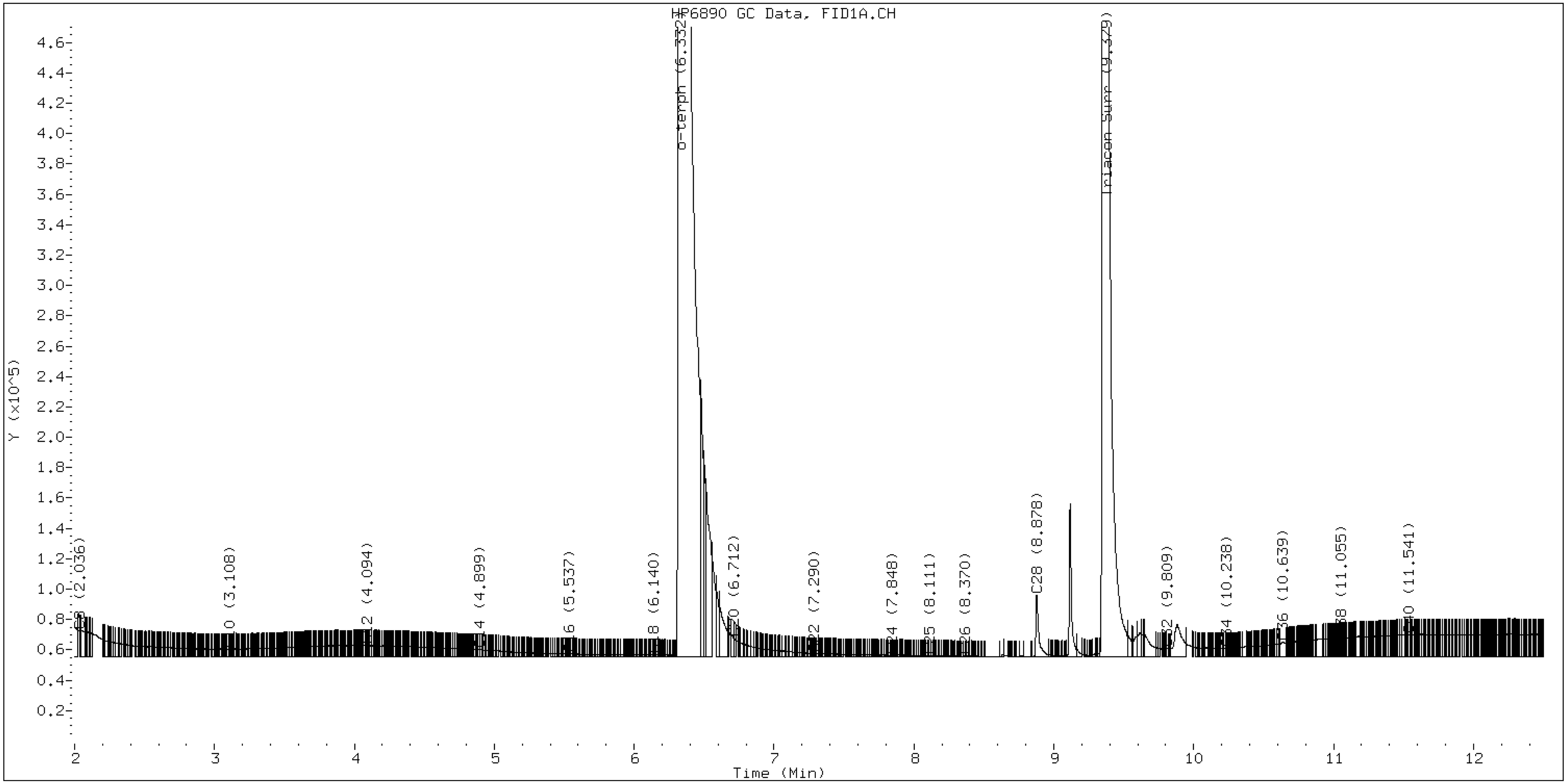
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount
o-Terphenyl	18875440	92.2
Triacontane	16667134	112.3

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

Datafile: FID4A, 20200810.b/420H1004.D SEQ-IBL2



Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1008.D

Page 1

Date : 10-AUG-2020 11:44

Client ID:

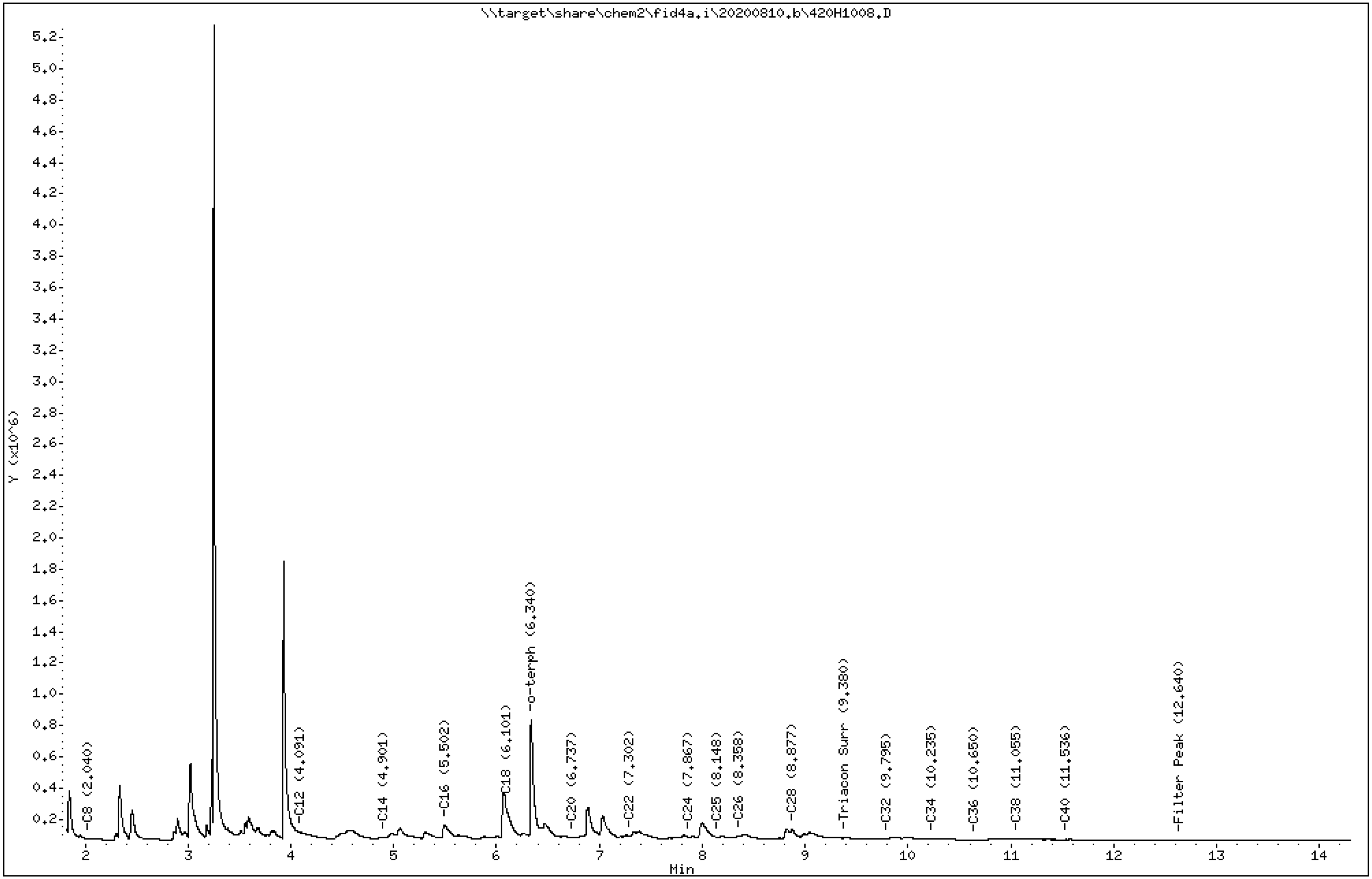
Instrument: fid4a.i

Sample Info: SEQ-CAL1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1008.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL1
Client ID:
Injection: 10-AUG-2020 11:44
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.040	0.041	9503	2838	WATPHD	(C12-C24)	8080791	50.7
C10	----				WATPHM	(C24-C38)	2579077	25.5
C12	4.091	-0.003	48194	23669	AK102	(C10-C25)	19525938	99.9
C14	4.901	0.004	17148	14774	AK103	(C25-C36)	2056688	28.1
C16	5.502	-0.042	98467	314876	OR.DIES	(C10-C28)	20511038	104.6
C18	6.101	-0.037	189826	593277				
C20	6.737	0.014	14982	5936	JET-A	(C10-C18)	15329343	91.3
C22	7.302	0.012	27302	26565				
C24	7.867	0.026	21147	7324				
C25	8.148	0.037	19796	7876				
C26	8.358	-0.018	27281	17420				
C28	8.877	-0.004	67902	107454				
C32	9.795	-0.016	12040	22767				
C34	10.235	-0.003	7524	8634				
Filter Peak	12.640	-0.001	3106	1077	CREOSOT	(C12-C22)	7382186	81.9
C36	10.650	0.007	3324	1958				
C38	11.055	0.001	5084	2761				
C40	11.536	-0.002	4406	4074				
o-terph	6.340	0.002	772053	1761409				
Triacon Surr	9.380	-0.004	14077	10247	NAS DIES	(C10-C24)	19109345	97.9

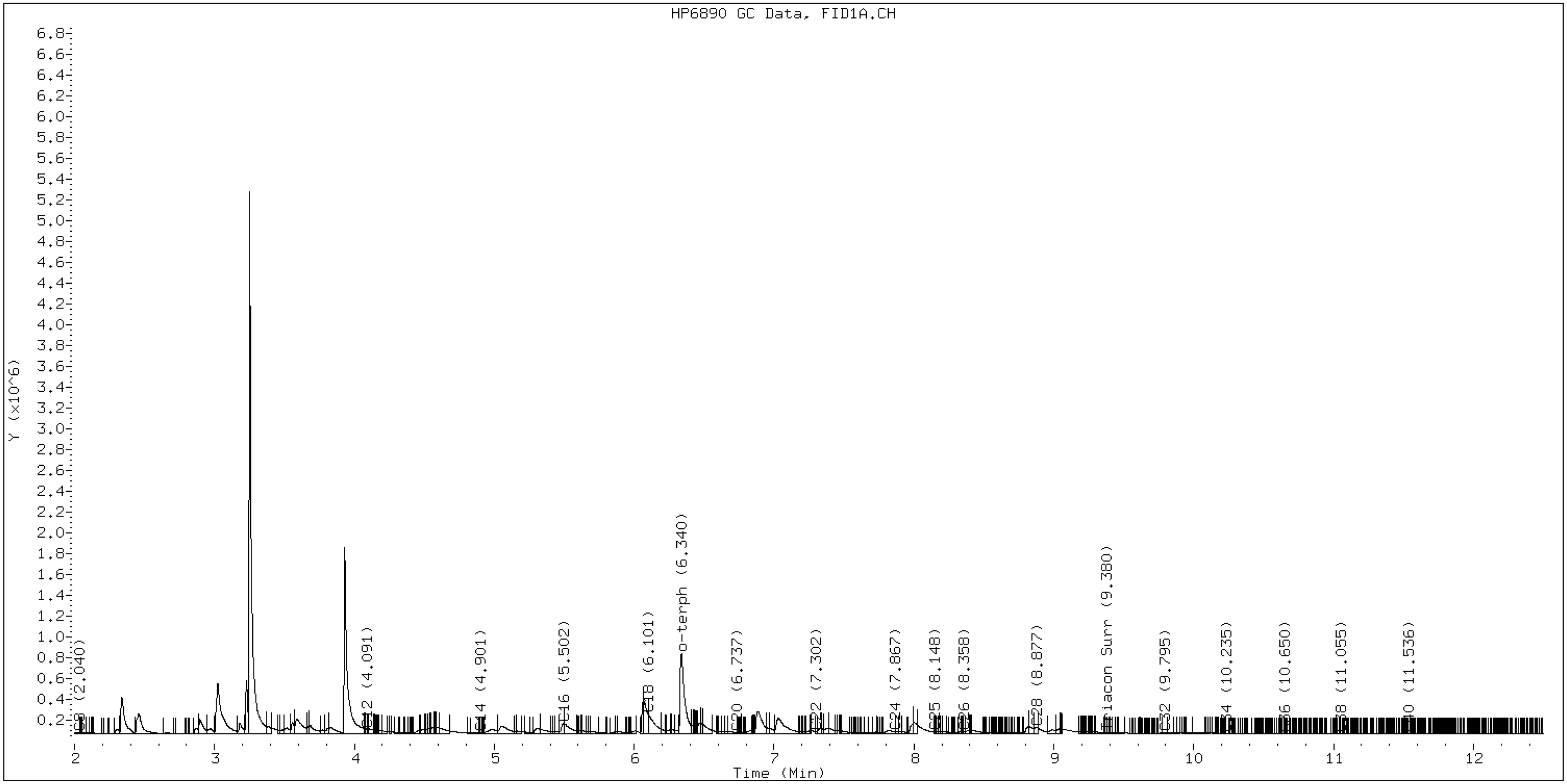
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount
o-Terphenyl	1761409	8.6
Triacontane	10247	0.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

Datafile: FID4A, 20200810.b/420H1008.D SEQ-CAL1



Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1009.D

Page 1

Date : 10-AUG-2020 12:03

Client ID:

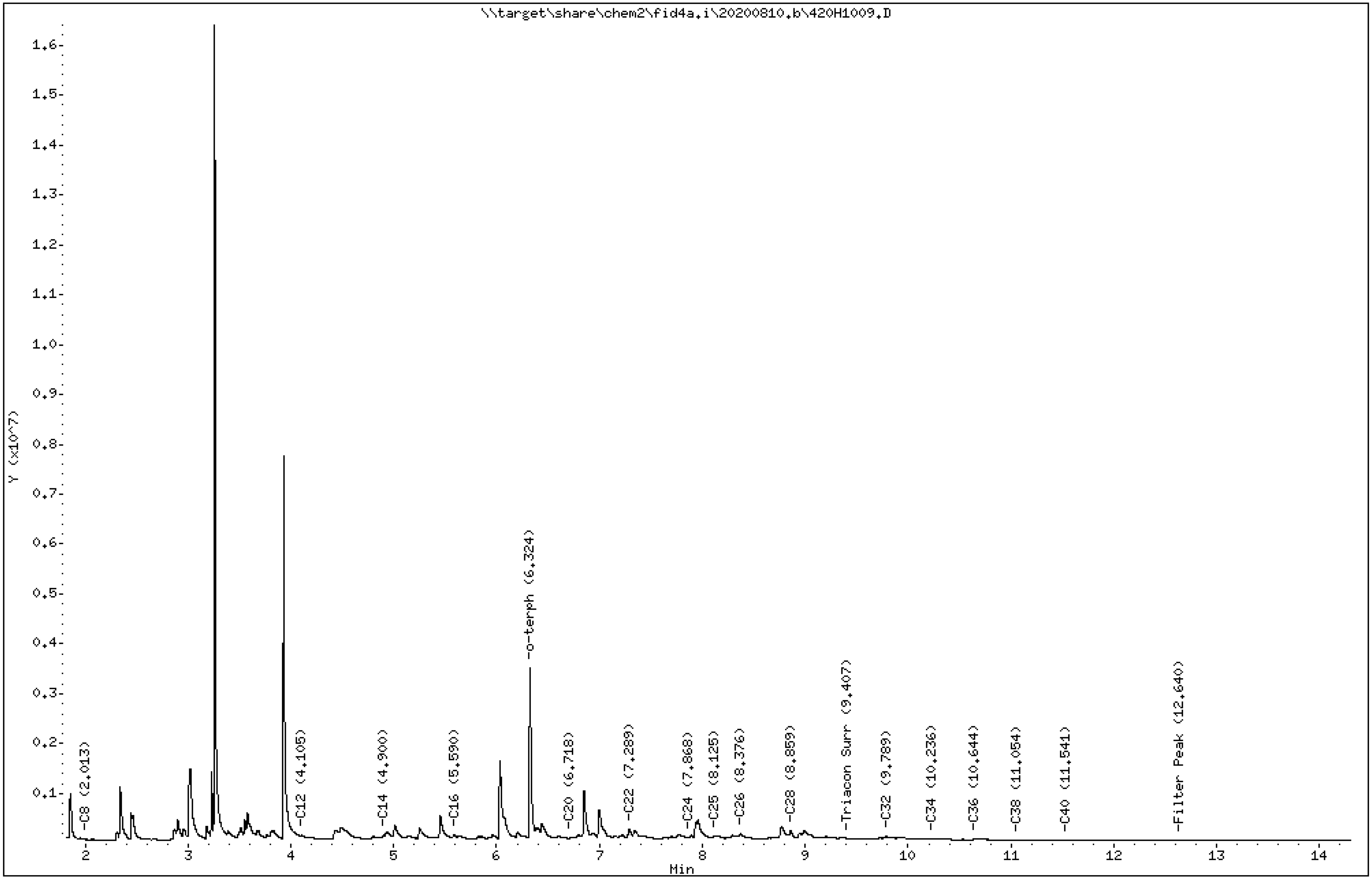
Instrument: fid4a.i

Sample Info: SEQ-CAL2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1009.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL2
Client ID:
Injection: 10-AUG-2020 12:03
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.013	0.014	13752	23396	WATPHD	(C12-C24)	24094230	151.2
C10	----				WATPHM	(C24-C38)	9822291	97.1
C12	4.105	0.012	97213	295971	AK102	(C10-C25)	55662092	284.7
C14	4.900	0.003	96654	172578	AK103	(C25-C36)	7689863	105.0
C16	5.590	0.046	100512	127761	OR.DIES	(C10-C28)	59384249	303.0
C18	----							
C20	6.718	-0.005	43007	69493	JET-A	(C10-C18)	42803912	254.9
C22	7.289	-0.001	213953	504363				
C24	7.868	0.026	51518	25580				
C25	8.125	0.014	87057	179953				
C26	8.376	0.000	125029	524631				
C28	8.859	-0.023	181002	435693				
C32	9.789	-0.022	68586	223761				
C34	10.236	-0.001	21356	24080				
Filter Peak	12.640	-0.000	3549	1227	CREOSOT	(C12-C22)	22100398	245.2
C36	10.644	0.001	13989	3478				
C38	11.054	-0.000	9429	6073				
C40	11.541	0.003	5623	1672				
o-terph	6.324	-0.013	3394533	4330623				
Triacon Surr	9.407	0.023	36620	30128	NAS DIES	(C10-C24)	53743053	275.4

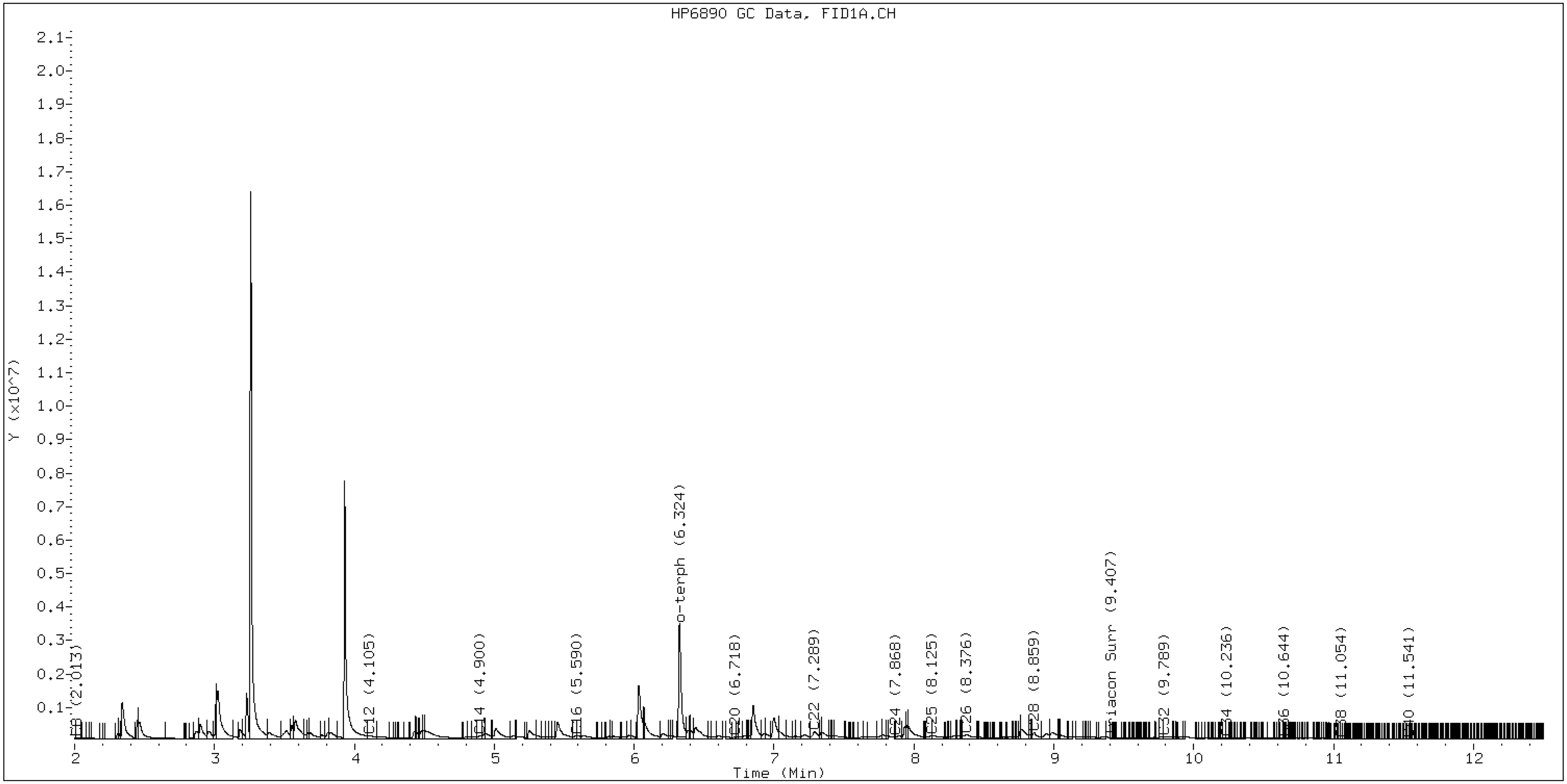
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount	
o-Terphenyl	4330623	21.2	M
Triacontane	30128	0.2	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

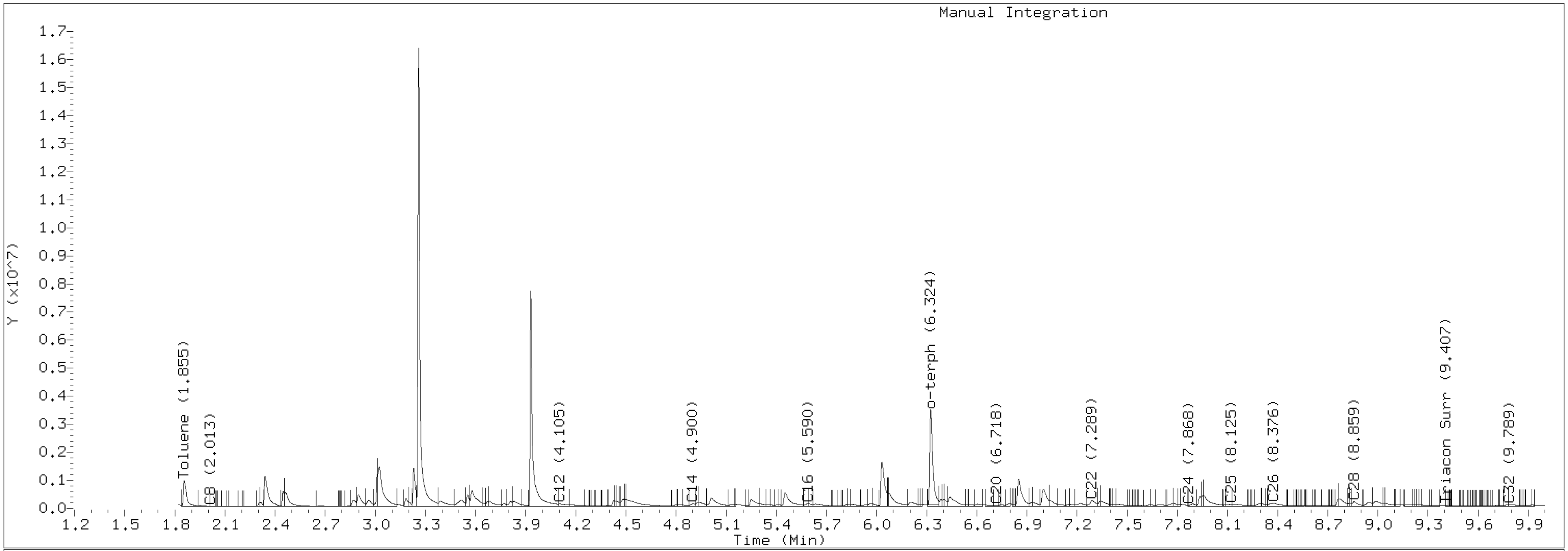
Datafile: FID4A, 20200810.b/420H1009.D SEQ-CAL2

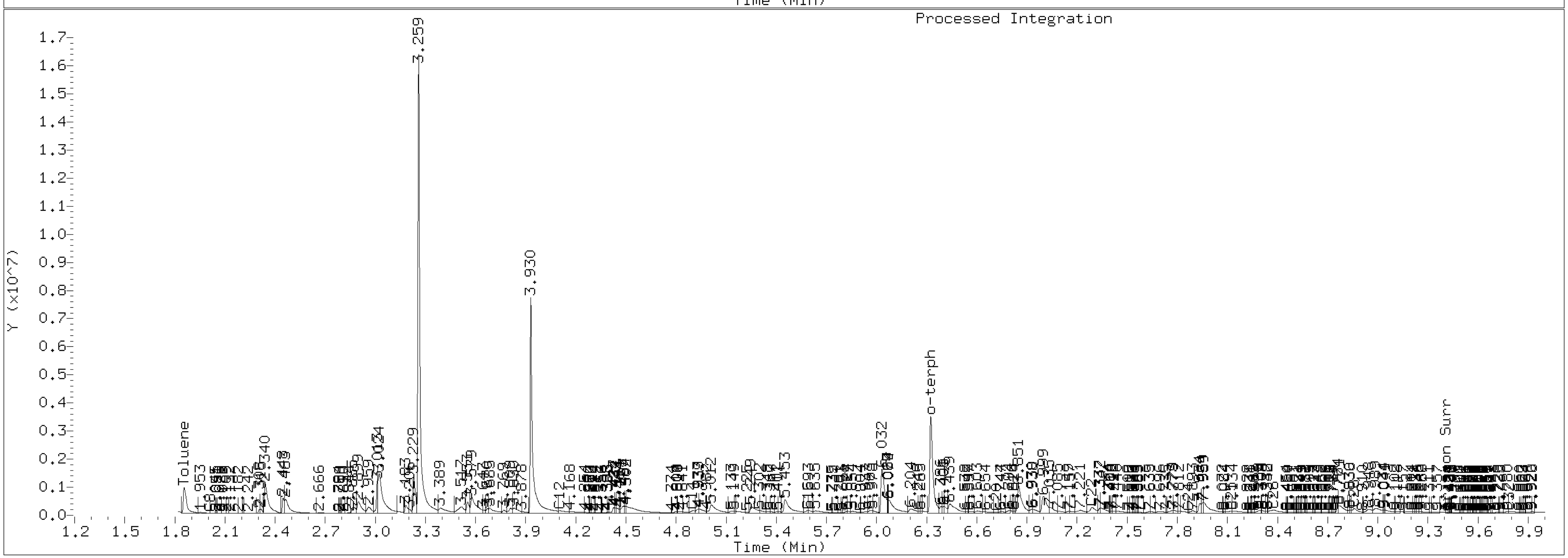


TPH Manual Integrations Report

Datafile: FID4A, 20200810.b/420H1009.D Injection: 10-AUG-2020 12:03

Lab ID:SEQ-CAL2





Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1010.D

Date : 10-AUG-2020 12:23

Client ID:

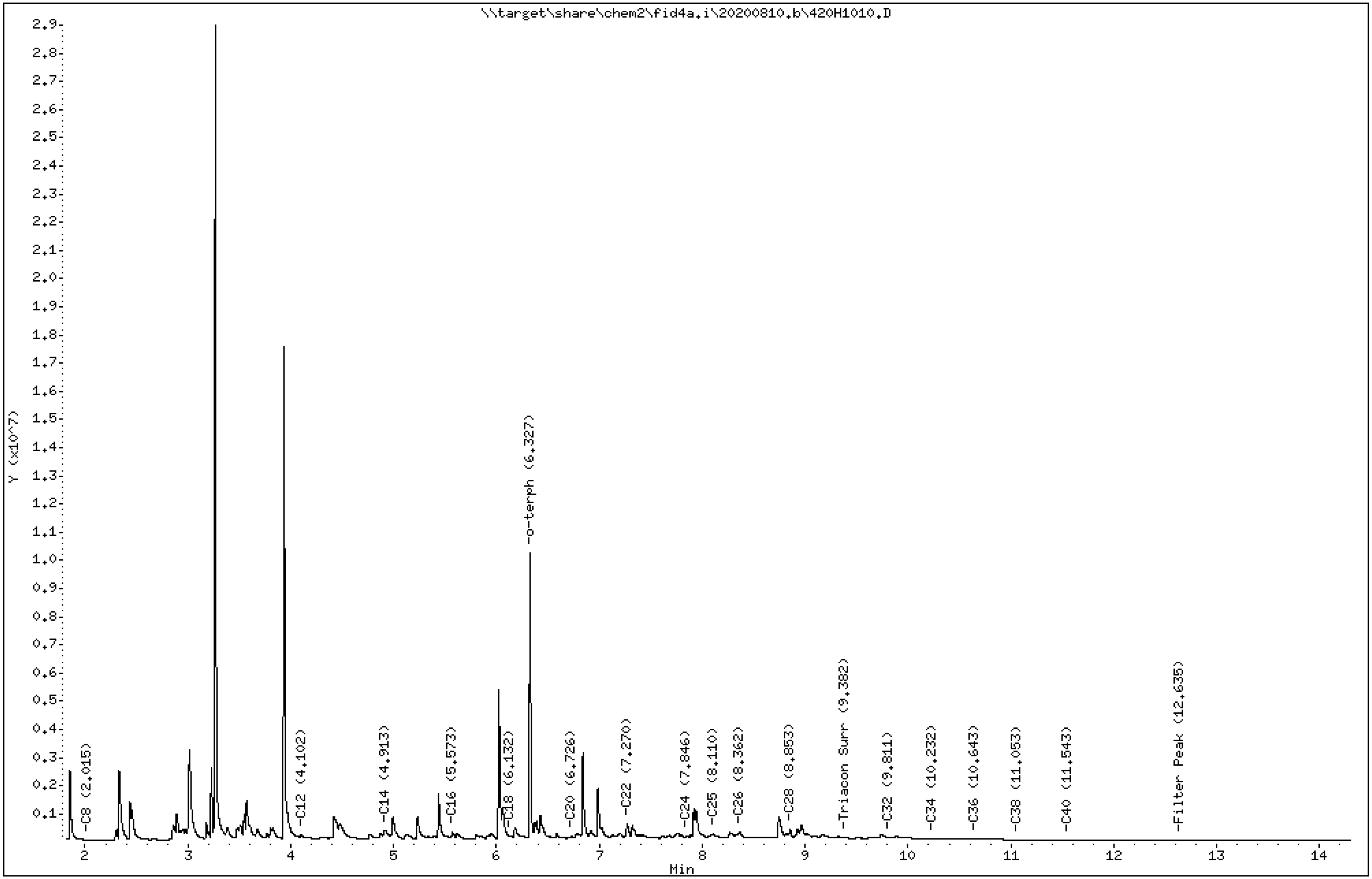
Instrument: fid4a.i

Sample Info: SEQ-CAL3

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1010.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL3
Client ID:
Injection: 10-AUG-2020 12:23
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.015	0.016	17846	36273	WATPHD	(C12-C24)	51259340	321.7
C10	----				WATPHM	(C24-C38)	22066522	218.1
C12	4.102	0.009	179685	448519	AK102	(C10-C25)	116587134	596.4
C14	4.913	0.016	356259	456272	AK103	(C25-C36)	17746552	242.4
C16	5.573	0.029	271020	584987	OR.DIES	(C10-C28)	125538937	640.5
C18	6.132	-0.006	140882	269530				
C20	6.726	0.003	136775	134046	JET-A	(C10-C18)	90127540	536.8
C22	7.270	-0.021	606173	1140185				
C24	7.846	0.004	128041	176452				
C25	8.110	-0.001	221035	545483				
C26	8.362	-0.014	297442	1027684				
C28	8.853	-0.028	403064	641655				
C32	9.811	0.000	99788	29846				
C34	10.232	-0.006	46152	43534				
Filter Peak	12.635	-0.006	3882	1909	CREOSOT	(C12-C22)	47014203	521.6
C36	10.643	0.000	38763	9675				
C38	11.053	-0.001	17467	8707				
C40	11.543	0.005	8291	3696				
o-terph	6.327	-0.010	10095175	9317090				
Triacon Surr	9.382	-0.002	75592	22548	NAS DIES	(C10-C24)	112694191	577.5

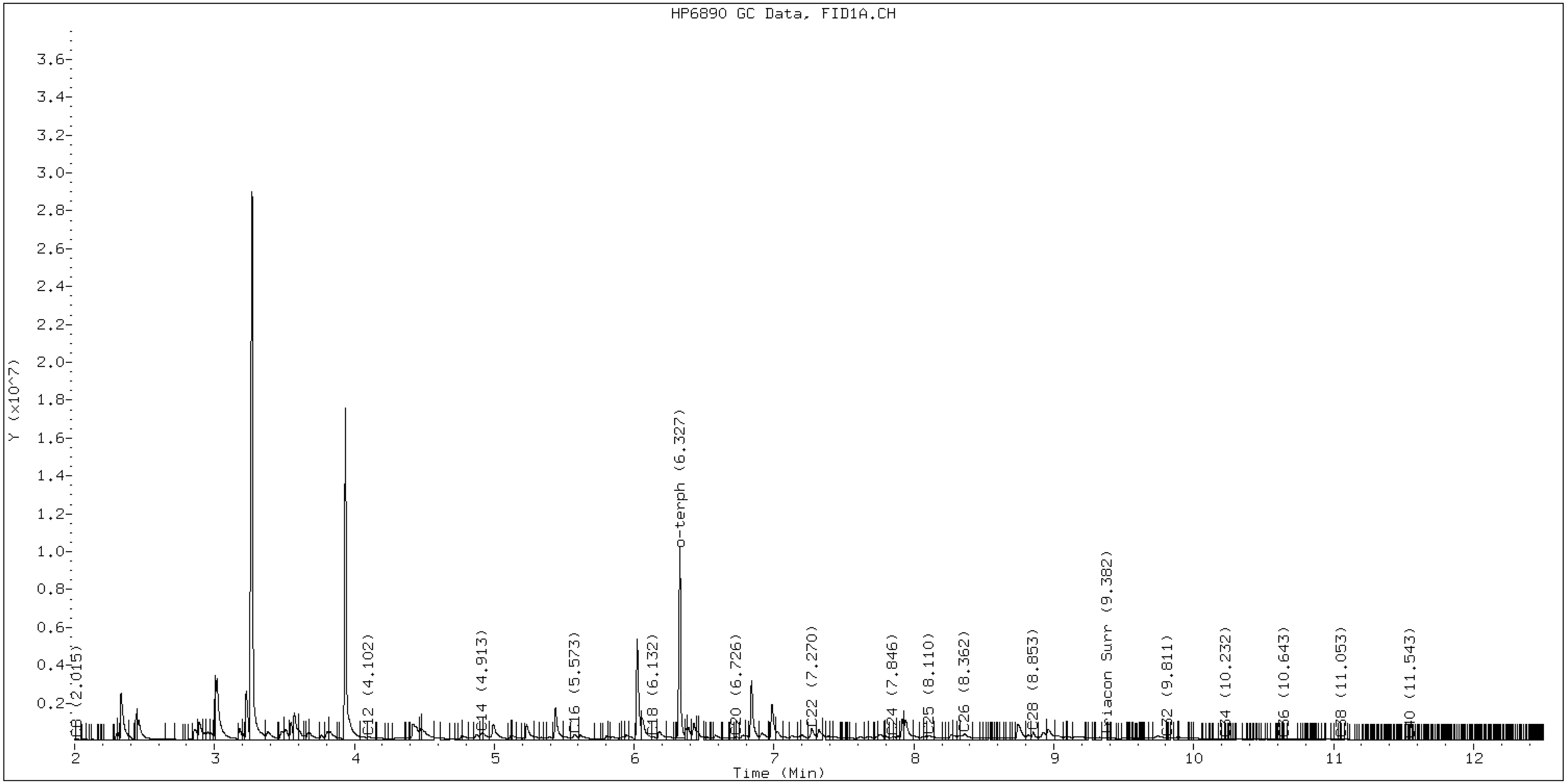
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount	
o-Terphenyl	9317090	45.5	M
Triacontane	22548	0.2	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

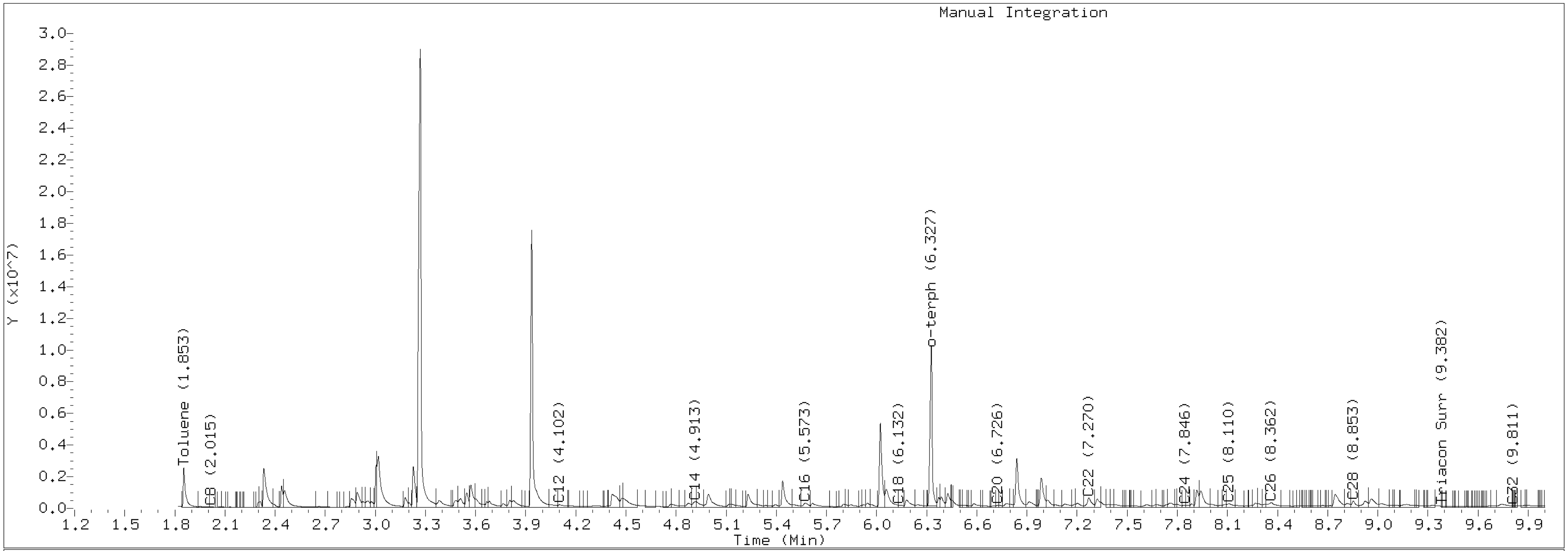
Datafile: FID4A, 20200810.b/420H1010.D SEQ-CAL3

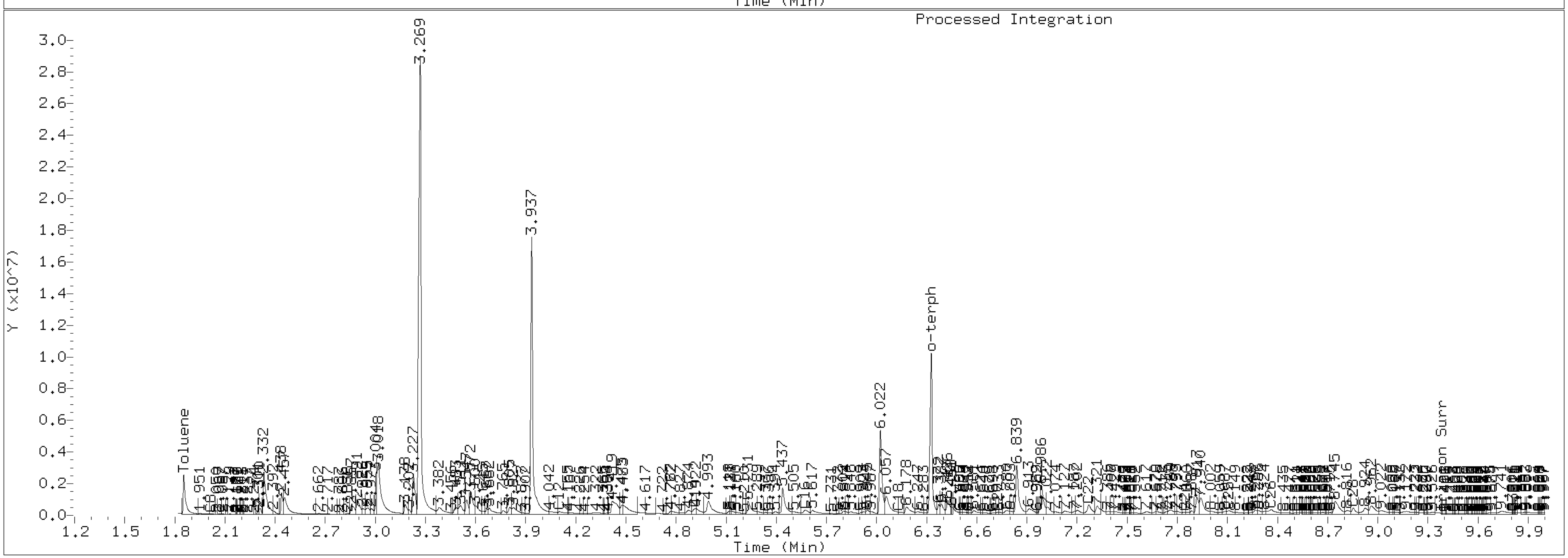


TPH Manual Integrations Report

Datafile: FID4A, 20200810.b/420H1010.D Injection: 10-AUG-2020 12:23

Lab ID:SEQ-CAL3





Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1011.D

Date : 10-AUG-2020 12:43

Client ID:

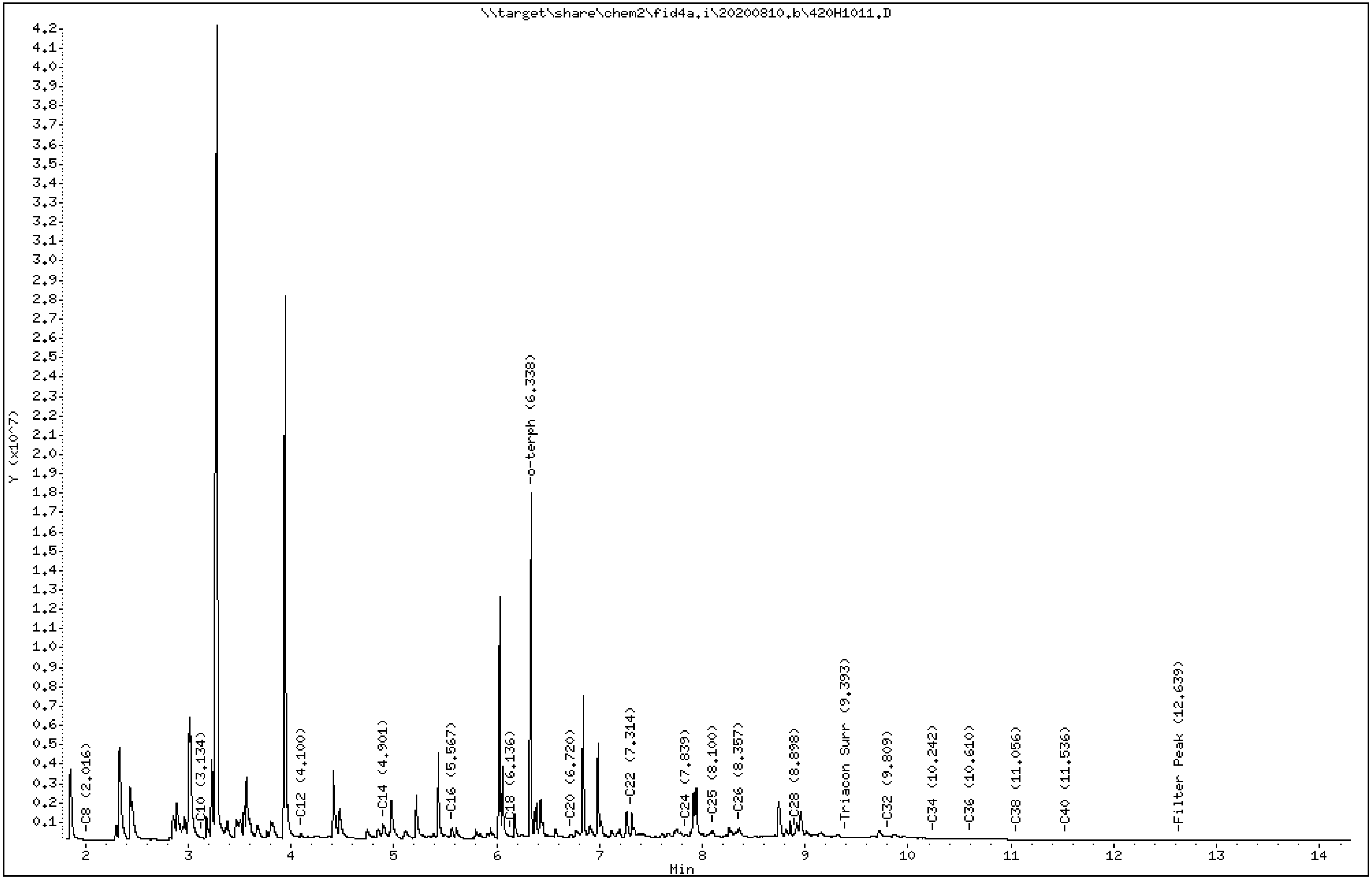
Instrument: fid4a.i

Sample Info: SEQ-CAL4

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1011.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL4
Client ID:
Injection: 10-AUG-2020 12:43
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.016	0.017	24926	59167	WATPHD	(C12-C24)	103926698	652.2
C10	3.134	0.022	150444	235035	WATPHM	(C24-C38)	45820283	452.9
C12	4.100	0.007	374328	737397	AK102	(C10-C25)	235546622	1204.9
C14	4.901	0.004	751227	1307415	AK103	(C25-C36)	37291444	509.4
C16	5.567	0.023	643749	1189010	OR.DIES	(C10-C28)	254051179	1296.2
C18	6.136	-0.002	231616	350832				
C20	6.720	-0.003	299567	566605	JET-A	(C10-C18)	181572311	1081.4
C22	7.314	0.023	1420953	1498483				
C24	7.839	-0.003	259197	166369				
C25	8.100	-0.011	495518	989810				
C26	8.357	-0.019	638808	1623602				
C28	8.898	0.016	333560	331673				
C32	9.809	-0.002	229023	124533				
C34	10.242	0.005	88773	91037				
Filter Peak	12.639	-0.001	2788	1651	CREOSOT	(C12-C22)	95404139	1058.5
C36	10.610	-0.033	86162	550400				
C38	11.056	0.002	27157	25166				
C40	11.536	-0.002	10651	4226				
o-terph	6.338	0.001	17707002	18789469				
Triacon Surr	9.393	0.009	169162	447494	NAS DIES	(C10-C24)	227630229	1166.4

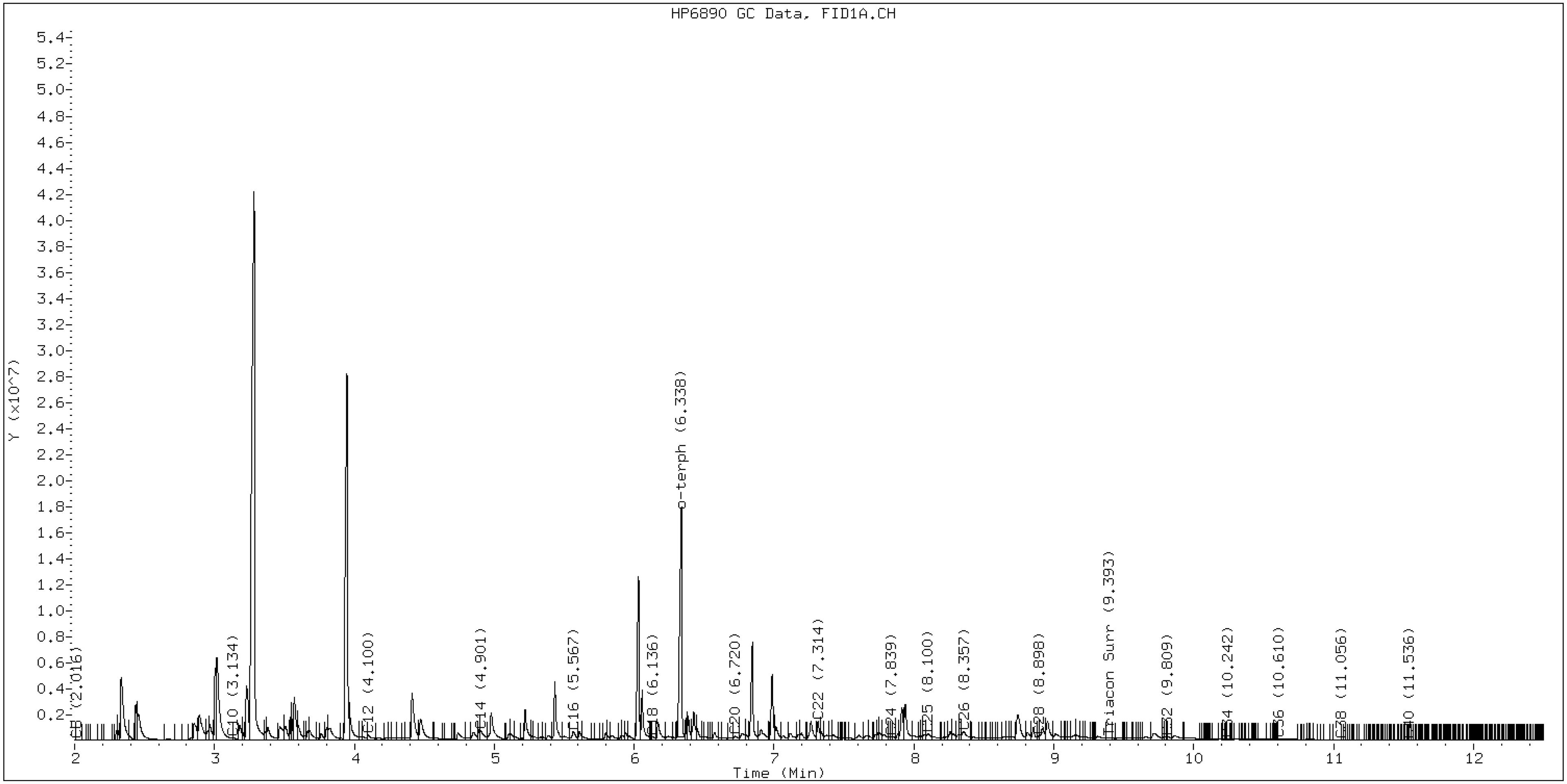
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount	
o-Terphenyl	18789469	91.8	M
Triacontane	447494	3.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

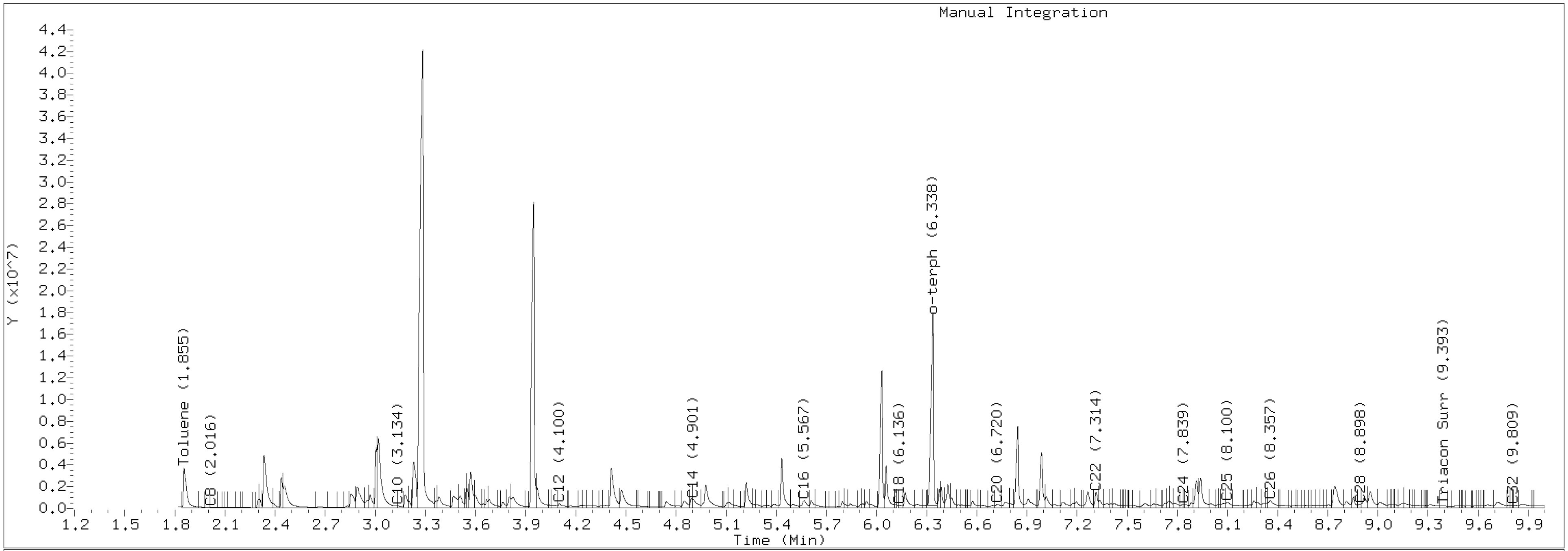
Datafile: FID4A, 20200810.b/420H1011.D SEQ-CAL4

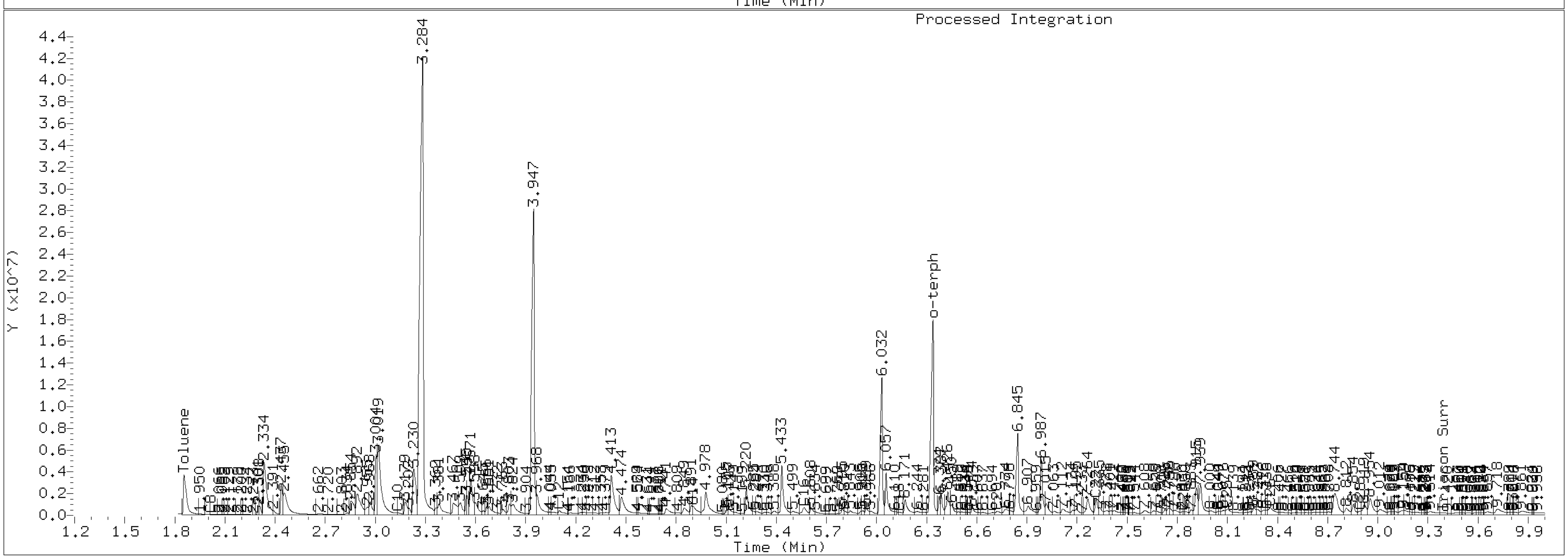


TPH Manual Integrations Report

Datafile: FID4A, 20200810.b/420H1011.D Injection: 10-AUG-2020 12:43

Lab ID:SEQ-CAL4





Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1012.D

Page 1

Date : 10-AUG-2020 13:02

Client ID:

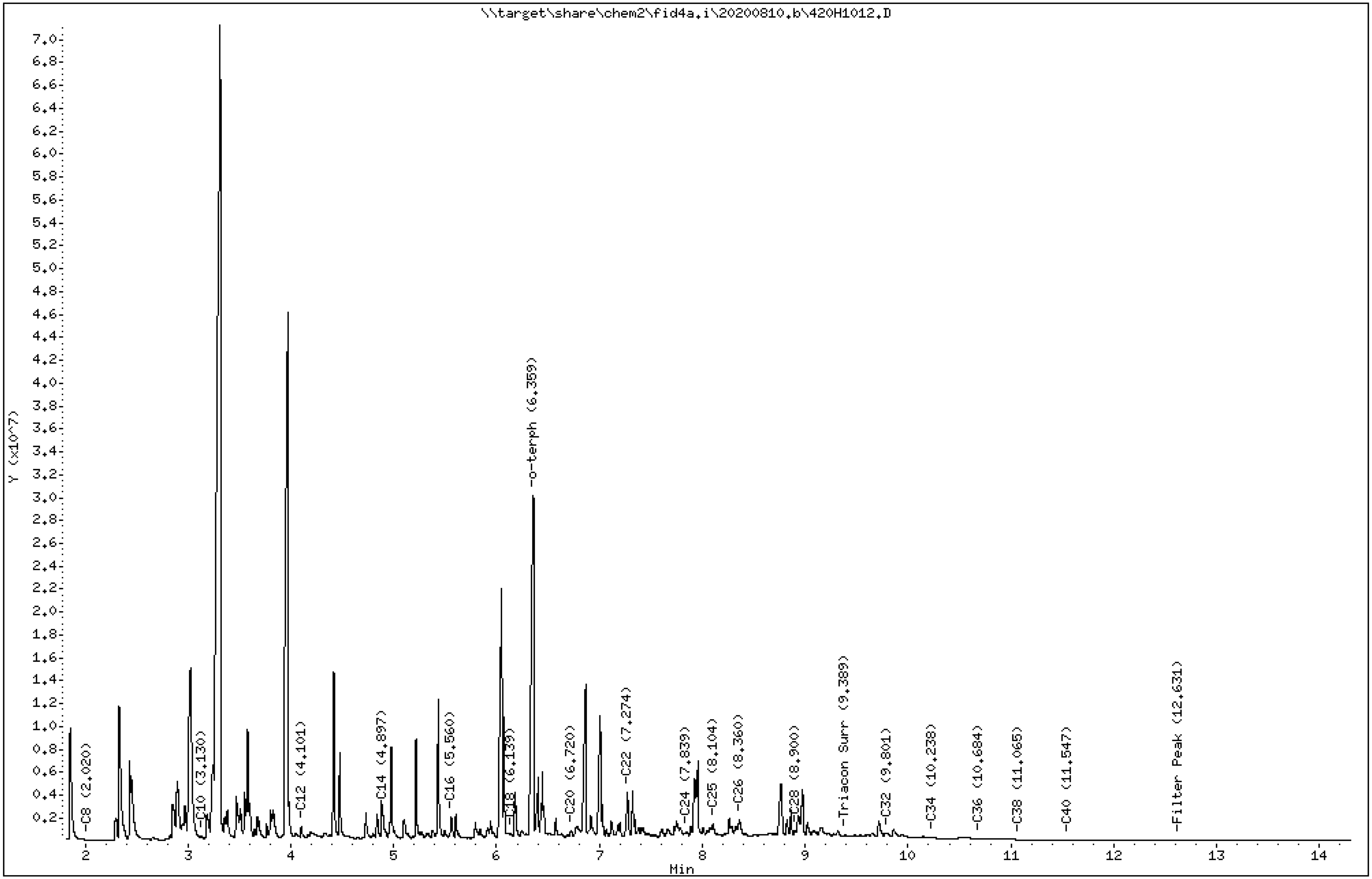
Instrument: fid4a.i

Sample Info: SEQ-CAL5

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1012.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL5
Client ID:
Injection: 10-AUG-2020 13:02
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.020	0.021	52370	125836	WATPHD	(C12-C24)	268023483	1682.1
C10	3.130	0.018	317129	695453	WATPHM	(C24-C38)	117269407	1159.2
C12	4.101	0.008	1186747	1663447	AK102	(C10-C25)	600790147	3073.2
C14	4.897	-0.000	2168738	2784429	AK103	(C25-C36)	95264608	1301.3
C16	5.560	0.016	1984017	3122013	OR.DIES	(C10-C28)	644811716	3289.9
C18	6.139	0.001	562391	706347				
C20	6.720	-0.003	826278	1411340	JET-A	(C10-C18)	461462580	2748.5
C22	7.274	-0.017	4123124	6213742				
C24	7.839	-0.003	669495	624603				
C25	8.104	-0.008	1393399	2367433				
C26	8.360	-0.016	1824142	4074782				
C28	8.900	0.018	833163	754960				
C32	9.801	-0.009	606450	1103529				
C34	10.238	0.001	193616	76806				
Filter Peak	12.631	-0.009	7657	6760	CREOSOT	(C12-C22)	243658159	2703.5
C36	10.684	0.041	121011	48208				
C38	11.065	0.011	57098	25623				
C40	11.547	0.009	26888	36992				
o-terph	6.359	0.021	29618277	48519579				
Triacon Surr	9.389	0.005	451742	414470	NAS DIES	(C10-C24)	580343650	2973.9

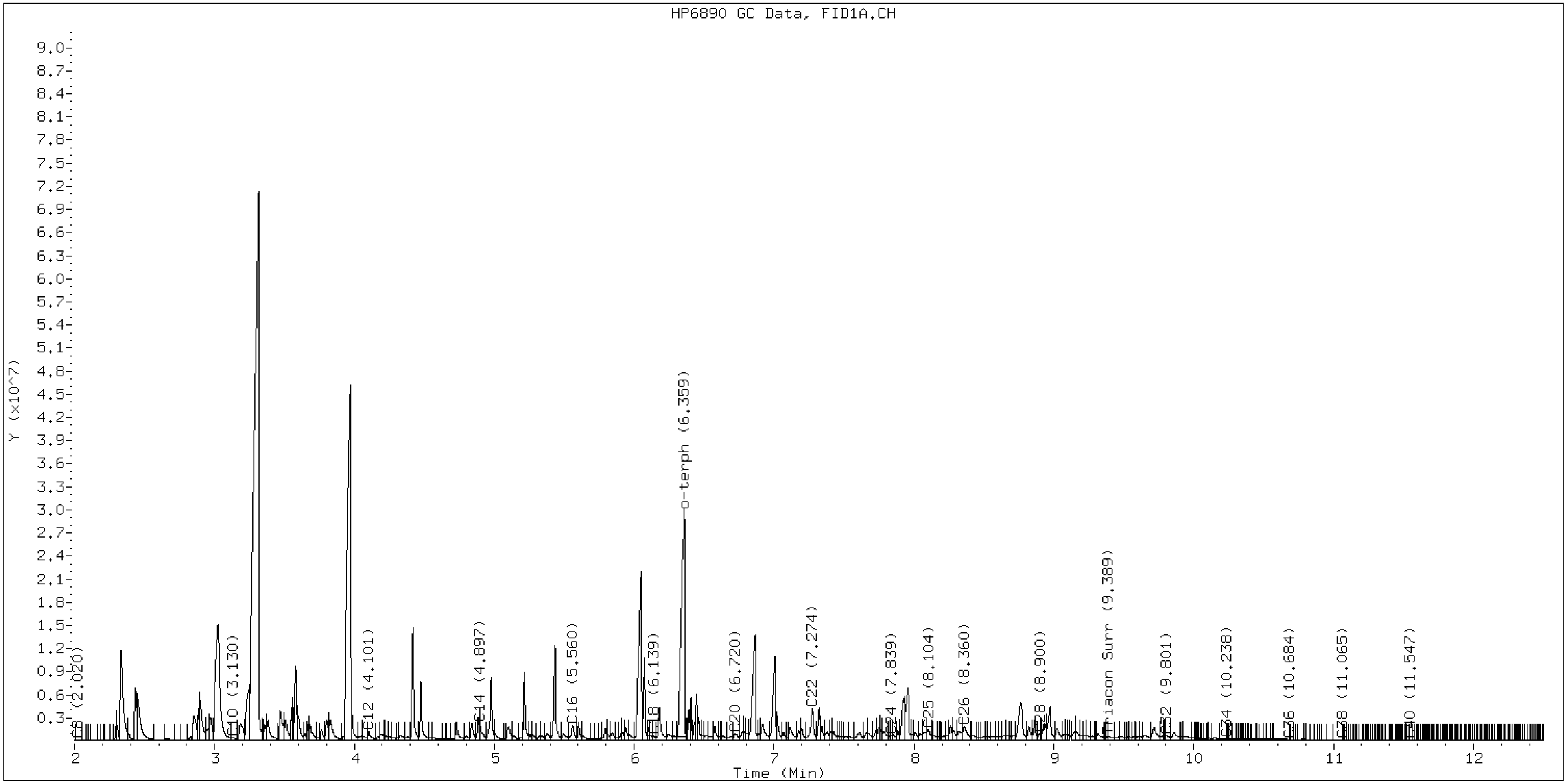
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount	
o-Terphenyl	48519579	237.0	M
Triacontane	414470	2.8	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

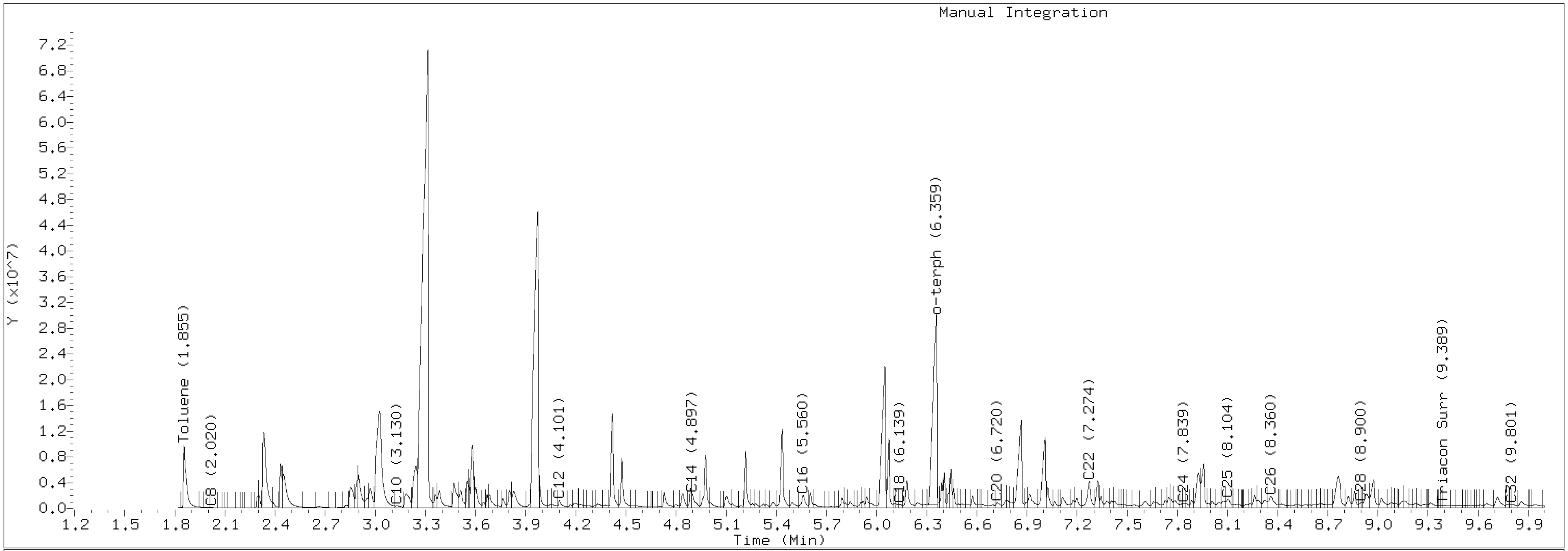
Datafile: FID4A, 20200810.b/420H1012.D SEQ-CAL5

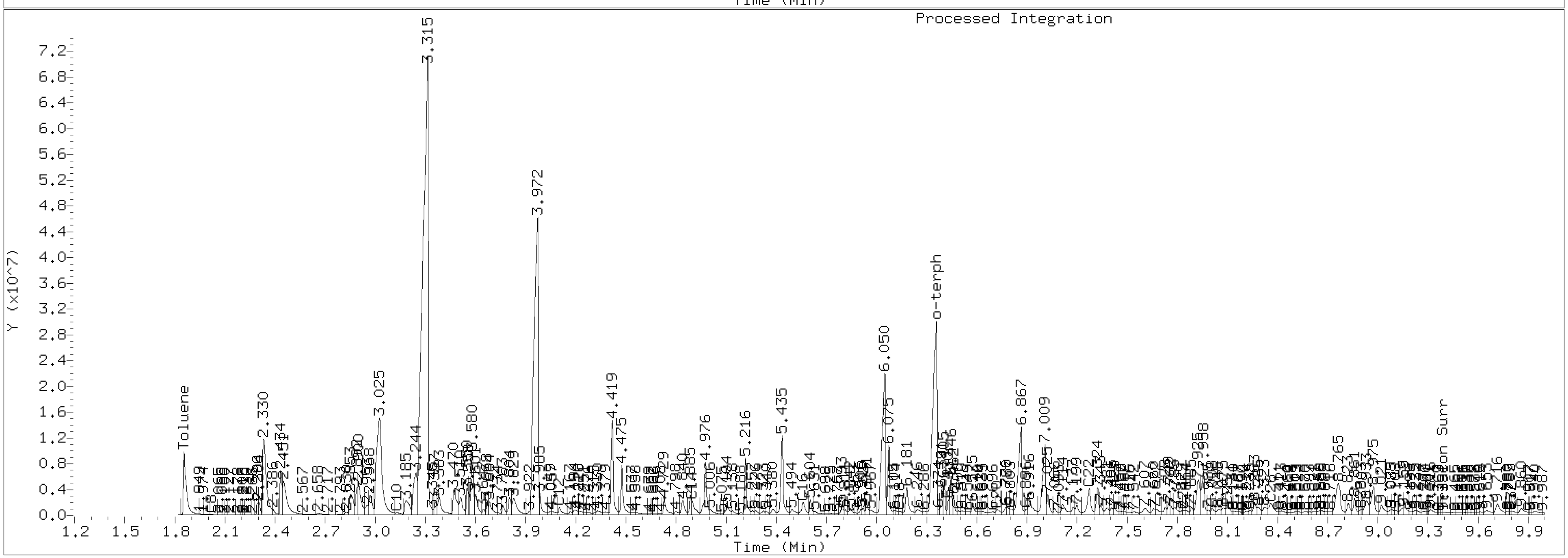


TPH Manual Integrations Report

Datafile: FID4A, 20200810.b/420H1012.D Injection: 10-AUG-2020 13:02

Lab ID:SEQ-CAL5





Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1013.D

Date : 10-AUG-2020 13:22

Client ID:

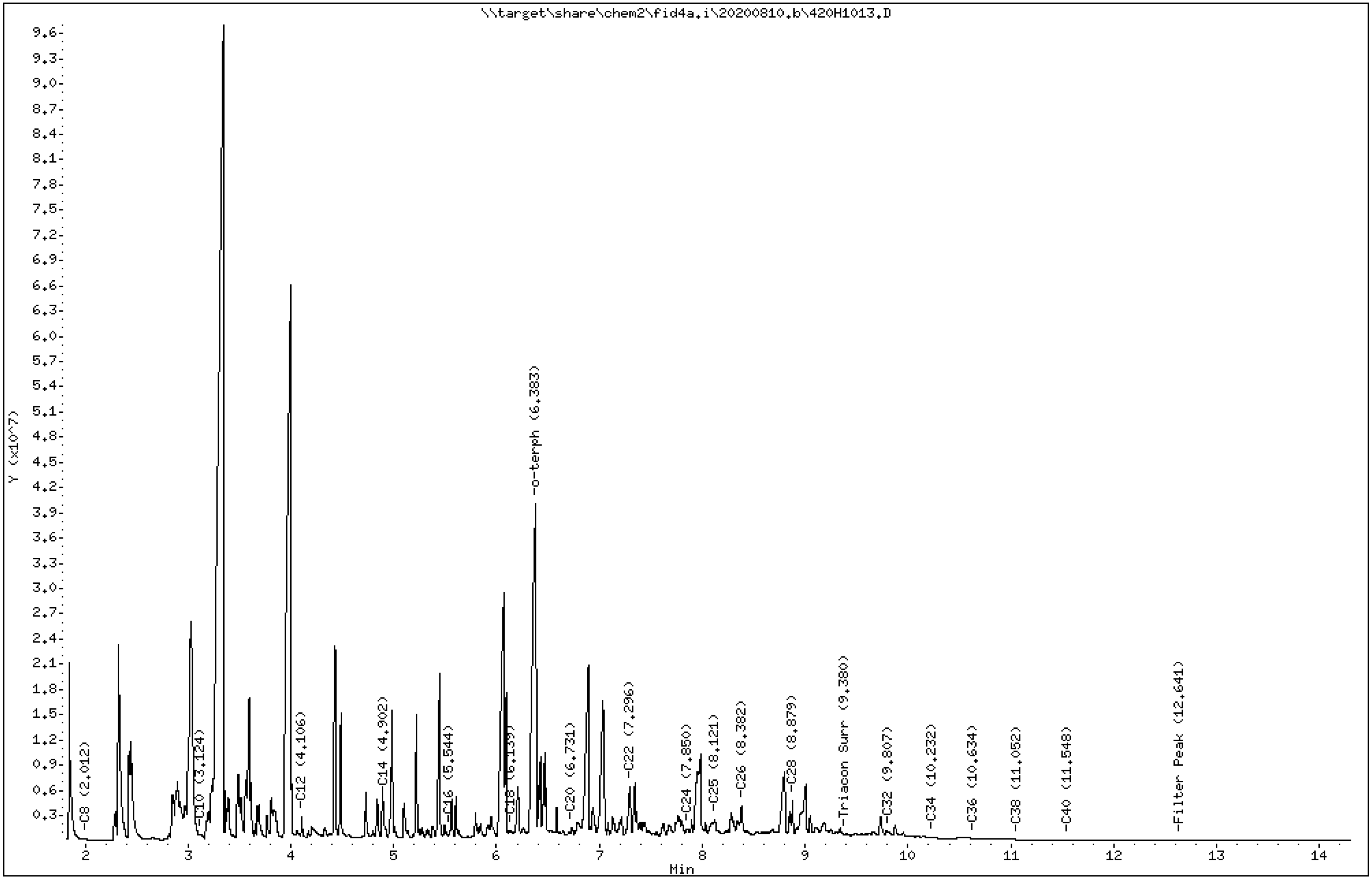
Instrument: fid4a.i

Sample Info: SEQ-CAL6

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1013.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL6
Client ID:
Injection: 10-AUG-2020 13:22
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.012	0.013	95463	213698	WATPHD	(C12-C24)	510718478	3205.3
C10	3.124	0.012	658048	1310273	WATPHM	(C24-C38)	217018558	2145.2
C12	4.106	0.013	2689100	3210487	AK102	(C10-C25)	1154977604	5908.1
C14	4.902	0.005	4529096	3169210	AK103	(C25-C36)	174815307	2388.0
C16	5.544	0.000	1186254	882489	OR.DIES	(C10-C28)	1241149517	6332.4
C18	6.139	0.000	1097209	1614733				
C20	6.731	0.008	1395502	2758564	JET-A	(C10-C18)	878617104	5233.0
C22	7.296	0.005	6358775	11740148				
C24	7.850	0.009	1319296	1273820				
C25	8.121	0.010	2507724	4067646				
C26	8.382	0.006	4064229	7597038				
C28	8.879	-0.003	4657449	5361411				
C32	9.807	-0.004	1046694	2394813				
C34	10.232	-0.005	290793	72598				
Filter Peak	12.641	0.000	7890	3140	CREOSOT	(C12-C22)	458251561	5084.4
C36	10.634	-0.009	213530	321534				
C38	11.052	-0.002	80686	94358				
C40	11.548	0.010	35419	22895				
o-terph	6.383	0.045	38995622	94112864				
Triacon Surr	9.380	-0.004	670067	426371	NAS DIES	(C10-C24)	1115021496	5713.7

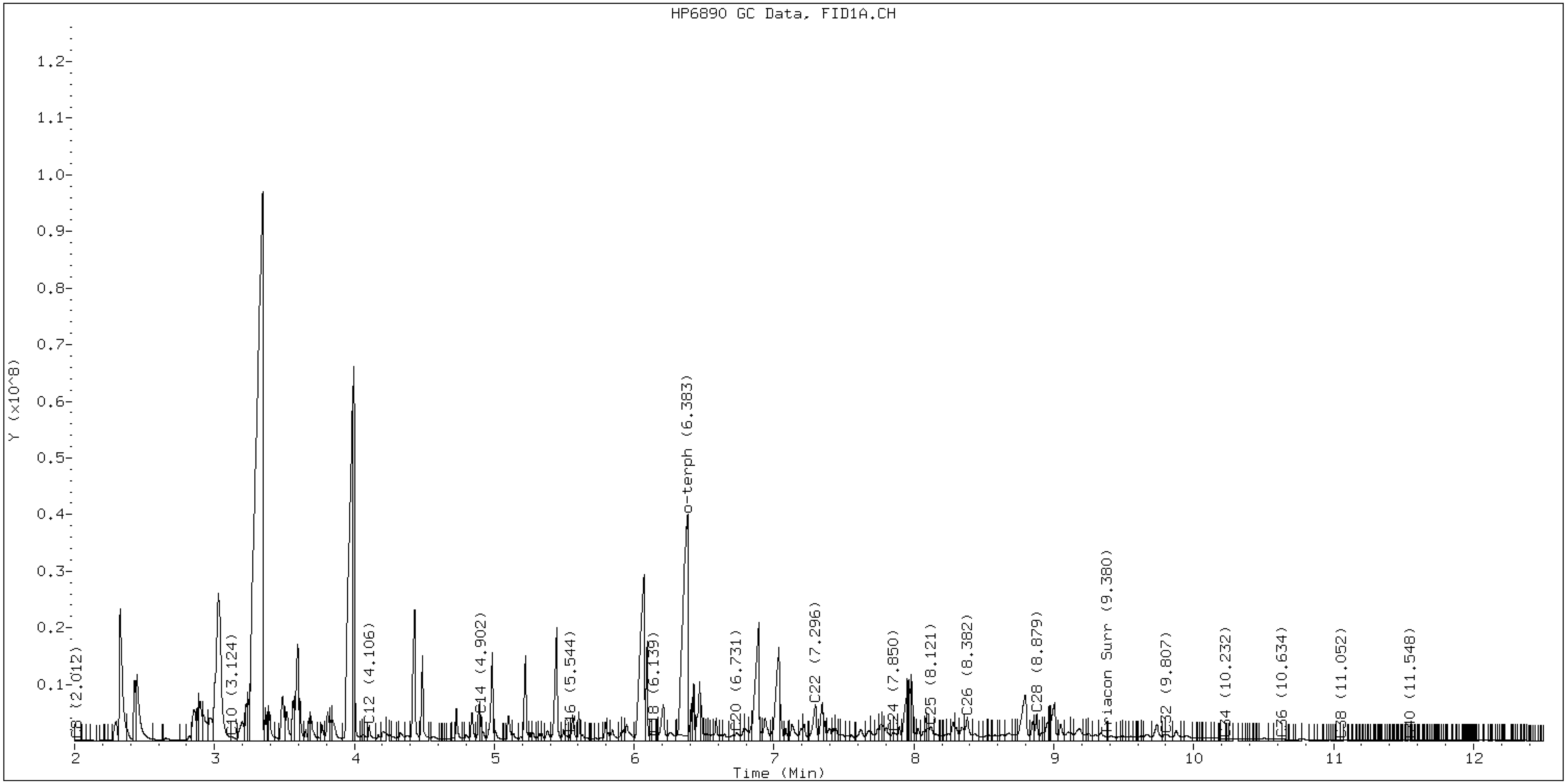
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount	
o-Terphenyl	94112864	459.8	M
Triacontane	426371	2.9	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

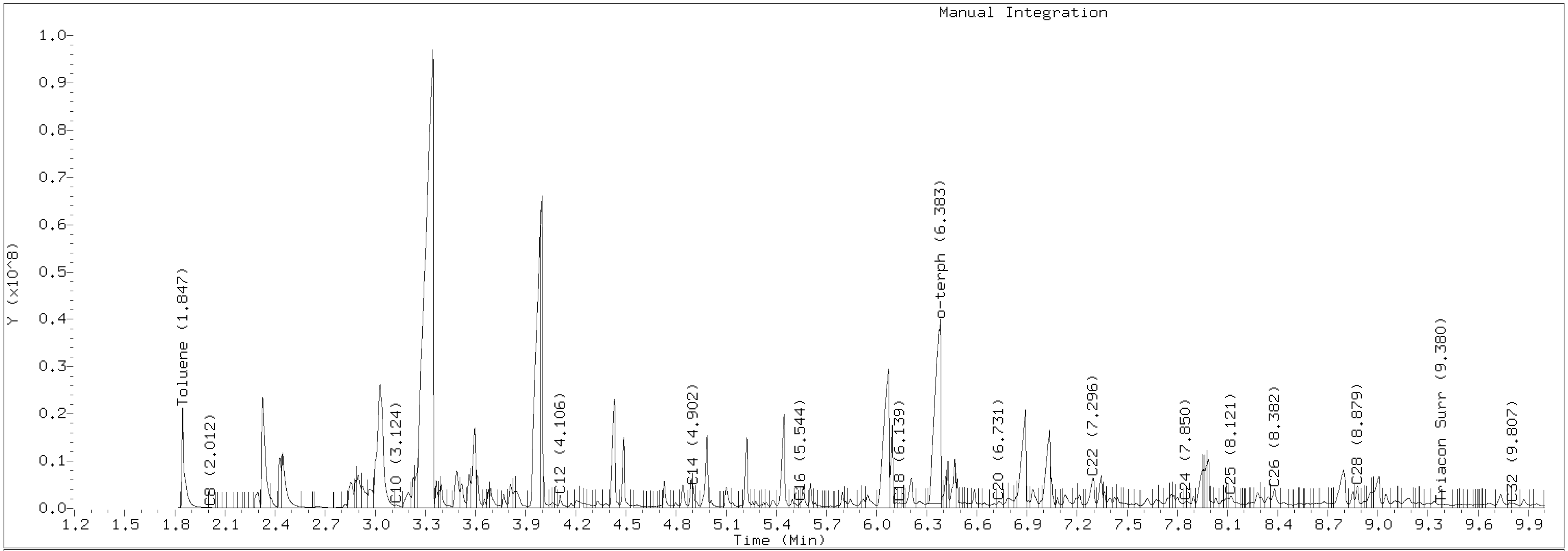
Datafile: FID4A, 20200810.b/420H1013.D SEQ-CAL6

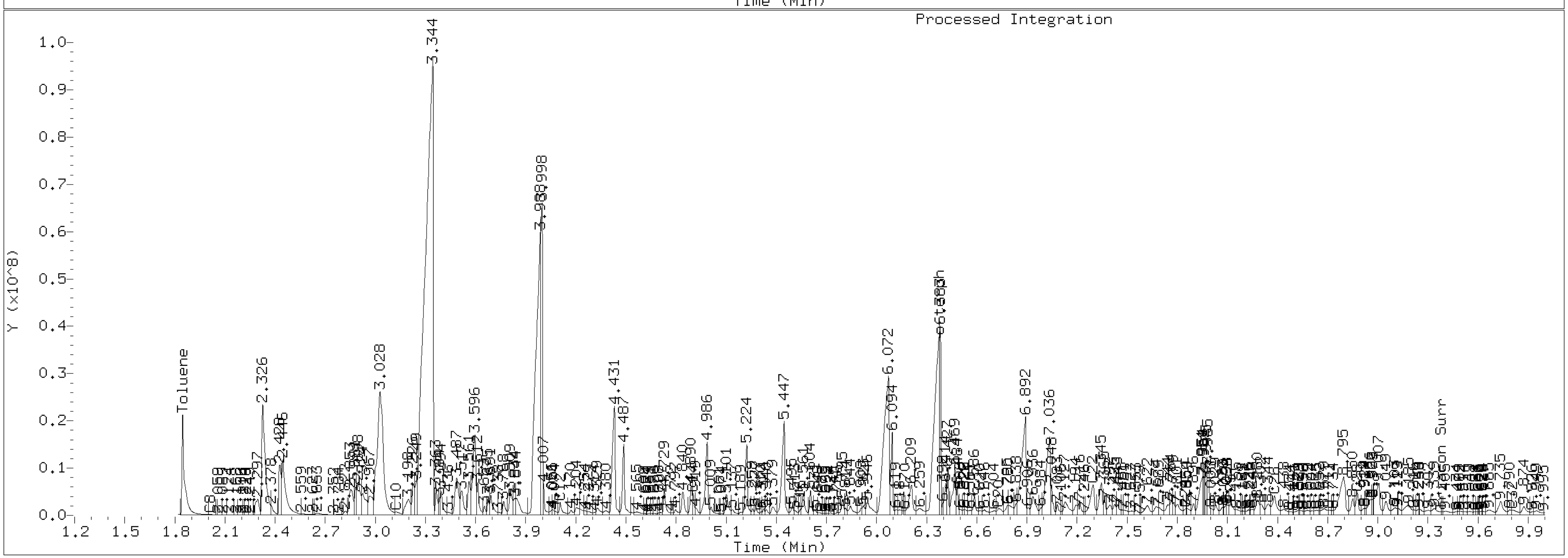


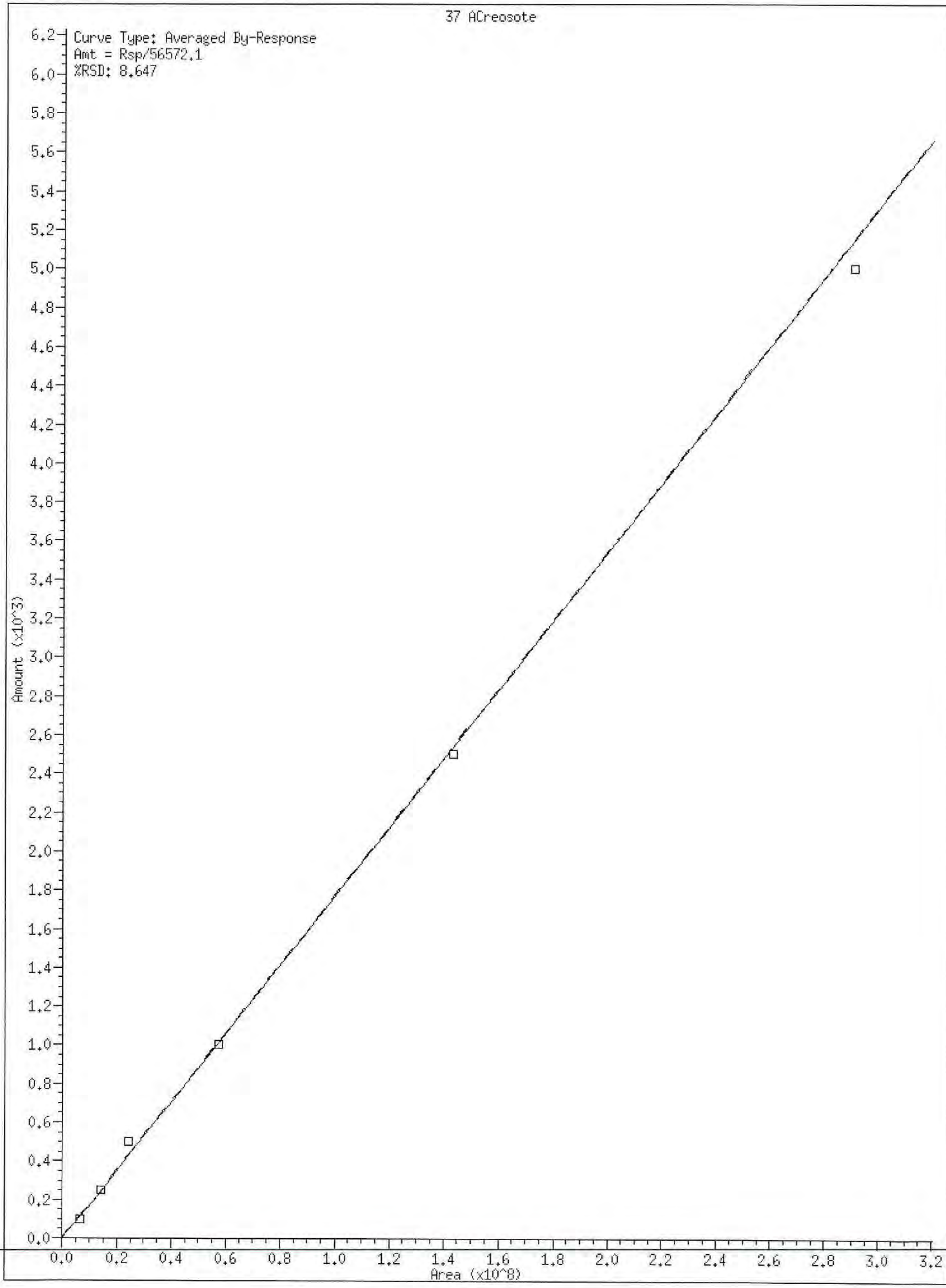
TPH Manual Integrations Report

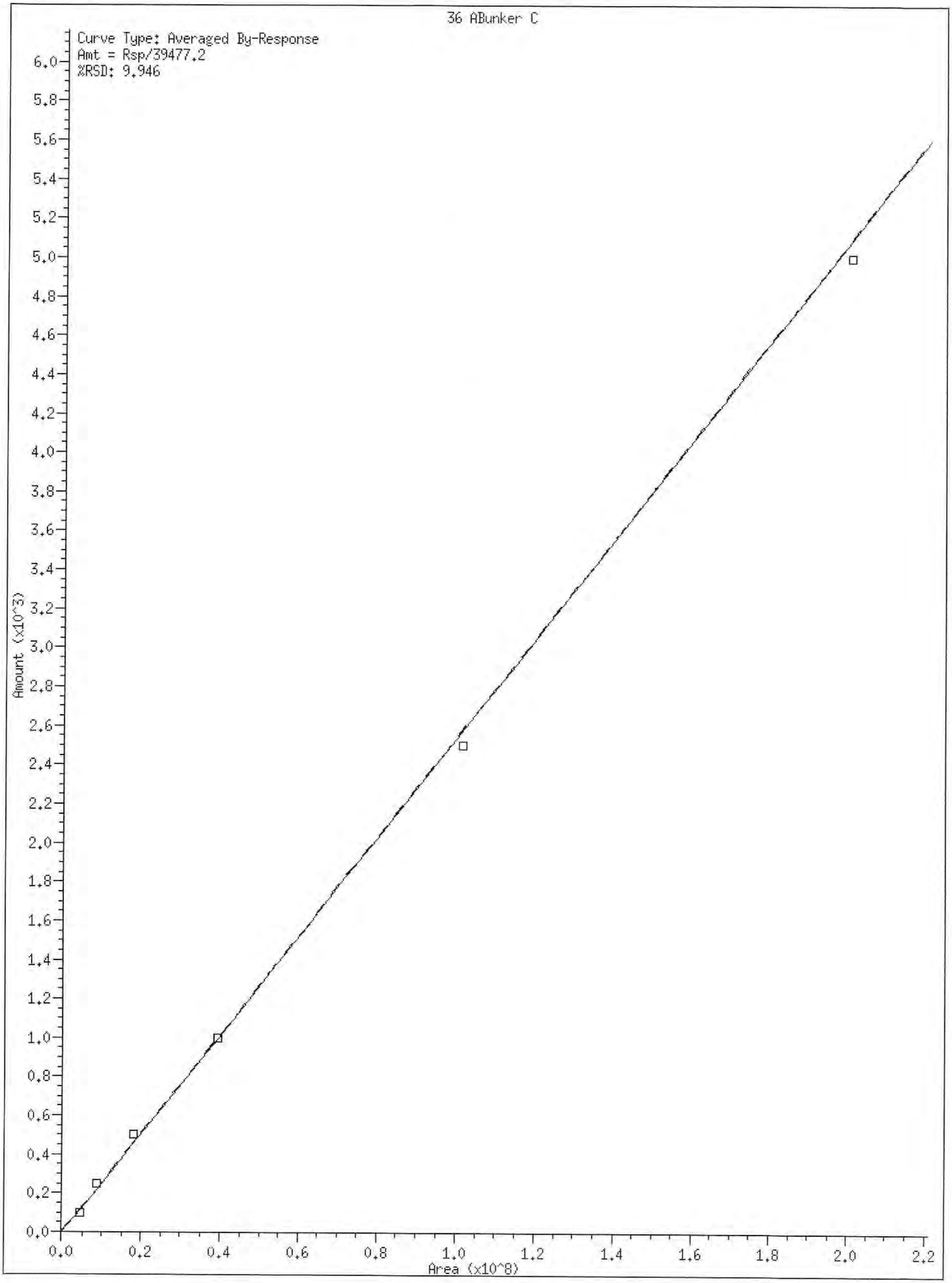
Datafile: FID4A, 20200810.b/420H1013.D Injection: 10-AUG-2020 13:22

Lab ID:SEQ-CAL6






37 ACreosote
Curve Type: Averaged By-Response
Amt = Rsp/56572.1
%RSD: 8.647
Amount (x10^3)
Area (x10^8)
6.2
6.0
5.8
5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2


36 ABunker C
Curve Type: Averaged By-Response
Amt = Rsp/39477.2
%RSD: 9.946
Amount (x10^3)
Area (x10^8)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: CJ00089
Sequence: SHJ0406

SDG: 20K0145
Project: ICS-Former NW Cooperage
Laboratory ID: SHJ0406-SCV1
Sequence Name: DIESEL SCV
Standard ID: H008294

ANALYTE	EXPECTED (mg/L)	FOUND (mg/L)	% DRIFT	QC LIMIT
Diesel Range Organics (C12-C24)	500.00	511	2.2	30.00

* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2513.D

Page 1

Date : 25-OCT-2019 15:52

Client ID:

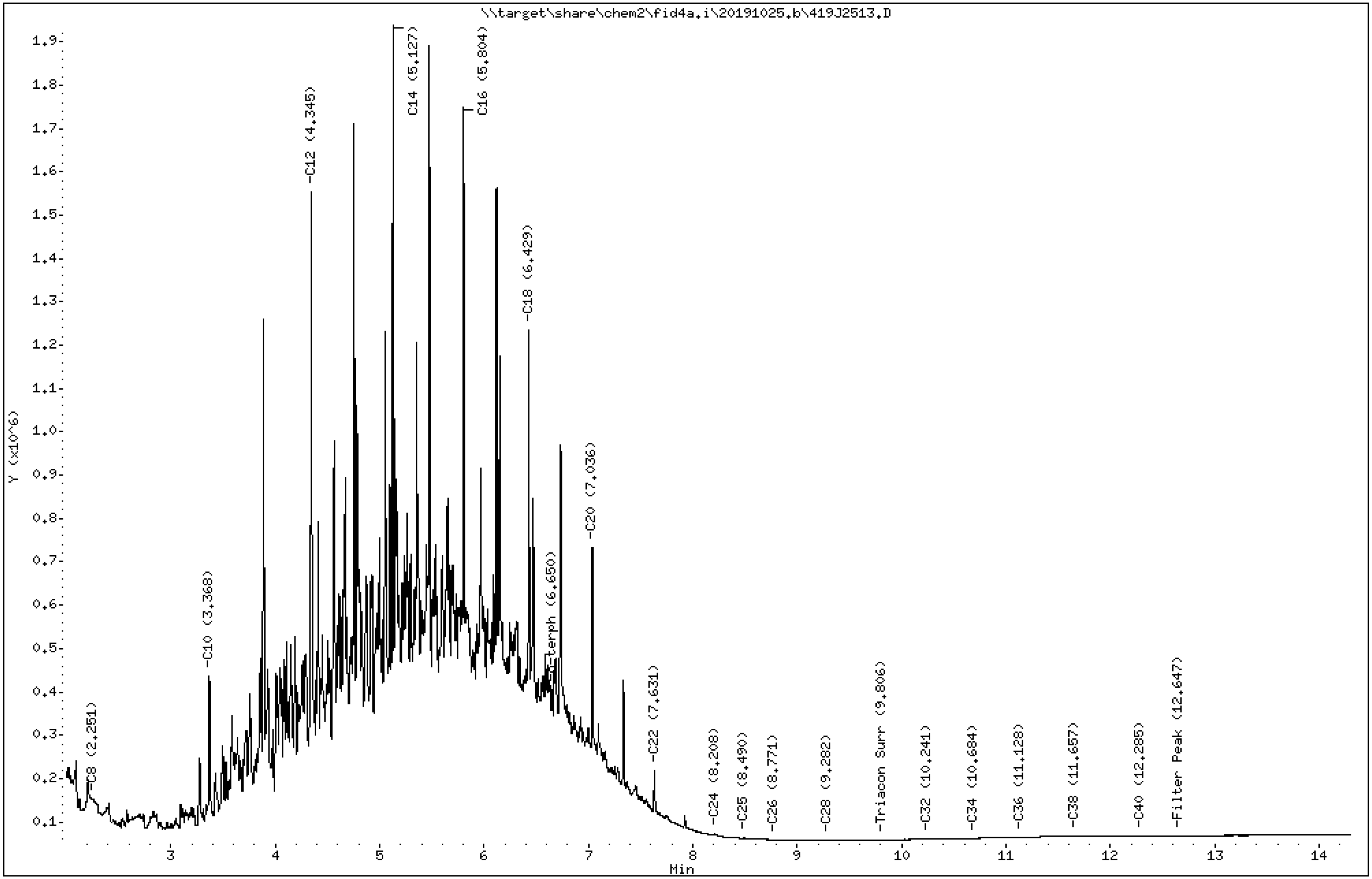
Instrument: fid4a.i

Sample Info: SHJ0406-SCV1

Operator: CTO/SH/VTS/JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2513.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV1
Client ID:
Injection: 25-OCT-2019 15:52
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.251	-0.011	94961	147864	WATPHD	(C12-C24)	81454017	511.2
C10	3.368	-0.005	379319	401979	WATPHM	(C24-C38)	639731	4.8
C12	4.345	-0.002	1496096	1990616	AK102	(C10-C25)	97704414	499.8
C14	5.127	-0.002	1881566	1510979	AK103	(C25-C36)	332991	3.3
C16	5.804	-0.003	1693335	1468242	OR.DIES	(C10-C28)	97755450	498.8
C18	6.429	-0.006	1178327	1173671				
C20	7.036	-0.007	676475	771884				
C22	7.631	-0.008	162529	245982				
C24	8.208	-0.007	16269	46701				
C25	8.490	-0.003	4835	8168				
C26	8.771	0.006	1378	465				
C28	9.282	-0.003	218	122				
C32	10.241	-0.001	2076	410				
C34	10.684	0.003	4334	2137				
Filter Peak	12.647	-0.003	10515	4189	CREOSOT	(C12-C22)	80554511	20650.3
C36	11.128	-0.001	6869	2744				
C38	11.657	0.008	8764	3056				
C40	12.285	-0.004	9988	4995				
o-terph	6.650	-0.007	347314	350999				
Triacon Surr	9.806	0.003	1146	388	NAS DIES	(C10-C24)	97645351	500.4

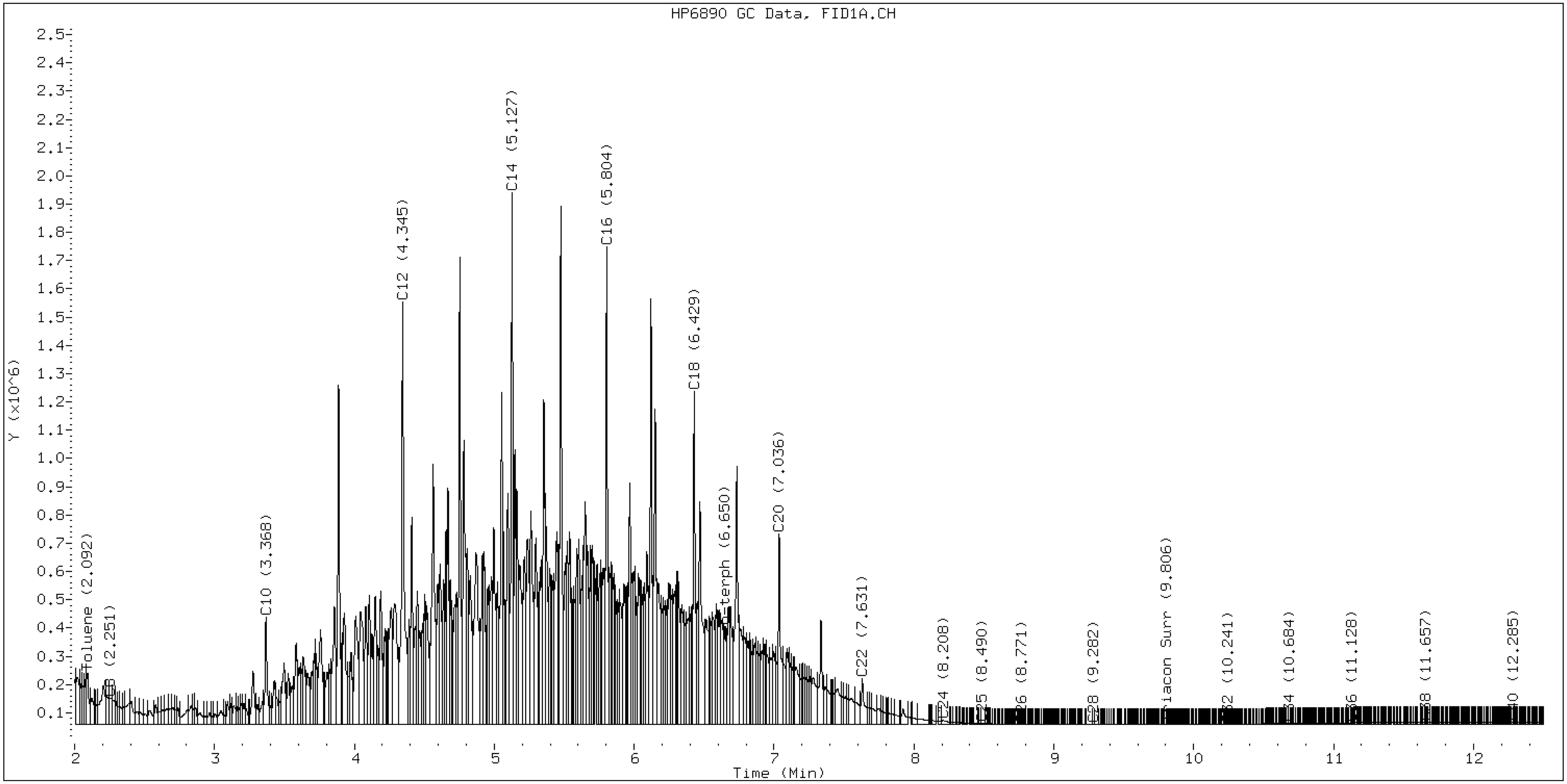
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	350999	1.7
Triacontane	388	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2513.D SHJ0406-SCV1



Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: CJ00089
Sequence: SHJ0406

SDG: 20K0145
Project: ICS-Former NW Cooperage
Laboratory ID: SHJ0406-SCV2
Sequence Name: MOIL SCV
Standard ID: H008399

ANALYTE	EXPECTED (mg/L)	FOUND (mg/L)	% DRIFT	QC LIMIT
Motor Oil Range Organics (C24-C38)	1000.0	1020	1.9	30.00

* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2520.D

Date : 25-OCT-2019 18:14

Client ID:

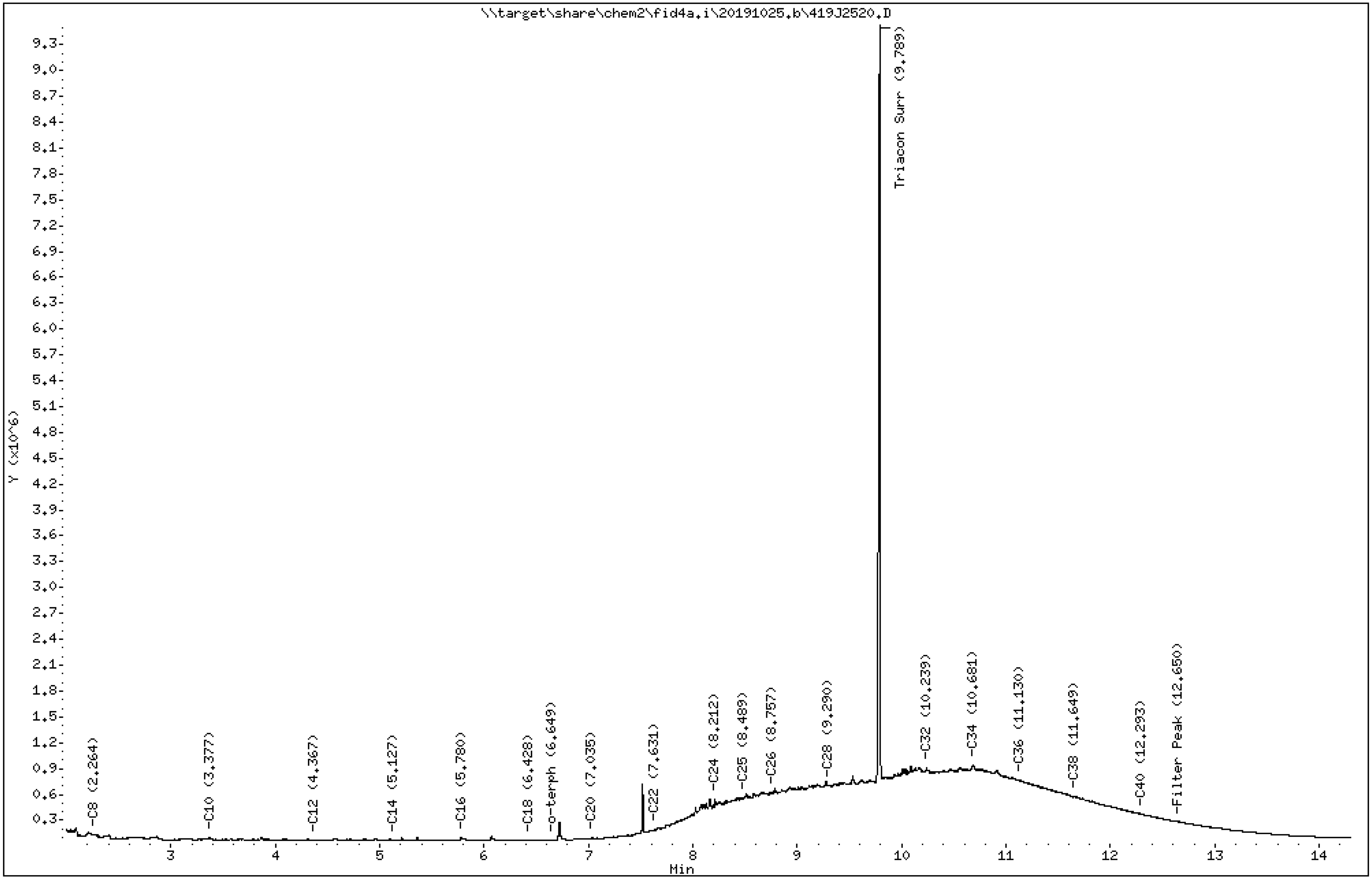
Instrument: fid4a.i

Sample Info: SHJ0406-SCV2

Operator: CTO/SH/VTS/JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2520.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV2
Client ID:
Injection: 25-OCT-2019 18:14
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	61386	42202	WATPHD	(C12-C24)	14006466	87.9
C10	3.377	0.004	28038	52387	WATPHM	(C24-C38)	135195593	1019.3
C12	4.367	0.020	3146	3151	AK102	(C10-C25)	18822986	96.3
C14	5.127	-0.003	4143	4458	AK103	(C25-C36)	113030798	1130.6
C16	5.780	-0.027	35494	74348	OR.DIES	(C10-C28)	49340102	251.7
C18	6.428	-0.007	6156	6874				
C20	7.035	-0.008	26093	30304				
C22	7.631	-0.008	127794	247657				
C24	8.212	-0.003	471017	746279				
C25	8.489	-0.004	491516	98217				
C26	8.757	-0.008	557900	550938				
C28	9.290	0.005	640615	223711				
C32	10.239	-0.004	847729	1306304				
C34	10.681	-0.000	865603	764427				
Filter Peak	12.650	-0.000	213232	84835	CREOSOT	(C12-C22)	3605357	924.2
C36	11.130	0.001	692159	413129				
C38	11.649	-0.001	503231	200454				
C40	12.293	0.004	305287	287895				
o-terph	6.649	-0.008	4022	3699				
Triacon Surr	9.789	-0.013	8762887	8519530	NAS DIES	(C10-C24)	14444503	74.0

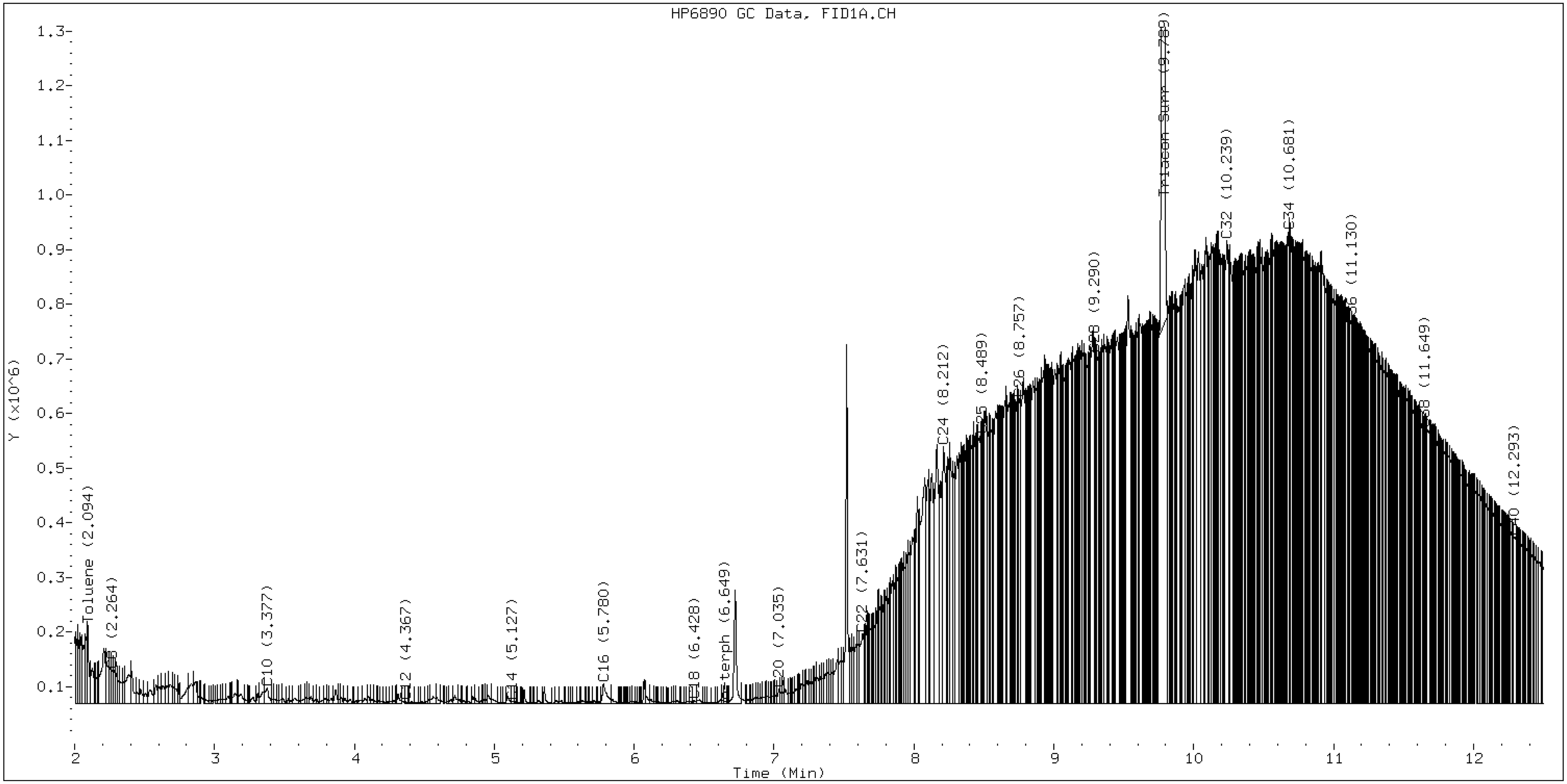
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	3699	0.0	
Triacontane	8519530	47.9	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

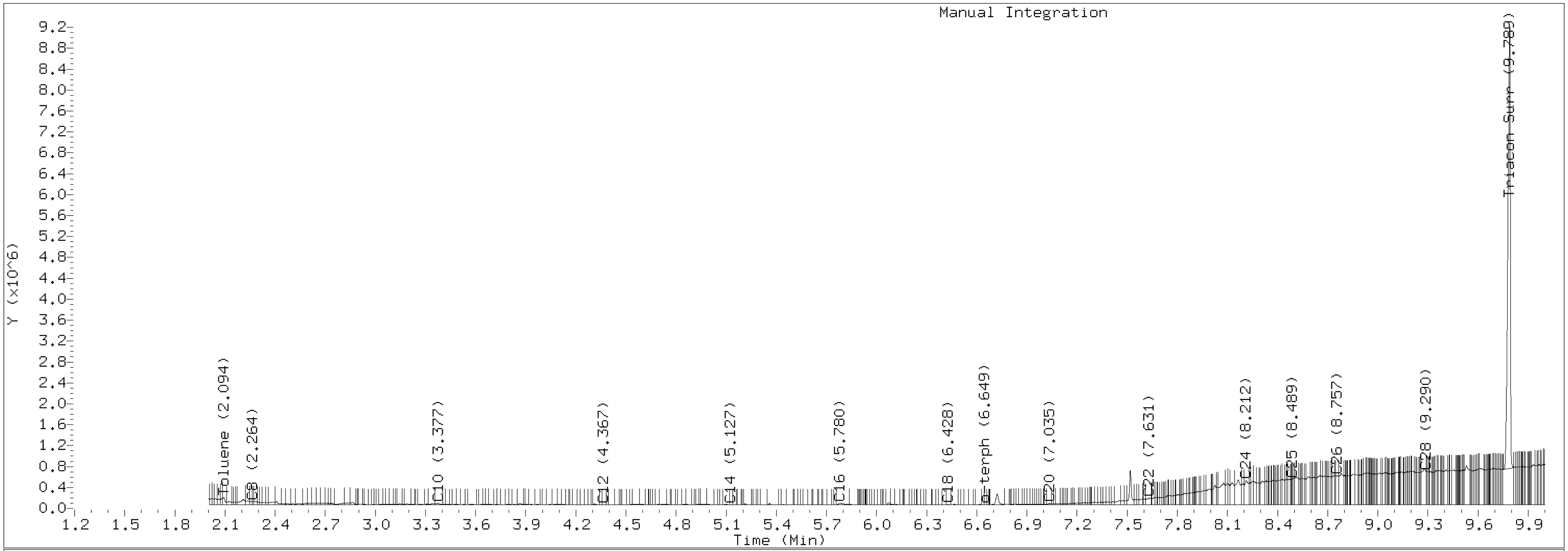
Datafile: FID4A, 20191025.b/419J2520.D SHJ0406-SCV2

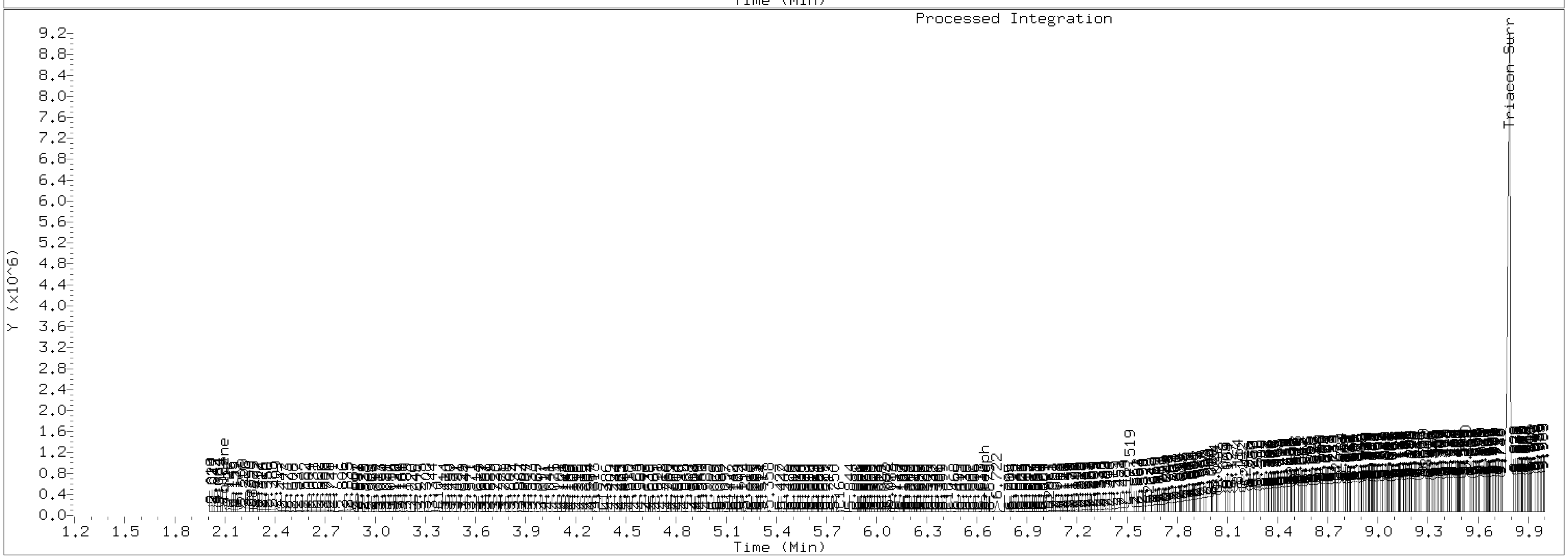


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2520.D Injection: 25-OCT-2019 18:14

Lab ID:SHJ0406-SCV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: DA00022
Sequence: SIF0018

SDG: 20K0145
Project: ICS-Former NW Cooperage
Laboratory ID: SIF0018-SCV1
Sequence Name: MOIL SCV
Standard ID: I004757

ANALYTE	EXPECTED (mg/L)	FOUND (mg/L)	% DRIFT	QC LIMIT
Motor Oil Range Organics (C24-C38)	1000.0	952	-4.8	30.00

* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0211.D

Date : 02-JUN-2020 10:55

Client ID:

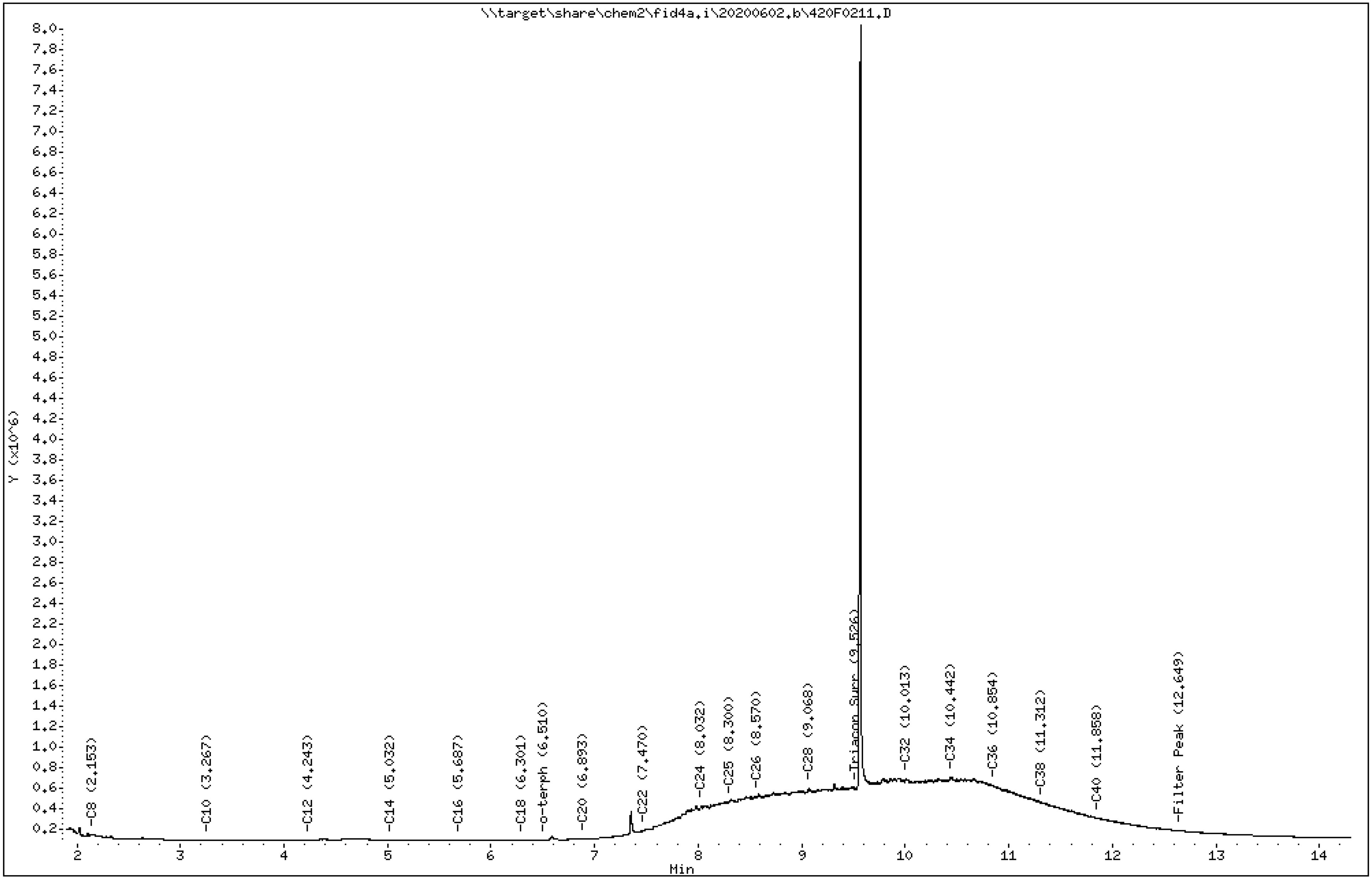
Instrument: fid4a.i

Sample Info: SIF0018-SCV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0211.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-SCV1
Client ID:
Injection: 02-JUN-2020 10:55
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.153	-0.003	53793	112352	WATPHD	(C12-C24)	10130617	63.6
C10	3.267	-0.001	3184	1798	WATPHM	(C24-C38)	96339891	952.3
C12	4.243	-0.001	6309	3433	AK102	(C10-C25)	13696411	70.1
C14	5.032	0.010	5041	1965	AK103	(C25-C36)	81704578	1116.1
C16	5.687	-0.002	418	225	OR.DIES	(C10-C28)	36730595	187.4
C18	6.301	0.002	1584	1331				
C20	6.893	0.005	13152	18749	JET-A	(C10-C18)	637720	3.8
C22	7.470	0.003	92369	58795				
C24	8.032	0.002	330875	354349				
C25	8.300	-0.001	376891	169098				
C26	8.570	0.005	421264	147085				
C28	9.068	-0.008	508527	807405				
C32	10.013	0.001	600890	237363				
C34	10.442	0.001	608272	242751				
Filter Peak	12.649	-0.003	94447	119849	CREOSOT	(C12-C22)	2566539	62.2
C36	10.854	-0.001	530087	263622				
C38	11.312	0.002	366594	183102				
C40	11.858	-0.003	220172	173259				
o-terph	6.510	0.003	2949	1966				
Triacon Surr	9.567	-0.013	7460477	7161172	NAS DIES	(C10-C24)	10346316	53.0

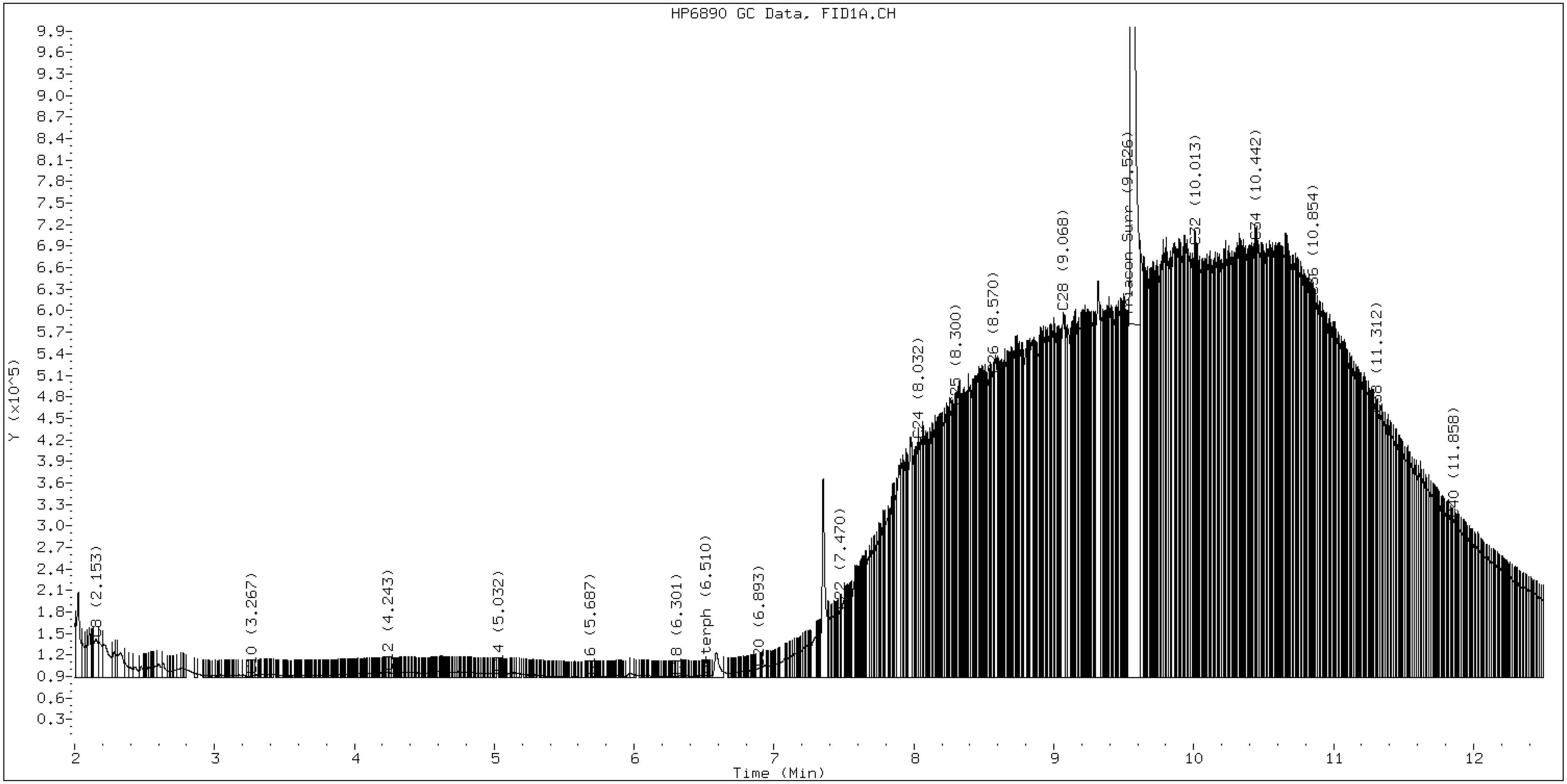
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	1966	0.0	
Triacontane	7161172	48.3	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

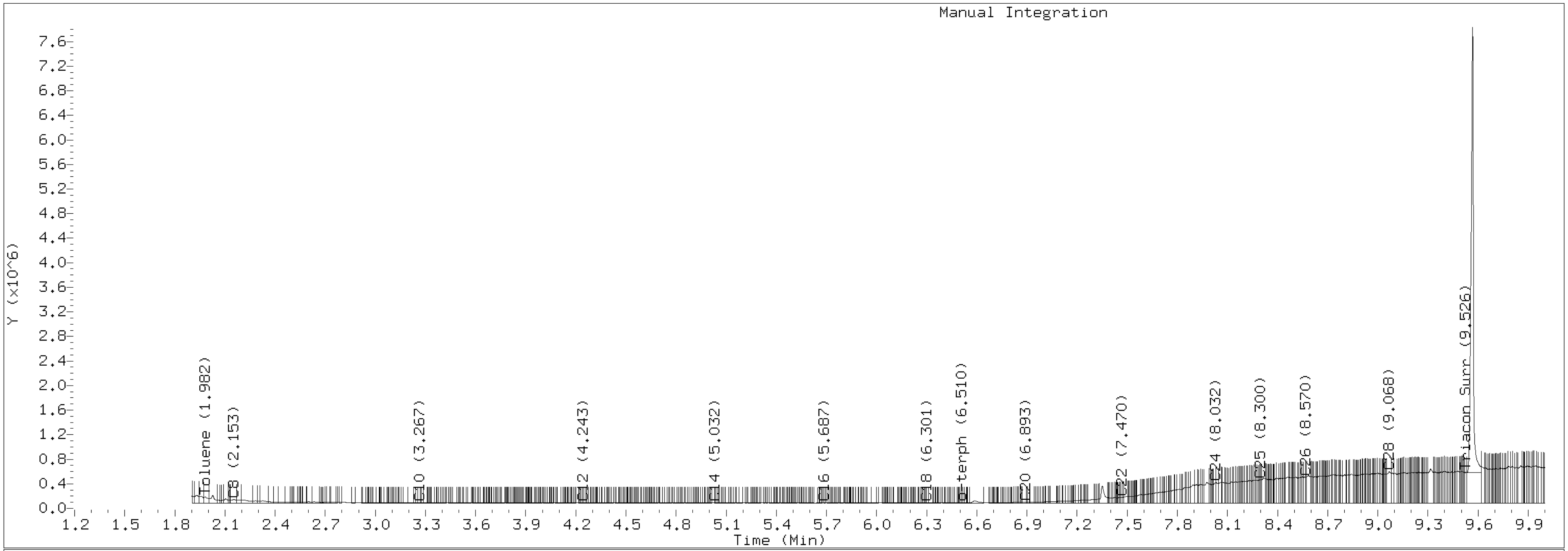
Datafile: FID4A, 20200602.b/420F0211.D SIF0018-SCV1

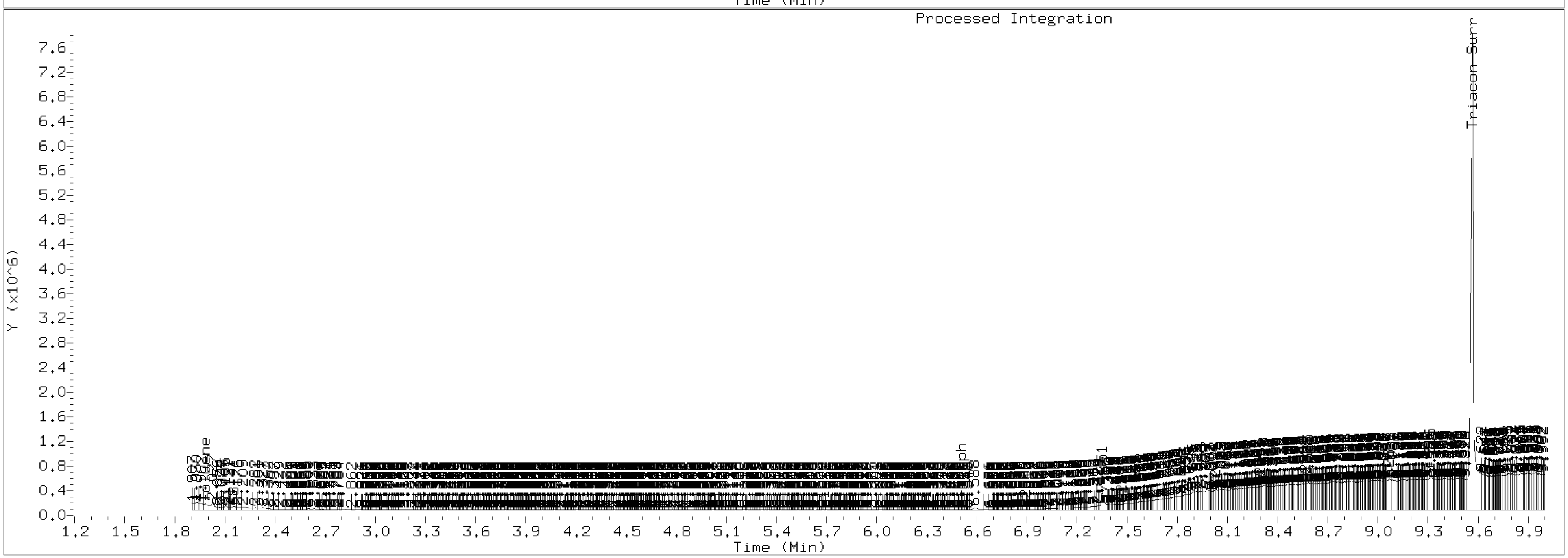


TPH Manual Integrations Report

Datafile: FID4A, 20200602.b/420F0211.D Injection: 02-JUN-2020 10:55

Lab ID:SIF0018-SCV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420J0205.D
Calibration Date: 10/25/2019
Sequence: SIJ0042
Injection Date: 10/02/20
Lab Sample ID: SIJ0042-ICV1
Injection Time: 10:02
Sequence Name: DIESEL ICV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	452	159336.7000	144138.7000		-9.5	+/-15
o-Terphenyl	A	90.000	80.6	204701.9000	183310.3000		-10.4	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201002.b\420J0205.D

Page 1

Date : 02-OCT-2020 10:02

Client ID:

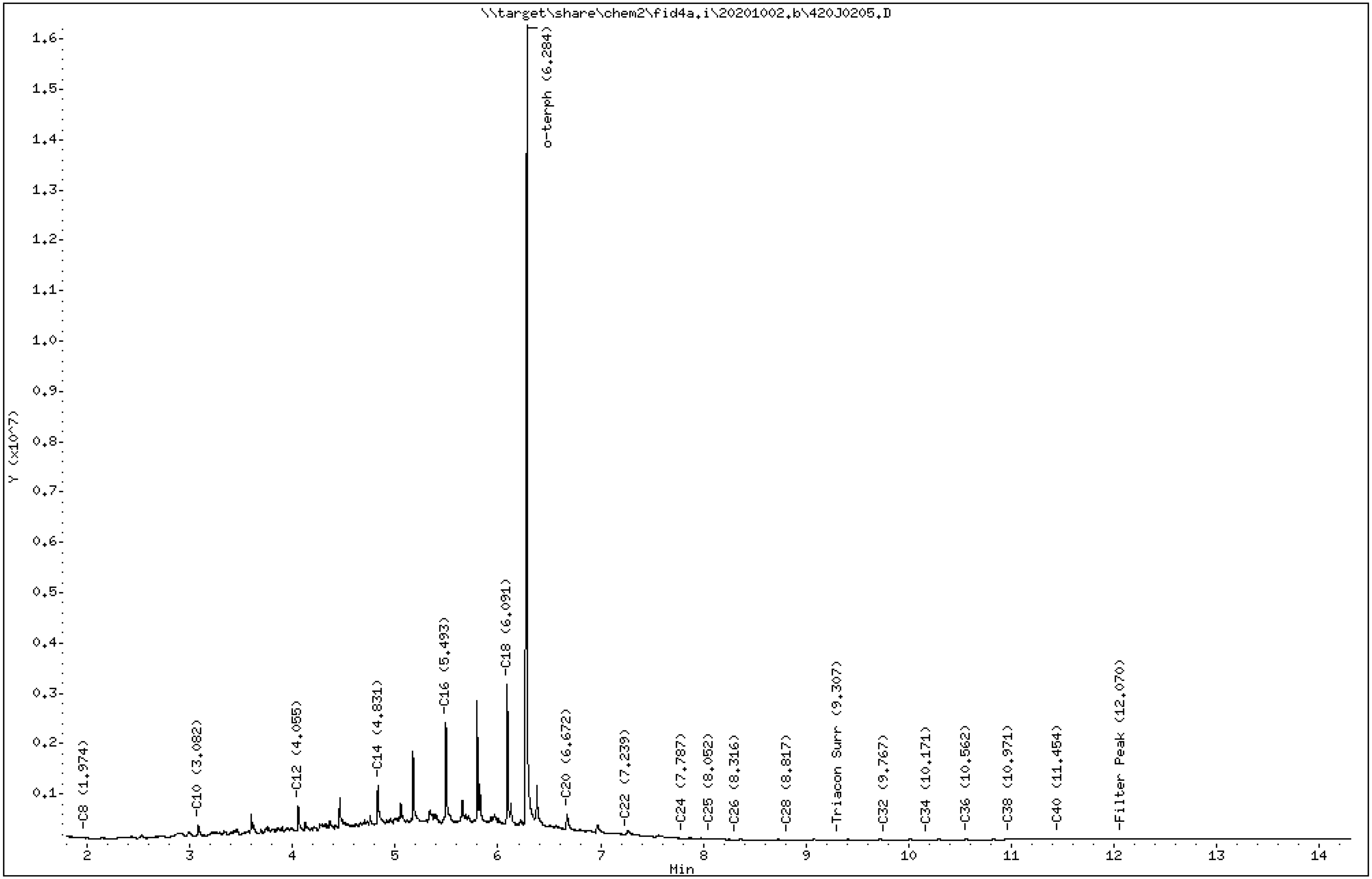
Instrument: fid4a.i

Sample Info: SEQ-ICV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201002.b/420J0205.D
Method: 20201002.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 10/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-ICV1
Client ID:
Injection: 02-OCT-2020 10:02
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.974	-0.011	44420	46374	WATPHD	(C12-C24)	72069347	452.3
C10	3.082	0.011	287360	631242	WATPHM	(C24-C38)	1617994	16.0
C12	4.055	0.003	678900	874723	AK102	(C10-C25)	83740998	428.4
C14	4.831	-0.020	1078112	1629048	AK103	(C25-C36)	975808	13.3
C16	5.493	-0.006	2325149	2519576	OR.DIES	(C10-C28)	84261604	429.9
C18	6.091	-0.001	3094596	2776409				
C20	6.672	-0.001	528691	1137793	JET-A	(C10-C18)	64134578	386.7
C22	7.239	0.003	112746	27707				
C24	7.787	0.003	38433	13199				
C25	8.052	-0.003	20425	12966				
C26	8.316	-0.001	10545	4130				
C28	8.817	-0.003	2938	1249				
C32	9.767	0.014	1384	800				
C34	10.171	-0.006	4006	1588				
Filter Peak	12.070	0.001	15527	5422	CREOSOT	(C12-C22)	69884769	1235.9
C36	10.562	-0.015	33354	51203				
C38	10.971	-0.009	14233	16927				
C40	11.454	-0.001	16193	4850				
o-terph	6.284	-0.001	15887466	16497934				
Triacon Surr	9.307	-0.012	1737	1458	NAS DIES	(C10-C24)	83398872	427.4

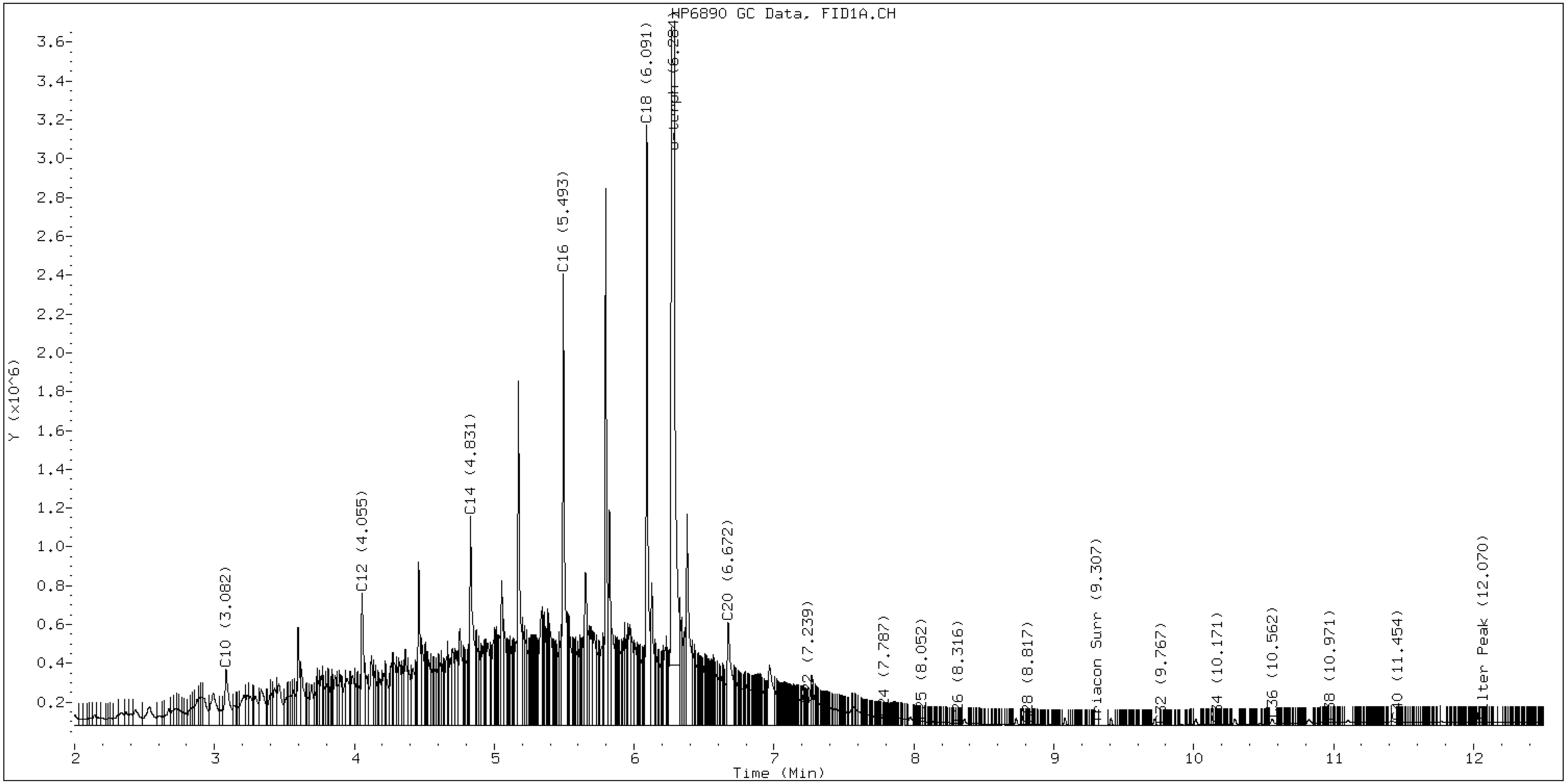
Range Times: NW Diesel(4.052 - 7.785) AK102(3.07 - 8.05) Jet A(3.07 - 6.09)
NW M.Oil(7.78 - 10.98) AK103(8.05 - 10.58) OR Diesel(3.07 - 8.82)

Surrogate	Area	Amount	
o-Terphenyl	16497934	80.6	M
Triacontane	1458	0.0	

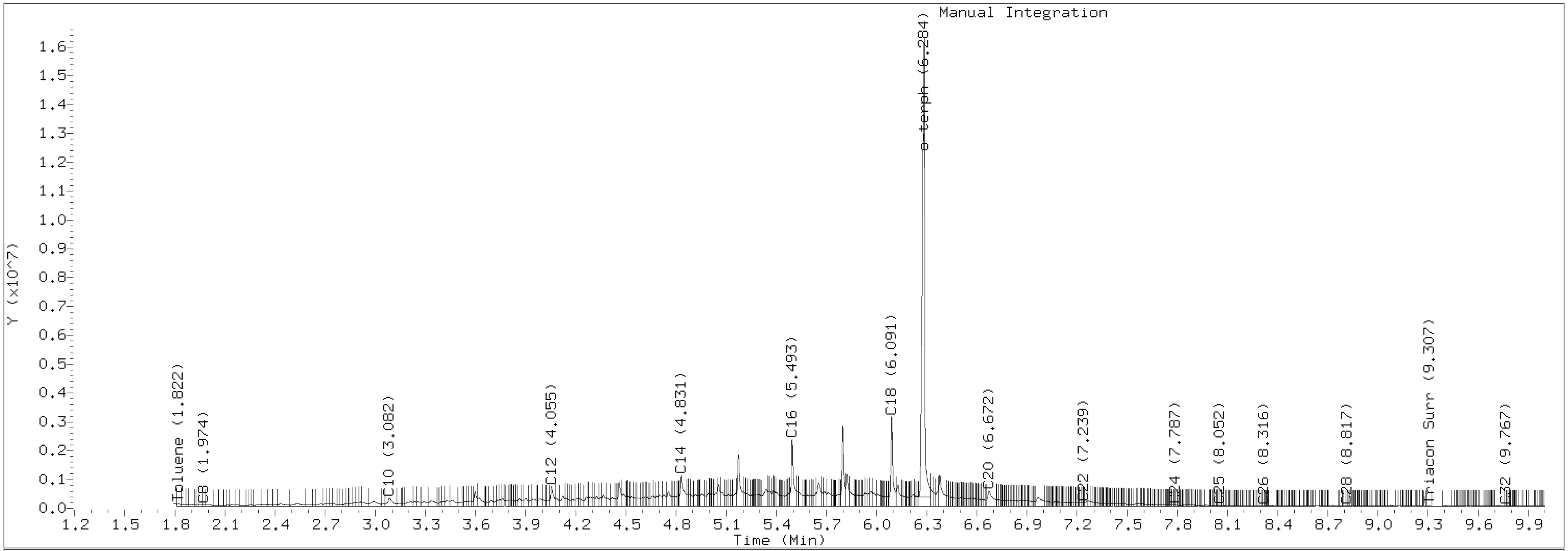
M Indicates the peak was manually integrated

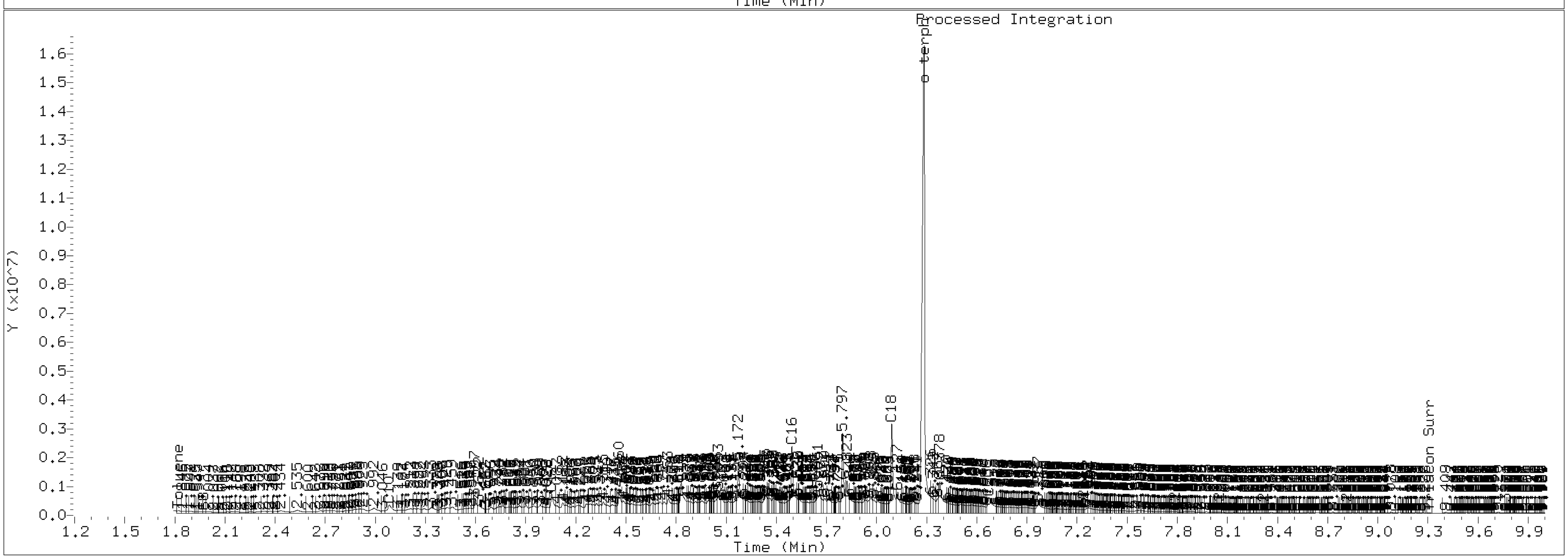
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	56546.9	30-MAR-2020

Datafile: FID4A, 20201002.b/420J0205.D SEQ-ICV1



TPH Manual Integrations Report
Datafile: FID4A, 20201002.b/420J0205.D Injection: 02-OCT-2020 10:02
Lab ID:SEQ-ICV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420J0206.D	Calibration Date:	10/25/2019
Sequence:	SIJ0042	Injection Date:	10/02/20
Lab Sample ID:	SIJ0042-ICV2	Injection Time:	10:22
Sequence Name:	MOIL ICV		

COMPOUND	TYPE	CONC. (mg/L) STD	CONC. (mg/L) ICV	RESPONSE FACTOR ICAL	RESPONSE FACTOR ICV	RESPONSE FACTOR MIN	% DRIFT/DIFF ICV	% DRIFT/DIFF LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1000	101166.0000	101326.9000		0.2	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201002.b\420J0206.D

Date : 02-OCT-2020 10:22

Client ID:

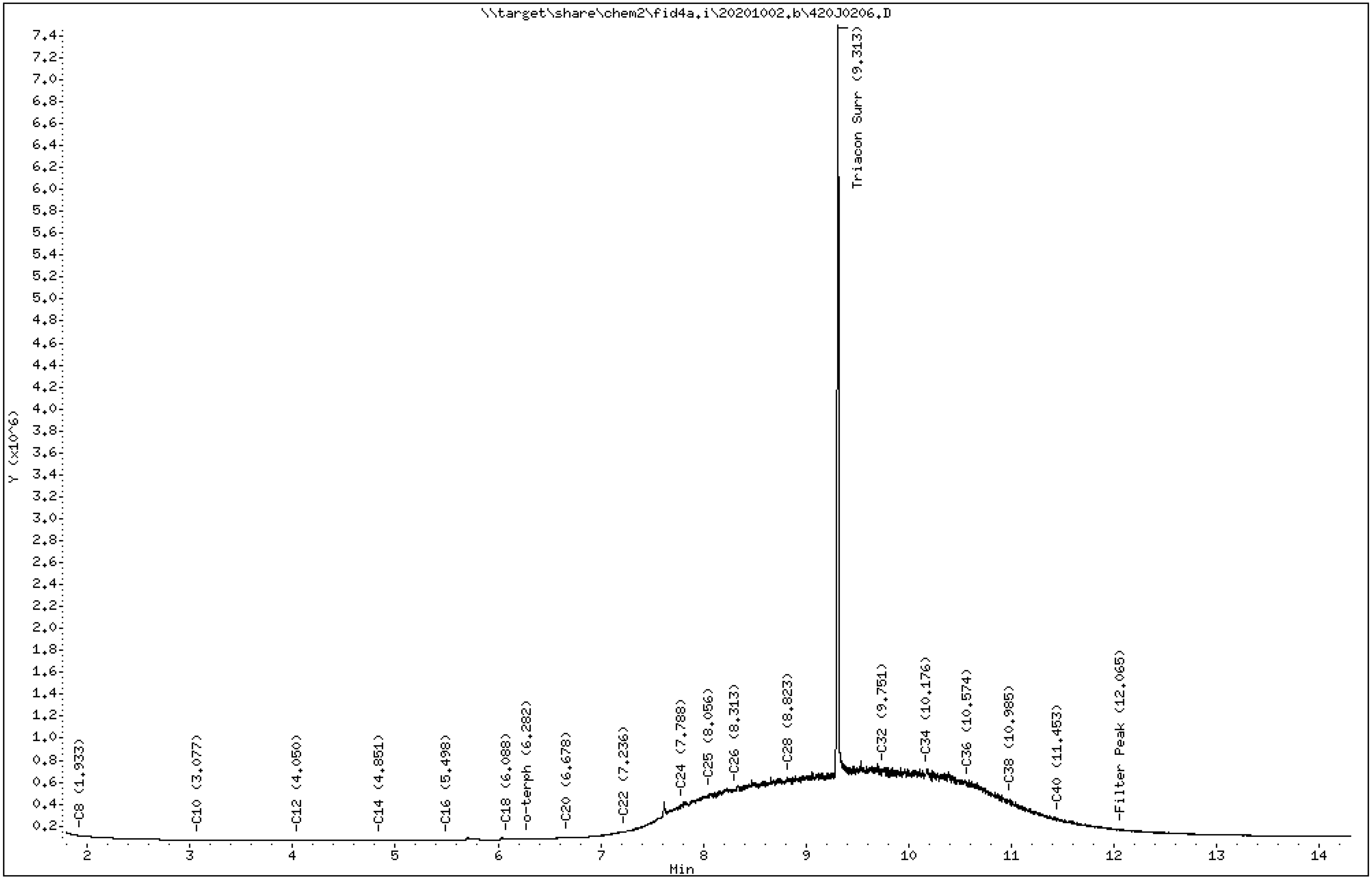
Instrument: fid4a.i

Sample Info: SEQ-ICV2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201002.b/420J0206.D
Method: 20201002.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 10/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-ICV2
Client ID:
Injection: 02-OCT-2020 10:22
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.933	-0.053	40170	217629	WATPHD	(C12-C24)	9338175	58.6
C10	3.077	0.005	3116	1235	WATPHM	(C24-C38)	101326864	1001.6
C12	4.050	-0.002	739	300	AK102	(C10-C25)	12980414	66.4
C14	4.851	0.000	1691	875	AK103	(C25-C36)	87854436	1200.1
C16	5.498	-0.001	3965	1775	OR.DIES	(C10-C28)	38104832	194.4
C18	6.088	-0.004	9124	7454				
C20	6.678	0.004	23587	21755	JET-A	(C10-C18)	531068	3.2
C22	7.236	-0.000	78929	19568				
C24	7.788	0.003	320203	157142				
C25	8.056	0.001	419327	203040				
C26	8.313	-0.003	465120	205807				
C28	8.823	0.002	561848	139100				
C32	9.751	-0.002	648448	161534				
C34	10.176	-0.000	636189	188508				
Filter Peak	12.065	-0.004	95356	47076	CREOSOT	(C12-C22)	2490372	44.0
C36	10.574	-0.003	526198	280237				
C38	10.985	0.005	371706	208774				
C40	11.453	-0.002	195991	143228				
o-terph	6.282	-0.003	9393	6016				
Triacon Surr	9.313	-0.007	6811245	6463450	NAS DIES	(C10-C24)	9467683	48.5

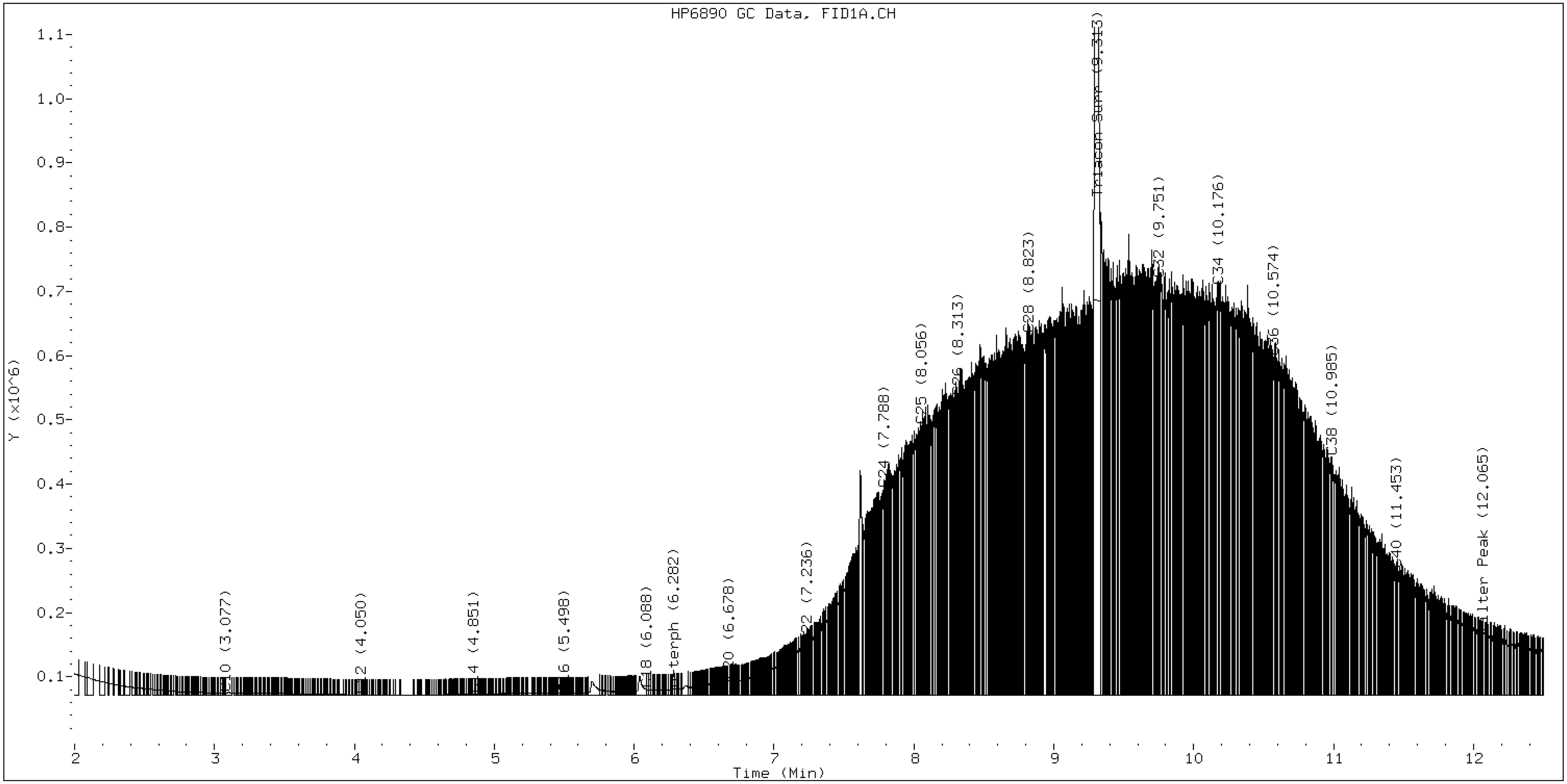
Range Times: NW Diesel(4.052 - 7.785) AK102(3.07 - 8.05) Jet A(3.07 - 6.09)
NW M.Oil(7.78 - 10.98) AK103(8.05 - 10.58) OR Diesel(3.07 - 8.82)

Surrogate	Area	Amount	
o-Terphenyl	6016	0.0	
Triacontane	6463450	43.6	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	56546.9	30-MAR-2020

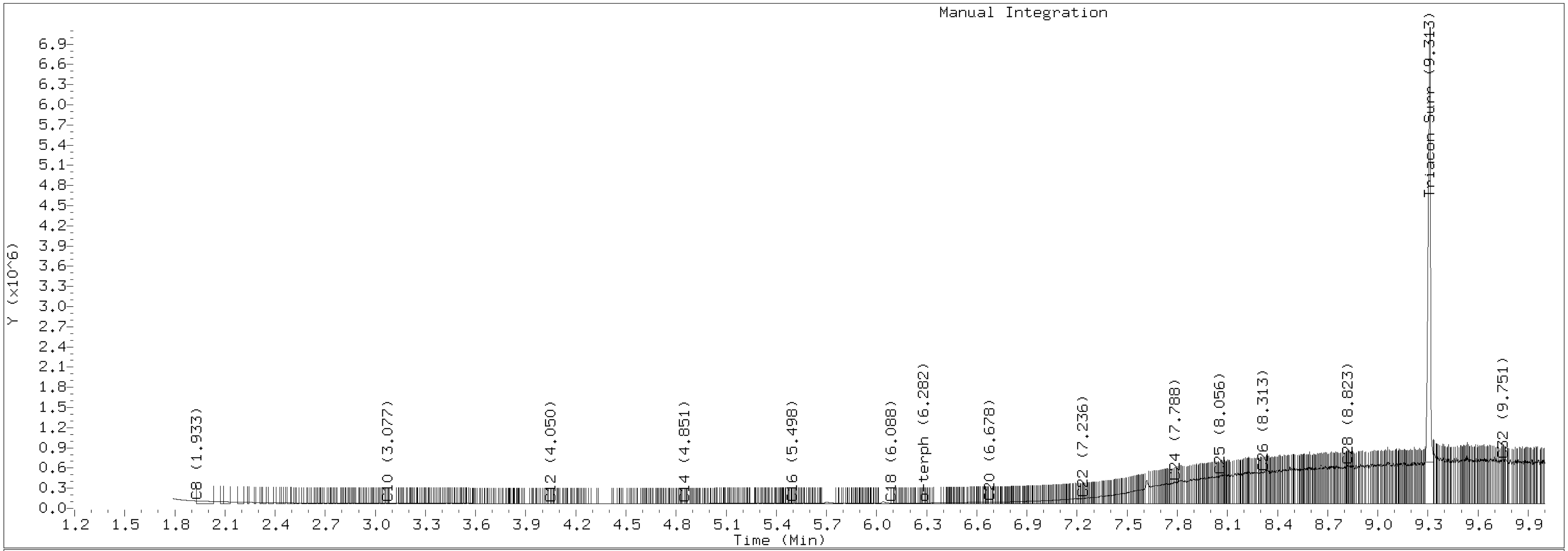
Datafile: FID4A, 20201002.b/420J0206.D SEQ-ICV2

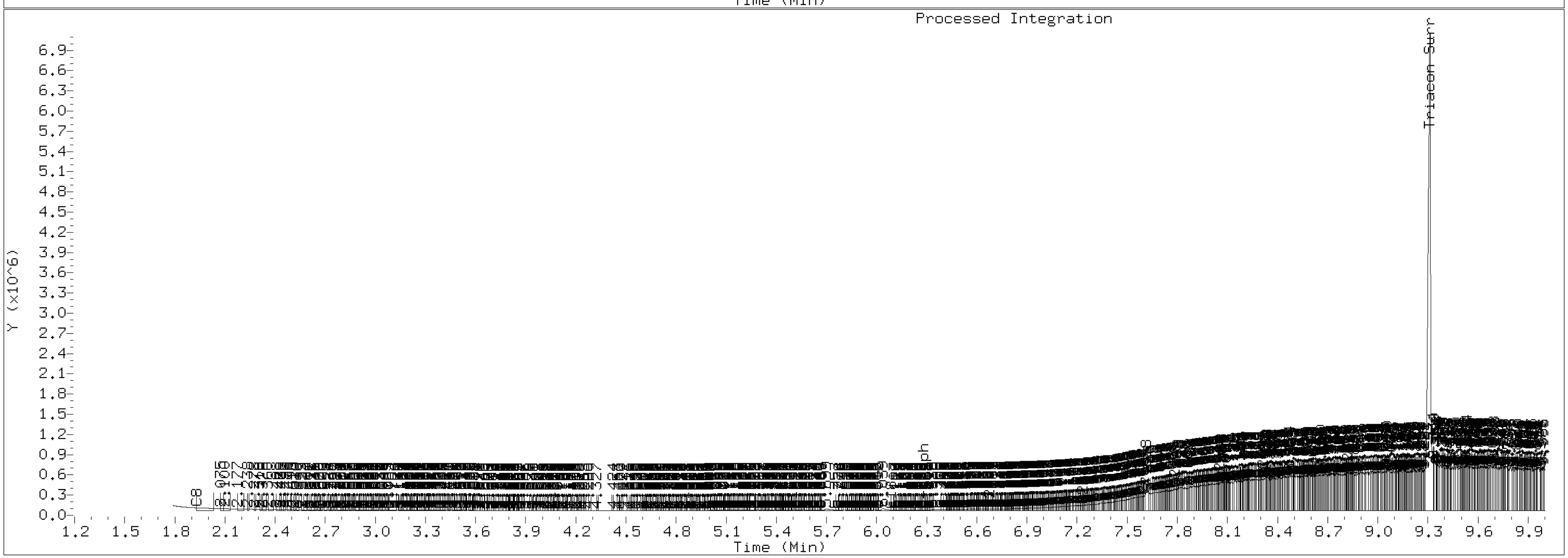


TPH Manual Integrations Report

Datafile: FID4A, 20201002.b/420J0206.D Injection: 02-OCT-2020 10:22

Lab ID:SEQ-ICV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Instrument ID: FID4

Lab File ID: 420J0213.D

Sequence: SIJ0042

Lab Sample ID: SIJ0042-ICV3

Sequence Name: A/S CREOSOTE ICV

SDG: 20K0145

Project: ICS-Former NW Cooperage

Calibration: DA00022

Calibration Date: 10/25/2019

Injection Date: 10/02/20

Injection Time: 12:46

		CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
o-Terphenyl	A	90.000	85.2	204701.9000	193728.7000		-5.3	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201002.b\420J0213.D

Page 1

Date : 02-OCT-2020 12:46

Client ID:

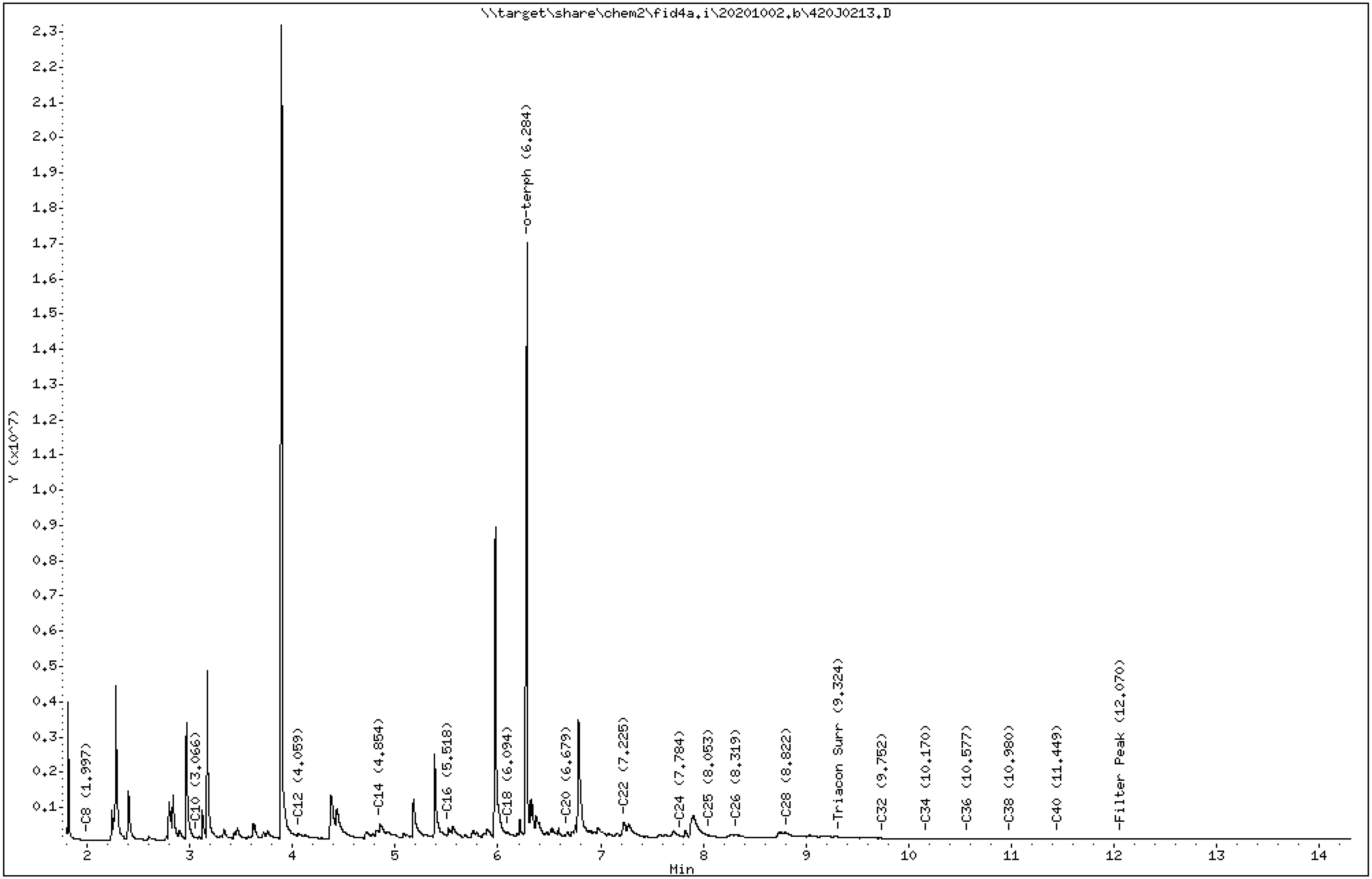
Instrument: fid4a.i

Sample Info: SEQ-ICV3

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201002.b/420J0213.D
Method: 20201002.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 10/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-ICV3
Client ID:
Injection: 02-OCT-2020 12:46
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.997	0.011	15231	44107	WATPHD	(C12-C24)	64142858	402.6
C10	3.066	-0.005	73828	66824	WATPHM	(C24-C38)	16752657	165.6
C12	4.059	0.007	208812	562762	AK102	(C10-C25)	104140417	532.7
C14	4.854	0.004	450395	458484	AK103	(C25-C36)	12683259	173.3
C16	5.518	0.018	336617	450507	OR.DIES	(C10-C28)	109859015	560.5
C18	6.094	0.002	214777	260250				
C20	6.679	0.005	247699	513028	JET-A	(C10-C18)	73860659	445.3
C22	7.225	-0.011	522649	1309051				
C24	7.784	-0.001	107515	42595				
C25	8.053	-0.002	136950	93608				
C26	8.319	0.002	144951	78122				
C28	8.822	0.001	186420	197034				
C32	9.752	-0.001	56122	19503				
C34	10.170	-0.006	43643	36590				
Filter Peak	12.070	0.001	32538	21116	CREOSOT	(C12-C22)	59740201	1056.5
C36	10.577	-0.000	42223	44767				
C38	10.980	0.001	44736	15566				
C40	11.449	-0.006	37967	30195				
o-terph	6.284	-0.000	16761119	17435581				
Triacon Surr	9.324	0.005	92969	45458	NAS DIES	(C10-C24)	101124086	518.2

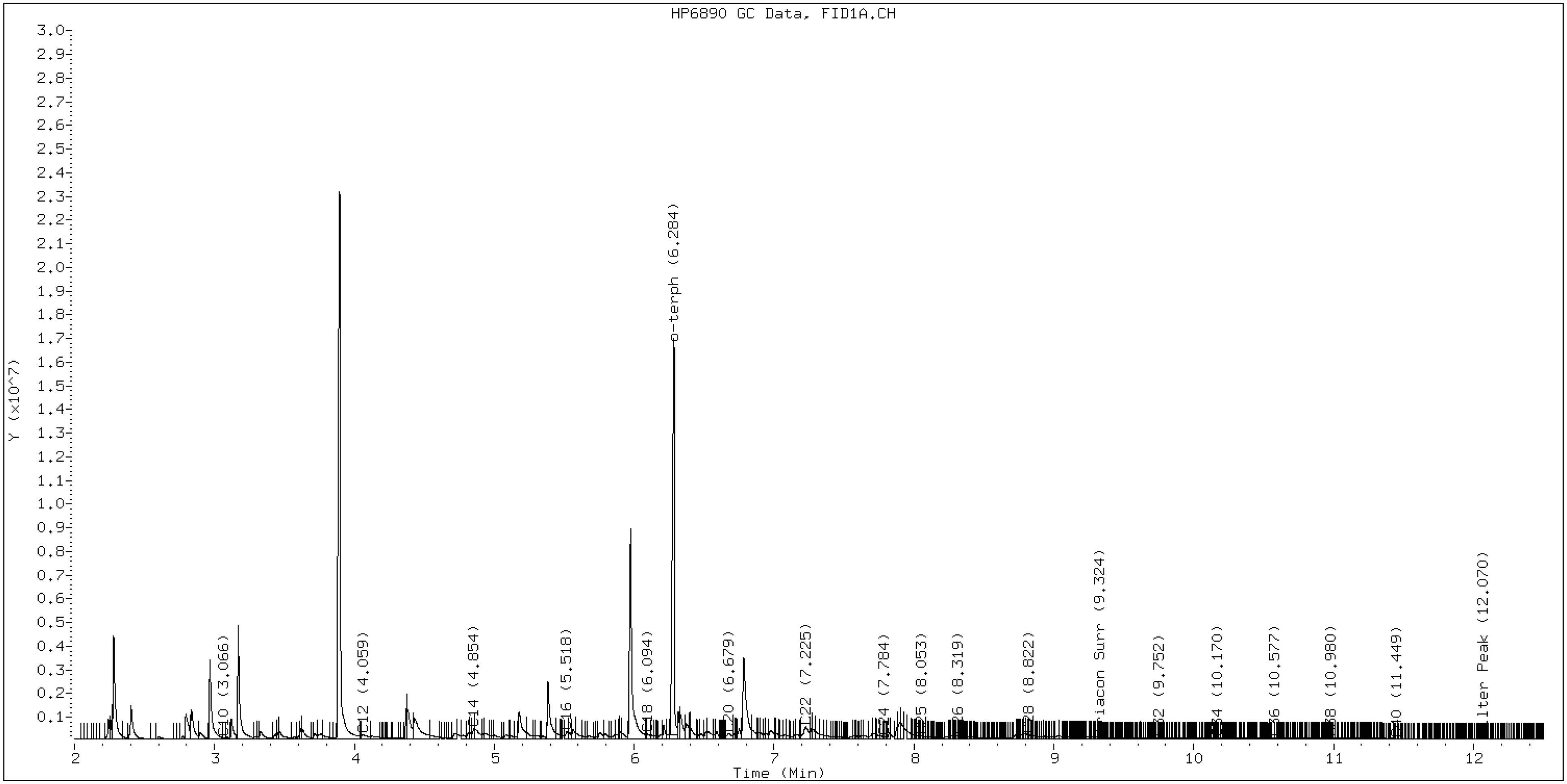
Range Times: NW Diesel(4.052 - 7.785) AK102(3.07 - 8.05) Jet A(3.07 - 6.09)
NW M.Oil(7.78 - 10.98) AK103(8.05 - 10.58) OR Diesel(3.07 - 8.82)

Surrogate	Area	Amount	
o-Terphenyl	17435581	85.2	M
Triacontane	45458	0.3	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	56546.9	30-MAR-2020

Datafile: FID4A, 20201002.b/420J0213.D SEQ-ICV3



TPH Manual Integrations Report
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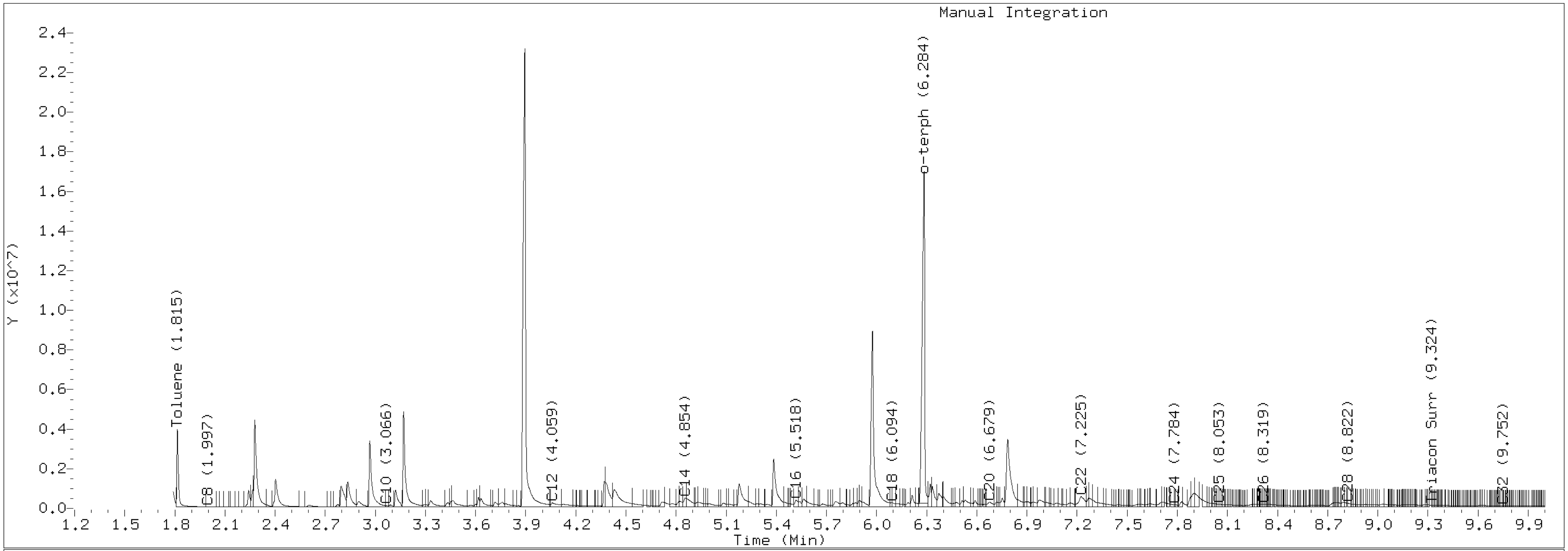
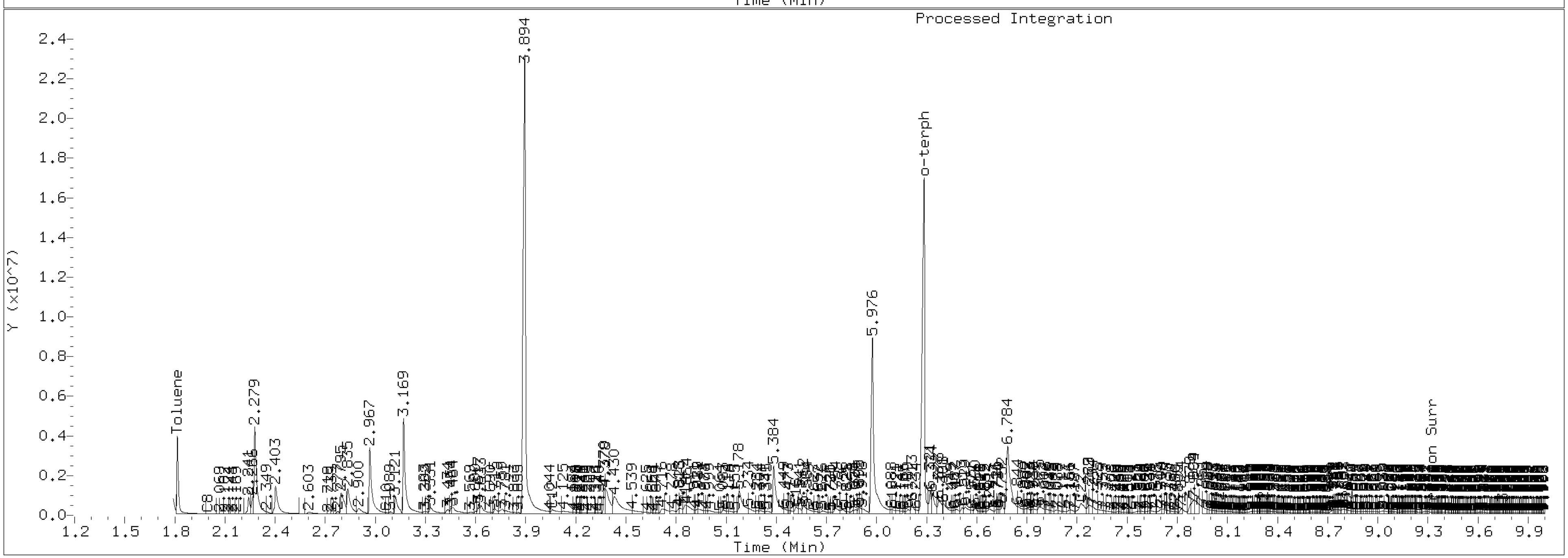
Lab ID:SEQ-ICV3





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory: Analytical Resources, Inc.

SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Instrument ID: FID4

Calibration: DA00022

Lab File ID: 420K0205.D

Calibration Date: 10/25/2019

Sequence: SIK0016

Injection Date: 11/02/20

Lab Sample ID: SIK0016-ICV1

Injection Time: 09:50

Sequence Name: DIESEL ICV

		CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	462	159336.7000	147218.2000		-7.6	+/-15
o-Terphenyl	A	90.000	85.5	204701.9000	194567.3000		-5.0	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201102.b\420K0205.D

Date : 02-NOV-2020 09:50

Client ID:

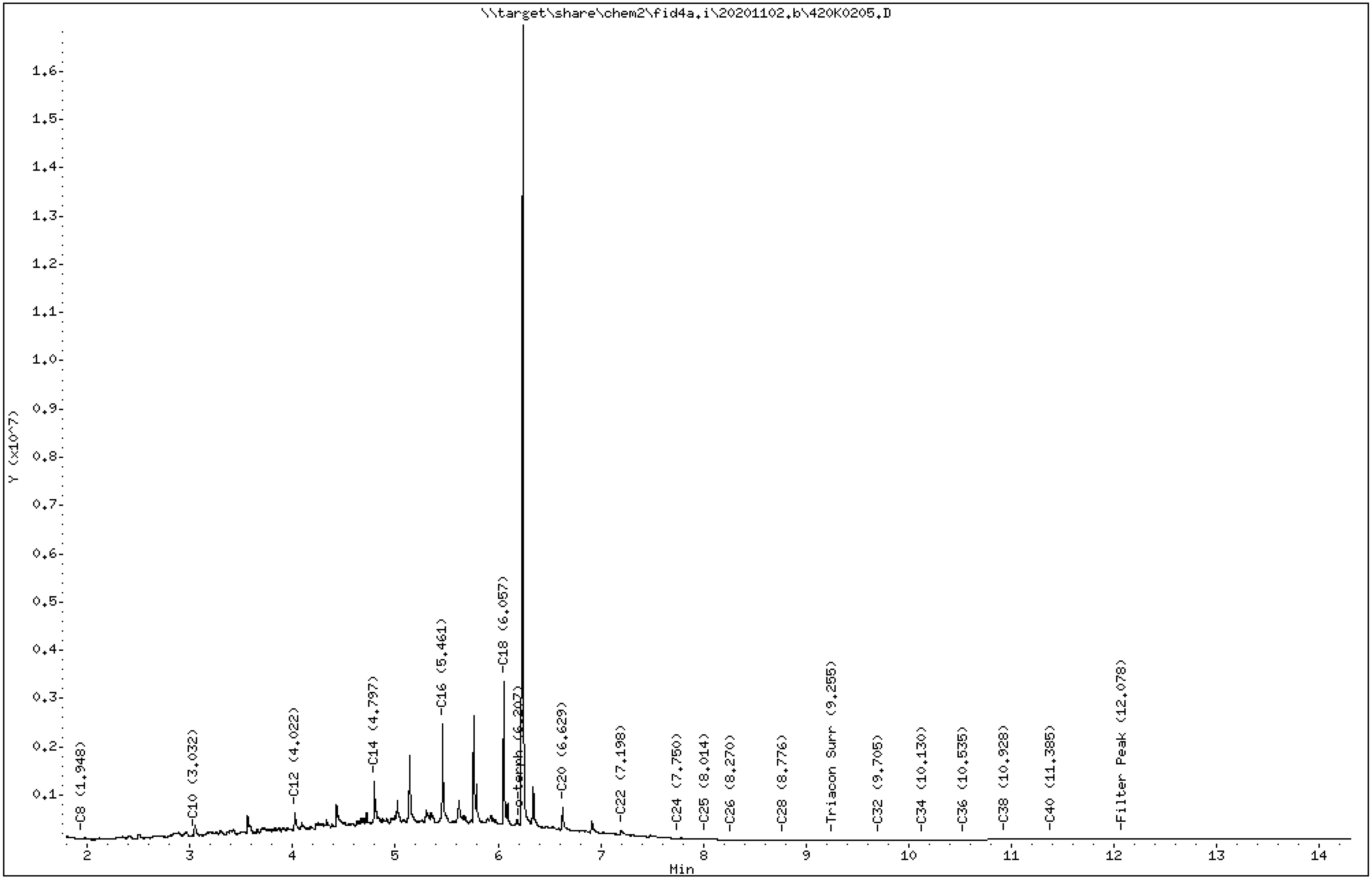
Instrument: fid4a.i

Sample Info: SEQ-ICV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201102.b/420K0205.D
Method: 20201102.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 11/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-ICV1
Client ID:
Injection: 02-NOV-2020 09:50
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.948	-0.005	27722	25305	WATPHD	(C12-C24)	73609123	462.0
C10	3.032	-0.000	100254	101191	WATPHM	(C24-C38)	1318446	13.0
C12	4.022	0.005	578386	910528	AK102	(C10-C25)	85995695	439.9
C14	4.797	-0.000	1205590	1792087	AK103	(C25-C36)	768399	10.5
C16	5.461	-0.003	2401105	3334464	OR.DIES	(C10-C28)	86376174	440.7
C18	6.057	0.000	3296857	2927279				
C20	6.629	0.000	687131	1352522	JET-A	(C10-C18)	67842897	409.1
C22	7.198	0.005	211338	187473				
C24	7.750	0.007	34186	5119				
C25	8.014	0.003	17661	6138				
C26	8.270	-0.002	8903	10303				
C28	8.776	-0.001	1579	700				
C32	9.705	-0.000	1846	457				
C34	10.130	-0.000	4665	1620				
Filter Peak	12.078	0.002	18811	4691	BUNKERC	(C10-C38)	87100489	2206.3
C36	10.535	0.001	10583	3159				
C38	10.928	-0.003	15959	3185				
C40	11.385	-0.001	18877	6577				
o-terph	6.247	-0.000	16578751	17511064				
Triacon Surr	9.255	-0.024	288	111	NAS DIES	(C10-C24)	85782044	439.6

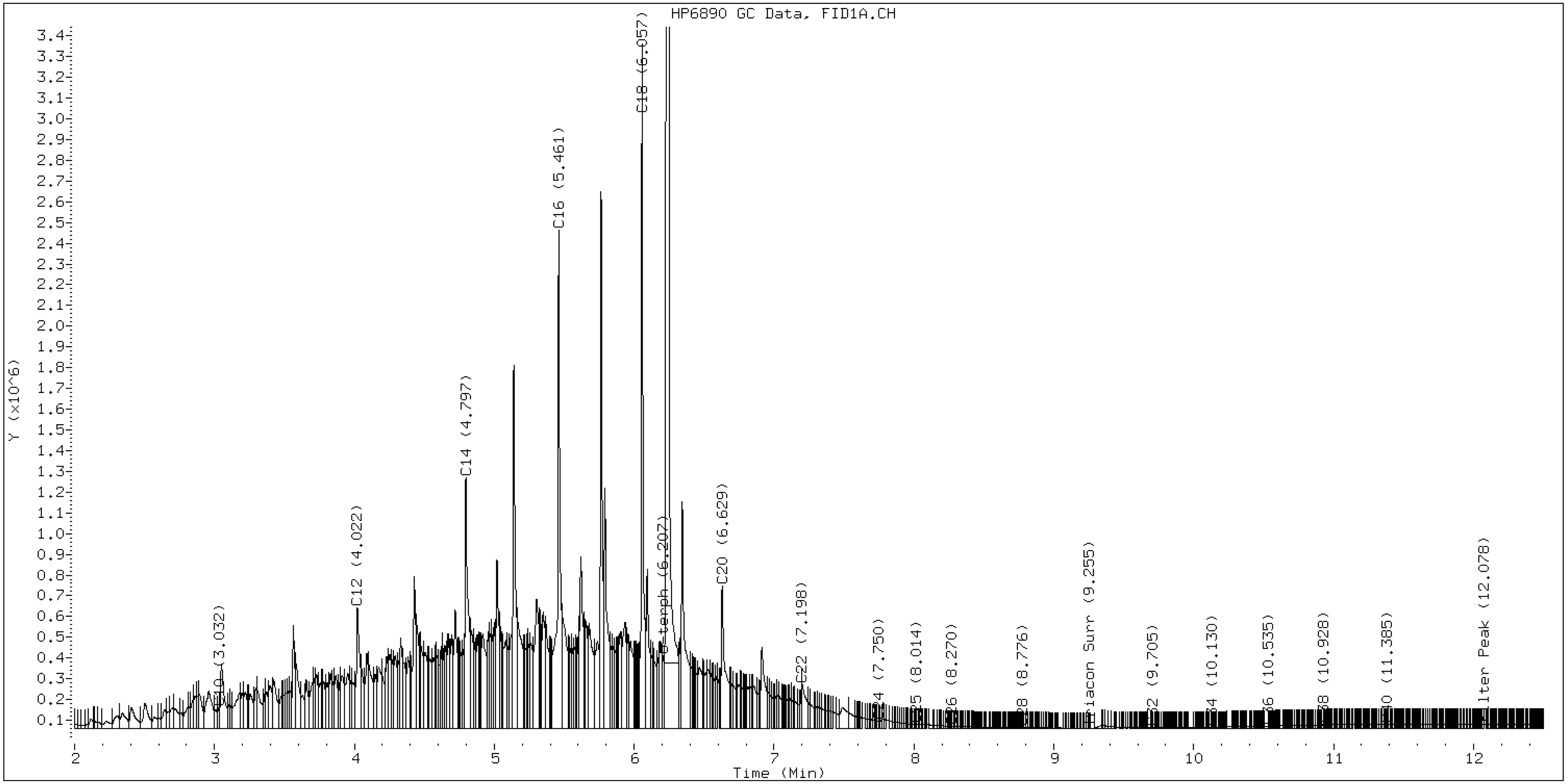
Range Times: NW Diesel(4.016 - 7.743) AK102(3.03 - 8.01) Jet A(3.03 - 6.06)
NW M.Oil(7.74 - 10.93) AK103(8.01 - 10.53) OR Diesel(3.03 - 8.78)

Surrogate	Area	Amount	
o-Terphenyl	17511064	85.5	M
Triacontane	111	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

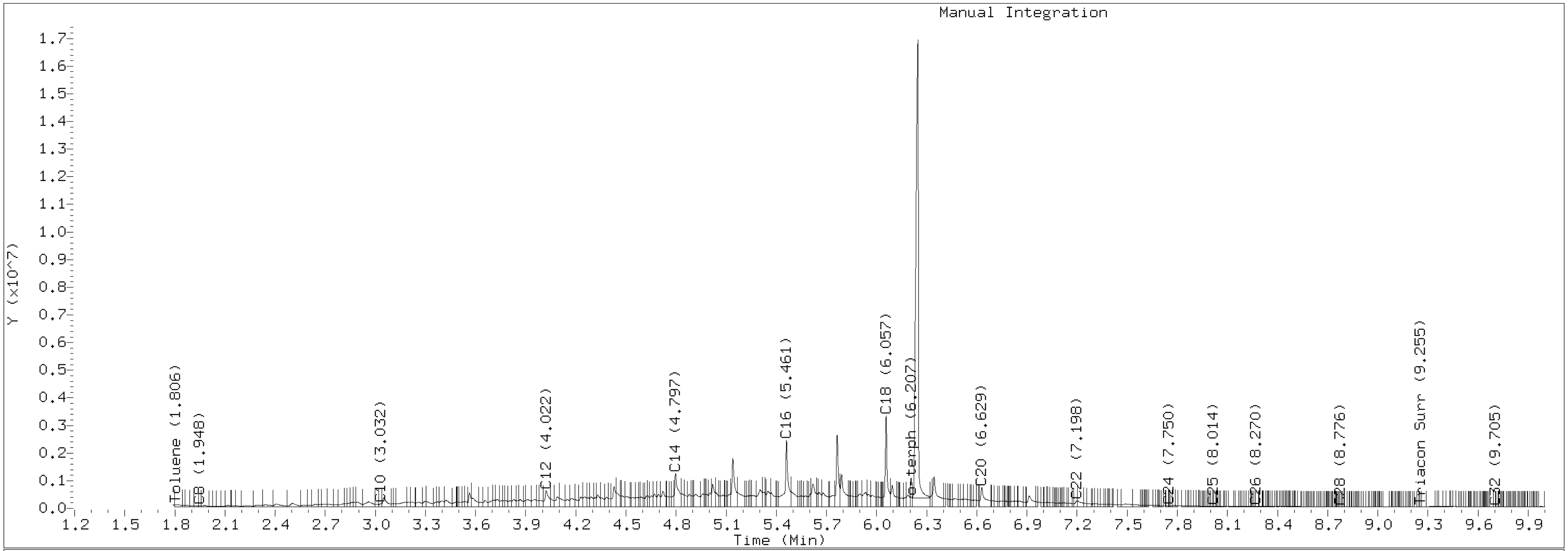
Datafile: FID4A, 20201102.b/420K0205.D SEQ-ICV1

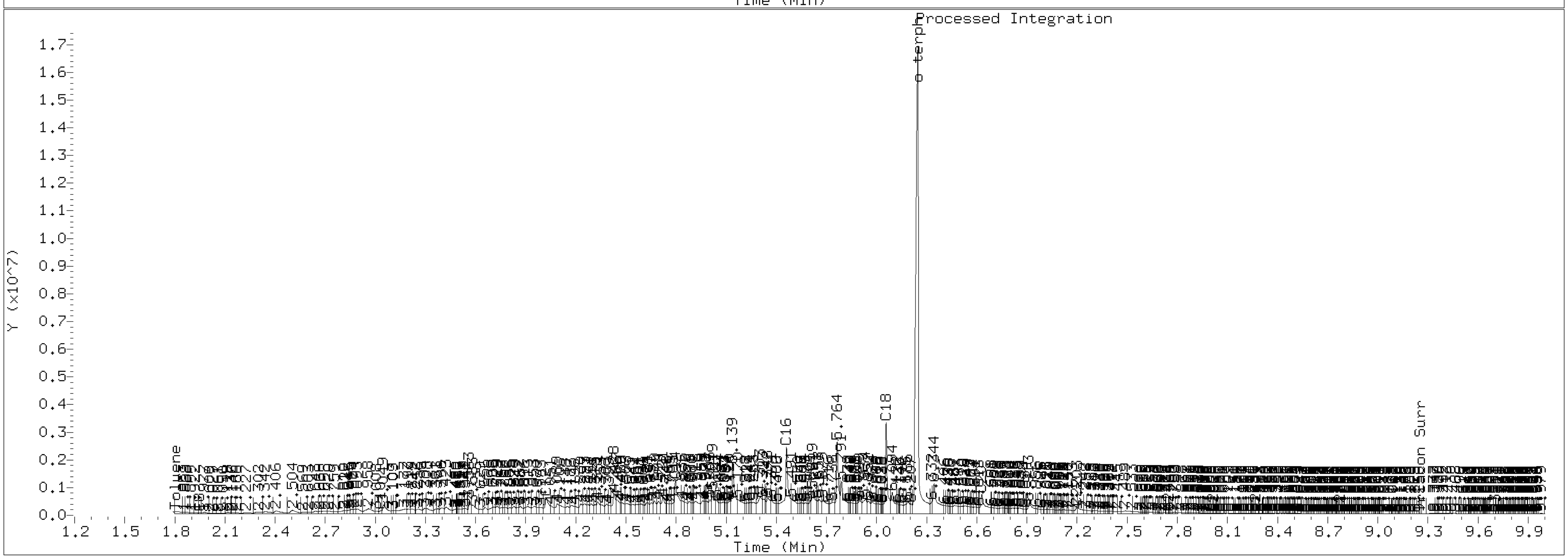


TPH Manual Integrations Report

Datafile: FID4A, 20201102.b/420K0205.D Injection: 02-NOV-2020 09:50

Lab ID:SEQ-ICV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420K0206.D
Calibration Date: 10/25/2019
Sequence: SIK0016
Injection Date: 11/02/20
Lab Sample ID: SIK0016-ICV2
Injection Time: 10:10
Sequence Name: MOIL ICV

		CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1090	101166.0000	109814.0000		8.6	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201102.b\420K0206.D

Date : 02-NOV-2020 10:10

Client ID:

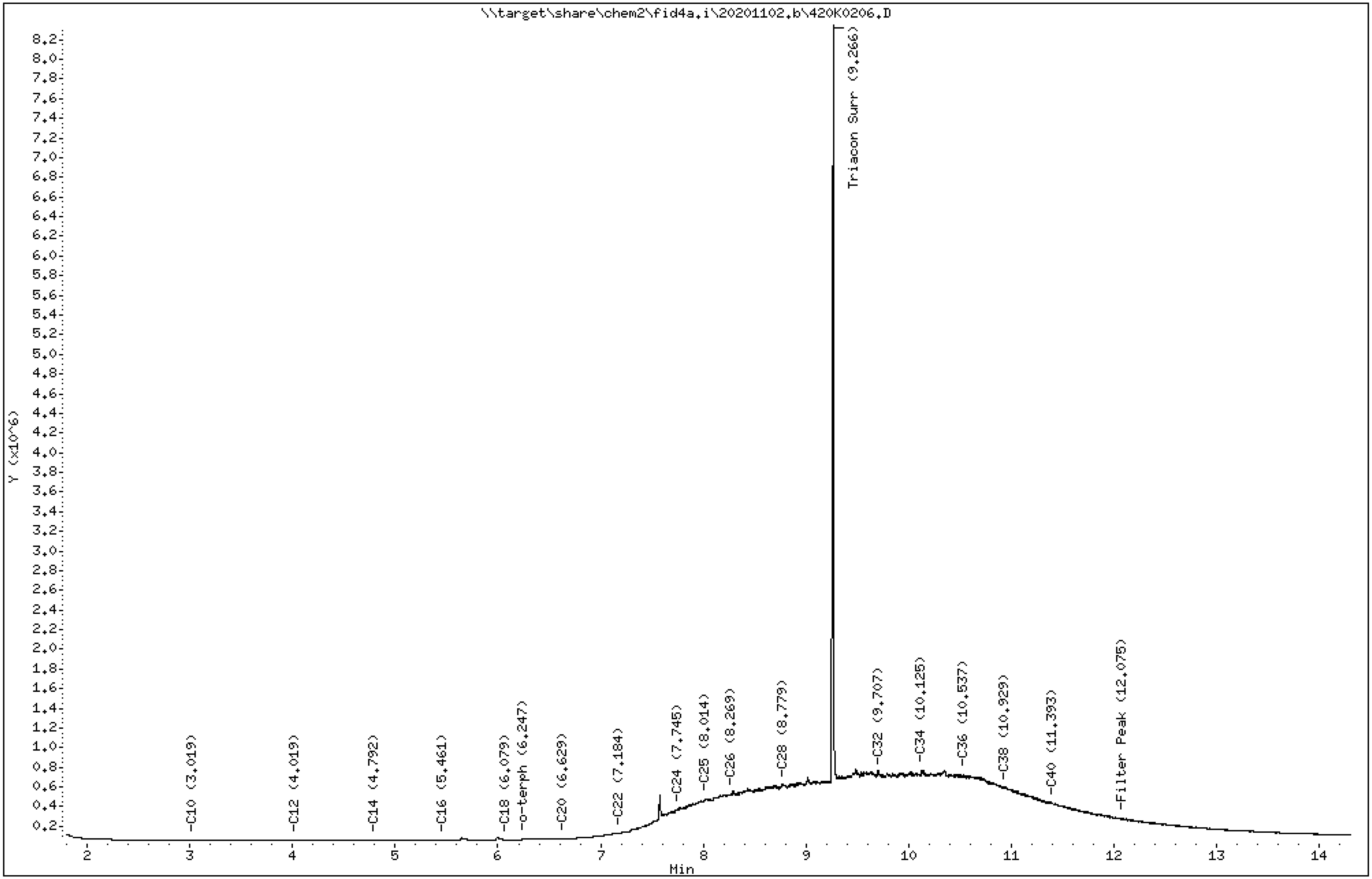
Instrument: fid4a.i

Sample Info: SEQ-ICV2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201102.b/420K0206.D
Method: 20201102.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 11/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-ICV2
Client ID:
Injection: 02-NOV-2020 10:10
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.904	-0.050	31372	153084	WATPHD	(C12-C24)	8630664	54.2
C10	3.019	-0.013	378	194	WATPHM	(C24-C38)	109814018	1085.5
C12	4.019	0.003	1699	579	AK102	(C10-C25)	12272418	62.8
C14	4.792	-0.005	1288	918	AK103	(C25-C36)	92392635	1262.1
C16	5.461	-0.003	665	372	OR.DIES	(C10-C28)	37432985	191.0
C18	6.079	0.023	4466	3942				
C20	6.629	0.001	15807	7032	JET-A	(C10-C18)	251326	1.5
C22	7.184	-0.009	69530	27586				
C24	7.745	0.002	311043	168835				
C25	8.014	0.002	417193	362937				
C26	8.269	-0.003	467663	346796				
C28	8.779	0.002	562711	224336				
C32	9.707	0.001	683502	371053				
C34	10.125	-0.005	713842	924625				
Filter Peak	12.075	-0.000	216088	85492	BUNKERC	(C10-C38)	118490676	3001.5
C36	10.537	0.003	664921	523533				
C38	10.929	-0.001	529835	132064				
C40	11.393	0.006	371203	129552				
o-terph	6.247	-0.000	17150	49096				
Triacon Surr	9.266	-0.013	7693311	7418519	NAS DIES	(C10-C24)	8676658	44.5

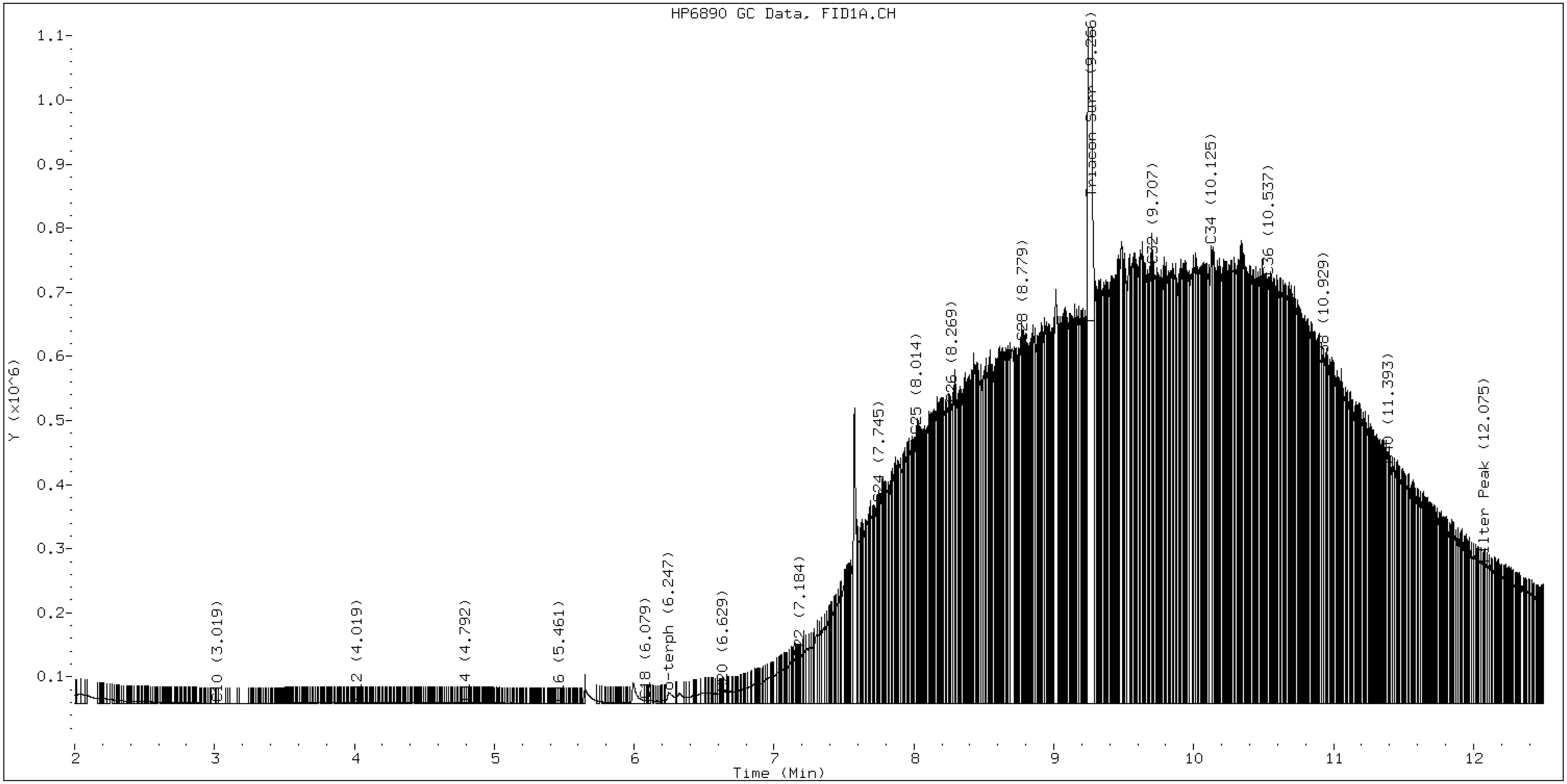
Range Times: NW Diesel(4.016 - 7.743) AK102(3.03 - 8.01) Jet A(3.03 - 6.06)
NW M.Oil(7.74 - 10.93) AK103(8.01 - 10.53) OR Diesel(3.03 - 8.78)

Surrogate	Area	Amount	
o-Terphenyl	49096	0.2	
Triacontane	7418519	50.0	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

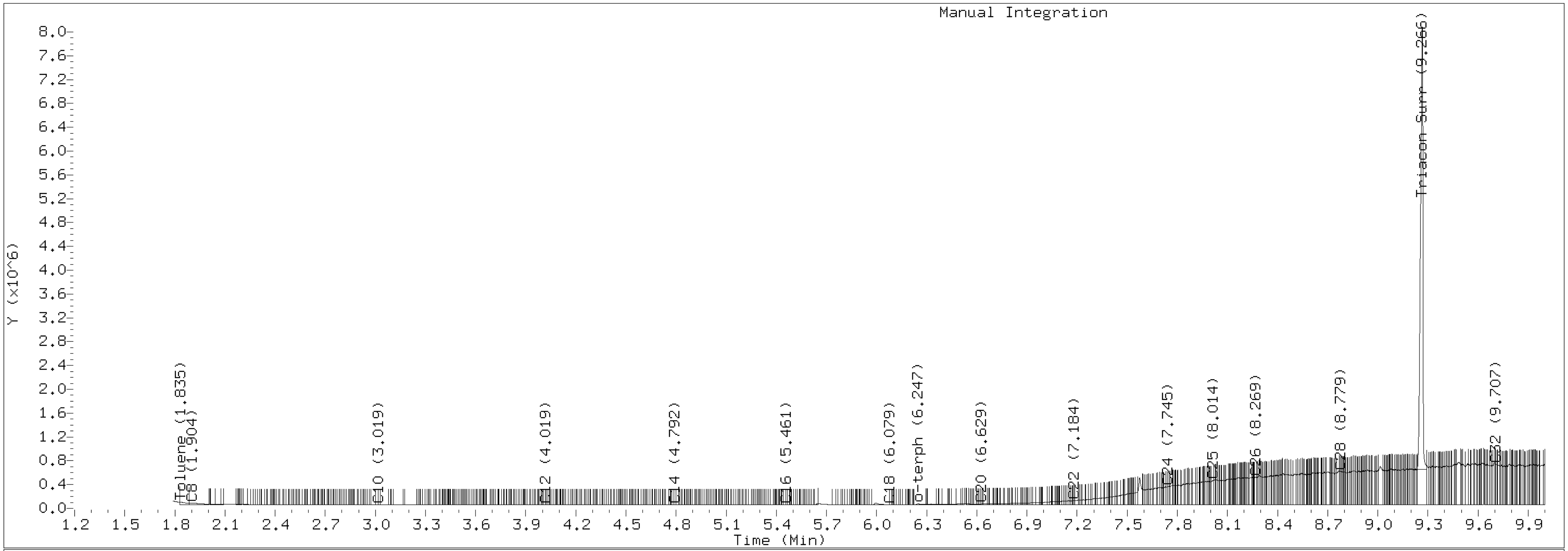
Datafile: FID4A, 20201102.b/420K0206.D SEQ-ICV2

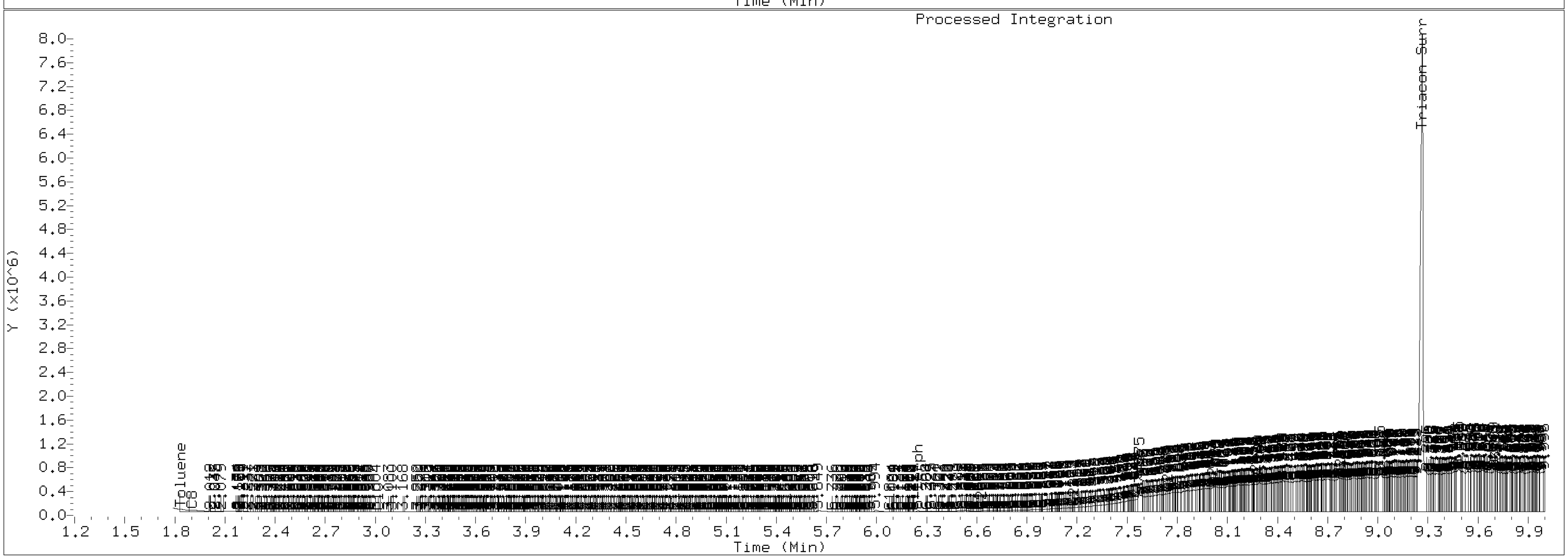


TPH Manual Integrations Report

Datafile: FID4A, 20201102.b/420K0206.D Injection: 02-NOV-2020 10:10

Lab ID:SEQ-ICV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420K0213.D
Calibration Date: 10/25/2019
Sequence: SIK0016
Injection Date: 11/02/20
Lab Sample ID: SIK0016-ICV3
Injection Time: 12:33
Sequence Name: A/S LANDAU BUNKER C

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
o-Terphenyl	A	22.500	22.7	204701.9000	206237.7000		0.9	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201102.b\420K0213.D

Date : 02-NOV-2020 12:33

Client ID:

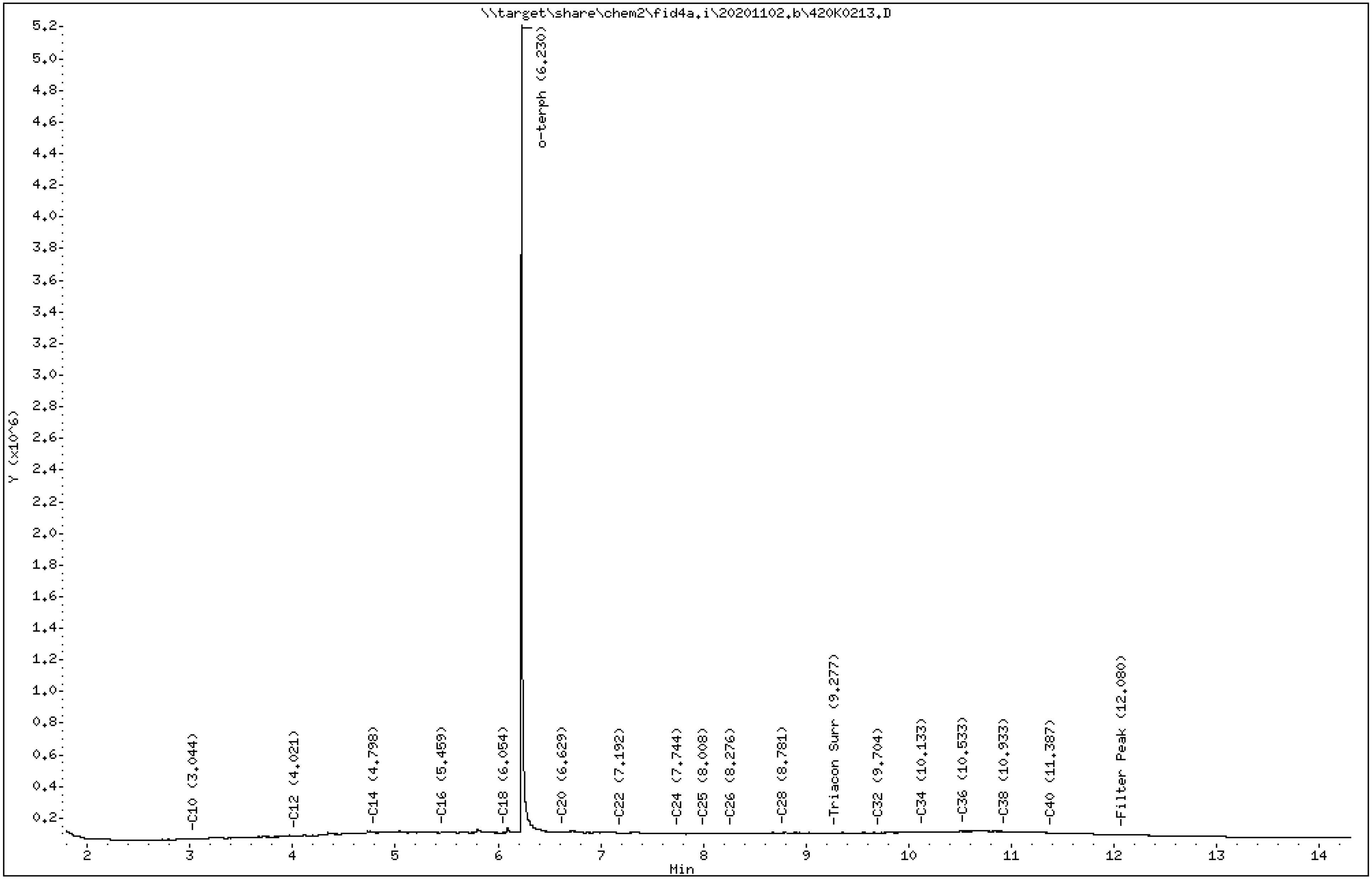
Sample Info: SEQ-ICV3

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201102.b/420K0213.D
Method: 20201102.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 11/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-ICV3
Client ID:
Injection: 02-NOV-2020 12:33
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.905	-0.049	29425	121927	WATPHD	(C12-C24)	10141433	63.6
C10	3.044	0.012	6803	6901	WATPHM	(C24-C38)	9120025	90.1
C12	4.021	0.005	27733	40280	AK102	(C10-C25)	11635353	59.5
C14	4.798	0.001	47843	38122	AK103	(C25-C36)	7369602	100.7
C16	5.459	-0.005	50282	92824	OR.DIES	(C10-C28)	13926769	71.1
C18	6.054	-0.002	48195	33149				
C20	6.629	0.000	51938	23197	JET-A	(C10-C18)	6617909	39.9
C22	7.192	-0.001	45794	36257				
C24	7.744	0.001	43476	10837				
C25	8.008	-0.003	43651	13061				
C26	8.276	0.004	45572	31655				
C28	8.781	0.004	47716	32741				
C32	9.704	-0.001	46788	30190				
C34	10.133	0.002	52271	15603				
Filter Peak	12.080	0.005	33980	18653	BUNKERC	(C10-C38)	20329330	515.0
C36	10.533	-0.000	56464	22507				
C38	10.933	0.002	54392	16254				
C40	11.387	0.000	47293	35175				
o-terph	6.230	-0.017	5152254	4640349				
Triacon Surr	9.277	-0.002	45837	24942	NAS DIES	(C10-C24)	11209305	57.4

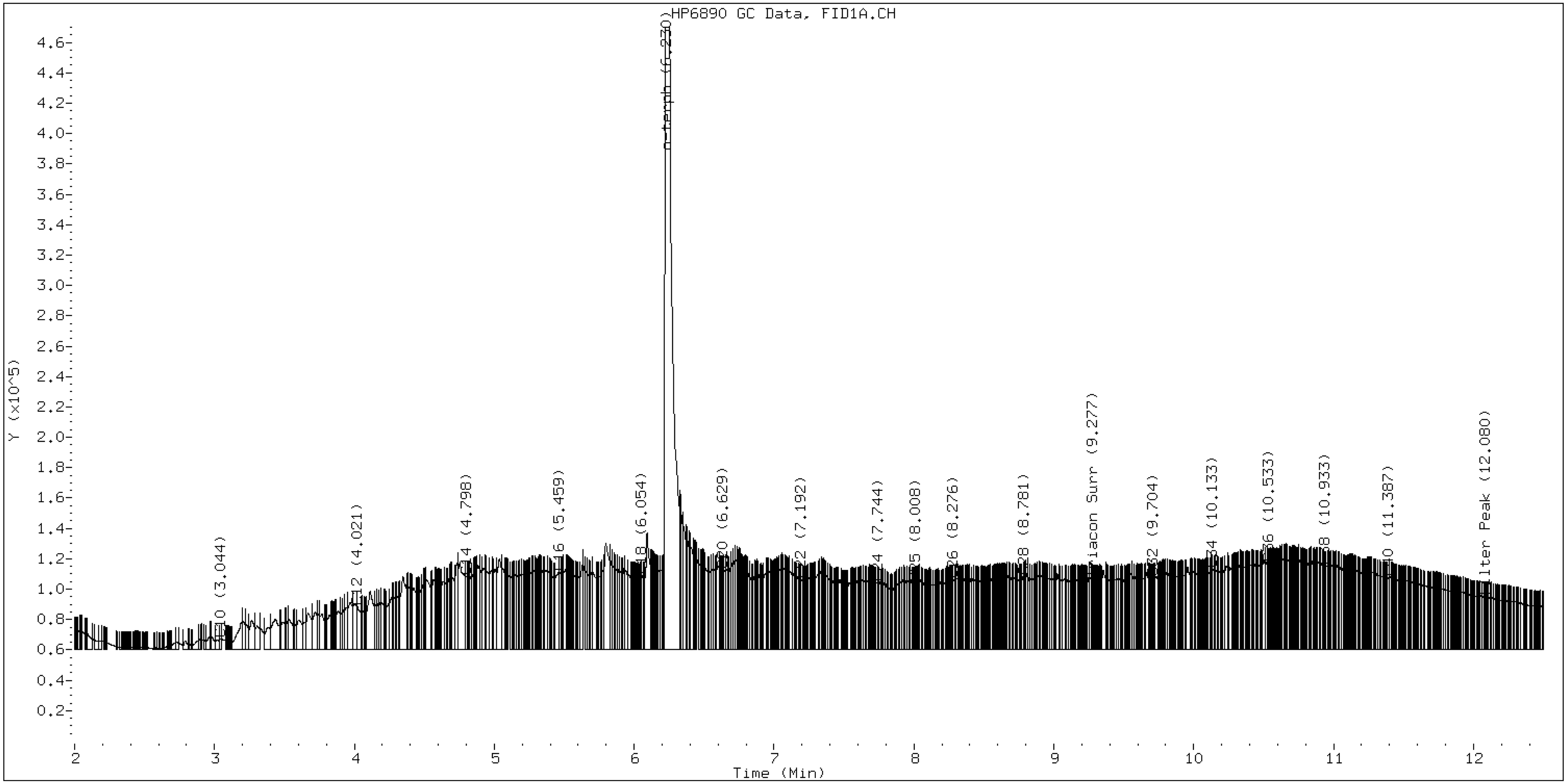
Range Times: NW Diesel(4.016 - 7.743) AK102(3.03 - 8.01) Jet A(3.03 - 6.06)
NW M.Oil(7.74 - 10.93) AK103(8.01 - 10.53) OR Diesel(3.03 - 8.78)

Surrogate	Area	Amount
o-Terphenyl	4640349	22.7
Triacontane	24942	0.2

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201102.b/420K0213.D   SEQ-ICV3



Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420K2905.D	Calibration Date:	10/25/2019
Sequence:	SIK0411	Injection Date:	11/29/20
Lab Sample ID:	SIK0411-ICV1	Injection Time:	16:25
Sequence Name:	DIESEL ICV		

		CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	459	159336.7000	146332.9000		-8.2	+/-15
o-Terphenyl	A	90.000	81.4	204701.9000	185047.8000		-9.6	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201129.b\420K2905.D

Date : 29-NOV-2020 16:25

Client ID:

Sample Info: SEQ-ICV1

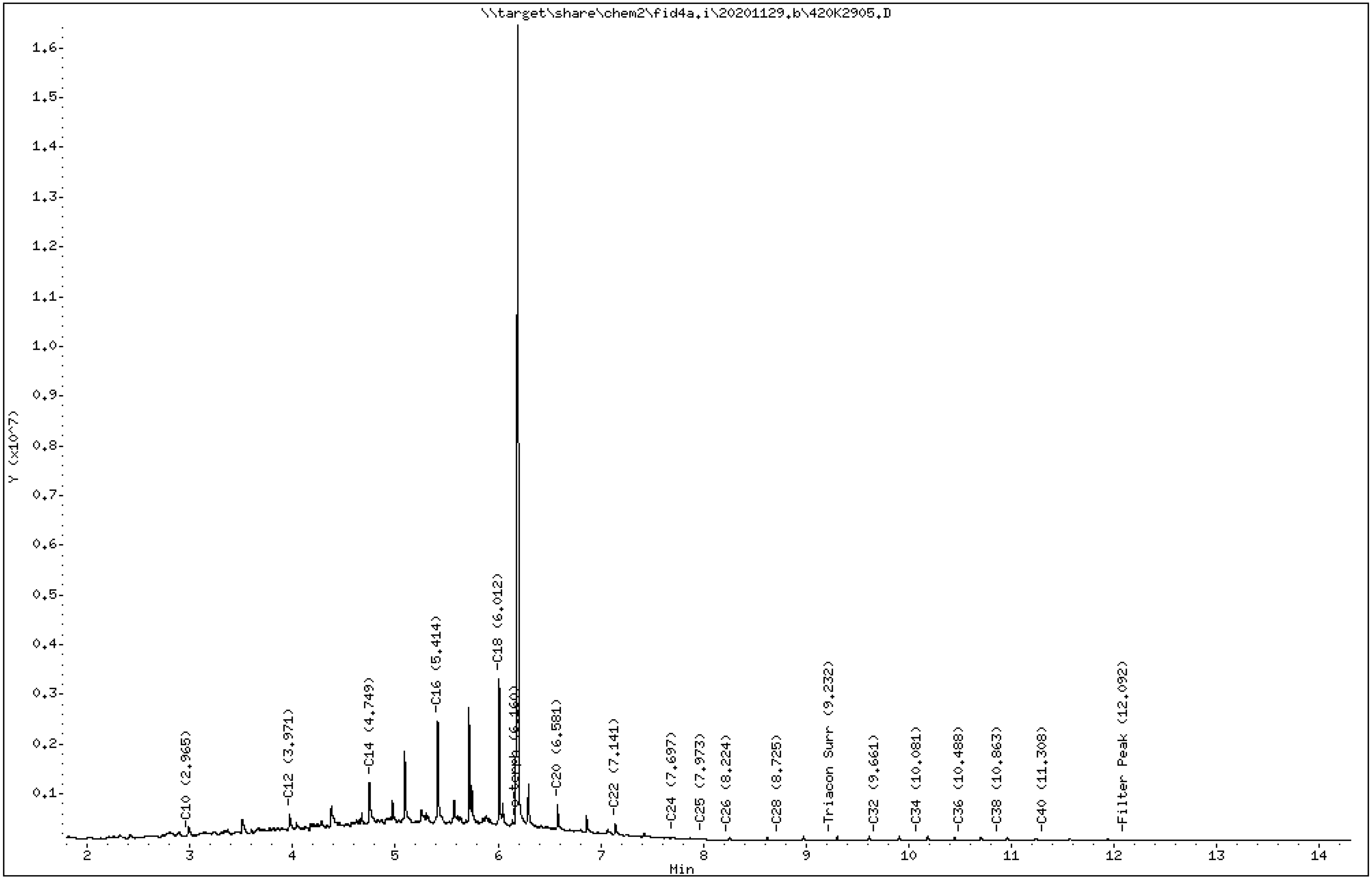
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201129.b/420K2905.D
Method: 20201129.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-ICV1
Client ID:
Injection: 29-NOV-2020 16:25
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.877	0.005	48399	168226	WATPHD	(C12-C24)	73166468	459.2
C10	2.965	-0.005	87109	107823	WATPHM	(C24-C38)	1254259	12.4
C12	3.971	0.007	560104	986189	AK102	(C10-C25)	84372203	431.6
C14	4.749	0.001	1221255	1740263	AK103	(C25-C36)	824881	11.3
C16	5.414	0.000	2422069	2319105	OR.DIES	(C10-C28)	84769742	432.5
C18	6.012	-0.000	3330794	2946388				
C20	6.581	-0.002	752910	948813	JET-A	(C10-C18)	65085282	392.4
C22	7.141	-0.003	338070	578521				
C24	7.697	0.004	65013	211368				
C25	7.973	0.012	22403	56036				
C26	8.224	0.001	7889	1958				
C28	8.725	-0.002	1724	679				
C32	9.661	0.005	677	376				
C34	10.081	0.002	1661	1108				
Filter Peak	12.092	-0.006	9875	5888	BUNKERC	(C10-C38)	85370771	2162.5
C36	10.488	0.006	4495	2876				
C38	10.863	-0.010	7735	2299				
C40	11.308	-0.005	9767	5330				
o-terph	6.196	-0.002	16061238	16654300				
Triacon Surr	9.232	0.001	4817	10693	NAS DIES	(C10-C24)	84116513	431.0

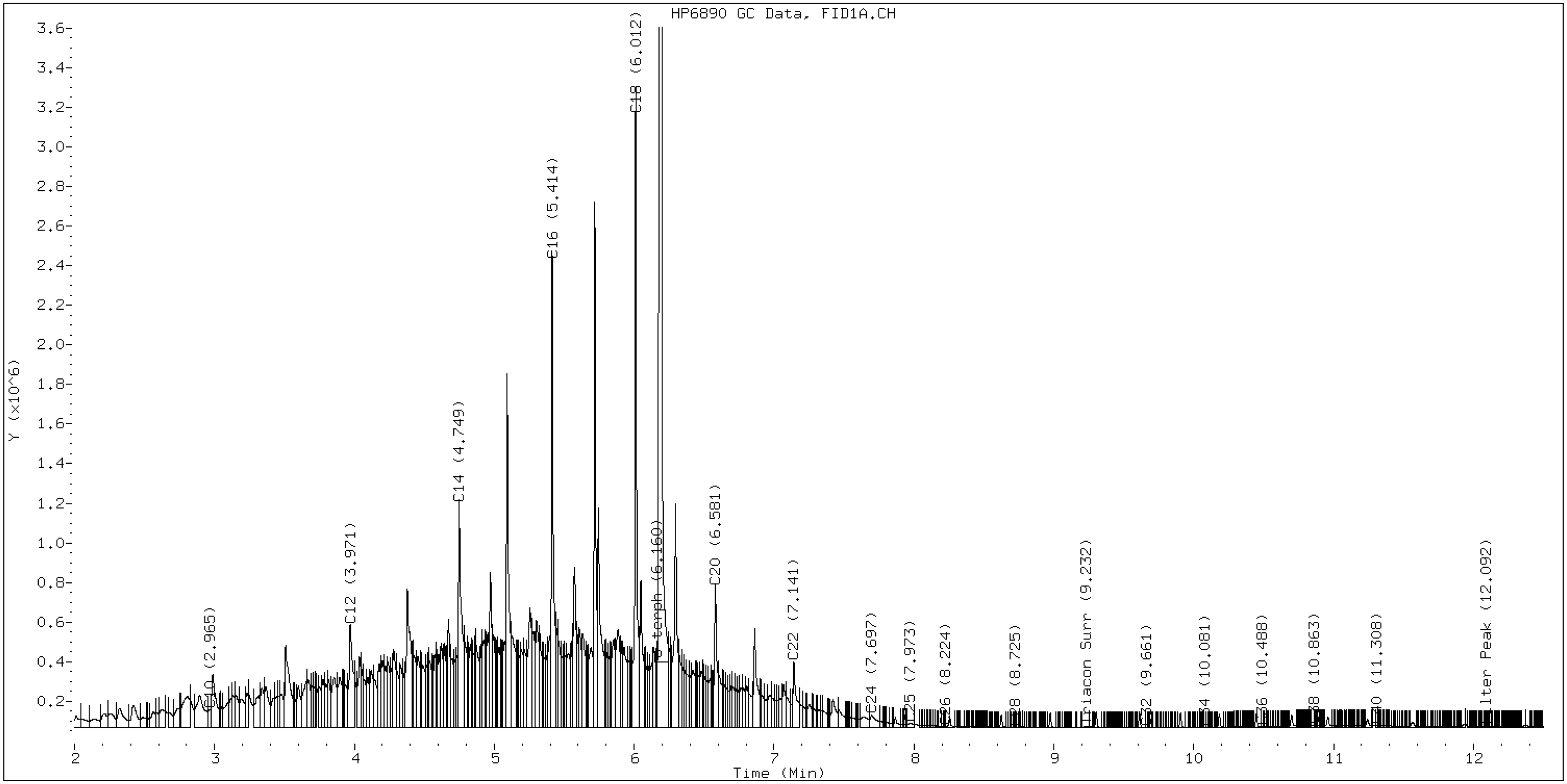
Range Times: NW Diesel(3.964 - 7.693) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.87) AK103(7.96 - 10.48) OR Diesel(2.97 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	16654300	81.4	M
Triacontane	10693	0.1	

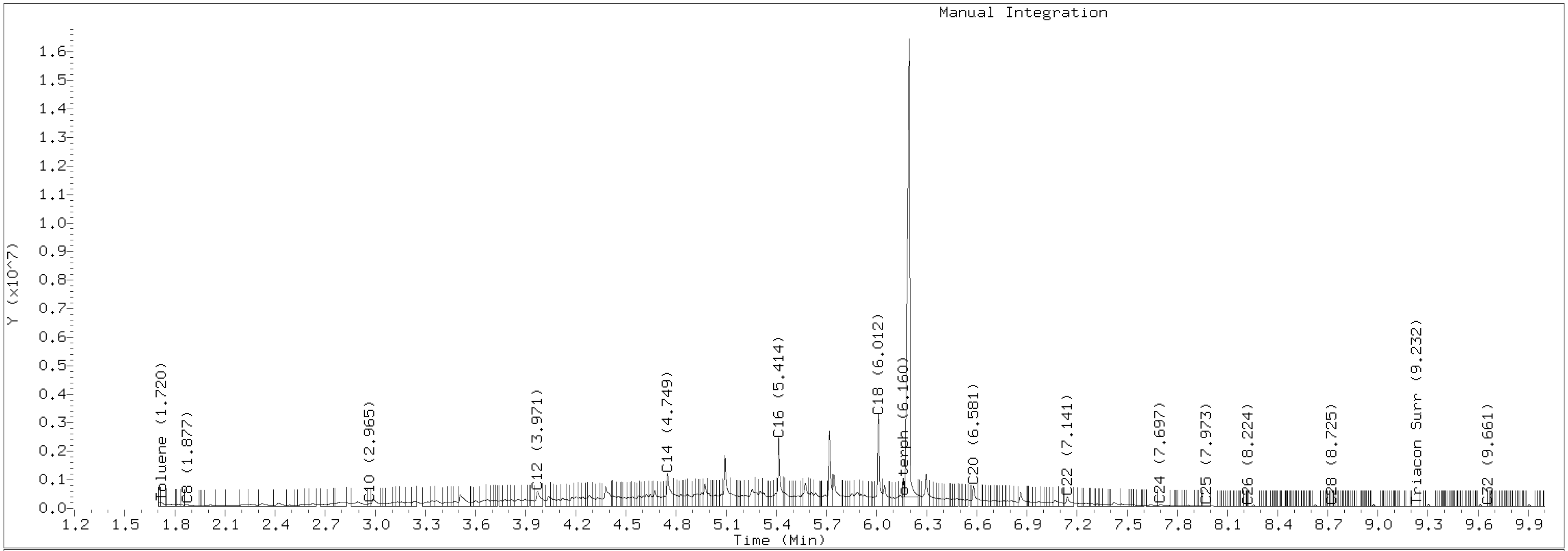
M Indicates the peak was manually integrated

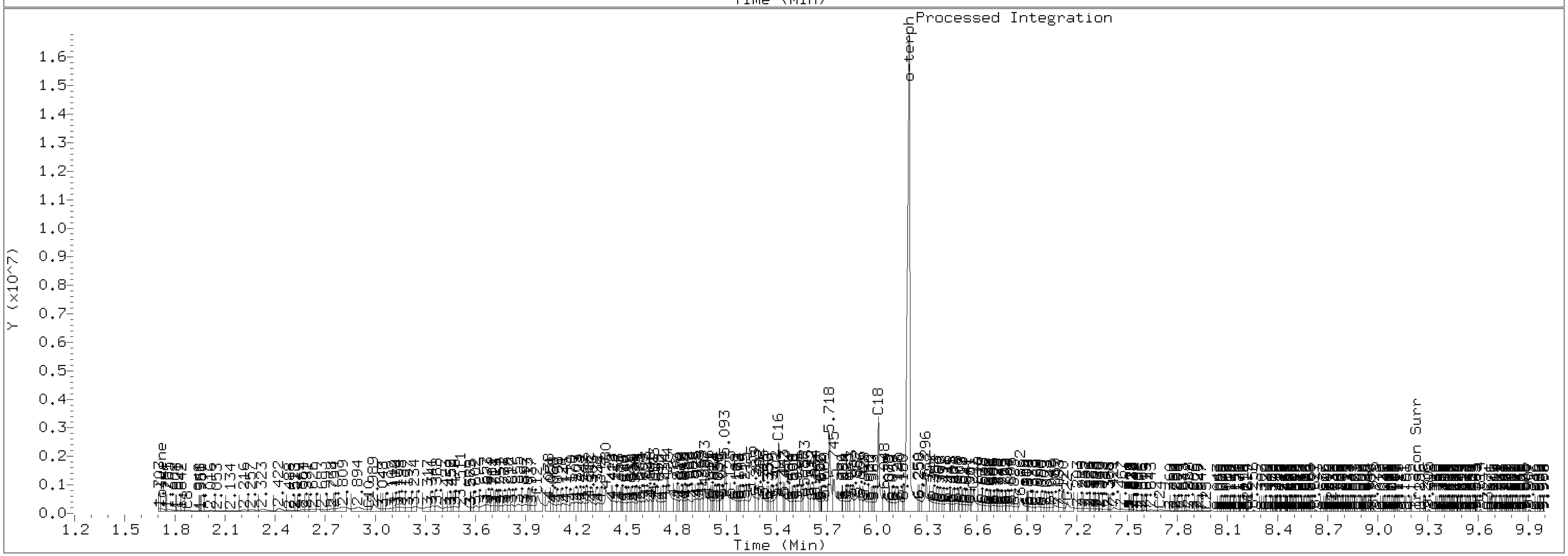
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201129.b/420K2905.D SEQ-ICV1



TPH Manual Integrations Report
Datafile: FID4A, 20201129.b/420K2905.D Injection: 29-NOV-2020 16:25
Lab ID:SEQ-ICV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420K2906.D	Calibration Date:	10/25/2019
Sequence:	SIK0411	Injection Date:	11/29/20
Lab Sample ID:	SIK0411-ICV2	Injection Time:	19:25
Sequence Name:	MOIL ICV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	959	101166.0000	96995.7400		-4.1	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201129.b\420K2906.D

Date : 29-NOV-2020 19:25

Client ID:

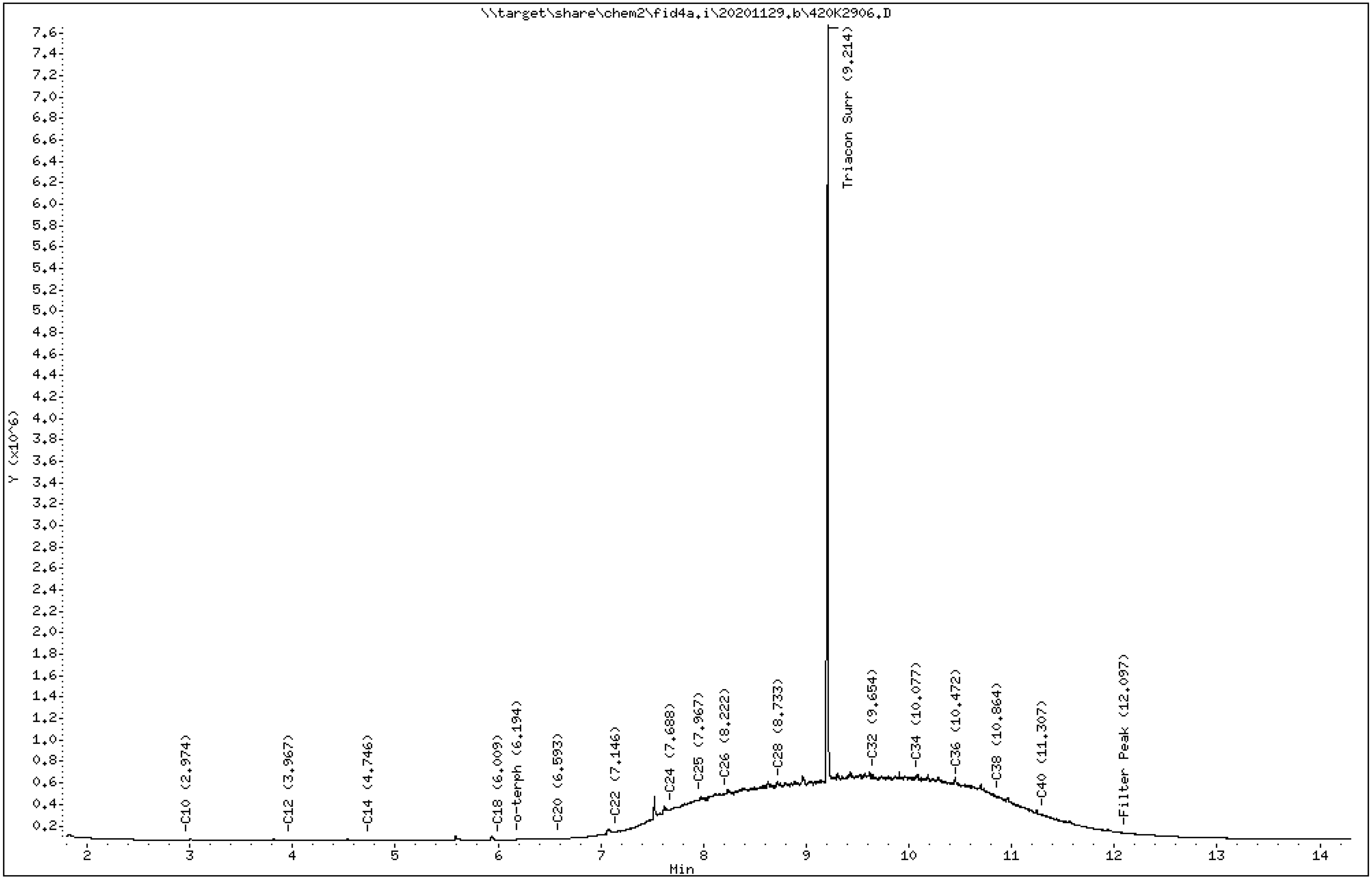
Instrument: fid4a.i

Sample Info: SEQ-ICV2

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201129.b/420K2906.D
Method: 20201129.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-ICV2
Client ID:
Injection: 29-NOV-2020 19:25
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.824	-0.047	56481	269118	WATPHD	(C12-C24)	8443152	53.0
C10	2.974	0.005	3712	3614	WATPHM	(C24-C38)	96995745	958.8
C12	3.967	0.003	1202	237	AK102	(C10-C25)	11954613	61.2
C14	4.746	-0.002	845	282	AK103	(C25-C36)	82747857	1130.3
C16	----				OR.DIES	(C10-C28)	35413186	180.7
C18	6.009	-0.003	3238	2671				
C20	6.593	0.010	17724	20684	JET-A	(C10-C18)	369533	2.2
C22	7.146	0.002	78699	15705				
C24	7.688	-0.005	296306	146422				
C25	7.967	0.006	392042	326542				
C26	8.222	-0.001	432138	64723				
C28	8.733	0.006	529289	338483				
C32	9.654	-0.001	607422	327063				
C34	10.077	-0.002	597394	267503				
Filter Peak	12.097	-0.001	69367	47658	BUNKERC	(C10-C38)	105587687	2674.6
C36	10.472	-0.010	534086	552924				
C38	10.864	-0.008	411631	162223				
C40	11.307	-0.007	239508	117282				
o-terph	6.194	-0.004	14571	31694				
Triacon Surr	9.214	-0.017	7068342	6614830	NAS DIES	(C10-C24)	8591942	44.0

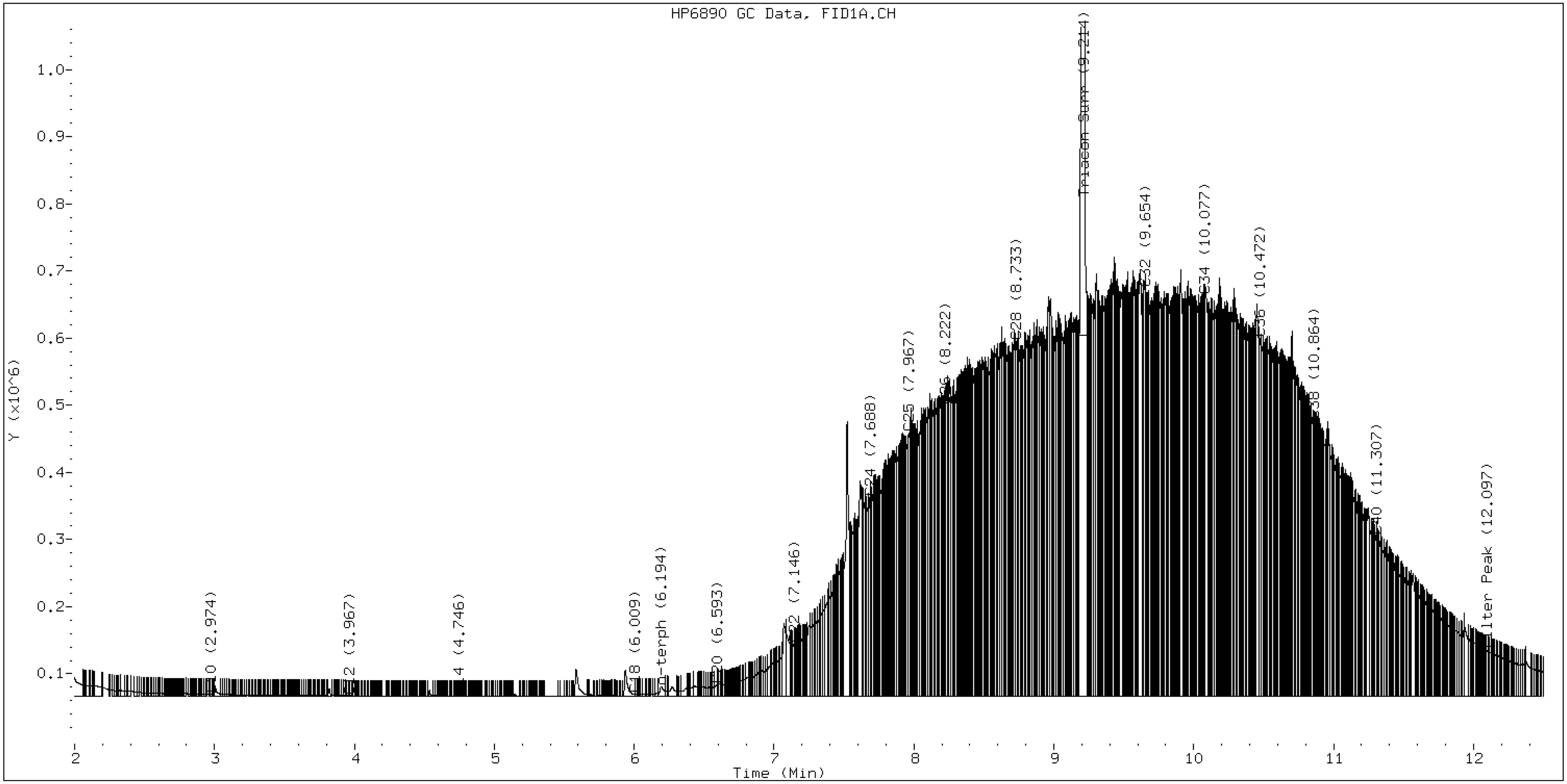
Range Times: NW Diesel(3.964 - 7.693) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.87) AK103(7.96 - 10.48) OR Diesel(2.97 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	31694	0.2	
Triacontane	6614830	44.6	M

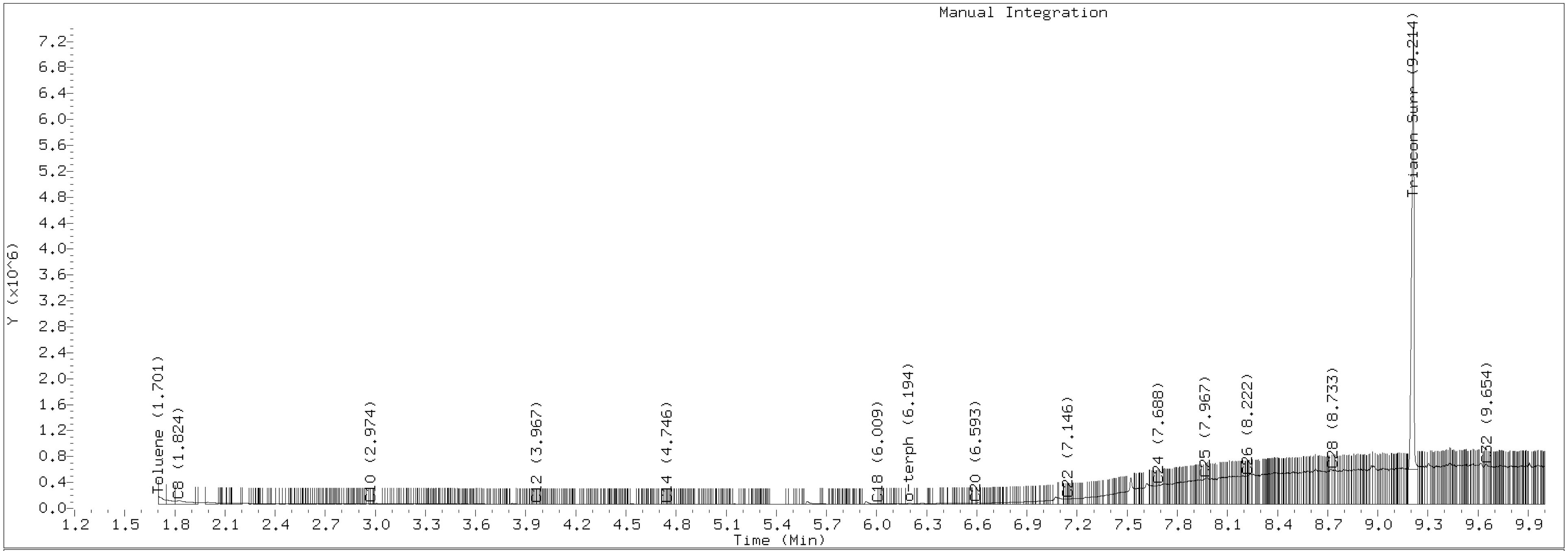
M Indicates the peak was manually integrated

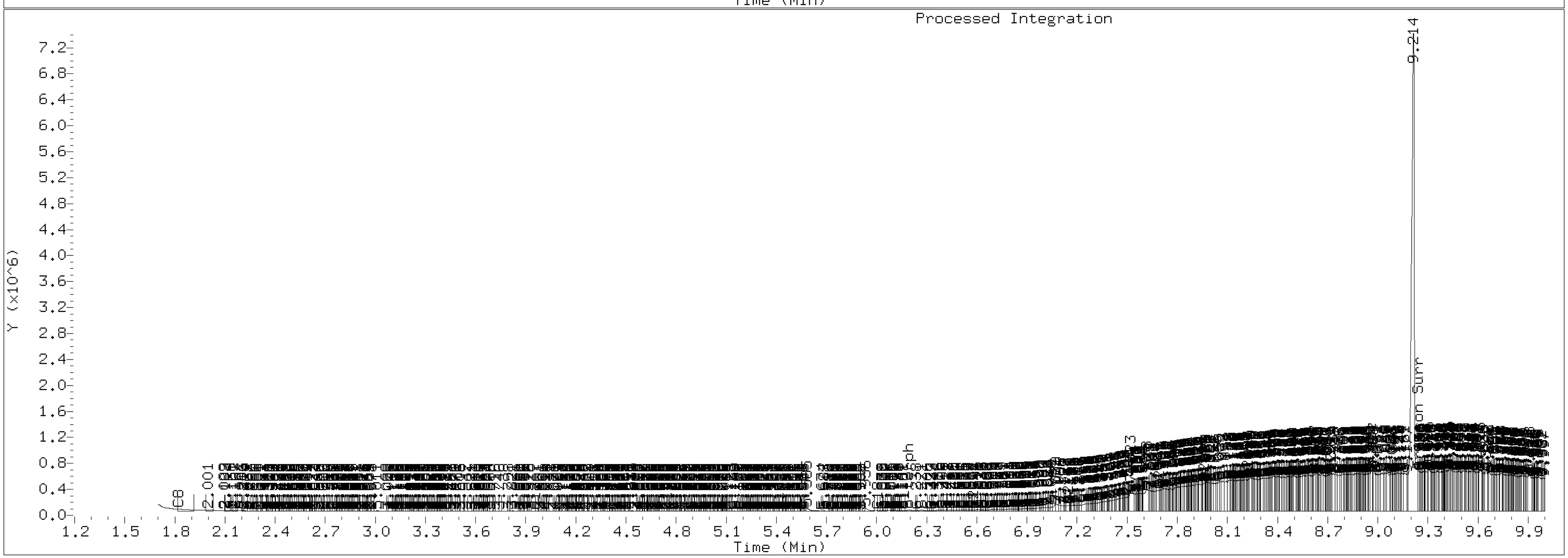
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201129.b/420K2906.D SEQ-ICV2



TPH Manual Integrations Report
Datafile: FID4A, 20201129.b/420K2906.D Injection: 29-NOV-2020 19:25
Lab ID:SEQ-ICV2





INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420K2781.D	Calibration Date:	10/25/2019
Sequence:	SIK0413	Injection Date:	11/28/20
Lab Sample ID:	SIK0413-ICV1	Injection Time:	14:18
Sequence Name:	DIESEL ICV		

		CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	550	159336.7000	175407.6000		10.1	+/-15
o-Terphenyl	A	90.000	98.9	204701.9000	225020.0000		9.9	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201128.b\420K2781.D

Date : 28-NOV-2020 14:18

Client ID:

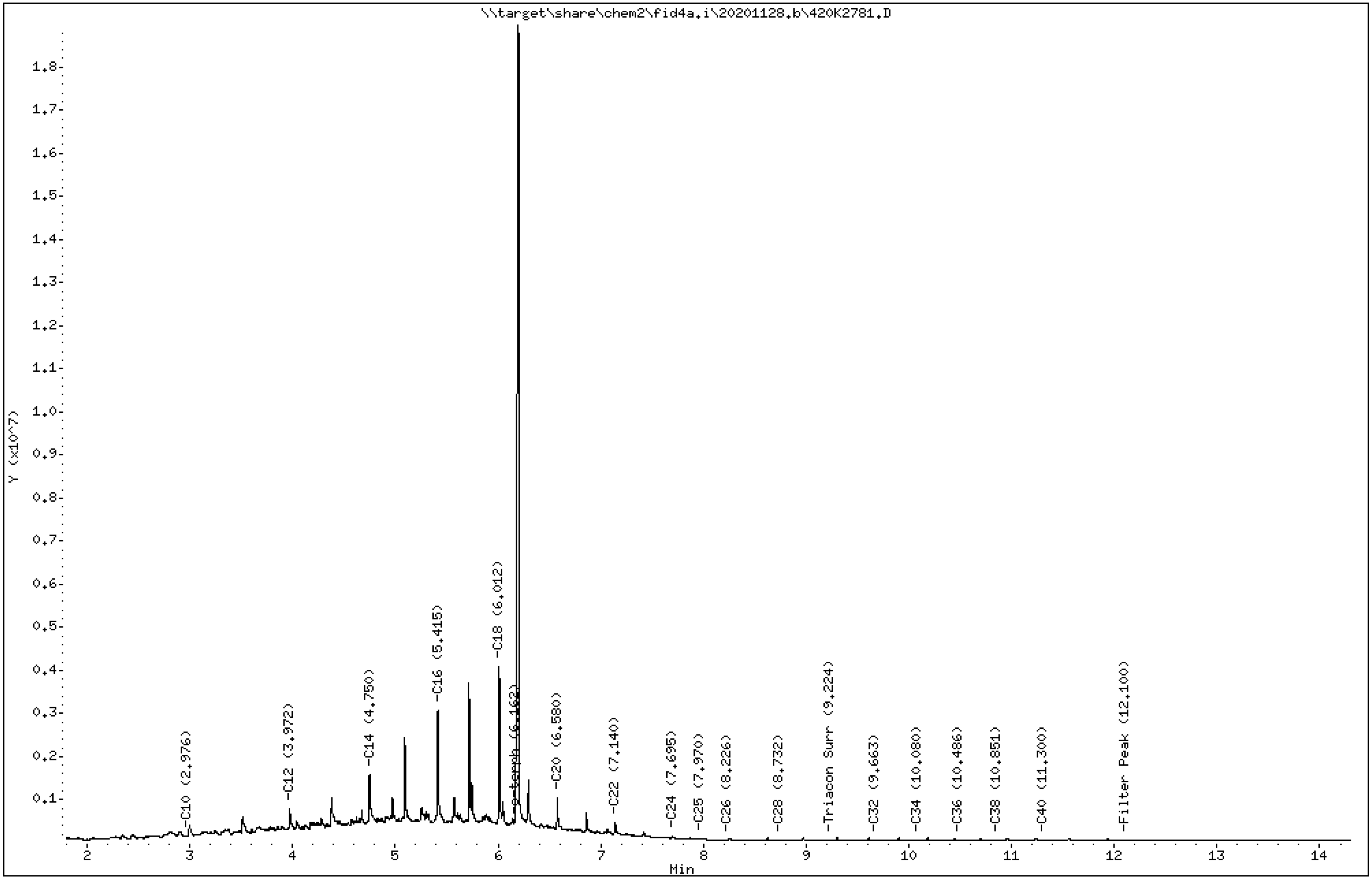
Instrument: fid4a.i

Sample Info: SEQ-CCVB

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201128.b/420K2781.D
Method: 20201128.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCVB
Client ID:
Injection: 28-NOV-2020 14:18
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.920	0.011	53186	87154	WATPHD	(C12-C24)	87703796	550.4
C10	2.976	-0.005	110625	125361	WATPHM	(C24-C38)	1369350	13.5
C12	3.972	0.005	731055	1141496	AK102	(C10-C25)	102380674	523.7
C14	4.750	0.001	1534596	2058567	AK103	(C25-C36)	877494	12.0
C16	5.415	0.000	3024406	3519706	OR.DIES	(C10-C28)	102829584	524.6
C18	6.012	-0.001	4024123	3584907				
C20	6.580	-0.004	997930	1209249	JET-A	(C10-C18)	78944185	476.0
C22	7.140	-0.005	424616	586569				
C24	7.695	0.001	79848	229228				
C25	7.970	0.008	27233	80566				
C26	8.226	0.002	10222	6025				
C28	8.732	0.005	2201	1296				
C32	9.663	0.008	937	917				
C34	10.080	0.001	2615	641				
Filter Peak	12.100	-0.000	12335	3077	BUNKERC	(C10-C38)	103455040	2620.6
C36	10.486	0.008	6298	1253				
C38	10.851	-0.012	9796	7748				
C40	11.300	-0.003	11373	7336				
o-terph	6.199	-0.001	18472905	20251801				
Triacon Surr	9.224	-0.008	7749	21838	NAS DIES	(C10-C24)	102085690	523.1

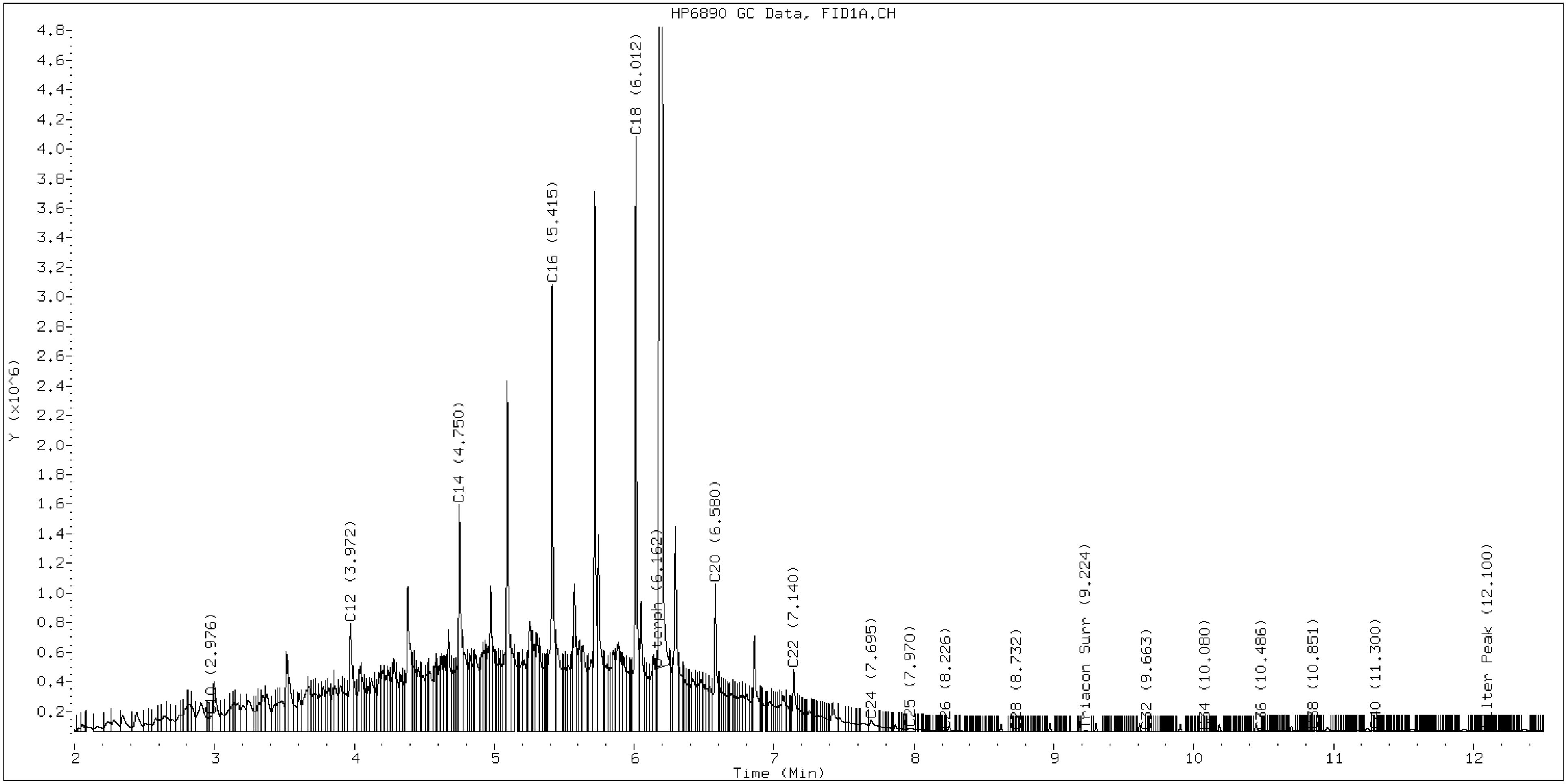
Range Times: NW Diesel(3.967 - 7.693) AK102(2.98 - 7.96) Jet A(2.98 - 6.01)
NW M.Oil(7.69 - 10.86) AK103(7.96 - 10.48) OR Diesel(2.98 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	20251801	98.9	M
Triacontane	21838	0.1	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

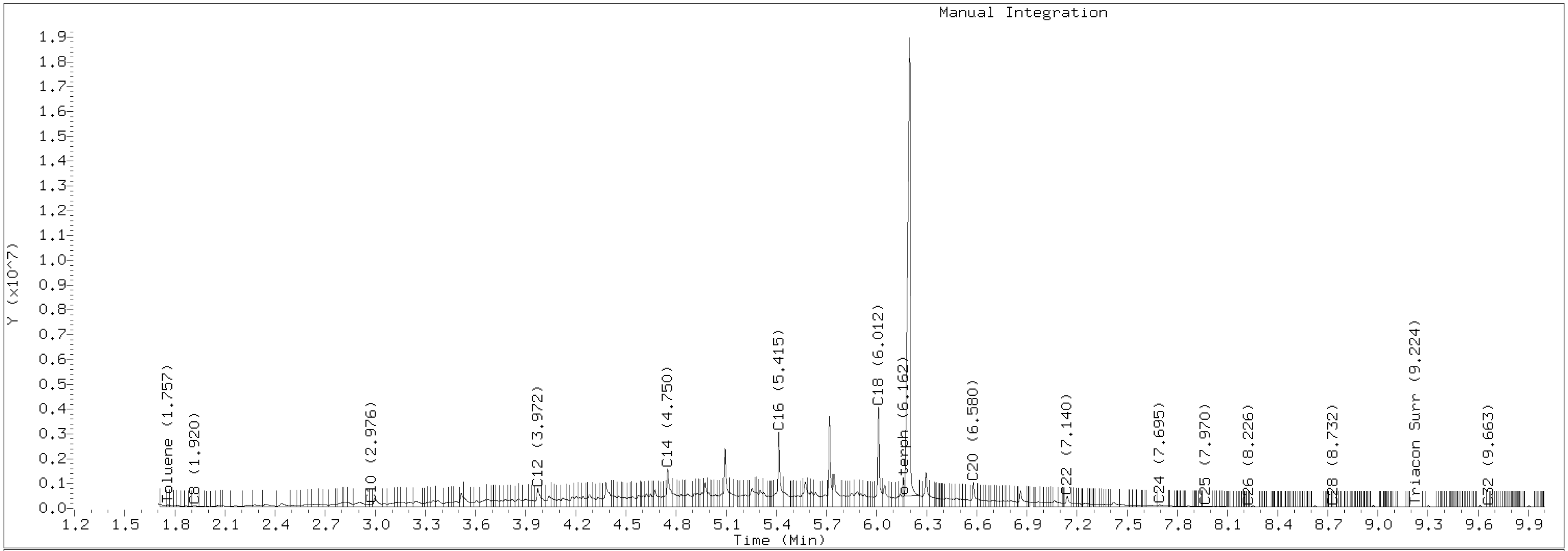
Datafile: FID4A, 20201128.b/420K2781.D SEQ-CCVB

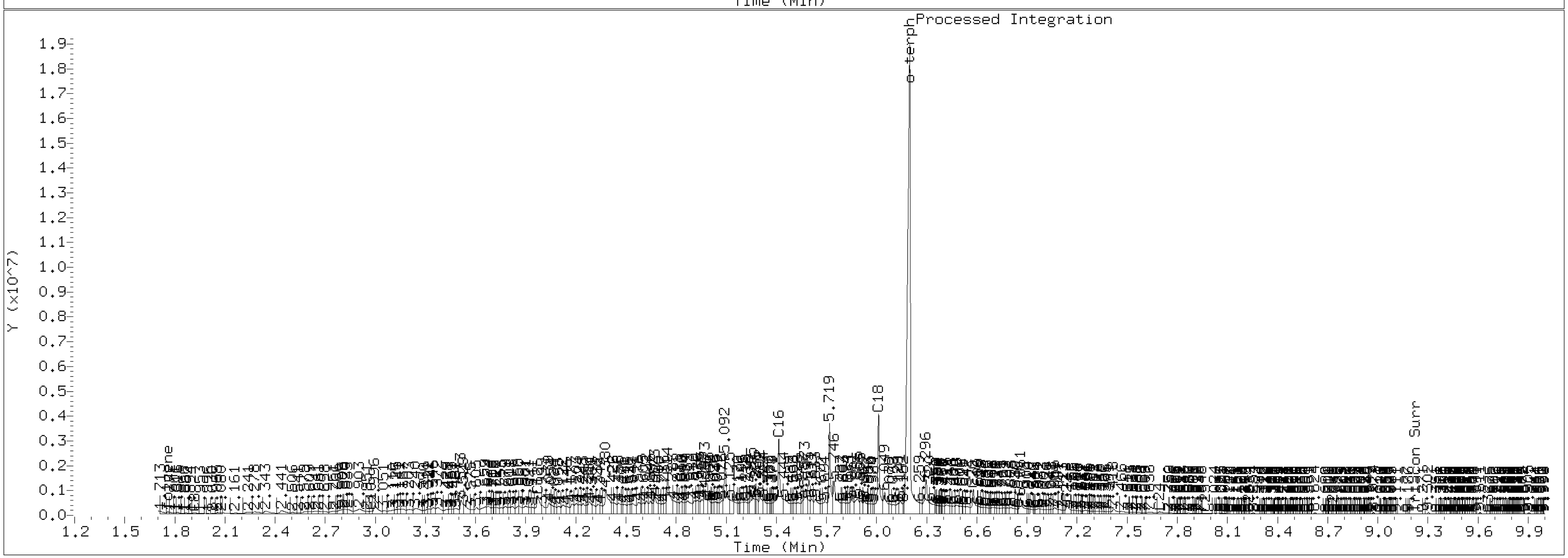


TPH Manual Integrations Report

Datafile: FID4A, 20201128.b/420K2781.D Injection: 28-NOV-2020 14:18

Lab ID:SEQ-CCVB





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420K2782.D	Calibration Date:	10/25/2019
Sequence:	SIK0413	Injection Date:	11/28/20
Lab Sample ID:	SIK0413-ICV2	Injection Time:	14:38
Sequence Name:	MOIL ICV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1040	101166.0000	104950.7000		3.7	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201128.b\420K2782.D

Date : 28-NOV-2020 14:38

Client ID:

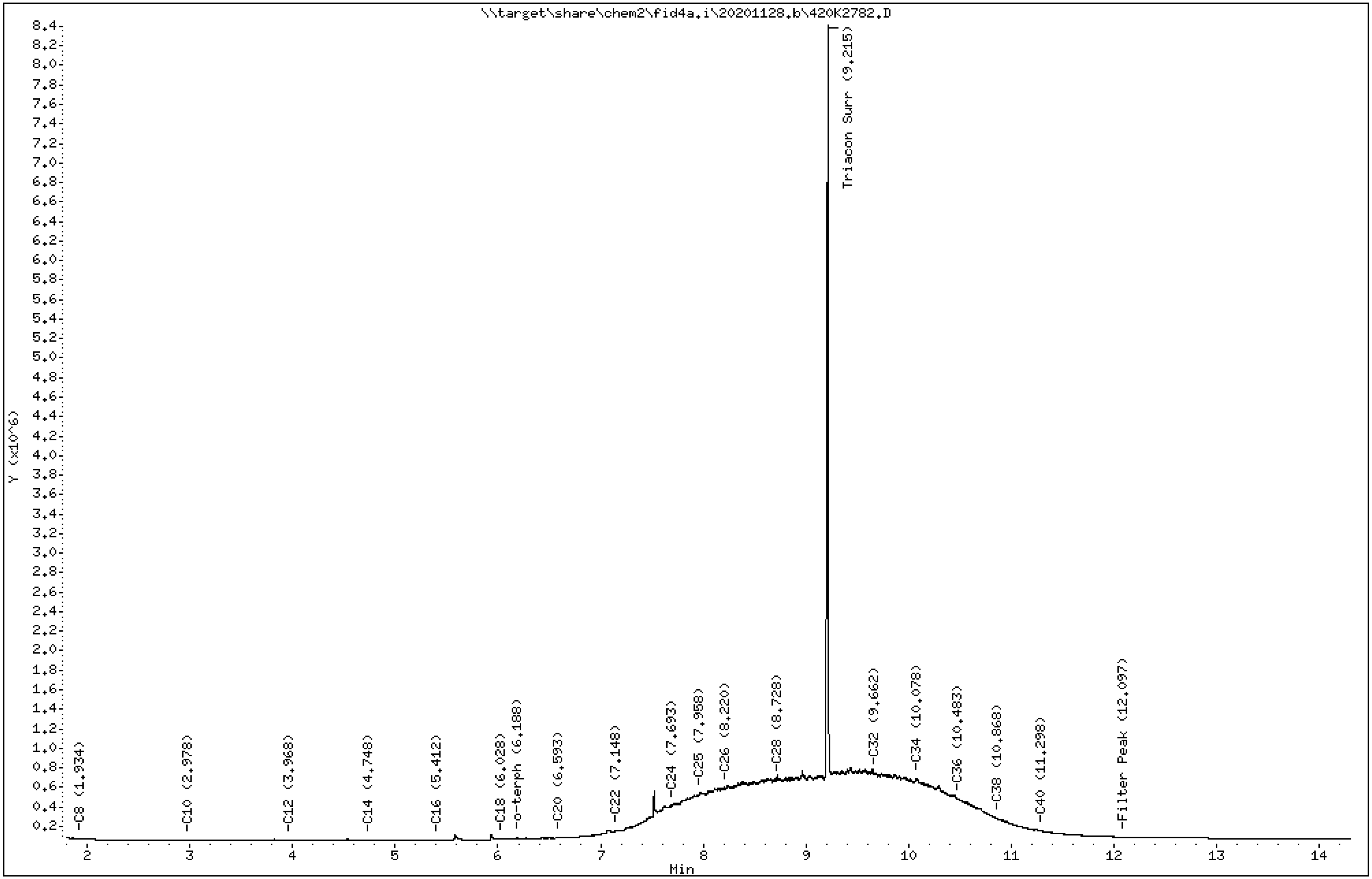
Instrument: fid4a.i

Sample Info: SEQ-CCVC

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201128.b/420K2782.D
Method: 20201128.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCVC
Client ID:
Injection: 28-NOV-2020 14:38
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.934	0.026	11682	4066	WATPHD	(C12-C24)	10660855	66.9
C10	2.978	-0.002	873	493	WATPHM	(C24-C38)	104950736	1037.4
C12	3.968	0.002	2120	821	AK102	(C10-C25)	14960802	76.5
C14	4.748	-0.001	3891	1153	AK103	(C25-C36)	94191367	1286.7
C16	5.412	-0.002	3793	1497	OR.DIES	(C10-C28)	43629119	222.6
C18	6.028	0.015	8259	8341				
C20	6.593	0.009	27603	50811	JET-A	(C10-C18)	700121	4.2
C22	7.148	0.003	97267	140140				
C24	7.693	0.000	355062	88673				
C25	7.958	-0.004	469721	163433				
C26	8.220	-0.003	536684	213931				
C28	8.728	0.001	620674	93056				
C32	9.662	0.007	685792	170681				
C34	10.078	-0.001	629663	156834				
Filter Peak	12.097	-0.003	31860	18932	BUNKERC	(C10-C38)	115708786	2931.0
C36	10.483	0.005	425398	273208				
C38	10.868	0.004	219315	172804				
C40	11.298	-0.005	92400	55036				
o-terph	6.188	-0.012	22873	57614				
Triacon Surr	9.215	-0.017	7670873	7869894	NAS DIES	(C10-C24)	10758050	55.1

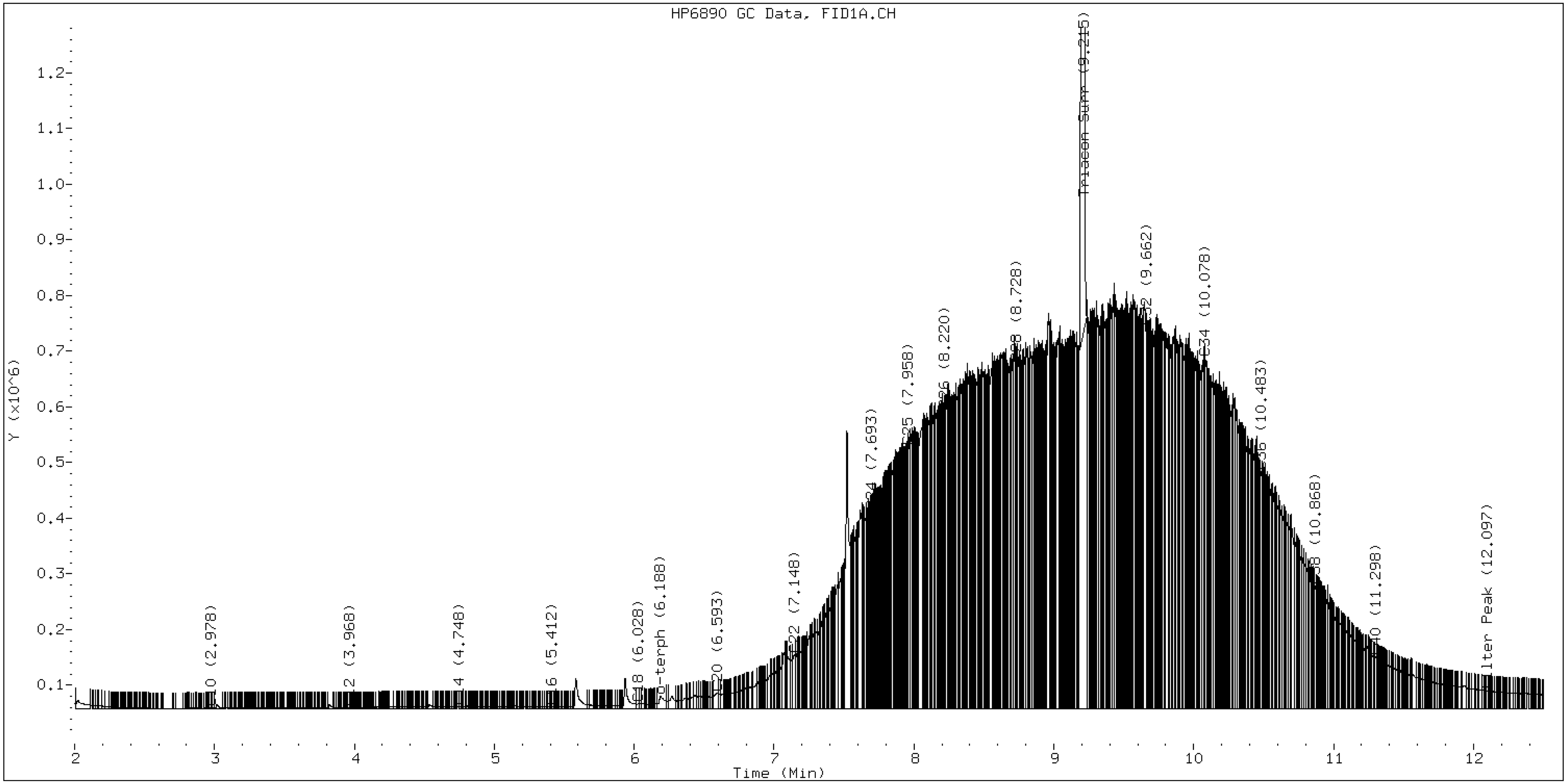
Range Times: NW Diesel(3.967 - 7.693) AK102(2.98 - 7.96) Jet A(2.98 - 6.01)
NW M.Oil(7.69 - 10.86) AK103(7.96 - 10.48) OR Diesel(2.98 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	57614	0.3	
Triacontane	7869894	53.0	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

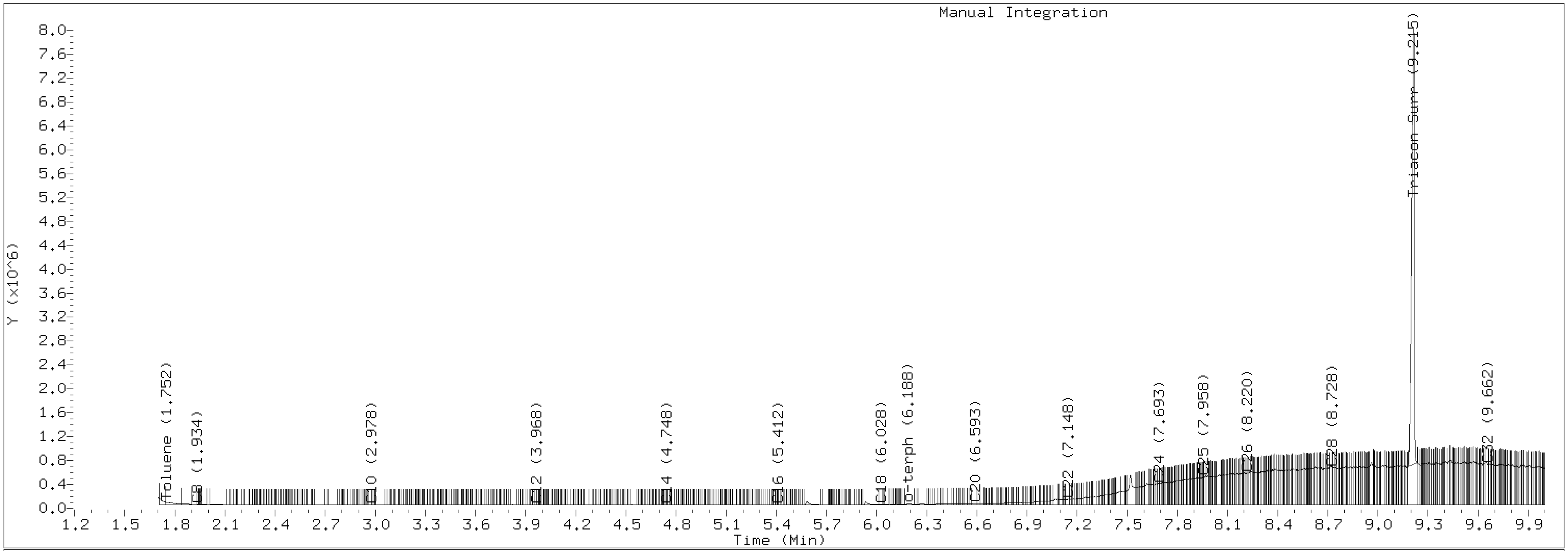
Datafile: FID4A, 20201128.b/420K2782.D   SEQ-CCVC

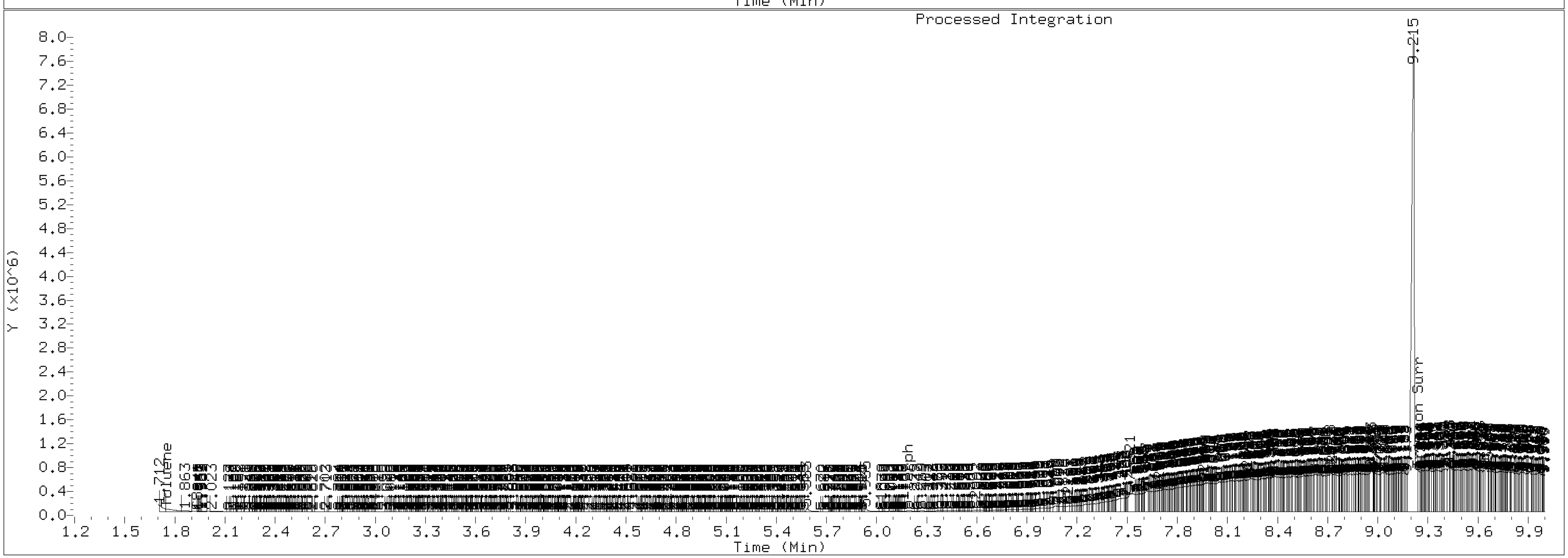


TPH Manual Integrations Report

Datafile: FID4A, 20201128.b/420K2782.D Injection: 28-NOV-2020 14:38

Lab ID:SEQ-CCVC





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420L0216.D
Calibration Date: 10/25/2019
Sequence: SIL0020
Injection Date: 12/02/20
Lab Sample ID: SIL0020-ICV1
Injection Time: 14:04
Sequence Name: DIESEL ICV

		CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	467	159336.7000	148777.3000		-6.6	+/-15
o-Terphenyl	A	90.000	83.3	204701.9000	189440.9000		-7.4	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0216.D

Date : 02-DEC-2020 14:04

Client ID:

Sample Info: SIL0020-ICV1

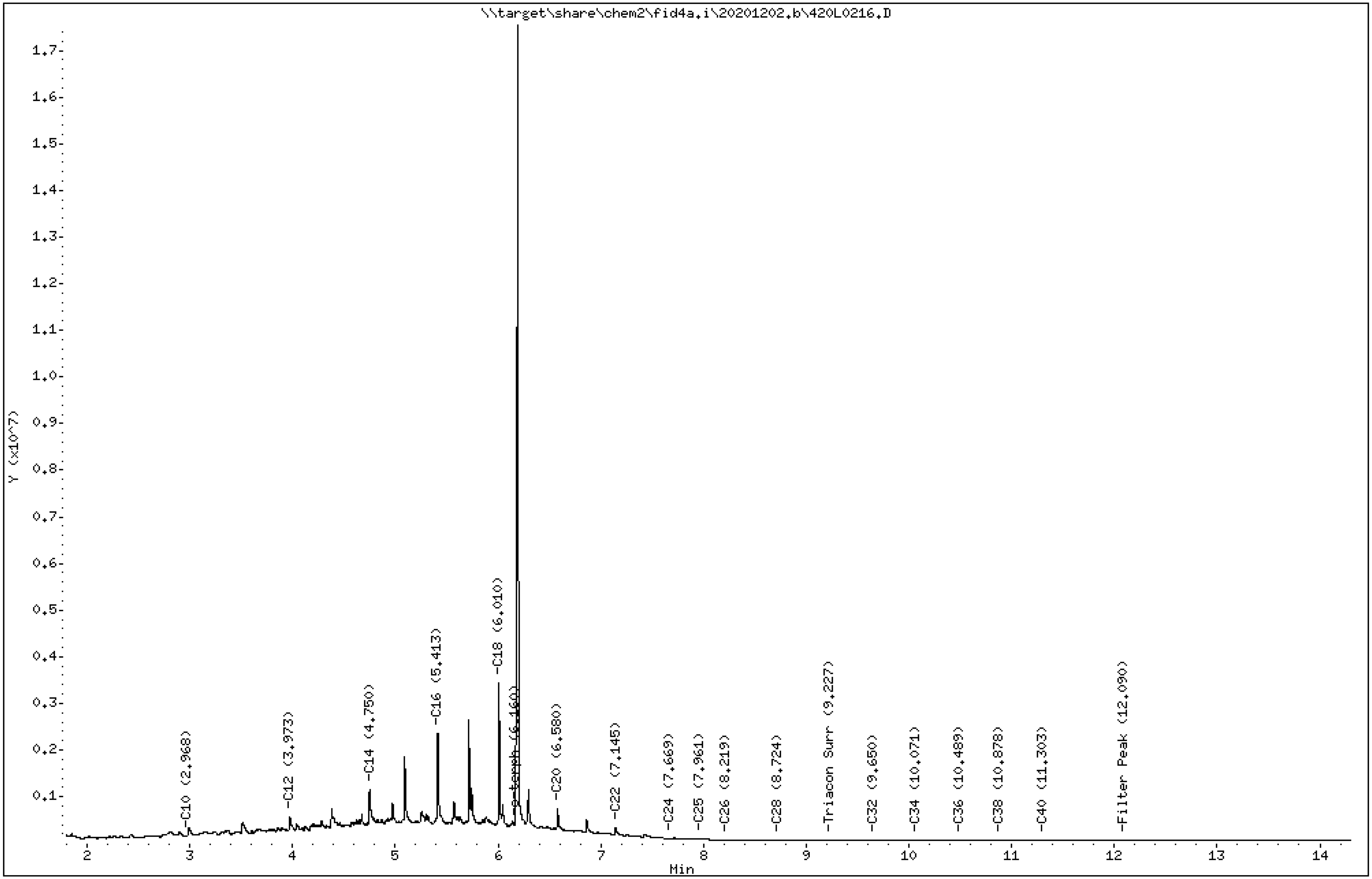
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: JGR/CTO/VTS

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0216.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIL0020-ICV1
Client ID:
Injection: 02-DEC-2020 14:04
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.873	-0.009	93887	294491	WATPHD	(C12-C24)	74388629	466.9
C10	2.968	-0.006	99752	116582	WATPHM	(C24-C38)	827622	8.2
C12	3.973	0.007	494514	1251722	AK102	(C10-C25)	86569119	442.8
C14	4.750	0.002	1078886	1741680	AK103	(C25-C36)	517562	7.1
C16	5.413	0.001	2296926	3276349	OR.DIES	(C10-C28)	86929286	443.5
C18	6.010	-0.000	3383423	2994052				
C20	6.580	-0.000	686467	990812	JET-A	(C10-C18)	66869372	403.2
C22	7.145	0.003	270905	747757				
C24	7.669	-0.021	37917	38613				
C25	7.961	0.002	16753	8350				
C26	8.219	0.001	8719	2592				
C28	8.724	0.002	2391	2104				
C32	9.650	0.003	514	233				
C34	10.071	0.002	973	280				
Filter Peak	12.090	-0.006	6918	5118	BUNKERC	(C10-C38)	87195801	2208.8
C36	10.489	0.015	3342	1298				
C38	10.878	0.003	5525	2466				
C40	11.303	-0.000	7003	2448				
o-terph	6.195	-0.001	17118807	17049681				
Triacon Surr	9.227	0.004	309	221	NAS DIES	(C10-C24)	86368179	442.6

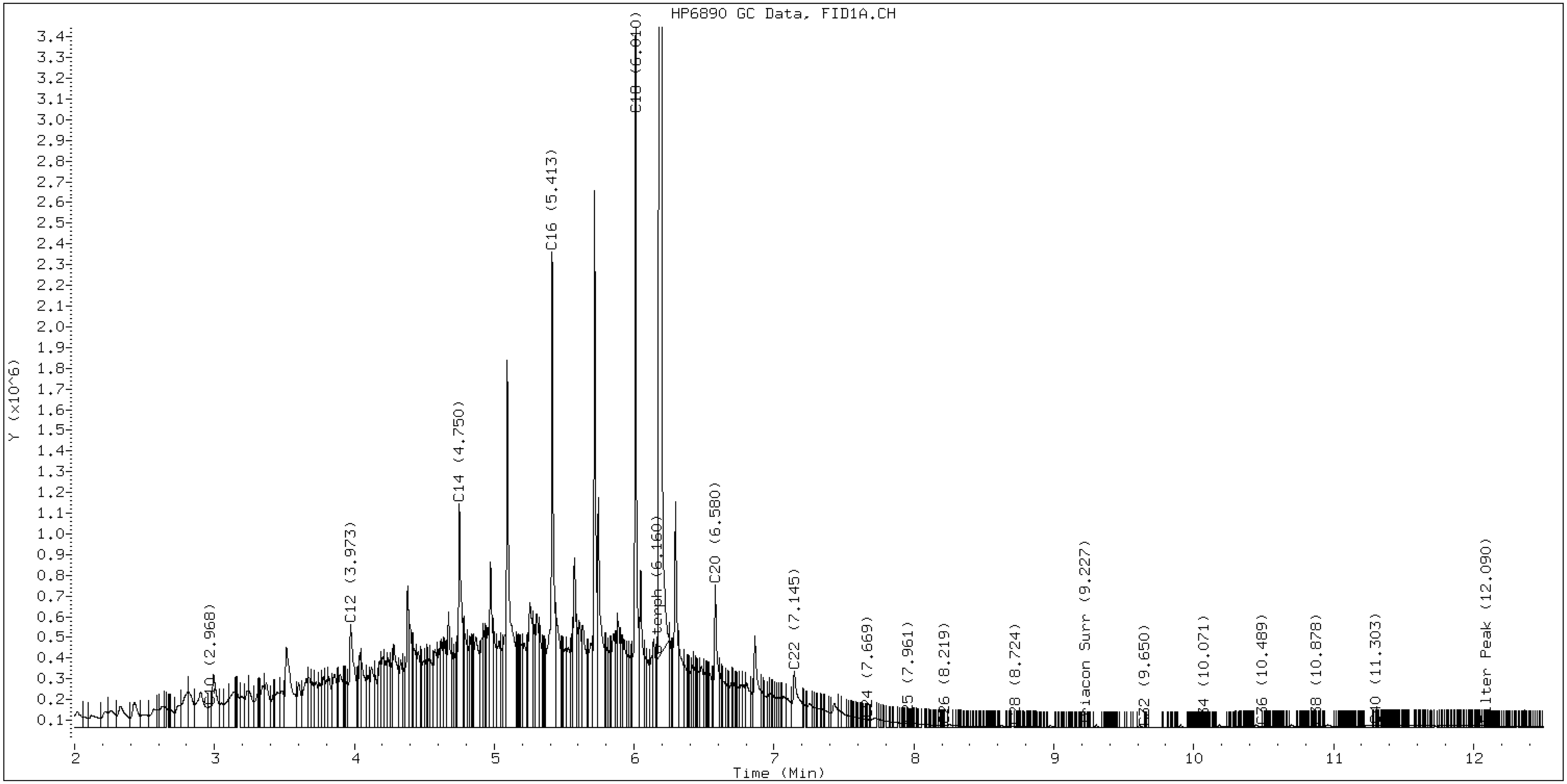
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	17049681	83.3	M
Triacontane	221	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

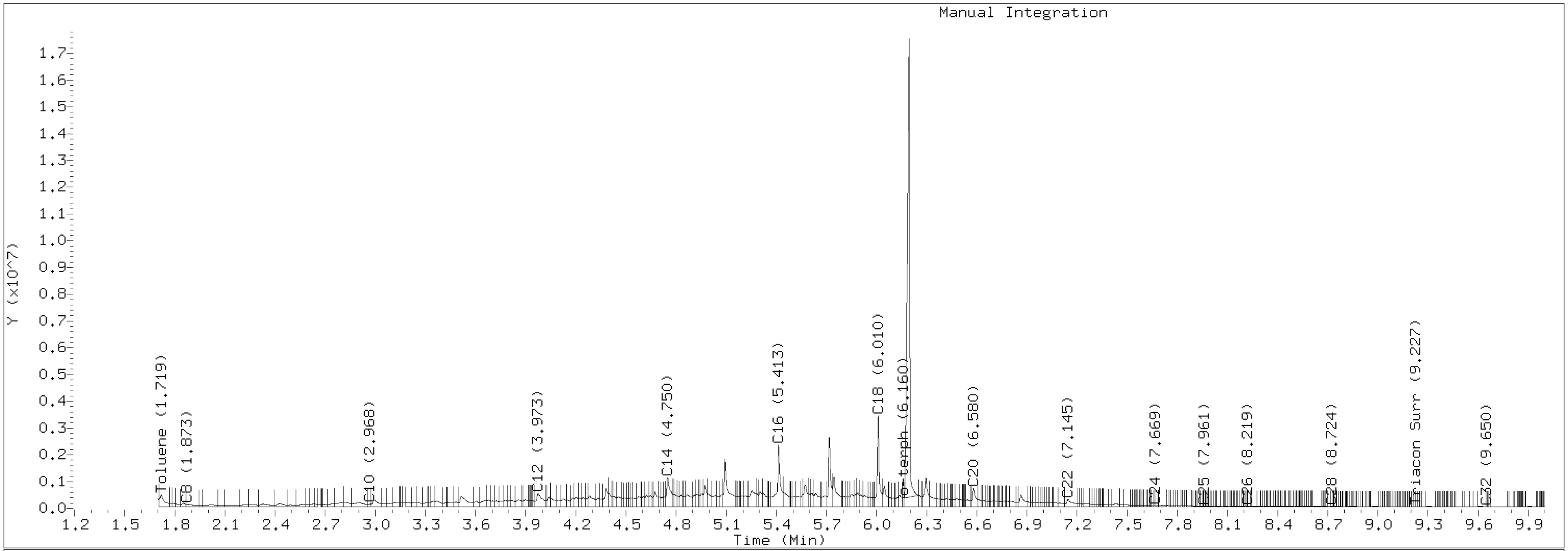
Datafile: FID4A, 20201202.b/420L0216.D   SIL0020-ICV1

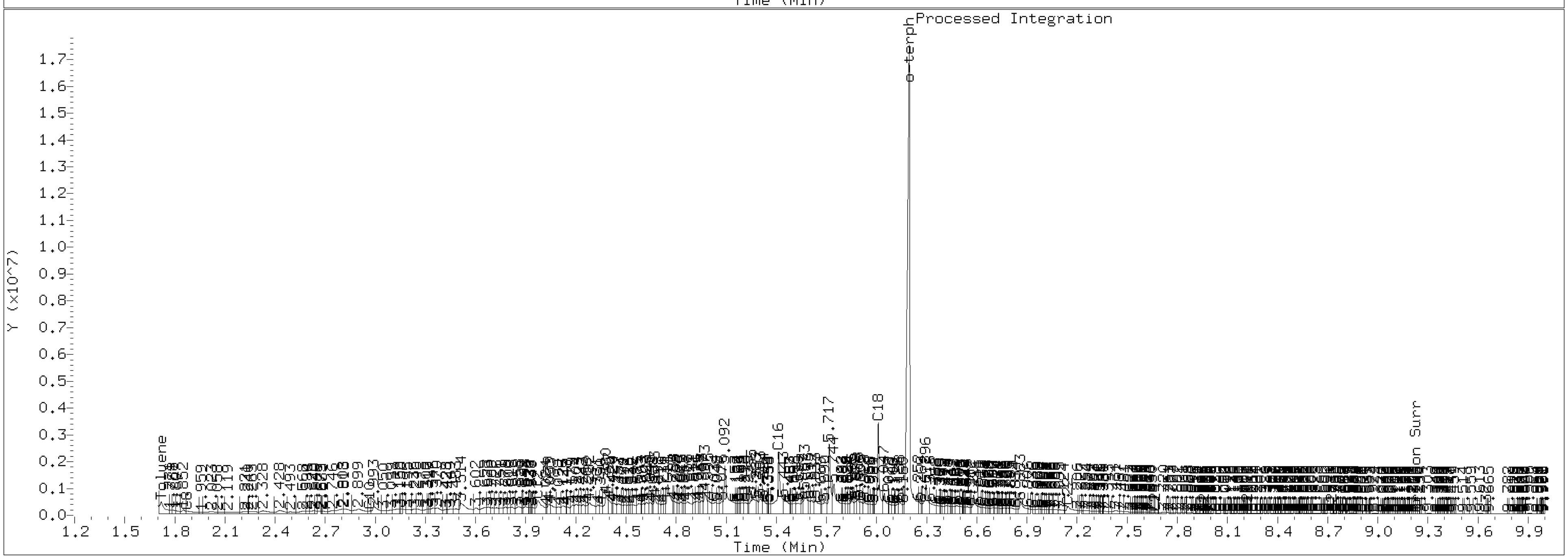


TPH Manual Integrations Report

Datafile: FID4A, 20201202.b/420L0216.D Injection: 02-DEC-2020 14:04

Lab ID:SIL0020-ICV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420L0217.D	Calibration Date:	10/25/2019
Sequence:	SIL0020	Injection Date:	12/02/20
Lab Sample ID:	SIL0020-ICV2	Injection Time:	14:24
Sequence Name:	MOIL ICV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1090	101166.0000	110405.0000		9.1	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0217.D

Page 1

Date : 02-DEC-2020 14:24

Client ID:

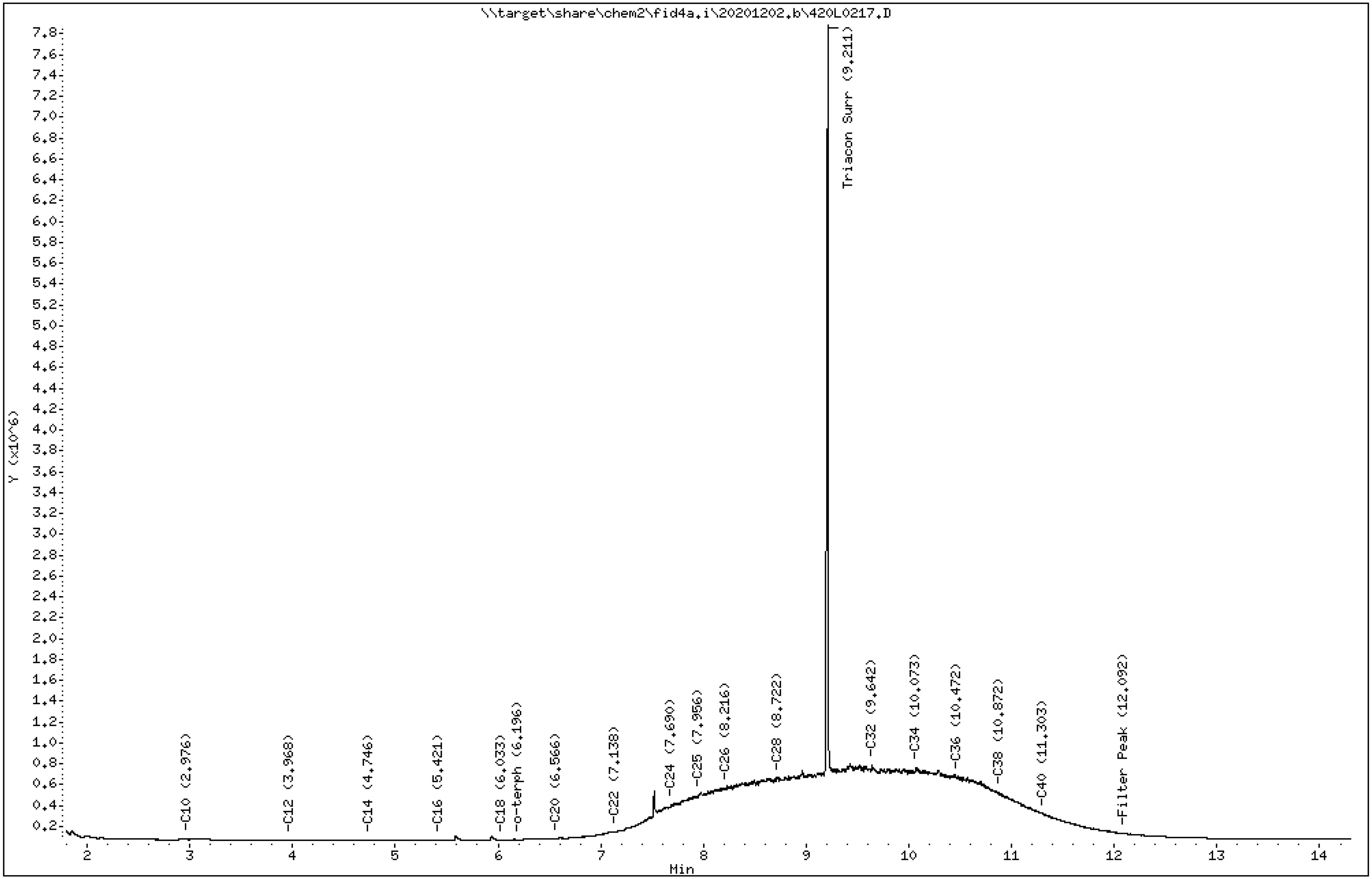
Instrument: fid4a.i

Sample Info: SIL0020-ICV2

Operator: JGR/CTO/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0217.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIL0020-ICV2
Client ID:
Injection: 02-DEC-2020 14:24
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.853	-0.029	98157	373535	WATPHD	(C12-C24)	9529607	59.8
C10	2.976	0.002	6757	6016	WATPHM	(C24-C38)	110405035	1091.3
C12	3.968	0.002	2609	1989	AK102	(C10-C25)	13484625	69.0
C14	4.746	-0.003	1695	815	AK103	(C25-C36)	94140627	1286.0
C16	5.421	0.009	326	116	OR.DIES	(C10-C28)	40275398	205.5
C18	6.033	0.023	3575	4714				
C20	6.566	-0.014	16059	15650	JET-A	(C10-C18)	566937	3.4
C22	7.138	-0.004	79872	35469				
C24	7.690	-0.000	334903	295641				
C25	7.956	-0.003	435490	129992				
C26	8.216	-0.002	493956	147231				
C28	8.722	-0.000	596152	148411				
C32	9.642	-0.005	715689	966677				
C34	10.073	0.005	692061	511594				
Filter Peak	12.092	-0.004	64278	38036	BUNKERC	(C10-C38)	120206486	3045.0
C36	10.472	-0.002	598260	178167				
C38	10.872	-0.003	460616	291814				
C40	11.303	0.000	254906	100982				
o-terph	6.196	-0.000	5576	2493				
Triacon Surr	9.211	-0.011	7162645	7311677	NAS DIES	(C10-C24)	9801452	50.2

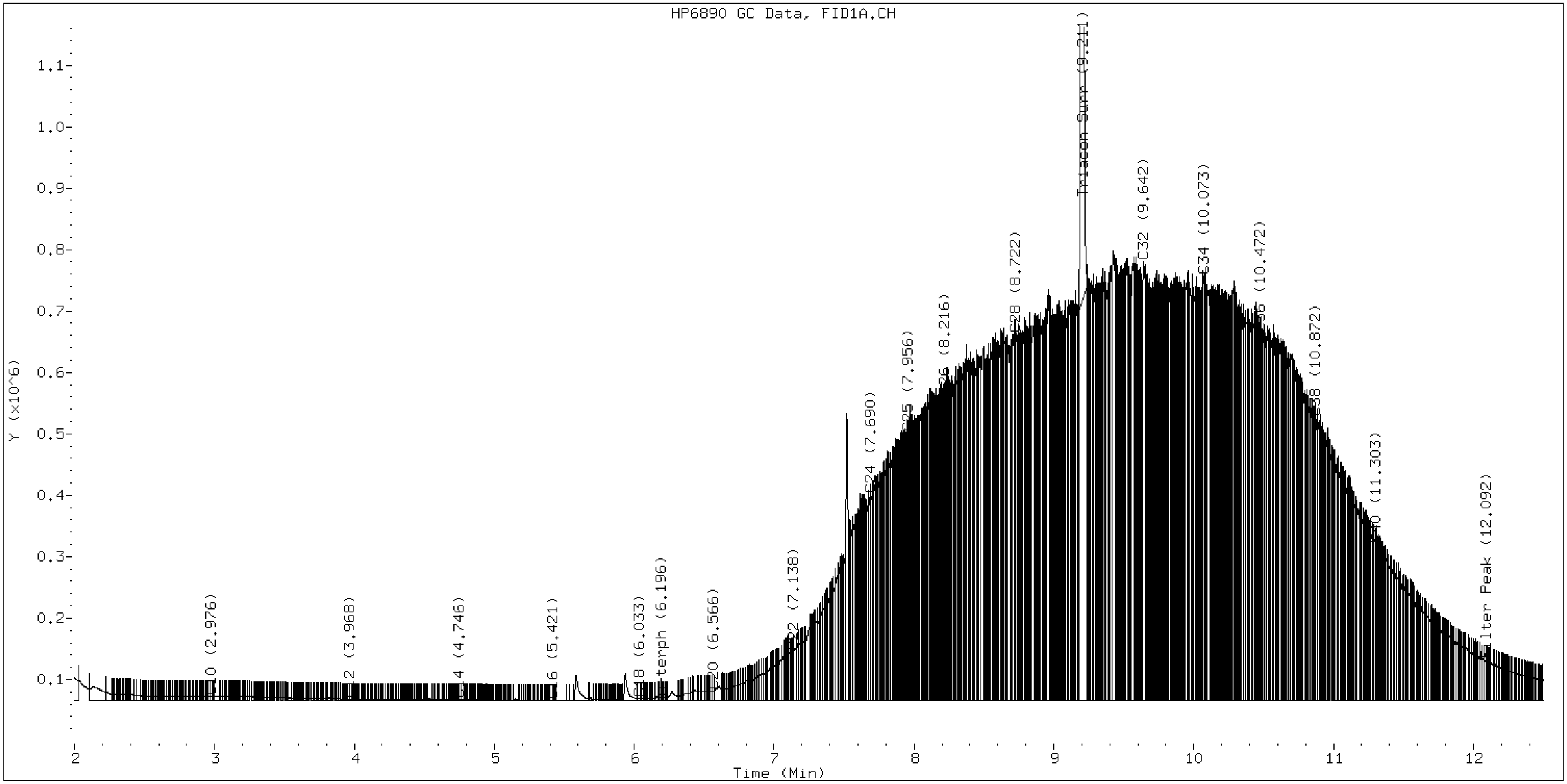
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	2493	0.0	
Triacontane	7311677	49.3	M

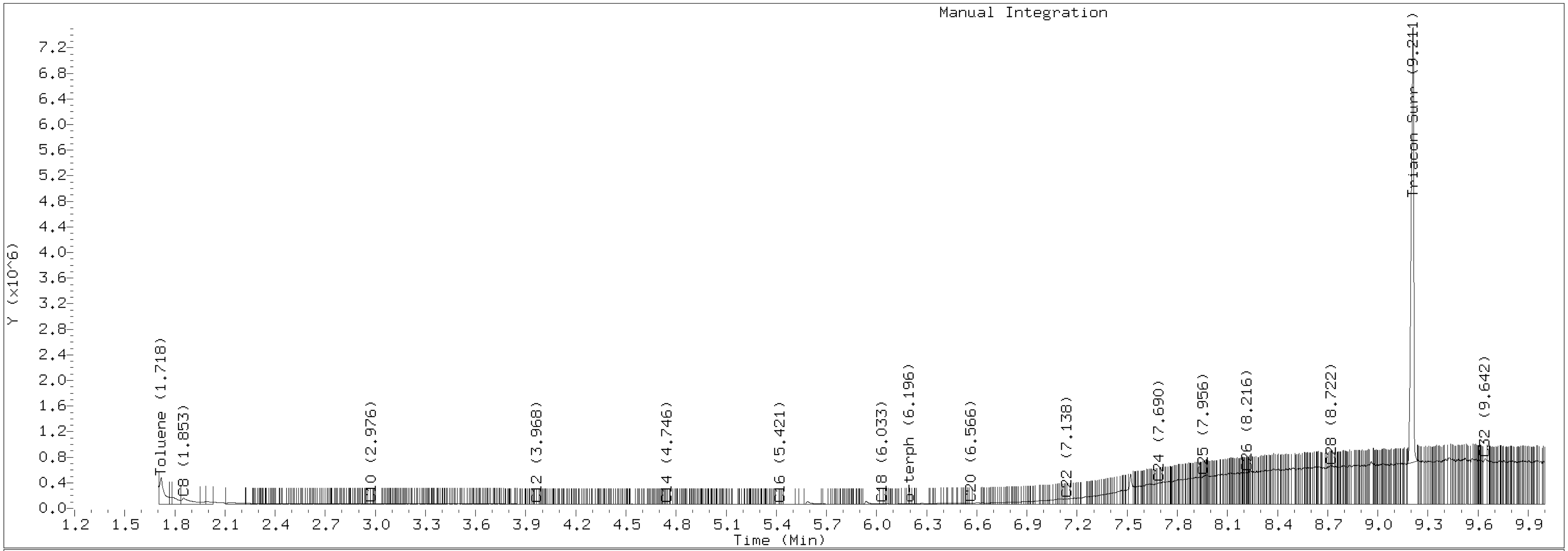
M Indicates the peak was manually integrated

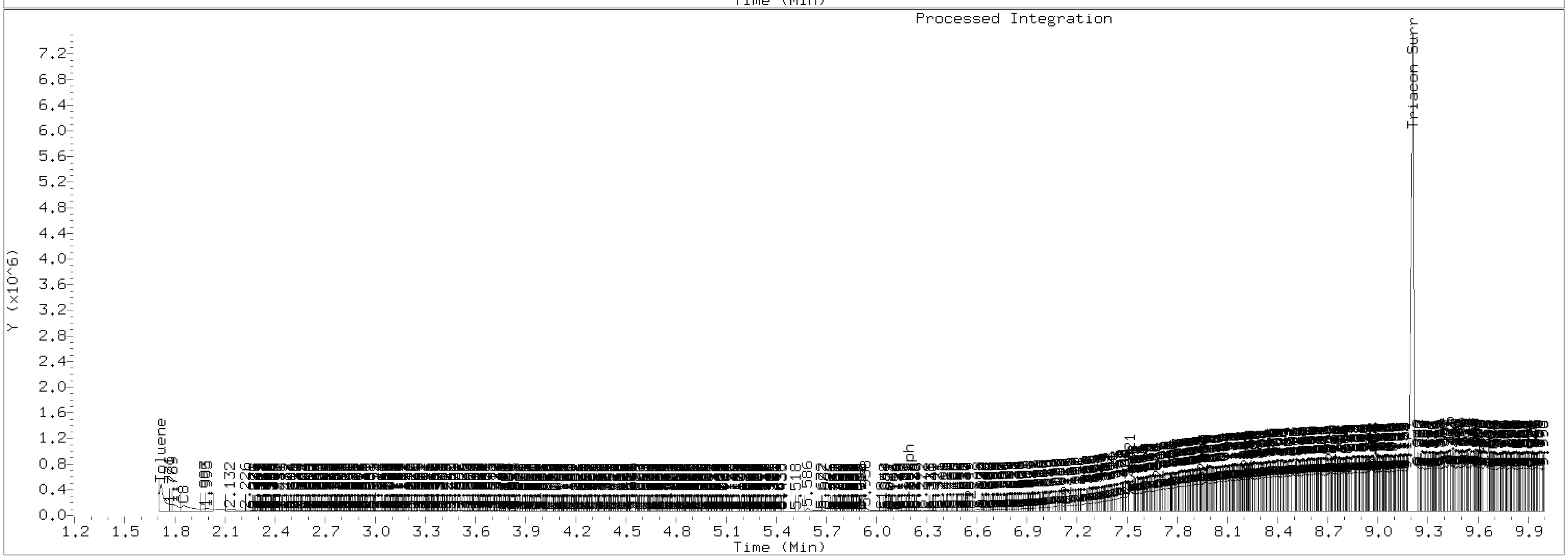
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201202.b/420L0217.D SIL0020-ICV2



TPH Manual Integrations Report
Datafile: FID4A, 20201202.b/420L0217.D Injection: 02-DEC-2020 14:24
Lab ID:SIL0020-ICV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420H1413.D	Calibration Date:	10/25/2019
Sequence:	SIH0165	Injection Date:	08/14/20
Lab Sample ID:	SIH0165-CCV1	Injection Time:	11:59
Sequence Name:	DIESEL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	481	159336.7	153209.9		-3.8	+/-15
o-Terphenyl	A	90.000	79.3	204701.9	180393.1		-11.9	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20200814.b\420H1413.D

Date : 14-AUG-2020 11:59

Client ID:

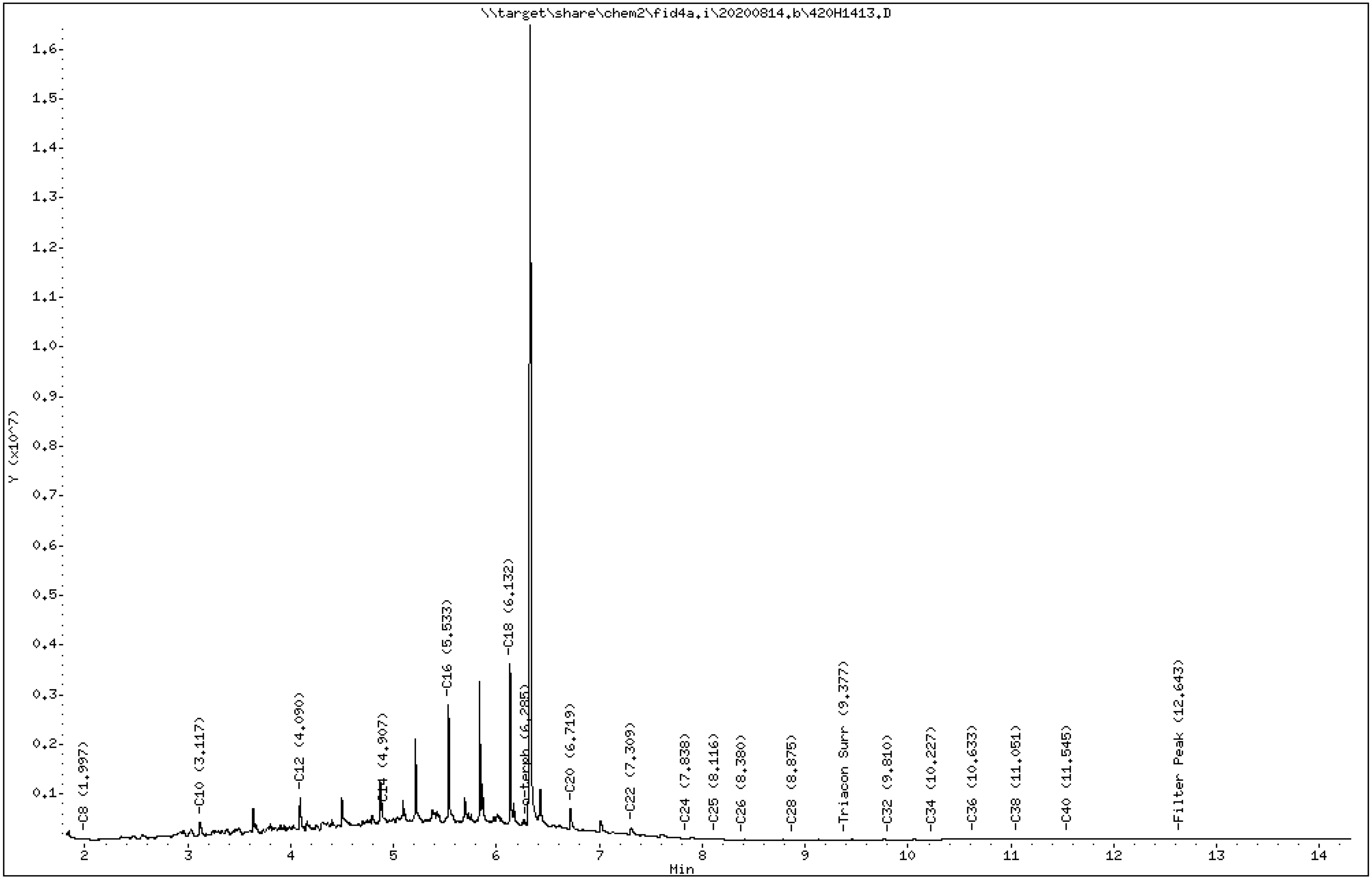
Instrument: fid4a.i

Sample Info: SEQ-CCV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200814.b/420H1413.D
Method: 20200814.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/24/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCV1
Client ID:
Injection: 14-AUG-2020 11:59
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.997	0.005	33555	26527	WATPHD	(C12-C24)	76604959	480.8
C10	3.117	0.011	360980	800884	WATPHM	(C24-C38)	2087736	20.6
C12	4.090	0.003	858002	1109180	AK102	(C10-C25)	90098220	460.9
C14	4.907	0.011	444696	641926	AK103	(C25-C36)	1192714	16.3
C16	5.533	-0.006	2733195	3097613	OR.DIES	(C10-C28)	90414159	461.3
C18	6.132	-0.001	3552120	3129904				
C20	6.719	-0.001	636483	1325665	JET-A	(C10-C18)	69968294	421.9
C22	7.309	0.022	248019	872467				
C24	7.838	0.001	39892	19883				
C25	8.116	0.009	16354	7274				
C26	8.380	0.009	7066	4723				
C28	8.875	-0.001	410	108				
C32	9.810	0.003	6271	1564				
C34	10.227	-0.005	10941	7550				
Filter Peak	12.643	0.007	25373	20242	CREOSOT	(C12-C22)	74914962	831.2
C36	10.633	-0.004	19294	9569				
C38	11.051	-0.001	25145	5023				
C40	11.545	-0.002	23988	7180				
o-terph	6.330	0.000	15978088	16235384				
Triacon Surr	9.377	-0.001	1405	784	NAS DIES	(C10-C24)	89766551	460.0

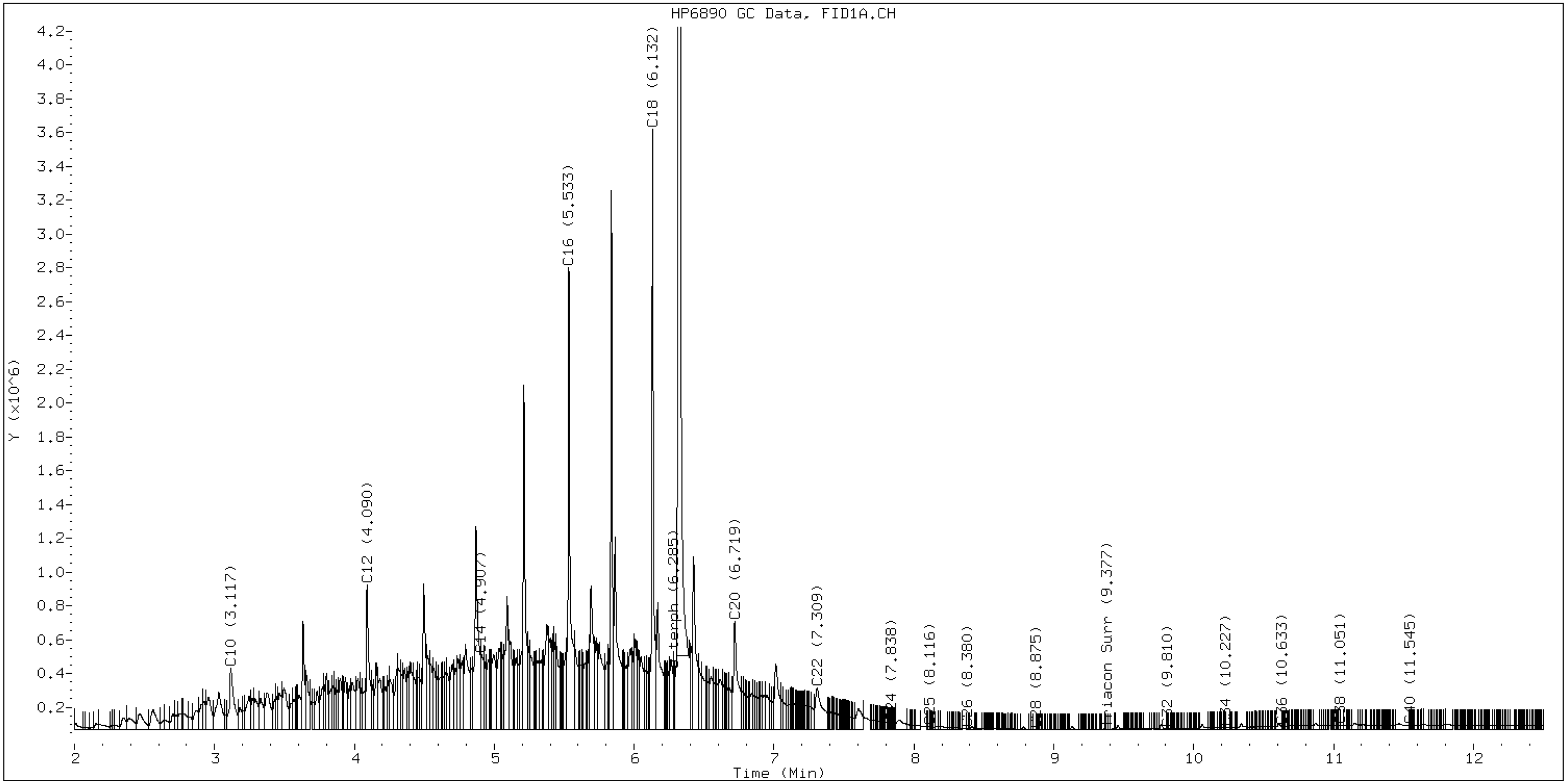
Range Times: NW Diesel(4.087 - 7.837) AK102(3.11 - 8.11) Jet A(3.11 - 6.13)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount	
o-Terphenyl	16235384	79.3	M
Triacontane	784	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

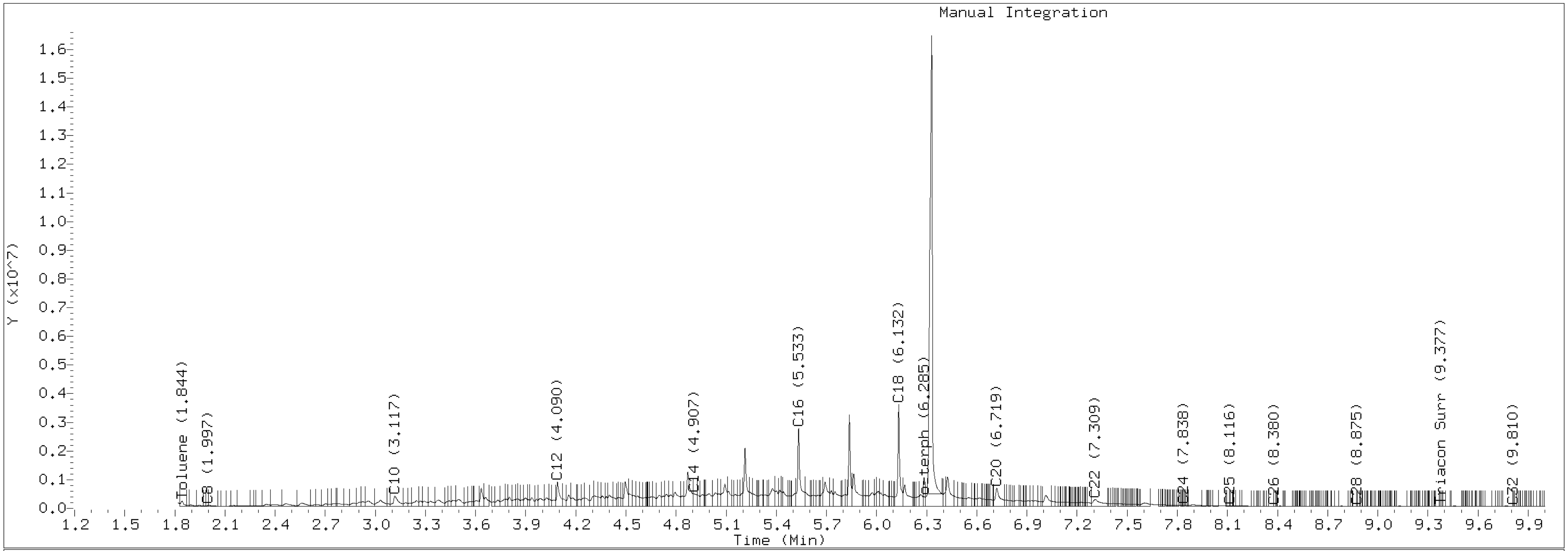
Datafile: FID4A, 20200814.b/420H1413.D SEQ-CCV1

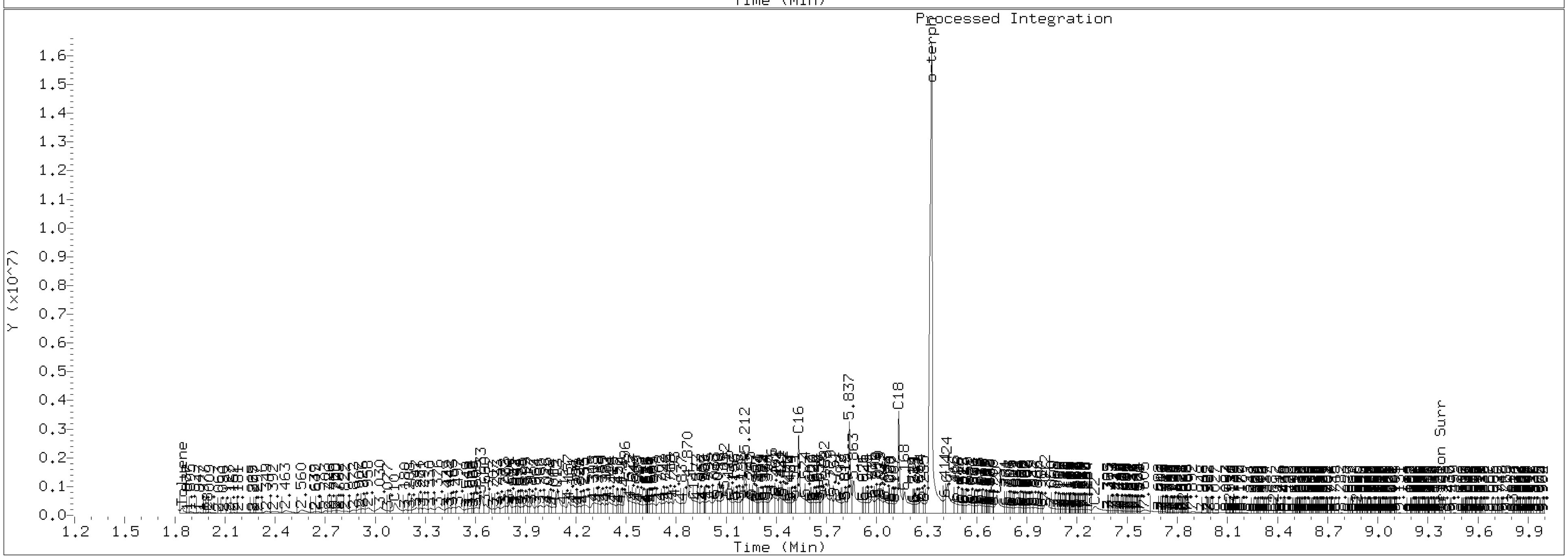


TPH Manual Integrations Report

Datafile: FID4A, 20200814.b/420H1413.D Injection: 14-AUG-2020 11:59

Lab ID:SEQ-CCV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420J0227.D
Calibration Date: 10/25/2019
Sequence: SIJ0042
Injection Date: 10/02/20
Lab Sample ID: SIJ0042-CCV1
Injection Time: 17:33
Sequence Name: DIESEL CCV

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	447	159336.7	142557.1		-10.5	+/-15
o-Terphenyl	A	90.000	79.5	204701.9	180884.2		-11.7	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201002.b\420J0227.D

Date : 02-OCT-2020 17:33

Client ID:

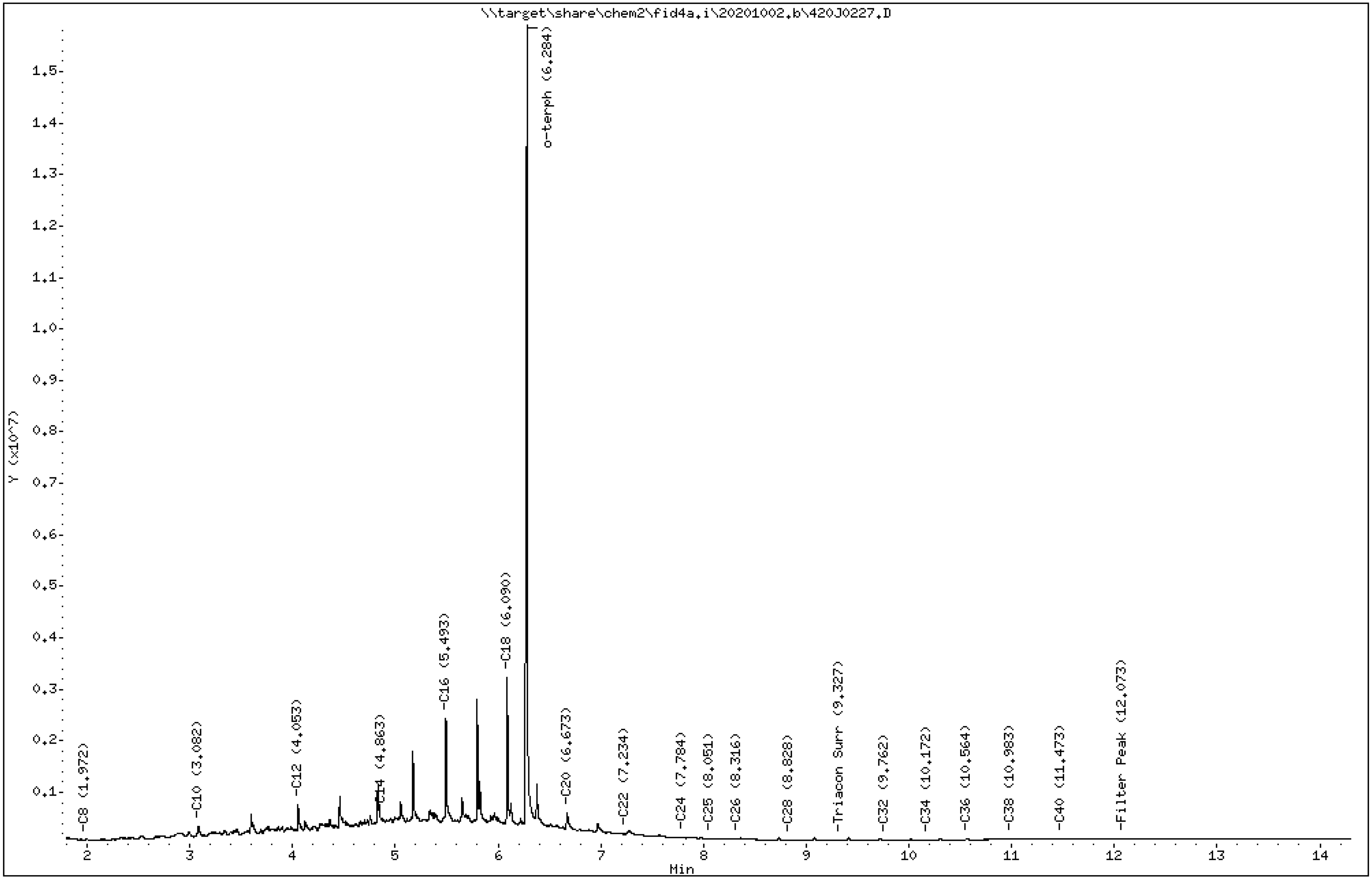
Instrument: fid4a.i

Sample Info: SEQ-CCV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201002.b/420J0227.D
Method: 20201002.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 10/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCV1
Client ID:
Injection: 02-OCT-2020 17:33
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.972	-0.014	9352	8051	WATPHD	(C12-C24)	71278543	447.3
C10	3.082	0.010	275290	604499	WATPHM	(C24-C38)	2595002	25.7
C12	4.053	0.001	678847	919302	AK102	(C10-C25)	83170245	425.4
C14	4.863	0.013	409591	81784	AK103	(C25-C36)	1818352	24.8
C16	5.493	-0.006	2358669	2412149	OR.DIES	(C10-C28)	84001487	428.6
C18	6.090	-0.002	3170614	2857622				
C20	6.673	-0.000	533120	754522	JET-A	(C10-C18)	63484632	382.8
C22	7.234	-0.002	119695	46935				
C24	7.784	-0.000	45383	13433				
C25	8.051	-0.004	27468	20294				
C26	8.316	-0.000	17075	9319				
C28	8.828	0.007	9161	4968				
C32	9.762	0.009	6982	2433				
C34	10.172	-0.005	7930	2763				
Filter Peak	12.073	0.004	16575	6608	CREOSOT	(C12-C22)	68914152	1218.7
C36	10.564	-0.013	34401	64674				
C38	10.983	0.003	15510	9262				
C40	11.473	0.018	17169	9419				
o-terph	6.284	-0.000	15509175	16279578				
Triacon Surr	9.327	0.007	6503	1296	NAS DIES	(C10-C24)	82734184	424.0

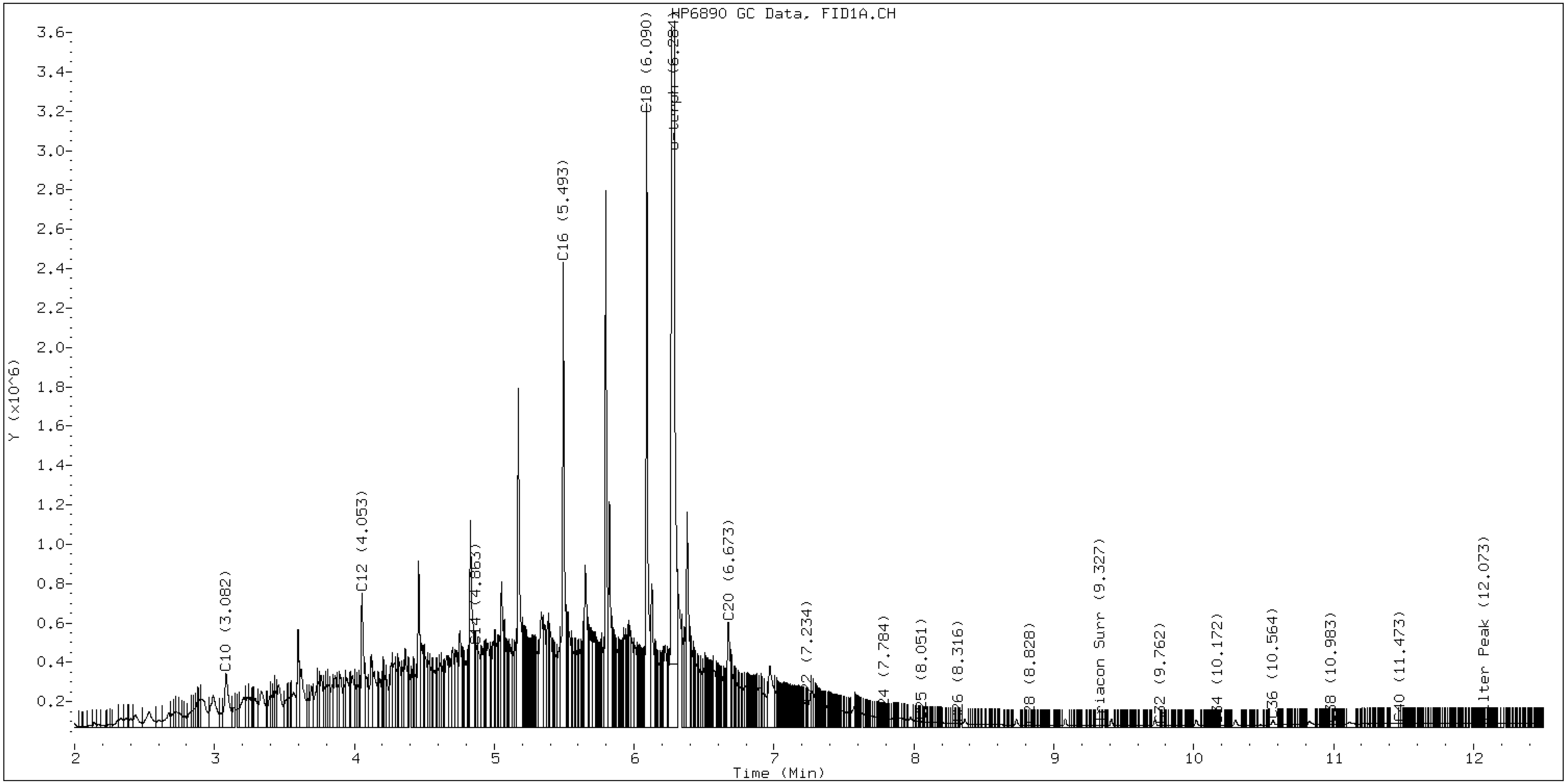
Range Times: NW Diesel(4.052 - 7.785) AK102(3.07 - 8.05) Jet A(3.07 - 6.09)
NW M.Oil(7.78 - 10.98) AK103(8.05 - 10.58) OR Diesel(3.07 - 8.82)

Surrogate	Area	Amount	
o-Terphenyl	16279578	79.5	M
Triacontane	1296	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	56546.9	30-MAR-2020

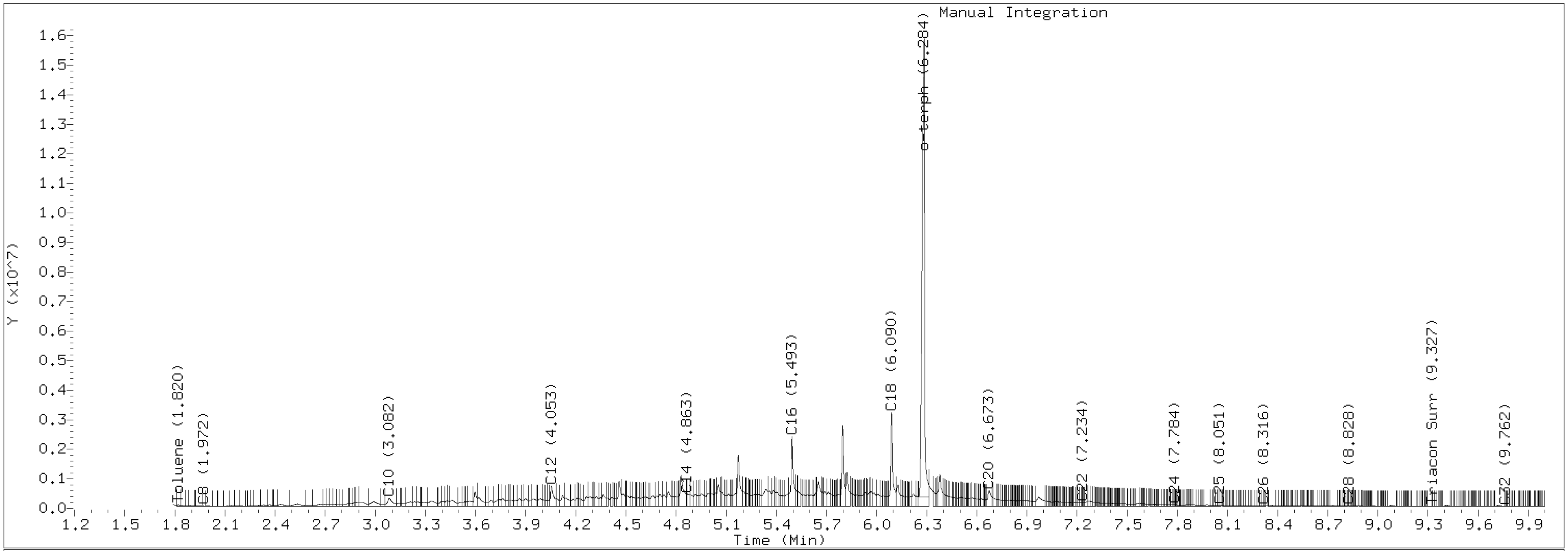
Datafile: FID4A, 20201002.b/420J0227.D   SEQ-CCV1

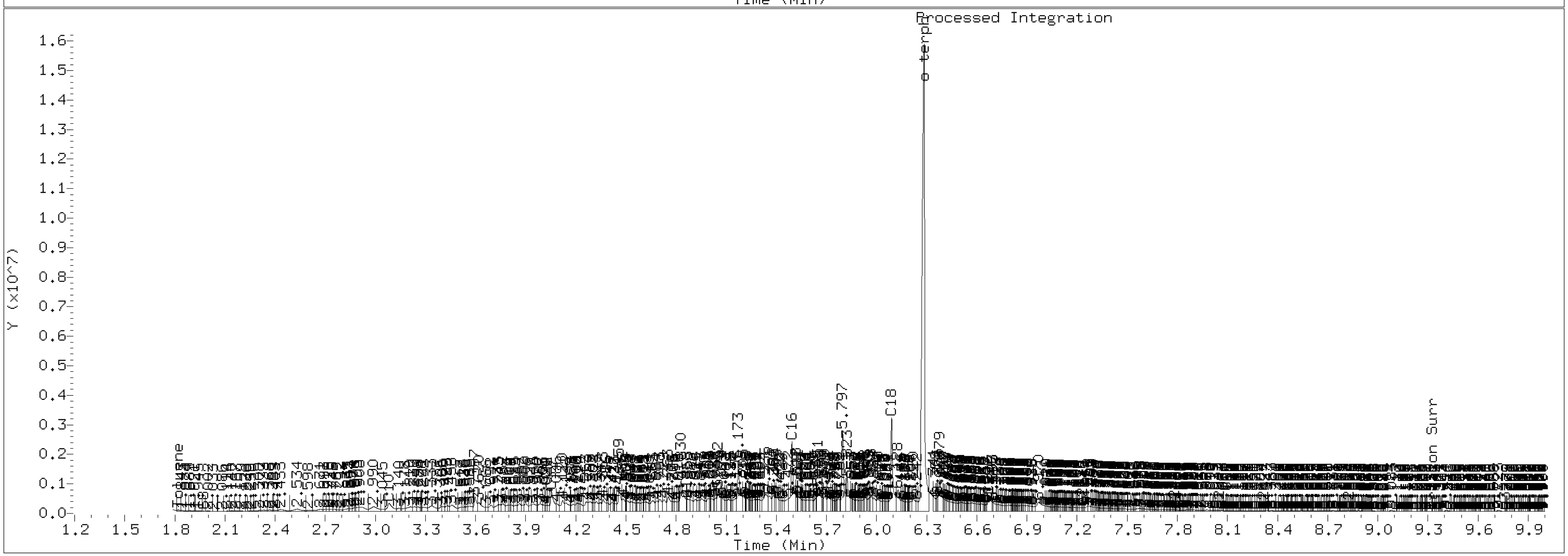


TPH Manual Integrations Report

Datafile: FID4A, 20201002.b/420J0227.D   Injection: 02-OCT-2020 17:33

Lab ID:SEQ-CCV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc. | SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc | Project: ICS-Former NW Cooperage
Instrument ID: FID4 | Calibration: DA00022
Lab File ID: 420K0216.D | Calibration Date: 10/25/2019
Sequence: SIK0016 | Injection Date: 11/02/20
Lab Sample ID: SIK0016-CCV1 | Injection Time: 13:34
Sequence Name: DIESEL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	469	159336.7	149526.6		-6.2	+/-15
o-Terphenyl	A	90.000	84.8	204701.9	192767.9		-5.8	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201102.b\420K0216.D

Page 1

Date : 02-NOV-2020 13:34

Client ID:

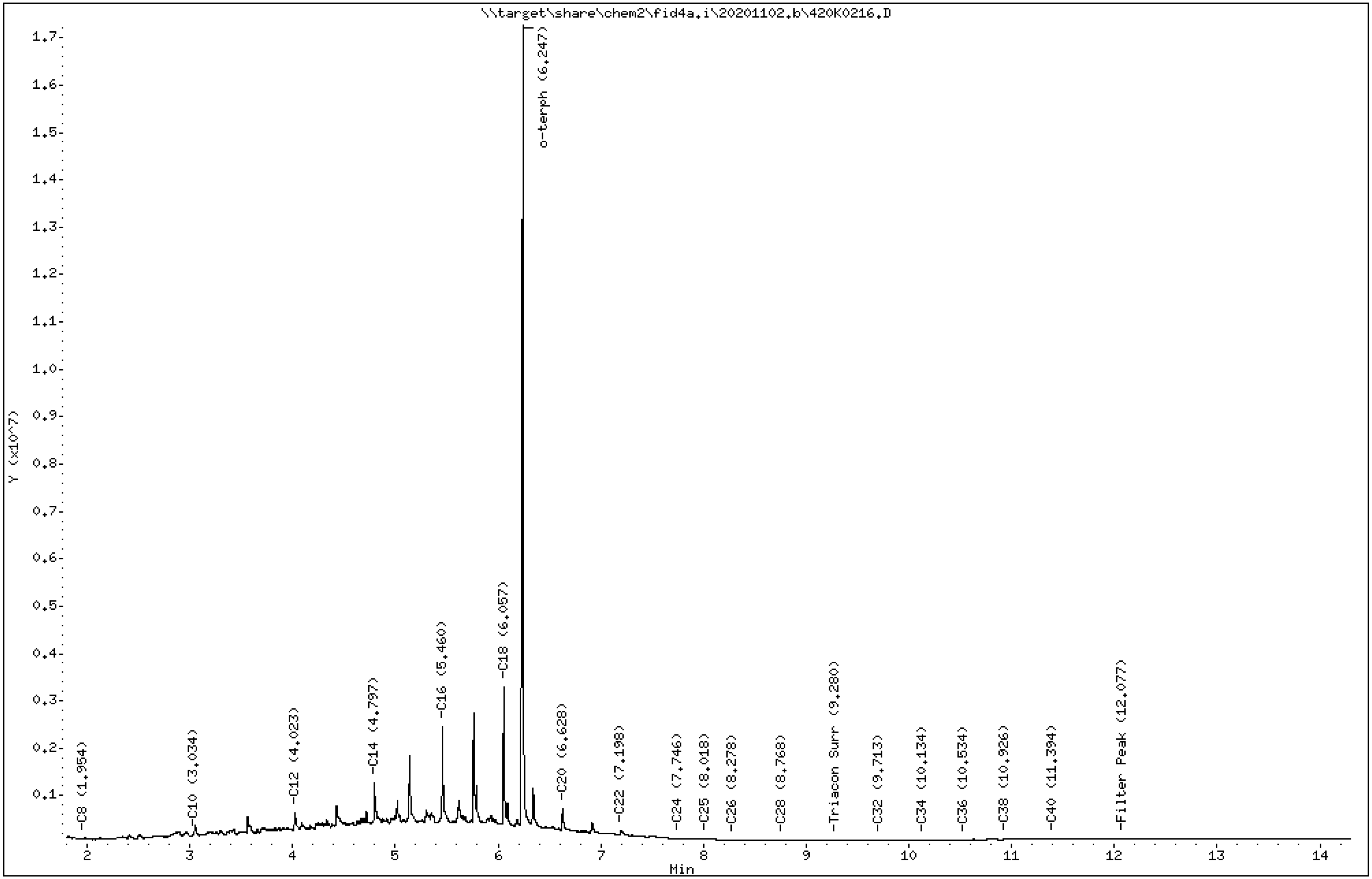
Instrument: fid4a.i

Sample Info: SEQ-CCV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201102.b/420K0216.D
Method: 20201102.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 11/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCV1
Client ID:
Injection: 02-NOV-2020 13:34
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.954	0.000	24971	20616	WATPHD	(C12-C24)	74763315	469.2
C10	3.034	0.002	105321	101464	WATPHM	(C24-C38)	1209447	12.0
C12	4.023	0.006	575267	930536	AK102	(C10-C25)	87571211	448.0
C14	4.797	-0.000	1223737	1816061	AK103	(C25-C36)	715520	9.8
C16	5.460	-0.004	2401544	3561647	OR.DIES	(C10-C28)	87913199	448.5
C18	6.057	0.000	3237914	3091821				
C20	6.628	-0.000	653899	1248522	JET-A	(C10-C18)	68713755	414.3
C22	7.198	0.005	208605	636302				
C24	7.746	0.003	33322	18203				
C25	8.018	0.006	16614	6601				
C26	8.278	0.006	7987	4343				
C28	8.768	-0.009	1583	1127				
C32	9.713	0.007	2142	1257				
C34	10.134	0.004	5373	3976				
Filter Peak	12.077	0.001	17799	13225	BUNKERC	(C10-C38)	88597423	2244.3
C36	10.534	0.000	10027	7461				
C38	10.926	-0.005	14614	5814				
C40	11.394	0.008	18404	11939				
o-terph	6.247	-0.000	16886621	17349107				
Triacon Surr	9.280	0.001	254	113	NAS DIES	(C10-C24)	87387977	447.8

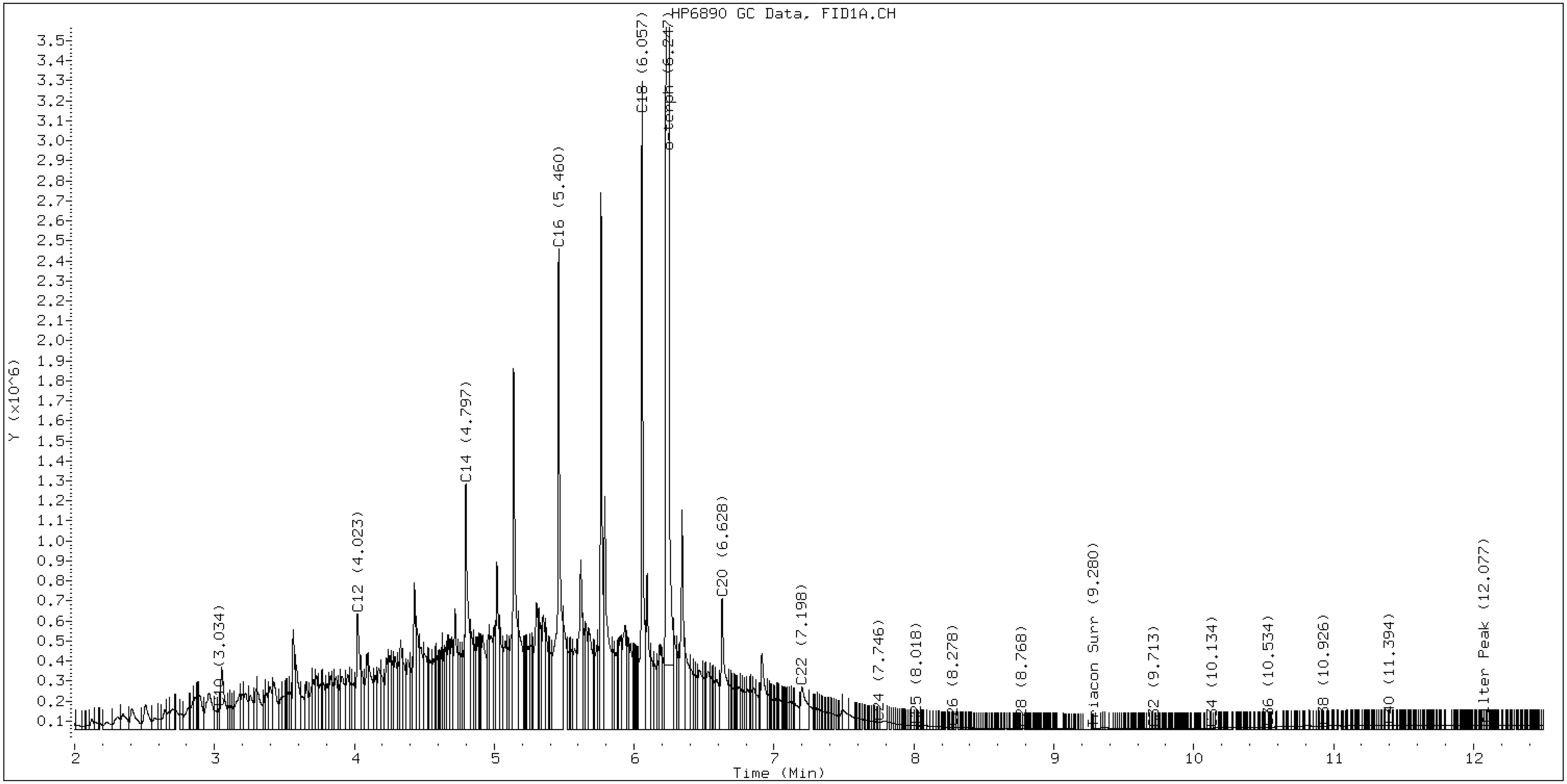
Range Times: NW Diesel(4.016 - 7.743) AK102(3.03 - 8.01) Jet A(3.03 - 6.06)
NW M.Oil(7.74 - 10.93) AK103(8.01 - 10.53) OR Diesel(3.03 - 8.78)

Surrogate	Area	Amount	
o-Terphenyl	17349107	84.8	M
Triacontane	113	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

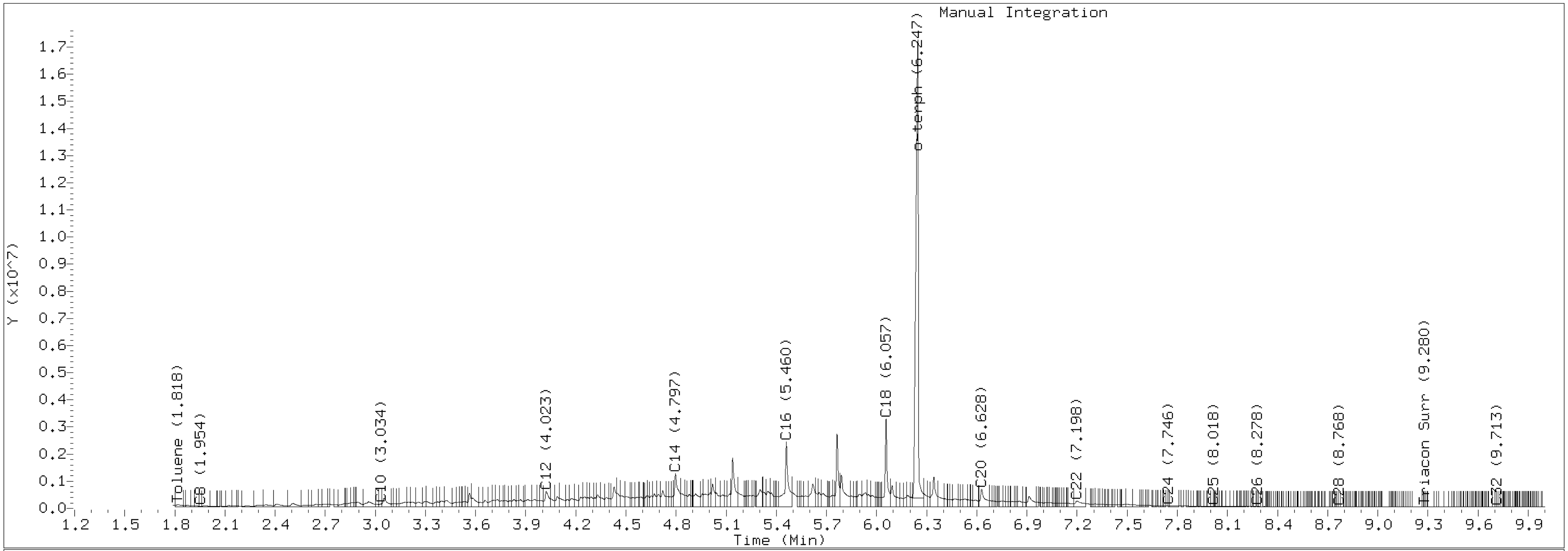
Datafile: FID4A, 20201102.b/420K0216.D SEQ-CCV1

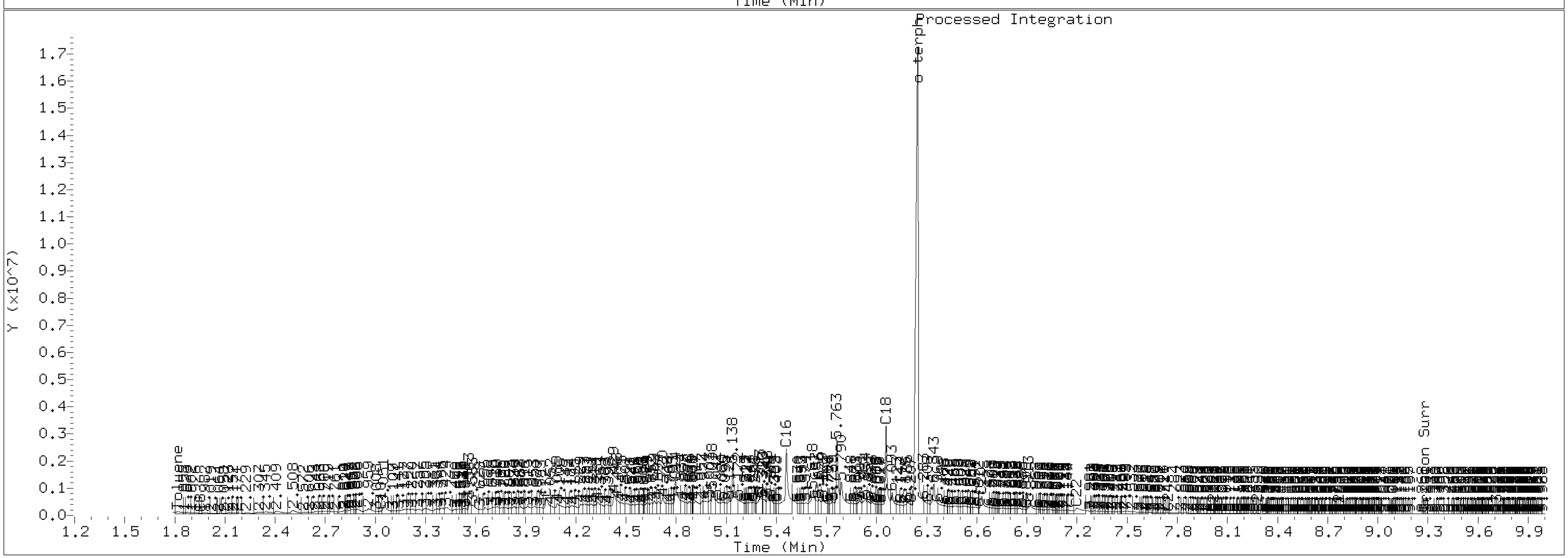


TPH Manual Integrations Report

Datafile: FID4A, 20201102.b/420K0216.D Injection: 02-NOV-2020 13:34

Lab ID:SEQ-CCV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420K2921.D
Calibration Date: 10/25/2019
Sequence: SIK0411
Injection Date: 11/30/20
Lab Sample ID: SIK0411-CCV1
Injection Time: 00:27
Sequence Name: DIESEL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	459	159336.7	146376.2		-8.1	+/-15
o-Terphenyl	A	90.000	82.6	204701.9	187900.7		-8.2	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201129.b\420K2921.D

Date : 30-NOV-2020 00:27

Client ID:

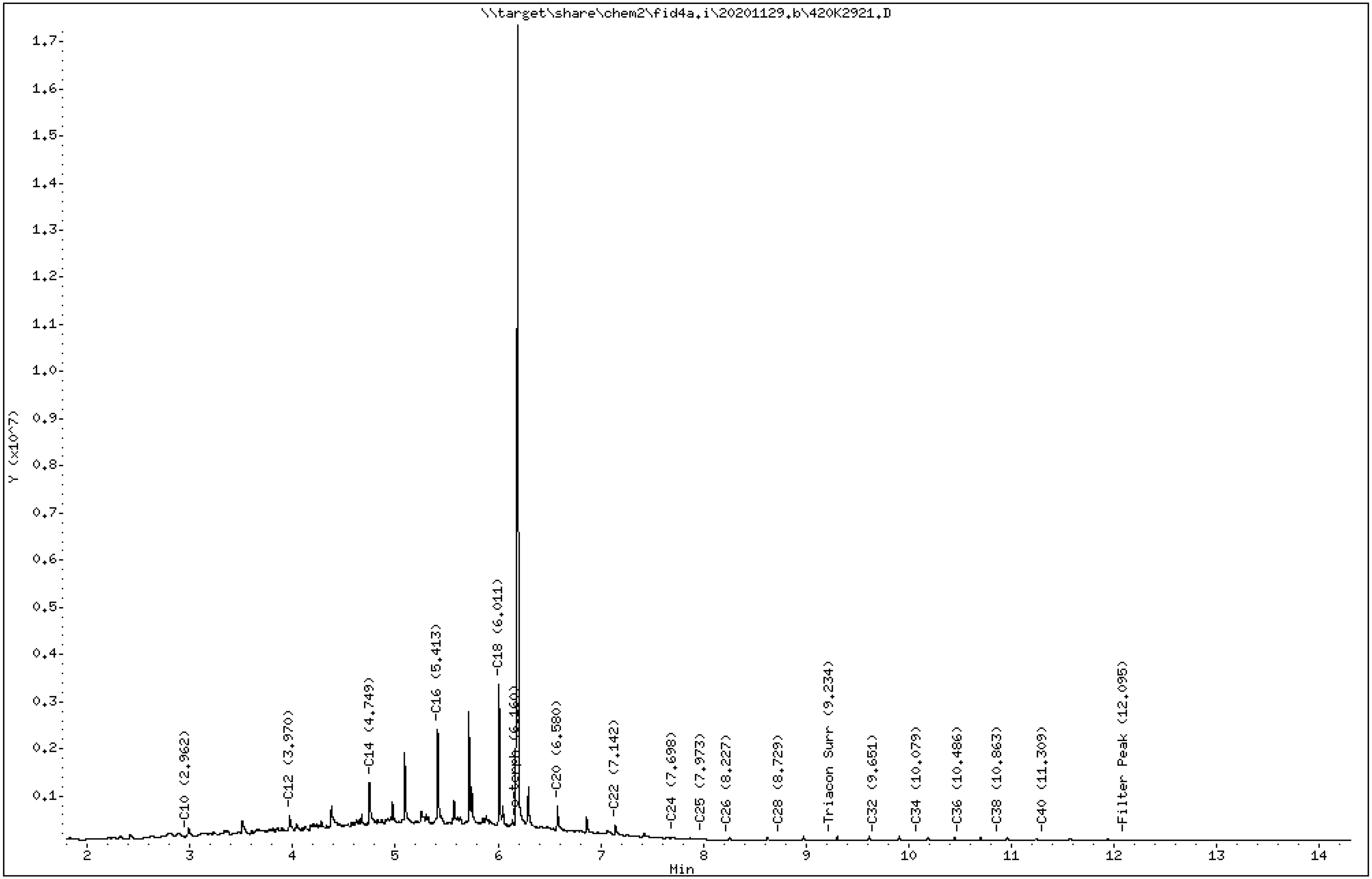
Instrument: fid4a.i

Sample Info: SEQ-CCV1

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201129.b/420K2921.D
Method: 20201129.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCV1
Client ID:
Injection: 30-NOV-2020 00:27
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.884	0.013	42732	78842	WATPHD	(C12-C24)	73188080	459.3
C10	2.962	-0.007	83680	95441	WATPHM	(C24-C38)	1315151	13.0
C12	3.970	0.006	527200	1228780	AK102	(C10-C25)	84939647	434.5
C14	4.749	0.001	1229802	1719809	AK103	(C25-C36)	924801	12.6
C16	5.413	-0.001	2348486	2372057	OR.DIES	(C10-C28)	85359444	435.5
C18	6.011	-0.001	3293816	2904071				
C20	6.580	-0.003	738126	972189	JET-A	(C10-C18)	65750625	396.4
C22	7.142	-0.002	332840	607899				
C24	7.698	0.005	61387	50076				
C25	7.973	0.012	20683	20133				
C26	8.227	0.004	7327	3248				
C28	8.729	0.002	1695	409				
C32	9.651	-0.005	1155	753				
C34	10.079	0.000	1776	673				
Filter Peak	12.095	-0.003	8637	1726	BUNKERC	(C10-C38)	86055846	2179.9
C36	10.486	0.004	5097	3520				
C38	10.863	-0.009	7622	4178				
C40	11.309	-0.005	9092	4983				
o-terph	6.195	-0.003	16954351	16911058				
Triacon Surr	9.234	0.004	5205	5348	NAS DIES	(C10-C24)	84740695	434.2

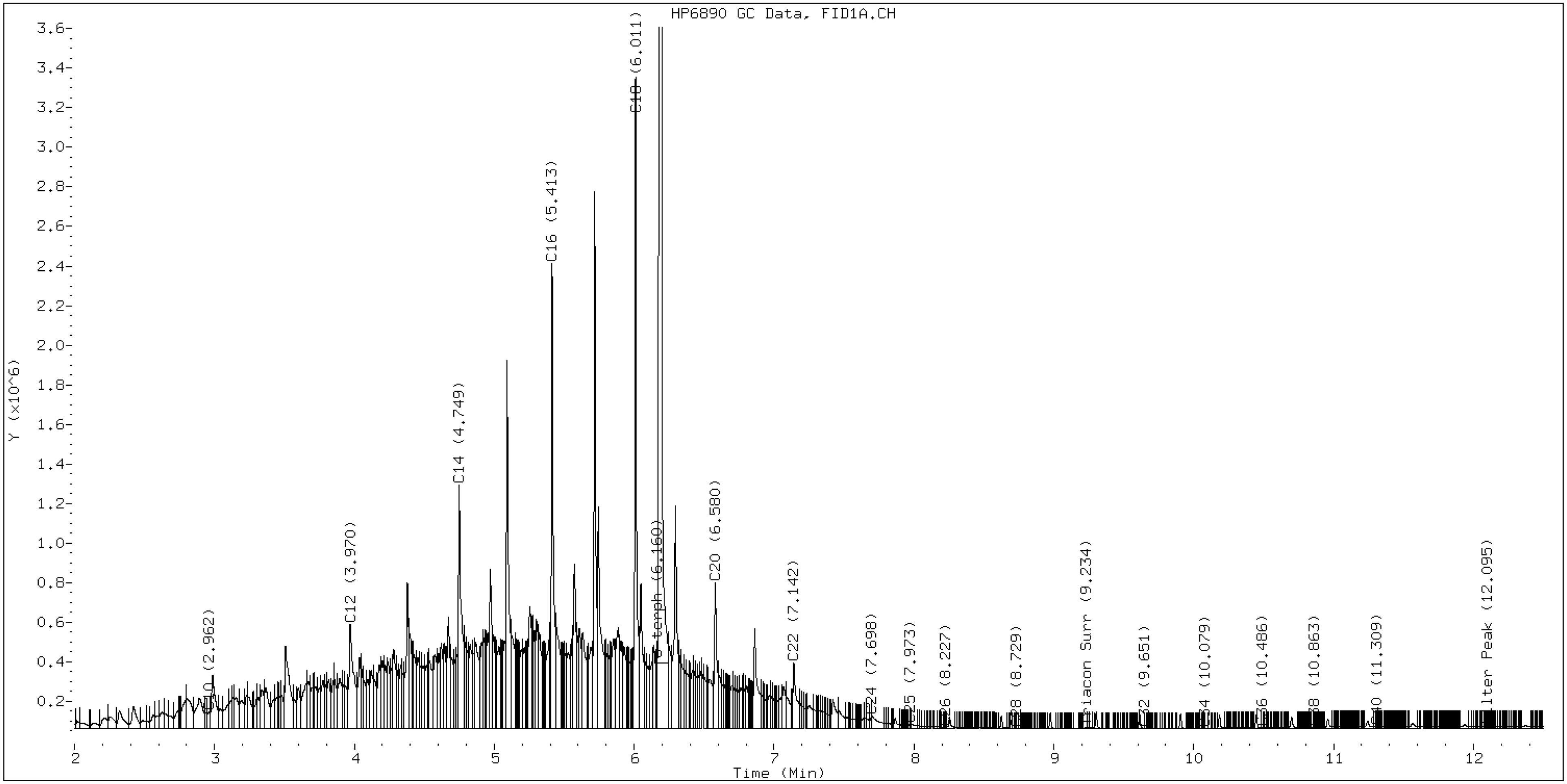
Range Times: NW Diesel(3.964 - 7.693) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.87) AK103(7.96 - 10.48) OR Diesel(2.97 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	16911058	82.6	M
Triacontane	5348	0.0	

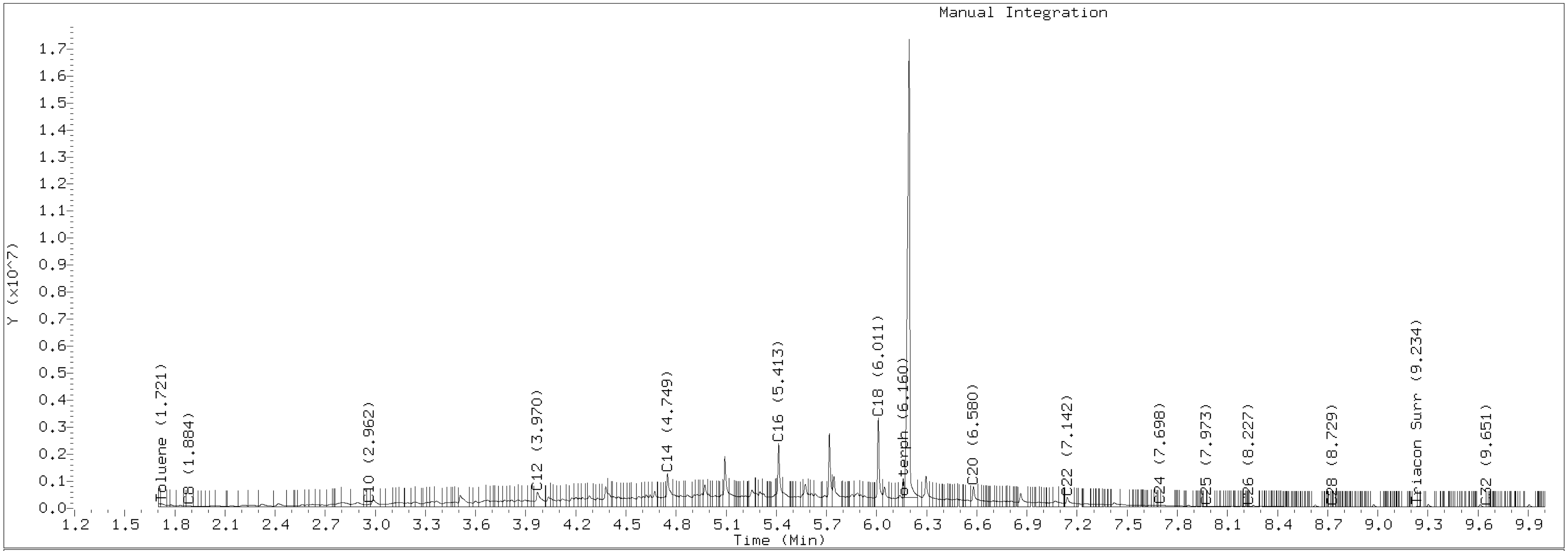
M Indicates the peak was manually integrated

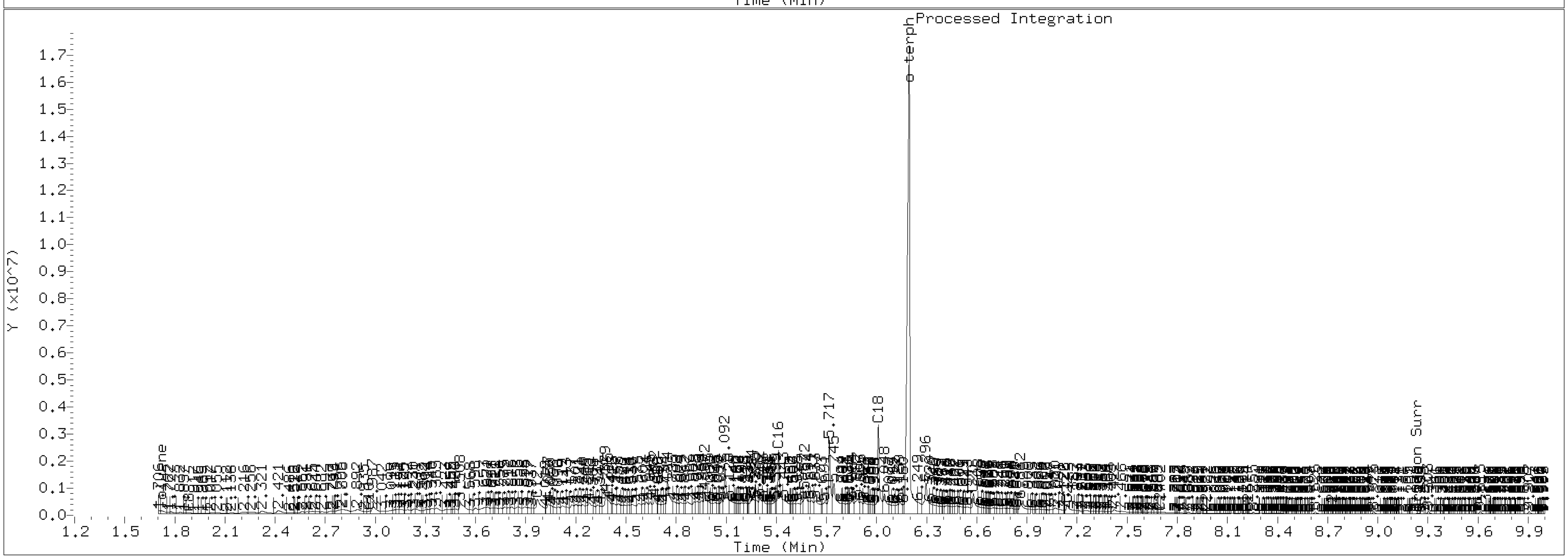
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201129.b/420K2921.D SEQ-CCV1



TPH Manual Integrations Report
Datafile: FID4A, 20201129.b/420K2921.D Injection: 30-NOV-2020 00:27
Lab ID:SEQ-CCV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420K2922.D
Calibration Date: 10/25/2019
Sequence: SIK0411
Injection Date: 11/30/20
Lab Sample ID: SIK0411-CCV2
Injection Time: 00:47
Sequence Name: MOIL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1060	101166	107641.3		6.4	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201129.b\420K2922.D

Page 1

Date : 30-NOV-2020 00:47

Client ID:

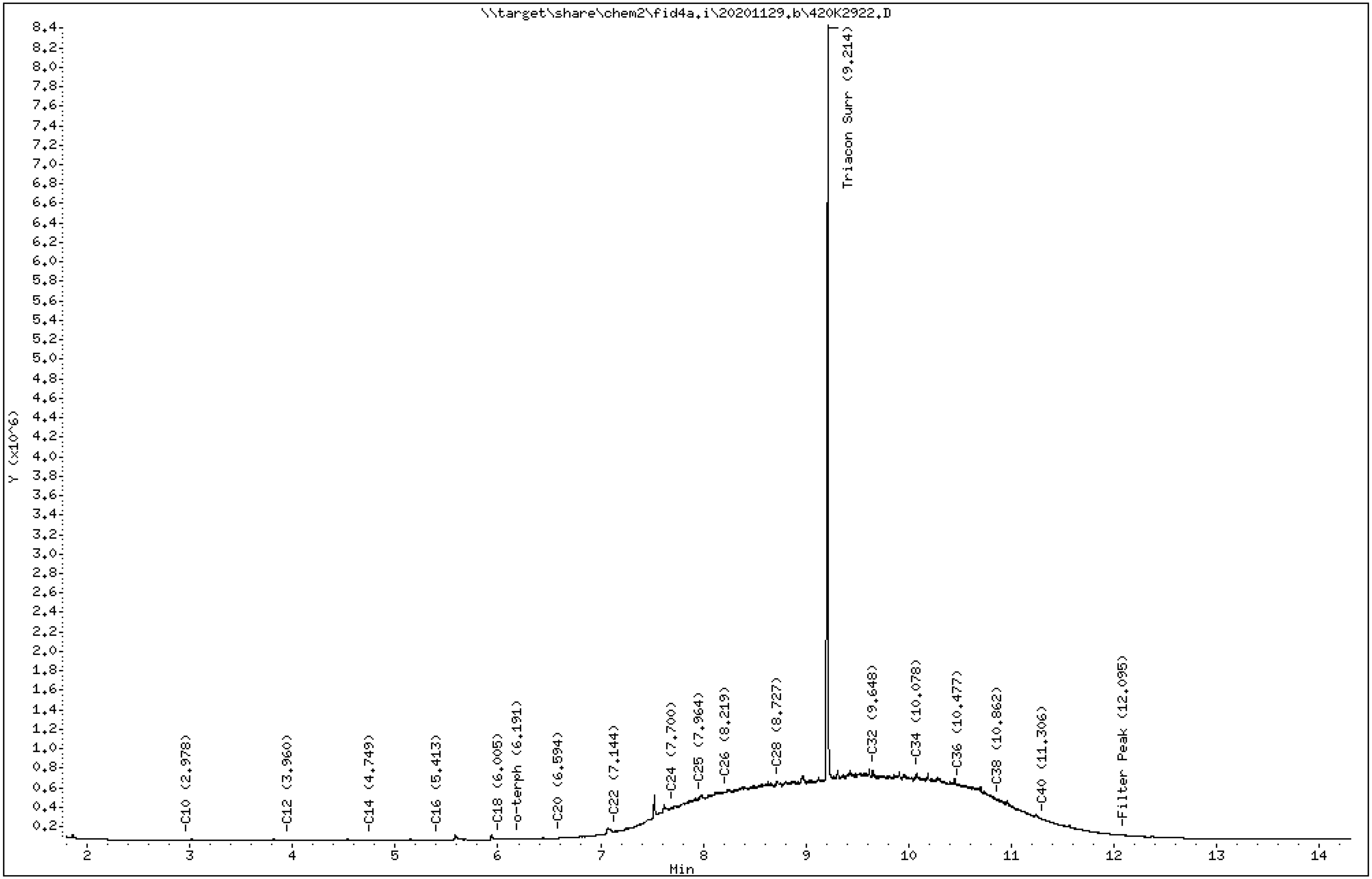
Instrument: fid4a.i

Sample Info: SEQ-CCV2

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201129.b/420K2922.D
Method: 20201129.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCV2
Client ID:
Injection: 30-NOV-2020 00:47
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.859	-0.012	50983	107057	WATPHD	(C12-C24)	10295676	64.6
C10	2.978	0.008	1422	1196	WATPHM	(C24-C38)	107641286	1064.0
C12	3.960	-0.004	3473	2218	AK102	(C10-C25)	14334362	73.3
C14	4.749	0.001	5061	3497	AK103	(C25-C36)	92529218	1263.9
C16	5.413	-0.001	4884	1692	OR.DIES	(C10-C28)	40717615	207.7
C18	6.005	-0.007	8104	7385				
C20	6.594	0.011	23625	33437	JET-A	(C10-C18)	880485	5.3
C22	7.144	-0.000	94873	73885				
C24	7.700	0.007	335341	248010				
C25	7.964	0.003	440038	216467				
C26	8.219	-0.004	495653	295300				
C28	8.727	-0.000	591087	204415				
C32	9.648	-0.008	710202	881609				
C34	10.078	-0.001	687064	1176406				
Filter Peak	12.095	-0.003	49371	12325	BUNKERC	(C10-C38)	118116698	2992.0
C36	10.477	-0.005	576704	398603				
C38	10.862	-0.010	413804	82462				
C40	11.306	-0.008	215572	74801				
o-terph	6.191	-0.007	20533	49517				
Triacon Surr	9.214	-0.017	7768177	7363708	NAS DIES	(C10-C24)	10475412	53.7

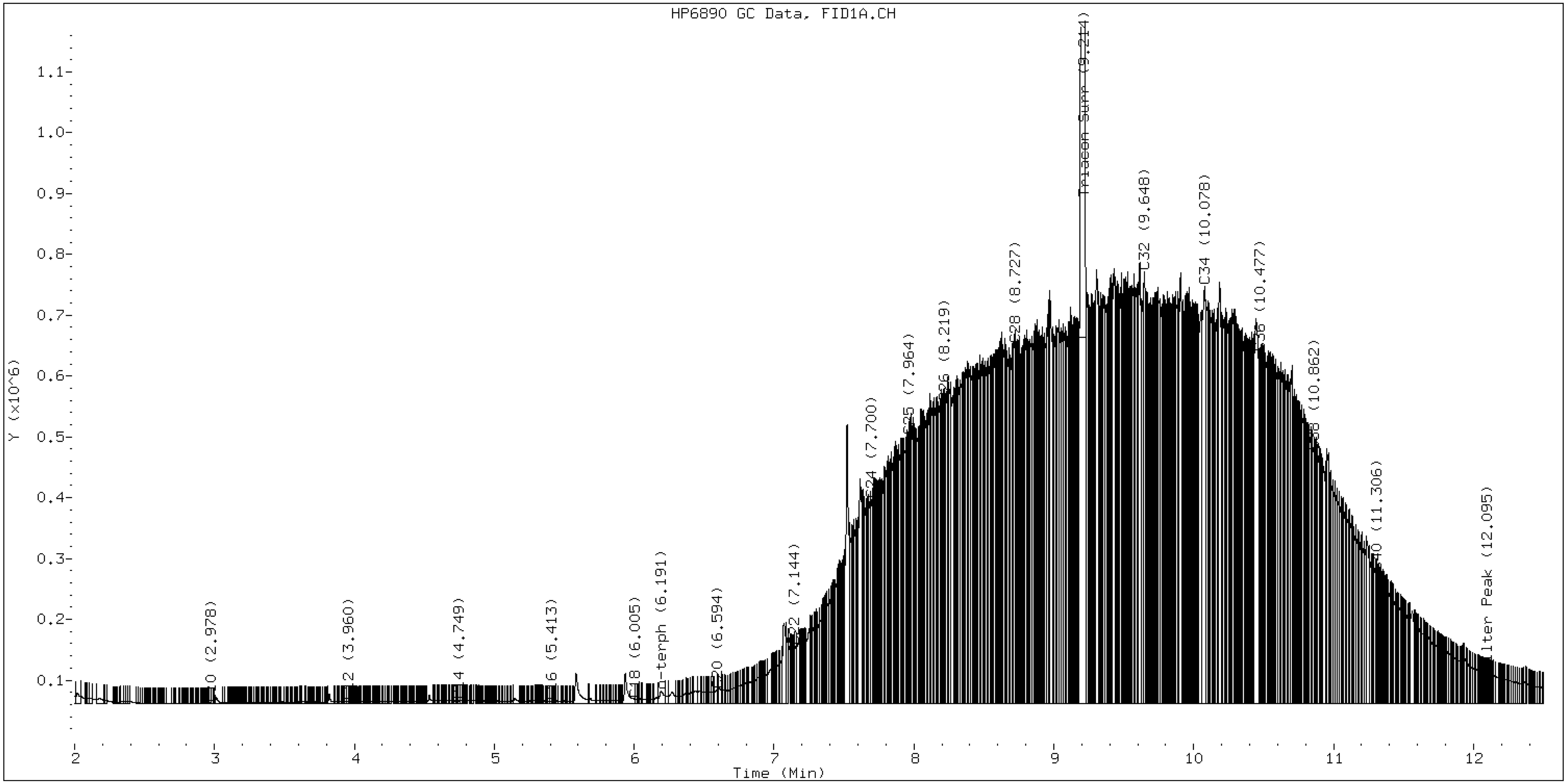
Range Times: NW Diesel(3.964 - 7.693) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.87) AK103(7.96 - 10.48) OR Diesel(2.97 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	49517	0.2	
Triacontane	7363708	49.6	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

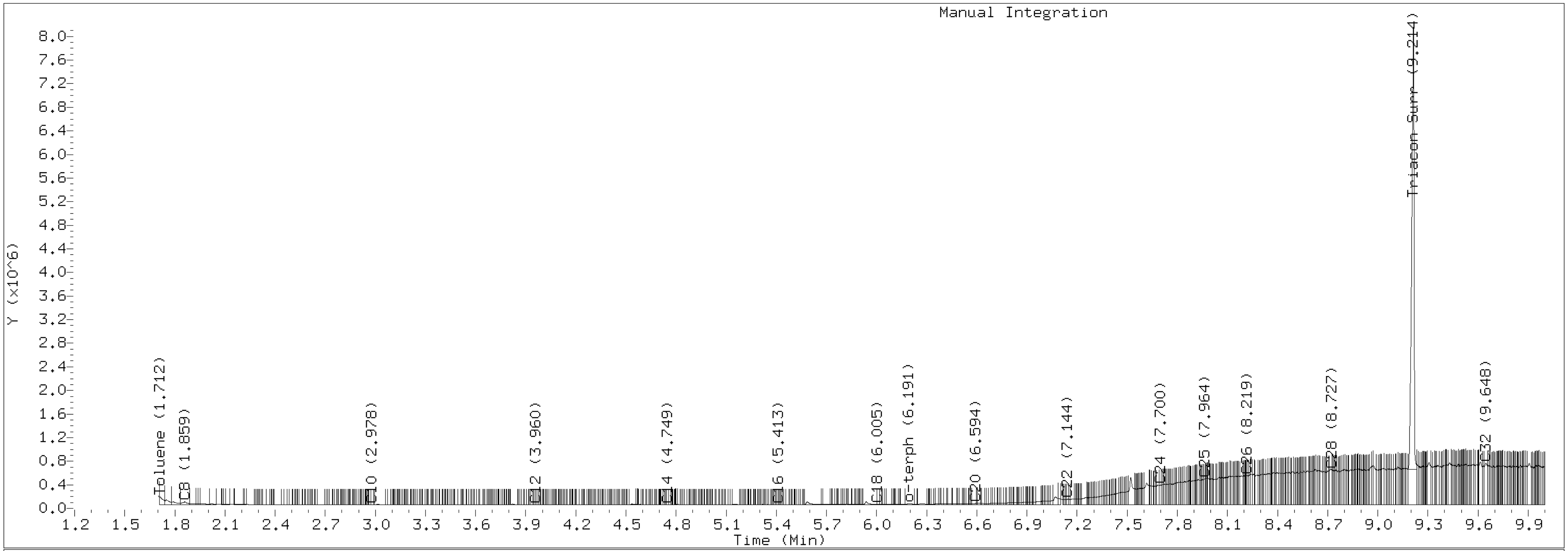
Datafile: FID4A, 20201129.b/420K2922.D SEQ-CCV2

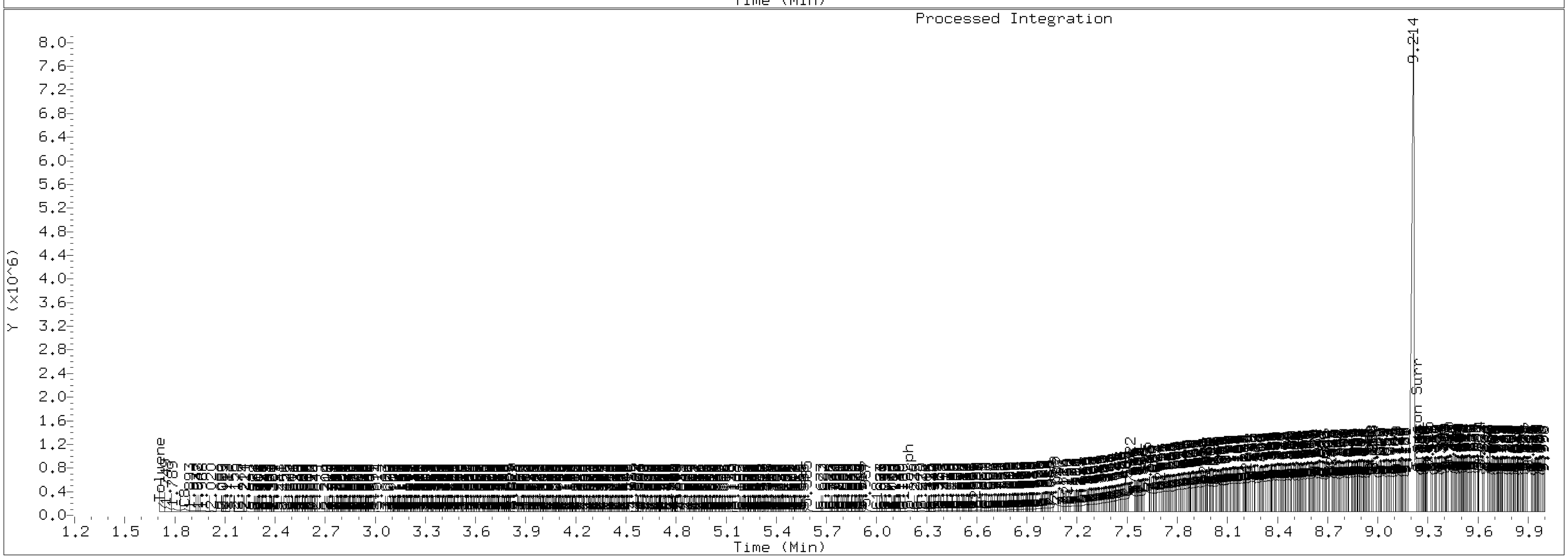


TPH Manual Integrations Report

Datafile: FID4A, 20201129.b/420K2922.D Injection: 30-NOV-2020 00:47

Lab ID:SEQ-CCV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420K2933.D
Calibration Date: 10/25/2019
Sequence: SIK0411
Injection Date: 11/30/20
Lab Sample ID: SIK0411-CCV3
Injection Time: 04:29
Sequence Name: DIESEL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	462	159336.7	147052.4		-7.7	+/-15
o-Terphenyl	A	90.000	84.4	204701.9	191956.2		-6.2	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201129.b\420K2933.D

Date : 30-NOV-2020 04:29

Client ID:

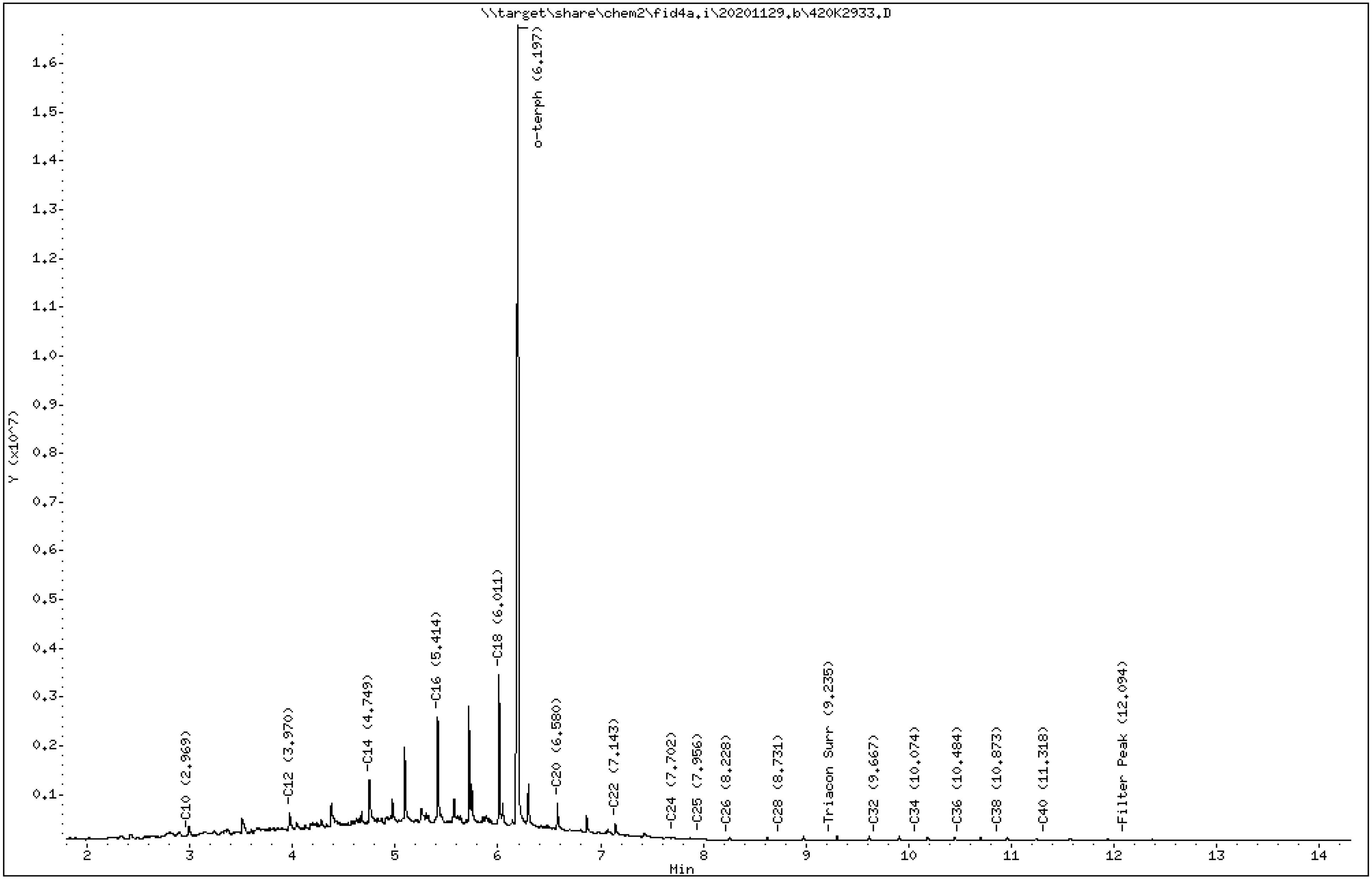
Instrument: fid4a.i

Sample Info: SEQ-CCV3

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201129.b/420K2933.D
Method: 20201129.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCV3
Client ID:
Injection: 30-NOV-2020 04:29
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.859	-0.012	31901	28298	WATPHD	(C12-C24)	73526193	461.5
C10	2.969	-0.001	91544	31904	WATPHM	(C24-C38)	1283411	12.7
C12	3.970	0.006	567511	919160	AK102	(C10-C25)	85790170	438.8
C14	4.749	0.001	1233929	1781117	AK103	(C25-C36)	906294	12.4
C16	5.414	-0.000	2513072	2450791	OR.DIES	(C10-C28)	86189906	439.7
C18	6.011	-0.001	3393410	3106068				
C20	6.580	-0.003	762658	1014901	JET-A	(C10-C18)	66737557	402.4
C22	7.143	-0.001	339876	522783				
C24	7.702	0.009	60356	257767				
C25	7.956	-0.005	15001	9648				
C26	8.228	0.005	6633	1964				
C28	8.731	0.004	1497	492				
C32	9.667	0.011	797	338				
C34	10.074	-0.005	1763	432				
Filter Peak	12.094	-0.004	8742	3487	BUNKERC	(C10-C38)	86887237	2200.9
C36	10.484	0.002	5112	3253				
C38	10.873	0.001	7767	5394				
C40	11.318	0.004	9258	7309				
o-terph	6.197	-0.001	16389199	17276065				
Triacon Surr	9.235	0.005	5266	7234	NAS DIES	(C10-C24)	85603826	438.7

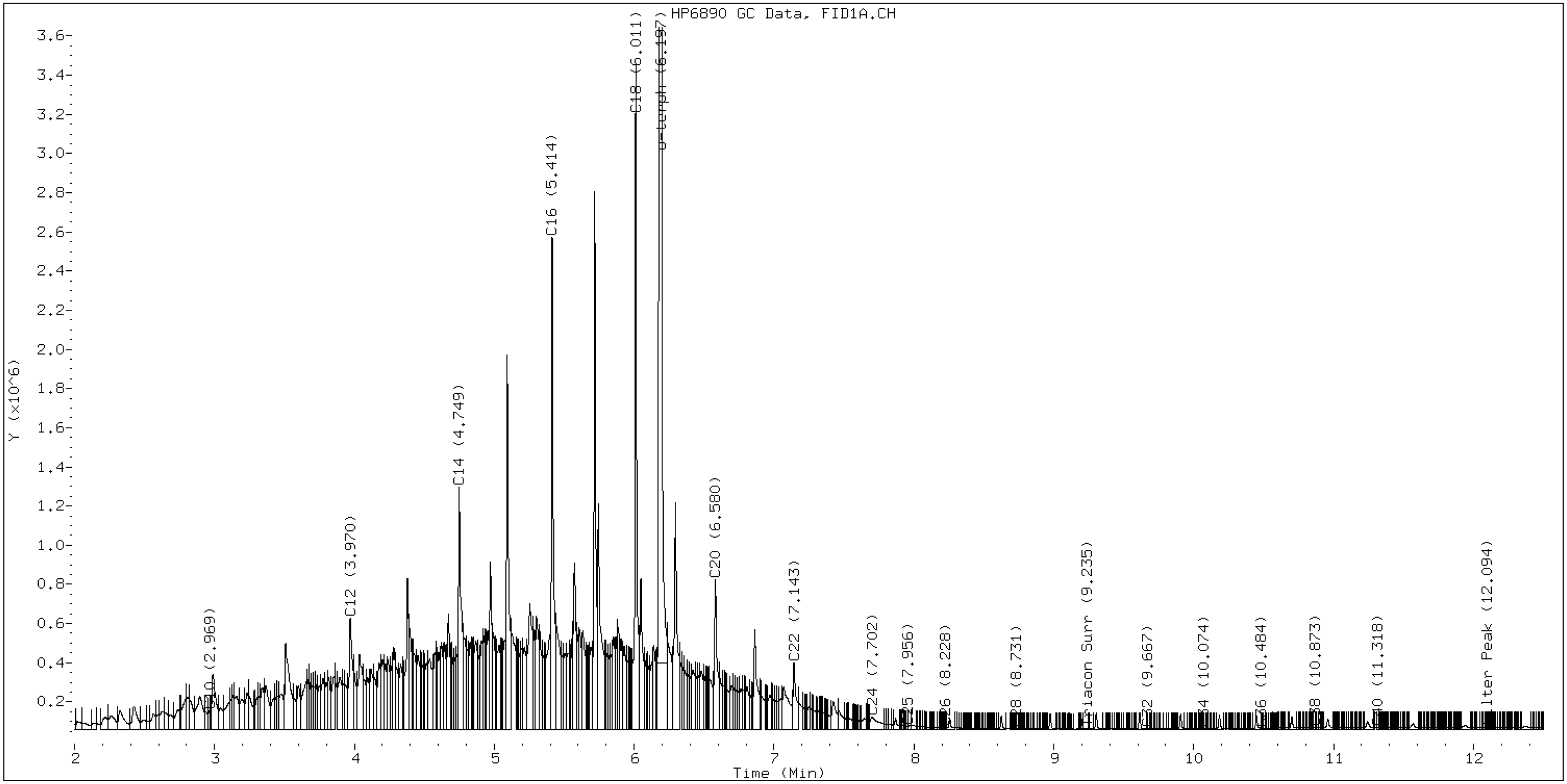
Range Times: NW Diesel(3.964 - 7.693) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.87) AK103(7.96 - 10.48) OR Diesel(2.97 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	17276065	84.4	M
Triacontane	7234	0.0	

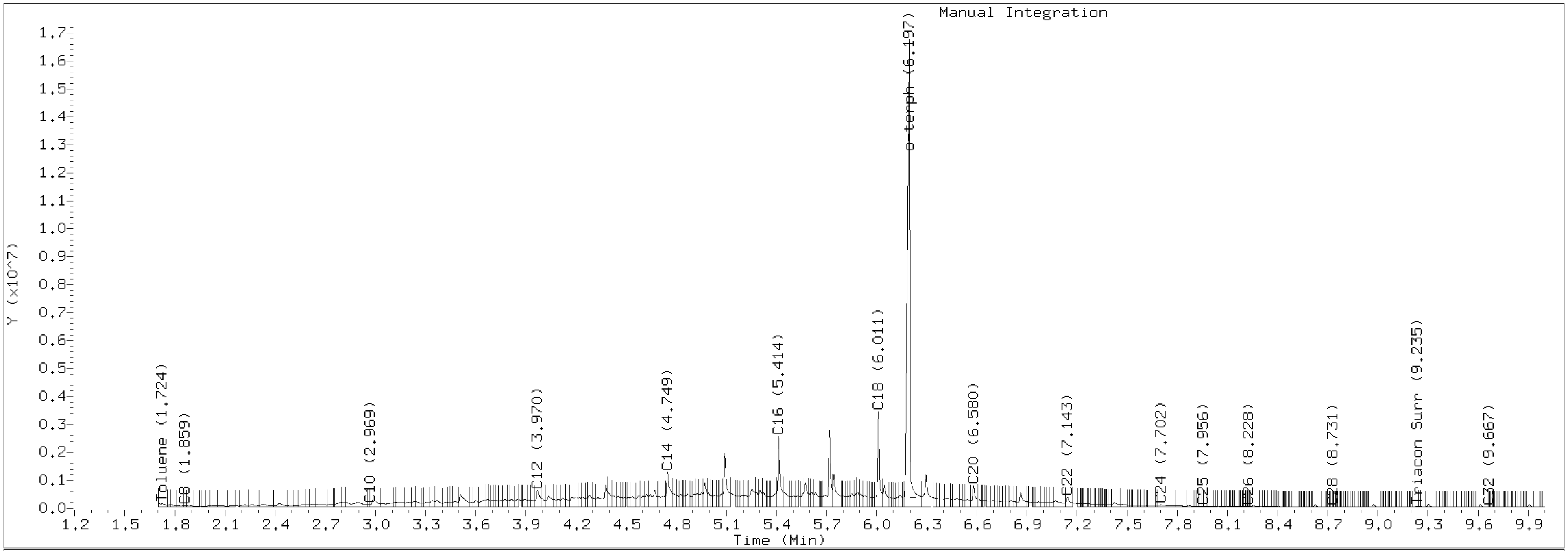
M Indicates the peak was manually integrated

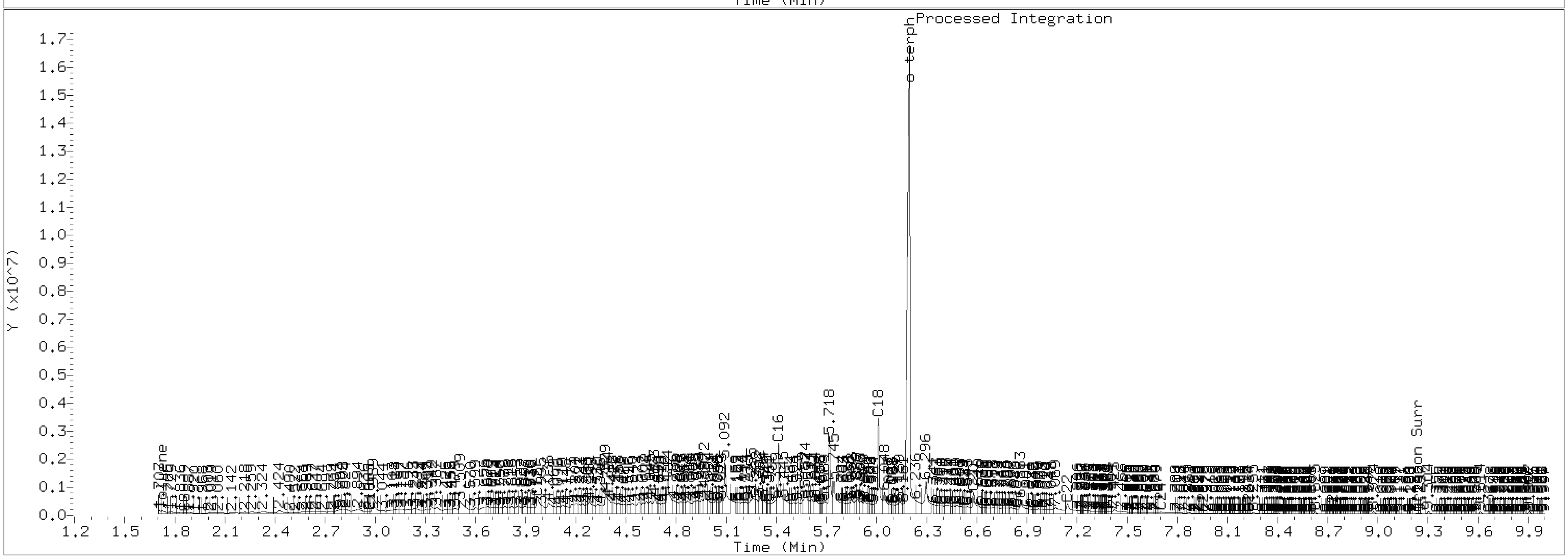
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201129.b/420K2933.D SEQ-CCV3



TPH Manual Integrations Report
Datafile: FID4A, 20201129.b/420K2933.D Injection: 30-NOV-2020 04:29
Lab ID:SEQ-CCV3





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420K2934.D
Calibration Date: 10/25/2019
Sequence: SIK0411
Injection Date: 11/30/20
Lab Sample ID: SIK0411-CCV4
Injection Time: 04:49
Sequence Name: MOIL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1040	101166	105643.8		4.4	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201129.b\420K2934.D

Page 1

Date : 30-NOV-2020 04:49

Client ID:

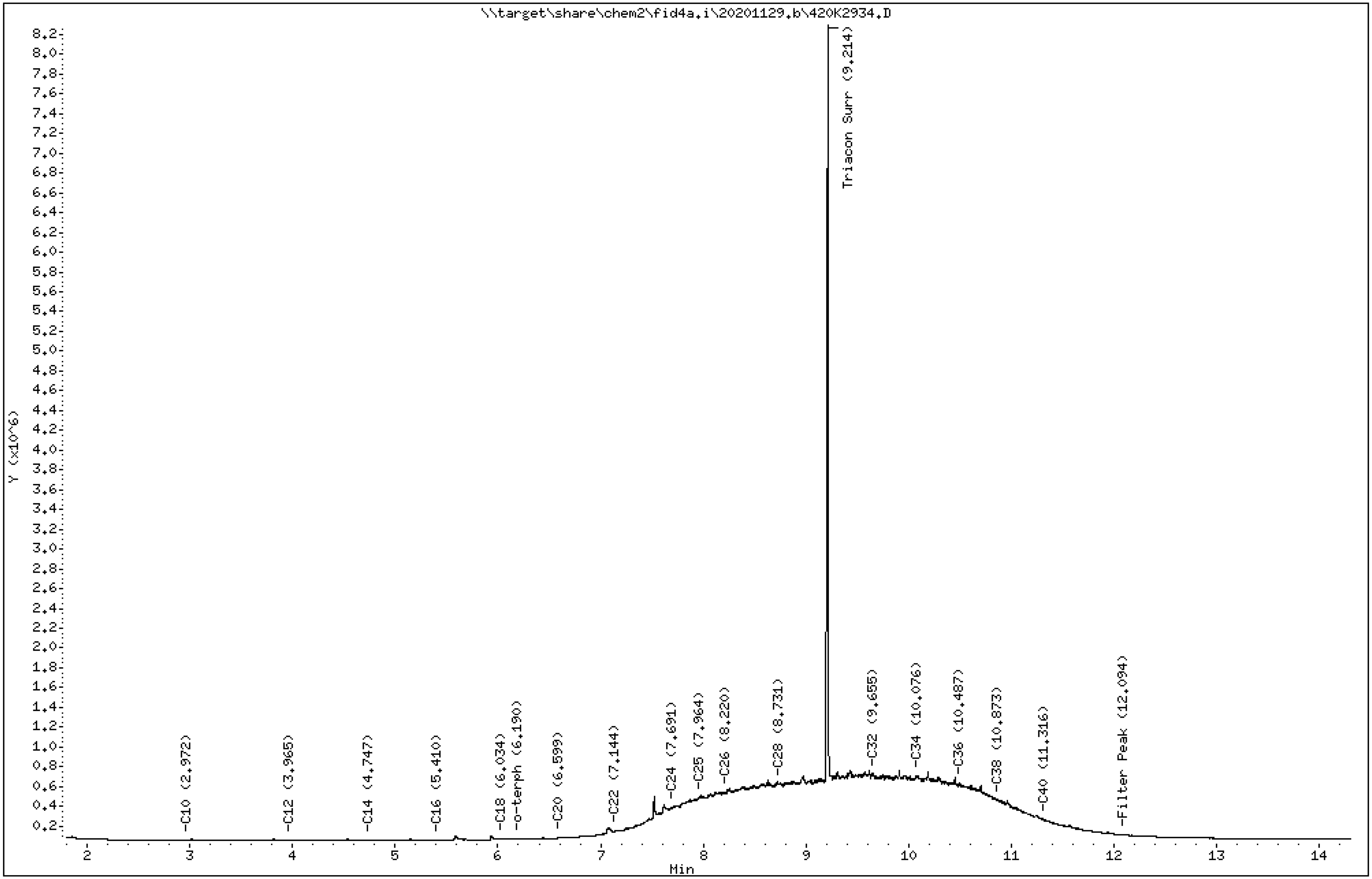
Instrument: fid4a.i

Sample Info: SEQ-CCV4

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201129.b/420K2934.D
Method: 20201129.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCV4
Client ID:
Injection: 30-NOV-2020 04:49
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.853	-0.018	41780	104814	WATPHD	(C12-C24)	10170688	63.8
C10	2.972	0.003	1071	651	WATPHM	(C24-C38)	105643767	1044.3
C12	3.965	0.001	3062	1787	AK102	(C10-C25)	14117911	72.2
C14	4.747	-0.001	4651	2536	AK103	(C25-C36)	90693317	1238.9
C16	5.410	-0.004	4458	1967	OR.DIES	(C10-C28)	40125575	204.7
C18	6.034	0.022	7537	7696				
C20	6.599	0.016	23648	40342	JET-A	(C10-C18)	825837	5.0
C22	7.144	0.000	94224	82361				
C24	7.691	-0.002	325912	113074				
C25	7.964	0.003	435140	276540				
C26	8.220	-0.003	487855	455745				
C28	8.731	0.003	570230	142165				
C32	9.655	-0.001	666261	264547				
C34	10.076	-0.002	652354	225734				
Filter Peak	12.094	-0.004	53798	37209	BUNKERC	(C10-C38)	115976742	2937.8
C36	10.487	0.005	575086	531200				
C38	10.873	0.001	399977	258094				
C40	11.316	0.003	201704	50128				
o-terph	6.190	-0.008	19664	46301				
Triacon Surr	9.214	-0.017	7654141	7270751	NAS DIES	(C10-C24)	10332975	52.9

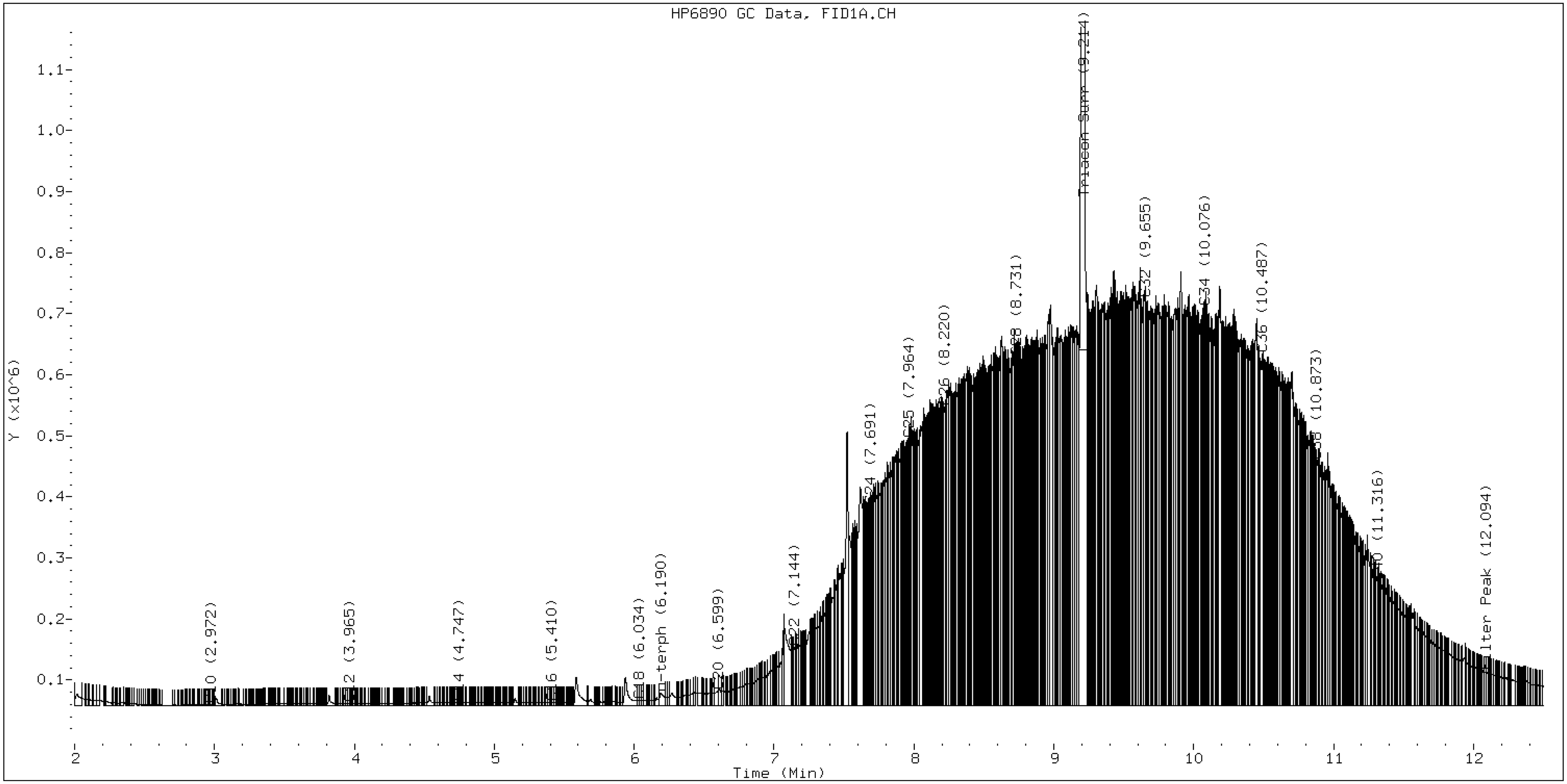
Range Times: NW Diesel(3.964 - 7.693) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.87) AK103(7.96 - 10.48) OR Diesel(2.97 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	46301	0.2	
Triacontane	7270751	49.0	M

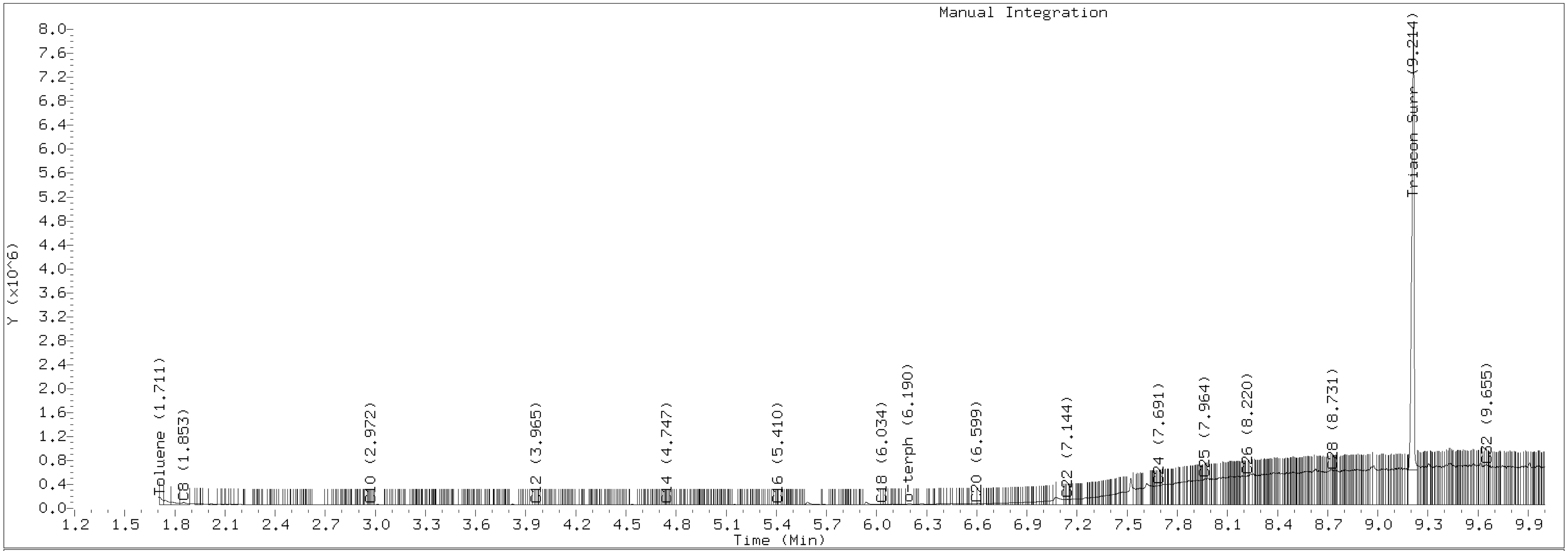
M Indicates the peak was manually integrated

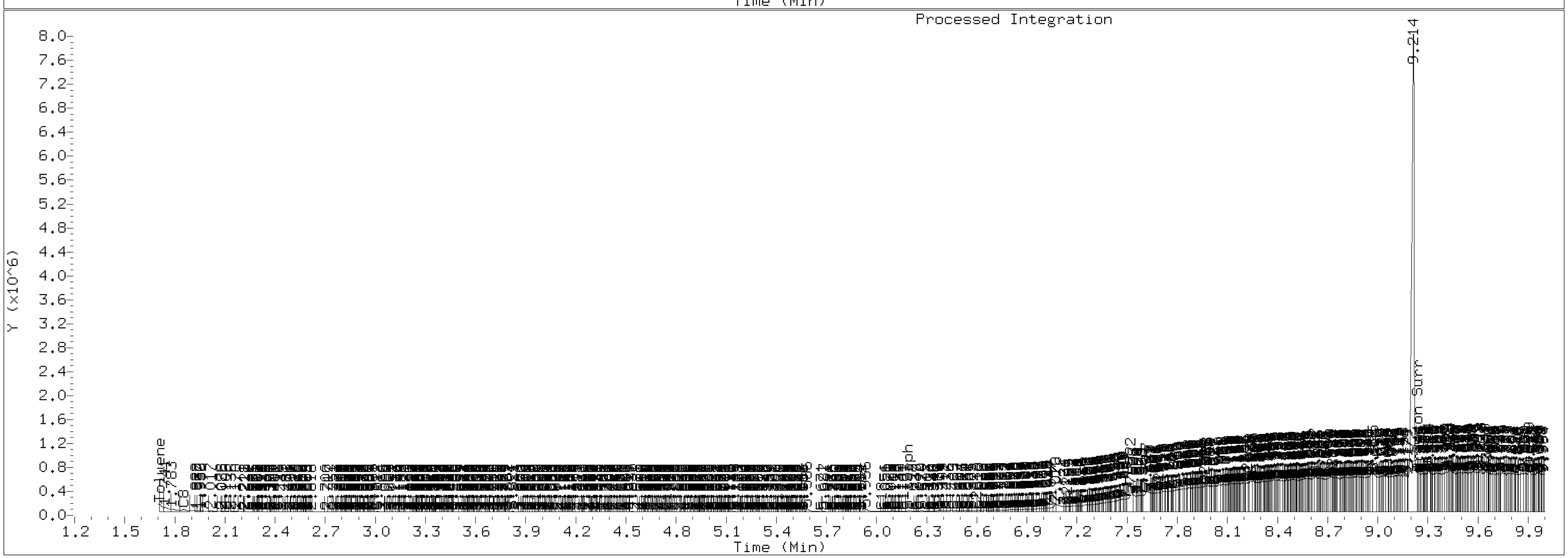
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201129.b/420K2934.D SEQ-CCV4



TPH Manual Integrations Report
Datafile: FID4A, 20201129.b/420K2934.D Injection: 30-NOV-2020 04:49
Lab ID:SEQ-CCV4





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420K2953.D
Calibration Date: 10/25/2019
Sequence: SIK0411
Injection Date: 11/30/20
Lab Sample ID: SIK0411-CCV5
Injection Time: 11:14
Sequence Name: DIESEL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	487	159336.7	155154.8		-2.6	+/-15
o-Terphenyl	A	90.000	86.9	204701.9	197609.4		-3.4	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201129.b\420K2953.D

Page 1

Date : 30-NOV-2020 11:14

Client ID:

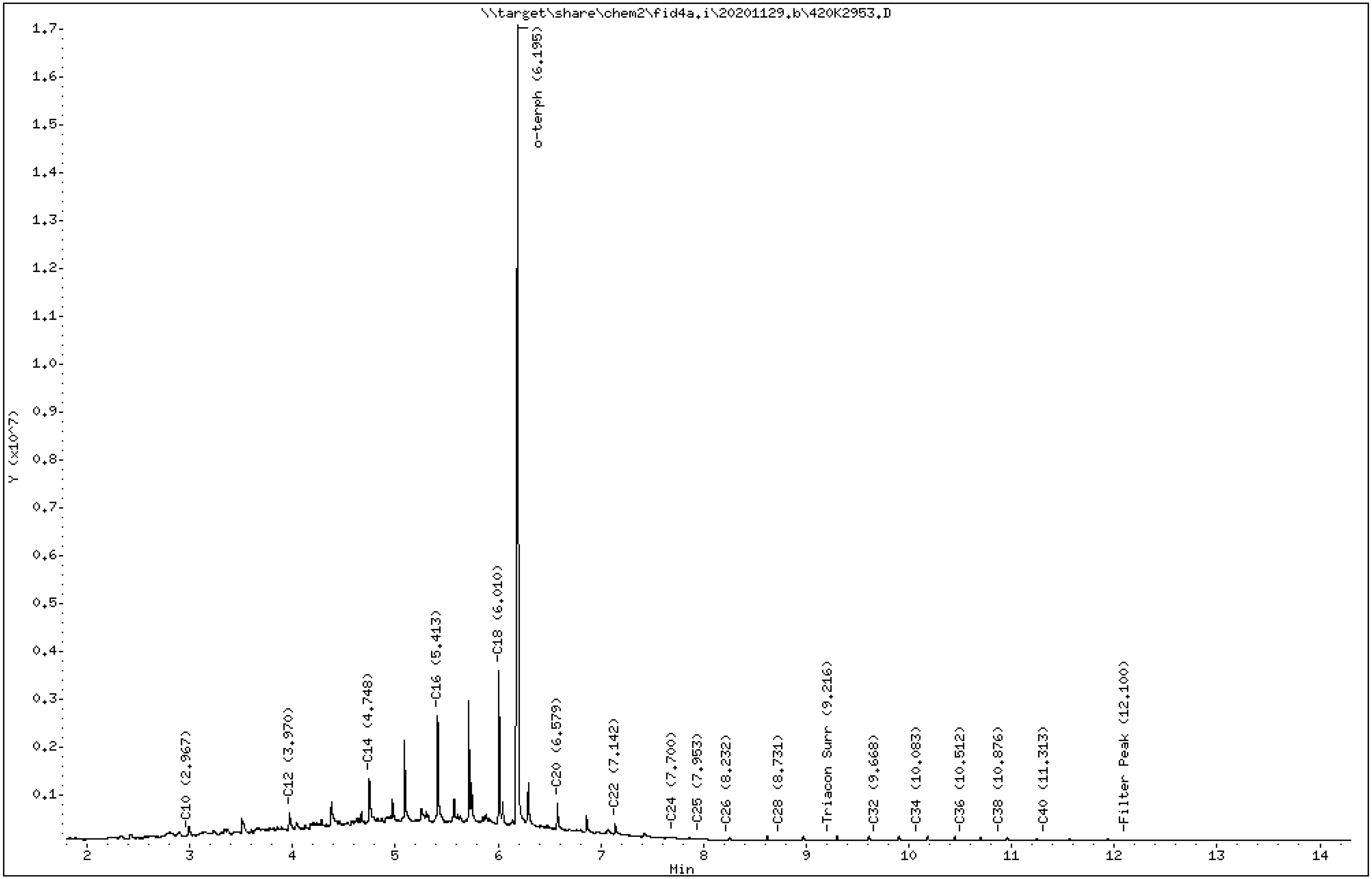
Instrument: fid4a.i

Sample Info: SEQ-CCV5

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201129.b/420K2953.D
Method: 20201129.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCV5
Client ID:
Injection: 30-NOV-2020 11:14
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.858	-0.014	31754	28084	WATPHD	(C12-C24)	77577392	486.9
C10	2.967	-0.003	95652	103773	WATPHM	(C24-C38)	1288930	12.7
C12	3.970	0.006	570123	1324446	AK102	(C10-C25)	90432302	462.6
C14	4.748	-0.000	1277287	1869859	AK103	(C25-C36)	975708	13.3
C16	5.413	-0.001	2590435	2508962	OR.DIES	(C10-C28)	90882656	463.7
C18	6.010	-0.002	3527198	3114914				
C20	6.579	-0.004	768325	1045752	JET-A	(C10-C18)	69947784	421.8
C22	7.142	-0.002	336181	689988				
C24	7.700	0.007	62719	85855				
C25	7.953	-0.008	16209	4840				
C26	8.232	0.009	7434	2578				
C28	8.731	0.004	1719	486				
C32	9.668	0.012	713	206				
C34	10.083	0.005	1311	485				
Filter Peak	12.100	0.002	6749	5015	BUNKERC	(C10-C38)	91562968	2319.4
C36	10.512	0.030	3278	2274				
C38	10.876	0.004	5763	2000				
C40	11.313	-0.000	6815	3043				
o-terph	6.195	-0.003	16662476	17784850				
Triacon Surr	9.216	-0.015	802	256	NAS DIES	(C10-C24)	90274038	462.6

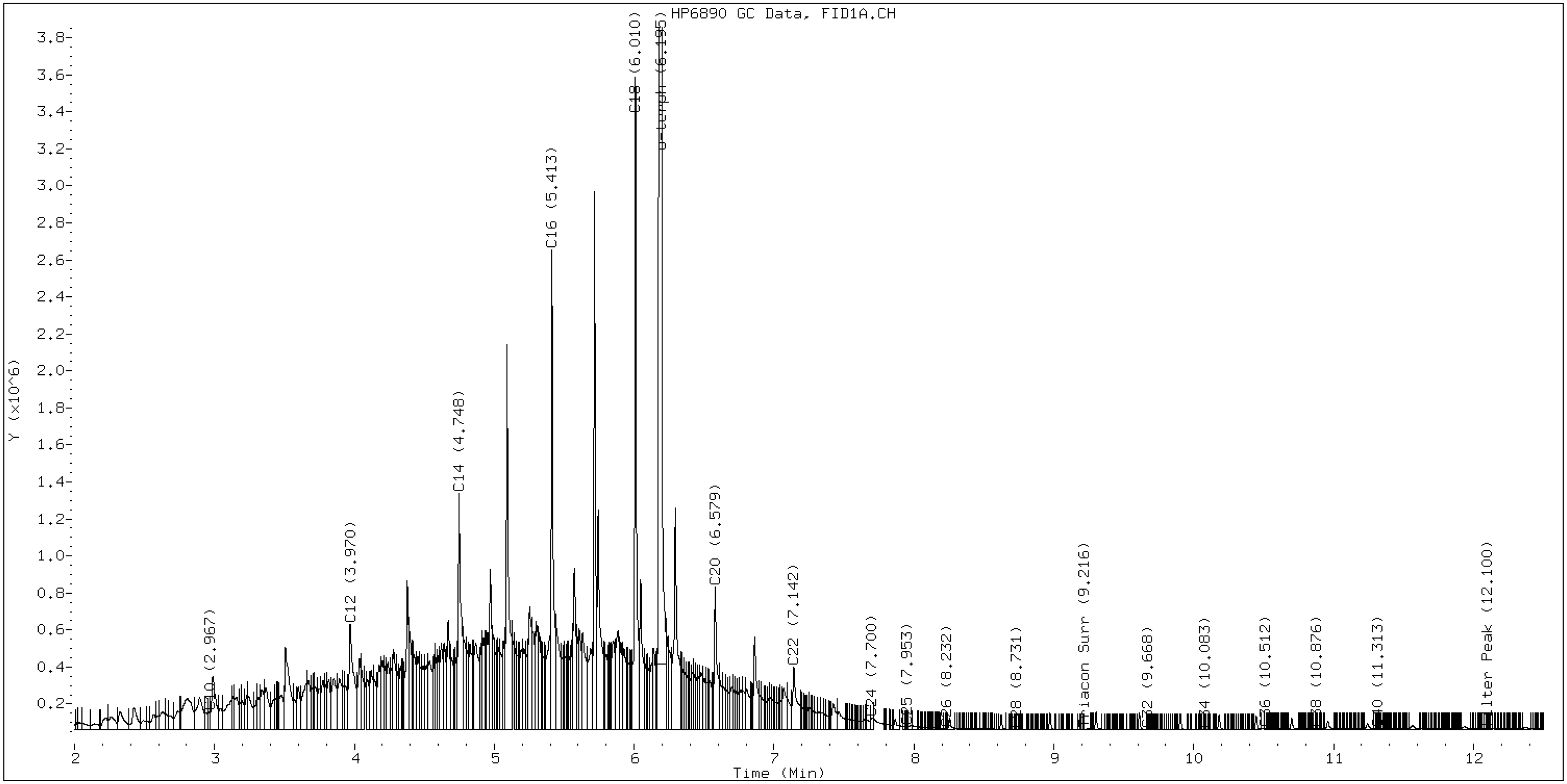
Range Times: NW Diesel(3.964 - 7.693)   AK102(2.97 - 7.96)   Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.87)   AK103(7.96 - 10.48)   OR Diesel(2.97 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	17784850	86.9	M
Triacontane	256	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

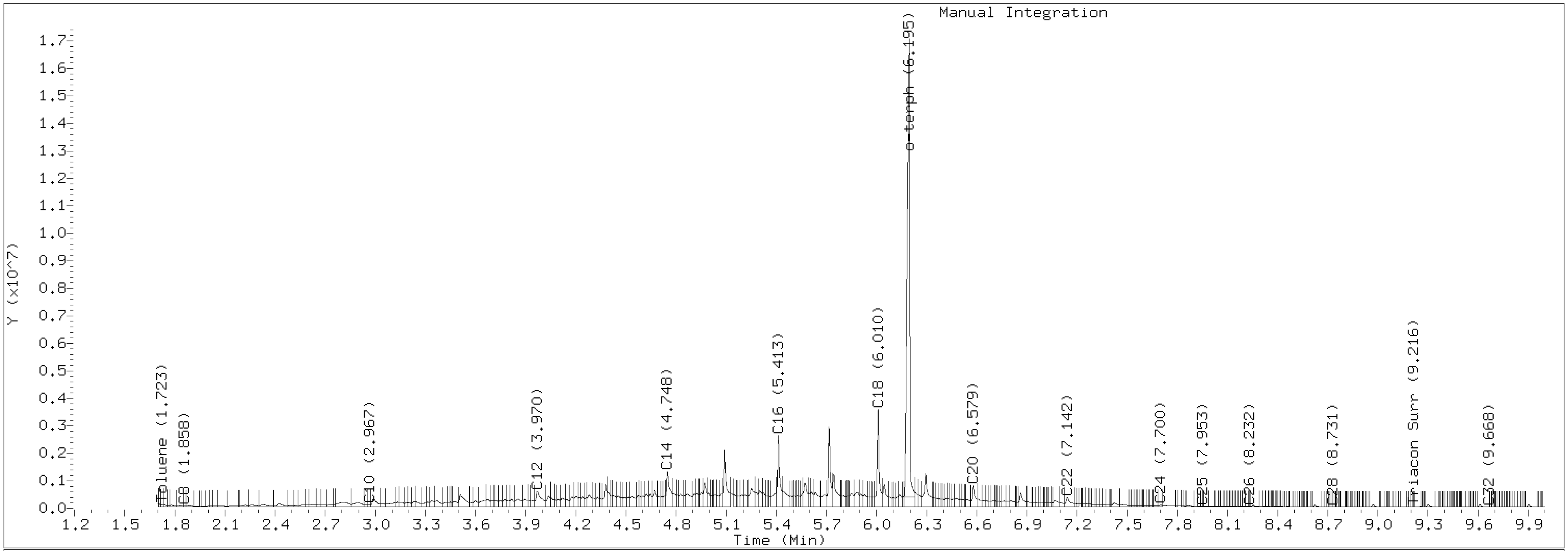
Datafile: FID4A, 20201129.b/420K2953.D SEQ-CCV5

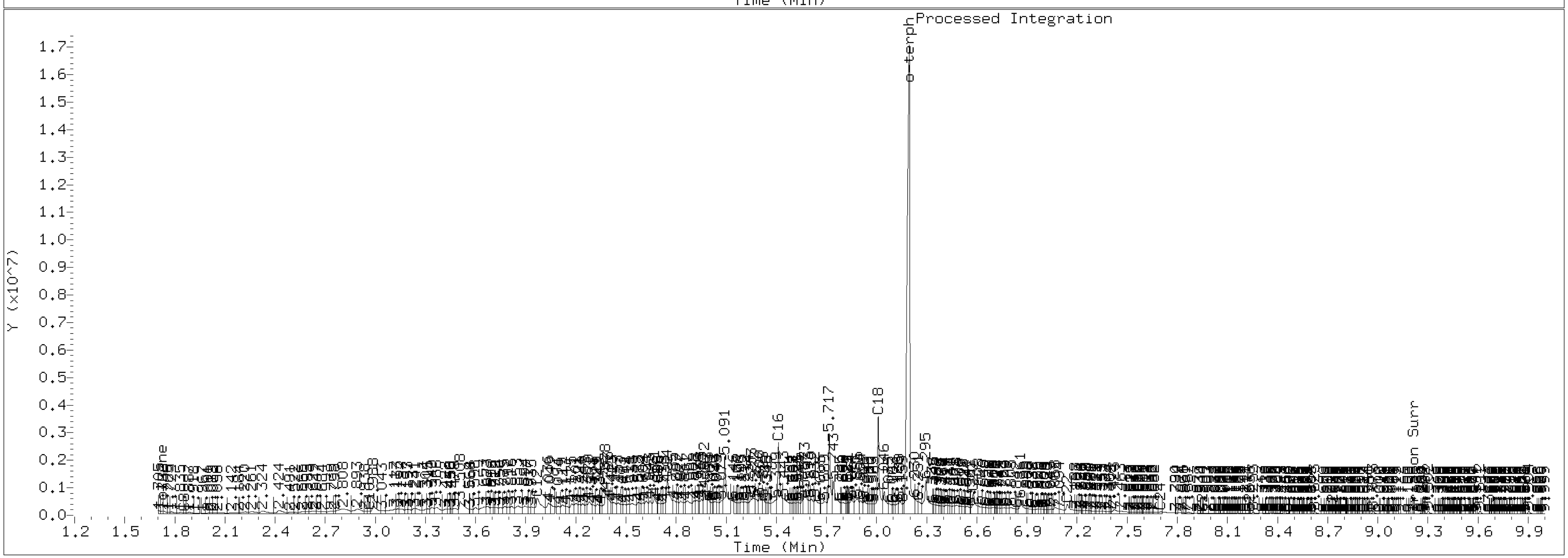


TPH Manual Integrations Report

Datafile: FID4A, 20201129.b/420K2953.D Injection: 30-NOV-2020 11:14

Lab ID:SEQ-CCV5





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420K2954.D	Calibration Date:	10/25/2019
Sequence:	SIK0411	Injection Date:	11/30/20
Lab Sample ID:	SIK0411-CCV6	Injection Time:	11:34
Sequence Name:	MOIL CCV		

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1130	101166	113997.2		12.7	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201129.b\420K2954.D

Date : 30-NOV-2020 11:34

Client ID:

Sample Info: SEQ-CCV6

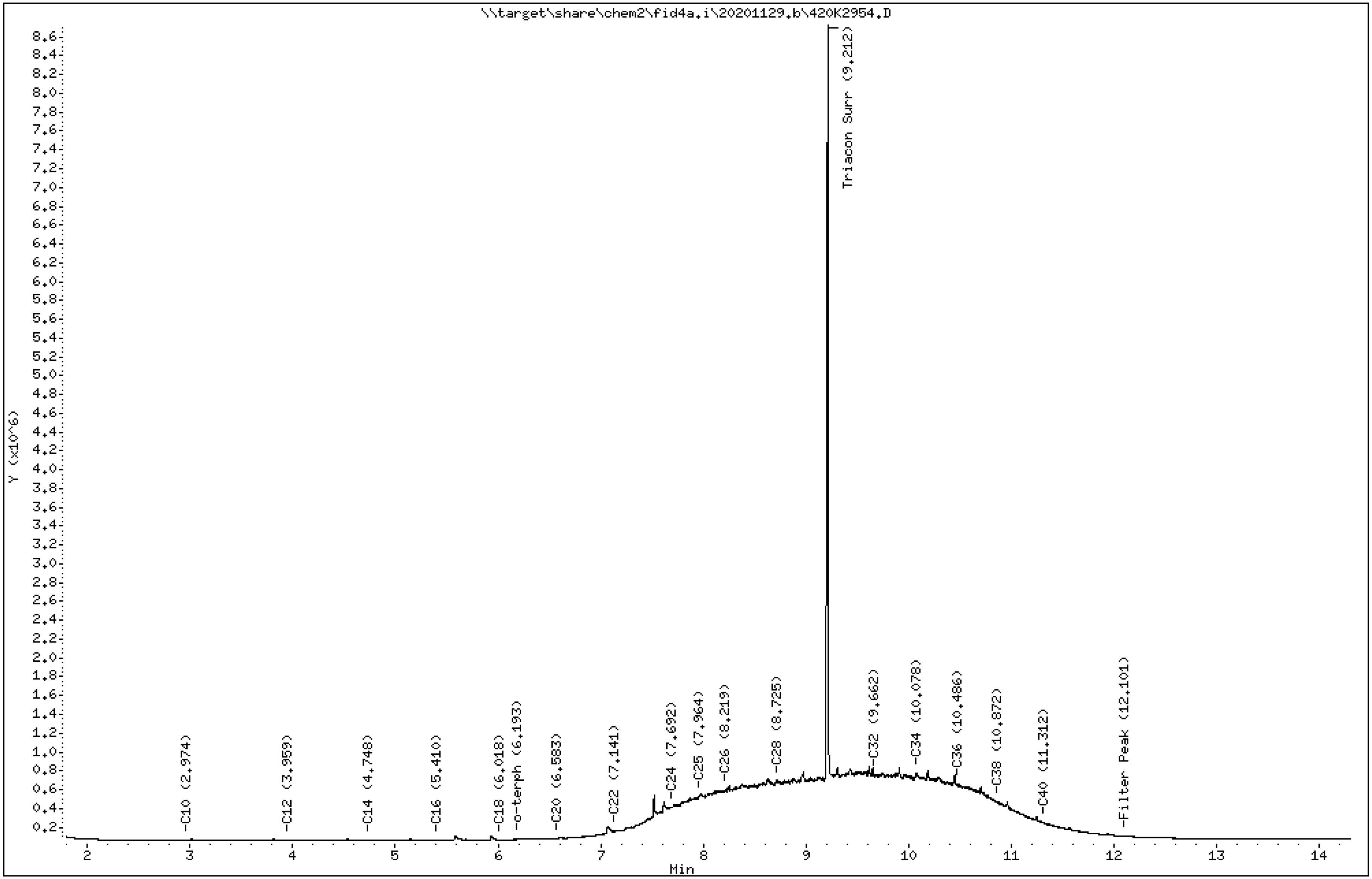
Column phase: RTX-1

Page 1

Instrument: fid4a.i

Operator: JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201129.b/420K2954.D
Method: 20201129.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCV6
Client ID:
Injection: 30-NOV-2020 11:34
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.872	0.001	35867	61994	WATPHD	(C12-C24)	10267796	64.4
C10	2.974	0.004	2694	1943	WATPHM	(C24-C38)	113997179	1126.8
C12	3.959	-0.005	1570	1335	AK102	(C10-C25)	14644558	74.9
C14	4.748	0.000	2904	2510	AK103	(C25-C36)	98545203	1346.1
C16	5.410	-0.004	2582	2106	OR.DIES	(C10-C28)	43054035	219.7
C18	6.018	0.006	5380	1329				
C20	6.583	0.000	20055	15245	JET-A	(C10-C18)	585507	3.5
C22	7.141	-0.003	98255	52591				
C24	7.692	-0.001	355528	106076				
C25	7.964	0.003	471063	279733				
C26	8.219	-0.004	532435	236776				
C28	8.725	-0.002	628492	218619				
C32	9.662	0.006	691450	137893				
C34	10.078	-0.001	708681	245557				
Filter Peak	12.101	0.003	42635	12649	BUNKERC	(C10-C38)	124394767	3151.1
C36	10.486	0.004	589171	262737				
C38	10.872	-0.001	403793	139410				
C40	11.312	-0.002	189370	120731				
o-terph	6.193	-0.005	19025	51268				
Triacon Surr	9.212	-0.018	8015942	7874508	NAS DIES	(C10-C24)	10397588	53.3

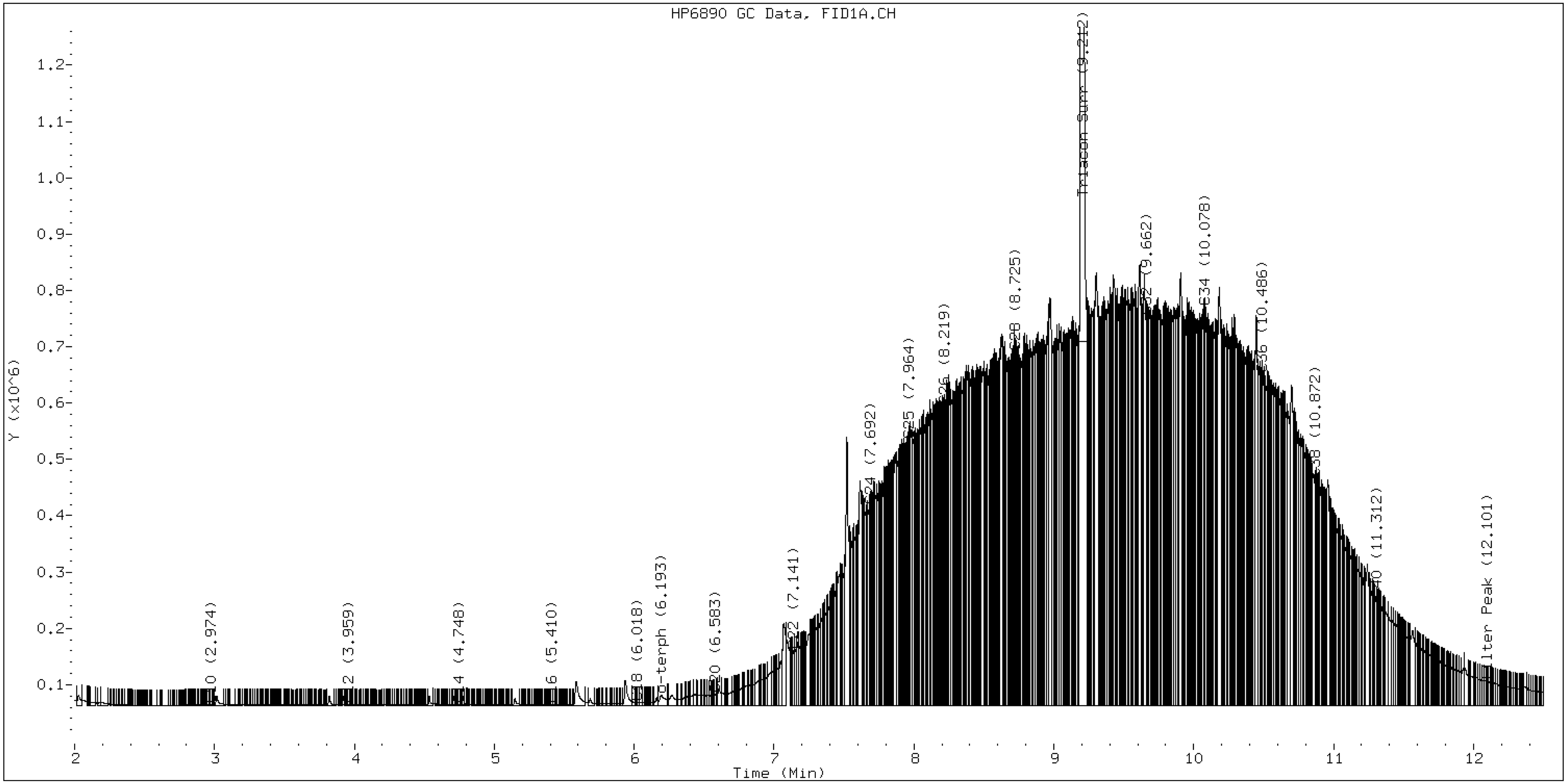
Range Times: NW Diesel(3.964 - 7.693) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.87) AK103(7.96 - 10.48) OR Diesel(2.97 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	51268	0.3	
Triacontane	7874508	53.1	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

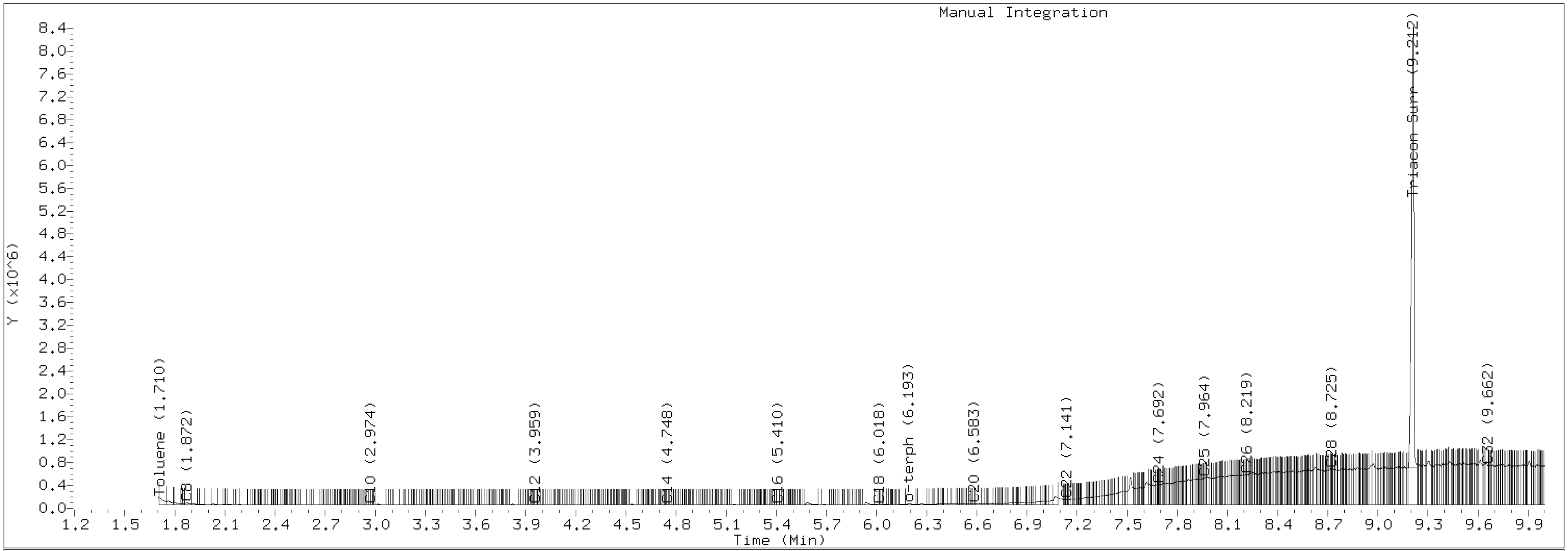
Datafile: FID4A, 20201129.b/420K2954.D SEQ-CCV6

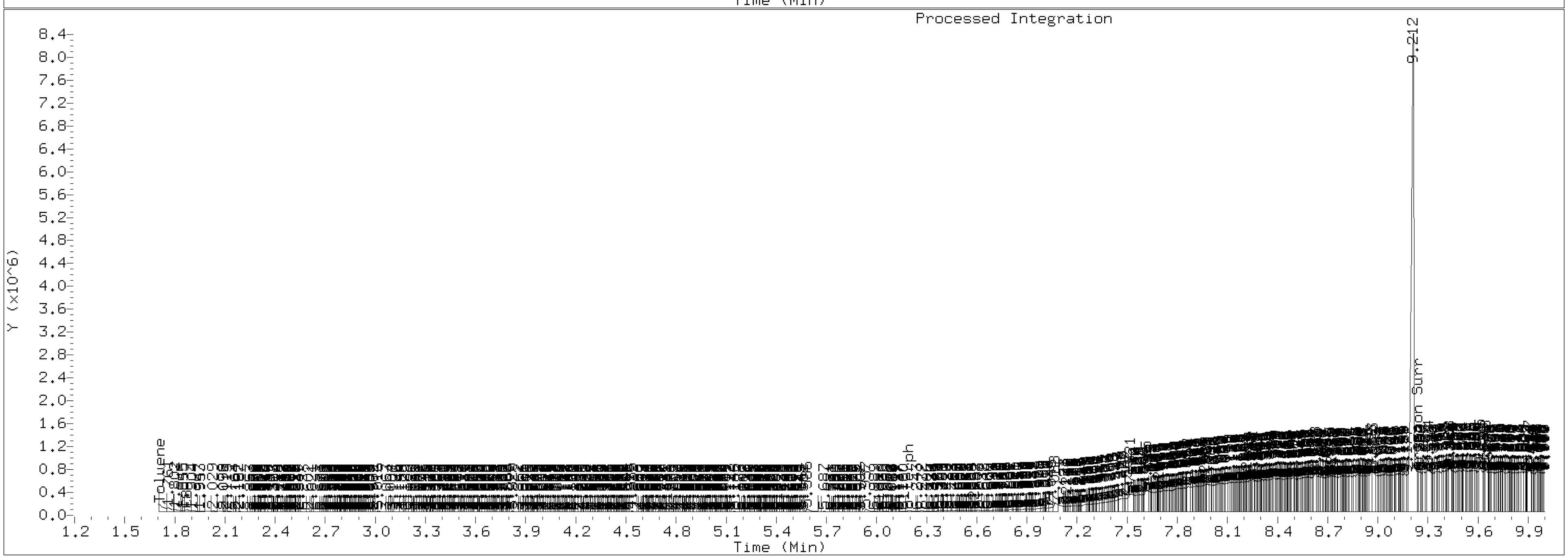


TPH Manual Integrations Report

Datafile: FID4A, 20201129.b/420K2954.D Injection: 30-NOV-2020 11:34

Lab ID:SEQ-CCV6





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420K2956.D
Calibration Date: 10/25/2019
Sequence: SIK0411
Injection Date: 11/30/20
Lab Sample ID: SIK0411-CCV7
Injection Time: 14:42
Sequence Name: DIESEL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	481	159336.7	153191.6		-3.9	+/-15
o-Terphenyl	A	90.000	90.0	204701.9	204621.7		0.0	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201129.b\420K2956.D

Date : 30-NOV-2020 14:42

Client ID:

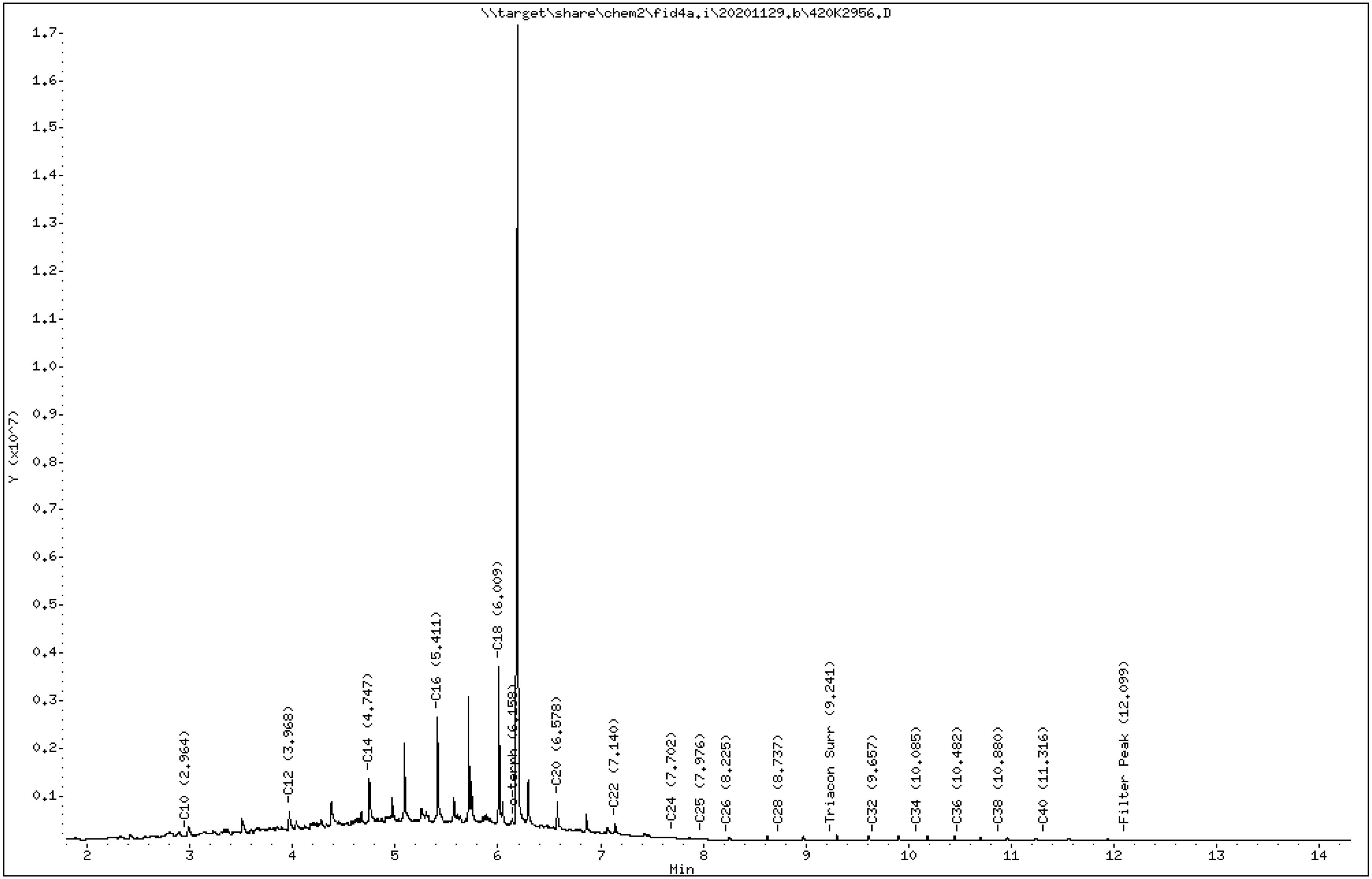
Instrument: fid4a.i

Sample Info: SEQ-CCV7

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201129.b/420K2956.D
Method: 20201129.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCV7
Client ID:
Injection: 30-NOV-2020 14:42
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.859	-0.012	27544	26308	WATPHD	(C12-C24)	76595819	480.7
C10	2.964	-0.006	93152	101851	WATPHM	(C24-C38)	1394764	13.8
C12	3.968	0.004	596985	1007053	AK102	(C10-C25)	89526406	458.0
C14	4.747	-0.001	1279630	1842164	AK103	(C25-C36)	998053	13.6
C16	5.411	-0.002	2567810	2866821	OR.DIES	(C10-C28)	89973228	459.0
C18	6.009	-0.003	3652684	3167368				
C20	6.578	-0.005	806243	974826	JET-A	(C10-C18)	69312234	417.9
C22	7.140	-0.004	356662	921820				
C24	7.702	0.009	67558	226861				
C25	7.976	0.014	21871	27707				
C26	8.225	0.002	8027	2781				
C28	8.737	0.010	2154	2086				
C32	9.657	0.002	775	249				
C34	10.085	0.006	1358	691				
Filter Peak	12.099	0.001	7411	5500	BUNKERC	(C10-C38)	90689544	2297.3
C36	10.482	0.000	4176	3772				
C38	10.880	0.008	6262	3417				
C40	11.316	0.003	7536	3364				
o-terph	6.195	-0.003	16732004	18415948				
Triacon Surr	9.241	0.011	4813	5299	NAS DIES	(C10-C24)	89294779	457.6

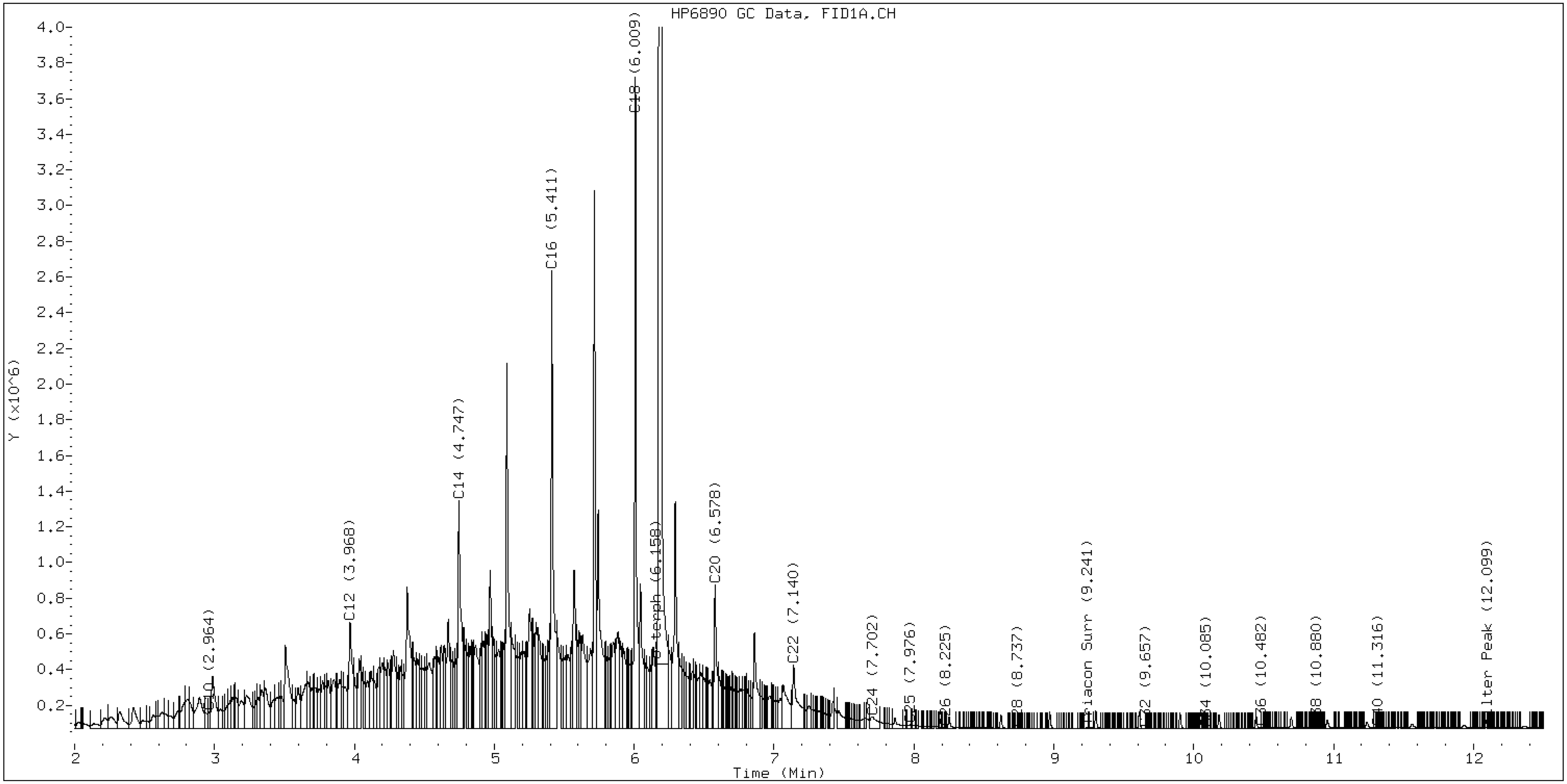
Range Times: NW Diesel(3.964 - 7.693) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.87) AK103(7.96 - 10.48) OR Diesel(2.97 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	18415948	90.0	M
Triacontane	5299	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

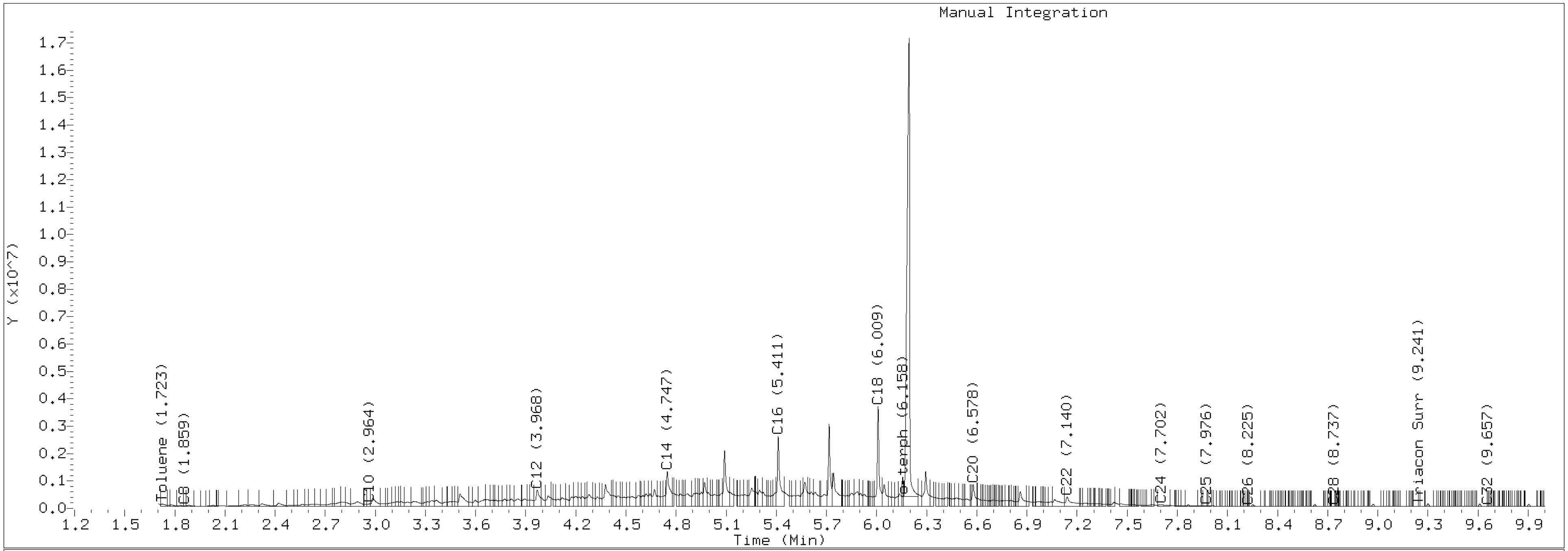
Datafile: FID4A, 20201129.b/420K2956.D SEQ-CCV7

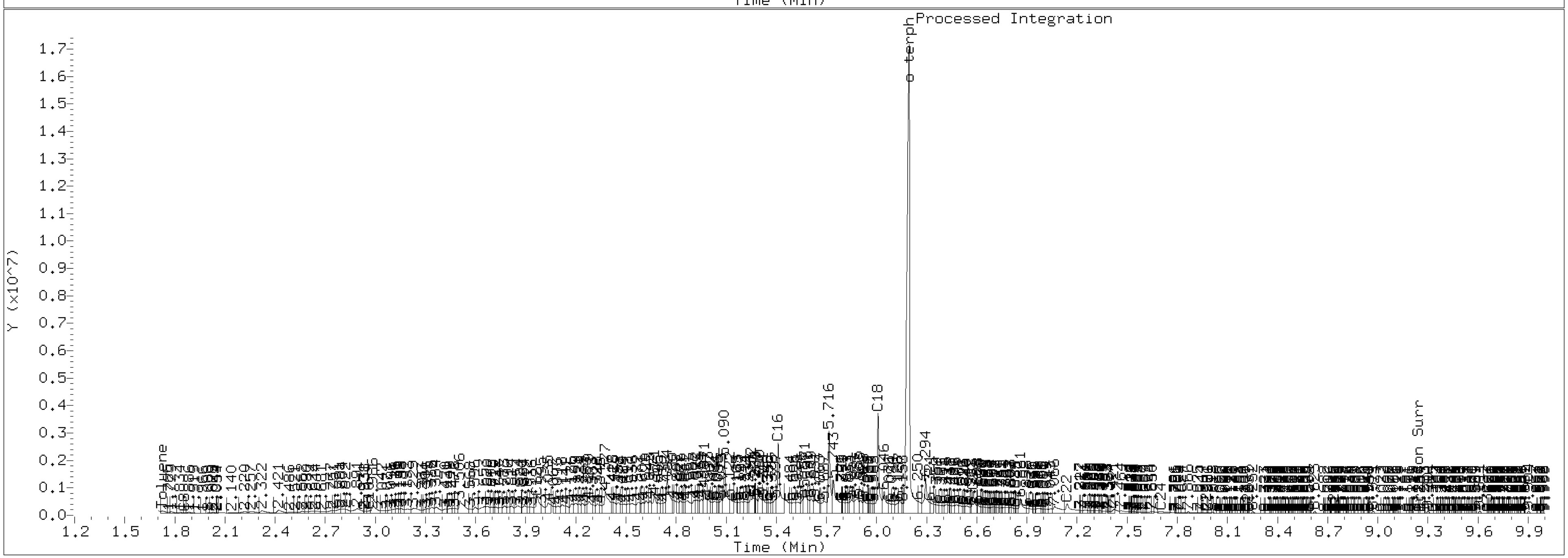


TPH Manual Integrations Report

Datafile: FID4A, 20201129.b/420K2956.D Injection: 30-NOV-2020 14:42

Lab ID:SEQ-CCV7





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420K2957.D
Calibration Date: 10/25/2019
Sequence: SIK0411
Injection Date: 11/30/20
Lab Sample ID: SIK0411-CCV8
Injection Time: 15:02
Sequence Name: MOIL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1020	101166	103285.5		2.1	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201129.b\420K2957.D

Date : 30-NOV-2020 15:02

Client ID:

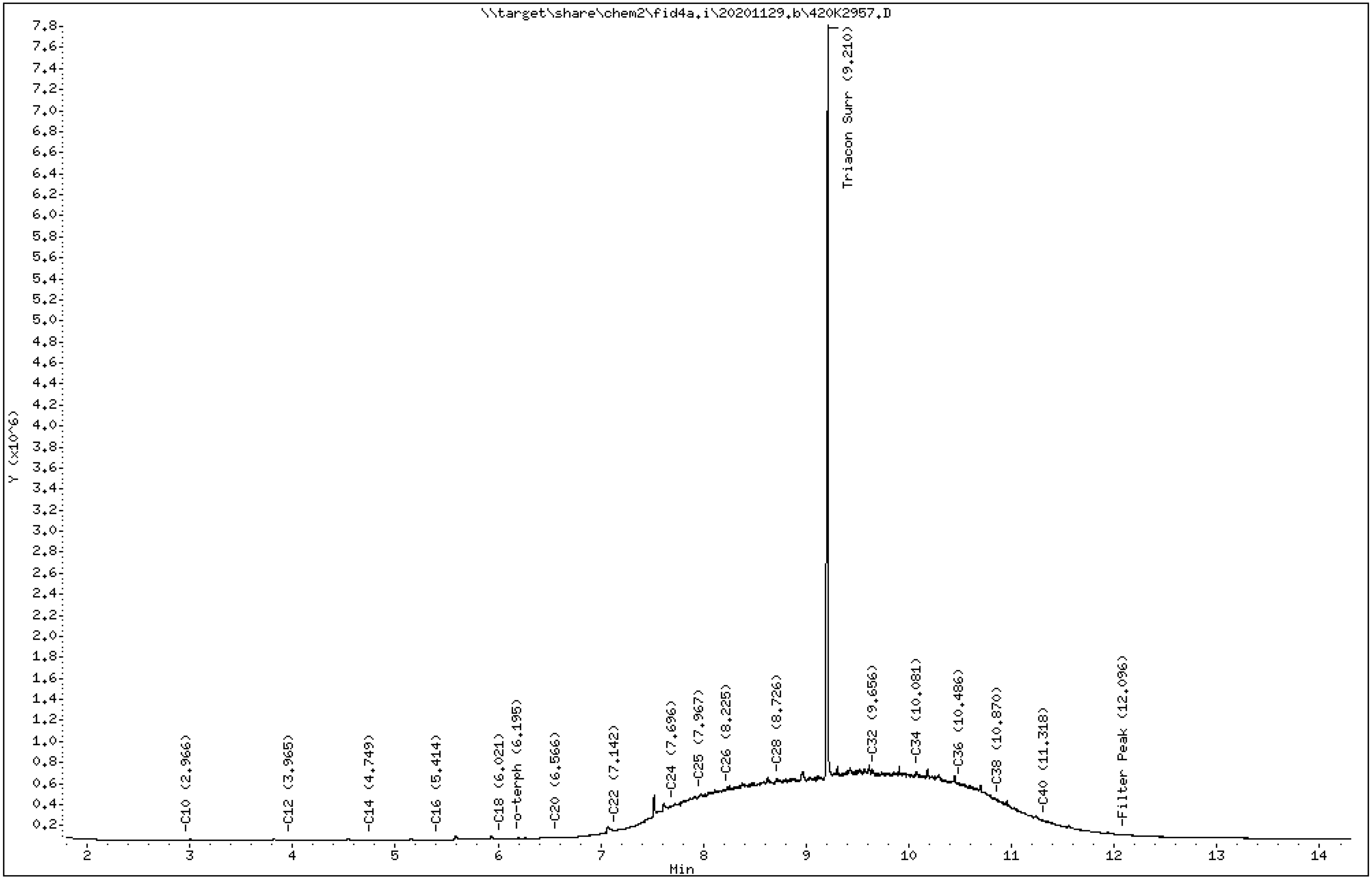
Instrument: fid4a.i

Sample Info: SEQ-CCV8

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201129.b/420K2957.D
Method: 20201129.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCV8
Client ID:
Injection: 30-NOV-2020 15:02
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.837	-0.034	29418	117360	WATPHD	(C12-C24)	10453140	65.6
C10	2.966	-0.003	1815	801	WATPHM	(C24-C38)	103285457	1021.0
C12	3.965	0.001	3747	2028	AK102	(C10-C25)	14445556	73.9
C14	4.749	0.001	5553	3866	AK103	(C25-C36)	88907640	1214.5
C16	5.414	0.000	6111	3618	OR.DIES	(C10-C28)	40314478	205.7
C18	6.021	0.009	9190	3653				
C20	6.566	-0.017	21072	17755	JET-A	(C10-C18)	1007256	6.1
C22	7.142	-0.002	93225	46168				
C24	7.696	0.002	329711	276646				
C25	7.967	0.006	433246	444729				
C26	8.225	0.002	486128	214435				
C28	8.726	-0.002	569489	169954				
C32	9.656	0.000	658464	417920				
C34	10.081	0.002	647121	256271				
Filter Peak	12.096	-0.002	51524	25456	BUNKERC	(C10-C38)	113932380	2886.0
C36	10.486	0.004	549823	190349				
C38	10.870	-0.002	372665	129825				
C40	11.318	0.004	182907	72339				
o-terph	6.195	-0.003	20610	40449				
Triacon Surr	9.210	-0.020	7164677	7119504	NAS DIES	(C10-C24)	10646923	54.6

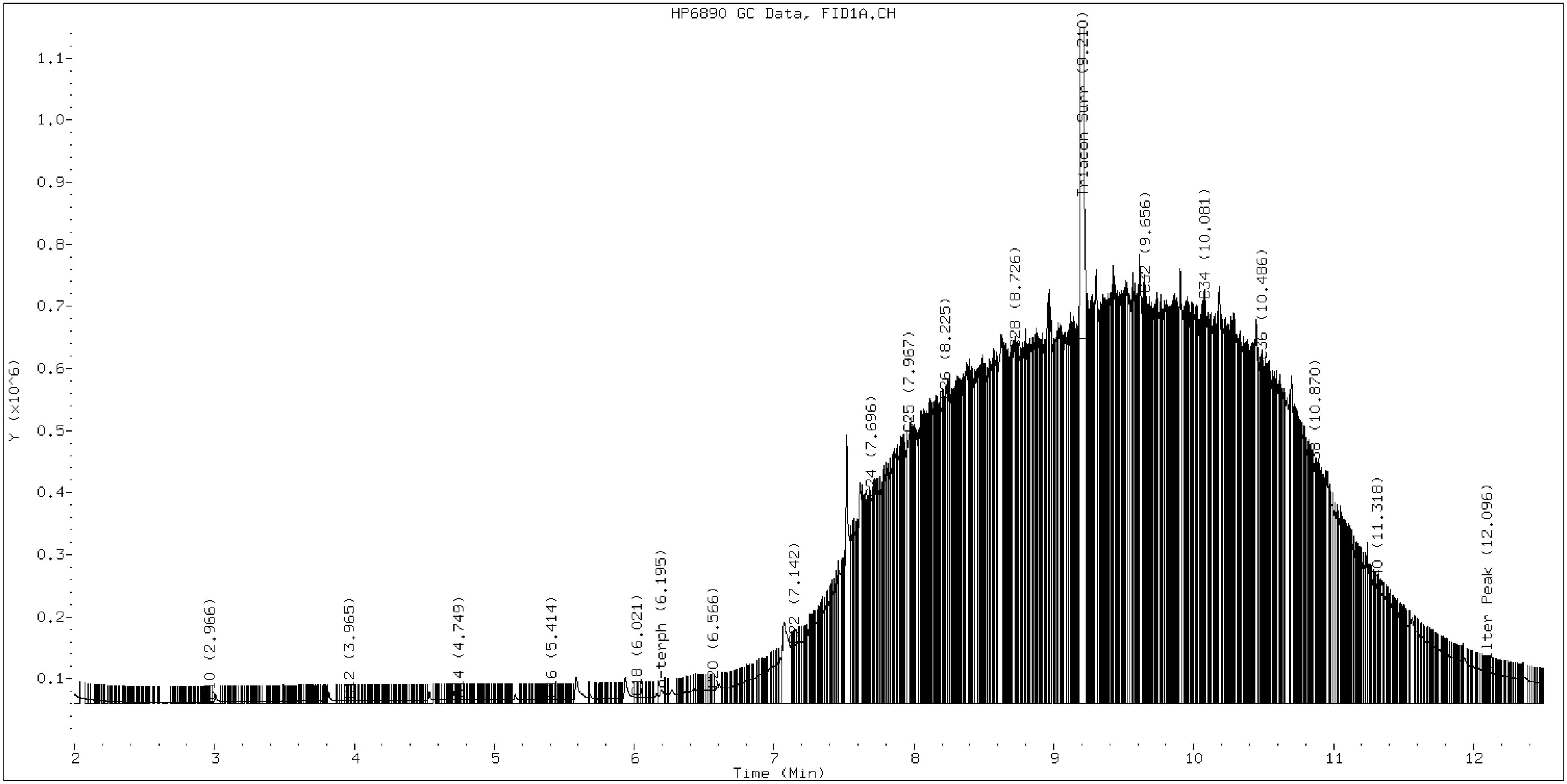
Range Times: NW Diesel(3.964 - 7.693) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.87) AK103(7.96 - 10.48) OR Diesel(2.97 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	40449	0.2	
Triacontane	7119504	48.0	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

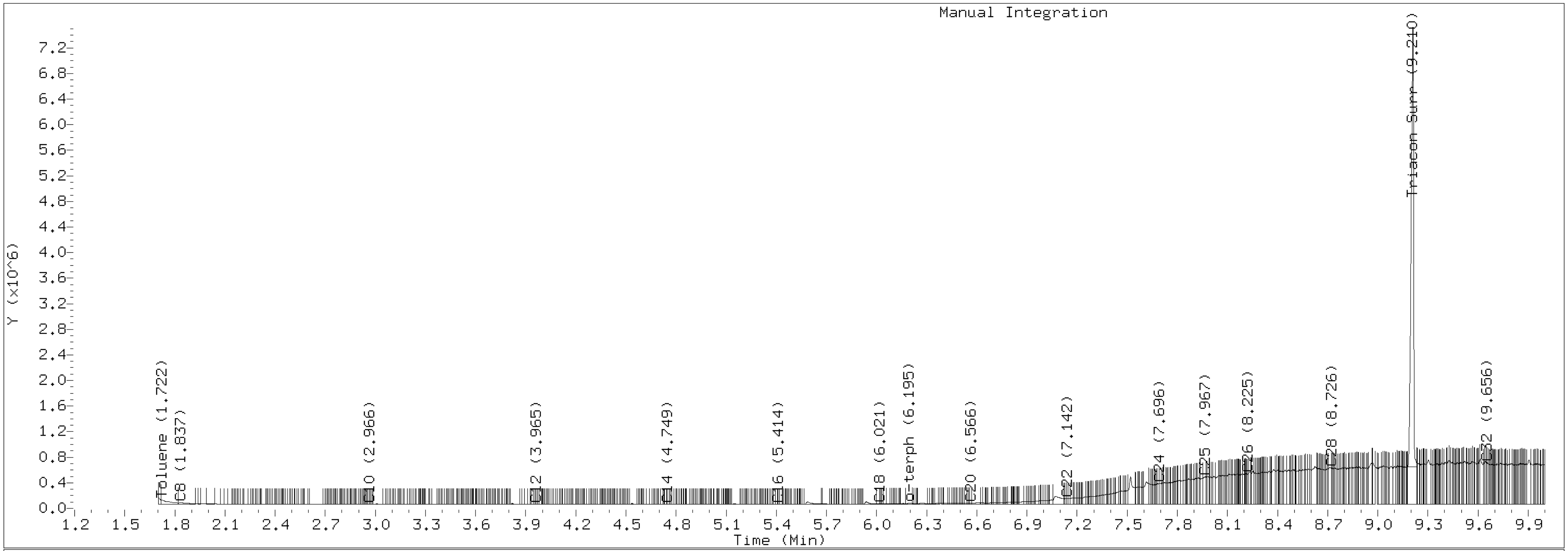
Datafile: FID4A, 20201129.b/420K2957.D SEQ-CCV8

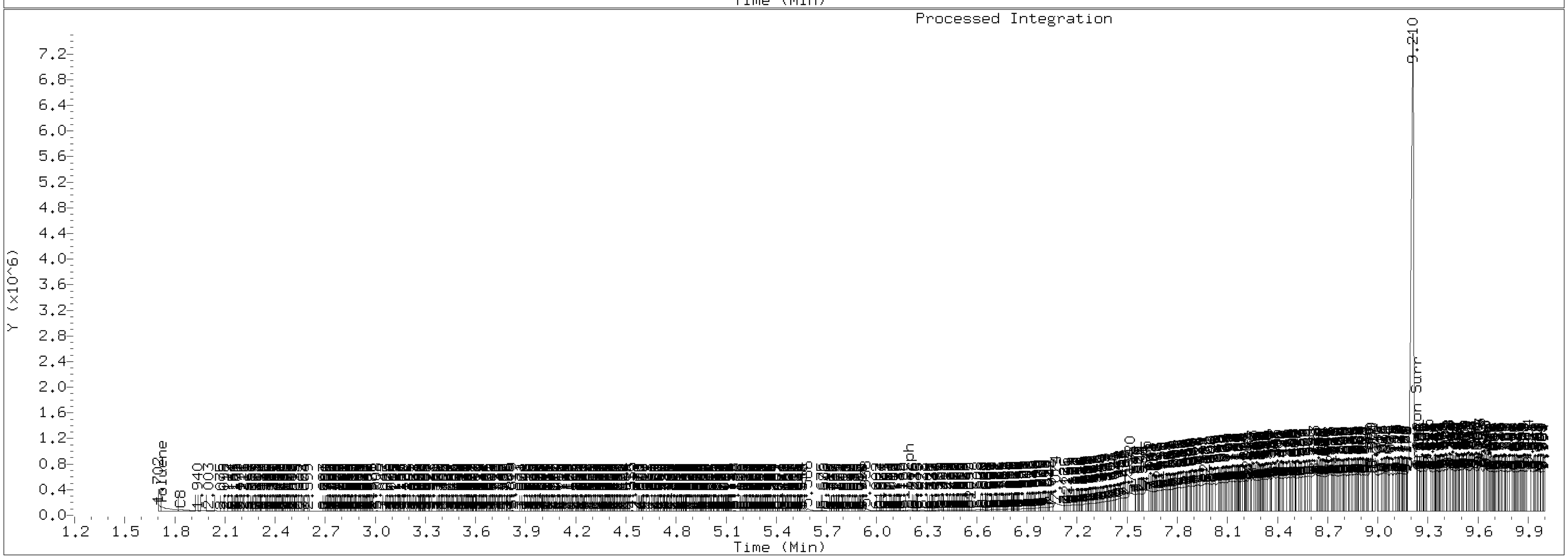


TPH Manual Integrations Report

Datafile: FID4A, 20201129.b/420K2957.D Injection: 30-NOV-2020 15:02

Lab ID:SEQ-CCV8





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420K2809.D	Calibration Date:	10/25/2019
Sequence:	SIK0413	Injection Date:	11/28/20
Lab Sample ID:	SIK0413-CCV1	Injection Time:	19:07
Sequence Name:	DIESEL CCV		

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	470	159336.7	149911.3		-5.9	+/-15
o-Terphenyl	A	90.000	83.8	204701.9	190521		-6.9	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201128.b\420K2809.D

Date : 28-NOV-2020 19:07

Client ID:

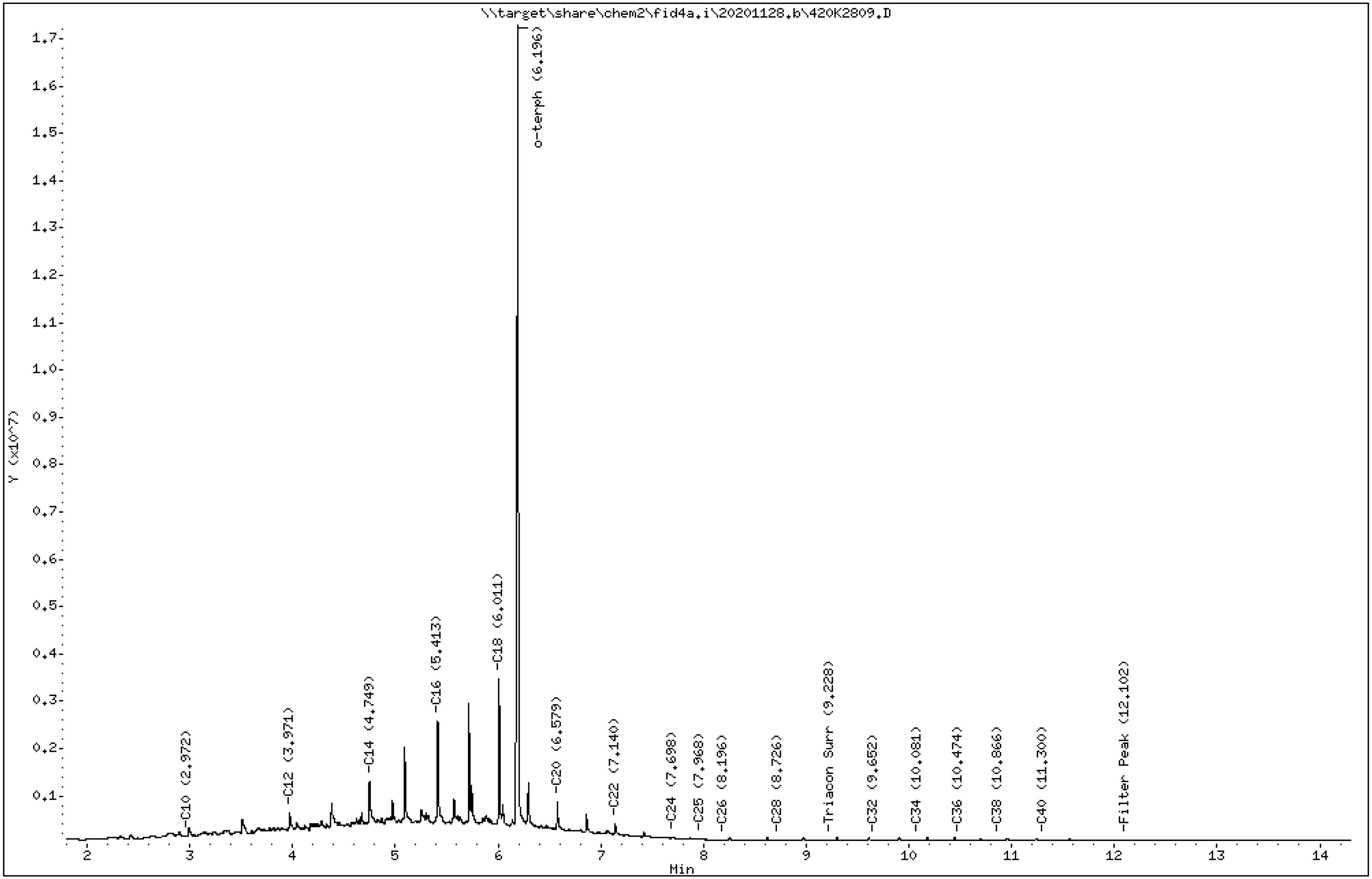
Instrument: fid4a.i

Sample Info: SEQ-CCVD

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201128.b/420K2809.D
Method: 20201128.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCVD
Client ID:
Injection: 28-NOV-2020 19:07
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.880	-0.028	37250	110779	WATPHD	(C12-C24)	74955675	470.4
C10	2.972	-0.009	89853	44679	WATPHM	(C24-C38)	1243867	12.3
C12	3.971	0.004	573249	1288711	AK102	(C10-C25)	87392630	447.0
C14	4.749	0.001	1235780	1814213	AK103	(C25-C36)	810502	11.1
C16	5.413	-0.001	2518110	2410873	OR.DIES	(C10-C28)	87777750	447.8
C18	6.011	-0.002	3412723	3116712				
C20	6.579	-0.004	815259	1035536	JET-A	(C10-C18)	67424543	406.5
C22	7.140	-0.005	354530	745715				
C24	7.698	0.004	67133	197371				
C25	7.968	0.006	23185	23132				
C26	8.196	-0.027	7990	4736				
C28	8.726	-0.002	1425	276				
C32	9.652	-0.003	1069	509				
C34	10.081	0.003	1800	1132				
Filter Peak	12.102	0.002	10053	3490	BUNKERC	(C10-C38)	88370202	2238.5
C36	10.474	-0.003	5567	3528				
C38	10.866	0.003	8405	7931				
C40	11.300	-0.002	9084	8107				
o-terph	6.196	-0.004	16817492	17146890				
Triacon Surr	9.228	-0.003	6540	8694	NAS DIES	(C10-C24)	87126335	446.5

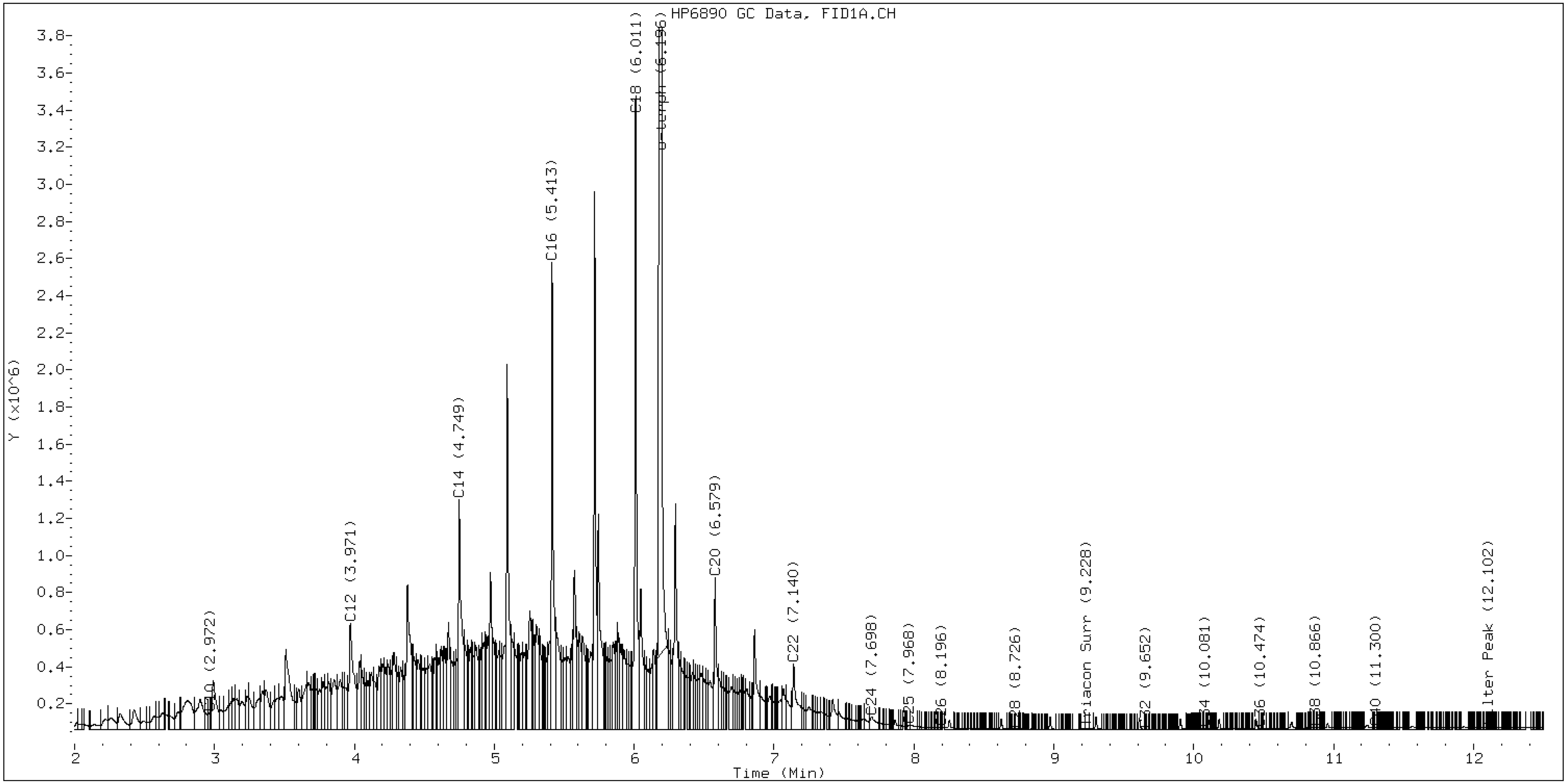
Range Times: NW Diesel(3.967 - 7.693) AK102(2.98 - 7.96) Jet A(2.98 - 6.01)
NW M.Oil(7.69 - 10.86) AK103(7.96 - 10.48) OR Diesel(2.98 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	17146890	83.8	M
Triacontane	8694	0.1	

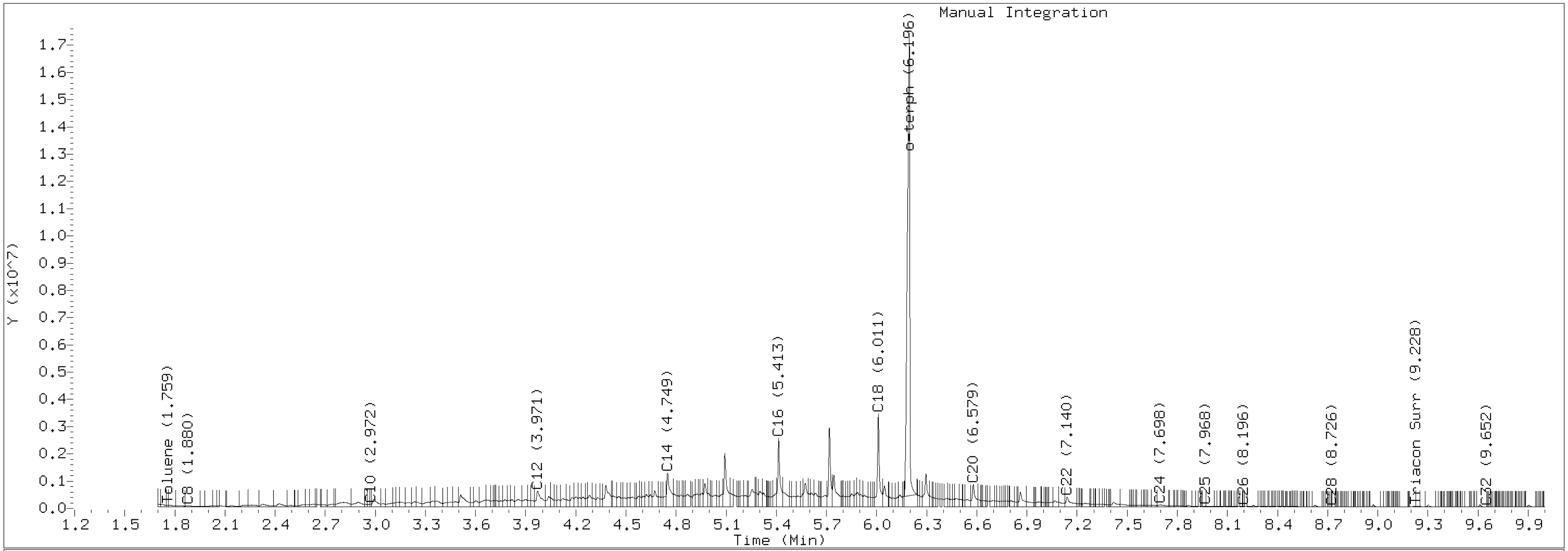
M Indicates the peak was manually integrated

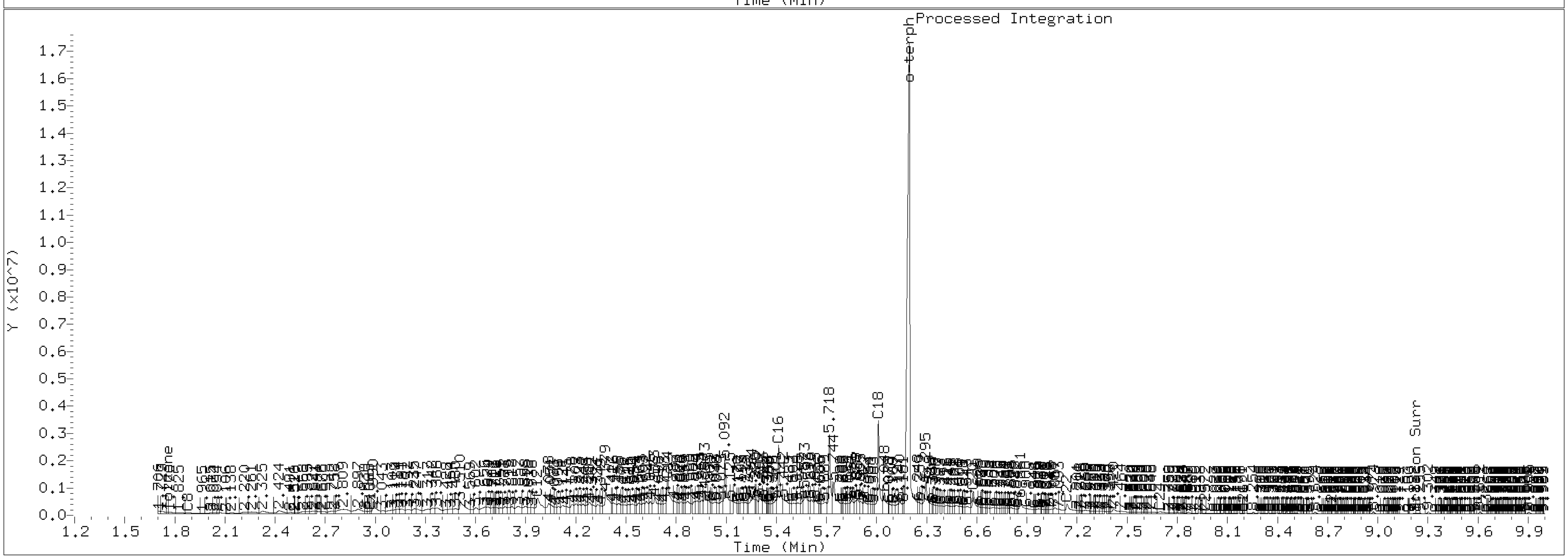
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201128.b/420K2809.D SEQ-CCVD



TPH Manual Integrations Report
Datafile: FID4A, 20201128.b/420K2809.D Injection: 28-NOV-2020 19:07
Lab ID:SEQ-CCVD





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420K2810.D	Calibration Date:	10/25/2019
Sequence:	SIK0413	Injection Date:	11/28/20
Lab Sample ID:	SIK0413-CCV2	Injection Time:	19:28
Sequence Name:	MOIL CCV		

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1050	101166	106657.1		5.4	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201128.b\420K2810.D

Date : 28-NOV-2020 19:28

Client ID:

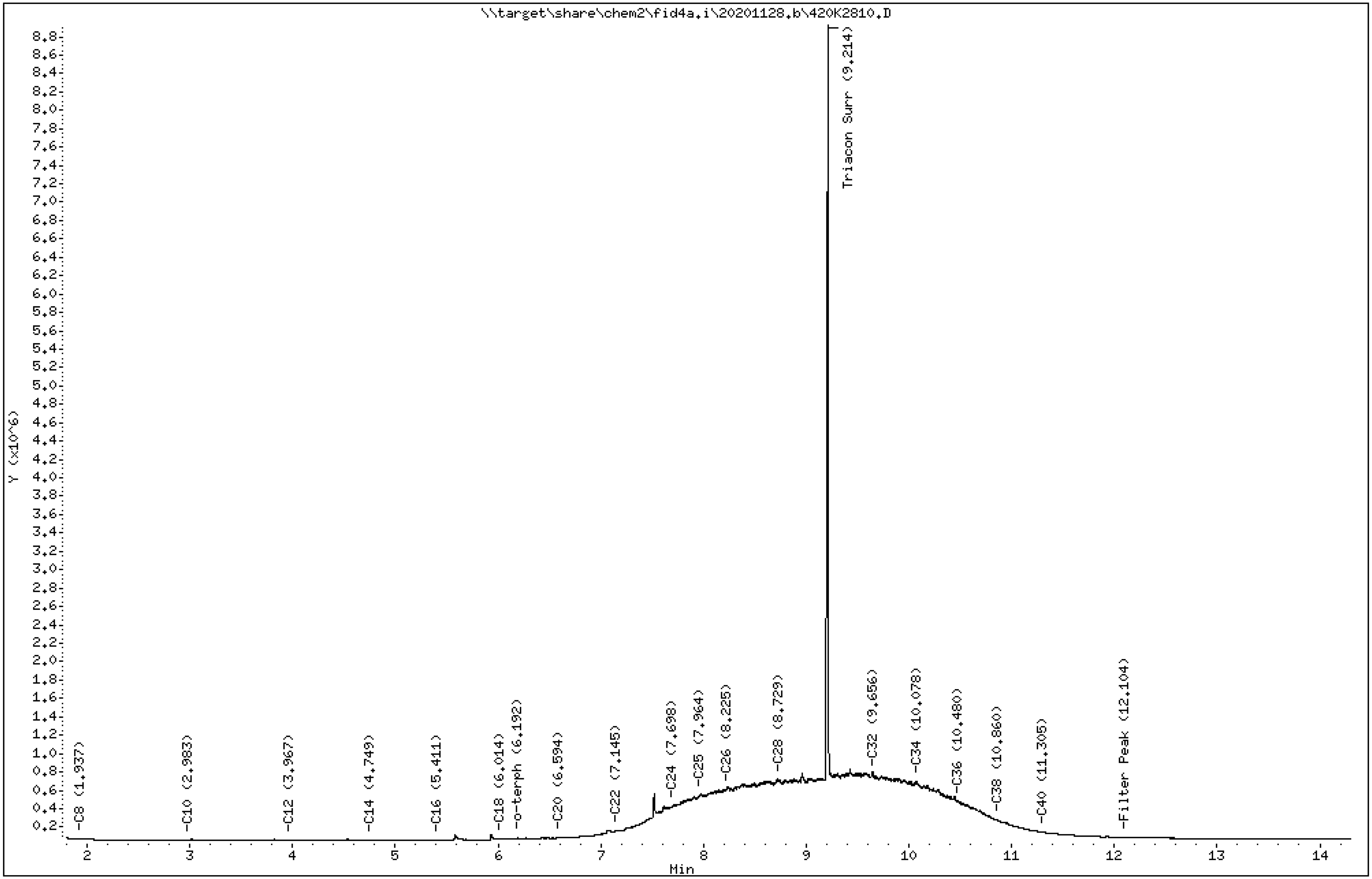
Sample Info: SEQ-CCVE

Column phase: RTX-1

Instrument: fid4a.i

Operator: JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201128.b/420K2810.D
Method: 20201128.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCVE
Client ID:
Injection: 28-NOV-2020 19:28
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.937	0.028	10672	2663	WATPHD	(C12-C24)	11246246	70.6
C10	2.983	0.002	889	174	WATPHM	(C24-C38)	106657071	1054.3
C12	3.967	0.000	2449	973	AK102	(C10-C25)	15811957	80.9
C14	4.749	0.001	4584	2243	AK103	(C25-C36)	95570549	1305.5
C16	5.411	-0.003	4610	1363	OR.DIES	(C10-C28)	44846278	228.8
C18	6.014	0.000	8873	4803				
C20	6.594	0.011	26781	54928	JET-A	(C10-C18)	805002	4.9
C22	7.145	0.000	100581	115256				
C24	7.698	0.004	369347	201143				
C25	7.964	0.003	495363	289515				
C26	8.225	0.002	556587	138088				
C28	8.729	0.002	648833	513637				
C32	9.656	0.001	710326	414131				
C34	10.078	-0.001	641896	596221				
Filter Peak	12.104	0.004	29588	14718	BUNKERC	(C10-C38)	118018314	2989.5
C36	10.480	0.003	423117	126557				
C38	10.860	-0.003	221660	130873				
C40	11.305	0.003	88639	69497				
o-terph	6.192	-0.008	23016	55419				
Triacon Surr	9.214	-0.018	8160014	7978663	NAS DIES	(C10-C24)	11361243	58.2

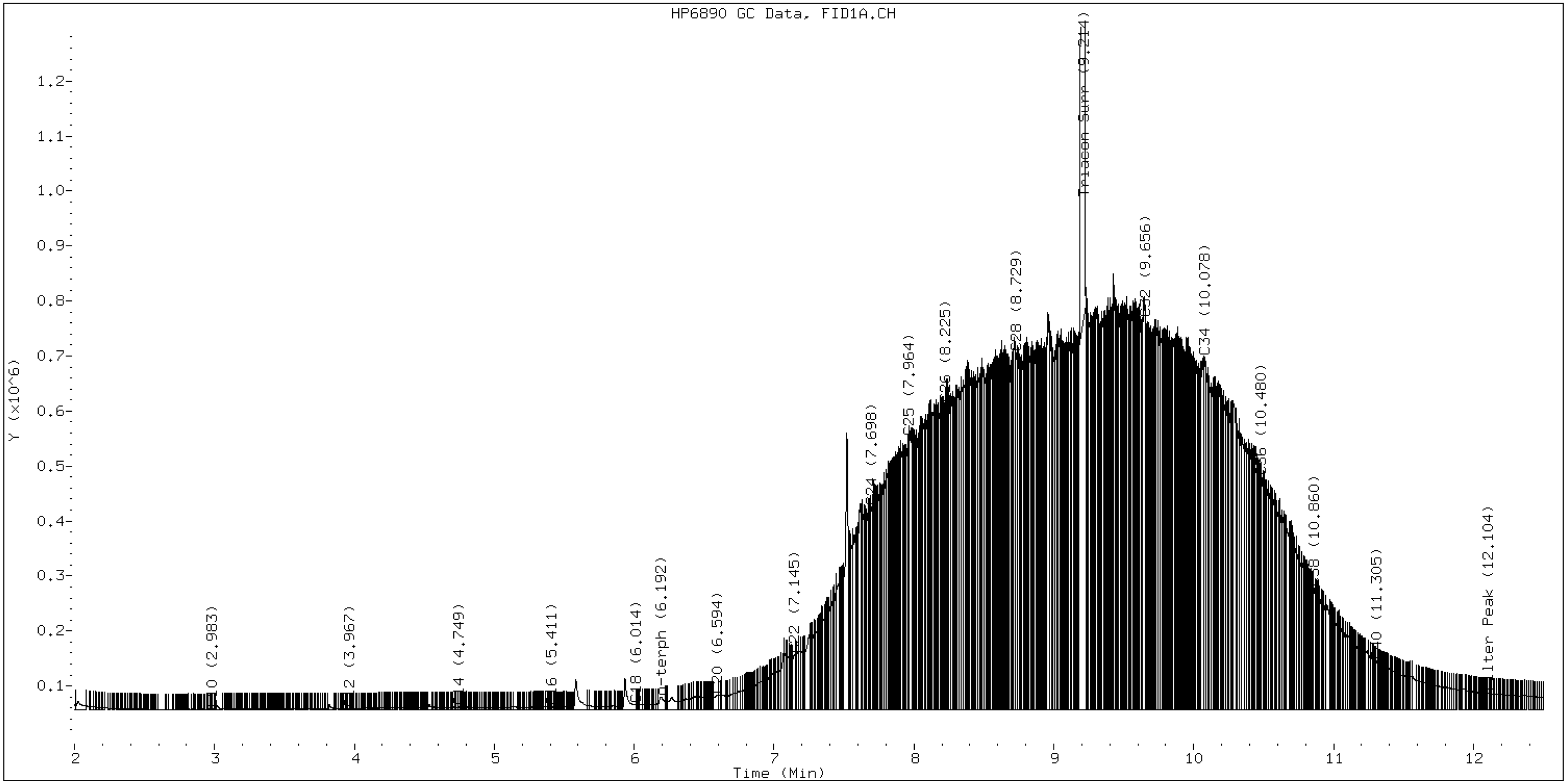
Range Times: NW Diesel(3.967 - 7.693) AK102(2.98 - 7.96) Jet A(2.98 - 6.01)
NW M.Oil(7.69 - 10.86) AK103(7.96 - 10.48) OR Diesel(2.98 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	55419	0.3	
Triacontane	7978663	53.8	M

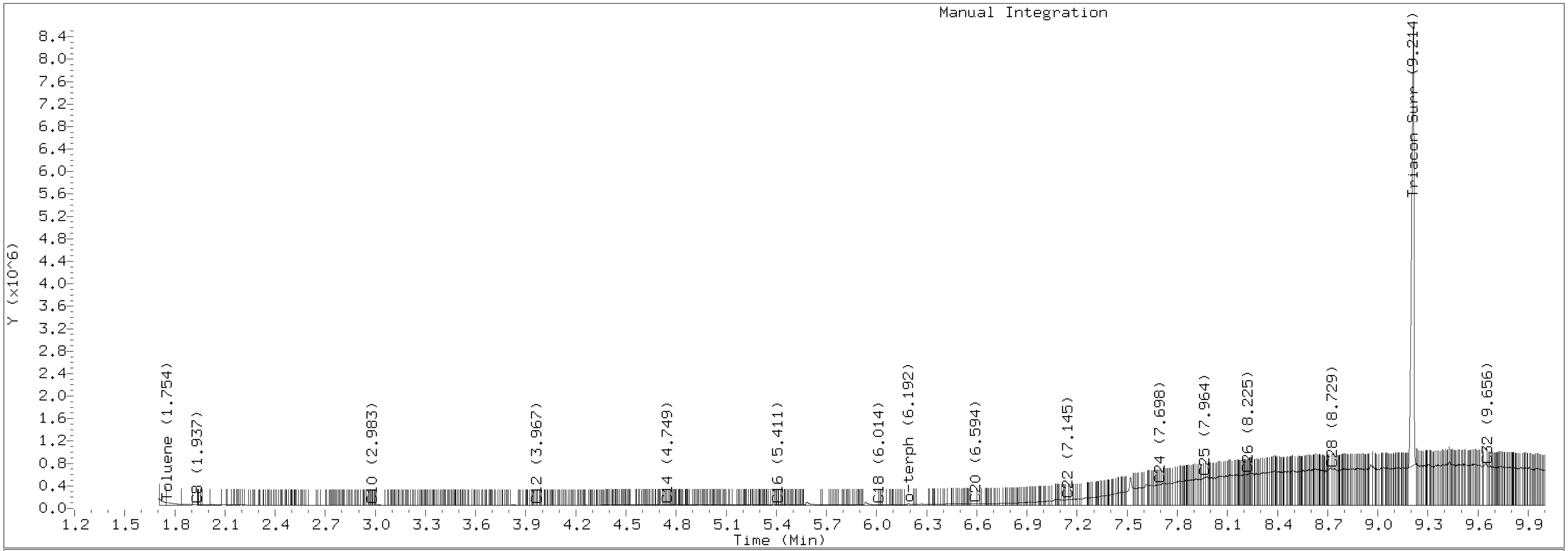
M Indicates the peak was manually integrated

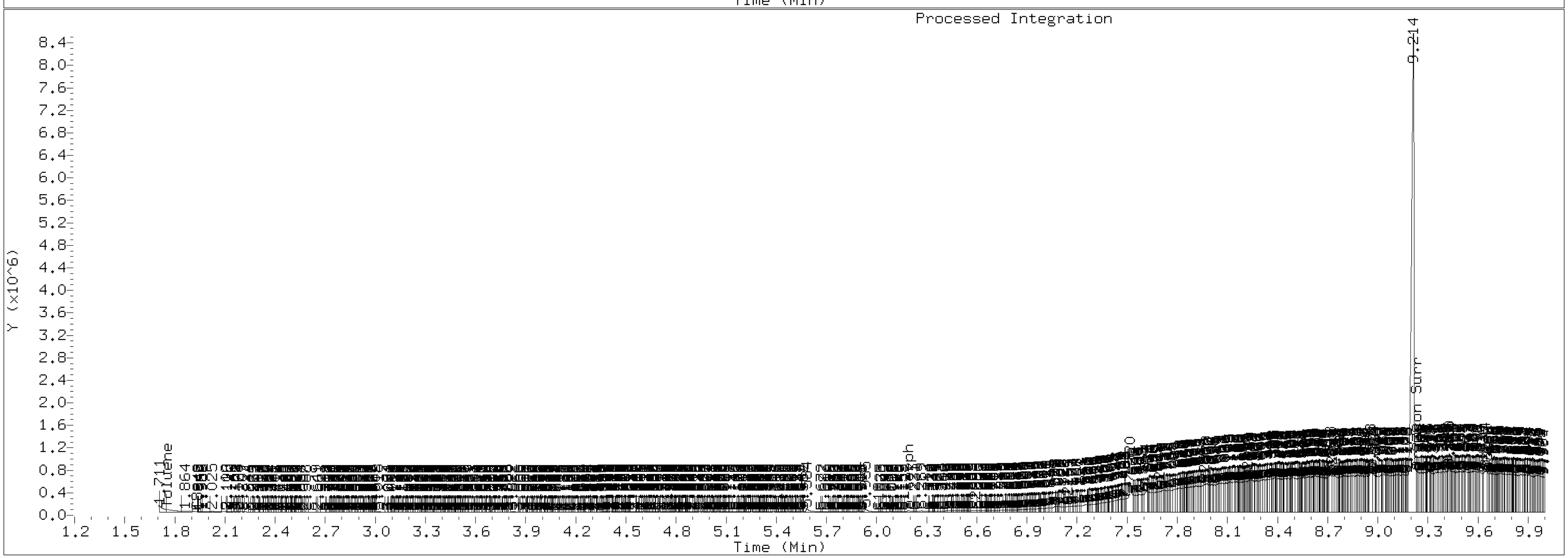
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201128.b/420K2810.D SEQ-CCVE



TPH Manual Integrations Report
Datafile: FID4A, 20201128.b/420K2810.D Injection: 28-NOV-2020 19:28
Lab ID:SEQ-CCVE





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420K2821.D	Calibration Date:	10/25/2019
Sequence:	SIK0413	Injection Date:	11/28/20
Lab Sample ID:	SIK0413-CCV3	Injection Time:	23:08
Sequence Name:	DIESEL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	477	159336.7	151991.1		-4.6	+/-15
o-Terphenyl	A	90.000	85.4	204701.9	194303		-5.1	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201128.b\420K2821.D

Date : 28-NOV-2020 23:08

Client ID:

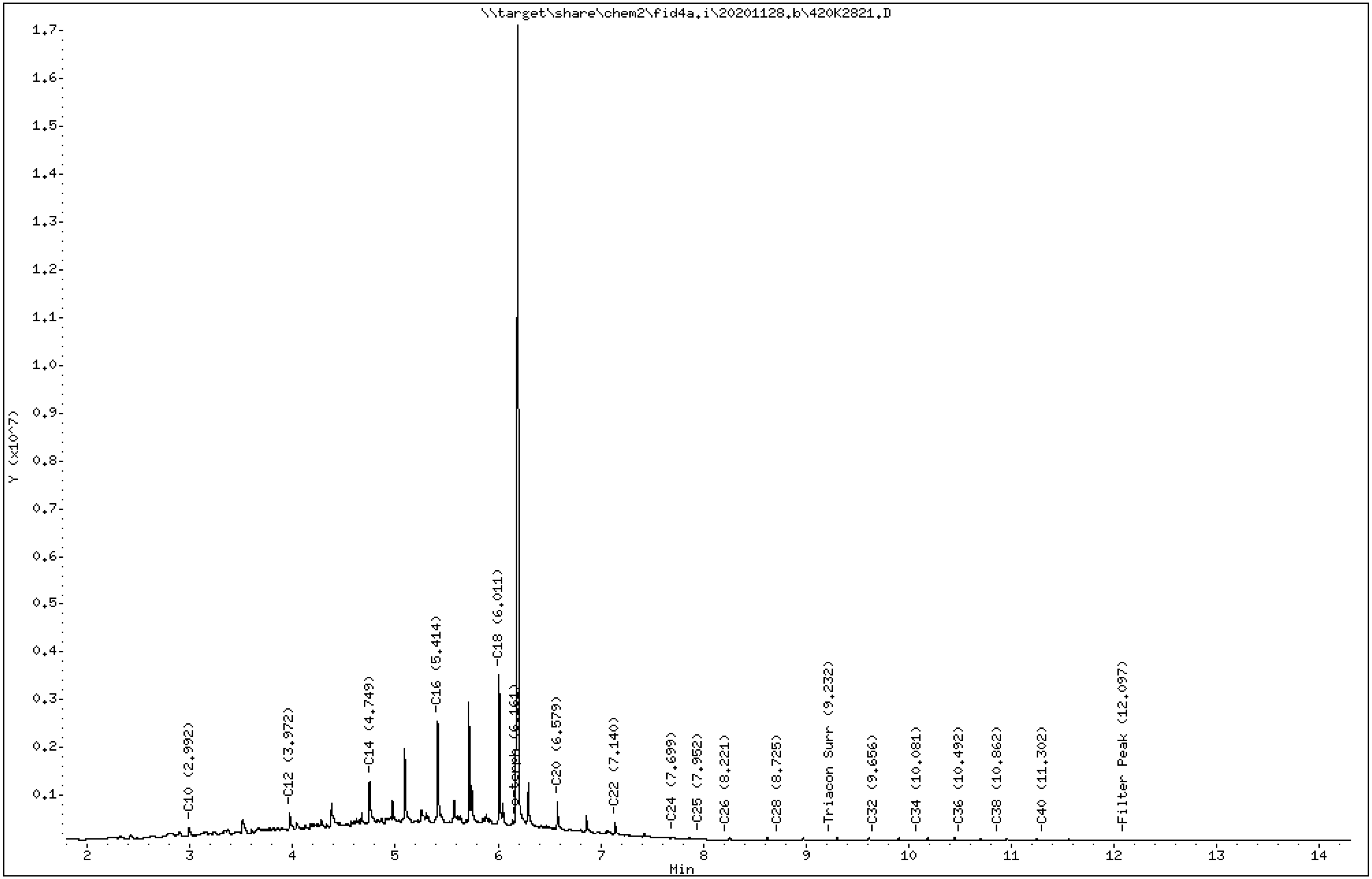
Instrument: fid4a.i

Sample Info: SEQ-CCVF

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201128.b/420K2821.D
Method: 20201128.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCVF
Client ID:
Injection: 28-NOV-2020 23:08
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.881	-0.028	39011	112742	WATPHD	(C12-C24)	75995550	476.9
C10	2.992	0.011	259471	573543	WATPHM	(C24-C38)	1150298	11.4
C12	3.972	0.005	569833	1255084	AK102	(C10-C25)	88314331	451.8
C14	4.749	0.001	1218044	1813902	AK103	(C25-C36)	799994	10.9
C16	5.414	-0.000	2483331	3077358	OR.DIES	(C10-C28)	88748821	452.8
C18	6.011	-0.003	3472099	3159536				
C20	6.579	-0.004	792604	1030467	JET-A	(C10-C18)	68235003	411.4
C22	7.140	-0.005	362776	574116				
C24	7.699	0.006	65096	156401				
C25	7.952	-0.009	16579	4135				
C26	8.221	-0.003	7841	3089				
C28	8.725	-0.003	1746	345				
C32	9.656	0.001	445	101				
C34	10.081	0.002	1070	308				
Filter Peak	12.097	-0.003	8090	4806	BUNKERC	(C10-C38)	89255439	2260.9
C36	10.492	0.014	3230	1115				
C38	10.862	-0.001	6356	5020				
C40	11.302	-0.000	7770	3474				
o-terph	6.196	-0.004	16679832	17487269				
Triacon Surr	9.232	-0.000	5787	11811	NAS DIES	(C10-C24)	88105141	451.5

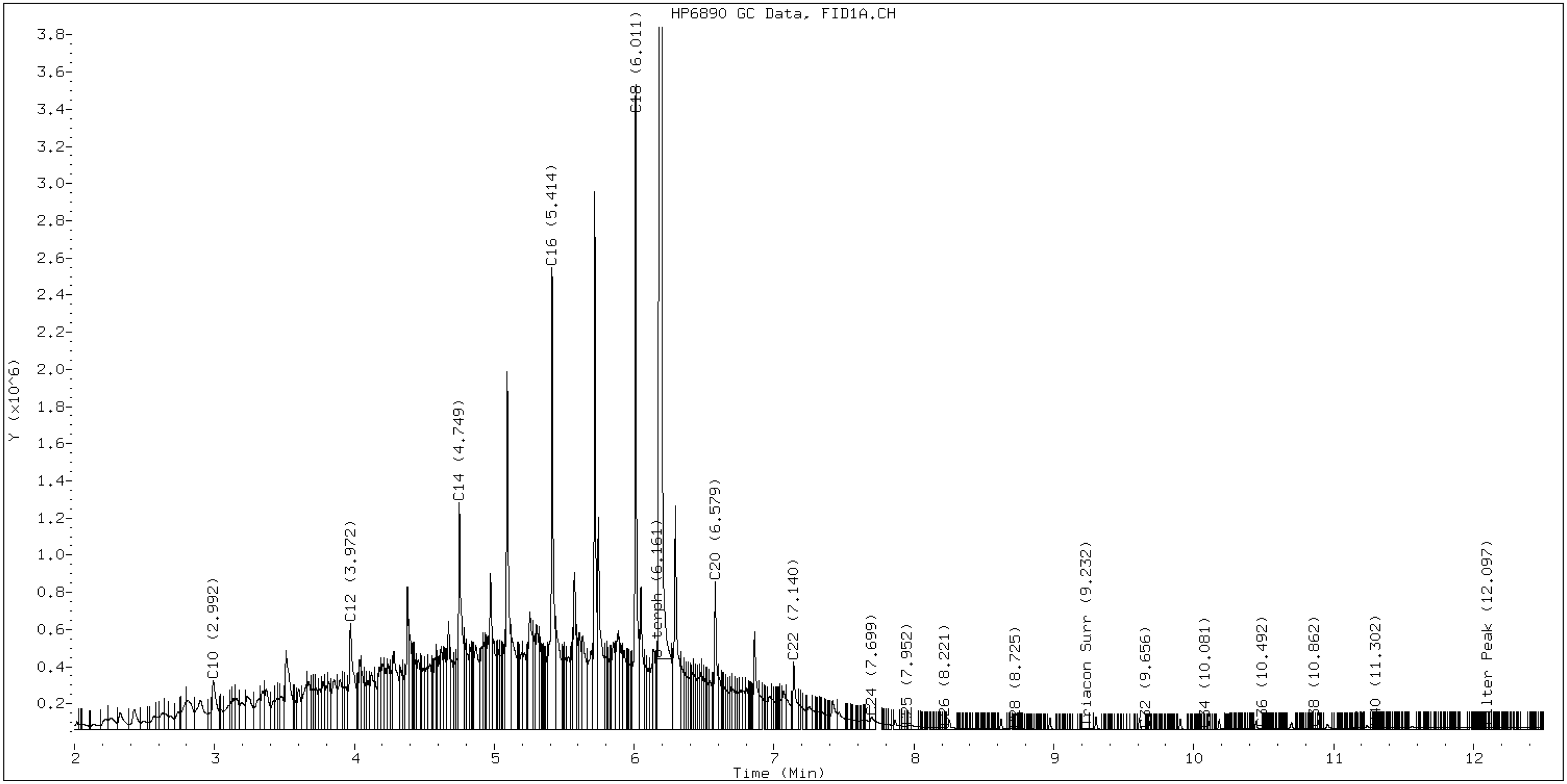
Range Times: NW Diesel(3.967 - 7.693) AK102(2.98 - 7.96) Jet A(2.98 - 6.01)
NW M.Oil(7.69 - 10.86) AK103(7.96 - 10.48) OR Diesel(2.98 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	17487269	85.4	M
Triacontane	11811	0.1	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

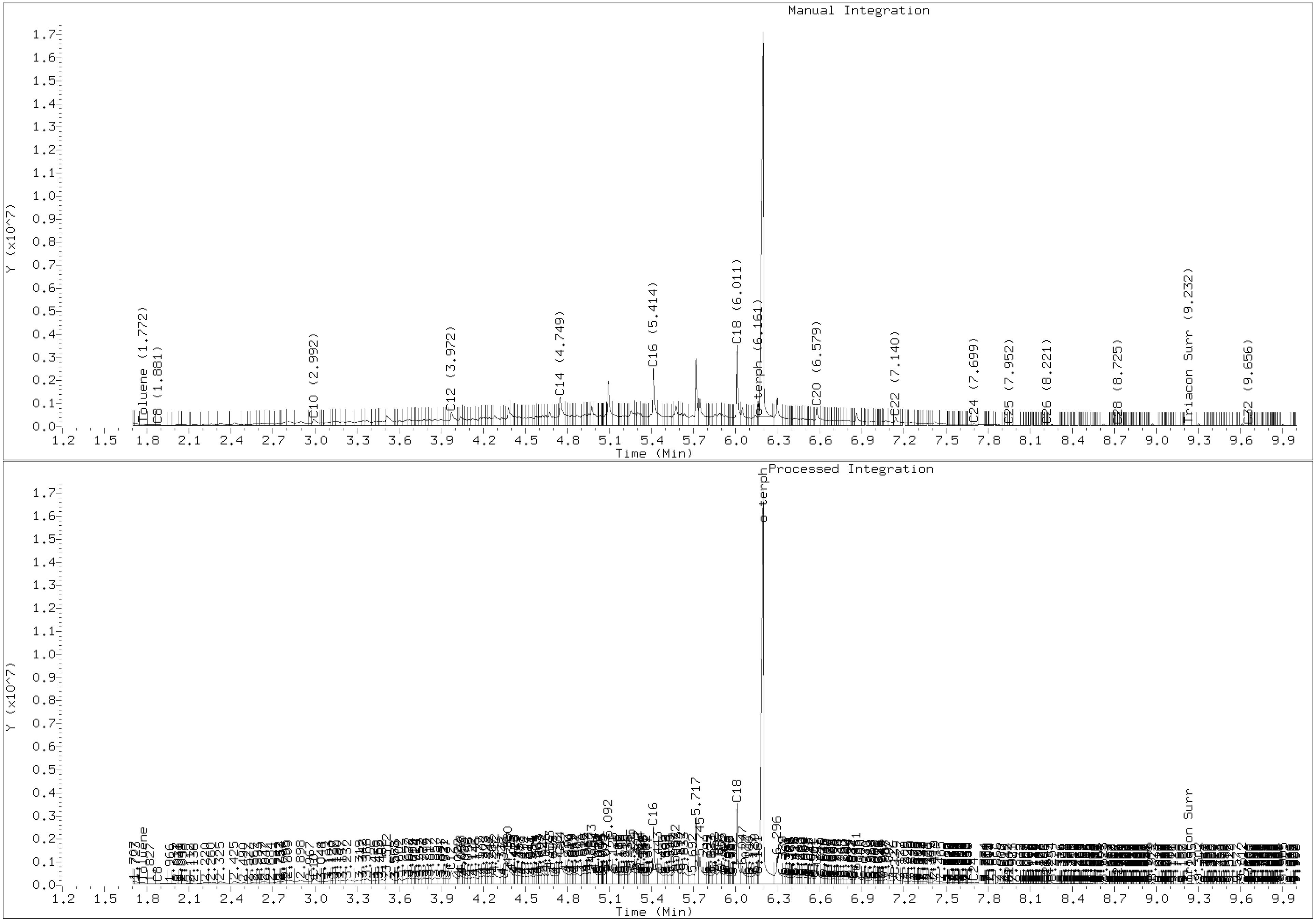
Datafile: FID4A, 20201128.b/420K2821.D   SEQ-CCVF



TPH Manual Integrations Report

Datafile: FID4A, 20201128.b/420K2821.D Injection: 28-NOV-2020 23:08

Lab ID:SEQ-CCVF



Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory: Analytical Resources, Inc.

SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Instrument ID: FID4

Calibration: DA00022

Lab File ID: 420K2822.D

Calibration Date: 10/25/2019

Sequence: SIK0413

Injection Date: 11/28/20

Lab Sample ID: SIK0413-CCV4

Injection Time: 23:28

Sequence Name: MOIL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	964	101166	97515.3		-3.6	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201128.b\420K2822.D

Date : 28-NOV-2020 23:28

Client ID:

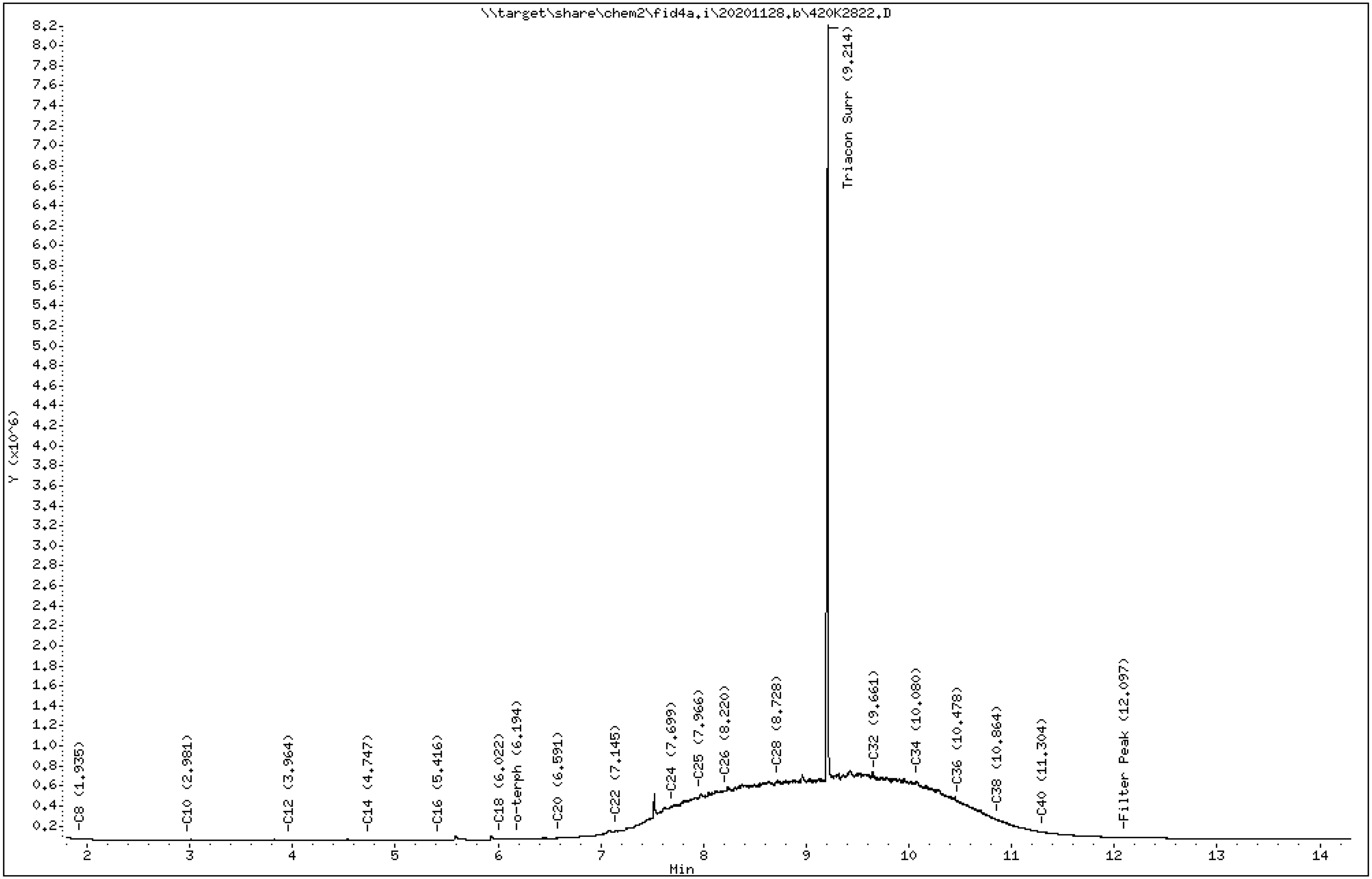
Instrument: fid4a.i

Sample Info: SEQ-CCVG

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201128.b/420K2822.D
Method: 20201128.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCVG
Client ID:
Injection: 28-NOV-2020 23:28
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.935	0.027	10769	7406	WATPHD	(C12-C24)	10130333	63.6
C10	2.981	0.000	883	420	WATPHM	(C24-C38)	97515302	963.9
C12	3.964	-0.002	2698	1713	AK102	(C10-C25)	13941533	71.3
C14	4.747	-0.001	4676	2301	AK103	(C25-C36)	87491903	1195.1
C16	5.416	0.002	4458	890	OR.DIES	(C10-C28)	40940453	208.9
C18	6.022	0.009	8231	2867				
C20	6.591	0.008	24005	26341	JET-A	(C10-C18)	783811	4.7
C22	7.145	0.000	90299	96319				
C24	7.699	0.006	333961	115387				
C25	7.966	0.004	448411	352452				
C26	8.220	-0.003	497759	173398				
C28	8.728	0.000	590045	232762				
C32	9.661	0.006	639556	380398				
C34	10.080	0.002	593026	234346				
Filter Peak	12.097	-0.003	27272	8160	BUNKERC	(C10-C38)	107766163	2729.8
C36	10.478	0.000	396267	117932				
C38	10.864	0.000	200433	49886				
C40	11.304	0.001	82038	60442				
o-terph	6.194	-0.006	20325	62552				
Triacon Surr	9.214	-0.018	7517790	7281723	NAS DIES	(C10-C24)	10250861	52.5

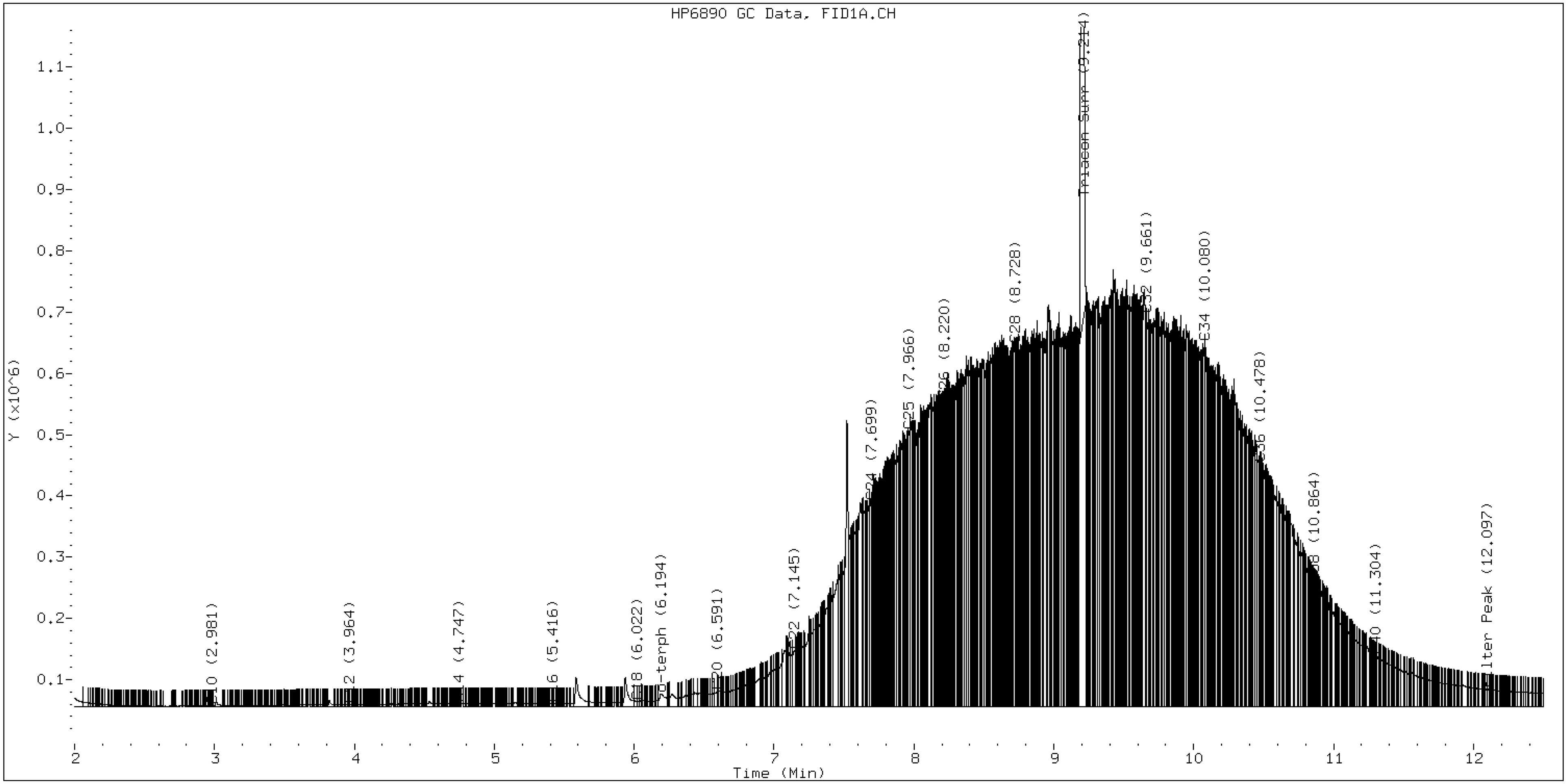
Range Times: NW Diesel(3.967 - 7.693) AK102(2.98 - 7.96) Jet A(2.98 - 6.01)
NW M.Oil(7.69 - 10.86) AK103(7.96 - 10.48) OR Diesel(2.98 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	62552	0.3	
Triacontane	7281723	49.1	M

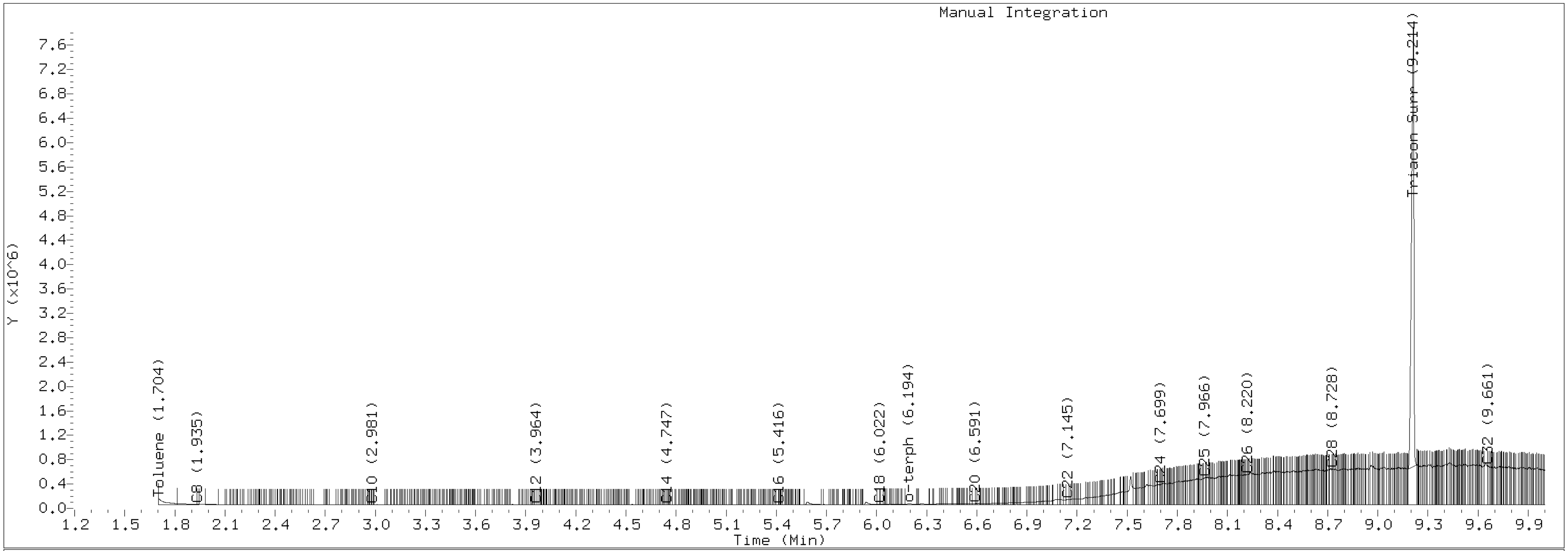
M Indicates the peak was manually integrated

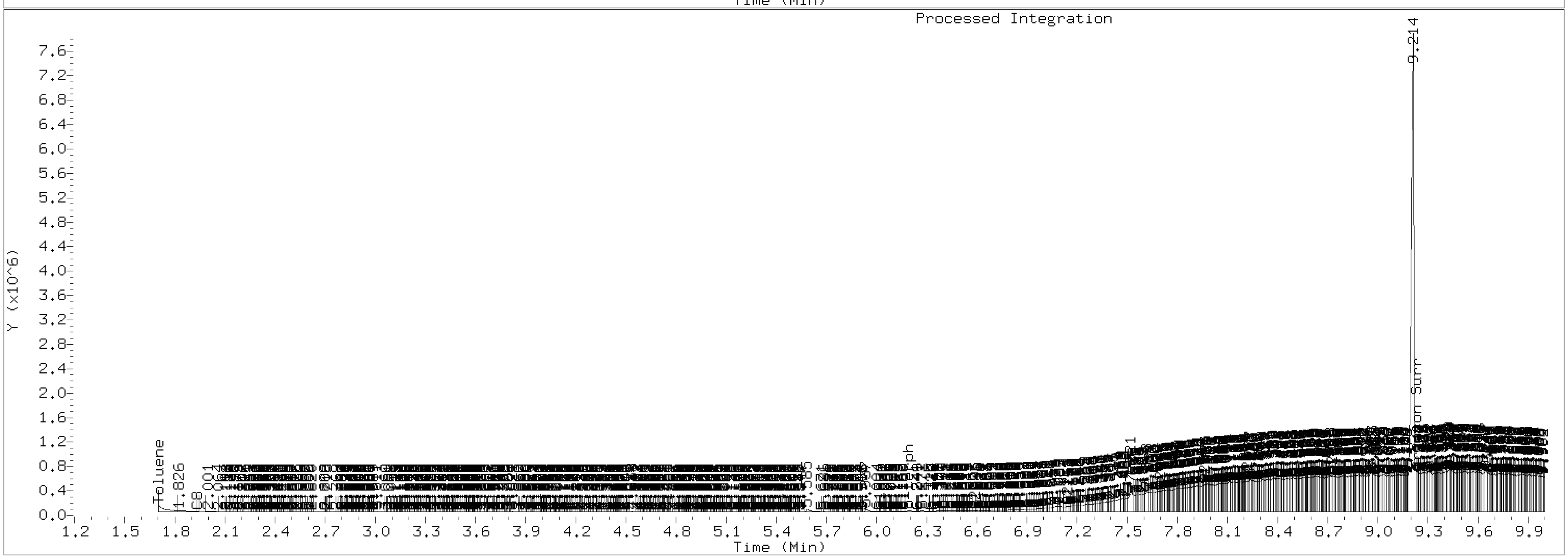
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201128.b/420K2822.D SEQ-CCVG



TPH Manual Integrations Report
Datafile: FID4A, 20201128.b/420K2822.D Injection: 28-NOV-2020 23:28
Lab ID:SEQ-CCVG





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420K2838.D	Calibration Date:	10/25/2019
Sequence:	SIK0413	Injection Date:	11/29/20
Lab Sample ID:	SIK0413-CCV5	Injection Time:	04:49
Sequence Name:	DIESEL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	467	159336.7	148799		-6.6	+/-15
o-Terphenyl	A	90.000	84.0	204701.9	191031.6		-6.7	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201128.b\420K2838.D

Page 1

Date : 29-NOV-2020 04:49

Client ID:

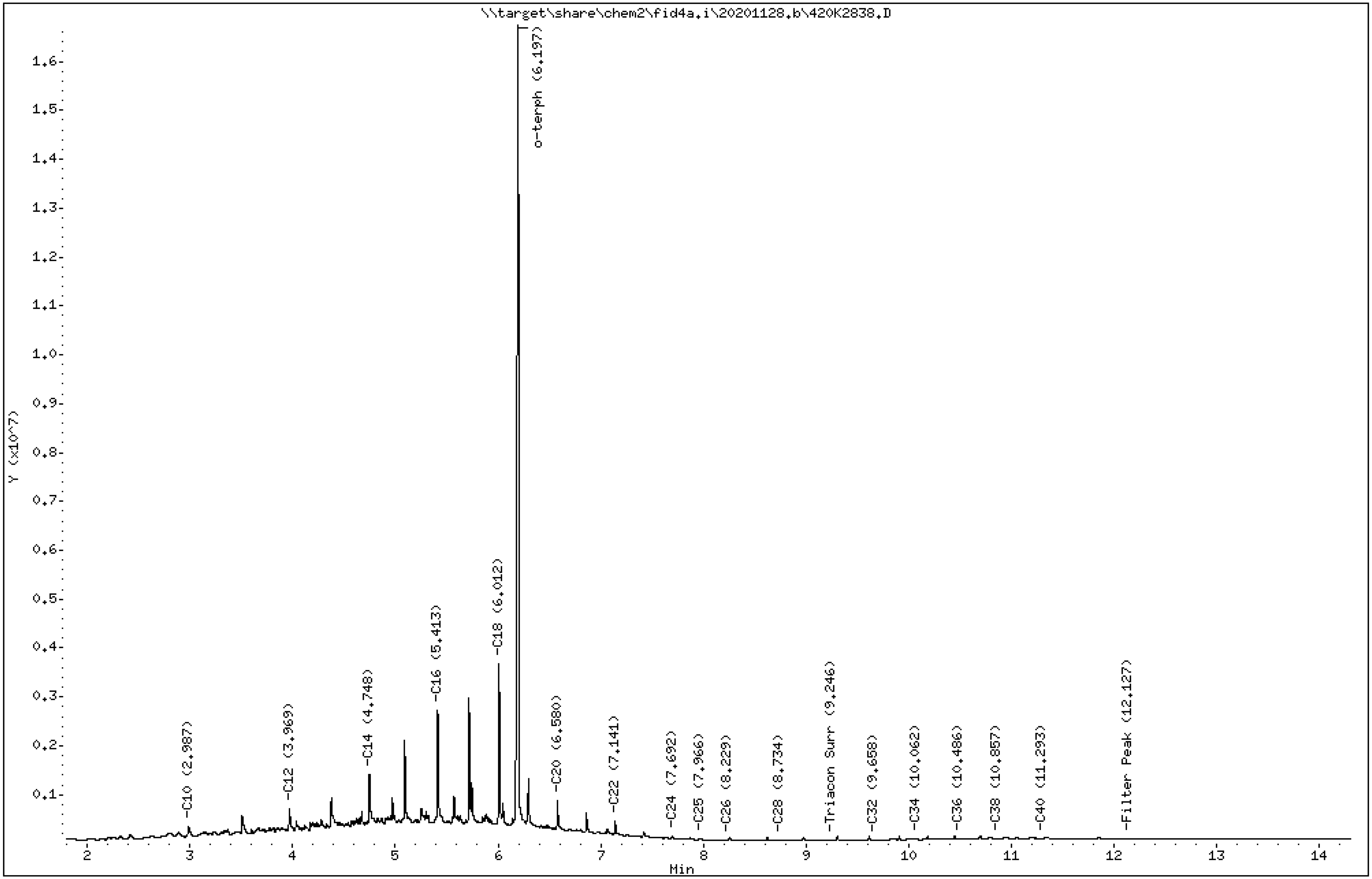
Instrument: fid4a.i

Sample Info: SEQ-CCVH

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201128.b/420K2838.D
Method: 20201128.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCVH
Client ID:
Injection: 29-NOV-2020 04:49
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.872	-0.036	27722	74723	WATPHD	(C12-C24)	74399512	466.9
C10	2.987	0.006	293324	571561	WATPHM	(C24-C38)	2773644	27.4
C12	3.969	0.002	636096	1016384	AK102	(C10-C25)	86101404	440.4
C14	4.748	-0.000	1353771	1204863	AK103	(C25-C36)	1732192	23.7
C16	5.413	-0.001	2670393	3214255	OR.DIES	(C10-C28)	86404058	440.8
C18	6.012	-0.002	3599743	3222088				
C20	6.580	-0.004	816736	1091045	JET-A	(C10-C18)	66355212	400.1
C22	7.141	-0.004	378397	474003				
C24	7.692	-0.001	70198	144697				
C25	7.966	0.004	21531	39490				
C26	8.229	0.006	7677	8452				
C28	8.734	0.006	1446	839				
C32	9.658	0.003	10215	7989				
C34	10.062	-0.016	21288	19117				
Filter Peak	12.127	0.027	32116	66548	BUNKERC	(C10-C38)	88646404	2245.5
C36	10.486	0.008	29831	39127				
C38	10.857	-0.007	25599	23906				
C40	11.293	-0.009	32188	49718				
o-terph	6.197	-0.003	16256379	17192842				
Triacon Surr	9.246	0.014	6358	3709	NAS DIES	(C10-C24)	85872760	440.0

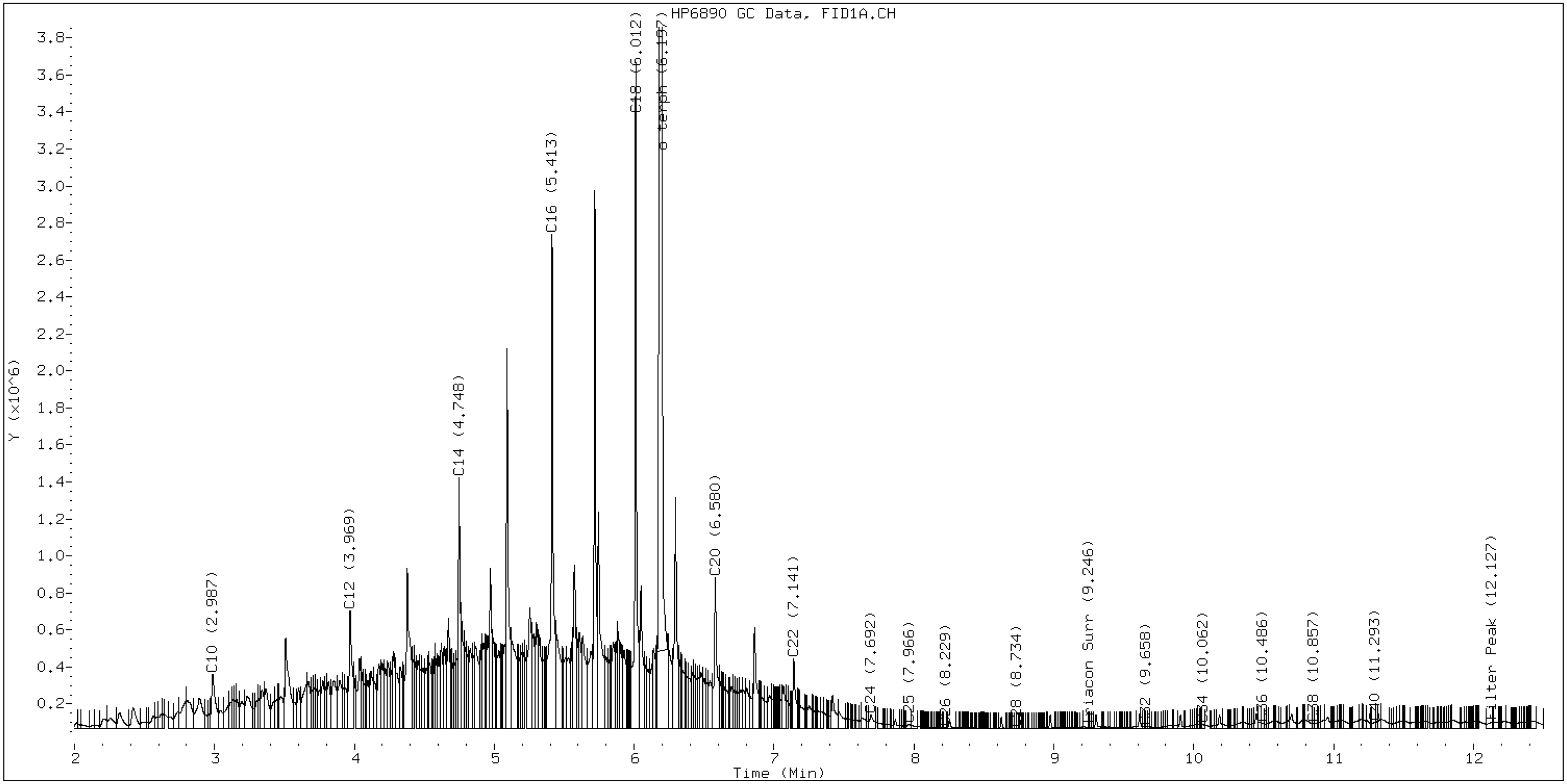
Range Times: NW Diesel(3.967 - 7.693) AK102(2.98 - 7.96) Jet A(2.98 - 6.01)
NW M.Oil(7.69 - 10.86) AK103(7.96 - 10.48) OR Diesel(2.98 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	17192842	84.0	M
Triacontane	3709	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

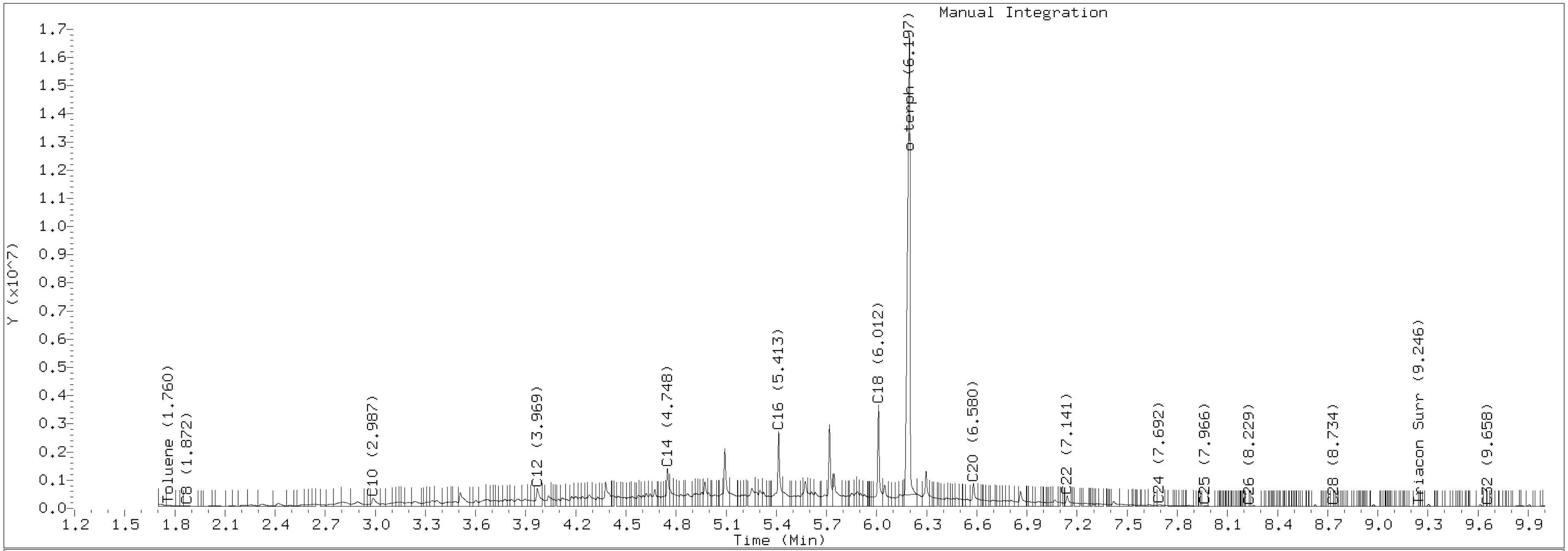
Datafile: FID4A, 20201128.b/420K2838.D SEQ-CCVH

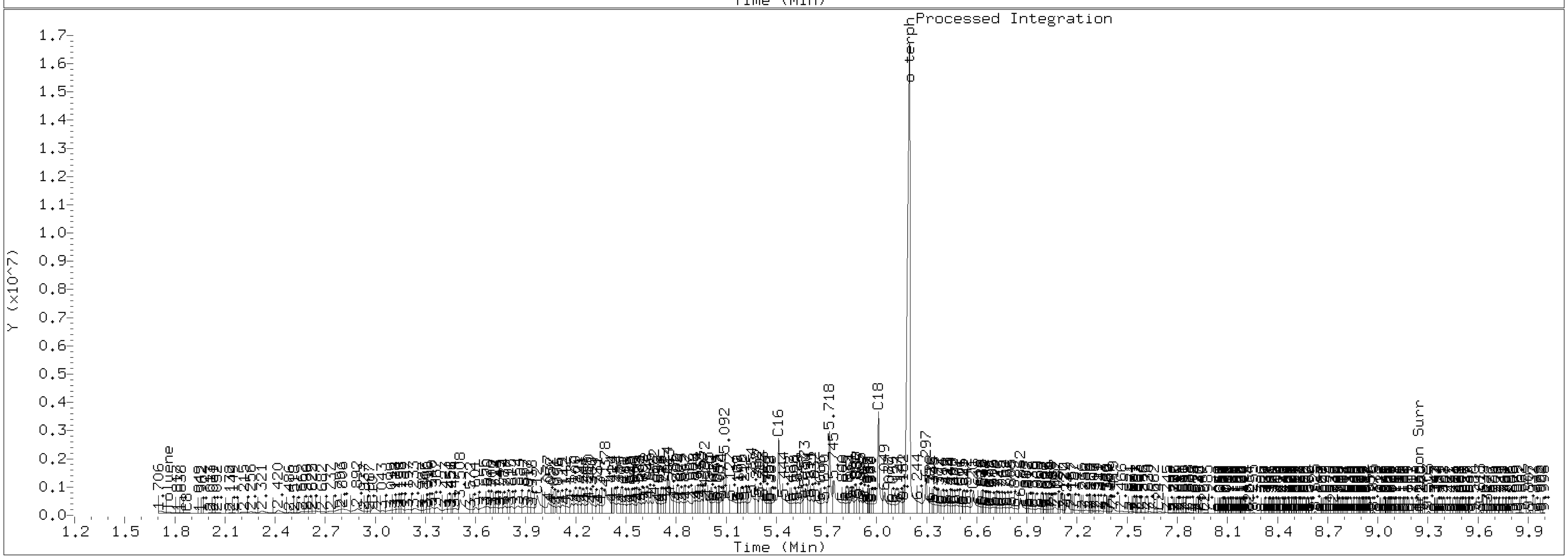


TPH Manual Integrations Report

Datafile: FID4A, 20201128.b/420K2838.D Injection: 29-NOV-2020 04:49

Lab ID:SEQ-CCVH





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420K2839.D	Calibration Date:	10/25/2019
Sequence:	SIK0413	Injection Date:	11/29/20
Lab Sample ID:	SIK0413-CCV6	Injection Time:	05:09
Sequence Name:	MOIL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	934	101166	94458.75		-6.6	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201128.b\420K2839.D

Page 1

Date : 29-NOV-2020 05:09

Client ID:

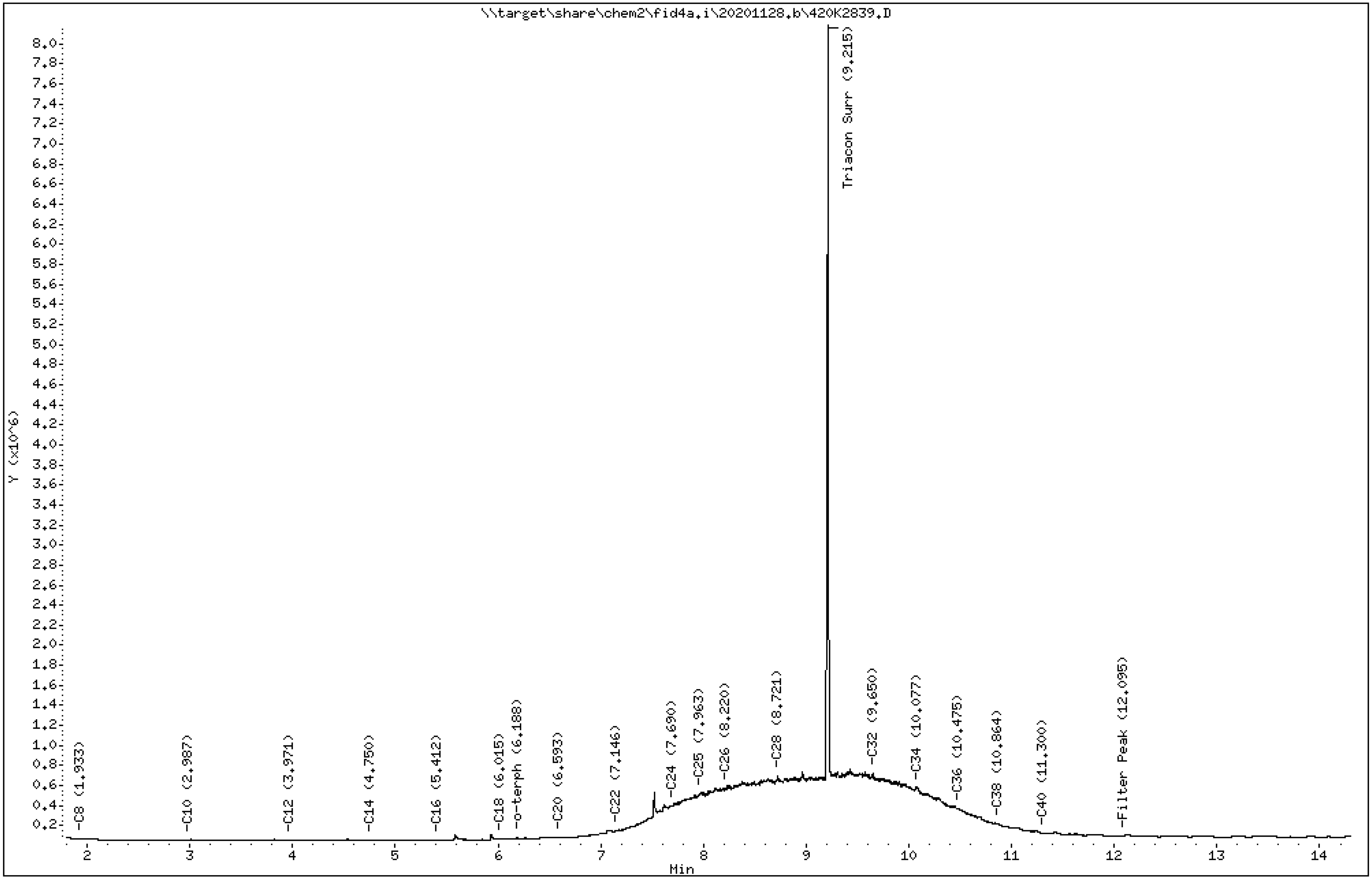
Instrument: fid4a.i

Sample Info: SEQ-CCVI

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201128.b/420K2839.D
Method: 20201128.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCVI
Client ID:
Injection: 29-NOV-2020 05:09
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.933	0.025	12281	23364	WATPHD	(C12-C24)	10616438	66.6
C10	2.987	0.006	233	115	WATPHM	(C24-C38)	94458751	933.7
C12	3.971	0.005	876	372	AK102	(C10-C25)	14383586	73.6
C14	4.750	0.001	3459	2314	AK103	(C25-C36)	86106533	1176.2
C16	5.412	-0.002	4266	2720	OR.DIES	(C10-C28)	42351411	216.1
C18	6.015	0.002	8527	2969				
C20	6.593	0.010	26155	46071	JET-A	(C10-C18)	632962	3.8
C22	7.146	0.001	97115	110348				
C24	7.690	-0.003	347170	103464				
C25	7.963	0.001	464373	472145				
C26	8.220	-0.004	523726	309424				
C28	8.721	-0.006	637672	640248				
C32	9.650	-0.005	662089	615693				
C34	10.077	-0.001	524308	130648				
Filter Peak	12.095	-0.005	47028	18744	BUNKERC	(C10-C38)	105122719	2662.9
C36	10.475	-0.002	318537	126372				
C38	10.864	0.000	160528	79629				
C40	11.300	-0.002	73136	50199				
o-terph	6.188	-0.012	23927	54348				
Triacon Surr	9.215	-0.016	7469405	7377200	NAS DIES	(C10-C24)	10663968	54.6

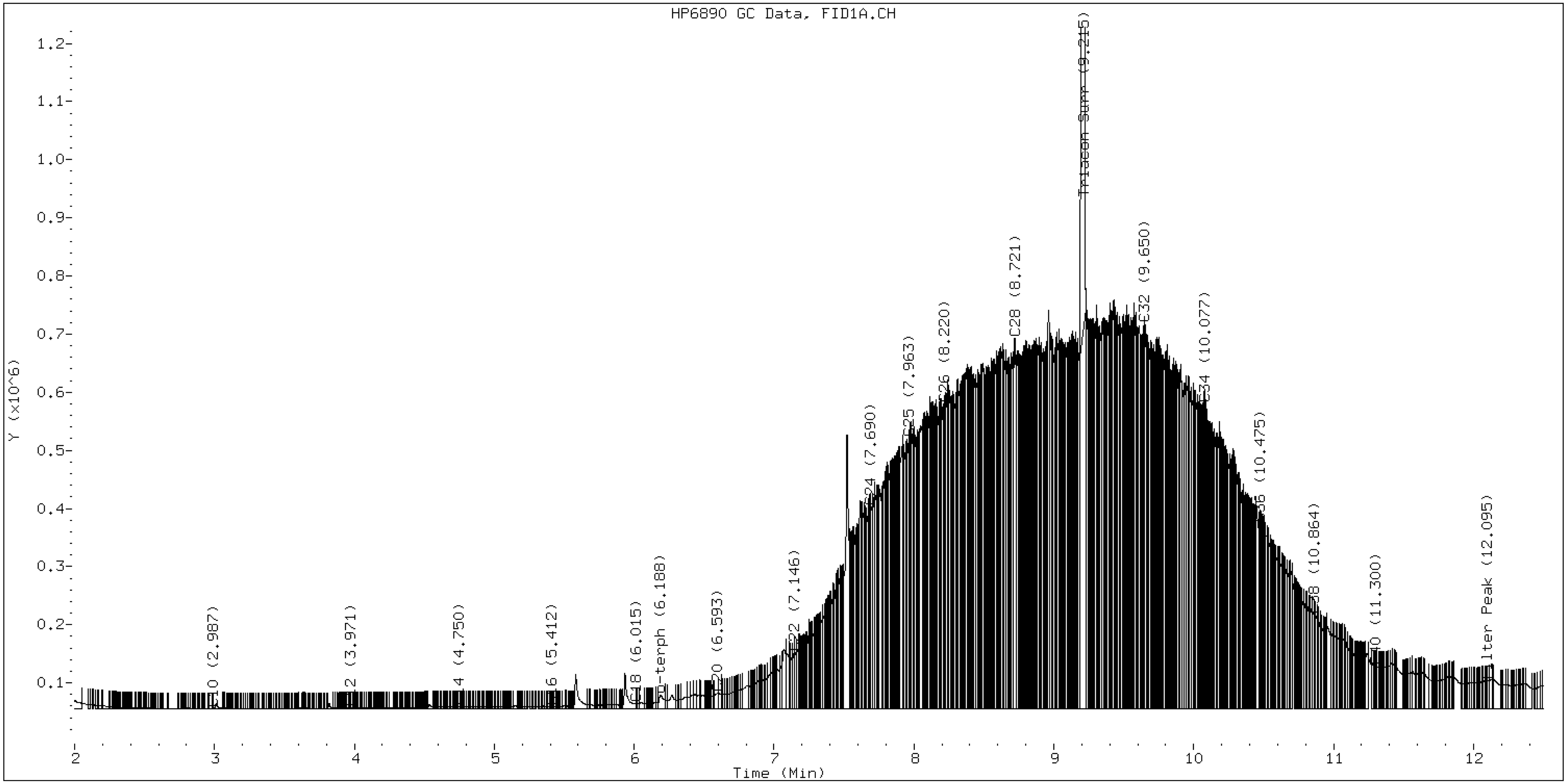
Range Times: NW Diesel(3.967 - 7.693) AK102(2.98 - 7.96) Jet A(2.98 - 6.01)
NW M.Oil(7.69 - 10.86) AK103(7.96 - 10.48) OR Diesel(2.98 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	54348	0.3	
Triacontane	7377200	49.7	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

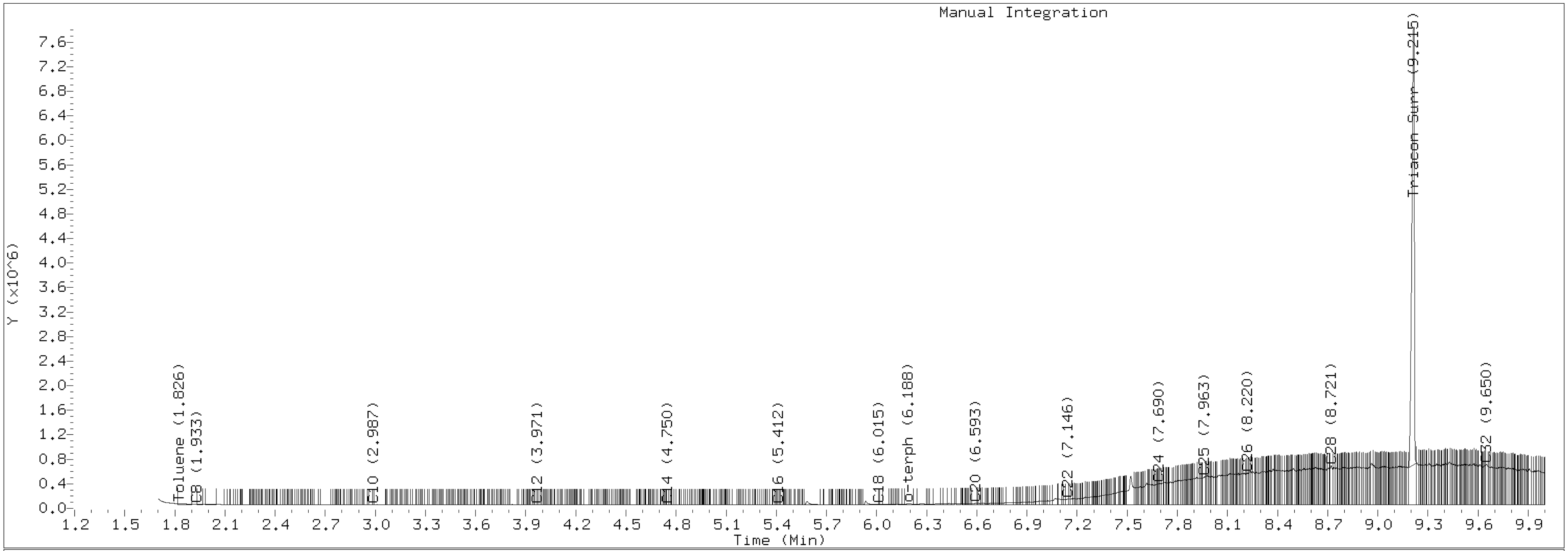
Datafile: FID4A, 20201128.b/420K2839.D SEQ-CCVI

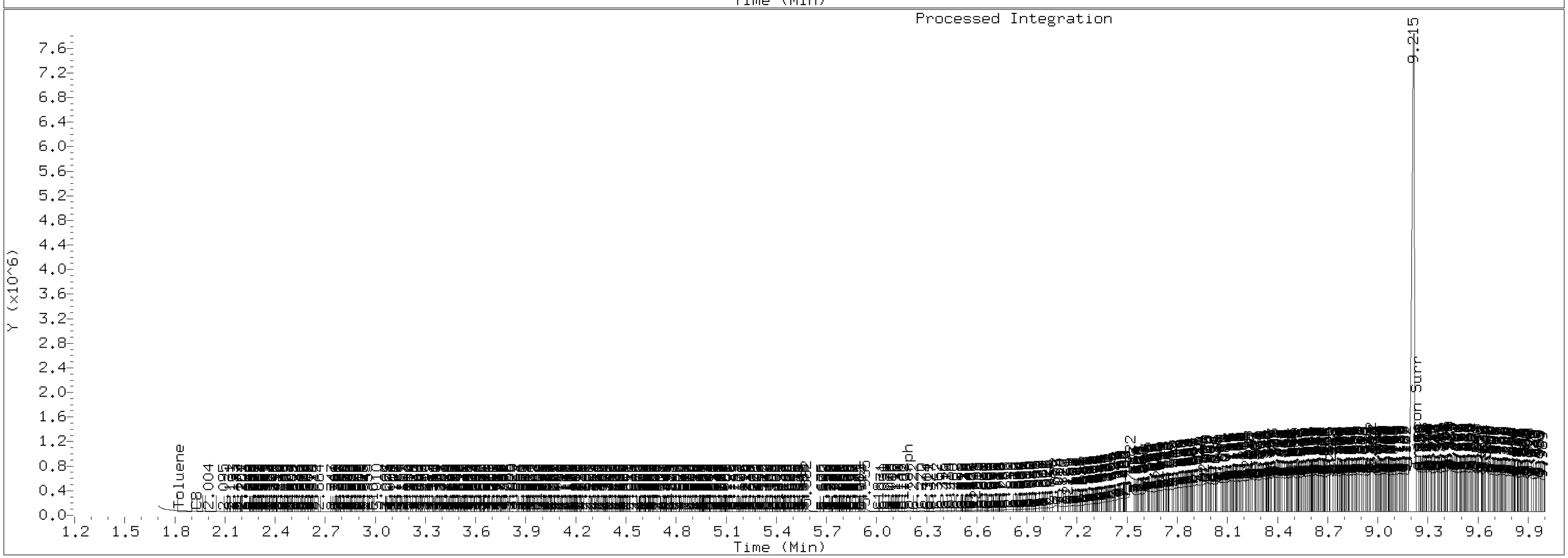


TPH Manual Integrations Report

Datafile: FID4A, 20201128.b/420K2839.D Injection: 29-NOV-2020 05:09

Lab ID:SEQ-CCVI





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420K2849.D	Calibration Date:	10/25/2019
Sequence:	SIK0413	Injection Date:	11/29/20
Lab Sample ID:	SIK0413-CCV7	Injection Time:	08:29
Sequence Name:	DIESEL CCV		

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	531	159336.7	169253		6.2	+/-15
o-Terphenyl	A	90.000	90.5	204701.9	205894.2		0.6	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201128.b\420K2849.D

Page 1

Date : 29-NOV-2020 08:29

Client ID:

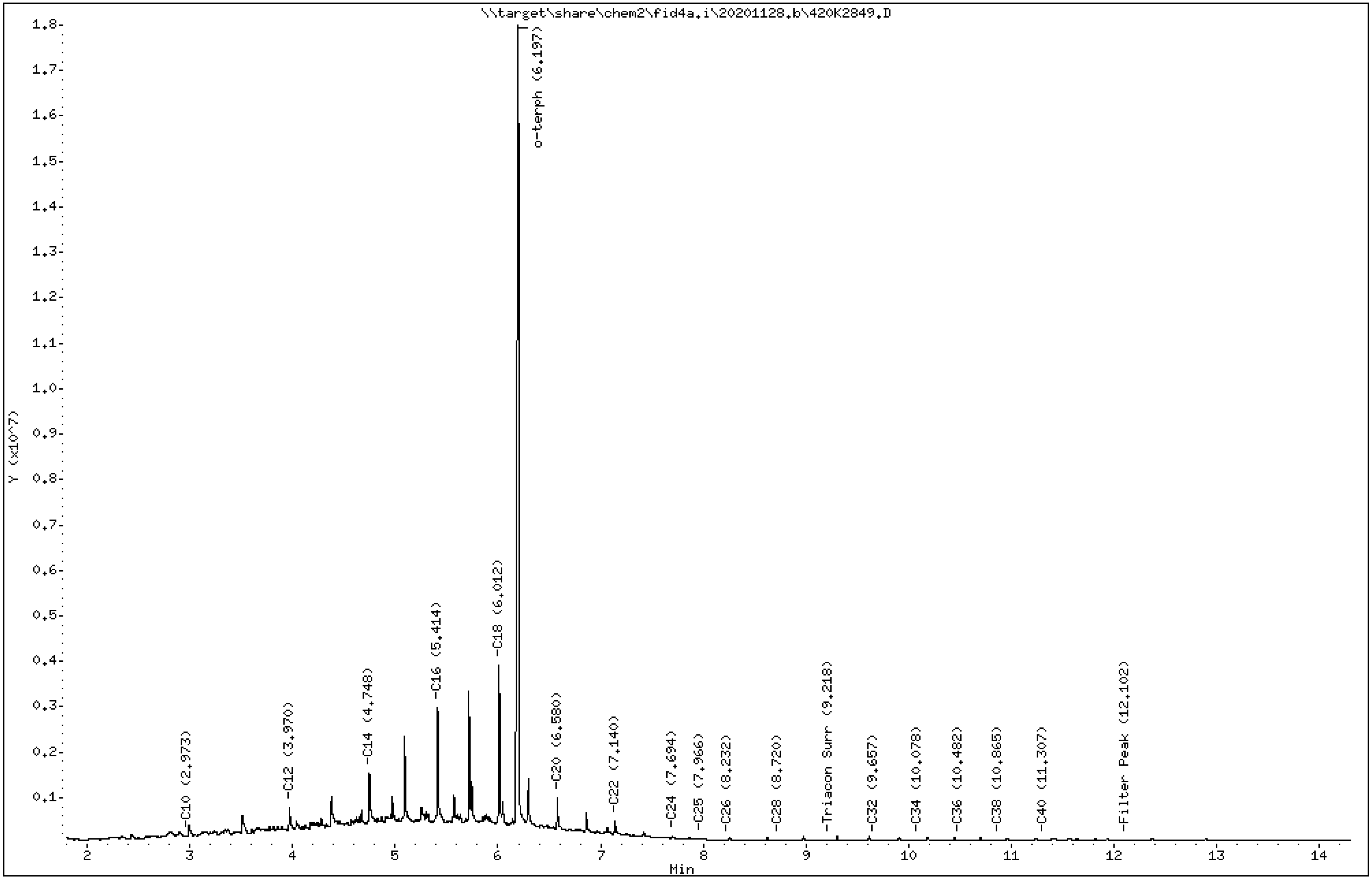
Instrument: fid4a.i

Sample Info: SEQ-CCVJ

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201128.b/420K2849.D
Method: 20201128.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCVJ
Client ID:
Injection: 29-NOV-2020 08:29
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.909	0.001	42797	69727	WATPHD	(C12-C24)	84626522	531.1
C10	2.973	-0.008	96627	104116	WATPHM	(C24-C38)	1529840	15.1
C12	3.970	0.003	709051	1023543	AK102	(C10-C25)	98265289	502.7
C14	4.748	-0.000	1471108	2001316	AK103	(C25-C36)	975888	13.3
C16	5.414	-0.000	2912153	2710230	OR.DIES	(C10-C28)	98689588	503.5
C18	6.012	-0.002	3866831	3360587				
C20	6.580	-0.003	940650	1080707	JET-A	(C10-C18)	75287828	454.0
C22	7.140	-0.005	418747	587305				
C24	7.694	0.001	79129	212523				
C25	7.966	0.004	26263	82366				
C26	8.232	0.009	10322	10234				
C28	8.720	-0.008	1361	514				
C32	9.657	0.002	1617	316				
C34	10.078	-0.000	2995	1168				
Filter Peak	12.102	0.002	14182	3541	BUNKERC	(C10-C38)	99508988	2520.7
C36	10.482	0.005	8759	6037				
C38	10.865	0.002	12694	9382				
C40	11.307	0.005	13347	6621				
o-terph	6.197	-0.003	17275845	18530483				
Triacon Surr	9.218	-0.013	8084	24151	NAS DIES	(C10-C24)	97979148	502.1

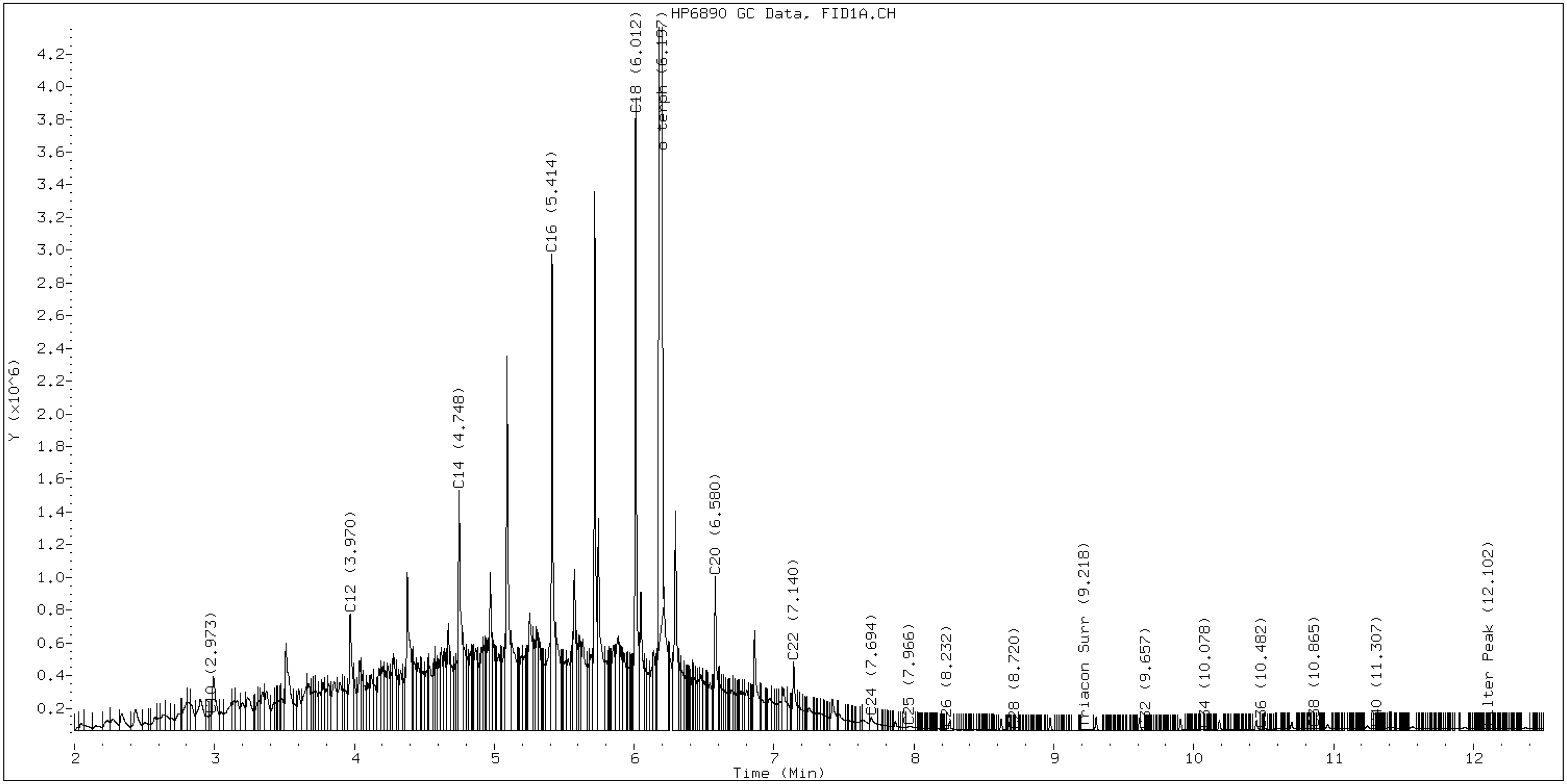
Range Times: NW Diesel(3.967 - 7.693) AK102(2.98 - 7.96) Jet A(2.98 - 6.01)
NW M.Oil(7.69 - 10.86) AK103(7.96 - 10.48) OR Diesel(2.98 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	18530483	90.5	M
Triacontane	24151	0.2	

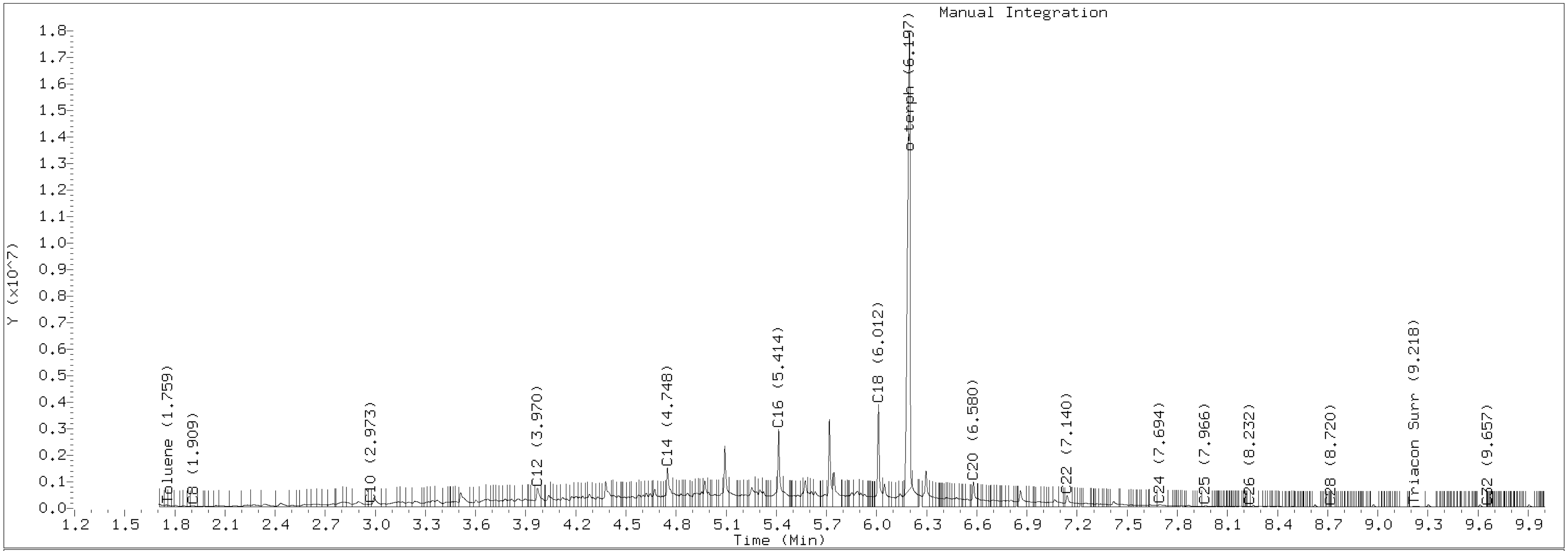
M Indicates the peak was manually integrated

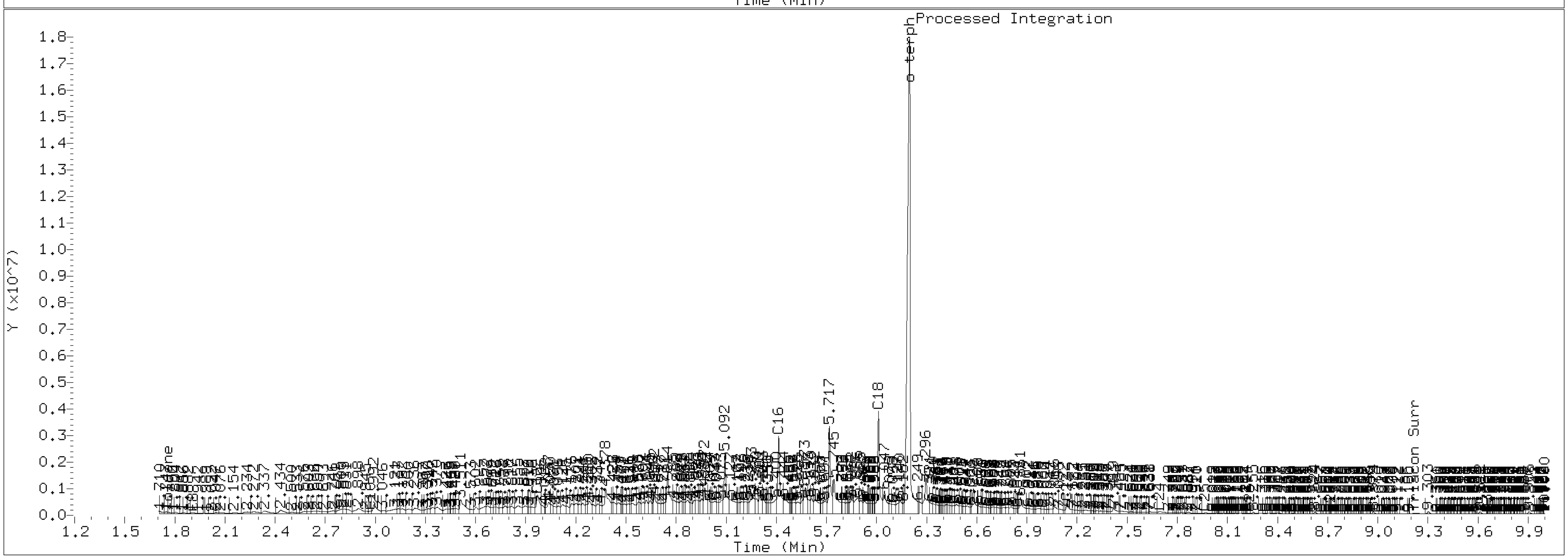
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201128.b/420K2849.D SEQ-CCVJ



TPH Manual Integrations Report
Datafile: FID4A, 20201128.b/420K2849.D Injection: 29-NOV-2020 08:29
Lab ID:SEQ-CCVJ





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420K2850.D	Calibration Date:	10/25/2019
Sequence:	SIK0413	Injection Date:	11/29/20
Lab Sample ID:	SIK0413-CCV8	Injection Time:	08:50
Sequence Name:	MOIL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1020	101166	103689.5		2.5	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201128.b\420K2850.D

Page 1

Date : 29-NOV-2020 08:50

Client ID:

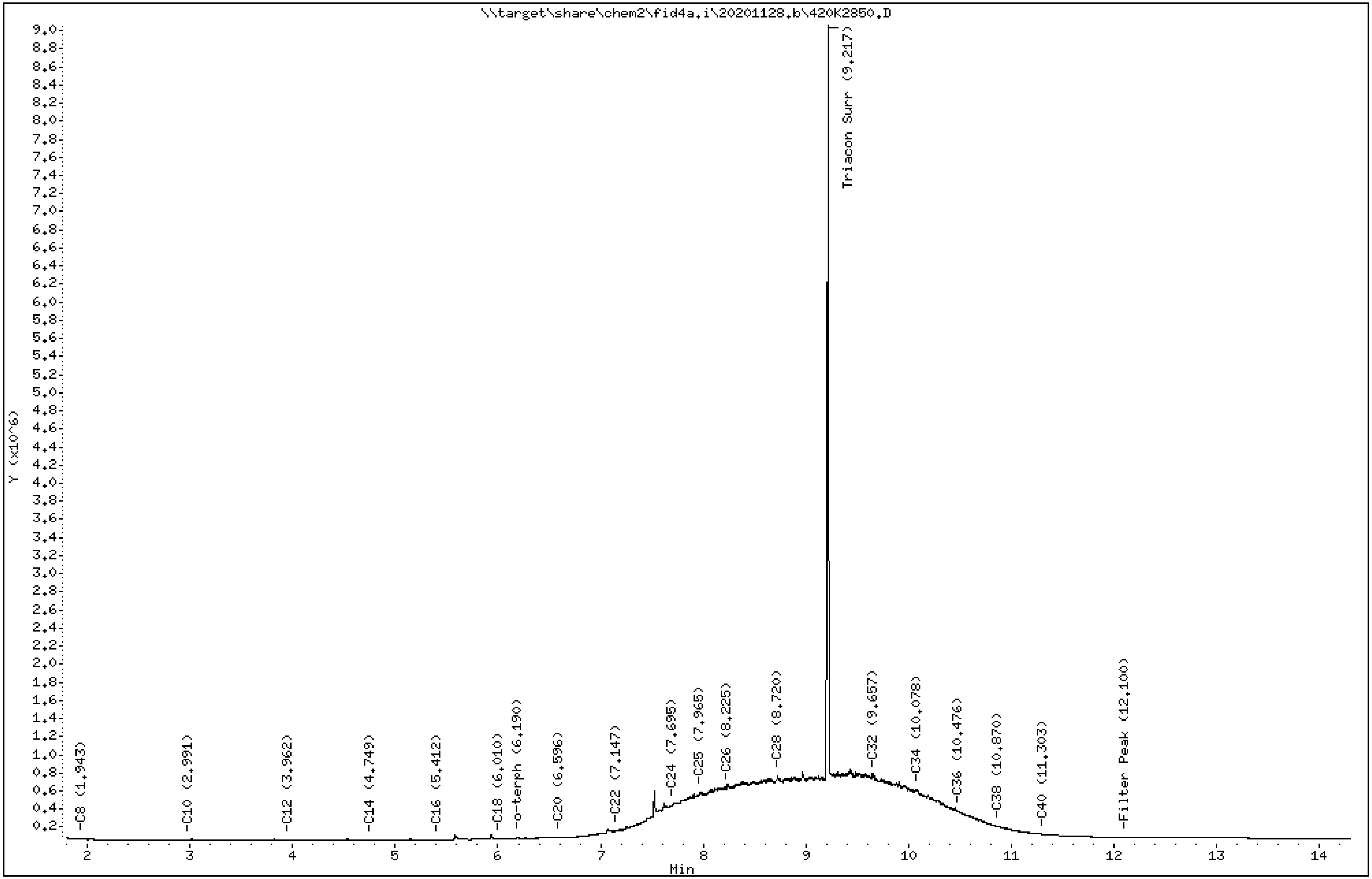
Instrument: fid4a.i

Sample Info: SEQ-CCVK

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201128.b/420K2850.D
Method: 20201128.b\FID4TPH.m
Instrument: fid4a.i, JGR
Report Date: 11/30/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCVK
Client ID:
Injection: 29-NOV-2020 08:50
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.943	0.034	10664	5278	WATPHD	(C12-C24)	12038751	75.6
C10	2.991	0.010	1510	443	WATPHM	(C24-C38)	103689511	1024.9
C12	3.962	-0.005	3346	2133	AK102	(C10-C25)	16575655	84.8
C14	4.749	0.000	6011	4151	AK103	(C25-C36)	94527092	1291.2
C16	5.412	-0.002	6675	4598	OR.DIES	(C10-C28)	47587919	242.8
C18	6.010	-0.003	10768	8471				
C20	6.596	0.013	30120	55520	JET-A	(C10-C18)	1024262	6.2
C22	7.147	0.002	108093	150089				
C24	7.695	0.002	391886	175040				
C25	7.965	0.004	524527	732243				
C26	8.225	0.002	572871	253926				
C28	8.720	-0.007	707044	886414				
C32	9.657	0.002	704953	175359				
C34	10.078	-0.001	563588	360703				
Filter Peak	12.100	0.000	31677	18927	BUNKERC	(C10-C38)	115889561	2935.6
C36	10.476	-0.001	320499	127291				
C38	10.870	0.007	148651	73579				
C40	11.303	0.000	66393	29811				
o-terph	6.190	-0.011	27269	65318				
Triacon Surr	9.217	-0.015	8285927	8301097	NAS DIES	(C10-C24)	12200049	62.5

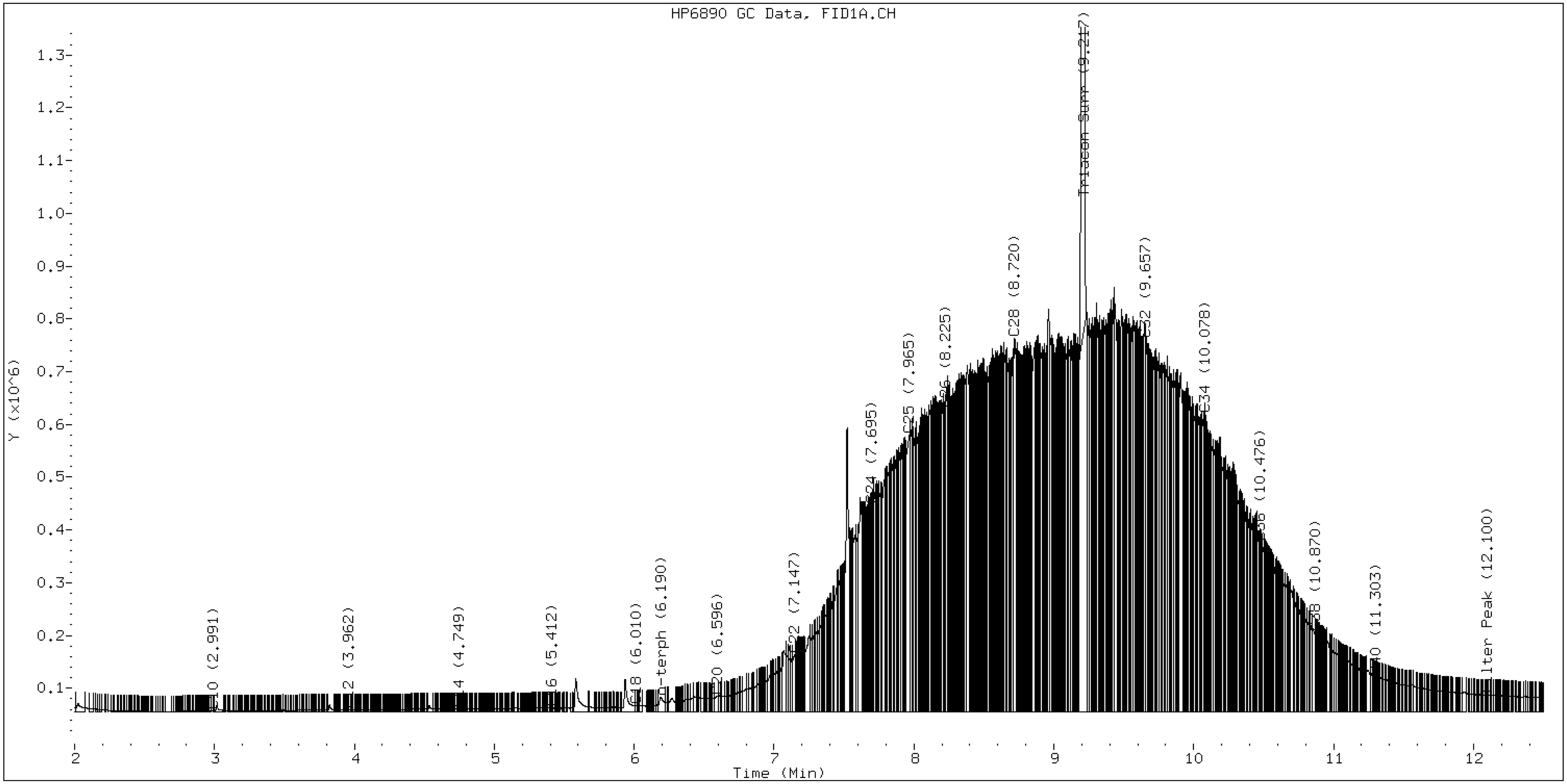
Range Times: NW Diesel(3.967 - 7.693) AK102(2.98 - 7.96) Jet A(2.98 - 6.01)
NW M.Oil(7.69 - 10.86) AK103(7.96 - 10.48) OR Diesel(2.98 - 8.73)

Surrogate	Area	Amount	
o-Terphenyl	65318	0.3	
Triacontane	8301097	55.9	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

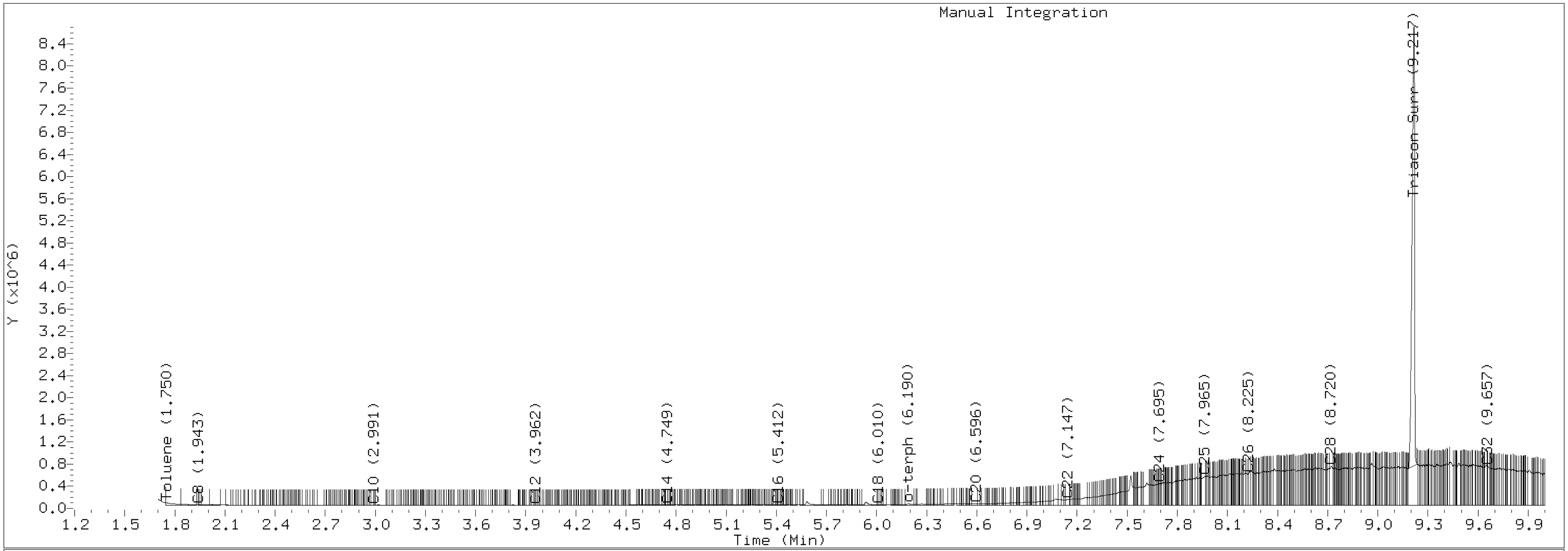
Datafile: FID4A, 20201128.b/420K2850.D SEQ-CCVK

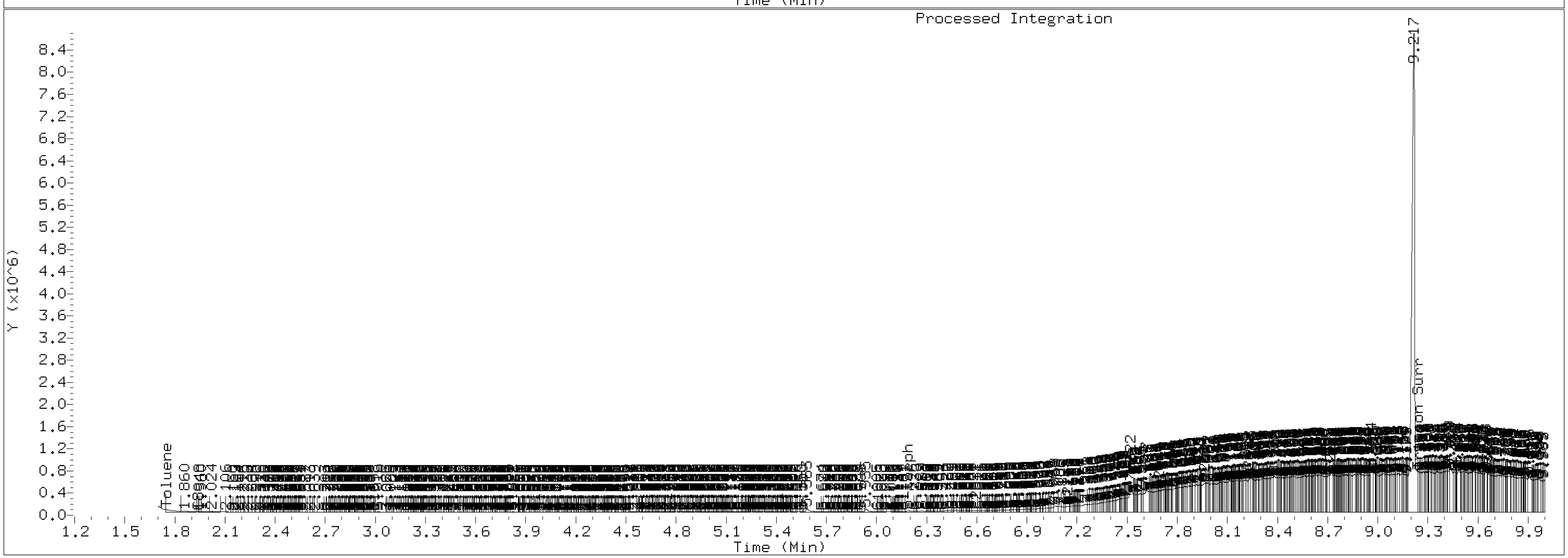


TPH Manual Integrations Report

Datafile: FID4A, 20201128.b/420K2850.D Injection: 29-NOV-2020 08:50

Lab ID:SEQ-CCVK





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420L0230.D
Calibration Date: 10/25/2019
Sequence: SIL0020
Injection Date: 12/02/20
Lab Sample ID: SIL0020-CCV1
Injection Time: 18:48
Sequence Name: DIESEL CCV

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	470	159336.7	149712.9		-6.0	+/-15
o-Terphenyl	A	90.000	83.7	204701.9	190409.7		-7.0	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0230.D

Date : 02-DEC-2020 18:48

Client ID:

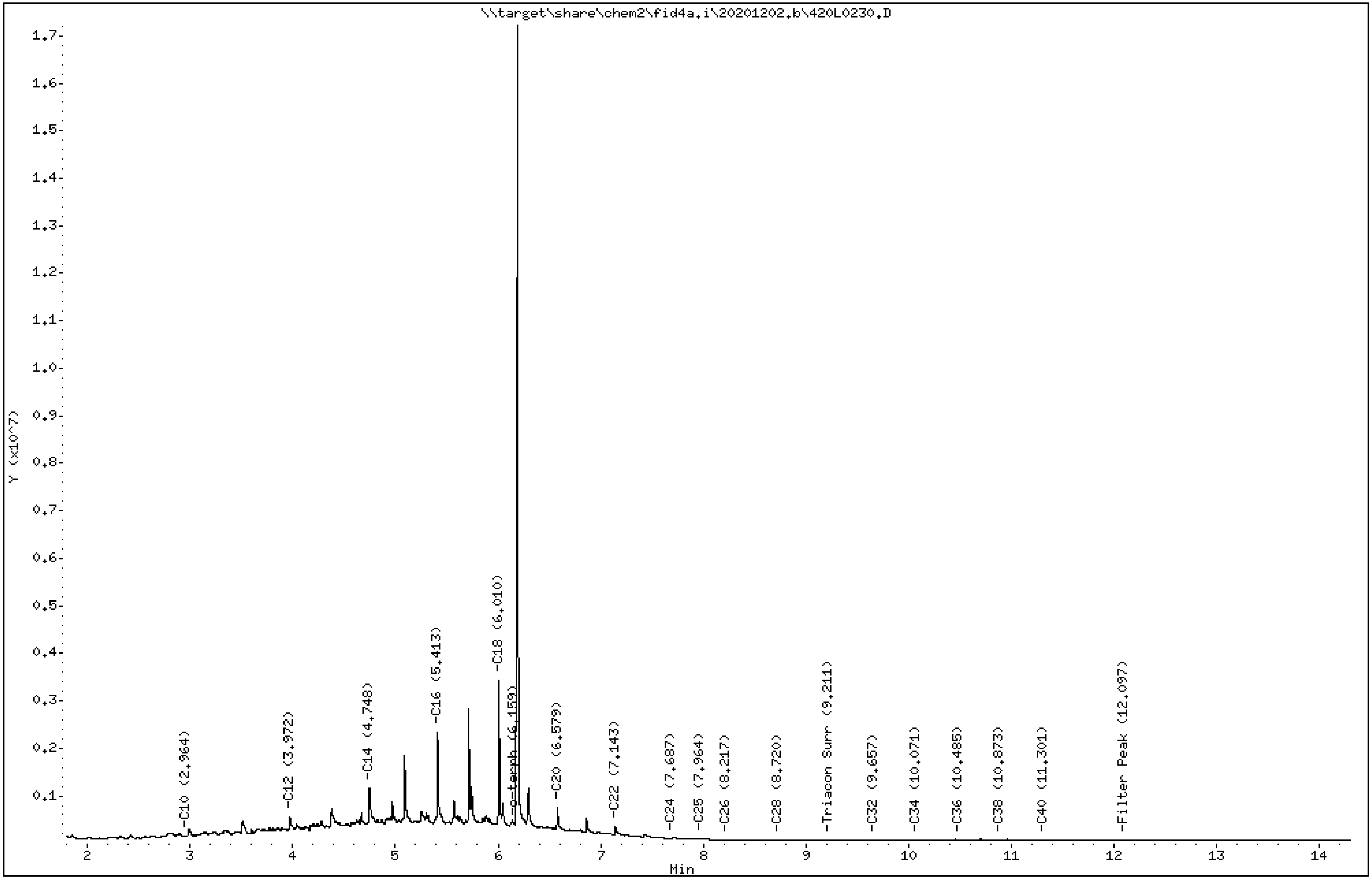
Sample Info: SIL0020-CCV1

Column phase: RTX-1

Instrument: fid4a.i

Operator: JGR/CTO/VTS

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0230.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIL0020-CCV1
Client ID:
Injection: 02-DEC-2020 18:48
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.851	-0.031	118436	336889	WATPHD	(C12-C24)	74856430	469.8
C10	2.964	-0.010	87722	93589	WATPHM	(C24-C38)	930693	9.2
C12	3.972	0.006	499722	1237222	AK102	(C10-C25)	87005217	445.1
C14	4.748	-0.000	1095146	1743294	AK103	(C25-C36)	558337	7.6
C16	5.413	0.001	2272399	3245560	OR.DIES	(C10-C28)	87368283	445.8
C18	6.010	-0.000	3375025	3035014				
C20	6.579	-0.001	692024	1310237	JET-A	(C10-C18)	67427365	406.6
C22	7.143	0.001	279900	536582				
C24	7.687	-0.004	36786	18274				
C25	7.964	0.006	16649	6629				
C26	8.217	-0.001	8271	2448				
C28	8.720	-0.003	1994	687				
C32	9.657	0.010	931	342				
C34	10.071	0.002	1674	331				
Filter Peak	12.097	0.000	4632	1596	BUNKERC	(C10-C38)	87697518	2221.5
C36	10.485	0.011	4240	2090				
C38	10.873	-0.002	6001	1492				
C40	11.301	-0.002	6808	2701				
o-terph	6.194	-0.002	16789564	17136873				
Triacon Surr	9.211	-0.012	262	133	NAS DIES	(C10-C24)	86766824	444.6

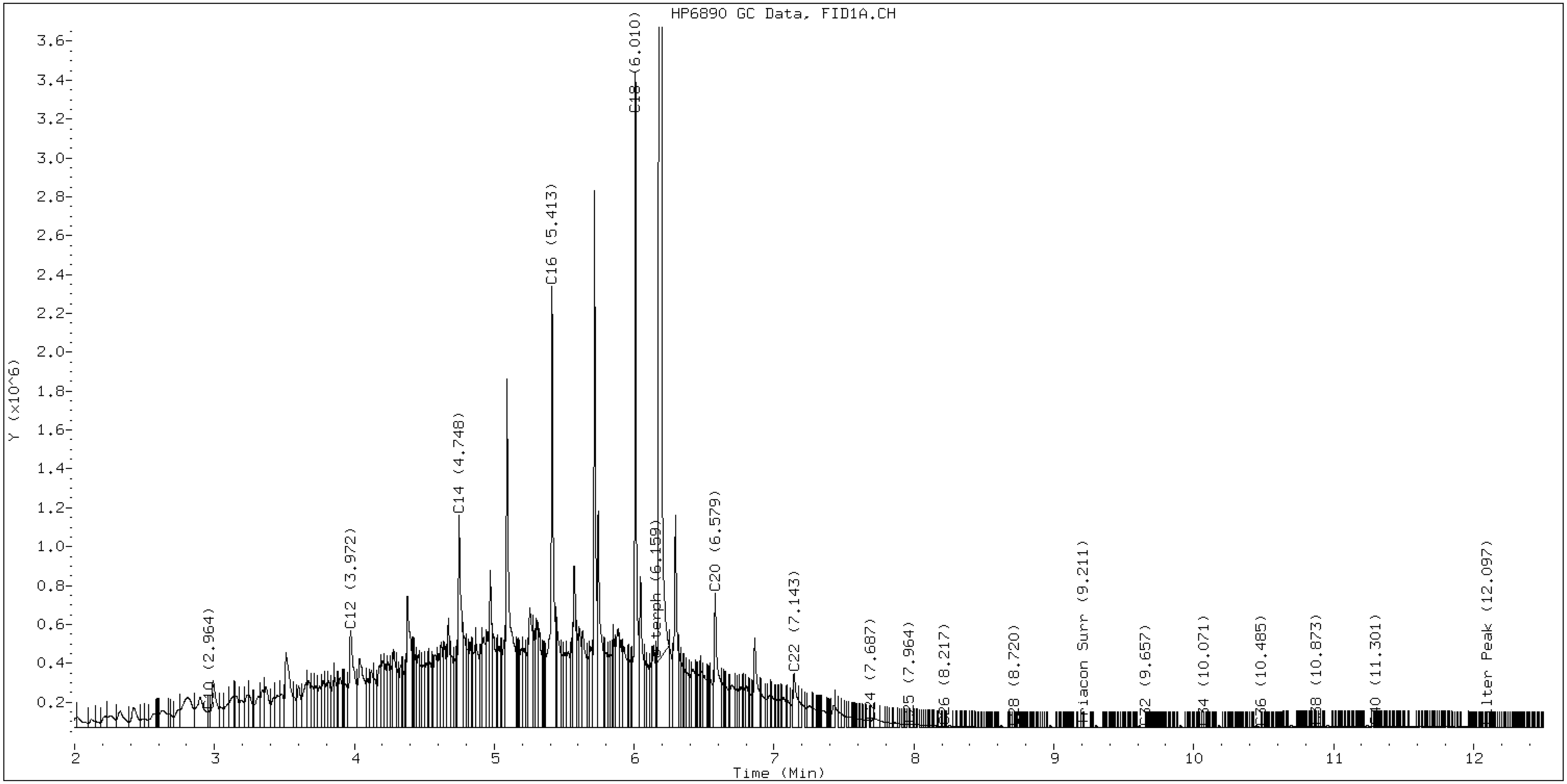
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	17136873	83.7	M
Triacontane	133	0.0	

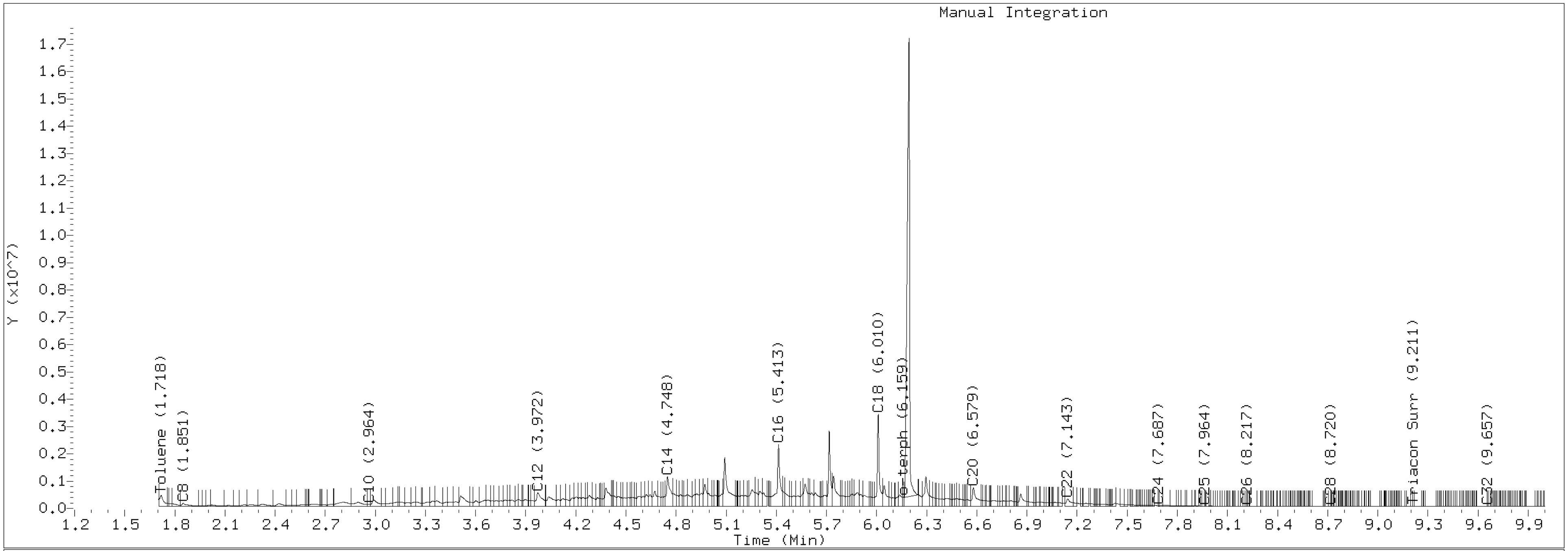
M Indicates the peak was manually integrated

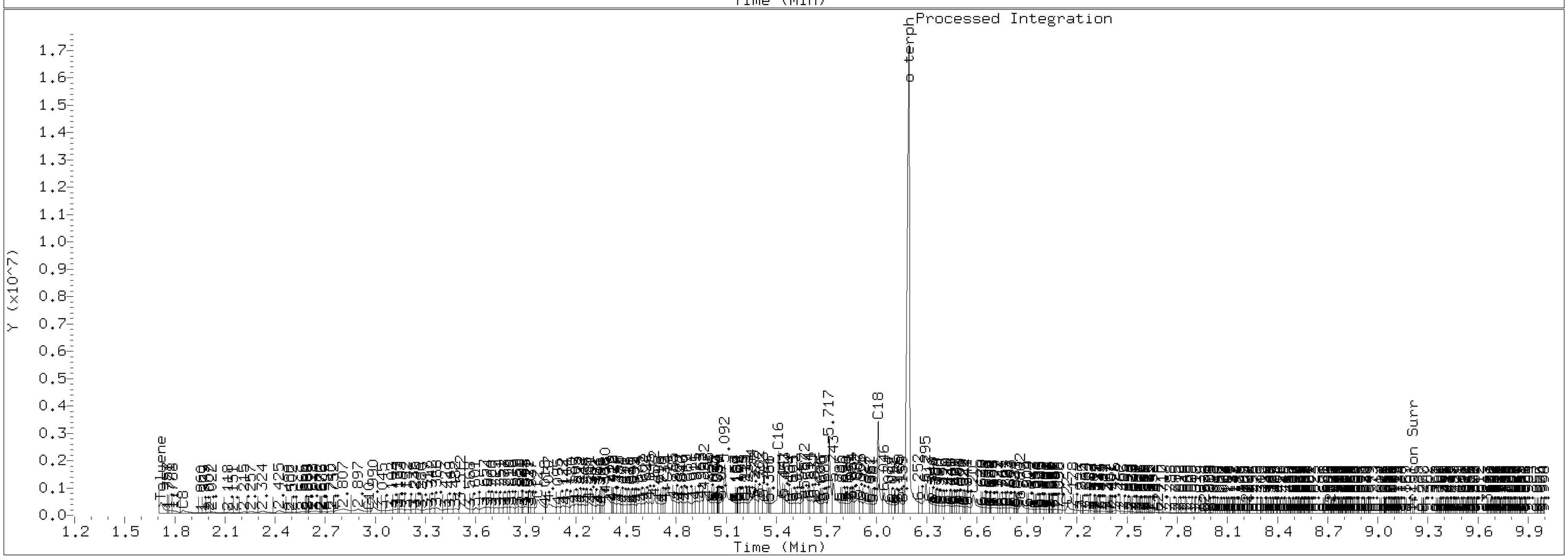
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201202.b/420L0230.D SIL0020-CCV1



TPH Manual Integrations Report
Datafile: FID4A, 20201202.b/420L0230.D Injection: 02-DEC-2020 18:48
Lab ID:SIL0020-CCV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420L0231.D
Calibration Date: 10/25/2019
Sequence: SIL0020
Injection Date: 12/02/20
Lab Sample ID: SIL0020-CCV2
Injection Time: 19:08
Sequence Name: MOIL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1080	101166	109429.1		8.2	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0231.D

Date : 02-DEC-2020 19:08

Client ID:

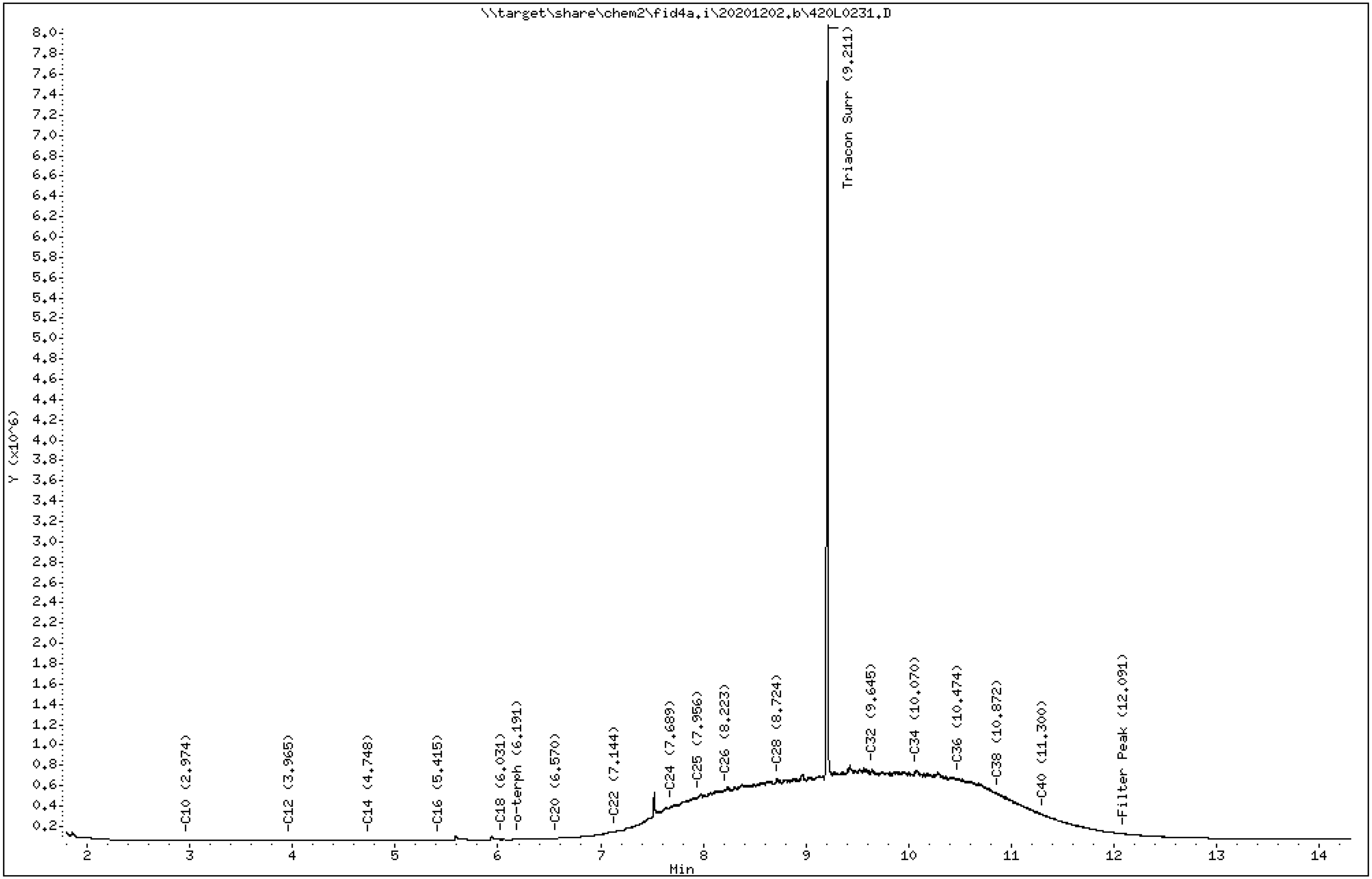
Instrument: fid4a.i

Sample Info: SIL0020-CCV2

Operator: JGR/CTO/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0231.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIL0020-CCV2
Client ID:
Injection: 02-DEC-2020 19:08
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.854	-0.028	75388	260251	WATPHD	(C12-C24)	10006728	62.8
C10	2.974	0.001	786	308	WATPHM	(C24-C38)	109429094	1081.7
C12	3.965	-0.001	3360	1665	AK102	(C10-C25)	13706693	70.1
C14	4.748	-0.001	4299	1270	AK103	(C25-C36)	93739244	1280.5
C16	5.415	0.002	3795	1499	OR.DIES	(C10-C28)	40170765	205.0
C18	6.031	0.021	7001	6505				
C20	6.570	-0.010	18146	3623	JET-A	(C10-C18)	720857	4.3
C22	7.144	0.002	86335	70507				
C24	7.689	-0.002	331274	212347				
C25	7.956	-0.003	431399	170181				
C26	8.223	0.004	494855	220089				
C28	8.724	0.002	590554	349614				
C32	9.645	-0.002	706063	686208				
C34	10.070	0.002	682147	203798				
Filter Peak	12.091	-0.005	63485	43572	BUNKERC	(C10-C38)	119579285	3029.1
C36	10.474	-0.001	602376	238960				
C38	10.872	-0.003	451581	335905				
C40	11.300	-0.003	253895	88397				
o-terph	6.191	-0.005	8220	3613				
Triacon Surr	9.211	-0.012	7393671	7344486	NAS DIES	(C10-C24)	10150191	52.0

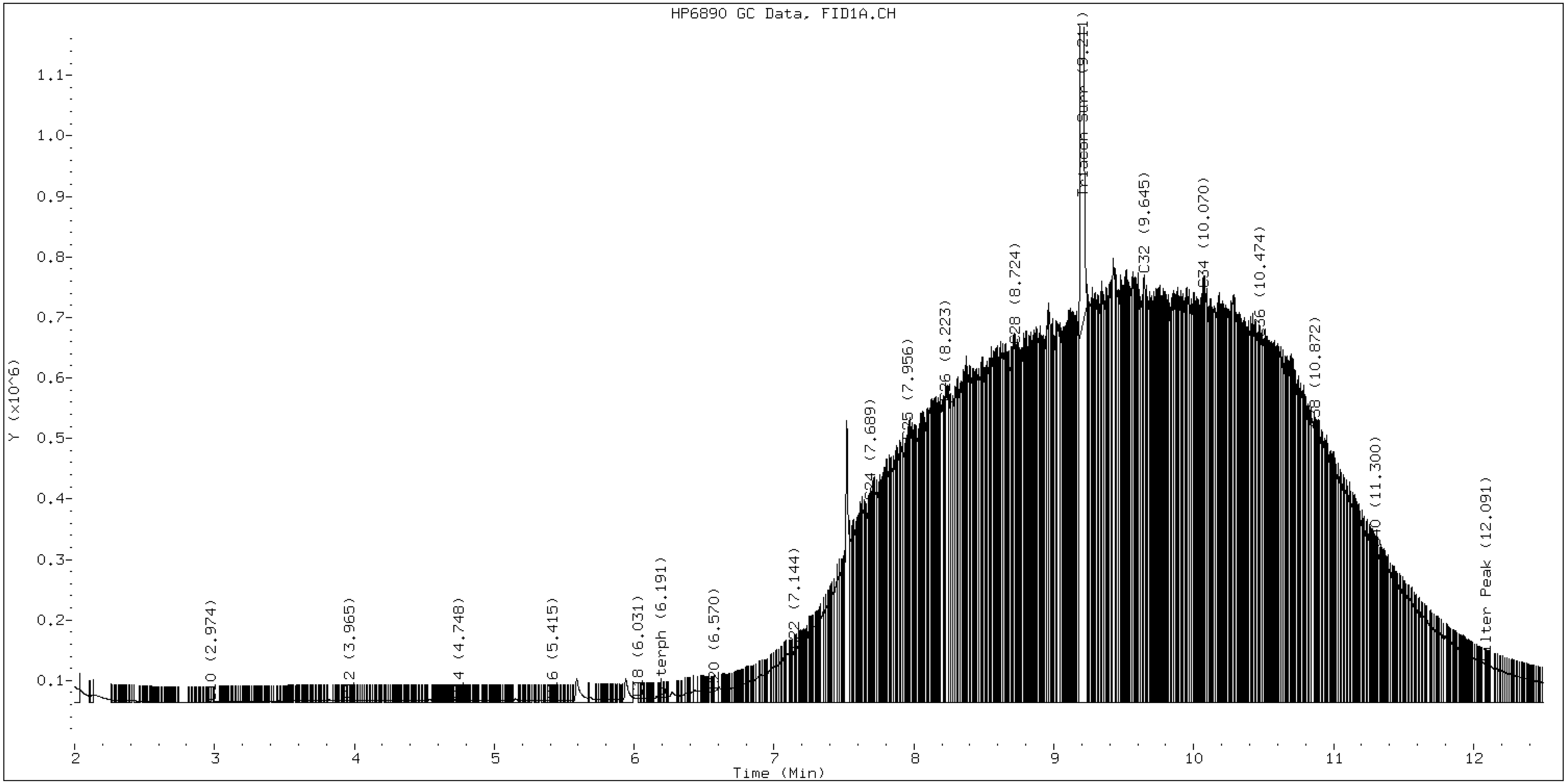
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	3613	0.0	
Triacontane	7344486	49.5	M

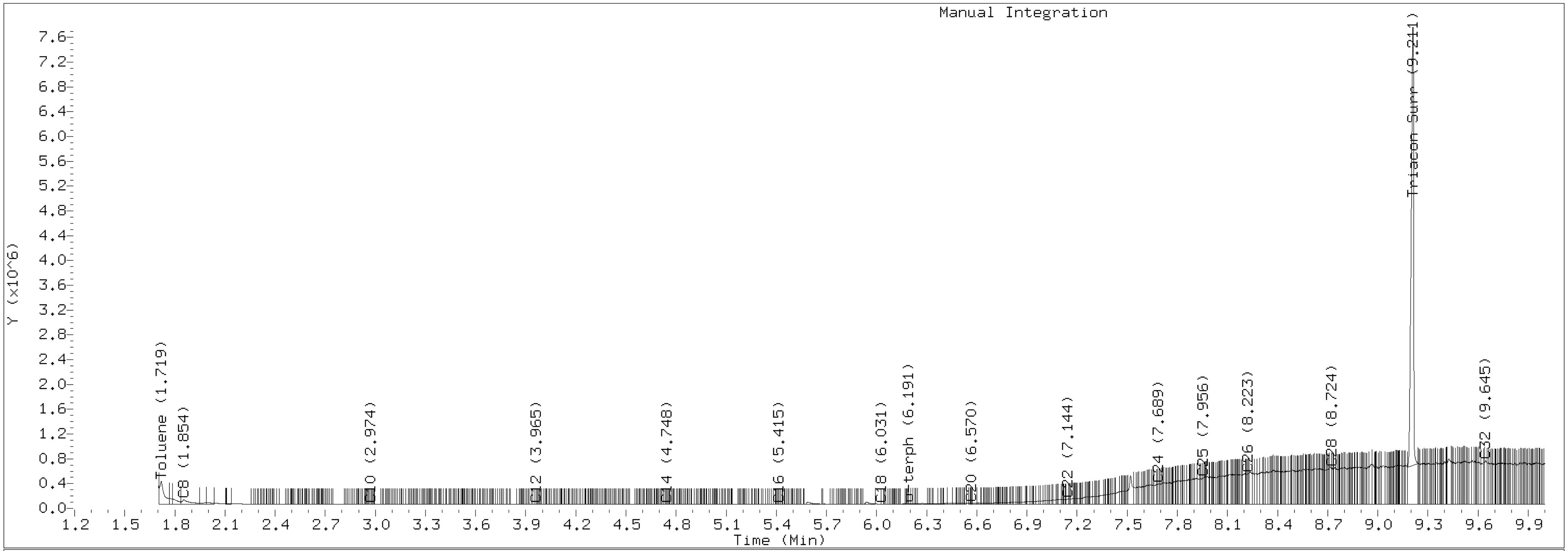
M Indicates the peak was manually integrated

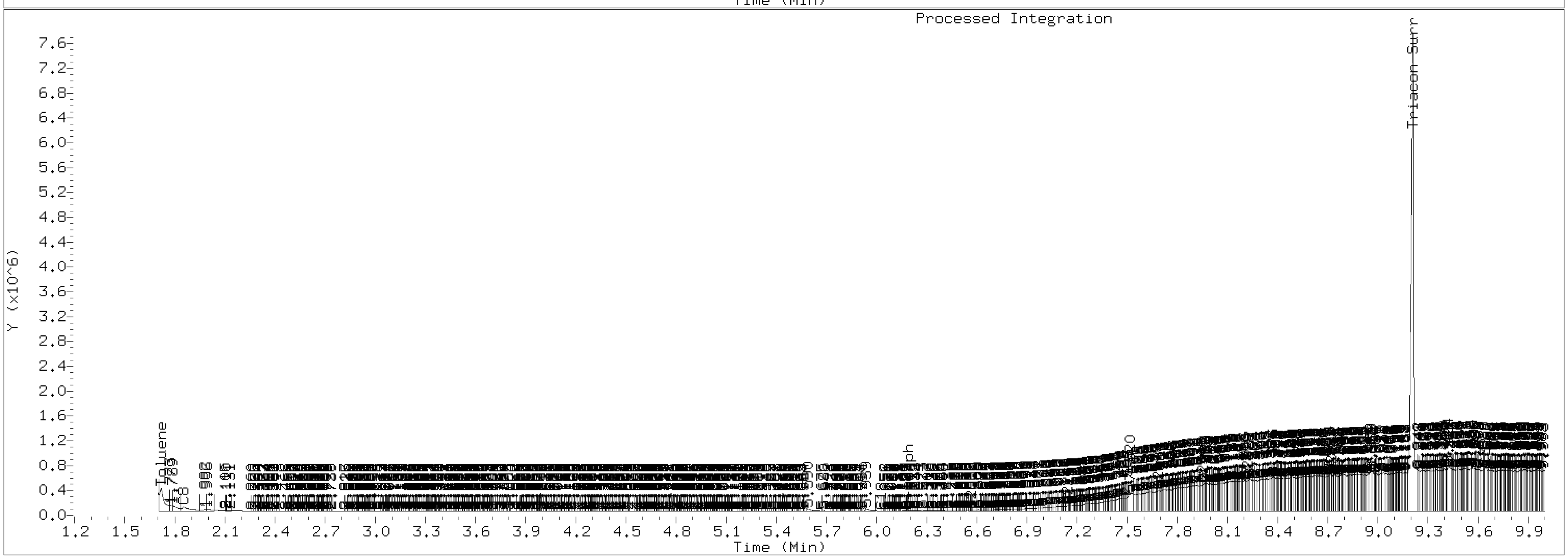
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201202.b/420L0231.D SIL0020-CCV2



TPH Manual Integrations Report
Datafile: FID4A, 20201202.b/420L0231.D Injection: 02-DEC-2020 19:08
Lab ID:SIL0020-CCV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420L0242.D	Calibration Date:	10/25/2019
Sequence:	SIL0020	Injection Date:	12/02/20
Lab Sample ID:	SIL0020-CCV3	Injection Time:	22:50
Sequence Name:	DIESEL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	493	159336.7	157209.5		-1.3	+/-15
o-Terphenyl	A	90.000	86.9	204701.9	197591.7		-3.4	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0242.D

Page 1

Date : 02-DEC-2020 22:50

Client ID:

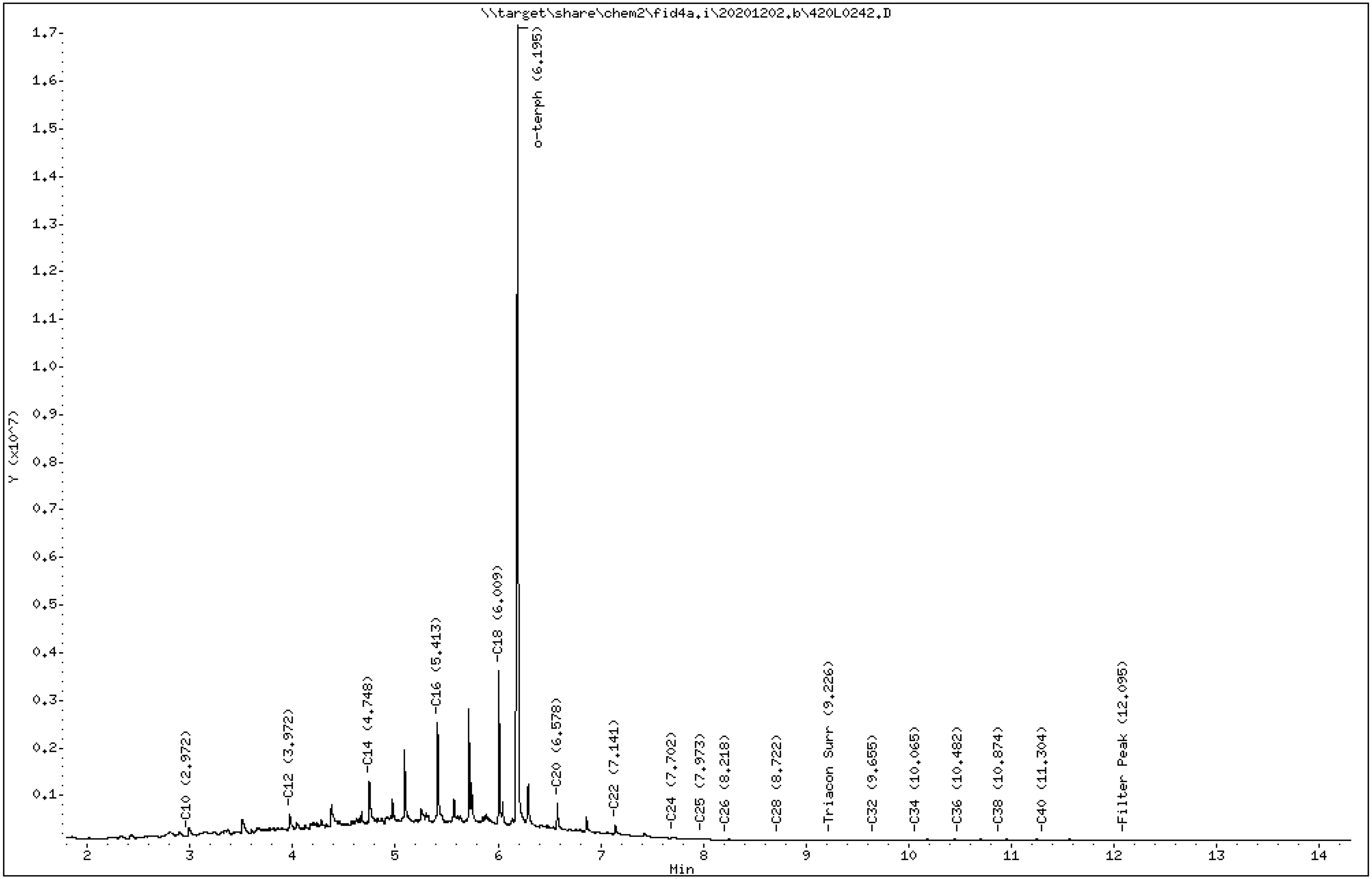
Instrument: fid4a.i

Sample Info: SIL0020-CCV3

Operator: JGR/CTO/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0242.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIL0020-CCV3
Client ID:
Injection: 02-DEC-2020 22:50
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.853	-0.028	79733	288904	WATPHD	(C12-C24)	78604734	493.3
C10	2.972	-0.002	92971	111099	WATPHM	(C24-C38)	1080059	10.7
C12	3.972	0.006	551821	945337	AK102	(C10-C25)	90891270	464.9
C14	4.748	-0.000	1230960	1832015	AK103	(C25-C36)	649400	8.9
C16	5.413	-0.000	2471113	3415283	OR.DIES	(C10-C28)	91302659	465.8
C18	6.009	-0.001	3560118	3009354				
C20	6.578	-0.002	764538	1073860	JET-A	(C10-C18)	69806015	420.9
C22	7.141	-0.001	314983	746675				
C24	7.702	0.012	58720	135271				
C25	7.973	0.015	24008	42425				
C26	8.218	-0.000	9489	3307				
C28	8.722	-0.001	2435	484				
C32	9.655	0.008	552	133				
C34	10.065	-0.003	2055	1077				
Filter Peak	12.095	-0.001	12609	3147	BUNKERC	(C10-C38)	91746615	2324.0
C36	10.482	0.007	6173	3372				
C38	10.874	-0.001	9332	5118				
C40	11.304	0.002	11158	1670				
o-terph	6.195	-0.001	16729230	17783250				
Triacon Surr	9.226	0.003	650	235	NAS DIES	(C10-C24)	90666557	464.6

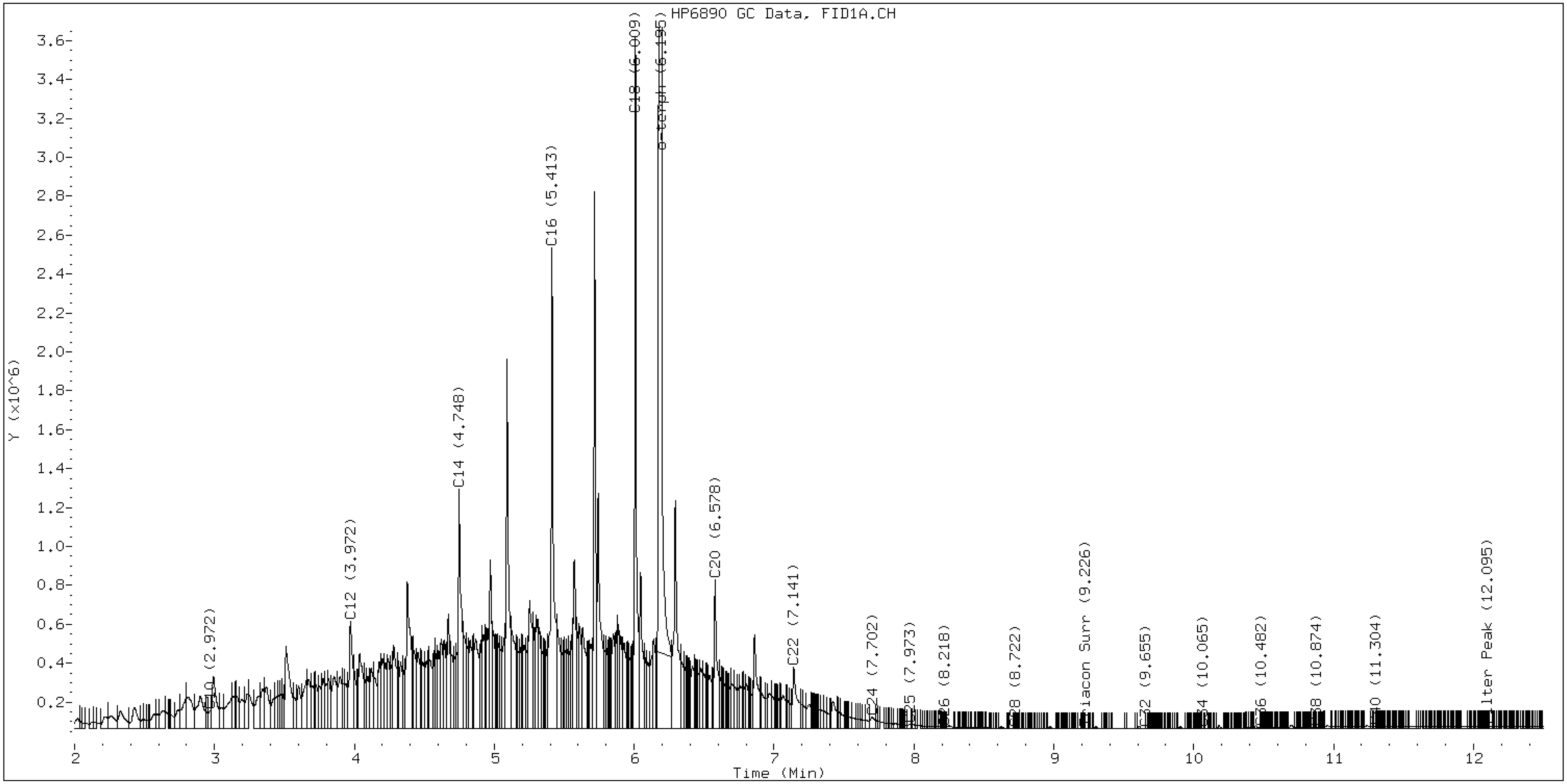
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	17783250	86.9	M
Triacontane	235	0.0	

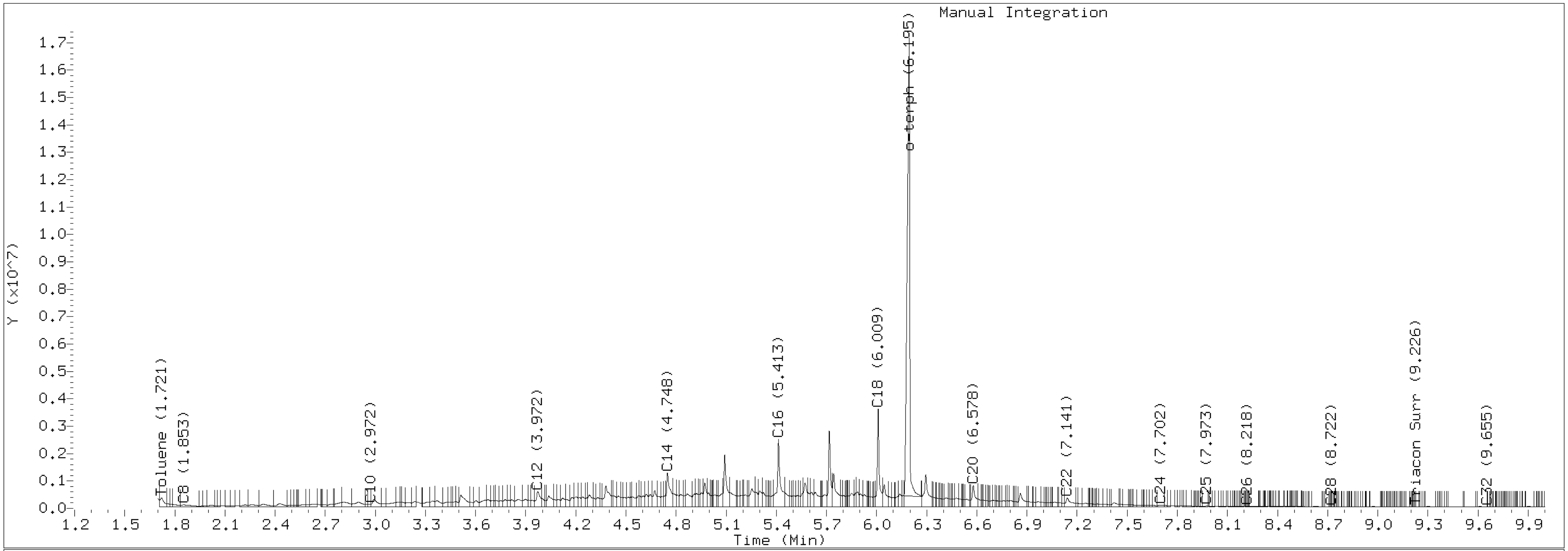
M Indicates the peak was manually integrated

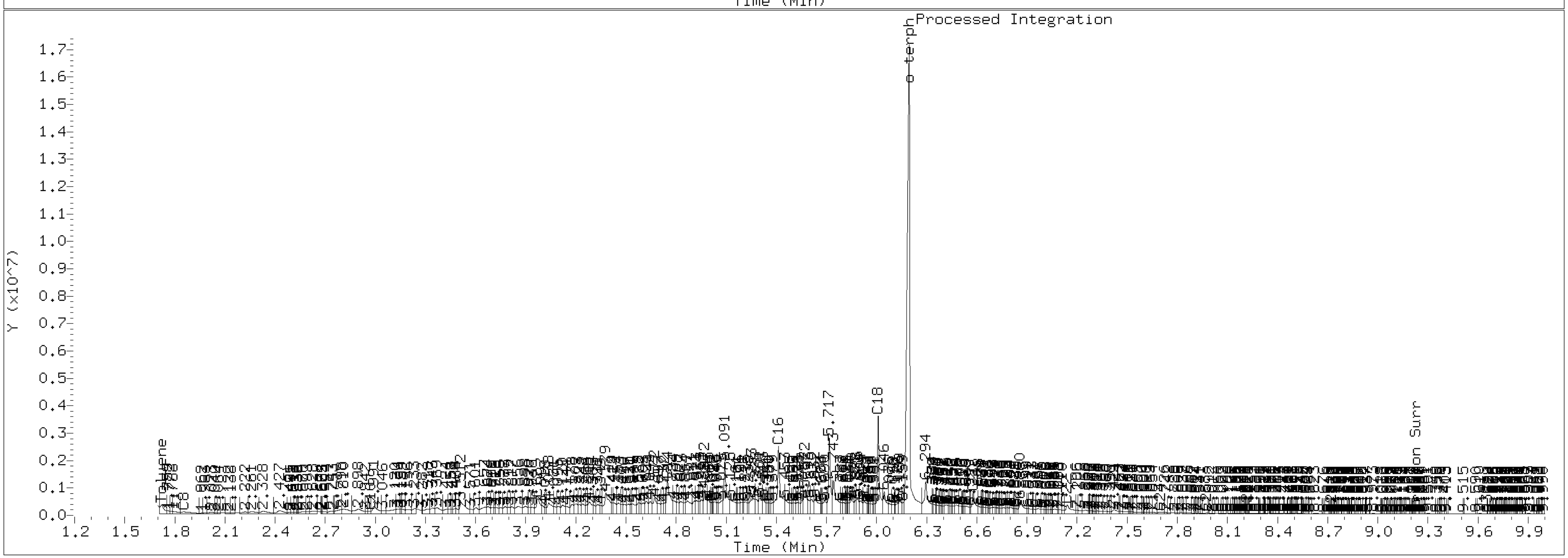
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201202.b/420L0242.D SIL0020-CCV3



TPH Manual Integrations Report
Datafile: FID4A, 20201202.b/420L0242.D Injection: 02-DEC-2020 22:50
Lab ID:SIL0020-CCV3





CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420L0243.D	Calibration Date:	10/25/2019
Sequence:	SIL0020	Injection Date:	12/02/20
Lab Sample ID:	SIL0020-CCV4	Injection Time:	23:10
Sequence Name:	MOIL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1080	101166	108873.4		7.6	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0243.D

Page 1

Date : 02-DEC-2020 23:10

Client ID:

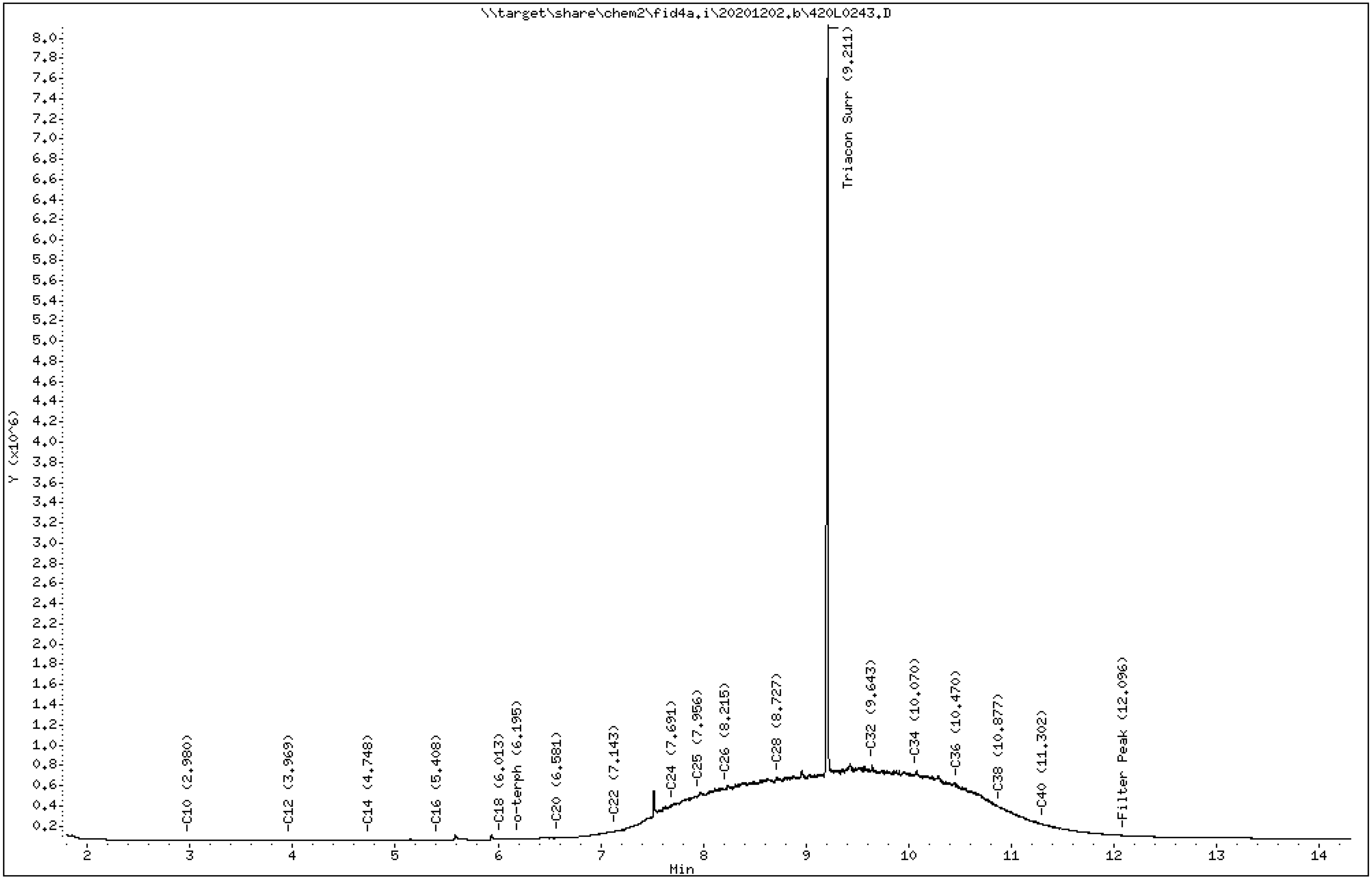
Instrument: fid4a.i

Sample Info: SIL0020-CCV4

Operator: JGR/CTO/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0243.D ARI ID: SIL0020-CCV4
Method: 20201202.b\FID4TPH.m Client ID:
Instrument: fid4a.i, JGR/CTO/VTS Injection: 02-DEC-2020 23:10
Report Date: 12/03/2020 Dilution Factor: 1
Macro: 09-SEP-2019 RT Std: 419H1603.D
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.854	-0.028	51428	198202	WATPHD	(C12-C24)	10461576	65.7
C10	2.980	0.006	391	272	WATPHM	(C24-C38)	108873416	1076.2
C12	3.969	0.003	2450	843	AK102	(C10-C25)	14654793	75.0
C14	4.748	-0.001	4672	4331	AK103	(C25-C36)	94742511	1294.2
C16	5.408	-0.004	4735	3487	OR.DIES	(C10-C28)	41879845	213.7
C18	6.013	0.003	8454	4178				
C20	6.581	0.001	22082	12811	JET-A	(C10-C18)	755406	4.6
C22	7.143	0.001	92464	58870				
C24	7.691	0.001	337945	83658				
C25	7.956	-0.003	450481	290182				
C26	8.215	-0.004	520208	409868				
C28	8.727	0.004	609479	121429				
C32	9.643	-0.004	744197	1507372				
C34	10.070	0.001	679931	434326				
Filter Peak	12.096	-0.000	46026	16005	BUNKERC	(C10-C38)	119426613	3025.2
C36	10.470	-0.004	548894	538816				
C38	10.877	0.001	328071	65448				
C40	11.302	-0.001	158103	101099				
o-terph	6.195	-0.001	11092	12440				
Triacon Surr	9.211	-0.012	7394309	7603160	NAS DIES	(C10-C24)	10553197	54.1

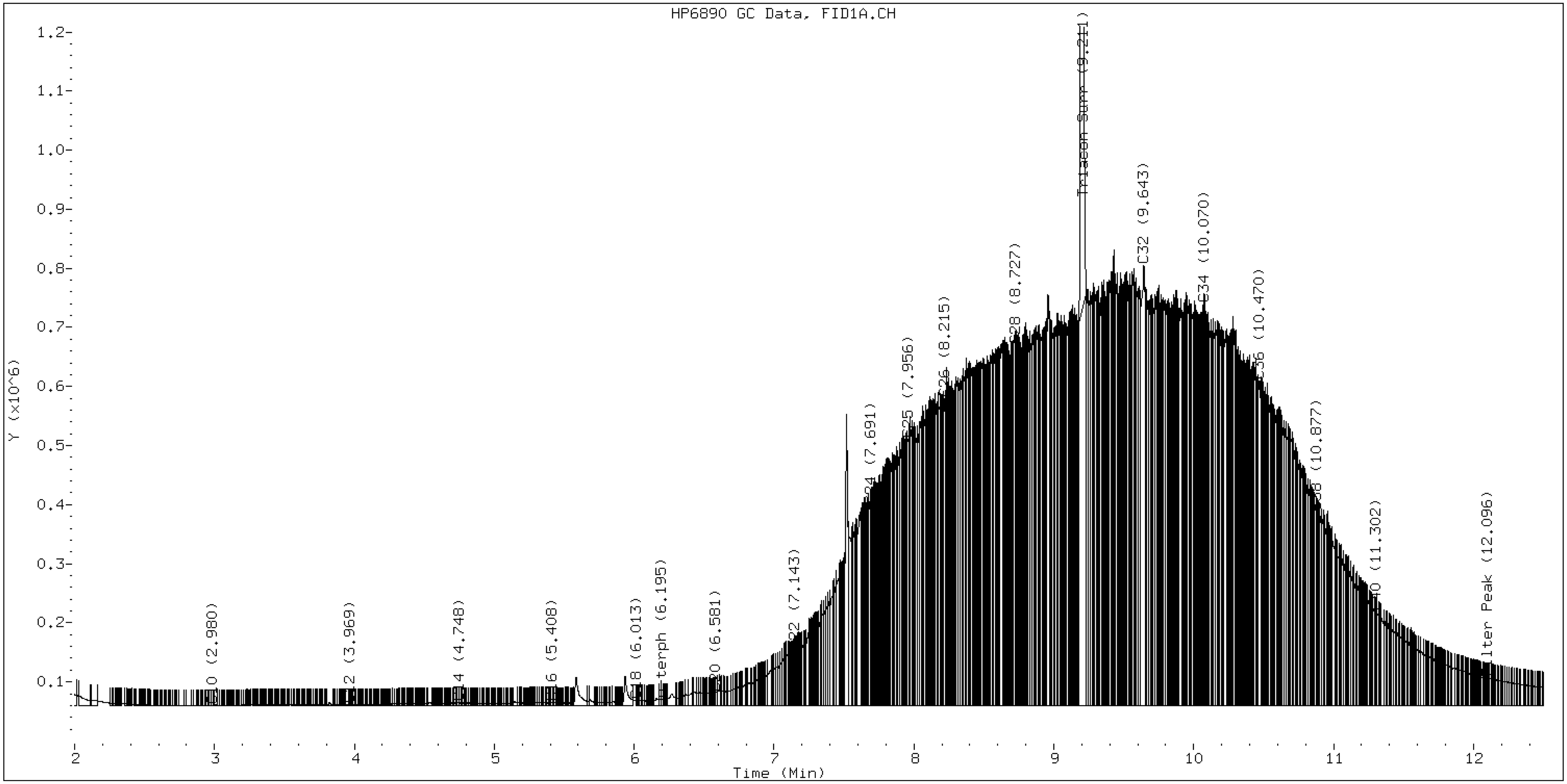
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	12440	0.1	
Triacontane	7603160	51.2	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

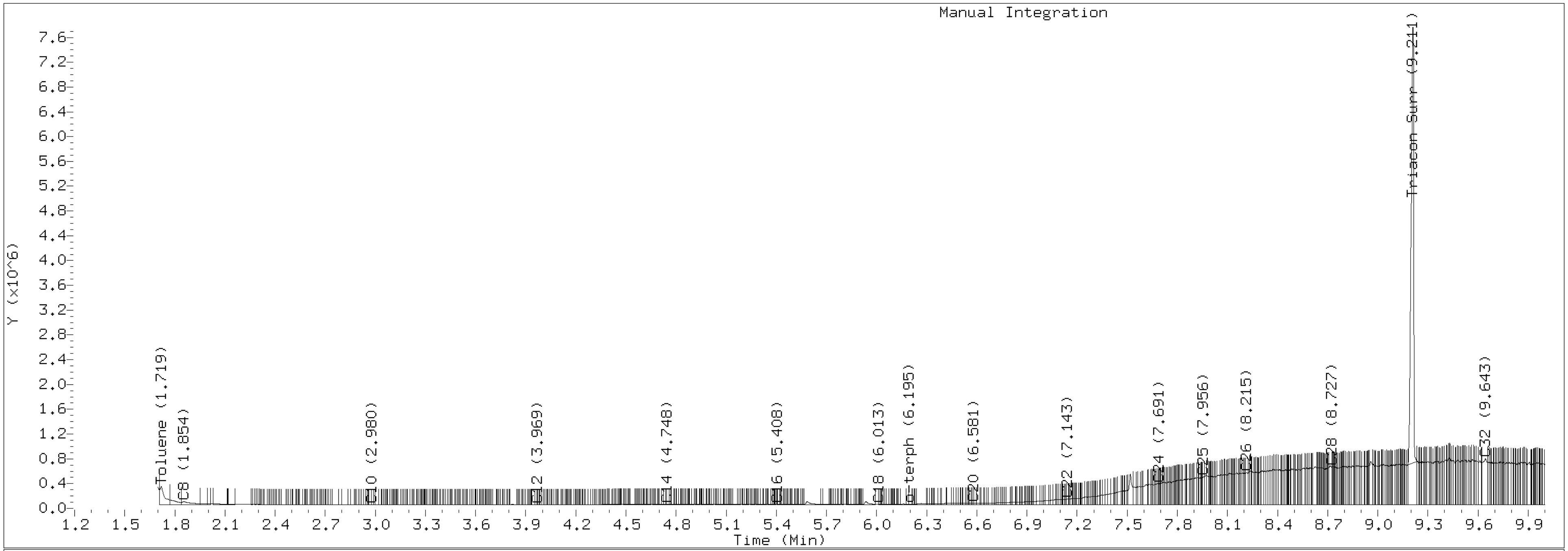
Datafile: FID4A, 20201202.b/420L0243.D SIL0020-CCV4

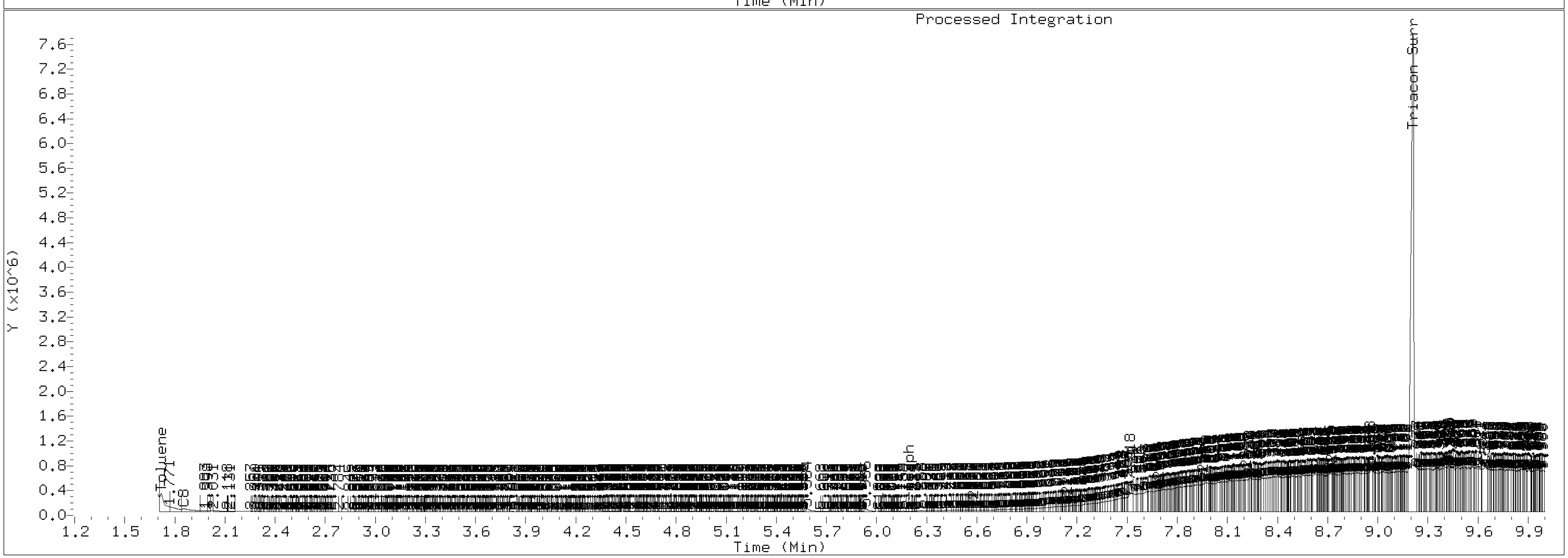


TPH Manual Integrations Report

Datafile: FID4A, 20201202.b/420L0243.D Injection: 02-DEC-2020 23:10

Lab ID:SIL0020-CCV4





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420L0257.D
Calibration Date: 10/25/2019
Sequence: SIL0020
Injection Date: 12/03/20
Lab Sample ID: SIL0020-CCV5
Injection Time: 03:51
Sequence Name: DIESEL CCV

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	482	159336.7	153508.6		-3.7	+/-15
o-Terphenyl	A	90.000	86.1	204701.9	195918		-4.3	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0257.D

Date : 03-DEC-2020 03:51

Client ID:

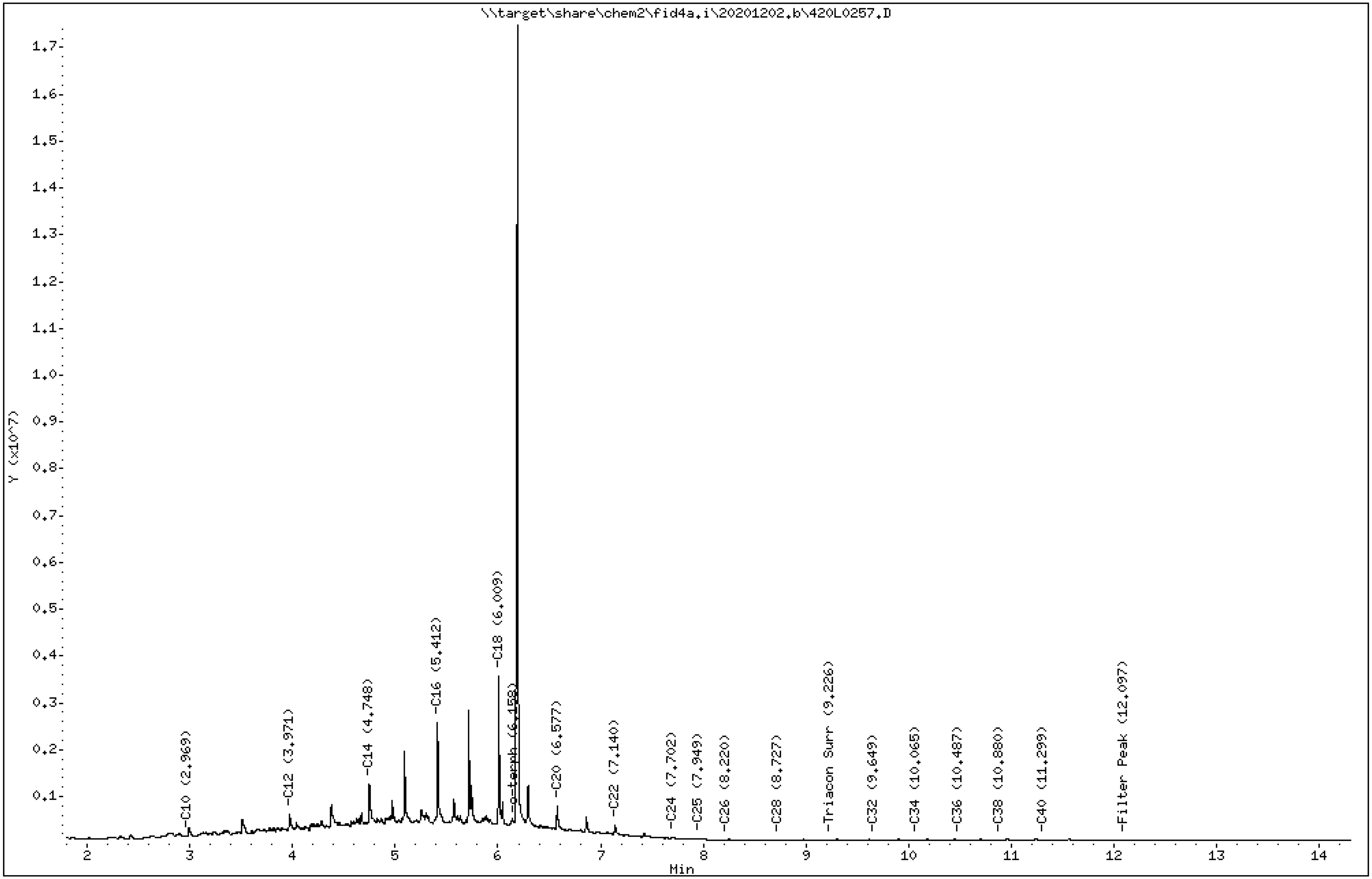
Instrument: fid4a.i

Sample Info: SIL0020-CCV5

Operator: JGR/CTO/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0257.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIL0020-CCV5
Client ID:
Injection: 03-DEC-2020 03:51
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.851	-0.031	72281	241130	WATPHD	(C12-C24)	76754307	481.7
C10	2.969	-0.004	84938	97127	WATPHM	(C24-C38)	1049759	10.4
C12	3.971	0.005	562409	1248540	AK102	(C10-C25)	88466949	452.5
C14	4.748	-0.000	1209715	1774577	AK103	(C25-C36)	617877	8.4
C16	5.412	-0.001	2524172	3084100	OR.DIES	(C10-C28)	88806478	453.1
C18	6.009	-0.001	3510775	3315533				
C20	6.577	-0.003	741992	1016280	JET-A	(C10-C18)	68169977	411.0
C22	7.140	-0.002	318309	633647				
C24	7.702	0.011	58325	141891				
C25	7.949	-0.009	16054	3202				
C26	8.220	0.001	7407	3301				
C28	8.727	0.005	1259	308				
C32	9.649	0.002	1357	718				
C34	10.065	-0.004	2736	1086				
Filter Peak	12.097	0.001	12279	2451	BUNKERC	(C10-C38)	89311698	2262.4
C36	10.487	0.012	6421	2228				
C38	10.880	0.005	10830	6435				
C40	11.299	-0.004	12263	6103				
o-terph	6.194	-0.002	17026644	17632621				
Triacon Surr	9.226	0.003	954	356	NAS DIES	(C10-C24)	88261938	452.3

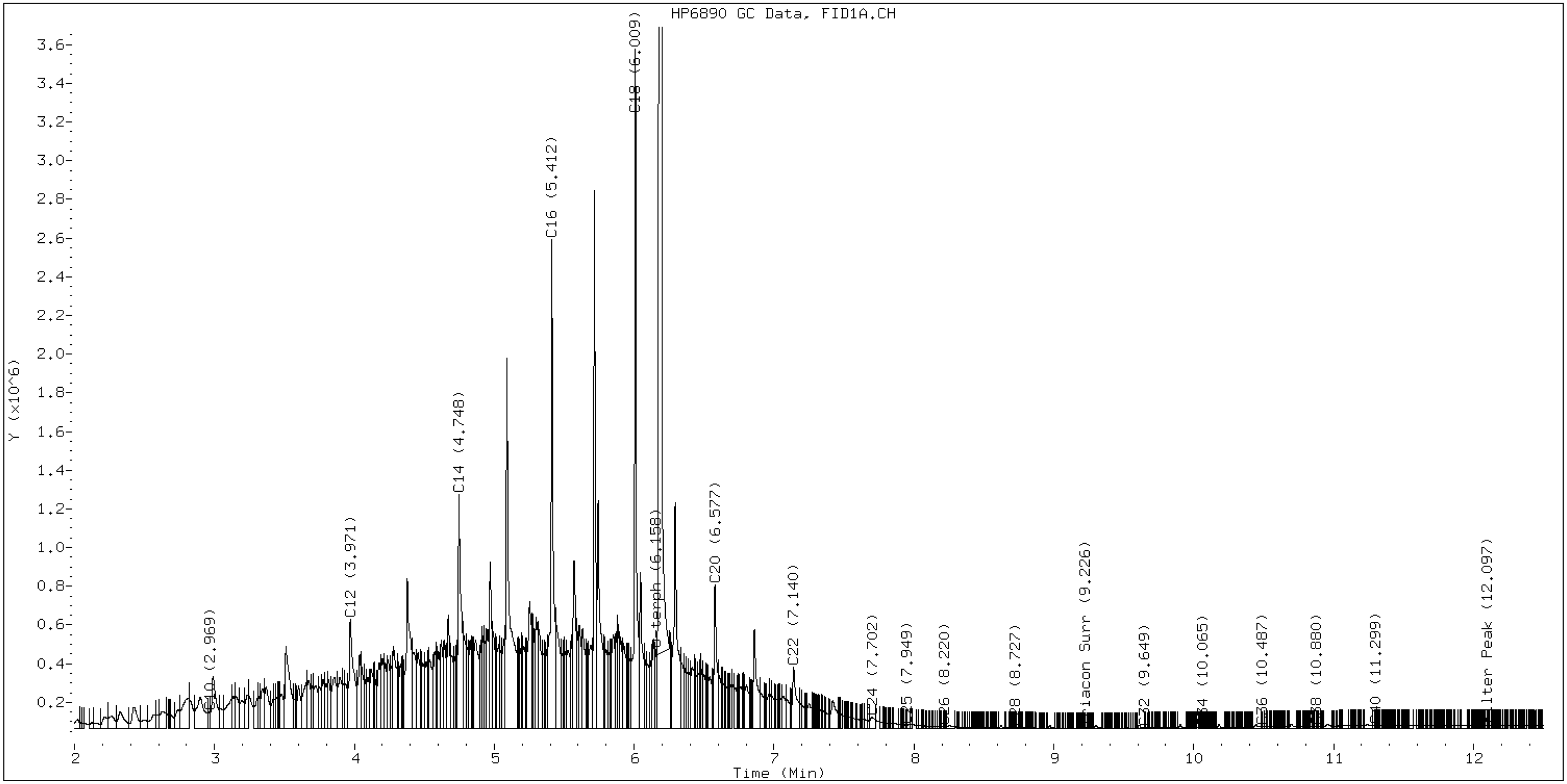
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	17632621	86.1	M
Triacontane	356	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

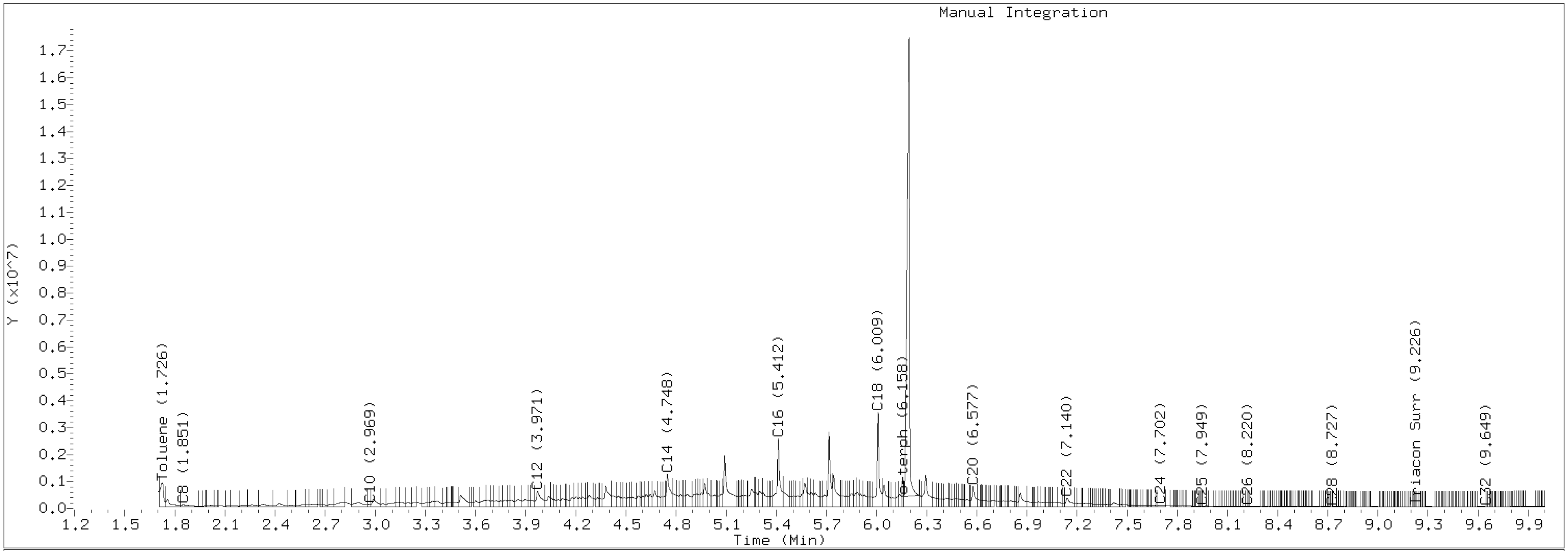
Datafile: FID4A, 20201202.b/420L0257.D   SIL0020-CCV5

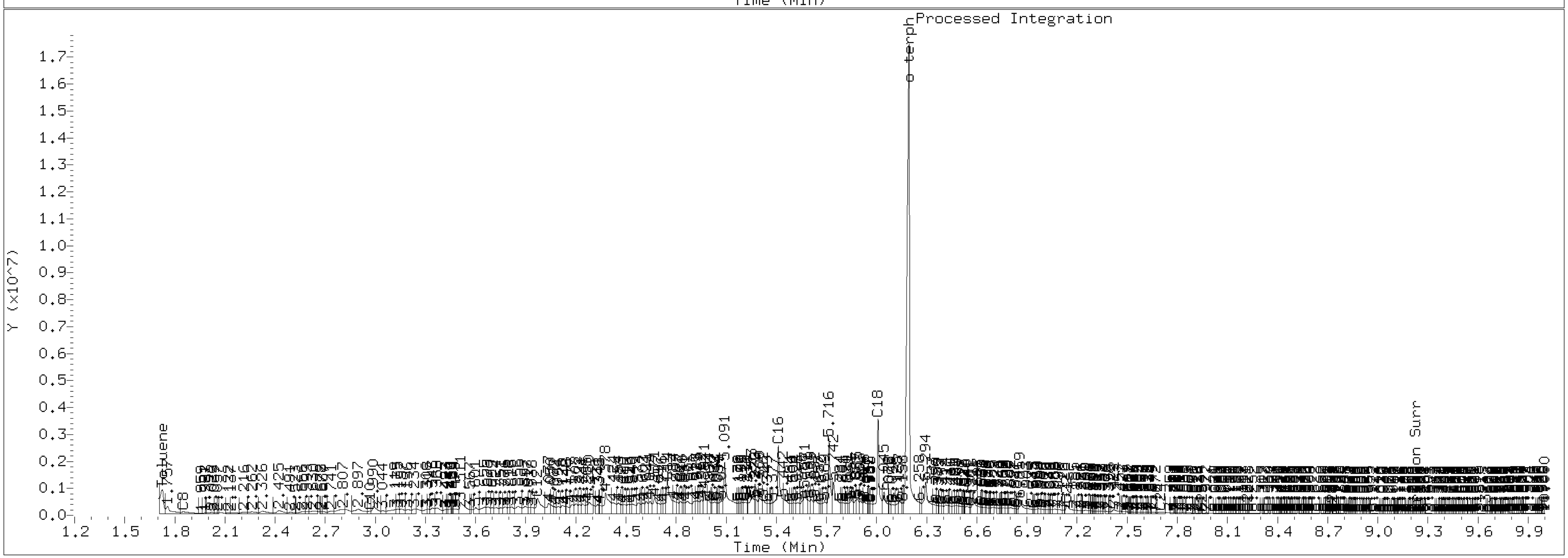


TPH Manual Integrations Report

Datafile: FID4A, 20201202.b/420L0257.D   Injection: 03-DEC-2020 03:51

Lab ID:SIL0020-CCV5





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420L0258.D	Calibration Date:	10/25/2019
Sequence:	SIL0020	Injection Date:	12/03/20
Lab Sample ID:	SIL0020-CCV6	Injection Time:	04:11
Sequence Name:	MOIL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1080	101166	109293.2		8.0	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0258.D

Date : 03-DEC-2020 04:11

Client ID:

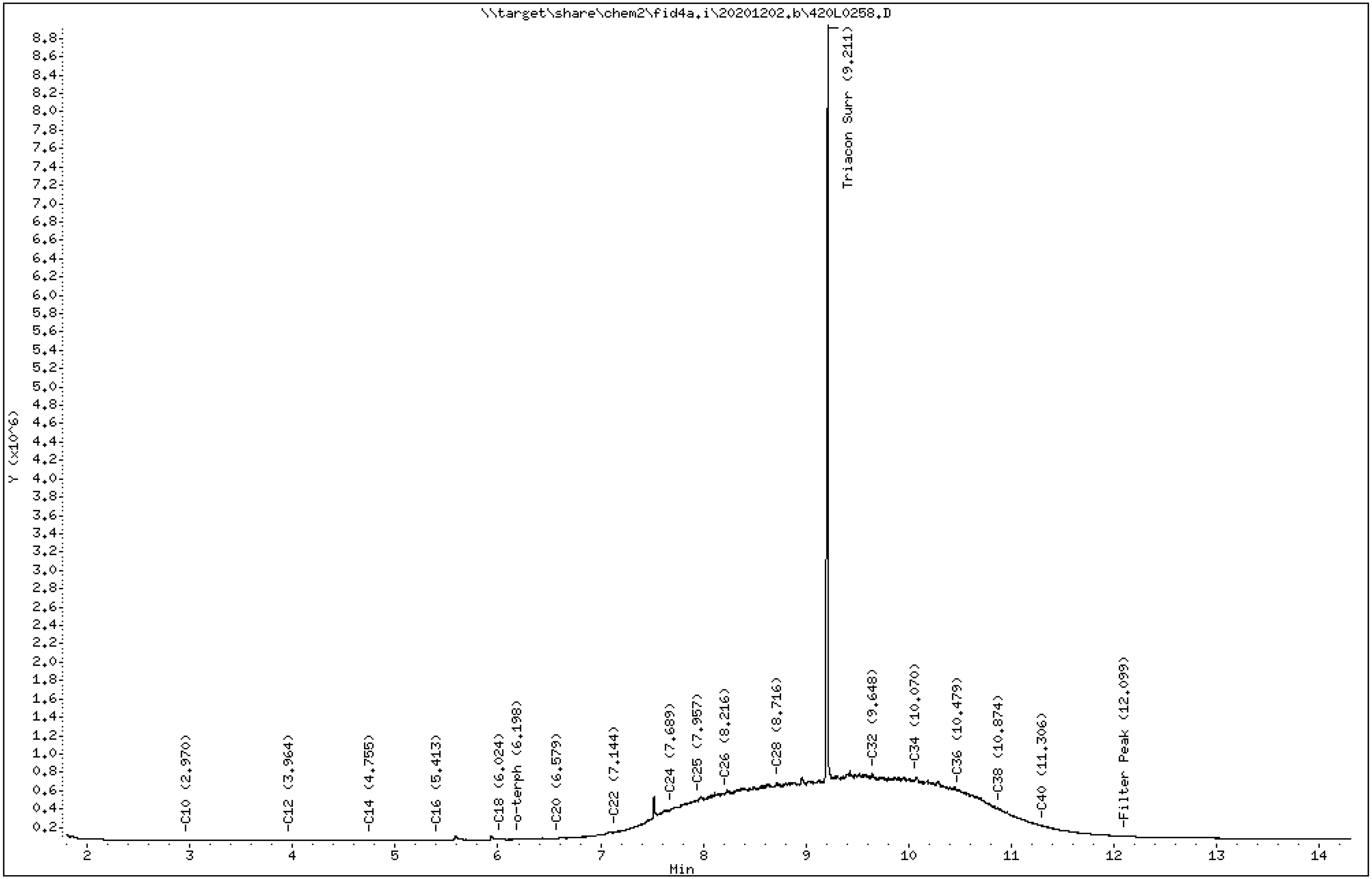
Sample Info: SIL0020-CCV6

Column phase: RTX-1

Instrument: fid4a.i

Operator: JGR/CTO/VTS

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0258.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIL0020-CCV6
Client ID:
Injection: 03-DEC-2020 04:11
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.854	-0.028	49024	189543	WATPHD	(C12-C24)	10263204	64.4
C10	2.970	-0.003	442	104	WATPHM	(C24-C38)	109293233	1080.3
C12	3.964	-0.003	1882	1192	AK102	(C10-C25)	14115563	72.2
C14	4.755	0.007	3702	2190	AK103	(C25-C36)	95025133	1298.0
C16	5.413	0.000	3711	739	OR.DIES	(C10-C28)	41830437	213.4
C18	6.024	0.013	7792	2699				
C20	6.579	-0.002	20953	12321	JET-A	(C10-C18)	639504	3.9
C22	7.144	0.003	92407	114249				
C24	7.689	-0.002	338956	118215				
C25	7.957	-0.002	451550	221847				
C26	8.216	-0.002	507861	176482				
C28	8.716	-0.007	628638	463393				
C32	9.648	0.001	717074	354713				
C34	10.070	0.002	681740	169513				
Filter Peak	12.099	0.002	42990	35977	BUNKERC	(C10-C38)	119629146	3030.3
C36	10.479	0.004	542766	188934				
C38	10.874	-0.001	344098	352414				
C40	11.306	0.003	153187	45798				
o-terph	6.198	0.002	10585	18229				
Triacon Surr	9.211	-0.012	8202989	7608815	NAS DIES	(C10-C24)	10335912	53.0

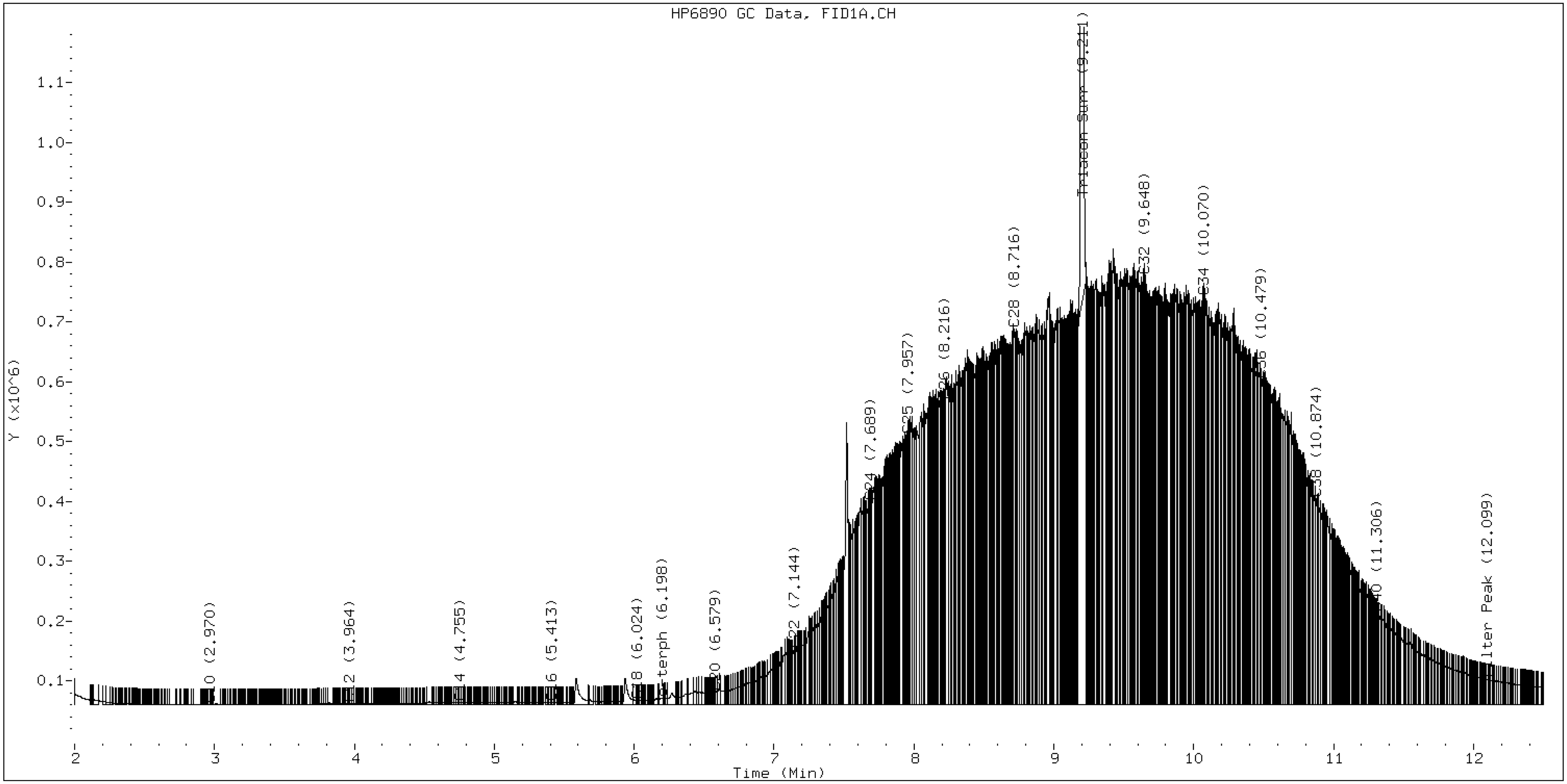
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	18229	0.1	
Triacontane	7608815	51.3	M

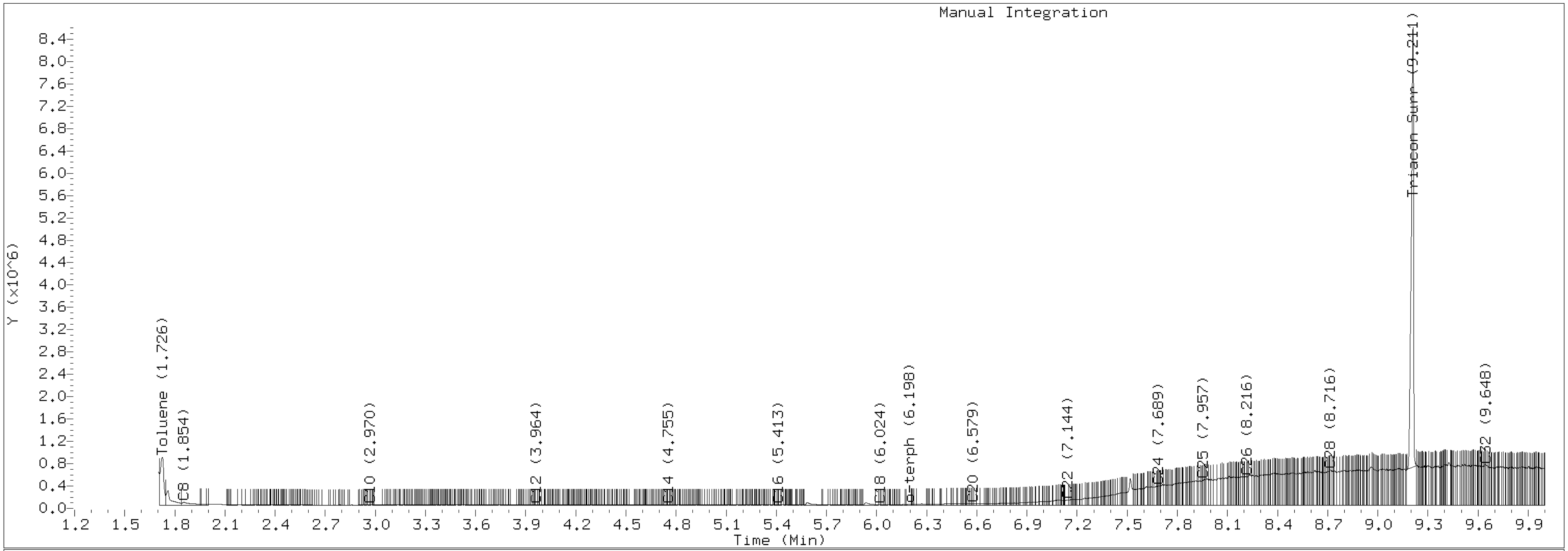
M Indicates the peak was manually integrated

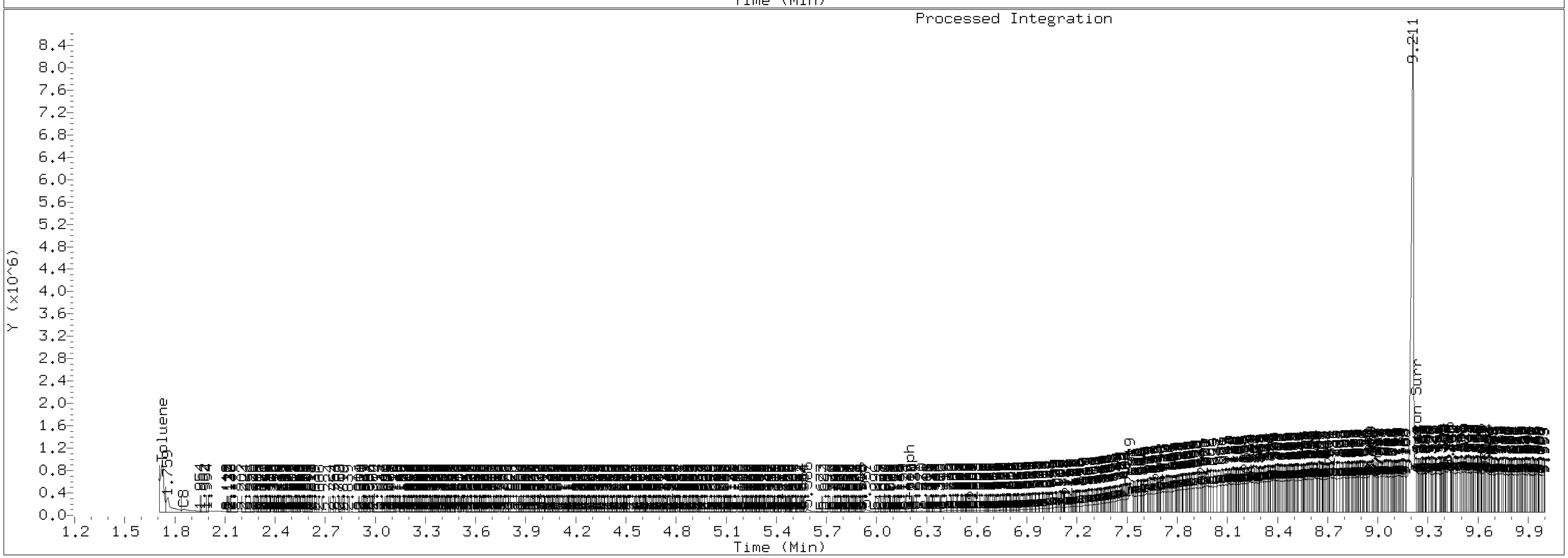
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201202.b/420L0258.D   SIL0020-CCV6



TPH Manual Integrations Report
Datafile: FID4A, 20201202.b/420L0258.D Injection: 03-DEC-2020 04:11
Lab ID:SIL0020-CCV6





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: DA00022
Lab File ID: 420L0273.D
Calibration Date: 10/25/2019
Sequence: SIL0020
Injection Date: 12/03/20
Lab Sample ID: SIL0020-CCV7
Injection Time: 09:14
Sequence Name: DIESEL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	472	159336.7	150371.1		-5.6	+/-15
o-Terphenyl	A	90.000	84.8	204701.9	192880.6		-5.8	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0273.D

Date : 03-DEC-2020 09:14

Client ID:

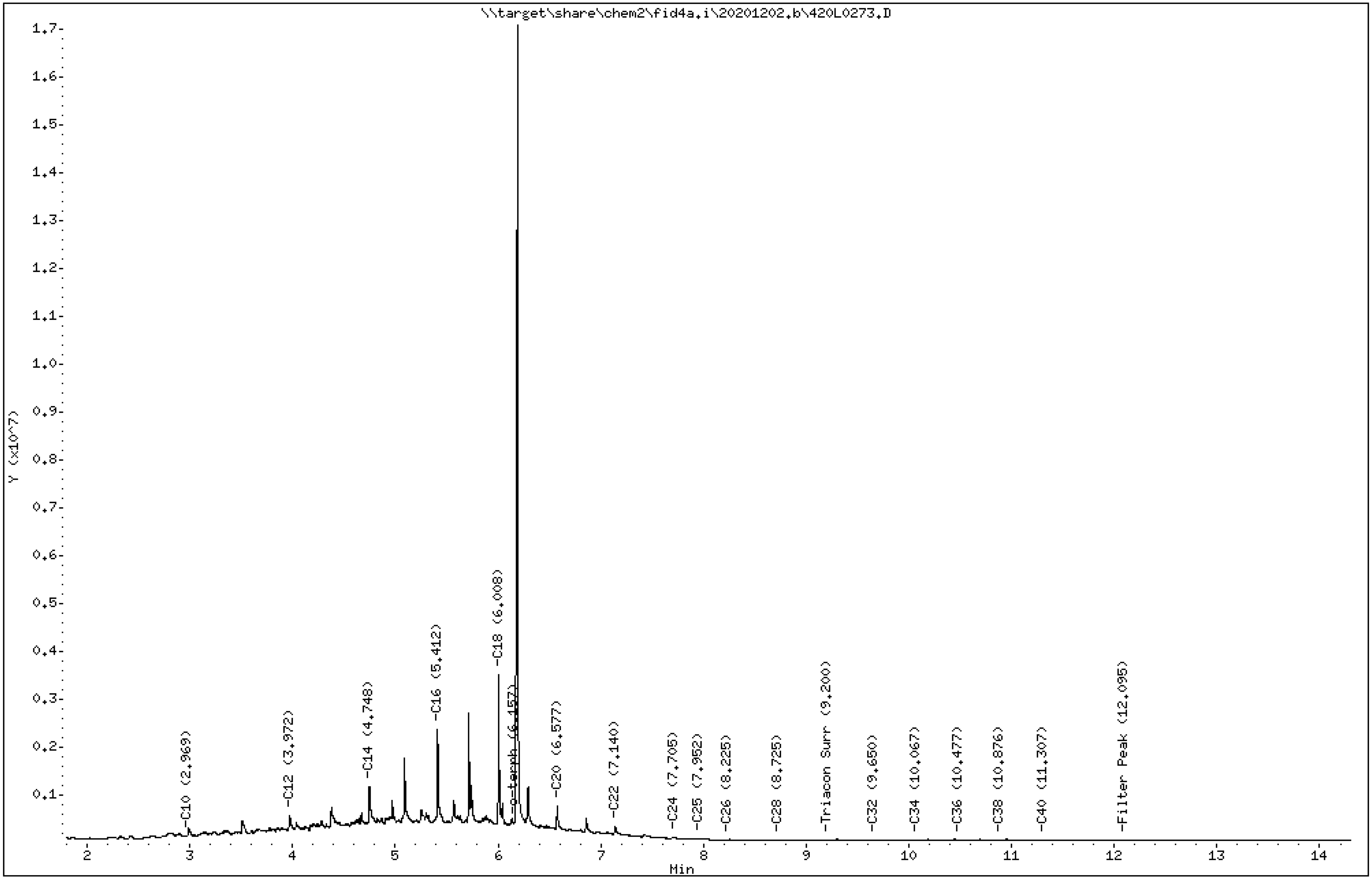
Instrument: fid4a.i

Sample Info: SIL0020-CCV7

Operator: JGR/CTO/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0273.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIL0020-CCV7
Client ID:
Injection: 03-DEC-2020 09:14
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.851	-0.031	68664	239395	WATPHD	(C12-C24)	75185543	471.9
C10	2.969	-0.005	86304	90430	WATPHM	(C24-C38)	922141	9.1
C12	3.972	0.006	504298	957796	AK102	(C10-C25)	86585772	442.9
C14	4.748	-0.001	1126705	1817949	AK103	(C25-C36)	585823	8.0
C16	5.412	-0.001	2309284	4032396	OR.DIES	(C10-C28)	86949786	443.6
C18	6.008	-0.002	3442986	3078315				
C20	6.577	-0.003	706662	934495	JET-A	(C10-C18)	66623559	401.7
C22	7.140	-0.002	286422	594182				
C24	7.705	0.015	52957	201560				
C25	7.952	-0.006	17528	10440				
C26	8.225	0.006	8474	4584				
C28	8.725	0.003	2095	922				
C32	9.650	0.003	777	319				
C34	10.067	-0.002	1306	688				
Filter Peak	12.095	-0.002	7885	3530	BUNKERC	(C10-C38)	87303838	2211.5
C36	10.477	0.003	3994	1371				
C38	10.876	0.001	6495	3559				
C40	11.307	0.004	8217	2867				
o-terph	6.193	-0.003	16652718	17359253				
Triacon Surr	9.200	-0.022	306	121	NAS DIES	(C10-C24)	86381697	442.6

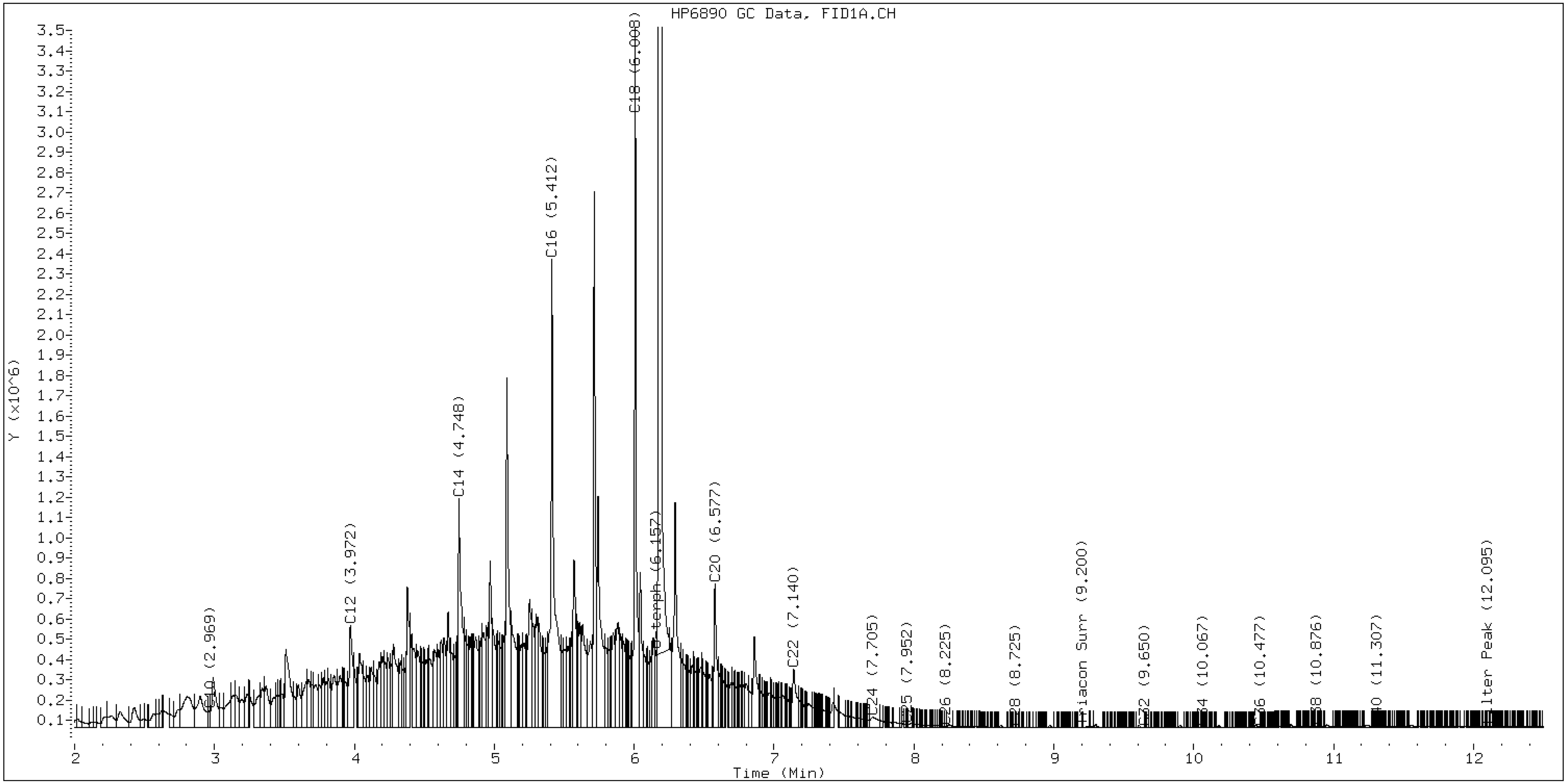
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	17359253	84.8	M
Triacontane	121	0.0	

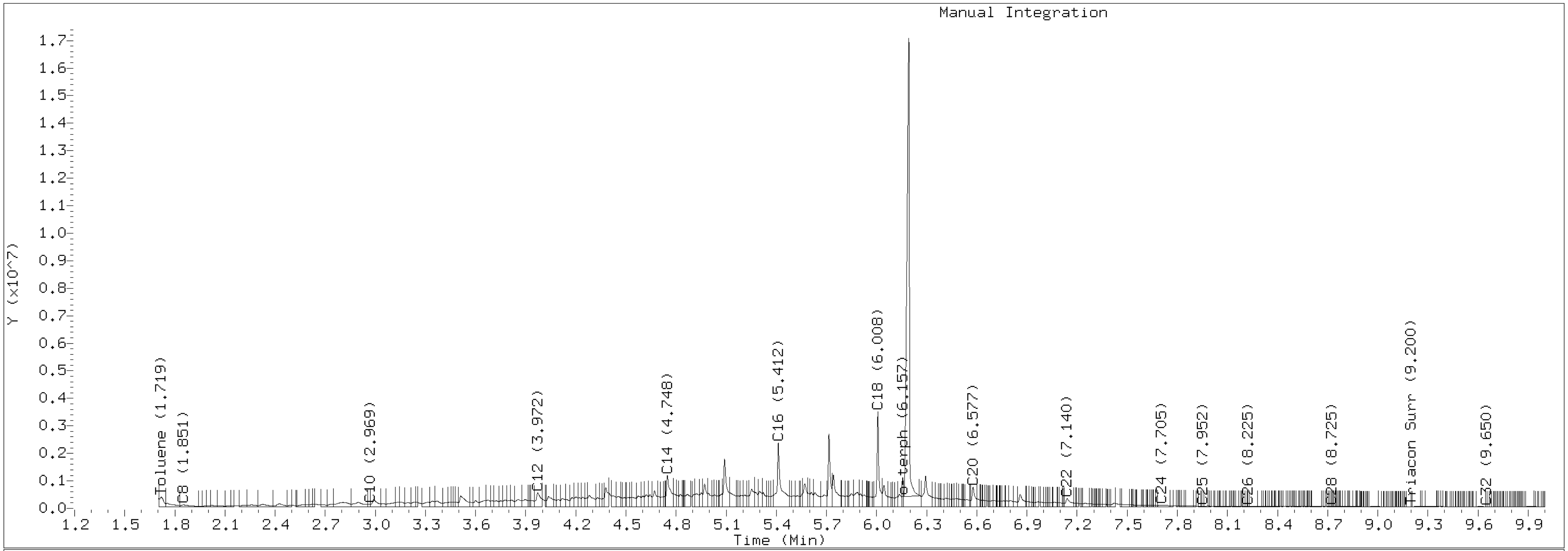
M Indicates the peak was manually integrated

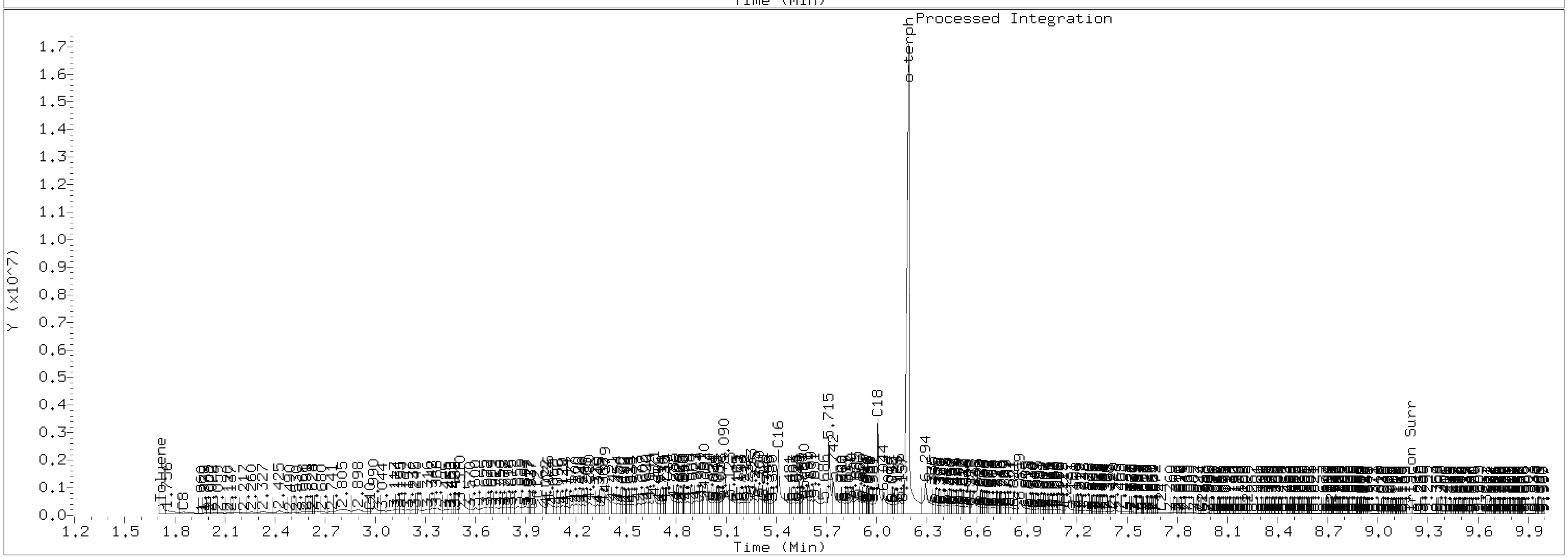
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201202.b/420L0273.D SIL0020-CCV7



TPH Manual Integrations Report
Datafile: FID4A, 20201202.b/420L0273.D Injection: 03-DEC-2020 09:14
Lab ID:SIL0020-CCV7





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420L0274.D	Calibration Date:	10/25/2019
Sequence:	SIL0020	Injection Date:	12/03/20
Lab Sample ID:	SIL0020-CCV8	Injection Time:	09:34
Sequence Name:	MOIL CCV		

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1060	101166	106982.6		5.8	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201202.b\420L0274.D

Date : 03-DEC-2020 09:34

Client ID:

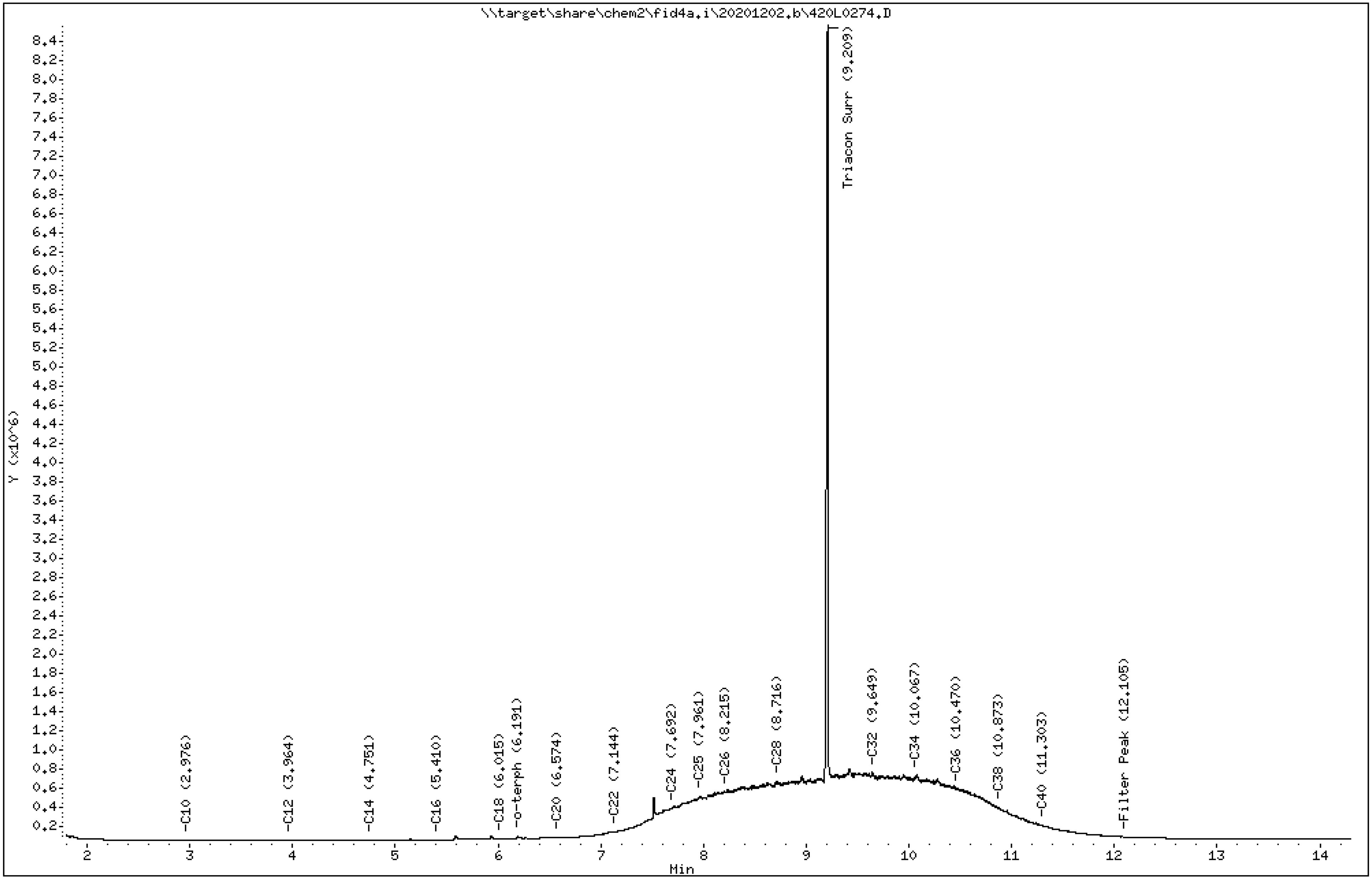
Instrument: fid4a.i

Sample Info: SIL0020-CCV8

Operator: JGR/CTO/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201202.b/420L0274.D
Method: 20201202.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO/VTS
Report Date: 12/03/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIL0020-CCV8
Client ID:
Injection: 03-DEC-2020 09:34
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.854	-0.028	44277	180342	WATPHD	(C12-C24)	10481245	65.8
C10	2.976	0.003	1145	501	WATPHM	(C24-C38)	106982651	1057.5
C12	3.964	-0.002	2486	1328	AK102	(C10-C25)	14294657	73.1
C14	4.751	0.003	5364	1869	AK103	(C25-C36)	93522446	1277.5
C16	5.410	-0.002	6776	2022	OR.DIES	(C10-C28)	41130655	209.9
C18	6.015	0.004	10945	3258				
C20	6.574	-0.007	22353	14389	JET-A	(C10-C18)	951036	5.7
C22	7.144	0.002	91413	92105				
C24	7.692	0.002	333923	116105				
C25	7.961	0.003	455083	353913				
C26	8.215	-0.003	503187	299099				
C28	8.716	-0.007	614899	392637				
C32	9.649	0.002	696573	409724				
C34	10.067	-0.002	667711	362348				
Filter Peak	12.105	0.008	34685	17268	BUNKERC	(C10-C38)	117583337	2978.5
C36	10.470	-0.004	532830	159101				
C38	10.873	-0.002	341234	201390				
C40	11.303	0.000	151056	125135				
o-terph	6.191	-0.005	37770	117506				
Triacon Surr	9.209	-0.014	7853282	7443462	NAS DIES	(C10-C24)	10600686	54.3

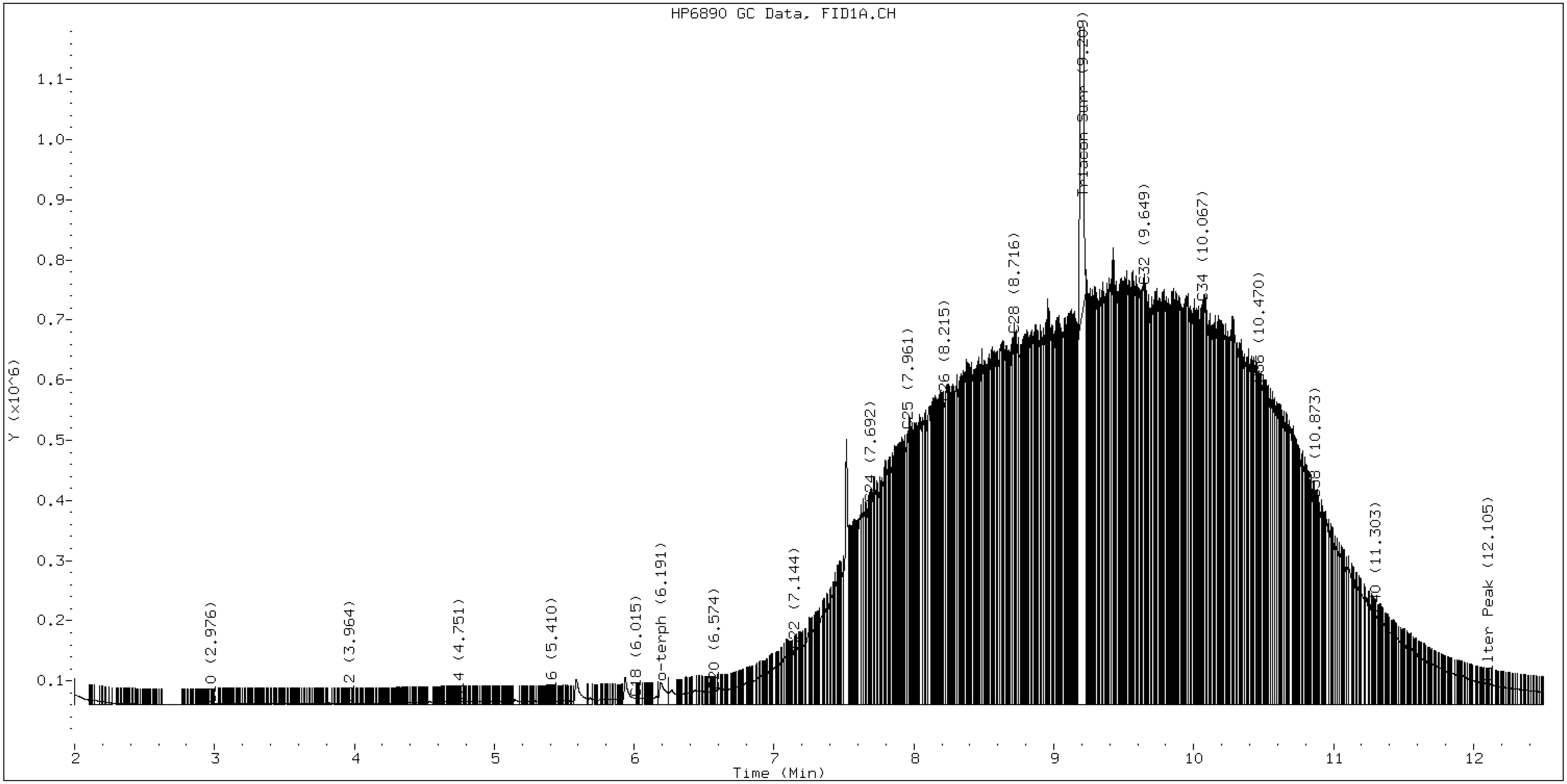
Range Times: NW Diesel(3.966 - 7.690) AK102(2.97 - 7.96) Jet A(2.97 - 6.01)
NW M.Oil(7.69 - 10.88) AK103(7.96 - 10.47) OR Diesel(2.97 - 8.72)

Surrogate	Area	Amount	
o-Terphenyl	117506	0.6	
Triacontane	7443462	50.2	M

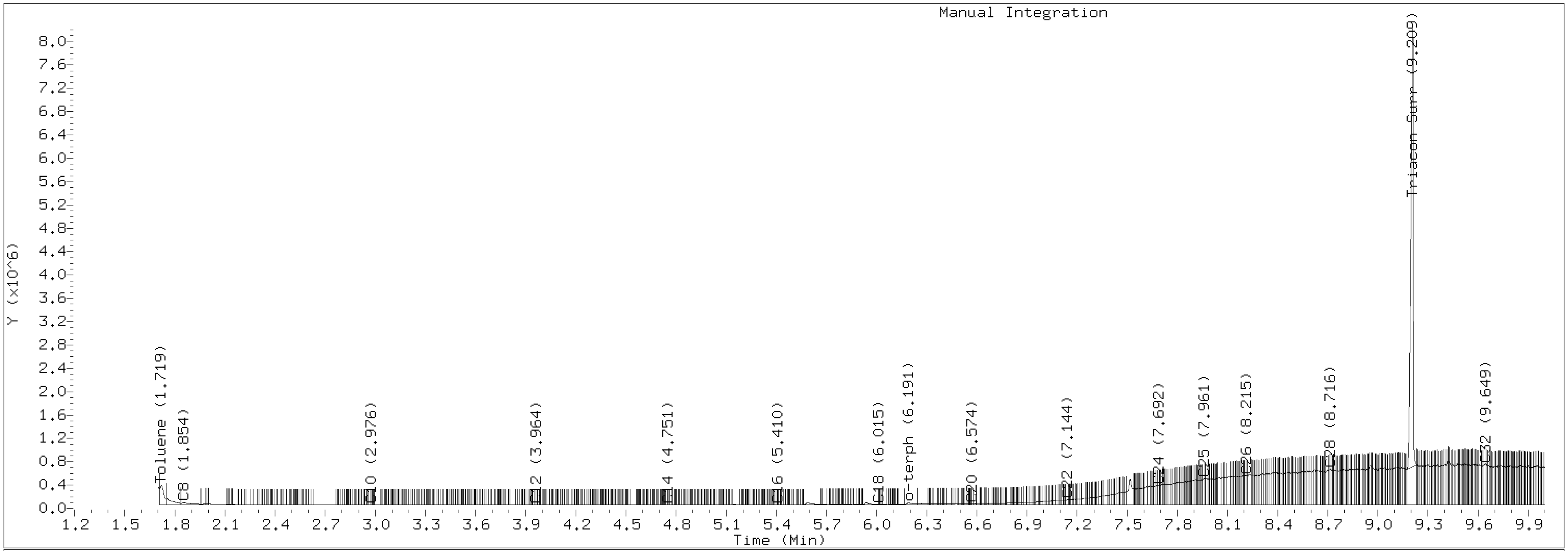
M Indicates the peak was manually integrated

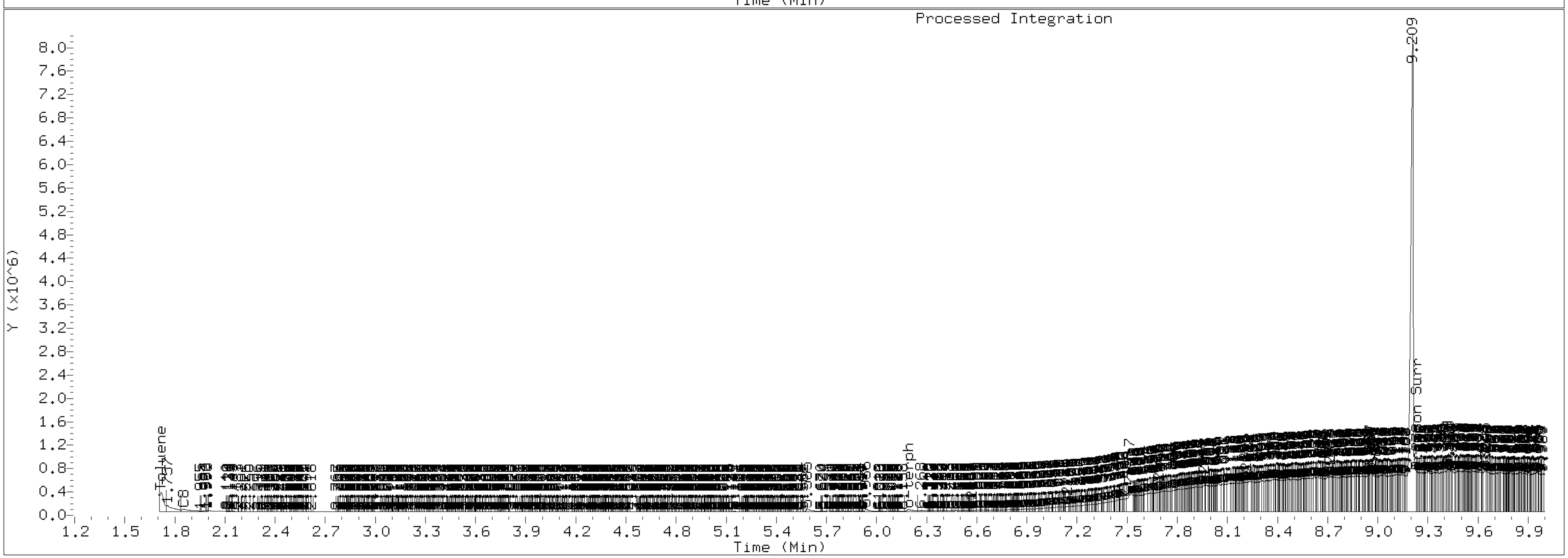
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201202.b/420L0274.D   SIL0020-CCV8



TPH Manual Integrations Report
Datafile: FID4A, 20201202.b/420L0274.D Injection: 03-DEC-2020 09:34
Lab ID:SIL0020-CCV8





Analytical Resources, Incorporated
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ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SHJ0406	Instrument:	FID4
		Calibration:	CJ00089

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SHJ0406-IBL1	419J2505.D	NA	10/25/19 13:11
Instrument Blank	SHJ0406-IBL2	419J2506.D	NA	10/25/19 13:31
DIESEL 50	SHJ0406-CAL1	419J2507.D	NA	10/25/19 13:52
DIESEL 100	SHJ0406-CAL2	419J2508.D	NA	10/25/19 14:12
DIESEL 250	SHJ0406-CAL3	419J2509.D	NA	10/25/19 14:32
DIESEL 500	SHJ0406-CAL4	419J2510.D	NA	10/25/19 14:53
DIESEL 1000	SHJ0406-CAL5	419J2511.D	NA	10/25/19 15:13
DIESEL 2500	SHJ0406-CAL6	419J2512.D	NA	10/25/19 15:32
DIESEL SCV	SHJ0406-SCV1	419J2513.D	NA	10/25/19 15:52
MOIL 100	SHJ0406-CAL7	419J2514.D	NA	10/25/19 16:12
MOIL 250	SHJ0406-CAL8	419J2515.D	NA	10/25/19 16:33
MOIL 500	SHJ0406-CAL9	419J2516.D	NA	10/25/19 16:53
MOIL 1000	SHJ0406-CALA	419J2517.D	NA	10/25/19 17:13
MOIL 2500	SHJ0406-CALB	419J2518.D	NA	10/25/19 17:34
MOIL 5000	SHJ0406-CALC	419J2519.D	NA	10/25/19 17:54
MOIL SCV	SHJ0406-SCV2	419J2520.D	NA	10/25/19 18:14

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 10/30/2019 7:24:06AM

ANALYSIS SEQUENCE

SHJ0406

Instrument: FID4 Element Column ID: G004925
Calibration ID: CJ00089

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SHJ0406-IBL1	Retention Time Standard	QC		1	H006806		
SHJ0406-IBL2	Instrument Blank	QC		2	H007457		
SHJ0406-CAL1	DIESEL 50	QC		3	H010495		
SHJ0406-CAL2	DIESEL 100	QC		4	H010496		
SHJ0406-CAL3	DIESEL 250	QC		5	H010497		
SHJ0406-CAL4	DIESEL 500	QC		6	H010498		
SHJ0406-CAL5	DIESEL 1000	QC		7	H010499		
SHJ0406-CAL6	DIESEL 2500	QC		8	H009367		
SHJ0406-SCV1	DIESEL SCV	QC		9	H008294		
SHJ0406-CAL7	MOIL 100	QC		10	H008395		
SHJ0406-CAL8	MOIL 250	QC		11	H008396		
SHJ0406-CAL9	MOIL 500	QC		12	H008397		
SHJ0406-CALA	MOIL 1000	QC		13	H007659		
SHJ0406-CALB	MOIL 2500	QC		14	H008398		
SHJ0406-CALC	MOIL 5000	QC		15	H007458		
SHJ0406-SCV2	MOIL SCV	QC		16	H008399		
SHJ0406-CALD	AK103 100	QC		17	H010478		
SHJ0406-CALE	AK103 250	QC		18	H010479		
SHJ0406-CALF	AK103 500	QC		19	H010480		
SHJ0406-CALG	AK103 1000	QC		20	H010481		
SHJ0406-CALH	AK103 2500	QC		21	H010482		
SHJ0406-CALI	AK103 5000	QC		22	H008608		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 10/30/2019 7:24:06AM

ANALYSIS SEQUENCE

SHJ0406

Instrument: FID4   Element Column ID: G004925
Calibration ID: CJ00089

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SHJ0406-SCV3	AK103 SCV	QC		23	H008400		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	25-OCT-2019 11:37	419J2501.D	1	RINSE	
2	25-OCT-2019 11:55	419J2502.D	1	RINSE	
3	25-OCT-2019 12:30	419J2503.D	1	RINSE	
4	25-OCT-2019 12:51	419J2504.D	1	RINSE	
5	25-OCT-2019 13:11	419J2505.D	1	SHJ0406-IBL1	
6	25-OCT-2019 13:31	419J2506.D	1	SHJ0406-IBL2	
7	25-OCT-2019 13:52	419J2507.D	1	SHJ0406-CAL1	
8	25-OCT-2019 14:12	419J2508.D	1	SHJ0406-CAL2	
9	25-OCT-2019 14:32	419J2509.D	1	SHJ0406-CAL3	
10	25-OCT-2019 14:53	419J2510.D	1	SHJ0406-CAL4	
11	25-OCT-2019 15:13	419J2511.D	1	SHJ0406-CAL5	
12	25-OCT-2019 15:32	419J2512.D	1	SHJ0406-CAL6	
13	25-OCT-2019 15:52	419J2513.D	1	SHJ0406-SCV1	
14	25-OCT-2019 16:12	419J2514.D	1	SHJ0406-CAL7	
15	25-OCT-2019 16:33	419J2515.D	1	SHJ0406-CAL8	
16	25-OCT-2019 16:53	419J2516.D	1	SHJ0406-CAL9	
17	25-OCT-2019 17:13	419J2517.D	1	SHJ0406-CALA	
18	25-OCT-2019 17:34	419J2518.D	1	SHJ0406-CALB	
19	25-OCT-2019 17:54	419J2519.D	1	SHJ0406-CALC	
20	25-OCT-2019 18:14	419J2520.D	1	SHJ0406-SCV2	
21	25-OCT-2019 18:35	419J2521.D	1	SHJ0406-CALD	
22	25-OCT-2019 18:55	419J2522.D	1	SHJ0406-CALE	
23	25-OCT-2019 19:15	419J2523.D	1	SHJ0406-CALF	
24	25-OCT-2019 19:34	419J2524.D	1	SHJ0406-CALG	
25	25-OCT-2019 19:54	419J2525.D	1	SHJ0406-CALH	
26	25-OCT-2019 20:15	419J2526.D	1	SHJ0406-CALI	
27	25-OCT-2019 20:35	419J2527.D	1	SHJ0406-SCV3	
28	25-OCT-2019 20:55	419J2528.D	1	SHJ0406-ICV1	
29	25-OCT-2019 21:16	419J2529.D	1	SHJ0406-ICV2	
30	25-OCT-2019 21:36	419J2530.D	1	BHJ0711-BLK1	
31	25-OCT-2019 21:56	419J2531.D	1	BHJ0711-BS1	
32	25-OCT-2019 22:16	419J2532.D	1	19J0373-01	
33	25-OCT-2019 22:35	419J2533.D	1	19J0373-02	
34	25-OCT-2019 22:55	419J2534.D	1	19J0373-03	
35	25-OCT-2019 23:16	419J2535.D	1	19J0373-04	
36	25-OCT-2019 23:36	419J2536.D	1	19J0373-05	
37	25-OCT-2019 23:57	419J2537.D	1	19J0373-06	
38	26-OCT-2019 00:17	419J2538.D	1	19J0373-07	
39	26-OCT-2019 00:37	419J2539.D	1	19J0373-08	
40	26-OCT-2019 00:58	419J2540.D	1	SHJ0406-CCV1	
41	26-OCT-2019 01:18	419J2541.D	1	SHJ0406-CCV2	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

ARI Job No.: RINS   Method: FID4TPH.m   Instrument: fid4a.i   Date: 25-OCT-2019

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1137	419J2501.D	RINSE		1	NO MANUAL INTEGRATION
1155	419J2502.D	RINSE		1	NO MANUAL INTEGRATION
1230	419J2503.D	RINSE		1	NO MANUAL INTEGRATION
1251	419J2504.D	RINSE		1	NO MANUAL INTEGRATION
1311	419J2505.D	SHJ0406-IBL1		1	NO MANUAL INTEGRATION
1331	419J2506.D	SHJ0406-IBL2		1	NO MANUAL INTEGRATION
1352	419J2507.D	SHJ0406-CAL1		1	NO MANUAL INTEGRATION
1412	419J2508.D	SHJ0406-CAL2		1	o-terph,
1432	419J2509.D	SHJ0406-CAL3		1	NO MANUAL INTEGRATION
1453	419J2510.D	SHJ0406-CAL4		1	o-terph,
1513	419J2511.D	SHJ0406-CAL5		1	o-terph,
1532	419J2512.D	SHJ0406-CAL6		1	o-terph,
1552	419J2513.D	SHJ0406-SCV1		1	NO MANUAL INTEGRATION
1612	419J2514.D	SHJ0406-CAL7		1	Triacon Surr,
1633	419J2515.D	SHJ0406-CAL8		1	Triacon Surr,
1653	419J2516.D	SHJ0406-CAL9		1	Triacon Surr,
1713	419J2517.D	SHJ0406-CALA		1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1734	419J2518.D	SHJ0406-CALB		1	Triacon Surr,
1754	419J2519.D	SHJ0406-CALC		1	Triacon Surr,
1814	419J2520.D	SHJ0406-SCV2		1	Triacon Surr,
1835	419J2521.D	SHJ0406-CALD		1	Triacon Surr,
1855	419J2522.D	SHJ0406-CALE		1	Triacon Surr,
1915	419J2523.D	SHJ0406-CALF		1	Triacon Surr,
1934	419J2524.D	SHJ0406-CALG		1	Triacon Surr,
1954	419J2525.D	SHJ0406-CALH		1	Triacon Surr,
2015	419J2526.D	SHJ0406-CALI		1	Triacon Surr,
2035	419J2527.D	SHJ0406-SCV3		1	Triacon Surr,
2055	419J2528.D	SHJ0406-ICV1		1	o-terph,
2116	419J2529.D	SHJ0406-ICV2		1	Triacon Surr,
2136	419J2530.D	BHJ0711-BLK1		1	NO MANUAL INTEGRATION
2156	419J2531.D	BHJ0711-BS1		1	o-terph,
2216	419J2532.D	19J0373-01		1	Triacon Surr,
2235	419J2533.D	19J0373-02		1	NO MANUAL INTEGRATION
2255	419J2534.D	19J0373-03		1	Triacon Surr,
2316	419J2535.D	19J0373-04		1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2336	419J2536.D	19J0373-05		1	o-terph, Triacon Surr,
2357	419J2537.D	19J0373-06		1	Triacon Surr,
0017	419J2538.D	19J0373-07		1	Triacon Surr,
0037	419J2539.D	19J0373-08		1	Triacon Surr,
0058	419J2540.D	SHJ0406-CCV1		1	o-terph,
0118	419J2541.D	SHJ0406-CCV2		1	Triacon Surr,

Security Status Report

Date: 30-Oct-2019 07:25

419J2507.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2508.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2509.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2510.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2511.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2512.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2513.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2514.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2515.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2516.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2517.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2518.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2519.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2520.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2521.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2522.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2523.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2524.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2525.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2526.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2527.D	Data Locked	jrains, 30-Oct-2019 07:20

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage

Sequence: SIF0018
Instrument: FID4

Calibration: DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIF0018-IBL1	420F0203.D	NA	06/02/20 08:19
Instrument Blank	SIF0018-IBL2	420F0204.D	NA	06/02/20 08:38
MOIL 100	SIF0018-CAL1	420F0205.D	NA	06/02/20 08:58
MOIL 250	SIF0018-CAL2	420F0206.D	NA	06/02/20 09:17
MOIL 500	SIF0018-CAL3	420F0207.D	NA	06/02/20 09:37
MOIL 1000	SIF0018-CAL4	420F0208.D	NA	06/02/20 09:56
MOIL 2500	SIF0018-CAL5	420F0209.D	NA	06/02/20 10:16
MOIL 5000	SIF0018-CAL6	420F0210.D	NA	06/02/20 10:36
MOIL SCV	SIF0018-SCV1	420F0211.D	NA	06/02/20 10:55

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIF0018

Instrument: FID4
Calibration ID: DA00022

Printed: 6/2/2020 12:49:08PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIF0018-IBL1	QC		1		H010802			
SIF0018-IBL2	QC		2		I000651			
SIF0018-CAL1	QC		3		I004752			
SIF0018-CAL2	QC		4		I004753			
SIF0018-CAL3	QC		5		I004754			
SIF0018-CAL4	QC		6		I004755			
SIF0018-CAL5	QC		7		I004756			
SIF0018-CAL6	QC		8		I003778			
SIF0018-SCV1	QC		9		I004757			

Samples Loaded By Date Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200602.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	02-JUN-2020 07:40	420F0201.D	1	RINSE	
2	02-JUN-2020 07:59	420F0202.D	1	RINSE	
3	02-JUN-2020 08:19	420F0203.D	1	SIF0018-IBL1	
4	02-JUN-2020 08:38	420F0204.D	1	SIF0018-IBL2	
5	02-JUN-2020 08:58	420F0205.D	1	SIF0018-CAL1	
6	02-JUN-2020 09:17	420F0206.D	1	SIF0018-CAL2	
7	02-JUN-2020 09:37	420F0207.D	1	SIF0018-CAL3	
8	02-JUN-2020 09:56	420F0208.D	1	SIF0018-CAL4	
9	02-JUN-2020 10:16	420F0209.D	1	SIF0018-CAL5	
10	02-JUN-2020 10:36	420F0210.D	1	SIF0018-CAL6	
11	02-JUN-2020 10:55	420F0211.D	1	SIF0018-SCV1	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200602.b

ARI Job No.: RINS   Method: FID4TPH.m   Instrument: fid4a.i   Date: 02-JUN-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0740	420F0201.D	RINSE		1	NO MANUAL INTEGRATION
0759	420F0202.D	RINSE		1	NO MANUAL INTEGRATION
0819	420F0203.D	SIF0018-IBL1		1	NO MANUAL INTEGRATION
0838	420F0204.D	SIF0018-IBL2		1	NO MANUAL INTEGRATION
0858	420F0205.D	SIF0018-CAL1		1	Triacon Surr,
0917	420F0206.D	SIF0018-CAL2		1	Triacon Surr,
0937	420F0207.D	SIF0018-CAL3		1	Triacon Surr,
0956	420F0208.D	SIF0018-CAL4		1	Triacon Surr,
1016	420F0209.D	SIF0018-CAL5		1	Triacon Surr,
1036	420F0210.D	SIF0018-CAL6		1	Triacon Surr,
1055	420F0211.D	SIF0018-SCV1		1	Triacon Surr,

Security Status Report

Date: 02-Jun-2020 12:52

420F0201.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0202.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0203.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0204.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0205.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0206.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0207.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0208.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0209.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0210.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0211.D	Data Locked	christopher, 02-Jun-2020 12:51

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIH0092
Instrument: FID4
Calibration: DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIH0092-IBL1	420H1003B.D	NA	08/10/20 08:50
Instrument Blank	SIH0092-IBL2	420H1004B.D	NA	08/10/20 09:10
CREOSOTE 100	SIH0092-CAL1	420H1008.D	NA	08/10/20 11:44
CREOSOTE 250	SIH0092-CAL2	420H1009.D	NA	08/10/20 12:03
CREOSOTE 500	SIH0092-CAL3	420H1010.D	NA	08/10/20 12:23
CREOSOTE 1000	SIH0092-CAL4	420H1011.D	NA	08/10/20 12:43
CREOSOTE 2500	SIH0092-CAL5	420H1012.D	NA	08/10/20 13:02
CREOSOTE 5000	SIH0092-CAL6	420H1013.D	NA	08/10/20 13:22

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIH0092

Instrument: FID4
Calibration ID: DA00022

Printed: 8/10/2020 2:51:30PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIH0092-IBL1	QC		1		I006239			
SIH0092-IBL2	QC		2		I006241			
SIH0092-CAL1	QC		3		I006988			
SIH0092-CAL2	QC		4		I006987			
SIH0092-CAL3	QC		5		I006986			
SIH0092-CAL4	QC		6		I006985			
SIH0092-CAL5	QC		7		I006984			
SIH0092-CAL6	QC		8		I006965			

Samples Loaded By   Date   Data Processed By   Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200810.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	10-AUG-2020 08:11	420H1001.D	1	RINSE	
2	10-AUG-2020 08:30	420H1002.D	1	RINSE	
3	10-AUG-2020 08:50	420H1003.D	1	SEQ-IBL1	
4	10-AUG-2020 09:10	420H1004.D	1	SEQ-IBL2	
5	10-AUG-2020 09:30	420H1005.D	1	SEQ-ICV1	
6	10-AUG-2020 09:49	420H1006.D	1	SEQ-ICV2	
7	10-AUG-2020 10:09	420H1007.D	1	I006965	
8	10-AUG-2020 11:44	420H1008.D	1	SEQ-CAL1	
9	10-AUG-2020 12:03	420H1009.D	1	SEQ-CAL2	
10	10-AUG-2020 12:23	420H1010.D	1	SEQ-CAL3	
11	10-AUG-2020 12:43	420H1011.D	1	SEQ-CAL4	
12	10-AUG-2020 13:02	420H1012.D	1	SEQ-CAL5	
13	10-AUG-2020 13:22	420H1013.D	1	SEQ-CAL6	
14	10-AUG-2020 15:15	420H1014.D	1	BIH0129-BLK1	
15	10-AUG-2020 15:34	420H1015.D	1	BIH0129-BS1	
16	10-AUG-2020 15:54	420H1016.D	1	20H0053-01	
17	10-AUG-2020 16:14	420H1017.D	1	20H0058-01	
18	10-AUG-2020 16:34	420H1018.D	1	20H0058-02	
19	10-AUG-2020 16:53	420H1019.D	1	20H0058-03	
20	10-AUG-2020 17:13	420H1020.D	1	20H0060-01	
21	10-AUG-2020 17:33	420H1021.D	1	20H0060-02	
22	10-AUG-2020 17:52	420H1022.D	1	20H0060-03	
23	10-AUG-2020 18:12	420H1023.D	1	BIH0058-BLK1	
24	10-AUG-2020 18:32	420H1024.D	1	BIH0058-BS1	
25	10-AUG-2020 18:52	420H1025.D	1	20G0289-03	
26	10-AUG-2020 19:11	420H1026.D	1	20G0291-01	
27	10-AUG-2020 19:31	420H1027.D	1	SEQ-CCV1	
28	10-AUG-2020 19:51	420H1028.D	1	SEQ-CCV2	
29	10-AUG-2020 20:11	420H1029.D	1	SEQ-ICV3	
30	10-AUG-2020 20:30	420H1030.D	1	BIH0100-BLK1	
31	10-AUG-2020 20:50	420H1031.D	1	BIH0100-BS1	
32	10-AUG-2020 21:10	420H1032.D	1	BIH0100-BSD1	
33	10-AUG-2020 21:29	420H1033.D	1	20G0287-01	
34	10-AUG-2020 21:49	420H1034.D	1	BIH0100-MS1	
35	10-AUG-2020 22:09	420H1035.D	1	BIH0100-MSD1	
36	10-AUG-2020 22:28	420H1036.D	1	BIH0113-BLK1	
37	10-AUG-2020 22:48	420H1037.D	1	BIH0113-BS1	
38	10-AUG-2020 23:08	420H1038.D	1	BIH0113-BSD1	
39	10-AUG-2020 23:27	420H1039.D	1	20H0047-01	
40	10-AUG-2020 23:47	420H1040.D	1	20H0047-02	
41	11-AUG-2020 00:06	420H1041.D	1	20H0047-03	
42	11-AUG-2020 00:26	420H1042.D	1	SEQ-CCV3	
43	11-AUG-2020 00:46	420H1043.D	1	SEQ-CCV4	
44	11-AUG-2020 01:05	420H1044.D	1	SEQ-CCV5	
45	11-AUG-2020 01:25	420H1045.D	1	BIH0166-BLK1	
46	11-AUG-2020 01:44	420H1046.D	1	BIH0166-BS1	
47	11-AUG-2020 02:04	420H1047.D	1	BIH0166-BSD1	
48	11-AUG-2020 02:23	420H1048.D	1	20H0082-01	
49	11-AUG-2020 02:43	420H1049.D	1	BIH0166-MS1	
50	11-AUG-2020 03:03	420H1050.D	1	BIH0166-MSD1	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200810.b

	Inject Date/Time	Filename	DF	LabID	ClientID
51	11-AUG-2020 03:22	420H1051.D	1	20H0082-02	
52	11-AUG-2020 03:42	420H1052.D	1	20H0082-03	
53	11-AUG-2020 04:01	420H1053.D	1	20H0082-04	
54	11-AUG-2020 04:21	420H1054.D	1	20H0082-05	
55	11-AUG-2020 04:40	420H1055.D	1	20H0082-06	
56	11-AUG-2020 05:00	420H1056.D	1	20H0082-07	
57	11-AUG-2020 05:19	420H1057.D	1	20H0082-08	
58	11-AUG-2020 05:39	420H1058.D	1	20H0082-09	
59	11-AUG-2020 05:58	420H1059.D	1	SEQ-CCV6	
60	11-AUG-2020 06:18	420H1060.D	1	SEQ-CCV7	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200810.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 10-AUG-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0811	420H1001.D	RINSE		1	NO MANUAL INTEGRATION
0830	420H1002.D	RINSE		1	NO MANUAL INTEGRATION
0850	420H1003.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
0910	420H1004.D	SEQ-IBL2		1	NO MANUAL INTEGRATION
0930	420H1005.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0949	420H1006.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
1009	420H1007.D	I006965		1	NO MANUAL INTEGRATION
1144	420H1008.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
1203	420H1009.D	SEQ-CAL2		1	o-terph,
1223	420H1010.D	SEQ-CAL3		1	o-terph,
1243	420H1011.D	SEQ-CAL4		1	o-terph,
1302	420H1012.D	SEQ-CAL5		1	o-terph,
1322	420H1013.D	SEQ-CAL6		1	o-terph,

Security Status Report

Date: 10-Aug-2020 15:38

420H1001.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1002.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1003.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1004.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1005.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1006.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1007.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1008.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1009.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1010.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1011.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1012.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1013.D	Data Locked	christopher, 10-Aug-2020 15:38

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIH0165	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIH0165-IBL1	420H1403.D	NA	08/14/20 08:43
Instrument Blank	SIH0165-IBL2	420H1404.D	NA	08/14/20 09:03
ZZZZZ	20H0120-01	420H1410.D	Solid	08/14/20 11:00
ZZZZZ	20H0120-02	420H1411.D	Solid	08/14/20 11:20
ZZZZZ	20H0120-03	420H1412.D	Solid	08/14/20 11:39
DIESEL CCV	SIH0165-CCV1	420H1413.D	NA	08/14/20 11:59
MOIL CCV	SIH0165-CCV2	420H1414.D	NA	08/14/20 12:18
JETA CAL	SIH0165-CAL1	420H1416.D	NA	08/14/20 12:58
ZZZZZ	BIH0255-BLK1	420H1417.D	Water	08/14/20 13:17
ZZZZZ	BIH0255-BS1	420H1418.D	Water	08/14/20 13:37
ZZZZZ	BIH0255-BSD1	420H1419.D	Water	08/14/20 13:56
ZZZZZ	20H0139-03	420H1420.D	Water	08/14/20 14:16
ZZZZZ	20H0139-04	420H1421.D	Water	08/14/20 14:36
ZZZZZ	20H0139-05	420H1422.D	Water	08/14/20 14:55
ZZZZZ	20H0142-01	420H1423.D	Water	08/14/20 15:15
ZZZZZ	BIH0199-BLK1	420H1424.D	Water	08/14/20 15:34
ZZZZZ	BIH0199-BS1	420H1425.D	Water	08/14/20 15:54
ZZZZZ	BIH0199-BSD1	420H1426.D	Water	08/14/20 16:14
ZZZZZ	20H0099-01	420H1427.D	Water	08/14/20 16:33
ZZZZZ	20H0099-02	420H1428.D	Water	08/14/20 16:53
ZZZZZ	20H0099-03	420H1429.D	Water	08/14/20 17:13
ZZZZZ	20H0099-04	420H1430.D	Water	08/14/20 17:32
DIESEL CCV	SIH0165-CCV4	420H1431.D	NA	08/14/20 17:52
MOIL CCV	SIH0165-CCV5	420H1432.D	NA	08/14/20 18:11
JETA CCV	SIH0165-CCV6	420H1433.D	NA	08/14/20 18:31
ZZZZZ	BIH0218-BLK1	420H1434.D	Water	08/14/20 18:51
ZZZZZ	BIH0218-BS1	420H1435.D	Water	08/14/20 19:10
ZZZZZ	BIH0218-BSD1	420H1436.D	Water	08/14/20 19:30
ZZZZZ	20H0114-01	420H1437.D	Water	08/14/20 19:49
ZZZZZ	20H0114-02	420H1438.D	Water	08/14/20 20:09

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIH0165	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BIH0216-BLK1	420H1439.D	Solid	08/14/20 20:29
ZZZZZ	BIH0216-BS1	420H1440.D	Solid	08/14/20 20:48
ZZZZZ	20H0085-01	420H1441.D	Solid	08/14/20 21:08
ZZZZZ	20H0085-02	420H1442.D	Solid	08/14/20 21:27
ZZZZZ	20H0085-03	420H1443.D	Solid	08/14/20 21:47
ZZZZZ	20H0085-04	420H1444.D	Solid	08/14/20 22:06
DIESEL CCV	SIH0165-CCV7	420H1445.D	NA	08/14/20 22:26
MOIL CCV	SIH0165-CCV8	420H1446.D	NA	08/14/20 22:45

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIH0165

Instrument: NT8
Calibration ID: DG00082

Printed: 8/14/2020 2:00:25PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIH0165-IBL1	QC		1		I006239			
SIH0165-IBL2	QC		2		I006241			
SIH0165-ICV1	QC		3		I002687			
SIH0165-ICV2	QC		4		I004755			
SIH0165-ICV3	QC		5		I006985			
BIH0223-BLK1	QC		6					
BIH0223-BS1	QC		7					
20H0120-01	TPH NW (Extractables)	A 01	8				Flatiron Corporation	Version
20H0120-02	TPH NW (Extractables)	A 01	9				Flatiron Corporation	Version
20H0120-03	TPH NW (Extractables)	A 01	10				Flatiron Corporation	Version
SIH0165-CCV1	QC		11		I002687			
SIH0165-CCV2	QC		12		I004755			
SIH0165-CCV3	QC		13		I006985			

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200814.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	14-AUG-2020 08:04	420H1401.D	1	RINSE	
2	14-AUG-2020 08:23	420H1402.D	1	RINSE	
3	14-AUG-2020 08:43	420H1403.D	1	SEQ-IBL1	
4	14-AUG-2020 09:03	420H1404.D	1	SEQ-IBL2	
5	14-AUG-2020 09:22	420H1405.D	1	SEQ-ICV1	
6	14-AUG-2020 09:42	420H1406.D	1	SEQ-ICV2	
7	14-AUG-2020 10:01	420H1407.D	1	SEQ-ICV3	
8	14-AUG-2020 10:21	420H1408.D	1	BIH0223-BLK1	
9	14-AUG-2020 10:41	420H1409.D	1	BIH0223-BS1	
10	14-AUG-2020 11:00	420H1410.D	1	20H0120-01	
11	14-AUG-2020 11:20	420H1411.D	1	20H0120-02	
12	14-AUG-2020 11:39	420H1412.D	1	20H0120-03	
13	14-AUG-2020 11:59	420H1413.D	1	SEQ-CCV1	
14	14-AUG-2020 12:18	420H1414.D	1	SEQ-CCV2	
15	14-AUG-2020 12:38	420H1415.D	1	SEQ-CCV3	
16	14-AUG-2020 12:58	420H1416.D	1	SEQ-ICV4	
17	14-AUG-2020 13:17	420H1417.D	1	BIH0255-BLK1	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200814.b

ARI Job No.: RINS   Method: FID4TPH.m   Instrument: fid4a.i   Date: 14-AUG-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0804	420H1401.D	RINSE		1	NO MANUAL INTEGRATION
0823	420H1402.D	RINSE		1	NO MANUAL INTEGRATION
0843	420H1403.D	SEQ-IBL1		1	C40,
0903	420H1404.D	SEQ-IBL2		1	NO MANUAL INTEGRATION
0922	420H1405.D	SEQ-ICV1		1	o-terph,
0942	420H1406.D	SEQ-ICV2		1	Triacon Surr,
1001	420H1407.D	SEQ-ICV3		1	NO MANUAL INTEGRATION
1021	420H1408.D	BIH0223-BLK1		1	o-terph,
1041	420H1409.D	BIH0223-BS1		1	NO MANUAL INTEGRATION
1100	420H1410.D	20H0120-01		1	o-terph, Triacon Surr,
1120	420H1411.D	20H0120-02		1	o-terph, Triacon Surr,
1139	420H1412.D	20H0120-03		1	o-terph, Triacon Surr,
1159	420H1413.D	SEQ-CCV1		1	o-terph,
1218	420H1414.D	SEQ-CCV2		1	Triacon Surr,
1238	420H1415.D	SEQ-CCV3		1	NO MANUAL INTEGRATION

Security Status Report

Date: 14-Aug-2020 13:57

420H1401.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1402.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1403.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1404.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1405.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1406.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1407.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1408.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1409.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1410.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1411.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1412.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1413.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1414.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1415.D	Data Locked	christopher, 14-Aug-2020 13:52

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIJ0042	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIJ0042-IBL1	420J0203.D	NA	10/02/20 09:21
Instrument Blank	SIJ0042-IBL2	420J0204.D	NA	10/02/20 09:42
DIESEL ICV	SIJ0042-ICV1	420J0205.D	NA	10/02/20 10:02
MOIL ICV	SIJ0042-ICV2	420J0206.D	NA	10/02/20 10:22
A/S CREOSOTE 100	SIJ0042-CAL1	420J0207.D	NA	10/02/20 10:43
A/S CREOSOTE 250	SIJ0042-CAL2	420J0208.D	NA	10/02/20 11:04
A/S CREOSOTE 500	SIJ0042-CAL3	420J0209.D	NA	10/02/20 11:24
A/S CREOSOTE 1000	SIJ0042-CAL4	420J0210.D	NA	10/02/20 11:45
A/S CREOSOTE 2500	SIJ0042-CAL5	420J0211.D	NA	10/02/20 12:05
A/S CREOSOTE 5000	SIJ0042-CAL6	420J0212.D	NA	10/02/20 12:26
A/S CREOSOTE ICV	SIJ0042-ICV3	420J0213.D	NA	10/02/20 12:46
ZZZZZ	BII0597-BLK1	420J0214.D	Water	10/02/20 13:07
ZZZZZ	BII0597-BS1	420J0215.D	Water	10/02/20 13:27
ZZZZZ	BII0597-BSD1	420J0216.D	Water	10/02/20 13:48
ZZZZZ	20I0229-02	420J0217.D	Water	10/02/20 14:08
ZZZZZ	20I0229-03	420J0218.D	Water	10/02/20 14:29
ZZZZZ	20I0229-04	420J0219.D	Water	10/02/20 14:50
ZZZZZ	20I0229-05	420J0220.D	Water	10/02/20 15:10
ZZZZZ	20I0229-06	420J0221.D	Water	10/02/20 15:31
ZZZZZ	20I0229-07	420J0222.D	Water	10/02/20 15:51
ZZZZZ	20I0229-08	420J0223.D	Water	10/02/20 16:12
ZZZZZ	20I0229-09	420J0224.D	Water	10/02/20 16:32
ZZZZZ	20I0229-10	420J0225.D	Water	10/02/20 16:52
ZZZZZ	20I0229-11	420J0226.D	Water	10/02/20 17:13
DIESEL CCV	SIJ0042-CCV1	420J0227.D	NA	10/02/20 17:33
MOIL CCV	SIJ0042-CCV2	420J0228.D	NA	10/02/20 17:54
A/S CREOSOTE CCV	SIJ0042-CCV3	420J0229.D	NA	10/02/20 18:14
ZZZZZ	20I0229-12	420J0230.D	Water	10/02/20 18:35
ZZZZZ	20I0229-13	420J0231.D	Water	10/02/20 18:55
ZZZZZ	20I0229-14	420J0232.D	Water	10/02/20 19:16

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIJ0042	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20I0229-15	420J0233.D	Water	10/02/20 19:36
ZZZZZ	20I0229-16	420J0234.D	Water	10/02/20 19:57
ZZZZZ	20I0307-01	420J0235.D	Water	10/02/20 20:17
ZZZZZ	20I0307-02	420J0236.D	Water	10/02/20 20:37
ZZZZZ	20I0307-03	420J0237.D	Water	10/02/20 20:58
ZZZZZ	20I0307-04	420J0238.D	Water	10/02/20 21:18
DIESEL CCV	SIJ0042-CCV4	420J0239.D	NA	10/02/20 21:39
MOIL CCV	SIJ0042-CCV5	420J0240.D	NA	10/02/20 21:59
A/S CREOSOTE CCV	SIJ0042-CCV6	420J0241.D	NA	10/02/20 22:20
ZZZZZ	20I0350-01	420J0242.D	Water	10/02/20 22:40
ZZZZZ	20I0350-02	420J0243.D	Water	10/02/20 23:00
ZZZZZ	20I0350-03	420J0244.D	Water	10/02/20 23:21
ZZZZZ	20I0350-04	420J0245.D	Water	10/02/20 23:41
ZZZZZ	20I0350-05	420J0246.D	Water	10/03/20 00:02
ZZZZZ	20I0350-06	420J0247.D	Water	10/03/20 00:22
ZZZZZ	20I0350-07	420J0248.D	Water	10/03/20 00:42
ZZZZZ	20I0217-01	420J0249.D	Water	10/03/20 01:03
ZZZZZ	20I0217-02	420J0250.D	Water	10/03/20 01:23
DIESEL CCV	SIJ0042-CCV7	420J0252.D	NA	10/03/20 02:04
MOIL CCV	SIJ0042-CCV8	420J0253.D	NA	10/03/20 02:24

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIJ0042

Instrument: FID4
Calibration ID: DA00022

Printed: 10/11/2020 10:46:24AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIJ0042-IBL1	QC		1		I006239			
SIJ0042-IBL2	QC		2		I006241			
SIJ0042-ICV1	QC		3		I008275			
SIJ0042-ICV2	QC		4		I008935			
SIJ0042-CAL1	QC		5		I009068			
SIJ0042-CAL2	QC		6		I009067			
SIJ0042-CAL3	QC		7		I009066			
SIJ0042-CAL4	QC		8		I009064			
SIJ0042-CAL5	QC		9		I009065			
SIJ0042-CAL6	QC		10		I009005			
SIJ0042-ICV3	QC		11		I009064			
BII0597-BLK1	QC		12					
BII0597-BS1	QC		13					
BII0597-BSD1	QC		14					
20I0229-02	PH NW (Extractables) low lev	C 01	15				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-03	PH NW (Extractables) low lev	C 01	16				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-04	PH NW (Extractables) low lev	C 01	17				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-05	PH NW (Extractables) low lev	C 01	18				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-06	PH NW (Extractables) low lev	C 01	19				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-07	PH NW (Extractables) low lev	C 01	20				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-08	PH NW (Extractables) low lev	C 01	21				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san

Samples Loaded By　　　　Date　　　　Data Processed By　　　　Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIJ0042

Instrument: FID4
Calibration ID: DA00022

Printed: 10/11/2020 10:46:24AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
20I0229-09	PH NW (Extractables) low lev	C 01	22				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-10	PH NW (Extractables) low lev	C 01	23				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-11	PH NW (Extractables) low lev	C 01	24				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
SIJ0042-CCV1	QC		25		I008275			
SIJ0042-CCV2	QC		26		I008935			
SIJ0042-CCV3	QC		27		I009064			
20I0229-12	PH NW (Extractables) low lev	C 01	28				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-13	PH NW (Extractables) low lev	C 01	29				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-14	PH NW (Extractables) low lev	C 01	30				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-15	PH NW (Extractables) low lev	C 01	31				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0229-16	PH NW (Extractables) low lev	C 01	32				Landau Associates, Inc.	Plus Creosote, Acid cleaned. Some san
20I0307-01	PH NW (Extractables) low lev	O 01	33				Joint Base Lewis McChord- Fort Lewis WA	Clin 1004
20I0307-02	PH NW (Extractables) low lev	O 01	34				Joint Base Lewis McChord- Fort Lewis WA	Clin 1004
20I0307-03	PH NW (Extractables) low lev	O 01	35				Joint Base Lewis McChord- Fort Lewis WA	Clin 1004
20I0307-04	PH NW (Extractables) low lev	O 01	36				Joint Base Lewis McChord- Fort Lewis WA	Clin 1004
SIJ0042-CCV4	QC		37		I008275			
SIJ0042-CCV5	QC		38		I008935			
SIJ0042-CCV6	QC		39		I009064			
20I0350-01	PH NW (Extractables) low lev	A 01	40				Geosyntec Consultants	
20I0350-02	PH NW (Extractables) low lev	A 01	41				Geosyntec Consultants	
20I0350-03	PH NW (Extractables) low lev	A 01	42				Geosyntec Consultants	

Samples Loaded By   Date   Data Processed By   Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIJ0042

Instrument: FID4
Calibration ID: DA00022

Printed: 10/11/2020 10:46:24AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
20I0350-04	PH NW (Extractables) low lev	A 01	43				Geosyntec Consultants	
20I0350-05	PH NW (Extractables) low lev	A 01	44				Geosyntec Consultants	
20I0350-06	PH NW (Extractables) low lev	A 01	45				Geosyntec Consultants	
20I0350-07	PH NW (Extractables) low lev	A 01	46				Geosyntec Consultants	
20I0217-01	PH NW (Extractables) low lev	K 01	47				Joint Base Lewis McChord- Fort Lewis WA	Clin 1004
20I0217-02	PH NW (Extractables) low lev	K 01	48				Joint Base Lewis McChord- Fort Lewis WA	Clin 1004
SIJ0042-CCV7	QC		49		I008275			
SIJ0042-CCV8	QC		50		I008935			

Samples Loaded By Date Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - fid4a.i\20201002.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	02-OCT-2020 08:41	420J0201.D	1	RINSE	
2	02-OCT-2020 09:01	420J0202.D	1	RINSE	
3	02-OCT-2020 09:21	420J0203.D	1	SEQ-IBL1	
4	02-OCT-2020 09:42	420J0204.D	1	SEQ-IBL2	
5	02-OCT-2020 10:02	420J0205.D	1	SEQ-ICV1	
6	02-OCT-2020 10:22	420J0206.D	1	SEQ-ICV2	
7	02-OCT-2020 10:43	420J0207.D	1	SEQ-CAL1	
8	02-OCT-2020 11:04	420J0208.D	1	SEQ-CAL2	
9	02-OCT-2020 11:24	420J0209.D	1	SEQ-CAL3	
10	02-OCT-2020 11:45	420J0210.D	1	SEQ-CAL4	
11	02-OCT-2020 12:05	420J0211.D	1	SEQ-CAL5	
12	02-OCT-2020 12:26	420J0212.D	1	SEQ-CAL6	
13	02-OCT-2020 12:46	420J0213.D	1	SEQ-ICV3	
14	02-OCT-2020 13:07	420J0214.D	1	BII0597-BLK1	
15	02-OCT-2020 13:27	420J0215.D	1	BII0597-BS1	
16	02-OCT-2020 13:48	420J0216.D	1	BII0597-BSD1	
17	02-OCT-2020 14:08	420J0217.D	1	20I0229-02	
18	02-OCT-2020 14:29	420J0218.D	1	20I0229-03	
19	02-OCT-2020 14:50	420J0219.D	1	20I0229-04	
20	02-OCT-2020 15:10	420J0220.D	1	20I0229-05	
21	02-OCT-2020 15:31	420J0221.D	1	20I0229-06	
22	02-OCT-2020 15:51	420J0222.D	1	20I0229-07	
23	02-OCT-2020 16:12	420J0223.D	1	20I0229-08	
24	02-OCT-2020 16:32	420J0224.D	1	20I0229-09	
25	02-OCT-2020 16:52	420J0225.D	1	20I0229-10	
26	02-OCT-2020 17:13	420J0226.D	1	20I0229-11	
27	02-OCT-2020 17:33	420J0227.D	1	SEQ-CCV1	
28	02-OCT-2020 17:54	420J0228.D	1	SEQ-CCV2	
29	02-OCT-2020 18:14	420J0229.D	1	SEQ-CCV3	
30	02-OCT-2020 18:35	420J0230.D	1	20I0229-12	
31	02-OCT-2020 18:55	420J0231.D	1	20I0229-13	
32	02-OCT-2020 19:16	420J0232.D	1	20I0229-14	
33	02-OCT-2020 19:36	420J0233.D	1	20I0229-15	
34	02-OCT-2020 19:57	420J0234.D	1	20I0229-16	
35	02-OCT-2020 20:17	420J0235.D	1	20I0307-01	
36	02-OCT-2020 20:37	420J0236.D	1	20I0307-02	
37	02-OCT-2020 20:58	420J0237.D	1	20I0307-03	
38	02-OCT-2020 21:18	420J0238.D	1	20I0307-04	
39	02-OCT-2020 21:39	420J0239.D	1	SEQ-CCV4	
40	02-OCT-2020 21:59	420J0240.D	1	SEQ-CCV5	
41	02-OCT-2020 22:20	420J0241.D	1	SEQ-CCV6	
42	02-OCT-2020 22:40	420J0242.D	1	20I0350-01	
43	02-OCT-2020 23:00	420J0243.D	1	20I0350-02	
44	02-OCT-2020 23:21	420J0244.D	1	20I0350-03	
45	02-OCT-2020 23:41	420J0245.D	1	20I0350-04	
46	03-OCT-2020 00:02	420J0246.D	1	20I0350-05	
47	03-OCT-2020 00:22	420J0247.D	1	20I0350-06	
48	03-OCT-2020 00:42	420J0248.D	1	20I0350-07	
49	03-OCT-2020 01:03	420J0249.D	1	20I0217-01	
50	03-OCT-2020 01:23	420J0250.D	200	20I0217-02	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201002.b

	Inject Date/Time	Filename	DF	LabID	ClientID
51	03-OCT-2020 01:44	420J0251.D	50	20I0217-02	
52	03-OCT-2020 02:04	420J0252.D	1	SEQ-CCV7	
53	03-OCT-2020 02:24	420J0253.D	1	SEQ-CCV8	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201002.b

ARI Job No.: RINS   Method: FID4TPH.m   Instrument: fid4a.i   Date: 02-OCT-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0841	420J0201.D	RINSE		1	NO MANUAL INTEGRATION
0901	420J0202.D	RINSE		1	NO MANUAL INTEGRATION
0921	420J0203.D	SEQ-IBL1		1	C40, Triacon Surr,
0942	420J0204.D	SEQ-IBL2		1	Triacon Surr,
1002	420J0205.D	SEQ-ICV1		1	o-terph,
1022	420J0206.D	SEQ-ICV2		1	Triacon Surr,
1043	420J0207.D	SEQ-CAL1		1	o-terph,
1104	420J0208.D	SEQ-CAL2		1	o-terph,
1124	420J0209.D	SEQ-CAL3		1	o-terph,
1145	420J0210.D	SEQ-CAL4		1	o-terph,
1205	420J0211.D	SEQ-CAL5		1	o-terph,
1226	420J0212.D	SEQ-CAL6		1	o-terph,
1246	420J0213.D	SEQ-ICV3		1	o-terph,
1307	420J0214.D	BII0597-BLK1		1	Triacon Surr,
1327	420J0215.D	BII0597-BS1		1	o-terph,
1348	420J0216.D	BII0597-BSD1		1	o-terph,
1408	420J0217.D	20I0229-02		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201002.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1429	420J0218.D	20I0229-03		1	NO MANUAL INTEGRATION
1450	420J0219.D	20I0229-04		1	NO MANUAL INTEGRATION
1510	420J0220.D	20I0229-05		1	NO MANUAL INTEGRATION
1531	420J0221.D	20I0229-06		1	NO MANUAL INTEGRATION
1551	420J0222.D	20I0229-07		1	Triacon Surr,
1612	420J0223.D	20I0229-08		1	NO MANUAL INTEGRATION
1632	420J0224.D	20I0229-09		1	NO MANUAL INTEGRATION
1652	420J0225.D	20I0229-10		1	NO MANUAL INTEGRATION
1713	420J0226.D	20I0229-11		1	NO MANUAL INTEGRATION
1733	420J0227.D	SEQ-CCV1		1	o-terph,
1754	420J0228.D	SEQ-CCV2		1	Triacon Surr,
1814	420J0229.D	SEQ-CCV3		1	o-terph,
1835	420J0230.D	20I0229-12		1	NO MANUAL INTEGRATION
1855	420J0231.D	20I0229-13		1	NO MANUAL INTEGRATION
1916	420J0232.D	20I0229-14		1	NO MANUAL INTEGRATION
1936	420J0233.D	20I0229-15		1	NO MANUAL INTEGRATION
1957	420J0234.D	20I0229-16		1	o-terph,
2017	420J0235.D	20I0307-01		1	o-terph, Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201002.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2037	420J0236.D	20I0307-02		1	o-terph, Triacon Surr,
2058	420J0237.D	20I0307-03		1	o-terph, Triacon Surr,
2118	420J0238.D	20I0307-04		1	o-terph, Triacon Surr,
2139	420J0239.D	SEQ-CCV4		1	o-terph,
2159	420J0240.D	SEQ-CCV5		1	Triacon Surr,
2220	420J0241.D	SEQ-CCV6		1	o-terph,
2240	420J0242.D	20I0350-01		1	NO MANUAL INTEGRATION
2300	420J0243.D	20I0350-02		1	o-terph,
2321	420J0244.D	20I0350-03		1	o-terph,
2341	420J0245.D	20I0350-04		1	o-terph, Triacon Surr,
0002	420J0246.D	20I0350-05		1	o-terph,
0022	420J0247.D	20I0350-06		1	o-terph,
0042	420J0248.D	20I0350-07		1	o-terph, Triacon Surr,
0103	420J0249.D	20I0217-01		1	o-terph, Triacon Surr,
0123	420J0250.D	20I0217-02		200	o-terph, Triacon Surr,
0144	420J0251.D	20I0217-02		50	NO MANUAL INTEGRATION
0204	420J0252.D	SEQ-CCV7		1	o-terph,
0224	420J0253.D	SEQ-CCV8		1	Triacon Surr,

Security Status Report

Date: 11-Oct-2020 10:45

420J0201.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0202.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0203.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0204.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0205.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0206.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0207.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0208.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0209.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0210.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0211.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0212.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0213.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0214.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0215.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0216.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0217.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0218.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0219.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0220.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0221.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0222.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0223.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0224.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0225.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0226.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0227.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0228.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0229.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0230.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0231.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0232.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0233.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0234.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0235.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0236.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0237.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0238.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0239.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0240.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0241.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0242.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0243.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0244.D	Data Locked	christopher, 11-Oct-2020 10:45

420J0245.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0246.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0247.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0248.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0249.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0250.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0251.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0252.D	Data Locked	christopher, 11-Oct-2020 10:45
420J0253.D	Data Locked	christopher, 11-Oct-2020 10:45

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

Sequence: SII0042
Analyst: CTO Date:

Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor
20I0217-02	5	DCM	995	200				
20I0217-02	20	DCM	980	50				

Form 12010F Version 002 03/01/2018

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Sequence: SIK0016
SDG: 20K0145
Project: ICS-Former NW Cooperage
Instrument: FID4
Calibration: DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIK0016-IBL1	420K0203.D	NA	11/02/20 09:10
Instrument Blank	SIK0016-IBL2	420K0204.D	NA	11/02/20 09:30
DIESEL ICV	SIK0016-ICV1	420K0205.D	NA	11/02/20 09:50
MOIL ICV	SIK0016-ICV2	420K0206.D	NA	11/02/20 10:10
A/S LANDAU BUNKER C 100	SIK0016-CAL1	420K0207.D	NA	11/02/20 10:31
A/S LANDAU BUNKER C 250	SIK0016-CAL2	420K0208.D	NA	11/02/20 10:51
A/S LANDAU BUNKER C 500	SIK0016-CAL3	420K0209.D	NA	11/02/20 11:11
A/S LANDAU BUNKER C 1000	SIK0016-CAL4	420K0210.D	NA	11/02/20 11:32
A/S LANDAU BUNKER C 2500	SIK0016-CAL5	420K0211.D	NA	11/02/20 11:52
A/S LANDAU BUNKER C 5000	SIK0016-CAL6	420K0212.D	NA	11/02/20 12:13
A/S LANDAU BUNKER C	SIK0016-ICV3	420K0213.D	NA	11/02/20 12:33
ZZZZZ	20J0250-02	420K0214.D	Solid	11/02/20 12:53
ZZZZZ	20J0265-01	420K0215.D	Water	11/02/20 13:14
DIESEL CCV	SIK0016-CCV1	420K0216.D	NA	11/02/20 13:34
MOIL CCV	SIK0016-CCV2	420K0217.D	NA	11/02/20 13:55
A/S LANDAU BUNKER C	SIK0016-CCV3	420K0218.D	NA	11/02/20 14:15
ZZZZZ	BIJ0617-BLK1	420K0219.D	Water	11/02/20 14:36
ZZZZZ	BIJ0617-BS1	420K0220.D	Water	11/02/20 14:56
ZZZZZ	BIJ0617-BSD1	420K0221.D	Water	11/02/20 15:17
ZZZZZ	20J0265-02	420K0224.D	Water	11/02/20 16:18
ZZZZZ	20J0265-03	420K0225.D	Water	11/02/20 16:39
ZZZZZ	20J0265-04	420K0226.D	Water	11/02/20 16:59
ZZZZZ	20J0265-05	420K0227.D	Water	11/02/20 17:19
ZZZZZ	20J0265-06	420K0228.D	Water	11/02/20 17:40
ZZZZZ	20J0265-07	420K0229.D	Water	11/02/20 18:00
ZZZZZ	20J0265-08	420K0230.D	Water	11/02/20 18:21
ZZZZZ	20J0265-09	420K0231.D	Water	11/02/20 18:41
ZZZZZ	20J0265-10	420K0232.D	Water	11/02/20 19:01
ZZZZZ	20J0265-11	420K0233.D	Water	11/02/20 19:22
DIESEL CCV	SIK0016-CCV4	420K0234.D	NA	11/02/20 19:42

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIK0016	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MOIL CCV	SIK0016-CCV5	420K0235.D	NA	11/02/20 20:02
A/S LANDAU BUNKER C	SIK0016-CCV6	420K0236.D	NA	11/02/20 20:23

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIK0016

Instrument: FID4
Calibration ID: DA00022

Printed: 11/3/2020 9:50:19AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIK0016-IBL1	QC		1		I006239			
SIK0016-IBL2	QC		2		I006241			
SIK0016-ICV1	QC		3		I008275			
SIK0016-ICV2	QC		4		I008935			
SIK0016-CAL1	QC		5		I010265			
SIK0016-CAL2	QC		6		I010264			
SIK0016-CAL3	QC		7		I010263			
SIK0016-CAL4	QC		8		I010262			
SIK0016-CAL5	QC		9		I010261			
SIK0016-CAL6	QC		10		I010260			
SIK0016-ICV3	QC		11		I010263			
20J0250-02	PH NW (Extractables) low lev	A 01	12				Seattle Public Utilities	A/S Clean up version
20J0265-01	PH NW (Extractables) low lev	A 01	13				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
SIK0016-CCV1	QC		14		I008275			
SIK0016-CCV2	QC		15		I008935			
SIK0016-CCV3	QC		16		I010263			
BIJ0617-BLK1	QC		17					
BIJ0617-BS1	QC		18					
BIJ0617-BSD1	QC		19					
BIJ0617-MS1	QC		20					
BIJ0617-MSD1	QC		21					

Samples Loaded By Date

Data Processed By Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIK0016

Instrument: FID4
Calibration ID: DA00022

Printed: 11/3/2020 9:50:19AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
20J0265-02	PH NW (Extractables) low lev	A 01	22				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-03	PH NW (Extractables) low lev	A 01	23				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-04	PH NW (Extractables) low lev	A 01	24				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-05	PH NW (Extractables) low lev	A 01	25				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-06	PH NW (Extractables) low lev	A 01	26				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-07	PH NW (Extractables) low lev	A 01	27				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-08	PH NW (Extractables) low lev	A 01	28				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-09	PH NW (Extractables) low lev	A 01	29				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-10	PH NW (Extractables) low lev	A 01	30				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
20J0265-11	PH NW (Extractables) low lev	A 01	31				Landau Associates, Inc. - Spokane	Curving for Bunker C, Acid/Si clean, C
SIK0016-CCV4	QC		32		I008275			
SIK0016-CCV5	QC		33		I008935			
SIK0016-CCV6	QC		34		I010263			

Samples Loaded By   Date   Data Processed By   Date

GC LOG SUMMARY FOR DATABATCH - fid4a.i\20201102.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	02-NOV-2020 08:29	420K0201.D	1	RINSE	
2	02-NOV-2020 08:49	420K0202.D	1	RINSE	
3	02-NOV-2020 09:10	420K0203.D	1	SEQ-IBL1	
4	02-NOV-2020 09:30	420K0204.D	1	SEQ-IBL2	
5	02-NOV-2020 09:50	420K0205.D	1	SEQ-ICV1	
6	02-NOV-2020 10:10	420K0206.D	1	SEQ-ICV2	
7	02-NOV-2020 10:31	420K0207.D	1	SEQ-CAL1	
8	02-NOV-2020 10:51	420K0208.D	1	SEQ-CAL2	
9	02-NOV-2020 11:11	420K0209.D	1	SEQ-CAL3	
10	02-NOV-2020 11:32	420K0210.D	1	SEQ-CAL4	
11	02-NOV-2020 11:52	420K0211.D	1	SEQ-CAL5	
12	02-NOV-2020 12:13	420K0212.D	1	SEQ-CAL6	
13	02-NOV-2020 12:33	420K0213.D	1	SEQ-ICV3	
14	02-NOV-2020 12:53	420K0214.D	1	20J0250-02	
15	02-NOV-2020 13:14	420K0215.D	1	20J0265-01	
16	02-NOV-2020 13:34	420K0216.D	1	SEQ-CCV1	
17	02-NOV-2020 13:55	420K0217.D	1	SEQ-CCV2	
18	02-NOV-2020 14:15	420K0218.D	1	SEQ-CCV3	
19	02-NOV-2020 14:36	420K0219.D	1	BIJ0617-BLK1	
20	02-NOV-2020 14:56	420K0220.D	1	BIJ0617-BS1	
21	02-NOV-2020 15:17	420K0221.D	1	BIJ0617-BSD1	
22	02-NOV-2020 15:37	420K0222.D	1	BIJ0617-MS1	
23	02-NOV-2020 15:58	420K0223.D	1	BIJ0617-MSD1	
24	02-NOV-2020 16:18	420K0224.D	1	20J0265-02	
25	02-NOV-2020 16:39	420K0225.D	1	20J0265-03	
26	02-NOV-2020 16:59	420K0226.D	1	20J0265-04	
27	02-NOV-2020 17:19	420K0227.D	1	20J0265-05	
28	02-NOV-2020 17:40	420K0228.D	1	20J0265-06	
29	02-NOV-2020 18:00	420K0229.D	1	20J0265-07	
30	02-NOV-2020 18:21	420K0230.D	1	20J0265-08	
31	02-NOV-2020 18:41	420K0231.D	1	20J0265-09	
32	02-NOV-2020 19:01	420K0232.D	1	20J0265-10	
33	02-NOV-2020 19:22	420K0233.D	1	20J0265-11	
34	02-NOV-2020 19:42	420K0234.D	1	SEQ-CCV4	
35	02-NOV-2020 20:02	420K0235.D	1	SEQ-CCV5	
36	02-NOV-2020 20:23	420K0236.D	1	SEQ-CCV6	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201102.b

ARI Job No.: RINS   Method: FID4TPH.m   Instrument: fid4a.i   Date: 02-NOV-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0829	420K0201.D	RINSE		1	NO MANUAL INTEGRATION
0849	420K0202.D	RINSE		1	NO MANUAL INTEGRATION
0910	420K0203.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
0930	420K0204.D	SEQ-IBL2		1	NO MANUAL INTEGRATION
0950	420K0205.D	SEQ-ICV1		1	o-terph,
1010	420K0206.D	SEQ-ICV2		1	Triacon Surr,
1031	420K0207.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
1051	420K0208.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
1111	420K0209.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
1132	420K0210.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
1152	420K0211.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
1213	420K0212.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
1233	420K0213.D	SEQ-ICV3		1	NO MANUAL INTEGRATION
1253	420K0214.D	20J0250-02		1	o-terph, Triacon Surr,
1314	420K0215.D	20J0265-01		1	NO MANUAL INTEGRATION
1334	420K0216.D	SEQ-CCV1		1	o-terph,
1355	420K0217.D	SEQ-CCV2		1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201102.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1415	420K0218.D	SEQ-CCV3		1	NO MANUAL INTEGRATION
1436	420K0219.D	BIJ0617-BLK1		1	NO MANUAL INTEGRATION
1456	420K0220.D	BIJ0617-BS1		1	o-terph,
1517	420K0221.D	BIJ0617-BSD1		1	o-terph,
1537	420K0222.D	BIJ0617-MS1		1	o-terph,
1558	420K0223.D	BIJ0617-MSD1		1	o-terph,
1618	420K0224.D	20J0265-02		1	NO MANUAL INTEGRATION
1639	420K0225.D	20J0265-03		1	NO MANUAL INTEGRATION
1659	420K0226.D	20J0265-04		1	NO MANUAL INTEGRATION
1719	420K0227.D	20J0265-05		1	NO MANUAL INTEGRATION
1740	420K0228.D	20J0265-06		1	NO MANUAL INTEGRATION
1800	420K0229.D	20J0265-07		1	NO MANUAL INTEGRATION
1821	420K0230.D	20J0265-08		1	NO MANUAL INTEGRATION
1841	420K0231.D	20J0265-09		1	NO MANUAL INTEGRATION
1901	420K0232.D	20J0265-10		1	NO MANUAL INTEGRATION
1922	420K0233.D	20J0265-11		1	NO MANUAL INTEGRATION
1942	420K0234.D	SEQ-CCV4		1	o-terph,
2002	420K0235.D	SEQ-CCV5		1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201102.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2023	420K0236.D	SEQ-CCV6		1	NO MANUAL INTEGRATION

Security Status Report

Date: 03-Nov-2020 09:49

420K0201.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0202.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0203.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0204.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0205.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0206.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0207.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0208.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0209.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0210.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0211.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0212.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0213.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0214.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0215.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0216.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0217.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0218.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0219.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0220.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0221.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0222.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0223.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0224.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0225.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0226.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0227.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0228.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0229.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0230.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0231.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0232.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0233.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0234.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0235.D	Data Locked	christopher, 03-Nov-2020 09:38
420K0236.D	Data Locked	christopher, 03-Nov-2020 09:38

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIK0411	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
DIESEL ICV	SIK0411-ICV1	420K2905.D	NA	11/29/20 16:25
Retention Time Standard	SIK0411-IBL1	420K2903.D	NA	11/29/20 18:24
Instrument Blank	SIK0411-IBL2	420K2904.D	NA	11/29/20 18:44
MOIL ICV	SIK0411-ICV2	420K2906.D	NA	11/29/20 19:25
ZZZZZ	20K0154-04RE1	420K2907.D	Solid	11/29/20 19:45
P8-10S-1	20K0145-15	420K2908.D	Solid	11/29/20 20:05
ZZZZZ	20K0152-10	420K2909.D	Solid	11/29/20 20:25
ZZZZZ	20K0152-17	420K2910.D	Solid	11/29/20 20:45
ZZZZZ	20K0152-18	420K2911.D	Solid	11/29/20 21:05
ZZZZZ	20K0191-01	420K2916.D	Solid	11/29/20 22:46
ZZZZZ	20K0191-02	420K2917.D	Solid	11/29/20 23:06
ZZZZZ	20K0191-04	420K2918.D	Solid	11/29/20 23:26
ZZZZZ	20K0191-05	420K2919.D	Solid	11/29/20 23:46
ZZZZZ	20K0191-06	420K2920.D	Solid	11/30/20 00:07
DIESEL CCV	SIK0411-CCV1	420K2921.D	NA	11/30/20 00:27
MOIL CCV	SIK0411-CCV2	420K2922.D	NA	11/30/20 00:47
ZZZZZ	20K0191-07	420K2923.D	Solid	11/30/20 01:07
ZZZZZ	20K0191-11	420K2924.D	Solid	11/30/20 01:27
ZZZZZ	20K0191-12	420K2925.D	Solid	11/30/20 01:47
ZZZZZ	20K0191-14	420K2926.D	Solid	11/30/20 02:08
ZZZZZ	20K0191-15	420K2927.D	Solid	11/30/20 02:28
ZZZZZ	20K0191-16	420K2928.D	Solid	11/30/20 02:48
ZZZZZ	20K0191-17	420K2929.D	Solid	11/30/20 03:08
ZZZZZ	20K0191-18	420K2930.D	Solid	11/30/20 03:28
ZZZZZ	20K0191-21	420K2931.D	Solid	11/30/20 03:49
ZZZZZ	20K0191-22	420K2932.D	Solid	11/30/20 04:09
DIESEL CCV	SIK0411-CCV3	420K2933.D	NA	11/30/20 04:29
MOIL CCV	SIK0411-CCV4	420K2934.D	NA	11/30/20 04:49
ZZZZZ	20K0191-24	420K2935.D	Solid	11/30/20 05:09
ZZZZZ	20K0191-25	420K2936.D	Solid	11/30/20 05:30

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIK0411
Instrument: FID4
Calibration: DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0191-26	420K2937.D	Solid	11/30/20 05:50
ZZZZZ	20K0191-27	420K2938.D	Solid	11/30/20 06:10
ZZZZZ	20K0191-28	420K2939.D	Solid	11/30/20 06:30
ZZZZZ	20K0204-07	420K2943.D	Solid	11/30/20 07:51
ZZZZZ	20K0117-21	420K2948.D	Solid	11/30/20 09:33
ZZZZZ	20K0170-04	420K2949.D	Solid	11/30/20 09:53
ZZZZZ	20K0170-14	420K2952.D	Solid	11/30/20 10:54
DIESEL CCV	SIK0411-CCV5	420K2953.D	NA	11/30/20 11:14
MOIL CCV	SIK0411-CCV6	420K2954.D	NA	11/30/20 11:34
ZZZZZ	20K0007-15	420K2955.D	Solid	11/30/20 14:22
DIESEL CCV	SIK0411-CCV7	420K2956.D	NA	11/30/20 14:42
MOIL CCV	SIK0411-CCV8	420K2957.D	NA	11/30/20 15:02

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIK0411

Instrument: FID4
Calibration ID: DA00022

Printed: 11/30/2020 5:35:12PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIK0411-IBL1	QC		1		I006239			
SIK0411-IBL2	QC		2		I006241			
SIK0411-ICV1	QC		3		I008275			
SIK0411-ICV2	QC		4		I008935			
20K0154-04RE1	PH NW (Extractables) low lev	A 01	5				The Boeing Company	Added 11/27/2020 by VTS
20K0145-15	PH NW (Extractables) low lev	A 02	6				Dalton, Olmsted & Fuglevand, Inc	
20K0152-10	PH NW (Extractables) low lev	B 01	7				Shannon & Wilson, Inc	
20K0152-17	PH NW (Extractables) low lev	A 01	8				Shannon & Wilson, Inc	
20K0152-18	PH NW (Extractables) low lev	A 01	9				Shannon & Wilson, Inc	
BIK0583-BLK1	QC		10					
BIK0583-BS1	QC		11					
BIK0583-MS1	QC		12					
BIK0583-MSD1	QC		13					
20K0191-01	TPH NW (Extractables)	A 01	14				Anchor QEA, LLC	
20K0191-02	TPH NW (Extractables)	A 01	15				Anchor QEA, LLC	
20K0191-04	TPH NW (Extractables)	A 01	16				Anchor QEA, LLC	
20K0191-05	TPH NW (Extractables)	A 01	17				Anchor QEA, LLC	
20K0191-06	TPH NW (Extractables)	A 01	18				Anchor QEA, LLC	
SIK0411-CCV1	QC		19		I008275			
SIK0411-CCV2	QC		20		I008935			
20K0191-07	TPH NW (Extractables)	A 01	21				Anchor QEA, LLC	

Samples Loaded By Date Data Processed By Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIK0411

Instrument: FID4
Calibration ID: DA00022

Printed: 11/30/2020 5:35:12PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
20K0191-11	TPH NW (Extractables)	A 01	22				Anchor QEA, LLC	
20K0191-12	TPH NW (Extractables)	A 01	23				Anchor QEA, LLC	
20K0191-14	TPH NW (Extractables)	A 01	24				Anchor QEA, LLC	
20K0191-15	TPH NW (Extractables)	A 01	25				Anchor QEA, LLC	
20K0191-16	TPH NW (Extractables)	A 01	26				Anchor QEA, LLC	
20K0191-17	TPH NW (Extractables)	A 01	27				Anchor QEA, LLC	
20K0191-18	TPH NW (Extractables)	A 01	28				Anchor QEA, LLC	
20K0191-21	TPH NW (Extractables)	A 01	29				Anchor QEA, LLC	
20K0191-22	TPH NW (Extractables)	A 01	30				Anchor QEA, LLC	
SIK0411-CCV3	QC		31		I008275			
SIK0411-CCV4	QC		32		I008935			
20K0191-24	TPH NW (Extractables)	A 01	33				Anchor QEA, LLC	
20K0191-25	TPH NW (Extractables)	A 01	34				Anchor QEA, LLC	
20K0191-26	TPH NW (Extractables)	A 01	35				Anchor QEA, LLC	
20K0191-27	TPH NW (Extractables)	A 01	36				Anchor QEA, LLC	
20K0191-28	TPH NW (Extractables)	A 01	37				Anchor QEA, LLC	
BIK0744-BLK1	QC		38					
BIK0744-BS1	QC		39					
20K0204-07	TPH NW (Extractables)	A 02	40				Anchor QEA, LLC	
BIK0744-MS1	QC		41					
BIK0744-MSD1	QC		42					

Samples Loaded By Date Data Processed By Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIK0411

Instrument: FID4
Calibration ID: DA00022

Printed: 11/30/2020 5:35:12PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
BIK0664-BLK1	QC		43					
BIK0664-BS1	QC		44					
20K0170-04	TPH NW (Extractables)	A 03	45				Anchor QEA, LLC	
BIK0664-MS1	QC		46					
BIK0664-MSD1	QC		47					
20K0170-14	TPH NW (Extractables)	A 03	48				Anchor QEA, LLC	
SIK0411-CCV5	QC		49		I008275			
SIK0411-CCV6	QC		50		I008935			
20K0007-15	PH NW (Extractables) low lev	A 01	51				Dalton, Olmsted & Fuglevand, Inc	
SIK0411-CCV7	QC		52		I008275			
SIK0411-CCV8	QC		53		I008935			

Samples Loaded By Date Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - fid4a.i\20201129.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	29-NOV-2020 17:44	420K2901.D	1	RINSE	
2	29-NOV-2020 18:04	420K2902.D	1	RINSE	
3	29-NOV-2020 18:24	420K2903.D	1	SEQ-IBL1	
4	29-NOV-2020 18:44	420K2904.D	1	SEQ-IBL2	
5	29-NOV-2020 16:25	420K2905.D	1	SEQ-ICV1	
6	29-NOV-2020 19:25	420K2906.D	1	SEQ-ICV2	
7	29-NOV-2020 19:45	420K2907.D	200	20K0154-04RE	
8	29-NOV-2020 20:05	420K2908.D	50	20K0145-15RE1	
9	29-NOV-2020 20:25	420K2909.D	50	20K0152-10RE1	
10	29-NOV-2020 20:45	420K2910.D	25	20K0152-17RE1	
11	29-NOV-2020 21:05	420K2911.D	50	20K0152-18RE1	
12	29-NOV-2020 21:25	420K2912.D	1	BIK0583-BLK1	
13	29-NOV-2020 21:46	420K2913.D	1	BIK0583-BS1	
14	29-NOV-2020 22:06	420K2914.D	1	BIK0583-MS1	
15	29-NOV-2020 22:26	420K2915.D	1	BIK0583-MSD1	
16	29-NOV-2020 22:46	420K2916.D	1	20K0191-01	
17	29-NOV-2020 23:06	420K2917.D	1	20K0191-02	
18	29-NOV-2020 23:26	420K2918.D	1	20K0191-04	
19	29-NOV-2020 23:46	420K2919.D	1	20K0191-05	
20	30-NOV-2020 00:07	420K2920.D	1	20K0191-06	
21	30-NOV-2020 00:27	420K2921.D	1	SEQ-CCV1	
22	30-NOV-2020 00:47	420K2922.D	1	SEQ-CCV2	
23	30-NOV-2020 01:07	420K2923.D	1	20K0191-07	
24	30-NOV-2020 01:27	420K2924.D	1	20K0191-11	
25	30-NOV-2020 01:47	420K2925.D	1	20K0191-12	
26	30-NOV-2020 02:08	420K2926.D	1	20K0191-14	
27	30-NOV-2020 02:28	420K2927.D	1	20K0191-15	
28	30-NOV-2020 02:48	420K2928.D	1	20K0191-16	
29	30-NOV-2020 03:08	420K2929.D	1	20K0191-17	
30	30-NOV-2020 03:28	420K2930.D	1	20K0191-18	
31	30-NOV-2020 03:49	420K2931.D	1	20K0191-21	
32	30-NOV-2020 04:09	420K2932.D	1	20K0191-22	
33	30-NOV-2020 04:29	420K2933.D	1	SEQ-CCV3	
34	30-NOV-2020 04:49	420K2934.D	1	SEQ-CCV4	
35	30-NOV-2020 05:09	420K2935.D	1	20K0191-24	
36	30-NOV-2020 05:30	420K2936.D	1	20K0191-25	
37	30-NOV-2020 05:50	420K2937.D	1	20K0191-26	
38	30-NOV-2020 06:10	420K2938.D	1	20K0191-27	
39	30-NOV-2020 06:30	420K2939.D	1	20K0191-28	
40	30-NOV-2020 06:51	420K2940.D	1	BIK0744-BLK1	
41	30-NOV-2020 07:11	420K2941.D	1	BIK0744-BS1	
42	30-NOV-2020 07:31	420K2942.D	1	20K0204-05	
43	30-NOV-2020 07:51	420K2943.D	1	20K0204-07	
44	30-NOV-2020 08:12	420K2944.D	1	BIK0744-MS1	
45	30-NOV-2020 08:32	420K2945.D	1	BIK0744-MSD1	
46	30-NOV-2020 08:52	420K2946.D	1	BIK0664-BLK1	
47	30-NOV-2020 09:12	420K2947.D	1	BIK0664-BS1	
48	30-NOV-2020 09:33	420K2948.D	10	20K0117-21	
49	30-NOV-2020 09:53	420K2949.D	1	20K0170-04	
50	30-NOV-2020 10:13	420K2950.D	1	BIK0664-MS1	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201129.b

	Inject Date/Time	Filename	DF	LabID	ClientID
51	30-NOV-2020 10:33	420K2951.D	1	BIK0664-MSD1	
52	30-NOV-2020 10:54	420K2952.D	1	20K0170-14	
53	30-NOV-2020 11:14	420K2953.D	1	SEQ-CCV5	
54	30-NOV-2020 11:34	420K2954.D	1	SEQ-CCV6	
55	30-NOV-2020 14:22	420K2955.D	1	20K0007-15RE1	
56	30-NOV-2020 14:42	420K2956.D	1	SEQ-CCV7	
57	30-NOV-2020 15:02	420K2957.D	1	SEQ-CCV8	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201129.b

ARI Job No.: RINS   Method: FID4TPH.m   Instrument: fid4a.i   Date: 29-NOV-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1744	420K2901.D	RINSE		1	NO MANUAL INTEGRATION
1804	420K2902.D	RINSE		1	NO MANUAL INTEGRATION
1824	420K2903.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
1844	420K2904.D	SEQ-IBL2		1	NO MANUAL INTEGRATION
1625	420K2905.D	SEQ-ICV1		1	o-terph,
1925	420K2906.D	SEQ-ICV2		1	Triacon Surr,
1945	420K2907.D	20K0154-04RE		200	o-terph,
2005	420K2908.D	20K0145-15RE1		50	o-terph, Triacon Surr,
2025	420K2909.D	20K0152-10RE1		50	o-terph, Triacon Surr,
2045	420K2910.D	20K0152-17RE1		25	o-terph, Triacon Surr,
2105	420K2911.D	20K0152-18RE1		50	o-terph, Triacon Surr,
2125	420K2912.D	BIK0583-BLK1		1	NO MANUAL INTEGRATION
2146	420K2913.D	BIK0583-BS1		1	o-terph,
2206	420K2914.D	BIK0583-MS1		1	o-terph,
2226	420K2915.D	BIK0583-MSD1		1	o-terph,
2246	420K2916.D	20K0191-01		1	NO MANUAL INTEGRATION
2306	420K2917.D	20K0191-02		1	o-terph, Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201129.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2326	420K2918.D	20K0191-04		1	Triacon Surr,
2346	420K2919.D	20K0191-05		1	Triacon Surr,
0007	420K2920.D	20K0191-06		1	o-terph, Triacon Surr,
0027	420K2921.D	SEQ-CCV1		1	o-terph,
0047	420K2922.D	SEQ-CCV2		1	Triacon Surr,
0107	420K2923.D	20K0191-07		1	o-terph, Triacon Surr,
0127	420K2924.D	20K0191-11		1	NO MANUAL INTEGRATION
0147	420K2925.D	20K0191-12		1	o-terph, Triacon Surr,
0208	420K2926.D	20K0191-14		1	NO MANUAL INTEGRATION
0228	420K2927.D	20K0191-15		1	NO MANUAL INTEGRATION
0248	420K2928.D	20K0191-16		1	Triacon Surr,
0308	420K2929.D	20K0191-17		1	o-terph, Triacon Surr,
0328	420K2930.D	20K0191-18		1	o-terph, Triacon Surr,
0349	420K2931.D	20K0191-21		1	NO MANUAL INTEGRATION
0409	420K2932.D	20K0191-22		1	o-terph, Triacon Surr,
0429	420K2933.D	SEQ-CCV3		1	o-terph,
0449	420K2934.D	SEQ-CCV4		1	Triacon Surr,
0509	420K2935.D	20K0191-24		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201129.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0530	420K2936.D	20K0191-25		1	o-terph, Triacon Surr,
0550	420K2937.D	20K0191-26		1	o-terph, Triacon Surr,
0610	420K2938.D	20K0191-27		1	o-terph, Triacon Surr,
0630	420K2939.D	20K0191-28		1	o-terph, Triacon Surr,
0651	420K2940.D	BIK0744-BLK1		1	NO MANUAL INTEGRATION
0711	420K2941.D	BIK0744-BS1		1	o-terph,
0731	420K2942.D	20K0204-05		1	Triacon Surr,
0751	420K2943.D	20K0204-07		1	NO MANUAL INTEGRATION
0812	420K2944.D	BIK0744-MS1		1	o-terph,
0832	420K2945.D	BIK0744-MSD1		1	o-terph,
0852	420K2946.D	BIK0664-BLK1		1	NO MANUAL INTEGRATION
0912	420K2947.D	BIK0664-BS1		1	o-terph,
0933	420K2948.D	20K0117-21		10	o-terph, Triacon Surr,
0953	420K2949.D	20K0170-04		1	NO MANUAL INTEGRATION
1013	420K2950.D	BIK0664-MS1		1	o-terph,
1033	420K2951.D	BIK0664-MSD1		1	o-terph,
1054	420K2952.D	20K0170-14		1	o-terph, Triacon Surr,
1114	420K2953.D	SEQ-CCV5		1	o-terph,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201129.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1134	420K2954.D	SEQ-CCV6		1	Triacon Surr,
1422	420K2955.D	20K0007-15RE1		1	o-terph, Triacon Surr,
1442	420K2956.D	SEQ-CCV7		1	o-terph,
1502	420K2957.D	SEQ-CCV8		1	Triacon Surr,

Security Status Report

Date: 30-Nov-2020 17:36

420K2901.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2902.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2903.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2904.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2905.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2906.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2907.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2908.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2909.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2910.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2911.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2912.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2913.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2914.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2915.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2916.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2917.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2918.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2919.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2920.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2921.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2922.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2923.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2924.D	Data Locked	christopher, 30-Nov-2020 17:36
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420K2926.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2927.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2928.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2929.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2930.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2931.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2932.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2933.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2934.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2935.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2936.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2937.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2938.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2939.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2940.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2941.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2942.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2943.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2944.D	Data Locked	christopher, 30-Nov-2020 17:36

420K2945.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2946.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2947.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2948.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2949.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2950.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2951.D	Data Locked	christopher, 30-Nov-2020 17:36
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420K2953.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2954.D	Data Locked	christopher, 30-Nov-2020 17:36
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420K2956.D	Data Locked	christopher, 30-Nov-2020 17:36
420K2957.D	Data Locked	christopher, 30-Nov-2020 17:36

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

Sequence: SIK8411
Analyst: JL Date: 11/29/20

Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor
20K0154-04 (20X)	100	DCM	900	200				
20K145-15	20		980	50				
20K152-10 (5X)	100		900	50				
20K152-17	40		960	25				
20K152-18 (5X)	100		900	50				
20K0117-21	100		900	10				

Form 12010F Version 002 03/01/2018

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIK0413
Instrument: FID4
Calibration: DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIK0413-IBL1	420K2779.D	NA	11/28/20 13:37
Instrument Blank	SIK0413-IBL2	420K2780.D	NA	11/28/20 13:57
DIESEL ICV	SIK0413-ICV1	420K2781.D	NA	11/28/20 14:18
MOIL ICV	SIK0413-ICV2	420K2782.D	NA	11/28/20 14:38
ZZZZZ	20K0192-01	420K2785.D	Solid	11/28/20 15:38
ZZZZZ	20K0192-02	420K2786.D	Solid	11/28/20 15:59
ZZZZZ	20K0192-04	420K2801.D	Solid	11/28/20 16:26
ZZZZZ	20K0192-05	420K2802.D	Solid	11/28/20 16:47
ZZZZZ	20K0192-06	420K2803.D	Solid	11/28/20 17:07
ZZZZZ	20K0192-08	420K2804.D	Solid	11/28/20 17:27
ZZZZZ	20K0192-11	420K2805.D	Solid	11/28/20 17:47
ZZZZZ	20K0192-12	420K2806.D	Solid	11/28/20 18:07
DIESEL CCV	SIK0413-CCV1	420K2809.D	NA	11/28/20 19:07
MOIL CCV	SIK0413-CCV2	420K2810.D	NA	11/28/20 19:28
ZZZZZ	20K0192-14	420K2811.D	Solid	11/28/20 19:48
ZZZZZ	20K0192-15	420K2812.D	Solid	11/28/20 20:08
ZZZZZ	20K0192-16	420K2813.D	Solid	11/28/20 20:28
ZZZZZ	20K0192-17	420K2814.D	Solid	11/28/20 20:48
ZZZZZ	20K0192-18	420K2817.D	Solid	11/28/20 21:48
ZZZZZ	20K0192-22	420K2818.D	Solid	11/28/20 22:08
ZZZZZ	20K0192-23	420K2819.D	Solid	11/28/20 22:28
ZZZZZ	20K0192-24	420K2820.D	Solid	11/28/20 22:48
DIESEL CCV	SIK0413-CCV3	420K2821.D	NA	11/28/20 23:08
MOIL CCV	SIK0413-CCV4	420K2822.D	NA	11/28/20 23:28
Blank	BIK0629-BLK1	420K2823.D	Solid	11/28/20 23:49
LCS	BIK0629-BS1	420K2824.D	Solid	11/29/20 00:09
LCS Dup	BIK0629-BSD1	420K2825.D	Solid	11/29/20 00:29
ZZZZZ	20K0120-06	420K2826.D	Solid	11/29/20 00:49
ZZZZZ	20K0120-07	420K2827.D	Solid	11/29/20 01:09
ZZZZZ	20K0120-08	420K2828.D	Solid	11/29/20 01:29

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sequence: SIK0413 Instrument: FID4

Calibration: DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0120-09	420K2829.D	Solid	11/29/20 01:49
ZZZZZ	20K0142-06	420K2830.D	Solid	11/29/20 02:09
ZZZZZ	20K0142-07	420K2831.D	Solid	11/29/20 02:29
P8-10S-5	20K0145-17	420K2833.D	Solid	11/29/20 03:09
ZZZZZ	20K0152-09	420K2834.D	Solid	11/29/20 03:29
DIESEL CCV	SIK0413-CCV5	420K2838.D	NA	11/29/20 04:49
MOIL CCV	SIK0413-CCV6	420K2839.D	NA	11/29/20 05:09
ZZZZZ	20K0152-11	420K2840.D	Solid	11/29/20 05:29
ZZZZZ	20K0152-12	420K2841.D	Solid	11/29/20 05:49
ZZZZZ	20K0152-13	420K2842.D	Solid	11/29/20 06:09
ZZZZZ	20K0152-14	420K2843.D	Solid	11/29/20 06:29
ZZZZZ	20K0152-15	420K2844.D	Solid	11/29/20 06:49
ZZZZZ	20K0152-16	420K2845.D	Solid	11/29/20 07:09
ZZZZZ	20K0152-19	420K2848.D	Solid	11/29/20 08:09
DIESEL CCV	SIK0413-CCV7	420K2849.D	NA	11/29/20 08:29
MOIL CCV	SIK0413-CCV8	420K2850.D	NA	11/29/20 08:50

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc. | SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc | Project: ICS-Former NW Cooperage
Sequence: SIL0020 | Instrument: FID4
Calibration: DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIL0020-IBL1	420L0214.D	NA	12/02/20 13:24
Instrument Blank	SIL0020-IBL2	420L0215.D	NA	12/02/20 13:44
DIESEL ICV	SIL0020-ICV1	420L0216.D	NA	12/02/20 14:04
MOIL ICV	SIL0020-ICV2	420L0217.D	NA	12/02/20 14:24
ZZZZZ	20K0102-28RE1	420L0218.D	Solid	12/02/20 14:45
ZZZZZ	BIK0519-BLK1	420L0219.D	Water	12/02/20 15:05
ZZZZZ	BIK0519-BS1	420L0220.D	Water	12/02/20 15:25
ZZZZZ	20K0216-01	420L0221.D	Water	12/02/20 15:46
ZZZZZ	20K0216-03	420L0222.D	Water	12/02/20 16:06
ZZZZZ	20K0218-01	420L0223.D	Water	12/02/20 16:26
ZZZZZ	20K0223-01	420L0224.D	Water	12/02/20 16:46
ZZZZZ	20K0223-02	420L0225.D	Water	12/02/20 17:07
ZZZZZ	20K0223-03	420L0226.D	Water	12/02/20 17:27
ZZZZZ	20K0223-04	420L0227.D	Water	12/02/20 17:47
ZZZZZ	20K0223-05	420L0228.D	Water	12/02/20 18:07
ZZZZZ	20K0228-01	420L0229.D	Water	12/02/20 18:28
DIESEL CCV	SIL0020-CCV1	420L0230.D	NA	12/02/20 18:48
MOIL CCV	SIL0020-CCV2	420L0231.D	NA	12/02/20 19:08
ZZZZZ	20K0126-22	420L0232.D	Solid	12/02/20 19:28
ZZZZZ	20K0387-01	420L0233.D	Solid	12/02/20 19:49
ZZZZZ	20K0388-02	420L0234.D	Solid	12/02/20 20:09
ZZZZZ	20K0388-03	420L0235.D	Solid	12/02/20 20:29
ZZZZZ	20K0388-06	420L0236.D	Solid	12/02/20 20:49
ZZZZZ	20K0230-01	420L0237.D	Water	12/02/20 21:09
ZZZZZ	20K0234-01	420L0238.D	Water	12/02/20 21:29
ZZZZZ	20K0234-03	420L0239.D	Water	12/02/20 21:50
ZZZZZ	20K0234-05	420L0240.D	Water	12/02/20 22:10
ZZZZZ	20K0234-07	420L0241.D	Water	12/02/20 22:30
DIESEL CCV	SIL0020-CCV3	420L0242.D	NA	12/02/20 22:50
MOIL CCV	SIL0020-CCV4	420L0243.D	NA	12/02/20 23:10

Analytical Resources, Incorporated
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ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0020	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Blank	BIK0587-BLK1	420L0244.D	Solid	12/02/20 23:30
LCS	BIK0587-BS1	420L0245.D	Solid	12/02/20 23:50
ZZZZZ	20K0152-01	420L0246.D	Solid	12/03/20 00:10
ZZZZZ	20K0152-02	420L0247.D	Solid	12/03/20 00:31
ZZZZZ	20K0152-03	420L0248.D	Solid	12/03/20 00:51
PP1-5	20K0145-02	420L0251.D	Solid	12/03/20 01:51
PP1-7.5	20K0145-03	420L0252.D	Solid	12/03/20 02:11
PP2-5	20K0145-07	420L0253.D	Solid	12/03/20 02:31
PP2-7.5	20K0145-08	420L0254.D	Solid	12/03/20 02:51
PP5-2	20K0145-11	420L0255.D	Solid	12/03/20 03:11
PP5-8	20K0145-13	420L0256.D	Solid	12/03/20 03:31
DIESEL CCV	SIL0020-CCV5	420L0257.D	NA	12/03/20 03:51
MOIL CCV	SIL0020-CCV6	420L0258.D	NA	12/03/20 04:11
ZZZZZ	20K0203-09	420L0261.D	Solid	12/03/20 05:12
ZZZZZ	20K0203-10	420L0262.D	Solid	12/03/20 05:32
ZZZZZ	20K0203-12	420L0263.D	Solid	12/03/20 05:52
ZZZZZ	20K0203-20	420L0264.D	Solid	12/03/20 06:12
ZZZZZ	20K0203-21	420L0265.D	Solid	12/03/20 06:33
ZZZZZ	20K0203-24	420L0266.D	Solid	12/03/20 06:53
ZZZZZ	20K0203-25	420L0267.D	Solid	12/03/20 07:13
ZZZZZ	20K0203-26	420L0268.D	Solid	12/03/20 07:33
ZZZZZ	20K0203-27	420L0271.D	Solid	12/03/20 08:34
ZZZZZ	20K0203-29	420L0272.D	Solid	12/03/20 08:54
DIESEL CCV	SIL0020-CCV7	420L0273.D	NA	12/03/20 09:14
MOIL CCV	SIL0020-CCV8	420L0274.D	NA	12/03/20 09:34

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Printed: 12/3/2020 12:35:34PM

ANALYSIS SEQUENCE

SIL0020

Instrument: FID4 Element Column ID: G004923
Calibration ID: DA00022

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0020-IBL1	Retention Time Standard	QC		1	I006239		
SIL0020-IBL2	Instrument Blank	QC		2	I006241		
SIL0020-ICV1	DIESEL ICV	QC		3	I008275		
SIL0020-ICV2	MOIL ICV	QC		4	I008935		
20K0102-28RE1	JSMPDI-048SC-B-10-12-20110	TPH NW (Extractables)	A 01	5			Added 12/2/2020 by VTS
BIK0519-BLK1	Blank	QC		6			
BIK0519-BS1	LCS	QC		7			
20K0216-01	Influent	TPH NW (Extractables) low level	D 01	8			
20K0216-03	Effluent	TPH NW (Extractables) low level	D 01	9			
20K0218-01	Basin 4	TPH NW (Extractables) low level	D 01	10			
20K0223-01	DC2-2.18M	TPH NW (Extractables) low level	D 01	11			
20K0223-02	DC5-5.1M	TPH NW (Extractables) low level	D 01	12			
20K0223-03	DC11-OWS-11	TPH NW (Extractables) low level	D 01	13			
20K0223-04	DC12-12.58M	TPH NW (Extractables) low level	D 01	14			
20K0223-05	DC13-13.45M	TPH NW (Extractables) low level	D 01	15			
20K0228-01	MFC-6.2C	TPH NW (Extractables) low level	D 01	16			
SIL0020-CCV1	DIESEL CCV	QC		17	I008275		
SIL0020-CCV2	MOIL CCV	QC		18	I008935		
20K0126-22	PP3-2	TPH NW (Extractables) low level	A 01	19			
20K0387-01	PGW-V-207-11/2020	TPH NW (Extractables) low level	A 01	20			
20K0388-02	PGW-V-113-11/2020	TPH NW (Extractables) low level	A 01	21			
20K0388-03	PGW-V-114-11/2020	TPH NW (Extractables) low level	A 01	22			

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Printed: 12/3/2020 12:35:34PM

ANALYSIS SEQUENCE

SIL0020

Instrument: FID4 Element Column ID: G004923
Calibration ID: DA00022

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
20K0388-06	PGW-V-117-11/2020	TPH NW (Extractables) low level	A 01	23			
20K0230-01	SDE4/S1111220GRAB	TPH NW (Extractables) low level	B 01	24			
20K0234-01	P2A (2-448)	TPH NW (Extractables) low level	D 01	25			
20K0234-03	P26	TPH NW (Extractables) low level	D 01	26			
20K0234-05	P33	TPH NW (Extractables) low level	D 01	27			
20K0234-07	P36	TPH NW (Extractables) low level	D 01	28			
SIL0020-CCV3	DIESEL CCV	QC		29	I008275		
SIL0020-CCV4	MOIL CCV	QC		30	I008935		
BIK0587-BLK1	Blank	QC		31			
BIK0587-BS1	LCS	QC		32			
20K0152-01	SB-2020-013:1.5-11052020	TPH NW (Extractables) low level	B 01	33			
20K0152-02	SB-2020-013:6-11052020	TPH NW (Extractables) low level	B 01	34			
20K0152-03	SB-2020-013:11.5-11052020	TPH NW (Extractables) low level	B 01	35			
BIK0587-MS1	Matrix Spike	QC		36			
BIK0587-MSD1	Matrix Spike Dup	QC		37			
20K0145-02	PP1-5	TPH NW (Extractables) low level	A 01	38			
20K0145-03	PP1-7.5	TPH NW (Extractables) low level	A 01	39			
20K0145-07	PP2-5	TPH NW (Extractables) low level	A 01	40			
20K0145-08	PP2-7.5	TPH NW (Extractables) low level	A 01	41			
20K0145-11	PP5-2	TPH NW (Extractables) low level	A 01	42			
20K0145-13	PP5-8	TPH NW (Extractables) low level	A 01	43			
SIL0020-CCV5	DIESEL CCV	QC		44	I008275		

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ANALYSIS SEQUENCE

SIL0020

Instrument: FID4   Element Column ID: G004923
Calibration ID: DA00022

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0020-CCV6	MOIL CCV	QC		45	I008935		
BIK0701-BLK1	Blank	QC		46			
BIK0701-BS1	LCS	QC		47			
20K0203-09	JSMPDI-014SC-A-00-01-20110	TPH NW (Extractables)	A 02	48			
20K0203-10	JSMPDI-014SC-A-10-11-20110	TPH NW (Extractables)	A 02	49			
20K0203-12	JSMPDI-014SC-B-02-04-20110	TPH NW (Extractables)	A 02	50			
20K0203-20	JSMPDI-057SC-A-00-01-20110	TPH NW (Extractables)	A 02	51			
20K0203-21	JSMPDI-057SC-A-03-04-20110	TPH NW (Extractables)	A 02	52			
20K0203-24	JSMPDI-057SC-B-04-06-20110	TPH NW (Extractables)	A 02	53			
20K0203-25	JSMPDI-057SC-B-06-08-20110	TPH NW (Extractables)	A 02	54			
20K0203-26	JSMPDI-057SC-B-08-10-20110	TPH NW (Extractables)	A 02	55			
BIK0701-MS1	Matrix Spike	QC		56			
BIK0701-MSD1	Matrix Spike Dup	QC		57			
20K0203-27	JSMPDI-057SC-B-10-12-20110	TPH NW (Extractables)	A 02	58			
20K0203-29	SMPDI-1057SC-B-06-08-2011(	TPH NW (Extractables)	A 02	59			
SIL0020-CCV7	DIESEL CCV	QC		60	I008275		
SIL0020-CCV8	MOIL CCV	QC		61	I008935		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201202.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	02-DEC-2020 13:24	420L0214.D	1	SIL0020-IBL1	
2	02-DEC-2020 13:44	420L0215.D	1	SIL0020-IBL2	
3	02-DEC-2020 14:04	420L0216.D	1	SIL0020-ICV1	
4	02-DEC-2020 14:24	420L0217.D	1	SIL0020-ICV2	
5	02-DEC-2020 14:45	420L0218.D	1	20K0102-28	
6	02-DEC-2020 15:05	420L0219.D	1	BIK0519-BLK1	
7	02-DEC-2020 15:25	420L0220.D	1	BIK0519-BS1	
8	02-DEC-2020 15:46	420L0221.D	1	20K0216-01	
9	02-DEC-2020 16:06	420L0222.D	1	20K0216-03	
10	02-DEC-2020 16:26	420L0223.D	1	20K0218-01	
11	02-DEC-2020 16:46	420L0224.D	1	20K0223-01	
12	02-DEC-2020 17:07	420L0225.D	1	20K0223-02	
13	02-DEC-2020 17:27	420L0226.D	1	20K0223-03	
14	02-DEC-2020 17:47	420L0227.D	1	20K0223-04	
15	02-DEC-2020 18:07	420L0228.D	1	20K0223-05	
16	02-DEC-2020 18:28	420L0229.D	1	20K0228-01	
17	02-DEC-2020 18:48	420L0230.D	1	SIL0020-CCV1	
18	02-DEC-2020 19:08	420L0231.D	1	SIL0020-CCV2	
19	02-DEC-2020 19:28	420L0232.D	3	20K0126-22	
20	02-DEC-2020 19:49	420L0233.D	3	20K0387-01	
21	02-DEC-2020 20:09	420L0234.D	3	20K0388-02	
22	02-DEC-2020 20:29	420L0235.D	3	20K0388-03	
23	02-DEC-2020 20:49	420L0236.D	3	20K0388-06	
24	02-DEC-2020 21:09	420L0237.D	1	20K0230-01	
25	02-DEC-2020 21:29	420L0238.D	1	20K0234-01	
26	02-DEC-2020 21:50	420L0239.D	1	20K0234-03	
27	02-DEC-2020 22:10	420L0240.D	1	20K0234-05	
28	02-DEC-2020 22:30	420L0241.D	1	20K0234-07	
29	02-DEC-2020 22:50	420L0242.D	1	SIL0020-CCV3	
30	02-DEC-2020 23:10	420L0243.D	1	SIL0020-CCV4	
31	02-DEC-2020 23:30	420L0244.D	1	BIK0587-BLK1	
32	02-DEC-2020 23:50	420L0245.D	1	BIK0587-BS1	
33	03-DEC-2020 00:10	420L0246.D	1	20K0152-01	
34	03-DEC-2020 00:31	420L0247.D	1	20K0152-02	
35	03-DEC-2020 00:51	420L0248.D	1	20K0152-03	
36	03-DEC-2020 01:11	420L0249.D	1	BIK0587-MS1	
37	03-DEC-2020 01:31	420L0250.D	1	BIK0587-MSD1	
38	03-DEC-2020 01:51	420L0251.D	1	20K0145-02	
39	03-DEC-2020 02:11	420L0252.D	1	20K0145-03	
40	03-DEC-2020 02:31	420L0253.D	1	20K0145-07	
41	03-DEC-2020 02:51	420L0254.D	1	20K0145-08	
42	03-DEC-2020 03:11	420L0255.D	1	20K0145-11	
43	03-DEC-2020 03:31	420L0256.D	1	20K0145-13	
44	03-DEC-2020 03:51	420L0257.D	1	SIL0020-CCV5	
45	03-DEC-2020 04:11	420L0258.D	1	SIL0020-CCV6	

46	03-DEC-2020	04:32	420L0259.D	1	BIK0701-BLK1
47	03-DEC-2020	04:52	420L0260.D	1	BIK0701-BS1
48	03-DEC-2020	05:12	420L0261.D	1	20K0203-09
49	03-DEC-2020	05:32	420L0262.D	1	20K0203-10
50	03-DEC-2020	05:52	420L0263.D	1	20K0203-12

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201202.b p2

	Inject Date/Time	Filename	DF	LabID	ClientID
51	03-DEC-2020 06:12	420L0264.D	1	20K0203-20	
52	03-DEC-2020 06:33	420L0265.D	1	20K0203-21	
53	03-DEC-2020 06:53	420L0266.D	1	20K0203-24	
54	03-DEC-2020 07:13	420L0267.D	1	20K0203-25	
55	03-DEC-2020 07:33	420L0268.D	1	20K0203-26	
56	03-DEC-2020 07:53	420L0269.D	1	BIK0701-MS1	
57	03-DEC-2020 08:13	420L0270.D	1	BIK0701-MSD1	
58	03-DEC-2020 08:34	420L0271.D	1	20K0203-27	
59	03-DEC-2020 08:54	420L0272.D	1	20K0203-29	
60	03-DEC-2020 09:14	420L0273.D	1	SIL0020-CCV7	
61	03-DEC-2020 09:34	420L0274.D	1	SIL0020-CCV8	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201202.b

Instrument: fid4a.i   Date: 02-DEC-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
1324	420L0214.D	SIL0020-IBL1	1	NO MANUAL INTEGRATION
1344	420L0215.D	SIL0020-IBL2	1	NO MANUAL INTEGRATION
1404	420L0216.D	SIL0020-ICV1	1	o-terph,
1424	420L0217.D	SIL0020-ICV2	1	Triacon Surr,
1445	420L0218.D	20K0102-28	1	o-terph, Triacon Surr,
1505	420L0219.D	BIK0519-BLK1	1	NO MANUAL INTEGRATION
1525	420L0220.D	BIK0519-BS1	1	o-terph,
1546	420L0221.D	20K0216-01	1	o-terph, Triacon Surr,
1606	420L0222.D	20K0216-03	1	Triacon Surr,
1626	420L0223.D	20K0218-01	1	o-terph, Triacon Surr,
1646	420L0224.D	20K0223-01	1	Triacon Surr,
1707	420L0225.D	20K0223-02	1	NO MANUAL INTEGRATION
1727	420L0226.D	20K0223-03	1	o-terph, Triacon Surr,
1747	420L0227.D	20K0223-04	1	Triacon Surr,
1807	420L0228.D	20K0223-05	1	o-terph, Triacon Surr,
1828	420L0229.D	20K0228-01	1	o-terph, Triacon Surr,
1848	420L0230.D	SIL0020-CCV1	1	o-terph,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201202.b

Instrument: fid4a.i Date: 02-DEC-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
1908	420L0231.D	SIL0020-CCV2	1	Triacon Surr,
1928	420L0232.D	20K0126-22	3	o-terph, Triacon Surr,
1949	420L0233.D	20K0387-01	3	o-terph, Triacon Surr,
2009	420L0234.D	20K0388-02	3	o-terph, Triacon Surr,
2029	420L0235.D	20K0388-03	3	o-terph, Triacon Surr,
2049	420L0236.D	20K0388-06	3	o-terph, Triacon Surr,
2109	420L0237.D	20K0230-01	1	o-terph, Triacon Surr,
2129	420L0238.D	20K0234-01	1	o-terph, Triacon Surr,
2150	420L0239.D	20K0234-03	1	NO MANUAL INTEGRATION
2210	420L0240.D	20K0234-05	1	NO MANUAL INTEGRATION
2230	420L0241.D	20K0234-07	1	NO MANUAL INTEGRATION
2250	420L0242.D	SIL0020-CCV3	1	o-terph,
2310	420L0243.D	SIL0020-CCV4	1	Triacon Surr,
2330	420L0244.D	BIK0587-BLK1	1	NO MANUAL INTEGRATION
2350	420L0245.D	BIK0587-BS1	1	o-terph,
0010	420L0246.D	20K0152-01	1	Triacon Surr,
0031	420L0247.D	20K0152-02	1	o-terph, Triacon Surr,
0051	420L0248.D	20K0152-03	1	o-terph, Triacon Surr,

Instrument: fid4a.i Date: 03-DEC-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
0111	420L0249.D	BIK0587-MS1	1	o-terph,
0131	420L0250.D	BIK0587-MSD1	1	o-terph,
0151	420L0251.D	20K0145-02	1	Triacon Surr,
0211	420L0252.D	20K0145-03	1	Triacon Surr,
0231	420L0253.D	20K0145-07	1	Triacon Surr,
0251	420L0254.D	20K0145-08	1	NO MANUAL INTEGRATION
0311	420L0255.D	20K0145-11	1	o-terph, Triacon Surr,
0331	420L0256.D	20K0145-13	1	o-terph, Triacon Surr,
0351	420L0257.D	SIL0020-CCV5	1	o-terph,
0411	420L0258.D	SIL0020-CCV6	1	Triacon Surr,
0432	420L0259.D	BIK0701-BLK1	1	NO MANUAL INTEGRATION
0452	420L0260.D	BIK0701-BS1	1	o-terph,
0512	420L0261.D	20K0203-09	1	o-terph, Triacon Surr,
0532	420L0262.D	20K0203-10	1	o-terph, Triacon Surr,
0552	420L0263.D	20K0203-12	1	o-terph, Triacon Surr,
0612	420L0264.D	20K0203-20	1	o-terph, Triacon Surr,
0633	420L0265.D	20K0203-21	1	o-terph, Triacon Surr,
0653	420L0266.D	20K0203-24	1	o-terph, Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20201202.b

Instrument: fid4a.i   Date: 03-DEC-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
0713	420L0267.D	20K0203-25	1	NO MANUAL INTEGRATION
0733	420L0268.D	20K0203-26	1	NO MANUAL INTEGRATION
0753	420L0269.D	BIK0701-MS1	1	o-terph,
0813	420L0270.D	BIK0701-MSD1	1	o-terph,
0834	420L0271.D	20K0203-27	1	NO MANUAL INTEGRATION
0854	420L0272.D	20K0203-29	1	NO MANUAL INTEGRATION
0914	420L0273.D	SIL0020-CCV7	1	o-terph,
0934	420L0274.D	SIL0020-CCV8	1	Triacon Surr,

Security Status Report

Date: 03-Dec-2020 10:49

420L0214.D	Data Locked	van, 03-Dec-2020 10:49
420L0215.D	Data Locked	van, 03-Dec-2020 10:49
420L0216.D	Data Locked	van, 03-Dec-2020 10:49
420L0217.D	Data Locked	van, 03-Dec-2020 10:49
420L0218.D	Data Locked	van, 03-Dec-2020 10:49
420L0219.D	Data Locked	van, 03-Dec-2020 10:49
420L0220.D	Data Locked	van, 03-Dec-2020 10:49
420L0221.D	Data Locked	van, 03-Dec-2020 10:49
420L0222.D	Data Locked	van, 03-Dec-2020 10:49
420L0223.D	Data Locked	van, 03-Dec-2020 10:49
420L0224.D	Data Locked	van, 03-Dec-2020 10:49
420L0225.D	Data Locked	van, 03-Dec-2020 10:49
420L0226.D	Data Locked	van, 03-Dec-2020 10:49
420L0227.D	Data Locked	van, 03-Dec-2020 10:49
420L0228.D	Data Locked	van, 03-Dec-2020 10:49
420L0229.D	Data Locked	van, 03-Dec-2020 10:49
420L0230.D	Data Locked	van, 03-Dec-2020 10:49
420L0231.D	Data Locked	van, 03-Dec-2020 10:49
420L0232.D	Data Locked	van, 03-Dec-2020 10:49
420L0233.D	Data Locked	van, 03-Dec-2020 10:49
420L0234.D	Data Locked	van, 03-Dec-2020 10:49
420L0235.D	Data Locked	van, 03-Dec-2020 10:49
420L0236.D	Data Locked	van, 03-Dec-2020 10:49
420L0237.D	Data Locked	van, 03-Dec-2020 10:49
420L0238.D	Data Locked	van, 03-Dec-2020 10:49
420L0239.D	Data Locked	van, 03-Dec-2020 10:49
420L0240.D	Data Locked	van, 03-Dec-2020 10:49
420L0241.D	Data Locked	van, 03-Dec-2020 10:49
420L0242.D	Data Locked	van, 03-Dec-2020 10:49
420L0243.D	Data Locked	van, 03-Dec-2020 10:49
420L0244.D	Data Locked	van, 03-Dec-2020 10:49
420L0245.D	Data Locked	van, 03-Dec-2020 10:49
420L0246.D	Data Locked	van, 03-Dec-2020 10:49
420L0247.D	Data Locked	van, 03-Dec-2020 10:49
420L0248.D	Data Locked	van, 03-Dec-2020 10:49
420L0249.D	Data Locked	van, 03-Dec-2020 10:49
420L0250.D	Data Locked	van, 03-Dec-2020 10:49
420L0251.D	Data Locked	van, 03-Dec-2020 10:49
420L0252.D	Data Locked	van, 03-Dec-2020 10:49
420L0253.D	Data Locked	van, 03-Dec-2020 10:49
420L0254.D	Data Locked	van, 03-Dec-2020 10:49
420L0255.D	Data Locked	van, 03-Dec-2020 10:49
420L0256.D	Data Locked	van, 03-Dec-2020 10:49
420L0257.D	Data Locked	van, 03-Dec-2020 10:49

420L0258.D	Data Locked	van, 03-Dec-2020 10:49
420L0259.D	Data Locked	van, 03-Dec-2020 10:49
420L0260.D	Data Locked	van, 03-Dec-2020 10:49
420L0261.D	Data Locked	van, 03-Dec-2020 10:49
420L0262.D	Data Locked	van, 03-Dec-2020 10:49
420L0263.D	Data Locked	van, 03-Dec-2020 10:49
420L0264.D	Data Locked	van, 03-Dec-2020 10:49
420L0265.D	Data Locked	van, 03-Dec-2020 10:49
420L0266.D	Data Locked	van, 03-Dec-2020 10:49
420L0267.D	Data Locked	van, 03-Dec-2020 10:49
420L0268.D	Data Locked	van, 03-Dec-2020 10:49
420L0269.D	Data Locked	van, 03-Dec-2020 10:49
420L0270.D	Data Locked	van, 03-Dec-2020 10:49
420L0271.D	Data Locked	van, 03-Dec-2020 10:49
420L0272.D	Data Locked	van, 03-Dec-2020 10:49
420L0273.D	Data Locked	van, 03-Dec-2020 10:49
420L0274.D	Data Locked	van, 03-Dec-2020 10:49

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Extract Dilution Bench Sheet

Sequence: SIL0020
Analyst: VB
Date: 12/2/2020

Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor
20K0285 -1, 2	100	DCM	900	10				
20K0291 -11, 16	100	dcm	900	10				
20K0387 - 1	200	DCM	400	3				
20K0388 -1, 2, 3, 6	200	DCM	400	3				

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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIH0165	Instrument:	FID4
Calibration:	DA00022	Calibration Date:	10/25/2019

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIH0165-CCV1 (Solid)			Lab File ID: 420H1413.D			Analyzed: 08/14/20 11:59		
o-Terphenyl	90.000	88.1	85 - 115	6.33	6.66	-0.3300	N/A	

SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIJ0042	Instrument:	FID4
Calibration:	DA00022	Calibration Date:	10/25/2019

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIJ0042-ICV1 (Water)				Lab File ID: 420J0205.D			Analyzed: 10/02/20 10:02	
o-Terphenyl	90.000	89.6	85 - 115	6.28	6.66	-0.3800	N/A	
SIJ0042-ICV3 (Water)				Lab File ID: 420J0213.D			Analyzed: 10/02/20 12:46	
o-Terphenyl	90.000	94.7	85 - 115	6.28	6.66	-0.3800	N/A	
SIJ0042-CCV1 (Water)				Lab File ID: 420J0227.D			Analyzed: 10/02/20 17:33	
o-Terphenyl	90.000	88.3	85 - 115	6.28	6.66	-0.3800	N/A	

SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIK0016	Instrument:	FID4
Calibration:	DA00022	Calibration Date:	10/25/2019

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIK0016-ICV1 (Water)				Lab File ID: 420K0205.D			Analyzed: 11/02/20 09:50	
o-Terphenyl	90.000	95.0	85 - 115	6.25	6.66	-0.4100	N/A	
SIK0016-ICV3 (Water)				Lab File ID: 420K0213.D			Analyzed: 11/02/20 12:33	
o-Terphenyl	22.500	101	85 - 115	6.23	6.66	-0.4300	N/A	
SIK0016-CCV1 (Water)				Lab File ID: 420K0216.D			Analyzed: 11/02/20 13:34	
o-Terphenyl	90.000	94.2	85 - 115	6.25	6.66	-0.4100	N/A	

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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIK0411	Instrument:	FID4
Calibration:	DA00022	Calibration Date:	10/25/2019

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIK0411-ICV1 (Solid)				Lab File ID: 420K2905.D			Analyzed: 11/29/20 16:25	
o-Terphenyl	90.000	90.4	85 - 115	6.2	6.66	-0.4600	N/A	
SIK0411-IBL1 (Solid)				Lab File ID: 420K2903.D			Analyzed: 11/29/20 18:24	
o-Terphenyl	100.00	103	50 - 150	6.2	6.66	-0.4600	N/A	
SIK0411-IBL2 (Solid)				Lab File ID: 420K2904.D			Analyzed: 11/29/20 18:44	
o-Terphenyl	100.00	106	50 - 150	6.2	6.66	-0.4600	N/A	
20K0145-15 (Solid)				Lab File ID: 420K2908.D			Analyzed: 11/29/20 20:05	
o-Terphenyl	11.729	84.4	50 - 150	6.18	6.66	-0.4800	N/A	
SIK0411-CCV1 (Solid)				Lab File ID: 420K2921.D			Analyzed: 11/30/20 00:27	
o-Terphenyl	90.000	91.8	85 - 115	6.19	6.66	-0.4700	N/A	
SIK0411-CCV3 (Solid)				Lab File ID: 420K2933.D			Analyzed: 11/30/20 04:29	
o-Terphenyl	90.000	93.8	85 - 115	6.2	6.66	-0.4600	N/A	
SIK0411-CCV5 (Solid)				Lab File ID: 420K2953.D			Analyzed: 11/30/20 11:14	
o-Terphenyl	90.000	96.6	85 - 115	6.2	6.66	-0.4600	N/A	
SIK0411-CCV7 (Solid)				Lab File ID: 420K2956.D			Analyzed: 11/30/20 14:42	
o-Terphenyl	90.000	100	85 - 115	6.19	6.66	-0.4700	N/A	

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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIK0413	Instrument:	FID4
Calibration:	DA00022	Calibration Date:	11/02/2020

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIK0413-IBL1 (Solid)				Lab File ID: 420K2779.D			Analyzed: 11/28/20 13:37	
o-Terphenyl	100.00	121	50 - 150	6.2	6.66	-0.4600	N/A	
SIK0413-IBL2 (Solid)				Lab File ID: 420K2780.D			Analyzed: 11/28/20 13:57	
o-Terphenyl	100.00	104	50 - 150	6.2	6.66	-0.4600	N/A	
SIK0413-ICV1 (Solid)				Lab File ID: 420K2781.D			Analyzed: 11/28/20 14:18	
o-Terphenyl	90.000	110	85 - 115	6.2	6.66	-0.4600	N/A	
SIK0413-CCV1 (Solid)				Lab File ID: 420K2809.D			Analyzed: 11/28/20 19:07	
o-Terphenyl	90.000	93.1	85 - 115	6.2	6.66	-0.4600	N/A	
SIK0413-CCV3 (Solid)				Lab File ID: 420K2821.D			Analyzed: 11/28/20 23:08	
o-Terphenyl	90.000	94.9	85 - 115	6.2	6.66	-0.4600	N/A	
BIK0629-BLK1 (Solid)				Lab File ID: 420K2823.D			Analyzed: 11/28/20 23:49	
o-Terphenyl	11.250	79.5	50 - 150	6.19	6.66	-0.4700	N/A	
BIK0629-BS1 (Solid)				Lab File ID: 420K2824.D			Analyzed: 11/29/20 00:09	
o-Terphenyl	11.250	94.8	50 - 150	6.2	6.66	-0.4600	N/A	
BIK0629-BSD1 (Solid)				Lab File ID: 420K2825.D			Analyzed: 11/29/20 00:29	
o-Terphenyl	11.250	97.1	50 - 150	6.2	6.66	-0.4600	N/A	
20K0145-17 (Solid)				Lab File ID: 420K2833.D			Analyzed: 11/29/20 03:09	
o-Terphenyl	11.874	82.0	50 - 150	6.2	6.66	-0.4600	N/A	
SIK0413-CCV5 (Solid)				Lab File ID: 420K2838.D			Analyzed: 11/29/20 04:49	
o-Terphenyl	90.000	93.3	85 - 115	6.2	6.66	-0.4600	N/A	
SIK0413-CCV7 (Solid)				Lab File ID: 420K2849.D			Analyzed: 11/29/20 08:29	
o-Terphenyl	90.000	101	85 - 115	6.2	6.66	-0.4600	N/A	

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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0020	Instrument:	FID4
Calibration:	DA00022	Calibration Date:	11/02/2020

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0020-IBL1 (Water)			Lab File ID: 420L0214.D			Analyzed: 12/02/20 13:24		
o-Terphenyl	100.00	100	50 - 150	6.2	6.66	-0.4600	N/A	
SIL0020-IBL2 (Water)			Lab File ID: 420L0215.D			Analyzed: 12/02/20 13:44		
o-Terphenyl	100.00	97.2	50 - 150	6.19	6.66	-0.4700	N/A	
SIL0020-ICV1 (Water)			Lab File ID: 420L0216.D			Analyzed: 12/02/20 14:04		
o-Terphenyl	90.000	92.6	85 - 115	6.2	6.66	-0.4600	N/A	
SIL0020-CCV1 (Water)			Lab File ID: 420L0230.D			Analyzed: 12/02/20 18:48		
o-Terphenyl	90.000	93.0	85 - 115	6.19	6.66	-0.4700	N/A	
SIL0020-CCV3 (Water)			Lab File ID: 420L0242.D			Analyzed: 12/02/20 22:50		
o-Terphenyl	90.000	96.6	85 - 115	6.2	6.66	-0.4600	N/A	
BIK0587-BLK1 (Solid)			Lab File ID: 420L0244.D			Analyzed: 12/02/20 23:30		
o-Terphenyl	11.250	83.3	50 - 150	6.19	6.66	-0.4700	N/A	
BIK0587-BS1 (Solid)			Lab File ID: 420L0245.D			Analyzed: 12/02/20 23:50		
o-Terphenyl	11.250	90.7	50 - 150	6.2	6.66	-0.4600	N/A	
20K0145-02 (Solid)			Lab File ID: 420L0251.D			Analyzed: 12/03/20 01:51		
o-Terphenyl	12.639	71.8	50 - 150	6.19	6.66	-0.4700	N/A	
20K0145-03 (Solid)			Lab File ID: 420L0252.D			Analyzed: 12/03/20 02:11		
o-Terphenyl	13.510	99.2	50 - 150	6.2	6.66	-0.4600	N/A	
20K0145-07 (Solid)			Lab File ID: 420L0253.D			Analyzed: 12/03/20 02:31		
o-Terphenyl	13.514	80.4	50 - 150	6.19	6.66	-0.4700	N/A	
20K0145-08 (Solid)			Lab File ID: 420L0254.D			Analyzed: 12/03/20 02:51		
o-Terphenyl	14.617	114	50 - 150	6.2	6.66	-0.4600	N/A	
20K0145-11 (Solid)			Lab File ID: 420L0255.D			Analyzed: 12/03/20 03:11		
o-Terphenyl	15.111	87.6	50 - 150	6.19	6.66	-0.4700	N/A	
20K0145-13 (Solid)			Lab File ID: 420L0256.D			Analyzed: 12/03/20 03:31		
o-Terphenyl	15.851	74.7	50 - 150	6.19	6.66	-0.4700	N/A	

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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0020	Instrument:	FID4
Calibration:	DA00022	Calibration Date:	10/25/2019

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0020-CCV5 (Water)				Lab File ID: 420L0257.D			Analyzed: 12/03/20 03:51	
o-Terphenyl	90.000	95.7	85 - 115	6.19	6.66	-0.4700	N/A	
SIL0020-CCV7 (Water)				Lab File ID: 420L0273.D			Analyzed: 12/03/20 09:14	
o-Terphenyl	90.000	94.2	85 - 115	6.19	6.66	-0.4700	N/A	

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HOLDING TIME SUMMARY

Analysis: NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PP1-5 20K0145-02	11/05/20 12:50	11/07/20 11:00	11/19/20 14:38	14	14	12/03/20 01:51	13	40	
PP1-7.5 20K0145-03	11/05/20 12:55	11/07/20 11:00	11/19/20 14:38	14	14	12/03/20 02:11	13	40	
PP2-5 20K0145-07	11/05/20 11:35	11/07/20 11:00	11/19/20 14:38	14	14	12/03/20 02:31	13	40	
PP2-7.5 20K0145-08	11/05/20 11:40	11/07/20 11:00	11/19/20 14:38	14	14	12/03/20 02:51	14	40	
PP5-2 20K0145-11	11/05/20 10:00	11/07/20 11:00	11/19/20 14:38	14	14	12/03/20 03:11	14	40	
PP5-8 20K0145-13	11/05/20 10:10	11/07/20 11:00	11/19/20 14:38	14	14	12/03/20 03:31	14	40	
P8-10S-1 20K0145-15	11/06/20 08:20	11/07/20 11:00	11/20/20 16:45	14	14	11/29/20 20:05	9	40	
P8-10S-5 20K0145-17	11/06/20 08:30	11/07/20 11:00	11/20/20 16:45	14	14	11/29/20 03:09	8	40	

* Indicates hold time exceedance.

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METHOD DETECTION
AND REPORTING LIMITS

NWTPH-Dx

Laboratory: Analytical Resources, Inc.

SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix: Solid

Instrument: FID4

Analyte	MDL	RL	Units
Diesel Range Organics (C12-C24)	2.34	5.00	mg/kg
Motor Oil Range Organics (C24-C38)	2.99	10.0	mg/kg

Analytical Resources, Incorporated
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METHOD DETECTION AND REPORTING LIMITS

NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Water Instrument: FID4

Analyte	MDL	RL	Units
Diesel Range Organics (C12-C24)	0.033	0.100	mg/L
Motor Oil Range Organics (C24-C38)	0.056	0.200	mg/L

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PP1-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	20K0145-02 A	File ID:	20120736ECD7.D
Sampled:	11/05/20 12:50	Prepared:	11/19/20 23:00	Analyzed:	12/08/20 05:17
% Solids:	88.92	Preparation:	EPA 3546 (Microwave)	Initial/Final:	7.31 g Wet / 5 mL
Batch:	BIK0599	Sequence:	SIL0131	Calibration:	DL00019
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	15.4	6.2	15.4	U
11104-28-2	Aroclor 1221	1	1	15.4	6.2	15.4	U
11141-16-5	Aroclor 1232	1	1	15.4	6.2	15.4	U
53469-21-9	Aroclor 1242	1	1	15.4	6.2	15.4	U
12672-29-6	Aroclor 1248	1	1	15.4	6.2	15.4	U
11097-69-1	Aroclor 1254	1	1	24.7	6.2	15.4	
11096-82-5	Aroclor 1260	1	1	11.2	7.1	15.4	J
37324-23-5	Aroclor 1262	1	1	15.4	7.1	15.4	U
11100-14-4	Aroclor 1268	1	1	15.4	7.1	15.4	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*30.769*	*21.6*	*70.2*	*40 - 133*	
Tetrachlorometaxylene	*1*	*30.769*	*21.7*	*70.4*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120736ECD7.D
Data file 2: /20201207.b/20201207.b/20120736ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0145-02
Client ID:
Injection Date: 08-DEC-2020 05:17
Report Date: 12/13/2020 14:25
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	0.000	325277	5.399	-0.001	194485	28.2	27.1	3.8	Tetrachloro-m-xylene
13.202	-0.002	680043	13.945	-0.003	346823	28.1	31.4	11.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	70.4	67.8
Decachlorobiphenyl	70.2	78.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	791971	0.7
Hexabromobiphenyl	2132987	2276976	6.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	625430	-1.6
Hexabromobiphenyl	665758	670985	0.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

```
                              ZB5 Col                                ZB35 Col
 Aroclor    Peak#    RT     Shift     Area    Amount     Peak#   RT      Shift     Area   Amount
 ===========================================================================================
 Aroclor-1016 1   6.612  -0.016       544      1.4       1    7.131   0.057      773      2.5
 Aroclor-1016 2   6.998  -0.001      1208      1.0       2    7.655  -0.014     1452      2.1
 Aroclor-1016 3   7.140  -0.009      1085      2.0       3    7.943   0.063     1874      7.2
 Aroclor-1016 4   7.542  -0.004      3430     11.6       4    8.066   0.011      244      1.6
       Total Col1Ave (4 peaks):     4.0       Total Col2Ave (4 peaks):      3.4   RPD = 16
       Corrected Ave (3 peaks):     1.4       Corrected Ave (3 peaks):      2.1   RPD = 37

 Aroclor-1221 1   3.978   0.006       293      2.8       1    4.622  -0.047      695     16.1
 Aroclor-1221 2   5.339  -0.066      4066     27.9       2    6.086   0.011     3003     34.9
 Aroclor-1221 3   5.671  -0.011       375      1.0       3    6.419   0.002     5039     31.5
       Total Col1Ave (3 peaks):    10.6       Total Col2Ave (3 peaks):     27.5   RPD = 89*
       Corrected Ave: < 3 Peaks                      Corrected Ave: < 3 Peaks

 Aroclor-1232 1   3.978   0.005       293      4.7       1    4.622  -0.048      695     26.0
 Aroclor-1232 2   6.612  -0.019       544      3.4       2    7.131   0.054      773      5.6
 Aroclor-1232 3   6.998  -0.004      1208      2.3       3    7.655  -0.017     1452      5.0
 Aroclor-1232 4   8.303  -0.006      6558     41.8       4    8.066   0.008      244      3.7
       Total Col1Ave (4 peaks):    13.0       Total Col2Ave (4 peaks):     10.1   RPD = 26
       Corrected Ave (3 peaks):     3.5       Corrected Ave (3 peaks):      4.8   RPD = 32

 Aroclor-1242 1   6.612  -0.017       544      1.8       1    7.131   0.058      773      3.3
 Aroclor-1242 2   6.998  -0.003      1208      1.3       2    7.655  -0.015     1452      2.7
 Aroclor-1242 3   8.303  -0.003      6558     20.8       3    8.988  -0.000     2383     11.0
 Aroclor-1242 4   8.590  -0.010      7830     22.9       4    9.419  -0.003      956      4.5
       Total Col1Ave (4 peaks):    11.7       Total Col2Ave (4 peaks):      5.4   RPD = 74*
       Corrected Ave (3 peaks):     8.0       Corrected Ave (3 peaks):      3.5   RPD = 79*

 Aroclor-1248 1   7.482  -0.001      6501     15.7       1    8.140   0.002     3633     17.1
 Aroclor-1248 2   7.955   0.003      2990      4.8       2    8.558  -0.000     1963      7.1
 Aroclor-1248 3   8.377   0.016     20229     21.8       3    8.988  -0.000     2383      6.0
 Aroclor-1248 4   8.590  -0.007      7830     14.6       4    9.419  -0.003      956      2.5
       Total Col1Ave (4 peaks):    14.2       Total Col2Ave (4 peaks):      8.2   RPD = 54*
       Corrected Ave (3 peaks):    11.7       Corrected Ave (3 peaks):      5.2   RPD = 77*

 Aroclor-1254 1   8.669  -0.002     30478     32.5       1    9.286  -0.001    10225     22.9
 Aroclor-1254 2   8.739  -0.001     13267     26.1       2    9.377  -0.003     2558     12.4
 Aroclor-1254 3   9.039  -0.001     19596     31.4       3    9.818   0.000     6473     21.9
 Aroclor-1254 4   9.173  -0.003     43196     33.5       4    9.968   0.000    15077     21.6
 Aroclor-1254 5   9.870  -0.002     31693     37.1       5   10.205   0.005    20937     29.1
       Total Col1Ave (5 peaks):    32.1       Total Col2Ave (5 peaks):     21.6   RPD = 39
       Corrected Ave (4 peaks):    30.9       Corrected Ave (4 peaks):     19.7   RPD = 44*

 Aroclor-1260 1  10.395  -0.005     15575     17.6       1   11.039  -0.000     2872      7.0
 Aroclor-1260 2  10.721  -0.001     11138     12.6       2   11.509   0.005     9285     21.5
 Aroclor-1260 3  11.069  -0.003     22560      9.8       3   11.758   0.002    14166     12.8
 Aroclor-1260 4  11.472  -0.002     16749     14.3       4   12.344   0.001     7101      9.9
 Aroclor-1260 5  11.575  -0.005      9466     18.5       NS    ---                       ----
       Total Col1Ave (5 peaks):    14.6       Total Col2Ave (4 peaks):     12.8   RPD = 13
       Corrected Ave (4 peaks):    13.6       Corrected Ave (3 peaks):      9.9   RPD = 31

 Aroclor-1262 1  10.395  -0.010     15575     11.7       1   11.039  -0.004     2872      4.1
 Aroclor-1262 2  11.069  -0.008     22560      7.6       2   11.758  -0.001    14166      9.2
 Aroclor-1262 3  11.575  -0.011      9466     11.4       3   12.269  -0.007     3795      7.7
 Aroclor-1262 4  11.651  -0.007      8043      7.4       4   13.057  -0.008     2304      4.1
       Total Col1Ave (4 peaks):     9.5       Total Col2Ave (4 peaks):      6.3   RPD = 41*
       Corrected Ave (3 peaks):     8.8       Corrected Ave (3 peaks):      5.3   RPD = 49*

 Aroclor-1268 1  11.575  -0.013      9466      3.1       1   12.269  -0.004     3795      2.4
 Aroclor-1268 2  11.651  -0.006      8043      2.5       2   12.344   0.005     7101      4.0
 Aroclor-1268 3  12.044   0.006      5756      2.2       3   12.730   0.001     1515      1.0
 Aroclor-1268 4  12.799  -0.013     12626      1.2       4   13.540  -0.006     3071      0.6
       Total Col1Ave (4 peaks):     2.3       Total Col2Ave (4 peaks):      2.0   RPD = 12
```

Corrected Ave (3 peaks): 2.0 Corrected Ave (3 peaks): 1.3 RPD = 38

Total PCB Area Col1 (5.113 - 13.105) = 790565 Col1 Total PCB = 0.1 ppm*

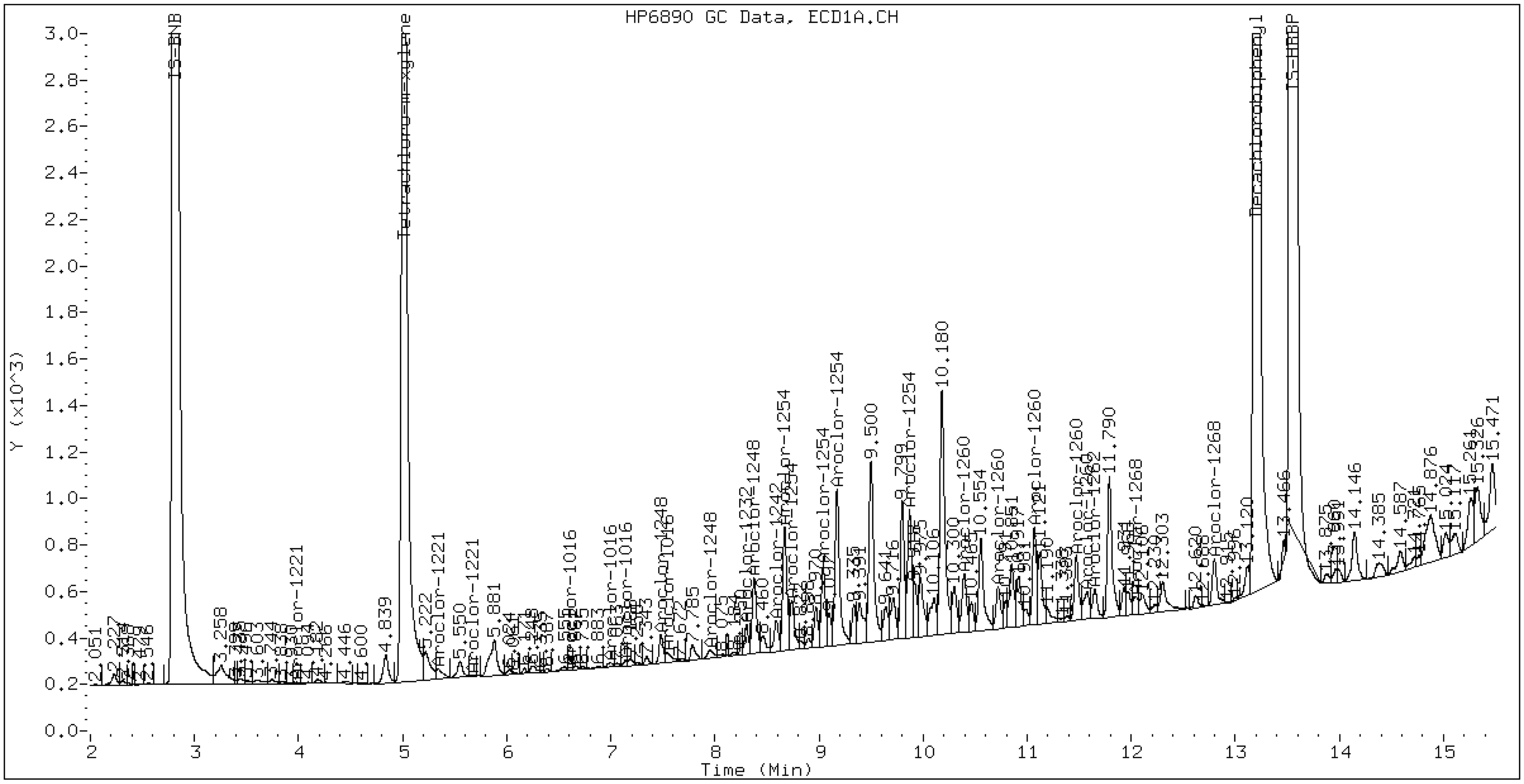
Total PCB Area Col2 (5.113 - 13.105) = 469869 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

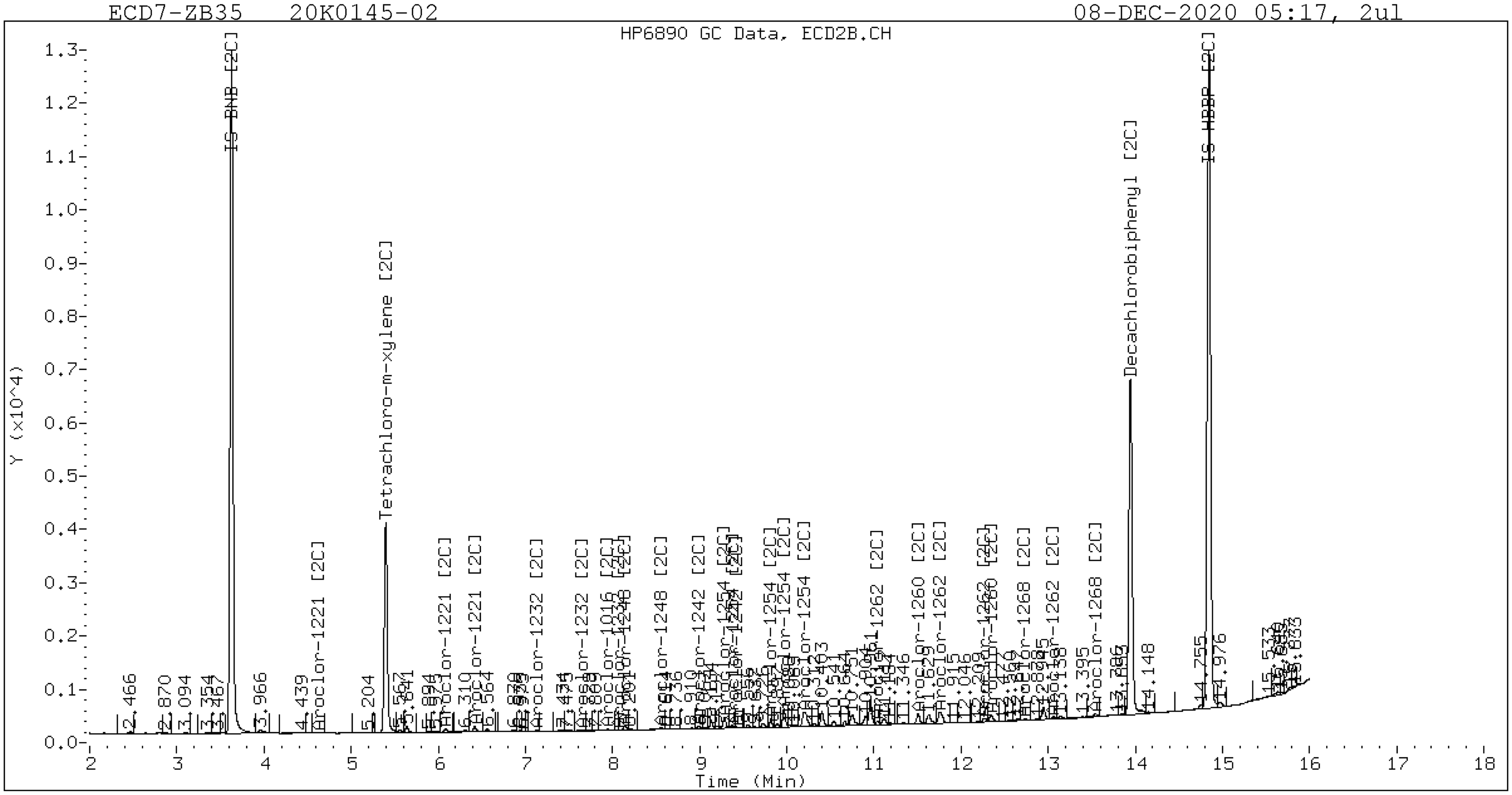
PCB Dual Column Chromatograms

ECD7-ZB5 20K0145-02 08-DEC-2020 05:17, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 20K0145-02 08-DEC-2020 05:17, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP1-7.5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	20K0145-03 A	File ID:	20120737ECD7.D
Sampled:	11/05/20 12:55	Prepared:	11/19/20 23:00	Analyzed:	12/08/20 05:38
% Solids:	83.19	Preparation:	EPA 3546 (Microwave)	Initial/Final:	7.51 g Wet / 5 mL
Batch:	BIK0599	Sequence:	SIL0131	Calibration:	DL00019
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	16.0	6.4	16.0	U
11104-28-2	Aroclor 1221	1	1	16.0	6.4	16.0	U
11141-16-5	Aroclor 1232	1	1	16.0	6.4	16.0	U
53469-21-9	Aroclor 1242	1	1	16.0	6.4	16.0	U
12672-29-6	Aroclor 1248	1	1	16.0	6.4	16.0	U
11097-69-1	Aroclor 1254	1	1	16.0	6.4	16.0	U
11096-82-5	Aroclor 1260	1	1	16.0	7.4	16.0	U
37324-23-5	Aroclor 1262	1	1	16.0	7.4	16.0	U
11100-14-4	Aroclor 1268	1	1	16.0	7.4	16.0	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*32.012*	*24.6*	*76.7*	*40 - 133*	
Tetrachlorometaxylene	*1*	*32.012*	*24.1*	*75.4*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120737ECD7.D
Data file 2: /20201207.b/20201207.b/20120737ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0145-03
Client ID:
Injection Date: 08-DEC-2020 05:38
Report Date: 12/13/2020 14:25
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	-0.000	343075	5.398	-0.002	210666	30.2	29.9	0.9	Tetrachloro-m-xylene
13.204	-0.001	743748	13.946	-0.001	388811	30.7	35.2	13.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	75.4	74.7
Decachlorobiphenyl	76.7	88.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	779968	-0.9
Hexabromobiphenyl	2132987	2280378	6.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	614911	-3.2
Hexabromobiphenyl	665758	671481	0.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.598	-0.030	566	1.4	1	7.131	0.057	789	2.6
Aroclor-1016	2	7.060	0.061	1321	1.1	2	7.652	-0.018	429	0.6
Aroclor-1016	3	7.135	-0.014	956	1.8	3	7.942	0.062	812	3.2
Aroclor-1016	4	7.549	0.003	482	1.6	4	---			0.0
	Total Col1Ave (4 peaks):				1.5	Total Col2Ave (3 peaks):			2.2	RPD = 37
	Corrected Ave (3 peaks):				1.4			Corrected Ave: < 3 Peaks		
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.084	0.010	2569	30.4
Aroclor-1221	3	---			0.0	3	6.414	-0.003	1433	9.1
	~~Col1Ave: <3 Quant Peaks~~					~~Col2Ave: <3 Quant Peaks~~				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.665	0.033	1258	7.9	2	7.131	0.054	789	5.8
Aroclor-1232	3	7.060	0.058	1321	2.5	3	7.652	-0.021	429	1.5
Aroclor-1232	~~4~~	~~8.296~~	~~-0.013~~	~~927~~	~~6.0~~	~~4~~	~~---~~			0.0
	Total Col1Ave (3 peaks):				5.5	Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.598	-0.031	566	1.9	1	7.131	0.057	789	3.4
Aroclor-1242	2	7.060	0.060	1321	1.4	2	7.652	-0.018	429	0.8
Aroclor-1242	3	8.296	-0.010	927	3.0	3	---			0.0
Aroclor-1242	4	8.582	-0.018	1721	5.1	4	9.369	-0.053	263	1.3
	Total Col1Ave (4 peaks):				2.8	Total Col2Ave (3 peaks):			1.8	RPD = 44*
	Corrected Ave (3 peaks):				2.1			Corrected Ave: < 3 Peaks		
Aroclor-1248	1	7.488	0.006	1205	3.0	1	8.159	0.022	1769	8.5
Aroclor-1248	2	7.994	0.042	1904	3.1	2	---			0.0
Aroclor-1248	3	8.377	0.015	3252	3.6	3	---			0.0
Aroclor-1248	4	8.582	-0.015	1721	3.3	4	9.369	-0.053	263	0.7
	~~Total Col1Ave (4 peaks):~~				~~3.2~~	~~Col2Ave: <3 Quant Peaks~~				
Aroclor-1254	1	8.671	-0.000	3082	3.3	1	9.287	0.001	1367	3.1
Aroclor-1254	2	8.739	-0.001	1696	3.4	2	9.369	-0.011	263	1.3
Aroclor-1254	3	9.060	0.020	1114	1.8	3	9.821	0.003	220	0.8
Aroclor-1254	4	9.170	-0.005	6811	5.4	4	9.970	0.002	1904	2.8
Aroclor-1254	5	9.866	-0.006	6183	7.3	5	10.217	0.018	3610	5.1
	Total Col1Ave (5 peaks):				4.2	Total Col2Ave (5 peaks):			2.6	RPD = 48*
	~~Corrected Ave (4 peaks):~~				~~3.5~~	~~Corrected Ave (4 peaks):~~			~~2.0~~	~~RPD~~ = 55*
Aroclor-1260	1	10.391	-0.009	5726	6.5	1	11.039	-0.000	1381	3.4
Aroclor-1260	2	10.716	-0.005	3826	4.3	2	11.508	0.004	3217	7.4
Aroclor-1260	3	11.069	-0.004	8854	3.9	3	11.757	0.002	4453	4.0
Aroclor-1260	4	11.474	-0.001	6370	5.4	4	12.343	-0.000	2796	3.9
Aroclor-1260	5	11.574	-0.007	6762	~~13.~~2	NS	---			----
	Total Col1Ave (5 peaks):				6.7	Total Col2Ave (4 peaks):			$\boxed{4.7}$	RPD = 35
	Corrected Ave (4 peaks):				$\boxed{5.0}$	Corrected Ave (3 peaks):			3.8	RPD = 29
Aroclor-1262	1	10.391	-0.014	5726	4.3	1	11.039	-0.005	1381	2.0
Aroclor-1262	2	11.069	-0.009	8854	3.0	2	11.757	-0.002	4453	2.9
Aroclor-1262	3	11.574	-0.012	6762	8.1	3	12.263	-0.012	2624	5.3
Aroclor-1262	4	11.650	-0.007	3984	3.7	4	13.059	-0.006	1110	2.0
	~~Total Col1Ave (4 peaks):~~				~~4.8~~	~~Total Col2Ave (4 peaks):~~			~~3.0~~	~~RPD~~ = 44*
	Corrected Ave (3 peaks):				3.6	Corrected Ave (3 peaks):			2.3	RPD = 46*
Aroclor-1268	1	11.574	-0.015	6762	2.2	1	12.263	-0.010	2624	1.6
Aroclor-1268	2	11.650	-0.007	3984	1.2	2	12.343	0.004	2796	1.6
Aroclor-1268	3	12.036	-0.001	4746	1.8	3	12.729	0.000	1178	0.8
Aroclor-1268	4	12.799	-0.013	12709	1.2	4	13.538	-0.008	3477	0.7
	~~Total Col1Ave (4 peaks):~~				~~1.6~~	~~Total Col2Ave (4 peaks):~~			~~1.2~~	~~RPD~~ = 32
	Corrected Ave (3 peaks):				1.4	Corrected Ave (3 peaks):			1.0	RPD = 32

```
Total PCB Area Col1 (5.113 - 13.105) =     308940     Col1 Total PCB = 0.0 ppm*

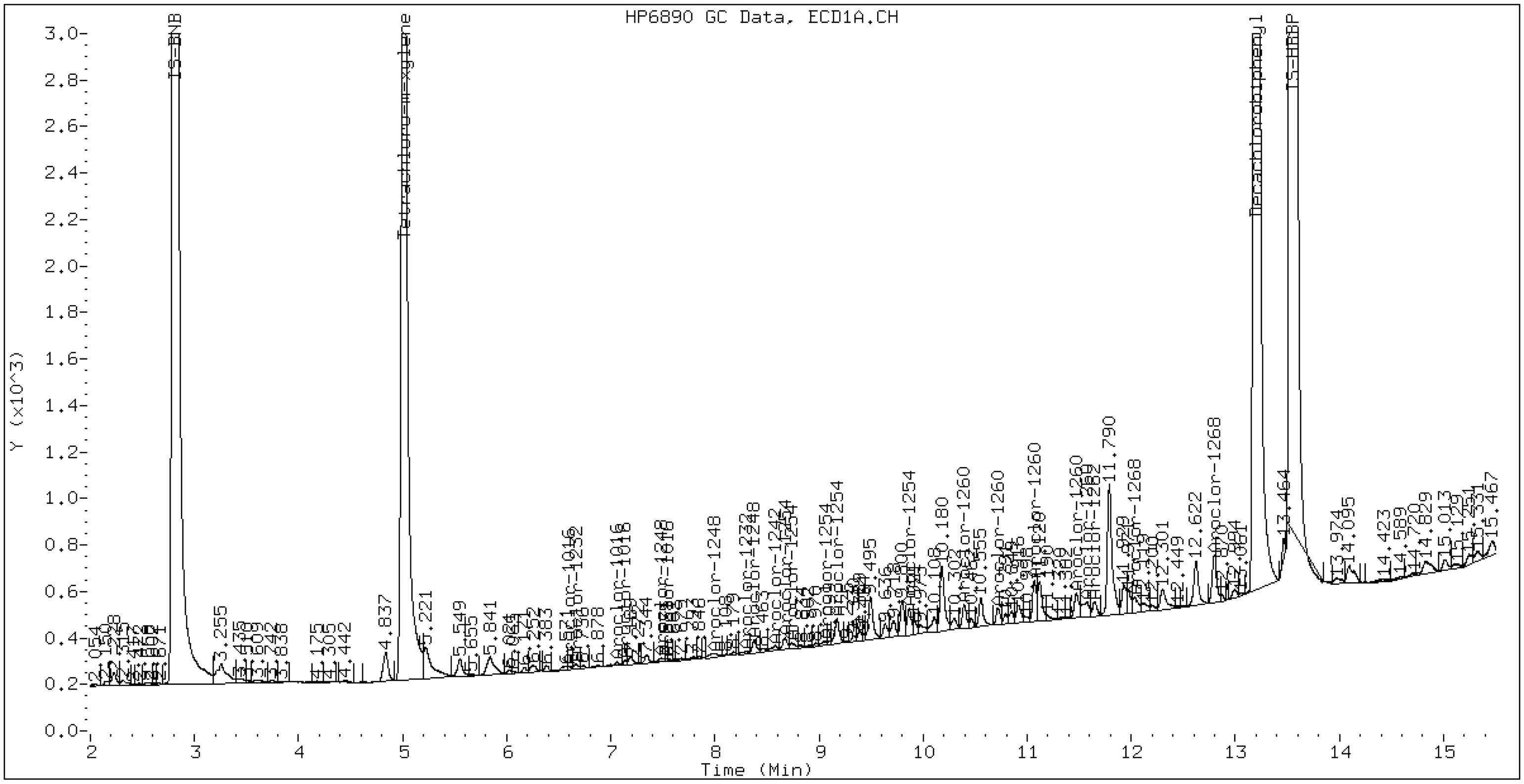
Total PCB Area Col2 (5.113 - 13.105) =     309885     Col2 Total PCB = 0.1 ppm*

  *  Quantitated against AR1660 0.25ppm in Ical
```

PCB-Form 10 Mod.

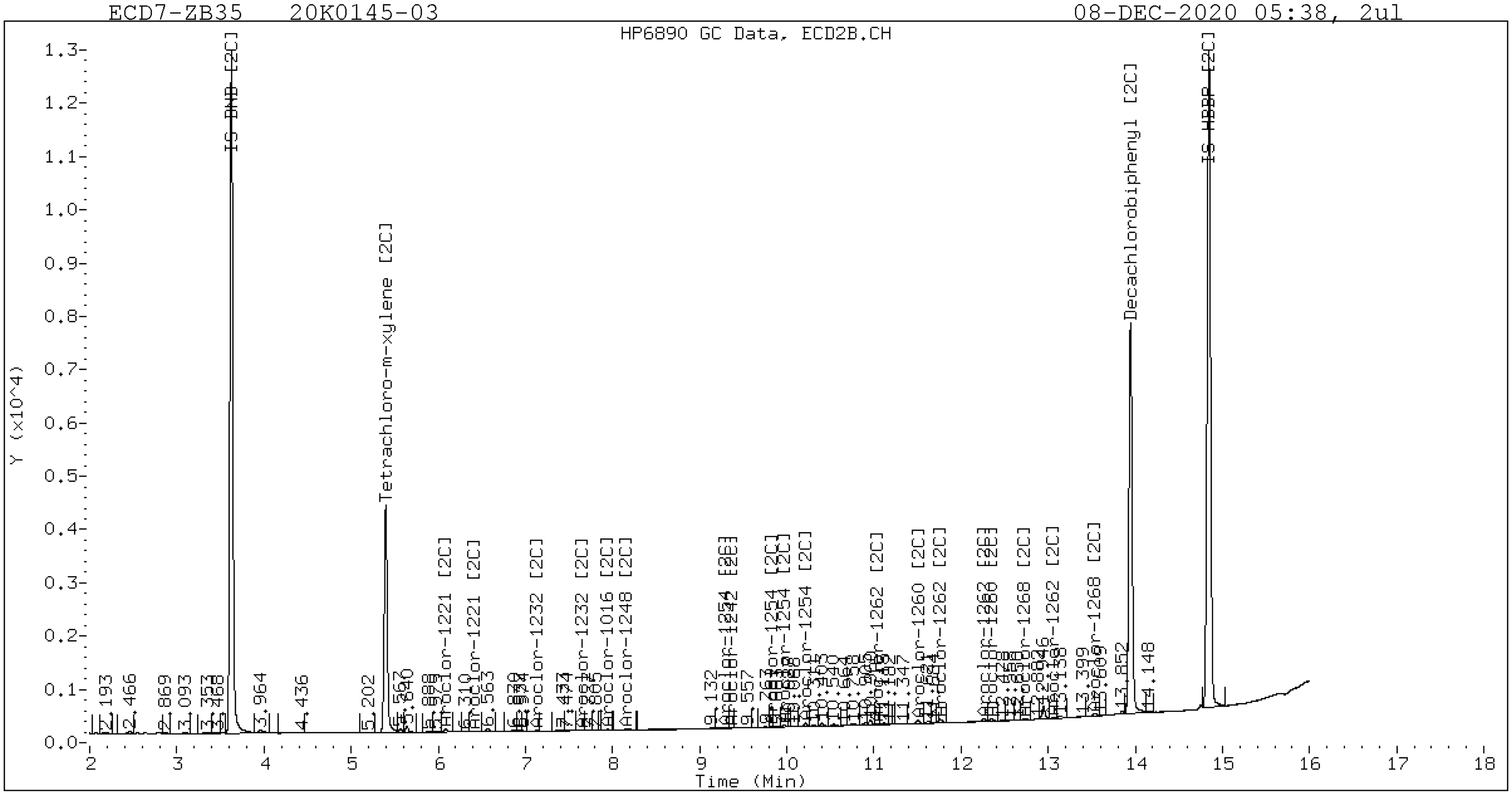
PCB Dual Column Chromatograms

ECD7-ZB5 20K0145-03 08-DEC-2020 05:38, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0145-03 08-DEC-2020 05:38, 2ul

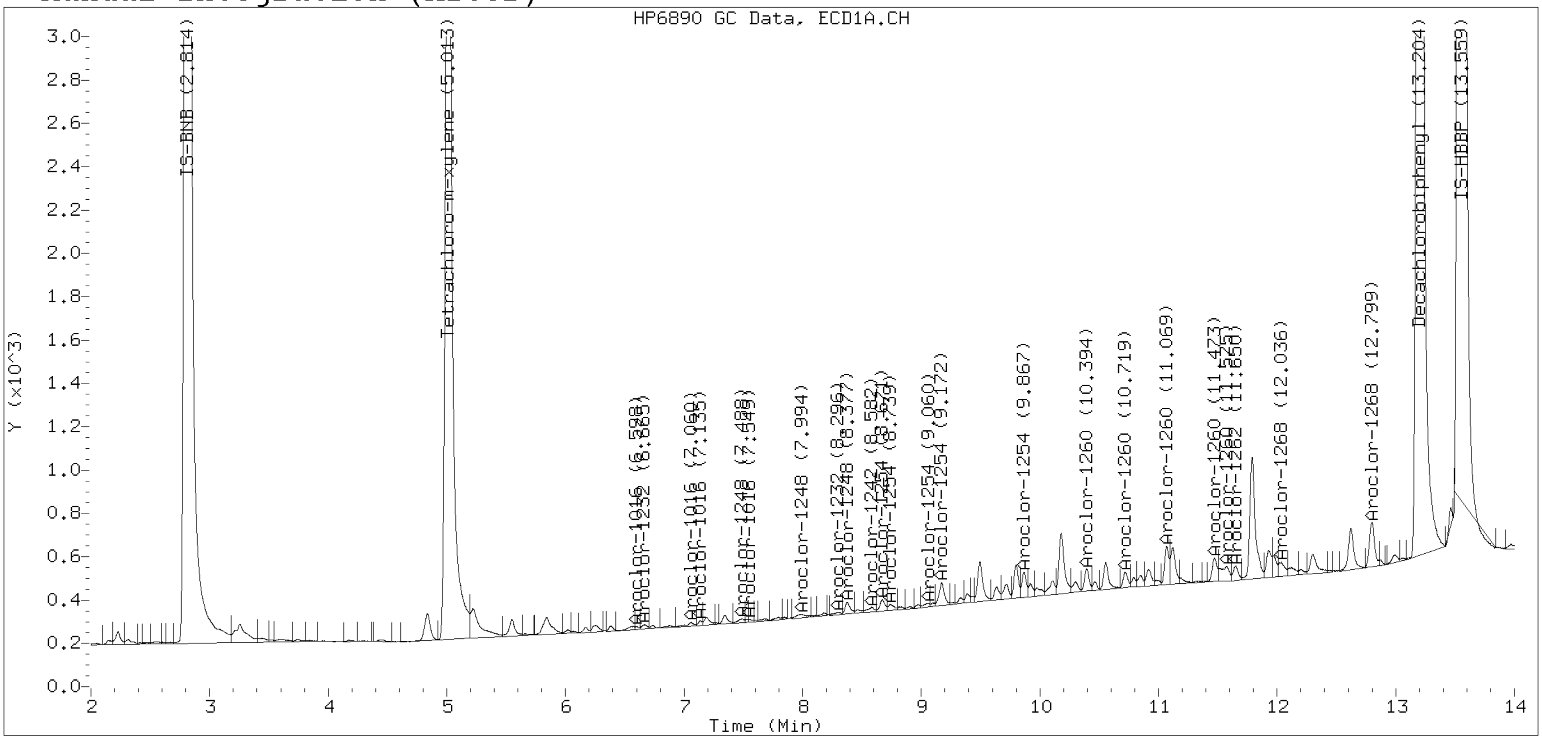


ZB-35 Manual Integration: NO

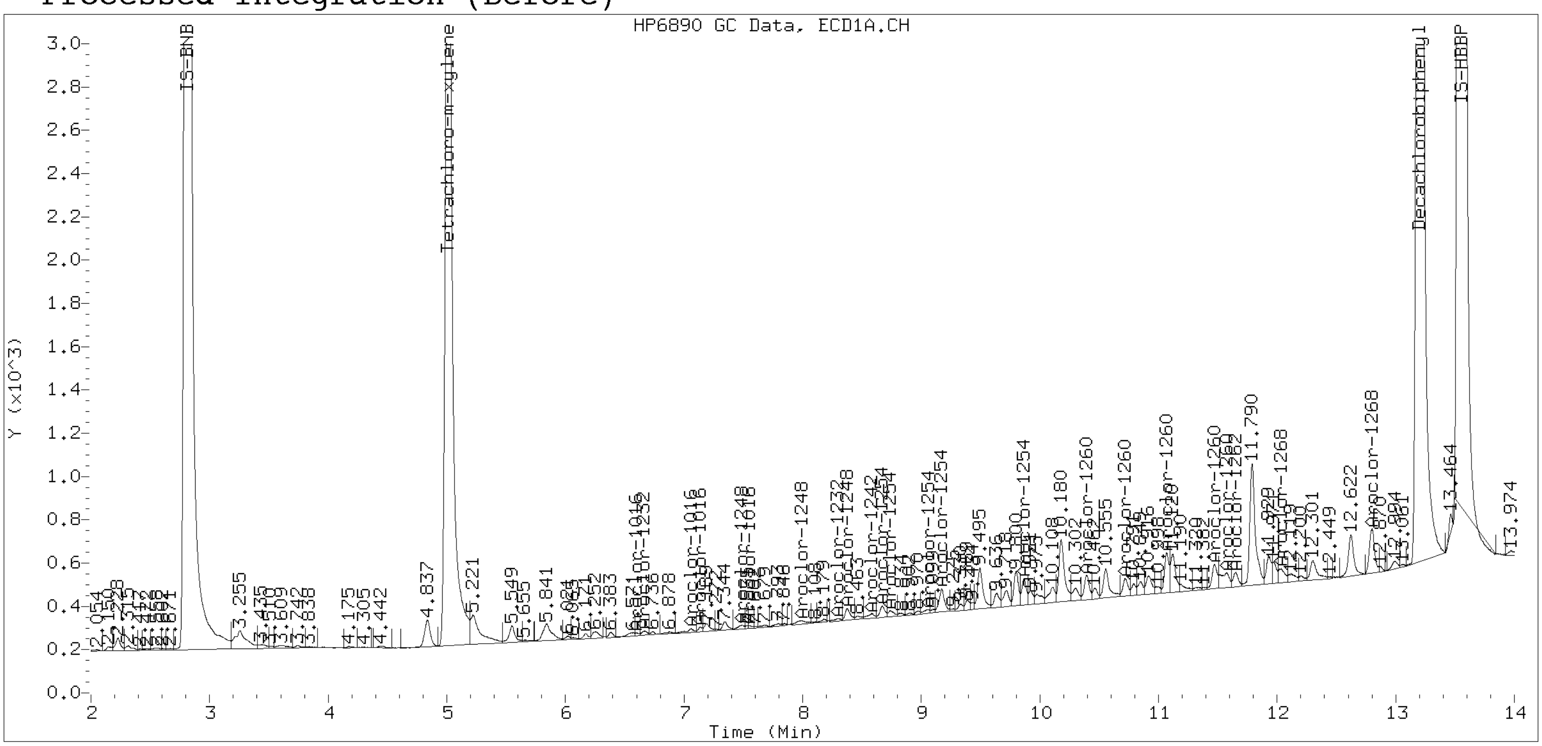
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120737ECD7.D   Injection Date: 08-DEC-2020 05:3

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP2-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Matrix: Solid
Laboratory ID: 20K0145-07 A
File ID: 20120738ECD7.D
Sampled: 11/05/20 11:35
Prepared: 11/19/20 23:00
Analyzed: 12/08/20 05:58
% Solids: 82.75
Preparation: EPA 3546 (Microwave)
Initial/Final: 7.61 g Wet / 5 mL
Batch: BIK0599
Sequence: SIL0131
Calibration: DL00019
Instrument: ECD7
Column 1: ZB5
Column 2: ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	15.9	6.4	15.9	U
11104-28-2	Aroclor 1221	1	1	15.9	6.4	15.9	U
11141-16-5	Aroclor 1232	1	1	15.9	6.4	15.9	U
53469-21-9	Aroclor 1242	1	1	15.9	6.4	15.9	U
12672-29-6	Aroclor 1248	1	1	15.9	6.4	15.9	U
11097-69-1	Aroclor 1254	1	1	15.9	6.4	15.9	U
11096-82-5	Aroclor 1260	1	1	15.9	7.4	15.9	U
37324-23-5	Aroclor 1262	1	1	15.9	7.4	15.9	U
11100-14-4	Aroclor 1268	1	1	15.9	7.4	15.9	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*31.760*	*21.2*	*66.8*	*40 - 133*	
Tetrachlorometaxylene	*1*	*31.760*	*22.2*	*69.9*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120738ECD7.D
Data file 2: /20201207.b/20201207.b/20120738ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0145-07
Client ID:
Injection Date: 08-DEC-2020 05:58
Report Date: 12/13/2020 14:25
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	0.001	331068	5.398	-0.002	208794	27.9	27.8	0.5	Tetrachloro-m-xylene
13.204	-0.001	698918	13.947	-0.000	361948	26.7	31.4	16.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	69.9	69.6
Decachlorobiphenyl	66.8	78.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	812459	3.3
Hexabromobiphenyl	2132987	2462480	15.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	654753	3.0
Hexabromobiphenyl	665758	700173	5.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

```
                                  ZB5 Col                                   ZB35 Col
 Aroclor    Peak#    RT     Shift     Area     Amount     Peak#   RT      Shift     Area   Amount
 ==========================================================================================
 Aroclor-1016 1   6.653   0.025      2075      5.1       1    7.128   0.054      927     2.9
 Aroclor-1016 2   6.985  -0.014       187      0.1       2    7.646  -0.024      606     0.8
 Aroclor-1016 3   7.187   0.038      3101      5.5       3    7.943   0.062     1096     4.0
 Aroclor-1016 4   7.550   0.004      1084      3.6       4     ---                       0.0
       Total Col1Ave (4 peaks):     3.6       Total Col2Ave (3 peaks):     2.6   RPD = 32
       Corrected Ave (3 peaks):     2.9                      Corrected Ave: < 3 Peaks

 Aroclor-1221 1   3.968  -0.004        15      0.1       1    4.713   0.044      552    12.2
 Aroclor-1221 2   5.418   0.013       393      2.6       2    6.085   0.010     4789    53.2
 Aroclor-1221 3   5.670  -0.012       729      1.9       3    6.417   0.000     3073    18.3
       Total Col1Ave (3 peaks):     1.6       Total Col2Ave (3 peaks):    27.9   RPD = 179*
       Corrected Ave: < 3 Peaks                      Corrected Ave: < 3 Peaks

 Aroclor-1232 1   3.968  -0.006        15      0.2       1    4.713   0.044      552    19.7
 Aroclor-1232 2   6.653   0.022      2075     12.5       2    7.128   0.051      927     6.4
 Aroclor-1232 3   6.985  -0.017       187      0.3       3    7.646  -0.026      606     2.0
 Aroclor-1232 4   8.313   0.004       537      3.3       4     ---                       0.0
       Total Col1Ave (4 peaks):     4.1       Total Col2Ave (3 peaks):     9.4   RPD = 78*
       Corrected Ave (3 peaks):     1.3                      Corrected Ave: < 3 Peaks

 Aroclor-1242 1   6.653   0.024      2075      6.6       1    7.128   0.054      927     3.7
 Aroclor-1242 2   6.985  -0.015       187      0.2       2    7.646  -0.024      606     1.1
 Aroclor-1242 3   8.313   0.007       537      1.7       3     ---                       0.0
 Aroclor-1242 4   8.581  -0.019      1361      3.9       4     ---                       0.0
       Total Col1Ave (4 peaks):     3.1                 Col2Ave: <3 Quant Peaks

 Aroclor-1248 1   7.476  -0.007       528      1.2       1     ---                       0.0
 Aroclor-1248 2   7.940  -0.012      1265      2.0       2     ---                       0.0
 Aroclor-1248 3   8.379   0.018      1792      1.9       3     ---                       0.0
 Aroclor-1248 4   8.581  -0.016      1361      2.5       4     ---                       0.0
       Total Col1Ave (4 peaks):     1.9                 Col2Ave: <3 Quant Peaks

 Aroclor-1254 1   8.657  -0.014      2129      2.2       1    9.284  -0.003      906     1.9
 Aroclor-1254 2   8.738  -0.001      1545      3.0       2     ---                       0.0
 Aroclor-1254 3   9.018  -0.022      1849      2.9       3    9.758  -0.059      351     1.1
 Aroclor-1254 4   9.168  -0.007      1514      1.1       4    9.972   0.004      332     0.5
 Aroclor-1254 5   9.867  -0.005      1174      1.3       5   10.217   0.017      681     0.9
       Total Col1Ave (5 peaks):     2.1       Total Col2Ave (4 peaks):     1.1   RPD = 62*
       Corrected Ave (4 peaks):     1.9       Corrected Ave (3 peaks):     0.8   RPD = 78*

 Aroclor-1260 1  10.397  -0.003      1686      1.8       1   11.043   0.004      276     0.6
 Aroclor-1260 2  10.723   0.002      1705      1.8       2   11.509   0.005      723     1.6
 Aroclor-1260 3  11.073   0.001      3293      1.3       3   11.758   0.003      618     0.5
 Aroclor-1260 4  11.478   0.004      1174      0.9       4   12.346   0.002      897     1.2
 Aroclor-1260 5  11.563  -0.018       712      1.3      NS     ---                      ----
       Total Col1Ave (5 peaks):     1.4       Total Col2Ave (4 peaks):     1.0   RPD = 35
       Corrected Ave (4 peaks):     1.3       Corrected Ave (3 peaks):     0.8   RPD = 50*

 Aroclor-1262 1  10.397  -0.008      1686      1.2       1   11.043  -0.000      276     0.4
 Aroclor-1262 2  11.073  -0.004      3293      1.0       2   11.758  -0.001      618     0.4
 Aroclor-1262 3  11.563  -0.023       712      0.8       3   12.271  -0.005     1667     3.2
 Aroclor-1262 4  11.659   0.002      2172      1.8       4   13.066   0.001      346     0.6
       Total Col1Ave (4 peaks):     1.2       Total Col2Ave (4 peaks):     1.2   RPD = 5
       Corrected Ave (3 peaks):     1.0       Corrected Ave (3 peaks):     0.5   RPD = 75*

 Aroclor-1268 1  11.563  -0.026       712      0.2       1   12.271  -0.002     1667     1.0
 Aroclor-1268 2  11.659   0.002      2172      0.6       2   12.346   0.006      897     0.5
 Aroclor-1268 3  12.010  -0.027      3456      1.2       3   12.728  -0.001     1195     0.8
 Aroclor-1268 4  12.800  -0.012     11294      1.0       4   13.541  -0.005     2043     0.4
       Total Col1Ave (4 peaks):     0.8       Total Col2Ave (4 peaks):     0.7   RPD = 15
       Corrected Ave (3 peaks):     0.6       Corrected Ave (3 peaks):     0.6   RPD = 11
```

Total PCB Area Col1 (5.113 - 13.105) = 201974 Col1 Total PCB = 0.0 ppm*

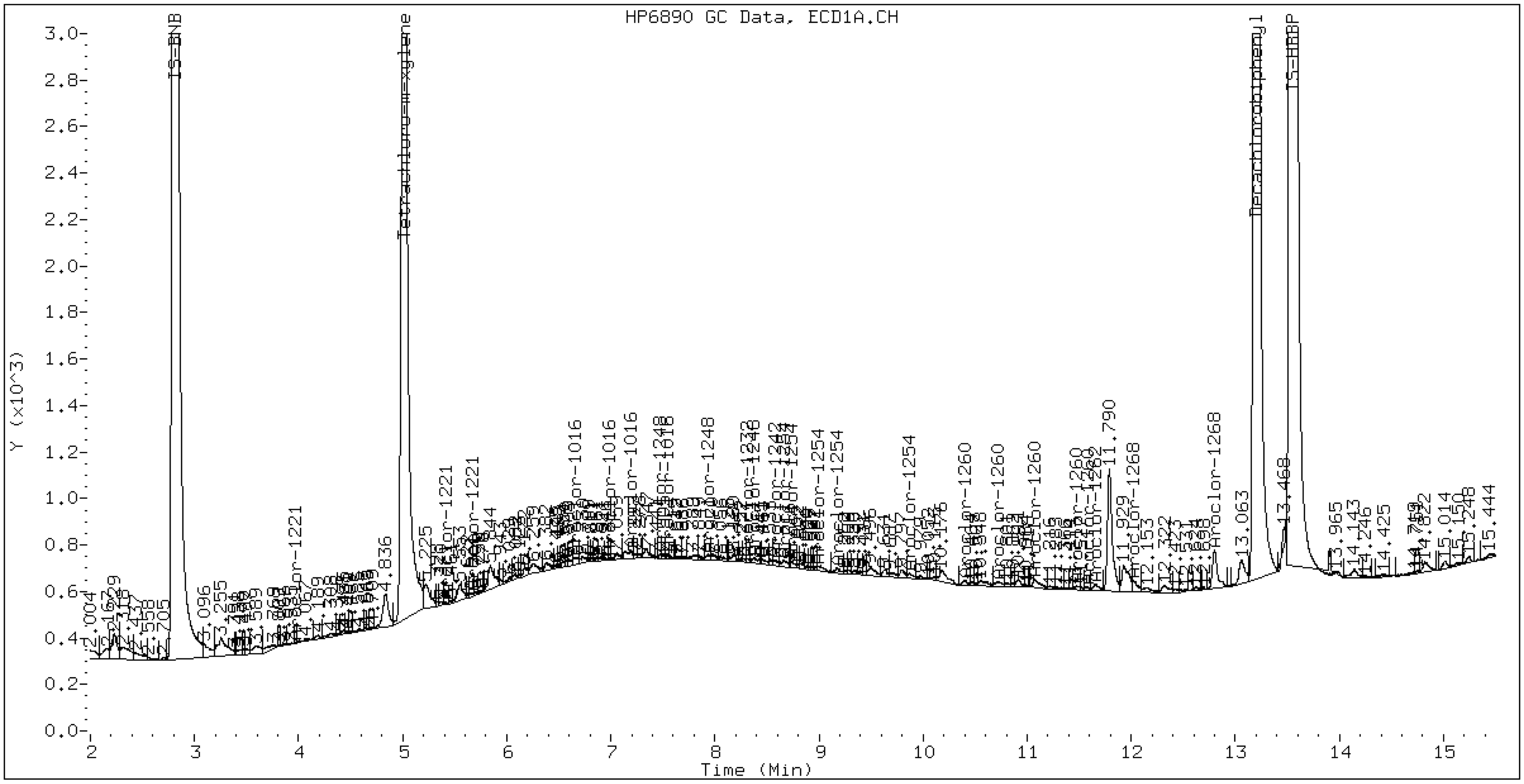
Total PCB Area Col2 (5.113 - 13.105) = 284000 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

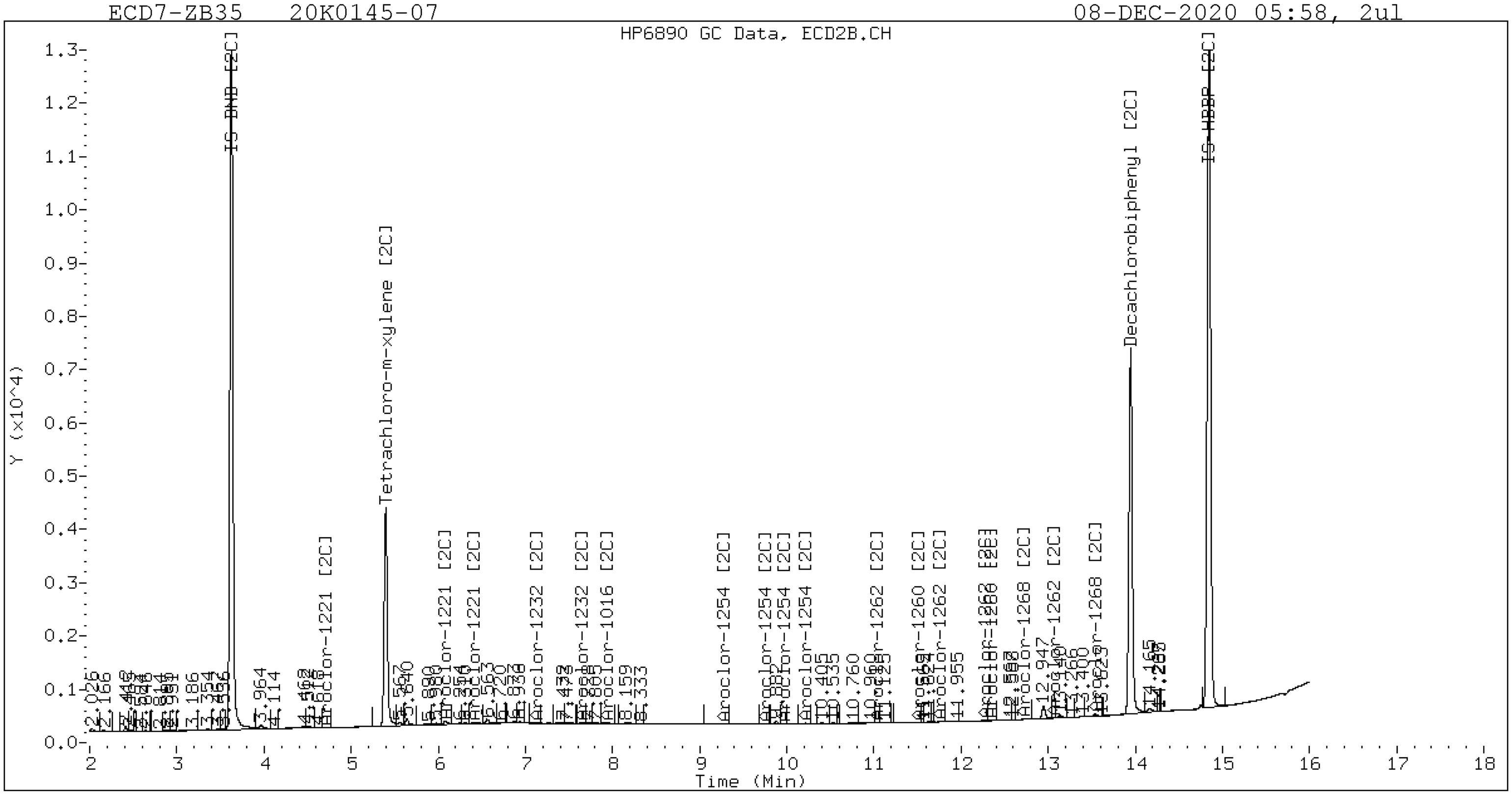
PCB Dual Column Chromatograms

ECD7-ZB5 20K0145-07 08-DEC-2020 05:58, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0145-07 08-DEC-2020 05:58, 2ul

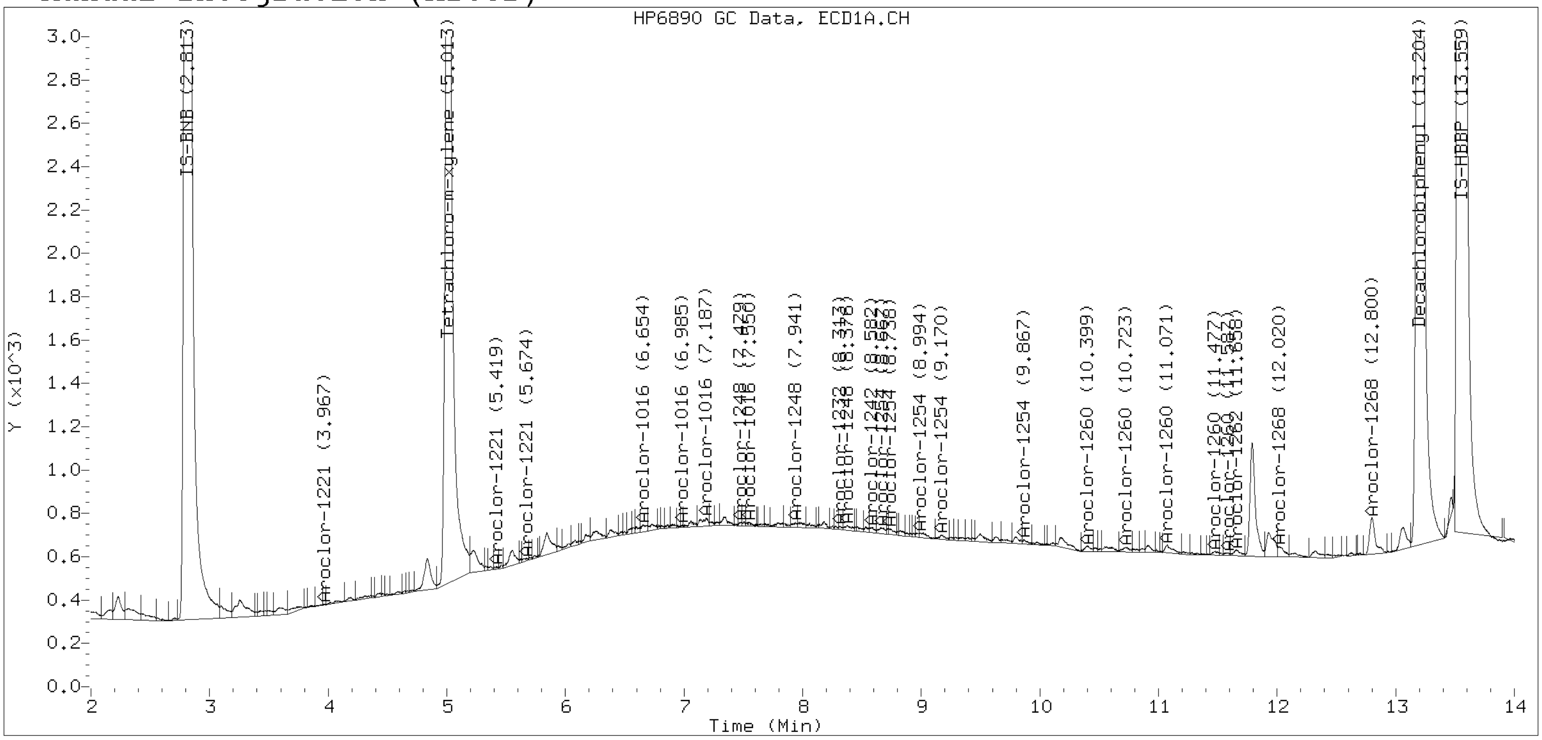


ZB-35 Manual Integration: NO

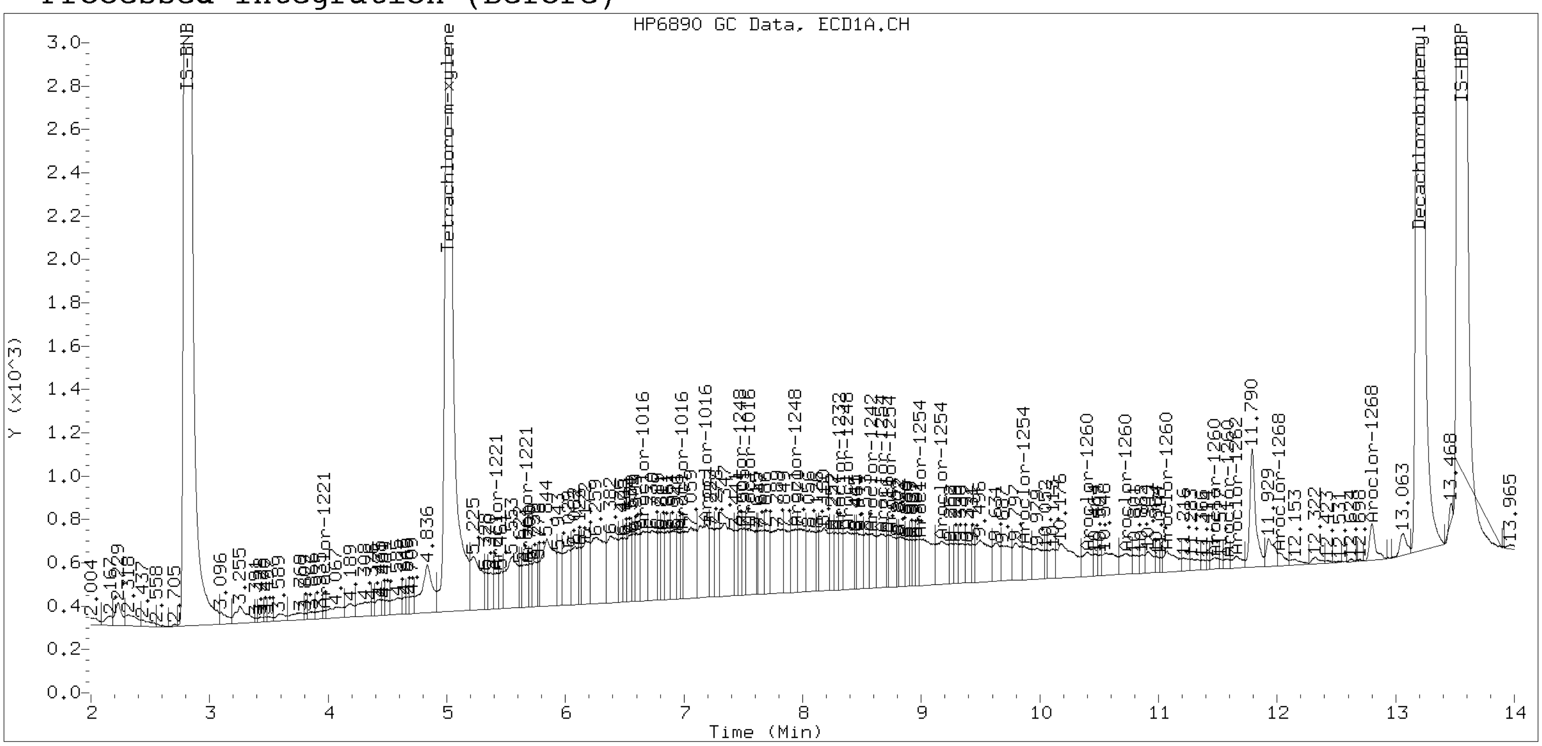
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120738ECD7.D   Injection Date: 08-DEC-2020 05:5

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP2-7.5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	20K0145-08 A	File ID:	20120739ECD7.D
Sampled:	11/05/20 11:40	Prepared:	11/19/20 23:00	Analyzed:	12/08/20 06:19
% Solids:	76.66	Preparation:	EPA 3546 (Microwave)	Initial/Final:	7.38 g Wet / 5 mL
Batch:	BIK0599	Sequence:	SIL0131	Calibration:	DL00019
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	17.7	7.1	17.7	U
11104-28-2	Aroclor 1221	1	1	17.7	7.1	17.7	U
11141-16-5	Aroclor 1232	1	1	17.7	7.1	17.7	U
53469-21-9	Aroclor 1242	1	1	17.7	7.1	17.7	U
12672-29-6	Aroclor 1248	1	1	17.7	7.1	17.7	U
11097-69-1	Aroclor 1254	1	1	17.7	7.1	17.7	U
11096-82-5	Aroclor 1260	1	1	17.7	8.2	17.7	U
37324-23-5	Aroclor 1262	1	1	17.7	8.2	17.7	U
11100-14-4	Aroclor 1268	1	1	17.7	8.2	17.7	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*35.351*	*27.0*	*76.3*	*40 - 133*	
Tetrachlorometaxylene	*1*	*35.351*	*26.5*	*74.9*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120739ECD7.D
Data file 2: /20201207.b/20201207.b/20120739ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0145-08
Client ID:
Injection Date: 08-DEC-2020 06:19
Report Date: 12/13/2020 14:25
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	-0.000	336974	5.398	-0.001	205393	30.0	29.2	2.6	Tetrachloro-m-xylene
13.205	0.000	758240	13.946	-0.001	379551	30.5	33.8	10.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	74.9	73.0
Decachlorobiphenyl	76.3	84.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	771328	-2.0
Hexabromobiphenyl	2132987	2337302	9.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	613839	-3.4
Hexabromobiphenyl	665758	681789	2.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.590	-0.038	808	2.1	1	7.130	0.056	977	3.3
Aroclor-1016	2	6.994	-0.005	741	0.6	2	7.652	-0.018	540	0.8
Aroclor-1016	3	7.148	-0.001	1195	2.2	3	7.942	0.062	960	3.8
Aroclor-1016	4	7.474	-0.072	1463	5.1	4	---			0.0
~~Total Col1Ave (4 peaks):~~				~~2.5~~		~~Total Col2Ave (3 peaks):~~			~~2.6~~	~~RPD = 5~~
Corrected Ave (3 peaks):				1.6			Corrected Ave: < 3 Peaks			
Aroclor-1221	1	4.056	0.084	732	7.3	1	4.715	0.046	548	12.9
Aroclor-1221	2	---			0.0	2	6.084	0.010	2811	33.3
Aroclor-1221	~~3~~	~~5.679~~	~~-0.003~~	~~413~~	~~1.1~~	~~3~~	~~6.405~~	~~-0.012~~	~~612~~	3.9
Col1Ave: <3 Quant Peaks							Col2Ave:		16.7	
Aroclor-1232	1	4.056	0.083	732	12.1	1	4.715	0.046	548	20.9
Aroclor-1232	2	6.665	0.034	1784	11.3	2	7.130	0.053	977	7.2
Aroclor-1232	3	6.994	-0.008	741	1.4	3	7.652	-0.020	540	1.9
Aroclor-1232	4	8.372	0.063	2735	17.9	4	---			0.0
~~Total Col1Ave (4 peaks):~~				~~10.7~~		~~Total Col2Ave (3 peaks):~~			~~10.0~~	~~RPD = 7~~
Corrected Ave (3 peaks):				8.3			Corrected Ave: < 3 Peaks			
Aroclor-1242	1	6.665	0.036	1784	6.0	1	7.130	0.057	977	4.2
Aroclor-1242	2	6.994	-0.006	741	0.8	2	7.652	-0.018	540	1.0
Aroclor-1242	3	8.372	0.067	2735	8.9	3	---			0.0
Aroclor-1242	~~4~~	~~8.586~~	~~-0.013~~	~~2006~~	~~6.0~~	~~4~~	~~---~~			0.0
Total Col1Ave (4 peaks):				5.4		Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	7.474	-0.009	1463	3.6	1	---			0.0
Aroclor-1248	2	7.984	0.031	1784	2.9	2	---			0.0
Aroclor-1248	3	8.372	0.011	2735	3.0	3	---			0.0
Aroclor-1248	~~4~~	~~8.586~~	~~0.011~~	~~2006~~	~~3.8~~	~~4~~				~~0.0~~
Total Col1Ave (4 peaks):				3.4		Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.661	-0.010	950	1.0	1	9.295	0.008	561	1.3
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	8.980	-0.060	1017	1.7	3	9.762	-0.055	2605	9.0
Aroclor-1254	4	---			0.0	4	9.882	-0.085	2240	3.3
Aroclor-1254	5	9.872	0.000	836	1.0	5	---			0.0
~~Total Col1Ave (3 peaks):~~				~~1.2~~		~~Total Col2Ave (3 peaks):~~			~~4.5~~	~~RPD~~ = 114*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1260	1	---			0.0	1	10.945	-0.094	1489	3.6
Aroclor-1260	2	10.779	0.058	4771	5.3	2	11.514	0.010	34	0.1
Aroclor-1260	3	11.121	0.048	2008	0.9	3	---			0.0
Aroclor-1260	4	11.496	0.022	1428	1.2	4	12.261	-0.083	187	0.3
Aroclor-1260	~~5~~	~~---~~			~~0.0~~	~~NS~~	~~---~~			----
Total Col1Ave (3 peaks):				2.4		Total Col2Ave (3 peaks):			1.3	RPD = 60*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	---			0.0	1	10.945	-0.098	1489	2.1
Aroclor-1262	2	11.121	0.043	2008	0.7	2	---			0.0
Aroclor-1262	3	11.662	0.076	494	0.6	3	12.261	-0.015	187	0.4
Aroclor-1262	~~4~~	~~---~~			~~0.0~~	~~4~~	~~13.137~~	~~0.072~~	~~2534~~	4.5
Col1Ave: <3 Quant Peaks							Col2Ave:		2.3	
Aroclor-1268	1	11.662	0.074	494	0.2	1	12.261	-0.013	187	0.1
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.030	-0.008	3312	1.2	3	12.729	-0.001	145	0.1
Aroclor-1268	4	12.799	-0.013	11545	1.1	4	13.541	-0.005	2079	0.4
~~Total Col1Ave (3 peaks):~~				~~0.8~~		~~Total Col2Ave (3 peaks):~~			~~0.2~~	~~RPD~~ = 119*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.113 - 13.105) = 151986 Col1 Total PCB = 0.0 ppm*

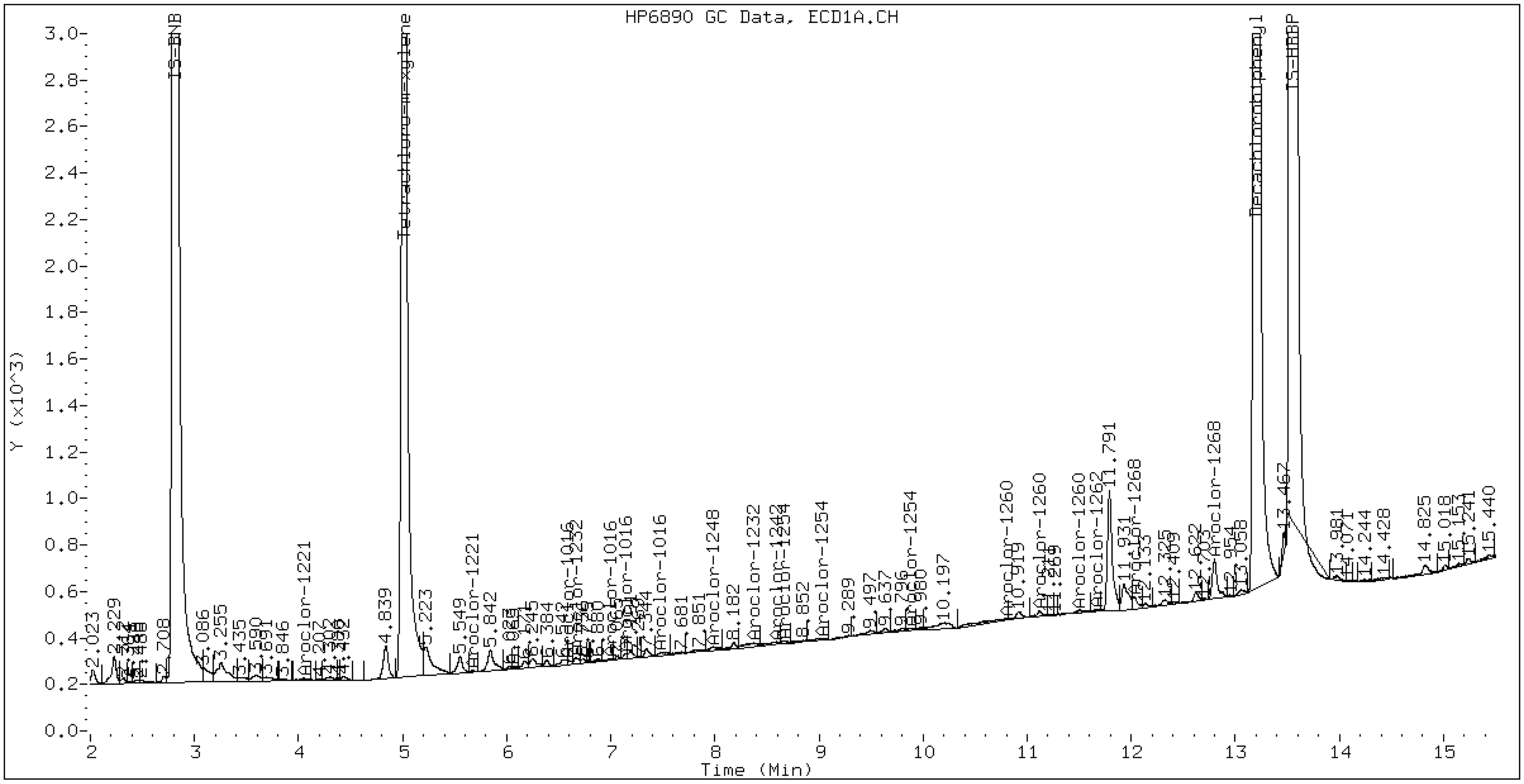
Total PCB Area Col2 (5.113 - 13.105) = 260639 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

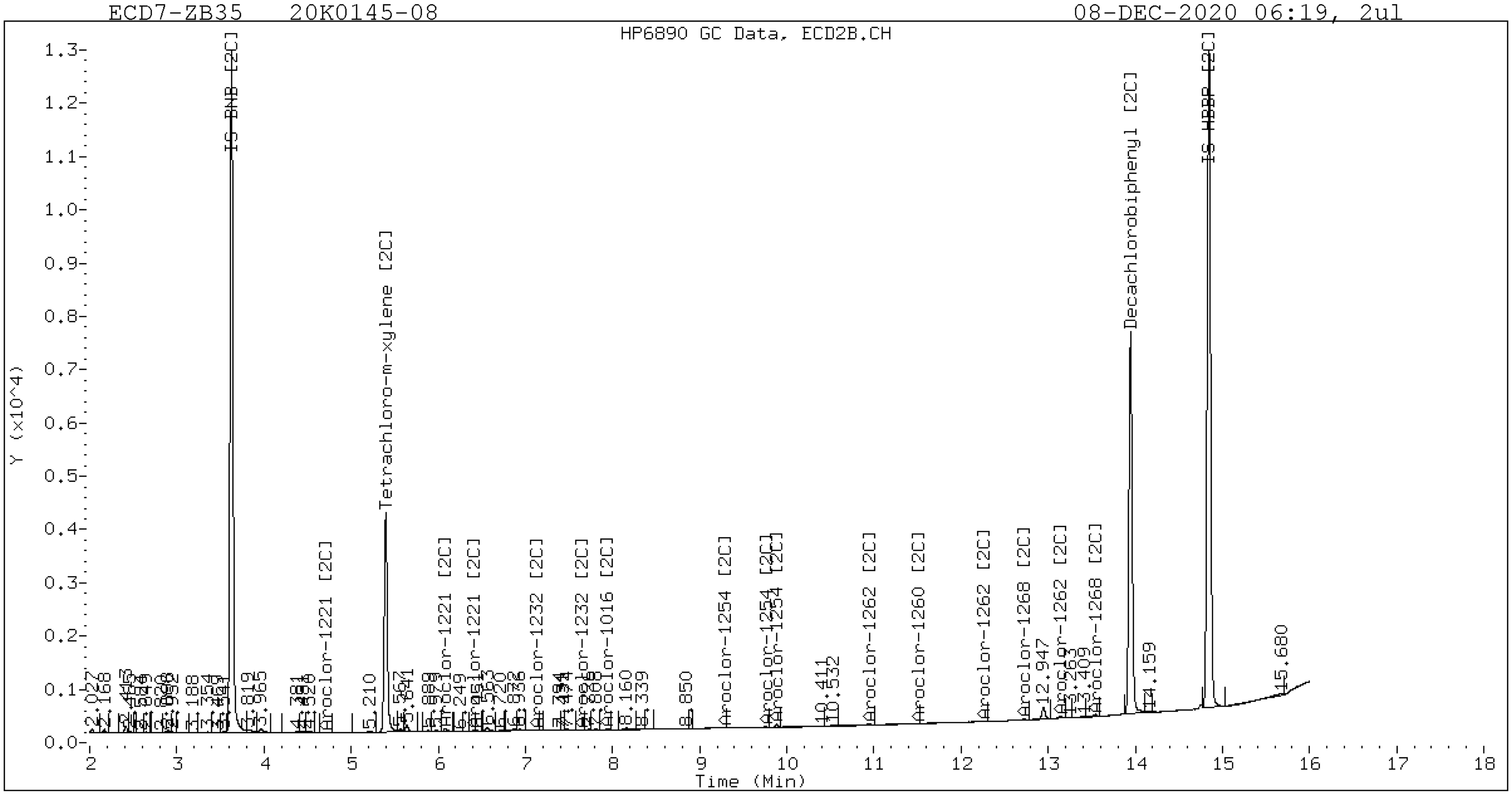
PCB Dual Column Chromatograms

ECD7-ZB5 20K0145-08 08-DEC-2020 06:19, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0145-08 08-DEC-2020 06:19, 2ul

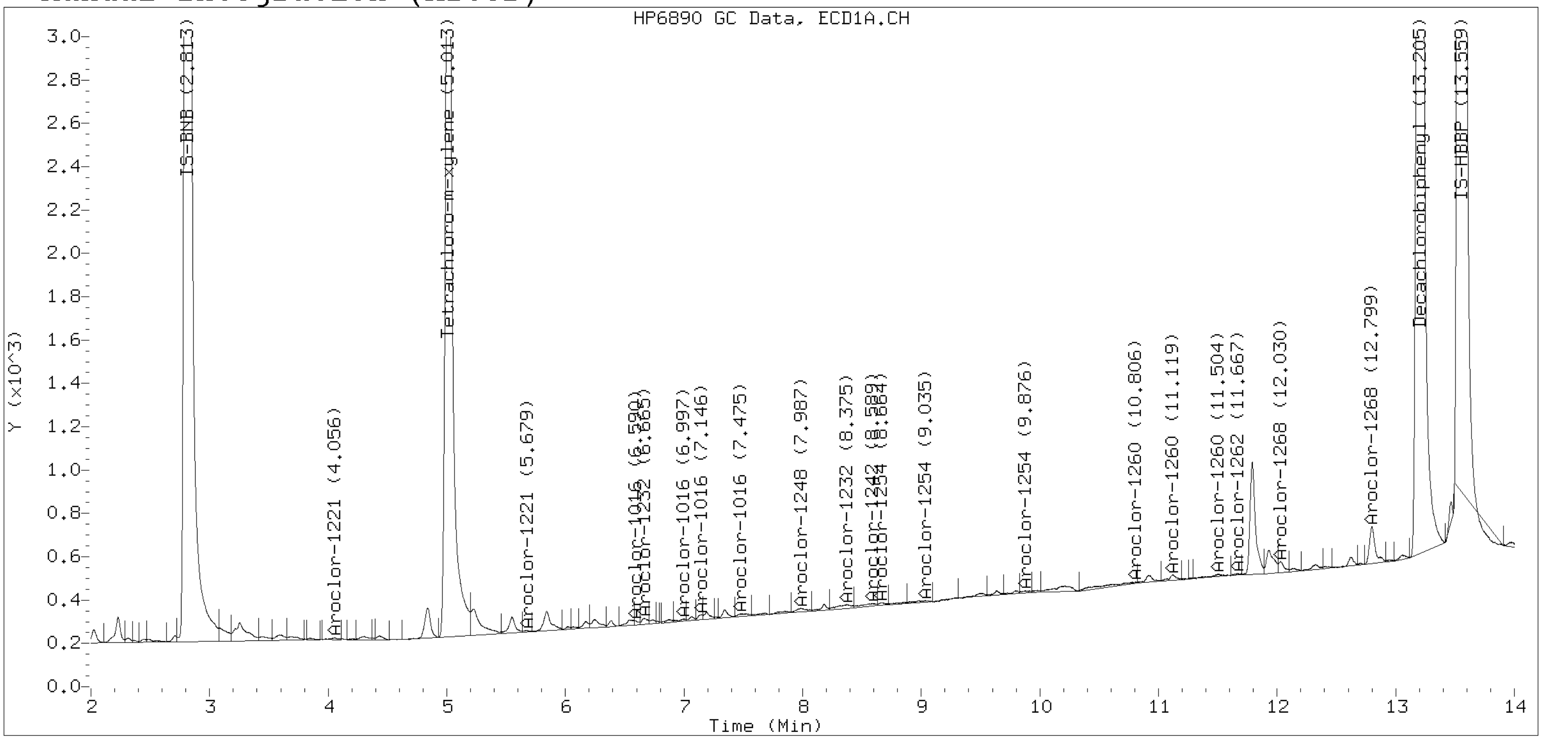


ZB-35 Manual Integration: NO

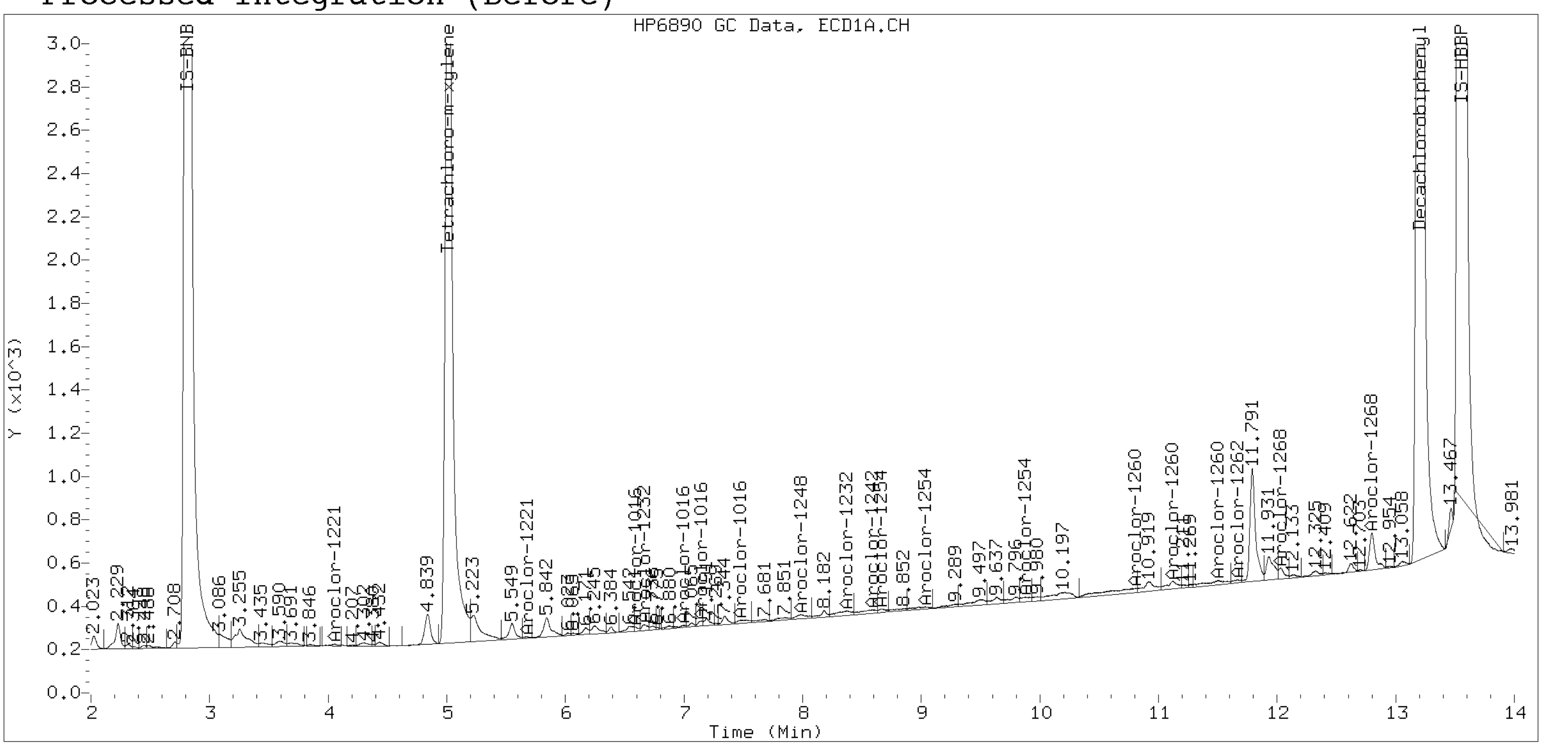
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120739ECD7.D   Injection Date: 08-DEC-2020 06:1

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP5-2

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix: Solid Laboratory ID: 20K0145-11 A File ID: 20120740ECD7.D

Sampled: 11/05/20 10:00 Prepared: 11/19/20 23:00 Analyzed: 12/08/20 06:40

% Solids: 74.45 Preparation: EPA 3546 (Microwave) Initial/Final: 7.57 g Wet / 5 mL

Batch: BIK0599 Sequence: SIL0131 Calibration: DL00019

Instrument: ECD7 Column 1: ZB5 Column 2: ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	17.7	7.1	17.7	U
11104-28-2	Aroclor 1221	1	1	17.7	7.1	17.7	U
11141-16-5	Aroclor 1232	1	1	17.7	7.1	17.7	U
53469-21-9	Aroclor 1242	1	1	17.7	7.1	17.7	U
12672-29-6	Aroclor 1248	1	1	17.7	7.1	17.7	U
11097-69-1	Aroclor 1254	2	1	13.9	7.1	17.7	J
11096-82-5	Aroclor 1260	1	1	33.7	8.2	17.7	
37324-23-5	Aroclor 1262	1	1	17.7	8.2	17.7	U
11100-14-4	Aroclor 1268	1	1	17.7	8.2	17.7	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*35.487*	*24.7*	*69.7*	*40 - 133*	
Tetrachlorometaxylene	*1*	*35.487*	*24.1*	*67.8*	*53 - 120*	
Decachlorobiphenyl	*2*	*35.487*	*27.8*	*78.2*	*40 - 133*	
Tetrachlorometaxylene	*2*	*35.487*	*24.9*	*70.2*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120740ECD7.D
Data file 2: /20201207.b/20201207.b/20120740ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0145-11
Client ID:
Injection Date: 08-DEC-2020 06:40
Report Date: 12/13/2020 14:25
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.012	-0.001	308833	5.397	-0.002	191957	27.1	28.1	3.4	Tetrachloro-m-xylene
13.202	-0.003	728878	13.944	-0.004	358695	27.9	31.3	11.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	67.8	70.2
Decachlorobiphenyl	69.7	78.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	780698	-0.8
Hexabromobiphenyl	2132987	2459898	15.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	596612	-6.1
Hexabromobiphenyl	665758	696883	4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.664	0.036	1251	3.2	1	7.130	0.056	547	1.9
Aroclor-1016	2	6.966	-0.033	1236	1.0	2	7.726	0.056	1053	1.6
Aroclor-1016	3	7.136	-0.013	950	1.8	3	7.875	-0.005	439	1.8
Aroclor-1016	4	7.570	0.024	2502	8.6	4	---			0.0
	~~Total Col1Ave (4 peaks):~~			~~3.6~~		~~Total Col2Ave (3 peaks):~~			~~1.8~~	~~RPD = 69*~~
	Corrected Ave (3 peaks):			2.0		Corrected Ave: < 3 Peaks				
Aroclor-1221	1	---			0.0	1	4.618	-0.051	168	4.1
Aroclor-1221	2	---			0.0	2	6.083	0.009	2159	26.3
Aroclor-1221	3	---			0.0	3	6.416	-0.001	1895	12.4
	~~Col1Ave: <3 Quant Peaks~~					~~Col2Ave:~~			~~14.3~~	
Aroclor-1232	1	---			0.0	1	4.618	-0.052	168	6.6
Aroclor-1232	2	6.664	0.033	1251	7.8	2	7.130	0.053	547	4.1
Aroclor-1232	3	6.966	-0.036	1236	2.4	3	7.726	0.054	1053	3.8
Aroclor-1232	4	8.255	-0.054	401	2.6	4	---			0.0
	~~Total Col1Ave (3 peaks):~~			~~4.3~~		~~Total Col2Ave (3 peaks):~~			~~4.9~~	~~RPD = 13~~
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.664	0.035	1251	4.1	1	7.130	0.057	547	2.4
Aroclor-1242	2	6.966	-0.035	1236	1.3	2	7.726	0.056	1053	2.0
Aroclor-1242	3	8.255	-0.051	401	1.3	3	8.986	-0.001	218	1.1
Aroclor-1242	4	8.567	-0.033	7428	22.0	4	9.410	-0.012	4909	24.2
	~~Total Col1Ave (4 peaks):~~			~~7.2~~		~~Total Col2Ave (4 peaks):~~			~~7.4~~	~~RPD = 3~~
	Corrected Ave (3 peaks):			2.2		Corrected Ave (3 peaks):			1.8	RPD = 20
Aroclor-1248	1	7.487	0.004	1927	4.7	1	8.158	0.020	1515	7.5
Aroclor-1248	2	7.984	0.032	1938	3.1	2	8.548	-0.010	750	2.8
Aroclor-1248	3	8.372	0.011	9798	10.7	3	8.986	-0.001	218	0.6
Aroclor-1248	4	8.567	-0.030	7428	14.1	4	9.410	-0.012	4909	13.3
	~~Total Col1Ave (4 peaks):~~			~~8.2~~		~~Total Col2Ave (4 peaks):~~			~~6.0~~	~~RPD = 30~~
	Corrected Ave (3 peaks):			6.2		Corrected Ave (3 peaks):			3.6	RPD = 52*
Aroclor-1254	1	8.665	-0.006	8346	9.0	1	9.285	-0.001	5729	13.4
Aroclor-1254	2	8.759	0.019	10153	20.3	2	9.410	0.030	4909	24.9
Aroclor-1254	3	9.054	0.014	8779	14.3	3	9.814	-0.003	959	3.4
Aroclor-1254	4	9.170	-0.006	17045	13.4	4	9.977	0.009	10617	16.0
Aroclor-1254	5	9.861	-0.011	15403	18.3	5	10.216	0.017	14367	20.9
	Total Col1Ave (5 peaks):			$\boxed{15.0}$		Total Col2Ave (5 peaks):			$\boxed{15.7}$	RPD = 4
	Corrected Ave (4 peaks):			13.7		Corrected Ave (4 peaks):			13.4	RPD = 2
Aroclor-1260	1	10.395	-0.005	36727	38.4	1	11.036	-0.003	13865	32.6
Aroclor-1260	2	10.717	-0.005	29288	30.7	2	11.499	-0.005	17941	40.0
Aroclor-1260	3	11.065	-0.007	88483	35.7	3	11.751	-0.004	32998	28.8
Aroclor-1260	4	11.469	-0.005	32166	25.4	4	12.338	-0.005	22087	29.6
Aroclor-1260	5	11.576	-0.004	32829	59.5	NS	---			----
	Total Col1Ave (5 peaks):			$\boxed{37.9}$		Total Col2Ave (4 peaks):			$\boxed{32.7}$	RPD = 15
	Corrected Ave (4 peaks):			32.5		Corrected Ave (3 peaks):			30.3	RPD = 7
Aroclor-1262	1	10.395	-0.010	36727	25.6	1	11.036	-0.008	13865	19.1
Aroclor-1262	2	11.065	-0.012	88483	27.4	2	11.751	-0.007	32998	20.7
Aroclor-1262	3	11.576	-0.010	32829	36.7	3	12.265	-0.010	16529	32.3
Aroclor-1262	4	11.648	-0.009	41080	35.0	4	13.057	-0.008	11788	20.4
	~~Total Col1Ave (4 peaks):~~			~~31.2~~		~~Total Col2Ave (4 peaks):~~			~~23.1~~	~~RPD = 30~~
	Corrected Ave (3 peaks):			29.3		Corrected Ave (3 peaks):			20.1	RPD = 37
Aroclor-1268	1	11.576	-0.013	32829	10.0	1	12.265	-0.008	16529	9.9
Aroclor-1268	2	11.648	-0.009	41080	11.7	2	12.338	-0.001	22087	12.1
Aroclor-1268	3	12.047	0.010	18071	6.4	3	12.723	-0.006	3265	2.1
Aroclor-1268	4	12.797	-0.015	33740	3.0	4	13.536	-0.010	11462	2.3
	Total Col1Ave (4 peaks):			7.8		Total Col2Ave (4 peaks):			6.6	RPD = 17
	~~Corrected Ave (3 peaks):~~			~~6.5~~		~~Corrected Ave (3 peaks):~~			~~4.8~~	~~RPD = 31~~

Total PCB Area Col1 (5.113 - 13.105) = 887626 Col1 Total PCB = 0.1 ppm*

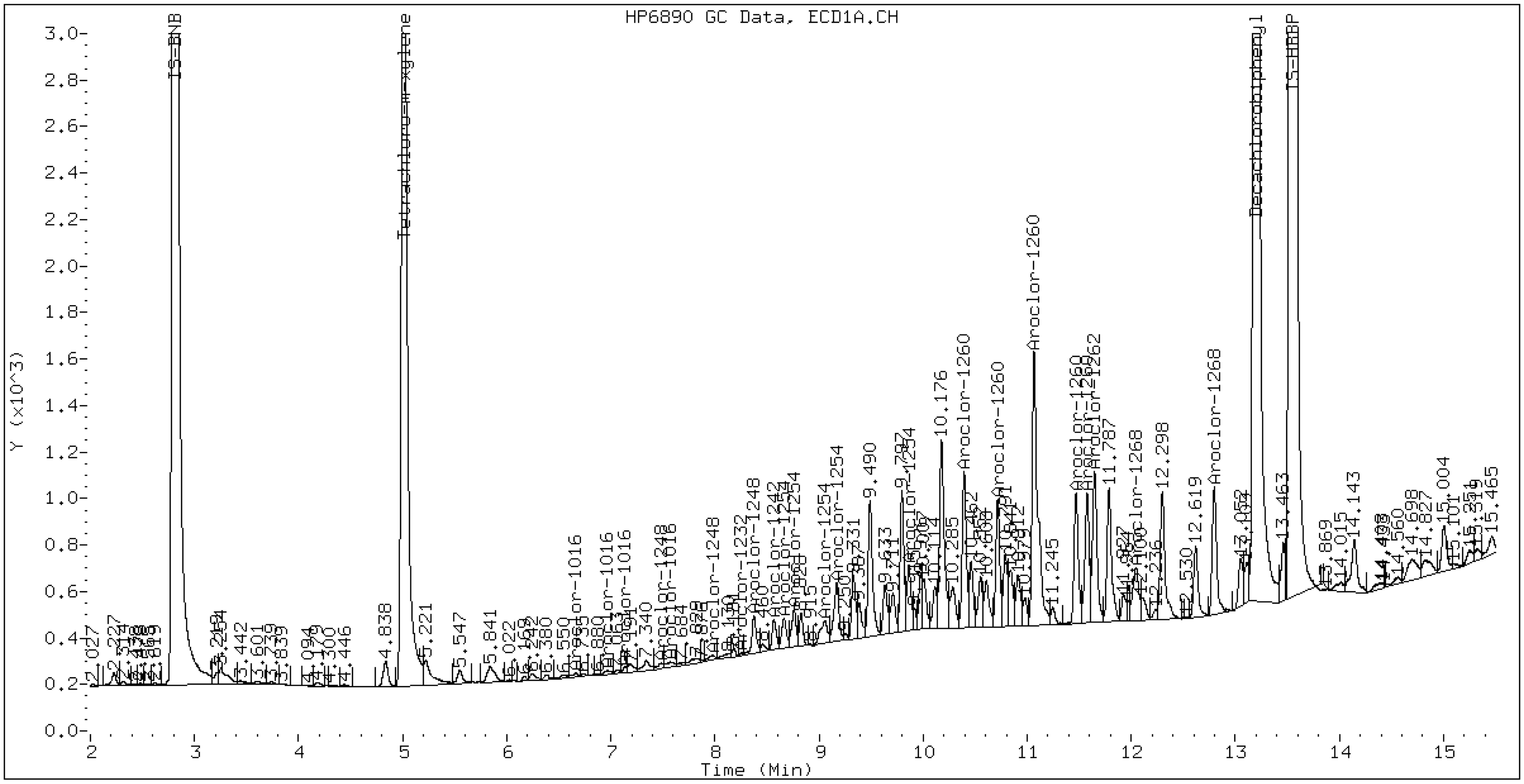
Total PCB Area Col2 (5.113 - 13.105) = 523282 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

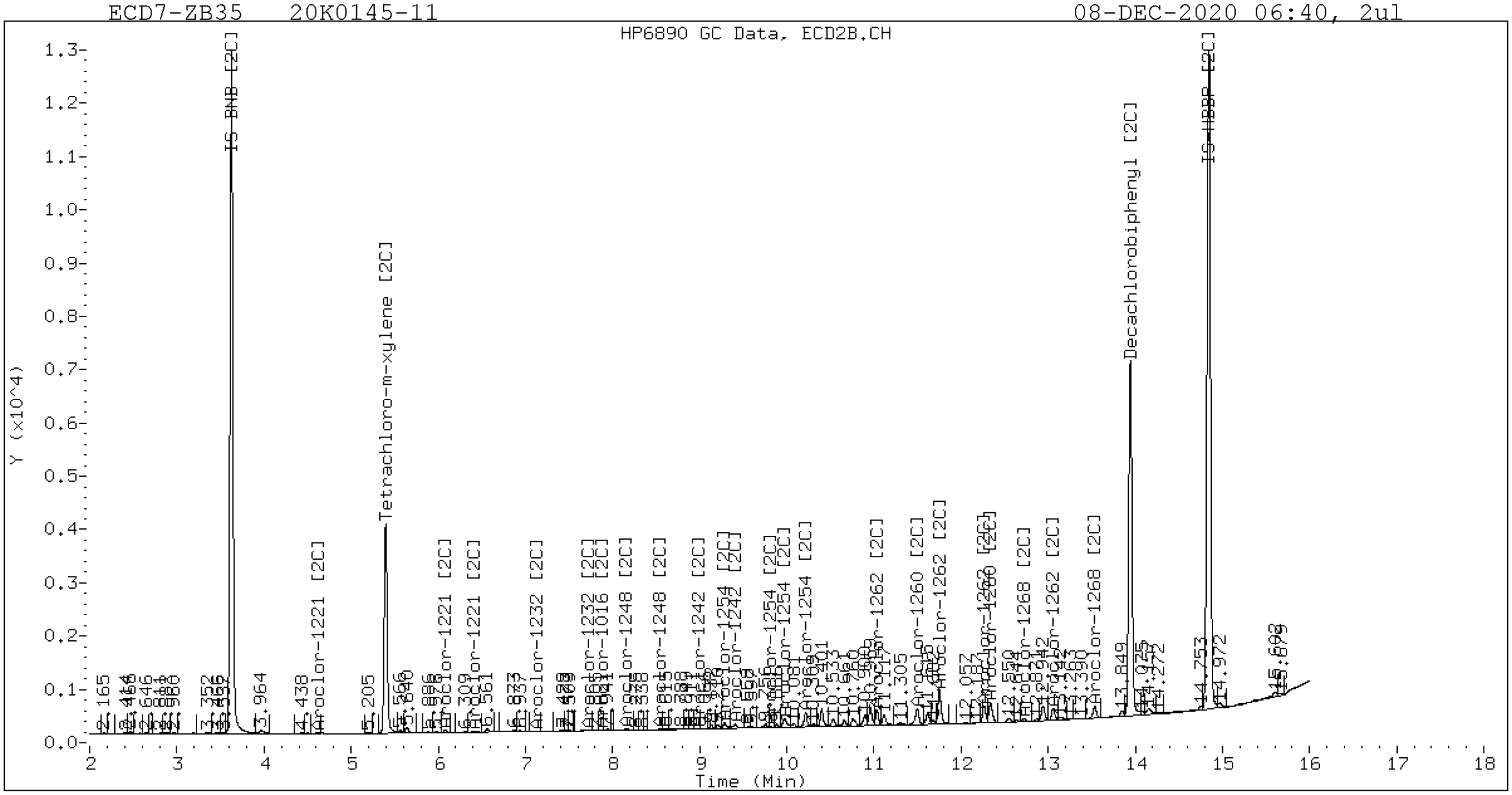
PCB Dual Column Chromatograms

ECD7-ZB5 20K0145-11 08-DEC-2020 06:40, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0145-11 08-DEC-2020 06:40, 2ul

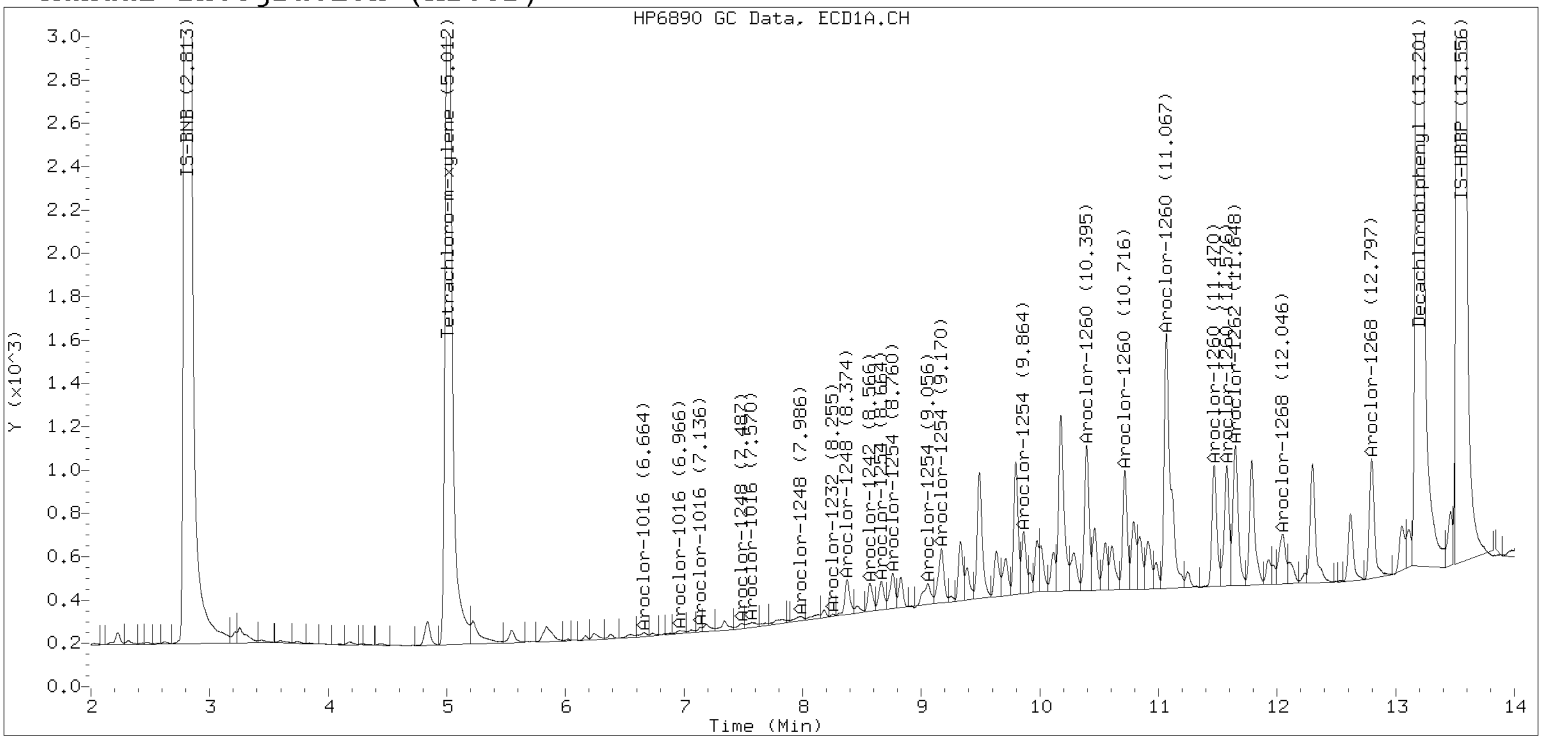


ZB-35 Manual Integration: NO

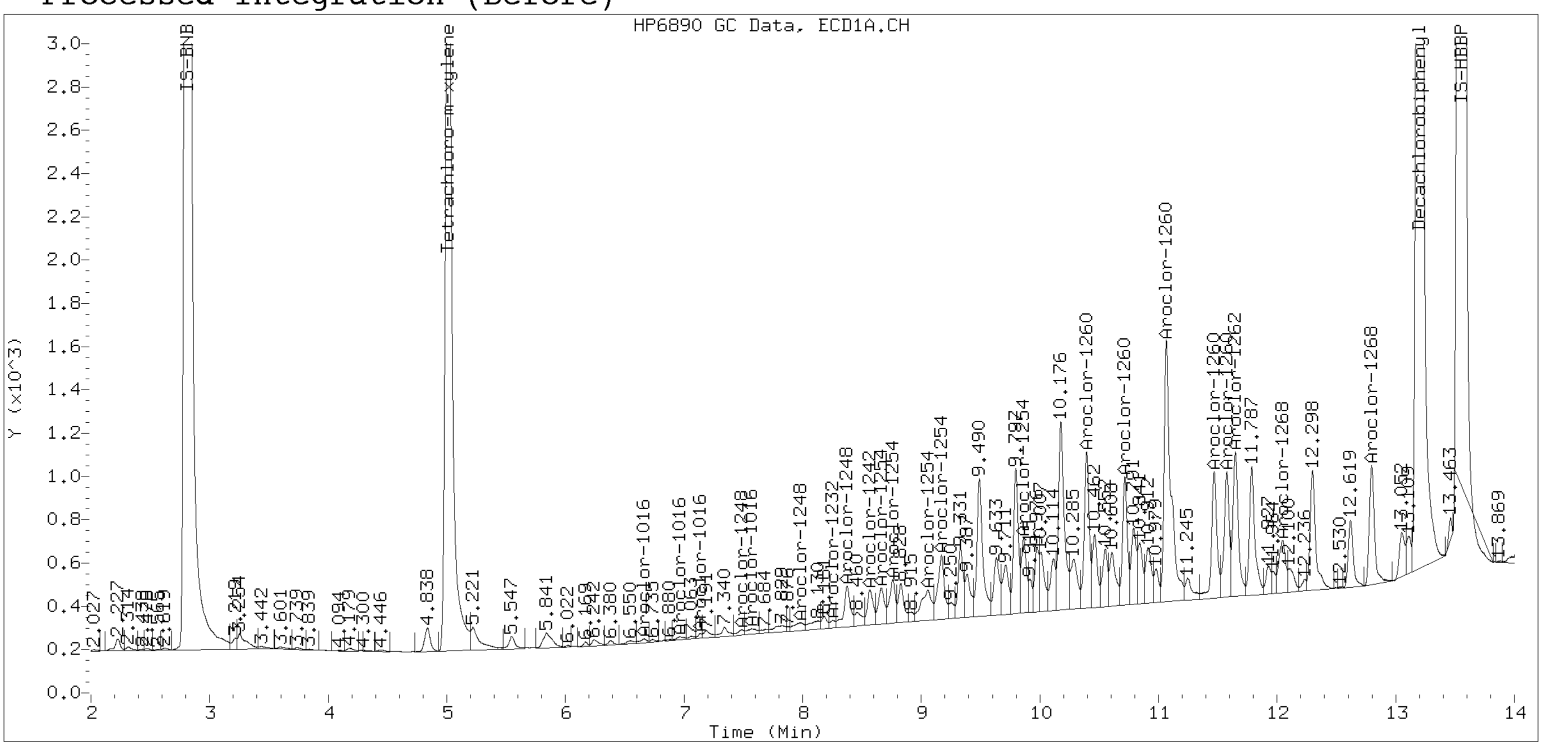
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120740ECD7.D   Injection Date: 08-DEC-2020 06:4

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP5-8

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	20K0145-13 A	File ID:	20120741ECD7.D
Sampled:	11/05/20 10:10	Prepared:	11/19/20 23:00	Analyzed:	12/08/20 07:00
% Solids:	70.83	Preparation:	EPA 3546 (Microwave)	Initial/Final:	7.5 g Wet / 5 mL
Batch:	BIK0599	Sequence:	SIL0131	Calibration:	DL00019
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	18.8	7.5	18.8	U
11104-28-2	Aroclor 1221	1	1	18.8	7.5	18.8	U
11141-16-5	Aroclor 1232	1	1	18.8	7.5	18.8	U
53469-21-9	Aroclor 1242	1	1	18.8	7.5	18.8	U
12672-29-6	Aroclor 1248	1	1	18.8	7.5	18.8	U
11097-69-1	Aroclor 1254	1	1	18.8	7.5	18.8	U
11096-82-5	Aroclor 1260	1	1	18.8	8.7	18.8	U
37324-23-5	Aroclor 1262	1	1	18.8	8.7	18.8	U
11100-14-4	Aroclor 1268	1	1	18.8	8.7	18.8	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*37.649*	*26.4*	*70.2*	*40 - 133*	
Tetrachlorometaxylene	*1*	*37.649*	*26.7*	*70.9*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120741ECD7.D
Data file 2: /20201207.b/20201207.b/20120741ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0145-13
Client ID:
Injection Date: 08-DEC-2020 07:00
Report Date: 12/13/2020 14:25
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	-0.000	336288	5.399	-0.001	202031	28.4	27.5	3.0	Tetrachloro-m-xylene
13.204	-0.001	725851	13.946	-0.001	367136	28.1	31.2	10.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	70.9	68.9
Decachlorobiphenyl	70.2	78.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	812979	3.3
Hexabromobiphenyl	2132987	2430786	14.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	639890	0.7
Hexabromobiphenyl	665758	714842	7.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.666	0.037	1841	4.5	1	7.129	0.055	854	2.8
Aroclor-1016	2	7.002	0.003	575	0.4	2	7.725	0.055	998	1.4
Aroclor-1016	3	7.138	-0.011	1071	1.9	3	7.943	0.062	816	3.1
Aroclor-1016	4	7.495	-0.051	1324	4.3	4	---			0.0

Total ~~Col1Ave (4 peaks): 2.8 Total Col2Ave (3 peaks): 2.4 RPD~~ = 15
Corrected Ave (3 peaks): 2.2 Corrected Ave: < 3 Peaks

Aroclor-1221	1	3.967	-0.004	247	2.3	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.084	0.010	2527	28.7
Aroclor-1221	3	5.672	-0.010	360	0.9	3	6.404	-0.013	1106	6.8

Col1Ave: <3 Quant Peaks Col2Ave: <3 Quant Peaks

Aroclor-1232	1	3.967	-0.006	247	3.9	1	---			0.0
Aroclor-1232	2	6.666	0.034	1841	11.1	2	7.129	0.052	854	6.0
Aroclor-1232	3	7.002	0.000	575	1.1	3	7.725	0.053	998	3.4
Aroclor-1232	4	8.301	-0.008	590	3.7	4	---			0.0

Total Col1Ave (4 peaks): 4.9 Col2Ave: <3 Quant Peaks

Aroclor-1242	1	6.666	0.036	1841	5.8	1	7.129	0.055	854	3.5
Aroclor-1242	2	7.002	0.002	575	0.6	2	7.725	0.055	998	1.8
Aroclor-1242	3	8.301	-0.005	590	1.8	3	---			0.0
Aroclor-1242	4	8.593	-0.007	1470	4.2	4	---			0.0

Total ~~Col1Ave (4 peaks): 3.1 Col2Ave: <3 Quant Peaks~~

Aroclor-1248	1	7.495	0.012	1324	3.1	1	---			0.0
Aroclor-1248	2	7.964	0.011	2611	4.1	2	---			0.0
Aroclor-1248	3	8.375	0.013	2509	2.6	3	---			0.0
Aroclor-1248	4	8.593	-0.004	1470	2.7	4	---			0.0

Total ~~Col1Ave (4 peaks): 3.1 Col2Ave: <3 Quant Peaks~~

Aroclor-1254	1	8.665	-0.006	2002	2.1	1	9.288	0.002	2649	5.8
Aroclor-1254	2	8.746	0.006	827	1.6	2	---			0.0
Aroclor-1254	3	9.025	-0.015	467	0.7	3	9.758	-0.059	9759	32.2
Aroclor-1254	4	9.160	-0.016	260	0.2	4	9.981	0.013	2069	2.9
Aroclor-1254	5	9.863	-0.009	1921	2.2	5	10.218	0.018	5402	7.3

Total ~~Col1Ave (5 peaks): 1.4 Total Col2Ave (4 peaks): 12.1 RPD~~ = 160*
Corrected Ave (4 peaks): 1.1 Corrected Ave (3 peaks): 5.3 RPD = 129*

Aroclor-1260	1	10.396	-0.003	1643	1.7	1	11.039	-0.001	799	1.8
Aroclor-1260	2	10.718	-0.003	2301	2.4	2	11.504	-0.000	1300	2.8
Aroclor-1260	3	11.067	-0.005	6155	2.5	3	11.755	-0.000	2407	2.0
Aroclor-1260	4	11.470	-0.004	2607	2.1	4	12.345	0.001	2017	2.6
Aroclor-1260	5	11.587	0.007	1427	2.6	NS	---			----

Total ~~Col1Ave (5 peaks): 2.3 Total Col2Ave (4 peaks): 2.3 RPD~~ = 2
Corrected Ave (4 peaks): 2.2 Corrected Ave (3 peaks): 2.2 RPD = 1

Aroclor-1262	1	10.396	-0.009	1643	1.2	1	11.039	-0.005	799	1.1
Aroclor-1262	2	11.067	-0.010	6155	1.9	2	11.755	-0.003	2407	1.5
Aroclor-1262	3	11.587	0.001	1427	1.6	3	12.267	-0.009	3364	6.4
Aroclor-1262	4	11.658	0.001	2534	2.2	4	13.062	-0.003	1221	2.1

Total ~~Col1Ave (4 peaks): 1.7 Total Col2Ave (4 peaks): 2.8 RPD~~ = 46*
Corrected Ave (3 peaks): 1.6 Corrected Ave (3 peaks): 1.5 RPD = 2

Aroclor-1268	1	11.587	-0.001	1427	0.4	1	12.267	-0.006	3364	2.0
Aroclor-1268	2	11.658	0.001	2534	0.7	2	12.345	0.005	2017	1.1
Aroclor-1268	3	12.025	-0.012	4060	1.5	3	12.726	-0.003	1278	0.8
Aroclor-1268	4	12.800	-0.013	9928	0.9	4	13.539	-0.007	3721	0.7

Total ~~Col1Ave (4 peaks): 0.9 Total Col2Ave (4 peaks): 1.1 RPD~~ = 25
Corrected Ave (3 peaks): 0.7 Corrected Ave (3 peaks): 0.9 RPD = 22

Total PCB Area Col1 (5.113 - 13.105) = 198127 Col1 Total PCB = 0.0 ppm*

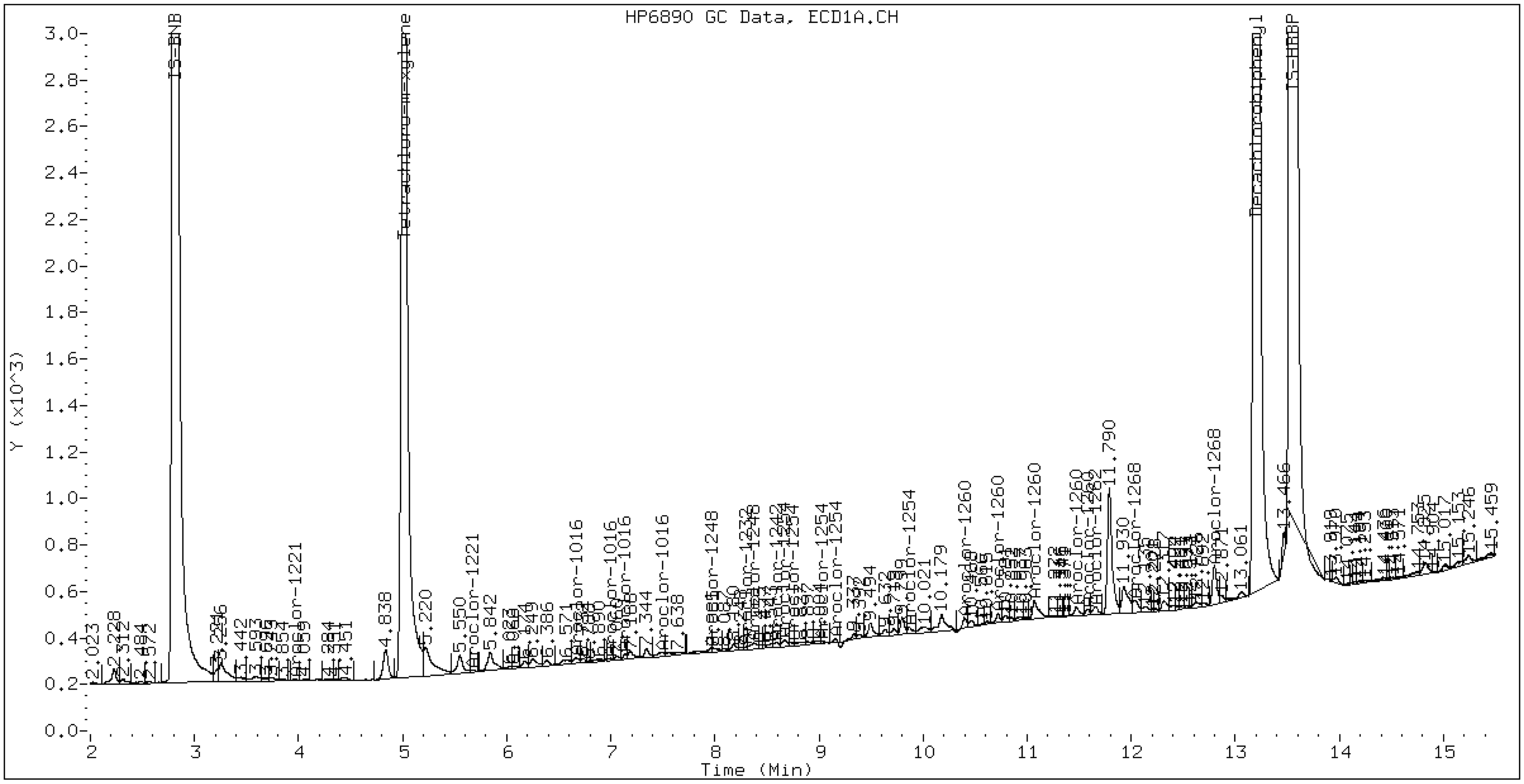
Total PCB Area Col2 (5.113 - 13.105) = 302593 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

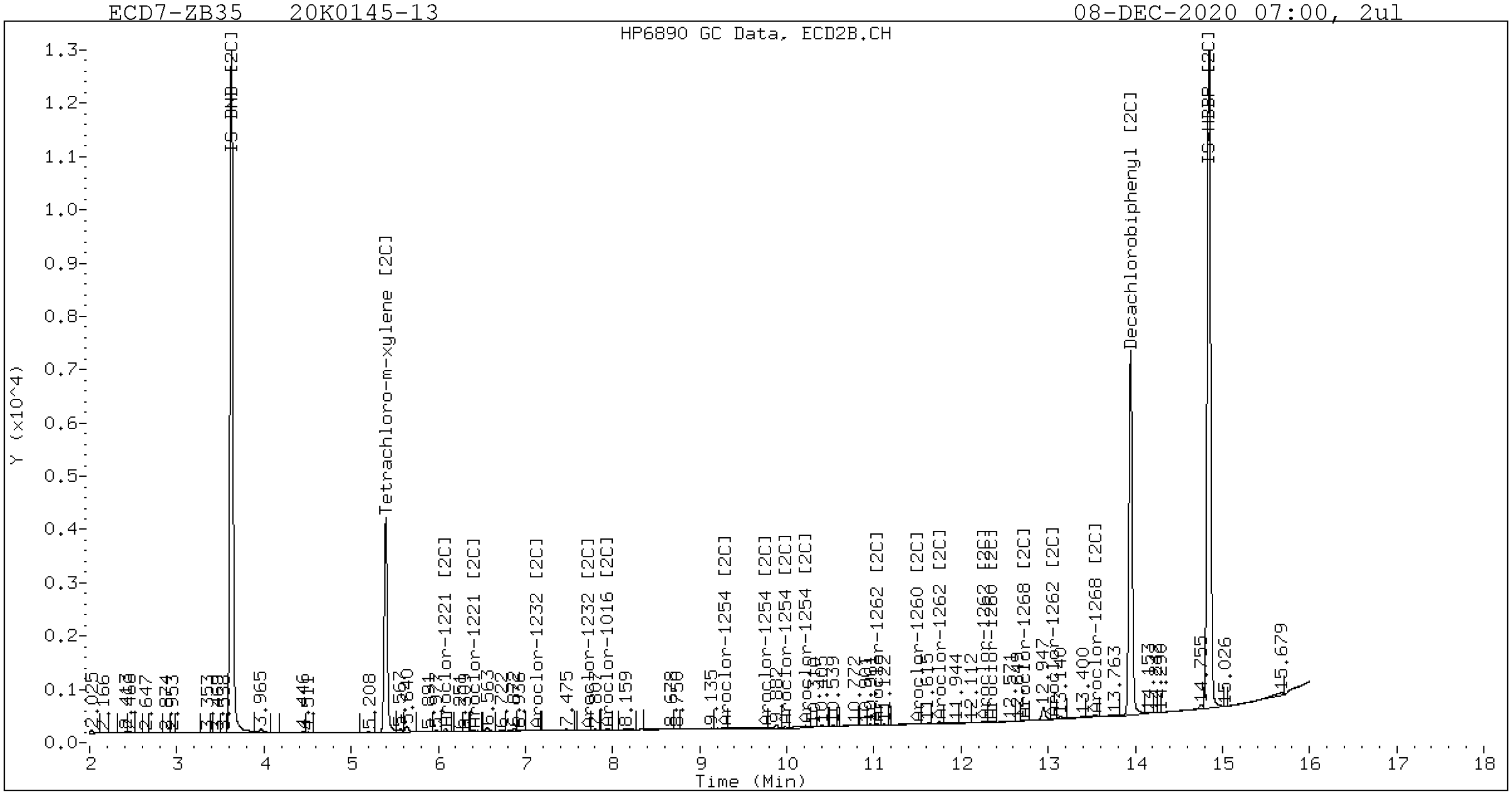
PCB Dual Column Chromatograms

ECD7-ZB5 20K0145-13 08-DEC-2020 07:00, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0145-13 08-DEC-2020 07:00, 2ul

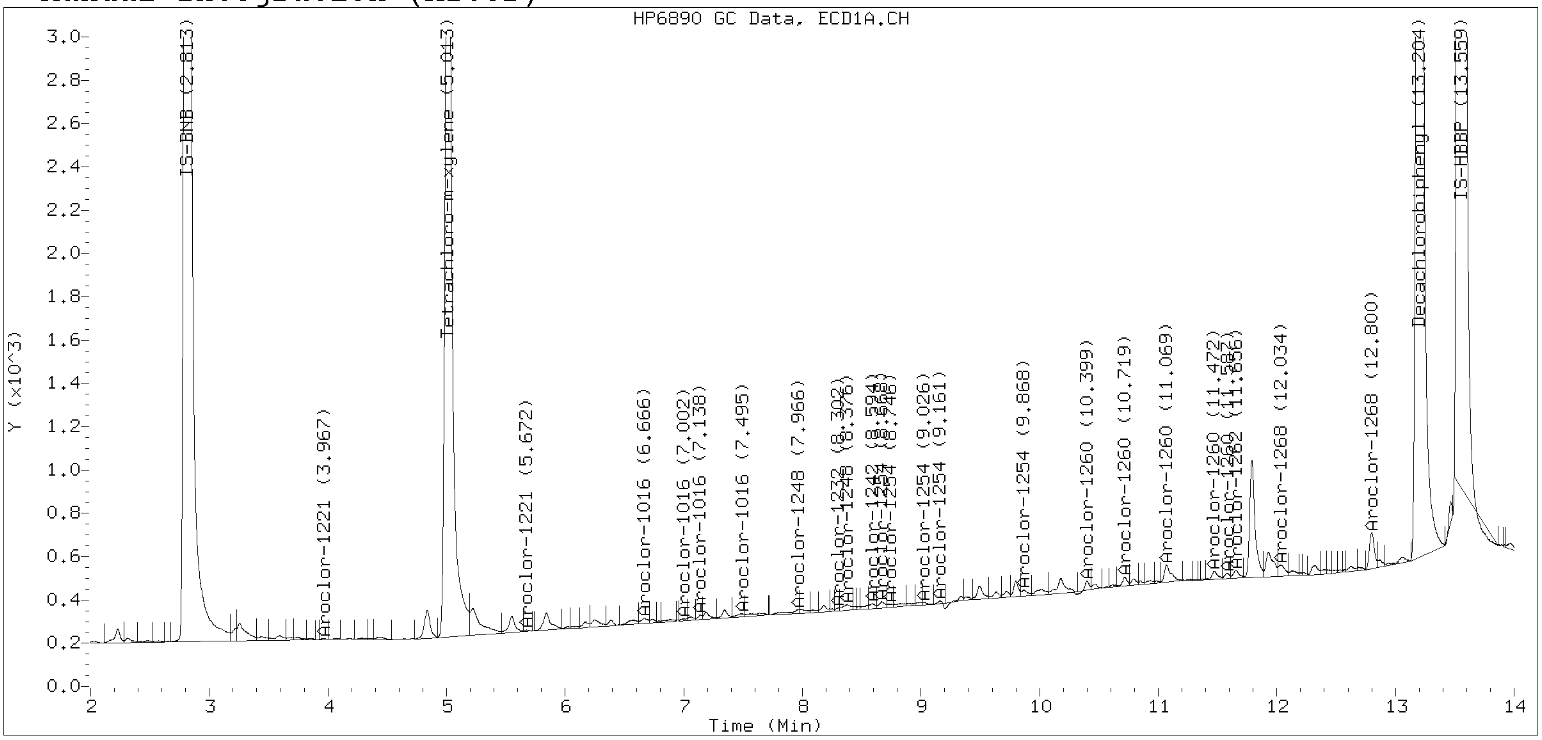


ZB-35 Manual Integration: NO

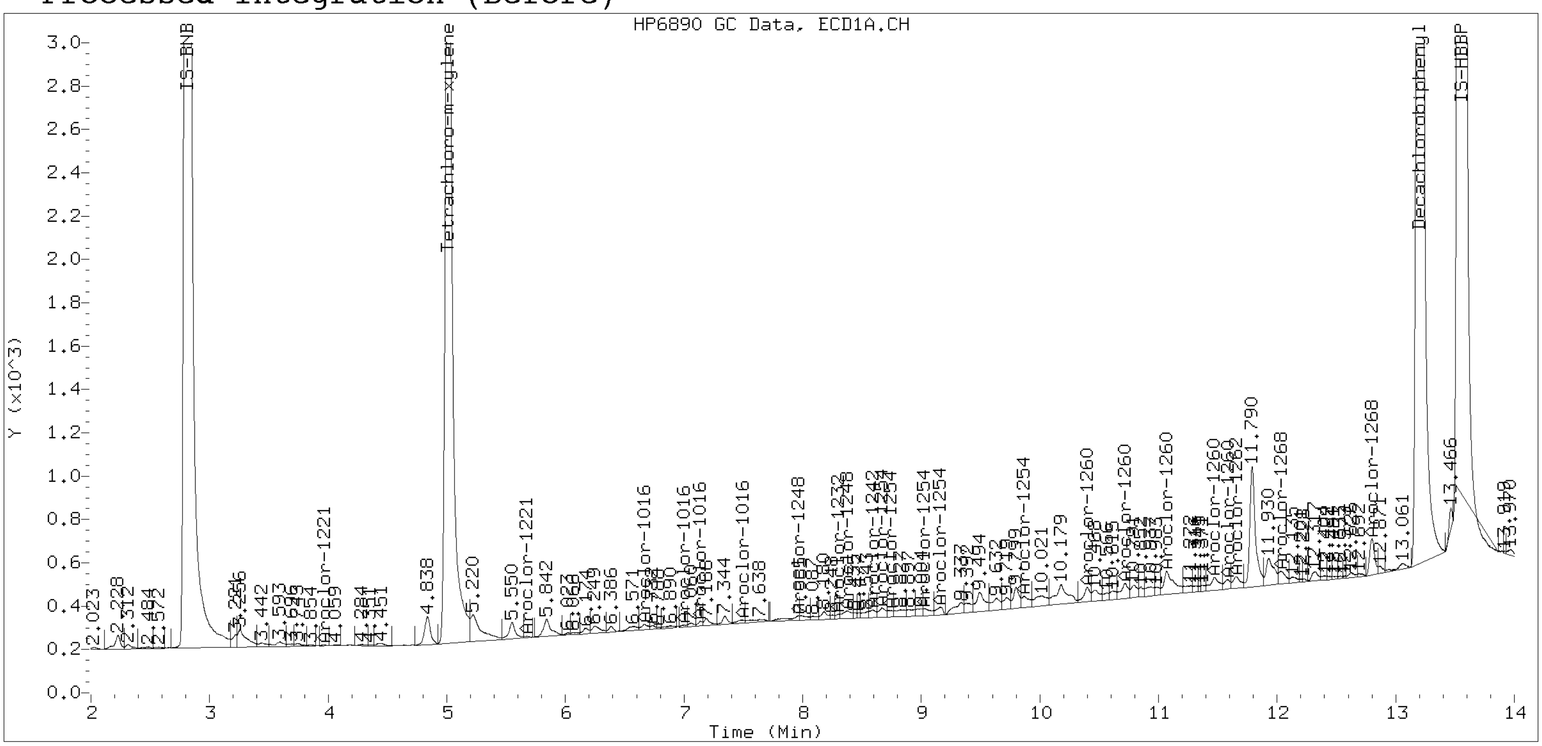
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120741ECD7.D   Injection Date: 08-DEC-2020 07:0

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10S-1

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	20K0145-15 A	File ID:	20120812ECD7.D
Sampled:	11/06/20 08:20	Prepared:	11/19/20 23:00	Analyzed:	12/08/20 23:55
% Solids:	94.87	Preparation:	EPA 3546 (Microwave)	Initial/Final:	7.27 g Wet / 5 mL
Batch:	BIK0599	Sequence:	SIL0191	Calibration:	DL00019
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	25	362	145	362	U
11104-28-2	Aroclor 1221	1	25	362	145	362	U
11141-16-5	Aroclor 1232	1	25	362	145	362	U
53469-21-9	Aroclor 1242	1	25	362	145	362	U
12672-29-6	Aroclor 1248	1	25	4470	145	362	D
11097-69-1	Aroclor 1254	1	25	2090	145	362	D
11096-82-5	Aroclor 1260	1	25	682	168	362	D
37324-23-5	Aroclor 1262	1	25	362	168	362	U
11100-14-4	Aroclor 1268	1	25	362	168	362	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*28.998*	*21.4*	*73.7*	*40 - 133*	
Tetrachlorometaxylene	*1*	*28.998*	*21.5*	*74.3*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120812ECD7.D
Data file 2: /20201208.b/20201208.b/20120812ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0145-15RE1
Client ID:
Injection Date: 08-DEC-2020 23:55
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 25.0

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.008	-0.006	12751	5.397	-0.003	7121	1.2	1.2	0.4	Tetrachloro-m-xylene
13.195	-0.010	29667	13.943	-0.003	10758	1.2	1.0	13.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	74.3	74.6
Decachlorobiphenyl	73.7	64.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	735680	-6.5
Hexabromobiphenyl	2132987	2365963	10.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	520252	-18.1
Hexabromobiphenyl	665758	633070	-4.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

//target/share/chem4/ecd7.i/20201208.b/20120812ECD7.D 20K0145-15RE1 page

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.624	-0.004	52308	141.3	1	7.071	-0.002	38298	151.8
Aroclor-1016	2	6.995	-0.004	206206	174.8	2	7.667	-0.004	104275	183.1
Aroclor-1016	3	7.147	-0.003	73495	145.0	3	7.877	-0.003	26926	124.7
Aroclor-1016	4	7.543	-0.002	75164	272.8	4	8.049	-0.006	45029	348.0
~~Total Col1Ave (4 peaks):~~				~~183.5~~	~~Total Col2Ave (4 peaks):~~				~~201.9~~	~~RPD = 10~~
Corrected Ave (3 peaks):				153.7	Corrected Ave (3 peaks):				153.2	RPD = 0
Aroclor-1221	1	---			0.0	1	4.619	-0.050	3751	104.3
Aroclor-1221	2	5.398	-0.007	1039	7.7	2	6.072	-0.002	731	10.2
Aroclor-1221	3	5.676	-0.006	14145	40.7	3	6.416	-0.001	23859	179.1
~~Col1Ave: <3 Quant Peaks~~						~~Col2Ave:~~			~~97.9~~	
Aroclor-1232	1	---			0.0	1	4.619	-0.051	3751	168.4
Aroclor-1232	2	6.624	-0.007	52308	348.3	2	7.071	-0.006	38298	333.2
Aroclor-1232	3	6.995	-0.007	206206	420.2	3	7.667	-0.006	104275	434.5
Aroclor-1232	4	8.298	-0.011	135651	930.4	4	8.049	-0.008	45029	823.1
Total Col1Ave (3 peaks):				566.3	Total Col2Ave (4 peaks):				439.8	RPD = 25
Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				312.0	
Aroclor-1242	1	6.624	-0.007	52308	183.3	1	7.071	-0.005	38298	194.7
Aroclor-1242	2	6.995	-0.008	206206	234.2	2	7.667	-0.006	104275	228.9
Aroclor-1242	3	8.298	-0.010	135651	464.2	3	8.982	-0.009	75894	422.2
Aroclor-1242	4	8.589	-0.013	148942	468.2	4	9.415	-0.012	79425	448.9
Total Col1Ave (4 peaks):				337.5	Total Col2Ave (4 peaks):				323.7	RPD = 4
Corrected Ave (3 peaks):				293.9	Corrected Ave (3 peaks):				281.9	RPD = 4
Aroclor-1248	1	7.479	-0.004	86282	224.9	1	8.134	-0.003	39695	225.0
Aroclor-1248	2	7.947	-0.005	136086	233.9	2	8.554	-0.004	58031	251.4
Aroclor-1248	3	8.355	-0.007	197238	229.3	3	8.982	-0.005	75894	230.8
Aroclor-1248	4	8.589	-0.007	148942	299.5	4	9.415	-0.007	79425	246.4
Total Col1Ave (4 peaks):				246.9	Total Col2Ave (4 peaks):				238.4	RPD = 3
Corrected Ave (3 peaks):				229.4	Corrected Ave (3 peaks):				234.1	RPD = 2
Aroclor-1254	1	8.664	-0.008	96340	110.5	1	9.282	-0.003	31000	83.4
Aroclor-1254	2	8.735	-0.005	51986	110.1	2	9.415	0.038	79425	4~~61~~.6
Aroclor-1254	3	9.051	0.012	150056	2~~58~~.5	3	9.813	-0.004	19714	80.1
Aroclor-1254	4	9.174	-0.001	167194	139.7	4	9.963	-0.004	47904	82.6
Aroclor-1254	5	9.865	-0.007	80508	101.4	5	10.191	-0.006	53264	88.9
Total Col1Ave (5 peaks):				144.0	Total Col2Ave (5 peaks):				159.3	RPD = 10
Corrected Ave (4 peaks):				115.4	Corrected Ave (4 peaks):				83.8	RPD = 32
Aroclor-1260	1	10.393	-0.007	34624	37.6	1	11.035	-0.005	12908	33.4
Aroclor-1260	2	10.714	-0.007	32678	35.6	2	11.500	-0.004	16273	39.9
Aroclor-1260	3	11.064	-0.008	90831	38.1	3	11.750	-0.005	35793	34.3
Aroclor-1260	4	11.468	-0.007	45807	37.6	4	12.340	-0.003	23521	34.7
Aroclor-1260	5	11.575	-0.006	20766	39.1	NS	---			----
Total Col1Ave (5 peaks):				37.6	Total Col2Ave (4 peaks):				35.6	RPD = 6
Corrected Ave (4 peaks):				37.2	Corrected Ave (3 peaks):				34.1	RPD = 9
Aroclor-1262	1	10.393	-0.012	34624	25.1	1	11.035	-0.008	12908	19.6
Aroclor-1262	2	11.064	-0.013	90831	29.3	2	11.750	-0.008	35793	24.8
Aroclor-1262	3	11.575	-0.011	20766	24.1	3	12.269	-0.007	10199	22.0
Aroclor-1262	4	11.646	-0.011	26970	23.9	4	13.058	-0.008	9649	18.3
~~Total Col1Ave (4 peaks):~~				~~25.6~~	~~Total Col2Ave (4 peaks):~~				~~21.2~~	~~RPD = 19~~
Corrected Ave (3 peaks):				24.4	Corrected Ave (3 peaks):				20.0	RPD = 20
Aroclor-1268	1	11.575	-0.013	20766	6.6	1	12.269	-0.005	10199	6.7
Aroclor-1268	2	11.646	-0.011	26970	8.0	2	12.340	0.000	23521	14.2
Aroclor-1268	3	12.050	0.013	14089	5.2	3	12.725	-0.004	534	0.4
Aroclor-1268	4	12.793	-0.019	19111	1.8	4	13.536	-0.010	2431	0.5
Total Col1Ave (4 peaks):				5.4	Total Col2Ave (4 peaks):				5.4	RPD = 1
Corrected Ave (3 peaks):				4.5	Corrected Ave (3 peaks):				2.5	RPD = 56*

Total PCB Area Col1 (5.114 - 13.105) = 3606471 Col1 Total PCB = 0.3 ppm*

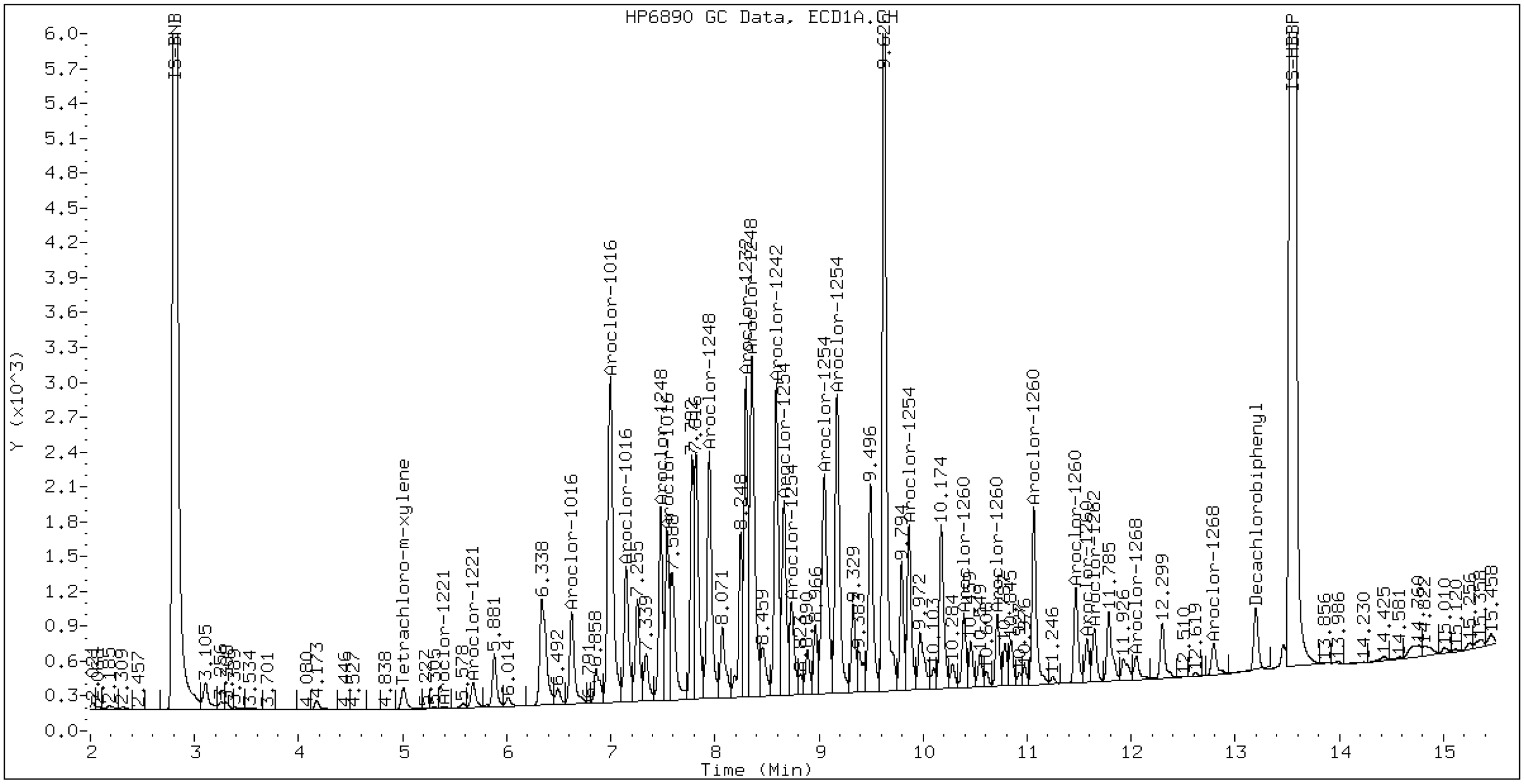
Total PCB Area Col2 (5.114 - 13.105) = 1523741 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

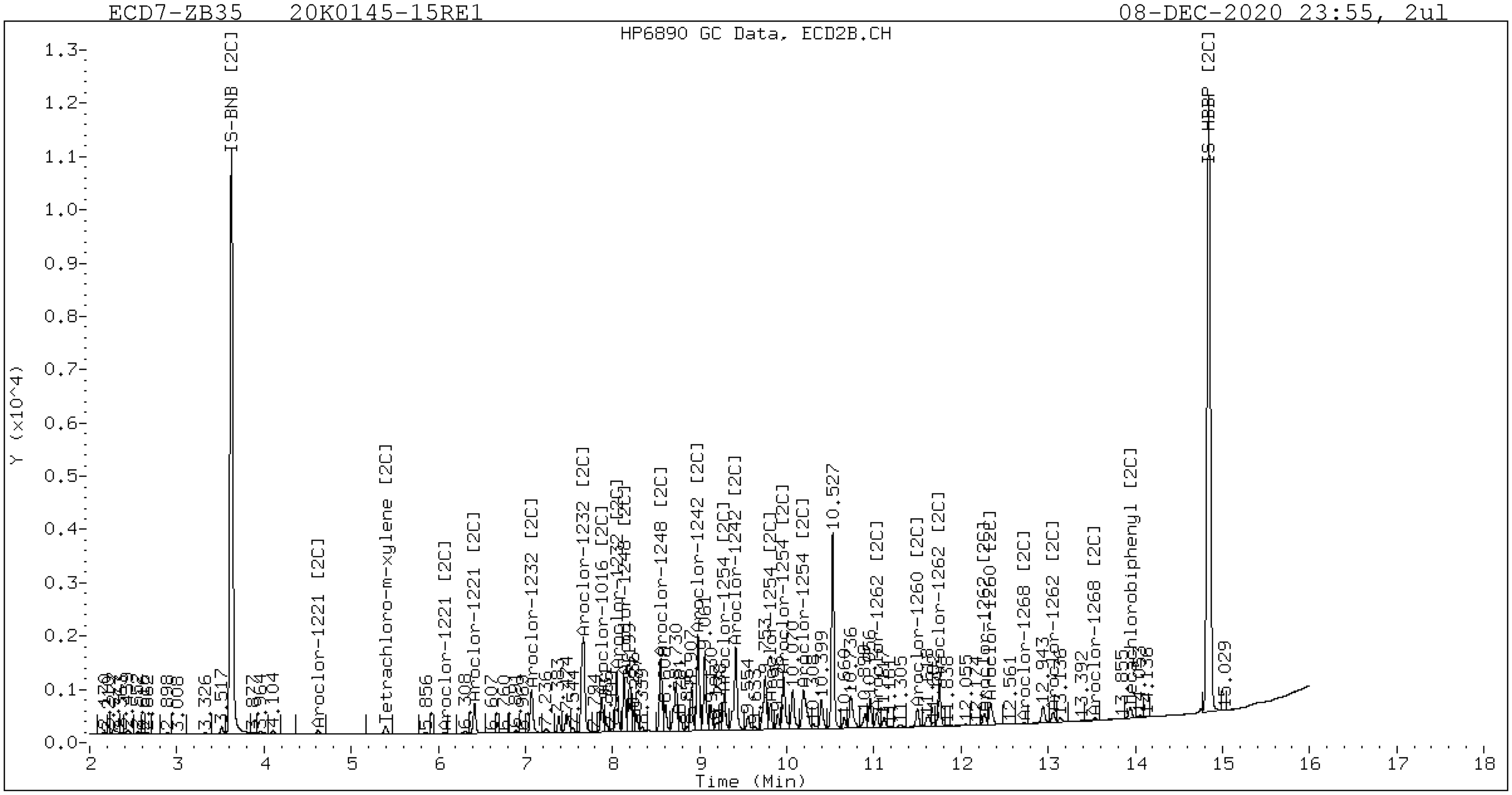
PCB Dual Column Chromatograms

ECD7-ZB5 20K0145-15RE1 08-DEC-2020 23:55, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0145-15RE1 08-DEC-2020 23:55, 2ul

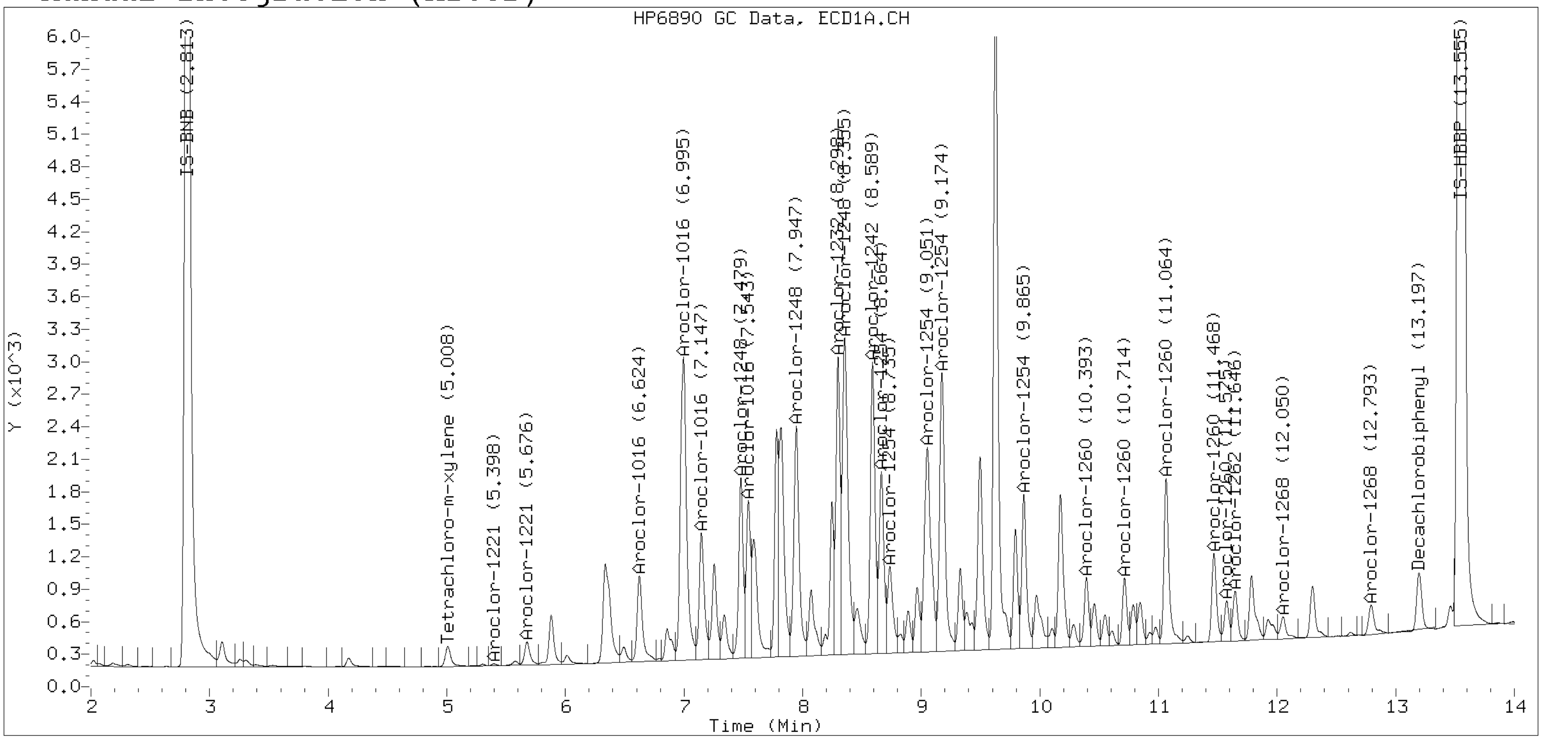


ZB-35 Manual Integration: NO

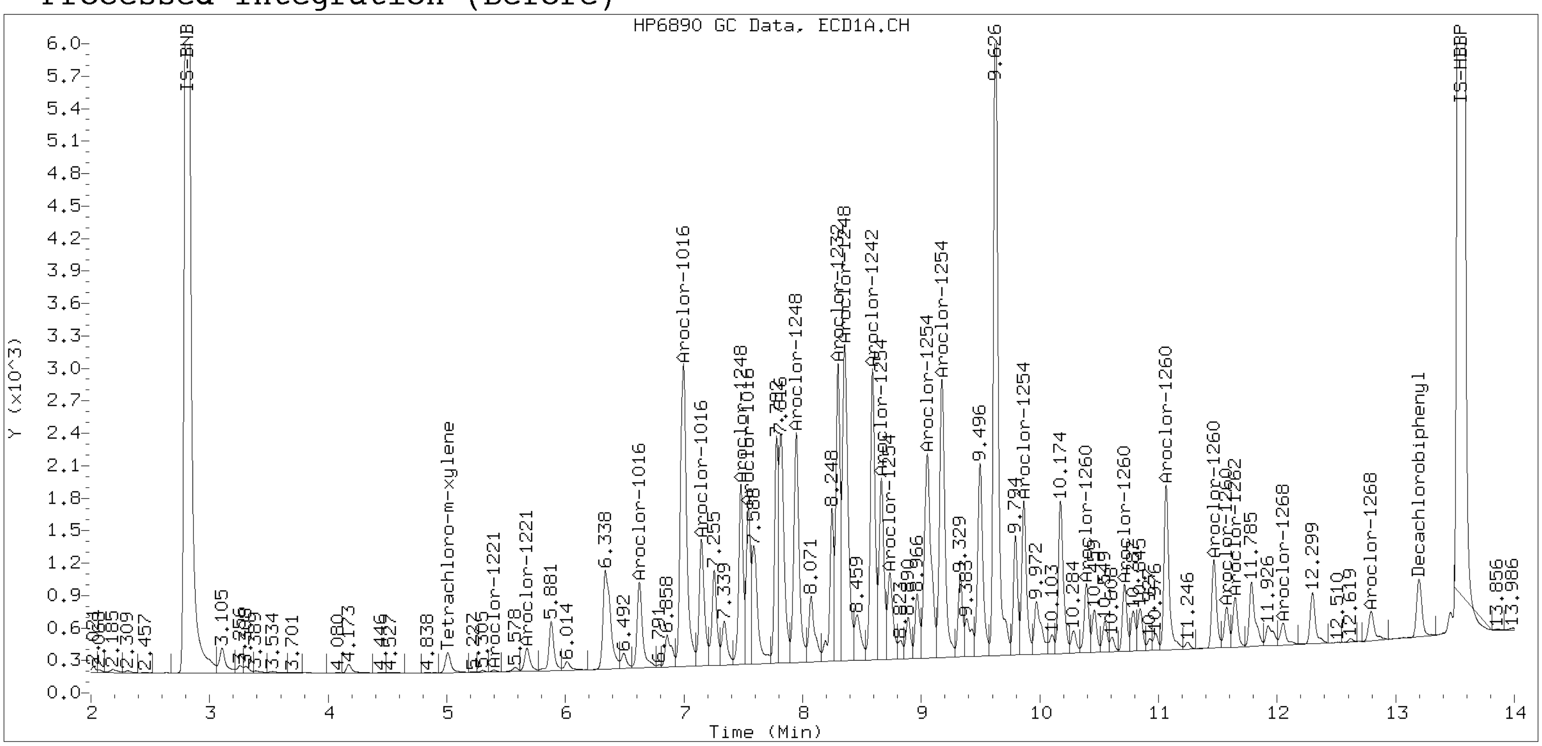
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201208.b/20120812ECD7.D   Injection Date: 08-DEC-2020 23:5

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10S-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	20K0145-17 A	File ID:	20120745ECD7.D
Sampled:	11/06/20 08:30	Prepared:	11/19/20 23:00	Analyzed:	12/08/20 08:23
% Solids:	93.16	Preparation:	EPA 3546 (Microwave)	Initial/Final:	7.27 g Wet / 5 mL
Batch:	BIK0599	Sequence:	SIL0131	Calibration:	DL00019
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	14.8	5.9	14.8	U
11104-28-2	Aroclor 1221	1	1	14.8	5.9	14.8	U
11141-16-5	Aroclor 1232	1	1	14.8	5.9	14.8	U
53469-21-9	Aroclor 1242	1	1	14.8	5.9	14.8	U
12672-29-6	Aroclor 1248	1	1	45.1	5.9	14.8	
11097-69-1	Aroclor 1254	1	1	92.9	5.9	14.8	
11096-82-5	Aroclor 1260	1	1	34.9	6.9	14.8	
37324-23-5	Aroclor 1262	1	1	14.8	6.9	14.8	U
11100-14-4	Aroclor 1268	1	1	14.8	6.9	14.8	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*29.530*	*17.1*	*57.9*	*40 - 133*	
Tetrachlorometaxylene	*1*	*29.530*	*17.8*	*60.3*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120745ECD7.D
Data file 2: /20201207.b/20201207.b/20120745ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 20K0145-17
Client ID:
Injection Date: 08-DEC-2020 08:23
Report Date: 12/13/2020 14:25
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.012	-0.001	291351	5.397	-0.002	177530	24.1	26.7	10.2	Tetrachloro-m-xylene
13.198	-0.007	558320	13.941	-0.006	265182	23.1	26.5	13.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	60.3	66.7
Decachlorobiphenyl	57.9	66.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	829149	5.4
Hexabromobiphenyl	2132987	2268978	6.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	580380	-8.7
Hexabromobiphenyl	665758	609224	-8.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.621	-0.007	6533	15.7	1	7.071	-0.003	6077	21.6
Aroclor-1016	2	6.994	-0.005	19866	14.9	2	7.663	-0.007	10962	17.2
Aroclor-1016	3	7.145	-0.004	9164	16.0	3	7.876	-0.005	4451	18.5
Aroclor-1016	4	7.541	-0.005	26891	86.6	4	8.041	-0.013	3585	24.8
	~~Total Col1Ave (4 peaks):~~			~~33.3~~		~~Total Col2Ave (4 peaks):~~			~~20.5~~	~~RPD = 47*~~
	Corrected Ave (3 peaks):			15.5		Corrected Ave (3 peaks):			19.1	RPD = 21
Aroclor-1221	1	3.953	-0.019	811	7.5	1	4.621	-0.049	855	21.3
Aroclor-1221	2	---			0.0	2	6.084	0.009	5274	66.1
Aroclor-1221	3	5.671	-0.011	2273	5.8	3	6.416	-0.001	8579	57.7
	~~Col1Ave: <3 Quant Peaks~~					~~Col2Ave:~~			~~48.4~~	
Aroclor-1232	1	3.953	-0.020	811	12.5	1	4.621	-0.049	855	34.4
Aroclor-1232	2	6.621	-0.010	6533	38.6	2	7.071	-0.006	6077	47.4
Aroclor-1232	3	6.994	-0.008	19866	35.9	3	7.663	-0.009	10962	40.9
Aroclor-1232	4	8.296	-0.013	35473	215.9	4	8.041	-0.016	3585	58.7
	~~Total Col1Ave (4 peaks):~~			~~75.7~~		~~Total Col2Ave (4 peaks):~~			~~45.4~~	~~RPD = 50*~~
	Corrected Ave (3 peaks):			29.0		Corrected Ave (3 peaks):			40.9	RPD = 34
Aroclor-1242	1	6.621	-0.008	6533	20.3	1	7.071	-0.003	6077	27.7
Aroclor-1242	2	6.994	-0.007	19866	20.0	2	7.663	-0.007	10962	21.6
Aroclor-1242	3	8.296	-0.010	35473	107.7	3	8.981	-0.007	16073	80.1
Aroclor-1242	4	8.583	-0.016	35797	99.8	4	9.411	-0.011	12703	64.4
	~~Total Col1Ave (4 peaks):~~			~~62.0~~		~~Total Col2Ave (4 peaks):~~			~~48.4~~	~~RPD = 25~~
	Corrected Ave (3 peaks):			46.7		Corrected Ave (3 peaks):			37.9	RPD = 21
Aroclor-1248	1	7.479	-0.004	29931	69.2	1	8.135	-0.003	16077	81.7
Aroclor-1248	2	7.944	-0.009	19234	29.3	2	8.554	-0.005	11884	46.1
Aroclor-1248	3	8.368	0.007	79562	82.1	3	8.981	-0.007	16073	43.8
Aroclor-1248	4	8.583	-0.014	35797	63.9	4	9.411	-0.011	12703	35.3
	Total Col1Ave (4 peaks):			61.1		Total Col2Ave (4 peaks):			51.7	RPD = 17
	Corrected Ave (3 peaks):			54.1		Corrected Ave (3 peaks):			41.8	RPD = 26
Aroclor-1254	1	8.662	-0.009	101179	103.0	1	9.280	-0.006	38093	91.9
Aroclor-1254	2	8.732	-0.008	50268	94.5	2	9.371	-0.008	14617	76.2
Aroclor-1254	3	9.042	0.002	123359	188.6	3	9.811	-0.007	25826	94.1
Aroclor-1254	4	9.167	-0.009	165215	122.5	4	9.960	-0.008	60722	93.8
Aroclor-1254	5	9.862	-0.010	108211	120.9	5	10.187	-0.012	76684	114.8
	Total Col1Ave (5 peaks):			125.9		Total Col2Ave (5 peaks):			94.2	RPD = 29
	Corrected Ave (4 peaks):			110.2		Corrected Ave (4 peaks):			89.0	RPD = 21
Aroclor-1260	1	10.389	-0.011	41424	47.0	1	11.033	-0.007	13107	35.2
Aroclor-1260	2	10.712	-0.009	33599	38.1	2	11.502	-0.002	26836	68.4
Aroclor-1260	3	11.062	-0.011	98856	43.2	3	11.749	-0.007	39377	39.3
Aroclor-1260	4	11.465	-0.009	47713	40.8	4	12.336	-0.007	27501	42.2
Aroclor-1260	5	11.574	-0.006	34074	67.0	NS	---			----
	Total Col1Ave (5 peaks):			47.2		Total Col2Ave (4 peaks):			46.3	RPD = 2
	Corrected Ave (4 peaks):			42.3		Corrected Ave (3 peaks):			38.9	RPD = 8
Aroclor-1262	1	10.389	-0.016	41424	31.3	1	11.033	-0.011	13107	20.7
Aroclor-1262	2	11.062	-0.015	98856	33.2	2	11.749	-0.010	39377	28.3
Aroclor-1262	3	11.574	-0.012	34074	41.3	3	12.264	-0.011	13800	30.9
Aroclor-1262	4	11.643	-0.014	32520	30.0	4	13.056	-0.010	12439	24.6
	~~Total Col1Ave (4 peaks):~~			~~34.0~~		~~Total Col2Ave (4 peaks):~~			~~26.1~~	~~RPD = 26~~
	Corrected Ave (3 peaks):			31.5		Corrected Ave (3 peaks):			24.5	RPD = 25
Aroclor-1268	1	11.574	-0.014	34074	11.3	1	12.264	-0.009	13800	9.4
Aroclor-1268	2	11.643	-0.014	32520	10.0	2	12.336	-0.003	27501	17.2
Aroclor-1268	3	12.039	0.002	18683	7.2	3	12.720	-0.009	2588	1.9
Aroclor-1268	4	12.794	-0.019	37151	3.6	4	13.534	-0.012	12583	2.8
	~~Total Col1Ave (4 peaks):~~			~~8.0~~		~~Total Col2Ave (4 peaks):~~			~~7.9~~	~~RPD = 2~~
	Corrected Ave (3 peaks):			6.9		Corrected Ave (3 peaks):			4.7	RPD = 38

Total PCB Area Col1 (5.113 - 13.105) = 2372427 Col1 Total PCB = 0.2 ppm*

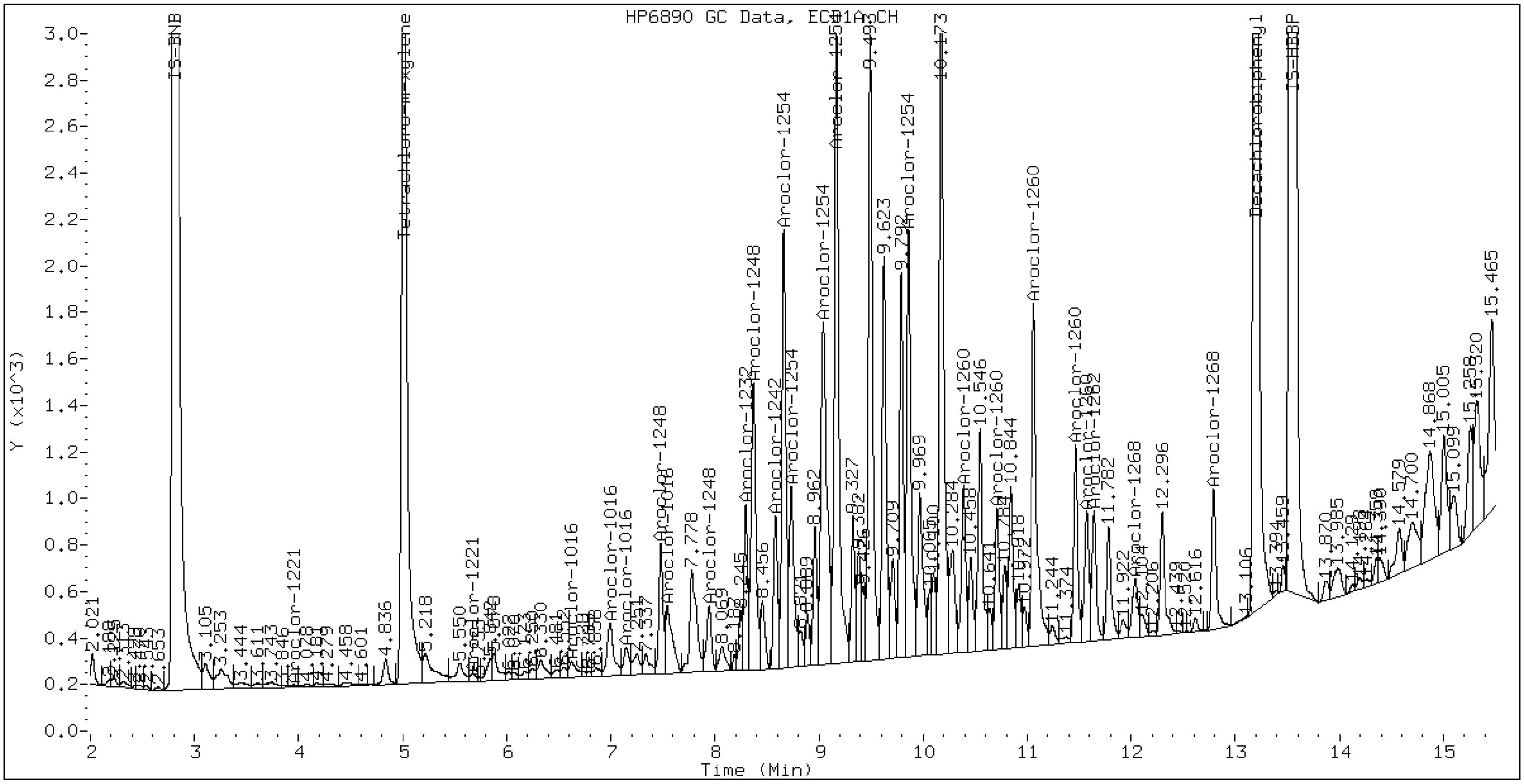
Total PCB Area Col2 (5.113 - 13.105) = 1205357 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

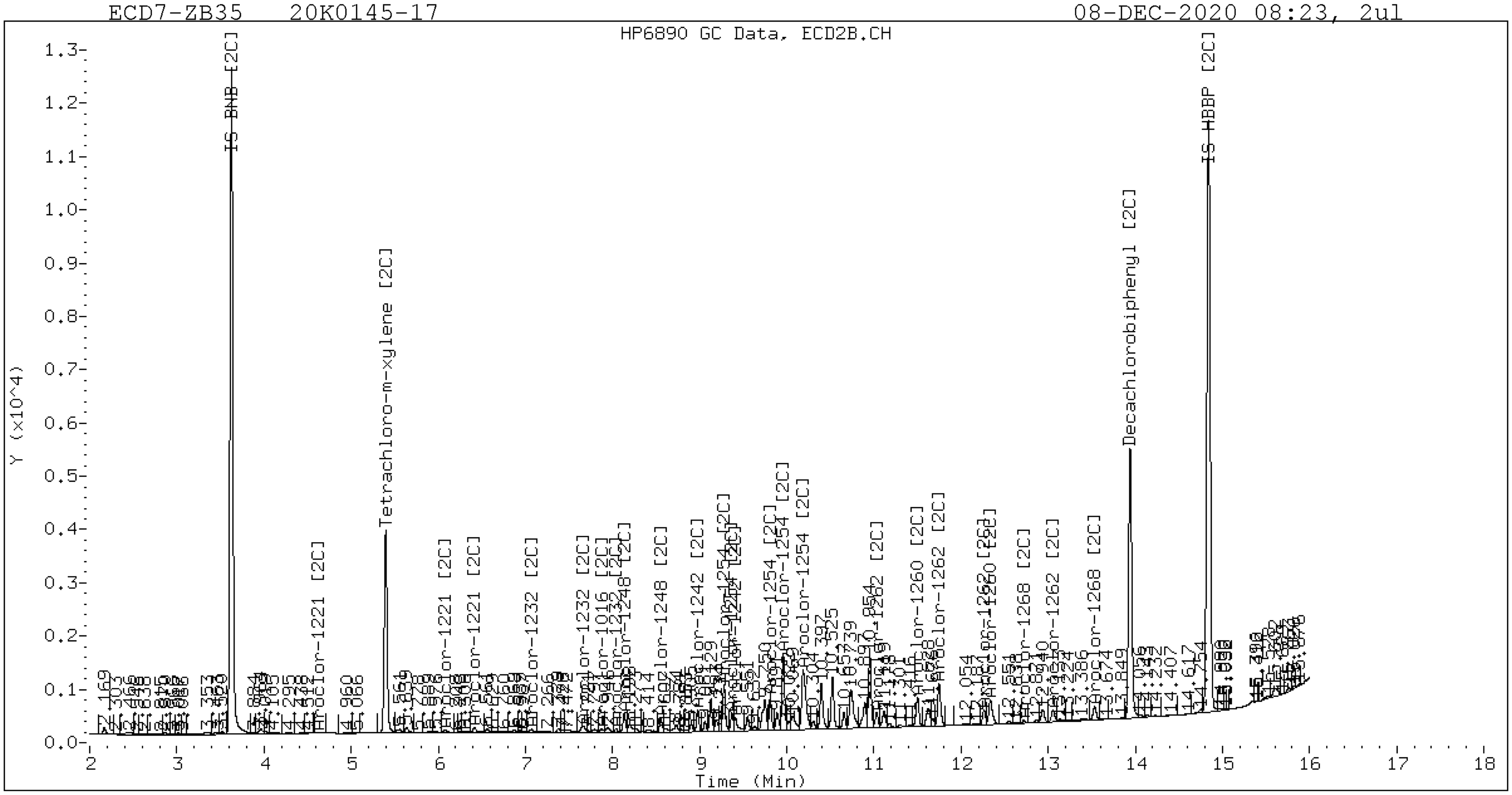
PCB Dual Column Chromatograms

ECD7-ZB5 20K0145-17 08-DEC-2020 08:23, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 20K0145-17 08-DEC-2020 08:23, 2ul

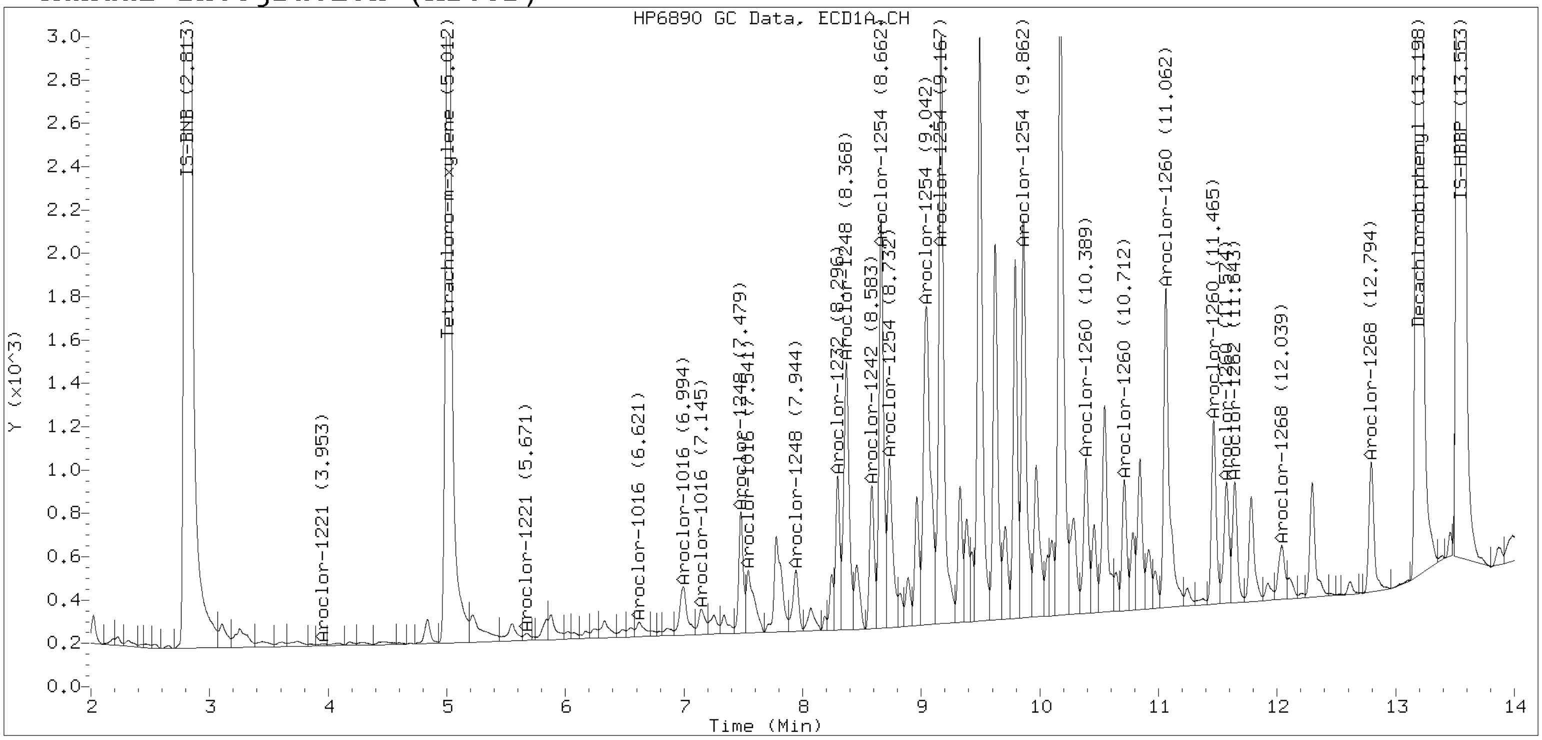


ZB-35 Manual Integration: NO

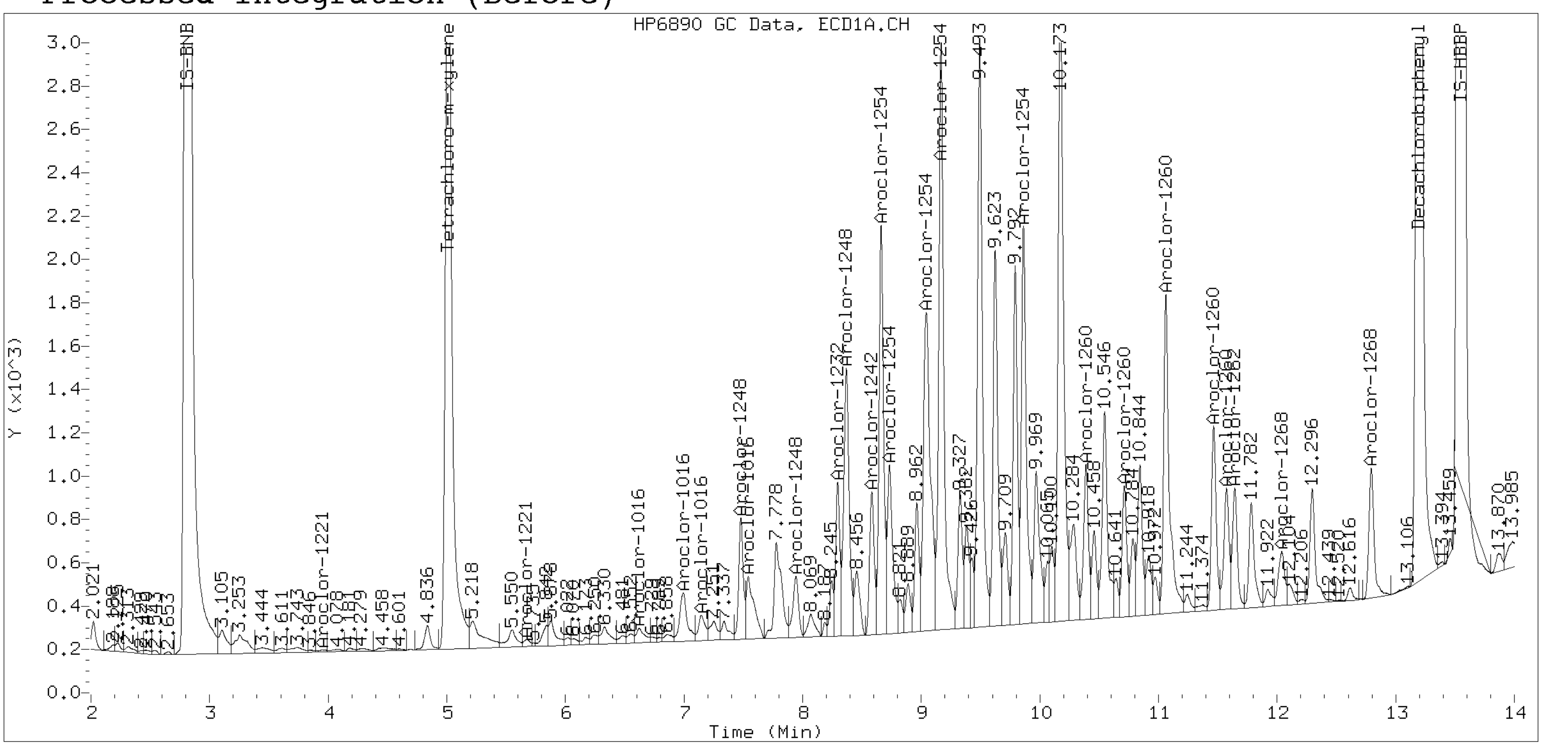
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120745ECD7.D   Injection Date: 08-DEC-2020 08:2

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Batch: BIK0599 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
PP1-5	20K0145-02	20120736ECD7.D	11/19/20 23:00	2020 Samples
PP1-7.5	20K0145-03	20120737ECD7.D	11/19/20 23:00	2020 Samples
PP2-5	20K0145-07	20120738ECD7.D	11/19/20 23:00	2020 Samples
PP2-7.5	20K0145-08	20120739ECD7.D	11/19/20 23:00	2020 Samples
PP5-2	20K0145-11	20120740ECD7.D	11/19/20 23:00	2020 Samples
PP5-8	20K0145-13	20120741ECD7.D	11/19/20 23:00	2020 Samples
P8-10S-1	20K0145-15	20120812ECD7.D	11/19/20 23:00	2020 Samples
P8-10S-5	20K0145-17	20120745ECD7.D	11/19/20 23:00	2020 Samples
Blank	BIK0599-BLK1	20120734ECD7.D	11/19/20 23:00	
LCS	BIK0599-BS1	20120735ECD7.D	11/19/20 23:00	
PP5-8	BIK0599-MS1	20120742ECD7.D	11/19/20 23:00	
PP5-8	BIK0599-MSD1	20120743ECD7.D	11/19/20 23:00	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0599

Prepared using: EPA 3546 (Microwave)
8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L) in Solid

Matrix: Solid **Date Prepared:** 11/19/20 **Balance ID:** B139298002 **Set Up By:** CTO 11/19/20

Analysis: 8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)

Lab Number & Container	% Solids	Initial (g) Target Dry: 5 (Wet)	Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL)	(Opt) Silica Gel C/U (1:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
20K0145-02 A	70.0	(7.14)	7.31	5.0mL	5.0mL	1mL Y/N	5	1.0	
20K0145-03 A	70.0	(7.14)	7.51	5.0mL	5.0mL	1mL Y/N	5	1.0	
20K0145-07 A	70.0	(7.14)	7.61	5.0mL	5.0mL	1mL Y/N	5	1.0	
20K0145-08 A	70.0	(7.14)	7.38	5.0mL	5.0mL	1mL Y/N	5	1.0	
20K0145-11 A	70.0	(7.14)	7.57	5.0mL	5.0mL	1mL Y/N	5	1.0	
20K0145-13 A	70.0	(7.14)	7.50	5.0mL	5.0mL	1mL Y/N	5	1.0	
20K0145-15 A	70.0	(7.14)	7.27	5.0mL	5.0mL	1mL Y/N	5	1.0	
20K0145-17 A	70.0	(7.14)	7.27	5.0mL	5.0mL	1mL Y/N	5	1.0	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 5 (Wet)	Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL)	(Opt) Silica Gel C/U (1:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BIK0599-BLK1	100.0	(5.00)	5.00	5.0mL	5.0mL	1mL Y/N	5	1.0	
BIK0599-BS1	100.0	(5.00)	5.00	5.0mL	5.0mL	1mL Y/N	5	1.0	
BIK0599-MS1	70.0	() (7.14)	7.36	5.0mL	5.0mL	1mL Y/N	5	1.0	Use 20K0145-13
BIK0599-MSD1	70.0	() (7.14)	7.28	5.0mL	5.0mL	1mL Y/N	5	1.0	Use 20K0145-13

SH 11/19/20 BH 12/7/20 11/19/20 2300

Client ID verified By Date Preparation Reviewed By Date Extraction Date and Time

Printed: 11/19/2020 11:27:51AM

3017F

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0599

Prepared using: EPA 3546 (Microwave)

8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L) in Solid

Prep Steps

Prep Steps
Microwave 1 2 3 DR 11/24/20 CT **Analyst/Date**
KD 100°C Hexane Exchange (2 X 20 mL) 1 2 3 4 5 6 VLB 12/4/20 **Analyst/Date**
TurboVap Pre Cleanups 1 2 3 4 5 BH 12/7/20 **Analyst/Date**
TurboVap Post Cleanups 1 2 3 4 5 6 BH 12/7/20 **Analyst/Date**
Vialing BH 12/7/20 **Analyst/Date**

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CT/DR Date: 11/24/20	
Anhydrous Sodium Sulfate	I010747
Neutral Glass Wool	I010044
1:1 Hexane/Acetone	I010590
Hexane	I009769
KD Analyst: VLB Date: 12/4/20	
Hexane	I009769
~~Neutral Glass Wool~~ Sodium Sulfate	I010747
Vialing Analyst: BH Date: 12/7/20	
Hexane	I009769
Concentrated Sulfuric Acid	I007088
Tetrabutylammonium hydrogensulfate (TBAS)	I010916
Sodium Sulfite	I010339
Silica Gel (SPE) Darts	I009985

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID		Vol uL	Analyst	Witness
Surrogate 2µg/mL	N	I010565 Exp: 02/14/2021	100µL	SH	ar
Spike 20µg/mL	1	I008526 Exp: 03/22/2021	125µL	SH	ar

(V) indicates a virtual standard combining two or more physical standards. In these cases the Standard ID refers to the virtual standard, not the parent standards.

If a Standard ID is missing, but should be present, check the standard definition in Element LIMS to be sure Standard Info 6 has the correct letter or number designator matching the vial designator inthe Standard ID column. If it is correct, check the batch and bench sheet in Element LIMS to be sure the correct standards are selected for surrogate(s) and spike(s).

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ORGANICS PREPARATION BENCH SHEET

Batch: BIK0599

Prepared using: EPA 3546 (Microwave)

8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L) in Solid

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3 inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in Refridgerator 05. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into E. flask using a funnel with neutral glasswool plug. 8. Re-homogenize and rinse with 1:1 Hexane/Acetone. 9. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 10. KD on 100° bath. 11. Exchange (2 X with 20mL) Hexane. 12. TurboVap. 13. Vial 5 mL into labelled scintillation vials using Hexane. Acid/Sulfur cleanups REQUIRED 14. TurboVap (if Silica Clean). 15. Vial with Hexane. A. Need Total Solids Y / N B. Archive/Freeze Y / N	

If T/S+screens are done.

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Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PCB   Extraction Batch BIK0599

Total Solids Batch: ______   Work Order(s): 20K0145

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

3056F

Revision 15
07/01/19

Batch: BIK0599
Batch Comment: **NONE**
Project: ICS-Former NW Cooperage
Project Comments: <G> Need J-flag Binary files for Aroclors .cdf
Need Acid/Silica Clean-ups for TPHDx if requested
Need MS/MSD if enough volume.
Need organic instrument files uploaded to the secure site for DMD (Raleigh Farlow).
</G>
Work Order:20K0145
Work Order Comments: <G> Need J-flag Binary files for Aroclors .cdf
Need Acid/Silica Clean-ups for TPHDx if requested
Need MS/MSD if enough volume.
Need organic instrument files uploaded to the secure site for DMD (Raleigh Farlow).
</G>
Sample: 20K0145-02
Sample Comments: **NONE**
Sample: 20K0145-03
Sample Comments: **NONE**
Sample: 20K0145-07
Sample Comments: **NONE**
Sample: 20K0145-08
Sample Comments: **NONE**
Sample: 20K0145-11
Sample Comments: **NONE**
Sample: 20K0145-13
Sample Comments: **NONE**

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CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Cleanup Batch:	CIL0072	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665A Sulfuric Acid Cleanup	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
PP2-7.5	20K0145-08	20120739ECD7.D	12/07/2020	
PP1-7.5	20K0145-03	20120737ECD7.D	12/07/2020	
P8-10S-5	20K0145-17	20120745ECD7.D	12/07/2020	
PP1-5	20K0145-02	20120736ECD7.D	12/07/2020	
Matrix Spike Dup	BIK0599-MSD1	20120743ECD7.D	12/07/2020	
Matrix Spike	BIK0599-MS1	20120742ECD7.D	12/07/2020	
LCS	BIK0599-BS1	20120735ECD7.D	12/07/2020	
PP2-5	20K0145-07	20120738ECD7.D	12/07/2020	
PP5-2	20K0145-11	20120740ECD7.D	12/07/2020	
PP5-8	20K0145-13	20120741ECD7.D	12/07/2020	
P8-10S-1	20K0145-15	20120812ECD7.D	12/07/2020	
Blank	BIK0599-BLK1	20120734ECD7.D	12/07/2020	

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CLEANUP BENCH SHEET

CIL0072

Matrix: Solid **Cleanup using: Organics - EPA 3665A Sulfuric Acid Cleanup** **Printed: 12/7/2020 12:45:18PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
20K0145-17	A	P8-10S-5	A 01	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-15	A	P8-10S-1	A 01	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-07	A	PP2-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-08	A	PP2-7.5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-11	A	PP5-2	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-13	A	PP5-8	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-02	A	PP1-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-03	A	PP1-7.5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
BIK0599-MSD1	-	Matrix Spike Dup	-	5	5	-	12/7/2020	BH	
BIK0599-MS1	-	Matrix Spike	-	5	5	-	12/7/2020	BH	
BIK0599-BLK1	-	Blank	-	5	5	-	12/7/2020	BH	
BIK0599-BS1	-	LCS	-	5	5	-	12/7/2020	BH	

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CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Cleanup Batch:	CIL0073	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
P8-10S-5	20K0145-17	20120745ECD7.D	12/07/2020	
LCS	BIK0599-BS1	20120735ECD7.D	12/07/2020	
Matrix Spike	BIK0599-MS1	20120742ECD7.D	12/07/2020	
Matrix Spike Dup	BIK0599-MSD1	20120743ECD7.D	12/07/2020	
PP1-7.5	20K0145-03	20120737ECD7.D	12/07/2020	
Blank	BIK0599-BLK1	20120734ECD7.D	12/07/2020	
P8-10S-1	20K0145-15	20120812ECD7.D	12/07/2020	
PP1-5	20K0145-02	20120736ECD7.D	12/07/2020	
PP5-8	20K0145-13	20120741ECD7.D	12/07/2020	
PP5-2	20K0145-11	20120740ECD7.D	12/07/2020	
PP2-7.5	20K0145-08	20120739ECD7.D	12/07/2020	
PP2-5	20K0145-07	20120738ECD7.D	12/07/2020	

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CLEANUP BENCH SHEET

CIL0073

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup** **Printed: 12/7/2020 12:46:05PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
20K0145-17	A	P8-10S-5	A 01	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-15	A	P8-10S-1	A 01	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-07	A	PP2-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-08	A	PP2-7.5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-11	A	PP5-2	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-13	A	PP5-8	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-02	A	PP1-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-03	A	PP1-7.5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
BIK0599-MSD1	-	Matrix Spike Dup	-	5	5	-	12/7/2020	BH	
BIK0599-MS1	-	Matrix Spike	-	5	5	-	12/7/2020	BH	
BIK0599-BLK1	-	Blank	-	5	5	-	12/7/2020	BH	
BIK0599-BS1	-	LCS	-	5	5	-	12/7/2020	BH	

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CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Cleanup Batch:	CIL0074	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
P8-10S-1	20K0145-15	20120812ECD7.D	12/07/2020	
Matrix Spike	BIK0599-MS1	20120742ECD7.D	12/07/2020	
LCS	BIK0599-BS1	20120735ECD7.D	12/07/2020	
Blank	BIK0599-BLK1	20120734ECD7.D	12/07/2020	
PP5-8	20K0145-13	20120741ECD7.D	12/07/2020	
PP5-2	20K0145-11	20120740ECD7.D	12/07/2020	
PP2-7.5	20K0145-08	20120739ECD7.D	12/07/2020	
PP2-5	20K0145-07	20120738ECD7.D	12/07/2020	
PP1-7.5	20K0145-03	20120737ECD7.D	12/07/2020	
Matrix Spike Dup	BIK0599-MSD1	20120743ECD7.D	12/07/2020	
P8-10S-5	20K0145-17	20120745ECD7.D	12/07/2020	
PP1-5	20K0145-02	20120736ECD7.D	12/07/2020	

Analytical Resources, Incorporated
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CLEANUP BENCH SHEET

CIL0074

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup** **Printed: 12/7/2020 12:46:41PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
20K0145-17	A	P8-10S-5	A 01	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-15	A	P8-10S-1	A 01	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-07	A	PP2-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-08	A	PP2-7.5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-11	A	PP5-2	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-13	A	PP5-8	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-02	A	PP1-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
20K0145-03	A	PP1-7.5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	12/7/2020	BH	
BIK0599-MSD1	-	Matrix Spike Dup	-	5	5	-	12/7/2020	BH	
BIK0599-MS1	-	Matrix Spike	-	5	5	-	12/7/2020	BH	
BIK0599-BLK1	-	Blank	-	5	5	-	12/7/2020	BH	
BIK0599-BS1	-	LCS	-	5	5	-	12/7/2020	BH	

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Form I
METHOD BLANK DATA SHEET
EPA 8082A

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc			Project:	ICS-Former NW Cooperage
Matrix:	Solid	Laboratory ID:	BIK0599-BLK1	File ID:	20120734ECD7.D
Sampled:	N/A	Prepared:	11/19/20 23:00	Analyzed:	12/08/20 04:36
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	5 g / 5 mL
Batch:	BIK0599	Sequence:	SIL0131	Calibration:	DL00019
Instrument:	ECD7	Column:	ZB5	Cleanups:	Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
12674-11-2	Aroclor 1016	1	20.0	U	8.0	20.0
11104-28-2	Aroclor 1221	1	20.0	U	8.0	20.0
11141-16-5	Aroclor 1232	1	20.0	U	8.0	20.0
53469-21-9	Aroclor 1242	1	20.0	U	8.0	20.0
12672-29-6	Aroclor 1248	1	20.0	U	8.0	20.0
11097-69-1	Aroclor 1254	1	20.0	U	8.0	20.0
11096-82-5	Aroclor 1260	1	20.0	U	9.3	20.0
37324-23-5	Aroclor 1262	1	20.0	U	9.3	20.0
11100-14-4	Aroclor 1268	1	20.0	U	9.3	20.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	40.000	30.1	75.2	40 - 133	
Tetrachlorometaxylene	40.000	30.8	77.0	53 - 120	
Decachlorobiphenyl [2C]	40.000	36.3	90.7	40 - 133	
Tetrachlorometaxylene [2C]	40.000	30.8	77.0	53 - 120	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120734ECD7.D
Data file 2: /20201207.b/20201207.b/20120734ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BIK0599-BLK1
Client ID:
Injection Date: 08-DEC-2020 04:36
Report Date: 12/13/2020 14:24
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	0.000	334924	5.398	-0.001	203769	30.8	30.8	0.0	Tetrachloro-m-xylene
13.203	-0.001	671938	13.946	-0.002	354497	30.1	36.3	18.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	77.0	77.0
Decachlorobiphenyl	75.2	90.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	746030	-5.2
Hexabromobiphenyl	2132987	2101760	-1.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	577430	-9.1
Hexabromobiphenyl	665758	593721	-10.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

```
                              ZB5 Col                              ZB35 Col
 Aroclor   Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
 ==========================================================================================
 Aroclor-1016 1   6.666   0.037      1431     3.8      1    7.131   0.057      877     3.1
 Aroclor-1016 2   7.001   0.002       767     0.6      2    7.652  -0.018      480     0.8
 Aroclor-1016 3   7.189   0.040      3347     6.5      3    7.944   0.063      775     3.2
 Aroclor-1016 4   7.538  -0.007       703     2.5      4     ---                       0.0
       Total Col1Ave (4 peaks):     3.4      Total Col2Ave (3 peaks):     2.4   RPD = 35
       Corrected Ave (3 peaks):     2.3                     Corrected Ave: < 3 Peaks

 Aroclor-1221 1   3.926  -0.046       315     3.2      1     ---                       0.0
 Aroclor-1221 2     ---                      0.0     2    6.084   0.010     2411    30.4
 Aroclor-1221 3   5.667  -0.015       460     1.3      3    6.402  -0.015      530     3.6
             Col1Ave: <3 Quant Peaks                 Col2Ave: <3 Quant Peaks

 Aroclor-1232 1   3.926  -0.047       315     5.4      1     ---                       0.0
 Aroclor-1232 2   6.666   0.034      1431     9.4      2    7.131   0.054      877     6.9
 Aroclor-1232 3   7.001  -0.001       767     1.5      3    7.652  -0.020      480     1.8
 Aroclor-1232 4   8.385   0.076      3487    23.6      4     ---                       0.0
       Total Col1Ave (4 peaks):    10.0                Col2Ave: <3 Quant Peaks

 Aroclor-1242 1   6.666   0.036      1431     4.9      1    7.131   0.057      877     4.0
 Aroclor-1242 2   7.001   0.000       767     0.9      2    7.652  -0.018      480     0.9
 Aroclor-1242 3   8.385   0.079      3487    11.8      3     ---                       0.0
 Aroclor-1242 4   8.546  -0.054      2669     8.3      4     ---                       0.0
       Total Col1Ave (4 peaks):     6.5                Col2Ave: <3 Quant Peaks

 Aroclor-1248 1   7.489   0.006      1241     3.2      1     ---                       0.0
 Aroclor-1248 2   7.988   0.035      2941     5.0      2     ---                       0.0
 Aroclor-1248 3   8.385   0.024      3487     4.0      3     ---                       0.0
 Aroclor-1248 4   8.546  -0.052      2669     5.3      4     ---                       0.0
       Total Col1Ave (4 peaks):     4.4                Col2Ave: <3 Quant Peaks

 Aroclor-1254 1   8.680   0.009      1937     2.2      1     ---                       0.0
 Aroclor-1254 2      ---                     0.0     2     ---                       0.0
 Aroclor-1254 3   9.029  -0.011      1036     1.8      3    9.767  -0.050      966     3.5
 Aroclor-1254 4     ---                      0.0     4    9.882  -0.086      562     0.9
 Aroclor-1254 5   9.918   0.045      2406     3.0      5     ---                       0.0
       Total Col1Ave (3 peaks):     2.3                Col2Ave: <3 Quant Peaks

 Aroclor-1260 1  10.466   0.066      3018     3.7      1   10.953  -0.086     1368     3.8
 Aroclor-1260 2  10.745   0.024      5761     7.1      2     ---                       0.0
 Aroclor-1260 3  11.122   0.049     86559    40.9      3     ---                       0.0
 Aroclor-1260 4  11.499   0.024      2295     2.1      4   12.260  -0.084    31875    50.2
 Aroclor-1260 5  11.581   0.001       954     2.0      NS    ---                      ----
       Total Col1Ave (5 peaks):    11.2                Col2Ave: <3 Quant Peaks

 Aroclor-1262 1  10.466   0.061      3018     2.5      1   10.953  -0.091     1368     2.2
 Aroclor-1262 2  11.122   0.044     86559    31.4      2     ---                       0.0
 Aroclor-1262 3  11.581  -0.005       954     1.2      3   12.260  -0.015    31875    73.2
 Aroclor-1262 4  11.671   0.013      1520     1.5      4   13.141   0.075     3376     6.8
       Total Col1Ave (4 peaks):     9.2      Total Col2Ave (3 peaks):    27.4   RPD = 100*
       Corrected Ave (3 peaks):     1.7                     Corrected Ave: < 3 Peaks

 Aroclor-1268 1  11.581  -0.007       954     0.3      1   12.260  -0.013    31875    22.4
 Aroclor-1268 2  11.671   0.014      1520     0.5      2     ---                       0.0
 Aroclor-1268 3     ---                      0.0     3   12.727  -0.002     1297     1.0
 Aroclor-1268 4  12.799  -0.014     16456     1.7      4   13.514  -0.032    11825     2.7
       Total Col1Ave (3 peaks):     0.9      Total Col2Ave (3 peaks):     8.7   RPD = 164*
       Corrected Ave: < 3 Peaks                    Corrected Ave: < 3 Peaks
```

Total PCB Area Col1 (5.113 - 13.105) = 432469 Col1 Total PCB = 0.0 ppm*

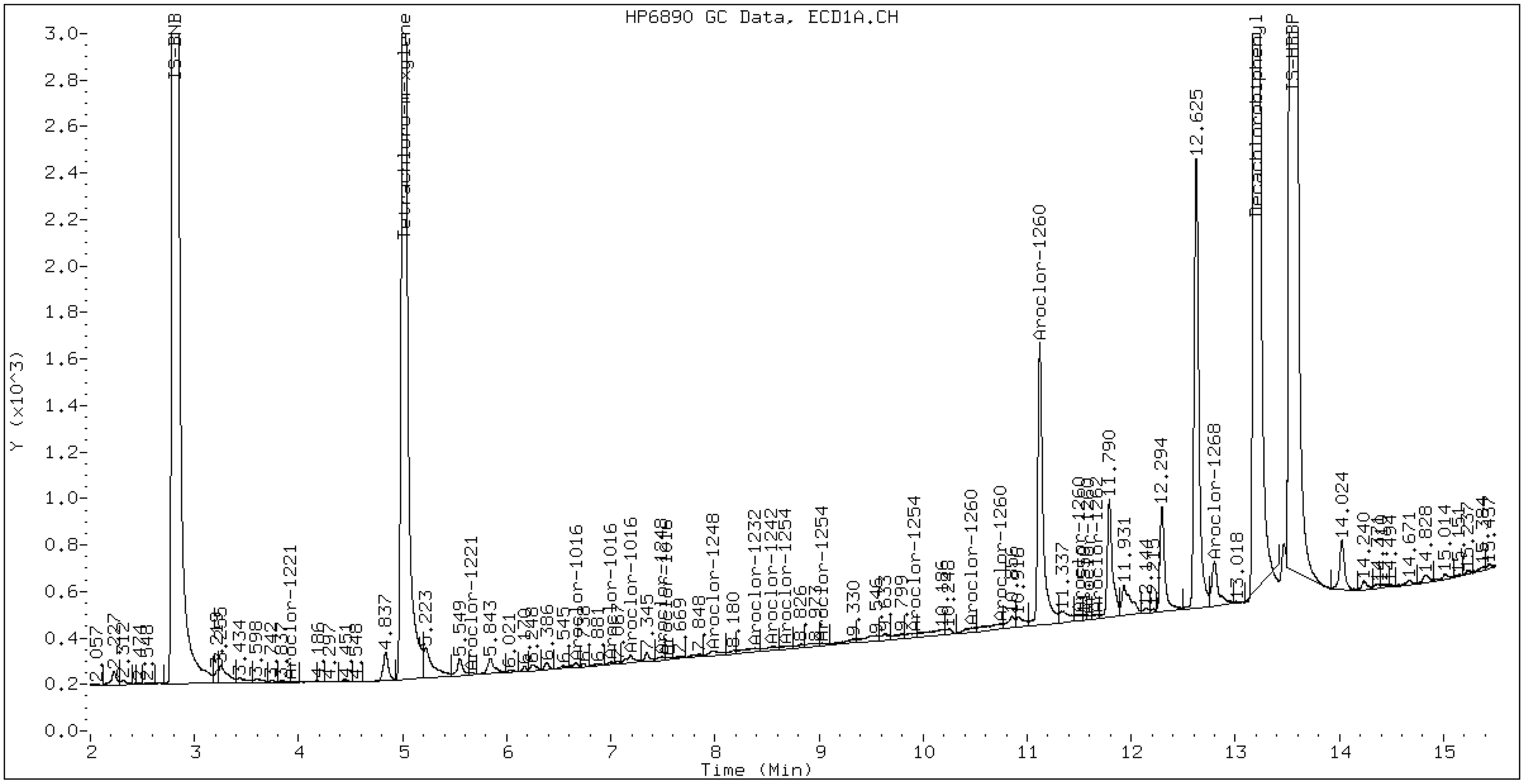
Total PCB Area Col2 (5.113 - 13.105) = 285468 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

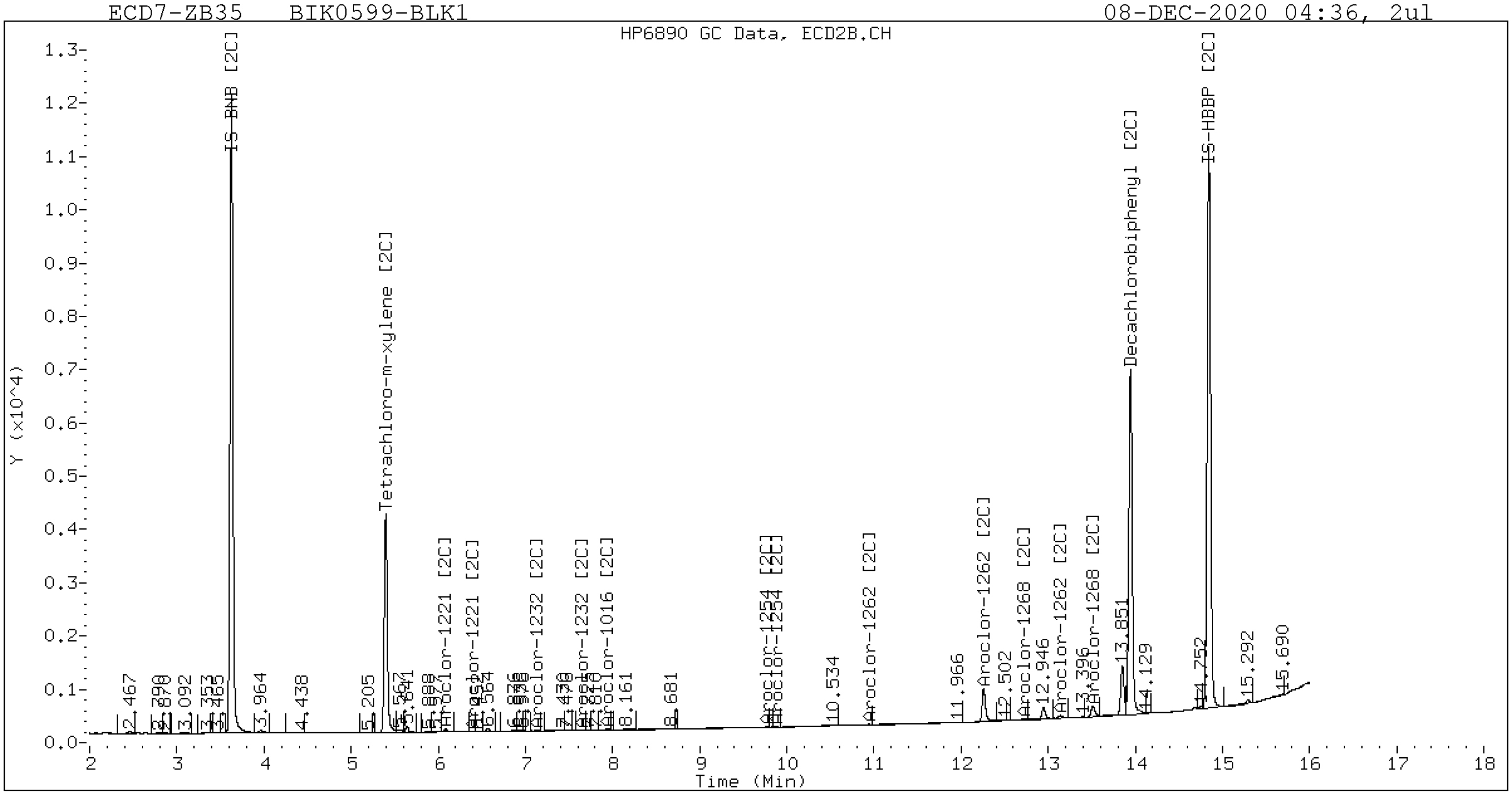
PCB Dual Column Chromatograms

ECD7-ZB5 BIK0599-BLK1 08-DEC-2020 04:36, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 BIK0599-BLK1 08-DEC-2020 04:36, 2ul

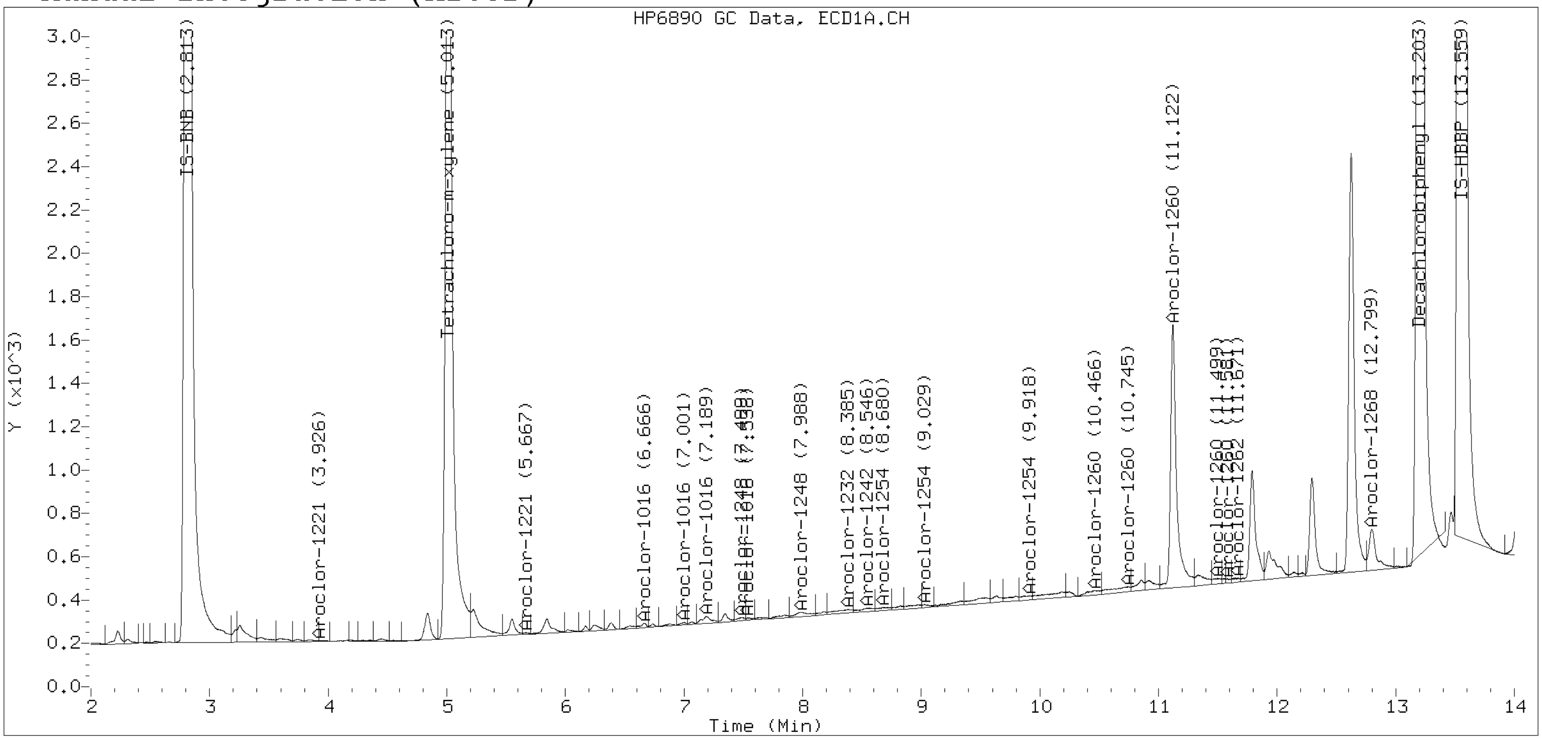


ZB-35 Manual Integration: NO

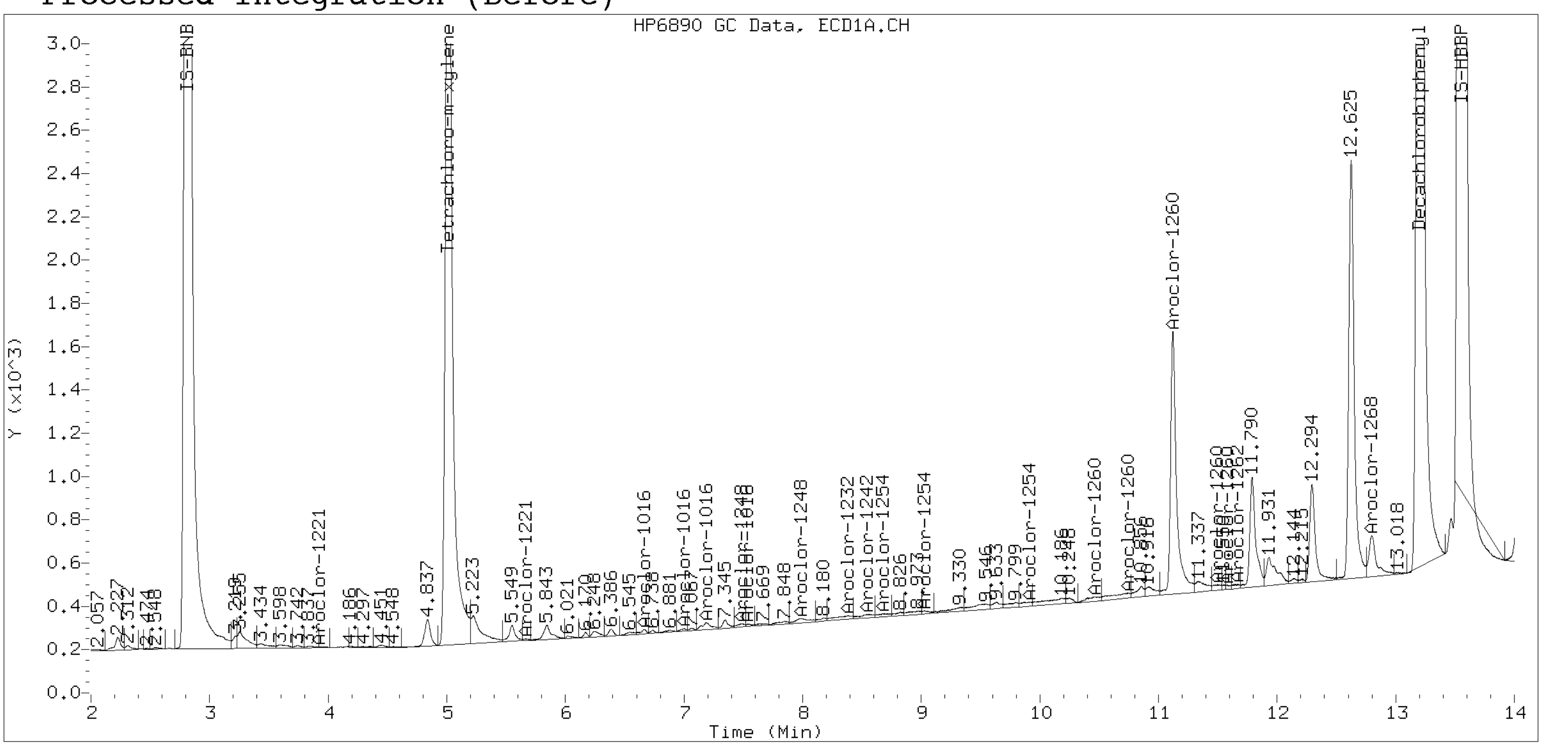
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120734ECD7.D   Injection Date: 08-DEC-2020 04:3

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY
EPA 8082A

Laboratory: Analytical Resources, Inc. | SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc | Project: ICS-Former NW Cooperage
Matrix: Solid | Analyzed: 12/08/20 04:57
Batch: BIK0599 | Laboratory ID: BIK0599-BS1
Preparation: EPA 3546 (Microwave) | Sequence Name: LCS
Initial/Final: 5 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Aroclor 1016 [2C]	500	394		78.9	52 - 120
Aroclor 1260 [2C]	500	467		93.3	57 - 120

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

```
Data file 1: /20201207.b/20120735ECD7.D                  ARI ID: BIK0599-BS1
Data file 2: /20201207.b/20201207.b/20120735ECD7.D       Client ID:
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m     Injection Date: 08-DEC-2020 04:57
Compound Sublist: PCB.sub                                Report Date: 12/13/2020 14:25
Instrument, Inj. Vol.: ecd7.i, 2ul                       Matrix: NONE
Quant Method: Internal Std                               Dilution Factor:  1.0
```

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	-0.000	321284	5.398	-0.002	193527	27.6	27.2	1.5	Tetrachloro-m-xylene
13.204	-0.001	655725	13.945	-0.002	340967	27.8	33.0	17.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	68.9	67.9
Decachlorobiphenyl	69.4	82.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	799401	1.6
Hexabromobiphenyl	2132987	2221269	4.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	621807	-2.2
Hexabromobiphenyl	665758	628752	-5.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.626	-0.002	143280	356.2	1	7.073	-0.001	112224	372.1
Aroclor-1016	2	6.998	-0.001	464509	362.4	2	7.668	-0.001	268604	394.5
Aroclor-1016	3	7.149	-0.000	195356	354.8	3	7.879	-0.002	102327	396.6
Aroclor-1016	4	7.545	-0.000	107672	359.6	4	8.053	-0.001	64093	414.4
Total Col1Ave (4 peaks):				358.2		Total Col2Ave (4 peaks):			394.4	RPD = 10
Corrected Ave (3 peaks):				356.9		Corrected Ave (3 peaks):			387.7	RPD = 8
Aroclor-1221	1	3.971	-0.001	1839	17.7	1	---			0.0
Aroclor-1221	2	5.399	-0.006	16480	112.0	2	6.073	-0.001	9262	108.4
Aroclor-1221	3	5.678	-0.005	85408	226.4	3	6.414	-0.003	42062	264.2
Total Col1Ave (3 peaks):				118.7		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.971	-0.003	1839	29.3	1	---			0.0
Aroclor-1232	2	6.626	-0.005	143280	878.0	2	7.073	-0.004	112224	816.9
Aroclor-1232	3	6.998	-0.003	464509	871.0	3	7.668	-0.004	268604	936.4
Aroclor-1232	4	8.303	-0.006	29245	184.6	4	8.053	-0.004	64093	980.3
Total Col1Ave (4 peaks):				490.7		Total Col2Ave (3 peaks):			911.2	RPD = 60*
Corrected Ave (3 peaks):				361.6		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.626	-0.003	143280	462.0	1	7.073	-0.001	112224	477.5
Aroclor-1242	2	6.998	-0.002	464509	485.6	2	7.668	-0.001	268604	493.3
Aroclor-1242	3	8.303	-0.002	29245	92.1	3	8.978	-0.009	26101	121.5
Aroclor-1242	4	8.592	-0.007	23602	68.3	4	9.422	0.000	4306	20.4
Total Col1Ave (4 peaks):				277.0		Total Col2Ave (4 peaks):			278.2	RPD = 0
Corrected Ave (3 peaks):				207.5		Corrected Ave (3 peaks):			206.4	RPD = 0
Aroclor-1248	1	7.482	-0.001	119661	287.0	1	8.137	-0.000	57141	271.0
Aroclor-1248	2	7.952	-0.001	178875	282.9	2	8.557	-0.001	82606	299.4
Aroclor-1248	3	8.377	0.015	147010	157.3	3	8.978	-0.009	26101	66.4
Aroclor-1248	4	8.592	-0.005	23602	43.7	4	9.422	0.000	4306	11.2
Total Col1Ave (4 peaks):				192.7		Total Col2Ave (4 peaks):			162.0	RPD = 17
Corrected Ave (3 peaks):				161.3		Corrected Ave (3 peaks):			116.2	RPD = 32
Aroclor-1254	1	8.668	-0.002	141534	149.4	1	9.286	-0.000	55279	124.5
Aroclor-1254	2	---			0.0	2	9.422	0.043	4306	20.9
Aroclor-1254	3	9.040	0.000	24089	38.2	3	9.818	0.001	8801	29.9
Aroclor-1254	4	9.168	-0.007	129260	99.4	4	9.987	0.019	136889	197.5
Aroclor-1254	5	9.867	-0.006	165820	192.1	5	10.220	0.020	182618	255.1
Total Col1Ave (4 peaks):				119.8		Total Col2Ave (5 peaks):			125.6	RPD = 5
Corrected Ave (3 peaks):				95.7		Corrected Ave (4 peaks):			93.2	RPD = 3
Aroclor-1260	1	10.400	0.000	351888	407.4	1	11.040	0.000	189516	493.2
Aroclor-1260	2	10.721	-0.000	346318	401.5	2	11.503	-0.001	186627	461.1
Aroclor-1260	3	11.073	0.000	967087	432.0	3	11.755	-0.000	480649	464.3
Aroclor-1260	4	11.475	0.001	438074	383.0	4	12.345	0.001	301396	448.0
Aroclor-1260	5	11.581	0.001	217591	436.8	NS	---			----
Total Col1Ave (5 peaks):				412.1		Total Col2Ave (4 peaks):			466.6	RPD = 12
Corrected Ave (4 peaks):				406.0		Corrected Ave (3 peaks):			457.8	RPD = 12
Aroclor-1262	1	10.400	-0.005	351888	271.6	1	11.040	-0.004	189516	290.0
Aroclor-1262	2	11.073	-0.005	967087	331.9	2	11.755	-0.004	480649	334.6
Aroclor-1262	3	11.581	-0.005	217591	269.1	3	12.273	-0.003	141399	306.5
Aroclor-1262	4	11.653	-0.004	282838	266.9	4	13.061	-0.004	142311	272.4
Total Col1Ave (4 peaks):				284.9		Total Col2Ave (4 peaks):			300.9	RPD = 5
Corrected Ave (3 peaks):				269.2		Corrected Ave (3 peaks):			289.7	RPD = 7
Aroclor-1268	1	11.581	-0.007	217591	73.7	1	12.273	-0.001	141399	93.6
Aroclor-1268	2	11.653	-0.004	282838	89.2	2	12.345	0.006	301396	182.8
Aroclor-1268	3	12.057	0.020	137758	54.1	3	12.725	-0.004	4615	3.3
Aroclor-1268	4	12.802	-0.010	79444	7.9	4	13.539	-0.006	31428	6.8
Total Col1Ave (4 peaks):				56.2		Total Col2Ave (4 peaks):			71.7	RPD = 24
Corrected Ave (3 peaks):				45.2		Corrected Ave (3 peaks):			34.6	RPD = 27

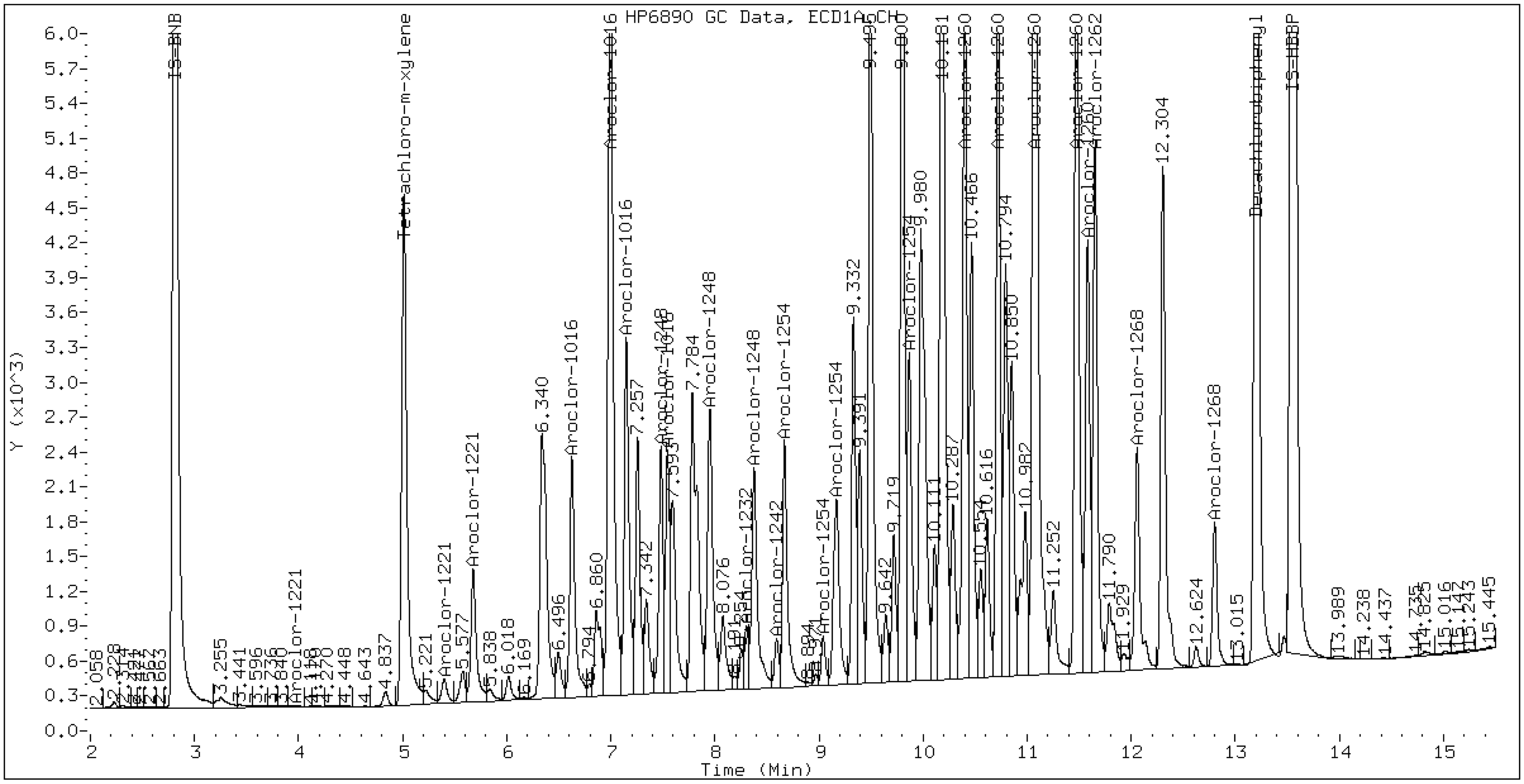
Total PCB Area Col1 (5.113 - 13.105) =	9327085	Col1 Total PCB = 0.8 ppm*
Total PCB Area Col2 (5.113 - 13.105) =	4566334	Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

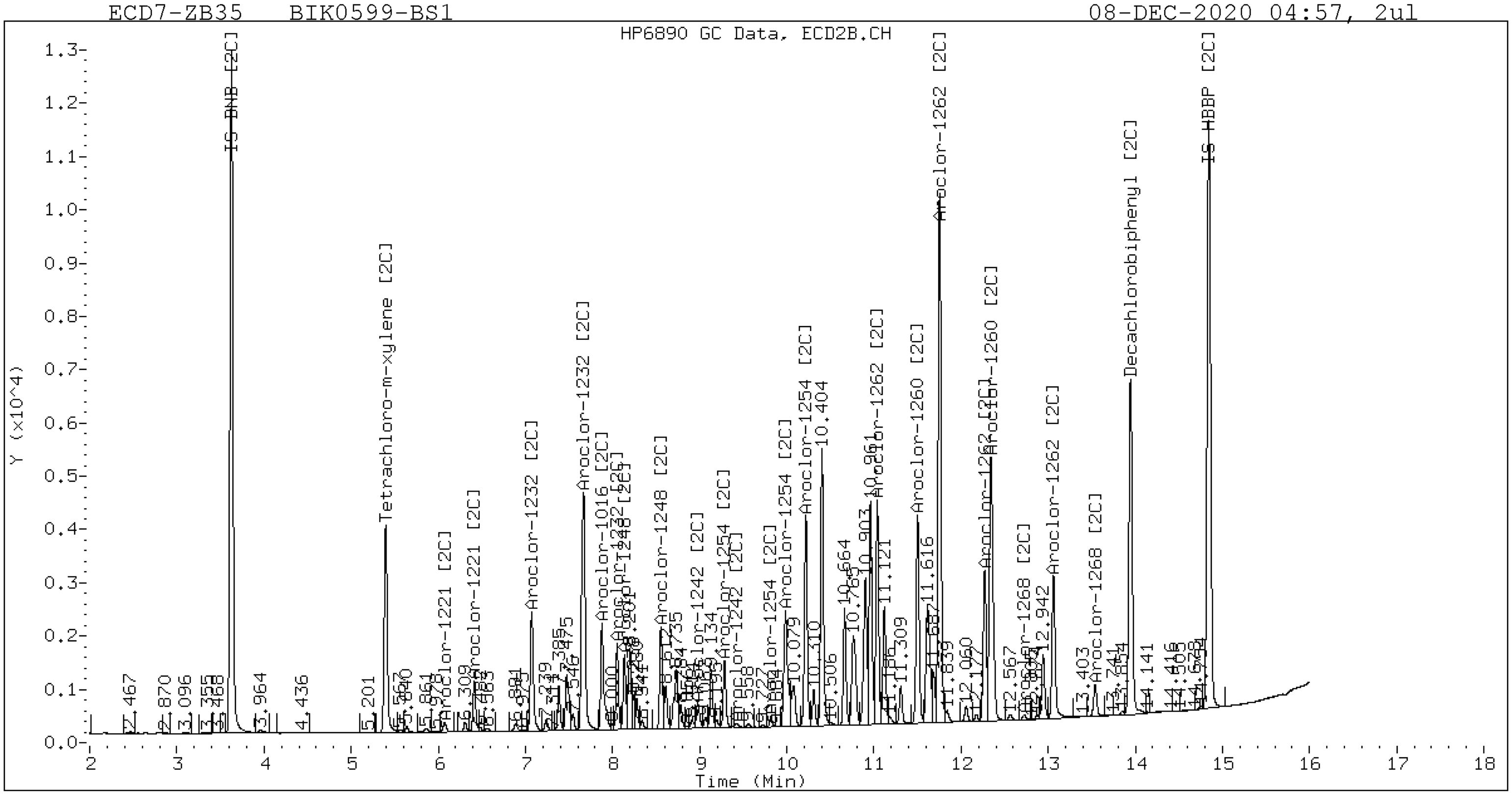
PCB Dual Column Chromatograms

ECD7-ZB5 BIK0599-BS1 08-DEC-2020 04:57, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 BIK0599-BS1 08-DEC-2020 04:57, 2ul

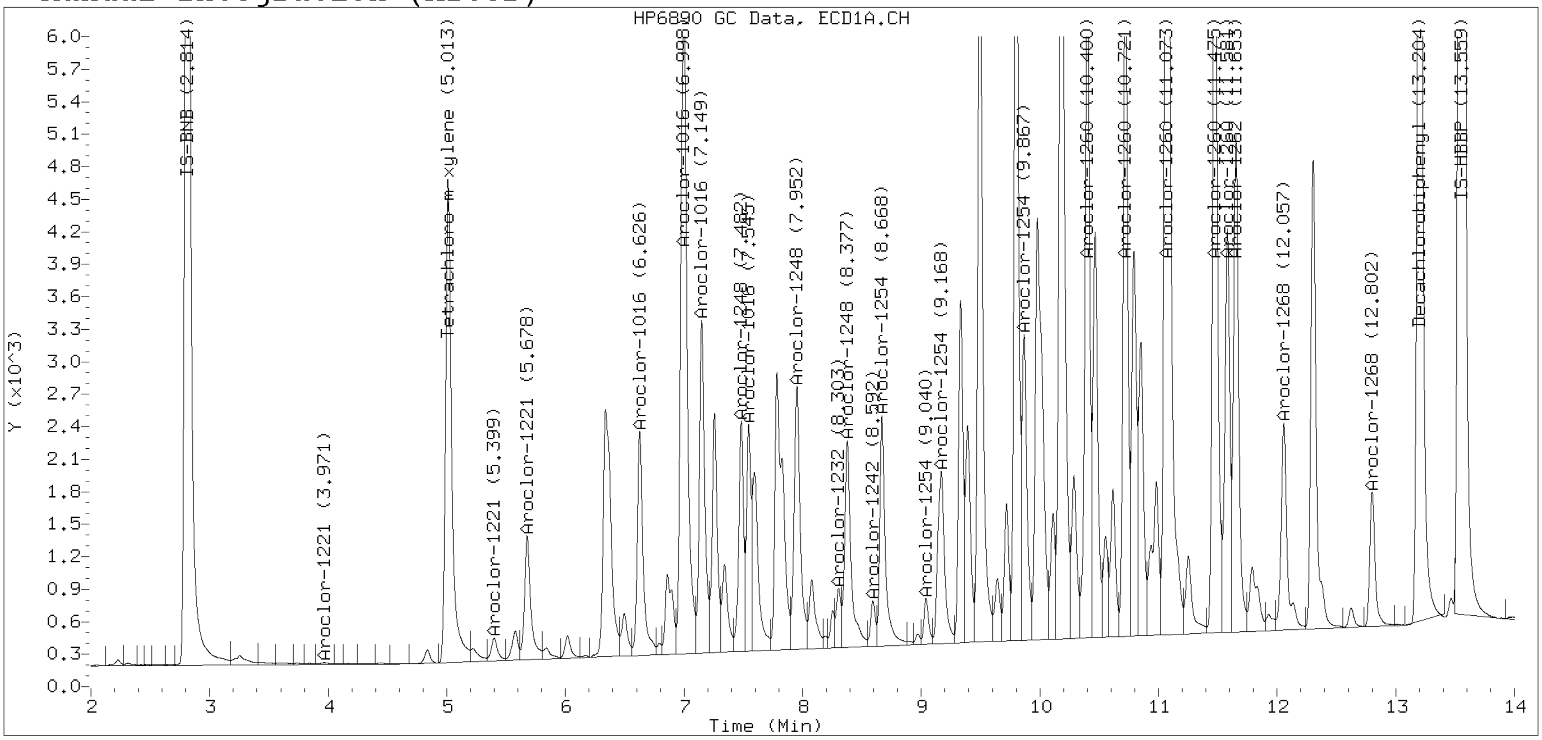


ZB-35 Manual Integration: NO

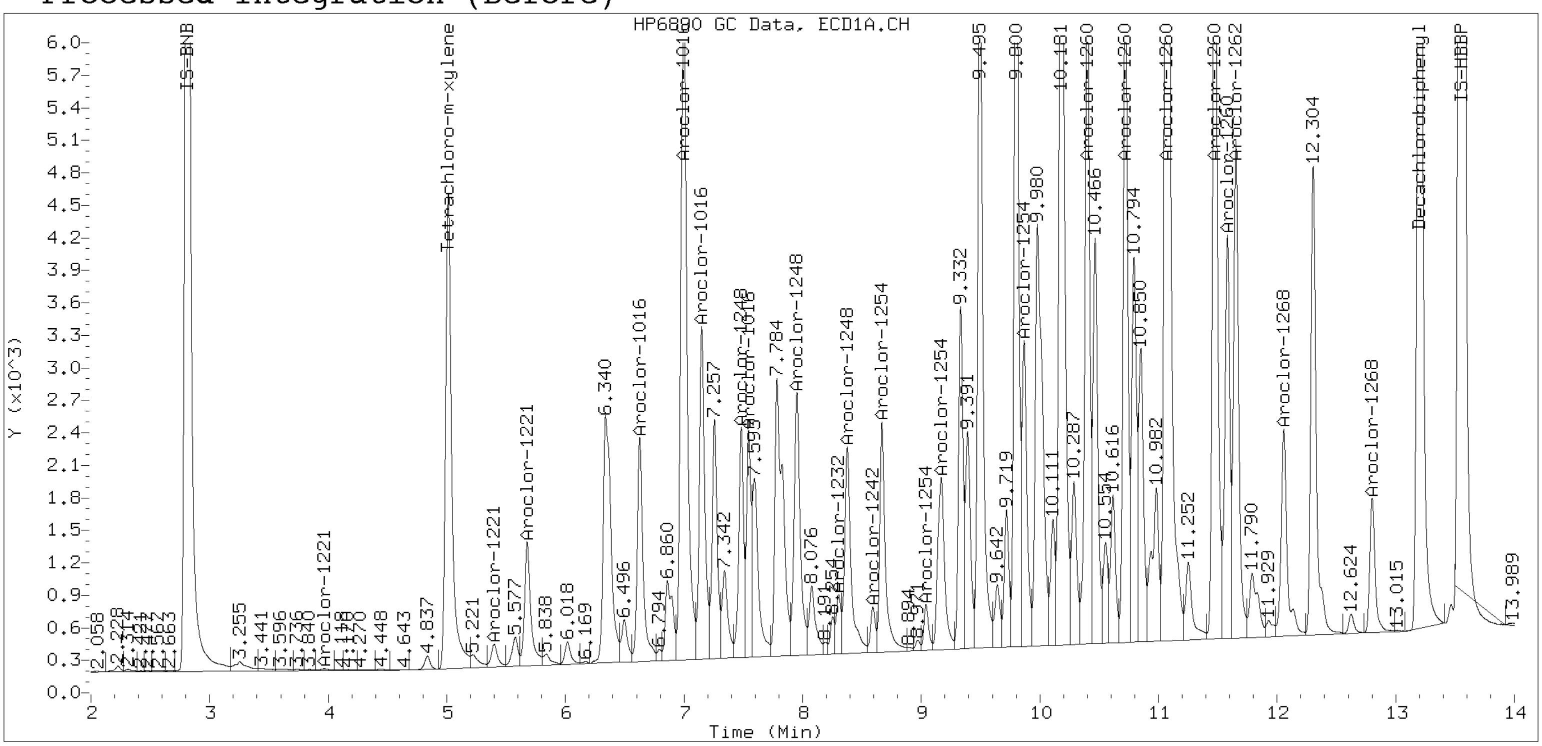
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120735ECD7.D   Injection Date: 08-DEC-2020 04:5

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP5-8

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	12/08/20 07:21
Batch:	BIK0599	Laboratory ID:	BIK0599-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	7.36 g / 5 mL	Source Sample:	PP5-8

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Aroclor 1016	480	ND	U	363		75.6	52 - 120
Aroclor 1260	480	ND	U	370		77.2	57 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PP5-8

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	12/08/20 07:41
Batch:	BIK0599	Laboratory ID:	BIK0599-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	7.28 g / 5 mL	Source Sample:	PP5-8

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Aroclor 1016	485	325		67.0	11.1	30	52 - 120
Aroclor 1260	485	330		68.0	11.5	30	57 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120742ECD7.D
Data file 2: /20201207.b/20201207.b/20120742ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BIK0599-MS1
Client ID:
Injection Date: 08-DEC-2020 07:21
Report Date: 12/13/2020 14:25
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	-0.000	334536	5.398	-0.001	202484	28.7	27.7	3.7	Tetrachloro-m-xylene
13.206	0.001	753225	13.947	-0.000	377972	27.9	32.1	13.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	71.7	69.1
Decachlorobiphenyl	69.9	80.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	799767	1.7
Hexabromobiphenyl	2132987	2535590	18.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	638662	0.5
Hexabromobiphenyl	665758	714781	7.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.627	-0.001	152596	379.1	1	7.073	-0.001	117422	379.0
Aroclor-1016	2	6.999	-0.000	493065	384.5	2	7.668	-0.001	282918	404.6
Aroclor-1016	3	7.148	-0.001	204713	371.6	3	7.879	-0.002	107851	407.0
Aroclor-1016	4	7.545	-0.001	112916	377.0	4	8.053	-0.002	67719	426.3
Total Col1Ave (4 peaks):				378.1		Total Col2Ave (4 peaks):			404.2	RPD = 7
Corrected Ave (3 peaks):				375.9		Corrected Ave (3 peaks):			396.9	RPD = 5
Aroclor-1221	1	3.977	0.005	1623	15.6	1	---			0.0
Aroclor-1221	2	5.400	-0.006	16809	114.2	2	6.073	-0.001	9784	111.5
Aroclor-1221	3	5.678	-0.004	88324	234.0	3	6.414	-0.003	44483	272.0
Total Col1Ave (3 peaks):				121.3		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.977	0.004	1623	25.8	1	---			0.0
Aroclor-1232	2	6.627	-0.005	152596	934.7	2	7.073	-0.004	117422	832.2
Aroclor-1232	3	6.999	-0.003	493065	924.2	3	7.668	-0.004	282918	960.3
Aroclor-1232	4	8.304	-0.005	34873	220.0	4	8.053	-0.005	67719	1008.4
Total Col1Ave (4 peaks):				526.2		Total Col2Ave (3 peaks):			933.6	RPD = 56*
Corrected Ave (3 peaks):				390.0		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.627	-0.002	152596	491.8	1	7.073	-0.001	117422	486.4
Aroclor-1242	2	6.999	-0.001	493065	515.2	2	7.668	-0.001	282918	505.9
Aroclor-1242	3	8.304	-0.002	34873	109.8	3	8.980	-0.008	28704	130.1
Aroclor-1242	4	8.593	-0.007	29203	84.4	4	9.422	-0.000	5947	27.4
Total Col1Ave (4 peaks):				300.3		Total Col2Ave (4 peaks):			287.4	RPD = 4
Corrected Ave (3 peaks):				228.7		Corrected Ave (3 peaks):			214.6	RPD = 6
Aroclor-1248	1	7.482	-0.001	127050	304.6	1	8.137	-0.001	60746	280.5
Aroclor-1248	2	7.952	-0.001	188490	298.0	2	8.557	-0.001	86913	306.7
Aroclor-1248	3	8.375	0.014	157729	168.7	3	8.980	-0.007	28704	71.1
Aroclor-1248	4	8.593	-0.004	29203	54.0	4	9.422	-0.000	5947	15.0
Total Col1Ave (4 peaks):				206.3		Total Col2Ave (4 peaks):			168.3	RPD = 20
Corrected Ave (3 peaks):				173.6		Corrected Ave (3 peaks):			122.2	RPD = 35
Aroclor-1254	1	8.668	-0.003	150557	158.9	1	9.285	-0.001	58669	128.6
Aroclor-1254	2	---			0.0	2	9.379	-0.001	1198	5.7
Aroclor-1254	3	9.041	0.001	29574	46.9	3	9.817	-0.000	9310	30.8
Aroclor-1254	4	9.167	-0.008	132744	102.0	4	9.985	0.017	136731	192.0
Aroclor-1254	5	9.866	-0.006	173370	200.8	5	10.219	0.019	193271	262.8
Total Col1Ave (4 peaks):				127.1		Total Col2Ave (5 peaks):			124.0	RPD = 2
Corrected Ave (3 peaks):				102.6		Corrected Ave (4 peaks):			89.3	RPD = 14
Aroclor-1260	1	10.399	-0.001	375882	381.2	1	11.038	-0.001	197530	452.2
Aroclor-1260	2	10.721	-0.000	371637	377.5	2	11.503	-0.001	194369	422.4
Aroclor-1260	3	11.073	0.001	1049531	410.7	3	11.754	-0.001	502377	426.9
Aroclor-1260	4	11.474	0.000	464833	356.0	4	12.342	-0.001	321073	419.8
Aroclor-1260	5	11.580	0.000	229367	403.4	NS	---			----
Total Col1Ave (5 peaks):				385.8		Total Col2Ave (4 peaks):			430.3	RPD = 11
Corrected Ave (4 peaks):				379.5		Corrected Ave (3 peaks):			423.0	RPD = 11
Aroclor-1262	1	10.399	-0.006	375882	254.1	1	11.038	-0.005	197530	265.9
Aroclor-1262	2	11.073	-0.004	1049531	315.5	2	11.754	-0.005	502377	307.7
Aroclor-1262	3	11.580	-0.005	229367	248.5	3	12.271	-0.005	152164	290.2
Aroclor-1262	4	11.653	-0.004	296484	245.1	4	13.061	-0.005	148292	249.7
Total Col1Ave (4 peaks):				265.8		Total Col2Ave (4 peaks):			278.4	RPD = 5
Corrected Ave (3 peaks):				249.2		Corrected Ave (3 peaks):			268.6	RPD = 7
Aroclor-1268	1	11.580	-0.008	229367	68.0	1	12.271	-0.002	152164	88.6
Aroclor-1268	2	11.653	-0.004	296484	81.9	2	12.342	0.003	321073	171.3
Aroclor-1268	3	12.056	0.019	128591	44.3	3	12.724	-0.005	5263	3.3
Aroclor-1268	4	12.801	-0.011	80288	7.0	4	13.539	-0.006	33159	6.4
Total Col1Ave (4 peaks):				50.3		Total Col2Ave (4 peaks):			67.4	RPD = 29
Corrected Ave (3 peaks):				39.8		Corrected Ave (3 peaks):			32.8	RPD = 19

Total PCB Area Col1 (5.113 - 13.105) = 9915630 Col1 Total PCB = 0.8 ppm*

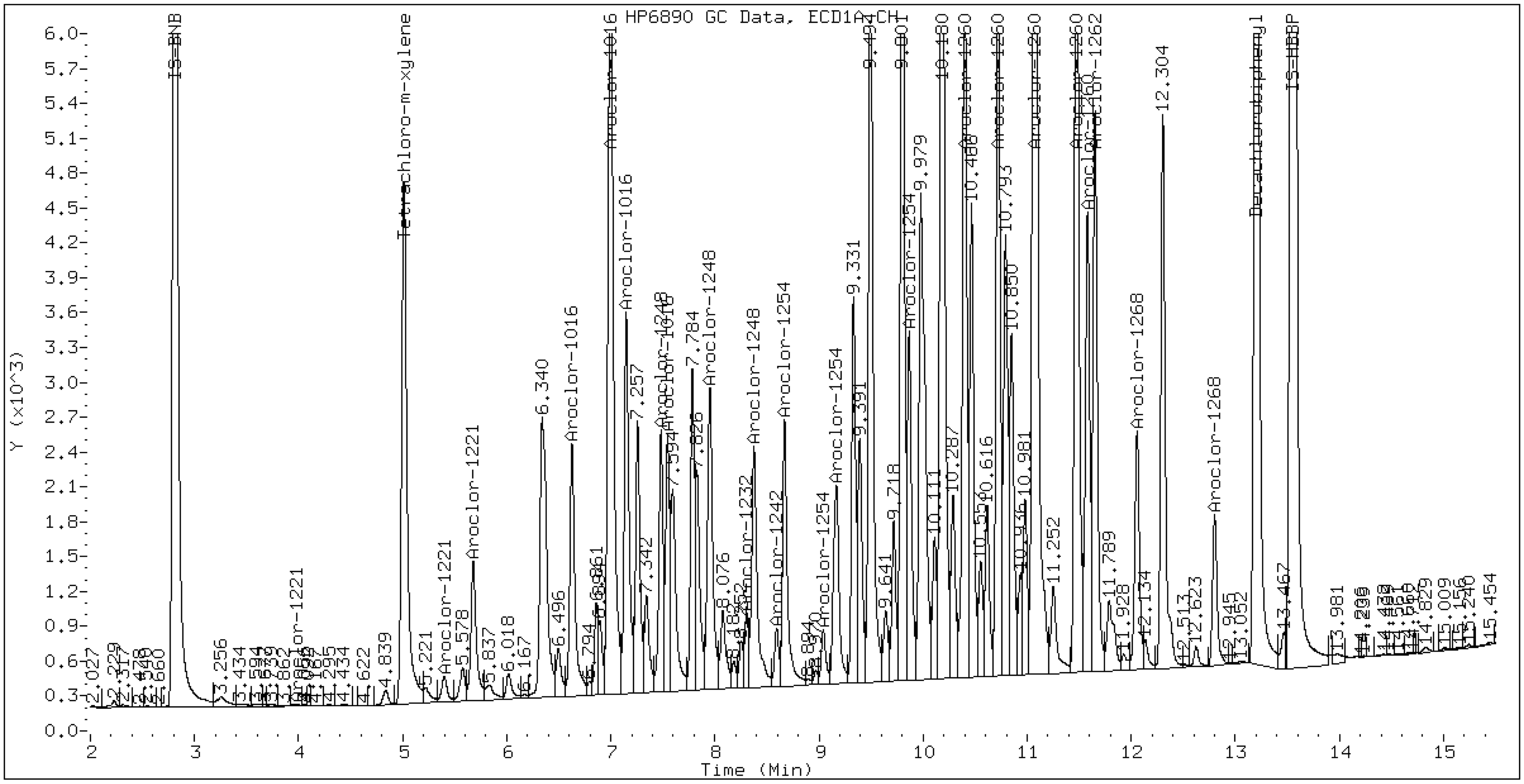
Total PCB Area Col2 (5.113 - 13.105) = 4810697 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

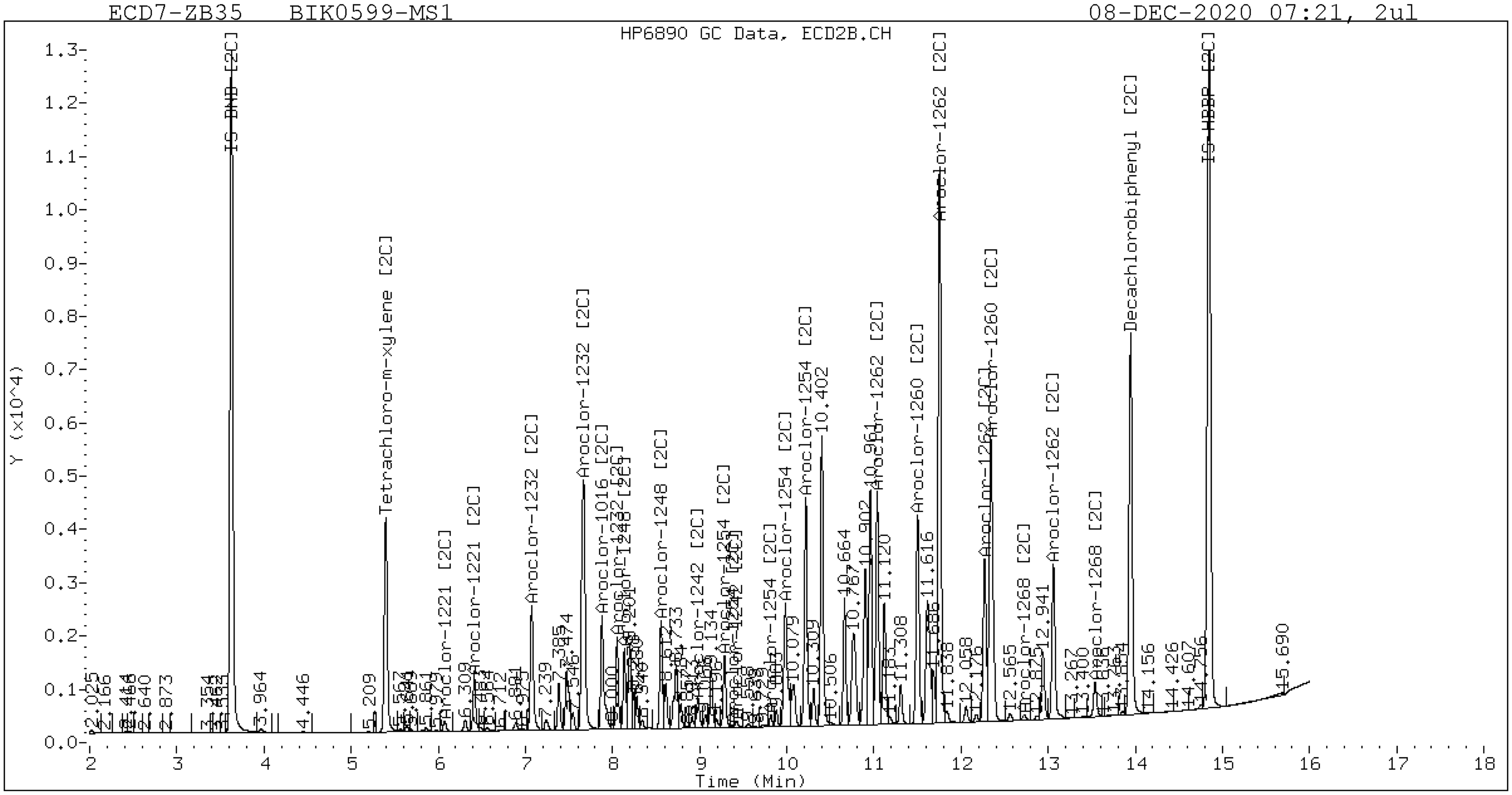
PCB Dual Column Chromatograms

ECD7-ZB5 BIK0599-MS1 08-DEC-2020 07:21, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 BIK0599-MS1 08-DEC-2020 07:21, 2ul

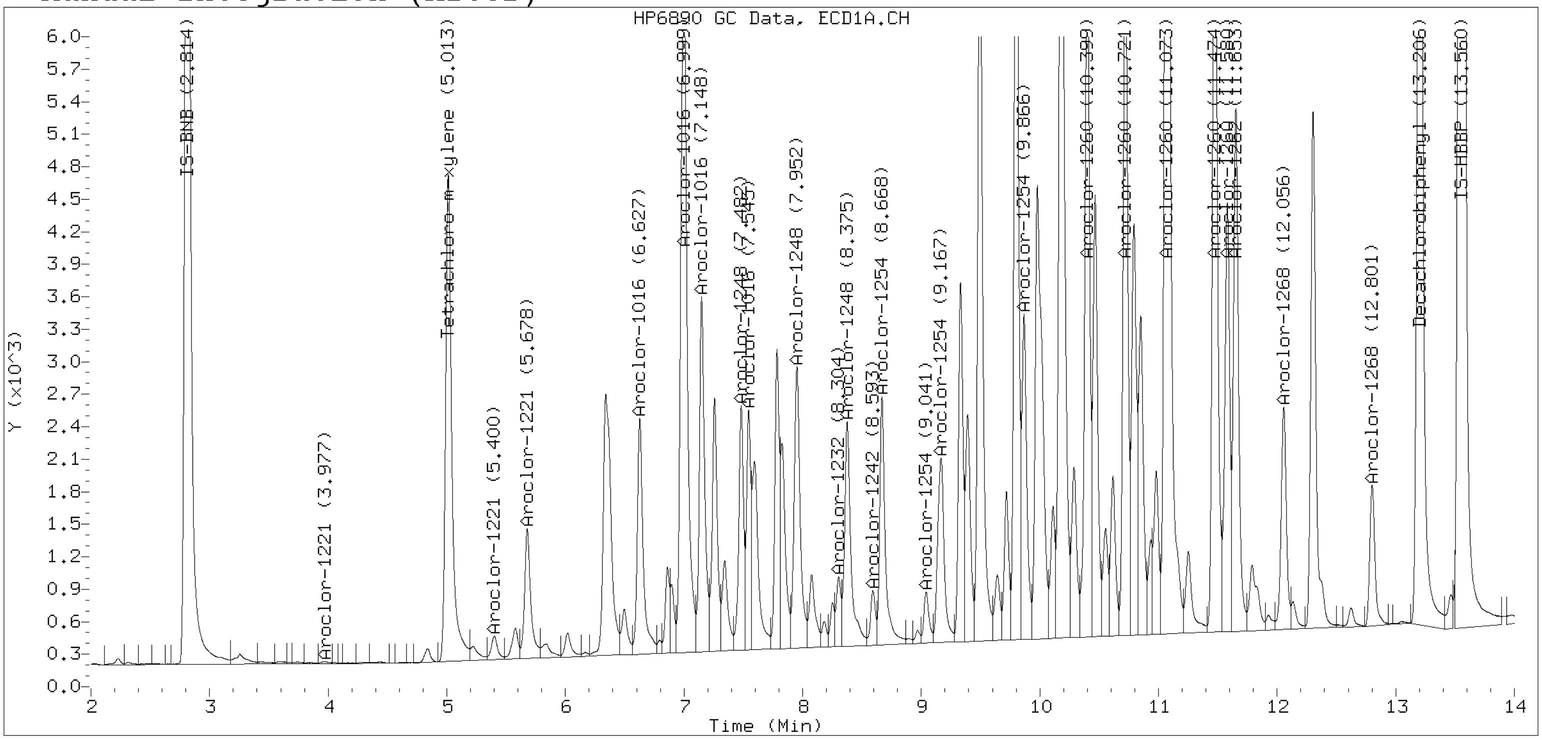


ZB-35 Manual Integration: NO

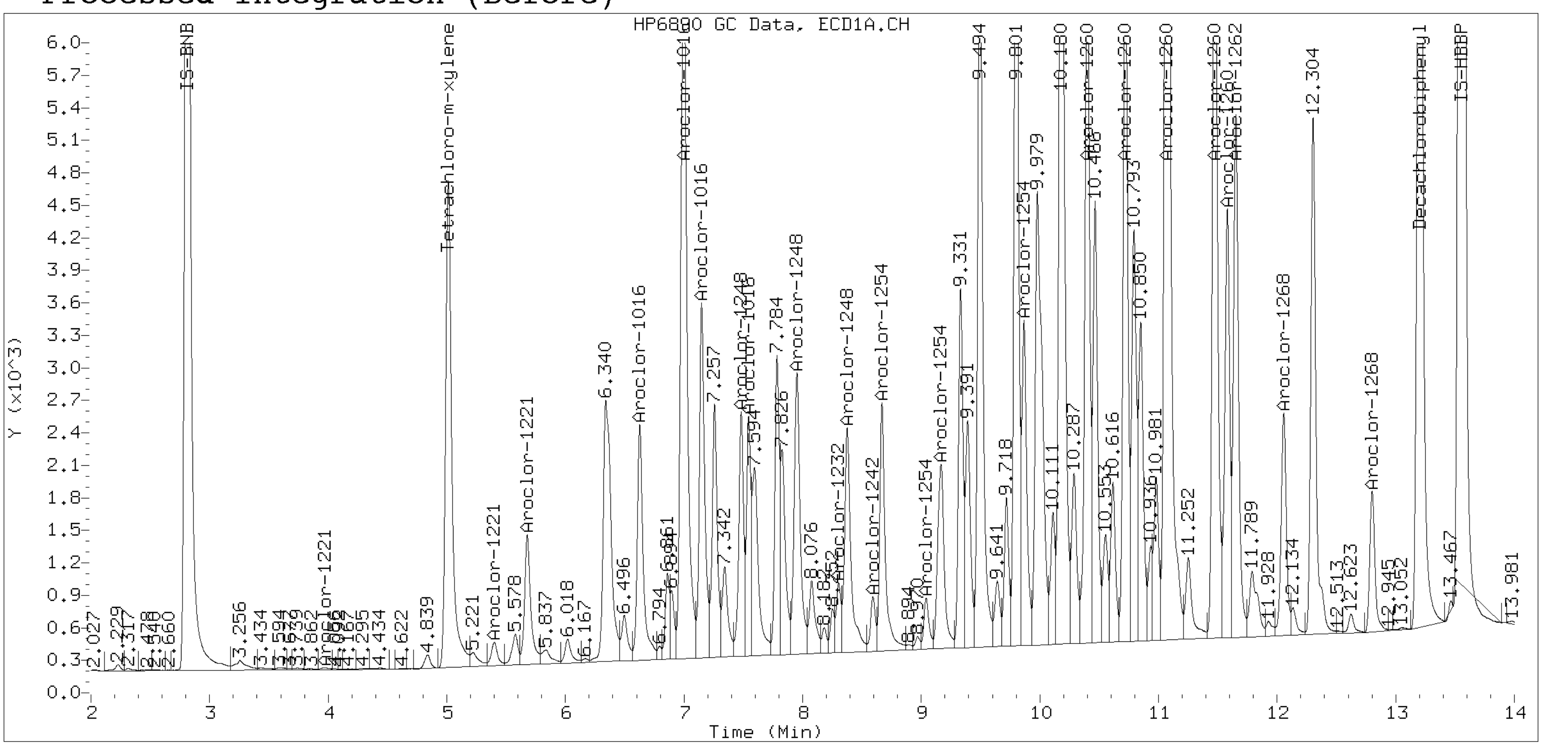
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120742ECD7.D   Injection Date: 08-DEC-2020 07:2

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120743ECD7.D	ARI ID: BIK0599-MSD1
Data file 2: /20201207.b/20201207.b/20120743ECD7.D	Client ID:
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m	Injection Date: 08-DEC-2020 07:41
Compound Sublist: PCB.sub	Report Date: 12/13/2020 14:25
Instrument, Inj. Vol.: ecd7.i, 2ul	Matrix: NONE
Quant Method: Internal Std	Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	0.000	309038	5.398	-0.001	186354	26.4	25.1	5.1	Tetrachloro-m-xylene
13.203	-0.001	634622	13.946	-0.001	327925	23.5	26.9	13.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	66.0	62.7
Decachlorobiphenyl	58.9	67.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	802648	2.0
Hexabromobiphenyl	2132987	2536092	18.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	647927	2.0
Hexabromobiphenyl	665758	739806	11.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.627	-0.001	134264	332.4	1	7.073	-0.001	106248	338.0
Aroclor-1016	2	6.998	-0.001	442306	343.7	2	7.669	-0.001	252279	355.6
Aroclor-1016	3	7.148	-0.001	181943	329.1	3	7.879	-0.002	95521	355.3
Aroclor-1016	4	7.546	0.000	100394	333.9	4	8.053	-0.001	59573	369.6
	Total Col1Ave (4 peaks):			334.8		Total Col2Ave (4 peaks):			354.7	RPD = 6
	Corrected Ave (3 peaks):			331.8		Corrected Ave (3 peaks):			349.7	RPD = 5
Aroclor-1221	1	3.970	-0.002	2024	19.4	1	---			0.0
Aroclor-1221	2	5.400	-0.006	14860	100.6	2	6.073	-0.002	8885	99.8
Aroclor-1221	3	5.678	-0.004	81586	215.4	3	6.415	-0.002	40345	243.2
	Total Col1Ave (3 peaks):			111.8		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.970	-0.003	2024	32.1	1	---			0.0
Aroclor-1232	2	6.627	-0.005	134264	819.4	2	7.073	-0.004	106248	742.2
Aroclor-1232	3	6.998	-0.004	442306	826.1	3	7.669	-0.003	252279	844.1
Aroclor-1232	4	8.303	-0.006	26962	169.5	4	8.053	-0.004	59573	874.4
	Total Col1Ave (4 peaks):			461.8		Total Col2Ave (3 peaks):			820.2	RPD = 56*
	Corrected Ave (3 peaks):			340.3			Corrected Ave: < 3 Peaks			
Aroclor-1242	1	6.627	-0.002	134264	431.2	1	7.073	-0.000	106248	433.8
Aroclor-1242	2	6.998	-0.002	442306	460.5	2	7.669	-0.001	252279	444.7
Aroclor-1242	3	8.303	-0.002	26962	84.6	3	8.979	-0.009	24068	107.5
Aroclor-1242	4	8.592	-0.008	21319	61.4	4	9.421	-0.001	5387	24.4
	Total Col1Ave (4 peaks):			259.4		Total Col2Ave (4 peaks):			252.6	RPD = 3
	Corrected Ave (3 peaks):			192.4		Corrected Ave (3 peaks):			188.6	RPD = 2
Aroclor-1248	1	7.482	-0.001	110862	264.8	1	8.137	-0.001	53788	244.8
Aroclor-1248	2	7.952	-0.001	162679	256.3	2	8.557	-0.001	76215	265.1
Aroclor-1248	3	8.376	0.014	132682	141.4	3	8.979	-0.009	24068	58.8
Aroclor-1248	4	8.592	-0.005	21319	39.3	4	9.421	-0.001	5387	13.4
	Total Col1Ave (4 peaks):			175.4		Total Col2Ave (4 peaks):			145.5	RPD = 19
	Corrected Ave (3 peaks):			145.7		Corrected Ave (3 peaks):			105.7	RPD = 32
Aroclor-1254	1	8.668	-0.003	127038	133.6	1	9.286	-0.001	51104	110.5
Aroclor-1254	2	---			0.0	2	9.421	0.041	5387	25.1
Aroclor-1254	3	9.040	0.000	21380	33.8	3	9.818	0.000	8069	26.3
Aroclor-1254	4	9.167	-0.009	113353	86.8	4	9.985	0.017	119525	165.5
Aroclor-1254	5	9.866	-0.006	149842	172.9	5	10.218	0.018	168617	226.0
	Total Col1Ave (4 peaks):			106.8		Total Col2Ave (5 peaks):			110.7	RPD = 4
	Corrected Ave (3 peaks):			84.7		Corrected Ave (4 peaks):			81.8	RPD = 3
Aroclor-1260	1	10.400	-0.000	328800	333.4	1	11.038	-0.001	171920	380.3
Aroclor-1260	2	10.720	-0.001	325387	330.4	2	11.502	-0.002	170881	358.8
Aroclor-1260	3	11.072	-0.001	945097	369.7	3	11.756	0.000	441686	362.6
Aroclor-1260	4	11.475	0.001	408193	312.6	4	12.343	-0.000	281128	355.2
Aroclor-1260	5	11.581	0.000	201230	353.8	NS	---			----
	Total Col1Ave (5 peaks):			340.0		Total Col2Ave (4 peaks):			364.2	RPD = 7
	Corrected Ave (4 peaks):			332.6		Corrected Ave (3 peaks):			358.8	RPD = 8
Aroclor-1262	1	10.400	-0.005	328800	222.3	1	11.038	-0.005	171920	223.6
Aroclor-1262	2	11.072	-0.006	945097	284.1	2	11.756	-0.003	441686	261.4
Aroclor-1262	3	11.581	-0.005	201230	218.0	3	12.270	-0.006	161327	297.2
Aroclor-1262	4	11.653	-0.005	258930	214.0	4	13.060	-0.005	128923	209.8
	Total Col1Ave (4 peaks):			234.6		Total Col2Ave (4 peaks):			248.0	RPD = 6
	Corrected Ave (3 peaks):			218.1		Corrected Ave (3 peaks):			231.6	RPD = 6
Aroclor-1268	1	11.581	-0.008	201230	59.7	1	12.270	-0.004	161327	90.8
Aroclor-1268	2	11.653	-0.004	258930	71.5	2	12.343	0.004	281128	144.9
Aroclor-1268	3	12.056	0.019	111980	38.5	3	12.724	-0.006	4453	2.7
Aroclor-1268	4	12.801	-0.011	73314	6.4	4	13.536	-0.009	37662	7.0
	Total Col1Ave (4 peaks):			44.0		Total Col2Ave (4 peaks):			61.4	RPD = 33
	Corrected Ave (3 peaks):			34.9		Corrected Ave (3 peaks):			33.5	RPD = 4

Total PCB Area Col1 (5.113 - 13.105) = 8801345 Col1 Total PCB = 0.7 ppm*

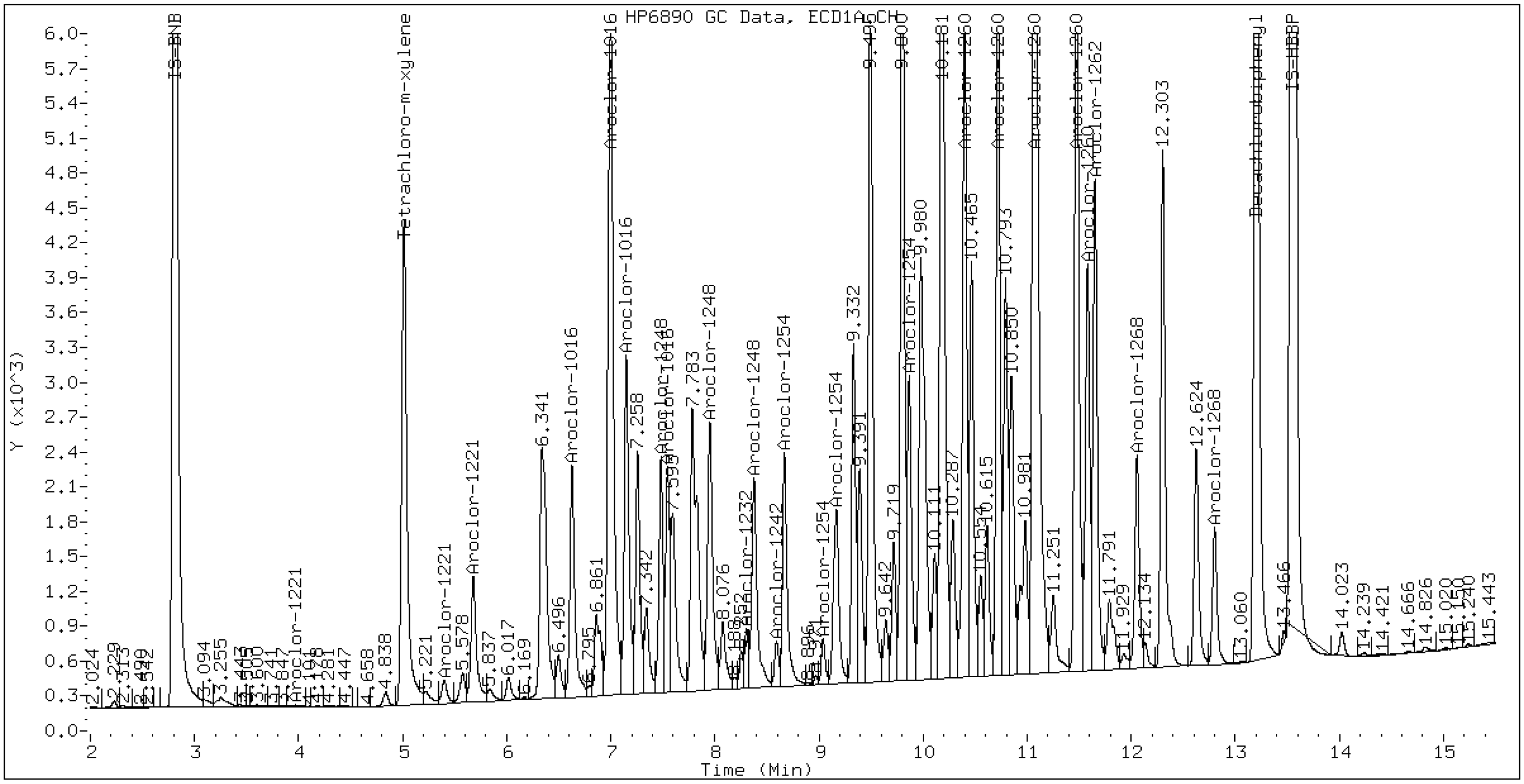
Total PCB Area Col2 (5.113 - 13.105) = 4247875 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

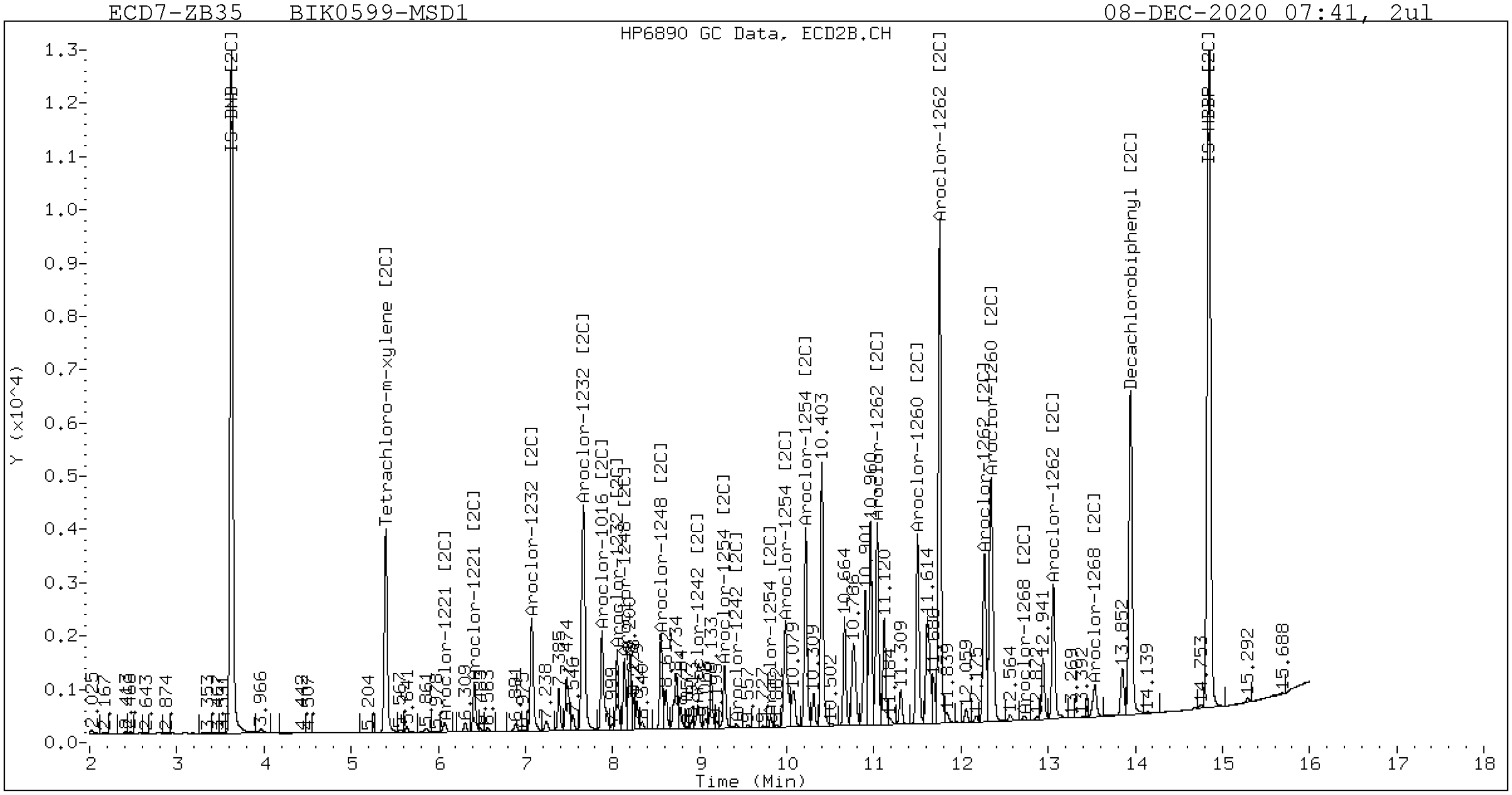
PCB Dual Column Chromatograms

ECD7-ZB5 BIK0599-MSD1 08-DEC-2020 07:41, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BIK0599-MSD1 08-DEC-2020 07:41, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00019	Instrument:	ECD7
Calibration Date:	12/04/2020	Column (1):	ZB5

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RRF		RRF		**RRF**		**RRF**		RRF		RRF
Aroclor 1016	250	6.014442E-02	20	7.584143E-02	50	6.707304E-02	1000	5.570891E-02	100	6.423001E-02	500	5.740282E-02
Aroclor 1260	250	3.888985E-02	20	4.188566E-02	50	0.0426375	1000	4.074348E-02	100	4.044385E-02	500	3.772896E-02
Decachlorobiphenyl	40	0.7878576	3.2	0.9603192	8	0.8478544			16	0.7983285	80	0.8575543
Tetrachlorometaxylene	40	1.192699	3.2	1.109	8	1.109784	160	1.245783	16	1.152502	80	1.188528

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00019	Instrument:	ECD7
Calibration Date:	12/04/2020	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RRF		RRF		RRF		RRF		RRF		RRF
Aroclor 1232									250	2.295964E-02		
Aroclor 1242	250	4.828508E-02										
Aroclor 1248			250	6.315092E-02								
Aroclor 1254					250	8.515398E-02						
Aroclor 1262							250	5.472412E-02				
Aroclor 1268									250	0.1684179		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00019	Instrument:	ECD7
Calibration Date:	12/04/2020	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016	0.0634001	11.7			RSD (20)	
Aroclor 1232		0.0			RSD (20)	
Aroclor 1242		0.0			RSD (20)	
Aroclor 1248		0.0			RSD (20)	
Aroclor 1254		0.0			RSD (20)	
Aroclor 1260	4.038822E-02	4.5			RSD (20)	
Aroclor 1262		0.0			RSD (20)	
Aroclor 1268		0.0			RSD (20)	
Decachlorobiphenyl	0.8503828	8.1			RSD (20)	
Tetrachlorometaxylene	1.166383	4.6			RSD (20)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00019	Instrument:	ECD7
Calibration Date:	12/04/2020	Column (2):	ZB35

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RRF		RRF		**RRF**		**RRF**		RRF		RRF
Aroclor 1016 [2C]	250	4.609222E-02	20	4.486078E-02	50	0.0434633	1000	4.434723E-02	100	4.504899E-02	500	0.045428
Aroclor 1260 [2C]	250	8.304447E-02	20	7.779723E-02	50	7.567688E-02	1000	8.156696E-02	100	7.897214E-02	500	7.951177E-02
Decachlorobiphenyl [2C]	40	1.404709	3.2	1.245863	8	1.192667			16	1.2785	80	1.460302
Tetrachlorometaxylene [2C]	40	0.9675103	3.2	0.8448913	8	0.8561071	160	0.9565922	16	0.9254635	80	0.9514523

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00019	Instrument:	ECD7
Calibration Date:	12/04/2020	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RRF		RRF		RRF		RRF		RRF		RRF
Aroclor 1232 [2C]									250	1.660351E-02		
Aroclor 1242 [2C]	250	3.878597E-02										
Aroclor 1248 [2C]			250	4.068484E-02								
Aroclor 1254 [2C]					250	0.0605432						
Aroclor 1262 [2C]							250	9.776166E-02				
Aroclor 1268 [2C]									250	0.2905151		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00019	Instrument:	ECD7
Calibration Date:	12/04/2020	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016 [2C]	4.487342E-02	2.0			RSD (20)	
Aroclor 1232 [2C]		0.0			RSD (20)	
Aroclor 1242 [2C]		0.0			RSD (20)	
Aroclor 1248 [2C]		0.0			RSD (20)	
Aroclor 1254 [2C]		0.0			RSD (20)	
Aroclor 1260 [2C]	7.942824E-02	3.3			RSD (20)	
Aroclor 1262 [2C]		0.0			RSD (20)	
Aroclor 1268 [2C]		0.0			RSD (20)	
Decachlorobiphenyl [2C]	1.316408	8.5			RSD (20)	
Tetrachlorometaxylene [2C]	0.9170028	5.8			RSD (20)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/7/2020 2:31:58PM

ANALYSIS SEQUENCE

SIL0088

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: DL00019

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0088-CAL1	0.25PPM AR1660	QC		1	I007341	I007345	
SIL0088-CAL2	0.02PPM AR1660	QC		2	I007344	I007345	
SIL0088-CAL3	0.05PPM AR1660	QC		3	I007343	I007345	
SIL0088-CAL4	1.0PPM AR1660	QC		4	I007317	I007345	
SIL0088-CAL5	0.1PPM AR1660	QC		5	I007342	I007345	
SIL0088-CAL6	0.5PPM AR1660	QC		6	I007340	I007345	
SIL0088-CAL7	0.25PPM AR1242	QC		7	I007322	I007345	
SIL0088-CAL8	0.25PPM AR1248	QC		8	I007321	I007345	
SIL0088-CAL9	0.25PPM AR1254	QC		9	I007320	I007345	
SIL0088-CALA	0.25PPM AR2162	QC		10	I007319	I007345	
SIL0088-CALB	0.25PPM AR3268	QC		11	I010378	I007345	
SIL0088-SCV1	AR1660SCV1	QC		12	I005063	I007345	
SIL0088-SCV2	AR1242SCV2	QC		13	I005064	I007345	
SIL0088-SCV3	AR1248SCV3	QC		14	I005065	I007345	
SIL0088-SCV4	AR1254SCV4	QC		15	I005066	I007345	
SIL0088-SCV5	AR2162SCV5	QC		16	I005067	I007345	
SIL0088-SCV6	AR3268SCV6	QC		17	I005068	I007345	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201204.b

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2	03-DEC-2020 22:56	20120402ECD7.D	1	RINSE	
3	03-DEC-2020 23:17	20120403ECD7.D	1	RINSE	
4	03-DEC-2020 23:37	20120404ECD7.D	1	RINSE	
5	03-DEC-2020 23:58	20120405ECD7.D	1	RINSE	
6	04-DEC-2020 00:18	20120406ECD7.D	1	RINSE	
7	04-DEC-2020 00:39	20120407ECD7.D	1	RINSE	
8	04-DEC-2020 00:59	20120408ECD7.D	1	IB	
9	04-DEC-2020 01:20	20120409ECD7.D	1	0.25PPMAR1660	
10	04-DEC-2020 01:40	20120410ECD7.D	1	0.02PPMAR1660	
11	04-DEC-2020 02:01	20120411ECD7.D	1	0.05PPMAR1660	
12	04-DEC-2020 02:22	20120412ECD7.D	1	1PPMAR1660	
13	04-DEC-2020 02:42	20120413ECD7.D	1	0.1PPMAR1660	
14	04-DEC-2020 03:03	20120414ECD7.D	1	0.5PPMAR1660	
15	04-DEC-2020 03:23	20120415ECD7.D	1	AR1242	
16	04-DEC-2020 03:44	20120416ECD7.D	1	AR1248	
17	04-DEC-2020 04:04	20120417ECD7.D	1	AR1254	
18	04-DEC-2020 04:25	20120418ECD7.D	1	AR2162	
19	04-DEC-2020 04:46	20120419ECD7.D	1	AR3268	
20	04-DEC-2020 05:06	20120420ECD7.D	1	AR1660SCV1	
21	04-DEC-2020 05:27	20120421ECD7.D	1	AR1242SCV2	
22	04-DEC-2020 05:47	20120422ECD7.D	1	AR1248SCV3	
23	04-DEC-2020 06:08	20120423ECD7.D	1	AR1254SCV4	
24	04-DEC-2020 06:28	20120424ECD7.D	1	AR2162SCV5	
25	04-DEC-2020 06:49	20120425ECD7.D	1	AR3268SCV6	
26	04-DEC-2020 07:10	20120426ECD7.D	1	DDT	
27	04-DEC-2020 07:30	20120427ECD7.D	1	BD	
28	04-DEC-2020 07:51	20120428ECD7.D	1	AR1254ICV1	
29	04-DEC-2020 08:11	20120429ECD7.D	1	AR1660ICV2	
30	04-DEC-2020 08:32	20120430ECD7.D	5	20K0101-41RE1	
31	04-DEC-2020 08:53	20120431ECD7.D	1		
32	04-DEC-2020 09:13	20120432ECD7.D	1		
33	04-DEC-2020 09:34	20120433ECD7.D	1		
34	04-DEC-2020 09:54	20120434ECD7.D	1		
35	04-DEC-2020 10:15	20120435ECD7.D	1		
36	04-DEC-2020 10:35	20120436ECD7.D	1		
37	04-DEC-2020 10:56	20120437ECD7.D	1		
38	04-DEC-2020 11:17	20120438ECD7.D	1		
39	04-DEC-2020 11:37	20120439ECD7.D	1		
40	04-DEC-2020 11:58	20120440ECD7.D	1		
41	04-DEC-2020 12:18	20120441ECD7.D	1		
42	04-DEC-2020 12:39	20120442ECD7.D	1		
43	04-DEC-2020 12:59	20120443ECD7.D	1		
44	04-DEC-2020 13:20	20120444ECD7.D	1		
45	04-DEC-2020 13:41	20120445ECD7.D	1		
46	04-DEC-2020 14:01	20120446ECD7.D	1		
47	04-DEC-2020 14:22	20120447ECD7.D	1		
48	04-DEC-2020 14:42	20120448ECD7.D	1		
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	Inject Date/Time	Filename	DF	LabID	ClientID
51	04-DEC-2020 15:44	20120451ECD7.D	1		
52	04-DEC-2020 16:05	20120452ECD7.D	1		
53	04-DEC-2020 16:25	20120453ECD7.D	1		
54	04-DEC-2020 16:46	20120454ECD7.D	1		
55	04-DEC-2020 17:06	20120455ECD7.D	1		
56	04-DEC-2020 17:27	20120456ECD7.D	1		
57	04-DEC-2020 17:48	20120457ECD7.D	1		
58	04-DEC-2020 18:08	20120458ECD7.D	1		
59	04-DEC-2020 18:29	20120459ECD7.D	1		
60	04-DEC-2020 18:49	20120460ECD7.D	1		
61	04-DEC-2020 20:51	20120461ECD7.D	1		
62	04-DEC-2020 21:12	20120462ECD7.D	1		
63	04-DEC-2020 21:32	20120463ECD7.D	1		
64	04-DEC-2020 21:53	20120464ECD7.D	1		
65	04-DEC-2020 22:14	20120465ECD7.D	1		
66	04-DEC-2020 22:34	20120466ECD7.D	1		
67	04-DEC-2020 22:55	20120467ECD7.D	1		
68	04-DEC-2020 23:15	20120468ECD7.D	1		
69	04-DEC-2020 23:36	20120469ECD7.D	1		
70	04-DEC-2020 23:56	20120470ECD7.D	1		
71	05-DEC-2020 00:17	20120471ECD7.D	1		
72	05-DEC-2020 00:38	20120472ECD7.D	1		
73	05-DEC-2020 00:58	20120473ECD7.D	1		
74	05-DEC-2020 01:19	20120474ECD7.D	1		
75	05-DEC-2020 01:39	20120475ECD7.D	1		
76	05-DEC-2020 02:00	20120476ECD7.D	1		
77	05-DEC-2020 02:20	20120477ECD7.D	1		
78	05-DEC-2020 02:41	20120478ECD7.D	1		
79	05-DEC-2020 03:02	20120479ECD7.D	1		
80	05-DEC-2020 03:22	20120480ECD7.D	1		
81	05-DEC-2020 03:43	20120481ECD7.D	1		
82	05-DEC-2020 04:03	20120482ECD7.D	1		
83	05-DEC-2020 04:24	20120483ECD7.D	1		
84	05-DEC-2020 04:44	20120484ECD7.D	1		
85	05-DEC-2020 05:05	20120485ECD7.D	1		
86	05-DEC-2020 05:26	20120486ECD7.D	1		
87	05-DEC-2020 05:46	20120487ECD7.D	1		
88	05-DEC-2020 06:07	20120488ECD7.D	1		
89	05-DEC-2020 06:27	20120489ECD7.D	1		
90	05-DEC-2020 06:48	20120490ECD7.D	1		
91	05-DEC-2020 07:09	20120491ECD7.D	1		

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201204.b

ARI Job No.: IB   Method: PCB.m   Instrument: ecd7.i   Date: 04-DEC-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0059	20120408ECD7.D	IB		1	NO MANUAL INTEGRATION
0120	20120409ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
0140	20120410ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
0201	20120411ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
0222	20120412ECD7.D	1PPMAR1660		1	NO MANUAL INTEGRATION
0242	20120413ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
0303	20120414ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
0323	20120415ECD7.D	AR1242		1	NO MANUAL INTEGRATION
0344	20120416ECD7.D	AR1248		1	NO MANUAL INTEGRATION
0404	20120417ECD7.D	AR1254		1	NO MANUAL INTEGRATION
0425	20120418ECD7.D	AR2162		1	NO MANUAL INTEGRATION
0446	20120419ECD7.D	AR3268		1	NO MANUAL INTEGRATION
0506	20120420ECD7.D	AR1660SCV1		1	NO MANUAL INTEGRATION
0527	20120421ECD7.D	AR1242SCV2		1	NO MANUAL INTEGRATION
0547	20120422ECD7.D	AR1248SCV3		1	NO MANUAL INTEGRATION
0608	20120423ECD7.D	AR1254SCV4		1	NO MANUAL INTEGRATION
0628	20120424ECD7.D	AR2162SCV5		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201204.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0649	20120425ECD7.D	AR3268SCV6		1	NO MANUAL INTEGRATION
0710	20120426ECD7.D	DDT		1	2,4-DDT, 4,4-DDD,
0730	20120427ECD7.D	BD		1	NO MANUAL INTEGRATION

Security Status Report

Date: 07-Dec-2020 11:46

20120408ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120409ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120410ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120411ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120412ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120413ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120414ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120415ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120416ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120417ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120418ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120419ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120420ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120421ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120422ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120423ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120424ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120425ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120426ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120427ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Last Edit : 05-Dec-2020 20:20 ecd7.i
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\20201204.b\20120410.D
Level 2: \\target\share\chem4\ecd7.i\20201204.b\20120411.D
Level 3: \\target\share\chem4\ecd7.i\20201204.b\20120413.D
Level 4: \\target\share\chem4\ecd7.i\20201204.b\20120409.D
Level 5: \\target\share\chem4\ecd7.i\20201204.b\20120414.D
Level 6: \\target\share\chem4\ecd7.i\20201204.b\20120412.D
Level 7: \\target\share\chem4\ecd7.i\20201204.b\20120419.D
Level 8: \\target\share\chem4\ecd7.i\20201204.b\20120426.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01040	+++++					0.01040	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01472	+++++					0.01472	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03775	+++++					0.03775	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03104	+++++					0.03104	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09573	+++++					0.09573	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03178	+++++					0.03178	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03459	+++++					0.03459	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00628	+++++					0.00628	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Last Edit : 05-Dec-2020 20:20 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01633	+++++					0.01633	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05337	+++++					0.05337	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01586	+++++					0.01586	0.000
7 Aroclor-1016(1)	0.04665	0.04234	0.04121	0.03918	0.03684	0.03534		
	+++++	+++++					0.04026	10.133
(2)	0.15249	0.13375	0.12915	0.12099	0.11772	0.11555		
	+++++	+++++					0.12827	10.709
(3)	0.06744	0.06004	0.05600	0.05199	0.04876	0.04640		
	+++++	+++++					0.05510	14.128
(4)	0.03679	0.03216	0.03056	0.02842	0.02629	0.02556		
	+++++	+++++					0.02996	13.925
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04173	+++++					0.04173	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06327	+++++					0.06327	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09354	+++++					0.09354	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05407	+++++					0.05407	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Last Edit : 05-Dec-2020 20:20 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09478	+++++					0.09478	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05133	+++++					0.05133	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06311	+++++					0.06311	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13017	+++++					0.13017	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08638	+++++					0.08638	0.000
9 Aroclor-1260(1)	0.03758	0.03331	0.03085	0.02941	0.02746	0.02802		
	+++++	+++++					0.03111	12.235
(2)	0.03591	0.03286	0.03098	0.02963	0.02807	0.02894		
	+++++	+++++					0.03106	9.362
(3)	0.06901	0.08466	0.08126	0.07902	0.07932	0.09052		
	+++++	+++++					0.08063	8.839
(4)	0.04586	0.04247	0.04071	0.03932	0.03801	0.04081		
	+++++	+++++					0.04120	6.640
(5)	0.02108	0.01988	0.01842	0.01707	0.01578	0.01542		
	+++++	+++++					0.01794	12.607
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04666	+++++					0.04666	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Last Edit : 05-Dec-2020 20:20 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10494	+++++					0.10494	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02912	+++++					0.02912	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03817	+++++					0.03817	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10637	+++++					0.10637	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.11423	+++++					0.11423	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09168	+++++					0.09168	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.36138	+++++					0.36138	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1404					1404	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1643					1643	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1500					1500	0.000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	2504					2504	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Last Edit : 05-Dec-2020 20:20 ecd7.i
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2 / 0.000e+00 Level 8	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	2209					2209	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1001					1001	0.000
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 1 Tetrachloro-m-xylene	1.10900	1.10978	1.15250	1.19270	1.18853	1.24578		
	+++++	+++++					1.16638	4.565
$ 13 Decachlorobiphenyl	0.96032	0.84785	0.79833	0.78786	0.85755	+++++		
	+++++	+++++					0.85038	8.054

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m\PCB2.m
Last Edit : 05-Dec-2020 20:08 jrains
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120410.D
Level 2: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120411.D
Level 3: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120413.D
Level 4: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120409.D
Level 5: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120414.D
Level 6: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120412.D
Level 7: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120419.D
Level 8: \\target\share\chem4\ecd7.i\20201204.b\20201204.b\20120426.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
1 Aroclor-1221 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00553	+++++					0.00553	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01099	+++++					0.01099	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02048	+++++					0.02048	0.000
4 Aroclor-1232 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00342	+++++					0.00342	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01767	+++++					0.01767	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03690	+++++					0.03690	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00841	+++++					0.00841	0.000
3 Aroclor-1242 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03024	+++++					0.03024	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m\PCB2.m
Last Edit : 05-Dec-2020 20:08 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07005	+++++					0.07005	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02764	+++++					0.02764	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02721	+++++					0.02721	0.000
6 Aroclor-1248 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02712	+++++					0.02712	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03550	+++++					0.03550	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05056	+++++					0.05056	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04956	+++++					0.04956	0.000
7 Aroclor-1016 [2C](1)	0.04249	0.03815	0.03888	0.03907	0.03820	0.03606		
	+++++	+++++					0.03881	5.400
(2)	0.08669	0.08472	0.08866	0.09095	0.08878	0.08577		
	+++++	+++++					0.08760	2.616
(3)	0.03243	0.03234	0.03309	0.03382	0.03369	0.03379		
	+++++	+++++					0.03319	2.055
(4)	0.01784	0.01865	0.01957	0.02052	0.02104	0.02177		
	+++++	+++++					0.01990	7.490

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m\PCB2.m
Last Edit : 05-Dec-2020 20:08 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
8 Aroclor-1254 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05713	+++++					0.05713	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02646	+++++					0.02646	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03784	+++++					0.03784	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08919	+++++					0.08919	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09211	+++++					0.09211	0.000
10 Aroclor-1262 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08314	+++++					0.08314	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18275	+++++					0.18275	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05869	+++++					0.05869	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06647	+++++					0.06647	0.000
9 Aroclor-1260 [2C](1)	0.04761	0.04704	0.04867	0.05095	0.04921	0.04985		
	+++++	+++++					0.04889	2.945
(2)	0.05097	0.04909	0.05117	0.05353	0.05196	0.05229		
	+++++	+++++					0.05150	2.901

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m\PCB2.m
Last Edit : 05-Dec-2020 20:08 jrains
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2 / 0.000e+00 Level 8	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
(3)	0.12396	0.12611	0.13274	0.13997	0.13090	0.13669		
	+++++	+++++					0.13173	4.631
(4)	0.08866	0.08046	0.08331	0.08773	0.08598	0.08744		
	+++++	+++++					0.08560	3.660
11 Aroclor-1268 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.19212	+++++					0.19212	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.20977	+++++					0.20977	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.17592	+++++					0.17592	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.58425	+++++					0.58425	0.000
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1439					1439	0.000
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	841					841	0.000
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	927					927	0.000
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	940					940	0.000
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	534					534	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2020 01:20
End Cal Date : 04-DEC-2020 07:10
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\20201204.b\PCB.m\PCB2.m
Last Edit : 05-Dec-2020 20:08 jrains
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2 / 0.000e+00 Level 8	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene [2C]	0.84489	0.85611	0.92546	0.96751	0.95145	0.95659		
	+++++	+++++					0.91700	5.829
$ 13 Decachlorobiphenyl [2C]	1.24586	1.19267	1.27850	1.40471	1.46030	+++++		
	+++++	+++++					1.31641	8.512

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\20201204.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	20120409ECD7	20120410ECD7	20120411ECD7	20120412ECD7	20120413ECD7	20120414ECD7
INJ.DATE:	04-DEC-2020	04-DEC-2020	04-DEC-2020	04-DEC-2020	04-DEC-2020	04-DEC-2020
INJ.TIME:	01:20	01:40	02:01	02:22	02:42	03:03

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	2.817	2.817	2.816	2.816	2.816	2.815	2.817	2.717-2.917	2.816	0.001
$ 1 Tetrachloro-m-xylene	5.017	5.015	5.017	5.020	5.016	5.018	5.017	4.917-5.117	5.017	0.002
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	3.972	3.872-4.072	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.631	6.531-6.731	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	3.973	3.873-4.073	+++++	+++++
7 Aroclor-1016	6.631	6.631	6.631	6.632	6.630	6.631	6.631	6.531-6.731	6.631	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	7.487	7.387-7.587	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.675	8.575-8.775	+++++	+++++
9 Aroclor-1260	10.405	10.406	10.405	10.405	10.405	10.404	10.405	10.305-10.505	10.405	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.405	10.305-10.505	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.588	11.488-11.688	+++++	+++++
$ 13 Decachlorobiphenyl	13.210	13.209	13.208	13.221	13.208	13.215	13.210	13.110-13.310	13.212	0.005
* 12 IS-HBBP	13.565	13.564	13.565	13.564	13.564	13.564	13.565	13.465-13.665	13.564	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.661	8.611-8.711	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.200	9.150-9.250	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.666	9.616-9.716	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.075	8.975-9.175	+++++	+++++

Reviewer 1 ______________________ Date: ______________
Reviewer 2 ______________________ Date: ______________

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\20201204.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.644	9.544-9.744	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.135	10.035-10.235	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\20201204.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\20201204.b\20201204.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	20120409ECD7	20120410ECD7	20120411ECD7	20120412ECD7	20120413ECD7	20120414ECD7
INJ.DATE:	04-DEC-2020	04-DEC-2020	04-DEC-2020	04-DEC-2020	04-DEC-2020	04-DEC-2020
INJ.TIME:	01:20	01:40	02:01	02:22	02:42	03:03

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB [2C]	3.631	3.630	3.630	3.630	3.630	3.629	3.629	3.529-3.729	3.630	0.000
$ 2 Tetrachloro-m-xylene [	5.403	5.400	5.401	5.402	5.401	5.401	5.402	5.302-5.502	5.401	0.001
1 Aroclor-1221 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.669	4.569-4.769	+++++	+++++
4 Aroclor-1232 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.670	4.570-4.770	+++++	+++++
3 Aroclor-1242 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	7.076	6.976-7.176	+++++	+++++
6 Aroclor-1248 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	8.141	8.041-8.241	+++++	+++++
7 Aroclor-1016 [2C]	7.076	7.076	7.077	7.076	7.076	7.076	7.076	6.976-7.176	7.076	0.000
8 Aroclor-1254 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.291	9.191-9.391	+++++	+++++
10 Aroclor-1262 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.044	10.944-11.144	+++++	+++++
9 Aroclor-1260 [2C]	11.043	11.043	11.044	11.043	11.044	11.043	11.043	10.943-11.143	11.044	0.001
11 Aroclor-1268 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	12.273	12.173-12.373	+++++	+++++
$ 13 Decachlorobiphenyl [2C	13.951	13.950	13.951	13.953	13.950	13.955	13.951	13.851-14.051	13.952	0.002
* 12 IS-HBBP [2C]	14.852	14.852	14.851	14.851	14.852	14.853	14.852	14.752-14.952	14.852	0.001
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.764	9.714-9.814	+++++	+++++
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.398	9.348-9.448	+++++	+++++
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.079	9.979-10.179	+++++	+++++
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.537	10.437-10.637	+++++	+++++

Reviewer 1 ______________________ Date: ______________
Reviewer 2 ______________________ Date: ______________

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\20201204.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\20201204.b\20201204.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.956	10.856-11.056	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	7.178	7.078-7.278	+++++	+++++

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120408ECD7.D
Data file 2: /20201204.b/20201204.b/20120408ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 04-DEC-2020 00:59
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.019	0.001	481214	5.402	-0.000	313804	42.3	43.2	2.1	Tetrachloro-m-xylene
13.211	0.000	888671	13.953	0.002	499150	38.0	44.3	15.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	105.8	108.1
Decachlorobiphenyl	95.1	110.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	779579	-0.9
Hexabromobiphenyl	2132987	2198068	3.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	633222	-0.4
Hexabromobiphenyl	665758	684184	2.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.629	-0.002	420	1.1	1	---			0.0
Aroclor-1016	2	7.002	-0.000	1462	1.2	2	---			0.0
Aroclor-1016	3	7.157	0.004	805	1.5	3	---			0.0
Aroclor-1016	4	7.553	0.004	909	3.1	4	---			0.0
Total Col1Ave (4 peaks):				1.7		Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	3.965	-0.007	838	8.3	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.087	0.013	3153	36.2
Aroclor-1221	3	5.676	-0.006	1179	3.2	3	6.406	-0.011	666	4.1
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.965	-0.008	838	13.7	1	---			0.0
Aroclor-1232	2	6.629	-0.002	420	2.6	2	---			0.0
Aroclor-1232	3	7.002	0.001	1462	2.8	3	---			0.0
Aroclor-1232	4	8.389	0.080	2617	16.9	4	---			0.0
Total Col1Ave (4 peaks):				9.0		Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.629	-0.002	420	1.4	1	---			0.0
Aroclor-1242	2	7.002	-0.001	1462	1.6	2	---			0.0
Aroclor-1242	3	8.389	0.080	2617	8.5	3	---			0.0
Aroclor-1242	4	8.588	-0.015	1703	5.1	4	---			0.0
Total Col1Ave (4 peaks):				4.1		Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	7.553	0.067	909	2.2	1	---			0.0
Aroclor-1248	2	7.987	0.031	596	1.0	2	---			0.0
Aroclor-1248	3	8.389	0.023	2617	2.9	3	---			0.0
Aroclor-1248	4	8.588	-0.013	1703	3.2	4	---			0.0
Total Col1Ave (4 peaks):				2.3		Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.588	-0.087	1703	1.8	1	---			0.0
Aroclor-1254	2	8.773	0.029	1332	2.7	2	---			0.0
Aroclor-1254	3	9.064	0.019	2127	3.5	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	9.869	-0.008	774	0.9	5	---			0.0
Total Col1Ave (4 peaks):				2.2		Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	10.413	0.009	680	0.8	1	11.040	-0.003	570	1.4
Aroclor-1260	2	10.729	0.002	1565	1.8	2	---			0.0
Aroclor-1260	3	11.129	0.050	59160	26.7	3	11.766	0.007	667	0.6
Aroclor-1260	4	11.480	-0.000	1522	1.3	4	12.267	-0.082	24032	32.8
Aroclor-1260	5	11.582	-0.004	698	1.4	NS	---			----
Total Col1Ave (5 peaks):				6.4		Total Col2Ave (3 peaks):			11.6	RPD = 57*
Corrected Ave (4 peaks):				1.3		Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.413	0.008	680	0.5	1	11.040	-0.004	570	0.8
Aroclor-1262	2	11.129	0.052	59160	20.5	2	11.766	0.007	667	0.4
Aroclor-1262	3	11.582	-0.004	698	0.9	3	12.267	-0.009	24032	47.9
Aroclor-1262	4	11.663	0.005	647	0.6	4	13.147	0.082	4224	7.4
Total Col1Ave (4 peaks):				5.6		Total Col2Ave (4 peaks):			14.1	RPD = 86*
Corrected Ave (3 peaks):				0.7		Corrected Ave (3 peaks):			2.9	RPD = 124*
Aroclor-1268	1	11.582	-0.006	698	0.2	1	12.267	-0.007	24032	14.6
Aroclor-1268	2	11.663	0.006	647	0.2	2	---			0.0
Aroclor-1268	3	12.034	-0.004	5131	2.0	3	12.735	0.005	1261	0.8
Aroclor-1268	4	12.804	-0.008	22675	2.3	4	13.522	-0.024	10057	2.0
Total Col1Ave (4 peaks):				1.2		Total Col2Ave (3 peaks):			5.8	RPD = 132*
Corrected Ave (3 peaks):				0.8		Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.118 - 13.110) = 324859 Col1 Total PCB = 0.0 ppm*

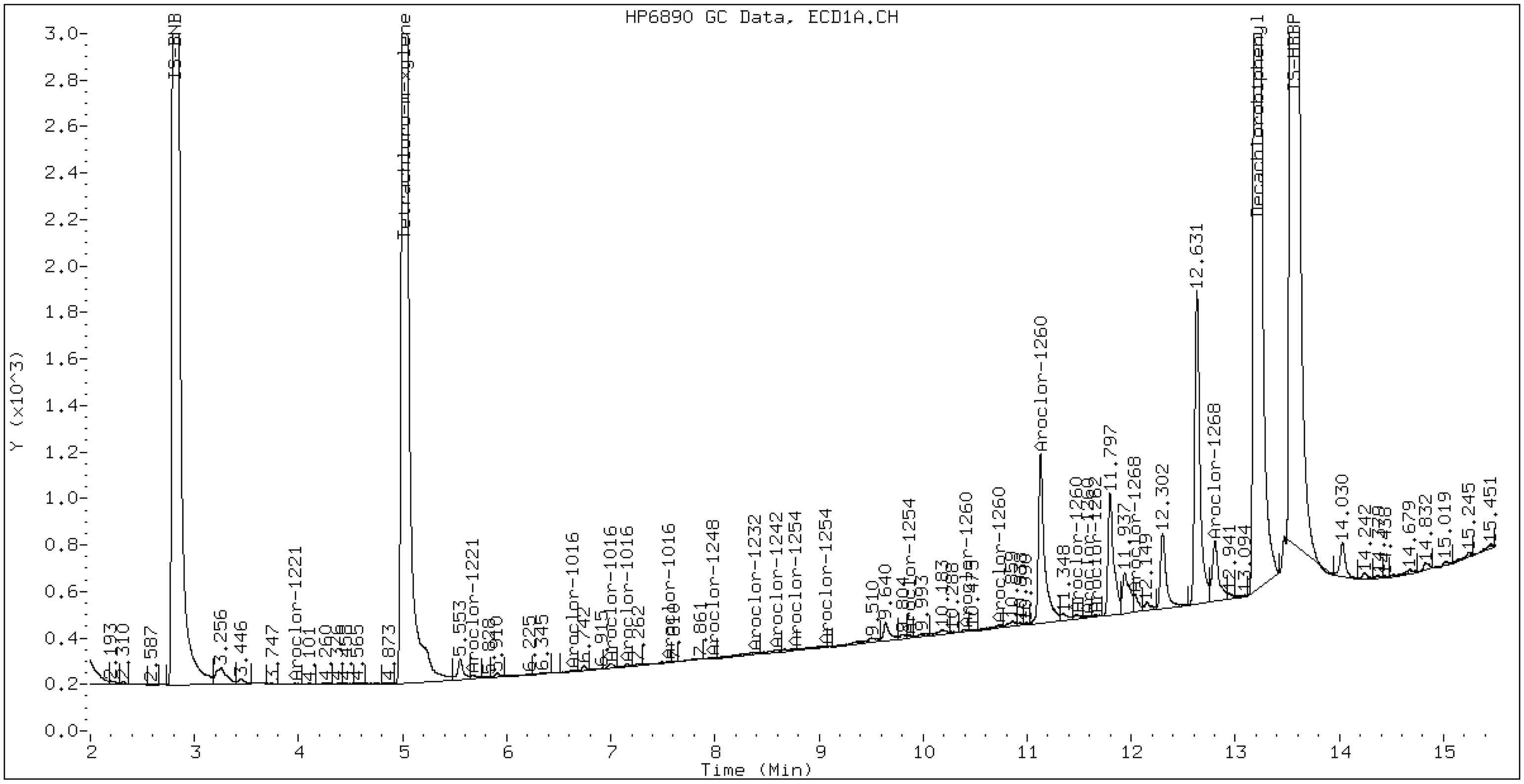
Total PCB Area Col2 (5.118 - 13.110) = 368775 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

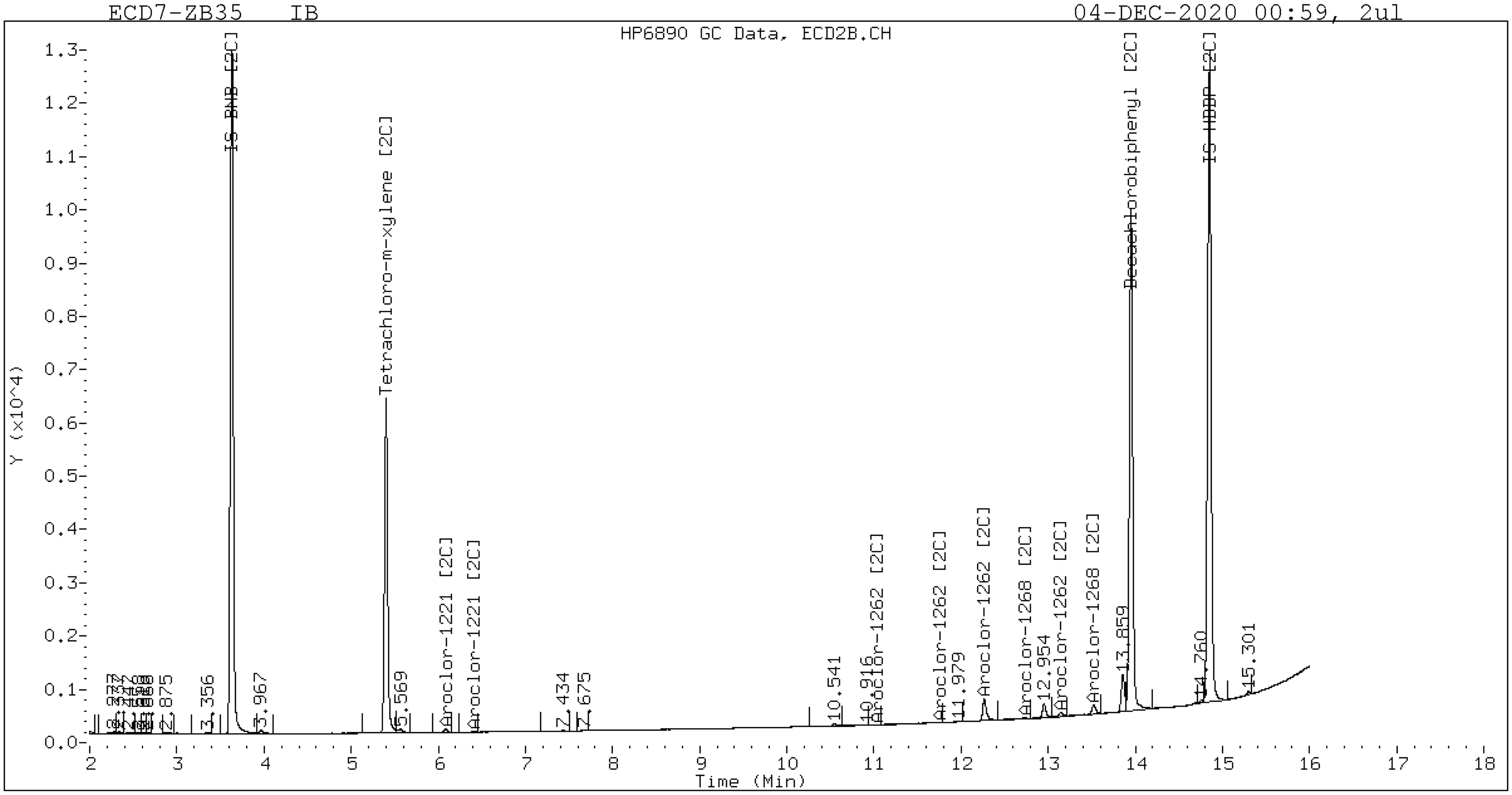
PCB Dual Column Chromatograms

ECD7-ZB5 IB 04-DEC-2020 00:59, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 IB 04-DEC-2020 00:59, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120409ECD7.D
Data file 2: /20201204.b/20201204.b/20120409ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 04-DEC-2020 01:20
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.017	-0.000	469134	5.403	0.000	307423	40.9	42.2	3.1	Tetrachloro-m-xylene
13.210	0.000	840245	13.951	0.001	467598	37.1	42.7	14.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	102.3	105.5
Decachlorobiphenyl	92.6	106.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	786676	0.0
Hexabromobiphenyl	2132987	2132987	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	635493	0.0
Hexabromobiphenyl	665758	665758	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.631	0.000	96315	243.3	1	7.076	0.000	77582	251.7
Aroclor-1016	2	7.002	-0.000	297428	235.8	2	7.673	0.001	180628	259.6
Aroclor-1016	3	7.153	0.000	127809	235.9	3	7.883	0.001	67171	254.8
Aroclor-1016	4	7.550	0.001	69875	237.1	4	8.057	0.000	40760	257.9

Total Col1Ave (4 peaks): 238.0 Total Col2Ave (4 peaks): 256.0 RPD = 7
Corrected Ave (3 peaks): 236.3 Corrected Ave (3 peaks): 254.8 RPD = 8

CalAmt %D: -4.8 CalAmt %D: 2.4

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1260	1	10.405	0.001	196055	236.4	1	11.043	0.000	106010	260.6
Aroclor-1260	2	10.726	-0.000	197500	238.5	2	11.508	0.001	111366	259.8
Aroclor-1260	3	11.077	-0.002	526707	245.0	3	11.760	0.000	291200	265.6
Aroclor-1260	4	11.481	0.001	262069	238.6	4	12.349	0.000	182518	256.2
Aroclor-1260	5	11.587	0.001	113787	237.9	NS	---			----

Total Col1Ave (5 peaks): 239.3 Total Col2Ave (4 peaks): 260.6 RPD = 9
Corrected Ave (4 peaks): 237.8 Corrected Ave (3 peaks): 258.9 RPD = 8

CalAmt %D: -4.3 CalAmt %D: 4.2

Total PCB Area Col1 (5.118 - 13.110) = 5845573 Col1 Total PCB = 0.5 ppm*

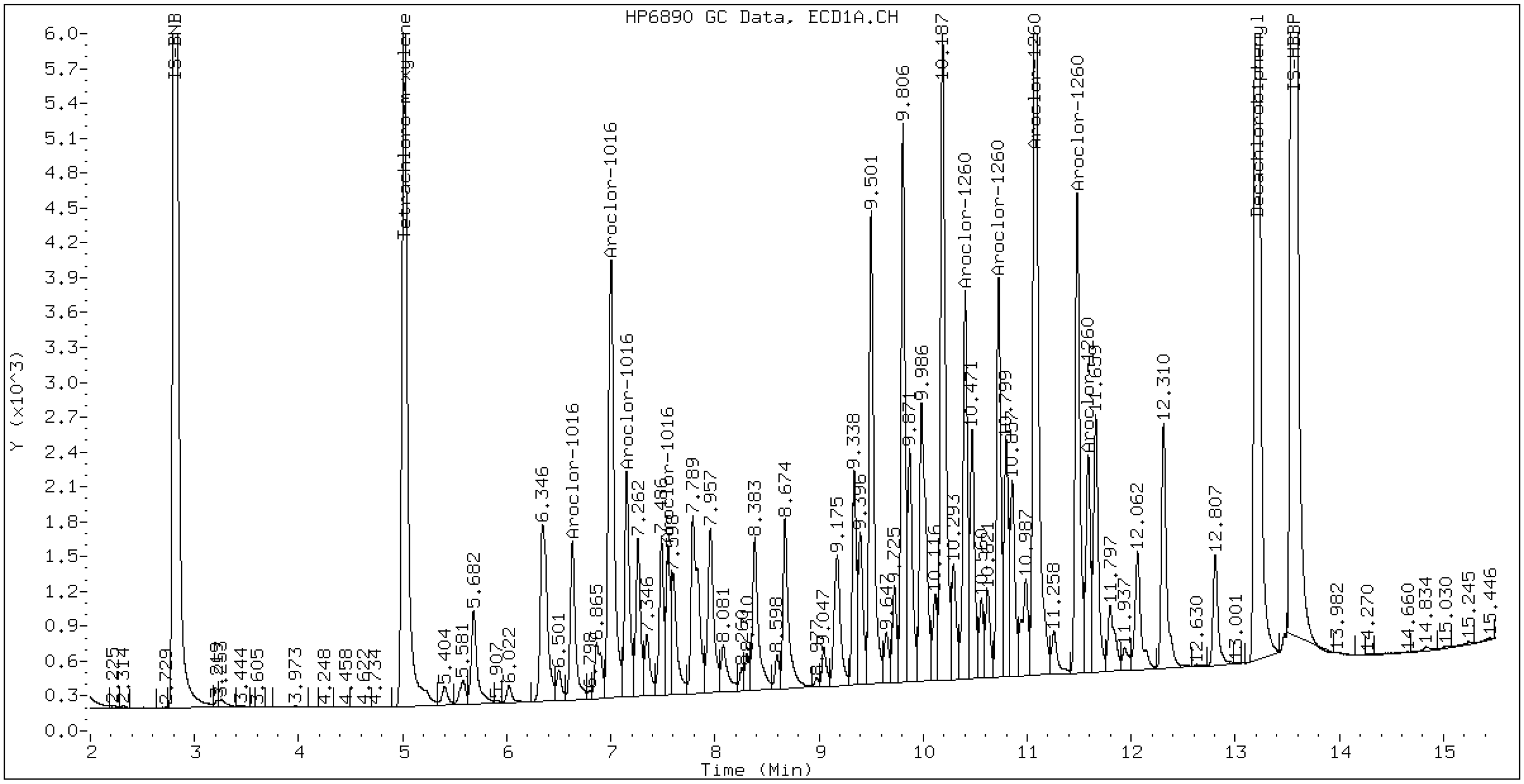
Total PCB Area Col2 (5.118 - 13.110) = 3084380 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

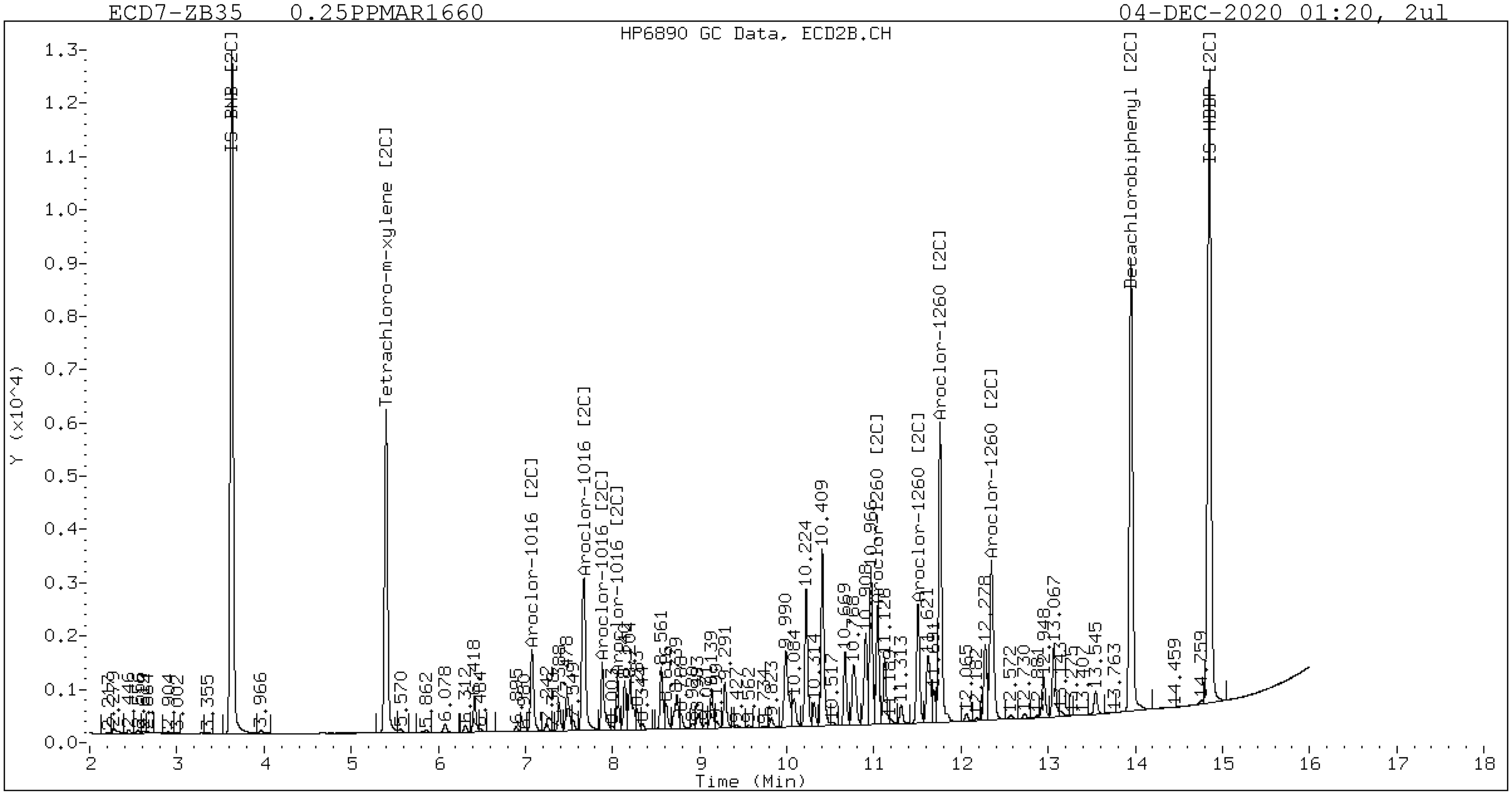
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1660 04-DEC-2020 01:20, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1660 04-DEC-2020 01:20, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120410ECD7.D
Data file 2: /20201204.b/20201204.b/20120410ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 04-DEC-2020 01:40
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.015	-0.002	34500	5.400	-0.002	21282	3.0	2.9	3.1	Tetrachloro-m-xylene
13.209	-0.001	83157	13.950	-0.000	33758	3.6	3.0	17.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	7.6	7.4
Decachlorobiphenyl	9.0	7.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	777728	-1.1
Hexabromobiphenyl	2132987	2164827	1.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	629726	-0.9
Hexabromobiphenyl	665758	677402	1.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.631	-0.000	9071	23.2	1	7.076	0.000	6689	21.9
Aroclor-1016	2	7.001	-0.001	29648	23.8	2	7.672	0.001	13648	19.8
Aroclor-1016	3	7.153	0.000	13112	24.5	3	7.884	0.002	5105	19.5
Aroclor-1016	4	7.550	0.001	7153	24.6	4	8.058	0.001	2808	17.9

Total Col1Ave (4 peaks): 24.0 Total Col2Ave (4 peaks): 19.8 RPD = 19
Corrected Ave (3 peaks): 23.8 Corrected Ave (3 peaks): 19.1 RPD = 22

CalAmt %D: 20.0 CalAmt %D: -1.1

Aroclor-1260	1	10.406	0.002	20336	24.2	1	11.043	0.000	8063	19.5
Aroclor-1260	2	10.727	0.000	19435	23.1	2	11.508	0.001	8631	19.8
Aroclor-1260	3	11.078	-0.001	37347	17.1	3	11.761	0.001	20992	18.8
Aroclor-1260	4	11.481	0.000	24819	22.3	4	12.350	0.001	15014	20.7
Aroclor-1260	5	11.585	-0.000	11407	23.5	NS	---			----

Total Col1Ave (5 peaks): 22.0 Total Col2Ave (4 peaks): 19.7 RPD = 11
Corrected Ave (4 peaks): 21.5 Corrected Ave (3 peaks): 19.4 RPD = 10

CalAmt %D: 10.2 CalAmt %D: -1.5

Total PCB Area Col1 (5.118 - 13.110) = 766475 Col1 Total PCB = 0.1 ppm*

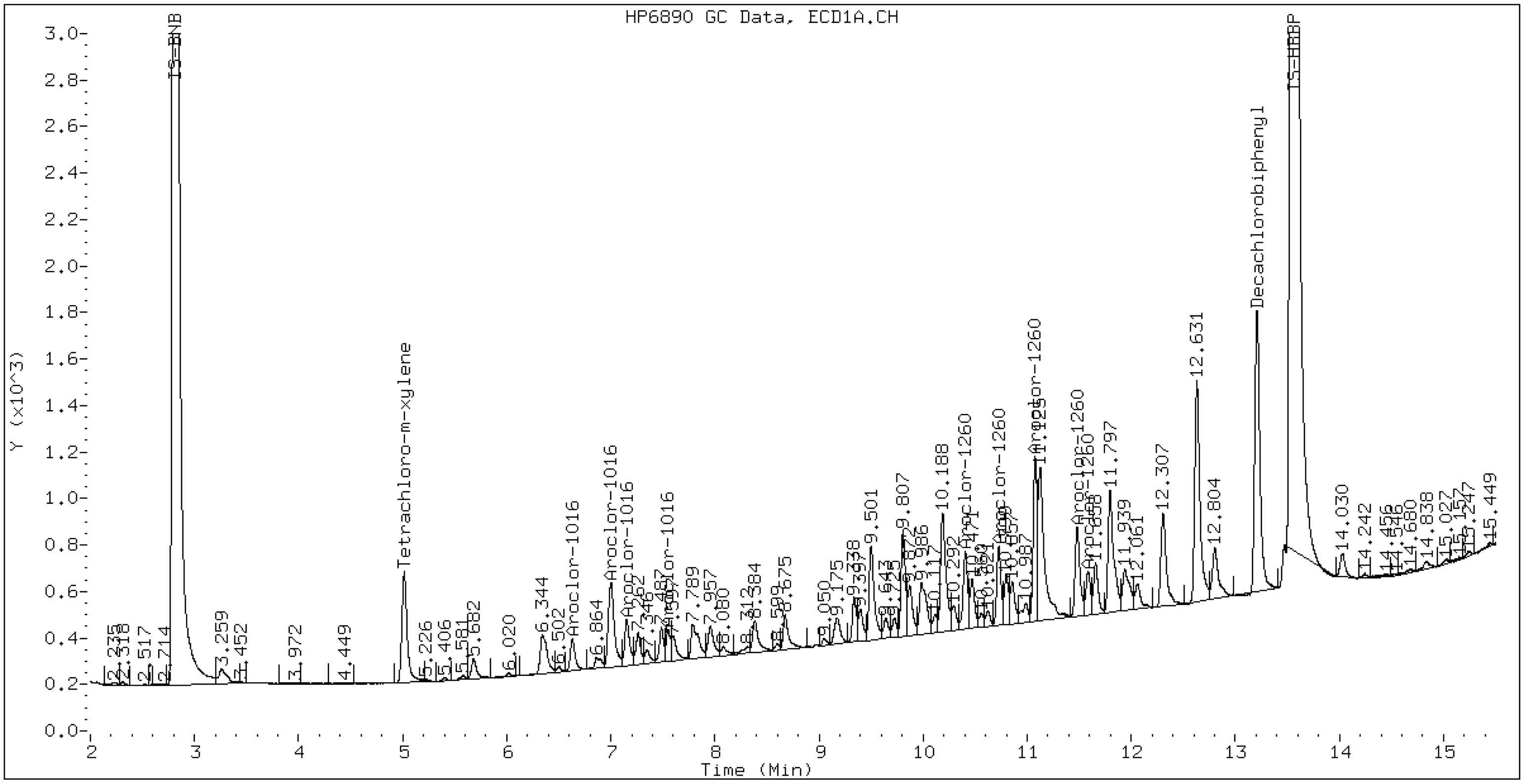
Total PCB Area Col2 (5.118 - 13.110) = 261860 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

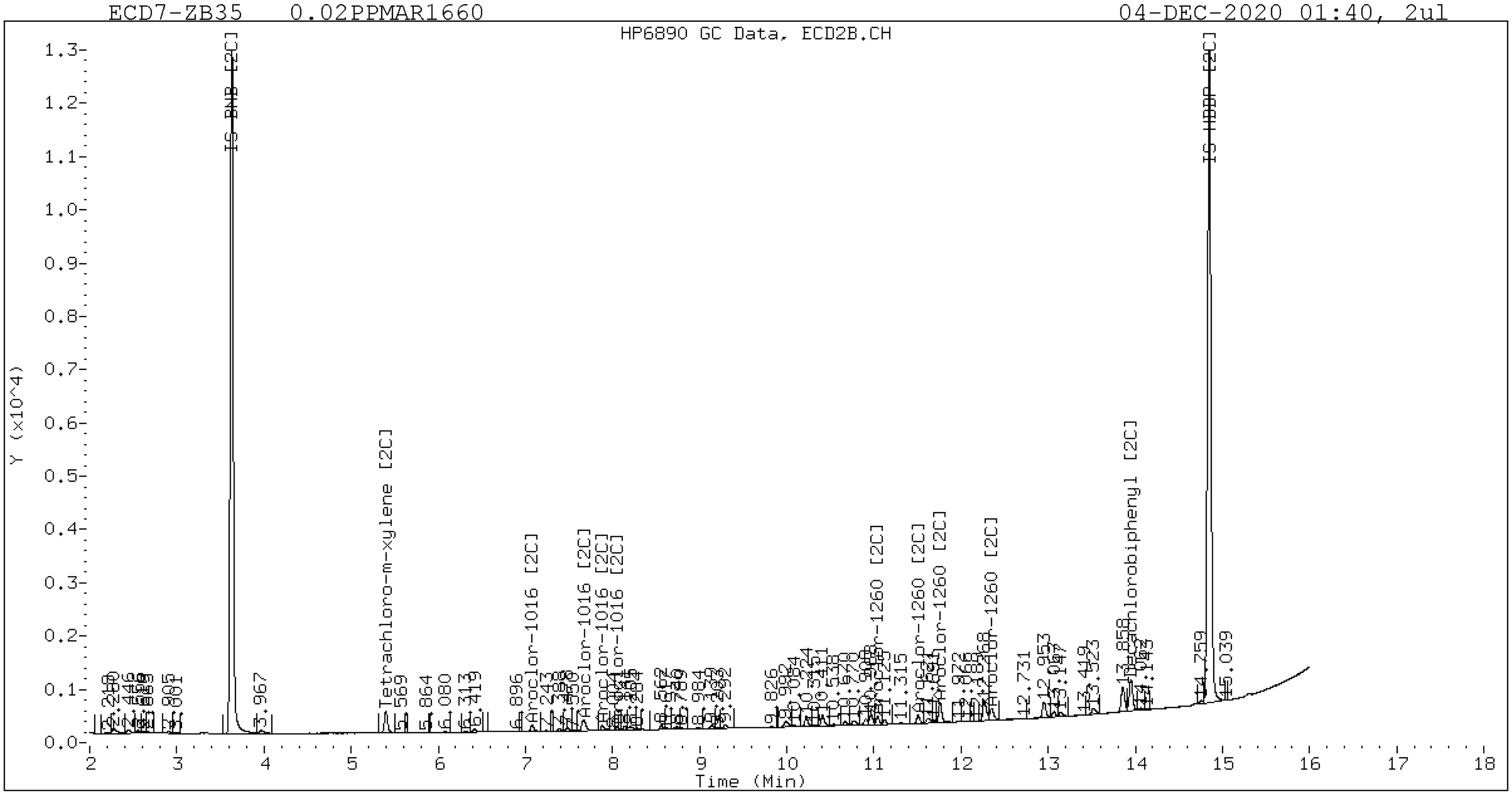
PCB Dual Column Chromatograms

ECD7-ZB5 0.02PPMAR1660 04-DEC-2020 01:40, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.02PPMAR1660 04-DEC-2020 01:40, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120411ECD7.D
Data file 2: /20201204.b/20201204.b/20120411ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 04-DEC-2020 02:01
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.017	-0.001	84531	5.401	-0.001	52854	7.6	7.5	1.9	Tetrachloro-m-xylene
13.208	-0.002	177596	13.951	0.000	77942	8.0	7.2	9.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	19.0	18.7
Decachlorobiphenyl	19.9	18.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	761689	-3.2
Hexabromobiphenyl	2132987	2094652	-1.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	617376	-2.9
Hexabromobiphenyl	665758	653510	-1.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.631	0.001	20155	52.6	1	7.077	0.001	14719	49.1
Aroclor-1016	2	7.001	-0.001	63674	52.1	2	7.673	0.002	32689	48.4
Aroclor-1016	3	7.153	0.001	28581	54.5	3	7.884	0.002	12477	48.7
Aroclor-1016	4	7.550	0.001	15312	53.7	4	8.058	0.002	7198	46.9
	Total Col1Ave (4 peaks):			53.2		Total Col2Ave (4 peaks):			48.3	RPD = 10
	Corrected Ave (3 peaks):			52.8		Corrected Ave (3 peaks):			48.0	RPD = 10
		CalAmt %D:		6.4			CalAmt %D:		-3.5	
Aroclor-1260	1	10.405	0.001	43614	53.5	1	11.044	0.001	19215	48.1
Aroclor-1260	2	10.726	0.000	43018	52.9	2	11.508	0.002	20050	47.7
Aroclor-1260	3	11.077	-0.002	110839	52.5	3	11.761	0.002	51510	47.9
Aroclor-1260	4	11.481	0.001	55605	51.5	4	12.350	0.002	32864	47.0
Aroclor-1260	5	11.587	0.001	26020	55.4	NS	---			----
	Total Col1Ave (5 peaks):			53.2		Total Col2Ave (4 peaks):			47.7	RPD = 11
	Corrected Ave (4 peaks):			52.6		Corrected Ave (3 peaks):			47.5	RPD = 10
		CalAmt %D:		6.4			CalAmt %D:		-4.7	

Total PCB Area Col1 (5.118 - 13.110) = 1336907 Col1 Total PCB = 0.1 ppm*

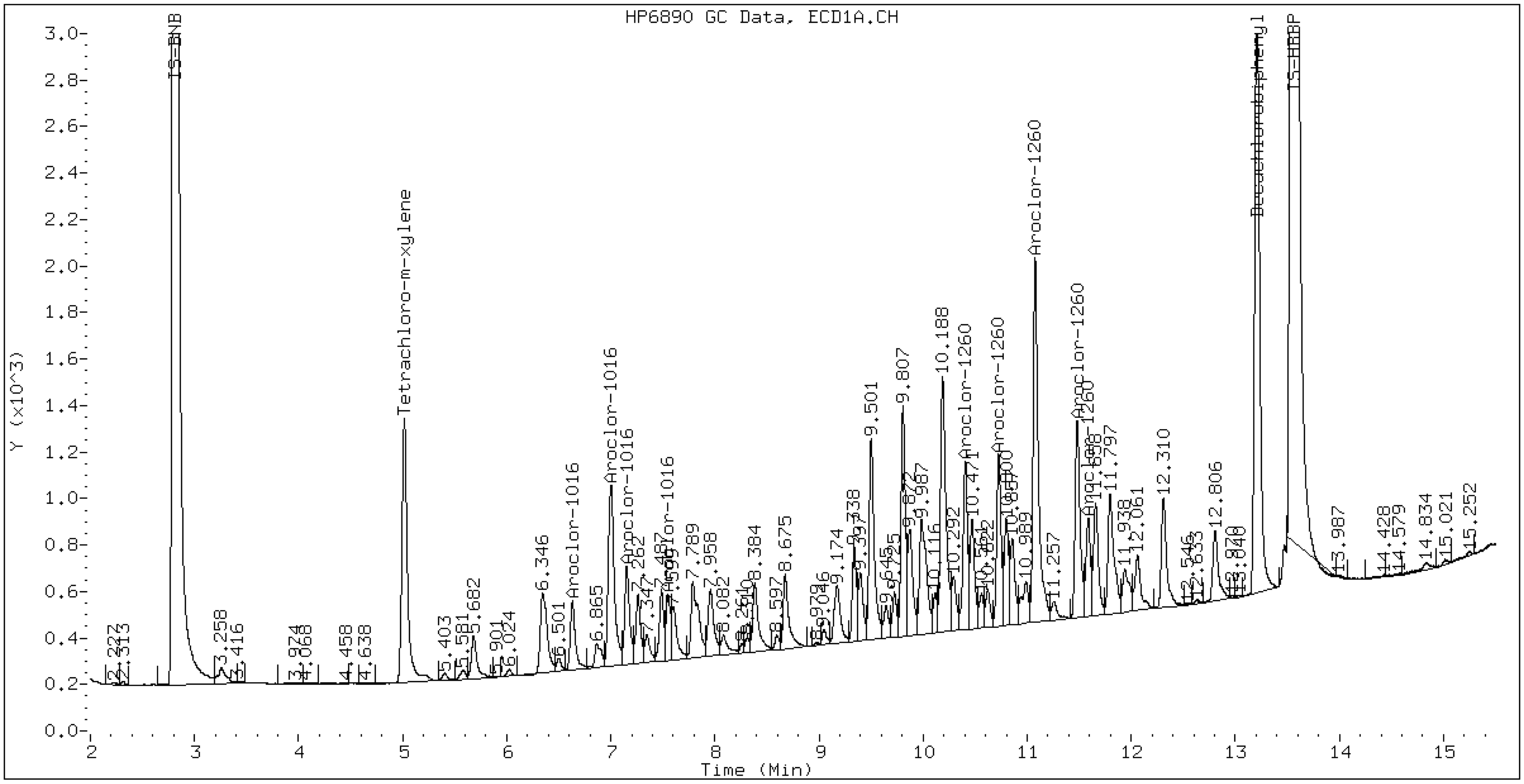
Total PCB Area Col2 (5.118 - 13.110) = 566725 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

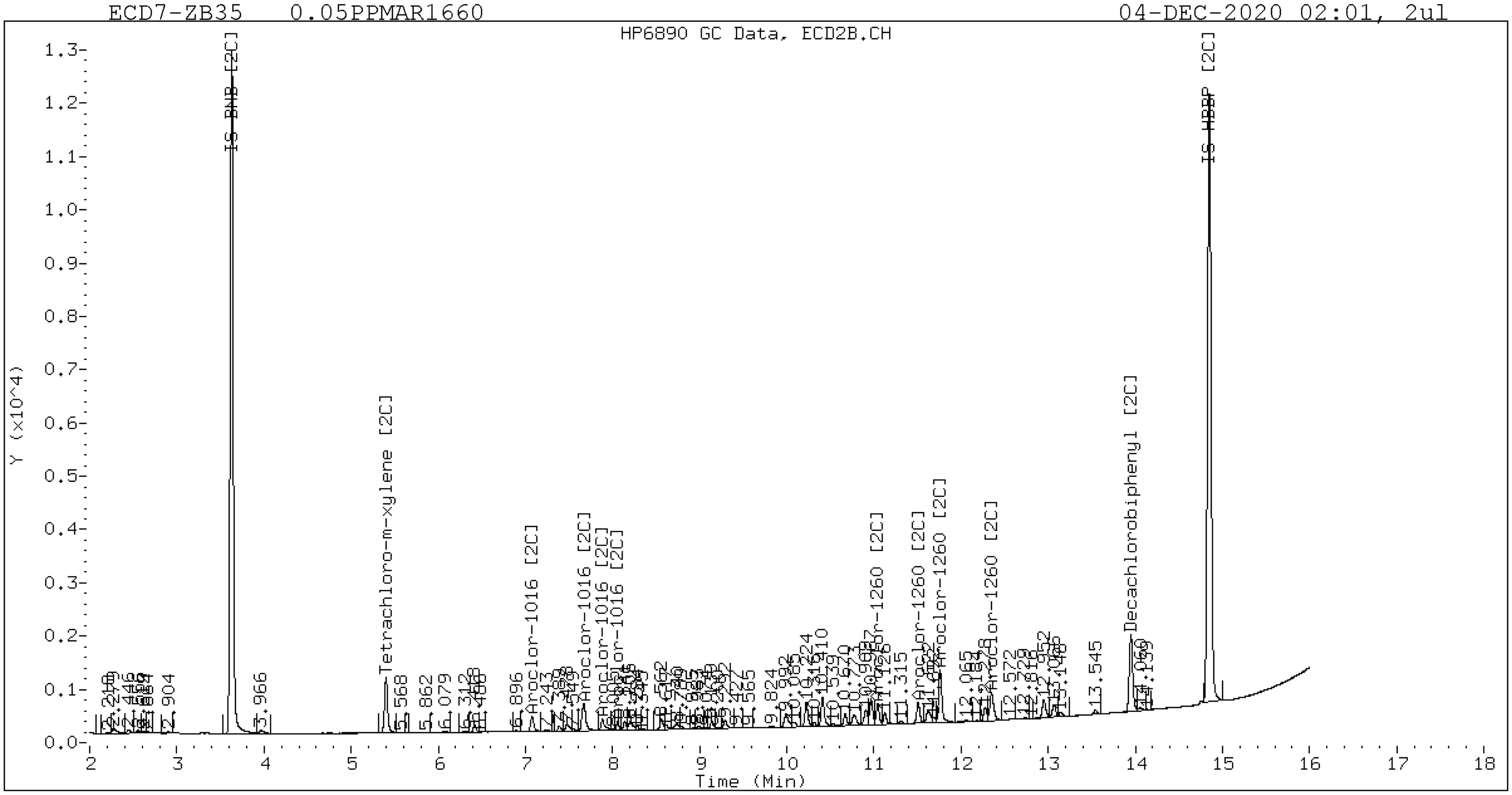
PCB Dual Column Chromatograms

ECD7-ZB5 0.05PPMAR1660 04-DEC-2020 02:01, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.05PPMAR1660 04-DEC-2020 02:01, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120412ECD7.D
Data file 2: /20201204.b/20201204.b/20120412ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1PPMAR1660
Client ID:
Injection Date: 04-DEC-2020 02:22
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.020	0.002	1911606	5.402	0.000	1187592	170.9	166.9	2.4	Tetrachloro-m-xylene
13.221	0.010	4334648	13.953	0.002	2095595	198.2	195.5	1.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	427.2	417.3
Decachlorobiphenyl	495.5	488.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	767231	-2.5
Hexabromobiphenyl	2132987	2057515	-3.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	620741	-2.3
Hexabromobiphenyl	665758	651315	-2.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.632	0.001	338881	877.7	1	7.076	0.000	279814	929.3
Aroclor-1016	2	7.003	0.000	1108158	900.8	2	7.672	0.001	665517	979.2
Aroclor-1016	3	7.153	0.000	444949	842.0	3	7.882	0.000	262161	1018.0
Aroclor-1016	4	7.550	0.001	245092	852.9	4	8.057	0.000	168915	1094.0
	Total Col1Ave (4 peaks):			868.3		Total Col2Ave (4 peaks):			1005.1	RPD = 15
	Corrected Ave (3 peaks):			857.5		Corrected Ave (3 peaks):			975.5	RPD = 13
	CalAmt %D:			-13.2		CalAmt %D:			0.5	
Aroclor-1260	1	10.405	0.001	720756	900.9	1	11.043	0.000	405816	1019.5
Aroclor-1260	2	10.727	0.000	744219	931.5	2	11.507	0.000	425746	1015.4
Aroclor-1260	3	11.080	0.001	2328188	1122.7	3	11.760	0.001	1112814	1037.6
Aroclor-1260	4	11.482	0.002	1049542	990.6	4	12.350	0.001	711913	1021.6
Aroclor-1260	5	11.586	-0.000	396690	859.7	NS	---			----
	Total Col1Ave (5 peaks):			961.1		Total Col2Ave (4 peaks):			1023.5	RPD = 6
	Corrected Ave (4 peaks):			920.7		Corrected Ave (3 peaks):			1018.8	RPD = 10
	CalAmt %D:			-3.9		CalAmt %D:			2.4	

Total PCB Area Col1 (5.118 - 13.110) = 21329423 Col1 Total PCB = 1.9 ppm*

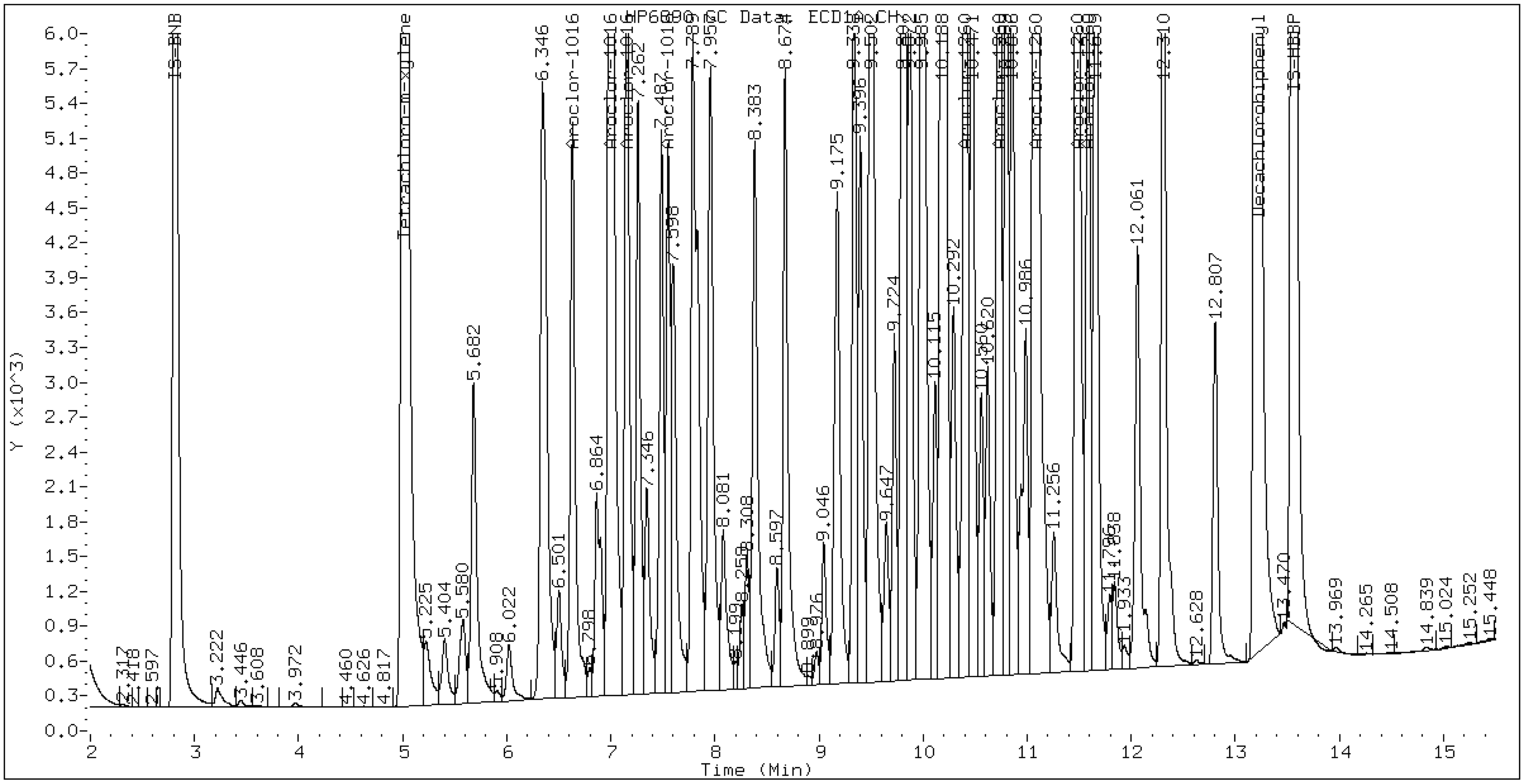
Total PCB Area Col2 (5.118 - 13.110) = 12060457 Col2 Total PCB = 2.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

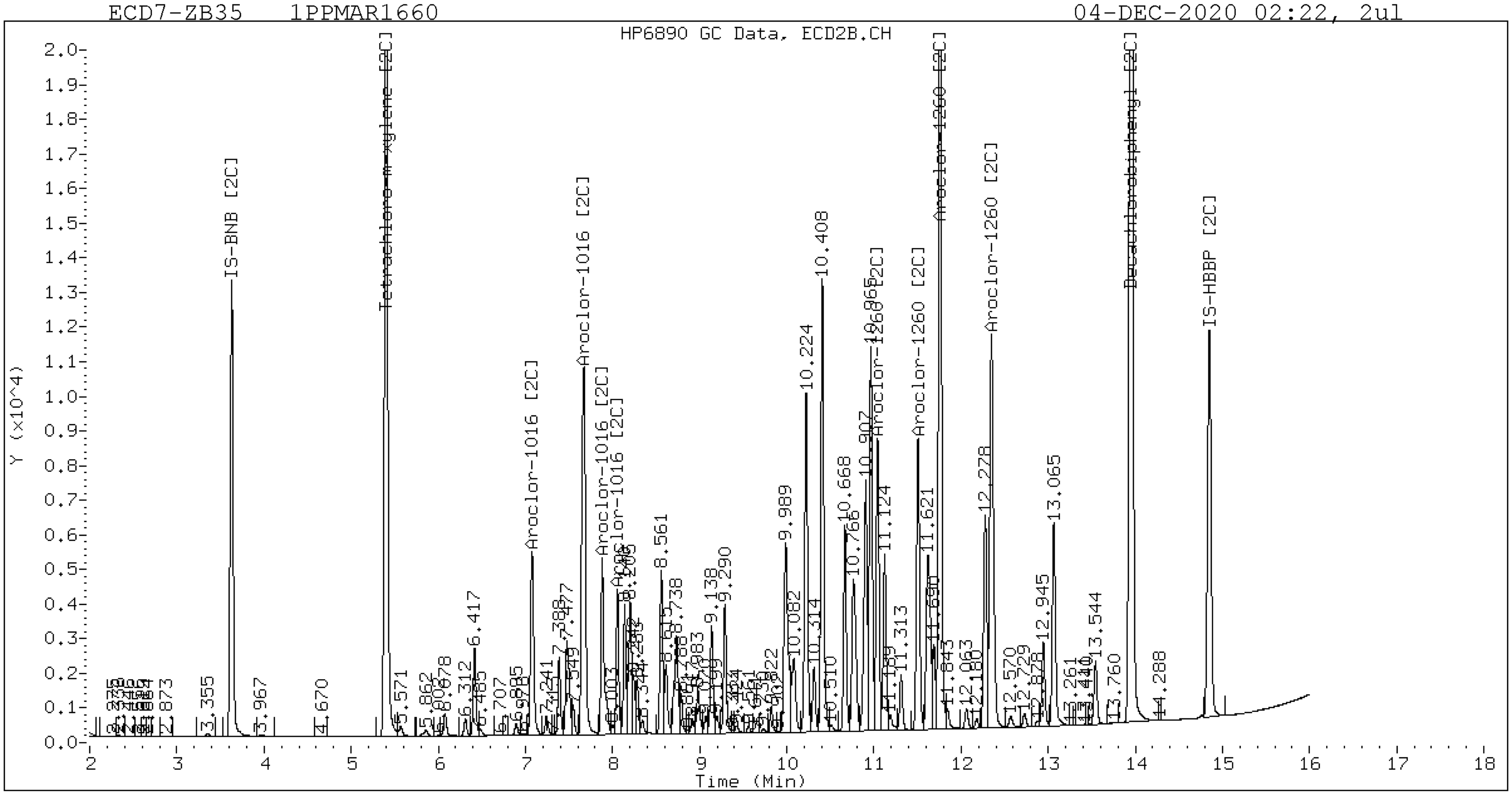
PCB Dual Column Chromatograms

ECD7-ZB5 1PPMAR1660 04-DEC-2020 02:22, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 1PPMAR1660 04-DEC-2020 02:22, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120413ECD7.D
Data file 2: /20201204.b/20201204.b/20120413ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 04-DEC-2020 02:42
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.001	180592	5.401	-0.001	117480	15.8	16.1	2.1	Tetrachloro-m-xylene
13.208	-0.002	346248	13.950	-0.001	174875	15.0	15.5	3.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	39.5	40.4
Decachlorobiphenyl	37.6	38.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	783478	-0.4
Hexabromobiphenyl	2132987	2168581	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	634709	-0.1
Hexabromobiphenyl	665758	683907	2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.630	-0.000	40359	102.4	1	7.076	-0.000	30843	100.2
Aroclor-1016	2	7.003	0.000	126484	100.7	2	7.672	0.001	70345	101.2
Aroclor-1016	3	7.151	-0.001	54846	101.6	3	7.883	0.001	26250	99.7
Aroclor-1016	4	7.550	0.001	29925	102.0	4	8.058	0.001	15527	98.3

Total Col1Ave (4 peaks): 101.7 Total Col2Ave (4 peaks): 99.9 RPD = 2
Corrected Ave (3 peaks): 101.4 Corrected Ave (3 peaks): 99.4 RPD = 2

CalAmt %D: 1.7 CalAmt %D: -0.1

Aroclor-1260	1	10.405	0.001	83628	99.2	1	11.044	0.001	41611	99.6
Aroclor-1260	2	10.726	-0.000	83965	99.7	2	11.508	0.002	43745	99.4
Aroclor-1260	3	11.077	-0.002	220285	100.8	3	11.760	0.001	113474	100.8
Aroclor-1260	4	11.481	0.001	110356	98.8	4	12.349	0.001	71218	97.3
Aroclor-1260	5	11.585	-0.000	49927	102.7	NS	---			----

Total Col1Ave (5 peaks): 100.2 Total Col2Ave (4 peaks): 99.3 RPD = 1
Corrected Ave (4 peaks): 99.6 Corrected Ave (3 peaks): 98.7 RPD = 1

CalAmt %D: 0.2 CalAmt %D: -0.7

Total PCB Area Col1 (5.118 - 13.110) = 2551562 Col1 Total PCB = 0.2 ppm*

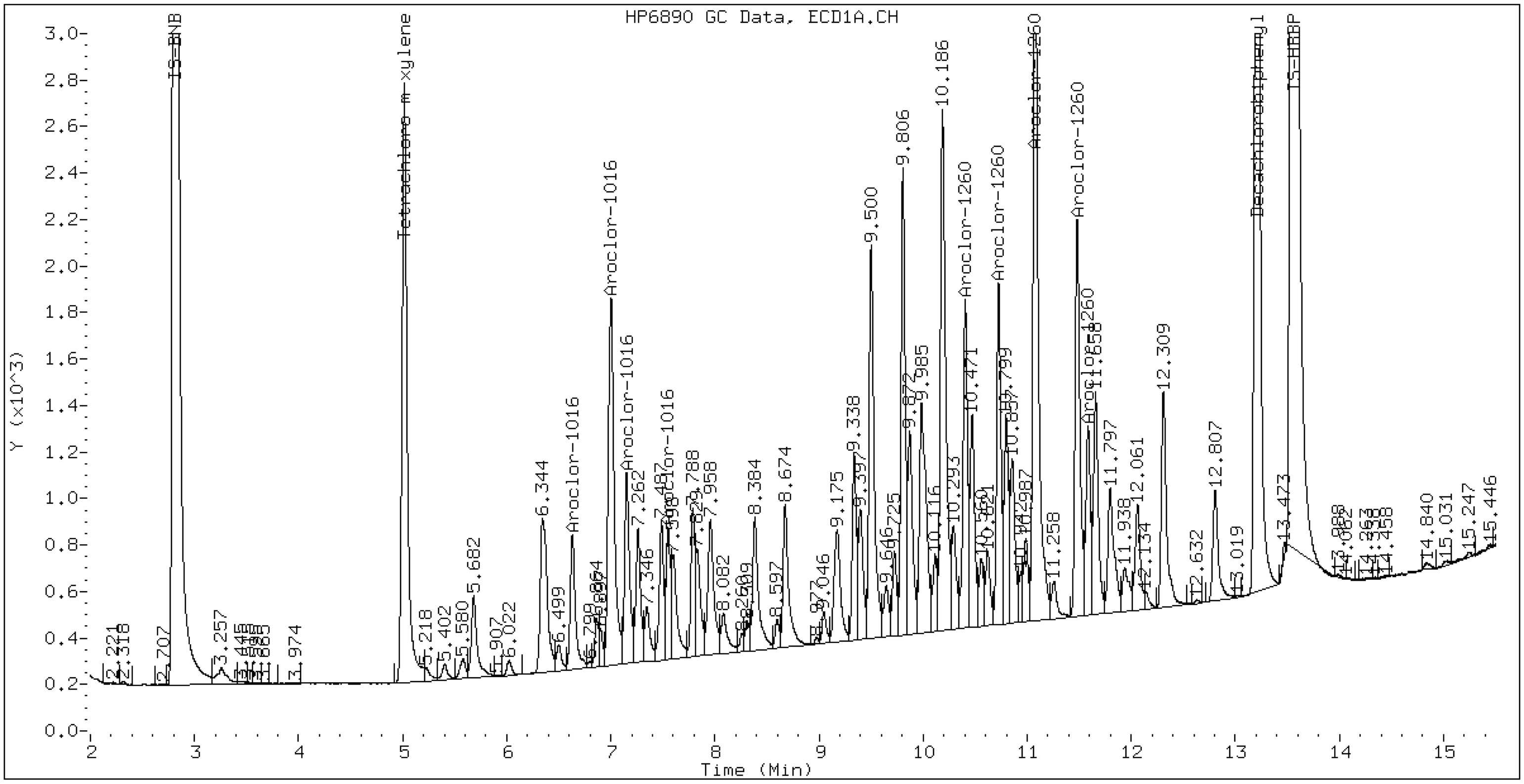
Total PCB Area Col2 (5.118 - 13.110) = 1208920 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

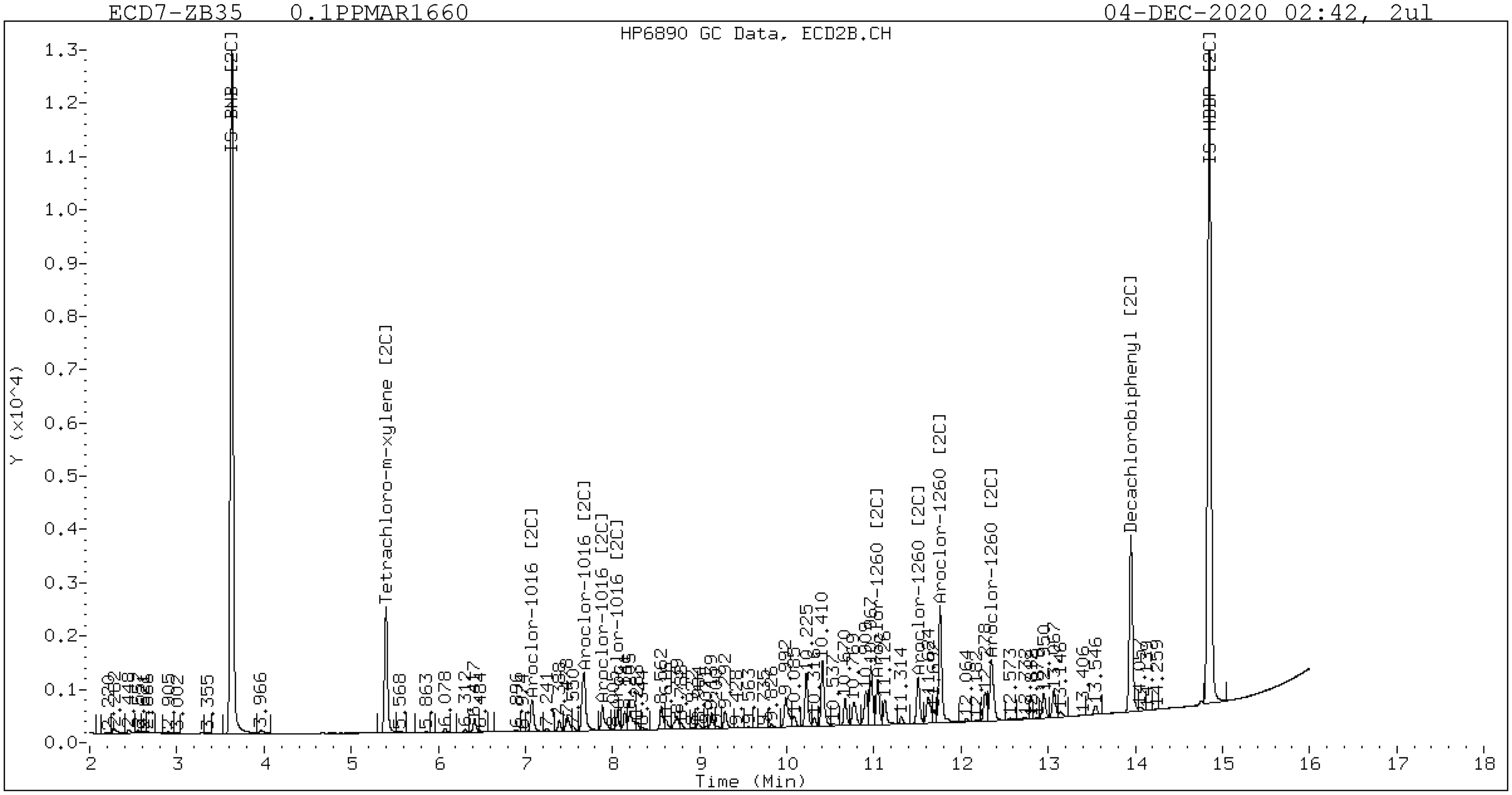
PCB Dual Column Chromatograms

ECD7-ZB5 0.1PPMAR1660 04-DEC-2020 02:42, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.1PPMAR1660 04-DEC-2020 02:42, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

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Data file 2: /20201204.b/20201204.b/20120414ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 04-DEC-2020 03:03
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.018	0.000	923925	5.401	-0.001	596513	81.5	83.0	1.8	Tetrachloro-m-xylene
13.215	0.004	1841470	13.955	0.004	999245	80.7	88.7	9.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	203.8	207.5
Decachlorobiphenyl	201.7	221.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	777369	-1.2
Hexabromobiphenyl	2132987	2147351	0.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	626950	-1.3
Hexabromobiphenyl	665758	684273	2.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.631	0.000	178991	457.5	1	7.076	0.000	149700	492.2
Aroclor-1016	2	7.003	0.000	571937	458.9	2	7.671	0.000	347879	506.8
Aroclor-1016	3	7.152	0.000	236901	442.4	3	7.882	0.000	131995	507.5
Aroclor-1016	4	7.549	0.000	127750	438.8	4	8.057	0.000	82453	528.7
	Total Col1Ave (4 peaks):			449.4		Total Col2Ave (4 peaks):			508.8	RPD = 12
	Corrected Ave (3 peaks):			446.2		Corrected Ave (3 peaks):			502.1	RPD = 12
	CalAmt %D:			-10.1		CalAmt %D:			1.8	
Aroclor-1260	1	10.404	0.000	368595	441.4	1	11.043	0.000	210469	503.3
Aroclor-1260	2	10.726	0.000	376679	451.8	2	11.506	0.000	222213	504.4
Aroclor-1260	3	11.079	0.000	1064588	491.9	3	11.759	0.000	559812	496.9
Aroclor-1260	4	11.480	0.000	510179	461.4	4	12.349	0.000	367700	502.2
Aroclor-1260	5	11.586	0.000	211750	439.7	NS	---			----
	Total Col1Ave (5 peaks):			457.2		Total Col2Ave (4 peaks):			501.7	RPD = 9
	Corrected Ave (4 peaks):			448.6		Corrected Ave (3 peaks):			500.8	RPD = 11
	CalAmt %D:			-8.6		CalAmt %D:			0.3	

Total PCB Area Col1 (5.118 - 13.110) = 10992659 Col1 Total PCB = 1.0 ppm*

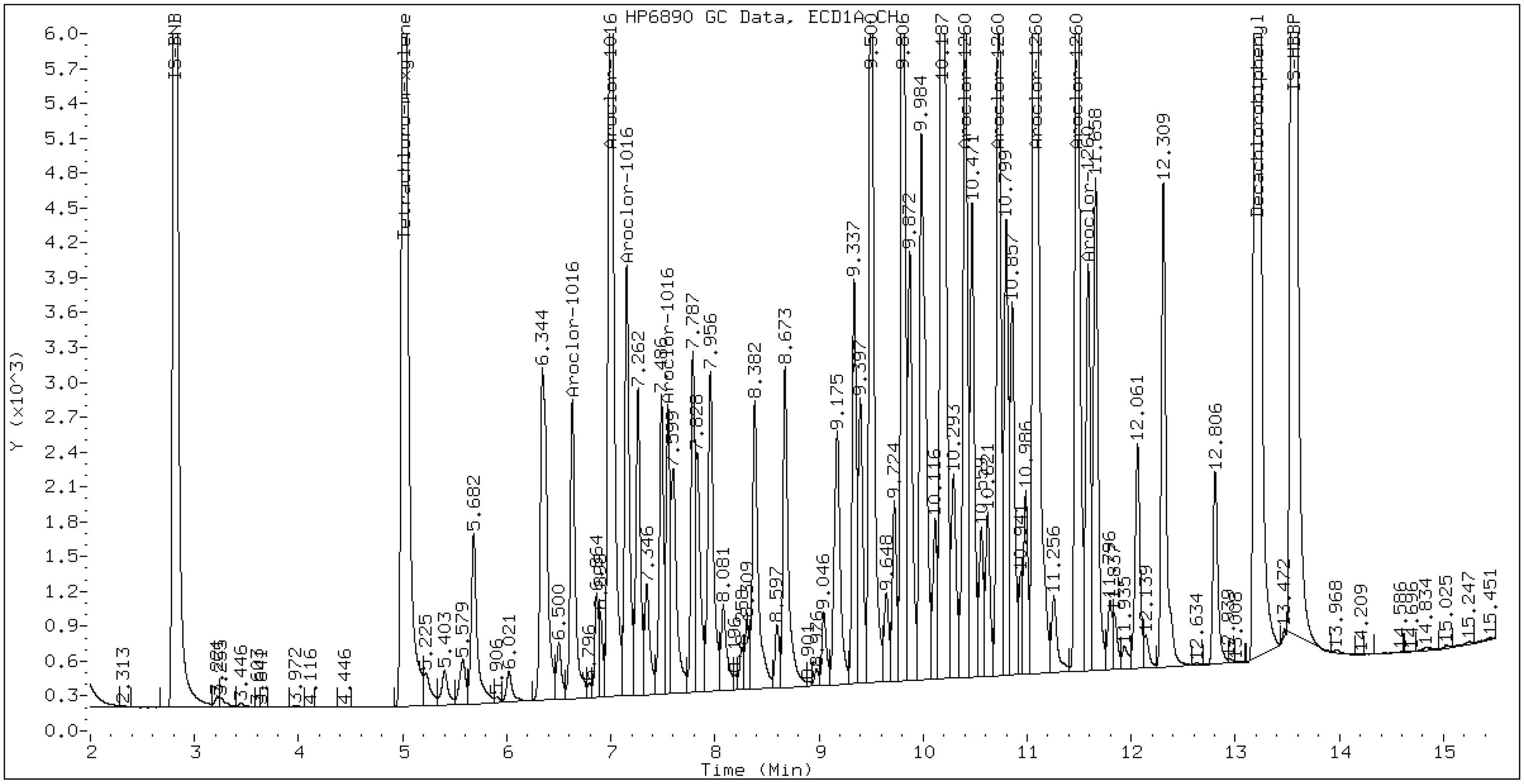
Total PCB Area Col2 (5.118 - 13.110) = 6128174 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

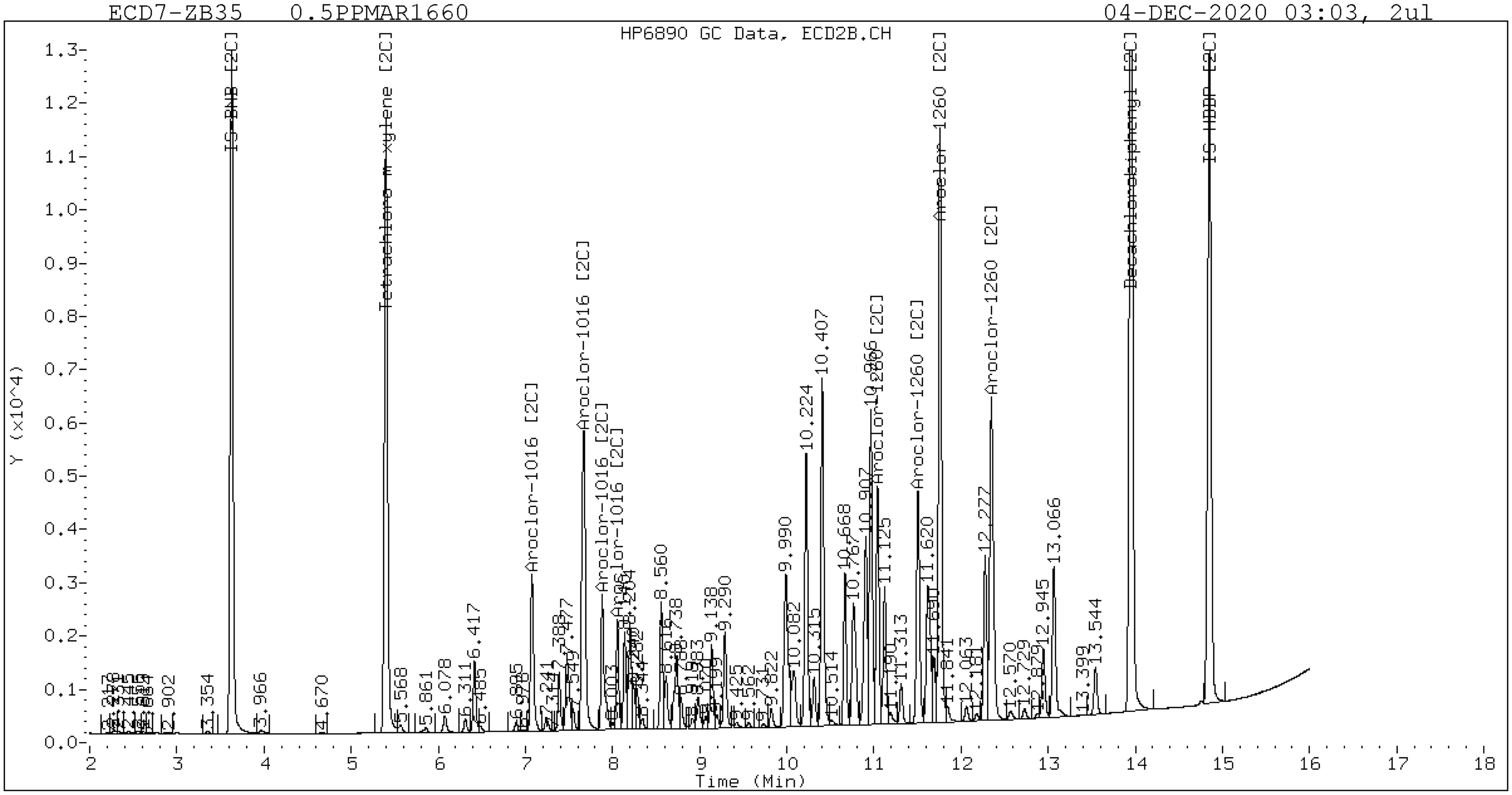
PCB Dual Column Chromatograms

ECD7-ZB5 0.5PPMAR1660 04-DEC-2020 03:03, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.5PPMAR1660 04-DEC-2020 03:03, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120415ECD7.D
Data file 2: /20201204.b/20201204.b/20120415ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 04-DEC-2020 03:23
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.017	-0.001	475624	5.401	-0.001	318630	40.8	43.3	6.2	Tetrachloro-m-xylene
13.210	0.000	879038	13.952	0.001	495702	37.5	43.3	14.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	101.9	108.4
Decachlorobiphenyl	93.7	108.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	800446	1.8
Hexabromobiphenyl	2132987	2206293	3.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	641302	0.9
Hexabromobiphenyl	665758	695866	4.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.631	0.000	77636	250.0	1	7.076	0.000	60604	250.0
Aroclor-1242	2	7.003	0.000	239466	250.0	2	7.673	0.000	140386	250.0
Aroclor-1242	3	8.309	0.000	79491	250.0	3	8.991	0.000	55399	250.0
Aroclor-1242	4	8.603	0.000	86527	250.0	4	9.427	0.000	54530	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.118 - 13.110) = 2034303 Col1 Total PCB = 0.2 ppm*

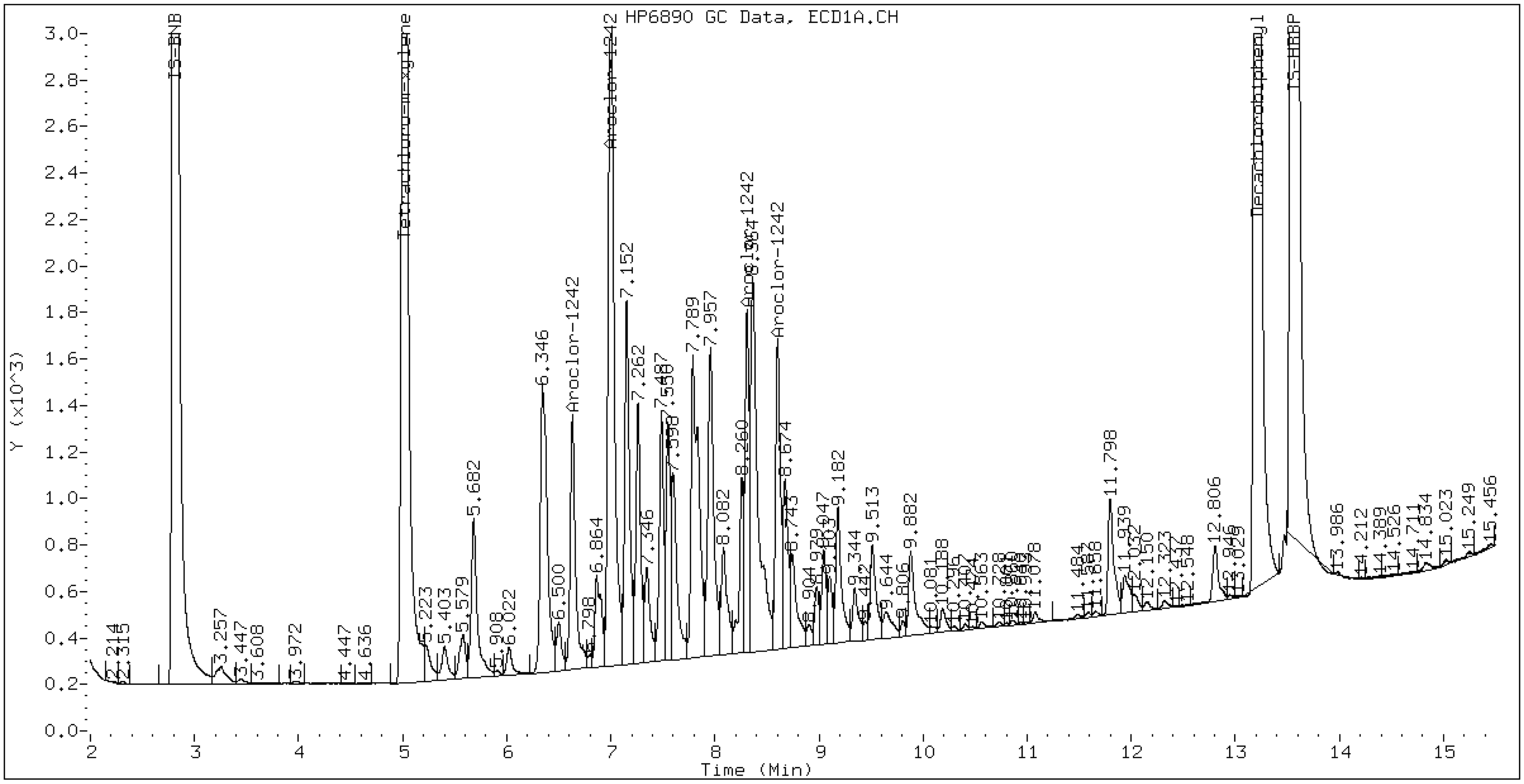
Total PCB Area Col2 (5.118 - 13.110) = 1234857 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

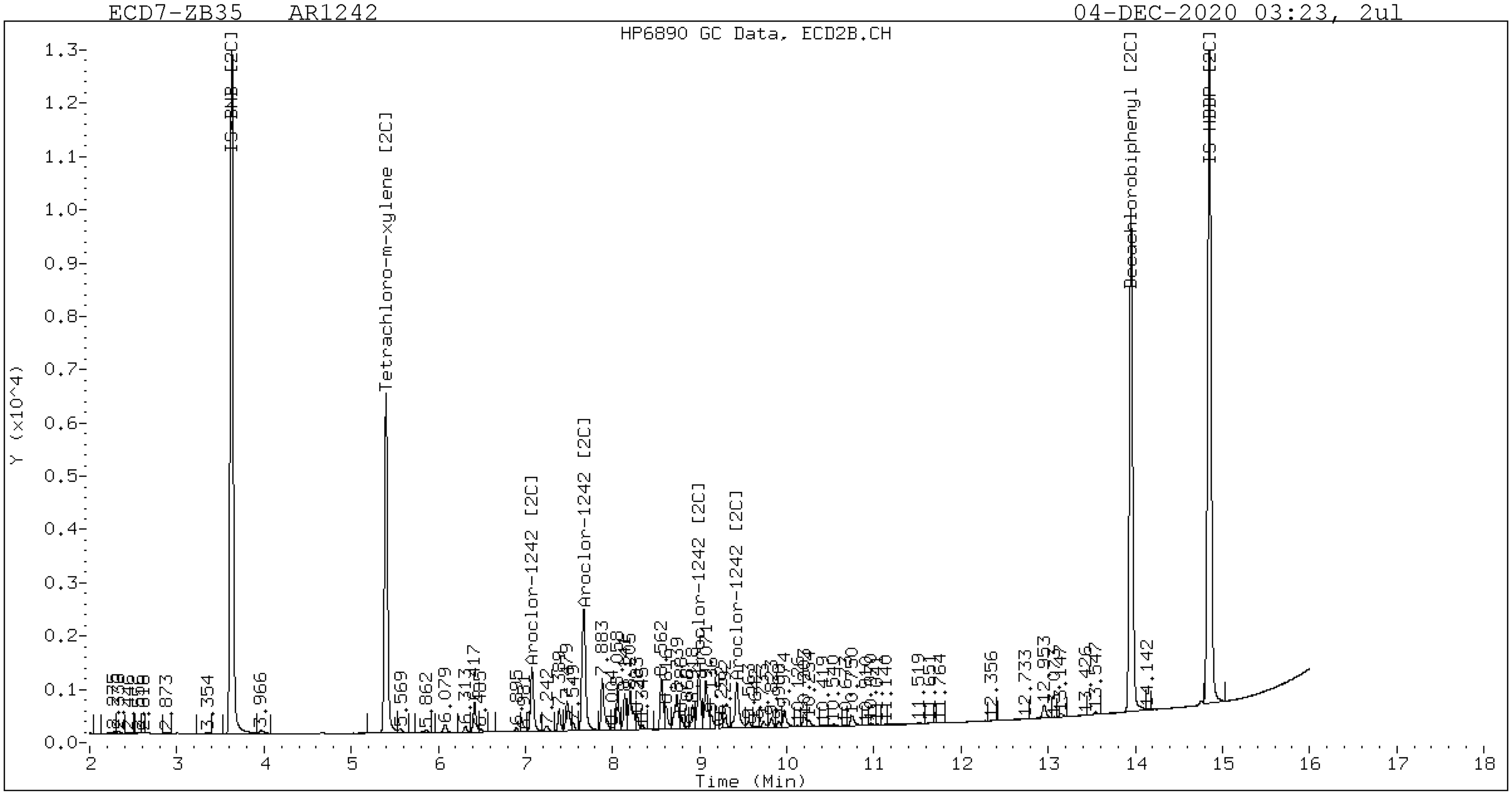
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242 04-DEC-2020 03:23, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242 04-DEC-2020 03:23, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120416ECD7.D
Data file 2: /20201204.b/20201204.b/20120416ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 04-DEC-2020 03:44
Report Date: 12/07/2020 11:51
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.017	-0.001	457627	5.401	-0.001	303284	40.7	42.9	5.3	Tetrachloro-m-xylene
13.210	-0.001	855062	13.952	0.001	476979	37.8	43.2	13.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	101.8	107.3
Decachlorobiphenyl	94.6	107.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	770909	-2.0
Hexabromobiphenyl	2132987	2125806	-0.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	616259	-3.0
Hexabromobiphenyl	665758	671394	0.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	7.487	0.000	100524	250.0	1	8.141	0.000	52236	250.0
Aroclor-1248	2	7.956	0.000	152414	250.0	2	8.562	0.000	68362	250.0
Aroclor-1248	3	8.365	0.000	225346	250.0	3	8.991	0.000	97366	250.0
Aroclor-1248	4	8.602	0.000	130261	250.0	4	9.426	0.000	95441	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.118 - 13.110) = 2555384 Col1 Total PCB = 0.2 ppm*

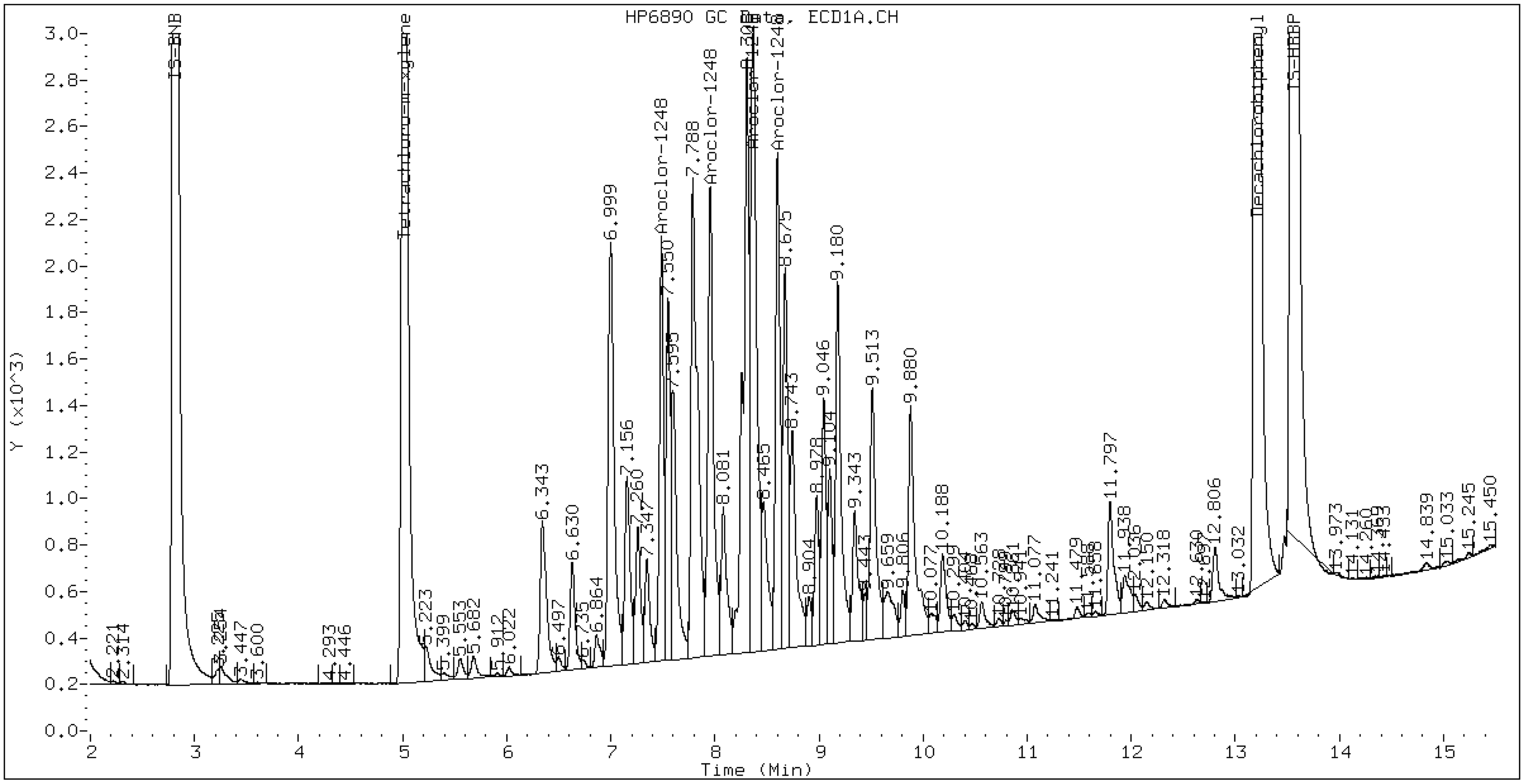
Total PCB Area Col2 (5.118 - 13.110) = 1467344 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

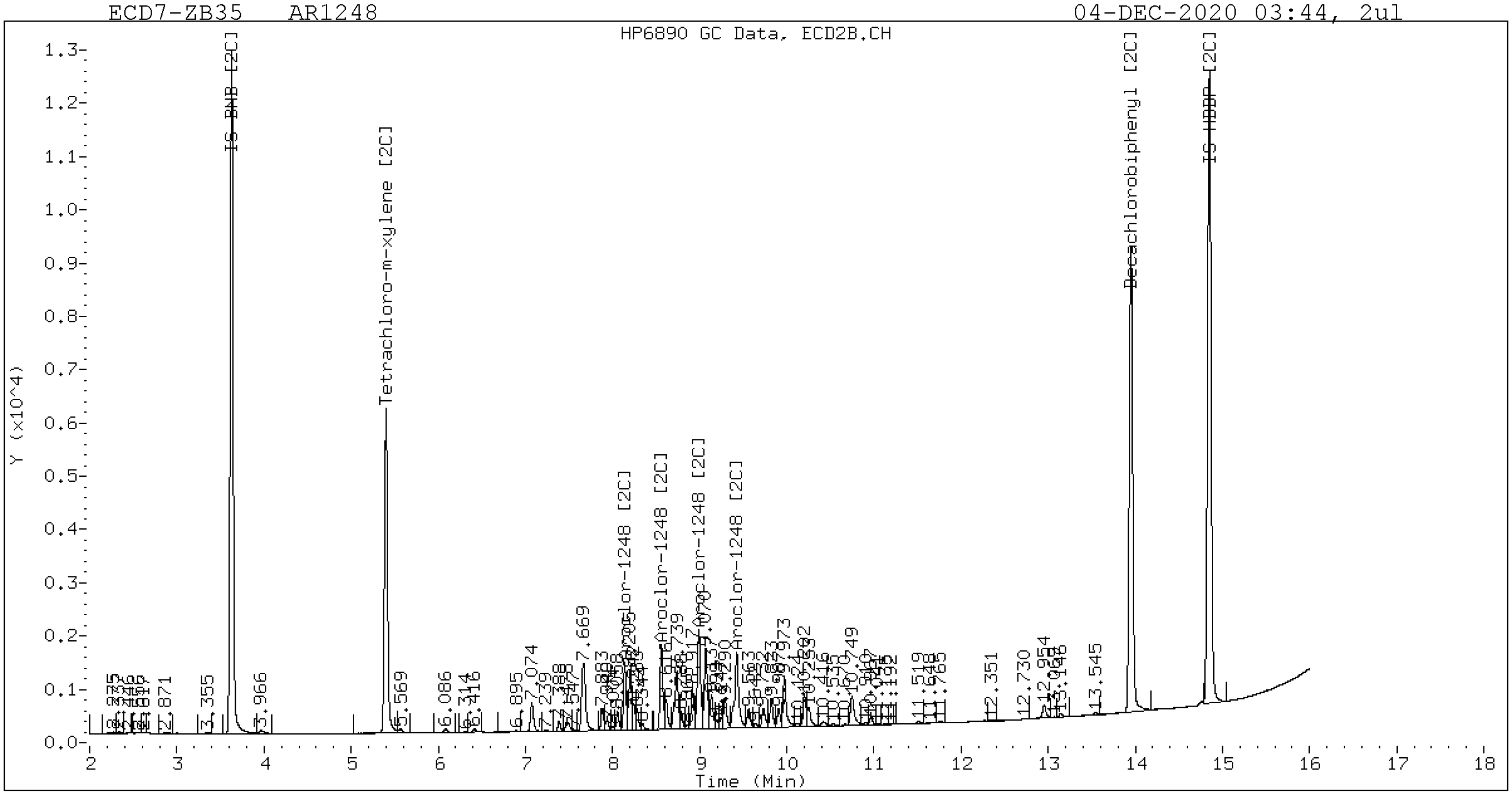
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248 04-DEC-2020 03:44, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248 04-DEC-2020 03:44, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120417ECD7.D
Data file 2: /20201204.b/20201204.b/20120417ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 04-DEC-2020 04:04
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.002	479430	5.401	-0.001	311865	41.4	42.6	2.8	Tetrachloro-m-xylene
13.210	-0.000	867479	13.953	0.002	492200	37.5	43.2	14.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.5	106.4
Decachlorobiphenyl	93.7	107.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	794434	1.0
Hexabromobiphenyl	2132987	2177140	2.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	639129	0.6
Hexabromobiphenyl	665758	692839	4.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.675	0.000	235296	250.0	1	9.291	0.000	114096	250.0
Aroclor-1254	2	8.743	0.000	127435	250.0	2	9.384	0.000	52845	250.0
Aroclor-1254	3	9.046	0.000	156684	250.0	3	9.823	0.000	75571	250.0
Aroclor-1254	4	9.180	0.000	323163	250.0	4	9.972	0.000	178132	250.0
Aroclor-1254	5	9.877	0.000	214441	250.0	5	10.205	0.000	183964	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0
Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.118 - 13.110) = 3465791 Col1 Total PCB = 0.3 ppm*

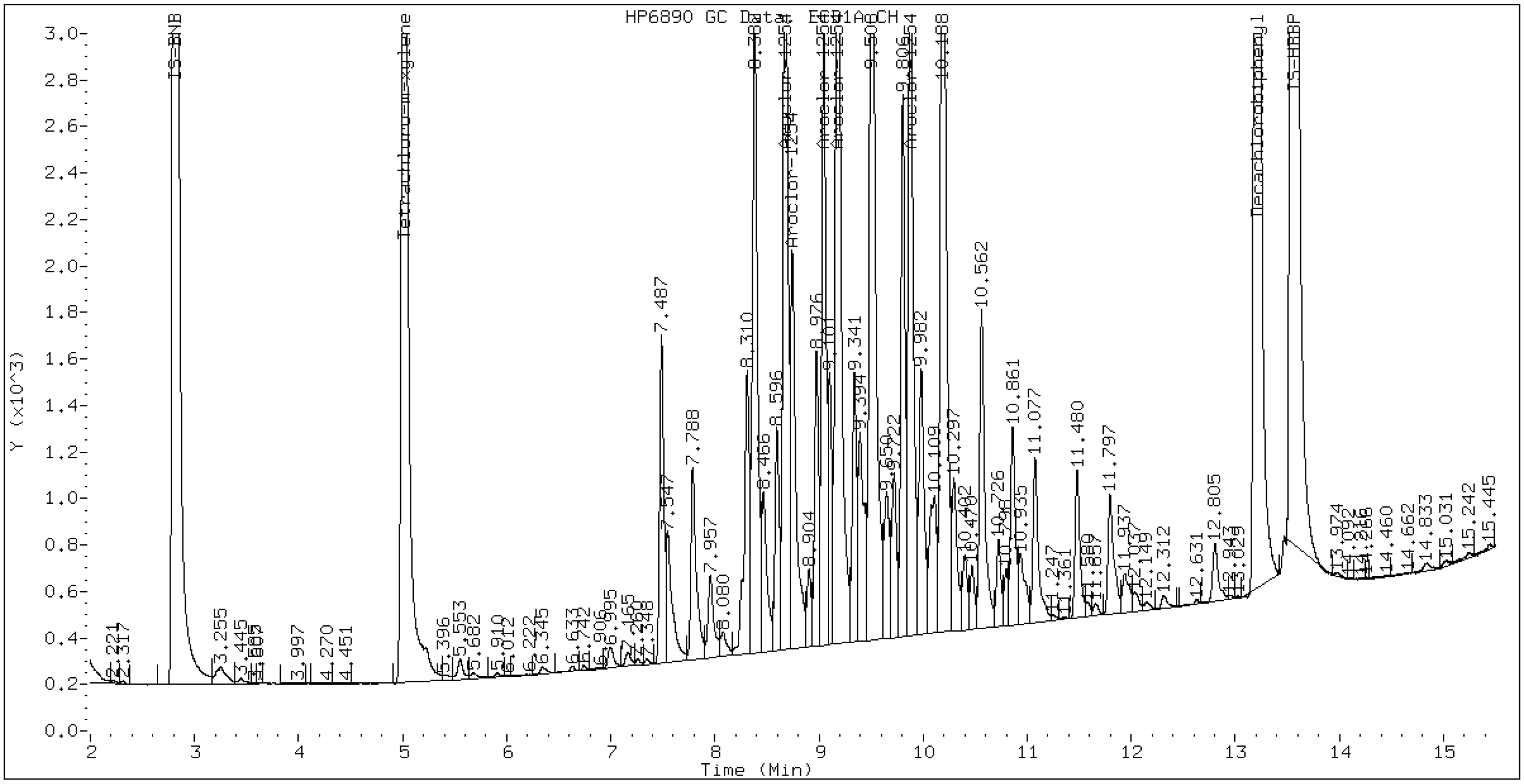
Total PCB Area Col2 (5.118 - 13.110) = 1886033 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

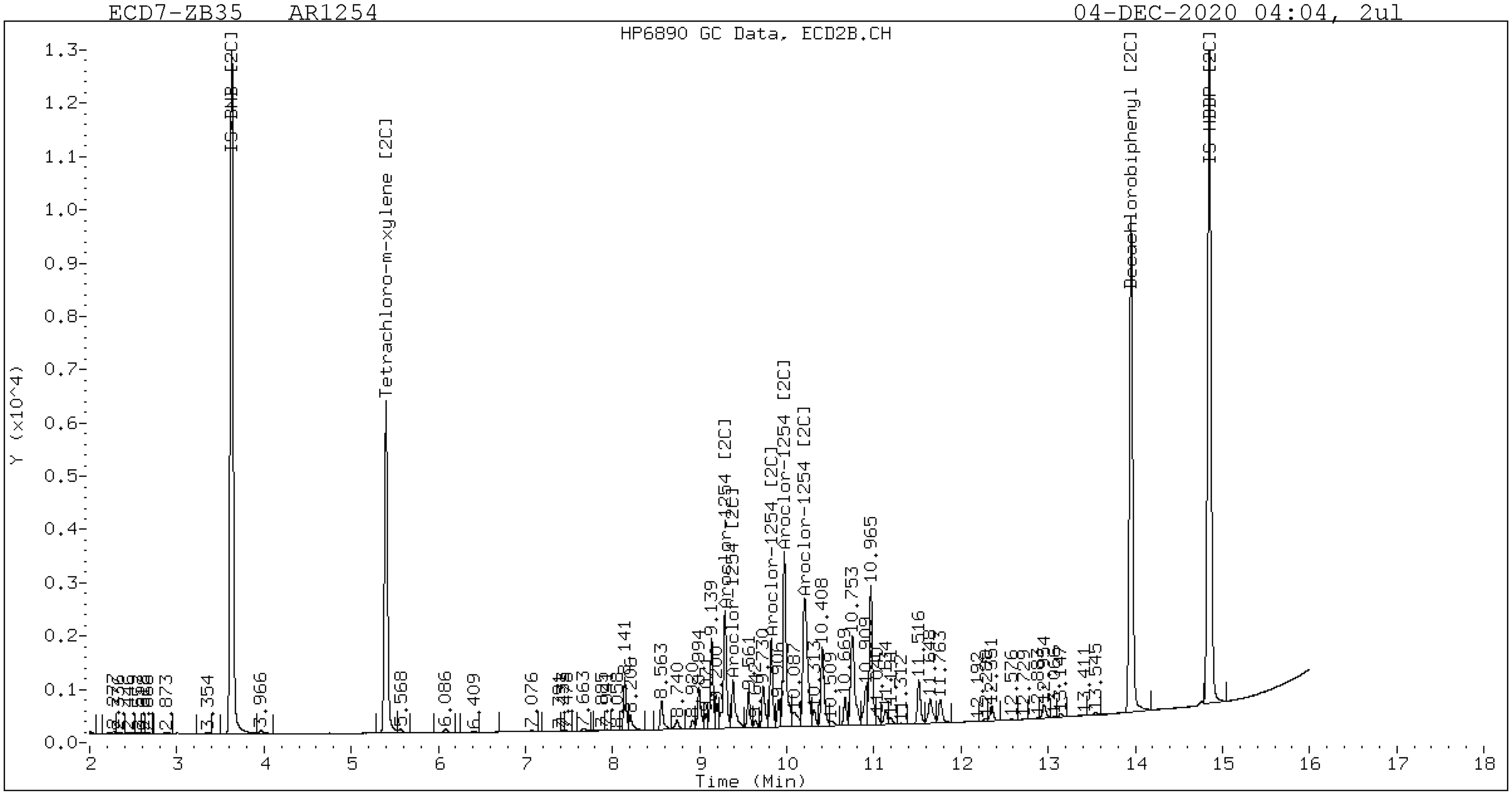
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254 04-DEC-2020 04:04, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254 04-DEC-2020 04:04, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120418ECD7.D
Data file 2: /20201204.b/20201204.b/20120418ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 04-DEC-2020 04:25
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.001	480815	5.401	-0.001	313973	41.2	42.4	3.0	Tetrachloro-m-xylene
13.210	0.000	854649	13.952	0.001	483991	36.0	41.6	14.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.0	106.1
Decachlorobiphenyl	90.1	104.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	800510	1.8
Hexabromobiphenyl	2132987	2231515	4.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	645401	1.6
Hexabromobiphenyl	665758	706623	6.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col			ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	3.972	0.000	26015	250.0	1	4.669	0.000	11154	250.0
Aroclor-1221	2	5.406	0.000	36825	250.0	2	6.074	0.000	22170	250.0
Aroclor-1221	3	5.682	0.000	94444	250.0	3	6.417	0.000	41315	250.0

Total Col1Ave (3 peaks): 250.0 Total Col2Ave (3 peaks): 250.0 RPD = 0
Corrected Ave: < 3 Peaks Corrected Ave: < 3 Peaks

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1262	1	10.405	0.000	325406	250.0	1	11.044	0.000	183589	250.0
Aroclor-1262	2	11.077	0.000	731826	250.0	2	11.759	0.000	403551	250.0
Aroclor-1262	3	11.586	0.000	203068	250.0	3	12.276	0.000	129598	250.0
Aroclor-1262	4	11.657	0.000	266171	250.0	4	13.065	0.000	146770	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.118 - 13.110) = 4840279 Col1 Total PCB = 0.4 ppm*

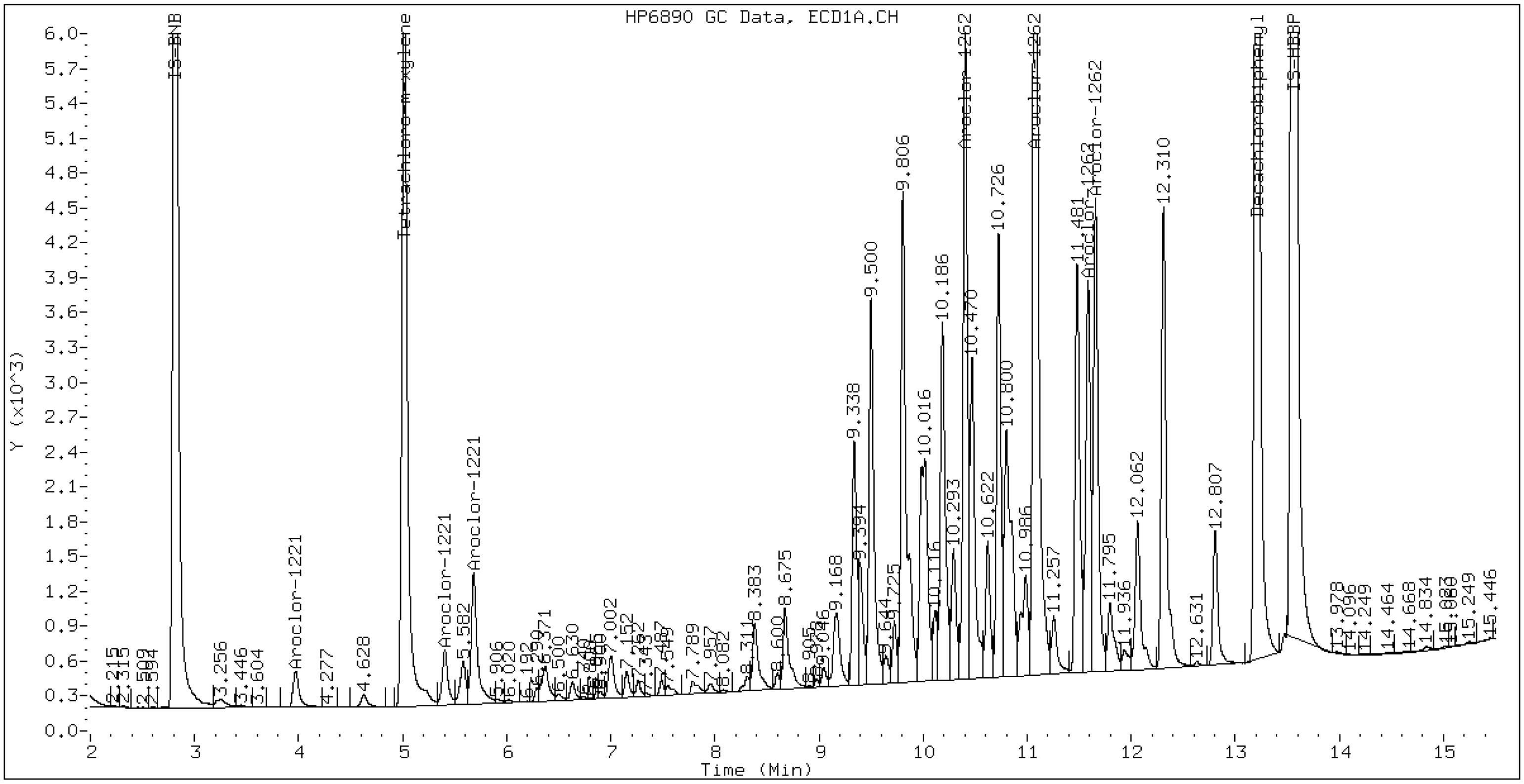
Total PCB Area Col2 (5.118 - 13.110) = 2639939 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

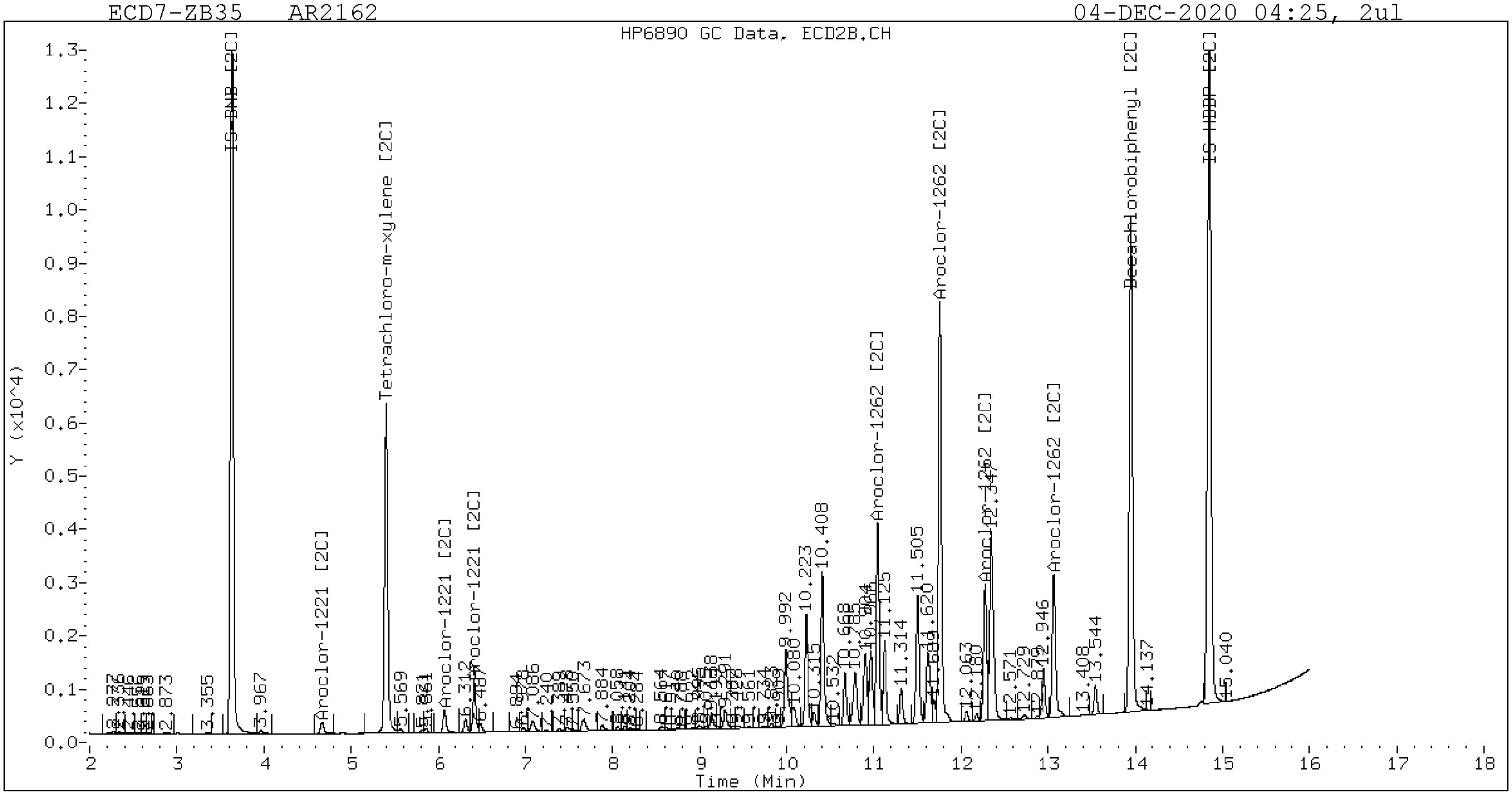
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162 04-DEC-2020 04:25, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162 04-DEC-2020 04:25, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120419ECD7.D
Data file 2: /20201204.b/20201204.b/20120419ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 04-DEC-2020 04:46
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.018	0.000	454273	5.402	0.000	302264	40.4	42.5	5.2	Tetrachloro-m-xylene
13.210	0.000	1269363	13.951	0.000	728736	56.7	65.0	13.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	100.9	106.3
Decachlorobiphenyl	141.8	162.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	771688	-1.9
Hexabromobiphenyl	2132987	2105027	-1.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	620134	-2.4
Hexabromobiphenyl	665758	680930	2.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	3.973	0.000	15156	250.0	1	4.670	0.000	6636	250.0
Aroclor-1232	2	6.631	0.000	39383	250.0	2	7.077	0.000	34251	250.0
Aroclor-1232	3	7.002	0.000	128697	250.0	3	7.672	0.000	71516	250.0
Aroclor-1232	4	8.309	0.000	38235	250.0	4	8.057	0.000	16302	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1268	1	11.588	0.000	699749	250.0	1	12.273	0.000	408812	250.0
Aroclor-1268	2	11.657	0.000	751431	250.0	2	12.339	0.000	446370	250.0
Aroclor-1268	3	12.037	0.000	603108	250.0	3	12.729	0.000	374344	250.0
Aroclor-1268	4	12.812	0.000	2377265	250.0	4	13.546	0.000	1243229	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.118 - 13.110) = 6554617 Col1 Total PCB = 0.6 ppm*

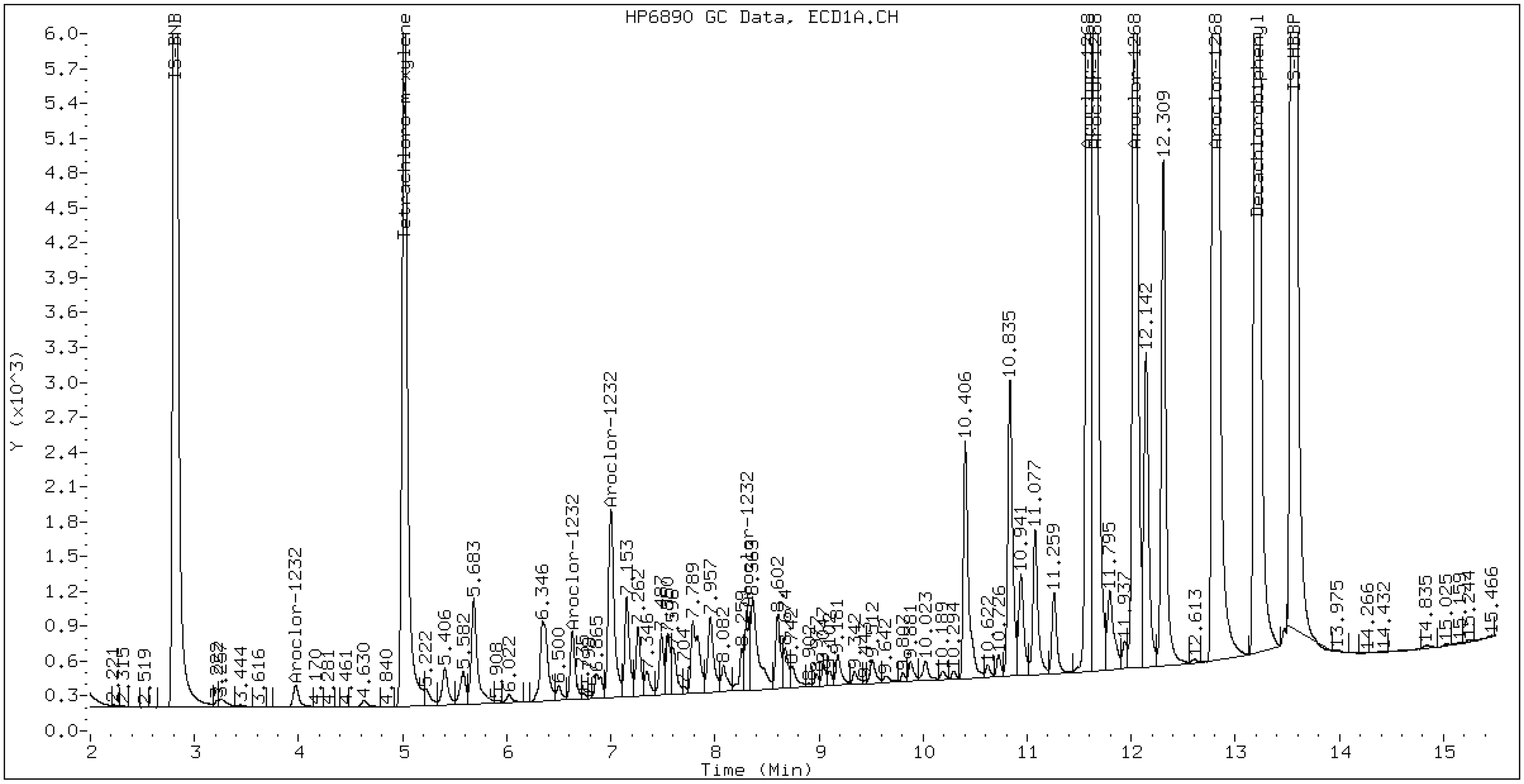
Total PCB Area Col2 (5.118 - 13.110) = 2521917 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

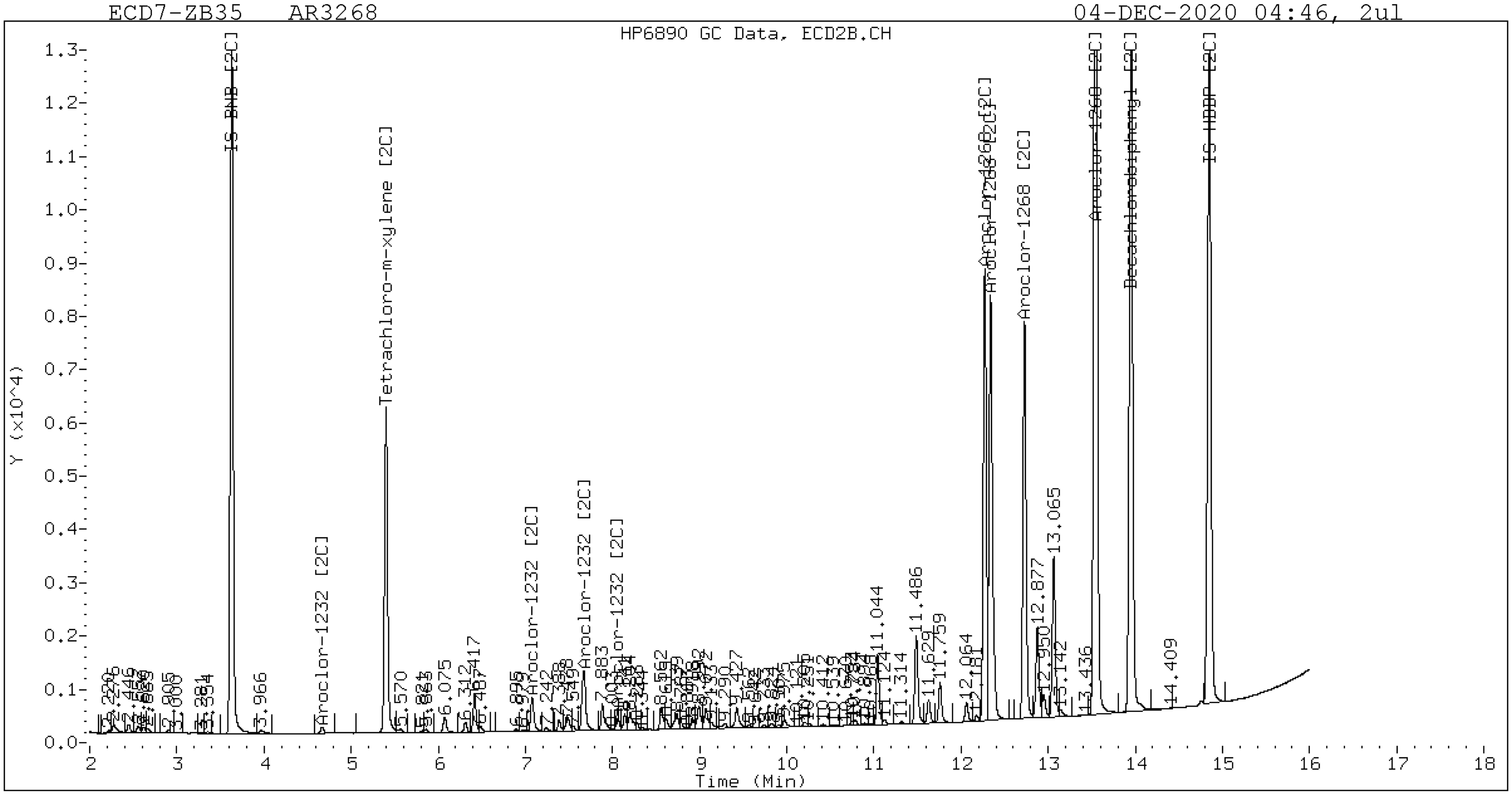
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268 04-DEC-2020 04:46, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268 04-DEC-2020 04:46, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120420ECD7.D
Data file 2: /20201204.b/20201204.b/20120420ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV1
Client ID:
Injection Date: 04-DEC-2020 05:06
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.018	0.000	522469	5.402	0.000	336381	45.0	46.0	2.2	Tetrachloro-m-xylene
13.210	-0.000	972568	13.950	-0.000	554258	41.8	48.2	14.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	112.6	115.1
Decachlorobiphenyl	104.6	120.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	795708	1.1
Hexabromobiphenyl	2132987	2186421	2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	637628	0.3
Hexabromobiphenyl	665758	698314	4.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.632	0.001	95528	238.6	1	7.077	0.001	76814	248.3
Aroclor-1016	2	7.002	-0.001	295416	231.5	2	7.673	0.002	175788	251.8
Aroclor-1016	3	7.153	0.000	127151	232.0	3	7.883	0.001	65410	247.3
Aroclor-1016	4	7.487	-0.062	76423	256.4	4	8.057	0.000	39803	251.0
	Total Col1Ave (4 peaks):			239.6		Total Col2Ave (4 peaks):			249.6	RPD = 4
	Corrected Ave (3 peaks):			234.0		Corrected Ave (3 peaks):			248.9	RPD = 6
Aroclor-1221	1	3.975	0.003	878	8.5	1	---			0.0
Aroclor-1221	2	5.404	-0.001	14963	102.2	2	6.079	0.005	9666	110.3
Aroclor-1221	3	5.683	0.001	68494	182.4	3	6.418	0.001	31755	194.5
	Total Col1Ave (3 peaks):			97.7		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.975	0.002	878	14.0	1	---			0.0
Aroclor-1232	2	6.632	0.000	95528	588.1	2	7.077	-0.000	76814	545.3
Aroclor-1232	3	7.002	-0.000	295416	556.5	3	7.673	0.001	175788	597.6
Aroclor-1232	4	8.309	-0.000	19510	123.7	4	8.057	-0.000	39803	593.7
	Total Col1Ave (4 peaks):			320.6		Total Col2Ave (3 peaks):			578.9	RPD = 57*
	Corrected Ave (3 peaks):			231.4		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.632	0.000	95528	309.4	1	7.077	0.000	76814	318.7
Aroclor-1242	2	7.002	-0.001	295416	310.2	2	7.673	0.000	175788	314.8
Aroclor-1242	3	8.309	0.000	19510	61.7	3	8.982	-0.009	19824	90.0
Aroclor-1242	4	8.597	-0.006	11788	34.3	4	9.430	0.002	2269	10.5
	Total Col1Ave (4 peaks):			178.9		Total Col2Ave (4 peaks):			183.5	RPD = 3
	Corrected Ave (3 peaks):			135.1		Corrected Ave (3 peaks):			138.4	RPD = 2
Aroclor-1248	1	7.487	0.000	76423	184.1	1	8.141	-0.000	36032	166.7
Aroclor-1248	2	7.957	0.001	122530	194.7	2	8.562	0.000	52014	183.8
Aroclor-1248	3	8.383	0.017	96065	103.3	3	8.982	-0.009	19824	49.2
Aroclor-1248	4	8.597	-0.005	11788	21.9	4	9.430	0.004	2269	5.7
	Total Col1Ave (4 peaks):			126.0		Total Col2Ave (4 peaks):			101.4	RPD = 22
	Corrected Ave (3 peaks):			103.1		Corrected Ave (3 peaks):			73.9	RPD = 33
Aroclor-1254	1	8.674	-0.001	81025	86.0	1	9.291	0.000	32530	71.4
Aroclor-1254	2	---			0.0	2	9.430	0.046	2269	10.8
Aroclor-1254	3	9.047	0.002	9960	15.9	3	9.824	0.001	3929	13.0
Aroclor-1254	4	9.170	-0.010	73847	57.0	4	9.991	0.019	84643	119.1
Aroclor-1254	5	9.871	-0.006	107932	125.6	5	10.224	0.019	114607	156.1
	Total Col1Ave (4 peaks):			71.1		Total Col2Ave (5 peaks):			74.1	RPD = 4
	Corrected Ave (3 peaks):			53.0		Corrected Ave (4 peaks):			53.6	RPD = 1
Aroclor-1260	1	10.405	0.001	223537	262.9	1	11.043	0.000	123924	290.4
Aroclor-1260	2	10.726	-0.000	221379	260.8	2	11.507	0.001	121258	269.7
Aroclor-1260	3	11.077	-0.002	596328	270.6	3	11.759	-0.000	319696	278.0
Aroclor-1260	4	11.480	0.000	273530	242.9	4	12.349	0.000	204231	273.3
Aroclor-1260	5	11.586	-0.000	132108	269.4	NS	---			----
	Total Col1Ave (5 peaks):			261.3		Total Col2Ave (4 peaks):			277.9	RPD = 6
	Corrected Ave (4 peaks):			259.0		Corrected Ave (3 peaks):			273.7	RPD = 6
Aroclor-1262	1	10.405	0.000	223537	175.3	1	11.043	-0.000	123924	170.8
Aroclor-1262	2	11.077	0.000	596328	207.9	2	11.759	0.000	319696	200.4
Aroclor-1262	3	11.586	-0.000	132108	166.0	3	12.277	0.001	87098	170.0
Aroclor-1262	4	11.658	0.001	176030	168.7	4	13.066	0.000	84509	145.7
	Total Col1Ave (4 peaks):			179.5		Total Col2Ave (4 peaks):			171.7	RPD = 4
	Corrected Ave (3 peaks):			170.0		Corrected Ave (3 peaks):			162.1	RPD = 5
Aroclor-1268	1	11.586	-0.003	132108	45.4	1	12.277	0.004	87098	51.9
Aroclor-1268	2	11.658	0.001	176030	56.4	2	12.349	0.010	204231	111.5
Aroclor-1268	3	12.062	0.025	90211	36.0	3	12.731	0.001	3573	2.3
Aroclor-1268	4	12.806	-0.006	57142	5.8	4	13.544	-0.002	17452	3.4
	Total Col1Ave (4 peaks):			35.9		Total Col2Ave (4 peaks):			42.3	RPD = 16
	Corrected Ave (3 peaks):			29.1		Corrected Ave (3 peaks):			19.2	RPD = 41*

Total PCB Area Col1 (5.118 - 13.110) = 5907925 Col1 Total PCB = 0.5 ppm*

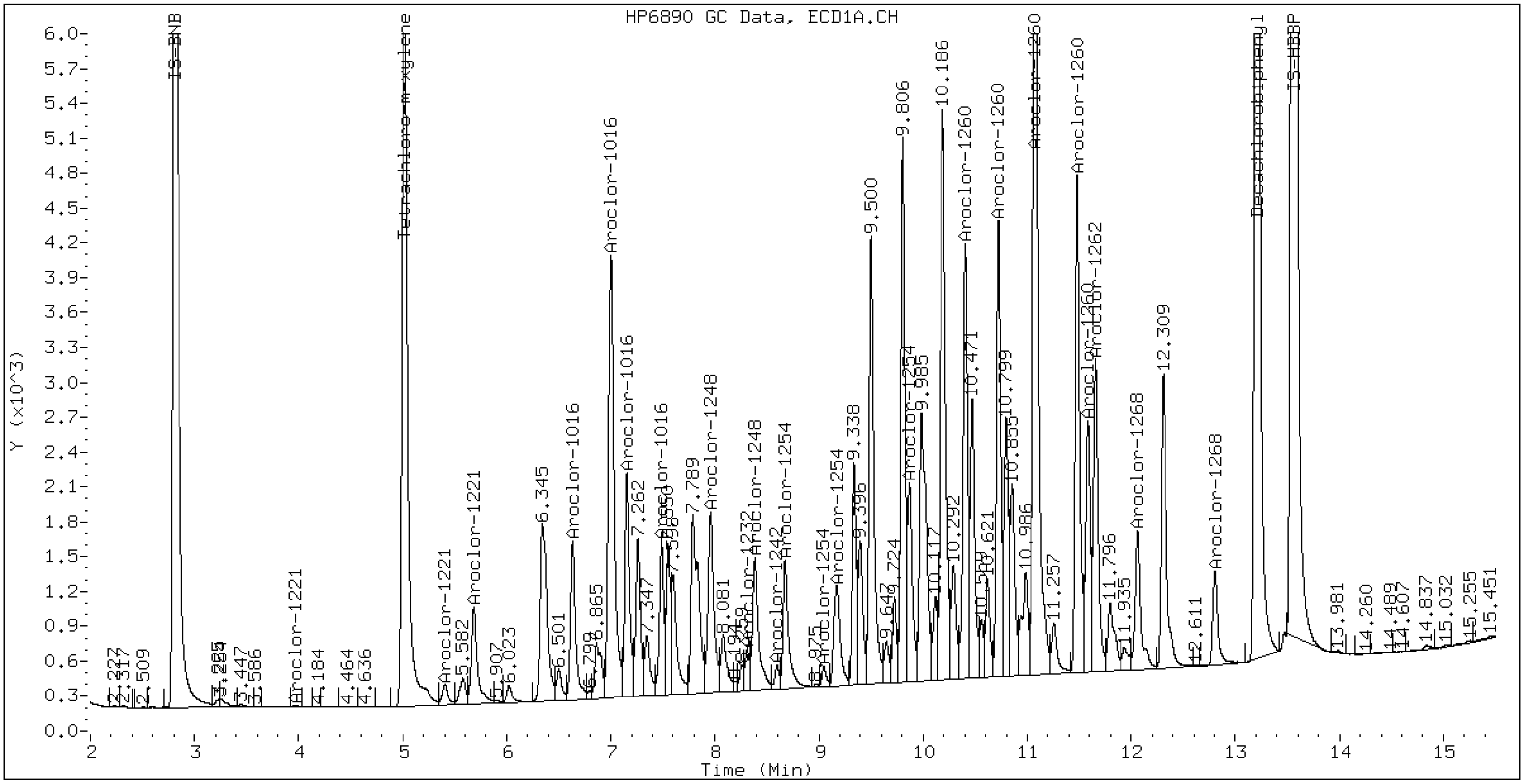
Total PCB Area Col2 (5.118 - 13.110) = 3169625 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

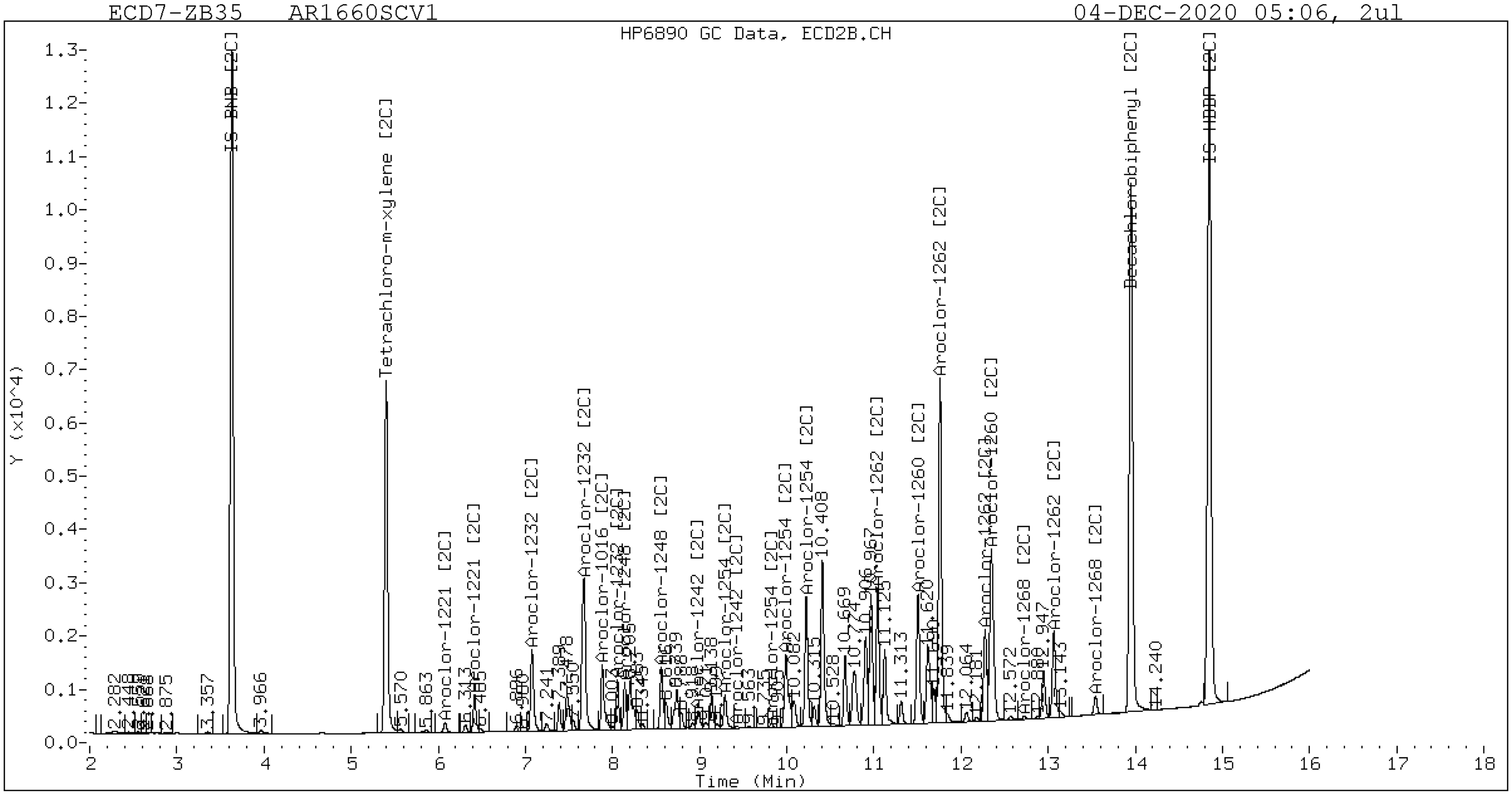
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV1 04-DEC-2020 05:06, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV1 04-DEC-2020 05:06, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120421ECD7.D
Data file 2: /20201204.b/20201204.b/20120421ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV2
Client ID:
Injection Date: 04-DEC-2020 05:27
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.001	491240	5.401	-0.001	325882	42.5	44.8	5.3	Tetrachloro-m-xylene
13.210	-0.000	945810	13.951	-0.000	538416	40.7	46.9	14.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	106.1	112.0
Decachlorobiphenyl	101.7	117.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	793550	0.9
Hexabromobiphenyl	2132987	2188269	2.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	634778	-0.1
Hexabromobiphenyl	665758	697627	4.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

//target/share/chem4/ecd7.i/20201204.b/20120421ECD7.D AR1242SCV2

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.630	-0.000	74056	185.4	1	7.075	-0.001	58151	188.8
Aroclor-1016	2	7.001	-0.001	226378	177.9	2	7.671	-0.000	131850	189.7
Aroclor-1016	3	7.152	0.000	97975	179.2	3	7.883	0.001	49024	186.1
Aroclor-1016	4	7.486	-0.063	61294	206.2	4	8.057	0.000	29614	187.6
Total Col1Ave (4 peaks):					187.2	Total Col2Ave (4 peaks):			188.1	RPD = 0
Corrected Ave (3 peaks):					180.9	Corrected Ave (3 peaks):			187.5	RPD = 4
Aroclor-1221	1	3.975	0.003	555	5.4	1	---			0.0
Aroclor-1221	2	5.403	-0.003	12058	82.6	2	6.078	0.004	8048	92.3
Aroclor-1221	3	5.681	-0.001	53082	141.7	3	6.417	0.000	23791	146.4
Total Col1Ave (3 peaks):					76.6	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.975	0.001	555	8.9	1	---			0.0
Aroclor-1232	2	6.630	-0.001	74056	457.2	2	7.075	-0.002	58151	414.7
Aroclor-1232	3	7.001	-0.000	226378	427.6	3	7.671	-0.001	131850	450.3
Aroclor-1232	4	8.308	-0.001	74236	472.0	4	8.057	-0.000	29614	443.7
Total Col1Ave (4 peaks):					341.4	Total Col2Ave (3 peaks):			436.2	RPD = 24
Corrected Ave (3 peaks):					297.9	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.630	-0.001	74056	240.5	1	7.075	-0.001	58151	242.3
Aroclor-1242	2	7.001	-0.002	226378	238.4	2	7.671	-0.001	131850	237.2
Aroclor-1242	3	8.308	-0.001	74236	235.5	3	8.991	-0.000	50455	230.0
Aroclor-1242	4	8.602	-0.001	75873	221.1	4	9.426	-0.001	50367	233.3
Total Col1Ave (4 peaks):					233.9	Total Col2Ave (4 peaks):			235.7	RPD = 1
Corrected Ave (3 peaks):					231.7	Corrected Ave (3 peaks):			233.5	RPD = 1
Aroclor-1248	1	7.486	-0.000	61294	148.1	1	8.140	-0.001	28713	133.4
Aroclor-1248	2	7.957	0.001	100565	160.2	2	8.561	-0.000	41996	149.1
Aroclor-1248	3	8.365	0.000	159627	172.0	3	8.991	-0.001	50455	125.8
Aroclor-1248	4	8.602	0.001	75873	141.5	4	9.426	0.000	50367	128.1
Total Col1Ave (4 peaks):					155.5	Total Col2Ave (4 peaks):			134.1	RPD = 15
Corrected Ave (3 peaks):					149.9	Corrected Ave (3 peaks):			129.1	RPD = 15
Aroclor-1254	1	8.674	-0.001	57708	61.4	1	9.290	-0.000	18475	40.8
Aroclor-1254	2	8.742	-0.001	39613	77.8	2	9.426	0.042	50367	239.9
Aroclor-1254	3	9.046	0.000	30111	48.1	3	9.823	0.000	11321	37.7
Aroclor-1254	4	9.180	0.000	56187	43.5	4	9.974	0.002	24173	34.2
Aroclor-1254	5	9.880	0.003	34148	39.9	5	10.203	-0.002	23932	32.7
Total Col1Ave (5 peaks):					54.1	Total Col2Ave (5 peaks):			77.1	RPD = 35
Corrected Ave (4 peaks):					48.2	Corrected Ave (4 peaks):			36.3	RPD = 28
Aroclor-1260	1	10.406	0.002	1571	1.8	1	10.967	-0.076	8147	19.1
Aroclor-1260	2	10.723	-0.003	1628	1.9	2	11.519	0.013	1967	4.4
Aroclor-1260	3	11.078	-0.002	4111	1.9	3	11.762	0.003	1178	1.0
Aroclor-1260	4	11.480	0.000	2943	2.6	4	12.354	0.005	137	0.2
Aroclor-1260	5	11.590	0.004	571	1.2	NS	---			----
Total Col1Ave (5 peaks):					1.9	Total Col2Ave (4 peaks):			6.2	RPD = 107*
Corrected Ave (4 peaks):					1.7	Corrected Ave (3 peaks):			1.9	RPD = 9
Aroclor-1262	1	10.406	0.001	1571	1.2	1	10.967	-0.077	8147	11.2
Aroclor-1262	2	11.078	0.000	4111	1.4	2	11.762	0.004	1178	0.7
Aroclor-1262	3	11.590	0.004	571	0.7	3	12.354	0.078	137	0.3
Aroclor-1262	4	11.659	0.002	533	0.5	4	13.146	0.080	4808	8.3
Total Col1Ave (4 peaks):					1.0	Total Col2Ave (4 peaks):			5.1	RPD = 136*
Corrected Ave (3 peaks):					0.8	Corrected Ave (3 peaks):			3.1	RPD = 116*
Aroclor-1268	1	11.590	0.001	571	0.2	1	12.354	0.081	137	0.1
Aroclor-1268	2	11.659	0.002	533	0.2	2	---			0.0
Aroclor-1268	3	12.032	-0.005	5531	2.2	3	12.733	0.004	972	0.6
Aroclor-1268	4	12.805	-0.007	19913	2.0	4	13.544	-0.002	3078	0.6
Total Col1Ave (4 peaks):					1.1	Total Col2Ave (3 peaks):			0.4	RPD = 89*
Corrected Ave (3 peaks):					0.8	Corrected Ave: < 3 Peaks				

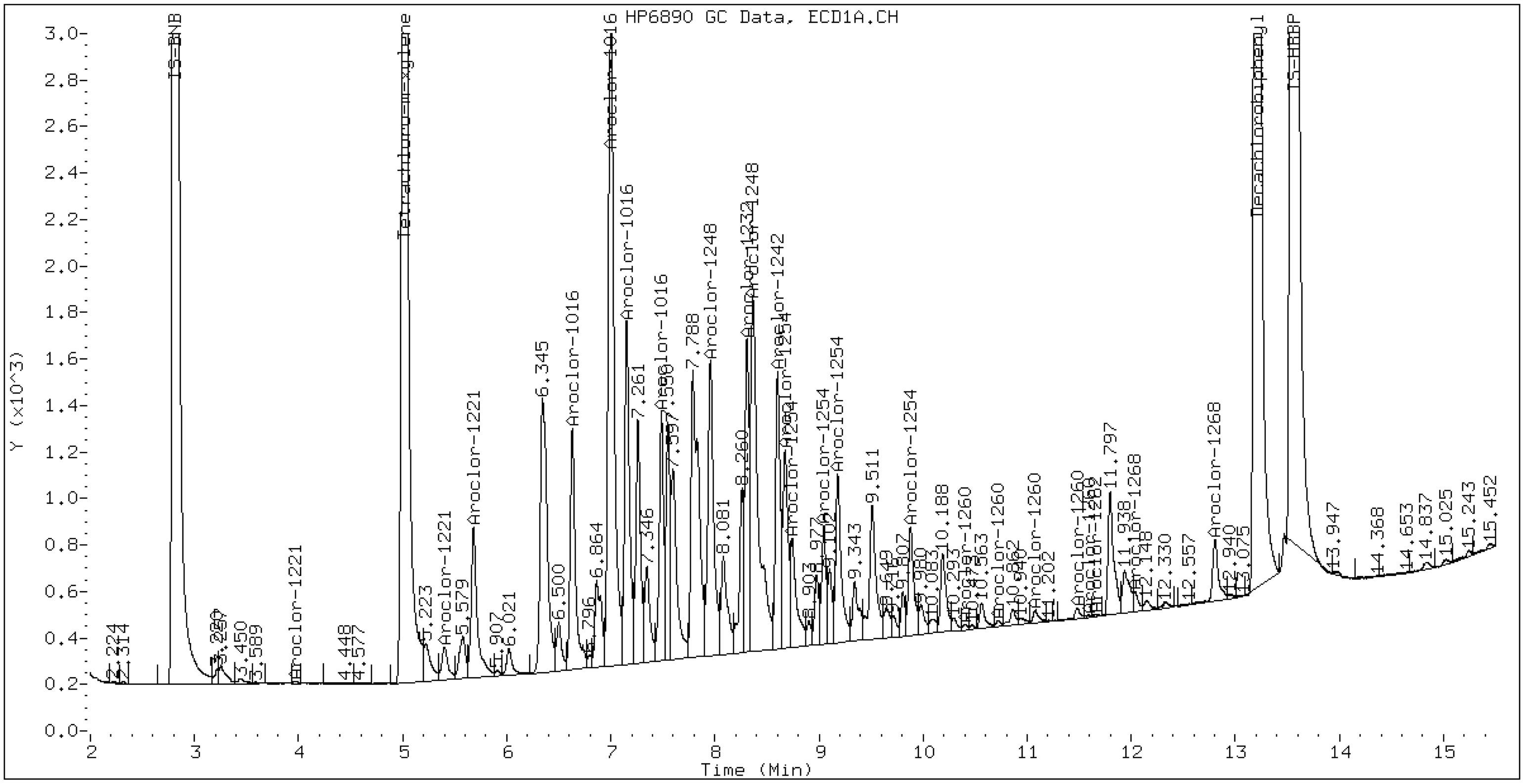
Total PCB Area Col1 (5.118 - 13.110) =	2078339	Col1 Total PCB = 0.2 ppm*
Total PCB Area Col2 (5.118 - 13.110) =	1247459	Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

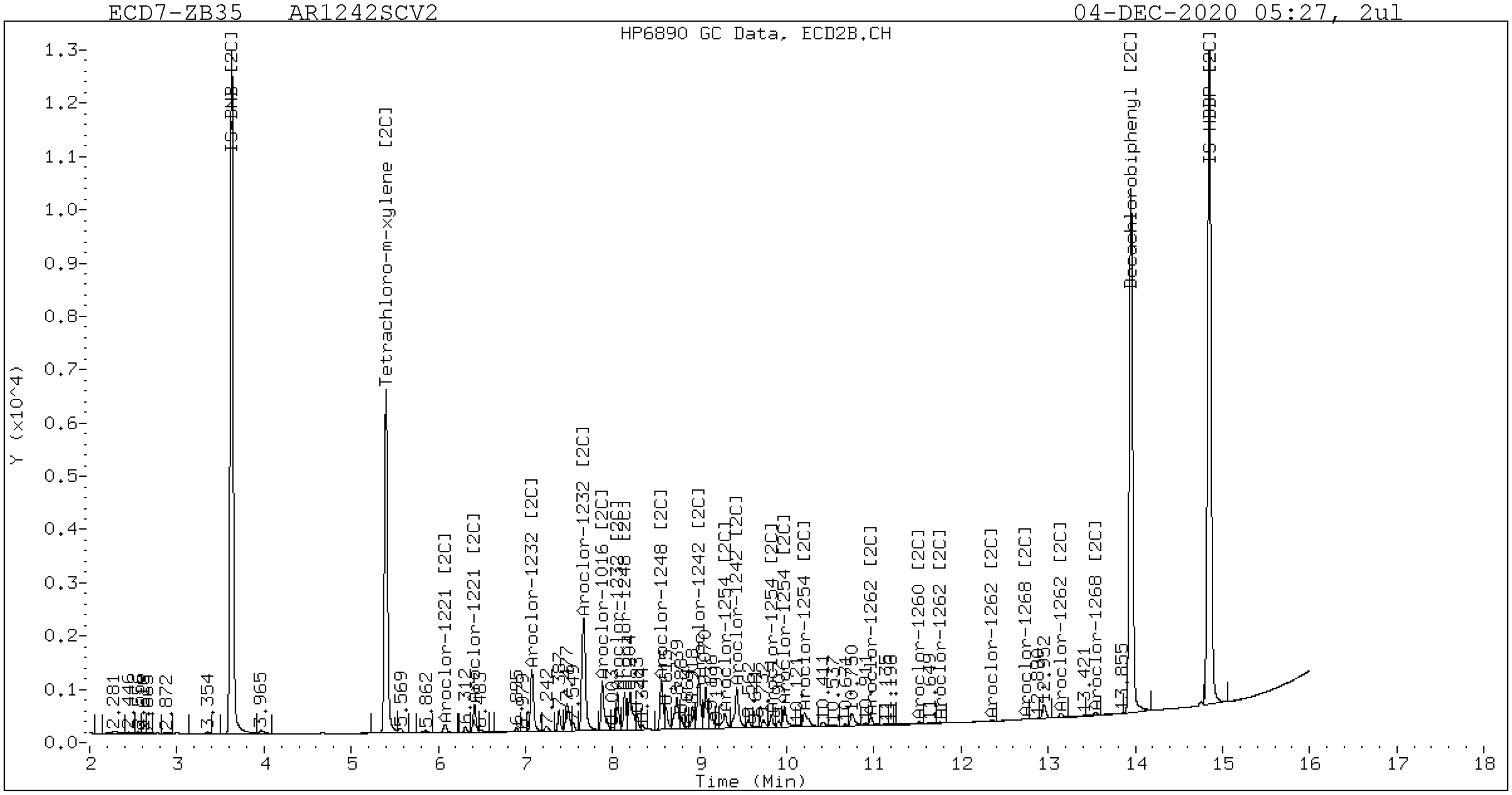
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV2 04-DEC-2020 05:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV2 04-DEC-2020 05:27, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120422ECD7.D
Data file 2: /20201204.b/20201204.b/20120422ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV3
Client ID:
Injection Date: 04-DEC-2020 05:47
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.001	519389	5.400	-0.002	333935	44.8	46.1	2.7	Tetrachloro-m-xylene
13.209	-0.001	967775	13.951	-0.000	548704	41.8	48.4	14.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	112.1	115.1
Decachlorobiphenyl	104.6	121.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	794644	1.0
Hexabromobiphenyl	2132987	2176927	2.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	632599	-0.5
Hexabromobiphenyl	665758	689113	3.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.630	-0.001	37848	94.6	1	7.074	-0.002	29752	97.0
Aroclor-1016	2	6.998	-0.004	154133	121.0	2	7.669	-0.002	87378	126.1
Aroclor-1016	3	7.154	0.002	62043	113.4	3	7.882	0.000	19776	75.3
Aroclor-1016	4	7.486	-0.063	99147	333.1	4	8.057	0.000	16327	103.8
Total Col1Ave (4 peaks):					165.5	Total Col2Ave (4 peaks):				100.6 RPD = 49*
Corrected Ave (3 peaks):					109.7	Corrected Ave (3 peaks):				92.0 RPD = 17
Aroclor-1221	1	3.970	-0.002	459	4.4	1	---			0.0
Aroclor-1221	2	5.399	-0.007	4381	30.0	2	6.084	0.010	3982	45.8
Aroclor-1221	3	5.681	-0.001	13045	34.8	3	6.416	-0.001	5950	36.7
Total Col1Ave (3 peaks):					23.1	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.970	-0.003	459	7.4	1	---			0.0
Aroclor-1232	2	6.630	-0.002	37848	233.3	2	7.074	-0.003	29752	212.9
Aroclor-1232	3	6.998	-0.004	154133	290.8	3	7.669	-0.003	87378	299.4
Aroclor-1232	4	8.308	-0.001	191286	1214.6	4	8.057	-0.000	16327	245.4
Total Col1Ave (4 peaks):					436.5	Total Col2Ave (3 peaks):				252.6 RPD = 53*
Corrected Ave (3 peaks):					177.1	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.630	-0.002	37848	122.8	1	7.074	-0.002	29752	124.4
Aroclor-1242	2	6.998	-0.005	154133	162.1	2	7.669	-0.003	87378	157.7
Aroclor-1242	3	8.308	-0.001	191286	606.0	3	8.990	-0.001	93110	426.0
Aroclor-1242	4	8.601	-0.002	124142	361.3	4	9.425	-0.002	90178	419.1
Total Col1Ave (4 peaks):					313.0	Total Col2Ave (4 peaks):				281.8 RPD = 10
Corrected Ave (3 peaks):					215.4	Corrected Ave (3 peaks):				233.8 RPD = 8
Aroclor-1248	1	7.486	-0.001	99147	239.2	1	8.140	-0.001	51725	241.2
Aroclor-1248	2	7.956	-0.001	145861	232.1	2	8.561	-0.001	67176	239.3
Aroclor-1248	3	8.366	0.001	215594	232.0	3	8.990	-0.001	93110	232.9
Aroclor-1248	4	8.601	-0.000	124142	231.1	4	9.425	-0.001	90178	230.1
Total Col1Ave (4 peaks):					233.6	Total Col2Ave (4 peaks):				235.9 RPD = 1
Corrected Ave (3 peaks):					231.8	Corrected Ave (3 peaks):				234.1 RPD = 1
Aroclor-1254	1	8.675	-0.001	105692	112.3	1	9.290	-0.001	29171	64.6
Aroclor-1254	2	8.743	-0.001	73797	144.7	2	9.425	0.041	90178	431.0
Aroclor-1254	3	9.045	-0.001	59822	95.4	3	9.822	-0.000	25001	83.6
Aroclor-1254	4	9.180	-0.000	110698	85.6	4	9.972	-0.000	51389	72.9
Aroclor-1254	5	9.879	0.002	83378	97.2	5	10.201	-0.005	30837	42.3
Total Col1Ave (5 peaks):					107.0	Total Col2Ave (5 peaks):				138.9 RPD = 26
Corrected Ave (4 peaks):					97.6	Corrected Ave (4 peaks):				65.8 RPD = 39
Aroclor-1260	1	10.405	0.000	5157	6.1	1	11.043	-0.000	1687	4.0
Aroclor-1260	2	10.726	-0.001	3873	4.6	2	11.516	0.009	2999	6.8
Aroclor-1260	3	11.076	-0.003	9719	4.4	3	11.762	0.003	2801	2.5
Aroclor-1260	4	11.480	-0.000	3945	3.5	4	12.351	0.002	2228	3.0
Aroclor-1260	5	11.586	-0.000	3424	7.0	NS	---			----
Total Col1Ave (5 peaks):					5.1	Total Col2Ave (4 peaks):				4.1 RPD = 23
Corrected Ave (4 peaks):					4.7	Corrected Ave (3 peaks):				3.2 RPD = 38
Aroclor-1262	1	10.405	-0.000	5157	4.1	1	11.043	-0.000	1687	2.4
Aroclor-1262	2	11.076	-0.001	9719	3.4	2	11.762	0.004	2801	1.8
Aroclor-1262	3	11.586	-0.000	3424	4.3	3	12.276	0.000	409	0.8
Aroclor-1262	4	11.656	-0.001	3749	3.6	4	13.067	0.002	1105	1.9
Total Col1Ave (4 peaks):					3.8	Total Col2Ave (4 peaks):				1.7 RPD = 77*
Corrected Ave (3 peaks):					3.7	Corrected Ave (3 peaks):				1.5 RPD = 84*
Aroclor-1268	1	11.586	-0.003	3424	1.2	1	12.276	0.002	409	0.2
Aroclor-1268	2	11.656	-0.001	3749	1.2	2	12.351	0.011	2228	1.2
Aroclor-1268	3	12.034	-0.003	6957	2.8	3	12.729	-0.001	1375	0.9
Aroclor-1268	4	12.804	-0.008	20500	2.1	4	13.545	-0.001	3684	0.7
Total Col1Ave (4 peaks):					1.8	Total Col2Ave (4 peaks):				0.8 RPD = 80*
Corrected Ave (3 peaks):					1.5	Corrected Ave (3 peaks):				0.6 RPD = 81*

Total PCB Area Col1 (5.118 - 13.110) = 2537125 Col1 Total PCB = 0.2 ppm*

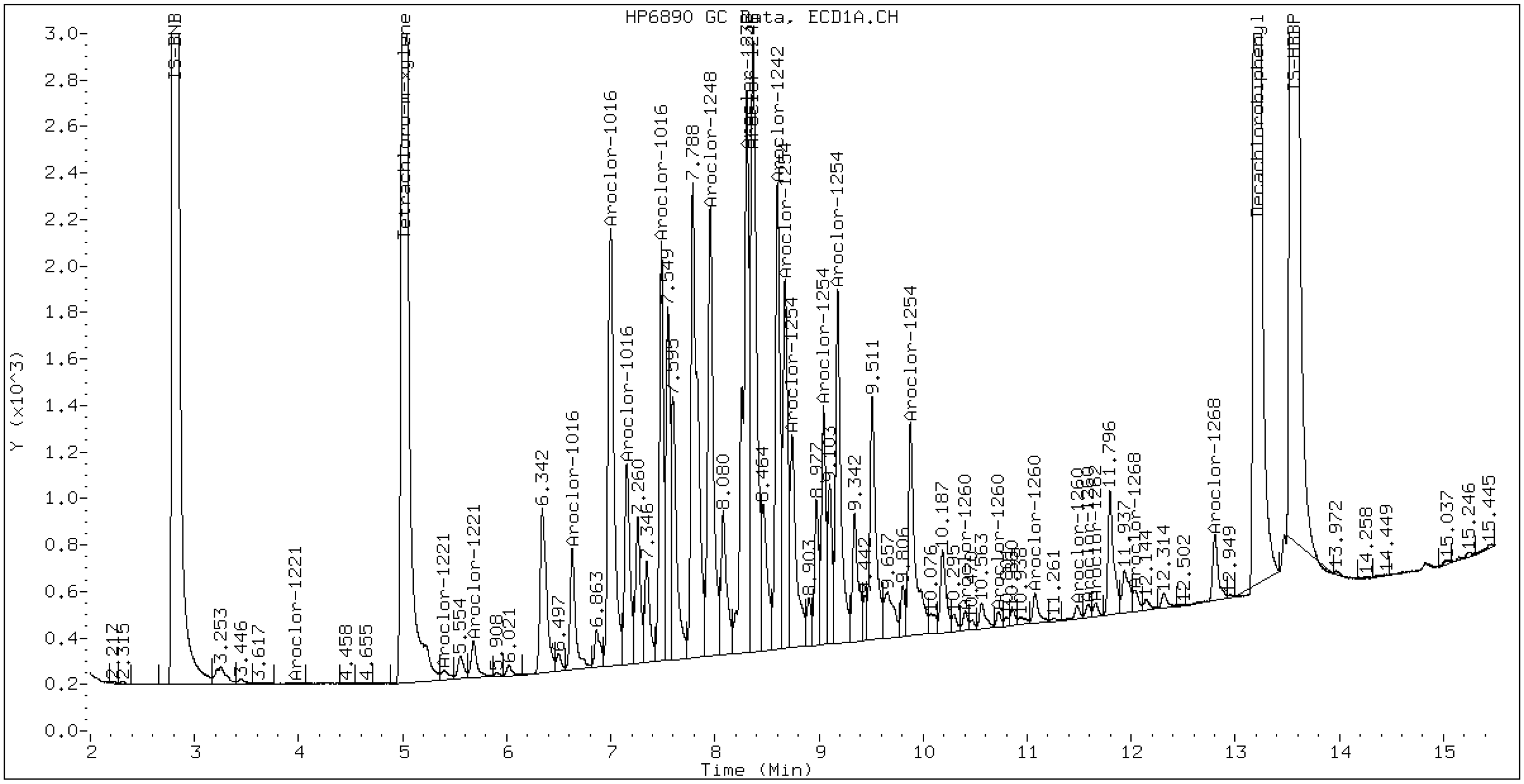
Total PCB Area Col2 (5.118 - 13.110) = 1484584 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

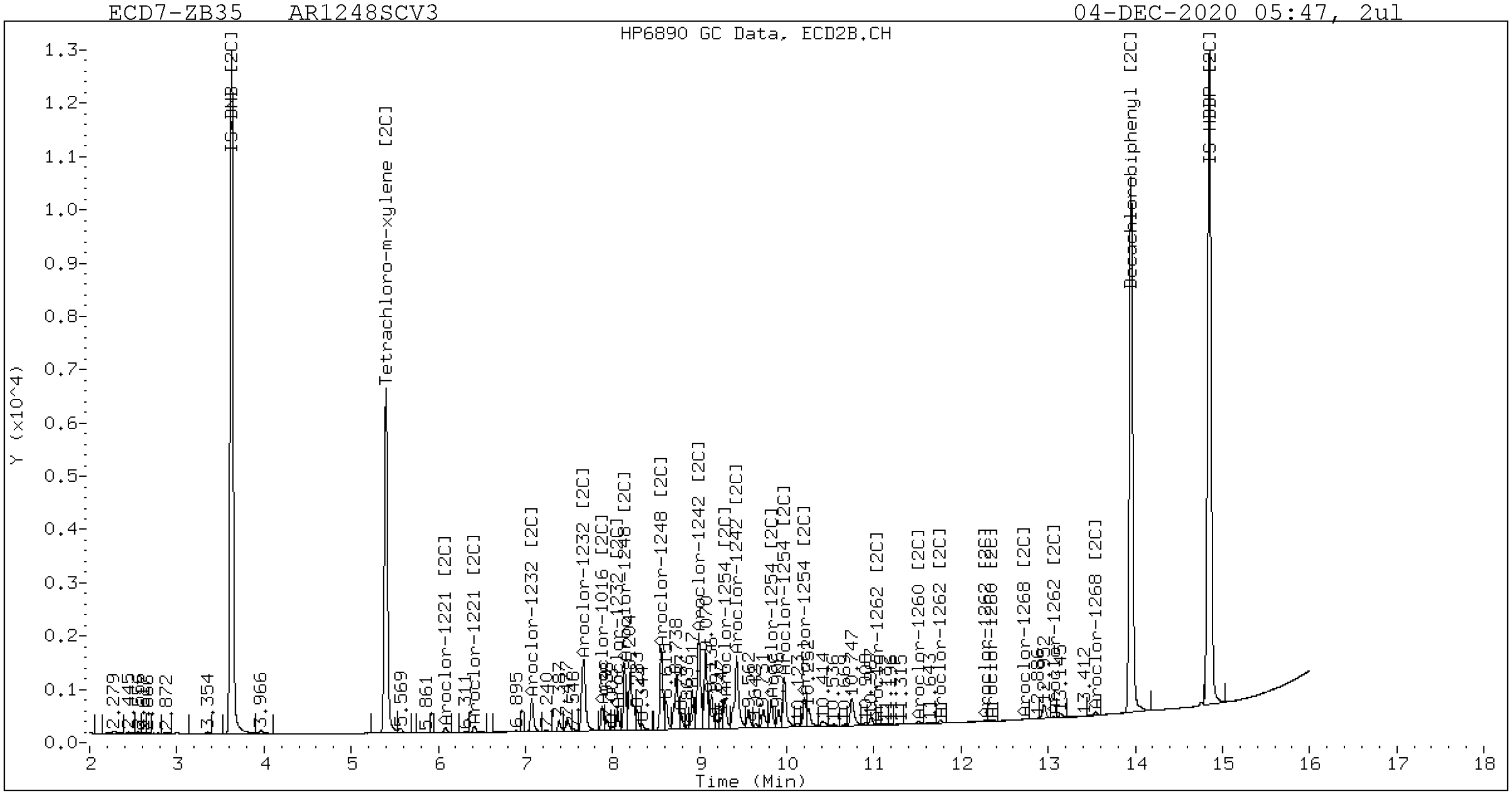
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV3 04-DEC-2020 05:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV3 04-DEC-2020 05:47, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120423ECD7.D
Data file 2: /20201204.b/20201204.b/20120423ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV4
Client ID:
Injection Date: 04-DEC-2020 06:08
Report Date: 12/07/2020 11:54
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.015	-0.002	497179	5.400	-0.002	321312	43.0	44.8	4.2	Tetrachloro-m-xylene
13.210	-0.000	933785	13.951	0.001	530860	41.1	47.2	13.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	107.5	112.1
Decachlorobiphenyl	102.8	118.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	792760	0.8
Hexabromobiphenyl	2132987	2135851	0.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	625033	-1.6
Hexabromobiphenyl	665758	683418	2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

```
                           ZB5 Col                                ZB35 Col
 Aroclor   Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
 ==========================================================================================
 Aroclor-1016 1   6.631   0.001      1306     3.3      1    7.075  -0.001      750     2.5
 Aroclor-1016 2   6.996  -0.007      6815     5.4      2    7.664  -0.007     2790     4.1
 Aroclor-1016 3   7.162   0.010      4028     7.4      3    7.884   0.002      520     2.0
 Aroclor-1016 4   7.487  -0.062     73107   246.2      4    8.058   0.002      262     1.7
       Total Col1Ave (4 peaks):    65.6       Total Col2Ave (4 peaks):     2.6   RPD = 185*
       Corrected Ave (3 peaks):     5.3       Corrected Ave (3 peaks):     2.1   RPD = 89*

 Aroclor-1221 1   4.003   0.031       395     3.8      1     ---                       0.0
 Aroclor-1221 2     ---                      0.0      2    6.085   0.011     3137    36.5
 Aroclor-1221 3   5.681  -0.001      1856     5.0      3    6.406  -0.011      842     5.3
             Col1Ave: <3 Quant Peaks                    Col2Ave: <3 Quant Peaks

 Aroclor-1232 1   4.003   0.030       395     6.3      1     ---                       0.0
 Aroclor-1232 2   6.631  -0.000      1306     8.1      2    7.075  -0.002      750     5.4
 Aroclor-1232 3   6.996  -0.006      6815    12.9      3    7.664  -0.008     2790     9.7
 Aroclor-1232 4   8.309  -0.000     75318   479.4      4    8.058   0.001      262     4.0
       Total Col1Ave (4 peaks):   126.7       Total Col2Ave (3 peaks):     6.4   RPD = 181*
       Corrected Ave (3 peaks):     9.1                    Corrected Ave: < 3 Peaks

 Aroclor-1242 1   6.631  -0.000      1306     4.2      1    7.075  -0.001      750     3.2
 Aroclor-1242 2   6.996  -0.007      6815     7.2      2    7.664  -0.008     2790     5.1
 Aroclor-1242 3   8.309  -0.000     75318   239.2      3    8.993   0.002    35817   165.8
 Aroclor-1242 4   8.595  -0.007     51811   151.1      4    9.383  -0.044    51086   240.3
       Total Col1Ave (4 peaks):   100.4       Total Col2Ave (4 peaks):   103.6   RPD = 3
       Corrected Ave (3 peaks):    54.2       Corrected Ave (3 peaks):    58.0   RPD = 7

 Aroclor-1248 1   7.487   0.000     73107   176.8      1    8.140  -0.001    37393   176.4
 Aroclor-1248 2   7.956  -0.001     24544    39.1      2    8.562   0.000    23796    85.8
 Aroclor-1248 3   8.382   0.017    184505   199.0      3    8.993   0.001    35817    90.7
 Aroclor-1248 4   8.595  -0.006     51811    96.7      4    9.383  -0.043    51086   131.9
       Total Col1Ave (4 peaks):   127.9       Total Col2Ave (4 peaks):   121.2   RPD = 5
       Corrected Ave (3 peaks):   104.2       Corrected Ave (3 peaks):   102.8   RPD = 1

 Aroclor-1254 1   8.674  -0.001    233167   248.3      1    9.290  -0.001   112499   252.1
 Aroclor-1254 2   8.743  -0.001    127115   249.9      2    9.383  -0.001    51086   247.1
 Aroclor-1254 3   9.045  -0.001    208920   334.0      3    9.822  -0.001    74276   251.3
 Aroclor-1254 4   9.179  -0.001    314079   243.5      4    9.972  -0.000   171593   246.3
 Aroclor-1254 5   9.876  -0.001    212269   248.0      5   10.204  -0.001   182042   253.0
       Total Col1Ave (5 peaks):   264.7       Total Col2Ave (5 peaks):   249.9   RPD = 6
       Corrected Ave (4 peaks):   247.4       Corrected Ave (4 peaks):   249.2   RPD = 1

 Aroclor-1260 1  10.401  -0.004     21923    26.4      1   11.038  -0.005     7916    19.0
 Aroclor-1260 2  10.726  -0.000     23351    28.2      2   11.515   0.009    42144    95.8
 Aroclor-1260 3  11.076  -0.003     53107    24.7      3   11.761   0.002    26550    23.6
 Aroclor-1260 4  11.479  -0.001     47458    43.1      4   12.350   0.001    15700    21.5
 Aroclor-1260 5  11.657   0.071      3124     6.5     NS     ---                      ----
       Total Col1Ave (5 peaks):    25.8       Total Col2Ave (4 peaks):    40.0   RPD = 43*
       Corrected Ave (4 peaks):    21.4       Corrected Ave (3 peaks):    21.3   RPD = 0

 Aroclor-1262 1  10.401  -0.004     21923    17.6      1   11.038  -0.006     7916    11.1
 Aroclor-1262 2  11.076  -0.001     53107    19.0      2   11.761   0.003    26550    17.0
 Aroclor-1262 3  11.657   0.071      3124     4.0      3   12.286   0.011     1391     2.8
 Aroclor-1262 4     ---                      0.0      4   13.066   0.001      907     1.6
       Total Col1Ave (3 peaks):    13.5       Total Col2Ave (4 peaks):     8.1   RPD = 50*
       Corrected Ave: < 3 Peaks                 Corrected Ave (3 peaks):     5.2

 Aroclor-1268 1  11.657   0.069      3124     1.1      1   12.286   0.013     1391     0.8
 Aroclor-1268 2     ---                      0.0      2   12.350   0.011    15700     8.8
 Aroclor-1268 3  12.035  -0.002      6558     2.7      3   12.733   0.004     1075     0.7
 Aroclor-1268 4  12.805  -0.008     19648     2.0      4   13.545  -0.001     2720     0.5
       Total Col1Ave (3 peaks):     1.9       Total Col2Ave (4 peaks):     2.7   RPD = 33
       Corrected Ave: < 3 Peaks                 Corrected Ave (3 peaks):     0.7
```

Total PCB Area Col1 (5.118 - 13.110) =   3440587   Col1 Total PCB = 0.3 ppm*

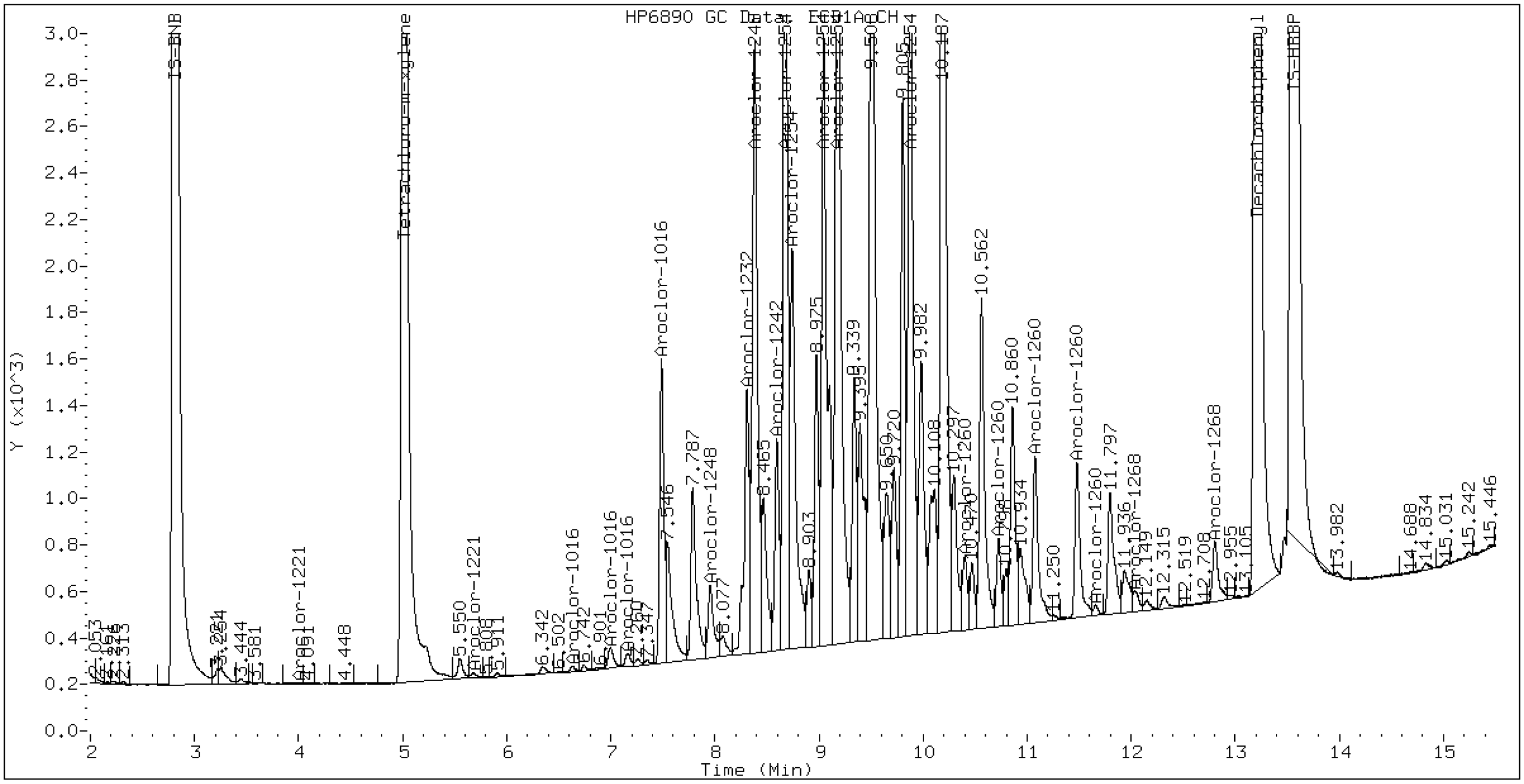
Total PCB Area Col2 (5.118 - 13.110) =   1870129   Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

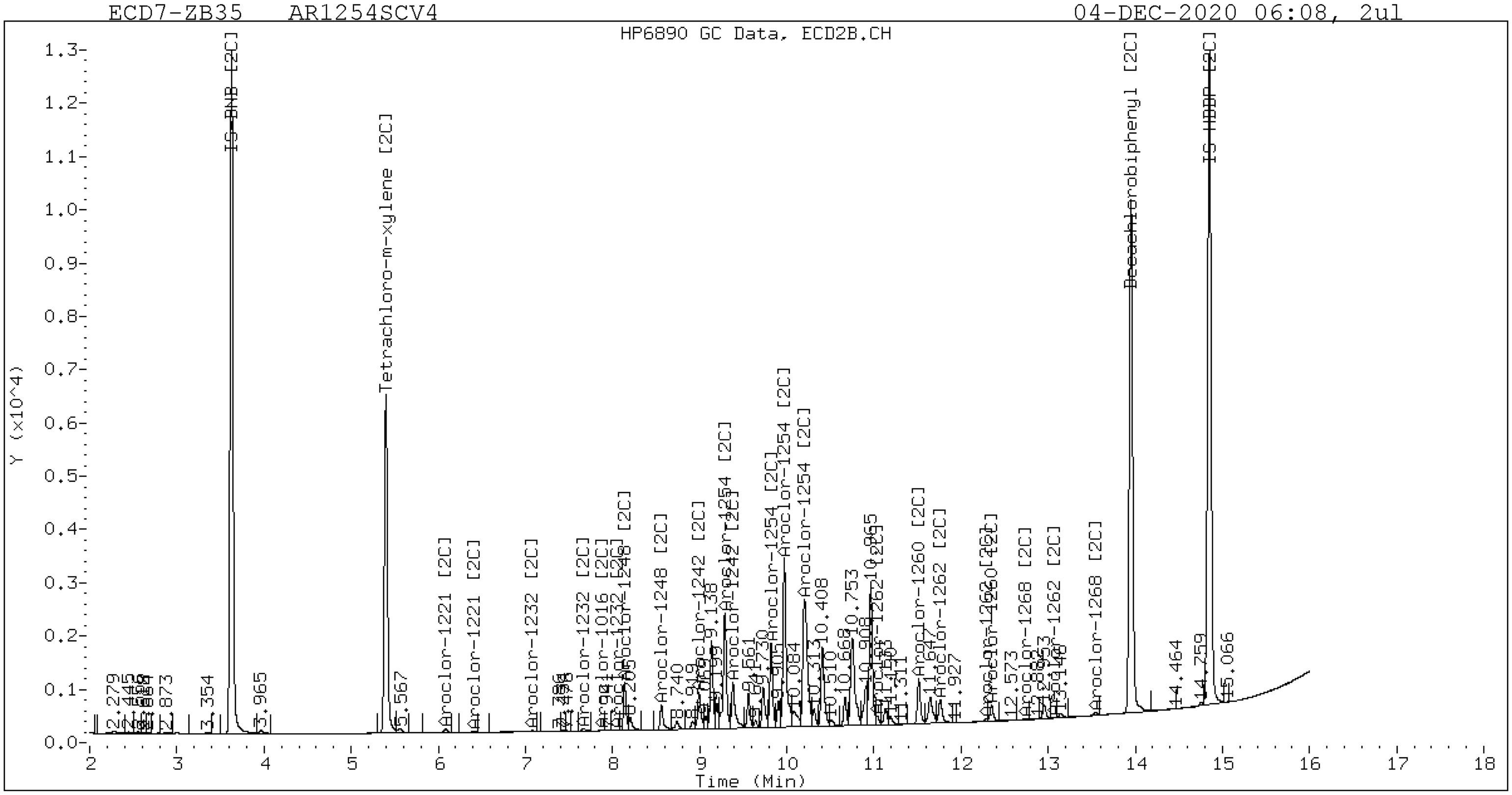
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV4 04-DEC-2020 06:08, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV4 04-DEC-2020 06:08, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120424ECD7.D
Data file 2: /20201204.b/20201204.b/20120424ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV5
Client ID:
Injection Date: 04-DEC-2020 06:28
Report Date: 12/07/2020 11:54
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.002	500967	5.401	-0.002	328515	45.2	46.7	3.4	Tetrachloro-m-xylene
13.210	-0.001	948706	13.950	-0.001	538054	42.2	48.8	14.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	112.9	116.8
Decachlorobiphenyl	105.6	122.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	760705	-3.3
Hexabromobiphenyl	2132987	2113407	-0.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	613536	-3.5
Hexabromobiphenyl	665758	670231	0.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.630	-0.001	9332	24.4	1	7.086	0.010	12173	40.9
Aroclor-1016	2	7.002	-0.001	27232	22.3	2	7.672	0.001	12687	18.9
Aroclor-1016	3	7.152	-0.001	13232	25.3	3	7.884	0.002	5508	21.6
Aroclor-1016	4	7.487	-0.063	6835	24.0	4	8.058	0.001	3069	20.1
Total Col1Ave (4 peaks):				24.0		Total Col2Ave (4 peaks):			25.4	RPD = 6
Corrected Ave (3 peaks):				23.6		Corrected Ave (3 peaks):			20.2	RPD = 15
Aroclor-1221	1	3.972	0.000	25700	259.9	1	4.668	-0.001	10702	252.3
Aroclor-1221	2	5.405	-0.000	35281	252.1	2	6.074	-0.001	21178	251.2
Aroclor-1221	3	5.682	0.000	88675	247.0	3	6.416	-0.001	38842	247.2
Total Col1Ave (3 peaks):				253.0		Total Col2Ave (3 peaks):			250.3	RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.972	-0.001	25700	430.0	1	4.668	-0.001	10702	407.5
Aroclor-1232	2	6.630	-0.001	9332	60.1	2	7.086	0.009	12173	89.8
Aroclor-1232	3	7.002	0.000	27232	53.7	3	7.672	0.000	12687	44.8
Aroclor-1232	4	8.310	0.002	7334	48.6	4	8.058	0.001	3069	47.6
Total Col1Ave (4 peaks):				148.1		Total Col2Ave (4 peaks):			147.4	RPD = 0
Corrected Ave (3 peaks):				54.1		Corrected Ave (3 peaks):			60.7	RPD = 11
Aroclor-1242	1	6.630	-0.001	9332	31.6	1	7.086	0.010	12173	52.5
Aroclor-1242	2	7.002	-0.001	27232	29.9	2	7.672	-0.000	12687	23.6
Aroclor-1242	3	8.310	0.002	7334	24.3	3	8.994	0.003	3292	15.5
Aroclor-1242	4	8.599	-0.004	6567	20.0	4	9.428	0.001	2788	13.4
Total Col1Ave (4 peaks):				26.4		Total Col2Ave (4 peaks):			26.2	RPD = 1
Corrected Ave (3 peaks):				24.7		Corrected Ave (3 peaks):			17.5	RPD = 34
Aroclor-1248	1	7.487	-0.000	6835	17.2	1	8.141	0.000	2855	13.7
Aroclor-1248	2	7.956	-0.001	6254	10.4	2	8.564	0.002	2760	10.1
Aroclor-1248	3	8.383	0.018	42170	47.4	3	8.994	0.003	3292	8.5
Aroclor-1248	4	8.599	-0.003	6567	12.8	4	9.428	0.002	2788	7.3
Total Col1Ave (4 peaks):				22.0		Total Col2Ave (4 peaks):			9.9	RPD = 75*
Corrected Ave (3 peaks):				13.5		Corrected Ave (3 peaks):			8.7	RPD = 43*
Aroclor-1254	1	8.675	-0.001	49067	54.4	1	9.292	0.001	15668	35.8
Aroclor-1254	2	---			0.0	2	9.385	0.001	1659	8.2
Aroclor-1254	3	9.046	0.000	8681	14.5	3	9.824	0.001	3263	11.2
Aroclor-1254	4	9.166	-0.014	53719	43.4	4	9.992	0.020	74632	109.1
Aroclor-1254	5	9.806	-0.071	271469	330.5	5	10.224	0.019	90774	128.5
Total Col1Ave (4 peaks):				110.7		Total Col2Ave (5 peaks):			58.6	RPD = 62*
Corrected Ave (3 peaks):				37.4		Corrected Ave (4 peaks):			41.1	RPD = 9
Aroclor-1260	1	10.405	0.001	311981	379.6	1	11.043	0.000	176982	432.1
Aroclor-1260	2	10.726	-0.000	256156	312.2	2	11.506	-0.001	146726	340.1
Aroclor-1260	3	11.077	-0.002	651962	306.1	3	11.760	0.001	355912	322.5
Aroclor-1260	4	11.480	-0.000	205051	188.4	4	12.348	-0.001	245935	343.0
Aroclor-1260	5	11.586	0.000	256602	541.4	NS	---			----
Total Col1Ave (5 peaks):				345.5		Total Col2Ave (4 peaks):			359.4	RPD = 4
Corrected Ave (4 peaks):				296.6		Corrected Ave (3 peaks):			335.2	RPD = 12
Aroclor-1262	1	10.405	0.000	311981	253.1	1	11.043	-0.000	176982	254.1
Aroclor-1262	2	11.077	-0.000	651962	235.2	2	11.760	0.001	355912	232.5
Aroclor-1262	3	11.586	0.000	256602	333.6	3	12.274	-0.001	159148	323.7
Aroclor-1262	4	11.657	-0.000	301603	299.1	4	13.067	0.001	141336	253.8
Total Col1Ave (4 peaks):				280.2		Total Col2Ave (4 peaks):			266.0	RPD = 5
Corrected Ave (3 peaks):				262.5		Corrected Ave (3 peaks):			246.8	RPD = 6
Aroclor-1268	1	11.586	-0.002	256602	91.3	1	12.274	0.001	159148	98.9
Aroclor-1268	2	11.657	0.000	301603	99.9	2	12.348	0.008	245935	139.9
Aroclor-1268	3	12.060	0.023	116958	48.3	3	12.729	-0.000	9225	6.3
Aroclor-1268	4	12.806	-0.006	110966	11.6	4	13.545	-0.001	44848	9.2
Total Col1Ave (4 peaks):				62.8		Total Col2Ave (4 peaks):			63.6	RPD = 1

Corrected Ave (3 peaks): 50.4 Corrected Ave (3 peaks): 38.1 RPD = 28

Total PCB Area Col1 (5.118 - 13.110) = 4837083 Col1 Total PCB = 0.4 ppm*

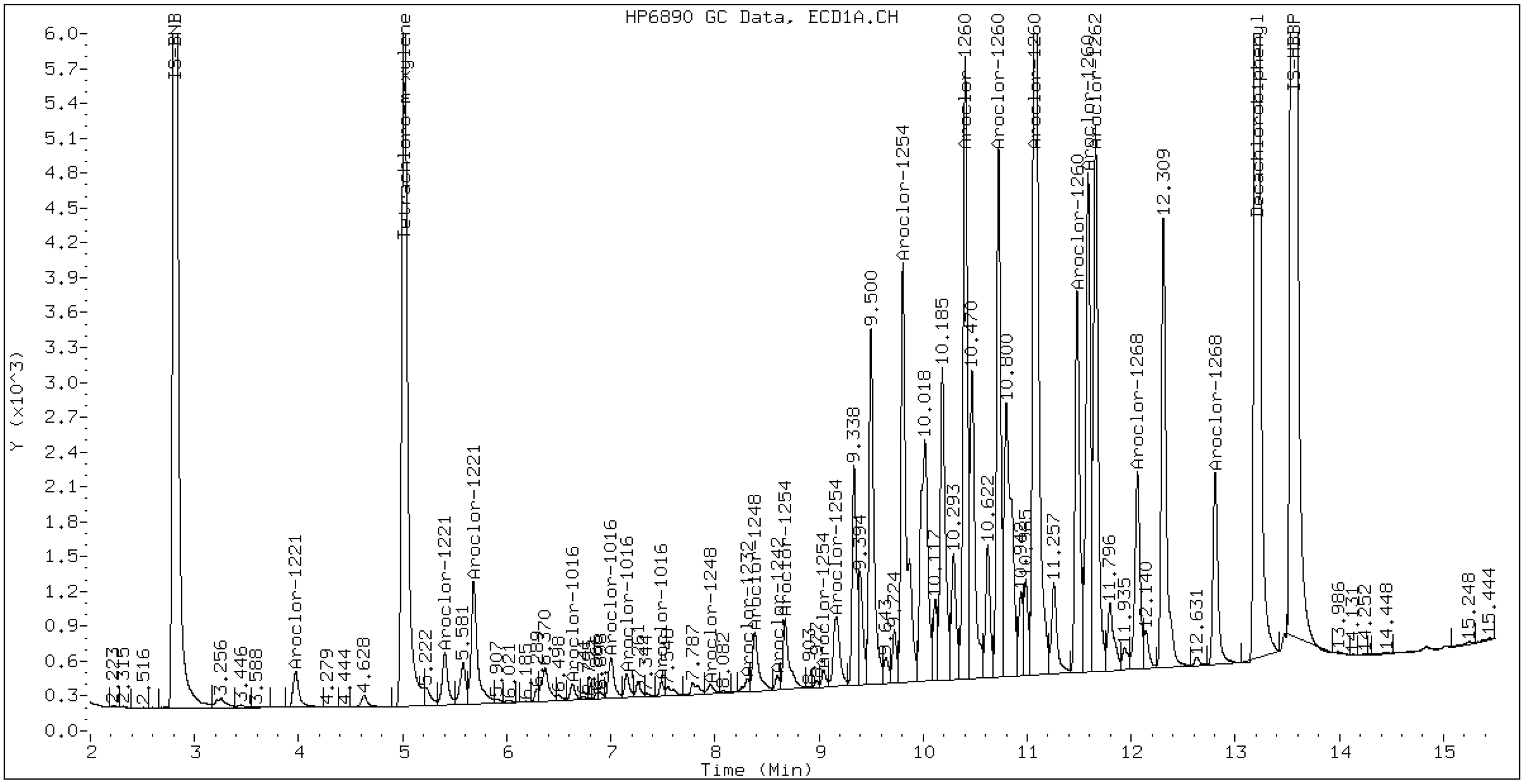
Total PCB Area Col2 (5.118 - 13.110) = 2627283 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

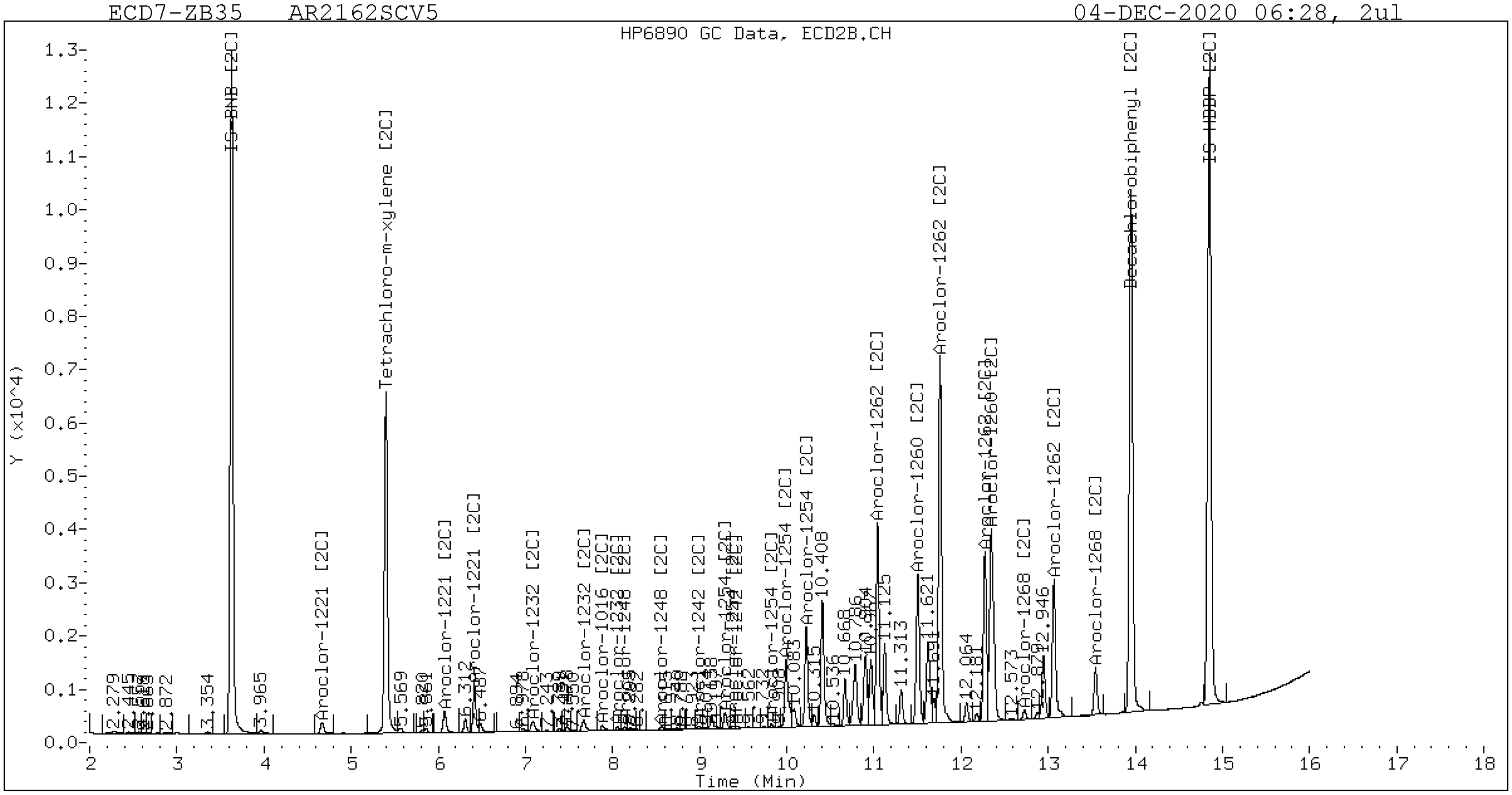
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV5 04-DEC-2020 06:28, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV5 04-DEC-2020 06:28, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120425ECD7.D
Data file 2: /20201204.b/20201204.b/20120425ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV6
Client ID:
Injection Date: 04-DEC-2020 06:49
Report Date: 12/07/2020 11:54
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.002	511511	5.400	-0.002	326478	45.5	45.9	0.8	Tetrachloro-m-xylene
13.210	0.000	1402408	13.950	-0.001	786093	61.5	69.8	12.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	113.8	114.8
Decachlorobiphenyl	153.8	174.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	770524	-2.1
Hexabromobiphenyl	2132987	2144827	0.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	620502	-2.4
Hexabromobiphenyl	665758	684700	2.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.630	-0.000	44327	114.3	1	7.076	-0.000	35634	118.4
Aroclor-1016	2	7.001	-0.002	133389	108.0	2	7.672	0.000	74142	109.1
Aroclor-1016	3	7.152	-0.000	58697	110.6	3	7.883	0.001	27953	108.6
Aroclor-1016	4	7.486	-0.063	32819	113.7	4	8.057	0.001	17125	111.0
	Total Col1Ave (4 peaks):			111.6		Total Col2Ave (4 peaks):			111.8	RPD = 0
	Corrected Ave (3 peaks):			110.8		Corrected Ave (3 peaks):			109.6	RPD = 1
Aroclor-1221	1	3.971	-0.001	15217	151.9	1	4.667	-0.002	6225	145.1
Aroclor-1221	2	5.404	-0.001	23065	162.7	2	6.075	0.000	14194	166.5
Aroclor-1221	3	5.682	-0.000	70892	195.0	3	6.416	-0.001	31775	200.0
	Total Col1Ave (3 peaks):			169.9		Total Col2Ave (3 peaks):			170.5	RPD = 0
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.971	-0.002	15217	251.4	1	4.667	-0.002	6225	234.4
Aroclor-1232	2	6.630	-0.001	44327	281.8	2	7.076	-0.001	35634	259.9
Aroclor-1232	3	7.001	-0.001	133389	259.5	3	7.672	-0.000	74142	259.0
Aroclor-1232	4	8.308	-0.000	57707	377.9	4	8.057	0.000	17125	262.5
	Total Col1Ave (4 peaks):			292.6		Total Col2Ave (4 peaks):			254.0	RPD = 14
	Corrected Ave (3 peaks):			264.2		Corrected Ave (3 peaks):			251.1	RPD = 5
Aroclor-1242	1	6.630	-0.001	44327	148.3	1	7.076	-0.001	35634	151.9
Aroclor-1242	2	7.001	-0.002	133389	144.7	2	7.672	-0.001	74142	136.5
Aroclor-1242	3	8.308	-0.000	57707	188.5	3	8.992	0.001	25997	121.2
Aroclor-1242	4	8.603	-0.000	41786	125.4	4	9.428	0.001	25272	119.7
	Total Col1Ave (4 peaks):			151.7		Total Col2Ave (4 peaks):			132.3	RPD = 14
	Corrected Ave (3 peaks):			139.5		Corrected Ave (3 peaks):			125.8	RPD = 10
Aroclor-1248	1	7.486	-0.001	32819	81.7	1	8.140	-0.000	14105	67.0
Aroclor-1248	2	7.956	0.000	53707	88.1	2	8.562	0.001	21319	77.4
Aroclor-1248	3	8.364	-0.002	83942	93.2	3	8.992	0.000	25997	66.3
Aroclor-1248	4	8.603	0.001	41786	80.2	4	9.428	0.002	25272	65.7
	Total Col1Ave (4 peaks):			85.8		Total Col2Ave (4 peaks):			69.1	RPD = 22
	Corrected Ave (3 peaks):			83.3		Corrected Ave (3 peaks):			66.4	RPD = 23
Aroclor-1254	1	8.674	-0.002	23763	26.0	1	9.291	0.000	6551	14.8
Aroclor-1254	2	8.742	-0.001	15107	30.6	2	9.428	0.044	25272	123.1
Aroclor-1254	3	9.045	-0.000	9408	15.5	3	9.822	-0.000	3580	12.2
Aroclor-1254	4	9.181	0.001	18138	14.5	4	9.975	0.003	8171	11.8
Aroclor-1254	5	9.880	0.003	10355	12.4	5	10.210	0.005	7387	10.3
	Total Col1Ave (5 peaks):			19.8		Total Col2Ave (5 peaks):			34.5	RPD = 54*
	Corrected Ave (4 peaks):			17.1		Corrected Ave (4 peaks):			12.3	RPD = 33
Aroclor-1260	1	10.406	0.001	141643	169.8	1	11.044	0.001	61084	146.0
Aroclor-1260	2	10.726	-0.000	10799	13.0	2	11.487	-0.020	85617	194.2
Aroclor-1260	3	11.077	-0.003	85817	39.7	3	11.759	-0.000	37085	32.9
Aroclor-1260	4	11.481	0.000	2895	2.6	4	12.340	-0.009	438765	598.9
Aroclor-1260	5	11.588	0.002	702643	1460.8	NS	---			----
	Total Col1Ave (5 peaks):			337.2		Total Col2Ave (4 peaks):			243.0	RPD = 32
	Corrected Ave (4 peaks):			56.3		Corrected Ave (3 peaks):			124.4	RPD = 75*
Aroclor-1262	1	10.406	0.001	141643	113.2	1	11.044	0.001	61084	85.8
Aroclor-1262	2	11.077	-0.001	85817	30.5	2	11.759	0.000	37085	23.7
Aroclor-1262	3	11.588	0.002	702643	900.0	3	12.273	-0.003	405151	806.6
Aroclor-1262	4	11.657	-0.000	749121	732.0	4	13.065	-0.000	143614	252.5
	Total Col1Ave (4 peaks):			443.9		Total Col2Ave (4 peaks):			292.1	RPD = 41*
	Corrected Ave (3 peaks):			291.9		Corrected Ave (3 peaks):			120.7	RPD = 83*
Aroclor-1268	1	11.588	-0.000	702643	246.4	1	12.273	-0.000	405151	246.4
Aroclor-1268	2	11.657	-0.000	749121	244.6	2	12.340	0.000	438765	244.4
Aroclor-1268	3	12.037	-0.001	604557	246.0	3	12.729	0.000	371169	246.5
Aroclor-1268	4	12.812	-0.000	2402545	248.0	4	13.545	-0.001	1232367	246.5
	Total Col1Ave (4 peaks):			246.2		Total Col2Ave (4 peaks):			245.9	RPD = 0

Corrected Ave (3 peaks): 245.6 Corrected Ave (3 peaks): 245.7 RPD = 0

Total PCB Area Col1 (5.118 - 13.110) = 6593528 Col1 Total PCB = 0.6 ppm*

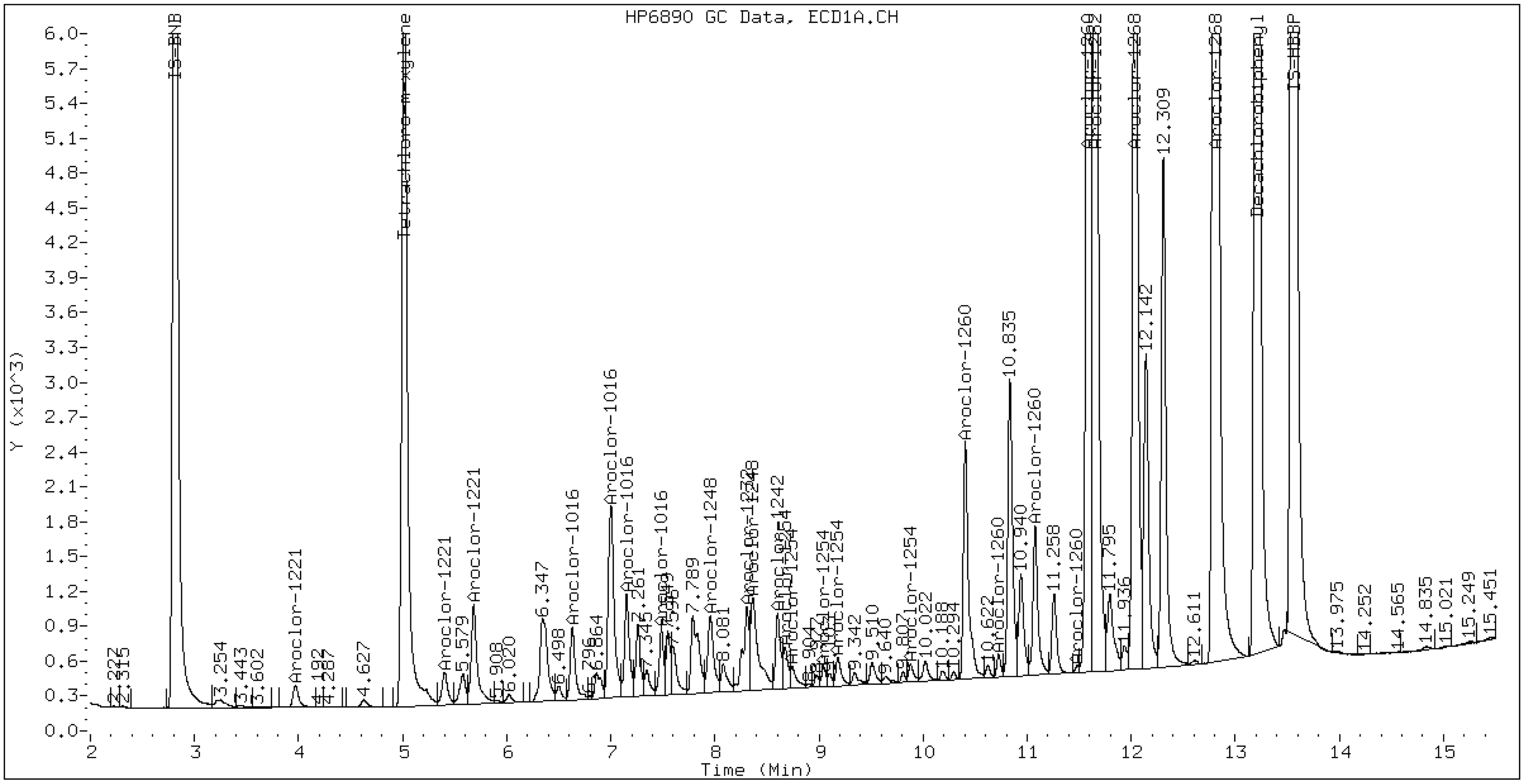
Total PCB Area Col2 (5.118 - 13.110) = 2531175 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

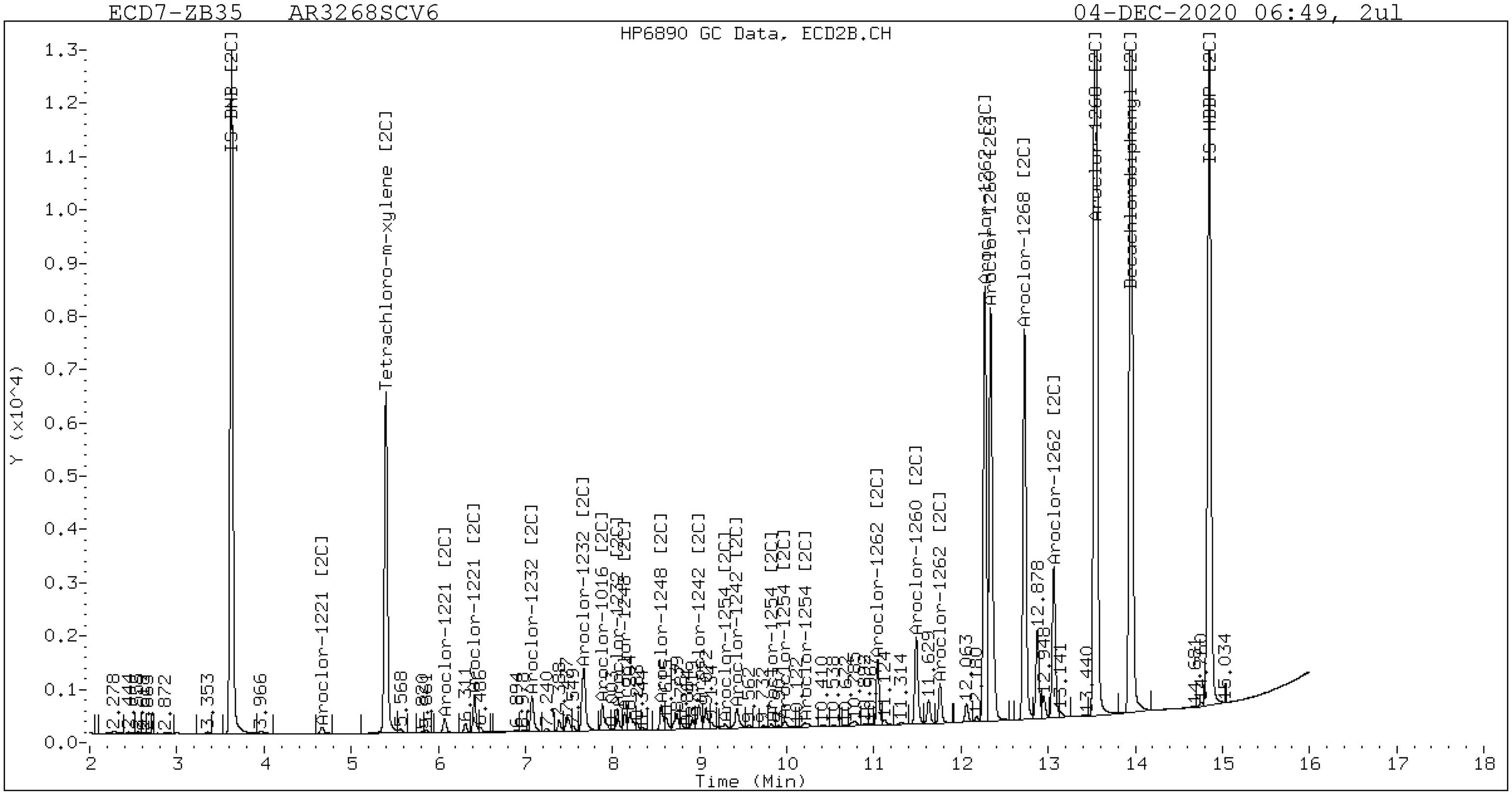
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV6 04-DEC-2020 06:49, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV6 04-DEC-2020 06:49, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /20201204.b/20120426ECD7.D ARI ID: DDT

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
8.661	0.000	1410001	9.764	0.000	1143063	0.100	0.100	0.0	2,4-DDE
9.666	0.000	1506827	10.537	0.000	1494054	0.100	0.200#	66.7*	2,4-DDT
9.075	0.000	2515539	10.079	0.000	736020	0.100	0.100	0.0	4,4-DDE
9.644	0.000	2219102	10.537	0.000	1494054	0.100	0.200#	66.7*	4,4-DDD

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: BD
Instrument: ecd7.i   Data File: /20201204.b/20120427ECD7.D
Analysis Date: 04-DEC-2020 07:30   Init. Calib. Date: 04-DEC-2020

GC Column: ZB5   ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	9.072	69352
4,4-DDD	9.643	340456
4,4-DDT	10.137	1065684

Col 1: 4,4-DDT Percent Breakdown = 27.8 %

GC Column: ZB35   ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE [2C]	10.081	220
4,4-DDD/2,4-DDT [2C]	10.540	223900
4,4-DDT [2C]	10.959	432465

Col 2: 4,4-DDT Percent Breakdown = 34.1 %

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Calibration: DL00019

Sequence: SIL0088

SDG: 20K0145

Project: ICS-Former NW Cooperage

Laboratory ID: SIL0088-SCV1

Sequence Name: AR1660SCV1

Standard ID: I005063

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT		QC LIMIT
Aroclor 1016	250.00	240	-4.1		20.00
Aroclor 1016 [2C]	250.00	250	-0.2		20.00
Aroclor 1260	250.00	261	4.5		20.00
Aroclor 1260 [2C]	250.00	278	11.1		20.00
Decachlorobiphenyl	40.000	41.8	4.6		20.00
Tetrachlorometaxylene	40.000	45.0	12.6		20.00
Decachlorobiphenyl [2C]	40.000	48.2	20.6	*	20.00
Tetrachlorometaxylene [2C]	40.000	46.0	15.1		20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120420ECD7.D
Data file 2: /20201204.b/20201204.b/20120420ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV1
Client ID:
Injection Date: 04-DEC-2020 05:06
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.018	0.000	522469	5.402	0.000	336381	45.0	46.0	2.2	Tetrachloro-m-xylene
13.210	-0.000	972568	13.950	-0.000	554258	41.8	48.2	14.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	112.6	115.1
Decachlorobiphenyl	104.6	120.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	795708	1.1
Hexabromobiphenyl	2132987	2186421	2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	637628	0.3
Hexabromobiphenyl	665758	698314	4.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.632	0.001	95528	238.6	1	7.077	0.001	76814	248.3
Aroclor-1016	2	7.002	-0.001	295416	231.5	2	7.673	0.002	175788	251.8
Aroclor-1016	3	7.153	0.000	127151	232.0	3	7.883	0.001	65410	247.3
Aroclor-1016	4	7.487	-0.062	76423	256.4	4	8.057	0.000	39803	251.0
	Total Col1Ave (4 peaks):			239.6		Total Col2Ave (4 peaks):			249.6	RPD = 4
	Corrected Ave (3 peaks):			234.0		Corrected Ave (3 peaks):			248.9	RPD = 6
Aroclor-1221	1	3.975	0.003	878	8.5	1	---			0.0
Aroclor-1221	2	5.404	-0.001	14963	102.2	2	6.079	0.005	9666	110.3
Aroclor-1221	3	5.683	0.001	68494	182.4	3	6.418	0.001	31755	194.5
	Total Col1Ave (3 peaks):			97.7		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.975	0.002	878	14.0	1	---			0.0
Aroclor-1232	2	6.632	0.000	95528	588.1	2	7.077	-0.000	76814	545.3
Aroclor-1232	3	7.002	-0.000	295416	556.5	3	7.673	0.001	175788	597.6
Aroclor-1232	4	8.309	-0.000	19510	123.7	4	8.057	-0.000	39803	593.7
	Total Col1Ave (4 peaks):			320.6		Total Col2Ave (3 peaks):			578.9	RPD = 57*
	Corrected Ave (3 peaks):			231.4		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.632	0.000	95528	309.4	1	7.077	0.000	76814	318.7
Aroclor-1242	2	7.002	-0.001	295416	310.2	2	7.673	0.000	175788	314.8
Aroclor-1242	3	8.309	0.000	19510	61.7	3	8.982	-0.009	19824	90.0
Aroclor-1242	4	8.597	-0.006	11788	34.3	4	9.430	0.002	2269	10.5
	Total Col1Ave (4 peaks):			178.9		Total Col2Ave (4 peaks):			183.5	RPD = 3
	Corrected Ave (3 peaks):			135.1		Corrected Ave (3 peaks):			138.4	RPD = 2
Aroclor-1248	1	7.487	0.000	76423	184.1	1	8.141	-0.000	36032	166.7
Aroclor-1248	2	7.957	0.001	122530	194.7	2	8.562	0.000	52014	183.8
Aroclor-1248	3	8.383	0.017	96065	103.3	3	8.982	-0.009	19824	49.2
Aroclor-1248	4	8.597	-0.005	11788	21.9	4	9.430	0.004	2269	5.7
	Total Col1Ave (4 peaks):			126.0		Total Col2Ave (4 peaks):			101.4	RPD = 22
	Corrected Ave (3 peaks):			103.1		Corrected Ave (3 peaks):			73.9	RPD = 33
Aroclor-1254	1	8.674	-0.001	81025	86.0	1	9.291	0.000	32530	71.4
Aroclor-1254	2	---			0.0	2	9.430	0.046	2269	10.8
Aroclor-1254	3	9.047	0.002	9960	15.9	3	9.824	0.001	3929	13.0
Aroclor-1254	4	9.170	-0.010	73847	57.0	4	9.991	0.019	84643	119.1
Aroclor-1254	5	9.871	-0.006	107932	125.6	5	10.224	0.019	114607	156.1
	Total Col1Ave (4 peaks):			71.1		Total Col2Ave (5 peaks):			74.1	RPD = 4
	Corrected Ave (3 peaks):			53.0		Corrected Ave (4 peaks):			53.6	RPD = 1
Aroclor-1260	1	10.405	0.001	223537	262.9	1	11.043	0.000	123924	290.4
Aroclor-1260	2	10.726	-0.000	221379	260.8	2	11.507	0.001	121258	269.7
Aroclor-1260	3	11.077	-0.002	596328	270.6	3	11.759	-0.000	319696	278.0
Aroclor-1260	4	11.480	0.000	273530	242.9	4	12.349	0.000	204231	273.3
Aroclor-1260	5	11.586	-0.000	132108	269.4	NS	---			----
	Total Col1Ave (5 peaks):			261.3		Total Col2Ave (4 peaks):			277.9	RPD = 6
	Corrected Ave (4 peaks):			259.0		Corrected Ave (3 peaks):			273.7	RPD = 6
Aroclor-1262	1	10.405	0.000	223537	175.3	1	11.043	-0.000	123924	170.8
Aroclor-1262	2	11.077	0.000	596328	207.9	2	11.759	0.000	319696	200.4
Aroclor-1262	3	11.586	-0.000	132108	166.0	3	12.277	0.001	87098	170.0
Aroclor-1262	4	11.658	0.001	176030	168.7	4	13.066	0.000	84509	145.7
	Total Col1Ave (4 peaks):			179.5		Total Col2Ave (4 peaks):			171.7	RPD = 4
	Corrected Ave (3 peaks):			170.0		Corrected Ave (3 peaks):			162.1	RPD = 5
Aroclor-1268	1	11.586	-0.003	132108	45.4	1	12.277	0.004	87098	51.9
Aroclor-1268	2	11.658	0.001	176030	56.4	2	12.349	0.010	204231	111.5
Aroclor-1268	3	12.062	0.025	90211	36.0	3	12.731	0.001	3573	2.3
Aroclor-1268	4	12.806	-0.006	57142	5.8	4	13.544	-0.002	17452	3.4
	Total Col1Ave (4 peaks):			35.9		Total Col2Ave (4 peaks):			42.3	RPD = 16
	Corrected Ave (3 peaks):			29.1		Corrected Ave (3 peaks):			19.2	RPD = 41*

Total PCB Area Col1 (5.118 - 13.110) = 5907925 Col1 Total PCB = 0.5 ppm*

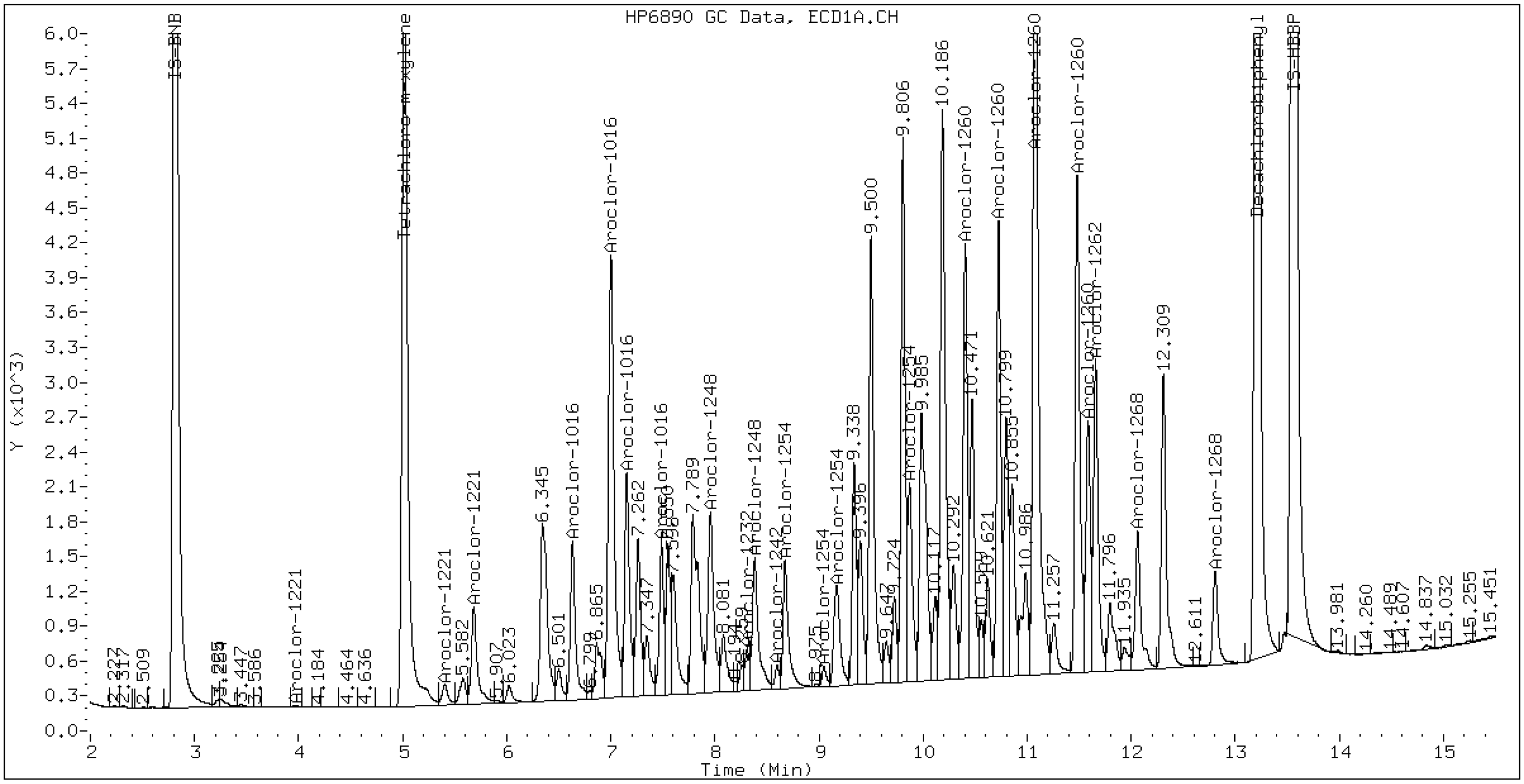
Total PCB Area Col2 (5.118 - 13.110) = 3169625 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

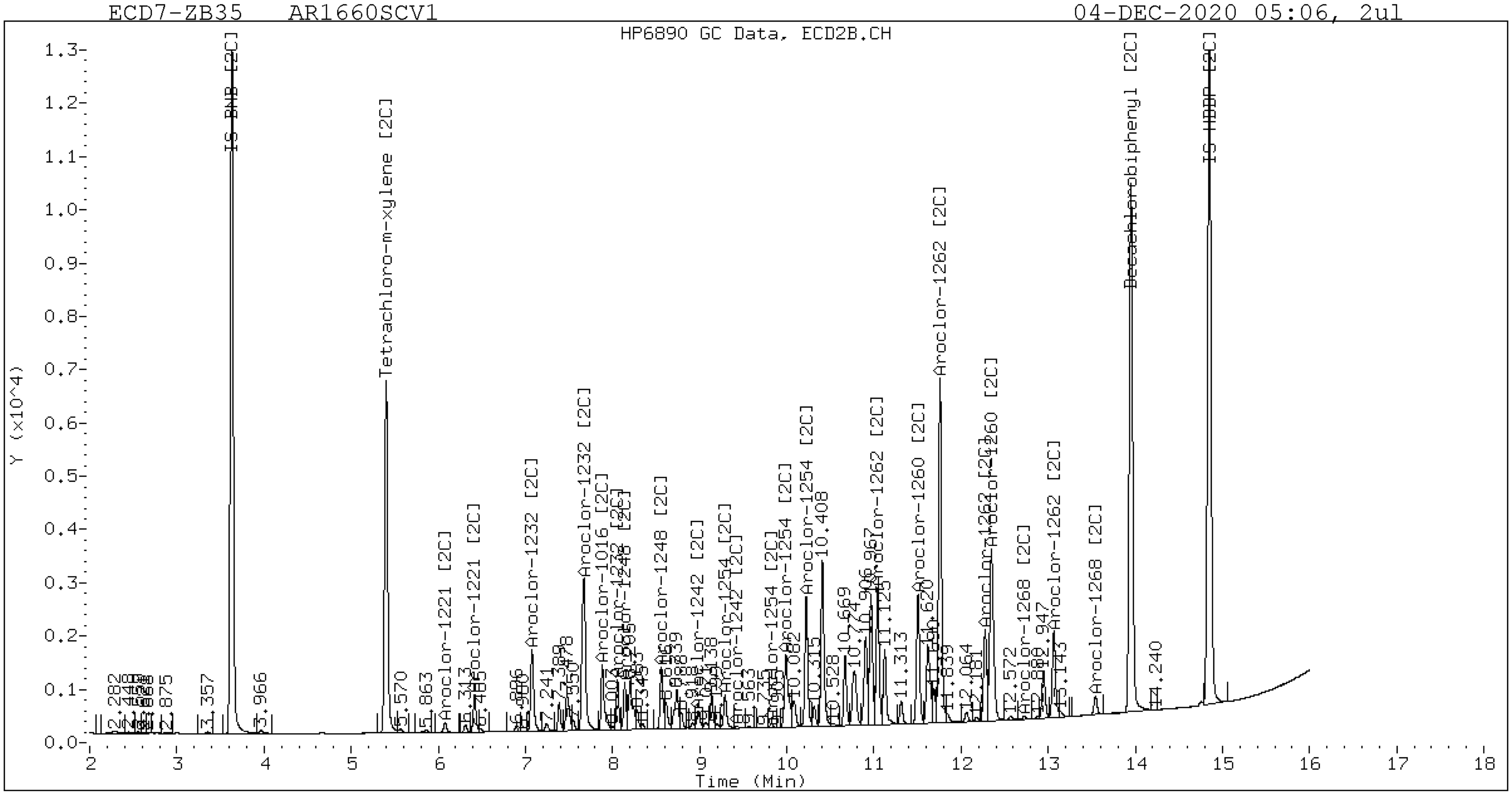
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV1 04-DEC-2020 05:06, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV1 04-DEC-2020 05:06, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: DL00019
Sequence: SIL0088

SDG: 20K0145
Project: ICS-Former NW Cooperage
Laboratory ID: SIL0088-SCV2
Sequence Name: AR1242SCV2
Standard ID: I005064

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1242	250.00	234	-6.4	20.00
Aroclor 1242 [2C]	250.00	236	-5.7	20.00
Decachlorobiphenyl	40.000	40.7	1.7	20.00
Tetrachlorometaxylene	40.000	42.5	6.1	20.00
Decachlorobiphenyl [2C]	40.000	46.9	17.3	20.00
Tetrachlorometaxylene [2C]	40.000	44.8	12.0	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120421ECD7.D
Data file 2: /20201204.b/20201204.b/20120421ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV2
Client ID:
Injection Date: 04-DEC-2020 05:27
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.001	491240	5.401	-0.001	325882	42.5	44.8	5.3	Tetrachloro-m-xylene
13.210	-0.000	945810	13.951	-0.000	538416	40.7	46.9	14.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	106.1	112.0
Decachlorobiphenyl	101.7	117.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	793550	0.9
Hexabromobiphenyl	2132987	2188269	2.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	634778	-0.1
Hexabromobiphenyl	665758	697627	4.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.630	-0.000	74056	185.4	1	7.075	-0.001	58151	188.8
Aroclor-1016	2	7.001	-0.001	226378	177.9	2	7.671	-0.000	131850	189.7
Aroclor-1016	3	7.152	0.000	97975	179.2	3	7.883	0.001	49024	186.1
Aroclor-1016	4	7.486	-0.063	61294	206.2	4	8.057	0.000	29614	187.6
Total Col1Ave (4 peaks): 187.2						Total Col2Ave (4 peaks): 188.1				RPD = 0
Corrected Ave (3 peaks): 180.9						Corrected Ave (3 peaks): 187.5				RPD = 4
Aroclor-1221	1	3.975	0.003	555	5.4	1	---			0.0
Aroclor-1221	2	5.403	-0.003	12058	82.6	2	6.078	0.004	8048	92.3
Aroclor-1221	3	5.681	-0.001	53082	141.7	3	6.417	0.000	23791	146.4
Total Col1Ave (3 peaks): 76.6						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.975	0.001	555	8.9	1	---			0.0
Aroclor-1232	2	6.630	-0.001	74056	457.2	2	7.075	-0.002	58151	414.7
Aroclor-1232	3	7.001	-0.000	226378	427.6	3	7.671	-0.001	131850	450.3
Aroclor-1232	4	8.308	-0.001	74236	472.0	4	8.057	-0.000	29614	443.7
Total Col1Ave (4 peaks): 341.4						Total Col2Ave (3 peaks): 436.2				RPD = 24
Corrected Ave (3 peaks): 297.9						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.630	-0.001	74056	240.5	1	7.075	-0.001	58151	242.3
Aroclor-1242	2	7.001	-0.002	226378	238.4	2	7.671	-0.001	131850	237.2
Aroclor-1242	3	8.308	-0.001	74236	235.5	3	8.991	-0.000	50455	230.0
Aroclor-1242	4	8.602	-0.001	75873	221.1	4	9.426	-0.001	50367	233.3
Total Col1Ave (4 peaks): 233.9						Total Col2Ave (4 peaks): 235.7				RPD = 1
Corrected Ave (3 peaks): 231.7						Corrected Ave (3 peaks): 233.5				RPD = 1
Aroclor-1248	1	7.486	-0.000	61294	148.1	1	8.140	-0.001	28713	133.4
Aroclor-1248	2	7.957	0.001	100565	160.2	2	8.561	-0.000	41996	149.1
Aroclor-1248	3	8.365	0.000	159627	172.0	3	8.991	-0.001	50455	125.8
Aroclor-1248	4	8.602	0.001	75873	141.5	4	9.426	0.000	50367	128.1
Total Col1Ave (4 peaks): 155.5						Total Col2Ave (4 peaks): 134.1				RPD = 15
Corrected Ave (3 peaks): 149.9						Corrected Ave (3 peaks): 129.1				RPD = 15
Aroclor-1254	1	8.674	-0.001	57708	61.4	1	9.290	-0.000	18475	40.8
Aroclor-1254	2	8.742	-0.001	39613	77.8	2	9.426	0.042	50367	239.9
Aroclor-1254	3	9.046	0.000	30111	48.1	3	9.823	0.000	11321	37.7
Aroclor-1254	4	9.180	0.000	56187	43.5	4	9.974	0.002	24173	34.2
Aroclor-1254	5	9.880	0.003	34148	39.9	5	10.203	-0.002	23932	32.7
Total Col1Ave (5 peaks): 54.1						Total Col2Ave (5 peaks): 77.1				RPD = 35
Corrected Ave (4 peaks): 48.2						Corrected Ave (4 peaks): 36.3				RPD = 28
Aroclor-1260	1	10.406	0.002	1571	1.8	1	10.967	-0.076	8147	19.1
Aroclor-1260	2	10.723	-0.003	1628	1.9	2	11.519	0.013	1967	4.4
Aroclor-1260	3	11.078	-0.002	4111	1.9	3	11.762	0.003	1178	1.0
Aroclor-1260	4	11.480	0.000	2943	2.6	4	12.354	0.005	137	0.2
Aroclor-1260	5	11.590	0.004	571	1.2	NS	---			----
Total Col1Ave (5 peaks): 1.9						Total Col2Ave (4 peaks): 6.2				RPD = 107*
Corrected Ave (4 peaks): 1.7						Corrected Ave (3 peaks): 1.9				RPD = 9
Aroclor-1262	1	10.406	0.001	1571	1.2	1	10.967	-0.077	8147	11.2
Aroclor-1262	2	11.078	0.000	4111	1.4	2	11.762	0.004	1178	0.7
Aroclor-1262	3	11.590	0.004	571	0.7	3	12.354	0.078	137	0.3
Aroclor-1262	4	11.659	0.002	533	0.5	4	13.146	0.080	4808	8.3
Total Col1Ave (4 peaks): 1.0						Total Col2Ave (4 peaks): 5.1				RPD = 136*
Corrected Ave (3 peaks): 0.8						Corrected Ave (3 peaks): 3.1				RPD = 116*
Aroclor-1268	1	11.590	0.001	571	0.2	1	12.354	0.081	137	0.1
Aroclor-1268	2	11.659	0.002	533	0.2	2	---			0.0
Aroclor-1268	3	12.032	-0.005	5531	2.2	3	12.733	0.004	972	0.6
Aroclor-1268	4	12.805	-0.007	19913	2.0	4	13.544	-0.002	3078	0.6
Total Col1Ave (4 peaks): 1.1						Total Col2Ave (3 peaks): 0.4				RPD = 89*
Corrected Ave (3 peaks): 0.8						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.118 - 13.110) = 2078339 Col1 Total PCB = 0.2 ppm*

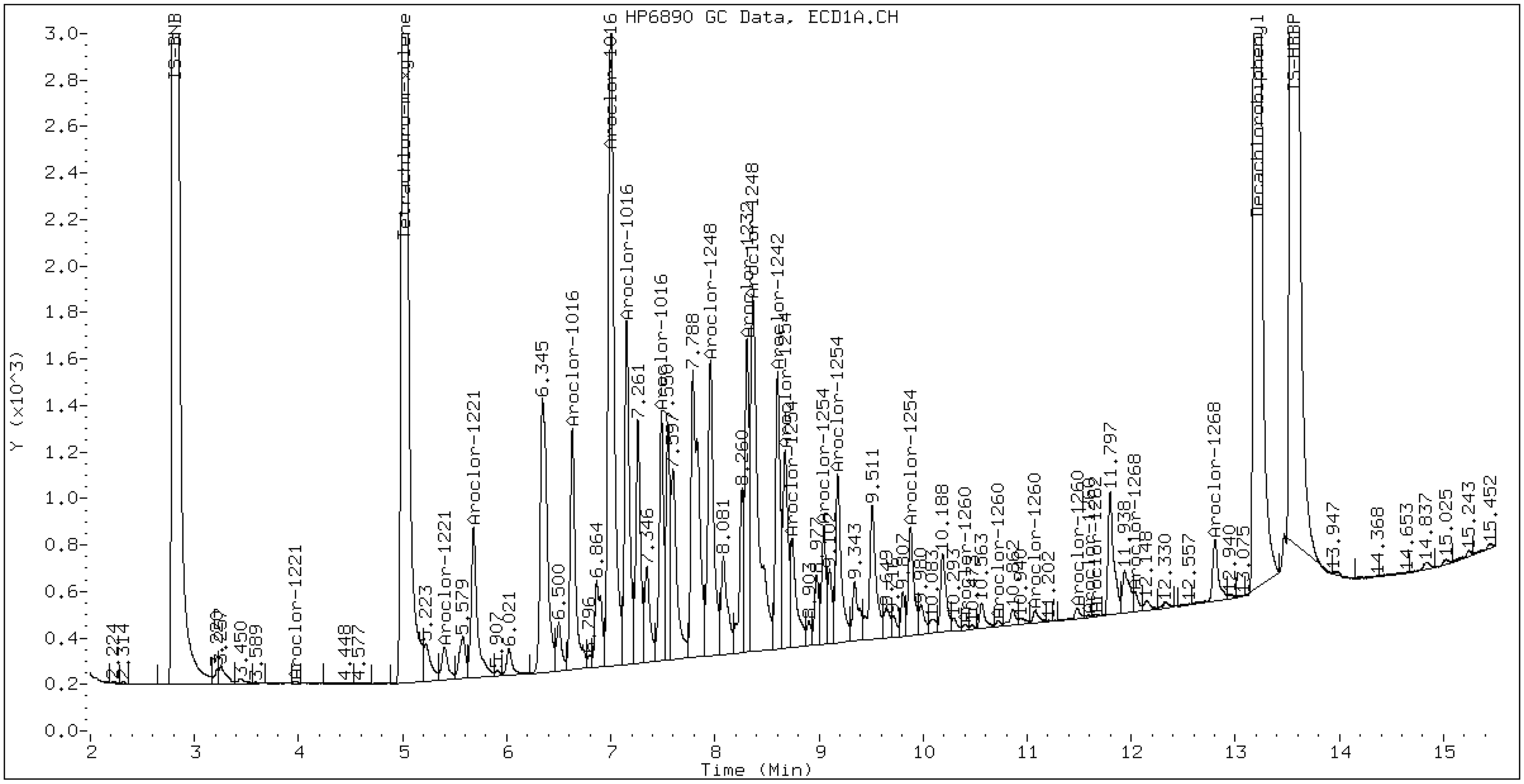
Total PCB Area Col2 (5.118 - 13.110) = 1247459 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

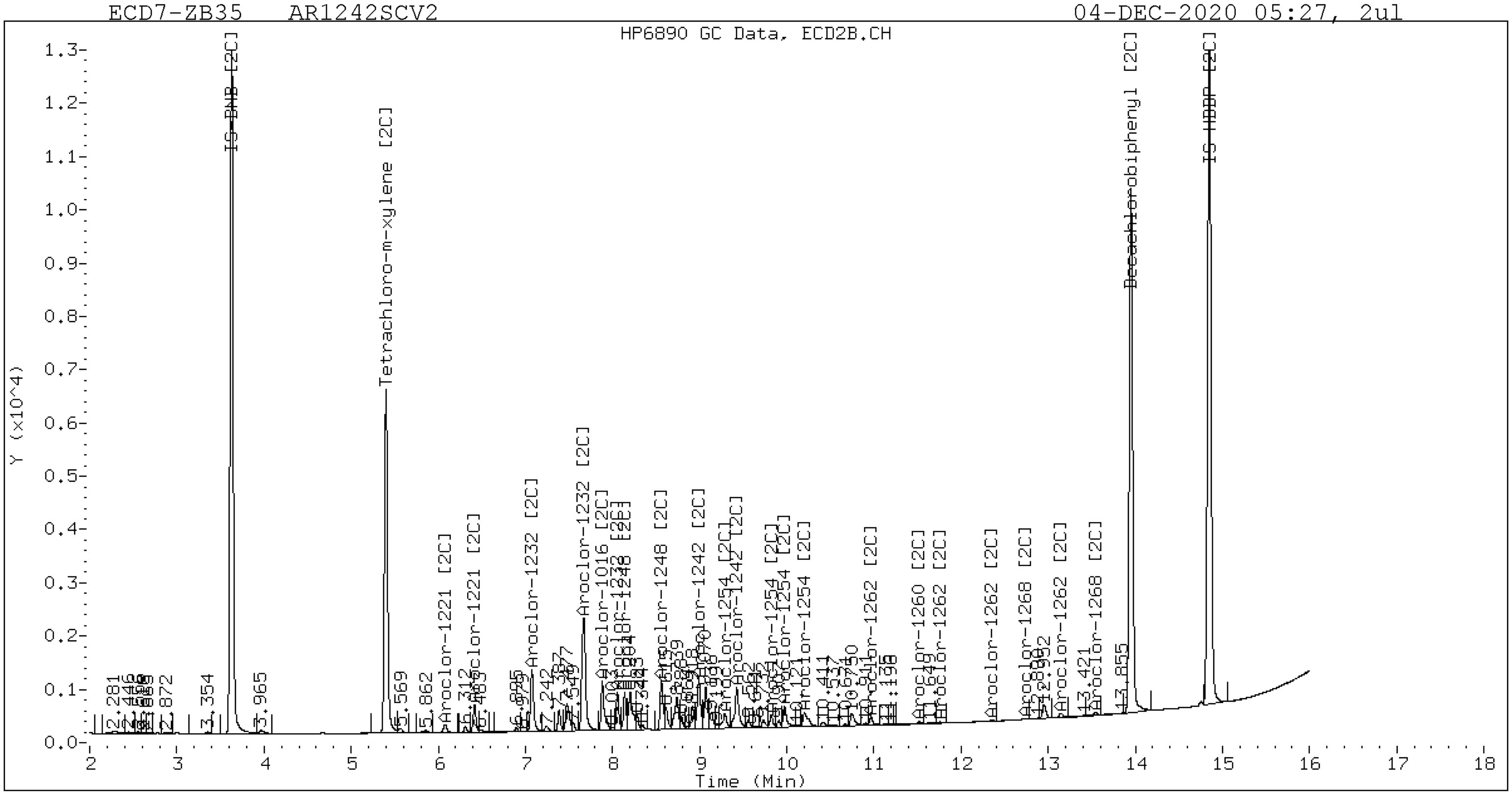
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV2 04-DEC-2020 05:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV2 04-DEC-2020 05:27, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: DL00019
Sequence: SIL0088

SDG: 20K0145
Project: ICS-Former NW Cooperage
Laboratory ID: SIL0088-SCV3
Sequence Name: AR1248SCV3
Standard ID: I005065

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT		QC LIMIT
Aroclor 1248	250.00	234	-6.6		20.00
Aroclor 1248 [2C]	250.00	236	-5.7		20.00
Decachlorobiphenyl	40.000	41.8	4.6		20.00
Tetrachlorometaxylene	40.000	44.8	12.1		20.00
Decachlorobiphenyl [2C]	40.000	48.4	21.0	*	20.00
Tetrachlorometaxylene [2C]	40.000	46.1	15.1		20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120422ECD7.D
Data file 2: /20201204.b/20201204.b/20120422ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV3
Client ID:
Injection Date: 04-DEC-2020 05:47
Report Date: 12/07/2020 11:52
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.016	-0.001	519389	5.400	-0.002	333935	44.8	46.1	2.7	Tetrachloro-m-xylene
13.209	-0.001	967775	13.951	-0.000	548704	41.8	48.4	14.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	112.1	115.1
Decachlorobiphenyl	104.6	121.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	794644	1.0
Hexabromobiphenyl	2132987	2176927	2.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	632599	-0.5
Hexabromobiphenyl	665758	689113	3.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

//target/share/chem4/ecd7.i/20201204.b/20120422ECD7.D AR1248SCV3

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.630	-0.001	37848	94.6	1	7.074	-0.002	29752	97.0
Aroclor-1016	2	6.998	-0.004	154133	121.0	2	7.669	-0.002	87378	126.1
Aroclor-1016	3	7.154	0.002	62043	113.4	3	7.882	0.000	19776	75.3
Aroclor-1016	4	7.486	-0.063	99147	333.1	4	8.057	0.000	16327	103.8
	Total Col1Ave (4 peaks):			165.5		Total Col2Ave (4 peaks):			100.6	RPD = 49*
	Corrected Ave (3 peaks):			109.7		Corrected Ave (3 peaks):			92.0	RPD = 17
Aroclor-1221	1	3.970	-0.002	459	4.4	1	---			0.0
Aroclor-1221	2	5.399	-0.007	4381	30.0	2	6.084	0.010	3982	45.8
Aroclor-1221	3	5.681	-0.001	13045	34.8	3	6.416	-0.001	5950	36.7
	Total Col1Ave (3 peaks):			23.1		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.970	-0.003	459	7.4	1	---			0.0
Aroclor-1232	2	6.630	-0.002	37848	233.3	2	7.074	-0.003	29752	212.9
Aroclor-1232	3	6.998	-0.004	154133	290.8	3	7.669	-0.003	87378	299.4
Aroclor-1232	4	8.308	-0.001	191286	1214.6	4	8.057	-0.000	16327	245.4
	Total Col1Ave (4 peaks):			436.5		Total Col2Ave (3 peaks):			252.6	RPD = 53*
	Corrected Ave (3 peaks):			177.1			Corrected Ave: < 3 Peaks			
Aroclor-1242	1	6.630	-0.002	37848	122.8	1	7.074	-0.002	29752	124.4
Aroclor-1242	2	6.998	-0.005	154133	162.1	2	7.669	-0.003	87378	157.7
Aroclor-1242	3	8.308	-0.001	191286	606.0	3	8.990	-0.001	93110	426.0
Aroclor-1242	4	8.601	-0.002	124142	361.3	4	9.425	-0.002	90178	419.1
	Total Col1Ave (4 peaks):			313.0		Total Col2Ave (4 peaks):			281.8	RPD = 10
	Corrected Ave (3 peaks):			215.4		Corrected Ave (3 peaks):			233.8	RPD = 8
Aroclor-1248	1	7.486	-0.001	99147	239.2	1	8.140	-0.001	51725	241.2
Aroclor-1248	2	7.956	-0.001	145861	232.1	2	8.561	-0.001	67176	239.3
Aroclor-1248	3	8.366	0.001	215594	232.0	3	8.990	-0.001	93110	232.9
Aroclor-1248	4	8.601	-0.000	124142	231.1	4	9.425	-0.001	90178	230.1
	Total Col1Ave (4 peaks):			233.6		Total Col2Ave (4 peaks):			235.9	RPD = 1
	Corrected Ave (3 peaks):			231.8		Corrected Ave (3 peaks):			234.1	RPD = 1
Aroclor-1254	1	8.675	-0.001	105692	112.3	1	9.290	-0.001	29171	64.6
Aroclor-1254	2	8.743	-0.001	73797	144.7	2	9.425	0.041	90178	431.0
Aroclor-1254	3	9.045	-0.001	59822	95.4	3	9.822	-0.000	25001	83.6
Aroclor-1254	4	9.180	-0.000	110698	85.6	4	9.972	-0.000	51389	72.9
Aroclor-1254	5	9.879	0.002	83378	97.2	5	10.201	-0.005	30837	42.3
	Total Col1Ave (5 peaks):			107.0		Total Col2Ave (5 peaks):			138.9	RPD = 26
	Corrected Ave (4 peaks):			97.6		Corrected Ave (4 peaks):			65.8	RPD = 39
Aroclor-1260	1	10.405	0.000	5157	6.1	1	11.043	-0.000	1687	4.0
Aroclor-1260	2	10.726	-0.001	3873	4.6	2	11.516	0.009	2999	6.8
Aroclor-1260	3	11.076	-0.003	9719	4.4	3	11.762	0.003	2801	2.5
Aroclor-1260	4	11.480	-0.000	3945	3.5	4	12.351	0.002	2228	3.0
Aroclor-1260	5	11.586	-0.000	3424	7.0	NS	---			----
	Total Col1Ave (5 peaks):			5.1		Total Col2Ave (4 peaks):			4.1	RPD = 23
	Corrected Ave (4 peaks):			4.7		Corrected Ave (3 peaks):			3.2	RPD = 38
Aroclor-1262	1	10.405	-0.000	5157	4.1	1	11.043	-0.000	1687	2.4
Aroclor-1262	2	11.076	-0.001	9719	3.4	2	11.762	0.004	2801	1.8
Aroclor-1262	3	11.586	-0.000	3424	4.3	3	12.276	0.000	409	0.8
Aroclor-1262	4	11.656	-0.001	3749	3.6	4	13.067	0.002	1105	1.9
	Total Col1Ave (4 peaks):			3.8		Total Col2Ave (4 peaks):			1.7	RPD = 77*
	Corrected Ave (3 peaks):			3.7		Corrected Ave (3 peaks):			1.5	RPD = 84*
Aroclor-1268	1	11.586	-0.003	3424	1.2	1	12.276	0.002	409	0.2
Aroclor-1268	2	11.656	-0.001	3749	1.2	2	12.351	0.011	2228	1.2
Aroclor-1268	3	12.034	-0.003	6957	2.8	3	12.729	-0.001	1375	0.9
Aroclor-1268	4	12.804	-0.008	20500	2.1	4	13.545	-0.001	3684	0.7
	Total Col1Ave (4 peaks):			1.8		Total Col2Ave (4 peaks):			0.8	RPD = 80*
	Corrected Ave (3 peaks):			1.5		Corrected Ave (3 peaks):			0.6	RPD = 81*

Total PCB Area Col1 (5.118 - 13.110) = 2537125 Col1 Total PCB = 0.2 ppm*

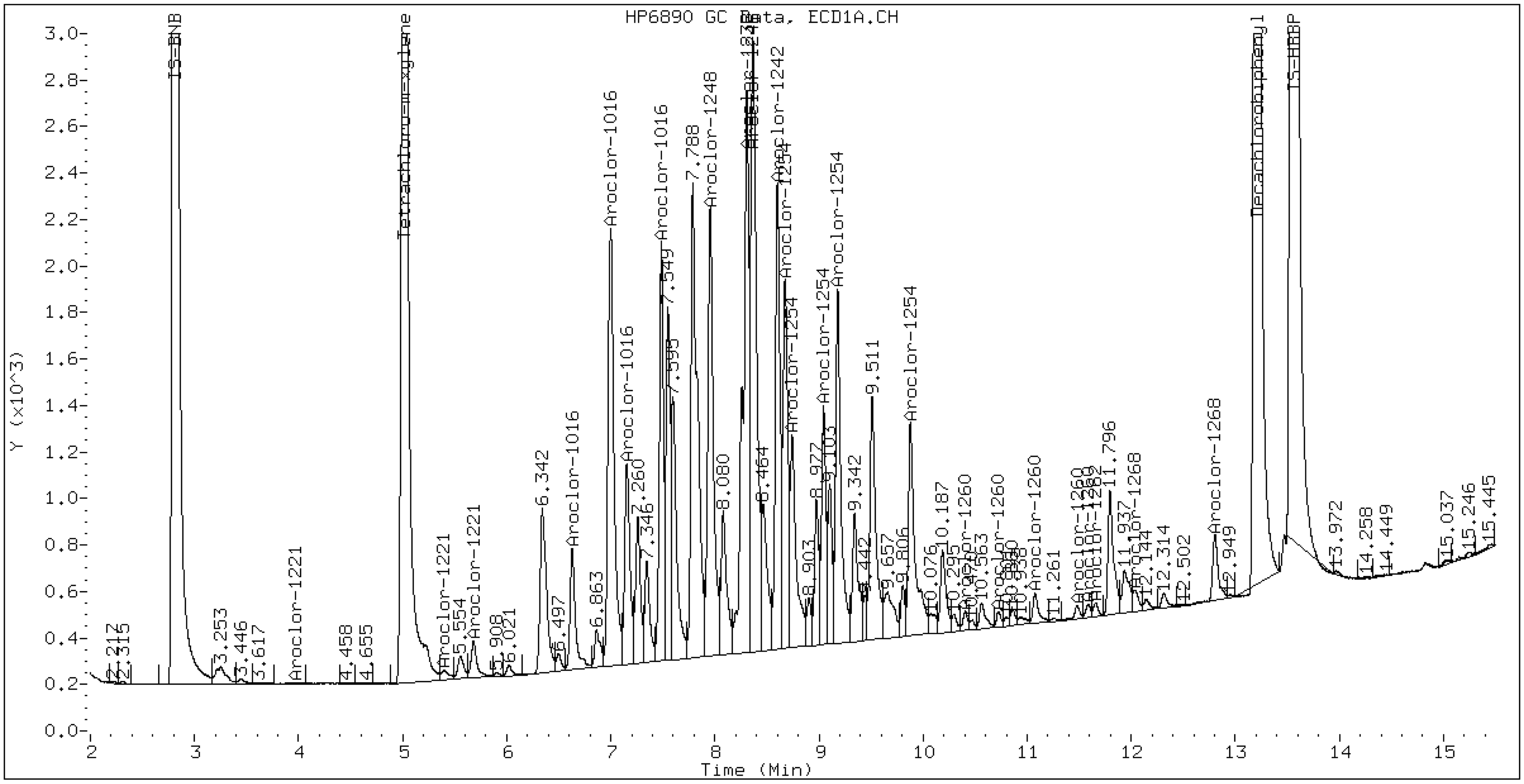
Total PCB Area Col2 (5.118 - 13.110) = 1484584 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

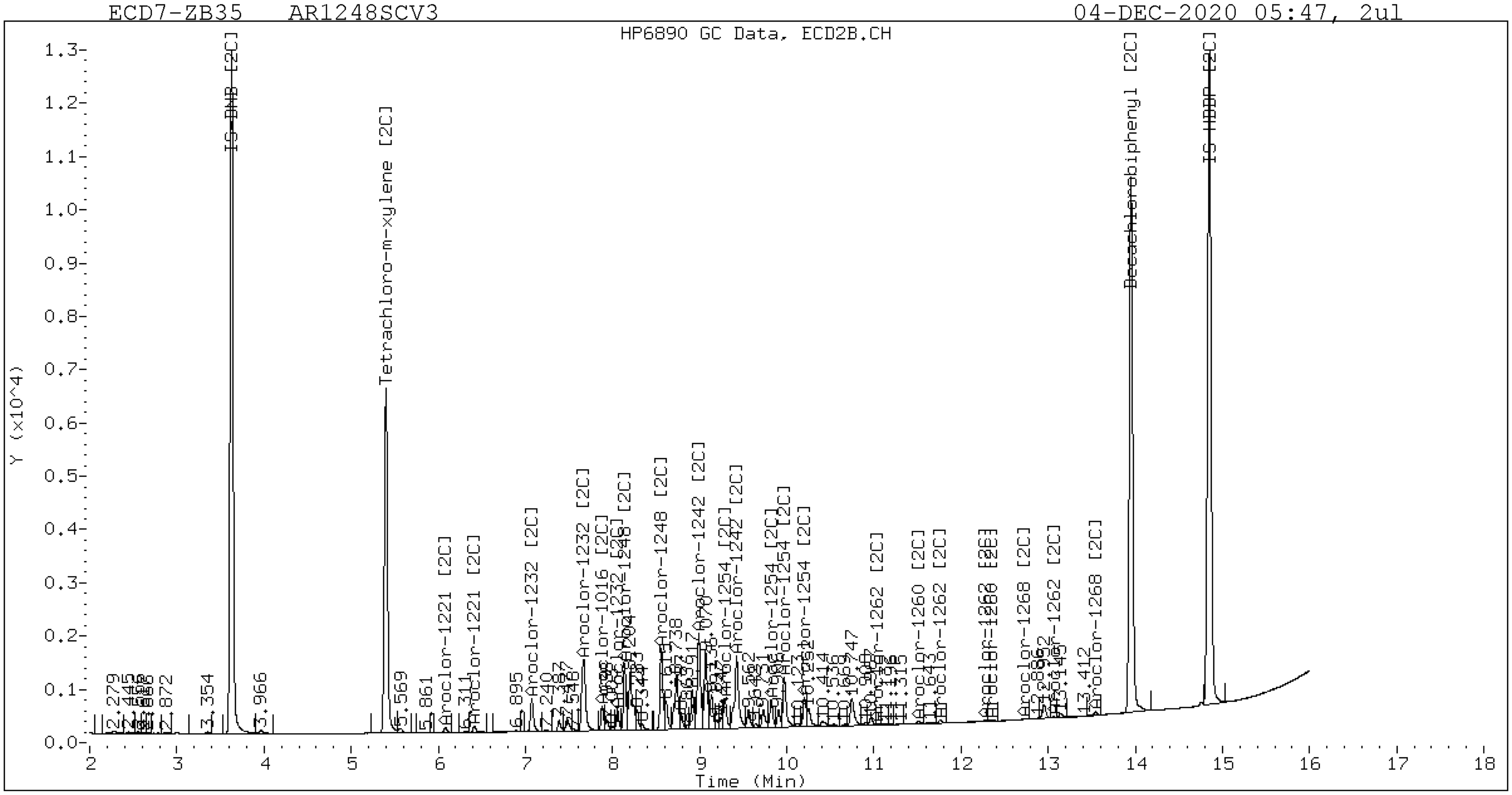
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV3 04-DEC-2020 05:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV3 04-DEC-2020 05:47, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: DL00019
Sequence: SIL0088

SDG: 20K0145
Project: ICS-Former NW Cooperage
Laboratory ID: SIL0088-SCV4
Sequence Name: AR1254SCV4
Standard ID: I005066

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1254	250.00	265	5.9	20.00
Aroclor 1254 [2C]	250.00	250	-0.03	20.00
Decachlorobiphenyl	40.000	41.1	2.8	20.00
Tetrachlorometaxylene	40.000	43.0	7.5	20.00
Decachlorobiphenyl [2C]	40.000	47.2	18.0	20.00
Tetrachlorometaxylene [2C]	40.000	44.8	12.1	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120423ECD7.D
Data file 2: /20201204.b/20201204.b/20120423ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV4
Client ID:
Injection Date: 04-DEC-2020 06:08
Report Date: 12/07/2020 11:54
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.015	-0.002	497179	5.400	-0.002	321312	43.0	44.8	4.2	Tetrachloro-m-xylene
13.210	-0.000	933785	13.951	0.001	530860	41.1	47.2	13.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	107.5	112.1
Decachlorobiphenyl	102.8	118.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	792760	0.8
Hexabromobiphenyl	2132987	2135851	0.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	625033	-1.6
Hexabromobiphenyl	665758	683418	2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.631	0.001	1306	3.3	1	7.075	-0.001	750	2.5
Aroclor-1016	2	6.996	-0.007	6815	5.4	2	7.664	-0.007	2790	4.1
Aroclor-1016	3	7.162	0.010	4028	7.4	3	7.884	0.002	520	2.0
Aroclor-1016	4	7.487	-0.062	73107	246.2	4	8.058	0.002	262	1.7
Total Col1Ave (4 peaks):				65.6		Total Col2Ave (4 peaks):			2.6	RPD = 185*
Corrected Ave (3 peaks):				5.3		Corrected Ave (3 peaks):			2.1	RPD = 89*
Aroclor-1221	1	4.003	0.031	395	3.8	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.085	0.011	3137	36.5
Aroclor-1221	3	5.681	-0.001	1856	5.0	3	6.406	-0.011	842	5.3
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.003	0.030	395	6.3	1	---			0.0
Aroclor-1232	2	6.631	-0.000	1306	8.1	2	7.075	-0.002	750	5.4
Aroclor-1232	3	6.996	-0.006	6815	12.9	3	7.664	-0.008	2790	9.7
Aroclor-1232	4	8.309	-0.000	75318	479.4	4	8.058	0.001	262	4.0
Total Col1Ave (4 peaks):				126.7		Total Col2Ave (3 peaks):			6.4	RPD = 181*
Corrected Ave (3 peaks):				9.1		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.631	-0.000	1306	4.2	1	7.075	-0.001	750	3.2
Aroclor-1242	2	6.996	-0.007	6815	7.2	2	7.664	-0.008	2790	5.1
Aroclor-1242	3	8.309	-0.000	75318	239.2	3	8.993	0.002	35817	165.8
Aroclor-1242	4	8.595	-0.007	51811	151.1	4	9.383	-0.044	51086	240.3
Total Col1Ave (4 peaks):				100.4		Total Col2Ave (4 peaks):			103.6	RPD = 3
Corrected Ave (3 peaks):				54.2		Corrected Ave (3 peaks):			58.0	RPD = 7
Aroclor-1248	1	7.487	0.000	73107	176.8	1	8.140	-0.001	37393	176.4
Aroclor-1248	2	7.956	-0.001	24544	39.1	2	8.562	0.000	23796	85.8
Aroclor-1248	3	8.382	0.017	184505	199.0	3	8.993	0.001	35817	90.7
Aroclor-1248	4	8.595	-0.006	51811	96.7	4	9.383	-0.043	51086	131.9
Total Col1Ave (4 peaks):				127.9		Total Col2Ave (4 peaks):			121.2	RPD = 5
Corrected Ave (3 peaks):				104.2		Corrected Ave (3 peaks):			102.8	RPD = 1
Aroclor-1254	1	8.674	-0.001	233167	248.3	1	9.290	-0.001	112499	252.1
Aroclor-1254	2	8.743	-0.001	127115	249.9	2	9.383	-0.001	51086	247.1
Aroclor-1254	3	9.045	-0.001	208920	334.0	3	9.822	-0.001	74276	251.3
Aroclor-1254	4	9.179	-0.001	314079	243.5	4	9.972	-0.000	171593	246.3
Aroclor-1254	5	9.876	-0.001	212269	248.0	5	10.204	-0.001	182042	253.0
Total Col1Ave (5 peaks):				264.7		Total Col2Ave (5 peaks):			249.9	RPD = 6
Corrected Ave (4 peaks):				247.4		Corrected Ave (4 peaks):			249.2	RPD = 1
Aroclor-1260	1	10.401	-0.004	21923	26.4	1	11.038	-0.005	7916	19.0
Aroclor-1260	2	10.726	-0.000	23351	28.2	2	11.515	0.009	42144	95.8
Aroclor-1260	3	11.076	-0.003	53107	24.7	3	11.761	0.002	26550	23.6
Aroclor-1260	4	11.479	-0.001	47458	43.1	4	12.350	0.001	15700	21.5
Aroclor-1260	5	11.657	0.071	3124	6.5	NS	---			----
Total Col1Ave (5 peaks):				25.8		Total Col2Ave (4 peaks):			40.0	RPD = 43*
Corrected Ave (4 peaks):				21.4		Corrected Ave (3 peaks):			21.3	RPD = 0
Aroclor-1262	1	10.401	-0.004	21923	17.6	1	11.038	-0.006	7916	11.1
Aroclor-1262	2	11.076	-0.001	53107	19.0	2	11.761	0.003	26550	17.0
Aroclor-1262	3	11.657	0.071	3124	4.0	3	12.286	0.011	1391	2.8
Aroclor-1262	4	---			0.0	4	13.066	0.001	907	1.6
Total Col1Ave (3 peaks):				13.5		Total Col2Ave (4 peaks):			8.1	RPD = 50*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			5.2	
Aroclor-1268	1	11.657	0.069	3124	1.1	1	12.286	0.013	1391	0.8
Aroclor-1268	2	---			0.0	2	12.350	0.011	15700	8.8
Aroclor-1268	3	12.035	-0.002	6558	2.7	3	12.733	0.004	1075	0.7
Aroclor-1268	4	12.805	-0.008	19648	2.0	4	13.545	-0.001	2720	0.5
Total Col1Ave (3 peaks):				1.9		Total Col2Ave (4 peaks):			2.7	RPD = 33
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			0.7	

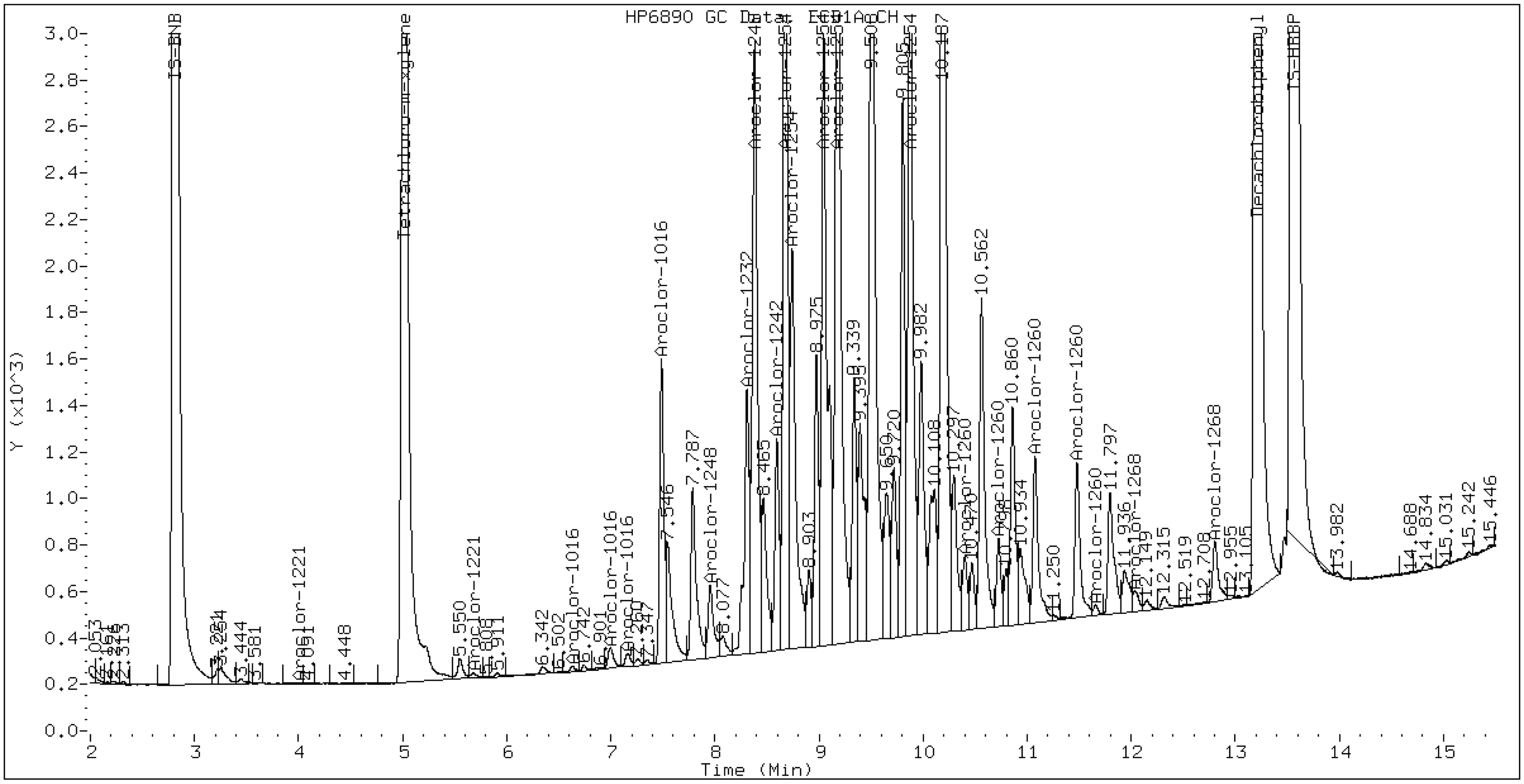
Total PCB Area Col1 (5.118 - 13.110) =	3440587	Col1 Total PCB = 0.3 ppm*
Total PCB Area Col2 (5.118 - 13.110) =	1870129	Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

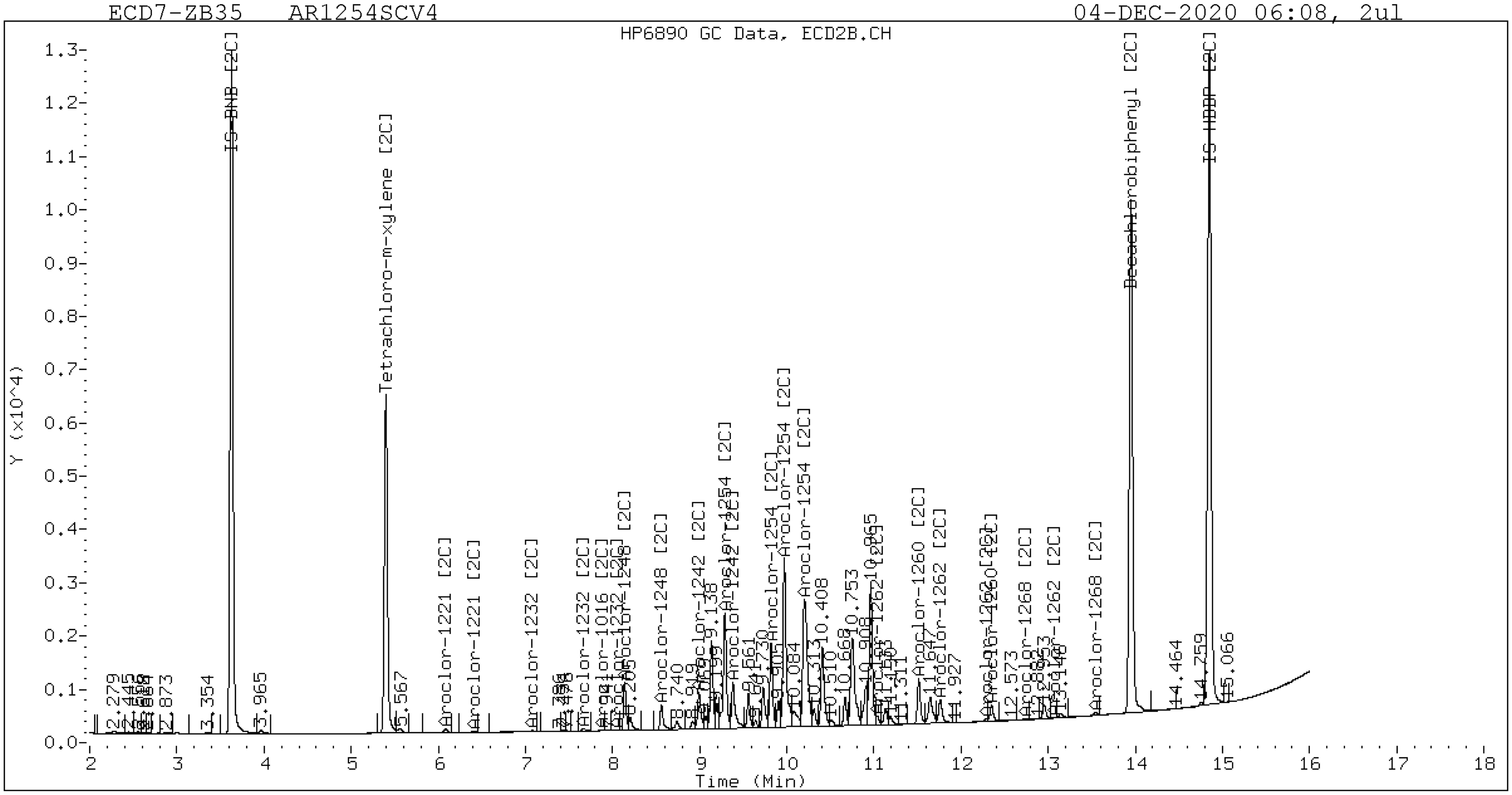
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV4 04-DEC-2020 06:08, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV4 04-DEC-2020 06:08, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Calibration: DL00019

Sequence: SIL0088

SDG: 20K0145

Project: ICS-Former NW Cooperage

Laboratory ID: SIL0088-SCV5

Sequence Name: AR2162SCV5

Standard ID: I005067

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT		QC LIMIT
Aroclor 1221	250.00	253	1.2		20.00
Aroclor 1221 [2C]	250.00	250	0.1		20.00
Aroclor 1262	250.00	280	12.1		20.00
Aroclor 1262 [2C]	250.00	266	6.4		20.00
Decachlorobiphenyl	40.000	42.2	5.6		20.00
Tetrachlorometaxylene	40.000	45.2	12.9		20.00
Decachlorobiphenyl [2C]	40.000	48.8	22.0	*	20.00
Tetrachlorometaxylene [2C]	40.000	46.7	16.8		20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120424ECD7.D
Data file 2: /20201204.b/20201204.b/20120424ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV5
Client ID:
Injection Date: 04-DEC-2020 06:28
Report Date: 12/07/2020 11:54
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.002	500967	5.401	-0.002	328515	45.2	46.7	3.4	Tetrachloro-m-xylene
13.210	-0.001	948706	13.950	-0.001	538054	42.2	48.8	14.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	112.9	116.8
Decachlorobiphenyl	105.6	122.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	760705	-3.3
Hexabromobiphenyl	2132987	2113407	-0.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	613536	-3.5
Hexabromobiphenyl	665758	670231	0.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.630	-0.001	9332	24.4	1	7.086	0.010	12173	40.9
Aroclor-1016	2	7.002	-0.001	27232	22.3	2	7.672	0.001	12687	18.9
Aroclor-1016	3	7.152	-0.001	13232	25.3	3	7.884	0.002	5508	21.6
Aroclor-1016	4	7.487	-0.063	6835	24.0	4	8.058	0.001	3069	20.1
Total Col1Ave (4 peaks):				24.0		Total Col2Ave (4 peaks):			25.4	RPD = 6
Corrected Ave (3 peaks):				23.6		Corrected Ave (3 peaks):			20.2	RPD = 15
Aroclor-1221	1	3.972	0.000	25700	259.9	1	4.668	-0.001	10702	252.3
Aroclor-1221	2	5.405	-0.000	35281	252.1	2	6.074	-0.001	21178	251.2
Aroclor-1221	3	5.682	0.000	88675	247.0	3	6.416	-0.001	38842	247.2
Total Col1Ave (3 peaks):				253.0		Total Col2Ave (3 peaks):			250.3	RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.972	-0.001	25700	430.0	1	4.668	-0.001	10702	407.5
Aroclor-1232	2	6.630	-0.001	9332	60.1	2	7.086	0.009	12173	89.8
Aroclor-1232	3	7.002	0.000	27232	53.7	3	7.672	0.000	12687	44.8
Aroclor-1232	4	8.310	0.002	7334	48.6	4	8.058	0.001	3069	47.6
Total Col1Ave (4 peaks):				148.1		Total Col2Ave (4 peaks):			147.4	RPD = 0
Corrected Ave (3 peaks):				54.1		Corrected Ave (3 peaks):			60.7	RPD = 11
Aroclor-1242	1	6.630	-0.001	9332	31.6	1	7.086	0.010	12173	52.5
Aroclor-1242	2	7.002	-0.001	27232	29.9	2	7.672	-0.000	12687	23.6
Aroclor-1242	3	8.310	0.002	7334	24.3	3	8.994	0.003	3292	15.5
Aroclor-1242	4	8.599	-0.004	6567	20.0	4	9.428	0.001	2788	13.4
Total Col1Ave (4 peaks):				26.4		Total Col2Ave (4 peaks):			26.2	RPD = 1
Corrected Ave (3 peaks):				24.7		Corrected Ave (3 peaks):			17.5	RPD = 34
Aroclor-1248	1	7.487	-0.000	6835	17.2	1	8.141	0.000	2855	13.7
Aroclor-1248	2	7.956	-0.001	6254	10.4	2	8.564	0.002	2760	10.1
Aroclor-1248	3	8.383	0.018	42170	47.4	3	8.994	0.003	3292	8.5
Aroclor-1248	4	8.599	-0.003	6567	12.8	4	9.428	0.002	2788	7.3
Total Col1Ave (4 peaks):				22.0		Total Col2Ave (4 peaks):			9.9	RPD = 75*
Corrected Ave (3 peaks):				13.5		Corrected Ave (3 peaks):			8.7	RPD = 43*
Aroclor-1254	1	8.675	-0.001	49067	54.4	1	9.292	0.001	15668	35.8
Aroclor-1254	2	---			0.0	2	9.385	0.001	1659	8.2
Aroclor-1254	3	9.046	0.000	8681	14.5	3	9.824	0.001	3263	11.2
Aroclor-1254	4	9.166	-0.014	53719	43.4	4	9.992	0.020	74632	109.1
Aroclor-1254	5	9.806	-0.071	271469	330.5	5	10.224	0.019	90774	128.5
Total Col1Ave (4 peaks):				110.7		Total Col2Ave (5 peaks):			58.6	RPD = 62*
Corrected Ave (3 peaks):				37.4		Corrected Ave (4 peaks):			41.1	RPD = 9
Aroclor-1260	1	10.405	0.001	311981	379.6	1	11.043	0.000	176982	432.1
Aroclor-1260	2	10.726	-0.000	256156	312.2	2	11.506	-0.001	146726	340.1
Aroclor-1260	3	11.077	-0.002	651962	306.1	3	11.760	0.001	355912	322.5
Aroclor-1260	4	11.480	-0.000	205051	188.4	4	12.348	-0.001	245935	343.0
Aroclor-1260	5	11.586	0.000	256602	541.4	NS	---			----
Total Col1Ave (5 peaks):				345.5		Total Col2Ave (4 peaks):			359.4	RPD = 4
Corrected Ave (4 peaks):				296.6		Corrected Ave (3 peaks):			335.2	RPD = 12
Aroclor-1262	1	10.405	0.000	311981	253.1	1	11.043	-0.000	176982	254.1
Aroclor-1262	2	11.077	-0.000	651962	235.2	2	11.760	0.001	355912	232.5
Aroclor-1262	3	11.586	0.000	256602	333.6	3	12.274	-0.001	159148	323.7
Aroclor-1262	4	11.657	-0.000	301603	299.1	4	13.067	0.001	141336	253.8
Total Col1Ave (4 peaks):				280.2		Total Col2Ave (4 peaks):			266.0	RPD = 5
Corrected Ave (3 peaks):				262.5		Corrected Ave (3 peaks):			246.8	RPD = 6
Aroclor-1268	1	11.586	-0.002	256602	91.3	1	12.274	0.001	159148	98.9
Aroclor-1268	2	11.657	0.000	301603	99.9	2	12.348	0.008	245935	139.9
Aroclor-1268	3	12.060	0.023	116958	48.3	3	12.729	-0.000	9225	6.3
Aroclor-1268	4	12.806	-0.006	110966	11.6	4	13.545	-0.001	44848	9.2
Total Col1Ave (4 peaks):				62.8		Total Col2Ave (4 peaks):			63.6	RPD = 1

Corrected Ave (3 peaks): 50.4 Corrected Ave (3 peaks): 38.1 RPD = 28

Total PCB Area Col1 (5.118 - 13.110) = 4837083 Col1 Total PCB = 0.4 ppm*

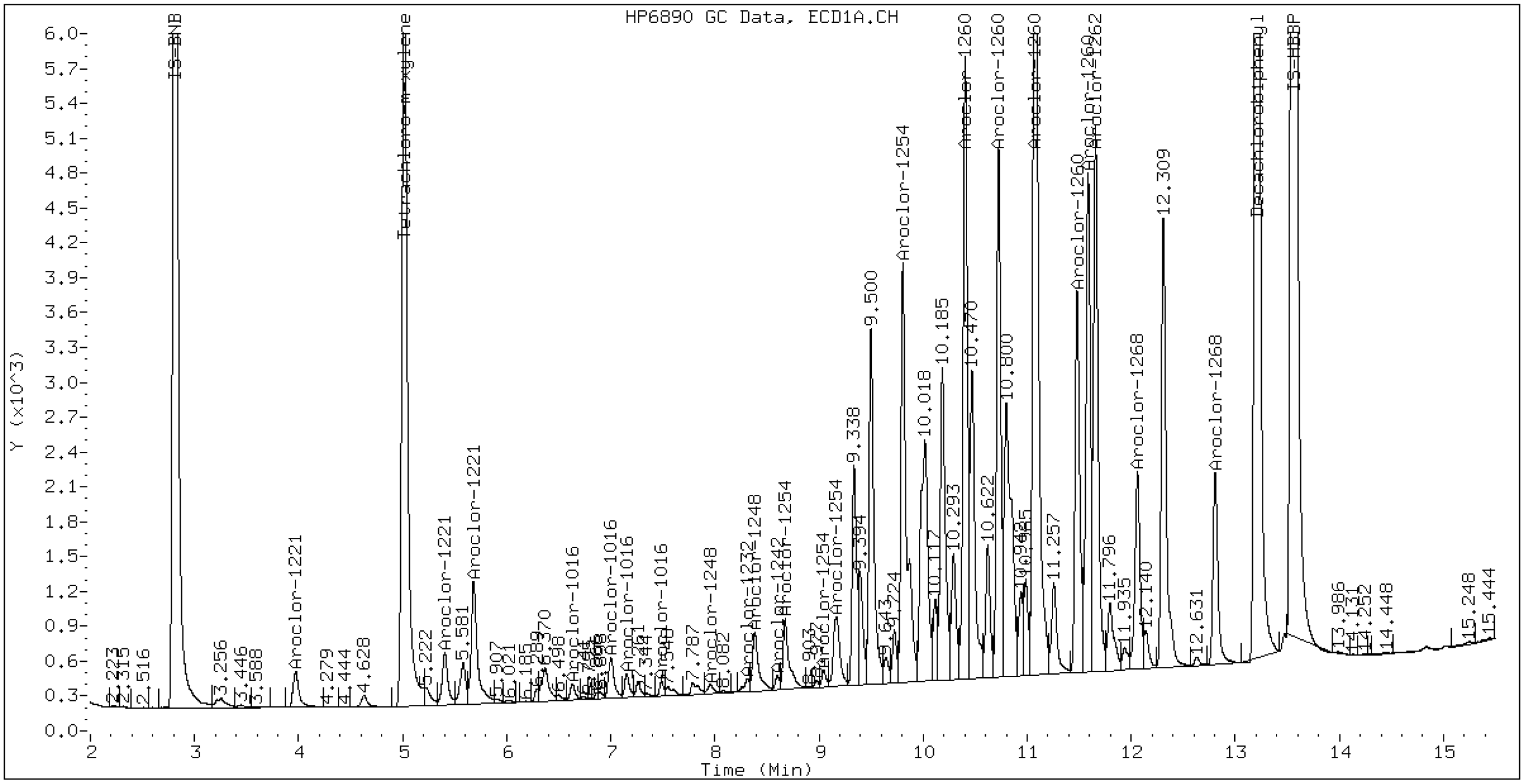
Total PCB Area Col2 (5.118 - 13.110) = 2627283 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

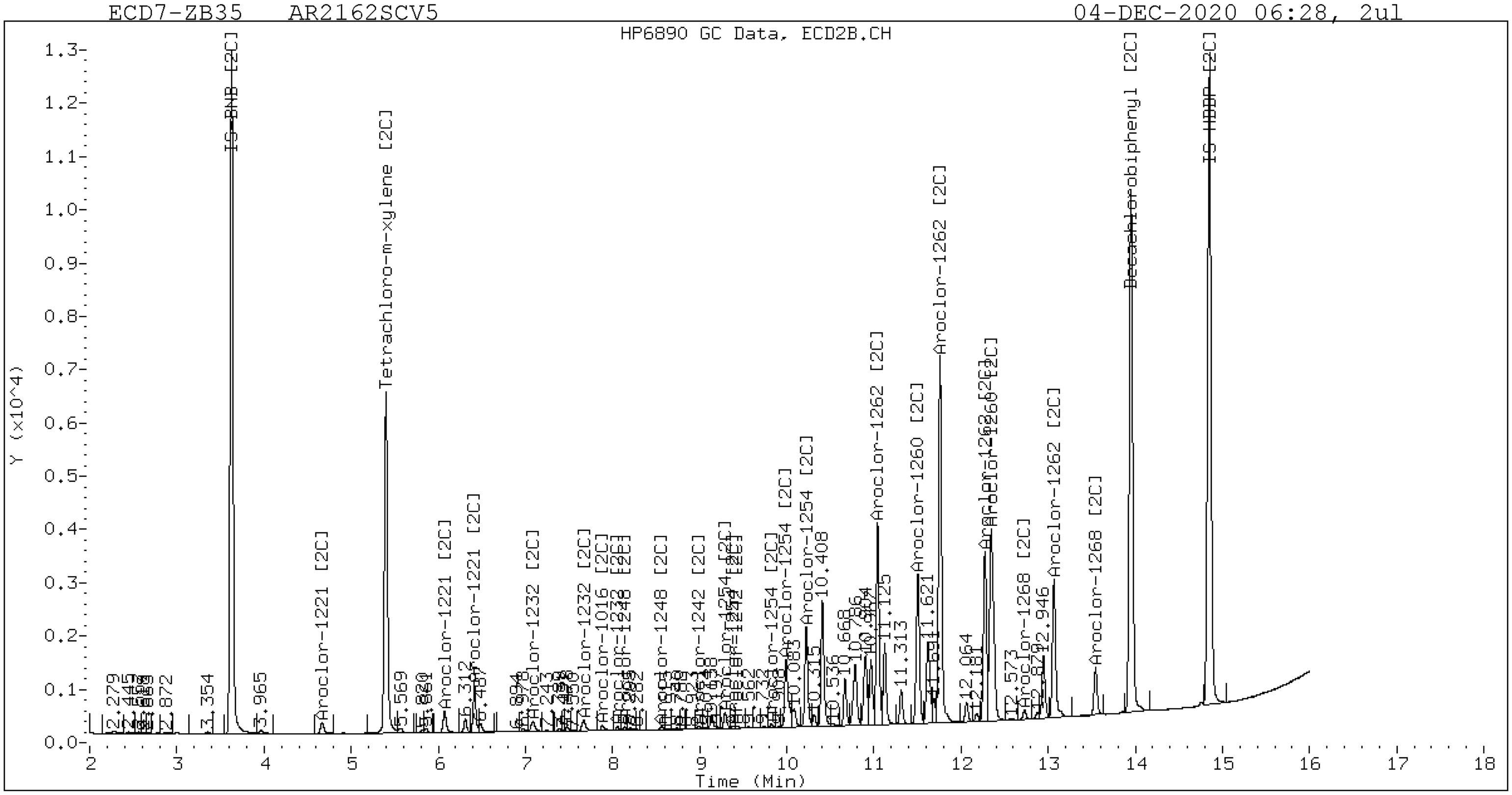
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV5 04-DEC-2020 06:28, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV5 04-DEC-2020 06:28, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: DL00019
Sequence: SIL0088

SDG: 20K0145
Project: ICS-Former NW Cooperage
Laboratory ID: SIL0088-SCV6
Sequence Name: AR3268SCV6
Standard ID: I005068

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1232	250.00	293	17.1	20.00
Aroclor 1232 [2C]	250.00	254	1.6	20.00
Aroclor 1268	250.00	246	-1.5	20.00
Aroclor 1268 [2C]	250.00	246	-1.6	20.00
Decachlorobiphenyl	40.000	61.5	53.8	20.00
Tetrachlorometaxylene	40.000	45.5	13.8	20.00
Decachlorobiphenyl [2C]	40.000	69.8	74.4	20.00
Tetrachlorometaxylene [2C]	40.000	45.9	14.8	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201204.b/20120425ECD7.D
Data file 2: /20201204.b/20201204.b/20120425ECD7.D
Method: \\target\share\chem4\ecd7.i\20201204.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV6
Client ID:
Injection Date: 04-DEC-2020 06:49
Report Date: 12/07/2020 11:54
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	-0.002	511511	5.400	-0.002	326478	45.5	45.9	0.8	Tetrachloro-m-xylene
13.210	0.000	1402408	13.950	-0.001	786093	61.5	69.8	12.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	113.8	114.8
Decachlorobiphenyl	153.8	174.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	770524	-2.1
Hexabromobiphenyl	2132987	2144827	0.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	620502	-2.4
Hexabromobiphenyl	665758	684700	2.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

```
                          ZB5 Col                              ZB35 Col
 Aroclor   Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
 ==========================================================================================
 Aroclor-1016 1   6.630  -0.000     44327   114.3      1    7.076  -0.000    35634   118.4
 Aroclor-1016 2   7.001  -0.002    133389   108.0      2    7.672   0.000    74142   109.1
 Aroclor-1016 3   7.152  -0.000     58697   110.6      3    7.883   0.001    27953   108.6
 Aroclor-1016 4   7.486  -0.063     32819   113.7      4    8.057   0.001    17125   111.0
       Total Col1Ave (4 peaks):   111.6       Total Col2Ave (4 peaks):   111.8   RPD = 0
       Corrected Ave (3 peaks):   110.8       Corrected Ave (3 peaks):   109.6   RPD = 1

 Aroclor-1221 1   3.971  -0.001     15217   151.9      1    4.667  -0.002     6225   145.1
 Aroclor-1221 2   5.404  -0.001     23065   162.7      2    6.075   0.000    14194   166.5
 Aroclor-1221 3   5.682  -0.000     70892   195.0      3    6.416  -0.001    31775   200.0
       Total Col1Ave (3 peaks):   169.9       Total Col2Ave (3 peaks):   170.5   RPD = 0
       Corrected Ave: < 3 Peaks                      Corrected Ave: < 3 Peaks

 Aroclor-1232 1   3.971  -0.002     15217   251.4      1    4.667  -0.002     6225   234.4
 Aroclor-1232 2   6.630  -0.001     44327   281.8      2    7.076  -0.001    35634   259.9
 Aroclor-1232 3   7.001  -0.001    133389   259.5      3    7.672  -0.000    74142   259.0
 Aroclor-1232 4   8.308  -0.000     57707   377.9      4    8.057   0.000    17125   262.5
       Total Col1Ave (4 peaks):   292.6       Total Col2Ave (4 peaks):   254.0   RPD = 14
       Corrected Ave (3 peaks):   264.2       Corrected Ave (3 peaks):   251.1   RPD = 5

 Aroclor-1242 1   6.630  -0.001     44327   148.3      1    7.076  -0.001    35634   151.9
 Aroclor-1242 2   7.001  -0.002    133389   144.7      2    7.672  -0.001    74142   136.5
 Aroclor-1242 3   8.308  -0.000     57707   188.5      3    8.992   0.001    25997   121.2
 Aroclor-1242 4   8.603  -0.000     41786   125.4      4    9.428   0.001    25272   119.7
       Total Col1Ave (4 peaks):   151.7       Total Col2Ave (4 peaks):   132.3   RPD = 14
       Corrected Ave (3 peaks):   139.5       Corrected Ave (3 peaks):   125.8   RPD = 10

 Aroclor-1248 1   7.486  -0.001     32819    81.7      1    8.140  -0.000    14105    67.0
 Aroclor-1248 2   7.956   0.000     53707    88.1      2    8.562   0.001    21319    77.4
 Aroclor-1248 3   8.364  -0.002     83942    93.2      3    8.992   0.000    25997    66.3
 Aroclor-1248 4   8.603   0.001     41786    80.2      4    9.428   0.002    25272    65.7
       Total Col1Ave (4 peaks):    85.8       Total Col2Ave (4 peaks):    69.1   RPD = 22
       Corrected Ave (3 peaks):    83.3       Corrected Ave (3 peaks):    66.4   RPD = 23

 Aroclor-1254 1   8.674  -0.002     23763    26.0      1    9.291   0.000     6551    14.8
 Aroclor-1254 2   8.742  -0.001     15107    30.6      2    9.428   0.044    25272   123.1
 Aroclor-1254 3   9.045  -0.000      9408    15.5      3    9.822  -0.000     3580    12.2
 Aroclor-1254 4   9.181   0.001     18138    14.5      4    9.975   0.003     8171    11.8
 Aroclor-1254 5   9.880   0.003     10355    12.4      5   10.210   0.005     7387    10.3
       Total Col1Ave (5 peaks):    19.8       Total Col2Ave (5 peaks):    34.5   RPD = 54*
       Corrected Ave (4 peaks):    17.1       Corrected Ave (4 peaks):    12.3   RPD = 33

 Aroclor-1260 1  10.406   0.001    141643   169.8      1   11.044   0.001    61084   146.0
 Aroclor-1260 2  10.726  -0.000     10799    13.0      2   11.487  -0.020    85617   194.2
 Aroclor-1260 3  11.077  -0.003     85817    39.7      3   11.759  -0.000    37085    32.9
 Aroclor-1260 4  11.481   0.000      2895     2.6      4   12.340  -0.009   438765   598.9
 Aroclor-1260 5  11.588   0.002    702643  1460.8      NS    ---                      ----
       Total Col1Ave (5 peaks):   337.2       Total Col2Ave (4 peaks):   243.0   RPD = 32
       Corrected Ave (4 peaks):    56.3       Corrected Ave (3 peaks):   124.4   RPD = 75*

 Aroclor-1262 1  10.406   0.001    141643   113.2      1   11.044   0.001    61084    85.8
 Aroclor-1262 2  11.077  -0.001     85817    30.5      2   11.759   0.000    37085    23.7
 Aroclor-1262 3  11.588   0.002    702643   900.0      3   12.273  -0.003   405151   806.6
 Aroclor-1262 4  11.657  -0.000    749121   732.0      4   13.065  -0.000   143614   252.5
       Total Col1Ave (4 peaks):   443.9       Total Col2Ave (4 peaks):   292.1   RPD = 41*
       Corrected Ave (3 peaks):   291.9       Corrected Ave (3 peaks):   120.7   RPD = 83*

 Aroclor-1268 1  11.588  -0.000    702643   246.4      1   12.273  -0.000   405151   246.4
 Aroclor-1268 2  11.657  -0.000    749121   244.6      2   12.340   0.000   438765   244.4
 Aroclor-1268 3  12.037  -0.001    604557   246.0      3   12.729   0.000   371169   246.5
 Aroclor-1268 4  12.812  -0.000   2402545   248.0      4   13.545  -0.001  1232367   246.5
       Total Col1Ave (4 peaks):   246.2       Total Col2Ave (4 peaks):   245.9   RPD = 0
```

Corrected Ave (3 peaks): 245.6 Corrected Ave (3 peaks): 245.7 RPD = 0

Total PCB Area Col1 (5.118 - 13.110) = 6593528 Col1 Total PCB = 0.6 ppm*

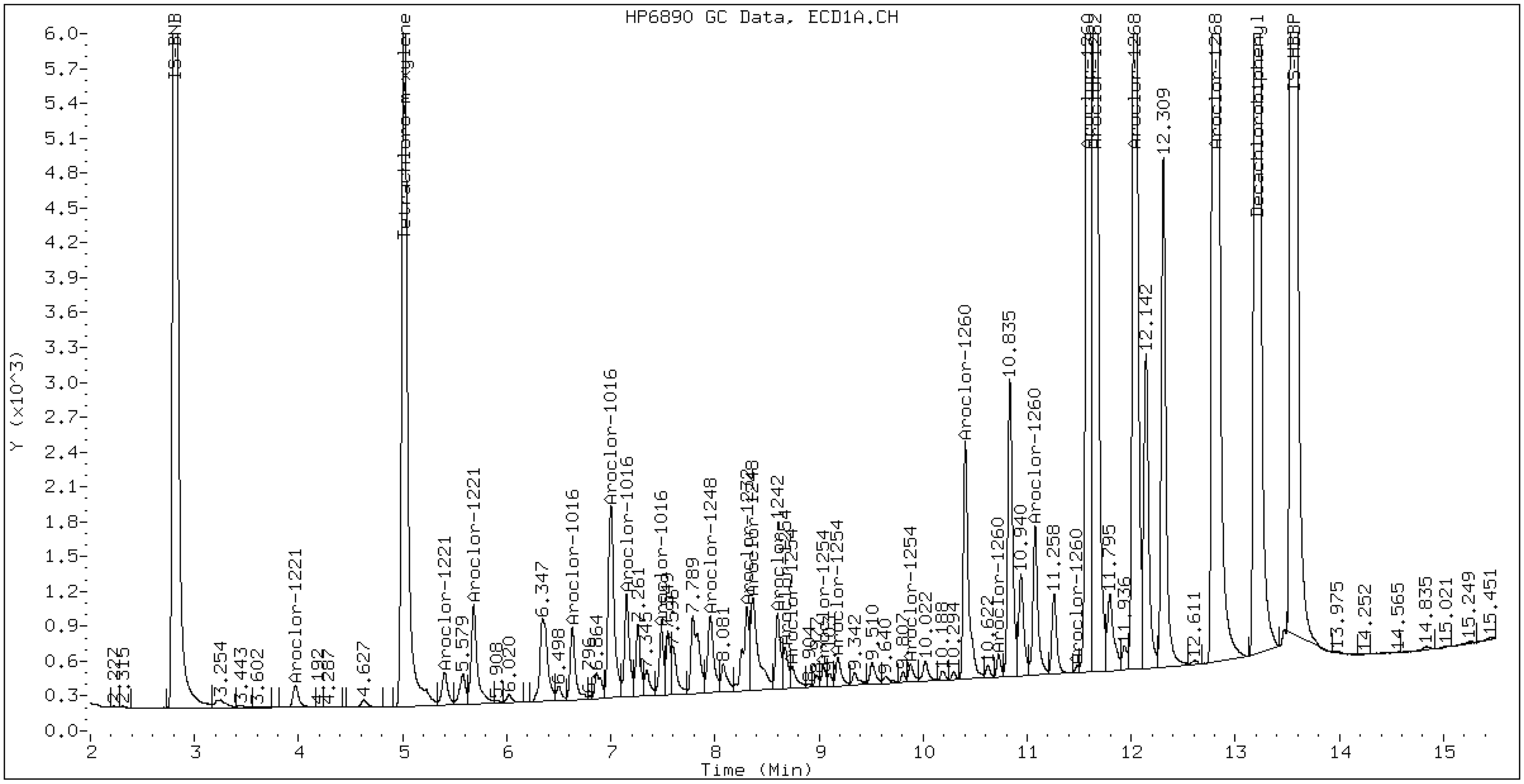
Total PCB Area Col2 (5.118 - 13.110) = 2531175 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

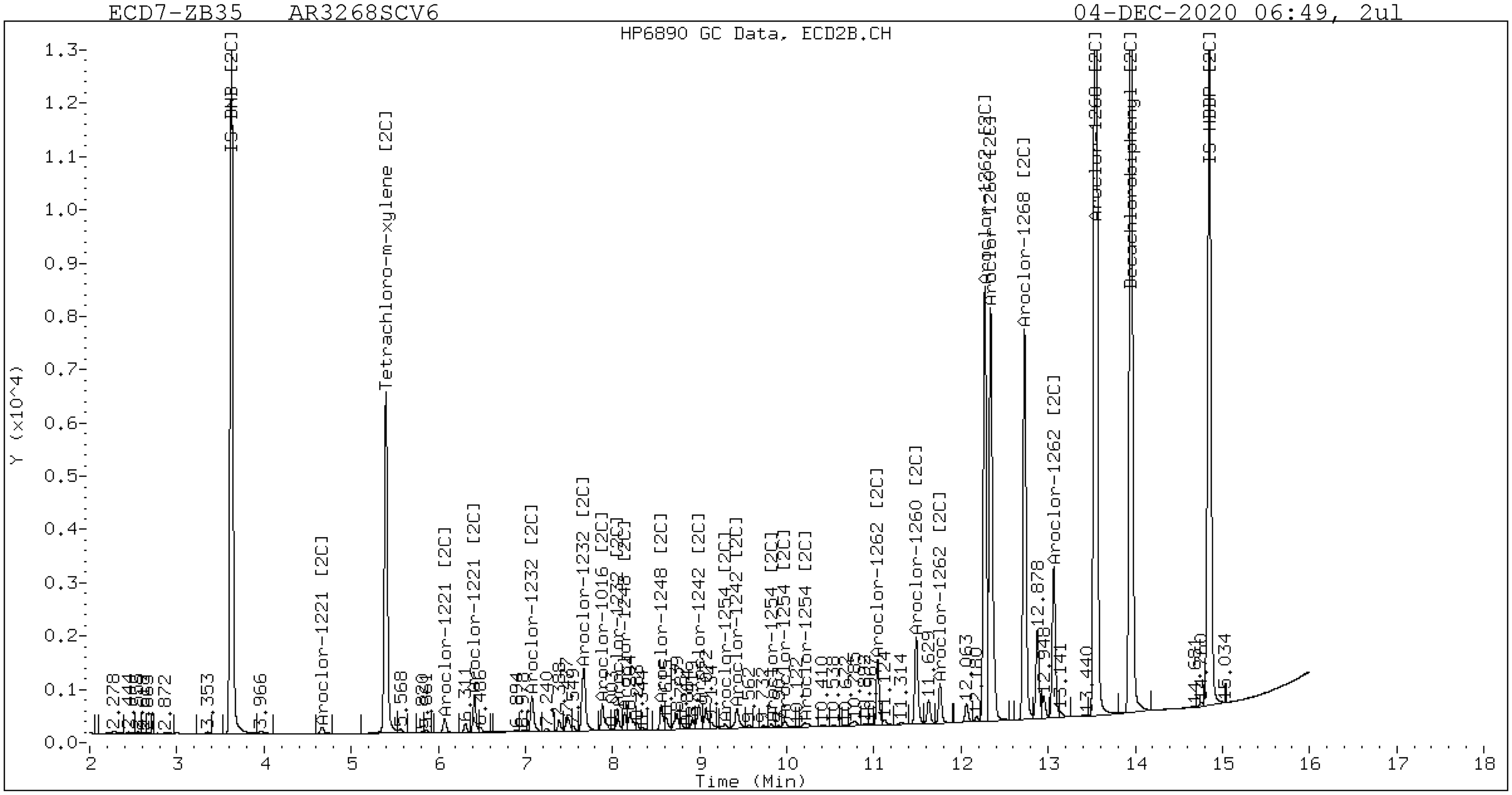
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV6 04-DEC-2020 06:49, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV6 04-DEC-2020 06:49, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120703ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0131	Injection Date:	12/07/20
Lab Sample ID:	SIL0131-ICV1	Injection Time:	08:26
Sequence Name:	AR1254ICV1		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	258	0.0851540	0.0880527		3.1	+/-20
Aroclor 1254 [2C]	A	250.00	262	0.0605432	0.0632949		4.6	+/-20
Decachlorobiphenyl	A	40.000	36.3	0.8503828	0.7713845		-9.3	+/-20
Tetrachlorometaxylene	A	40.000	41.2	1.1663830	1.2010120		3.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.7	1.3164080	1.3715220		4.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	43.8	0.9170028	1.0047400		9.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120703ECD7.D
Data file 2: /20201207.b/20201207.b/20120703ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 07-DEC-2020 08:26
Report Date: 12/09/2020 14:06
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.016	0.002	501703	5.400	0.000	315939	41.2	43.8	6.2	Tetrachloro-m-xylene
13.206	0.001	949265	13.947	0.000	505480	36.3	41.7	13.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.0	109.6
Decachlorobiphenyl	90.7	104.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	835467	6.2
Hexabromobiphenyl	2132987	2461198	15.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	628897	-1.0
Hexabromobiphenyl	665758	737108	10.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.673	0.000	266318	269.1	1	9.288	0.000	118015	262.8
Aroclor-1254	2	8.742	0.000	131999	246.2	2	9.381	0.000	54757	263.3
Aroclor-1254	3	9.043	0.000	169529	257.2	3	9.819	0.000	77213	259.6
Aroclor-1254	4	9.178	0.000	342575	252.0	4	9.970	0.000	179282	255.7
Aroclor-1254	5	9.874	0.000	239034	265.0	5	10.201	0.000	192701	266.1

Total Col1Ave (5 peaks): 257.9 Total Col2Ave (5 peaks): 261.5 RPD = 1
Corrected Ave (4 peaks): 255.1 Corrected Ave (4 peaks): 260.3 RPD = 2

CalAmt %D: 3.2 CalAmt %D: 4.6

Total PCB Area Col1 (5.114 - 13.105) = 3807536 Col1 Total PCB = 0.3 ppm*

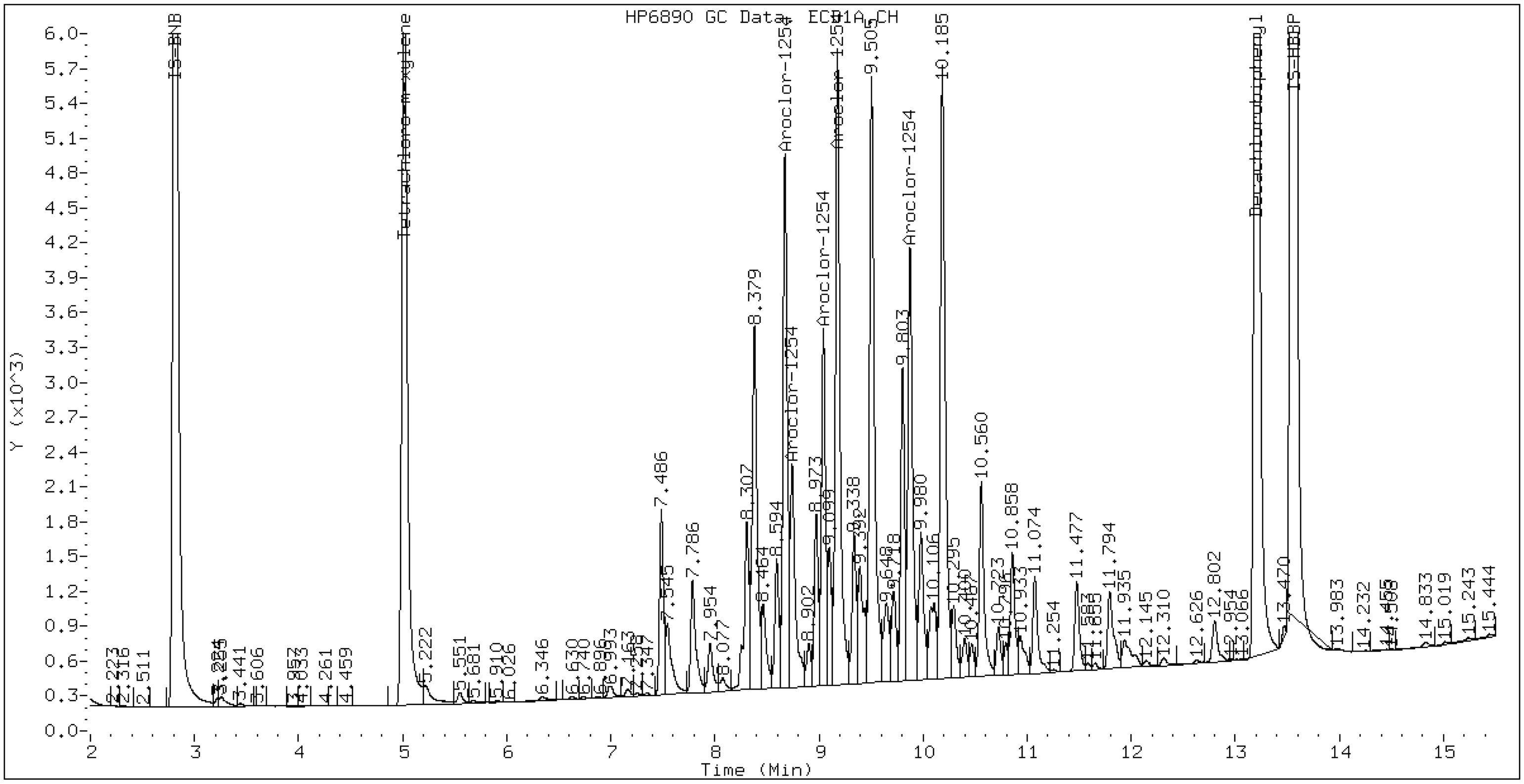
Total PCB Area Col2 (5.114 - 13.105) = 1936382 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

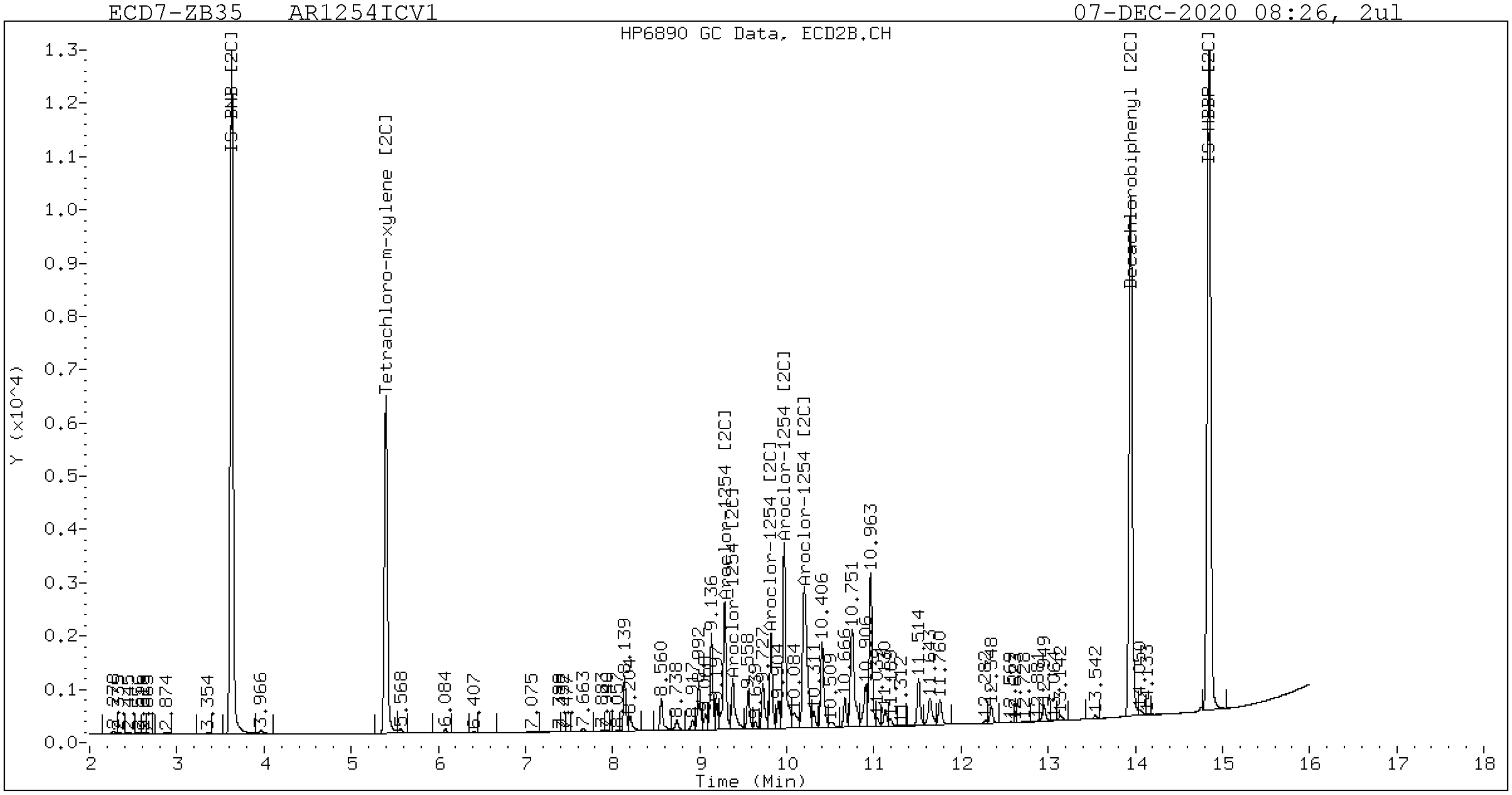
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 07-DEC-2020 08:26, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 07-DEC-2020 08:26, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8082A

Laboratory: Analytical Resources, Inc.

SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Instrument ID: ECD7

Calibration: DL00019

Lab File ID: 20120704ECD7.D

Calibration Date: 12/04/2020

Sequence: SIL0131

Injection Date: 12/07/20

Lab Sample ID: SIL0131-ICV2

Injection Time: 08:47

Sequence Name: AR1660ICV2

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1016	A	250.00	247	0.0634001	0.0623994		-1.4	+/-20
Aroclor 1016 [2C]	A	250.00	263	0.0448734	0.0469814		5.2	+/-20
Aroclor 1260	A	250.00	229	0.0403882	0.0374916		-8.2	+/-20
Aroclor 1260 [2C]	A	250.00	230	0.0794282	0.0727301		-8.2	+/-20
Decachlorobiphenyl	A	40.000	35.6	0.8503828	0.7571784		-11.0	+/-20
Tetrachlorometaxylene	A	40.000	40.9	1.1663830	1.1940020		2.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.6	1.3164080	1.3047400		-1.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.9	0.9170028	0.9838412		7.3	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120704ECD7.D
Data file 2: /20201207.b/20201207.b/20120704ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 07-DEC-2020 08:47
Report Date: 12/09/2020 14:06
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	-0.000	467253	5.400	0.000	294079	40.9	42.9	4.7	Tetrachloro-m-xylene
13.206	0.001	888305	13.948	0.001	466616	35.6	39.6	10.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	102.4	107.3
Decachlorobiphenyl	89.0	99.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	782667	-0.5
Hexabromobiphenyl	2132987	2346356	10.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	597818	-5.9
Hexabromobiphenyl	665758	715263	7.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.628	0.001	98191	249.3	1	7.074	0.000	75810	261.4
Aroclor-1016	2	7.000	0.000	308050	245.5	2	7.670	0.000	170212	260.0
Aroclor-1016	3	7.150	0.001	131891	244.7	3	7.881	0.000	65052	262.3
Aroclor-1016	4	7.547	0.001	72342	246.8	4	8.055	0.000	40005	269.0
	Total Col1Ave (4 peaks):			246.5		Total Col2Ave (4 peaks):		263.2	RPD = 7	
	Corrected Ave (3 peaks):			245.6		Corrected Ave (3 peaks):		261.2	RPD = 6	
	CalAmt %D:			-1.4		CalAmt %D:		5.3		
Aroclor-1260	1	10.402	0.001	195608	214.4	1	11.041	0.000	95258	217.9
Aroclor-1260	2	10.723	0.002	210806	231.4	2	11.505	0.001	112279	243.8
Aroclor-1260	3	11.074	0.001	562661	237.9	3	11.757	0.002	266844	226.6
Aroclor-1260	4	11.477	0.001	285925	236.6	4	12.346	0.001	175883	229.8
Aroclor-1260	5	11.583	0.001	119510	227.1	NS	---			----
	Total Col1Ave (5 peaks):			229.5		Total Col2Ave (4 peaks):		229.5	RPD = 0	
	Corrected Ave (4 peaks):			227.4		Corrected Ave (3 peaks):		224.8	RPD = 1	
	CalAmt %D:			-8.2		CalAmt %D:		-8.2		

Total PCB Area Col1 (5.114 - 13.105) = 6060899 Col1 Total PCB = 0.5 ppm*

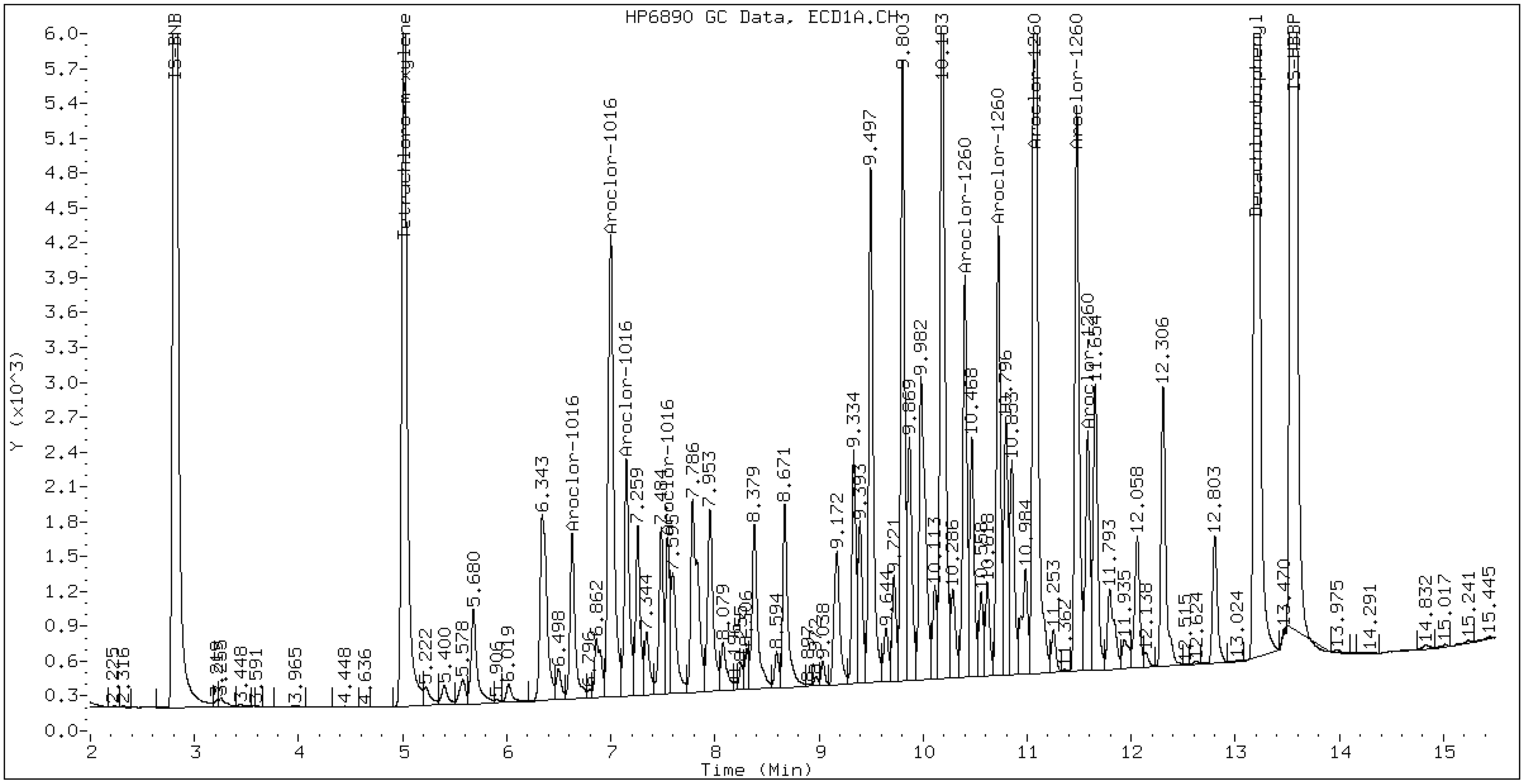
Total PCB Area Col2 (5.114 - 13.105) = 2965700 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

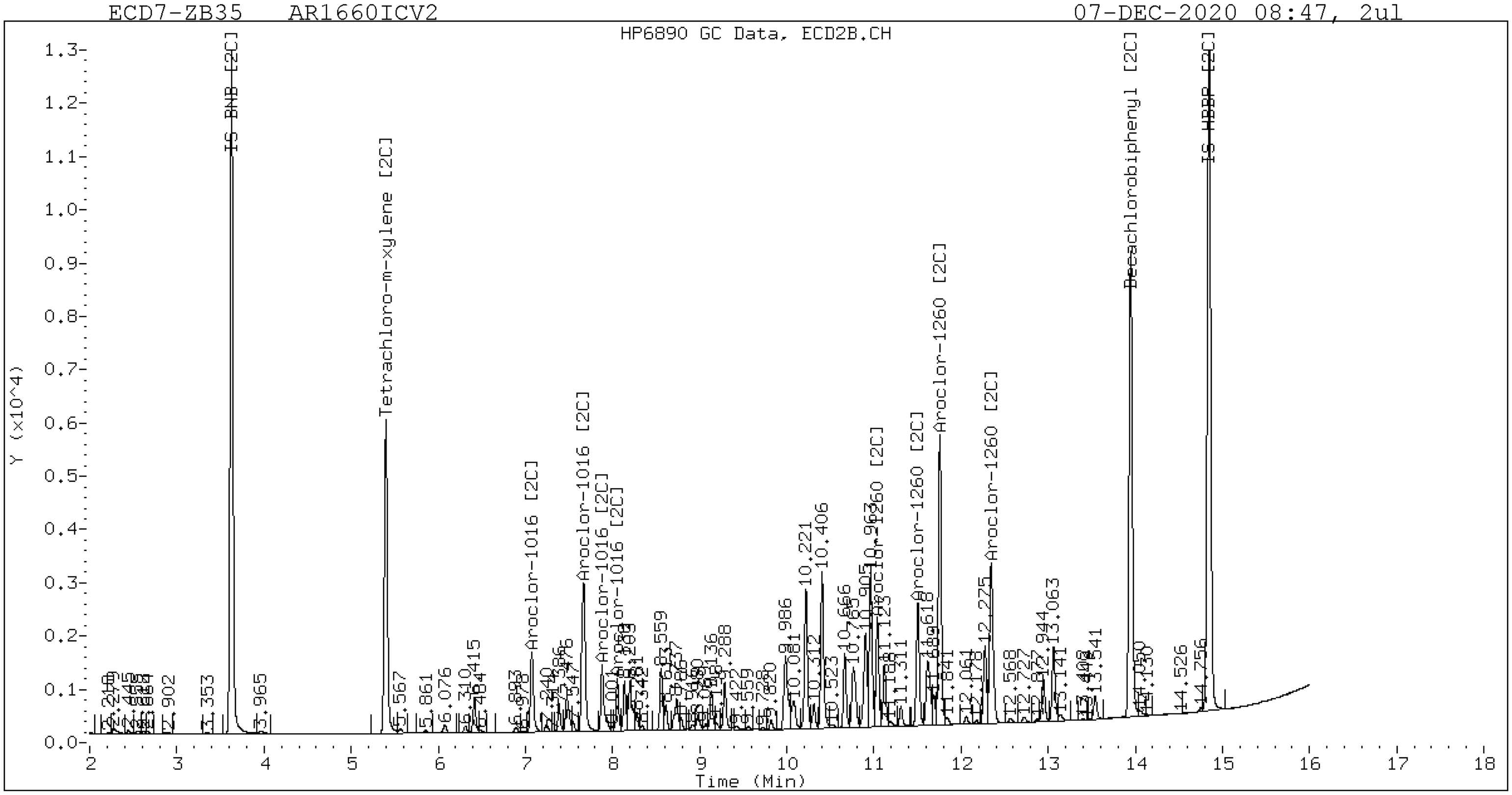
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 07-DEC-2020 08:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 07-DEC-2020 08:47, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ECD7
Calibration: DL00019
Lab File ID: 20120802ECD7.D
Calibration Date: 12/04/2020
Sequence: SIL0191
Injection Date: 12/08/20
Lab Sample ID: SIL0191-ICV1
Injection Time: 20:29
Sequence Name: AR1254ICV1

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	269	0.0851540	0.0925220		7.6	+/-20
Aroclor 1254 [2C]	A	250.00	271	0.0605432	0.0654444		8.4	+/-20
Decachlorobiphenyl	A	40.000	37.3	0.8503828	0.7928791		-6.8	+/-20
Tetrachlorometaxylene	A	40.000	45.0	1.1663830	1.3129		12.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.7	1.3164080	1.4386550		9.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	45.7	0.9170028	1.0468740		14.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120802ECD7.D
Data file 2: /20201208.b/20201208.b/20120802ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 08-DEC-2020 20:29
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	-0.000	499321	5.396	-0.003	301563	45.0	45.7	1.4	Tetrachloro-m-xylene
13.205	0.001	914751	13.945	-0.001	458316	37.3	43.7	15.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	112.6	114.2
Decachlorobiphenyl	93.2	109.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	760638	-3.3
Hexabromobiphenyl	2132987	2307416	8.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	576121	-9.3
Hexabromobiphenyl	665758	637145	-4.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	8.671	0.000	262114	290.9	1	9.285	0.000	113496	275.9
Aroclor-1254	2	8.740	0.000	130773	267.9	2	9.378	0.000	54275	284.8
Aroclor-1254	3	9.039	0.000	139568	232.6	3	9.817	0.000	69610	255.5
Aroclor-1254	4	9.175	0.000	332150	268.4	4	9.967	0.000	168229	261.9
Aroclor-1254	5	9.872	0.000	235016	286.2	5	10.197	0.000	183513	276.7

Total Col1Ave (5 peaks): 269.2 Total Col2Ave (5 peaks): 271.0 RPD = 1
Corrected Ave (4 peaks): 263.8 Corrected Ave (4 peaks): 267.5 RPD = 1

CalAmt %D: 7.7 CalAmt %D: 8.4

Total PCB Area Col1 (5.114 - 13.105) = 3728581 Col1 Total PCB = 0.3 ppm*

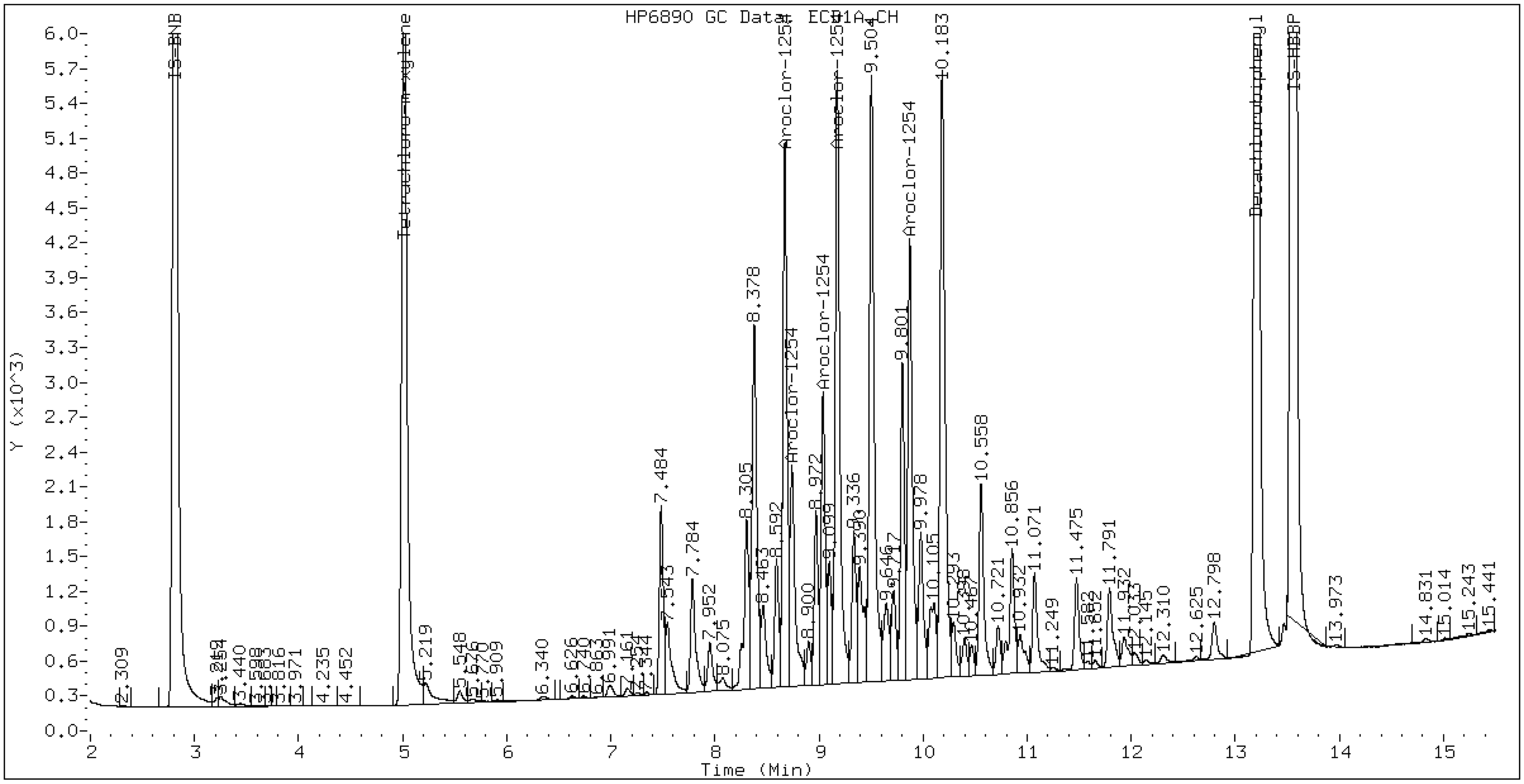
Total PCB Area Col2 (5.114 - 13.105) = 1839670 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

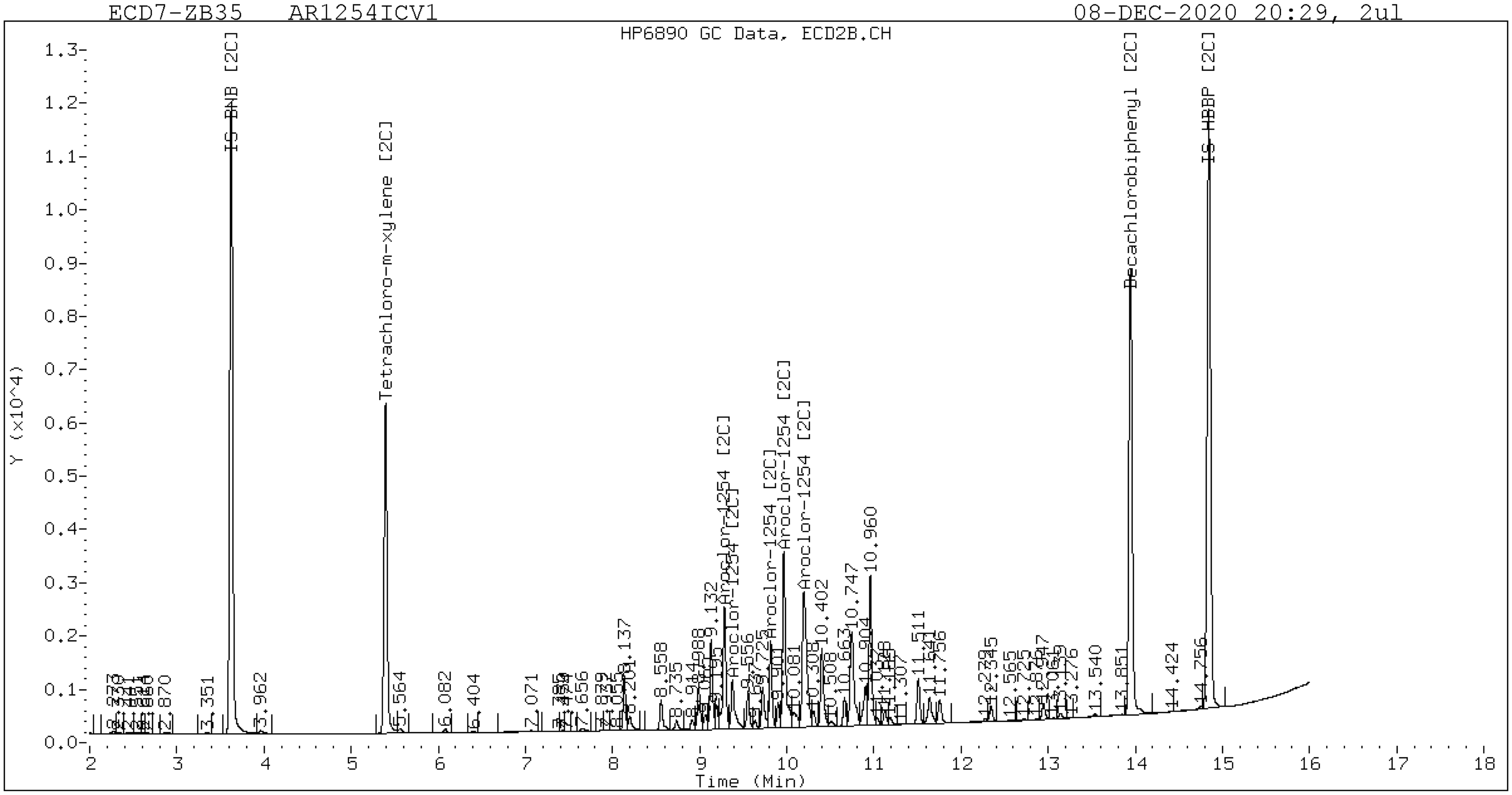
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 08-DEC-2020 20:29, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 08-DEC-2020 20:29, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120803ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0191	Injection Date:	12/08/20
Lab Sample ID:	SIL0191-ICV2	Injection Time:	20:49
Sequence Name:	AR1660ICV2		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1016	A	250.00	258	0.0634001	0.0666016		3.0	+/-20
Aroclor 1016 [2C]	A	250.00	273	0.0448734	0.0479871		9.1	+/-20
Aroclor 1260	A	250.00	244	0.0403882	0.0399528		-2.4	+/-20
Aroclor 1260 [2C]	A	250.00	236	0.0794282	0.0746025		-5.5	+/-20
Decachlorobiphenyl	A	40.000	37.6	0.8503828	0.8000993		-6.0	+/-20
Tetrachlorometaxylene	A	40.000	43.0	1.1663830	1.2552960		7.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.3	1.3164080	1.3579210		3.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.7	0.9170028	1.0252110		11.8	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120803ECD7.D
Data file 2: /20201208.b/20201208.b/20120803ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 08-DEC-2020 20:49
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.012	-0.002	441725	5.396	-0.003	277027	43.0	44.7	3.8	Tetrachloro-m-xylene
13.204	-0.000	855731	13.946	-0.000	416137	37.6	41.3	9.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	107.6	111.8
Decachlorobiphenyl	94.1	103.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	703778	-10.5
Hexabromobiphenyl	2132987	2139062	0.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	540429	-15.0
Hexabromobiphenyl	665758	612903	-7.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.626	-0.002	95595	269.9	1	7.072	-0.002	72359	276.0
Aroclor-1016	2	6.998	-0.002	302428	268.0	2	7.668	-0.002	151724	256.4
Aroclor-1016	3	7.148	-0.001	127429	262.9	3	7.878	-0.002	62016	276.6
Aroclor-1016	4	7.542	-0.002	60457	229.4	4	8.053	-0.002	38071	283.2
	Total Col1Ave (4 peaks):			257.5		Total Col2Ave (4 peaks):		273.1	RPD = 6	
	Corrected Ave (3 peaks):			253.4		Corrected Ave (3 peaks):		269.7	RPD = 6	
	CalAmt %D:			3.0		CalAmt %D:		9.2		
Aroclor-1260	1	10.398	-0.001	179634	216.0	1	11.038	-0.002	81049	216.4
Aroclor-1260	2	10.720	-0.001	207158	249.4	2	11.503	-0.001	104384	264.6
Aroclor-1260	3	11.071	-0.001	549568	254.9	3	11.754	-0.001	231388	229.3
Aroclor-1260	4	11.474	-0.001	281946	256.0	4	12.343	0.000	154730	236.0
Aroclor-1260	5	11.580	-0.001	117031	244.0	NS	---			----
	Total Col1Ave (5 peaks):			244.0		Total Col2Ave (4 peaks):		236.5	RPD = 3	
	Corrected Ave (4 peaks):			241.1		Corrected Ave (3 peaks):		227.2	RPD = 6	
	CalAmt %D:			-2.4		CalAmt %D:		-5.4		

Total PCB Area Col1 (5.114 - 13.105) = 5916115 Col1 Total PCB = 0.6 ppm*

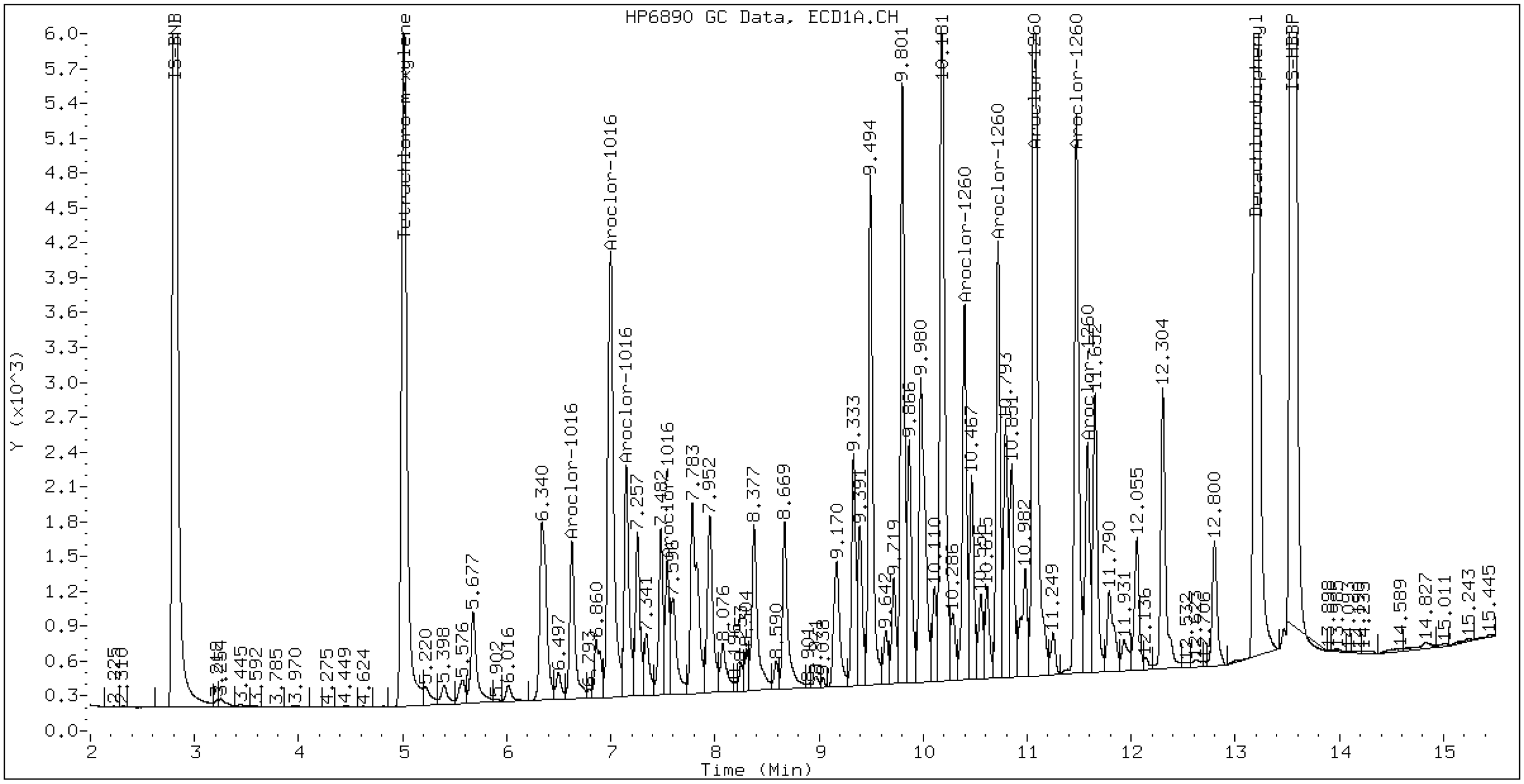
Total PCB Area Col2 (5.114 - 13.105) = 2704983 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

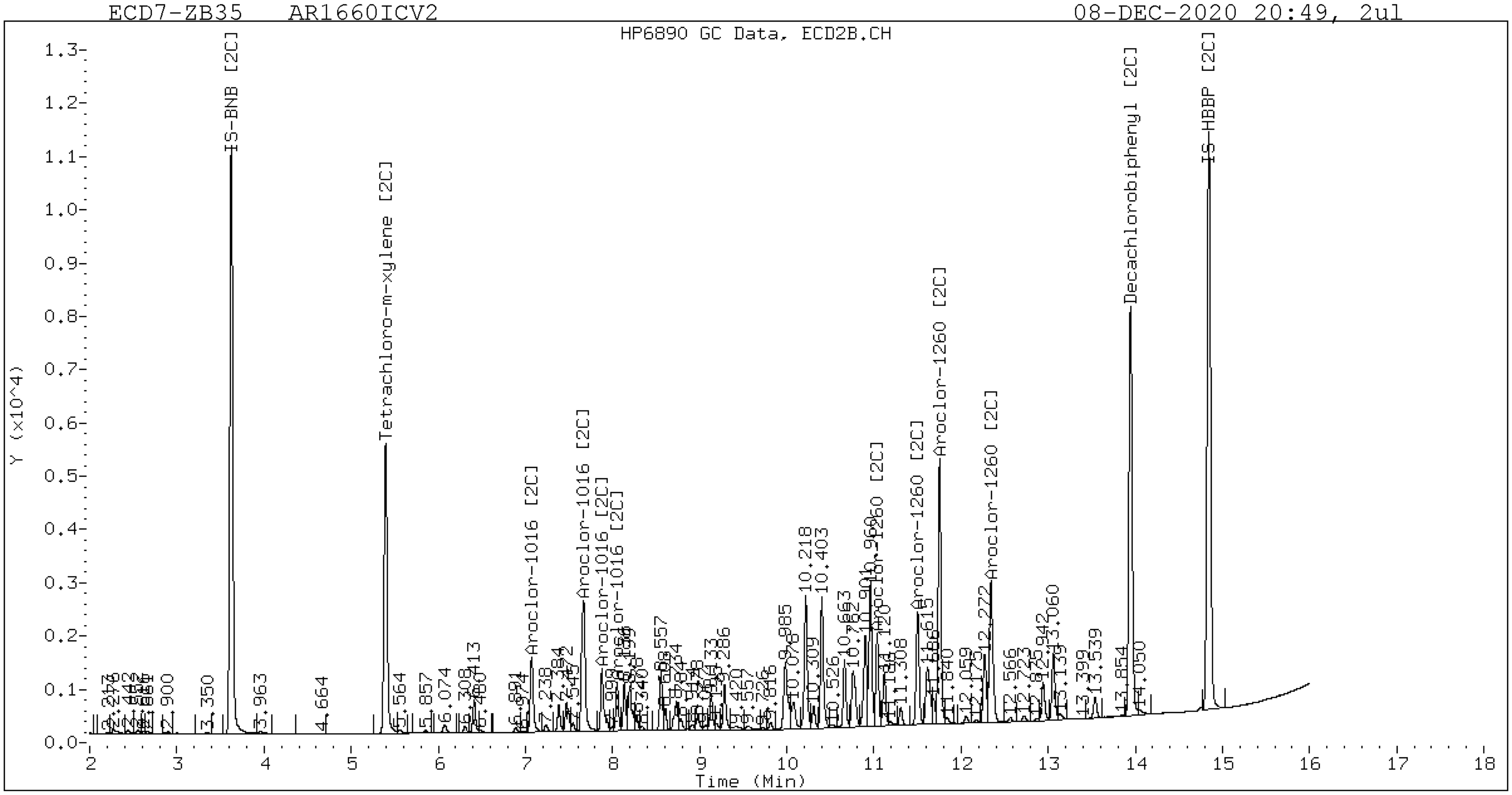
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 08-DEC-2020 20:49, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 08-DEC-2020 20:49, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ECD7
Calibration: DL00019
Lab File ID: 20120713ECD7.D
Calibration Date: 12/04/2020
Sequence: SIL0131
Injection Date: 12/07/20
Lab Sample ID: SIL0131-CCV1
Injection Time: 16:44
Sequence Name: AR1248CCV1

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	258	0.0631509	0.0653475		3.3	+/-20
Aroclor 1248 [2C]	A	250.00	259	0.0406848	0.0419079		3.4	+/-20
Decachlorobiphenyl	A	40.000	36.5	0.8503828	0.7760775		-8.8	+/-20
Tetrachlorometaxylene	A	40.000	40.7	1.1663830	1.1879280		1.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.7	1.3164080	1.3398630		1.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.8	0.9170028	1.0261080		12.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120713ECD7.D
Data file 2: /20201207.b/20201207.b/20120713ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 07-DEC-2020 16:44
Report Date: 12/09/2020 14:06
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.012	-0.002	475477	5.399	-0.001	302841	40.7	44.8	9.4	Tetrachloro-m-xylene
13.205	-0.000	851572	13.946	-0.001	427494	36.5	40.7	10.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	101.8	111.9
Decachlorobiphenyl	91.3	101.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	800515	1.8
Hexabromobiphenyl	2132987	2194554	2.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	590271	-7.1
Hexabromobiphenyl	665758	638116	-4.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	7.484	0.000	107331	257.1	1	8.138	0.000	52758	263.6
Aroclor-1248	2	7.953	0.000	166593	263.2	2	8.558	0.000	68215	260.4
Aroclor-1248	3	8.361	0.000	242696	259.3	3	8.988	0.000	91810	246.1
Aroclor-1248	4	8.596	0.000	137275	253.7	4	9.423	0.000	96430	263.7

Total Col1Ave (4 peaks): 258.3 Total Col2Ave (4 peaks): 258.5 RPD = 0
Corrected Ave (3 peaks): 256.7 Corrected Ave (3 peaks): 256.7 RPD = 0

CalAmt %D: 3.3 CalAmt %D: 3.4

Total PCB Area Col1 (5.114 - 13.105) = 2779647 Col1 Total PCB = 0.2 ppm*

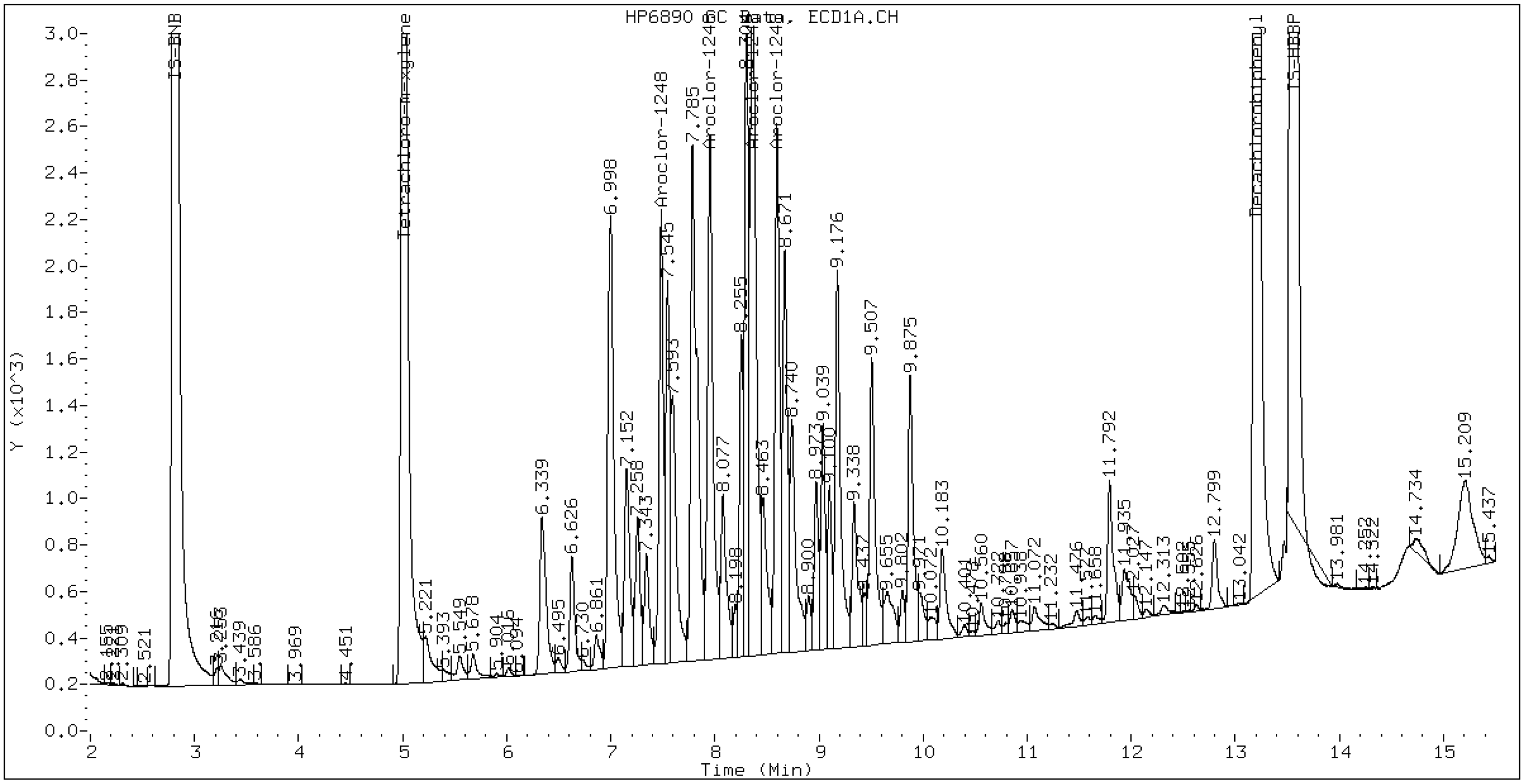
Total PCB Area Col2 (5.114 - 13.105) = 1430569 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

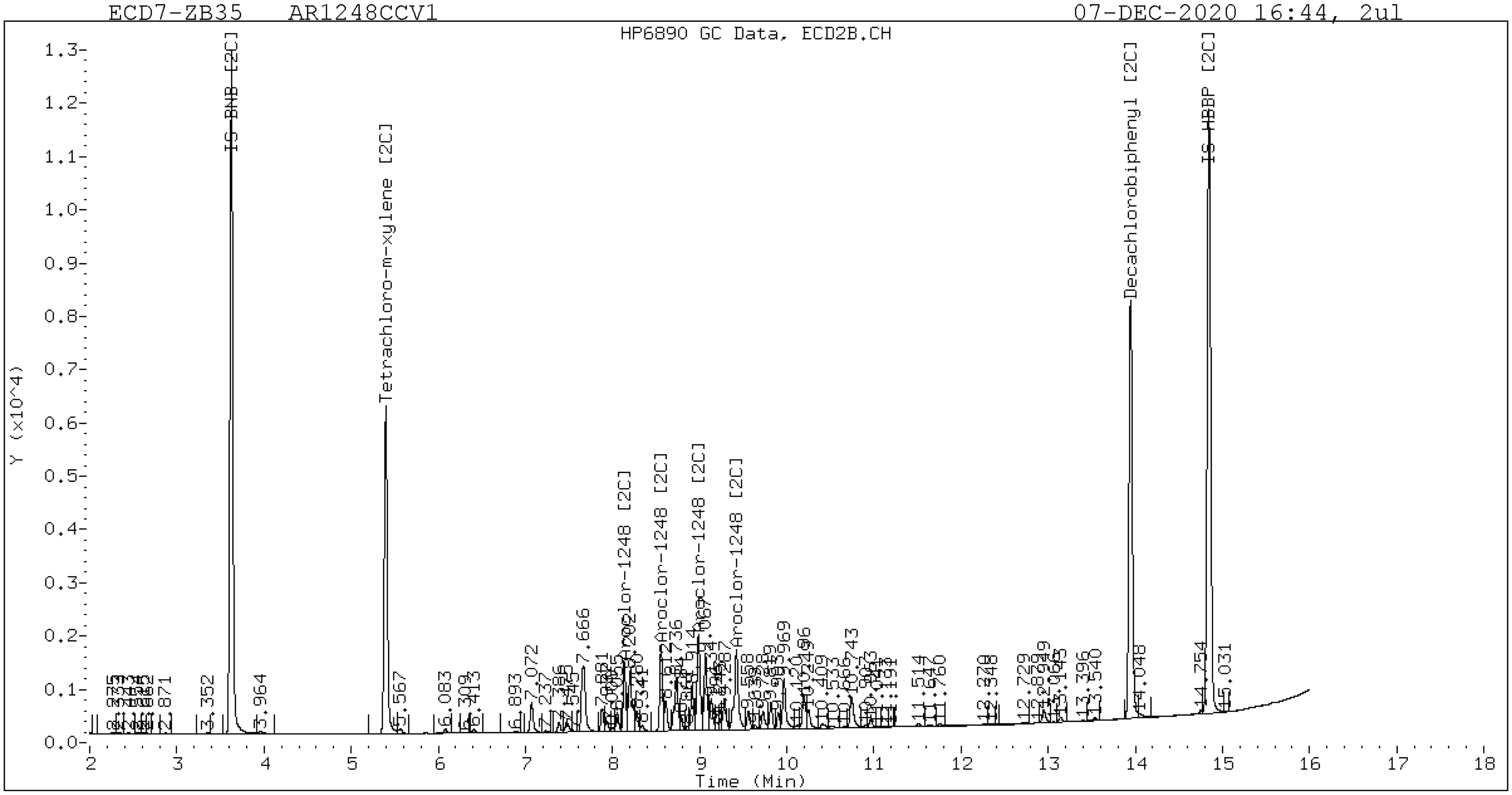
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 07-DEC-2020 16:44, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 07-DEC-2020 16:44, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120714ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0131	Injection Date:	12/07/20
Lab Sample ID:	SIL0131-CCV2	Injection Time:	17:05
Sequence Name:	AR1660CCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	246	0.0634001	0.0622966		-1.6	+/-20
Aroclor 1016 [2C]	A	250.00	266	0.0448734	0.0474204		6.4	+/-20
Aroclor 1260	A	250.00	233	0.0403882	0.0382722		-6.6	+/-20
Aroclor 1260 [2C]	A	250.00	237	0.0794282	0.0748687		-5.2	+/-20
Decachlorobiphenyl	A	40.000	35.2	0.8503828	0.7478221		-12.0	+/-20
Tetrachlorometaxylene	A	40.000	40.5	1.1663830	1.1803270		1.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.9	1.3164080	1.2812010		-2.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	43.4	0.9170028	0.9941025		8.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120714ECD7.D
Data file 2: /20201207.b/20201207.b/20120714ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 07-DEC-2020 17:05
Report Date: 12/09/2020 14:06
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	0.000	472866	5.399	0.000	299201	40.5	43.4	6.9	Tetrachloro-m-xylene
13.205	0.000	857737	13.947	0.000	439874	35.2	38.9	10.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	101.2	108.4
Decachlorobiphenyl	87.9	97.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	801246	1.9
Hexabromobiphenyl	2132987	2293960	7.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	601952	-5.3
Hexabromobiphenyl	665758	686659	3.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.628	0.000	100625	249.6	1	7.074	0.000	77040	263.8
Aroclor-1016	2	6.999	0.000	314930	245.1	2	7.670	0.000	172650	261.9
Aroclor-1016	3	7.149	0.000	135225	245.0	3	7.881	0.000	66332	265.6
Aroclor-1016	4	7.546	0.000	73156	243.8	4	8.055	0.000	40788	272.4

Total Col1Ave (4 peaks): 245.9 Total Col2Ave (4 peaks): 265.9 RPD = 8
Corrected Ave (3 peaks): 244.6 Corrected Ave (3 peaks): 263.8 RPD = 8

CalAmt %D: -1.7 CalAmt %D: 6.4

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1260	1	10.401	0.000	195660	219.4	1	11.041	0.000	96280	229.4
Aroclor-1260	2	10.721	0.000	208488	234.1	2	11.504	0.000	111239	251.6
Aroclor-1260	3	11.073	0.000	565128	244.4	3	11.756	0.000	263142	232.7
Aroclor-1260	4	11.476	0.000	284154	240.5	4	12.345	0.000	171955	234.1
Aroclor-1260	5	11.582	0.000	118366	230.1	NS	---			----

Total Col1Ave (5 peaks): 233.7 Total Col2Ave (4 peaks): 237.0 RPD = 1
Corrected Ave (4 peaks): 231.0 Corrected Ave (3 peaks): 232.1 RPD = 0

CalAmt %D: -6.5 CalAmt %D: -5.2

Total PCB Area Col1 (5.114 - 13.105) = 6156291 Col1 Total PCB = 0.5 ppm*

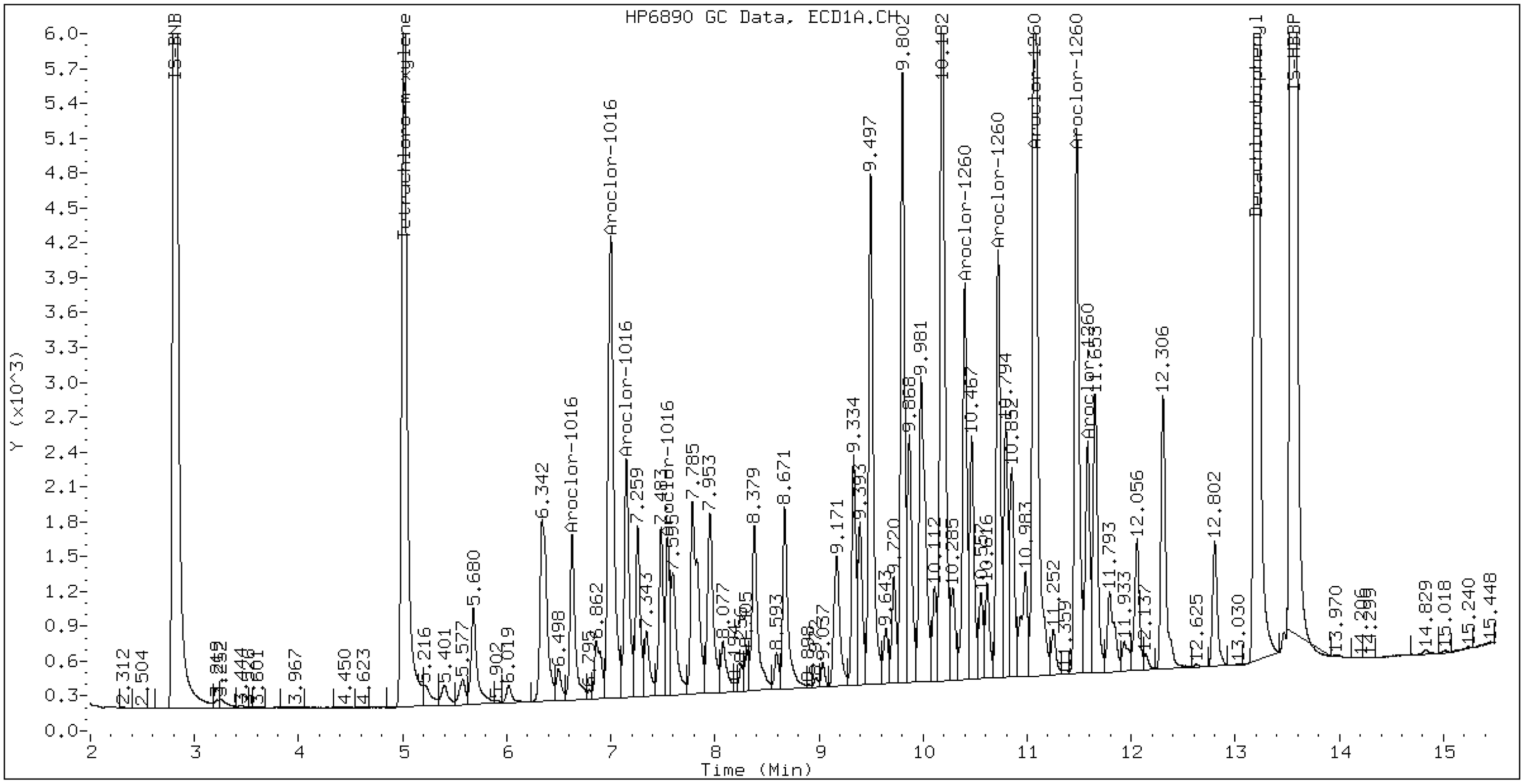
Total PCB Area Col2 (5.114 - 13.105) = 2974507 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

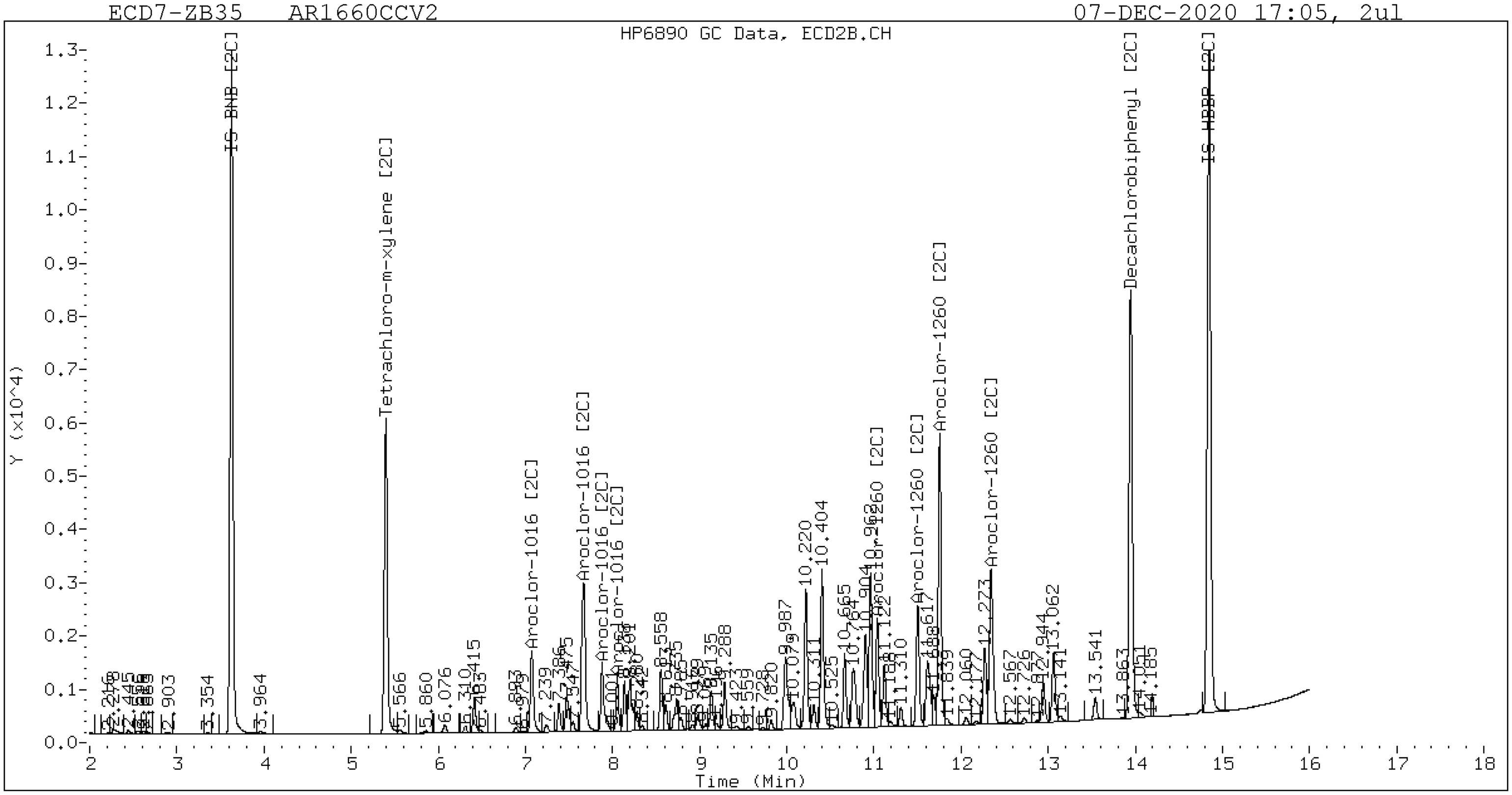
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 07-DEC-2020 17:05, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 07-DEC-2020 17:05, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120716ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0131	Injection Date:	12/07/20
Lab Sample ID:	SIL0131-CCV3	Injection Time:	22:25
Sequence Name:	AR1242CCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	270	0.0482851	0.0515795		7.8	+/-20
Aroclor 1242 [2C]	A	250.00	266	0.0387860	0.0411437		6.5	+/-20
Decachlorobiphenyl	A	40.000	35.8	0.8503828	0.7623666		-10.5	+/-20
Tetrachlorometaxylene	A	40.000	42.2	1.1663830	1.2317390		5.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.0	1.3164080	1.3808740		5.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.6	0.9170028	1.0213190		11.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120716ECD7.D	ARI ID: AR1242CCV3
Data file 2: /20201207.b/20201207.b/20120716ECD7.D	Client ID:
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m	Injection Date: 07-DEC-2020 22:25
Compound Sublist: AR1242.sub	Report Date: 12/13/2020 14:24
Instrument, Inj. Vol.: ecd7.i, 2ul	Matrix: NONE
Quant Method: Internal Std	Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.015	0.002	545020	5.399	-0.001	328512	42.2	44.6	5.3	Tetrachloro-m-xylene
13.207	0.003	984479	13.948	0.001	493985	35.9	42.0	15.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	105.6	111.4
Decachlorobiphenyl	89.6	104.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	884960	12.5
Hexabromobiphenyl	2132987	2582692	21.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	643309	1.2
Hexabromobiphenyl	665758	715467	7.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.629	0.000	90732	264.3	1	7.073	0.000	63557	261.4
Aroclor-1242	2	7.000	0.000	276732	261.3	2	7.670	0.000	147801	262.4
Aroclor-1242	3	8.306	0.000	96574	274.7	3	8.988	0.000	59149	266.1
Aroclor-1242	4	8.600	0.000	106534	278.4	4	9.422	0.000	60344	275.8

Total Col1Ave (4 peaks): 269.7 Total Col2Ave (4 peaks): 266.4 RPD = 1
Corrected Ave (3 peaks): 266.8 Corrected Ave (3 peaks): 263.3 RPD = 1

CalAmt %D: 7.9 CalAmt %D: 6.6

Total PCB Area Col1 (5.113 - 13.105) = 2571092 Col1 Total PCB = 0.2 ppm*

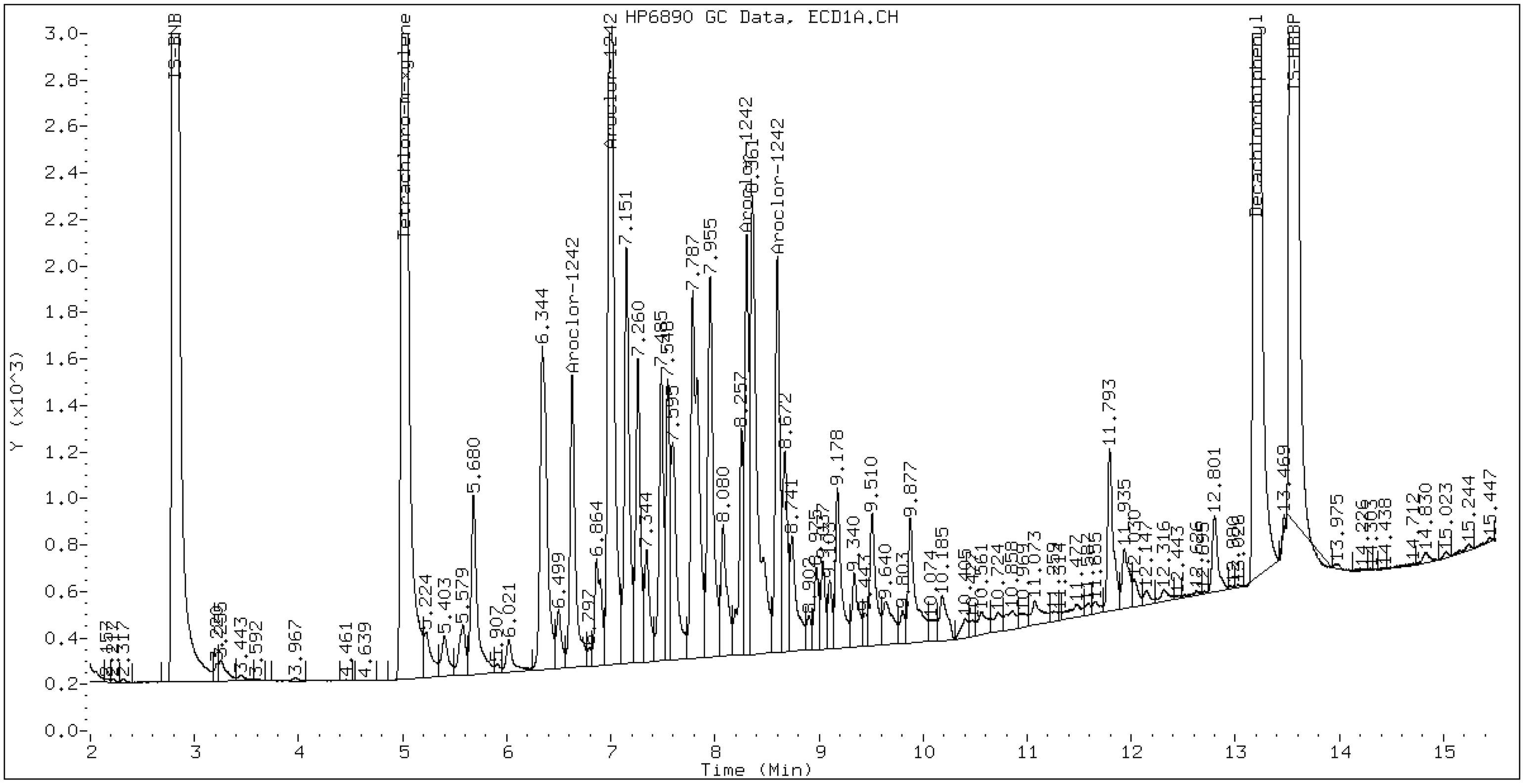
Total PCB Area Col2 (5.113 - 13.105) = 1315784 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

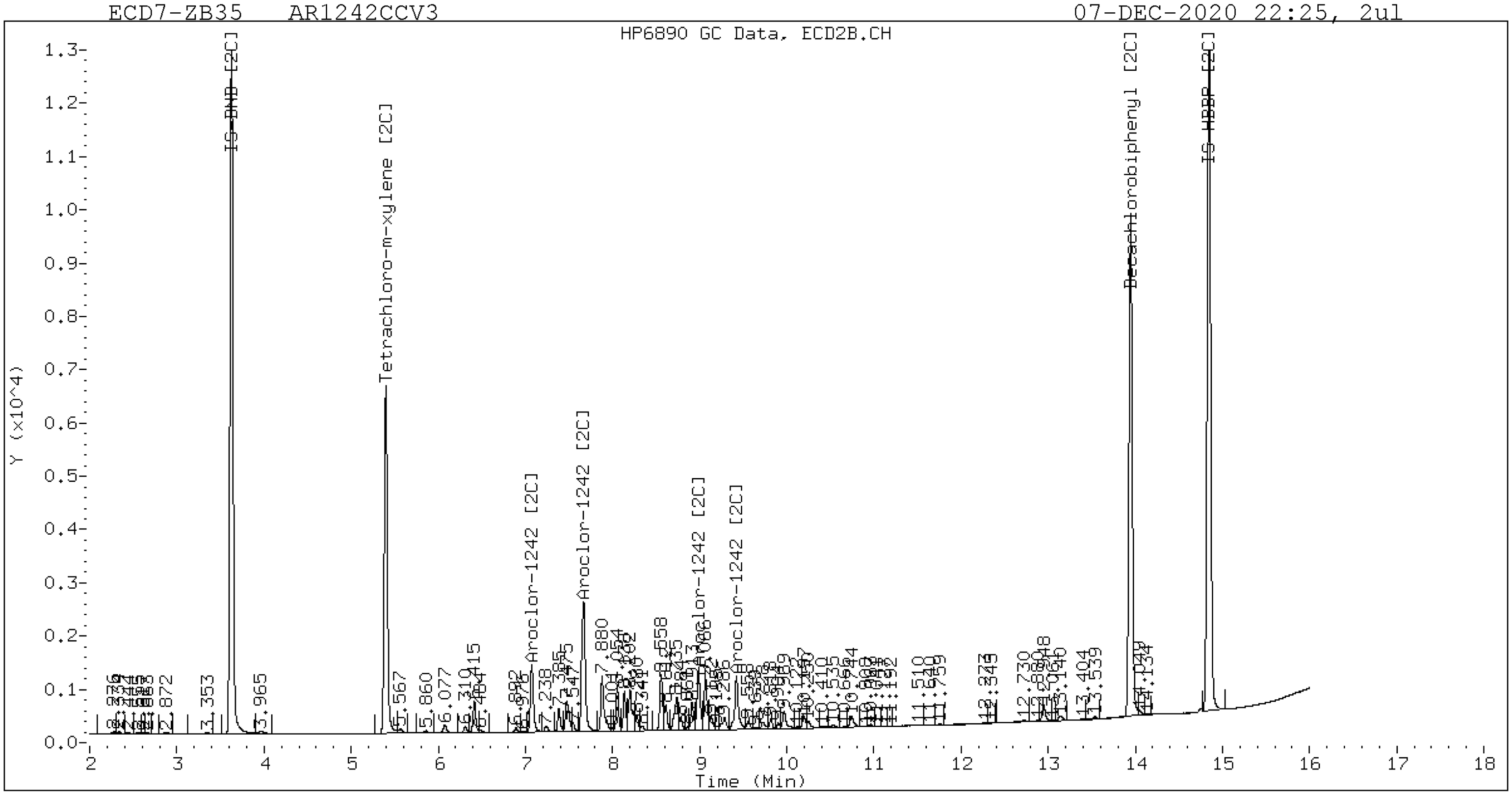
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 07-DEC-2020 22:25, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3 07-DEC-2020 22:25, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120717ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0131	Injection Date:	12/07/20
Lab Sample ID:	SIL0131-CCV4	Injection Time:	22:46
Sequence Name:	AR1660CCV4		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	245	0.0634001	0.0620920		-2.1	+/-20
Aroclor 1016 [2C]	A	250.00	264	0.0448734	0.0469938		5.7	+/-20
Aroclor 1260	A	250.00	228	0.0403882	0.0372760		-9.0	+/-20
Aroclor 1260 [2C]	A	250.00	236	0.0794282	0.0745732		-5.7	+/-20
Decachlorobiphenyl	A	40.000	35.1	0.8503828	0.7461983		-12.3	+/-20
Tetrachlorometaxylene	A	40.000	40.9	1.1663830	1.1916160		2.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.0	1.3164080	1.2835070		-2.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	43.2	0.9170028	0.9905732		8.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120717ECD7.D
Data file 2: /20201207.b/20201207.b/20120717ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 07-DEC-2020 22:46
Report Date: 12/13/2020 14:24
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.015	0.002	497806	5.400	0.000	308518	40.9	43.2	5.6	Tetrachloro-m-xylene
13.206	0.001	926363	13.946	-0.001	457085	35.1	39.0	10.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	102.2	108.0
Decachlorobiphenyl	87.7	97.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	835514	6.2
Hexabromobiphenyl	2132987	2482887	16.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	622908	-2.0
Hexabromobiphenyl	665758	712244	7.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col			
Aroclor Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016 1	6.628	0.000	104961	249.6	1	7.073	-0.000	79139	261.9
Aroclor-1016 2	7.000	0.001	329079	245.6	2	7.669	-0.000	176280	258.5
Aroclor-1016 3	7.150	0.001	138630	240.9	3	7.880	-0.000	68402	264.7
Aroclor-1016 4	7.547	0.001	75814	242.3	4	8.054	-0.000	42089	271.6
Total Col1Ave (4 peaks):			244.6		Total Col2Ave (4 peaks):			264.2	RPD = 8
Corrected Ave (3 peaks):			242.9		Corrected Ave (3 peaks):			261.7	RPD = 7
CalAmt %D:			-2.2		CalAmt %D:			5.7	
Aroclor-1260 1	10.401	0.001	204913	212.2	1	11.040	0.001	97545	224.1
Aroclor-1260 2	10.722	0.001	222667	231.0	2	11.504	0.000	115959	252.9
Aroclor-1260 3	11.073	0.001	594212	237.4	3	11.755	-0.000	271740	231.7
Aroclor-1260 4	11.476	0.002	299498	234.2	4	12.344	0.001	178685	234.5
Aroclor-1260 5	11.582	0.002	124835	224.2	NS	---			----
Total Col1Ave (5 peaks):			227.8		Total Col2Ave (4 peaks):			235.8	RPD = 3
Corrected Ave (4 peaks):			225.4		Corrected Ave (3 peaks):			230.1	RPD = 2
CalAmt %D:			-8.9		CalAmt %D:			-5.7	

Total PCB Area Col1 (5.113 - 13.105) = 6423180 Col1 Total PCB = 0.5 ppm*

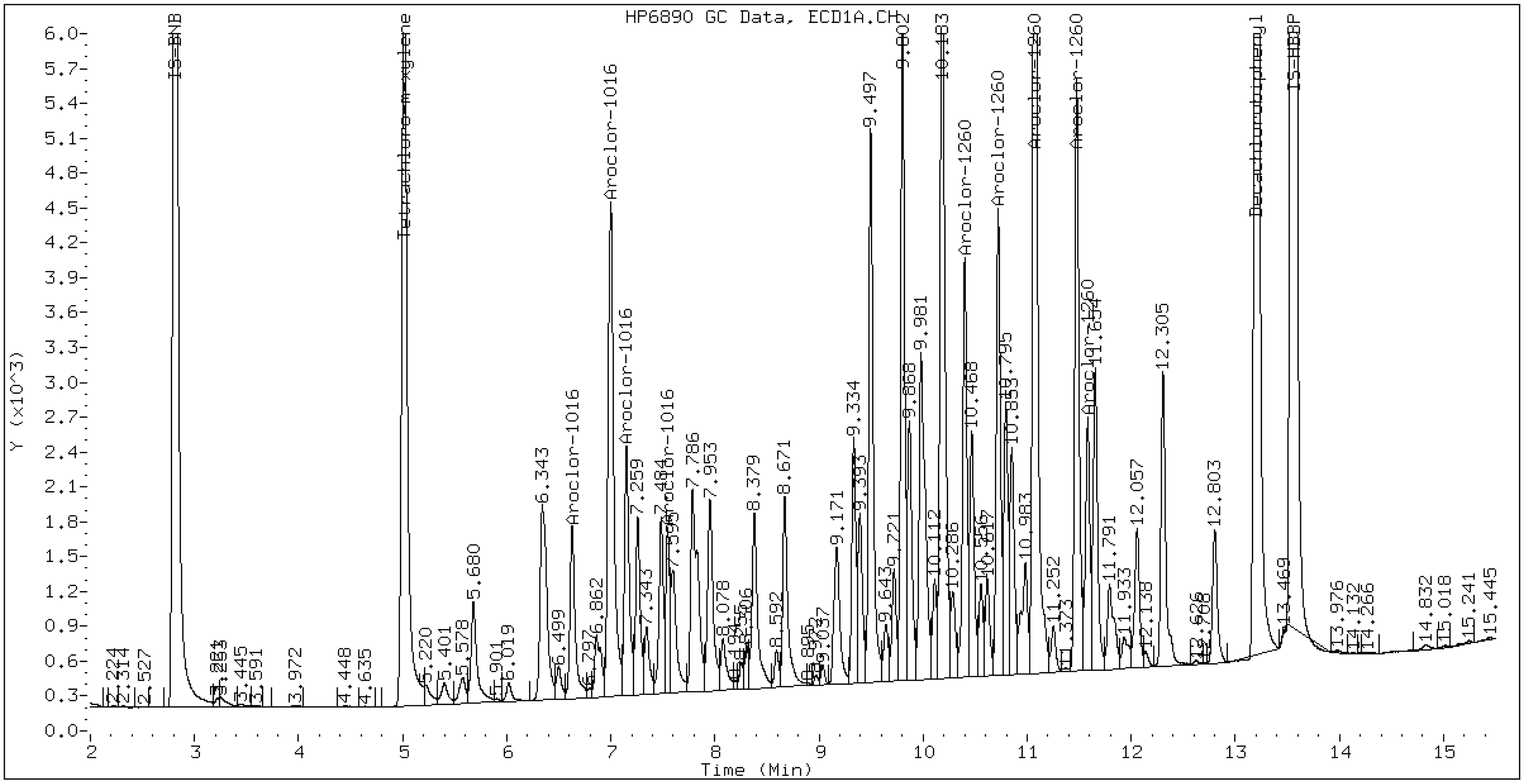
Total PCB Area Col2 (5.113 - 13.105) = 3075341 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

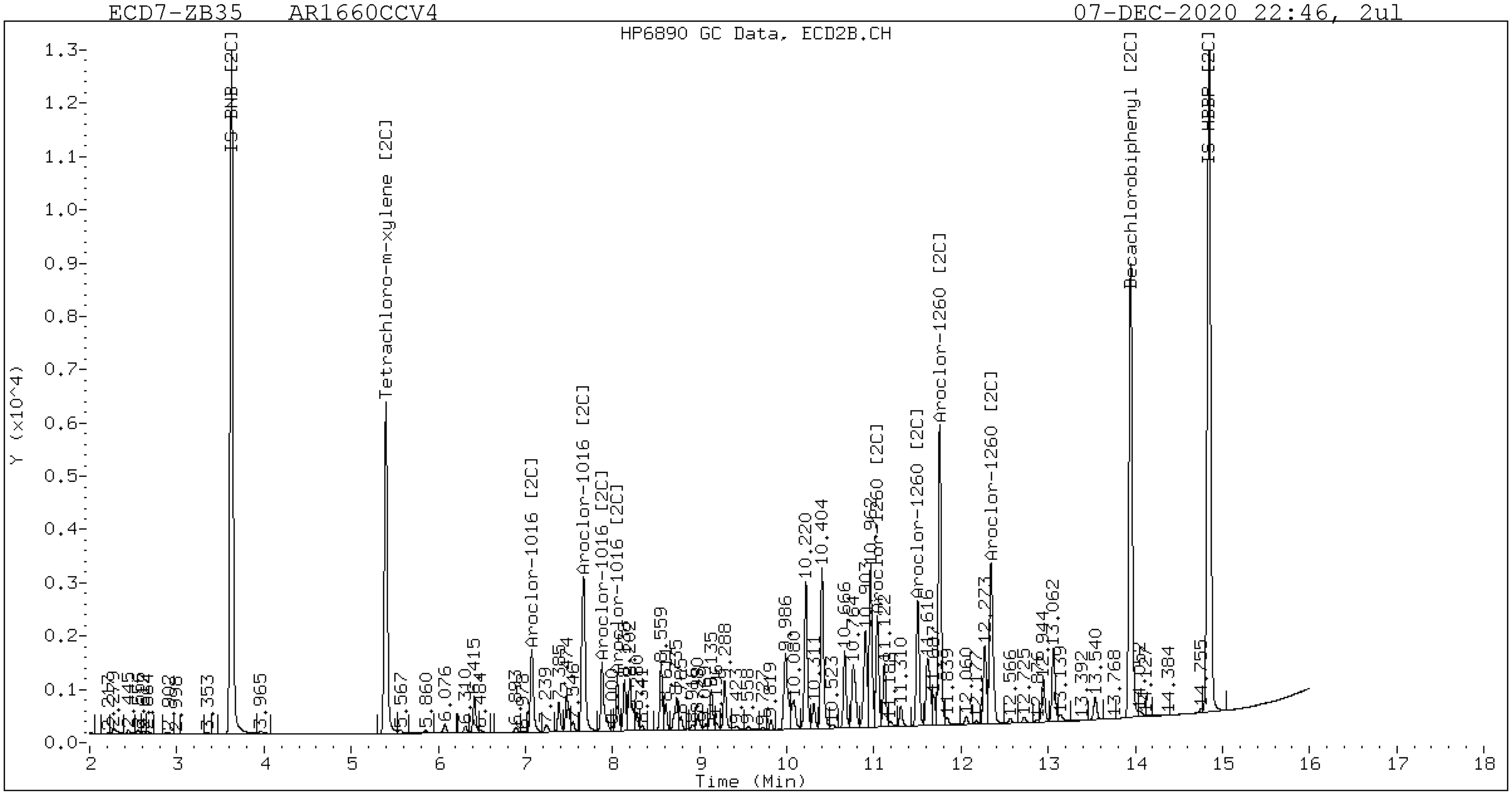
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 07-DEC-2020 22:46, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4 07-DEC-2020 22:46, 2ul



ZB-35 Manual Integration: NO

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120732ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0131	Injection Date:	12/08/20
Lab Sample ID:	SIL0131-CCV5	Injection Time:	03:55
Sequence Name:	AR1254CCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	262	0.0851540	0.0891386		4.6	+/-20
Aroclor 1254 [2C]	A	250.00	252	0.0605432	0.0607143		1.0	+/-20
Decachlorobiphenyl	A	40.000	39.0	0.8503828	0.8288749		-2.5	+/-20
Tetrachlorometaxylene	A	40.000	42.3	1.1663830	1.2331570		5.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.4	1.3164080	1.4291680		8.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.3	0.9170028	1.0148360		10.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120732ECD7.D
Data file 2: /20201207.b/20201207.b/20120732ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 08-DEC-2020 03:55
Report Date: 12/13/2020 14:24
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	0.001	515445	5.399	0.000	325123	42.3	44.3	4.6	Tetrachloro-m-xylene
13.204	-0.000	854047	13.946	-0.002	413977	39.0	43.4	10.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	105.7	110.7
Decachlorobiphenyl	97.5	108.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	835976	6.3
Hexabromobiphenyl	2132987	2060738	-3.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	640740	0.8
Hexabromobiphenyl	665758	579326	-13.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.671	0.000	264013	266.6	1	9.287	0.000	117980	257.9
Aroclor-1254	2	8.740	0.000	140151	261.3	2	9.380	0.000	55300	261.0
Aroclor-1254	3	9.040	0.000	168028	254.8	3	9.817	0.000	75926	250.5
Aroclor-1254	4	9.176	0.000	348475	256.2	4	9.968	0.000	173797	243.3
Aroclor-1254	5	9.872	0.000	243672	270.0	5	10.200	0.000	184842	250.6

Total Col1Ave (5 peaks): 261.8 Total Col2Ave (5 peaks): 252.6 RPD = 4
Corrected Ave (4 peaks): 259.7 Corrected Ave (4 peaks): 250.6 RPD = 4

CalAmt %D: 4.7 CalAmt %D: 1.1

Total PCB Area Col1 (5.113 - 13.105) = 3869401 Col1 Total PCB = 0.3 ppm*

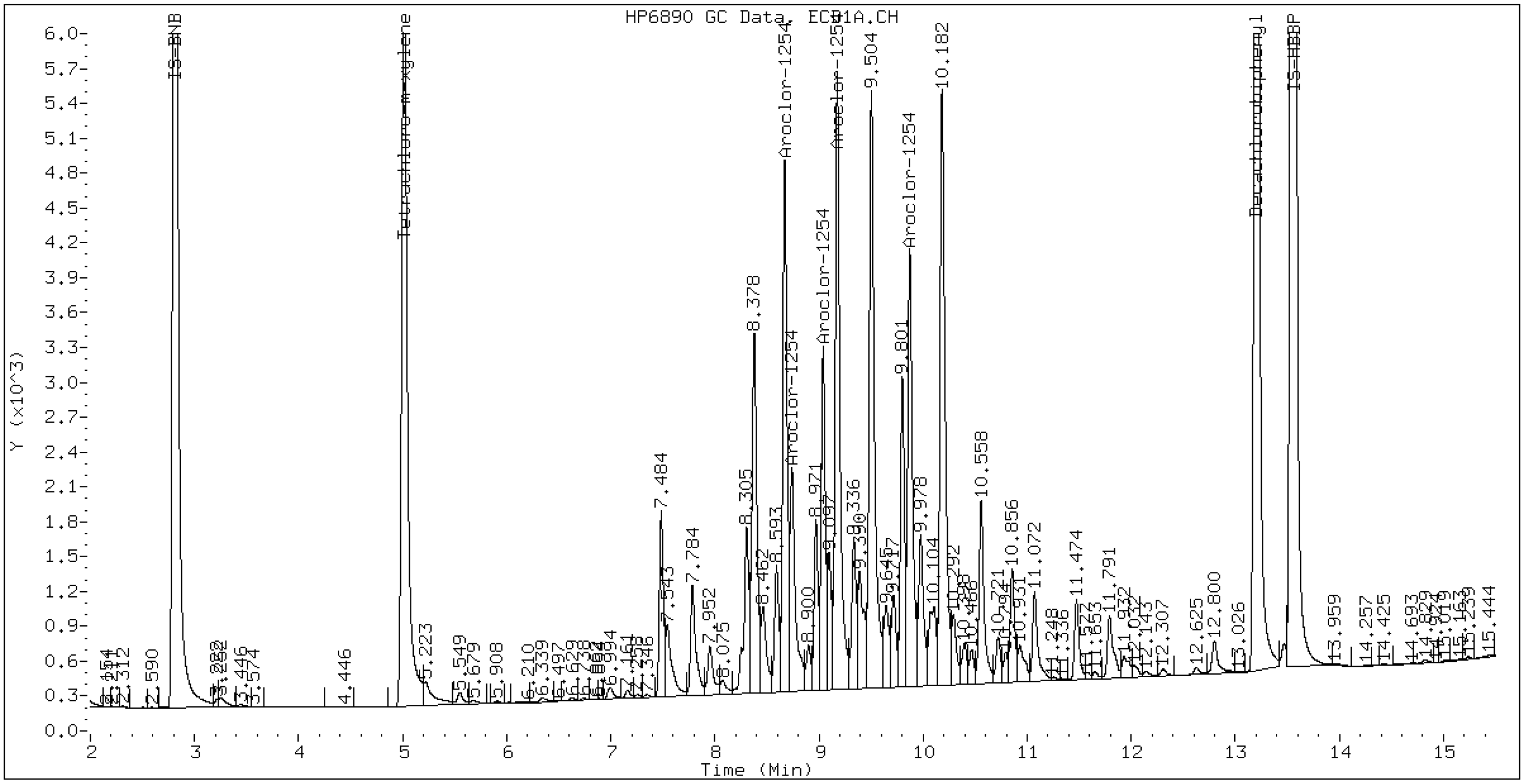
Total PCB Area Col2 (5.113 - 13.105) = 1908979 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

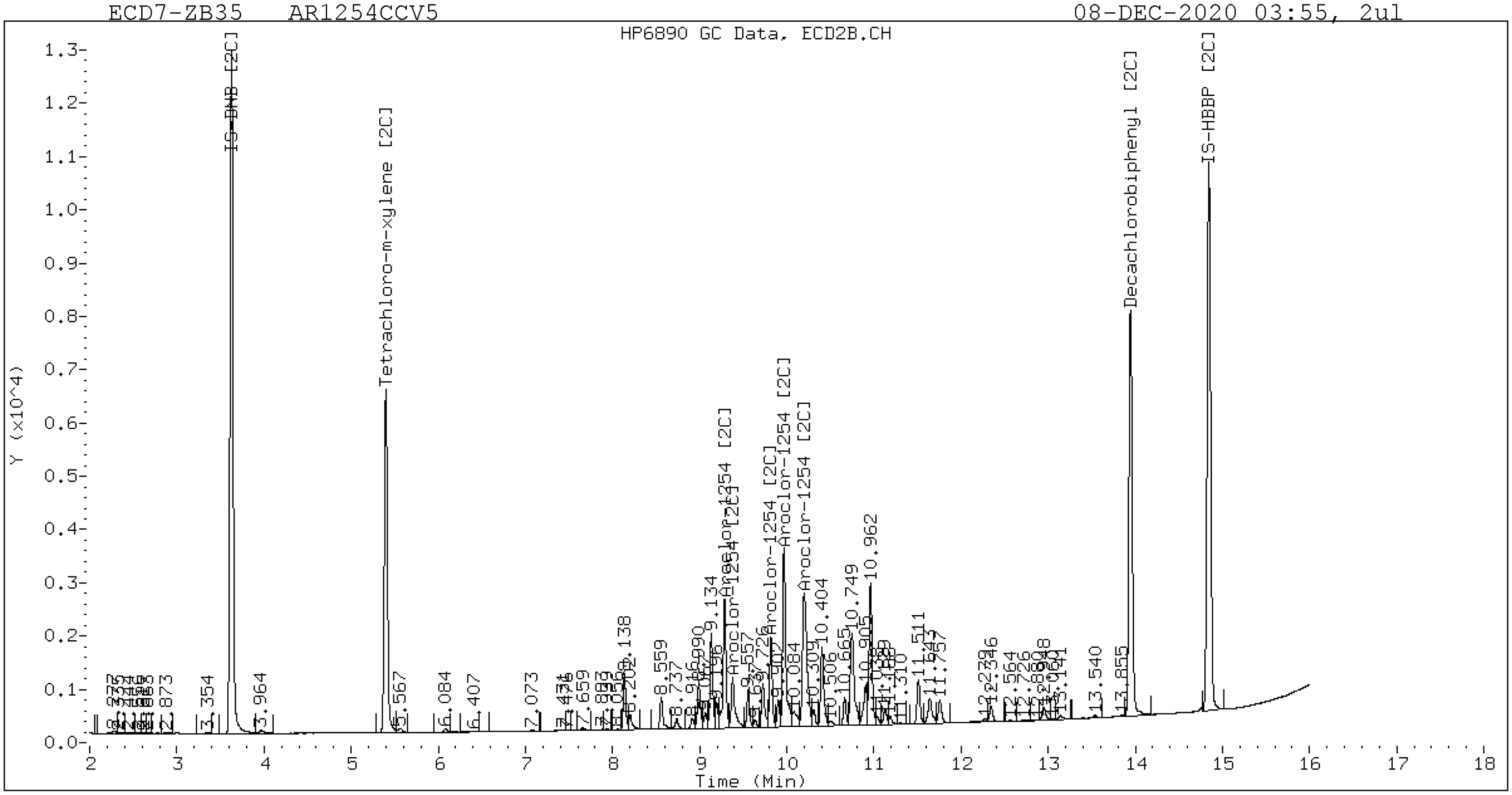
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 08-DEC-2020 03:55, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1254CCV5 08-DEC-2020 03:55, 2ul

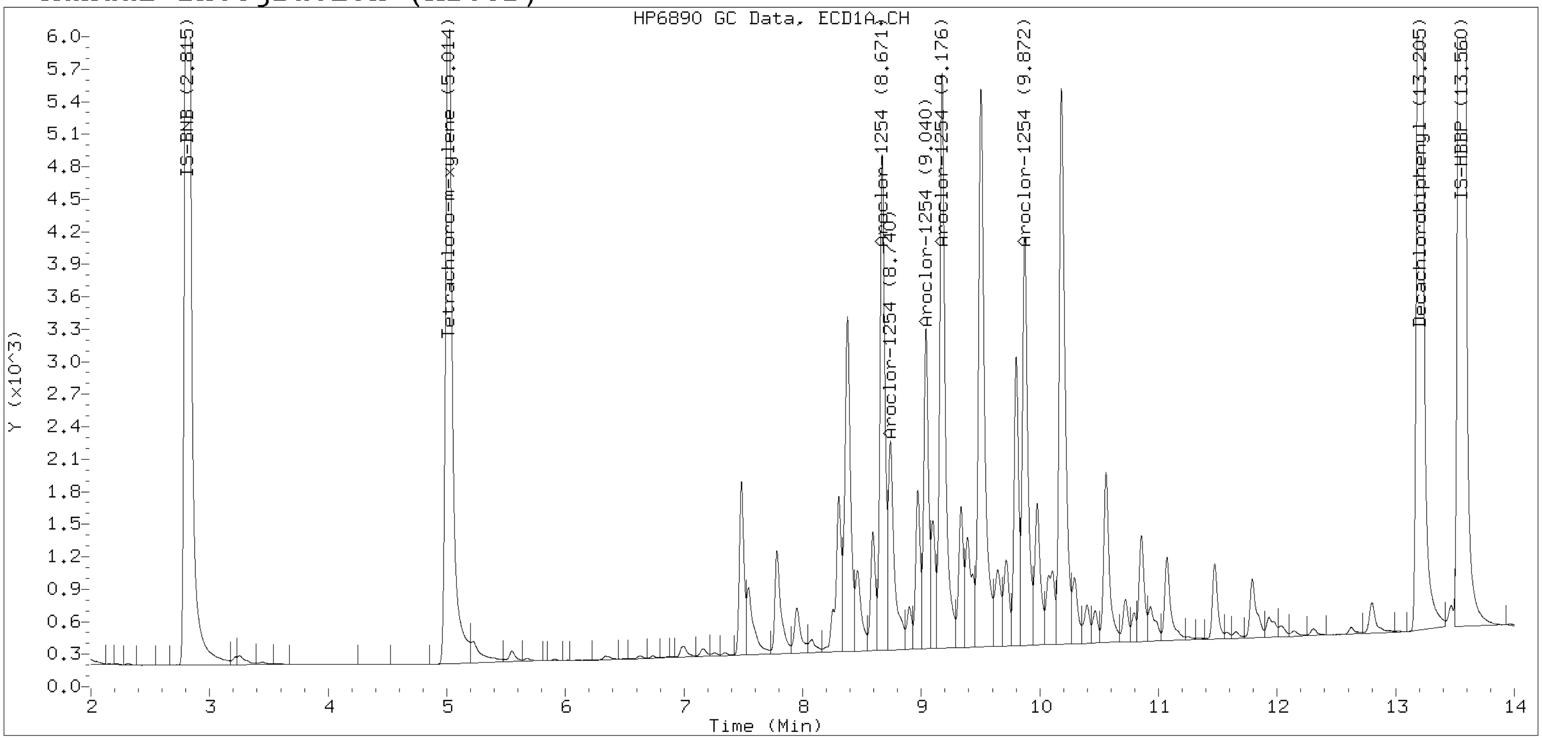


ZB-35 Manual Integration: NO

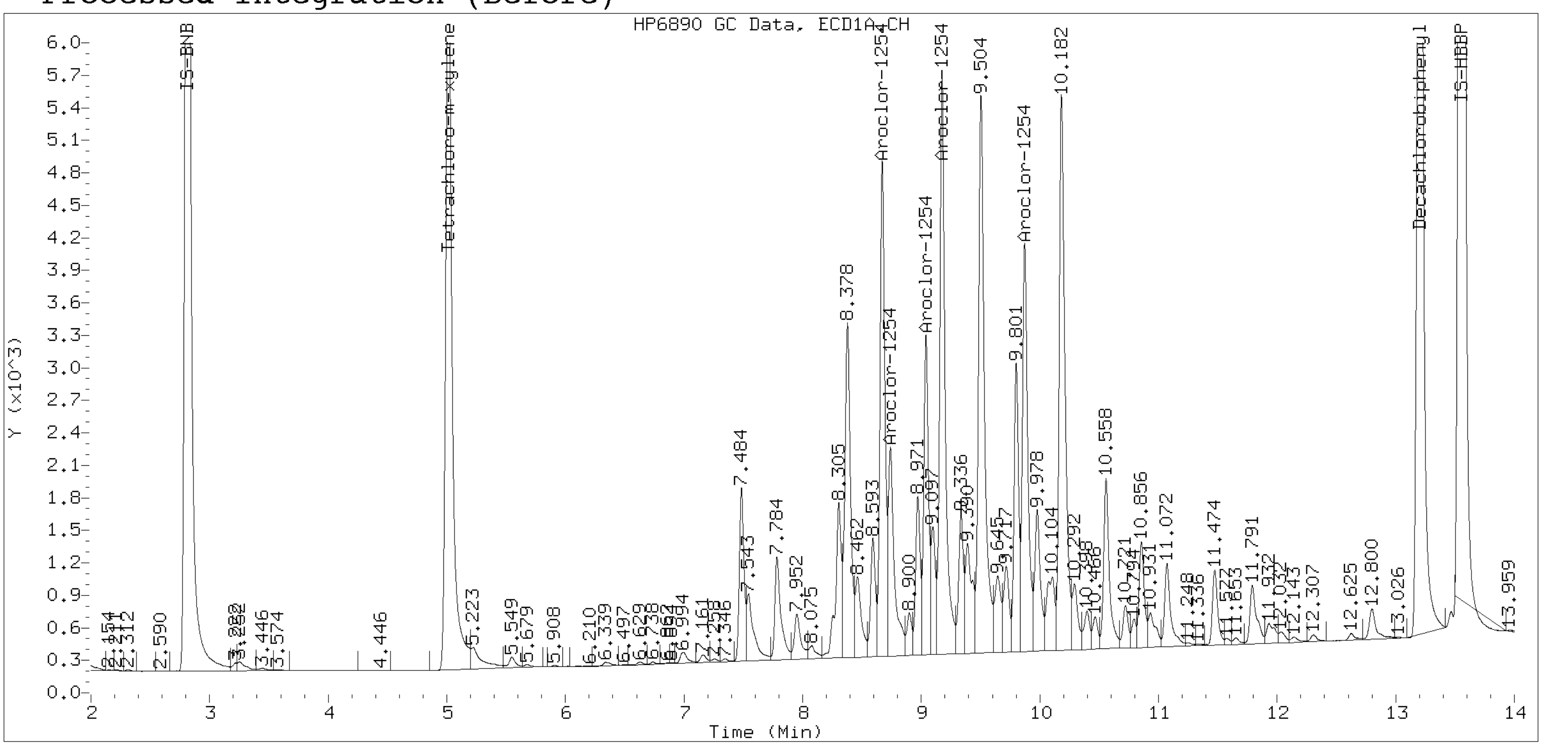
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120732ECD7.D   Injection Date: 08-DEC-2020 03:5

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120733ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0131	Injection Date:	12/08/20
Lab Sample ID:	SIL0131-CCV6	Injection Time:	04:15
Sequence Name:	AR1660CCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	256	0.0634001	0.0650858		2.5	+/-20
Aroclor 1016 [2C]	A	250.00	268	0.0448734	0.0475955		7.3	+/-20
Aroclor 1260	A	250.00	260	0.0403882	0.0426696		3.9	+/-20
Aroclor 1260 [2C]	A	250.00	265	0.0794282	0.0837461		5.9	+/-20
Decachlorobiphenyl	A	40.000	38.2	0.8503828	0.8117096		-4.5	+/-20
Tetrachlorometaxylene	A	40.000	41.9	1.1663830	1.2215150		4.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.1	1.3164080	1.4174990		7.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	43.8	0.9170028	1.0029740		9.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120733ECD7.D	ARI ID: AR1660CCV6
Data file 2: /20201207.b/20201207.b/20120733ECD7.D	Client ID:
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m	Injection Date: 08-DEC-2020 04:15
Compound Sublist: AR1660.sub	Report Date: 12/13/2020 14:24
Instrument, Inj. Vol.: ecd7.i, 2ul	Matrix: NONE
Quant Method: Internal Std	Dilution Factor: 1.0

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.013	0.000	498521	5.399	-0.001	318852	41.9	43.8	4.3	Tetrachloro-m-xylene
13.205	0.000	872589	13.945	-0.002	442517	38.2	43.1	12.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	104.7	109.4
Decachlorobiphenyl	95.5	107.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	816234	3.8
Hexabromobiphenyl	2132987	2150003	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	635813	0.1
Hexabromobiphenyl	665758	624363	-6.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.627	-0.001	106945	260.4	1	7.073	-0.001	82052	266.0
Aroclor-1016	2	6.999	-0.001	336424	257.1	2	7.669	-0.001	181550	260.8
Aroclor-1016	3	7.149	-0.000	142888	254.2	3	7.880	-0.001	70907	268.8
Aroclor-1016	4	7.545	-0.000	77808	254.5	4	8.054	-0.001	43764	276.7
	Total Col1Ave (4 peaks):				256.5	Total Col2Ave (4 peaks):			268.1	RPD = 4
	Corrected Ave (3 peaks):				255.2	Corrected Ave (3 peaks):			265.2	RPD = 4
	CalAmt %D:				2.6	CalAmt %D:			7.2	
Aroclor-1260	1	10.400	-0.000	205113	245.3	1	11.039	-0.001	98100	257.1
Aroclor-1260	2	10.721	0.000	223615	267.9	2	11.503	-0.001	111426	277.2
Aroclor-1260	3	11.073	0.000	593907	274.1	3	11.755	-0.000	267249	260.0
Aroclor-1260	4	11.475	0.001	290853	262.7	4	12.344	0.000	176824	264.7
Aroclor-1260	5	11.581	0.001	119945	248.8	NS	---			----
	Total Col1Ave (5 peaks):				259.7	Total Col2Ave (4 peaks):			264.7	RPD = 2
	Corrected Ave (4 peaks):				256.2	Corrected Ave (3 peaks):			260.6	RPD = 2
	CalAmt %D:				3.9	CalAmt %D:			5.9	

Total PCB Area Col1 (5.113 - 13.105) = 6451630 Col1 Total PCB = 0.5 ppm*

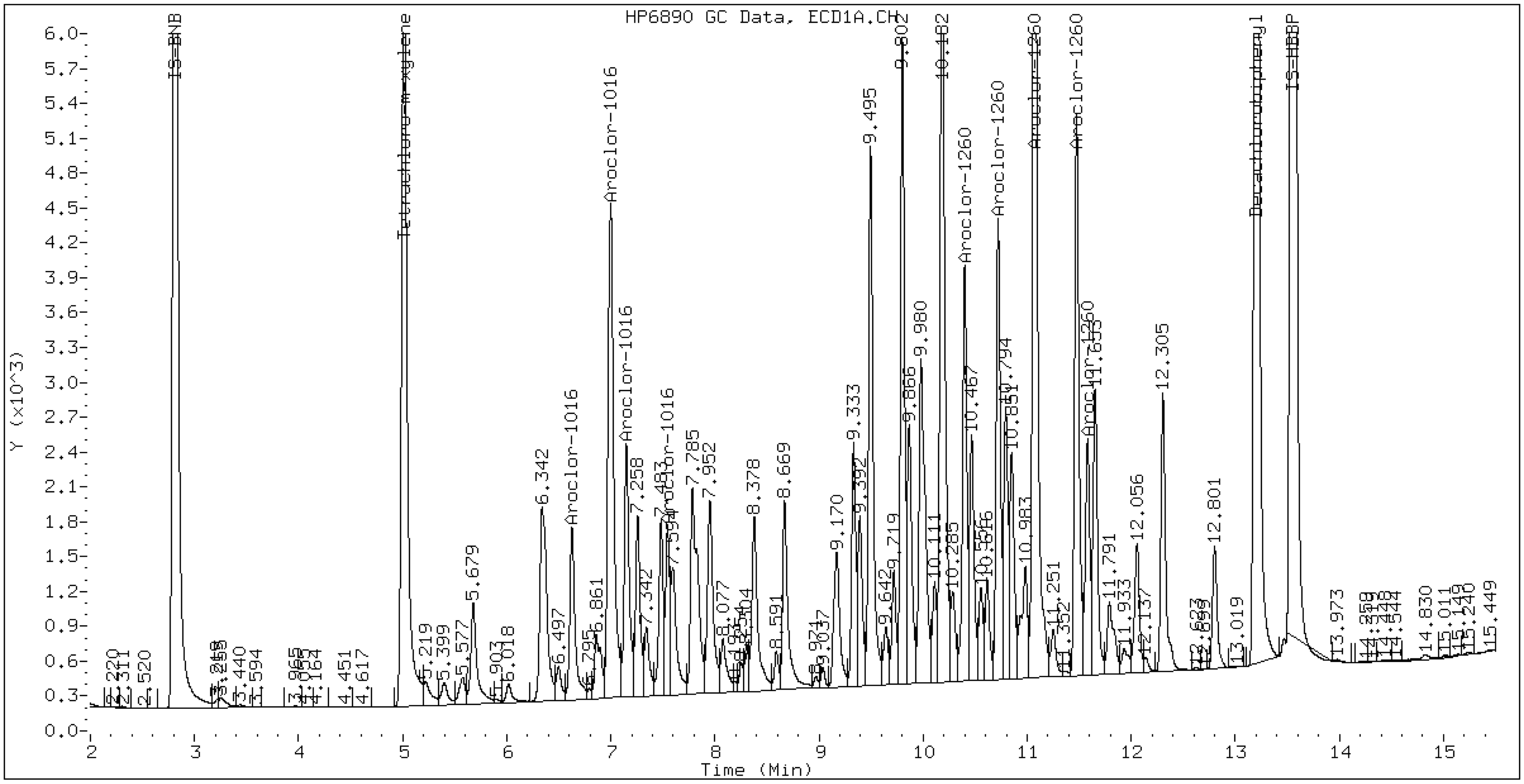
Total PCB Area Col2 (5.113 - 13.105) = 3106761 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

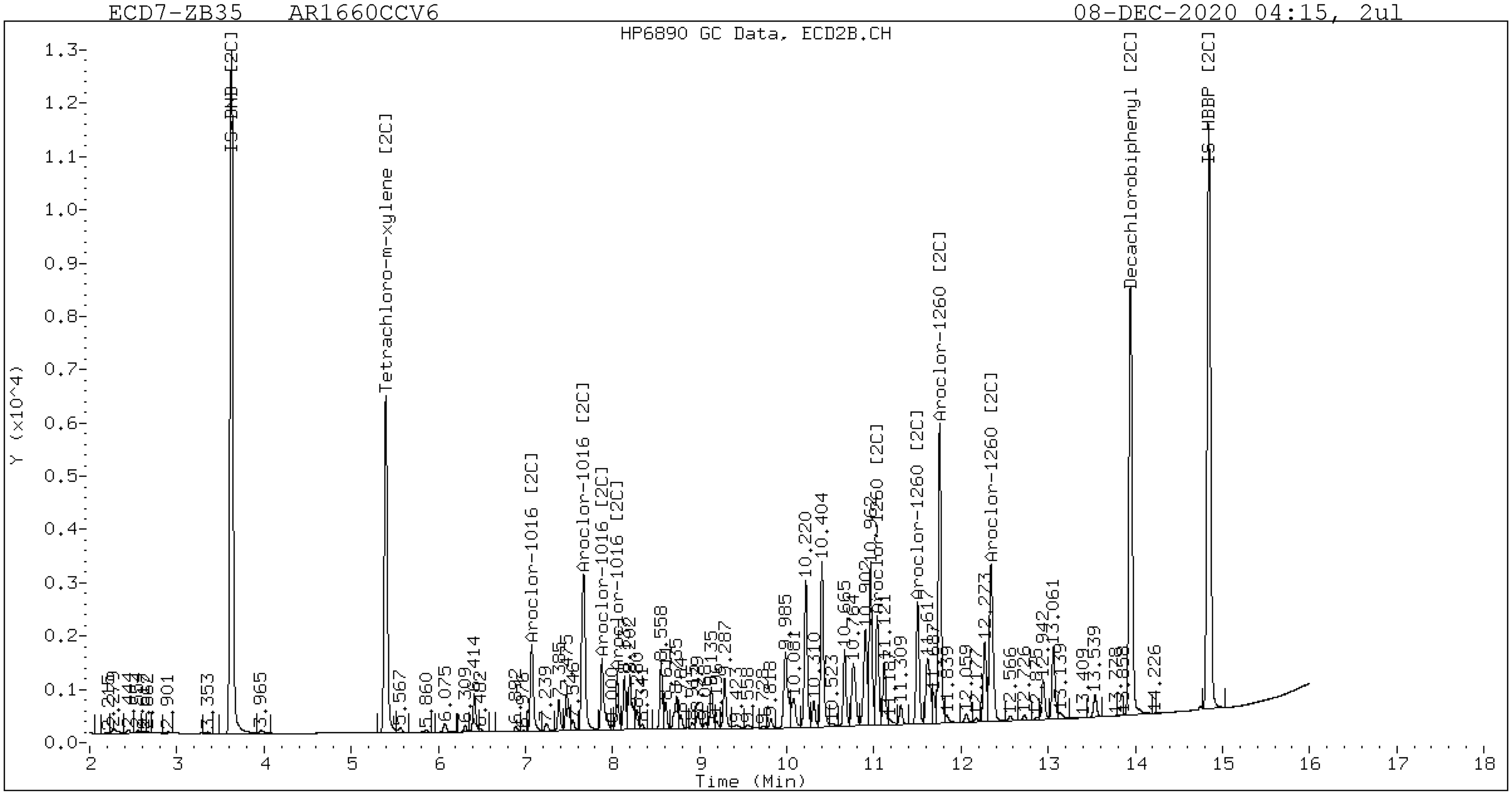
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 08-DEC-2020 04:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 08-DEC-2020 04:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120747ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0131	Injection Date:	12/08/20
Lab Sample ID:	SIL0131-CCV7	Injection Time:	09:04
Sequence Name:	AR1248CCV7		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	268	0.0631509	0.0679980		7.3	+/-20
Aroclor 1248 [2C]	A	250.00	258	0.0406848	0.0418287		3.1	+/-20
Decachlorobiphenyl	A	40.000	38.5	0.8503828	0.8191584		-3.8	+/-20
Tetrachlorometaxylene	A	40.000	41.6	1.1663830	1.2131550		4.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.7	1.3164080	1.4393400		9.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.6	0.9170028	1.0230060		11.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120747ECD7.D
Data file 2: /20201207.b/20201207.b/20120747ECD7.D
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV7
Client ID:
Injection Date: 08-DEC-2020 09:04
Report Date: 12/13/2020 14:25
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	0.001	498290	5.399	-0.000	324037	41.6	44.6	7.0	Tetrachloro-m-xylene
13.205	0.000	936457	13.950	0.003	485691	38.5	43.7	12.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	104.0	111.6
Decachlorobiphenyl	96.3	109.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	821478	4.4
Hexabromobiphenyl	2132987	2286388	7.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	633500	-0.3
Hexabromobiphenyl	665758	674880	1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	7.483	0.000	114029	266.1	1	8.137	0.000	56563	263.3
Aroclor-1248	2	7.953	0.000	177552	273.3	2	8.558	0.000	72252	257.0
Aroclor-1248	3	8.361	0.000	260405	271.1	3	8.988	0.000	99610	248.8
Aroclor-1248	4	8.597	0.000	146249	263.4	4	9.422	0.000	102806	262.0

Total Col1Ave (4 peaks): 268.5 Total Col2Ave (4 peaks): 257.8 RPD = 4
Corrected Ave (3 peaks): 266.9 Corrected Ave (3 peaks): 255.9 RPD = 4

CalAmt %D: 7.4 CalAmt %D: 3.1

Total PCB Area Col1 (5.113 - 13.105) = 2957621 Col1 Total PCB = 0.2 ppm*

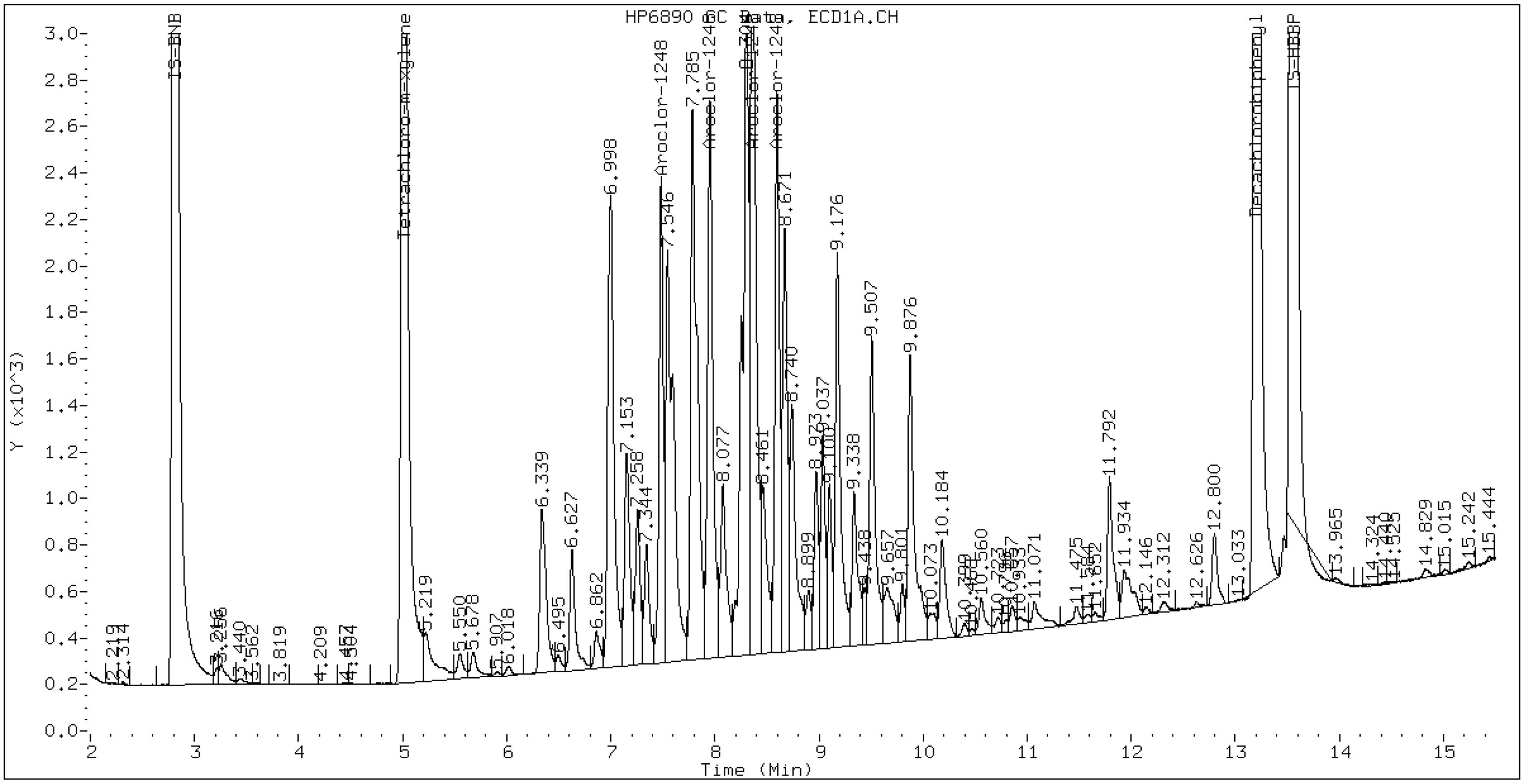
Total PCB Area Col2 (5.113 - 13.105) = 1525509 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

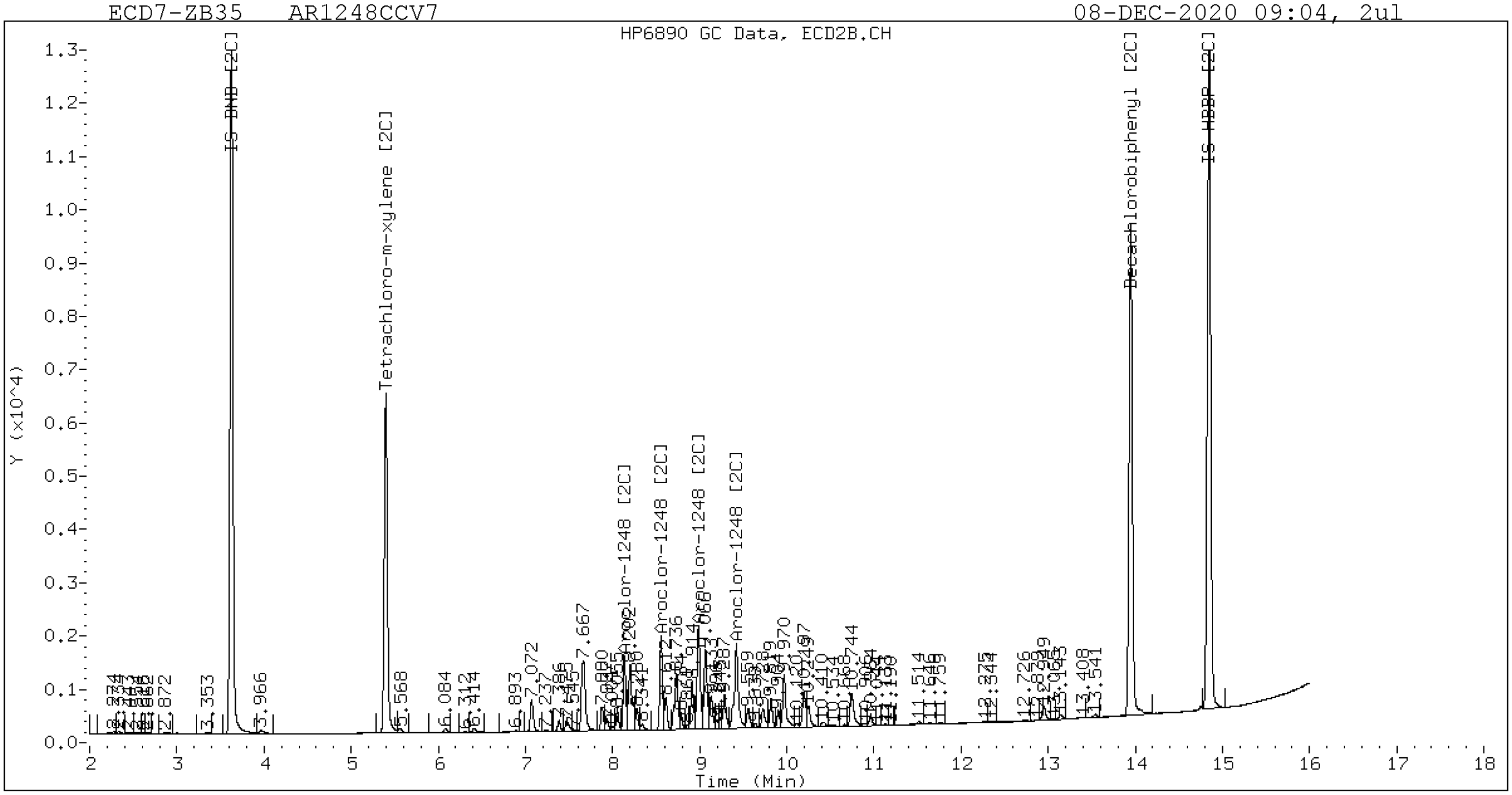
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV7 08-DEC-2020 09:04, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1248CCV7 08-DEC-2020 09:04, 2ul

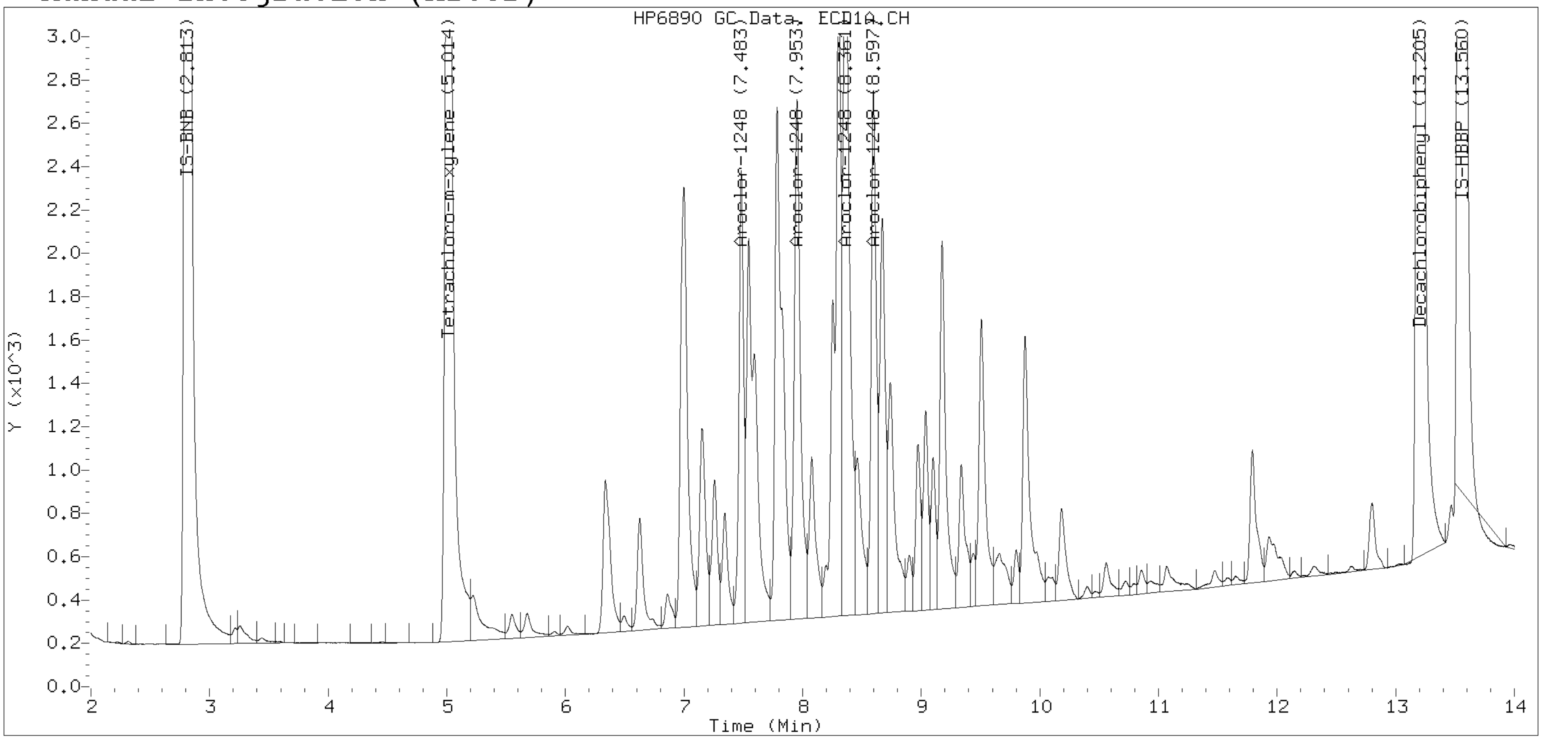


ZB-35 Manual Integration: NO

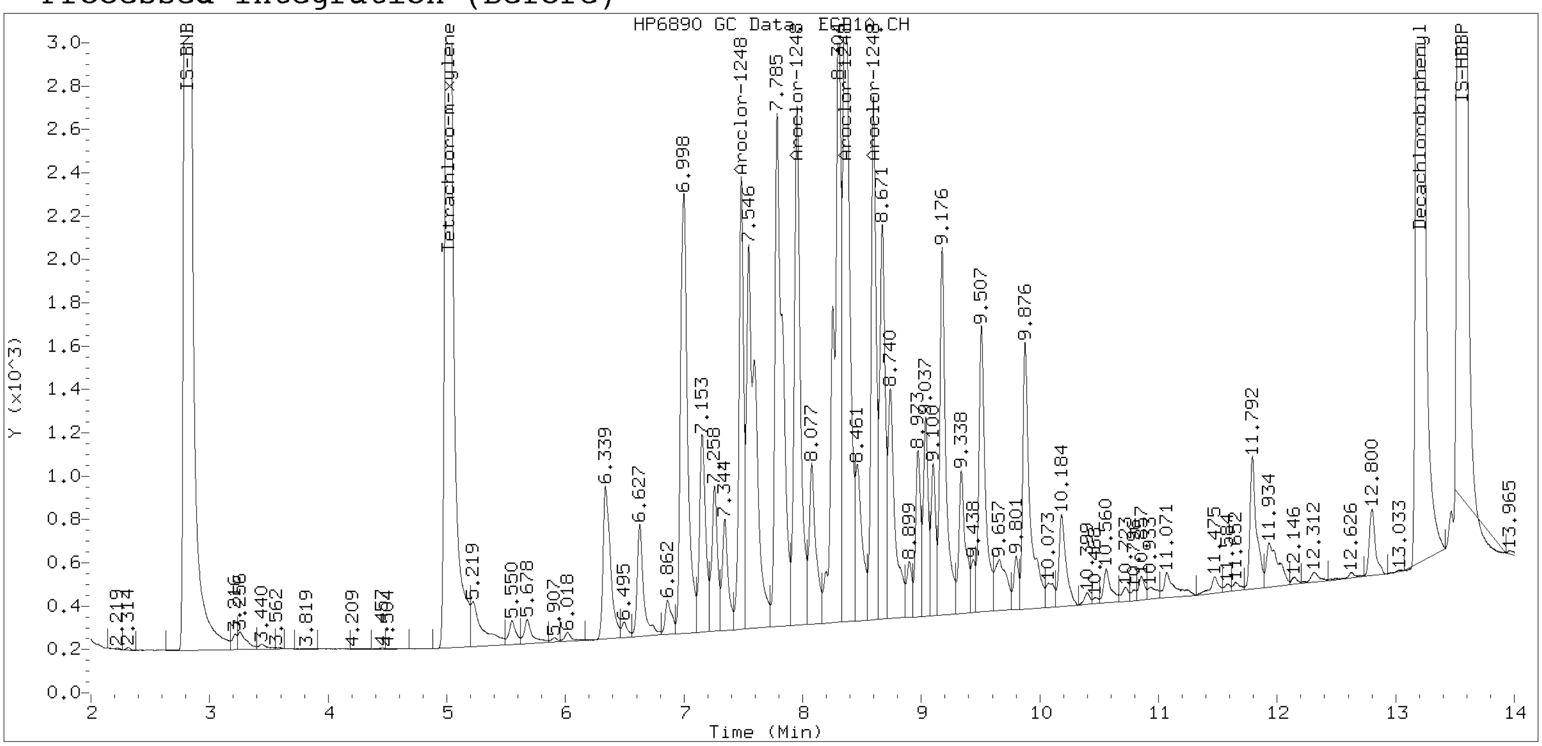
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/20201207.b/20120747ECD7.D   Injection Date: 08-DEC-2020 09:0

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ECD7
Calibration: DL00019
Lab File ID: 20120748ECD7.D
Calibration Date: 12/04/2020
Sequence: SIL0131
Injection Date: 12/08/20
Lab Sample ID: SIL0131-CCV8
Injection Time: 09:24
Sequence Name: AR1660CCV8

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	252	0.0634001	0.0641402		0.7	+/-20
Aroclor 1016 [2C]	A	250.00	271	0.0448734	0.0479681		8.4	+/-20
Aroclor 1260	A	250.00	240	0.0403882	0.0393312		-4.2	+/-20
Aroclor 1260 [2C]	A	250.00	248	0.0794282	0.0782008		-1.0	+/-20
Decachlorobiphenyl	A	40.000	36.6	0.8503828	0.7787135		-8.5	+/-20
Tetrachlorometaxylene	A	40.000	41.9	1.1663830	1.2219600		4.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.2	1.3164080	1.3896640		5.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	43.5	0.9170028	0.9981171		8.8	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201207.b/20120748ECD7.D	ARI ID: AR1660CCV8
Data file 2: /20201207.b/20201207.b/20120748ECD7.D	Client ID:
Method: \\target\share\chem4\ecd7.i\20201207.b\PCB.m	Injection Date: 08-DEC-2020 09:24
Compound Sublist: AR1660.sub	Report Date: 12/13/2020 14:25
Instrument, Inj. Vol.: ecd7.i, 2ul	Matrix: NONE
Quant Method: Internal Std	Dilution Factor: 1.0

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.013	0.000	512682	5.399	0.000	326540	41.9	43.5	3.8	Tetrachloro-m-xylene
13.205	0.000	965287	13.947	0.000	502659	36.6	42.2	14.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	104.8	108.8
Decachlorobiphenyl	91.6	105.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	839114	6.7
Hexabromobiphenyl	2132987	2479184	16.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	654312	3.0
Hexabromobiphenyl	665758	723425	8.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.628	0.000	109189	258.6	1	7.074	0.000	84678	266.8
Aroclor-1016	2	6.999	0.000	341843	254.1	2	7.670	0.000	187553	261.8
Aroclor-1016	3	7.149	0.000	144812	250.5	3	7.881	0.000	74215	273.4
Aroclor-1016	4	7.546	0.000	76917	244.7	4	8.054	0.000	45880	281.9
	Total Col1Ave (4 peaks):			252.0		Total Col2Ave (4 peaks):			271.0	RPD = 7
	Corrected Ave (3 peaks):			249.8		Corrected Ave (3 peaks):			267.3	RPD = 7
		CalAmt %D:		0.8			CalAmt %D:		8.4	
Aroclor-1260	1	10.400	0.000	212003	219.9	1	11.039	0.000	106197	240.2
Aroclor-1260	2	10.721	0.000	232129	241.1	2	11.504	0.000	122367	262.8
Aroclor-1260	3	11.072	0.000	630724	252.4	3	11.755	0.000	289752	243.2
Aroclor-1260	4	11.474	0.000	316965	248.3	4	12.344	0.000	188839	244.0
Aroclor-1260	5	11.580	0.000	131762	237.0	NS	---			----
	Total Col1Ave (5 peaks):			239.7		Total Col2Ave (4 peaks):			247.5	RPD = 3
	Corrected Ave (4 peaks):			236.6		Corrected Ave (3 peaks):			242.5	RPD = 2
		CalAmt %D:		-4.1			CalAmt %D:		-1.0	

Total PCB Area Col1 (5.113 - 13.105) = 6723155 Col1 Total PCB = 0.5 ppm*

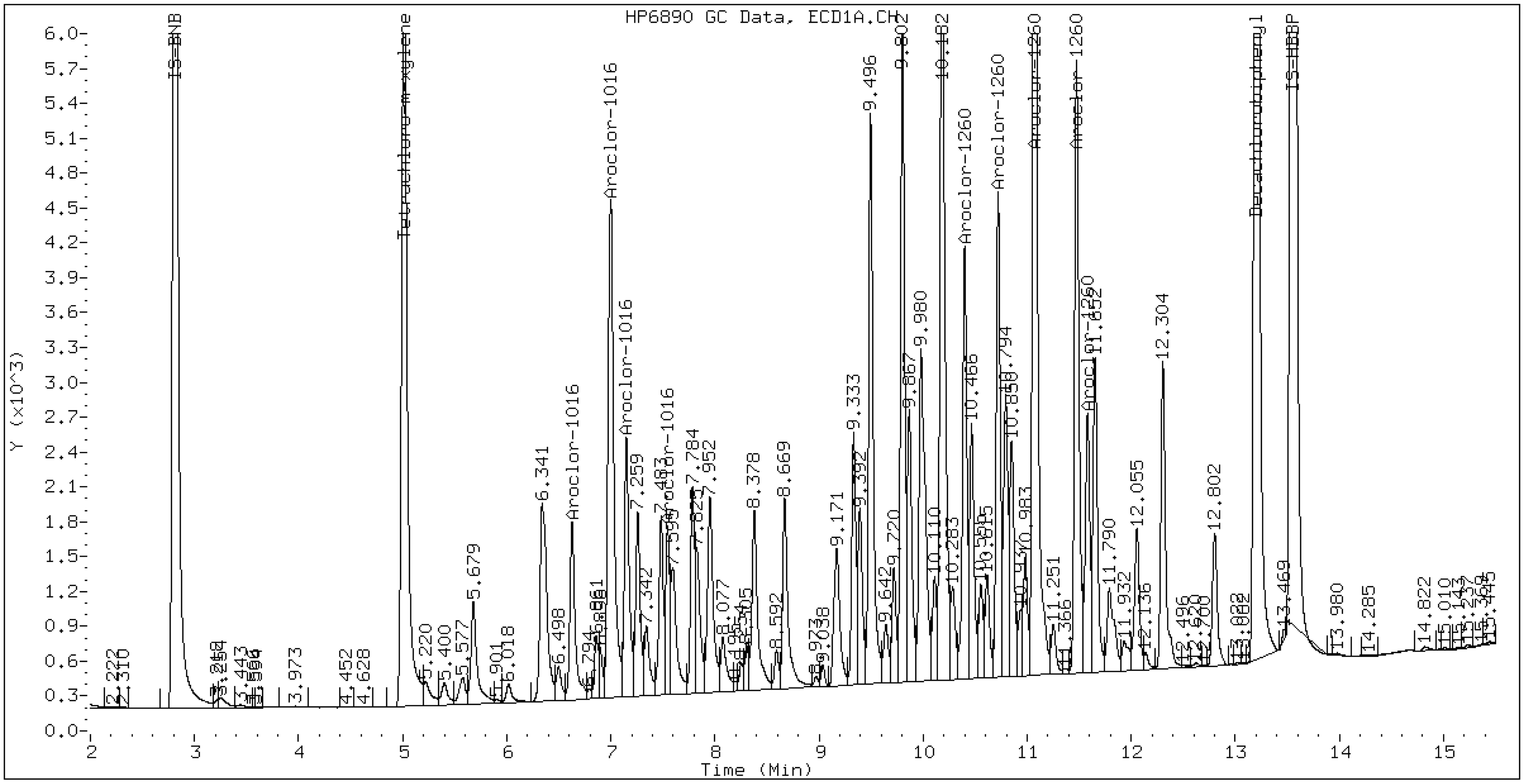
Total PCB Area Col2 (5.113 - 13.105) = 3287574 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

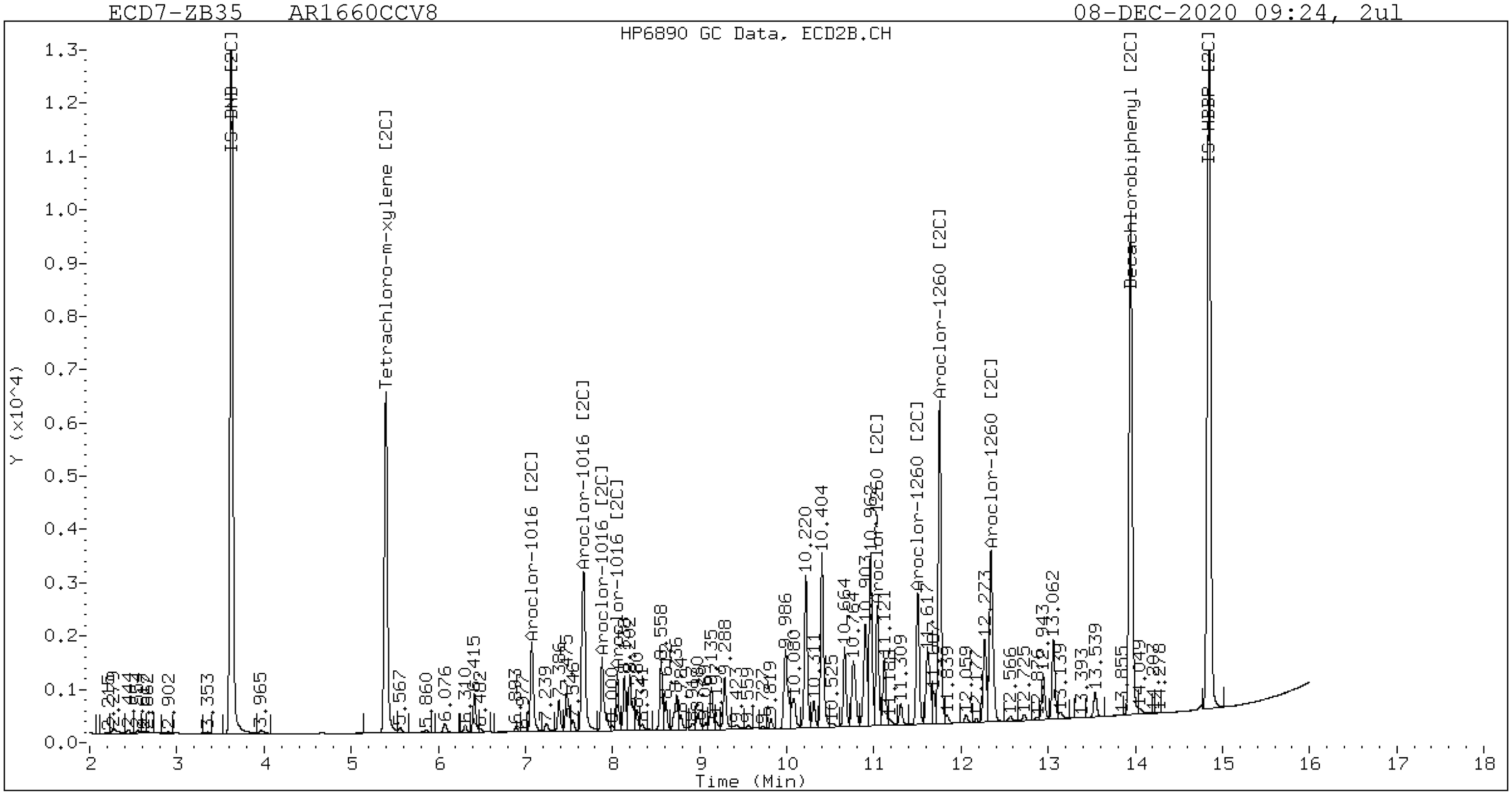
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV8 08-DEC-2020 09:24, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV8 08-DEC-2020 09:24, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120813ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0191	Injection Date:	12/09/20
Lab Sample ID:	SIL0191-CCV1	Injection Time:	00:15
Sequence Name:	AR1248CCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	274	0.0631509	0.0692707		9.6	+/-20
Aroclor 1248 [2C]	A	250.00	262	0.0406848	0.0424313		4.7	+/-20
Decachlorobiphenyl	A	40.000	37.5	0.8503828	0.7966423		-6.3	+/-20
Tetrachlorometaxylene	A	40.000	42.7	1.1663830	1.2444720		6.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.6	1.3164080	1.4021960		6.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.8	0.9170028	1.0281470		12.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120813ECD7.D
Data file 2: /20201208.b/20201208.b/20120813ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 09-DEC-2020 00:15
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	-0.001	466776	5.399	-0.001	289429	42.7	44.8	5.0	Tetrachloro-m-xylene
13.204	-0.000	901008	13.946	0.000	444039	37.5	42.6	12.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	106.7	112.1
Decachlorobiphenyl	93.7	106.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	750159	-4.6
Hexabromobiphenyl	2132987	2262014	6.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	563011	-11.4
Hexabromobiphenyl	665758	633348	-4.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	7.483	0.000	106758	272.8	1	8.137	0.000	51173	268.1
Aroclor-1248	2	7.952	0.000	165497	279.0	2	8.558	0.000	65382	261.7
Aroclor-1248	3	8.361	0.000	241064	274.8	3	8.988	0.000	88785	249.5
Aroclor-1248	4	8.597	0.000	136231	268.7	4	9.422	0.000	93276	267.4

Total Col1Ave (4 peaks): 273.8 Total Col2Ave (4 peaks): 261.7 RPD = 5
Corrected Ave (3 peaks): 272.1 Corrected Ave (3 peaks): 259.6 RPD = 5

CalAmt %D: 9.5 CalAmt %D: 4.7

Total PCB Area Col1 (5.114 - 13.105) = 2835111 Col1 Total PCB = 0.3 ppm*

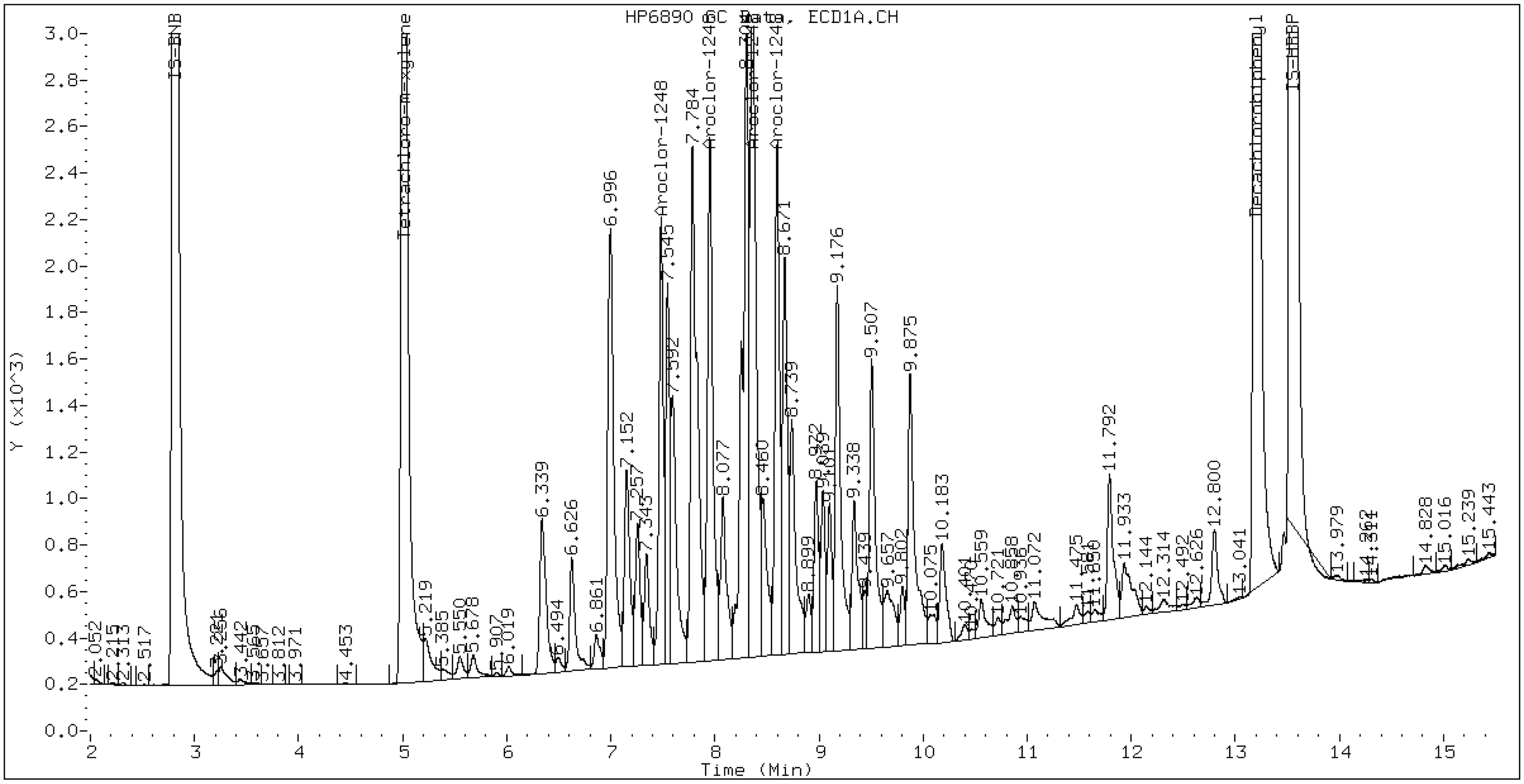
Total PCB Area Col2 (5.114 - 13.105) = 1374559 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

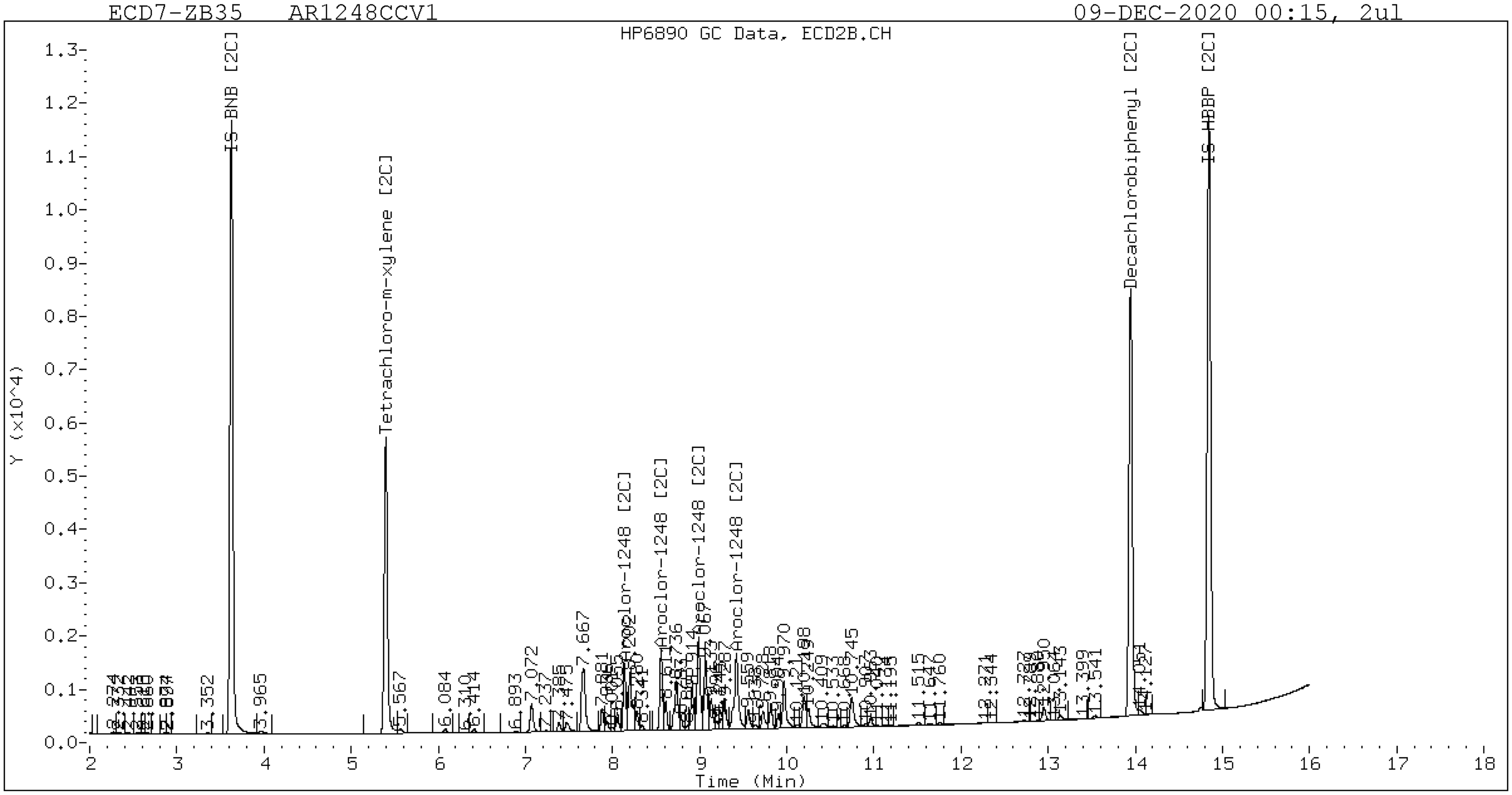
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 09-DEC-2020 00:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 09-DEC-2020 00:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	DL00019
Lab File ID:	20120814ECD7.D	Calibration Date:	12/04/2020
Sequence:	SIL0191	Injection Date:	12/09/20
Lab Sample ID:	SIL0191-CCV2	Injection Time:	00:36
Sequence Name:	AR1660CCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	247	0.0634001	0.0635527		-1.2	+/-20
Aroclor 1016 [2C]	A	250.00	267	0.0448734	0.0467751		6.9	+/-20
Aroclor 1260	A	250.00	237	0.0403882	0.0388996		-5.2	+/-20
Aroclor 1260 [2C]	A	250.00	234	0.0794282	0.0738953		-6.3	+/-20
Decachlorobiphenyl	A	40.000	36.8	0.8503828	0.7817085		-8.0	+/-20
Tetrachlorometaxylene	A	40.000	41.2	1.1663830	1.2025230		3.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.7	1.3164080	1.3410370		1.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	43.8	0.9170028	1.0045180		9.5	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /20201208.b/20120814ECD7.D
Data file 2: /20201208.b/20201208.b/20120814ECD7.D
Method: \\target\share\chem4\ecd7.i\20201208.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 09-DEC-2020 00:36
Report Date: 12/13/2020 16:40
Matrix: NONE
Dilution Factor: 1.0

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.014	0.000	427771	5.400	0.000	268825	41.2	43.8	6.1	Tetrachloro-m-xylene
13.205	0.000	850500	13.946	0.000	412415	36.8	40.7	10.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.1	109.5
Decachlorobiphenyl	91.9	101.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	786676	711456	-9.6
Hexabromobiphenyl	2132987	2176003	2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	635493	535232	-15.8
Hexabromobiphenyl	665758	615069	-7.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 04-DEC-2020
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.628	0.000	92389	258.0	1	7.073	0.000	70294	270.7
Aroclor-1016	2	6.999	0.000	289732	254.0	2	7.670	0.000	145309	247.9
Aroclor-1016	3	7.149	0.000	122720	250.4	3	7.881	0.000	60299	271.5
Aroclor-1016	4	7.544	0.000	60346	226.5	4	8.055	0.000	37042	278.2

Total Col1Ave (4 peaks): 247.2 Total Col2Ave (4 peaks): 267.1 RPD = 8
Corrected Ave (3 peaks): 243.6 Corrected Ave (3 peaks): 263.4 RPD = 8

CalAmt %D: -1.1 CalAmt %D: 6.8

Aroclor-1260	1	10.399	0.000	176820	209.0	1	11.040	0.000	82719	220.1
Aroclor-1260	2	10.721	0.000	203083	240.4	2	11.504	0.000	101452	256.2
Aroclor-1260	3	11.072	0.000	548774	250.2	3	11.756	0.000	230149	227.3
Aroclor-1260	4	11.474	0.000	277224	247.4	4	12.343	0.000	153814	233.7
Aroclor-1260	5	11.581	0.000	116687	239.1	NS	---			----

Total Col1Ave (5 peaks): 237.2 Total Col2Ave (4 peaks): 234.3 RPD = 1
Corrected Ave (4 peaks): 234.0 Corrected Ave (3 peaks): 227.0 RPD = 3

CalAmt %D: -5.1 CalAmt %D: -6.3

Total PCB Area Col1 (5.114 - 13.105) = 5805448 Col1 Total PCB = 0.5 ppm*

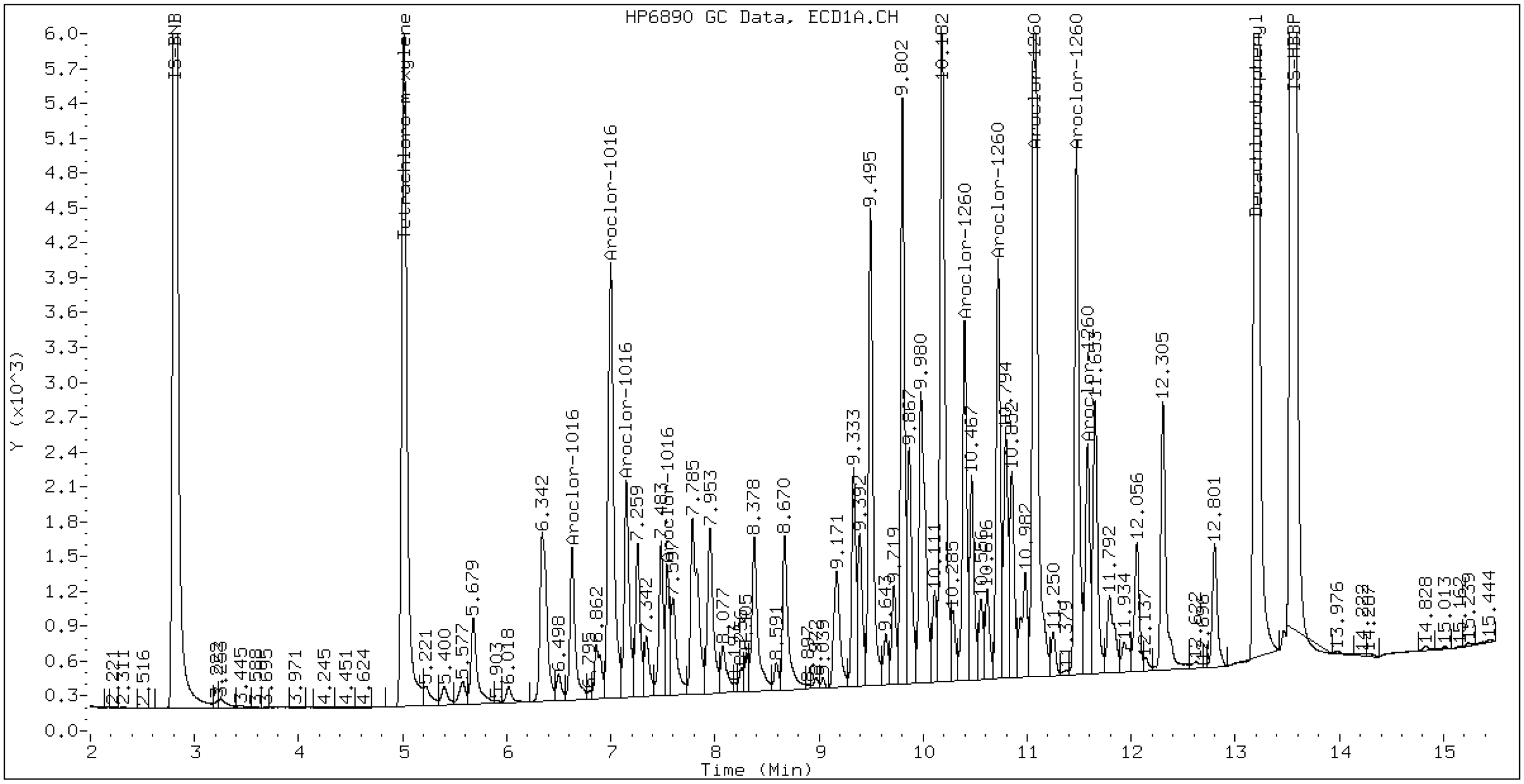
Total PCB Area Col2 (5.114 - 13.105) = 2658186 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

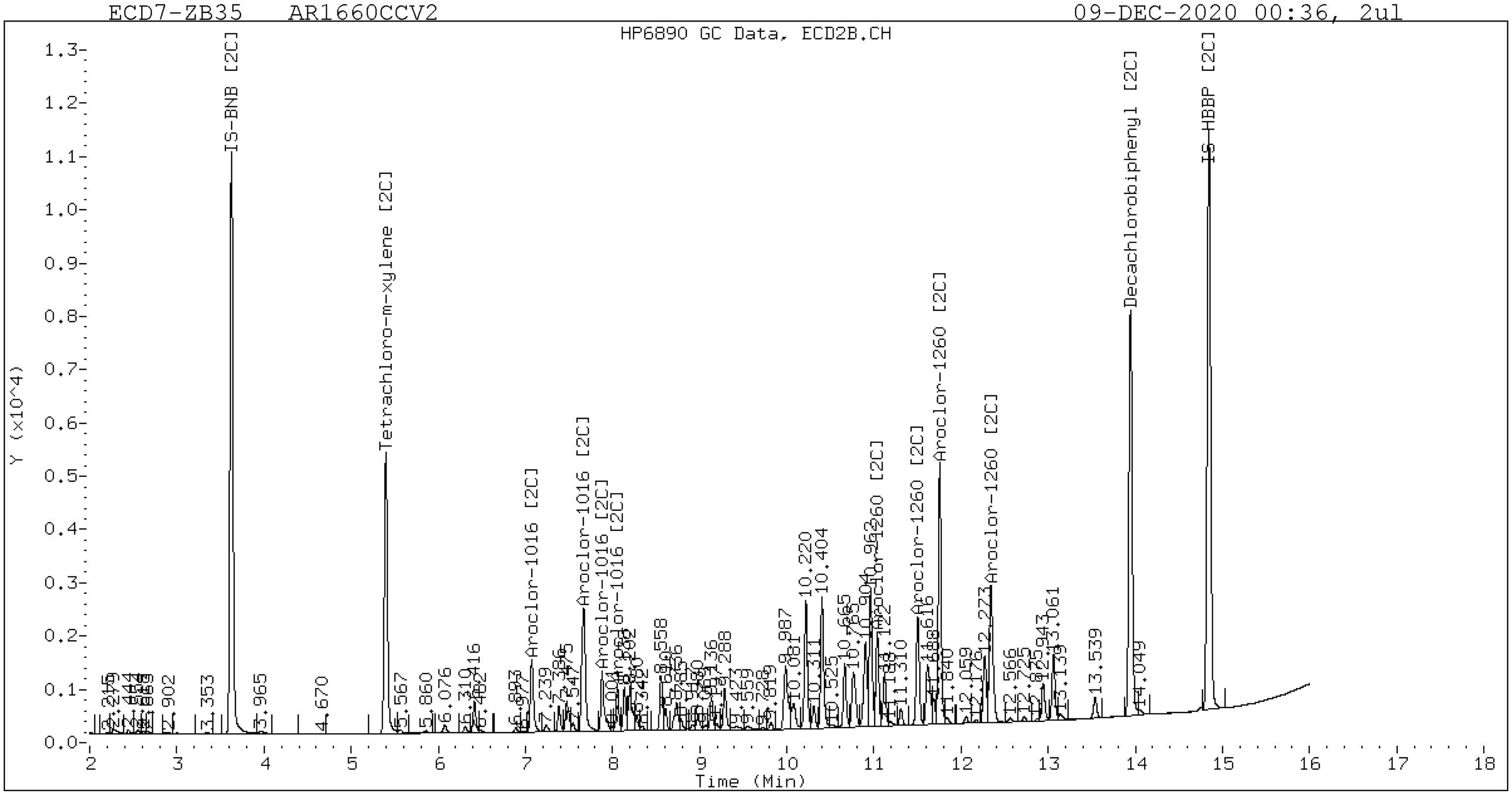
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 09-DEC-2020 00:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 09-DEC-2020 00:36, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIL0088
Instrument: ECD7
Calibration: DL00019

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Cal Standard	SIL0088-CAL1	20120409ECD7.D	20120409ECD7.D	NA	12/04/20 01:20
Cal Standard	SIL0088-CAL2	20120410ECD7.D	20120410ECD7.D	NA	12/04/20 01:40
Cal Standard	SIL0088-CAL3	20120411ECD7.D	20120411ECD7.D	NA	12/04/20 02:01
Cal Standard	SIL0088-CAL4	20120412ECD7.D	20120412ECD7.D	NA	12/04/20 02:22
Cal Standard	SIL0088-CAL5	20120413ECD7.D	20120413ECD7.D	NA	12/04/20 02:42
Cal Standard	SIL0088-CAL6	20120414ECD7.D	20120414ECD7.D	NA	12/04/20 03:03
Cal Standard	SIL0088-CAL7	20120415ECD7.D	20120415ECD7.D	NA	12/04/20 03:23
Cal Standard	SIL0088-CAL8	20120416ECD7.D	20120416ECD7.D	NA	12/04/20 03:44
Cal Standard	SIL0088-CAL9	20120417ECD7.D	20120417ECD7.D	NA	12/04/20 04:04
Cal Standard	SIL0088-CALA	20120418ECD7.D	20120418ECD7.D	NA	12/04/20 04:25
Cal Standard	SIL0088-CALB	20120419ECD7.D	20120419ECD7.D	NA	12/04/20 04:46
Secondary Cal Check	SIL0088-SCV1	20120420ECD7.D	20120420ECD7.D	NA	12/04/20 05:06
Secondary Cal Check	SIL0088-SCV2	20120421ECD7.D	20120421ECD7.D	NA	12/04/20 05:27
Secondary Cal Check	SIL0088-SCV3	20120422ECD7.D	20120422ECD7.D	NA	12/04/20 05:47
Secondary Cal Check	SIL0088-SCV4	20120423ECD7.D	20120423ECD7.D	NA	12/04/20 06:08
Secondary Cal Check	SIL0088-SCV5	20120424ECD7.D	20120424ECD7.D	NA	12/04/20 06:28
Secondary Cal Check	SIL0088-SCV6	20120425ECD7.D	20120425ECD7.D	NA	12/04/20 06:49

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/7/2020 2:15:10PM

ANALYSIS SEQUENCE

SIL0088

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: DL00019

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0088-CAL1	0.25PPM AR1660	QC		1	I007341	I007345	
SIL0088-CAL2	0.02PPM AR1660	QC		2	I007344	I007345	
SIL0088-CAL3	0.05PPM AR1660	QC		3	I007343	I007345	
SIL0088-CAL4	1.0PPM AR1660	QC		4	I007317	I007345	
SIL0088-CAL5	0.1PPM AR1660	QC		5	I007342	I007345	
SIL0088-CAL6	0.5PPM AR1660	QC		6	I007340	I007345	
SIL0088-CAL7	0.25PPM AR1242	QC		7	I007322	I007345	
SIL0088-CAL8	0.25PPM AR1248	QC		8	I007321	I007345	
SIL0088-CAL9	0.25PPM AR1254	QC		9	I007320	I007345	
SIL0088-CALA	0.25PPM AR2162	QC		10	I007319	I007345	
SIL0088-CALB	0.25PPM AR3268	QC		11	I010378	I007345	
SIL0088-SCV1	AR1660SCV1	QC		12	I005063	I007345	
SIL0088-SCV2	AR1242SCV2	QC		13	I005064	I007345	
SIL0088-SCV3	AR1248SCV3	QC		14	I005065	I007345	
SIL0088-SCV4	AR1254SCV4	QC		15	I005066	I007345	
SIL0088-SCV5	AR2162SCV5	QC		16	I005067	I007345	
SIL0088-SCV6	AR3268SCV6	QC		17	I005068	I007345	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201204.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	03-DEC-2020 22:35	20120401ECD7.D	1	RINSE	
2	03-DEC-2020 22:56	20120402ECD7.D	1	RINSE	
3	03-DEC-2020 23:17	20120403ECD7.D	1	RINSE	
4	03-DEC-2020 23:37	20120404ECD7.D	1	RINSE	
5	03-DEC-2020 23:58	20120405ECD7.D	1	RINSE	
6	04-DEC-2020 00:18	20120406ECD7.D	1	RINSE	
7	04-DEC-2020 00:39	20120407ECD7.D	1	RINSE	
8	04-DEC-2020 00:59	20120408ECD7.D	1	IB	
9	04-DEC-2020 01:20	20120409ECD7.D	1	0.25PPMAR1660	
10	04-DEC-2020 01:40	20120410ECD7.D	1	0.02PPMAR1660	
11	04-DEC-2020 02:01	20120411ECD7.D	1	0.05PPMAR1660	
12	04-DEC-2020 02:22	20120412ECD7.D	1	1PPMAR1660	
13	04-DEC-2020 02:42	20120413ECD7.D	1	0.1PPMAR1660	
14	04-DEC-2020 03:03	20120414ECD7.D	1	0.5PPMAR1660	
15	04-DEC-2020 03:23	20120415ECD7.D	1	AR1242	
16	04-DEC-2020 03:44	20120416ECD7.D	1	AR1248	
17	04-DEC-2020 04:04	20120417ECD7.D	1	AR1254	
18	04-DEC-2020 04:25	20120418ECD7.D	1	AR2162	
19	04-DEC-2020 04:46	20120419ECD7.D	1	AR3268	
20	04-DEC-2020 05:06	20120420ECD7.D	1	AR1660SCV1	
21	04-DEC-2020 05:27	20120421ECD7.D	1	AR1242SCV2	
22	04-DEC-2020 05:47	20120422ECD7.D	1	AR1248SCV3	
23	04-DEC-2020 06:08	20120423ECD7.D	1	AR1254SCV4	
24	04-DEC-2020 06:28	20120424ECD7.D	1	AR2162SCV5	
25	04-DEC-2020 06:49	20120425ECD7.D	1	AR3268SCV6	
26	04-DEC-2020 07:10	20120426ECD7.D	1	DDT	
27	04-DEC-2020 07:30	20120427ECD7.D	1	BD	
28	04-DEC-2020 07:51	20120428ECD7.D	1	AR1254ICV1	
29	04-DEC-2020 08:11	20120429ECD7.D	1	AR1660ICV2	
30	04-DEC-2020 08:32	20120430ECD7.D	5	20K0101-41RE1	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201204.b

ARI Job No.: IB   Method: PCB.m   Instrument: ecd7.i   Date: 04-DEC-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0059	20120408ECD7.D	IB		1	NO MANUAL INTEGRATION
0120	20120409ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
0140	20120410ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
0201	20120411ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
0222	20120412ECD7.D	1PPMAR1660		1	NO MANUAL INTEGRATION
0242	20120413ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
0303	20120414ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
0323	20120415ECD7.D	AR1242		1	NO MANUAL INTEGRATION
0344	20120416ECD7.D	AR1248		1	NO MANUAL INTEGRATION
0404	20120417ECD7.D	AR1254		1	NO MANUAL INTEGRATION
0425	20120418ECD7.D	AR2162		1	NO MANUAL INTEGRATION
0446	20120419ECD7.D	AR3268		1	NO MANUAL INTEGRATION
0506	20120420ECD7.D	AR1660SCV1		1	NO MANUAL INTEGRATION
0527	20120421ECD7.D	AR1242SCV2		1	NO MANUAL INTEGRATION
0547	20120422ECD7.D	AR1248SCV3		1	NO MANUAL INTEGRATION
0608	20120423ECD7.D	AR1254SCV4		1	NO MANUAL INTEGRATION
0628	20120424ECD7.D	AR2162SCV5		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201204.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0649	20120425ECD7.D	AR3268SCV6		1	NO MANUAL INTEGRATION
0710	20120426ECD7.D	DDT		1	2,4-DDT, 4,4-DDD,
0730	20120427ECD7.D	BD		1	NO MANUAL INTEGRATION

Security Status Report

Date: 07-Dec-2020 11:46

20120408ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120409ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120410ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120411ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120412ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120413ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120414ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120415ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120416ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120417ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120418ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120419ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120420ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120421ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120422ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120423ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120424ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120425ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120426ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46
20120427ECD7.D	Data Locked	jrains, 07-Dec-2020 11:46

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIL0131
Instrument: ECD7
Calibration: DL00019

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SIL0131-ICV1	20120703ECD7.D	20120703ECD7.D	NA	12/07/20 08:26
Initial Cal Check	SIL0131-ICV2	20120704ECD7.D	20120704ECD7.D	NA	12/07/20 08:47
Calibration Check	SIL0131-CCV1	20120713ECD7.D	20120713ECD7.D	NA	12/07/20 16:44
Calibration Check	SIL0131-CCV2	20120714ECD7.D	20120714ECD7.D	NA	12/07/20 17:05
Calibration Check	SIL0131-CCV3	20120716ECD7.D	20120716ECD7.D	NA	12/07/20 22:25
Calibration Check	SIL0131-CCV4	20120717ECD7.D	20120717ECD7.D	NA	12/07/20 22:46
Calibration Check	SIL0131-CCV5	20120732ECD7.D	20120732ECD7.D	NA	12/08/20 03:55
Calibration Check	SIL0131-CCV6	20120733ECD7.D	20120733ECD7.D	NA	12/08/20 04:15
Blank	BIK0599-BLK1	20120734ECD7.D	20120734ECD7.D	Solid	12/08/20 04:36
LCS	BIK0599-BS1	20120735ECD7.D	20120735ECD7.D	Solid	12/08/20 04:57
PP1-5	20K0145-02	20120736ECD7.D	20120736ECD7.D	Solid	12/08/20 05:17
PP1-7.5	20K0145-03	20120737ECD7.D	20120737ECD7.D	Solid	12/08/20 05:38
PP2-5	20K0145-07	20120738ECD7.D	20120738ECD7.D	Solid	12/08/20 05:58
PP2-7.5	20K0145-08	20120739ECD7.D	20120739ECD7.D	Solid	12/08/20 06:19
PP5-2	20K0145-11	20120740ECD7.D	20120740ECD7.D	Solid	12/08/20 06:40
PP5-8	20K0145-13	20120741ECD7.D	20120741ECD7.D	Solid	12/08/20 07:00
PP5-8	BIK0599-MS1	20120742ECD7.D	20120742ECD7.D	Solid	12/08/20 07:21
PP5-8	BIK0599-MSD1	20120743ECD7.D	20120743ECD7.D	Solid	12/08/20 07:41
P8-10S-5	20K0145-17	20120745ECD7.D	20120745ECD7.D	Solid	12/08/20 08:23
Calibration Check	SIL0131-CCV7	20120747ECD7.D	20120747ECD7.D	NA	12/08/20 09:04
Calibration Check	SIL0131-CCV8	20120748ECD7.D	20120748ECD7.D	NA	12/08/20 09:24

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/14/2020 8:34:48AM

ANALYSIS SEQUENCE

SIL0131

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: DL00019

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0131-ICV1	AR1254ICV1	QC		1	I007320	I007345	
SIL0131-ICV2	AR1660ICV2	QC		2	I007341	I007345	
BIL0061-BLK1	Blank	QC		3		I007345	
BIL0061-BS1	LCS	QC		4		I007345	
20J0425-04	ID-ST1-101420	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	E 01	5		I007345	
20J0425-07	7th-ST3-101520	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	E 01	6		I007345	
BIL0121-BLK1	Blank	QC		7		I007345	
BIL0121-BS1	LCS	QC		8		I007345	
BIL0121-BSD1	LCS Dup	QC		9		I007345	
20L0021-01	LAI-06 (1-3)	8082A PCB Solid 2	A 01	10		I007345	For solids only
SIL0131-CCV1	AR1248CCV1	QC		11	I007321	I007345	
SIL0131-CCV2	AR1660CCV2	QC		12	I007341	I007345	
SIL0131-CCV3	AR1242CCV3	QC		13	I007322	I007345	
SIL0131-CCV4	AR1660CCV4	QC		14	I007341	I007345	
BIK0552-BLK1	Blank	QC		15		I007345	
BIK0552-BS1	LCS	QC		16		I007345	
20K0126-16	PP7-2.5	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	17		I007345	2020 Samples
BIK0552-MS1	Matrix Spike	QC		18		I007345	
BIK0552-MSD1	Matrix Spike Dup	QC		19		I007345	
20K0126-22	PP3-2	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	20		I007345	2020 Samples
20K0126-24	PP3-5	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	21		I007345	2020 Samples
SIL0131-CCV5	AR1254CCV5	QC		22	I007320	I007345	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/14/2020 8:34:48AM

ANALYSIS SEQUENCE

SIL0131

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: DL00019

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0131-CCV6	AR1660CCV6	QC		23	I007341	I007345	
BIK0599-BLK1	Blank	QC		24		I007345	
BIK0599-BS1	LCS	QC		25		I007345	
20K0145-02	PP1-5	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	26		I007345	2020 Samples
20K0145-03	PP1-7.5	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	27		I007345	2020 Samples
20K0145-07	PP2-5	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	28		I007345	2020 Samples
20K0145-08	PP2-7.5	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	29		I007345	2020 Samples
20K0145-11	PP5-2	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	30		I007345	2020 Samples
20K0145-13	PP5-8	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	31		I007345	2020 Samples
BIK0599-MS1	Matrix Spike	QC		32		I007345	
BIK0599-MSD1	Matrix Spike Dup	QC		33		I007345	
20K0145-17	P8-10S-5	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 01	34		I007345	2020 Samples
SIL0131-CCV7	AR1248CCV7	QC		35	I007321	I007345	
SIL0131-CCV8	AR1660CCV8	QC		36	I007341	I007345	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201207.b

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1	07-DEC-2020 07:45	20120701ECD7.D	1	DDTS	
2	07-DEC-2020 08:06	20120702ECD7.D	1	BD	
3	07-DEC-2020 08:26	20120703ECD7.D	1	AR1254ICV1	
4	07-DEC-2020 08:47	20120704ECD7.D	1	AR1660ICV2	
5	07-DEC-2020 13:59	20120705ECD7.D	1	BIL0061-BLK1	
6	07-DEC-2020 14:20	20120706ECD7.D	1	BIL0061-BS1	
7	07-DEC-2020 14:40	20120707ECD7.D	1	20J0425-04	
8	07-DEC-2020 15:01	20120708ECD7.D	1	20J00425-07	
9	07-DEC-2020 15:22	20120709ECD7.D	1	BIL0121-BLK1	
10	07-DEC-2020 15:42	20120710ECD7.D	1	BIL0121-BS1	
11	07-DEC-2020 16:03	20120711ECD7.D	1	BIL0121-BSD1	
12	07-DEC-2020 16:23	20120712ECD7.D	1	20L0021-01	
13	07-DEC-2020 16:44	20120713ECD7.D	1	AR1248CCV1	
14	07-DEC-2020 17:05	20120714ECD7.D	1	AR1660CCV2	
15	07-DEC-2020 22:05	20120715ECD7.D	1	RINSE	
16	07-DEC-2020 22:25	20120716ECD7.D	1	AR1242CCV3	
17	07-DEC-2020 22:46	20120717ECD7.D	1	AR1660CCV4	
18	07-DEC-2020 23:07	20120718ECD7.D	1	BIK0552-BLK1	
19	07-DEC-2020 23:27	20120719ECD7.D	1	BIK0552-BS1	
20	07-DEC-2020 23:48	20120720ECD7.D	1	20K0126-01	
21	08-DEC-2020 00:08	20120721ECD7.D	1	20K0126-02	
22	08-DEC-2020 00:29	20120722ECD7.D	1	20K0126-06	
23	08-DEC-2020 00:50	20120723ECD7.D	1	20K0126-07	
24	08-DEC-2020 01:10	20120724ECD7.D	1	20K0126-11	
25	08-DEC-2020 01:31	20120725ECD7.D	1	20K0126-12	
26	08-DEC-2020 01:51	20120726ECD7.D	1	20K0126-16	
27	08-DEC-2020 02:12	20120727ECD7.D	1	BIK0552-MS1	
28	08-DEC-2020 02:32	20120728ECD7.D	1	BIK0552-MSD1	
29	08-DEC-2020 02:53	20120729ECD7.D	1	20K0126-18	
30	08-DEC-2020 03:14	20120730ECD7.D	1	20K0126-22	
31	08-DEC-2020 03:34	20120731ECD7.D	1	20K0126-24	
32	08-DEC-2020 03:55	20120732ECD7.D	1	AR1254CCV5	
33	08-DEC-2020 04:15	20120733ECD7.D	1	AR1660CCV6	
34	08-DEC-2020 04:36	20120734ECD7.D	1	BIK0599-BLK1	
35	08-DEC-2020 04:57	20120735ECD7.D	1	BIK0599-BS1	
36	08-DEC-2020 05:17	20120736ECD7.D	1	20K0145-02	
37	08-DEC-2020 05:38	20120737ECD7.D	1	20K0145-03	
38	08-DEC-2020 05:58	20120738ECD7.D	1	20K0145-07	
39	08-DEC-2020 06:19	20120739ECD7.D	1	20K0145-08	
40	08-DEC-2020 06:40	20120740ECD7.D	1	20K0145-11	
41	08-DEC-2020 07:00	20120741ECD7.D	1	20K0145-13	
42	08-DEC-2020 07:21	20120742ECD7.D	1	BIK0599-MS1	
43	08-DEC-2020 07:41	20120743ECD7.D	1	BIK0599-MSD1	
44	08-DEC-2020 08:02	20120744ECD7.D	1	20K0145-15	
45	08-DEC-2020 08:23	20120745ECD7.D	1	20K0145-17	
46	08-DEC-2020 08:43	20120746ECD7.D	1	20K0152-09	
47	08-DEC-2020 09:04	20120747ECD7.D	1	AR1248CCV7	
48	08-DEC-2020 09:24	20120748ECD7.D	1	AR1660CCV8	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201207.b

ARI Job No.: DDTS   Method: PCB.m   Instrument: ecd7.i   Date: 07-DEC-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0745	20120701ECD7.D	DDTS		1	NO MANUAL INTEGRATION
0806	20120702ECD7.D	BD		1	NO MANUAL INTEGRATION
0826	20120703ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
0847	20120704ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1359	20120705ECD7.D	BIL0061-BLK1		1	NO MANUAL INTEGRATION
1420	20120706ECD7.D	BIL0061-BS1		1	NO MANUAL INTEGRATION
1440	20120707ECD7.D	20J0425-04		1	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268, IS-HBBP,
1501	20120708ECD7.D	20J00425-07		1	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268, IS-HBBP,
1522	20120709ECD7.D	BIL0121-BLK1		1	Aroclor-1016, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268,
1542	20120710ECD7.D	BIL0121-BS1		1	NO MANUAL INTEGRATION
1603	20120711ECD7.D	BIL0121-BSD1		1	NO MANUAL INTEGRATION
1623	20120712ECD7.D	20L0021-01		1	Aroclor-1260, IS-HBBP,
1644	20120713ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1705	20120714ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
0745	20120701ECD7.D	DDTS		1	NO MANUAL INTEGRATION
0806	20120702ECD7.D	BD		1	NO MANUAL INTEGRATION
0826	20120703ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\20201207.b\20201207.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0847	20120704ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1359	20120705ECD7.D	BIL0061-BLK1		1	NO MANUAL INTEGRATION
1420	20120706ECD7.D	BIL0061-BS1		1	NO MANUAL INTEGRATION
1440	20120707ECD7.D	20J0425-04		1	NO MANUAL INTEGRATION
1501	20120708ECD7.D	20J00425-07		1	NO MANUAL INTEGRATION
1522	20120709ECD7.D	BIL0121-BLK1		1	NO MANUAL INTEGRATION
1542	20120710ECD7.D	BIL0121-BS1		1	NO MANUAL INTEGRATION
1603	20120711ECD7.D	BIL0121-BSD1		1	NO MANUAL INTEGRATION
1623	20120712ECD7.D	20L0021-01		1	NO MANUAL INTEGRATION
1644	20120713ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1705	20120714ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION

Security Status Report

Date: 14-Dec-2020 08:43

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Analytical Resources, Incorporated
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Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0191	Instrument:	ECD7
		Calibration:	DL00019

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SIL0191-ICV1	20120802ECD7.D	20120802ECD7.D	NA	12/08/20 20:29
Initial Cal Check	SIL0191-ICV2	20120803ECD7.D	20120803ECD7.D	NA	12/08/20 20:49
P8-10S-1	20K0145-15	20120812ECD7.D	20120812ECD7.D	Solid	12/08/20 23:55
Calibration Check	SIL0191-CCV1	20120813ECD7.D	20120813ECD7.D	NA	12/09/20 00:15
Calibration Check	SIL0191-CCV2	20120814ECD7.D	20120814ECD7.D	NA	12/09/20 00:36

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0088	Instrument:	ECD7
Calibration:	DL00019	Calibration Date:	12/04/2020

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0088-SCV1 (Water)			Lab File ID: 20120420ECD7.D			Analyzed: 12/04/20 05:06		
Decachlorobiphenyl	40.000	105	80 - 120	13.209	13.2094	-0.0004	N/A	
Tetrachlorometaxylene	40.000	113	80 - 120	5.017	5.016667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	121	80 - 120	13.95	13.951	-0.0010	N/A	*
Tetrachlorometaxylene [2C]	40.000	115	80 - 120	5.402	5.401167	0.0008	N/A	
SIL0088-SCV2 (Water)			Lab File ID: 20120421ECD7.D			Analyzed: 12/04/20 05:27		
Decachlorobiphenyl	40.000	102	80 - 120	13.209	13.2094	-0.0004	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	5.016	5.016667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	117	80 - 120	13.95	13.951	-0.0010	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.4	5.401167	-0.0012	N/A	
SIL0088-SCV3 (Water)			Lab File ID: 20120422ECD7.D			Analyzed: 12/04/20 05:47		
Decachlorobiphenyl	40.000	105	80 - 120	13.209	13.2094	-0.0004	N/A	
Tetrachlorometaxylene	40.000	112	80 - 120	5.016	5.016667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	121	80 - 120	13.95	13.951	-0.0010	N/A	*
Tetrachlorometaxylene [2C]	40.000	115	80 - 120	5.4	5.401167	-0.0012	N/A	
SIL0088-SCV4 (Water)			Lab File ID: 20120423ECD7.D			Analyzed: 12/04/20 06:08		
Decachlorobiphenyl	40.000	103	80 - 120	13.209	13.2094	-0.0004	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.015	5.016667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	118	80 - 120	13.951	13.951	0.0000	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.399	5.401167	-0.0022	N/A	
SIL0088-SCV5 (Water)			Lab File ID: 20120424ECD7.D			Analyzed: 12/04/20 06:28		
Decachlorobiphenyl	40.000	106	80 - 120	13.209	13.2094	-0.0004	N/A	
Tetrachlorometaxylene	40.000	113	80 - 120	5.015	5.016667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	122	80 - 120	13.95	13.951	-0.0010	N/A	*
Tetrachlorometaxylene [2C]	40.000	117	80 - 120	5.4	5.401167	-0.0012	N/A	
SIL0088-SCV6 (Water)			Lab File ID: 20120425ECD7.D			Analyzed: 12/04/20 06:49		
Decachlorobiphenyl	40.000	154	80 - 200	13.21	13.2094	0.0006	N/A	
Tetrachlorometaxylene	40.000	114	80 - 120	5.015	5.016667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	174	80 - 200	13.949	13.951	-0.0020	N/A	
Tetrachlorometaxylene [2C]	40.000	115	80 - 120	5.399	5.401167	-0.0022	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0131	Instrument:	ECD7
Calibration:	DL00019	Calibration Date:	12/04/2020

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0131-ICV1 (Solid)			Lab File ID: 20120703ECD7.D			Analyzed: 12/07/20 08:26		
Decachlorobiphenyl	40.000	90.8	80 - 120	13.206	13.2094	-0.0034	N/A	
Tetrachlorometaxylene	40.000	103	80 - 120	5.016	5.016667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	104	80 - 120	13.947	13.951	-0.0040	N/A	
Tetrachlorometaxylene [2C]	40.000	110	80 - 120	5.399	5.401167	-0.0022	N/A	
SIL0131-ICV2 (Solid)			Lab File ID: 20120704ECD7.D			Analyzed: 12/07/20 08:47		
Decachlorobiphenyl	40.000	89.0	80 - 120	13.206	13.2094	-0.0034	N/A	
Tetrachlorometaxylene	40.000	102	80 - 120	5.014	5.016667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	99.0	80 - 120	13.947	13.951	-0.0040	N/A	
Tetrachlorometaxylene [2C]	40.000	107	80 - 120	5.399	5.401167	-0.0022	N/A	
SIL0131-CCV1 (Solid)			Lab File ID: 20120713ECD7.D			Analyzed: 12/07/20 16:44		
Decachlorobiphenyl	40.000	91.3	80 - 120	13.205	13.2094	-0.0044	N/A	
Tetrachlorometaxylene	40.000	102	80 - 120	5.011	5.016667	-0.0057	N/A	
Decachlorobiphenyl [2C]	40.000	102	80 - 120	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.398	5.401167	-0.0032	N/A	
SIL0131-CCV2 (Solid)			Lab File ID: 20120714ECD7.D			Analyzed: 12/07/20 17:05		
Decachlorobiphenyl	40.000	88.0	80 - 120	13.205	13.2094	-0.0044	N/A	
Tetrachlorometaxylene	40.000	101	80 - 120	5.014	5.016667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	97.3	80 - 120	13.946	13.951	-0.0050	N/A	
Tetrachlorometaxylene [2C]	40.000	109	80 - 120	5.399	5.401167	-0.0022	N/A	
SIL0131-CCV3 (Solid)			Lab File ID: 20120716ECD7.D			Analyzed: 12/07/20 22:25		
Decachlorobiphenyl	40.000	89.5	80 - 120	13.207	13.2094	-0.0024	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	5.015	5.016667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	105	80 - 120	13.948	13.951	-0.0030	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.398	5.401167	-0.0032	N/A	
SIL0131-CCV4 (Solid)			Lab File ID: 20120717ECD7.D			Analyzed: 12/07/20 22:46		
Decachlorobiphenyl	40.000	87.8	80 - 120	13.205	13.2094	-0.0044	N/A	
Tetrachlorometaxylene	40.000	102	80 - 120	5.014	5.016667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	97.5	80 - 120	13.946	13.951	-0.0050	N/A	
Tetrachlorometaxylene [2C]	40.000	108	80 - 120	5.399	5.401167	-0.0022	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0131	Instrument:	ECD7
Calibration:	DL00019	Calibration Date:	12/04/2020

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0131-CCV5 (Solid)			Lab File ID: 20120732ECD7.D			Analyzed: 12/08/20 03:55		
Decachlorobiphenyl	40.000	97.5	80 - 120	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	5.014	5.016667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	109	80 - 120	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	111	80 - 120	5.399	5.401167	-0.0022	N/A	
SIL0131-CCV6 (Solid)			Lab File ID: 20120733ECD7.D			Analyzed: 12/08/20 04:15		
Decachlorobiphenyl	40.000	95.5	80 - 120	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	40.000	105	80 - 120	5.013	5.016667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	108	80 - 120	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	110	80 - 120	5.398	5.401167	-0.0032	N/A	
BIK0599-BLK1 (Solid)			Lab File ID: 20120734ECD7.D			Analyzed: 12/08/20 04:36		
Decachlorobiphenyl	40.000	75.2	40 - 133	13.203	13.2094	-0.0064	N/A	
Tetrachlorometaxylene	40.000	77.0	53 - 120	5.013	5.016667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	90.7	40 - 133	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	77.0	53 - 120	5.398	5.401167	-0.0032	N/A	
BIK0599-BS1 (Solid)			Lab File ID: 20120735ECD7.D			Analyzed: 12/08/20 04:57		
Decachlorobiphenyl	40.000	69.4	40 - 133	13.203	13.2094	-0.0064	N/A	
Tetrachlorometaxylene	40.000	68.9	53 - 120	5.012	5.016667	-0.0047	N/A	
Decachlorobiphenyl [2C]	40.000	82.4	40 - 133	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	67.9	53 - 120	5.397	5.401167	-0.0042	N/A	
20K0145-02 (Solid)			Lab File ID: 20120736ECD7.D			Analyzed: 12/08/20 05:17		
Decachlorobiphenyl	30.769	70.2	40 - 133	13.202	13.2094	-0.0074	N/A	
Tetrachlorometaxylene	30.769	70.4	53 - 120	5.013	5.016667	-0.0037	N/A	
Decachlorobiphenyl [2C]	30.769	78.5	40 - 133	13.944	13.951	-0.0070	N/A	
Tetrachlorometaxylene [2C]	30.769	67.8	53 - 120	5.398	5.401167	-0.0032	N/A	
20K0145-03 (Solid)			Lab File ID: 20120737ECD7.D			Analyzed: 12/08/20 05:38		
Decachlorobiphenyl	32.012	76.7	40 - 133	13.203	13.2094	-0.0064	N/A	
Tetrachlorometaxylene	32.012	75.4	53 - 120	5.012	5.016667	-0.0047	N/A	
Decachlorobiphenyl [2C]	32.012	88.0	40 - 133	13.946	13.951	-0.0050	N/A	
Tetrachlorometaxylene [2C]	32.012	74.7	53 - 120	5.397	5.401167	-0.0042	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0131	Instrument:	ECD7
Calibration:	DL00019	Calibration Date:	12/04/2020

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
20K0145-07 (Solid)			Lab File ID: 20120738ECD7.D			Analyzed: 12/08/20 05:58		
Decachlorobiphenyl	31.760	66.8	40 - 133	13.203	13.2094	-0.0064	N/A	
Tetrachlorometaxylene	31.760	69.9	53 - 120	5.013	5.016667	-0.0037	N/A	
Decachlorobiphenyl [2C]	31.760	78.5	40 - 133	13.947	13.951	-0.0040	N/A	
Tetrachlorometaxylene [2C]	31.760	69.6	53 - 120	5.397	5.401167	-0.0042	N/A	
20K0145-08 (Solid)			Lab File ID: 20120739ECD7.D			Analyzed: 12/08/20 06:19		
Decachlorobiphenyl	35.351	76.3	40 - 133	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	35.351	74.9	53 - 120	5.012	5.016667	-0.0047	N/A	
Decachlorobiphenyl [2C]	35.351	84.6	40 - 133	13.946	13.951	-0.0050	N/A	
Tetrachlorometaxylene [2C]	35.351	73.0	53 - 120	5.398	5.401167	-0.0032	N/A	
20K0145-11 (Solid)			Lab File ID: 20120740ECD7.D			Analyzed: 12/08/20 06:40		
Decachlorobiphenyl	35.487	69.7	40 - 133	13.201	13.2094	-0.0084	N/A	
Tetrachlorometaxylene	35.487	67.8	53 - 120	5.011	5.016667	-0.0057	N/A	
Decachlorobiphenyl [2C]	35.487	78.2	40 - 133	13.943	13.951	-0.0080	N/A	
Tetrachlorometaxylene [2C]	35.487	70.2	53 - 120	5.397	5.401167	-0.0042	N/A	
20K0145-13 (Solid)			Lab File ID: 20120741ECD7.D			Analyzed: 12/08/20 07:00		
Decachlorobiphenyl	37.649	70.2	40 - 133	13.203	13.2094	-0.0064	N/A	
Tetrachlorometaxylene	37.649	70.9	53 - 120	5.012	5.016667	-0.0047	N/A	
Decachlorobiphenyl [2C]	37.649	78.0	40 - 133	13.946	13.951	-0.0050	N/A	
Tetrachlorometaxylene [2C]	37.649	68.9	53 - 120	5.398	5.401167	-0.0032	N/A	
BIK0599-MS1 (Solid)			Lab File ID: 20120742ECD7.D			Analyzed: 12/08/20 07:21		
Decachlorobiphenyl	38.365	69.9	40 - 133	13.205	13.2094	-0.0044	N/A	
Tetrachlorometaxylene	38.365	71.7	53 - 120	5.012	5.016667	-0.0047	N/A	
Decachlorobiphenyl [2C]	38.365	80.3	40 - 133	13.947	13.951	-0.0040	N/A	
Tetrachlorometaxylene [2C]	38.365	69.1	53 - 120	5.398	5.401167	-0.0032	N/A	
BIK0599-MSD1 (Solid)			Lab File ID: 20120743ECD7.D			Analyzed: 12/08/20 07:41		
Decachlorobiphenyl	38.787	58.9	40 - 133	13.203	13.2094	-0.0064	N/A	
Tetrachlorometaxylene	38.787	66.0	53 - 120	5.013	5.016667	-0.0037	N/A	
Decachlorobiphenyl [2C]	38.787	67.3	40 - 133	13.946	13.951	-0.0050	N/A	
Tetrachlorometaxylene [2C]	38.787	62.7	53 - 120	5.398	5.401167	-0.0032	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0131	Instrument:	ECD7
Calibration:	DL00019	Calibration Date:	12/04/2020

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
20K0145-17 (Solid)			Lab File ID: 20120745ECD7.D			Analyzed: 12/08/20 08:23		
Decachlorobiphenyl	29.530	57.9	40 - 133	13.197	13.2094	-0.0124	N/A	
Tetrachlorometaxylene	29.530	60.3	53 - 120	5.012	5.016667	-0.0047	N/A	
Decachlorobiphenyl [2C]	29.530	66.1	40 - 133	13.941	13.951	-0.0100	N/A	
Tetrachlorometaxylene [2C]	29.530	66.7	53 - 120	5.397	5.401167	-0.0042	N/A	
SIL0131-CCV7 (Solid)			Lab File ID: 20120747ECD7.D			Analyzed: 12/08/20 09:04		
Decachlorobiphenyl	40.000	96.3	80 - 120	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	40.000	104	80 - 120	5.013	5.016667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	109	80 - 120	13.949	13.951	-0.0020	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.399	5.401167	-0.0022	N/A	
SIL0131-CCV8 (Solid)			Lab File ID: 20120748ECD7.D			Analyzed: 12/08/20 09:24		
Decachlorobiphenyl	40.000	91.5	80 - 120	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	40.000	105	80 - 120	5.012	5.016667	-0.0047	N/A	
Decachlorobiphenyl [2C]	40.000	106	80 - 120	13.947	13.951	-0.0040	N/A	
Tetrachlorometaxylene [2C]	40.000	109	80 - 120	5.399	5.401167	-0.0022	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0191	Instrument:	ECD7
Calibration:	DL00019	Calibration Date:	12/04/2020

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0191-ICV1 (Solid)			Lab File ID: 20120802ECD7.D			Analyzed: 12/08/20 20:29		
Decachlorobiphenyl	40.000	93.3	80 - 120	13.205	13.2094	-0.0044	N/A	
Tetrachlorometaxylene	40.000	113	80 - 120	5.013	5.016667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	109	80 - 120	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	114	80 - 120	5.396	5.401167	-0.0052	N/A	
SIL0191-ICV2 (Solid)			Lab File ID: 20120803ECD7.D			Analyzed: 12/08/20 20:49		
Decachlorobiphenyl	40.000	94.0	80 - 120	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.011	5.016667	-0.0057	N/A	
Decachlorobiphenyl [2C]	40.000	103	80 - 120	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.396	5.401167	-0.0052	N/A	
20K0145-15 (Solid)			Lab File ID: 20120812ECD7.D			Analyzed: 12/08/20 23:55		
Decachlorobiphenyl	28.998	73.7	40 - 133	13.194	13.2094	-0.0154	N/A	
Tetrachlorometaxylene	28.998	74.3	53 - 120	5.008	5.016667	-0.0087	N/A	
Decachlorobiphenyl [2C]	28.998	64.5	40 - 133	13.943	13.951	-0.0080	N/A	
Tetrachlorometaxylene [2C]	28.998	74.6	53 - 120	5.396	5.401167	-0.0052	N/A	
SIL0191-CCV1 (Solid)			Lab File ID: 20120813ECD7.D			Analyzed: 12/09/20 00:15		
Decachlorobiphenyl	40.000	93.8	80 - 120	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	40.000	107	80 - 120	5.013	5.016667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	107	80 - 120	13.946	13.951	-0.0050	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.398	5.401167	-0.0032	N/A	
SIL0191-CCV2 (Solid)			Lab File ID: 20120814ECD7.D			Analyzed: 12/09/20 00:36		
Decachlorobiphenyl	40.000	92.0	80 - 120	13.204	13.2094	-0.0054	N/A	
Tetrachlorometaxylene	40.000	103	80 - 120	5.014	5.016667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	102	80 - 120	13.945	13.951	-0.0060	N/A	
Tetrachlorometaxylene [2C]	40.000	110	80 - 120	5.399	5.401167	-0.0022	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0088	Instrument:	ECD7
		Calibration:	DL00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SIL0088-SCV1)	(Water)		Lab File ID: 20120420ECD7.D				Analyzed: 12/04/20 05:06		
1-Bromo-2-Nitrobenzene	795708	2.817	786676	2.816	101	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	2186421	13.563	2132987	13.564	103	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	637628	3.631	635493	3.63	100	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	698314	14.852	665758	14.851	105	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SIL0088-SCV2)	(Water)		Lab File ID: 20120421ECD7.D				Analyzed: 12/04/20 05:27		
1-Bromo-2-Nitrobenzene	793550	2.816	786676	2.816	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2188269	13.564	2132987	13.564	103	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	634778	3.628	635493	3.63	100	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	697627	14.852	665758	14.851	105	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SIL0088-SCV3)	(Water)		Lab File ID: 20120422ECD7.D				Analyzed: 12/04/20 05:47		
1-Bromo-2-Nitrobenzene	794644	2.814	786676	2.816	101	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	2176927	13.563	2132987	13.564	102	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	632599	3.628	635493	3.63	100	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	689113	14.851	665758	14.851	104	50 - 200	0.000	+/-0.50	
Secondary Cal Check (SIL0088-SCV4)	(Water)		Lab File ID: 20120423ECD7.D				Analyzed: 12/04/20 06:08		
1-Bromo-2-Nitrobenzene	792760	2.815	786676	2.816	101	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	2135851	13.564	2132987	13.564	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	625033	3.628	635493	3.63	98	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	683418	14.852	665758	14.851	103	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SIL0088-SCV5)	(Water)		Lab File ID: 20120424ECD7.D				Analyzed: 12/04/20 06:28		
1-Bromo-2-Nitrobenzene	760705	2.815	786676	2.816	97	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	2113407	13.564	2132987	13.564	99	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	613536	3.629	635493	3.63	97	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	670231	14.852	665758	14.851	101	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SIL0088-SCV6)	(Water)		Lab File ID: 20120425ECD7.D				Analyzed: 12/04/20 06:49		
1-Bromo-2-Nitrobenzene	770524	2.814	786676	2.816	98	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	2144827	13.563	2132987	13.564	101	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	620502	3.628	635493	3.63	98	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	684700	14.851	665758	14.851	103	50 - 200	0.000	+/-0.50	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage
Sequence: SIL0131 Instrument: ECD7
Calibration: DL00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SIL0131-ICV1)		(Solid)	Lab File ID: 20120703ECD7.D				Analyzed: 12/07/20 08:26		
1-Bromo-2-Nitrobenzene	835467	2.815	782667	2.815	107	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2461198	13.561	2346356	13.561	105	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	628897	3.629	597818	3.629	105	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	737108	14.845	715263	14.847	103	50 - 200	-0.002	+/-0.50	
Initial Cal Check (SIL0131-ICV2)		(Solid)	Lab File ID: 20120704ECD7.D				Analyzed: 12/07/20 08:47		
1-Bromo-2-Nitrobenzene	782667	2.815	782667	2.815	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2346356	13.561	2346356	13.561	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	597818	3.629	597818	3.629	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	715263	14.847	715263	14.847	100	50 - 200	0.000	+/-0.50	
Blank (BIK0599-BLK1)		(Solid)	Lab File ID: 20120734ECD7.D				Analyzed: 12/08/20 04:36		
1-Bromo-2-Nitrobenzene	746030	2.812	782667	2.815	95	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	2101760	13.56	2346356	13.561	90	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	577430	3.627	597818	3.629	97	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	593721	14.845	715263	14.847	83	50 - 200	-0.002	+/-0.50	
LCS (BIK0599-BS1)		(Solid)	Lab File ID: 20120735ECD7.D				Analyzed: 12/08/20 04:57		
1-Bromo-2-Nitrobenzene	799401	2.814	782667	2.815	102	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	2221269	13.56	2346356	13.561	95	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	621807	3.628	597818	3.629	104	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	628752	14.845	715263	14.847	88	50 - 200	-0.002	+/-0.50	
PP1-5 (20K0145-02)		(Solid)	Lab File ID: 20120736ECD7.D				Analyzed: 12/08/20 05:17		
1-Bromo-2-Nitrobenzene	791971	2.814	835467	2.815	95	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	2276976	13.558	2461198	13.561	93	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	625430	3.628	628897	3.629	99	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	670985	14.847	737108	14.845	91	50 - 200	0.002	+/-0.50	
PP1-7.5 (20K0145-03)		(Solid)	Lab File ID: 20120737ECD7.D				Analyzed: 12/08/20 05:38		
1-Bromo-2-Nitrobenzene	779968	2.814	835467	2.815	93	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	2280378	13.559	2461198	13.561	93	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	614911	3.626	628897	3.629	98	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	671481	14.846	737108	14.845	91	50 - 200	0.001	+/-0.50	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0131	Instrument:	ECD7
		Calibration:	DL00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
PP2-5 (20K0145-07)		(Solid)		Lab File ID: 20120738ECD7.D				Analyzed: 12/08/20 05:58	
1-Bromo-2-Nitrobenzene	812459	2.812	782667	2.815	104	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	2462480	13.559	2346356	13.561	105	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	654753	3.626	597818	3.629	110	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	700173	14.846	715263	14.847	98	50 - 200	-0.001	+/-0.50	
PP2-7.5 (20K0145-08)		(Solid)		Lab File ID: 20120739ECD7.D				Analyzed: 12/08/20 06:19	
1-Bromo-2-Nitrobenzene	771328	2.812	782667	2.815	99	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	2337302	13.558	2346356	13.561	100	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	613839	3.628	597818	3.629	103	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	681789	14.847	715263	14.847	95	50 - 200	0.000	+/-0.50	
PP5-2 (20K0145-11)		(Solid)		Lab File ID: 20120740ECD7.D				Analyzed: 12/08/20 06:40	
1-Bromo-2-Nitrobenzene	780698	2.813	835467	2.815	93	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	2459898	13.556	2461198	13.561	100	50 - 200	-0.005	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	596612	3.628	628897	3.629	95	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	696883	14.845	737108	14.845	95	50 - 200	0.000	+/-0.50	
PP5-8 (20K0145-13)		(Solid)		Lab File ID: 20120741ECD7.D				Analyzed: 12/08/20 07:00	
1-Bromo-2-Nitrobenzene	812979	2.812	782667	2.815	104	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	2430786	13.559	2346356	13.561	104	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	639890	3.627	597818	3.629	107	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	714842	14.845	715263	14.847	100	50 - 200	-0.002	+/-0.50	
Matrix Spike (BIK0599-MS1)		(Solid)		Lab File ID: 20120742ECD7.D				Analyzed: 12/08/20 07:21	
1-Bromo-2-Nitrobenzene	799767	2.813	782667	2.815	102	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	2535590	13.56	2346356	13.561	108	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	638662	3.627	597818	3.629	107	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	714781	14.846	715263	14.847	100	50 - 200	-0.001	+/-0.50	
Matrix Spike Dup (BIK0599-MSD1)		(Solid)		Lab File ID: 20120743ECD7.D				Analyzed: 12/08/20 07:41	
1-Bromo-2-Nitrobenzene	802648	2.814	782667	2.815	103	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	2536092	13.559	2346356	13.561	108	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	647927	3.627	597818	3.629	108	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	739806	14.845	715263	14.847	103	50 - 200	-0.002	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIL0131	Instrument:	ECD7
		Calibration:	DL00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
P8-10S-5 (20K0145-17)		(Solid)		Lab File ID: 20120745ECD7.D			Analyzed: 12/08/20 08:23		
1-Bromo-2-Nitrobenzene	829149	2.812	835467	2.815	99	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	2268978	13.553	2461198	13.561	92	50 - 200	-0.008	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	580380	3.628	628897	3.629	92	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	609224	14.842	737108	14.845	83	50 - 200	-0.003	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIL0191
Instrument: ECD7
Calibration: DL00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SIL0191-ICV1)		(Solid)		Lab File ID: 20120802ECD7.D			Analyzed: 12/08/20 20:29		
1-Bromo-2-Nitrobenzene	760638	2.813	760638	2.813	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2307416	13.56	2307416	13.56	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	576121	3.624	576121	3.624	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	637145	14.845	637145	14.845	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SIL0191-ICV2)		(Solid)		Lab File ID: 20120803ECD7.D			Analyzed: 12/08/20 20:49		
1-Bromo-2-Nitrobenzene	703778	2.812	760638	2.813	93	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	2139062	13.559	2307416	13.56	93	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	540429	3.625	576121	3.624	94	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	612903	14.845	637145	14.845	96	50 - 200	0.000	+/-0.50	
P8-10S-1 (20K0145-15)		(Solid)		Lab File ID: 20120812ECD7.D			Analyzed: 12/08/20 23:55		
1-Bromo-2-Nitrobenzene	735680	2.812	703778	2.812	105	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2365963	13.554	2139062	13.559	111	50 - 200	-0.005	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	520252	3.626	540429	3.625	96	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	633070	14.843	612903	14.845	103	50 - 200	-0.002	+/-0.50	

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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc			Project:	ICS-Former NW Cooperage
Matrix:	Soil	Laboratory ID:	20K0145-02	File ID:	20120736ECD7.D
Sampled:	11/05/20 12:50	Prepared:	11/19/20 23:00	Analyzed:	12/08/20 05:17
Solids:	88.92	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BIK0599	Sequence:	SIL0131		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	* 1	9.869	9.877	0.008	27646	24.7	39.2
	2	10.205	10.205	0	11054	16.6	
Aroclor 1260	* 1	11.575	11.58533	0.0103	15097.6	11.2	13.3
	2	12.344	12.349	0.005	8356	9.8	

* Column used for quantitation

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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc			Project:	ICS-Former NW Cooperage
Matrix:	Soil	Laboratory ID:	20K0145-11	File ID:	20120740ECD7.D
Sampled:	11/05/20 10:00	Prepared:	11/19/20 23:00	Analyzed:	12/08/20 06:40
Solids:	74.45	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BIK0599	Sequence:	SIL0131		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	1	9.86	9.877	0.017	11945.2	13.3	4.4
	* 2	10.216	10.205	0.011	7316.2	13.9	
Aroclor 1260	* 1	11.575	11.58533	0.0103	43898.6	33.7	15.
	2	12.338	12.349	0.011	21722.75	29.0	

* Column used for quantitation

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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 20K0145-17 File ID: 20120745ECD7.D

Sampled: 11/06/20 08:30 Prepared: 11/19/20 23:00 Analyzed: 12/08/20 08:23

Solids: 93.16 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BIK0599 Sequence: SIL0131

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.583	8.601	0.018	41131	45.1	16.6
	2	9.411	9.426	0.015	14184.25	38.2	
Aroclor 1254	* 1	9.862	9.877	0.015	109646.4	92.9	28.8
	2	10.187	10.205	0.018	43188.4	69.5	
Aroclor 1260	* 1	11.573	11.58533	0.0123	51133.2	34.9	2.
	2	12.336	12.349	0.013	26705.25	34.2	

* Column used for quantitation

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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 20K0145-15 File ID: 20120812ECD7.D

Sampled: 11/06/20 08:20 Prepared: 11/19/20 23:00 Analyzed: 12/08/20 23:55

Solids: 94.87 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BIK0599 Sequence: SIL0191

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.589	8.601	0.012	142137	4470	3.4
	2	9.415	9.426	0.011	63261.25	4320	
Aroclor 1254	* 1	9.865	9.877	0.012	109216.8	2090	31.6
	2	10.191	10.205	0.014	46261.4	1520	
Aroclor 1260	* 1	11.574	11.58533	0.0113	44941.2	682	5.6
	2	12.339	12.349	0.01	22123.75	645	

* Column used for quantitation

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HOLDING TIME SUMMARY

Analysis: EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PP1-5 20K0145-02	11/05/20 12:50	11/07/20 11:00	11/19/20 23:00	14	14	12/08/20 05:17	18	40	
PP1-7.5 20K0145-03	11/05/20 12:55	11/07/20 11:00	11/19/20 23:00	14	14	12/08/20 05:38	18	40	
PP2-5 20K0145-07	11/05/20 11:35	11/07/20 11:00	11/19/20 23:00	14	14	12/08/20 05:58	18	40	
PP2-7.5 20K0145-08	11/05/20 11:40	11/07/20 11:00	11/19/20 23:00	14	14	12/08/20 06:19	18	40	
PP5-2 20K0145-11	11/05/20 10:00	11/07/20 11:00	11/19/20 23:00	14	14	12/08/20 06:40	18	40	
PP5-8 20K0145-13	11/05/20 10:10	11/07/20 11:00	11/19/20 23:00	14	14	12/08/20 07:00	18	40	
P8-10S-1 20K0145-15	11/06/20 08:20	11/07/20 11:00	11/19/20 23:00	13	14	12/08/20 23:55	19	40	
P8-10S-5 20K0145-17	11/06/20 08:30	11/07/20 11:00	11/19/20 23:00	13	14	12/08/20 08:23	18	40	
Matrix Spike BIK0599-MS1	11/05/20 10:10	11/07/20 11:00	11/19/20 23:00	14	14	12/08/20 07:21	18	40	
Matrix Spike Dup BIK0599-MSD1	11/05/20 10:10	11/07/20 11:00	11/19/20 23:00	14	14	12/08/20 07:41	18	40	

* Indicates hold time exceedance.

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METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Solid Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	8.0	20.0	ug/kg
Aroclor 1016 [2C]	8.0	20.0	ug/kg
Aroclor 1221	8.0	20.0	ug/kg
Aroclor 1221 [2C]	8.0	20.0	ug/kg
Aroclor 1232	8.0	20.0	ug/kg
Aroclor 1232 [2C]	8.0	20.0	ug/kg
Aroclor 1242	8.0	20.0	ug/kg
Aroclor 1242 [2C]	8.0	20.0	ug/kg
Aroclor 1248	8.0	20.0	ug/kg
Aroclor 1248 [2C]	8.0	20.0	ug/kg
Aroclor 1254	8.0	20.0	ug/kg
Aroclor 1254 [2C]	8.0	20.0	ug/kg
Aroclor 1260	9.3	20.0	ug/kg
Aroclor 1260 [2C]	9.3	20.0	ug/kg
Aroclor 1262	9.3	20.0	ug/kg
Aroclor 1262 [2C]	9.3	20.0	ug/kg
Aroclor 1268	9.3	20.0	ug/kg
Aroclor 1268 [2C]	9.3	20.0	ug/kg

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METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Water Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	0.018	0.100	ug/L
Aroclor 1016 [2C]	0.018	0.100	ug/L
Aroclor 1221	0.018	0.100	ug/L
Aroclor 1221 [2C]	0.018	0.100	ug/L
Aroclor 1232	0.018	0.100	ug/L
Aroclor 1232 [2C]	0.018	0.100	ug/L
Aroclor 1242	0.018	0.100	ug/L
Aroclor 1242 [2C]	0.018	0.100	ug/L
Aroclor 1248	0.018	0.100	ug/L
Aroclor 1248 [2C]	0.018	0.100	ug/L
Aroclor 1254	0.018	0.100	ug/L
Aroclor 1254 [2C]	0.018	0.100	ug/L
Aroclor 1260	0.017	0.100	ug/L
Aroclor 1260 [2C]	0.017	0.100	ug/L
Aroclor 1262	0.017	0.100	ug/L
Aroclor 1262 [2C]	0.017	0.100	ug/L
Aroclor 1268	0.017	0.100	ug/L
Aroclor 1268 [2C]	0.017	0.100	ug/L

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

PP1-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0145-02 C	SDG:	20K0145
Sampled:	11/05/20 12:50	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-060
% Solids:	88.36	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:32
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.208 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.182	1	0.00571	0.0272	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

PP1-7.5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0145-03 C	SDG:	20K0145
Sampled:	11/05/20 12:55	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-061
% Solids:	83.64	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:34
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.203 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0192	1	0.00618	0.0294	J

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

PP2-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0145-07 C	SDG:	20K0145
Sampled:	11/05/20 11:35	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-062
% Solids:	80.58	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:36
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.23 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0122	1	0.00567	0.0270	J

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

PP2-7.5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0145-08 C	SDG:	20K0145
Sampled:	11/05/20 11:40	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-063
% Solids:	76.94	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:38
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.265 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.00792	1	0.00515	0.0245	J

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

PP5-2

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0145-11 C	SDG:	20K0145
Sampled:	11/05/20 10:00	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-064
% Solids:	75.72	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:40
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.228 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0459	1	0.00608	0.0290	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

PP5-8

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0145-13 C	SDG:	20K0145
Sampled:	11/05/20 10:10	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-065
% Solids:	70.29	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:43
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.252 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.116	1	0.00593	0.0282	

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-10S-1

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage

Matrix: Soil | Laboratory ID: 20K0145-15 C | SDG: 20K0145
Sampled: 11/06/20 08:20 | Prepared: 11/17/20 11:02 | File ID: SMM 11-18-20-066
% Solids: 94.55 | Preparation: SMM EPA 7471B | Analyzed: 11/18/20 15:45
Batch: BIK0465 | Sequence: SIK0284 | Initial/Final: 0.203 g Wet / 50 mL
Instrument: HYDRA | Calibration: DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.480	1	0.00547	0.0261	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-10S-5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0145-17 C	SDG:	20K0145
Sampled:	11/06/20 08:30	Prepared:	11/17/20 11:02	File ID:	SMM 11-18-20-067
% Solids:	92.97	Preparation:	SMM EPA 7471B	Analyzed:	11/18/20 15:47
Batch:	BIK0465	Sequence:	SIK0284	Initial/Final:	0.216 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	DK00044

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.170	1	0.00523	0.0249	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 7471B

Laboratory: Analytical Resources, Inc.　　SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc　　Project: ICS-Former NW Cooperage

Batch: BIK0465　　Batch Matrix: Solid　　Preparation: SMM EPA 7471B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
PP1-5	20K0145-02	SMM 11-18-20-060	11/17/20 11:02	
PP1-7.5	20K0145-03	SMM 11-18-20-061	11/17/20 11:02	
PP2-5	20K0145-07	SMM 11-18-20-062	11/17/20 11:02	
PP2-7.5	20K0145-08	SMM 11-18-20-063	11/17/20 11:02	
PP5-2	20K0145-11	SMM 11-18-20-064	11/17/20 11:02	
PP5-8	20K0145-13	SMM 11-18-20-065	11/17/20 11:02	
P8-10S-1	20K0145-15	SMM 11-18-20-066	11/17/20 11:02	
P8-10S-5	20K0145-17	SMM 11-18-20-067	11/17/20 11:02	
Blank	BIK0465-BLK1	SMM 11-18-20-041	11/17/20 11:02	
LCS	BIK0465-BS1	SMM 11-18-20-042	11/17/20 11:02	

BIK0465

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM

Analyst: SD

Bath Temp: 92°C

Start Time: 1230

Matrix: Soil

Date: 11/17/2020

End Time: 1350

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
20K126-1	C		0.209	50.0	1		
-2			0.269				
-6			0.236				
-7			0.212				
-11			0.212				
-12			0.255				
-16			0.201				
-18			0.278				
-22			0.229				
-24			0.273				
20K145-2			0.208				
-3			0.203				
-7			0.230				
-8			0.265				
-11			0.228				
-13			0.252				
-15			0.203				
-17			0.216				
20K196-1	A		0.205				
BIK465-BLK1	—		—				
-BS1	—		—				
-DUP1	—		0.211				20K126-1
-MS1	—		0.213				
-MSD1	—		0.213				
—	—	—	—	—	—	—	—

Chemical/Reagent ID:

HNO_3: I9356

H_2SO_4: I6551

HCl: —

5% $K_2S_2O_8$: I9312

5% $KMnO_4$: I9582

Digest Tube Lot: 2003055

5037F

Revision 007
6/18/09

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Blank

Form I

METHOD BLANK DATA SHEET

EPA 7471B

Total Metals

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Batch: BIK0465
Laboratory ID: BIK0465-BLK1
Prepared: 11/17/20 11:02
Matrix: Solid
Preparation: SMM EPA 7471B
Analyzed: 11/18/20 14:49
Sequence: SIK0284
Calibration: DK00044
Instrument: HYDRA

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	ND	1	0.00525	0.0250	U

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY

EPA 7471B

Total Metals

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Matrix: Solid
Analyzed: 11/18/20 14:51
Batch: BIK0465
Laboratory ID: BIK0465-BS1
Preparation: SMM EPA 7471B
Sequence Name: LCS
Initial/Final: 0.2 g / 50 mL

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Mercury	0.500	0.440		88.0	80 - 120

* Indicates values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DK00044	Instrument:	HYDRA
Calibration Date:	11/18/2020 13:16		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Mercury	0	0	0.0001	5210000	0.0005	5030000	0.001	4867000	0.002	4871000	0.005	4812200

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DK00044	Instrument:	HYDRA
Calibration Date:	11/18/2020 13:16		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Mercury	4131700	49.1	1.0000		0.99	

DIL00044
SIK0284

SMM 11-18-20

Method: ARI 5 ppb (NO 0.05) Operator: Admin Date of Analysis: 18 Nov 2020 13:05:35

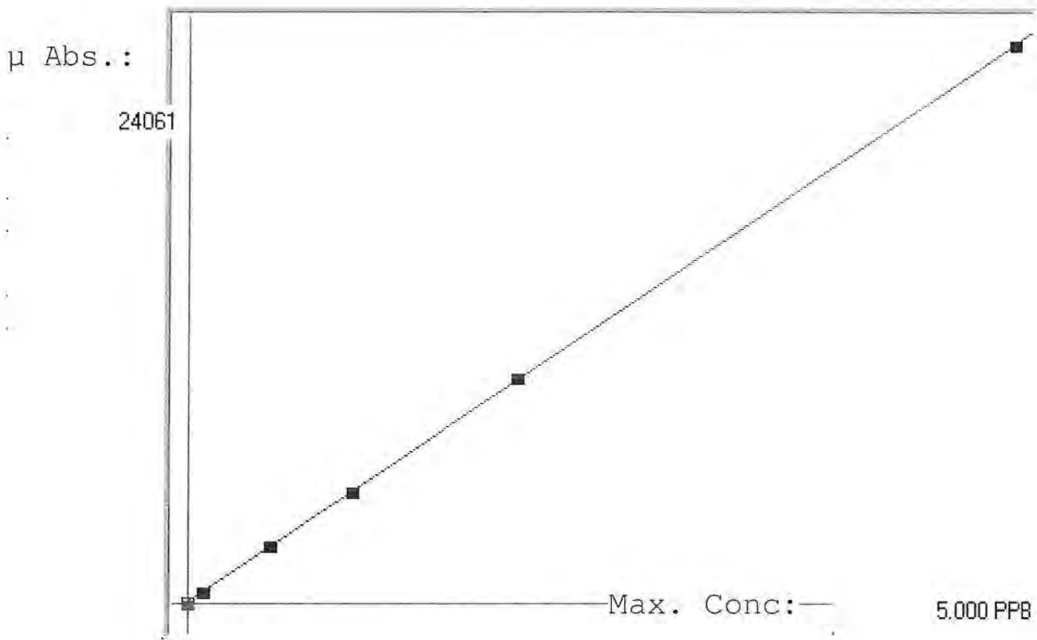
Sample ID	Mean	Units	Date	Method
SEQ-CAL1	31	PPB	18 Nov 2020 13:16:47	ARI 5 ppb (NO 0.05)
SEQ-CAL2	521	PPB	18 Nov 2020 13:19:02	ARI 5 ppb (NO 0.05)
SEQ-CAL3	2515	PPB	18 Nov 2020 13:21:17	ARI 5 ppb (NO 0.05)
SEQ-CAL4	4867	PPB	18 Nov 2020 13:23:32	ARI 5 ppb (NO 0.05)
SEQ-CAL5	9742	PPB	18 Nov 2020 13:25:46	ARI 5 ppb (NO 0.05)
SEQ-CAL6	24061	PPB	18 Nov 2020 13:28:00	ARI 5 ppb (NO 0.05)
SEQ-ICV	99.8% 3.9923	PPB ✓	18 Nov 2020 13:33:33	ARI 5 ppb (NO 0.05)
SEQ-ICB	-0.0209	PPB ✓	18 Nov 2020 13:35:46	ARI 5 ppb (NO 0.05)
SEQ-CRL	91.3% 0.0913	PPB ✓	18 Nov 2020 13:38:02	ARI 5 ppb (NO 0.05)
SEQ-CCV	99.5% 3.9792	PPB ✓	18 Nov 2020 13:40:18	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0229	PPB ✓	18 Nov 2020 13:42:31	ARI 5 ppb (NO 0.05)
BIK0376-BLK1	-0.0090	PPB ✓	18 Nov 2020 13:44:47	ARI 5 ppb (NO 0.05)
BIK0376-BS1	1.7796	PPB ✓ %R=88%	18 Nov 2020 13:47:01	ARI 5 ppb (NO 0.05)
20K0101-02	0.0091	PPB	18 Nov 2020 13:49:14	ARI 5 ppb (NO 0.05)
BIK0376-DUP1	0.0139	PPB ✓ no RPD	18 Nov 2020 13:51:27	ARI 5 ppb (NO 0.05)
BIK0376-MS1	1.1060	PPB ✓ %R=109.6%	18 Nov 2020 13:53:41	ARI 5 ppb (NO 0.05)
BIK0376-MSD1	1.0970	PPB ✓ %R=108.7%, RPD0.8	18 Nov 2020 13:55:54	ARI 5 ppb (NO 0.05)
20K0101-04	0.1900	PPB	18 Nov 2020 13:58:07	ARI 5 ppb (NO 0.05)
20K0101-07	0.0242	PPB	18 Nov 2020 14:00:21	ARI 5 ppb (NO 0.05)
20K0101-10	0.0564	PPB	18 Nov 2020 14:02:35	ARI 5 ppb (NO 0.05)
20K0101-13	0.0942	PPB	18 Nov 2020 14:04:49	ARI 5 ppb (NO 0.05)
SEQ-CCV	100.1% 4.0053	PPB ✓	18 Nov 2020 14:07:03	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0213	PPB ✓	18 Nov 2020 14:09:16	ARI 5 ppb (NO 0.05)
20K0101-15	0.0830	PPB	18 Nov 2020 14:11:33	ARI 5 ppb (NO 0.05)
20K0101-16	0.7332	PPB	18 Nov 2020 14:13:48	ARI 5 ppb (NO 0.05)
20K0101-18	0.8566	PPB	18 Nov 2020 14:16:03	ARI 5 ppb (NO 0.05)
20K0101-20	0.1603	PPB	18 Nov 2020 14:18:16	ARI 5 ppb (NO 0.05)
20K0101-22	0.1452	PPB	18 Nov 2020 14:20:29	ARI 5 ppb (NO 0.05)
20K0101-23	0.0176	PPB	18 Nov 2020 14:22:43	ARI 5 ppb (NO 0.05)
20K0101-24	0.0274	PPB	18 Nov 2020 14:24:56	ARI 5 ppb (NO 0.05)
20K0101-26	0.0342	PPB	18 Nov 2020 14:27:09	ARI 5 ppb (NO 0.05)
20K0101-27	0.4312	PPB	18 Nov 2020 14:29:23	ARI 5 ppb (NO 0.05)
20K0101-28	0.0270	PPB	18 Nov 2020 14:31:37	ARI 5 ppb (NO 0.05)
SEQ-CCV	98.0% 3.9183	PPB ✓	18 Nov 2020 14:33:50	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0247	PPB ✓	18 Nov 2020 14:36:03	ARI 5 ppb (NO 0.05)
20K0101-29	0.2792	PPB	18 Nov 2020 14:38:20	ARI 5 ppb (NO 0.05)
20K0101-30	0.0369	PPB	18 Nov 2020 14:40:34	ARI 5 ppb (NO 0.05)
20K0142-06	0.1268	PPB	18 Nov 2020 14:42:49	ARI 5 ppb (NO 0.05)
20K0142-07	0.1669	PPB	18 Nov 2020 14:45:04	ARI 5 ppb (NO 0.05)
20K0175-01	2.1814	PPB	18 Nov 2020 14:47:20	ARI 5 ppb (NO 0.05)
BIK0465-BLK1	-0.0188	PPB ✓	18 Nov 2020 14:49:33	ARI 5 ppb (NO 0.05)
BIK0465-BS1	1.7608	PPB ✓ %R=88%	18 Nov 2020 14:51:48	ARI 5 ppb (NO 0.05)
20K0126-01	0.2462	PPB	18 Nov 2020 14:54:02	ARI 5 ppb (NO 0.05)
BIK0465-DUP1	0.3946	PPB × RPD HIGH	18 Nov 2020 14:56:16	ARI 5 ppb (NO 0.05)
BIK0465-MS1	1.4510	PPB ✓ %R=120%	18 Nov 2020 14:58:29	ARI 5 ppb (NO 0.05)
SEQ-CCV	95.7% 3.8280	PPB ✓	18 Nov 2020 15:00:43	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0245	PPB ✓	18 Nov 2020 15:02:56	ARI 5 ppb (NO 0.05)
BIK0465-MSD1	1.5477	PPB × %R=HIGH, ✓RPD-6.4	18 Nov 2020 15:05:12	ARI 5 ppb (NO 0.05)
20K0126-02	0.3187	PPB	18 Nov 2020 15:07:26	ARI 5 ppb (NO 0.05)
20K0126-06	0.4920	PPB	18 Nov 2020 15:09:40	ARI 5 ppb (NO 0.05)
20K0126-07	0.0985	PPB	18 Nov 2020 15:11:54	ARI 5 ppb (NO 0.05)
20K0126-11	0.1234	PPB	18 Nov 2020 15:14:09	ARI 5 ppb (NO 0.05)
20K0126-12	0.1673	PPB	18 Nov 2020 15:16:24	ARI 5 ppb (NO 0.05)
20K0126-16	0.0247	PPB	18 Nov 2020 15:18:39	ARI 5 ppb (NO 0.05)
20K0126-18	0.0463	PPB	18 Nov 2020 15:20:52	ARI 5 ppb (NO 0.05)
20K0126-22	0.2331	PPB	18 Nov 2020 15:23:06	ARI 5 ppb (NO 0.05)
20K0126-24	0.2006	PPB	18 Nov 2020 15:25:20	ARI 5 ppb (NO 0.05)
SEQ-CCV	96.7% 3.8665	PPB ✓	18 Nov 2020 15:27:33	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0269	PPB ✓	18 Nov 2020 15:29:46	ARI 5 ppb (NO 0.05)
20K0145-02	0.6675	PPB	18 Nov 2020 15:32:03	ARI 5 ppb (NO 0.05)

SMM 11-18-20

Method: ARI 5 ppb (NO 0.05) Operator: Admin Date of Analysis: 18 Nov 2020 13:05:35

Sample ID	Mean	Units	Date	Method
20K0145-03	0.0653	PPB	18 Nov 2020 15:34:16	ARI 5 ppb (NO 0.05)
20K0145-07	0.0453	PPB	18 Nov 2020 15:36:30	ARI 5 ppb (NO 0.05)
20K0145-08	0.0323	PPB	18 Nov 2020 15:38:44	ARI 5 ppb (NO 0.05)
20K0145-11	0.1585	PPB	18 Nov 2020 15:40:58	ARI 5 ppb (NO 0.05)
20K0145-13	0.4098	PPB	18 Nov 2020 15:43:12	ARI 5 ppb (NO 0.05)
20K0145-15	1.8408	PPB	18 Nov 2020 15:45:27	ARI 5 ppb (NO 0.05)
20K0145-17	0.6843	PPB	18 Nov 2020 15:47:42	ARI 5 ppb (NO 0.05)
20K0196-01	0.1095	PPB	18 Nov 2020 15:49:57	ARI 5 ppb (NO 0.05)
BIK0530-BLK1	-0.0098	PPB ✓	18 Nov 2020 15:52:11	ARI 5 ppb (NO 0.05)
SEQ-CCV	95.7% 3.8296	PPB ✓	18 Nov 2020 15:54:24	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0251	PPB ✓	18 Nov 2020 15:56:38	ARI 5 ppb (NO 0.05)
BIK0530-BS1	1.9226	PPB ✓ %R=96%	18 Nov 2020 15:58:54	ARI 5 ppb (NO 0.05)
20K0131-01	0.0990	PPB	18 Nov 2020 16:01:09	ARI 5 ppb (NO 0.05)
BIK0530-DUP1	0.1407	PPB ✓ DIFF < 1RL	18 Nov 2020 16:03:22	ARI 5 ppb (NO 0.05)
BIK0530-MS1	1.2295	PPB ✓ %R=113%	18 Nov 2020 16:05:36	ARI 5 ppb (NO 0.05)
20K0135-01	0.2493	PPB	18 Nov 2020 16:07:50	ARI 5 ppb (NO 0.05)
20K0135-02	0.1145	PPB	18 Nov 2020 16:10:04	ARI 5 ppb (NO 0.05)
20K0135-03	0.1639	PPB	18 Nov 2020 16:12:19	ARI 5 ppb (NO 0.05)
20K0201-02	0.0844	PPB	18 Nov 2020 16:14:34	ARI 5 ppb (NO 0.05)
20K0201-03	0.1521	PPB	18 Nov 2020 16:16:49	ARI 5 ppb (NO 0.05)
20K0201-04	0.0776	PPB	18 Nov 2020 16:19:04	ARI 5 ppb (NO 0.05)
SEQ-CCV	96.2% 3.8484	PPB ✓	18 Nov 2020 16:21:19	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0273	PPB ✓	18 Nov 2020 16:23:32	ARI 5 ppb (NO 0.05)
20K0201-05	0.2304	PPB	18 Nov 2020 16:25:49	ARI 5 ppb (NO 0.05)
20K0213-01	-0.0047	PPB	18 Nov 2020 16:28:03	ARI 5 ppb (NO 0.05)
20K0222-01	0.0116	PPB	18 Nov 2020 16:30:17	ARI 5 ppb (NO 0.05)
20K0238-01	1.5254	PPB	18 Nov 2020 16:32:31	ARI 5 ppb (NO 0.05)
20K0238-02	0.1083	PPB	18 Nov 2020 16:34:45	ARI 5 ppb (NO 0.05)
20K0238-03	1.9190	PPB	18 Nov 2020 16:37:00	ARI 5 ppb (NO 0.05)
20K0238-04	0.2089	PPB	18 Nov 2020 16:39:14	ARI 5 ppb (NO 0.05)
SEQ-CCV	96.6% 3.8651	PPB ✓	18 Nov 2020 16:41:28	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0273	PPB ✓	18 Nov 2020 16:43:41	ARI 5 ppb (NO 0.05)

ARI 5 ppb (NO 0.05)



Linear

A= 0.0000e+000

B= 2.0818e-004

C= -1.4748e-002

Rho= 0.9999889

Accept=Accepted

Accepted Date=

11/18/20 13:33

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
SEQ-CAL1 - Blank	0.000	-0.008	-0.008	31	3.742	27	30	36		
SEQ-CAL2 - 0.1 PPB	0.100	0.094	-0.006	520	0.2 %	519	521	522		
SEQ-CAL3 - 0.5 PPB	0.500	0.509	0.009	2514	0.4 %	2504	2513	2527		
SEQ-CAL4 - 1.0 PPB	1.000	0.998	-0.002	4867	1.1 %	4798	4878	4925		
SEQ-CAL5 - 2.0 PPB	2.000	2.013	0.013	9741	0.7 %	9773	9804	9648		
SEQ-CAL6 - 5.0 PPB	5.000	4.994	-0.006	24060	1.3 %	23624	24340	24218		

Mercury Analysis Log

Analyst: BC
Instrument: HYDRA
SEQ: SIK284

Date: 11/18/20
Page: 1 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
SEQ-CAL1	SMM	1X		
-CAL2				
-CAL3				
-CAL4				
-CAL5				
-CAL6				
-ICV			3.99	✓
-ICB			-0.0209	✓
-CRL			0.091	✓
-CCV			3.97	✓
-CCB			-0.0229	✓
BIK376-BLK1			-0.0090	✓
-BS1			1.77	✓ %R=88.9%
20K101-2			0.009	
BIK376-DUP1			0.013	✓ no RPD
-MS1			1.10	✓ %R=109.6%
-MSD1			1.09	✓ %R=108.7%, RPD=0.81
20K101-4				
-7				
-10				
-13				
SEQ-CCV			4.00	✓
-CCB			-0.0213	✓
20K101-15				
-16				
-18				
-20				
-22				
-23				
-24				

Chemical/Reagent ID:
10% $SnCl_2$: I10555
14% $NH_2OH/NaCl$: I8327

Standard ID:
Standard: I10681- I10686
ICV/CCV: I10687

Mercury Analysis Log

Analyst: BC **Date:** 11/18/20

Instrument: HYDRA **Page:** 2 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
20K101-26	SMM	1x		
-27				
-28				
SEQ-CCV			3.91	
-CCB			-0.0247	
20K101-29				
-30				
20K142-6				
-7				
20K175-1				
BK465-BLK1			-0.0188	✓
-BS1			1.76	✓ %R=88.0%
20K126-1			0.24	
BK465-DUP1			0.39	x RPD = HIGH
-MS1			1.45	✓ %R=120.4%
SEQ-CCV			3.82	✓
-CCB			-0.0245	✓
BK465-MSD1			1.54	x %R=130.1%, ✓RPD=6.4
20K126-2				
-6				
-7				
-11				
-12				
-16				
-18				
-22				
-24				
SEQ-CCV			3.86	✓
-CCB			-0.0269	✓
20K145-2				

Chemical/Reagent ID: —

10% $SnCl_2$: ______ **14% NH_2OH/NaCl:** —

Standard ID: —

Standard: ______ **ICV/CCV:** —

Mercury Analysis Log

Analyst: BC
Instrument: HYDRA

Date: 11/18/20
Page: 3 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
20K145-3	SMM	1X		
-7	↓	↓		
-8				
-11				
-13				
-15				
↓ -17				
20K196-1				
BK530-BLK1			-0.0098	✓
SEQ-CCV			3.82	✓
↓ -CCB			-0.0251	✓
BK530-BS1			1.92	✓ %R=96.1%
20K131-1			0.09	
BK530-DUP1			0.14	✓ DIFF < 1 RL
↓ -MS1			1.22	✓ %R=113.0%
20K135-1				
-2				
↓ -3				
20K201-2				
-3				
↓ -4				
SEQ-CCV			3.84	✓
↓ -CCB			-0.0273	✓
20K201-5				
20K213-1				
20K222-1				
20K238-1				
-2				
-3				
↓ -4	↓	↓		

Chemical/Reagent ID: —
10% $SnCl_2$:

14% NH_2OH/NaCl: —

Standard ID: —
Standard:

ICV/CCV: —

SEQ-CCV	SMM	1X	3.86	✓
-CCB	↓	↓	-0.0273	✓

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 7471B

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: HYDRA
Calibration: DK00044
Control Limt: +/- 20.00%
Sequence: SIK0284

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SIK0284-ICV1	Mercury	0.0040000	0.00399	99.8	mg/L	EPA 7471B
SIK0284-CCV1	Mercury	0.0040000	0.00398	99.5	mg/L	EPA 7471B
SIK0284-CCV2	Mercury	0.0040000	0.00401	100	mg/L	EPA 7471B
SIK0284-CCV3	Mercury	0.0040000	0.00392	98.0	mg/L	EPA 7471B
SIK0284-CCV4	Mercury	0.0040000	0.00383	95.7	mg/L	EPA 7471B
SIK0284-CCV5	Mercury	0.0040000	0.00387	96.7	mg/L	EPA 7471B
SIK0284-CCV6	Mercury	0.0040000	0.00383	95.7	mg/L	EPA 7471B
SIK0284-CCV7	Mercury	0.0040000	0.00385	96.2	mg/L	EPA 7471B
SIK0284-CCV8	Mercury	0.0040000	0.00387	96.6	mg/L	EPA 7471B

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 7471B

Laboratory: Analytical Resources, Inc. SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage
Instrument ID: HYDRA Calibration: DK00044
Sequence: SIK0284 Date Analyzed: 11/18/20 13:35

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SIK0284-ICB1	Mercury	-0.000021	0.000021	0.000100	mg/L	
SIK0284-CCB1	Mercury	-0.000023	0.000021	0.000100	mg/L	
SIK0284-CCB2	Mercury	-0.000021	0.000021	0.000100	mg/L	
SIK0284-CCB3	Mercury	-0.000025	0.000021	0.000100	mg/L	
SIK0284-CCB4	Mercury	-0.000025	0.000021	0.000100	mg/L	
SIK0284-CCB5	Mercury	-0.000027	0.000021	0.000100	mg/L	
SIK0284-CCB6	Mercury	-0.000025	0.000021	0.000100	mg/L	
SIK0284-CCB7	Mercury	-0.000027	0.000021	0.000100	mg/L	
SIK0284-CCB8	Mercury	-0.000027	0.000021	0.000100	mg/L	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SIK0284	Instrument:	HYDRA
		Calibration:	DK00044

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SIK0284-CAL1	SMM 11-18-20-001	NA	11/18/20 13:16
Cal Standard	SIK0284-CAL2	SMM 11-18-20-002	NA	11/18/20 13:19
Cal Standard	SIK0284-CAL3	SMM 11-18-20-003	NA	11/18/20 13:21
Cal Standard	SIK0284-CAL4	SMM 11-18-20-004	NA	11/18/20 13:23
Cal Standard	SIK0284-CAL5	SMM 11-18-20-005	NA	11/18/20 13:25
Cal Standard	SIK0284-CAL6	SMM 11-18-20-006	NA	11/18/20 13:28
Initial Cal Check	SIK0284-ICV1	SMM 11-18-20-007	NA	11/18/20 13:33
Initial Cal Blank	SIK0284-ICB1	SMM 11-18-20-008	NA	11/18/20 13:35
Instrument RL Check	SIK0284-CRL1	SMM 11-18-20-009	NA	11/18/20 13:38
Calibration Check	SIK0284-CCV1	SMM 11-18-20-010	NA	11/18/20 13:40
Calibration Blank	SIK0284-CCB1	SMM 11-18-20-011	NA	11/18/20 13:42
Calibration Check	SIK0284-CCV2	SMM 11-18-20-022	NA	11/18/20 14:07
Calibration Blank	SIK0284-CCB2	SMM 11-18-20-023	NA	11/18/20 14:09
Calibration Check	SIK0284-CCV3	SMM 11-18-20-034	NA	11/18/20 14:33
Calibration Blank	SIK0284-CCB3	SMM 11-18-20-035	NA	11/18/20 14:36
Blank	BIK0465-BLK1	SMM 11-18-20-041	Solid	11/18/20 14:49
LCS	BIK0465-BS1	SMM 11-18-20-042	Solid	11/18/20 14:51
Calibration Check	SIK0284-CCV4	SMM 11-18-20-046	NA	11/18/20 15:00
Calibration Blank	SIK0284-CCB4	SMM 11-18-20-047	NA	11/18/20 15:02
Calibration Check	SIK0284-CCV5	SMM 11-18-20-058	NA	11/18/20 15:27
Calibration Blank	SIK0284-CCB5	SMM 11-18-20-059	NA	11/18/20 15:29
PP1-5	20K0145-02	SMM 11-18-20-060	Solid	11/18/20 15:32
PP1-7.5	20K0145-03	SMM 11-18-20-061	Solid	11/18/20 15:34
PP2-5	20K0145-07	SMM 11-18-20-062	Solid	11/18/20 15:36
PP2-7.5	20K0145-08	SMM 11-18-20-063	Solid	11/18/20 15:38
PP5-2	20K0145-11	SMM 11-18-20-064	Solid	11/18/20 15:40
PP5-8	20K0145-13	SMM 11-18-20-065	Solid	11/18/20 15:43
P8-10S-1	20K0145-15	SMM 11-18-20-066	Solid	11/18/20 15:45
P8-10S-5	20K0145-17	SMM 11-18-20-067	Solid	11/18/20 15:47
Calibration Check	SIK0284-CCV6	SMM 11-18-20-070	NA	11/18/20 15:54

Analytical Resources, Incorporated
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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Sequence: SIK0284

SDG: 20K0145

Project: ICS-Former NW Cooperage

Instrument: HYDRA

Calibration: DK00044

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SIK0284-CCB6	SMM 11-18-20-071	NA	11/18/20 15:56
Calibration Check	SIK0284-CCV7	SMM 11-18-20-082	NA	11/18/20 16:21
Calibration Blank	SIK0284-CCB7	SMM 11-18-20-083	NA	11/18/20 16:23
Calibration Check	SIK0284-CCV8	SMM 11-18-20-091	NA	11/18/20 16:41
Calibration Blank	SIK0284-CCB8	SMM 11-18-20-092	NA	11/18/20 16:43

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DETECTION LEVEL STANDARD
EPA 7471B

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: HYDRA
Calibration: DK00044
Sequence: SIK0284
Lab Sample ID: SIK0284-CRL1

Analyte	True	Found	%R	Units	QC Limts
Mercury	0.000100	0.000091	91.3	mg/L	70 - 130

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: EPA 7471B

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PP1-5 20K0145-02	11/05/20 12:50	11/07/20 11:00	11/17/20 11:02	11	28	11/18/20 15:32	13	28	
PP1-7.5 20K0145-03	11/05/20 12:55	11/07/20 11:00	11/17/20 11:02	11	28	11/18/20 15:34	13	28	
PP2-5 20K0145-07	11/05/20 11:35	11/07/20 11:00	11/17/20 11:02	11	28	11/18/20 15:36	13	28	
PP2-7.5 20K0145-08	11/05/20 11:40	11/07/20 11:00	11/17/20 11:02	11	28	11/18/20 15:38	13	28	
PP5-2 20K0145-11	11/05/20 10:00	11/07/20 11:00	11/17/20 11:02	12	28	11/18/20 15:40	13	28	
PP5-8 20K0145-13	11/05/20 10:10	11/07/20 11:00	11/17/20 11:02	12	28	11/18/20 15:43	13	28	
P8-10S-1 20K0145-15	11/06/20 08:20	11/07/20 11:00	11/17/20 11:02	11	28	11/18/20 15:45	12	28	
P8-10S-5 20K0145-17	11/06/20 08:30	11/07/20 11:00	11/17/20 11:02	11	28	11/18/20 15:47	12	28	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 7471B

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Matrix: Solid
Instrument: HYDRA

Analyte	MDL	RL	Units
Mercury	0.00525	0.0250	mg/kg

BIK 470

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section: Metals

Oven Identification: #9

Balance ID: C041235412

Samples in Oven: Date: 11/16/20 Time: 1445 Temp: 106°C Analyst: GA

Removed from Oven: Date: 11/17/20 Time: 0615 Temp: 102°C Analyst: GA

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
20K145-02	1.011	10.382	9.291	—	✓
-03	.990	10.087	8.599		
-07	1.013	10.666	8.791		
-08	1.012	10.660	8.435		
-11	1.002	10.930	8.519		
-13	.986	10.792	7.879		
-15	.986	10.207	9.704		
-17	1.015	10.330	9.675		
20K196-01	1.007	(1) 5.015	4.992		

GA 11/16/20

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

5050F (1) Not enough volume for 10.0 g

Revision 003
11/20/09

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP1-5

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0145-02 C	SDG:	20K0145
Sampled:	11/05/20 12:50	Prepared:	11/16/20 11:07	File ID:	I2201118A-071
% Solids:	88.36	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 19:34
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.003 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	17.2	2	0.271	2.26	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP1-7.5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0145-03 C	SDG:	20K0145
Sampled:	11/05/20 12:55	Prepared:	11/16/20 11:07	File ID:	I2201118A-072
% Solids:	83.64	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 19:38
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.03 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	9.84	2	0.279	2.32	

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP2-5

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0145-07 C	SDG:	20K0145
Sampled:	11/05/20 11:35	Prepared:	11/16/20 11:07	File ID:	I2201118A-073
% Solids:	80.58	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 19:43
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.051 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	2.32	2	0.283	2.36	J

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP2-7.5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0145-08 C	SDG:	20K0145
Sampled:	11/05/20 11:40	Prepared:	11/16/20 11:07	File ID:	I2201118A-074
% Solids:	76.94	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 19:47
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.075 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	2.31	2	0.290	2.42	J

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP5-2

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	20K0145-11 C	SDG:	20K0145
Sampled:	11/05/20 10:00	Prepared:	11/16/20 11:07	File ID:	I2201118A-075
% Solids:	75.72	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 19:51
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.068 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	19.4	2	0.297	2.47	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

PP5-8

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0145-13 C	SDG:	20K0145
Sampled:	11/05/20 10:10	Prepared:	11/16/20 11:07	File ID:	I2201118A-076
% Solids:	70.29	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 19:56
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.007 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	3.18	2	0.339	2.83	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-10S-1

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0145-15 C	SDG:	20K0145
Sampled:	11/06/20 08:20	Prepared:	11/16/20 11:07	File ID:	I2201118A-077
% Solids:	94.55	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 20:00
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.033 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	14.6	2	0.246	2.05	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-10S-5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	20K0145-17 C	SDG:	20K0145
Sampled:	11/06/20 08:30	Prepared:	11/16/20 11:07	File ID:	I2201118A-078
% Solids:	92.97	Preparation:	SWC EPA 3050B	Analyzed:	11/18/20 20:04
Batch:	BIK0408	Sequence:	SIK0278	Initial/Final:	1.005 g Wet / 50 mL
Instrument:	ICP2			Calibration:	DK00045

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	85.9	2	0.257	2.14	

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PREPARATION BATCH SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Batch: BIK0408 Batch Matrix: Solid Preparation: SWC EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
PP1-5	20K0145-02	I2201118A-071	11/16/20 11:07	
PP1-7.5	20K0145-03	I2201118A-072	11/16/20 11:07	
PP2-5	20K0145-07	I2201118A-073	11/16/20 11:07	
PP2-7.5	20K0145-08	I2201118A-074	11/16/20 11:07	
PP5-2	20K0145-11	I2201118A-075	11/16/20 11:07	
PP5-8	20K0145-13	I2201118A-076	11/16/20 11:07	
P8-10S-1	20K0145-15	I2201118A-077	11/16/20 11:07	
P8-10S-5	20K0145-17	I2201118A-078	11/16/20 11:07	
Blank	BIK0408-BLK1	I2201118A-016	11/16/20 11:07	
LCS	BIK0408-BS1	I2201118A-017	11/16/20 11:07	

BIK0408

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Digestion Log

Analyst: SD Date: 11/16/2020 Time: 11/16/20 1205 - 11/17/20 1005

Matrix: Soil Block ID: #6 Block Temp: 96°C Thermometer: 20-3

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Final Vol (mL)	Comments
20K126-1	C		1.021	50.0			
-2			1.010				
-6			1.074				
-7			1.061				
-11			1.034				
-12			1.059				
-16			1.006				
-18			1.063				
-22			1.009				
↓ -24			1.031				
20K145-2			1.003				
-3			1.030				
-7			1.051				
-8			1.075				
-11			1.068				
-13			1.007				
-15			1.033				
↓ -17	↓		1.005				
20K175-1	A		1.024				
20K196-1	↓		1.002				
BIK408-BLK1	—		—				
-BS1	—		—				
-DUP1	—		1.024				
-MS1	—		1.021				20K126-1
↓ -MSD1	—		1.022	↓			
—	—	—	—	—	—	—	↓ —

Chemical/Reagent ID:

HNO$_3$: I9356 1:1 HNO$_3$: I10417 HCl: ~~H10738~~ SD 11/17 H$_2$O$_2$: I9826

Tube Lot#: 2003055 Boiling Chip Lot#: — (DoD Only)

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Form I

METHOD BLANK DATA SHEET

EPA 6010C

Total Metals

Blank

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Batch: BIK0408 Laboratory ID: BIK0408-BLK1 Prepared: 11/16/20 11:07

Matrix: Solid Preparation: SWC EPA 3050B Analyzed: 11/18/20 15:02

Sequence: SIK0278 Calibration: DK00045 Instrument: ICP2

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	ND	2	0.240	2.00	U

Analytical Resources, Incorporated
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LCS / LCS DUPLICATE RECOVERY

EPA 6010C

Total Metals

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Matrix: Solid
Analyzed: 11/18/20 15:06
Batch: BIK0408
Laboratory ID: BIK0408-BS1
Preparation: SWC EPA 3050B
Sequence Name: LCS
Initial/Final: 1 g / 50 mL

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Lead	200	193		96.4	80 - 120

* Indicates values outside of QC limits

Analytical Resources, Incorporated
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INITIAL CALIBRATION DATA

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DK00045	Instrument:	ICP2
Calibration Date:	11/18/2020 13:51		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Lead	0	0	0		10	5187.25	0		0			

Analytical Resources, Incorporated
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INITIAL CALIBRATION DATA

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DK00045	Instrument:	ICP2
Calibration Date:	11/18/2020 13:51		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Lead	2593.625	141.4	1.0000			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: 11/12/20 Analysis Date: 11/18/20 Analyst: MB/TK
LR Date: 11/12/20 Sequence: SIKØ278 Page: 1 of 4

All corrections made by analyst unless otherwise noted. MB 11/18/20

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CAL1	I10177		
		-CAL2	I10647		
		-CAL3	I10648		
		-CAL4	I10649		
		-CAL5	I10650		
		-ICV~~I~~1	I10589		
		-ICB1	I10177		
		-~~CCV~~ CRL1	I10665 ~~I10646~~		
		-IFA1	I10667		V↑
		-IFB1	I6931		
		-CCV1	I10589		
		-CCB1	I10177		
		BIKØ532-BLK1	TWC		
		↓ -BS1	↓		
	✓	2ØKØ255-Ø1	↓		Cr & Ni noisy / ScR almost noisy
		BIKØ4Ø8-BLK1	SWC	2	
		↓ -BS1	↓	↓	
		2ØKØ175-Ø1		5	
		2ØKØ196-Ø1		2	Cr noisy Cr NR
		2ØKØ135-Ø1		5	As↓ NO As
		↓ -Ø2			
		↓ -Ø3	↓	↓	↓ ↓
		SEQ-CCV2			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: ______ Analysis Date: 11/18/20 Analyst: MB / TH

LR Date: ______ Sequence: ______ Page: 2 of 4

All corrections made by analyst unless otherwise noted. TH 11/18/20

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments	
		SEQ-CCB2				
		BIKØ5Ø8-BLK1	LEN	5		
508-BS1 → 507-BLK1		BIKØ5Ø7-BLK1	↓	↓	Cr↑	
		2ØKØ215-Ø1	↓	↓	Cr<10x BLK	
		2ØKØ255-Ø1	TWC		Ni noisy	Ni: NR
		2ØKØ196-Ø1RE1	SWC	5	~~Cr<10x BLK~~	Cr only
	✓	2ØKØ135-Ø1RE1		10	As↓	
	✓	-Ø2RE1				
	✓	-Ø3RE1	↓	↓	↓	
		2ØKØ255-Ø1RE1	TWC	2		Ni only
		SEQ-CCV3				
		-CCB3				
	✓	EF#1 TEST1	—	5	(Blue cap) Cr↑	
	✓	EF#1 TEST2	—			
		20K0196-01	LEN		Cr<10x BLK	
		20K0209-01				
		20K0210-01				
		20K0211-01			↓	
		BIK0508-DUP1				
		20K0212-01				
		BIK0508-MS1				
	✓	OLD LEN BLK	↓	↓	Test only	
		SEQ-CCV4				

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — **Analysis Date:** 11/18/20 **Analyst:** TH
LR Date: — **Sequence:** — **Page:** 3 of 9

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CCB4			
	✓	20K0135-01RE1	SWC	20	
	↓	↓ -02RE1	↓	↓	
	↓	↓ -03RE1	↓	↓	
	✓	20K0126-06	↓	5	Sn 7LR
		↓ -02	↓	2	
		↓ -07	↓	↓	
		BIK0408-DUP1	↓	↓	As↓ Cu,Pb RPD No As
		20K0126-01	↓	↓	↓ ↓
		BIK0408-MS1	↓	↓	↓ Cu,Mn %R↓ ↓
		↓ -MSD1	↓	↓	↓ Cu,Zn %R↓ ↓
		SEQ-CCV5			Si↑
		↓ -CCB5			
		BIK0507-DUP1	LEN	5	Cr<10xBLK
		20K0201-07	↓	↓	↓
		BIK0507-MS1	↓	↓	↓
		20K0126-11	SWC	2	
		↓ -12	↓	↓	
		↓ -16	↓	↓	
		↓ -18	↓	↓	
		↓ -22	↓	↓	
		↓ -24	↓	↓	
		SEQ-CCV6			Si↑

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11/18/20 Analyst: TH

LR Date: — Sequence: — Page: 4 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CC36			
		20K0145-02	SWC	2	
		-03	↓	↓	
		-07			
		-08			
		-11			
		-13			
		-15			
		↓ -17	↓	↓	
		SEQ-CCV7			Si ↑
		↓ -CCB7			Al ↓
		Rinse/DI			
		TH 11/18/20			

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Analysis Begun

Start Time: 11/18/2020 1:50:53 PM
Plasma On Time: 11/18/2020 9:28:48 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Method Loaded
Method Name: ELMT7300bcESI2FAST
Method Last Saved: 11/18/2020 1:49:36 PM
IEC File: IEC111220A.iec
MSF File:
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

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Sequence No.: 1
Autosampler Location: 1
Sample ID: SEQ-CAL1
Date Collected: 11/18/2020 1:51:01 PM
Data Type: Original

Nebulizer Parameters: SEQ-CAL1

Analyte	Back Pressure	Flow
All	234.0 kPa	0.65 L/min

Mean Data: SEQ-CAL1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1413794.7	6942.47	0.49%	100.0	%
ScR 361.383	151200.2	1251.27	0.83%	100.0	%
Ag 328.068†	-50.6	41.48	82.02%	[0.00]	mg/L
Al 308.215†	606.8	3.38	0.56%	[0.00]	mg/L
As 188.979†	-26.2	2.85	10.88%	[0.00]	mg/L
B 249.677†	-109.2	9.49	8.69%	[0.00]	mg/L
Ba 233.527†	57.0	2.72	4.78%	[0.00]	mg/L

Be 313.042†	1488.1	8.19	0.55%	[0.00]	mg/L
Ca 317.933†	37.7	6.29	16.70%	[0.00]	mg/L
Cd 228.802†	274.2	1.75	0.64%	[0.00]	mg/L
Co 228.616†	-188.3	2.57	1.36%	[0.00]	mg/L
Cr 267.716†	-282.9	1.67	0.59%	[0.00]	mg/L
Cu 324.752†	1655.1	8.74	0.53%	[0.00]	mg/L
Fe 273.955†	21.8	0.96	4.42%	[0.00]	mg/L
K 766.490†	146.2	26.68	18.25%	[0.00]	mg/L
Mg 279.077†	51.3	10.67	20.81%	[0.00]	mg/L
Mn 257.610†	345.3	3.49	1.01%	[0.00]	mg/L
Mo 202.031†	56.5	0.46	0.81%	[0.00]	mg/L
Na 589.592†	130.3	19.94	15.31%	[0.00]	mg/L
Na 330.237†	-141.8	2.22	1.57%	[0.00]	mg/L
Ni 231.604†	-13.3	1.85	13.94%	[0.00]	mg/L
Pb 220.353†	176.2	4.99	2.83%	[0.00]	mg/L
Sb 206.836†	49.7	2.27	4.56%	[0.00]	mg/L
Se 196.026†	-104.4	4.37	4.19%	[0.00]	mg/L
Si 288.158†	-23.3	6.53	28.00%	[0.00]	mg/L
Sn 189.927†	7.6	1.74	22.92%	[0.00]	mg/L
Sr 421.552†	824.2	27.53	3.34%	[0.00]	mg/L
Ti 334.903†	215.9	28.60	13.24%	[0.00]	mg/L
Tl 190.801†	87.7	1.17	1.33%	[0.00]	mg/L
V 292.402†	132.6	23.99	18.08%	[0.00]	mg/L
Zn 206.200†	24.1	2.39	9.91%	[0.00]	mg/L

==

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: SEQ-CAL2 **Date Collected: 11/18/2020 1:55:23 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL2

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: SEQ-CAL2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1416622.8	4079.98	0.29%	100.2	%
ScR 361.383	152515.2	357.45	0.23%	100.9	%
Ba 233.527†	35014.8	149.02	0.43%	[10]	mg/L
Cd 228.802†	170688.3	41.58	0.02%	[10]	mg/L
Co 228.616†	177356.9	364.11	0.21%	[10]	mg/L
Cr 267.716†	22723.8	83.31	0.37%	[10]	mg/L
Cu 324.752†	1553886.0	3682.93	0.24%	[10]	mg/L
Mn 257.610†	327348.3	697.06	0.21%	[10]	mg/L
V 292.402†	496081.9	5333.19	1.08%	[10]	mg/L

==

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: SEQ-CAL3 **Date Collected: 11/18/2020 1:57:24 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL3

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: SEQ-CAL3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1405633.1	1450.01	0.10%	99.42	%
ScR 361.383	146929.7	1275.16	0.87%	97.18	%
Ag 328.068†	134855.7	429.53	0.32%	[1.0]	mg/L
As 188.979†	6205.6	31.95	0.51%	[10]	mg/L
B 249.677†	57073.0	77.58	0.14%	[10]	mg/L
Be 313.042†	2261385.5	12029.78	0.53%	[5.0]	mg/L
Na 589.592†	432536.4	1596.72	0.37%	[50]	mg/L
Ni 231.604†	20734.8	40.97	0.20%	[10]	mg/L
Pb 220.353†	51872.5	314.24	0.61%	[10]	mg/L

Se 196.026†	6292.5	14.78	0.23%	[10]	mg/L
Sr 421.552†	2196752.3	11465.85	0.52%	[5]	mg/L
Tl 190.801†	12239.0	33.95	0.28%	[10]	mg/L
Zn 206.200†	16543.6	33.29	0.20%	[10]	mg/L

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Sequence No.: 4 **Autosampler Location: 4**
Sample ID: SEQ-CAL4 **Date Collected: 11/18/2020 2:00:41 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL4

Analyte	**Back Pressure**	**Flow**
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-CAL4

Analyte	**Mean Corrected Intensity**	**Std.Dev.**	**RSD**	**Conc.**	**Calib Units**
ScA 357.253	1456772.9	5719.54	0.39%	103.0	%
ScR 361.383	155457.2	287.84	0.19%	102.8	%
Mo 202.031†	109304.1	143.96	0.13%	[10]	mg/L
Sb 206.836†	18137.2	14.87	0.08%	[10]	mg/L
Si 288.158†	7589.7	61.05	0.80%	[10]	mg/L
Sn 189.927†	25984.1	60.19	0.23%	[10]	mg/L
Ti 334.903†	129843.6	358.00	0.28%	[10]	mg/L

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Sequence No.: 5 **Autosampler Location: 5**
Sample ID: SEQ-CAL5 **Date Collected: 11/18/2020 2:03:10 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL5

Analyte	**Back Pressure**	**Flow**
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-CAL5

Analyte	**Mean Corrected Intensity**	**Std.Dev.**	**RSD**	**Conc.**	**Calib Units**
ScA 357.253	1365574.8	7029.15	0.51%	96.59	%
ScR 361.383	155960.2	1429.93	0.92%	103.1	%
Al 308.215†	27760.9	275.50	0.99%	[30]	mg/L
Ca 317.933†	175511.5	491.65	0.28%	[30]	mg/L
Fe 273.955†	90980.5	1022.15	1.12%	[100]	mg/L
K 766.490†	111293.1	272.72	0.25%	[100]	mg/L
Mg 279.077†	21277.5	205.56	0.97%	[30]	mg/L
Na 330.237†	1776.9	12.45	0.70%	[100]	mg/L

Calibration Summary

Analyte	**Stds.**	**Equation**	**Intercept**	**Slope**	**Curvature**	**Corr. Coef.**	**Reslope**
Ag 328.068	1	Lin Thru 0	0.0	134900	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	925.4	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	620.6	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	5707	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	3501	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	452300	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	5850	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	17070	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	17740	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	2272	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	155400	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	909.8	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1113	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	709.3	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	32730	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	10930	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	8651	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	17.77	0.00000	1.000000	

Ni 231.604	1	Lin Thru 0	0.0	2073	0.00000	1.000000
Pb 220.353	1	Lin Thru 0	0.0	5187	0.00000	1.000000
Sb 206.836	1	Lin Thru 0	0.0	1814	0.00000	1.000000
Se 196.026	1	Lin Thru 0	0.0	629.3	0.00000	1.000000
Si 288.158	1	Lin Thru 0	0.0	759.0	0.00000	1.000000
Sn 189.927	1	Lin Thru 0	0.0	2598	0.00000	1.000000
Sr 421.552	1	Lin Thru 0	0.0	439400	0.00000	1.000000
Ti 334.903	1	Lin Thru 0	0.0	12980	0.00000	1.000000
Tl 190.801	1	Lin Thru 0	0.0	1224	0.00000	1.000000
V 292.402	1	Lin Thru 0	0.0	49610	0.00000	1.000000
Zn 206.200	1	Lin Thru 0	0.0	1654	0.00000	1.000000

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Analysis Begun

Start Time: 11/18/2020 2:08:43 PM
Plasma On Time: 11/18/2020 9:28:48 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 7
Sample ID: SEQ-ICV1
Date Collected: 11/18/2020 2:08:51 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SEQ-ICV1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: SEQ-ICV1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1394888.3	98.66	%	0.205				0.21%
ScR 361.383	149634.2	98.96	%	0.571				0.58%
Ag 328.068†	139343.4	1.034	mg/L	0.0042	1.034	mg/L	0.0042	0.41%
Al 308.215†	1995.7	2.122	mg/L	0.0249	2.122	mg/L	0.0249	1.17%
As 188.979†	1185.7	1.941	mg/L	0.0039	1.941	mg/L	0.0039	0.20%
B 249.677†	5569.4	0.9746	mg/L	0.00814	0.9746	mg/L	0.00814	0.84%
Ba 233.527†	3528.4	1.007	mg/L	0.0067	1.007	mg/L	0.0067	0.66%
Be 313.042†	440466.4	0.9713	mg/L	0.00273	0.9713	mg/L	0.00273	0.28%
Ca 317.933†	11346.0	1.939	mg/L	0.0079	1.939	mg/L	0.0079	0.41%
Cd 228.802†	17155.7	0.9930	mg/L	0.00110	0.9930	mg/L	0.00110	0.11%
Co 228.616†	17332.6	0.9754	mg/L	0.00455	0.9754	mg/L	0.00455	0.47%
Cr 267.716†	2306.9	1.018	mg/L	0.0161	1.018	mg/L	0.0161	1.58%
Cu 324.752†	154820.8	0.9960	mg/L	0.00278	0.9960	mg/L	0.00278	0.28%
Fe 273.955†	1864.3	2.042	mg/L	0.0172	2.042	mg/L	0.0172	0.84%
K 766.490†	22013.0	19.78	mg/L	0.053	19.78	mg/L	0.053	0.27%
Mg 279.077†	1460.4	2.072	mg/L	0.0266	2.072	mg/L	0.0266	1.29%
Mn 257.610†	31365.4	0.9584	mg/L	0.00159	0.9584	mg/L	0.00159	0.17%
Mo 202.031†	10890.9	0.9963	mg/L	0.00492	0.9963	mg/L	0.00492	0.49%
Na 589.592†	425510.1	49.19	mg/L	0.042	49.19	mg/L	0.042	0.09%
Na 330.237†	905.7	50.80	mg/L	0.331	50.80	mg/L	0.331	0.65%
Ni 231.604†	2018.9	0.9749	mg/L	0.01070	0.9749	mg/L	0.01070	1.10%
Pb 220.353†	10558.7	2.037	mg/L	0.0116	2.037	mg/L	0.0116	0.57%
Sb 206.836†	3713.7	2.043	mg/L	0.0111	2.043	mg/L	0.0111	0.54%
Se 196.026†	1267.5	2.015	mg/L	0.0156	2.015	mg/L	0.0156	0.78%
Si 288.158†	1567.9	2.051	mg/L	0.0238	2.051	mg/L	0.0238	1.16%
Sn 189.927†	2559.0	0.9856	mg/L	0.00447	0.9856	mg/L	0.00447	0.45%
Sr 421.552†	427744.3	0.9736	mg/L	0.00099	0.9736	mg/L	0.00099	0.10%
Ti 334.903†	12909.5	0.9930	mg/L	0.00090	0.9930	mg/L	0.00090	0.09%
Tl 190.801†	2445.9	1.984	mg/L	0.0100	1.984	mg/L	0.0100	0.51%
V 292.402†	48757.7	0.9909	mg/L	0.01359	0.9909	mg/L	0.01359	1.37%
Zn 206.200†	1615.4	0.9760	mg/L	0.00790	0.9760	mg/L	0.00790	0.81%

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Sequence No.: 2 **Autosampler Location: 1**
Sample ID: SEQ-ICB1 **Date Collected: 11/18/2020 2:13:14 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-ICB1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-ICB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1421342.3	100.5	%	0.49				0.48%
ScR 361.383	151105.0	99.94	%	0.803				0.80%
Ag 328.068†	16.6	0.00012	mg/L	0.000151	0.00012	mg/L	0.000151	122.47%
Al 308.215†	22.1	0.02388	mg/L	0.013853	0.02388	mg/L	0.013853	58.00%
As 188.979†	4.1	0.00670	mg/L	0.002984	0.00670	mg/L	0.002984	44.52%
B 249.677†	41.4	0.00727	mg/L	0.000036	0.00727	mg/L	0.000036	0.49%
Ba 233.527†	0.5	0.00016	mg/L	0.001233	0.00016	mg/L	0.001233	793.24%
Be 313.042†	6.0	0.00001	mg/L	0.000069	0.00001	mg/L	0.000069	518.28%
Ca 317.933†	-6.5	-0.00112	mg/L	0.001043	-0.00112	mg/L	0.001043	93.52%
Cd 228.802†	1.6	0.00005	mg/L	0.000134	0.00005	mg/L	0.000134	277.60%
Co 228.616†	-2.1	-0.00012	mg/L	0.000166	-0.00012	mg/L	0.000166	137.04%
Cr 267.716†	3.6	0.00160	mg/L	0.004173	0.00160	mg/L	0.004173	261.28%
Cu 324.752†	7.6	0.00005	mg/L	0.000224	0.00005	mg/L	0.000224	461.26%
Fe 273.955†	0.5	0.00052	mg/L	0.001964	0.00052	mg/L	0.001964	379.73%
K 766.490†	56.1	0.05040	mg/L	0.063203	0.05040	mg/L	0.063203	125.40%
Mg 279.077†	-1.9	-0.00263	mg/L	0.009216	-0.00263	mg/L	0.009216	350.70%
Mn 257.610†	1.7	0.00005	mg/L	0.000119	0.00005	mg/L	0.000119	226.87%
Mo 202.031†	6.1	0.00056	mg/L	0.000367	0.00056	mg/L	0.000367	65.81%
Na 589.592†	-95.1	-0.01099	mg/L	0.004221	-0.01099	mg/L	0.004221	38.39%
Na 330.237†	1.2	0.06540	mg/L	0.573231	0.06540	mg/L	0.573231	876.47%
Ni 231.604†	-3.3	-0.00157	mg/L	0.004582	-0.00157	mg/L	0.004582	292.46%
Pb 220.353†	-3.4	-0.00064	mg/L	0.000273	-0.00064	mg/L	0.000273	42.69%
Sb 206.836†	2.1	0.00116	mg/L	0.001319	0.00116	mg/L	0.001319	113.66%
Se 196.026†	4.6	0.00724	mg/L	0.006652	0.00724	mg/L	0.006652	91.83%
Si 288.158†	-8.0	-0.01049	mg/L	0.006754	-0.01049	mg/L	0.006754	64.36%
Sn 189.927†	0.7	0.00025	mg/L	0.001337	0.00025	mg/L	0.001337	532.41%
Sr 421.552†	-3.9	-0.00001	mg/L	0.000121	-0.00001	mg/L	0.000121	>999.9%
Ti 334.903†	15.1	0.00116	mg/L	0.001814	0.00116	mg/L	0.001814	156.11%
Tl 190.801†	-2.3	-0.00187	mg/L	0.001664	-0.00187	mg/L	0.001664	89.09%
V 292.402†	-0.5	0.00000	mg/L	0.000511	0.00000	mg/L	0.000511	>999.9%
Zn 206.200†	5.2	0.00313	mg/L	0.001442	0.00313	mg/L	0.001442	46.05%

Sequence No.: 3
Sample ID: SEQ-CRL1
Autosampler Location: 301
Date Collected: 11/18/2020 2:17:30 PM
Data Type: Original

Dilution: 1X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CRL1

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: SEQ-CRL1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1427487.5	101.0	%	0.27				0.27%
ScR 361.383	153672.1	101.6	%	0.50				0.49%
Ag 328.068†	405.1	0.00300	mg/L	0.000086	0.00300	mg/L	0.000086	2.85%
Al 308.215†	75.5	0.08135	mg/L	0.006043	0.08135	mg/L	0.006043	7.43%
As 188.979†	33.3	0.05399	mg/L	0.008047	0.05399	mg/L	0.008047	14.90%
B 249.677†	191.4	0.03348	mg/L	0.001284	0.03348	mg/L	0.001284	3.83%
Ba 233.527†	23.3	0.00665	mg/L	0.000159	0.00665	mg/L	0.000159	2.39%
Be 313.042†	434.8	0.00095	mg/L	0.000072	0.00095	mg/L	0.000072	7.51%
Ca 317.933†	303.6	0.05189	mg/L	0.001757	0.05189	mg/L	0.001757	3.38%
Cd 228.802†	40.0	0.00199	mg/L	0.000113	0.00199	mg/L	0.000113	5.67%
Co 228.616†	50.4	0.00283	mg/L	0.000227	0.00283	mg/L	0.000227	8.03%
Cr 267.716†	19.4	0.00858	mg/L	0.001157	0.00858	mg/L	0.001157	13.49%
Cu 324.752†	464.6	0.00299	mg/L	0.000154	0.00299	mg/L	0.000154	5.16%
Fe 273.955†	49.8	0.05468	mg/L	0.003344	0.05468	mg/L	0.003344	6.11%
K 766.490†	500.6	0.4498	mg/L	0.04603	0.4498	mg/L	0.04603	10.23%
Mg 279.077†	37.7	0.05320	mg/L	0.005769	0.05320	mg/L	0.005769	10.84%
Mn 257.610†	132.5	0.00405	mg/L	0.000072	0.00405	mg/L	0.000072	1.79%
Mo 202.031†	51.1	0.00467	mg/L	0.000474	0.00467	mg/L	0.000474	10.16%
Na 589.592†	3436.8	0.3973	mg/L	0.00496	0.3973	mg/L	0.00496	1.25%
Na 330.237†	-4.5	-0.2578	mg/L	0.31832	-0.2578	mg/L	0.31832	123.49%
Ni 231.604†	21.0	0.01017	mg/L	0.000978	0.01017	mg/L	0.000978	9.62%
Pb 220.353†	109.8	0.02120	mg/L	0.000446	0.02120	mg/L	0.000446	2.10%
Sb 206.836†	92.9	0.05125	mg/L	0.001007	0.05125	mg/L	0.001007	1.96%
Se 196.026†	32.1	0.05103	mg/L	0.003708	0.05103	mg/L	0.003708	7.27%
Si 288.158†	76.0	0.09993	mg/L	0.010105	0.09993	mg/L	0.010105	10.11%
Sn 189.927†	53.3	0.02053	mg/L	0.001162	0.02053	mg/L	0.001162	5.66%
Sr 421.552†	392.7	0.00089	mg/L	0.000127	0.00089	mg/L	0.000127	14.25%
Ti 334.903†	121.4	0.00934	mg/L	0.000984	0.00934	mg/L	0.000984	10.53%
Tl 190.801†	61.1	0.04980	mg/L	0.001001	0.04980	mg/L	0.001001	2.01%
V 292.402†	126.0	0.00261	mg/L	0.000286	0.00261	mg/L	0.000286	10.94%
Zn 206.200†	36.8	0.02221	mg/L	0.002888	0.02221	mg/L	0.002888	13.00%

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Sequence No.: 4 **Autosampler Location: 302**
Sample ID: SEQ-IFA1 **Date Collected: 11/18/2020 2:21:46 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-IFA1

Analyte	Back Pressure	Flow
All	235.0 kPa	0.65 L/min

Mean Data: SEQ-IFA1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1385109.7	97.97	%	0.571				0.58%
ScR 361.383	150549.1	99.57	%	0.374				0.38%
Ag 328.068†	-105.2	-0.00079	mg/L	0.000146	-0.00079	mg/L	0.000146	18.54%
Al 308.215†	188376.5	203.6	mg/L	0.83	203.6	mg/L	0.83	0.41%
As 188.979†	38.9	0.06740	mg/L	0.003970	0.06740	mg/L	0.003970	5.89%
B 249.677†	-79.4	0.00588	mg/L	0.001389	0.00588	mg/L	0.001389	23.63%
Ba 233.527†	104.5	0.00118	mg/L	0.000795	0.00118	mg/L	0.000795	67.20%
Be 313.042†	38.6	0.00015	mg/L	0.000032	0.00015	mg/L	0.000032	21.42%
Ca 317.933†	580432.9	99.21	mg/L	0.451	99.21	mg/L	0.451	0.45%
Cd 228.802†	138.1	0.00163	mg/L	0.000269	0.00163	mg/L	0.000269	16.48%
Co 228.616†	-33.4	-0.00190	mg/L	0.000391	-0.00190	mg/L	0.000391	20.57%
Cr 267.716†	-12.3	-0.00427	mg/L	0.004219	-0.00427	mg/L	0.004219	98.73%
Cu 324.752†	-1007.1	0.00072	mg/L	0.000083	0.00072	mg/L	0.000083	11.53%
Fe 273.955†	180811.4	198.7	mg/L	1.04	198.7	mg/L	1.04	0.53%
K 766.490†	72.7	0.06532	mg/L	0.016139	0.06532	mg/L	0.016139	24.71%
Mg 279.077†	73446.2	103.4	mg/L	0.29	103.4	mg/L	0.29	0.28%
Mn 257.610†	164.9	0.00060	mg/L	0.000430	0.00060	mg/L	0.000430	71.78%
Mo 202.031†	73.2	0.00361	mg/L	0.000693	0.00361	mg/L	0.000693	19.21%
Na 589.592†	-155.1	-0.01793	mg/L	0.000783	-0.01793	mg/L	0.000783	4.37%
Na 330.237†	-17.2	-0.9702	mg/L	0.47701	-0.9702	mg/L	0.47701	49.17%
Ni 231.604†	-8.3	-0.00399	mg/L	0.002096	-0.00399	mg/L	0.002096	52.60%
Pb 220.353†	-227.3	-0.00609	mg/L	0.000908	-0.00609	mg/L	0.000908	14.91%
Sb 206.836†	22.6	0.01230	mg/L	0.005406	0.01230	mg/L	0.005406	43.95%
Se 196.026†	-72.2	0.00220	mg/L	0.004642	0.00220	mg/L	0.004642	211.05%
Si 288.158†	-32.6	-0.02977	mg/L	0.006270	-0.02977	mg/L	0.006270	21.06%
Sn 189.927†	-56.3	-0.00389	mg/L	0.000759	-0.00389	mg/L	0.000759	19.52%
Sr 421.552†	416.3	0.00095	mg/L	0.000033	0.00095	mg/L	0.000033	3.53%
Ti 334.903†	106.9	0.00296	mg/L	0.000884	0.00296	mg/L	0.000884	29.85%
Tl 190.801†	52.6	-0.02513	mg/L	0.002849	-0.02513	mg/L	0.002849	11.34%
V 292.402†	-1250.2	0.00968	mg/L	0.000803	0.00968	mg/L	0.000803	8.30%
Zn 206.200†	8.9	0.00262	mg/L	0.001083	0.00262	mg/L	0.001083	41.37%

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Sequence No.: 5
Sample ID: SEQ-IFB1

Autosampler Location: 303
Date Collected: 11/18/2020 2:26:17 PM
Data Type: Original

Dilution: 1X
Wash Time: 37

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-IFB1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: SEQ-IFB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1399202.0	98.97	%	0.250				0.25%
ScR 361.383	149535.6	98.90	%	0.374				0.38%
Ag 328.068†	140990.5	1.046	mg/L	0.0033	1.046	mg/L	0.0033	0.32%
Al 308.215†	188722.8	203.9	mg/L	0.50	203.9	mg/L	0.50	0.25%
As 188.979†	650.6	1.051	mg/L	0.0047	1.051	mg/L	0.0047	0.45%
B 249.677†	-61.3	0.00776	mg/L	0.001165	0.00776	mg/L	0.001165	15.02%
Ba 233.527†	3571.5	0.9905	mg/L	0.00350	0.9905	mg/L	0.00350	0.35%
Be 313.042†	442327.2	0.9756	mg/L	0.00149	0.9756	mg/L	0.00149	0.15%
Ca 317.933†	587150.0	100.4	mg/L	0.33	100.4	mg/L	0.33	0.33%
Cd 228.802†	16783.0	0.9710	mg/L	0.00405	0.9710	mg/L	0.00405	0.42%
Co 228.616†	16122.6	0.9088	mg/L	0.00365	0.9088	mg/L	0.00365	0.40%
Cr 267.716†	2279.0	1.003	mg/L	0.0073	1.003	mg/L	0.0073	0.73%
Cu 324.752†	155353.6	1.007	mg/L	0.0035	1.007	mg/L	0.0035	0.35%
Fe 273.955†	181460.6	199.4	mg/L	1.45	199.4	mg/L	1.45	0.73%
K 766.490†	107.7	0.09676	mg/L	0.042725	0.09676	mg/L	0.042725	44.16%
Mg 279.077†	71595.4	100.8	mg/L	0.20	100.8	mg/L	0.20	0.20%
Mn 257.610†	33001.7	1.004	mg/L	0.0024	1.004	mg/L	0.0024	0.24%
Mo 202.031†	78.2	0.00408	mg/L	0.000088	0.00408	mg/L	0.000088	2.17%
Na 589.592†	-164.9	-0.01906	mg/L	0.002688	-0.01906	mg/L	0.002688	14.10%
Na 330.237†	-20.4	-1.494	mg/L	0.2016	-1.494	mg/L	0.2016	13.49%
Ni 231.604†	1941.1	0.9366	mg/L	0.00844	0.9366	mg/L	0.00844	0.90%
Pb 220.353†	4885.7	0.9808	mg/L	0.00289	0.9808	mg/L	0.00289	0.30%
Sb 206.836†	1908.3	1.038	mg/L	0.0062	1.038	mg/L	0.0062	0.60%
Se 196.026†	571.2	1.025	mg/L	0.0016	1.025	mg/L	0.0016	0.16%
Si 288.158†	-20.1	-0.00933	mg/L	0.007626	-0.00933	mg/L	0.007626	81.78%
Sn 189.927†	-56.1	-0.00363	mg/L	0.001376	-0.00363	mg/L	0.001376	37.93%
Sr 421.552†	389.4	0.00089	mg/L	0.000005	0.00089	mg/L	0.000005	0.61%
Ti 334.903†	122.6	0.00385	mg/L	0.001054	0.00385	mg/L	0.001054	27.35%
Tl 190.801†	1210.8	0.9112	mg/L	0.00209	0.9112	mg/L	0.00209	0.23%
V 292.402†	46574.6	0.9808	mg/L	0.00880	0.9808	mg/L	0.00880	0.90%
Zn 206.200†	1586.4	0.9559	mg/L	0.00389	0.9559	mg/L	0.00389	0.41%

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Sequence No.: 6 **Autosampler Location: 7**
Sample ID: SEQ-CCV1 **Date Collected: 11/18/2020 2:33:17 PM**
Data Type: Original
Dilution: 1X
Wash Time: 200 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: SEQ-CCV1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1392139.6	98.47	%	0.075				0.08%
ScR 361.383	149601.3	98.94	%	0.361				0.37%
Ag 328.068†	139686.4	1.036	mg/L	0.0049	1.036	mg/L	0.0049	0.47%
Al 308.215†	1973.7	2.099	mg/L	0.0064	2.099	mg/L	0.0064	0.31%
As 188.979†	1175.3	1.924	mg/L	0.0119	1.924	mg/L	0.0119	0.62%
B 249.677†	5554.6	0.9720	mg/L	0.00536	0.9720	mg/L	0.00536	0.55%
Ba 233.527†	3551.4	1.013	mg/L	0.0052	1.013	mg/L	0.0052	0.51%
Be 313.042†	443547.2	0.9782	mg/L	0.00723	0.9782	mg/L	0.00723	0.74%
Ca 317.933†	12028.1	2.056	mg/L	0.0139	2.056	mg/L	0.0139	0.68%
Cd 228.802†	17167.3	0.9938	mg/L	0.00039	0.9938	mg/L	0.00039	0.04%
Co 228.616†	17347.5	0.9762	mg/L	0.00339	0.9762	mg/L	0.00339	0.35%
Cr 267.716†	2286.7	1.009	mg/L	0.0120	1.009	mg/L	0.0120	1.19%
Cu 324.752†	154988.9	0.9971	mg/L	0.00651	0.9971	mg/L	0.00651	0.65%
Fe 273.955†	1856.6	2.033	mg/L	0.0126	2.033	mg/L	0.0126	0.62%
K 766.490†	21734.2	19.53	mg/L	0.103	19.53	mg/L	0.103	0.53%
Mg 279.077†	1462.9	2.076	mg/L	0.0127	2.076	mg/L	0.0127	0.61%
Mn 257.610†	33064.4	1.010	mg/L	0.0056	1.010	mg/L	0.0056	0.55%
Mo 202.031†	10798.1	0.9878	mg/L	0.00399	0.9878	mg/L	0.00399	0.40%
Na 589.592†	421386.1	48.71	mg/L	0.131	48.71	mg/L	0.131	0.27%
Na 330.237†	911.2	51.11	mg/L	0.326	51.11	mg/L	0.326	0.64%
Ni 231.604†	2030.7	0.9806	mg/L	0.00640	0.9806	mg/L	0.00640	0.65%
Pb 220.353†	10470.4	2.020	mg/L	0.0088	2.020	mg/L	0.0088	0.44%
Sb 206.836†	3686.3	2.028	mg/L	0.0037	2.028	mg/L	0.0037	0.18%
Se 196.026†	1257.7	2.000	mg/L	0.0109	2.000	mg/L	0.0109	0.54%
Si 288.158†	1572.9	2.057	mg/L	0.0100	2.057	mg/L	0.0100	0.48%
Sn 189.927†	2536.6	0.9770	mg/L	0.00553	0.9770	mg/L	0.00553	0.57%
Sr 421.552†	427008.2	0.9719	mg/L	0.00563	0.9719	mg/L	0.00563	0.58%
Ti 334.903†	12966.5	0.9974	mg/L	0.00476	0.9974	mg/L	0.00476	0.48%
Tl 190.801†	2429.0	1.970	mg/L	0.0030	1.970	mg/L	0.0030	0.15%
V 292.402†	48148.6	0.9785	mg/L	0.00922	0.9785	mg/L	0.00922	0.94%
Zn 206.200†	1649.5	0.9966	mg/L	0.00765	0.9966	mg/L	0.00765	0.77%

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Sequence No.: 7 **Autosampler Location: 1**
Sample ID: SEQ-CCB1 **Date Collected: 11/18/2020 2:38:37 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB1

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: SEQ-CCB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1392108.1	98.47	%	0.159				0.16%
ScR 361.383	147195.9	97.35	%	0.334				0.34%
Ag 328.068†	-2.7	-0.00002	mg/L	0.000097	-0.00002	mg/L	0.000097	490.15%
Al 308.215†	21.5	0.02319	mg/L	0.015497	0.02319	mg/L	0.015497	66.83%
As 188.979†	1.3	0.00210	mg/L	0.006536	0.00210	mg/L	0.006536	310.88%
B 249.677†	26.0	0.00457	mg/L	0.001691	0.00457	mg/L	0.001691	37.02%
Ba 233.527†	2.2	0.00064	mg/L	0.001209	0.00064	mg/L	0.001209	190.23%
Be 313.042†	20.5	0.00005	mg/L	0.000059	0.00005	mg/L	0.000059	131.11%
Ca 317.933†	7.4	0.00126	mg/L	0.000466	0.00126	mg/L	0.000466	37.07%
Cd 228.802†	1.8	0.00009	mg/L	0.000149	0.00009	mg/L	0.000149	164.86%
Co 228.616†	-8.0	-0.00045	mg/L	0.000321	-0.00045	mg/L	0.000321	71.02%
Cr 267.716†	-1.7	-0.00076	mg/L	0.002488	-0.00076	mg/L	0.002488	326.75%
Cu 324.752†	46.2	0.00030	mg/L	0.000122	0.00030	mg/L	0.000122	41.18%
Fe 273.955†	2.5	0.00271	mg/L	0.002396	0.00271	mg/L	0.002396	88.54%
K 766.490†	20.9	0.01875	mg/L	0.029641	0.01875	mg/L	0.029641	158.05%
Mg 279.077†	-0.3	-0.00046	mg/L	0.015859	-0.00046	mg/L	0.015859	>999.9%
Mn 257.610†	-2.4	-0.00007	mg/L	0.000160	-0.00007	mg/L	0.000160	217.27%
Mo 202.031†	2.6	0.00024	mg/L	0.000561	0.00024	mg/L	0.000561	232.39%
Na 589.592†	-205.0	-0.02370	mg/L	0.004693	-0.02370	mg/L	0.004693	19.80%
Na 330.237†	-8.6	-0.4820	mg/L	1.84818	-0.4820	mg/L	1.84818	383.45%
Ni 231.604†	-4.2	-0.00203	mg/L	0.000618	-0.00203	mg/L	0.000618	30.48%
Pb 220.353†	-0.4	-0.00007	mg/L	0.000333	-0.00007	mg/L	0.000333	470.73%
Sb 206.836†	3.6	0.00201	mg/L	0.000657	0.00201	mg/L	0.000657	32.75%
Se 196.026†	4.4	0.00705	mg/L	0.001295	0.00705	mg/L	0.001295	18.36%
Si 288.158†	-10.1	-0.01327	mg/L	0.007067	-0.01327	mg/L	0.007067	53.25%
Sn 189.927†	0.4	0.00017	mg/L	0.000533	0.00017	mg/L	0.000533	308.46%
Sr 421.552†	-19.2	-0.00004	mg/L	0.000078	-0.00004	mg/L	0.000078	178.71%
Ti 334.903†	17.0	0.00131	mg/L	0.000299	0.00131	mg/L	0.000299	22.83%
Tl 190.801†	-2.8	-0.00232	mg/L	0.000179	-0.00232	mg/L	0.000179	7.72%
V 292.402†	4.1	0.00008	mg/L	0.000398	0.00008	mg/L	0.000398	506.28%
Zn 206.200†	4.2	0.00255	mg/L	0.000520	0.00255	mg/L	0.000520	20.42%

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Analysis Begun

Start Time: 11/18/2020 2:48:18 PM
Plasma On Time: 11/18/2020 9:28:48 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 304
Sample ID: BIK0532-BLK1
Date Collected: 11/18/2020 2:48:26 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: BIK0532-BLK1

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: BIK0532-BLK1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1434426.3	101.5	%	0.12				0.11%
ScR 361.383	153320.1	101.4	%	1.06				1.05%
Ag 328.068†	-6.6	-0.00005	mg/L	0.000142	-0.00005	mg/L	0.000142	290.76%
Al 308.215†	11.0	0.01191	mg/L	0.019357	0.01191	mg/L	0.019357	162.55%
As 188.979†	2.6	0.00418	mg/L	0.000480	0.00418	mg/L	0.000480	11.48%
B 249.677†	9.9	0.00174	mg/L	0.001600	0.00174	mg/L	0.001600	91.82%
Ba 233.527†	-0.2	-0.00006	mg/L	0.001055	-0.00006	mg/L	0.001055	>999.9%
Be 313.042†	-4.1	-0.00001	mg/L	0.000033	-0.00001	mg/L	0.000033	370.84%
Ca 317.933†	31.4	0.00537	mg/L	0.001796	0.00537	mg/L	0.001796	33.47%
Cd 228.802†	-0.7	-0.00007	mg/L	0.000163	-0.00007	mg/L	0.000163	233.50%
Co 228.616†	-5.1	-0.00029	mg/L	0.000147	-0.00029	mg/L	0.000147	50.29%
Cr 267.716†	3.9	0.00170	mg/L	0.003784	0.00170	mg/L	0.003784	221.98%
Cu 324.752†	31.0	0.00020	mg/L	0.000097	0.00020	mg/L	0.000097	48.89%
Fe 273.955†	2.4	0.00268	mg/L	0.004031	0.00268	mg/L	0.004031	150.48%
K 766.490†	15.9	0.01430	mg/L	0.010038	0.01430	mg/L	0.010038	70.21%
Mg 279.077†	5.4	0.00768	mg/L	0.006756	0.00768	mg/L	0.006756	88.01%
Mn 257.610†	3.1	0.00009	mg/L	0.000130	0.00009	mg/L	0.000130	137.66%
Mo 202.031†	2.9	0.00027	mg/L	0.000172	0.00027	mg/L	0.000172	64.10%
Na 589.592†	-181.8	-0.02101	mg/L	0.004093	-0.02101	mg/L	0.004093	19.48%
Na 330.237†	-20.9	-1.179	mg/L	0.0975	-1.179	mg/L	0.0975	8.27%
Ni 231.604†	0.9	0.00045	mg/L	0.002356	0.00045	mg/L	0.002356	528.02%
Pb 220.353†	1.1	0.00022	mg/L	0.001107	0.00022	mg/L	0.001107	492.99%
Sb 206.836†	-0.7	-0.00040	mg/L	0.000884	-0.00040	mg/L	0.000884	221.36%
Se 196.026†	2.8	0.00452	mg/L	0.007656	0.00452	mg/L	0.007656	169.41%
Si 288.158†	-5.8	-0.00766	mg/L	0.007560	-0.00766	mg/L	0.007560	98.68%
Sn 189.927†	1.3	0.00051	mg/L	0.000187	0.00051	mg/L	0.000187	36.74%
Sr 421.552†	-29.0	-0.00007	mg/L	0.000025	-0.00007	mg/L	0.000025	37.76%
Ti 334.903†	17.2	0.00132	mg/L	0.001219	0.00132	mg/L	0.001219	92.17%
Tl 190.801†	1.5	0.00125	mg/L	0.003002	0.00125	mg/L	0.003002	240.15%
V 292.402†	-3.9	-0.00007	mg/L	0.000314	-0.00007	mg/L	0.000314	478.66%
Zn 206.200†	3.9	0.00234	mg/L	0.001618	0.00234	mg/L	0.001618	69.26%

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Sequence No.: 2
Sample ID: BIK0532-BS1

Dilution: 1X
Wash Time: 37

Autosampler Location: 305
Date Collected: 11/18/2020 2:52:48 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0532-BS1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: BIK0532-BS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1409551.7	99.70	%	0.294				0.29%
ScR 361.383	150894.4	99.80	%	0.364				0.36%
Ag 328.068†	70017.5	0.5193	mg/L	0.00102	0.5193	mg/L	0.00102	0.20%
Al 308.215†	1888.2	2.034	mg/L	0.0116	2.034	mg/L	0.0116	0.57%
As 188.979†	1189.4	1.913	mg/L	0.0178	1.913	mg/L	0.0178	0.93%
B 249.677†	2.2	-0.00010	mg/L	0.001040	-0.00010	mg/L	0.001040	>999.9%
Ba 233.527†	6779.6	1.936	mg/L	0.0173	1.936	mg/L	0.0173	0.90%
Be 313.042†	216173.0	0.4768	mg/L	0.00218	0.4768	mg/L	0.00218	0.46%
Ca 317.933†	54594.2	9.332	mg/L	0.0754	9.332	mg/L	0.0754	0.81%
Cd 228.802†	8267.8	0.4716	mg/L	0.00192	0.4716	mg/L	0.00192	0.41%
Co 228.616†	8259.6	0.4655	mg/L	0.00276	0.4655	mg/L	0.00276	0.59%
Cr 267.716†	1056.0	0.4633	mg/L	0.00591	0.4633	mg/L	0.00591	1.27%
Cu 324.752†	74080.4	0.4768	mg/L	0.00176	0.4768	mg/L	0.00176	0.37%
Fe 273.955†	1755.8	1.926	mg/L	0.0180	1.926	mg/L	0.0180	0.93%
K 766.490†	10344.5	9.295	mg/L	0.0318	9.295	mg/L	0.0318	0.34%
Mg 279.077†	7137.9	10.06	mg/L	0.053	10.06	mg/L	0.053	0.52%
Mn 257.610†	15261.1	0.4664	mg/L	0.00065	0.4664	mg/L	0.00065	0.14%
Mo 202.031†	14.2	0.00101	mg/L	0.000081	0.00101	mg/L	0.000081	8.09%
Na 589.592†	78260.7	9.047	mg/L	0.0318	9.047	mg/L	0.0318	0.35%
Na 330.237†	180.7	10.01	mg/L	0.102	10.01	mg/L	0.102	1.02%
Ni 231.604†	924.3	0.4455	mg/L	0.00724	0.4455	mg/L	0.00724	1.62%
Pb 220.353†	9909.6	1.911	mg/L	0.0141	1.911	mg/L	0.0141	0.74%
Sb 206.836†	6.9	-0.00268	mg/L	0.000947	-0.00268	mg/L	0.000947	35.37%
Se 196.026†	1219.0	1.938	mg/L	0.0124	1.938	mg/L	0.0124	0.64%
Si 288.158†	-3.2	-0.00080	mg/L	0.005877	-0.00080	mg/L	0.005877	736.82%
Sn 189.927†	-14.6	-0.00395	mg/L	0.000754	-0.00395	mg/L	0.000754	19.08%
Sr 421.552†	209439.6	0.4767	mg/L	0.00178	0.4767	mg/L	0.00178	0.37%
Ti 334.903†	57.8	0.00384	mg/L	0.001280	0.00384	mg/L	0.001280	33.37%
Tl 190.801†	2347.5	1.913	mg/L	0.0112	1.913	mg/L	0.0112	0.59%
V 292.402†	23056.0	0.4695	mg/L	0.00845	0.4695	mg/L	0.00845	1.80%
Zn 206.200†	750.8	0.4536	mg/L	0.00491	0.4536	mg/L	0.00491	1.08%

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Sequence No.: 3 **Autosampler Location: 306**
Sample ID: 20K0255-01 **Date Collected: 11/18/2020 2:57:04 PM**
Data Type: Original
DEL
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0255-01

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0255-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1371245.5	96.99	%	0.324				0.33%
ScR 361.383	143849.0	95.14	%	3.284				3.45%
Ag 328.068†	-67.0	-0.00050	mg/L	0.000285	-0.00050	mg/L	0.000285	57.26%
Al 308.215†	94.5	0.09901	mg/L	0.029966	0.09901	mg/L	0.029966	30.27%
As 188.979†	102.2	0.09326	mg/L	0.006043	0.09326	mg/L	0.006043	6.48%
B 249.677†	16038.4	2.810	mg/L	0.0904	2.810	mg/L	0.0904	3.22%
Ba 233.527†	372.7	0.1045	mg/L	0.00530	0.1045	mg/L	0.00530	5.07%
Be 313.042†	60.3	0.00014	mg/L	0.000113	0.00014	mg/L	0.000113	82.70%
Ca 317.933†	782944.4	133.8	mg/L	0.61	133.8	mg/L	0.61	0.46%
Cd 228.802†	215.0	0.00983	mg/L	0.000242	0.00983	mg/L	0.000242	2.46%
Co 228.616†	78.4	0.00436	mg/L	0.000058	0.00436	mg/L	0.000058	1.33%
Cr 267.716†	140.1	0.08960	mg/L	0.004134	0.08960	mg/L	0.004134	4.61%
Cu 324.752†	2892.6	0.01907	mg/L	0.000180	0.01907	mg/L	0.000180	0.94%
Fe 273.955†	11824.9	13.00	mg/L	0.278	13.00	mg/L	0.278	2.14%
K 766.490†	15762.9	14.16	mg/L	0.438	14.16	mg/L	0.438	3.09%
Mg 279.077†	2996.7	4.192	mg/L	0.1560	4.192	mg/L	0.1560	3.72%
Mn 257.610†	15260.6	0.4660	mg/L	0.01441	0.4660	mg/L	0.01441	3.09%
Mo 202.031†	1051.0	0.09382	mg/L	0.001215	0.09382	mg/L	0.001215	1.29%
Na 589.592†	2894449.8	334.6	mg/L	0.59	334.6	mg/L	0.59	0.18%
Na 330.237†	5740.7	323.1	mg/L	9.14	323.1	mg/L	9.14	2.83%
Ni 231.604†	530.8	0.2560	mg/L	0.01065	0.2560	mg/L	0.01065	4.16%
Pb 220.353†	-30.3	-0.00659	mg/L	0.000488	-0.00659	mg/L	0.000488	7.40%
Sb 206.836†	20.7	0.01007	mg/L	0.002592	0.01007	mg/L	0.002592	25.74%
Se 196.026†	24.8	0.02893	mg/L	0.002677	0.02893	mg/L	0.002677	9.25%
Si 288.158†	1676.5	2.210	mg/L	0.1029	2.210	mg/L	0.1029	4.66%
Sn 189.927†	-79.9	-0.00678	mg/L	0.001664	-0.00678	mg/L	0.001664	24.55%
Sr 421.552†	565456.5	1.287	mg/L	0.0036	1.287	mg/L	0.0036	0.28%
Ti 334.903†	146.5	0.00408	mg/L	0.002130	0.00408	mg/L	0.002130	52.24%
Tl 190.801†	-68.2	-0.03480	mg/L	0.001623	-0.03480	mg/L	0.001623	4.66%
V 292.402†	-73.0	0.00107	mg/L	0.000045	0.00107	mg/L	0.000045	4.22%
Zn 206.200†	36.1	0.01807	mg/L	0.001956	0.01807	mg/L	0.001956	10.82%

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Sequence No.: 4 **Autosampler Location: 307**
Sample ID: BIK0408-BLK1 **Date Collected: 11/18/2020 3:02:40 PM**
Data Type: Original
Dilution: 2X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0408-BLK1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: BIK0408-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1472063.7	104.1	%	0.42				0.40%
ScR 361.383	158292.1	104.7	%	1.04				1.00%
Ag 328.068†	24.0	0.00018	mg/L	0.000177	0.00036	mg/L	0.000354	99.43%
Al 308.215†	2.6	0.00284	mg/L	0.022405	0.00569	mg/L	0.044809	787.62%
As 188.979†	6.2	0.01001	mg/L	0.002907	0.02002	mg/L	0.005815	29.04%
B 249.677†	56.5	0.00991	mg/L	0.000765	0.01981	mg/L	0.001529	7.72%
Ba 233.527†	-2.9	-0.00081	mg/L	0.001625	-0.00163	mg/L	0.003250	199.42%
Be 313.042†	-64.3	-0.00014	mg/L	0.000022	-0.00028	mg/L	0.000045	15.82%
Ca 317.933†	41.4	0.00708	mg/L	0.002099	0.01417	mg/L	0.004198	29.63%
Cd 228.802†	-2.6	-0.00023	mg/L	0.000197	-0.00045	mg/L	0.000395	87.44%
Co 228.616†	-5.4	-0.00030	mg/L	0.000250	-0.00060	mg/L	0.000501	83.39%
Cr 267.716†	8.4	0.00369	mg/L	0.002509	0.00739	mg/L	0.005018	67.94%
Cu 324.752†	44.4	0.00029	mg/L	0.000070	0.00057	mg/L	0.000139	24.32%
Fe 273.955†	5.5	0.00601	mg/L	0.000364	0.01201	mg/L	0.000728	6.06%
K 766.490†	-3.3	-0.00294	mg/L	0.026314	-0.00588	mg/L	0.052627	895.78%
Mg 279.077†	3.4	0.00473	mg/L	0.008928	0.00946	mg/L	0.017856	188.73%
Mn 257.610†	-17.0	-0.00052	mg/L	0.000278	-0.00104	mg/L	0.000557	53.44%
Mo 202.031†	-3.0	-0.00028	mg/L	0.000042	-0.00056	mg/L	0.000085	15.20%
Na 589.592†	276.0	0.03191	mg/L	0.007491	0.06381	mg/L	0.014983	23.48%
Na 330.237†	2.2	0.1237	mg/L	0.13807	0.2475	mg/L	0.27614	111.59%
Ni 231.604†	-5.5	-0.00265	mg/L	0.000206	-0.00530	mg/L	0.000412	7.78%
Pb 220.353†	-0.9	-0.00017	mg/L	0.000178	-0.00034	mg/L	0.000356	105.94%
Sb 206.836†	-0.9	-0.00057	mg/L	0.000865	-0.00114	mg/L	0.001729	152.31%
Se 196.026†	3.3	0.00532	mg/L	0.008309	0.01064	mg/L	0.016618	156.15%
Si 288.158†	-2.5	-0.00336	mg/L	0.005922	-0.00672	mg/L	0.011845	176.22%
Sn 189.927†	5.9	0.00226	mg/L	0.000843	0.00452	mg/L	0.001687	37.35%
Sr 421.552†	-22.0	-0.00005	mg/L	0.000046	-0.00010	mg/L	0.000093	92.58%
Ti 334.903†	-15.2	-0.00117	mg/L	0.001331	-0.00235	mg/L	0.002661	113.28%
Tl 190.801†	-2.2	-0.00178	mg/L	0.000736	-0.00355	mg/L	0.001472	41.41%
V 292.402†	-4.2	-0.00006	mg/L	0.000333	-0.00012	mg/L	0.000665	574.26%
Zn 206.200†	4.0	0.00239	mg/L	0.001172	0.00478	mg/L	0.002345	49.01%

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Sequence No.: 5
Sample ID: BIK0408-BS1

Dilution: 2X
Wash Time: 37

Autosampler Location: 308
Date Collected: 11/18/2020 3:06:55 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0408-BS1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: BIK0408-BS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1425989.4	100.9	%	0.11				0.11%
ScR 361.383	154579.5	102.2	%	0.11				0.10%
Ag 328.068†	70198.9	0.5207	mg/L	0.00090	1.041	mg/L	0.0018	0.17%
Al 308.215†	1884.5	2.030	mg/L	0.0045	4.061	mg/L	0.0090	0.22%
As 188.979†	1199.9	1.929	mg/L	0.0048	3.859	mg/L	0.0095	0.25%
B 249.677†	31.7	0.00506	mg/L	0.002069	0.01012	mg/L	0.004138	40.87%
Ba 233.527†	6801.1	1.942	mg/L	0.0045	3.883	mg/L	0.0089	0.23%
Be 313.042†	213493.4	0.4708	mg/L	0.00138	0.9417	mg/L	0.00276	0.29%
Ca 317.933†	54458.3	9.309	mg/L	0.0642	18.62	mg/L	0.128	0.69%
Cd 228.802†	8301.2	0.4735	mg/L	0.00089	0.9470	mg/L	0.00177	0.19%
Co 228.616†	8374.5	0.4720	mg/L	0.00086	0.9439	mg/L	0.00171	0.18%
Cr 267.716†	1084.1	0.4757	mg/L	0.00485	0.9513	mg/L	0.00970	1.02%
Cu 324.752†	73993.9	0.4763	mg/L	0.00118	0.9526	mg/L	0.00237	0.25%
Fe 273.955†	1762.3	1.934	mg/L	0.0022	3.867	mg/L	0.0044	0.11%
K 766.490†	10222.9	9.186	mg/L	0.0865	18.37	mg/L	0.173	0.94%
Mg 279.077†	7122.4	10.04	mg/L	0.020	20.08	mg/L	0.040	0.20%
Mn 257.610†	15204.1	0.4646	mg/L	0.00368	0.9293	mg/L	0.00736	0.79%
Mo 202.031†	13.6	0.00095	mg/L	0.000234	0.00190	mg/L	0.000467	24.61%
Na 589.592†	77236.6	8.928	mg/L	0.0451	17.86	mg/L	0.090	0.51%
Na 330.237†	174.8	9.673	mg/L	0.4150	19.35	mg/L	0.830	4.29%
Ni 231.604†	941.4	0.4538	mg/L	0.00529	0.9075	mg/L	0.01059	1.17%
Pb 220.353†	9991.4	1.927	mg/L	0.0030	3.854	mg/L	0.0060	0.16%
Sb 206.836†	7.1	-0.00278	mg/L	0.000984	-0.00556	mg/L	0.001969	35.38%
Se 196.026†	1217.3	1.935	mg/L	0.0084	3.870	mg/L	0.0167	0.43%
Si 288.158†	-5.6	-0.00393	mg/L	0.002764	-0.00785	mg/L	0.005528	70.41%
Sn 189.927†	-12.7	-0.00322	mg/L	0.000494	-0.00645	mg/L	0.000989	15.34%
Sr 421.552†	206448.4	0.4699	mg/L	0.00208	0.9398	mg/L	0.00416	0.44%
Ti 334.903†	28.0	0.00154	mg/L	0.000454	0.00308	mg/L	0.000908	29.49%
Tl 190.801†	2364.3	1.927	mg/L	0.0133	3.854	mg/L	0.0265	0.69%
V 292.402†	22997.2	0.4684	mg/L	0.00342	0.9368	mg/L	0.00684	0.73%
Zn 206.200†	761.8	0.4602	mg/L	0.00057	0.9204	mg/L	0.00114	0.12%

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Sequence No.: 6
Sample ID: 20K0175-01
Autosampler Location: 309
Date Collected: 11/18/2020 3:11:11 PM
Data Type: Original

Dilution: 5X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0175-01

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: 20K0175-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1427239.0	101.0	%	0.55				0.54%
ScR 361.383	152948.9	101.2	%	0.17				0.17%
Ag 328.068†	520.9	0.00389	mg/L	0.000284	0.01944	mg/L	0.001422	7.31%
Al 308.215†	28228.1	30.50	mg/L	0.061	152.5	mg/L	0.31	0.20%
As 188.979†	6.3	0.04165	mg/L	0.004762	0.2083	mg/L	0.02381	11.43%
B 249.677†	584.1	0.1213	mg/L	0.00075	0.6063	mg/L	0.00373	0.61%
Ba 233.527†	2077.1	0.5653	mg/L	0.00025	2.826	mg/L	0.0013	0.04%
Be 313.042†	517.1	0.00089	mg/L	0.000382	0.00444	mg/L	0.001912	43.05%
Ca 317.933†	421412.9	72.03	mg/L	0.387	360.2	mg/L	1.94	0.54%
Cd 228.802†	316.0	0.01365	mg/L	0.000459	0.06826	mg/L	0.002295	3.36%
Co 228.616†	820.1	0.04305	mg/L	0.000356	0.2153	mg/L	0.00178	0.83%
Cr 267.716†	975.9	0.4284	mg/L	0.00206	2.142	mg/L	0.0103	0.48%
Cu 324.752†	165988.8	1.076	mg/L	0.0082	5.378	mg/L	0.0408	0.76%
Fe 273.955†	175221.7	192.6	mg/L	0.58	963.0	mg/L	2.92	0.30%
K 766.490†	2156.1	1.937	mg/L	0.0196	9.687	mg/L	0.0979	1.01%
Mg 279.077†	8542.3	11.98	mg/L	0.029	59.88	mg/L	0.145	0.24%
Mn 257.610†	883794.9	27.00	mg/L	0.032	135.0	mg/L	0.16	0.12%
Mo 202.031†	899.7	0.08092	mg/L	0.000743	0.4046	mg/L	0.00371	0.92%
Na 589.592†	10483.6	1.212	mg/L	0.0107	6.059	mg/L	0.0534	0.88%
Na 330.237†	55.9	0.6960	mg/L	0.30968	3.480	mg/L	1.5484	44.49%
Ni 231.604†	753.6	0.3635	mg/L	0.00167	1.817	mg/L	0.0083	0.46%
Pb 220.353†	3473.6	0.6636	mg/L	0.00696	3.318	mg/L	0.0348	1.05%
Sb 206.836†	34.5	0.01575	mg/L	0.001147	0.07876	mg/L	0.005735	7.28%
Se 196.026†	-12.6	0.04203	mg/L	0.002219	0.2102	mg/L	0.01109	5.28%
Si 288.158†	314.8	0.3967	mg/L	0.00447	1.984	mg/L	0.0223	1.13%
Sn 189.927†	442.3	0.1839	mg/L	0.00348	0.9196	mg/L	0.01742	1.89%
Sr 421.552†	93063.2	0.2118	mg/L	0.00040	1.059	mg/L	0.0020	0.19%
Ti 334.903†	22278.3	1.712	mg/L	0.0027	8.559	mg/L	0.0136	0.16%
Tl 190.801†	-25.5	-0.02890	mg/L	0.002589	-0.1445	mg/L	0.01295	8.96%
V 292.402†	4885.3	0.1305	mg/L	0.00260	0.6527	mg/L	0.01301	1.99%
Zn 206.200†	12663.7	7.653	mg/L	0.0178	38.26	mg/L	0.089	0.23%

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Sequence No.: 7 **Autosampler Location: 310**
Sample ID: 20K0196-01 **Date Collected: 11/18/2020 3:15:28 PM**
Data Type: Original

Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0196-01

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0196-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1450656.6	102.6	%	0.25				0.24%
ScR 361.383	155959.0	103.1	%	0.62				0.60%
Ag 328.068†	247.6	0.00184	mg/L	0.000372	0.00367	mg/L	0.000743	20.25%
Al 308.215†	1426.1	1.540	mg/L	0.0128	3.080	mg/L	0.0256	0.83%
As 188.979†	56.5	0.07994	mg/L	0.002704	0.1599	mg/L	0.00541	3.38%
B 249.677†	49042.3	8.601	mg/L	0.0320	17.20	mg/L	0.064	0.37%
Ba 233.527†	275.4	0.06705	mg/L	0.001021	0.1341	mg/L	0.00204	1.52%
Be 313.042†	260.4	0.00058	mg/L	0.000024	0.00117	mg/L	0.000049	4.19%
Ca 317.933†	172914.3	29.56	mg/L	0.081	59.11	mg/L	0.161	0.27%
Cd 228.802†	71.0	0.00161	mg/L	0.000053	0.00322	mg/L	0.000107	3.31%
Co 228.616†	294.3	0.01634	mg/L	0.000369	0.03267	mg/L	0.000738	2.26%
Cr 267.716†	306.6	0.1434	mg/L	0.00570	0.2868	mg/L	0.01141	3.98%
Cu 324.752†	541718.5	3.489	mg/L	0.0198	6.979	mg/L	0.0396	0.57%
Fe 273.955†	72892.7	80.12	mg/L	0.469	160.2	mg/L	0.94	0.59%
K 766.490†	802.1	0.7207	mg/L	0.00791	1.441	mg/L	0.0158	1.10%
Mg 279.077†	744.6	0.9968	mg/L	0.01684	1.994	mg/L	0.0337	1.69%
Mn 257.610†	19979.2	0.6093	mg/L	0.00162	1.219	mg/L	0.0032	0.27%
Mo 202.031†	381.7	0.03441	mg/L	0.000232	0.06882	mg/L	0.000465	0.68%
Na 589.592†	158142.8	18.28	mg/L	0.046	36.56	mg/L	0.092	0.25%
Na 330.237†	459.4	19.55	mg/L	0.177	39.09	mg/L	0.354	0.90%
Ni 231.604†	357.6	0.1725	mg/L	0.00162	0.3449	mg/L	0.00324	0.94%
Pb 220.353†	5432.9	1.037	mg/L	0.0020	2.075	mg/L	0.0040	0.19%
Sb 206.836†	25.8	0.01224	mg/L	0.003642	0.02448	mg/L	0.007284	29.76%
Se 196.026†	-2.2	0.01869	mg/L	0.010868	0.03738	mg/L	0.021737	58.15%
Si 288.158†	284.3	0.3733	mg/L	0.00776	0.7466	mg/L	0.01552	2.08%
Sn 189.927†	66.5	0.03094	mg/L	0.000885	0.06188	mg/L	0.001769	2.86%
Sr 421.552†	12674.3	0.02885	mg/L	0.000130	0.05770	mg/L	0.000260	0.45%
Ti 334.903†	1674.4	0.1273	mg/L	0.00122	0.2546	mg/L	0.00244	0.96%
Tl 190.801†	-14.3	-0.00866	mg/L	0.002566	-0.01732	mg/L	0.005131	29.63%
V 292.402†	-148.4	0.00770	mg/L	0.000292	0.01540	mg/L	0.000584	3.79%
Zn 206.200†	28939.6	17.49	mg/L	0.028	34.98	mg/L	0.056	0.16%

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Sequence No.: 8
Sample ID: 20K0135-01

Dilution: 5X
Wash Time: 60

Autosampler Location: 311
Date Collected: 11/18/2020 3:20:07 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0135-01

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: 20K0135-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1492049.4	105.5	%	0.59				0.56%
ScR 361.383	160582.5	106.2	%	0.52				0.49%
Ag 328.068†	-101.5	-0.00069	mg/L	0.000576	-0.00346	mg/L	0.002880	83.16%
Al 308.215†	102106.6	110.3	mg/L	0.35	551.6	mg/L	1.74	0.31%
As 188.979†	-202.6	-0.1562	mg/L	0.00586	-0.7811	mg/L	0.02932	3.75%
B 249.677†	205.4	0.04730	mg/L	0.003920	0.2365	mg/L	0.01960	8.29%
Ba 233.527†	1780.5	0.4908	mg/L	0.00047	2.454	mg/L	0.0024	0.10%
Be 313.042†	872.2	0.00133	mg/L	0.000016	0.00664	mg/L	0.000082	1.23%
Ca 317.933†	98342.1	16.81	mg/L	0.092	84.05	mg/L	0.461	0.55%
Cd 228.802†	60.7	0.00292	mg/L	0.000145	0.01461	mg/L	0.000724	4.96%
Co 228.616†	1066.3	0.05266	mg/L	0.000463	0.2633	mg/L	0.00232	0.88%
Cr 267.716†	461.0	0.2071	mg/L	0.00132	1.035	mg/L	0.0066	0.64%
Cu 324.752†	20790.7	0.1377	mg/L	0.00172	0.6886	mg/L	0.00858	1.25%
Fe 273.955†	110527.6	121.5	mg/L	0.43	607.4	mg/L	2.14	0.35%
K 766.490†	6982.2	6.274	mg/L	0.0654	31.37	mg/L	0.327	1.04%
Mg 279.077†	24846.4	34.96	mg/L	0.128	174.8	mg/L	0.64	0.37%
Mn 257.610†	60475.3	1.845	mg/L	0.0067	9.224	mg/L	0.0336	0.36%
Mo 202.031†	32.1	0.00218	mg/L	0.000328	0.01089	mg/L	0.001642	15.08%
Na 589.592†	5588.4	0.6460	mg/L	0.00243	3.230	mg/L	0.0121	0.38%
Na 330.237†	-11.2	0.05910	mg/L	0.333940	0.2955	mg/L	1.66970	565.07%
Ni 231.604†	449.8	0.2169	mg/L	0.00133	1.084	mg/L	0.0067	0.62%
Pb 220.353†	14.6	0.02262	mg/L	0.000727	0.1131	mg/L	0.00363	3.21%
Sb 206.836†	2.0	0.00437	mg/L	0.001518	0.02183	mg/L	0.007590	34.77%
Se 196.026†	-31.8	0.02116	mg/L	0.002045	0.1058	mg/L	0.01023	9.67%
Si 288.158†	838.2	1.065	mg/L	0.0020	5.323	mg/L	0.0098	0.18%
Sn 189.927†	-13.3	-0.00020	mg/L	0.001621	-0.00098	mg/L	0.008107	830.10%
Sr 421.552†	63708.7	0.1450	mg/L	0.00036	0.7250	mg/L	0.00179	0.25%
Ti 334.903†	53016.9	4.082	mg/L	0.0127	20.41	mg/L	0.064	0.31%
Tl 190.801†	58.2	-0.01003	mg/L	0.002347	-0.05016	mg/L	0.011737	23.40%
V 292.402†	11515.1	0.2516	mg/L	0.00482	1.258	mg/L	0.0241	1.92%
Zn 206.200†	373.4	0.2253	mg/L	0.00038	1.126	mg/L	0.0019	0.17%

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Sequence No.: 9 **Autosampler Location: 312**
Sample ID: 20K0135-02 **Date Collected: 11/18/2020 3:24:23 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0135-02

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: 20K0135-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1452080.9	102.7	%	0.34				0.33%
ScR 361.383	158986.7	105.1	%	0.82				0.78%
Ag 328.068†	-59.4	-0.00039	mg/L	0.000202	-0.00194	mg/L	0.001008	51.91%
Al 308.215†	93275.6	100.8	mg/L	0.35	503.9	mg/L	1.74	0.34%
As 188.979†	-192.8	-0.1496	mg/L	0.00425	-0.7481	mg/L	0.02127	2.84%
B 249.677†	120.1	0.02997	mg/L	0.001764	0.1499	mg/L	0.00882	5.89%
Ba 233.527†	1780.6	0.4941	mg/L	0.00317	2.471	mg/L	0.0158	0.64%
Be 313.042†	764.7	0.00117	mg/L	0.000076	0.00584	mg/L	0.000378	6.47%
Ca 317.933†	149698.8	25.59	mg/L	0.082	127.9	mg/L	0.41	0.32%
Cd 228.802†	65.5	0.00349	mg/L	0.000141	0.01743	mg/L	0.000707	4.06%
Co 228.616†	935.2	0.04535	mg/L	0.000188	0.2268	mg/L	0.00094	0.41%
Cr 267.716†	405.9	0.1815	mg/L	0.00314	0.9077	mg/L	0.01571	1.73%
Cu 324.752†	13318.7	0.08878	mg/L	0.000599	0.4439	mg/L	0.00299	0.67%
Fe 273.955†	89872.1	98.78	mg/L	0.464	493.9	mg/L	2.32	0.47%
K 766.490†	4318.7	3.880	mg/L	0.0254	19.40	mg/L	0.127	0.66%
Mg 279.077†	20253.9	28.50	mg/L	0.084	142.5	mg/L	0.42	0.30%
Mn 257.610†	55258.1	1.686	mg/L	0.0081	8.430	mg/L	0.0403	0.48%
Mo 202.031†	37.9	0.00265	mg/L	0.000522	0.01324	mg/L	0.002611	19.72%
Na 589.592†	6111.6	0.7065	mg/L	0.00574	3.532	mg/L	0.0287	0.81%
Na 330.237†	-1.8	0.5708	mg/L	0.25481	2.854	mg/L	1.2741	44.64%
Ni 231.604†	382.2	0.1843	mg/L	0.00278	0.9215	mg/L	0.01389	1.51%
Pb 220.353†	62.0	0.03092	mg/L	0.001110	0.1546	mg/L	0.00555	3.59%
Sb 206.836†	3.2	0.00526	mg/L	0.001837	0.02629	mg/L	0.009187	34.95%
Se 196.026†	-28.1	0.01583	mg/L	0.001368	0.07913	mg/L	0.006841	8.65%
Si 288.158†	1005.6	1.285	mg/L	0.0098	6.425	mg/L	0.0490	0.76%
Sn 189.927†	-21.7	-0.00188	mg/L	0.000984	-0.00940	mg/L	0.004921	52.35%
Sr 421.552†	52971.3	0.1206	mg/L	0.00033	0.6028	mg/L	0.00164	0.27%
Ti 334.903†	52430.3	4.037	mg/L	0.0123	20.18	mg/L	0.062	0.31%
Tl 190.801†	44.2	-0.01580	mg/L	0.003068	-0.07901	mg/L	0.015340	19.42%
V 292.402†	10024.3	0.2179	mg/L	0.00215	1.090	mg/L	0.0107	0.99%
Zn 206.200†	420.8	0.2537	mg/L	0.00171	1.268	mg/L	0.0086	0.68%

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Sequence No.: 10
Sample ID: 20K0135-03

Dilution: 5X
Wash Time: 37

Autosampler Location: 313
Date Collected: 11/18/2020 3:28:39 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0135-03

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: 20K0135-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1441011.8	101.9	%	0.33				0.33%
ScR 361.383	156828.5	103.7	%	0.48				0.47%
Ag 328.068†	-12.7	-0.00004	mg/L	0.000202	-0.00022	mg/L	0.001009	460.77%
Al 308.215†	87104.2	94.12	mg/L	0.096	470.6	mg/L	0.48	0.10%
As 188.979†	-183.1	-0.1402	mg/L	0.00608	-0.7009	mg/L	0.03038	4.33%
B 249.677†	81.4	0.02361	mg/L	0.002370	0.1181	mg/L	0.01185	10.04%
Ba 233.527†	1824.6	0.5062	mg/L	0.00179	2.531	mg/L	0.0089	0.35%
Be 313.042†	687.6	0.00102	mg/L	0.000033	0.00508	mg/L	0.000167	3.29%
Ca 317.933†	137751.3	23.55	mg/L	0.091	117.7	mg/L	0.45	0.38%
Cd 228.802†	65.8	0.00334	mg/L	0.000193	0.01671	mg/L	0.000964	5.77%
Co 228.616†	936.6	0.04571	mg/L	0.000263	0.2286	mg/L	0.00131	0.57%
Cr 267.716†	398.7	0.1784	mg/L	0.00240	0.8921	mg/L	0.01200	1.35%
Cu 324.752†	14580.8	0.09704	mg/L	0.001013	0.4852	mg/L	0.00507	1.04%
Fe 273.955†	92549.3	101.7	mg/L	0.31	508.6	mg/L	1.53	0.30%
K 766.490†	4854.4	4.362	mg/L	0.0425	21.81	mg/L	0.213	0.98%
Mg 279.077†	20820.4	29.30	mg/L	0.051	146.5	mg/L	0.26	0.17%
Mn 257.610†	68052.0	2.077	mg/L	0.0104	10.38	mg/L	0.052	0.50%
Mo 202.031†	40.8	0.00294	mg/L	0.000325	0.01468	mg/L	0.001623	11.06%
Na 589.592†	6509.3	0.7525	mg/L	0.01427	3.762	mg/L	0.0714	1.90%
Na 330.237†	-6.7	0.2742	mg/L	0.26865	1.371	mg/L	1.3432	97.97%
Ni 231.604†	356.9	0.1721	mg/L	0.00308	0.8605	mg/L	0.01539	1.79%
Pb 220.353†	137.1	0.04349	mg/L	0.000866	0.2175	mg/L	0.00433	1.99%
Sb 206.836†	4.7	0.00593	mg/L	0.001436	0.02963	mg/L	0.007179	24.23%
Se 196.026†	-31.9	0.00886	mg/L	0.005541	0.04430	mg/L	0.027705	62.54%
Si 288.158†	838.1	1.066	mg/L	0.0071	5.330	mg/L	0.0353	0.66%
Sn 189.927†	-9.1	0.00251	mg/L	0.000895	0.01255	mg/L	0.004476	35.65%
Sr 421.552†	53410.9	0.1216	mg/L	0.00001	0.6078	mg/L	0.00005	0.01%
Ti 334.903†	50414.6	3.881	mg/L	0.0014	19.41	mg/L	0.007	0.04%
Tl 190.801†	37.7	-0.01814	mg/L	0.002158	-0.09071	mg/L	0.010788	11.89%
V 292.402†	9642.8	0.2108	mg/L	0.00130	1.054	mg/L	0.0065	0.62%
Zn 206.200†	368.5	0.2221	mg/L	0.00420	1.111	mg/L	0.0210	1.89%

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Sequence No.: 11 **Autosampler Location: 7**
Sample ID: SEQ-CCV2 **Date Collected: 11/18/2020 3:35:38 PM**
Data Type: Original
Dilution: 1X
Wash Time: 200 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV2

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-CCV2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1448281.1	102.4	%	0.91				0.89%
ScR 361.383	152882.0	101.1	%	0.14				0.14%
Ag 328.068†	140513.7	1.042	mg/L	0.0084	1.042	mg/L	0.0084	0.81%
Al 308.215†	1981.7	2.107	mg/L	0.0083	2.107	mg/L	0.0083	0.39%
As 188.979†	1192.7	1.952	mg/L	0.0244	1.952	mg/L	0.0244	1.25%
B 249.677†	5601.1	0.9801	mg/L	0.00318	0.9801	mg/L	0.00318	0.32%
Ba 233.527†	3523.1	1.005	mg/L	0.0081	1.005	mg/L	0.0081	0.81%
Be 313.042†	448096.2	0.9883	mg/L	0.00063	0.9883	mg/L	0.00063	0.06%
Ca 317.933†	11873.5	2.030	mg/L	0.0131	2.030	mg/L	0.0131	0.65%
Cd 228.802†	17103.7	0.9898	mg/L	0.01301	0.9898	mg/L	0.01301	1.31%
Co 228.616†	17430.9	0.9809	mg/L	0.00867	0.9809	mg/L	0.00867	0.88%
Cr 267.716†	2211.4	0.9765	mg/L	0.00584	0.9765	mg/L	0.00584	0.60%
Cu 324.752†	154754.4	0.9956	mg/L	0.01137	0.9956	mg/L	0.01137	1.14%
Fe 273.955†	1814.0	1.987	mg/L	0.0188	1.987	mg/L	0.0188	0.95%
K 766.490†	21977.4	19.75	mg/L	0.047	19.75	mg/L	0.047	0.24%
Mg 279.077†	1446.8	2.053	mg/L	0.0040	2.053	mg/L	0.0040	0.19%
Mn 257.610†	33249.8	1.016	mg/L	0.0038	1.016	mg/L	0.0038	0.37%
Mo 202.031†	10843.5	0.9920	mg/L	0.01065	0.9920	mg/L	0.01065	1.07%
Na 589.592†	433182.6	50.07	mg/L	0.040	50.07	mg/L	0.040	0.08%
Na 330.237†	912.9	51.20	mg/L	0.779	51.20	mg/L	0.779	1.52%
Ni 231.604†	1966.5	0.9497	mg/L	0.00708	0.9497	mg/L	0.00708	0.75%
Pb 220.353†	10594.8	2.044	mg/L	0.0236	2.044	mg/L	0.0236	1.16%
Sb 206.836†	3726.1	2.051	mg/L	0.0208	2.051	mg/L	0.0208	1.01%
Se 196.026†	1287.2	2.047	mg/L	0.0192	2.047	mg/L	0.0192	0.94%
Si 288.158†	1625.9	2.127	mg/L	0.0036	2.127	mg/L	0.0036	0.17%
Sn 189.927†	2595.4	0.9997	mg/L	0.01235	0.9997	mg/L	0.01235	1.23%
Sr 421.552†	432427.7	0.9842	mg/L	0.00084	0.9842	mg/L	0.00084	0.08%
Ti 334.903†	12980.5	0.9985	mg/L	0.00128	0.9985	mg/L	0.00128	0.13%
Tl 190.801†	2462.9	1.998	mg/L	0.0226	1.998	mg/L	0.0226	1.13%
V 292.402†	47535.6	0.9659	mg/L	0.01850	0.9659	mg/L	0.01850	1.91%
Zn 206.200†	1633.2	0.9867	mg/L	0.00527	0.9867	mg/L	0.00527	0.53%

Sequence No.: 12
Sample ID: SEQ-CCB2
Autosampler Location: 1
Date Collected: 11/18/2020 3:40:58 PM
Data Type: Original
Dilution: 1X
Wash Time: 100
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB2

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: SEQ-CCB2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1437182.0	101.7	%	0.19				0.19%
ScR 361.383	155334.4	102.7	%	0.42				0.41%
Ag 328.068†	8.2	0.00006	mg/L	0.000127	0.00006	mg/L	0.000127	208.56%
Al 308.215†	40.0	0.04319	mg/L	0.002230	0.04319	mg/L	0.002230	5.16%
As 188.979†	5.0	0.00808	mg/L	0.003045	0.00808	mg/L	0.003045	37.67%
B 249.677†	42.7	0.00748	mg/L	0.000456	0.00748	mg/L	0.000456	6.09%
Ba 233.527†	-1.6	-0.00045	mg/L	0.000731	-0.00045	mg/L	0.000731	162.31%
Be 313.042†	-25.0	-0.00006	mg/L	0.000058	-0.00006	mg/L	0.000058	105.08%
Ca 317.933†	-14.7	-0.00252	mg/L	0.004620	-0.00252	mg/L	0.004620	183.42%
Cd 228.802†	4.3	0.00020	mg/L	0.000270	0.00020	mg/L	0.000270	137.42%
Co 228.616†	-7.2	-0.00041	mg/L	0.000247	-0.00041	mg/L	0.000247	60.45%
Cr 267.716†	1.9	0.00083	mg/L	0.002118	0.00083	mg/L	0.002118	255.74%
Cu 324.752†	50.0	0.00032	mg/L	0.000117	0.00032	mg/L	0.000117	36.58%
Fe 273.955†	1.6	0.00179	mg/L	0.002562	0.00179	mg/L	0.002562	143.23%
K 766.490†	27.1	0.02432	mg/L	0.019243	0.02432	mg/L	0.019243	79.13%
Mg 279.077†	2.2	0.00305	mg/L	0.007666	0.00305	mg/L	0.007666	251.07%
Mn 257.610†	-9.6	-0.00029	mg/L	0.000099	-0.00029	mg/L	0.000099	33.85%
Mo 202.031†	4.9	0.00045	mg/L	0.000503	0.00045	mg/L	0.000503	112.29%
Na 589.592†	-253.8	-0.02934	mg/L	0.002498	-0.02934	mg/L	0.002498	8.51%
Na 330.237†	-7.4	-0.4171	mg/L	0.25621	-0.4171	mg/L	0.25621	61.42%
Ni 231.604†	-1.0	-0.00050	mg/L	0.003059	-0.00050	mg/L	0.003059	609.80%
Pb 220.353†	13.5	0.00262	mg/L	0.001237	0.00262	mg/L	0.001237	47.31%
Sb 206.836†	2.1	0.00117	mg/L	0.002228	0.00117	mg/L	0.002228	190.00%
Se 196.026†	-0.6	-0.00098	mg/L	0.004860	-0.00098	mg/L	0.004860	494.03%
Si 288.158†	-1.1	-0.00142	mg/L	0.007505	-0.00142	mg/L	0.007505	527.64%
Sn 189.927†	3.1	0.00120	mg/L	0.000685	0.00120	mg/L	0.000685	57.17%
Sr 421.552†	4.1	0.00001	mg/L	0.000079	0.00001	mg/L	0.000079	844.99%
Ti 334.903†	22.7	0.00174	mg/L	0.001851	0.00174	mg/L	0.001851	106.12%
Tl 190.801†	-1.1	-0.00090	mg/L	0.001795	-0.00090	mg/L	0.001795	200.06%
V 292.402†	-3.6	-0.00007	mg/L	0.000244	-0.00007	mg/L	0.000244	368.19%
Zn 206.200†	4.1	0.00246	mg/L	0.000917	0.00246	mg/L	0.000917	37.31%

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Analysis Begun

Start Time: 11/18/2020 3:55:01 PM
Plasma On Time: 11/18/2020 9:28:48 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 314
Sample ID: BIK0508-BLK1
Date Collected: 11/18/2020 3:55:10 PM
Data Type: Original
Dilution: 5X

Nebulizer Parameters: BIK0508-BLK1

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: BIK0508-BLK1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1445532.4	102.2	%	0.28				0.28%
ScR 361.383	154905.0	102.5	%	0.55				0.54%
Ag 328.068†	22.8	0.00017	mg/L	0.000159	0.00084	mg/L	0.000797	94.40%
Al 308.215†	23.0	0.02479	mg/L	0.008741	0.1239	mg/L	0.04371	35.26%
As 188.979†	3.5	0.00548	mg/L	0.002571	0.02738	mg/L	0.012857	46.95%
B 249.677†	198.8	0.03482	mg/L	0.002294	0.1741	mg/L	0.01147	6.59%
Ba 233.527†	6.1	0.00174	mg/L	0.001140	0.00872	mg/L	0.005699	65.32%
Be 313.042†	-17.3	-0.00004	mg/L	0.000014	-0.00019	mg/L	0.000068	35.95%
Ca 317.933†	898.9	0.1537	mg/L	0.00371	0.7683	mg/L	0.01854	2.41%
Cd 228.802†	1.5	0.00004	mg/L	0.000132	0.00022	mg/L	0.000662	306.82%
Co 228.616†	-11.7	-0.00066	mg/L	0.000152	-0.00328	mg/L	0.000761	23.21%
Cr 267.716†	-3.0	-0.00125	mg/L	0.001287	-0.00626	mg/L	0.006437	102.84%
Cu 324.752†	44.6	0.00029	mg/L	0.000108	0.00143	mg/L	0.000541	37.72%
Fe 273.955†	2.7	0.00295	mg/L	0.003272	0.01473	mg/L	0.016359	111.07%
K 766.490†	17.2	0.01542	mg/L	0.026090	0.07712	mg/L	0.130452	169.15%
Mg 279.077†	54.7	0.07703	mg/L	0.016680	0.3852	mg/L	0.08340	21.65%
Mn 257.610†	-3.3	-0.00010	mg/L	0.000126	-0.00050	mg/L	0.000631	125.13%
Mo 202.031†	-1.5	-0.00014	mg/L	0.000350	-0.00070	mg/L	0.001748	251.56%
Na 589.592†	6129.9	0.7086	mg/L	0.00497	3.543	mg/L	0.0248	0.70%
Na 330.237†	8.6	0.4815	mg/L	0.47374	2.407	mg/L	2.3687	98.39%
Ni 231.604†	-6.6	-0.00316	mg/L	0.001916	-0.01581	mg/L	0.009580	60.59%
Pb 220.353†	9.0	0.00175	mg/L	0.001036	0.00873	mg/L	0.005182	59.40%
Sb 206.836†	-3.7	-0.00202	mg/L	0.000992	-0.01010	mg/L	0.004959	49.08%
Se 196.026†	-0.0	-0.00002	mg/L	0.004071	-0.00011	mg/L	0.020355	>999.9%
Si 288.158†	26.5	0.03489	mg/L	0.005129	0.1744	mg/L	0.02565	14.70%
Sn 189.927†	3.7	0.00146	mg/L	0.000219	0.00730	mg/L	0.001095	14.99%
Sr 421.552†	99.4	0.00023	mg/L	0.000026	0.00113	mg/L	0.000131	11.59%
Ti 334.903†	-18.2	-0.00141	mg/L	0.002205	-0.00703	mg/L	0.011026	156.74%
Tl 190.801†	0.8	0.00071	mg/L	0.003269	0.00353	mg/L	0.016343	463.30%
V 292.402†	-9.2	-0.00018	mg/L	0.000387	-0.00092	mg/L	0.001935	210.14%
Zn 206.200†	13.9	0.00839	mg/L	0.001839	0.04197	mg/L	0.009197	21.92%

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Sequence No.: 2
Sample ID: ~~BIK0508-BS1~~ BIK0507-BLK1
Dilution: 5X
Wash Time: 37

Autosampler Location: 315
Date Collected: 11/18/2020 3:59:32 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: ~~BIK0508-BS1~~ BIK0507-BLK1

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

MB 11/18/20

Mean Data: ~~BIK0508-BS1~~ BIK0507-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1365614.4	96.59	%	1.143				1.18%
ScR 361.383	153883.0	101.8	%	0.45				0.44%
Ag 328.068†	32.5	0.00024	mg/L	0.000311	0.00121	mg/L	0.001557	129.09%
Al 308.215†	20.0	0.02162	mg/L	0.011962	0.1081	mg/L	0.05981	55.33%
As 188.979†	7.9	0.01262	mg/L	0.002243	0.06309	mg/L	0.011213	17.77%
B 249.677†	196.4	0.03440	mg/L	0.001545	0.1720	mg/L	0.00772	4.49%
Ba 233.527†	9.2	0.00264	mg/L	0.000729	0.01319	mg/L	0.003645	27.64%
Be 313.042†	-36.3	-0.00008	mg/L	0.000031	-0.00040	mg/L	0.000156	38.48%
Ca 317.933†	633.0	0.1082	mg/L	0.00231	0.5410	mg/L	0.01156	2.14%
Cd 228.802†	9.0	0.00044	mg/L	0.000088	0.00219	mg/L	0.000438	19.96%
Co 228.616†	-21.1	-0.00119	mg/L	0.000192	-0.00596	mg/L	0.000959	16.11%
Cr 267.716†	8.7	0.03152	mg/L	0.002787	0.1576	mg/L	0.01393	8.84%
Cu 324.752†	172.8	0.00111	mg/L	0.000057	0.00556	mg/L	0.000285	5.14%
Fe 273.955†	1.3	0.00148	mg/L	0.000431	0.00741	mg/L	0.002156	29.08%
K 766.490†	87.1	0.07824	mg/L	0.026867	0.3912	mg/L	0.13433	34.34%
Mg 279.077†	21.9	0.03089	mg/L	0.013878	0.1545	mg/L	0.06939	44.92%
Mn 257.610†	1.1	0.00003	mg/L	0.000145	0.00017	mg/L	0.000726	428.58%
Mo 202.031†	-1.3	-0.00012	mg/L	0.000083	-0.00060	mg/L	0.000413	69.43%
Na 589.592†	2739421.2	316.7	mg/L	2.80	1583	mg/L	13.99	0.88%
Na 330.237†	5349.1	301.0	mg/L	1.22	1505	mg/L	6.08	0.40%
Ni 231.604†	-2.5	-0.00119	mg/L	0.003098	-0.00593	mg/L	0.015489	261.32%
Pb 220.353†	21.2	0.00410	mg/L	0.001061	0.02052	mg/L	0.005305	25.85%
Sb 206.836†	-3.5	-0.00200	mg/L	0.003715	-0.00999	mg/L	0.018573	185.86%
Se 196.026†	-3.3	-0.00531	mg/L	0.006407	-0.02657	mg/L	0.032037	120.57%
Si 288.158†	13.7	0.01806	mg/L	0.005487	0.09028	mg/L	0.027436	30.39%
Sn 189.927†	5.3	0.00205	mg/L	0.000827	0.01023	mg/L	0.004133	40.40%
Sr 421.552†	29.4	0.00007	mg/L	0.000091	0.00033	mg/L	0.000453	135.34%
Ti 334.903†	3.3	0.00025	mg/L	0.001629	0.00124	mg/L	0.008147	654.89%
Tl 190.801†	2.3	0.00187	mg/L	0.000584	0.00937	mg/L	0.002922	31.18%
V 292.402†	11.5	0.00026	mg/L	0.000451	0.00131	mg/L	0.002256	172.78%
Zn 206.200†	10.5	0.00636	mg/L	0.001667	0.03180	mg/L	0.008334	26.21%

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Sequence No.: 3
Sample ID: 20K0215-01

Dilution: 5X
Wash Time: 37

Autosampler Location: 316
Date Collected: 11/18/2020 4:04:06 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0215-01

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0215-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1351633.3	95.60	%	0.109				0.11%
ScR 361.383	149012.6	98.55	%	0.280				0.28%
Ag 328.068†	-8.1	-0.00006	mg/L	0.000470	-0.00030	mg/L	0.002349	781.48%
Al 308.215†	107.0	0.1152	mg/L	0.01178	0.5759	mg/L	0.05892	10.23%
As 188.979†	19.8	0.02802	mg/L	0.001937	0.1401	mg/L	0.00969	6.91%
B 249.677†	277.9	0.04823	mg/L	0.000816	0.2412	mg/L	0.00408	1.69%
Ba 233.527†	196.3	0.05605	mg/L	0.001113	0.2802	mg/L	0.00557	1.99%
Be 313.042†	-5.9	-0.00001	mg/L	0.000046	-0.00007	mg/L	0.000232	337.12%
Ca 317.933†	46202.9	7.897	mg/L	0.0847	39.49	mg/L	0.423	1.07%
Cd 228.802†	323.8	0.01866	mg/L	0.000145	0.09328	mg/L	0.000724	0.78%
Co 228.616†	-16.2	-0.00093	mg/L	0.000260	-0.00463	mg/L	0.001300	28.10%
Cr 267.716†	-0.0	0.02752	mg/L	0.002832	0.1376	mg/L	0.01416	10.29%
Cu 324.752†	2211.9	0.01423	mg/L	0.000066	0.07113	mg/L	0.000331	0.47%
Fe 273.955†	29.3	0.03215	mg/L	0.006722	0.1608	mg/L	0.03361	20.91%
K 766.490†	821.1	0.7378	mg/L	0.05874	3.689	mg/L	0.2937	7.96%
Mg 279.077†	824.3	1.161	mg/L	0.0235	5.805	mg/L	0.1174	2.02%
Mn 257.610†	6523.8	0.1993	mg/L	0.00128	0.9964	mg/L	0.00641	0.64%
Mo 202.031†	7.9	0.00057	mg/L	0.000057	0.00287	mg/L	0.000287	9.99%
Na 589.592†	2763344.2	319.4	mg/L	0.87	1597	mg/L	4.33	0.27%
Na 330.237†	5371.5	301.5	mg/L	1.02	1507	mg/L	5.09	0.34%
Ni 231.604†	12.3	0.00592	mg/L	0.000867	0.02960	mg/L	0.004335	14.64%
Pb 220.353†	103.6	0.01998	mg/L	0.000678	0.09989	mg/L	0.003391	3.39%
Sb 206.836†	1.9	0.00104	mg/L	0.001028	0.00521	mg/L	0.005138	98.64%
Se 196.026†	-1.2	-0.00277	mg/L	0.003661	-0.01383	mg/L	0.018304	132.37%
Si 288.158†	572.8	0.7549	mg/L	0.00298	3.774	mg/L	0.0149	0.39%
Sn 189.927†	-6.6	-0.00114	mg/L	0.000481	-0.00571	mg/L	0.002405	42.13%
Sr 421.552†	10344.2	0.02354	mg/L	0.000152	0.1177	mg/L	0.00076	0.65%
Ti 334.903†	47.3	0.00322	mg/L	0.000757	0.01610	mg/L	0.003785	23.51%
Tl 190.801†	-11.5	-0.00825	mg/L	0.001781	-0.04126	mg/L	0.008906	21.58%
V 292.402†	15.9	0.00050	mg/L	0.000467	0.00250	mg/L	0.002336	93.51%
Zn 206.200†	3757.2	2.271	mg/L	0.0155	11.35	mg/L	0.078	0.68%

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Sequence No.: 4 **Autosampler Location: 317**
Sample ID: 20K0255-01 **Date Collected: 11/18/2020 4:08:38 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0255-01

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 20K0255-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1337979.3	94.64	%	0.458				0.48%
ScR 361.383	145162.4	96.01	%	0.501				0.52%
Ag 328.068†	-49.4	-0.00037	mg/L	0.000157	-0.00037	mg/L	0.000157	42.65%
Al 308.215†	115.2	0.1210	mg/L	0.00595	0.1210	mg/L	0.00595	4.92%
As 188.979†	112.0	0.09804	mg/L	0.001432	0.09804	mg/L	0.001432	1.46%
B 249.677†	17856.3	3.129	mg/L	0.0474	3.129	mg/L	0.0474	1.52%
Ba 233.527†	408.8	0.1146	mg/L	0.00274	0.1146	mg/L	0.00274	2.39%
Be 313.042†	40.5	0.00009	mg/L	0.000055	0.00009	mg/L	0.000055	57.91%
Ca 317.933†	905327.9	154.7	mg/L	0.91	154.7	mg/L	0.91	0.59%
Cd 228.802†	246.6	0.01131	mg/L	0.000352	0.01131	mg/L	0.000352	3.12%
Co 228.616†	87.2	0.00485	mg/L	0.000093	0.00485	mg/L	0.000093	1.92%
Cr 267.716†	144.6	0.09545	mg/L	0.002936	0.09545	mg/L	0.002936	3.08%
Cu 324.752†	3409.6	0.02245	mg/L	0.000234	0.02245	mg/L	0.000234	1.04%
Fe 273.955†	13247.7	14.56	mg/L	0.362	14.56	mg/L	0.362	2.49%
K 766.490†	17722.7	15.92	mg/L	0.224	15.92	mg/L	0.224	1.41%
Mg 279.077†	3370.5	4.715	mg/L	0.0668	4.715	mg/L	0.0668	1.42%
Mn 257.610†	17178.2	0.5245	mg/L	0.00718	0.5245	mg/L	0.00718	1.37%
Mo 202.031†	1216.5	0.1086	mg/L	0.00111	0.1086	mg/L	0.00111	1.02%
Na 589.592†	3302269.6	381.7	mg/L	2.68	381.7	mg/L	2.68	0.70%
Na 330.237†	6395.5	359.9	mg/L	5.80	359.9	mg/L	5.80	1.61%
Ni 231.604†	581.9	0.2807	mg/L	0.01047	0.2807	mg/L	0.01047	3.73%
Pb 220.353†	-13.8	-0.00351	mg/L	0.000525	-0.00351	mg/L	0.000525	14.95%
Sb 206.836†	20.3	0.00982	mg/L	0.000382	0.00982	mg/L	0.000382	3.90%
Se 196.026†	17.9	0.01616	mg/L	0.002162	0.01616	mg/L	0.002162	13.38%
Si 288.158†	1898.9	2.503	mg/L	0.0263	2.503	mg/L	0.0263	1.05%
Sn 189.927†	-88.1	-0.00617	mg/L	0.001443	-0.00617	mg/L	0.001443	23.37%
Sr 421.552†	643909.2	1.466	mg/L	0.0096	1.466	mg/L	0.0096	0.66%
Ti 334.903†	176.6	0.00528	mg/L	0.000330	0.00528	mg/L	0.000330	6.25%
Tl 190.801†	-75.9	-0.03787	mg/L	0.004017	-0.03787	mg/L	0.004017	10.61%
V 292.402†	-91.6	0.00097	mg/L	0.000293	0.00097	mg/L	0.000293	30.14%
Zn 206.200†	39.4	0.01947	mg/L	0.001263	0.01947	mg/L	0.001263	6.48%

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Sequence No.: 5
Sample ID: 20K0196-01RE1

Dilution: 5X
Wash Time: 37

Autosampler Location: 318
Date Collected: 11/18/2020 4:13:28 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0196-01RE1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 20K0196-01RE1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1450821.1	102.6	%	0.51				0.50%
ScR 361.383	156031.6	103.2	%	0.68				0.66%
Ag 328.068†	97.2	0.00072	mg/L	0.000583	0.00360	mg/L	0.002913	80.83%
Al 308.215†	593.0	0.6404	mg/L	0.01017	3.202	mg/L	0.0508	1.59%
As 188.979†	29.0	0.04204	mg/L	0.006004	0.2102	mg/L	0.03002	14.28%
B 249.677†	19667.7	3.449	mg/L	0.0101	17.25	mg/L	0.050	0.29%
Ba 233.527†	116.2	0.02850	mg/L	0.001599	0.1425	mg/L	0.00799	5.61%
Be 313.042†	53.7	0.00012	mg/L	0.000067	0.00061	mg/L	0.000333	54.23%
Ca 317.933†	70988.6	12.13	mg/L	0.072	60.67	mg/L	0.358	0.59%
Cd 228.802†	26.4	0.00045	mg/L	0.000173	0.00225	mg/L	0.000864	38.33%
Co 228.616†	110.0	0.00610	mg/L	0.000175	0.03050	mg/L	0.000875	2.87%
Cr 267.716†	127.0	0.05933	mg/L	0.002859	0.2966	mg/L	0.01429	4.82%
Cu 324.752†	213791.5	1.377	mg/L	0.0074	6.886	mg/L	0.0370	0.54%
Fe 273.955†	29482.6	32.41	mg/L	0.294	162.0	mg/L	1.47	0.91%
K 766.490†	336.2	0.3021	mg/L	0.01098	1.510	mg/L	0.0549	3.64%
Mg 279.077†	305.9	0.4098	mg/L	0.00789	2.049	mg/L	0.0394	1.92%
Mn 257.610†	8136.7	0.2481	mg/L	0.00193	1.241	mg/L	0.0097	0.78%
Mo 202.031†	153.2	0.01381	mg/L	0.000272	0.06903	mg/L	0.001358	1.97%
Na 589.592†	62860.8	7.267	mg/L	0.2043	36.33	mg/L	1.021	2.81%
Na 330.237†	189.2	8.038	mg/L	1.0809	40.19	mg/L	5.405	13.45%
Ni 231.604†	148.5	0.07160	mg/L	0.001050	0.3580	mg/L	0.00525	1.47%
Pb 220.353†	2279.6	0.4355	mg/L	0.00058	2.178	mg/L	0.0029	0.13%
Sb 206.836†	7.9	0.00353	mg/L	0.000120	0.01764	mg/L	0.000598	3.39%
Se 196.026†	-1.7	0.00636	mg/L	0.003259	0.03178	mg/L	0.016295	51.27%
Si 288.158†	105.7	0.1388	mg/L	0.00359	0.6939	mg/L	0.01796	2.59%
Sn 189.927†	28.8	0.01328	mg/L	0.000991	0.06642	mg/L	0.004955	7.46%
Sr 421.552†	5273.1	0.01200	mg/L	0.000487	0.06001	mg/L	0.002437	4.06%
Ti 334.903†	661.4	0.05026	mg/L	0.000435	0.2513	mg/L	0.00217	0.86%
Tl 190.801†	-9.5	-0.00648	mg/L	0.001667	-0.03239	mg/L	0.008334	25.73%
V 292.402†	-75.4	0.00281	mg/L	0.000345	0.01407	mg/L	0.001725	12.26%
Zn 206.200†	11953.2	7.225	mg/L	0.0646	36.12	mg/L	0.323	0.89%

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Sequence No.: 6 **Autosampler Location: 319**
Sample ID: 20K0135-01RE1 **Date Collected: 11/18/2020 4:17:44 PM**
Data Type: Original
DEL
Dilution: 10X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0135-01RE1

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0135-01RE1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1434508.4	101.5	%	0.17				0.17%
ScR 361.383	154754.9	102.4	%	0.12				0.11%
Ag 328.068†	-56.3	-0.00039	mg/L	0.000353	-0.00387	mg/L	0.003534	91.28%
Al 308.215†	50996.4	55.10	mg/L	0.281	551.0	mg/L	2.81	0.51%
As 188.979†	-99.9	-0.07553	mg/L	0.003498	-0.7553	mg/L	0.03498	4.63%
B 249.677†	122.6	0.02706	mg/L	0.002451	0.2706	mg/L	0.02451	9.06%
Ba 233.527†	893.7	0.2464	mg/L	0.00150	2.464	mg/L	0.0150	0.61%
Be 313.042†	429.1	0.00064	mg/L	0.000106	0.00643	mg/L	0.001062	16.52%
Ca 317.933†	49044.3	8.383	mg/L	0.0381	83.83	mg/L	0.381	0.45%
Cd 228.802†	30.7	0.00147	mg/L	0.000038	0.01473	mg/L	0.000383	2.60%
Co 228.616†	537.7	0.02657	mg/L	0.000441	0.2657	mg/L	0.00441	1.66%
Cr 267.716†	232.5	0.1044	mg/L	0.00104	1.044	mg/L	0.0104	0.99%
Cu 324.752†	10764.1	0.07122	mg/L	0.000294	0.7122	mg/L	0.00294	0.41%
Fe 273.955†	54893.2	60.33	mg/L	0.321	603.3	mg/L	3.21	0.53%
K 766.490†	3508.3	3.152	mg/L	0.0297	31.52	mg/L	0.297	0.94%
Mg 279.077†	12412.9	17.47	mg/L	0.124	174.7	mg/L	1.24	0.71%
Mn 257.610†	30356.5	0.9261	mg/L	0.00762	9.261	mg/L	0.0762	0.82%
Mo 202.031†	20.8	0.00153	mg/L	0.000273	0.01527	mg/L	0.002728	17.87%
Na 589.592†	2954.4	0.3415	mg/L	0.00814	3.415	mg/L	0.0814	2.38%
Na 330.237†	-8.4	-0.1275	mg/L	0.29924	-1.275	mg/L	2.9924	234.61%
Ni 231.604†	220.4	0.1063	mg/L	0.00255	1.063	mg/L	0.0255	2.40%
Pb 220.353†	25.2	0.01477	mg/L	0.001291	0.1477	mg/L	0.01291	8.74%
Sb 206.836†	2.6	0.00308	mg/L	0.001499	0.03080	mg/L	0.014995	48.68%
Se 196.026†	-20.0	0.00391	mg/L	0.005486	0.03909	mg/L	0.054858	140.32%
Si 288.158†	460.8	0.5871	mg/L	0.00670	5.871	mg/L	0.0670	1.14%
Sn 189.927†	-4.2	0.00084	mg/L	0.001614	0.00844	mg/L	0.016136	191.18%
Sr 421.552†	32258.4	0.07342	mg/L	0.000464	0.7342	mg/L	0.00464	0.63%
Ti 334.903†	26627.9	2.050	mg/L	0.0100	20.50	mg/L	0.100	0.49%
Tl 190.801†	21.5	-0.01121	mg/L	0.002408	-0.1121	mg/L	0.02408	21.49%
V 292.402†	5860.6	0.1278	mg/L	0.00053	1.278	mg/L	0.0053	0.42%
Zn 206.200†	188.7	0.1138	mg/L	0.00316	1.138	mg/L	0.0316	2.77%

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Sequence No.: 7 **Autosampler Location: 320**
Sample ID: 20K0135-02RE1 **Date Collected: 11/18/2020 4:22:00 PM**
DEL **Data Type: Original**
Dilution: 10X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0135-02RE1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: 20K0135-02RE1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1420901.7	100.5	%	0.46				0.46%
ScR 361.383	152613.1	100.9	%	0.07				0.07%
Ag 328.068†	-38.5	-0.00026	mg/L	0.000162	-0.00260	mg/L	0.001620	62.26%
Al 308.215†	45683.1	49.36	mg/L	0.064	493.6	mg/L	0.64	0.13%
As 188.979†	-93.6	-0.07186	mg/L	0.003251	-0.7186	mg/L	0.03251	4.52%
B 249.677†	74.2	0.01722	mg/L	0.001014	0.1722	mg/L	0.01014	5.89%
Ba 233.527†	872.3	0.2422	mg/L	0.00073	2.422	mg/L	0.0073	0.30%
Be 313.042†	350.3	0.00052	mg/L	0.000010	0.00520	mg/L	0.000102	1.97%
Ca 317.933†	72333.1	12.36	mg/L	0.065	123.6	mg/L	0.65	0.52%
Cd 228.802†	31.5	0.00169	mg/L	0.000128	0.01686	mg/L	0.001276	7.57%
Co 228.616†	457.8	0.02220	mg/L	0.000207	0.2220	mg/L	0.00207	0.93%
Cr 267.716†	202.6	0.09050	mg/L	0.003176	0.9050	mg/L	0.03176	3.51%
Cu 324.752†	6593.6	0.04390	mg/L	0.000095	0.4390	mg/L	0.00095	0.22%
Fe 273.955†	43154.9	47.43	mg/L	0.096	474.3	mg/L	0.96	0.20%
K 766.490†	2129.0	1.913	mg/L	0.0092	19.13	mg/L	0.092	0.48%
Mg 279.077†	9822.1	13.82	mg/L	0.047	138.2	mg/L	0.47	0.34%
Mn 257.610†	27013.1	0.8242	mg/L	0.00067	8.242	mg/L	0.0067	0.08%
Mo 202.031†	19.5	0.00139	mg/L	0.000588	0.01390	mg/L	0.005882	42.31%
Na 589.592†	3059.3	0.3536	mg/L	0.00856	3.536	mg/L	0.0856	2.42%
Na 330.237†	-6.3	-0.02350	mg/L	0.688360	-0.2350	mg/L	6.88360	>999.9%
Ni 231.604†	182.7	0.08811	mg/L	0.001439	0.8811	mg/L	0.01439	1.63%
Pb 220.353†	45.3	0.01809	mg/L	0.000292	0.1809	mg/L	0.00292	1.61%
Sb 206.836†	0.4	0.00189	mg/L	0.000556	0.01886	mg/L	0.005560	29.47%
Se 196.026†	-11.3	0.01146	mg/L	0.013120	0.1146	mg/L	0.13120	114.46%
Si 288.158†	565.4	0.7253	mg/L	0.00669	7.253	mg/L	0.0669	0.92%
Sn 189.927†	-8.6	-0.00019	mg/L	0.001139	-0.00190	mg/L	0.011391	598.07%
Sr 421.552†	26273.2	0.05980	mg/L	0.000292	0.5980	mg/L	0.00292	0.49%
Ti 334.903†	25696.4	1.978	mg/L	0.0004	19.78	mg/L	0.004	0.02%
Tl 190.801†	13.7	-0.01427	mg/L	0.000468	-0.1427	mg/L	0.00468	3.28%
V 292.402†	4883.1	0.1061	mg/L	0.00081	1.061	mg/L	0.0081	0.76%
Zn 206.200†	203.4	0.1226	mg/L	0.00179	1.226	mg/L	0.0179	1.46%

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Sequence No.: 8 **Autosampler Location: 321**
Sample ID: 20K0135-03RE1 **Date Collected: 11/18/2020 4:26:16 PM**
Data Type: Original
Dilution: 10X DEL
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0135-03RE1

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: 20K0135-03RE1

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	1453136.5	102.8	%	0.53				0.52%
ScR 361.383	155130.9	102.6	%	1.17				1.14%
Ag 328.068†	-23.7	-0.00015	mg/L	0.000331	-0.00151	mg/L	0.003308	219.69%
Al 308.215†	42743.3	46.19	mg/L	0.402	461.9	mg/L	4.02	0.87%
As 188.979†	-94.5	-0.07565	mg/L	0.001699	-0.7565	mg/L	0.01699	2.25%
B 249.677†	50.5	0.01337	mg/L	0.000737	0.1337	mg/L	0.00737	5.51%
Ba 233.527†	904.6	0.2511	mg/L	0.00386	2.511	mg/L	0.0386	1.54%
Be 313.042†	289.7	0.00039	mg/L	0.000047	0.00388	mg/L	0.000474	12.21%
Ca 317.933†	67558.6	11.55	mg/L	0.090	115.5	mg/L	0.90	0.78%
Cd 228.802†	29.8	0.00155	mg/L	0.000089	0.01551	mg/L	0.000885	5.71%
Co 228.616†	471.1	0.02305	mg/L	0.000109	0.2305	mg/L	0.00109	0.47%
Cr 267.716†	195.4	0.08739	mg/L	0.001711	0.8739	mg/L	0.01711	1.96%
Cu 324.752†	7315.7	0.04863	mg/L	0.000209	0.4863	mg/L	0.00209	0.43%
Fe 273.955†	44978.4	49.44	mg/L	0.505	494.4	mg/L	5.05	1.02%
K 766.490†	2360.4	2.121	mg/L	0.0461	21.21	mg/L	0.461	2.18%
Mg 279.077†	10318.3	14.52	mg/L	0.104	145.2	mg/L	1.04	0.72%
Mn 257.610†	33744.9	1.030	mg/L	0.0082	10.30	mg/L	0.082	0.80%
Mo 202.031†	19.7	0.00140	mg/L	0.000225	0.01404	mg/L	0.002245	15.99%
Na 589.592†	3149.0	0.3640	mg/L	0.00487	3.640	mg/L	0.0487	1.34%
Na 330.237†	-6.4	-0.03827	mg/L	0.347134	-0.3827	mg/L	3.47134	906.96%
Ni 231.604†	173.5	0.08366	mg/L	0.001813	0.8366	mg/L	0.01813	2.17%
Pb 220.353†	92.2	0.02619	mg/L	0.001310	0.2619	mg/L	0.01310	5.00%
Sb 206.836†	0.3	0.00183	mg/L	0.002397	0.01832	mg/L	0.023974	130.83%
Se 196.026†	-13.4	0.00776	mg/L	0.005538	0.07756	mg/L	0.055384	71.41%
Si 288.158†	442.1	0.5636	mg/L	0.00682	5.636	mg/L	0.0682	1.21%
Sn 189.927†	0.4	0.00313	mg/L	0.001307	0.03129	mg/L	0.013069	41.77%
Sr 421.552†	26524.7	0.06037	mg/L	0.000479	0.6037	mg/L	0.00479	0.79%
Ti 334.903†	24938.5	1.920	mg/L	0.0157	19.20	mg/L	0.157	0.82%
Tl 190.801†	13.1	-0.01341	mg/L	0.002571	-0.1341	mg/L	0.02571	19.17%
V 292.402†	4828.1	0.1053	mg/L	0.00148	1.053	mg/L	0.0148	1.40%
Zn 206.200†	186.7	0.1126	mg/L	0.00131	1.126	mg/L	0.0131	1.16%

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Analysis Begun

Start Time: 11/18/2020 4:33:56 PM
Plasma On Time: 11/18/2020 9:28:48 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 322
Sample ID: 20K0255-01RE1
Date Collected: 11/18/2020 4:34:04 PM
Data Type: Original
Dilution: 2X

Nebulizer Parameters: 20K0255-01RE1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: 20K0255-01RE1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1376216.1	97.34	%	0.636				0.65%
ScR 361.383	148346.4	98.11	%	1.742				1.78%
Ag 328.068†	-11.0	-0.00008	mg/L	0.000590	-0.00016	mg/L	0.001179	722.68%
Al 308.215†	49.0	0.05117	mg/L	0.017934	0.1023	mg/L	0.03587	35.05%
As 188.979†	81.9	0.09158	mg/L	0.003482	0.1832	mg/L	0.00696	3.80%
B 249.677†	8773.5	1.537	mg/L	0.0065	3.074	mg/L	0.0130	0.42%
Ba 233.527†	205.5	0.05764	mg/L	0.000430	0.1153	mg/L	0.00086	0.75%
Be 313.042†	3.3	0.00001	mg/L	0.000032	0.00002	mg/L	0.000063	352.67%
Ca 317.933†	444336.1	75.95	mg/L	0.350	151.9	mg/L	0.70	0.46%
Cd 228.802†	134.1	0.00603	mg/L	0.000313	0.01206	mg/L	0.000626	5.19%
Co 228.616†	30.0	0.00165	mg/L	0.000280	0.00331	mg/L	0.000560	16.94%
Cr 267.716†	65.7	0.04431	mg/L	0.002532	0.08862	mg/L	0.005063	5.71%
Cu 324.752†	1725.6	0.01135	mg/L	0.000122	0.02270	mg/L	0.000243	1.07%
Fe 273.955†	6524.0	7.171	mg/L	0.0571	14.34	mg/L	0.114	0.80%
K 766.490†	8574.9	7.705	mg/L	0.0375	15.41	mg/L	0.075	0.49%
Mg 279.077†	1690.2	2.365	mg/L	0.0344	4.729	mg/L	0.0688	1.45%
Mn 257.610†	8561.6	0.2614	mg/L	0.00348	0.5229	mg/L	0.00696	1.33%
Mo 202.031†	616.5	0.05507	mg/L	0.000556	0.1101	mg/L	0.00111	1.01%
Na 589.592†	1602123.3	185.2	mg/L	1.69	370.4	mg/L	3.39	0.92%
Na 330.237†	3082.9	173.5	mg/L	2.56	347.0	mg/L	5.12	1.48%
Ni 231.604†	286.0	0.1379	mg/L	0.00073	0.2758	mg/L	0.00145	0.53%
Pb 220.353†	-0.8	-0.00058	mg/L	0.000411	-0.00116	mg/L	0.000821	70.65%
Sb 206.836†	8.8	0.00414	mg/L	0.003870	0.00828	mg/L	0.007740	93.50%
Se 196.026†	13.3	0.01518	mg/L	0.009032	0.03036	mg/L	0.018064	59.50%
Si 288.158†	958.6	1.264	mg/L	0.0161	2.527	mg/L	0.0322	1.27%
Sn 189.927†	-65.8	-0.01172	mg/L	0.000693	-0.02345	mg/L	0.001386	5.91%
Sr 421.552†	321257.0	0.7312	mg/L	0.00490	1.462	mg/L	0.0098	0.67%
Ti 334.903†	126.6	0.00566	mg/L	0.001059	0.01132	mg/L	0.002118	18.71%
Tl 190.801†	-58.0	-0.03550	mg/L	0.001393	-0.07100	mg/L	0.002785	3.92%
V 292.402†	-29.7	0.00078	mg/L	0.000113	0.00156	mg/L	0.000226	14.53%
Zn 206.200†	23.5	0.01206	mg/L	0.003122	0.02412	mg/L	0.006245	25.89%

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Analysis Begun

Start Time: 11/18/2020 4:39:34 PM **Plasma On Time: 11/18/2020 9:28:48 AM**
Logged In Analyst: Metals Instrument Controller **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 7**
Sample ID: SEQ-CCV3 **Date Collected: 11/18/2020 4:39:45 PM**
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SEQ-CCV3

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: SEQ-CCV3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1407027.4	99.52	%	0.336				0.34%
ScR 361.383	149709.3	99.01	%	0.874				0.88%
Ag 328.068†	142726.6	1.059	mg/L	0.0036	1.059	mg/L	0.0036	0.34%
Al 308.215†	1985.8	2.112	mg/L	0.0236	2.112	mg/L	0.0236	1.12%
As 188.979†	1176.6	1.927	mg/L	0.0093	1.927	mg/L	0.0093	0.49%
B 249.677†	5684.3	0.9946	mg/L	0.00801	0.9946	mg/L	0.00801	0.81%
Ba 233.527†	3558.8	1.015	mg/L	0.0063	1.015	mg/L	0.0063	0.62%
Be 313.042†	453399.6	1.000	mg/L	0.0030	1.000	mg/L	0.0030	0.30%
Ca 317.933†	11927.8	2.039	mg/L	0.0167	2.039	mg/L	0.0167	0.82%
Cd 228.802†	17005.4	0.9843	mg/L	0.00625	0.9843	mg/L	0.00625	0.64%
Co 228.616†	17432.0	0.9810	mg/L	0.00183	0.9810	mg/L	0.00183	0.19%
Cr 267.716†	2199.8	0.9715	mg/L	0.00582	0.9715	mg/L	0.00582	0.60%
Cu 324.752†	156018.6	1.004	mg/L	0.0043	1.004	mg/L	0.0043	0.43%
Fe 273.955†	1809.1	1.981	mg/L	0.0160	1.981	mg/L	0.0160	0.81%
K 766.490†	22273.3	20.01	mg/L	0.123	20.01	mg/L	0.123	0.62%
Mg 279.077†	1470.1	2.086	mg/L	0.0157	2.086	mg/L	0.0157	0.75%
Mn 257.610†	33744.1	1.031	mg/L	0.0074	1.031	mg/L	0.0074	0.72%
Mo 202.031†	10782.8	0.9864	mg/L	0.00269	0.9864	mg/L	0.00269	0.27%
Na 589.592†	443669.4	51.29	mg/L	0.325	51.29	mg/L	0.325	0.63%
Na 330.237†	925.6	51.92	mg/L	0.421	51.92	mg/L	0.421	0.81%
Ni 231.604†	1972.4	0.9525	mg/L	0.00636	0.9525	mg/L	0.00636	0.67%
Pb 220.353†	10491.0	2.024	mg/L	0.0015	2.024	mg/L	0.0015	0.07%
Sb 206.836†	3723.6	2.049	mg/L	0.0031	2.049	mg/L	0.0031	0.15%
Se 196.026†	1286.2	2.045	mg/L	0.0027	2.045	mg/L	0.0027	0.13%
Si 288.158†	1668.3	2.183	mg/L	0.0148	2.183	mg/L	0.0148	0.68%
Sn 189.927†	2579.7	0.9936	mg/L	0.00243	0.9936	mg/L	0.00243	0.25%
Sr 421.552†	440865.2	1.003	mg/L	0.0032	1.003	mg/L	0.0032	0.32%
Ti 334.903†	13087.8	1.007	mg/L	0.0031	1.007	mg/L	0.0031	0.31%
Tl 190.801†	2471.6	2.005	mg/L	0.0067	2.005	mg/L	0.0067	0.33%
V 292.402†	46806.4	0.9512	mg/L	0.00174	0.9512	mg/L	0.00174	0.18%
Zn 206.200†	1638.5	0.9899	mg/L	0.00606	0.9899	mg/L	0.00606	0.61%

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Sequence No.: 2 **Autosampler Location: 1**
Sample ID: SEQ-CCB3 **Date Collected: 11/18/2020 4:45:11 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB3

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCB3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1440159.3	101.9	%	0.23				0.23%
ScR 361.383	153210.6	101.3	%	0.86				0.85%
Ag 328.068†	-1.0	-0.00001	mg/L	0.000290	-0.00001	mg/L	0.000290	>999.9%
Al 308.215†	-9.5	-0.01028	mg/L	0.028296	-0.01028	mg/L	0.028296	275.18%
As 188.979†	4.1	0.00657	mg/L	0.002806	0.00657	mg/L	0.002806	42.72%
B 249.677†	45.0	0.00789	mg/L	0.001048	0.00789	mg/L	0.001048	13.29%
Ba 233.527†	-1.5	-0.00043	mg/L	0.000439	-0.00043	mg/L	0.000439	101.37%
Be 313.042†	-29.6	-0.00007	mg/L	0.000036	-0.00007	mg/L	0.000036	54.05%
Ca 317.933†	-7.3	-0.00125	mg/L	0.000617	-0.00125	mg/L	0.000617	49.35%
Cd 228.802†	1.1	0.00001	mg/L	0.000296	0.00001	mg/L	0.000296	>999.9%
Co 228.616†	-14.0	-0.00079	mg/L	0.000164	-0.00079	mg/L	0.000164	20.79%
Cr 267.716†	-2.7	-0.00121	mg/L	0.004493	-0.00121	mg/L	0.004493	371.17%
Cu 324.752†	76.0	0.00049	mg/L	0.000137	0.00049	mg/L	0.000137	28.05%
Fe 273.955†	-0.5	-0.00055	mg/L	0.002977	-0.00055	mg/L	0.002977	544.07%
K 766.490†	46.9	0.04216	mg/L	0.022924	0.04216	mg/L	0.022924	54.37%
Mg 279.077†	5.7	0.00801	mg/L	0.005626	0.00801	mg/L	0.005626	70.26%
Mn 257.610†	-1.7	-0.00005	mg/L	0.000096	-0.00005	mg/L	0.000096	190.82%
Mo 202.031†	2.3	0.00021	mg/L	0.000256	0.00021	mg/L	0.000256	119.73%
Na 589.592†	-30.4	-0.00352	mg/L	0.005031	-0.00352	mg/L	0.005031	142.93%
Na 330.237†	-12.8	-0.7233	mg/L	0.63348	-0.7233	mg/L	0.63348	87.58%
Ni 231.604†	-5.2	-0.00250	mg/L	0.001872	-0.00250	mg/L	0.001872	74.87%
Pb 220.353†	25.7	0.00495	mg/L	0.000938	0.00495	mg/L	0.000938	18.94%
Sb 206.836†	2.7	0.00154	mg/L	0.001171	0.00154	mg/L	0.001171	76.24%
Se 196.026†	1.8	0.00279	mg/L	0.003564	0.00279	mg/L	0.003564	127.87%
Si 288.158†	-2.7	-0.00353	mg/L	0.002888	-0.00353	mg/L	0.002888	81.78%
Sn 189.927†	2.9	0.00111	mg/L	0.001605	0.00111	mg/L	0.001605	144.95%
Sr 421.552†	-7.7	-0.00002	mg/L	0.000134	-0.00002	mg/L	0.000134	761.87%
Ti 334.903†	8.4	0.00065	mg/L	0.001399	0.00065	mg/L	0.001399	215.26%
Tl 190.801†	-4.5	-0.00371	mg/L	0.000639	-0.00371	mg/L	0.000639	17.24%
V 292.402†	9.7	0.00019	mg/L	0.000314	0.00019	mg/L	0.000314	167.09%
Zn 206.200†	5.4	0.00324	mg/L	0.001133	0.00324	mg/L	0.001133	34.97%

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Sequence No.: 3 **Autosampler Location: 323**
Sample ID: EF#1 TEST1 **Date Collected: 11/18/2020 4:49:27 PM**
DEL **Data Type: Original**
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: EF#1 TEST1

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: EF#1 TEST1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1402379.4	99.19	%	0.482				0.49%
ScR 361.383	156331.8	103.4	%	0.11				0.10%
Ag 328.068†	-4.4	-0.00003	mg/L	0.000212	-0.00016	mg/L	0.001060	654.97%
Al 308.215†	-3.4	-0.00369	mg/L	0.012166	-0.01847	mg/L	0.060830	329.35%
As 188.979†	5.8	0.00933	mg/L	0.002853	0.04667	mg/L	0.014266	30.57%
B 249.677†	34.2	0.00600	mg/L	0.001394	0.03000	mg/L	0.006969	23.23%
Ba 233.527†	-1.7	-0.00047	mg/L	0.001045	-0.00237	mg/L	0.005225	220.03%
Be 313.042†	-61.6	-0.00014	mg/L	0.000036	-0.00068	mg/L	0.000182	26.65%
Ca 317.933†	15.6	0.00267	mg/L	0.003152	0.01333	mg/L	0.015762	118.25%
Cd 228.802†	8.7	0.00045	mg/L	0.000034	0.00225	mg/L	0.000169	7.52%
Co 228.616†	-19.4	-0.00110	mg/L	0.000304	-0.00549	mg/L	0.001522	27.73%
Cr 267.716†	12.3	0.03332	mg/L	0.002551	0.1666	mg/L	0.01275	7.66%
Cu 324.752†	164.1	0.00106	mg/L	0.000134	0.00528	mg/L	0.000670	12.69%
Fe 273.955†	2.3	0.00258	mg/L	0.001858	0.01290	mg/L	0.009291	72.00%
K 766.490†	69.9	0.06281	mg/L	0.033768	0.3141	mg/L	0.16884	53.76%
Mg 279.077†	4.2	0.00593	mg/L	0.004162	0.02964	mg/L	0.020811	70.20%
Mn 257.610†	-5.3	-0.00016	mg/L	0.000120	-0.00080	mg/L	0.000599	74.92%
Mo 202.031†	-0.7	-0.00006	mg/L	0.000176	-0.00031	mg/L	0.000880	287.15%
Na 589.592†	2761215.4	319.2	mg/L	5.26	1596	mg/L	26.29	1.65%
Na 330.237†	5383.2	302.9	mg/L	2.02	1515	mg/L	10.11	0.67%
Ni 231.604†	7.3	0.00354	mg/L	0.001363	0.01770	mg/L	0.006813	38.49%
Pb 220.353†	26.6	0.00513	mg/L	0.001100	0.02566	mg/L	0.005498	21.43%
Sb 206.836†	-1.3	-0.00079	mg/L	0.000819	-0.00395	mg/L	0.004095	103.76%
Se 196.026†	0.3	0.00053	mg/L	0.004087	0.00266	mg/L	0.020435	767.21%
Si 288.158†	-4.4	-0.00586	mg/L	0.011323	-0.02932	mg/L	0.056613	193.05%
Sn 189.927†	6.1	0.00233	mg/L	0.001179	0.01166	mg/L	0.005894	50.56%
Sr 421.552†	-16.8	-0.00004	mg/L	0.000029	-0.00019	mg/L	0.000144	75.21%
Ti 334.903†	7.5	0.00057	mg/L	0.001555	0.00286	mg/L	0.007773	271.50%
Tl 190.801†	-0.8	-0.00069	mg/L	0.002478	-0.00345	mg/L	0.012389	358.89%
V 292.402†	0.6	0.00005	mg/L	0.000583	0.00025	mg/L	0.002913	>999.9%
Zn 206.200†	4.9	0.00293	mg/L	0.000374	0.01467	mg/L	0.001868	12.73%

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Sequence No.: 4 **Autosampler Location: 324**
Sample ID: EF#1 TEST2 **Date Collected: 11/18/2020 4:54:01 PM**
DEL
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: EF#1 TEST2

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: EF#1 TEST2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1379833.6	97.60	%	0.166				0.17%
ScR 361.383	152907.6	101.1	%	0.56				0.55%
Ag 328.068†	37.9	0.00028	mg/L	0.000436	0.00140	mg/L	0.002181	155.29%
Al 308.215†	-6.1	-0.00656	mg/L	0.008191	-0.03279	mg/L	0.040953	124.88%
As 188.979†	5.5	0.00897	mg/L	0.002633	0.04484	mg/L	0.013166	29.36%
B 249.677†	20.4	0.00358	mg/L	0.001098	0.01789	mg/L	0.005490	30.69%
Ba 233.527†	-3.8	-0.00109	mg/L	0.001786	-0.00546	mg/L	0.008930	163.46%
Be 313.042†	-23.6	-0.00005	mg/L	0.000057	-0.00026	mg/L	0.000284	108.50%
Ca 317.933†	5.2	0.00089	mg/L	0.002262	0.00447	mg/L	0.011311	252.93%
Cd 228.802†	3.2	0.00013	mg/L	0.000207	0.00065	mg/L	0.001037	158.62%
Co 228.616†	-20.3	-0.00115	mg/L	0.000154	-0.00574	mg/L	0.000770	13.42%
Cr 267.716†	4.8	0.02965	mg/L	0.001077	0.1483	mg/L	0.00539	3.63%
Cu 324.752†	160.5	0.00103	mg/L	0.000174	0.00516	mg/L	0.000868	16.81%
Fe 273.955†	2.0	0.00220	mg/L	0.003984	0.01102	mg/L	0.019919	180.71%
K 766.490†	110.0	0.09880	mg/L	0.024788	0.4940	mg/L	0.12394	25.09%
Mg 279.077†	9.2	0.01298	mg/L	0.009838	0.06492	mg/L	0.049191	75.77%
Mn 257.610†	-6.1	-0.00019	mg/L	0.000161	-0.00093	mg/L	0.000806	86.70%
Mo 202.031†	2.2	0.00020	mg/L	0.000281	0.00102	mg/L	0.001407	138.46%
Na 589.592†	2721692.1	314.6	mg/L	12.92	1573	mg/L	64.60	4.11%
Na 330.237†	5272.3	296.7	mg/L	11.33	1484	mg/L	56.63	3.82%
Ni 231.604†	6.0	0.00291	mg/L	0.001506	0.01454	mg/L	0.007532	51.80%
Pb 220.353†	26.4	0.00509	mg/L	0.000257	0.02547	mg/L	0.001286	5.05%
Sb 206.836†	-1.3	-0.00074	mg/L	0.002741	-0.00368	mg/L	0.013703	371.91%
Se 196.026†	-0.4	-0.00063	mg/L	0.004018	-0.00314	mg/L	0.020088	639.16%
Si 288.158†	-0.6	-0.00086	mg/L	0.012060	-0.00430	mg/L	0.060302	>999.9%
Sn 189.927†	5.3	0.00204	mg/L	0.001465	0.01019	mg/L	0.007327	71.91%
Sr 421.552†	-12.4	-0.00003	mg/L	0.000066	-0.00014	mg/L	0.000330	233.33%
Ti 334.903†	14.4	0.00111	mg/L	0.001934	0.00555	mg/L	0.009670	174.10%
Tl 190.801†	-1.4	-0.00116	mg/L	0.000527	-0.00579	mg/L	0.002635	45.52%
V 292.402†	1.8	0.00005	mg/L	0.000111	0.00026	mg/L	0.000556	211.05%
Zn 206.200†	4.8	0.00291	mg/L	0.000945	0.01453	mg/L	0.004726	32.53%

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Analysis Begun

Start Time: 11/18/2020 5:02:37 PM
Plasma On Time: 11/18/2020 9:28:48 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 325
Sample ID: 20K0196-01
Date Collected: 11/18/2020 5:02:45 PM
Data Type: Original
Dilution: 5X

Nebulizer Parameters: 20K0196-01

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 20K0196-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1397441.1	98.84	%	0.147				0.15%
ScR 361.383	153402.2	101.5	%	0.73				0.72%
Ag 328.068†	-18.1	-0.00013	mg/L	0.000318	-0.00067	mg/L	0.001589	237.00%
Al 308.215†	61.8	0.06605	mg/L	0.008505	0.3303	mg/L	0.04253	12.88%
As 188.979†	65.7	0.08218	mg/L	0.001596	0.4109	mg/L	0.00798	1.94%
B 249.677†	84302.0	14.77	mg/L	0.021	73.85	mg/L	0.107	0.14%
Ba 233.527†	122.5	0.03498	mg/L	0.001143	0.1749	mg/L	0.00571	3.27%
Be 313.042†	-24.2	-0.00005	mg/L	0.000030	-0.00027	mg/L	0.000148	54.36%
Ca 317.933†	262393.1	44.85	mg/L	0.162	224.3	mg/L	0.81	0.36%
Cd 228.802†	63.0	0.00248	mg/L	0.000055	0.01241	mg/L	0.000276	2.23%
Co 228.616†	17.0	0.00094	mg/L	0.000259	0.00468	mg/L	0.001293	27.61%
Cr 267.716†	12.7	0.03638	mg/L	0.000661	0.1819	mg/L	0.00331	1.82%
Cu 324.752†	202000.3	1.300	mg/L	0.0075	6.500	mg/L	0.0377	0.58%
Fe 273.955†	15.3	0.01685	mg/L	0.000839	0.08425	mg/L	0.004196	4.98%
K 766.490†	1192.2	1.071	mg/L	0.0277	5.356	mg/L	0.1387	2.59%
Mg 279.077†	512.6	0.7141	mg/L	0.01232	3.570	mg/L	0.0616	1.73%
Mn 257.610†	3788.9	0.1158	mg/L	0.00093	0.5789	mg/L	0.00464	0.80%
Mo 202.031†	78.1	0.00637	mg/L	0.000118	0.03185	mg/L	0.000590	1.85%
Na 589.592†	3137664.2	362.7	mg/L	2.54	1814	mg/L	12.71	0.70%
Na 330.237†	6080.9	340.1	mg/L	0.30	1701	mg/L	1.48	0.09%
Ni 231.604†	105.5	0.05090	mg/L	0.001621	0.2545	mg/L	0.00810	3.18%
Pb 220.353†	1262.7	0.2415	mg/L	0.00100	1.208	mg/L	0.0050	0.41%
Sb 206.836†	13.8	0.00740	mg/L	0.003052	0.03698	mg/L	0.015260	41.27%
Se 196.026†	8.9	0.00929	mg/L	0.009398	0.04646	mg/L	0.046990	101.14%
Si 288.158†	714.1	0.9410	mg/L	0.01261	4.705	mg/L	0.0630	1.34%
Sn 189.927†	-43.9	-0.00886	mg/L	0.000232	-0.04429	mg/L	0.001159	2.62%
Sr 421.552†	16317.5	0.03714	mg/L	0.000112	0.1857	mg/L	0.00056	0.30%
Ti 334.903†	77.1	0.00355	mg/L	0.000839	0.01775	mg/L	0.004194	23.63%
Tl 190.801†	-43.6	-0.02876	mg/L	0.003161	-0.1438	mg/L	0.01581	10.99%
V 292.402†	17.4	0.00060	mg/L	0.000190	0.00299	mg/L	0.000952	31.88%
Zn 206.200†	9546.1	5.769	mg/L	0.0040	28.85	mg/L	0.020	0.07%

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Sequence No.: 2
Sample ID: 20K0209-01

Dilution: 5X
Wash Time: 37

Autosampler Location: 326
Date Collected: 11/18/2020 5:07:26 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0209-01

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: 20K0209-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1368946.1	96.83	%	0.692				0.71%
ScR 361.383	153703.3	101.7	%	0.22				0.22%
Ag 328.068†	-12.9	-0.00010	mg/L	0.000225	-0.00048	mg/L	0.001125	234.11%
Al 308.215†	7.2	0.00531	mg/L	0.007155	0.02657	mg/L	0.035776	134.66%
As 188.979†	81.3	0.09045	mg/L	0.002596	0.4522	mg/L	0.01298	2.87%
B 249.677†	421.5	0.07315	mg/L	0.005771	0.3657	mg/L	0.02885	7.89%
Ba 233.527†	86.1	0.02211	mg/L	0.001172	0.1106	mg/L	0.00586	5.30%
Be 313.042†	-41.5	-0.00009	mg/L	0.000027	-0.00043	mg/L	0.000134	31.41%
Ca 317.933†	456800.5	78.08	mg/L	1.132	390.4	mg/L	5.66	1.45%
Cd 228.802†	58.9	0.00133	mg/L	0.000227	0.00664	mg/L	0.001135	17.09%
Co 228.616†	290.5	0.01635	mg/L	0.000442	0.08174	mg/L	0.002211	2.71%
Cr 267.716†	5.8	0.02607	mg/L	0.002171	0.1304	mg/L	0.01086	8.33%
Cu 324.752†	149.1	0.00157	mg/L	0.000240	0.00787	mg/L	0.001202	15.28%
Fe 273.955†	15536.7	17.08	mg/L	0.088	85.38	mg/L	0.438	0.51%
K 766.490†	682.6	0.6134	mg/L	0.00899	3.067	mg/L	0.0449	1.47%
Mg 279.077†	6786.0	9.548	mg/L	0.0633	47.74	mg/L	0.316	0.66%
Mn 257.610†	85057.2	2.598	mg/L	0.0200	12.99	mg/L	0.100	0.77%
Mo 202.031†	50.1	0.00313	mg/L	0.000487	0.01564	mg/L	0.002437	15.58%
Na 589.592†	2565045.4	296.5	mg/L	1.82	1483	mg/L	9.11	0.61%
Na 330.237†	4965.2	279.3	mg/L	1.67	1397	mg/L	8.33	0.60%
Ni 231.604†	242.6	0.1170	mg/L	0.00212	0.5851	mg/L	0.01059	1.81%
Pb 220.353†	18.7	0.00244	mg/L	0.000486	0.01221	mg/L	0.002428	19.88%
Sb 206.836†	4.8	0.00240	mg/L	0.002490	0.01200	mg/L	0.012448	103.77%
Se 196.026†	10.1	0.01287	mg/L	0.010236	0.06436	mg/L	0.051181	79.52%
Si 288.158†	2961.9	3.904	mg/L	0.0173	19.52	mg/L	0.087	0.44%
Sn 189.927†	-63.5	-0.01045	mg/L	0.001314	-0.05223	mg/L	0.006571	12.58%
Sr 421.552†	87409.6	0.1990	mg/L	0.00111	0.9948	mg/L	0.00553	0.56%
Ti 334.903†	94.0	0.00309	mg/L	0.000403	0.01543	mg/L	0.002014	13.05%
Tl 190.801†	-68.7	-0.04399	mg/L	0.003006	-0.2200	mg/L	0.01503	6.83%
V 292.402†	-126.3	0.00108	mg/L	0.000256	0.00542	mg/L	0.001282	23.67%
Zn 206.200†	514.9	0.3091	mg/L	0.00251	1.545	mg/L	0.0126	0.81%

Sequence No.: 3
Sample ID: 20K0210-01
Autosampler Location: 327
Date Collected: 11/18/2020 5:11:58 PM
Data Type: Original
Dilution: 5X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0210-01

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0210-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1348260.5	95.36	%	0.119				0.12%
ScR 361.383	150064.0	99.25	%	0.432				0.43%
Ag 328.068†	-60.4	-0.00045	mg/L	0.000516	-0.00225	mg/L	0.002580	114.77%
Al 308.215†	0.5	-0.00073	mg/L	0.010121	-0.00366	mg/L	0.050606	>999.9%
As 188.979†	91.7	0.09530	mg/L	0.002134	0.4765	mg/L	0.01067	2.24%
B 249.677†	468.8	0.08424	mg/L	0.001059	0.4212	mg/L	0.00530	1.26%
Ba 233.527†	54.4	0.01063	mg/L	0.001113	0.05317	mg/L	0.005567	10.47%
Be 313.042†	-40.9	-0.00008	mg/L	0.000025	-0.00038	mg/L	0.000124	32.14%
Ca 317.933†	586279.5	100.2	mg/L	0.39	501.1	mg/L	1.95	0.39%
Cd 228.802†	67.8	0.00116	mg/L	0.000237	0.00580	mg/L	0.001186	20.44%
Co 228.616†	264.6	0.01488	mg/L	0.000409	0.07439	mg/L	0.002047	2.75%
Cr 267.716†	1.3	0.02734	mg/L	0.003733	0.1367	mg/L	0.01867	13.65%
Cu 324.752†	7.1	0.00134	mg/L	0.000076	0.00671	mg/L	0.000379	5.65%
Fe 273.955†	30708.8	33.75	mg/L	0.259	168.8	mg/L	1.29	0.77%
K 766.490†	1152.3	1.035	mg/L	0.0239	5.177	mg/L	0.1194	2.31%
Mg 279.077†	5804.8	8.150	mg/L	0.0309	40.75	mg/L	0.154	0.38%
Mn 257.610†	89896.6	2.746	mg/L	0.0091	13.73	mg/L	0.045	0.33%
Mo 202.031†	55.9	0.00330	mg/L	0.000025	0.01649	mg/L	0.000125	0.76%
Na 589.592†	2736788.4	316.4	mg/L	1.64	1582	mg/L	8.22	0.52%
Na 330.237†	5255.0	295.7	mg/L	1.18	1479	mg/L	5.90	0.40%
Ni 231.604†	349.2	0.1684	mg/L	0.00502	0.8422	mg/L	0.02512	2.98%
Pb 220.353†	7.8	-0.00082	mg/L	0.001231	-0.00409	mg/L	0.006154	150.61%
Sb 206.836†	7.1	0.00365	mg/L	0.001643	0.01827	mg/L	0.008217	44.98%
Se 196.026†	11.2	0.01747	mg/L	0.005933	0.08734	mg/L	0.029666	33.97%
Si 288.158†	1539.8	2.030	mg/L	0.0305	10.15	mg/L	0.152	1.50%
Sn 189.927†	-77.7	-0.01196	mg/L	0.000871	-0.05978	mg/L	0.004357	7.29%
Sr 421.552†	81955.8	0.1865	mg/L	0.00032	0.9327	mg/L	0.00162	0.17%
Ti 334.903†	116.4	0.00364	mg/L	0.000463	0.01819	mg/L	0.002313	12.71%
Tl 190.801†	-80.6	-0.05017	mg/L	0.002891	-0.2509	mg/L	0.01445	5.76%
V 292.402†	-257.5	0.00022	mg/L	0.000146	0.00110	mg/L	0.000728	65.97%
Zn 206.200†	124.1	0.07221	mg/L	0.000791	0.3611	mg/L	0.00395	1.09%

Sequence No.: 4
Sample ID: 20K0211-01

Dilution: 5X
Wash Time: 37

Autosampler Location: 328
Date Collected: 11/18/2020 5:16:30 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0211-01

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: 20K0211-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1364026.0	96.48	%	0.294				0.31%
ScR 361.383	147488.7	97.55	%	0.134				0.14%
Ag 328.068†	0.6	0.00000	mg/L	0.000020	0.00002	mg/L	0.000099	476.02%
Al 308.215†	-0.4	-0.00239	mg/L	0.013508	-0.01197	mg/L	0.067539	564.36%
As 188.979†	86.5	0.08971	mg/L	0.002991	0.4486	mg/L	0.01495	3.33%
B 249.677†	169.0	0.02802	mg/L	0.003114	0.1401	mg/L	0.01557	11.11%
Ba 233.527†	44.5	0.01228	mg/L	0.000476	0.06141	mg/L	0.002380	3.88%
Be 313.042†	-28.3	-0.00006	mg/L	0.000020	-0.00031	mg/L	0.000101	33.17%
Ca 317.933†	556681.8	95.15	mg/L	0.289	475.8	mg/L	1.44	0.30%
Cd 228.802†	54.6	0.00108	mg/L	0.000167	0.00542	mg/L	0.000835	15.41%
Co 228.616†	212.5	0.01195	mg/L	0.000342	0.05976	mg/L	0.001709	2.86%
Cr 267.716†	10.9	0.02821	mg/L	0.004070	0.1410	mg/L	0.02035	14.43%
Cu 324.752†	196.9	0.00130	mg/L	0.000271	0.00651	mg/L	0.001353	20.79%
Fe 273.955†	2585.4	2.842	mg/L	0.0192	14.21	mg/L	0.096	0.67%
K 766.490†	684.4	0.6149	mg/L	0.03560	3.075	mg/L	0.1780	5.79%
Mg 279.077†	7120.4	10.02	mg/L	0.061	50.12	mg/L	0.303	0.60%
Mn 257.610†	86822.8	2.652	mg/L	0.0205	13.26	mg/L	0.103	0.77%
Mo 202.031†	56.5	0.00341	mg/L	0.000078	0.01705	mg/L	0.000388	2.28%
Na 589.592†	2732978.0	315.9	mg/L	0.67	1580	mg/L	3.33	0.21%
Na 330.237†	5311.2	298.8	mg/L	2.16	1494	mg/L	10.81	0.72%
Ni 231.604†	173.9	0.08387	mg/L	0.001210	0.4194	mg/L	0.00605	1.44%
Pb 220.353†	4.7	0.00072	mg/L	0.001263	0.00361	mg/L	0.006317	175.17%
Sb 206.836†	-0.2	-0.00045	mg/L	0.001427	-0.00224	mg/L	0.007135	319.08%
Se 196.026†	19.9	0.02221	mg/L	0.004606	0.1110	mg/L	0.02303	20.74%
Si 288.158†	2312.4	3.048	mg/L	0.0089	15.24	mg/L	0.045	0.29%
Sn 189.927†	-73.1	-0.01111	mg/L	0.001356	-0.05554	mg/L	0.006779	12.21%
Sr 421.552†	68723.3	0.1564	mg/L	0.00041	0.7821	mg/L	0.00204	0.26%
Ti 334.903†	115.9	0.00387	mg/L	0.000647	0.01934	mg/L	0.003235	16.73%
Tl 190.801†	-79.1	-0.04978	mg/L	0.003835	-0.2489	mg/L	0.01917	7.70%
V 292.402†	-27.1	0.00152	mg/L	0.000269	0.00760	mg/L	0.001345	17.71%
Zn 206.200†	278.0	0.1654	mg/L	0.00164	0.8271	mg/L	0.00822	0.99%

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Sequence No.: 5
Sample ID: BIK0508-DUP1

Dilution: 5X
Wash Time: 37

Autosampler Location: 329
Date Collected: 11/18/2020 5:21:19 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0508-DUP1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: BIK0508-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1448335.7	102.4	%	0.13				0.12%
ScR 361.383	153927.0	101.8	%	1.06				1.04%
Ag 328.068†	-53.7	-0.00041	mg/L	0.000412	-0.00203	mg/L	0.002058	101.52%
Al 308.215†	11.0	0.00893	mg/L	0.005584	0.04467	mg/L	0.027922	62.50%
As 188.979†	93.6	0.09595	mg/L	0.004478	0.4797	mg/L	0.02239	4.67%
B 249.677†	70.9	0.02618	mg/L	0.001520	0.1309	mg/L	0.00760	5.81%
Ba 233.527†	230.5	0.04118	mg/L	0.001716	0.2059	mg/L	0.00858	4.17%
Be 313.042†	23.0	0.00012	mg/L	0.000024	0.00060	mg/L	0.000120	20.06%
Ca 317.933†	612400.8	104.7	mg/L	1.31	523.4	mg/L	6.53	1.25%
Cd 228.802†	105.1	0.00036	mg/L	0.000372	0.00182	mg/L	0.001858	102.27%
Co 228.616†	559.9	0.03151	mg/L	0.000175	0.1575	mg/L	0.00087	0.55%
Cr 267.716†	-17.1	0.00559	mg/L	0.003921	0.02794	mg/L	0.019605	70.18%
Cu 324.752†	-1019.6	0.00026	mg/L	0.000129	0.00132	mg/L	0.000645	48.72%
Fe 273.955†	155265.9	170.7	mg/L	0.76	853.3	mg/L	3.78	0.44%
K 766.490†	1027.1	0.9229	mg/L	0.03803	4.614	mg/L	0.1901	4.12%
Mg 279.077†	5388.7	7.479	mg/L	0.0484	37.39	mg/L	0.242	0.65%
Mn 257.610†	96143.3	2.935	mg/L	0.0287	14.67	mg/L	0.144	0.98%
Mo 202.031†	38.7	0.00166	mg/L	0.000268	0.00829	mg/L	0.001339	16.14%
Na 589.592†	4280.5	0.4948	mg/L	0.05919	2.474	mg/L	0.2960	11.96%
Na 330.237†	-8.4	-0.7727	mg/L	0.22867	-3.864	mg/L	1.1433	29.59%
Ni 231.604†	531.4	0.2563	mg/L	0.00151	1.281	mg/L	0.0076	0.59%
Pb 220.353†	53.3	-0.00146	mg/L	0.002577	-0.00732	mg/L	0.012885	176.04%
Sb 206.836†	13.0	0.00701	mg/L	0.002293	0.03503	mg/L	0.011464	32.72%
Se 196.026†	-6.6	0.03128	mg/L	0.002050	0.1564	mg/L	0.01025	6.55%
Si 288.158†	3932.8	5.183	mg/L	0.0243	25.91	mg/L	0.121	0.47%
Sn 189.927†	-64.3	-0.00599	mg/L	0.002213	-0.02993	mg/L	0.011064	36.97%
Sr 421.552†	93584.6	0.2130	mg/L	0.00194	1.065	mg/L	0.0097	0.91%
Ti 334.903†	123.1	0.00392	mg/L	0.001136	0.01960	mg/L	0.005678	28.97%
Tl 190.801†	-74.4	-0.04441	mg/L	0.001583	-0.2221	mg/L	0.00792	3.56%
V 292.402†	-1314.5	-0.00536	mg/L	0.000227	-0.02680	mg/L	0.001135	4.23%
Zn 206.200†	1390.3	0.8375	mg/L	0.00806	4.188	mg/L	0.0403	0.96%

Sequence No.: 6
Sample ID: 20K0212-01

Dilution: 5X
Wash Time: 60

Autosampler Location: 330
Date Collected: 11/18/2020 5:25:58 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0212-01

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0212-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1426678.4	100.9	%	1.07				1.06%
ScR 361.383	154415.0	102.1	%	0.15				0.15%
Ag 328.068†	-19.4	-0.00015	mg/L	0.000268	-0.00076	mg/L	0.001339	177.02%
Al 308.215†	4.6	0.00231	mg/L	0.006826	0.01153	mg/L	0.034130	295.95%
As 188.979†	98.5	0.09532	mg/L	0.010030	0.4766	mg/L	0.05015	10.52%
B 249.677†	57.1	0.02653	mg/L	0.001550	0.1327	mg/L	0.00775	5.84%
Ba 233.527†	264.7	0.04726	mg/L	0.000848	0.2363	mg/L	0.00424	1.79%
Be 313.042†	28.1	0.00014	mg/L	0.000064	0.00070	mg/L	0.000321	46.15%
Ca 317.933†	707212.5	120.9	mg/L	0.77	604.4	mg/L	3.87	0.64%
Cd 228.802†	118.6	0.00037	mg/L	0.000463	0.00184	mg/L	0.002313	125.46%
Co 228.616†	631.2	0.03552	mg/L	0.000169	0.1776	mg/L	0.00085	0.48%
Cr 267.716†	-30.5	0.00173	mg/L	0.001011	0.00863	mg/L	0.005053	58.53%
Cu 324.752†	-1208.1	0.00008	mg/L	0.000071	0.00040	mg/L	0.000356	89.81%
Fe 273.955†	178622.1	196.3	mg/L	2.22	981.7	mg/L	11.10	1.13%
K 766.490†	1154.2	1.037	mg/L	0.0141	5.185	mg/L	0.0705	1.36%
Mg 279.077†	6125.4	8.500	mg/L	0.0408	42.50	mg/L	0.204	0.48%
Mn 257.610†	109497.1	3.342	mg/L	0.0076	16.71	mg/L	0.038	0.23%
Mo 202.031†	38.5	0.00135	mg/L	0.000237	0.00673	mg/L	0.001184	17.60%
Na 589.592†	3730.0	0.4312	mg/L	0.00330	2.156	mg/L	0.0165	0.77%
Na 330.237†	-9.6	-0.8866	mg/L	0.10517	-4.433	mg/L	0.5259	11.86%
Ni 231.604†	601.6	0.2902	mg/L	0.00472	1.451	mg/L	0.0236	1.63%
Pb 220.353†	55.2	-0.00288	mg/L	0.001341	-0.01439	mg/L	0.006705	46.60%
Sb 206.836†	27.0	0.01477	mg/L	0.001170	0.07384	mg/L	0.005852	7.92%
Se 196.026†	-16.5	0.02177	mg/L	0.005893	0.1089	mg/L	0.02947	27.07%
Si 288.158†	3642.5	4.800	mg/L	0.0961	24.00	mg/L	0.481	2.00%
Sn 189.927†	-69.7	-0.00519	mg/L	0.001577	-0.02594	mg/L	0.007886	30.40%
Sr 421.552†	106866.9	0.2432	mg/L	0.00085	1.216	mg/L	0.0042	0.35%
Ti 334.903†	120.7	0.00288	mg/L	0.000246	0.01438	mg/L	0.001231	8.55%
Tl 190.801†	-78.8	-0.04546	mg/L	0.002625	-0.2273	mg/L	0.01313	5.78%
V 292.402†	-1476.5	-0.00550	mg/L	0.000607	-0.02749	mg/L	0.003034	11.04%
Zn 206.200†	1578.0	0.9505	mg/L	0.00365	4.752	mg/L	0.0182	0.38%

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Sequence No.: 7 **Autosampler Location: 331**
Sample ID: BIK0508-MS1 **Date Collected: 11/18/2020 5:30:37 PM**
Data Type: Original
Dilution: 5X
Wash Time: 60 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0508-MS1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: BIK0508-MS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1406540.2	99.49	%	0.178				0.18%
ScR 361.383	149263.2	98.72	%	0.689				0.70%
Ag 328.068†	29843.6	0.2213	mg/L	0.00105	1.107	mg/L	0.0052	0.47%
Al 308.215†	823.5	0.8841	mg/L	0.01965	4.420	mg/L	0.0983	2.22%
As 188.979†	616.0	0.9279	mg/L	0.00611	4.640	mg/L	0.0306	0.66%
B 249.677†	55.9	0.02544	mg/L	0.001592	0.1272	mg/L	0.00796	6.26%
Ba 233.527†	3257.7	0.9018	mg/L	0.00451	4.509	mg/L	0.0226	0.50%
Be 313.042†	96192.3	0.2123	mg/L	0.00081	1.061	mg/L	0.0040	0.38%
Ca 317.933†	725747.1	124.1	mg/L	0.16	620.3	mg/L	0.81	0.13%
Cd 228.802†	3797.1	0.2104	mg/L	0.00086	1.052	mg/L	0.0043	0.41%
Co 228.616†	4286.7	0.2415	mg/L	0.00109	1.208	mg/L	0.0055	0.45%
Cr 267.716†	436.1	0.2064	mg/L	0.00339	1.032	mg/L	0.0170	1.64%
Cu 324.752†	31622.0	0.2114	mg/L	0.00119	1.057	mg/L	0.0059	0.56%
Fe 273.955†	179157.1	196.9	mg/L	0.61	984.6	mg/L	3.07	0.31%
K 766.490†	5813.2	5.223	mg/L	0.0080	26.12	mg/L	0.040	0.15%
Mg 279.077†	9246.0	12.90	mg/L	0.054	64.50	mg/L	0.269	0.42%
Mn 257.610†	117063.0	3.573	mg/L	0.0113	17.87	mg/L	0.057	0.32%
Mo 202.031†	42.2	0.00157	mg/L	0.000395	0.00787	mg/L	0.001977	25.12%
Na 589.592†	40042.2	4.629	mg/L	0.0255	23.14	mg/L	0.127	0.55%
Na 330.237†	67.4	3.382	mg/L	0.0187	16.91	mg/L	0.093	0.55%
Ni 231.604†	1008.1	0.4860	mg/L	0.00514	2.430	mg/L	0.0257	1.06%
Pb 220.353†	4374.1	0.8301	mg/L	0.00335	4.151	mg/L	0.0168	0.40%
Sb 206.836†	25.2	0.01092	mg/L	0.000296	0.05460	mg/L	0.001480	2.71%
Se 196.026†	531.2	0.8923	mg/L	0.00769	4.462	mg/L	0.0385	0.86%
Si 288.158†	4439.3	5.852	mg/L	0.0636	29.26	mg/L	0.318	1.09%
Sn 189.927†	-71.6	-0.00535	mg/L	0.000459	-0.02673	mg/L	0.002296	8.59%
Sr 421.552†	202644.0	0.4612	mg/L	0.00175	2.306	mg/L	0.0087	0.38%
Ti 334.903†	155.8	0.00536	mg/L	0.000829	0.02678	mg/L	0.004143	15.47%
Tl 190.801†	907.5	0.7581	mg/L	0.00444	3.790	mg/L	0.0222	0.59%
V 292.402†	8156.8	0.1907	mg/L	0.00174	0.9537	mg/L	0.00868	0.91%
Zn 206.200†	1888.6	1.138	mg/L	0.0053	5.691	mg/L	0.0264	0.46%

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Analysis Begun

Start Time: 11/18/2020 5:35:34 PM **Plasma On Time: 11/18/2020 9:28:48 AM**
Logged In Analyst: Metals Instrument Controller **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1118.sif
Batch ID:
Results Data Set: I2201118A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 332**
Sample ID: OLD LEN BLK TEST DEL **Date Collected: 11/18/2020 5:35:42 PM**
Data Type: Original
Dilution: 5X

Nebulizer Parameters: OLD LEN BLK TEST

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: OLD LEN BLK TEST

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1391304.2	98.41	%	0.529				0.54%
ScR 361.383	154137.7	101.9	%	1.14				1.12%
Ag 328.068†	5.1	0.00004	mg/L	0.000264	0.00019	mg/L	0.001321	695.49%
Al 308.215†	-53.1	-0.05742	mg/L	0.037028	-0.2871	mg/L	0.18514	64.48%
As 188.979†	4.8	0.00749	mg/L	0.002465	0.03746	mg/L	0.012326	32.91%
B 249.677†	230.0	0.04029	mg/L	0.001226	0.2014	mg/L	0.00613	3.04%
Ba 233.527†	19.9	0.00568	mg/L	0.000317	0.02841	mg/L	0.001587	5.59%
Be 313.042†	-77.2	-0.00017	mg/L	0.000040	-0.00085	mg/L	0.000202	23.61%
Ca 317.933†	1597.8	0.2731	mg/L	0.00507	1.366	mg/L	0.0254	1.86%
Cd 228.802†	4.6	0.00022	mg/L	0.000358	0.00109	mg/L	0.001792	164.38%
Co 228.616†	-25.6	-0.00144	mg/L	0.000087	-0.00720	mg/L	0.000435	6.04%
Cr 267.716†	12.9	0.03415	mg/L	0.003400	0.1707	mg/L	0.01700	9.96%
Cu 324.752†	201.4	0.00130	mg/L	0.000138	0.00649	mg/L	0.000692	10.67%
Fe 273.955†	32.9	0.03618	mg/L	0.029144	0.1809	mg/L	0.14572	80.56%
K 766.490†	136.7	0.1228	mg/L	0.03121	0.6142	mg/L	0.15603	25.40%
Mg 279.077†	55.2	0.07774	mg/L	0.005202	0.3887	mg/L	0.02601	6.69%
Mn 257.610†	8.7	0.00027	mg/L	0.000585	0.00133	mg/L	0.002924	219.26%
Mo 202.031†	4.0	0.00036	mg/L	0.000026	0.00180	mg/L	0.000129	7.17%
Na 589.592†	2817589.9	325.7	mg/L	1.79	1629	mg/L	8.95	0.55%
Na 330.237†	5316.7	299.2	mg/L	0.26	1496	mg/L	1.31	0.09%
Ni 231.604†	6.5	0.00312	mg/L	0.001861	0.01560	mg/L	0.009307	59.64%
Pb 220.353†	37.3	0.00719	mg/L	0.001284	0.03596	mg/L	0.006418	17.85%
Sb 206.836†	-1.0	-0.00065	mg/L	0.003673	-0.00324	mg/L	0.018366	566.51%
Se 196.026†	-3.1	-0.00495	mg/L	0.005826	-0.02473	mg/L	0.029130	117.78%
Si 288.158†	26.3	0.03464	mg/L	0.006005	0.1732	mg/L	0.03003	17.33%
Sn 189.927†	6.3	0.00247	mg/L	0.001059	0.01234	mg/L	0.005296	42.90%
Sr 421.552†	93.8	0.00021	mg/L	0.000042	0.00107	mg/L	0.000210	19.71%
Ti 334.903†	-24.3	-0.00189	mg/L	0.000821	-0.00944	mg/L	0.004106	43.51%
Tl 190.801†	-6.8	-0.00544	mg/L	0.002565	-0.02721	mg/L	0.012827	47.14%
V 292.402†	4.4	0.00014	mg/L	0.000284	0.00071	mg/L	0.001420	199.07%
Zn 206.200†	14.6	0.00880	mg/L	0.002332	0.04400	mg/L	0.011661	26.50%

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Sequence No.: 2 **Autosampler Location: 7**
Sample ID: SEQ-CCV4 **Date Collected: 11/18/2020 5:40:21 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV4

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCV4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1429206.8	101.1	%	0.39				0.39%
ScR 361.383	151339.9	100.1	%	0.84				0.84%
Ag 328.068†	141883.0	1.052	mg/L	0.0015	1.052	mg/L	0.0015	0.15%
Al 308.215†	1935.0	2.057	mg/L	0.0290	2.057	mg/L	0.0290	1.41%
As 188.979†	1184.8	1.940	mg/L	0.0106	1.940	mg/L	0.0106	0.55%
B 249.677†	5593.9	0.9788	mg/L	0.00814	0.9788	mg/L	0.00814	0.83%
Ba 233.527†	3539.7	1.010	mg/L	0.0109	1.010	mg/L	0.0109	1.08%
Be 313.042†	453586.3	1.000	mg/L	0.0084	1.000	mg/L	0.0084	0.84%
Ca 317.933†	11989.1	2.049	mg/L	0.0098	2.049	mg/L	0.0098	0.48%
Cd 228.802†	17067.7	0.9878	mg/L	0.00726	0.9878	mg/L	0.00726	0.73%
Co 228.616†	17520.5	0.9860	mg/L	0.00300	0.9860	mg/L	0.00300	0.30%
Cr 267.716†	2163.5	0.9554	mg/L	0.00749	0.9554	mg/L	0.00749	0.78%
Cu 324.752†	154926.3	0.9967	mg/L	0.00326	0.9967	mg/L	0.00326	0.33%
Fe 273.955†	1816.4	1.989	mg/L	0.0185	1.989	mg/L	0.0185	0.93%
K 766.490†	22034.7	19.80	mg/L	0.178	19.80	mg/L	0.178	0.90%
Mg 279.077†	1468.6	2.084	mg/L	0.0332	2.084	mg/L	0.0332	1.60%
Mn 257.610†	33683.9	1.029	mg/L	0.0101	1.029	mg/L	0.0101	0.98%
Mo 202.031†	10806.3	0.9886	mg/L	0.00853	0.9886	mg/L	0.00853	0.86%
Na 589.592†	437789.9	50.61	mg/L	0.603	50.61	mg/L	0.603	1.19%
Na 330.237†	909.0	50.99	mg/L	0.295	50.99	mg/L	0.295	0.58%
Ni 231.604†	1951.0	0.9422	mg/L	0.00874	0.9422	mg/L	0.00874	0.93%
Pb 220.353†	10637.0	2.052	mg/L	0.0182	2.052	mg/L	0.0182	0.89%
Sb 206.836†	3735.7	2.057	mg/L	0.0123	2.057	mg/L	0.0123	0.60%
Se 196.026†	1305.5	2.076	mg/L	0.0108	2.076	mg/L	0.0108	0.52%
Si 288.158†	1671.1	2.186	mg/L	0.0235	2.186	mg/L	0.0235	1.08%
Sn 189.927†	2622.9	1.010	mg/L	0.0073	1.010	mg/L	0.0073	0.72%
Sr 421.552†	435996.7	0.9924	mg/L	0.01020	0.9924	mg/L	0.01020	1.03%
Ti 334.903†	13001.9	1.000	mg/L	0.0084	1.000	mg/L	0.0084	0.84%
Tl 190.801†	2488.6	2.019	mg/L	0.0139	2.019	mg/L	0.0139	0.69%
V 292.402†	47047.6	0.9560	mg/L	0.01315	0.9560	mg/L	0.01315	1.38%
Zn 206.200†	1649.9	0.9968	mg/L	0.00558	0.9968	mg/L	0.00558	0.56%

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Sequence No.: 3 **Autosampler Location: 1**
Sample ID: SEQ-CCB4 **Date Collected: 11/18/2020 5:45:41 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB4

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: SEQ-CCB4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1398011.0	98.88	%	0.301				0.30%
ScR 361.383	149862.8	99.12	%	0.143				0.14%
Ag 328.068†	-11.7	-0.00009	mg/L	0.000294	-0.00009	mg/L	0.000294	339.05%
Al 308.215†	-14.8	-0.01597	mg/L	0.027607	-0.01597	mg/L	0.027607	172.82%
As 188.979†	3.8	0.00615	mg/L	0.004551	0.00615	mg/L	0.004551	73.95%
B 249.677†	33.0	0.00579	mg/L	0.001653	0.00579	mg/L	0.001653	28.57%
Ba 233.527†	0.8	0.00024	mg/L	0.000376	0.00024	mg/L	0.000376	158.35%
Be 313.042†	-16.2	-0.00004	mg/L	0.000091	-0.00004	mg/L	0.000091	251.65%
Ca 317.933†	-10.2	-0.00174	mg/L	0.003424	-0.00174	mg/L	0.003424	196.67%
Cd 228.802†	2.4	0.00010	mg/L	0.000066	0.00010	mg/L	0.000066	67.27%
Co 228.616†	-23.0	-0.00130	mg/L	0.000282	-0.00130	mg/L	0.000282	21.64%
Cr 267.716†	-6.4	-0.00283	mg/L	0.002241	-0.00283	mg/L	0.002241	79.28%
Cu 324.752†	83.3	0.00054	mg/L	0.000126	0.00054	mg/L	0.000126	23.58%
Fe 273.955†	2.5	0.00278	mg/L	0.004470	0.00278	mg/L	0.004470	161.03%
K 766.490†	57.0	0.05122	mg/L	0.020665	0.05122	mg/L	0.020665	40.34%
Mg 279.077†	3.2	0.00455	mg/L	0.005904	0.00455	mg/L	0.005904	129.83%
Mn 257.610†	0.4	0.00001	mg/L	0.000014	0.00001	mg/L	0.000014	112.74%
Mo 202.031†	5.1	0.00047	mg/L	0.000242	0.00047	mg/L	0.000242	51.66%
Na 589.592†	464.8	0.05372	mg/L	0.012781	0.05372	mg/L	0.012781	23.79%
Na 330.237†	-3.5	-0.1968	mg/L	0.26235	-0.1968	mg/L	0.26235	133.28%
Ni 231.604†	-5.1	-0.00246	mg/L	0.001451	-0.00246	mg/L	0.001451	58.87%
Pb 220.353†	35.7	0.00688	mg/L	0.000640	0.00688	mg/L	0.000640	9.30%
Sb 206.836†	3.5	0.00204	mg/L	0.001634	0.00204	mg/L	0.001634	80.11%
Se 196.026†	0.8	0.00130	mg/L	0.001876	0.00130	mg/L	0.001876	144.14%
Si 288.158†	-2.5	-0.00329	mg/L	0.003628	-0.00329	mg/L	0.003628	110.22%
Sn 189.927†	9.4	0.00362	mg/L	0.000220	0.00362	mg/L	0.000220	6.07%
Sr 421.552†	11.4	0.00003	mg/L	0.000031	0.00003	mg/L	0.000031	118.51%
Ti 334.903†	29.1	0.00224	mg/L	0.002525	0.00224	mg/L	0.002525	112.64%
Tl 190.801†	-4.4	-0.00359	mg/L	0.001506	-0.00359	mg/L	0.001506	41.96%
V 292.402†	10.7	0.00020	mg/L	0.000094	0.00020	mg/L	0.000094	47.59%
Zn 206.200†	5.3	0.00320	mg/L	0.001319	0.00320	mg/L	0.001319	41.22%

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Sequence No.: 4 **Autosampler Location: 333**
Sample ID: 20K0135-01RE1 **Date Collected: 11/18/2020 5:49:57 PM**
DEL **Data Type: Original**
Dilution: 20X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0135-01RE1

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0135-01RE1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1408345.7	99.61	%	0.219				0.22%
ScR 361.383	150127.0	99.29	%	0.495				0.50%
Ag 328.068†	-34.5	-0.00024	mg/L	0.000237	-0.00482	mg/L	0.004730	98.22%
Al 308.215†	25897.1	27.98	mg/L	0.046	559.7	mg/L	0.92	0.16%
As 188.979†	-52.2	-0.04054	mg/L	0.006042	-0.8107	mg/L	0.12085	14.91%
B 249.677†	30.4	0.00806	mg/L	0.002252	0.1611	mg/L	0.04503	27.95%
Ba 233.527†	451.7	0.1246	mg/L	0.00161	2.493	mg/L	0.0322	1.29%
Be 313.042†	168.2	0.00022	mg/L	0.000022	0.00437	mg/L	0.000433	9.90%
Ca 317.933†	24414.3	4.173	mg/L	0.0110	83.46	mg/L	0.219	0.26%
Cd 228.802†	12.2	0.00058	mg/L	0.000075	0.01150	mg/L	0.001490	12.96%
Co 228.616†	260.8	0.01279	mg/L	0.000047	0.2559	mg/L	0.00094	0.37%
Cr 267.716†	118.7	0.05320	mg/L	0.002710	1.064	mg/L	0.0542	5.09%
Cu 324.752†	5443.5	0.03599	mg/L	0.000202	0.7199	mg/L	0.00403	0.56%
Fe 273.955†	27315.2	30.02	mg/L	0.048	600.5	mg/L	0.97	0.16%
K 766.490†	1778.0	1.598	mg/L	0.0544	31.95	mg/L	1.088	3.40%
Mg 279.077†	6305.4	8.873	mg/L	0.0219	177.5	mg/L	0.44	0.25%
Mn 257.610†	15488.7	0.4725	mg/L	0.00218	9.451	mg/L	0.0437	0.46%
Mo 202.031†	7.4	0.00048	mg/L	0.000422	0.00970	mg/L	0.008438	86.99%
Na 589.592†	1644.3	0.1901	mg/L	0.00509	3.801	mg/L	0.1018	2.68%
Na 330.237†	-1.5	0.09100	mg/L	0.659203	1.820	mg/L	13.1841	724.44%
Ni 231.604†	107.5	0.05182	mg/L	0.003156	1.036	mg/L	0.0631	6.09%
Pb 220.353†	34.5	0.01172	mg/L	0.000422	0.2344	mg/L	0.00843	3.60%
Sb 206.836†	2.0	0.00196	mg/L	0.001456	0.03912	mg/L	0.029130	74.46%
Se 196.026†	-9.5	0.00280	mg/L	0.003468	0.05597	mg/L	0.069365	123.92%
Si 288.158†	281.0	0.3601	mg/L	0.00830	7.201	mg/L	0.1659	2.30%
Sn 189.927†	0.2	0.00133	mg/L	0.002469	0.02660	mg/L	0.049389	185.67%
Sr 421.552†	16577.9	0.03773	mg/L	0.000207	0.7547	mg/L	0.00413	0.55%
Ti 334.903†	13581.2	1.046	mg/L	0.0041	20.91	mg/L	0.083	0.39%
Tl 190.801†	3.3	-0.01197	mg/L	0.000901	-0.2394	mg/L	0.01801	7.52%
V 292.402†	2935.2	0.06401	mg/L	0.000591	1.280	mg/L	0.0118	0.92%
Zn 206.200†	96.2	0.05803	mg/L	0.001908	1.161	mg/L	0.0382	3.29%

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Sequence No.: 5 **Autosampler Location: 334**
Sample ID: 20K0135-02RE1 **Date Collected: 11/18/2020 5:54:13 PM**
DEL **Data Type: Original**
Dilution: 20X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0135-02RE1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 20K0135-02RE1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1425460.8	100.8	%	0.64				0.63%
ScR 361.383	151780.8	100.4	%	0.35				0.35%
Ag 328.068†	-28.6	-0.00020	mg/L	0.000307	-0.00399	mg/L	0.006147	153.93%
Al 308.215†	23196.7	25.06	mg/L	0.118	501.3	mg/L	2.37	0.47%
As 188.979†	-49.5	-0.03921	mg/L	0.003345	-0.7843	mg/L	0.06689	8.53%
B 249.677†	7.7	0.00344	mg/L	0.002140	0.06884	mg/L	0.042798	62.17%
Ba 233.527†	448.8	0.1247	mg/L	0.00308	2.493	mg/L	0.0615	2.47%
Be 313.042†	152.7	0.00021	mg/L	0.000044	0.00419	mg/L	0.000879	21.00%
Ca 317.933†	36754.0	6.282	mg/L	0.0182	125.6	mg/L	0.36	0.29%
Cd 228.802†	13.3	0.00072	mg/L	0.000241	0.01446	mg/L	0.004826	33.38%
Co 228.616†	219.9	0.01054	mg/L	0.000221	0.2109	mg/L	0.00442	2.10%
Cr 267.716†	100.6	0.04494	mg/L	0.001292	0.8988	mg/L	0.02585	2.88%
Cu 324.752†	3381.2	0.02249	mg/L	0.000286	0.4498	mg/L	0.00573	1.27%
Fe 273.955†	21701.0	23.85	mg/L	0.152	477.0	mg/L	3.04	0.64%
K 766.490†	1097.8	0.9864	mg/L	0.03526	19.73	mg/L	0.705	3.57%
Mg 279.077†	5045.6	7.100	mg/L	0.0644	142.0	mg/L	1.29	0.91%
Mn 257.610†	13904.5	0.4242	mg/L	0.00340	8.485	mg/L	0.0681	0.80%
Mo 202.031†	15.2	0.00119	mg/L	0.000138	0.02372	mg/L	0.002753	11.61%
Na 589.592†	1669.7	0.1930	mg/L	0.00204	3.860	mg/L	0.0407	1.06%
Na 330.237†	-4.3	-0.07655	mg/L	0.704804	-1.531	mg/L	14.0961	920.75%
Ni 231.604†	90.6	0.04370	mg/L	0.003553	0.8740	mg/L	0.07105	8.13%
Pb 220.353†	37.9	0.01208	mg/L	0.000988	0.2415	mg/L	0.01976	8.18%
Sb 206.836†	3.4	0.00276	mg/L	0.001227	0.05515	mg/L	0.024535	44.49%
Se 196.026†	-6.9	0.00386	mg/L	0.003207	0.07725	mg/L	0.064132	83.02%
Si 288.158†	319.3	0.4106	mg/L	0.01672	8.212	mg/L	0.3344	4.07%
Sn 189.927†	-0.5	0.00140	mg/L	0.000855	0.02802	mg/L	0.017104	61.05%
Sr 421.552†	13518.4	0.03077	mg/L	0.000240	0.6154	mg/L	0.00480	0.78%
Ti 334.903†	13174.3	1.014	mg/L	0.0056	20.29	mg/L	0.113	0.56%
Tl 190.801†	6.0	-0.00803	mg/L	0.003235	-0.1607	mg/L	0.06471	40.28%
V 292.402†	2456.8	0.05339	mg/L	0.000618	1.068	mg/L	0.0124	1.16%
Zn 206.200†	107.4	0.06473	mg/L	0.001853	1.295	mg/L	0.0371	2.86%

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Sequence No.: 6 **Autosampler Location: 335**
Sample ID: 20K0135-03RE1 **Date Collected: 11/18/2020 5:58:29 PM**
DEL **Data Type: Original**
Dilution: 20X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0135-03RE1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: 20K0135-03RE1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1452159.4	102.7	%	0.32				0.31%
ScR 361.383	156748.0	103.7	%	0.78				0.76%
Ag 328.068†	24.5	0.00019	mg/L	0.000070	0.00388	mg/L	0.001402	36.16%
Al 308.215†	21401.5	23.12	mg/L	0.131	462.5	mg/L	2.63	0.57%
As 188.979†	-49.2	-0.04049	mg/L	0.004679	-0.8097	mg/L	0.09358	11.56%
B 249.677†	24.3	0.00651	mg/L	0.000543	0.1303	mg/L	0.01087	8.34%
Ba 233.527†	452.5	0.1256	mg/L	0.00149	2.512	mg/L	0.0298	1.19%
Be 313.042†	142.0	0.00019	mg/L	0.000095	0.00376	mg/L	0.001893	50.30%
Ca 317.933†	34334.8	5.869	mg/L	0.0160	117.4	mg/L	0.32	0.27%
Cd 228.802†	13.4	0.00071	mg/L	0.000089	0.01411	mg/L	0.001770	12.54%
Co 228.616†	229.8	0.01118	mg/L	0.000099	0.2236	mg/L	0.00198	0.89%
Cr 267.716†	100.5	0.04484	mg/L	0.001811	0.8967	mg/L	0.03621	4.04%
Cu 324.752†	3676.4	0.02443	mg/L	0.000260	0.4886	mg/L	0.00521	1.07%
Fe 273.955†	22528.0	24.76	mg/L	0.215	495.2	mg/L	4.31	0.87%
K 766.490†	1201.8	1.080	mg/L	0.0211	21.60	mg/L	0.422	1.95%
Mg 279.077†	5519.6	7.768	mg/L	0.0604	155.4	mg/L	1.21	0.78%
Mn 257.610†	17164.1	0.5238	mg/L	0.00231	10.48	mg/L	0.046	0.44%
Mo 202.031†	7.3	0.00047	mg/L	0.000188	0.00933	mg/L	0.003768	40.38%
Na 589.592†	1685.8	0.1949	mg/L	0.00454	3.897	mg/L	0.0909	2.33%
Na 330.237†	-12.7	-0.5554	mg/L	0.19184	-11.11	mg/L	3.837	34.54%
Ni 231.604†	83.9	0.04046	mg/L	0.002451	0.8093	mg/L	0.04901	6.06%
Pb 220.353†	64.8	0.01670	mg/L	0.001205	0.3340	mg/L	0.02409	7.21%
Sb 206.836†	-2.0	-0.00024	mg/L	0.002612	-0.00488	mg/L	0.052239	>999.9%
Se 196.026†	-7.9	0.00206	mg/L	0.005013	0.04115	mg/L	0.100263	243.67%
Si 288.158†	234.4	0.2993	mg/L	0.00738	5.986	mg/L	0.1477	2.47%
Sn 189.927†	2.8	0.00259	mg/L	0.000644	0.05182	mg/L	0.012877	24.85%
Sr 421.552†	13396.4	0.03049	mg/L	0.000038	0.6098	mg/L	0.00076	0.12%
Ti 334.903†	12624.3	0.9719	mg/L	0.00769	19.44	mg/L	0.154	0.79%
Tl 190.801†	3.1	-0.00951	mg/L	0.001985	-0.1902	mg/L	0.03970	20.87%
V 292.402†	2409.9	0.05265	mg/L	0.000603	1.053	mg/L	0.0121	1.15%
Zn 206.200†	97.6	0.05882	mg/L	0.001291	1.176	mg/L	0.0258	2.19%

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Sequence No.: 7 **Autosampler Location: 336**
Sample ID: 20K0126-06 DEL **Date Collected: 11/18/2020 6:02:45 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0126-06

Analyte	Back Pressure	Flow
All	236.0 kPa	0.65 L/min

Mean Data: 20K0126-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1411863.7	99.86	%	0.309				0.31%
ScR 361.383	154163.6	102.0	%	0.09				0.09%
Ag 328.068†	1759.0	0.01306	mg/L	0.000260	0.06531	mg/L	0.001302	1.99%
Al 308.215†	24847.5	26.85	mg/L	0.027	134.2	mg/L	0.14	0.10%
As 188.979†	58.4	0.1605	mg/L	0.01005	0.8025	mg/L	0.05027	6.26%
B 249.677†	65.4	0.02508	mg/L	0.004023	0.1254	mg/L	0.02012	16.04%
Ba 233.527†	530.2	0.1306	mg/L	0.00181	0.6528	mg/L	0.00904	1.39%
Be 313.042†	205.3	0.00027	mg/L	0.000007	0.00135	mg/L	0.000035	2.55%
Ca 317.933†	81497.9	13.93	mg/L	0.048	69.65	mg/L	0.238	0.34%
Cd 228.802†	105.9	0.00337	mg/L	0.000092	0.01684	mg/L	0.000459	2.72%
Co 228.616†	185.0	0.00696	mg/L	0.000094	0.03482	mg/L	0.000470	1.35%
Cr 267.716†	162.0	0.1323	mg/L	0.00063	0.6614	mg/L	0.00317	0.48%
Cu 324.752†	3759813.3	24.20	mg/L	0.020	121.0	mg/L	0.10	0.08%
Fe 273.955†	130366.2	143.3	mg/L	1.04	716.4	mg/L	5.20	0.73%
K 766.490†	2138.8	1.922	mg/L	0.0221	9.609	mg/L	0.1103	1.15%
Mg 279.077†	5449.8	7.597	mg/L	0.0184	37.98	mg/L	0.092	0.24%
Mn 257.610†	34145.0	1.046	mg/L	0.0033	5.228	mg/L	0.0167	0.32%
Mo 202.031†	42.6	0.00355	mg/L	0.000517	0.01776	mg/L	0.002586	14.56%
Na 589.592†	47294.1	5.467	mg/L	0.0030	27.34	mg/L	0.015	0.05%
Na 330.237†	87.9	5.185	mg/L	0.3886	25.93	mg/L	1.943	7.49%
Ni 231.604†	2169.7	1.070	mg/L	0.0021	5.351	mg/L	0.0107	0.20%
Pb 220.353†	190447.5	36.68	mg/L	0.081	183.4	mg/L	0.41	0.22%
Sb 206.836†	49301.6	28.76	mg/L	0.119	143.8	mg/L	0.60	0.41%
Se 196.026†	-47.7	-0.02401	mg/L	0.002089	-0.1200	mg/L	0.01045	8.70%
Si 288.158†	736.9	-0.7029	mg/L	0.02530	-3.514	mg/L	0.1265	3.60%
Sn 189.927†	481317.5	185.2	mg/L	0.11	926.2	mg/L	0.57	0.06%
Sr 421.552†	62286.7	0.1418	mg/L	0.00010	0.7088	mg/L	0.00052	0.07%
Ti 334.903†	23623.4	1.819	mg/L	0.0014	9.093	mg/L	0.0068	0.07%
Tl 190.801†	55.2	0.01646	mg/L	0.001490	0.08231	mg/L	0.007448	9.05%
V 292.402†	3512.0	0.09056	mg/L	0.002167	0.4528	mg/L	0.01083	2.39%
Zn 206.200†	479.3	0.2912	mg/L	0.00134	1.456	mg/L	0.0067	0.46%

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Sequence No.: 8 **Autosampler Location: 337**
Sample ID: 20K0126-02 **Date Collected: 11/18/2020 6:07:03 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0126-02

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: 20K0126-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1430055.1	101.2	%	0.33				0.33%
ScR 361.383	153593.6	101.6	%	0.73				0.72%
Ag 328.068†	-139.9	-0.00097	mg/L	0.000098	-0.00195	mg/L	0.000196	10.08%
Al 308.215†	77238.7	83.45	mg/L	0.339	166.9	mg/L	0.68	0.41%
As 188.979†	-261.2	-0.2162	mg/L	0.00222	-0.4325	mg/L	0.00445	1.03%
B 249.677†	76.2	0.02276	mg/L	0.002267	0.04552	mg/L	0.004534	9.96%
Ba 233.527†	917.4	0.2472	mg/L	0.00340	0.4943	mg/L	0.00680	1.38%
Be 313.042†	580.2	0.00064	mg/L	0.000055	0.00127	mg/L	0.000109	8.58%
Ca 317.933†	186497.4	31.88	mg/L	0.139	63.76	mg/L	0.278	0.44%
Cd 228.802†	58.4	0.00358	mg/L	0.000154	0.00716	mg/L	0.000307	4.29%
Co 228.616†	616.6	0.02487	mg/L	0.000335	0.04974	mg/L	0.000670	1.35%
Cr 267.716†	247.2	0.1153	mg/L	0.00162	0.2307	mg/L	0.00324	1.40%
Cu 324.752†	15095.1	0.1002	mg/L	0.00038	0.2003	mg/L	0.00077	0.38%
Fe 273.955†	92375.4	101.5	mg/L	0.27	203.1	mg/L	0.54	0.27%
K 766.490†	4182.9	3.758	mg/L	0.0620	7.517	mg/L	0.1239	1.65%
Mg 279.077†	11601.8	16.29	mg/L	0.041	32.59	mg/L	0.082	0.25%
Mn 257.610†	29863.2	0.9103	mg/L	0.00341	1.821	mg/L	0.0068	0.37%
Mo 202.031†	72.2	0.00584	mg/L	0.000212	0.01168	mg/L	0.000425	3.64%
Na 589.592†	103744.2	11.99	mg/L	0.036	23.99	mg/L	0.072	0.30%
Na 330.237†	201.5	12.30	mg/L	0.136	24.61	mg/L	0.273	1.11%
Ni 231.604†	103.7	0.05004	mg/L	0.000471	0.1001	mg/L	0.00094	0.94%
Pb 220.353†	292.0	0.07052	mg/L	0.001369	0.1410	mg/L	0.00274	1.94%
Sb 206.836†	62.4	0.04240	mg/L	0.017969	0.08479	mg/L	0.035938	42.38%
Se 196.026†	-32.4	0.00368	mg/L	0.006011	0.00736	mg/L	0.012021	163.43%
Si 288.158†	794.3	0.9884	mg/L	0.02265	1.977	mg/L	0.0453	2.29%
Sn 189.927†	294.1	0.1214	mg/L	0.06288	0.2429	mg/L	0.12577	51.78%
Sr 421.552†	168800.5	0.3842	mg/L	0.00151	0.7684	mg/L	0.00302	0.39%
Ti 334.903†	70755.1	5.448	mg/L	0.0174	10.90	mg/L	0.035	0.32%
Tl 190.801†	22.8	-0.02990	mg/L	0.001604	-0.05980	mg/L	0.003208	5.37%
V 292.402†	12381.5	0.2636	mg/L	0.00233	0.5272	mg/L	0.00466	0.88%
Zn 206.200†	290.6	0.1748	mg/L	0.00229	0.3496	mg/L	0.00458	1.31%

Sequence No.: 9
Sample ID: 20K0126-07
Dilution: 2X
Wash Time: 37

Autosampler Location: 338
Date Collected: 11/18/2020 6:11:19 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0126-07

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: 20K0126-07

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1451158.8	102.6	%	0.35				0.34%
ScR 361.383	153557.2	101.6	%	0.36				0.35%
Ag 328.068†	-152.2	-0.00105	mg/L	0.000170	-0.00211	mg/L	0.000339	16.12%
Al 308.215†	67738.2	73.19	mg/L	0.152	146.4	mg/L	0.30	0.21%
As 188.979†	-249.7	-0.2067	mg/L	0.00762	-0.4133	mg/L	0.01524	3.69%
B 249.677†	106.6	0.02642	mg/L	0.001164	0.05284	mg/L	0.002328	4.41%
Ba 233.527†	776.9	0.2091	mg/L	0.00111	0.4183	mg/L	0.00222	0.53%
Be 313.042†	691.5	0.00077	mg/L	0.000052	0.00153	mg/L	0.000104	6.80%
Ca 317.933†	191934.1	32.81	mg/L	0.298	65.61	mg/L	0.596	0.91%
Cd 228.802†	56.5	0.00366	mg/L	0.000109	0.00733	mg/L	0.000218	2.98%
Co 228.616†	737.8	0.03199	mg/L	0.000378	0.06398	mg/L	0.000755	1.18%
Cr 267.716†	284.8	0.1309	mg/L	0.00381	0.2618	mg/L	0.00761	2.91%
Cu 324.752†	14917.8	0.09846	mg/L	0.000172	0.1969	mg/L	0.00034	0.17%
Fe 273.955†	78812.1	86.62	mg/L	0.610	173.2	mg/L	1.22	0.70%
K 766.490†	4083.3	3.669	mg/L	0.0430	7.338	mg/L	0.0859	1.17%
Mg 279.077†	11084.7	15.57	mg/L	0.081	31.15	mg/L	0.162	0.52%
Mn 257.610†	27520.8	0.8390	mg/L	0.00491	1.678	mg/L	0.0098	0.59%
Mo 202.031†	125.4	0.01070	mg/L	0.000268	0.02140	mg/L	0.000537	2.51%
Na 589.592†	136344.1	15.76	mg/L	0.097	31.52	mg/L	0.195	0.62%
Na 330.237†	267.8	16.00	mg/L	0.690	32.01	mg/L	1.379	4.31%
Ni 231.604†	110.8	0.05342	mg/L	0.002901	0.1068	mg/L	0.00580	5.43%
Pb 220.353†	107.8	0.03348	mg/L	0.001244	0.06695	mg/L	0.002488	3.72%
Sb 206.836†	8.1	0.01136	mg/L	0.002722	0.02271	mg/L	0.005445	23.97%
Se 196.026†	-23.9	0.00902	mg/L	0.005332	0.01804	mg/L	0.010665	59.11%
Si 288.158†	1009.2	1.274	mg/L	0.0045	2.548	mg/L	0.0091	0.36%
Sn 189.927†	56.5	0.03010	mg/L	0.003235	0.06020	mg/L	0.006471	10.75%
Sr 421.552†	154687.2	0.3521	mg/L	0.00085	0.7042	mg/L	0.00171	0.24%
Ti 334.903†	68697.0	5.289	mg/L	0.0119	10.58	mg/L	0.024	0.22%
Tl 190.801†	11.5	-0.03439	mg/L	0.002334	-0.06877	mg/L	0.004668	6.79%
V 292.402†	14601.0	0.3066	mg/L	0.00407	0.6133	mg/L	0.00815	1.33%
Zn 206.200†	302.8	0.1822	mg/L	0.00191	0.3643	mg/L	0.00382	1.05%

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Sequence No.: 10 **Autosampler Location: 339**
Sample ID: BIK0408-DUP1 **Date Collected: 11/18/2020 6:15:35 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0408-DUP1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: BIK0408-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1483579.1	104.9	%	0.29				0.28%
ScR 361.383	160678.0	106.3	%	0.61				0.58%
Ag 328.068†	-138.7	-0.00095	mg/L	0.000081	-0.00190	mg/L	0.000162	8.52%
Al 308.215†	113220.5	122.3	mg/L	0.56	244.7	mg/L	1.12	0.46%
As 188.979†	-291.1	-0.2359	mg/L	0.00704	-0.4717	mg/L	0.01408	2.99%
B 249.677†	135.5	0.04114	mg/L	0.001538	0.08227	mg/L	0.003076	3.74%
Ba 233.527†	2009.0	0.5469	mg/L	0.00367	1.094	mg/L	0.0073	0.67%
Be 313.042†	1116.7	0.00170	mg/L	0.000028	0.00339	mg/L	0.000055	1.63%
Ca 317.933†	229439.0	39.22	mg/L	0.131	78.44	mg/L	0.261	0.33%
Cd 228.802†	105.2	0.00473	mg/L	0.000192	0.00946	mg/L	0.000385	4.06%
Co 228.616†	1066.2	0.04909	mg/L	0.000624	0.09818	mg/L	0.001248	1.27%
Cr 267.716†	325.3	0.1550	mg/L	0.00534	0.3100	mg/L	0.01067	3.44%
Cu 324.752†	67405.0	0.4399	mg/L	0.00188	0.8799	mg/L	0.00376	0.43%
Fe 273.955†	167829.2	184.5	mg/L	1.39	368.9	mg/L	2.77	0.75%
K 766.490†	8289.8	7.449	mg/L	0.0269	14.90	mg/L	0.054	0.36%
Mg 279.077†	21118.6	29.66	mg/L	0.146	59.32	mg/L	0.292	0.49%
Mn 257.610†	49166.7	1.499	mg/L	0.0081	2.997	mg/L	0.0161	0.54%
Mo 202.031†	76.1	0.00589	mg/L	0.000262	0.01178	mg/L	0.000525	4.46%
Na 589.592†	79858.1	9.231	mg/L	0.0510	18.46	mg/L	0.102	0.55%
Na 330.237†	144.5	9.102	mg/L	0.1550	18.20	mg/L	0.310	1.70%
Ni 231.604†	235.6	0.1136	mg/L	0.00189	0.2272	mg/L	0.00379	1.67%
Pb 220.353†	1523.8	0.3117	mg/L	0.00210	0.6233	mg/L	0.00419	0.67%
Sb 206.836†	27.7	0.02437	mg/L	0.001468	0.04875	mg/L	0.002935	6.02%
Se 196.026†	-47.7	0.01687	mg/L	0.006344	0.03373	mg/L	0.012687	37.61%
Si 288.158†	1058.4	1.331	mg/L	0.0065	2.662	mg/L	0.0131	0.49%
Sn 189.927†	490.4	0.1986	mg/L	0.00299	0.3971	mg/L	0.00599	1.51%
Sr 421.552†	251620.7	0.5727	mg/L	0.00263	1.145	mg/L	0.0053	0.46%
Ti 334.903†	78608.8	6.052	mg/L	0.0211	12.10	mg/L	0.042	0.35%
Tl 190.801†	41.6	-0.03177	mg/L	0.002087	-0.06354	mg/L	0.004173	6.57%
V 292.402†	14808.0	0.3239	mg/L	0.00338	0.6479	mg/L	0.00677	1.04%
Zn 206.200†	788.5	0.4756	mg/L	0.00216	0.9511	mg/L	0.00432	0.45%

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Sequence No.: 11 **Autosampler Location: 340**
Sample ID: 20K0126-01 **Date Collected: 11/18/2020 6:19:51 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0126-01

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: 20K0126-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1459525.2	103.2	%	0.11				0.10%
ScR 361.383	157562.8	104.2	%	0.47				0.45%
Ag 328.068†	-128.8	-0.00088	mg/L	0.000157	-0.00176	mg/L	0.000313	17.84%
Al 308.215†	107085.7	115.7	mg/L	0.43	231.4	mg/L	0.87	0.37%
As 188.979†	-292.8	-0.2460	mg/L	0.01417	-0.4919	mg/L	0.02835	5.76%
B 249.677†	116.5	0.03589	mg/L	0.001876	0.07178	mg/L	0.003751	5.23%
Ba 233.527†	1799.3	0.4896	mg/L	0.00064	0.9793	mg/L	0.00127	0.13%
Be 313.042†	1071.6	0.00160	mg/L	0.000019	0.00320	mg/L	0.000039	1.21%
Ca 317.933†	227311.5	38.85	mg/L	0.234	77.71	mg/L	0.468	0.60%
Cd 228.802†	93.4	0.00447	mg/L	0.000091	0.00895	mg/L	0.000182	2.03%
Co 228.616†	1017.6	0.04665	mg/L	0.000452	0.09329	mg/L	0.000903	0.97%
Cr 267.716†	297.5	0.1414	mg/L	0.00398	0.2828	mg/L	0.00796	2.81%
Cu 324.752†	85210.6	0.5538	mg/L	0.00515	1.108	mg/L	0.0103	0.93%
Fe 273.955†	151224.3	166.2	mg/L	0.93	332.4	mg/L	1.86	0.56%
K 766.490†	7430.2	6.676	mg/L	0.0425	13.35	mg/L	0.085	0.64%
Mg 279.077†	19459.6	27.33	mg/L	0.217	54.67	mg/L	0.434	0.79%
Mn 257.610†	49640.7	1.513	mg/L	0.0096	3.027	mg/L	0.0193	0.64%
Mo 202.031†	73.3	0.00567	mg/L	0.000146	0.01134	mg/L	0.000291	2.57%
Na 589.592†	80490.1	9.304	mg/L	0.0641	18.61	mg/L	0.128	0.69%
Na 330.237†	147.5	9.250	mg/L	0.1759	18.50	mg/L	0.352	1.90%
Ni 231.604†	233.7	0.1127	mg/L	0.00218	0.2255	mg/L	0.00436	1.93%
Pb 220.353†	2166.3	0.4349	mg/L	0.00169	0.8699	mg/L	0.00337	0.39%
Sb 206.836†	108.7	0.07243	mg/L	0.001683	0.1449	mg/L	0.00337	2.32%
Se 196.026†	-51.2	0.00358	mg/L	0.007366	0.00716	mg/L	0.014731	205.67%
Si 288.158†	1193.6	1.507	mg/L	0.0156	3.014	mg/L	0.0312	1.04%
Sn 189.927†	1530.2	0.5986	mg/L	0.00337	1.197	mg/L	0.0067	0.56%
Sr 421.552†	235968.2	0.5371	mg/L	0.00306	1.074	mg/L	0.0061	0.57%
Ti 334.903†	76509.0	5.890	mg/L	0.0278	11.78	mg/L	0.056	0.47%
Tl 190.801†	33.9	-0.03485	mg/L	0.002120	-0.06970	mg/L	0.004240	6.08%
V 292.402†	14762.8	0.3206	mg/L	0.00558	0.6412	mg/L	0.01116	1.74%
Zn 206.200†	750.0	0.4523	mg/L	0.00375	0.9046	mg/L	0.00751	0.83%

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Sequence No.: 12
Sample ID: BIK0408-MS1

Dilution: 2X
Wash Time: 37

Autosampler Location: 341
Date Collected: 11/18/2020 6:24:07 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0408-MS1

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: BIK0408-MS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1444043.5	102.1	%	0.33				0.33%
ScR 361.383	154352.3	102.1	%	0.34				0.33%
Ag 328.068†	65704.4	0.4874	mg/L	0.00143	0.9748	mg/L	0.00287	0.29%
Al 308.215†	111737.6	120.7	mg/L	0.18	241.5	mg/L	0.37	0.15%
As 188.979†	783.7	1.481	mg/L	0.0111	2.962	mg/L	0.0222	0.75%
B 249.677†	128.6	0.03732	mg/L	0.000588	0.07463	mg/L	0.001176	1.58%
Ba 233.527†	8162.1	2.307	mg/L	0.0093	4.613	mg/L	0.0187	0.41%
Be 313.042†	202001.7	0.4449	mg/L	0.00040	0.8897	mg/L	0.00080	0.09%
Ca 317.933†	275940.4	47.17	mg/L	0.151	94.33	mg/L	0.302	0.32%
Cd 228.802†	7948.8	0.4532	mg/L	0.00134	0.9065	mg/L	0.00269	0.30%
Co 228.616†	8669.3	0.4781	mg/L	0.00218	0.9562	mg/L	0.00437	0.46%
Cr 267.716†	1254.0	0.5605	mg/L	0.00414	1.121	mg/L	0.0083	0.74%
Cu 324.752†	138340.8	0.8957	mg/L	0.00335	1.791	mg/L	0.0067	0.37%
Fe 273.955†	149793.9	164.6	mg/L	0.85	329.3	mg/L	1.71	0.52%
K 766.490†	17607.8	15.82	mg/L	0.072	31.64	mg/L	0.144	0.45%
Mg 279.077†	27037.1	38.02	mg/L	0.142	76.04	mg/L	0.283	0.37%
Mn 257.610†	60746.3	1.853	mg/L	0.0070	3.706	mg/L	0.0141	0.38%
Mo 202.031†	84.5	0.00641	mg/L	0.000048	0.01281	mg/L	0.000096	0.75%
Na 589.592†	166285.9	19.22	mg/L	0.060	38.44	mg/L	0.120	0.31%
Na 330.237†	317.3	18.63	mg/L	0.205	37.26	mg/L	0.410	1.10%
Ni 231.604†	1067.7	0.5147	mg/L	0.00276	1.029	mg/L	0.0055	0.54%
Pb 220.353†	10713.9	2.085	mg/L	0.0095	4.169	mg/L	0.0190	0.45%
Sb 206.836†	34.5	0.02205	mg/L	0.002434	0.04409	mg/L	0.004869	11.04%
Se 196.026†	1086.2	1.811	mg/L	0.0137	3.623	mg/L	0.0274	0.76%
Si 288.158†	1076.9	1.361	mg/L	0.0310	2.722	mg/L	0.0621	2.28%
Sn 189.927†	512.3	0.2083	mg/L	0.00080	0.4166	mg/L	0.00161	0.39%
Sr 421.552†	441012.6	1.004	mg/L	0.0013	2.008	mg/L	0.0027	0.13%
Ti 334.903†	74874.6	5.764	mg/L	0.0069	11.53	mg/L	0.014	0.12%
Tl 190.801†	2185.3	1.718	mg/L	0.0046	3.435	mg/L	0.0092	0.27%
V 292.402†	34039.0	0.7132	mg/L	0.00454	1.426	mg/L	0.0091	0.64%
Zn 206.200†	1437.9	0.8678	mg/L	0.00471	1.736	mg/L	0.0094	0.54%

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Sequence No.: 13
Sample ID: BIK0408-MSD1
Autosampler Location: 342
Date Collected: 11/18/2020 6:28:47 PM
Data Type: Original

Dilution: 2X
Wash Time: 60
Auto Dilution Factor: 1

Nebulizer Parameters: BIK0408-MSD1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BIK0408-MSD1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1448818.7	102.5	%	0.80				0.78%
ScR 361.383	154485.7	102.2	%	0.20				0.20%
Ag 328.068†	68815.9	0.5105	mg/L	0.00333	1.021	mg/L	0.0067	0.65%
Al 308.215†	92585.6	100.0	mg/L	0.29	200.1	mg/L	0.59	0.29%
As 188.979†	878.8	1.618	mg/L	0.0103	3.236	mg/L	0.0207	0.64%
B 249.677†	79.2	0.02822	mg/L	0.000658	0.05645	mg/L	0.001317	2.33%
Ba 233.527†	8113.0	2.293	mg/L	0.0022	4.586	mg/L	0.0044	0.10%
Be 313.042†	214602.8	0.4726	mg/L	0.00213	0.9453	mg/L	0.00425	0.45%
Ca 317.933†	274711.1	46.96	mg/L	0.152	93.91	mg/L	0.304	0.32%
Cd 228.802†	8396.4	0.4785	mg/L	0.00117	0.9571	mg/L	0.00235	0.25%
Co 228.616†	9224.6	0.5100	mg/L	0.00129	1.020	mg/L	0.0026	0.25%
Cr 267.716†	1331.5	0.5956	mg/L	0.00529	1.191	mg/L	0.0106	0.89%
Cu 324.752†	124761.5	0.8083	mg/L	0.00796	1.617	mg/L	0.0159	0.98%
Fe 273.955†	147015.0	161.6	mg/L	1.49	323.2	mg/L	2.97	0.92%
K 766.490†	15810.8	14.21	mg/L	0.067	28.41	mg/L	0.135	0.47%
Mg 279.077†	21696.5	30.49	mg/L	0.118	60.98	mg/L	0.236	0.39%
Mn 257.610†	66787.6	2.037	mg/L	0.0145	4.075	mg/L	0.0290	0.71%
Mo 202.031†	81.0	0.00619	mg/L	0.000286	0.01239	mg/L	0.000572	4.62%
Na 589.592†	168174.3	19.44	mg/L	0.085	38.88	mg/L	0.170	0.44%
Na 330.237†	322.9	18.91	mg/L	0.211	37.82	mg/L	0.422	1.12%
Ni 231.604†	1128.4	0.5439	mg/L	0.00176	1.088	mg/L	0.0035	0.32%
Pb 220.353†	10514.4	2.041	mg/L	0.0139	4.083	mg/L	0.0279	0.68%
Sb 206.836†	42.6	0.02506	mg/L	0.001391	0.05012	mg/L	0.002781	5.55%
Se 196.026†	1160.3	1.922	mg/L	0.0082	3.843	mg/L	0.0165	0.43%
Si 288.158†	1191.0	1.515	mg/L	0.0254	3.029	mg/L	0.0507	1.67%
Sn 189.927†	348.8	0.1452	mg/L	0.00087	0.2904	mg/L	0.00173	0.60%
Sr 421.552†	412976.0	0.9400	mg/L	0.00227	1.880	mg/L	0.0045	0.24%
Ti 334.903†	70957.5	5.462	mg/L	0.0151	10.92	mg/L	0.030	0.28%
Tl 190.801†	2302.9	1.823	mg/L	0.0070	3.646	mg/L	0.0140	0.38%
V 292.402†	35724.7	0.7463	mg/L	0.01271	1.493	mg/L	0.0254	1.70%
Zn 206.200†	1341.4	0.8095	mg/L	0.00259	1.619	mg/L	0.0052	0.32%

Sequence No.: 14
Sample ID: SEQ-CCV5
Autosampler Location: 7
Date Collected: 11/18/2020 6:34:27 PM
Data Type: Original
Dilution: 1X
Wash Time: 120
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV5

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-CCV5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1408427.3	99.62	%	0.658				0.66%
ScR 361.383	149904.7	99.14	%	0.284				0.29%
Ag 328.068†	144107.2	1.069	mg/L	0.0046	1.069	mg/L	0.0046	0.43%
Al 308.215†	2006.4	2.134	mg/L	0.0419	2.134	mg/L	0.0419	1.96%
As 188.979†	1192.9	1.954	mg/L	0.0260	1.954	mg/L	0.0260	1.33%
B 249.677†	5674.9	0.9929	mg/L	0.00734	0.9929	mg/L	0.00734	0.74%
Ba 233.527†	3619.5	1.033	mg/L	0.0029	1.033	mg/L	0.0029	0.28%
Be 313.042†	465413.2	1.027	mg/L	0.0043	1.027	mg/L	0.0043	0.42%
Ca 317.933†	12258.8	2.095	mg/L	0.0193	2.095	mg/L	0.0193	0.92%
Cd 228.802†	17246.8	0.9982	mg/L	0.00321	0.9982	mg/L	0.00321	0.32%
Co 228.616†	17726.3	0.9975	mg/L	0.00464	0.9975	mg/L	0.00464	0.47%
Cr 267.716†	2205.6	0.9740	mg/L	0.00593	0.9740	mg/L	0.00593	0.61%
Cu 324.752†	156198.8	1.005	mg/L	0.0035	1.005	mg/L	0.0035	0.35%
Fe 273.955†	1889.4	2.070	mg/L	0.0889	2.070	mg/L	0.0889	4.30%
K 766.490†	22418.8	20.14	mg/L	0.107	20.14	mg/L	0.107	0.53%
Mg 279.077†	1524.1	2.162	mg/L	0.0039	2.162	mg/L	0.0039	0.18%
Mn 257.610†	34679.8	1.060	mg/L	0.0048	1.060	mg/L	0.0048	0.46%
Mo 202.031†	10944.7	1.001	mg/L	0.0093	1.001	mg/L	0.0093	0.93%
Na 589.592†	446109.8	51.57	mg/L	0.419	51.57	mg/L	0.419	0.81%
Na 330.237†	915.8	51.36	mg/L	0.154	51.36	mg/L	0.154	0.30%
Ni 231.604†	1993.8	0.9628	mg/L	0.00650	0.9628	mg/L	0.00650	0.68%
Pb 220.353†	10819.8	2.087	mg/L	0.0157	2.087	mg/L	0.0157	0.75%
Sb 206.836†	3785.2	2.084	mg/L	0.0124	2.084	mg/L	0.0124	0.59%
Se 196.026†	1316.4	2.093	mg/L	0.0160	2.093	mg/L	0.0160	0.77%
Si 288.158†	1707.9	2.234	mg/L	0.0199	2.234	mg/L	0.0199	0.89%
Sn 189.927†	2702.3	1.041	mg/L	0.0104	1.041	mg/L	0.0104	1.00%
Sr 421.552†	445009.8	1.013	mg/L	0.0046	1.013	mg/L	0.0046	0.45%
Ti 334.903†	13332.2	1.026	mg/L	0.0032	1.026	mg/L	0.0032	0.32%
Tl 190.801†	2533.6	2.055	mg/L	0.0185	2.055	mg/L	0.0185	0.90%
V 292.402†	47103.7	0.9573	mg/L	0.01006	0.9573	mg/L	0.01006	1.05%
Zn 206.200†	1695.3	1.024	mg/L	0.0045	1.024	mg/L	0.0045	0.44%

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Sequence No.: 15 **Autosampler Location: 1**
Sample ID: SEQ-CCB5 **Date Collected: 11/18/2020 6:39:47 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB5

Analyte	Back Pressure	Flow
All	237.0 kPa	0.65 L/min

Mean Data: SEQ-CCB5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1383527.2	97.86	%	0.189				0.19%
ScR 361.383	146936.6	97.18	%	0.031				0.03%
Ag 328.068†	44.4	0.00033	mg/L	0.000354	0.00033	mg/L	0.000354	107.59%
Al 308.215†	-28.6	-0.03098	mg/L	0.011410	-0.03098	mg/L	0.011410	36.84%
As 188.979†	4.2	0.00684	mg/L	0.009220	0.00684	mg/L	0.009220	134.75%
B 249.677†	11.9	0.00209	mg/L	0.000773	0.00209	mg/L	0.000773	36.96%
Ba 233.527†	-1.2	-0.00034	mg/L	0.001657	-0.00034	mg/L	0.001657	492.61%
Be 313.042†	-8.9	-0.00002	mg/L	0.000024	-0.00002	mg/L	0.000024	116.52%
Ca 317.933†	-9.6	-0.00164	mg/L	0.003023	-0.00164	mg/L	0.003023	184.40%
Cd 228.802†	0.6	-0.00001	mg/L	0.000137	-0.00001	mg/L	0.000137	>999.9%
Co 228.616†	-28.4	-0.00160	mg/L	0.000151	-0.00160	mg/L	0.000151	9.43%
Cr 267.716†	-14.7	-0.00646	mg/L	0.002972	-0.00646	mg/L	0.002972	45.99%
Cu 324.752†	162.0	0.00104	mg/L	0.000459	0.00104	mg/L	0.000459	44.08%
Fe 273.955†	3.4	0.00374	mg/L	0.003990	0.00374	mg/L	0.003990	106.73%
K 766.490†	65.6	0.05895	mg/L	0.021311	0.05895	mg/L	0.021311	36.15%
Mg 279.077†	4.9	0.00690	mg/L	0.001787	0.00690	mg/L	0.001787	25.90%
Mn 257.610†	2.0	0.00006	mg/L	0.000046	0.00006	mg/L	0.000046	73.40%
Mo 202.031†	7.5	0.00068	mg/L	0.000156	0.00068	mg/L	0.000156	22.81%
Na 589.592†	-297.8	-0.03443	mg/L	0.004235	-0.03443	mg/L	0.004235	12.30%
Na 330.237†	-8.1	-0.4549	mg/L	0.78619	-0.4549	mg/L	0.78619	172.81%
Ni 231.604†	-4.7	-0.00225	mg/L	0.004333	-0.00225	mg/L	0.004333	192.87%
Pb 220.353†	36.9	0.00710	mg/L	0.000846	0.00710	mg/L	0.000846	11.93%
Sb 206.836†	8.2	0.00472	mg/L	0.001314	0.00472	mg/L	0.001314	27.82%
Se 196.026†	3.7	0.00589	mg/L	0.002654	0.00589	mg/L	0.002654	45.08%
Si 288.158†	-8.9	-0.01180	mg/L	0.015593	-0.01180	mg/L	0.015593	132.09%
Sn 189.927†	24.1	0.00927	mg/L	0.000941	0.00927	mg/L	0.000941	10.16%
Sr 421.552†	15.3	0.00003	mg/L	0.000061	0.00003	mg/L	0.000061	175.56%
Ti 334.903†	24.4	0.00188	mg/L	0.001236	0.00188	mg/L	0.001236	65.71%
Tl 190.801†	-3.9	-0.00314	mg/L	0.001917	-0.00314	mg/L	0.001917	60.99%
V 292.402†	25.7	0.00048	mg/L	0.000560	0.00048	mg/L	0.000560	117.74%
Zn 206.200†	6.0	0.00363	mg/L	0.001277	0.00363	mg/L	0.001277	35.18%

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Sequence No.: 16 **Autosampler Location: 343**
Sample ID: BIK0507-DUP1 **Date Collected: 11/18/2020 6:44:03 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0507-DUP1

Analyte	Back Pressure	Flow
All	238.0 kPa	0.65 L/min

Mean Data: BIK0507-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1368145.6	96.77	%	1.320				1.36%
ScR 361.383	143734.8	95.06	%	0.512				0.54%
Ag 328.068†	-46.5	-0.00035	mg/L	0.000294	-0.00173	mg/L	0.001469	85.13%
Al 308.215†	153.6	0.1652	mg/L	0.01442	0.8258	mg/L	0.07211	8.73%
As 188.979†	18.3	0.02507	mg/L	0.005303	0.1254	mg/L	0.02652	21.15%
B 249.677†	57.2	0.00919	mg/L	0.001082	0.04595	mg/L	0.005410	11.77%
Ba 233.527†	132.9	0.03796	mg/L	0.001921	0.1898	mg/L	0.00960	5.06%
Be 313.042†	104.7	0.00023	mg/L	0.000069	0.00115	mg/L	0.000346	30.04%
Ca 317.933†	53133.1	9.082	mg/L	0.0366	45.41	mg/L	0.183	0.40%
Cd 228.802†	15.6	0.00060	mg/L	0.000165	0.00299	mg/L	0.000823	27.52%
Co 228.616†	60.0	0.00337	mg/L	0.000342	0.01685	mg/L	0.001711	10.15%
Cr 267.716†	-12.1	0.02263	mg/L	0.001131	0.1132	mg/L	0.00566	5.00%
Cu 324.752†	898.9	0.00577	mg/L	0.000212	0.02886	mg/L	0.001060	3.67%
Fe 273.955†	36.7	0.04032	mg/L	0.003249	0.2016	mg/L	0.01624	8.06%
K 766.490†	798.6	0.7176	mg/L	0.03161	3.588	mg/L	0.1581	4.41%
Mg 279.077†	1244.5	1.753	mg/L	0.0116	8.767	mg/L	0.0578	0.66%
Mn 257.610†	8105.8	0.2476	mg/L	0.00229	1.238	mg/L	0.0115	0.92%
Mo 202.031†	11.3	0.00086	mg/L	0.000214	0.00429	mg/L	0.001068	24.86%
Na 589.592†	2817239.5	325.7	mg/L	0.90	1628	mg/L	4.51	0.28%
Na 330.237†	5381.9	302.9	mg/L	1.37	1514	mg/L	6.86	0.45%
Ni 231.604†	9.8	0.00472	mg/L	0.000748	0.02358	mg/L	0.003738	15.85%
Pb 220.353†	38.1	0.00735	mg/L	0.001910	0.03677	mg/L	0.009548	25.97%
Sb 206.836†	3.2	0.00189	mg/L	0.001893	0.00944	mg/L	0.009464	100.28%
Se 196.026†	2.2	0.00257	mg/L	0.001499	0.01285	mg/L	0.007495	58.33%
Si 288.158†	1035.9	1.365	mg/L	0.0172	6.825	mg/L	0.0858	1.26%
Sn 189.927†	-0.4	0.00146	mg/L	0.000812	0.00729	mg/L	0.004059	55.72%
Sr 421.552†	19892.6	0.04528	mg/L	0.000275	0.2264	mg/L	0.00137	0.61%
Ti 334.903†	53.3	0.00363	mg/L	0.000902	0.01813	mg/L	0.004509	24.87%
Tl 190.801†	-20.9	-0.01578	mg/L	0.001083	-0.07890	mg/L	0.005413	6.86%
V 292.402†	17.4	0.00057	mg/L	0.000615	0.00286	mg/L	0.003073	107.29%
Zn 206.200†	21.3	0.01262	mg/L	0.000808	0.06311	mg/L	0.004042	6.40%

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Sequence No.: 17
Sample ID: 20K0201-07

Dilution: 5X
Wash Time: 37

Autosampler Location: 344
Date Collected: 11/18/2020 6:48:36 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0201-07

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 20K0201-07

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1410265.4	99.75	%	0.865				0.87%
ScR 361.383	149005.7	98.55	%	1.037				1.05%
Ag 328.068†	-25.7	-0.00019	mg/L	0.000491	-0.00095	mg/L	0.002456	257.77%
Al 308.215†	169.8	0.1826	mg/L	0.01629	0.9130	mg/L	0.08143	8.92%
As 188.979†	17.1	0.02318	mg/L	0.007554	0.1159	mg/L	0.03777	32.59%
B 249.677†	53.7	0.00855	mg/L	0.000698	0.04276	mg/L	0.003488	8.16%
Ba 233.527†	132.6	0.03786	mg/L	0.001090	0.1893	mg/L	0.00545	2.88%
Be 313.042†	66.9	0.00015	mg/L	0.000045	0.00073	mg/L	0.000226	31.02%
Ca 317.933†	52784.2	9.022	mg/L	0.1055	45.11	mg/L	0.528	1.17%
Cd 228.802†	15.0	0.00057	mg/L	0.000241	0.00287	mg/L	0.001206	42.06%
Co 228.616†	64.3	0.00361	mg/L	0.000324	0.01806	mg/L	0.001622	8.98%
Cr 267.716†	-7.5	0.02400	mg/L	0.001776	0.1200	mg/L	0.00888	7.40%
Cu 324.752†	884.7	0.00568	mg/L	0.000157	0.02840	mg/L	0.000786	2.77%
Fe 273.955†	35.5	0.03897	mg/L	0.006459	0.1949	mg/L	0.03229	16.57%
K 766.490†	857.4	0.7704	mg/L	0.02000	3.852	mg/L	0.1000	2.60%
Mg 279.077†	1248.1	1.759	mg/L	0.0204	8.793	mg/L	0.1018	1.16%
Mn 257.610†	8016.4	0.2449	mg/L	0.00286	1.224	mg/L	0.0143	1.17%
Mo 202.031†	13.5	0.00106	mg/L	0.000357	0.00528	mg/L	0.001785	33.82%
Na 589.592†	2752031.7	318.1	mg/L	3.47	1591	mg/L	17.35	1.09%
Na 330.237†	5306.1	298.6	mg/L	3.11	1493	mg/L	15.54	1.04%
Ni 231.604†	4.7	0.00228	mg/L	0.003558	0.01138	mg/L	0.017792	156.40%
Pb 220.353†	44.8	0.00867	mg/L	0.002167	0.04333	mg/L	0.010835	25.00%
Sb 206.836†	2.2	0.00126	mg/L	0.001914	0.00630	mg/L	0.009570	151.86%
Se 196.026†	-3.3	-0.00621	mg/L	0.004526	-0.03104	mg/L	0.022632	72.92%
Si 288.158†	1065.1	1.404	mg/L	0.0160	7.018	mg/L	0.0801	1.14%
Sn 189.927†	0.7	0.00188	mg/L	0.000528	0.00939	mg/L	0.002639	28.09%
Sr 421.552†	19493.2	0.04437	mg/L	0.000504	0.2218	mg/L	0.00252	1.14%
Ti 334.903†	68.1	0.00476	mg/L	0.002539	0.02382	mg/L	0.012693	53.29%
Tl 190.801†	-19.0	-0.01426	mg/L	0.001609	-0.07128	mg/L	0.008045	11.29%
V 292.402†	40.7	0.00106	mg/L	0.000369	0.00528	mg/L	0.001843	34.91%
Zn 206.200†	22.6	0.01342	mg/L	0.000725	0.06709	mg/L	0.003623	5.40%

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Sequence No.: 18 **Autosampler Location: 345**
Sample ID: BIK0507-MS1 **Date Collected: 11/18/2020 6:53:08 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0507-MS1

Analyte	**Back Pressure**	**Flow**
All	241.0 kPa	0.65 L/min

Mean Data: BIK0507-MS1

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	1376186.4	97.34	%	0.213				0.22%
ScR 361.383	151744.5	100.4	%	0.94				0.93%
Ag 328.068†	29835.3	0.2213	mg/L	0.00104	1.106	mg/L	0.0052	0.47%
Al 308.215†	960.0	1.034	mg/L	0.0176	5.170	mg/L	0.0879	1.70%
As 188.979†	530.2	0.8483	mg/L	0.00309	4.242	mg/L	0.0155	0.36%
B 249.677†	50.2	0.00777	mg/L	0.000771	0.03883	mg/L	0.003853	9.92%
Ba 233.527†	3042.2	0.8686	mg/L	0.00579	4.343	mg/L	0.0290	0.67%
Be 313.042†	92099.0	0.2031	mg/L	0.00166	1.016	mg/L	0.0083	0.82%
Ca 317.933†	74517.3	12.74	mg/L	0.012	63.69	mg/L	0.060	0.09%
Cd 228.802†	3640.6	0.2075	mg/L	0.00042	1.037	mg/L	0.0021	0.20%
Co 228.616†	3624.0	0.2042	mg/L	0.00024	1.021	mg/L	0.0012	0.12%
Cr 267.716†	442.1	0.2201	mg/L	0.00179	1.101	mg/L	0.0089	0.81%
Cu 324.752†	32385.9	0.2084	mg/L	0.00070	1.042	mg/L	0.0035	0.34%
Fe 273.955†	764.5	0.8388	mg/L	0.01223	4.194	mg/L	0.0611	1.46%
K 766.490†	5572.0	5.007	mg/L	0.0662	25.03	mg/L	0.331	1.32%
Mg 279.077†	4249.0	5.989	mg/L	0.0446	29.95	mg/L	0.223	0.74%
Mn 257.610†	14317.9	0.4375	mg/L	0.00415	2.187	mg/L	0.0207	0.95%
Mo 202.031†	19.7	0.00150	mg/L	0.000604	0.00751	mg/L	0.003021	40.25%
Na 589.592†	2678488.7	309.6	mg/L	3.18	1548	mg/L	15.92	1.03%
Na 330.237†	5099.4	286.9	mg/L	1.40	1434	mg/L	7.01	0.49%
Ni 231.604†	402.4	0.1940	mg/L	0.00301	0.9698	mg/L	0.01504	1.55%
Pb 220.353†	4298.5	0.8291	mg/L	0.00120	4.145	mg/L	0.0060	0.14%
Sb 206.836†	2.9	-0.00110	mg/L	0.002211	-0.00551	mg/L	0.011053	200.74%
Se 196.026†	545.3	0.8658	mg/L	0.01296	4.329	mg/L	0.0648	1.50%
Si 288.158†	1011.4	1.334	mg/L	0.0023	6.671	mg/L	0.0116	0.17%
Sn 189.927†	-5.5	0.00017	mg/L	0.000586	0.00085	mg/L	0.002928	343.61%
Sr 421.552†	106952.4	0.2434	mg/L	0.00185	1.217	mg/L	0.0093	0.76%
Ti 334.903†	64.1	0.00421	mg/L	0.000471	0.02106	mg/L	0.002356	11.19%
Tl 190.801†	964.1	0.7869	mg/L	0.00259	3.934	mg/L	0.0130	0.33%
V 292.402†	9480.1	0.1933	mg/L	0.00245	0.9667	mg/L	0.01227	1.27%
Zn 206.200†	356.2	0.2149	mg/L	0.00258	1.075	mg/L	0.0129	1.20%

Sequence No.: 19
Sample ID: 20K0126-11
Dilution: 2X
Wash Time: 60

Autosampler Location: 346
Date Collected: 11/18/2020 6:58:03 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0126-11

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 20K0126-11

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1422913.2	100.6	%	0.13				0.13%
ScR 361.383	155397.5	102.8	%	0.34				0.33%
Ag 328.068†	-120.1	-0.00082	mg/L	0.000356	-0.00164	mg/L	0.000712	43.56%
Al 308.215†	76105.2	82.23	mg/L	0.268	164.5	mg/L	0.54	0.33%
As 188.979†	-141.4	-0.03632	mg/L	0.003587	-0.07265	mg/L	0.007174	9.88%
B 249.677†	58.7	0.01984	mg/L	0.000592	0.03968	mg/L	0.001185	2.99%
Ba 233.527†	977.3	0.2640	mg/L	0.00151	0.5280	mg/L	0.00303	0.57%
Be 313.042†	732.3	0.00089	mg/L	0.000019	0.00177	mg/L	0.000037	2.10%
Ca 317.933†	204494.9	34.95	mg/L	0.202	69.91	mg/L	0.404	0.58%
Cd 228.802†	95.9	0.00445	mg/L	0.000137	0.00890	mg/L	0.000274	3.08%
Co 228.616†	802.8	0.03593	mg/L	0.000391	0.07185	mg/L	0.000782	1.09%
Cr 267.716†	208.7	0.09733	mg/L	0.004193	0.1947	mg/L	0.00839	4.31%
Cu 324.752†	18365.2	0.1213	mg/L	0.00043	0.2426	mg/L	0.00087	0.36%
Fe 273.955†	93806.5	103.1	mg/L	0.48	206.2	mg/L	0.96	0.47%
K 766.490†	5396.9	4.849	mg/L	0.0042	9.698	mg/L	0.0083	0.09%
Mg 279.077†	14529.8	20.42	mg/L	0.042	40.84	mg/L	0.084	0.21%
Mn 257.610†	37197.3	1.134	mg/L	0.0054	2.269	mg/L	0.0109	0.48%
Mo 202.031†	56.3	0.00428	mg/L	0.000393	0.00855	mg/L	0.000786	9.19%
Na 589.592†	62126.2	7.182	mg/L	0.0330	14.36	mg/L	0.066	0.46%
Na 330.237†	109.0	6.909	mg/L	0.1141	13.82	mg/L	0.228	1.65%
Ni 231.604†	224.8	0.1084	mg/L	0.00248	0.2168	mg/L	0.00496	2.29%
Pb 220.353†	977.6	0.2022	mg/L	0.00101	0.4044	mg/L	0.00202	0.50%
Sb 206.836†	2.3	0.00833	mg/L	0.004577	0.01665	mg/L	0.009154	54.97%
Se 196.026†	-25.0	0.01509	mg/L	0.014572	0.03019	mg/L	0.029144	96.54%
Si 288.158†	786.2	0.9827	mg/L	0.00584	1.965	mg/L	0.0117	0.59%
Sn 189.927†	10.4	0.01266	mg/L	0.002365	0.02532	mg/L	0.004730	18.68%
Sr 421.552†	151620.9	0.3451	mg/L	0.00125	0.6902	mg/L	0.00251	0.36%
Ti 334.903†	66646.7	5.131	mg/L	0.0154	10.26	mg/L	0.031	0.30%
Tl 190.801†	17.0	-0.03277	mg/L	0.000662	-0.06553	mg/L	0.001325	2.02%
V 292.402†	14012.1	0.2971	mg/L	0.00398	0.5941	mg/L	0.00797	1.34%
Zn 206.200†	873.1	0.5268	mg/L	0.00066	1.054	mg/L	0.0013	0.12%

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Sequence No.: 20
Sample ID: 20K0126-12

Dilution: 2X
Wash Time: 37

Autosampler Location: 347
Date Collected: 11/18/2020 7:02:21 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0126-12

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 20K0126-12

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1451106.1	102.6	%	0.46				0.45%
ScR 361.383	154714.0	102.3	%	0.41				0.40%
Ag 328.068†	-72.6	-0.00048	mg/L	0.000045	-0.00096	mg/L	0.000089	9.32%
Al 308.215†	73518.2	79.43	mg/L	0.174	158.9	mg/L	0.35	0.22%
As 188.979†	-238.7	-0.1807	mg/L	0.00470	-0.3614	mg/L	0.00941	2.60%
B 249.677†	53.4	0.01696	mg/L	0.002542	0.03392	mg/L	0.005085	14.99%
Ba 233.527†	864.7	0.2345	mg/L	0.00170	0.4689	mg/L	0.00339	0.72%
Be 313.042†	554.3	0.00063	mg/L	0.000060	0.00126	mg/L	0.000119	9.46%
Ca 317.933†	190475.6	32.56	mg/L	0.120	65.12	mg/L	0.240	0.37%
Cd 228.802†	58.2	0.00367	mg/L	0.000162	0.00735	mg/L	0.000324	4.41%
Co 228.616†	583.6	0.02298	mg/L	0.000150	0.04596	mg/L	0.000299	0.65%
Cr 267.716†	202.7	0.09387	mg/L	0.004560	0.1877	mg/L	0.00912	4.86%
Cu 324.752†	13031.6	0.08623	mg/L	0.000708	0.1725	mg/L	0.00142	0.82%
Fe 273.955†	77557.0	85.24	mg/L	0.342	170.5	mg/L	0.68	0.40%
K 766.490†	4599.4	4.133	mg/L	0.0564	8.265	mg/L	0.1127	1.36%
Mg 279.077†	12144.2	17.07	mg/L	0.052	34.14	mg/L	0.103	0.30%
Mn 257.610†	24908.9	0.7592	mg/L	0.00184	1.518	mg/L	0.0037	0.24%
Mo 202.031†	49.4	0.00373	mg/L	0.000360	0.00747	mg/L	0.000721	9.65%
Na 589.592†	81993.3	9.478	mg/L	0.0305	18.96	mg/L	0.061	0.32%
Na 330.237†	153.1	9.578	mg/L	0.3008	19.16	mg/L	0.602	3.14%
Ni 231.604†	98.9	0.04769	mg/L	0.002959	0.09538	mg/L	0.005917	6.20%
Pb 220.353†	158.7	0.04488	mg/L	0.001106	0.08976	mg/L	0.002213	2.47%
Sb 206.836†	-3.9	0.00511	mg/L	0.002078	0.01023	mg/L	0.004156	40.64%
Se 196.026†	-20.1	0.01675	mg/L	0.007785	0.03350	mg/L	0.015570	46.48%
Si 288.158†	1031.7	1.302	mg/L	0.0133	2.604	mg/L	0.0266	1.02%
Sn 189.927†	-18.9	0.00112	mg/L	0.000929	0.00224	mg/L	0.001858	82.99%
Sr 421.552†	157785.3	0.3591	mg/L	0.00101	0.7183	mg/L	0.00202	0.28%
Ti 334.903†	70943.7	5.462	mg/L	0.0060	10.92	mg/L	0.012	0.11%
Tl 190.801†	15.1	-0.03432	mg/L	0.001461	-0.06864	mg/L	0.002921	4.26%
V 292.402†	11408.7	0.2420	mg/L	0.00058	0.4840	mg/L	0.00115	0.24%
Zn 206.200†	303.7	0.1827	mg/L	0.00059	0.3653	mg/L	0.00118	0.32%

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Sequence No.: 21 **Autosampler Location: 348**
Sample ID: 20K0126-16 **Date Collected: 11/18/2020 7:06:37 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0126-16

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 20K0126-16

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1478629.6	104.6	%	0.38				0.36%
ScR 361.383	157956.5	104.5	%	0.38				0.36%
Ag 328.068†	-155.2	-0.00107	mg/L	0.000278	-0.00213	mg/L	0.000557	26.13%
Al 308.215†	65325.7	70.58	mg/L	0.379	141.2	mg/L	0.76	0.54%
As 188.979†	-329.0	-0.2951	mg/L	0.00428	-0.5903	mg/L	0.00856	1.45%
B 249.677†	-0.4	0.00984	mg/L	0.001919	0.01968	mg/L	0.003839	19.51%
Ba 233.527†	763.8	0.2023	mg/L	0.00119	0.4047	mg/L	0.00237	0.59%
Be 313.042†	678.2	0.00065	mg/L	0.000047	0.00129	mg/L	0.000094	7.31%
Ca 317.933†	204350.4	34.93	mg/L	0.185	69.86	mg/L	0.370	0.53%
Cd 228.802†	63.3	0.00442	mg/L	0.000341	0.00884	mg/L	0.000681	7.70%
Co 228.616†	859.6	0.03687	mg/L	0.000221	0.07374	mg/L	0.000441	0.60%
Cr 267.716†	286.5	0.1317	mg/L	0.00296	0.2635	mg/L	0.00593	2.25%
Cu 324.752†	12137.5	0.08118	mg/L	0.000342	0.1624	mg/L	0.00068	0.42%
Fe 273.955†	98003.1	107.7	mg/L	1.00	215.4	mg/L	2.00	0.93%
K 766.490†	4461.4	4.009	mg/L	0.0384	8.017	mg/L	0.0768	0.96%
Mg 279.077†	15750.3	22.14	mg/L	0.088	44.28	mg/L	0.176	0.40%
Mn 257.610†	31560.1	0.9621	mg/L	0.00488	1.924	mg/L	0.0098	0.51%
Mo 202.031†	56.7	0.00429	mg/L	0.000402	0.00859	mg/L	0.000805	9.37%
Na 589.592†	43469.1	5.025	mg/L	0.0386	10.05	mg/L	0.077	0.77%
Na 330.237†	68.3	4.967	mg/L	0.5114	9.935	mg/L	1.0229	10.30%
Ni 231.604†	153.3	0.07388	mg/L	0.002505	0.1478	mg/L	0.00501	3.39%
Pb 220.353†	85.7	0.02713	mg/L	0.001323	0.05426	mg/L	0.002646	4.88%
Sb 206.836†	-5.2	0.00548	mg/L	0.002262	0.01096	mg/L	0.004524	41.29%
Se 196.026†	-29.3	0.00608	mg/L	0.006728	0.01215	mg/L	0.013456	110.72%
Si 288.158†	912.7	1.136	mg/L	0.0104	2.272	mg/L	0.0208	0.92%
Sn 189.927†	-22.0	0.00077	mg/L	0.001138	0.00154	mg/L	0.002275	147.98%
Sr 421.552†	133179.5	0.3031	mg/L	0.00190	0.6063	mg/L	0.00380	0.63%
Ti 334.903†	82912.9	6.384	mg/L	0.0266	12.77	mg/L	0.053	0.42%
Tl 190.801†	17.5	-0.03189	mg/L	0.004024	-0.06377	mg/L	0.008047	12.62%
V 292.402†	16351.1	0.3450	mg/L	0.00497	0.6900	mg/L	0.00994	1.44%
Zn 206.200†	356.5	0.2146	mg/L	0.00249	0.4291	mg/L	0.00498	1.16%

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Sequence No.: 22 **Autosampler Location: 349**
Sample ID: 20K0126-18 **Date Collected: 11/18/2020 7:10:53 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0126-18

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 20K0126-18

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1473196.3	104.2	%	0.35				0.34%
ScR 361.383	159878.2	105.7	%	0.39				0.36%
Ag 328.068†	-103.0	-0.00069	mg/L	0.000388	-0.00137	mg/L	0.000775	56.48%
Al 308.215†	67333.6	72.75	mg/L	0.075	145.5	mg/L	0.15	0.10%
As 188.979†	-318.3	-0.2860	mg/L	0.00692	-0.5720	mg/L	0.01385	2.42%
B 249.677†	36.1	0.01288	mg/L	0.000309	0.02575	mg/L	0.000619	2.40%
Ba 233.527†	724.8	0.1960	mg/L	0.00259	0.3919	mg/L	0.00518	1.32%
Be 313.042†	601.4	0.00055	mg/L	0.000052	0.00110	mg/L	0.000104	9.48%
Ca 317.933†	176242.1	30.12	mg/L	0.055	60.25	mg/L	0.110	0.18%
Cd 228.802†	51.1	0.00438	mg/L	0.000062	0.00876	mg/L	0.000123	1.41%
Co 228.616†	701.3	0.02847	mg/L	0.000465	0.05694	mg/L	0.000931	1.63%
Cr 267.716†	231.6	0.1057	mg/L	0.00196	0.2113	mg/L	0.00392	1.86%
Cu 324.752†	12545.6	0.08258	mg/L	0.000336	0.1652	mg/L	0.00067	0.41%
Fe 273.955†	68006.8	74.75	mg/L	0.349	149.5	mg/L	0.70	0.47%
K 766.490†	3917.9	3.520	mg/L	0.0539	7.041	mg/L	0.1078	1.53%
Mg 279.077†	10761.8	15.13	mg/L	0.049	30.25	mg/L	0.099	0.33%
Mn 257.610†	19909.7	0.6066	mg/L	0.00252	1.213	mg/L	0.0050	0.42%
Mo 202.031†	59.2	0.00470	mg/L	0.000470	0.00940	mg/L	0.000940	10.01%
Na 589.592†	56695.5	6.554	mg/L	0.0155	13.11	mg/L	0.031	0.24%
Na 330.237†	102.7	6.864	mg/L	0.1610	13.73	mg/L	0.322	2.35%
Ni 231.604†	100.3	0.04833	mg/L	0.001416	0.09666	mg/L	0.002831	2.93%
Pb 220.353†	27.9	0.01875	mg/L	0.001155	0.03749	mg/L	0.002311	6.16%
Sb 206.836†	-6.9	0.00446	mg/L	0.001595	0.00892	mg/L	0.003189	35.76%
Se 196.026†	-21.4	0.00955	mg/L	0.002287	0.01910	mg/L	0.004574	23.95%
Si 288.158†	1034.0	1.298	mg/L	0.0213	2.596	mg/L	0.0426	1.64%
Sn 189.927†	-17.9	0.00136	mg/L	0.001511	0.00273	mg/L	0.003023	110.87%
Sr 421.552†	140914.2	0.3207	mg/L	0.00055	0.6415	mg/L	0.00111	0.17%
Ti 334.903†	79192.4	6.097	mg/L	0.0041	12.19	mg/L	0.008	0.07%
Tl 190.801†	19.9	-0.03045	mg/L	0.001912	-0.06090	mg/L	0.003824	6.28%
V 292.402†	14944.2	0.3118	mg/L	0.00405	0.6237	mg/L	0.00809	1.30%
Zn 206.200†	292.9	0.1762	mg/L	0.00241	0.3524	mg/L	0.00481	1.37%

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Sequence No.: 23
Sample ID: 20K0126-22

Dilution: 2X
Wash Time: 37

Autosampler Location: 350
Date Collected: 11/18/2020 7:15:09 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0126-22

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 20K0126-22

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1426450.2	100.9	%	0.42				0.42%
ScR 361.383	154048.1	101.9	%	0.74				0.72%
Ag 328.068†	-16.2	-0.00004	mg/L	0.000347	-0.00009	mg/L	0.000695	802.77%
Al 308.215†	106323.6	114.9	mg/L	0.89	229.8	mg/L	1.79	0.78%
As 188.979†	-262.8	-0.2094	mg/L	0.00542	-0.4188	mg/L	0.01083	2.59%
B 249.677†	90.0	0.02949	mg/L	0.001871	0.05897	mg/L	0.003741	6.34%
Ba 233.527†	1750.4	0.4785	mg/L	0.00565	0.9570	mg/L	0.01130	1.18%
Be 313.042†	1079.7	0.00161	mg/L	0.000055	0.00323	mg/L	0.000109	3.38%
Ca 317.933†	725699.7	124.0	mg/L	1.43	248.1	mg/L	2.86	1.15%
Cd 228.802†	162.6	0.00762	mg/L	0.000085	0.01524	mg/L	0.000170	1.12%
Co 228.616†	1232.5	0.05715	mg/L	0.000568	0.1143	mg/L	0.00114	0.99%
Cr 267.716†	481.3	0.2157	mg/L	0.00281	0.4315	mg/L	0.00562	1.30%
Cu 324.752†	48507.9	0.3166	mg/L	0.00171	0.6331	mg/L	0.00342	0.54%
Fe 273.955†	133260.3	146.5	mg/L	1.08	292.9	mg/L	2.16	0.74%
K 766.490†	7341.1	6.596	mg/L	0.0686	13.19	mg/L	0.137	1.04%
Mg 279.077†	31355.5	44.10	mg/L	0.273	88.21	mg/L	0.546	0.62%
Mn 257.610†	65808.2	2.007	mg/L	0.0154	4.015	mg/L	0.0308	0.77%
Mo 202.031†	134.3	0.00958	mg/L	0.000759	0.01915	mg/L	0.001519	7.93%
Na 589.592†	49223.1	5.690	mg/L	0.0467	11.38	mg/L	0.093	0.82%
Na 330.237†	74.9	5.211	mg/L	0.3073	10.42	mg/L	0.615	5.90%
Ni 231.604†	414.6	0.1999	mg/L	0.00223	0.3998	mg/L	0.00447	1.12%
Pb 220.353†	4101.7	0.8097	mg/L	0.00909	1.619	mg/L	0.0182	1.12%
Sb 206.836†	14.9	0.01546	mg/L	0.002704	0.03091	mg/L	0.005408	17.49%
Se 196.026†	-25.4	0.02894	mg/L	0.008477	0.05788	mg/L	0.016953	29.29%
Si 288.158†	922.3	1.147	mg/L	0.0022	2.295	mg/L	0.0045	0.19%
Sn 189.927†	-30.7	0.01354	mg/L	0.001127	0.02708	mg/L	0.002254	8.32%
Sr 421.552†	201641.9	0.4590	mg/L	0.00330	0.9179	mg/L	0.00659	0.72%
Ti 334.903†	87995.6	6.770	mg/L	0.0476	13.54	mg/L	0.095	0.70%
Tl 190.801†	-11.2	-0.06117	mg/L	0.002388	-0.1223	mg/L	0.00478	3.90%
V 292.402†	14828.9	0.3221	mg/L	0.00332	0.6443	mg/L	0.00664	1.03%
Zn 206.200†	1289.4	0.7760	mg/L	0.00585	1.552	mg/L	0.0117	0.75%

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Sequence No.: 24 **Autosampler Location: 351**
Sample ID: 20K0126-24 **Date Collected: 11/18/2020 7:19:26 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0126-24

Analyte	**Back Pressure**	**Flow**
All	242.0 kPa	0.65 L/min

Mean Data: 20K0126-24

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	1436689.6	101.6	%	0.56				0.55%
ScR 361.383	154492.4	102.2	%	0.41				0.40%
Ag 328.068†	-140.7	-0.00097	mg/L	0.000093	-0.00194	mg/L	0.000186	9.57%
Al 308.215†	70179.8	75.82	mg/L	0.341	151.6	mg/L	0.68	0.45%
As 188.979†	-264.2	-0.2332	mg/L	0.00366	-0.4665	mg/L	0.00731	1.57%
B 249.677†	52.1	0.01823	mg/L	0.001400	0.03645	mg/L	0.002799	7.68%
Ba 233.527†	1022.5	0.2773	mg/L	0.00034	0.5547	mg/L	0.00069	0.12%
Be 313.042†	566.3	0.00054	mg/L	0.000032	0.00108	mg/L	0.000063	5.87%
Ca 317.933†	200725.3	34.31	mg/L	0.189	68.62	mg/L	0.378	0.55%
Cd 228.802†	61.3	0.00378	mg/L	0.000119	0.00756	mg/L	0.000238	3.14%
Co 228.616†	631.0	0.02612	mg/L	0.000103	0.05225	mg/L	0.000207	0.40%
Cr 267.716†	198.8	0.09379	mg/L	0.002563	0.1876	mg/L	0.00513	2.73%
Cu 324.752†	14846.2	0.09856	mg/L	0.000244	0.1971	mg/L	0.00049	0.25%
Fe 273.955†	91171.9	100.2	mg/L	0.70	200.4	mg/L	1.40	0.70%
K 766.490†	3189.5	2.866	mg/L	0.0188	5.732	mg/L	0.0376	0.66%
Mg 279.077†	11728.9	16.47	mg/L	0.037	32.95	mg/L	0.073	0.22%
Mn 257.610†	24492.0	0.7463	mg/L	0.00524	1.493	mg/L	0.0105	0.70%
Mo 202.031†	66.0	0.00523	mg/L	0.000171	0.01045	mg/L	0.000342	3.27%
Na 589.592†	81223.5	9.389	mg/L	0.0760	18.78	mg/L	0.152	0.81%
Na 330.237†	150.2	9.316	mg/L	0.0757	18.63	mg/L	0.151	0.81%
Ni 231.604†	109.8	0.05292	mg/L	0.000688	0.1058	mg/L	0.00138	1.30%
Pb 220.353†	582.1	0.1245	mg/L	0.00269	0.2491	mg/L	0.00537	2.16%
Sb 206.836†	2.0	0.00820	mg/L	0.001253	0.01639	mg/L	0.002507	15.29%
Se 196.026†	-26.7	0.00955	mg/L	0.014101	0.01909	mg/L	0.028202	147.73%
Si 288.158†	1012.4	1.280	mg/L	0.0140	2.559	mg/L	0.0280	1.10%
Sn 189.927†	-22.1	0.00004	mg/L	0.000627	0.00009	mg/L	0.001255	>999.9%
Sr 421.552†	159897.1	0.3639	mg/L	0.00141	0.7279	mg/L	0.00282	0.39%
Ti 334.903†	67538.1	5.200	mg/L	0.0115	10.40	mg/L	0.023	0.22%
Tl 190.801†	6.3	-0.03915	mg/L	0.000763	-0.07830	mg/L	0.001526	1.95%
V 292.402†	13651.1	0.2889	mg/L	0.00283	0.5778	mg/L	0.00565	0.98%
Zn 206.200†	538.9	0.3248	mg/L	0.00213	0.6496	mg/L	0.00427	0.66%

Sequence No.: 25
Sample ID: SEQ-CCV6
Autosampler Location: 7
Date Collected: 11/18/2020 7:25:05 PM
Data Type: Original
Dilution: 1X
Wash Time: 120
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV6

Analyte	Back Pressure	Flow
All	245.0 kPa	0.65 L/min

Mean Data: SEQ-CCV6

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1457156.6	103.1	%	0.42				0.40%
ScR 361.383	153966.8	101.8	%	1.00				0.98%
Ag 328.068†	143164.4	1.062	mg/L	0.0096	1.062	mg/L	0.0096	0.90%
Al 308.215†	1949.1	2.073	mg/L	0.0239	2.073	mg/L	0.0239	1.15%
As 188.979†	1182.0	1.936	mg/L	0.0082	1.936	mg/L	0.0082	0.42%
B 249.677†	5632.1	0.9854	mg/L	0.00792	0.9854	mg/L	0.00792	0.80%
Ba 233.527†	3612.0	1.030	mg/L	0.0080	1.030	mg/L	0.0080	0.78%
Be 313.042†	461546.6	1.018	mg/L	0.0026	1.018	mg/L	0.0026	0.25%
Ca 317.933†	12007.9	2.052	mg/L	0.0203	2.052	mg/L	0.0203	0.99%
Cd 228.802†	17038.8	0.9862	mg/L	0.00640	0.9862	mg/L	0.00640	0.65%
Co 228.616†	17593.6	0.9901	mg/L	0.01019	0.9901	mg/L	0.01019	1.03%
Cr 267.716†	2151.2	0.9500	mg/L	0.01470	0.9500	mg/L	0.01470	1.55%
Cu 324.752†	154672.5	0.9951	mg/L	0.00778	0.9951	mg/L	0.00778	0.78%
Fe 273.955†	1815.1	1.988	mg/L	0.0264	1.988	mg/L	0.0264	1.33%
K 766.490†	22031.8	19.80	mg/L	0.168	19.80	mg/L	0.168	0.85%
Mg 279.077†	1506.9	2.138	mg/L	0.0160	2.138	mg/L	0.0160	0.75%
Mn 257.610†	34677.5	1.060	mg/L	0.0063	1.060	mg/L	0.0063	0.59%
Mo 202.031†	10804.9	0.9885	mg/L	0.00428	0.9885	mg/L	0.00428	0.43%
Na 589.592†	443859.6	51.31	mg/L	0.364	51.31	mg/L	0.364	0.71%
Na 330.237†	912.3	51.16	mg/L	0.383	51.16	mg/L	0.383	0.75%
Ni 231.604†	1963.4	0.9482	mg/L	0.00973	0.9482	mg/L	0.00973	1.03%
Pb 220.353†	10710.6	2.066	mg/L	0.0050	2.066	mg/L	0.0050	0.24%
Sb 206.836†	3756.4	2.068	mg/L	0.0051	2.068	mg/L	0.0051	0.25%
Se 196.026†	1325.9	2.108	mg/L	0.0064	2.108	mg/L	0.0064	0.30%
Si 288.158†	1723.0	2.254	mg/L	0.0112	2.254	mg/L	0.0112	0.50%
Sn 189.927†	2681.4	1.033	mg/L	0.0047	1.033	mg/L	0.0047	0.46%
Sr 421.552†	440622.2	1.003	mg/L	0.0056	1.003	mg/L	0.0056	0.56%
Ti 334.903†	13202.9	1.016	mg/L	0.0045	1.016	mg/L	0.0045	0.45%
Tl 190.801†	2522.2	2.046	mg/L	0.0082	2.046	mg/L	0.0082	0.40%
V 292.402†	45800.5	0.9308	mg/L	0.00316	0.9308	mg/L	0.00316	0.34%
Zn 206.200†	1697.1	1.025	mg/L	0.0068	1.025	mg/L	0.0068	0.66%

Sequence No.: 26
Sample ID: SEQ-CCB6
Autosampler Location: 1
Date Collected: 11/18/2020 7:30:25 PM
Data Type: Original

Dilution: 1X
Wash Time: 100
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB6

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCB6

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1420112.6	100.4	%	0.23				0.23%
ScR 361.383	152731.5	101.0	%	0.67				0.66%
Ag 328.068†	-9.7	-0.00007	mg/L	0.000305	-0.00007	mg/L	0.000305	426.28%
Al 308.215†	-57.0	-0.06158	mg/L	0.013544	-0.06158	mg/L	0.013544	22.00%
As 188.979†	5.8	0.00942	mg/L	0.003421	0.00942	mg/L	0.003421	36.30%
B 249.677†	-0.5	-0.00007	mg/L	0.000897	-0.00007	mg/L	0.000897	>999.9%
Ba 233.527†	-0.9	-0.00026	mg/L	0.000179	-0.00026	mg/L	0.000179	68.43%
Be 313.042†	-49.6	-0.00011	mg/L	0.000081	-0.00011	mg/L	0.000081	73.58%
Ca 317.933†	-8.4	-0.00143	mg/L	0.001053	-0.00143	mg/L	0.001053	73.72%
Cd 228.802†	5.2	0.00024	mg/L	0.000136	0.00024	mg/L	0.000136	57.27%
Co 228.616†	-35.7	-0.00202	mg/L	0.000046	-0.00202	mg/L	0.000046	2.26%
Cr 267.716†	-1.5	-0.00068	mg/L	0.001580	-0.00068	mg/L	0.001580	231.53%
Cu 324.752†	136.3	0.00088	mg/L	0.000073	0.00088	mg/L	0.000073	8.30%
Fe 273.955†	-2.1	-0.00230	mg/L	0.002947	-0.00230	mg/L	0.002947	128.11%
K 766.490†	41.6	0.03741	mg/L	0.011998	0.03741	mg/L	0.011998	32.07%
Mg 279.077†	-2.1	-0.00292	mg/L	0.010685	-0.00292	mg/L	0.010685	366.31%
Mn 257.610†	2.1	0.00007	mg/L	0.000071	0.00007	mg/L	0.000071	107.77%
Mo 202.031†	9.6	0.00088	mg/L	0.000211	0.00088	mg/L	0.000211	24.02%
Na 589.592†	-186.0	-0.02150	mg/L	0.005801	-0.02150	mg/L	0.005801	26.98%
Na 330.237†	-7.7	-0.4327	mg/L	1.07091	-0.4327	mg/L	1.07091	247.52%
Ni 231.604†	-11.3	-0.00545	mg/L	0.003682	-0.00545	mg/L	0.003682	67.57%
Pb 220.353†	42.9	0.00825	mg/L	0.000215	0.00825	mg/L	0.000215	2.61%
Sb 206.836†	7.7	0.00429	mg/L	0.002377	0.00429	mg/L	0.002377	55.44%
Se 196.026†	2.6	0.00407	mg/L	0.007957	0.00407	mg/L	0.007957	195.73%
Si 288.158†	-3.9	-0.00523	mg/L	0.016477	-0.00523	mg/L	0.016477	315.28%
Sn 189.927†	15.6	0.00602	mg/L	0.000794	0.00602	mg/L	0.000794	13.18%
Sr 421.552†	-5.0	-0.00001	mg/L	0.000009	-0.00001	mg/L	0.000009	76.80%
Ti 334.903†	36.3	0.00280	mg/L	0.001181	0.00280	mg/L	0.001181	42.20%
Tl 190.801†	-4.3	-0.00353	mg/L	0.002286	-0.00353	mg/L	0.002286	64.80%
V 292.402†	17.6	0.00035	mg/L	0.000201	0.00035	mg/L	0.000201	57.42%
Zn 206.200†	5.5	0.00335	mg/L	0.001407	0.00335	mg/L	0.001407	42.01%

Sequence No.: 27
Sample ID: 20K0145-02

Dilution: 2X
Wash Time: 37

Autosampler Location: 352
Date Collected: 11/18/2020 7:34:41 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0145-02

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 20K0145-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1431197.1	101.2	%	0.35				0.34%
ScR 361.383	153978.4	101.8	%	0.22				0.22%
Ag 328.068†	-79.5	-0.00051	mg/L	0.000267	-0.00102	mg/L	0.000533	52.15%
Al 308.215†	80112.9	86.56	mg/L	0.091	173.1	mg/L	0.18	0.11%
As 188.979†	-299.6	-0.2598	mg/L	0.00631	-0.5196	mg/L	0.01263	2.43%
B 249.677†	19.8	0.01545	mg/L	0.000364	0.03090	mg/L	0.000729	2.36%
Ba 233.527†	800.6	0.2098	mg/L	0.00240	0.4197	mg/L	0.00480	1.14%
Be 313.042†	739.5	0.00084	mg/L	0.000038	0.00169	mg/L	0.000076	4.47%
Ca 317.933†	268641.4	45.92	mg/L	0.257	91.84	mg/L	0.514	0.56%
Cd 228.802†	92.6	0.00523	mg/L	0.000170	0.01045	mg/L	0.000339	3.25%
Co 228.616†	912.8	0.04035	mg/L	0.000029	0.08071	mg/L	0.000057	0.07%
Cr 267.716†	1086.8	0.4852	mg/L	0.00814	0.9703	mg/L	0.01627	1.68%
Cu 324.752†	26124.8	0.1721	mg/L	0.00088	0.3441	mg/L	0.00177	0.51%
Fe 273.955†	116999.3	128.6	mg/L	0.64	257.2	mg/L	1.28	0.50%
K 766.490†	4521.5	4.063	mg/L	0.0212	8.125	mg/L	0.0423	0.52%
Mg 279.077†	19161.3	26.94	mg/L	0.008	53.87	mg/L	0.017	0.03%
Mn 257.610†	38765.0	1.182	mg/L	0.0016	2.364	mg/L	0.0032	0.13%
Mo 202.031†	110.3	0.00894	mg/L	0.000738	0.01789	mg/L	0.001477	8.25%
Na 589.592†	72775.6	8.413	mg/L	0.0113	16.83	mg/L	0.023	0.13%
Na 330.237†	132.2	8.140	mg/L	0.3580	16.28	mg/L	0.716	4.40%
Ni 231.604†	185.9	0.08961	mg/L	0.002254	0.1792	mg/L	0.00451	2.52%
Pb 220.353†	716.9	0.1522	mg/L	0.00021	0.3043	mg/L	0.00042	0.14%
Sb 206.836†	9.7	0.00715	mg/L	0.001630	0.01430	mg/L	0.003259	22.80%
Se 196.026†	-27.5	0.01930	mg/L	0.009649	0.03860	mg/L	0.019297	49.99%
Si 288.158†	919.4	1.149	mg/L	0.0121	2.297	mg/L	0.0242	1.05%
Sn 189.927†	32.3	0.02349	mg/L	0.001820	0.04699	mg/L	0.003640	7.75%
Sr 421.552†	154199.7	0.3510	mg/L	0.00061	0.7019	mg/L	0.00123	0.17%
Ti 334.903†	79563.7	6.125	mg/L	0.0096	12.25	mg/L	0.019	0.16%
Tl 190.801†	18.8	-0.03504	mg/L	0.003924	-0.07007	mg/L	0.007849	11.20%
V 292.402†	15142.4	0.3261	mg/L	0.00425	0.6523	mg/L	0.00849	1.30%
Zn 206.200†	2086.0	1.260	mg/L	0.0052	2.519	mg/L	0.0104	0.41%

Sequence No.: 28
Sample ID: 20K0145-03
Dilution: 2X
Wash Time: 37

Autosampler Location: 353
Date Collected: 11/18/2020 7:38:58 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0145-03

Analyte	Back Pressure	Flow
All	244.0 kPa	0.65 L/min

Mean Data: 20K0145-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1465149.2	103.6	%	0.27				0.26%
ScR 361.383	156236.6	103.3	%	0.44				0.43%
Ag 328.068†	-108.0	-0.00074	mg/L	0.000070	-0.00147	mg/L	0.000139	9.46%
Al 308.215†	60492.8	65.36	mg/L	0.242	130.7	mg/L	0.48	0.37%
As 188.979†	-259.0	-0.2289	mg/L	0.00737	-0.4577	mg/L	0.01475	3.22%
B 249.677†	36.2	0.01381	mg/L	0.001523	0.02762	mg/L	0.003045	11.03%
Ba 233.527†	638.5	0.1702	mg/L	0.00074	0.3404	mg/L	0.00148	0.44%
Be 313.042†	686.3	0.00087	mg/L	0.000020	0.00174	mg/L	0.000039	2.24%
Ca 317.933†	184114.3	31.47	mg/L	0.093	62.94	mg/L	0.186	0.30%
Cd 228.802†	52.3	0.00363	mg/L	0.000233	0.00726	mg/L	0.000466	6.42%
Co 228.616†	613.1	0.02529	mg/L	0.000220	0.05057	mg/L	0.000439	0.87%
Cr 267.716†	259.5	0.1181	mg/L	0.00161	0.2361	mg/L	0.00322	1.36%
Cu 324.752†	16280.7	0.1071	mg/L	0.00097	0.2141	mg/L	0.00195	0.91%
Fe 273.955†	75250.2	82.71	mg/L	0.722	165.4	mg/L	1.44	0.87%
K 766.490†	3789.6	3.405	mg/L	0.0418	6.810	mg/L	0.0835	1.23%
Mg 279.077†	14071.1	19.79	mg/L	0.068	39.57	mg/L	0.135	0.34%
Mn 257.610†	24601.6	0.7499	mg/L	0.00385	1.500	mg/L	0.0077	0.51%
Mo 202.031†	48.3	0.00362	mg/L	0.000262	0.00723	mg/L	0.000523	7.23%
Na 589.592†	51234.6	5.923	mg/L	0.0292	11.85	mg/L	0.058	0.49%
Na 330.237†	88.5	5.755	mg/L	0.2214	11.51	mg/L	0.443	3.85%
Ni 231.604†	142.5	0.06870	mg/L	0.001429	0.1374	mg/L	0.00286	2.08%
Pb 220.353†	383.0	0.08478	mg/L	0.001527	0.1696	mg/L	0.00305	1.80%
Sb 206.836†	-2.9	0.00482	mg/L	0.003209	0.00964	mg/L	0.006419	66.57%
Se 196.026†	-15.6	0.01873	mg/L	0.001722	0.03746	mg/L	0.003444	9.19%
Si 288.158†	882.3	1.109	mg/L	0.0038	2.219	mg/L	0.0077	0.35%
Sn 189.927†	-16.7	0.00158	mg/L	0.002015	0.00317	mg/L	0.004029	127.22%
Sr 421.552†	126265.5	0.2874	mg/L	0.00141	0.5748	mg/L	0.00282	0.49%
Ti 334.903†	66371.1	5.110	mg/L	0.0120	10.22	mg/L	0.024	0.24%
Tl 190.801†	14.5	-0.02814	mg/L	0.004577	-0.05628	mg/L	0.009154	16.27%
V 292.402†	12356.3	0.2613	mg/L	0.00419	0.5227	mg/L	0.00838	1.60%
Zn 206.200†	864.2	0.5215	mg/L	0.00188	1.043	mg/L	0.0038	0.36%

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Sequence No.: 29 **Autosampler Location: 354**
Sample ID: 20K0145-07 **Date Collected: 11/18/2020 7:43:14 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0145-07

Analyte	Back Pressure	Flow
All	244.0 kPa	0.65 L/min

Mean Data: 20K0145-07

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1488469.0	105.3	%	0.54				0.52%
ScR 361.383	160028.6	105.8	%	0.66				0.63%
Ag 328.068†	-91.2	-0.00062	mg/L	0.000049	-0.00123	mg/L	0.000097	7.88%
Al 308.215†	56492.8	61.04	mg/L	0.123	122.1	mg/L	0.25	0.20%
As 188.979†	-242.7	-0.2193	mg/L	0.00213	-0.4386	mg/L	0.00426	0.97%
B 249.677†	12.8	0.00858	mg/L	0.002100	0.01715	mg/L	0.004201	24.49%
Ba 233.527†	852.4	0.2329	mg/L	0.00192	0.4659	mg/L	0.00384	0.82%
Be 313.042†	557.5	0.00064	mg/L	0.000031	0.00127	mg/L	0.000062	4.90%
Ca 317.933†	152471.6	26.06	mg/L	0.178	52.12	mg/L	0.356	0.68%
Cd 228.802†	43.3	0.00323	mg/L	0.000048	0.00647	mg/L	0.000095	1.47%
Co 228.616†	761.2	0.03453	mg/L	0.000417	0.06906	mg/L	0.000835	1.21%
Cr 267.716†	184.2	0.08448	mg/L	0.003807	0.1690	mg/L	0.00761	4.51%
Cu 324.752†	11494.9	0.07593	mg/L	0.000581	0.1519	mg/L	0.00116	0.77%
Fe 273.955†	64948.1	71.38	mg/L	0.240	142.8	mg/L	0.48	0.34%
K 766.490†	3274.5	2.942	mg/L	0.0307	5.885	mg/L	0.0614	1.04%
Mg 279.077†	11544.0	16.23	mg/L	0.092	32.46	mg/L	0.184	0.57%
Mn 257.610†	19594.7	0.5971	mg/L	0.00295	1.194	mg/L	0.0059	0.49%
Mo 202.031†	51.5	0.00404	mg/L	0.000170	0.00809	mg/L	0.000340	4.20%
Na 589.592†	40784.3	4.715	mg/L	0.0156	9.429	mg/L	0.0313	0.33%
Na 330.237†	69.4	4.681	mg/L	0.1769	9.362	mg/L	0.3539	3.78%
Ni 231.604†	113.8	0.05484	mg/L	0.001576	0.1097	mg/L	0.00315	2.87%
Pb 220.353†	46.8	0.01962	mg/L	0.001127	0.03924	mg/L	0.002253	5.74%
Sb 206.836†	-7.6	0.00199	mg/L	0.002806	0.00398	mg/L	0.005613	140.95%
Se 196.026†	-17.5	0.01124	mg/L	0.009554	0.02248	mg/L	0.019108	84.99%
Si 288.158†	882.8	1.115	mg/L	0.0096	2.230	mg/L	0.0192	0.86%
Sn 189.927†	-15.4	0.00087	mg/L	0.001102	0.00174	mg/L	0.002204	126.57%
Sr 421.552†	124130.5	0.2825	mg/L	0.00061	0.5651	mg/L	0.00122	0.22%
Ti 334.903†	59914.4	4.613	mg/L	0.0165	9.226	mg/L	0.0330	0.36%
Tl 190.801†	15.7	-0.02451	mg/L	0.001357	-0.04902	mg/L	0.002714	5.54%
V 292.402†	11402.8	0.2402	mg/L	0.00038	0.4804	mg/L	0.00076	0.16%
Zn 206.200†	429.5	0.2589	mg/L	0.00124	0.5177	mg/L	0.00248	0.48%

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Sequence No.: 30
Sample ID: 20K0145-08

Dilution: 2X
Wash Time: 37

Autosampler Location: 355
Date Collected: 11/18/2020 7:47:30 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0145-08

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 20K0145-08

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1471791.3	104.1	%	0.60				0.58%
ScR 361.383	159132.8	105.2	%	0.15				0.14%
Ag 328.068†	-162.5	-0.00113	mg/L	0.000289	-0.00226	mg/L	0.000579	25.64%
Al 308.215†	74588.8	80.59	mg/L	0.262	161.2	mg/L	0.52	0.33%
As 188.979†	-276.5	-0.2440	mg/L	0.00476	-0.4880	mg/L	0.00953	1.95%
B 249.677†	51.0	0.01617	mg/L	0.001014	0.03235	mg/L	0.002029	6.27%
Ba 233.527†	871.1	0.2369	mg/L	0.00056	0.4739	mg/L	0.00112	0.24%
Be 313.042†	709.9	0.00080	mg/L	0.000047	0.00159	mg/L	0.000094	5.87%
Ca 317.933†	175662.1	30.03	mg/L	0.059	60.05	mg/L	0.119	0.20%
Cd 228.802†	48.4	0.00363	mg/L	0.000077	0.00727	mg/L	0.000154	2.12%
Co 228.616†	703.3	0.02994	mg/L	0.000451	0.05987	mg/L	0.000902	1.51%
Cr 267.716†	217.4	0.09969	mg/L	0.001899	0.1994	mg/L	0.00380	1.90%
Cu 324.752†	14594.7	0.09609	mg/L	0.001083	0.1922	mg/L	0.00217	1.13%
Fe 273.955†	73149.0	80.40	mg/L	0.216	160.8	mg/L	0.43	0.27%
K 766.490†	4595.0	4.129	mg/L	0.0649	8.257	mg/L	0.1298	1.57%
Mg 279.077†	13604.2	19.13	mg/L	0.045	38.26	mg/L	0.091	0.24%
Mn 257.610†	19788.8	0.6028	mg/L	0.00280	1.206	mg/L	0.0056	0.46%
Mo 202.031†	58.2	0.00455	mg/L	0.000767	0.00910	mg/L	0.001535	16.86%
Na 589.592†	90995.1	10.52	mg/L	0.043	21.04	mg/L	0.086	0.41%
Na 330.237†	175.2	10.80	mg/L	0.335	21.60	mg/L	0.669	3.10%
Ni 231.604†	109.4	0.05275	mg/L	0.002231	0.1055	mg/L	0.00446	4.23%
Pb 220.353†	21.7	0.01911	mg/L	0.001082	0.03822	mg/L	0.002164	5.66%
Sb 206.836†	-2.6	0.00584	mg/L	0.001236	0.01168	mg/L	0.002473	21.17%
Se 196.026†	-28.4	0.00263	mg/L	0.008062	0.00526	mg/L	0.016125	306.72%
Si 288.158†	878.5	1.102	mg/L	0.0087	2.204	mg/L	0.0174	0.79%
Sn 189.927†	-19.3	0.00046	mg/L	0.000995	0.00092	mg/L	0.001991	217.21%
Sr 421.552†	158669.0	0.3611	mg/L	0.00141	0.7223	mg/L	0.00282	0.39%
Ti 334.903†	69453.6	5.347	mg/L	0.0088	10.69	mg/L	0.018	0.17%
Tl 190.801†	22.1	-0.02941	mg/L	0.002113	-0.05883	mg/L	0.004226	7.18%
V 292.402†	14790.2	0.3099	mg/L	0.00258	0.6198	mg/L	0.00516	0.83%
Zn 206.200†	321.9	0.1937	mg/L	0.00292	0.3875	mg/L	0.00584	1.51%

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Sequence No.: 31
Sample ID: 20K0145-11

Dilution: 2X
Wash Time: 37

Autosampler Location: 356
Date Collected: 11/18/2020 7:51:46 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0145-11

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 20K0145-11

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1452621.5	102.7	%	0.50				0.49%
ScR 361.383	157521.8	104.2	%	0.38				0.37%
Ag 328.068†	-78.9	-0.00050	mg/L	0.000112	-0.00101	mg/L	0.000224	22.19%
Al 308.215†	89357.3	96.55	mg/L	0.414	193.1	mg/L	0.83	0.43%
As 188.979†	-272.6	-0.2335	mg/L	0.01014	-0.4671	mg/L	0.02029	4.34%
B 249.677†	39.4	0.01404	mg/L	0.001348	0.02807	mg/L	0.002697	9.61%
Ba 233.527†	1586.6	0.4411	mg/L	0.00121	0.8822	mg/L	0.00243	0.28%
Be 313.042†	852.7	0.00108	mg/L	0.000056	0.00215	mg/L	0.000112	5.22%
Ca 317.933†	208524.9	35.64	mg/L	0.056	71.29	mg/L	0.113	0.16%
Cd 228.802†	93.5	0.00615	mg/L	0.000341	0.01230	mg/L	0.000683	5.55%
Co 228.616†	773.3	0.03369	mg/L	0.000338	0.06739	mg/L	0.000675	1.00%
Cr 267.716†	274.4	0.1242	mg/L	0.00274	0.2484	mg/L	0.00547	2.20%
Cu 324.752†	29666.6	0.1931	mg/L	0.00098	0.3862	mg/L	0.00196	0.51%
Fe 273.955†	74107.7	81.45	mg/L	0.154	162.9	mg/L	0.31	0.19%
K 766.490†	3203.5	2.878	mg/L	0.0294	5.757	mg/L	0.0589	1.02%
Mg 279.077†	14194.3	19.96	mg/L	0.061	39.92	mg/L	0.123	0.31%
Mn 257.610†	20895.4	0.6365	mg/L	0.00216	1.273	mg/L	0.0043	0.34%
Mo 202.031†	75.6	0.00604	mg/L	0.000414	0.01208	mg/L	0.000829	6.86%
Na 589.592†	67855.0	7.844	mg/L	0.0337	15.69	mg/L	0.067	0.43%
Na 330.237†	128.2	7.903	mg/L	0.6100	15.81	mg/L	1.220	7.72%
Ni 231.604†	141.2	0.06807	mg/L	0.002328	0.1361	mg/L	0.00466	3.42%
Pb 220.353†	717.4	0.1571	mg/L	0.00060	0.3142	mg/L	0.00119	0.38%
Sb 206.836†	-3.1	0.00532	mg/L	0.001191	0.01064	mg/L	0.002382	22.39%
Se 196.026†	-24.4	0.01388	mg/L	0.006483	0.02775	mg/L	0.012965	46.72%
Si 288.158†	1123.8	1.424	mg/L	0.0047	2.848	mg/L	0.0095	0.33%
Sn 189.927†	-11.9	0.00435	mg/L	0.001029	0.00870	mg/L	0.002059	23.67%
Sr 421.552†	195463.4	0.4449	mg/L	0.00149	0.8898	mg/L	0.00298	0.33%
Ti 334.903†	70679.5	5.442	mg/L	0.0143	10.88	mg/L	0.029	0.26%
Tl 190.801†	23.6	-0.03432	mg/L	0.003195	-0.06864	mg/L	0.006389	9.31%
V 292.402†	15512.2	0.3248	mg/L	0.00303	0.6497	mg/L	0.00606	0.93%
Zn 206.200†	1550.9	0.9365	mg/L	0.00206	1.873	mg/L	0.0041	0.22%

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Sequence No.: 32
Sample ID: 20K0145-13

Dilution: 2X
Wash Time: 37

Autosampler Location: 357
Date Collected: 11/18/2020 7:56:02 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0145-13

Analyte	Back Pressure	Flow
All	243.0 kPa	0.65 L/min

Mean Data: 20K0145-13

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1471973.0	104.1	%	0.24				0.23%
ScR 361.383	157043.6	103.9	%	0.51				0.49%
Ag 328.068†	-82.3	-0.00054	mg/L	0.000081	-0.00108	mg/L	0.000163	15.14%
Al 308.215†	85213.5	92.07	mg/L	0.537	184.1	mg/L	1.07	0.58%
As 188.979†	-287.1	-0.2508	mg/L	0.00438	-0.5016	mg/L	0.00876	1.75%
B 249.677†	65.1	0.01743	mg/L	0.000176	0.03486	mg/L	0.000352	1.01%
Ba 233.527†	1154.0	0.3190	mg/L	0.00405	0.6381	mg/L	0.00811	1.27%
Be 313.042†	802.6	0.00104	mg/L	0.000096	0.00209	mg/L	0.000193	9.23%
Ca 317.933†	202801.8	34.66	mg/L	0.244	69.33	mg/L	0.489	0.70%
Cd 228.802†	49.4	0.00395	mg/L	0.000232	0.00789	mg/L	0.000464	5.88%
Co 228.616†	884.1	0.03965	mg/L	0.000196	0.07930	mg/L	0.000392	0.49%
Cr 267.716†	255.4	0.1146	mg/L	0.00096	0.2291	mg/L	0.00192	0.84%
Cu 324.752†	25514.2	0.1659	mg/L	0.00019	0.3319	mg/L	0.00039	0.12%
Fe 273.955†	64945.3	71.38	mg/L	0.858	142.8	mg/L	1.72	1.20%
K 766.490†	5436.2	4.885	mg/L	0.0641	9.769	mg/L	0.1282	1.31%
Mg 279.077†	16496.2	23.21	mg/L	0.104	46.43	mg/L	0.208	0.45%
Mn 257.610†	21467.6	0.6541	mg/L	0.00312	1.308	mg/L	0.0062	0.48%
Mo 202.031†	62.5	0.00481	mg/L	0.000576	0.00962	mg/L	0.001151	11.97%
Na 589.592†	84786.0	9.801	mg/L	0.0484	19.60	mg/L	0.097	0.49%
Na 330.237†	158.8	9.909	mg/L	0.5989	19.82	mg/L	1.198	6.04%
Ni 231.604†	142.7	0.06878	mg/L	0.003260	0.1376	mg/L	0.00652	4.74%
Pb 220.353†	21.4	0.02250	mg/L	0.001468	0.04499	mg/L	0.002936	6.53%
Sb 206.836†	-11.0	0.00120	mg/L	0.002434	0.00240	mg/L	0.004867	202.75%
Se 196.026†	-20.1	0.01630	mg/L	0.006861	0.03259	mg/L	0.013722	42.10%
Si 288.158†	1240.8	1.577	mg/L	0.0083	3.154	mg/L	0.0166	0.53%
Sn 189.927†	-25.8	-0.00109	mg/L	0.000796	-0.00218	mg/L	0.001592	73.09%
Sr 421.552†	200299.1	0.4559	mg/L	0.00302	0.9118	mg/L	0.00603	0.66%
Ti 334.903†	72876.2	5.611	mg/L	0.0401	11.22	mg/L	0.080	0.71%
Tl 190.801†	26.0	-0.03111	mg/L	0.003783	-0.06222	mg/L	0.007567	12.16%
V 292.402†	13973.0	0.2929	mg/L	0.00385	0.5859	mg/L	0.00770	1.31%
Zn 206.200†	398.3	0.2398	mg/L	0.00463	0.4796	mg/L	0.00926	1.93%

Sequence No.: 33
Sample ID: 20K0145-15
Dilution: 2X
Wash Time: 37

Autosampler Location: 358
Date Collected: 11/18/2020 8:00:18 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0145-15

Analyte	Back Pressure	Flow
All	244.0 kPa	0.65 L/min

Mean Data: 20K0145-15

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1507957.3	106.7	%	0.67				0.63%
ScR 361.383	162062.1	107.2	%	0.07				0.06%
Ag 328.068†	-87.0	-0.00056	mg/L	0.000215	-0.00111	mg/L	0.000430	38.65%
Al 308.215†	105073.5	113.5	mg/L	0.14	227.1	mg/L	0.28	0.12%
As 188.979†	-387.0	-0.3440	mg/L	0.00547	-0.6880	mg/L	0.01094	1.59%
B 249.677†	53.7	0.02408	mg/L	0.000701	0.04815	mg/L	0.001402	2.91%
Ba 233.527†	1666.1	0.4530	mg/L	0.00426	0.9061	mg/L	0.00852	0.94%
Be 313.042†	1070.7	0.00147	mg/L	0.000044	0.00295	mg/L	0.000089	3.02%
Ca 317.933†	300382.9	51.34	mg/L	0.286	102.7	mg/L	0.57	0.56%
Cd 228.802†	103.0	0.00620	mg/L	0.000034	0.01240	mg/L	0.000067	0.54%
Co 228.616†	1480.8	0.06984	mg/L	0.000745	0.1397	mg/L	0.00149	1.07%
Cr 267.716†	504.7	0.2268	mg/L	0.00237	0.4535	mg/L	0.00474	1.04%
Cu 324.752†	31240.0	0.2057	mg/L	0.00133	0.4113	mg/L	0.00267	0.65%
Fe 273.955†	141823.9	155.9	mg/L	0.22	311.8	mg/L	0.43	0.14%
K 766.490†	7330.4	6.587	mg/L	0.0340	13.17	mg/L	0.068	0.52%
Mg 279.077†	34939.9	49.17	mg/L	0.047	98.34	mg/L	0.095	0.10%
Mn 257.610†	83135.7	2.537	mg/L	0.0041	5.073	mg/L	0.0082	0.16%
Mo 202.031†	83.6	0.00611	mg/L	0.000417	0.01221	mg/L	0.000833	6.82%
Na 589.592†	36407.8	4.209	mg/L	0.0028	8.417	mg/L	0.0056	0.07%
Na 330.237†	51.1	4.082	mg/L	0.5045	8.165	mg/L	1.0090	12.36%
Ni 231.604†	550.1	0.2652	mg/L	0.00391	0.5305	mg/L	0.00782	1.47%
Pb 220.353†	646.9	0.1429	mg/L	0.00143	0.2859	mg/L	0.00286	1.00%
Sb 206.836†	1.9	0.00936	mg/L	0.000646	0.01872	mg/L	0.001291	6.90%
Se 196.026†	-42.9	0.01155	mg/L	0.005529	0.02310	mg/L	0.011057	47.87%
Si 288.158†	870.3	1.072	mg/L	0.0191	2.143	mg/L	0.0383	1.79%
Sn 189.927†	-21.6	0.00438	mg/L	0.001353	0.00876	mg/L	0.002706	30.90%
Sr 421.552†	135018.7	0.3073	mg/L	0.00031	0.6146	mg/L	0.00063	0.10%
Ti 334.903†	97314.7	7.492	mg/L	0.0096	14.98	mg/L	0.019	0.13%
Tl 190.801†	32.6	-0.03863	mg/L	0.003449	-0.07727	mg/L	0.006898	8.93%
V 292.402†	17109.1	0.3699	mg/L	0.00747	0.7397	mg/L	0.01494	2.02%
Zn 206.200†	941.2	0.5675	mg/L	0.00446	1.135	mg/L	0.0089	0.79%

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Sequence No.: 34 **Autosampler Location: 359**
Sample ID: 20K0145-17 **Date Collected: 11/18/2020 8:04:34 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0145-17

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 20K0145-17

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1502977.4	106.3	%	0.26				0.24%
ScR 361.383	162283.3	107.3	%	0.20				0.19%
Ag 328.068†	-22.7	-0.00009	mg/L	0.000092	-0.00018	mg/L	0.000184	100.97%
Al 308.215†	68173.6	73.65	mg/L	0.358	147.3	mg/L	0.72	0.49%
As 188.979†	-315.9	-0.2796	mg/L	0.00854	-0.5592	mg/L	0.01707	3.05%
B 249.677†	17.3	0.01381	mg/L	0.001476	0.02762	mg/L	0.002951	10.68%
Ba 233.527†	1919.0	0.5308	mg/L	0.00423	1.062	mg/L	0.0085	0.80%
Be 313.042†	753.0	0.00089	mg/L	0.000009	0.00178	mg/L	0.000018	1.02%
Ca 317.933†	205171.6	35.07	mg/L	0.171	70.14	mg/L	0.343	0.49%
Cd 228.802†	125.5	0.00770	mg/L	0.000154	0.01539	mg/L	0.000309	2.00%
Co 228.616†	926.9	0.04094	mg/L	0.000172	0.08187	mg/L	0.000344	0.42%
Cr 267.716†	825.8	0.3697	mg/L	0.00114	0.7393	mg/L	0.00227	0.31%
Cu 324.752†	109005.6	0.7050	mg/L	0.00131	1.410	mg/L	0.0026	0.19%
Fe 273.955†	107216.9	117.8	mg/L	0.77	235.7	mg/L	1.54	0.65%
K 766.490†	6405.1	5.755	mg/L	0.0492	11.51	mg/L	0.098	0.85%
Mg 279.077†	17154.1	24.11	mg/L	0.137	48.23	mg/L	0.273	0.57%
Mn 257.610†	35841.9	1.093	mg/L	0.0064	2.186	mg/L	0.0128	0.59%
Mo 202.031†	62.1	0.00476	mg/L	0.000581	0.00951	mg/L	0.001162	12.21%
Na 589.592†	44790.3	5.178	mg/L	0.0375	10.36	mg/L	0.075	0.73%
Na 330.237†	88.3	5.494	mg/L	0.6008	10.99	mg/L	1.202	10.94%
Ni 231.604†	172.6	0.08321	mg/L	0.001840	0.1664	mg/L	0.00368	2.21%
Pb 220.353†	4111.3	0.8029	mg/L	0.00402	1.606	mg/L	0.0080	0.50%
Sb 206.836†	13.0	0.01109	mg/L	0.001968	0.02217	mg/L	0.003936	17.75%
Se 196.026†	-24.7	0.01752	mg/L	0.004662	0.03503	mg/L	0.009325	26.62%
Si 288.158†	1056.4	1.328	mg/L	0.0060	2.655	mg/L	0.0120	0.45%
Sn 189.927†	20.6	0.01713	mg/L	0.000588	0.03425	mg/L	0.001175	3.43%
Sr 421.552†	171078.4	0.3894	mg/L	0.00166	0.7788	mg/L	0.00333	0.43%
Ti 334.903†	80855.9	6.225	mg/L	0.0192	12.45	mg/L	0.038	0.31%
Tl 190.801†	23.4	-0.02815	mg/L	0.002575	-0.05630	mg/L	0.005149	9.15%
V 292.402†	14865.6	0.3182	mg/L	0.00147	0.6364	mg/L	0.00294	0.46%
Zn 206.200†	2965.0	1.791	mg/L	0.0112	3.583	mg/L	0.0224	0.63%

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Sequence No.: 35
Sample ID: SEQ-CCV7

Autosampler Location: 7
Date Collected: 11/18/2020 8:10:13 PM
Data Type: Original

Dilution: 1X
Wash Time: 120

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV7

Analyte	Back Pressure	Flow
All	243.0 kPa	0.65 L/min

Mean Data: SEQ-CCV7

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1446189.9	102.3	%	0.57				0.55%
ScR 361.383	155083.6	102.6	%	0.54				0.53%
Ag 328.068†	143123.4	1.062	mg/L	0.0024	1.062	mg/L	0.0024	0.23%
Al 308.215†	1870.5	1.988	mg/L	0.0059	1.988	mg/L	0.0059	0.30%
As 188.979†	1145.1	1.876	mg/L	0.0091	1.876	mg/L	0.0091	0.49%
B 249.677†	5524.2	0.9665	mg/L	0.00137	0.9665	mg/L	0.00137	0.14%
Ba 233.527†	3523.1	1.005	mg/L	0.0045	1.005	mg/L	0.0045	0.44%
Be 313.042†	452477.2	0.9981	mg/L	0.00515	0.9981	mg/L	0.00515	0.52%
Ca 317.933†	11716.9	2.003	mg/L	0.0121	2.003	mg/L	0.0121	0.61%
Cd 228.802†	16773.3	0.9710	mg/L	0.00620	0.9710	mg/L	0.00620	0.64%
Co 228.616†	17292.8	0.9732	mg/L	0.00410	0.9732	mg/L	0.00410	0.42%
Cr 267.716†	2122.9	0.9376	mg/L	0.00809	0.9376	mg/L	0.00809	0.86%
Cu 324.752†	154302.3	0.9927	mg/L	0.00345	0.9927	mg/L	0.00345	0.35%
Fe 273.955†	1759.9	1.928	mg/L	0.0188	1.928	mg/L	0.0188	0.98%
K 766.490†	21822.0	19.61	mg/L	0.128	19.61	mg/L	0.128	0.65%
Mg 279.077†	1464.3	2.078	mg/L	0.0212	2.078	mg/L	0.0212	1.02%
Mn 257.610†	33792.1	1.033	mg/L	0.0050	1.033	mg/L	0.0050	0.49%
Mo 202.031†	10549.8	0.9651	mg/L	0.00734	0.9651	mg/L	0.00734	0.76%
Na 589.592†	442288.5	51.13	mg/L	0.442	51.13	mg/L	0.442	0.87%
Na 330.237†	903.3	50.66	mg/L	0.542	50.66	mg/L	0.542	1.07%
Ni 231.604†	1920.9	0.9276	mg/L	0.00575	0.9276	mg/L	0.00575	0.62%
Pb 220.353†	10403.4	2.007	mg/L	0.0166	2.007	mg/L	0.0166	0.83%
Sb 206.836†	3665.4	2.018	mg/L	0.0104	2.018	mg/L	0.0104	0.52%
Se 196.026†	1272.9	2.024	mg/L	0.0102	2.024	mg/L	0.0102	0.50%
Si 288.158†	1688.1	2.209	mg/L	0.0153	2.209	mg/L	0.0153	0.69%
Sn 189.927†	2603.5	1.003	mg/L	0.0094	1.003	mg/L	0.0094	0.94%
Sr 421.552†	435518.2	0.9913	mg/L	0.00485	0.9913	mg/L	0.00485	0.49%
Ti 334.903†	12964.0	0.9973	mg/L	0.00571	0.9973	mg/L	0.00571	0.57%
Tl 190.801†	2461.1	1.996	mg/L	0.0171	1.996	mg/L	0.0171	0.86%
V 292.402†	45267.1	0.9199	mg/L	0.00429	0.9199	mg/L	0.00429	0.47%
Zn 206.200†	1636.7	0.9889	mg/L	0.00602	0.9889	mg/L	0.00602	0.61%

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Sequence No.: 36 **Autosampler Location: 1**
Sample ID: SEQ-CCB7 **Date Collected: 11/18/2020 8:15:33 PM**
Data Type: Original

Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB7

Analyte	**Back Pressure**	**Flow**
All	244.0 kPa	0.65 L/min

Mean Data: SEQ-CCB7

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	1470792.1	104.0	%	0.51				0.49%
ScR 361.383	156326.4	103.4	%	0.93				0.90%
Ag 328.068†	-5.7	-0.00004	mg/L	0.000040	-0.00004	mg/L	0.000040	94.98%
Al 308.215†	-96.8	-0.1046	mg/L	0.01584	-0.1046	mg/L	0.01584	15.14%
As 188.979†	6.5	0.01053	mg/L	0.004915	0.01053	mg/L	0.004915	46.67%
B 249.677†	8.8	0.00154	mg/L	0.001994	0.00154	mg/L	0.001994	129.18%
Ba 233.527†	-3.2	-0.00093	mg/L	0.000373	-0.00093	mg/L	0.000373	40.09%
Be 313.042†	-84.0	-0.00019	mg/L	0.000069	-0.00019	mg/L	0.000069	37.31%
Ca 317.933†	4.5	0.00077	mg/L	0.002528	0.00077	mg/L	0.002528	326.81%
Cd 228.802†	-2.3	-0.00021	mg/L	0.000085	-0.00021	mg/L	0.000085	40.75%
Co 228.616†	-30.6	-0.00173	mg/L	0.000157	-0.00173	mg/L	0.000157	9.09%
Cr 267.716†	13.5	0.00593	mg/L	0.003479	0.00593	mg/L	0.003479	58.70%
Cu 324.752†	124.6	0.00080	mg/L	0.000029	0.00080	mg/L	0.000029	3.63%
Fe 273.955†	7.3	0.00803	mg/L	0.005692	0.00803	mg/L	0.005692	70.89%
K 766.490†	46.2	0.04148	mg/L	0.029123	0.04148	mg/L	0.029123	70.21%
Mg 279.077†	8.5	0.01204	mg/L	0.001842	0.01204	mg/L	0.001842	15.31%
Mn 257.610†	-2.6	-0.00008	mg/L	0.000134	-0.00008	mg/L	0.000134	169.05%
Mo 202.031†	5.8	0.00053	mg/L	0.000285	0.00053	mg/L	0.000285	53.71%
Na 589.592†	-269.1	-0.03111	mg/L	0.011010	-0.03111	mg/L	0.011010	35.39%
Na 330.237†	-2.5	-0.1400	mg/L	0.91222	-0.1400	mg/L	0.91222	651.52%
Ni 231.604†	-2.7	-0.00128	mg/L	0.001831	-0.00128	mg/L	0.001831	142.68%
Pb 220.353†	42.9	0.00825	mg/L	0.000134	0.00825	mg/L	0.000134	1.63%
Sb 206.836†	2.2	0.00116	mg/L	0.001948	0.00116	mg/L	0.001948	168.03%
Se 196.026†	2.3	0.00356	mg/L	0.006399	0.00356	mg/L	0.006399	179.93%
Si 288.158†	-3.2	-0.00432	mg/L	0.008341	-0.00432	mg/L	0.008341	193.23%
Sn 189.927†	10.0	0.00386	mg/L	0.000438	0.00386	mg/L	0.000438	11.35%
Sr 421.552†	-14.6	-0.00003	mg/L	0.000053	-0.00003	mg/L	0.000053	160.28%
Ti 334.903†	28.5	0.00219	mg/L	0.002012	0.00219	mg/L	0.002012	91.86%
Tl 190.801†	-7.7	-0.00624	mg/L	0.002695	-0.00624	mg/L	0.002695	43.21%
V 292.402†	7.7	0.00020	mg/L	0.000334	0.00020	mg/L	0.000334	168.52%
Zn 206.200†	3.2	0.00192	mg/L	0.001418	0.00192	mg/L	0.001418	73.67%

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Sequence No.: 37 | Autosampler Location: 9
Sample ID: RINSE - 1 | Date Collected: 11/18/2020 8:19:49 PM
Data Type: Original
Dilution: 1X
Wash Time: 37 | Auto Dilution Factor: 1

Nebulizer Parameters: RINSE - 1

Analyte	Back Pressure	Flow
All	243.0 kPa	0.65 L/min

Mean Data: RINSE - 1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1461651.6	103.4	%	0.19				0.19%
ScR 361.383	158137.1	104.6	%	1.04				1.00%
Ag 328.068†	38.3	0.00028	mg/L	0.000163	0.00028	mg/L	0.000163	57.28%
Al 308.215†	-79.4	-0.08581	mg/L	0.023234	-0.08581	mg/L	0.023234	27.08%
As 188.979†	3.8	0.00608	mg/L	0.003656	0.00608	mg/L	0.003656	60.11%
B 249.677†	11.6	0.00205	mg/L	0.000460	0.00205	mg/L	0.000460	22.50%
Ba 233.527†	-1.9	-0.00053	mg/L	0.000423	-0.00053	mg/L	0.000423	79.80%
Be 313.042†	-70.3	-0.00016	mg/L	0.000073	-0.00016	mg/L	0.000073	46.62%
Ca 317.933†	3.4	0.00058	mg/L	0.001031	0.00058	mg/L	0.001031	179.09%
Cd 228.802†	-3.3	-0.00024	mg/L	0.000242	-0.00024	mg/L	0.000242	103.02%
Co 228.616†	-31.4	-0.00177	mg/L	0.000175	-0.00177	mg/L	0.000175	9.89%
Cr 267.716†	1.5	0.00067	mg/L	0.003555	0.00067	mg/L	0.003555	530.43%
Cu 324.752†	144.5	0.00093	mg/L	0.000106	0.00093	mg/L	0.000106	11.37%
Fe 273.955†	3.8	0.00417	mg/L	0.005465	0.00417	mg/L	0.005465	131.13%
K 766.490†	18.2	0.01636	mg/L	0.056215	0.01636	mg/L	0.056215	343.71%
Mg 279.077†	2.4	0.00341	mg/L	0.003381	0.00341	mg/L	0.003381	99.26%
Mn 257.610†	-3.5	-0.00011	mg/L	0.000109	-0.00011	mg/L	0.000109	101.87%
Mo 202.031†	3.2	0.00029	mg/L	0.000055	0.00029	mg/L	0.000055	18.94%
Na 589.592†	-262.8	-0.03038	mg/L	0.001362	-0.03038	mg/L	0.001362	4.48%
Na 330.237†	-1.0	-0.05677	mg/L	0.810138	-0.05677	mg/L	0.810138	>999.9%
Ni 231.604†	2.0	0.00099	mg/L	0.000908	0.00099	mg/L	0.000908	92.13%
Pb 220.353†	44.7	0.00860	mg/L	0.000687	0.00860	mg/L	0.000687	7.99%
Sb 206.836†	-1.5	-0.00077	mg/L	0.001182	-0.00077	mg/L	0.001182	152.53%
Se 196.026†	-2.4	-0.00387	mg/L	0.004061	-0.00387	mg/L	0.004061	104.83%
Si 288.158†	-1.7	-0.00223	mg/L	0.014197	-0.00223	mg/L	0.014197	636.83%
Sn 189.927†	11.3	0.00436	mg/L	0.000166	0.00436	mg/L	0.000166	3.80%
Sr 421.552†	-25.6	-0.00006	mg/L	0.000059	-0.00006	mg/L	0.000059	101.61%
Ti 334.903†	17.5	0.00135	mg/L	0.001232	0.00135	mg/L	0.001232	91.34%
Tl 190.801†	-1.9	-0.00154	mg/L	0.005452	-0.00154	mg/L	0.005452	355.10%
V 292.402†	7.4	0.00016	mg/L	0.000234	0.00016	mg/L	0.000234	150.78%
Zn 206.200†	4.8	0.00292	mg/L	0.000549	0.00292	mg/L	0.000549	18.79%

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Sequence No.: 38 **Autosampler Location: 9**
Sample ID: RINSE - 2 **Date Collected: 11/18/2020 8:24:05 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: RINSE - 2

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: RINSE - 2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1442510.8	102.0	%	0.31				0.30%
ScR 361.383	154349.7	102.1	%	0.55				0.54%
Ag 328.068†	-13.2	-0.00010	mg/L	0.000163	-0.00010	mg/L	0.000163	166.27%
Al 308.215†	-80.1	-0.08654	mg/L	0.011348	-0.08654	mg/L	0.011348	13.11%
As 188.979†	5.9	0.00964	mg/L	0.007645	0.00964	mg/L	0.007645	79.33%
B 249.677†	-2.6	-0.00045	mg/L	0.002244	-0.00045	mg/L	0.002244	498.39%
Ba 233.527†	-2.9	-0.00082	mg/L	0.000413	-0.00082	mg/L	0.000413	50.32%
Be 313.042†	-55.2	-0.00012	mg/L	0.000022	-0.00012	mg/L	0.000022	18.30%
Ca 317.933†	1.9	0.00032	mg/L	0.000819	0.00032	mg/L	0.000819	254.56%
Cd 228.802†	-4.3	-0.00032	mg/L	0.000327	-0.00032	mg/L	0.000327	102.34%
Co 228.616†	-34.6	-0.00196	mg/L	0.000131	-0.00196	mg/L	0.000131	6.72%
Cr 267.716†	-8.6	-0.00378	mg/L	0.001677	-0.00378	mg/L	0.001677	44.42%
Cu 324.752†	102.5	0.00066	mg/L	0.000097	0.00066	mg/L	0.000097	14.64%
Fe 273.955†	0.9	0.00095	mg/L	0.002949	0.00095	mg/L	0.002949	311.67%
K 766.490†	44.2	0.03970	mg/L	0.027241	0.03970	mg/L	0.027241	68.62%
Mg 279.077†	3.4	0.00473	mg/L	0.020415	0.00473	mg/L	0.020415	431.94%
Mn 257.610†	0.5	0.00002	mg/L	0.000074	0.00002	mg/L	0.000074	480.10%
Mo 202.031†	0.5	0.00005	mg/L	0.000144	0.00005	mg/L	0.000144	292.66%
Na 589.592†	-281.1	-0.03250	mg/L	0.007103	-0.03250	mg/L	0.007103	21.86%
Na 330.237†	-4.4	-0.2508	mg/L	0.74586	-0.2508	mg/L	0.74586	297.44%
Ni 231.604†	-0.8	-0.00039	mg/L	0.001802	-0.00039	mg/L	0.001802	463.63%
Pb 220.353†	45.7	0.00879	mg/L	0.001720	0.00879	mg/L	0.001720	19.58%
Sb 206.836†	-2.4	-0.00124	mg/L	0.001923	-0.00124	mg/L	0.001923	155.16%
Se 196.026†	-3.7	-0.00590	mg/L	0.003953	-0.00590	mg/L	0.003953	67.04%
Si 288.158†	-6.6	-0.00882	mg/L	0.009107	-0.00882	mg/L	0.009107	103.30%
Sn 189.927†	8.8	0.00340	mg/L	0.001032	0.00340	mg/L	0.001032	30.34%
Sr 421.552†	-10.0	-0.00002	mg/L	0.000062	-0.00002	mg/L	0.000062	272.39%
Ti 334.903†	31.3	0.00241	mg/L	0.000803	0.00241	mg/L	0.000803	33.28%
Tl 190.801†	-3.9	-0.00317	mg/L	0.001101	-0.00317	mg/L	0.001101	34.77%
V 292.402†	-2.6	-0.00008	mg/L	0.000188	-0.00008	mg/L	0.000188	239.84%
Zn 206.200†	5.6	0.00340	mg/L	0.000577	0.00340	mg/L	0.000577	16.96%

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Sequence No.: 39
Sample ID: RINSE - 3

Autosampler Location: 9
Date Collected: 11/18/2020 8:28:21 PM
Data Type: Original

Dilution: 1X
Wash Time: 37

Auto Dilution Factor: 1

Nebulizer Parameters: RINSE - 3

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: RINSE - 3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1427070.9	100.9	%	0.45				0.45%
ScR 361.383	152095.2	100.6	%	0.41				0.40%
Ag 328.068†	-24.3	-0.00018	mg/L	0.000249	-0.00018	mg/L	0.000249	138.40%
Al 308.215†	-85.1	-0.09198	mg/L	0.017407	-0.09198	mg/L	0.017407	18.93%
As 188.979†	5.5	0.00883	mg/L	0.001144	0.00883	mg/L	0.001144	12.96%
B 249.677†	-7.4	-0.00129	mg/L	0.000762	-0.00129	mg/L	0.000762	58.91%
Ba 233.527†	-0.8	-0.00024	mg/L	0.001684	-0.00024	mg/L	0.001684	696.43%
Be 313.042†	-75.3	-0.00017	mg/L	0.000022	-0.00017	mg/L	0.000022	13.31%
Ca 317.933†	9.7	0.00166	mg/L	0.002506	0.00166	mg/L	0.002506	150.95%
Cd 228.802†	-6.8	-0.00046	mg/L	0.000216	-0.00046	mg/L	0.000216	46.87%
Co 228.616†	-32.6	-0.00184	mg/L	0.000153	-0.00184	mg/L	0.000153	8.31%
Cr 267.716†	-0.6	-0.00026	mg/L	0.001027	-0.00026	mg/L	0.001027	397.98%
Cu 324.752†	117.2	0.00075	mg/L	0.000136	0.00075	mg/L	0.000136	18.01%
Fe 273.955†	3.4	0.00376	mg/L	0.000103	0.00376	mg/L	0.000103	2.73%
K 766.490†	17.7	0.01587	mg/L	0.014877	0.01587	mg/L	0.014877	93.77%
Mg 279.077†	2.9	0.00406	mg/L	0.003585	0.00406	mg/L	0.003585	88.29%
Mn 257.610†	-1.9	-0.00006	mg/L	0.000016	-0.00006	mg/L	0.000016	28.11%
Mo 202.031†	2.2	0.00020	mg/L	0.000262	0.00020	mg/L	0.000262	130.72%
Na 589.592†	-328.0	-0.03791	mg/L	0.007116	-0.03791	mg/L	0.007116	18.77%
Na 330.237†	-6.9	-0.3888	mg/L	0.75023	-0.3888	mg/L	0.75023	192.96%
Ni 231.604†	-3.5	-0.00170	mg/L	0.000571	-0.00170	mg/L	0.000571	33.64%
Pb 220.353†	43.8	0.00841	mg/L	0.000474	0.00841	mg/L	0.000474	5.64%
Sb 206.836†	-0.9	-0.00048	mg/L	0.001146	-0.00048	mg/L	0.001146	240.72%
Se 196.026†	-3.1	-0.00494	mg/L	0.006615	-0.00494	mg/L	0.006615	133.85%
Si 288.158†	-1.9	-0.00252	mg/L	0.007380	-0.00252	mg/L	0.007380	293.16%
Sn 189.927†	9.0	0.00347	mg/L	0.001315	0.00347	mg/L	0.001315	37.94%
Sr 421.552†	-3.3	-0.00001	mg/L	0.000068	-0.00001	mg/L	0.000068	916.08%
Ti 334.903†	12.2	0.00094	mg/L	0.001311	0.00094	mg/L	0.001311	139.59%
Tl 190.801†	-6.3	-0.00512	mg/L	0.001817	-0.00512	mg/L	0.001817	35.52%
V 292.402†	3.3	0.00007	mg/L	0.000430	0.00007	mg/L	0.000430	650.84%
Zn 206.200†	6.9	0.00414	mg/L	0.000336	0.00414	mg/L	0.000336	8.10%

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Sequence No.: 40
Sample ID: RINSE - 4

Autosampler Location: 9
Date Collected: 11/18/2020 8:32:37 PM
Data Type: Original

Dilution: 1X
Wash Time: 37

Auto Dilution Factor: 1

Nebulizer Parameters: RINSE - 4

Analyte	Back Pressure	Flow
All	243.0 kPa	0.65 L/min

Mean Data: RINSE - 4

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1470391.0	104.0	%	1.02				0.98%
ScR 361.383	156727.2	103.7	%	0.31				0.30%
Ag 328.068†	13.0	0.00010	mg/L	0.000222	0.00010	mg/L	0.000222	231.32%
Al 308.215†	-100.9	-0.1091	mg/L	0.01311	-0.1091	mg/L	0.01311	12.02%
As 188.979†	4.2	0.00676	mg/L	0.006509	0.00676	mg/L	0.006509	96.24%
B 249.677†	7.3	0.00127	mg/L	0.000501	0.00127	mg/L	0.000501	39.32%
Ba 233.527†	-2.2	-0.00063	mg/L	0.001259	-0.00063	mg/L	0.001259	198.34%
Be 313.042†	-129.2	-0.00029	mg/L	0.000065	-0.00029	mg/L	0.000065	22.90%
Ca 317.933†	2.5	0.00043	mg/L	0.000284	0.00043	mg/L	0.000284	65.83%
Cd 228.802†	-7.5	-0.00048	mg/L	0.000179	-0.00048	mg/L	0.000179	37.01%
Co 228.616†	-31.3	-0.00177	mg/L	0.000147	-0.00177	mg/L	0.000147	8.34%
Cr 267.716†	8.3	0.00363	mg/L	0.001277	0.00363	mg/L	0.001277	35.14%
Cu 324.752†	75.9	0.00049	mg/L	0.000125	0.00049	mg/L	0.000125	25.69%
Fe 273.955†	2.3	0.00251	mg/L	0.001919	0.00251	mg/L	0.001919	76.35%
K 766.490†	49.2	0.04422	mg/L	0.013121	0.04422	mg/L	0.013121	29.67%
Mg 279.077†	5.8	0.00815	mg/L	0.009852	0.00815	mg/L	0.009852	120.85%
Mn 257.610†	-14.8	-0.00045	mg/L	0.000078	-0.00045	mg/L	0.000078	17.35%
Mo 202.031†	-1.3	-0.00012	mg/L	0.000077	-0.00012	mg/L	0.000077	65.14%
Na 589.592†	-347.4	-0.04016	mg/L	0.007882	-0.04016	mg/L	0.007882	19.63%
Na 330.237†	0.3	0.01620	mg/L	0.498222	0.01620	mg/L	0.498222	>999.9%
Ni 231.604†	-0.6	-0.00028	mg/L	0.001040	-0.00028	mg/L	0.001040	366.58%
Pb 220.353†	39.8	0.00765	mg/L	0.001110	0.00765	mg/L	0.001110	14.51%
Sb 206.836†	-3.0	-0.00167	mg/L	0.001717	-0.00167	mg/L	0.001717	103.03%
Se 196.026†	3.2	0.00498	mg/L	0.006488	0.00498	mg/L	0.006488	130.38%
Si 288.158†	4.5	0.00587	mg/L	0.000988	0.00587	mg/L	0.000988	16.84%
Sn 189.927†	9.4	0.00360	mg/L	0.001380	0.00360	mg/L	0.001380	38.34%
Sr 421.552†	-40.9	-0.00009	mg/L	0.000085	-0.00009	mg/L	0.000085	90.90%
Ti 334.903†	20.7	0.00159	mg/L	0.001686	0.00159	mg/L	0.001686	105.91%
Tl 190.801†	-9.8	-0.00796	mg/L	0.000998	-0.00796	mg/L	0.000998	12.54%
V 292.402†	-5.3	-0.00008	mg/L	0.000281	-0.00008	mg/L	0.000281	352.29%
Zn 206.200†	5.1	0.00309	mg/L	0.001731	0.00309	mg/L	0.001731	56.05%

Sequence No.: 41
Sample ID: DI - 1
Dilution: 1X
Wash Time: 37

Autosampler Location: 10
Date Collected: 11/18/2020 8:36:53 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: DI - 1

Analyte	Back Pressure	Flow
All	243.0 kPa	0.65 L/min

Mean Data: DI - 1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1544329.9	109.2	%	0.36				0.33%
ScR 361.383	164292.4	108.7	%	1.25				1.15%
Ag 328.068†	-15.4	-0.00011	mg/L	0.000187	-0.00011	mg/L	0.000187	163.86%
Al 308.215†	-108.8	-0.1176	mg/L	0.01523	-0.1176	mg/L	0.01523	12.96%
As 188.979†	7.3	0.01178	mg/L	0.000404	0.01178	mg/L	0.000404	3.43%
B 249.677†	-4.7	-0.00083	mg/L	0.001480	-0.00083	mg/L	0.001480	178.80%
Ba 233.527†	-3.4	-0.00098	mg/L	0.002256	-0.00098	mg/L	0.002256	231.36%
Be 313.042†	-130.0	-0.00029	mg/L	0.000038	-0.00029	mg/L	0.000038	13.34%
Ca 317.933†	-15.3	-0.00261	mg/L	0.001980	-0.00261	mg/L	0.001980	75.92%
Cd 228.802†	-10.8	-0.00071	mg/L	0.000100	-0.00071	mg/L	0.000100	14.08%
Co 228.616†	-20.9	-0.00118	mg/L	0.000157	-0.00118	mg/L	0.000157	13.30%
Cr 267.716†	22.6	0.00996	mg/L	0.001339	0.00996	mg/L	0.001339	13.44%
Cu 324.752†	35.0	0.00023	mg/L	0.000049	0.00023	mg/L	0.000049	21.97%
Fe 273.955†	2.8	0.00313	mg/L	0.000959	0.00313	mg/L	0.000959	30.63%
K 766.490†	-13.1	-0.01180	mg/L	0.013451	-0.01180	mg/L	0.013451	114.03%
Mg 279.077†	0.3	0.00043	mg/L	0.004342	0.00043	mg/L	0.004342	>999.9%
Mn 257.610†	-25.9	-0.00079	mg/L	0.000171	-0.00079	mg/L	0.000171	21.65%
Mo 202.031†	-1.5	-0.00014	mg/L	0.000203	-0.00014	mg/L	0.000203	148.88%
Na 589.592†	-227.7	-0.02632	mg/L	0.002083	-0.02632	mg/L	0.002083	7.92%
Na 330.237†	0.5	0.02643	mg/L	0.121126	0.02643	mg/L	0.121126	458.28%
Ni 231.604†	-4.7	-0.00229	mg/L	0.001900	-0.00229	mg/L	0.001900	82.93%
Pb 220.353†	43.4	0.00837	mg/L	0.000402	0.00837	mg/L	0.000402	4.80%
Sb 206.836†	-6.4	-0.00367	mg/L	0.000543	-0.00367	mg/L	0.000543	14.78%
Se 196.026†	2.6	0.00412	mg/L	0.008247	0.00412	mg/L	0.008247	200.09%
Si 288.158†	12.3	0.01619	mg/L	0.007928	0.01619	mg/L	0.007928	48.96%
Sn 189.927†	7.9	0.00304	mg/L	0.001170	0.00304	mg/L	0.001170	38.45%
Sr 421.552†	-90.9	-0.00021	mg/L	0.000030	-0.00021	mg/L	0.000030	14.69%
Ti 334.903†	8.0	0.00061	mg/L	0.000743	0.00061	mg/L	0.000743	121.77%
Tl 190.801†	-8.6	-0.00695	mg/L	0.002912	-0.00695	mg/L	0.002912	41.91%
V 292.402†	3.0	0.00013	mg/L	0.000626	0.00013	mg/L	0.000626	482.77%
Zn 206.200†	4.8	0.00292	mg/L	0.001051	0.00292	mg/L	0.001051	35.96%

Sequence No.: 42
Sample ID: DI - 2
Dilution: 1X
Wash Time: 37

Autosampler Location: 10
Date Collected: 11/18/2020 8:41:08 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: DI - 2

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: DI - 2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1514991.2	107.2	%	0.70				0.66%
ScR 361.383	163543.4	108.2	%	0.87				0.80%
Ag 328.068†	-39.4	-0.00029	mg/L	0.000017	-0.00029	mg/L	0.000017	5.88%
Al 308.215†	-108.9	-0.1176	mg/L	0.01386	-0.1176	mg/L	0.01386	11.79%
As 188.979†	5.5	0.00889	mg/L	0.005377	0.00889	mg/L	0.005377	60.51%
B 249.677†	-8.9	-0.00157	mg/L	0.002182	-0.00157	mg/L	0.002182	139.39%
Ba 233.527†	-6.5	-0.00185	mg/L	0.000708	-0.00185	mg/L	0.000708	38.32%
Be 313.042†	-126.8	-0.00028	mg/L	0.000083	-0.00028	mg/L	0.000083	29.68%
Ca 317.933†	-8.8	-0.00151	mg/L	0.002210	-0.00151	mg/L	0.002210	146.32%
Cd 228.802†	-9.3	-0.00061	mg/L	0.000079	-0.00061	mg/L	0.000079	12.97%
Co 228.616†	-21.5	-0.00121	mg/L	0.000407	-0.00121	mg/L	0.000407	33.62%
Cr 267.716†	21.4	0.00943	mg/L	0.004833	0.00943	mg/L	0.004833	51.26%
Cu 324.752†	50.3	0.00032	mg/L	0.000163	0.00032	mg/L	0.000163	50.31%
Fe 273.955†	-0.9	-0.00091	mg/L	0.001235	-0.00091	mg/L	0.001235	135.35%
K 766.490†	27.3	0.02455	mg/L	0.011358	0.02455	mg/L	0.011358	46.27%
Mg 279.077†	-2.2	-0.00310	mg/L	0.007399	-0.00310	mg/L	0.007399	238.72%
Mn 257.610†	-19.3	-0.00059	mg/L	0.000146	-0.00059	mg/L	0.000146	24.76%
Mo 202.031†	-7.5	-0.00069	mg/L	0.000352	-0.00069	mg/L	0.000352	51.16%
Na 589.592†	-245.9	-0.02843	mg/L	0.000358	-0.02843	mg/L	0.000358	1.26%
Na 330.237†	-6.5	-0.3687	mg/L	0.51306	-0.3687	mg/L	0.51306	139.15%
Ni 231.604†	-3.9	-0.00188	mg/L	0.002085	-0.00188	mg/L	0.002085	110.82%
Pb 220.353†	43.2	0.00832	mg/L	0.001126	0.00832	mg/L	0.001126	13.52%
Sb 206.836†	-6.6	-0.00377	mg/L	0.002669	-0.00377	mg/L	0.002669	70.78%
Se 196.026†	-0.9	-0.00150	mg/L	0.003675	-0.00150	mg/L	0.003675	244.52%
Si 288.158†	4.7	0.00624	mg/L	0.006327	0.00624	mg/L	0.006327	101.41%
Sn 189.927†	9.2	0.00352	mg/L	0.001197	0.00352	mg/L	0.001197	33.99%
Sr 421.552†	-50.6	-0.00012	mg/L	0.000075	-0.00012	mg/L	0.000075	65.02%
Ti 334.903†	-2.8	-0.00022	mg/L	0.001100	-0.00022	mg/L	0.001100	507.69%
Tl 190.801†	-8.3	-0.00674	mg/L	0.002191	-0.00674	mg/L	0.002191	32.52%
V 292.402†	-19.6	-0.00033	mg/L	0.000150	-0.00033	mg/L	0.000150	45.33%
Zn 206.200†	4.0	0.00242	mg/L	0.000680	0.00242	mg/L	0.000680	28.08%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00015	Instrument:	ICP2
Calibration Date:	12/03/2020 14:04		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Lead	0	0	0		10	7156.317	0		0			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	DL00015	Instrument:	ICP2
Calibration Date:	12/03/2020 14:04		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Lead	3578.159	141.4	1.0000			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: 12/2/2020 Analysis Date: 12/3/2020 Analyst: SD

LR Date: 12/2/2020 Sequence: SIL0061 Page: 1 of 4

All corrections made by analyst unless otherwise noted. CALIB.: DL00015

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CAL1	I10813		
		-CAL2	I11038		
		-CAL3	I11039		
		-CAL4	I11040		
		-CAL5	I11041		
		-ICV1	I10589		
		-ICB1	I10813		
		-CRL1	I10665		
		-IFA1	I10667		
		-IFB1	I6931		
CV→CCV1		-CCV1	I10589		
CB→CCB1		-CCB1	I10813		Mo↑
		BIK0446-BLK2	TWC		Ag & V only
		20K0325-02		20	
		-03			
		-04			
		SEQ-IBL1	—		
		BIK0408-DUP2	SWC	2	As only
		20K0126-01			
		BIK0408-MS2			
		-MSD2			
		BIK0446-BS2	TWC		Ag & V only
		SEQ-CCV2			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — Analysis Date: 12/3/2020 Analyst: SD
LR Date: — Sequence: — Page: 2 of 4

All corrections made by analyst unless otherwise noted. SD 12/3/2020

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CCB2			
		BIK0645-BLK1	TWC		
		20K0286-04	LEN	5	
		↓ -05	↓	↓	
		BIK0594-DUP1	↓	↓	
		20K0287-01	↓	↓	
		BIK0594-MS1	↓	↓	
		BIK0529-DUP1	SWC	2	
		20K0222-01	↓	↓	
		BIK0529-MS1	↓	↓	Ag %R ↓
		BIK0645-BS1	TWC		
		SEQ-CCV3			
		↓ -CCB3			
		BIK0738-BLK1	LEN	5	No Pb
		BIL0040-BLK1	TWC		No Pb, Fe, Mg, Zn
		20K0326-01	↓		No Pb, Zn
		20K0345-01	↓		No Zn No Pb
		20K0327-01	LEN	5	↓
		20K0328-01	↓	↓	↓
		20K0335-01	TWC	↓	No Pb, Zn
		20K0411-01	TWC	↓	↓
		SEQ-IBL2			
		BIL0040-BS1	TWC		No Fe, Mg, Pb, Zn

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — **Analysis Date:** 12/3/2020 **Analyst:** SD

LR Date: — **Sequence:** — **Page:** 3 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CCV4			B, Fe, K, Mg, Na, Pb, Sb, Se, Si, Sn, Sr, Zn ↑
		↓ -CCB4			
	✓	↓ -CAL3			
	↓	↓ -CAL2			
	↓	↓ -CAL5			
		↓ -CCV5			Sb, Si, Sn ↑
		↓ -CCB5			
	✓	20K0183-01	SWC	2	Fe > LR ; R.R @ 5x
		↓ -02	↓	↓	
		↓ -03	↓	↓	
		↓ -04	↓	↓	
		20K0199-01	LEN	5	
		↓ -02	↓	↓	
		↓ -03	↓	↓	
		20K0200-01	↓	↓	
		↓ -02	↓	↓	
		↓ -03	↓	↓	
		SEQ-CCV6			Sb + Sn ↑
		↓ -CCB6			
		BIL0006-BLK1	LEN	5	
		20K0394-02	↓	↓	
		↓ -03	↓	↓	
		20K0408-01	↓	↓	

Analytical Resources, Incorporated
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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — Analysis Date: 12/3/2020 Analyst: SD
LR Date: — Sequence: — Page: 4 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		20K409-01	LEN	5	
		BIL0006-DUP1	↓	↓	
		20K0394-01			
		BIL0006-MS1			
		20K0237-05	TWC		
		20K0213-01	SWC	2	SCR NOISY NO Ba, Cr
		SEQ-CCV7			Sb & Sn↑
		↓ -CCB7			
		20K0238-01	SWC	2	
		-02	↓	↓	
	✓	-03			Fe>LR; R.R@5x
		↓ -04			
		BIK0645-DUP1	TWC		
		20K0258-01	↓		
		BIK0645-MS1			
		20K0261-01			SCR NOISY No Cr, Ni, Zn
		20K0183-01	SWC	5	
		SEQ-IBL3			
		-CCV8			Sb, Si, Sn, Ti↑
		↓ -CCB8			Al↓
		RINSE/DI			
			SD 12/3/2020		

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

12/3/2020 8:54:17 AM Hg ReAlign... Actual peak offset (nm): 0.003
Drift (nm): 0.000 Slit adjustment: 0

Analysis Begun

Start Time: 12/3/2020 8:58:05 AM
Plasma On Time: 12/3/2020 8:08:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\BLKS.sif
Batch ID:
Results Data Set: I2201203
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded
Method Name: ELMT7300bcESI2FAST
Method Last Saved: 12/3/2020 8:52:33 AM
IEC File: IEC120220.iec
MSF File:
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

~~**Sequence No.: 1**~~
~~**Autosampler Location: 1**~~
~~**Sample ID: B1**~~
TH 12-03-20
~~**Date Collected: 12/3/2020 8:58:16 AM**~~
~~**Data Type: Original**~~
~~**Dilution: 1X**~~

~~**Nebulizer Parameters: B1**~~

~~Analyte~~	~~Back Pressure~~	~~Flow~~
~~All~~	~~232.0 kPa~~	~~0.65 L/min~~

==
Analysis Begun

Start Time: 12/3/2020 2:04:14 PM
Plasma On Time: 12/3/2020 8:08:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==
Sequence No.: 1
Autosampler Location: 1
Sample ID: SEQ-CAL1
Date Collected: 12/3/2020 2:04:23 PM
Data Type: Original

Nebulizer Parameters: SEQ-CAL1

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: SEQ-CAL1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2168827.5	11709.79	0.54%	100.0	%
ScR 361.383	232660.8	246.09	0.11%	100.0	%
Ag 328.068†	426.1	51.72	12.14%	[0.00]	mg/L
Al 308.215†	-483.0	15.35	3.18%	[0.00]	mg/L
As 188.979†	-4.8	3.12	65.27%	[0.00]	mg/L
B 249.677†	-287.4	7.63	2.65%	[0.00]	mg/L
Ba 233.527†	7.5	0.96	12.71%	[0.00]	mg/L
Be 313.042†	1587.8	22.81	1.44%	[0.00]	mg/L
Ca 317.933†	421.1	14.03	3.33%	[0.00]	mg/L
Cd 228.802†	251.6	3.45	1.37%	[0.00]	mg/L
Co 228.616†	73.8	7.18	9.73%	[0.00]	mg/L
Cr 267.716†	-162.0	4.55	2.81%	[0.00]	mg/L
Cu 324.752†	1593.7	24.75	1.55%	[0.00]	mg/L
Fe 273.955†	35.9	2.09	5.81%	[0.00]	mg/L
K 766.490†	148.9	35.48	23.83%	[0.00]	mg/L
Mg 279.077†	-260.3	7.80	3.00%	[0.00]	mg/L
Mn 257.610†	185.6	2.76	1.49%	[0.00]	mg/L
Mo 202.031†	51.0	6.41	12.56%	[0.00]	mg/L
Na 589.592†	56.6	53.35	94.26%	[0.00]	mg/L
Na 330.237†	-232.4	8.39	3.61%	[0.00]	mg/L
Ni 231.604†	-103.3	7.61	7.37%	[0.00]	mg/L
Pb 220.353†	-0.8	0.67	87.44%	[0.00]	mg/L
Sb 206.836†	177.7	3.29	1.85%	[0.00]	mg/L
Se 196.026†	-29.9	4.40	14.70%	[0.00]	mg/L
Si 288.158†	-810.7	6.20	0.77%	[0.00]	mg/L
Sn 189.927†	-7.4	2.50	33.83%	[0.00]	mg/L
Sr 421.552†	1077.5	24.10	2.24%	[0.00]	mg/L
Ti 334.903†	89.3	35.51	39.78%	[0.00]	mg/L
Tl 190.801†	-13.9	2.99	21.59%	[0.00]	mg/L
V 292.402†	1643.2	31.62	1.92%	[0.00]	mg/L
Zn 206.200†	12.6	2.18	17.26%	[0.00]	mg/L

==

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: SEQ-CAL2 **Date Collected: 12/3/2020 2:08:47 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL2

Analyte	**Back Pressure**	**Flow**
All	234.0 kPa	0.65 L/min

Mean Data: SEQ-CAL2

Analyte	**Mean Corrected Intensity**	**Std.Dev.**	**RSD**	**Conc.**	**Calib Units**
ScA 357.253	2134782.5	21837.50	1.02%	98.43	%
ScR 361.383	227164.1	2032.64	0.89%	97.64	%
Ba 233.527†	71664.0	495.65	0.69%	[10]	mg/L
Cd 228.802†	300207.5	2008.73	0.67%	[10]	mg/L
Co 228.616†	343979.5	3727.95	1.08%	[10]	mg/L
Cr 267.716†	84548.7	621.35	0.73%	[10]	mg/L
Cu 324.752†	2113310.2	14337.72	0.68%	[10]	mg/L
Mn 257.610†	484229.9	3609.97	0.75%	[10]	mg/L
V 292.402†	1609948.1	12795.94	0.79%	[10]	mg/L

==

Sequence No.: 3
Sample ID: SEQ-CAL3
Wash Time: 37

Autosampler Location: 3
Date Collected: 12/3/2020 2:10:48 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CAL3

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: SEQ-CAL3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2135404.9	7044.35	0.33%	98.46	%
ScR 361.383	229436.4	725.35	0.32%	98.61	%
Ag 328.068†	172045.9	335.07	0.19%	[1.0]	mg/L
As 188.979†	14489.1	73.76	0.51%	[10]	mg/L
B 249.677†	49732.3	518.05	1.04%	[10]	mg/L
Be 313.042†	3523954.9	16192.45	0.46%	[5.0]	mg/L
Na 589.592†	251237.0	2903.04	1.16%	[50]	mg/L
Ni 231.604†	34875.1	328.49	0.94%	[10]	mg/L
Pb 220.353†	71563.2	119.51	0.17%	[10]	mg/L
Se 196.026†	11684.2	81.58	0.70%	[10]	mg/L
Sr 421.552†	2474197.0	8368.13	0.34%	[5]	mg/L
Tl 190.801†	18596.5	122.59	0.66%	[10]	mg/L
Zn 206.200†	34926.6	222.12	0.64%	[10]	mg/L

==

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: SEQ-CAL4 **Date Collected: 12/3/2020 2:13:21 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL4

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-CAL4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2167257.3	9919.62	0.46%	99.93	%
ScR 361.383	229351.8	1317.88	0.57%	98.58	%
Mo 202.031†	135920.6	522.29	0.38%	[10]	mg/L
Sb 206.836†	24372.4	111.27	0.46%	[10]	mg/L
Si 288.158†	15540.1	81.31	0.52%	[10]	mg/L
Sn 189.927†	38288.0	249.42	0.65%	[10]	mg/L
Ti 334.903†	189864.9	1045.47	0.55%	[10]	mg/L

==

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: SEQ-CAL5 **Date Collected: 12/3/2020 2:15:50 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL5

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-CAL5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1997062.1	13366.11	0.67%	92.08	%
ScR 361.383	224737.9	364.28	0.16%	96.59	%
Al 308.215†	36795.5	113.95	0.31%	[30]	mg/L
Ca 317.933†	334162.2	1666.96	0.50%	[30]	mg/L
Fe 273.955†	154759.9	769.95	0.50%	[100]	mg/L
K 766.490†	150954.3	760.44	0.50%	[100]	mg/L
Mg 279.077†	42927.3	221.61	0.52%	[30]	mg/L
Na 330.237†	2286.5	9.18	0.40%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	172000	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1227	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1449	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	4973	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	7166	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	704800	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	11140	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	30020	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	34400	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	8455	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	211300	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1548	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1510	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1431	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	48420	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	13590	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	5025	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	22.86	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3488	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7156	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2437	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1168	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1554	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3829	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	494800	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	18990	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1860	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	161000	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3493	0.00000	1.000000	

==

Analysis Begun

Start Time: 12/3/2020 2:20:59 PM
Plasma On Time: 12/3/2020 8:08:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==

Sequence No.: 1
Autosampler Location: 7
Sample ID: SEQ-ICV1
Date Collected: 12/3/2020 2:21:07 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SEQ-ICV1

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: SEQ-ICV1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2142050.3	98.77	%	0.343				0.35%
ScR 361.383	229262.3	98.54	%	0.169				0.17%
Ag 328.068†	180124.4	1.047	mg/L	0.0016	1.047	mg/L	0.0016	0.15%
Al 308.215†	2542.5	2.043	mg/L	0.0064	2.043	mg/L	0.0064	0.31%
As 188.979†	2788.5	2.033	mg/L	0.0043	2.033	mg/L	0.0043	0.21%
B 249.677†	5075.2	1.017	mg/L	0.0049	1.017	mg/L	0.0049	0.48%
Ba 233.527†	6947.9	0.9680	mg/L	0.00306	0.9680	mg/L	0.00306	0.32%
Be 313.042†	707782.0	1.003	mg/L	0.0052	1.003	mg/L	0.0052	0.52%
Ca 317.933†	21966.5	1.895	mg/L	0.0173	1.895	mg/L	0.0173	0.91%
Cd 228.802†	29795.3	0.9845	mg/L	0.00175	0.9845	mg/L	0.00175	0.18%
Co 228.616†	33048.1	0.9588	mg/L	0.00069	0.9588	mg/L	0.00069	0.07%
Cr 267.716†	8191.6	0.9687	mg/L	0.00120	0.9687	mg/L	0.00120	0.12%
Cu 324.752†	206187.4	0.9753	mg/L	0.00555	0.9753	mg/L	0.00555	0.57%
Fe 273.955†	3187.4	2.055	mg/L	0.0106	2.055	mg/L	0.0106	0.51%
K 766.490†	30508.5	20.21	mg/L	0.104	20.21	mg/L	0.104	0.51%
Mg 279.077†	2918.8	2.056	mg/L	0.0071	2.056	mg/L	0.0071	0.35%
Mn 257.610†	45265.1	0.9350	mg/L	0.00448	0.9350	mg/L	0.00448	0.48%
Mo 202.031†	13515.3	0.9943	mg/L	0.00569	0.9943	mg/L	0.00569	0.57%
Na 589.592†	255837.9	50.92	mg/L	0.454	50.92	mg/L	0.454	0.89%
Na 330.237†	1195.4	52.12	mg/L	0.254	52.12	mg/L	0.254	0.49%
Ni 231.604†	3497.0	1.004	mg/L	0.0028	1.004	mg/L	0.0028	0.28%
Pb 220.353†	14319.0	2.002	mg/L	0.0091	2.002	mg/L	0.0091	0.46%
Sb 206.836†	5266.8	2.159	mg/L	0.0012	2.159	mg/L	0.0012	0.05%
Se 196.026†	2391.2	2.046	mg/L	0.0184	2.046	mg/L	0.0184	0.90%
Si 288.158†	3244.3	2.093	mg/L	0.0068	2.093	mg/L	0.0068	0.33%
Sn 189.927†	3878.7	1.015	mg/L	0.0022	1.015	mg/L	0.0022	0.21%
Sr 421.552†	502700.1	1.016	mg/L	0.0090	1.016	mg/L	0.0090	0.88%
Ti 334.903†	19026.8	1.001	mg/L	0.0045	1.001	mg/L	0.0045	0.45%
Tl 190.801†	3770.4	2.020	mg/L	0.0096	2.020	mg/L	0.0096	0.48%
V 292.402†	156706.3	0.9777	mg/L	0.00228	0.9777	mg/L	0.00228	0.23%
Zn 206.200†	3457.5	0.9900	mg/L	0.00186	0.9900	mg/L	0.00186	0.19%

Sequence No.: 2
Sample ID: SEQ-ICB1

Autosampler Location: 1
Date Collected: 12/3/2020 2:26:53 PM
Data Type: Original

Dilution: 1X
Wash Time: 120

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-ICB1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-ICB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2105694.7	97.09	%	0.720				0.74%
ScR 361.383	224532.4	96.51	%	0.597				0.62%
Ag 328.068†	52.4	0.00030	mg/L	0.000443	0.00030	mg/L	0.000443	145.48%
Al 308.215†	-11.3	-0.00930	mg/L	0.007769	-0.00930	mg/L	0.007769	83.50%
As 188.979†	8.1	0.00577	mg/L	0.000792	0.00577	mg/L	0.000792	13.73%
B 249.677†	6.9	0.00140	mg/L	0.001363	0.00140	mg/L	0.001363	97.14%
Ba 233.527†	2.7	0.00038	mg/L	0.001517	0.00038	mg/L	0.001517	398.31%
Be 313.042†	78.2	0.00011	mg/L	0.000006	0.00011	mg/L	0.000006	5.56%
Ca 317.933†	0.3	0.00001	mg/L	0.001537	0.00001	mg/L	0.001537	>999.9%
Cd 228.802†	2.6	0.00006	mg/L	0.000179	0.00006	mg/L	0.000179	297.39%
Co 228.616†	2.7	0.00008	mg/L	0.000029	0.00008	mg/L	0.000029	38.17%
Cr 267.716†	-9.6	-0.00114	mg/L	0.000651	-0.00114	mg/L	0.000651	57.18%
Cu 324.752†	35.2	0.00016	mg/L	0.000148	0.00016	mg/L	0.000148	89.92%
Fe 273.955†	3.7	0.00238	mg/L	0.001827	0.00238	mg/L	0.001827	76.69%
K 766.490†	-20.5	-0.01360	mg/L	0.030671	-0.01360	mg/L	0.030671	225.54%
Mg 279.077†	-1.0	-0.00068	mg/L	0.004429	-0.00068	mg/L	0.004429	653.16%
Mn 257.610†	7.7	0.00016	mg/L	0.000090	0.00016	mg/L	0.000090	56.58%
Mo 202.031†	66.1	0.00486	mg/L	0.000893	0.00486	mg/L	0.000893	18.37%
Na 589.592†	-61.3	-0.01219	mg/L	0.006049	-0.01219	mg/L	0.006049	49.60%
Na 330.237†	-5.6	-0.2426	mg/L	0.25242	-0.2426	mg/L	0.25242	104.03%
Ni 231.604†	-9.3	-0.00267	mg/L	0.000362	-0.00267	mg/L	0.000362	13.54%
Pb 220.353†	-3.5	-0.00050	mg/L	0.000333	-0.00050	mg/L	0.000333	66.95%
Sb 206.836†	7.2	0.00297	mg/L	0.002263	0.00297	mg/L	0.002263	76.16%
Se 196.026†	6.7	0.00573	mg/L	0.001486	0.00573	mg/L	0.001486	25.93%
Si 288.158†	-39.0	-0.02512	mg/L	0.004541	-0.02512	mg/L	0.004541	18.08%
Sn 189.927†	-2.1	-0.00056	mg/L	0.000660	-0.00056	mg/L	0.000660	117.92%
Sr 421.552†	90.4	0.00018	mg/L	0.000086	0.00018	mg/L	0.000086	47.17%
Ti 334.903†	33.2	0.00174	mg/L	0.001299	0.00174	mg/L	0.001299	74.44%
Tl 190.801†	1.0	0.00052	mg/L	0.002274	0.00052	mg/L	0.002274	435.75%
V 292.402†	56.6	0.00035	mg/L	0.000221	0.00035	mg/L	0.000221	62.91%
Zn 206.200†	0.9	0.00025	mg/L	0.000441	0.00025	mg/L	0.000441	177.07%

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Sequence No.: 3 **Autosampler Location: 301**
Sample ID: SEQ-CRL1 **Date Collected: 12/3/2020 2:31:09 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CRL1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-CRL1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2147741.5	99.03	%	0.500				0.50%
ScR 361.383	228789.8	98.34	%	0.122				0.12%
Ag 328.068†	549.7	0.00320	mg/L	0.000179	0.00320	mg/L	0.000179	5.59%
Al 308.215†	61.7	0.05015	mg/L	0.002715	0.05015	mg/L	0.002715	5.41%
As 188.979†	72.2	0.05078	mg/L	0.000775	0.05078	mg/L	0.000775	1.53%
B 249.677†	161.6	0.03243	mg/L	0.001308	0.03243	mg/L	0.001308	4.03%
Ba 233.527†	46.2	0.00644	mg/L	0.000383	0.00644	mg/L	0.000383	5.95%
Be 313.042†	710.8	0.00100	mg/L	0.000028	0.00100	mg/L	0.000028	2.77%
Ca 317.933†	722.8	0.06435	mg/L	0.001530	0.06435	mg/L	0.001530	2.38%
Cd 228.802†	65.7	0.00197	mg/L	0.000174	0.00197	mg/L	0.000174	8.82%
Co 228.616†	97.7	0.00282	mg/L	0.000238	0.00282	mg/L	0.000238	8.45%
Cr 267.716†	67.6	0.00800	mg/L	0.000592	0.00800	mg/L	0.000592	7.40%
Cu 324.752†	576.9	0.00273	mg/L	0.000087	0.00273	mg/L	0.000087	3.19%
Fe 273.955†	79.2	0.05114	mg/L	0.003316	0.05114	mg/L	0.003316	6.48%
K 766.490†	726.7	0.4814	mg/L	0.01682	0.4814	mg/L	0.01682	3.49%
Mg 279.077†	50.6	0.03543	mg/L	0.004208	0.03543	mg/L	0.004208	11.88%
Mn 257.610†	185.2	0.00382	mg/L	0.000060	0.00382	mg/L	0.000060	1.56%
Mo 202.031†	74.8	0.00550	mg/L	0.000296	0.00550	mg/L	0.000296	5.37%
Na 589.592†	2365.1	0.4707	mg/L	0.00511	0.4707	mg/L	0.00511	1.08%
Na 330.237†	8.6	0.3692	mg/L	0.22777	0.3692	mg/L	0.22777	61.70%
Ni 231.604†	27.7	0.00799	mg/L	0.000843	0.00799	mg/L	0.000843	10.55%
Pb 220.353†	142.4	0.01992	mg/L	0.000417	0.01992	mg/L	0.000417	2.09%
Sb 206.836†	124.0	0.05093	mg/L	0.001857	0.05093	mg/L	0.001857	3.65%
Se 196.026†	58.8	0.05028	mg/L	0.002824	0.05028	mg/L	0.002824	5.62%
Si 288.158†	145.3	0.09345	mg/L	0.006023	0.09345	mg/L	0.006023	6.45%
Sn 189.927†	74.1	0.01939	mg/L	0.001433	0.01939	mg/L	0.001433	7.39%
Sr 421.552†	561.9	0.00114	mg/L	0.000101	0.00114	mg/L	0.000101	8.91%
Ti 334.903†	160.3	0.00843	mg/L	0.000687	0.00843	mg/L	0.000687	8.15%
Tl 190.801†	94.3	0.05069	mg/L	0.001427	0.05069	mg/L	0.001427	2.81%
V 292.402†	424.8	0.00267	mg/L	0.000240	0.00267	mg/L	0.000240	8.99%
Zn 206.200†	69.5	0.01991	mg/L	0.001365	0.01991	mg/L	0.001365	6.85%

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Sequence No.: 4 **Autosampler Location: 302**
Sample ID: SEQ-IFA1 **Date Collected: 12/3/2020 2:35:25 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-IFA1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-IFA1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2049366.3	94.49	%	0.209				0.22%
ScR 361.383	214181.6	92.06	%	0.350				0.38%
Ag 328.068†	73.0	0.00042	mg/L	0.000385	0.00042	mg/L	0.000385	91.08%
Al 308.215†	257432.0	209.9	mg/L	1.34	209.9	mg/L	1.34	0.64%
As 188.979†	0.7	-0.00134	mg/L	0.006183	-0.00134	mg/L	0.006183	462.61%
B 249.677†	87.1	0.00054	mg/L	0.003283	0.00054	mg/L	0.003283	603.61%
Ba 233.527†	215.3	0.00073	mg/L	0.000517	0.00073	mg/L	0.000517	71.28%
Be 313.042†	131.3	0.00020	mg/L	0.000020	0.00020	mg/L	0.000020	10.25%
Ca 317.933†	1125982.2	101.1	mg/L	0.31	101.1	mg/L	0.31	0.30%
Cd 228.802†	69.0	0.00229	mg/L	0.000160	0.00229	mg/L	0.000160	6.96%
Co 228.616†	73.3	-0.00149	mg/L	0.000142	-0.00149	mg/L	0.000142	9.54%
Cr 267.716†	-30.2	0.00056	mg/L	0.001492	0.00056	mg/L	0.001492	264.75%
Cu 324.752†	-1578.9	0.00047	mg/L	0.000119	0.00047	mg/L	0.000119	25.32%
Fe 273.955†	314141.2	203.0	mg/L	0.26	203.0	mg/L	0.26	0.13%
K 766.490†	111.0	0.07353	mg/L	0.033917	0.07353	mg/L	0.033917	46.13%
Mg 279.077†	152981.4	106.8	mg/L	0.34	106.8	mg/L	0.34	0.32%
Mn 257.610†	132.6	-0.00039	mg/L	0.000022	-0.00039	mg/L	0.000022	5.61%
Mo 202.031†	99.9	0.00450	mg/L	0.000909	0.00450	mg/L	0.000909	20.19%
Na 589.592†	-65.0	-0.01293	mg/L	0.008361	-0.01293	mg/L	0.008361	64.64%
Na 330.237†	-21.9	-0.9562	mg/L	0.33288	-0.9562	mg/L	0.33288	34.81%
Ni 231.604†	-8.1	-0.00222	mg/L	0.002336	-0.00222	mg/L	0.002336	105.31%
Pb 220.353†	-445.3	-0.00746	mg/L	0.001392	-0.00746	mg/L	0.001392	18.66%
Sb 206.836†	228.6	0.07910	mg/L	0.002381	0.07910	mg/L	0.002381	3.01%
Se 196.026†	29.8	0.01721	mg/L	0.003351	0.01721	mg/L	0.003351	19.47%
Si 288.158†	-55.7	0.04259	mg/L	0.002921	0.04259	mg/L	0.002921	6.86%
Sn 189.927†	-133.3	-0.01630	mg/L	0.000937	-0.01630	mg/L	0.000937	5.75%
Sr 421.552†	488.1	0.00099	mg/L	0.000109	0.00099	mg/L	0.000109	11.02%
Ti 334.903†	119.9	0.00195	mg/L	0.001015	0.00195	mg/L	0.001015	52.08%
Tl 190.801†	-27.8	-0.01490	mg/L	0.004487	-0.01490	mg/L	0.004487	30.11%
V 292.402†	-1230.9	-0.00446	mg/L	0.000122	-0.00446	mg/L	0.000122	2.74%
Zn 206.200†	16.4	0.00471	mg/L	0.001077	0.00471	mg/L	0.001077	22.89%

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Sequence No.: 5 Autosampler Location: 303
Sample ID: SEQ-IFB1 Date Collected: 12/3/2020 2:39:57 PM
Data Type: Original
Dilution: 1X
Wash Time: 37 Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-IFB1

Analyte	Back Pressure	Flow
All	234.0 kPa	0.65 L/min

Mean Data: SEQ-IFB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2068392.1	95.37	%	0.800				0.84%
ScR 361.383	223060.1	95.87	%	1.320				1.38%
Ag 328.068†	178163.6	1.036	mg/L	0.0075	1.036	mg/L	0.0075	0.72%
Al 308.215†	255644.1	208.5	mg/L	1.69	208.5	mg/L	1.69	0.81%
As 188.979†	1457.6	1.004	mg/L	0.0129	1.004	mg/L	0.0129	1.29%
B 249.677†	101.3	0.00023	mg/L	0.001371	0.00023	mg/L	0.001371	603.18%
Ba 233.527†	7189.1	0.9723	mg/L	0.01336	0.9723	mg/L	0.01336	1.37%
Be 313.042†	721193.1	1.022	mg/L	0.0083	1.022	mg/L	0.0083	0.81%
Ca 317.933†	1153325.3	103.5	mg/L	0.68	103.5	mg/L	0.68	0.66%
Cd 228.802†	29142.7	0.9669	mg/L	0.00622	0.9669	mg/L	0.00622	0.64%
Co 228.616†	31984.5	0.9259	mg/L	0.00902	0.9259	mg/L	0.00902	0.97%
Cr 267.716†	8385.0	0.9959	mg/L	0.01377	0.9959	mg/L	0.01377	1.38%
Cu 324.752†	204181.9	0.9745	mg/L	0.00995	0.9745	mg/L	0.00995	1.02%
Fe 273.955†	317835.7	205.4	mg/L	1.71	205.4	mg/L	1.71	0.83%
K 766.490†	160.9	0.1066	mg/L	0.03168	0.1066	mg/L	0.03168	29.72%
Mg 279.077†	147829.2	103.2	mg/L	0.81	103.2	mg/L	0.81	0.79%
Mn 257.610†	46520.8	0.9577	mg/L	0.00807	0.9577	mg/L	0.00807	0.84%
Mo 202.031†	94.4	0.00410	mg/L	0.000440	0.00410	mg/L	0.000440	10.71%
Na 589.592†	-51.9	-0.01033	mg/L	0.012992	-0.01033	mg/L	0.012992	125.77%
Na 330.237†	-0.4	-0.3718	mg/L	0.07245	-0.3718	mg/L	0.07245	19.48%
Ni 231.604†	3414.0	0.9797	mg/L	0.01326	0.9797	mg/L	0.01326	1.35%
Pb 220.353†	6734.9	0.9962	mg/L	0.00782	0.9962	mg/L	0.00782	0.79%
Sb 206.836†	2876.0	1.155	mg/L	0.0116	1.155	mg/L	0.0116	1.00%
Se 196.026†	1219.8	1.035	mg/L	0.0128	1.035	mg/L	0.0128	1.24%
Si 288.158†	-5.8	0.09238	mg/L	0.006587	0.09238	mg/L	0.006587	7.13%
Sn 189.927†	-139.3	-0.01696	mg/L	0.000558	-0.01696	mg/L	0.000558	3.29%
Sr 421.552†	485.2	0.00098	mg/L	0.000068	0.00098	mg/L	0.000068	6.94%
Ti 334.903†	122.2	0.00177	mg/L	0.000403	0.00177	mg/L	0.000403	22.73%
Tl 190.801†	1773.9	0.9450	mg/L	0.01317	0.9450	mg/L	0.01317	1.39%
V 292.402†	150749.2	0.9434	mg/L	0.00914	0.9434	mg/L	0.00914	0.97%
Zn 206.200†	3389.3	0.9705	mg/L	0.01424	0.9705	mg/L	0.01424	1.47%

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Sequence No.: 6
Sample ID: SEQ-CCV 1
Dilution: 1X
Wash Time: 200

Autosampler Location: 7
Date Collected: 12/3/2020 2:46:45 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV 1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

SKD 12-03-20

Mean Data: SEQ-CCV 1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2147857.0	99.03	%	0.244				0.25%
ScR 361.383	224587.2	96.53	%	1.414				1.46%
Ag 328.068†	179376.5	1.043	mg/L	0.0050	1.043	mg/L	0.0050	0.48%
Al 308.215†	2573.4	2.068	mg/L	0.0349	2.068	mg/L	0.0349	1.69%
As 188.979†	2736.2	1.999	mg/L	0.0065	1.999	mg/L	0.0065	0.32%
B 249.677†	5164.8	1.035	mg/L	0.0236	1.035	mg/L	0.0236	2.28%
Ba 233.527†	7083.8	0.9869	mg/L	0.02130	0.9869	mg/L	0.02130	2.16%
Be 313.042†	710385.3	1.006	mg/L	0.0152	1.006	mg/L	0.0152	1.51%
Ca 317.933†	22338.6	1.928	mg/L	0.0247	1.928	mg/L	0.0247	1.28%
Cd 228.802†	29514.6	0.9754	mg/L	0.00520	0.9754	mg/L	0.00520	0.53%
Co 228.616†	33145.5	0.9616	mg/L	0.00601	0.9616	mg/L	0.00601	0.62%
Cr 267.716†	8354.0	0.9880	mg/L	0.02160	0.9880	mg/L	0.02160	2.19%
Cu 324.752†	204029.8	0.9651	mg/L	0.00330	0.9651	mg/L	0.00330	0.34%
Fe 273.955†	3245.7	2.093	mg/L	0.0495	2.093	mg/L	0.0495	2.37%
K 766.490†	31176.7	20.65	mg/L	0.287	20.65	mg/L	0.287	1.39%
Mg 279.077†	2983.7	2.101	mg/L	0.0408	2.101	mg/L	0.0408	1.94%
Mn 257.610†	46272.2	0.9558	mg/L	0.01332	0.9558	mg/L	0.01332	1.39%
Mo 202.031†	13395.2	0.9855	mg/L	0.00298	0.9855	mg/L	0.00298	0.30%
Na 589.592†	264481.3	52.64	mg/L	0.295	52.64	mg/L	0.295	0.56%
Na 330.237†	1207.8	52.65	mg/L	0.919	52.65	mg/L	0.919	1.75%
Ni 231.604†	3552.3	1.020	mg/L	0.0215	1.020	mg/L	0.0215	2.11%
Pb 220.353†	14213.4	1.988	mg/L	0.0104	1.988	mg/L	0.0104	0.52%
Sb 206.836†	5159.0	2.115	mg/L	0.0041	2.115	mg/L	0.0041	0.20%
Se 196.026†	2343.9	2.005	mg/L	0.0105	2.005	mg/L	0.0105	0.52%
Si 288.158†	3274.9	2.113	mg/L	0.0355	2.113	mg/L	0.0355	1.68%
Sn 189.927†	3813.9	0.9978	mg/L	0.00286	0.9978	mg/L	0.00286	0.29%
Sr 421.552†	518366.6	1.048	mg/L	0.0105	1.048	mg/L	0.0105	1.01%
Ti 334.903†	19333.3	1.017	mg/L	0.0183	1.017	mg/L	0.0183	1.80%
Tl 190.801†	3696.6	1.981	mg/L	0.0093	1.981	mg/L	0.0093	0.47%
V 292.402†	156059.9	0.9738	mg/L	0.00446	0.9738	mg/L	0.00446	0.46%
Zn 206.200†	3538.0	1.013	mg/L	0.0229	1.013	mg/L	0.0229	2.26%

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Sequence No.: 7
Sample ID: SEQ-CCB 1

Dilution: 1X
Wash Time: 120

Autosampler Location: 1
Date Collected: 12/3/2020 2:52:27 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB 1

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

SKD 12-03-20

Mean Data: SEQ-CCB 1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2117077.0	97.61	%	0.143				0.15%
ScR 361.383	225463.0	96.91	%	0.780				0.81%
Ag 328.068†	53.3	0.00031	mg/L	0.000231	0.00031	mg/L	0.000231	74.60%
Al 308.215†	-7.1	-0.00588	mg/L	0.018910	-0.00588	mg/L	0.018910	321.78%
As 188.979†	-0.4	-0.00022	mg/L	0.003163	-0.00022	mg/L	0.003163	>999.9%
B 249.677†	-0.3	-0.00004	mg/L	0.002546	-0.00004	mg/L	0.002546	>999.9%
Ba 233.527†	-3.5	-0.00048	mg/L	0.000460	-0.00048	mg/L	0.000460	95.58%
Be 313.042†	68.4	0.00010	mg/L	0.000037	0.00010	mg/L	0.000037	38.73%
Ca 317.933†	0.1	-0.00002	mg/L	0.001677	-0.00002	mg/L	0.001677	>999.9%
Cd 228.802†	6.1	0.00020	mg/L	0.000085	0.00020	mg/L	0.000085	41.58%
Co 228.616†	2.2	0.00006	mg/L	0.000113	0.00006	mg/L	0.000113	179.06%
Cr 267.716†	-6.4	-0.00075	mg/L	0.000527	-0.00075	mg/L	0.000527	70.02%
Cu 324.752†	62.3	0.00029	mg/L	0.000123	0.00029	mg/L	0.000123	41.98%
Fe 273.955†	0.3	0.00021	mg/L	0.001110	0.00021	mg/L	0.001110	534.74%
K 766.490†	11.9	0.00787	mg/L	0.034422	0.00787	mg/L	0.034422	437.44%
Mg 279.077†	-13.9	-0.00964	mg/L	0.012371	-0.00964	mg/L	0.012371	128.38%
Mn 257.610†	6.0	0.00012	mg/L	0.000109	0.00012	mg/L	0.000109	87.36%
Mo 202.031†	70.3	0.00517	mg/L	0.000794	0.00517	mg/L	0.000794	15.35%
Na 589.592†	-128.0	-0.02548	mg/L	0.003225	-0.02548	mg/L	0.003225	12.66%
Na 330.237†	8.8	0.3838	mg/L	0.24468	0.3838	mg/L	0.24468	63.75%
Ni 231.604†	-5.8	-0.00165	mg/L	0.001362	-0.00165	mg/L	0.001362	82.31%
Pb 220.353†	-2.1	-0.00029	mg/L	0.000224	-0.00029	mg/L	0.000224	76.50%
Sb 206.836†	8.3	0.00341	mg/L	0.001596	0.00341	mg/L	0.001596	46.85%
Se 196.026†	6.4	0.00546	mg/L	0.006212	0.00546	mg/L	0.006212	113.78%
Si 288.158†	-29.6	-0.01904	mg/L	0.003482	-0.01904	mg/L	0.003482	18.29%
Sn 189.927†	1.2	0.00031	mg/L	0.001231	0.00031	mg/L	0.001231	395.04%
Sr 421.552†	64.9	0.00013	mg/L	0.000020	0.00013	mg/L	0.000020	15.33%
Ti 334.903†	14.8	0.00078	mg/L	0.000622	0.00078	mg/L	0.000622	80.03%
Tl 190.801†	3.3	0.00180	mg/L	0.001595	0.00180	mg/L	0.001595	88.75%
V 292.402†	32.2	0.00020	mg/L	0.000170	0.00020	mg/L	0.000170	84.17%
Zn 206.200†	4.0	0.00115	mg/L	0.000715	0.00115	mg/L	0.000715	62.01%

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Analysis Begun

Start Time: 12/3/2020 3:05:46 PM
Plasma On Time: 12/3/2020 8:08:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 304
Sample ID: BIK0446-BLK2
Date Collected: 12/3/2020 3:05:55 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: BIK0446-BLK2

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0446-BLK2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2148199.0	99.05	%	0.174				0.18%
ScR 361.383	226222.0	97.23	%	1.773				1.82%
Ag 328.068†	38.4	0.00022	mg/L	0.000031	0.00022	mg/L	0.000031	13.68%
Al 308.215†	-5.1	-0.00417	mg/L	0.015639	-0.00417	mg/L	0.015639	375.47%
As 188.979†	-0.2	-0.00009	mg/L	0.000424	-0.00009	mg/L	0.000424	447.50%
B 249.677†	1.1	0.00023	mg/L	0.002760	0.00023	mg/L	0.002760	>999.9%
Ba 233.527†	0.2	0.00003	mg/L	0.000164	0.00003	mg/L	0.000164	558.27%
Be 313.042†	37.5	0.00005	mg/L	0.000020	0.00005	mg/L	0.000020	38.10%
Ca 317.933†	61.5	0.00552	mg/L	0.001838	0.00552	mg/L	0.001838	33.33%
Cd 228.802†	3.2	0.00011	mg/L	0.000107	0.00011	mg/L	0.000107	100.94%
Co 228.616†	-5.8	-0.00017	mg/L	0.000081	-0.00017	mg/L	0.000081	47.15%
Cr 267.716†	-2.3	-0.00028	mg/L	0.000954	-0.00028	mg/L	0.000954	346.77%
Cu 324.752†	30.7	0.00014	mg/L	0.000108	0.00014	mg/L	0.000108	74.33%
Fe 273.955†	6.8	0.00438	mg/L	0.000579	0.00438	mg/L	0.000579	13.22%
K 766.490†	33.6	0.02229	mg/L	0.021742	0.02229	mg/L	0.021742	97.55%
Mg 279.077†	1.7	0.00119	mg/L	0.018245	0.00119	mg/L	0.018245	>999.9%
Mn 257.610†	67.3	0.00139	mg/L	0.000172	0.00139	mg/L	0.000172	12.40%
Mo 202.031†	4.7	0.00034	mg/L	0.000254	0.00034	mg/L	0.000254	73.86%
Na 589.592†	-158.0	-0.03144	mg/L	0.003534	-0.03144	mg/L	0.003534	11.24%
Na 330.237†	2.5	0.1107	mg/L	0.22375	0.1107	mg/L	0.22375	202.04%
Ni 231.604†	-1.2	-0.00035	mg/L	0.001672	-0.00035	mg/L	0.001672	470.93%
Pb 220.353†	-1.4	-0.00020	mg/L	0.001291	-0.00020	mg/L	0.001291	659.04%
Sb 206.836†	-3.6	-0.00146	mg/L	0.001529	-0.00146	mg/L	0.001529	104.72%
Se 196.026†	2.9	0.00247	mg/L	0.000825	0.00247	mg/L	0.000825	33.41%
Si 288.158†	-13.2	-0.00846	mg/L	0.012849	-0.00846	mg/L	0.012849	151.81%
Sn 189.927†	-0.3	-0.00009	mg/L	0.000332	-0.00009	mg/L	0.000332	376.88%
Sr 421.552†	36.4	0.00007	mg/L	0.000110	0.00007	mg/L	0.000110	148.89%
Ti 334.903†	12.6	0.00066	mg/L	0.001008	0.00066	mg/L	0.001008	151.87%
Tl 190.801†	-2.0	-0.00108	mg/L	0.002491	-0.00108	mg/L	0.002491	230.61%
V 292.402†	-18.7	-0.00012	mg/L	0.000049	-0.00012	mg/L	0.000049	42.13%
Zn 206.200†	7.0	0.00200	mg/L	0.000165	0.00200	mg/L	0.000165	8.23%

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Sequence No.: 2 **Autosampler Location: 305**
Sample ID: 20K0325-02 **Date Collected: 12/3/2020 3:10:17 PM**
Data Type: Original
Dilution: 20X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0325-02

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0325-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2193093.5	101.1	%	0.54				0.54%
ScR 361.383	232971.2	100.1	%	1.19				1.19%
Ag 328.068†	64.3	0.00037	mg/L	0.000128	0.00747	mg/L	0.002556	34.20%
Al 308.215†	18.2	0.01482	mg/L	0.010886	0.2965	mg/L	0.21772	73.44%
As 188.979†	4.0	0.00278	mg/L	0.003196	0.05552	mg/L	0.063924	115.13%
B 249.677†	15.4	0.00298	mg/L	0.000643	0.05959	mg/L	0.012853	21.57%
Ba 233.527†	4.6	0.00064	mg/L	0.000757	0.01276	mg/L	0.015131	118.55%
Be 313.042†	-21.5	-0.00003	mg/L	0.000074	-0.00059	mg/L	0.001476	248.47%
Ca 317.933†	2198.5	0.1973	mg/L	0.00410	3.947	mg/L	0.0821	2.08%
Cd 228.802†	2.9	0.00009	mg/L	0.000038	0.00176	mg/L	0.000765	43.41%
Co 228.616†	-1.7	-0.00005	mg/L	0.000006	-0.00101	mg/L	0.000115	11.40%
Cr 267.716†	3.1	0.00036	mg/L	0.000541	0.00720	mg/L	0.010813	150.08%
Cu 324.752†	2648.8	0.01253	mg/L	0.000131	0.2507	mg/L	0.00263	1.05%
Fe 273.955†	28.3	0.01827	mg/L	0.000415	0.3653	mg/L	0.00830	2.27%
K 766.490†	458.6	0.3038	mg/L	0.01833	6.075	mg/L	0.3666	6.03%
Mg 279.077†	83.8	0.05855	mg/L	0.006581	1.171	mg/L	0.1316	11.24%
Mn 257.610†	17.5	0.00036	mg/L	0.000061	0.00723	mg/L	0.001224	16.92%
Mo 202.031†	7.7	0.00056	mg/L	0.000438	0.01126	mg/L	0.008753	77.77%
Na 589.592†	48665.2	9.685	mg/L	0.1294	193.7	mg/L	2.59	1.34%
Na 330.237†	218.8	9.565	mg/L	0.6570	191.3	mg/L	13.14	6.87%
Ni 231.604†	22.3	0.00638	mg/L	0.002444	0.1277	mg/L	0.04888	38.28%
Pb 220.353†	-12.4	-0.00175	mg/L	0.000720	-0.03504	mg/L	0.014399	41.09%
Sb 206.836†	-2.3	-0.00096	mg/L	0.000638	-0.01917	mg/L	0.012761	66.57%
Se 196.026†	1.3	0.00108	mg/L	0.001356	0.02151	mg/L	0.027121	126.07%
Si 288.158†	278.3	0.1791	mg/L	0.01277	3.582	mg/L	0.2554	7.13%
Sn 189.927†	0.1	0.00007	mg/L	0.000357	0.00137	mg/L	0.007134	522.00%
Sr 421.552†	356.5	0.00072	mg/L	0.000039	0.01441	mg/L	0.000776	5.38%
Ti 334.903†	2.4	0.00012	mg/L	0.000959	0.00235	mg/L	0.019186	815.52%
Tl 190.801†	0.1	0.00008	mg/L	0.000414	0.00153	mg/L	0.008276	539.89%
V 292.402†	-67.3	-0.00042	mg/L	0.000022	-0.00832	mg/L	0.000448	5.38%
Zn 206.200†	30.1	0.00862	mg/L	0.000988	0.1723	mg/L	0.01976	11.46%

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Sequence No.: 3
Sample ID: 20K0325-03

Dilution: 20X
Wash Time: 37

Autosampler Location: 306
Date Collected: 12/3/2020 3:14:33 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0325-03

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: 20K0325-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2227330.4	102.7	%	0.23				0.23%
ScR 361.383	236023.2	101.4	%	0.65				0.64%
Ag 328.068†	33.3	0.00019	mg/L	0.000155	0.00387	mg/L	0.003098	80.07%
Al 308.215†	2.1	0.00171	mg/L	0.015521	0.03411	mg/L	0.310416	910.04%
As 188.979†	-1.0	-0.00072	mg/L	0.001766	-0.01450	mg/L	0.035328	243.65%
B 249.677†	30.1	0.00591	mg/L	0.001937	0.1183	mg/L	0.03874	32.76%
Ba 233.527†	1.2	0.00016	mg/L	0.000196	0.00316	mg/L	0.003919	124.04%
Be 313.042†	-36.5	-0.00005	mg/L	0.000019	-0.00103	mg/L	0.000385	37.50%
Ca 317.933†	5481.0	0.4921	mg/L	0.00144	9.841	mg/L	0.0288	0.29%
Cd 228.802†	0.1	0.00001	mg/L	0.000092	0.00020	mg/L	0.001845	945.33%
Co 228.616†	0.3	0.00001	mg/L	0.000029	0.00015	mg/L	0.000572	391.18%
Cr 267.716†	23.7	0.00280	mg/L	0.000728	0.05609	mg/L	0.014553	25.94%
Cu 324.752†	1648.3	0.00780	mg/L	0.000122	0.1560	mg/L	0.00244	1.57%
Fe 273.955†	32.4	0.02095	mg/L	0.002951	0.4189	mg/L	0.05901	14.09%
K 766.490†	126.1	0.08356	mg/L	0.011657	1.671	mg/L	0.2331	13.95%
Mg 279.077†	148.1	0.1035	mg/L	0.00834	2.070	mg/L	0.1668	8.06%
Mn 257.610†	26.6	0.00055	mg/L	0.000032	0.01096	mg/L	0.000630	5.75%
Mo 202.031†	2.7	0.00019	mg/L	0.000147	0.00376	mg/L	0.002931	77.94%
Na 589.592†	2508.0	0.4991	mg/L	0.00627	9.983	mg/L	0.1255	1.26%
Na 330.237†	25.3	1.103	mg/L	0.3739	22.06	mg/L	7.477	33.89%
Ni 231.604†	18.0	0.00514	mg/L	0.000258	0.1029	mg/L	0.00516	5.02%
Pb 220.353†	-1.8	-0.00026	mg/L	0.001014	-0.00520	mg/L	0.020277	389.65%
Sb 206.836†	-10.5	-0.00434	mg/L	0.001123	-0.08678	mg/L	0.022466	25.89%
Se 196.026†	5.3	0.00449	mg/L	0.005305	0.08982	mg/L	0.106098	118.13%
Si 288.158†	339.4	0.2185	mg/L	0.00057	4.370	mg/L	0.0113	0.26%
Sn 189.927†	-1.5	-0.00029	mg/L	0.000608	-0.00589	mg/L	0.012167	206.51%
Sr 421.552†	945.4	0.00191	mg/L	0.000114	0.03821	mg/L	0.002272	5.95%
Ti 334.903†	-3.8	-0.00022	mg/L	0.000412	-0.00443	mg/L	0.008242	185.98%
Tl 190.801†	-0.6	-0.00031	mg/L	0.001873	-0.00611	mg/L	0.037456	612.98%
V 292.402†	-49.1	-0.00029	mg/L	0.000131	-0.00588	mg/L	0.002628	44.69%
Zn 206.200†	12.2	0.00350	mg/L	0.000254	0.07002	mg/L	0.005086	7.26%

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Sequence No.: 4
Sample ID: 20K0325-04

Dilution: 20X
Wash Time: 37

Autosampler Location: 307
Date Collected: 12/3/2020 3:18:49 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0325-04

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0325-04

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2209896.8	101.9	%	0.46				0.45%
ScR 361.383	235592.3	101.3	%	0.25				0.25%
Ag 328.068†	59.7	0.00035	mg/L	0.000101	0.00694	mg/L	0.002018	29.08%
Al 308.215†	-2.7	-0.00216	mg/L	0.008491	-0.04328	mg/L	0.169819	392.34%
As 188.979†	1.4	0.00100	mg/L	0.001527	0.01990	mg/L	0.030531	153.41%
B 249.677†	8.5	0.00149	mg/L	0.001494	0.02978	mg/L	0.029875	100.33%
Ba 233.527†	-2.0	-0.00028	mg/L	0.000499	-0.00555	mg/L	0.009985	180.02%
Be 313.042†	17.9	0.00003	mg/L	0.000021	0.00051	mg/L	0.000416	80.99%
Ca 317.933†	408.8	0.03650	mg/L	0.000235	0.7300	mg/L	0.00471	0.65%
Cd 228.802†	1.8	0.00006	mg/L	0.000106	0.00118	mg/L	0.002128	180.96%
Co 228.616†	5.5	0.00016	mg/L	0.000088	0.00315	mg/L	0.001767	56.15%
Cr 267.716†	11.3	0.00134	mg/L	0.000138	0.02682	mg/L	0.002758	10.29%
Cu 324.752†	15980.7	0.07562	mg/L	0.000449	1.512	mg/L	0.0090	0.59%
Fe 273.955†	30.3	0.01957	mg/L	0.000650	0.3914	mg/L	0.01300	3.32%
K 766.490†	2613.5	1.731	mg/L	0.0463	34.63	mg/L	0.925	2.67%
Mg 279.077†	7.4	0.00515	mg/L	0.009477	0.1030	mg/L	0.18954	184.03%
Mn 257.610†	19.4	0.00040	mg/L	0.000120	0.00801	mg/L	0.002395	29.91%
Mo 202.031†	0.6	0.00004	mg/L	0.000197	0.00084	mg/L	0.003943	471.04%
Na 589.592†	238484.6	47.46	mg/L	0.474	949.2	mg/L	9.48	1.00%
Na 330.237†	1076.5	47.08	mg/L	1.129	941.6	mg/L	22.58	2.40%
Ni 231.604†	8.2	0.00236	mg/L	0.000431	0.04715	mg/L	0.008622	18.29%
Pb 220.353†	-6.6	-0.00104	mg/L	0.000594	-0.02075	mg/L	0.011887	57.28%
Sb 206.836†	-4.8	-0.00201	mg/L	0.000390	-0.04013	mg/L	0.007801	19.44%
Se 196.026†	7.2	0.00618	mg/L	0.001740	0.1236	mg/L	0.03480	28.15%
Si 288.158†	551.3	0.3548	mg/L	0.00187	7.096	mg/L	0.0375	0.53%
Sn 189.927†	0.8	0.00021	mg/L	0.001141	0.00412	mg/L	0.022819	553.33%
Sr 421.552†	23.4	0.00005	mg/L	0.000106	0.00095	mg/L	0.002129	225.24%
Ti 334.903†	6.0	0.00031	mg/L	0.001132	0.00628	mg/L	0.022633	360.36%
Tl 190.801†	3.0	0.00161	mg/L	0.001826	0.03226	mg/L	0.036519	113.20%
V 292.402†	-18.6	-0.00011	mg/L	0.000290	-0.00220	mg/L	0.005791	262.79%
Zn 206.200†	24.1	0.00690	mg/L	0.001060	0.1379	mg/L	0.02121	15.38%

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Sequence No.: 5 **Autosampler Location: 308**
Sample ID: SEQ-IBL1 **Date Collected: 12/3/2020 3:23:20 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-IBL1

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-IBL1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2176580.5	100.4	%	0.56				0.56%
ScR 361.383	230675.8	99.15	%	0.203				0.21%
Ag 328.068†	33.4	0.00019	mg/L	0.000321	0.00019	mg/L	0.000321	165.20%
Al 308.215†	1.4	0.00117	mg/L	0.006139	0.00117	mg/L	0.006139	525.04%
As 188.979†	3.2	0.00233	mg/L	0.001590	0.00233	mg/L	0.001590	68.36%
B 249.677†	-3.2	-0.00063	mg/L	0.000661	-0.00063	mg/L	0.000661	104.20%
Ba 233.527†	6.3	0.00088	mg/L	0.000811	0.00088	mg/L	0.000811	91.65%
Be 313.042†	-6.4	-0.00001	mg/L	0.000028	-0.00001	mg/L	0.000028	336.09%
Ca 317.933†	0.6	0.00006	mg/L	0.001080	0.00006	mg/L	0.001080	>999.9%
Cd 228.802†	1.3	0.00003	mg/L	0.000100	0.00003	mg/L	0.000100	313.85%
Co 228.616†	-1.9	-0.00006	mg/L	0.000167	-0.00006	mg/L	0.000167	298.15%
Cr 267.716†	1.9	0.00022	mg/L	0.001022	0.00022	mg/L	0.001022	463.48%
Cu 324.752†	-6.1	-0.00003	mg/L	0.000210	-0.00003	mg/L	0.000210	723.70%
Fe 273.955†	0.7	0.00047	mg/L	0.001654	0.00047	mg/L	0.001654	348.39%
K 766.490†	6.4	0.00426	mg/L	0.019593	0.00426	mg/L	0.019593	459.92%
Mg 279.077†	0.2	0.00016	mg/L	0.016121	0.00016	mg/L	0.016121	>999.9%
Mn 257.610†	0.8	0.00002	mg/L	0.000047	0.00002	mg/L	0.000047	294.40%
Mo 202.031†	0.3	0.00002	mg/L	0.000733	0.00002	mg/L	0.000733	>999.9%
Na 589.592†	-99.7	-0.01984	mg/L	0.006242	-0.01984	mg/L	0.006242	31.46%
Na 330.237†	5.9	0.2589	mg/L	0.13473	0.2589	mg/L	0.13473	52.04%
Ni 231.604†	-6.4	-0.00185	mg/L	0.001749	-0.00185	mg/L	0.001749	94.72%
Pb 220.353†	-0.3	-0.00004	mg/L	0.000547	-0.00004	mg/L	0.000547	>999.9%
Sb 206.836†	-7.5	-0.00308	mg/L	0.001425	-0.00308	mg/L	0.001425	46.21%
Se 196.026†	5.0	0.00424	mg/L	0.004604	0.00424	mg/L	0.004604	108.59%
Si 288.158†	-6.5	-0.00419	mg/L	0.008088	-0.00419	mg/L	0.008088	192.91%
Sn 189.927†	-4.0	-0.00106	mg/L	0.000653	-0.00106	mg/L	0.000653	61.73%
Sr 421.552†	50.3	0.00010	mg/L	0.000042	0.00010	mg/L	0.000042	40.89%
Ti 334.903†	19.4	0.00102	mg/L	0.001034	0.00102	mg/L	0.001034	101.10%
Tl 190.801†	0.3	0.00019	mg/L	0.001031	0.00019	mg/L	0.001031	546.30%
V 292.402†	-65.1	-0.00040	mg/L	0.000094	-0.00040	mg/L	0.000094	23.28%
Zn 206.200†	0.6	0.00016	mg/L	0.000226	0.00016	mg/L	0.000226	142.31%

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Sequence No.: 6 **Autosampler Location: 309**
Sample ID: BIK0408-DUP2 **Date Collected: 12/3/2020 3:27:35 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0408-DUP2

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0408-DUP2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2236296.2	103.1	%	0.42				0.41%
ScR 361.383	236186.4	101.5	%	1.04				1.02%
Ag 328.068†	-100.2	-0.00065	mg/L	0.000087	-0.00130	mg/L	0.000174	13.39%
Al 308.215†	163283.1	133.2	mg/L	1.25	266.3	mg/L	2.50	0.94%
As 188.979†	-1020.7	0.06922	mg/L	0.006463	0.1384	mg/L	0.01293	9.34%
B 249.677†	305.5	0.03391	mg/L	0.002416	0.06783	mg/L	0.004832	7.12%
Ba 233.527†	4132.7	0.5486	mg/L	0.00687	1.097	mg/L	0.0137	1.25%
Be 313.042†	1893.8	0.00208	mg/L	0.000034	0.00416	mg/L	0.000068	1.64%
Ca 317.933†	485265.0	43.56	mg/L	0.499	87.13	mg/L	0.997	1.14%
Cd 228.802†	76.2	0.00576	mg/L	0.000276	0.01153	mg/L	0.000552	4.79%
Co 228.616†	2195.6	0.04784	mg/L	0.000437	0.09568	mg/L	0.000874	0.91%
Cr 267.716†	1332.8	0.1633	mg/L	0.00147	0.3265	mg/L	0.00294	0.90%
Cu 324.752†	88811.2	0.4269	mg/L	0.00236	0.8539	mg/L	0.00473	0.55%
Fe 273.955†	303828.9	196.3	mg/L	1.96	392.6	mg/L	3.92	1.00%
K 766.490†	12526.4	8.298	mg/L	0.0722	16.60	mg/L	0.144	0.87%
Mg 279.077†	44045.3	30.72	mg/L	0.289	61.44	mg/L	0.577	0.94%
Mn 257.610†	72618.3	1.497	mg/L	0.0160	2.995	mg/L	0.0320	1.07%
Mo 202.031†	91.8	0.00571	mg/L	0.000234	0.01143	mg/L	0.000469	4.10%
Na 589.592†	56110.4	11.17	mg/L	0.146	22.33	mg/L	0.292	1.31%
Na 330.237†	239.0	11.62	mg/L	0.167	23.23	mg/L	0.333	1.43%
Ni 231.604†	439.8	0.1262	mg/L	0.00397	0.2523	mg/L	0.00793	3.14%
Pb 220.353†	1936.0	0.3023	mg/L	0.00134	0.6046	mg/L	0.00268	0.44%
Sb 206.836†	165.5	0.06736	mg/L	0.001943	0.1347	mg/L	0.00389	2.88%
Se 196.026†	17.3	0.01005	mg/L	0.004469	0.02010	mg/L	0.008939	44.47%
Si 288.158†	26827.2	17.30	mg/L	0.183	34.60	mg/L	0.366	1.06%
Sn 189.927†	622.4	0.1734	mg/L	0.00198	0.3468	mg/L	0.00396	1.14%
Sr 421.552†	330339.9	0.6676	mg/L	0.00752	1.335	mg/L	0.0150	1.13%
Ti 334.903†	130918.6	6.893	mg/L	0.0527	13.79	mg/L	0.105	0.76%
Tl 190.801†	-14.9	-0.00959	mg/L	0.005444	-0.01917	mg/L	0.010888	56.79%
V 292.402†	55056.0	0.3431	mg/L	0.00265	0.6862	mg/L	0.00531	0.77%
Zn 206.200†	1700.9	0.4870	mg/L	0.00526	0.9740	mg/L	0.01052	1.08%

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Sequence No.: 7
Sample ID: 20K0126-01

Dilution: 2X
Wash Time: 37

Autosampler Location: 310
Date Collected: 12/3/2020 3:31:37 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0126-01

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: 20K0126-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2244042.1	103.5	%	0.49				0.47%
ScR 361.383	239260.9	102.8	%	0.49				0.48%
Ag 328.068†	-46.1	-0.00034	mg/L	0.000149	-0.00068	mg/L	0.000299	44.27%
Al 308.215†	150053.9	122.4	mg/L	0.28	244.7	mg/L	0.55	0.23%
As 188.979†	-977.2	0.05320	mg/L	0.005872	0.1064	mg/L	0.01174	11.04%
B 249.677†	256.0	0.02595	mg/L	0.000129	0.05190	mg/L	0.000257	0.50%
Ba 233.527†	3597.2	0.4773	mg/L	0.00180	0.9546	mg/L	0.00361	0.38%
Be 313.042†	1765.5	0.00192	mg/L	0.000032	0.00385	mg/L	0.000064	1.66%
Ca 317.933†	475688.8	42.70	mg/L	0.125	85.40	mg/L	0.250	0.29%
Cd 228.802†	64.3	0.00523	mg/L	0.000115	0.01046	mg/L	0.000229	2.19%
Co 228.616†	2049.2	0.04477	mg/L	0.000375	0.08953	mg/L	0.000749	0.84%
Cr 267.716†	1187.5	0.1453	mg/L	0.00076	0.2905	mg/L	0.00152	0.52%
Cu 324.752†	108043.6	0.5170	mg/L	0.00296	1.034	mg/L	0.0059	0.57%
Fe 273.955†	266105.5	171.9	mg/L	1.28	343.9	mg/L	2.56	0.74%
K 766.490†	10804.5	7.157	mg/L	0.0342	14.31	mg/L	0.068	0.48%
Mg 279.077†	41802.1	29.16	mg/L	0.121	58.32	mg/L	0.241	0.41%
Mn 257.610†	70890.3	1.462	mg/L	0.0019	2.924	mg/L	0.0037	0.13%
Mo 202.031†	89.5	0.00558	mg/L	0.000036	0.01115	mg/L	0.000071	0.64%
Na 589.592†	55439.7	11.03	mg/L	0.068	22.07	mg/L	0.136	0.62%
Na 330.237†	234.1	11.33	mg/L	0.415	22.67	mg/L	0.830	3.66%
Ni 231.604†	421.0	0.1208	mg/L	0.00193	0.2416	mg/L	0.00386	1.60%
Pb 220.353†	2793.5	0.4197	mg/L	0.00168	0.8394	mg/L	0.00336	0.40%
Sb 206.836†	202.3	0.08608	mg/L	0.000783	0.1722	mg/L	0.00157	0.91%
Se 196.026†	15.9	0.00893	mg/L	0.006702	0.01785	mg/L	0.013404	75.09%
Si 288.158†	27016.7	17.41	mg/L	0.078	34.83	mg/L	0.156	0.45%
Sn 189.927†	2172.3	0.5779	mg/L	0.00162	1.156	mg/L	0.0032	0.28%
Sr 421.552†	302340.5	0.6110	mg/L	0.00165	1.222	mg/L	0.0033	0.27%
Ti 334.903†	123124.3	6.483	mg/L	0.0181	12.97	mg/L	0.036	0.28%
Tl 190.801†	-17.2	-0.01079	mg/L	0.002069	-0.02157	mg/L	0.004139	19.18%
V 292.402†	52551.7	0.3272	mg/L	0.00189	0.6545	mg/L	0.00378	0.58%
Zn 206.200†	1592.6	0.4560	mg/L	0.00262	0.9120	mg/L	0.00524	0.57%

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Sequence No.: 8 **Autosampler Location: 311**
Sample ID: BIK0408-MS2 **Date Collected: 12/3/2020 3:35:39 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0408-MS2

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0408-MS2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2243918.1	103.5	%	0.99				0.96%
ScR 361.383	234787.8	100.9	%	0.57				0.56%
Ag 328.068†	82243.4	0.4780	mg/L	0.00478	0.9560	mg/L	0.00956	1.00%
Al 308.215†	165209.8	134.7	mg/L	0.67	269.4	mg/L	1.34	0.50%
As 188.979†	1632.4	1.886	mg/L	0.0059	3.773	mg/L	0.0119	0.32%
B 249.677†	292.5	0.03297	mg/L	0.001360	0.06594	mg/L	0.002720	4.13%
Ba 233.527†	17391.1	2.400	mg/L	0.0078	4.800	mg/L	0.0157	0.33%
Be 313.042†	340318.7	0.4815	mg/L	0.00220	0.9630	mg/L	0.00440	0.46%
Ca 317.933†	605944.2	54.36	mg/L	0.517	108.7	mg/L	1.03	0.95%
Cd 228.802†	14143.1	0.4665	mg/L	0.00552	0.9329	mg/L	0.01105	1.18%
Co 228.616†	17352.9	0.4886	mg/L	0.00574	0.9772	mg/L	0.01149	1.18%
Cr 267.716†	5244.0	0.6251	mg/L	0.00074	1.250	mg/L	0.0015	0.12%
Cu 324.752†	186193.4	0.8872	mg/L	0.00853	1.774	mg/L	0.0171	0.96%
Fe 273.955†	283798.0	183.4	mg/L	1.28	366.8	mg/L	2.55	0.70%
K 766.490†	26445.6	17.52	mg/L	0.069	35.04	mg/L	0.138	0.39%
Mg 279.077†	56178.3	39.21	mg/L	0.154	78.42	mg/L	0.308	0.39%
Mn 257.610†	92986.4	1.918	mg/L	0.0131	3.837	mg/L	0.0262	0.68%
Mo 202.031†	102.5	0.00623	mg/L	0.000438	0.01246	mg/L	0.000876	7.03%
Na 589.592†	109991.4	21.89	mg/L	0.230	43.78	mg/L	0.460	1.05%
Na 330.237†	482.1	22.06	mg/L	0.274	44.12	mg/L	0.548	1.24%
Ni 231.604†	2058.4	0.5900	mg/L	0.00156	1.180	mg/L	0.0031	0.26%
Pb 220.353†	15494.5	2.198	mg/L	0.0243	4.397	mg/L	0.0487	1.11%
Sb 206.836†	167.7	0.06437	mg/L	0.003351	0.1287	mg/L	0.00670	5.21%
Se 196.026†	2152.6	1.836	mg/L	0.0119	3.673	mg/L	0.0238	0.65%
Si 288.158†	21933.2	14.16	mg/L	0.024	28.31	mg/L	0.048	0.17%
Sn 189.927†	718.9	0.2006	mg/L	0.00265	0.4012	mg/L	0.00529	1.32%
Sr 421.552†	578815.0	1.170	mg/L	0.0070	2.339	mg/L	0.0139	0.59%
Ti 334.903†	128666.9	6.774	mg/L	0.0190	13.55	mg/L	0.038	0.28%
Tl 190.801†	3306.5	1.772	mg/L	0.0187	3.545	mg/L	0.0373	1.05%
V 292.402†	124280.7	0.7747	mg/L	0.00886	1.549	mg/L	0.0177	1.14%
Zn 206.200†	3272.3	0.9370	mg/L	0.00152	1.874	mg/L	0.0030	0.16%

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Sequence No.: 9
Sample ID: BIK0408-MSD2

Dilution: 2X
Wash Time: 37

Autosampler Location: 312
Date Collected: 12/3/2020 3:39:44 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0408-MSD2

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0408-MSD2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2263794.0	104.4	%	0.50				0.48%
ScR 361.383	237268.2	102.0	%	0.39				0.38%
Ag 328.068†	80951.4	0.4705	mg/L	0.00260	0.9410	mg/L	0.00520	0.55%
Al 308.215†	129560.8	105.7	mg/L	0.32	211.3	mg/L	0.64	0.30%
As 188.979†	1729.7	1.850	mg/L	0.0095	3.701	mg/L	0.0190	0.51%
B 249.677†	223.8	0.01997	mg/L	0.001949	0.03994	mg/L	0.003897	9.76%
Ba 233.527†	15871.4	2.190	mg/L	0.0064	4.380	mg/L	0.0127	0.29%
Be 313.042†	330911.8	0.4682	mg/L	0.00199	0.9364	mg/L	0.00398	0.42%
Ca 317.933†	564196.7	50.62	mg/L	0.524	101.2	mg/L	1.05	1.03%
Cd 228.802†	13907.5	0.4583	mg/L	0.00219	0.9166	mg/L	0.00438	0.48%
Co 228.616†	16943.4	0.4787	mg/L	0.00207	0.9573	mg/L	0.00413	0.43%
Cr 267.716†	5056.6	0.6026	mg/L	0.00242	1.205	mg/L	0.0048	0.40%
Cu 324.752†	155112.4	0.7397	mg/L	0.00284	1.479	mg/L	0.0057	0.38%
Fe 273.955†	258902.2	167.3	mg/L	0.90	334.6	mg/L	1.80	0.54%
K 766.490†	22248.2	14.74	mg/L	0.098	29.48	mg/L	0.196	0.67%
Mg 279.077†	43590.5	30.42	mg/L	0.120	60.83	mg/L	0.241	0.40%
Mn 257.610†	93889.2	1.937	mg/L	0.0034	3.875	mg/L	0.0068	0.18%
Mo 202.031†	97.8	0.00605	mg/L	0.000167	0.01210	mg/L	0.000333	2.75%
Na 589.592†	106098.8	21.12	mg/L	0.109	42.23	mg/L	0.219	0.52%
Na 330.237†	466.3	21.24	mg/L	0.246	42.48	mg/L	0.492	1.16%
Ni 231.604†	1975.8	0.5664	mg/L	0.00344	1.133	mg/L	0.0069	0.61%
Pb 220.353†	14058.7	1.990	mg/L	0.0096	3.979	mg/L	0.0192	0.48%
Sb 206.836†	155.8	0.05852	mg/L	0.000339	0.1170	mg/L	0.00068	0.58%
Se 196.026†	2120.4	1.809	mg/L	0.0164	3.618	mg/L	0.0328	0.91%
Si 288.158†	23319.7	15.05	mg/L	0.029	30.10	mg/L	0.059	0.19%
Sn 189.927†	426.9	0.1233	mg/L	0.00125	0.2466	mg/L	0.00250	1.02%
Sr 421.552†	506755.8	1.024	mg/L	0.0050	2.048	mg/L	0.0099	0.49%
Ti 334.903†	111188.4	5.854	mg/L	0.0247	11.71	mg/L	0.049	0.42%
Tl 190.801†	3278.1	1.757	mg/L	0.0102	3.514	mg/L	0.0204	0.58%
V 292.402†	118474.6	0.7386	mg/L	0.00419	1.477	mg/L	0.0084	0.57%
Zn 206.200†	2771.4	0.7936	mg/L	0.00008	1.587	mg/L	0.0002	0.01%

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Sequence No.: 10
Sample ID: BIK0446-BS2

Dilution: 1X
Wash Time: 37

Autosampler Location: 313
Date Collected: 12/3/2020 3:43:49 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0446-BS2

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0446-BS2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2286963.8	105.4	%	0.34				0.32%
ScR 361.383	242215.4	104.1	%	0.35				0.34%
Ag 328.068†	87244.6	0.5072	mg/L	0.00203	0.5072	mg/L	0.00203	0.40%
Al 308.215†	2441.4	1.977	mg/L	0.0133	1.977	mg/L	0.0133	0.67%
As 188.979†	2770.0	1.910	mg/L	0.0089	1.910	mg/L	0.0089	0.47%
B 249.677†	20.6	0.00297	mg/L	0.001559	0.00297	mg/L	0.001559	52.46%
Ba 233.527†	13335.2	1.860	mg/L	0.0093	1.860	mg/L	0.0093	0.50%
Be 313.042†	337457.1	0.4780	mg/L	0.00280	0.4780	mg/L	0.00280	0.59%
Ca 317.933†	105292.4	9.414	mg/L	0.0011	9.414	mg/L	0.0011	0.01%
Cd 228.802†	14087.3	0.4610	mg/L	0.00164	0.4610	mg/L	0.00164	0.36%
Co 228.616†	15616.7	0.4537	mg/L	0.00176	0.4537	mg/L	0.00176	0.39%
Cr 267.716†	3906.1	0.4617	mg/L	0.00261	0.4617	mg/L	0.00261	0.56%
Cu 324.752†	96684.7	0.4574	mg/L	0.00221	0.4574	mg/L	0.00221	0.48%
Fe 273.955†	3019.3	1.949	mg/L	0.0089	1.949	mg/L	0.0089	0.46%
K 766.490†	14645.2	9.702	mg/L	0.0175	9.702	mg/L	0.0175	0.18%
Mg 279.077†	14357.0	10.04	mg/L	0.048	10.04	mg/L	0.048	0.47%
Mn 257.610†	22759.9	0.4701	mg/L	0.00327	0.4701	mg/L	0.00327	0.70%
Mo 202.031†	6591.1	0.4847	mg/L	0.00040	0.4847	mg/L	0.00040	0.08%
Na 589.592†	49892.3	9.929	mg/L	0.1240	9.929	mg/L	0.1240	1.25%
Na 330.237†	246.2	10.60	mg/L	0.366	10.60	mg/L	0.366	3.45%
Ni 231.604†	1627.3	0.4685	mg/L	0.00323	0.4685	mg/L	0.00323	0.69%
Pb 220.353†	13639.8	1.907	mg/L	0.0103	1.907	mg/L	0.0103	0.54%
Sb 206.836†	4998.7	2.046	mg/L	0.0059	2.046	mg/L	0.0059	0.29%
Se 196.026†	2247.4	1.922	mg/L	0.0096	1.922	mg/L	0.0096	0.50%
Si 288.158†	54.6	0.04581	mg/L	0.006933	0.04581	mg/L	0.006933	15.14%
Sn 189.927†	-28.6	-0.00488	mg/L	0.001030	-0.00488	mg/L	0.001030	21.09%
Sr 421.552†	242663.3	0.4904	mg/L	0.00188	0.4904	mg/L	0.00188	0.38%
Ti 334.903†	51.1	0.00179	mg/L	0.000574	0.00179	mg/L	0.000574	32.10%
Tl 190.801†	3610.3	1.938	mg/L	0.0032	1.938	mg/L	0.0032	0.17%
V 292.402†	73674.7	0.4599	mg/L	0.00230	0.4599	mg/L	0.00230	0.50%
Zn 206.200†	1602.8	0.4590	mg/L	0.00298	0.4590	mg/L	0.00298	0.65%

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Sequence No.: 11 **Autosampler Location: 7**
Sample ID: SEQ-CCV2 **Date Collected: 12/3/2020 3:48:05 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV2

Analyte	**Back Pressure**	**Flow**
All	234.0 kPa	0.65 L/min

Mean Data: SEQ-CCV2

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2243186.3	103.4	%	0.26				0.25%
ScR 361.383	241096.9	103.6	%	1.03				1.00%
Ag 328.068†	172265.8	1.001	mg/L	0.0072	1.001	mg/L	0.0072	0.72%
Al 308.215†	2443.7	1.963	mg/L	0.0164	1.963	mg/L	0.0164	0.84%
As 188.979†	2657.0	1.938	mg/L	0.0019	1.938	mg/L	0.0019	0.10%
B 249.677†	4923.5	0.9865	mg/L	0.01465	0.9865	mg/L	0.01465	1.48%
Ba 233.527†	6662.1	0.9282	mg/L	0.01077	0.9282	mg/L	0.01077	1.16%
Be 313.042†	682641.1	0.9669	mg/L	0.00378	0.9669	mg/L	0.00378	0.39%
Ca 317.933†	21169.4	1.826	mg/L	0.0086	1.826	mg/L	0.0086	0.47%
Cd 228.802†	28157.5	0.9304	mg/L	0.00528	0.9304	mg/L	0.00528	0.57%
Co 228.616†	31765.0	0.9215	mg/L	0.00571	0.9215	mg/L	0.00571	0.62%
Cr 267.716†	7868.2	0.9305	mg/L	0.01117	0.9305	mg/L	0.01117	1.20%
Cu 324.752†	195215.6	0.9234	mg/L	0.00484	0.9234	mg/L	0.00484	0.52%
Fe 273.955†	3022.8	1.949	mg/L	0.0207	1.949	mg/L	0.0207	1.06%
K 766.490†	29230.8	19.36	mg/L	0.191	19.36	mg/L	0.191	0.98%
Mg 279.077†	2822.2	1.988	mg/L	0.0215	1.988	mg/L	0.0215	1.08%
Mn 257.610†	43799.8	0.9047	mg/L	0.00586	0.9047	mg/L	0.00586	0.65%
Mo 202.031†	12849.1	0.9453	mg/L	0.00626	0.9453	mg/L	0.00626	0.66%
Na 589.592†	249213.4	49.60	mg/L	0.527	49.60	mg/L	0.527	1.06%
Na 330.237†	1151.7	50.21	mg/L	0.459	50.21	mg/L	0.459	0.92%
Ni 231.604†	3325.1	0.9551	mg/L	0.01040	0.9551	mg/L	0.01040	1.09%
Pb 220.353†	13668.1	1.911	mg/L	0.0113	1.911	mg/L	0.0113	0.59%
Sb 206.836†	5007.8	2.053	mg/L	0.0045	2.053	mg/L	0.0045	0.22%
Se 196.026†	2297.2	1.965	mg/L	0.0117	1.965	mg/L	0.0117	0.59%
Si 288.158†	3141.3	2.027	mg/L	0.0126	2.027	mg/L	0.0126	0.62%
Sn 189.927†	3733.9	0.9768	mg/L	0.00211	0.9768	mg/L	0.00211	0.22%
Sr 421.552†	483921.6	0.9779	mg/L	0.00933	0.9779	mg/L	0.00933	0.95%
Ti 334.903†	18269.2	0.9612	mg/L	0.00687	0.9612	mg/L	0.00687	0.71%
Tl 190.801†	3618.5	1.939	mg/L	0.0075	1.939	mg/L	0.0075	0.39%
V 292.402†	149722.4	0.9342	mg/L	0.00608	0.9342	mg/L	0.00608	0.65%
Zn 206.200†	3338.8	0.9560	mg/L	0.01344	0.9560	mg/L	0.01344	1.41%

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Sequence No.: 12
Sample ID: SEQ-CCB2

Autosampler Location: 1
Date Collected: 12/3/2020 3:53:46 PM
Data Type: Original

Dilution: 1X
Wash Time: 120

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB2

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-CCB2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2253346.1	103.9	%	0.31				0.30%
ScR 361.383	240552.8	103.4	%	0.32				0.31%
Ag 328.068†	50.1	0.00029	mg/L	0.000255	0.00029	mg/L	0.000255	87.74%
Al 308.215†	18.3	0.01489	mg/L	0.008263	0.01489	mg/L	0.008263	55.49%
As 188.979†	4.3	0.00301	mg/L	0.001294	0.00301	mg/L	0.001294	42.92%
B 249.677†	18.0	0.00362	mg/L	0.001086	0.00362	mg/L	0.001086	29.95%
Ba 233.527†	8.0	0.00112	mg/L	0.000076	0.00112	mg/L	0.000076	6.77%
Be 313.042†	-21.8	-0.00003	mg/L	0.000023	-0.00003	mg/L	0.000023	76.09%
Ca 317.933†	-10.4	-0.00094	mg/L	0.001048	-0.00094	mg/L	0.001048	111.06%
Cd 228.802†	-0.9	-0.00004	mg/L	0.000056	-0.00004	mg/L	0.000056	134.30%
Co 228.616†	-4.5	-0.00013	mg/L	0.000044	-0.00013	mg/L	0.000044	33.78%
Cr 267.716†	-4.4	-0.00052	mg/L	0.000629	-0.00052	mg/L	0.000629	119.87%
Cu 324.752†	-58.2	-0.00028	mg/L	0.000127	-0.00028	mg/L	0.000127	45.66%
Fe 273.955†	3.0	0.00193	mg/L	0.002847	0.00193	mg/L	0.002847	147.34%
K 766.490†	-22.5	-0.01491	mg/L	0.032094	-0.01491	mg/L	0.032094	215.20%
Mg 279.077†	-2.3	-0.00159	mg/L	0.015086	-0.00159	mg/L	0.015086	949.16%
Mn 257.610†	-8.9	-0.00018	mg/L	0.000144	-0.00018	mg/L	0.000144	78.39%
Mo 202.031†	49.0	0.00361	mg/L	0.000975	0.00361	mg/L	0.000975	27.02%
Na 589.592†	-151.0	-0.03006	mg/L	0.008955	-0.03006	mg/L	0.008955	29.79%
Na 330.237†	14.8	0.6469	mg/L	0.23479	0.6469	mg/L	0.23479	36.30%
Ni 231.604†	2.5	0.00071	mg/L	0.001748	0.00071	mg/L	0.001748	246.08%
Pb 220.353†	3.0	0.00043	mg/L	0.001545	0.00043	mg/L	0.001545	360.50%
Sb 206.836†	-8.7	-0.00356	mg/L	0.000820	-0.00356	mg/L	0.000820	23.06%
Se 196.026†	8.1	0.00697	mg/L	0.002654	0.00697	mg/L	0.002654	38.09%
Si 288.158†	13.9	0.00892	mg/L	0.002252	0.00892	mg/L	0.002252	25.25%
Sn 189.927†	2.5	0.00066	mg/L	0.001002	0.00066	mg/L	0.001002	152.67%
Sr 421.552†	-15.6	-0.00003	mg/L	0.000055	-0.00003	mg/L	0.000055	174.67%
Ti 334.903†	13.6	0.00071	mg/L	0.001401	0.00071	mg/L	0.001401	196.68%
Tl 190.801†	5.5	0.00297	mg/L	0.001570	0.00297	mg/L	0.001570	52.78%
V 292.402†	-64.1	-0.00040	mg/L	0.000095	-0.00040	mg/L	0.000095	23.84%
Zn 206.200†	-1.9	-0.00054	mg/L	0.001040	-0.00054	mg/L	0.001040	190.79%

User canceled analysis.

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Analysis Begun

Start Time: 12/3/2020 3:58:12 PM
Logged In Analyst: Metals Instrument Controller
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 12/3/2020 8:08:06 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 13
Sample ID: BIK0645-BLK1
Autosampler Location: 314
Date Collected: 12/3/2020 3:58:13 PM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: BIK0645-BLK1

Analyte	**Back Pressure**	**Flow**
All	231.0 kPa	0.65 L/min

Mean Data: BIK0645-BLK1

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2249542.8	103.7	%	0.75				0.72%
ScR 361.383	238381.7	102.5	%	0.23				0.23%
Ag 328.068†	23.0	0.00013	mg/L	0.000329	0.00013	mg/L	0.000329	246.12%
Al 308.215†	6.2	0.00506	mg/L	0.007903	0.00506	mg/L	0.007903	156.22%
As 188.979†	-0.4	-0.00029	mg/L	0.001835	-0.00029	mg/L	0.001835	630.09%
B 249.677†	15.7	0.00315	mg/L	0.001758	0.00315	mg/L	0.001758	55.72%
Ba 233.527†	1.9	0.00026	mg/L	0.000116	0.00026	mg/L	0.000116	44.12%
Be 313.042†	-45.8	-0.00006	mg/L	0.000000	-0.00006	mg/L	0.000000	0.59%
Ca 317.933†	28.9	0.00259	mg/L	0.001868	0.00259	mg/L	0.001868	72.05%
Cd 228.802†	-1.0	-0.00003	mg/L	0.000106	-0.00003	mg/L	0.000106	328.43%
Co 228.616†	-6.6	-0.00019	mg/L	0.000161	-0.00019	mg/L	0.000161	83.98%
Cr 267.716†	1.1	0.00013	mg/L	0.000796	0.00013	mg/L	0.000796	612.48%
Cu 324.752†	-59.3	-0.00028	mg/L	0.000056	-0.00028	mg/L	0.000056	20.13%
Fe 273.955†	13.1	0.00846	mg/L	0.001975	0.00846	mg/L	0.001975	23.35%
K 766.490†	1.5	0.00102	mg/L	0.038670	0.00102	mg/L	0.038670	>999.9%
Mg 279.077†	4.8	0.00334	mg/L	0.008220	0.00334	mg/L	0.008220	246.06%
Mn 257.610†	-5.9	-0.00012	mg/L	0.000166	-0.00012	mg/L	0.000166	134.75%
Mo 202.031†	5.3	0.00039	mg/L	0.000093	0.00039	mg/L	0.000093	23.73%
Na 589.592†	-186.9	-0.03719	mg/L	0.007986	-0.03719	mg/L	0.007986	21.47%
Na 330.237†	10.6	0.4620	mg/L	0.41435	0.4620	mg/L	0.41435	89.69%
Ni 231.604†	1.7	0.00047	mg/L	0.002363	0.00047	mg/L	0.002363	498.97%
Pb 220.353†	-3.8	-0.00052	mg/L	0.000569	-0.00052	mg/L	0.000569	108.40%
Sb 206.836†	-11.6	-0.00477	mg/L	0.001675	-0.00477	mg/L	0.001675	35.09%
Se 196.026†	6.1	0.00523	mg/L	0.002291	0.00523	mg/L	0.002291	43.83%
Si 288.158†	20.7	0.01332	mg/L	0.004501	0.01332	mg/L	0.004501	33.79%
Sn 189.927†	2.3	0.00059	mg/L	0.000394	0.00059	mg/L	0.000394	66.84%
Sr 421.552†	-13.4	-0.00003	mg/L	0.000080	-0.00003	mg/L	0.000080	293.32%
Ti 334.903†	1.7	0.00009	mg/L	0.000383	0.00009	mg/L	0.000383	424.92%
Tl 190.801†	0.6	0.00033	mg/L	0.000816	0.00033	mg/L	0.000816	246.05%
V 292.402†	-92.0	-0.00057	mg/L	0.000228	-0.00057	mg/L	0.000228	39.97%
Zn 206.200†	3.6	0.00102	mg/L	0.000727	0.00102	mg/L	0.000727	71.50%

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Sequence No.: 14 **Autosampler Location: 315**
Sample ID: 20K0286-04 **Date Collected: 12/3/2020 4:02:29 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0286-04

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: 20K0286-04

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2174997.2	100.3	%	0.87				0.87%
ScR 361.383	236740.8	101.8	%	1.42				1.40%
Ag 328.068†	54.1	0.00022	mg/L	0.000057	0.00110	mg/L	0.000285	25.99%
Al 308.215†	-14.4	0.02877	mg/L	0.015509	0.1439	mg/L	0.07754	53.90%
As 188.979†	-1.5	-0.00101	mg/L	0.005355	-0.00505	mg/L	0.026777	530.67%
B 249.677†	138.4	0.01399	mg/L	0.001265	0.06995	mg/L	0.006326	9.04%
Ba 233.527†	2159.0	0.2785	mg/L	0.00481	1.392	mg/L	0.0241	1.73%
Be 313.042†	25.4	0.00005	mg/L	0.000031	0.00024	mg/L	0.000154	64.60%
Ca 317.933†	7281.0	0.6536	mg/L	0.00854	3.268	mg/L	0.0427	1.31%
Cd 228.802†	33.6	0.00114	mg/L	0.000179	0.00572	mg/L	0.000893	15.62%
Co 228.616†	305.4	0.00594	mg/L	0.000099	0.02972	mg/L	0.000496	1.67%
Cr 267.716†	-8.1	0.00449	mg/L	0.001251	0.02245	mg/L	0.006256	27.87%
Cu 324.752†	-1471.9	0.00009	mg/L	0.000062	0.00046	mg/L	0.000308	67.68%
Fe 273.955†	251426.8	162.5	mg/L	3.54	812.3	mg/L	17.69	2.18%
K 766.490†	242.8	0.1608	mg/L	0.00699	0.8042	mg/L	0.03493	4.34%
Mg 279.077†	214.3	0.09365	mg/L	0.002613	0.4682	mg/L	0.01306	2.79%
Mn 257.610†	47689.2	0.9838	mg/L	0.01999	4.919	mg/L	0.1000	2.03%
Mo 202.031†	4.4	0.00031	mg/L	0.000337	0.00156	mg/L	0.001685	108.08%
Na 589.592†	1421966.3	283.0	mg/L	4.51	1415	mg/L	22.56	1.59%
Na 330.237†	6551.9	286.4	mg/L	4.02	1432	mg/L	20.08	1.40%
Ni 231.604†	85.4	0.02451	mg/L	0.001034	0.1225	mg/L	0.00517	4.22%
Pb 220.353†	36.1	-0.00143	mg/L	0.001029	-0.00717	mg/L	0.005144	71.70%
Sb 206.836†	54.9	0.01089	mg/L	0.001670	0.05443	mg/L	0.008348	15.34%
Se 196.026†	-8.3	-0.00794	mg/L	0.005653	-0.03972	mg/L	0.028265	71.16%
Si 288.158†	491.1	0.3596	mg/L	0.00418	1.798	mg/L	0.0209	1.16%
Sn 189.927†	-9.4	-0.00232	mg/L	0.000530	-0.01159	mg/L	0.002651	22.87%
Sr 421.552†	2527.3	0.00511	mg/L	0.000207	0.02554	mg/L	0.001036	4.06%
Ti 334.903†	2.9	0.00012	mg/L	0.000544	0.00062	mg/L	0.002722	438.62%
Tl 190.801†	-23.9	-0.01286	mg/L	0.001747	-0.06428	mg/L	0.008735	13.59%
V 292.402†	-1050.8	-0.00398	mg/L	0.000183	-0.01988	mg/L	0.000916	4.61%
Zn 206.200†	1795.5	0.5141	mg/L	0.00860	2.570	mg/L	0.0430	1.67%

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Sequence No.: 15 **Autosampler Location: 316**
Sample ID: 20K0286-05 **Date Collected: 12/3/2020 4:07:01 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0286-05

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: 20K0286-05

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2168139.9	99.97	%	0.360				0.36%
ScR 361.383	237820.6	102.2	%	1.38				1.35%
Ag 328.068†	62.7	-0.00004	mg/L	0.000086	-0.00022	mg/L	0.000431	195.17%
Al 308.215†	-20.1	0.02289	mg/L	0.002884	0.1145	mg/L	0.01442	12.60%
As 188.979†	-5.5	-0.00382	mg/L	0.002193	-0.01911	mg/L	0.010967	57.38%
B 249.677†	127.9	0.01251	mg/L	0.003764	0.06256	mg/L	0.018819	30.08%
Ba 233.527†	247.5	0.01245	mg/L	0.000153	0.06226	mg/L	0.000765	1.23%
Be 313.042†	-31.1	-0.00003	mg/L	0.000041	-0.00016	mg/L	0.000205	129.66%
Ca 317.933†	4773.7	0.4285	mg/L	0.00535	2.143	mg/L	0.0267	1.25%
Cd 228.802†	30.7	0.00105	mg/L	0.000279	0.00526	mg/L	0.001397	26.58%
Co 228.616†	192.1	0.00278	mg/L	0.000024	0.01392	mg/L	0.000122	0.88%
Cr 267.716†	-4.3	0.00375	mg/L	0.000351	0.01873	mg/L	0.001755	9.37%
Cu 324.752†	-1371.1	0.00035	mg/L	0.000092	0.00176	mg/L	0.000459	26.02%
Fe 273.955†	243774.5	157.5	mg/L	1.53	787.6	mg/L	7.66	0.97%
K 766.490†	363.9	0.2411	mg/L	0.03726	1.205	mg/L	0.1863	15.46%
Mg 279.077†	262.7	0.1391	mg/L	0.00295	0.6954	mg/L	0.01477	2.12%
Mn 257.610†	207018.0	4.274	mg/L	0.0458	21.37	mg/L	0.229	1.07%
Mo 202.031†	-8.0	-0.00060	mg/L	0.000313	-0.00300	mg/L	0.001567	52.19%
Na 589.592†	1466577.9	291.9	mg/L	7.16	1459	mg/L	35.78	2.45%
Na 330.237†	6554.4	286.7	mg/L	2.58	1433	mg/L	12.92	0.90%
Ni 231.604†	56.7	0.01627	mg/L	0.000766	0.08134	mg/L	0.003831	4.71%
Pb 220.353†	36.6	-0.00117	mg/L	0.000888	-0.00585	mg/L	0.004442	76.00%
Sb 206.836†	51.5	0.00984	mg/L	0.001369	0.04918	mg/L	0.006844	13.92%
Se 196.026†	-4.1	-0.00703	mg/L	0.001553	-0.03515	mg/L	0.007767	22.10%
Si 288.158†	12.5	0.06761	mg/L	0.005592	0.3381	mg/L	0.02796	8.27%
Sn 189.927†	-3.9	-0.00092	mg/L	0.000545	-0.00462	mg/L	0.002723	58.90%
Sr 421.552†	4009.8	0.00810	mg/L	0.000141	0.04052	mg/L	0.000707	1.75%
Ti 334.903†	-9.1	-0.00050	mg/L	0.000310	-0.00248	mg/L	0.001548	62.28%
Tl 190.801†	-32.3	-0.01739	mg/L	0.003062	-0.08695	mg/L	0.015310	17.61%
V 292.402†	-1123.2	-0.00450	mg/L	0.000128	-0.02251	mg/L	0.000639	2.84%
Zn 206.200†	9.8	0.00281	mg/L	0.000799	0.01404	mg/L	0.003994	28.43%

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Sequence No.: 16
Sample ID: BIK0594-DUP1

Dilution: 5X
Wash Time: 37

Autosampler Location: 317
Date Collected: 12/3/2020 4:11:33 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0594-DUP1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0594-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2170529.9	100.1	%	0.43				0.43%
ScR 361.383	239086.2	102.8	%	0.48				0.46%
Ag 328.068†	93.7	0.00054	mg/L	0.000100	0.00271	mg/L	0.000502	18.55%
Al 308.215†	23.7	0.01925	mg/L	0.003616	0.09623	mg/L	0.018080	18.79%
As 188.979†	-3.9	-0.00277	mg/L	0.001748	-0.01387	mg/L	0.008741	63.02%
B 249.677†	362.0	0.07245	mg/L	0.000046	0.3623	mg/L	0.00023	0.06%
Ba 233.527†	11.6	0.00157	mg/L	0.000334	0.00786	mg/L	0.001668	21.23%
Be 313.042†	-36.6	-0.00005	mg/L	0.000009	-0.00025	mg/L	0.000044	17.15%
Ca 317.933†	55219.2	4.957	mg/L	0.0355	24.79	mg/L	0.178	0.72%
Cd 228.802†	1.1	0.00005	mg/L	0.000157	0.00026	mg/L	0.000784	307.00%
Co 228.616†	-3.6	-0.00010	mg/L	0.000137	-0.00052	mg/L	0.000683	130.82%
Cr 267.716†	10.8	-0.00099	mg/L	0.001156	-0.00494	mg/L	0.005781	117.03%
Cu 324.752†	2913.3	0.01314	mg/L	0.000095	0.06571	mg/L	0.000477	0.73%
Fe 273.955†	15.6	0.01006	mg/L	0.005136	0.05032	mg/L	0.025678	51.03%
K 766.490†	668.7	0.4430	mg/L	0.01092	2.215	mg/L	0.0546	2.47%
Mg 279.077†	112963.3	78.95	mg/L	0.604	394.7	mg/L	3.02	0.77%
Mn 257.610†	1570.0	0.03215	mg/L	0.000257	0.1607	mg/L	0.00128	0.80%
Mo 202.031†	73.2	0.00435	mg/L	0.000468	0.02175	mg/L	0.002342	10.77%
Na 589.592†	1337580.1	266.2	mg/L	1.41	1331	mg/L	7.06	0.53%
Na 330.237†	5991.2	262.0	mg/L	1.71	1310	mg/L	8.54	0.65%
Ni 231.604†	5.1	0.00147	mg/L	0.001613	0.00734	mg/L	0.008066	109.87%
Pb 220.353†	-13.2	-0.00186	mg/L	0.000485	-0.00928	mg/L	0.002426	26.13%
Sb 206.836†	15.7	0.00641	mg/L	0.002346	0.03203	mg/L	0.011730	36.62%
Se 196.026†	14.4	0.01186	mg/L	0.005183	0.05930	mg/L	0.025917	43.70%
Si 288.158†	836.4	0.5494	mg/L	0.00355	2.747	mg/L	0.0177	0.65%
Sn 189.927†	-16.2	-0.00332	mg/L	0.000741	-0.01658	mg/L	0.003707	22.36%
Sr 421.552†	12414.7	0.02509	mg/L	0.000234	0.1254	mg/L	0.00117	0.93%
Ti 334.903†	7.2	0.00016	mg/L	0.000156	0.00079	mg/L	0.000779	98.54%
Tl 190.801†	-5.3	-0.00284	mg/L	0.002370	-0.01419	mg/L	0.011852	83.50%
V 292.402†	-96.1	-0.00059	mg/L	0.000145	-0.00293	mg/L	0.000726	24.77%
Zn 206.200†	9.7	0.00278	mg/L	0.001534	0.01392	mg/L	0.007671	55.11%

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Sequence No.: 17 **Autosampler Location: 318**
Sample ID: 20K0287-01 **Date Collected: 12/3/2020 4:16:05 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0287-01

Analyte	**Back Pressure**	**Flow**
All	232.0 kPa	0.65 L/min

Mean Data: 20K0287-01

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2184303.4	100.7	%	0.17				0.17%
ScR 361.383	233035.3	100.2	%	0.26				0.25%
Ag 328.068†	71.7	0.00041	mg/L	0.000163	0.00207	mg/L	0.000814	39.39%
Al 308.215†	21.1	0.01715	mg/L	0.004168	0.08576	mg/L	0.020838	24.30%
As 188.979†	-4.6	-0.00326	mg/L	0.001335	-0.01630	mg/L	0.006674	40.93%
B 249.677†	377.1	0.07548	mg/L	0.001182	0.3774	mg/L	0.00591	1.57%
Ba 233.527†	4.9	0.00063	mg/L	0.000339	0.00317	mg/L	0.001696	53.49%
Be 313.042†	-6.6	-0.00001	mg/L	0.000039	-0.00004	mg/L	0.000195	486.97%
Ca 317.933†	57945.4	5.202	mg/L	0.0443	26.01	mg/L	0.221	0.85%
Cd 228.802†	7.8	0.00027	mg/L	0.000080	0.00136	mg/L	0.000399	29.28%
Co 228.616†	1.6	0.00005	mg/L	0.000155	0.00023	mg/L	0.000775	330.16%
Cr 267.716†	-1.9	-0.00260	mg/L	0.000896	-0.01300	mg/L	0.004479	34.45%
Cu 324.752†	2982.4	0.01344	mg/L	0.000165	0.06719	mg/L	0.000826	1.23%
Fe 273.955†	2.9	0.00189	mg/L	0.002063	0.00943	mg/L	0.010315	109.40%
K 766.490†	773.9	0.5127	mg/L	0.02042	2.563	mg/L	0.1021	3.98%
Mg 279.077†	118345.4	82.71	mg/L	0.183	413.5	mg/L	0.91	0.22%
Mn 257.610†	1629.5	0.03336	mg/L	0.000132	0.1668	mg/L	0.00066	0.40%
Mo 202.031†	75.4	0.00446	mg/L	0.000219	0.02230	mg/L	0.001096	4.91%
Na 589.592†	1381300.1	274.9	mg/L	2.99	1374	mg/L	14.96	1.09%
Na 330.237†	6260.6	273.8	mg/L	1.20	1369	mg/L	5.99	0.44%
Ni 231.604†	-4.4	-0.00124	mg/L	0.001135	-0.00622	mg/L	0.005676	91.27%
Pb 220.353†	-12.5	-0.00176	mg/L	0.000487	-0.00879	mg/L	0.002436	27.72%
Sb 206.836†	15.8	0.00647	mg/L	0.001126	0.03233	mg/L	0.005628	17.41%
Se 196.026†	6.6	0.00519	mg/L	0.005532	0.02597	mg/L	0.027660	106.51%
Si 288.158†	843.0	0.5542	mg/L	0.00214	2.771	mg/L	0.0107	0.39%
Sn 189.927†	-15.6	-0.00313	mg/L	0.000950	-0.01566	mg/L	0.004751	30.33%
Sr 421.552†	12949.1	0.02617	mg/L	0.000068	0.1308	mg/L	0.00034	0.26%
Ti 334.903†	6.7	0.00013	mg/L	0.001084	0.00063	mg/L	0.005419	859.75%
Tl 190.801†	-6.1	-0.00327	mg/L	0.002053	-0.01637	mg/L	0.010266	62.72%
V 292.402†	-118.0	-0.00073	mg/L	0.000020	-0.00364	mg/L	0.000101	2.77%
Zn 206.200†	19.3	0.00551	mg/L	0.000815	0.02756	mg/L	0.004077	14.79%

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Sequence No.: 18 **Autosampler Location: 319**
Sample ID: BIK0594-MS1 **Date Collected: 12/3/2020 4:20:36 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0594-MS1

Analyte	Back Pressure	Flow
All	234.0 kPa	0.65 L/min

Mean Data: BIK0594-MS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2164403.3	99.80	%	0.571				0.57%
ScR 361.383	239741.8	103.0	%	0.40				0.39%
Ag 328.068†	34402.8	0.2000	mg/L	0.00160	0.9999	mg/L	0.00798	0.80%
Al 308.215†	981.1	0.7979	mg/L	0.00465	3.989	mg/L	0.0232	0.58%
As 188.979†	1129.3	0.7791	mg/L	0.00907	3.896	mg/L	0.0454	1.16%
B 249.677†	377.9	0.07501	mg/L	0.001261	0.3751	mg/L	0.00631	1.68%
Ba 233.527†	5241.2	0.7309	mg/L	0.00228	3.655	mg/L	0.0114	0.31%
Be 313.042†	131290.6	0.1860	mg/L	0.00089	0.9298	mg/L	0.00446	0.48%
Ca 317.933†	99604.4	8.929	mg/L	0.1168	44.64	mg/L	0.584	1.31%
Cd 228.802†	5776.8	0.1891	mg/L	0.00027	0.9453	mg/L	0.00136	0.14%
Co 228.616†	6216.7	0.1806	mg/L	0.00087	0.9029	mg/L	0.00437	0.48%
Cr 267.716†	1563.4	0.1824	mg/L	0.00196	0.9122	mg/L	0.00982	1.08%
Cu 324.752†	40402.2	0.1906	mg/L	0.00138	0.9528	mg/L	0.00692	0.73%
Fe 273.955†	1176.3	0.7593	mg/L	0.00486	3.797	mg/L	0.0243	0.64%
K 766.490†	6497.0	4.304	mg/L	0.0172	21.52	mg/L	0.086	0.40%
Mg 279.077†	123131.8	86.05	mg/L	0.438	430.3	mg/L	2.19	0.51%
Mn 257.610†	10396.5	0.2145	mg/L	0.00124	1.072	mg/L	0.0062	0.58%
Mo 202.031†	80.7	0.00475	mg/L	0.000472	0.02377	mg/L	0.002359	9.92%
Na 589.592†	1400813.3	278.8	mg/L	2.49	1394	mg/L	12.47	0.89%
Na 330.237†	6233.2	272.5	mg/L	1.43	1363	mg/L	7.15	0.52%
Ni 231.604†	636.1	0.1823	mg/L	0.00180	0.9116	mg/L	0.00898	0.98%
Pb 220.353†	5407.5	0.7560	mg/L	0.00387	3.780	mg/L	0.0194	0.51%
Sb 206.836†	23.0	0.00745	mg/L	0.001555	0.03724	mg/L	0.007776	20.88%
Se 196.026†	939.8	0.8034	mg/L	0.00490	4.017	mg/L	0.0245	0.61%
Si 288.158†	851.0	0.5639	mg/L	0.00240	2.820	mg/L	0.0120	0.43%
Sn 189.927†	-23.3	-0.00443	mg/L	0.000889	-0.02215	mg/L	0.004447	20.08%
Sr 421.552†	107895.6	0.2180	mg/L	0.00134	1.090	mg/L	0.0067	0.61%
Ti 334.903†	17.2	0.00048	mg/L	0.000683	0.00240	mg/L	0.003417	142.40%
Tl 190.801†	1358.0	0.7286	mg/L	0.00562	3.643	mg/L	0.0281	0.77%
V 292.402†	29030.5	0.1810	mg/L	0.00137	0.9052	mg/L	0.00685	0.76%
Zn 206.200†	647.8	0.1855	mg/L	0.00055	0.9275	mg/L	0.00276	0.30%

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Sequence No.: 19
Sample ID: BIK0529-DUP1

Dilution: 2X
Wash Time: 37

Autosampler Location: 320
Date Collected: 12/3/2020 4:25:08 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0529-DUP1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0529-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2265180.2	104.4	%	0.20				0.19%
ScR 361.383	241528.7	103.8	%	1.17				1.12%
Ag 328.068†	43.0	0.00022	mg/L	0.000143	0.00045	mg/L	0.000285	63.99%
Al 308.215†	873.3	0.7124	mg/L	0.00739	1.425	mg/L	0.0148	1.04%
As 188.979†	-5.1	0.00106	mg/L	0.001716	0.00212	mg/L	0.003433	161.77%
B 249.677†	1493.2	0.2997	mg/L	0.00676	0.5994	mg/L	0.01351	2.25%
Ba 233.527†	236.9	0.03275	mg/L	0.000994	0.06551	mg/L	0.001988	3.03%
Be 313.042†	-21.0	-0.00003	mg/L	0.000033	-0.00007	mg/L	0.000065	95.11%
Ca 317.933†	36104.6	3.241	mg/L	0.0067	6.483	mg/L	0.0134	0.21%
Cd 228.802†	4.7	0.00018	mg/L	0.000041	0.00036	mg/L	0.000082	23.11%
Co 228.616†	58.9	0.00160	mg/L	0.000149	0.00320	mg/L	0.000297	9.30%
Cr 267.716†	23.1	0.00266	mg/L	0.000817	0.00532	mg/L	0.001634	30.69%
Cu 324.752†	7994.7	0.03789	mg/L	0.000224	0.07578	mg/L	0.000448	0.59%
Fe 273.955†	2997.3	1.937	mg/L	0.0295	3.873	mg/L	0.0590	1.52%
K 766.490†	971.8	0.6438	mg/L	0.03123	1.288	mg/L	0.0625	4.85%
Mg 279.077†	2533.5	1.771	mg/L	0.0270	3.542	mg/L	0.0540	1.52%
Mn 257.610†	14093.2	0.2910	mg/L	0.00263	0.5820	mg/L	0.00525	0.90%
Mo 202.031†	29.6	0.00211	mg/L	0.000247	0.00422	mg/L	0.000495	11.74%
Na 589.592†	24048.1	4.786	mg/L	0.0473	9.572	mg/L	0.0946	0.99%
Na 330.237†	116.9	5.079	mg/L	0.4349	10.16	mg/L	0.870	8.56%
Ni 231.604†	21.7	0.00622	mg/L	0.001712	0.01244	mg/L	0.003424	27.53%
Pb 220.353†	117.1	0.01645	mg/L	0.000442	0.03290	mg/L	0.000885	2.69%
Sb 206.836†	-8.1	-0.00343	mg/L	0.000702	-0.00686	mg/L	0.001405	20.49%
Se 196.026†	7.4	0.00582	mg/L	0.003224	0.01164	mg/L	0.006448	55.38%
Si 288.158†	860.8	0.5565	mg/L	0.00532	1.113	mg/L	0.0106	0.96%
Sn 189.927†	-3.0	-0.00019	mg/L	0.000384	-0.00037	mg/L	0.000767	207.32%
Sr 421.552†	26445.4	0.05344	mg/L	0.000475	0.1069	mg/L	0.00095	0.89%
Ti 334.903†	791.6	0.04155	mg/L	0.000498	0.08310	mg/L	0.000996	1.20%
Tl 190.801†	3.3	0.00177	mg/L	0.001884	0.00354	mg/L	0.003768	106.41%
V 292.402†	395.8	0.00249	mg/L	0.000186	0.00497	mg/L	0.000373	7.50%
Zn 206.200†	390.8	0.1119	mg/L	0.00213	0.2238	mg/L	0.00427	1.91%

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Sequence No.: 20
Sample ID: 20K0222-01
Dilution: 2X
Wash Time: 37

Autosampler Location: 321
Date Collected: 12/3/2020 4:29:24 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0222-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0222-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2265323.5	104.4	%	0.41				0.39%
ScR 361.383	238725.9	102.6	%	0.22				0.21%
Ag 328.068†	64.2	0.00035	mg/L	0.000187	0.00069	mg/L	0.000375	54.21%
Al 308.215†	902.0	0.7358	mg/L	0.00270	1.472	mg/L	0.0054	0.37%
As 188.979†	-1.9	0.00341	mg/L	0.002583	0.00682	mg/L	0.005166	75.78%
B 249.677†	1444.9	0.2900	mg/L	0.00197	0.5800	mg/L	0.00393	0.68%
Ba 233.527†	243.7	0.03371	mg/L	0.000114	0.06742	mg/L	0.000227	0.34%
Be 313.042†	-38.1	-0.00006	mg/L	0.000026	-0.00012	mg/L	0.000052	44.81%
Ca 317.933†	36594.4	3.285	mg/L	0.0109	6.570	mg/L	0.0218	0.33%
Cd 228.802†	8.7	0.00030	mg/L	0.000112	0.00060	mg/L	0.000224	37.05%
Co 228.616†	52.8	0.00142	mg/L	0.000038	0.00284	mg/L	0.000077	2.70%
Cr 267.716†	23.1	0.00266	mg/L	0.000398	0.00532	mg/L	0.000796	14.96%
Cu 324.752†	7277.9	0.03450	mg/L	0.000021	0.06899	mg/L	0.000041	0.06%
Fe 273.955†	2945.5	1.903	mg/L	0.0167	3.807	mg/L	0.0333	0.88%
K 766.490†	1304.1	0.8639	mg/L	0.00830	1.728	mg/L	0.0166	0.96%
Mg 279.077†	2436.7	1.703	mg/L	0.0035	3.406	mg/L	0.0070	0.21%
Mn 257.610†	14286.1	0.2950	mg/L	0.00101	0.5900	mg/L	0.00201	0.34%
Mo 202.031†	28.1	0.00200	mg/L	0.000212	0.00400	mg/L	0.000425	10.62%
Na 589.592†	23575.5	4.692	mg/L	0.0264	9.384	mg/L	0.0528	0.56%
Na 330.237†	113.0	4.908	mg/L	0.3684	9.817	mg/L	0.7369	7.51%
Ni 231.604†	25.4	0.00726	mg/L	0.001309	0.01453	mg/L	0.002618	18.02%
Pb 220.353†	117.4	0.01650	mg/L	0.000435	0.03301	mg/L	0.000870	2.64%
Sb 206.836†	-11.2	-0.00470	mg/L	0.001371	-0.00941	mg/L	0.002743	29.15%
Se 196.026†	6.8	0.00528	mg/L	0.001611	0.01057	mg/L	0.003222	30.50%
Si 288.158†	857.2	0.5542	mg/L	0.00674	1.108	mg/L	0.0135	1.22%
Sn 189.927†	-5.3	-0.00075	mg/L	0.000301	-0.00151	mg/L	0.000602	39.90%
Sr 421.552†	19784.9	0.03998	mg/L	0.000124	0.07997	mg/L	0.000249	0.31%
Ti 334.903†	811.5	0.04260	mg/L	0.001413	0.08520	mg/L	0.002827	3.32%
Tl 190.801†	1.7	0.00089	mg/L	0.001871	0.00179	mg/L	0.003741	209.43%
V 292.402†	376.7	0.00237	mg/L	0.000280	0.00473	mg/L	0.000560	11.84%
Zn 206.200†	384.8	0.1102	mg/L	0.00066	0.2203	mg/L	0.00131	0.59%

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Sequence No.: 21 **Autosampler Location: 322**
Sample ID: BIK0529-MS1 **Date Collected: 12/3/2020 4:33:40 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0529-MS1

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: BIK0529-MS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2262694.5	104.3	%	0.54				0.52%
ScR 361.383	241959.8	104.0	%	1.32				1.27%
Ag 328.068†	58948.9	0.3427	mg/L	0.00227	0.6853	mg/L	0.00453	0.66%
Al 308.215†	2922.4	2.379	mg/L	0.0306	4.757	mg/L	0.0612	1.29%
As 188.979†	2580.5	1.785	mg/L	0.0096	3.569	mg/L	0.0192	0.54%
B 249.677†	1519.9	0.3036	mg/L	0.00300	0.6073	mg/L	0.00600	0.99%
Ba 233.527†	12306.8	1.716	mg/L	0.0244	3.432	mg/L	0.0487	1.42%
Be 313.042†	318421.5	0.4510	mg/L	0.00160	0.9021	mg/L	0.00320	0.35%
Ca 317.933†	136534.3	12.23	mg/L	0.082	24.46	mg/L	0.164	0.67%
Cd 228.802†	13153.0	0.4305	mg/L	0.00390	0.8609	mg/L	0.00780	0.91%
Co 228.616†	14701.6	0.4269	mg/L	0.00207	0.8539	mg/L	0.00415	0.49%
Cr 267.716†	3439.5	0.4065	mg/L	0.00460	0.8130	mg/L	0.00920	1.13%
Cu 324.752†	95393.1	0.4515	mg/L	0.00272	0.9031	mg/L	0.00545	0.60%
Fe 273.955†	5449.5	3.519	mg/L	0.0553	7.039	mg/L	0.1106	1.57%
K 766.490†	13981.7	9.262	mg/L	0.0698	18.52	mg/L	0.140	0.75%
Mg 279.077†	15728.3	10.99	mg/L	0.133	21.99	mg/L	0.267	1.21%
Mn 257.610†	33483.9	0.6916	mg/L	0.00304	1.383	mg/L	0.0061	0.44%
Mo 202.031†	44.9	0.00298	mg/L	0.000404	0.00596	mg/L	0.000808	13.55%
Na 589.592†	70441.8	14.02	mg/L	0.145	28.04	mg/L	0.289	1.03%
Na 330.237†	327.1	14.12	mg/L	0.237	28.24	mg/L	0.474	1.68%
Ni 231.604†	1533.1	0.4394	mg/L	0.00742	0.8788	mg/L	0.01485	1.69%
Pb 220.353†	12720.2	1.778	mg/L	0.0132	3.557	mg/L	0.0264	0.74%
Sb 206.836†	12.2	0.00074	mg/L	0.002246	0.00147	mg/L	0.004492	305.12%
Se 196.026†	2099.8	1.796	mg/L	0.0025	3.591	mg/L	0.0050	0.14%
Si 288.158†	808.9	0.5335	mg/L	0.00682	1.067	mg/L	0.0136	1.28%
Sn 189.927†	-25.3	-0.00429	mg/L	0.000560	-0.00858	mg/L	0.001121	13.06%
Sr 421.552†	245505.8	0.4961	mg/L	0.00300	0.9923	mg/L	0.00601	0.61%
Ti 334.903†	691.9	0.03583	mg/L	0.000798	0.07166	mg/L	0.001596	2.23%
Tl 190.801†	2390.3	1.281	mg/L	0.0028	2.563	mg/L	0.0056	0.22%
V 292.402†	67568.6	0.4213	mg/L	0.00259	0.8426	mg/L	0.00518	0.61%
Zn 206.200†	1824.8	0.5225	mg/L	0.00626	1.045	mg/L	0.0125	1.20%

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Sequence No.: 22 **Autosampler Location: 323**
Sample ID: BIK0645-BS1 **Date Collected: 12/3/2020 4:37:56 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0645-BS1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0645-BS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2187773.7	100.9	%	0.45				0.45%
ScR 361.383	233081.1	100.2	%	0.46				0.46%
Ag 328.068†	90591.3	0.5266	mg/L	0.00480	0.5266	mg/L	0.00480	0.91%
Al 308.215†	2504.1	2.037	mg/L	0.0126	2.037	mg/L	0.0126	0.62%
As 188.979†	2902.2	2.003	mg/L	0.0160	2.003	mg/L	0.0160	0.80%
B 249.677†	16.2	0.00159	mg/L	0.001852	0.00159	mg/L	0.001852	116.59%
Ba 233.527†	13985.0	1.950	mg/L	0.0108	1.950	mg/L	0.0108	0.55%
Be 313.042†	351658.8	0.4981	mg/L	0.00224	0.4981	mg/L	0.00224	0.45%
Ca 317.933†	111271.1	9.954	mg/L	0.0580	9.954	mg/L	0.0580	0.58%
Cd 228.802†	14659.0	0.4797	mg/L	0.00476	0.4797	mg/L	0.00476	0.99%
Co 228.616†	16350.1	0.4749	mg/L	0.00533	0.4749	mg/L	0.00533	1.12%
Cr 267.716†	4130.0	0.4882	mg/L	0.00289	0.4882	mg/L	0.00289	0.59%
Cu 324.752†	99832.6	0.4725	mg/L	0.00517	0.4725	mg/L	0.00517	1.09%
Fe 273.955†	3146.3	2.031	mg/L	0.0185	2.031	mg/L	0.0185	0.91%
K 766.490†	15434.9	10.22	mg/L	0.024	10.22	mg/L	0.024	0.23%
Mg 279.077†	15143.1	10.58	mg/L	0.064	10.58	mg/L	0.064	0.61%
Mn 257.610†	23682.8	0.4892	mg/L	0.00321	0.4892	mg/L	0.00321	0.66%
Mo 202.031†	22.1	0.00135	mg/L	0.000029	0.00135	mg/L	0.000029	2.12%
Na 589.592†	52701.5	10.49	mg/L	0.049	10.49	mg/L	0.049	0.46%
Na 330.237†	246.3	10.59	mg/L	0.172	10.59	mg/L	0.172	1.62%
Ni 231.604†	1712.3	0.4908	mg/L	0.00169	0.4908	mg/L	0.00169	0.34%
Pb 220.353†	14271.6	1.995	mg/L	0.0256	1.995	mg/L	0.0256	1.28%
Sb 206.836†	22.3	0.00402	mg/L	0.001539	0.00402	mg/L	0.001539	38.31%
Se 196.026†	2365.3	2.023	mg/L	0.0220	2.023	mg/L	0.0220	1.09%
Si 288.158†	-13.0	0.00378	mg/L	0.001007	0.00378	mg/L	0.001007	26.62%
Sn 189.927†	-24.9	-0.00461	mg/L	0.000525	-0.00461	mg/L	0.000525	11.38%
Sr 421.552†	256091.9	0.5175	mg/L	0.00133	0.5175	mg/L	0.00133	0.26%
Ti 334.903†	25.9	0.00084	mg/L	0.000164	0.00084	mg/L	0.000164	19.62%
Tl 190.801†	3780.9	2.029	mg/L	0.0238	2.029	mg/L	0.0238	1.17%
V 292.402†	76750.0	0.4786	mg/L	0.00507	0.4786	mg/L	0.00507	1.06%
Zn 206.200†	1706.4	0.4887	mg/L	0.00221	0.4887	mg/L	0.00221	0.45%

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Sequence No.: 23
Sample ID: SEQ-CCV3
Autosampler Location: 7
Date Collected: 12/3/2020 4:42:12 PM
Data Type: Original
Dilution: 1X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV3

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-CCV3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2177811.0	100.4	%	0.71				0.71%
ScR 361.383	230841.3	99.22	%	0.711				0.72%
Ag 328.068†	177349.8	1.031	mg/L	0.0096	1.031	mg/L	0.0096	0.93%
Al 308.215†	2515.5	2.021	mg/L	0.0083	2.021	mg/L	0.0083	0.41%
As 188.979†	2719.5	1.984	mg/L	0.0098	1.984	mg/L	0.0098	0.50%
B 249.677†	5099.2	1.022	mg/L	0.0079	1.022	mg/L	0.0079	0.77%
Ba 233.527†	6869.7	0.9571	mg/L	0.00450	0.9571	mg/L	0.00450	0.47%
Be 313.042†	701783.8	0.9940	mg/L	0.00446	0.9940	mg/L	0.00446	0.45%
Ca 317.933†	21470.5	1.851	mg/L	0.0064	1.851	mg/L	0.0064	0.34%
Cd 228.802†	28936.4	0.9561	mg/L	0.00914	0.9561	mg/L	0.00914	0.96%
Co 228.616†	32568.9	0.9449	mg/L	0.01050	0.9449	mg/L	0.01050	1.11%
Cr 267.716†	8142.2	0.9629	mg/L	0.00464	0.9629	mg/L	0.00464	0.48%
Cu 324.752†	201389.5	0.9526	mg/L	0.00810	0.9526	mg/L	0.00810	0.85%
Fe 273.955†	3108.9	2.005	mg/L	0.0118	2.005	mg/L	0.0118	0.59%
K 766.490†	30287.7	20.06	mg/L	0.058	20.06	mg/L	0.058	0.29%
Mg 279.077†	2913.9	2.052	mg/L	0.0097	2.052	mg/L	0.0097	0.47%
Mn 257.610†	44963.6	0.9287	mg/L	0.00441	0.9287	mg/L	0.00441	0.48%
Mo 202.031†	13148.6	0.9673	mg/L	0.00612	0.9673	mg/L	0.00612	0.63%
Na 589.592†	255909.6	50.93	mg/L	0.216	50.93	mg/L	0.216	0.42%
Na 330.237†	1188.1	51.79	mg/L	0.182	51.79	mg/L	0.182	0.35%
Ni 231.604†	3398.5	0.9762	mg/L	0.00443	0.9762	mg/L	0.00443	0.45%
Pb 220.353†	13997.3	1.957	mg/L	0.0149	1.957	mg/L	0.0149	0.76%
Sb 206.836†	5128.4	2.102	mg/L	0.0136	2.102	mg/L	0.0136	0.65%
Se 196.026†	2346.5	2.007	mg/L	0.0165	2.007	mg/L	0.0165	0.82%
Si 288.158†	3207.6	2.070	mg/L	0.0020	2.070	mg/L	0.0020	0.10%
Sn 189.927†	3818.5	0.9989	mg/L	0.00513	0.9989	mg/L	0.00513	0.51%
Sr 421.552†	502538.4	1.016	mg/L	0.0036	1.016	mg/L	0.0036	0.35%
Ti 334.903†	18728.1	0.9853	mg/L	0.00449	0.9853	mg/L	0.00449	0.46%
Tl 190.801†	3709.8	1.988	mg/L	0.0068	1.988	mg/L	0.0068	0.34%
V 292.402†	153867.5	0.9601	mg/L	0.00851	0.9601	mg/L	0.00851	0.89%
Zn 206.200†	3453.9	0.9890	mg/L	0.00384	0.9890	mg/L	0.00384	0.39%

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Sequence No.: 24
Sample ID: SEQ-CCB3
Dilution: 1X
Wash Time: 120

Autosampler Location: 1
Date Collected: 12/3/2020 4:47:53 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB3

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-CCB3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2209836.0	101.9	%	0.39				0.38%
ScR 361.383	233130.3	100.2	%	0.81				0.81%
Ag 328.068†	47.6	0.00028	mg/L	0.000125	0.00028	mg/L	0.000125	45.29%
Al 308.215†	11.0	0.00893	mg/L	0.013959	0.00893	mg/L	0.013959	156.29%
As 188.979†	0.1	0.00009	mg/L	0.001666	0.00009	mg/L	0.001666	>999.9%
B 249.677†	0.4	0.00009	mg/L	0.001034	0.00009	mg/L	0.001034	>999.9%
Ba 233.527†	1.1	0.00015	mg/L	0.000259	0.00015	mg/L	0.000259	169.53%
Be 313.042†	27.2	0.00004	mg/L	0.000036	0.00004	mg/L	0.000036	92.50%
Ca 317.933†	-3.2	-0.00029	mg/L	0.001775	-0.00029	mg/L	0.001775	607.32%
Cd 228.802†	0.3	0.00001	mg/L	0.000009	0.00001	mg/L	0.000009	129.26%
Co 228.616†	-0.8	-0.00002	mg/L	0.000109	-0.00002	mg/L	0.000109	469.39%
Cr 267.716†	-4.8	-0.00057	mg/L	0.000553	-0.00057	mg/L	0.000553	97.58%
Cu 324.752†	8.4	0.00004	mg/L	0.000067	0.00004	mg/L	0.000067	174.54%
Fe 273.955†	3.8	0.00246	mg/L	0.001813	0.00246	mg/L	0.001813	73.70%
K 766.490†	-18.3	-0.01213	mg/L	0.034976	-0.01213	mg/L	0.034976	288.22%
Mg 279.077†	4.8	0.00343	mg/L	0.007222	0.00343	mg/L	0.007222	210.62%
Mn 257.610†	-1.3	-0.00003	mg/L	0.000082	-0.00003	mg/L	0.000082	300.77%
Mo 202.031†	54.8	0.00403	mg/L	0.000380	0.00403	mg/L	0.000380	9.43%
Na 589.592†	-30.8	-0.00613	mg/L	0.010289	-0.00613	mg/L	0.010289	167.81%
Na 330.237†	6.2	0.2720	mg/L	0.55356	0.2720	mg/L	0.55356	203.53%
Ni 231.604†	-5.7	-0.00163	mg/L	0.002609	-0.00163	mg/L	0.002609	159.96%
Pb 220.353†	-8.7	-0.00122	mg/L	0.000461	-0.00122	mg/L	0.000461	37.91%
Sb 206.836†	-4.6	-0.00189	mg/L	0.001439	-0.00189	mg/L	0.001439	76.05%
Se 196.026†	3.3	0.00279	mg/L	0.003415	0.00279	mg/L	0.003415	122.21%
Si 288.158†	-7.4	-0.00476	mg/L	0.001199	-0.00476	mg/L	0.001199	25.21%
Sn 189.927†	1.8	0.00046	mg/L	0.001276	0.00046	mg/L	0.001276	278.17%
Sr 421.552†	12.3	0.00002	mg/L	0.000110	0.00002	mg/L	0.000110	441.96%
Ti 334.903†	10.7	0.00056	mg/L	0.000293	0.00056	mg/L	0.000293	52.08%
Tl 190.801†	0.2	0.00010	mg/L	0.001073	0.00010	mg/L	0.001073	>999.9%
V 292.402†	-7.8	-0.00005	mg/L	0.000152	-0.00005	mg/L	0.000152	325.78%
Zn 206.200†	1.6	0.00046	mg/L	0.000640	0.00046	mg/L	0.000640	138.16%

User canceled analysis.

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Analysis Begun

Start Time: 12/3/2020 4:52:50 PM
Logged In Analyst: Metals Instrument Controller
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 12/3/2020 8:08:06 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 25
Sample ID: BIK0738-BLK1
Autosampler Location: 324
Date Collected: 12/3/2020 4:52:52 PM
Data Type: Original

Dilution: 5X

Nebulizer Parameters: BIK0738-BLK1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIK0738-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2069987.0	95.44	%	0.625				0.66%
ScR 361.383	220464.0	94.76	%	0.625				0.66%
Ag 328.068†	105.5	0.00061	mg/L	0.000109	0.00307	mg/L	0.000546	17.79%
Al 308.215†	-64.0	-0.05222	mg/L	0.018625	-0.2611	mg/L	0.09312	35.67%
As 188.979†	-3.2	-0.00212	mg/L	0.002620	-0.01059	mg/L	0.013102	123.70%
B 249.677†	259.1	0.05212	mg/L	0.002322	0.2606	mg/L	0.01161	4.46%
Ba 233.527†	12.9	0.00180	mg/L	0.000756	0.00901	mg/L	0.003781	41.98%
Be 313.042†	130.8	0.00018	mg/L	0.000041	0.00092	mg/L	0.000204	22.29%
Ca 317.933†	1891.5	0.1698	mg/L	0.00114	0.8488	mg/L	0.00569	0.67%
Cd 228.802†	13.3	0.00046	mg/L	0.000203	0.00228	mg/L	0.001015	44.59%
Co 228.616†	13.5	0.00039	mg/L	0.000126	0.00195	mg/L	0.000631	32.39%
Cr 267.716†	-17.1	-0.00202	mg/L	0.000272	-0.01010	mg/L	0.001360	13.47%
Cu 324.752†	400.4	0.00189	mg/L	0.000225	0.00947	mg/L	0.001127	11.90%
Fe 273.955†	9.0	0.00581	mg/L	0.001880	0.02907	mg/L	0.009399	32.34%
K 766.490†	170.1	0.1127	mg/L	0.03174	0.5633	mg/L	0.15872	28.17%
Mg 279.077†	-9.0	-0.00630	mg/L	0.008889	-0.03151	mg/L	0.044447	141.05%
Mn 257.610†	9.0	0.00019	mg/L	0.000031	0.00093	mg/L	0.000157	16.83%
Mo 202.031†	12.1	0.00089	mg/L	0.000176	0.00444	mg/L	0.000882	19.84%
Na 589.592†	1502104.3	298.9	mg/L	0.77	1495	mg/L	3.85	0.26%
Na 330.237†	6878.6	300.8	mg/L	2.38	1504	mg/L	11.89	0.79%
Ni 231.604†	5.9	0.00168	mg/L	0.000683	0.00842	mg/L	0.003415	40.56%
Pb 220.353†	-3.8	-0.00055	mg/L	0.001192	-0.00277	mg/L	0.005962	215.52%
Sb 206.836†	15.1	0.00625	mg/L	0.000396	0.03123	mg/L	0.001980	6.34%
Se 196.026†	5.7	0.00483	mg/L	0.003121	0.02413	mg/L	0.015603	64.67%
Si 288.158†	-45.3	-0.02912	mg/L	0.004497	-0.1456	mg/L	0.02249	15.45%
Sn 189.927†	1.3	0.00036	mg/L	0.001513	0.00182	mg/L	0.007565	415.37%
Sr 421.552†	361.5	0.00073	mg/L	0.000046	0.00365	mg/L	0.000230	6.31%
Ti 334.903†	15.6	0.00081	mg/L	0.000527	0.00406	mg/L	0.002637	64.88%
Tl 190.801†	-0.1	-0.00004	mg/L	0.003376	-0.00022	mg/L	0.016881	>999.9%
V 292.402†	203.0	0.00125	mg/L	0.000084	0.00627	mg/L	0.000420	6.70%
Zn 206.200†	12.9	0.00370	mg/L	0.000722	0.01851	mg/L	0.003609	19.50%

Sequence No.: 26
Sample ID: BIL0040-BLK1
Autosampler Location: 325
Date Collected: 12/3/2020 4:57:25 PM
Data Type: Original

Dilution: 1X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: BIL0040-BLK1

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: BIL0040-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2072148.5	95.54	%	0.395				0.41%
ScR 361.383	223177.6	95.92	%	0.427				0.45%
Ag 328.068†	109.3	0.00064	mg/L	0.000165	0.00064	mg/L	0.000165	26.00%
Al 308.215†	-54.8	-0.04474	mg/L	0.027929	-0.04474	mg/L	0.027929	62.42%
As 188.979†	2.2	0.00167	mg/L	0.001572	0.00167	mg/L	0.001572	94.34%
B 249.677†	-28.3	-0.00566	mg/L	0.000678	-0.00566	mg/L	0.000678	11.98%
Ba 233.527†	4.1	0.00057	mg/L	0.000662	0.00057	mg/L	0.000662	116.28%
Be 313.042†	95.8	0.00013	mg/L	0.000035	0.00013	mg/L	0.000035	26.00%
Ca 317.933†	87.8	0.00785	mg/L	0.002288	0.00785	mg/L	0.002288	29.17%
Cd 228.802†	9.7	0.00031	mg/L	0.000095	0.00031	mg/L	0.000095	30.29%
Co 228.616†	9.4	0.00027	mg/L	0.000138	0.00027	mg/L	0.000138	51.16%
Cr 267.716†	-5.9	-0.00069	mg/L	0.000942	-0.00069	mg/L	0.000942	135.89%
Cu 324.752†	344.2	0.00163	mg/L	0.000109	0.00163	mg/L	0.000109	6.72%
Fe 273.955†	11.0	0.00712	mg/L	0.000855	0.00712	mg/L	0.000855	12.01%
K 766.490†	-1.3	-0.00088	mg/L	0.030950	-0.00088	mg/L	0.030950	>999.9%
Mg 279.077†	-22.8	-0.01593	mg/L	0.006400	-0.01593	mg/L	0.006400	40.17%
Mn 257.610†	13.3	0.00028	mg/L	0.000121	0.00028	mg/L	0.000121	43.74%
Mo 202.031†	10.6	0.00078	mg/L	0.000662	0.00078	mg/L	0.000662	85.05%
Na 589.592†	181.6	0.03615	mg/L	0.015807	0.03615	mg/L	0.015807	43.73%
Na 330.237†	-17.1	-0.7475	mg/L	0.98123	-0.7475	mg/L	0.98123	131.26%
Ni 231.604†	-8.2	-0.00236	mg/L	0.000277	-0.00236	mg/L	0.000277	11.75%
Pb 220.353†	-12.9	-0.00182	mg/L	0.001070	-0.00182	mg/L	0.001070	58.87%
Sb 206.836†	12.1	0.00499	mg/L	0.000439	0.00499	mg/L	0.000439	8.80%
Se 196.026†	5.9	0.00502	mg/L	0.002109	0.00502	mg/L	0.002109	41.98%
Si 288.158†	-77.9	-0.05010	mg/L	0.003469	-0.05010	mg/L	0.003469	6.93%
Sn 189.927†	-5.2	-0.00135	mg/L	0.001240	-0.00135	mg/L	0.001240	91.63%
Sr 421.552†	95.4	0.00019	mg/L	0.000035	0.00019	mg/L	0.000035	17.98%
Ti 334.903†	24.3	0.00128	mg/L	0.000223	0.00128	mg/L	0.000223	17.42%
Tl 190.801†	1.1	0.00059	mg/L	0.003408	0.00059	mg/L	0.003408	575.55%
V 292.402†	178.7	0.00111	mg/L	0.000053	0.00111	mg/L	0.000053	4.80%
Zn 206.200†	7.9	0.00227	mg/L	0.000051	0.00227	mg/L	0.000051	2.24%

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Sequence No.: 27 **Autosampler Location: 326**
Sample ID: 20K0326-01 **Date Collected: 12/3/2020 5:01:41 PM**
Data Type: Original

Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0326-01

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0326-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2063266.7	95.13	%	0.412				0.43%
ScR 361.383	223173.1	95.92	%	0.692				0.72%
Ag 328.068†	117.1	0.00068	mg/L	0.000123	0.00068	mg/L	0.000123	18.04%
Al 308.215†	1473.6	1.201	mg/L	0.0114	1.201	mg/L	0.0114	0.95%
As 188.979†	2.9	0.00204	mg/L	0.001704	0.00204	mg/L	0.001704	83.71%
B 249.677†	4629.4	0.9307	mg/L	0.01918	0.9307	mg/L	0.01918	2.06%
Ba 233.527†	32.0	0.00445	mg/L	0.000139	0.00445	mg/L	0.000139	3.12%
Be 313.042†	81.5	0.00011	mg/L	0.000028	0.00011	mg/L	0.000028	24.90%
Ca 317.933†	24317.4	2.183	mg/L	0.0278	2.183	mg/L	0.0278	1.27%
Cd 228.802†	10.3	0.00033	mg/L	0.000045	0.00033	mg/L	0.000045	13.42%
Co 228.616†	7.3	0.00021	mg/L	0.000032	0.00021	mg/L	0.000032	15.11%
Cr 267.716†	-16.5	-0.00196	mg/L	0.000420	-0.00196	mg/L	0.000420	21.38%
Cu 324.752†	553.8	0.00262	mg/L	0.000206	0.00262	mg/L	0.000206	7.87%
Fe 273.955†	9.4	0.00608	mg/L	0.000977	0.00608	mg/L	0.000977	16.05%
K 766.490†	821.0	0.5439	mg/L	0.02241	0.5439	mg/L	0.02241	4.12%
Mg 279.077†	363.1	0.2538	mg/L	0.00433	0.2538	mg/L	0.00433	1.71%
Mn 257.610†	584.6	0.01206	mg/L	0.000147	0.01206	mg/L	0.000147	1.22%
Mo 202.031†	16.3	0.00116	mg/L	0.000439	0.00116	mg/L	0.000439	37.88%
Na 589.592†	74780.0	14.88	mg/L	0.322	14.88	mg/L	0.322	2.16%
Na 330.237†	325.1	14.21	mg/L	0.690	14.21	mg/L	0.690	4.86%
Ni 231.604†	-5.7	-0.00162	mg/L	0.000500	-0.00162	mg/L	0.000500	30.94%
Pb 220.353†	-3.3	-0.00011	mg/L	0.000377	-0.00011	mg/L	0.000377	342.91%
Sb 206.836†	14.2	0.00583	mg/L	0.001653	0.00583	mg/L	0.001653	28.34%
Se 196.026†	1.8	0.00133	mg/L	0.004014	0.00133	mg/L	0.004014	301.00%
Si 288.158†	345.5	0.2228	mg/L	0.00272	0.2228	mg/L	0.00272	1.22%
Sn 189.927†	-6.3	-0.00123	mg/L	0.000589	-0.00123	mg/L	0.000589	47.75%
Sr 421.552†	3711.1	0.00750	mg/L	0.000182	0.00750	mg/L	0.000182	2.42%
Ti 334.903†	11.1	0.00049	mg/L	0.000773	0.00049	mg/L	0.000773	158.01%
Tl 190.801†	1.1	0.00060	mg/L	0.001307	0.00060	mg/L	0.001307	216.53%
V 292.402†	173.5	0.00107	mg/L	0.000114	0.00107	mg/L	0.000114	10.66%
Zn 206.200†	70.3	0.02014	mg/L	0.001072	0.02014	mg/L	0.001072	5.32%

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Sequence No.: 28 **Autosampler Location: 327**
Sample ID: 20K0345-01 **Date Collected: 12/3/2020 5:05:57 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0345-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0345-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2079991.8	95.90	%	0.285				0.30%
ScR 361.383	226851.2	97.50	%	0.533				0.55%
Ag 328.068†	289.5	0.00168	mg/L	0.000118	0.00168	mg/L	0.000118	7.02%
Al 308.215†	110.5	0.09009	mg/L	0.005368	0.09009	mg/L	0.005368	5.96%
As 188.979†	7.2	0.00510	mg/L	0.000838	0.00510	mg/L	0.000838	16.43%
B 249.677†	-10.7	-0.00218	mg/L	0.002487	-0.00218	mg/L	0.002487	114.15%
Ba 233.527†	13.4	0.00186	mg/L	0.000357	0.00186	mg/L	0.000357	19.21%
Be 313.042†	67.3	0.00010	mg/L	0.000022	0.00010	mg/L	0.000022	23.29%
Ca 317.933†	322.7	0.02874	mg/L	0.001201	0.02874	mg/L	0.001201	4.18%
Cd 228.802†	12.3	0.00039	mg/L	0.000081	0.00039	mg/L	0.000081	20.82%
Co 228.616†	18.8	0.00054	mg/L	0.000246	0.00054	mg/L	0.000246	45.20%
Cr 267.716†	-4.7	-0.00055	mg/L	0.000476	-0.00055	mg/L	0.000476	86.03%
Cu 324.752†	3070072.1	14.53	mg/L	0.010	14.53	mg/L	0.010	0.07%
Fe 273.955†	70.5	0.04553	mg/L	0.003606	0.04553	mg/L	0.003606	7.92%
K 766.490†	71.6	0.04745	mg/L	0.050429	0.04745	mg/L	0.050429	106.28%
Mg 279.077†	-25.7	-0.01794	mg/L	0.004148	-0.01794	mg/L	0.004148	23.12%
Mn 257.610†	35.6	0.00075	mg/L	0.000086	0.00075	mg/L	0.000086	11.46%
Mo 202.031†	32.0	0.00236	mg/L	0.000451	0.00236	mg/L	0.000451	19.14%
Na 589.592†	68655.1	13.66	mg/L	0.105	13.66	mg/L	0.105	0.76%
Na 330.237†	305.3	13.18	mg/L	0.390	13.18	mg/L	0.390	2.96%
Ni 231.604†	5.2	0.00151	mg/L	0.001304	0.00151	mg/L	0.001304	86.33%
Pb 220.353†	637.4	0.06759	mg/L	0.002148	0.06759	mg/L	0.002148	3.18%
Sb 206.836†	29.9	0.01240	mg/L	0.001508	0.01240	mg/L	0.001508	12.16%
Se 196.026†	17.0	0.01453	mg/L	0.002968	0.01453	mg/L	0.002968	20.43%
Si 288.158†	60.1	0.03853	mg/L	0.010425	0.03853	mg/L	0.010425	27.05%
Sn 189.927†	79.5	0.02079	mg/L	0.000716	0.02079	mg/L	0.000716	3.44%
Sr 421.552†	194.8	0.00039	mg/L	0.000094	0.00039	mg/L	0.000094	23.90%
Ti 334.903†	19.2	0.00101	mg/L	0.000691	0.00101	mg/L	0.000691	68.40%
Tl 190.801†	-0.0	-0.00002	mg/L	0.001503	-0.00002	mg/L	0.001503	>999.9%
V 292.402†	34.4	0.00021	mg/L	0.000184	0.00021	mg/L	0.000184	85.69%
Zn 206.200†	1677.2	0.4802	mg/L	0.00238	0.4802	mg/L	0.00238	0.49%

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Sequence No.: 29
Sample ID: 20K0327-01
Dilution: 5X
Wash Time: 37

Autosampler Location: 328
Date Collected: 12/3/2020 5:10:14 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0327-01

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0327-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1933440.8	89.15	%	0.338				0.38%
ScR 361.383	213144.1	91.61	%	0.396				0.43%
Ag 328.068†	116.8	0.00040	mg/L	0.000125	0.00198	mg/L	0.000624	31.53%
Al 308.215†	-99.8	-0.06060	mg/L	0.002893	-0.3030	mg/L	0.01447	4.77%
As 188.979†	0.2	-0.00141	mg/L	0.000991	-0.00705	mg/L	0.004956	70.26%
B 249.677†	1369.6	0.2672	mg/L	0.00262	1.336	mg/L	0.0131	0.98%
Ba 233.527†	161.5	0.01010	mg/L	0.000951	0.05049	mg/L	0.004754	9.42%
Be 313.042†	176.3	0.00025	mg/L	0.000023	0.00126	mg/L	0.000116	9.19%
Ca 317.933†	898113.1	80.63	mg/L	1.152	403.1	mg/L	5.76	1.43%
Cd 228.802†	52.9	0.00188	mg/L	0.000194	0.00938	mg/L	0.000969	10.33%
Co 228.616†	839.3	0.02288	mg/L	0.000094	0.1144	mg/L	0.00047	0.41%
Cr 267.716†	-35.2	-0.00249	mg/L	0.000805	-0.01246	mg/L	0.004025	32.29%
Cu 324.752†	-147.1	0.00283	mg/L	0.000325	0.01416	mg/L	0.001624	11.47%
Fe 273.955†	129502.6	83.68	mg/L	0.392	418.4	mg/L	1.96	0.47%
K 766.490†	1085.3	0.7189	mg/L	0.02922	3.595	mg/L	0.1461	4.06%
Mg 279.077†	19185.9	13.39	mg/L	0.033	66.93	mg/L	0.167	0.25%
Mn 257.610†	143656.6	2.966	mg/L	0.0146	14.83	mg/L	0.073	0.49%
Mo 202.031†	71.3	0.00385	mg/L	0.000258	0.01924	mg/L	0.001292	6.72%
Na 589.592†	1533748.7	305.2	mg/L	1.02	1526	mg/L	5.12	0.34%
Na 330.237†	6945.7	303.7	mg/L	1.84	1519	mg/L	9.18	0.60%
Ni 231.604†	498.5	0.1429	mg/L	0.00256	0.7147	mg/L	0.01282	1.79%
Pb 220.353†	16.0	-0.00111	mg/L	0.000739	-0.00557	mg/L	0.003694	66.28%
Sb 206.836†	57.1	0.01729	mg/L	0.001813	0.08647	mg/L	0.009066	10.48%
Se 196.026†	22.0	0.00985	mg/L	0.005696	0.04923	mg/L	0.028479	57.85%
Si 288.158†	2662.3	1.764	mg/L	0.0044	8.818	mg/L	0.0221	0.25%
Sn 189.927†	-122.3	-0.01719	mg/L	0.000080	-0.08597	mg/L	0.000400	0.47%
Sr 421.552†	90066.7	0.1820	mg/L	0.00083	0.9101	mg/L	0.00414	0.46%
Ti 334.903†	74.4	0.00044	mg/L	0.001280	0.00219	mg/L	0.006401	291.89%
Tl 190.801†	-10.8	-0.00595	mg/L	0.001884	-0.02975	mg/L	0.009421	31.67%
V 292.402†	-207.7	0.00001	mg/L	0.000121	0.00007	mg/L	0.000603	904.07%
Zn 206.200†	292.9	0.08385	mg/L	0.001726	0.4192	mg/L	0.00863	2.06%

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Sequence No.: 30
Sample ID: 20K0328-01

Dilution: 5X
Wash Time: 37

Autosampler Location: 329
Date Collected: 12/3/2020 5:14:47 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0328-01

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: 20K0328-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1943455.8	89.61	%	0.106				0.12%
ScR 361.383	216245.6	92.94	%	0.682				0.73%
Ag 328.068†	178.4	0.00083	mg/L	0.000246	0.00416	mg/L	0.001229	29.56%
Al 308.215†	-74.1	-0.05944	mg/L	0.007993	-0.2972	mg/L	0.03996	13.45%
As 188.979†	5.0	0.00177	mg/L	0.000811	0.00885	mg/L	0.004057	45.86%
B 249.677†	285.4	0.05438	mg/L	0.002998	0.2719	mg/L	0.01499	5.51%
Ba 233.527†	93.4	0.01159	mg/L	0.000515	0.05797	mg/L	0.002577	4.45%
Be 313.042†	222.2	0.00031	mg/L	0.000009	0.00156	mg/L	0.000043	2.72%
Ca 317.933†	1017927.5	91.39	mg/L	1.191	456.9	mg/L	5.96	1.30%
Cd 228.802†	37.7	0.00132	mg/L	0.000166	0.00659	mg/L	0.000828	12.57%
Co 228.616†	545.3	0.01575	mg/L	0.000075	0.07873	mg/L	0.000376	0.48%
Cr 267.716†	-10.1	-0.00200	mg/L	0.001180	-0.01001	mg/L	0.005898	58.92%
Cu 324.752†	482.6	0.00240	mg/L	0.000176	0.01198	mg/L	0.000882	7.36%
Fe 273.955†	7053.6	4.558	mg/L	0.0367	22.79	mg/L	0.184	0.81%
K 766.490†	1461.7	0.9683	mg/L	0.03410	4.841	mg/L	0.1705	3.52%
Mg 279.077†	14927.3	10.44	mg/L	0.014	52.18	mg/L	0.071	0.14%
Mn 257.610†	104681.4	2.162	mg/L	0.0041	10.81	mg/L	0.021	0.19%
Mo 202.031†	77.6	0.00419	mg/L	0.000462	0.02094	mg/L	0.002312	11.05%
Na 589.592†	1502680.3	299.1	mg/L	3.43	1495	mg/L	17.15	1.15%
Na 330.237†	6793.2	297.0	mg/L	1.74	1485	mg/L	8.72	0.59%
Ni 231.604†	333.7	0.09569	mg/L	0.001283	0.4785	mg/L	0.00642	1.34%
Pb 220.353†	-4.3	-0.00079	mg/L	0.001387	-0.00394	mg/L	0.006936	176.06%
Sb 206.836†	24.8	0.00967	mg/L	0.001235	0.04833	mg/L	0.006177	12.78%
Se 196.026†	28.9	0.01553	mg/L	0.003886	0.07767	mg/L	0.019429	25.01%
Si 288.158†	6378.4	4.133	mg/L	0.0249	20.67	mg/L	0.125	0.60%
Sn 189.927†	-126.8	-0.01641	mg/L	0.001881	-0.08204	mg/L	0.009403	11.46%
Sr 421.552†	91520.4	0.1849	mg/L	0.00124	0.9247	mg/L	0.00622	0.67%
Ti 334.903†	93.3	0.00097	mg/L	0.000743	0.00484	mg/L	0.003713	76.65%
Tl 190.801†	-0.4	-0.00028	mg/L	0.003059	-0.00138	mg/L	0.015297	>999.9%
V 292.402†	283.6	0.00183	mg/L	0.000032	0.00916	mg/L	0.000158	1.72%
Zn 206.200†	1331.6	0.3812	mg/L	0.00077	1.906	mg/L	0.0039	0.20%

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Sequence No.: 31
Sample ID: 20K0335-01

Autosampler Location: 330
Date Collected: 12/3/2020 5:19:20 PM
Data Type: Original

Dilution: 5X
Wash Time: 37

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0335-01

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0335-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1786505.1	82.37	%	0.148				0.18%
ScR 361.383	205703.9	88.41	%	0.326				0.37%
Ag 328.068†	147.6	0.00086	mg/L	0.000201	0.00428	mg/L	0.001006	23.51%
Al 308.215†	-96.2	-0.08051	mg/L	0.010939	-0.4025	mg/L	0.05470	13.59%
As 188.979†	12.3	0.00777	mg/L	0.000591	0.03883	mg/L	0.002953	7.61%
B 249.677†	34666.8	6.971	mg/L	0.0441	34.85	mg/L	0.220	0.63%
Ba 233.527†	21.3	0.00273	mg/L	0.000370	0.01365	mg/L	0.001852	13.57%
Be 313.042†	181.8	0.00025	mg/L	0.000050	0.00127	mg/L	0.000251	19.82%
Ca 317.933†	254775.3	22.87	mg/L	0.221	114.4	mg/L	1.11	0.97%
Cd 228.802†	31.5	0.00104	mg/L	0.000073	0.00522	mg/L	0.000366	7.01%
Co 228.616†	48.0	0.00139	mg/L	0.000148	0.00697	mg/L	0.000740	10.61%
Cr 267.716†	-34.9	-0.00412	mg/L	0.000599	-0.02062	mg/L	0.002994	14.52%
Cu 324.752†	1038.8	0.00488	mg/L	0.000095	0.02440	mg/L	0.000476	1.95%
Fe 273.955†	458.8	0.2964	mg/L	0.00287	1.482	mg/L	0.0143	0.97%
K 766.490†	4489.8	2.974	mg/L	0.0351	14.87	mg/L	0.175	1.18%
Mg 279.077†	155.2	0.1097	mg/L	0.00589	0.5486	mg/L	0.02943	5.36%
Mn 257.610†	1371.9	0.02833	mg/L	0.000057	0.1417	mg/L	0.00029	0.20%
Mo 202.031†	1562.1	0.1146	mg/L	0.00039	0.5729	mg/L	0.00193	0.34%
Na 589.592†	11428867.1	2275	mg/L	20.98	11370	mg/L	104.88	0.92%
Na 330.237†	53838.9	2355	mg/L	15.72	11770	mg/L	78.61	0.67%
Ni 231.604†	142.5	0.04088	mg/L	0.000859	0.2044	mg/L	0.00429	2.10%
Pb 220.353†	37.0	0.00512	mg/L	0.001434	0.02561	mg/L	0.007170	27.99%
Sb 206.836†	40.6	0.01658	mg/L	0.002075	0.08291	mg/L	0.010374	12.51%
Se 196.026†	12.4	0.00873	mg/L	0.009035	0.04363	mg/L	0.045177	103.56%
Si 288.158†	-77.0	-0.04563	mg/L	0.003519	-0.2282	mg/L	0.01759	7.71%
Sn 189.927†	-72.4	-0.01471	mg/L	0.000306	-0.07354	mg/L	0.001530	2.08%
Sr 421.552†	16517.6	0.03338	mg/L	0.000200	0.1669	mg/L	0.00100	0.60%
Ti 334.903†	41.5	0.00110	mg/L	0.000909	0.00551	mg/L	0.004543	82.49%
Tl 190.801†	3.8	0.00227	mg/L	0.002738	0.01136	mg/L	0.013691	120.47%
V 292.402†	445.2	0.00287	mg/L	0.000138	0.01436	mg/L	0.000692	4.82%
Zn 206.200†	400.8	0.1147	mg/L	0.00104	0.5737	mg/L	0.00522	0.91%

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Sequence No.: 32
Sample ID: 20K0411-01

Dilution: 5X
Wash Time: 60

Autosampler Location: 331
Date Collected: 12/3/2020 5:24:21 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0411-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0411-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1883417.0	86.84	%	0.490				0.56%
ScR 361.383	214172.5	92.05	%	1.042				1.13%
Ag 328.068†	115.5	0.00066	mg/L	0.000146	0.00329	mg/L	0.000729	22.18%
Al 308.215†	-81.7	-0.06686	mg/L	0.008994	-0.3343	mg/L	0.04497	13.45%
As 188.979†	10.7	0.00699	mg/L	0.001692	0.03493	mg/L	0.008461	24.23%
B 249.677†	59474.3	11.96	mg/L	0.119	59.79	mg/L	0.597	1.00%
Ba 233.527†	10.8	0.00120	mg/L	0.000397	0.00602	mg/L	0.001985	32.95%
Be 313.042†	157.2	0.00022	mg/L	0.000071	0.00109	mg/L	0.000357	32.59%
Ca 317.933†	264498.0	23.75	mg/L	0.238	118.7	mg/L	1.19	1.00%
Cd 228.802†	30.1	0.00097	mg/L	0.000196	0.00487	mg/L	0.000981	20.14%
Co 228.616†	28.9	0.00083	mg/L	0.000235	0.00413	mg/L	0.001177	28.52%
Cr 267.716†	-22.2	-0.00266	mg/L	0.001025	-0.01331	mg/L	0.005127	38.52%
Cu 324.752†	1316.0	0.00624	mg/L	0.000066	0.03121	mg/L	0.000332	1.06%
Fe 273.955†	1022.6	0.6607	mg/L	0.00971	3.304	mg/L	0.0485	1.47%
K 766.490†	2443.5	1.619	mg/L	0.0219	8.094	mg/L	0.1093	1.35%
Mg 279.077†	886.0	0.6196	mg/L	0.01008	3.098	mg/L	0.0504	1.63%
Mn 257.610†	7380.7	0.1524	mg/L	0.00134	0.7621	mg/L	0.00672	0.88%
Mo 202.031†	318.0	0.02302	mg/L	0.000049	0.1151	mg/L	0.00025	0.21%
Na 589.592†	4692706.0	933.9	mg/L	13.38	4670	mg/L	66.89	1.43%
Na 330.237†	21438.0	937.6	mg/L	9.33	4688	mg/L	46.63	0.99%
Ni 231.604†	18.8	0.00541	mg/L	0.001647	0.02706	mg/L	0.008234	30.43%
Pb 220.353†	63.6	0.00882	mg/L	0.001086	0.04412	mg/L	0.005432	12.31%
Sb 206.836†	35.0	0.01428	mg/L	0.004432	0.07140	mg/L	0.022158	31.04%
Se 196.026†	10.7	0.00710	mg/L	0.005473	0.03552	mg/L	0.027366	77.04%
Si 288.158†	-70.2	-0.04019	mg/L	0.009523	-0.2010	mg/L	0.04762	23.69%
Sn 189.927†	-61.9	-0.01182	mg/L	0.000778	-0.05909	mg/L	0.003889	6.58%
Sr 421.552†	14210.2	0.02872	mg/L	0.000200	0.1436	mg/L	0.00100	0.70%
Ti 334.903†	40.1	0.00107	mg/L	0.000733	0.00533	mg/L	0.003664	68.69%
Tl 190.801†	1.8	0.00099	mg/L	0.003822	0.00494	mg/L	0.019109	386.61%
V 292.402†	369.0	0.00232	mg/L	0.000049	0.01158	mg/L	0.000247	2.13%
Zn 206.200†	68.1	0.01949	mg/L	0.000983	0.09744	mg/L	0.004916	5.05%

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Sequence No.: 33
Sample ID: SEQ-IBL2

Autosampler Location: 332
Date Collected: 12/3/2020 5:29:18 PM
Data Type: Original

Dilution: 1X
Wash Time: 60

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-IBL2

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: SEQ-IBL2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2020775.1	93.17	%	0.294				0.32%
ScR 361.383	217404.7	93.44	%	0.678				0.73%
Ag 328.068†	74.0	0.00043	mg/L	0.000221	0.00043	mg/L	0.000221	51.43%
Al 308.215†	-77.2	-0.06297	mg/L	0.008343	-0.06297	mg/L	0.008343	13.25%
As 188.979†	4.1	0.00288	mg/L	0.001891	0.00288	mg/L	0.001891	65.56%
B 249.677†	104.8	0.02110	mg/L	0.003186	0.02110	mg/L	0.003186	15.10%
Ba 233.527†	2.0	0.00027	mg/L	0.000348	0.00027	mg/L	0.000348	128.18%
Be 313.042†	103.2	0.00014	mg/L	0.000016	0.00014	mg/L	0.000016	11.15%
Ca 317.933†	53.5	0.00476	mg/L	0.000366	0.00476	mg/L	0.000366	7.68%
Cd 228.802†	14.4	0.00046	mg/L	0.000108	0.00046	mg/L	0.000108	23.18%
Co 228.616†	7.5	0.00022	mg/L	0.000284	0.00022	mg/L	0.000284	131.05%
Cr 267.716†	-21.2	-0.00250	mg/L	0.000649	-0.00250	mg/L	0.000649	25.93%
Cu 324.752†	385.9	0.00183	mg/L	0.000094	0.00183	mg/L	0.000094	5.16%
Fe 273.955†	7.3	0.00468	mg/L	0.000804	0.00468	mg/L	0.000804	17.19%
K 766.490†	51.7	0.03428	mg/L	0.032238	0.03428	mg/L	0.032238	94.04%
Mg 279.077†	-52.7	-0.03683	mg/L	0.004904	-0.03683	mg/L	0.004904	13.32%
Mn 257.610†	17.7	0.00037	mg/L	0.000206	0.00037	mg/L	0.000206	56.32%
Mo 202.031†	4.1	0.00031	mg/L	0.000085	0.00031	mg/L	0.000085	27.97%
Na 589.592†	1417.1	0.2820	mg/L	0.02919	0.2820	mg/L	0.02919	10.35%
Na 330.237†	-20.4	-0.8918	mg/L	0.33082	-0.8918	mg/L	0.33082	37.09%
Ni 231.604†	-16.4	-0.00470	mg/L	0.000430	-0.00470	mg/L	0.000430	9.15%
Pb 220.353†	-4.0	-0.00059	mg/L	0.000049	-0.00059	mg/L	0.000049	8.28%
Sb 206.836†	17.9	0.00740	mg/L	0.001309	0.00740	mg/L	0.001309	17.70%
Se 196.026†	8.8	0.00756	mg/L	0.006605	0.00756	mg/L	0.006605	87.39%
Si 288.158†	-102.0	-0.06563	mg/L	0.004171	-0.06563	mg/L	0.004171	6.36%
Sn 189.927†	-0.7	-0.00018	mg/L	0.001259	-0.00018	mg/L	0.001259	681.72%
Sr 421.552†	144.7	0.00029	mg/L	0.000065	0.00029	mg/L	0.000065	22.08%
Ti 334.903†	10.6	0.00056	mg/L	0.000407	0.00056	mg/L	0.000407	72.93%
Tl 190.801†	1.8	0.00095	mg/L	0.000847	0.00095	mg/L	0.000847	89.52%
V 292.402†	218.4	0.00135	mg/L	0.000131	0.00135	mg/L	0.000131	9.72%
Zn 206.200†	4.0	0.00115	mg/L	0.000559	0.00115	mg/L	0.000559	48.42%

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Sequence No.: 34 **Autosampler Location: 333**
Sample ID: BIL0040-BS1 **Date Collected: 12/3/2020 5:33:34 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIL0040-BS1

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: BIL0040-BS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2022393.2	93.25	%	0.933				1.00%
ScR 361.383	216573.8	93.09	%	0.529				0.57%
Ag 328.068†	98768.1	0.5741	mg/L	0.00312	0.5741	mg/L	0.00312	0.54%
Al 308.215†	2636.3	2.144	mg/L	0.0056	2.144	mg/L	0.0056	0.26%
As 188.979†	3201.6	2.209	mg/L	0.0242	2.209	mg/L	0.0242	1.10%
B 249.677†	58.8	0.01001	mg/L	0.002940	0.01001	mg/L	0.002940	29.38%
Ba 233.527†	15016.6	2.094	mg/L	0.0154	2.094	mg/L	0.0154	0.73%
Be 313.042†	373707.4	0.5293	mg/L	0.00203	0.5293	mg/L	0.00203	0.38%
Ca 317.933†	120031.2	10.74	mg/L	0.042	10.74	mg/L	0.042	0.39%
Cd 228.802†	16032.9	0.5245	mg/L	0.00324	0.5245	mg/L	0.00324	0.62%
Co 228.616†	17946.5	0.5213	mg/L	0.00439	0.5213	mg/L	0.00439	0.84%
Cr 267.716†	4448.1	0.5258	mg/L	0.00537	0.5258	mg/L	0.00537	1.02%
Cu 324.752†	107952.2	0.5109	mg/L	0.00337	0.5109	mg/L	0.00337	0.66%
Fe 273.955†	3375.7	2.179	mg/L	0.0190	2.179	mg/L	0.0190	0.87%
K 766.490†	16906.9	11.20	mg/L	0.071	11.20	mg/L	0.071	0.63%
Mg 279.077†	16354.3	11.43	mg/L	0.078	11.43	mg/L	0.078	0.68%
Mn 257.610†	25372.2	0.5241	mg/L	0.00372	0.5241	mg/L	0.00372	0.71%
Mo 202.031†	28.7	0.00180	mg/L	0.000408	0.00180	mg/L	0.000408	22.62%
Na 589.592†	56822.2	11.31	mg/L	0.121	11.31	mg/L	0.121	1.07%
Na 330.237†	242.1	10.40	mg/L	0.170	10.40	mg/L	0.170	1.63%
Ni 231.604†	1813.4	0.5197	mg/L	0.00535	0.5197	mg/L	0.00535	1.03%
Pb 220.353†	15692.2	2.194	mg/L	0.0124	2.194	mg/L	0.0124	0.57%
Sb 206.836†	43.4	0.01226	mg/L	0.002396	0.01226	mg/L	0.002396	19.54%
Se 196.026†	2623.4	2.244	mg/L	0.0181	2.244	mg/L	0.0181	0.81%
Si 288.158†	-90.4	-0.04508	mg/L	0.008653	-0.04508	mg/L	0.008653	19.19%
Sn 189.927†	-30.7	-0.00598	mg/L	0.000435	-0.00598	mg/L	0.000435	7.28%
Sr 421.552†	274611.4	0.5550	mg/L	0.00553	0.5550	mg/L	0.00553	1.00%
Ti 334.903†	13.8	0.00016	mg/L	0.000062	0.00016	mg/L	0.000062	39.64%
Tl 190.801†	4173.4	2.239	mg/L	0.0192	2.239	mg/L	0.0192	0.86%
V 292.402†	83623.3	0.5215	mg/L	0.00299	0.5215	mg/L	0.00299	0.57%
Zn 206.200†	1838.7	0.5265	mg/L	0.00340	0.5265	mg/L	0.00340	0.65%

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Sequence No.: 35 **Autosampler Location: 7**
Sample ID: SEQ-CCV4 **Date Collected: 12/3/2020 5:37:51 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV4

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: SEQ-CCV4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2037662.6	93.95	%	0.716				0.76%
ScR 361.383	213290.4	91.67	%	0.936				1.02%
Ag 328.068†	185833.8	1.080	mg/L	0.0103	1.080	mg/L	0.0103	0.96%
Al 308.215†	2714.1	2.180	mg/L	0.0158	2.180	mg/L	0.0158	0.73%
As 188.979†	3005.6	2.192	mg/L	0.0271	2.192	mg/L	0.0271	1.24%
B 249.677†	5608.5	1.124	mg/L	0.0093	1.124	mg/L	0.0093	0.83%
Ba 233.527†	7697.1	1.072	mg/L	0.0106	1.072	mg/L	0.0106	0.99%
Be 313.042†	752576.6	1.066	mg/L	0.0074	1.066	mg/L	0.0074	0.70%
Ca 317.933†	24309.0	2.101	mg/L	0.0076	2.101	mg/L	0.0076	0.36%
Cd 228.802†	31546.4	1.042	mg/L	0.0102	1.042	mg/L	0.0102	0.98%
Co 228.616†	36980.9	1.073	mg/L	0.0085	1.073	mg/L	0.0085	0.79%
Cr 267.716†	9118.2	1.078	mg/L	0.0128	1.078	mg/L	0.0128	1.19%
Cu 324.752†	211356.2	0.9998	mg/L	0.00956	0.9998	mg/L	0.00956	0.96%
Fe 273.955†	3451.6	2.226	mg/L	0.0174	2.226	mg/L	0.0174	0.78%
K 766.490†	34008.8	22.53	mg/L	0.145	22.53	mg/L	0.145	0.64%
Mg 279.077†	3248.6	2.288	mg/L	0.0228	2.288	mg/L	0.0228	1.00%
Mn 257.610†	49902.4	1.031	mg/L	0.0127	1.031	mg/L	0.0127	1.23%
Mo 202.031†	14723.8	1.083	mg/L	0.0114	1.083	mg/L	0.0114	1.05%
Na 589.592†	283077.6	56.34	mg/L	0.937	56.34	mg/L	0.937	1.66%
Na 330.237†	1272.2	55.45	mg/L	0.352	55.45	mg/L	0.352	0.63%
Ni 231.604†	3786.8	1.088	mg/L	0.0097	1.088	mg/L	0.0097	0.89%
Pb 220.353†	15981.1	2.235	mg/L	0.0216	2.235	mg/L	0.0216	0.97%
Sb 206.836†	5616.8	2.302	mg/L	0.0234	2.302	mg/L	0.0234	1.01%
Se 196.026†	2628.2	2.248	mg/L	0.0296	2.248	mg/L	0.0296	1.32%
Si 288.158†	3431.6	2.214	mg/L	0.0140	2.214	mg/L	0.0140	0.63%
Sn 189.927†	4238.0	1.109	mg/L	0.0100	1.109	mg/L	0.0100	0.90%
Sr 421.552†	554802.1	1.121	mg/L	0.0142	1.121	mg/L	0.0142	1.26%
Ti 334.903†	20611.8	1.084	mg/L	0.0072	1.084	mg/L	0.0072	0.66%
Tl 190.801†	4081.7	2.187	mg/L	0.0228	2.187	mg/L	0.0228	1.04%
V 292.402†	163763.5	1.022	mg/L	0.0106	1.022	mg/L	0.0106	1.04%
Zn 206.200†	3880.5	1.111	mg/L	0.0111	1.111	mg/L	0.0111	1.00%

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Sequence No.: 36
Sample ID: SEQ-CCB4

Autosampler Location: 1
Date Collected: 12/3/2020 5:43:19 PM
Data Type: Original

Dilution: 1X
Wash Time: 120

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB4

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-CCB4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2029979.0	93.60	%	0.482				0.52%
ScR 361.383	215970.0	92.83	%	0.318				0.34%
Ag 328.068†	162.7	0.00095	mg/L	0.000297	0.00095	mg/L	0.000297	31.34%
Al 308.215†	-55.6	-0.04538	mg/L	0.011460	-0.04538	mg/L	0.011460	25.25%
As 188.979†	5.1	0.00368	mg/L	0.000684	0.00368	mg/L	0.000684	18.61%
B 249.677†	14.2	0.00291	mg/L	0.002372	0.00291	mg/L	0.002372	81.54%
Ba 233.527†	9.1	0.00126	mg/L	0.001139	0.00126	mg/L	0.001139	90.27%
Be 313.042†	170.3	0.00024	mg/L	0.000051	0.00024	mg/L	0.000051	21.47%
Ca 317.933†	45.9	0.00405	mg/L	0.000599	0.00405	mg/L	0.000599	14.80%
Cd 228.802†	14.6	0.00047	mg/L	0.000081	0.00047	mg/L	0.000081	17.26%
Co 228.616†	21.0	0.00061	mg/L	0.000039	0.00061	mg/L	0.000039	6.46%
Cr 267.716†	-29.2	-0.00345	mg/L	0.000910	-0.00345	mg/L	0.000910	26.40%
Cu 324.752†	380.6	0.00180	mg/L	0.000091	0.00180	mg/L	0.000091	5.08%
Fe 273.955†	7.6	0.00487	mg/L	0.001000	0.00487	mg/L	0.001000	20.53%
K 766.490†	23.0	0.01520	mg/L	0.003687	0.01520	mg/L	0.003687	24.25%
Mg 279.077†	-42.6	-0.02974	mg/L	0.016252	-0.02974	mg/L	0.016252	54.64%
Mn 257.610†	14.9	0.00031	mg/L	0.000121	0.00031	mg/L	0.000121	39.23%
Mo 202.031†	44.0	0.00324	mg/L	0.000919	0.00324	mg/L	0.000919	28.40%
Na 589.592†	470.5	0.09363	mg/L	0.000415	0.09363	mg/L	0.000415	0.44%
Na 330.237†	-18.4	-0.8042	mg/L	0.40668	-0.8042	mg/L	0.40668	50.57%
Ni 231.604†	-11.4	-0.00326	mg/L	0.001846	-0.00326	mg/L	0.001846	56.62%
Pb 220.353†	-7.2	-0.00102	mg/L	0.000390	-0.00102	mg/L	0.000390	38.06%
Sb 206.836†	24.6	0.01013	mg/L	0.001688	0.01013	mg/L	0.001688	16.67%
Se 196.026†	10.0	0.00855	mg/L	0.001850	0.00855	mg/L	0.001850	21.64%
Si 288.158†	-117.0	-0.07532	mg/L	0.005267	-0.07532	mg/L	0.005267	6.99%
Sn 189.927†	-0.0	-0.00001	mg/L	0.000537	-0.00001	mg/L	0.000537	>999.9%
Sr 421.552†	161.6	0.00033	mg/L	0.000066	0.00033	mg/L	0.000066	20.32%
Ti 334.903†	24.3	0.00128	mg/L	0.001556	0.00128	mg/L	0.001556	122.04%
Tl 190.801†	-2.2	-0.00121	mg/L	0.002419	-0.00121	mg/L	0.002419	200.37%
V 292.402†	223.7	0.00138	mg/L	0.000176	0.00138	mg/L	0.000176	12.80%
Zn 206.200†	2.1	0.00061	mg/L	0.000393	0.00061	mg/L	0.000393	64.41%

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Analysis Begun

Start Time: 12/3/2020 5:49:11 PM
Plasma On Time: 12/3/2020 8:08:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: SEQ-CAL3
Date Collected: 12/3/2020 5:49:12 PM
Data Type: Original

Nebulizer Parameters: SEQ-CAL3

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

DEL

Mean Data: SEQ-CAL3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2046889.5	5783.58	0.28%	94.38	%
ScR 361.383	218867.8	886.90	0.41%	94.07	%
Ag 328.068†	185077.2	1236.03	0.67%	[1.0]	mg/L
As 188.979†	15626.1	142.44	0.91%	[10]	mg/L
B 249.677†	53532.3	369.50	0.69%	[10]	mg/L
Be 313.042†	3686101.0	50565.46	1.37%	[5.0]	mg/L
Na 589.592†	277943.5	4023.42	1.45%	[50]	mg/L
Ni 231.604†	36014.2	210.64	0.58%	[10]	mg/L
Pb 220.353†	77052.6	565.30	0.73%	[10]	mg/L
Se 196.026†	12809.9	86.57	0.68%	[10]	mg/L
Sr 421.552†	2680994.0	39053.01	1.46%	[5]	mg/L
Tl 190.801†	20157.9	73.66	0.37%	[10]	mg/L
Zn 206.200†	37366.9	308.26	0.82%	[10]	mg/L

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Sequence No.: 2
Sample ID: SEQ-CAL2 **Date Collected: 12/3/2020 5:51:45 PM**
Data Type: Original

Nebulizer Parameters: SEQ-CAL2

Analyte	**Back Pressure**	**Flow**
All	232.0 kPa	0.65 L/min

DEL

Mean Data: SEQ-CAL2

Analyte	**Mean Corrected Intensity**	**Std.Dev.**	**RSD**	**Conc.**	**Calib Units**
ScA 357.253	2066421.1	23888.60	1.16%	95.28	%
ScR 361.383	220053.5	1386.12	0.63%	94.58	%
Ba 233.527†	73704.4	413.81	0.56%	[10]	mg/L
Cd 228.802†	308379.9	4086.79	1.33%	[10]	mg/L
Co 228.616†	360735.8	4602.11	1.28%	[10]	mg/L
Cr 267.716†	87542.2	563.52	0.64%	[10]	mg/L
Cu 324.752†	2146483.8	18091.80	0.84%	[10]	mg/L
Mn 257.610†	502807.5	2509.64	0.50%	[10]	mg/L
V 292.402†	1656068.8	17271.45	1.04%	[10]	mg/L

==

Sequence No.: 3
Sample ID: SEQ-CAL5 **Date Collected: 12/3/2020 5:53:30 PM**
Data Type: Original

Nebulizer Parameters: SEQ-CAL5

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

DEL

Mean Data: SEQ-CAL5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1892609.6	4458.38	0.24%	87.26	%
ScR 361.383	214061.7	2111.71	0.99%	92.01	%
Al 308.215†	40063.8	520.01	1.30%	[30]	mg/L
Ca 317.933†	366592.4	1560.05	0.43%	[30]	mg/L
Fe 273.955†	165006.6	1103.01	0.67%	[100]	mg/L
K 766.490†	166249.6	549.12	0.33%	[100]	mg/L
Mg 279.077†	47954.1	597.03	1.24%	[30]	mg/L
Na 330.237†	2419.5	16.41	0.68%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	185100	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1335	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1563	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	5353	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	7370	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	737200	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	12220	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	30840	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	36070	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	8754	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	214600	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1650	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1662	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1598	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	50280	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	13590	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	5559	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	24.19	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3601	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7705	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2437	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1281	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1554	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3829	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	536200	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	18990	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2016	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	165600	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3737	0.00000	1.000000	

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Analysis Begun

Start Time: 12/3/2020 5:56:28 PM
Plasma On Time: 12/3/2020 8:08:06 AM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 7
Sample ID: SEQ-CCV5
Date Collected: 12/3/2020 5:56:29 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SEQ-CCV5

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-CCV5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2038939.8	94.01	%	0.406				0.43%
ScR 361.383	212039.5	91.14	%	0.353				0.39%
Ag 328.068†	184613.0	0.9976	mg/L	0.00073	0.9976	mg/L	0.00073	0.07%
Al 308.215†	2728.7	2.011	mg/L	0.0062	2.011	mg/L	0.0062	0.31%
As 188.979†	2982.3	2.027	mg/L	0.0100	2.027	mg/L	0.0100	0.49%
B 249.677†	5687.9	1.059	mg/L	0.0012	1.059	mg/L	0.0012	0.11%
Ba 233.527†	7734.5	1.048	mg/L	0.0015	1.048	mg/L	0.0015	0.14%
Be 313.042†	759346.2	1.028	mg/L	0.0085	1.028	mg/L	0.0085	0.82%
Ca 317.933†	24417.4	1.922	mg/L	0.0081	1.922	mg/L	0.0081	0.42%
Cd 228.802†	31226.3	1.005	mg/L	0.0003	1.005	mg/L	0.0003	0.03%
Co 228.616†	36703.1	1.015	mg/L	0.0041	1.015	mg/L	0.0041	0.40%
Cr 267.716†	9172.9	1.048	mg/L	0.0005	1.048	mg/L	0.0005	0.05%
Cu 324.752†	208974.7	0.9732	mg/L	0.00421	0.9732	mg/L	0.00421	0.43%
Fe 273.955†	3464.3	2.095	mg/L	0.0066	2.095	mg/L	0.0066	0.32%
K 766.490†	34274.5	20.62	mg/L	0.167	20.62	mg/L	0.167	0.81%
Mg 279.077†	3277.5	2.068	mg/L	0.0008	2.068	mg/L	0.0008	0.04%
Mn 257.610†	50351.1	1.002	mg/L	0.0107	1.002	mg/L	0.0107	1.07%
Mo 202.031†	14583.9	1.073	mg/L	0.0064	1.073	mg/L	0.0064	0.60%
Na 589.592†	287552.9	51.73	mg/L	0.365	51.73	mg/L	0.365	0.71%
Na 330.237†	1279.8	52.72	mg/L	0.184	52.72	mg/L	0.184	0.35%
Ni 231.604†	3789.0	1.054	mg/L	0.0027	1.054	mg/L	0.0027	0.25%
Pb 220.353†	15854.2	2.059	mg/L	0.0135	2.059	mg/L	0.0135	0.66%
Sb 206.836†	5574.9	2.285	mg/L	0.0046	2.285	mg/L	0.0046	0.20%
Se 196.026†	2613.6	2.039	mg/L	0.0040	2.039	mg/L	0.0040	0.20%
Si 288.158†	3436.2	2.217	mg/L	0.0105	2.217	mg/L	0.0105	0.48%
Sn 189.927†	4214.7	1.103	mg/L	0.0073	1.103	mg/L	0.0073	0.66%
Sr 421.552†	560720.1	1.046	mg/L	0.0089	1.046	mg/L	0.0089	0.85%
Ti 334.903†	20724.1	1.090	mg/L	0.0072	1.090	mg/L	0.0072	0.66%
Tl 190.801†	4059.5	2.007	mg/L	0.0104	2.007	mg/L	0.0104	0.52%
V 292.402†	162418.2	0.9855	mg/L	0.00171	0.9855	mg/L	0.00171	0.17%
Zn 206.200†	3940.1	1.055	mg/L	0.0020	1.055	mg/L	0.0020	0.19%

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Sequence No.: 2 **Autosampler Location: 1**
Sample ID: SEQ-CCB5 **Date Collected: 12/3/2020 6:01:58 PM**
Data Type: Original
Dilution: 1X
Wash Time: 120 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB5

Analyte	**Back Pressure**	**Flow**
All	230.0 kPa	0.65 L/min

Mean Data: SEQ-CCB5

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2015886.5	92.95	%	0.394				0.42%
ScR 361.383	218380.9	93.86	%	1.164				1.24%
Ag 328.068†	93.3	0.00050	mg/L	0.000469	0.00050	mg/L	0.000469	92.91%
Al 308.215†	-74.4	-0.05580	mg/L	0.009036	-0.05580	mg/L	0.009036	16.19%
As 188.979†	0.7	0.00060	mg/L	0.002167	0.00060	mg/L	0.002167	358.68%
B 249.677†	8.8	0.00167	mg/L	0.000622	0.00167	mg/L	0.000622	37.14%
Ba 233.527†	0.8	0.00011	mg/L	0.000143	0.00011	mg/L	0.000143	129.82%
Be 313.042†	111.7	0.00015	mg/L	0.000062	0.00015	mg/L	0.000062	41.42%
Ca 317.933†	29.7	0.00238	mg/L	0.001364	0.00238	mg/L	0.001364	57.27%
Cd 228.802†	16.7	0.00054	mg/L	0.000142	0.00054	mg/L	0.000142	26.31%
Co 228.616†	14.4	0.00040	mg/L	0.000146	0.00040	mg/L	0.000146	36.81%
Cr 267.716†	-19.9	-0.00227	mg/L	0.001083	-0.00227	mg/L	0.001083	47.80%
Cu 324.752†	388.7	0.00181	mg/L	0.000061	0.00181	mg/L	0.000061	3.37%
Fe 273.955†	3.4	0.00203	mg/L	0.001264	0.00203	mg/L	0.001264	62.17%
K 766.490†	41.1	0.02475	mg/L	0.021111	0.02475	mg/L	0.021111	85.30%
Mg 279.077†	-54.2	-0.03385	mg/L	0.001302	-0.03385	mg/L	0.001302	3.85%
Mn 257.610†	8.5	0.00017	mg/L	0.000111	0.00017	mg/L	0.000111	65.10%
Mo 202.031†	53.3	0.00392	mg/L	0.000864	0.00392	mg/L	0.000864	22.03%
Na 589.592†	224.3	0.04035	mg/L	0.005641	0.04035	mg/L	0.005641	13.98%
Na 330.237†	-9.1	-0.3768	mg/L	1.16544	-0.3768	mg/L	1.16544	309.31%
Ni 231.604†	-10.8	-0.00300	mg/L	0.000762	-0.00300	mg/L	0.000762	25.41%
Pb 220.353†	-3.8	-0.00051	mg/L	0.000978	-0.00051	mg/L	0.000978	190.00%
Sb 206.836†	22.3	0.00920	mg/L	0.001190	0.00920	mg/L	0.001190	12.93%
Se 196.026†	2.0	0.00154	mg/L	0.003705	0.00154	mg/L	0.003705	241.04%
Si 288.158†	-90.8	-0.05845	mg/L	0.009840	-0.05845	mg/L	0.009840	16.83%
Sn 189.927†	-0.1	-0.00003	mg/L	0.000843	-0.00003	mg/L	0.000843	>999.9%
Sr 421.552†	126.6	0.00024	mg/L	0.000089	0.00024	mg/L	0.000089	37.63%
Ti 334.903†	33.0	0.00174	mg/L	0.000607	0.00174	mg/L	0.000607	34.95%
Tl 190.801†	-1.9	-0.00092	mg/L	0.002422	-0.00092	mg/L	0.002422	263.84%
V 292.402†	237.4	0.00143	mg/L	0.000218	0.00143	mg/L	0.000218	15.25%
Zn 206.200†	-0.7	-0.00019	mg/L	0.000779	-0.00019	mg/L	0.000779	408.91%

User canceled analysis.

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Analysis Begun

Start Time: 12/3/2020 6:06:42 PM **Plasma On Time: 12/3/2020 8:08:06 AM**
Logged In Analyst: Metals Instrument Controller **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\1203.sif
Batch ID:
Results Data Set: I2201203A
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 3 **Autosampler Location: 334**
Sample ID: 20K0183-01 **Date Collected: 12/3/2020 6:06:44 PM**
Data Type: Original
Dilution: 2X

Nebulizer Parameters: 20K0183-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

DEL

Mean Data: 20K0183-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2055959.4	94.80	%	0.420				0.44%
ScR 361.383	221695.4	95.29	%	0.171				0.18%
Ag 328.068†	214.7	0.00025	mg/L	0.000233	0.00049	mg/L	0.000466	94.07%
Al 308.215†	295183.2	221.1	mg/L	1.46	442.2	mg/L	2.92	0.66%
As 188.979†	387.0	1.620	mg/L	0.0097	3.239	mg/L	0.0194	0.60%
B 249.677†	225.9	0.00779	mg/L	0.001141	0.01558	mg/L	0.002282	14.64%
Ba 233.527†	7683.9	0.9998	mg/L	0.00366	2.000	mg/L	0.0073	0.37%
Be 313.042†	4087.9	0.00440	mg/L	0.000066	0.00881	mg/L	0.000132	1.50%
Ca 317.933†	830210.4	67.94	mg/L	0.574	135.9	mg/L	1.15	0.85%
Cd 228.802†	386.0	0.01156	mg/L	0.000082	0.02312	mg/L	0.000163	0.71%
Co 228.616†	5464.8	0.1240	mg/L	0.00098	0.2481	mg/L	0.00196	0.79%
Cr 267.716†	2762.0	0.3210	mg/L	0.00210	0.6420	mg/L	0.00420	0.65%
Cu 324.752†	98821.6	0.4700	mg/L	0.00190	0.9401	mg/L	0.00380	0.40%
Fe 273.955†	491660.0	298.0	mg/L	1.57	595.9	mg/L	3.14	0.53%
K 766.490†	34045.0	20.48	mg/L	0.175	40.96	mg/L	0.350	0.85%
Mg 279.077†	92848.9	58.02	mg/L	0.391	116.0	mg/L	0.78	0.67%
Mn 257.610†	554524.2	11.02	mg/L	0.075	22.05	mg/L	0.150	0.68%
Mo 202.031†	149.0	0.00921	mg/L	0.000608	0.01843	mg/L	0.001216	6.60%
Na 589.592†	42822.5	7.703	mg/L	0.0377	15.41	mg/L	0.075	0.49%
Na 330.237†	135.5	7.612	mg/L	0.3050	15.22	mg/L	0.610	4.01%
Ni 231.604†	877.5	0.2437	mg/L	0.00099	0.4874	mg/L	0.00198	0.41%
Pb 220.353†	814.1	0.1600	mg/L	0.00145	0.3199	mg/L	0.00290	0.91%
Sb 206.836†	334.4	0.1375	mg/L	0.00105	0.2750	mg/L	0.00210	0.76%
Se 196.026†	25.1	0.00509	mg/L	0.007634	0.01018	mg/L	0.015267	149.94%
Si 288.158†	22185.3	14.37	mg/L	0.036	28.74	mg/L	0.072	0.25%
Sn 189.927†	-125.8	-0.01534	mg/L	0.000358	-0.03069	mg/L	0.000716	2.33%
Sr 421.552†	269246.9	0.5021	mg/L	0.00431	1.004	mg/L	0.0086	0.86%
Ti 334.903†	232093.5	12.22	mg/L	0.073	24.44	mg/L	0.147	0.60%
Tl 190.801†	-50.0	-0.02801	mg/L	0.002992	-0.05602	mg/L	0.005984	10.68%
V 292.402†	106029.6	0.6416	mg/L	0.00296	1.283	mg/L	0.0059	0.46%
Zn 206.200†	3734.2	0.9993	mg/L	0.00428	1.999	mg/L	0.0086	0.43%

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Sequence No.: 4
Sample ID: 20K0183-02

Dilution: 2X
Wash Time: 37

Autosampler Location: 335
Date Collected: 12/3/2020 6:10:48 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0183-02

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0183-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2063920.1	95.16	%	0.430				0.45%
ScR 361.383	220830.2	94.92	%	0.291				0.31%
Ag 328.068†	69.3	0.00021	mg/L	0.000367	0.00042	mg/L	0.000734	174.06%
Al 308.215†	218970.4	164.0	mg/L	0.46	328.0	mg/L	0.93	0.28%
As 188.979†	-932.4	0.5414	mg/L	0.01410	1.083	mg/L	0.0282	2.60%
B 249.677†	205.8	0.01332	mg/L	0.003360	0.02664	mg/L	0.006719	25.22%
Ba 233.527†	4106.2	0.5284	mg/L	0.00196	1.057	mg/L	0.0039	0.37%
Be 313.042†	2836.7	0.00306	mg/L	0.000050	0.00611	mg/L	0.000100	1.63%
Ca 317.933†	552293.5	45.20	mg/L	0.311	90.39	mg/L	0.621	0.69%
Cd 228.802†	163.3	0.00811	mg/L	0.000032	0.01623	mg/L	0.000064	0.39%
Co 228.616†	3279.9	0.06902	mg/L	0.000143	0.1380	mg/L	0.00029	0.21%
Cr 267.716†	2241.5	0.2611	mg/L	0.00196	0.5222	mg/L	0.00392	0.75%
Cu 324.752†	46242.0	0.2214	mg/L	0.00151	0.4429	mg/L	0.00301	0.68%
Fe 273.955†	330143.2	200.1	mg/L	0.23	400.2	mg/L	0.45	0.11%
K 766.490†	18359.6	11.04	mg/L	0.044	22.09	mg/L	0.088	0.40%
Mg 279.077†	68141.5	42.58	mg/L	0.214	85.15	mg/L	0.428	0.50%
Mn 257.610†	136889.4	2.720	mg/L	0.0155	5.440	mg/L	0.0310	0.57%
Mo 202.031†	140.6	0.00914	mg/L	0.000670	0.01828	mg/L	0.001340	7.33%
Na 589.592†	42329.9	7.615	mg/L	0.1085	15.23	mg/L	0.217	1.42%
Na 330.237†	129.4	7.152	mg/L	0.0933	14.30	mg/L	0.187	1.30%
Ni 231.604†	828.6	0.2301	mg/L	0.00113	0.4603	mg/L	0.00226	0.49%
Pb 220.353†	53.7	0.04833	mg/L	0.000339	0.09667	mg/L	0.000677	0.70%
Sb 206.836†	229.1	0.09743	mg/L	0.001089	0.1949	mg/L	0.00218	1.12%
Se 196.026†	11.7	0.00326	mg/L	0.007905	0.00652	mg/L	0.015810	242.51%
Si 288.158†	19952.6	12.87	mg/L	0.032	25.74	mg/L	0.065	0.25%
Sn 189.927†	-104.9	-0.01492	mg/L	0.001318	-0.02984	mg/L	0.002635	8.83%
Sr 421.552†	227910.5	0.4250	mg/L	0.00386	0.8501	mg/L	0.00771	0.91%
Ti 334.903†	192503.7	10.14	mg/L	0.046	20.27	mg/L	0.093	0.46%
Tl 190.801†	-19.4	-0.01176	mg/L	0.003742	-0.02352	mg/L	0.007484	31.82%
V 292.402†	73675.8	0.4452	mg/L	0.00202	0.8905	mg/L	0.00404	0.45%
Zn 206.200†	1720.3	0.4604	mg/L	0.00085	0.9208	mg/L	0.00170	0.18%

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Sequence No.: 5 **Autosampler Location: 336**
Sample ID: 20K0183-03 **Date Collected: 12/3/2020 6:14:51 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0183-03

Analyte	**Back Pressure**	**Flow**
All	231.0 kPa	0.65 L/min

Mean Data: 20K0183-03

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2065452.0	95.23	%	0.278				0.29%
ScR 361.383	221659.7	95.27	%	0.945				0.99%
Ag 328.068†	25.8	-0.00004	mg/L	0.000452	-0.00009	mg/L	0.000905	>999.9%
Al 308.215†	233757.9	175.1	mg/L	1.17	350.1	mg/L	2.34	0.67%
As 188.979†	-974.1	0.4906	mg/L	0.00572	0.9813	mg/L	0.01144	1.17%
B 249.677†	220.3	0.01307	mg/L	0.001122	0.02614	mg/L	0.002245	8.59%
Ba 233.527†	4158.2	0.5330	mg/L	0.00581	1.066	mg/L	0.0116	1.09%
Be 313.042†	3192.7	0.00348	mg/L	0.000099	0.00697	mg/L	0.000198	2.84%
Ca 317.933†	558305.8	45.69	mg/L	0.251	91.37	mg/L	0.502	0.55%
Cd 228.802†	164.3	0.00828	mg/L	0.000162	0.01655	mg/L	0.000324	1.96%
Co 228.616†	3877.1	0.08564	mg/L	0.000389	0.1713	mg/L	0.00078	0.45%
Cr 267.716†	2396.5	0.2792	mg/L	0.00321	0.5584	mg/L	0.00642	1.15%
Cu 324.752†	48326.7	0.2319	mg/L	0.00181	0.4639	mg/L	0.00362	0.78%
Fe 273.955†	359527.9	217.9	mg/L	2.26	435.8	mg/L	4.52	1.04%
K 766.490†	19892.7	11.97	mg/L	0.086	23.93	mg/L	0.171	0.72%
Mg 279.077†	74842.4	46.76	mg/L	0.232	93.52	mg/L	0.463	0.50%
Mn 257.610†	150668.4	2.994	mg/L	0.0116	5.988	mg/L	0.0232	0.39%
Mo 202.031†	124.1	0.00786	mg/L	0.000167	0.01573	mg/L	0.000335	2.13%
Na 589.592†	52110.9	9.374	mg/L	0.0422	18.75	mg/L	0.084	0.45%
Na 330.237†	178.3	9.137	mg/L	0.2600	18.27	mg/L	0.520	2.84%
Ni 231.604†	894.3	0.2484	mg/L	0.00311	0.4968	mg/L	0.00623	1.25%
Pb 220.353†	71.1	0.05322	mg/L	0.000568	0.1064	mg/L	0.00114	1.07%
Sb 206.836†	247.3	0.1030	mg/L	0.00129	0.2061	mg/L	0.00258	1.25%
Se 196.026†	18.0	0.00788	mg/L	0.005048	0.01575	mg/L	0.010097	64.10%
Si 288.158†	23449.0	15.13	mg/L	0.136	30.26	mg/L	0.271	0.90%
Sn 189.927†	-105.8	-0.01514	mg/L	0.000822	-0.03029	mg/L	0.001645	5.43%
Sr 421.552†	238779.8	0.4453	mg/L	0.00302	0.8906	mg/L	0.00605	0.68%
Ti 334.903†	188442.0	9.923	mg/L	0.0508	19.85	mg/L	0.102	0.51%
Tl 190.801†	-33.5	-0.01899	mg/L	0.003435	-0.03798	mg/L	0.006869	18.09%
V 292.402†	78810.8	0.4767	mg/L	0.00362	0.9533	mg/L	0.00724	0.76%
Zn 206.200†	1671.6	0.4473	mg/L	0.00351	0.8947	mg/L	0.00701	0.78%

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Sequence No.: 6
Sample ID: 20K0183-04

Autosampler Location: 337
Date Collected: 12/3/2020 6:18:54 PM
Data Type: Original

Dilution: 2X
Wash Time: 37

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0183-04

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0183-04

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2061264.0	95.04	%	0.663				0.70%
ScR 361.383	220292.3	94.68	%	0.435				0.46%
Ag 328.068†	-29.5	-0.00026	mg/L	0.000165	-0.00051	mg/L	0.000330	64.47%
Al 308.215†	229193.5	171.6	mg/L	0.67	343.3	mg/L	1.34	0.39%
As 188.979†	-1050.1	0.4220	mg/L	0.01745	0.8441	mg/L	0.03489	4.13%
B 249.677†	285.2	0.02745	mg/L	0.001704	0.05489	mg/L	0.003407	6.21%
Ba 233.527†	4605.3	0.5976	mg/L	0.00132	1.195	mg/L	0.0026	0.22%
Be 313.042†	2870.2	0.00297	mg/L	0.000025	0.00594	mg/L	0.000050	0.84%
Ca 317.933†	657862.0	53.83	mg/L	0.224	107.7	mg/L	0.45	0.42%
Cd 228.802†	149.3	0.00797	mg/L	0.000178	0.01593	mg/L	0.000357	2.24%
Co 228.616†	3167.6	0.06680	mg/L	0.000953	0.1336	mg/L	0.00191	1.43%
Cr 267.716†	2382.7	0.2768	mg/L	0.00120	0.5536	mg/L	0.00240	0.43%
Cu 324.752†	64037.9	0.3039	mg/L	0.00045	0.6078	mg/L	0.00090	0.15%
Fe 273.955†	311707.3	188.9	mg/L	1.51	377.8	mg/L	3.01	0.80%
K 766.490†	24175.8	14.54	mg/L	0.024	29.08	mg/L	0.048	0.16%
Mg 279.077†	79388.0	49.61	mg/L	0.161	99.23	mg/L	0.322	0.32%
Mn 257.610†	109813.2	2.181	mg/L	0.0084	4.363	mg/L	0.0169	0.39%
Mo 202.031†	228.2	0.01536	mg/L	0.000083	0.03073	mg/L	0.000166	0.54%
Na 589.592†	73869.6	13.29	mg/L	0.055	26.58	mg/L	0.110	0.41%
Na 330.237†	281.7	13.36	mg/L	0.172	26.71	mg/L	0.344	1.29%
Ni 231.604†	708.8	0.1969	mg/L	0.00246	0.3938	mg/L	0.00493	1.25%
Pb 220.353†	303.7	0.08342	mg/L	0.001712	0.1668	mg/L	0.00342	2.05%
Sb 206.836†	249.2	0.1057	mg/L	0.00109	0.2115	mg/L	0.00219	1.03%
Se 196.026†	25.4	0.01369	mg/L	0.002521	0.02738	mg/L	0.005043	18.42%
Si 288.158†	24032.8	15.49	mg/L	0.039	30.99	mg/L	0.078	0.25%
Sn 189.927†	-93.1	-0.01040	mg/L	0.002949	-0.02079	mg/L	0.005898	28.37%
Sr 421.552†	293125.6	0.5467	mg/L	0.00259	1.093	mg/L	0.0052	0.47%
Ti 334.903†	185113.5	9.747	mg/L	0.0257	19.49	mg/L	0.051	0.26%
Tl 190.801†	-13.9	-0.00925	mg/L	0.004911	-0.01851	mg/L	0.009821	53.06%
V 292.402†	85831.1	0.5187	mg/L	0.00139	1.037	mg/L	0.0028	0.27%
Zn 206.200†	1840.5	0.4925	mg/L	0.00233	0.9851	mg/L	0.00466	0.47%

Sequence No.: 7
Sample ID: 20K0199-01
Autosampler Location: 338
Date Collected: 12/3/2020 6:22:57 PM
Data Type: Original

Dilution: 5X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0199-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0199-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1984292.4	91.49	%	0.561				0.61%
ScR 361.383	215708.3	92.71	%	0.728				0.79%
Ag 328.068†	161.5	0.00080	mg/L	0.000169	0.00400	mg/L	0.000843	21.08%
Al 308.215†	64.0	0.04788	mg/L	0.004614	0.2394	mg/L	0.02307	9.64%
As 188.979†	30.0	0.01937	mg/L	0.003486	0.09683	mg/L	0.017428	18.00%
B 249.677†	167.9	0.02952	mg/L	0.001384	0.1476	mg/L	0.00692	4.69%
Ba 233.527†	444.8	0.06025	mg/L	0.001198	0.3012	mg/L	0.00599	1.99%
Be 313.042†	198.5	0.00027	mg/L	0.000017	0.00133	mg/L	0.000085	6.44%
Ca 317.933†	127516.1	10.44	mg/L	0.069	52.18	mg/L	0.347	0.67%
Cd 228.802†	38.1	0.00115	mg/L	0.000137	0.00575	mg/L	0.000683	11.89%
Co 228.616†	314.9	0.00871	mg/L	0.000213	0.04356	mg/L	0.001067	2.45%
Cr 267.716†	-14.9	-0.00203	mg/L	0.001216	-0.01017	mg/L	0.006079	59.75%
Cu 324.752†	3658.2	0.01702	mg/L	0.000080	0.08509	mg/L	0.000401	0.47%
Fe 273.955†	85.3	0.05170	mg/L	0.003883	0.2585	mg/L	0.01941	7.51%
K 766.490†	1519.7	0.9141	mg/L	0.04443	4.571	mg/L	0.2222	4.86%
Mg 279.077†	5190.6	3.250	mg/L	0.0183	16.25	mg/L	0.092	0.56%
Mn 257.610†	38505.0	0.7658	mg/L	0.00431	3.829	mg/L	0.0216	0.56%
Mo 202.031†	32.1	0.00216	mg/L	0.000146	0.01082	mg/L	0.000728	6.73%
Na 589.592†	1531312.4	275.5	mg/L	2.77	1377	mg/L	13.83	1.00%
Na 330.237†	6732.3	278.2	mg/L	0.66	1391	mg/L	3.32	0.24%
Ni 231.604†	2.8	0.00079	mg/L	0.002377	0.00394	mg/L	0.011884	301.79%
Pb 220.353†	95.9	0.01243	mg/L	0.000385	0.06214	mg/L	0.001926	3.10%
Sb 206.836†	38.8	0.01589	mg/L	0.001455	0.07947	mg/L	0.007275	9.15%
Se 196.026†	8.6	0.00528	mg/L	0.005952	0.02638	mg/L	0.029758	112.82%
Si 288.158†	4466.6	2.880	mg/L	0.0184	14.40	mg/L	0.092	0.64%
Sn 189.927†	-27.2	-0.00520	mg/L	0.002152	-0.02599	mg/L	0.010762	41.41%
Sr 421.552†	48544.2	0.09053	mg/L	0.000654	0.4527	mg/L	0.00327	0.72%
Ti 334.903†	73.6	0.00342	mg/L	0.000450	0.01711	mg/L	0.002249	13.14%
Tl 190.801†	-4.7	-0.00238	mg/L	0.001332	-0.01192	mg/L	0.006660	55.85%
V 292.402†	352.4	0.00212	mg/L	0.000207	0.01062	mg/L	0.001037	9.76%
Zn 206.200†	142.7	0.03819	mg/L	0.000050	0.1909	mg/L	0.00025	0.13%

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Sequence No.: 8
Sample ID: 20K0199-02

Dilution: 5X
Wash Time: 37

Autosampler Location: 339
Date Collected: 12/3/2020 6:27:31 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0199-02

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0199-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2002001.4	92.31	%	0.457				0.50%
ScR 361.383	215170.3	92.48	%	0.397				0.43%
Ag 328.068†	190.2	0.00096	mg/L	0.000212	0.00479	mg/L	0.001060	22.12%
Al 308.215†	42.4	0.03169	mg/L	0.007107	0.1585	mg/L	0.03554	22.43%
As 188.979†	13.9	0.00893	mg/L	0.002219	0.04463	mg/L	0.011093	24.86%
B 249.677†	230.1	0.04124	mg/L	0.002675	0.2062	mg/L	0.01338	6.49%
Ba 233.527†	446.8	0.06052	mg/L	0.000723	0.3026	mg/L	0.00362	1.20%
Be 313.042†	225.7	0.00030	mg/L	0.000036	0.00152	mg/L	0.000181	11.93%
Ca 317.933†	125166.1	10.24	mg/L	0.052	51.21	mg/L	0.262	0.51%
Cd 228.802†	28.2	0.00087	mg/L	0.000034	0.00437	mg/L	0.000172	3.93%
Co 228.616†	324.7	0.00899	mg/L	0.000131	0.04493	mg/L	0.000657	1.46%
Cr 267.716†	-33.0	-0.00408	mg/L	0.000868	-0.02040	mg/L	0.004339	21.27%
Cu 324.752†	2494.6	0.01160	mg/L	0.000098	0.05800	mg/L	0.000491	0.85%
Fe 273.955†	108.6	0.06582	mg/L	0.003173	0.3291	mg/L	0.01587	4.82%
K 766.490†	1531.3	0.9211	mg/L	0.03460	4.605	mg/L	0.1730	3.76%
Mg 279.077†	4945.2	3.096	mg/L	0.0158	15.48	mg/L	0.079	0.51%
Mn 257.610†	36608.6	0.7281	mg/L	0.00277	3.640	mg/L	0.0138	0.38%
Mo 202.031†	29.7	0.00199	mg/L	0.000289	0.00995	mg/L	0.001445	14.52%
Na 589.592†	1548053.9	278.5	mg/L	2.46	1392	mg/L	12.28	0.88%
Na 330.237†	6796.6	280.9	mg/L	1.09	1405	mg/L	5.44	0.39%
Ni 231.604†	-1.1	-0.00030	mg/L	0.000753	-0.00152	mg/L	0.003767	248.44%
Pb 220.353†	9.4	0.00120	mg/L	0.000427	0.00601	mg/L	0.002136	35.55%
Sb 206.836†	27.3	0.01123	mg/L	0.000576	0.05613	mg/L	0.002881	5.13%
Se 196.026†	15.5	0.01067	mg/L	0.002718	0.05335	mg/L	0.013589	25.47%
Si 288.158†	4205.7	2.712	mg/L	0.0157	13.56	mg/L	0.079	0.58%
Sn 189.927†	-29.4	-0.00580	mg/L	0.001075	-0.02901	mg/L	0.005374	18.52%
Sr 421.552†	46116.4	0.08601	mg/L	0.000256	0.4300	mg/L	0.00128	0.30%
Ti 334.903†	41.5	0.00175	mg/L	0.000247	0.00873	mg/L	0.001237	14.18%
Tl 190.801†	0.9	0.00038	mg/L	0.001950	0.00188	mg/L	0.009752	519.76%
V 292.402†	290.5	0.00174	mg/L	0.000189	0.00871	mg/L	0.000943	10.83%
Zn 206.200†	126.5	0.03384	mg/L	0.001274	0.1692	mg/L	0.00637	3.77%

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Sequence No.: 9 **Autosampler Location: 340**
Sample ID: 20K0199-03 **Date Collected: 12/3/2020 6:32:03 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0199-03

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0199-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1979290.5	91.26	%	0.732				0.80%
ScR 361.383	216057.7	92.86	%	0.764				0.82%
Ag 328.068†	186.5	0.00095	mg/L	0.000206	0.00475	mg/L	0.001030	21.67%
Al 308.215†	76.3	0.05706	mg/L	0.007941	0.2853	mg/L	0.03971	13.92%
As 188.979†	16.2	0.01033	mg/L	0.003550	0.05165	mg/L	0.017750	34.36%
B 249.677†	163.4	0.02852	mg/L	0.001747	0.1426	mg/L	0.00874	6.13%
Ba 233.527†	431.7	0.05848	mg/L	0.001010	0.2924	mg/L	0.00505	1.73%
Be 313.042†	187.4	0.00025	mg/L	0.000020	0.00125	mg/L	0.000102	8.13%
Ca 317.933†	125420.9	10.26	mg/L	0.130	51.32	mg/L	0.648	1.26%
Cd 228.802†	36.5	0.00114	mg/L	0.000085	0.00568	mg/L	0.000427	7.52%
Co 228.616†	289.4	0.00801	mg/L	0.000312	0.04005	mg/L	0.001561	3.90%
Cr 267.716†	-32.7	-0.00401	mg/L	0.001244	-0.02004	mg/L	0.006222	31.05%
Cu 324.752†	2803.3	0.01304	mg/L	0.000177	0.06519	mg/L	0.000883	1.35%
Fe 273.955†	67.0	0.04060	mg/L	0.002939	0.2030	mg/L	0.01470	7.24%
K 766.490†	1434.8	0.8631	mg/L	0.01964	4.315	mg/L	0.0982	2.28%
Mg 279.077†	4893.7	3.063	mg/L	0.0276	15.32	mg/L	0.138	0.90%
Mn 257.610†	30232.7	0.6013	mg/L	0.00919	3.006	mg/L	0.0460	1.53%
Mo 202.031†	27.7	0.00184	mg/L	0.000085	0.00922	mg/L	0.000427	4.63%
Na 589.592†	1576581.4	283.6	mg/L	2.78	1418	mg/L	13.91	0.98%
Na 330.237†	6783.1	280.3	mg/L	4.07	1402	mg/L	20.34	1.45%
Ni 231.604†	-1.5	-0.00042	mg/L	0.001952	-0.00209	mg/L	0.009759	467.63%
Pb 220.353†	26.7	0.00345	mg/L	0.000545	0.01727	mg/L	0.002727	15.79%
Sb 206.836†	38.6	0.01586	mg/L	0.000945	0.07930	mg/L	0.004726	5.96%
Se 196.026†	10.3	0.00670	mg/L	0.004385	0.03348	mg/L	0.021926	65.48%
Si 288.158†	4891.9	3.153	mg/L	0.0260	15.77	mg/L	0.130	0.83%
Sn 189.927†	-26.8	-0.00510	mg/L	0.000751	-0.02552	mg/L	0.003753	14.70%
Sr 421.552†	42257.3	0.07881	mg/L	0.001220	0.3940	mg/L	0.00610	1.55%
Ti 334.903†	36.1	0.00146	mg/L	0.001272	0.00728	mg/L	0.006358	87.38%
Tl 190.801†	-2.6	-0.00132	mg/L	0.000456	-0.00659	mg/L	0.002281	34.61%
V 292.402†	319.0	0.00191	mg/L	0.000138	0.00957	mg/L	0.000689	7.20%
Zn 206.200†	139.9	0.03745	mg/L	0.000726	0.1872	mg/L	0.00363	1.94%

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Sequence No.: 10 **Autosampler Location: 341**
Sample ID: 20K0200-01 **Date Collected: 12/3/2020 6:36:35 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0200-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0200-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1979787.7	91.28	%	0.238				0.26%
ScR 361.383	216876.8	93.22	%	0.414				0.44%
Ag 328.068†	94.6	0.00044	mg/L	0.000127	0.00219	mg/L	0.000634	28.99%
Al 308.215†	-60.6	-0.04552	mg/L	0.002744	-0.2276	mg/L	0.01372	6.03%
As 188.979†	21.3	0.01336	mg/L	0.001824	0.06682	mg/L	0.009119	13.65%
B 249.677†	157.9	0.02902	mg/L	0.001753	0.1451	mg/L	0.00876	6.04%
Ba 233.527†	329.2	0.04449	mg/L	0.000675	0.2225	mg/L	0.00338	1.52%
Be 313.042†	133.2	0.00018	mg/L	0.000059	0.00089	mg/L	0.000293	32.95%
Ca 317.933†	224928.1	18.41	mg/L	0.309	92.03	mg/L	1.543	1.68%
Cd 228.802†	30.5	0.00093	mg/L	0.000079	0.00463	mg/L	0.000394	8.51%
Co 228.616†	246.9	0.00683	mg/L	0.000221	0.03417	mg/L	0.001104	3.23%
Cr 267.716†	-33.2	-0.00626	mg/L	0.000643	-0.03130	mg/L	0.003217	10.28%
Cu 324.752†	695.9	0.00261	mg/L	0.000160	0.01306	mg/L	0.000801	6.14%
Fe 273.955†	136.0	0.08240	mg/L	0.001847	0.4120	mg/L	0.00923	2.24%
K 766.490†	1426.1	0.8578	mg/L	0.01304	4.289	mg/L	0.0652	1.52%
Mg 279.077†	124366.1	77.81	mg/L	0.660	389.0	mg/L	3.30	0.85%
Mn 257.610†	38964.2	0.7747	mg/L	0.00718	3.873	mg/L	0.0359	0.93%
Mo 202.031†	76.7	0.00441	mg/L	0.000404	0.02207	mg/L	0.002018	9.14%
Na 589.592†	1583030.0	284.8	mg/L	1.64	1424	mg/L	8.20	0.58%
Na 330.237†	6875.2	284.2	mg/L	2.57	1421	mg/L	12.84	0.90%
Ni 231.604†	-0.4	-0.00010	mg/L	0.001087	-0.00049	mg/L	0.005436	>999.9%
Pb 220.353†	755.6	0.09804	mg/L	0.000417	0.4902	mg/L	0.00208	0.42%
Sb 206.836†	43.2	0.01768	mg/L	0.002329	0.08842	mg/L	0.011646	13.17%
Se 196.026†	15.7	0.01010	mg/L	0.005501	0.05052	mg/L	0.027504	54.44%
Si 288.158†	1090.9	0.7192	mg/L	0.00666	3.596	mg/L	0.0333	0.93%
Sn 189.927†	-47.1	-0.00893	mg/L	0.000434	-0.04467	mg/L	0.002171	4.86%
Sr 421.552†	41163.4	0.07677	mg/L	0.000615	0.3838	mg/L	0.00307	0.80%
Ti 334.903†	37.0	0.00115	mg/L	0.000474	0.00575	mg/L	0.002371	41.20%
Tl 190.801†	-5.3	-0.00267	mg/L	0.000776	-0.01335	mg/L	0.003879	29.05%
V 292.402†	267.3	0.00161	mg/L	0.000142	0.00803	mg/L	0.000711	8.86%
Zn 206.200†	26.9	0.00721	mg/L	0.000603	0.03604	mg/L	0.003016	8.37%

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Sequence No.: 11 **Autosampler Location: 342**
Sample ID: 20K0200-02 **Date Collected: 12/3/2020 6:41:07 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0200-02

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0200-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1995408.7	92.00	%	0.652				0.71%
ScR 361.383	215683.7	92.70	%	0.355				0.38%
Ag 328.068†	128.7	0.00061	mg/L	0.000374	0.00305	mg/L	0.001872	61.31%
Al 308.215†	-65.9	-0.04944	mg/L	0.007606	-0.2472	mg/L	0.03803	15.38%
As 188.979†	7.8	0.00480	mg/L	0.001600	0.02402	mg/L	0.008001	33.31%
B 249.677†	121.4	0.02220	mg/L	0.000989	0.1110	mg/L	0.00495	4.46%
Ba 233.527†	206.4	0.02783	mg/L	0.000228	0.1391	mg/L	0.00114	0.82%
Be 313.042†	121.8	0.00016	mg/L	0.000026	0.00082	mg/L	0.000130	15.85%
Ca 317.933†	216451.9	17.71	mg/L	0.127	88.57	mg/L	0.637	0.72%
Cd 228.802†	31.4	0.00099	mg/L	0.000133	0.00497	mg/L	0.000665	13.39%
Co 228.616†	340.3	0.00942	mg/L	0.000208	0.04711	mg/L	0.001039	2.21%
Cr 267.716†	-28.0	-0.00564	mg/L	0.001166	-0.02821	mg/L	0.005829	20.66%
Cu 324.752†	691.9	0.00261	mg/L	0.000192	0.01306	mg/L	0.000960	7.35%
Fe 273.955†	266.9	0.1617	mg/L	0.00367	0.8086	mg/L	0.01836	2.27%
K 766.490†	1287.5	0.7744	mg/L	0.00707	3.872	mg/L	0.0353	0.91%
Mg 279.077†	121599.0	76.07	mg/L	0.554	380.4	mg/L	2.77	0.73%
Mn 257.610†	44786.5	0.8906	mg/L	0.00640	4.453	mg/L	0.0320	0.72%
Mo 202.031†	78.3	0.00456	mg/L	0.000254	0.02281	mg/L	0.001271	5.57%
Na 589.592†	1556221.7	280.0	mg/L	2.23	1400	mg/L	11.16	0.80%
Na 330.237†	6625.0	273.8	mg/L	1.47	1369	mg/L	7.35	0.54%
Ni 231.604†	-3.3	-0.00092	mg/L	0.001068	-0.00460	mg/L	0.005340	116.16%
Pb 220.353†	3539.6	0.4593	mg/L	0.00430	2.297	mg/L	0.0215	0.94%
Sb 206.836†	35.7	0.01459	mg/L	0.001490	0.07297	mg/L	0.007450	10.21%
Se 196.026†	16.6	0.01078	mg/L	0.002592	0.05392	mg/L	0.012961	24.04%
Si 288.158†	1087.9	0.7175	mg/L	0.00154	3.588	mg/L	0.0077	0.21%
Sn 189.927†	-47.7	-0.00920	mg/L	0.000215	-0.04598	mg/L	0.001075	2.34%
Sr 421.552†	39188.9	0.07309	mg/L	0.000478	0.3654	mg/L	0.00239	0.65%
Ti 334.903†	48.6	0.00179	mg/L	0.000841	0.00896	mg/L	0.004207	46.95%
Tl 190.801†	-13.4	-0.00669	mg/L	0.002428	-0.03346	mg/L	0.012139	36.28%
V 292.402†	155.2	0.00093	mg/L	0.000124	0.00466	mg/L	0.000618	13.26%
Zn 206.200†	39.1	0.01047	mg/L	0.000485	0.05236	mg/L	0.002426	4.63%

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Sequence No.: 12
Sample ID: 20K0200-03

Dilution: 5X
Wash Time: 37

Autosampler Location: 343
Date Collected: 12/3/2020 6:45:39 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0200-03

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: 20K0200-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1974460.6	91.04	%	0.583				0.64%
ScR 361.383	214330.0	92.12	%	0.553				0.60%
Ag 328.068†	105.7	0.00057	mg/L	0.000354	0.00286	mg/L	0.001769	61.91%
Al 308.215†	-62.4	-0.04686	mg/L	0.000921	-0.2343	mg/L	0.00460	1.96%
As 188.979†	12.4	0.00764	mg/L	0.002605	0.03818	mg/L	0.013026	34.12%
B 249.677†	67.9	0.01264	mg/L	0.000624	0.06321	mg/L	0.003122	4.94%
Ba 233.527†	141.1	0.01894	mg/L	0.000680	0.09468	mg/L	0.003400	3.59%
Be 313.042†	120.8	0.00016	mg/L	0.000026	0.00081	mg/L	0.000130	16.12%
Ca 317.933†	286238.9	23.42	mg/L	0.053	117.1	mg/L	0.27	0.23%
Cd 228.802†	31.3	0.00098	mg/L	0.000231	0.00488	mg/L	0.001156	23.71%
Co 228.616†	-4.6	-0.00013	mg/L	0.000234	-0.00066	mg/L	0.001171	177.54%
Cr 267.716†	-30.2	-0.00718	mg/L	0.001250	-0.03590	mg/L	0.006249	17.40%
Cu 324.752†	768.2	0.00252	mg/L	0.000131	0.01258	mg/L	0.000654	5.19%
Fe 273.955†	-2.2	-0.00136	mg/L	0.003249	-0.00681	mg/L	0.016244	238.54%
K 766.490†	1081.9	0.6508	mg/L	0.02836	3.254	mg/L	0.1418	4.36%
Mg 279.077†	208261.4	130.3	mg/L	0.96	651.4	mg/L	4.81	0.74%
Mn 257.610†	25.5	0.00006	mg/L	0.000119	0.00028	mg/L	0.000593	213.06%
Mo 202.031†	96.4	0.00515	mg/L	0.000248	0.02575	mg/L	0.001240	4.82%
Na 589.592†	1559039.7	280.5	mg/L	2.45	1402	mg/L	12.27	0.87%
Na 330.237†	6734.0	278.3	mg/L	1.60	1392	mg/L	7.98	0.57%
Ni 231.604†	-18.1	-0.00500	mg/L	0.000483	-0.02498	mg/L	0.002415	9.67%
Pb 220.353†	-8.0	-0.00106	mg/L	0.001467	-0.00530	mg/L	0.007336	138.41%
Sb 206.836†	40.1	0.01641	mg/L	0.002099	0.08205	mg/L	0.010495	12.79%
Se 196.026†	16.8	0.01119	mg/L	0.003695	0.05593	mg/L	0.018475	33.03%
Si 288.158†	132.2	0.1058	mg/L	0.00966	0.5292	mg/L	0.04831	9.13%
Sn 189.927†	-61.6	-0.01179	mg/L	0.001244	-0.05894	mg/L	0.006219	10.55%
Sr 421.552†	32506.8	0.06062	mg/L	0.000537	0.3031	mg/L	0.00268	0.89%
Ti 334.903†	46.1	0.00141	mg/L	0.000396	0.00706	mg/L	0.001979	28.04%
Tl 190.801†	-13.6	-0.00676	mg/L	0.000922	-0.03378	mg/L	0.004609	13.64%
V 292.402†	222.5	0.00134	mg/L	0.000130	0.00668	mg/L	0.000650	9.73%
Zn 206.200†	13.7	0.00367	mg/L	0.001387	0.01836	mg/L	0.006933	37.76%

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Sequence No.: 13 **Autosampler Location: 7**
Sample ID: SEQ-CCV6 **Date Collected: 12/3/2020 6:50:11 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV6

Analyte	**Back Pressure**	**Flow**
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-CCV6

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2063972.2	95.17	%	0.142				0.15%
ScR 361.383	216920.0	93.23	%	0.775				0.83%
Ag 328.068†	185869.3	1.004	mg/L	0.0006	1.004	mg/L	0.0006	0.06%
Al 308.215†	2693.9	1.985	mg/L	0.0115	1.985	mg/L	0.0115	0.58%
As 188.979†	3026.4	2.052	mg/L	0.0004	2.052	mg/L	0.0004	0.02%
B 249.677†	5622.0	1.046	mg/L	0.0078	1.046	mg/L	0.0078	0.74%
Ba 233.527†	7625.7	1.033	mg/L	0.0076	1.033	mg/L	0.0076	0.73%
Be 313.042†	755548.8	1.023	mg/L	0.0034	1.023	mg/L	0.0034	0.33%
Ca 317.933†	23877.8	1.877	mg/L	0.0071	1.877	mg/L	0.0071	0.38%
Cd 228.802†	31474.7	1.013	mg/L	0.0032	1.013	mg/L	0.0032	0.32%
Co 228.616†	37108.0	1.027	mg/L	0.0008	1.027	mg/L	0.0008	0.08%
Cr 267.716†	9055.5	1.034	mg/L	0.0083	1.034	mg/L	0.0083	0.80%
Cu 324.752†	208983.1	0.9732	mg/L	0.00275	0.9732	mg/L	0.00275	0.28%
Fe 273.955†	3382.8	2.046	mg/L	0.0203	2.046	mg/L	0.0203	0.99%
K 766.490†	33378.1	20.08	mg/L	0.140	20.08	mg/L	0.140	0.70%
Mg 279.077†	3262.2	2.058	mg/L	0.0075	2.058	mg/L	0.0075	0.36%
Mn 257.610†	49495.3	0.9846	mg/L	0.00613	0.9846	mg/L	0.00613	0.62%
Mo 202.031†	14678.4	1.080	mg/L	0.0009	1.080	mg/L	0.0009	0.08%
Na 589.592†	286241.2	51.49	mg/L	0.745	51.49	mg/L	0.745	1.45%
Na 330.237†	1262.7	52.02	mg/L	0.156	52.02	mg/L	0.156	0.30%
Ni 231.604†	3698.2	1.029	mg/L	0.0077	1.029	mg/L	0.0077	0.75%
Pb 220.353†	16025.5	2.081	mg/L	0.0033	2.081	mg/L	0.0033	0.16%
Sb 206.836†	5629.1	2.308	mg/L	0.0033	2.308	mg/L	0.0033	0.14%
Se 196.026†	2656.5	2.073	mg/L	0.0023	2.073	mg/L	0.0023	0.11%
Si 288.158†	3409.0	2.199	mg/L	0.0160	2.199	mg/L	0.0160	0.73%
Sn 189.927†	4282.3	1.120	mg/L	0.0026	1.120	mg/L	0.0026	0.23%
Sr 421.552†	549562.9	1.025	mg/L	0.0071	1.025	mg/L	0.0071	0.69%
Ti 334.903†	20303.8	1.068	mg/L	0.0037	1.068	mg/L	0.0037	0.34%
Tl 190.801†	4106.4	2.030	mg/L	0.0060	2.030	mg/L	0.0060	0.30%
V 292.402†	163672.3	0.9930	mg/L	0.00053	0.9930	mg/L	0.00053	0.05%
Zn 206.200†	3902.8	1.045	mg/L	0.0082	1.045	mg/L	0.0082	0.78%

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Sequence No.: 14
Sample ID: SEQ-CCB6

Autosampler Location: 1
Date Collected: 12/3/2020 6:55:38 PM
Data Type: Original

Dilution: 1X
Wash Time: 120

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB6

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-CCB6

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2072801.1	95.57	%	0.475				0.50%
ScR 361.383	221139.0	95.05	%	0.152				0.16%
Ag 328.068†	139.5	0.00075	mg/L	0.000329	0.00075	mg/L	0.000329	43.71%
Al 308.215†	-43.0	-0.03226	mg/L	0.018699	-0.03226	mg/L	0.018699	57.96%
As 188.979†	2.0	0.00144	mg/L	0.002695	0.00144	mg/L	0.002695	186.62%
B 249.677†	-23.3	-0.00431	mg/L	0.001242	-0.00431	mg/L	0.001242	28.83%
Ba 233.527†	0.7	0.00009	mg/L	0.000215	0.00009	mg/L	0.000215	228.41%
Be 313.042†	127.7	0.00017	mg/L	0.000026	0.00017	mg/L	0.000026	15.38%
Ca 317.933†	34.8	0.00279	mg/L	0.000984	0.00279	mg/L	0.000984	35.30%
Cd 228.802†	18.2	0.00058	mg/L	0.000134	0.00058	mg/L	0.000134	23.17%
Co 228.616†	15.9	0.00044	mg/L	0.000220	0.00044	mg/L	0.000220	49.96%
Cr 267.716†	-27.4	-0.00313	mg/L	0.000768	-0.00313	mg/L	0.000768	24.53%
Cu 324.752†	391.0	0.00182	mg/L	0.000089	0.00182	mg/L	0.000089	4.90%
Fe 273.955†	3.2	0.00191	mg/L	0.000888	0.00191	mg/L	0.000888	46.52%
K 766.490†	45.9	0.02762	mg/L	0.032355	0.02762	mg/L	0.032355	117.14%
Mg 279.077†	-30.6	-0.01909	mg/L	0.008655	-0.01909	mg/L	0.008655	45.33%
Mn 257.610†	20.3	0.00040	mg/L	0.000108	0.00040	mg/L	0.000108	26.74%
Mo 202.031†	47.1	0.00347	mg/L	0.001395	0.00347	mg/L	0.001395	40.23%
Na 589.592†	316.6	0.05696	mg/L	0.009972	0.05696	mg/L	0.009972	17.51%
Na 330.237†	-16.1	-0.6646	mg/L	0.57152	-0.6646	mg/L	0.57152	86.00%
Ni 231.604†	-16.4	-0.00456	mg/L	0.001347	-0.00456	mg/L	0.001347	29.56%
Pb 220.353†	-13.1	-0.00172	mg/L	0.000726	-0.00172	mg/L	0.000726	42.21%
Sb 206.836†	21.6	0.00891	mg/L	0.001424	0.00891	mg/L	0.001424	15.99%
Se 196.026†	7.7	0.00604	mg/L	0.004974	0.00604	mg/L	0.004974	82.31%
Si 288.158†	-112.8	-0.07259	mg/L	0.001791	-0.07259	mg/L	0.001791	2.47%
Sn 189.927†	-0.4	-0.00010	mg/L	0.000315	-0.00010	mg/L	0.000315	304.18%
Sr 421.552†	126.9	0.00024	mg/L	0.000078	0.00024	mg/L	0.000078	32.80%
Ti 334.903†	26.3	0.00138	mg/L	0.001538	0.00138	mg/L	0.001538	111.19%
Tl 190.801†	1.6	0.00082	mg/L	0.002504	0.00082	mg/L	0.002504	305.69%
V 292.402†	196.6	0.00118	mg/L	0.000263	0.00118	mg/L	0.000263	22.35%
Zn 206.200†	1.9	0.00050	mg/L	0.000507	0.00050	mg/L	0.000507	101.66%

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Sequence No.: 15
Sample ID: BIL0006-BLK1

Dilution: 5X
Wash Time: 37

Autosampler Location: 344
Date Collected: 12/3/2020 6:59:54 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIL0006-BLK1

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: BIL0006-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2022688.8	93.26	%	0.955				1.02%
ScR 361.383	212072.1	91.15	%	0.755				0.83%
Ag 328.068†	126.7	0.00068	mg/L	0.000132	0.00342	mg/L	0.000662	19.32%
Al 308.215†	-87.5	-0.06554	mg/L	0.004847	-0.3277	mg/L	0.02423	7.39%
As 188.979†	2.5	0.00167	mg/L	0.002412	0.00837	mg/L	0.012060	144.09%
B 249.677†	46.6	0.00875	mg/L	0.001925	0.04375	mg/L	0.009627	22.00%
Ba 233.527†	7.5	0.00101	mg/L	0.000526	0.00507	mg/L	0.002629	51.86%
Be 313.042†	190.2	0.00026	mg/L	0.000022	0.00128	mg/L	0.000108	8.42%
Ca 317.933†	902.8	0.07382	mg/L	0.002298	0.3691	mg/L	0.01149	3.11%
Cd 228.802†	16.0	0.00051	mg/L	0.000136	0.00256	mg/L	0.000682	26.65%
Co 228.616†	18.1	0.00050	mg/L	0.000194	0.00250	mg/L	0.000971	38.86%
Cr 267.716†	-24.9	-0.00284	mg/L	0.001056	-0.01421	mg/L	0.005279	37.15%
Cu 324.752†	490.2	0.00228	mg/L	0.000091	0.01142	mg/L	0.000457	4.00%
Fe 273.955†	7.8	0.00469	mg/L	0.001089	0.02346	mg/L	0.005447	23.22%
K 766.490†	167.3	0.1006	mg/L	0.01709	0.5031	mg/L	0.08546	16.99%
Mg 279.077†	-40.7	-0.02545	mg/L	0.007174	-0.1272	mg/L	0.03587	28.19%
Mn 257.610†	24.9	0.00050	mg/L	0.000098	0.00248	mg/L	0.000490	19.81%
Mo 202.031†	14.8	0.00109	mg/L	0.000336	0.00545	mg/L	0.001678	30.81%
Na 589.592†	1508076.1	271.3	mg/L	2.52	1356	mg/L	12.62	0.93%
Na 330.237†	6482.7	267.9	mg/L	0.93	1340	mg/L	4.64	0.35%
Ni 231.604†	0.3	0.00008	mg/L	0.002774	0.00042	mg/L	0.013871	>999.9%
Pb 220.353†	-2.6	-0.00037	mg/L	0.001251	-0.00184	mg/L	0.006256	340.19%
Sb 206.836†	19.0	0.00786	mg/L	0.003354	0.03929	mg/L	0.016772	42.69%
Se 196.026†	3.7	0.00287	mg/L	0.002514	0.01437	mg/L	0.012572	87.48%
Si 288.158†	-123.1	-0.07923	mg/L	0.005670	-0.3961	mg/L	0.02835	7.16%
Sn 189.927†	-0.9	-0.00022	mg/L	0.000795	-0.00110	mg/L	0.003976	361.90%
Sr 421.552†	239.1	0.00045	mg/L	0.000051	0.00223	mg/L	0.000257	11.54%
Ti 334.903†	16.9	0.00089	mg/L	0.000420	0.00443	mg/L	0.002100	47.38%
Tl 190.801†	-1.8	-0.00090	mg/L	0.001913	-0.00452	mg/L	0.009565	211.69%
V 292.402†	231.8	0.00139	mg/L	0.000096	0.00695	mg/L	0.000481	6.92%
Zn 206.200†	4.3	0.00115	mg/L	0.001122	0.00577	mg/L	0.005609	97.26%

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Sequence No.: 16 **Autosampler Location: 345**
Sample ID: 20K0394-02 **Date Collected: 12/3/2020 7:04:26 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0394-02

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0394-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1970941.4	90.88	%	0.509				0.56%
ScR 361.383	215273.4	92.53	%	0.282				0.30%
Ag 328.068†	148.0	0.00077	mg/L	0.000124	0.00387	mg/L	0.000621	16.06%
Al 308.215†	169.4	0.1268	mg/L	0.00460	0.6339	mg/L	0.02298	3.62%
As 188.979†	62.6	0.04018	mg/L	0.003544	0.2009	mg/L	0.01772	8.82%
B 249.677†	65.9	0.01138	mg/L	0.000631	0.05688	mg/L	0.003156	5.55%
Ba 233.527†	255.5	0.03453	mg/L	0.001021	0.1726	mg/L	0.00511	2.96%
Be 313.042†	158.8	0.00021	mg/L	0.000032	0.00105	mg/L	0.000162	15.36%
Ca 317.933†	153061.2	12.53	mg/L	0.051	62.63	mg/L	0.255	0.41%
Cd 228.802†	57.0	0.00167	mg/L	0.000192	0.00836	mg/L	0.000960	11.48%
Co 228.616†	89.7	0.00247	mg/L	0.000148	0.01235	mg/L	0.000738	5.98%
Cr 267.716†	490.6	0.05593	mg/L	0.000617	0.2797	mg/L	0.00309	1.10%
Cu 324.752†	136716.0	0.6369	mg/L	0.00426	3.185	mg/L	0.0213	0.67%
Fe 273.955†	334.6	0.2028	mg/L	0.00339	1.014	mg/L	0.0170	1.67%
K 766.490†	1528.2	0.9192	mg/L	0.01508	4.596	mg/L	0.0754	1.64%
Mg 279.077†	1489.9	0.9329	mg/L	0.00243	4.665	mg/L	0.0121	0.26%
Mn 257.610†	14122.4	0.2809	mg/L	0.00157	1.404	mg/L	0.0079	0.56%
Mo 202.031†	31.6	0.00212	mg/L	0.000275	0.01062	mg/L	0.001373	12.93%
Na 589.592†	1570753.0	282.6	mg/L	2.74	1413	mg/L	13.71	0.97%
Na 330.237†	6663.8	275.4	mg/L	0.75	1377	mg/L	3.76	0.27%
Ni 231.604†	8.3	0.00232	mg/L	0.001736	0.01161	mg/L	0.008680	74.78%
Pb 220.353†	5.2	-0.00012	mg/L	0.000675	-0.00060	mg/L	0.003373	565.27%
Sb 206.836†	34.5	0.01336	mg/L	0.001556	0.06679	mg/L	0.007779	11.65%
Se 196.026†	10.8	0.00718	mg/L	0.005141	0.03588	mg/L	0.025707	71.65%
Si 288.158†	2243.7	1.448	mg/L	0.0034	7.239	mg/L	0.0171	0.24%
Sn 189.927†	-36.9	-0.00734	mg/L	0.000493	-0.03668	mg/L	0.002464	6.72%
Sr 421.552†	29490.2	0.05500	mg/L	0.000319	0.2750	mg/L	0.00159	0.58%
Ti 334.903†	92.2	0.00430	mg/L	0.000260	0.02152	mg/L	0.001302	6.05%
Tl 190.801†	-2.1	-0.00110	mg/L	0.001726	-0.00552	mg/L	0.008629	156.30%
V 292.402†	404.2	0.00266	mg/L	0.000115	0.01329	mg/L	0.000573	4.31%
Zn 206.200†	89.4	0.02394	mg/L	0.000572	0.1197	mg/L	0.00286	2.39%

Sequence No.: 17
Sample ID: 20K0394-03
Dilution: 5X
Wash Time: 37

Autosampler Location: 346
Date Collected: 12/3/2020 7:08:59 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0394-03

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0394-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1999882.6	92.21	%	0.313				0.34%
ScR 361.383	212200.3	91.21	%	0.385				0.42%
Ag 328.068†	235.0	0.00123	mg/L	0.000345	0.00617	mg/L	0.001723	27.95%
Al 308.215†	54.4	0.04071	mg/L	0.007235	0.2036	mg/L	0.03618	17.77%
As 188.979†	219.5	0.1405	mg/L	0.00202	0.7023	mg/L	0.01011	1.44%
B 249.677†	34.8	0.00610	mg/L	0.002620	0.03049	mg/L	0.013102	42.97%
Ba 233.527†	262.7	0.03556	mg/L	0.000540	0.1778	mg/L	0.00270	1.52%
Be 313.042†	201.8	0.00027	mg/L	0.000008	0.00135	mg/L	0.000042	3.12%
Ca 317.933†	81346.4	6.657	mg/L	0.0204	33.28	mg/L	0.102	0.31%
Cd 228.802†	140.9	0.00394	mg/L	0.000112	0.01972	mg/L	0.000562	2.85%
Co 228.616†	105.2	0.00291	mg/L	0.000124	0.01454	mg/L	0.000620	4.27%
Cr 267.716†	653.4	0.07450	mg/L	0.001051	0.3725	mg/L	0.00525	1.41%
Cu 324.752†	1386402.6	6.459	mg/L	0.0482	32.29	mg/L	0.241	0.75%
Fe 273.955†	154.7	0.09381	mg/L	0.002159	0.4691	mg/L	0.01080	2.30%
K 766.490†	1872.0	1.126	mg/L	0.0173	5.630	mg/L	0.0867	1.54%
Mg 279.077†	1177.6	0.7379	mg/L	0.00314	3.690	mg/L	0.0157	0.43%
Mn 257.610†	19575.1	0.3893	mg/L	0.00259	1.947	mg/L	0.0130	0.67%
Mo 202.031†	16.1	0.00108	mg/L	0.000309	0.00538	mg/L	0.001544	28.73%
Na 589.592†	1622019.2	291.8	mg/L	2.08	1459	mg/L	10.39	0.71%
Na 330.237†	6937.5	286.7	mg/L	0.69	1434	mg/L	3.47	0.24%
Ni 231.604†	3.2	0.00090	mg/L	0.003219	0.00451	mg/L	0.016097	356.72%
Pb 220.353†	68.1	-0.00057	mg/L	0.000778	-0.00283	mg/L	0.003888	137.25%
Sb 206.836†	34.7	0.01318	mg/L	0.000678	0.06589	mg/L	0.003391	5.15%
Se 196.026†	14.1	0.01016	mg/L	0.001240	0.05080	mg/L	0.006198	12.20%
Si 288.158†	935.3	0.6055	mg/L	0.00275	3.028	mg/L	0.0137	0.45%
Sn 189.927†	-23.5	-0.00493	mg/L	0.000484	-0.02463	mg/L	0.002422	9.84%
Sr 421.552†	24850.6	0.04635	mg/L	0.000265	0.2317	mg/L	0.00133	0.57%
Ti 334.903†	50.8	0.00238	mg/L	0.000409	0.01188	mg/L	0.002043	17.20%
Tl 190.801†	1.6	0.00076	mg/L	0.000916	0.00382	mg/L	0.004581	120.01%
V 292.402†	259.0	0.00185	mg/L	0.000137	0.00925	mg/L	0.000687	7.43%
Zn 206.200†	199.6	0.05342	mg/L	0.000863	0.2671	mg/L	0.00432	1.62%

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Sequence No.: 18
Sample ID: 20K0408-01

Dilution: 5X
Wash Time: 37

Autosampler Location: 347
Date Collected: 12/3/2020 7:13:31 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0408-01

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0408-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1941312.0	89.51	%	0.562				0.63%
ScR 361.383	212018.8	91.13	%	0.718				0.79%
Ag 328.068†	153.5	0.00063	mg/L	0.000291	0.00315	mg/L	0.001454	46.13%
Al 308.215†	-95.6	-0.06230	mg/L	0.012328	-0.3115	mg/L	0.06164	19.79%
As 188.979†	4.2	0.00153	mg/L	0.002888	0.00765	mg/L	0.014442	188.74%
B 249.677†	75.0	0.00859	mg/L	0.000651	0.04297	mg/L	0.003254	7.57%
Ba 233.527†	116.0	0.00985	mg/L	0.000467	0.04924	mg/L	0.002334	4.74%
Be 313.042†	211.5	0.00029	mg/L	0.000016	0.00143	mg/L	0.000080	5.56%
Ca 317.933†	845400.1	69.18	mg/L	0.780	345.9	mg/L	3.90	1.13%
Cd 228.802†	44.5	0.00153	mg/L	0.000193	0.00763	mg/L	0.000964	12.63%
Co 228.616†	694.5	0.01855	mg/L	0.000068	0.09277	mg/L	0.000341	0.37%
Cr 267.716†	-33.7	-0.00342	mg/L	0.000908	-0.01712	mg/L	0.004540	26.52%
Cu 324.752†	399.8	0.00342	mg/L	0.000168	0.01712	mg/L	0.000841	4.91%
Fe 273.955†	62151.9	37.67	mg/L	0.157	188.3	mg/L	0.78	0.42%
K 766.490†	1666.9	1.003	mg/L	0.0131	5.013	mg/L	0.0655	1.31%
Mg 279.077†	14885.6	9.305	mg/L	0.0906	46.52	mg/L	0.453	0.97%
Mn 257.610†	104943.0	2.087	mg/L	0.0225	10.43	mg/L	0.112	1.08%
Mo 202.031†	66.3	0.00371	mg/L	0.000136	0.01854	mg/L	0.000682	3.68%
Na 589.592†	1443106.1	259.6	mg/L	4.04	1298	mg/L	20.19	1.56%
Na 330.237†	6283.4	259.6	mg/L	1.33	1298	mg/L	6.64	0.51%
Ni 231.604†	424.5	0.1179	mg/L	0.00178	0.5894	mg/L	0.00888	1.51%
Pb 220.353†	-0.8	-0.00163	mg/L	0.000867	-0.00813	mg/L	0.004336	53.37%
Sb 206.836†	45.4	0.01581	mg/L	0.000732	0.07904	mg/L	0.003661	4.63%
Se 196.026†	24.6	0.01183	mg/L	0.003901	0.05914	mg/L	0.019507	32.99%
Si 288.158†	5433.9	3.529	mg/L	0.0276	17.65	mg/L	0.138	0.78%
Sn 189.927†	-119.4	-0.01851	mg/L	0.001212	-0.09257	mg/L	0.006062	6.55%
Sr 421.552†	85082.1	0.1587	mg/L	0.00142	0.7934	mg/L	0.00709	0.89%
Ti 334.903†	93.5	0.00194	mg/L	0.001031	0.00969	mg/L	0.005153	53.21%
Tl 190.801†	-0.8	-0.00051	mg/L	0.002768	-0.00257	mg/L	0.013838	537.65%
V 292.402†	56.1	0.00092	mg/L	0.000152	0.00460	mg/L	0.000761	16.55%
Zn 206.200†	539.7	0.1444	mg/L	0.00231	0.7222	mg/L	0.01153	1.60%

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Sequence No.: 19 **Autosampler Location: 348**
Sample ID: 20K0409-01 **Date Collected: 12/3/2020 7:18:03 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0409-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0409-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1923695.0	88.70	%	0.363				0.41%
ScR 361.383	204223.2	87.78	%	0.949				1.08%
Ag 328.068†	172.2	0.00072	mg/L	0.000162	0.00360	mg/L	0.000812	22.55%
Al 308.215†	-119.1	-0.08912	mg/L	0.012259	-0.4456	mg/L	0.06129	13.76%
As 188.979†	0.2	-0.00128	mg/L	0.001352	-0.00641	mg/L	0.006759	105.49%
B 249.677†	81.3	0.01339	mg/L	0.000602	0.06695	mg/L	0.003009	4.49%
Ba 233.527†	111.0	0.01428	mg/L	0.000454	0.07139	mg/L	0.002270	3.18%
Be 313.042†	242.5	0.00032	mg/L	0.000055	0.00162	mg/L	0.000274	16.85%
Ca 317.933†	956737.8	78.29	mg/L	0.769	391.5	mg/L	3.85	0.98%
Cd 228.802†	42.9	0.00146	mg/L	0.000237	0.00728	mg/L	0.001186	16.30%
Co 228.616†	510.3	0.01411	mg/L	0.000134	0.07055	mg/L	0.000668	0.95%
Cr 267.716†	-29.9	-0.00439	mg/L	0.000396	-0.02193	mg/L	0.001982	9.04%
Cu 324.752†	648.1	0.00296	mg/L	0.000059	0.01482	mg/L	0.000293	1.98%
Fe 273.955†	1237.9	0.7502	mg/L	0.00720	3.751	mg/L	0.0360	0.96%
K 766.490†	1383.6	0.8322	mg/L	0.03697	4.161	mg/L	0.1849	4.44%
Mg 279.077†	17265.4	10.81	mg/L	0.197	54.04	mg/L	0.987	1.83%
Mn 257.610†	111150.1	2.211	mg/L	0.0393	11.05	mg/L	0.196	1.78%
Mo 202.031†	77.6	0.00438	mg/L	0.000091	0.02190	mg/L	0.000456	2.08%
Na 589.592†	1485428.7	267.2	mg/L	5.01	1336	mg/L	25.03	1.87%
Na 330.237†	6352.4	262.5	mg/L	4.88	1313	mg/L	24.39	1.86%
Ni 231.604†	287.8	0.07993	mg/L	0.000616	0.3996	mg/L	0.00308	0.77%
Pb 220.353†	-4.4	-0.00062	mg/L	0.000838	-0.00311	mg/L	0.004190	134.61%
Sb 206.836†	29.4	0.01187	mg/L	0.003872	0.05936	mg/L	0.019359	32.61%
Se 196.026†	30.6	0.01572	mg/L	0.002647	0.07861	mg/L	0.013237	16.84%
Si 288.158†	4162.3	2.705	mg/L	0.0258	13.52	mg/L	0.129	0.95%
Sn 189.927†	-123.9	-0.01803	mg/L	0.000786	-0.09014	mg/L	0.003929	4.36%
Sr 421.552†	102334.2	0.1909	mg/L	0.00237	0.9543	mg/L	0.01184	1.24%
Ti 334.903†	92.7	0.00150	mg/L	0.000766	0.00751	mg/L	0.003831	51.03%
Tl 190.801†	1.4	0.00060	mg/L	0.000496	0.00301	mg/L	0.002482	82.49%
V 292.402†	381.4	0.00231	mg/L	0.000042	0.01153	mg/L	0.000209	1.82%
Zn 206.200†	356.5	0.09540	mg/L	0.000173	0.4770	mg/L	0.00087	0.18%

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Sequence No.: 20
Sample ID: BIL0006-DUP1

Dilution: 5X
Wash Time: 37

Autosampler Location: 349
Date Collected: 12/3/2020 7:22:35 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIL0006-DUP1

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: BIL0006-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1941714.5	89.53	%	0.680				0.76%
ScR 361.383	211195.3	90.77	%	0.809				0.89%
Ag 328.068†	142.4	0.00075	mg/L	0.000176	0.00375	mg/L	0.000882	23.52%
Al 308.215†	161.9	0.1212	mg/L	0.00383	0.6059	mg/L	0.01913	3.16%
As 188.979†	28.8	0.01798	mg/L	0.000432	0.08990	mg/L	0.002160	2.40%
B 249.677†	52.7	0.00799	mg/L	0.001061	0.03997	mg/L	0.005303	13.27%
Ba 233.527†	322.5	0.04348	mg/L	0.000673	0.2174	mg/L	0.00336	1.55%
Be 313.042†	225.6	0.00030	mg/L	0.000074	0.00151	mg/L	0.000369	24.43%
Ca 317.933†	356376.2	29.16	mg/L	0.317	145.8	mg/L	1.58	1.09%
Cd 228.802†	65.0	0.00203	mg/L	0.000154	0.01014	mg/L	0.000768	7.57%
Co 228.616†	95.4	0.00263	mg/L	0.000287	0.01316	mg/L	0.001434	10.89%
Cr 267.716†	826.2	0.09428	mg/L	0.000843	0.4714	mg/L	0.00422	0.89%
Cu 324.752†	204160.5	0.9511	mg/L	0.00609	4.756	mg/L	0.0305	0.64%
Fe 273.955†	203.8	0.1236	mg/L	0.00340	0.6178	mg/L	0.01698	2.75%
K 766.490†	1653.3	0.9945	mg/L	0.01292	4.972	mg/L	0.0646	1.30%
Mg 279.077†	1809.7	1.133	mg/L	0.0154	5.665	mg/L	0.0770	1.36%
Mn 257.610†	10650.4	0.2118	mg/L	0.00262	1.059	mg/L	0.0131	1.24%
Mo 202.031†	49.7	0.00320	mg/L	0.000038	0.01599	mg/L	0.000188	1.17%
Na 589.592†	1637686.7	294.6	mg/L	2.22	1473	mg/L	11.11	0.75%
Na 330.237†	7022.5	290.2	mg/L	1.13	1451	mg/L	5.63	0.39%
Ni 231.604†	10.5	0.00293	mg/L	0.000909	0.01465	mg/L	0.004547	31.05%
Pb 220.353†	10.1	0.00012	mg/L	0.001347	0.00062	mg/L	0.006735	>999.9%
Sb 206.836†	42.7	0.01613	mg/L	0.001702	0.08066	mg/L	0.008511	10.55%
Se 196.026†	19.5	0.01269	mg/L	0.002688	0.06343	mg/L	0.013440	21.19%
Si 288.158†	4510.0	2.909	mg/L	0.0323	14.54	mg/L	0.162	1.11%
Sn 189.927†	-69.6	-0.01284	mg/L	0.000687	-0.06421	mg/L	0.003433	5.35%
Sr 421.552†	51627.8	0.09628	mg/L	0.001284	0.4814	mg/L	0.00642	1.33%
Ti 334.903†	79.3	0.00290	mg/L	0.000249	0.01449	mg/L	0.001244	8.59%
Tl 190.801†	2.6	0.00123	mg/L	0.002957	0.00617	mg/L	0.014786	239.78%
V 292.402†	370.4	0.00260	mg/L	0.000047	0.01300	mg/L	0.000237	1.83%
Zn 206.200†	139.7	0.03739	mg/L	0.001501	0.1869	mg/L	0.00751	4.02%

Sequence No.: 21
Sample ID: 20K0394-01
Autosampler Location: 350
Date Collected: 12/3/2020 7:27:08 PM
Data Type: Original
Dilution: 5X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: 20K0394-01

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: 20K0394-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1965361.5	90.62	%	0.113				0.12%
ScR 361.383	209691.8	90.13	%	0.918				1.02%
Ag 328.068†	134.6	0.00071	mg/L	0.000251	0.00355	mg/L	0.001257	35.42%
Al 308.215†	135.6	0.1015	mg/L	0.00494	0.5075	mg/L	0.02468	4.86%
As 188.979†	26.4	0.01643	mg/L	0.000419	0.08216	mg/L	0.002094	2.55%
B 249.677†	40.1	0.00579	mg/L	0.002080	0.02897	mg/L	0.010398	35.89%
Ba 233.527†	289.9	0.03909	mg/L	0.000870	0.1955	mg/L	0.00435	2.23%
Be 313.042†	202.2	0.00027	mg/L	0.000039	0.00135	mg/L	0.000196	14.47%
Ca 317.933†	314673.0	25.75	mg/L	0.284	128.8	mg/L	1.42	1.10%
Cd 228.802†	58.2	0.00181	mg/L	0.000037	0.00907	mg/L	0.000184	2.02%
Co 228.616†	75.7	0.00209	mg/L	0.000141	0.01044	mg/L	0.000707	6.78%
Cr 267.716†	721.2	0.08230	mg/L	0.000093	0.4115	mg/L	0.00047	0.11%
Cu 324.752†	177676.3	0.8278	mg/L	0.00105	4.139	mg/L	0.0052	0.13%
Fe 273.955†	184.3	0.1117	mg/L	0.00040	0.5585	mg/L	0.00201	0.36%
K 766.490†	1504.5	0.9050	mg/L	0.03280	4.525	mg/L	0.1640	3.62%
Mg 279.077†	1585.4	0.9925	mg/L	0.01304	4.962	mg/L	0.0652	1.31%
Mn 257.610†	9409.0	0.1871	mg/L	0.00158	0.9356	mg/L	0.00791	0.85%
Mo 202.031†	43.8	0.00282	mg/L	0.000227	0.01409	mg/L	0.001135	8.06%
Na 589.592†	1510326.2	271.7	mg/L	4.34	1358	mg/L	21.71	1.60%
Na 330.237†	6412.3	265.0	mg/L	0.90	1325	mg/L	4.48	0.34%
Ni 231.604†	14.9	0.00414	mg/L	0.002705	0.02069	mg/L	0.013524	65.35%
Pb 220.353†	8.1	0.00002	mg/L	0.000850	0.00009	mg/L	0.004250	>999.9%
Sb 206.836†	28.0	0.01027	mg/L	0.002351	0.05133	mg/L	0.011754	22.90%
Se 196.026†	16.6	0.01068	mg/L	0.002577	0.05339	mg/L	0.012883	24.13%
Si 288.158†	4139.0	2.669	mg/L	0.0268	13.35	mg/L	0.134	1.00%
Sn 189.927†	-65.0	-0.01226	mg/L	0.001241	-0.06129	mg/L	0.006206	10.13%
Sr 421.552†	45737.8	0.08530	mg/L	0.000774	0.4265	mg/L	0.00387	0.91%
Ti 334.903†	55.1	0.00177	mg/L	0.000896	0.00886	mg/L	0.004478	50.52%
Tl 190.801†	-1.5	-0.00080	mg/L	0.002099	-0.00399	mg/L	0.010496	262.84%
V 292.402†	315.9	0.00223	mg/L	0.000172	0.01113	mg/L	0.000858	7.71%
Zn 206.200†	131.0	0.03507	mg/L	0.001140	0.1753	mg/L	0.00570	3.25%

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Sequence No.: 22
Sample ID: BIL0006-MS1

Dilution: 5X
Wash Time: 37

Autosampler Location: 351
Date Collected: 12/3/2020 7:31:41 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BIL0006-MS1

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: BIL0006-MS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1941138.1	89.50	%	0.366				0.41%
ScR 361.383	209861.2	90.20	%	0.755				0.84%
Ag 328.068†	39189.5	0.2118	mg/L	0.00096	1.059	mg/L	0.0048	0.45%
Al 308.215†	1288.5	0.9626	mg/L	0.00967	4.813	mg/L	0.0483	1.00%
As 188.979†	1339.7	0.8567	mg/L	0.00650	4.283	mg/L	0.0325	0.76%
B 249.677†	57.4	0.00811	mg/L	0.001339	0.04055	mg/L	0.006693	16.50%
Ba 233.527†	6357.0	0.8618	mg/L	0.00630	4.309	mg/L	0.0315	0.73%
Be 313.042†	149991.3	0.2031	mg/L	0.00075	1.015	mg/L	0.0038	0.37%
Ca 317.933†	404646.8	33.10	mg/L	0.135	165.5	mg/L	0.67	0.41%
Cd 228.802†	6686.6	0.2131	mg/L	0.00133	1.066	mg/L	0.0066	0.62%
Co 228.616†	7356.5	0.2038	mg/L	0.00076	1.019	mg/L	0.0038	0.37%
Cr 267.716†	2649.2	0.3024	mg/L	0.00138	1.512	mg/L	0.0069	0.46%
Cu 324.752†	258496.7	1.204	mg/L	0.0029	6.022	mg/L	0.0147	0.24%
Fe 273.955†	1530.7	0.9268	mg/L	0.00698	4.634	mg/L	0.0349	0.75%
K 766.490†	8322.1	5.006	mg/L	0.0405	25.03	mg/L	0.202	0.81%
Mg 279.077†	8311.6	5.201	mg/L	0.0263	26.01	mg/L	0.131	0.51%
Mn 257.610†	20509.8	0.4080	mg/L	0.00085	2.040	mg/L	0.0043	0.21%
Mo 202.031†	59.0	0.00377	mg/L	0.000068	0.01887	mg/L	0.000338	1.79%
Na 589.592†	1691590.3	304.3	mg/L	0.91	1522	mg/L	4.56	0.30%
Na 330.237†	7189.8	297.1	mg/L	1.34	1485	mg/L	6.72	0.45%
Ni 231.604†	734.7	0.2039	mg/L	0.00454	1.020	mg/L	0.0227	2.22%
Pb 220.353†	6356.0	0.8240	mg/L	0.00476	4.120	mg/L	0.0238	0.58%
Sb 206.836†	47.6	0.01597	mg/L	0.001476	0.07987	mg/L	0.007379	9.24%
Se 196.026†	1105.8	0.8602	mg/L	0.00758	4.301	mg/L	0.0379	0.88%
Si 288.158†	4662.4	3.012	mg/L	0.0146	15.06	mg/L	0.073	0.49%
Sn 189.927†	-80.4	-0.01490	mg/L	0.001085	-0.07449	mg/L	0.005423	7.28%
Sr 421.552†	161826.8	0.3018	mg/L	0.00179	1.509	mg/L	0.0089	0.59%
Ti 334.903†	71.2	0.00226	mg/L	0.000416	0.01130	mg/L	0.002080	18.40%
Tl 190.801†	1602.4	0.7929	mg/L	0.00062	3.965	mg/L	0.0031	0.08%
V 292.402†	33778.2	0.2051	mg/L	0.00030	1.026	mg/L	0.0015	0.14%
Zn 206.200†	904.0	0.2420	mg/L	0.00080	1.210	mg/L	0.0040	0.33%

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Sequence No.: 23
Sample ID: 20K0237-05

Dilution: 1X
Wash Time: 37

Autosampler Location: 352
Date Collected: 12/3/2020 7:36:14 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0237-05

Analyte	Back Pressure	Flow
All	233.0 kPa	0.65 L/min

Mean Data: 20K0237-05

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2033858.4	93.78	%	0.489				0.52%
ScR 361.383	216184.3	92.92	%	0.421				0.45%
Ag 328.068†	159.2	0.00086	mg/L	0.000301	0.00086	mg/L	0.000301	35.01%
Al 308.215†	58.0	0.04342	mg/L	0.006517	0.04342	mg/L	0.006517	15.01%
As 188.979†	2.0	0.00162	mg/L	0.001363	0.00162	mg/L	0.001363	84.38%
B 249.677†	-21.1	-0.00476	mg/L	0.002228	-0.00476	mg/L	0.002228	46.77%
Ba 233.527†	73.2	0.00980	mg/L	0.000825	0.00980	mg/L	0.000825	8.43%
Be 313.042†	118.3	0.00016	mg/L	0.000051	0.00016	mg/L	0.000051	32.47%
Ca 317.933†	130717.9	10.70	mg/L	0.046	10.70	mg/L	0.046	0.43%
Cd 228.802†	28.9	0.00093	mg/L	0.000039	0.00093	mg/L	0.000039	4.24%
Co 228.616†	20.9	0.00056	mg/L	0.000112	0.00056	mg/L	0.000112	19.74%
Cr 267.716†	-18.0	-0.00206	mg/L	0.001078	-0.00206	mg/L	0.001078	52.44%
Cu 324.752†	11633.4	0.05421	mg/L	0.000431	0.05421	mg/L	0.000431	0.80%
Fe 273.955†	431.1	0.2613	mg/L	0.00320	0.2613	mg/L	0.00320	1.23%
K 766.490†	754.0	0.4535	mg/L	0.02654	0.4535	mg/L	0.02654	5.85%
Mg 279.077†	277.2	0.1733	mg/L	0.00571	0.1733	mg/L	0.00571	3.29%
Mn 257.610†	470.6	0.00936	mg/L	0.000189	0.00936	mg/L	0.000189	2.02%
Mo 202.031†	29.8	0.00202	mg/L	0.000232	0.00202	mg/L	0.000232	11.46%
Na 589.592†	6987.5	1.257	mg/L	0.0283	1.257	mg/L	0.0283	2.25%
Na 330.237†	13.6	0.5389	mg/L	0.52352	0.5389	mg/L	0.52352	97.15%
Ni 231.604†	-14.7	-0.00407	mg/L	0.002033	-0.00407	mg/L	0.002033	49.94%
Pb 220.353†	-4.1	-0.00061	mg/L	0.000509	-0.00061	mg/L	0.000509	82.97%
Sb 206.836†	19.3	0.00789	mg/L	0.000961	0.00789	mg/L	0.000961	12.17%
Se 196.026†	3.2	0.00161	mg/L	0.000229	0.00161	mg/L	0.000229	14.21%
Si 288.158†	1976.4	1.274	mg/L	0.0072	1.274	mg/L	0.0072	0.57%
Sn 189.927†	-28.3	-0.00543	mg/L	0.000938	-0.00543	mg/L	0.000938	17.28%
Sr 421.552†	27992.0	0.05220	mg/L	0.000441	0.05220	mg/L	0.000441	0.85%
Ti 334.903†	101.0	0.00486	mg/L	0.000752	0.00486	mg/L	0.000752	15.49%
Tl 190.801†	3.2	0.00157	mg/L	0.001812	0.00157	mg/L	0.001812	115.45%
V 292.402†	370.8	0.00224	mg/L	0.000097	0.00224	mg/L	0.000097	4.36%
Zn 206.200†	236.8	0.06338	mg/L	0.002121	0.06338	mg/L	0.002121	3.35%

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Sequence No.: 24 **Autosampler Location: 353**
Sample ID: 20K0213-01 **Date Collected: 12/3/2020 7:40:30 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0213-01

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: 20K0213-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1930905.6	89.03	%	0.241				0.27%
ScR 361.383	206893.8	88.93	%	4.164				4.68%
Ag 328.068†	605.0	0.00326	mg/L	0.000164	0.00651	mg/L	0.000328	5.04%
Al 308.215†	3356.6	2.515	mg/L	0.0376	5.030	mg/L	0.0752	1.49%
As 188.979†	5.4	0.00204	mg/L	0.002969	0.00409	mg/L	0.005939	145.26%
B 249.677†	582.3	0.1075	mg/L	0.00236	0.2151	mg/L	0.00472	2.19%
Ba 233.527†	4751.3	0.6432	mg/L	0.01270	1.286	mg/L	0.0254	1.98%
Be 313.042†	-765.9	-0.00099	mg/L	0.000078	-0.00199	mg/L	0.000155	7.81%
Ca 317.933†	44049.3	3.604	mg/L	0.0215	7.208	mg/L	0.0431	0.60%
Cd 228.802†	844.1	0.02740	mg/L	0.000235	0.05479	mg/L	0.000470	0.86%
Co 228.616†	171.1	0.00450	mg/L	0.000209	0.00899	mg/L	0.000417	4.64%
Cr 267.716†	66108.5	7.552	mg/L	0.0656	15.10	mg/L	0.131	0.87%
Cu 324.752†	67445.5	0.3149	mg/L	0.00110	0.6297	mg/L	0.00220	0.35%
Fe 273.955†	16761.2	10.16	mg/L	0.247	20.32	mg/L	0.494	2.43%
K 766.490†	535.0	0.3218	mg/L	0.01793	0.6436	mg/L	0.03587	5.57%
Mg 279.077†	1699.7	1.069	mg/L	0.0107	2.139	mg/L	0.0213	1.00%
Mn 257.610†	3802.0	0.07553	mg/L	0.001445	0.1511	mg/L	0.00289	1.91%
Mo 202.031†	904.2	0.06646	mg/L	0.000108	0.1329	mg/L	0.00022	0.16%
Na 589.592†	2255.0	0.4057	mg/L	0.01255	0.8113	mg/L	0.02511	3.09%
Na 330.237†	3.6	-0.8432	mg/L	0.82706	-1.686	mg/L	1.6541	98.09%
Ni 231.604†	176.5	0.04919	mg/L	0.001740	0.09838	mg/L	0.003480	3.54%
Pb 220.353†	-24.6	0.01190	mg/L	0.000747	0.02381	mg/L	0.001494	6.28%
Sb 206.836†	416.2	0.06836	mg/L	0.001178	0.1367	mg/L	0.00236	1.72%
Se 196.026†	3.2	0.00218	mg/L	0.003776	0.00435	mg/L	0.007552	173.58%
Si 288.158†	1051.1	0.7139	mg/L	0.01538	1.428	mg/L	0.0308	2.15%
Sn 189.927†	26.1	0.00758	mg/L	0.000320	0.01516	mg/L	0.000640	4.22%
Sr 421.552†	931669.2	1.738	mg/L	0.0064	3.475	mg/L	0.0128	0.37%
Ti 334.903†	1927.8	0.09983	mg/L	0.002700	0.1997	mg/L	0.00540	2.70%
Tl 190.801†	3.6	-0.00086	mg/L	0.003812	-0.00172	mg/L	0.007623	442.93%
V 292.402†	-4122.6	0.00407	mg/L	0.000376	0.00814	mg/L	0.000751	9.23%
Zn 206.200†	10356.4	2.772	mg/L	0.0487	5.543	mg/L	0.0975	1.76%

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Sequence No.: 25 **Autosampler Location: 7**
Sample ID: SEQ-CCV7 **Date Collected: 12/3/2020 7:44:47 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV7

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-CCV7

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1990946.5	91.80	%	0.193				0.21%
ScR 361.383	207996.3	89.40	%	0.345				0.39%
Ag 328.068†	187283.8	1.012	mg/L	0.0015	1.012	mg/L	0.0015	0.15%
Al 308.215†	2695.8	1.986	mg/L	0.0097	1.986	mg/L	0.0097	0.49%
As 188.979†	2987.4	2.028	mg/L	0.0065	2.028	mg/L	0.0065	0.32%
B 249.677†	5669.1	1.055	mg/L	0.0082	1.055	mg/L	0.0082	0.77%
Ba 233.527†	7667.1	1.039	mg/L	0.0045	1.039	mg/L	0.0045	0.44%
Be 313.042†	757783.1	1.026	mg/L	0.0058	1.026	mg/L	0.0058	0.56%
Ca 317.933†	23822.8	1.872	mg/L	0.0170	1.872	mg/L	0.0170	0.91%
Cd 228.802†	31234.4	1.005	mg/L	0.0024	1.005	mg/L	0.0024	0.24%
Co 228.616†	37201.0	1.029	mg/L	0.0009	1.029	mg/L	0.0009	0.08%
Cr 267.716†	9084.2	1.038	mg/L	0.0051	1.038	mg/L	0.0051	0.49%
Cu 324.752†	210617.2	0.9808	mg/L	0.00302	0.9808	mg/L	0.00302	0.31%
Fe 273.955†	3375.1	2.041	mg/L	0.0157	2.041	mg/L	0.0157	0.77%
K 766.490†	34077.5	20.50	mg/L	0.078	20.50	mg/L	0.078	0.38%
Mg 279.077†	3211.6	2.027	mg/L	0.0094	2.027	mg/L	0.0094	0.46%
Mn 257.610†	50205.5	0.9987	mg/L	0.00367	0.9987	mg/L	0.00367	0.37%
Mo 202.031†	14714.2	1.083	mg/L	0.0015	1.083	mg/L	0.0015	0.14%
Na 589.592†	294598.6	53.00	mg/L	0.200	53.00	mg/L	0.200	0.38%
Na 330.237†	1269.3	52.29	mg/L	0.350	52.29	mg/L	0.350	0.67%
Ni 231.604†	3678.3	1.023	mg/L	0.0076	1.023	mg/L	0.0076	0.74%
Pb 220.353†	15925.4	2.068	mg/L	0.0034	2.068	mg/L	0.0034	0.17%
Sb 206.836†	5627.3	2.307	mg/L	0.0034	2.307	mg/L	0.0034	0.15%
Se 196.026†	2637.1	2.058	mg/L	0.0095	2.058	mg/L	0.0095	0.46%
Si 288.158†	3405.1	2.197	mg/L	0.0053	2.197	mg/L	0.0053	0.24%
Sn 189.927†	4262.4	1.115	mg/L	0.0016	1.115	mg/L	0.0016	0.15%
Sr 421.552†	559894.4	1.044	mg/L	0.0041	1.044	mg/L	0.0041	0.40%
Ti 334.903†	20468.5	1.077	mg/L	0.0062	1.077	mg/L	0.0062	0.58%
Tl 190.801†	4129.2	2.041	mg/L	0.0031	2.041	mg/L	0.0031	0.15%
V 292.402†	163238.0	0.9904	mg/L	0.00172	0.9904	mg/L	0.00172	0.17%
Zn 206.200†	3895.8	1.043	mg/L	0.0062	1.043	mg/L	0.0062	0.59%

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Sequence No.: 26
Sample ID: SEQ-CCB7

Autosampler Location: 1
Date Collected: 12/3/2020 7:50:14 PM
Data Type: Original

Dilution: 1X
Wash Time: 120

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB7

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-CCB7

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2005748.7	92.48	%	0.502				0.54%
ScR 361.383	210743.8	90.58	%	0.890				0.98%
Ag 328.068†	180.2	0.00097	mg/L	0.000395	0.00097	mg/L	0.000395	40.60%
Al 308.215†	-68.0	-0.05102	mg/L	0.026288	-0.05102	mg/L	0.026288	51.52%
As 188.979†	-1.9	-0.00122	mg/L	0.001738	-0.00122	mg/L	0.001738	142.94%
B 249.677†	-35.5	-0.00657	mg/L	0.001459	-0.00657	mg/L	0.001459	22.22%
Ba 233.527†	-2.8	-0.00038	mg/L	0.000294	-0.00038	mg/L	0.000294	76.62%
Be 313.042†	178.5	0.00024	mg/L	0.000016	0.00024	mg/L	0.000016	6.52%
Ca 317.933†	36.6	0.00291	mg/L	0.001499	0.00291	mg/L	0.001499	51.49%
Cd 228.802†	18.3	0.00059	mg/L	0.000068	0.00059	mg/L	0.000068	11.40%
Co 228.616†	22.9	0.00064	mg/L	0.000150	0.00064	mg/L	0.000150	23.59%
Cr 267.716†	-32.3	-0.00368	mg/L	0.001097	-0.00368	mg/L	0.001097	29.76%
Cu 324.752†	516.3	0.00240	mg/L	0.000207	0.00240	mg/L	0.000207	8.59%
Fe 273.955†	9.9	0.00599	mg/L	0.000721	0.00599	mg/L	0.000721	12.03%
K 766.490†	60.2	0.03622	mg/L	0.032635	0.03622	mg/L	0.032635	90.11%
Mg 279.077†	-35.0	-0.02186	mg/L	0.003634	-0.02186	mg/L	0.003634	16.62%
Mn 257.610†	23.3	0.00046	mg/L	0.000011	0.00046	mg/L	0.000011	2.44%
Mo 202.031†	57.2	0.00421	mg/L	0.000552	0.00421	mg/L	0.000552	13.13%
Na 589.592†	295.7	0.05320	mg/L	0.008063	0.05320	mg/L	0.008063	15.16%
Na 330.237†	-24.5	-1.013	mg/L	0.1517	-1.013	mg/L	0.1517	14.98%
Ni 231.604†	-23.8	-0.00658	mg/L	0.001749	-0.00658	mg/L	0.001749	26.57%
Pb 220.353†	-2.2	-0.00031	mg/L	0.001175	-0.00031	mg/L	0.001175	379.39%
Sb 206.836†	31.3	0.01288	mg/L	0.002271	0.01288	mg/L	0.002271	17.63%
Se 196.026†	6.1	0.00477	mg/L	0.004249	0.00477	mg/L	0.004249	89.10%
Si 288.158†	-133.5	-0.08591	mg/L	0.009839	-0.08591	mg/L	0.009839	11.45%
Sn 189.927†	3.6	0.00095	mg/L	0.001036	0.00095	mg/L	0.001036	108.60%
Sr 421.552†	177.4	0.00033	mg/L	0.000072	0.00033	mg/L	0.000072	21.63%
Ti 334.903†	-3.7	-0.00020	mg/L	0.001018	-0.00020	mg/L	0.001018	518.40%
Tl 190.801†	0.1	0.00006	mg/L	0.000119	0.00006	mg/L	0.000119	183.20%
V 292.402†	279.9	0.00168	mg/L	0.000167	0.00168	mg/L	0.000167	9.95%
Zn 206.200†	3.7	0.00100	mg/L	0.000721	0.00100	mg/L	0.000721	72.26%

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Sequence No.: 27 **Autosampler Location: 354**
Sample ID: 20K0238-01 **Date Collected: 12/3/2020 7:54:30 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0238-01

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: 20K0238-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2016631.4	92.98	%	0.671				0.72%
ScR 361.383	215143.8	92.47	%	0.848				0.92%
Ag 328.068†	1211.7	0.00636	mg/L	0.000049	0.01273	mg/L	0.000099	0.78%
Al 308.215†	96907.2	72.60	mg/L	0.376	145.2	mg/L	0.75	0.52%
As 188.979†	-696.8	0.06681	mg/L	0.011286	0.1336	mg/L	0.02257	16.89%
B 249.677†	1329.3	0.2262	mg/L	0.00111	0.4525	mg/L	0.00222	0.49%
Ba 233.527†	8891.8	1.179	mg/L	0.0098	2.358	mg/L	0.0197	0.83%
Be 313.042†	1131.6	0.00112	mg/L	0.000060	0.00225	mg/L	0.000120	5.33%
Ca 317.933†	468940.9	38.37	mg/L	0.043	76.75	mg/L	0.086	0.11%
Cd 228.802†	809.3	0.02860	mg/L	0.000204	0.05720	mg/L	0.000407	0.71%
Co 228.616†	2996.7	0.07119	mg/L	0.000136	0.1424	mg/L	0.00027	0.19%
Cr 267.716†	4783.9	0.5517	mg/L	0.00585	1.103	mg/L	0.0117	1.06%
Cu 324.752†	427025.3	1.996	mg/L	0.0052	3.993	mg/L	0.0103	0.26%
Fe 273.955†	316901.9	192.1	mg/L	0.63	384.1	mg/L	1.25	0.33%
K 766.490†	10121.0	6.088	mg/L	0.0537	12.18	mg/L	0.107	0.88%
Mg 279.077†	46493.3	29.03	mg/L	0.307	58.06	mg/L	0.615	1.06%
Mn 257.610†	122329.0	2.431	mg/L	0.0147	4.863	mg/L	0.0294	0.60%
Mo 202.031†	874.4	0.06339	mg/L	0.000067	0.1268	mg/L	0.00013	0.11%
Na 589.592†	159081.2	28.62	mg/L	0.306	57.24	mg/L	0.611	1.07%
Na 330.237†	780.2	28.88	mg/L	0.522	57.76	mg/L	1.044	1.81%
Ni 231.604†	1682.6	0.4672	mg/L	0.00603	0.9345	mg/L	0.01205	1.29%
Pb 220.353†	12972.5	1.696	mg/L	0.0049	3.392	mg/L	0.0098	0.29%
Sb 206.836†	211.4	0.07622	mg/L	0.003498	0.1524	mg/L	0.00700	4.59%
Se 196.026†	13.0	0.00504	mg/L	0.004990	0.01007	mg/L	0.009980	99.06%
Si 288.158†	14262.3	9.228	mg/L	0.0824	18.46	mg/L	0.165	0.89%
Sn 189.927†	526.8	0.1466	mg/L	0.00147	0.2932	mg/L	0.00295	1.01%
Sr 421.552†	185761.4	0.3464	mg/L	0.00300	0.6929	mg/L	0.00600	0.87%
Ti 334.903†	86950.5	4.578	mg/L	0.0167	9.156	mg/L	0.0333	0.36%
Tl 190.801†	-28.8	-0.01563	mg/L	0.001160	-0.03127	mg/L	0.002319	7.42%
V 292.402†	38186.2	0.2340	mg/L	0.00036	0.4681	mg/L	0.00071	0.15%
Zn 206.200†	43645.3	11.68	mg/L	0.163	23.36	mg/L	0.326	1.40%

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Sequence No.: 28 **Autosampler Location: 355**
Sample ID: 20K0238-02 **Date Collected: 12/3/2020 7:57:48 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0238-02

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: 20K0238-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2007069.4	92.54	%	0.339				0.37%
ScR 361.383	209395.1	90.00	%	0.195				0.22%
Ag 328.068†	202.7	0.00084	mg/L	0.000473	0.00168	mg/L	0.000946	56.42%
Al 308.215†	93882.8	70.32	mg/L	0.284	140.6	mg/L	0.57	0.40%
As 188.979†	-853.1	0.06441	mg/L	0.011350	0.1288	mg/L	0.02270	17.62%
B 249.677†	478.5	0.07031	mg/L	0.000707	0.1406	mg/L	0.00141	1.01%
Ba 233.527†	6801.6	0.9026	mg/L	0.00335	1.805	mg/L	0.0067	0.37%
Be 313.042†	1434.4	0.00149	mg/L	0.000041	0.00299	mg/L	0.000081	2.71%
Ca 317.933†	763334.2	62.47	mg/L	0.277	124.9	mg/L	0.55	0.44%
Cd 228.802†	162.2	0.00789	mg/L	0.000075	0.01578	mg/L	0.000150	0.95%
Co 228.616†	2108.2	0.04600	mg/L	0.000504	0.09199	mg/L	0.001007	1.09%
Cr 267.716†	3778.8	0.4345	mg/L	0.00267	0.8689	mg/L	0.00533	0.61%
Cu 324.752†	267532.4	1.251	mg/L	0.0057	2.502	mg/L	0.0115	0.46%
Fe 273.955†	230192.3	139.5	mg/L	1.18	279.0	mg/L	2.36	0.84%
K 766.490†	10193.4	6.131	mg/L	0.0135	12.26	mg/L	0.027	0.22%
Mg 279.077†	62684.5	39.18	mg/L	0.179	78.36	mg/L	0.359	0.46%
Mn 257.610†	164128.4	3.263	mg/L	0.0144	6.526	mg/L	0.0288	0.44%
Mo 202.031†	574.6	0.04084	mg/L	0.001081	0.08168	mg/L	0.002162	2.65%
Na 589.592†	85232.1	15.33	mg/L	0.101	30.67	mg/L	0.203	0.66%
Na 330.237†	368.9	15.03	mg/L	0.402	30.06	mg/L	0.804	2.67%
Ni 231.604†	928.2	0.2578	mg/L	0.00307	0.5155	mg/L	0.00615	1.19%
Pb 220.353†	2513.0	0.3407	mg/L	0.00188	0.6814	mg/L	0.00376	0.55%
Sb 206.836†	165.7	0.06371	mg/L	0.001531	0.1274	mg/L	0.00306	2.40%
Se 196.026†	19.1	0.00717	mg/L	0.007344	0.01435	mg/L	0.014687	102.37%
Si 288.158†	17886.8	11.55	mg/L	0.037	23.11	mg/L	0.073	0.32%
Sn 189.927†	4.6	0.01491	mg/L	0.000764	0.02983	mg/L	0.001527	5.12%
Sr 421.552†	242036.3	0.4514	mg/L	0.00146	0.9028	mg/L	0.00291	0.32%
Ti 334.903†	103500.7	5.448	mg/L	0.0302	10.90	mg/L	0.060	0.55%
Tl 190.801†	-23.6	-0.01297	mg/L	0.001777	-0.02594	mg/L	0.003553	13.70%
V 292.402†	41926.6	0.2550	mg/L	0.00139	0.5100	mg/L	0.00278	0.55%
Zn 206.200†	13069.6	3.498	mg/L	0.0142	6.995	mg/L	0.0285	0.41%

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Sequence No.: 29 **Autosampler Location: 356**
Sample ID: 20K0238-03 **Date Collected: 12/3/2020 8:01:51 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0238-03

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

DEL

Mean Data: 20K0238-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2013297.8	92.83	%	1.203				1.30%
ScR 361.383	213874.6	91.93	%	0.557				0.61%
Ag 328.068†	1854.7	0.00975	mg/L	0.000169	0.01951	mg/L	0.000337	1.73%
Al 308.215†	122677.4	91.91	mg/L	0.344	183.8	mg/L	0.69	0.37%
As 188.979†	-842.6	0.1005	mg/L	0.01128	0.2010	mg/L	0.02256	11.22%
B 249.677†	1636.2	0.2768	mg/L	0.00521	0.5536	mg/L	0.01043	1.88%
Ba 233.527†	12819.8	1.701	mg/L	0.0036	3.402	mg/L	0.0072	0.21%
Be 313.042†	1339.3	0.00132	mg/L	0.000026	0.00263	mg/L	0.000051	1.96%
Ca 317.933†	484321.2	39.63	mg/L	0.242	79.26	mg/L	0.483	0.61%
Cd 228.802†	1164.4	0.04129	mg/L	0.000733	0.08257	mg/L	0.001466	1.77%
Co 228.616†	4520.8	0.1099	mg/L	0.00200	0.2197	mg/L	0.00399	1.82%
Cr 267.716†	46715.6	5.344	mg/L	0.0299	10.69	mg/L	0.060	0.56%
Cu 324.752†	602319.6	2.816	mg/L	0.0075	5.633	mg/L	0.0150	0.27%
Fe 273.955†	441974.0	267.9	mg/L	2.07	535.7	mg/L	4.13	0.77%
K 766.490†	9066.7	5.454	mg/L	0.0048	10.91	mg/L	0.010	0.09%
Mg 279.077†	50071.4	31.25	mg/L	0.154	62.50	mg/L	0.308	0.49%
Mn 257.610†	173490.8	3.449	mg/L	0.0349	6.897	mg/L	0.0698	1.01%
Mo 202.031†	1490.2	0.1087	mg/L	0.00084	0.2173	mg/L	0.00168	0.77%
Na 589.592†	44981.6	8.092	mg/L	0.1052	16.18	mg/L	0.210	1.30%
Na 330.237†	327.9	8.621	mg/L	0.4926	17.24	mg/L	0.985	5.71%
Ni 231.604†	4991.5	1.386	mg/L	0.0076	2.772	mg/L	0.0151	0.55%
Pb 220.353†	17468.8	2.291	mg/L	0.0276	4.582	mg/L	0.0551	1.20%
Sb 206.836†	476.7	0.1179	mg/L	0.00434	0.2358	mg/L	0.00869	3.69%
Se 196.026†	7.7	-0.00002	mg/L	0.001577	-0.00005	mg/L	0.003154	>999.9%
Si 288.158†	15047.6	9.774	mg/L	0.0272	19.55	mg/L	0.054	0.28%
Sn 189.927†	731.4	0.2008	mg/L	0.00338	0.4016	mg/L	0.00677	1.69%
Sr 421.552†	190268.3	0.3548	mg/L	0.00317	0.7097	mg/L	0.00635	0.89%
Ti 334.903†	109765.8	5.778	mg/L	0.0384	11.56	mg/L	0.077	0.66%
Tl 190.801†	-39.6	-0.02313	mg/L	0.004651	-0.04625	mg/L	0.009301	20.11%
V 292.402†	46637.4	0.3041	mg/L	0.00076	0.6082	mg/L	0.00152	0.25%
Zn 206.200†	62073.3	16.61	mg/L	0.094	33.22	mg/L	0.188	0.57%

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Sequence No.: 30 **Autosampler Location: 357**
Sample ID: 20K0238-04 **Date Collected: 12/3/2020 8:05:08 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0238-04

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0238-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2031548.8	93.67	%	0.362				0.39%
ScR 361.383	213763.1	91.88	%	0.660				0.72%
Ag 328.068†	255.4	0.00126	mg/L	0.000039	0.00252	mg/L	0.000077	3.06%
Al 308.215†	70077.7	52.49	mg/L	0.048	105.0	mg/L	0.10	0.09%
As 188.979†	-620.5	0.05927	mg/L	0.003761	0.1185	mg/L	0.00752	6.35%
B 249.677†	266.3	0.03883	mg/L	0.000278	0.07765	mg/L	0.000557	0.72%
Ba 233.527†	3624.5	0.4773	mg/L	0.00231	0.9546	mg/L	0.00462	0.48%
Be 313.042†	1137.6	0.00116	mg/L	0.000011	0.00232	mg/L	0.000022	0.95%
Ca 317.933†	402874.5	32.97	mg/L	0.046	65.94	mg/L	0.091	0.14%
Cd 228.802†	156.7	0.00699	mg/L	0.000076	0.01397	mg/L	0.000151	1.08%
Co 228.616†	1652.2	0.03661	mg/L	0.000264	0.07321	mg/L	0.000528	0.72%
Cr 267.716†	2830.8	0.3256	mg/L	0.00189	0.6512	mg/L	0.00379	0.58%
Cu 324.752†	149783.3	0.7010	mg/L	0.00337	1.402	mg/L	0.0067	0.48%
Fe 273.955†	165206.0	100.1	mg/L	0.71	200.2	mg/L	1.42	0.71%
K 766.490†	7948.0	4.781	mg/L	0.0557	9.562	mg/L	0.1113	1.16%
Mg 279.077†	42462.5	26.54	mg/L	0.124	53.08	mg/L	0.249	0.47%
Mn 257.610†	86690.6	1.723	mg/L	0.0066	3.446	mg/L	0.0131	0.38%
Mo 202.031†	430.6	0.03086	mg/L	0.000543	0.06171	mg/L	0.001086	1.76%
Na 589.592†	21992.9	3.956	mg/L	0.0205	7.913	mg/L	0.0410	0.52%
Na 330.237†	94.1	3.609	mg/L	0.2578	7.218	mg/L	0.5156	7.14%
Ni 231.604†	646.3	0.1795	mg/L	0.00053	0.3590	mg/L	0.00105	0.29%
Pb 220.353†	2772.6	0.3712	mg/L	0.00184	0.7424	mg/L	0.00367	0.49%
Sb 206.836†	143.5	0.05618	mg/L	0.001856	0.1124	mg/L	0.00371	3.30%
Se 196.026†	25.6	0.01588	mg/L	0.008203	0.03176	mg/L	0.016406	51.66%
Si 288.158†	5954.4	3.857	mg/L	0.0270	7.713	mg/L	0.0539	0.70%
Sn 189.927†	69.1	0.02578	mg/L	0.000747	0.05156	mg/L	0.001493	2.90%
Sr 421.552†	145463.6	0.2713	mg/L	0.00074	0.5426	mg/L	0.00149	0.27%
Ti 334.903†	77329.5	4.071	mg/L	0.0112	8.143	mg/L	0.0225	0.28%
Tl 190.801†	-15.0	-0.00852	mg/L	0.003040	-0.01705	mg/L	0.006080	35.66%
V 292.402†	35541.9	0.2159	mg/L	0.00068	0.4319	mg/L	0.00137	0.32%
Zn 206.200†	10992.1	2.942	mg/L	0.0133	5.883	mg/L	0.0265	0.45%

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Sequence No.: 31 **Autosampler Location: 358**
Sample ID: BIK0645-DUP1 **Date Collected: 12/3/2020 8:09:11 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BIK0645-DUP1

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: BIK0645-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2017680.4	93.03	%	0.520				0.56%
ScR 361.383	212900.2	91.51	%	0.444				0.49%
Ag 328.068†	140.2	0.00076	mg/L	0.000184	0.00076	mg/L	0.000184	24.31%
Al 308.215†	181.3	0.1358	mg/L	0.00191	0.1358	mg/L	0.00191	1.40%
As 188.979†	11.7	0.00811	mg/L	0.000671	0.00811	mg/L	0.000671	8.28%
B 249.677†	74.8	0.01200	mg/L	0.000385	0.01200	mg/L	0.000385	3.21%
Ba 233.527†	111.6	0.01498	mg/L	0.000659	0.01498	mg/L	0.000659	4.40%
Be 313.042†	227.5	0.00030	mg/L	0.000013	0.00030	mg/L	0.000013	4.12%
Ca 317.933†	154491.1	12.64	mg/L	0.141	12.64	mg/L	0.141	1.12%
Cd 228.802†	31.2	0.00098	mg/L	0.000213	0.00098	mg/L	0.000213	21.87%
Co 228.616†	20.0	0.00053	mg/L	0.000033	0.00053	mg/L	0.000033	6.27%
Cr 267.716†	-23.2	-0.00271	mg/L	0.000652	-0.00271	mg/L	0.000652	24.04%
Cu 324.752†	2660.2	0.01239	mg/L	0.000299	0.01239	mg/L	0.000299	2.41%
Fe 273.955†	625.6	0.3791	mg/L	0.00386	0.3791	mg/L	0.00386	1.02%
K 766.490†	2787.1	1.676	mg/L	0.0151	1.676	mg/L	0.0151	0.90%
Mg 279.077†	4011.2	2.509	mg/L	0.0062	2.509	mg/L	0.0062	0.25%
Mn 257.610†	1184.1	0.02354	mg/L	0.000132	0.02354	mg/L	0.000132	0.56%
Mo 202.031†	41.7	0.00284	mg/L	0.000211	0.00284	mg/L	0.000211	7.42%
Na 589.592†	27071.0	4.870	mg/L	0.0385	4.870	mg/L	0.0385	0.79%
Na 330.237†	94.4	3.851	mg/L	0.3524	3.851	mg/L	0.3524	9.15%
Ni 231.604†	-10.6	-0.00293	mg/L	0.003052	-0.00293	mg/L	0.003052	104.27%
Pb 220.353†	15.4	0.00200	mg/L	0.000931	0.00200	mg/L	0.000931	46.57%
Sb 206.836†	25.0	0.01024	mg/L	0.001191	0.01024	mg/L	0.001191	11.63%
Se 196.026†	10.9	0.00743	mg/L	0.002394	0.00743	mg/L	0.002394	32.23%
Si 288.158†	4789.8	3.085	mg/L	0.0122	3.085	mg/L	0.0122	0.40%
Sn 189.927†	-37.5	-0.00747	mg/L	0.000478	-0.00747	mg/L	0.000478	6.40%
Sr 421.552†	39571.0	0.07380	mg/L	0.000280	0.07380	mg/L	0.000280	0.38%
Ti 334.903†	161.3	0.00795	mg/L	0.000480	0.00795	mg/L	0.000480	6.04%
Tl 190.801†	0.4	0.00021	mg/L	0.000578	0.00021	mg/L	0.000578	276.61%
V 292.402†	469.6	0.00283	mg/L	0.000170	0.00283	mg/L	0.000170	6.00%
Zn 206.200†	546.1	0.1462	mg/L	0.00006	0.1462	mg/L	0.00006	0.04%

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Sequence No.: 32
Sample ID: 20K0258-01

Dilution: 1X
Wash Time: 37

Autosampler Location: 359
Date Collected: 12/3/2020 8:13:27 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 20K0258-01

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: 20K0258-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2017730.5	93.03	%	0.346				0.37%
ScR 361.383	213414.8	91.73	%	0.312				0.34%
Ag 328.068†	48.4	0.00026	mg/L	0.000220	0.00026	mg/L	0.000220	84.53%
Al 308.215†	203.1	0.1521	mg/L	0.00395	0.1521	mg/L	0.00395	2.60%
As 188.979†	14.0	0.00950	mg/L	0.003602	0.00950	mg/L	0.003602	37.90%
B 249.677†	83.3	0.01358	mg/L	0.000691	0.01358	mg/L	0.000691	5.09%
Ba 233.527†	109.1	0.01464	mg/L	0.001194	0.01464	mg/L	0.001194	8.16%
Be 313.042†	215.4	0.00029	mg/L	0.000031	0.00029	mg/L	0.000031	10.87%
Ca 317.933†	155176.4	12.70	mg/L	0.038	12.70	mg/L	0.038	0.30%
Cd 228.802†	27.8	0.00086	mg/L	0.000161	0.00086	mg/L	0.000161	18.69%
Co 228.616†	18.8	0.00050	mg/L	0.000217	0.00050	mg/L	0.000217	43.53%
Cr 267.716†	-18.1	-0.00213	mg/L	0.001747	-0.00213	mg/L	0.001747	82.03%
Cu 324.752†	2670.4	0.01243	mg/L	0.000305	0.01243	mg/L	0.000305	2.45%
Fe 273.955†	602.2	0.3649	mg/L	0.00309	0.3649	mg/L	0.00309	0.85%
K 766.490†	2875.0	1.729	mg/L	0.0308	1.729	mg/L	0.0308	1.78%
Mg 279.077†	3986.4	2.494	mg/L	0.0257	2.494	mg/L	0.0257	1.03%
Mn 257.610†	1155.3	0.02297	mg/L	0.000098	0.02297	mg/L	0.000098	0.43%
Mo 202.031†	35.5	0.00239	mg/L	0.000139	0.00239	mg/L	0.000139	5.83%
Na 589.592†	27062.5	4.868	mg/L	0.0641	4.868	mg/L	0.0641	1.32%
Na 330.237†	92.8	3.785	mg/L	0.1158	3.785	mg/L	0.1158	3.06%
Ni 231.604†	-11.2	-0.00309	mg/L	0.000714	-0.00309	mg/L	0.000714	23.09%
Pb 220.353†	17.5	0.00228	mg/L	0.001198	0.00228	mg/L	0.001198	52.65%
Sb 206.836†	23.7	0.00969	mg/L	0.001582	0.00969	mg/L	0.001582	16.32%
Se 196.026†	10.7	0.00730	mg/L	0.005472	0.00730	mg/L	0.005472	74.96%
Si 288.158†	4803.0	3.093	mg/L	0.0303	3.093	mg/L	0.0303	0.98%
Sn 189.927†	-37.1	-0.00737	mg/L	0.000384	-0.00737	mg/L	0.000384	5.20%
Sr 421.552†	39329.0	0.07335	mg/L	0.000407	0.07335	mg/L	0.000407	0.56%
Ti 334.903†	150.2	0.00736	mg/L	0.000070	0.00736	mg/L	0.000070	0.95%
Tl 190.801†	5.5	0.00272	mg/L	0.000861	0.00272	mg/L	0.000861	31.60%
V 292.402†	418.3	0.00252	mg/L	0.000103	0.00252	mg/L	0.000103	4.08%
Zn 206.200†	537.7	0.1439	mg/L	0.00197	0.1439	mg/L	0.00197	1.37%

Sequence No.: 33
Sample ID: BIK0645-MS1

Autosampler Location: 360
Date Collected: 12/3/2020 8:17:43 PM
Data Type: Original

Dilution: 1X
Wash Time: 37

Auto Dilution Factor: 1

Nebulizer Parameters: BIK0645-MS1

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: BIK0645-MS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2000797.8	92.25	%	1.099				1.19%
ScR 361.383	207635.0	89.24	%	0.359				0.40%
Ag 328.068†	102536.5	0.5541	mg/L	0.00499	0.5541	mg/L	0.00499	0.90%
Al 308.215†	3057.8	2.284	mg/L	0.0075	2.284	mg/L	0.0075	0.33%
As 188.979†	3341.9	2.139	mg/L	0.0251	2.139	mg/L	0.0251	1.17%
B 249.677†	88.2	0.01259	mg/L	0.002675	0.01259	mg/L	0.002675	21.24%
Ba 233.527†	16160.4	2.191	mg/L	0.0093	2.191	mg/L	0.0093	0.43%
Be 313.042†	394575.6	0.5343	mg/L	0.00034	0.5343	mg/L	0.00034	0.06%
Ca 317.933†	282774.7	23.10	mg/L	0.123	23.10	mg/L	0.123	0.53%
Cd 228.802†	16418.3	0.5232	mg/L	0.00440	0.5232	mg/L	0.00440	0.84%
Co 228.616†	18793.4	0.5205	mg/L	0.00520	0.5205	mg/L	0.00520	1.00%
Cr 267.716†	4734.7	0.5405	mg/L	0.00260	0.5405	mg/L	0.00260	0.48%
Cu 324.752†	112586.4	0.5246	mg/L	0.00399	0.5246	mg/L	0.00399	0.76%
Fe 273.955†	4132.4	2.502	mg/L	0.0119	2.502	mg/L	0.0119	0.48%
K 766.490†	20763.9	12.49	mg/L	0.020	12.49	mg/L	0.020	0.16%
Mg 279.077†	21559.5	13.49	mg/L	0.073	13.49	mg/L	0.073	0.54%
Mn 257.610†	28478.9	0.5665	mg/L	0.00304	0.5665	mg/L	0.00304	0.54%
Mo 202.031†	55.2	0.00355	mg/L	0.000503	0.00355	mg/L	0.000503	14.18%
Na 589.592†	89603.7	16.12	mg/L	0.132	16.12	mg/L	0.132	0.82%
Na 330.237†	375.0	15.25	mg/L	0.201	15.25	mg/L	0.201	1.32%
Ni 231.604†	1881.0	0.5221	mg/L	0.00302	0.5221	mg/L	0.00302	0.58%
Pb 220.353†	16174.8	2.100	mg/L	0.0129	2.100	mg/L	0.0129	0.61%
Sb 206.836†	47.7	0.01383	mg/L	0.003088	0.01383	mg/L	0.003088	22.34%
Se 196.026†	2750.7	2.145	mg/L	0.0225	2.145	mg/L	0.0225	1.05%
Si 288.158†	4973.6	3.216	mg/L	0.0094	3.216	mg/L	0.0094	0.29%
Sn 189.927†	-58.0	-0.01082	mg/L	0.000741	-0.01082	mg/L	0.000741	6.85%
Sr 421.552†	335342.5	0.6254	mg/L	0.00184	0.6254	mg/L	0.00184	0.29%
Ti 334.903†	160.3	0.00733	mg/L	0.000633	0.00733	mg/L	0.000633	8.63%
Tl 190.801†	4319.6	2.138	mg/L	0.0239	2.138	mg/L	0.0239	1.12%
V 292.402†	86888.1	0.5268	mg/L	0.00497	0.5268	mg/L	0.00497	0.94%
Zn 206.200†	2523.6	0.6755	mg/L	0.00303	0.6755	mg/L	0.00303	0.45%

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Sequence No.: 34 **Autosampler Location: 361**
Sample ID: 20K0261-01 **Date Collected: 12/3/2020 8:22:00 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0261-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: 20K0261-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2197484.2	101.3	%	0.61				0.60%
ScR 361.383	204037.3	87.70	%	5.027				5.73%
Ag 328.068†	4582.9	0.02476	mg/L	0.000281	0.02476	mg/L	0.000281	1.13%
Al 308.215†	1519.2	1.138	mg/L	0.0184	1.138	mg/L	0.0184	1.61%
As 188.979†	3.8	0.00264	mg/L	0.002625	0.00264	mg/L	0.002625	99.53%
B 249.677†	86606.6	16.17	mg/L	0.044	16.17	mg/L	0.044	0.27%
Ba 233.527†	2544.7	0.3451	mg/L	0.01284	0.3451	mg/L	0.01284	3.72%
Be 313.042†	-11144.4	-0.01512	mg/L	0.000166	-0.01512	mg/L	0.000166	1.10%
Ca 317.933†	131860.4	10.78	mg/L	0.076	10.78	mg/L	0.076	0.70%
Cd 228.802†	-17.4	-0.00058	mg/L	0.000212	-0.00058	mg/L	0.000212	36.60%
Co 228.616†	4.6	0.00006	mg/L	0.000095	0.00006	mg/L	0.000095	154.24%
Cr 267.716†	-8.3	-0.00098	mg/L	0.001743	-0.00098	mg/L	0.001743	178.57%
Cu 324.752†	4117.2	0.01919	mg/L	0.000272	0.01919	mg/L	0.000272	1.42%
Fe 273.955†	617.2	0.3740	mg/L	0.01304	0.3740	mg/L	0.01304	3.49%
K 766.490†	169839.3	102.2	mg/L	0.29	102.2	mg/L	0.29	0.28%
Mg 279.077†	2094.0	1.310	mg/L	0.0326	1.310	mg/L	0.0326	2.49%
Mn 257.610†	700.6	0.01392	mg/L	0.000614	0.01392	mg/L	0.000614	4.41%
Mo 202.031†	28.5	0.00192	mg/L	0.000439	0.00192	mg/L	0.000439	22.88%
Na 589.592†	19973.4	3.593	mg/L	0.0256	3.593	mg/L	0.0256	0.71%
Na 330.237†	64.7	2.669	mg/L	0.9386	2.669	mg/L	0.9386	35.17%
Ni 231.604†	-22.3	-0.00619	mg/L	0.002752	-0.00619	mg/L	0.002752	44.46%
Pb 220.353†	-5.5	-0.00043	mg/L	0.000416	-0.00043	mg/L	0.000416	97.82%
Sb 206.836†	2.6	0.00104	mg/L	0.001776	0.00104	mg/L	0.001776	170.49%
Se 196.026†	10.4	0.00724	mg/L	0.005308	0.00724	mg/L	0.005308	73.35%
Si 288.158†	14432.3	9.289	mg/L	0.0503	9.289	mg/L	0.0503	0.54%
Sn 189.927†	-8.8	-0.00033	mg/L	0.001302	-0.00033	mg/L	0.001302	391.11%
Sr 421.552†	21801.7	0.04066	mg/L	0.000037	0.04066	mg/L	0.000037	0.09%
Ti 334.903†	77.7	0.00363	mg/L	0.000867	0.00363	mg/L	0.000867	23.90%
Tl 190.801†	-1.4	-0.00068	mg/L	0.001846	-0.00068	mg/L	0.001846	271.79%
V 292.402†	185.7	0.00112	mg/L	0.000021	0.00112	mg/L	0.000021	1.91%
Zn 206.200†	49.4	0.01323	mg/L	0.001113	0.01323	mg/L	0.001113	8.41%

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Sequence No.: 35 **Autosampler Location: 362**
Sample ID: 20K0183-01 **Date Collected: 12/3/2020 8:26:16 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 20K0183-01

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: 20K0183-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2014674.5	92.89	%	0.138				0.15%
ScR 361.383	209628.1	90.10	%	2.454				2.72%
Ag 328.068†	141.9	0.00038	mg/L	0.000217	0.00192	mg/L	0.001086	56.45%
Al 308.215†	120117.1	89.96	mg/L	0.582	449.8	mg/L	2.91	0.65%
As 188.979†	104.4	0.6239	mg/L	0.00741	3.120	mg/L	0.0371	1.19%
B 249.677†	244.4	0.03168	mg/L	0.003687	0.1584	mg/L	0.01843	11.64%
Ba 233.527†	3180.1	0.4142	mg/L	0.01216	2.071	mg/L	0.0608	2.94%
Be 313.042†	1791.7	0.00197	mg/L	0.000134	0.00984	mg/L	0.000669	6.80%
Ca 317.933†	336419.3	27.53	mg/L	0.200	137.6	mg/L	1.00	0.73%
Cd 228.802†	171.0	0.00530	mg/L	0.000178	0.02651	mg/L	0.000892	3.36%
Co 228.616†	2284.2	0.05218	mg/L	0.000320	0.2609	mg/L	0.00160	0.61%
Cr 267.716†	1127.5	0.1309	mg/L	0.00371	0.6545	mg/L	0.01854	2.83%
Cu 324.752†	39748.0	0.1890	mg/L	0.00062	0.9452	mg/L	0.00308	0.33%
Fe 273.955†	198168.1	120.1	mg/L	0.17	600.5	mg/L	0.83	0.14%
K 766.490†	14029.3	8.439	mg/L	0.0847	42.19	mg/L	0.423	1.00%
Mg 279.077†	40509.8	25.32	mg/L	0.709	126.6	mg/L	3.55	2.80%
Mn 257.610†	231174.6	4.596	mg/L	0.0308	22.98	mg/L	0.154	0.67%
Mo 202.031†	76.6	0.00491	mg/L	0.000126	0.02455	mg/L	0.000632	2.58%
Na 589.592†	17984.8	3.235	mg/L	0.0258	16.18	mg/L	0.129	0.80%
Na 330.237†	35.7	2.286	mg/L	0.1803	11.43	mg/L	0.901	7.89%
Ni 231.604†	344.7	0.09574	mg/L	0.005242	0.4787	mg/L	0.02621	5.48%
Pb 220.353†	333.9	0.06549	mg/L	0.000479	0.3275	mg/L	0.00240	0.73%
Sb 206.836†	149.3	0.06139	mg/L	0.001630	0.3070	mg/L	0.00815	2.66%
Se 196.026†	16.0	0.00652	mg/L	0.004122	0.03262	mg/L	0.020610	63.18%
Si 288.158†	9186.6	5.951	mg/L	0.1422	29.75	mg/L	0.711	2.39%
Sn 189.927†	-70.4	-0.01129	mg/L	0.001095	-0.05644	mg/L	0.005475	9.70%
Sr 421.552†	111078.2	0.2072	mg/L	0.00225	1.036	mg/L	0.0113	1.09%
Ti 334.903†	94247.6	4.963	mg/L	0.0217	24.81	mg/L	0.108	0.44%
Tl 190.801†	-30.8	-0.01660	mg/L	0.004210	-0.08301	mg/L	0.021051	25.36%
V 292.402†	43039.5	0.2604	mg/L	0.00092	1.302	mg/L	0.0046	0.35%
Zn 206.200†	1580.3	0.4229	mg/L	0.01228	2.115	mg/L	0.0614	2.90%

Sequence No.: 36
Sample ID: SEQ-IBL3

Autosampler Location: 363
Date Collected: 12/3/2020 8:30:18 PM
Data Type: Original

Dilution: 1X
Wash Time: 37

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-IBL3

Analyte	Back Pressure	Flow
All	230.0 kPa	0.65 L/min

Mean Data: SEQ-IBL3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1986256.6	91.58	%	0.241				0.26%
ScR 361.383	208407.3	89.58	%	0.495				0.55%
Ag 328.068†	144.5	0.00078	mg/L	0.000064	0.00078	mg/L	0.000064	8.25%
Al 308.215†	-82.8	-0.06204	mg/L	0.022668	-0.06204	mg/L	0.022668	36.54%
As 188.979†	4.5	0.00293	mg/L	0.003377	0.00293	mg/L	0.003377	115.09%
B 249.677†	74.5	0.01398	mg/L	0.001837	0.01398	mg/L	0.001837	13.14%
Ba 233.527†	-0.1	-0.00001	mg/L	0.001090	-0.00001	mg/L	0.001090	>999.9%
Be 313.042†	166.6	0.00022	mg/L	0.000007	0.00022	mg/L	0.000007	3.28%
Ca 317.933†	66.3	0.00537	mg/L	0.000389	0.00537	mg/L	0.000389	7.25%
Cd 228.802†	23.6	0.00075	mg/L	0.000131	0.00075	mg/L	0.000131	17.53%
Co 228.616†	21.2	0.00059	mg/L	0.000238	0.00059	mg/L	0.000238	40.44%
Cr 267.716†	-33.5	-0.00383	mg/L	0.000237	-0.00383	mg/L	0.000237	6.18%
Cu 324.752†	494.2	0.00230	mg/L	0.000229	0.00230	mg/L	0.000229	9.95%
Fe 273.955†	19.2	0.01161	mg/L	0.000993	0.01161	mg/L	0.000993	8.56%
K 766.490†	91.8	0.05524	mg/L	0.018195	0.05524	mg/L	0.018195	32.94%
Mg 279.077†	-53.2	-0.03331	mg/L	0.015294	-0.03331	mg/L	0.015294	45.92%
Mn 257.610†	32.8	0.00065	mg/L	0.000105	0.00065	mg/L	0.000105	16.17%
Mo 202.031†	8.7	0.00064	mg/L	0.000271	0.00064	mg/L	0.000271	42.38%
Na 589.592†	-68.2	-0.01227	mg/L	0.008007	-0.01227	mg/L	0.008007	65.23%
Na 330.237†	-21.4	-0.8843	mg/L	0.15379	-0.8843	mg/L	0.15379	17.39%
Ni 231.604†	-19.2	-0.00532	mg/L	0.001598	-0.00532	mg/L	0.001598	30.07%
Pb 220.353†	-4.8	-0.00065	mg/L	0.000575	-0.00065	mg/L	0.000575	88.26%
Sb 206.836†	21.9	0.00906	mg/L	0.001098	0.00906	mg/L	0.001098	12.12%
Se 196.026†	1.2	0.00094	mg/L	0.003677	0.00094	mg/L	0.003677	391.61%
Si 288.158†	-145.1	-0.09336	mg/L	0.005456	-0.09336	mg/L	0.005456	5.84%
Sn 189.927†	-3.2	-0.00084	mg/L	0.000870	-0.00084	mg/L	0.000870	103.82%
Sr 421.552†	149.9	0.00028	mg/L	0.000051	0.00028	mg/L	0.000051	18.39%
Ti 334.903†	6.3	0.00033	mg/L	0.002287	0.00033	mg/L	0.002287	693.39%
Tl 190.801†	-0.1	-0.00006	mg/L	0.001559	-0.00006	mg/L	0.001559	>999.9%
V 292.402†	249.1	0.00149	mg/L	0.000237	0.00149	mg/L	0.000237	15.88%
Zn 206.200†	3.4	0.00090	mg/L	0.000380	0.00090	mg/L	0.000380	42.21%

Sequence No.: 37
Sample ID: SEQ-CCV8
Autosampler Location: 7
Date Collected: 12/3/2020 8:34:34 PM
Data Type: Original
Dilution: 1X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV8

Analyte	Back Pressure	Flow
All	231.0 kPa	0.65 L/min

Mean Data: SEQ-CCV8

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2002778.0	92.34	%	0.627				0.68%
ScR 361.383	208168.4	89.47	%	0.069				0.08%
Ag 328.068†	190106.6	1.027	mg/L	0.0009	1.027	mg/L	0.0009	0.09%
Al 308.215†	2743.6	2.022	mg/L	0.0084	2.022	mg/L	0.0084	0.42%
As 188.979†	3023.6	2.054	mg/L	0.0054	2.054	mg/L	0.0054	0.26%
B 249.677†	5885.0	1.095	mg/L	0.0069	1.095	mg/L	0.0069	0.63%
Ba 233.527†	7716.9	1.045	mg/L	0.0034	1.045	mg/L	0.0034	0.33%
Be 313.042†	770166.7	1.043	mg/L	0.0039	1.043	mg/L	0.0039	0.37%
Ca 317.933†	24218.2	1.903	mg/L	0.0056	1.903	mg/L	0.0056	0.30%
Cd 228.802†	31551.6	1.015	mg/L	0.0064	1.015	mg/L	0.0064	0.63%
Co 228.616†	37831.0	1.047	mg/L	0.0051	1.047	mg/L	0.0051	0.49%
Cr 267.716†	9201.0	1.051	mg/L	0.0038	1.051	mg/L	0.0038	0.36%
Cu 324.752†	212399.6	0.9891	mg/L	0.00143	0.9891	mg/L	0.00143	0.14%
Fe 273.955†	3384.4	2.047	mg/L	0.0032	2.047	mg/L	0.0032	0.15%
K 766.490†	34756.4	20.91	mg/L	0.097	20.91	mg/L	0.097	0.47%
Mg 279.077†	3269.1	2.063	mg/L	0.0157	2.063	mg/L	0.0157	0.76%
Mn 257.610†	50977.5	1.014	mg/L	0.0063	1.014	mg/L	0.0063	0.62%
Mo 202.031†	14807.2	1.089	mg/L	0.0029	1.089	mg/L	0.0029	0.26%
Na 589.592†	298346.2	53.67	mg/L	0.347	53.67	mg/L	0.347	0.65%
Na 330.237†	1285.9	52.98	mg/L	0.518	52.98	mg/L	0.518	0.98%
Ni 231.604†	3703.0	1.030	mg/L	0.0030	1.030	mg/L	0.0030	0.29%
Pb 220.353†	16102.3	2.091	mg/L	0.0037	2.091	mg/L	0.0037	0.18%
Sb 206.836†	5701.8	2.338	mg/L	0.0047	2.338	mg/L	0.0047	0.20%
Se 196.026†	2694.1	2.102	mg/L	0.0117	2.102	mg/L	0.0117	0.56%
Si 288.158†	3445.4	2.223	mg/L	0.0066	2.223	mg/L	0.0066	0.30%
Sn 189.927†	4330.9	1.133	mg/L	0.0058	1.133	mg/L	0.0058	0.51%
Sr 421.552†	576343.8	1.075	mg/L	0.0064	1.075	mg/L	0.0064	0.59%
Ti 334.903†	20915.0	1.100	mg/L	0.0030	1.100	mg/L	0.0030	0.27%
Tl 190.801†	4181.6	2.067	mg/L	0.0015	2.067	mg/L	0.0015	0.07%
V 292.402†	166046.1	1.007	mg/L	0.0027	1.007	mg/L	0.0027	0.27%
Zn 206.200†	3975.8	1.064	mg/L	0.0067	1.064	mg/L	0.0067	0.63%

Sequence No.: 38
Sample ID: SEQ-CCB8
Dilution: 1X
Wash Time: 120

Autosampler Location: 1
Date Collected: 12/3/2020 8:40:02 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB8

Analyte	Back Pressure	Flow
All	232.0 kPa	0.65 L/min

Mean Data: SEQ-CCB8

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2012163.8	92.78	%	0.242				0.26%
ScR 361.383	211883.6	91.07	%	0.424				0.47%
Ag 328.068†	121.1	0.00065	mg/L	0.000184	0.00065	mg/L	0.000184	28.08%
Al 308.215†	-102.7	-0.07700	mg/L	0.007223	-0.07700	mg/L	0.007223	9.38%
As 188.979†	4.5	0.00286	mg/L	0.002329	0.00286	mg/L	0.002329	81.46%
B 249.677†	5.2	0.00102	mg/L	0.000376	0.00102	mg/L	0.000376	36.82%
Ba 233.527†	0.4	0.00006	mg/L	0.000577	0.00006	mg/L	0.000577	>999.9%
Be 313.042†	199.0	0.00027	mg/L	0.000020	0.00027	mg/L	0.000020	7.66%
Ca 317.933†	57.6	0.00466	mg/L	0.000821	0.00466	mg/L	0.000821	17.64%
Cd 228.802†	18.7	0.00059	mg/L	0.000237	0.00059	mg/L	0.000237	40.17%
Co 228.616†	17.3	0.00048	mg/L	0.000036	0.00048	mg/L	0.000036	7.47%
Cr 267.716†	-36.5	-0.00417	mg/L	0.001155	-0.00417	mg/L	0.001155	27.67%
Cu 324.752†	498.3	0.00232	mg/L	0.000081	0.00232	mg/L	0.000081	3.50%
Fe 273.955†	4.5	0.00271	mg/L	0.000623	0.00271	mg/L	0.000623	23.04%
K 766.490†	13.3	0.00798	mg/L	0.016681	0.00798	mg/L	0.016681	208.94%
Mg 279.077†	-71.9	-0.04493	mg/L	0.008947	-0.04493	mg/L	0.008947	19.91%
Mn 257.610†	27.6	0.00055	mg/L	0.000121	0.00055	mg/L	0.000121	22.11%
Mo 202.031†	51.7	0.00380	mg/L	0.001083	0.00380	mg/L	0.001083	28.50%
Na 589.592†	-95.2	-0.01712	mg/L	0.005028	-0.01712	mg/L	0.005028	29.36%
Na 330.237†	-28.7	-1.188	mg/L	0.5628	-1.188	mg/L	0.5628	47.36%
Ni 231.604†	-21.7	-0.00601	mg/L	0.000661	-0.00601	mg/L	0.000661	11.01%
Pb 220.353†	-4.5	-0.00061	mg/L	0.000528	-0.00061	mg/L	0.000528	85.92%
Sb 206.836†	28.4	0.01170	mg/L	0.000698	0.01170	mg/L	0.000698	5.97%
Se 196.026†	2.7	0.00214	mg/L	0.005737	0.00214	mg/L	0.005737	268.31%
Si 288.158†	-138.6	-0.08924	mg/L	0.001029	-0.08924	mg/L	0.001029	1.15%
Sn 189.927†	-4.1	-0.00107	mg/L	0.000913	-0.00107	mg/L	0.000913	85.46%
Sr 421.552†	120.5	0.00022	mg/L	0.000013	0.00022	mg/L	0.000013	5.91%
Ti 334.903†	1.7	0.00009	mg/L	0.000272	0.00009	mg/L	0.000272	313.86%
Tl 190.801†	-0.4	-0.00021	mg/L	0.001712	-0.00021	mg/L	0.001712	800.36%
V 292.402†	305.3	0.00183	mg/L	0.000018	0.00183	mg/L	0.000018	0.96%
Zn 206.200†	4.1	0.00109	mg/L	0.000993	0.00109	mg/L	0.000993	91.19%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Instrument ID: ICP2
Control Limt: +/- 10.00%

SDG: 20K0145
Project: ICS-Former NW Cooperage
Calibration: DK00045
Sequence: SIK0278

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SIK0278-ICV1	Lead	2.0000	2.04	102	mg/L	EPA 6010C
SIK0278-CCV1	Lead	2.0000	2.02	101	mg/L	EPA 6010C
SIK0278-CCV2	Lead	2.0000	2.04	102	mg/L	EPA 6010C
SIK0278-CCV3	Lead	2.0000	2.02	101	mg/L	EPA 6010C
SIK0278-CCV4	Lead	2.0000	2.05	103	mg/L	EPA 6010C
SIK0278-CCV5	Lead	2.0000	2.09	104	mg/L	EPA 6010C
SIK0278-CCV6	Lead	2.0000	2.07	103	mg/L	EPA 6010C
SIK0278-CCV7	Lead	2.0000	2.01	100	mg/L	EPA 6010C

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: DL00015
Control Limt: +/- 10.00%
Sequence: SIL0061

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SIL0061-ICV1	Lead	2.0000	2.00	100	mg/L	EPA 6010C
SIL0061-CCV1	Lead	2.0000	1.99	99.4	mg/L	EPA 6010C
SIL0061-CCV2	Lead	2.0000	1.91	95.6	mg/L	EPA 6010C
SIL0061-CCV3	Lead	2.0000	1.96	97.9	mg/L	EPA 6010C
SIL0061-CCV4	Lead	2.0000	2.23	112	mg/L	EPA 6010C
SIL0061-CCV5	Lead	2.0000	2.06	103	mg/L	EPA 6010C
SIL0061-CCV6	Lead	2.0000	2.08	104	mg/L	EPA 6010C
SIL0061-CCV7	Lead	2.0000	2.07	103	mg/L	EPA 6010C
SIL0061-CCV8	Lead	2.0000	2.09	105	mg/L	EPA 6010C

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: DK00045
Sequence: SIK0278
Date Analyzed: 11/18/20 14:13

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SIK0278-ICB1	Lead	-0.0006	0.0024	0.0200	mg/L	
SIK0278-CCB1	Lead	-0.00007	0.0024	0.0200	mg/L	
SIK0278-CCB2	Lead	0.0026	0.0024	0.0200	mg/L	
SIK0278-CCB3	Lead	0.0050	0.0024	0.0200	mg/L	
SIK0278-CCB4	Lead	0.0069	0.0024	0.0200	mg/L	
SIK0278-CCB5	Lead	0.0071	0.0024	0.0200	mg/L	
SIK0278-CCB6	Lead	0.0082	0.0024	0.0200	mg/L	
SIK0278-CCB7	Lead	0.0083	0.0024	0.0200	mg/L	

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INSTRUMENT BLANKS
EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Instrument ID: ICP2 Calibration: DL00015

Sequence: SIL0061 Date Analyzed: 12/03/20 14:26

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SIL0061-ICB1	Lead	-0.0005	0.0024	0.0200	mg/L	
SIL0061-CCB1	Lead	-0.0003	0.0024	0.0200	mg/L	
SIL0061-IBL1	Lead	-0.00004	0.0024	0.0200	mg/L	
SIL0061-CCB2	Lead	0.0004	0.0024	0.0200	mg/L	
SIL0061-CCB3	Lead	-0.0012	0.0024	0.0200	mg/L	
SIL0061-IBL2	Lead	-0.0006	0.0024	0.0200	mg/L	
SIL0061-CCB4	Lead	-0.0010	0.0024	0.0200	mg/L	
SIL0061-CCB5	Lead	-0.0005	0.0024	0.0200	mg/L	
SIL0061-CCB6	Lead	-0.0017	0.0024	0.0200	mg/L	
SIL0061-CCB7	Lead	-0.0003	0.0024	0.0200	mg/L	
SIL0061-IBL3	Lead	-0.0007	0.0024	0.0200	mg/L	
SIL0061-CCB8	Lead	-0.0006	0.0024	0.0200	mg/L	

Analytical Resources, Incorporated
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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIK0278
Instrument: ICP2
Calibration: DK00045

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SIK0278-CAL1	I2201118A-001	NA	11/18/20 13:51
CAL 1 - LOW CHECK	SIK0278-CAL2	I2201118A-002	NA	11/18/20 13:55
CAL 2	SIK0278-CAL3	I2201118A-003	NA	11/18/20 13:57
CAL 3	SIK0278-CAL4	I2201118A-004	NA	11/18/20 14:00
CAL 4	SIK0278-CAL5	I2201118A-005	NA	11/18/20 14:03
Initial Cal Check	SIK0278-ICV1	I2201118A-006	NA	11/18/20 14:08
Initial Cal Blank	SIK0278-ICB1	I2201118A-007	NA	11/18/20 14:13
Instrument RL Check	SIK0278-CRL1	I2201118A-008	NA	11/18/20 14:17
Interference Check A	SIK0278-IFA1	I2201118A-009	NA	11/18/20 14:21
Interference Check B	SIK0278-IFB1	I2201118A-010	NA	11/18/20 14:26
Calibration Check	SIK0278-CCV1	I2201118A-011	NA	11/18/20 14:33
Calibration Blank	SIK0278-CCB1	I2201118A-012	NA	11/18/20 14:38
Blank	BIK0408-BLK1	I2201118A-016	Solid	11/18/20 15:02
LCS	BIK0408-BS1	I2201118A-017	Solid	11/18/20 15:06
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0175-01	I2201118A-018	Solid	11/18/20 15:11
ZZZZZ	20K0196-01	I2201118A-019	Solid	11/18/20 15:15
ZZZZZ	20K0196-01	I2201118A-019	Solid	11/18/20 15:15
ZZZZZ	20K0196-01	I2201118A-019	Solid	11/18/20 15:15
ZZZZZ	20K0196-01	I2201118A-019	Solid	11/18/20 15:15
ZZZZZ	20K0196-01	I2201118A-019	Solid	11/18/20 15:15

Analytical Resources, Incorporated
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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Sequence: SIK0278
SDG: 20K0145
Project: ICS-Former NW Cooperage
Instrument: ICP2
Calibration: DK00045

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0196-01	I2201118A-019	Solid	11/18/20 15:15
ZZZZZ	20K0196-01	I2201118A-019	Solid	11/18/20 15:15
ZZZZZ	20K0135-01	I2201118A-020	Solid	11/18/20 15:20
ZZZZZ	20K0135-01	I2201118A-020	Solid	11/18/20 15:20
ZZZZZ	20K0135-01	I2201118A-020	Solid	11/18/20 15:20
ZZZZZ	20K0135-01	I2201118A-020	Solid	11/18/20 15:20
ZZZZZ	20K0135-01	I2201118A-020	Solid	11/18/20 15:20
ZZZZZ	20K0135-01	I2201118A-020	Solid	11/18/20 15:20
ZZZZZ	20K0135-02	I2201118A-021	Solid	11/18/20 15:24
ZZZZZ	20K0135-02	I2201118A-021	Solid	11/18/20 15:24
ZZZZZ	20K0135-02	I2201118A-021	Solid	11/18/20 15:24
ZZZZZ	20K0135-02	I2201118A-021	Solid	11/18/20 15:24
ZZZZZ	20K0135-02	I2201118A-021	Solid	11/18/20 15:24
ZZZZZ	20K0135-02	I2201118A-021	Solid	11/18/20 15:24
ZZZZZ	20K0135-03	I2201118A-022	Solid	11/18/20 15:28
ZZZZZ	20K0135-03	I2201118A-022	Solid	11/18/20 15:28
ZZZZZ	20K0135-03	I2201118A-022	Solid	11/18/20 15:28
ZZZZZ	20K0135-03	I2201118A-022	Solid	11/18/20 15:28
ZZZZZ	20K0135-03	I2201118A-022	Solid	11/18/20 15:28
ZZZZZ	20K0135-03	I2201118A-022	Solid	11/18/20 15:28
Calibration Check	SIK0278-CCV2	I2201118A-023	NA	11/18/20 15:35
Calibration Blank	SIK0278-CCB2	I2201118A-024	NA	11/18/20 15:40
ZZZZZ	20K0215-01	I2201118A-027	Solid	11/18/20 16:04
ZZZZZ	20K0215-01	I2201118A-027	Solid	11/18/20 16:04
ZZZZZ	20K0215-01	I2201118A-027	Solid	11/18/20 16:04
ZZZZZ	20K0215-01	I2201118A-027	Solid	11/18/20 16:04
ZZZZZ	20K0215-01	I2201118A-027	Solid	11/18/20 16:04
ZZZZZ	20K0215-01	I2201118A-027	Solid	11/18/20 16:04
ZZZZZ	20K0215-01	I2201118A-027	Solid	11/18/20 16:04
ZZZZZ	20K0196-01RE1	I2201118A-029	Solid	11/18/20 16:13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Sequence: SIK0278
SDG: 20K0145
Project: ICS-Former NW Cooperage
Instrument: ICP2
Calibration: DK00045

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SIK0278-CCV3	I2201118A-034	NA	11/18/20 16:39
Calibration Blank	SIK0278-CCB3	I2201118A-035	NA	11/18/20 16:45
ZZZZZ	20K0196-01	I2201118A-038	Solid	11/18/20 17:02
ZZZZZ	20K0196-01	I2201118A-038	Solid	11/18/20 17:02
ZZZZZ	20K0196-01	I2201118A-038	Solid	11/18/20 17:02
ZZZZZ	20K0196-01	I2201118A-038	Solid	11/18/20 17:02
ZZZZZ	20K0196-01	I2201118A-038	Solid	11/18/20 17:02
ZZZZZ	20K0196-01	I2201118A-038	Solid	11/18/20 17:02
ZZZZZ	20K0196-01	I2201118A-038	Solid	11/18/20 17:02
ZZZZZ	20K0209-01	I2201118A-039	Solid	11/18/20 17:07
ZZZZZ	20K0209-01	I2201118A-039	Solid	11/18/20 17:07
ZZZZZ	20K0209-01	I2201118A-039	Solid	11/18/20 17:07
ZZZZZ	20K0209-01	I2201118A-039	Solid	11/18/20 17:07
ZZZZZ	20K0209-01	I2201118A-039	Solid	11/18/20 17:07
ZZZZZ	20K0210-01	I2201118A-040	Solid	11/18/20 17:11
ZZZZZ	20K0210-01	I2201118A-040	Solid	11/18/20 17:11
ZZZZZ	20K0210-01	I2201118A-040	Solid	11/18/20 17:11
ZZZZZ	20K0210-01	I2201118A-040	Solid	11/18/20 17:11
ZZZZZ	20K0210-01	I2201118A-040	Solid	11/18/20 17:11
ZZZZZ	20K0211-01	I2201118A-041	Solid	11/18/20 17:16
ZZZZZ	20K0211-01	I2201118A-041	Solid	11/18/20 17:16
ZZZZZ	20K0211-01	I2201118A-041	Solid	11/18/20 17:16
ZZZZZ	20K0211-01	I2201118A-041	Solid	11/18/20 17:16
ZZZZZ	20K0211-01	I2201118A-041	Solid	11/18/20 17:16
ZZZZZ	20K0212-01	I2201118A-043	Solid	11/18/20 17:25
ZZZZZ	20K0212-01	I2201118A-043	Solid	11/18/20 17:25
ZZZZZ	20K0212-01	I2201118A-043	Solid	11/18/20 17:25
ZZZZZ	20K0212-01	I2201118A-043	Solid	11/18/20 17:25
ZZZZZ	20K0212-01	I2201118A-043	Solid	11/18/20 17:25
Calibration Check	SIK0278-CCV4	I2201118A-046	NA	11/18/20 17:40

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIK0278
Instrument: ICP2
Calibration: DK00045

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SIK0278-CCB4	I2201118A-047	NA	11/18/20 17:45
ZZZZZ	20K0126-02	I2201118A-052	Solid	11/18/20 18:07
ZZZZZ	20K0126-07	I2201118A-053	Solid	11/18/20 18:11
ZZZZZ	20K0126-01	I2201118A-055	Solid	11/18/20 18:19
ZZZZZ	20K0126-01	I2201118A-055	Solid	11/18/20 18:19
ZZZZZ	20K0126-01	I2201118A-055	Solid	11/18/20 18:19
ZZZZZ	20K0126-01	I2201118A-055	Solid	11/18/20 18:19
ZZZZZ	20K0126-01	I2201118A-055	Solid	11/18/20 18:19
ZZZZZ	20K0126-01	I2201118A-055	Solid	11/18/20 18:19
ZZZZZ	20K0126-01	I2201118A-055	Solid	11/18/20 18:19
ZZZZZ	20K0126-01	I2201118A-055	Solid	11/18/20 18:19
ZZZZZ	20K0126-01	I2201118A-055	Solid	11/18/20 18:19
ZZZZZ	20K0126-01	I2201118A-055	Solid	11/18/20 18:19
Calibration Check	SIK0278-CCV5	I2201118A-058	NA	11/18/20 18:34
Calibration Blank	SIK0278-CCB5	I2201118A-059	NA	11/18/20 18:39
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0201-07	I2201118A-061	Solid	11/18/20 18:48
ZZZZZ	20K0126-11	I2201118A-063	Solid	11/18/20 18:58
ZZZZZ	20K0126-12	I2201118A-064	Solid	11/18/20 19:02
ZZZZZ	20K0126-16	I2201118A-065	Solid	11/18/20 19:06
ZZZZZ	20K0126-18	I2201118A-066	Solid	11/18/20 19:10
ZZZZZ	20K0126-22	I2201118A-067	Solid	11/18/20 19:15
ZZZZZ	20K0126-24	I2201118A-068	Solid	11/18/20 19:19
Calibration Check	SIK0278-CCV6	I2201118A-069	NA	11/18/20 19:25

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIK0278
Instrument: ICP2
Calibration: DK00045

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SIK0278-CCB6	I2201118A-070	NA	11/18/20 19:30
PP1-5	20K0145-02	I2201118A-071	Solid	11/18/20 19:34
PP1-7.5	20K0145-03	I2201118A-072	Solid	11/18/20 19:38
PP2-5	20K0145-07	I2201118A-073	Solid	11/18/20 19:43
PP2-7.5	20K0145-08	I2201118A-074	Solid	11/18/20 19:47
PP5-2	20K0145-11	I2201118A-075	Solid	11/18/20 19:51
PP5-8	20K0145-13	I2201118A-076	Solid	11/18/20 19:56
P8-10S-1	20K0145-15	I2201118A-077	Solid	11/18/20 20:00
P8-10S-5	20K0145-17	I2201118A-078	Solid	11/18/20 20:04
Calibration Check	SIK0278-CCV7	I2201118A-079	NA	11/18/20 20:10
Calibration Blank	SIK0278-CCB7	I2201118A-080	NA	11/18/20 20:15

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Sequence: SIL0061
SDG: 20K0145
Project: ICS-Former NW Cooperage
Instrument: ICP2
Calibration: DL00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SIL0061-CAL1	I2201203A-001	NA	12/03/20 14:04
CAL 1 - LOW CHECK	SIL0061-CAL2	I2201203A-002	NA	12/03/20 14:08
CAL 2	SIL0061-CAL3	I2201203A-003	NA	12/03/20 14:10
CAL 3	SIL0061-CAL4	I2201203A-004	NA	12/03/20 14:13
CAL 4	SIL0061-CAL5	I2201203A-005	NA	12/03/20 14:15
Initial Cal Check	SIL0061-ICV1	I2201203A-006	NA	12/03/20 14:21
Initial Cal Blank	SIL0061-ICB1	I2201203A-007	NA	12/03/20 14:26
Instrument RL Check	SIL0061-CRL1	I2201203A-008	NA	12/03/20 14:31
Interference Check A	SIL0061-IFA1	I2201203A-009	NA	12/03/20 14:35
Interference Check B	SIL0061-IFB1	I2201203A-010	NA	12/03/20 14:39
Calibration Check	SIL0061-CCV1	I2201203A-011	NA	12/03/20 14:46
Calibration Blank	SIL0061-CCB1	I2201203A-012	NA	12/03/20 14:52
RINSE	SIL0061-IBL1	I2201203A-017	NA	12/03/20 15:23
ZZZZZ	20K0126-01	I2201203A-019	Solid	12/03/20 15:31
Calibration Check	SIL0061-CCV2	I2201203A-023	NA	12/03/20 15:48
Calibration Blank	SIL0061-CCB2	I2201203A-024	NA	12/03/20 15:53
ZZZZZ	BIK0645-BLK1	I2201203A-025	Water	12/03/20 15:58
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-04	I2201203A-026	Solid	12/03/20 16:02
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SIL0061
Instrument: ICP2
Calibration: DL00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07
ZZZZZ	20K0286-05	I2201203A-027	Solid	12/03/20 16:07
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0287-01	I2201203A-029	Solid	12/03/20 16:16
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	20K0222-01	I2201203A-032	Solid	12/03/20 16:29
ZZZZZ	BIK0645-BS1	I2201203A-034	Water	12/03/20 16:37
Calibration Check	SIL0061-CCV3	I2201203A-035	NA	12/03/20 16:42
Calibration Blank	SIL0061-CCB3	I2201203A-036	NA	12/03/20 16:47
ZZZZZ	20K0326-01	I2201203A-039	Water	12/03/20 17:01
ZZZZZ	20K0327-01	I2201203A-041	Solid	12/03/20 17:10
ZZZZZ	20K0327-01	I2201203A-041	Solid	12/03/20 17:10
ZZZZZ	20K0327-01	I2201203A-041	Solid	12/03/20 17:10
ZZZZZ	20K0327-01	I2201203A-041	Solid	12/03/20 17:10
ZZZZZ	20K0328-01	I2201203A-042	Solid	12/03/20 17:14
ZZZZZ	20K0328-01	I2201203A-042	Solid	12/03/20 17:14

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Sequence: SIL0061

SDG: 20K0145
Project: ICS-Former NW Cooperage
Instrument: ICP2
Calibration: DL00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0328-01	I2201203A-042	Solid	12/03/20 17:14
ZZZZZ	20K0328-01	I2201203A-042	Solid	12/03/20 17:14
ZZZZZ	20K0335-01	I2201203A-043	Water	12/03/20 17:19
ZZZZZ	20K0411-01	I2201203A-044	Water	12/03/20 17:24
Instrument Blank	SIL0061-IBL2	I2201203A-045	NA	12/03/20 17:29
Calibration Check	SIL0061-CCV4	I2201203A-047	NA	12/03/20 17:37
Calibration Blank	SIL0061-CCB4	I2201203A-048	NA	12/03/20 17:43
Calibration Check	SIL0061-CCV5	I2201203A-052	NA	12/03/20 17:56
Calibration Blank	SIL0061-CCB5	I2201203A-053	NA	12/03/20 18:01
ZZZZZ	20K0183-02	I2201203A-055	Solid	12/03/20 18:10
ZZZZZ	20K0183-02	I2201203A-055	Solid	12/03/20 18:10
ZZZZZ	20K0183-03	I2201203A-056	Solid	12/03/20 18:14
ZZZZZ	20K0183-03	I2201203A-056	Solid	12/03/20 18:14
ZZZZZ	20K0183-04	I2201203A-057	Solid	12/03/20 18:18
ZZZZZ	20K0183-04	I2201203A-057	Solid	12/03/20 18:18
ZZZZZ	20K0199-01	I2201203A-058	Solid	12/03/20 18:22
ZZZZZ	20K0199-01	I2201203A-058	Solid	12/03/20 18:22
ZZZZZ	20K0199-02	I2201203A-059	Solid	12/03/20 18:27
ZZZZZ	20K0199-02	I2201203A-059	Solid	12/03/20 18:27
ZZZZZ	20K0199-03	I2201203A-060	Solid	12/03/20 18:32
ZZZZZ	20K0199-03	I2201203A-060	Solid	12/03/20 18:32
ZZZZZ	20K0200-01	I2201203A-061	Solid	12/03/20 18:36
ZZZZZ	20K0200-01	I2201203A-061	Solid	12/03/20 18:36
ZZZZZ	20K0200-02	I2201203A-062	Solid	12/03/20 18:41
ZZZZZ	20K0200-02	I2201203A-062	Solid	12/03/20 18:41
ZZZZZ	20K0200-03	I2201203A-063	Solid	12/03/20 18:45
ZZZZZ	20K0200-03	I2201203A-063	Solid	12/03/20 18:45
Calibration Check	SIL0061-CCV6	I2201203A-064	NA	12/03/20 18:50
Calibration Blank	SIL0061-CCB6	I2201203A-065	NA	12/03/20 18:55
ZZZZZ	20K0394-02	I2201203A-067	Solid	12/03/20 19:04

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Sequence: SIL0061
SDG: 20K0145
Project: ICS-Former NW Cooperage
Instrument: ICP2
Calibration: DL00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0394-02	I2201203A-067	Solid	12/03/20 19:04
ZZZZZ	20K0394-02	I2201203A-067	Solid	12/03/20 19:04
ZZZZZ	20K0394-02	I2201203A-067	Solid	12/03/20 19:04
ZZZZZ	20K0394-02	I2201203A-067	Solid	12/03/20 19:04
ZZZZZ	20K0394-02	I2201203A-067	Solid	12/03/20 19:04
ZZZZZ	20K0394-02	I2201203A-067	Solid	12/03/20 19:04
ZZZZZ	20K0394-03	I2201203A-068	Solid	12/03/20 19:08
ZZZZZ	20K0394-03	I2201203A-068	Solid	12/03/20 19:08
ZZZZZ	20K0394-03	I2201203A-068	Solid	12/03/20 19:08
ZZZZZ	20K0394-03	I2201203A-068	Solid	12/03/20 19:08
ZZZZZ	20K0394-03	I2201203A-068	Solid	12/03/20 19:08
ZZZZZ	20K0394-03	I2201203A-068	Solid	12/03/20 19:08
ZZZZZ	20K0394-03	I2201203A-068	Solid	12/03/20 19:08
ZZZZZ	20K0408-01	I2201203A-069	Solid	12/03/20 19:13
ZZZZZ	20K0408-01	I2201203A-069	Solid	12/03/20 19:13
ZZZZZ	20K0408-01	I2201203A-069	Solid	12/03/20 19:13
ZZZZZ	20K0408-01	I2201203A-069	Solid	12/03/20 19:13
ZZZZZ	20K0408-01	I2201203A-069	Solid	12/03/20 19:13
ZZZZZ	20K0409-01	I2201203A-070	Solid	12/03/20 19:18
ZZZZZ	20K0409-01	I2201203A-070	Solid	12/03/20 19:18
ZZZZZ	20K0409-01	I2201203A-070	Solid	12/03/20 19:18
ZZZZZ	20K0409-01	I2201203A-070	Solid	12/03/20 19:18
ZZZZZ	20K0409-01	I2201203A-070	Solid	12/03/20 19:18
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Sequence: SIL0061
SDG: 20K0145
Project: ICS-Former NW Cooperage
Instrument: ICP2
Calibration: DL00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0394-01	I2201203A-072	Solid	12/03/20 19:27
ZZZZZ	20K0213-01	I2201203A-075	Solid	12/03/20 19:40
ZZZZZ	20K0213-01	I2201203A-075	Solid	12/03/20 19:40
ZZZZZ	20K0213-01	I2201203A-075	Solid	12/03/20 19:40
ZZZZZ	20K0213-01	I2201203A-075	Solid	12/03/20 19:40
ZZZZZ	20K0213-01	I2201203A-075	Solid	12/03/20 19:40
Calibration Check	SIL0061-CCV7	I2201203A-076	NA	12/03/20 19:44
Calibration Blank	SIL0061-CCB7	I2201203A-077	NA	12/03/20 19:50
ZZZZZ	20K0238-01	I2201203A-078	Solid	12/03/20 19:54
ZZZZZ	20K0238-01	I2201203A-078	Solid	12/03/20 19:54
ZZZZZ	20K0238-01	I2201203A-078	Solid	12/03/20 19:54
ZZZZZ	20K0238-01	I2201203A-078	Solid	12/03/20 19:54
ZZZZZ	20K0238-02	I2201203A-079	Solid	12/03/20 19:57
ZZZZZ	20K0238-02	I2201203A-079	Solid	12/03/20 19:57
ZZZZZ	20K0238-02	I2201203A-079	Solid	12/03/20 19:57
ZZZZZ	20K0238-02	I2201203A-079	Solid	12/03/20 19:57
ZZZZZ	20K0238-04	I2201203A-081	Solid	12/03/20 20:05
ZZZZZ	20K0238-04	I2201203A-081	Solid	12/03/20 20:05
ZZZZZ	20K0238-04	I2201203A-081	Solid	12/03/20 20:05
ZZZZZ	20K0238-04	I2201203A-081	Solid	12/03/20 20:05
ZZZZZ	20K0258-01	I2201203A-083	Water	12/03/20 20:13
ZZZZZ	20K0258-01	I2201203A-083	Water	12/03/20 20:13
ZZZZZ	20K0258-01	I2201203A-083	Water	12/03/20 20:13
ZZZZZ	20K0183-01	I2201203A-086	Solid	12/03/20 20:26
ZZZZZ	20K0183-01	I2201203A-086	Solid	12/03/20 20:26
Instrument Blank	SIL0061-IBL3	I2201203A-087	NA	12/03/20 20:30
Calibration Check	SIL0061-CCV8	I2201203A-088	NA	12/03/20 20:34
Calibration Blank	SIL0061-CCB8	I2201203A-089	NA	12/03/20 20:40

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Instrument ID: ICP2 Calibration: DK00045

Sequence: SIK0278 Standard ID: I010667

Lab Sample ID	Analyte	True	Found	%R	Units
SIK0278-IFA1	Lead	0	-0.0061		mg/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: DK00045
Sequence: SIK0278
Standard ID: I010667

Lab Sample ID	Analyte	True	Found	%R	Units
SIK0278-IFB1	Lead	1.0000	0.9808	98.1	mg/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: Analytical Resources, Inc.

SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Instrument ID: ICP2

Calibration: DL00015

Sequence: SIL0061

Standard ID: I010667

Lab Sample ID	Analyte	True	Found	%R	Units
SIL0061-IFA1	Lead	0	-0.0075		mg/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: Analytical Resources, Inc.

SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Instrument ID: ICP2

Calibration: DL00015

Sequence: SIL0061

Standard ID: I010667

Lab Sample ID	Analyte	True	Found	%R	Units
SIL0061-IFB1	Lead	1.0000	0.9962	99.6	mg/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTER-ELEMENT CORRECTION FACTORS

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Instrument: ICP2 IEC Date: 12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Sb
Aluminum				-0.248834		
Arsenic	188.98		0.024798			
Barium	233.53		0.008625	0.140186		
Cadmium	228.8					
Chromium	267.72			-0.035454	0.028625	
Copper	324.75			-0.043429	0.008126	
Lead	220.35	-0.29953		0.039965		
Manganese	257.61	0.007007		0.006282	0.003479	
Nickel	231.6					-1.022571
Selenium	196.03		0.081709			
Silver	328.07					
Zinc	206.2					

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTER-ELEMENT CORRECTION FACTORS

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument:	ICP2	IEC Date:	12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for: As	Ba	Be	Cd	Cr
Aluminum						
Arsenic	188.98					1.655524
Barium	233.53					
Cadmium	228.8	4.46437				
Chromium	267.72					
Copper	324.75					-0.035547
Lead	220.35					-2.014266
Manganese	257.61					
Nickel	231.6					
Selenium	196.03					
Silver	328.07					
Zinc	206.2					

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTER-ELEMENT CORRECTION FACTORS

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument:	ICP2	IEC Date:	12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Co	Cu	Pb	Mn	Mo
Aluminum						18.16733
Arsenic	188.98	-1.127911				3.610309
Barium	233.53	-0.124877				
Cadmium	228.8	0.156246				
Chromium	267.72	-0.170521			0.310897	
Copper	324.75	-0.206732				0.408373
Lead	220.35	-0.160377	1.479952			
Manganese	257.61			-0.21682		
Nickel	231.6	0.49217				
Selenium	196.03				0.813286	
Silver	328.07				0.095187	
Zinc	206.2			-0.042156		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTER-ELEMENT CORRECTION FACTORS

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument:	ICP2	IEC Date:	12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ni	K	Si	Ag	Tl
Aluminum						
Arsenic	188.98					
Barium	233.53	0.095217			0.67157	
Cadmium	228.8	-0.832508				
Chromium	267.72					
Copper	324.75					
Lead	220.35	-0.149057				
Manganese	257.61					0.12352
Nickel	231.6					
Selenium	196.03					
Silver	328.07					
Zinc	206.2					

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTER-ELEMENT CORRECTION FACTORS

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument:	ICP2	IEC Date:	12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Sn	Ti	V	Zn	
Aluminum			1.456667	11.60996		
Arsenic	188.98		-112.3948			
Barium	233.53			0.572325		
Cadmium	228.8			0.05035		
Chromium	267.72					
Copper	324.75		0.233423			
Lead	220.35					
Manganese	257.61			-0.021953		
Nickel	231.6					
Selenium	196.03					
Silver	328.07			-0.214248		
Zinc	206.2					

DETECTION LEVEL STANDARD
EPA 6010C

Laboratory: Analytical Resources, Inc.

SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Instrument ID: ICP2

Calibration: DK00045

Sequence: SIK0278

Lab Sample ID: SIK0278-CRL1

Analyte	True	Found	%R	Units	QC Limts
Lead	0.0200	0.0212	106	mg/L	50 - 150

* Values outside of QC limits

DETECTION LEVEL STANDARD
EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 20K0145
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: DL00015
Sequence: SIL0061
Lab Sample ID: SIL0061-CRL1

Analyte	True	Found	%R	Units	QC Limts
Lead	0.0200	0.0199	99.6	mg/L	50 - 150

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PP1-5 20K0145-02	11/05/20 12:50	11/07/20 11:00	11/16/20 11:07	10	180	11/18/20 19:34	13	180	
PP1-7.5 20K0145-03	11/05/20 12:55	11/07/20 11:00	11/16/20 11:07	10	180	11/18/20 19:38	13	180	
PP2-5 20K0145-07	11/05/20 11:35	11/07/20 11:00	11/16/20 11:07	10	180	11/18/20 19:43	13	180	
PP2-7.5 20K0145-08	11/05/20 11:40	11/07/20 11:00	11/16/20 11:07	10	180	11/18/20 19:47	13	180	
PP5-2 20K0145-11	11/05/20 10:00	11/07/20 11:00	11/16/20 11:07	11	180	11/18/20 19:51	13	180	
PP5-8 20K0145-13	11/05/20 10:10	11/07/20 11:00	11/16/20 11:07	11	180	11/18/20 19:56	13	180	
P8-10S-1 20K0145-15	11/06/20 08:20	11/07/20 11:00	11/16/20 11:07	10	180	11/18/20 20:00	12	180	
P8-10S-5 20K0145-17	11/06/20 08:30	11/07/20 11:00	11/16/20 11:07	10	180	11/18/20 20:04	12	180	

* Indicates hold time exceedance.

METHOD DETECTION
AND REPORTING LIMITS

EPA 6010C

Laboratory: Analytical Resources, Inc.

SDG: 20K0145

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix: Solid

Instrument: ICP2

Analyte	MDL	RL	Units
Lead	0.240	2.00	mg/kg

Analytical Resources, Incorporated
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	20K0145
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Water	Instrument:	ICP2

Analyte	MDL	RL	Units
Lead	0.0024	0.0200	mg/L

Analytical Resources, Incorporated
Analytical Chemists and Consultants

24 February 2021

Matt Dalton
Dalton, Olmsted & Fuglevand, Inc
6034 N Star Rd
Ferndale, WA 98248

RE: ICS-Former NW Cooperage

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
21A0361	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclosed Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

Amanda Volgardsen Johnson, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21A0361	Turn-around Requested: Normal	Date: 1/26/21	
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466	Page: 1 of 3	
Client Contact: Matt Dalton / Dave Cooper		No. of Coolers: 3	Cooler Temps: See CRF
Client Project Name: ICS/Former NW Cooperage			
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
P8-20N-1	1/25/2021	1540	soil	1-8oz 2-4oz	X	X	X	X								
P8-20N-2.5	1/25/2021	1545	soil	1-8oz 2-4oz											X	
P8-20N-5	1/25/2021	1550	soil	1-8oz 2-4oz	X	X	X	X								
P8-20N-7.5	1/25/2021	1555	soil	1-8oz 2-4oz											X	
P8-10NW-1	1/25/2021	1500	soil	1-8oz 2-4oz	X	X	X	X								
P8-10NW-2.5	1/25/2021	1505	soil	1-8oz 2-4oz											X	
P8-10NW-5	1/25/2021	1510	soil	1-8oz 2-4oz	X	X	X	X								
P8-10NW-7	1/25/2021	1515	soil	1-8oz 2-4oz											X	
P8-15SW-1	1/25/2021	1415	soil	1-8oz 2-4oz	X	X	X	X								
P8-15SW-2.5	1/25/2021	1420	soil	1-8oz 2-4oz											X	
P8-15SW-5	1/25/2021	1425	soil	1-8oz 2-4oz	X	X	X	X								
P8-15SW-7.5	1/25/2021	1430	soil	1-8oz 2-4oz											X	

Comments/Special Instructions	Relinquished by	Received by	Relinquished by	Received by
(1) Based on total metals	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: DG Cooper	Printed Name: Samantha Colch	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 1/26/21 1420	Date & Time: 1/26/21 1420	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21A0361	Turn-around Requested: Normal	Date: 1/26/21	
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466	Page: 2 of 3	
Client Contact: Matt Dalton / Dave Cooper		No. of Coolers: 3	Cooler Temps: See CRF
Client Project Name: ICS/Former NW Cooperage			
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
P8-10SE-1	1/25/2021	1300	soil	1-8oz 2-4oz	X	X	X	X								
P8-10SE-2.5	1/25/2021	1305	soil	1-8oz 2-4oz											X	
P8-10SE-5	1/25/2021	1310	soil	1-8oz 2-4oz	X	X	X	X								
P8-10SE-7.5	1/25/2021	1315	soil	1-8oz 2-4oz											X	
P8-10NE-1	1/25/2021	1215	soil	1-8oz 2-4oz	X	X	X	X								
P8-10NE-2.5	1/25/2021	1220	soil	1-8oz 2-4oz											X	
P8-10NE-5	1/25/2021	1225	soil	1-8oz 2-4oz	X	X	X	X								
P8-10NE-7.5	1/25/2021	1230	soil	1-8oz 2-4oz											X	
P8-7W-1	1/25/2021	1040	soil	1-8oz 2-4oz	X	X	X	X								
P8-7W-2.5	1/25/2021	1045	soil	1-8oz 2-4oz											X	
P8-7W-5	1/25/2021	1050	soil	1-8oz 2-4oz	X	X	X	X								
P8-7W-7.5	1/25/2021	1055	soil	1-8oz 2-4oz											X	

Comments/Special Instructions	Relinquished by	Received by	Relinquished by	Received by
(1) Based on total metals	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: DG Cooper	Printed Name: Samantha Colon	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 1/26/21 1420	Date & Time: 1/26/21 1420	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21A0361	Turn-around Requested: Normal	Date: 1/26/21	
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466	Page: 3 of 3	
Client Contact: Matt Dalton / Dave Cooper		No. of Coolers: 3	Cooler Temps: See CRF
Client Project Name: ICS/Former NW Cooperage			
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
P8-10E-1	1/25/2021	1130	soil	1-8oz 2-4oz	X	X	X	X								
P8-10E-2.5	1/25/2021	1135	soil	1-8oz 2-4oz											X	
P8-10E-5	1/26/2021	1140	soil	1-8oz 2-4oz	X	X	X	X								
P8-10E-7.5	1/27/2021	1145	soil	1-8oz 2-4oz											X	
P8-10N-1	1/25/2021	0925	soil	1-8oz 2-4oz	X	X	X	X								
P8-10N-2.5	1/25/2021	0930	soil	1-8oz 2-4oz											X	
P8-10N-5	1/25/2021	0935	soil	1-8oz 2-4oz	X	X	X	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) Based on total metals	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: D. Cooper	Printed Name: Samantha Colon	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 1/26/21 1420	Date & Time: 1/26/21 1420	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: DOF

Project Name: ICS - Former NW Cooperage

COC No(s): NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No: 21A0361

Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1420 — 2.9 5.8 3.8

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: DOO 5206

Cooler Accepted by: SC Date: 1/26/21 Time: 1420

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:

Was sufficient ice used (if appropriate)? NA YES NO

How were bottles sealed in plastic bags? Individually Grouped Not

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI NA

Were the sample(s) split by ARI? NA YES Date/Time: Equipment: Split by:

Samples Logged by: SC Date: 1/26/21 Time: 1527 Labels checked by: SC

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
P8-7W-8	P8-7W-7.5		
P8-10NW-7	P8-10NW 7.5		

Additional Notes, Discrepancies, & Resolutions:

By: SC Date: 1/26/21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale, WA 98248	Project Manager: Matt Dalton	02/24/2021 12:36

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
21A0361-01	P8-20N-1	Solid	01/25/21 15:40	01/26/21 14:20
21A0361-02	P8-20N-2.5	Solid	01/25/21 15:45	01/26/21 14:20
21A0361-03	P8-20N-5	Solid	01/25/21 15:50	01/26/21 14:20
21A0361-04	P8-20N-7.5	Solid	01/25/21 15:55	01/26/21 14:20
21A0361-05	P8-10NW-1	Solid	01/25/21 15:00	01/26/21 14:20
21A0361-06	P8-10NW-2.5	Solid	01/25/21 15:05	01/26/21 14:20
21A0361-07	P8-10NW-5	Solid	01/25/21 15:10	01/26/21 14:20
21A0361-08	P8-10NW-7	Solid	01/25/21 15:15	01/26/21 14:20
21A0361-09	P8-15SW-1	Solid	01/25/21 14:15	01/26/21 14:20
21A0361-10	P8-15SW-2.5	Solid	01/25/21 14:20	01/26/21 14:20
21A0361-11	P8-15SW-5	Solid	01/25/21 14:25	01/26/21 14:20
21A0361-12	P8-15SW-7.5	Solid	01/25/21 14:30	01/26/21 14:20
21A0361-13	P8-10SE-1	Solid	01/25/21 13:00	01/26/21 14:20
21A0361-14	P8-10SE-2.5	Solid	01/25/21 13:05	01/26/21 14:20
21A0361-15	P8-10SE-5	Solid	01/25/21 13:10	01/26/21 14:20
21A0361-16	P8-10SE-7.5	Solid	01/25/21 13:15	01/26/21 14:20
21A0361-17	P8-10NE-1	Solid	01/25/21 12:15	01/26/21 14:20
21A0361-18	P8-10NE-2.5	Solid	01/25/21 12:20	01/26/21 14:20
21A0361-19	P8-10NE-5	Solid	01/25/21 12:25	01/26/21 14:20
21A0361-20	P8-10NE-7.5	Solid	01/25/21 12:30	01/26/21 14:20
21A0361-21	P8-7W-1	Solid	01/25/21 10:40	01/26/21 14:20
21A0361-22	P8-7W-2.5	Solid	01/25/21 10:45	01/26/21 14:20
21A0361-23	P8-7W-5	Solid	01/25/21 10:50	01/26/21 14:20
21A0361-24	P8-7W-7.5	Solid	01/25/21 10:55	01/26/21 14:20
21A0361-25	P8-10E-1	Solid	01/25/21 11:30	01/26/21 14:20
21A0361-26	P8-10E-2.5	Solid	01/25/21 11:35	01/26/21 14:20
21A0361-27	P8-10E-5	Solid	01/25/21 11:40	01/26/21 14:20
21A0361-28	P8-10E-7.5	Solid	01/25/21 11:45	01/26/21 14:20
21A0361-29	P8-10N-1	Solid	01/25/21 09:25	01/26/21 14:20
21A0361-30	P8-10N-2.5	Solid	01/25/21 09:30	01/26/21 14:20
21A0361-31	P8-10N-5	Solid	01/25/21 09:35	01/26/21 14:20

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	24-Feb-2021 12:36

Case Narrative

Sample receipt

Samples as listed on the preceding page were received 26-Jan-2021 14:20 under ARI work order 21A0361. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements, with the exception of SJB0231-CCV1 which is outside of control limits low for the second Aroclor 1242. Data was reported from passing columns. No corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike/blank spike duplicate (BS/LCS/BSD/LCSD) percent recoveries and RPD were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

Total Hg - EPA Method 7470/7471

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike and matrix spike duplicate have natural concentrations that so much greater than the concentrations spiked that an accurate determination of spike recovery is not possible. The MS/MSD has been flagged with "HC" qualifiers. The results are advisory. No further corrective action was taken.

Total Lead - EPA Method 6010C

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	24-Feb-2021 12:36

Case Narrative

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike and matrix spike duplicate have natural concentrations that so much greater than the concentrations spiked that an accurate determination of spike recovery is not possible. The MS/MSD has been flagged with "HC" qualifiers. The results are advisory. No further corrective action was taken.

Case Narrative

Analytical Resources, Incorporated
Analytical Chemists and Consultants

QUALIFIERS AND NOTES

Qualifier	Definition
Y1	Raised reporting limit due to interference
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
J	Estimated concentration value detected below the reporting limit.
HC	The natural concentration of the spiked analyte is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
D1	Surrogate was not detected due to sample extract dilution
D	The reported value is from a dilution
*	Flagged value is not within established control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-20N-1

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	21A0361-01 A	SDG:	21A0361
Sampled:	01/25/21 15:40	Prepared:	02/05/21 12:05	File ID:	421B2266.D
% Solids:	82.99	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/23/21 08:46
Batch:	BJB0148	Sequence:	SJB0344	Initial/Final:	10.04 g Wet / 10 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	10	8590	D	281	600
RRO	Motor Oil Range Organics (C24-C38)	10	31200	D	359	1200

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	13.502	14.4	107	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2266.D

Date : 23-FEB-2021 08:46

Client ID:

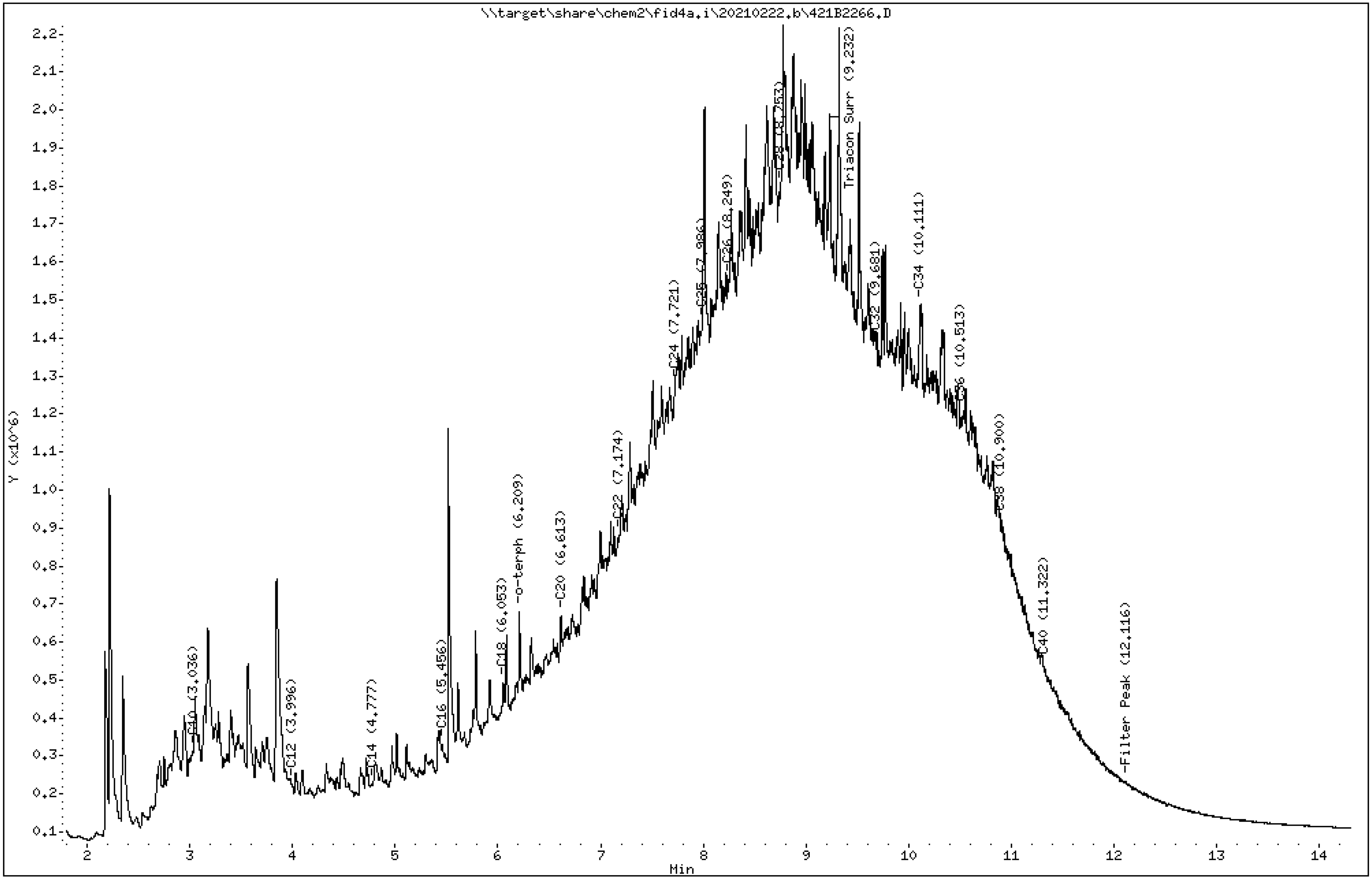
Instrument: fid4a.i

Sample Info: 21A0361-01,10

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2266.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-01
Client ID:
Injection: 23-FEB-2021 08:46
Dilution Factor: 10
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.921	0.016	12016	28504	WATPHD	(C12-C24)	98465137	716.1
C10	3.036	0.001	234355	105160	WATPHM	(C24-C38)	264911257	2602.1
C12	3.996	-0.015	145983	171694	AK102	(C10-C25)	127415947	758.1
C14	4.777	-0.010	148173	65972	AK103	(C25-C36)	231303730	3076.8
C16	5.456	0.002	250858	314262	OR.DIES	(C10-C28)	208273546	1062.6
C18	6.053	0.002	412337	667756				
C20	6.613	-0.004	588518	1084508	JET-A	(C10-C18)	42778825	257.9
C22	7.174	-0.001	801357	317761				
C24	7.721	-0.001	1198189	817263				
C25	7.986	-0.003	1360400	472550				
C26	8.249	-0.000	1475847	1099090				
C28	8.753	-0.000	1718972	511883				
C32	9.681	-0.001	1300822	259583				
C34	10.111	0.002	1409149	1632218				
Filter Peak	12.116	-0.001	153119	60400	BUNKERC	(C10-C38)	379621337	9616.2
C36	10.513	-0.000	1113306	720815				
C38	10.900	-0.001	825953	327491				
C40	11.322	0.003	447103	155843				
o-terph	6.209	-0.017	212235	205329				
Triacon Surr	9.232	-0.024	363729	387222	NAS DIES	(C10-C24)	114710080	587.8

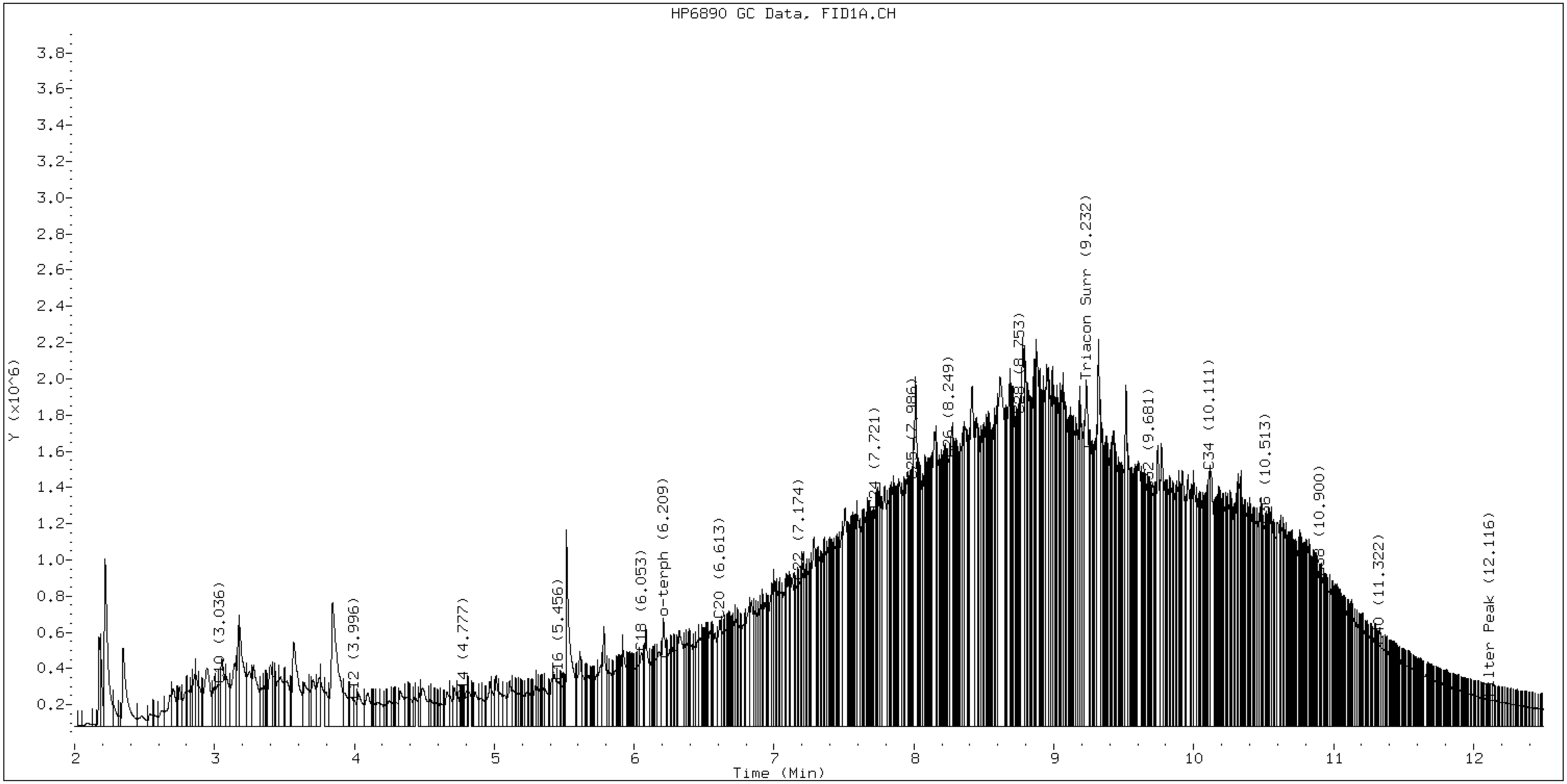
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	205329	1.2	M
Triacontane	387222	2.7	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

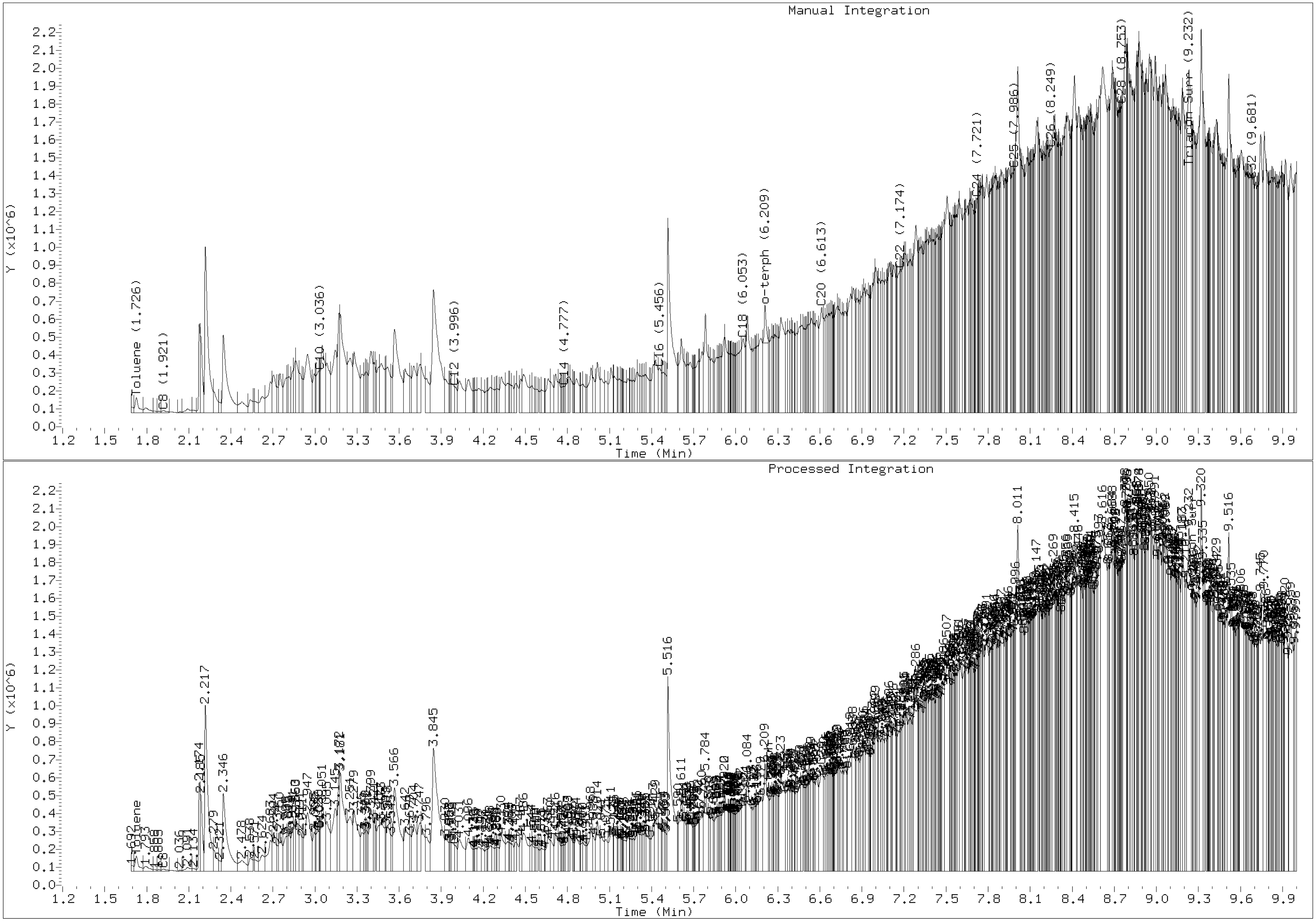
Datafile: FID4A, 20210222.b/421B2266.D 21A0361-01



TPH Manual Integrations Report

Datafile: FID4A, 20210222.b/421B2266.D Injection: 23-FEB-2021 08:46

Lab ID:21A0361-01



Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-20N-5

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-03 A	SDG:	21A0361
Sampled:	01/25/21 15:50	Prepared:	02/05/21 12:05	File ID:	421B1726.D
% Solids:	88.80	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/17/21 19:32
Batch:	BJB0148	Sequence:	SJB0251	Initial/Final:	10.04 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	5	101	D	13.1	28.0
RRO	Motor Oil Range Organics (C24-C38)	5	305	D	16.8	56.1

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	12.618	16.2	128	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1726.D

Date : 17-FEB-2021 19:32

Client ID:

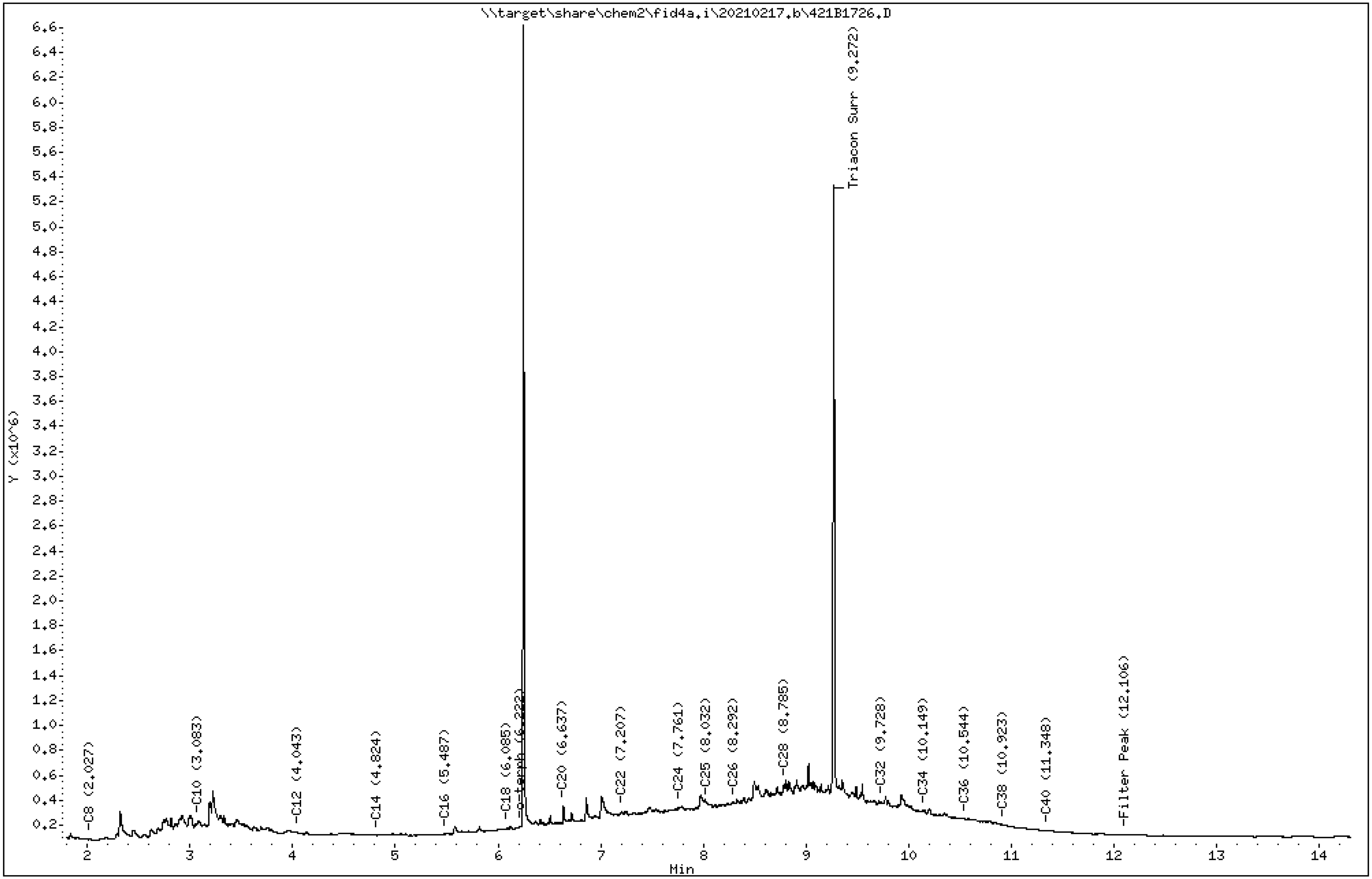
Sample Info: 21A0361-03,5

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO

Column diameter: 0,25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1726.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-03
Client ID:
Injection: 17-FEB-2021 19:32
Dilution Factor: 5
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.027	0.016	7932	13619	WATPHD	(C12-C24)	24854065	180.8
C10	3.083	-0.008	151046	455963	WATPHM	(C24-C38)	55360788	543.8
C12	4.043	-0.010	60644	74957	AK102	(C10-C25)	34788612	207.0
C14	4.824	-0.002	37940	7566	AK103	(C25-C36)	49326389	656.1
C16	5.487	-0.001	48247	23983	OR.DIES	(C10-C28)	52025477	265.4
C18	6.085	-0.001	95764	101240				
C20	6.637	-0.015	279019	472680	JET-A	(C10-C18)	13690587	82.5
C22	7.207	-0.005	232063	354564				
C24	7.761	0.001	261168	129956				
C25	8.032	0.004	297200	88863				
C26	8.292	0.003	301771	120162				
C28	8.785	-0.007	453348	471737				
C32	9.728	0.007	305432	119996				
C34	10.149	0.006	232503	69469				
Filter Peak	12.106	-0.016	43454	89906	BUNKERC	(C10-C38)	87369847	2213.2
C36	10.544	0.001	169257	42189				
C38	10.923	-0.003	124054	91035				
C40	11.348	-0.002	76929	49733				
o-terph	6.249	-0.017	6433237	4911043				
Triacon Surr	9.272	-0.025	4886868	4273684	NAS DIES	(C10-C24)	32009059	164.0

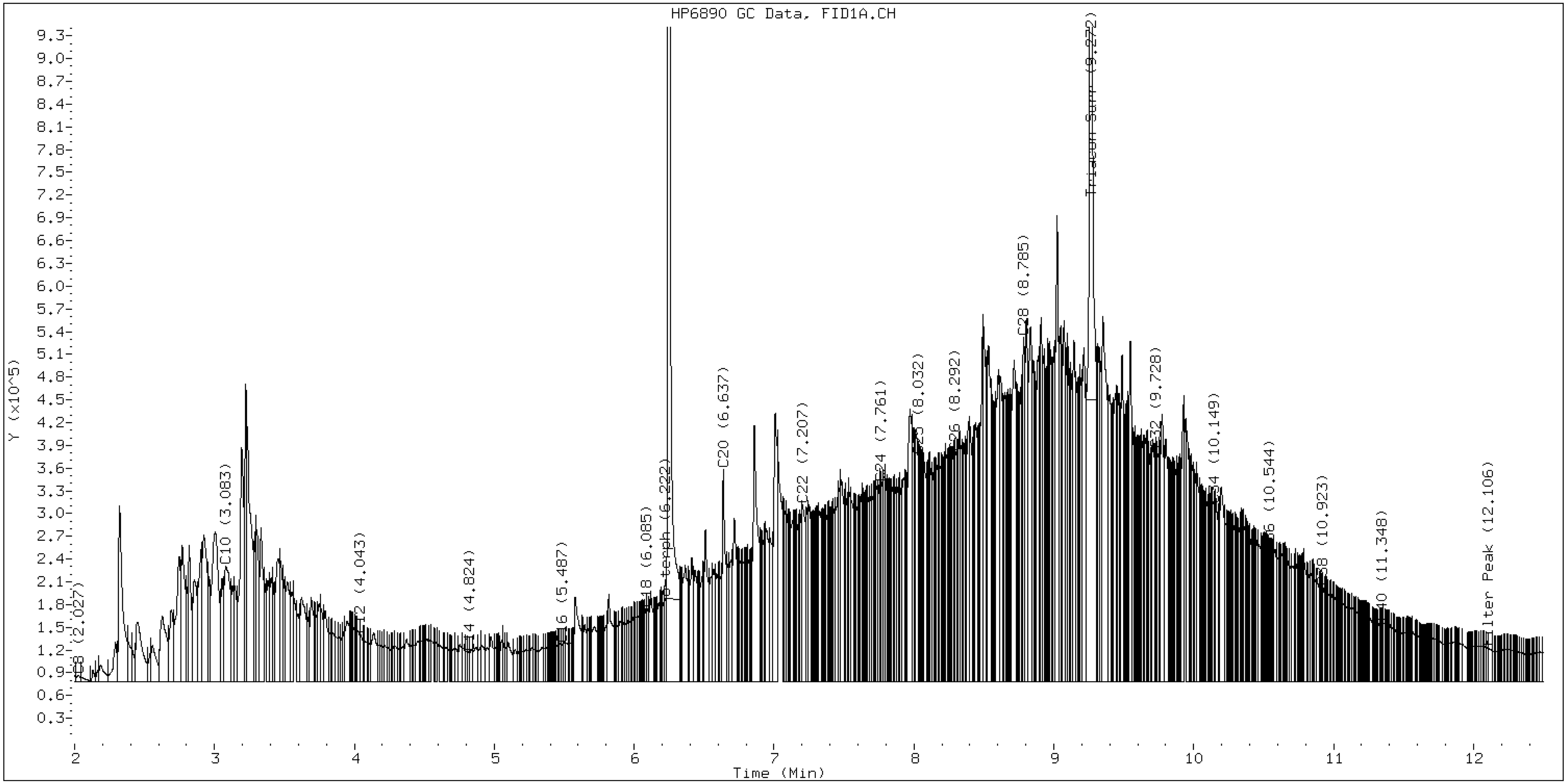
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	4911043	28.8	M
Triacontane	4273684	30.2	M

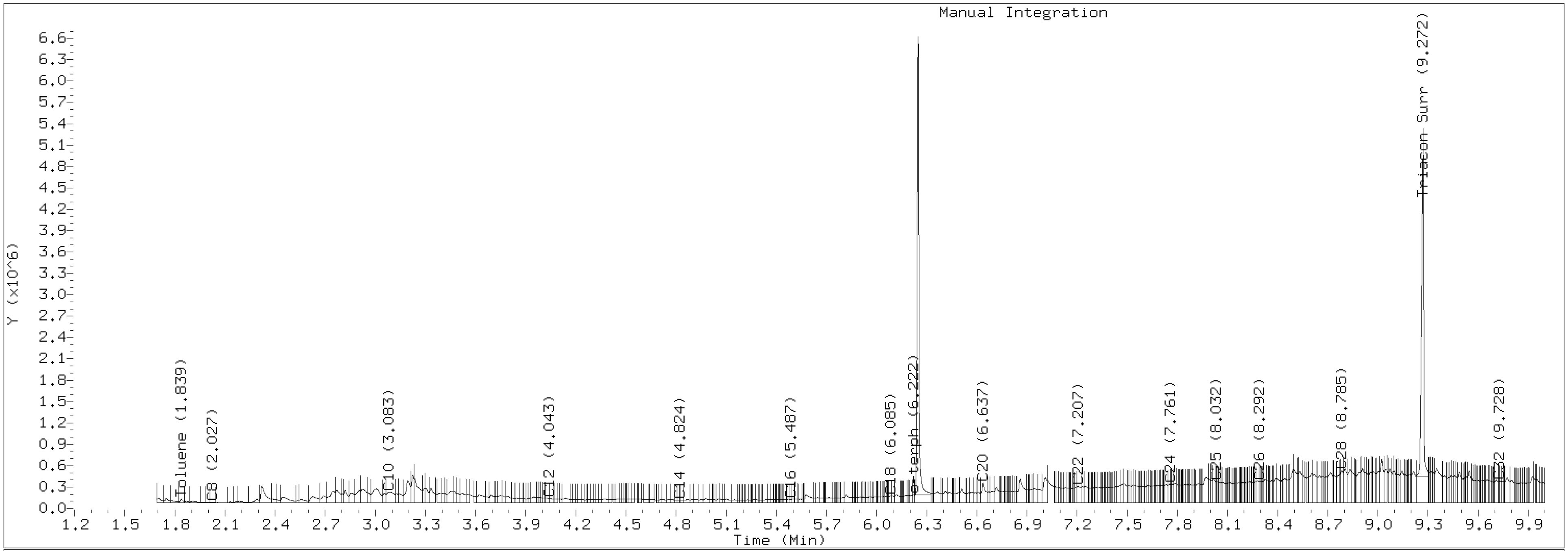
M Indicates the peak was manually integrated

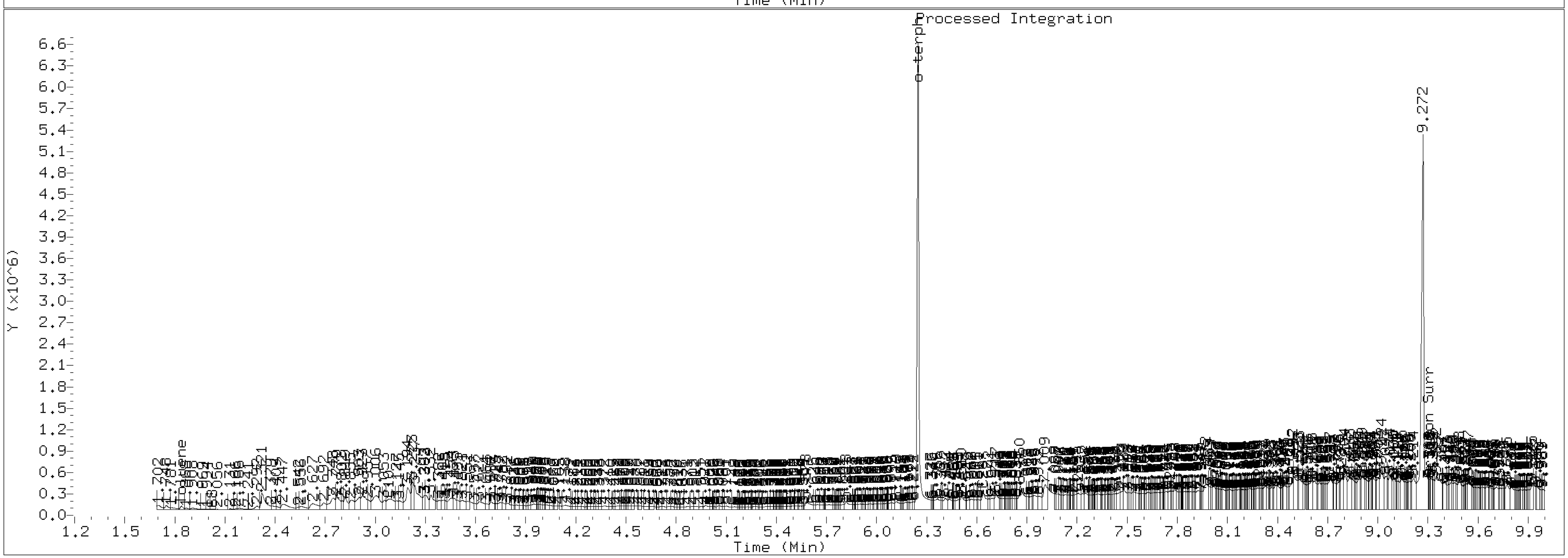
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210217.b/421B1726.D 21A0361-03



TPH Manual Integrations Report
Datafile: FID4A, 20210217.b/421B1726.D Injection: 17-FEB-2021 19:32
Lab ID:21A0361-03





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10NW-1

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-05 A	SDG:	21A0361
Sampled:	01/25/21 15:00	Prepared:	02/05/21 12:05	File ID:	421B2267.D
% Solids:	88.66	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/23/21 09:07
Batch:	BJB0148	Sequence:	SJB0344	Initial/Final:	10.04 g Wet / 10 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	10	5750	D	263	562
RRO	Motor Oil Range Organics (C24-C38)	10	11200	D	336	1120

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	12.638	18.0	142	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2267.D

Page 1

Date : 23-FEB-2021 09:07

Client ID:

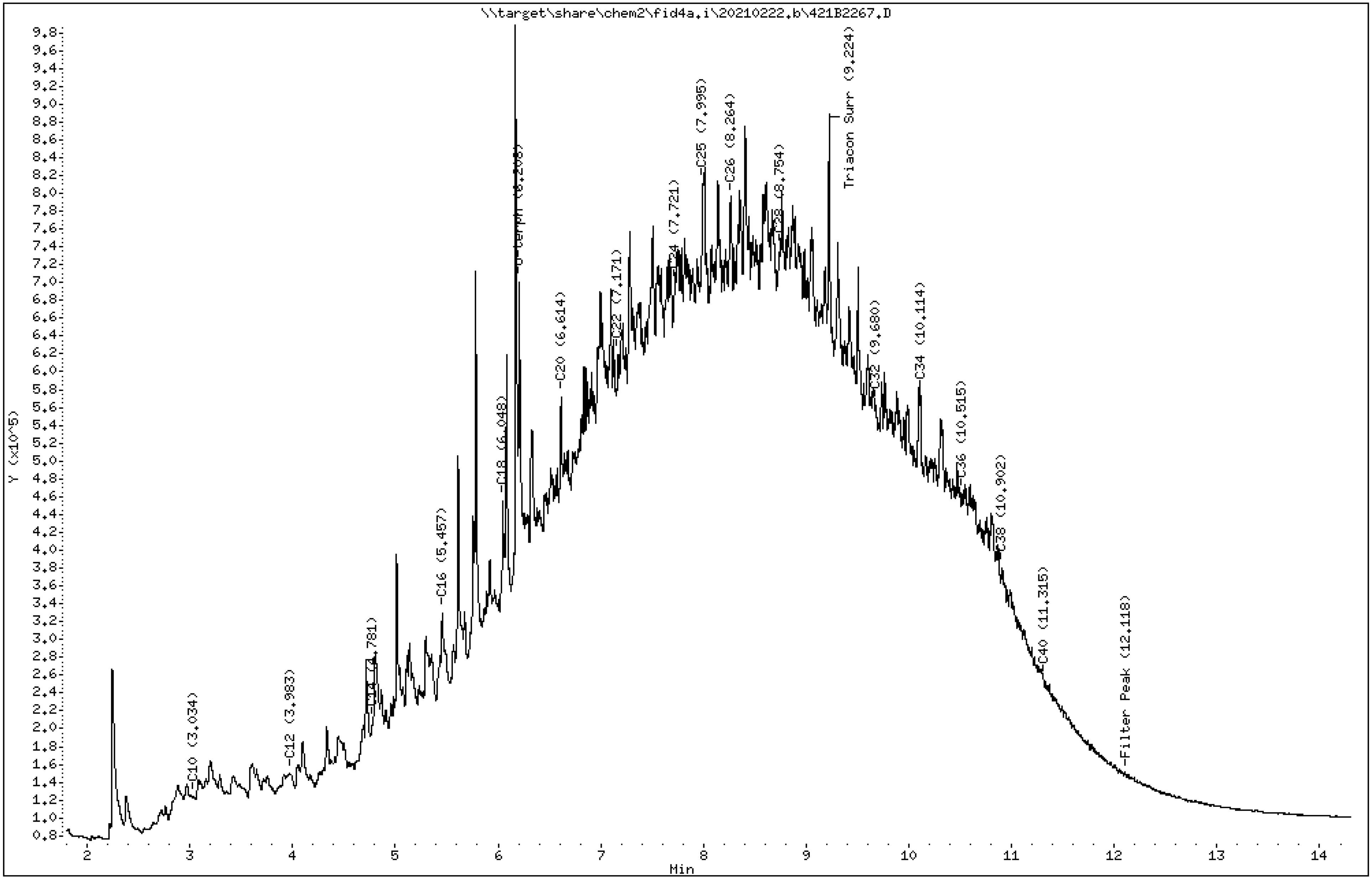
Instrument: fid4a.i

Sample Info: 21A0361-05,10

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2267.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-05
Client ID:
Injection: 23-FEB-2021 09:07
Dilution Factor: 10
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.905	0.001	4724	5175	WATPHD	(C12-C24)	70412893	512.1
C10	3.034	-0.000	47552	11860	WATPHM	(C24-C38)	101708739	999.0
C12	3.983	-0.029	74192	122822	AK102	(C10-C25)	80527812	479.1
C14	4.781	-0.007	131910	187126	AK103	(C25-C36)	87645959	1165.9
C16	5.457	0.004	253688	422908	OR.DIES	(C10-C28)	114474613	584.1
C18	6.048	-0.003	380056	822966				
C20	6.614	-0.003	497067	900067	JET-A	(C10-C18)	25066535	151.1
C22	7.171	-0.004	543792	582174				
C24	7.721	-0.001	622214	574791				
C25	7.995	0.006	735450	845564				
C26	8.264	0.015	719373	1097917				
C28	8.754	0.001	662298	164854				
C32	9.680	-0.003	487563	313530				
C34	10.114	0.006	498519	615136				
Filter Peak	12.118	0.001	73185	32633	BUNKERC	(C10-C38)	175871089	4455.0
C36	10.515	0.001	388087	287265				
C38	10.902	0.001	305586	194839				
C40	11.315	-0.004	179270	88565				
o-terph	6.208	-0.018	269434	267494				
Triacon Surr	9.224	-0.032	231577	187389	NAS DIES	(C10-C24)	74162350	380.0

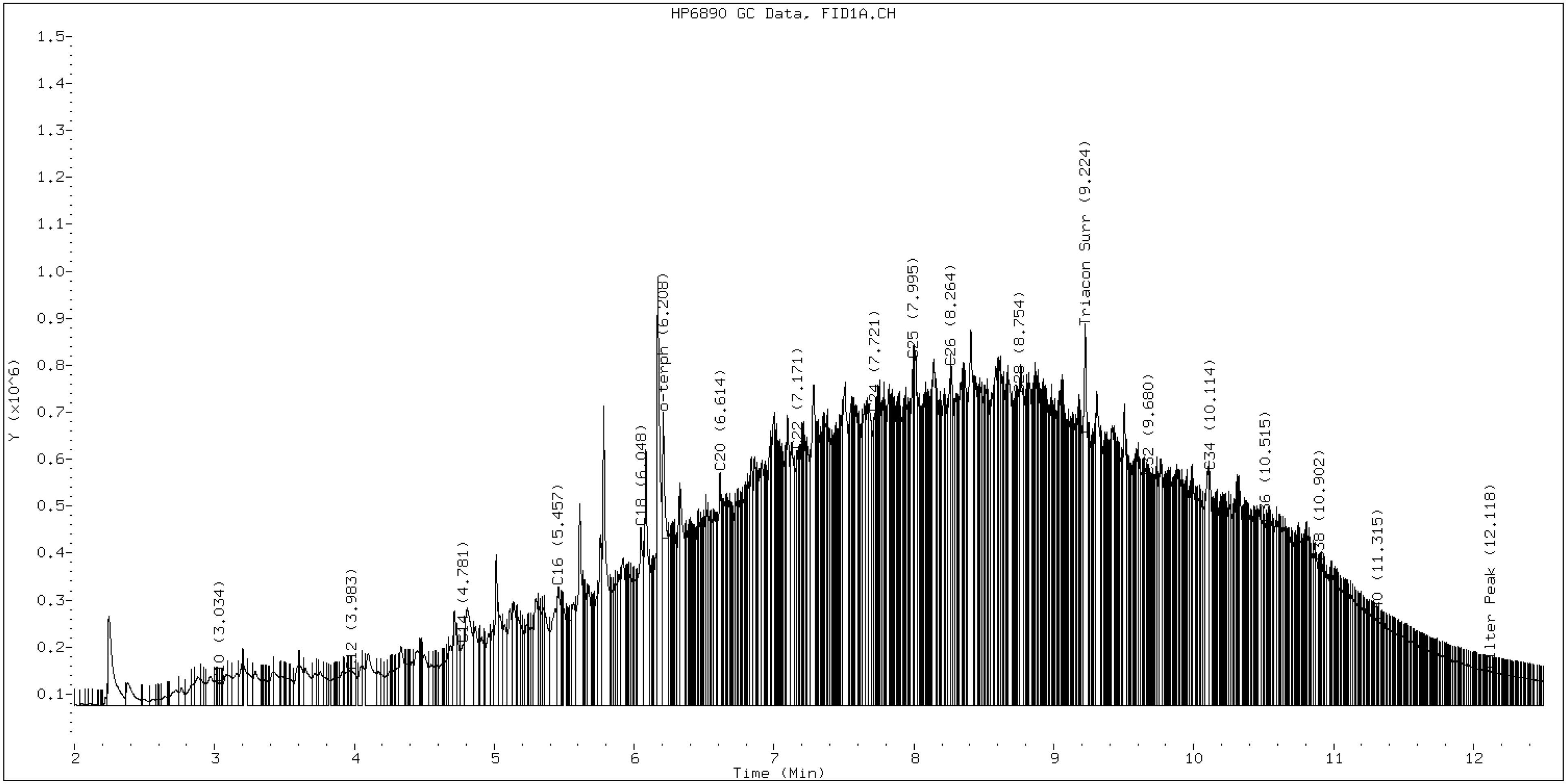
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	267494	1.6	M
Triacontane	187389	1.3	M

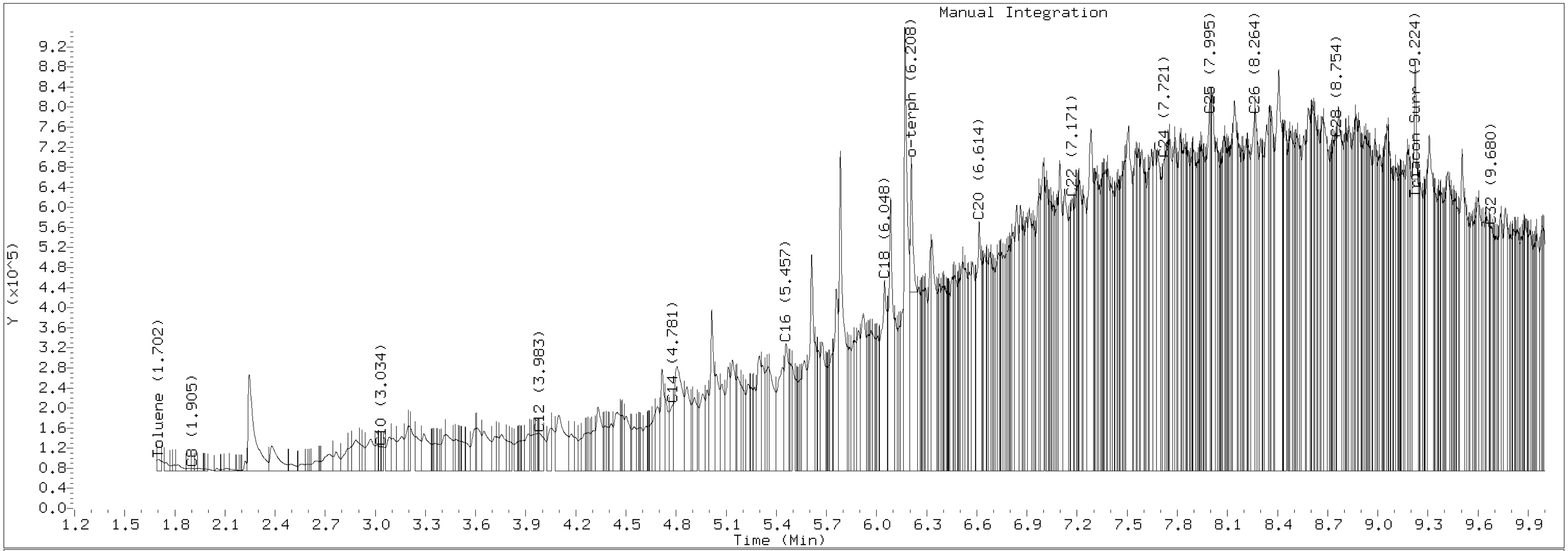
M Indicates the peak was manually integrated

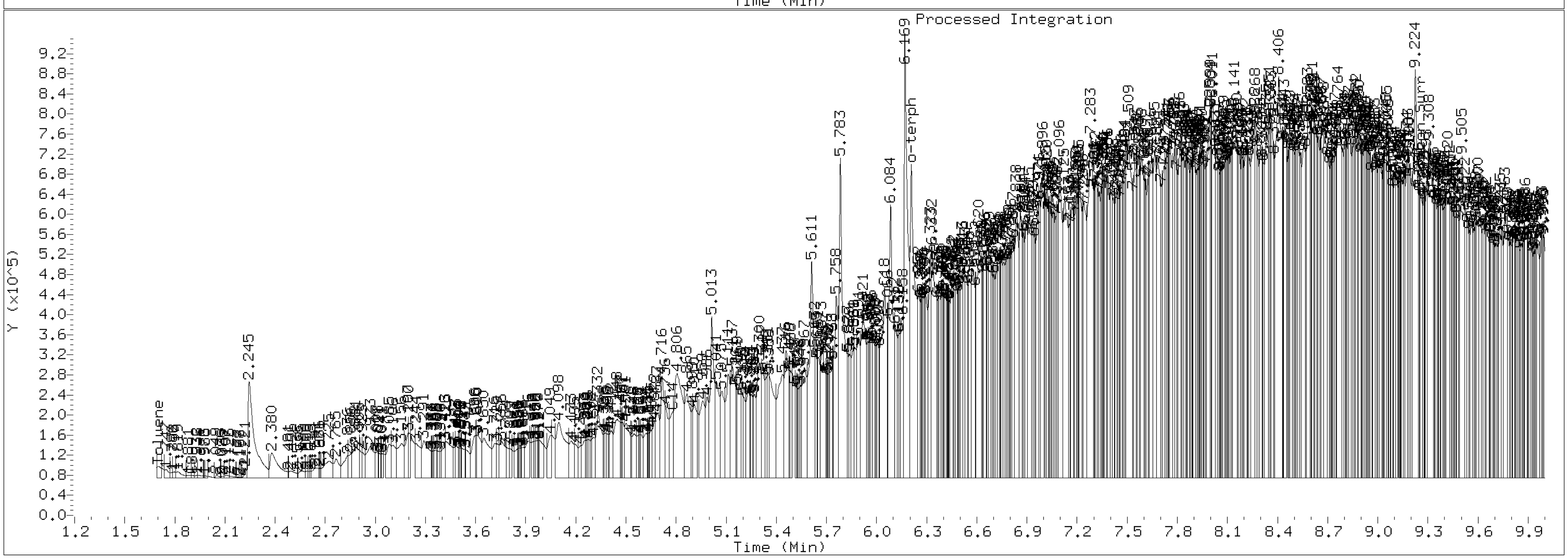
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210222.b/421B2267.D 21A0361-05



TPH Manual Integrations Report
Datafile: FID4A, 20210222.b/421B2267.D Injection: 23-FEB-2021 09:07
Lab ID:21A0361-05





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10NW-5

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-07 A	SDG:	21A0361
Sampled:	01/25/21 15:10	Prepared:	02/05/21 12:05	File ID:	421B1730.D
% Solids:	81.84	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/17/21 20:54
Batch:	BJB0148	Sequence:	SJB0251	Initial/Final:	10.04 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	5	172	D	14.2	30.4
RRO	Motor Oil Range Organics (C24-C38)	5	437	D	18.2	60.9

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	13.692	15.0	109	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1730.D

Date : 17-FEB-2021 20:54

Client ID:

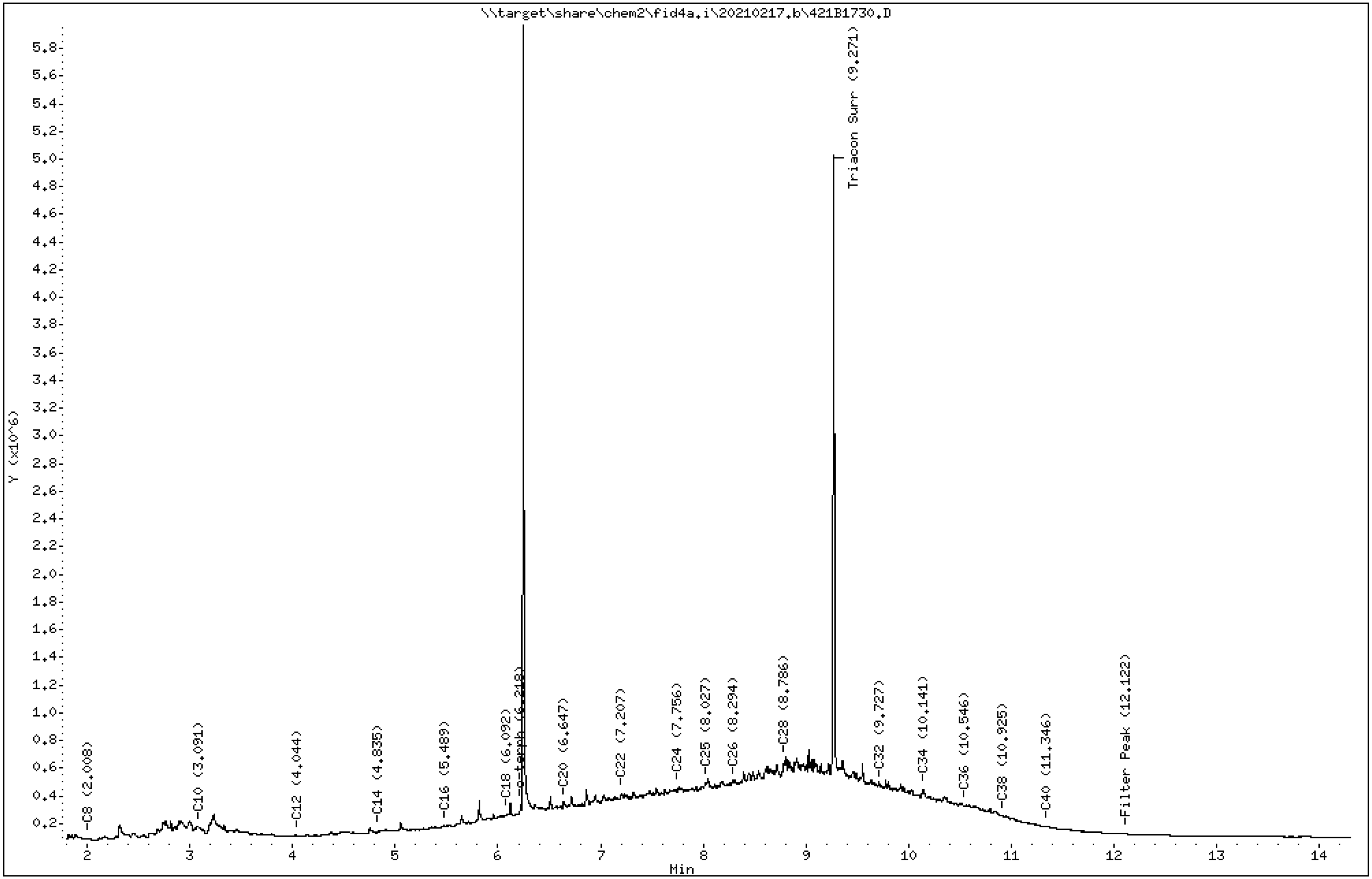
Instrument: fid4a.i

Sample Info: 21A0361-07,5

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1730.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-07
Client ID:
Injection: 17-FEB-2021 20:54
Dilution Factor: 5
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.008	-0.003	11602	18828	WATPHD	(C12-C24)	38794365	282.1
C10	3.091	-0.000	93481	153418	WATPHM	(C24-C38)	73056943	717.6
C12	4.044	-0.010	34274	20479	AK102	(C10-C25)	46171127	274.7
C14	4.835	0.009	68118	93037	AK103	(C25-C36)	64887108	863.1
C16	5.489	0.000	101457	50418	OR.DIES	(C10-C28)	69331626	353.7
C18	6.092	0.006	192029	303483				
C20	6.647	-0.005	271071	322558	JET-A	(C10-C18)	14515787	87.5
C22	7.207	-0.005	331749	402752				
C24	7.756	-0.004	375672	398968				
C25	8.027	-0.001	412109	123019				
C26	8.294	0.005	416557	83188				
C28	8.786	-0.005	568349	603625				
C32	9.727	0.006	399040	450650				
C34	10.141	-0.002	364876	740889				
Filter Peak	12.122	0.001	45366	20316	BUNKERC	(C10-C38)	115503291	2925.8
C36	10.546	0.003	250764	137222				
C38	10.925	-0.001	171812	67904				
C40	11.346	-0.004	96844	43365				
o-terph	6.248	-0.018	5667957	4191742				
Triacon Surr	9.271	-0.025	4448737	3744682	NAS DIES	(C10-C24)	42446348	217.5

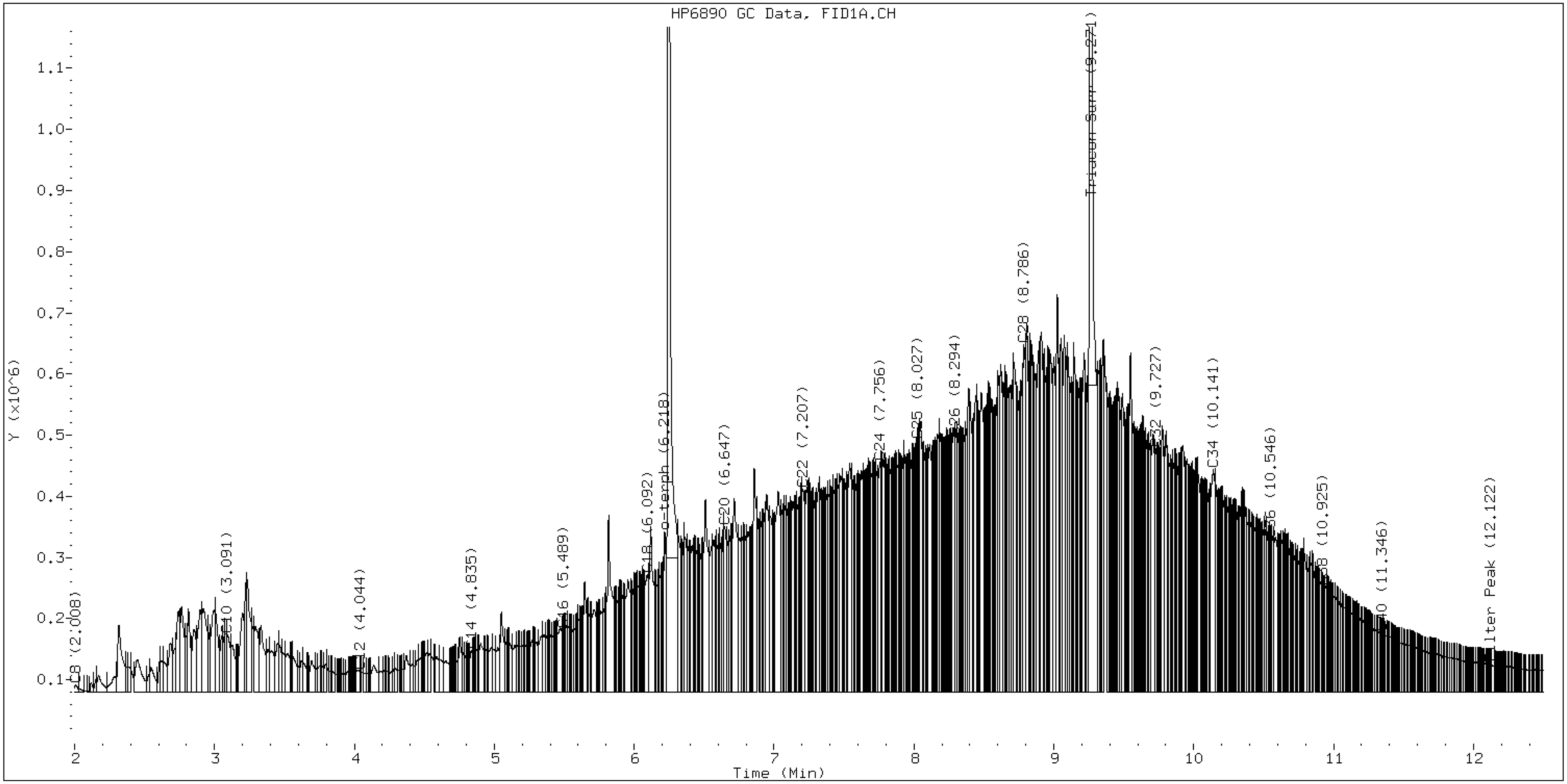
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	4191742	24.6	M
Triacontane	3744682	26.5	M

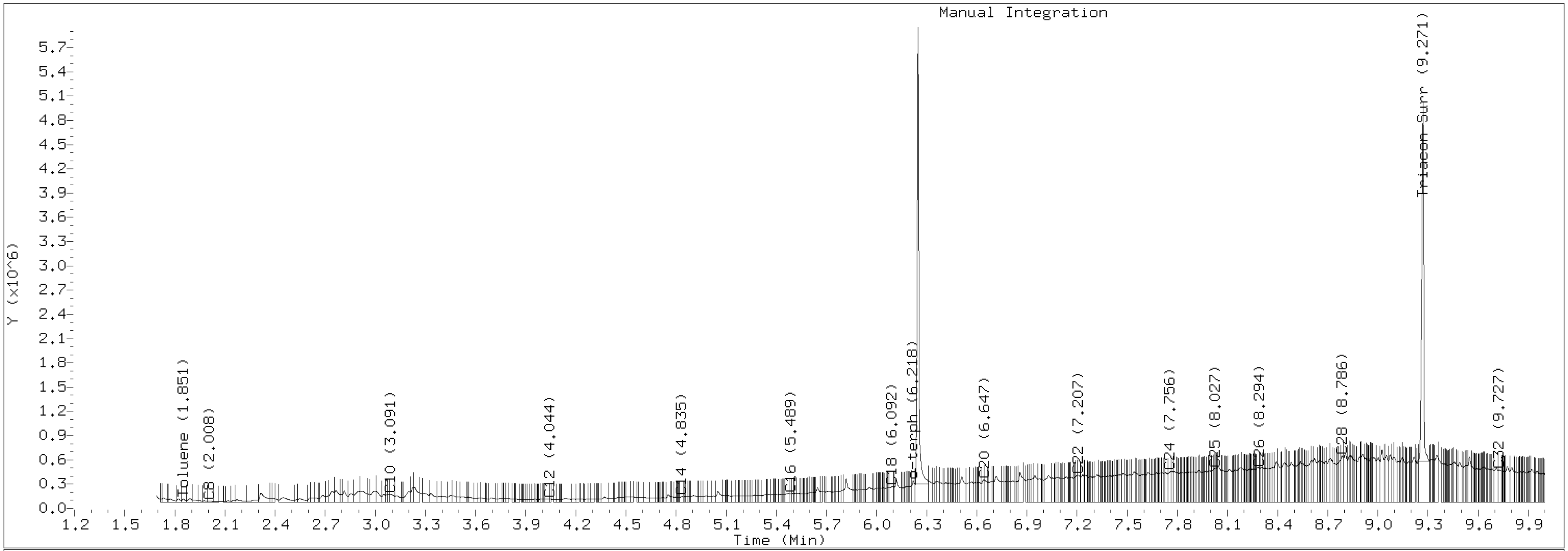
M Indicates the peak was manually integrated

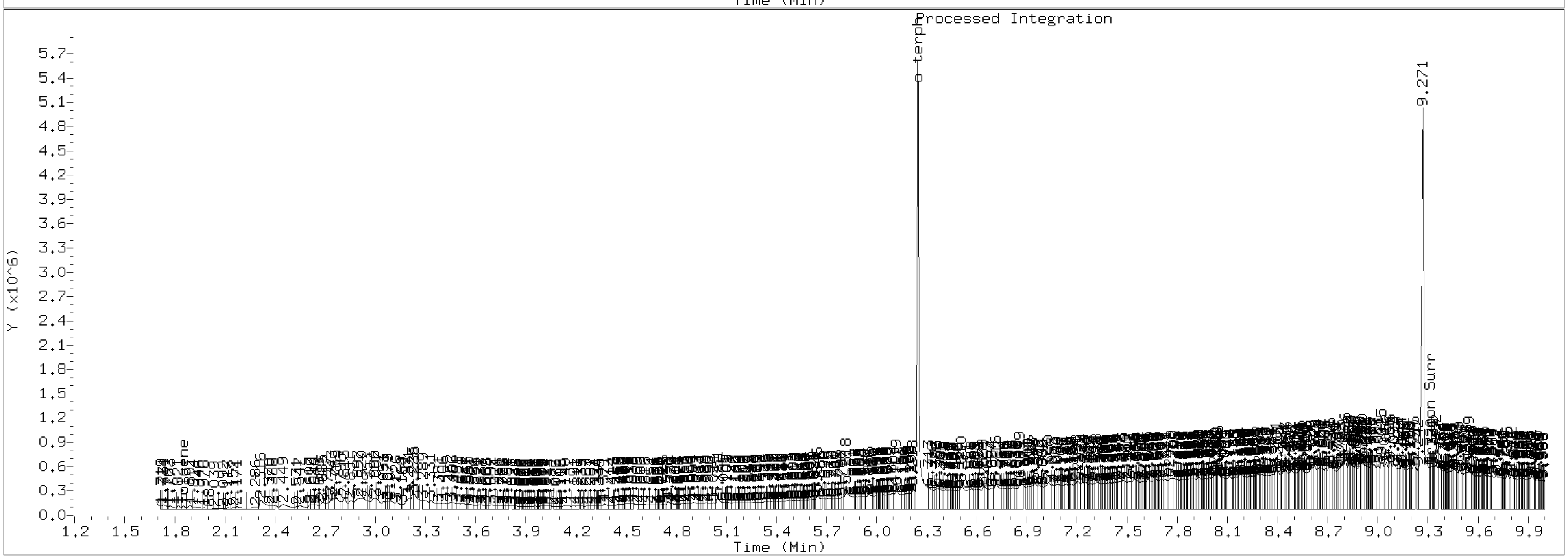
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210217.b/421B1730.D 21A0361-07



TPH Manual Integrations Report
Datafile: FID4A, 20210217.b/421B1730.D Injection: 17-FEB-2021 20:54
Lab ID:21A0361-07





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-15SW-1

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-09 A	SDG:	21A0361
Sampled:	01/25/21 14:15	Prepared:	02/05/21 12:05	File ID:	421B1731.D
% Solids:	94.02	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/17/21 21:15
Batch:	BJB0148	Sequence:	SJB0251	Initial/Final:	10.04 g Wet / 10 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	2160		24.8	53.0
RRO	Motor Oil Range Organics (C24-C38)	1	4080		31.7	106

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	11.918	14.0	117	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1731.D

Page 1

Date : 17-FEB-2021 21:15

Client ID:

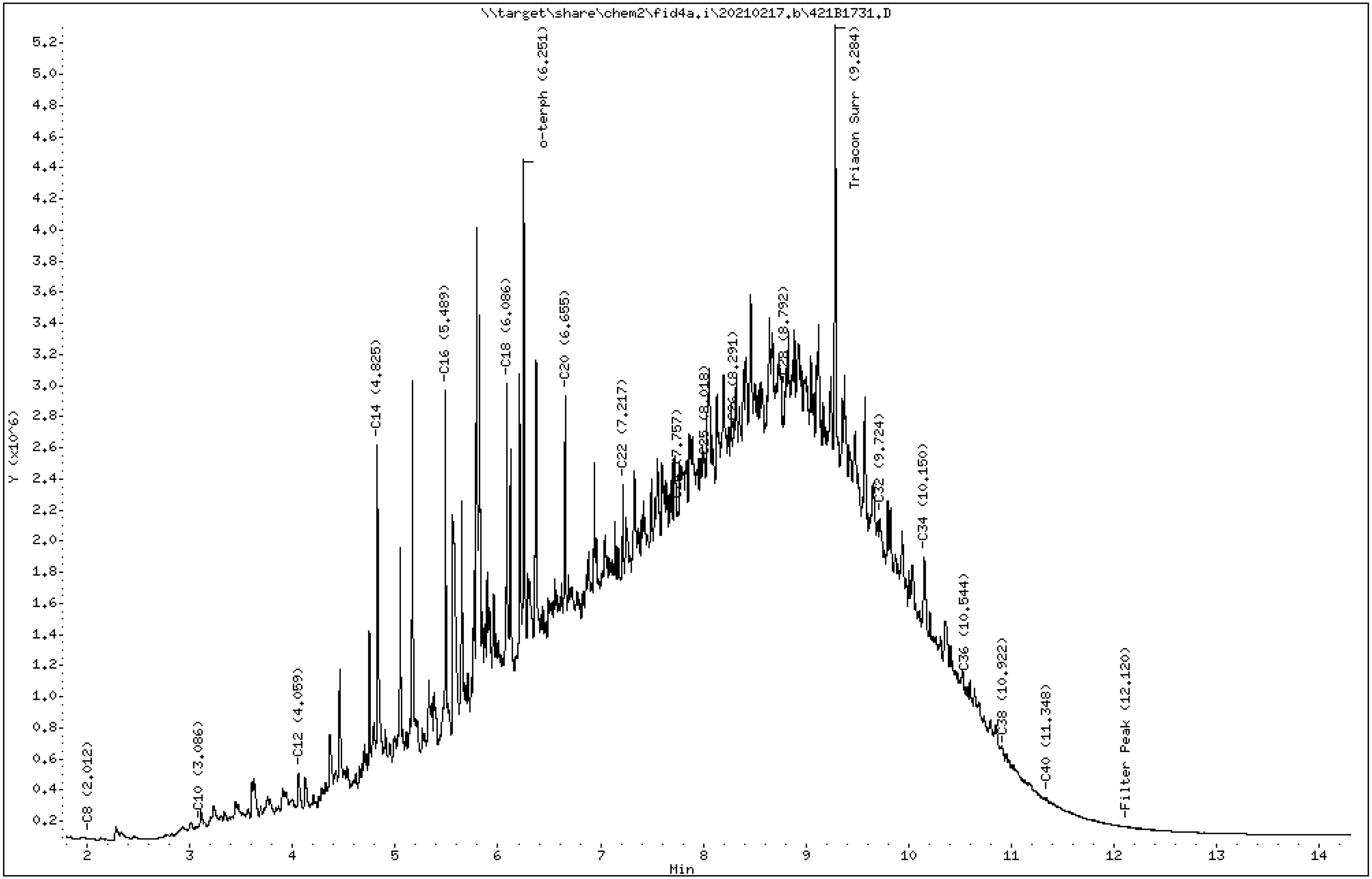
Instrument: fid4a.i

Sample Info: 21A0361-09

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1731.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-09
Client ID:
Injection: 17-FEB-2021 21:15
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.012	0.001	10083	6310	WATPHD	(C12-C24)	280227291	2038.0
C10	3.086	-0.005	87919	47969	WATPHM	(C24-C38)	392367802	3854.0
C12	4.059	0.005	430835	957574	AK102	(C10-C25)	316665675	1884.2
C14	4.825	-0.001	2536457	4220819	AK103	(C25-C36)	351940128	4681.5
C16	5.489	0.000	2889105	2873032	OR.DIES	(C10-C28)	458394947	2338.8
C18	6.086	0.000	2936903	4430753				
C20	6.655	0.003	2857805	4565572	JET-A	(C10-C18)	115058822	693.8
C22	7.217	0.005	2284506	3436461				
C24	7.757	-0.003	2090902	313201				
C25	8.018	-0.011	2369641	823676				
C26	8.291	0.003	2596728	900192				
C28	8.792	0.000	2880303	2376405				
C32	9.724	0.004	2068631	1601615				
C34	10.150	0.008	1822495	3834722				
Filter Peak	12.120	-0.001	85699	50930	BUNKERC	(C10-C38)	684986631	17351.4
C36	10.544	0.001	988601	818461				
C38	10.922	-0.004	568003	279542				
C40	11.348	-0.002	268671	258553				
o-terph	6.251	-0.015	3072859	2244921				
Triacon Surr	9.284	-0.012	2722214	2058451	NAS DIES	(C10-C24)	292618829	1499.5

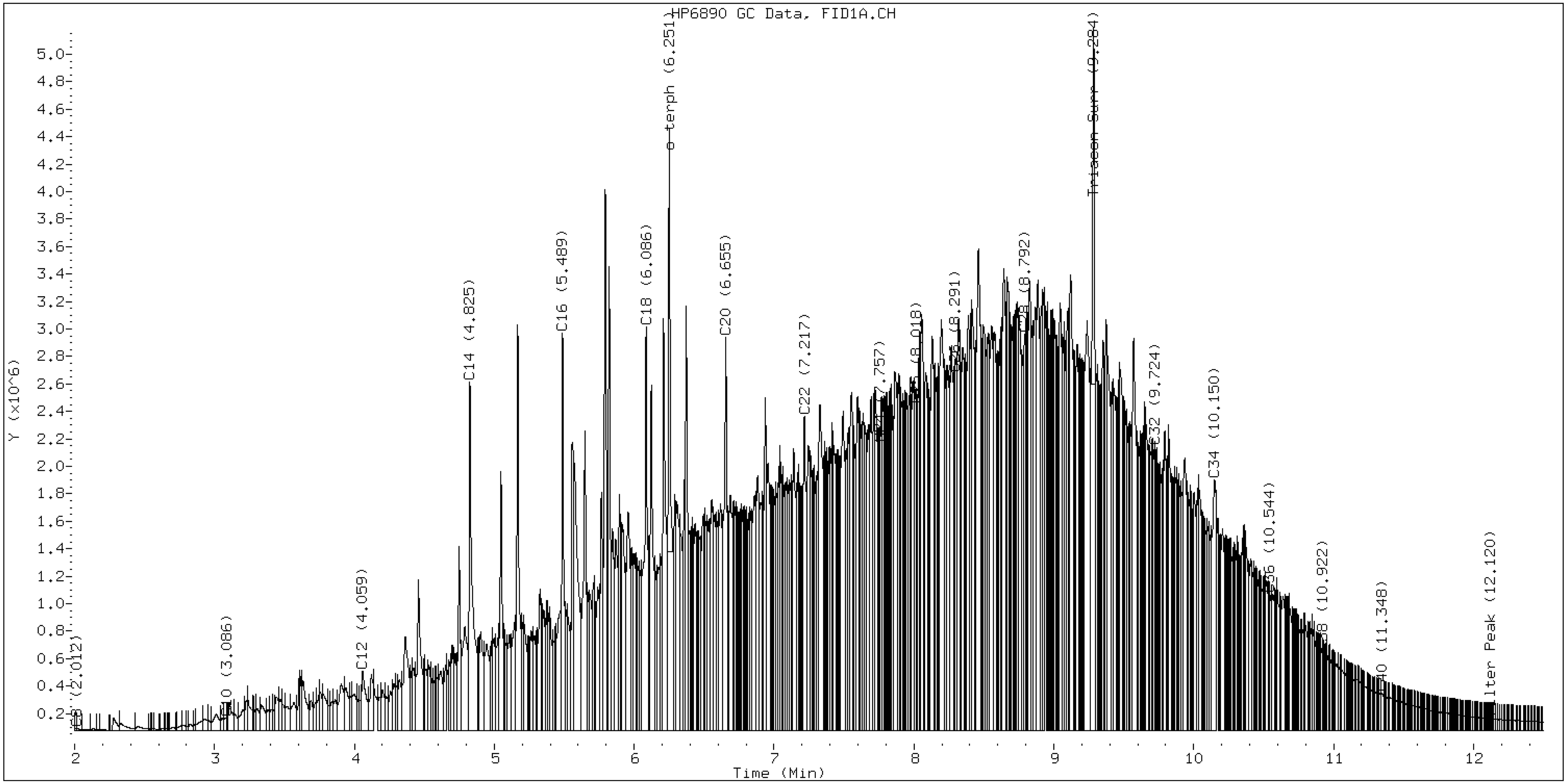
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	2244921	13.2	M
Triacontane	2058451	14.6	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

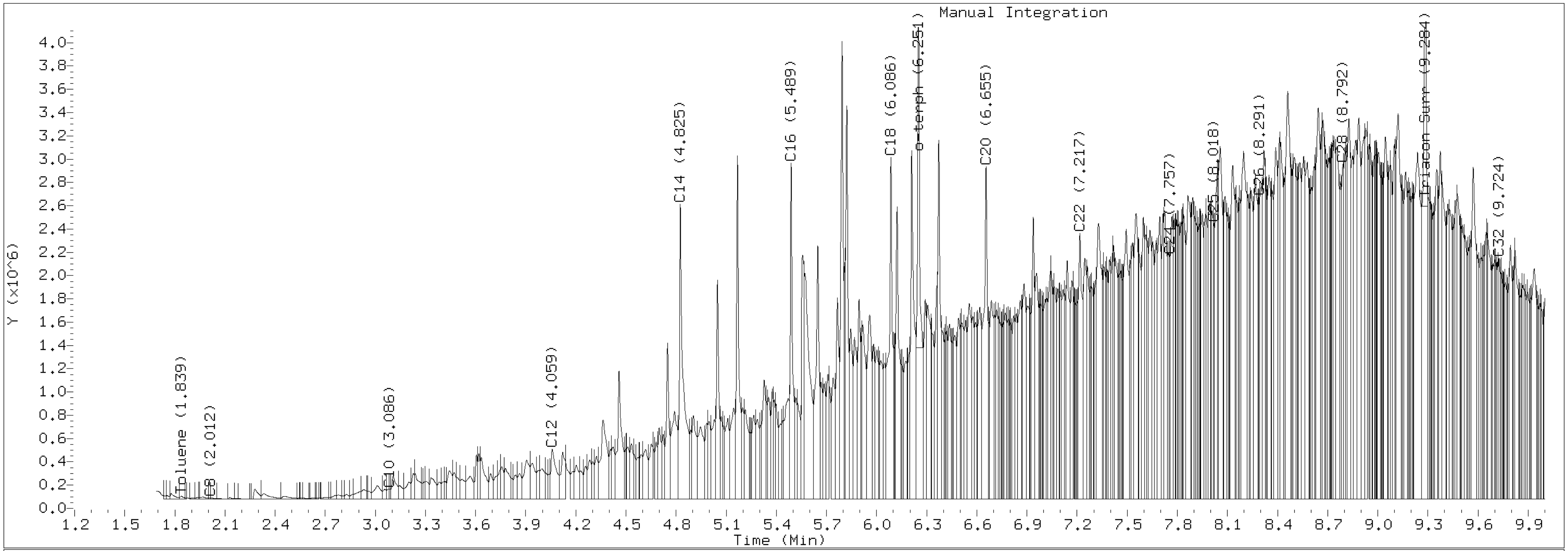
Datafile: FID4A, 20210217.b/421B1731.D 21A0361-09

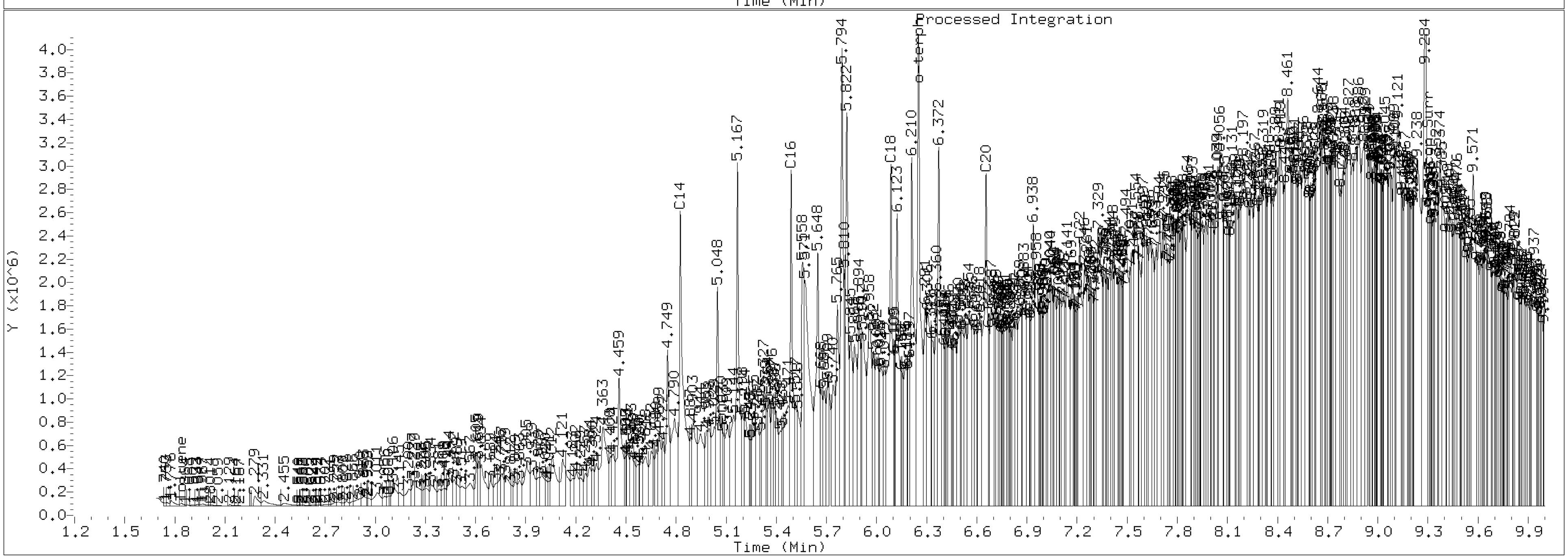


TPH Manual Integrations Report

Datafile: FID4A, 20210217.b/421B1731.D Injection: 17-FEB-2021 21:15

Lab ID:21A0361-09





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-15SW-5

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-11 A	SDG:	21A0361
Sampled:	01/25/21 14:25	Prepared:	02/05/21 12:05	File ID:	421B1732.D
% Solids:	84.44	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/17/21 21:36
Batch:	BJB0148	Sequence:	SJB0251	Initial/Final:	10.04 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	5	314	D	13.8	29.5
RRO	Motor Oil Range Organics (C24-C38)	5	468	D	17.6	59.0

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	13.270	17.3	130	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1732.D

Page 1

Date : 17-FEB-2021 21:36

Client ID:

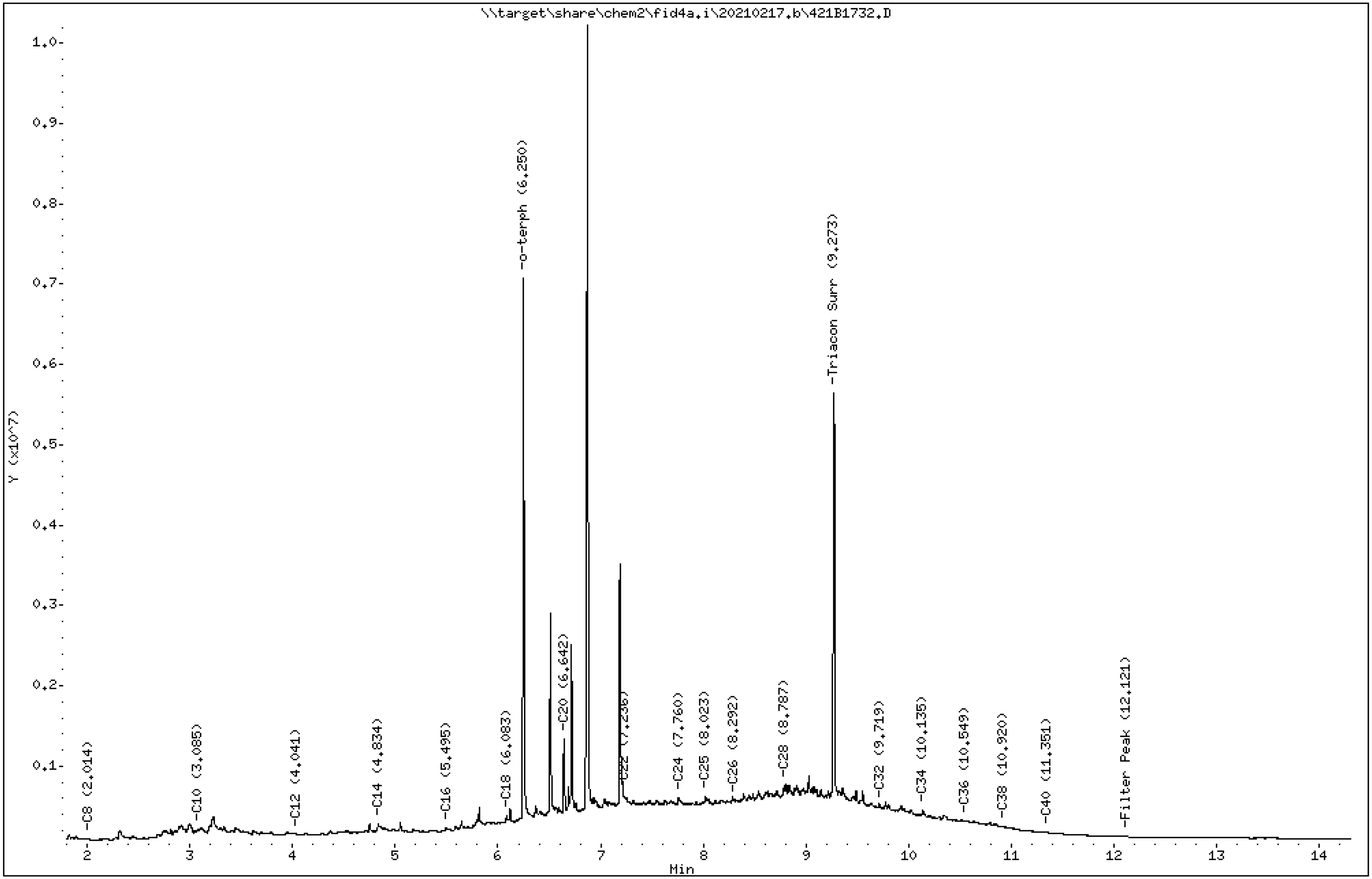
Instrument: fid4a.i

Sample Info: 21A0361-11,5

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1732.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-11
Client ID:
Injection: 17-FEB-2021 21:36
Dilution Factor: 5
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.014	0.003	15834	28183	WATPHD	(C12-C24)	73161010	532.1
C10	3.085	-0.006	127938	31960	WATPHM	(C24-C38)	80821867	793.9
C12	4.041	-0.012	75794	96515	AK102	(C10-C25)	84400550	502.2
C14	4.834	0.008	212752	333320	AK103	(C25-C36)	72190467	960.3
C16	5.495	0.006	145722	251543	OR.DIES	(C10-C28)	111935699	571.1
C18	6.083	-0.003	305641	448068				
C20	6.642	-0.010	1259058	1705093	JET-A	(C10-C18)	23120577	139.4
C22	7.236	0.025	545998	427369				
C24	7.760	0.000	532069	948645				
C25	8.023	-0.005	536920	668239				
C26	8.292	0.004	494759	123370				
C28	8.787	-0.005	673782	1075756				
C32	9.719	-0.002	426774	408784				
C34	10.135	-0.007	366868	663572				
Filter Peak	12.121	-0.000	43746	21705	BUNKERC	(C10-C38)	160795753	4073.1
C36	10.549	0.005	240203	154060				
C38	10.920	-0.006	168660	173135				
C40	11.351	0.001	95619	79981				
o-terph	6.250	-0.016	6734110	4993496				
Triacon Surr	9.273	-0.024	4988805	4317630	NAS DIES	(C10-C24)	79973886	409.8

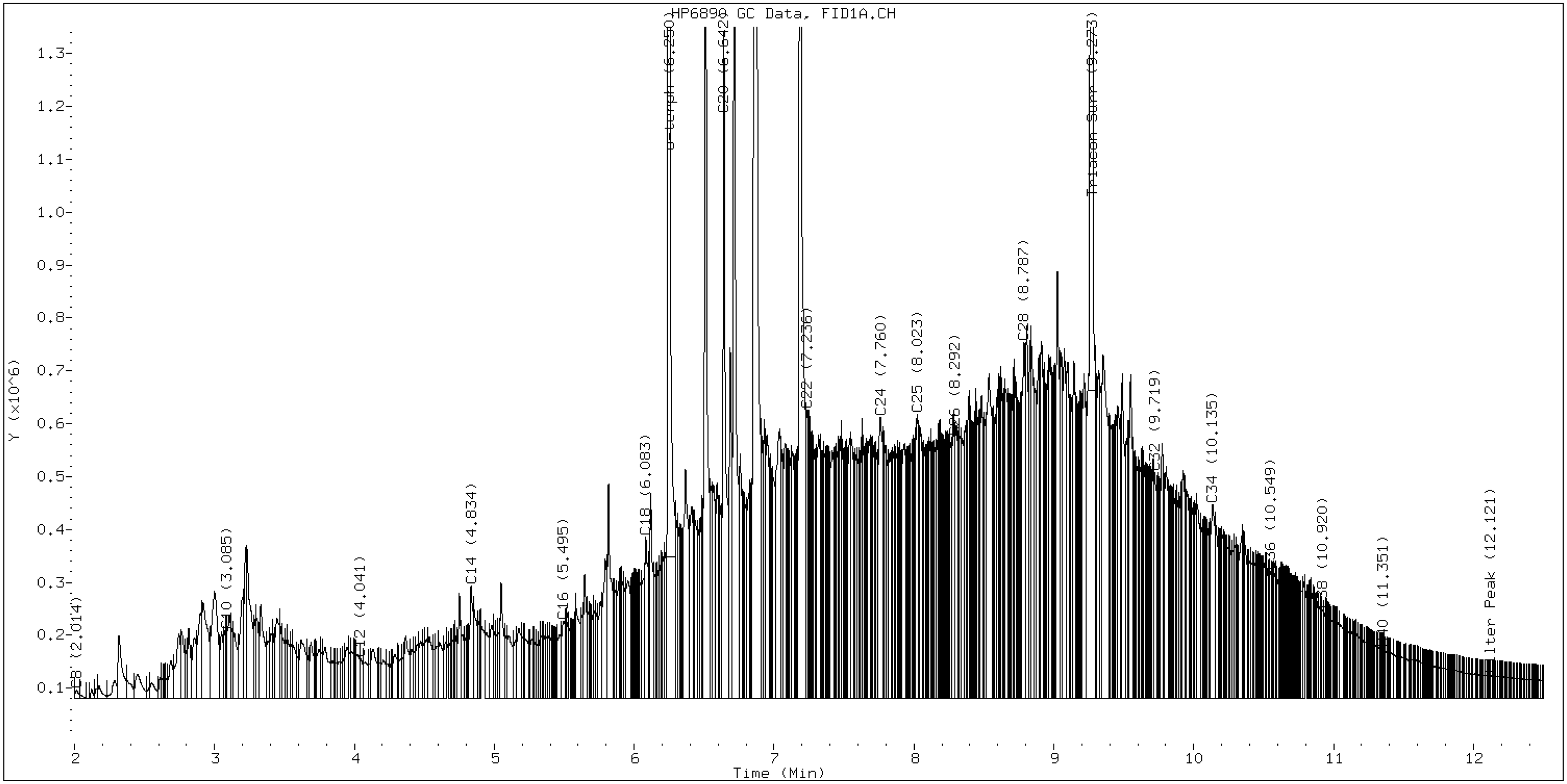
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	4993496	29.3	M
Triacontane	4317630	30.5	M

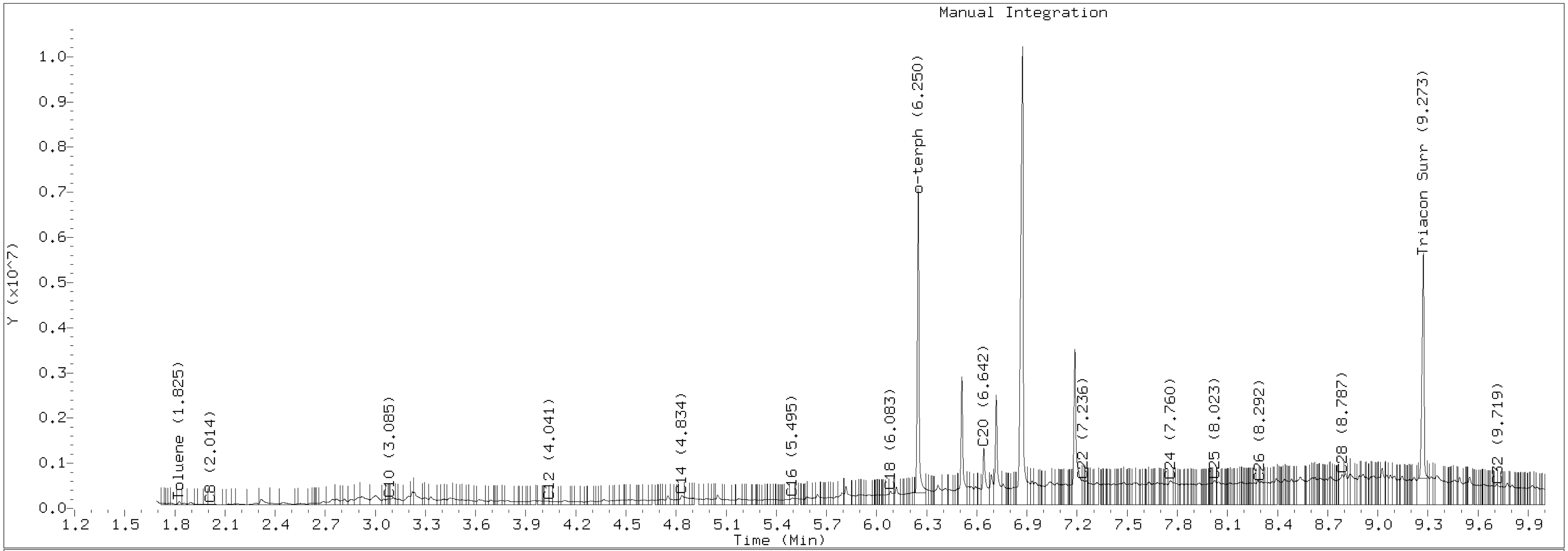
M Indicates the peak was manually integrated

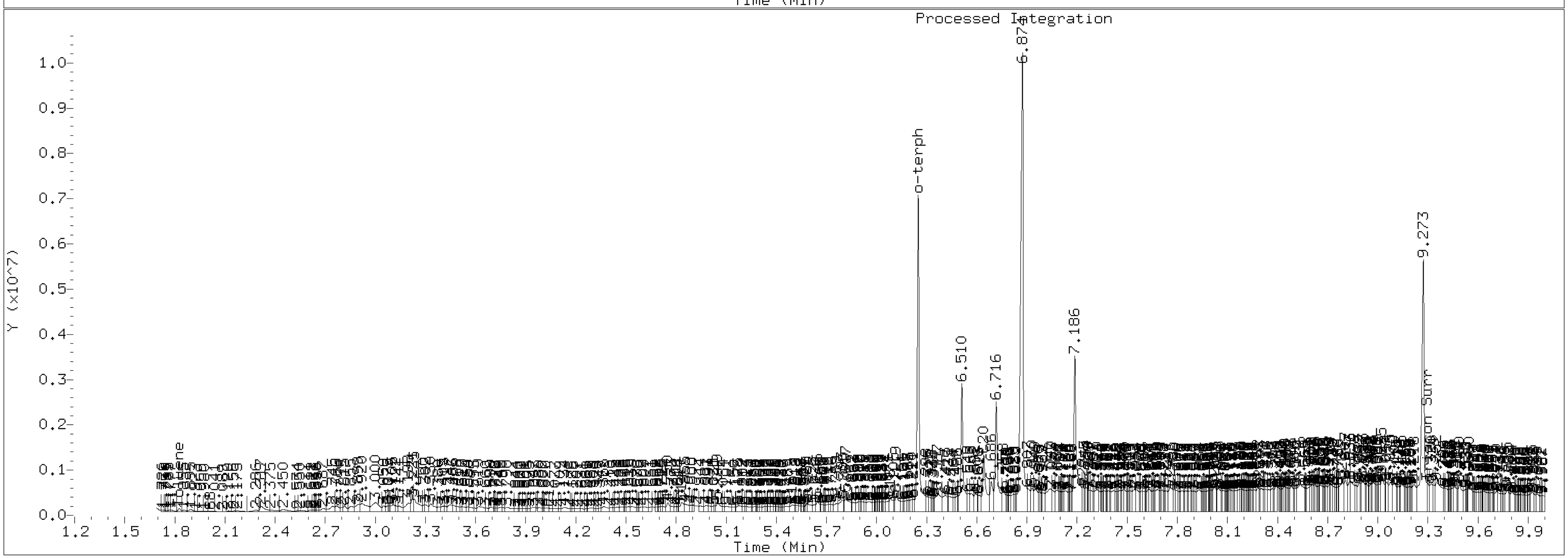
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210217.b/421B1732.D 21A0361-11



TPH Manual Integrations Report
Datafile: FID4A, 20210217.b/421B1732.D Injection: 17-FEB-2021 21:36
Lab ID:21A0361-11





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10SE-1

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-13 A	SDG:	21A0361
Sampled:	01/25/21 13:00	Prepared:	02/05/21 12:05	File ID:	421B1733.D
% Solids:	94.85	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/17/21 21:57
Batch:	BJB0148	Sequence:	SJB0251	Initial/Final:	10.04 g Wet / 10 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	1050		24.6	52.5
RRO	Motor Oil Range Organics (C24-C38)	1	2380		31.4	105

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	11.814	12.7	108	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1733.D

Page 1

Date : 17-FEB-2021 21:57

Client ID:

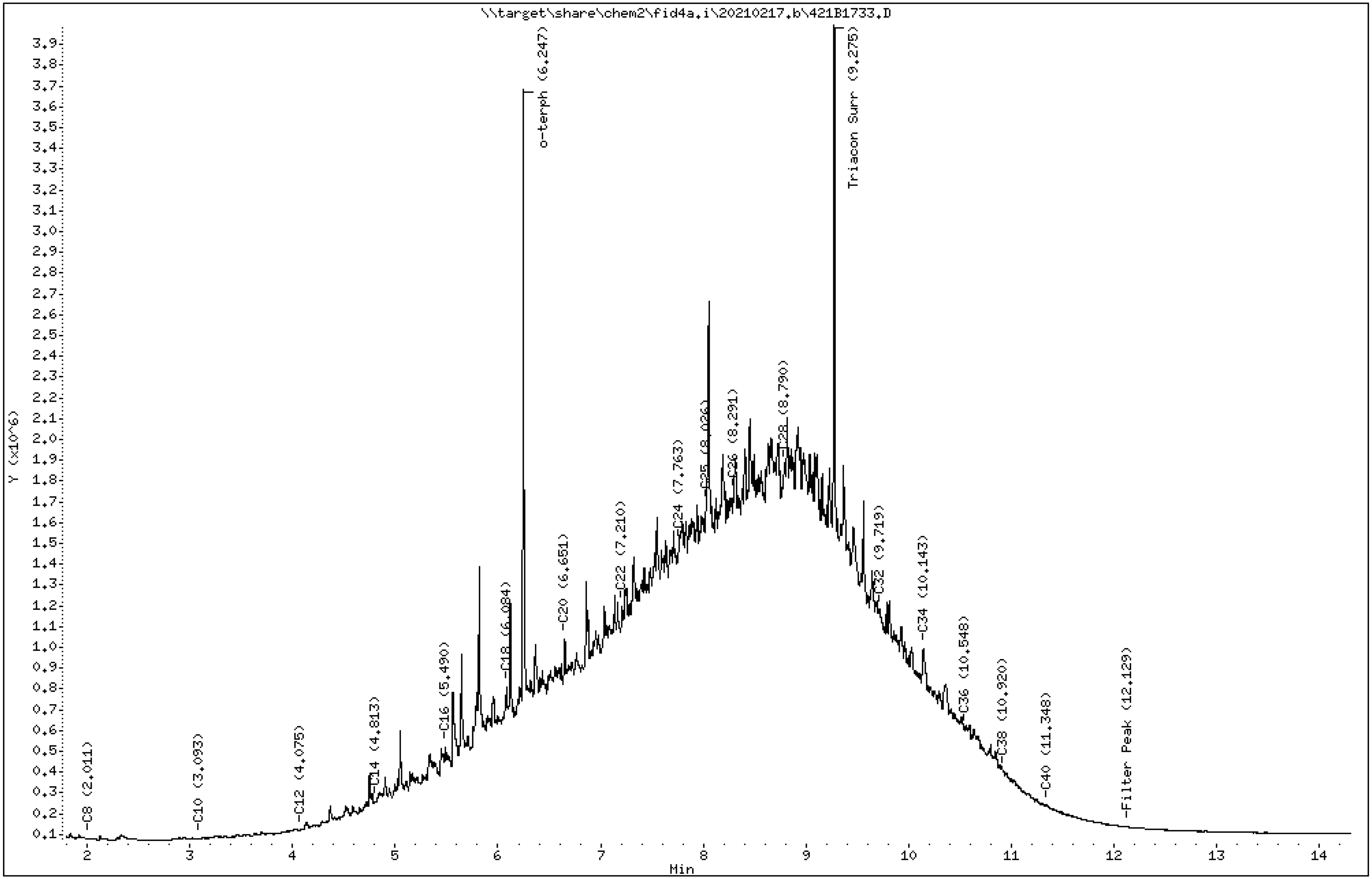
Instrument: fid4a.i

Sample Info: 21A0361-13

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1733.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-13
Client ID:
Injection: 17-FEB-2021 21:57
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.011	0.000	7079	1759	WATPHD	(C12-C24)	137474858	999.8
C10	3.093	0.002	9034	4466	WATPHM	(C24-C38)	231203518	2271.0
C12	4.075	0.022	48156	41531	AK102	(C10-C25)	153316158	912.2
C14	4.813	-0.013	183325	45672	AK103	(C25-C36)	208260578	2770.3
C16	5.490	0.001	447854	738323	OR.DIES	(C10-C28)	241620508	1232.8
C18	6.084	-0.002	739577	777502				
C20	6.651	-0.001	969744	1524645	JET-A	(C10-C18)	40858777	246.4
C22	7.210	-0.002	1123887	1488214				
C24	7.763	0.003	1418232	974215				
C25	8.026	-0.002	1612083	1168491				
C26	8.291	0.003	1665665	1296140				
C28	8.790	-0.002	1799284	1580626				
C32	9.719	-0.002	1104106	708981				
C34	10.143	0.000	923324	1596109				
Filter Peak	12.129	0.007	64890	48417	BUNKERC	(C10-C38)	370185867	9377.2
C36	10.548	0.005	532039	211257				
C38	10.920	-0.005	328655	228215				
C40	11.348	-0.002	166117	161881				
o-terph	6.247	-0.019	2936151	2065748				
Triacon Surr	9.275	-0.022	2430103	1975582	NAS DIES	(C10-C24)	138982349	712.2

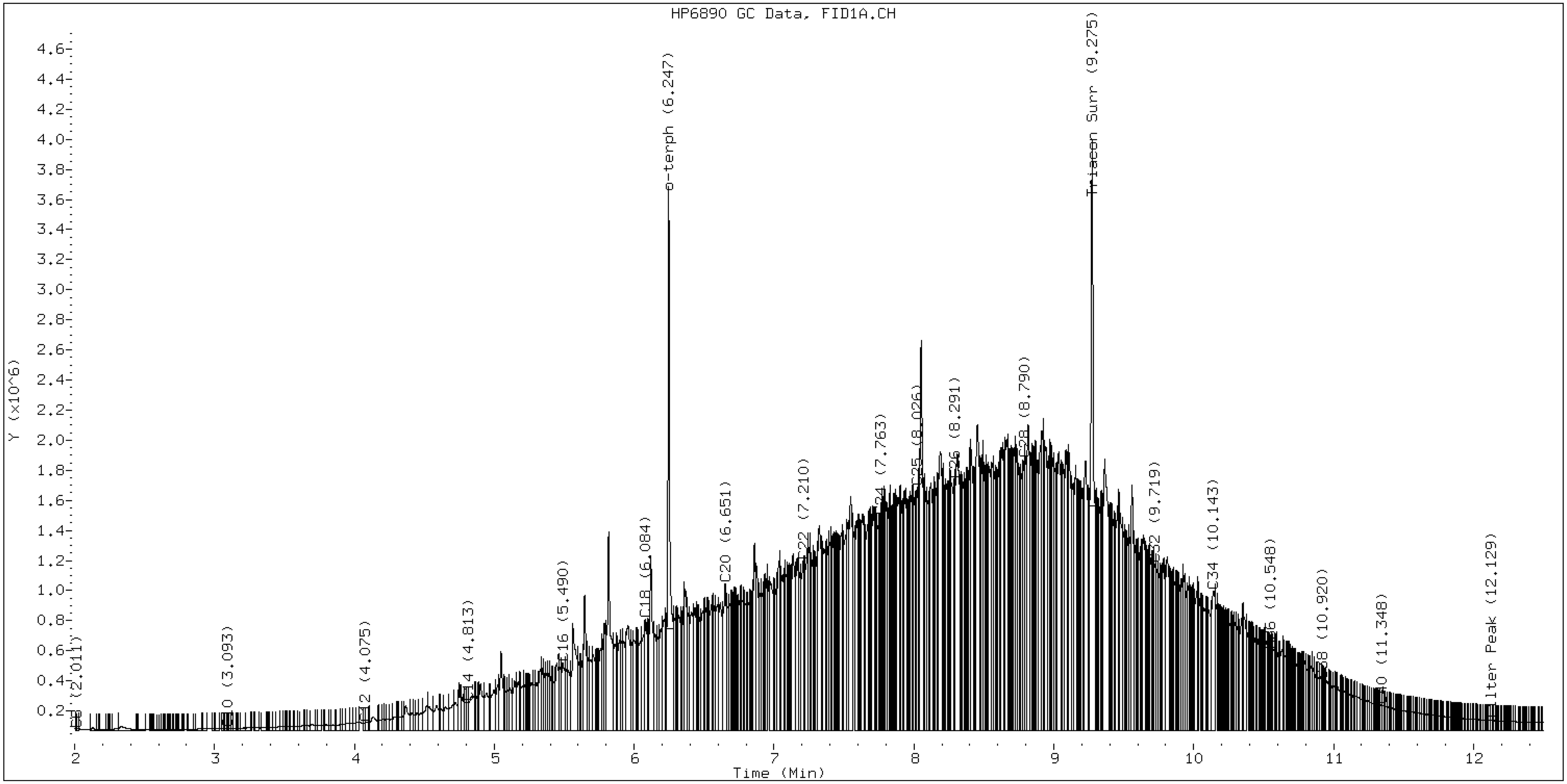
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	2065748	12.1	M
Triacontane	1975582	14.0	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

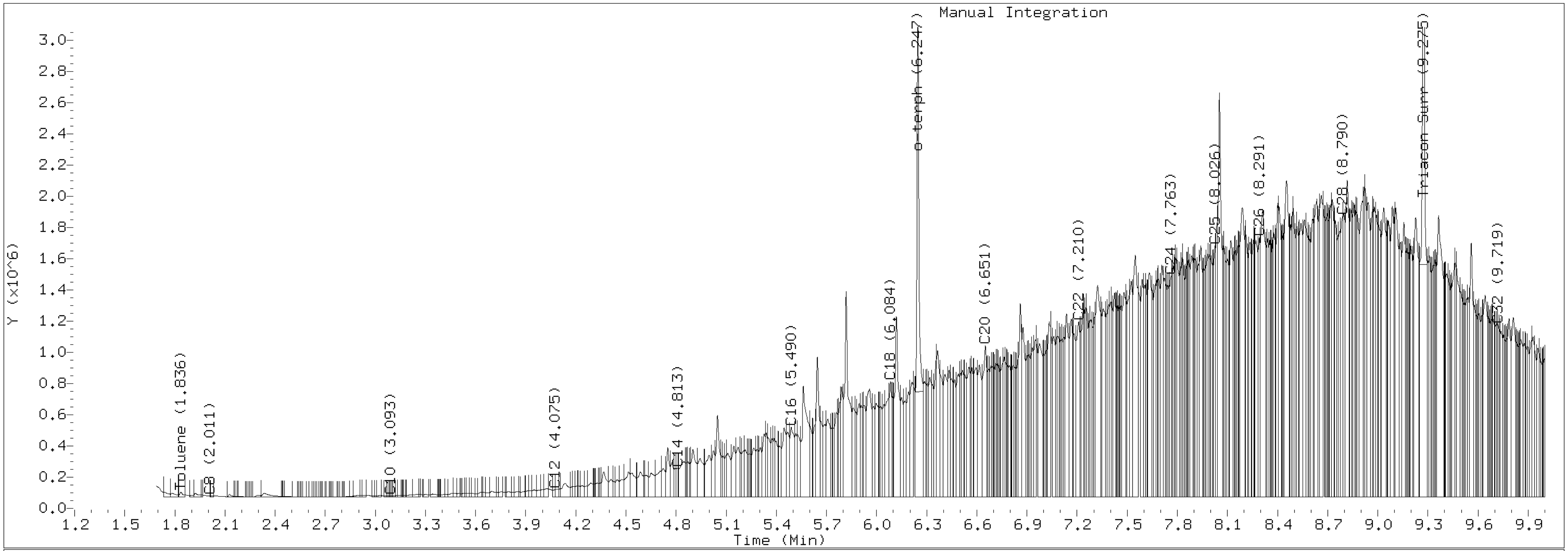
Datafile: FID4A, 20210217.b/421B1733.D 21A0361-13

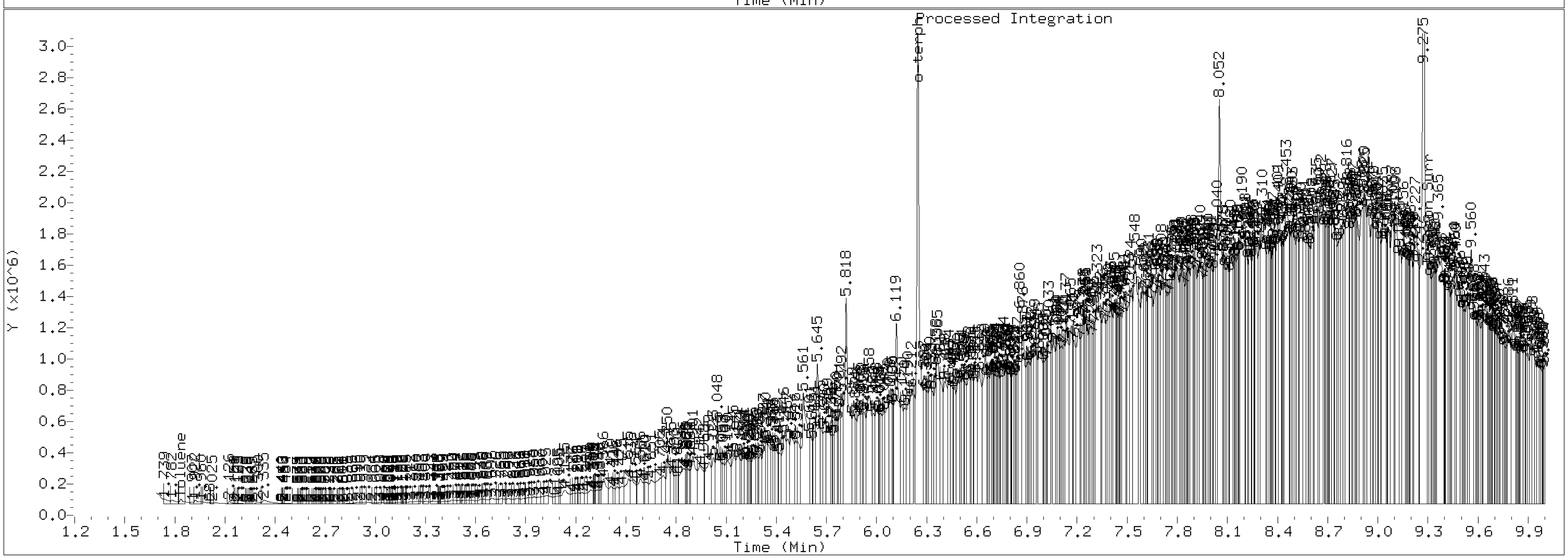


TPH Manual Integrations Report

Datafile: FID4A, 20210217.b/421B1733.D Injection: 17-FEB-2021 21:57

Lab ID:21A0361-13





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10SE-5

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	21A0361-15 A	SDG:	21A0361
Sampled:	01/25/21 13:10	Prepared:	02/05/21 12:05	File ID:	421B1734.D
% Solids:	92.94	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/17/21 22:17
Batch:	BJB0148	Sequence:	SJB0251	Initial/Final:	10.04 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	216		2.51	5.36
RRO	Motor Oil Range Organics (C24-C38)	1	463		3.20	10.7

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	12.056	13.7	113	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1734.D

Page 1

Date : 17-FEB-2021 22:17

Client ID:

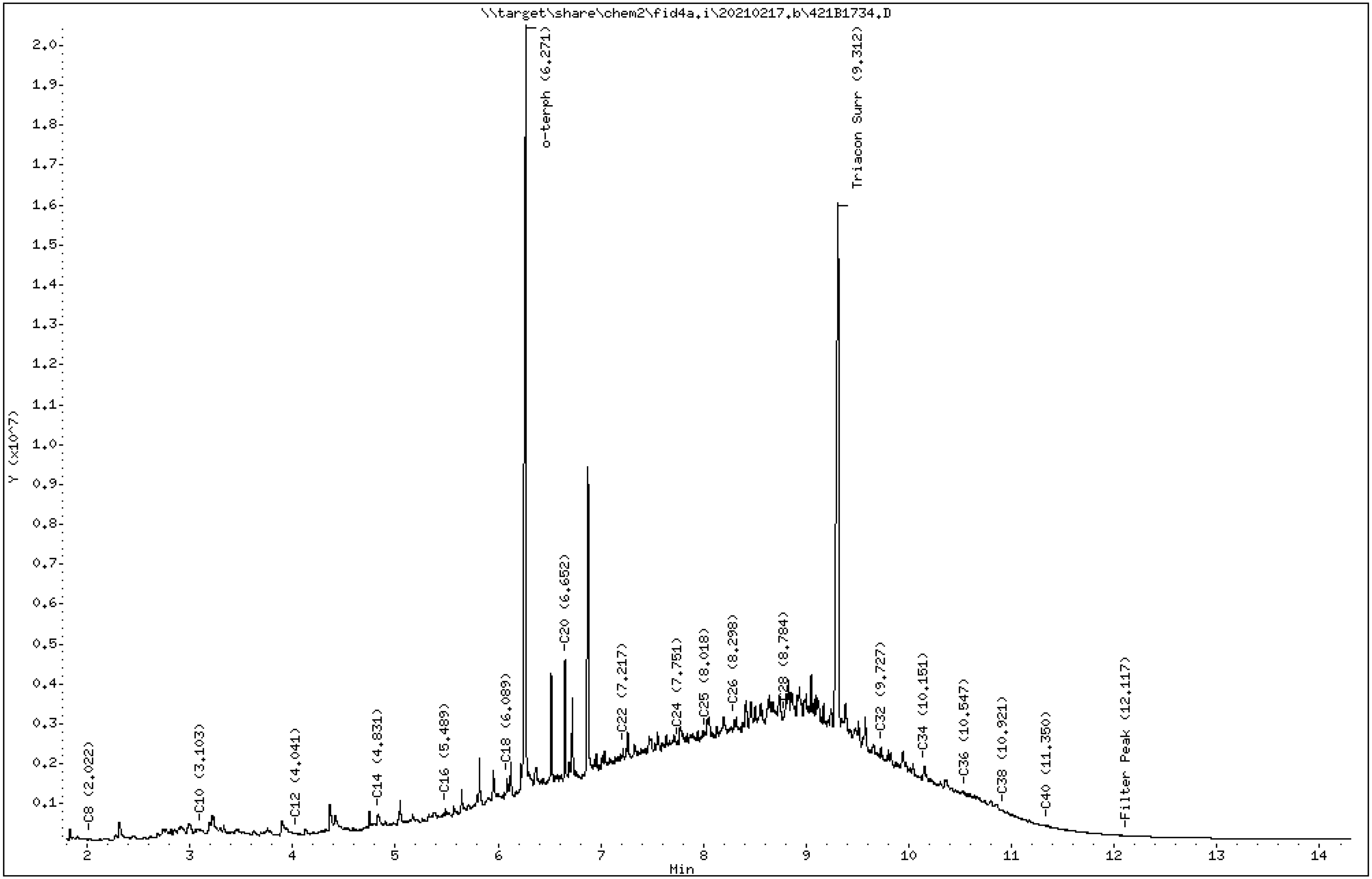
Instrument: fid4a.i

Sample Info: 21A0361-15

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1734.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-15
Client ID:
Injection: 17-FEB-2021 22:17
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.022	0.011	31241	46894	WATPHD	(C12-C24)	277244276	2016.3
C10	3.103	0.012	281162	363962	WATPHM	(C24-C38)	440257032	4324.4
C12	4.041	-0.012	164519	213672	AK102	(C10-C25)	316245809	1881.7
C14	4.831	0.005	637056	1924122	AK103	(C25-C36)	394393153	5246.2
C16	5.489	0.000	780467	1141233	OR.DIES	(C10-C28)	471905469	2407.7
C18	6.089	0.003	1530678	2368327				
C20	6.652	-0.000	4534645	6364433	JET-A	(C10-C18)	86843159	523.6
C22	7.217	0.005	2281283	3496524				
C24	7.751	-0.009	2433007	1087619				
C25	8.018	-0.010	2686359	1194565				
C26	8.298	0.010	3003530	4432226				
C28	8.784	-0.008	3076747	767237				
C32	9.727	0.006	2324362	2625693				
C34	10.151	0.009	1861502	2620184				
Filter Peak	12.117	-0.005	114686	67950	BUNKERC	(C10-C38)	731566817	18531.4
C36	10.547	0.004	1189543	1208499				
C38	10.921	-0.005	751638	478713				
C40	11.350	-0.000	369620	507759				
o-terph	6.271	0.005	18809778	21770158				
Triacon Surr	9.312	0.015	13115664	19585043	NAS DIES	(C10-C24)	291309785	1492.8

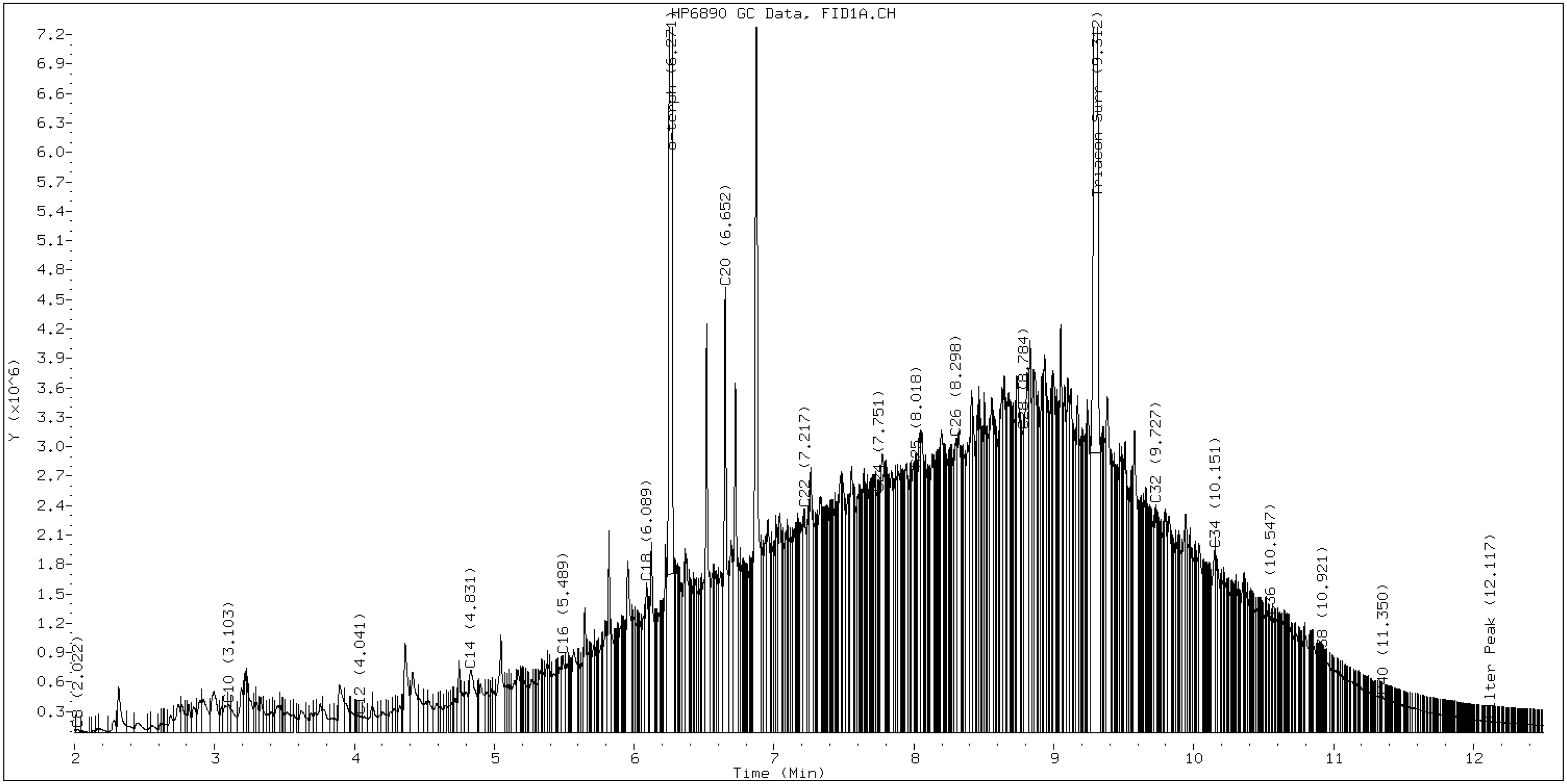
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	21770158	127.6	M
Triacontane	19585043	138.5	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

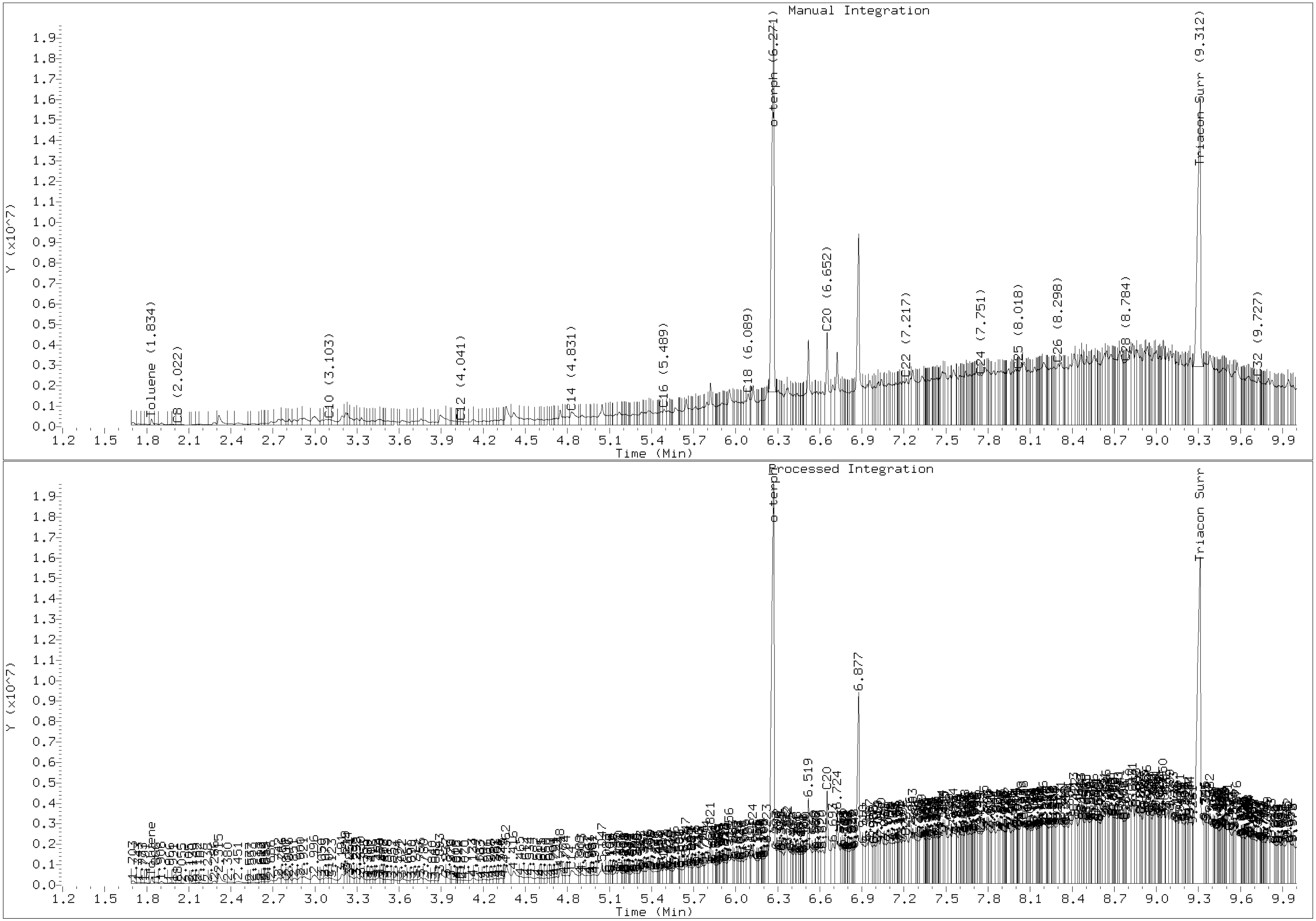
Datafile: FID4A, 20210217.b/421B1734.D 21A0361-15



TPH Manual Integrations Report

Datafile: FID4A, 20210217.b/421B1734.D Injection: 17-FEB-2021 22:17

Lab ID:21A0361-15



Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10NE-1

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-17 A	SDG:	21A0361
Sampled:	01/25/21 12:15	Prepared:	02/05/21 12:05	File ID:	421B1735.D
% Solids:	79.23	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/17/21 22:38
Batch:	BJB0148	Sequence:	SJB0251	Initial/Final:	10.04 g Wet / 10 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	2040		29.4	62.9
RRO	Motor Oil Range Organics (C24-C38)	1	4220		37.6	126

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	14.143	13.5	95.1	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1735.D

Page 1

Date : 17-FEB-2021 22:38

Client ID:

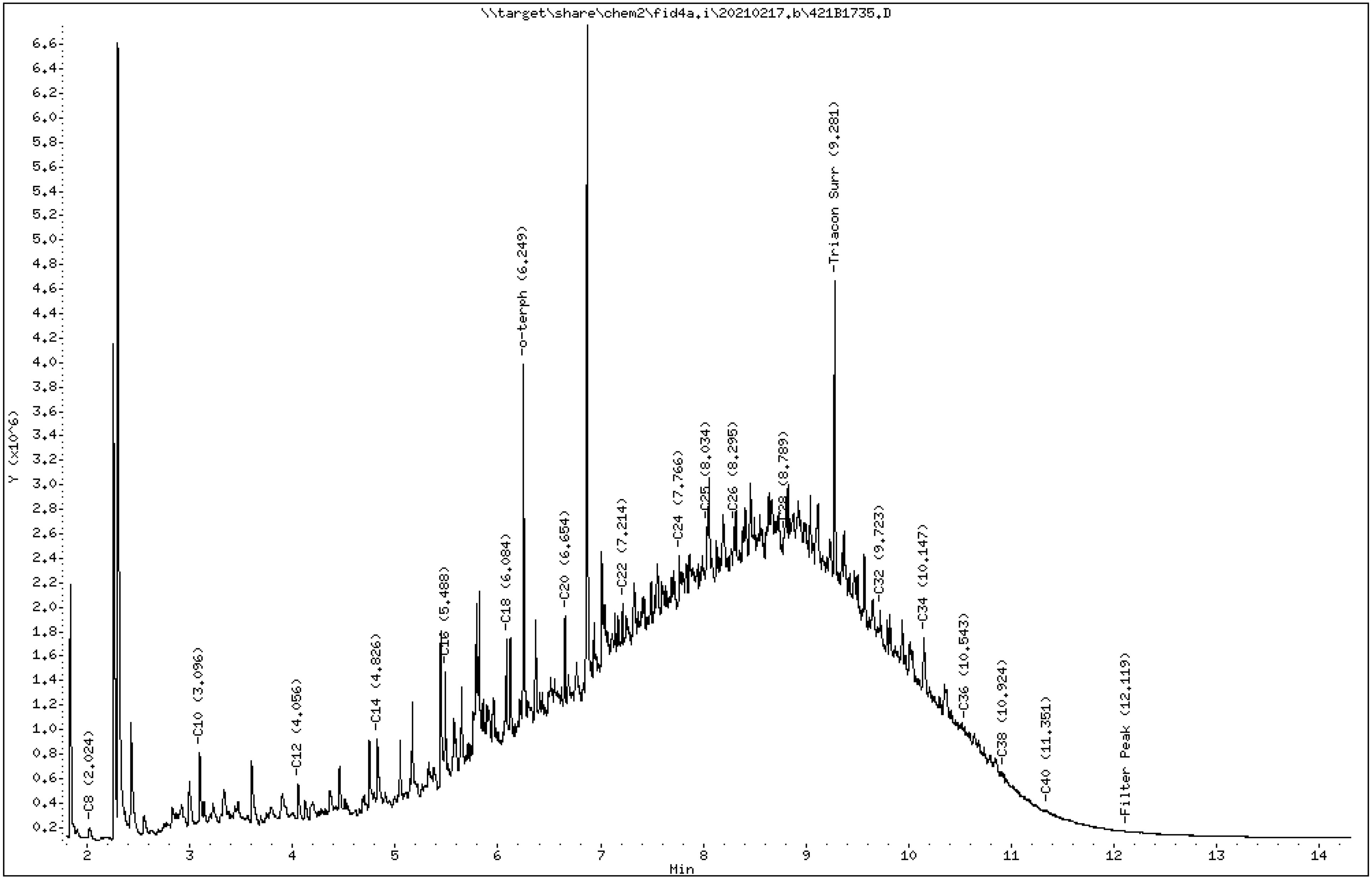
Instrument: fid4a.i

Sample Info: 21A0361-17

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1735.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-17
Client ID:
Injection: 17-FEB-2021 22:38
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.024	0.014	104889	180557	WATPHD	(C12-C24)	223552433	1625.9
C10	3.096	0.005	719807	1152113	WATPHM	(C24-C38)	341569035	3355.0
C12	4.056	0.003	456078	878331	AK102	(C10-C25)	258581196	1538.6
C14	4.826	0.000	822783	1914894	AK103	(C25-C36)	306652022	4079.1
C16	5.488	-0.001	1373138	1573242	OR.DIES	(C10-C28)	383206395	1955.1
C18	6.084	-0.002	1645794	1574690				
C20	6.654	0.001	1831845	2742115	JET-A	(C10-C18)	81456205	491.1
C22	7.214	0.003	1935035	2192102				
C24	7.766	0.006	2320285	2271818				
C25	8.034	0.006	2564182	2951889				
C26	8.295	0.007	2559375	3494557				
C28	8.789	-0.002	2479904	494885				
C32	9.723	0.002	1874570	2287798				
C34	10.147	0.004	1649504	3690481				
Filter Peak	12.119	-0.003	72072	35829	BUNKERC	(C10-C38)	579417380	14677.3
C36	10.543	-0.001	922357	669700				
C38	10.924	-0.002	545010	568974				
C40	11.351	0.001	241011	154301				
o-terph	6.249	-0.016	2888580	1823592				
Triacon Surr	9.281	-0.016	2409351	1883870	NAS DIES	(C10-C24)	237848346	1218.8

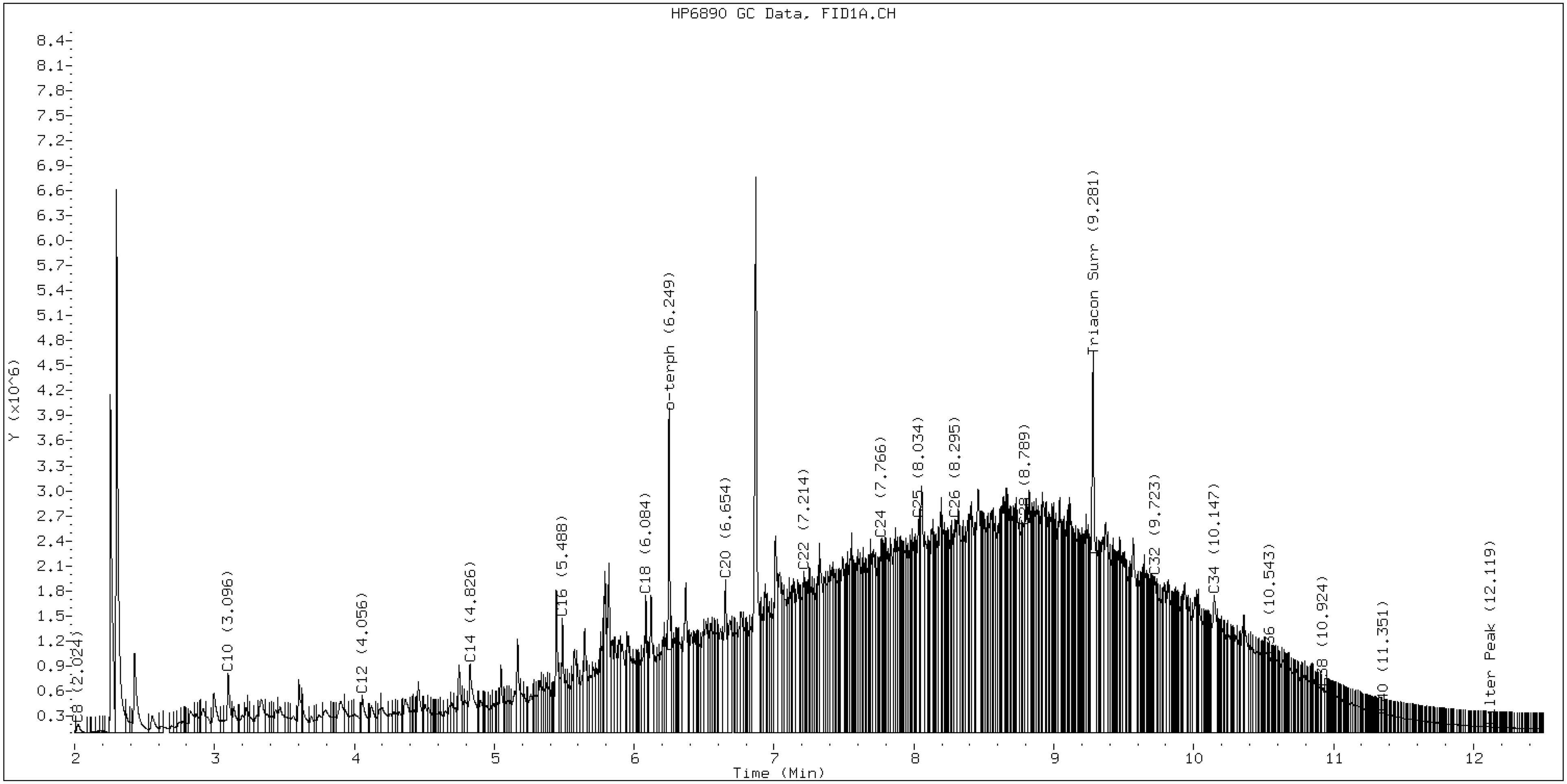
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	1823592	10.7	M
Triacontane	1883870	13.3	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

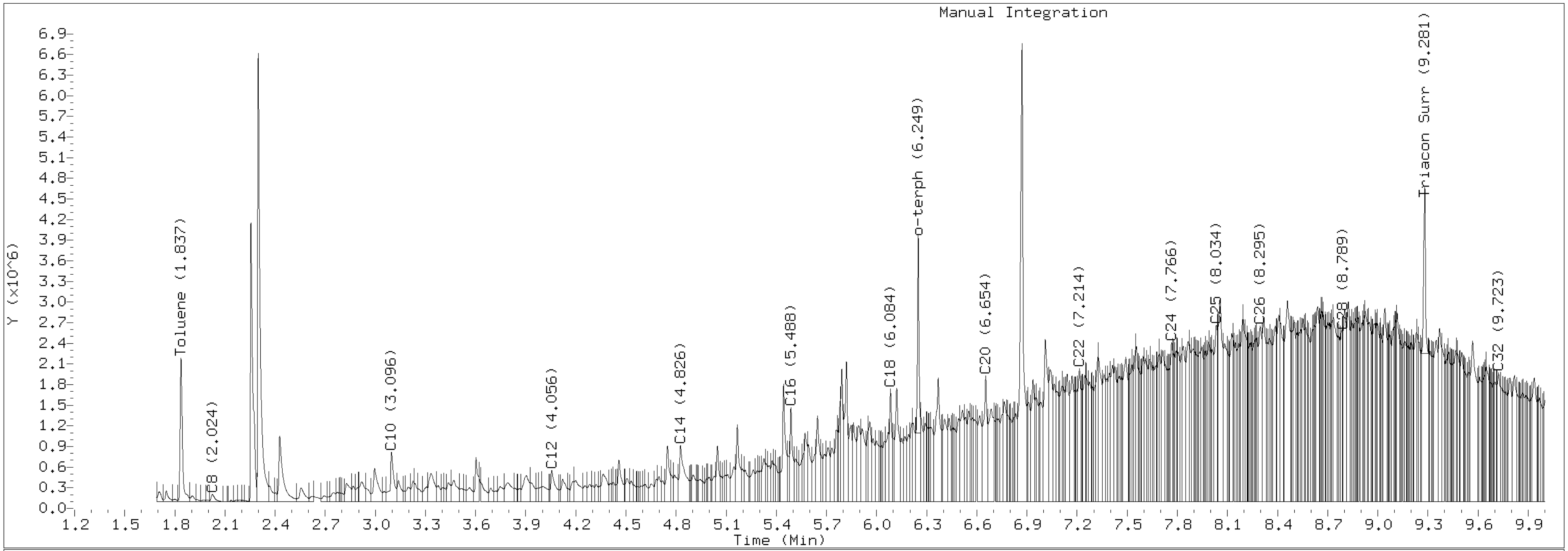
Datafile: FID4A, 20210217.b/421B1735.D 21A0361-17

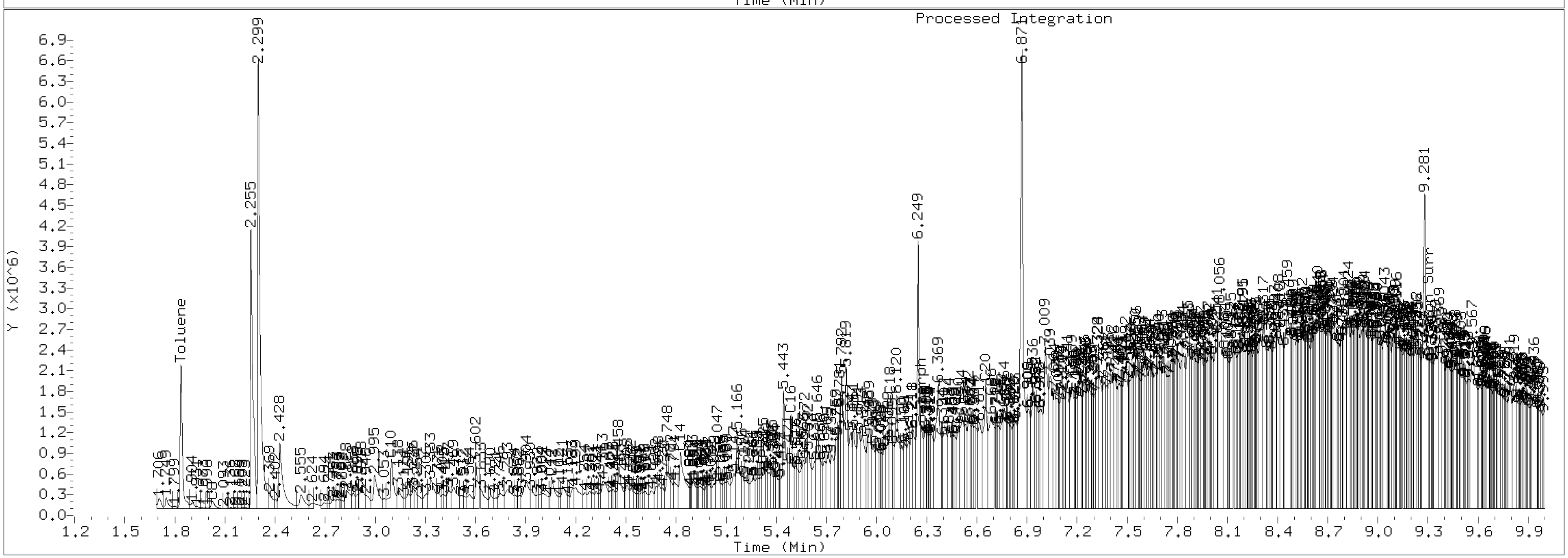


TPH Manual Integrations Report

Datafile: FID4A, 20210217.b/421B1735.D Injection: 17-FEB-2021 22:38

Lab ID:21A0361-17





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10NE-5

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	21A0361-19 A	SDG:	21A0361
Sampled:	01/25/21 12:25	Prepared:	02/05/21 12:05	File ID:	421B1736.D
% Solids:	83.72	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/17/21 22:58
Batch:	BJB0148	Sequence:	SJB0251	Initial/Final:	10.04 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	208		2.78	5.95
RRO	Motor Oil Range Organics (C24-C38)	1	390		3.56	11.9

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	13.384	14.8	111	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1736.D

Page 1

Date : 17-FEB-2021 22:58

Client ID:

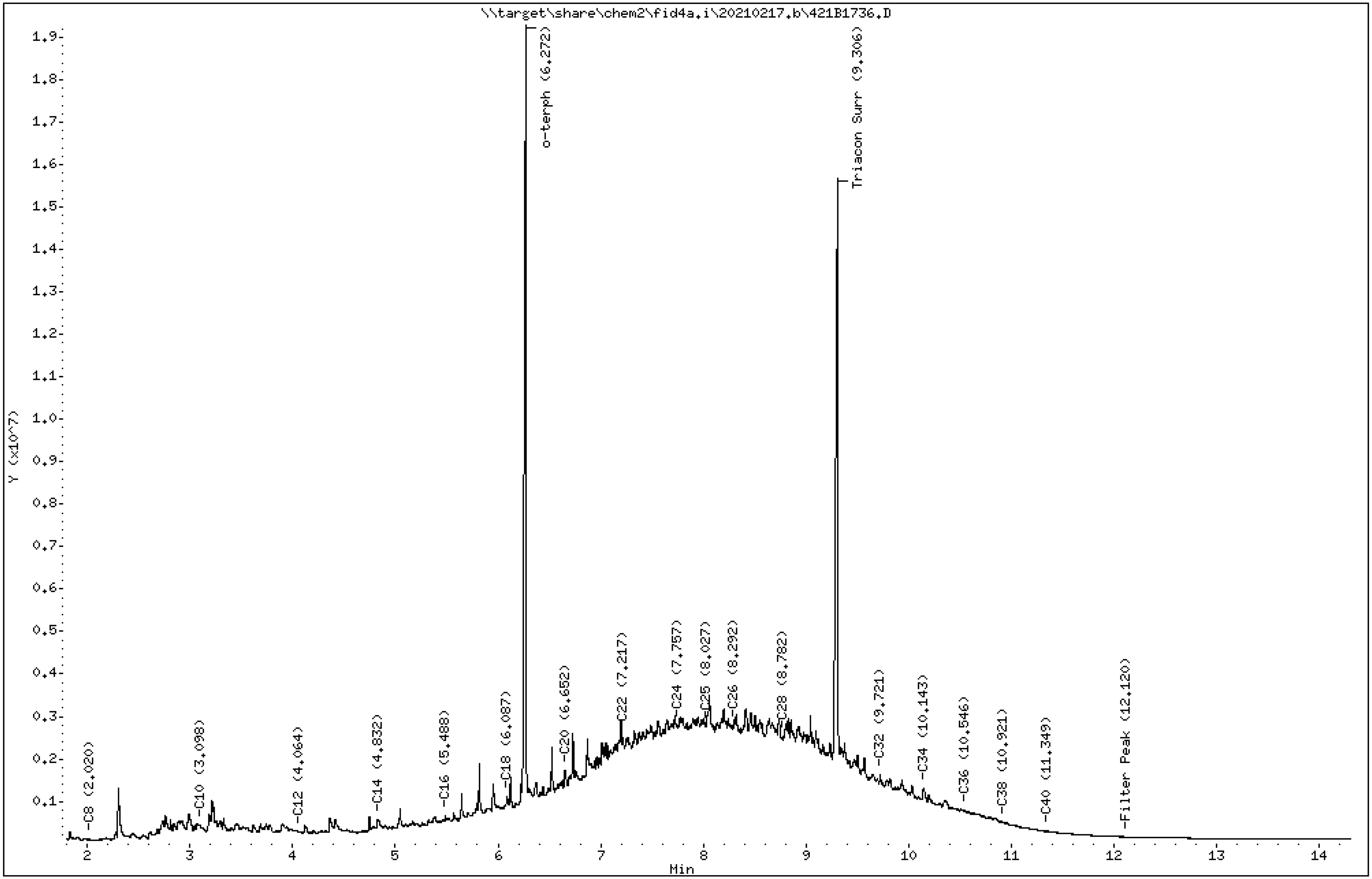
Instrument: fid4a.i

Sample Info: 21A0361-19

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1736.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-19
Client ID:
Injection: 17-FEB-2021 22:58
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.020	0.009	24118	35740	WATPHD	(C12-C24)	240616530	1750.0
C10	3.098	0.007	361213	463543	WATPHM	(C24-C38)	333435858	3275.2
C12	4.064	0.011	189933	102474	AK102	(C10-C25)	285440563	1698.4
C14	4.832	0.006	482621	1474325	AK103	(C25-C36)	296246655	3940.6
C16	5.488	-0.000	573523	888276	OR.DIES	(C10-C28)	423437871	2160.4
C18	6.087	0.002	1041585	2034091				
C20	6.652	-0.000	1648255	1163266	JET-A	(C10-C18)	72941774	439.8
C22	7.217	0.006	2426130	2436606				
C24	7.757	-0.003	2695621	804284				
C25	8.027	-0.002	2684283	803566				
C26	8.292	0.003	2693430	931954				
C28	8.782	-0.010	2448908	1207485				
C32	9.721	-0.000	1545651	1792363				
C34	10.143	0.001	1230430	1625283				
Filter Peak	12.120	-0.002	78273	19526	BUNKERC	(C10-C38)	592785543	15015.9
C36	10.546	0.002	693788	374606				
C38	10.921	-0.005	433462	315534				
C40	11.349	-0.001	212401	216176				
o-terph	6.272	0.006	18050755	21237079				
Triacon Surr	9.306	0.009	13682116	18850887	NAS DIES	(C10-C24)	259349685	1329.0

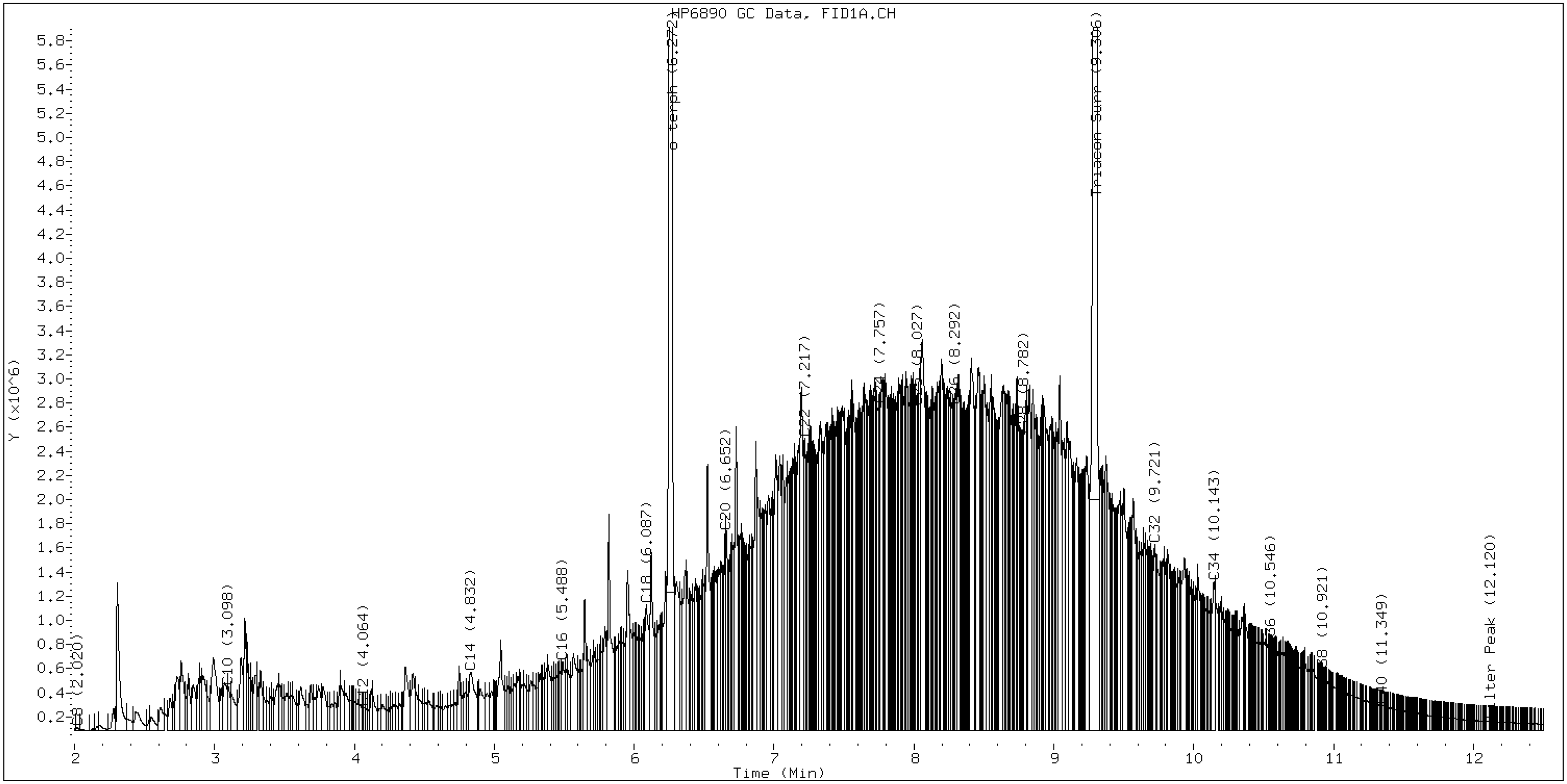
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	21237079	124.5	M
Triacontane	18850887	133.3	M

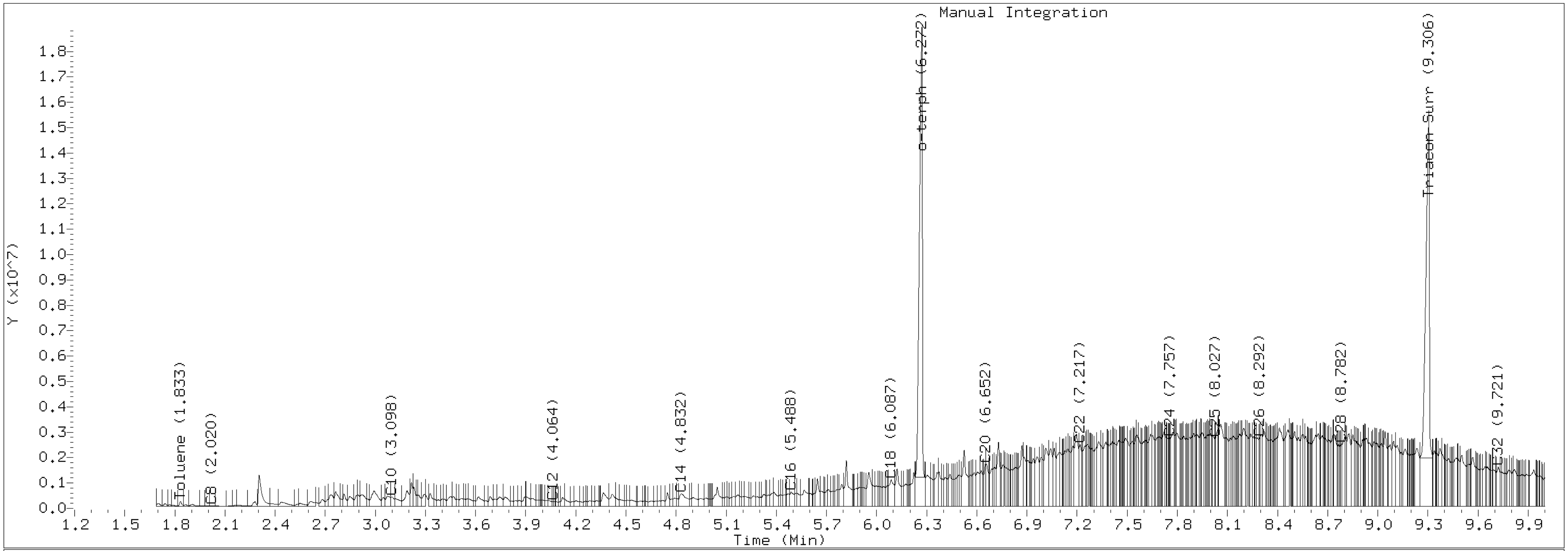
M Indicates the peak was manually integrated

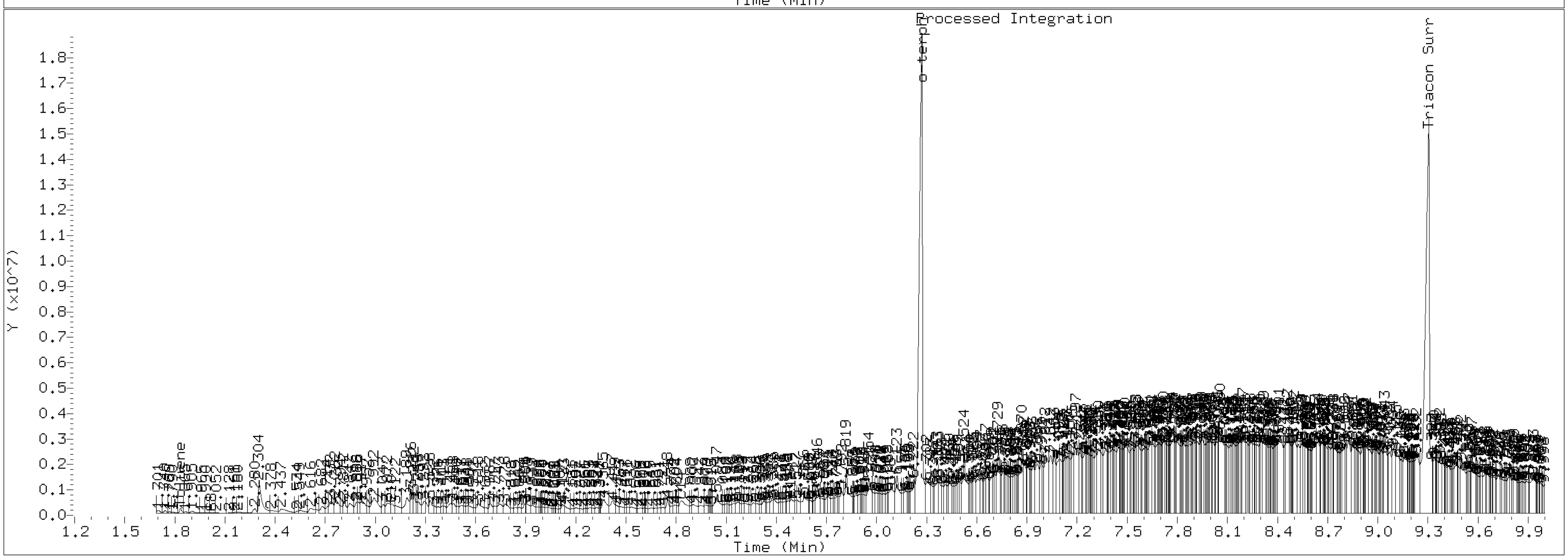
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210217.b/421B1736.D   21A0361-19



TPH Manual Integrations Report
Datafile: FID4A, 20210217.b/421B1736.D Injection: 17-FEB-2021 22:58
Lab ID:21A0361-19





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-7W-1

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-21 A	SDG:	21A0361
Sampled:	01/25/21 10:40	Prepared:	02/05/21 12:05	File ID:	421B2268.D
% Solids:	94.12	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/23/21 09:28
Batch:	BJB0148	Sequence:	SJB0344	Initial/Final:	10.04 g Wet / 10 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	10	4800	D	248	529
RRO	Motor Oil Range Organics (C24-C38)	10	11600	D	316	1060

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	11.905	13.8	116	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2268.D

Date : 23-FEB-2021 09:28

Client ID:

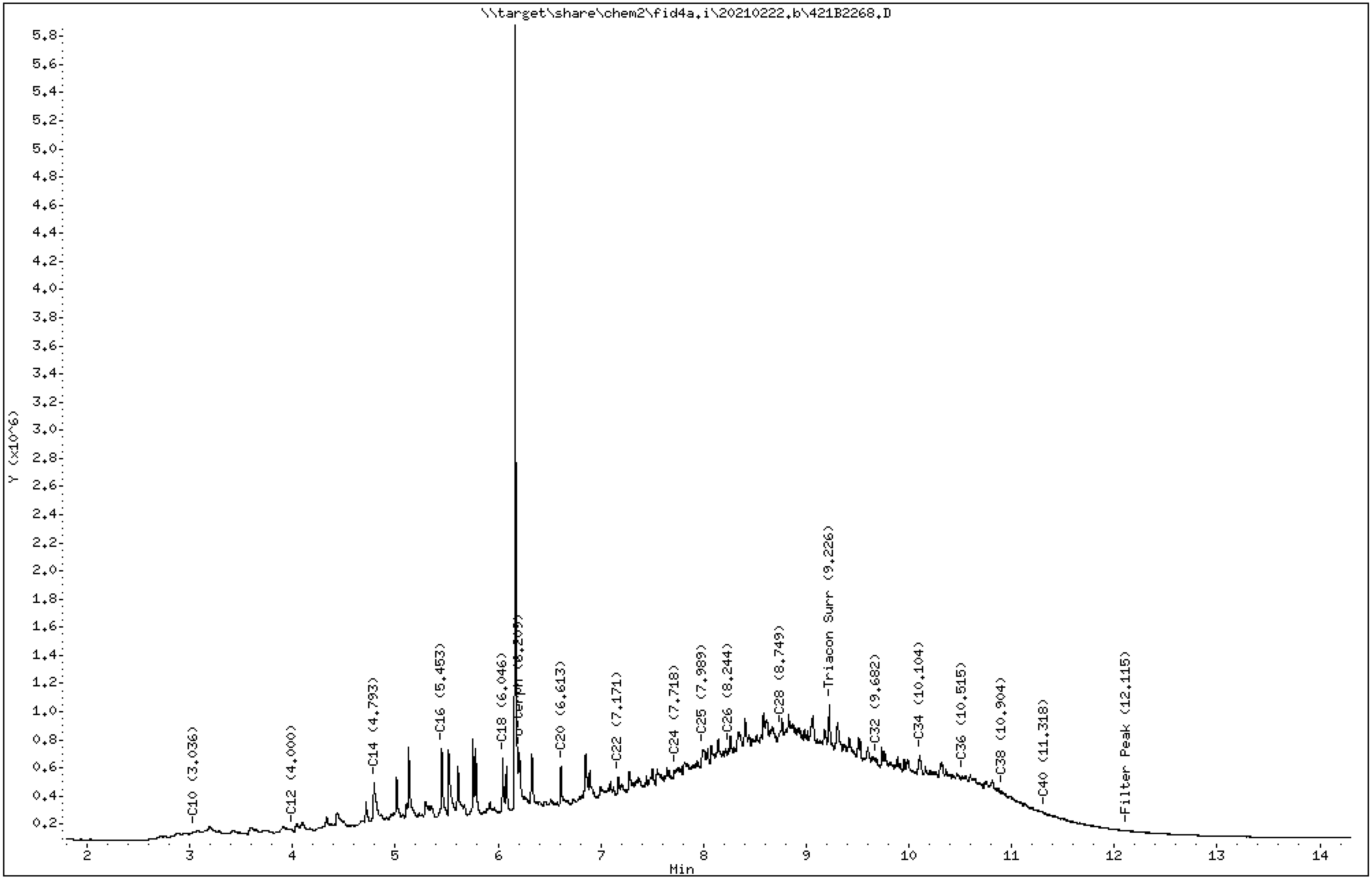
Instrument: fid4a.i

Sample Info: 21A0361-21,10

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2268.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-21
Client ID:
Injection: 23-FEB-2021 09:28
Dilution Factor: 10
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.903	-0.001	3824	947	WATPHD	(C12-C24)	62393651	453.8
C10	3.036	0.002	54308	16182	WATPHM	(C24-C38)	111585437	1096.0
C12	4.000	-0.011	71458	80733	AK102	(C10-C25)	71335350	424.4
C14	4.793	0.005	408434	1265009	AK103	(C25-C36)	98128126	1305.3
C16	5.453	-0.001	648839	966507	OR.DIES	(C10-C28)	106239116	542.0
C18	6.046	-0.005	580639	811170				
C20	6.613	-0.004	526374	901216	JET-A	(C10-C18)	27599022	166.4
C22	7.171	-0.004	449716	752729				
C24	7.718	-0.005	494896	453480				
C25	7.989	0.000	639691	629066				
C26	8.244	-0.006	646987	630421				
C28	8.749	-0.005	776025	270940				
C32	9.682	-0.001	573444	283321				
C34	10.104	-0.005	606569	722168				
Filter Peak	12.115	-0.001	66949	19993	BUNKERC	(C10-C38)	178105407	4511.6
C36	10.515	0.002	453137	445264				
C38	10.904	0.004	346968	185924				
C40	11.318	-0.001	189889	75266				
o-terph	6.209	-0.017	248369	221163				
Triacon Surr	9.226	-0.030	266319	208456	NAS DIES	(C10-C24)	66519970	340.9

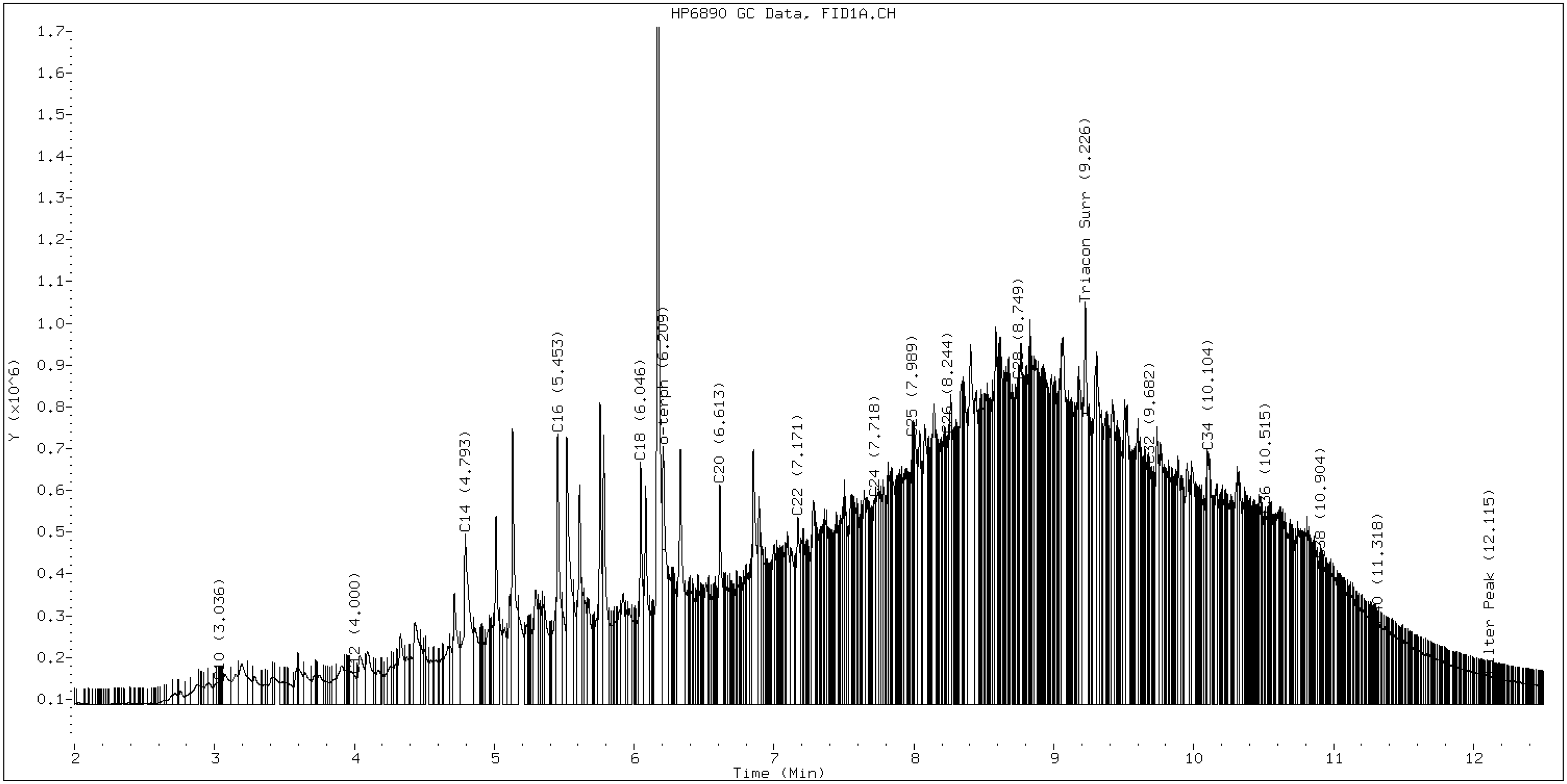
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	221163	1.3	M
Triacontane	208456	1.5	M

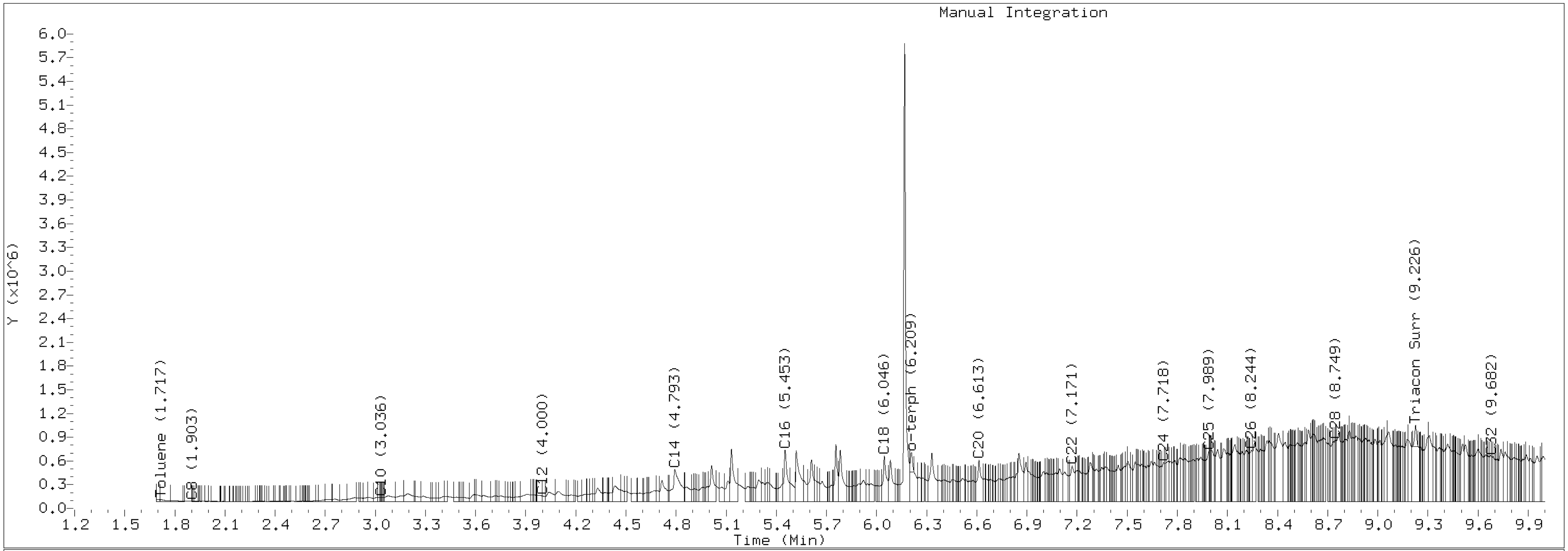
M Indicates the peak was manually integrated

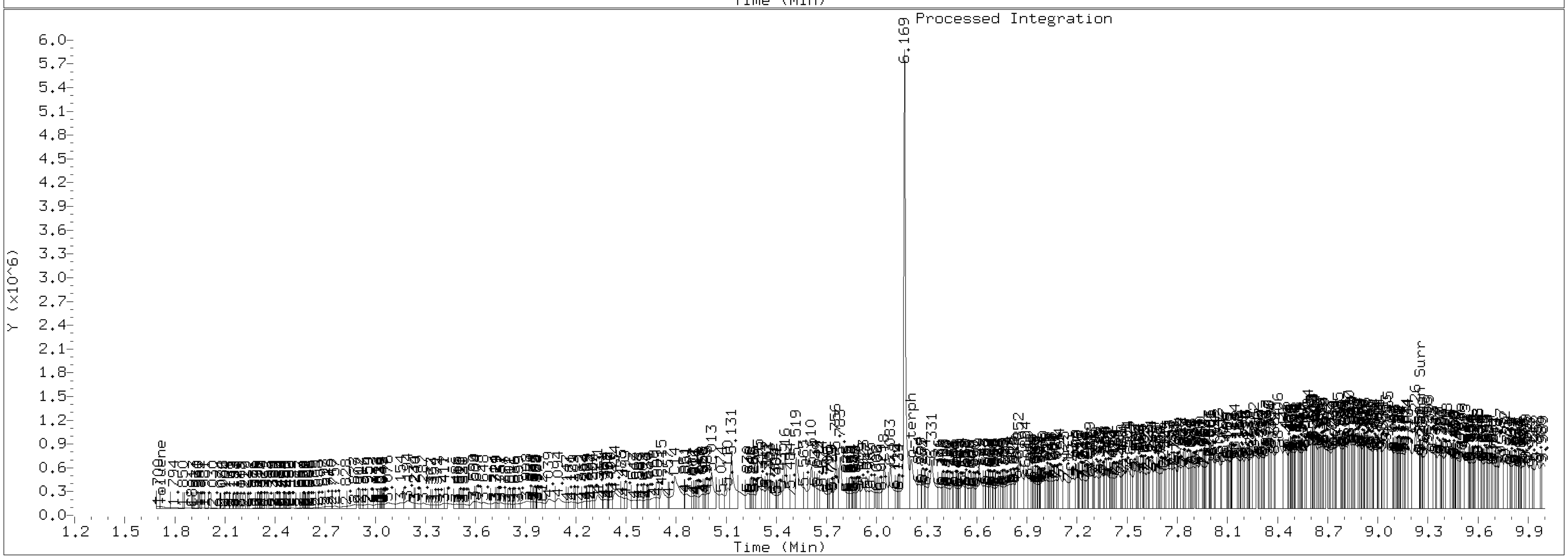
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210222.b/421B2268.D 21A0361-21



TPH Manual Integrations Report
Datafile: FID4A, 20210222.b/421B2268.D Injection: 23-FEB-2021 09:28
Lab ID:21A0361-21





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-7W-5

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-23 A	SDG:	21A0361
Sampled:	01/25/21 10:50	Prepared:	02/05/21 12:05	File ID:	421B1738.D
% Solids:	87.83	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/17/21 23:40
Batch:	BJB0148	Sequence:	SJB0251	Initial/Final:	10.04 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	84.9		2.65	5.67
RRO	Motor Oil Range Organics (C24-C38)	1	141		3.39	11.3

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	12.758	13.2	103	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1738.D

Date : 17-FEB-2021 23:40

Client ID:

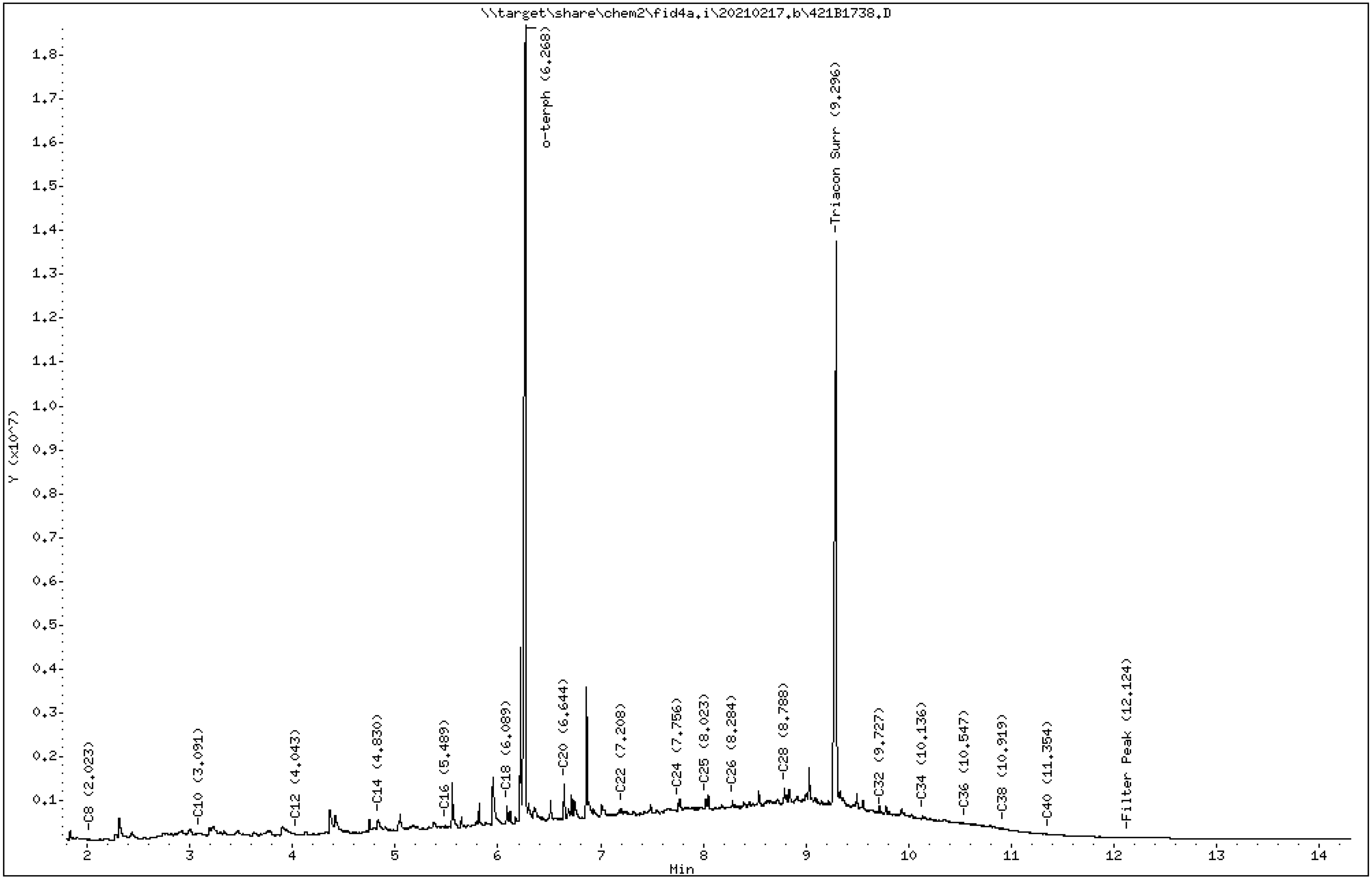
Instrument: fid4a.i

Sample Info: 21A0361-23

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1738.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-23
Client ID:
Injection: 17-FEB-2021 23:40
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.023	0.012	21331	32700	WATPHD	(C12-C24)	102906883	748.4
C10	3.091	0.000	159602	31882	WATPHM	(C24-C38)	126400796	1241.6
C12	4.043	-0.011	140156	199804	AK102	(C10-C25)	119690791	712.2
C14	4.830	0.004	455446	363389	AK103	(C25-C36)	112218988	1492.7
C16	5.489	0.000	344842	511548	OR.DIES	(C10-C28)	163236002	832.8
C18	6.089	0.003	768556	1140042				
C20	6.644	-0.008	1286759	1798457	JET-A	(C10-C18)	47577054	286.9
C22	7.208	-0.004	709708	792096				
C24	7.756	-0.004	851030	950375				
C25	8.023	-0.006	950493	1313861				
C26	8.284	-0.004	891338	1068887				
C28	8.788	-0.004	1175749	1456844				
C32	9.727	0.006	639576	127783				
C34	10.136	-0.007	550531	1046808				
Filter Peak	12.124	0.003	61088	45424	BUNKERC	(C10-C38)	238809280	6049.3
C36	10.547	0.003	385899	303074				
C38	10.919	-0.007	266107	346764				
C40	11.354	0.003	138808	34501				
o-terph	6.268	0.002	17968355	19853289				
Triacon Surr	9.296	-0.001	12832164	17377058	NAS DIES	(C10-C24)	112408484	576.0

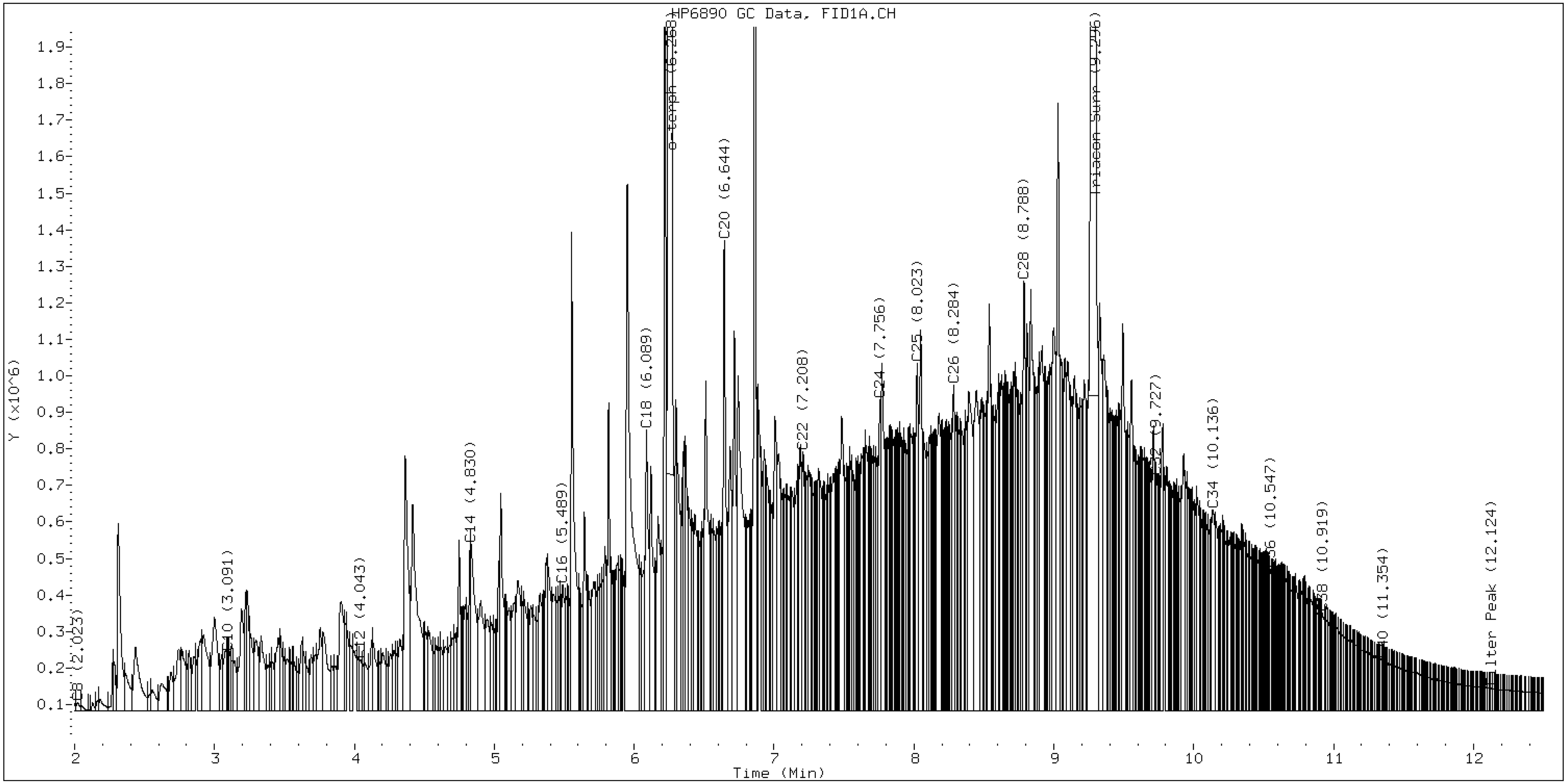
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	19853289	116.4	M
Triacontane	17377058	122.9	M

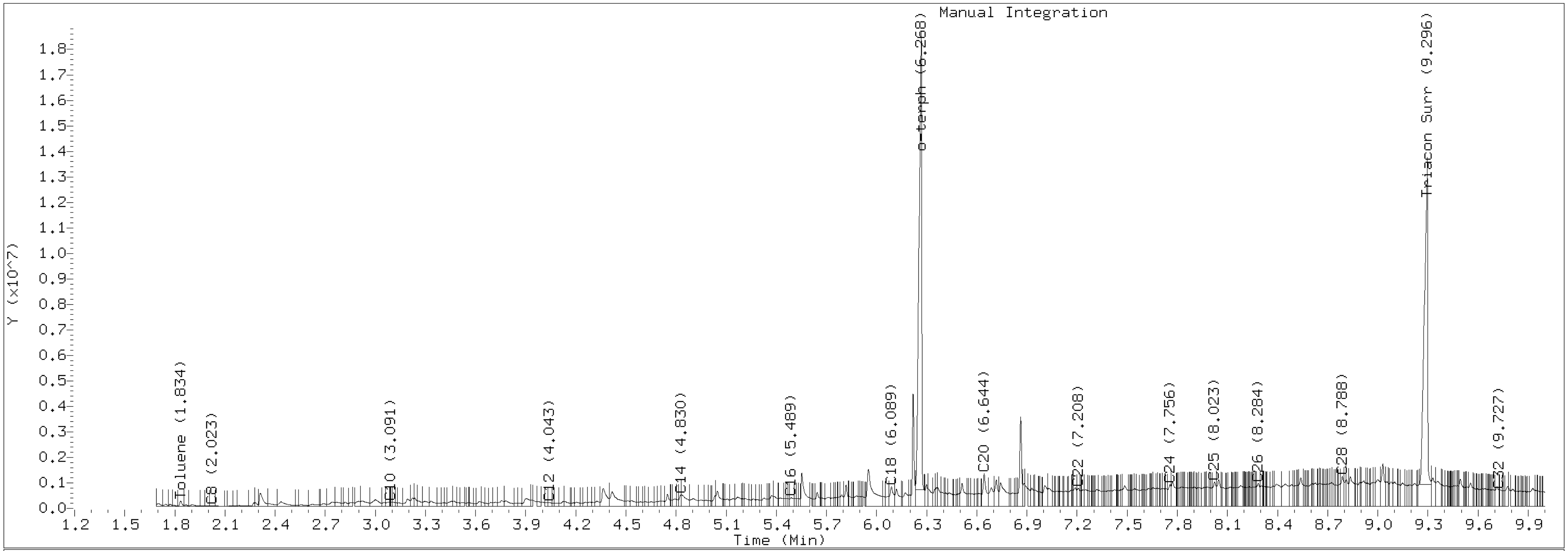
M Indicates the peak was manually integrated

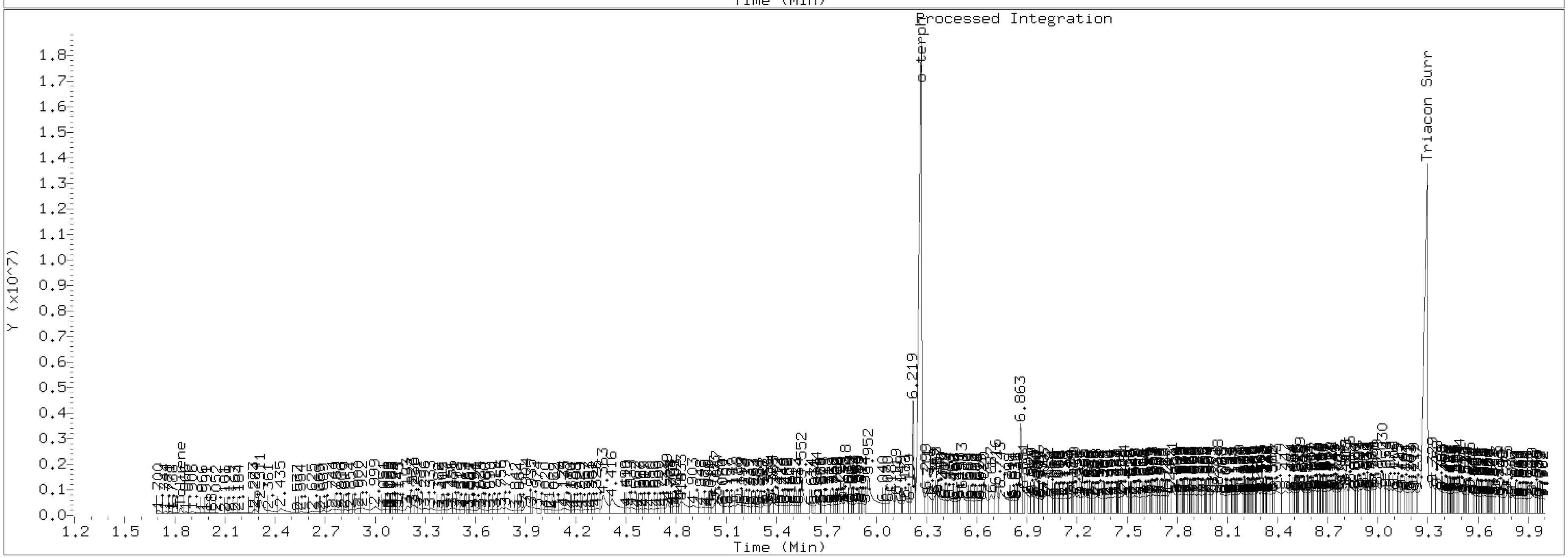
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210217.b/421B1738.D 21A0361-23



TPH Manual Integrations Report
Datafile: FID4A, 20210217.b/421B1738.D Injection: 17-FEB-2021 23:40
Lab ID:21A0361-23





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10E-1

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-25 A	SDG:	21A0361
Sampled:	01/25/21 11:30	Prepared:	02/05/21 12:05	File ID:	421B2269.D
% Solids:	92.94	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/23/21 09:49
Batch:	BJB0148	Sequence:	SJB0344	Initial/Final:	10.04 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	20	2550	D	50.2	107
RRO	Motor Oil Range Organics (C24-C38)	20	5040	D	64.1	214

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	12.056	13.7	114	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2269.D

Date : 23-FEB-2021 09:49

Client ID:

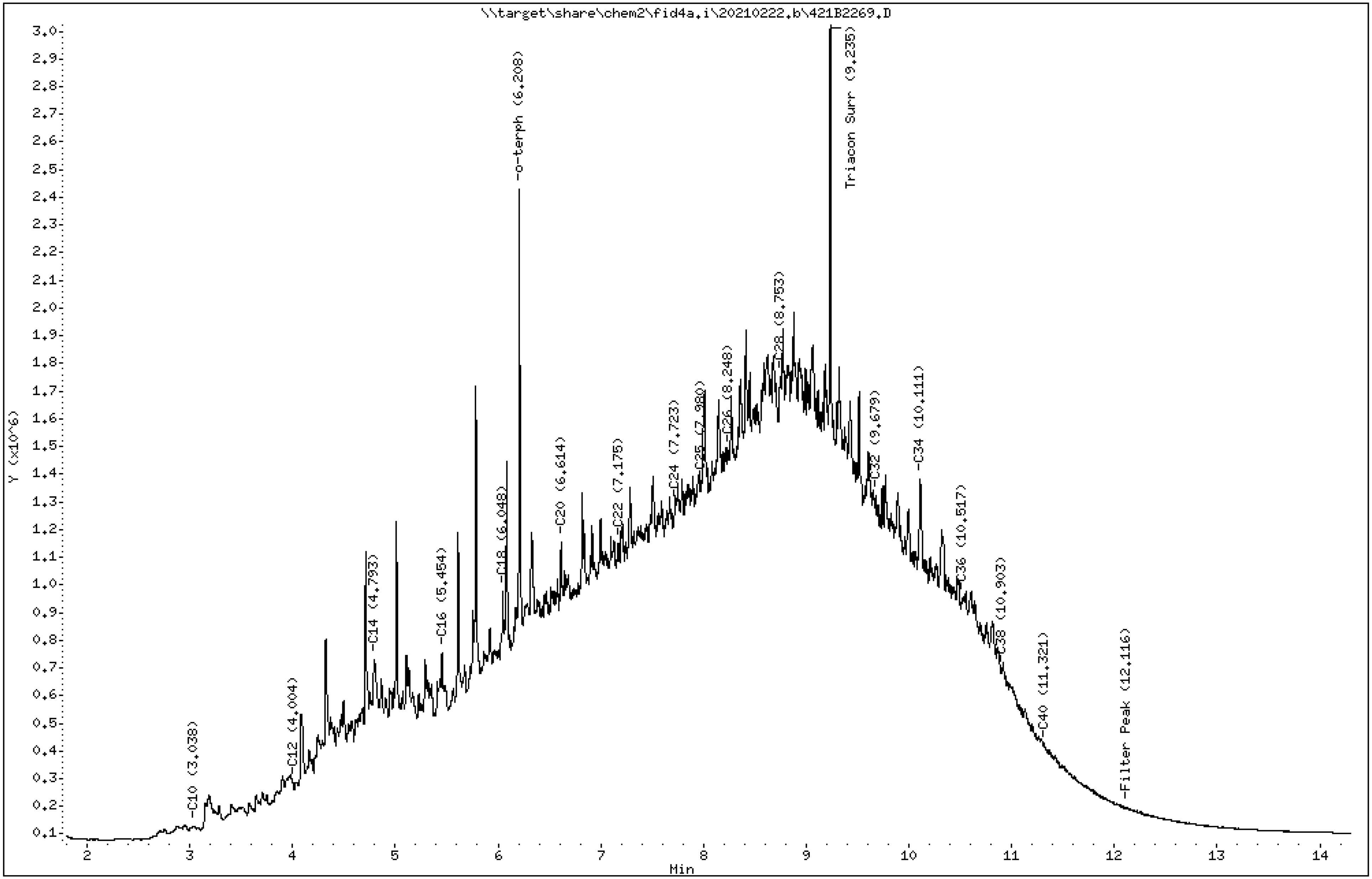
Instrument: fid4a.i

Sample Info: 21A0361-25,20

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2269.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-25
Client ID:
Injection: 23-FEB-2021 09:49
Dilution Factor: 20
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.916	0.012	6963	14799	WATPHD	(C12-C24)	163381542	1188.2
C10	3.038	0.003	48027	42238	WATPHM	(C24-C38)	239497885	2352.5
C12	4.004	-0.008	208233	186278	AK102	(C10-C25)	183412313	1091.3
C14	4.793	0.006	651730	624186	AK103	(C25-C36)	210686502	2802.5
C16	5.454	0.001	675392	958849	OR.DIES	(C10-C28)	261248319	1332.9
C18	6.048	-0.003	899856	1408952				
C20	6.614	-0.003	1077374	1369696	JET-A	(C10-C18)	72237998	435.6
C22	7.175	-0.000	1073703	782187				
C24	7.723	-0.000	1211689	710324				
C25	7.980	-0.009	1280071	255695				
C26	8.248	-0.001	1409982	559018				
C28	8.753	-0.000	1674694	663465				
C32	9.679	-0.003	1242682	790097				
C34	10.111	0.002	1303911	2680237				
Filter Peak	12.116	-0.001	116720	34731	BUNKERC	(C10-C38)	410790989	10405.8
C36	10.517	0.003	876374	431765				
C38	10.903	0.002	610359	151982				
C40	11.321	0.002	340559	168538				
o-terph	6.208	-0.018	1533672	1087156				
Triacon Surr	9.235	-0.021	1419276	1055662	NAS DIES	(C10-C24)	171293104	877.8

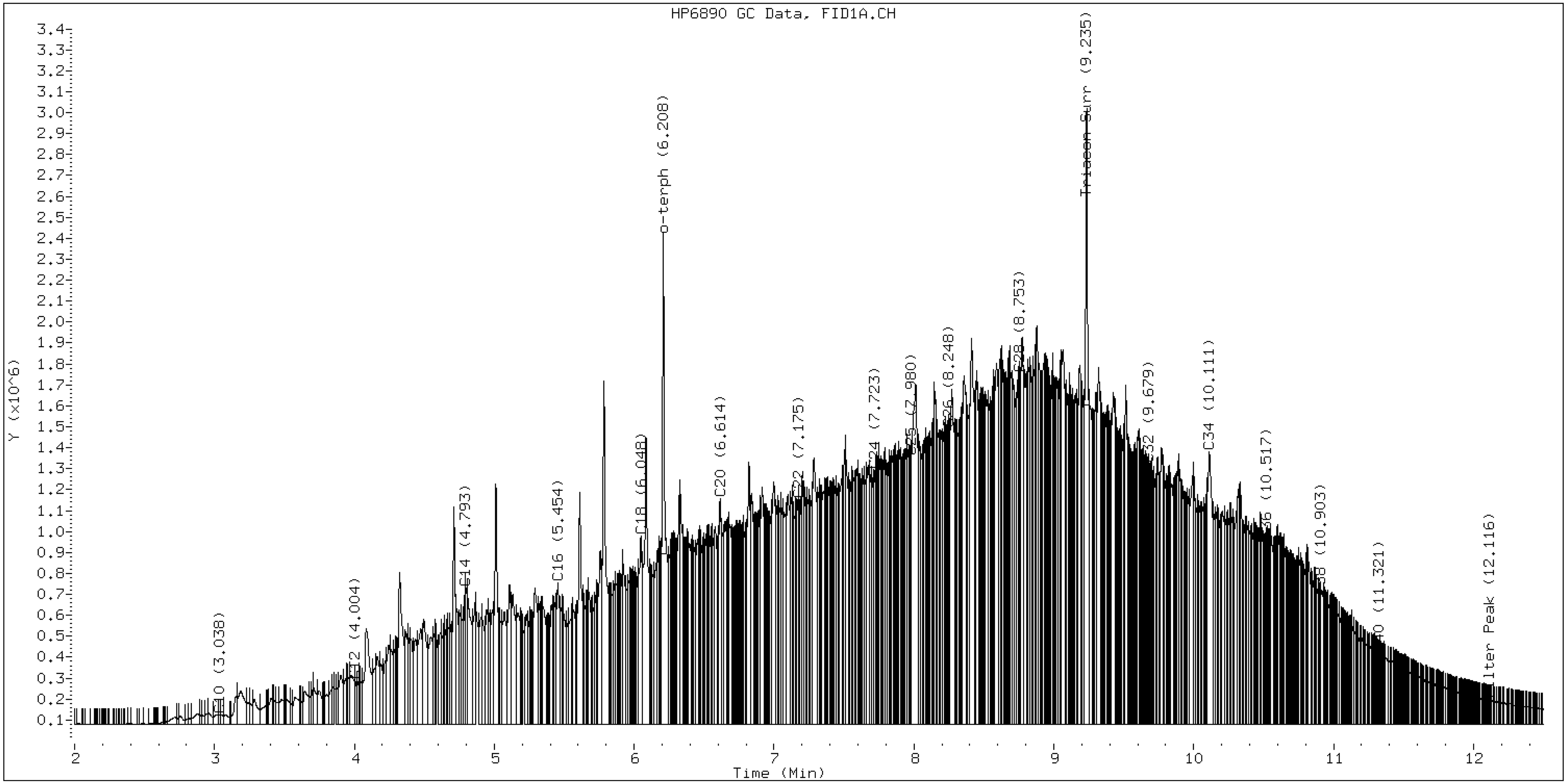
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	1087156	6.4	M
Triacontane	1055662	7.5	M

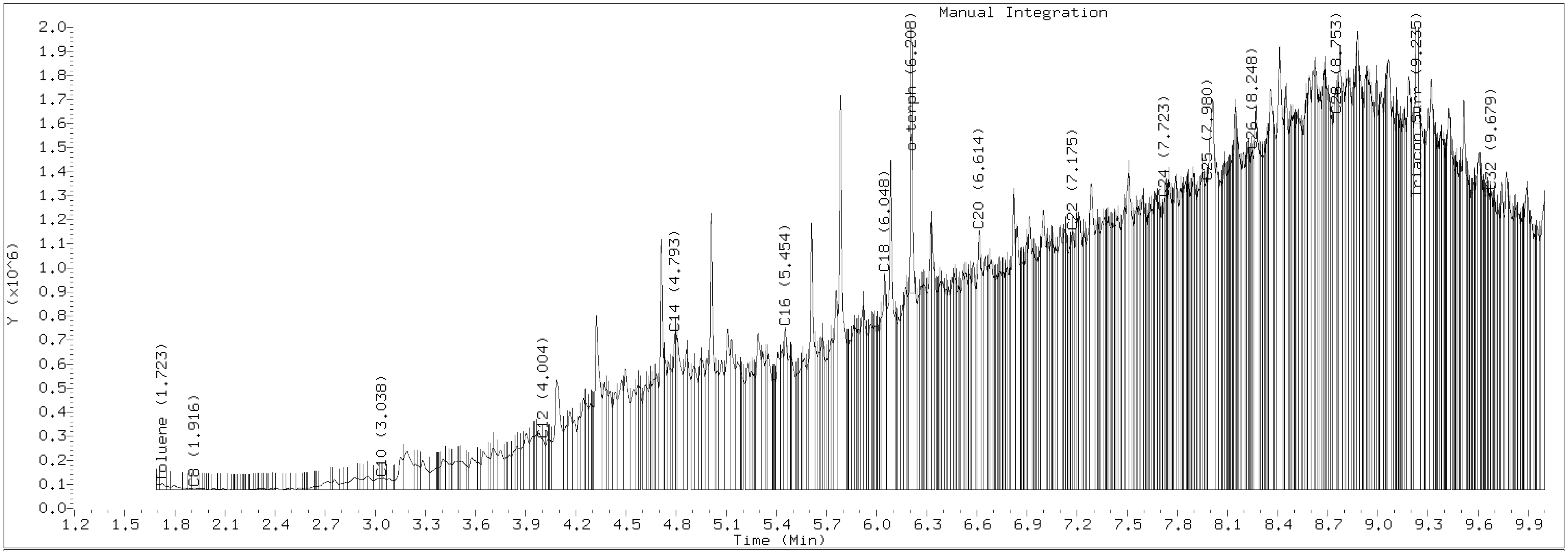
M Indicates the peak was manually integrated

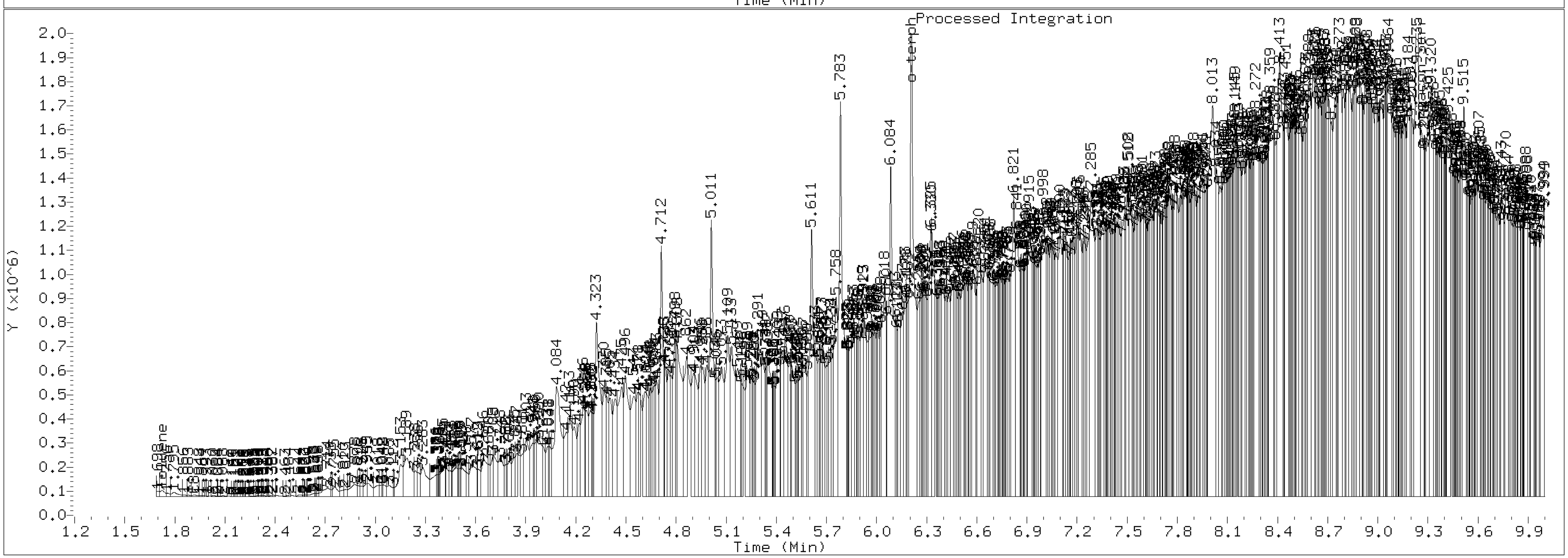
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210222.b/421B2269.D 21A0361-25



TPH Manual Integrations Report
Datafile: FID4A, 20210222.b/421B2269.D Injection: 23-FEB-2021 09:49
Lab ID:21A0361-25





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10E-5

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	21A0361-27 A	SDG:	21A0361
Sampled:	01/25/21 11:40	Prepared:	02/05/21 12:05	File ID:	421B1742.D
% Solids:	88.17	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/18/21 01:02
Batch:	BJB0148	Sequence:	SJB0251	Initial/Final:	10.04 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	5	542	D	13.2	28.2
RRO	Motor Oil Range Organics (C24-C38)	5	1240	D	16.9	56.5

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	12.709	14.1	111	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1742.D

Page 1

Date : 18-FEB-2021 01:02

Client ID:

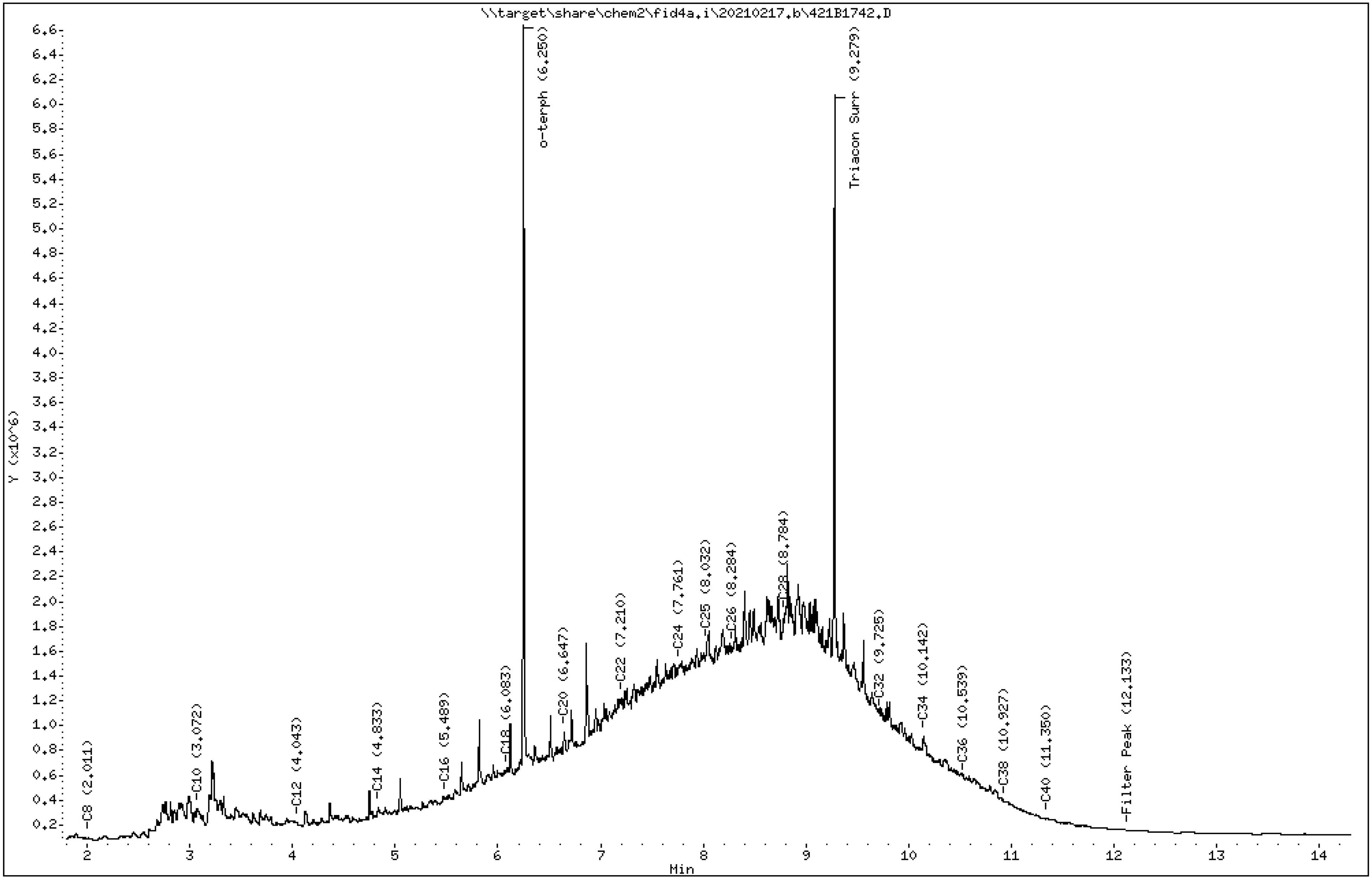
Instrument: fid4a.i

Sample Info: 21A0361-27,5

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1742.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-27
Client ID:
Injection: 18-FEB-2021 01:02
Dilution Factor: 5
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.011	0.000	16892	28728	WATPHD	(C12-C24)	132038297	960.3
C10	3.072	-0.019	252506	737570	WATPHM	(C24-C38)	224375121	2203.9
C12	4.043	-0.010	138122	127778	AK102	(C10-C25)	157564613	937.5
C14	4.833	0.008	264895	573846	AK103	(C25-C36)	202492372	2693.5
C16	5.489	0.001	341087	219613	OR.DIES	(C10-C28)	242696811	1238.3
C18	6.083	-0.002	564237	277651				
C20	6.647	-0.006	867078	1534514	JET-A	(C10-C18)	48583763	292.9
C22	7.210	-0.002	1146834	1112805				
C24	7.761	0.001	1410539	1311064				
C25	8.032	0.003	1575009	1002976				
C26	8.284	-0.005	1549445	848673				
C28	8.784	-0.008	1806252	1315029				
C32	9.725	0.004	1009886	251743				
C34	10.142	-0.001	836825	1081994				
Filter Peak	12.133	0.011	77399	57359	BUNKERC	(C10-C38)	368730692	9340.3
C36	10.539	-0.005	496240	148077				
C38	10.927	0.001	309384	61848				
C40	11.350	0.000	173260	77231				
o-terph	6.250	-0.016	5953053	4260317				
Triacon Surr	9.279	-0.017	4527280	3891442	NAS DIES	(C10-C24)	144355571	739.7

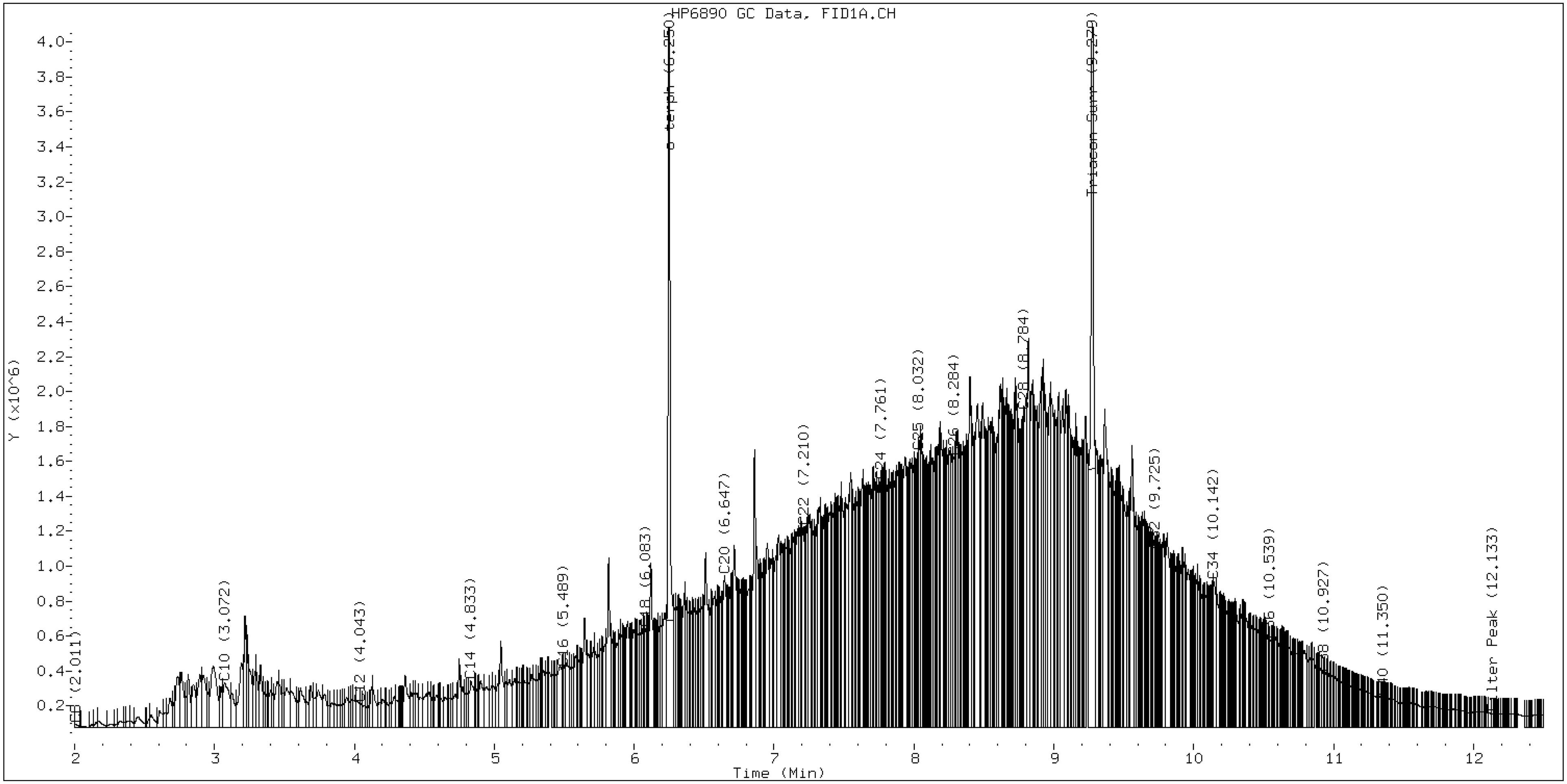
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	4260317	25.0	M
Triacontane	3891442	27.5	M

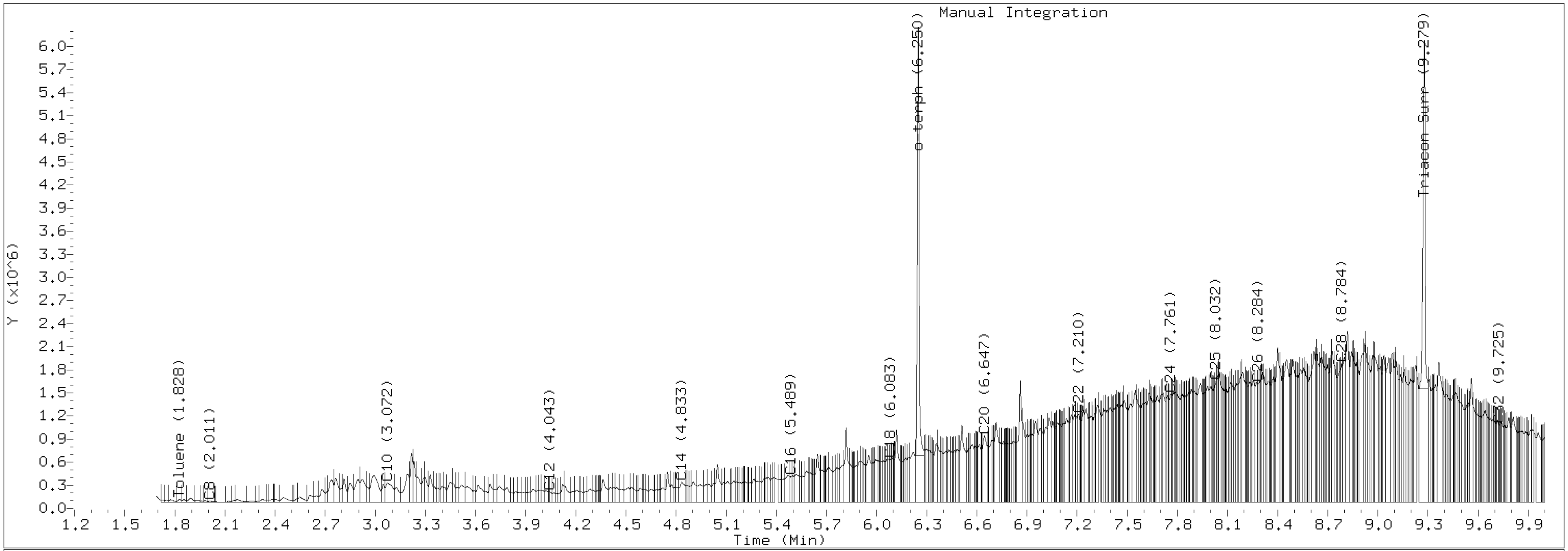
M Indicates the peak was manually integrated

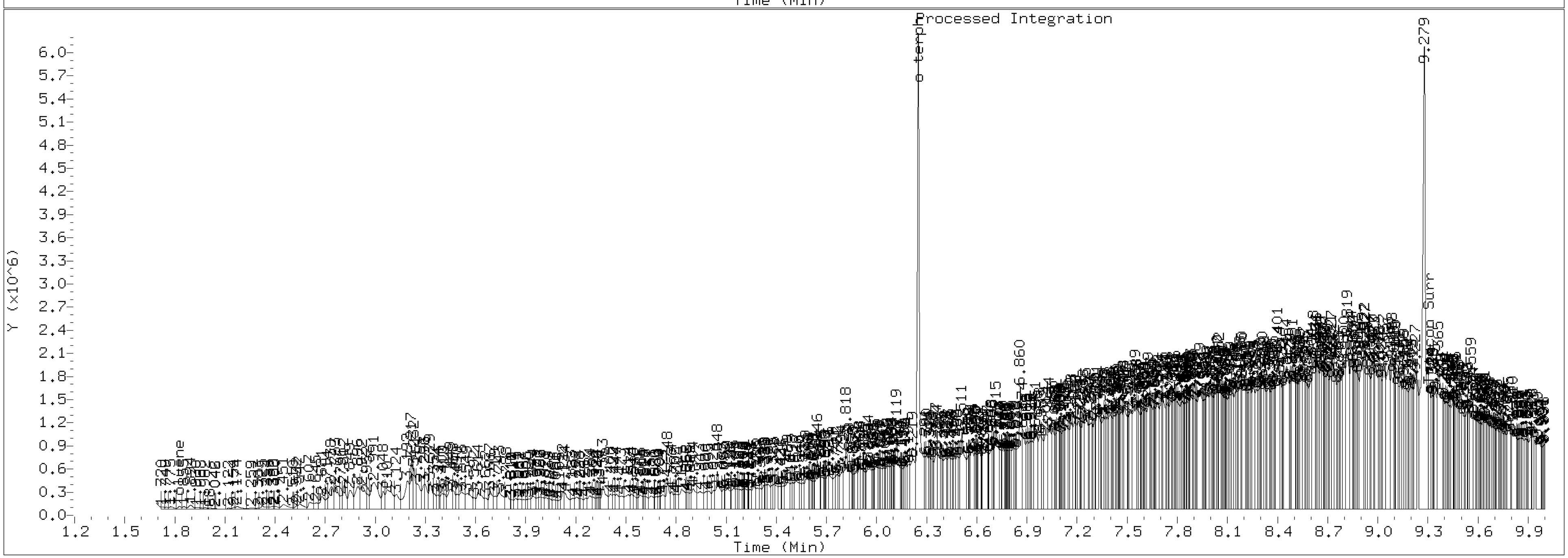
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210217.b/421B1742.D 21A0361-27



TPH Manual Integrations Report
Datafile: FID4A, 20210217.b/421B1742.D   Injection: 18-FEB-2021 01:02
Lab ID:21A0361-27





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10N-1

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	21A0361-29 A	SDG:	21A0361
Sampled:	01/25/21 09:25	Prepared:	02/05/21 12:05	File ID:	421B2270.D
% Solids:	91.04	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/23/21 10:10
Batch:	BJB0148	Sequence:	SJB0344	Initial/Final:	10.04 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	10	1190	D	25.6	54.7
RRO	Motor Oil Range Organics (C24-C38)	10	1740	D	32.7	109

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	12.308	13.0	106	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2270.D

Date : 23-FEB-2021 10:10

Client ID:

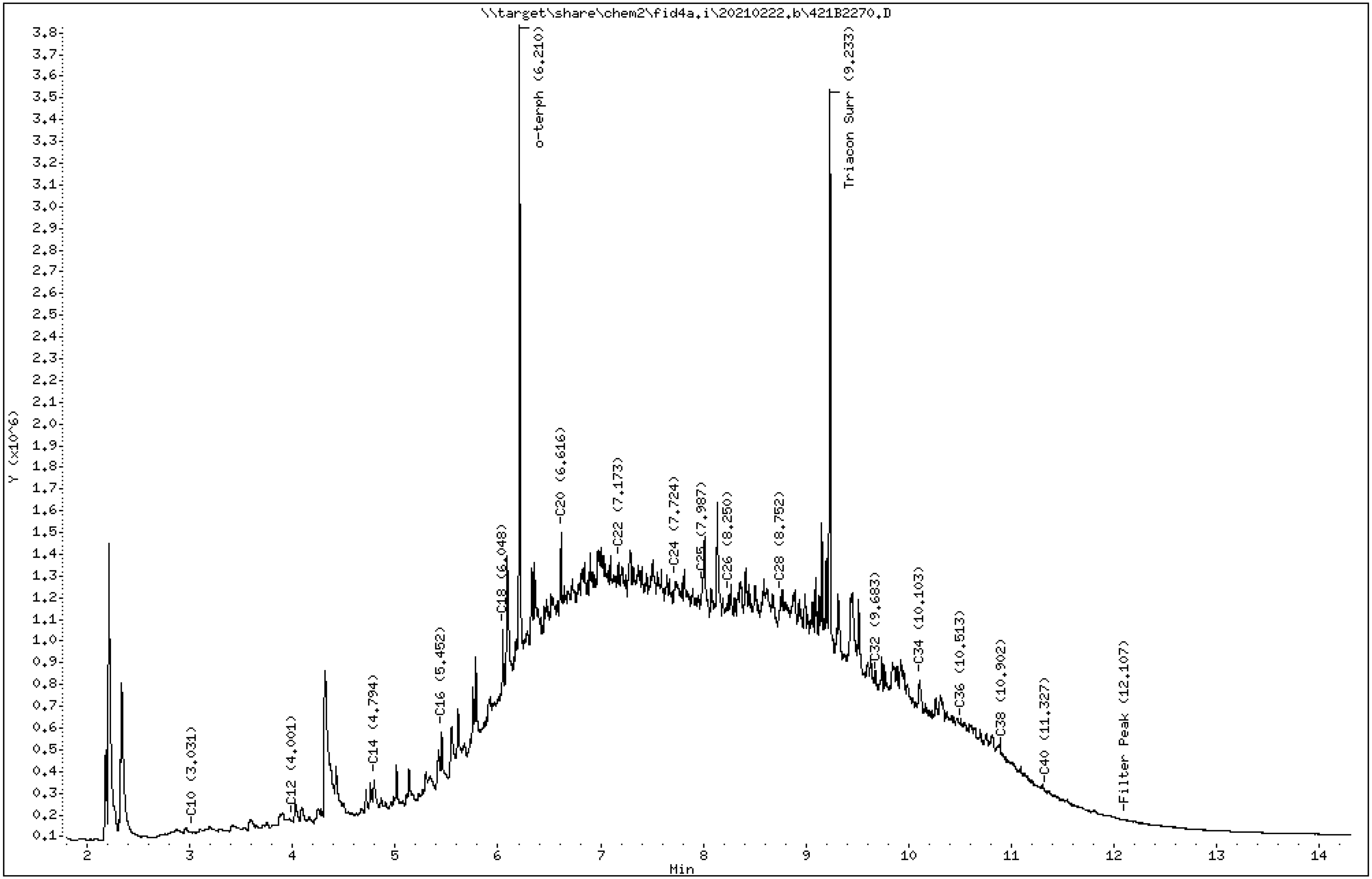
Instrument: fid4a.i

Sample Info: 21A0361-29,10

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2270.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-29
Client ID:
Injection: 23-FEB-2021 10:10
Dilution Factor: 10
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.922	0.018	6791	8342	WATPHD	(C12-C24)	150008942	1091.0
C10	3.031	-0.004	34838	10415	WATPHM	(C24-C38)	162172343	1592.9
C12	4.001	-0.011	89458	65806	AK102	(C10-C25)	165127023	982.5
C14	4.794	0.006	274662	766623	AK103	(C25-C36)	141033043	1876.0
C16	5.452	-0.001	498565	644359	OR.DIES	(C10-C28)	221099216	1128.1
C18	6.048	-0.003	969346	1146113				
C20	6.616	-0.001	1414947	1825529	JET-A	(C10-C18)	42484675	256.2
C22	7.173	-0.002	1277311	1053968				
C24	7.724	0.001	1191994	1547873				
C25	7.987	-0.003	1165343	458837				
C26	8.250	0.001	1123474	602649				
C28	8.752	-0.001	1123538	606165				
C32	9.683	0.001	749237	293435				
C34	10.103	-0.005	739157	715140				
Filter Peak	12.107	-0.009	96225	89374	BUNKERC	(C10-C38)	316249523	8010.9
C36	10.513	-0.000	534408	133131				
C38	10.902	0.001	400916	179462				
C40	11.327	0.008	229039	135271				
o-terph	6.210	-0.016	2869285	2032244				
Triacon Surr	9.233	-0.023	2476193	1778757	NAS DIES	(C10-C24)	154077179	789.5

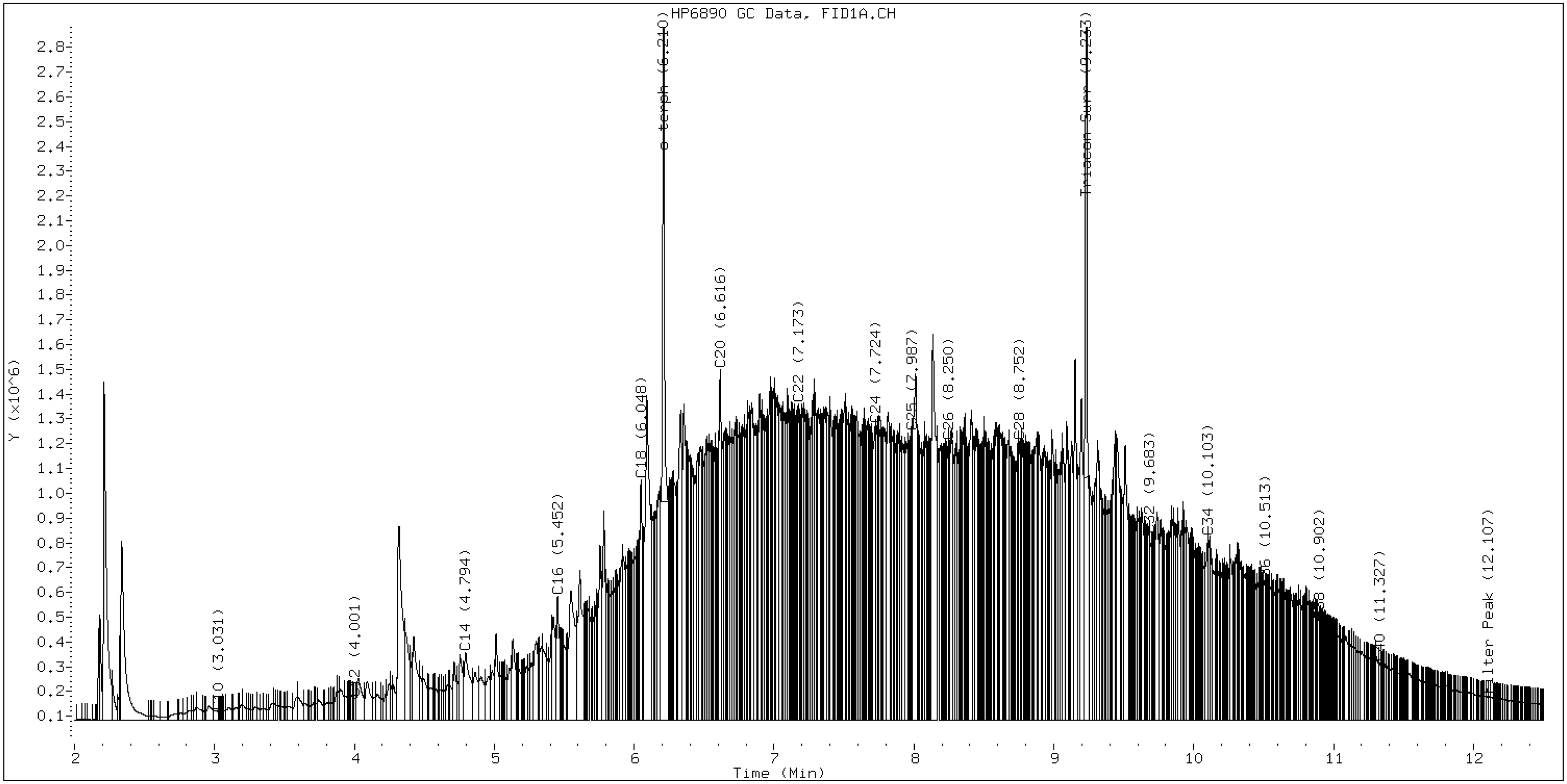
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	2032244	11.9	M
Triacontane	1778757	12.6	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

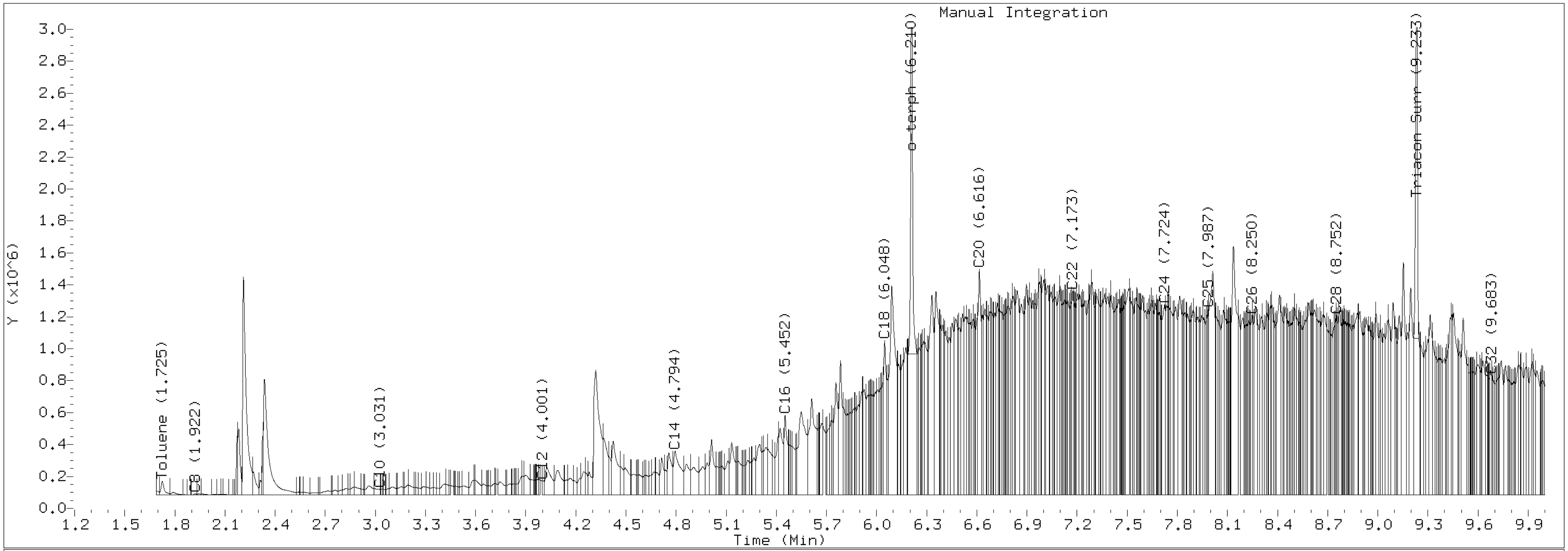
Datafile: FID4A, 20210222.b/421B2270.D   21A0361-29

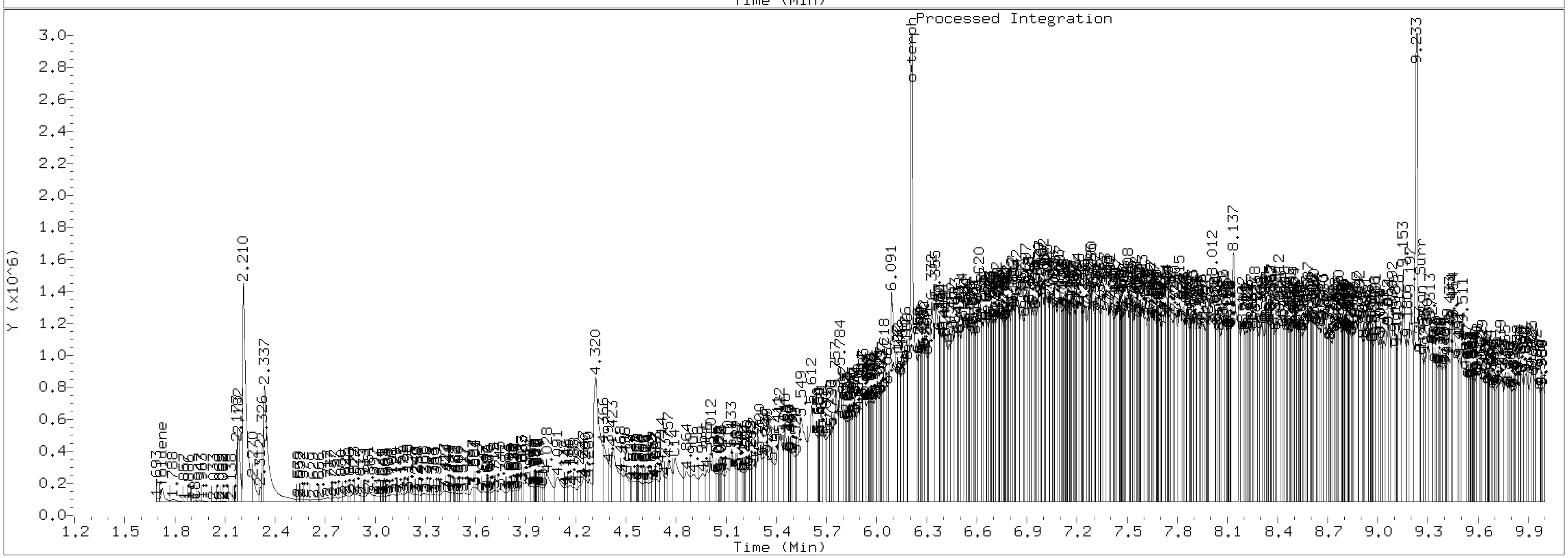


TPH Manual Integrations Report

Datafile: FID4A, 20210222.b/421B2270.D Injection: 23-FEB-2021 10:10

Lab ID:21A0361-29





Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10N-5

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables) low level

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-31 A	SDG:	21A0361
Sampled:	01/25/21 09:35	Prepared:	02/05/21 12:05	File ID:	421B1744.D
% Solids:	85.05	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/18/21 01:44
Batch:	BJB0148	Sequence:	SJB0251	Initial/Final:	10.04 g Wet / 1 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	EA00020

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	111		2.74	5.86
RRO	Motor Oil Range Organics (C24-C38)	1	197		3.50	11.7

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	13.175	16.0	122	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1744.D

Date : 18-FEB-2021 01:44

Client ID:

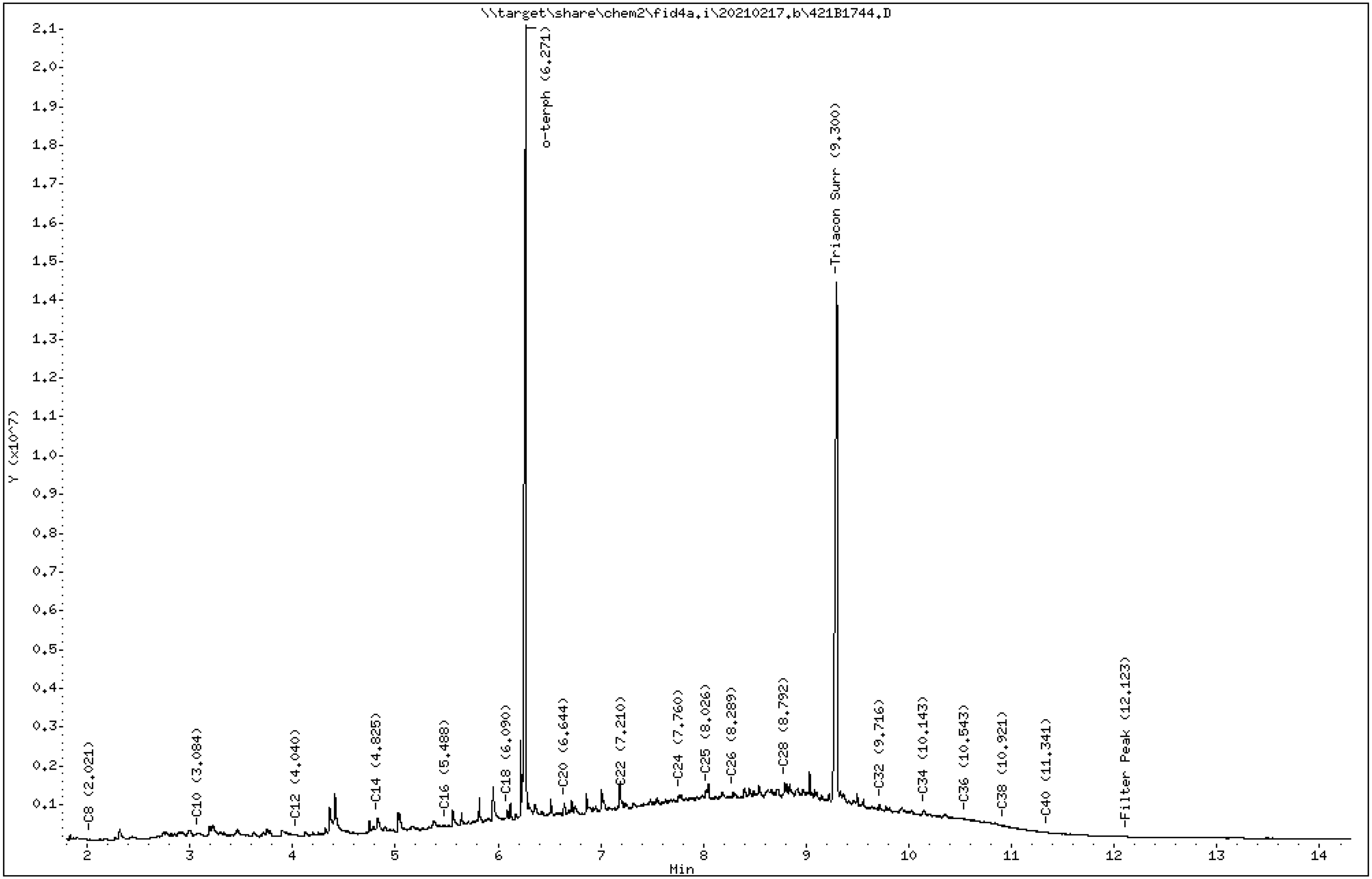
Instrument: fid4a.i

Sample Info: 21A0361-31

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1744.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: 21A0361-31
Client ID:
Injection: 18-FEB-2021 01:44
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.021	0.011	18452	25417	WATPHD	(C12-C24)	130694104	950.5
C10	3.084	-0.007	170698	329775	WATPHM	(C24-C38)	171195177	1681.6
C12	4.040	-0.014	136983	224287	AK102	(C10-C25)	151311128	900.3
C14	4.825	-0.001	564715	499877	AK103	(C25-C36)	150913126	2007.4
C16	5.488	-0.000	389614	352134	OR.DIES	(C10-C28)	212144098	1082.4
C18	6.090	0.004	788916	1192773				
C20	6.644	-0.009	960302	1718426	JET-A	(C10-C18)	55936801	337.3
C22	7.210	-0.002	984404	1185632				
C24	7.760	-0.000	1161032	1193278				
C25	8.026	-0.003	1296972	2269797				
C26	8.289	0.001	1249813	1529464				
C28	8.792	0.001	1480459	2236973				
C32	9.716	-0.005	924488	1347975				
C34	10.143	0.001	759235	1316844				
Filter Peak	12.123	0.001	90880	49478	BUNKERC	(C10-C38)	311867502	7899.9
C36	10.543	-0.000	549344	434456				
C38	10.921	-0.004	381407	351121				
C40	11.341	-0.009	211301	277012				
o-terph	6.271	0.006	20182369	23362634				
Triacon Surr	9.300	0.003	13321045	18327912	NAS DIES	(C10-C24)	140672326	720.8

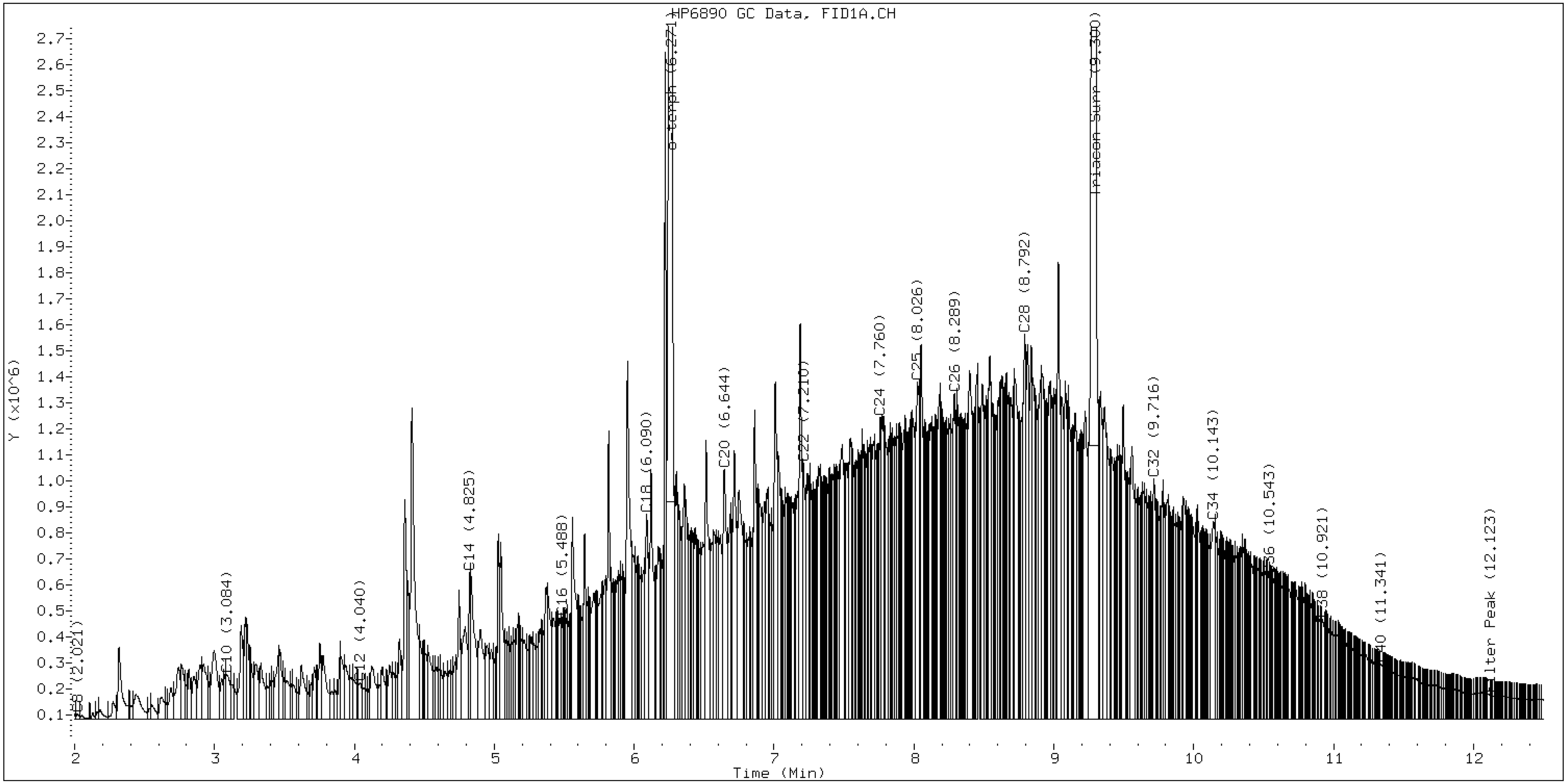
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	23362634	137.0	M
Triacontane	18327912	129.6	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

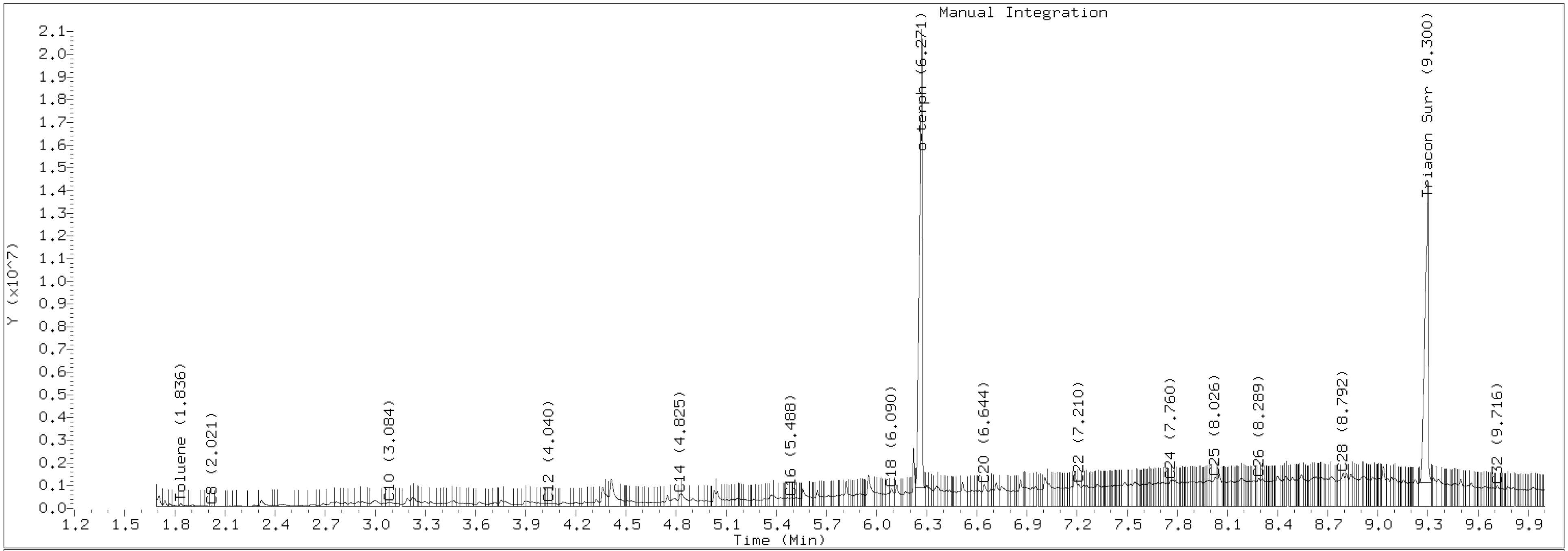
Datafile: FID4A, 20210217.b/421B1744.D 21A0361-31

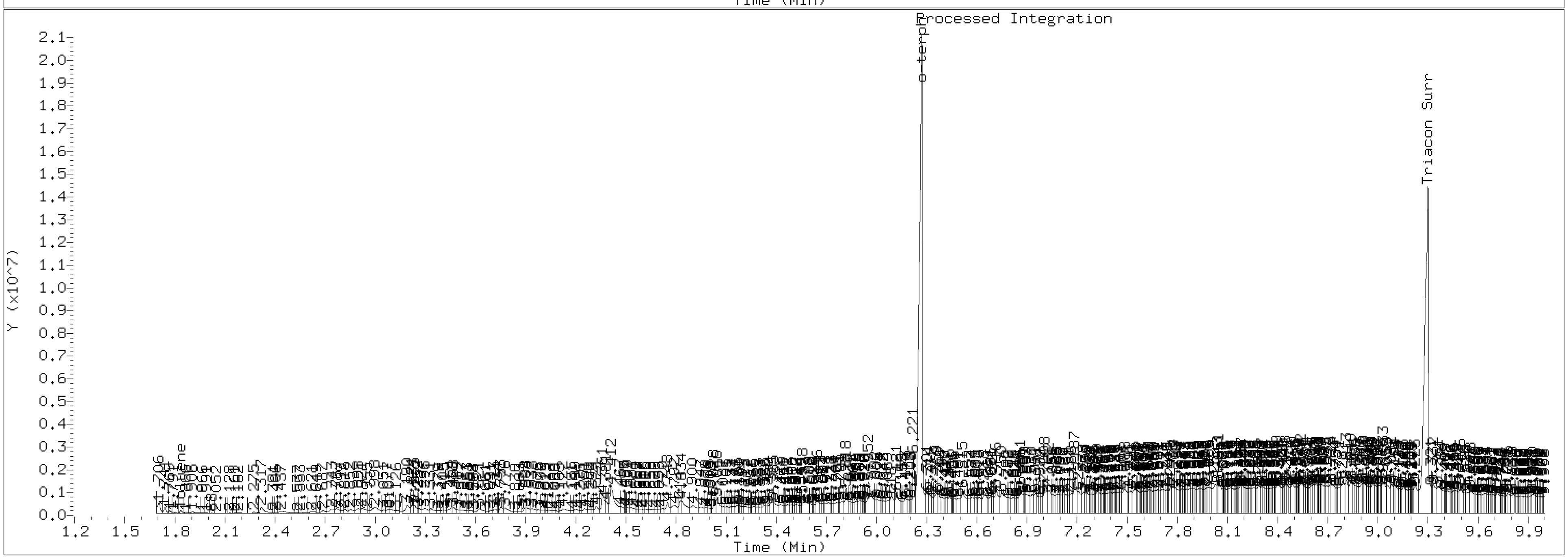


TPH Manual Integrations Report

Datafile: FID4A, 20210217.b/421B1744.D Injection: 18-FEB-2021 01:44

Lab ID:21A0361-31





Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Batch: BJB0148 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
P8-20N-1	21A0361-01	421B2266.D	02/05/21 12:05	
P8-20N-5	21A0361-03	421B1726.D	02/05/21 12:05	
P8-10NW-1	21A0361-05	421B2267.D	02/05/21 12:05	
P8-10NW-5	21A0361-07	421B1730.D	02/05/21 12:05	
P8-15SW-1	21A0361-09	421B1731.D	02/05/21 12:05	
P8-15SW-5	21A0361-11	421B1732.D	02/05/21 12:05	
P8-10SE-1	21A0361-13	421B1733.D	02/05/21 12:05	
P8-10SE-5	21A0361-15	421B1734.D	02/05/21 12:05	
P8-10NE-1	21A0361-17	421B1735.D	02/05/21 12:05	
P8-10NE-5	21A0361-19	421B1736.D	02/05/21 12:05	
P8-7W-1	21A0361-21	421B2268.D	02/05/21 12:05	
P8-7W-5	21A0361-23	421B1738.D	02/05/21 12:05	
P8-10E-1	21A0361-25	421B2269.D	02/05/21 12:05	
P8-10E-5	21A0361-27	421B1742.D	02/05/21 12:05	
P8-10N-1	21A0361-29	421B2270.D	02/05/21 12:05	
P8-10N-5	21A0361-31	421B1744.D	02/05/21 12:05	
Blank	BJB0148-BLK1	421B0907.D	02/05/21 12:05	
LCS	BJB0148-BS1	421B0908.D	02/05/21 12:05	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BJB0148

Prepared using: EPA 3546 (Microwave)

TPH NW (Extractables) low level in Solid (Version:)
TPH NW (Extractables) low level in Solid

Matrix: Solid **Date Prepared:** 2/5/2021 **Balance ID:** B334705934 **Set Up By:** CTO 2/4/21

The following standards may be missing from this batch!

Designator	Description
QLS 18	QLS Spike

Analysis: TPH NW (Extractables) low level

Lab Number & Container	Initial (g) Target Wet: 10 (Wet) Actual	Acid C/U (1:1) Y N	Silica Gel C/U (1:1) Y N	Final Effective Vol (mL)	Vol to Lab	Extraction Comments
21A0352-43 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	1	1.0	
21A0352-44 A	(10.000) 10.03	(1:1) Y / N	(1:1) Y / N	1	1.0	
21A0352-45 A	(10.000) 10.05	(1:1) Y / N	(1:1) Y / N	1	1.0	
21A0361-01 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	10x	1.0	
21A0361-03 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	1	1.0	
21A0361-05 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	10x	1.0	
21A0361-07 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	1	1.0	
21A0361-09 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	10x	1.0	
21A0361-11 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	1	1.0	
21A0361-13 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	10x	1.0	
21A0361-15 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	1	1.0	
21A0361-17 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	10x	1.0	
21A0361-19 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	1	1.0	
21A0361-21 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	10x	1.0	
21A0361-23 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	1	1.0	
21A0361-25 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	1	1.0	
21A0361-27 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	1	1.0	
21A0361-29 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	1	1.0	
21A0361-31 A	(10.000) 10.04	(1:1) Y / N	(1:1) Y / N	1	1.0	

Batch QC

Lab Number	Initial (g) Target Wet: 10 (Wet) Actual	Acid C/U (1:1) Y N	Silica Gel C/U (1:1) Y N	Final Effective Vol (mL)	Vol to Lab	Extraction Comments
BJB0148-BLK1	(10.000) 10.00	(1:1) Y / N	(1:1) Y / N	1	1.0	
BJB0148-BS1 Φ2/Φ5/21 CT	(10.000) 1Φ.Φ4 ~~10.00~~	Φ2/Φ4/4 CT (1:1) Y / N	(1:1) Y / N	1	1.0	
BJB0148-MS1	(10.000) 10.05	(1:1) Y / N	(1:1) Y / N	1	1.0	Use 21A0352-45
BJB0148-MSD1	(10.000) 10.05	(1:1) Y / N	(1:1) Y / N	1	1.0	Use 21A0352-45

TW Φ2/Φ8/21 BH 2/8/21 Φ2/Φ5/21 12:Φ5

Client ID verified By | Date | Preparation Reviewed By | Date | Extraction Date and Time

Printed: 2/4/2021 11:59:53AM

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BJB0148

Prepared using: EPA 3546 (Microwave)

TPH NW (Extractables) low level in Solid (Version:)
TPH NW (Extractables) low level in Solid

Prep Steps

Microwave
YL 1 2 3
Rpd 2/05/21
Analyst/Date
TurboVap
~~Pre Acid/Silica Clean~~
1 2 3 4 5 6
BH 2/8/21
Analyst/Date
Vialing
BH 2/8/21
Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave 2/5/21 **Analyst:** FW Rpd **Date:** 2/5/2021	
Methylene Chloride	I012069
Anhydrous Sodium Sulfate	J001270
Neutral Glass Wool	J001130
Vialing **Analyst:** BH **Date:** 2/8/21	
Methylene Chloride	I012069
~~Concentrated Sulfuric Acid~~	
~~0% Silica Gel~~	

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 1125µg/mL	P I011052 Exp: 06/01/2021	100µL	Rpd	MJ
Spike 15000µg/mL	11 I011054 Exp: 02/20/2021	100µL	DR	JL

(V) indicates a virtual standard combining two or more physical standards. In these cases the Standard ID refers to the virtual standard, not the parent standards.

If a Standard ID is missing, but should be present, check the standard definition in Element LIMS to be sure Standard Info 6 has the correct letter or number designator matching the vial designator inthe Standard ID column. If it is correct, check the batch and bench sheet in Element LIMS to be sure the correct standards are selected for surrogate(s) and spike(s).

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: TPHD Extraction Batch BJB0148

Total Solids Batch: BJB0035 Work Order(s): 21A0361

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? 40% 1/3" = 1,5,25 20% 1/3" = 3,17 10% 1/4" = 11	DP 2/2/21
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= 5,3,7,9,11,13,15,17,19,21,23,25,27	DP 2/2/21
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☒ Other (Details)= Strong unknown odor = 1	DP 2/2/21
Rocks - 80% 1/4" = 13	
Also fuel odor = 29,31	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / N	DP 2/2/21
☒ Multiple Jars Y N 361-01-31 (odd numbers) x 2	DP 2/2/21
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

3056F

Revision 15
07/01/19

Batch: BJB0148
Batch Comment: **NONE**
Project: Lower Duwamish
Project Comments: MS/MSD for < than 6 samples is equal to analytical cost, 6-15 samples is equal to 1/2 the analytical. TBs charged at analytical. 1st metals element per method $40 (excl. Hg), each add $10.
<M> MS/MSD, PS </M> <E> MS/MSD </E>
Work Order:21A0352
Work Order Comments:
<M> MS/MSD, PS </M> <E> MS/MSD </E>
Sample: 21A0352-43
Sample Comments: **NONE**
Sample: 21A0352-44
Sample Comments: **NONE**
Sample: 21A0352-45
Sample Comments: **NONE**
Project: ICS-Former NW Cooperage
Project Comments: <G> Need J-flag Binary files for Aroclors .cdf
Need Acid/Silica Clean-ups for TPHDx if requested
Need MS/MSD if enough volume.
Need organic instrument files uploaded to the secure site for DMD (Raleigh Farlow).
</G>
Work Order:21A0361
Work Order Comments: <G> Need J-flag Binary files for Aroclors .cdf
Need Acid/Silica Clean-ups for TPHDx if requested
Need MS/MSD if enough volume.
Need organic instrument files uploaded to the secure site for DMD (Raleigh Farlow).
</G>
Sample: 21A0361-01
Sample Comments: **NONE**
Sample: 21A0361-03
Sample Comments: **NONE**
Sample: 21A0361-05
Sample Comments: **NONE**
Sample: 21A0361-07
Sample Comments: **NONE**
Sample: 21A0361-09
Sample Comments: **NONE**
Sample: 21A0361-11
Sample Comments: **NONE**
Sample: 21A0361-13
Sample Comments: **NONE**
Sample: 21A0361-15
Sample Comments: **NONE**
Sample: 21A0361-17
Sample Comments: **NONE**
Sample: 21A0361-19
Sample Comments: **NONE**
Sample: 21A0361-21
Sample Comments: **NONE**

Sample: 21A0361-23
Sample Comments: **NONE**
Sample: 21A0361-25
Sample Comments: **NONE**
Sample: 21A0361-27
Sample Comments: **NONE**
Sample: 21A0361-29
Sample Comments: **NONE**
Sample: 21A0361-31
Sample Comments: **NONE**

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

NWTPH-Dx

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc			Project:	ICS-Former NW Cooperage
Matrix:	Solid	Laboratory ID:	BJB0148-BLK1	File ID:	421B0907.D
Sampled:	N/A	Prepared:	02/05/21 12:05	Analyzed:	02/09/21 10:53
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 1 mL
Batch:	BJB0148	Sequence:	SJB0139	Calibration:	EA00020
Instrument:	FID4	Column:	RTX-1		

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg wet)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	5.00	U	2.34	5.00
RRO	Motor Oil Range Organics (C24-C38)	1	10.0	U	2.99	10.0

SURROGATES	ADDED: (mg/kg wet)	FOUND: (mg/kg wet)	% REC	QC LIMITS	Q
o-Terphenyl	11.250	12.3	109	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20210209.b\421B0907.D

Date : 09-FEB-2021 10:53

Client ID:

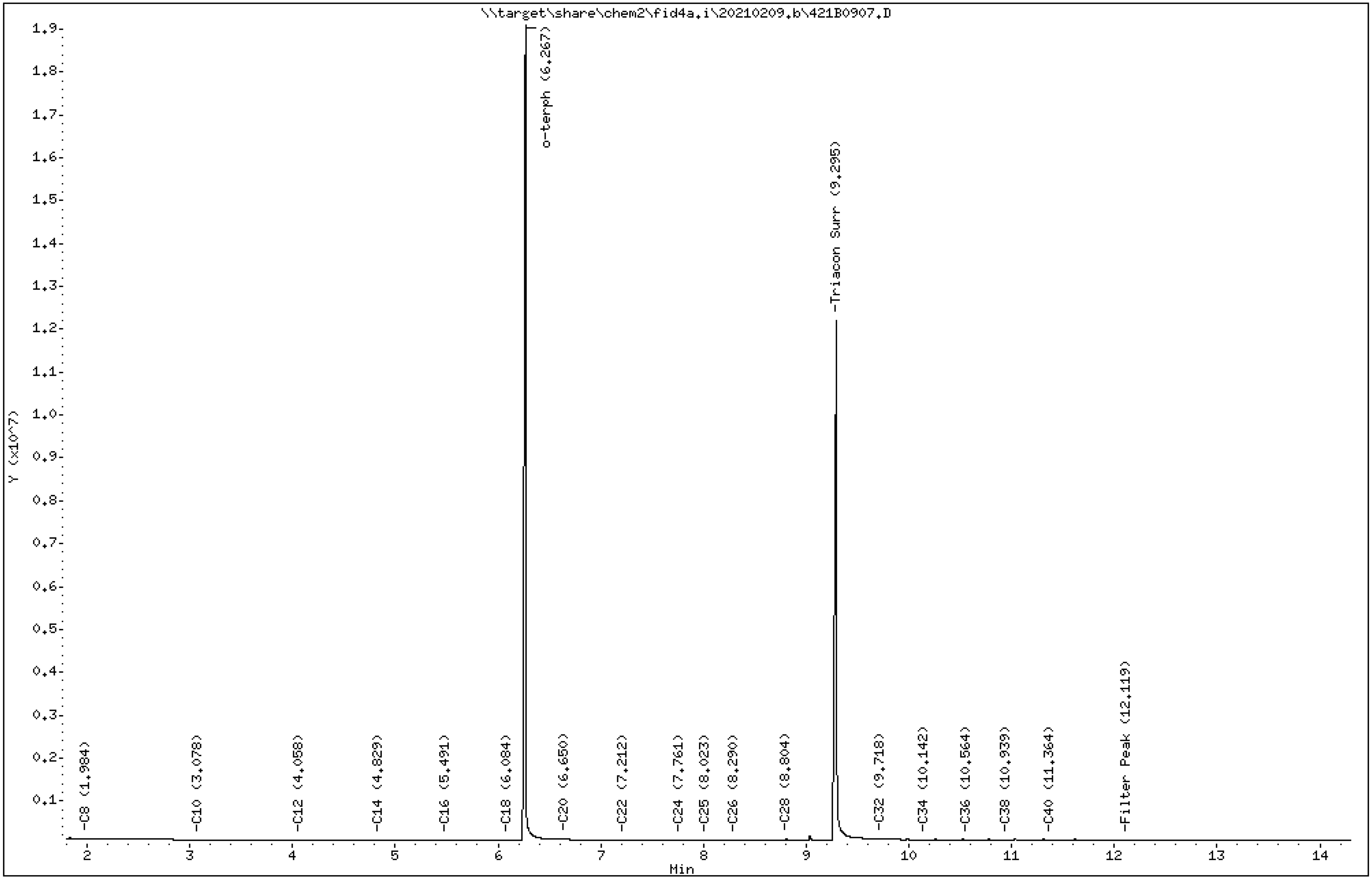
Instrument: fid4a.i

Sample Info: BJB0148-BLK1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210209.b/421B0907.D
Method: 20210209.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/09/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: BJB0148-BLK1
Client ID:
Injection: 09-FEB-2021 10:53
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.984	0.014	35257	48911	WATPHD	(C12-C24)	1669964	12.1
C10	3.078	-0.004	10002	7942	WATPHM	(C24-C38)	1422649	14.0
C12	4.058	0.004	584	227	AK102	(C10-C25)	1886817	11.2
C14	4.829	0.000	5782	1435	AK103	(C25-C36)	1122296	14.9
C16	5.491	-0.001	6804	2710	OR.DIES	(C10-C28)	2005845	10.2
C18	6.084	-0.005	8142	2849				
C20	6.650	-0.006	18500	13635	JET-A	(C10-C18)	838490	5.1
C22	7.212	-0.003	6700	6900				
C24	7.761	-0.002	2787	1226				
C25	8.023	-0.007	1898	825				
C26	8.290	0.000	574	108				
C28	8.804	0.011	37378	66265				
C32	9.718	-0.005	22676	14710				
C34	10.142	-0.007	11482	5714				
Filter Peak	12.119	0.005	7187	4650	BUNKERC	(C10-C38)	3283562	83.2
C36	10.564	0.012	10118	4995				
C38	10.939	-0.001	12134	3618				
C40	11.364	-0.004	11644	7526				
o-terph	6.267	0.000	19008189	20946100				
Triacon Surr	9.295	-0.002	12109955	18401892	NAS DIES	(C10-C24)	1860913	9.5

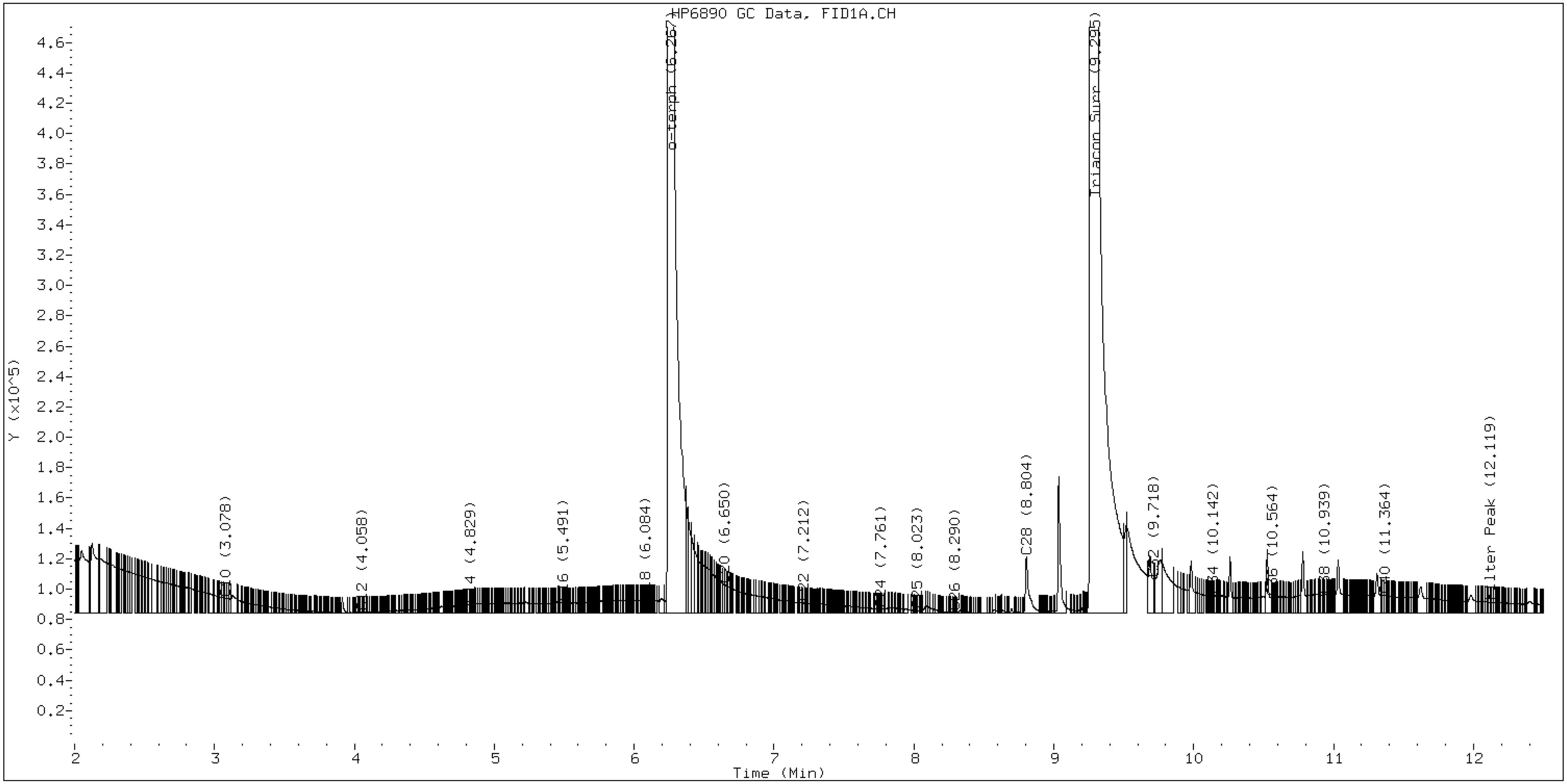
Range Times: NW Diesel(4.054 - 7.763) AK102(3.08 - 8.03) Jet A(3.08 - 6.09)
NW M.Oil(7.76 - 10.94) AK103(8.03 - 10.55) OR Diesel(3.08 - 8.79)

Surrogate	Area	Amount
o-Terphenyl	20946100	122.8
Triacontane	18401892	130.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210209.b/421B0907.D BJB0148-BLK1



Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Matrix: Solid
Analyzed: 02/09/21 11:14
Batch: BJB0148
Laboratory ID: BJB0148-BS1
Preparation: EPA 3546 (Microwave)
Sequence Name: LCS
Initial/Final: 10 g / 1 mL

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Diesel Range Organics (C12-C24)	150	147		98.3	63 - 120

* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210209.b\421B0908.D

Date : 09-FEB-2021 11:14

Client ID:

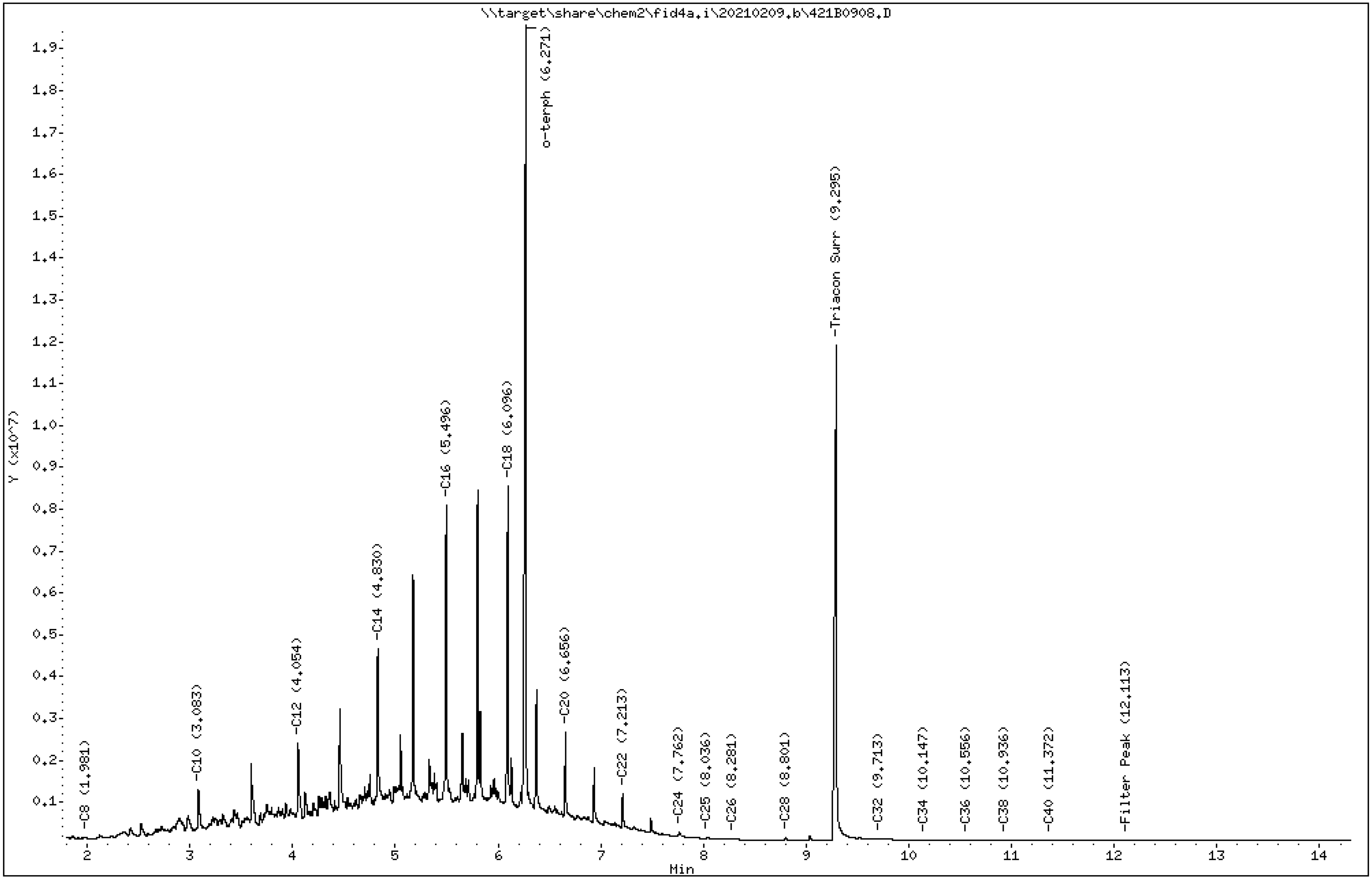
Sample Info: BJB0148-BS1

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210209.b/421B0908.D
Method: 20210209.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/09/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: BJB0148-BS1
Client ID:
Injection: 09-FEB-2021 11:14
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.981	0.011	78596	165502	WATPHD	(C12-C24)	202652983	1473.9
C10	3.083	0.001	1203859	1767233	WATPHM	(C24-C38)	2457072	24.1
C12	4.054	0.000	2323590	3986379	AK102	(C10-C25)	239498849	1425.0
C14	4.830	0.001	4580344	5160513	AK103	(C25-C36)	1874081	24.9
C16	5.496	0.005	8016292	8763032	OR.DIES	(C10-C28)	240416744	1226.6
C18	6.096	0.007	8470277	9014123				
C20	6.656	-0.000	2568270	2881956	JET-A	(C10-C18)	188266868	1135.2
C22	7.213	-0.002	1117448	1376109				
C24	7.762	-0.001	184326	498903				
C25	8.036	0.006	64259	54129				
C26	8.281	-0.009	18450	8229				
C28	8.801	0.007	49761	85601				
C32	9.713	-0.010	18129	12618				
C34	10.147	-0.001	6729	5235				
Filter Peak	12.113	-0.001	4929	2191	BUNKERC	(C10-C38)	241489291	6117.2
C36	10.556	0.004	5069	4200				
C38	10.936	-0.004	6114	3030				
C40	11.372	0.004	6335	3474				
o-terph	6.271	0.005	18580377	20905989				
Triacon Surr	9.295	-0.003	11840155	17996390	NAS DIES	(C10-C24)	239032219	1224.9

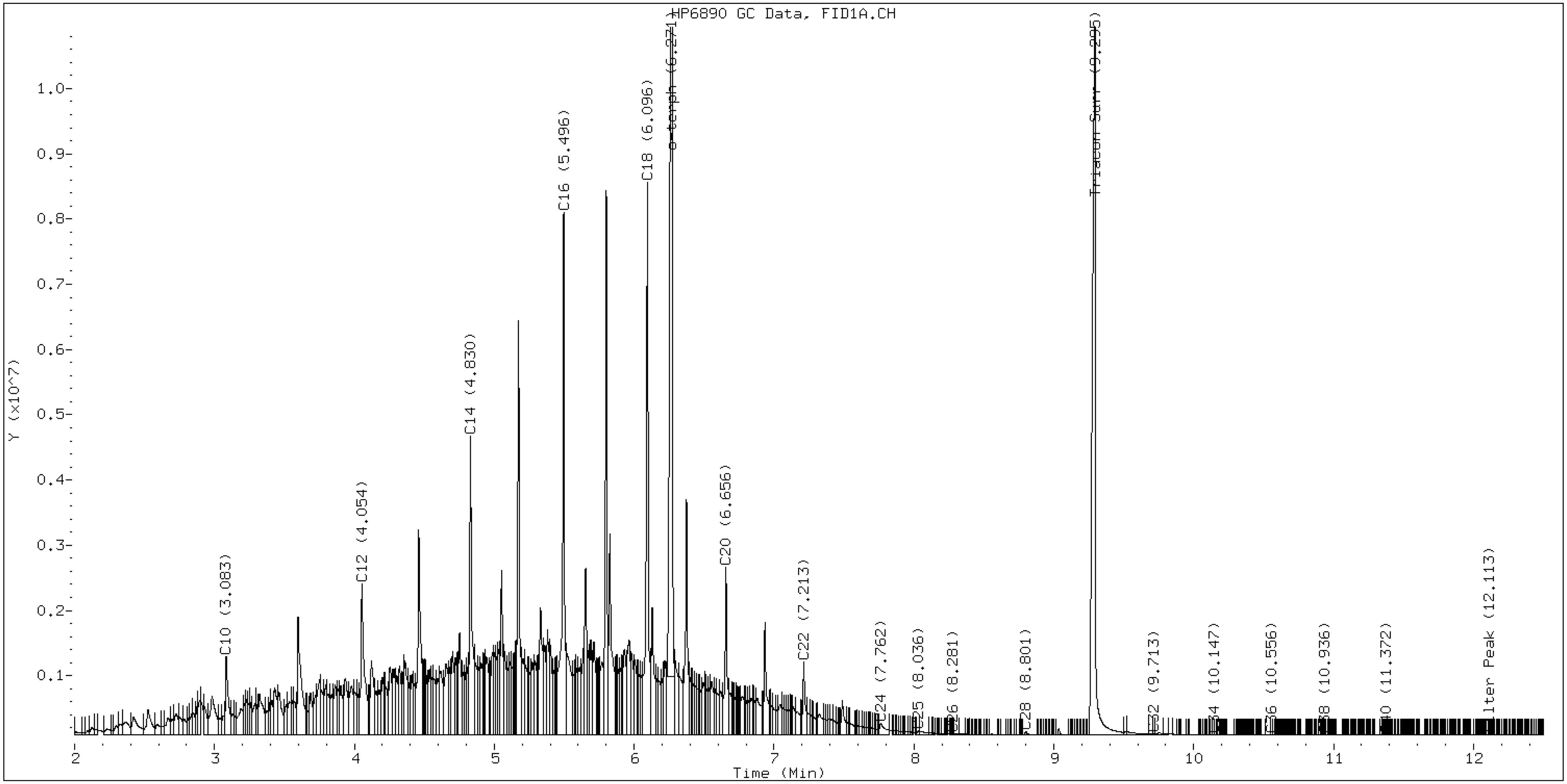
Range Times: NW Diesel(4.054 - 7.763) AK102(3.08 - 8.03) Jet A(3.08 - 6.09)
NW M.Oil(7.76 - 10.94) AK103(8.03 - 10.55) OR Diesel(3.08 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	20905989	122.6	M
Triacontane	17996390	127.3	

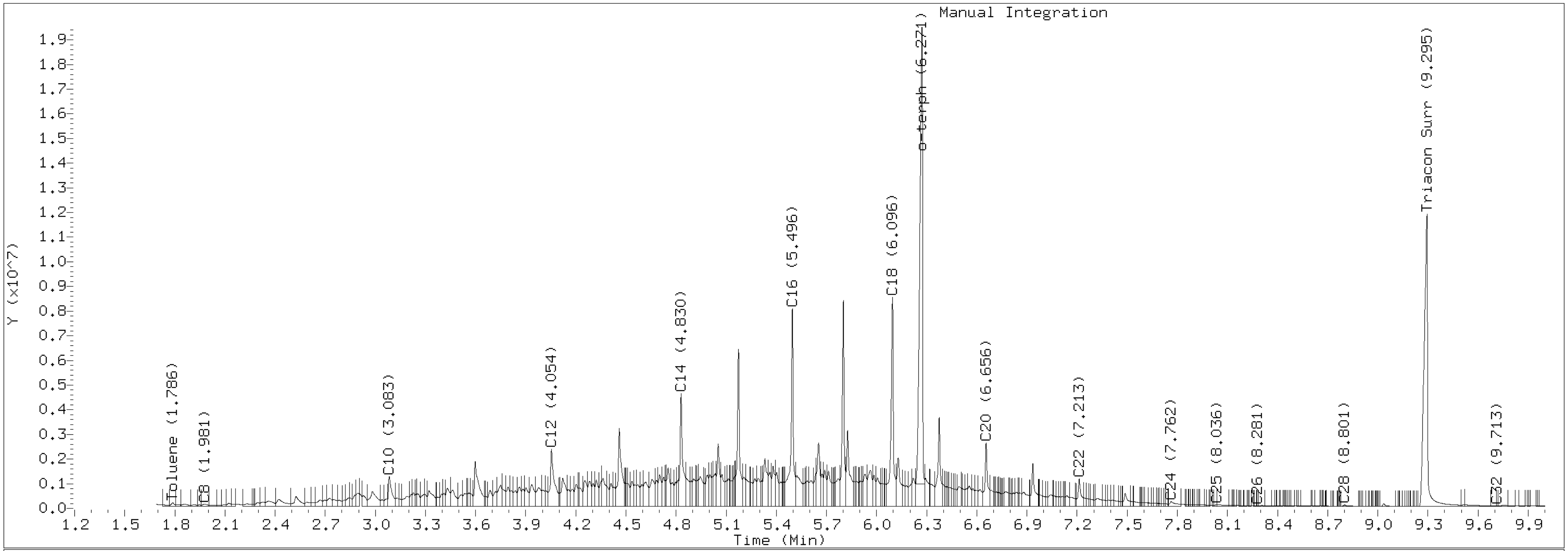
M Indicates the peak was manually integrated

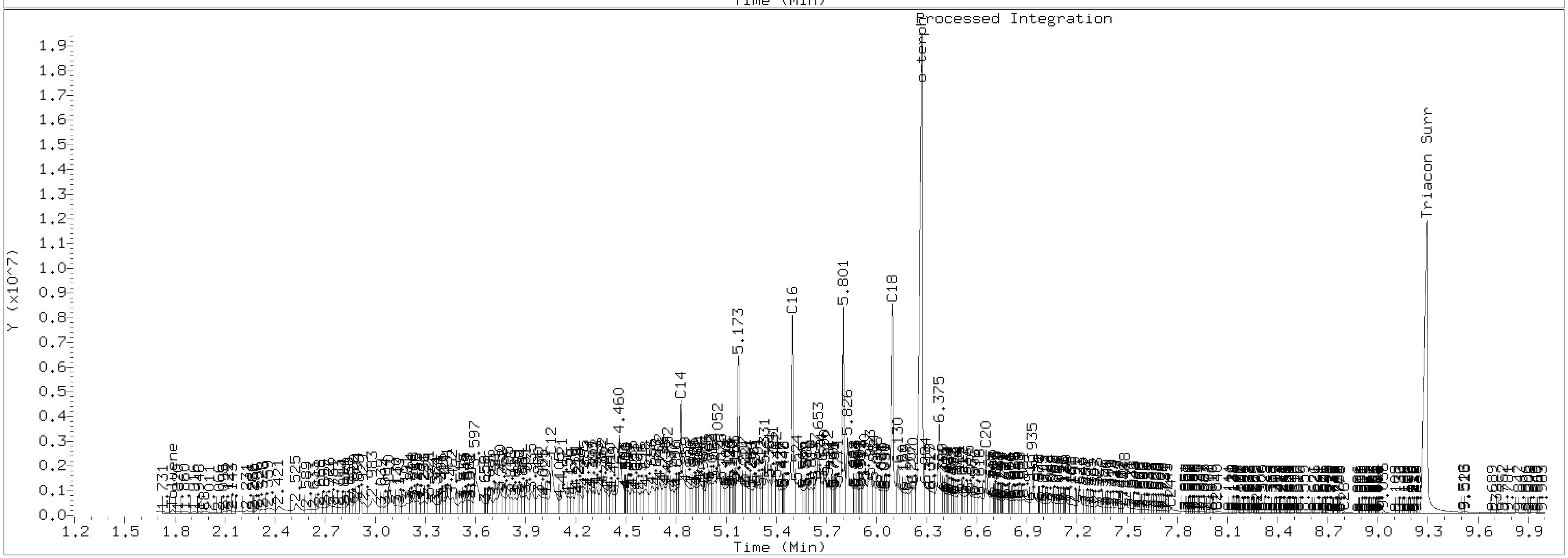
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210209.b/421B0908.D BJB0148-BS1



TPH Manual Integrations Report
Datafile: FID4A, 20210209.b/421B0908.D Injection: 09-FEB-2021 11:14
Lab ID:BJB0148-BS1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EA00020	Instrument:	FID4
Calibration Date:	01/07/2021	Column (1):	RTX-1

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)	50	137648.1	100	143194.5	250	136655	500	136841.6	1000	138165.9	2500	132483.8
o-Terphenyl	9	158664.6	18	166872.6	45	166719.8	90	173143.7	180	179295.9	450	178769.9

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EA00020	Instrument:	FID4
Calibration Date:	01/07/2021	Column (1):	RTX-1

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Motor Oil Range Organics (C24-C38)	100	95231.72	250	97768.08	500	98903.19	1000	101255.7	2500	107495.7	5000	110190.4

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EA00020	Instrument:	FID4
Calibration Date:	01/07/2021	Column (1):	RTX-1

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	

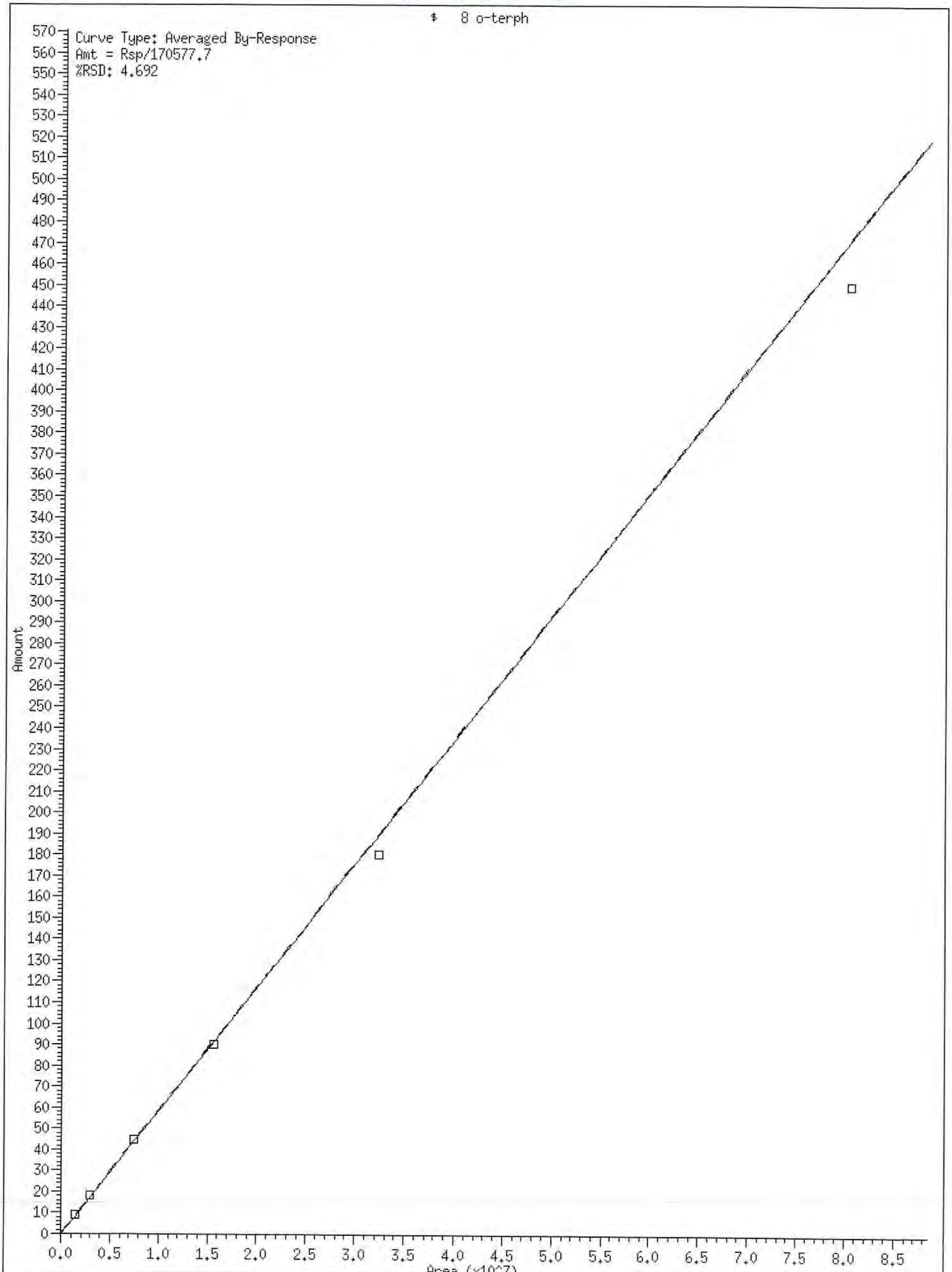
Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

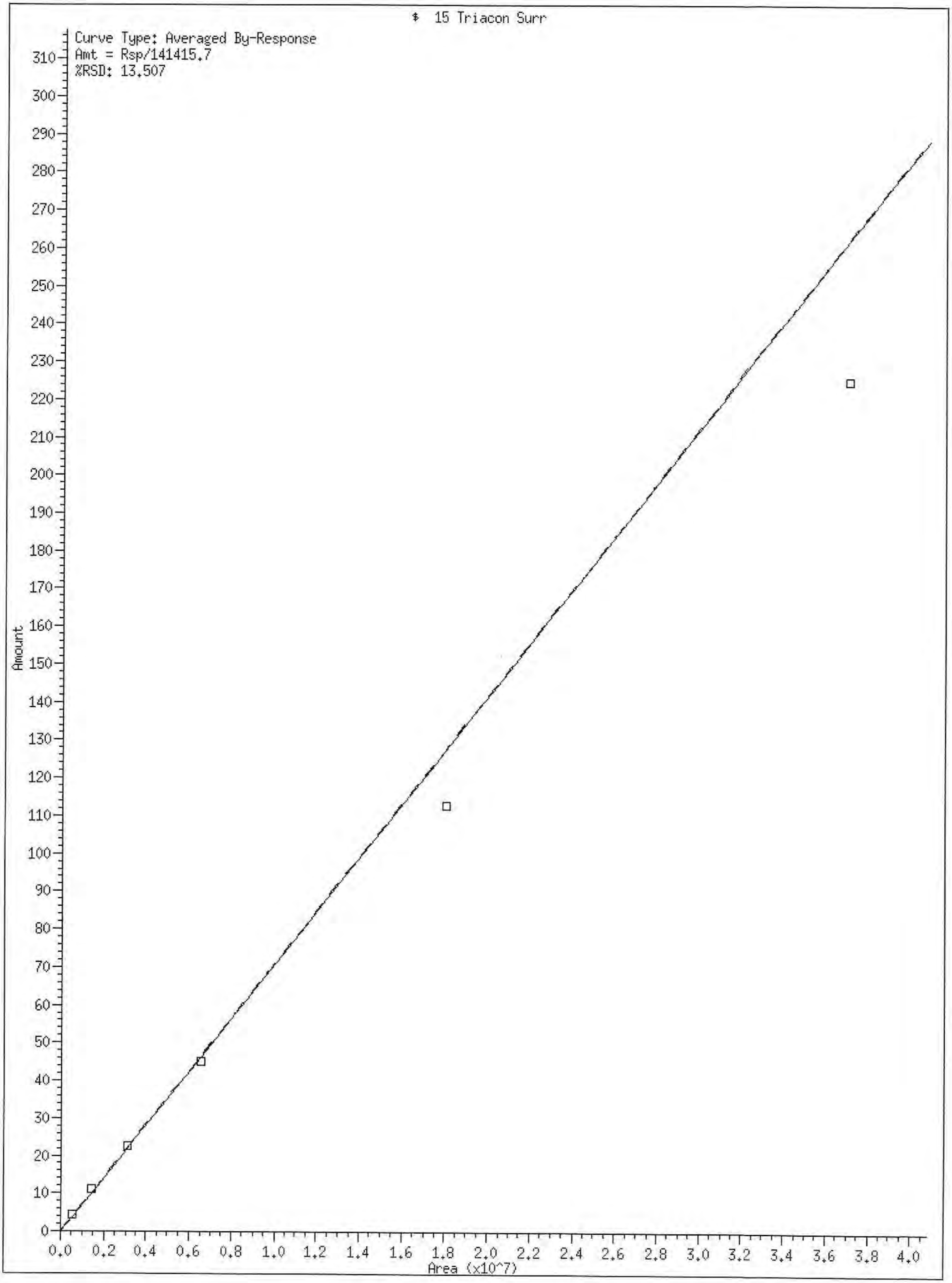
Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EA00020	Instrument:	FID4
Calibration Date:	01/07/2021	Column (1):	RTX-1

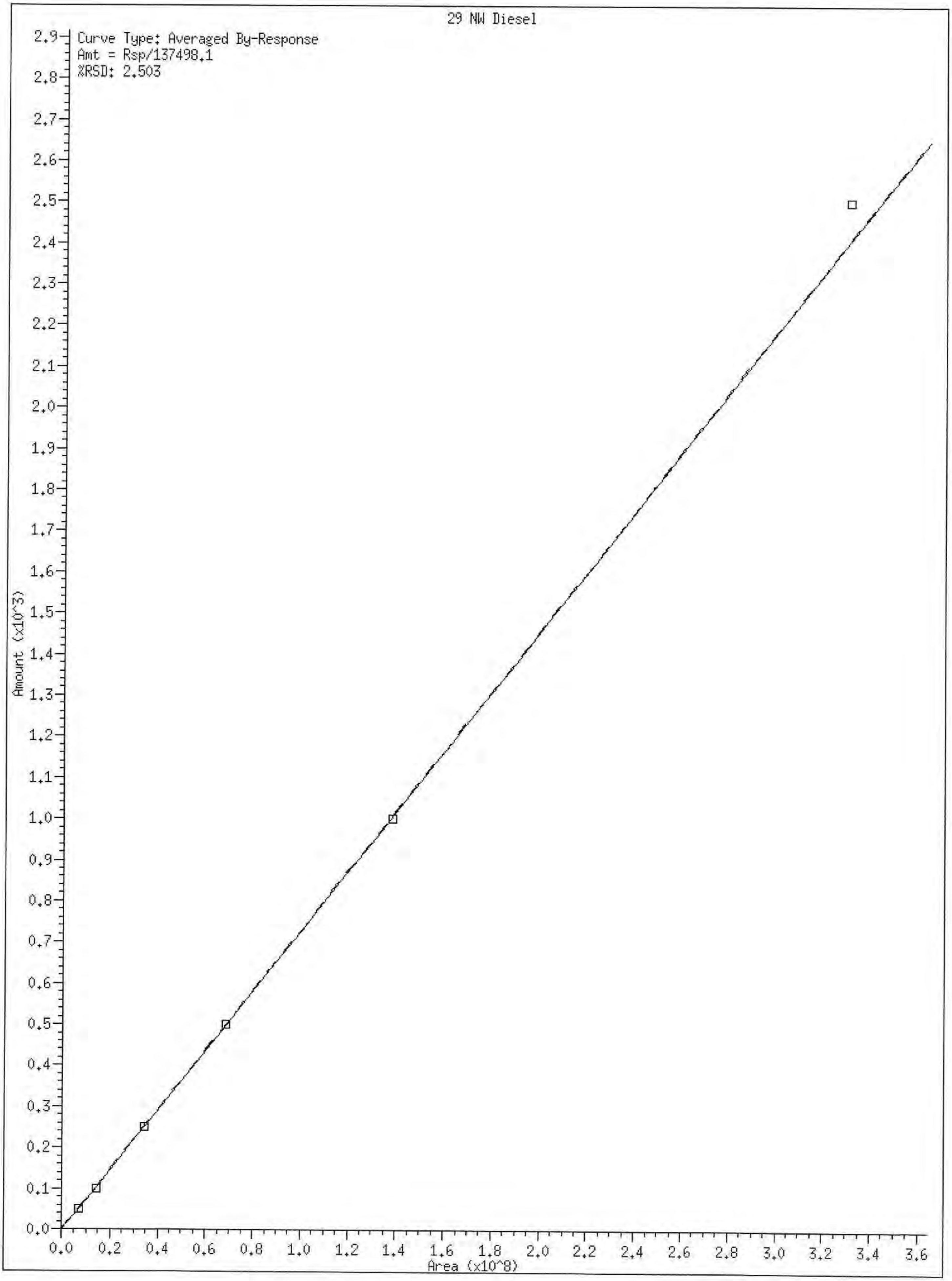
COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Diesel Range Organics (C12-C24)	137498.2	2.5			RSD (20)	
Motor Oil Range Organics (C24-C38)	101807.5	5.7			RSD (20)	
o-Terphenyl	170577.7	4.7			RSD (20)	

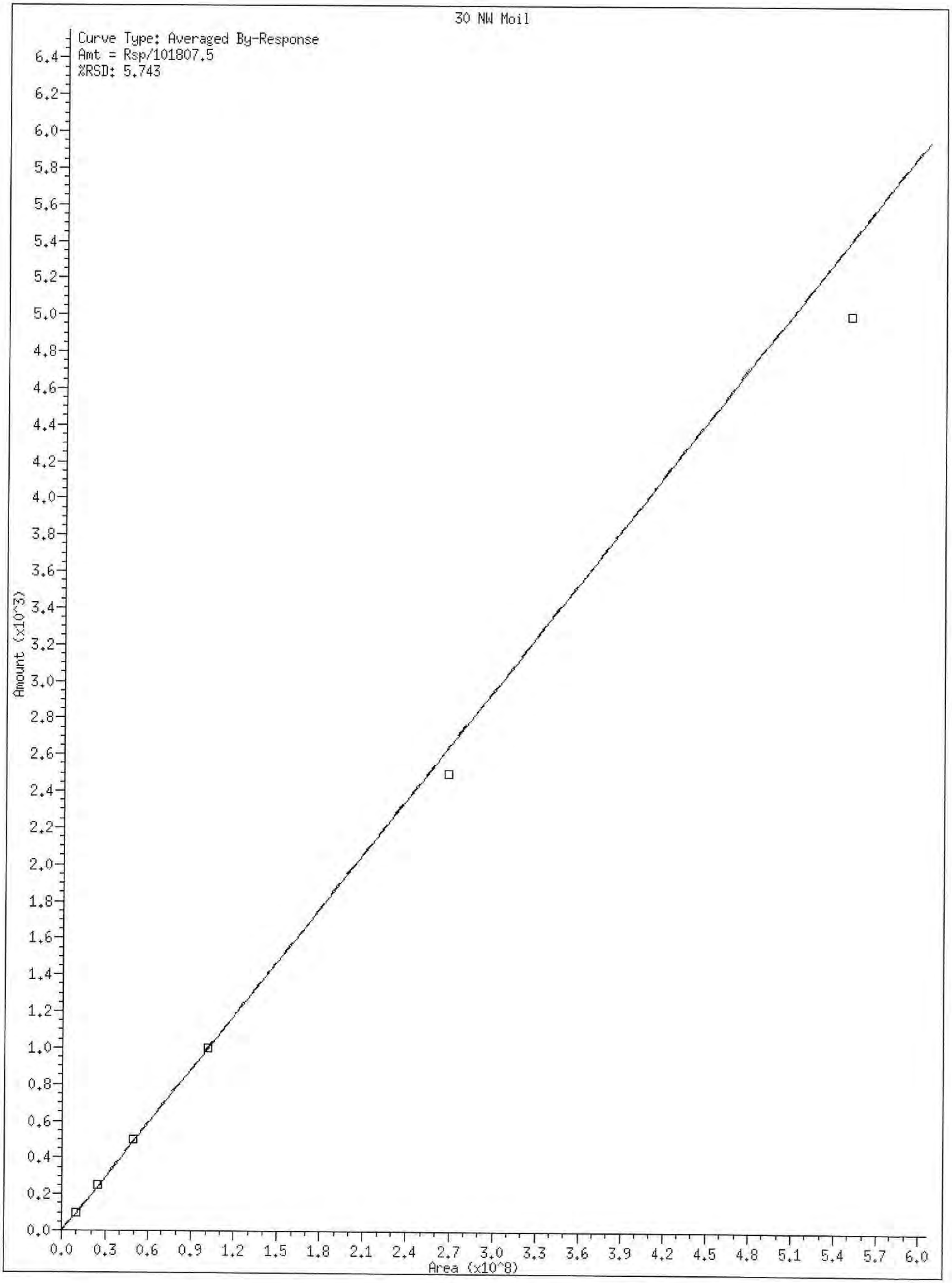
EA00020

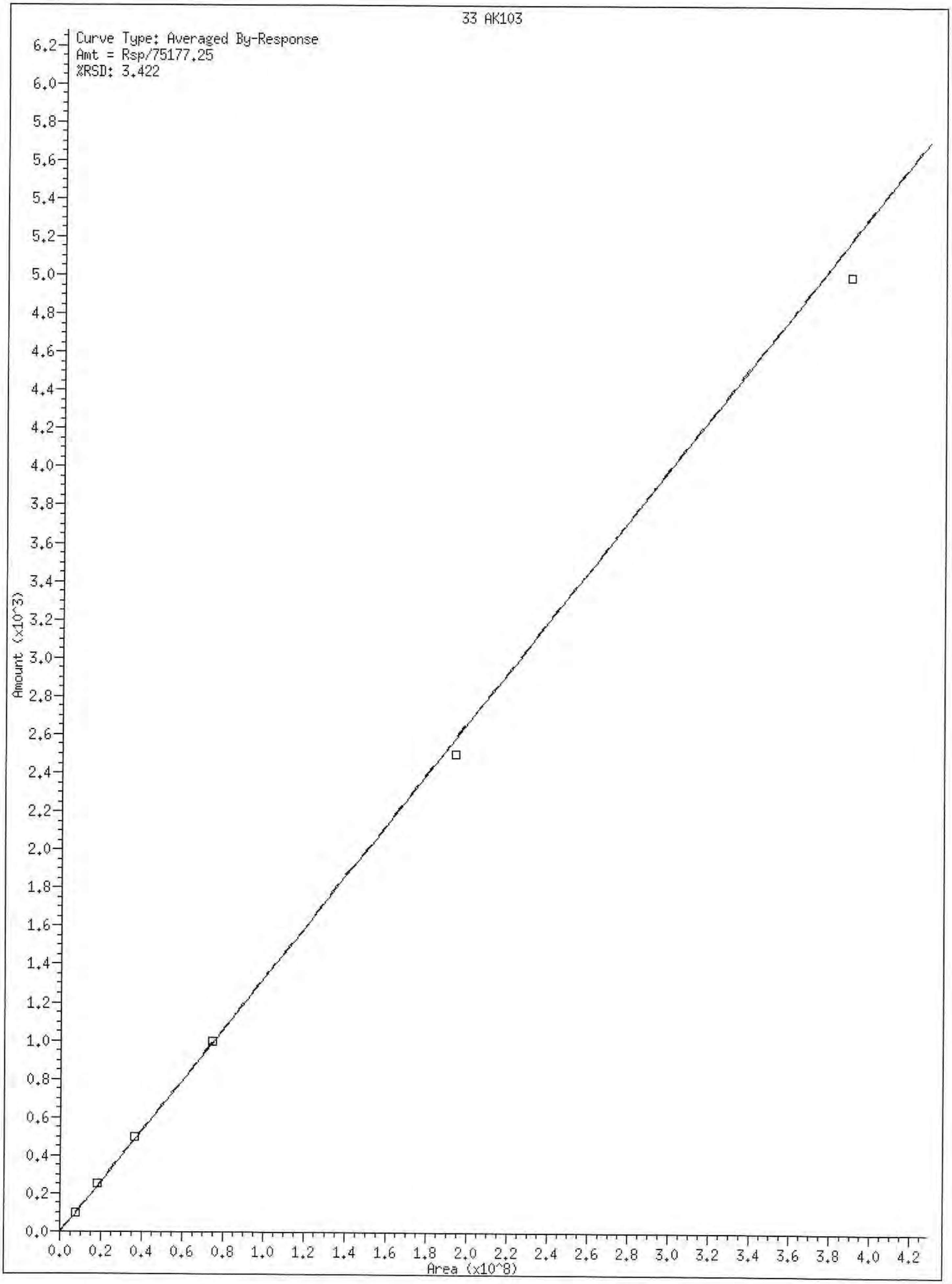


8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/170577.7
%RSD: 4.692
Amount
Area (x10^7)


$ 15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/141415.7
%RSD: 13.507
Amount
Area (x10^7)


29 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/137498.1
%RSD: 2.503
Amount (x10^3)
Area (x10^8)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
2.9
3.0
3.2
3.4
3.6


30 NW Moil
Curve Type: Averaged By-Response
Amt = Rsp/101807.5
%RSD: 5.743
Amount (x10^3)
Area (x10^8)
6.4
6.2
6.0
5.8
5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8
5.1
5.4
5.7
6.0


33 AK103
Curve Type: Averaged By-Response
Amt = Rsp/75177.25
%RSD: 3.422
Amount (x10^3)
Area (x10^8)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: EA00020
Sequence: SJA0096

SDG: 21A0361
Project: ICS-Former NW Cooperage
Laboratory ID: SJA0096-SCV1
Sequence Name: DIESEL SCV
Standard ID: I004025

ANALYTE	EXPECTED (mg/L)	FOUND (mg/L)	% DRIFT	QC LIMIT
Diesel Range Organics (C12-C24)	500.00	529	5.8	30.00

* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210107.b\421A0712.D

Date : 07-JAN-2021 18:30

Client ID:

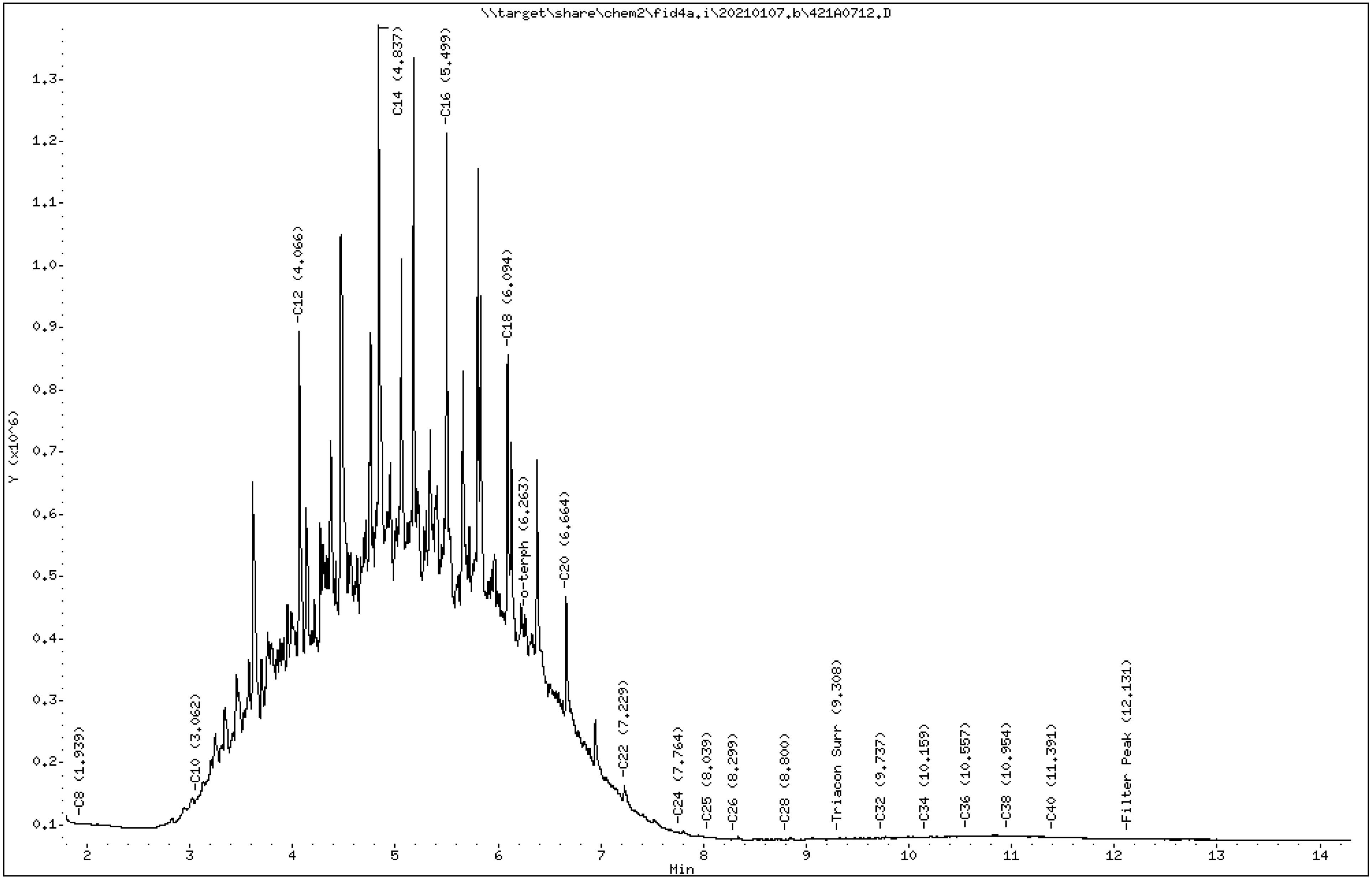
Instrument: fid4a.i

Sample Info: SEQ-SCV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210107.b/421A0712.D
Method: 20210107.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 01/08/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-SCV1
Client ID:
Injection: 07-JAN-2021 18:30
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.939	-0.009	27421	50016	WATPHD	(C12-C24)	72733887	529.0
C10	3.062	-0.017	66943	80186	WATPHM	(C24-C38)	697004	6.8
C12	4.066	0.008	818579	1791423	AK102	(C10-C25)	87307656	446.6
C14	4.837	0.003	1311533	2959053	AK103	(C25-C36)	467041	6.2
C16	5.499	0.002	1137826	1542083	OR.DIES	(C10-C28)	87396584	445.9
C18	6.094	-0.001	780349	1347913				
C20	6.664	0.001	392751	875007	JET-A	(C10-C18)	73957524	445.9
C22	7.229	0.007	87119	187699				
C24	7.764	-0.006	12482	9572				
C25	8.039	-0.002	4794	2100				
C26	8.299	-0.002	1789	1195				
C28	8.800	-0.004	1236	652				
C32	9.737	0.003	3303	1373				
C34	10.159	0.001	4959	1222				
Filter Peak	12.131	0.005	1805	525	BUNKERC	(C10-C38)	87934635	2227.5
C36	10.557	-0.008	6113	3019				
C38	10.954	-0.002	6671	2278				
C40	11.391	0.005	5206	5293				
o-terph	6.263	-0.010	363544	862363				
Triacon Surr	9.308	0.001	2539	1252	NAS DIES	(C10-C24)	87237631	447.0

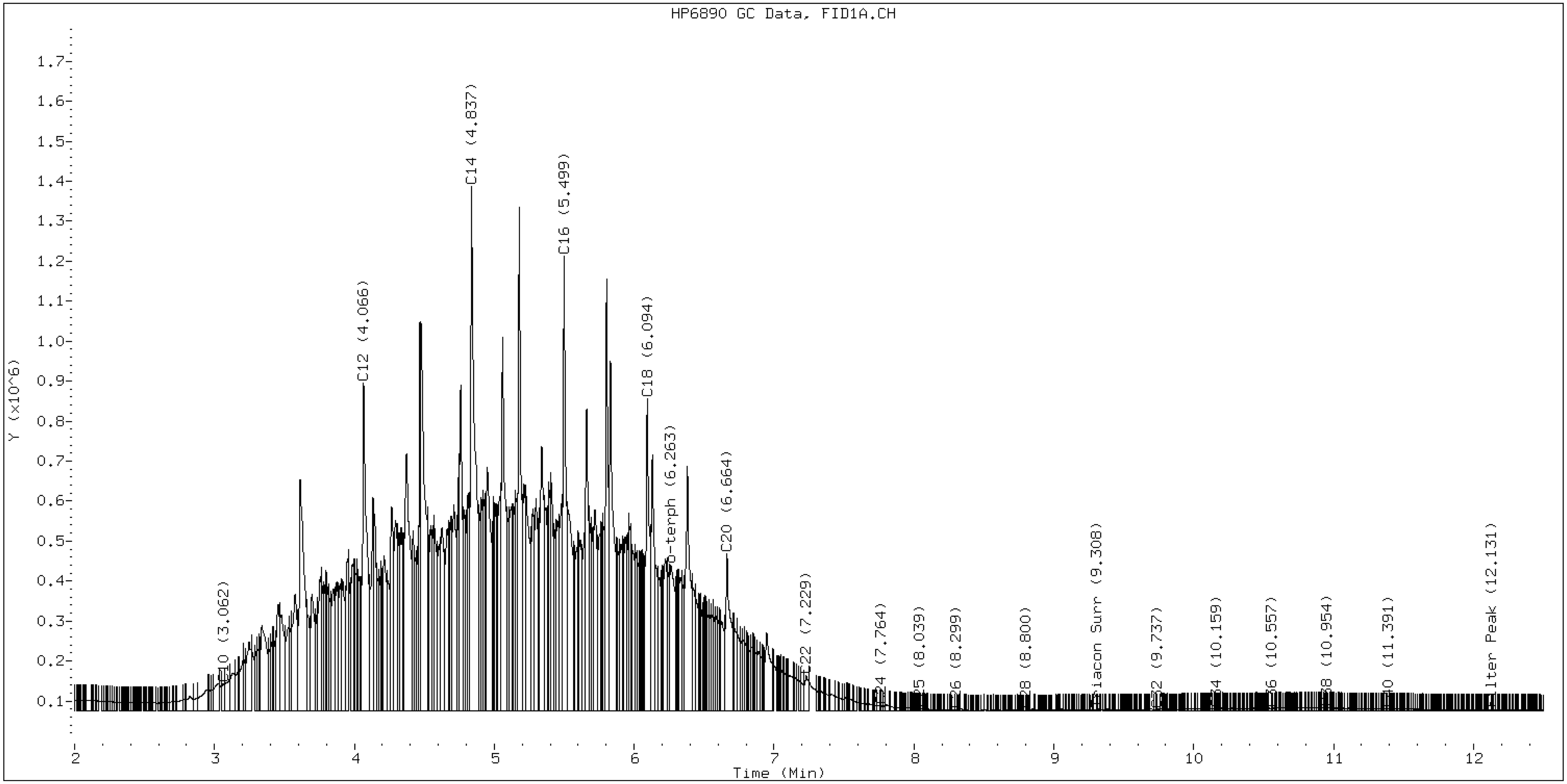
Range Times: NW Diesel(4.058 - 7.770) AK102(3.08 - 8.04) Jet A(3.08 - 6.10)
NW M.Oil(7.77 - 10.96) AK103(8.04 - 10.57) OR Diesel(3.08 - 8.80)

Surrogate	Area	Amount
o-Terphenyl	862363	5.1
Triacontane	1252	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	195491.2	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210107.b/421A0712.D SEQ-SCV1



Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Dx

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Calibration: EA00020

Sequence: SJA0096

SDG: 21A0361

Project: ICS-Former NW Cooperage

Laboratory ID: SJA0096-SCV2

Sequence Name: MOIL SCV

Standard ID: I003292

ANALYTE	EXPECTED (mg/L)	FOUND (mg/L)	% DRIFT	QC LIMIT
Motor Oil Range Organics (C24-C38)	5000.0	4870	-2.5	30.00

* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210107.b\421A0719.D

Date : 07-JAN-2021 20:57

Client ID:

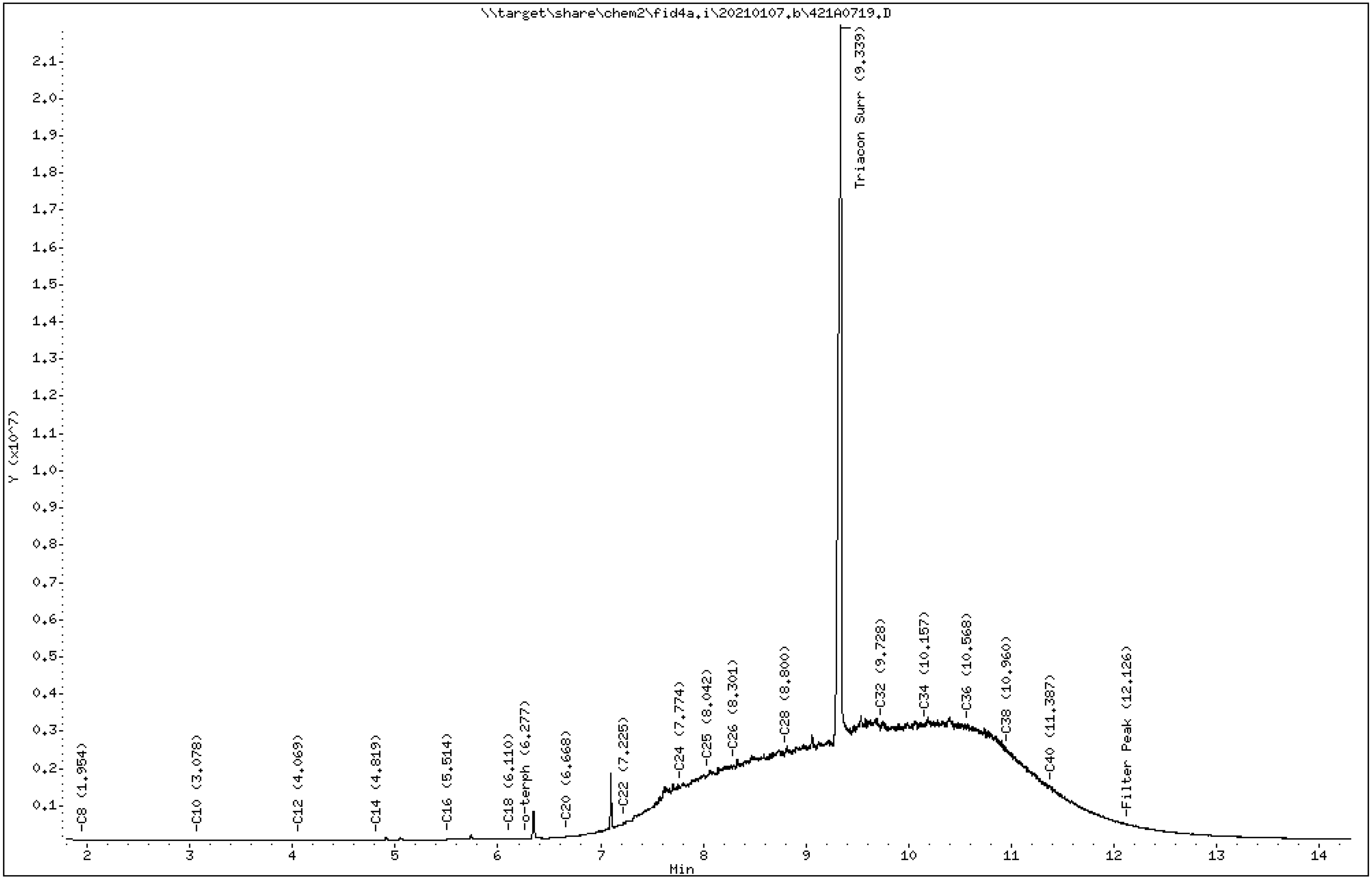
Sample Info: SEQ-SCV2

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210107.b/421A0719.D
Method: 20210107.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 01/08/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-SCV2
Client ID:
Injection: 07-JAN-2021 20:57
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.954	0.006	13791	10816	WATPHD	(C12-C24)	47758918	347.3
C10	3.078	-0.001	2997	1627	WATPHM	(C24-C38)	496085579	4872.8
C12	4.069	0.011	2013	1621	AK102	(C10-C25)	64598274	330.4
C14	4.819	-0.015	4813	1187	AK103	(C25-C36)	415777607	5530.6
C16	5.514	0.017	23243	47973	OR.DIES	(C10-C28)	171610205	875.6
C18	6.110	0.015	45416	79261				
C20	6.668	0.004	106138	138769	JET-A	(C10-C18)	1977823	11.9
C22	7.225	0.003	459667	446858				
C24	7.774	0.004	1422337	636208				
C25	8.042	0.002	1751482	609864				
C26	8.301	0.001	2024046	1096368				
C28	8.800	-0.004	2402705	1190174				
C32	9.728	-0.006	3116821	2281497				
C34	10.157	-0.002	3100583	924815				
Filter Peak	12.126	0.000	415371	62199	BUNKERC	(C10-C38)	544842550	13801.4
C36	10.568	0.003	3036951	1204903				
C38	10.960	0.003	2409548	1310465				
C40	11.387	0.001	1406539	487230				
o-terph	6.277	0.004	44163	13215				
Triacon Surr	9.339	0.033	19073632	34806403	NAS DIES	(C10-C24)	48019069	246.1

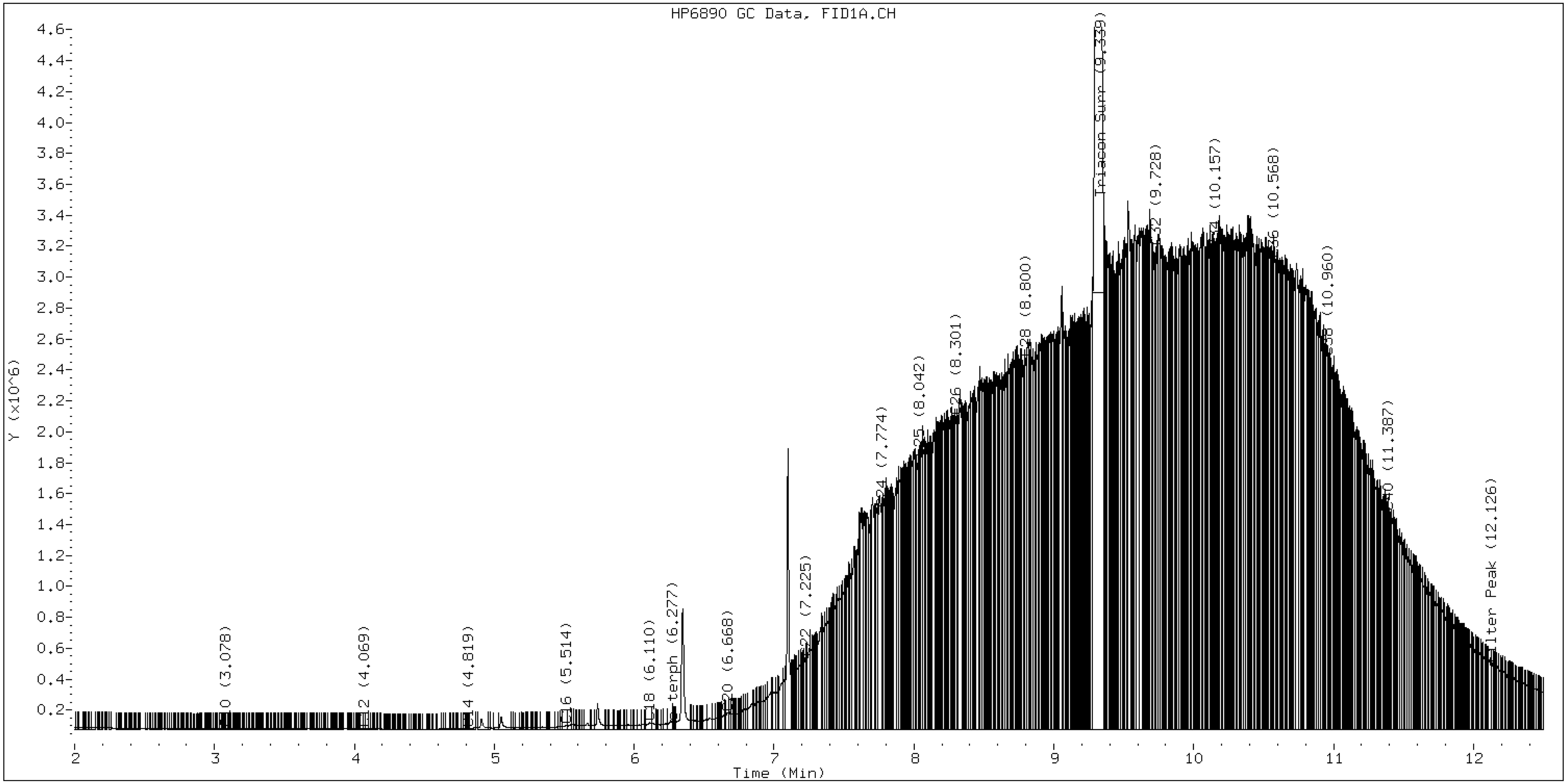
Range Times: NW Diesel(4.058 - 7.770) AK102(3.08 - 8.04) Jet A(3.08 - 6.10)
NW M.Oil(7.77 - 10.96) AK103(8.04 - 10.57) OR Diesel(3.08 - 8.80)

Surrogate	Area	Amount	
o-Terphenyl	13215	0.1	
Triacontane	34806403	246.1	M

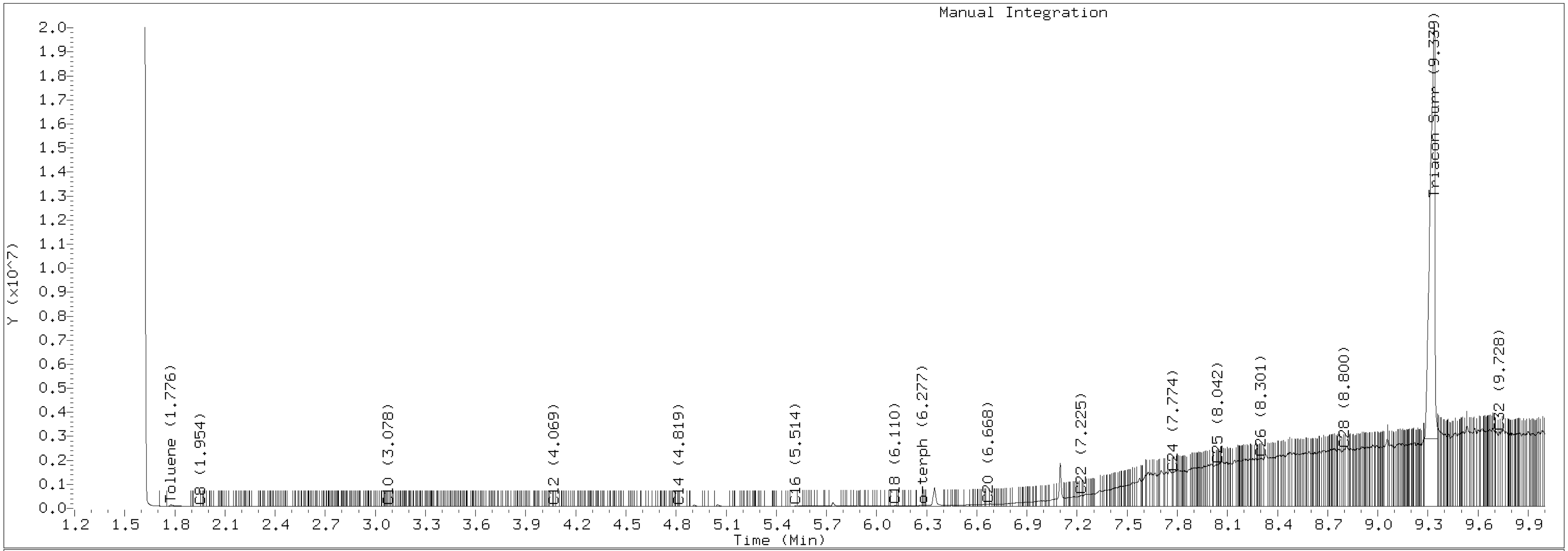
M Indicates the peak was manually integrated

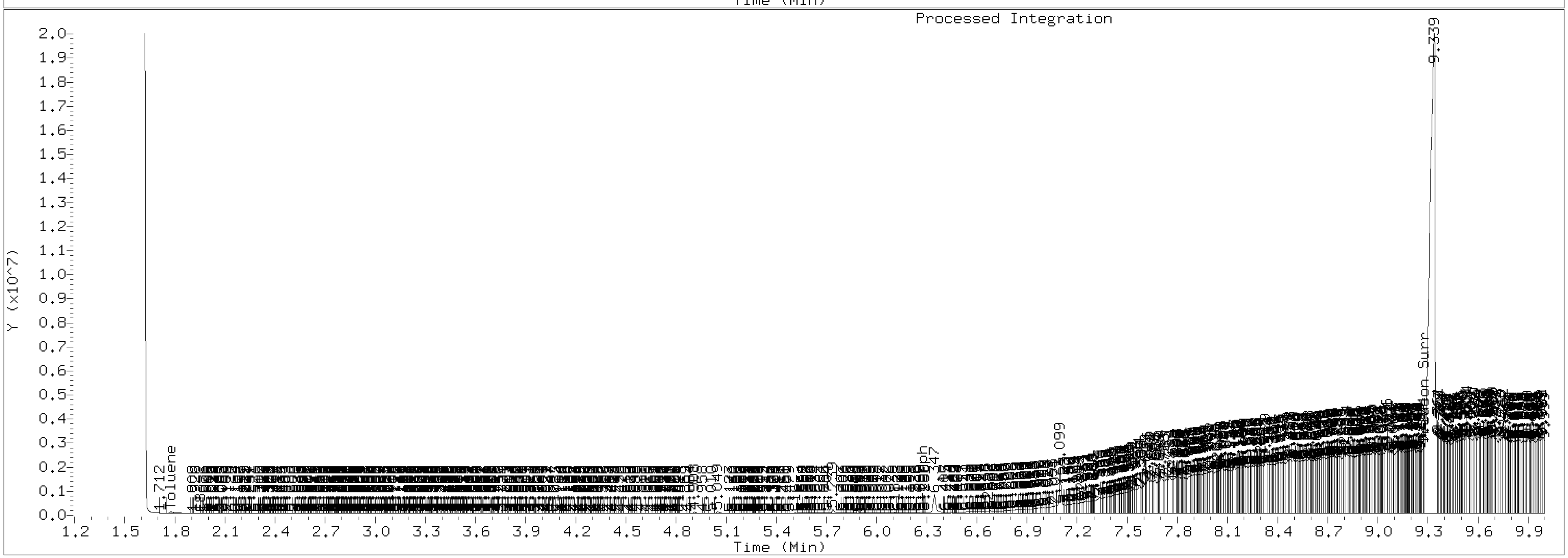
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	195491.2	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210107.b/421A0719.D SEQ-SCV2



TPH Manual Integrations Report
Datafile: FID4A, 20210107.b/421A0719.D Injection: 07-JAN-2021 20:57
Lab ID:SEQ-SCV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: EA00020
Sequence: SJA0096

SDG: 21A0361
Project: ICS-Former NW Cooperage
Laboratory ID: SJA0096-SCV3
Sequence Name: AK103 SCV
Standard ID: I003268

ANALYTE	EXPECTED (mg/L)	FOUND (mg/L)	% DRIFT	QC LIMIT
Motor Oil Range Organics (C24-C38)	5000.0	4390	-12.3	30.00

* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210107.b\421A0726.D

Date : 07-JAN-2021 23:25

Client ID:

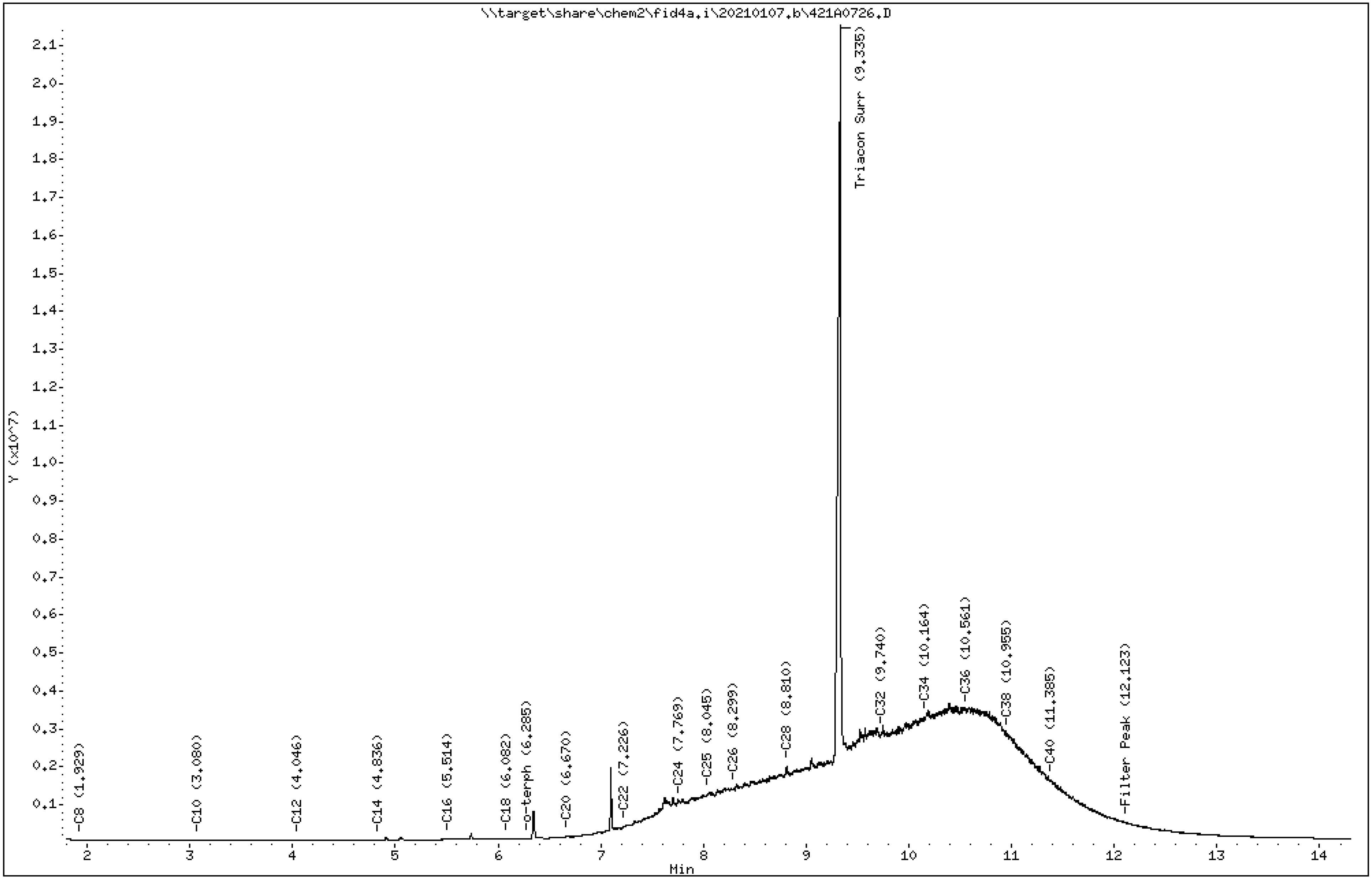
Instrument: fid4a.i

Sample Info: SEQ-SCV3

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210107.b/421A0726.D
Method: 20210107.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 01/08/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-SCV3
Client ID:
Injection: 07-JAN-2021 23:25
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.929	-0.020	11406	31616	WATPHD	(C12-C24)	36887509	268.3
C10	3.080	0.001	2103	618	WATPHM	(C24-C38)	446622252	4386.9
C12	4.046	-0.011	4969	3414	AK102	(C10-C25)	48168119	246.4
C14	4.836	0.003	9399	10064	AK103	(C25-C36)	364188866	4844.4
C16	5.514	0.016	25847	56181	OR.DIES	(C10-C28)	123932003	632.3
C18	6.082	-0.013	29613	11790				
C20	6.670	0.006	98492	123723	JET-A	(C10-C18)	2415380	14.6
C22	7.226	0.003	353946	307883				
C24	7.769	-0.001	1004241	492534				
C25	8.045	0.005	1232383	1188933				
C26	8.299	-0.001	1366105	1353227				
C28	8.810	0.005	1941337	2952339				
C32	9.740	0.006	2851743	1971642				
C34	10.164	0.005	3251095	1927935				
Filter Peak	12.123	-0.003	462955	585275	BUNKERC	(C10-C38)	483792398	12255.0
C36	10.561	-0.004	3433221	1535433				
C38	10.955	-0.002	2808313	834902				
C40	11.385	-0.001	1590505	705765				
o-terph	6.285	0.012	46185	31608				
Triacon Surr	9.335	0.028	19227304	36488388	NAS DIES	(C10-C24)	37170146	190.5

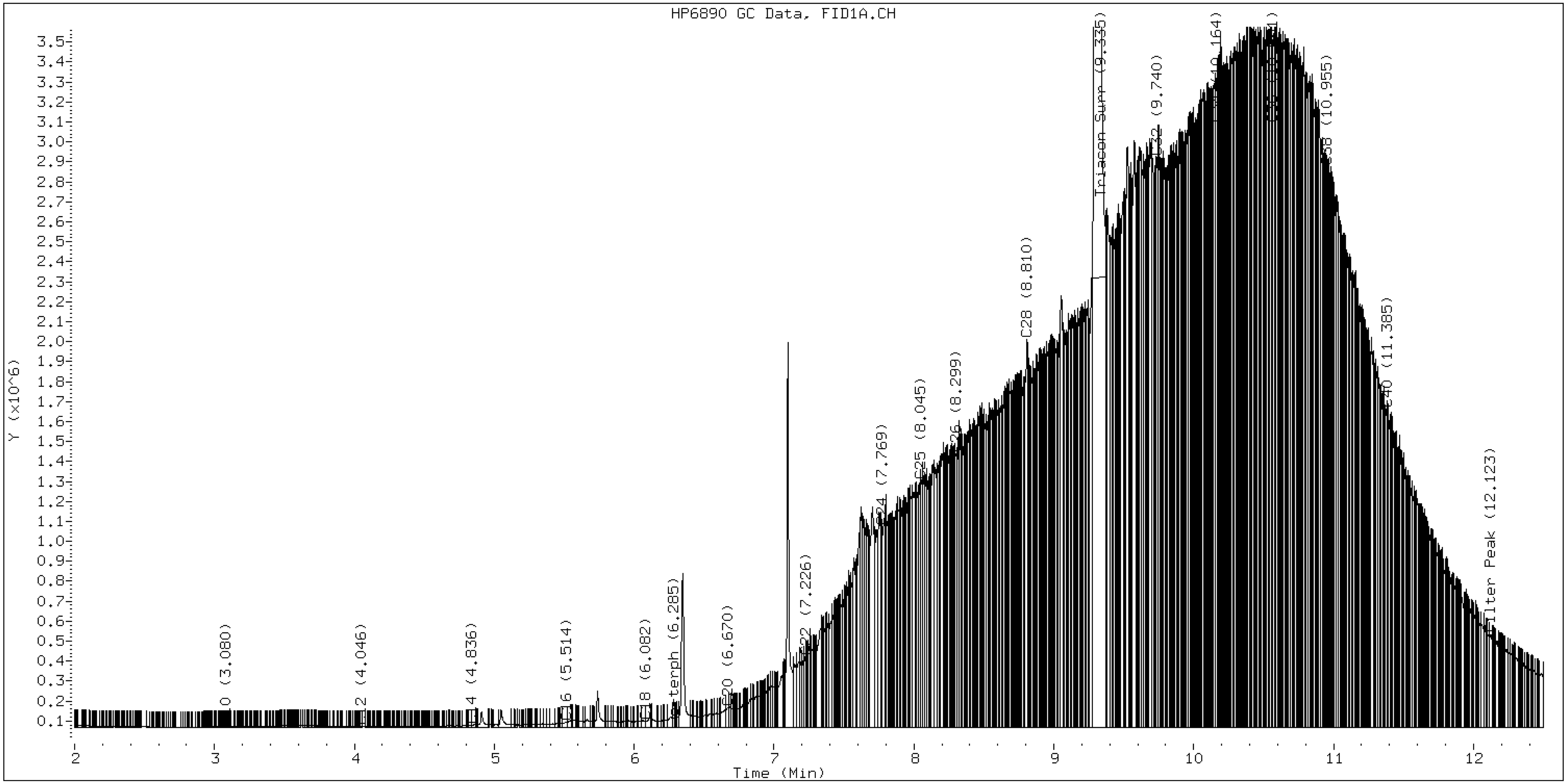
Range Times: NW Diesel(4.058 - 7.770) AK102(3.08 - 8.04) Jet A(3.08 - 6.10)
NW M.Oil(7.77 - 10.96) AK103(8.04 - 10.57) OR Diesel(3.08 - 8.80)

Surrogate	Area	Amount	
o-Terphenyl	31608	0.2	
Triacontane	36488388	258.0	M

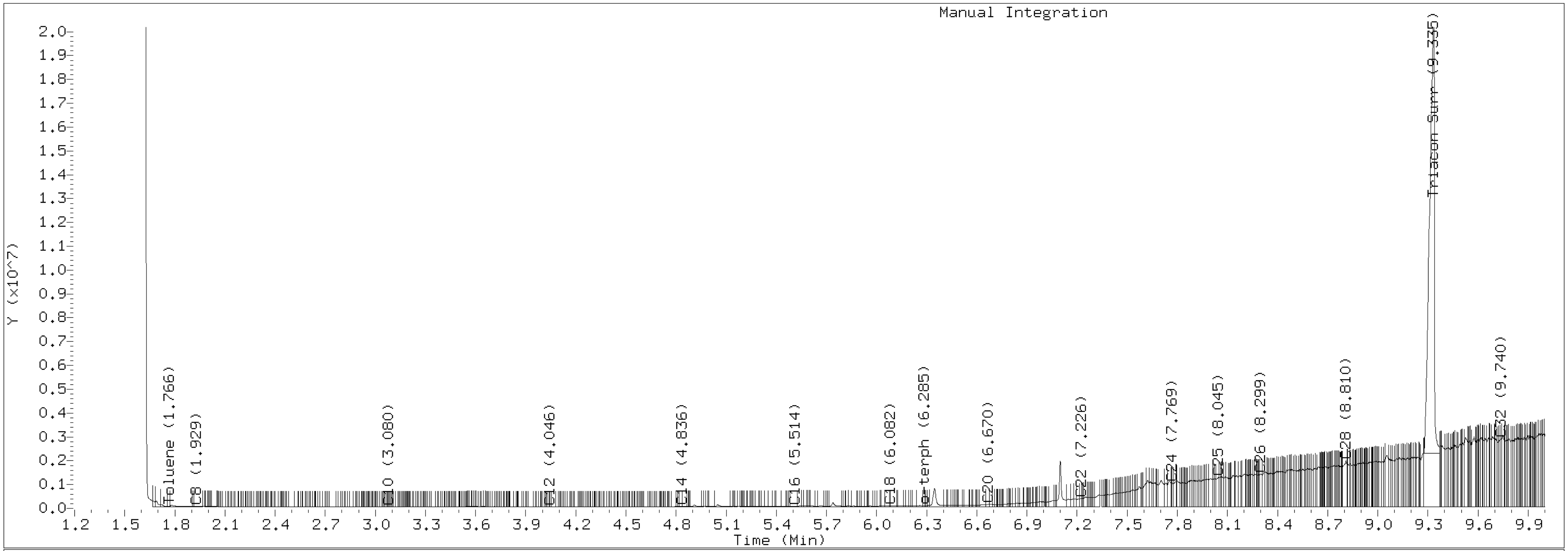
M Indicates the peak was manually integrated

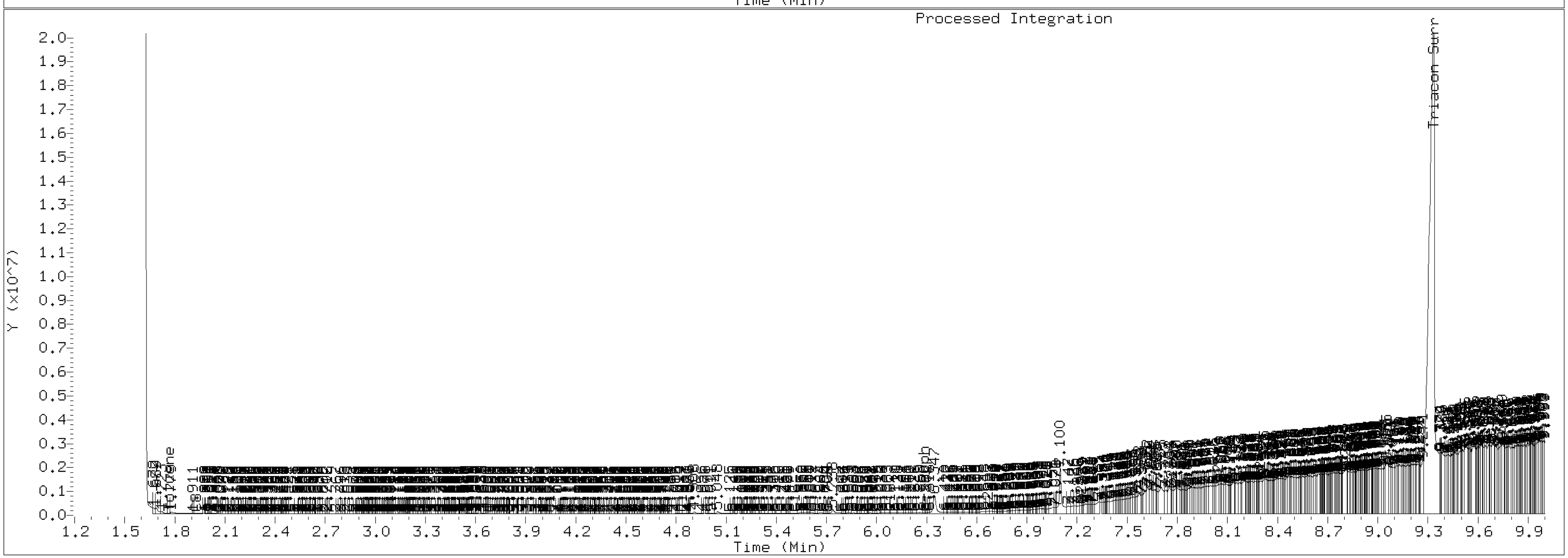
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	195491.2	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210107.b/421A0726.D   SEQ-SCV3



TPH Manual Integrations Report
Datafile: FID4A, 20210107.b/421A0726.D Injection: 07-JAN-2021 23:25
Lab ID:SEQ-SCV3





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B0905.D	Calibration Date:	01/07/2021
Sequence:	SJB0139	Injection Date:	02/09/21
Lab Sample ID:	SJB0139-ICV1	Injection Time:	10:11
Sequence Name:	DIESEL ICV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	516	137498.2000	141832.8000		3.2	+/-15
o-Terphenyl	A	90.000	93.1	170577.7000	176410.9000		3.4	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210209.b\421B0905.D

Page 1

Date : 09-FEB-2021 10:11

Client ID:

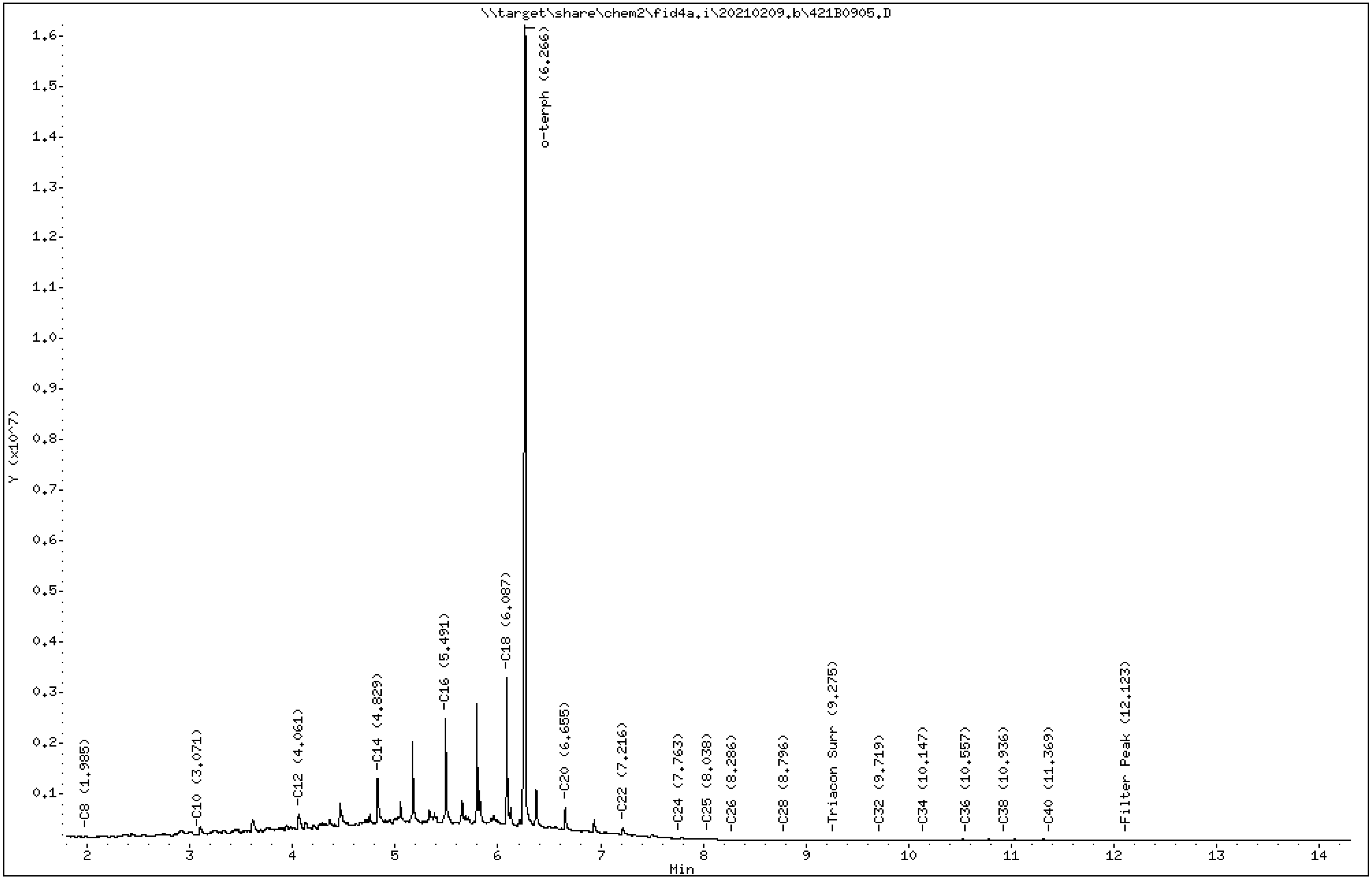
Instrument: fid4a.i

Sample Info: SEQ-ICV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210209.b/421B0905.D
Method: 20210209.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/09/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-ICV1
Client ID:
Injection: 09-FEB-2021 10:11
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.985	0.015	79678	357518	WATPHD	(C12-C24)	70916402	515.8
C10	3.071	-0.010	120988	175082	WATPHM	(C24-C38)	748034	7.3
C12	4.061	0.007	516382	1335073	AK102	(C10-C25)	83741703	498.3
C14	4.829	0.000	1218596	2347419	AK103	(C25-C36)	451355	6.0
C16	5.491	-0.001	2413222	4131683	OR.DIES	(C10-C28)	84077844	429.0
C18	6.087	-0.001	3224184	3102784				
C20	6.655	-0.001	642371	1345424	JET-A	(C10-C18)	65536364	395.2
C22	7.216	0.001	243359	809605				
C24	7.763	0.000	33491	6657				
C25	8.038	0.009	16483	4928				
C26	8.286	-0.005	8617	2562				
C28	8.796	0.002	2068	1482				
C32	9.719	-0.004	484	178				
C34	10.147	-0.001	1022	435				
Filter Peak	12.123	0.009	7472	5516	BUNKERC	(C10-C38)	84313833	2135.8
C36	10.557	0.005	2999	1178				
C38	10.936	-0.003	6203	926				
C40	11.369	0.000	8093	3996				
o-terph	6.266	-0.001	15791832	15876984				
Triacon Surr	9.275	-0.023	219	115	NAS DIES	(C10-C24)	83565799	428.2

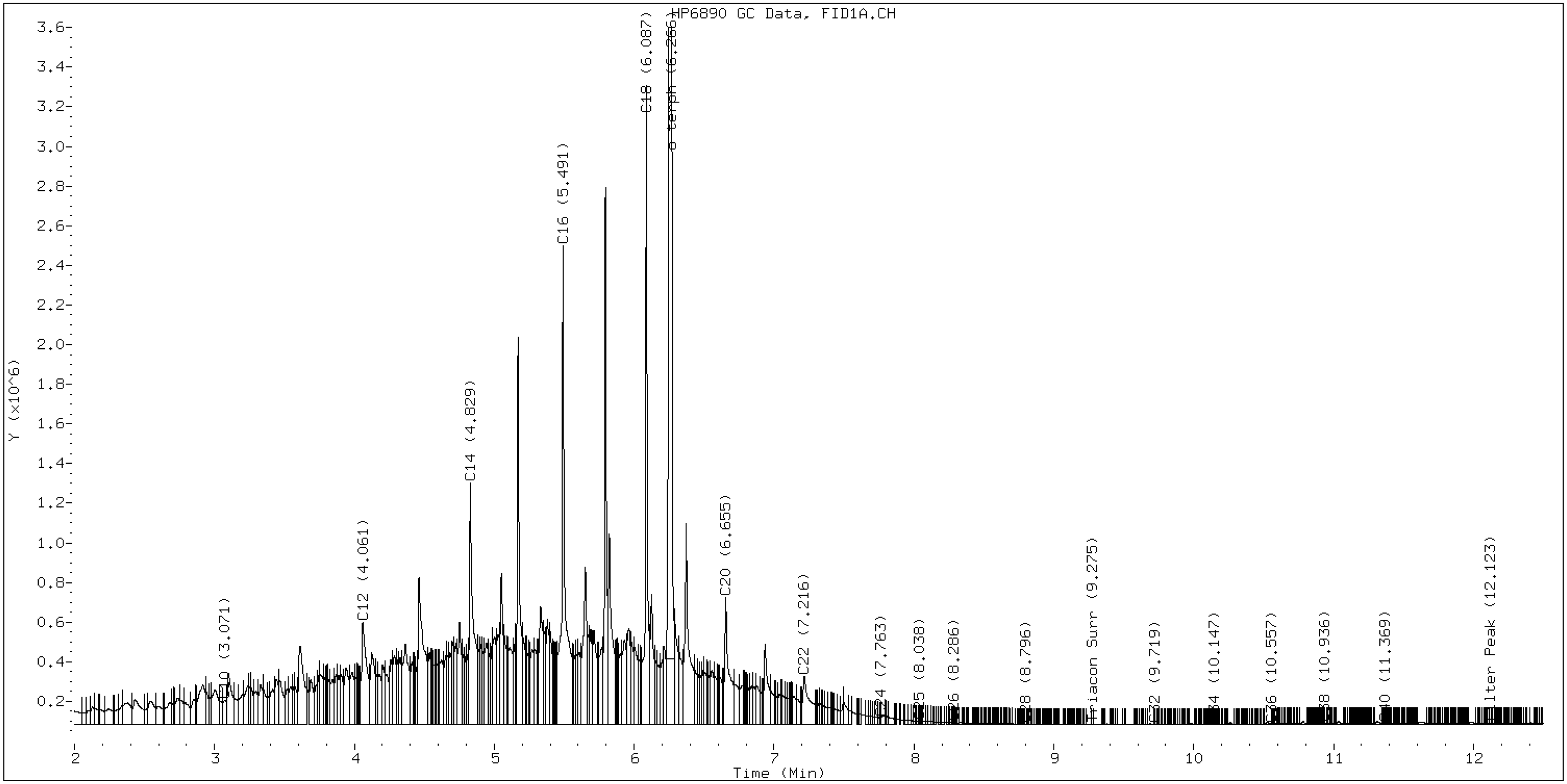
Range Times: NW Diesel(4.054 - 7.763) AK102(3.08 - 8.03) Jet A(3.08 - 6.09)
NW M.Oil(7.76 - 10.94) AK103(8.03 - 10.55) OR Diesel(3.08 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	15876984	93.1	M
Triacontane	115	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

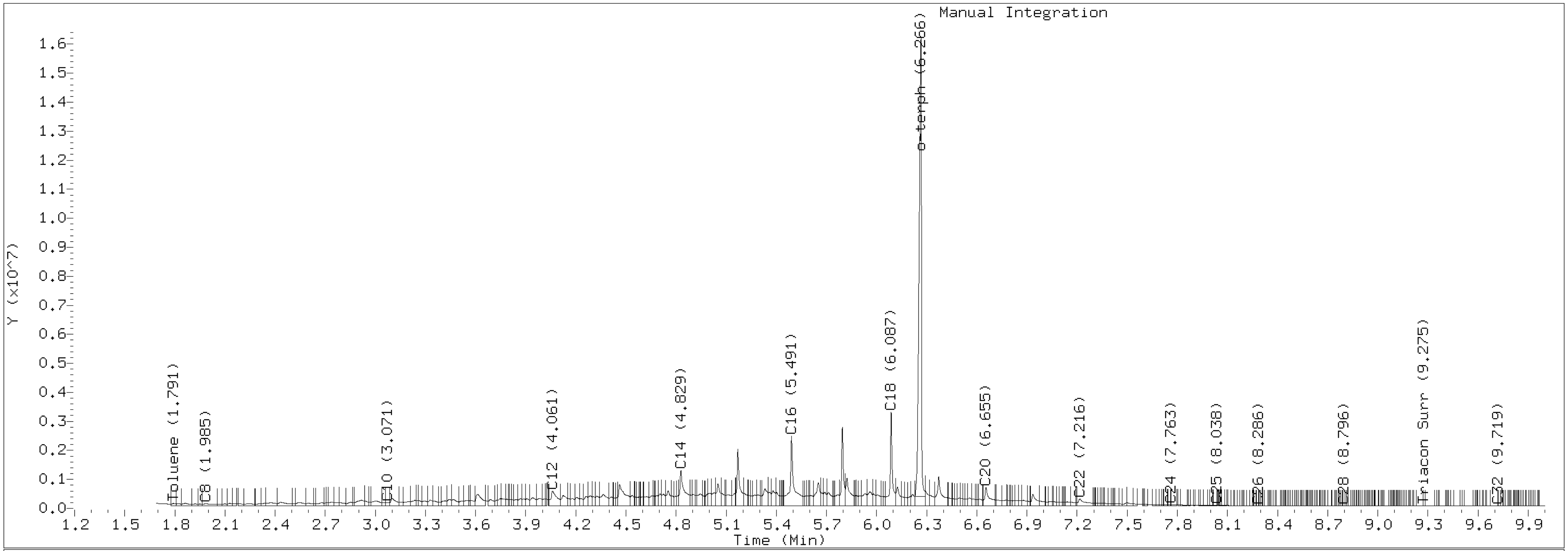
Datafile: FID4A, 20210209.b/421B0905.D SEQ-ICV1

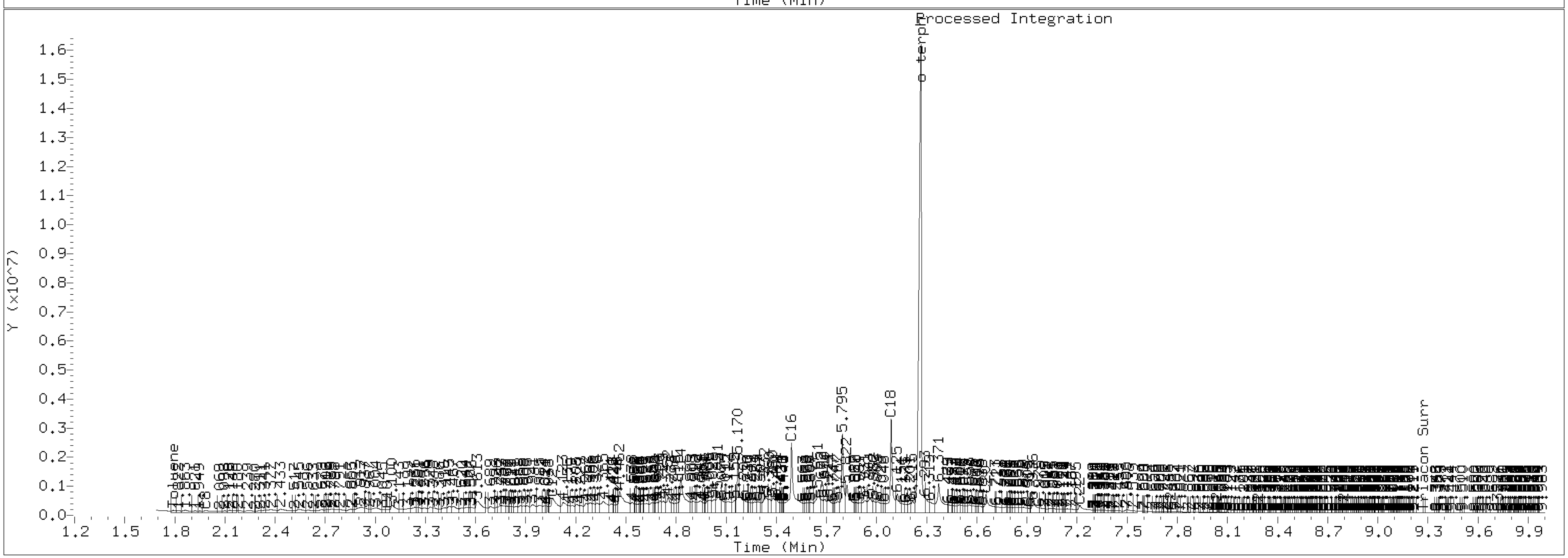


TPH Manual Integrations Report

Datafile: FID4A, 20210209.b/421B0905.D Injection: 09-FEB-2021 10:11

Lab ID:SEQ-ICV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B0906.D	Calibration Date:	01/07/2021
Sequence:	SJB0139	Injection Date:	02/09/21
Lab Sample ID:	SJB0139-ICV2	Injection Time:	10:32
Sequence Name:	MOIL ICV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	989	101807.5000	100690.7000		-1.1	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210209.b\421B0906.D

Date : 09-FEB-2021 10:32

Client ID:

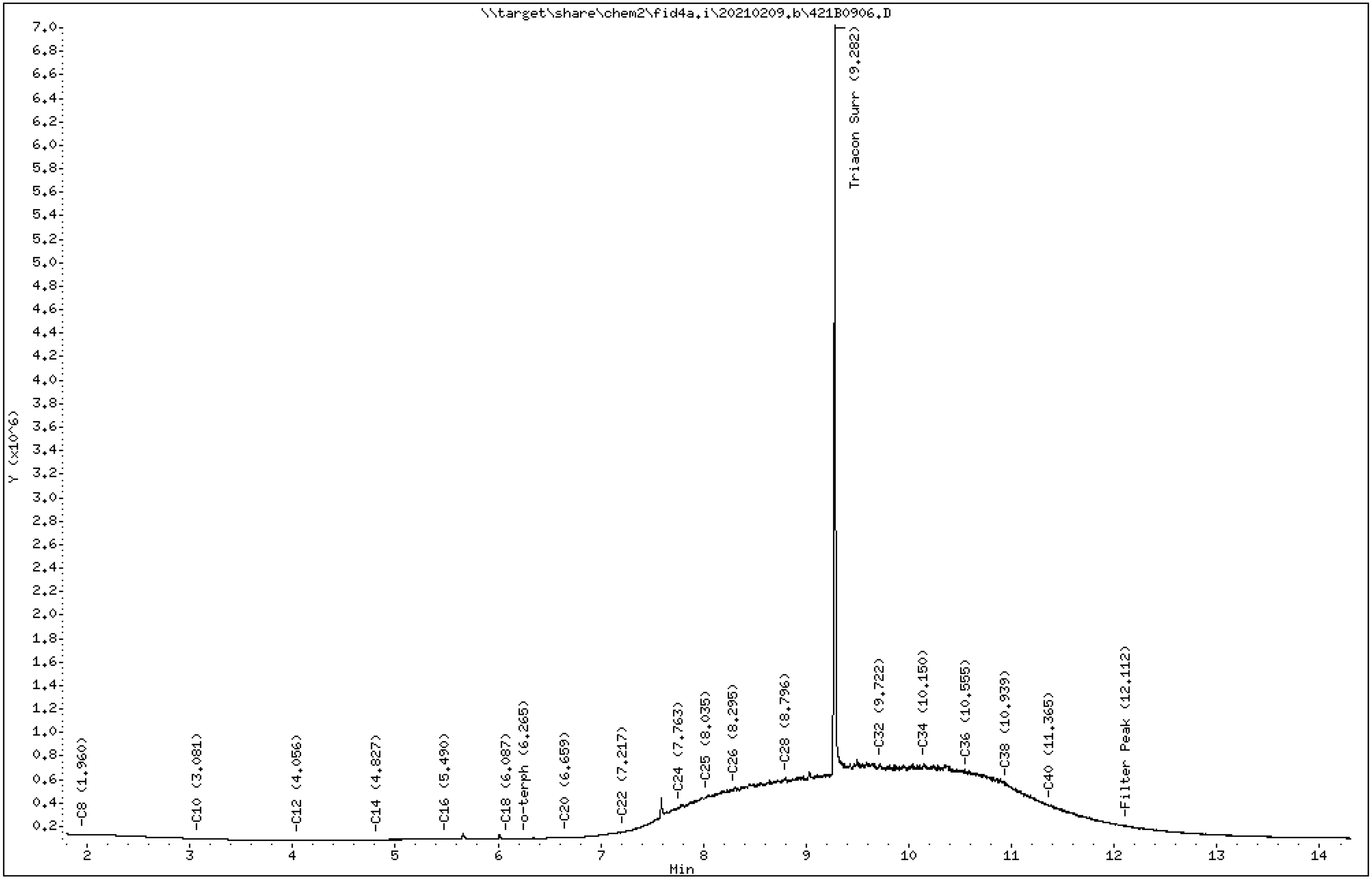
Instrument: fid4a.i

Sample Info: SEQ-ICV2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210209.b/421B0906.D
Method: 20210209.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/09/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-ICV2
Client ID:
Injection: 09-FEB-2021 10:32
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.960	-0.010	48117	78650	WATPHD	(C12-C24)	8747718	63.6
C10	3.081	-0.001	13138	5211	WATPHM	(C24-C38)	100690667	989.0
C12	4.056	0.003	336	106	AK102	(C10-C25)	12126555	72.2
C14	4.827	-0.001	5202	519	AK103	(C25-C36)	85718038	1140.2
C16	5.490	-0.002	6350	2514	OR.DIES	(C10-C28)	35145971	179.3
C18	6.087	-0.001	10807	3771				
C20	6.659	0.003	23288	11369	JET-A	(C10-C18)	929011	5.6
C22	7.217	0.002	72702	59385				
C24	7.763	0.000	280873	124913				
C25	8.035	0.006	375894	257526				
C26	8.295	0.005	428877	276597				
C28	8.796	0.003	518572	205872				
C32	9.722	-0.001	657163	795532				
C34	10.150	0.002	655189	449478				
Filter Peak	12.112	-0.002	124397	60895	BUNKERC	(C10-C38)	109653011	2777.6
C36	10.555	0.002	574850	171809				
C38	10.939	-0.001	474266	141414				
C40	11.365	-0.003	294295	131023				
o-terph	6.265	-0.002	11586	12415				
Triacon Surr	9.282	-0.016	6388034	6409150	NAS DIES	(C10-C24)	8962344	45.9

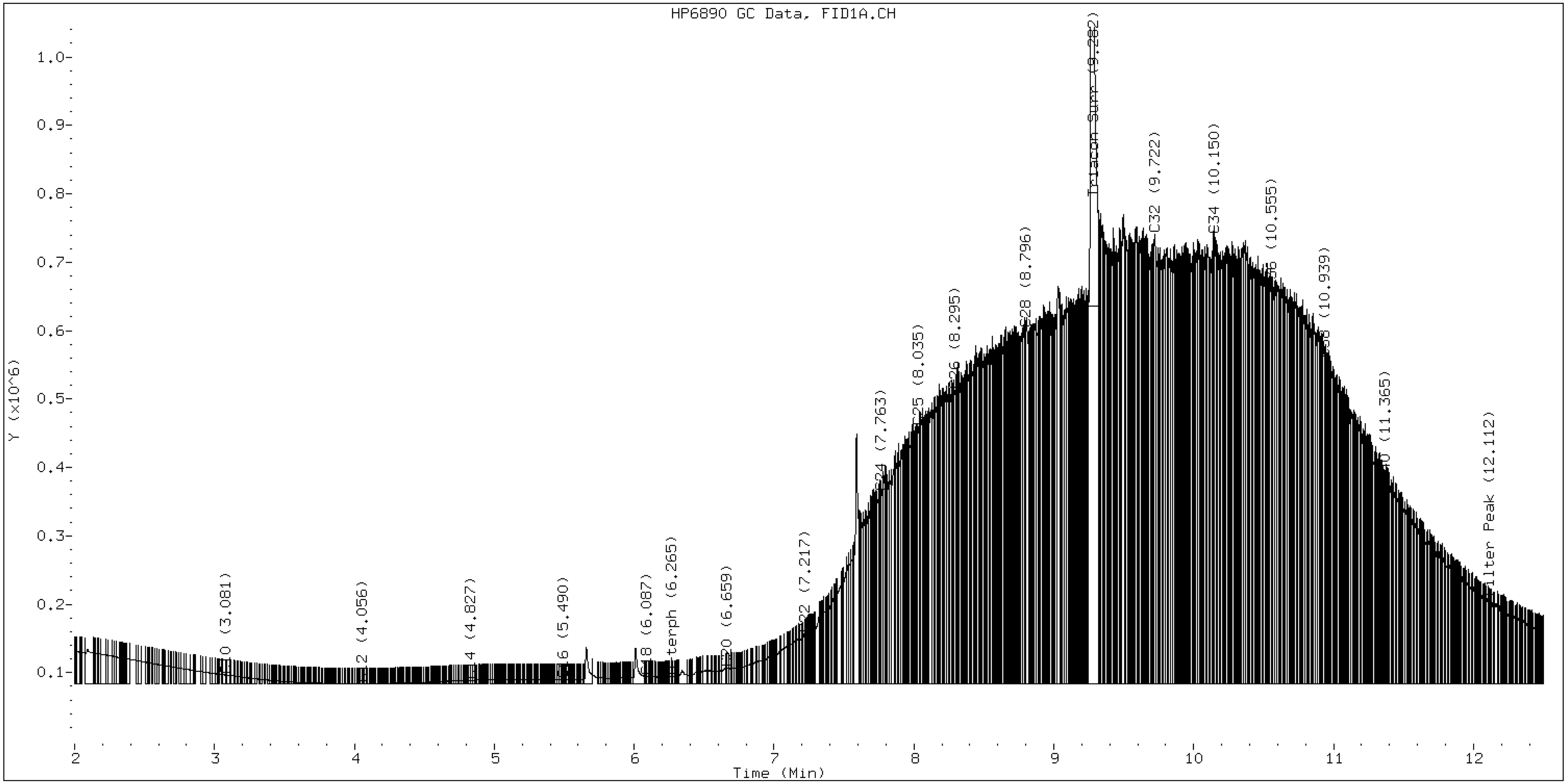
Range Times: NW Diesel(4.054 - 7.763) AK102(3.08 - 8.03) Jet A(3.08 - 6.09)
NW M.Oil(7.76 - 10.94) AK103(8.03 - 10.55) OR Diesel(3.08 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	12415	0.1	
Triacontane	6409150	45.3	M

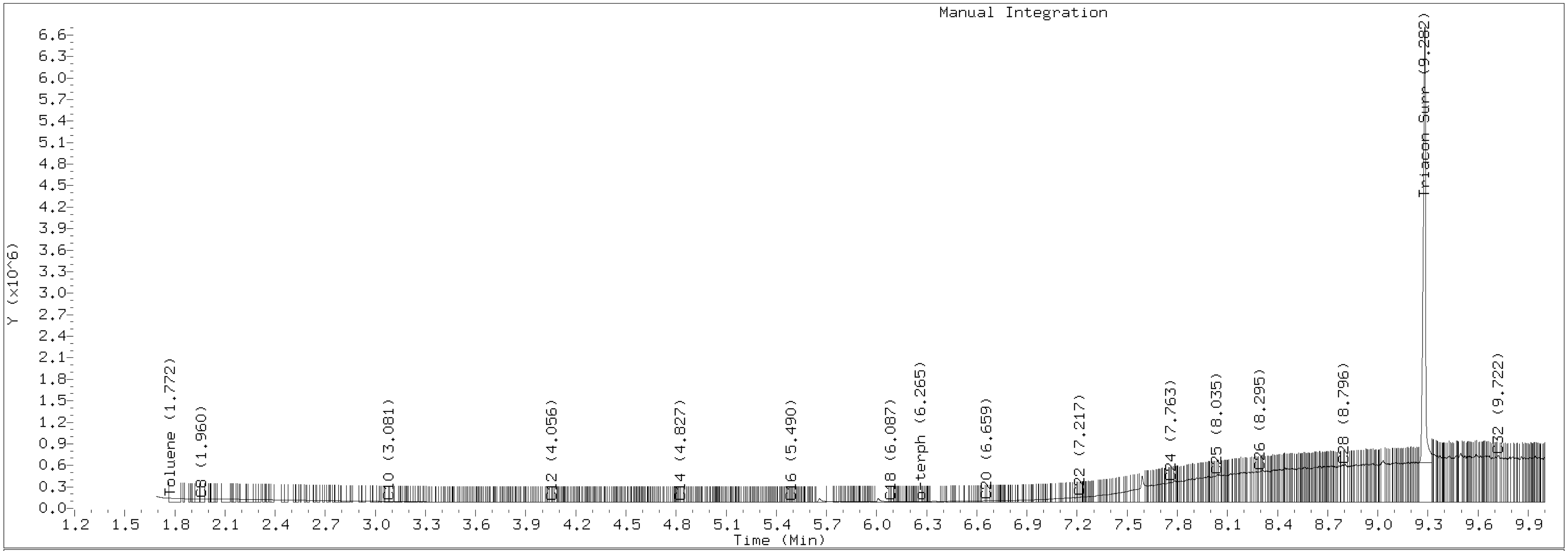
M Indicates the peak was manually integrated

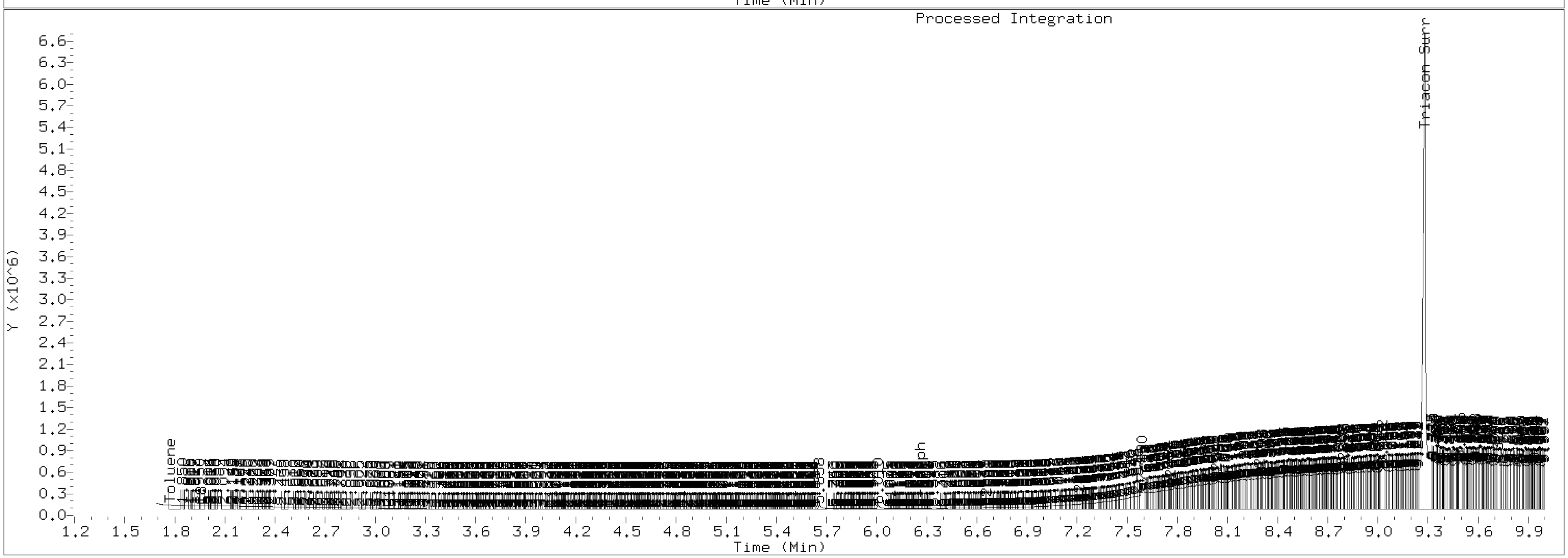
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210209.b/421B0906.D SEQ-ICV2



TPH Manual Integrations Report
Datafile: FID4A, 20210209.b/421B0906.D Injection: 09-FEB-2021 10:32
Lab ID:SEQ-ICV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B1705.D
Calibration Date: 01/07/2021
Sequence: SJB0251
Injection Date: 02/17/21
Lab Sample ID: SJB0251-ICV1
Injection Time: 12:14
Sequence Name: DIESEL ICV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	562	137498.2000	154432.9000		12.3	+/-15
o-Terphenyl	A	90.000	103	170577.7000	194488.9000		14.0	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1705.D

Page 1

Date : 17-FEB-2021 12:14

Client ID:

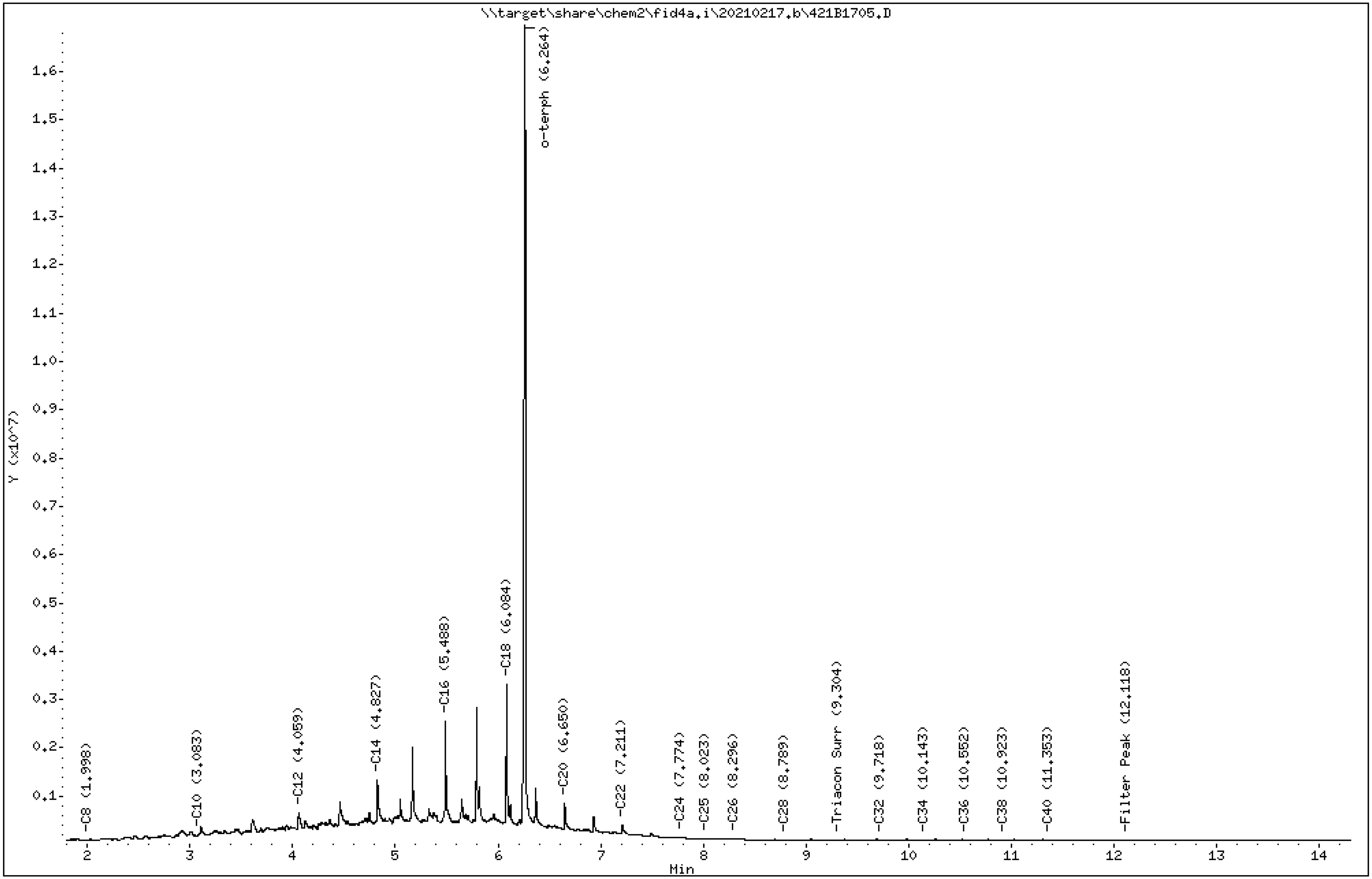
Instrument: fid4a.i

Sample Info: SEQ-ICV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1705.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-ICV1
Client ID:
Injection: 17-FEB-2021 12:14
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.998	-0.012	10683	12272	WATPHD	(C12-C24)	77216460	561.6
C10	3.083	-0.008	106898	140165	WATPHM	(C24-C38)	1743756	17.1
C12	4.059	0.006	562404	1403498	AK102	(C10-C25)	90498420	538.5
C14	4.827	0.001	1241050	2583328	AK103	(C25-C36)	1308722	17.4
C16	5.488	0.000	2473110	4296018	OR.DIES	(C10-C28)	91167530	465.1
C18	6.084	-0.002	3232449	3022665				
C20	6.650	-0.002	754606	974066	JET-A	(C10-C18)	69743455	420.5
C22	7.211	-0.001	313309	623712				
C24	7.774	0.014	58655	64404				
C25	8.023	-0.006	25293	22504				
C26	8.296	0.008	15706	8572				
C28	8.789	-0.002	7732	3061				
C32	9.718	-0.002	5700	3395				
C34	10.143	0.001	6211	3375				
Filter Peak	12.118	-0.003	11062	7121	BUNKERC	(C10-C38)	92004814	2330.6
C36	10.552	0.008	7617	4892				
C38	10.923	-0.002	9606	4316				
C40	11.353	0.003	11710	10479				
o-terph	6.264	-0.002	16506915	17503995				
Triacon Surr	9.304	0.008	5170	5745	NAS DIES	(C10-C24)	90261058	462.5

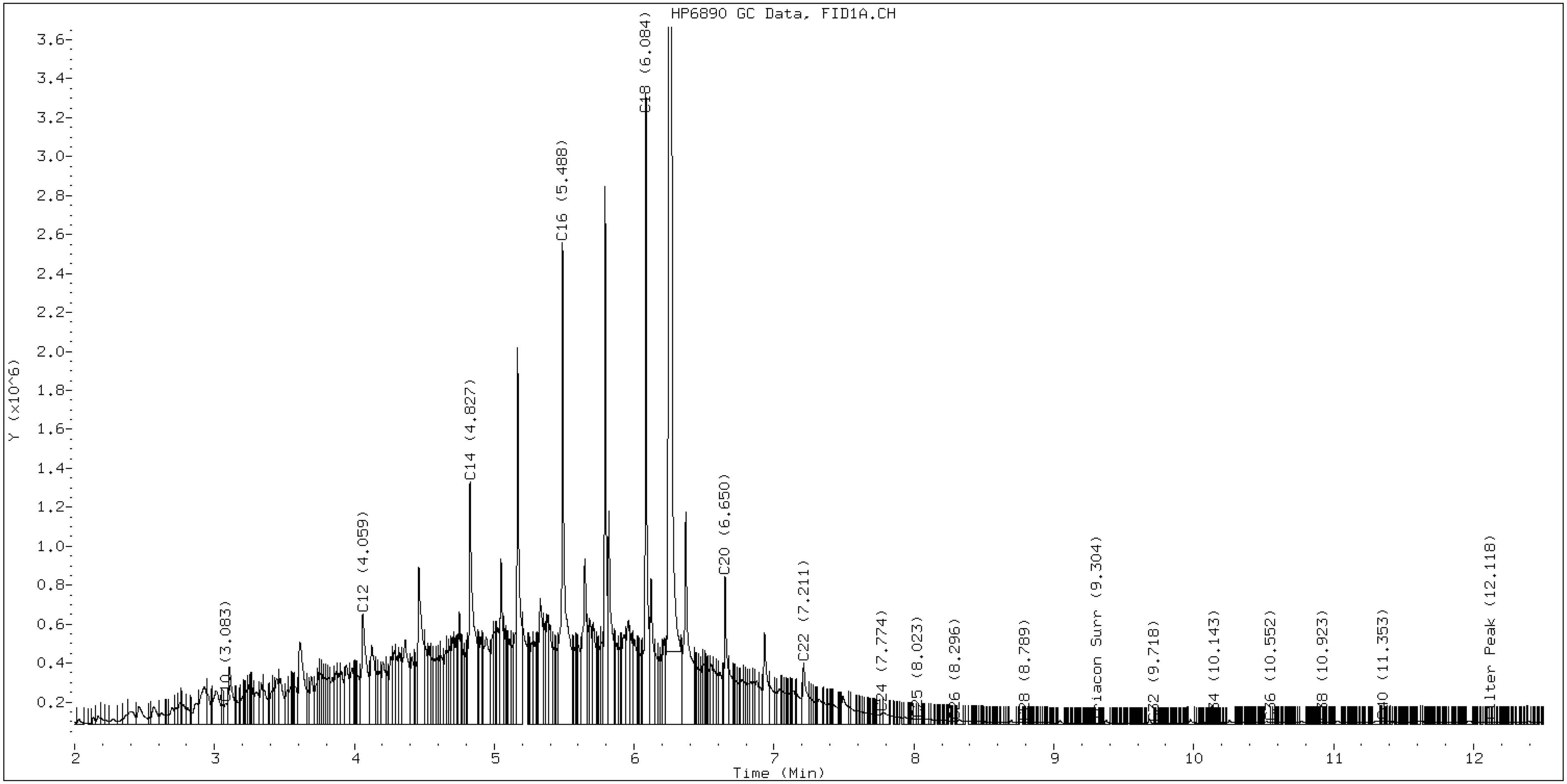
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	17503995	102.6	M
Triacontane	5745	0.0	

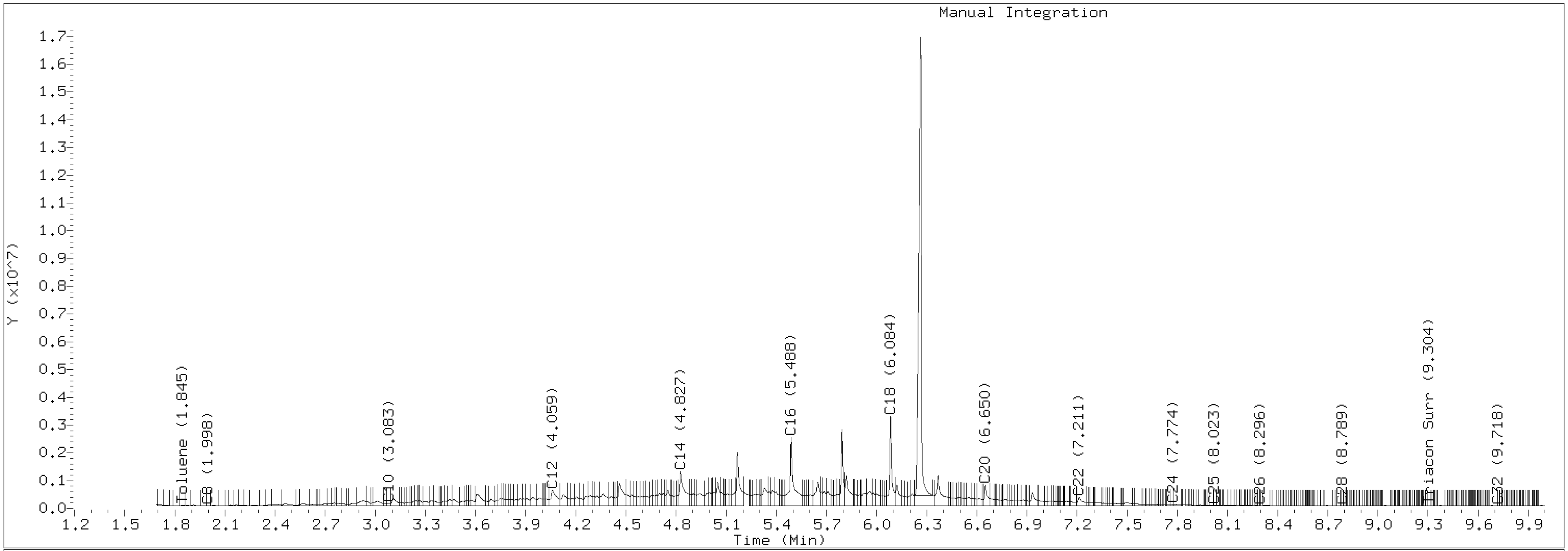
M Indicates the peak was manually integrated

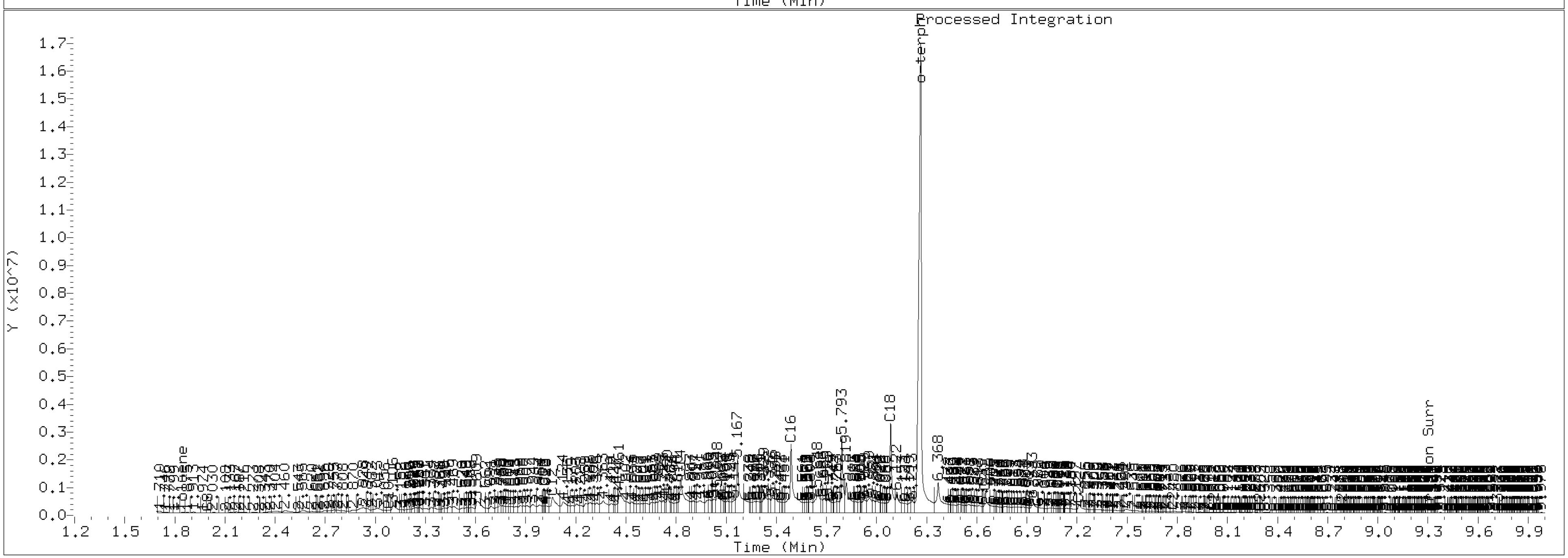
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210217.b/421B1705.D SEQ-ICV1



TPH Manual Integrations Report
Datafile: FID4A, 20210217.b/421B1705.D Injection: 17-FEB-2021 12:14
Lab ID:SEQ-ICV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

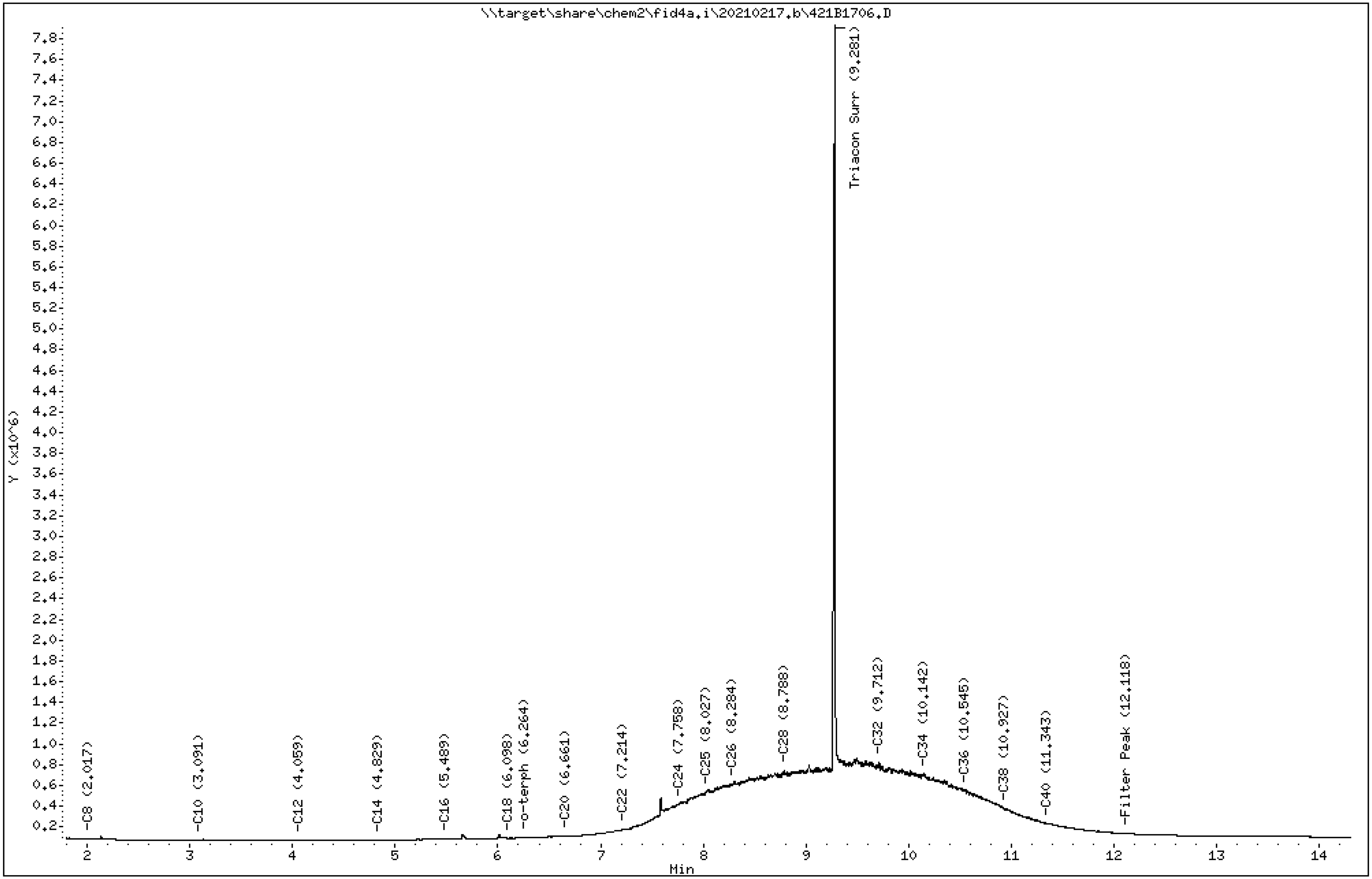
Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B1706.D	Calibration Date:	01/07/2021
Sequence:	SJB0251	Injection Date:	02/17/21
Lab Sample ID:	SJB0251-ICV2	Injection Time:	12:35
Sequence Name:	MOIL ICV		

		CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1070	101807.5000	108824.7000		6.9	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1706.D
Date : 17-FEB-2021 12:35
Client ID:
Sample Info: SEQ-ICV2

Instrument: fid4a.i
Operator: CTO
Column phase: RTX-1
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1706.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-ICV2
Client ID:
Injection: 17-FEB-2021 12:35
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.017	0.007	10774	12757	WATPHD	(C12-C24)	11661786	84.8
C10	3.091	-0.000	2694	2207	WATPHM	(C24-C38)	108824719	1068.9
C12	4.059	0.006	366	208	AK102	(C10-C25)	16008340	95.3
C14	4.829	0.003	2759	680	AK103	(C25-C36)	95989835	1276.8
C16	5.489	0.001	8676	3456	OR.DIES	(C10-C28)	44876014	229.0
C18	6.098	0.012	19600	4889				
C20	6.661	0.008	39512	61686	JET-A	(C10-C18)	974554	5.9
C22	7.214	0.002	105048	155828				
C24	7.758	-0.002	347864	120875				
C25	8.027	-0.001	464548	115579				
C26	8.284	-0.004	534651	159296				
C28	8.788	-0.003	677026	622713				
C32	9.712	-0.008	755269	623478				
C34	10.142	-0.001	627190	125129				
Filter Peak	12.118	-0.003	64080	50530	BUNKERC	(C10-C38)	120556192	3053.8
C36	10.545	0.002	473072	117896				
C38	10.927	0.001	307213	76409				
C40	11.343	-0.007	164784	129665				
o-terph	6.264	-0.002	22802	23568				
Triacon Surr	9.281	-0.016	7175476	7495233	NAS DIES	(C10-C24)	11731473	60.1

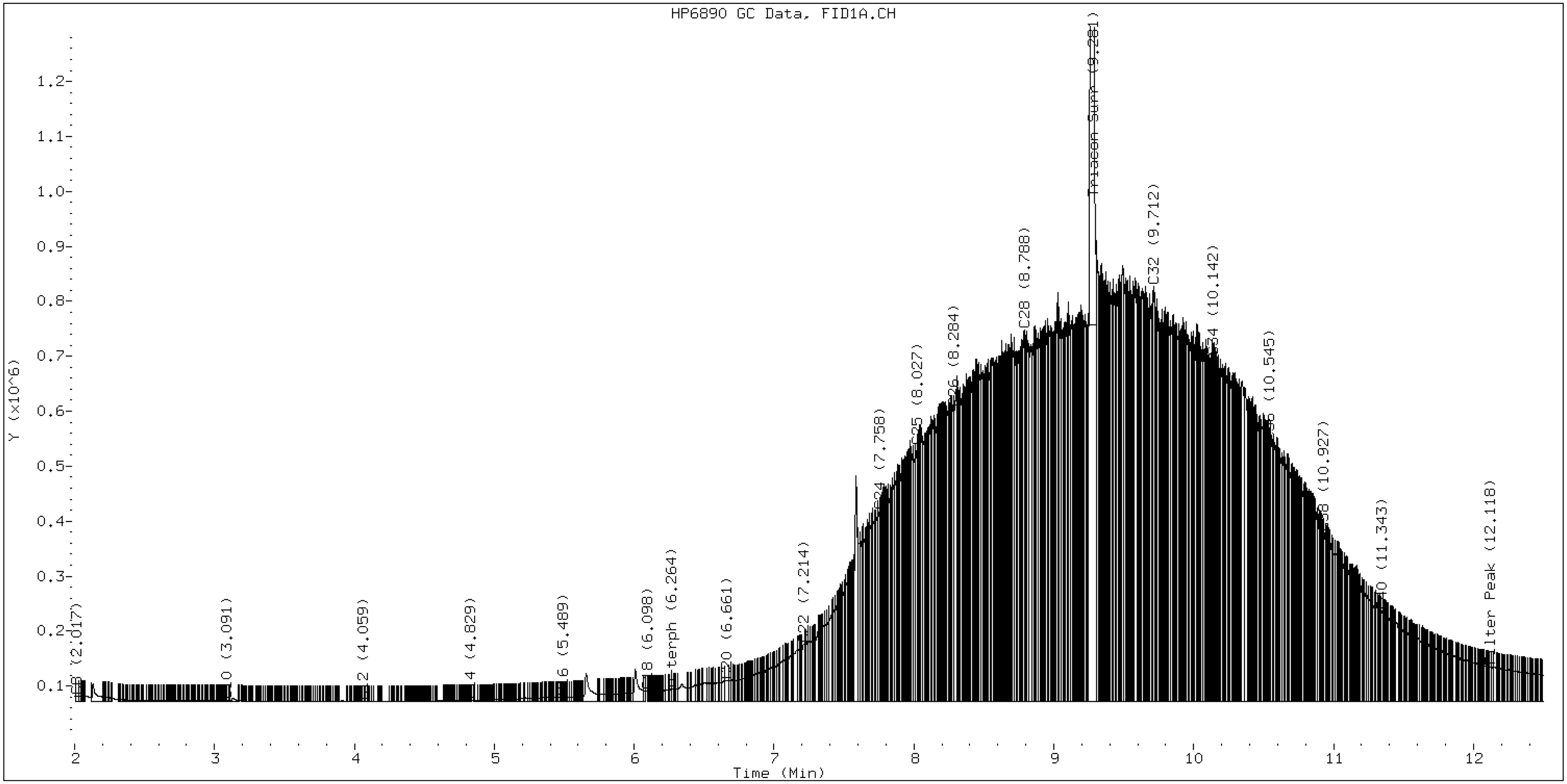
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	23568	0.1	
Triacontane	7495233	53.0	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

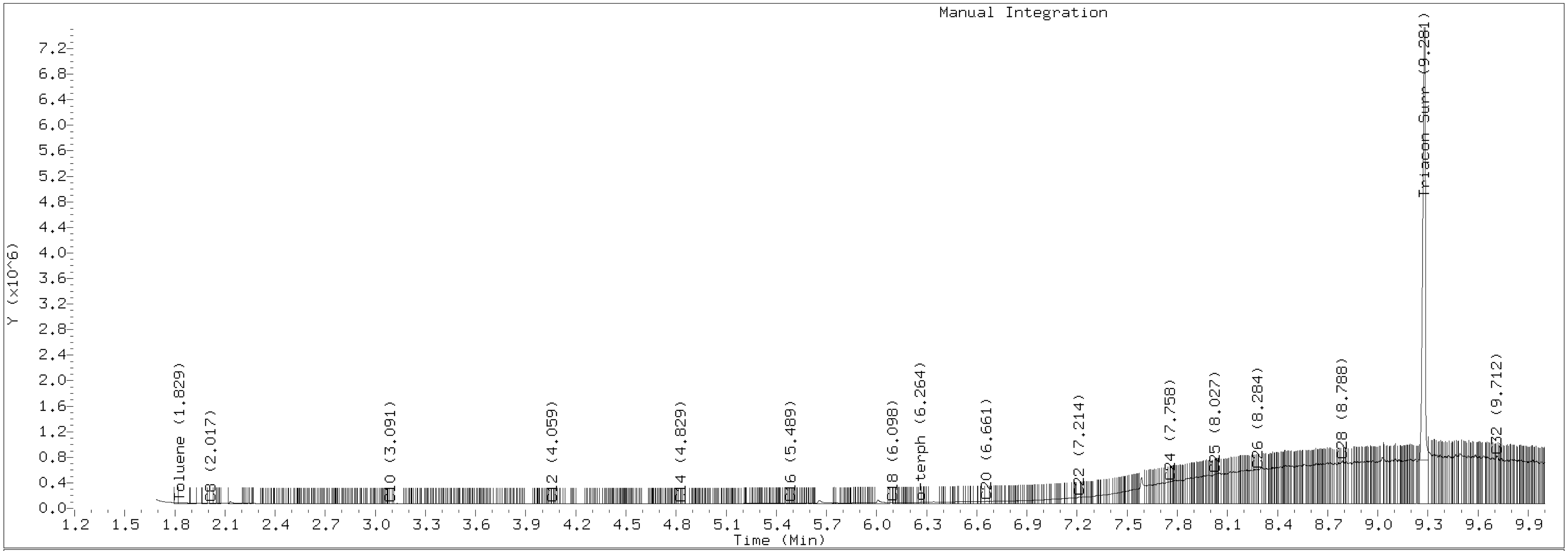
Datafile: FID4A, 20210217.b/421B1706.D SEQ-ICV2

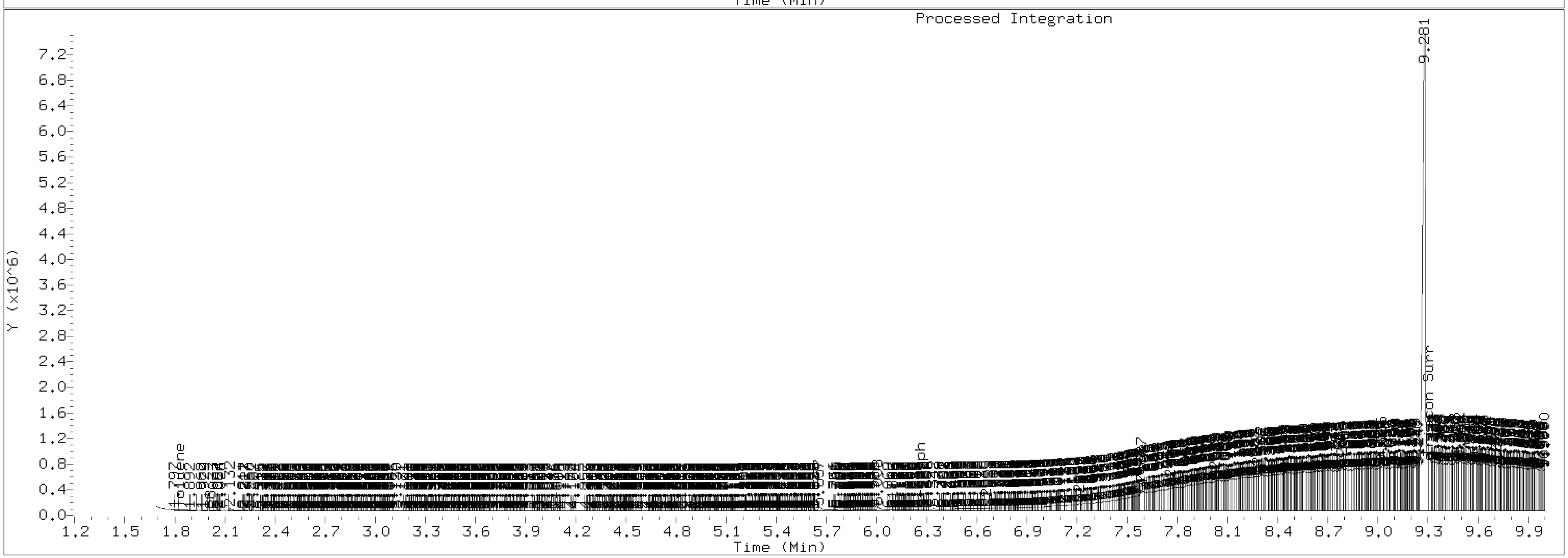


TPH Manual Integrations Report

Datafile: FID4A, 20210217.b/421B1706.D   Injection: 17-FEB-2021 12:35

Lab ID:SEQ-ICV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B2207.D
Calibration Date: 01/07/2021
Sequence: SJB0344
Injection Date: 02/22/21
Lab Sample ID: SJB0344-ICV1
Injection Time: 12:12
Sequence Name: DIESEL ICV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	512	137498.2000	140650.9000		2.3	+/-15
o-Terphenyl	A	90.000	93.8	170577.7000	177740.2000		4.2	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2207.D

Date : 22-FEB-2021 12:12

Client ID:

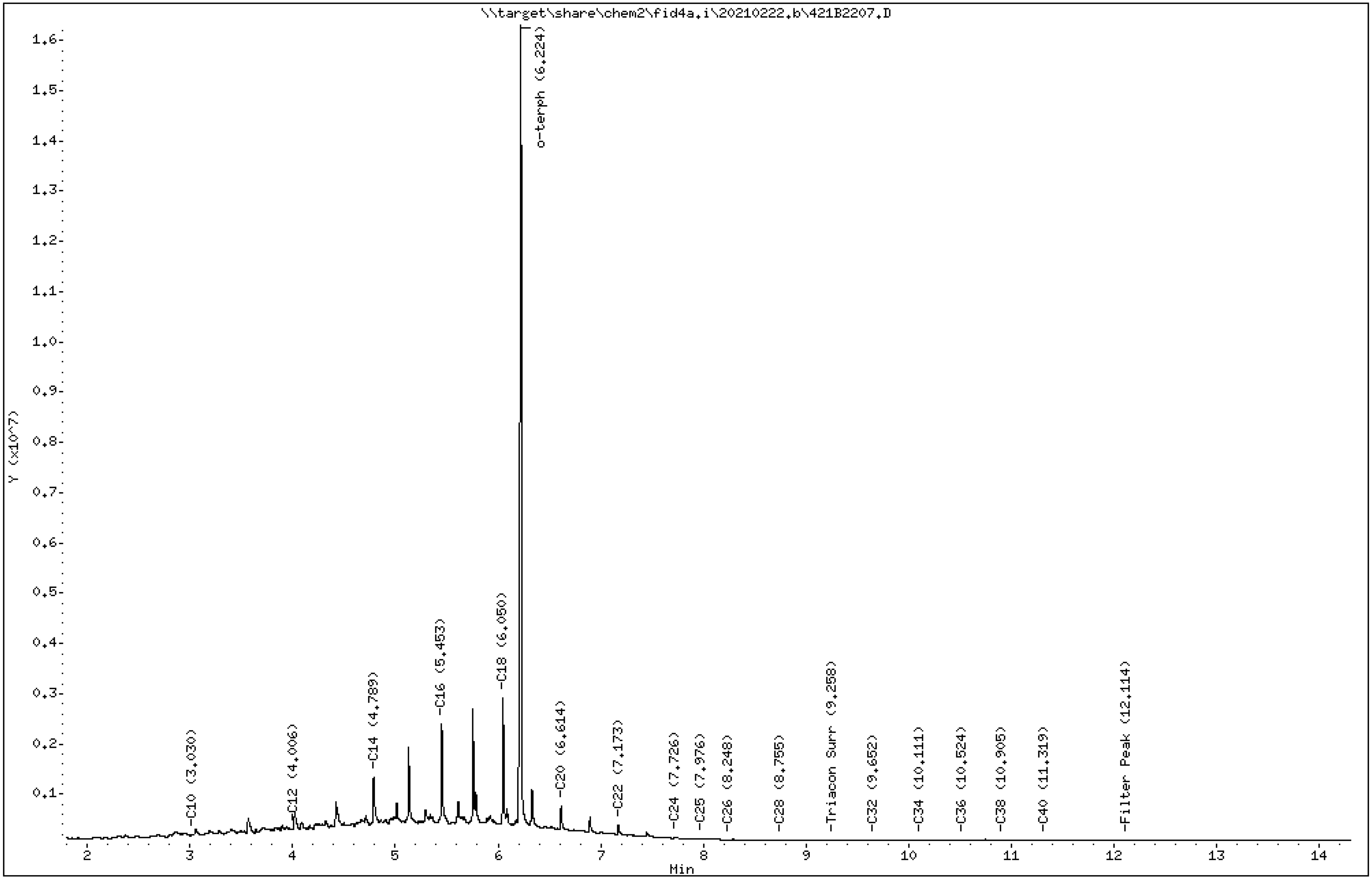
Sample Info: SEQ-ICV1

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2207.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-ICV1
Client ID:
Injection: 22-FEB-2021 12:12
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.913	0.009	63568	101248	WATPHD	(C12-C24)	70325475	511.5
C10	3.030	-0.004	98876	54015	WATPHM	(C24-C38)	948581	9.3
C12	4.006	-0.006	215974	43144	AK102	(C10-C25)	82930043	493.4
C14	4.789	0.002	1243069	2761477	AK103	(C25-C36)	663643	8.8
C16	5.453	-0.001	2325957	3990112	OR.DIES	(C10-C28)	83429650	425.7
C18	6.050	-0.001	2819167	2917286				
C20	6.614	-0.002	680883	1051367	JET-A	(C10-C18)	65273440	393.6
C22	7.173	-0.002	307066	547423				
C24	7.726	0.003	61162	260811				
C25	7.976	-0.013	19906	9850				
C26	8.248	-0.002	11307	2259				
C28	8.755	0.002	4398	2750				
C32	9.652	-0.031	7377	6421				
C34	10.111	0.003	1129	436				
Filter Peak	12.114	-0.002	7892	2347	BUNKERC	(C10-C38)	83687893	2119.9
C36	10.524	0.011	2808	1787				
C38	10.905	0.004	4851	1689				
C40	11.319	0.000	6828	3731				
o-terph	6.224	-0.002	15855579	15996615				
Triacon Surr	9.258	0.002	800	261	NAS DIES	(C10-C24)	82739312	424.0

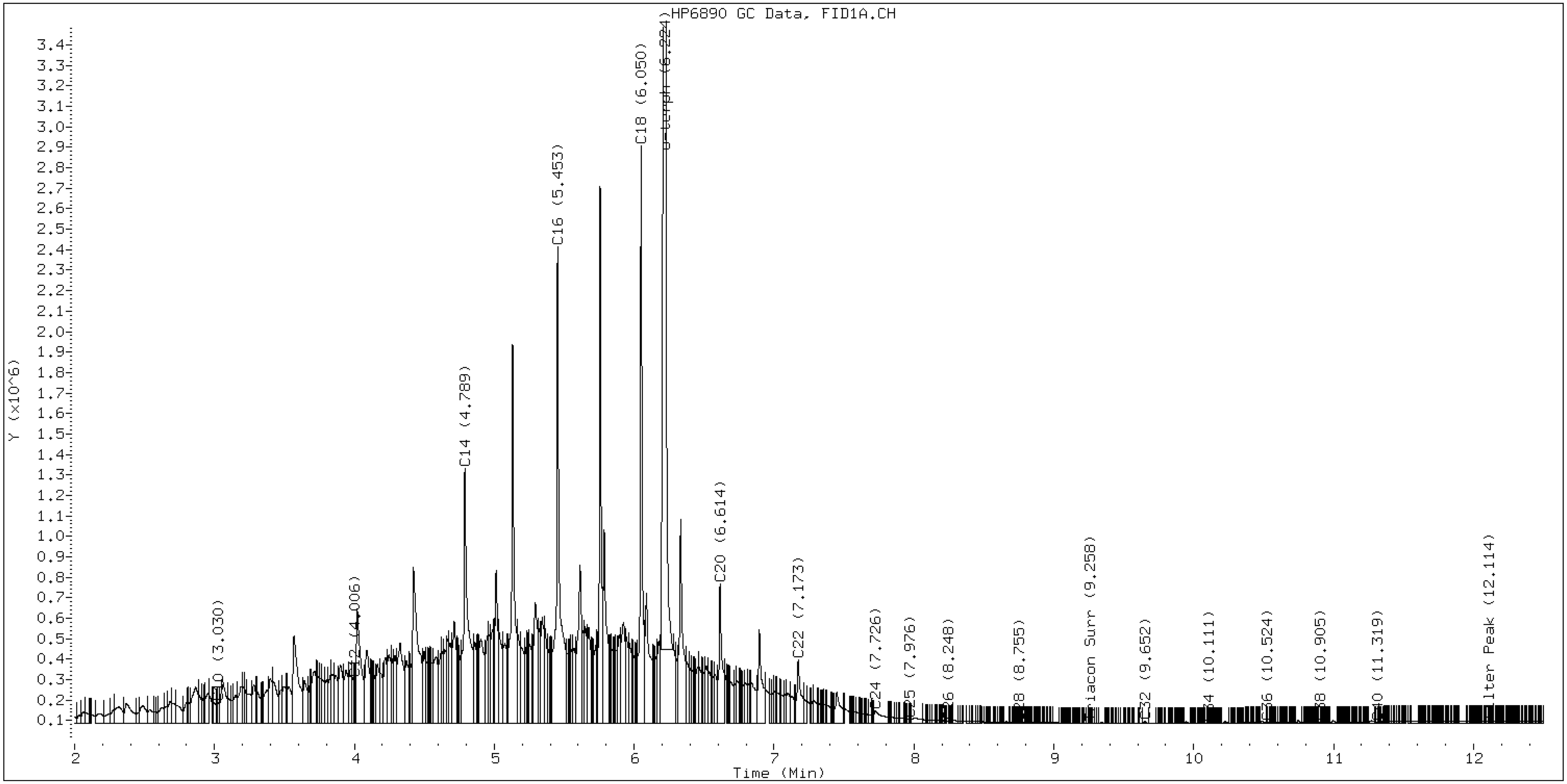
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	15996615	93.8	M
Triacontane	261	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

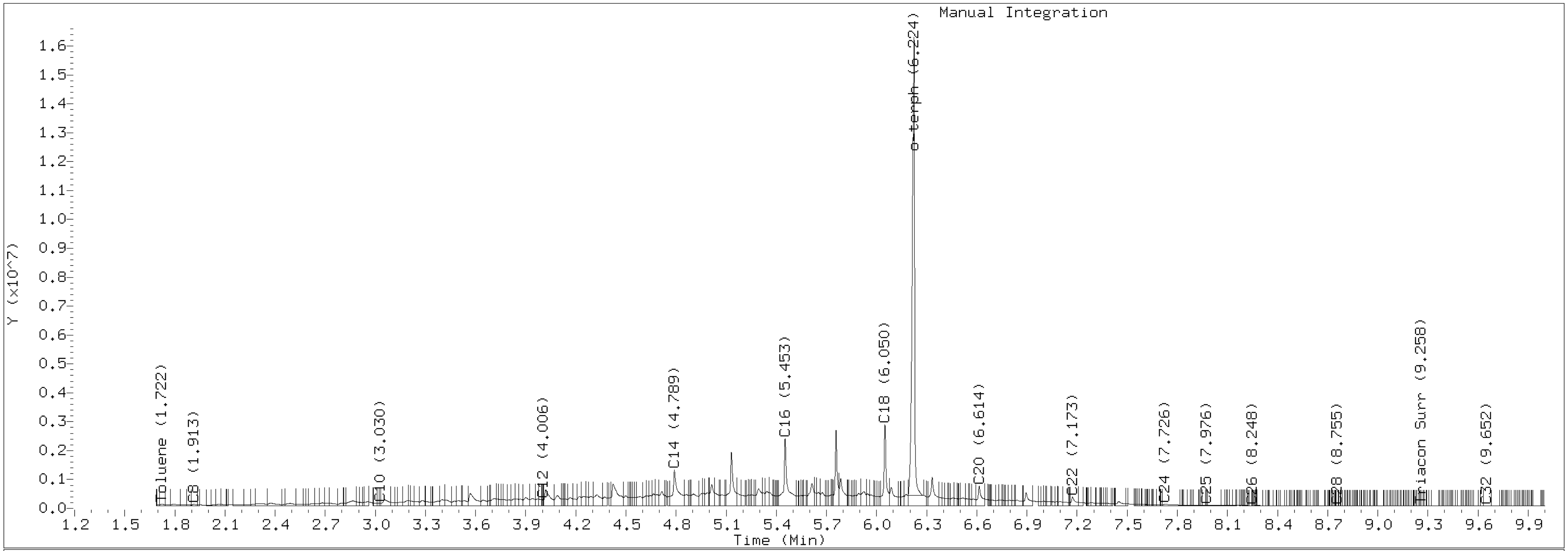
Datafile: FID4A, 20210222.b/421B2207.D SEQ-ICV1

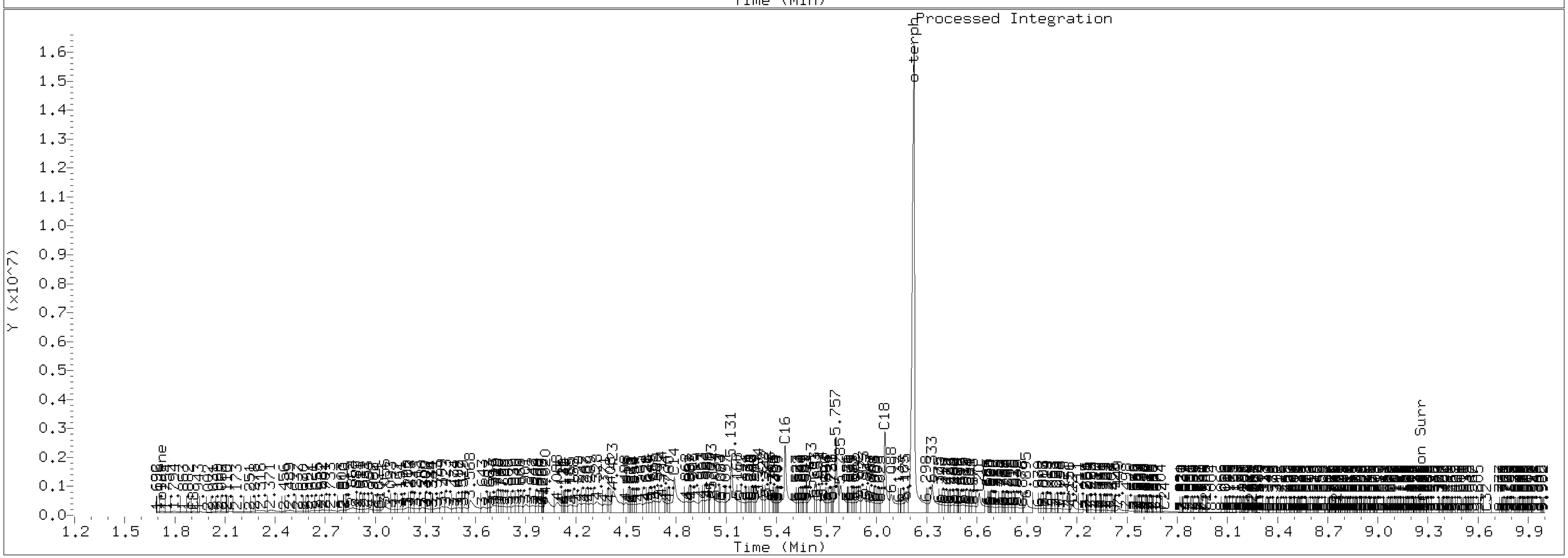


TPH Manual Integrations Report

Datafile: FID4A, 20210222.b/421B2207.D Injection: 22-FEB-2021 12:12

Lab ID:SEQ-ICV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B2208.D
Calibration Date: 01/07/2021
Sequence: SJB0344
Injection Date: 02/22/21
Lab Sample ID: SJB0344-ICV2
Injection Time: 12:34
Sequence Name: MOIL ICV

		CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1090	101807.5000	111404.6000		9.4	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2208.D

Page 1

Date : 22-FEB-2021 12:34

Client ID:

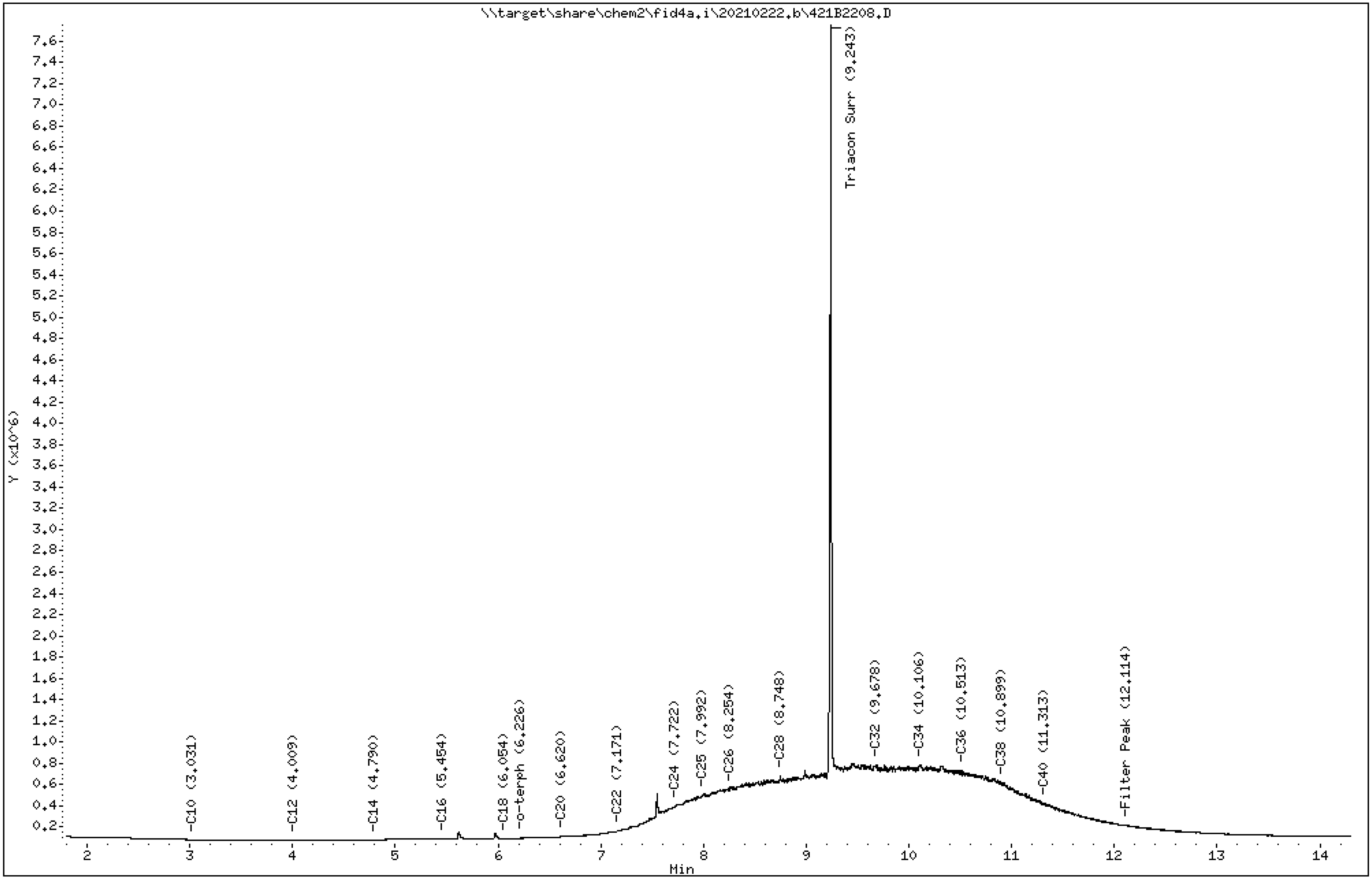
Instrument: fid4a.i

Sample Info: SEQ-ICV2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2208.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-ICV2
Client ID:
Injection: 22-FEB-2021 12:34
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.901	-0.003	29904	22310	WATPHD	(C12-C24)	10955893	79.7
C10	3.031	-0.003	5854	2894	WATPHM	(C24-C38)	111404640	1094.3
C12	4.009	-0.002	311	145	AK102	(C10-C25)	14466928	86.1
C14	4.790	0.003	5694	2825	AK103	(C25-C36)	94563760	1257.9
C16	5.454	0.001	9921	4464	OR.DIES	(C10-C28)	40709516	207.7
C18	6.054	0.003	15697	5471				
C20	6.620	0.003	33355	32279	JET-A	(C10-C18)	1134368	6.8
C22	7.171	-0.004	88058	43355				
C24	7.722	-0.001	321092	251105				
C25	7.992	0.003	426784	231037				
C26	8.254	0.005	479988	142741				
C28	8.748	-0.006	606130	835230				
C32	9.678	-0.005	711459	492915				
C34	10.106	-0.002	708456	489522				
Filter Peak	12.114	-0.002	137973	34423	BUNKERC	(C10-C38)	122450053	3101.8
C36	10.513	-0.001	654661	508651				
C38	10.899	-0.002	540975	265093				
C40	11.313	-0.006	341323	236508				
o-terph	6.226	0.000	19538	19967				
Triacon Surr	9.243	-0.012	7068269	6859168	NAS DIES	(C10-C24)	11045413	56.6

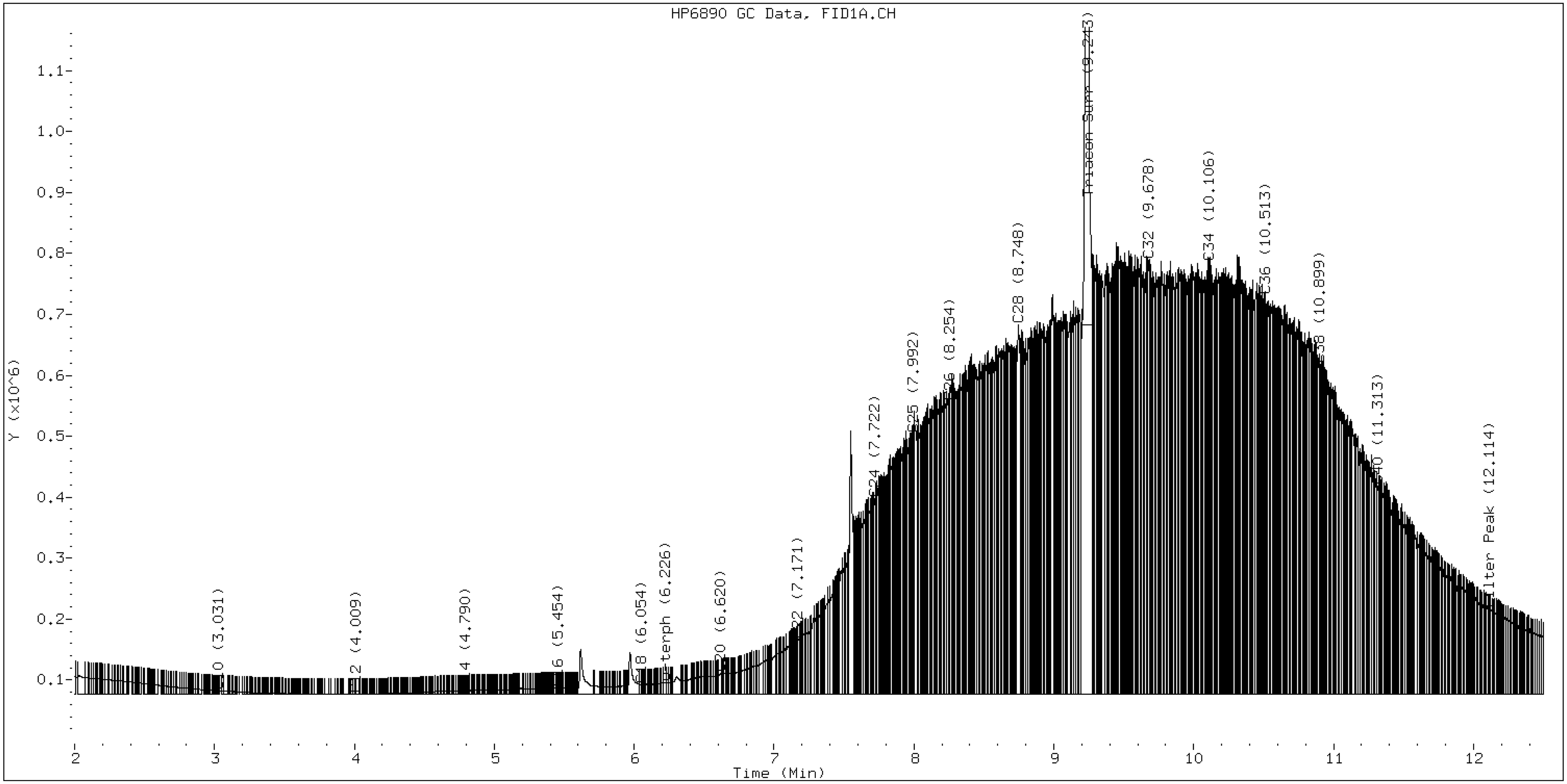
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	19967	0.1	
Triacontane	6859168	48.5	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

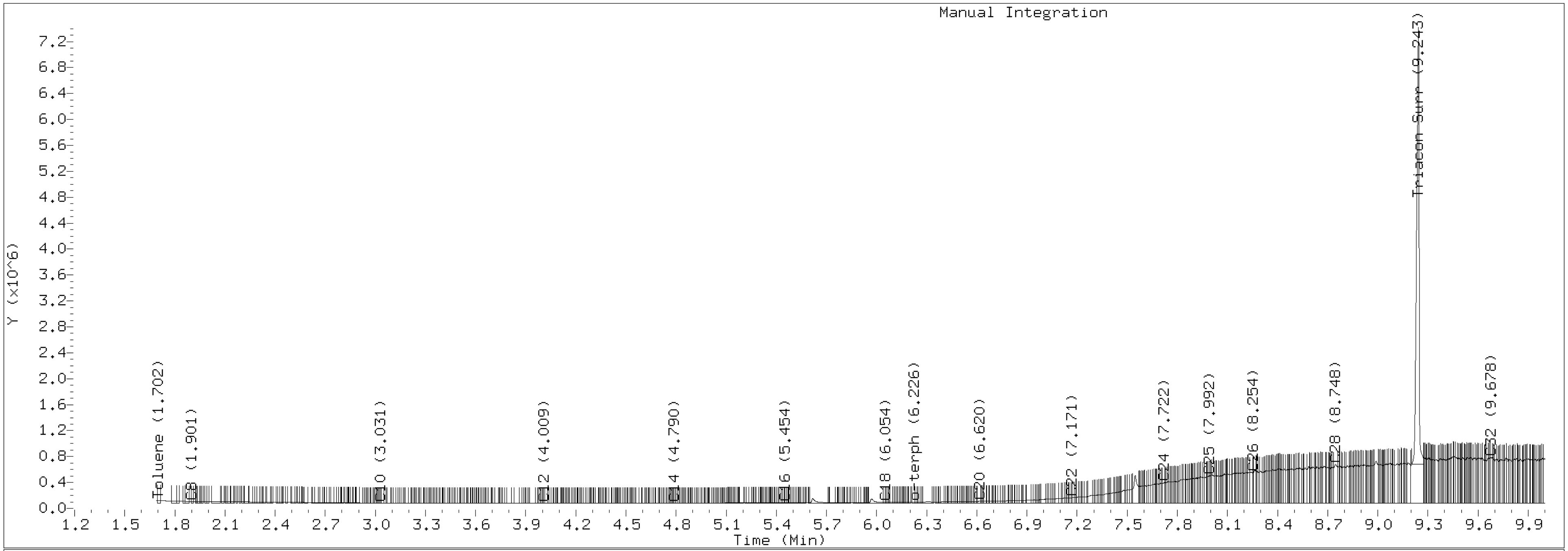
Datafile: FID4A, 20210222.b/421B2208.D   SEQ-ICV2

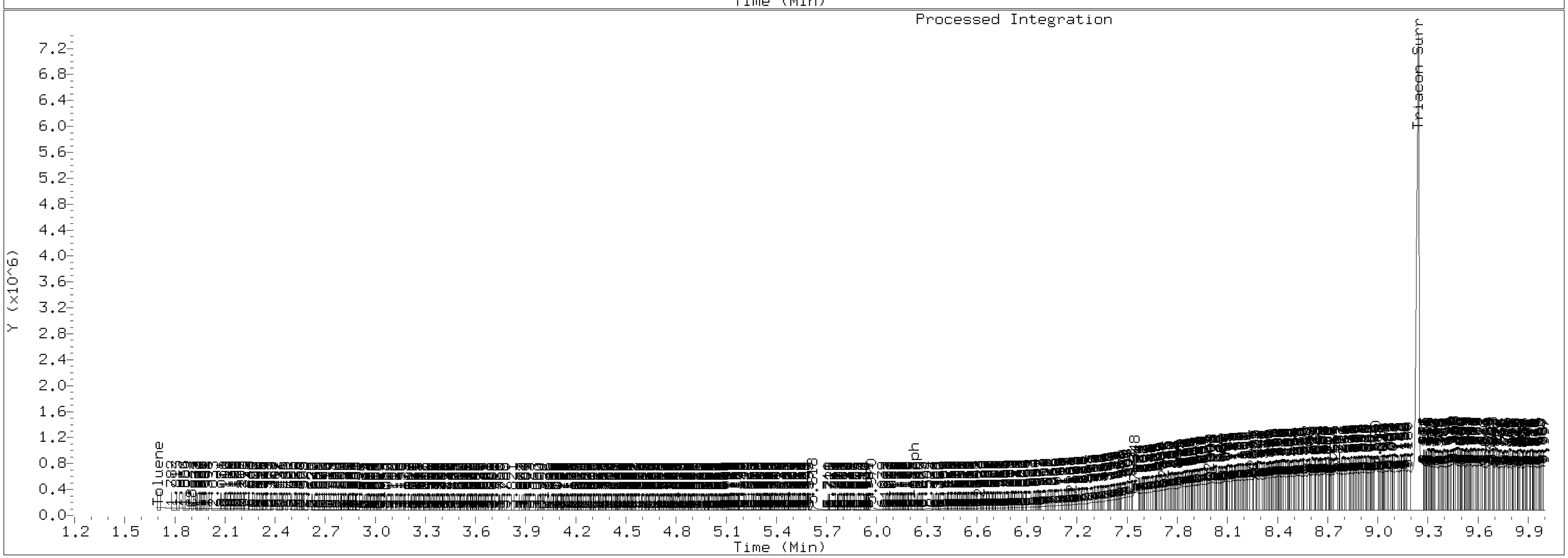


TPH Manual Integrations Report

Datafile: FID4A, 20210222.b/421B2208.D Injection: 22-FEB-2021 12:34

Lab ID:SEQ-ICV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B0914.D
Calibration Date: 01/07/2021
Sequence: SJB0139
Injection Date: 02/09/21
Lab Sample ID: SJB0139-CCV1
Injection Time: 13:21
Sequence Name: DIESEL CCV

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	507	137498.2	139295.6		1.3	+/-15
o-Terphenyl	A	90.000	95.7	170577.7	181402.6		6.3	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210209.b\421B0914.D

Date : 09-FEB-2021 13:21

Client ID:

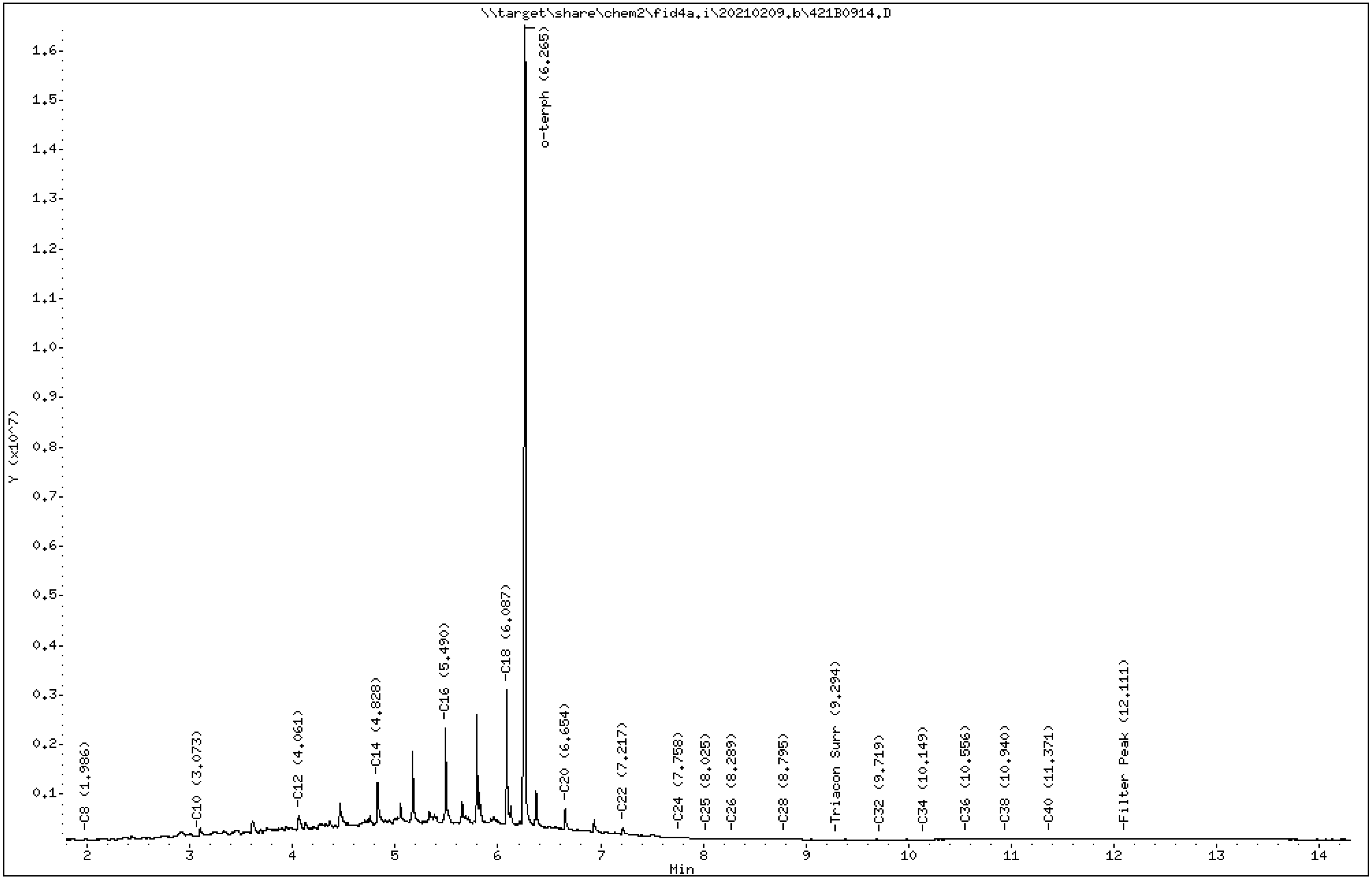
Instrument: fid4a.i

Sample Info: SEQ-CCV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210209.b/421B0914.D
Method: 20210209.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/09/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV1
Client ID:
Injection: 09-FEB-2021 13:21
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.986	0.017	20277	41372	WATPHD	(C12-C24)	69647781	506.5
C10	3.073	-0.008	93124	133662	WATPHM	(C24-C38)	2850539	28.0
C12	4.061	0.007	498961	1275108	AK102	(C10-C25)	81802418	486.7
C14	4.828	-0.000	1169350	1872456	AK103	(C25-C36)	2165689	28.8
C16	5.490	-0.002	2271066	3349229	OR.DIES	(C10-C28)	82668550	421.8
C18	6.087	-0.002	3032403	2871821				
C20	6.654	-0.002	633400	1226870	JET-A	(C10-C18)	63076392	380.3
C22	7.217	0.002	256453	755458				
C24	7.758	-0.005	46944	23409				
C25	8.025	-0.004	30822	28872				
C26	8.289	-0.001	22372	19961				
C28	8.795	0.002	14944	14107				
C32	9.719	-0.003	12606	6276				
C34	10.149	0.001	13137	4580				
Filter Peak	12.111	-0.003	17766	10622	BUNKERC	(C10-C38)	84346654	2136.6
C36	10.556	0.003	15191	7581				
C38	10.940	0.001	17945	8057				
C40	11.371	0.002	19507	3895				
o-terph	6.265	-0.002	16089675	16326229				
Triacon Surr	9.294	-0.003	12624	11241	NAS DIES	(C10-C24)	81496116	417.6

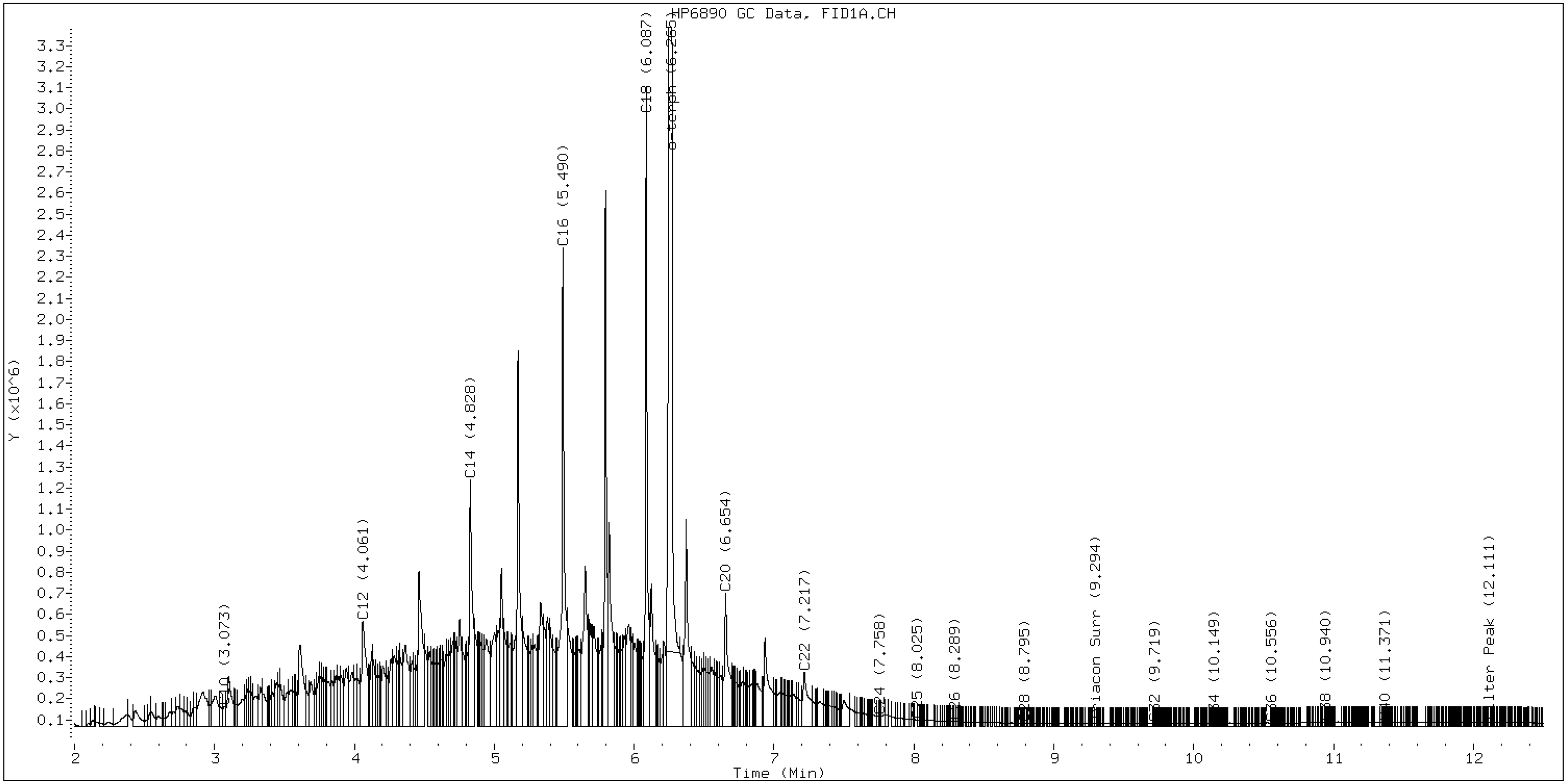
Range Times: NW Diesel(4.054 - 7.763) AK102(3.08 - 8.03) Jet A(3.08 - 6.09)
NW M.Oil(7.76 - 10.94) AK103(8.03 - 10.55) OR Diesel(3.08 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	16326229	95.7	M
Triacontane	11241	0.1	

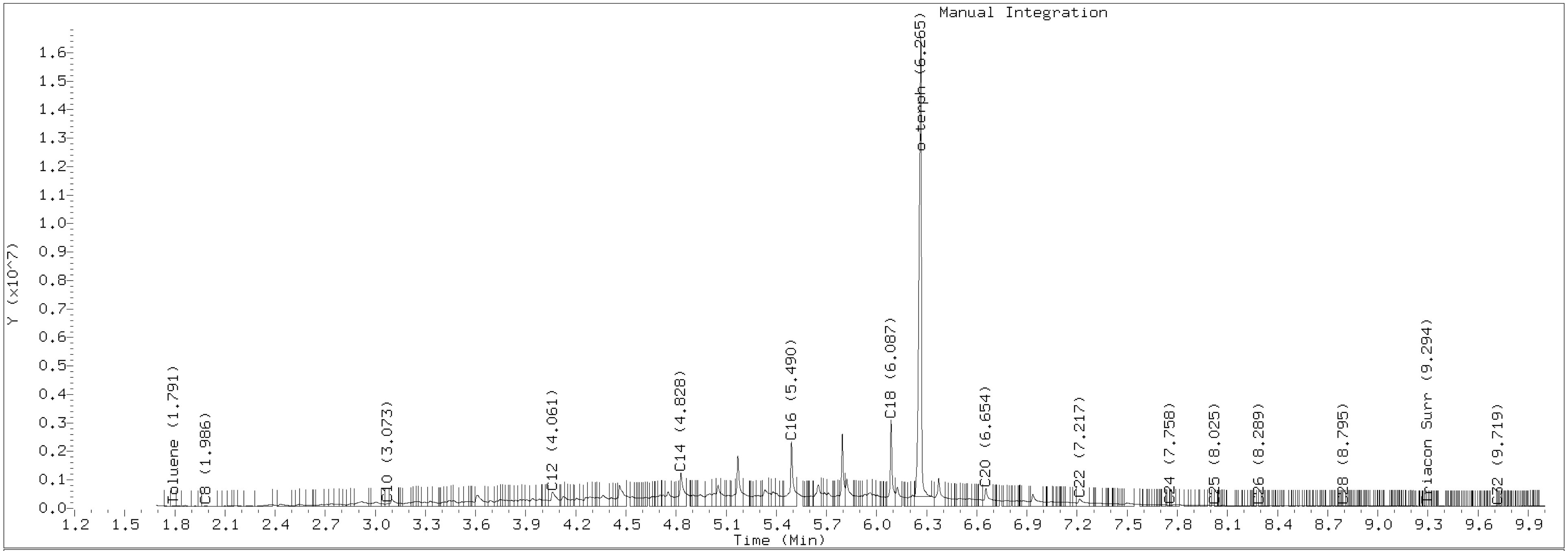
M Indicates the peak was manually integrated

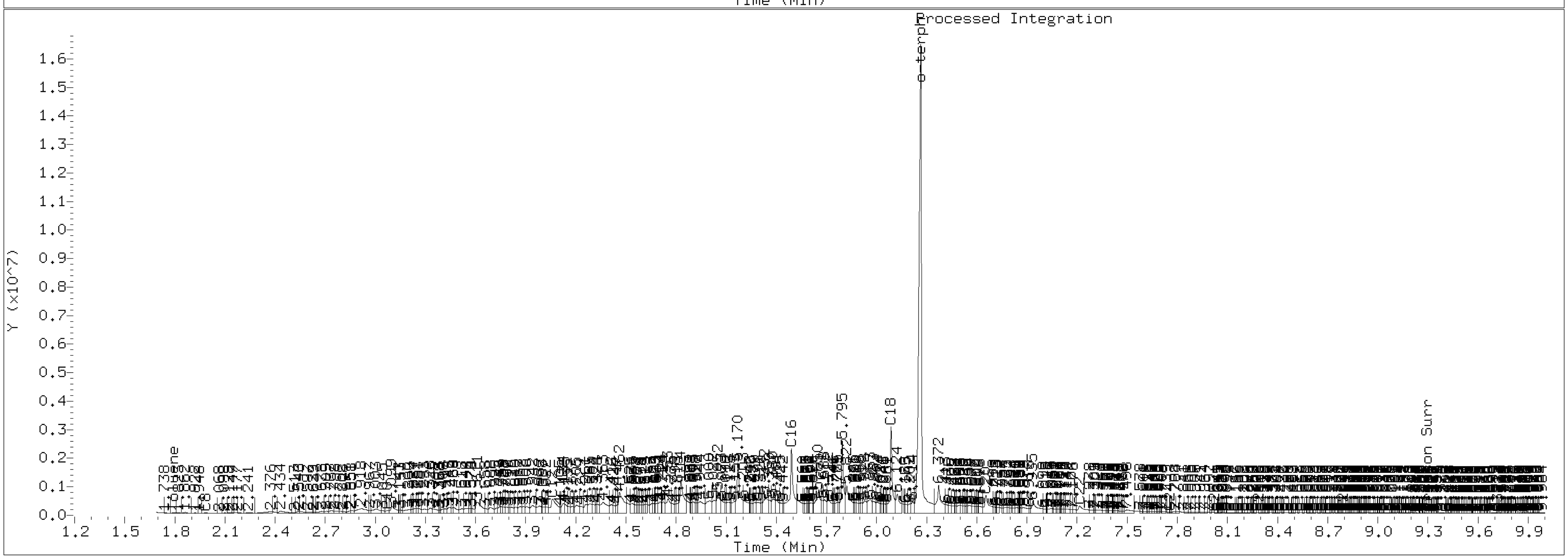
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210209.b/421B0914.D SEQ-CCV1



TPH Manual Integrations Report
Datafile: FID4A, 20210209.b/421B0914.D Injection: 09-FEB-2021 13:21
Lab ID:SEQ-CCV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B0915.D
Calibration Date: 01/07/2021
Sequence: SJB0139
Injection Date: 02/09/21
Lab Sample ID: SJB0139-CCV2
Injection Time: 13:42
Sequence Name: MOIL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1060	101807.5	107588		5.7	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210209.b\421B0915.D

Date : 09-FEB-2021 13:42

Client ID:

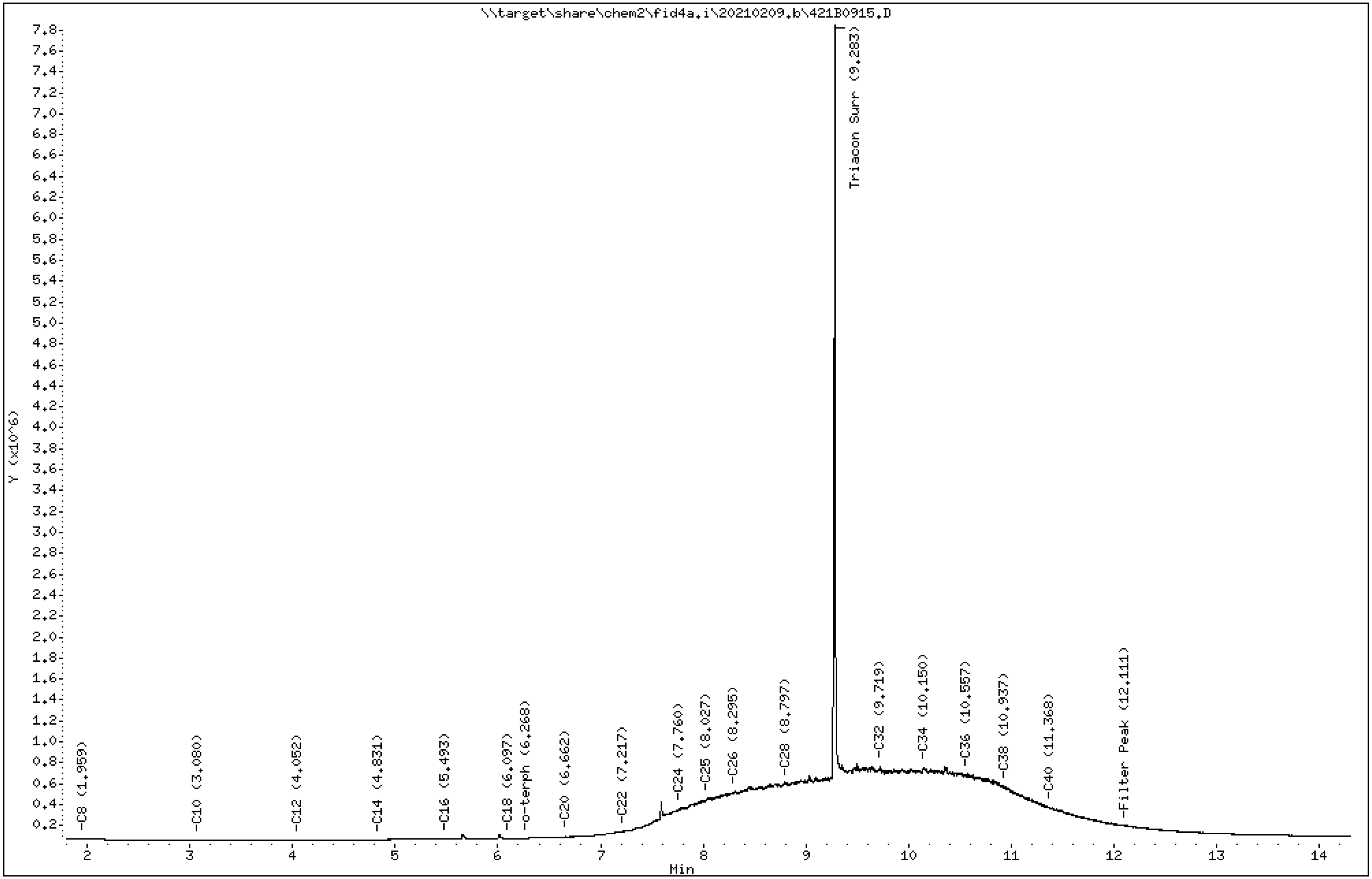
Instrument: fid4a.i

Sample Info: SEQ-CCV2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210209.b/421B0915.D
Method: 20210209.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/09/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV2
Client ID:
Injection: 09-FEB-2021 13:42
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.959	-0.010	10603	10433	WATPHD	(C12-C24)	9973002	72.5
C10	3.080	-0.002	1314	1179	WATPHM	(C24-C38)	107587957	1056.8
C12	4.052	-0.001	570	237	AK102	(C10-C25)	13205903	78.6
C14	4.831	0.002	5466	1086	AK103	(C25-C36)	91557074	1217.9
C16	5.493	0.001	9902	2466	OR.DIES	(C10-C28)	37549320	191.6
C18	6.097	0.008	16705	5825				
C20	6.662	0.006	32719	45004	JET-A	(C10-C18)	992437	6.0
C22	7.217	0.001	84144	78163				
C24	7.760	-0.003	296581	259259				
C25	8.027	-0.002	391136	173495				
C26	8.295	0.005	462887	318795				
C28	8.797	0.003	534850	159950				
C32	9.719	-0.004	700762	443787				
C34	10.150	0.001	692020	446073				
Filter Peak	12.111	-0.004	137010	81448	BUNKERC	(C10-C38)	117585681	2978.6
C36	10.557	0.004	630823	340805				
C38	10.937	-0.003	505985	300056				
C40	11.368	-0.000	319836	111265				
o-terph	6.268	0.001	19341	16312				
Triacon Surr	9.283	-0.014	7192232	6536959	NAS DIES	(C10-C24)	9997724	51.2

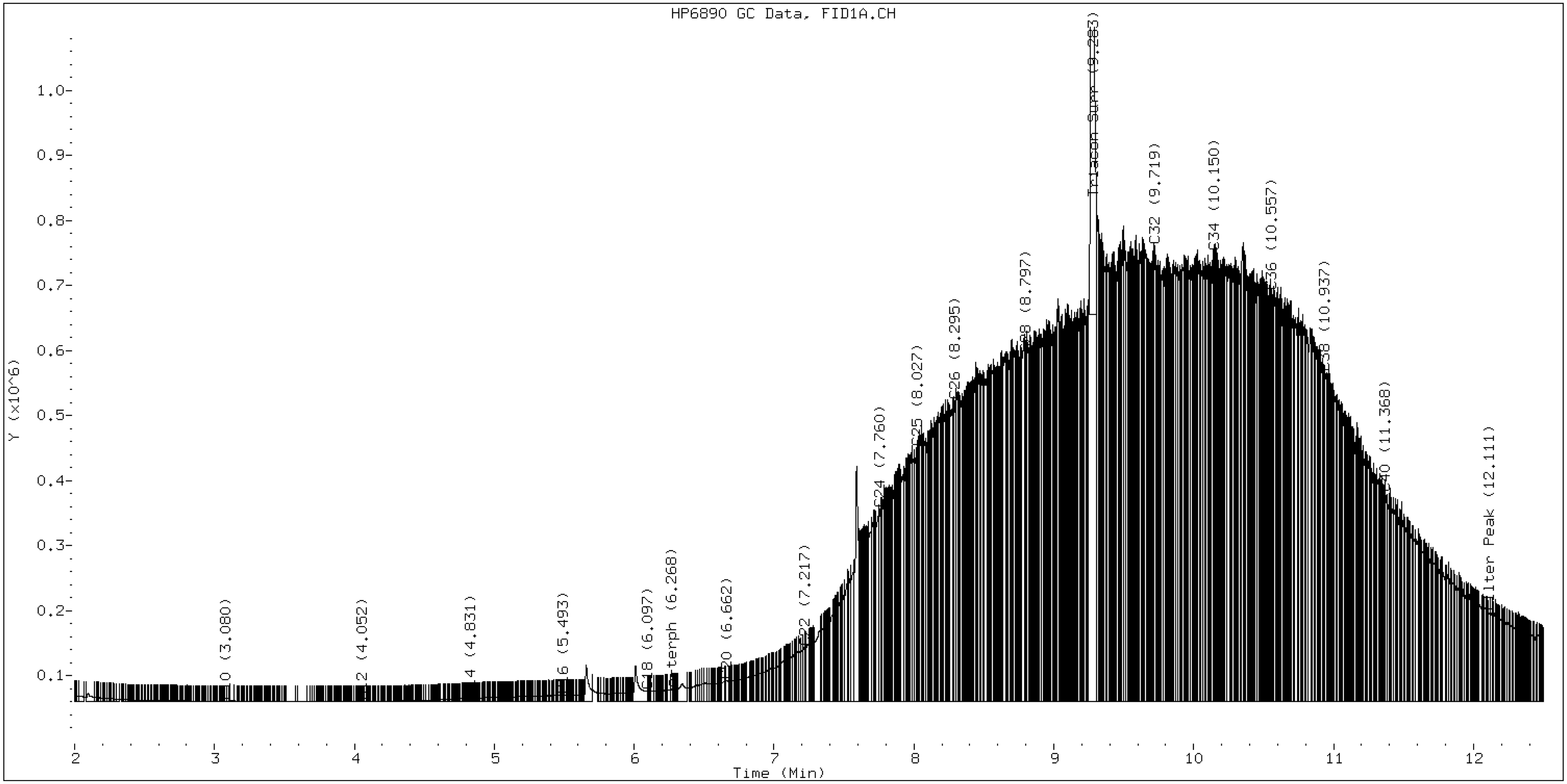
Range Times: NW Diesel(4.054 - 7.763) AK102(3.08 - 8.03) Jet A(3.08 - 6.09)
NW M.Oil(7.76 - 10.94) AK103(8.03 - 10.55) OR Diesel(3.08 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	16312	0.1	
Triacontane	6536959	46.2	M

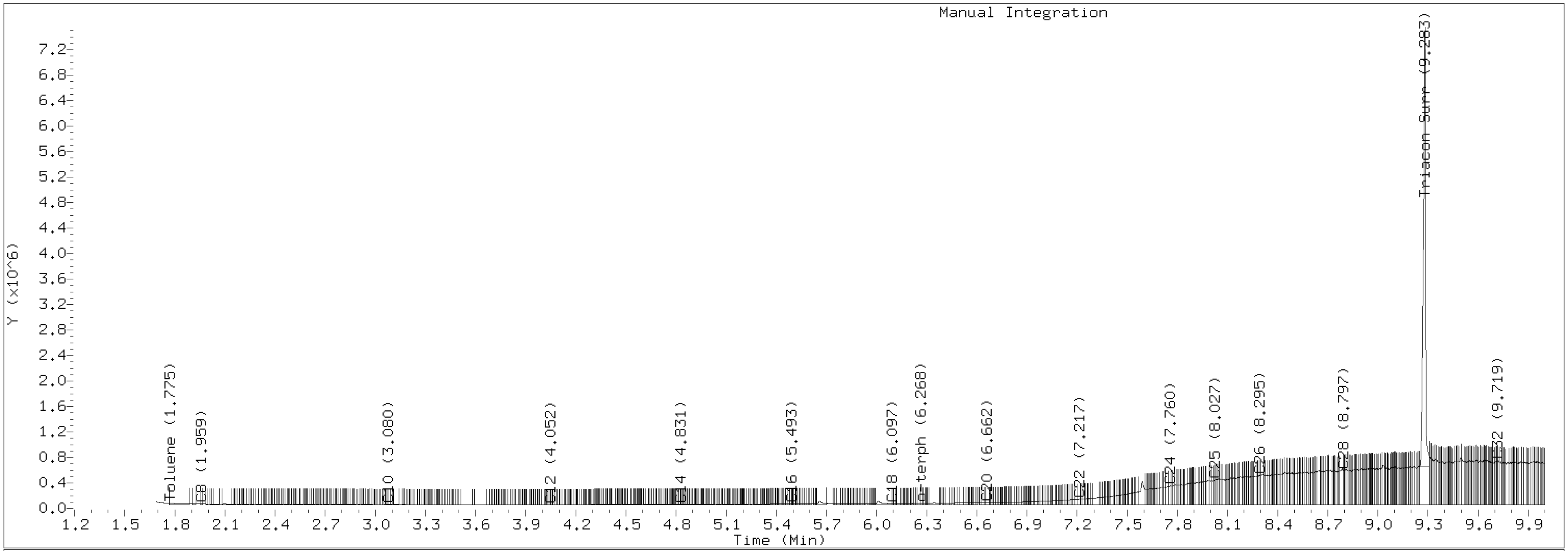
M Indicates the peak was manually integrated

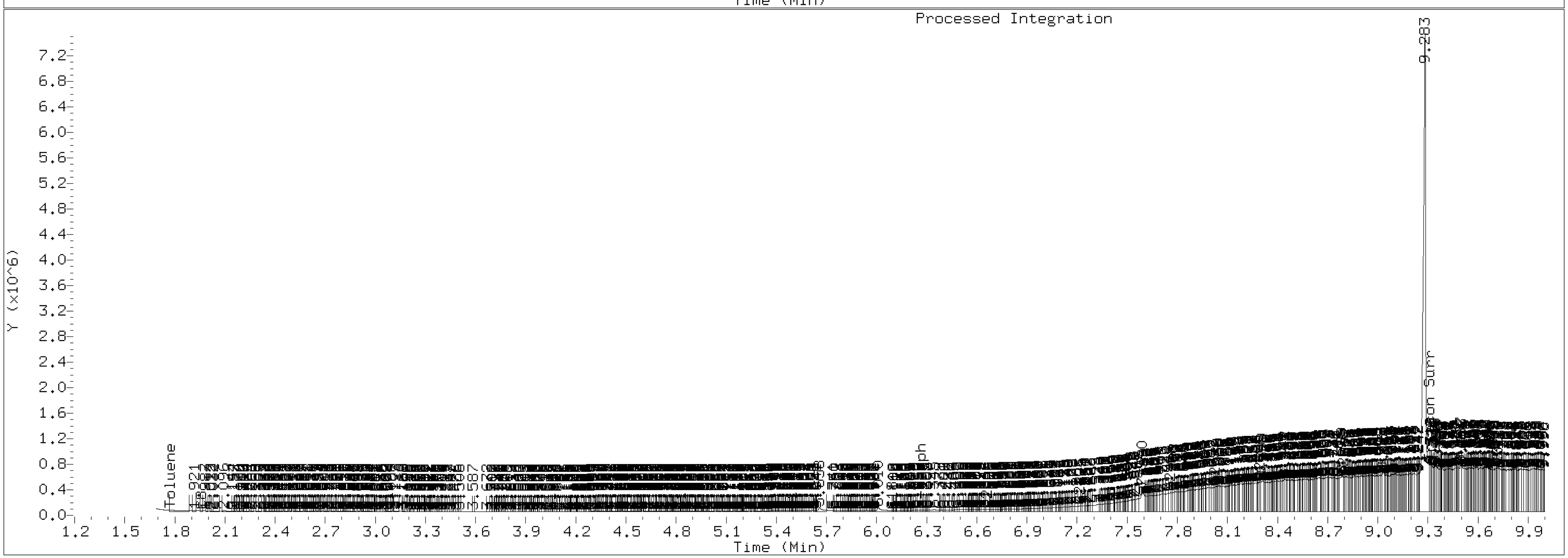
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210209.b/421B0915.D SEQ-CCV2



TPH Manual Integrations Report
Datafile: FID4A, 20210209.b/421B0915.D Injection: 09-FEB-2021 13:42
Lab ID:SEQ-CCV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B0924.D	Calibration Date:	01/07/2021
Sequence:	SJB0139	Injection Date:	02/09/21
Lab Sample ID:	SJB0139-CCV3	Injection Time:	16:51
Sequence Name:	DIESEL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	526	137498.2	144720.5		5.3	+/-15
o-Terphenyl	A	90.000	97.1	170577.7	184060.7		7.9	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210209.b\421B0924.D

Date : 09-FEB-2021 16:51

Client ID:

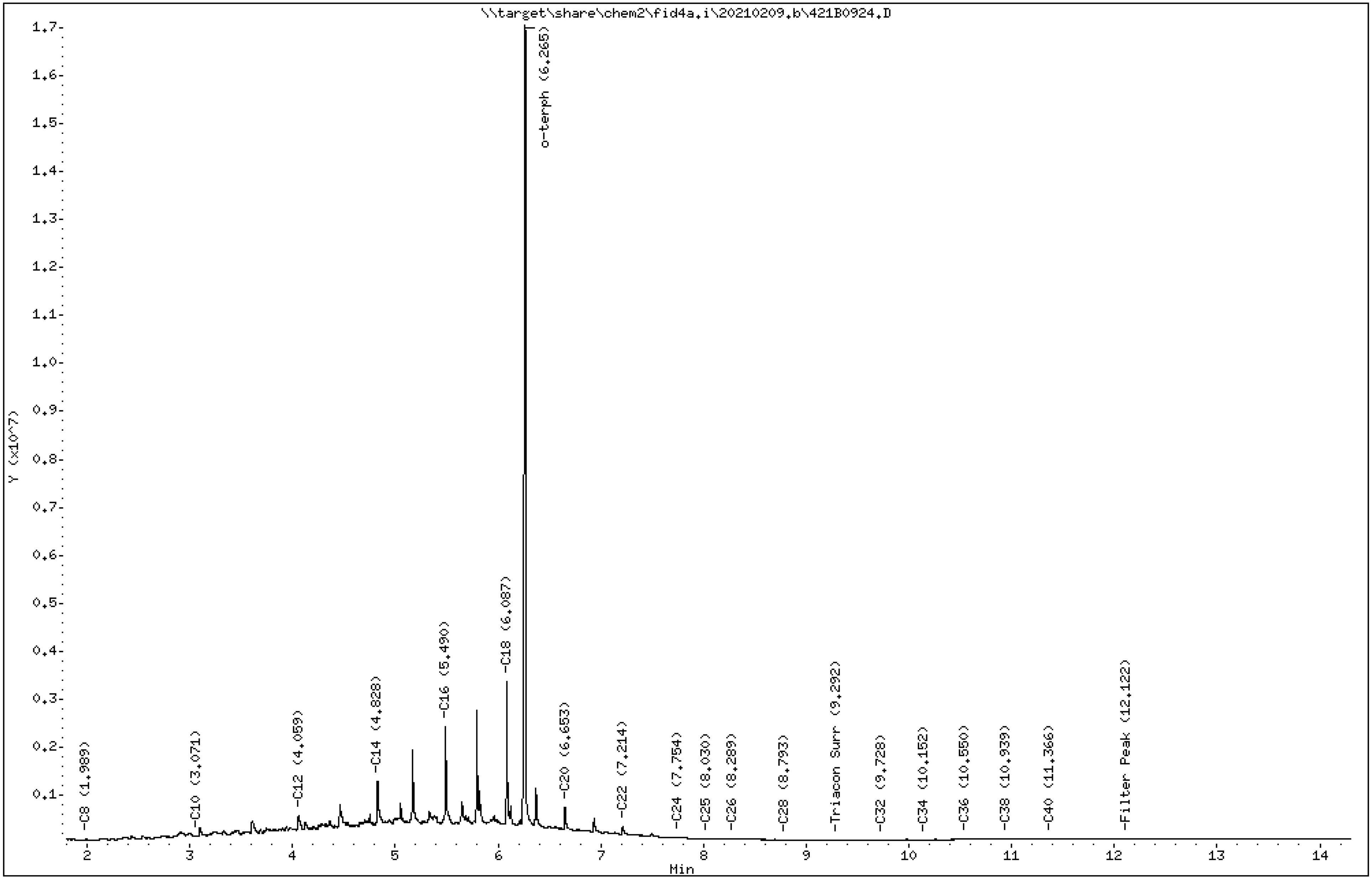
Instrument: fid4a.i

Sample Info: SEQ-CCV3

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210209.b/421B0924.D
Method: 20210209.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/10/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV3
Client ID:
Injection: 09-FEB-2021 16:51
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.989	0.019	20334	41186	WATPHD	(C12-C24)	72360276	526.3
C10	3.071	-0.011	95625	130656	WATPHM	(C24-C38)	2750915	27.0
C12	4.059	0.005	521167	1293040	AK102	(C10-C25)	83833006	498.8
C14	4.828	-0.001	1224429	2657329	AK103	(C25-C36)	1976925	26.3
C16	5.490	-0.002	2375824	3269221	OR.DIES	(C10-C28)	84628202	431.8
C18	6.087	-0.002	3314144	2990896				
C20	6.653	-0.003	696625	983955	JET-A	(C10-C18)	64425801	388.5
C22	7.214	-0.002	293050	716064				
C24	7.754	-0.009	46576	13954				
C25	8.030	0.001	28176	9845				
C26	8.289	-0.002	19421	16304				
C28	8.793	-0.001	12161	3029				
C32	9.728	0.005	10989	4374				
C34	10.152	0.003	12824	9548				
Filter Peak	12.122	0.008	20469	9188	BUNKERC	(C10-C38)	86217674	2184.0
C36	10.550	-0.002	15439	7692				
C38	10.939	0.000	19313	7695				
C40	11.366	-0.002	20375	7105				
o-terph	6.265	-0.002	16580612	16565456				
Triacon Surr	9.292	-0.006	10294	7147	NAS DIES	(C10-C24)	83466760	427.7

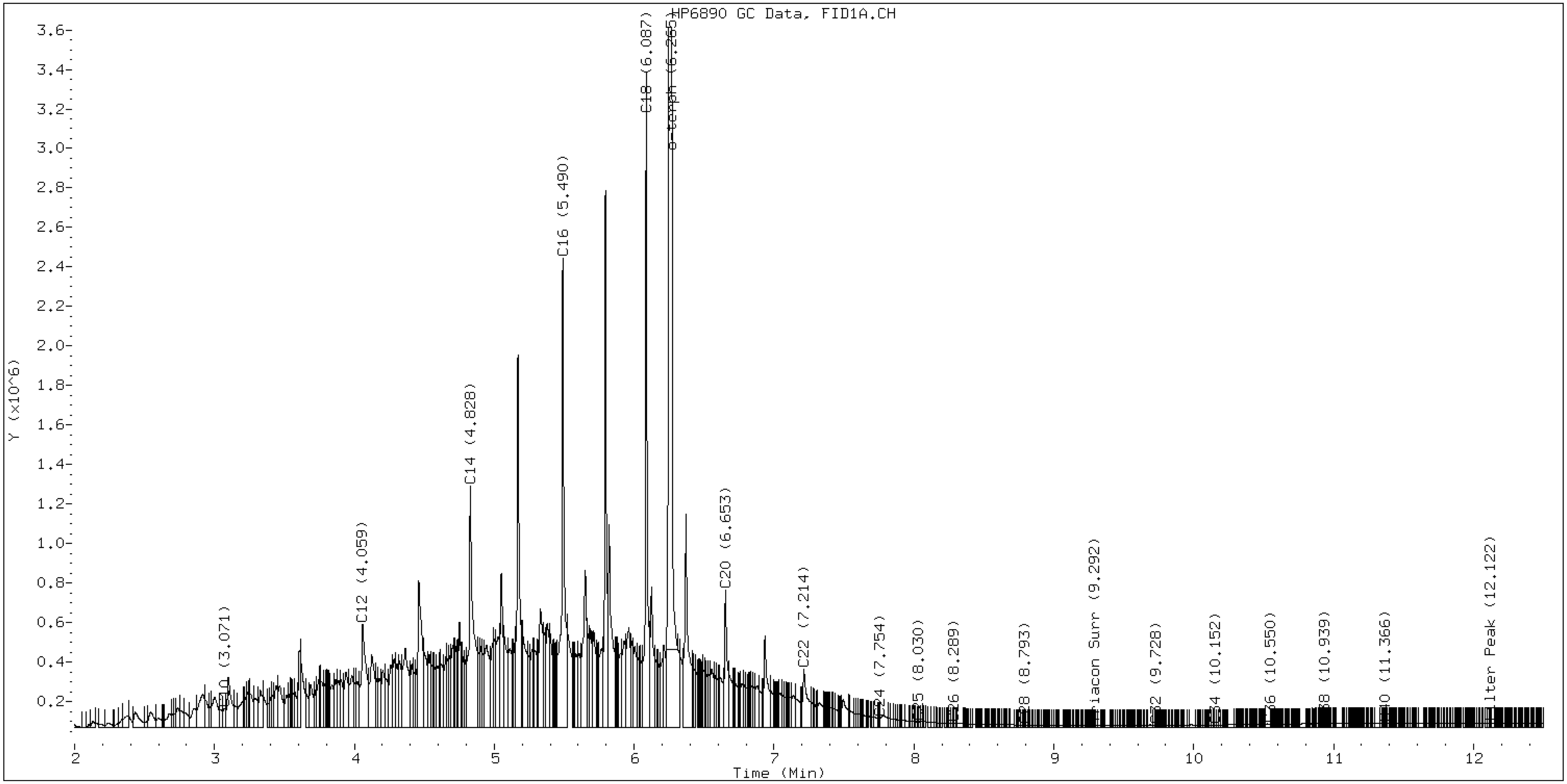
Range Times: NW Diesel(4.054 - 7.763) AK102(3.08 - 8.03) Jet A(3.08 - 6.09)
NW M.Oil(7.76 - 10.94) AK103(8.03 - 10.55) OR Diesel(3.08 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	16565456	97.1	M
Triacontane	7147	0.1	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

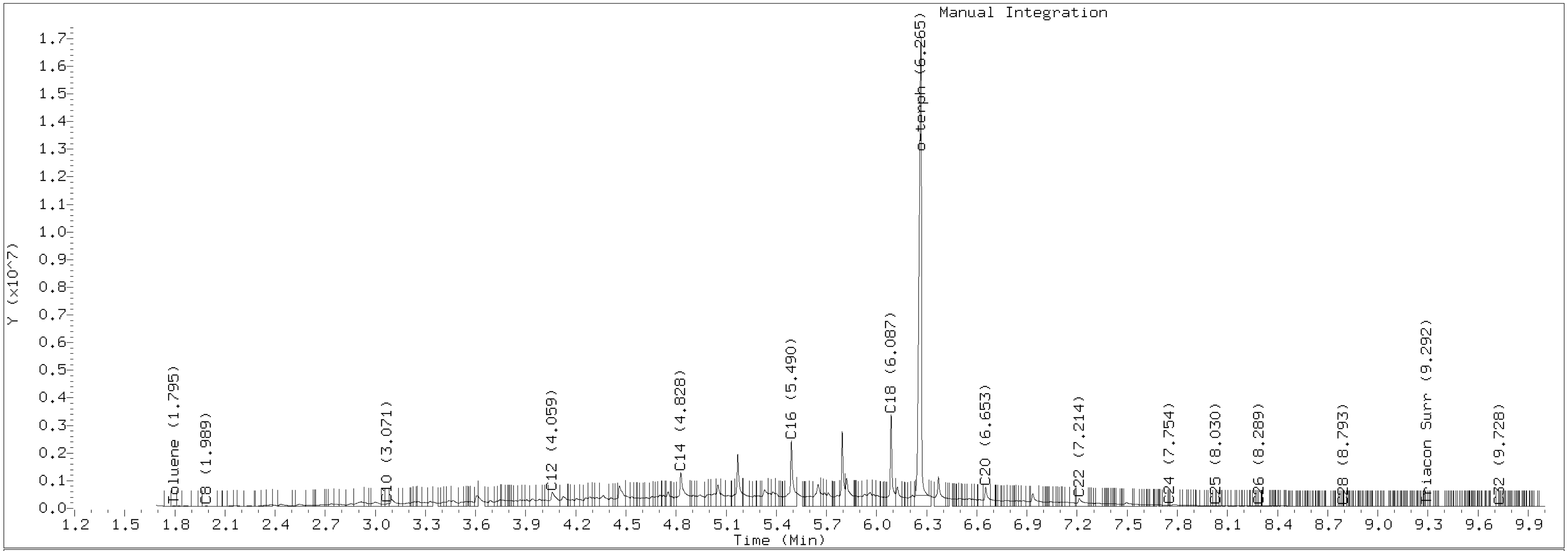
Datafile: FID4A, 20210209.b/421B0924.D SEQ-CCV3

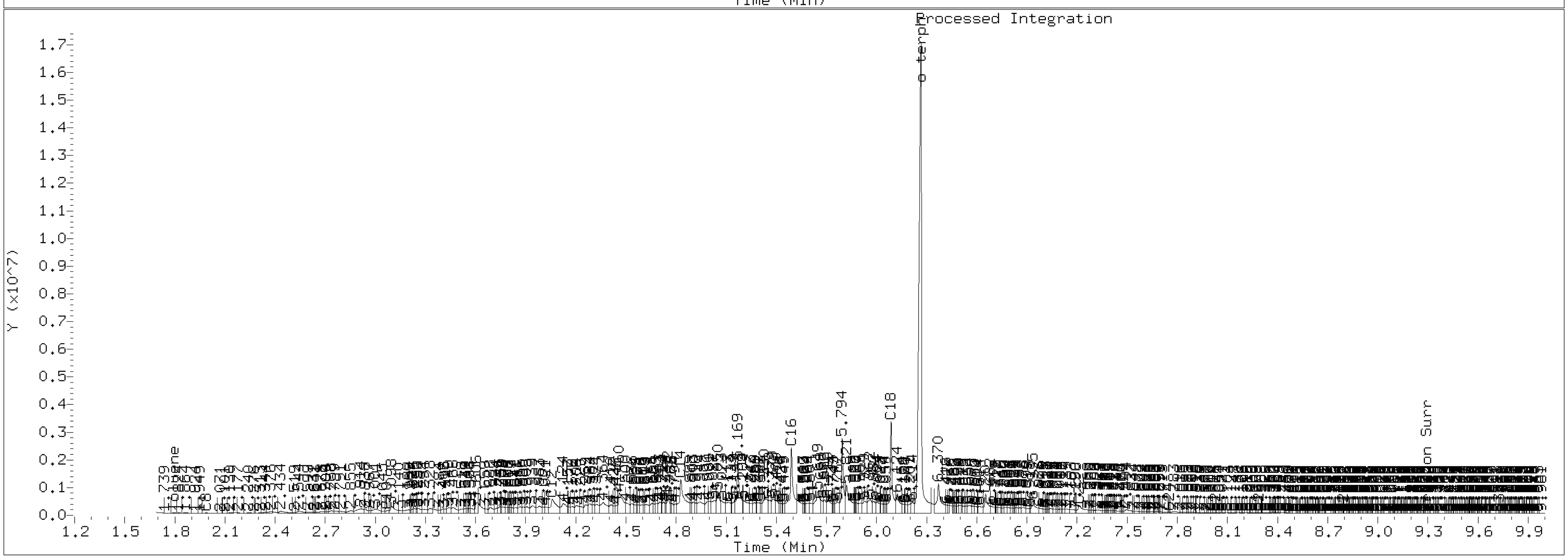


TPH Manual Integrations Report

Datafile: FID4A, 20210209.b/421B0924.D Injection: 09-FEB-2021 16:51

Lab ID:SEQ-CCV3





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B0925.D
Calibration Date: 01/07/2021
Sequence: SJB0139
Injection Date: 02/09/21
Lab Sample ID: SJB0139-CCV4
Injection Time: 17:12
Sequence Name: MOIL CCV

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1080	101807.5	109981.6		8.0	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210209.b\421B0925.D

Date : 09-FEB-2021 17:12

Client ID:

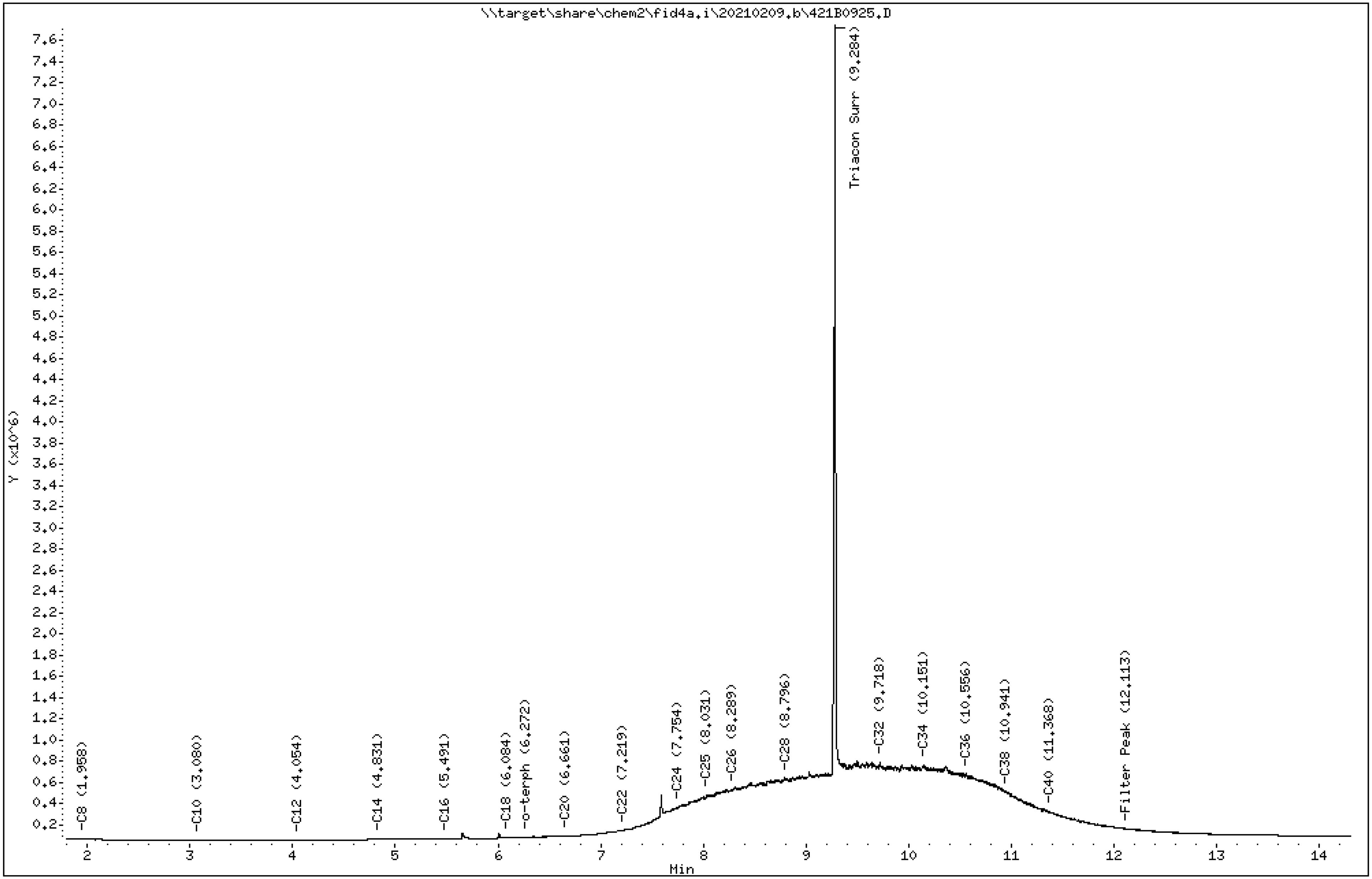
Instrument: fid4a.i

Sample Info: SEQ-CCV4

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210209.b/421B0925.D
Method: 20210209.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/10/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV4
Client ID:
Injection: 09-FEB-2021 17:12
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.958	-0.011	10071	23018	WATPHD	(C12-C24)	11497803	83.6
C10	3.080	-0.002	941	580	WATPHM	(C24-C38)	109981643	1080.3
C12	4.054	0.001	877	333	AK102	(C10-C25)	15093198	89.8
C14	4.831	0.002	8009	2778	AK103	(C25-C36)	94434191	1256.2
C16	5.491	-0.001	13253	2645	OR.DIES	(C10-C28)	41118185	209.8
C18	6.084	-0.004	21368	16998				
C20	6.661	0.005	39495	65874	JET-A	(C10-C18)	1294848	7.8
C22	7.219	0.004	95462	160633				
C24	7.754	-0.008	306503	136982				
C25	8.031	0.002	425595	450810				
C26	8.289	-0.001	477589	213147				
C28	8.796	0.002	584801	261573				
C32	9.718	-0.005	730524	603672				
C34	10.151	0.002	714193	457546				
Filter Peak	12.113	-0.002	106227	31796	BUNKERC	(C10-C38)	121509058	3078.0
C36	10.556	0.003	619936	306624				
C38	10.941	0.002	451812	112628				
C40	11.368	-0.000	270267	171839				
o-terph	6.272	0.005	24999	19884				
Triacon Surr	9.284	-0.013	7061816	7065806	NAS DIES	(C10-C24)	11527416	59.1

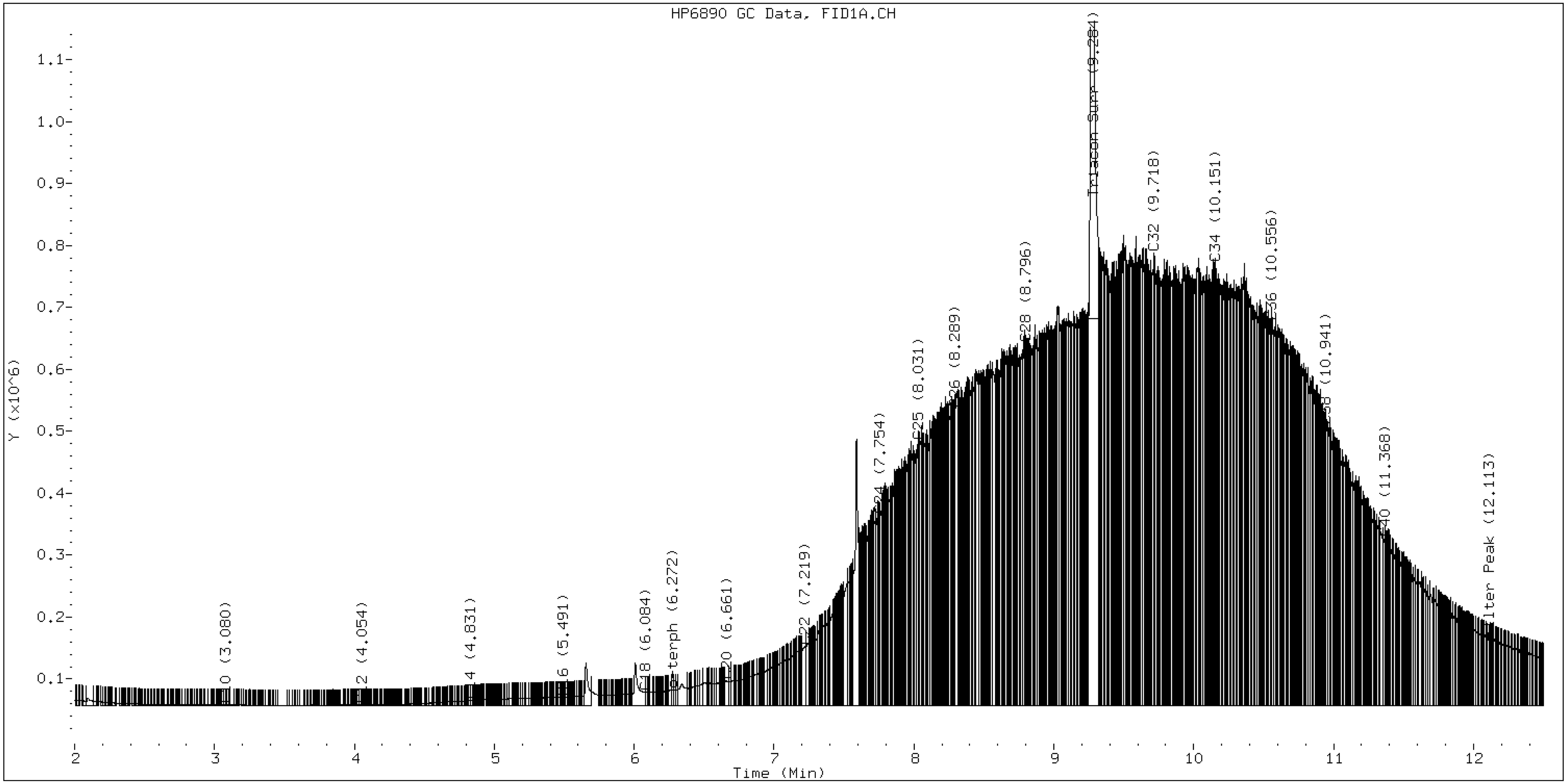
Range Times: NW Diesel(4.054 - 7.763) AK102(3.08 - 8.03) Jet A(3.08 - 6.09)
NW M.Oil(7.76 - 10.94) AK103(8.03 - 10.55) OR Diesel(3.08 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	19884	0.1	
Triacontane	7065806	50.0	M

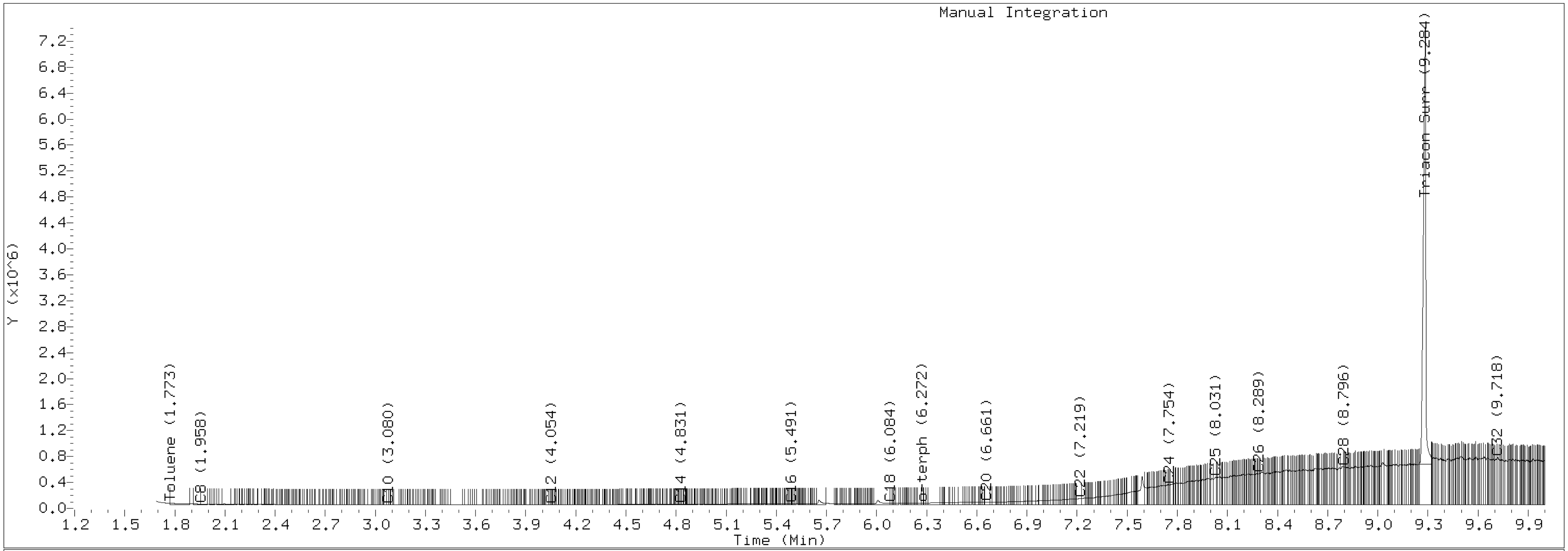
M Indicates the peak was manually integrated

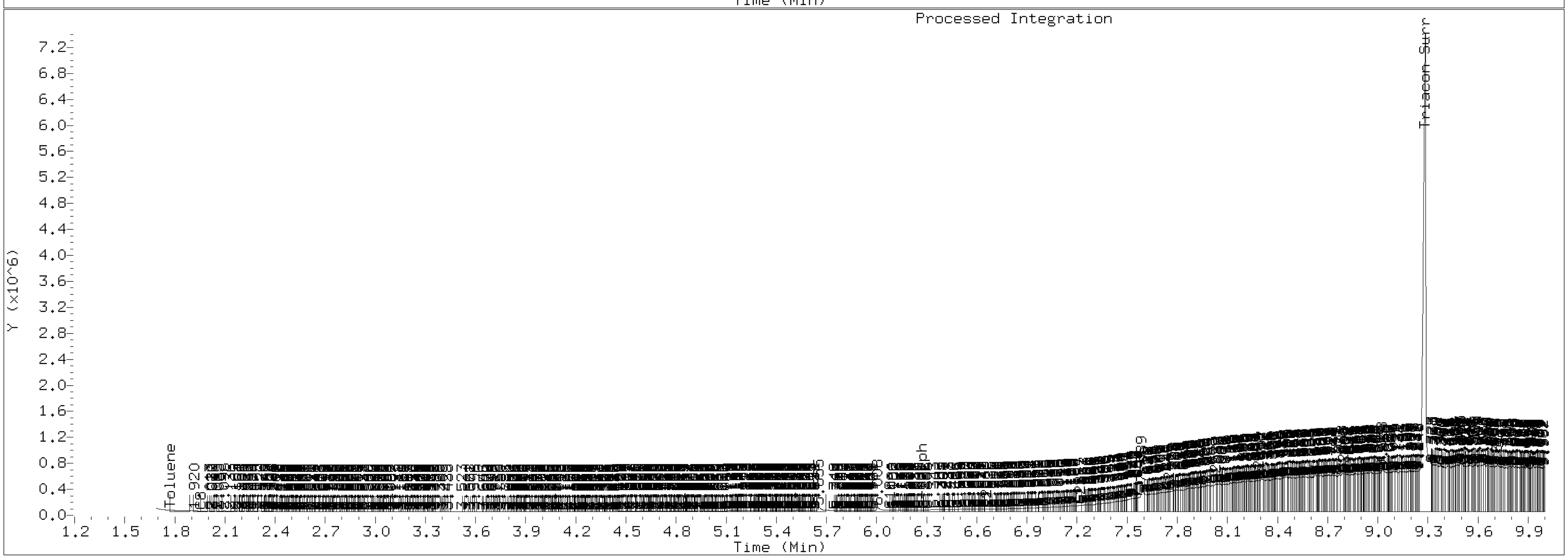
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210209.b/421B0925.D SEQ-CCV4



TPH Manual Integrations Report
Datafile: FID4A, 20210209.b/421B0925.D   Injection: 09-FEB-2021 17:12
Lab ID:SEQ-CCV4





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B0936.D	Calibration Date:	01/07/2021
Sequence:	SJB0139	Injection Date:	02/09/21
Lab Sample ID:	SJB0139-CCV5	Injection Time:	21:02
Sequence Name:	DIESEL CCV		

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	533	137498.2	146422.7		6.5	+/-15
o-Terphenyl	A	90.000	97.2	170577.7	184164.2		8.0	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210209.b\421B0936.D

Date : 09-FEB-2021 21:02

Client ID:

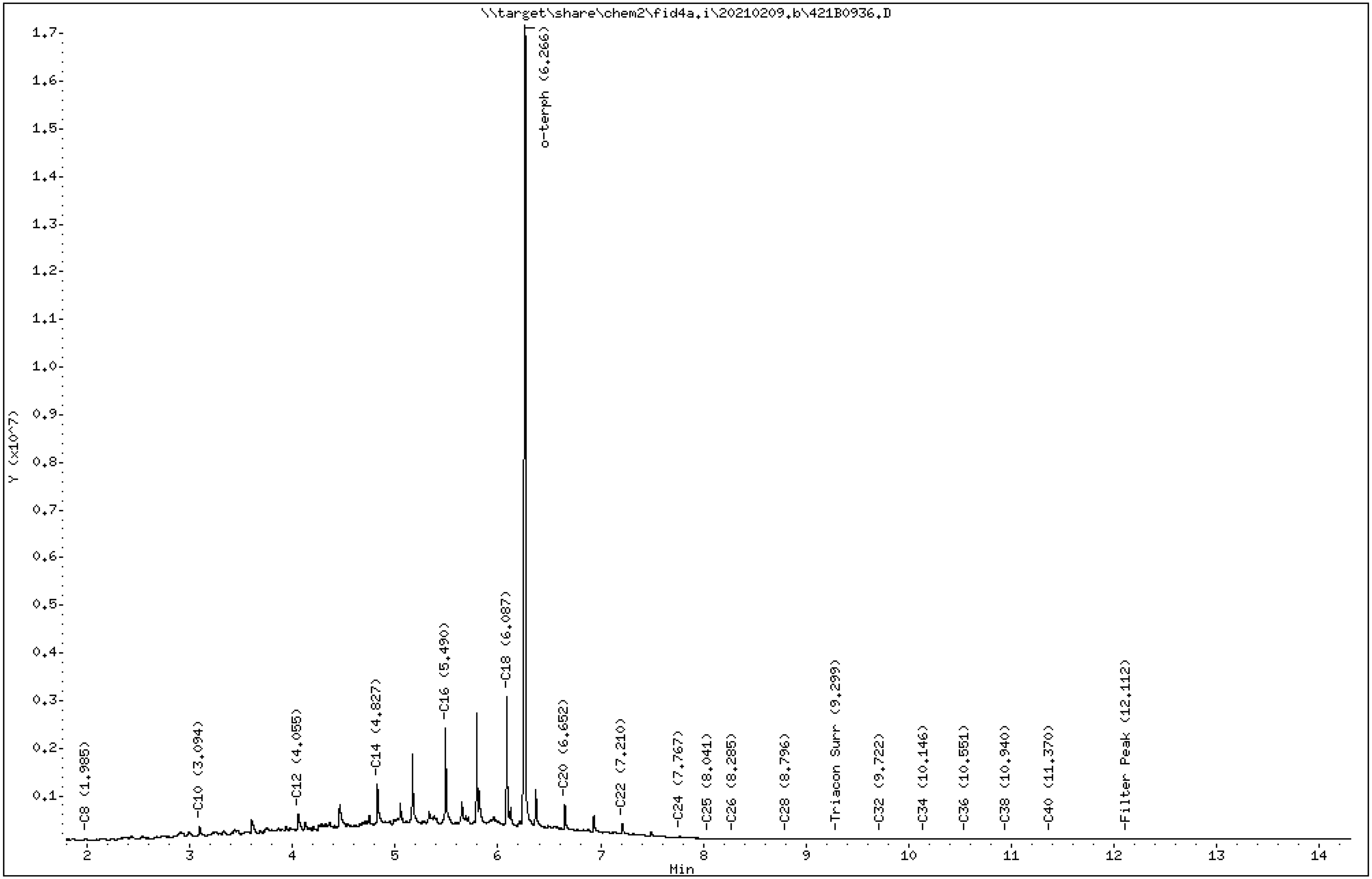
Instrument: fid4a.i

Sample Info: SEQ-CCV5

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210209.b/421B0936.D
Method: 20210209.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/11/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV5
Client ID:
Injection: 09-FEB-2021 21:02
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.985	0.015	22869	44061	WATPHD	(C12-C24)	73211363	532.5
C10	3.094	0.012	288802	510284	WATPHM	(C24-C38)	4480543	44.0
C12	4.055	0.002	541707	1309732	AK102	(C10-C25)	85538376	509.0
C14	4.827	-0.002	1190700	2325147	AK103	(C25-C36)	3344301	44.5
C16	5.490	-0.002	2354719	3049663	OR.DIES	(C10-C28)	86687731	442.3
C18	6.087	-0.002	3027803	2946829				
C20	6.652	-0.004	746542	1069458	JET-A	(C10-C18)	65053663	392.2
C22	7.210	-0.005	336371	603949				
C24	7.767	0.004	78893	287316				
C25	8.041	0.012	42958	67295				
C26	8.285	-0.005	28067	8397				
C28	8.796	0.003	20736	12350				
C32	9.722	-0.001	20427	13261				
C34	10.146	-0.002	23366	10481				
Filter Peak	12.112	-0.002	34666	25926	BUNKERC	(C10-C38)	89597668	2269.6
C36	10.551	-0.002	27906	20813				
C38	10.940	0.001	33385	18257				
C40	11.370	0.002	35110	22570				
o-terph	6.266	-0.001	16706441	16574784				
Triacon Surr	9.299	0.001	19254	6726	NAS DIES	(C10-C24)	85117125	436.2

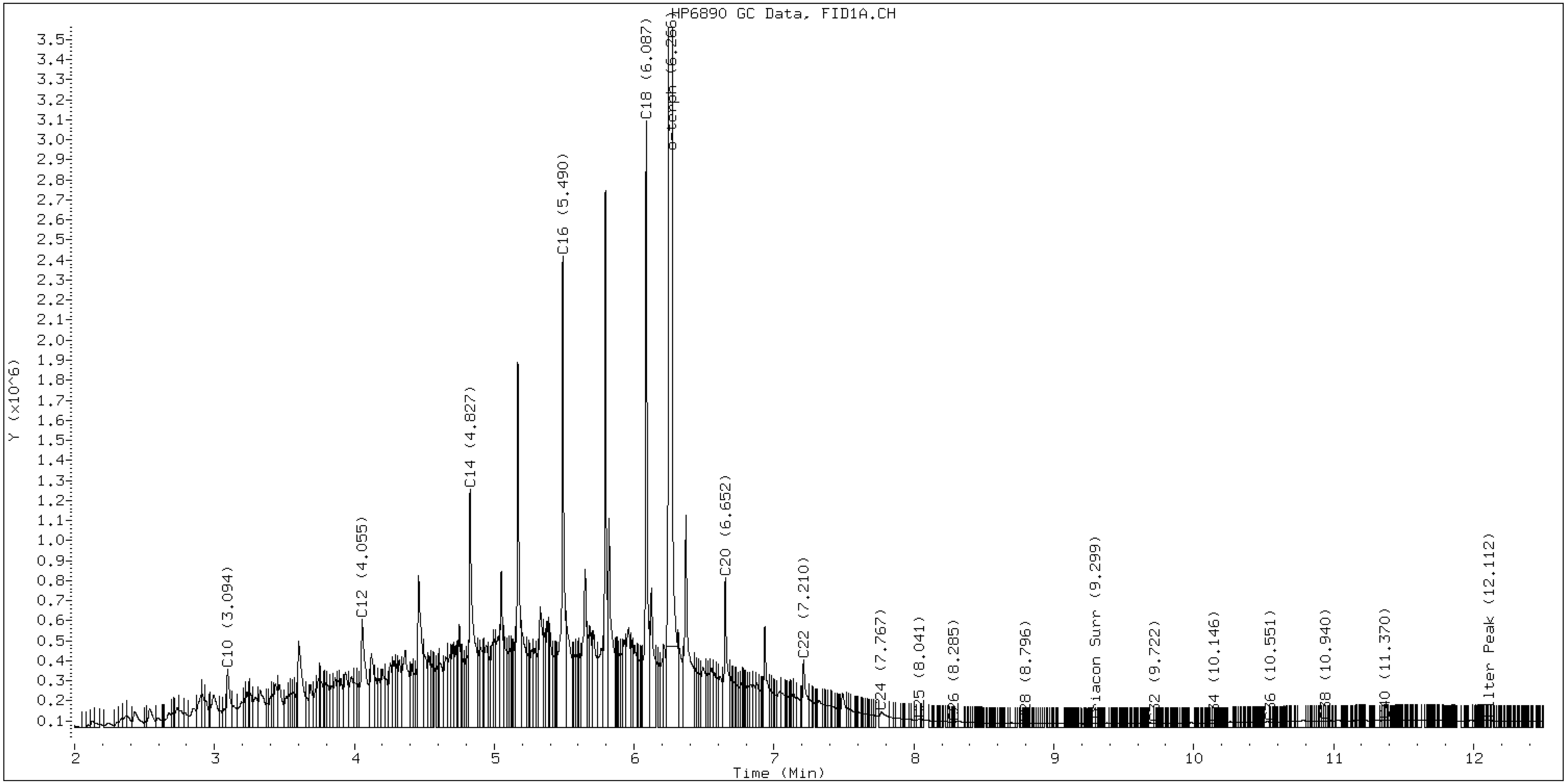
Range Times: NW Diesel(4.054 - 7.763) AK102(3.08 - 8.03) Jet A(3.08 - 6.09)
NW M.Oil(7.76 - 10.94) AK103(8.03 - 10.55) OR Diesel(3.08 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	16574784	97.2	M
Triacontane	6726	0.0	

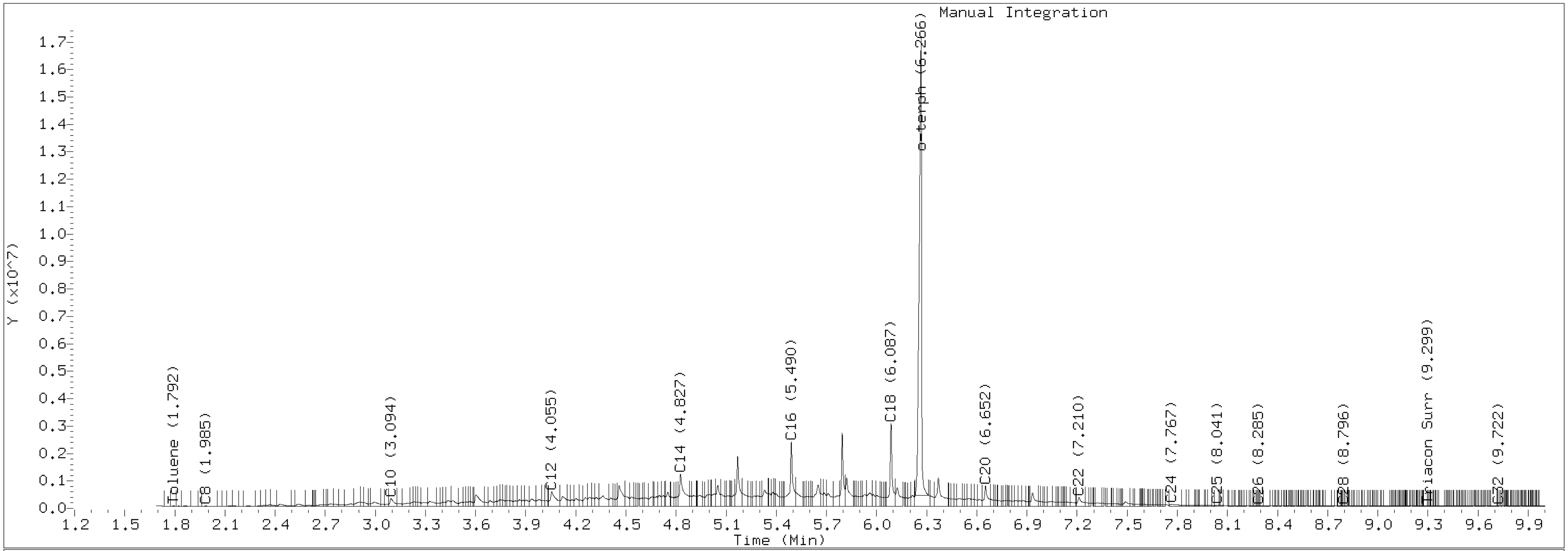
M Indicates the peak was manually integrated

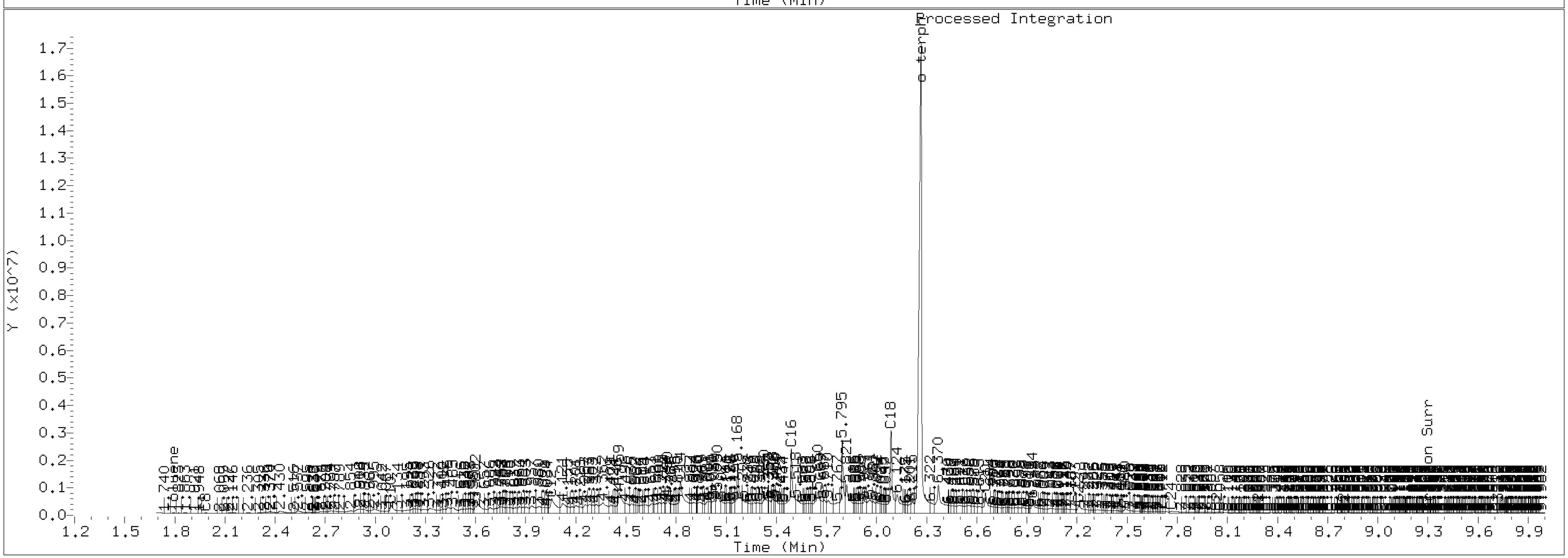
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210209.b/421B0936.D   SEQ-CCV5



TPH Manual Integrations Report
Datafile: FID4A, 20210209.b/421B0936.D Injection: 09-FEB-2021 21:02
Lab ID:SEQ-CCV5





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B0937.D	Calibration Date:	01/07/2021
Sequence:	SJB0139	Injection Date:	02/09/21
Lab Sample ID:	SJB0139-CCV6	Injection Time:	21:22
Sequence Name:	MOIL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1020	101807.5	103398.8		1.6	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210209.b\421B0937.D

Date : 09-FEB-2021 21:22

Client ID:

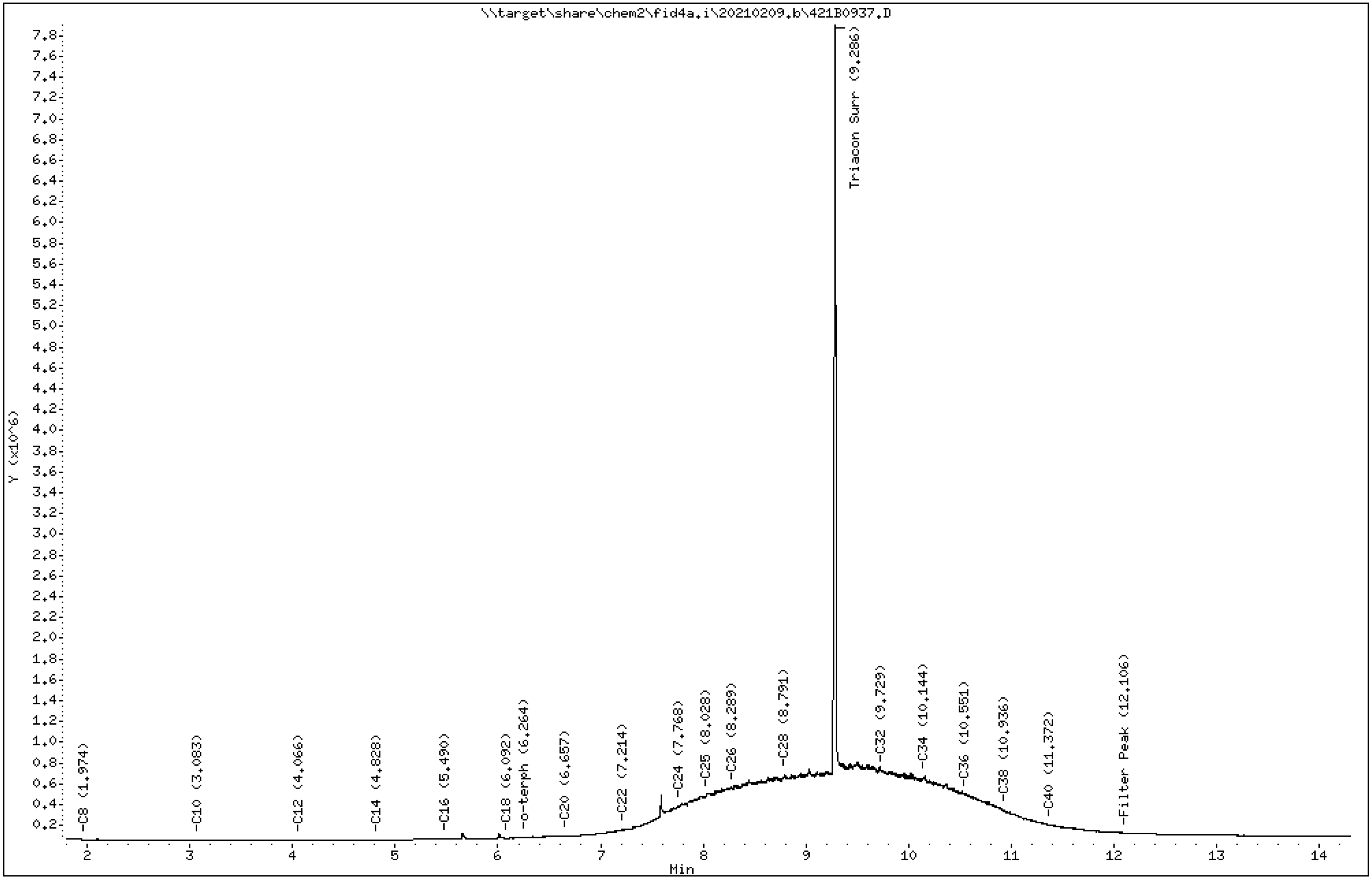
Sample Info: SEQ-CCV6

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210209.b/421B0937.D
Method: 20210209.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/11/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV6
Client ID:
Injection: 09-FEB-2021 21:22
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.974	0.004	5861	4271	WATPHD	(C12-C24)	11402975	82.9
C10	3.083	0.001	1283	493	WATPHM	(C24-C38)	103398845	1015.6
C12	4.066	0.013	290	152	AK102	(C10-C25)	15189595	90.4
C14	4.828	-0.001	3970	1163	AK103	(C25-C36)	92075773	1224.8
C16	5.490	-0.002	9859	3928	OR.DIES	(C10-C28)	42408740	216.4
C18	6.092	0.004	18967	2841				
C20	6.657	0.001	41224	64336	JET-A	(C10-C18)	964081	5.8
C22	7.214	-0.001	105033	220932				
C24	7.768	0.005	330412	162324				
C25	8.028	-0.001	431887	483495				
C26	8.289	-0.001	503469	298458				
C28	8.791	-0.002	634287	676415				
C32	9.729	0.006	672872	234889				
C34	10.144	-0.005	610486	331100				
Filter Peak	12.106	-0.008	71595	101854	BUNKERC	(C10-C38)	114841476	2909.1
C36	10.551	-0.001	438989	87600				
C38	10.936	-0.003	283122	221468				
C40	11.372	0.004	149108	117459				
o-terph	6.264	-0.003	23929	27281				
Triacon Surr	9.286	-0.012	7093988	6938170	NAS DIES	(C10-C24)	11442631	58.6

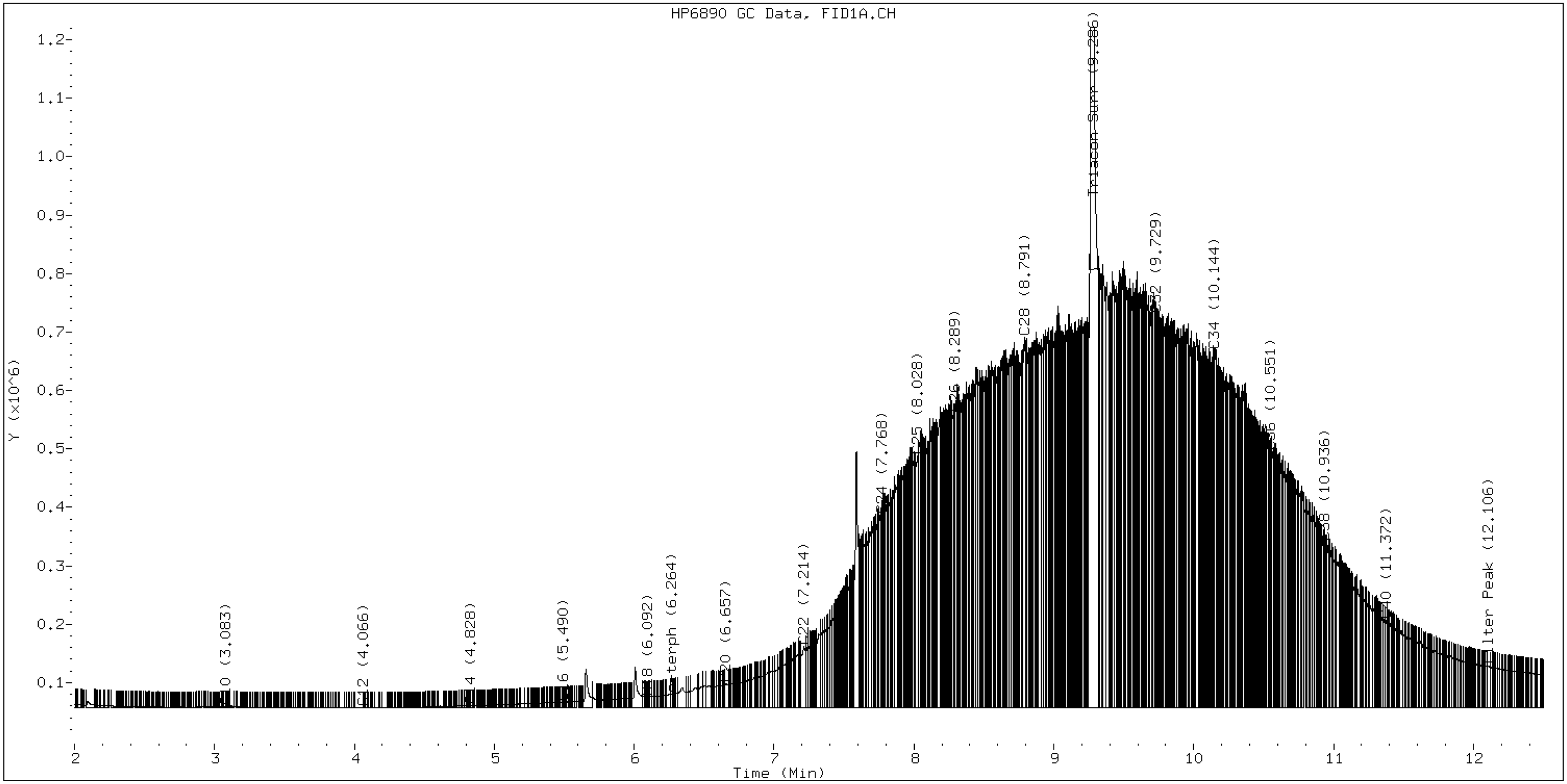
Range Times: NW Diesel(4.054 - 7.763) AK102(3.08 - 8.03) Jet A(3.08 - 6.09)
NW M.Oil(7.76 - 10.94) AK103(8.03 - 10.55) OR Diesel(3.08 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	27281	0.2	
Triacontane	6938170	49.1	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

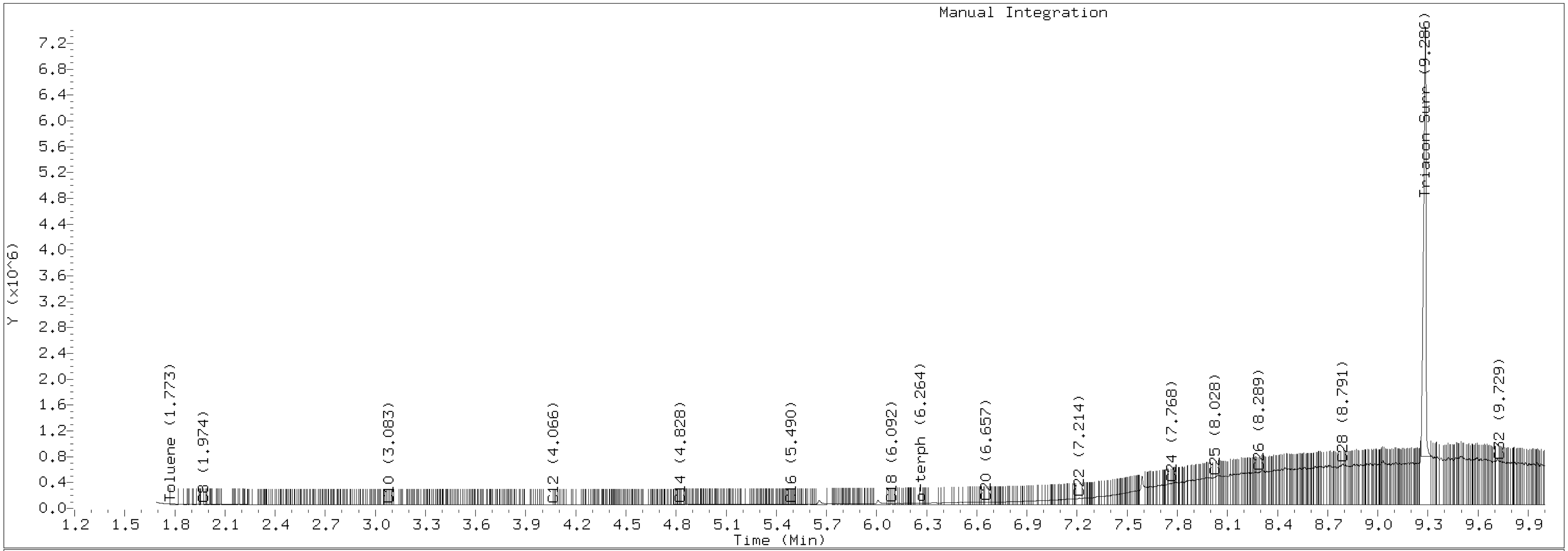
Datafile: FID4A, 20210209.b/421B0937.D SEQ-CCV6

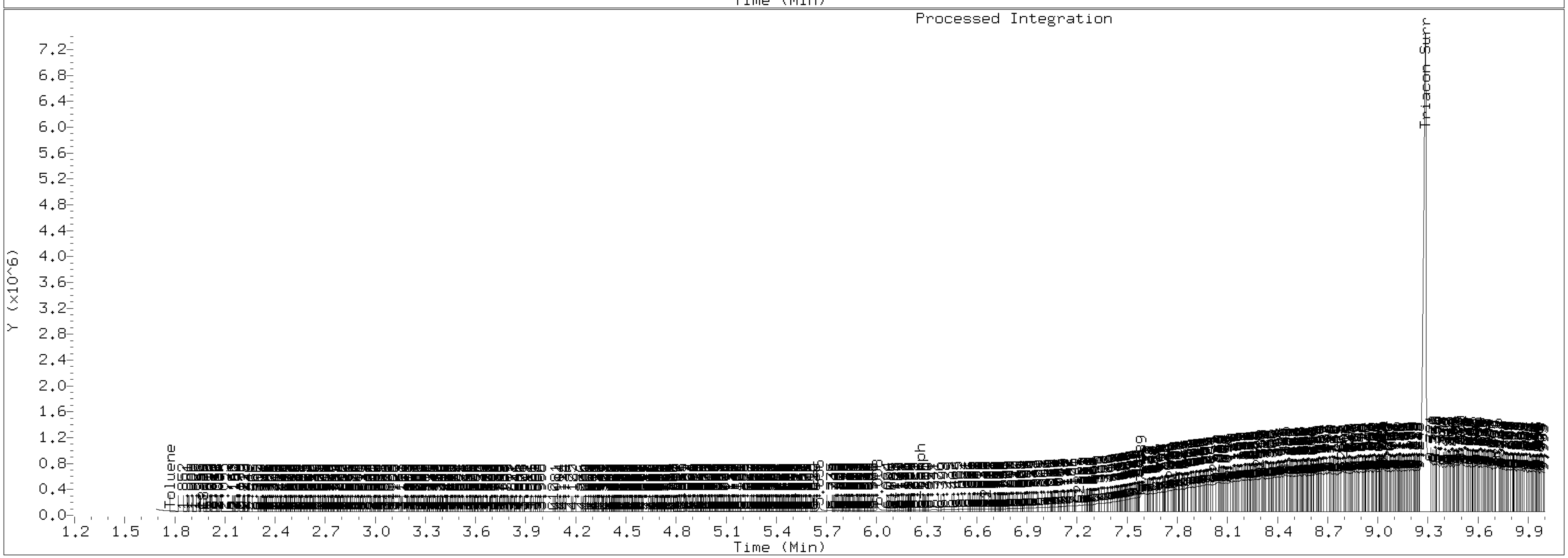


TPH Manual Integrations Report

Datafile: FID4A, 20210209.b/421B0937.D Injection: 09-FEB-2021 21:22

Lab ID:SEQ-CCV6





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B0953.D	Calibration Date:	01/07/2021
Sequence:	SJB0139	Injection Date:	02/10/21
Lab Sample ID:	SJB0139-CCV7	Injection Time:	02:55
Sequence Name:	DIESEL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	534	137498.2	146877.4		6.8	+/-15
o-Terphenyl	A	90.000	96.8	170577.7	183402.1		7.6	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210209.b\421B0953.D

Date : 10-FEB-2021 02:55

Client ID:

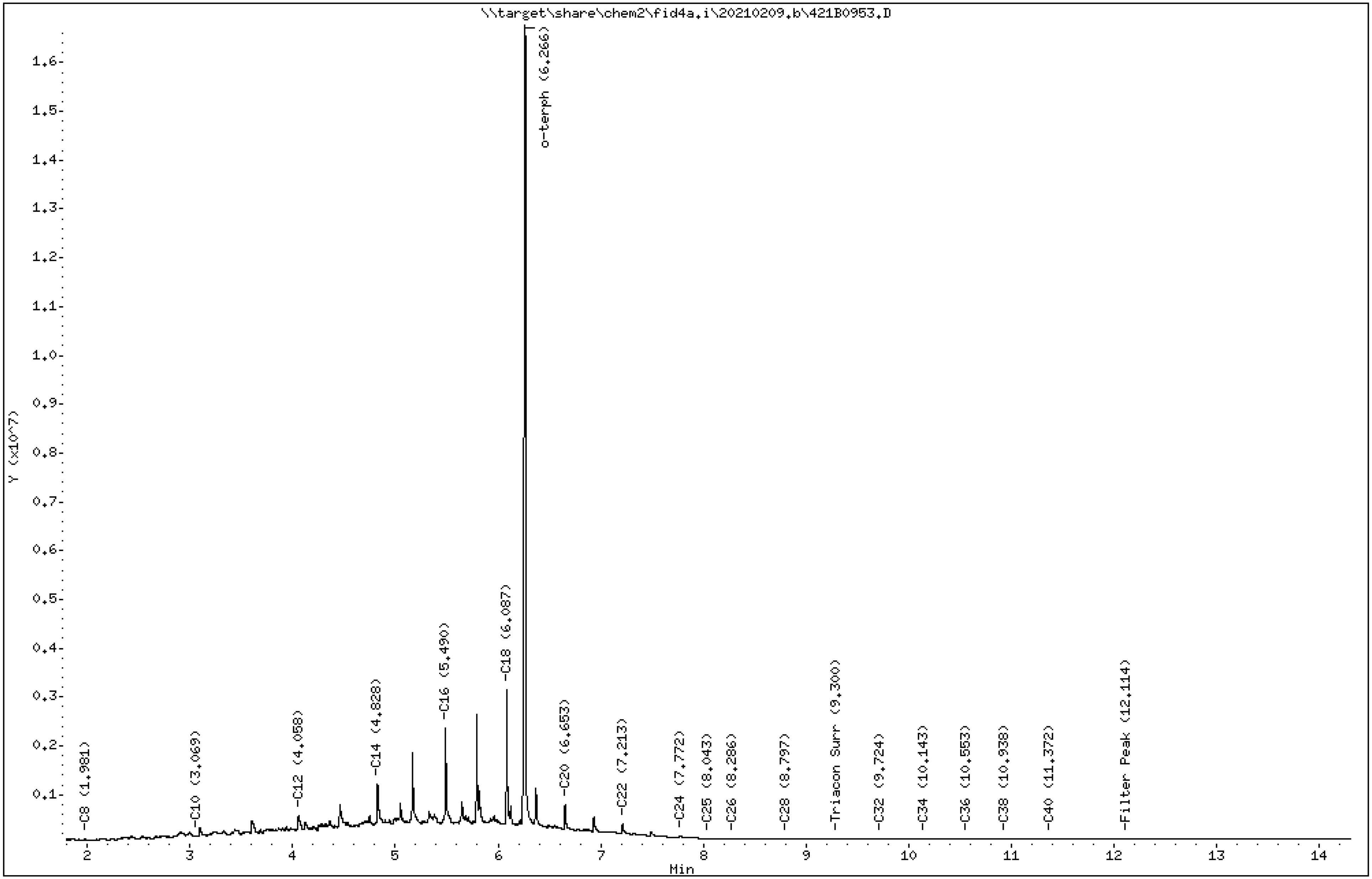
Instrument: fid4a.i

Sample Info: SEQ-CCV7

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210209.b/421B0953.D
Method: 20210209.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/15/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV7
Client ID:
Injection: 10-FEB-2021 02:55
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.981	0.012	21627	41120	WATPHD	(C12-C24)	73438713	534.1
C10	3.069	-0.013	94512	111185	WATPHM	(C24-C38)	3717842	36.5
C12	4.058	0.005	511551	1339047	AK102	(C10-C25)	85503705	508.8
C14	4.828	-0.001	1151911	2291612	AK103	(C25-C36)	2895563	38.5
C16	5.490	-0.002	2298706	2821078	OR.DIES	(C10-C28)	86735201	442.5
C18	6.087	-0.002	3088959	2872717				
C20	6.653	-0.003	718355	1051334	JET-A	(C10-C18)	64970821	391.7
C22	7.213	-0.002	323717	637651				
C24	7.772	0.009	72564	84794				
C25	8.043	0.013	40510	46337				
C26	8.286	-0.004	27465	16421				
C28	8.797	0.003	18939	9426				
C32	9.724	0.002	16035	8002				
C34	10.143	-0.005	16472	12335				
Filter Peak	12.114	-0.000	22154	7745	BUNKERC	(C10-C38)	88850362	2250.7
C36	10.553	0.001	18287	4562				
C38	10.938	-0.002	21336	4252				
C40	11.372	0.003	22992	17187				
o-terph	6.266	-0.001	16289624	16506187				
Triacon Surr	9.300	0.002	16450	10599	NAS DIES	(C10-C24)	85132520	436.2

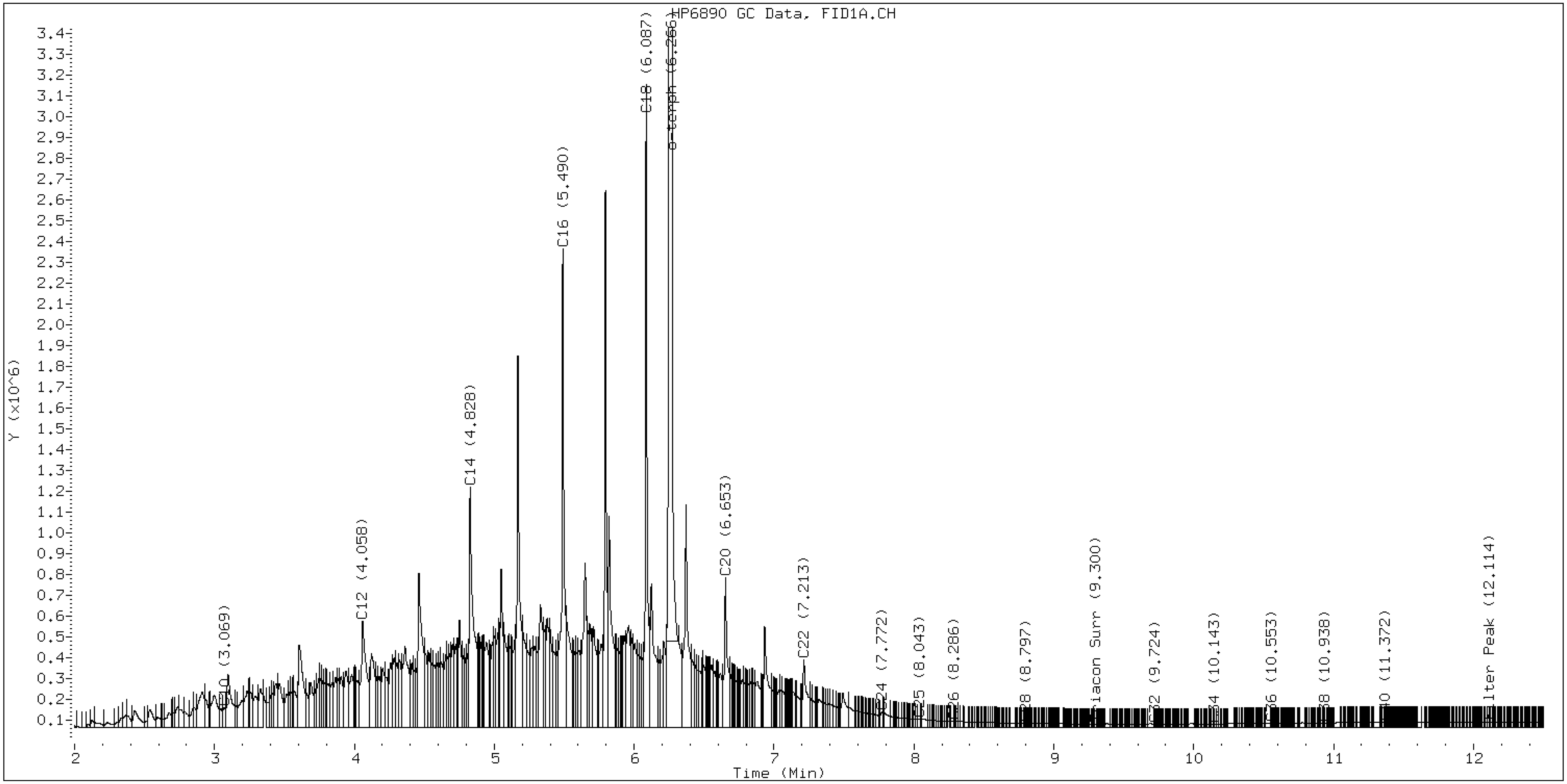
Range Times: NW Diesel(4.054 - 7.763) AK102(3.08 - 8.03) Jet A(3.08 - 6.09)
NW M.Oil(7.76 - 10.94) AK103(8.03 - 10.55) OR Diesel(3.08 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	16506187	96.8	M
Triacontane	10599	0.1	

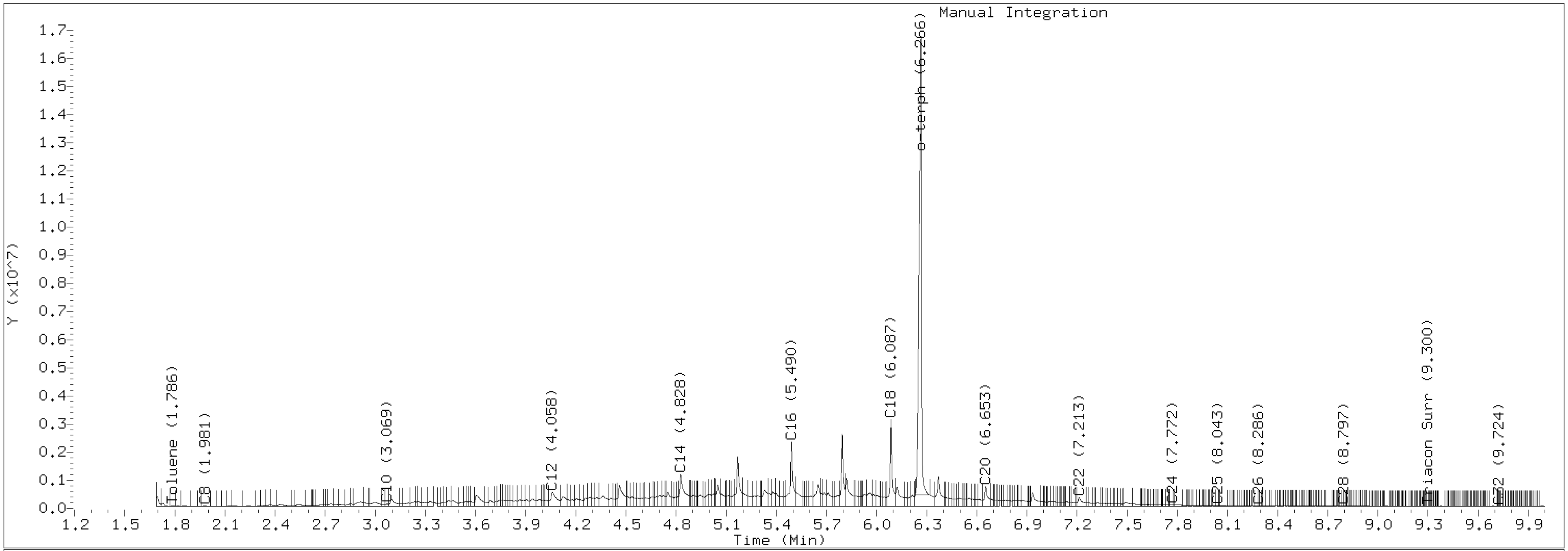
M Indicates the peak was manually integrated

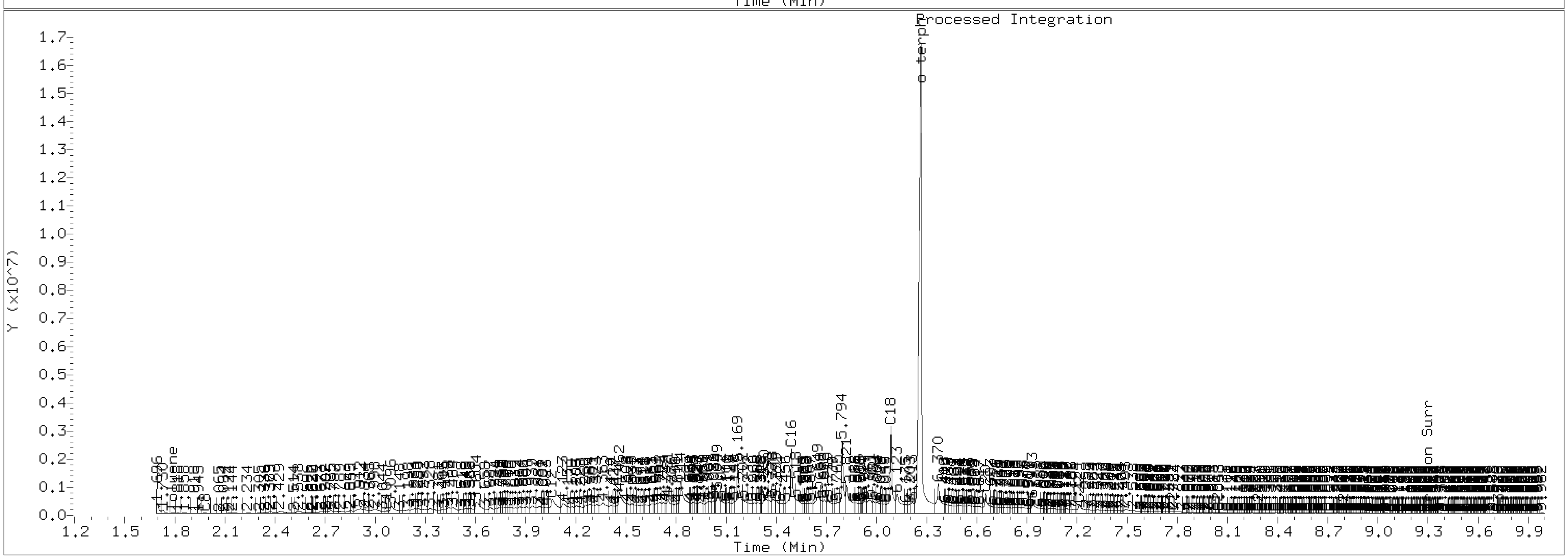
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210209.b/421B0953.D SEQ-CCV7



TPH Manual Integrations Report
Datafile: FID4A, 20210209.b/421B0953.D   Injection: 10-FEB-2021 02:55
Lab ID:SEQ-CCV7





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B0954.D
Calibration Date: 01/07/2021
Sequence: SJB0139
Injection Date: 02/10/21
Lab Sample ID: SJB0139-CCV8
Injection Time: 03:15
Sequence Name: MOIL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1010	101807.5	103215.7		1.4	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210209.b\421B0954.D

Date : 10-FEB-2021 03:15

Client ID:

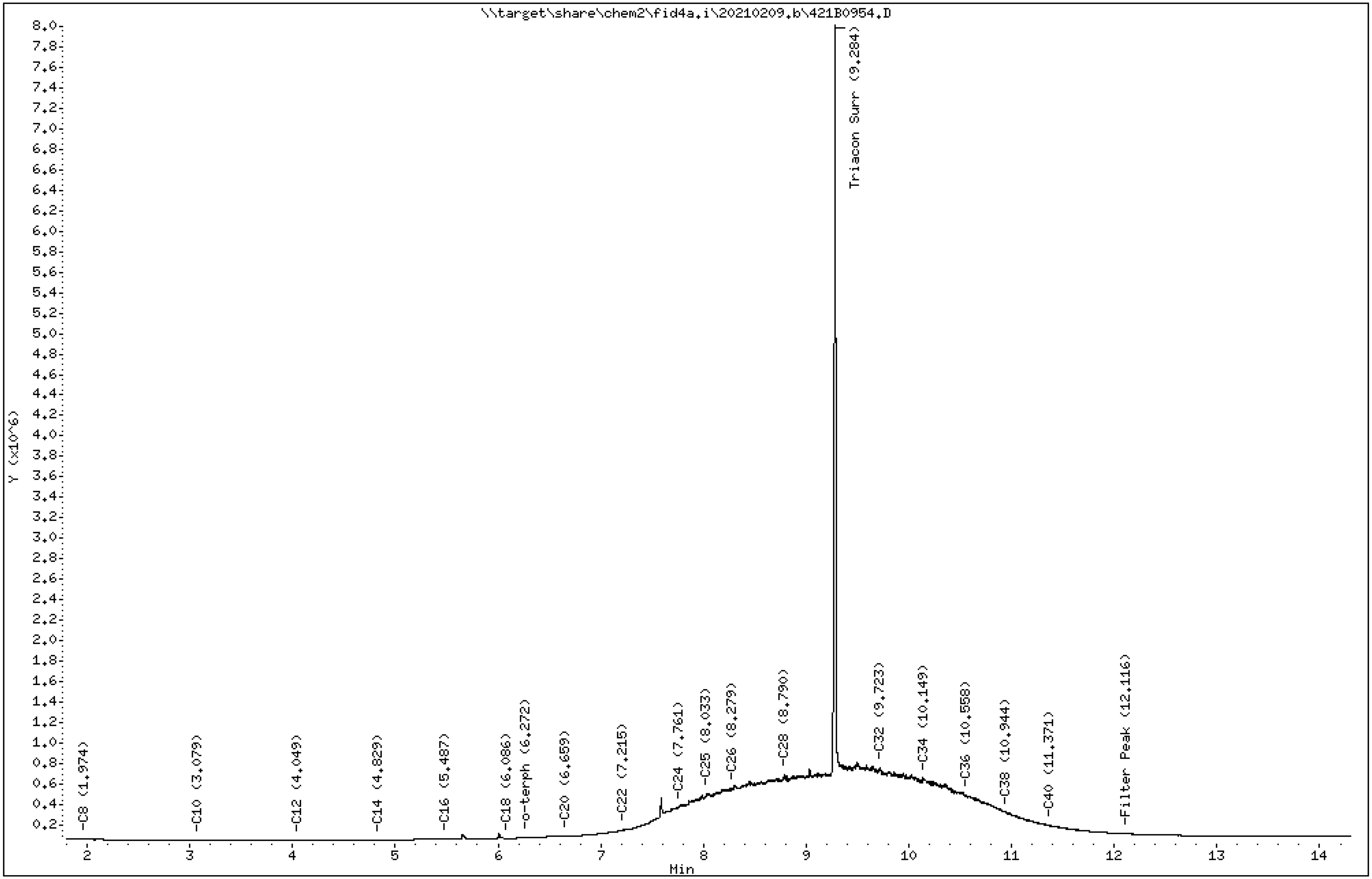
Instrument: fid4a.i

Sample Info: SEQ-CCV8

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210209.b/421B0954.D
Method: 20210209.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/15/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV8
Client ID:
Injection: 10-FEB-2021 03:15
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.974	0.005	8767	5174	WATPHD	(C12-C24)	11231551	81.7
C10	3.079	-0.003	1680	797	WATPHM	(C24-C38)	103215725	1013.8
C12	4.049	-0.005	283	163	AK102	(C10-C25)	14982407	89.1
C14	4.829	0.000	3949	2360	AK103	(C25-C36)	91830227	1221.5
C16	5.487	-0.005	9700	6263	OR.DIES	(C10-C28)	42117982	214.9
C18	6.086	-0.002	18805	10296				
C20	6.659	0.003	40141	74345	JET-A	(C10-C18)	949418	5.7
C22	7.215	-0.000	103030	117237				
C24	7.761	-0.001	324432	80805				
C25	8.033	0.004	447304	219512				
C26	8.279	-0.011	503282	298167				
C28	8.790	-0.004	645707	829500				
C32	9.723	0.000	701399	555366				
C34	10.149	0.000	602073	475799				
Filter Peak	12.116	0.002	63481	28454	BUNKERC	(C10-C38)	114493289	2900.2
C36	10.558	0.005	438519	195822				
C38	10.944	0.005	272269	81119				
C40	11.371	0.002	142345	70684				
o-terph	6.272	0.005	23181	13847				
Triacon Surr	9.284	-0.014	7235991	6996542	NAS DIES	(C10-C24)	11277564	57.8

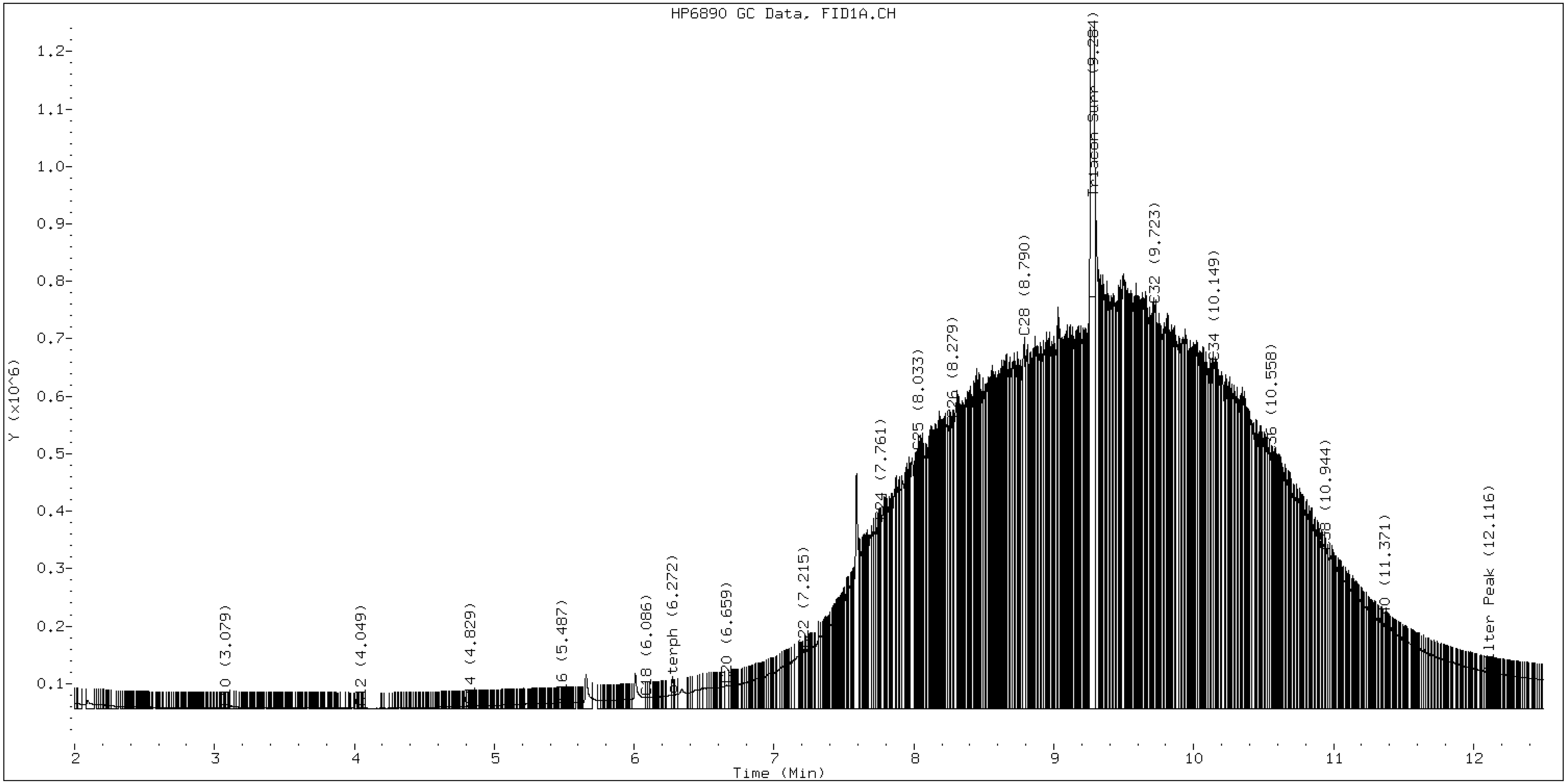
Range Times: NW Diesel(4.054 - 7.763) AK102(3.08 - 8.03) Jet A(3.08 - 6.09)
NW M.Oil(7.76 - 10.94) AK103(8.03 - 10.55) OR Diesel(3.08 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	13847	0.1	
Triacontane	6996542	49.5	M

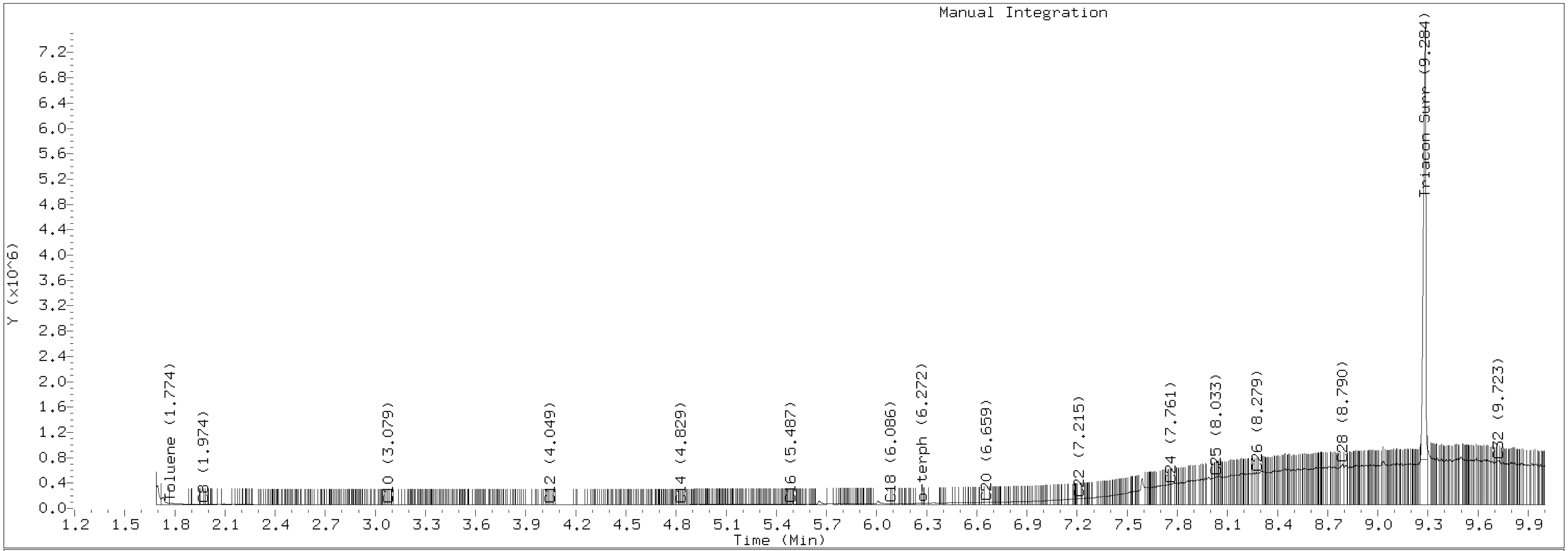
M Indicates the peak was manually integrated

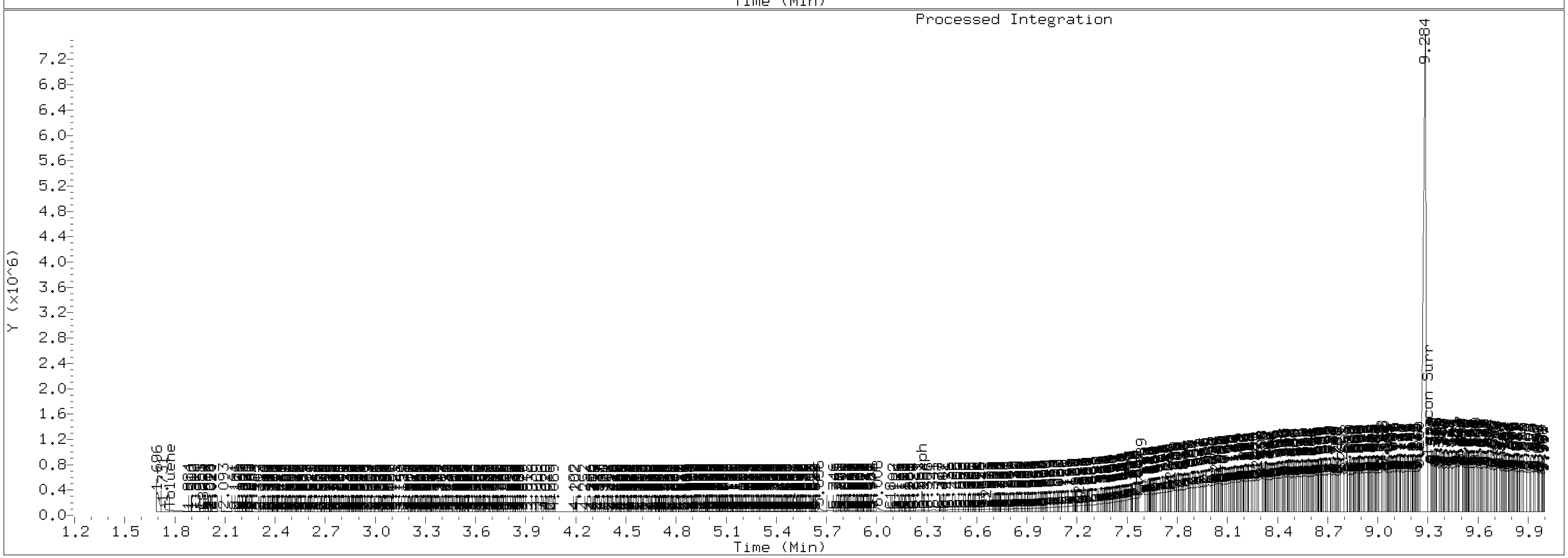
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210209.b/421B0954.D SEQ-CCV8



TPH Manual Integrations Report
Datafile: FID4A, 20210209.b/421B0954.D Injection: 10-FEB-2021 03:15
Lab ID:SEQ-CCV8





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B0963.D
Calibration Date: 01/07/2021
Sequence: SJB0139
Injection Date: 02/10/21
Lab Sample ID: SJB0139-CCV9
Injection Time: 06:22
Sequence Name: DIESEL CCV

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	570	137498.2	156739.8		14.0	+/-15
o-Terphenyl	A	90.000	103	170577.7	196035		14.9	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210209.b\421B0963.D

Date : 10-FEB-2021 06:22

Client ID:

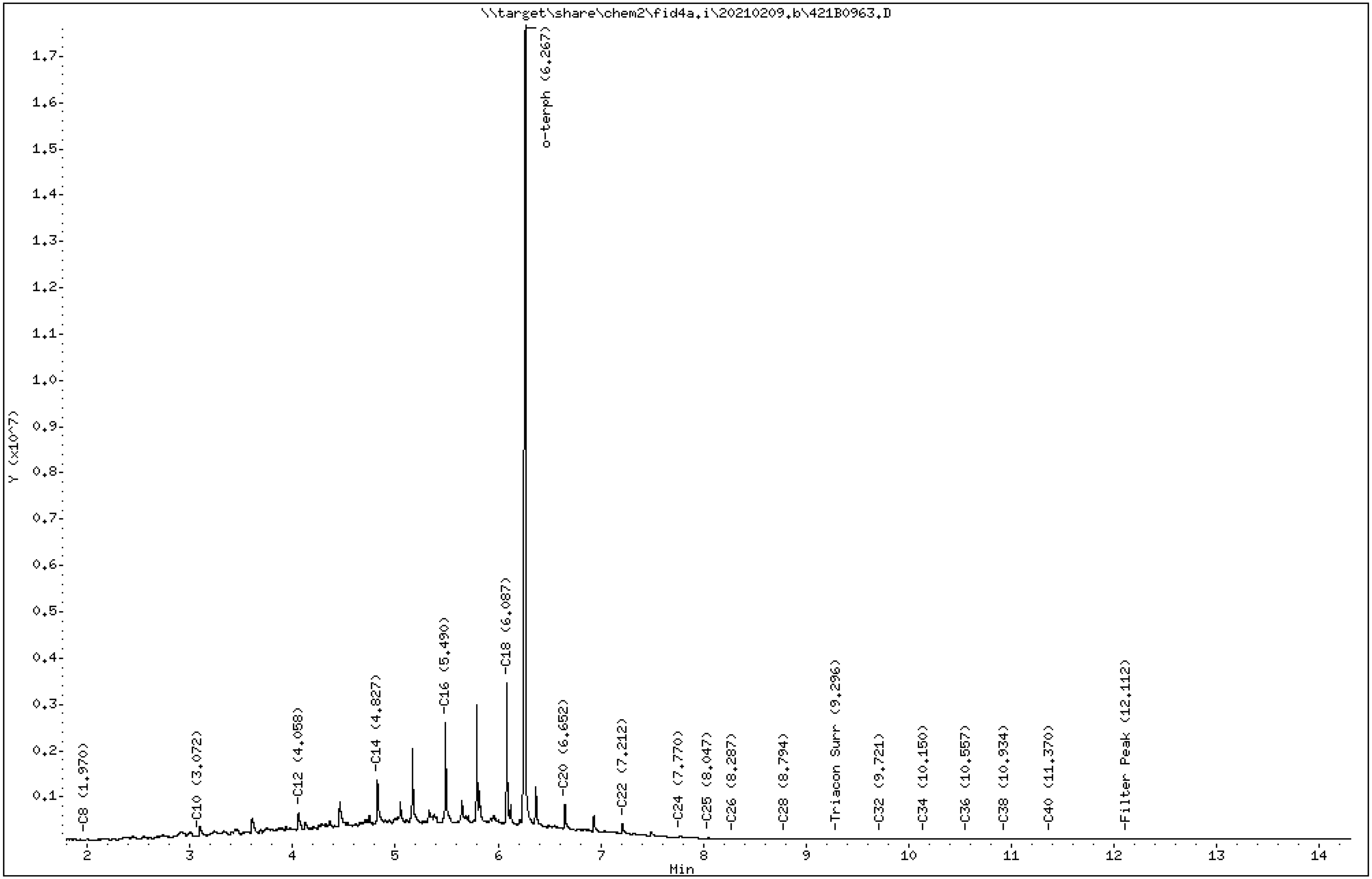
Instrument: fid4a.i

Sample Info: SEQ-CCV9

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210209.b/421B0963.D
Method: 20210209.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/15/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV9
Client ID:
Injection: 10-FEB-2021 06:22
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.970	0.000	8249	11802	WATPHD	(C12-C24)	78369878	570.0
C10	3.072	-0.010	102493	138967	WATPHM	(C24-C38)	3796971	37.3
C12	4.058	0.005	584782	1422170	AK102	(C10-C25)	91577551	544.9
C14	4.827	-0.002	1309837	2622356	AK103	(C25-C36)	3007881	40.0
C16	5.490	-0.002	2542816	3592688	OR.DIES	(C10-C28)	92822866	473.6
C18	6.087	-0.002	3411190	3339388				
C20	6.652	-0.004	775622	1142843	JET-A	(C10-C18)	69500946	419.1
C22	7.212	-0.004	355196	734864				
C24	7.770	0.007	81046	336298				
C25	8.047	0.017	44339	64246				
C26	8.287	-0.003	29181	8730				
C28	8.794	0.000	20265	6065				
C32	9.721	-0.002	17122	7682				
C34	10.150	0.001	17557	6132				
Filter Peak	12.112	-0.002	23150	4624	BUNKERC	(C10-C38)	95047904	2407.7
C36	10.557	0.004	19090	5713				
C38	10.934	-0.005	21829	9800				
C40	11.370	0.001	23854	14268				
o-terph	6.267	-0.000	17112448	17643150				
Triacon Surr	9.296	-0.002	17455	3485	NAS DIES	(C10-C24)	91250933	467.6

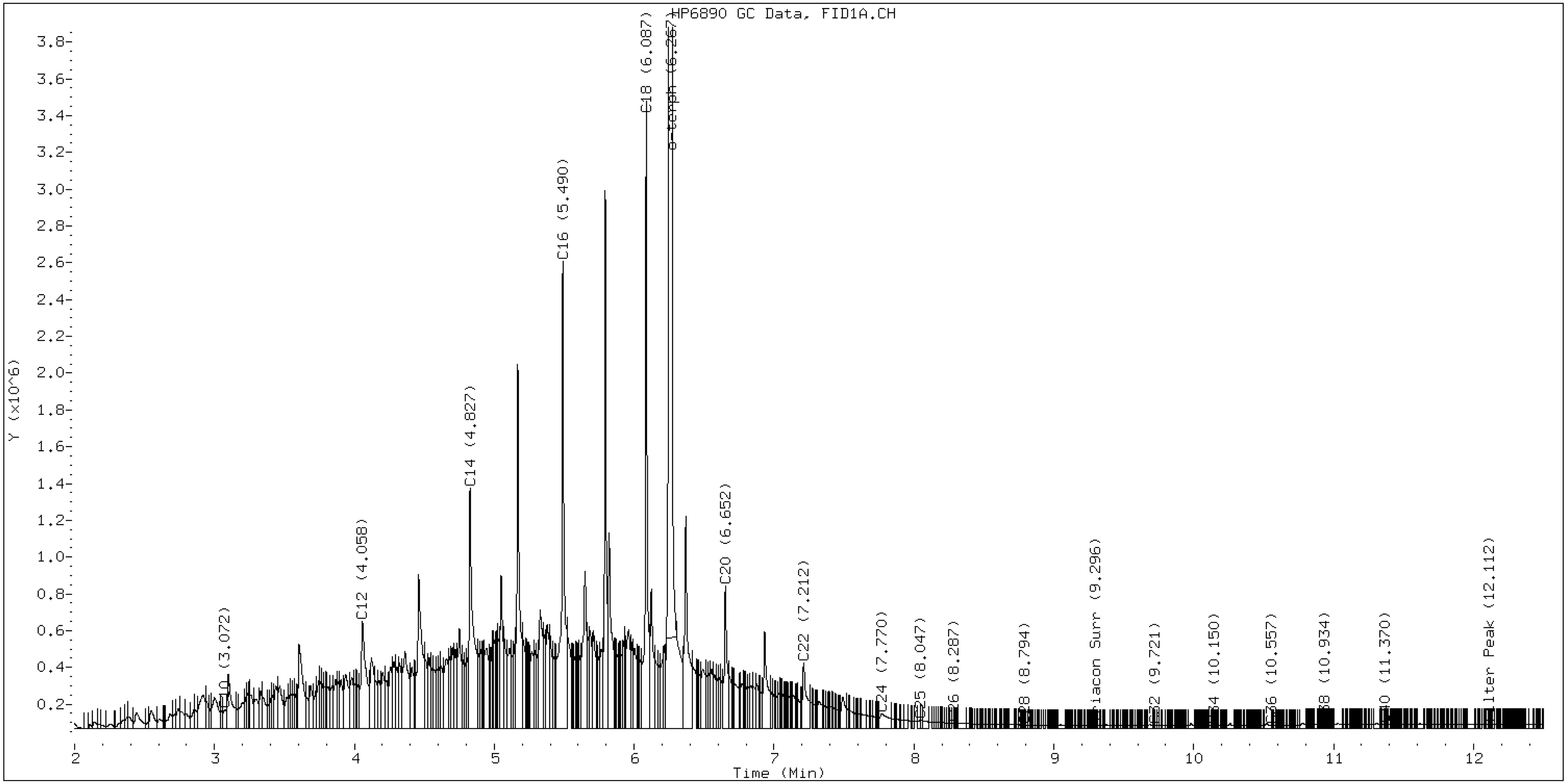
Range Times: NW Diesel(4.054 - 7.763) AK102(3.08 - 8.03) Jet A(3.08 - 6.09)
NW M.Oil(7.76 - 10.94) AK103(8.03 - 10.55) OR Diesel(3.08 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	17643150	103.4	M
Triacontane	3485	0.0	

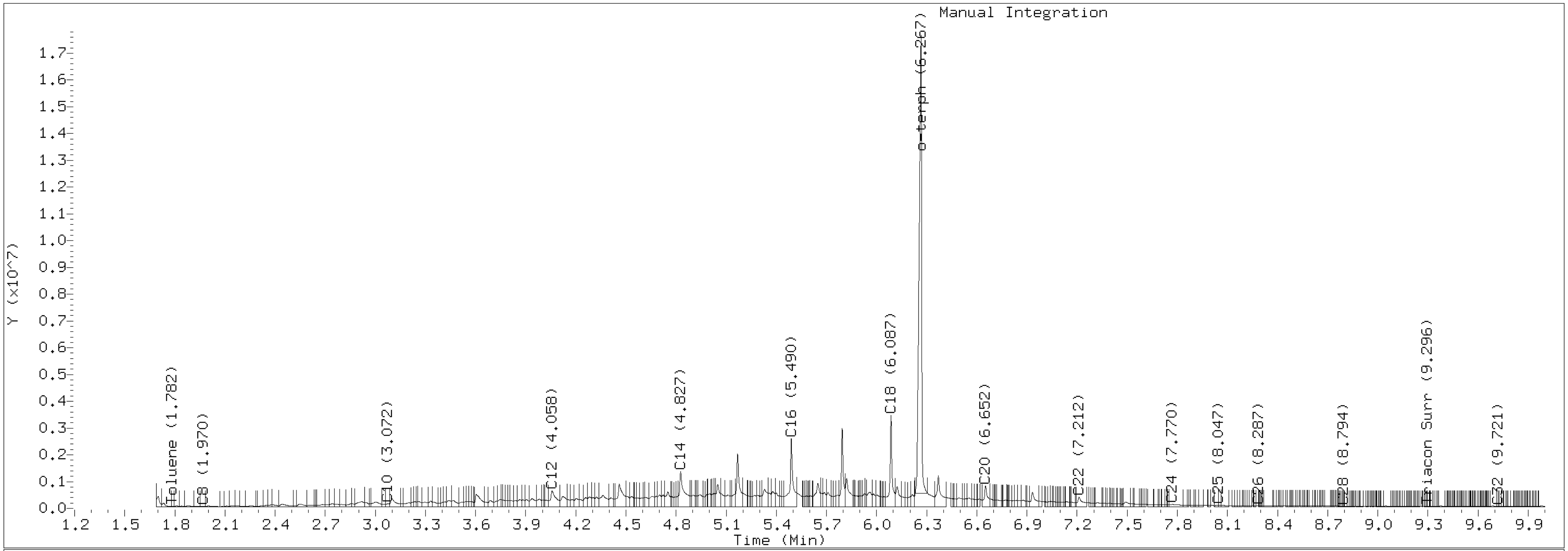
M Indicates the peak was manually integrated

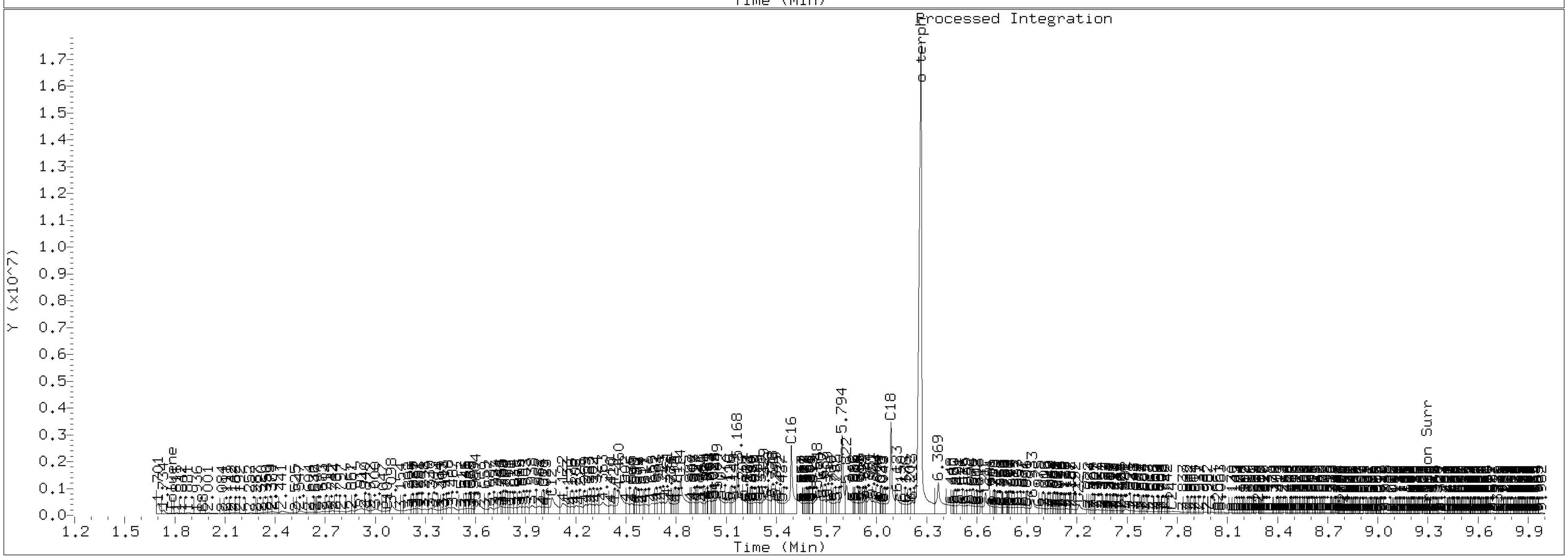
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210209.b/421B0963.D SEQ-CCV9



TPH Manual Integrations Report
Datafile: FID4A, 20210209.b/421B0963.D Injection: 10-FEB-2021 06:22
Lab ID:SEQ-CCV9





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B0964.D
Calibration Date: 01/07/2021
Sequence: SJB0139
Injection Date: 02/10/21
Lab Sample ID: SJB0139-CCVA
Injection Time: 06:43
Sequence Name: MOIL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1100	101807.5	111753.7		9.8	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210209.b\421B0964.D

Date : 10-FEB-2021 06:43

Client ID:

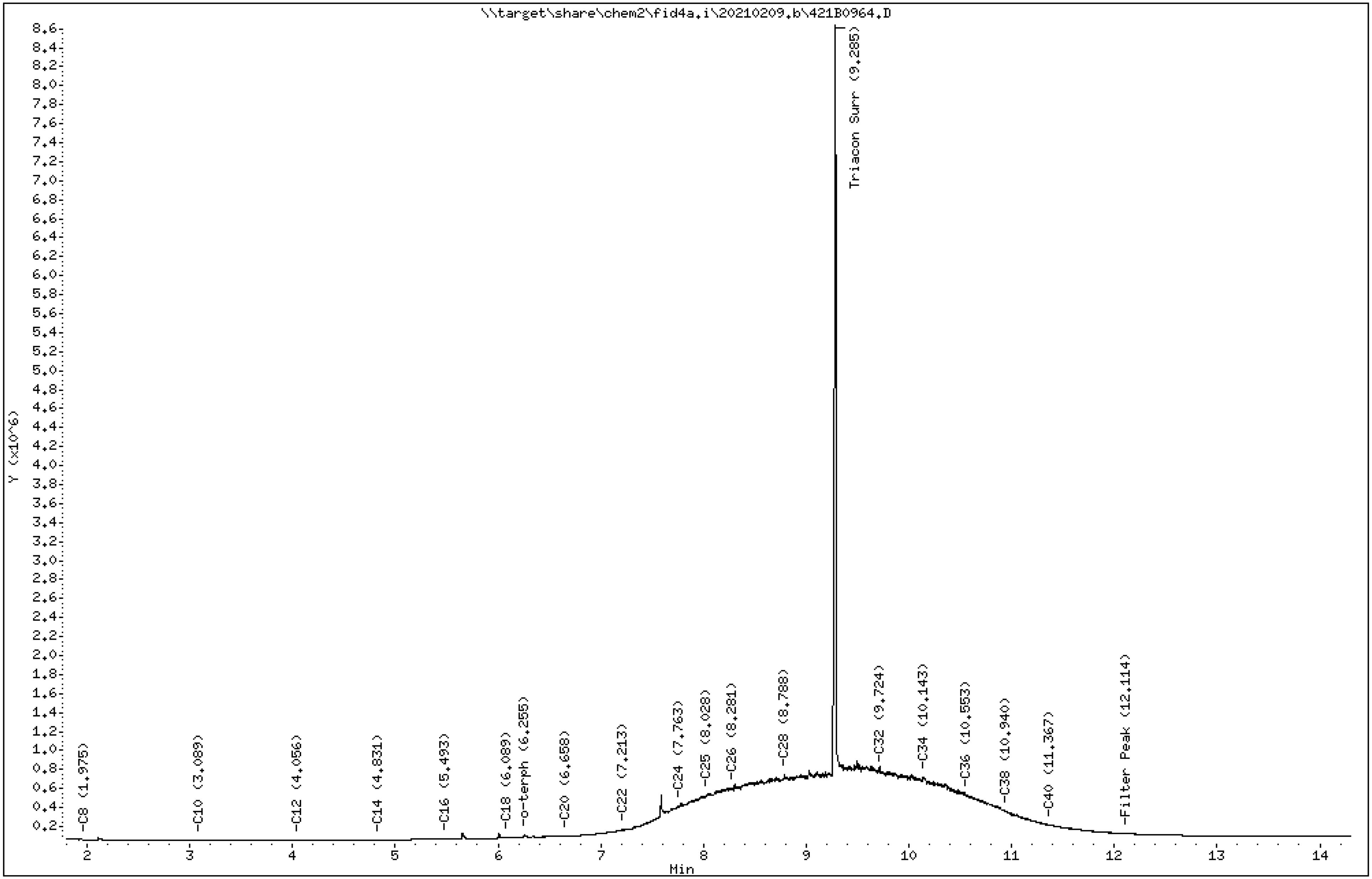
Instrument: fid4a.i

Sample Info: SEQ-CCVA

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210209.b/421B0964.D
Method: 20210209.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/15/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCVA
Client ID:
Injection: 10-FEB-2021 06:43
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.975	0.006	6481	1292	WATPHD	(C12-C24)	12405632	90.2
C10	3.089	0.007	1304	877	WATPHM	(C24-C38)	111753709	1097.7
C12	4.056	0.002	335	215	AK102	(C10-C25)	16400068	97.6
C14	4.831	0.002	4090	3618	AK103	(C25-C36)	99245880	1320.2
C16	5.493	0.001	11533	2295	OR.DIES	(C10-C28)	46059593	235.0
C18	6.089	0.001	22139	14333				
C20	6.658	0.002	45038	35291	JET-A	(C10-C18)	1127076	6.8
C22	7.213	-0.003	111241	132319				
C24	7.763	-0.000	354713	105656				
C25	8.028	-0.002	470146	139763				
C26	8.281	-0.009	551901	460041				
C28	8.788	-0.005	685985	665925				
C32	9.724	0.002	728504	180668				
C34	10.143	-0.005	664876	460298				
Filter Peak	12.114	-0.000	69795	65546	BUNKERC	(C10-C38)	124205238	3146.3
C36	10.553	0.001	472798	164337				
C38	10.940	0.001	307028	182002				
C40	11.367	-0.002	164201	144974				
o-terph	6.255	-0.012	51924	144593				
Triacon Surr	9.285	-0.013	7889811	7838723	NAS DIES	(C10-C24)	12451529	63.8

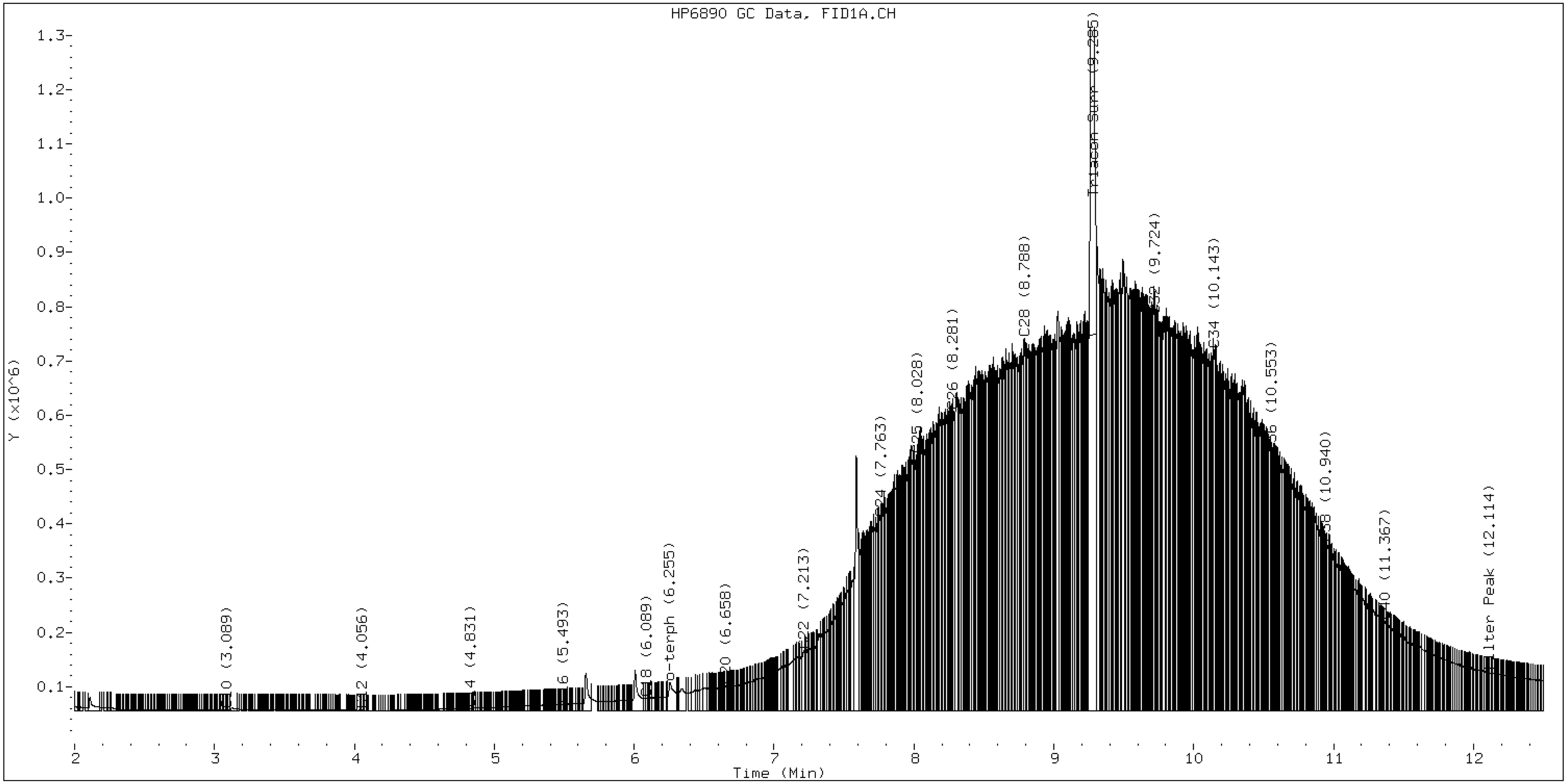
Range Times: NW Diesel(4.054 - 7.763) AK102(3.08 - 8.03) Jet A(3.08 - 6.09)
NW M.Oil(7.76 - 10.94) AK103(8.03 - 10.55) OR Diesel(3.08 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	144593	0.8	
Triacontane	7838723	55.4	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210209.b/421B0964.D   SEQ-CCVA



TPH Manual Integrations Report
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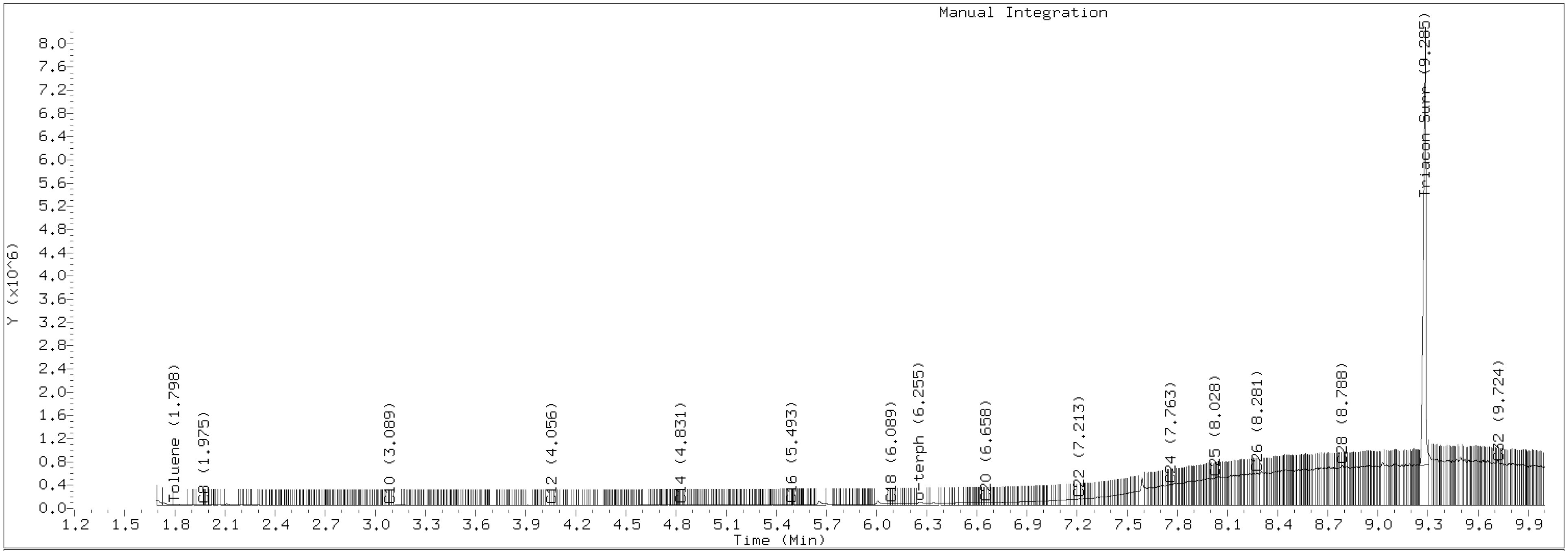
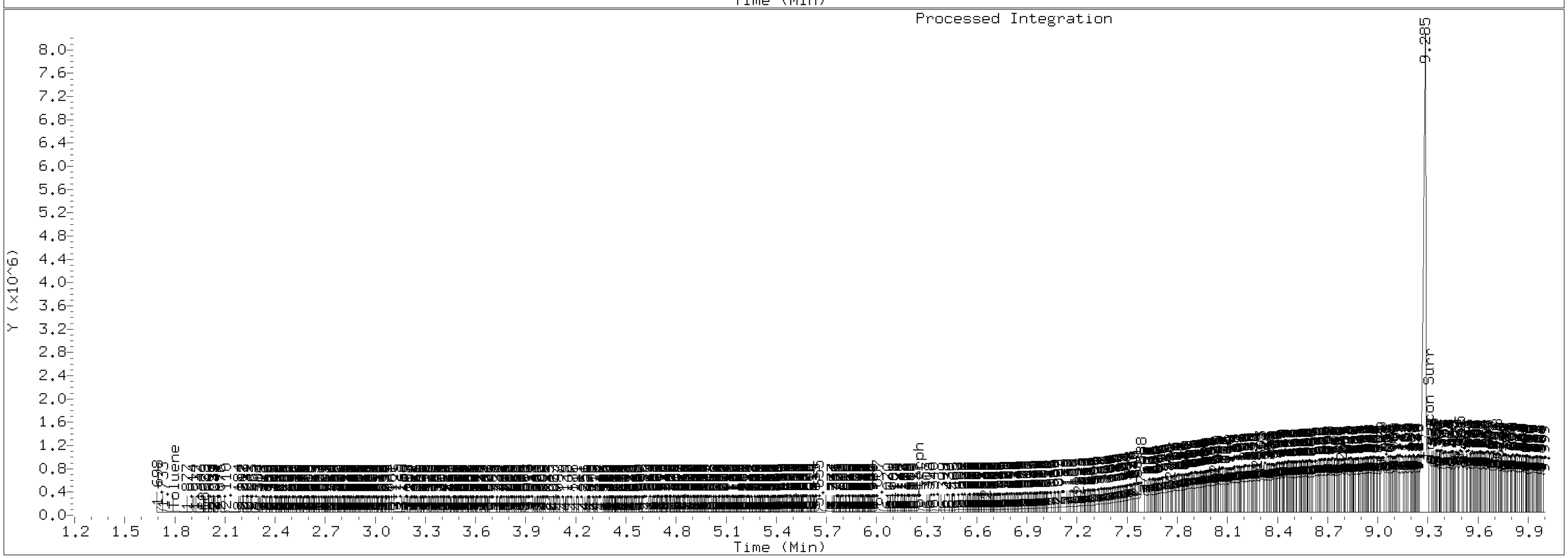
Lab ID:SEQ-CCVA





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B1717.D
Calibration Date: 01/07/2021
Sequence: SJB0251
Injection Date: 02/17/21
Lab Sample ID: SJB0251-CCV1
Injection Time: 16:24
Sequence Name: DIESEL CCV

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	532	137498.2	146209.9		6.3	+/-15
o-Terphenyl	A	90.000	96.2	170577.7	182260.1		6.9	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1717.D

Page 1

Date : 17-FEB-2021 16:24

Client ID:

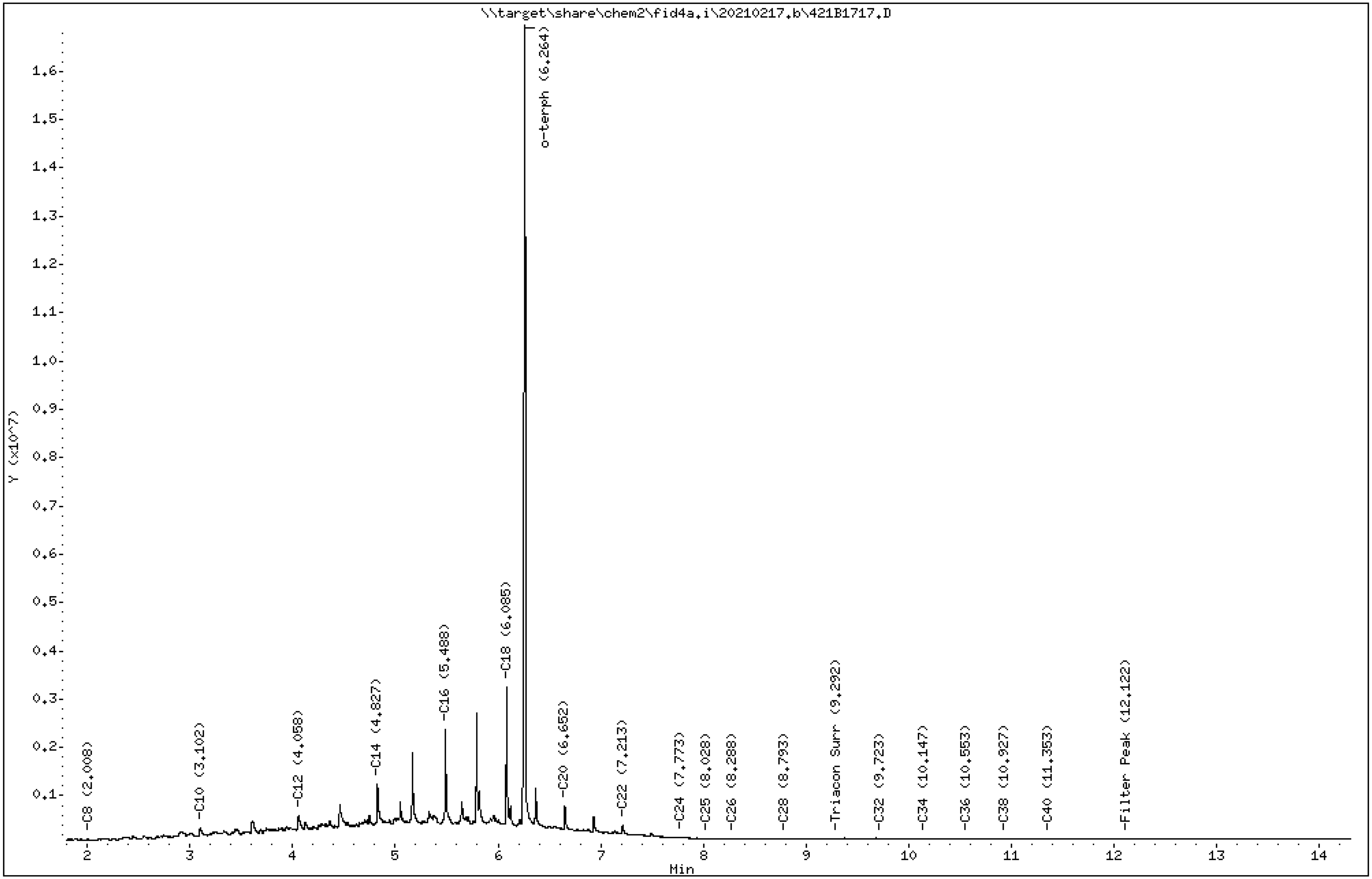
Instrument: fid4a.i

Sample Info: SEQ-CCV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1717.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV1
Client ID:
Injection: 17-FEB-2021 16:24
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.008	-0.002	24052	43868	WATPHD	(C12-C24)	73104950	531.7
C10	3.102	0.011	258542	546958	WATPHM	(C24-C38)	3441180	33.8
C12	4.058	0.005	504478	1367366	AK102	(C10-C25)	85558173	509.1
C14	4.827	0.001	1150394	2320892	AK103	(C25-C36)	2681758	35.7
C16	5.488	0.000	2302634	4036052	OR.DIES	(C10-C28)	86587118	441.8
C18	6.085	-0.001	3180472	2896397				
C20	6.652	-0.001	699851	1061869	JET-A	(C10-C18)	65599911	395.5
C22	7.213	0.001	303894	847493				
C24	7.773	0.013	69887	305471				
C25	8.028	-0.001	32281	9646				
C26	8.288	0.000	23868	10713				
C28	8.793	0.002	16935	12646				
C32	9.723	0.002	15199	10576				
C34	10.147	0.004	16135	9655				
Filter Peak	12.122	0.000	21116	9473	BUNKERC	(C10-C38)	88687065	2246.5
C36	10.553	0.010	18054	5408				
C38	10.927	0.001	20486	11217				
C40	11.353	0.003	22350	5577				
o-terph	6.264	-0.002	16535436	16403407				
Triacon Surr	9.292	-0.005	14990	8957	NAS DIES	(C10-C24)	85245885	436.8

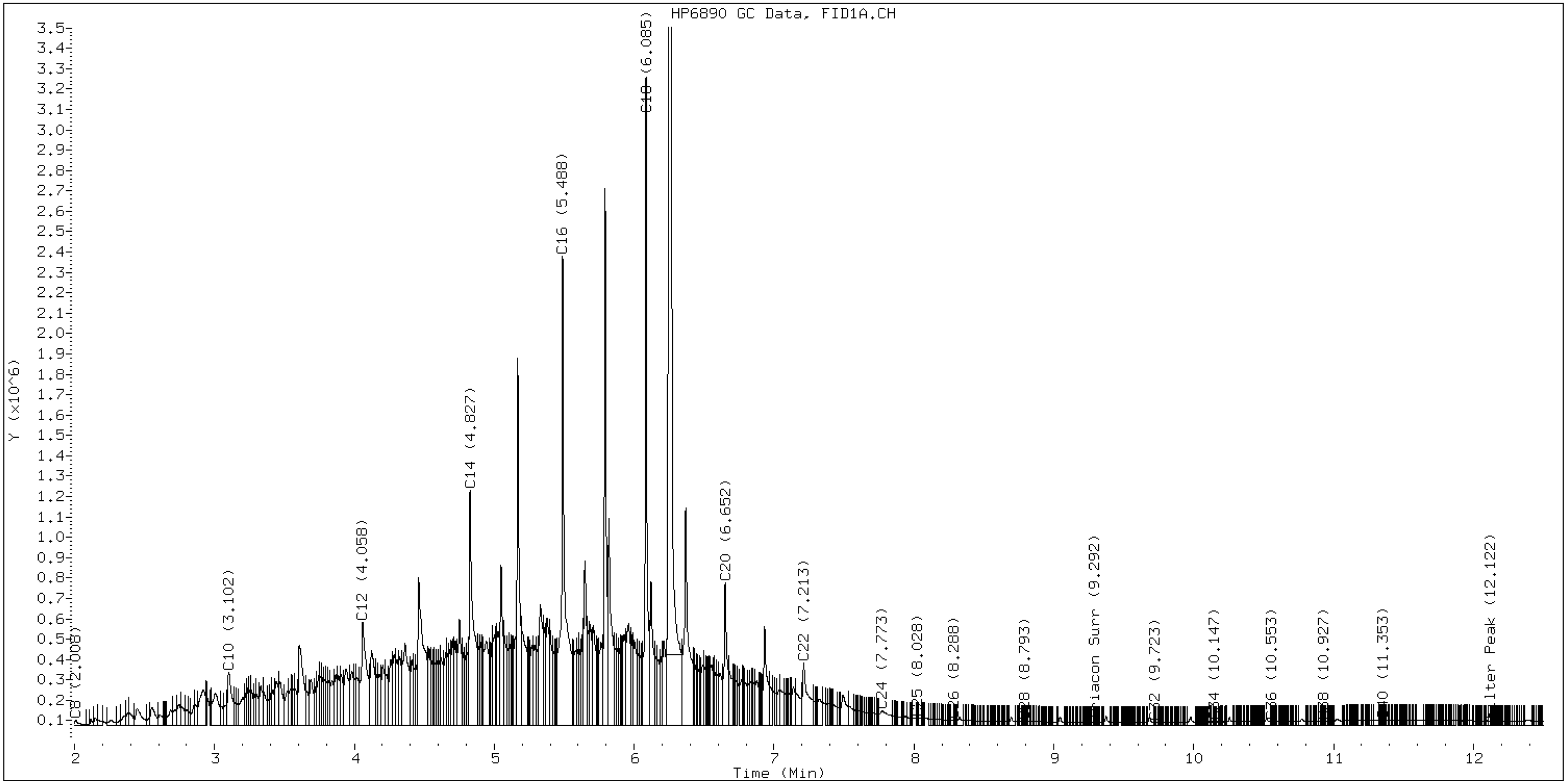
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	16403407	96.2	M
Triacontane	8957	0.1	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

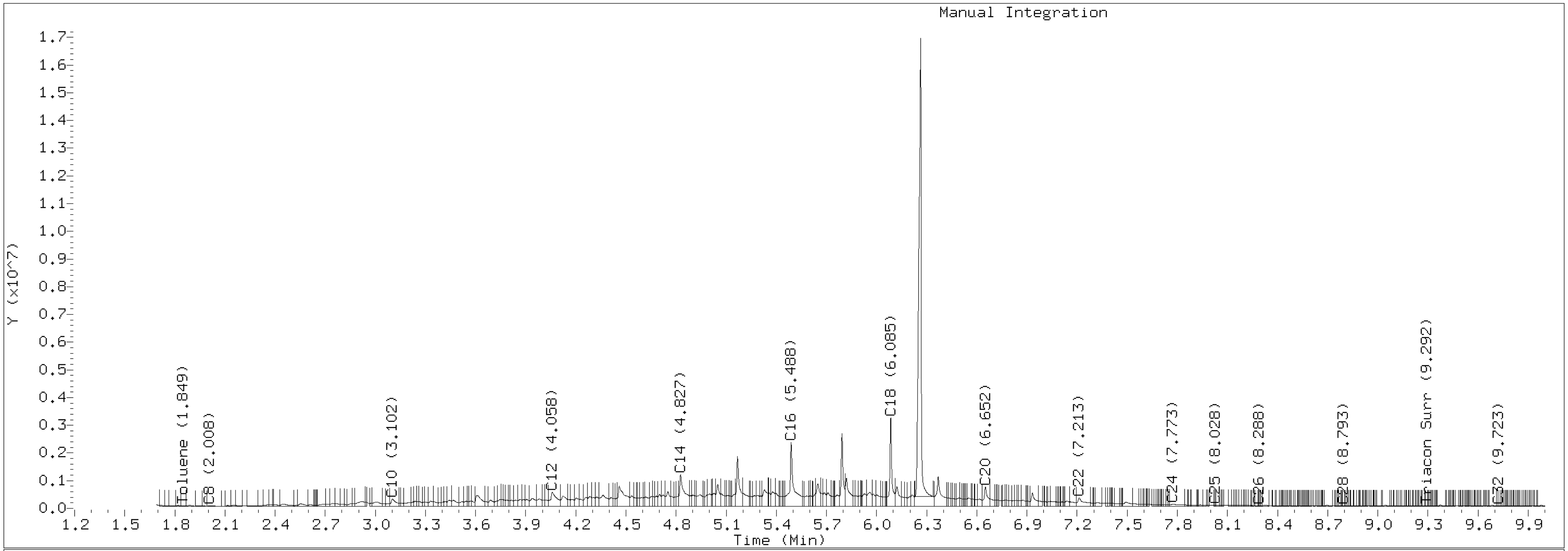
Datafile: FID4A, 20210217.b/421B1717.D SEQ-CCV1

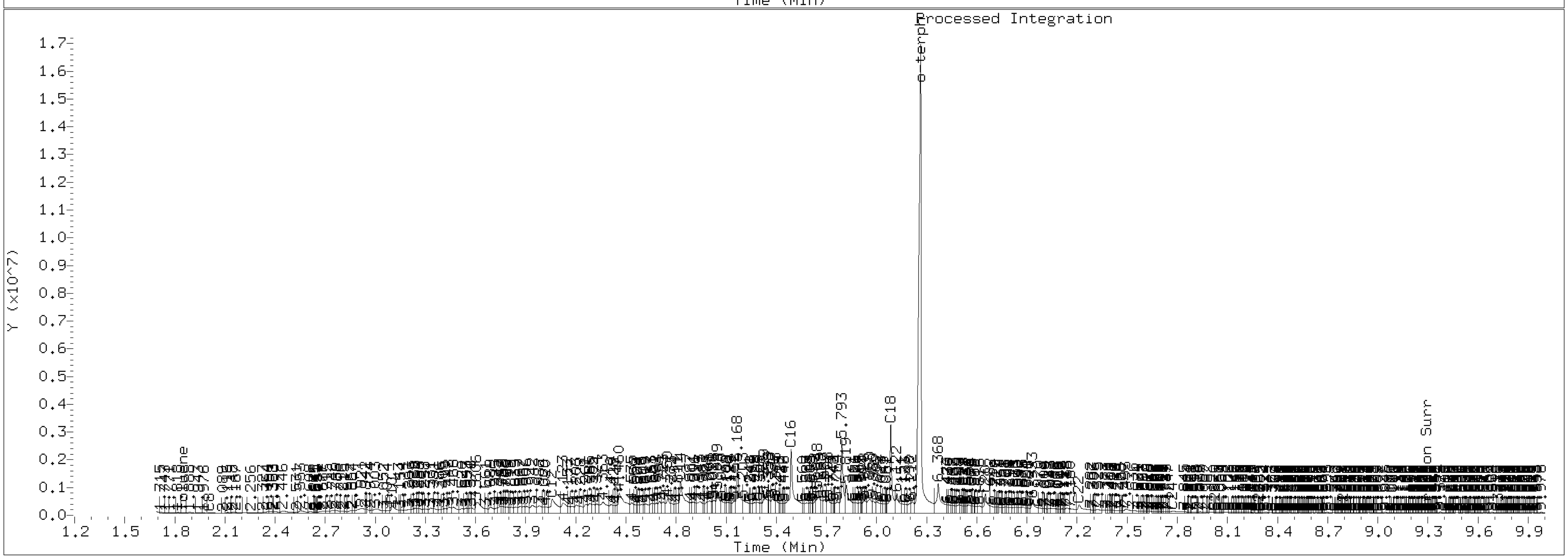


TPH Manual Integrations Report

Datafile: FID4A, 20210217.b/421B1717.D Injection: 17-FEB-2021 16:24

Lab ID:SEQ-CCV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B1718.D
Calibration Date: 01/07/2021
Sequence: SJB0251
Injection Date: 02/17/21
Lab Sample ID: SJB0251-CCV2
Injection Time: 16:45
Sequence Name: MOIL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1040	101807.5	106291.7		4.4	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1718.D

Date : 17-FEB-2021 16:45

Client ID:

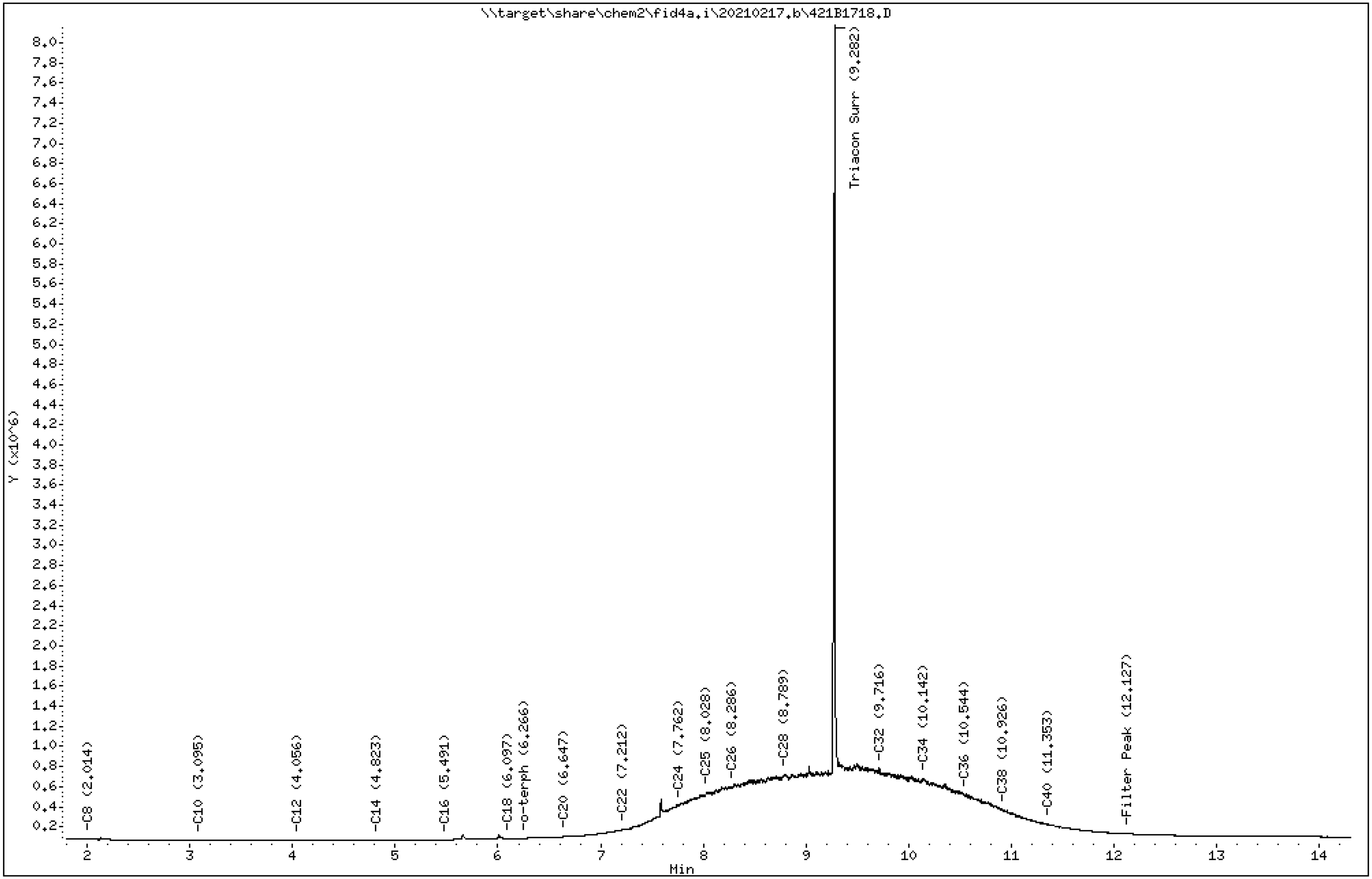
Instrument: fid4a.i

Sample Info: SEQ-CCV2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1718.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV2
Client ID:
Injection: 17-FEB-2021 16:45
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.014	0.003	10048	6960	WATPHD	(C12-C24)	11487975	83.6
C10	3.095	0.004	2707	2083	WATPHM	(C24-C38)	106291700	1044.0
C12	4.056	0.003	485	263	AK102	(C10-C25)	15587491	92.7
C14	4.823	-0.003	1724	666	AK103	(C25-C36)	94093468	1251.6
C16	5.491	0.002	5910	1451	OR.DIES	(C10-C28)	44408853	226.6
C18	6.097	0.011	16348	5692				
C20	6.647	-0.005	35876	5370	JET-A	(C10-C18)	759588	4.6
C22	7.212	0.001	106901	140935				
C24	7.762	0.001	346544	120551				
C25	8.028	-0.000	480057	466512				
C26	8.286	-0.003	534165	291239				
C28	8.789	-0.003	648564	448803				
C32	9.716	-0.005	706381	579359				
C34	10.142	-0.001	617629	514509				
Filter Peak	12.127	0.006	63460	22075	BUNKERC	(C10-C38)	117858606	2985.5
C36	10.544	0.001	451384	134243				
C38	10.926	-0.000	294088	73298				
C40	11.353	0.003	159905	140465				
o-terph	6.266	-0.000	20361	23948				
Triacon Surr	9.282	-0.015	7444453	7472515	NAS DIES	(C10-C24)	11566906	59.3

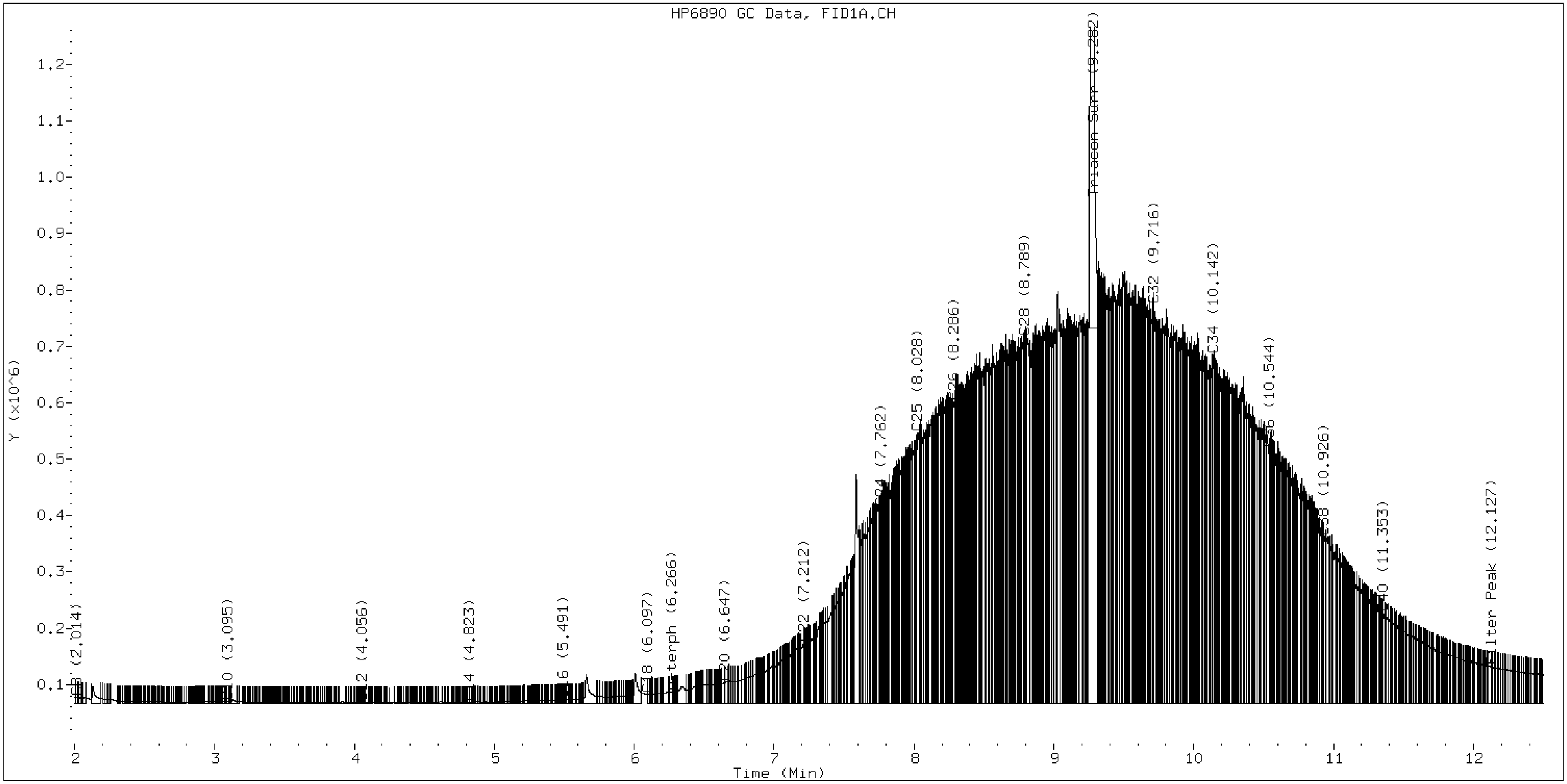
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	23948	0.1	
Triacontane	7472515	52.8	M

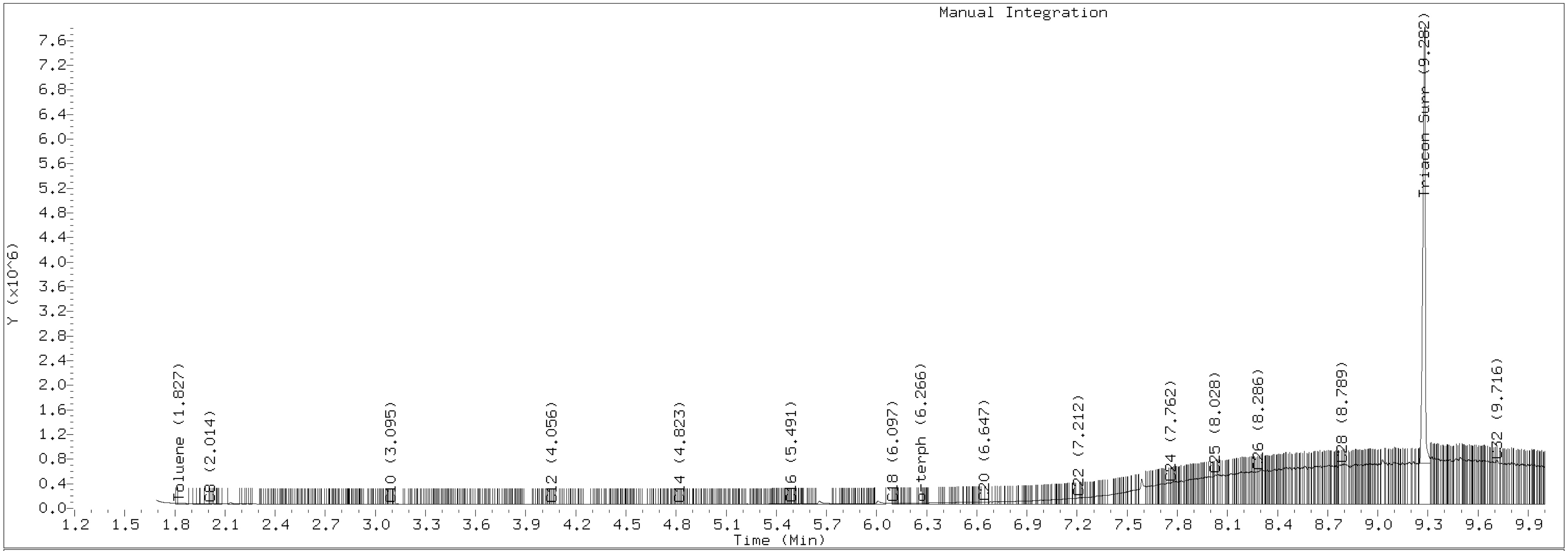
M Indicates the peak was manually integrated

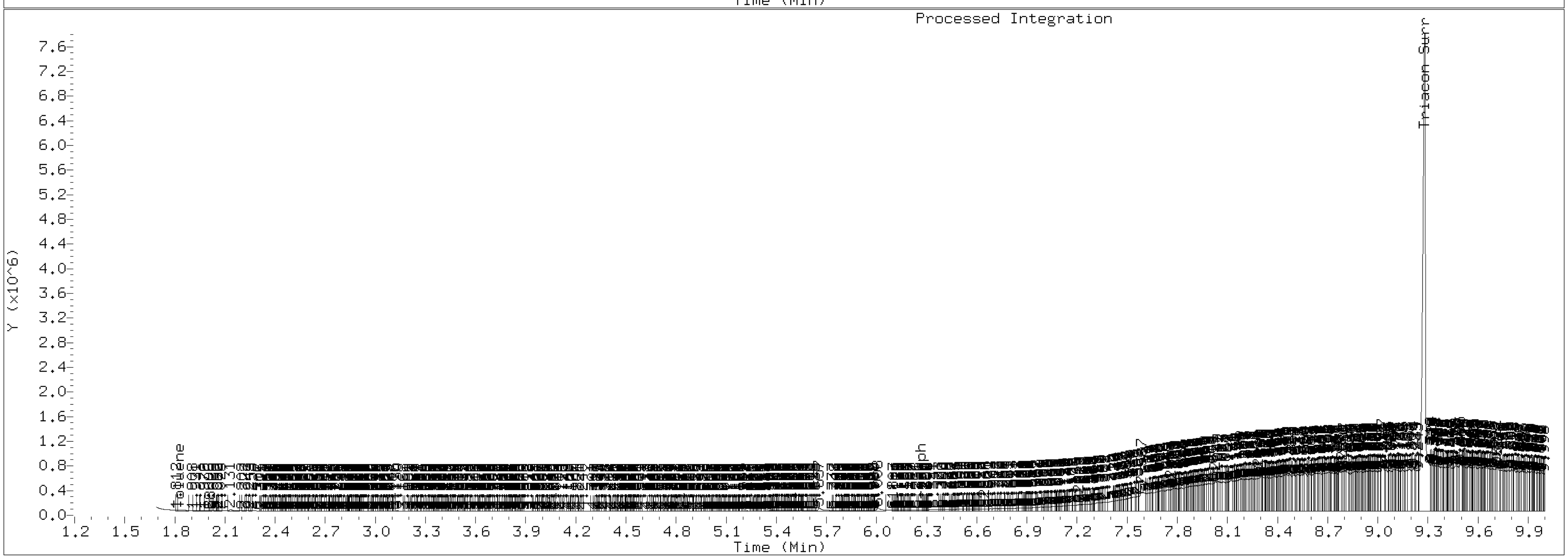
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210217.b/421B1718.D   SEQ-CCV2



TPH Manual Integrations Report
Datafile: FID4A, 20210217.b/421B1718.D Injection: 17-FEB-2021 16:45
Lab ID:SEQ-CCV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B1727.D	Calibration Date:	01/07/2021
Sequence:	SJB0251	Injection Date:	02/17/21
Lab Sample ID:	SJB0251-CCV3	Injection Time:	19:52
Sequence Name:	DIESEL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	539	137498.2	148268.5		7.8	+/-15
o-Terphenyl	A	90.000	98.6	170577.7	186890.8		9.6	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1727.D

Date : 17-FEB-2021 19:52

Client ID:

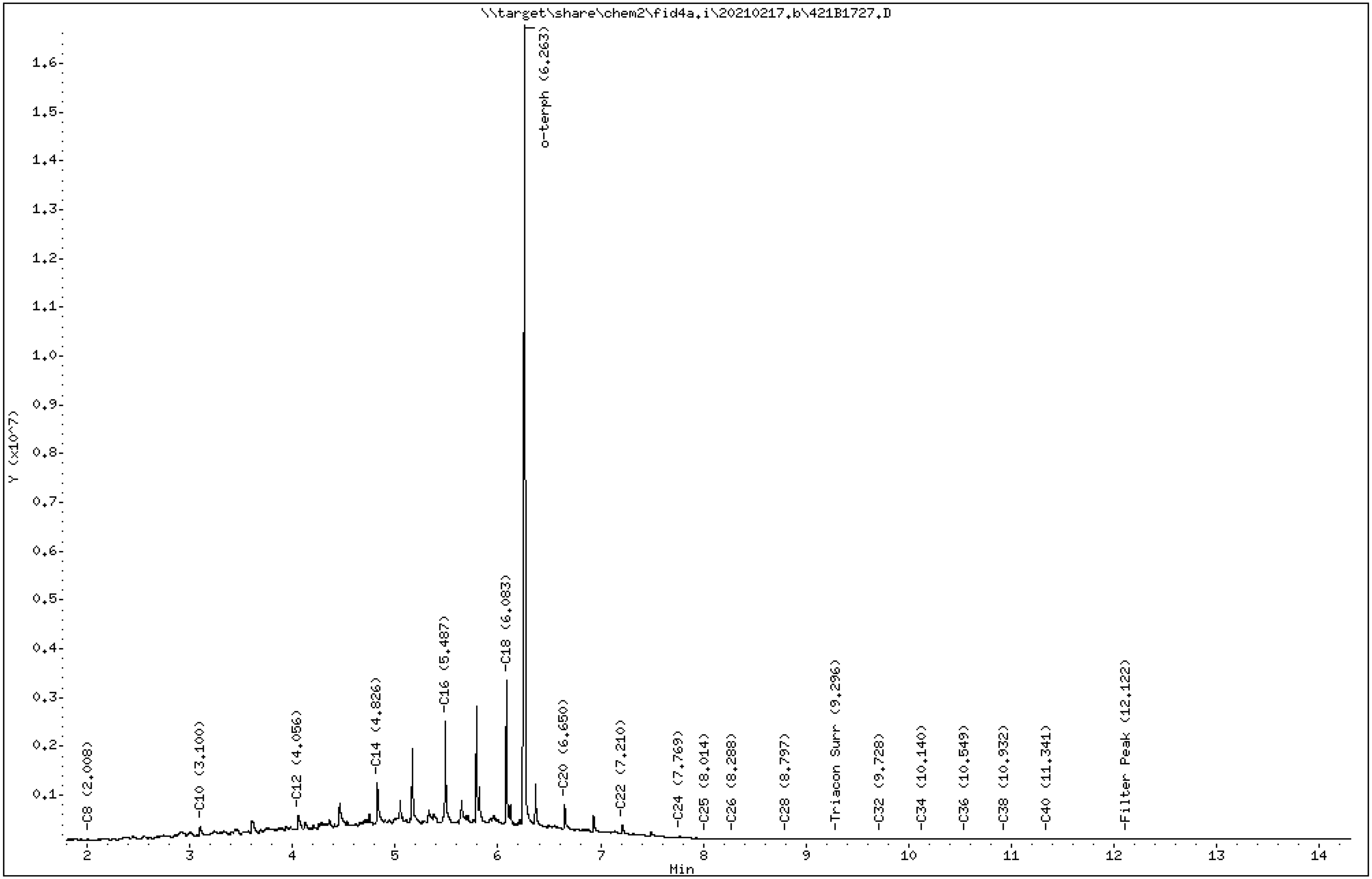
Instrument: fid4a.i

Sample Info: SEQ-CCV3

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1727.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV3
Client ID:
Injection: 17-FEB-2021 19:52
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.008	-0.003	23266	43632	WATPHD	(C12-C24)	74134268	539.2
C10	3.100	0.009	279046	545755	WATPHM	(C24-C38)	3722441	36.6
C12	4.056	0.003	510964	1297243	AK102	(C10-C25)	86884667	517.0
C14	4.826	-0.000	1180772	2391398	AK103	(C25-C36)	2846950	37.9
C16	5.487	-0.001	2435914	4323865	OR.DIES	(C10-C28)	87937455	448.7
C18	6.083	-0.003	3284508	2990562				
C20	6.650	-0.003	731943	1280438	JET-A	(C10-C18)	66704009	402.2
C22	7.210	-0.002	321712	672435				
C24	7.769	0.009	72338	100933				
C25	8.014	-0.014	33658	24939				
C26	8.288	-0.000	24585	11046				
C28	8.797	0.006	17322	20597				
C32	9.728	0.007	16273	8943				
C34	10.140	-0.003	18143	16213				
Filter Peak	12.122	-0.000	26969	100356	BUNKERC	(C10-C38)	90243609	2286.0
C36	10.549	0.006	21011	7307				
C38	10.932	0.006	23015	14800				
C40	11.341	-0.009	25753	19188				
o-terph	6.263	-0.003	16353513	16820174				
Triacon Surr	9.296	-0.001	15339	10666	NAS DIES	(C10-C24)	86521167	443.4

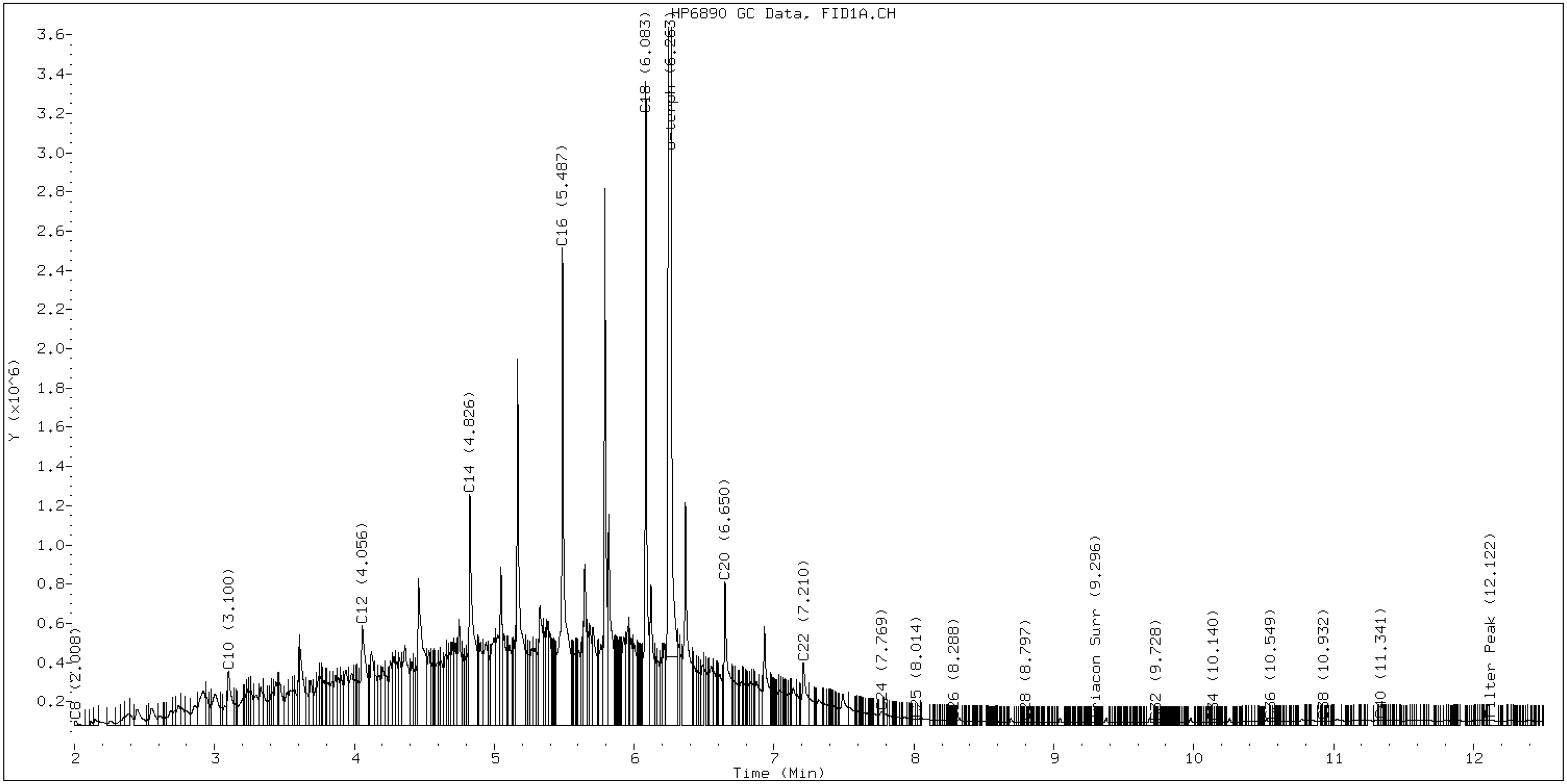
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	16820174	98.6	M
Triacontane	10666	0.1	

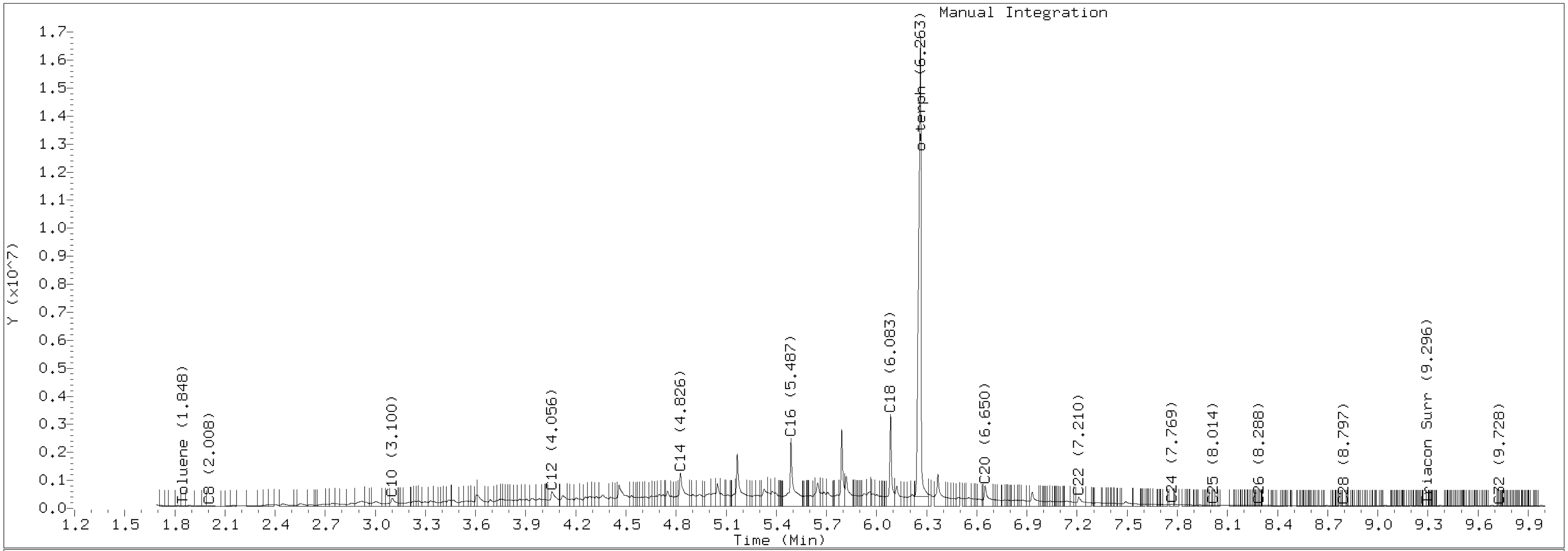
M Indicates the peak was manually integrated

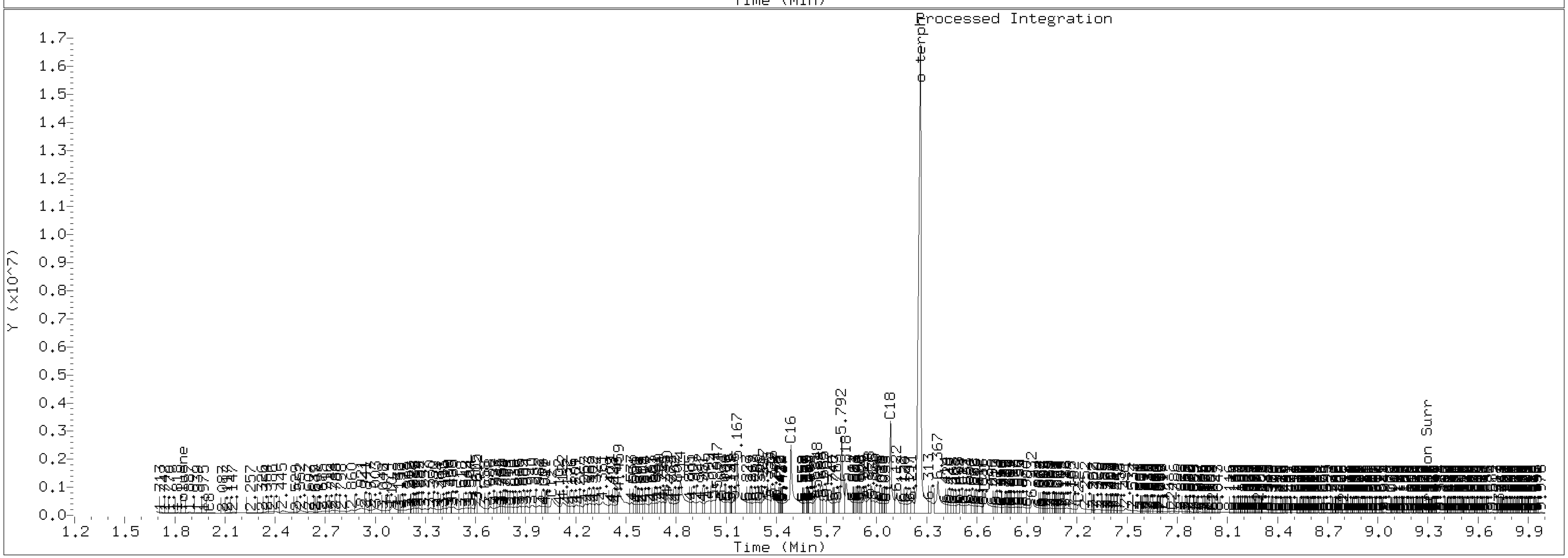
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210217.b/421B1727.D SEQ-CCV3



TPH Manual Integrations Report
Datafile: FID4A, 20210217.b/421B1727.D Injection: 17-FEB-2021 19:52
Lab ID:SEQ-CCV3





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B1728.D	Calibration Date:	01/07/2021
Sequence:	SJB0251	Injection Date:	02/17/21
Lab Sample ID:	SJB0251-CCV4	Injection Time:	20:13
Sequence Name:	MOIL CCV		

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1020	101807.5	103612.1		1.8	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1728.D

Date : 17-FEB-2021 20:13

Client ID:

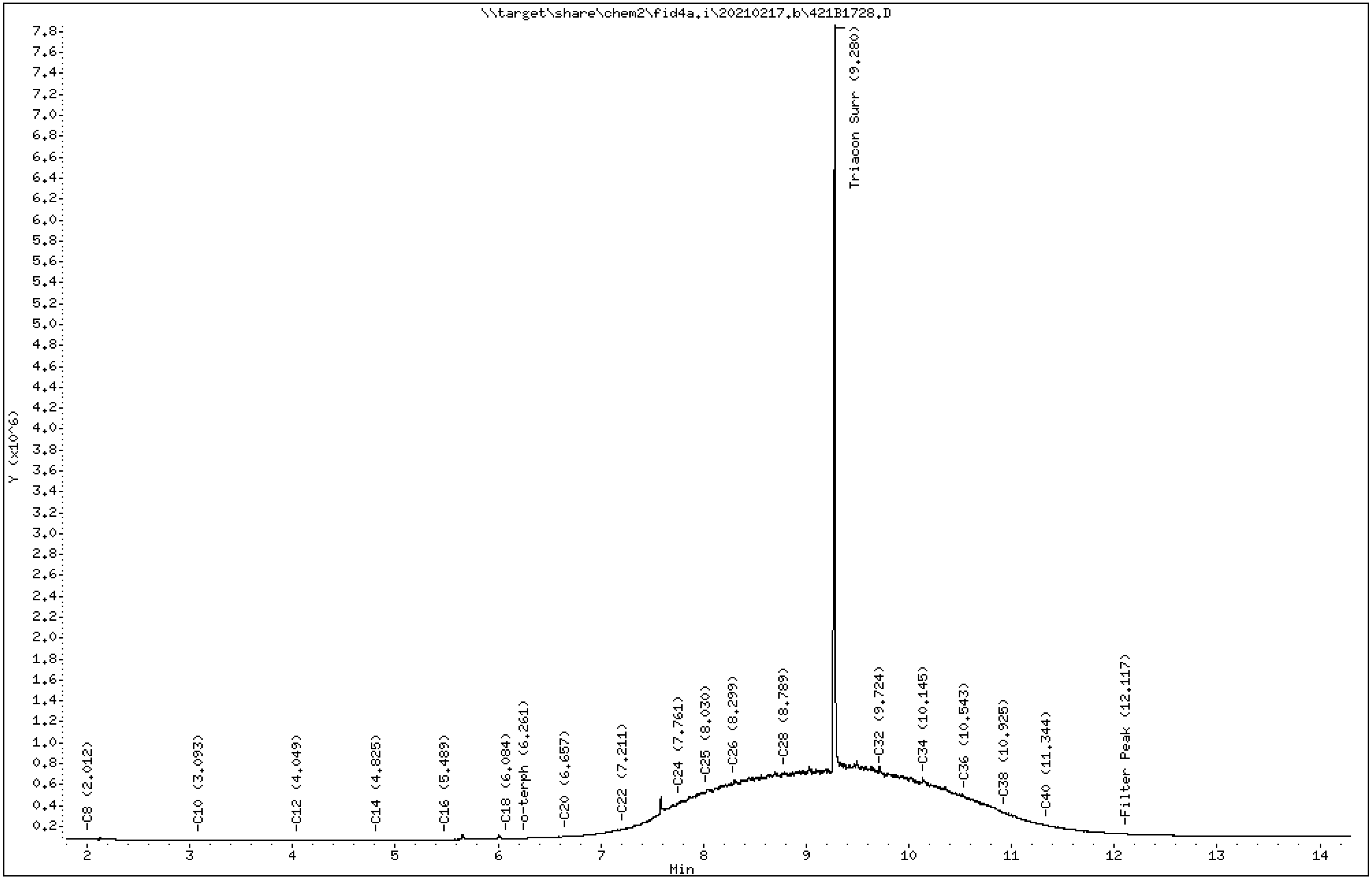
Instrument: fid4a.i

Sample Info: SEQ-CCV4

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1728.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV4
Client ID:
Injection: 17-FEB-2021 20:13
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.012	0.001	10009	7919	WATPHD	(C12-C24)	11659466	84.8
C10	3.093	0.002	2348	1916	WATPHM	(C24-C38)	103612142	1017.7
C12	4.049	-0.005	513	345	AK102	(C10-C25)	16003734	95.2
C14	4.825	-0.001	1515	1289	AK103	(C25-C36)	92050337	1224.4
C16	5.489	0.000	5160	1028	OR.DIES	(C10-C28)	44697753	228.1
C18	6.084	-0.002	15276	10634				
C20	6.657	0.004	36839	52169	JET-A	(C10-C18)	739447	4.5
C22	7.211	-0.001	110271	142679				
C24	7.761	0.001	365346	353745				
C25	8.030	0.002	476733	304865				
C26	8.299	0.011	568620	674333				
C28	8.789	-0.003	642441	223492				
C32	9.724	0.003	658329	294445				
C34	10.145	0.003	574874	423245				
Filter Peak	12.117	-0.005	60246	36000	BUNKERC	(C10-C38)	115352100	2922.0
C36	10.543	-0.001	422311	146043				
C38	10.925	-0.001	260265	64754				
C40	11.344	-0.006	144306	146547				
o-terph	6.261	-0.005	19599	28633				
Triacon Surr	9.280	-0.016	7133152	7484801	NAS DIES	(C10-C24)	11739958	60.2

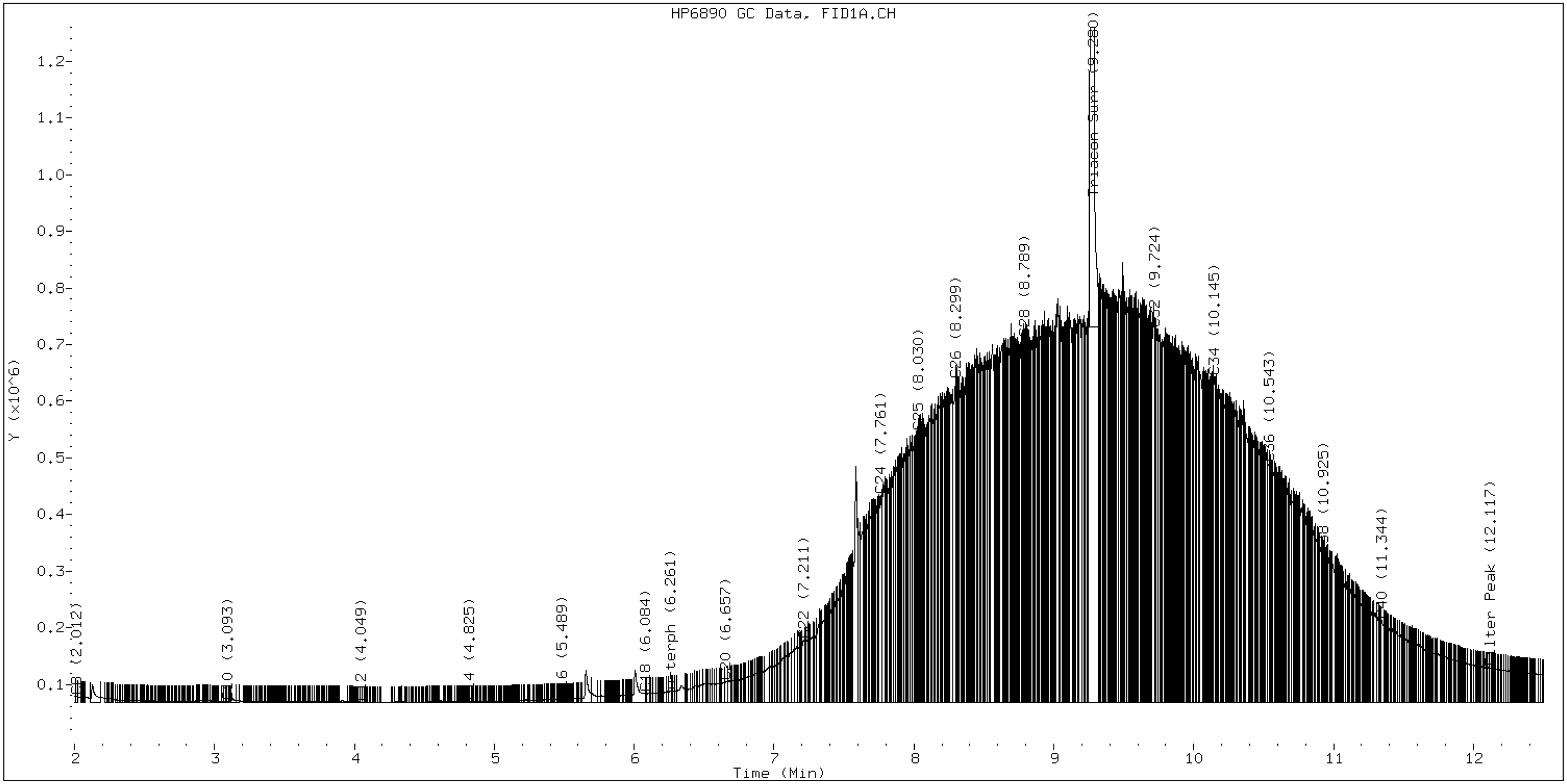
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	28633	0.2	
Triacontane	7484801	52.9	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

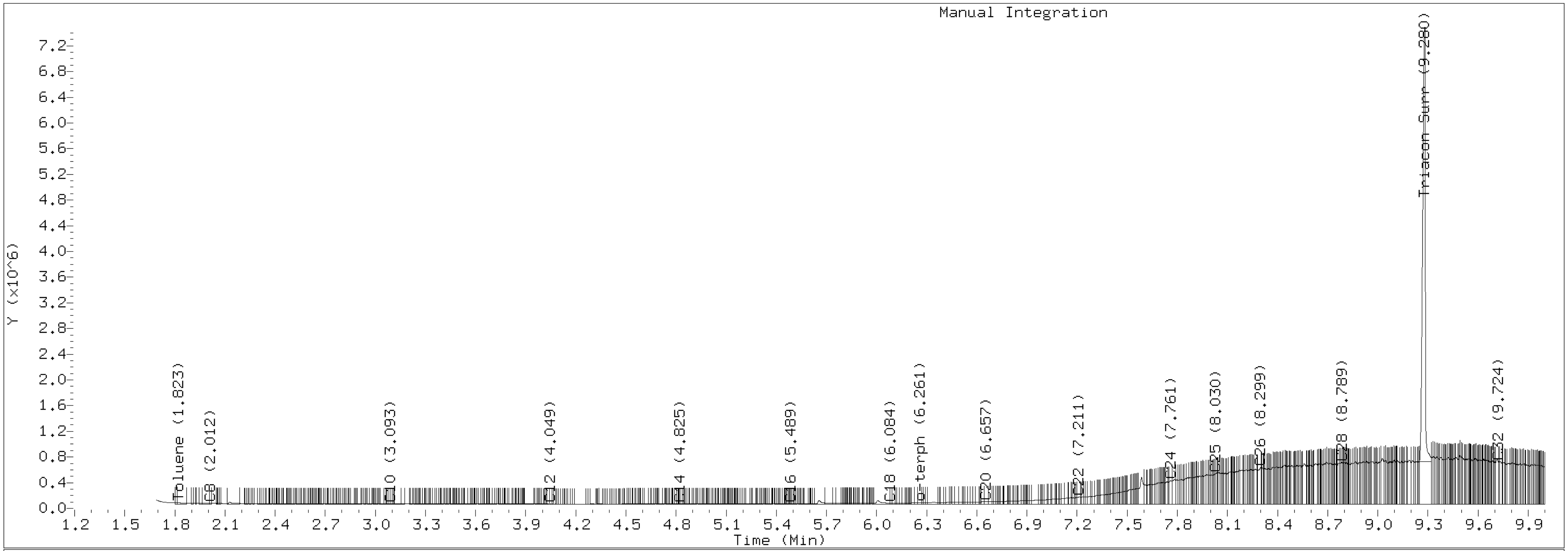
Datafile: FID4A, 20210217.b/421B1728.D SEQ-CCV4

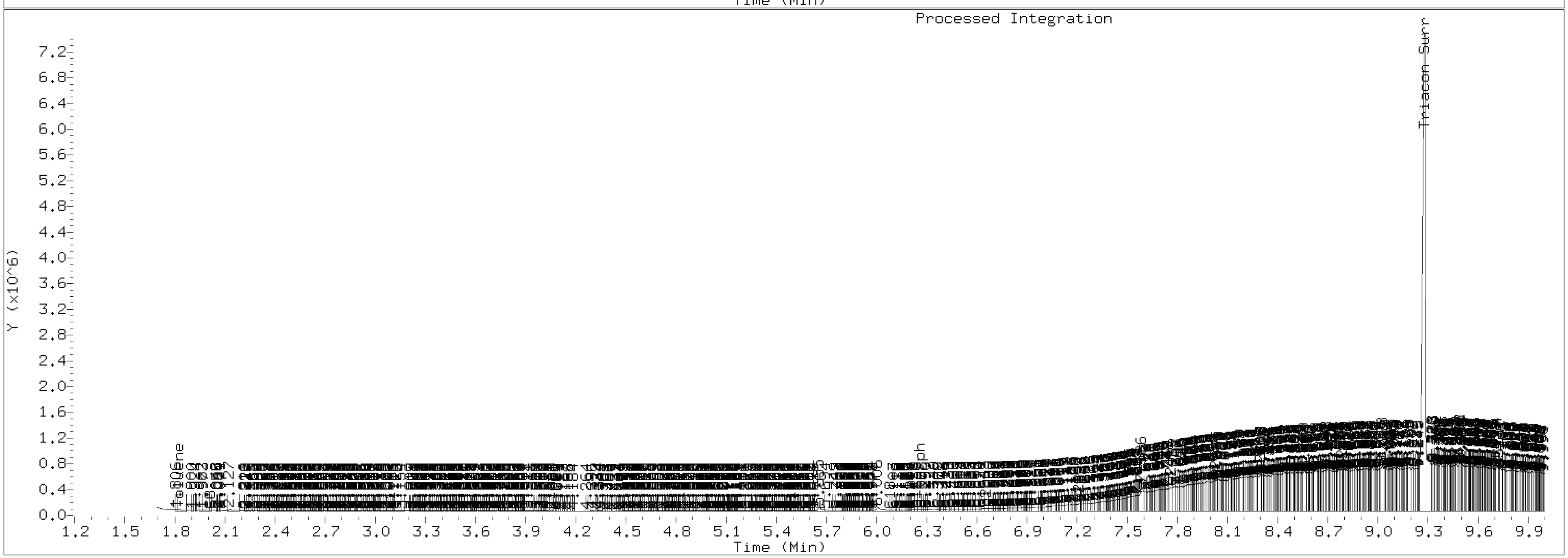


TPH Manual Integrations Report

Datafile: FID4A, 20210217.b/421B1728.D Injection: 17-FEB-2021 20:13

Lab ID:SEQ-CCV4





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B1739.D	Calibration Date:	01/07/2021
Sequence:	SJB0251	Injection Date:	02/18/21
Lab Sample ID:	SJB0251-CCV5	Injection Time:	00:00
Sequence Name:	DIESEL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	566	137498.2	155625.9		13.2	+/-15
o-Terphenyl	A	90.000	102	170577.7	192346.2		12.8	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1739.D

Date : 18-FEB-2021 00:00

Client ID:

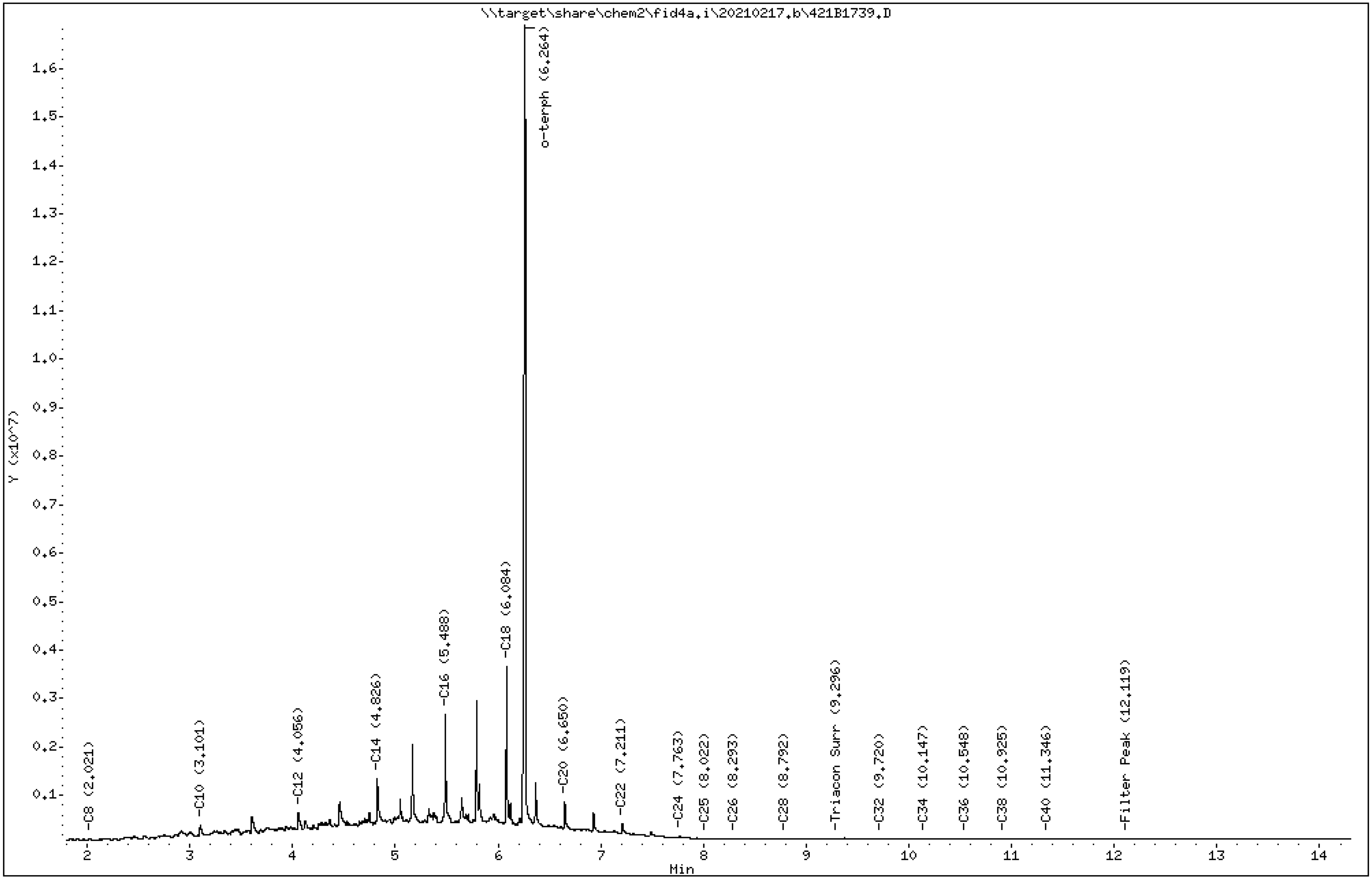
Instrument: fid4a.i

Sample Info: SEQ-CCV5

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1739.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV5
Client ID:
Injection: 18-FEB-2021 00:00
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.021	0.011	24532	46167	WATPHD	(C12-C24)	77812926	565.9
C10	3.101	0.011	310723	564805	WATPHM	(C24-C38)	3792928	37.3
C12	4.056	0.003	563126	1338320	AK102	(C10-C25)	90900951	540.9
C14	4.826	-0.000	1261468	2488389	AK103	(C25-C36)	2844873	37.8
C16	5.488	-0.000	2583967	3307000	OR.DIES	(C10-C28)	91938509	469.1
C18	6.084	-0.002	3577454	3009518				
C20	6.650	-0.003	801727	1128661	JET-A	(C10-C18)	69132334	416.8
C22	7.211	-0.001	351444	884315				
C24	7.763	0.003	75667	65176				
C25	8.022	-0.006	31855	7925				
C26	8.293	0.005	23318	8104				
C28	8.792	0.001	16200	12825				
C32	9.720	-0.001	15731	10162				
C34	10.147	0.005	18662	7423				
Filter Peak	12.119	-0.003	28413	11345	BUNKERC	(C10-C38)	94369351	2390.5
C36	10.548	0.005	22544	10100				
C38	10.925	-0.001	26285	11802				
C40	11.346	-0.004	28374	14131				
o-terph	6.264	-0.002	16372214	17311165				
Triacon Surr	9.296	-0.001	14724	3668	NAS DIES	(C10-C24)	90576423	464.1

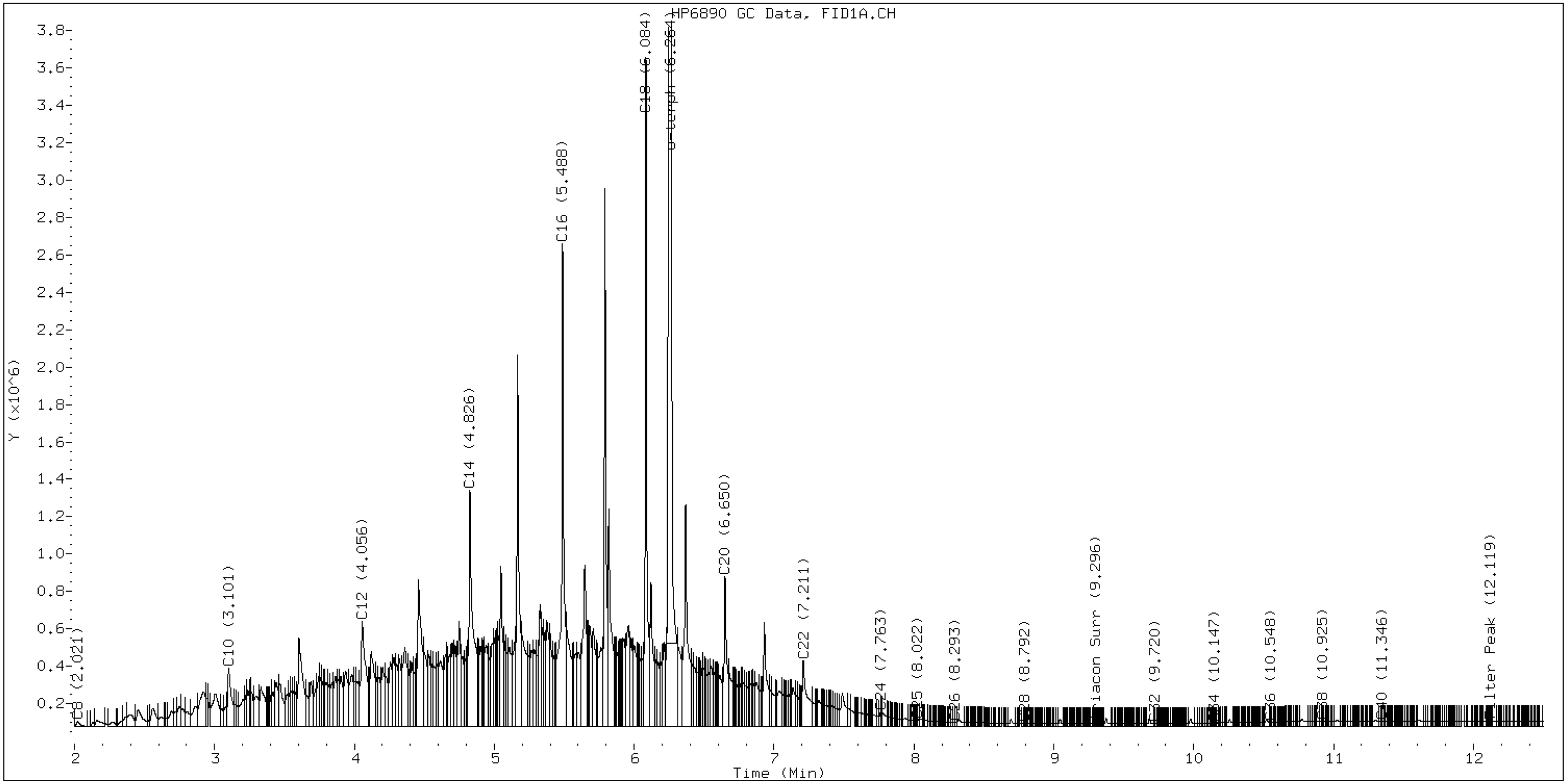
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	17311165	101.5	M
Triacontane	3668	0.0	

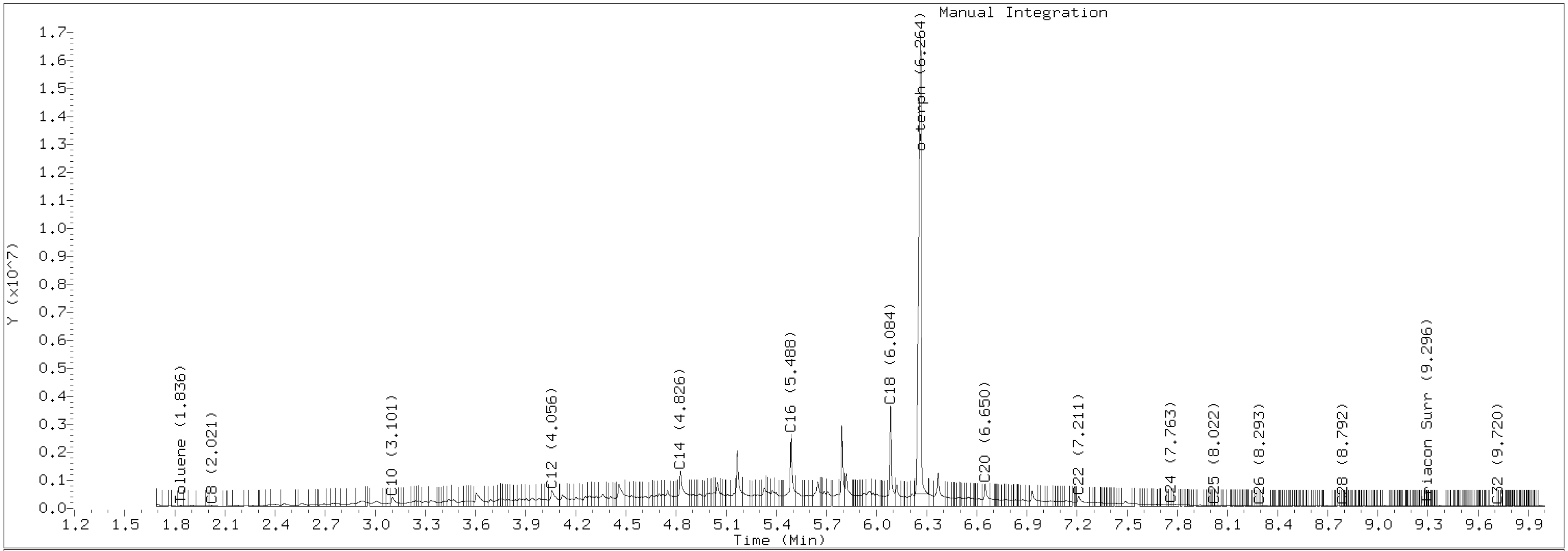
M Indicates the peak was manually integrated

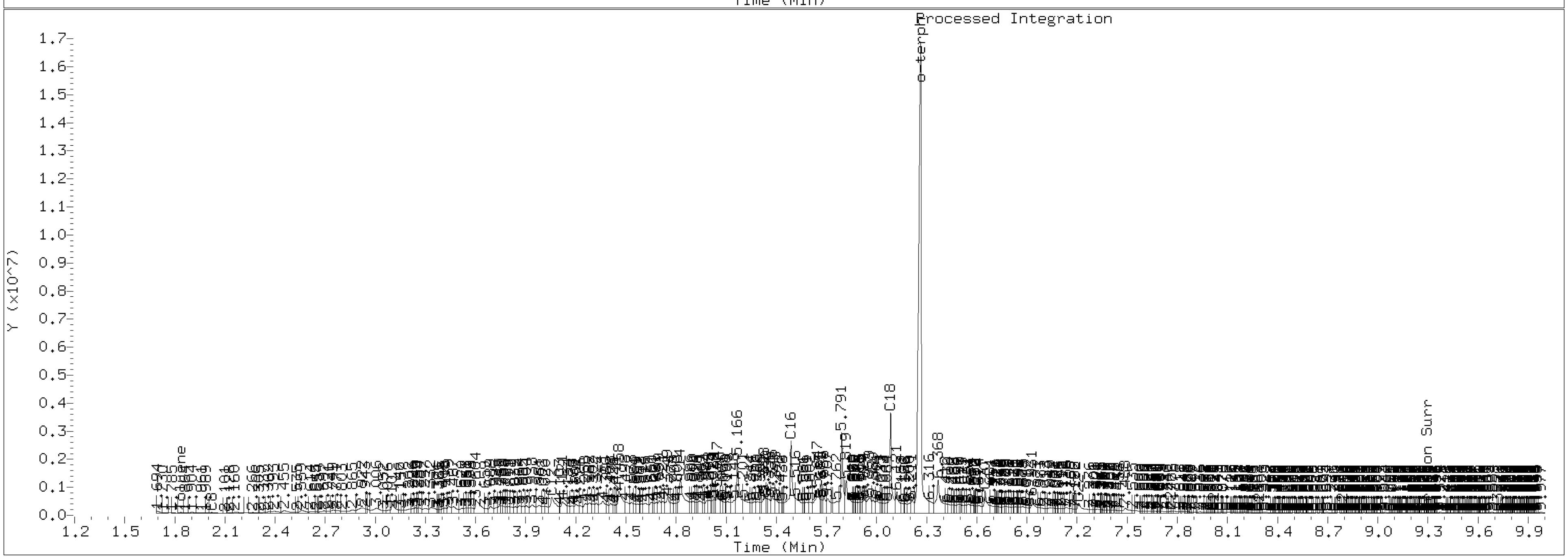
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210217.b/421B1739.D SEQ-CCV5



TPH Manual Integrations Report
Datafile: FID4A, 20210217.b/421B1739.D Injection: 18-FEB-2021 00:00
Lab ID:SEQ-CCV5





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B1740.D	Calibration Date:	01/07/2021
Sequence:	SJB0251	Injection Date:	02/18/21
Lab Sample ID:	SJB0251-CCV6	Injection Time:	00:21
Sequence Name:	MOIL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	973	101807.5	99062.77		-2.7	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1740.D

Date : 18-FEB-2021 00:21

Client ID:

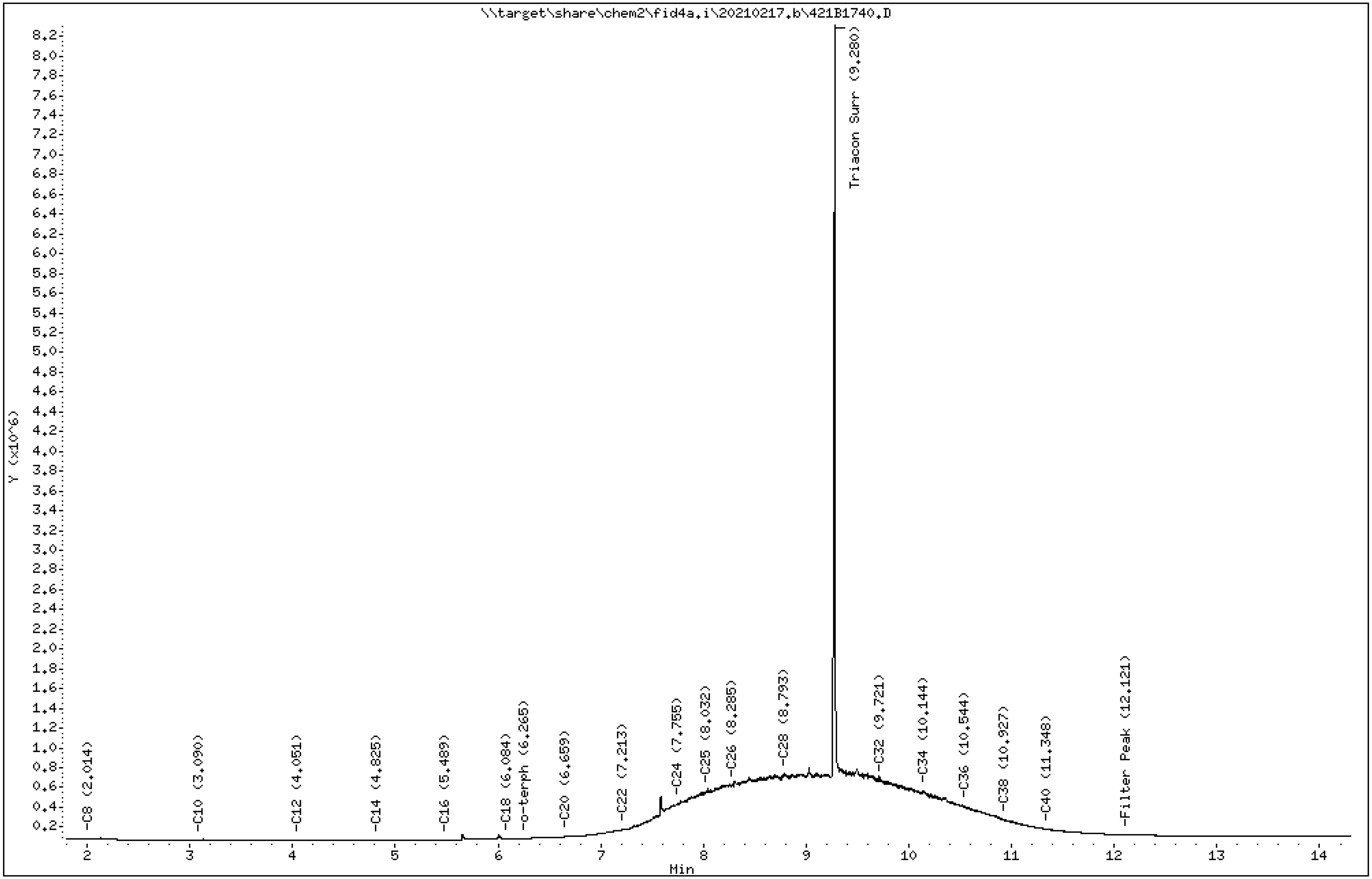
Instrument: fid4a.i

Sample Info: SEQ-CCV6

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1740.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV6
Client ID:
Injection: 18-FEB-2021 00:21
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.014	0.003	13943	32725	WATPHD	(C12-C24)	11778396	85.7
C10	3.090	-0.001	4389	2604	WATPHM	(C24-C38)	99062767	973.0
C12	4.051	-0.002	1044	729	AK102	(C10-C25)	16082557	95.7
C14	4.825	-0.000	611	341	AK103	(C25-C36)	89219973	1186.8
C16	5.489	0.000	3147	927	OR.DIES	(C10-C28)	46255211	236.0
C18	6.084	-0.002	13316	5304				
C20	6.659	0.006	36526	56568	JET-A	(C10-C18)	618713	3.7
C22	7.213	0.001	114382	236655				
C24	7.755	-0.005	369920	128477				
C25	8.032	0.004	498682	417993				
C26	8.285	-0.003	555370	247916				
C28	8.793	0.001	657563	196565				
C32	9.721	0.000	609694	181985				
C34	10.144	0.001	497508	392960				
Filter Peak	12.121	-0.000	55266	30144	BUNKERC	(C10-C38)	110999090	2811.7
C36	10.544	0.000	341217	217215				
C38	10.927	0.001	204615	60917				
C40	11.348	-0.002	113180	88755				
o-terph	6.265	-0.001	18193	17099				
Triacon Surr	9.280	-0.016	7604528	7440343	NAS DIES	(C10-C24)	11936323	61.2

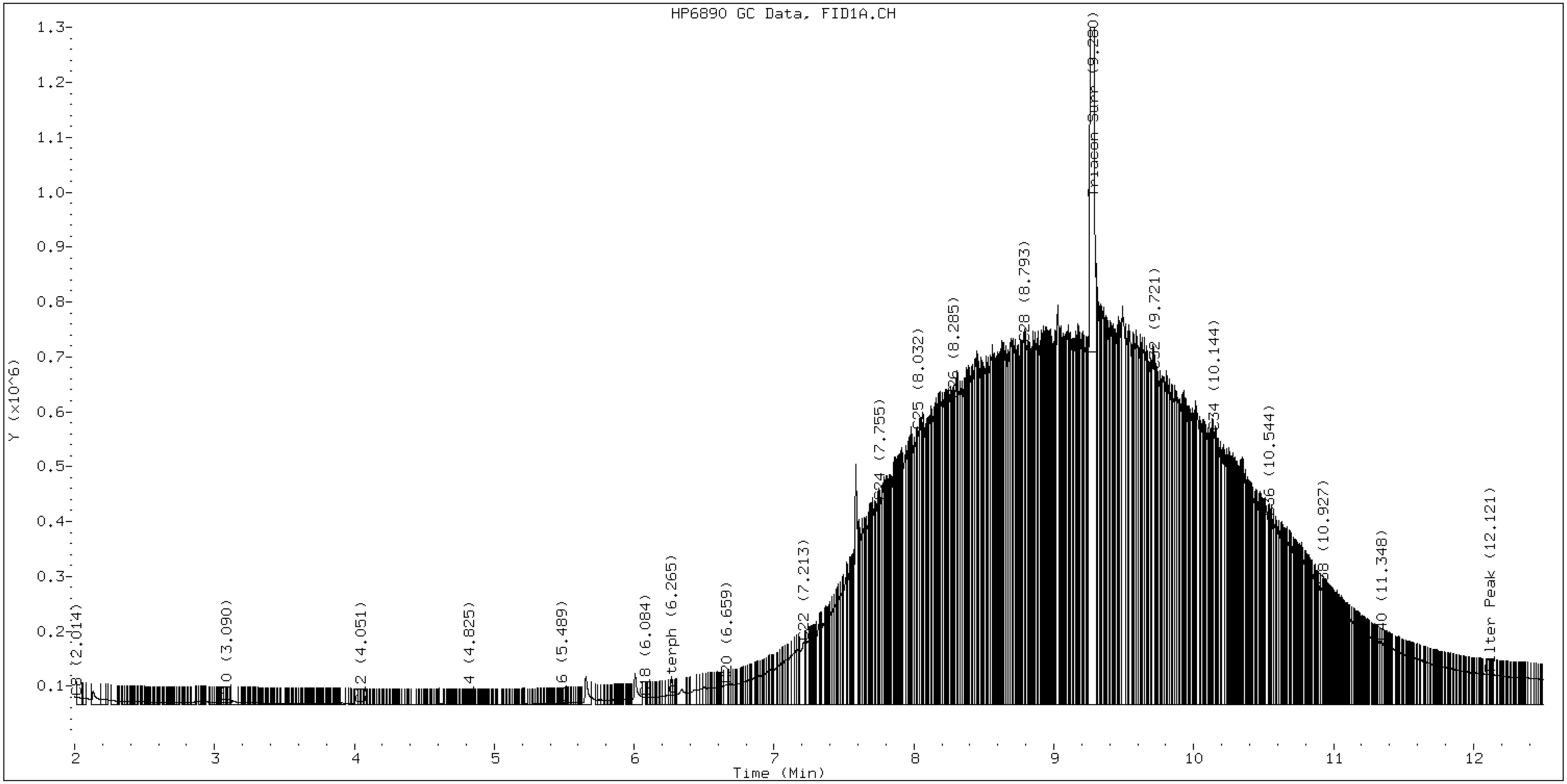
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	17099	0.1	
Triacontane	7440343	52.6	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

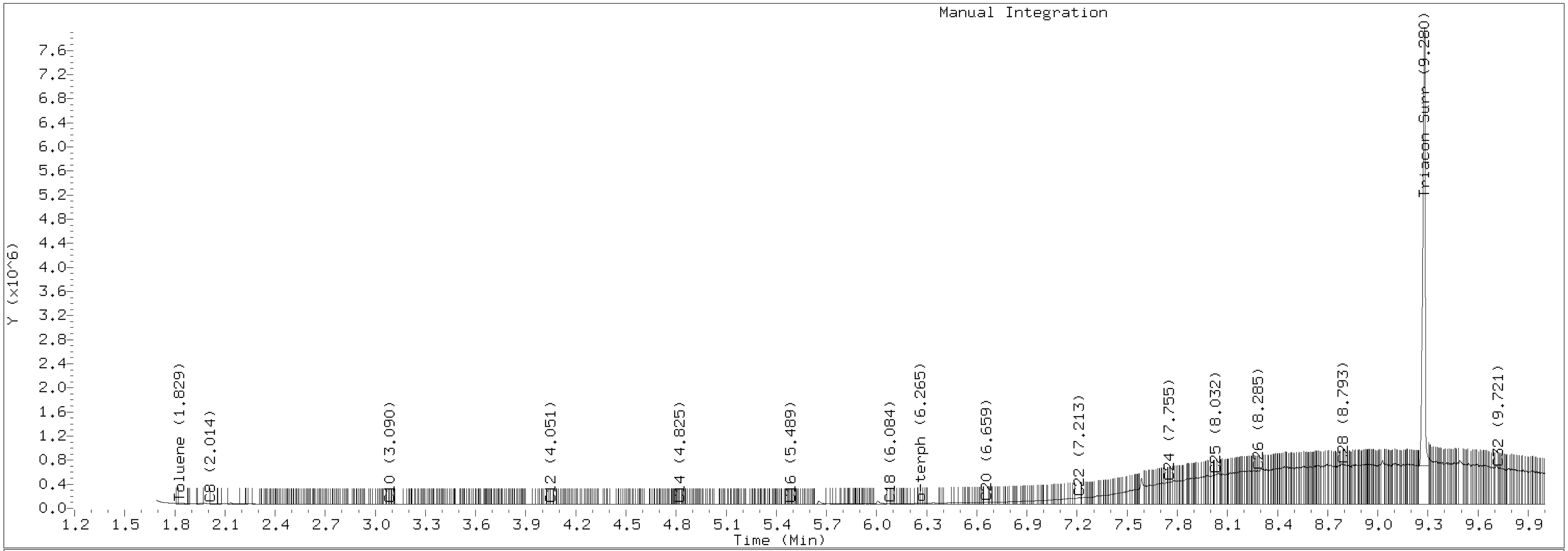
Datafile: FID4A, 20210217.b/421B1740.D SEQ-CCV6

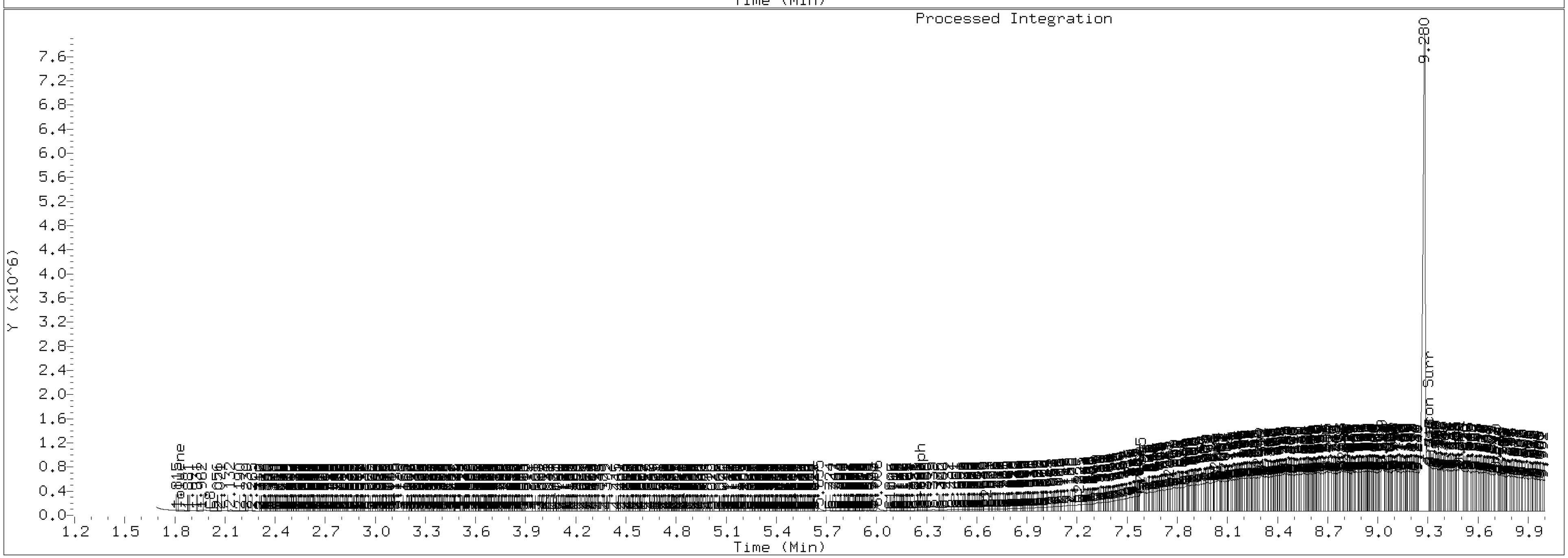


TPH Manual Integrations Report

Datafile: FID4A, 20210217.b/421B1740.D Injection: 18-FEB-2021 00:21

Lab ID:SEQ-CCV6





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B1754.D	Calibration Date:	01/07/2021
Sequence:	SJB0251	Injection Date:	02/18/21
Lab Sample ID:	SJB0251-CCV7	Injection Time:	05:10
Sequence Name:	DIESEL CCV		

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	559	137498.2	153820.6		11.9	+/-15
o-Terphenyl	A	90.000	101	170577.7	191501.4		12.2	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1754.D

Page 1

Date : 18-FEB-2021 05:10

Client ID:

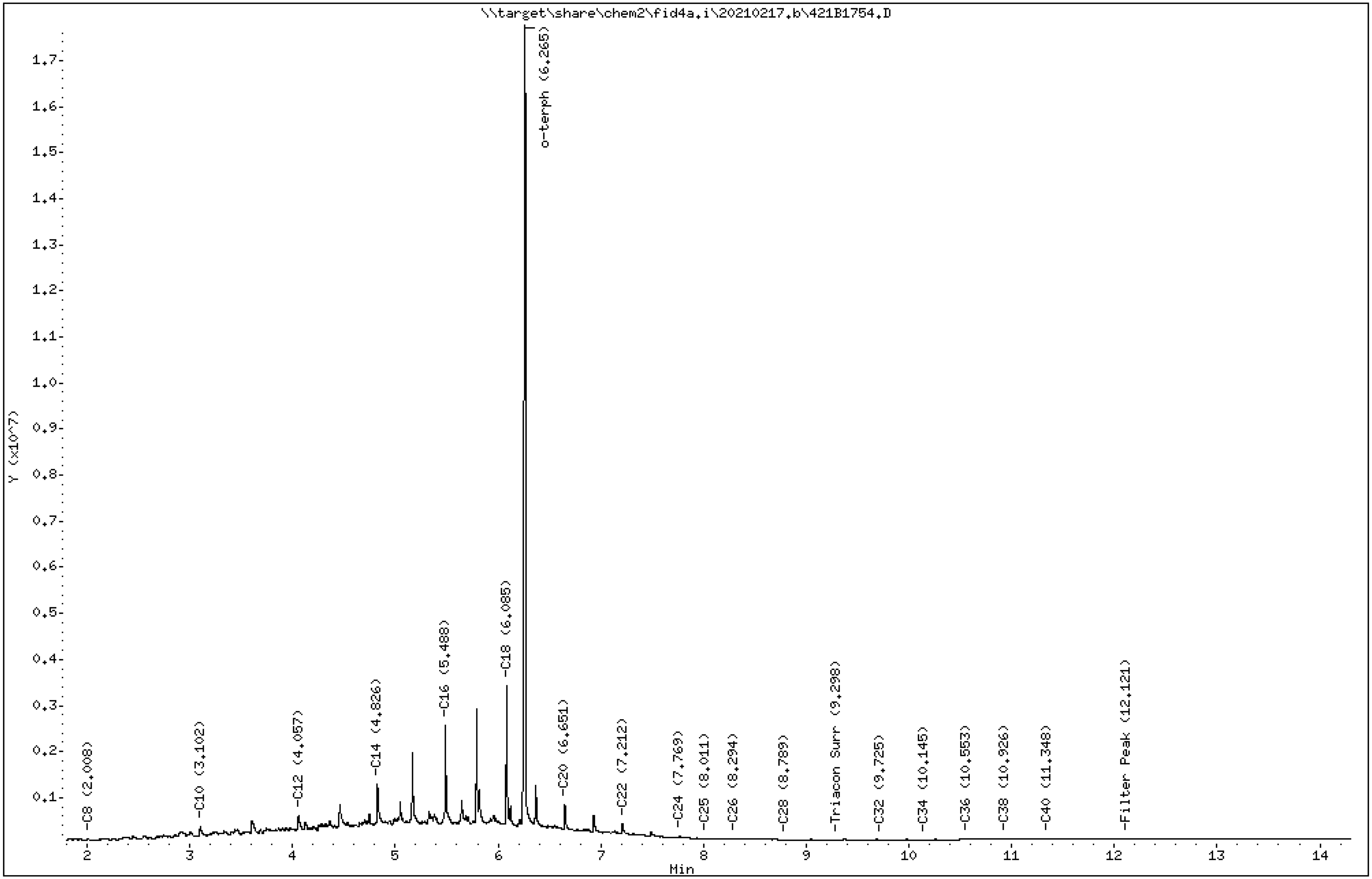
Instrument: fid4a.i

Sample Info: SEQ-CCV7

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1754.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV7
Client ID:
Injection: 18-FEB-2021 05:10
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.008	-0.003	23660	47901	WATPHD	(C12-C24)	76910307	559.4
C10	3.102	0.011	287401	562798	WATPHM	(C24-C38)	2987283	29.3
C12	4.057	0.003	525850	1316061	AK102	(C10-C25)	89488497	532.5
C14	4.826	-0.000	1214953	2393366	AK103	(C25-C36)	2253419	30.0
C16	5.488	-0.000	2481819	2537535	OR.DIES	(C10-C28)	90448492	461.5
C18	6.085	-0.001	3359330	3067645				
C20	6.651	-0.002	767086	1102239	JET-A	(C10-C18)	67425731	406.5
C22	7.212	-0.000	347276	867306				
C24	7.769	0.009	76556	333147				
C25	8.011	-0.018	33269	27756				
C26	8.294	0.006	22912	15962				
C28	8.789	-0.003	13730	8234				
C32	9.725	0.004	10892	9732				
C34	10.145	0.002	12515	3122				
Filter Peak	12.121	-0.001	21239	6353	BUNKERC	(C10-C38)	92141513	2334.0
C36	10.553	0.009	15630	6242				
C38	10.926	-0.000	19707	6874				
C40	11.348	-0.003	21961	9878				
o-terph	6.265	-0.001	17266838	17235126				
Triacon Surr	9.298	0.002	10802	3215	NAS DIES	(C10-C24)	89154230	456.9

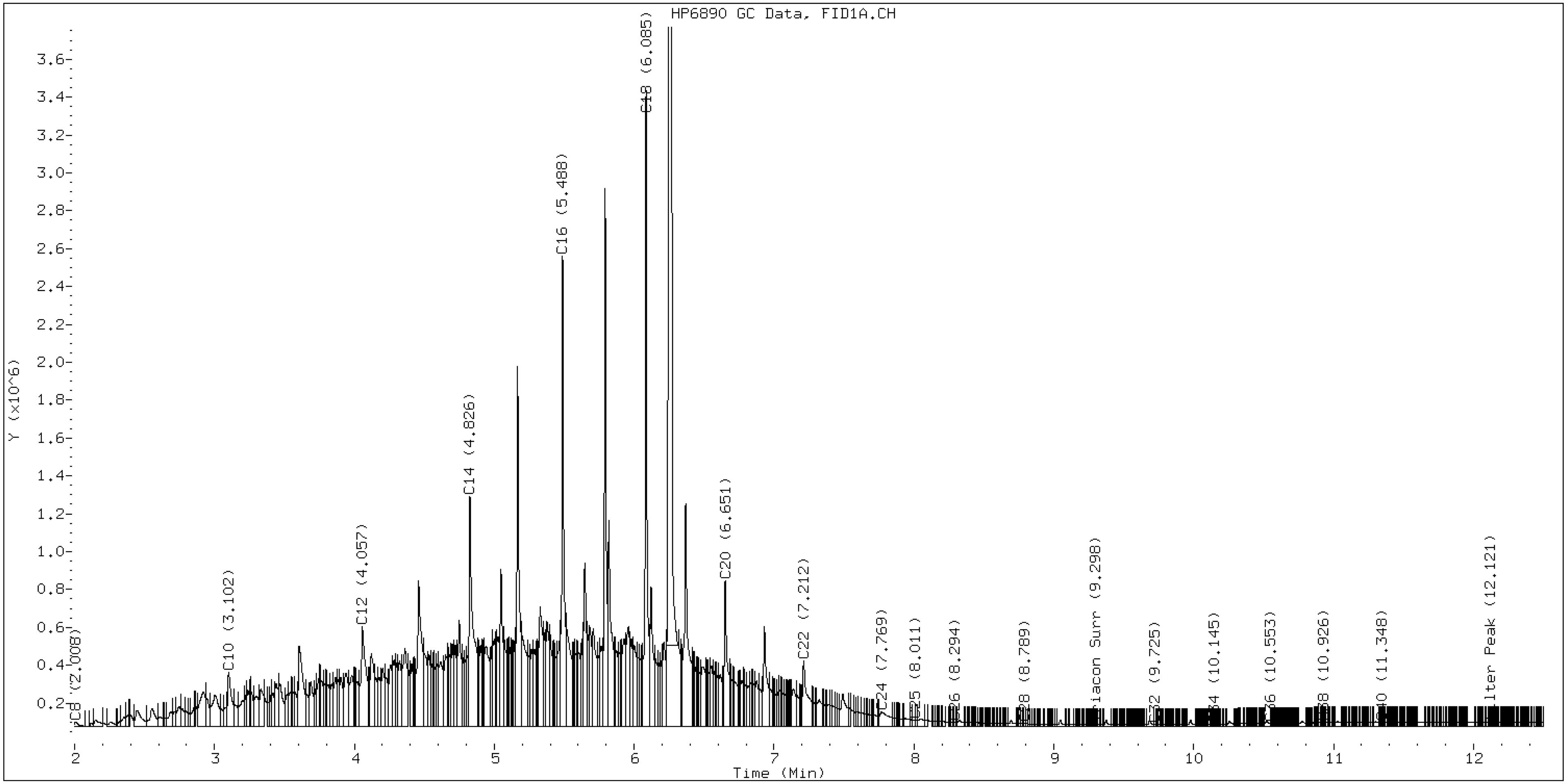
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	17235126	101.0	M
Triacontane	3215	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

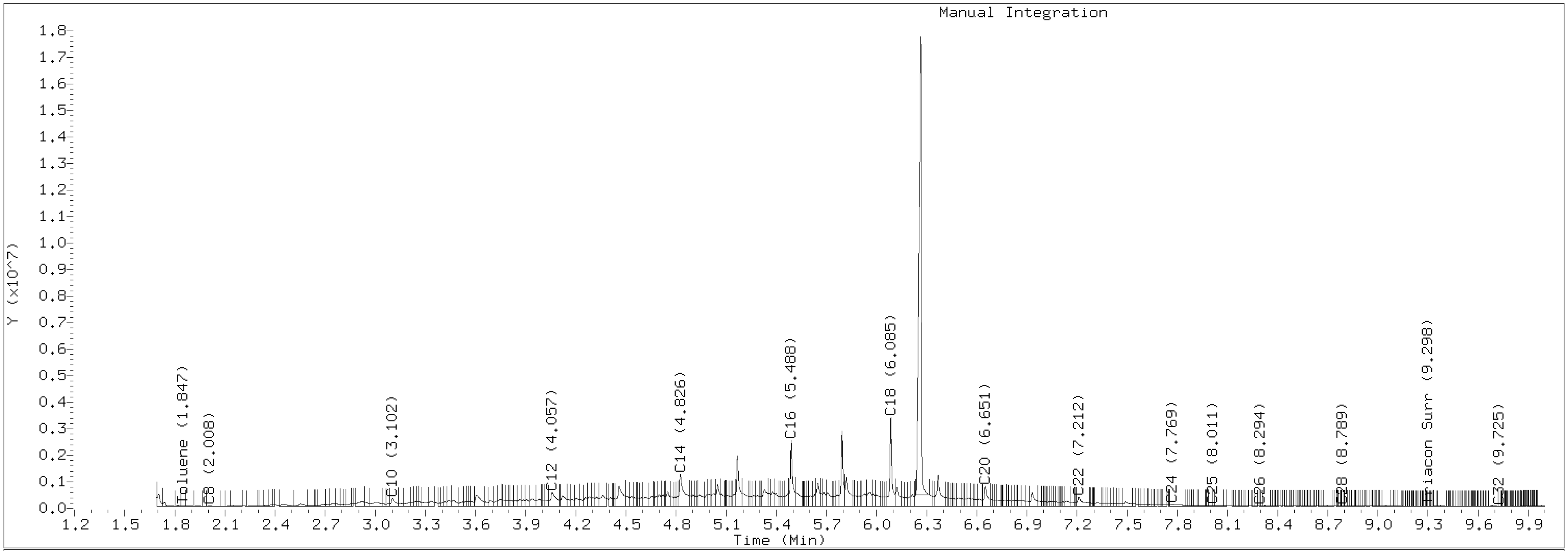
Datafile: FID4A, 20210217.b/421B1754.D SEQ-CCV7

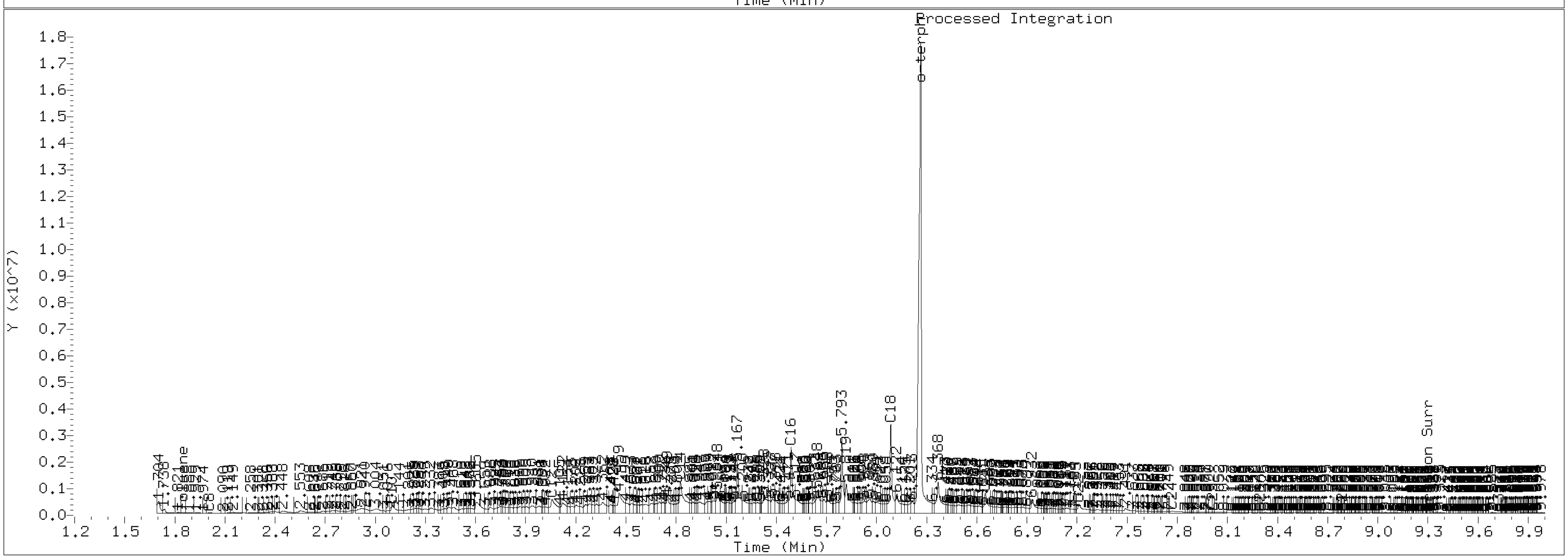


TPH Manual Integrations Report

Datafile: FID4A, 20210217.b/421B1754.D Injection: 18-FEB-2021 05:10

Lab ID:SEQ-CCV7





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory: Analytical Resources, Inc.

SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Instrument ID: FID4

Calibration: EA00020

Lab File ID: 421B1755.D

Calibration Date: 01/07/2021

Sequence: SJB0251

Injection Date: 02/18/21

Lab Sample ID: SJB0251-CCV8

Injection Time: 05:31

Sequence Name: MOIL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	898	101807.5	91443.26		-10.2	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1755.D

Page 1

Date : 18-FEB-2021 05:31

Client ID:

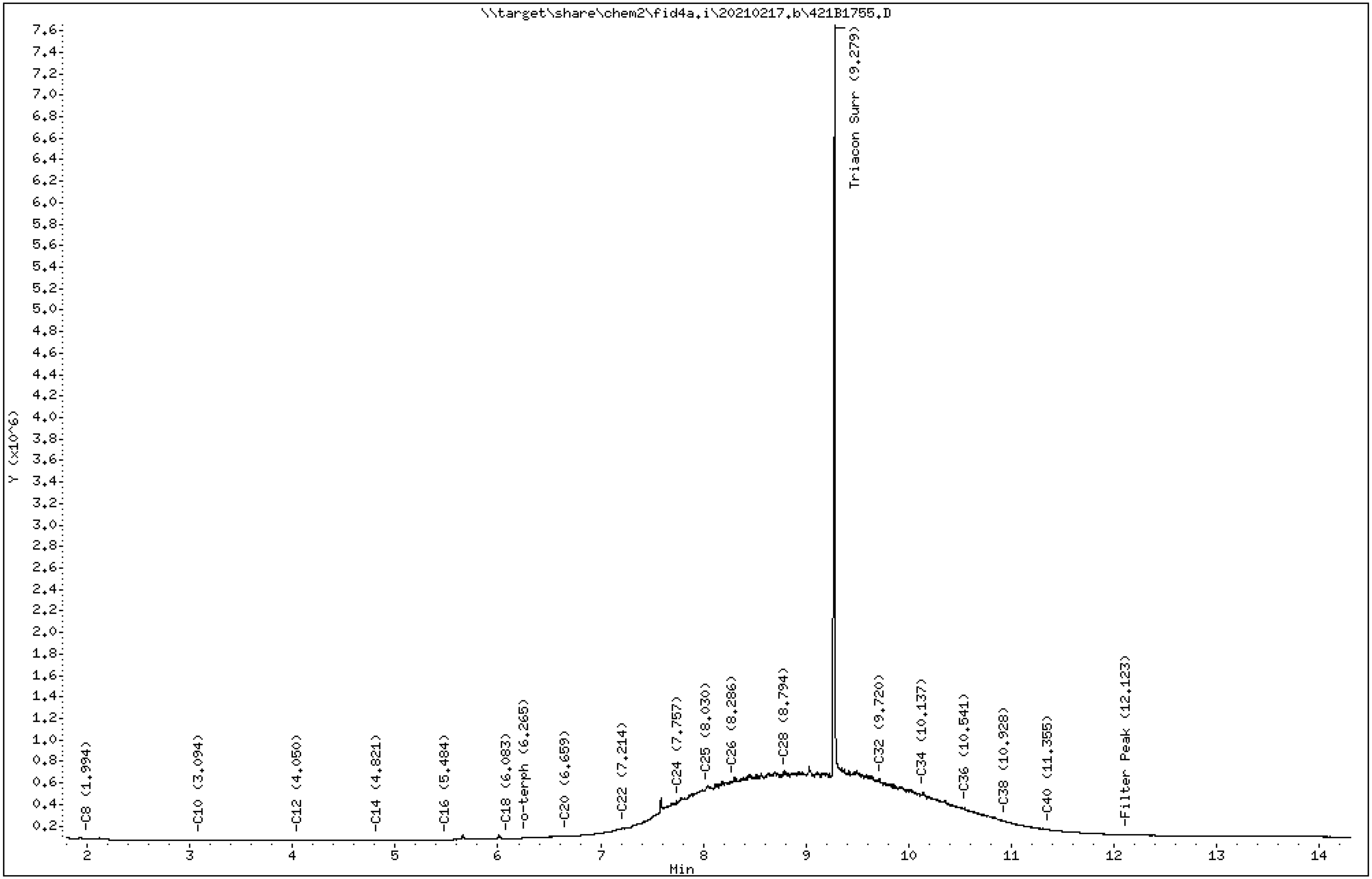
Instrument: fid4a.i

Sample Info: SEQ-CCV8

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1755.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV8
Client ID:
Injection: 18-FEB-2021 05:31
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.994	-0.016	11741	12146	WATPHD	(C12-C24)	11821264	86.0
C10	3.094	0.004	2449	1181	WATPHM	(C24-C38)	91443256	898.2
C12	4.050	-0.003	416	257	AK102	(C10-C25)	16283605	96.9
C14	4.821	-0.005	1909	901	AK103	(C25-C36)	82128455	1092.5
C16	5.484	-0.004	5172	3036	OR.DIES	(C10-C28)	45049600	229.8
C18	6.083	-0.003	15969	13504				
C20	6.659	0.006	38991	47363	JET-A	(C10-C18)	714472	4.3
C22	7.214	0.002	113964	186022				
C24	7.757	-0.003	362451	142707				
C25	8.030	0.002	488049	121705				
C26	8.286	-0.002	549837	163521				
C28	8.794	0.003	617471	184227				
C32	9.720	-0.001	558133	83626				
C34	10.137	-0.006	440758	345702				
Filter Peak	12.123	0.001	49512	14817	BUNKERC	(C10-C38)	103335027	2617.6
C36	10.541	-0.002	299858	131403				
C38	10.928	0.002	177173	70478				
C40	11.355	0.005	97699	38760				
o-terph	6.265	-0.001	20998	14607				
Triacon Surr	9.279	-0.017	6987944	6939175	NAS DIES	(C10-C24)	11891771	60.9

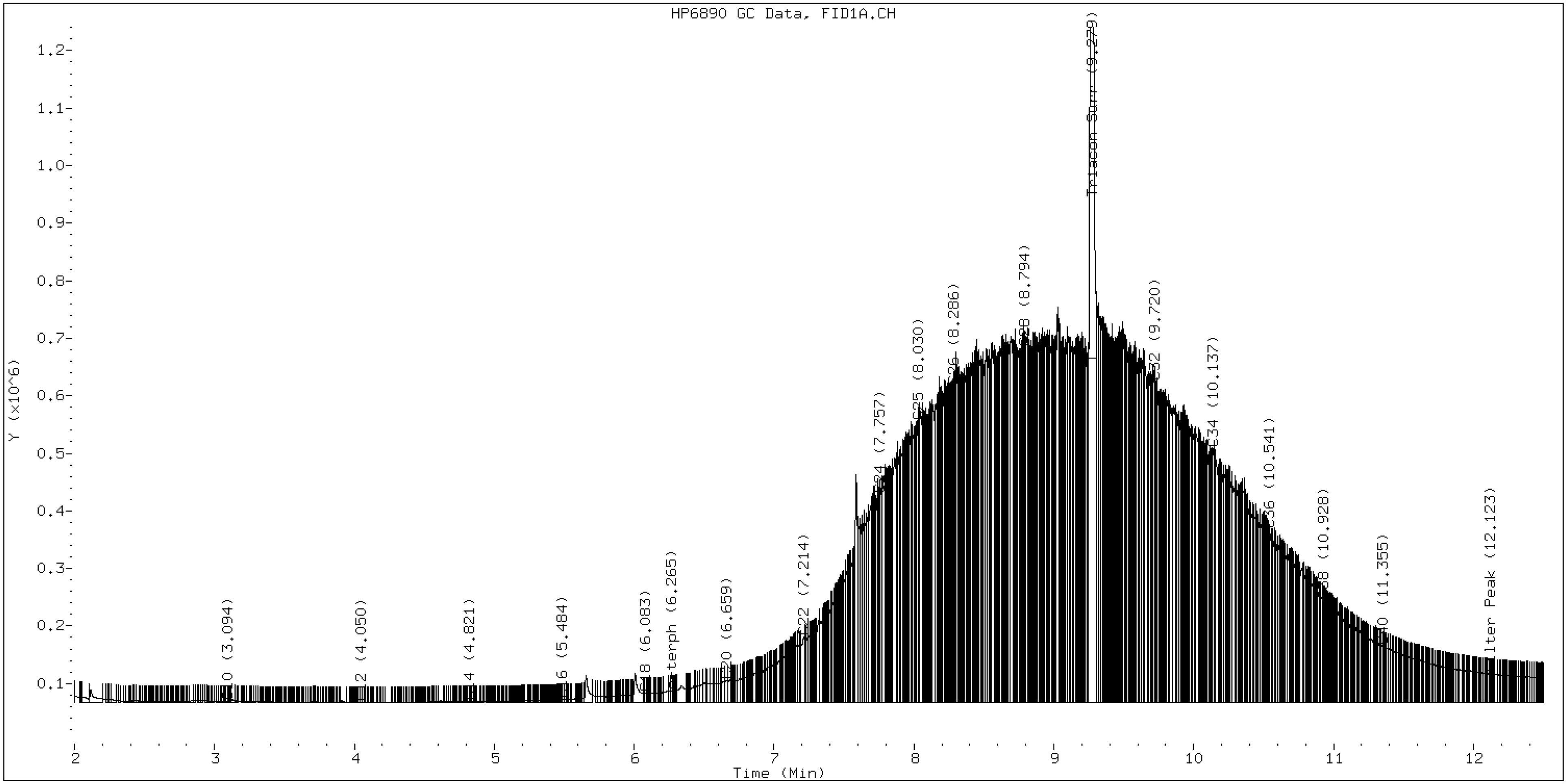
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	14607	0.1	
Triacontane	6939175	49.1	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210217.b/421B1755.D SEQ-CCV8



TPH Manual Integrations Report
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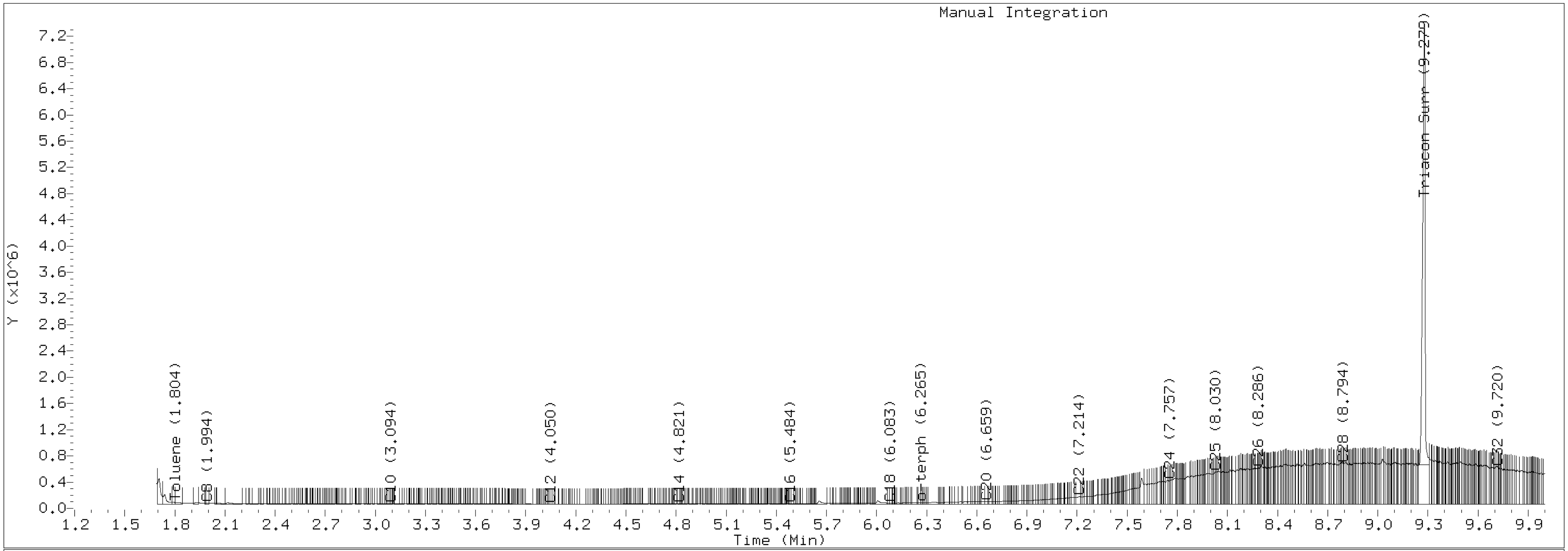
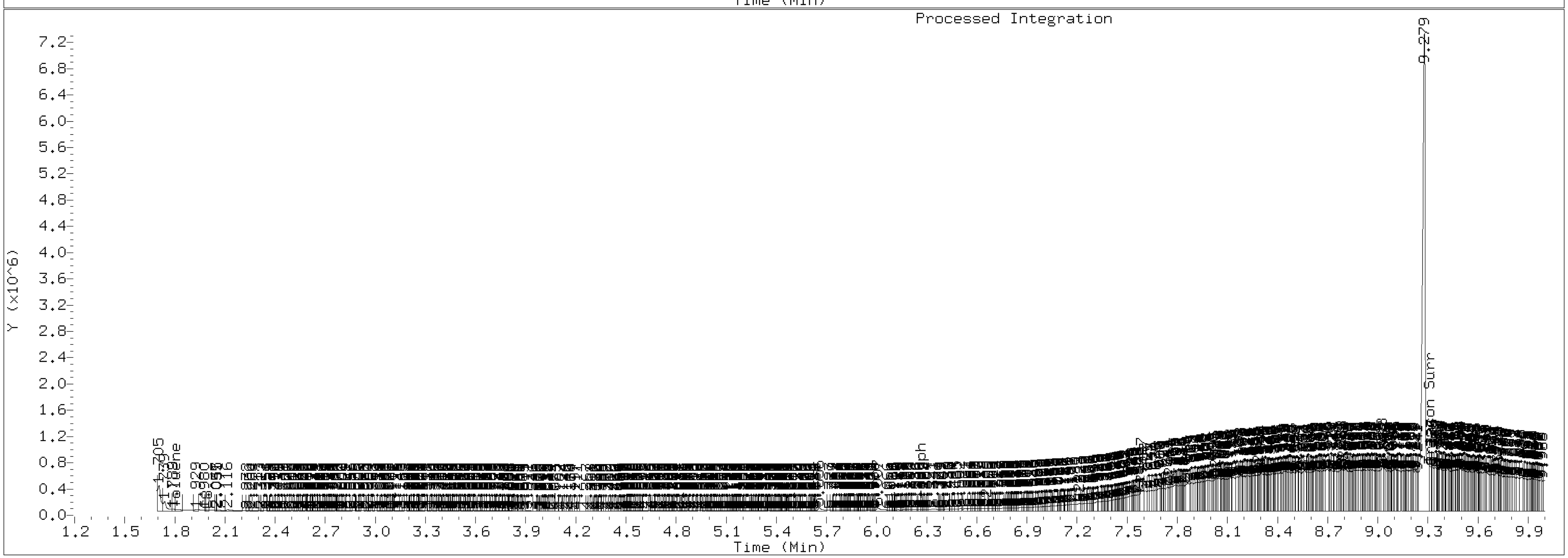
Lab ID:SEQ-CCV8





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B1769.D
Calibration Date: 01/07/2021
Sequence: SJB0251
Injection Date: 02/18/21
Lab Sample ID: SJB0251-CCV9
Injection Time: 10:23
Sequence Name: DIESEL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	537	137498.2	147670.6		7.4	+/-15
o-Terphenyl	A	90.000	98.2	170577.7	186123.4		9.1	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1769.D

Date : 18-FEB-2021 10:23

Client ID:

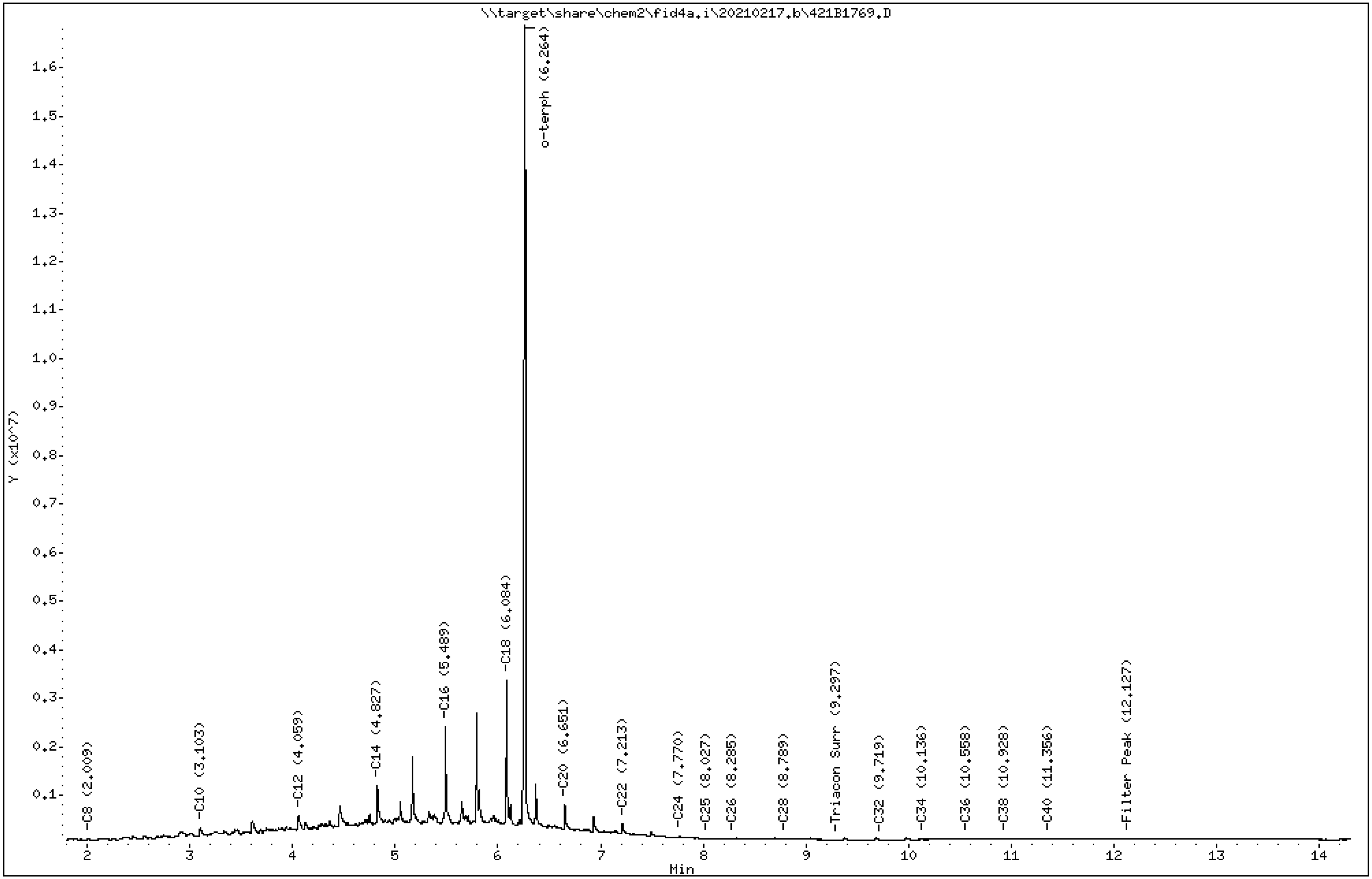
Instrument: fid4a.i

Sample Info: SEQ-CCV9

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1769.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV9
Client ID:
Injection: 18-FEB-2021 10:23
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.009	-0.001	23412	50104	WATPHD	(C12-C24)	73835295	537.0
C10	3.103	0.012	261245	545783	WATPHM	(C24-C38)	3265734	32.1
C12	4.059	0.005	506747	1283976	AK102	(C10-C25)	85221573	507.1
C14	4.827	0.001	1123750	2292387	AK103	(C25-C36)	2587494	34.4
C16	5.489	0.000	2338579	3089888	OR.DIES	(C10-C28)	86302211	440.3
C18	6.084	-0.001	3306503	2971555				
C20	6.651	-0.001	741124	1068771	JET-A	(C10-C18)	64410480	388.4
C22	7.213	0.001	329671	662898				
C24	7.770	0.010	72311	81075				
C25	8.027	-0.001	33914	11840				
C26	8.285	-0.003	24951	6213				
C28	8.789	-0.003	16494	9033				
C32	9.719	-0.002	13360	7307				
C34	10.136	-0.006	14310	8525				
Filter Peak	12.127	0.005	19104	19909	BUNKERC	(C10-C38)	88210486	2234.5
C36	10.558	0.014	16209	12056				
C38	10.928	0.002	18395	4586				
C40	11.356	0.006	20146	8045				
o-terph	6.264	-0.001	16397479	16751113				
Triacon Surr	9.297	0.000	13437	6684	NAS DIES	(C10-C24)	84944752	435.3

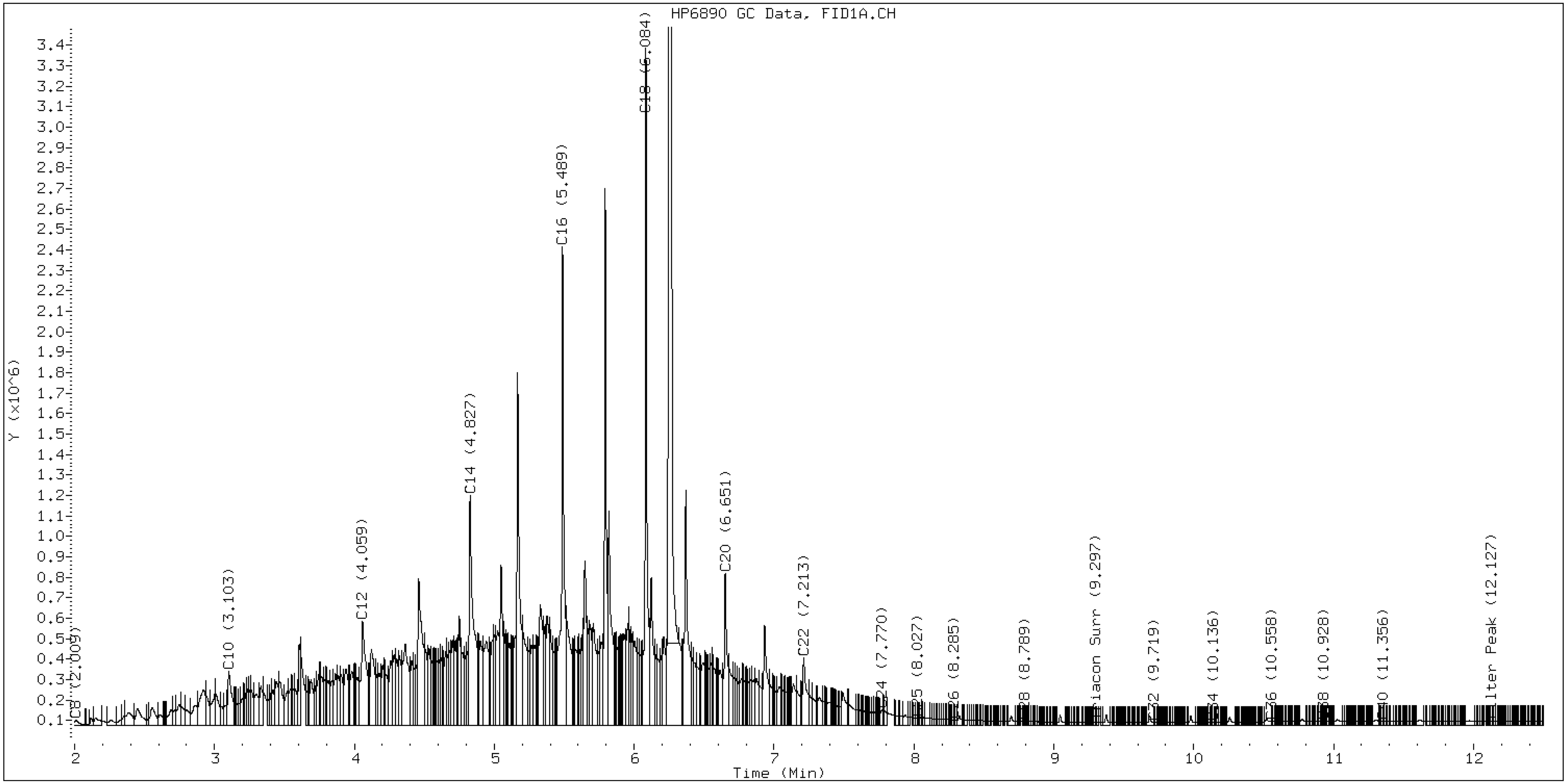
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	16751113	98.2	M
Triacontane	6684	0.0	

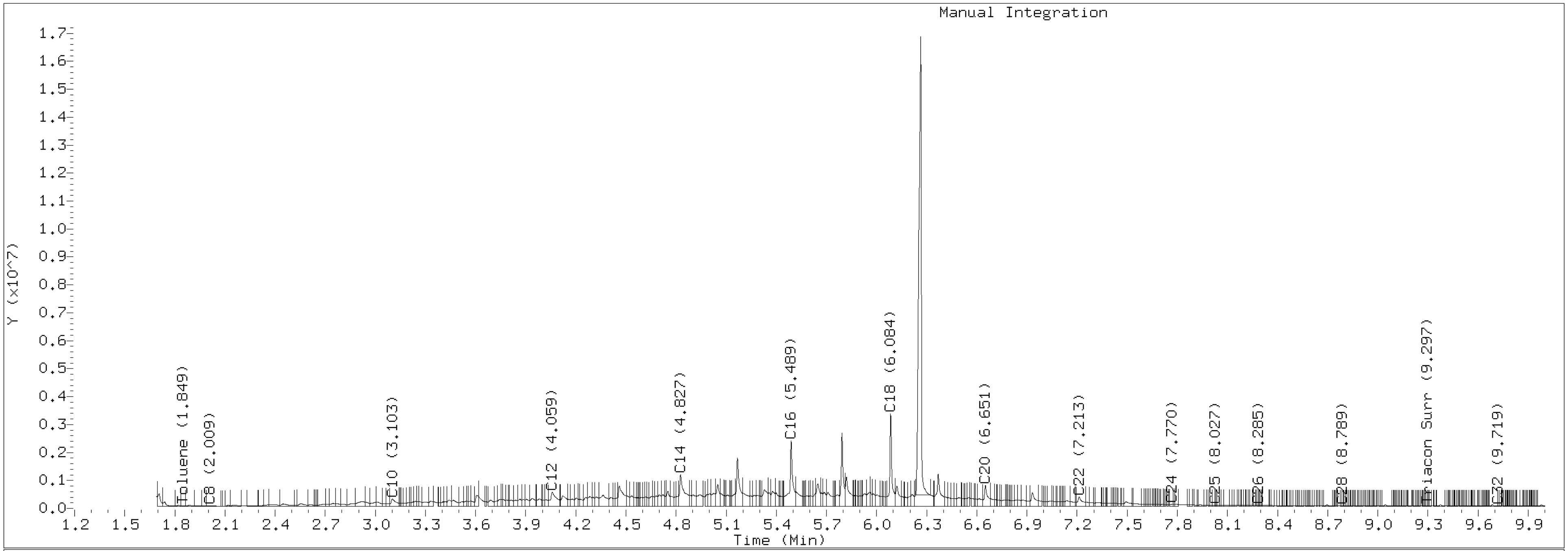
M Indicates the peak was manually integrated

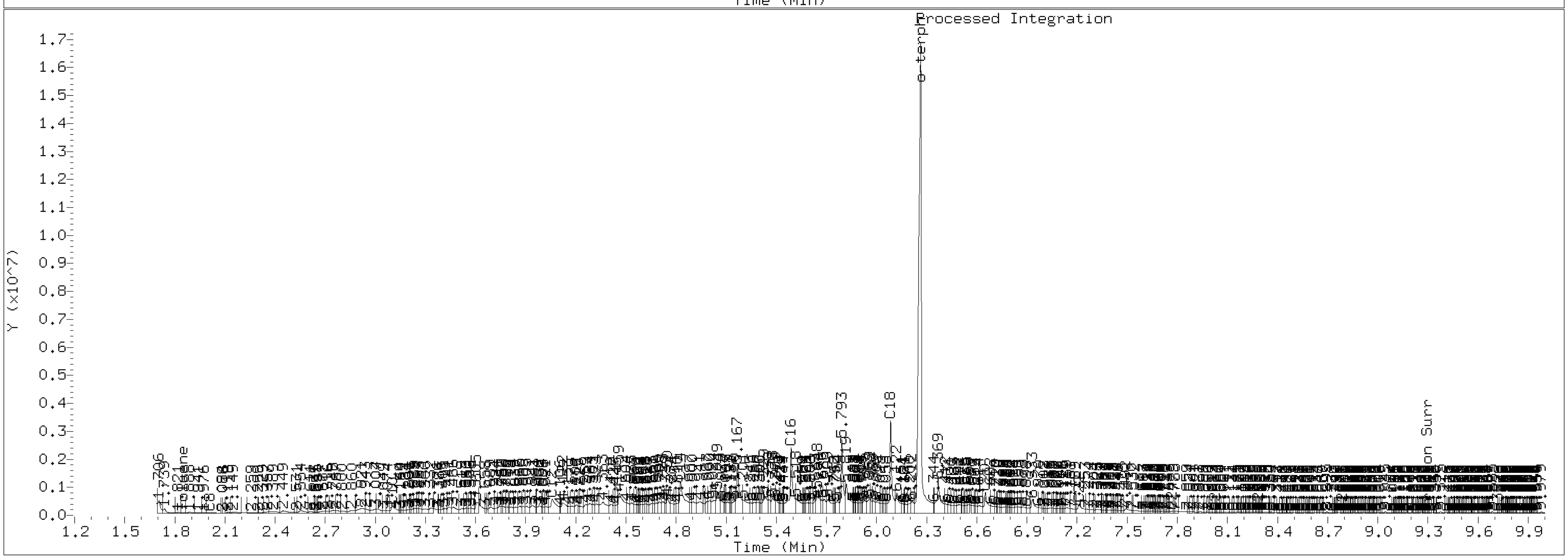
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210217.b/421B1769.D SEQ-CCV9



TPH Manual Integrations Report
Datafile: FID4A, 20210217.b/421B1769.D Injection: 18-FEB-2021 10:23
Lab ID:SEQ-CCV9





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B1770.D
Calibration Date: 01/07/2021
Sequence: SJB0251
Injection Date: 02/18/21
Lab Sample ID: SJB0251-CCVA
Injection Time: 10:43
Sequence Name: MOIL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	915	101807.5	93163.94		-8.5	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210217.b\421B1770.D

Page 1

Date : 18-FEB-2021 10:43

Client ID:

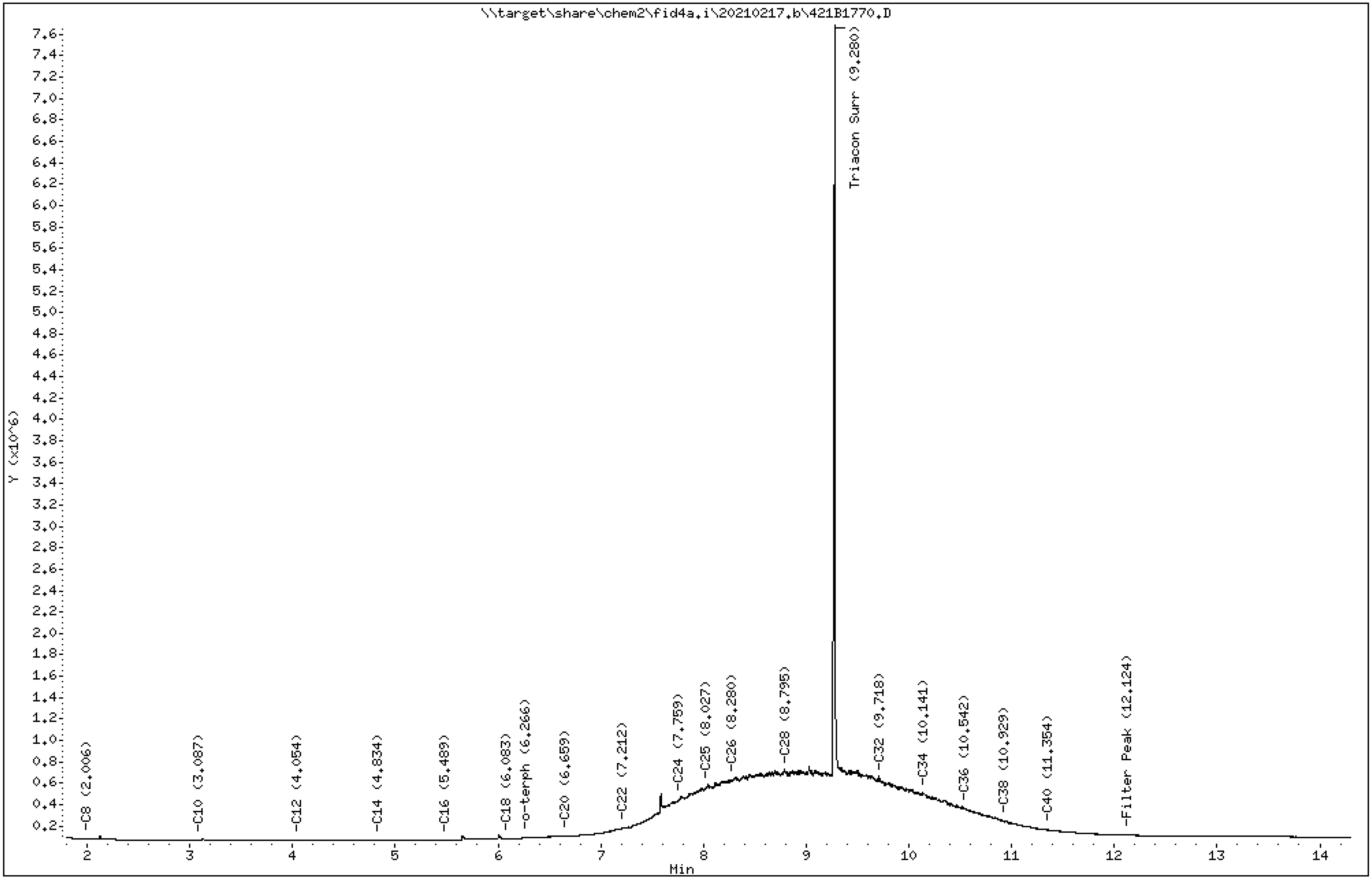
Instrument: fid4a.i

Sample Info: SEQ-CCVA

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210217.b/421B1770.D
Method: 20210217.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/22/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCVA
Client ID:
Injection: 18-FEB-2021 10:43
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.006	-0.005	13710	28068	WATPHD	(C12-C24)	12250083	89.1
C10	3.087	-0.004	3391	1341	WATPHM	(C24-C38)	93163934	915.1
C12	4.054	0.001	499	195	AK102	(C10-C25)	16388154	97.5
C14	4.834	0.008	1717	1371	AK103	(C25-C36)	84194522	1119.9
C16	5.489	0.000	4182	1034	OR.DIES	(C10-C28)	45969372	234.5
C18	6.083	-0.003	15456	10001				
C20	6.659	0.007	39349	57965	JET-A	(C10-C18)	712192	4.3
C22	7.212	0.000	117440	123093				
C24	7.759	-0.001	379416	168090				
C25	8.027	-0.001	495236	220709				
C26	8.280	-0.008	558819	249572				
C28	8.795	0.004	638199	158677				
C32	9.718	-0.003	572784	225360				
C34	10.141	-0.001	440173	175051				
Filter Peak	12.124	0.002	47208	16475	BUNKERC	(C10-C38)	105527760	2673.1
C36	10.542	-0.001	294223	116715				
C38	10.929	0.003	178229	53136				
C40	11.354	0.004	97415	86233				
o-terph	6.266	0.000	21012	40598				
Triacon Surr	9.280	-0.016	6980686	6944596	NAS DIES	(C10-C24)	12363826	63.4

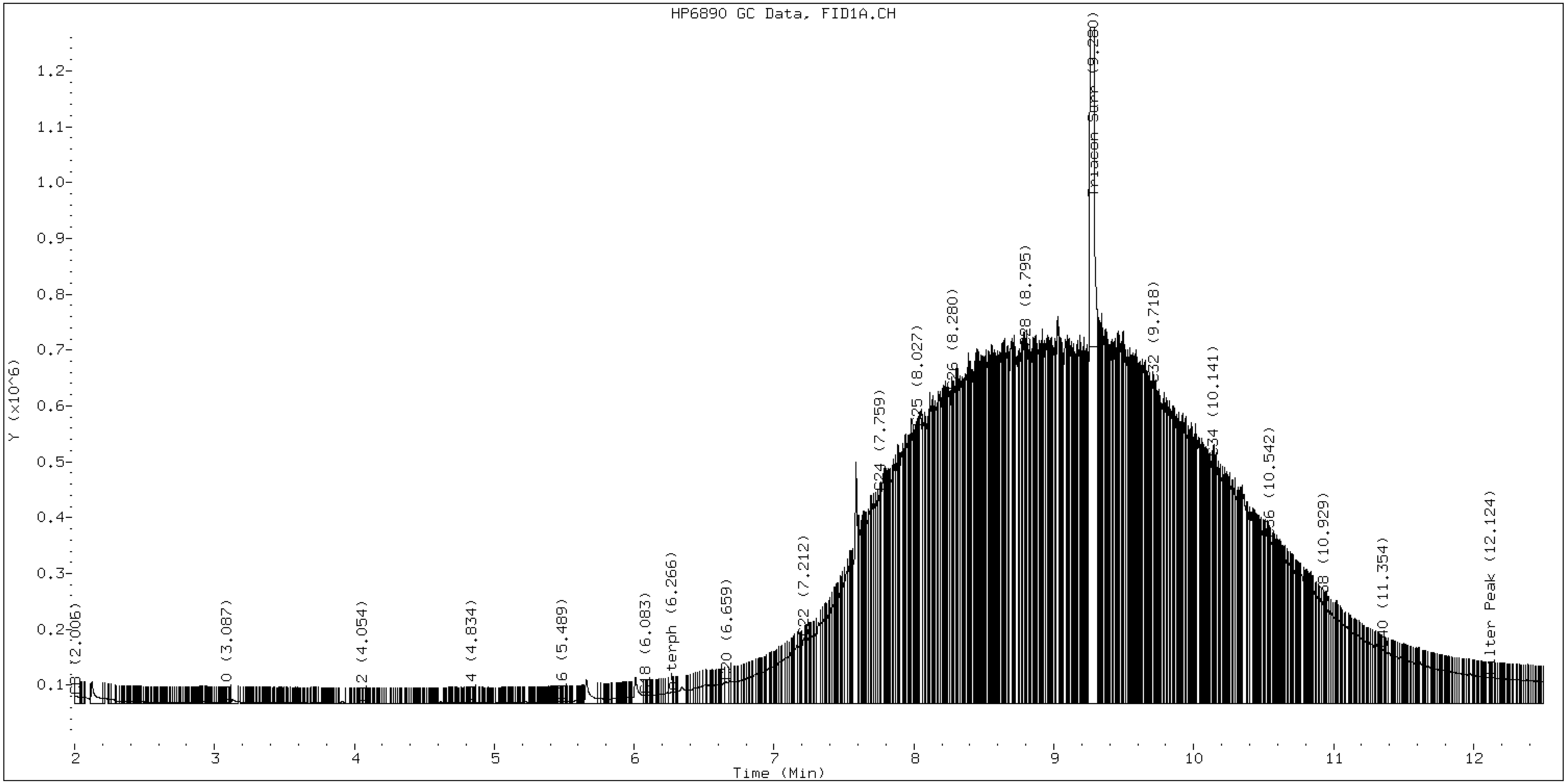
Range Times: NW Diesel(4.053 - 7.760) AK102(3.09 - 8.03) Jet A(3.09 - 6.09)
NW M.Oil(7.76 - 10.93) AK103(8.03 - 10.54) OR Diesel(3.09 - 8.79)

Surrogate	Area	Amount	
o-Terphenyl	40598	0.2	
Triacontane	6944596	49.1	M

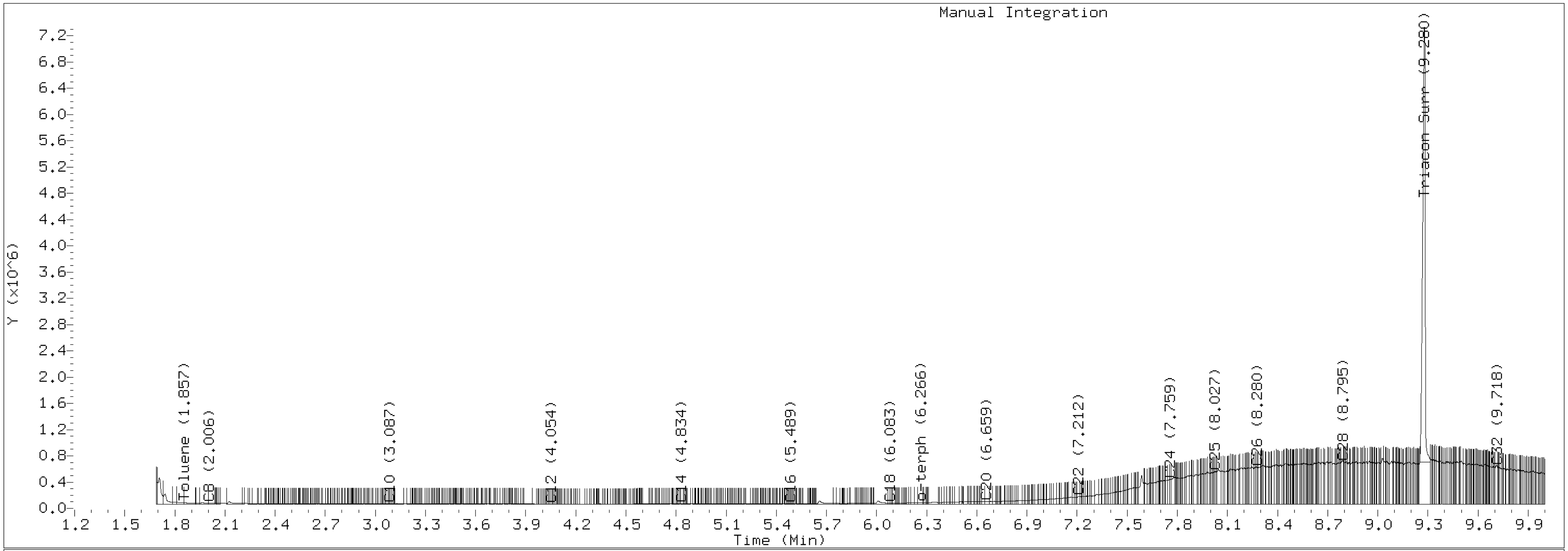
M Indicates the peak was manually integrated

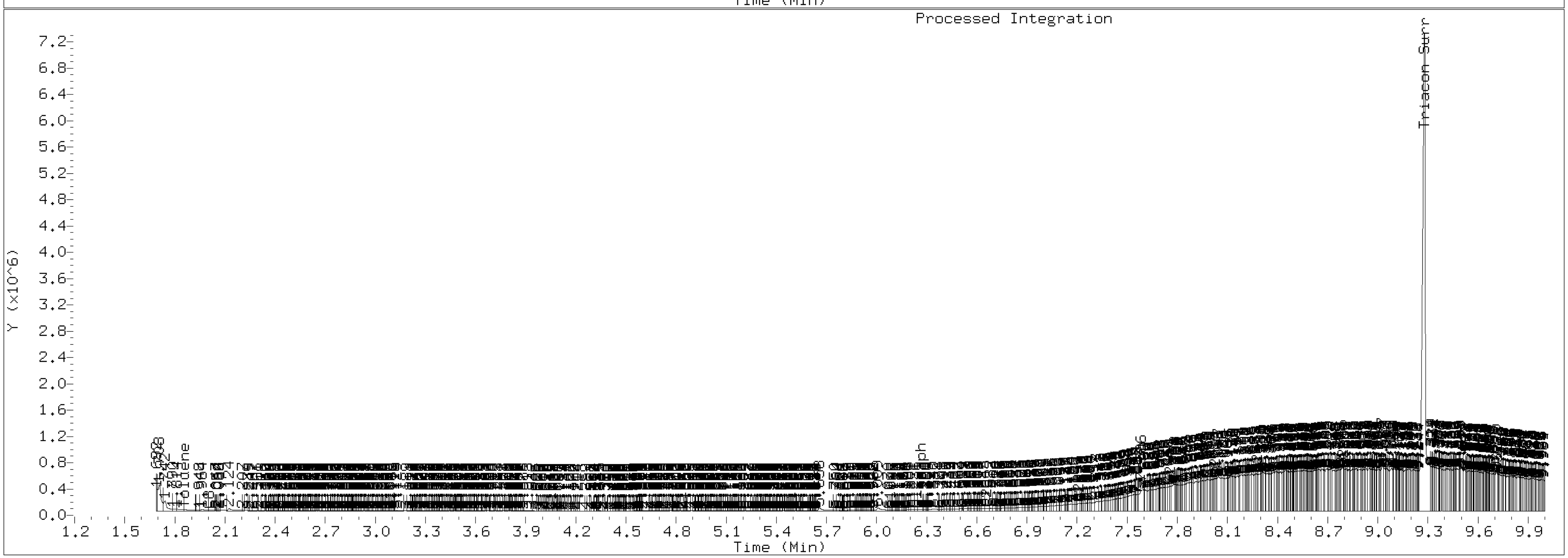
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210217.b/421B1770.D SEQ-CCVA



TPH Manual Integrations Report
Datafile: FID4A, 20210217.b/421B1770.D Injection: 18-FEB-2021 10:43
Lab ID:SEQ-CCVA





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B2222.D
Calibration Date: 01/07/2021
Sequence: SJB0344
Injection Date: 02/22/21
Lab Sample ID: SJB0344-CCV1
Injection Time: 17:29
Sequence Name: DIESEL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	520	137498.2	143004.2		4.0	+/-15
o-Terphenyl	A	90.000	95.7	170577.7	181409.7		6.3	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2222.D

Date : 22-FEB-2021 17:29

Client ID:

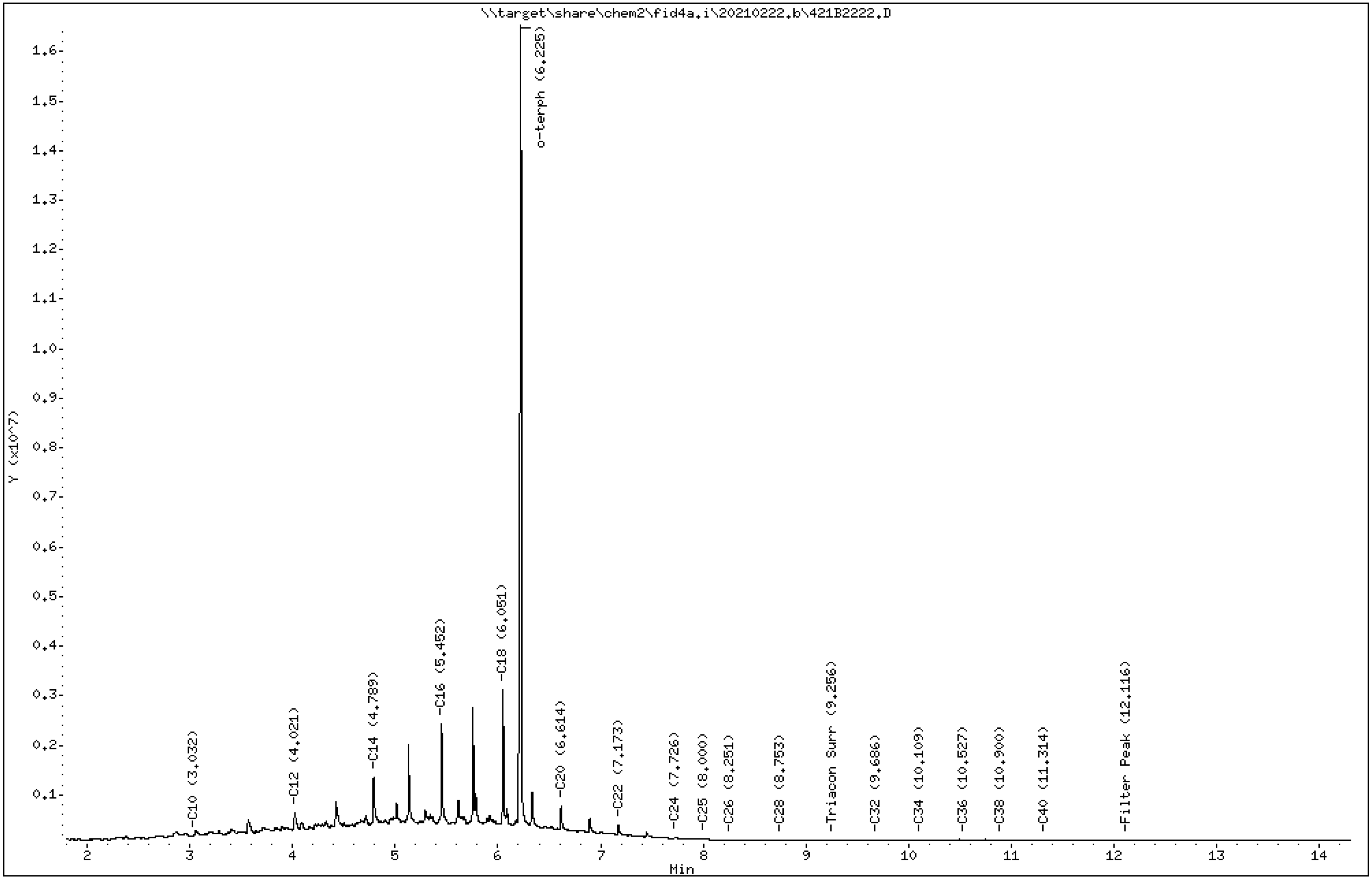
Instrument: fid4a.i

Sample Info: SEQ-CCV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2222.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV1
Client ID:
Injection: 22-FEB-2021 17:29
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.915	0.011	40234	48681	WATPHD	(C12-C24)	71502106	520.0
C10	3.032	-0.002	91248	36374	WATPHM	(C24-C38)	777425	7.6
C12	4.021	0.009	539043	1331062	AK102	(C10-C25)	83697991	498.0
C14	4.789	0.001	1260944	2325636	AK103	(C25-C36)	492081	6.5
C16	5.452	-0.001	2332359	3196000	OR.DIES	(C10-C28)	84023460	428.7
C18	6.051	-0.000	3026147	2879322				
C20	6.614	-0.003	688317	1178440	JET-A	(C10-C18)	65312288	393.8
C22	7.173	-0.002	316680	742521				
C24	7.726	0.004	56197	188714				
C25	8.000	0.011	20709	19802				
C26	8.251	0.001	8100	2829				
C28	8.753	-0.000	2179	1057				
C32	9.686	0.003	603	280				
C34	10.109	0.001	1675	1401				
Filter Peak	12.116	-0.001	8448	2519	BUNKERC	(C10-C38)	84307341	2135.6
C36	10.527	0.014	3697	1444				
C38	10.900	-0.001	5813	1158				
C40	11.314	-0.005	7531	6696				
o-terph	6.225	-0.001	16082524	16326872				
Triacon Surr	9.256	0.001	452	226	NAS DIES	(C10-C24)	83529916	428.0

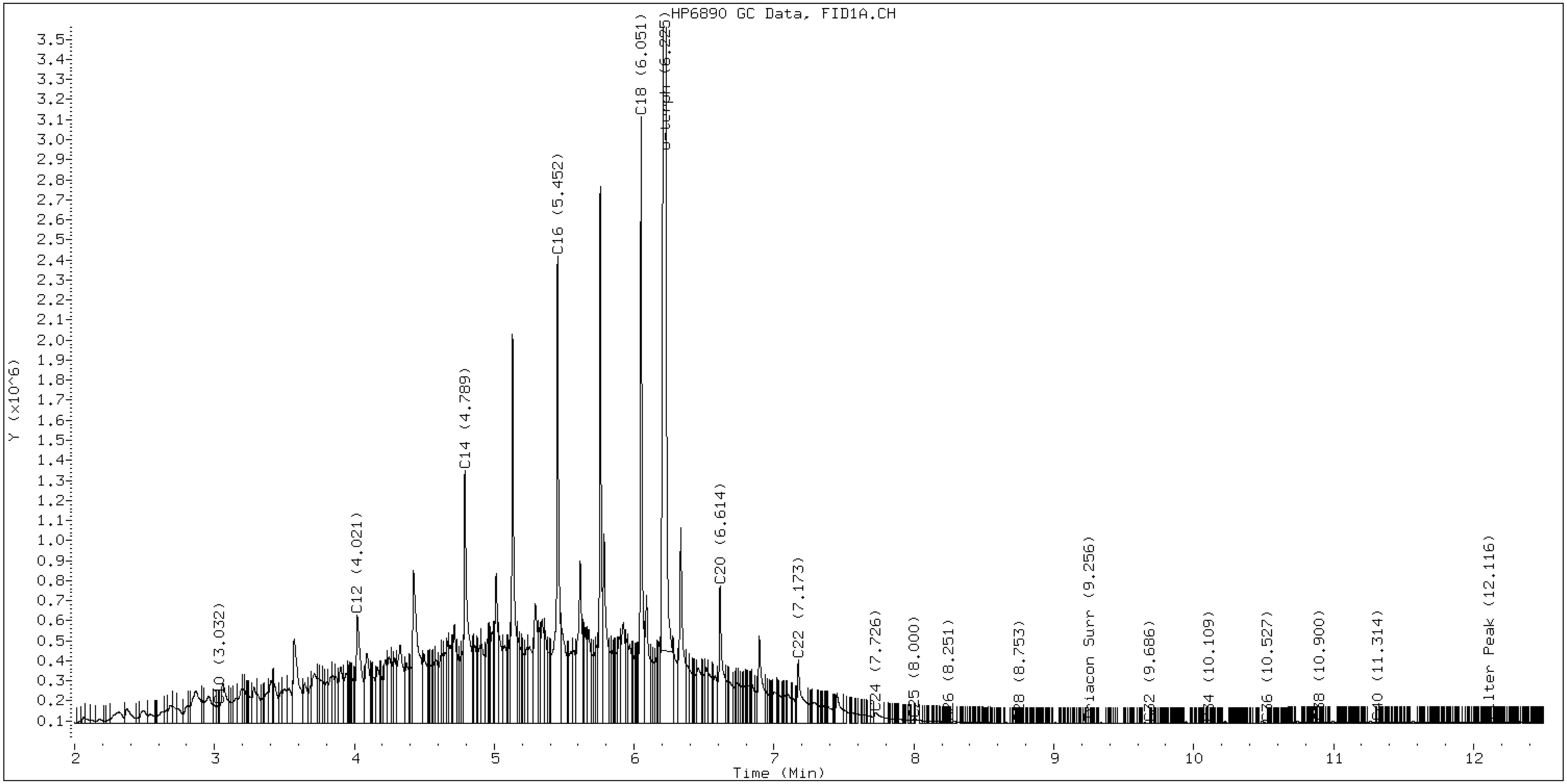
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	16326872	95.7	M
Triacontane	226	0.0	

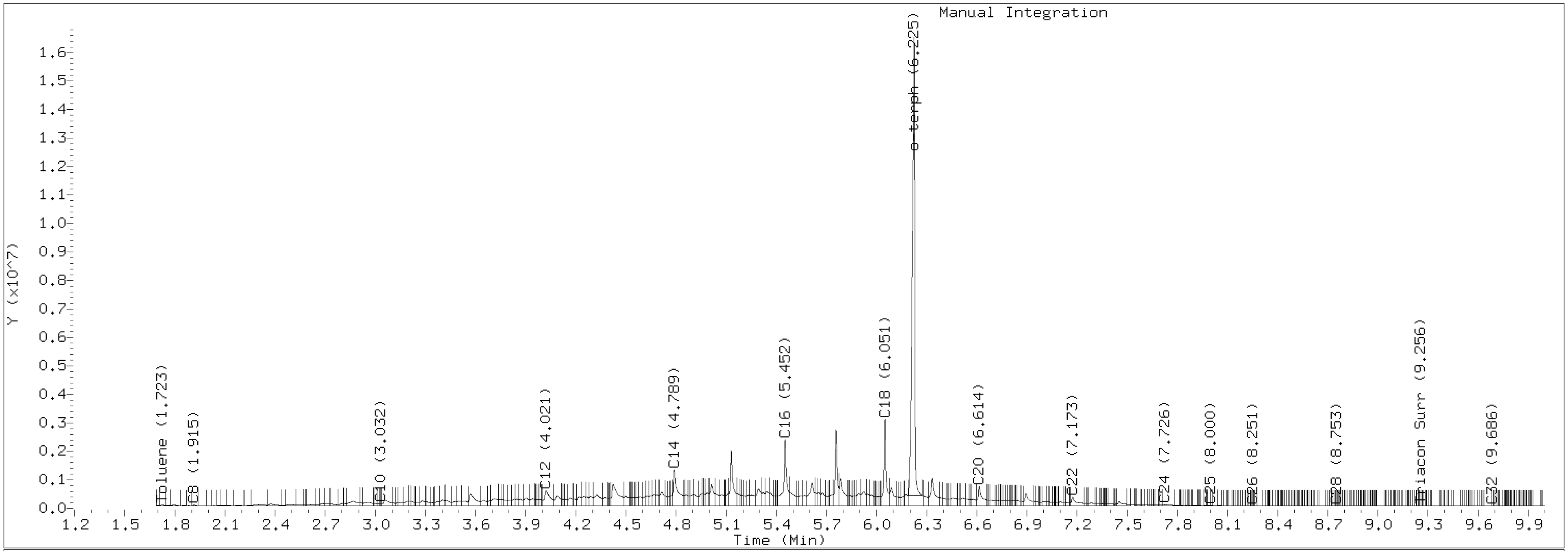
M Indicates the peak was manually integrated

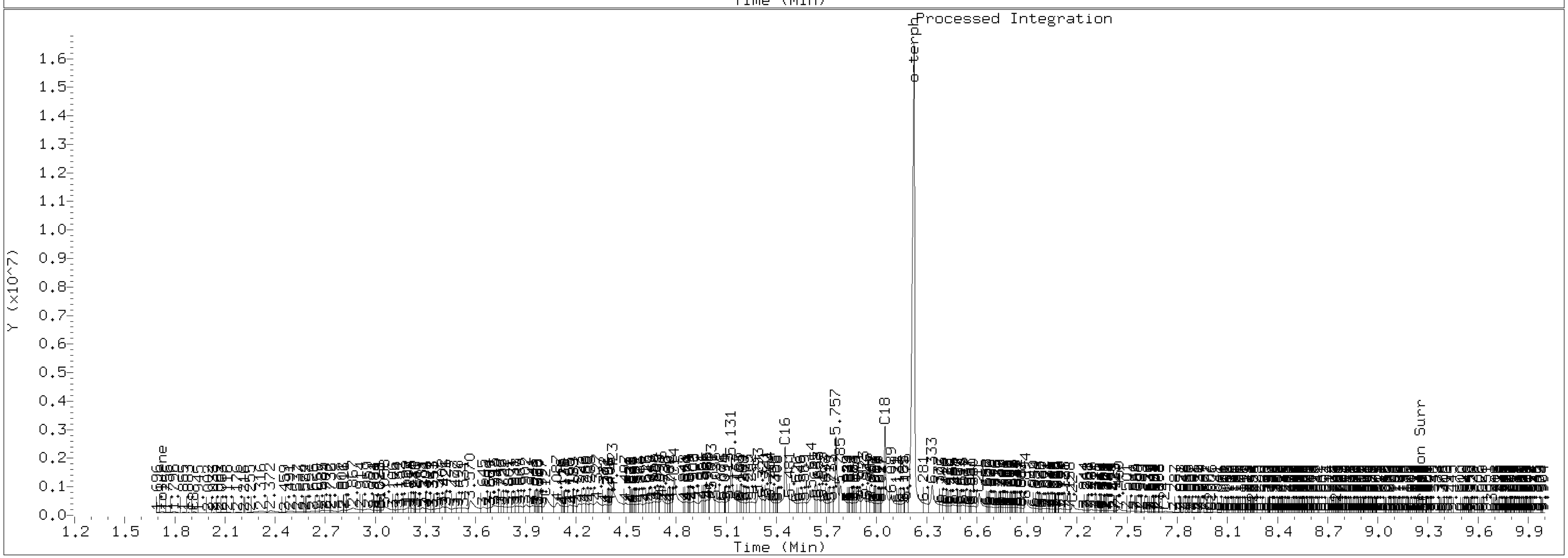
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210222.b/421B2222.D SEQ-CCV1



TPH Manual Integrations Report
Datafile: FID4A, 20210222.b/421B2222.D Injection: 22-FEB-2021 17:29
Lab ID:SEQ-CCV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B2223.D
Calibration Date: 01/07/2021
Sequence: SJB0344
Injection Date: 02/22/21
Lab Sample ID: SJB0344-CCV2
Injection Time: 17:50
Sequence Name: MOIL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1130	101807.5	115288.3		13.2	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2223.D

Page 1

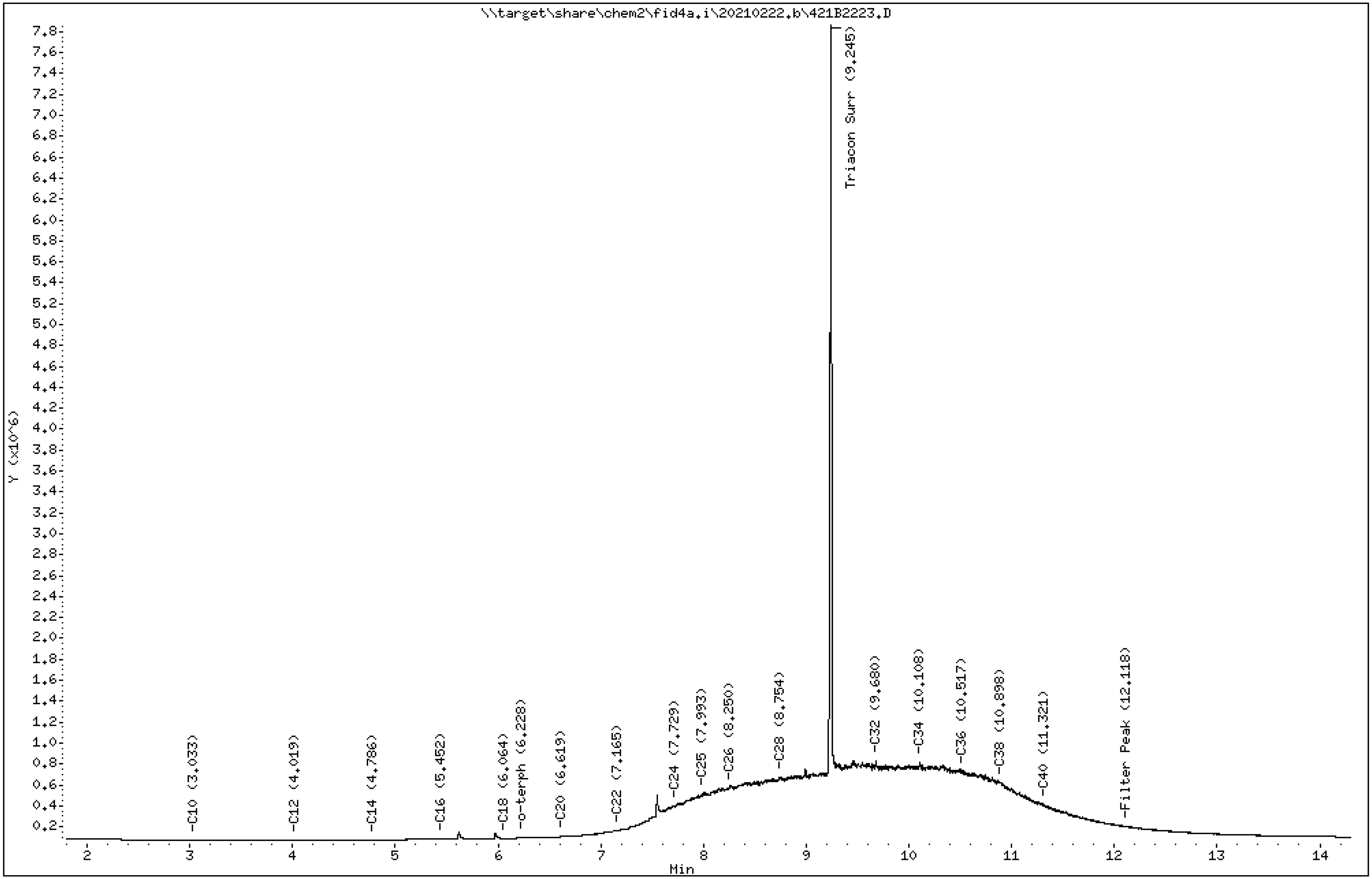
Date : 22-FEB-2021 17:50

Client ID: Instrument: fid4a.i

Sample Info: SEQ-CCV2

Operator: CTO

Column phase: RTX-1 Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2223.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV2
Client ID:
Injection: 22-FEB-2021 17:50
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.905	0.001	15245	23597	WATPHD	(C12-C24)	11097178	80.7
C10	3.033	-0.001	2404	1512	WATPHM	(C24-C38)	115288338	1132.4
C12	4.019	0.007	279	101	AK102	(C10-C25)	15104498	89.9
C14	4.786	-0.002	4572	1131	AK103	(C25-C36)	97734762	1300.1
C16	5.452	-0.002	9293	3237	OR.DIES	(C10-C28)	41742429	213.0
C18	6.064	0.013	17358	3468				
C20	6.619	0.003	34881	56399	JET-A	(C10-C18)	1032752	6.2
C22	7.165	-0.010	92141	36604				
C24	7.729	0.007	329059	162658				
C25	7.993	0.004	448875	418164				
C26	8.250	0.001	495721	148048				
C28	8.754	0.001	605209	209627				
C32	9.680	-0.002	752183	546186				
C34	10.108	-0.001	744884	366714				
Filter Peak	12.118	0.001	129392	101846	BUNKERC	(C10-C38)	126439081	3202.8
C36	10.517	0.003	657474	260863				
C38	10.898	-0.003	552270	298310				
C40	11.321	0.002	334017	148467				
o-terph	6.228	0.003	22217	30442				
Triacon Surr	9.245	-0.011	7145312	7068026	NAS DIES	(C10-C24)	11150743	57.1

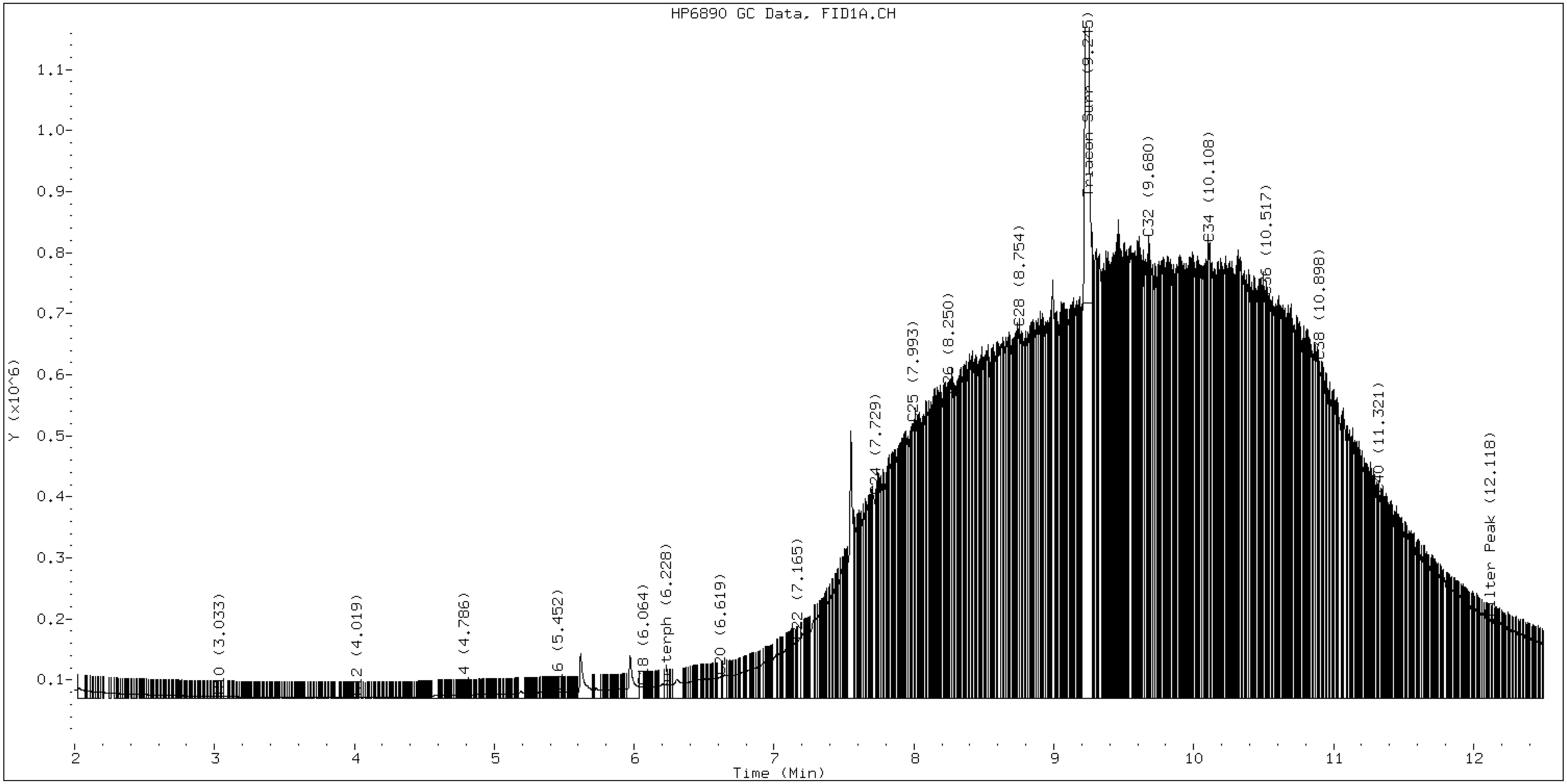
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	30442	0.2	
Triacontane	7068026	50.0	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

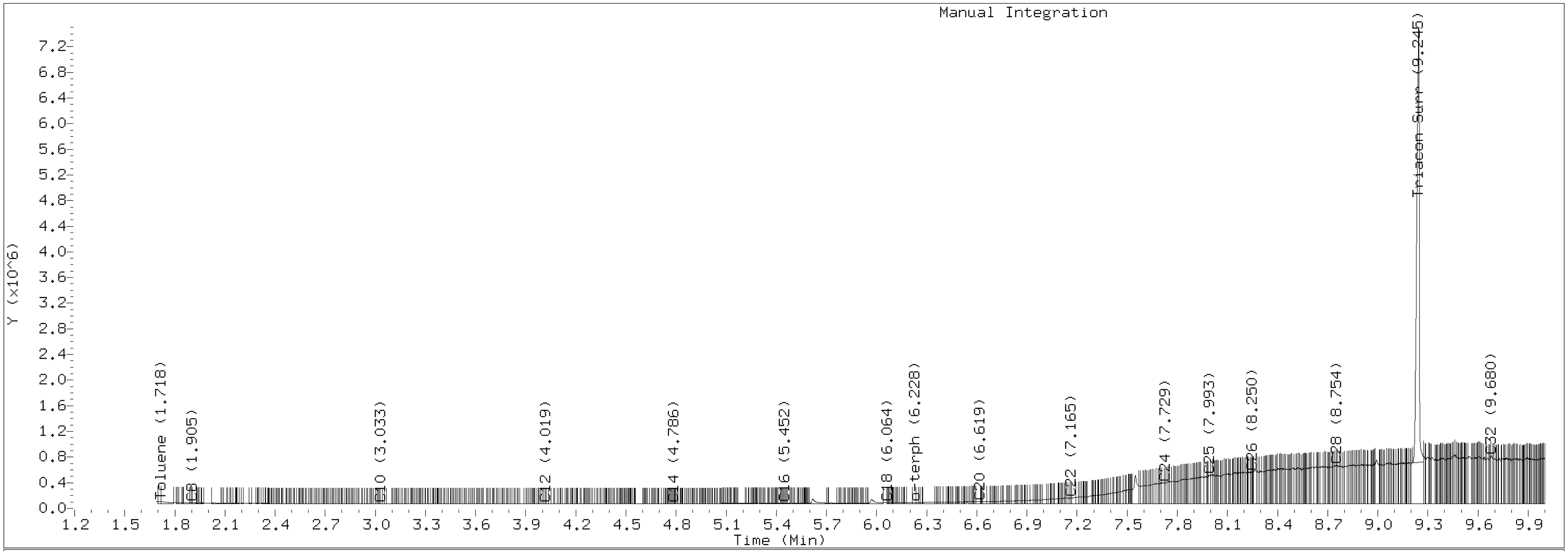
Datafile: FID4A, 20210222.b/421B2223.D SEQ-CCV2

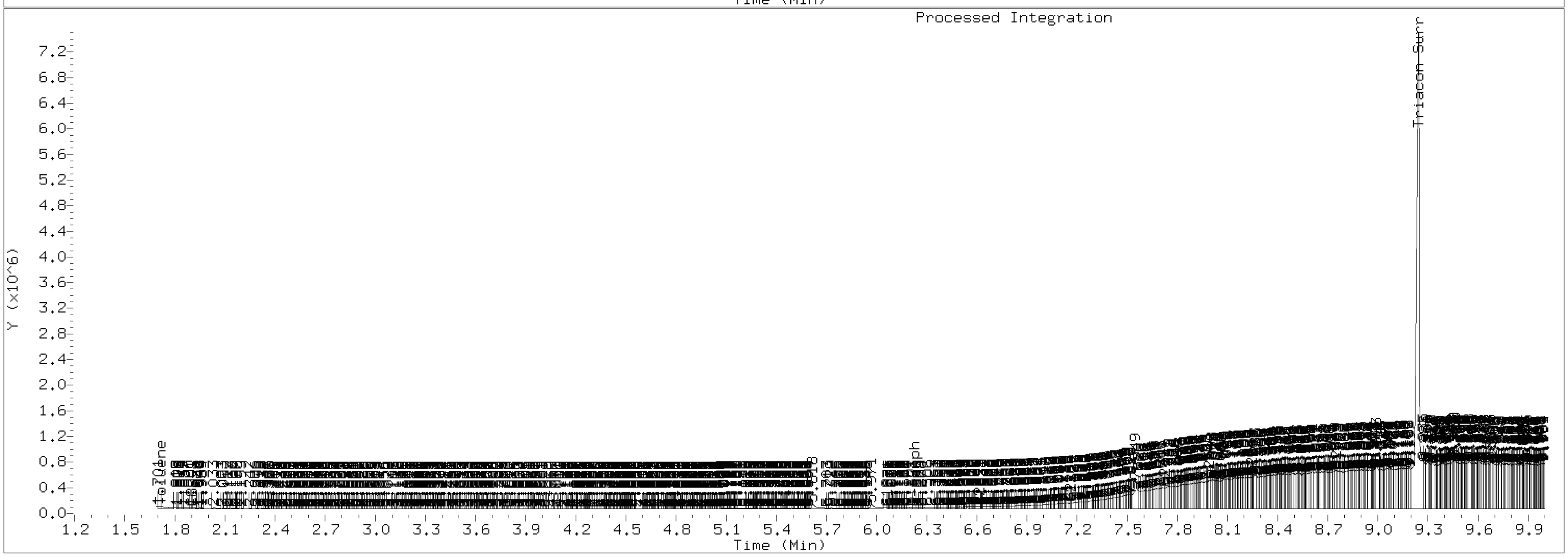


TPH Manual Integrations Report

Datafile: FID4A, 20210222.b/421B2223.D Injection: 22-FEB-2021 17:50

Lab ID:SEQ-CCV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B2240.D
Calibration Date: 01/07/2021
Sequence: SJB0344
Injection Date: 02/22/21
Lab Sample ID: SJB0344-CCV3
Injection Time: 23:46
Sequence Name: DIESEL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	536	137498.2	147483.2		7.3	+/-15
o-Terphenyl	A	90.000	98.2	170577.7	186167.7		9.1	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2240.D

Page 1

Date : 22-FEB-2021 23:46

Client ID:

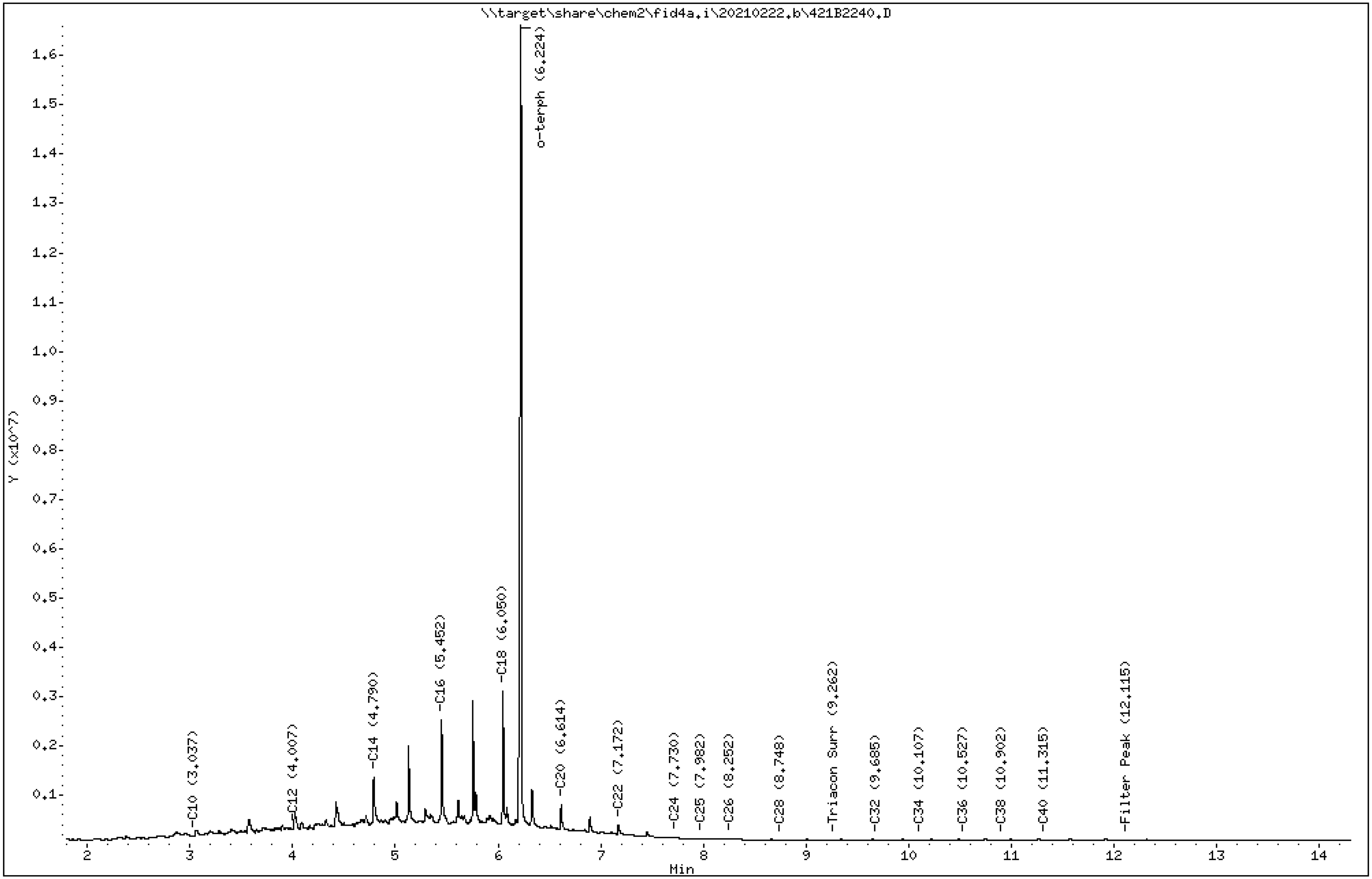
Instrument: fid4a.i

Sample Info: SEQ-CCV3

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2240.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV3
Client ID:
Injection: 22-FEB-2021 23:46
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.920	0.016	35983	56765	WATPHD	(C12-C24)	73741586	536.3
C10	3.037	0.002	95913	52369	WATPHM	(C24-C38)	1976270	19.4
C12	4.007	-0.005	219803	130606	AK102	(C10-C25)	86464751	514.5
C14	4.790	0.002	1275148	2681103	AK103	(C25-C36)	1535996	20.4
C16	5.452	-0.001	2435487	4224931	OR.DIES	(C10-C28)	87156171	444.7
C18	6.050	-0.001	3011778	3035442				
C20	6.614	-0.003	709367	1354726	JET-A	(C10-C18)	67620249	407.7
C22	7.172	-0.003	314353	747080				
C24	7.730	0.007	63060	219568				
C25	7.982	-0.007	23650	8255				
C26	8.252	0.002	15749	7804				
C28	8.748	-0.005	9992	7898				
C32	9.685	0.002	7857	5750				
C34	10.107	-0.001	8444	1677				
Filter Peak	12.115	-0.002	12912	7063	BUNKERC	(C10-C38)	88250339	2235.5
C36	10.527	0.013	9869	3918				
C38	10.902	0.002	11463	5136				
C40	11.315	-0.004	12690	4442				
o-terph	6.224	-0.002	16167294	16755094				
Triacon Surr	9.262	0.007	7651	5321	NAS DIES	(C10-C24)	86274069	442.1

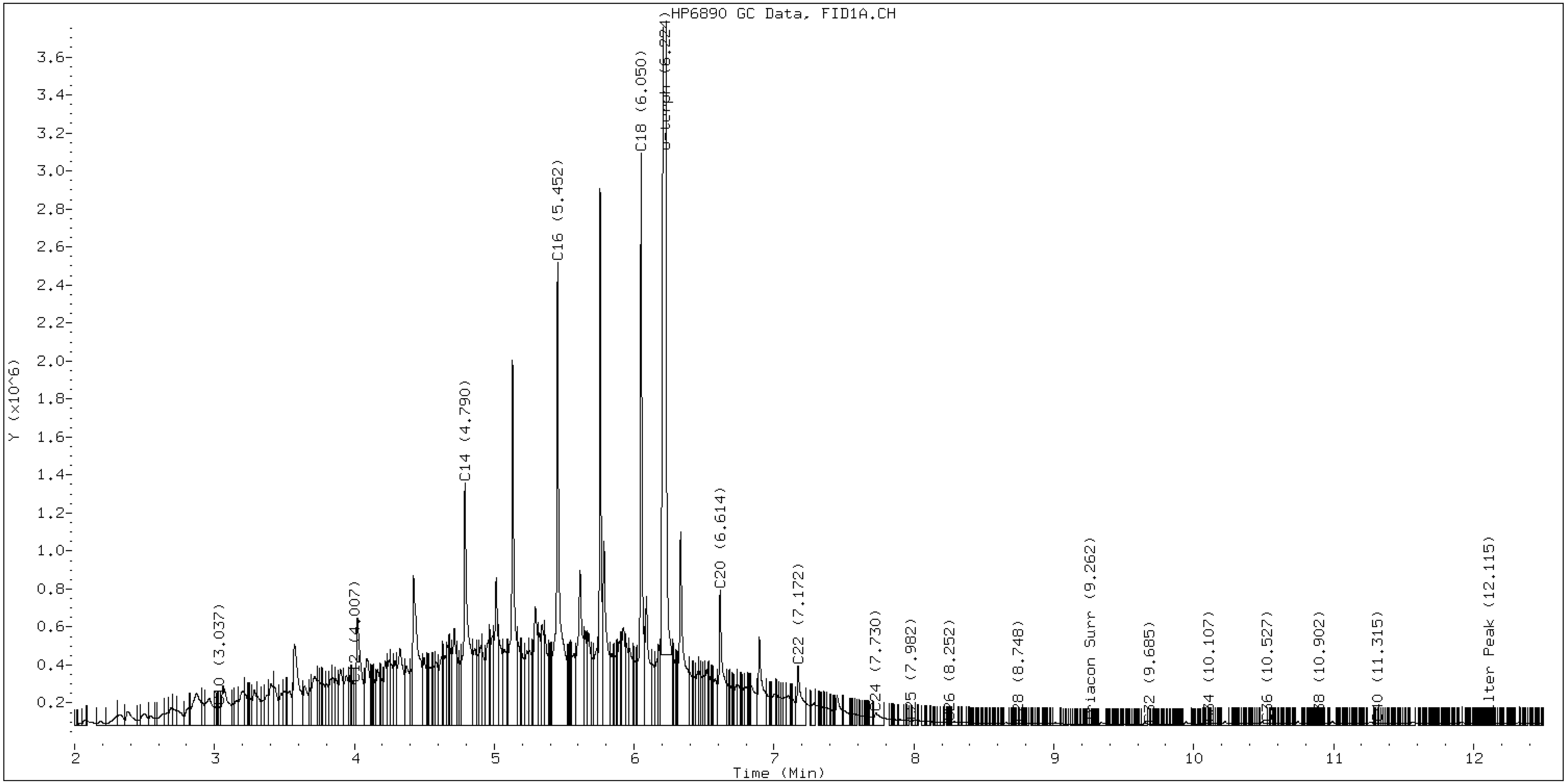
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	16755094	98.2	M
Triacontane	5321	0.0	

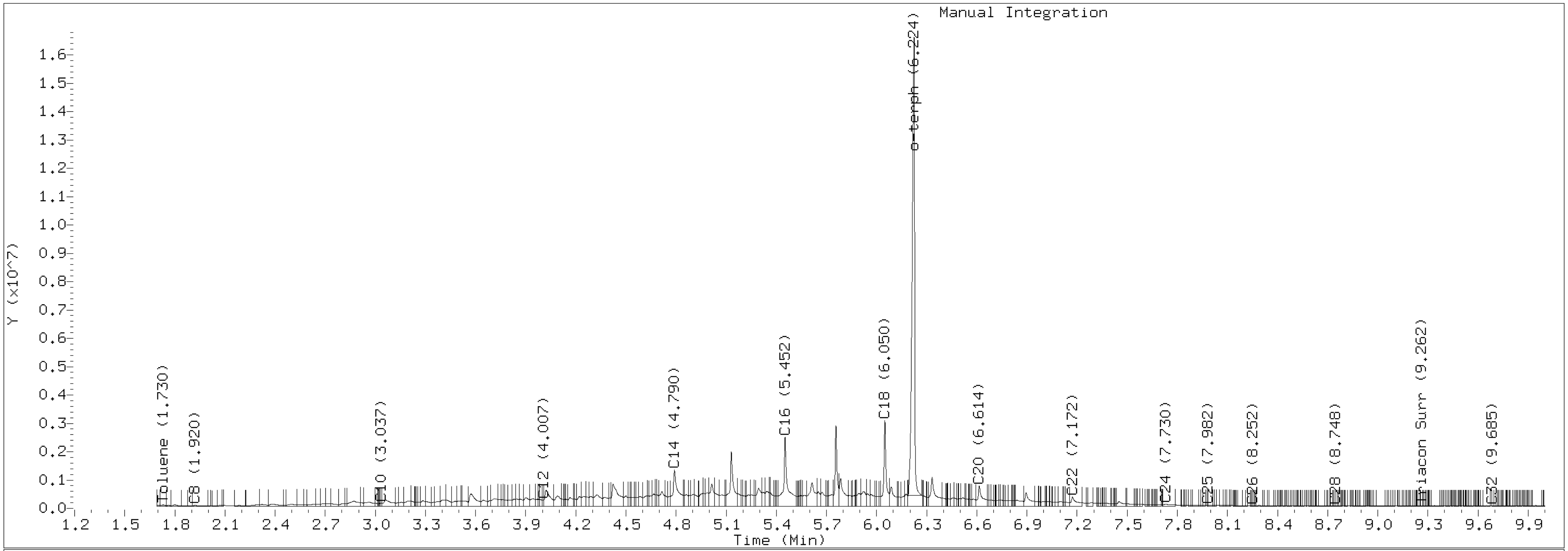
M Indicates the peak was manually integrated

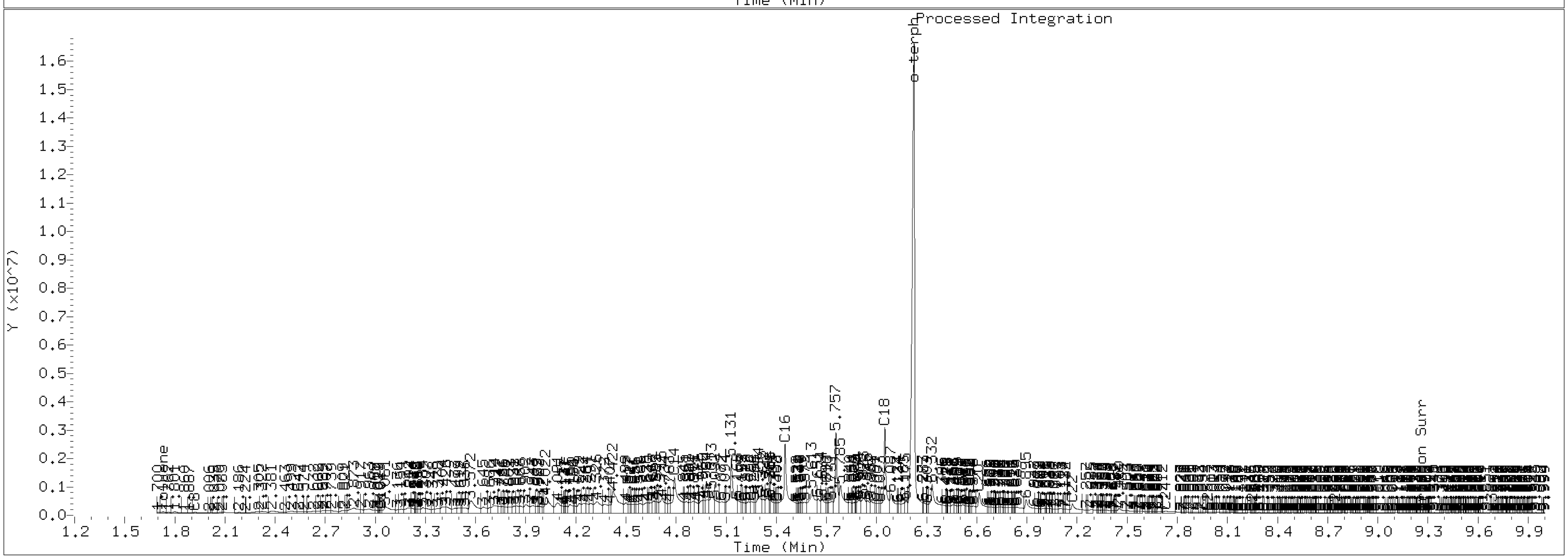
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210222.b/421B2240.D   SEQ-CCV3



TPH Manual Integrations Report
Datafile: FID4A, 20210222.b/421B2240.D Injection: 22-FEB-2021 23:46
Lab ID:SEQ-CCV3





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B2241.D	Calibration Date:	01/07/2021
Sequence:	SJB0344	Injection Date:	02/23/21
Lab Sample ID:	SJB0344-CCV4	Injection Time:	00:07
Sequence Name:	MOIL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1150	101807.5	116939.3		14.9	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2241.D

Date : 23-FEB-2021 00:07

Client ID:

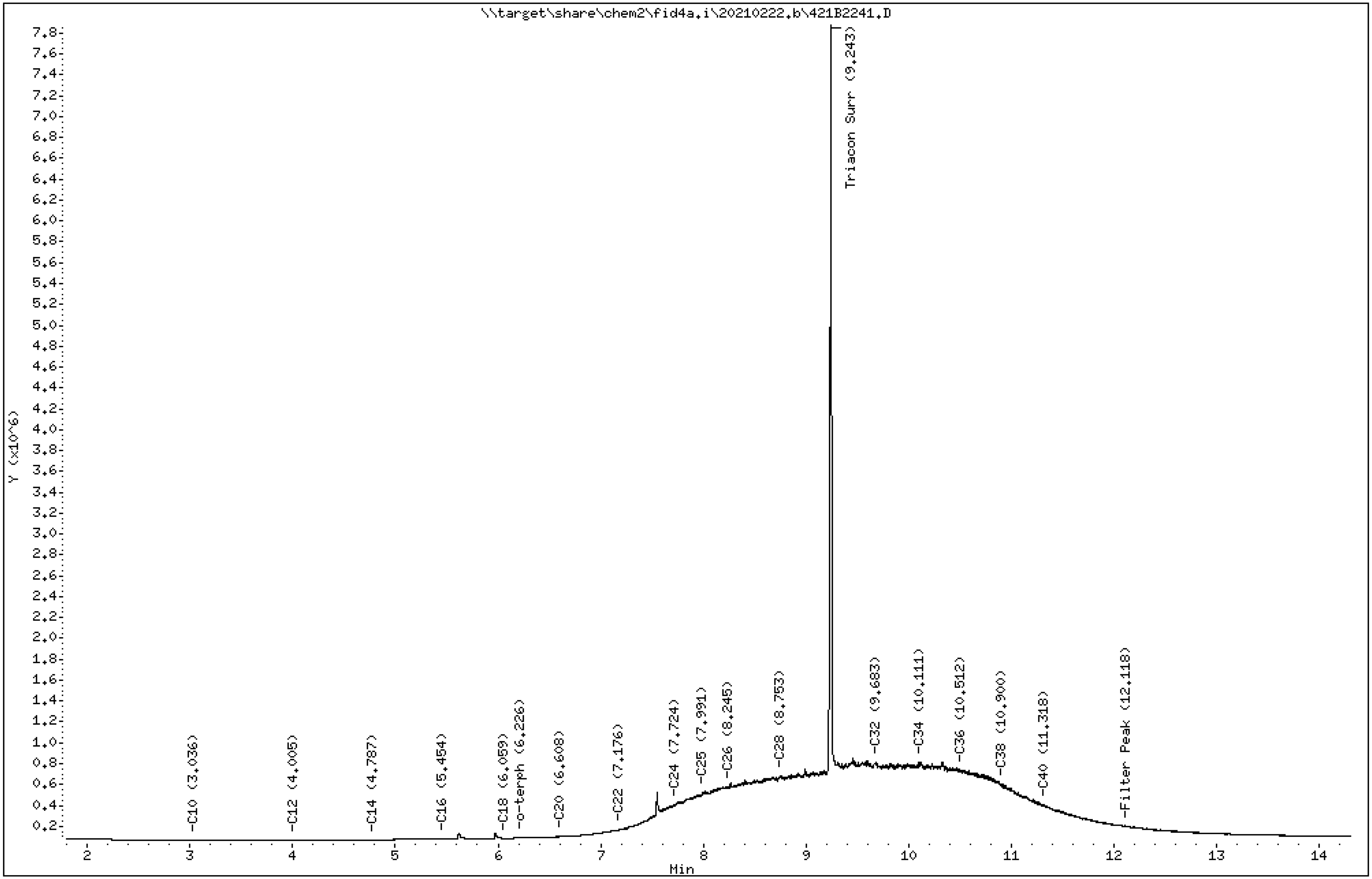
Instrument: fid4a.i

Sample Info: SEQ-CCV4

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2241.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV4
Client ID:
Injection: 23-FEB-2021 00:07
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.911	0.007	14410	11389	WATPHD	(C12-C24)	11693318	85.0
C10	3.036	0.002	1674	889	WATPHM	(C24-C38)	116939338	1148.6
C12	4.005	-0.007	284	113	AK102	(C10-C25)	15616593	92.9
C14	4.787	-0.001	4524	2439	AK103	(C25-C36)	99185955	1319.4
C16	5.454	0.001	10190	5057	OR.DIES	(C10-C28)	42979241	219.3
C18	6.059	0.008	18591	6496				
C20	6.608	-0.009	34646	33832	JET-A	(C10-C18)	1052966	6.3
C22	7.176	0.001	98690	57917				
C24	7.724	0.002	336095	100232				
C25	7.991	0.002	457333	245748				
C26	8.245	-0.004	505438	323999				
C28	8.753	-0.001	613541	243685				
C32	9.683	0.001	748265	515604				
C34	10.111	0.003	743007	362432				
Filter Peak	12.118	0.002	130893	58046	BUNKERC	(C10-C38)	128663895	3259.2
C36	10.512	-0.002	664994	198395				
C38	10.900	-0.001	541662	656288				
C40	11.318	-0.001	339571	314135				
o-terph	6.226	0.000	23023	16880				
Triacon Surr	9.243	-0.012	7224955	7567920	NAS DIES	(C10-C24)	11724557	60.1

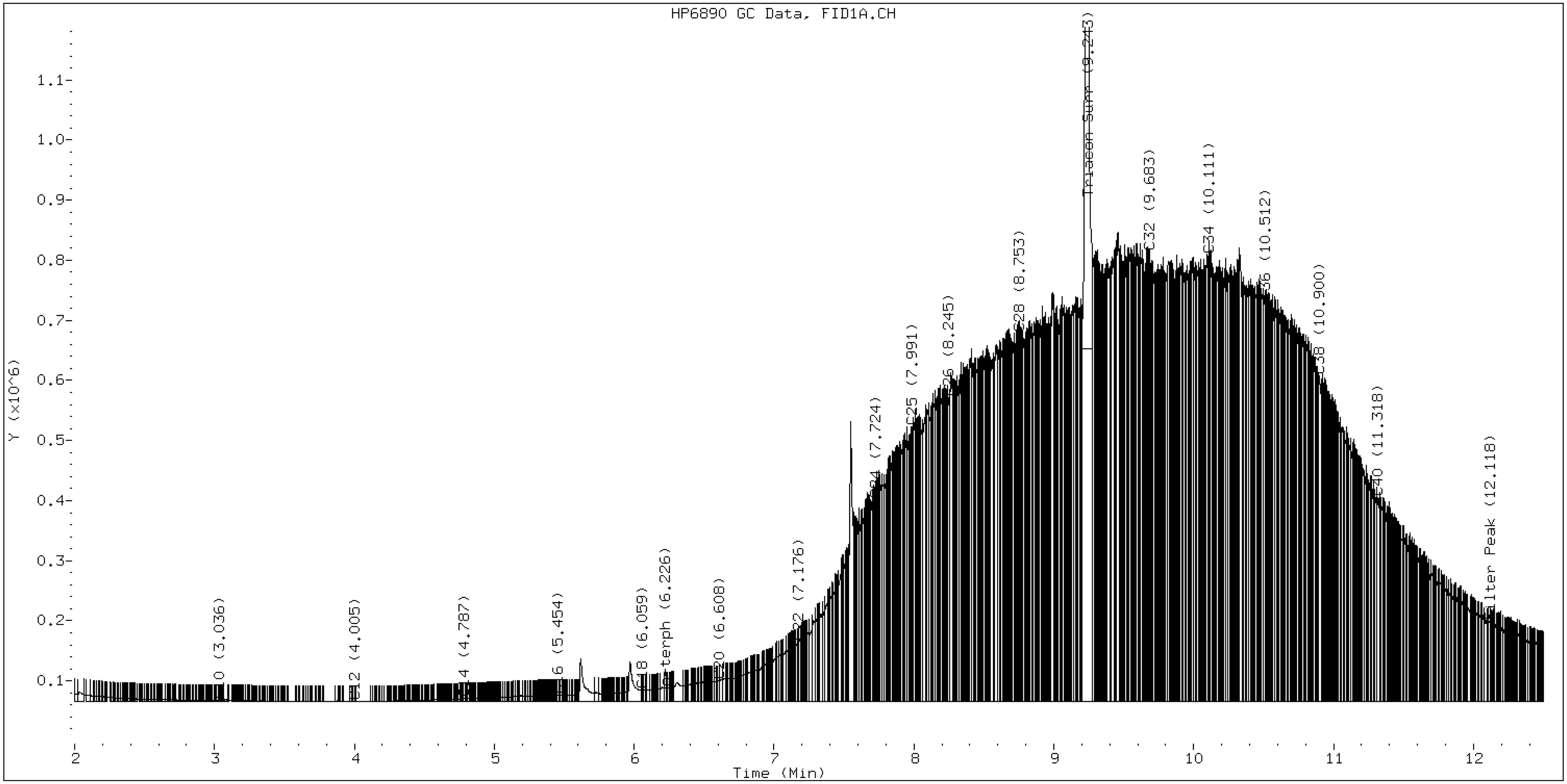
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	16880	0.1	
Triacontane	7567920	53.5	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

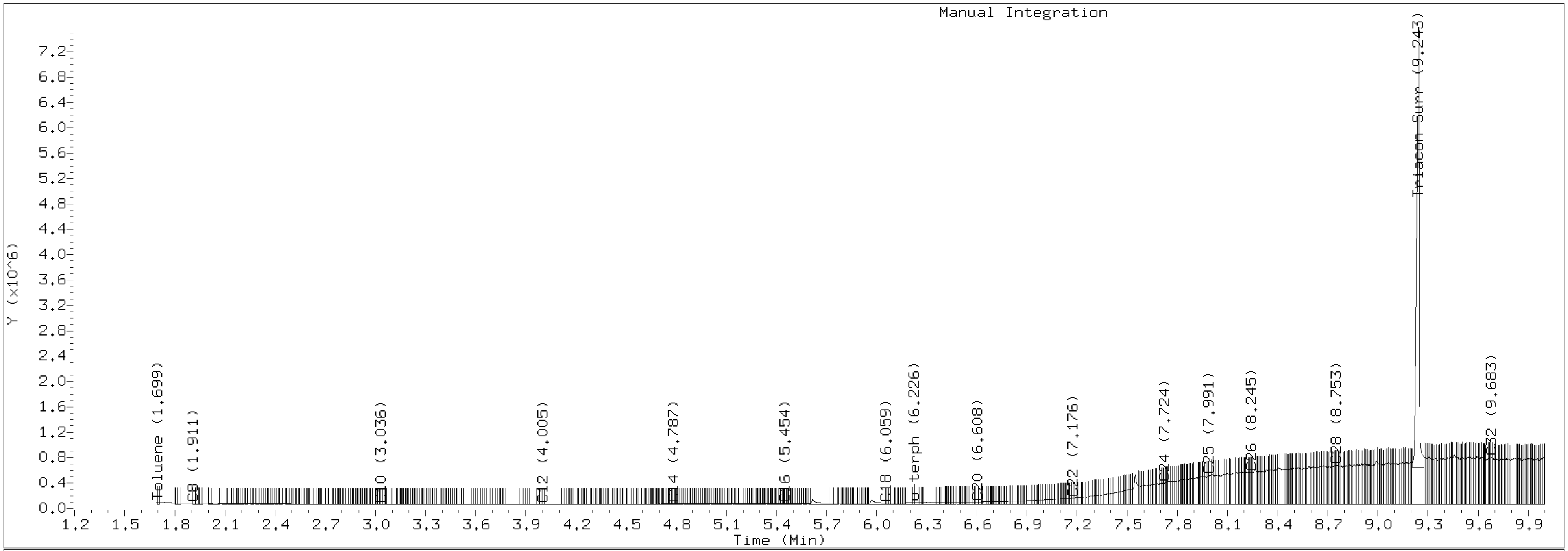
Datafile: FID4A, 20210222.b/421B2241.D   SEQ-CCV4

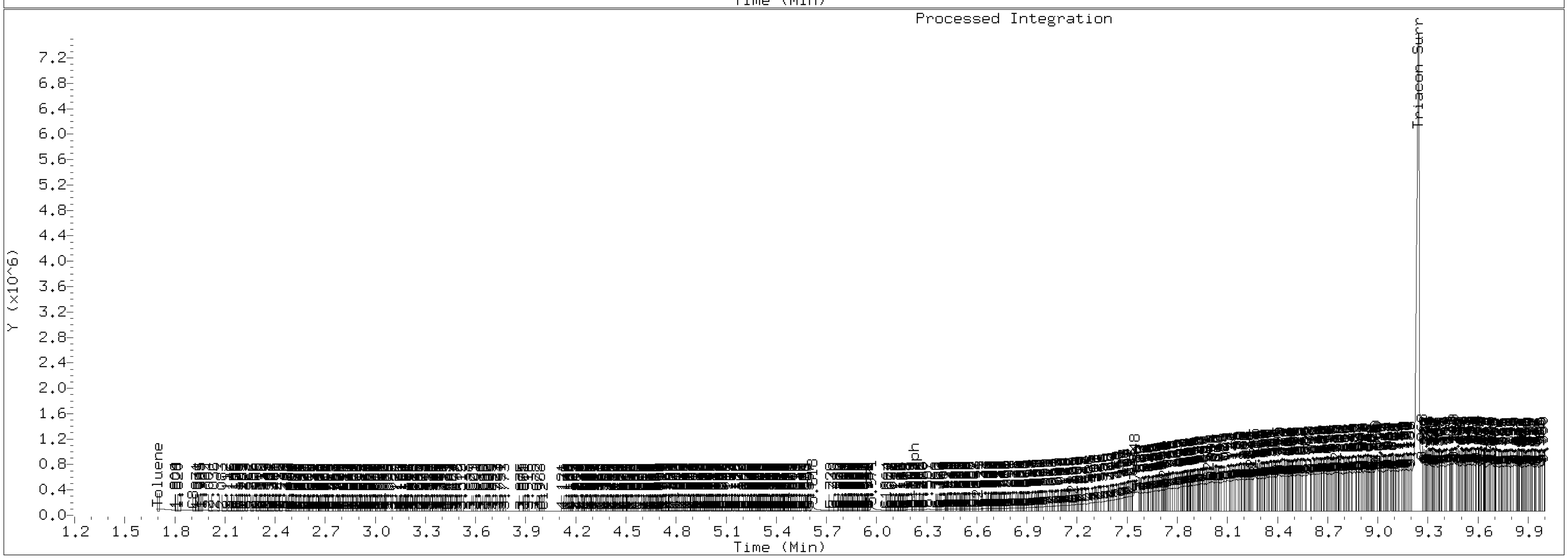


TPH Manual Integrations Report

Datafile: FID4A, 20210222.b/421B2241.D Injection: 23-FEB-2021 00:07

Lab ID:SEQ-CCV4





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B2255.D	Calibration Date:	01/07/2021
Sequence:	SJB0344	Injection Date:	02/23/21
Lab Sample ID:	SJB0344-CCV5	Injection Time:	04:57
Sequence Name:	DIESEL CCV		

COMPOUND	TYPE	CONC. (mg/L) STD	CONC. (mg/L) CCV	RESPONSE FACTOR (RF) ICAL	RESPONSE FACTOR (RF) CCV	RESPONSE FACTOR (RF) MIN	% DRIFT/DIFF CCV	% DRIFT/DIFF LIMIT
Diesel Range Organics (C12-C24)	A	500.00	517	137498.2	142239		3.4	+/-15
o-Terphenyl	A	90.000	96.8	170577.7	183499.3		7.6	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2255.D

Page 1

Date : 23-FEB-2021 04:57

Client ID:

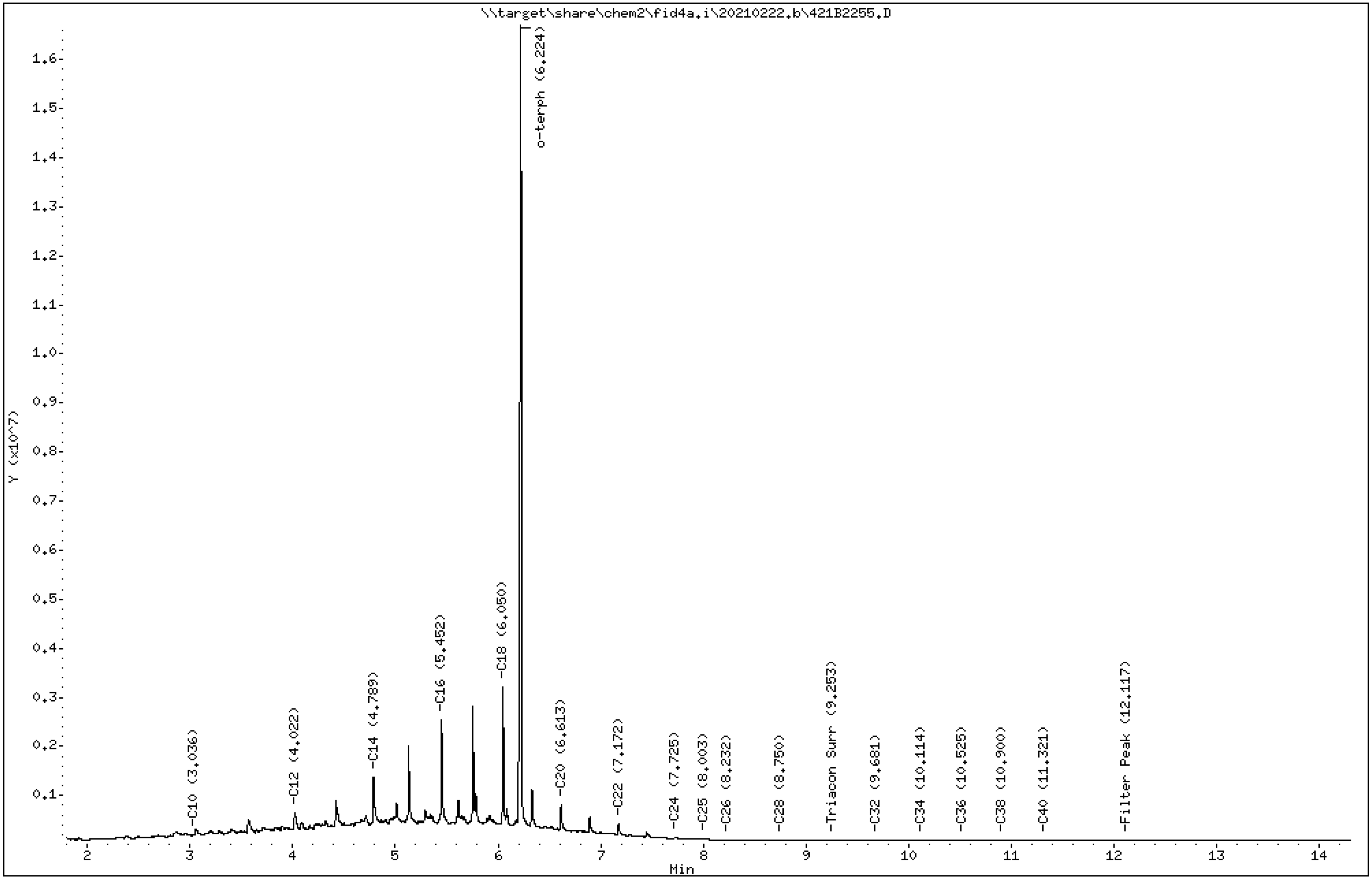
Instrument: fid4a.i

Sample Info: SEQ-CCV5

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2255.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV5
Client ID:
Injection: 23-FEB-2021 04:57
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.919	0.015	42852	66269	WATPHD	(C12-C24)	71119481	517.2
C10	3.036	0.002	99898	24879	WATPHM	(C24-C38)	756616	7.4
C12	4.022	0.010	561251	1353517	AK102	(C10-C25)	83927403	499.4
C14	4.789	0.002	1289587	2229347	AK103	(C25-C36)	491270	6.5
C16	5.452	-0.002	2446090	4209456	OR.DIES	(C10-C28)	84275270	430.0
C18	6.050	-0.001	3124594	2987952				
C20	6.613	-0.003	720195	1089442	JET-A	(C10-C18)	65576567	395.4
C22	7.172	-0.003	323757	596703				
C24	7.725	0.002	57370	56751				
C25	8.003	0.014	21463	42438				
C26	8.232	-0.018	8149	6267				
C28	8.750	-0.003	2465	1924				
C32	9.681	-0.002	707	398				
C34	10.114	0.006	1203	235				
Filter Peak	12.117	-0.000	6411	3524	BUNKERC	(C10-C38)	84516734	2140.9
C36	10.525	0.012	3349	2278				
C38	10.900	-0.001	5180	1029				
C40	11.321	0.002	6464	3505				
o-terph	6.224	-0.002	16235503	16514942				
Triacon Surr	9.253	-0.003	528	162	NAS DIES	(C10-C24)	83760117	429.2

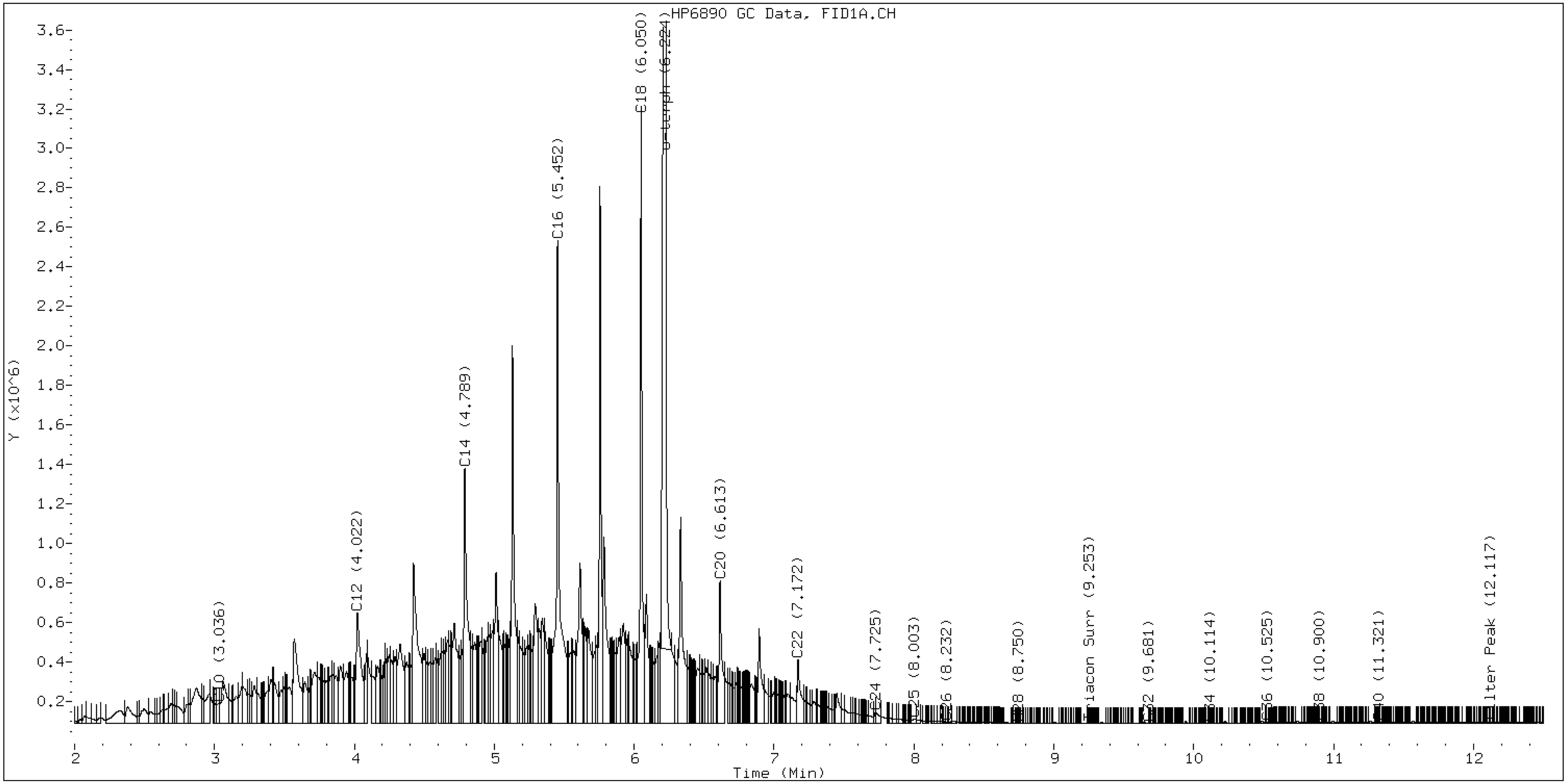
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	16514942	96.8	M
Triacontane	162	0.0	

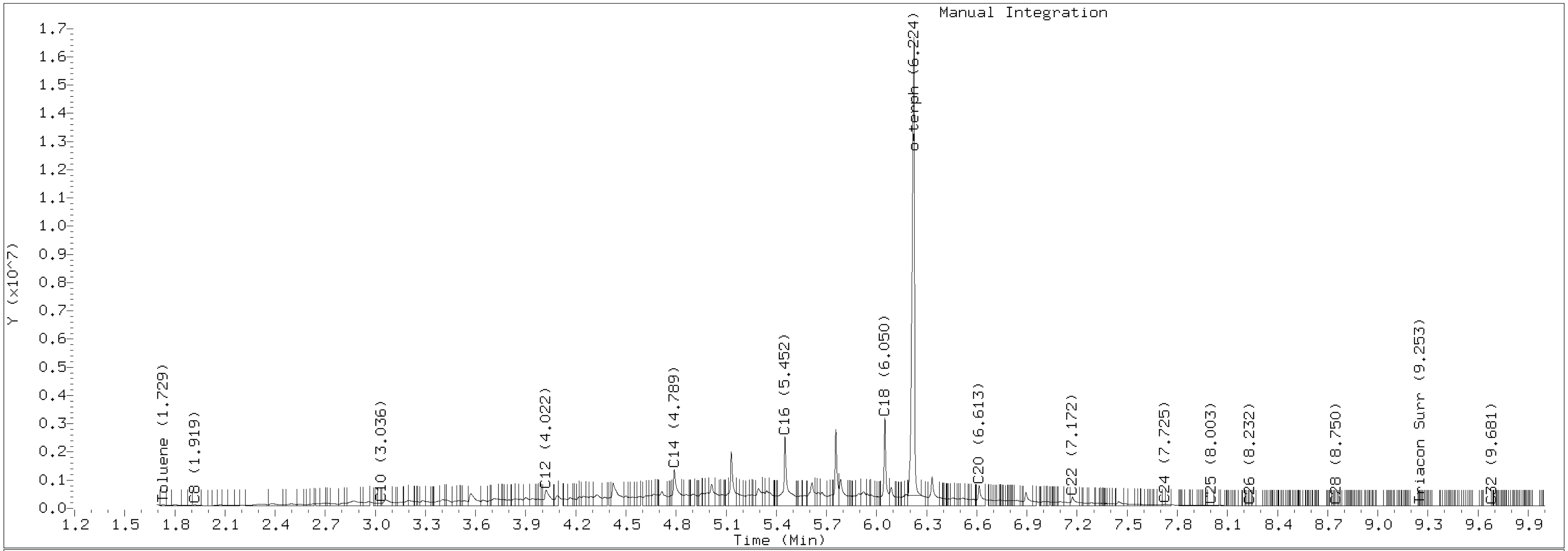
M Indicates the peak was manually integrated

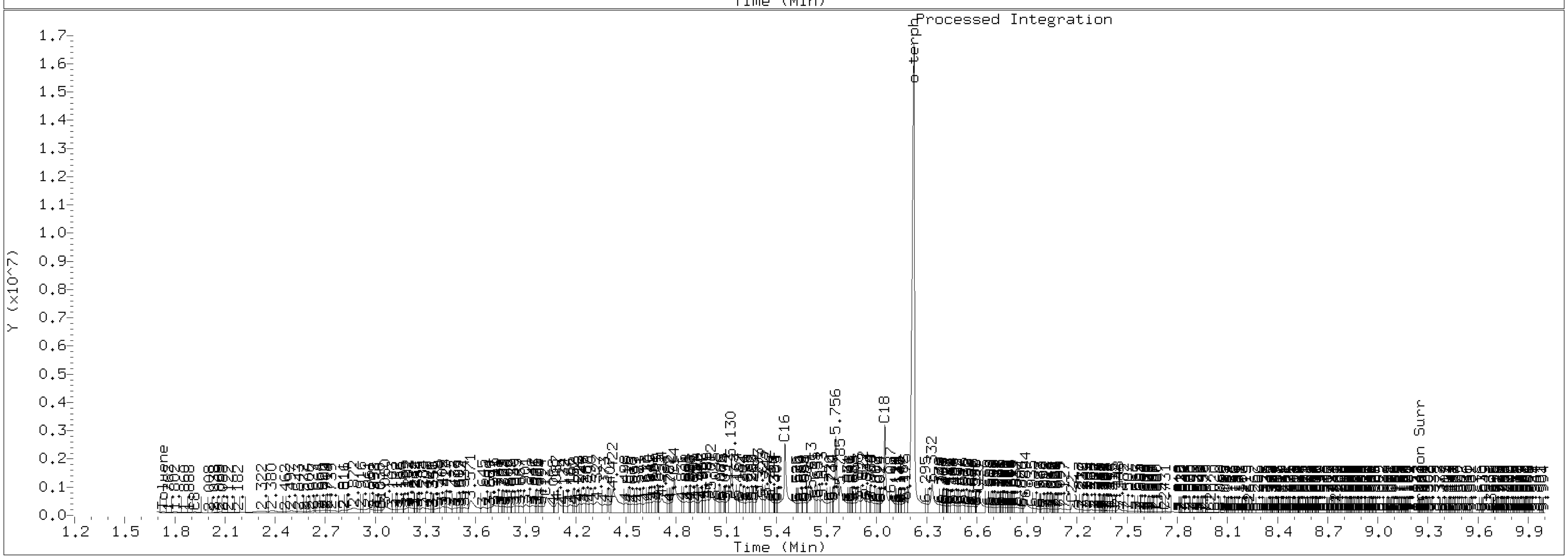
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210222.b/421B2255.D SEQ-CCV5



TPH Manual Integrations Report
Datafile: FID4A, 20210222.b/421B2255.D Injection: 23-FEB-2021 04:57
Lab ID:SEQ-CCV5





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B2256.D
Calibration Date: 01/07/2021
Sequence: SJB0344
Injection Date: 02/23/21
Lab Sample ID: SJB0344-CCV6
Injection Time: 05:18
Sequence Name: MOIL CCV

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1130	101807.5	115440.4		13.4	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2256.D

Date : 23-FEB-2021 05:18

Client ID:

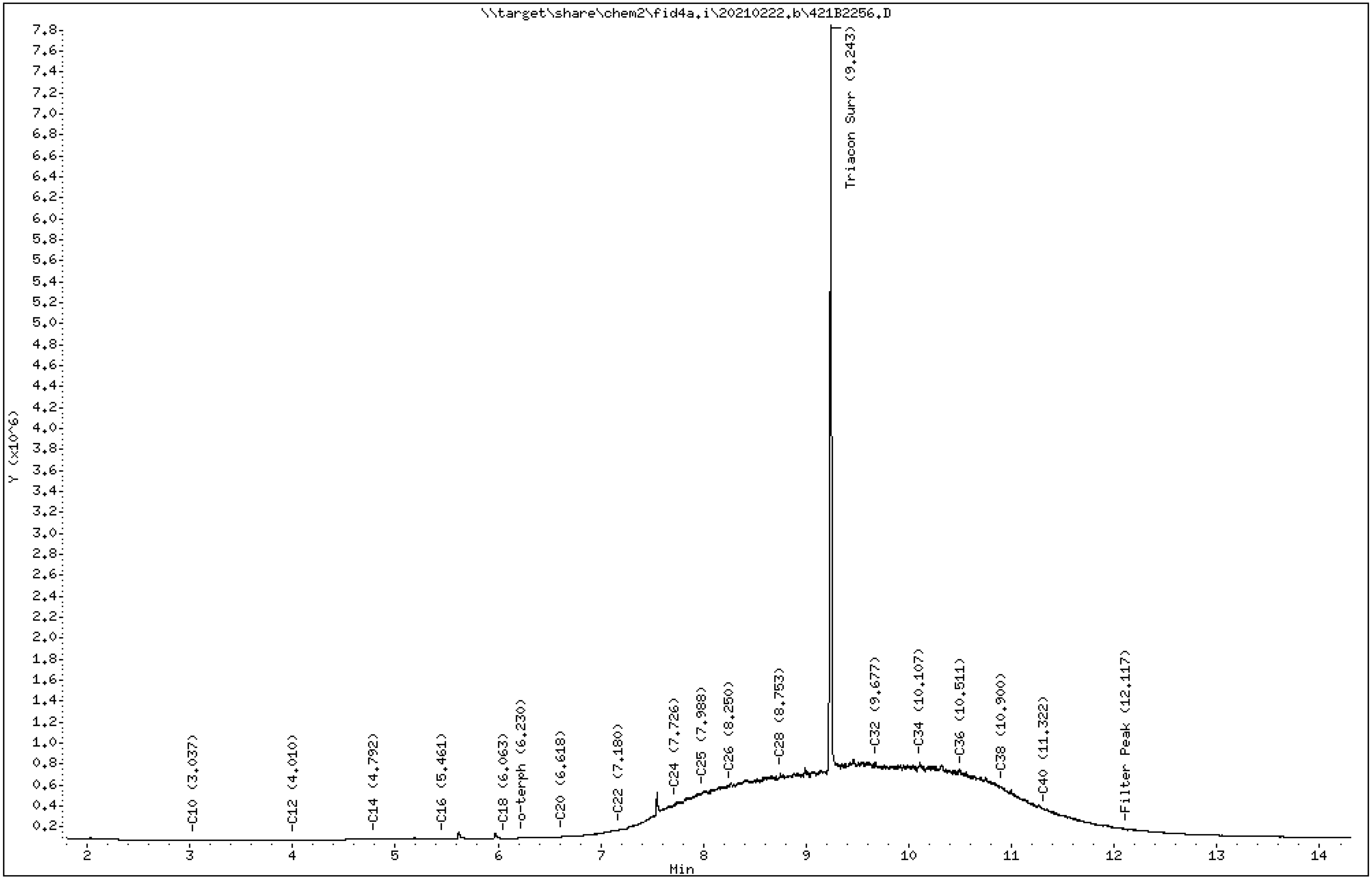
Instrument: fid4a.i

Sample Info: SEQ-CCV6

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2256.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV6
Client ID:
Injection: 23-FEB-2021 05:18
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.897	-0.007	14988	11135	WATPHD	(C12-C24)	12063199	87.7
C10	3.037	0.003	2906	712	WATPHM	(C24-C38)	115440398	1133.9
C12	4.010	-0.001	846	432	AK102	(C10-C25)	15850856	94.3
C14	4.792	0.005	11903	6518	AK103	(C25-C36)	98859629	1315.0
C16	5.461	0.008	16289	15378	OR.DIES	(C10-C28)	43732056	223.1
C18	6.063	0.012	17532	8729				
C20	6.618	0.001	33685	19748	JET-A	(C10-C18)	1602424	9.7
C22	7.180	0.005	99068	86880				
C24	7.726	0.004	347690	186821				
C25	7.988	-0.001	458270	267477				
C26	8.250	0.000	510631	152088				
C28	8.753	-0.000	634380	433311				
C32	9.677	-0.005	748308	838482				
C34	10.107	-0.001	737573	361780				
Filter Peak	12.117	0.000	108021	63928	BUNKERC	(C10-C38)	127565755	3231.4
C36	10.511	-0.002	646337	223511				
C38	10.900	-0.000	508728	276497				
C40	11.322	0.003	291838	101353				
o-terph	6.230	0.004	21708	11781				
Triacon Surr	9.243	-0.013	7142194	7455558	NAS DIES	(C10-C24)	12125357	62.1

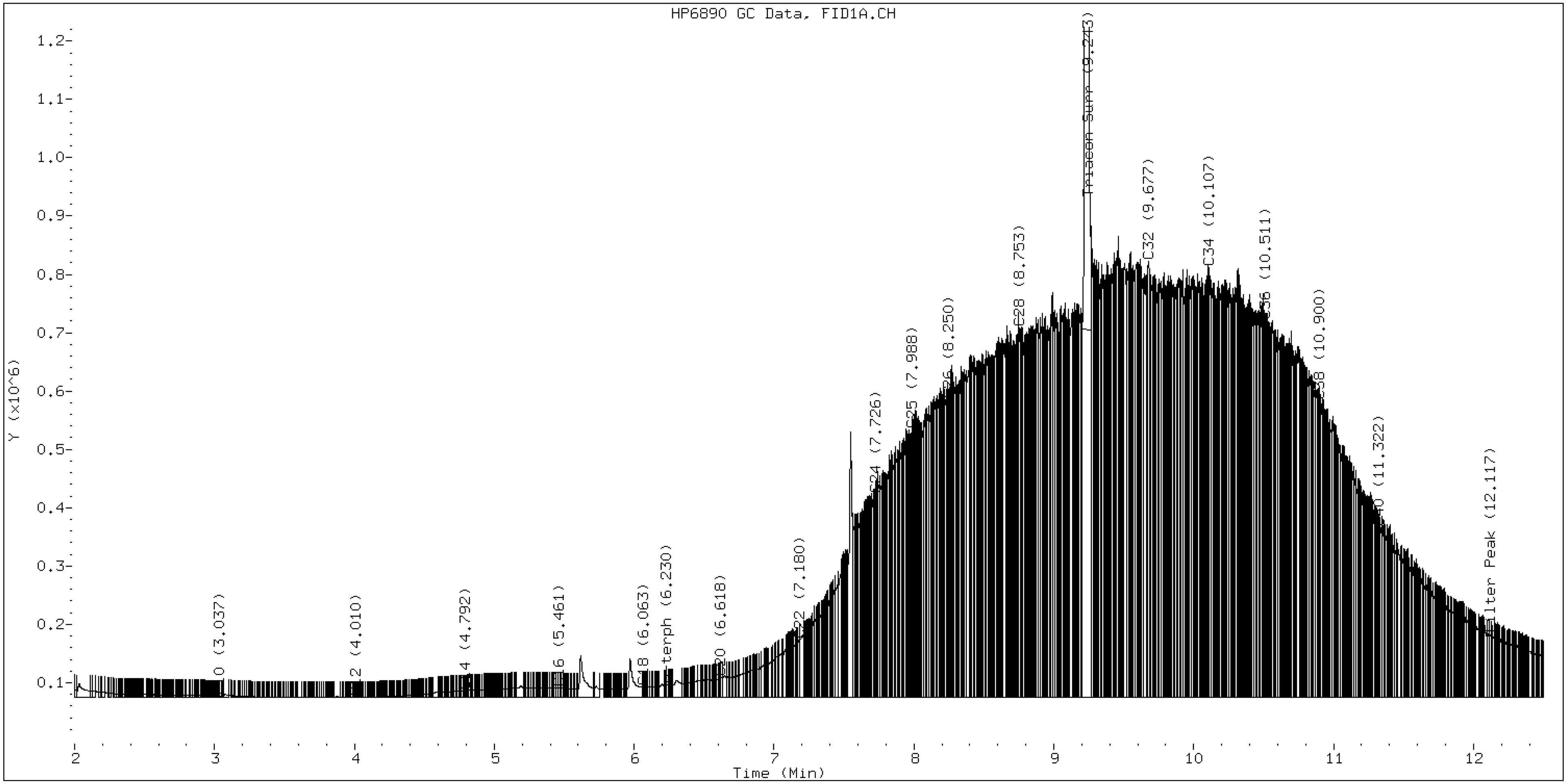
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	11781	0.1	
Triacontane	7455558	52.7	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

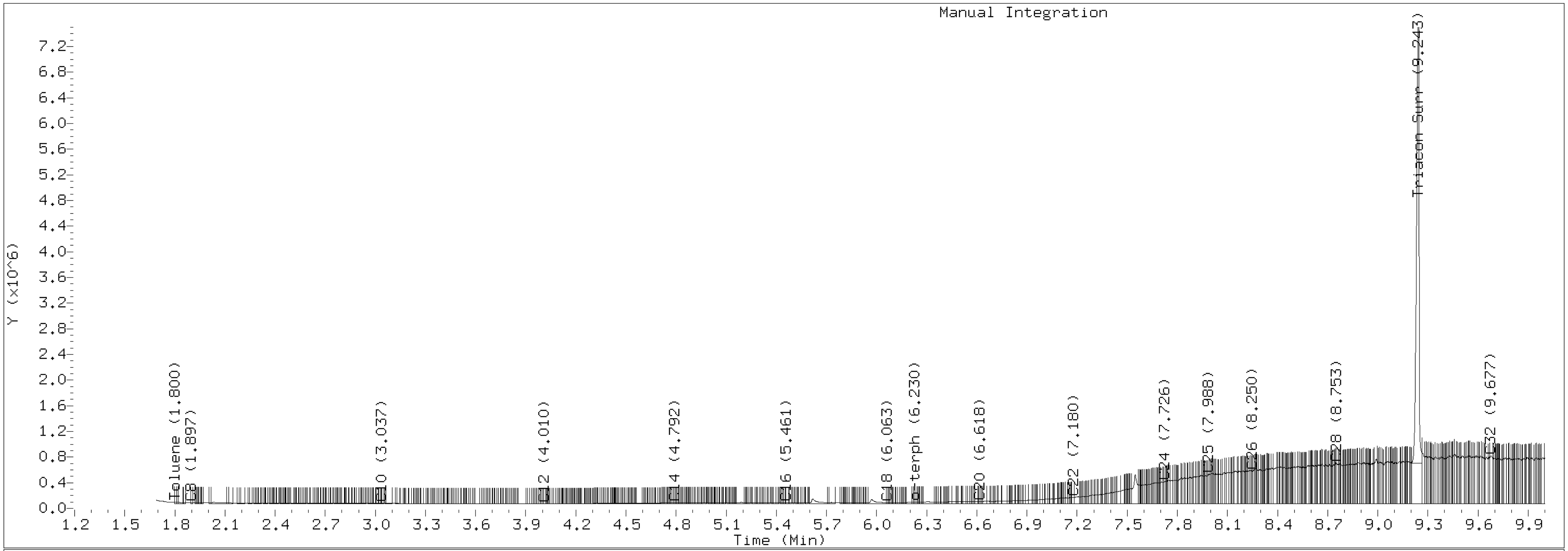
Datafile: FID4A, 20210222.b/421B2256.D SEQ-CCV6

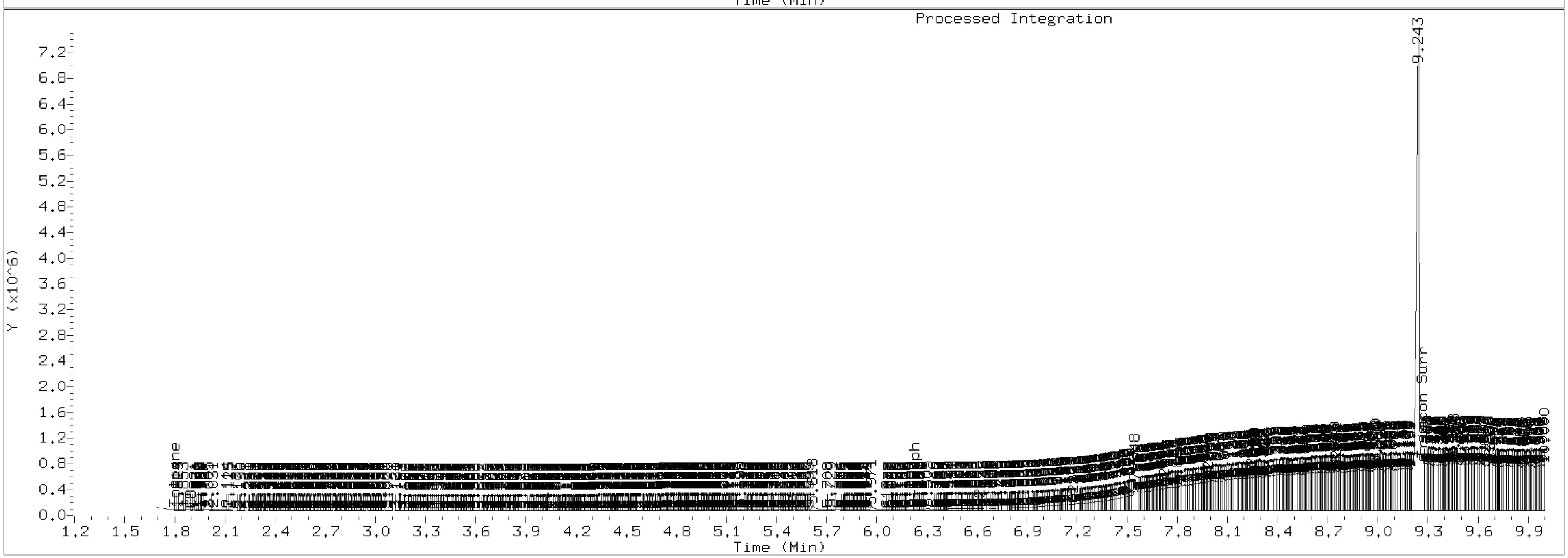


TPH Manual Integrations Report

Datafile: FID4A, 20210222.b/421B2256.D Injection: 23-FEB-2021 05:18

Lab ID:SEQ-CCV6





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	FID4	Calibration:	EA00020
Lab File ID:	421B2264.D	Calibration Date:	01/07/2021
Sequence:	SJB0344	Injection Date:	02/23/21
Lab Sample ID:	SJB0344-CCV7	Injection Time:	08:05
Sequence Name:	DIESEL CCV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	539	137498.2	148105.9		7.7	+/-15
o-Terphenyl	A	90.000	99.3	170577.7	188133.9		10.3	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2264.D

Date : 23-FEB-2021 08:05

Client ID:

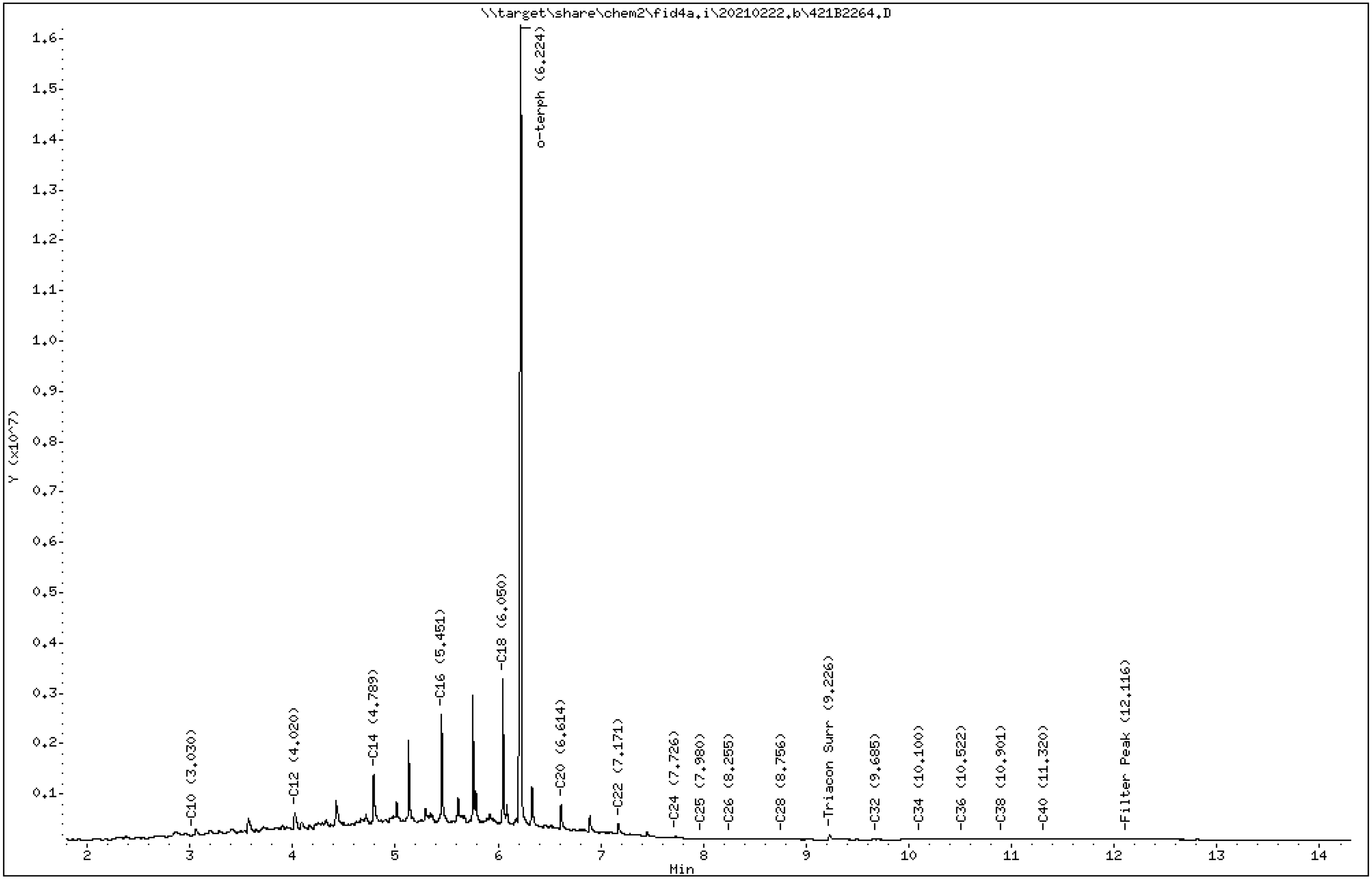
Instrument: fid4a.i

Sample Info: SEQ-CCV7

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2264.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV7
Client ID:
Injection: 23-FEB-2021 08:05
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.916	0.012	36048	42041	WATPHD	(C12-C24)	74052951	538.6
C10	3.030	-0.005	96927	108246	WATPHM	(C24-C38)	2929328	28.8
C12	4.020	0.009	557107	1411018	AK102	(C10-C25)	87090105	518.2
C14	4.789	0.001	1294221	2813374	AK103	(C25-C36)	2314706	30.8
C16	5.451	-0.002	2507662	3399993	OR.DIES	(C10-C28)	88050239	449.2
C18	6.050	-0.001	3209869	3100732				
C20	6.614	-0.003	718456	1326293	JET-A	(C10-C18)	67025754	404.1
C22	7.171	-0.004	321911	798998				
C24	7.726	0.004	71929	307630				
C25	7.980	-0.009	28459	7107				
C26	8.255	0.006	21058	13504				
C28	8.756	0.003	15019	5990				
C32	9.685	0.003	13657	3406				
C34	10.100	-0.008	14246	11331				
Filter Peak	12.116	-0.000	16055	7191	BUNKERC	(C10-C38)	89774702	2274.1
C36	10.522	0.009	16400	11426				
C38	10.901	0.000	17625	8775				
C40	11.320	0.001	18082	9929				
o-terph	6.224	-0.002	15801950	16932051				
Triacon Surr	9.226	-0.030	101720	242670	NAS DIES	(C10-C24)	86845374	445.0

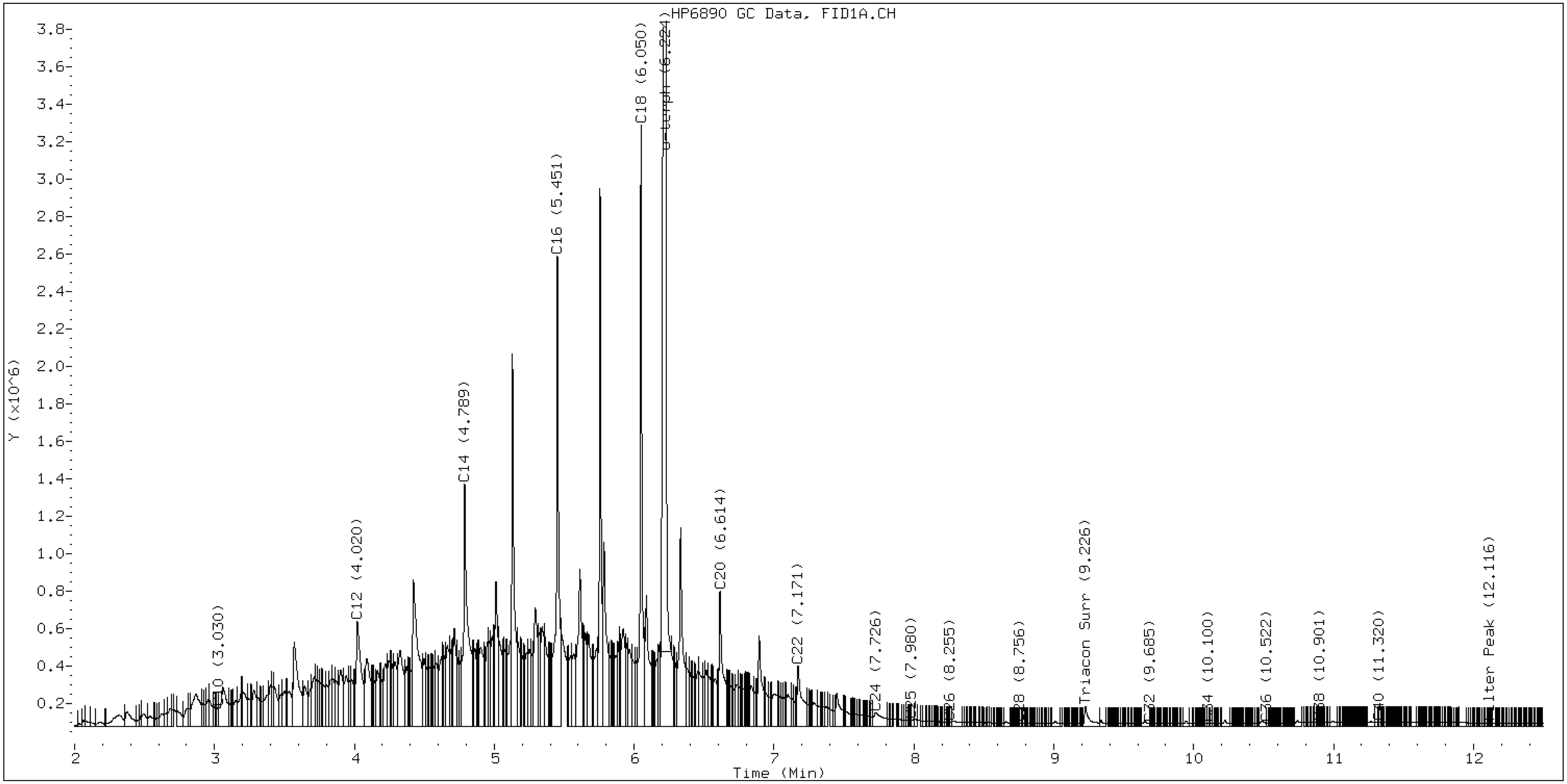
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	16932051	99.3	M
Triacontane	242670	1.7	

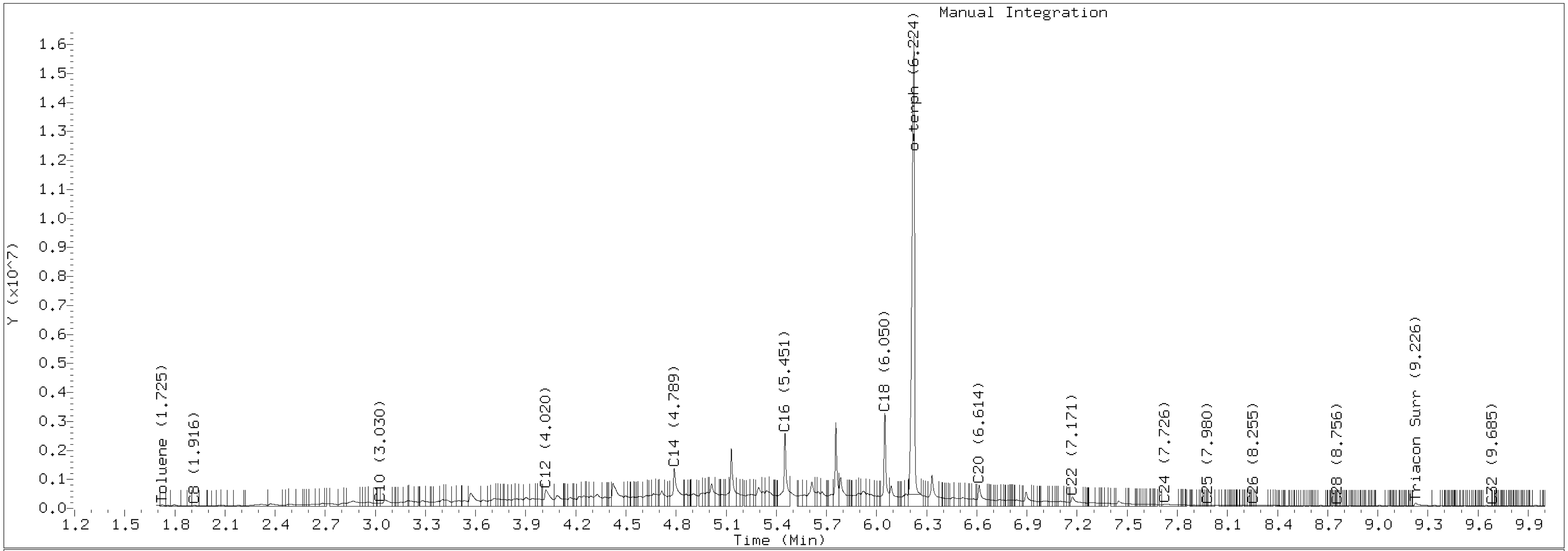
M Indicates the peak was manually integrated

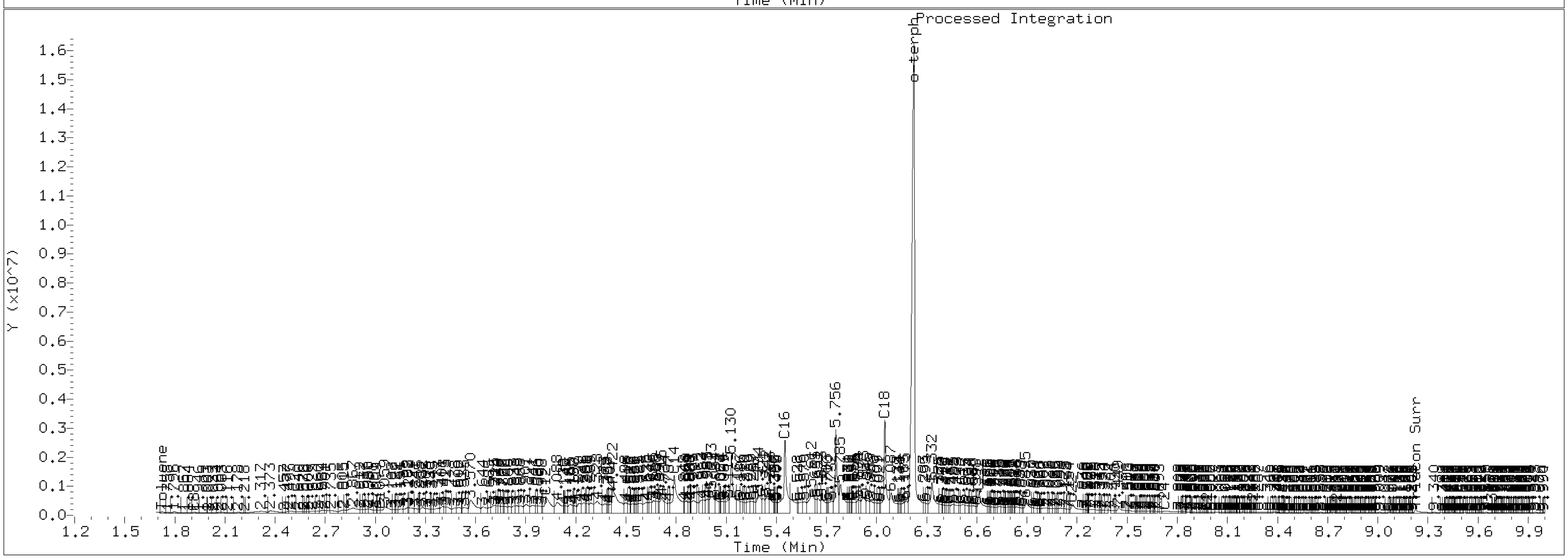
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210222.b/421B2264.D SEQ-CCV7



TPH Manual Integrations Report
Datafile: FID4A, 20210222.b/421B2264.D Injection: 23-FEB-2021 08:05
Lab ID:SEQ-CCV7





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc. | SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc | Project: ICS-Former NW Cooperage
Instrument ID: FID4 | Calibration: EA00020
Lab File ID: 421B2265.D | Calibration Date: 01/07/2021
Sequence: SJB0344 | Injection Date: 02/23/21
Lab Sample ID: SJB0344-CCV8 | Injection Time: 08:25
Sequence Name: MOIL CCV

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1140	101807.5	115599.3		13.6	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2265.D

Date : 23-FEB-2021 08:25

Client ID:

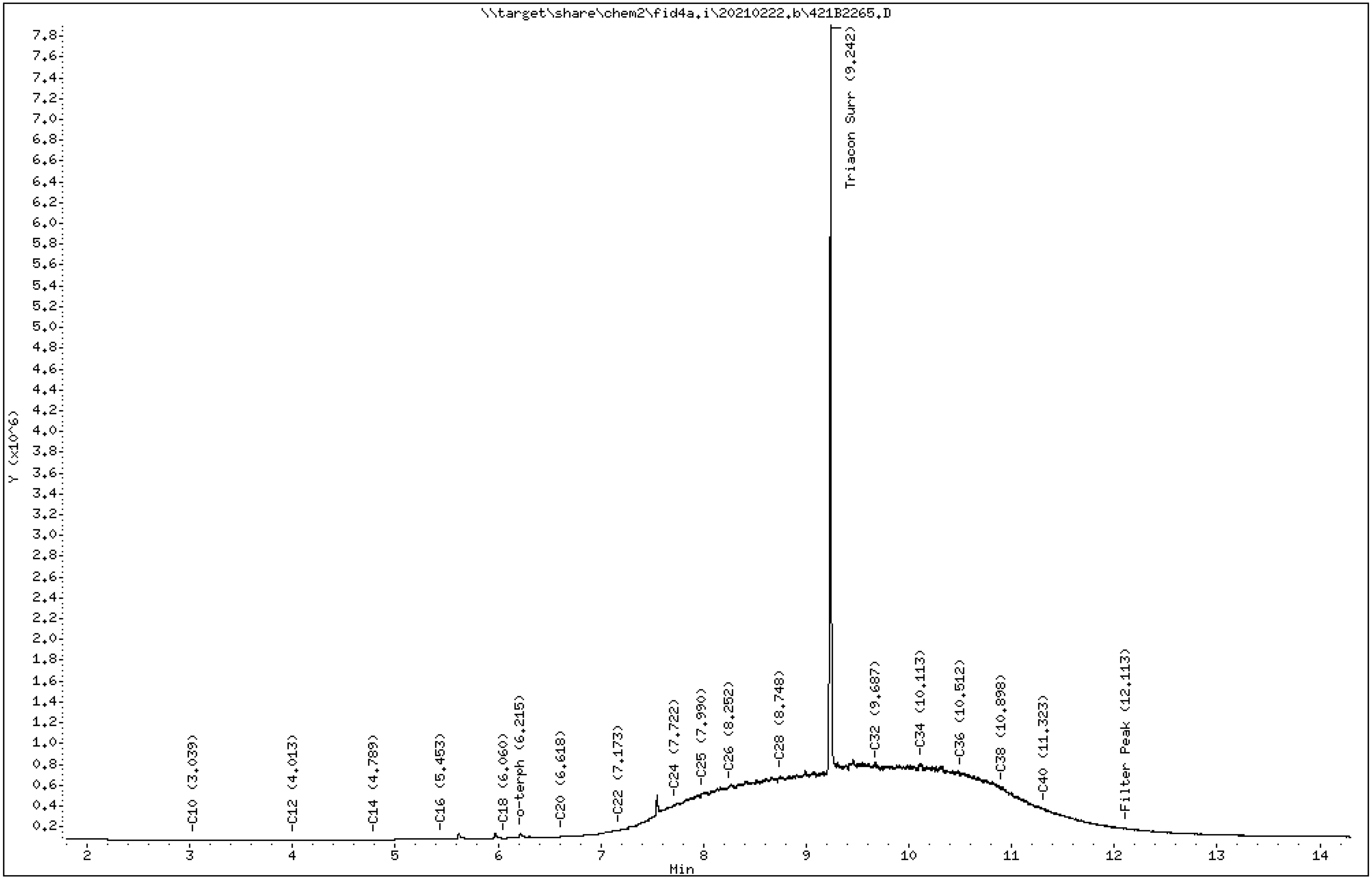
Instrument: fid4a.i

Sample Info: SEQ-CCV8

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2265.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV8
Client ID:
Injection: 23-FEB-2021 08:25
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.901	-0.003	12221	9020	WATPHD	(C12-C24)	11601217	84.4
C10	3.039	0.005	1623	1143	WATPHM	(C24-C38)	115599341	1135.5
C12	4.013	0.002	473	184	AK102	(C10-C25)	15397836	91.6
C14	4.789	0.002	5128	3015	AK103	(C25-C36)	98736955	1313.4
C16	5.453	-0.001	10732	2672	OR.DIES	(C10-C28)	42733132	218.0
C18	6.060	0.009	18307	5474				
C20	6.618	0.001	34242	20138	JET-A	(C10-C18)	1166123	7.0
C22	7.173	-0.002	97004	89564				
C24	7.722	-0.001	336459	133242				
C25	7.990	0.001	446122	566178				
C26	8.252	0.002	512299	304045				
C28	8.748	-0.005	624044	487678				
C32	9.687	0.004	712729	176739				
C34	10.113	0.005	737022	650930				
Filter Peak	12.113	-0.003	114887	78611	BUNKERC	(C10-C38)	127239682	3223.1
C36	10.512	-0.002	645444	475110				
C38	10.898	-0.003	494829	147688				
C40	11.323	0.003	298852	176927				
o-terph	6.215	-0.011	62832	194312				
Triacon Surr	9.242	-0.014	7182003	7360598	NAS DIES	(C10-C24)	11640341	59.6

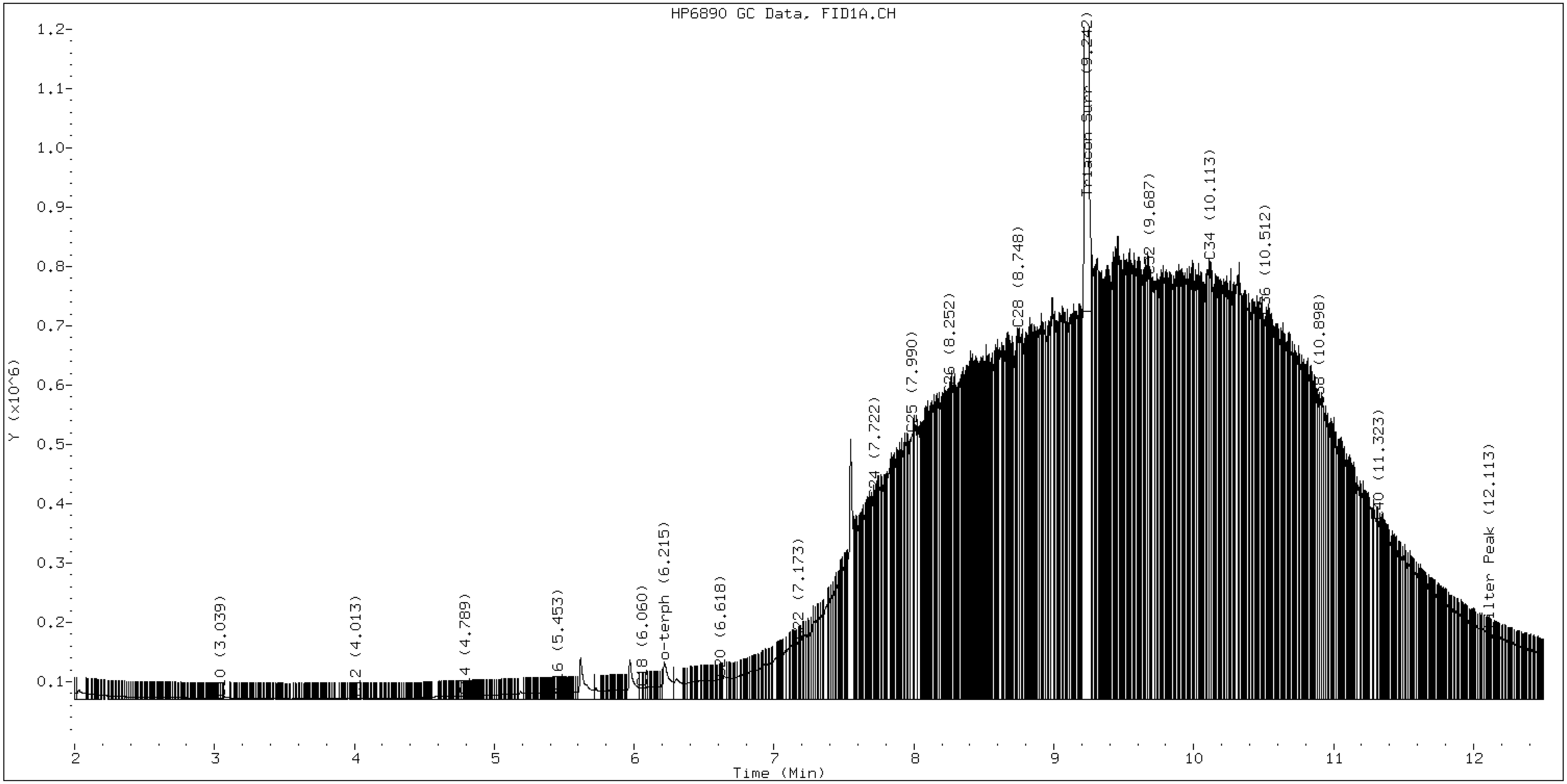
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	194312	1.1	
Triacontane	7360598	52.0	M

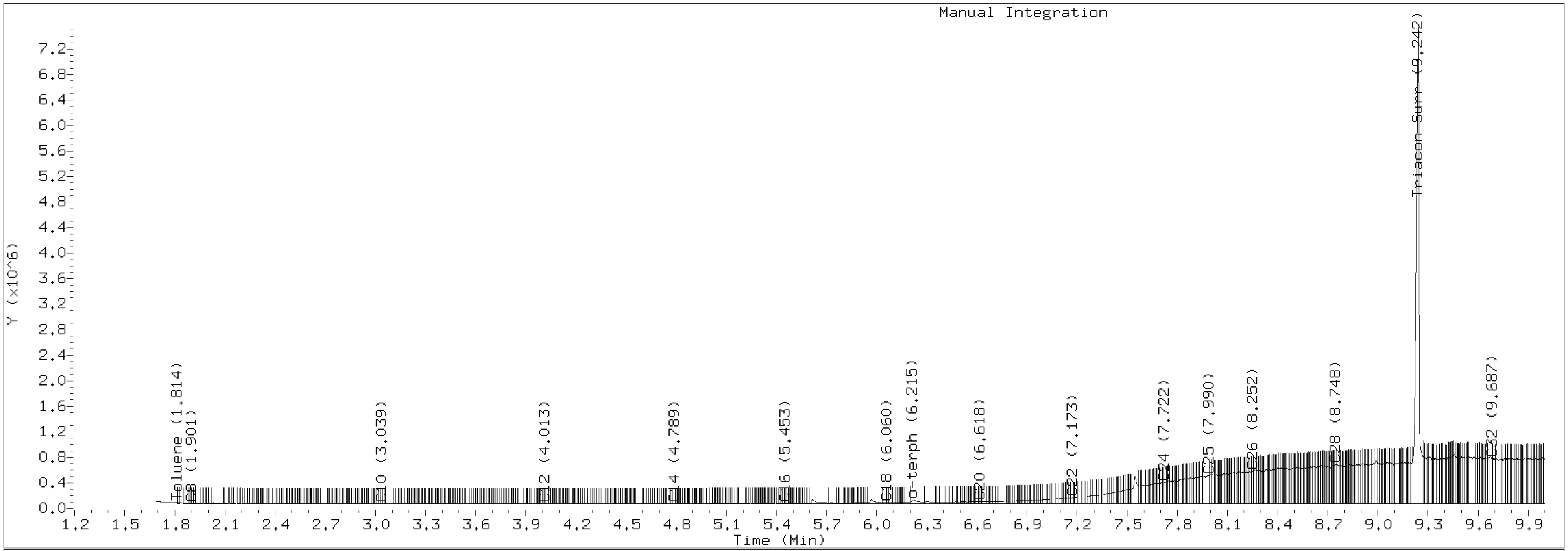
M Indicates the peak was manually integrated

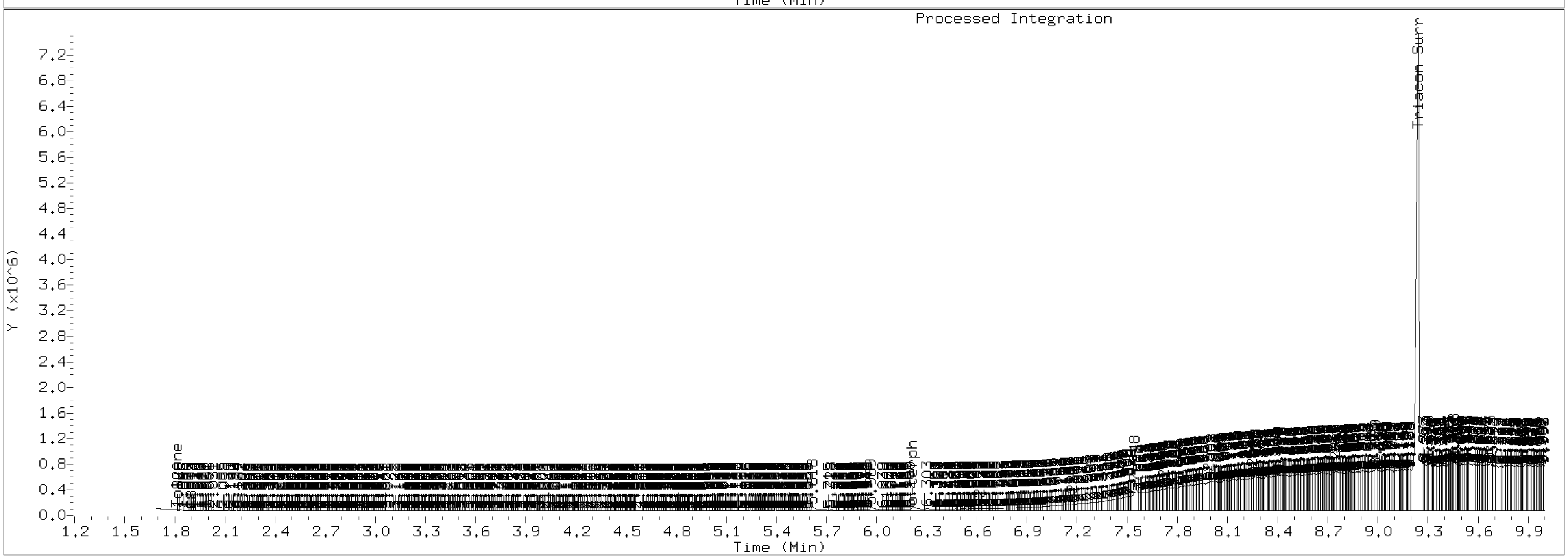
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210222.b/421B2265.D SEQ-CCV8



TPH Manual Integrations Report
Datafile: FID4A, 20210222.b/421B2265.D Injection: 23-FEB-2021 08:25
Lab ID:SEQ-CCV8





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B2271.D
Calibration Date: 01/07/2021
Sequence: SJB0344
Injection Date: 02/23/21
Lab Sample ID: SJB0344-CCV9
Injection Time: 10:31
Sequence Name: DIESEL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	525	137498.2	144447.3		5.1	+/-15
o-Terphenyl	A	90.000	94.3	170577.7	178735		4.8	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2271.D

Page 1

Date : 23-FEB-2021 10:31

Client ID:

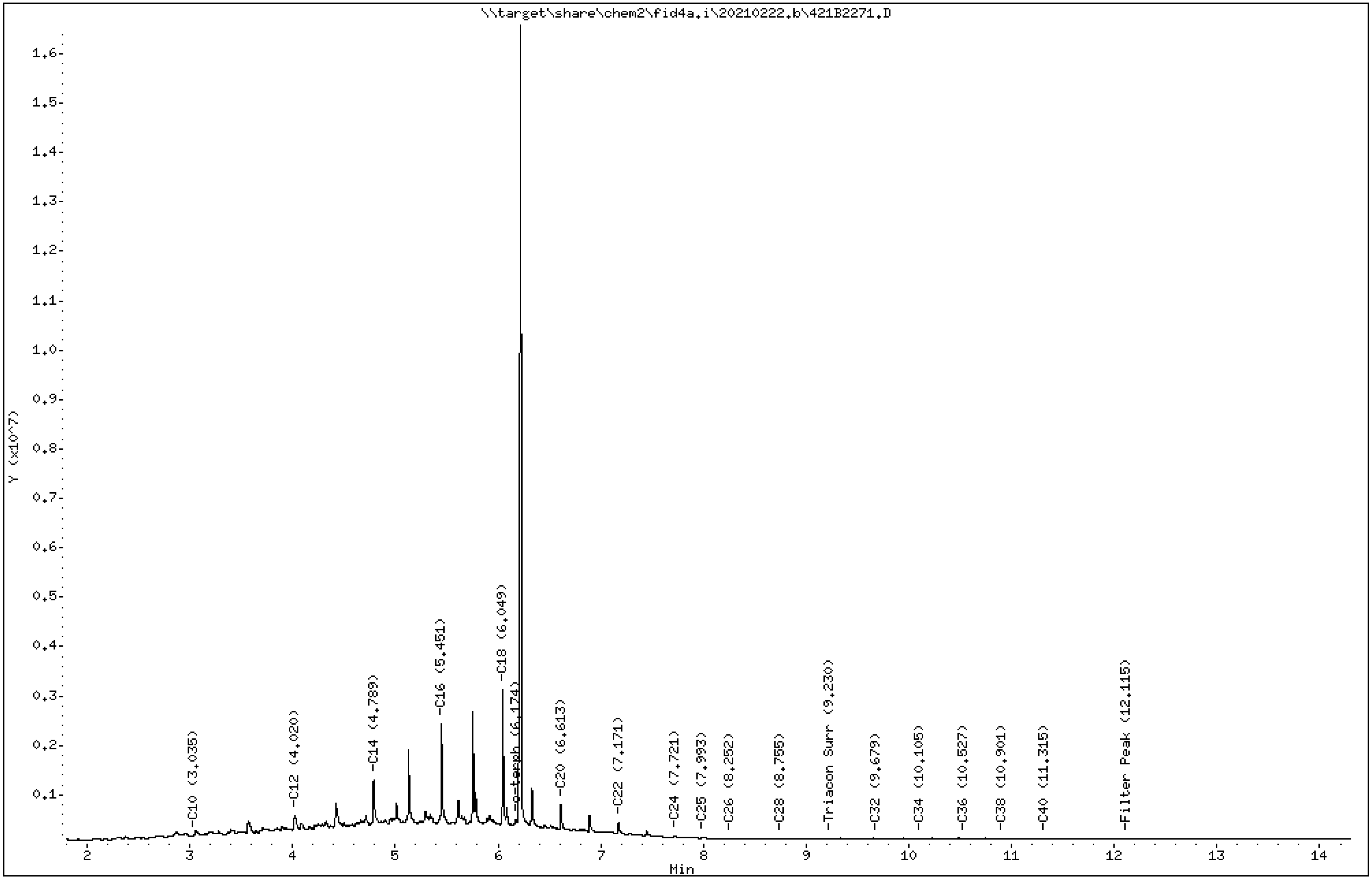
Instrument: fid4a.i

Sample Info: SEQ-CCV9

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2271.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCV9
Client ID:
Injection: 23-FEB-2021 10:31
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.915	0.010	35424	39289	WATPHD	(C12-C24)	72223632	525.3
C10	3.035	0.000	92964	36893	WATPHM	(C24-C38)	5387571	52.9
C12	4.020	0.009	512114	1404298	AK102	(C10-C25)	84080249	500.3
C14	4.789	0.001	1205714	2610827	AK103	(C25-C36)	4278471	56.9
C16	5.451	-0.002	2349998	3013021	OR.DIES	(C10-C28)	85733602	437.4
C18	6.049	-0.002	3045272	3115587				
C20	6.613	-0.004	728088	1019479	JET-A	(C10-C18)	63868374	385.1
C22	7.171	-0.004	350098	790125				
C24	7.721	-0.001	88872	104811				
C25	7.993	0.004	50398	143782				
C26	8.252	0.003	35122	40225				
C28	8.755	0.001	29050	10102				
C32	9.679	-0.004	25340	10074				
C34	10.105	-0.004	26374	15777				
Filter Peak	12.115	-0.001	24795	19745	BUNKERC	(C10-C38)	88995854	2254.4
C36	10.527	0.014	27099	10796				
C38	10.901	0.000	28688	17171				
C40	11.315	-0.004	27675	22043				
o-terph	6.223	-0.003	16144962	16086154				
Triacon Surr	9.230	-0.026	39976	129875	NAS DIES	(C10-C24)	83608282	428.4

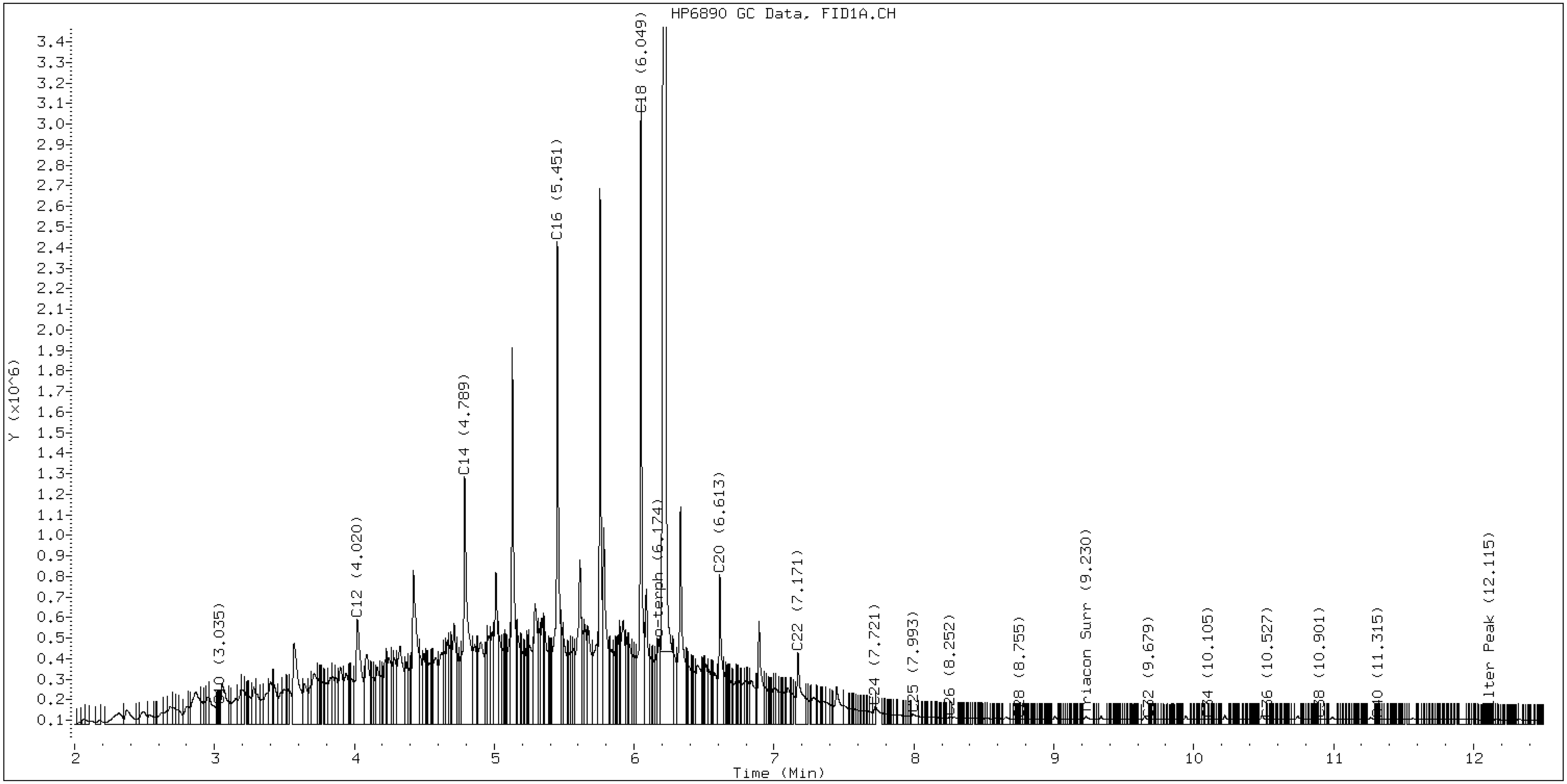
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	16086154	94.3	M
Triacontane	129875	0.9	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

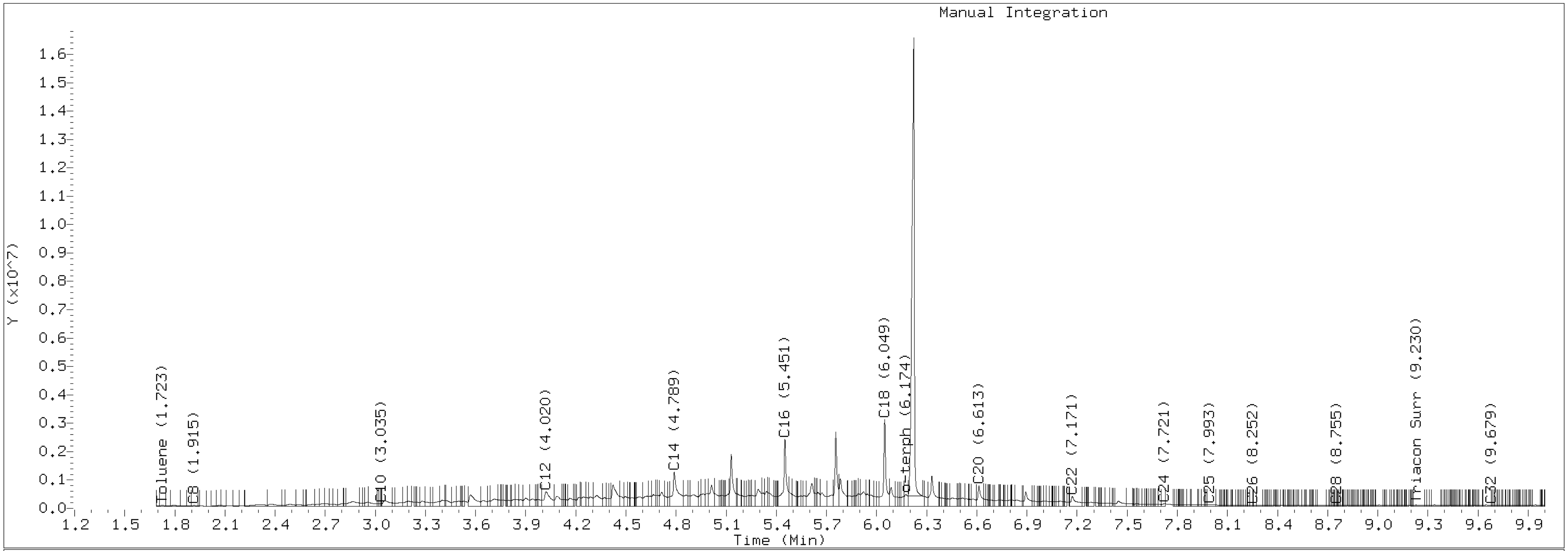
Datafile: FID4A, 20210222.b/421B2271.D SEQ-CCV9

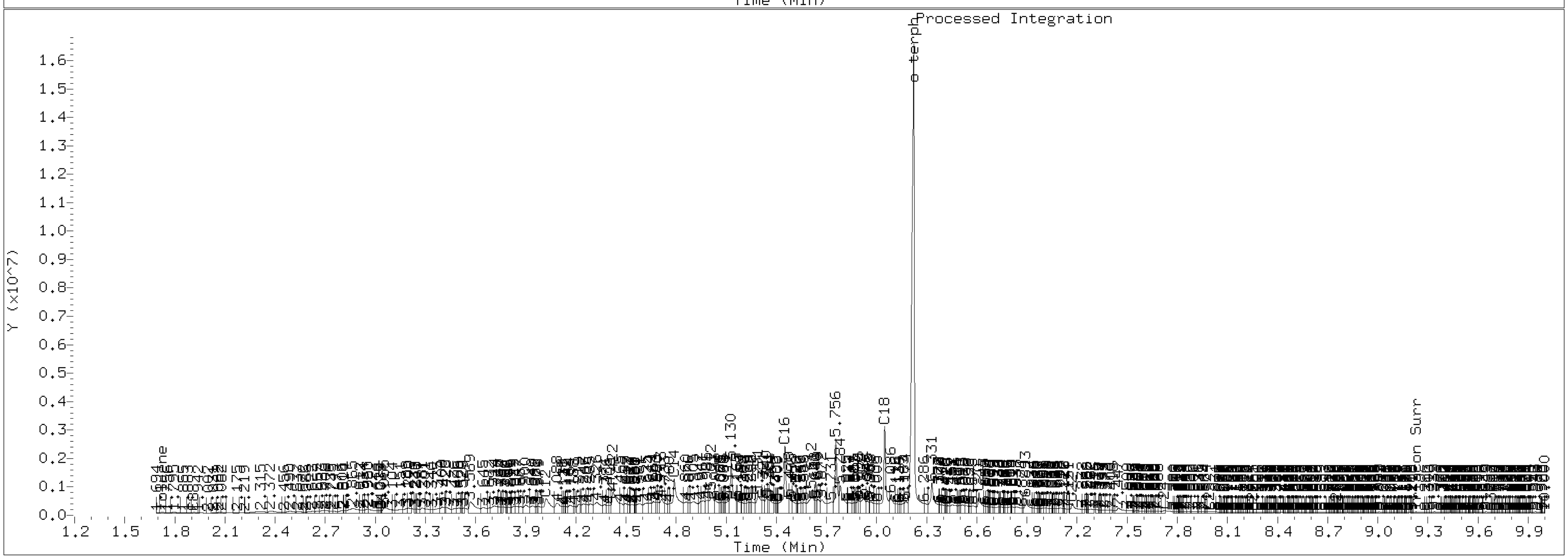


TPH Manual Integrations Report

Datafile: FID4A, 20210222.b/421B2271.D Injection: 23-FEB-2021 10:31

Lab ID:SEQ-CCV9





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: FID4
Calibration: EA00020
Lab File ID: 421B2272.D
Calibration Date: 01/07/2021
Sequence: SJB0344
Injection Date: 02/23/21
Lab Sample ID: SJB0344-CCVA
Injection Time: 10:52
Sequence Name: MOIL CCV

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	1040	101807.5	105577.5		3.7	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20210222.b\421B2272.D

Date : 23-FEB-2021 10:52

Client ID:

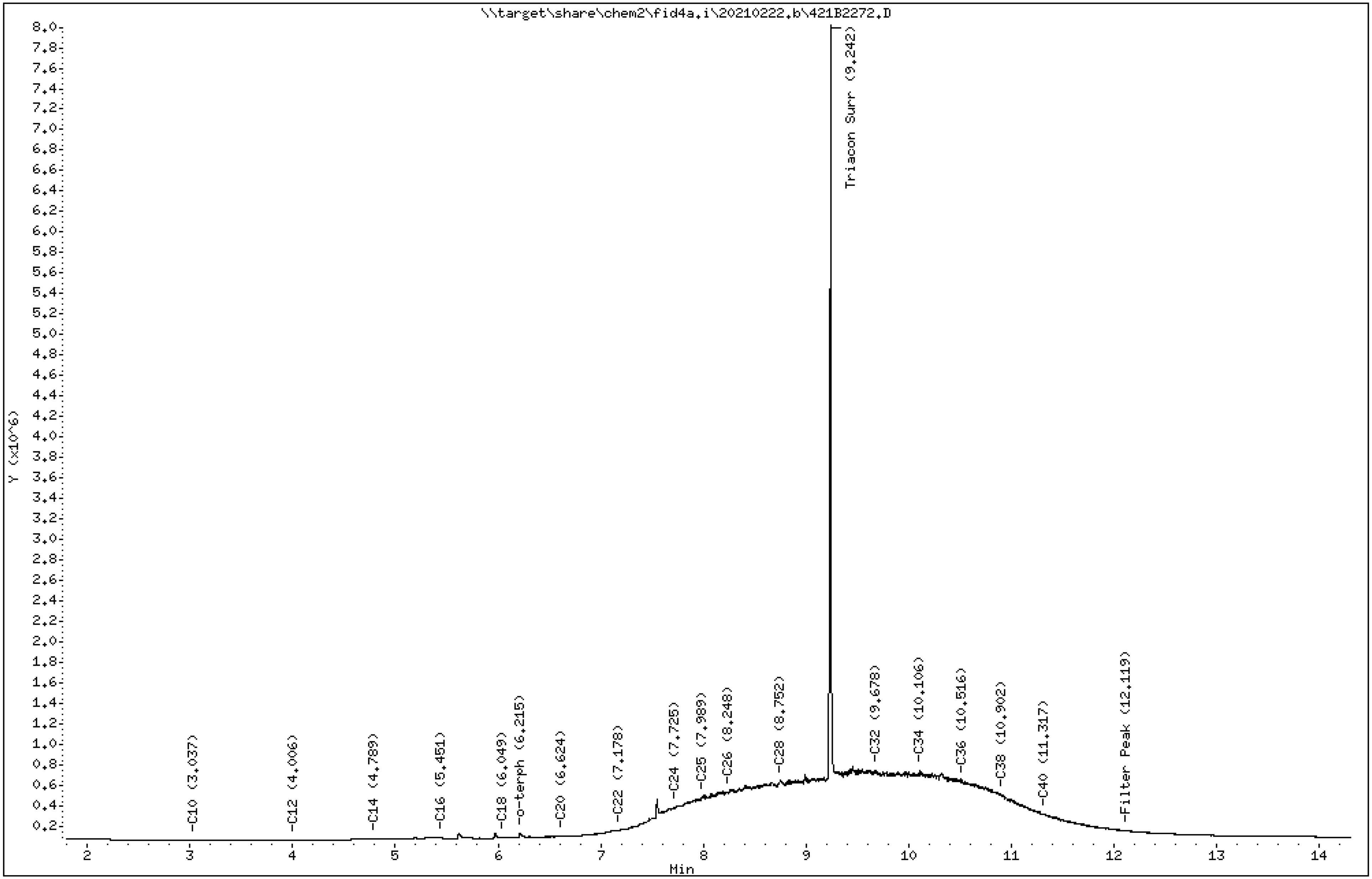
Instrument: fid4a.i

Sample Info: SEQ-CCVA

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20210222.b/421B2272.D
Method: 20210222.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 02/23/2021
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:08-JAN-2021 M.Oil:08-JAN-2021

ARI ID: SEQ-CCVA
Client ID:
Injection: 23-FEB-2021 10:52
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.902	-0.002	12532	21713	WATPHD	(C12-C24)	11902532	86.6
C10	3.037	0.003	2260	1207	WATPHM	(C24-C38)	105577535	1037.0
C12	4.006	-0.006	623	321	AK102	(C10-C25)	15561116	92.6
C14	4.789	0.002	10886	4867	AK103	(C25-C36)	90565371	1204.7
C16	5.451	-0.002	20275	21075	OR.DIES	(C10-C28)	40804655	208.2
C18	6.049	-0.002	21719	9695				
C20	6.624	0.008	37269	52635	JET-A	(C10-C18)	1755719	10.6
C22	7.178	0.003	98032	126756				
C24	7.725	0.003	316568	78875				
C25	7.989	0.000	416952	186179				
C26	8.248	-0.002	469982	140369				
C28	8.752	-0.002	571715	227468				
C32	9.678	-0.004	682956	404442				
C34	10.106	-0.002	674369	361198				
Filter Peak	12.119	0.003	91780	36447	BUNKERC	(C10-C38)	117525850	2977.1
C36	10.516	0.003	568207	310553				
C38	10.902	0.001	443306	217873				
C40	11.317	-0.002	253869	151115				
o-terph	6.215	-0.011	71753	213838				
Triacon Surr	9.242	-0.014	7352956	6852367	NAS DIES	(C10-C24)	11948314	61.2

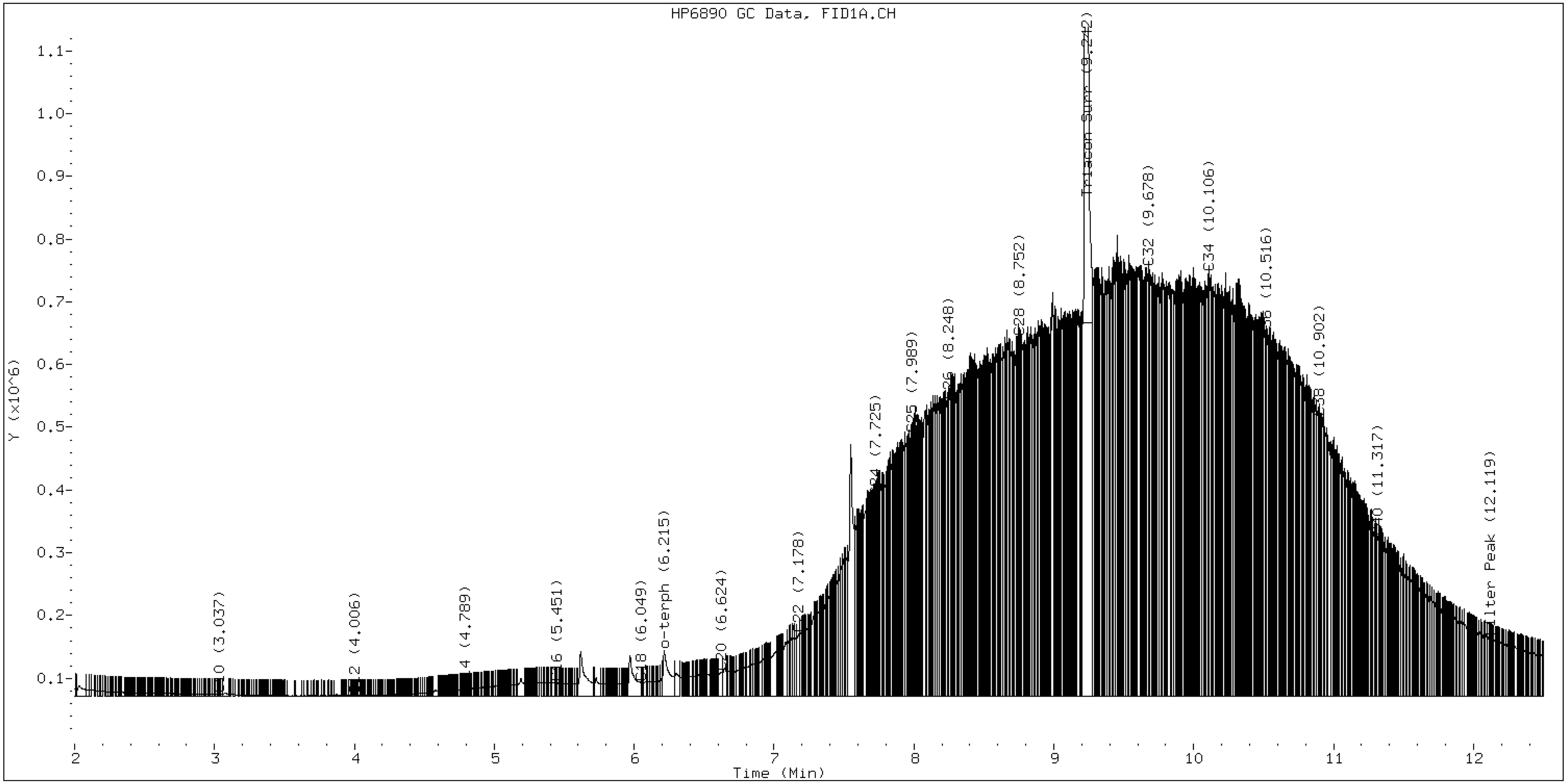
Range Times: NW Diesel(4.012 - 7.723) AK102(3.03 - 7.99) Jet A(3.03 - 6.05)
NW M.Oil(7.72 - 10.90) AK103(7.99 - 10.51) OR Diesel(3.03 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	213838	1.3	
Triacontane	6852367	48.5	M

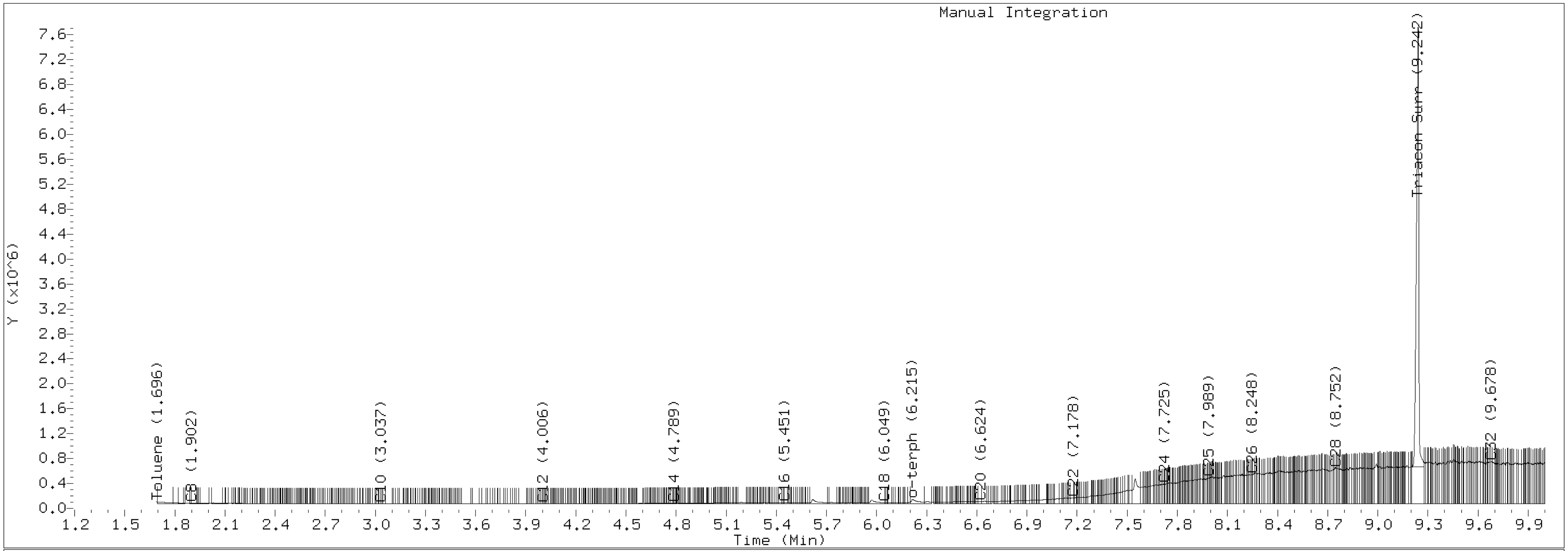
M Indicates the peak was manually integrated

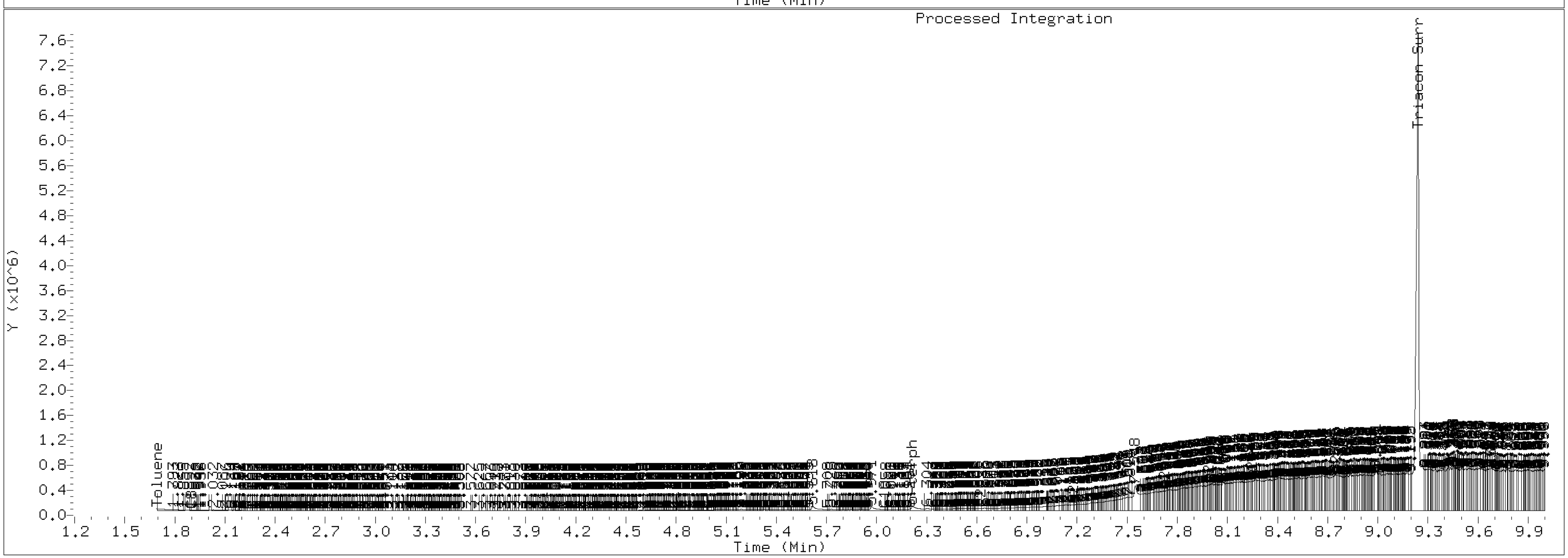
Analyte	RF	Curve Date
o-Terph Surr	170577.7	25-OCT-2019
Triacon Surr	141415.7	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	137498.1	08-JAN-2021
Motor Oil	101807.5	08-JAN-2021
AK102	168065.4	08-JAN-2021
AK103	75177.3	08-JAN-2021
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20210222.b/421B2272.D SEQ-CCVA



TPH Manual Integrations Report
Datafile: FID4A, 20210222.b/421B2272.D Injection: 23-FEB-2021 10:52
Lab ID:SEQ-CCVA





Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJA0096	Instrument:	FID4
		Calibration:	EA00020

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SJA0096-IBL1	421A0704.D	NA	01/07/21 15:42
Instrument Blank	SJA0096-IBL2	421A0705.D	NA	01/07/21 16:03
DIESEL 50	SJA0096-CAL1	421A0706.D	NA	01/07/21 16:23
DIESEL 100	SJA0096-CAL2	421A0707.D	NA	01/07/21 16:45
DIESEL 250	SJA0096-CAL3	421A0708.D	NA	01/07/21 17:06
DIESEL 500	SJA0096-CAL4	421A0709.D	NA	01/07/21 17:27
DIESEL 1000	SJA0096-CAL5	421A0710.D	NA	01/07/21 17:48
DIESEL 2500	SJA0096-CAL6	421A0711.D	NA	01/07/21 18:09
DIESEL SCV	SJA0096-SCV1	421A0712.D	NA	01/07/21 18:30
MOIL 100	SJA0096-CAL7	421A0713.D	NA	01/07/21 18:51
MOIL 250	SJA0096-CAL8	421A0714.D	NA	01/07/21 19:12
MOIL 500	SJA0096-CAL9	421A0715.D	NA	01/07/21 19:33
MOIL 1000	SJA0096-CALA	421A0716.D	NA	01/07/21 19:54
MOIL 2500	SJA0096-CALB	421A0717.D	NA	01/07/21 20:15
MOIL 5000	SJA0096-CALC	421A0718.D	NA	01/07/21 20:36
MOIL SCV	SJA0096-SCV2	421A0719.D	NA	01/07/21 20:57
AK103 100	SJA0096-CALD	421A0720.D	NA	01/07/21 21:18
AK103 250	SJA0096-CALE	421A0721.D	NA	01/07/21 21:39
AK103 500	SJA0096-CALF	421A0722.D	NA	01/07/21 22:00
AK103 1000	SJA0096-CALG	421A0723.D	NA	01/07/21 22:21
AK103 2500	SJA0096-CALH	421A0724.D	NA	01/07/21 22:43
AK103 5000	SJA0096-CALI	421A0725.D	NA	01/07/21 23:04
AK103 SCV	SJA0096-SCV3	421A0726.D	NA	01/07/21 23:25

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc. | SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc | Project: ICS-Former NW Cooperage
Sequence: SJB0139 | Instrument: FID4
Calibration: EA00020

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SJB0139-IBL1	421B0903.D	NA	02/09/21 09:30
Instrument Blank	SJB0139-IBL2	421B0904.D	NA	02/09/21 09:51
DIESEL ICV	SJB0139-ICV1	421B0905.D	NA	02/09/21 10:11
MOIL ICV	SJB0139-ICV2	421B0906.D	NA	02/09/21 10:32
Blank	BJB0148-BLK1	421B0907.D	Solid	02/09/21 10:53
LCS	BJB0148-BS1	421B0908.D	Solid	02/09/21 11:14
ZZZZZ	21A0352-43	421B0909.D	Solid	02/09/21 11:35
ZZZZZ	21A0352-44	421B0910.D	Solid	02/09/21 11:56
ZZZZZ	21A0352-45	421B0911.D	Solid	02/09/21 12:17
DIESEL CCV	SJB0139-CCV1	421B0914.D	NA	02/09/21 13:21
MOIL CCV	SJB0139-CCV2	421B0915.D	NA	02/09/21 13:42
ZZZZZ	BJB0231-BLK1	421B0916.D	Solid	02/09/21 14:03
ZZZZZ	BJB0231-BS1	421B0917.D	Solid	02/09/21 14:24
ZZZZZ	BJB0231-BSD1	421B0918.D	Solid	02/09/21 14:45
ZZZZZ	21B0065-01	421B0919.D	Solid	02/09/21 15:06
ZZZZZ	21B0065-02	421B0920.D	Solid	02/09/21 15:27
ZZZZZ	21B0065-03	421B0921.D	Solid	02/09/21 15:48
ZZZZZ	21B0065-04	421B0922.D	Solid	02/09/21 16:09
DIESEL CCV	SJB0139-CCV3	421B0924.D	NA	02/09/21 16:51
MOIL CCV	SJB0139-CCV4	421B0925.D	NA	02/09/21 17:12
ZZZZZ	21B0086-05	421B0928.D	Solid	02/09/21 18:15
ZZZZZ	21B0086-06	421B0929.D	Solid	02/09/21 18:36
ZZZZZ	21B0086-07	421B0930.D	Solid	02/09/21 18:56
ZZZZZ	21B0086-09	421B0931.D	Solid	02/09/21 19:17
ZZZZZ	21B0086-10	421B0932.D	Solid	02/09/21 19:38
ZZZZZ	21B0086-12	421B0933.D	Solid	02/09/21 19:59
ZZZZZ	21B0086-13	421B0934.D	Solid	02/09/21 20:20
ZZZZZ	21B0106-02	421B0935.D	Solid	02/09/21 20:41
DIESEL CCV	SJB0139-CCV5	421B0936.D	NA	02/09/21 21:02
MOIL CCV	SJB0139-CCV6	421B0937.D	NA	02/09/21 21:22

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SJB0139
Instrument: FID4
Calibration: EA00020

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BJB0188-BLK1	421B0938.D	Solid	02/09/21 21:43
ZZZZZ	BJB0188-BS1	421B0939.D	Solid	02/09/21 22:04
ZZZZZ	BJB0188-BSD1	421B0940.D	Solid	02/09/21 22:25
ZZZZZ	21B0005-01	421B0941.D	Solid	02/09/21 22:46
ZZZZZ	21B0005-02	421B0942.D	Solid	02/09/21 23:06
ZZZZZ	21B0005-03	421B0943.D	Solid	02/09/21 23:27
ZZZZZ	21B0005-05	421B0944.D	Solid	02/09/21 23:48
ZZZZZ	21B0005-06	421B0947.D	Solid	02/10/21 00:50
ZZZZZ	21B0005-07	421B0948.D	Solid	02/10/21 01:11
ZZZZZ	21B0005-09	421B0949.D	Solid	02/10/21 01:31
ZZZZZ	21B0005-10	421B0950.D	Solid	02/10/21 01:52
ZZZZZ	21B0005-11	421B0951.D	Solid	02/10/21 02:13
ZZZZZ	21B0005-12	421B0952.D	Solid	02/10/21 02:34
DIESEL CCV	SJB0139-CCV7	421B0953.D	NA	02/10/21 02:55
MOIL CCV	SJB0139-CCV8	421B0954.D	NA	02/10/21 03:15
ZZZZZ	21B0005-13	421B0955.D	Solid	02/10/21 03:36
ZZZZZ	21B0005-14	421B0956.D	Solid	02/10/21 03:57
ZZZZZ	21B0005-15	421B0957.D	Solid	02/10/21 04:18
ZZZZZ	21B0005-19	421B0958.D	Solid	02/10/21 04:38
ZZZZZ	21B0005-20	421B0959.D	Solid	02/10/21 04:59
ZZZZZ	21B0005-21	421B0960.D	Solid	02/10/21 05:20
ZZZZZ	21B0005-22	421B0961.D	Solid	02/10/21 05:41
ZZZZZ	21B0005-33	421B0962.D	Solid	02/10/21 06:01
DIESEL CCV	SJB0139-CCV9	421B0963.D	NA	02/10/21 06:22
MOIL CCV	SJB0139-CCVA	421B0964.D	NA	02/10/21 06:43

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SJB0251
Instrument: FID4
Calibration: EA00020

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SJB0251-IBL1	421B1703.D	NA	02/17/21 11:33
Instrument Blank	SJB0251-IBL2	421B1704.D	NA	02/17/21 11:54
DIESEL ICV	SJB0251-ICV1	421B1705.D	NA	02/17/21 12:14
MOIL ICV	SJB0251-ICV2	421B1706.D	NA	02/17/21 12:35
ZZZZZ	21A0376-14	421B1707.D	Solid	02/17/21 12:56
ZZZZZ	21A0376-16	421B1708.D	Solid	02/17/21 13:17
ZZZZZ	21A0376-17	421B1709.D	Solid	02/17/21 13:38
ZZZZZ	21A0376-18	421B1710.D	Solid	02/17/21 13:58
ZZZZZ	21A0376-76	421B1711.D	Solid	02/17/21 14:19
ZZZZZ	21A0376-77	421B1712.D	Solid	02/17/21 14:40
ZZZZZ	21A0376-80	421B1713.D	Solid	02/17/21 15:01
ZZZZZ	21A0376-81	421B1714.D	Solid	02/17/21 15:22
ZZZZZ	21A0376-82	421B1715.D	Solid	02/17/21 15:42
ZZZZZ	21A0376-83	421B1716.D	Solid	02/17/21 16:03
DIESEL CCV	SJB0251-CCV1	421B1717.D	NA	02/17/21 16:24
MOIL CCV	SJB0251-CCV2	421B1718.D	NA	02/17/21 16:45
ZZZZZ	BJB0479-BLK1	421B1719.D	Water	02/17/21 17:06
ZZZZZ	BJB0479-BS1	421B1720.D	Water	02/17/21 17:27
ZZZZZ	BJB0479-BSD1	421B1721.D	Water	02/17/21 17:47
ZZZZZ	21B0201-01	421B1722.D	Water	02/17/21 18:08
ZZZZZ	21B0201-02	421B1723.D	Water	02/17/21 18:29
ZZZZZ	21B0207-01	421B1724.D	Water	02/17/21 18:50
P8-20N-5	21A0361-03	421B1726.D	Solid	02/17/21 19:32
DIESEL CCV	SJB0251-CCV3	421B1727.D	NA	02/17/21 19:52
MOIL CCV	SJB0251-CCV4	421B1728.D	NA	02/17/21 20:13
P8-10NW-5	21A0361-07	421B1730.D	Solid	02/17/21 20:54
P8-15SW-1	21A0361-09	421B1731.D	Solid	02/17/21 21:15
P8-15SW-5	21A0361-11	421B1732.D	Solid	02/17/21 21:36
P8-10SE-1	21A0361-13	421B1733.D	Solid	02/17/21 21:57
P8-10SE-5	21A0361-15	421B1734.D	Solid	02/17/21 22:17

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0251	Instrument:	FID4
		Calibration:	EA00020

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
P8-10NE-1	21A0361-17	421B1735.D	Solid	02/17/21 22:38
P8-10NE-5	21A0361-19	421B1736.D	Solid	02/17/21 22:58
P8-7W-5	21A0361-23	421B1738.D	Solid	02/17/21 23:40
DIESEL CCV	SJB0251-CCV5	421B1739.D	NA	02/18/21 00:00
MOIL CCV	SJB0251-CCV6	421B1740.D	NA	02/18/21 00:21
P8-10E-5	21A0361-27	421B1742.D	Solid	02/18/21 01:02
P8-10N-5	21A0361-31	421B1744.D	Solid	02/18/21 01:44
ZZZZZ	21A0376-91	421B1745.D	Solid	02/18/21 02:04
ZZZZZ	BJB0266-BLK1	421B1746.D	Water	02/18/21 02:25
ZZZZZ	BJB0266-BS1	421B1747.D	Water	02/18/21 02:46
ZZZZZ	BJB0266-BSD1	421B1748.D	Water	02/18/21 03:06
ZZZZZ	21B0079-01	421B1749.D	Water	02/18/21 03:27
ZZZZZ	21B0079-03	421B1750.D	Water	02/18/21 03:48
ZZZZZ	21B0079-05	421B1751.D	Water	02/18/21 04:08
ZZZZZ	21B0079-07	421B1752.D	Water	02/18/21 04:29
ZZZZZ	21B0079-09	421B1753.D	Water	02/18/21 04:50
DIESEL CCV	SJB0251-CCV7	421B1754.D	NA	02/18/21 05:10
MOIL CCV	SJB0251-CCV8	421B1755.D	NA	02/18/21 05:31
ZZZZZ	21B0079-11	421B1756.D	Water	02/18/21 05:52
ZZZZZ	21B0079-13	421B1757.D	Water	02/18/21 06:13
ZZZZZ	21B0079-15	421B1758.D	Water	02/18/21 06:33
ZZZZZ	21B0079-17	421B1759.D	Water	02/18/21 06:54
ZZZZZ	21B0079-19	421B1760.D	Water	02/18/21 07:15
ZZZZZ	BJB0441-BLK1	421B1761.D	Solid	02/18/21 07:36
ZZZZZ	BJB0441-BS1	421B1762.D	Solid	02/18/21 07:57
ZZZZZ	BJB0441-BSD1	421B1763.D	Solid	02/18/21 08:17
ZZZZZ	21B0176-02	421B1764.D	Solid	02/18/21 08:38
ZZZZZ	21B0176-03	421B1765.D	Solid	02/18/21 08:59
ZZZZZ	21B0176-06	421B1766.D	Solid	02/18/21 09:20
ZZZZZ	21B0176-07	421B1767.D	Solid	02/18/21 09:41

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SJB0251
Instrument: FID4
Calibration: EA00020

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	21B0176-08	421B1768.D	Solid	02/18/21 10:02
DIESEL CCV	SJB0251-CCV9	421B1769.D	NA	02/18/21 10:23
MOIL CCV	SJB0251-CCVA	421B1770.D	NA	02/18/21 10:43

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SJB0344
Instrument: FID4
Calibration: EA00020

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SJB0344-IBL1	421B2204.D	NA	02/22/21 11:09
Instrument Blank	SJB0344-IBL2	421B2205.D	NA	02/22/21 11:30
DIESEL ICV	SJB0344-ICV1	421B2207.D	NA	02/22/21 12:12
MOIL ICV	SJB0344-ICV2	421B2208.D	NA	02/22/21 12:34
ZZZZZ	BJB0556-BLK1	421B2209.D	Solid	02/22/21 12:55
ZZZZZ	BJB0556-BS1	421B2210.D	Solid	02/22/21 13:16
ZZZZZ	BJB0556-BSD1	421B2211.D	Solid	02/22/21 13:37
ZZZZZ	21B0211-02	421B2212.D	Solid	02/22/21 13:58
ZZZZZ	21B0211-03	421B2213.D	Solid	02/22/21 14:19
ZZZZZ	21B0211-04	421B2214.D	Solid	02/22/21 14:41
ZZZZZ	21B0211-05	421B2215.D	Solid	02/22/21 15:02
ZZZZZ	21B0211-06	421B2216.D	Solid	02/22/21 15:23
ZZZZZ	21B0211-07	421B2217.D	Solid	02/22/21 15:44
ZZZZZ	21B0211-08	421B2218.D	Solid	02/22/21 16:05
ZZZZZ	21B0211-09	421B2219.D	Solid	02/22/21 16:26
ZZZZZ	21B0211-10	421B2220.D	Solid	02/22/21 16:47
ZZZZZ	21B0211-11	421B2221.D	Solid	02/22/21 17:08
DIESEL CCV	SJB0344-CCV1	421B2222.D	NA	02/22/21 17:29
MOIL CCV	SJB0344-CCV2	421B2223.D	NA	02/22/21 17:50
ZZZZZ	21B0211-12	421B2224.D	Solid	02/22/21 18:11
ZZZZZ	21B0211-14	421B2225.D	Solid	02/22/21 18:32
ZZZZZ	21B0211-15	421B2226.D	Solid	02/22/21 18:53
ZZZZZ	21B0211-16	421B2227.D	Solid	02/22/21 19:14
ZZZZZ	BJB0557-BLK1	421B2228.D	Water	02/22/21 19:35
ZZZZZ	BJB0557-BS1	421B2229.D	Water	02/22/21 19:56
ZZZZZ	BJB0557-BSD1	421B2230.D	Water	02/22/21 20:17
ZZZZZ	21B0256-01	421B2231.D	Water	02/22/21 20:38
ZZZZZ	21B0256-02	421B2232.D	Water	02/22/21 20:59
ZZZZZ	BJB0537-BLK1	421B2233.D	Water	02/22/21 21:20
ZZZZZ	BJB0537-BS1	421B2234.D	Water	02/22/21 21:41

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0344	Instrument:	FID4
		Calibration:	EA00020

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BJB0537-BSD1	421B2235.D	Water	02/22/21 22:02
ZZZZZ	21B0211-18	421B2236.D	Water	02/22/21 22:23
ZZZZZ	21B0211-19	421B2237.D	Water	02/22/21 22:43
ZZZZZ	21B0211-20	421B2238.D	Water	02/22/21 23:04
ZZZZZ	21B0211-21	421B2239.D	Water	02/22/21 23:25
DIESEL CCV	SJB0344-CCV3	421B2240.D	NA	02/22/21 23:46
MOIL CCV	SJB0344-CCV4	421B2241.D	NA	02/23/21 00:07
ZZZZZ	BJB0176-BLK1	421B2242.D	Water	02/23/21 00:28
ZZZZZ	BJB0176-BS1	421B2243.D	Water	02/23/21 00:49
ZZZZZ	BJB0176-BSD1	421B2244.D	Water	02/23/21 01:09
ZZZZZ	21B0001-01	421B2245.D	Water	02/23/21 01:30
ZZZZZ	21B0001-03	421B2246.D	Water	02/23/21 01:51
ZZZZZ	21B0001-10	421B2247.D	Water	02/23/21 02:12
ZZZZZ	21B0006-01	421B2248.D	Water	02/23/21 02:32
ZZZZZ	21B0016-01	421B2249.D	Water	02/23/21 02:53
ZZZZZ	21B0016-03	421B2250.D	Water	02/23/21 03:14
ZZZZZ	21B0016-05	421B2251.D	Water	02/23/21 03:34
ZZZZZ	21B0016-07	421B2252.D	Water	02/23/21 03:55
ZZZZZ	21B0016-09	421B2253.D	Water	02/23/21 04:16
ZZZZZ	21B0018-01	421B2254.D	Water	02/23/21 04:36
DIESEL CCV	SJB0344-CCV5	421B2255.D	NA	02/23/21 04:57
MOIL CCV	SJB0344-CCV6	421B2256.D	NA	02/23/21 05:18
ZZZZZ	21B0025-02	421B2257.D	Water	02/23/21 05:39
ZZZZZ	21B0025-04	421B2258.D	Water	02/23/21 06:00
ZZZZZ	21B0035-01	421B2259.D	Water	02/23/21 06:20
ZZZZZ	21B0035-02	421B2260.D	Water	02/23/21 06:41
ZZZZZ	21B0035-03	421B2261.D	Water	02/23/21 07:02
ZZZZZ	21B0035-04	421B2262.D	Water	02/23/21 07:23
ZZZZZ	21B0063-01	421B2263.D	Water	02/23/21 07:44
DIESEL CCV	SJB0344-CCV7	421B2264.D	NA	02/23/21 08:05

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SJB0344
Instrument: FID4
Calibration: EA00020

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MOIL CCV	SJB0344-CCV8	421B2265.D	NA	02/23/21 08:25
P8-20N-1	21A0361-01	421B2266.D	Solid	02/23/21 08:46
P8-10NW-1	21A0361-05	421B2267.D	Solid	02/23/21 09:07
P8-7W-1	21A0361-21	421B2268.D	Solid	02/23/21 09:28
P8-10E-1	21A0361-25	421B2269.D	Solid	02/23/21 09:49
P8-10N-1	21A0361-29	421B2270.D	Solid	02/23/21 10:10
DIESEL CCV	SJB0344-CCV9	421B2271.D	NA	02/23/21 10:31
MOIL CCV	SJB0344-CCVA	421B2272.D	NA	02/23/21 10:52

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0139	Instrument:	FID4
Calibration:	EA00020	Calibration Date:	01/07/2021

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SJB0139-IBL1 (Solid)				Lab File ID: 421B0903.D			Analyzed: 02/09/21 09:30	
o-Terphenyl	100.00	110	50 - 150	6.27	6.275	-0.0050	N/A	
SJB0139-IBL2 (Solid)				Lab File ID: 421B0904.D			Analyzed: 02/09/21 09:51	
o-Terphenyl	100.00	110	50 - 150	6.27	6.275	-0.0050	N/A	
SJB0139-ICV1 (Solid)				Lab File ID: 421B0905.D			Analyzed: 02/09/21 10:11	
o-Terphenyl	90.000	103	85 - 115	6.27	6.275	-0.0050	N/A	
BJB0148-BLK1 (Solid)				Lab File ID: 421B0907.D			Analyzed: 02/09/21 10:53	
o-Terphenyl	11.250	109	50 - 150	6.27	6.275	-0.0050	N/A	
BJB0148-BS1 (Solid)				Lab File ID: 421B0908.D			Analyzed: 02/09/21 11:14	
o-Terphenyl	11.250	109	50 - 150	6.27	6.275	-0.0050	N/A	
SJB0139-CCV1 (Solid)				Lab File ID: 421B0914.D			Analyzed: 02/09/21 13:21	
o-Terphenyl	90.000	106	85 - 115	6.27	6.275	-0.0050	N/A	
SJB0139-CCV3 (Solid)				Lab File ID: 421B0924.D			Analyzed: 02/09/21 16:51	
o-Terphenyl	90.000	108	85 - 115	6.27	6.275	-0.0050	N/A	
SJB0139-CCV5 (Solid)				Lab File ID: 421B0936.D			Analyzed: 02/09/21 21:02	
o-Terphenyl	90.000	108	85 - 115	6.27	6.275	-0.0050	N/A	
SJB0139-CCV7 (Solid)				Lab File ID: 421B0953.D			Analyzed: 02/10/21 02:55	
o-Terphenyl	90.000	108	85 - 115	6.27	6.275	-0.0050	N/A	
SJB0139-CCV9 (Solid)				Lab File ID: 421B0963.D			Analyzed: 02/10/21 06:22	
o-Terphenyl	90.000	115	85 - 115	6.27	6.275	-0.0050	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0251	Instrument:	FID4
Calibration:	EA00020	Calibration Date:	01/07/2021

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SJB0251-IBL1 (Water)				Lab File ID: 421B1703.D			Analyzed: 02/17/21 11:33	
o-Terphenyl	100.00	120	50 - 150	6.27	6.275	-0.0050	N/A	
SJB0251-IBL2 (Water)				Lab File ID: 421B1704.D			Analyzed: 02/17/21 11:54	
o-Terphenyl	100.00	123	50 - 150	6.26	6.275	-0.0150	N/A	
SJB0251-ICV1 (Water)				Lab File ID: 421B1705.D			Analyzed: 02/17/21 12:14	
o-Terphenyl	90.000	114	85 - 115	6.26	6.275	-0.0150	N/A	
SJB0251-CCV1 (Water)				Lab File ID: 421B1717.D			Analyzed: 02/17/21 16:24	
o-Terphenyl	90.000	107	85 - 115	6.26	6.275	-0.0150	N/A	
21A0361-03 (Solid)				Lab File ID: 421B1726.D			Analyzed: 02/17/21 19:32	
o-Terphenyl	12.618	128	50 - 150	6.25	6.275	-0.0250	N/A	
SJB0251-CCV3 (Water)				Lab File ID: 421B1727.D			Analyzed: 02/17/21 19:52	
o-Terphenyl	90.000	110	85 - 115	6.26	6.275	-0.0150	N/A	
21A0361-07 (Solid)				Lab File ID: 421B1730.D			Analyzed: 02/17/21 20:54	
o-Terphenyl	13.692	109	50 - 150	6.25	6.275	-0.0250	N/A	
21A0361-09 (Solid)				Lab File ID: 421B1731.D			Analyzed: 02/17/21 21:15	
o-Terphenyl	11.918	117	50 - 150	6.25	6.275	-0.0250	N/A	
21A0361-11 (Solid)				Lab File ID: 421B1732.D			Analyzed: 02/17/21 21:36	
o-Terphenyl	13.270	130	50 - 150	6.25	6.275	-0.0250	N/A	
21A0361-13 (Solid)				Lab File ID: 421B1733.D			Analyzed: 02/17/21 21:57	
o-Terphenyl	11.814	108	50 - 150	6.25	6.275	-0.0250	N/A	
21A0361-15 (Solid)				Lab File ID: 421B1734.D			Analyzed: 02/17/21 22:17	
o-Terphenyl	12.056	113	50 - 150	6.27	6.275	-0.0050	N/A	
21A0361-17 (Solid)				Lab File ID: 421B1735.D			Analyzed: 02/17/21 22:38	
o-Terphenyl	14.143	95.1	50 - 150	6.25	6.275	-0.0250	N/A	
21A0361-19 (Solid)				Lab File ID: 421B1736.D			Analyzed: 02/17/21 22:58	
o-Terphenyl	13.384	111	50 - 150	6.27	6.275	-0.0050	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0251	Instrument:	FID4
Calibration:	EA00020	Calibration Date:	01/07/2021

Surrogate Compound	Spike Level mg/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
21A0361-23 (Solid)			Lab File ID: 421B1738.D			Analyzed: 02/17/21 23:40		
o-Terphenyl	12.758	103	50 - 150	6.27	6.275	-0.0050	N/A	
SJB0251-CCV5 (Water)			Lab File ID: 421B1739.D			Analyzed: 02/18/21 00:00		
o-Terphenyl	90.000	113	85 - 115	6.26	6.275	-0.0150	N/A	
21A0361-27 (Solid)			Lab File ID: 421B1742.D			Analyzed: 02/18/21 01:02		
o-Terphenyl	12.709	111	50 - 150	6.25	6.275	-0.0250	N/A	
21A0361-31 (Solid)			Lab File ID: 421B1744.D			Analyzed: 02/18/21 01:44		
o-Terphenyl	13.175	122	50 - 150	6.27	6.275	-0.0050	N/A	
SJB0251-CCV7 (Water)			Lab File ID: 421B1754.D			Analyzed: 02/18/21 05:10		
o-Terphenyl	90.000	112	85 - 115	6.27	6.275	-0.0050	N/A	
SJB0251-CCV9 (Water)			Lab File ID: 421B1769.D			Analyzed: 02/18/21 10:23		
o-Terphenyl	90.000	109	85 - 115	6.26	6.275	-0.0150	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0344	Instrument:	FID4
Calibration:	EA00020	Calibration Date:	01/07/2021

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SJB0344-IBL1 (Solid)			Lab File ID: 421B2204.D			Analyzed: 02/22/21 11:09		
o-Terphenyl	100.00	109	50 - 150	6.23	6.275	-0.0450	N/A	
SJB0344-IBL2 (Solid)			Lab File ID: 421B2205.D			Analyzed: 02/22/21 11:30		
o-Terphenyl	100.00	120	50 - 150	6.23	6.275	-0.0450	N/A	
SJB0344-ICV1 (Solid)			Lab File ID: 421B2207.D			Analyzed: 02/22/21 12:12		
o-Terphenyl	90.000	104	85 - 115	6.22	6.275	-0.0550	N/A	
SJB0344-CCV1 (Solid)			Lab File ID: 421B2222.D			Analyzed: 02/22/21 17:29		
o-Terphenyl	90.000	106	85 - 115	6.22	6.275	-0.0550	N/A	
SJB0344-CCV3 (Solid)			Lab File ID: 421B2240.D			Analyzed: 02/22/21 23:46		
o-Terphenyl	90.000	109	85 - 115	6.22	6.275	-0.0550	N/A	
SJB0344-CCV5 (Solid)			Lab File ID: 421B2255.D			Analyzed: 02/23/21 04:57		
o-Terphenyl	90.000	108	85 - 115	6.22	6.275	-0.0550	N/A	
SJB0344-CCV7 (Solid)			Lab File ID: 421B2264.D			Analyzed: 02/23/21 08:05		
o-Terphenyl	90.000	110	85 - 115	6.22	6.275	-0.0550	N/A	
21A0361-01 (Solid)			Lab File ID: 421B2266.D			Analyzed: 02/23/21 08:46		
o-Terphenyl	13.502	107	50 - 150	6.21	6.275	-0.0650	N/A	
21A0361-05 (Solid)			Lab File ID: 421B2267.D			Analyzed: 02/23/21 09:07		
o-Terphenyl	12.638	142	50 - 150	6.21	6.275	-0.0650	N/A	
21A0361-21 (Solid)			Lab File ID: 421B2268.D			Analyzed: 02/23/21 09:28		
o-Terphenyl	11.905	116	50 - 150	6.21	6.275	-0.0650	N/A	
21A0361-25 (Solid)			Lab File ID: 421B2269.D			Analyzed: 02/23/21 09:49		
o-Terphenyl	12.056	114	50 - 150	6.21	6.275	-0.0650	N/A	
21A0361-29 (Solid)			Lab File ID: 421B2270.D			Analyzed: 02/23/21 10:10		
o-Terphenyl	12.308	106	50 - 150	6.21	6.275	-0.0650	N/A	
SJB0344-CCV9 (Solid)			Lab File ID: 421B2271.D			Analyzed: 02/23/21 10:31		
o-Terphenyl	90.000	105	85 - 115	6.22	6.275	-0.0550	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
P8-20N-1 21A0361-01	01/25/21 15:40	01/26/21 14:20	02/05/21 12:05	10	14	02/23/21 08:46	18	40	
P8-20N-5 21A0361-03	01/25/21 15:50	01/26/21 14:20	02/05/21 12:05	10	14	02/17/21 19:32	12	40	
P8-10NW-1 21A0361-05	01/25/21 15:00	01/26/21 14:20	02/05/21 12:05	10	14	02/23/21 09:07	18	40	
P8-10NW-5 21A0361-07	01/25/21 15:10	01/26/21 14:20	02/05/21 12:05	10	14	02/17/21 20:54	12	40	
P8-15SW-1 21A0361-09	01/25/21 14:15	01/26/21 14:20	02/05/21 12:05	10	14	02/17/21 21:15	12	40	
P8-15SW-5 21A0361-11	01/25/21 14:25	01/26/21 14:20	02/05/21 12:05	10	14	02/17/21 21:36	12	40	
P8-10SE-1 21A0361-13	01/25/21 13:00	01/26/21 14:20	02/05/21 12:05	10	14	02/17/21 21:57	12	40	
P8-10SE-5 21A0361-15	01/25/21 13:10	01/26/21 14:20	02/05/21 12:05	10	14	02/17/21 22:17	12	40	
P8-10NE-1 21A0361-17	01/25/21 12:15	01/26/21 14:20	02/05/21 12:05	10	14	02/17/21 22:38	12	40	
P8-10NE-5 21A0361-19	01/25/21 12:25	01/26/21 14:20	02/05/21 12:05	10	14	02/17/21 22:58	12	40	
P8-7W-1 21A0361-21	01/25/21 10:40	01/26/21 14:20	02/05/21 12:05	11	14	02/23/21 09:28	18	40	
P8-7W-5 21A0361-23	01/25/21 10:50	01/26/21 14:20	02/05/21 12:05	11	14	02/17/21 23:40	12	40	
P8-10E-1 21A0361-25	01/25/21 11:30	01/26/21 14:20	02/05/21 12:05	11	14	02/23/21 09:49	18	40	
P8-10E-5 21A0361-27	01/25/21 11:40	01/26/21 14:20	02/05/21 12:05	11	14	02/18/21 01:02	13	40	
P8-10N-1 21A0361-29	01/25/21 09:25	01/26/21 14:20	02/05/21 12:05	11	14	02/23/21 10:10	18	40	
P8-10N-5 21A0361-31	01/25/21 09:35	01/26/21 14:20	02/05/21 12:05	11	14	02/18/21 01:44	13	40	

* Indicates hold time exceedance.

METHOD DETECTION
AND REPORTING LIMITS

NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Solid Instrument: FID4

Analyte	MDL	RL	Units
Diesel Range Organics (C12-C24)	2.34	5.00	mg/kg
Motor Oil Range Organics (C24-C38)	2.99	10.0	mg/kg

Analytical Resources, Incorporated
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

NWTPH-Dx

Laboratory: Analytical Resources, Inc.   SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc   Project: ICS-Former NW Cooperage

Matrix: Water   Instrument: FID4

Analyte	MDL	RL	Units
Diesel Range Organics (C12-C24)	0.033	0.100	mg/L
Motor Oil Range Organics (C24-C38)	0.056	0.200	mg/L

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-20N-1

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	21A0361-01 A	File ID:	02112104ECD7.D
Sampled:	01/25/21 15:40	Prepared:	02/05/21 16:51	Analyzed:	02/11/21 19:59
% Solids:	82.99	Preparation:	EPA 3546 (Microwave)	Initial/Final:	6.11 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0228	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	250	4930	1970	4930	U
11104-28-2	Aroclor 1221	1	250	4930	1970	4930	U
11141-16-5	Aroclor 1232	1	250	4930	1970	4930	U
53469-21-9	Aroclor 1242	1	250	4930	1970	4930	U
12672-29-6	Aroclor 1248	2	250	70500	1970	4930	D
11097-69-1	Aroclor 1254	2	250	32500	1970	4930	D
11096-82-5	Aroclor 1260	1	250	26500	2290	4930	D
37324-23-5	Aroclor 1262	1	250	4930	2290	4930	U
11100-14-4	Aroclor 1268	1	250	4930	2290	4930	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.442*			*40 - 133*	*D1*
Tetrachlorometaxylene	*1*	*39.442*			*53 - 120*	*D1*
Decachlorobiphenyl	*2*	*39.442*			*40 - 133*	*D1*
Tetrachlorometaxylene	*2*	*39.442*			*53 - 120*	*D1*

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210211.b/02112104ECD7.D
Data file 2: /210211.b/210211.b/02112104ECD7.D
Method: \\target\share\chem4\ecd7.i\210211.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-01RE
Client ID:
Injection Date: 11-FEB-2021 19:59
Report Date: 02/17/2021 10:49
Matrix: NONE
Dilution Factor: 250.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.982	-0.003	1051	5.376	-0.002	794	0.3	0.1	85.2*	Tetrachloro-m-xylene
13.179	-0.007	5685	13.923	-0.009	2630	0.3	0.2	45.5*	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	221177	33.5
Hexabromobiphenyl	1343188	1575719	17.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	619443	-26.0
Hexabromobiphenyl	850693	711182	-16.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.608	-0.000	34443	180.2	1	7.053	-0.003	52917	197.0
Aroclor-1016	2	6.981	-0.002	126166	202.8	2	7.654	-0.004	142289	233.7
Aroclor-1016	3	7.133	0.003	36950	124.8	3	7.863	-0.006	25162	94.0
Aroclor-1016	4	7.239	-0.001	26112	140.4	4	8.120	-0.005	60589	397.3
	~~Total Col1Ave (4 peaks):~~			~~162.1~~		~~Total Col2Ave (4 peaks):~~			~~230.5~~	RPD = 35
	Corrected Ave (3 peaks):			148.5		Corrected Ave (3 peaks):			174.9	RPD = 16
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	5.383	0.008	638	15.2	2	6.051	-0.001	1298	16.7
Aroclor-1221	3	5.658	-0.001	5623	39.5	3	6.398	0.001	12244	87.2
	~~Col1Ave: <3 Quant Peaks~~					~~Col2Ave: <3 Quant Peaks~~				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.608	-0.000	34443	425.4	2	7.053	-0.003	52917	429.6
Aroclor-1232	3	6.981	-0.002	126166	486.6	3	7.654	-0.007	142289	543.7
Aroclor-1232	4	8.285	-0.010	88314	975.5	4	8.040	-0.009	37595	753.7
	Total ~~Col1Ave (3 peaks):~~			~~629.2~~		~~Total Col2Ave (3 peaks):~~			~~575.7~~	RPD = 9
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.608	-0.000	34443	222.7	1	7.053	-0.003	52917	239.1
Aroclor-1242	2	6.981	-0.001	126166	246.2	2	7.654	-0.007	142289	274.0
Aroclor-1242	3	8.285	-0.008	88314	516.0	3	8.972	-0.020	101365	484.5
Aroclor-1242	4	8.577	-0.014	88159	507.0	4	9.404	-0.027	101981	499.8
	Total ~~Col1Ave (4 peaks):~~			~~373.0~~		~~Total Col2Ave (4 peaks):~~			~~374.4~~	RPD = 0
	Corrected Ave (3 peaks):			325.3		Corrected Ave (3 peaks):			332.6	RPD = 2
Aroclor-1248	1	7.465	-0.001	61678	260.5	1	8.120	-0.007	60589	300.9
Aroclor-1248	2	7.933	-0.003	88076	246.5	2	8.539	-0.010	76577	307.5
Aroclor-1248	3	8.346	-0.003	150283	203.8	3	8.972	-0.018	101365	262.1
Aroclor-1248	4	8.577	-0.006	88159	322.1	4	9.404	-0.023	101981	273.2
	Total Col1Ave (4 peaks):			258.2		Total Col2Ave (4 peaks):			285.9	RPD = 10
	Corrected Ave (3 peaks):			236.9		Corrected Ave (3 peaks):			278.7	RPD = 16
Aroclor-1254	1	8.650	-0.006	92231	141.2	1	9.268	-0.014	61078	148.0
Aroclor-1254	2	8.722	-0.004	39783	110.3	2	9.404	0.028	101981	~~450~~.1
Aroclor-1254	3	9.037	0.014	111378	~~257~~.9	3	9.799	-0.014	35089	115.9
Aroclor-1254	4	9.155	-0.007	104985	112.3	4	9.953	-0.015	102011	121.8
Aroclor-1254	5	9.851	-0.008	81983	135.5	5	10.194	-0.014	112909	141.6
	Total Col1Ave (5 peaks):			151.4		Total Col2Ave (5 peaks):			195.5	RPD = 25
	Corrected Ave (4 peaks):			124.8		Corrected Ave (4 peaks):			131.8	RPD = 5
Aroclor-1260	1	10.378	-0.007	56925	106.8	1	11.019	-0.012	42235	84.8
Aroclor-1260	2	10.699	-0.007	57335	107.3	2	11.482	-0.011	50017	108.0
Aroclor-1260	3	11.051	-0.006	161464	105.4	3	11.734	-0.013	117428	91.6
Aroclor-1260	4	11.453	-0.006	83600	118.0	4	12.322	-0.015	72830	88.0
Aroclor-1260	5	11.559	-0.005	32960	99.8	NS	---			----
	Total Col1Ave (5 peaks):			107.5		Total Col2Ave (4 peaks):			93.1	RPD = 14
	Corrected Ave (4 peaks):			104.8		Corrected Ave (3 peaks):			88.1	RPD = 17
Aroclor-1262	1	10.378	-0.010	56925	64.8	1	11.019	-0.013	42235	51.5
Aroclor-1262	2	11.051	-0.010	161464	77.3	2	11.734	-0.015	117428	64.3
Aroclor-1262	3	11.559	-0.010	32960	55.7	3	12.252	-0.009	28662	54.2
Aroclor-1262	4	~~11.631~~	~~-0.009~~	~~41879~~	~~53.3~~	~~4~~	~~13.120~~	~~0.067~~	~~3227~~	4.9
	Total Col1Ave (4 peaks):			62.8		Total Col2Ave (4 peaks):			43.7	RPD = 36
	Corrected Ave (3 peaks):			57.9		Corrected Ave (3 peaks):			36.9	RPD = 44*
Aroclor-1268	1	11.559	-0.010	32960	16.4	1	12.252	-0.007	28662	15.9
Aroclor-1268	2	11.631	-0.007	41879	18.3	2	12.322	-0.005	72830	33.5
Aroclor-1268	3	12.034	0.019	20960	11.2	3	12.704	-0.008	1327	0.8
Aroclor-1268	4	12.778	-0.013	16486	2.5	4	13.517	-0.014	6128	1.0
	Total ~~Col1Ave (4 peaks):~~			~~12.1~~		~~Total Col2Ave (4 peaks):~~			~~12.8~~	RPD = 6
	Corrected Ave (3 peaks):			10.0		Corrected Ave (3 peaks):			5.9	RPD = 52*

Total PCB Area Col1 (5.086 - 13.086) = 2855729 Col1 Total PCB = 0.3 ppm*

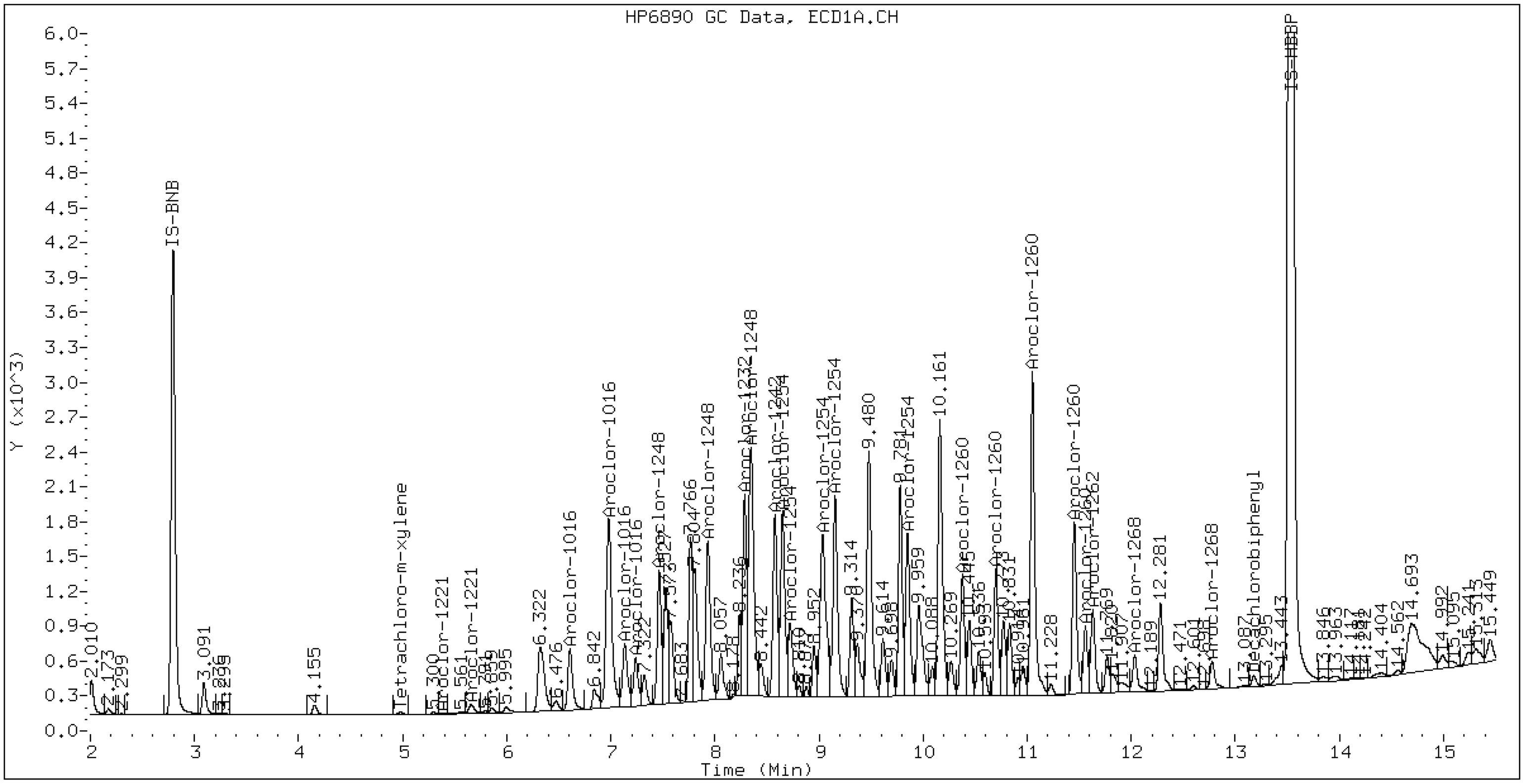
Total PCB Area Col2 (5.086 - 13.086) = 2328718 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

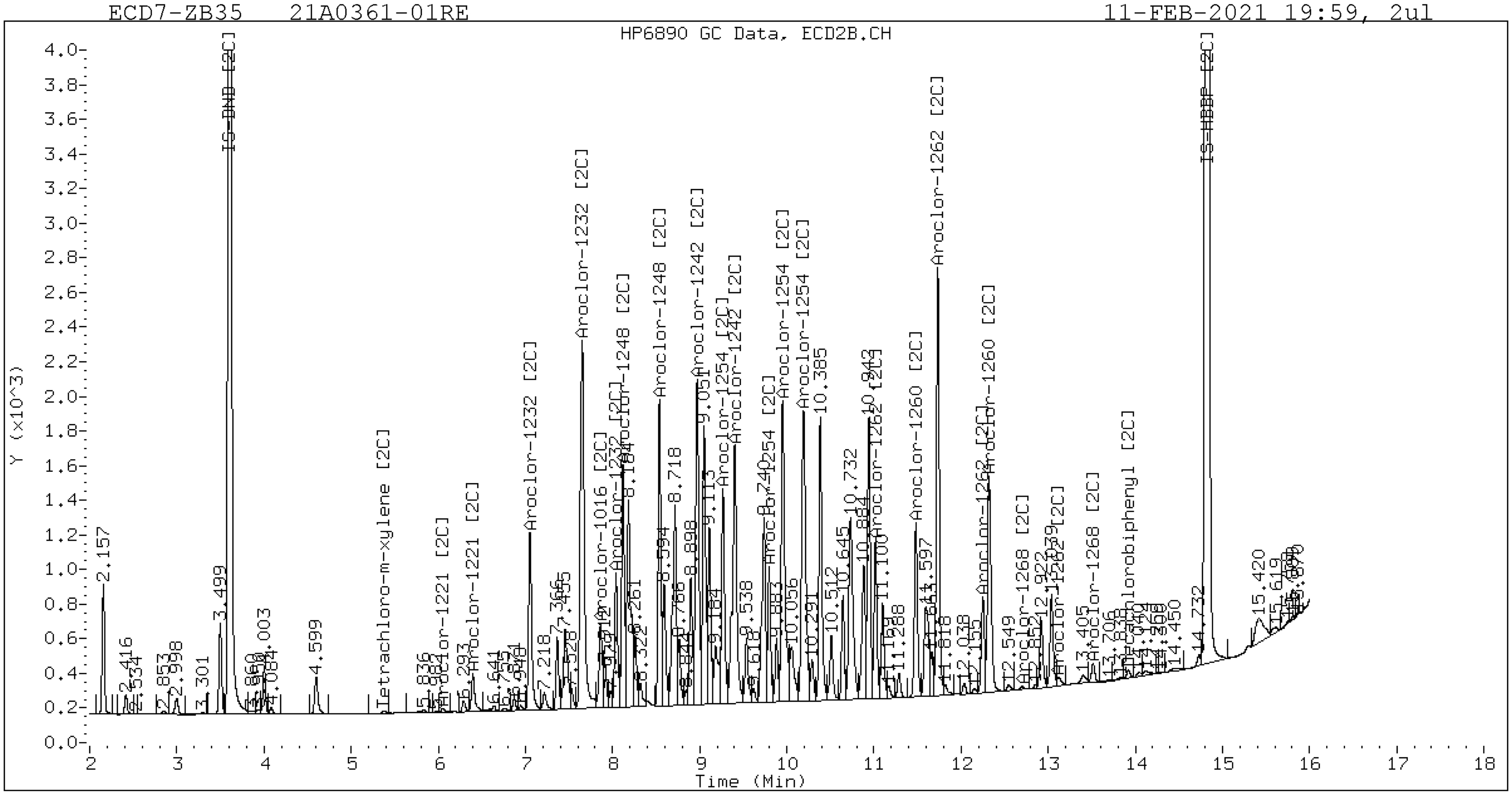
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-01RE 11-FEB-2021 19:59, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21A0361-01RE 11-FEB-2021 19:59, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-20N-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Solid	Laboratory ID:	21A0361-03 A	File ID:	02092108ECD5.D
Sampled:	01/25/21 15:50	Prepared:	02/05/21 16:51	Analyzed:	02/09/21 19:23
% Solids:	88.80	Preparation:	EPA 3546 (Microwave)	Initial/Final:	5.69 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0231	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	19.8	7.9	19.8	U
11104-28-2	Aroclor 1221	1	1	19.8	7.9	19.8	U
11141-16-5	Aroclor 1232	1	1	19.8	7.9	19.8	U
53469-21-9	Aroclor 1242	1	1	19.8	7.9	19.8	U
12672-29-6	Aroclor 1248	1	1	60.4	7.9	19.8	
11097-69-1	Aroclor 1254	1	1	73.4	7.9	19.8	
11096-82-5	Aroclor 1260	1	1	64.7	9.2	19.8	
37324-23-5	Aroclor 1262	1	1	19.8	9.2	19.8	U
11100-14-4	Aroclor 1268	1	1	19.8	9.2	19.8	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.583*	*29.1*	*73.5*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.583*	*29.2*	*73.7*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092108ECD5.D
Data file 2: /210209.b/210209.b/02092108ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-03
Client ID:
Injection Date: 09-FEB-2021 19:23
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.991	0.001	108367	5.379	-0.002	194005	29.5	28.2	4.4	Tetrachloro-m-xylene
13.178	-0.008	398668	13.922	-0.005	312597	29.4	29.0	1.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	233071	40.6
Hexabromobiphenyl	1343188	1263098	-6.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	650863	-22.3
Hexabromobiphenyl	850693	616422	-27.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.604	-0.005	5637	28.0	1	7.051	-0.006	7071	25.0
Aroclor-1016	2	6.980	-0.003	17749	27.1	2	7.652	-0.004	15368	24.0
Aroclor-1016	3	7.136	0.002	6581	21.1	3	7.863	-0.005	2710	9.6
Aroclor-1016	4	7.232	-0.011	5534	28.2	4	8.124	0.001	23341	145.6
Total Col1Ave (4 peaks):				26.1		Total Col2Ave (4 peaks):			51.1	RPD = 65*
Corrected Ave (3 peaks):				25.4		Corrected Ave (3 peaks):			19.6	RPD = 26
Aroclor-1221	1	3.959	0.016	323	9.7	1	4.597	3.597	2437	64.1
Aroclor-1221	2	5.291	-0.084	3204	72.5	2	6.069	0.010	3994	48.8
Aroclor-1221	3	5.653	-0.006	1446	9.6	3	6.399	0.000	12980	88.0
Total Col1Ave (3 peaks):				30.6		Total Col2Ave (3 peaks):			67.0	RPD = 75*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.959	0.017	323	16.9	1	4.597	3.597	2437	117.2
Aroclor-1232	2	6.604	-0.004	5637	66.1	2	7.051	-0.005	7071	54.6
Aroclor-1232	3	6.980	-0.003	17749	65.0	3	7.652	-0.005	15368	55.9
Aroclor-1232	4	8.284	-0.012	12744	133.6	4	8.039	-0.005	1720	32.8
Total Col1Ave (4 peaks):				70.4		Total Col2Ave (4 peaks):			65.1	RPD = 8
Corrected Ave (3 peaks):				49.3		Corrected Ave (3 peaks):			47.8	RPD = 3
Aroclor-1242	1	6.604	-0.006	5637	34.6	1	7.051	-0.005	7071	30.4
Aroclor-1242	2	6.980	-0.003	17749	32.9	2	7.652	-0.005	15368	28.2
Aroclor-1242	3	8.284	-0.008	12744	70.7	3	8.971	-0.011	14850	67.6
Aroclor-1242	4	8.569	-0.016	22170	121.0	4	9.400	-0.020	14765	68.9
Total Col1Ave (4 peaks):				64.8		Total Col2Ave (4 peaks):			48.8	RPD = 28
Corrected Ave (3 peaks):				46.0		Corrected Ave (3 peaks):			42.0	RPD = 9
Aroclor-1248	1	7.464	-0.004	17134	68.7	1	8.124	0.001	23341	110.3
Aroclor-1248	2	7.929	-0.009	15158	40.3	2	8.540	-0.005	14225	54.4
Aroclor-1248	3	8.353	0.002	45255	58.2	3	8.971	-0.011	14850	36.5
Aroclor-1248	4	8.569	-0.017	22170	76.9	4	9.400	-0.020	14765	37.6
Total Col1Ave (4 peaks):				61.0		Total Col2Ave (4 peaks):			59.7	RPD = 2
Corrected Ave (3 peaks):				55.7		Corrected Ave (3 peaks):			42.8	RPD = 26
Aroclor-1254	1	8.648	-0.007	50486	73.3	1	9.268	-0.008	31026	71.6
Aroclor-1254	2	8.718	-0.007	25408	66.8	2	9.362	-0.009	13095	55.0
Aroclor-1254	3	9.029	0.002	54426	119.6	3	9.799	-0.008	17289	54.4
Aroclor-1254	4	9.154	-0.007	86473	87.7	4	9.950	-0.009	58936	67.0
Aroclor-1254	5	9.847	-0.013	43976	69.0	5	10.191	-0.009	55518	66.3
Total Col1Ave (5 peaks):				83.3		Total Col2Ave (5 peaks):			62.8	RPD = 28
Corrected Ave (4 peaks):				74.2		Corrected Ave (4 peaks):			60.6	RPD = 20
Aroclor-1260	1	10.375	-0.011	33136	77.5	1	11.017	-0.008	21446	49.7
Aroclor-1260	2	10.696	-0.011	26679	62.3	2	11.484	-0.006	32243	80.3
Aroclor-1260	3	11.047	-0.011	80941	65.9	3	11.733	-0.009	61039	54.9
Aroclor-1260	4	11.450	-0.011	31688	55.8	4	12.320	-0.011	38120	53.1
Aroclor-1260	5	11.558	-0.007	29732	112.3	NS	---			----
Total Col1Ave (5 peaks):				74.8		Total Col2Ave (4 peaks):			59.5	RPD = 23
Corrected Ave (4 peaks):				65.4		Corrected Ave (3 peaks):			52.6	RPD = 22
Aroclor-1262	1	10.375	-0.014	33136	47.1	1	11.017	-0.009	21446	30.2
Aroclor-1262	2	11.047	-0.013	80941	48.3	2	11.733	-0.013	61039	38.5
Aroclor-1262	3	11.558	-0.011	29732	62.7	3	12.249	-0.011	19920	43.5
Aroclor-1262	4	11.627	-0.013	29805	47.3	4	13.037	-0.096	20308	35.6
Total Col1Ave (4 peaks):				51.3		Total Col2Ave (4 peaks):			36.9	RPD = 33
Corrected Ave (3 peaks):				47.6		Corrected Ave (3 peaks):			34.8	RPD = 31
Aroclor-1268	1	11.558	-0.011	29732	18.4	1	12.249	-0.011	19920	12.8
Aroclor-1268	2	11.627	-0.011	29805	16.2	2	12.320	-0.016	38120	20.2
Aroclor-1268	3	12.025	0.010	14488	9.6	3	12.703	-0.010	2966	2.0
Aroclor-1268	4	12.776	-0.016	29141	5.5	4	13.515	-0.005	12465	2.3
Total Col1Ave (4 peaks):				12.4		Total Col2Ave (4 peaks):			9.3	RPD = 29

Corrected Ave (3 peaks): 10.5 Corrected Ave (3 peaks): 5.7 RPD = 59*

Total PCB Area Col1 (5.090 - 13.086) = 1384119 Col1 Total PCB = 0.2 ppm*

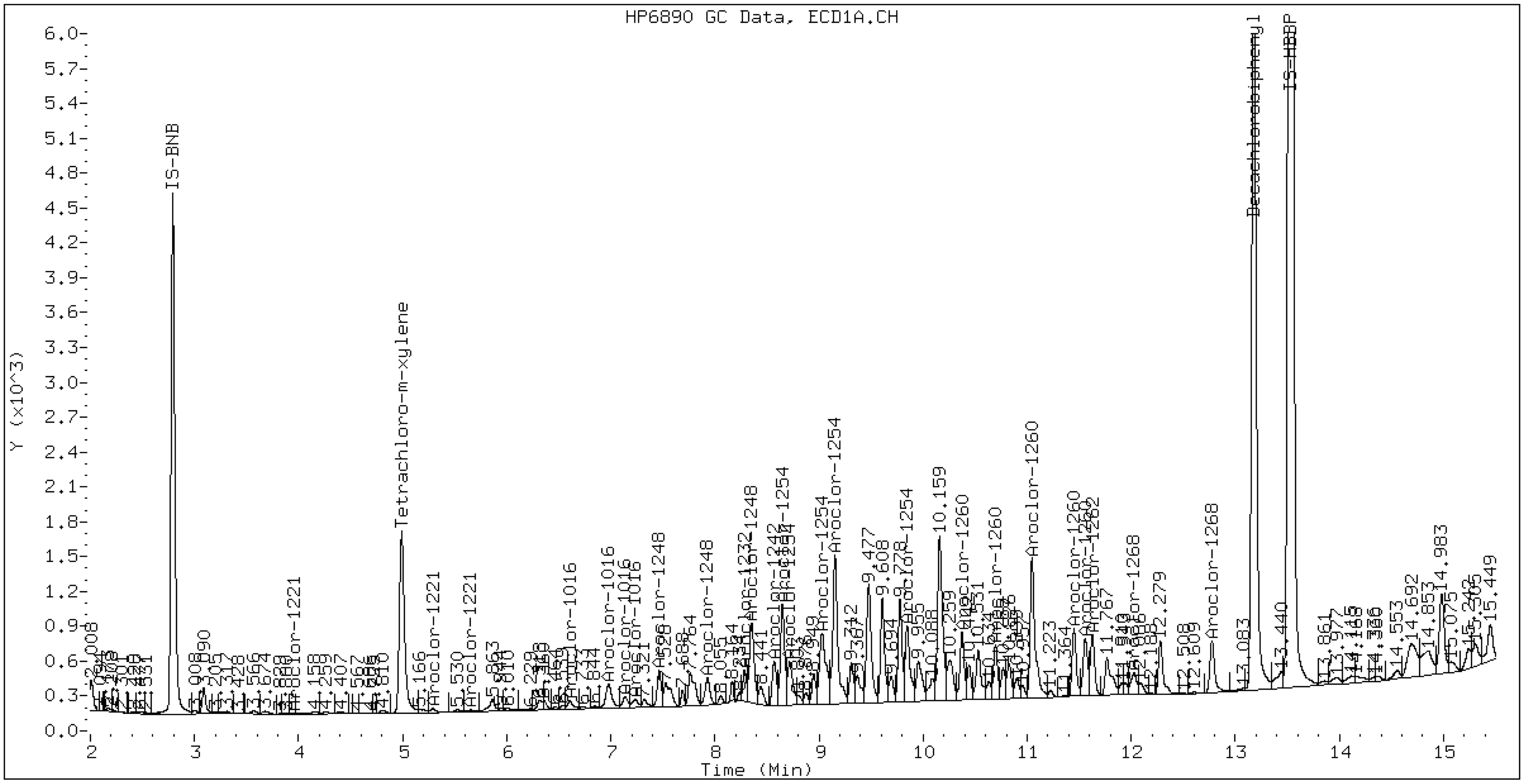
Total PCB Area Col2 (5.090 - 13.086) = 1229631 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

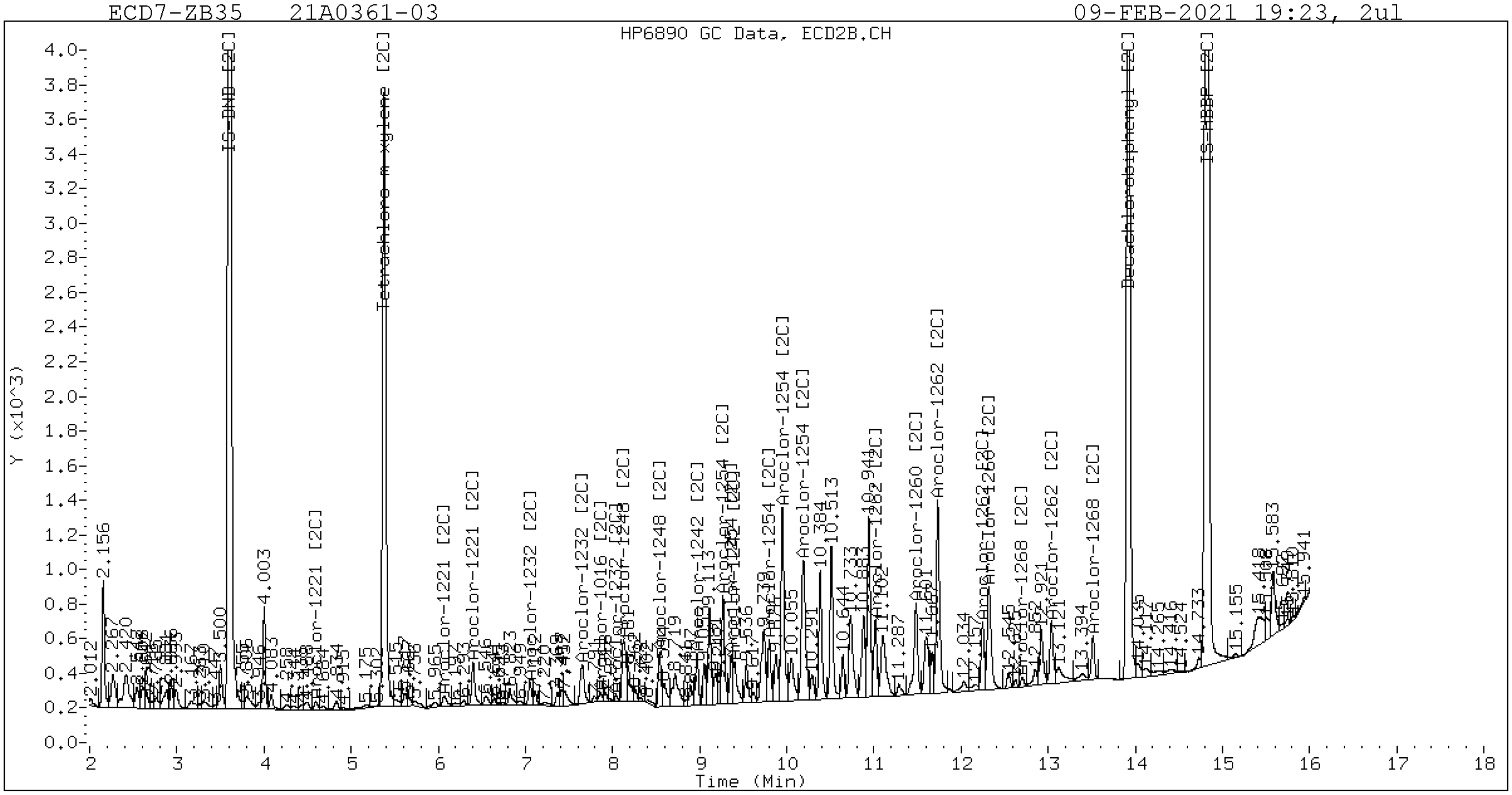
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-03 09-FEB-2021 19:23, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21A0361-03 09-FEB-2021 19:23, 2ul

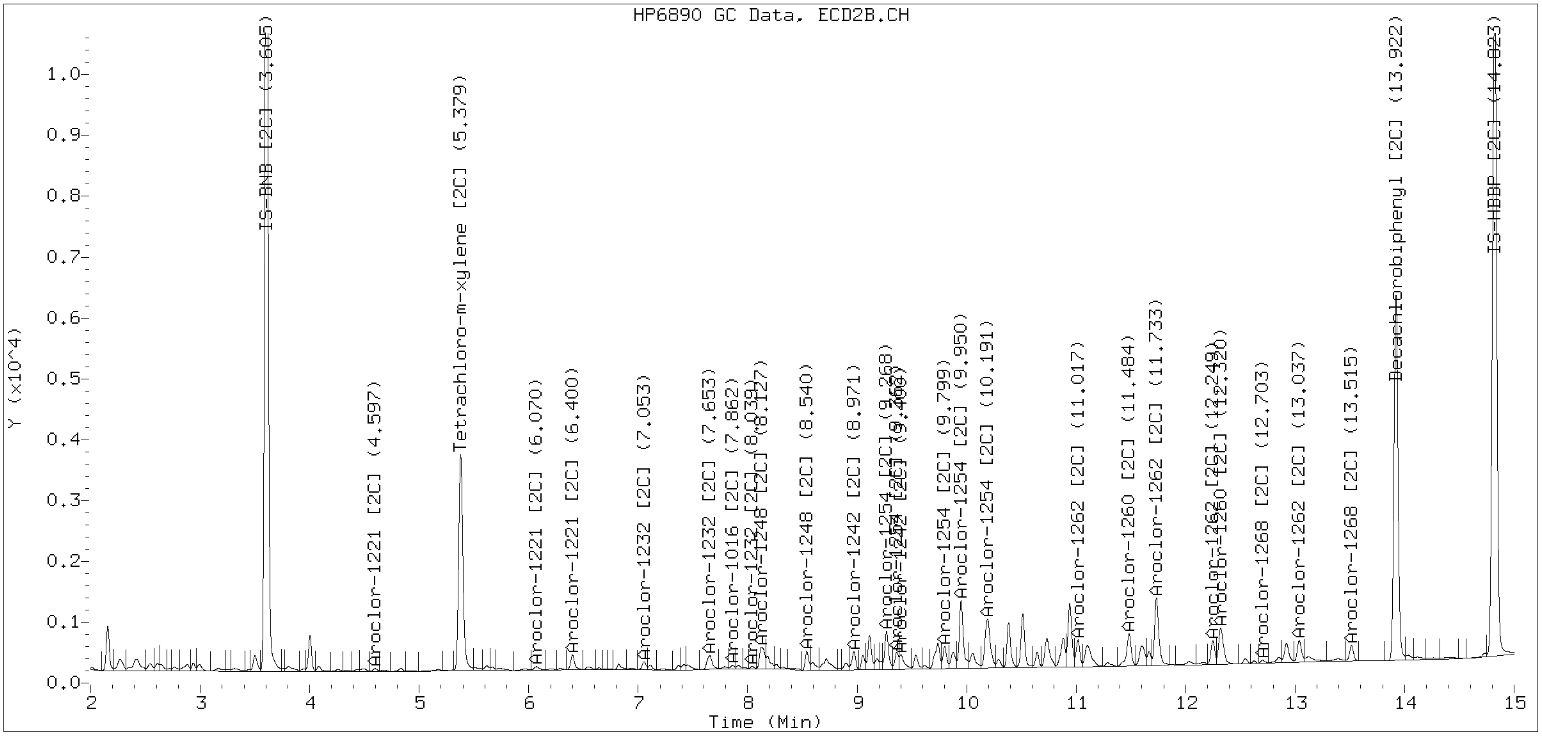


ZB-35 Manual Integration: YES

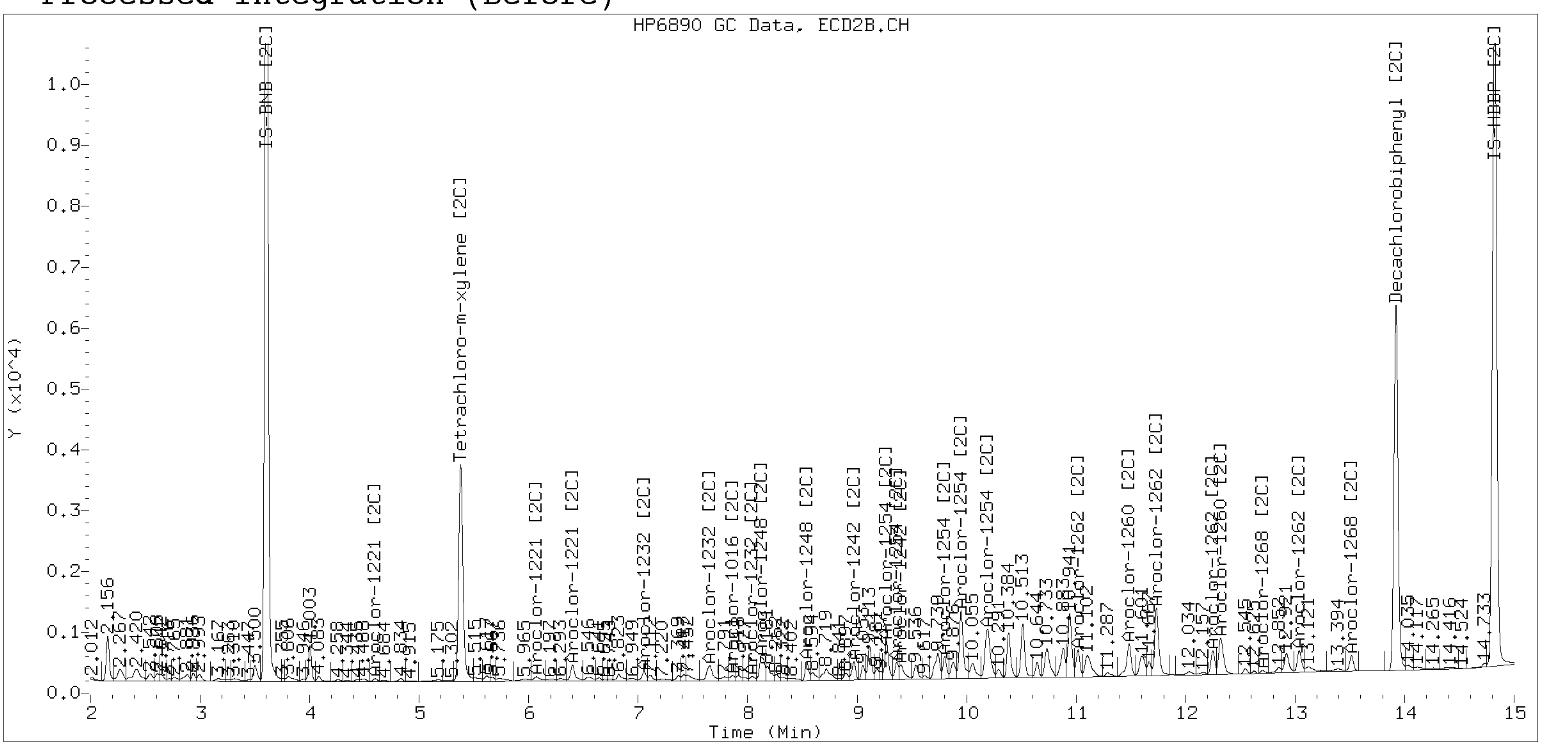
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/210209.b/210209.b/02092108ECD5.D   Injection Date: 09-FEB-2021

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10NW-1

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	21A0361-05 A	File ID:	02092109ECD5.D
Sampled:	01/25/21 15:00	Prepared:	02/05/21 16:51	Analyzed:	02/09/21 19:44
% Solids:	88.66	Preparation:	EPA 3546 (Microwave)	Initial/Final:	5.74 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0231	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	10	196	78.6	196	U
11104-28-2	Aroclor 1221	1	10	196	78.6	196	U
11141-16-5	Aroclor 1232	1	10	196	78.6	196	U
53469-21-9	Aroclor 1242	1	10	196	78.6	196	U
12672-29-6	Aroclor 1248	2	10	6280	78.6	196	D
11097-69-1	Aroclor 1254	2	10	2720	78.6	196	D
11096-82-5	Aroclor 1260	1	10	2190	91.2	196	D
37324-23-5	Aroclor 1262	1	10	196	91.2	196	U
11100-14-4	Aroclor 1268	1	10	196	91.2	196	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.300*	*29.3*	*74.7*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.300*	*30.6*	*77.9*	*53 - 120*	
Decachlorobiphenyl	*2*	*39.300*	*23.6*	*60.1*	*40 - 133*	
Tetrachlorometaxylene	*2*	*39.300*	*28.7*	*73.0*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092109ECD5.D
Data file 2: /210209.b/210209.b/02092109ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-05
Client ID:
Injection Date: 09-FEB-2021 19:44
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 10.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.983	-0.007	10484	5.377	-0.005	14861	3.1	2.9	6.5	Tetrachloro-m-xylene
13.169	-0.018	36881	13.915	-0.012	23350	3.0	2.4	21.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	213327	28.7
Hexabromobiphenyl	1343188	1149783	-14.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	481257	-42.5
Hexabromobiphenyl	850693	555019	-34.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.601	-0.008	97073	526.7	1	7.049	-0.008	156449	749.5
Aroclor-1016	2	6.972	-0.010	371572	619.2	2	7.644	-0.013	355651	752.0
Aroclor-1016	3	7.122	-0.013	137084	480.1	3	7.854	-0.014	123981	596.0
Aroclor-1016	4	7.231	-0.012	90226	503.0	4	8.111	-0.012	102597	865.8
Total Col1Ave (4 peaks):				532.2		Total Col2Ave (4 peaks):			740.8	RPD = 33
Corrected Ave (3 peaks):				503.3		Corrected Ave (3 peaks):			699.1	RPD = 33
Aroclor-1221	1	3.942	-0.001	280	9.2	1	4.598	3.598	22908	814.9
Aroclor-1221	2	5.373	-0.002	2967	73.3	2	6.049	-0.010	4629	76.5
Aroclor-1221	3	5.653	-0.006	32152	234.3	3	6.394	-0.005	68006	623.7
Total Col1Ave (3 peaks):				105.6		Total Col2Ave (3 peaks):			505.0	RPD = 131*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.942	-0.000	280	16.0	1	4.598	3.598	22908	1490.5
Aroclor-1232	2	6.601	-0.007	97073	1243.1	2	7.049	-0.008	156449	1634.9
Aroclor-1232	3	6.972	-0.010	371572	1485.9	3	7.644	-0.013	355651	1749.3
Aroclor-1232	4	8.268	-0.027	177013	2027.3	4	8.025	-0.019	241167	6222.9
Total Col1Ave (4 peaks):				1193.1		Total Col2Ave (4 peaks):			2774.4	RPD = 80*
Corrected Ave (3 peaks):				915.0		Corrected Ave (3 peaks):			1624.9	RPD = 56*
Aroclor-1242	1	6.601	-0.009	97073	650.8	1	7.049	-0.008	156449	910.0
Aroclor-1242	2	6.972	-0.010	371572	751.9	2	7.644	-0.013	355651	881.6
Aroclor-1242	3	8.268	-0.023	177013	1072.4	3	8.956	-0.026	173530	1067.7
Aroclor-1242	4	8.559	-0.026	189275	1128.5	4	9.388	-0.031	153972	971.3
Total Col1Ave (4 peaks):				900.9		Total Col2Ave (4 peaks):			957.6	RPD = 6
Corrected Ave (3 peaks):				825.0		Corrected Ave (3 peaks):			921.0	RPD = 11
Aroclor-1248	1	7.454	-0.014	116964	512.1	1	8.111	-0.012	102597	655.8
Aroclor-1248	2	7.920	-0.018	166197	482.2	2	8.530	-0.015	153173	791.6
Aroclor-1248	3	8.327	-0.024	263751	370.9	3	8.956	-0.026	173530	577.6
Aroclor-1248	4	8.559	-0.027	189275	717.1	4	9.388	-0.031	153972	530.9
Total Col1Ave (4 peaks):				520.6		Total Col2Ave (4 peaks):			639.0	RPD = 20
Corrected Ave (3 peaks):				455.0		Corrected Ave (3 peaks):			588.1	RPD = 26
Aroclor-1254	1	8.633	-0.022	156294	248.0	1	9.255	-0.021	97720	304.8
Aroclor-1254	2	8.704	-0.021	67134	192.9	2	9.388	0.018	153972	874.7
Aroclor-1254	3	9.013	-0.013	189658	455.3	3	9.785	-0.022	58564	249.0
Aroclor-1254	4	9.136	-0.025	203523	225.6	4	9.935	-0.024	168119	258.3
Aroclor-1254	5	9.831	-0.029	141675	242.7	5	10.170	-0.030	182245	294.2
Total Col1Ave (5 peaks):				272.9		Total Col2Ave (5 peaks):			396.2	RPD = 37
Corrected Ave (4 peaks):				227.3		Corrected Ave (4 peaks):			276.6	RPD = 20
Aroclor-1260	1	10.360	-0.025	83180	213.8	1	11.005	-0.020	61691	158.7
Aroclor-1260	2	10.681	-0.026	82759	212.3	2	11.471	-0.018	79569	220.2
Aroclor-1260	3	11.034	-0.024	246478	220.5	3	11.723	-0.019	180197	180.2
Aroclor-1260	4	11.438	-0.024	130754	252.9	4	12.311	-0.019	114431	177.1
Aroclor-1260	5	11.543	-0.022	52217	216.6	NS	---			----
Total Col1Ave (5 peaks):				223.2		Total Col2Ave (4 peaks):			184.0	RPD = 19
Corrected Ave (4 peaks):				215.8		Corrected Ave (3 peaks):			172.0	RPD = 23
Aroclor-1262	1	10.360	-0.028	83180	129.8	1	11.005	-0.021	61691	96.4
Aroclor-1262	2	11.034	-0.026	246478	161.7	2	11.723	-0.023	180197	126.4
Aroclor-1262	3	11.543	-0.025	52217	120.9	3	12.240	-0.019	49732	120.6
Aroclor-1262	4	11.615	-0.025	66051	115.2	4	13.030	-0.104	46790	91.0
Total Col1Ave (4 peaks):				131.9		Total Col2Ave (4 peaks):			108.6	RPD = 19
Corrected Ave (3 peaks):				121.9		Corrected Ave (3 peaks):			102.7	RPD = 17
Aroclor-1268	1	11.543	-0.025	52217	35.5	1	12.240	-0.019	49732	35.4
Aroclor-1268	2	11.615	-0.022	66051	39.5	2	12.311	-0.025	114431	67.5
Aroclor-1268	3	12.019	0.004	31624	23.1	3	12.692	-0.021	3090	2.3
Aroclor-1268	4	12.765	-0.027	25651	5.3	4	13.509	-0.011	13087	2.7
Total Col1Ave (4 peaks):				25.9		Total Col2Ave (4 peaks):			27.0	RPD = 4

Corrected Ave (3 peaks): 21.3 Corrected Ave (3 peaks): 13.5 RPD = 45*

Total PCB Area Col1 (5.090 - 13.086) = 5599356 Col1 Total PCB = 0.7 ppm*

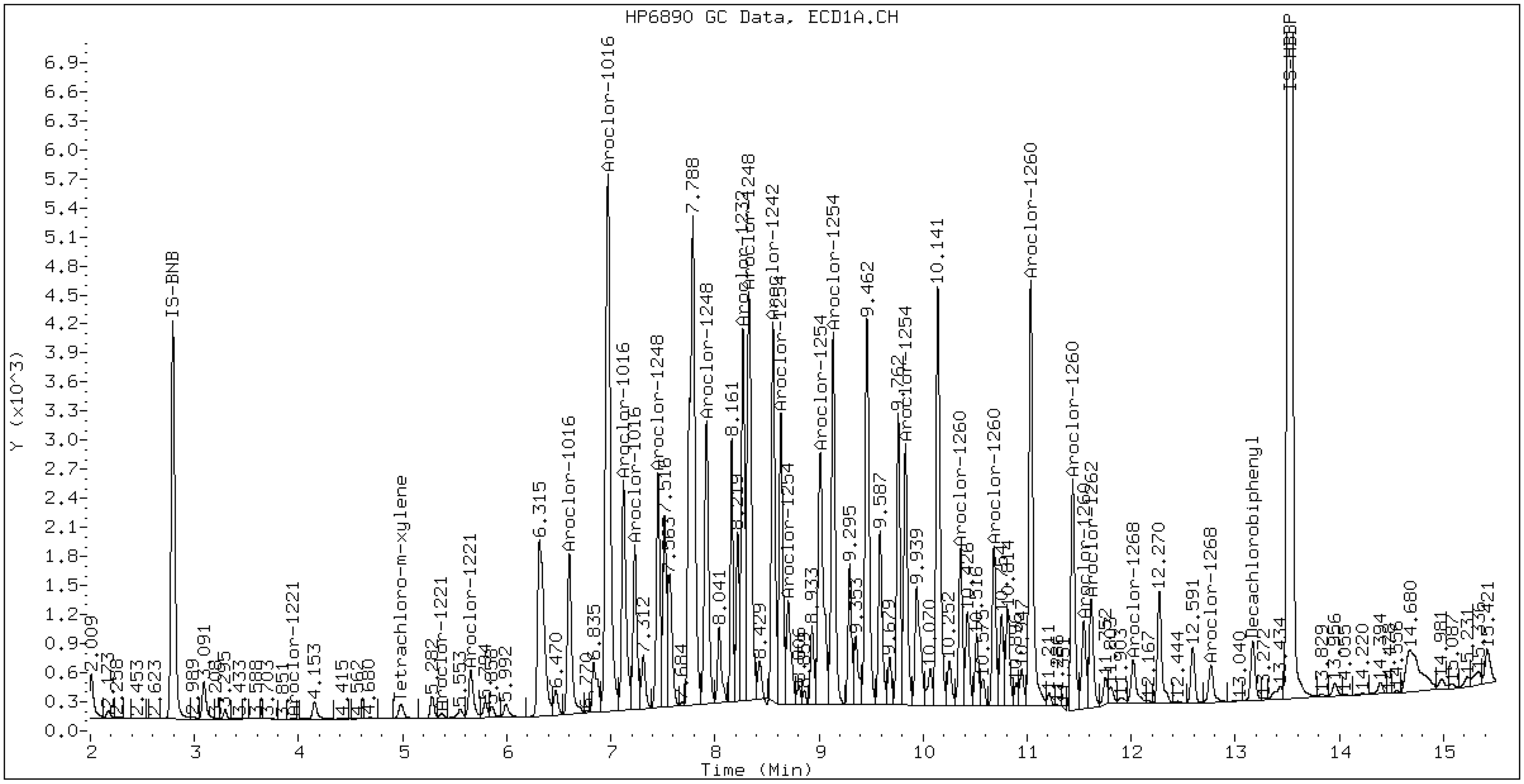
Total PCB Area Col2 (5.090 - 13.086) = 4687569 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

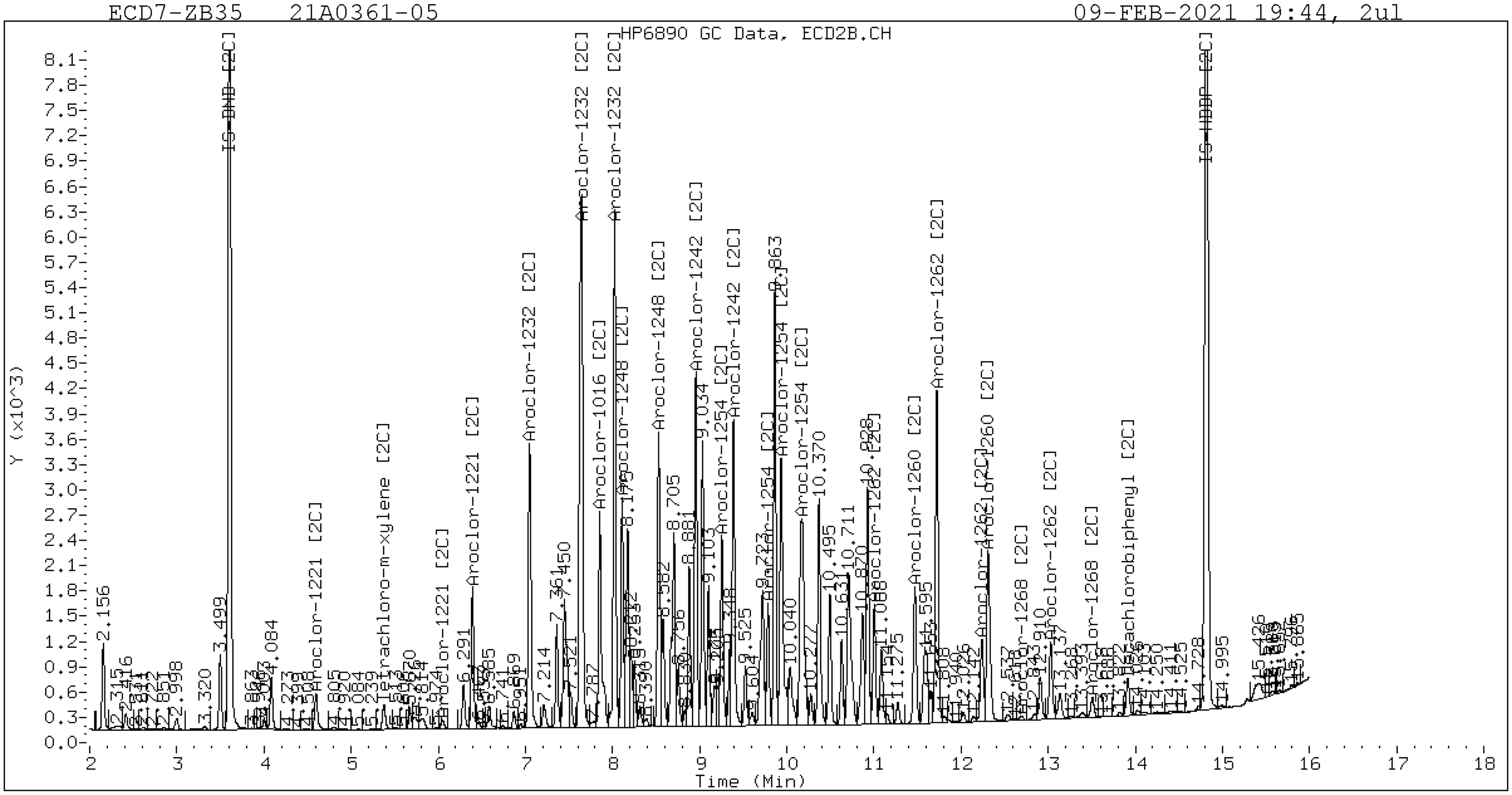
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-05 09-FEB-2021 19:44, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 21A0361-05 09-FEB-2021 19:44, 2ul

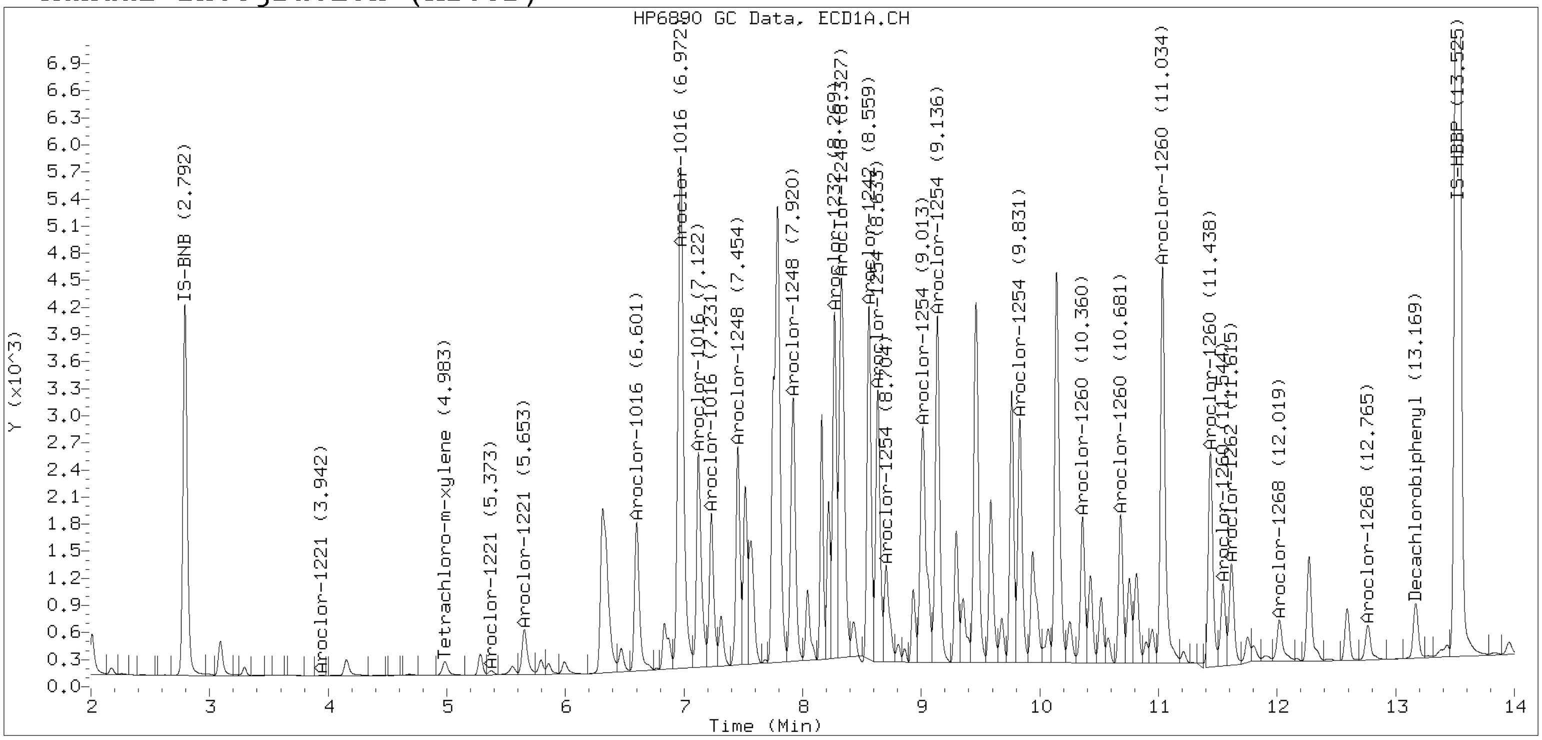


ZB-35 Manual Integration: NO

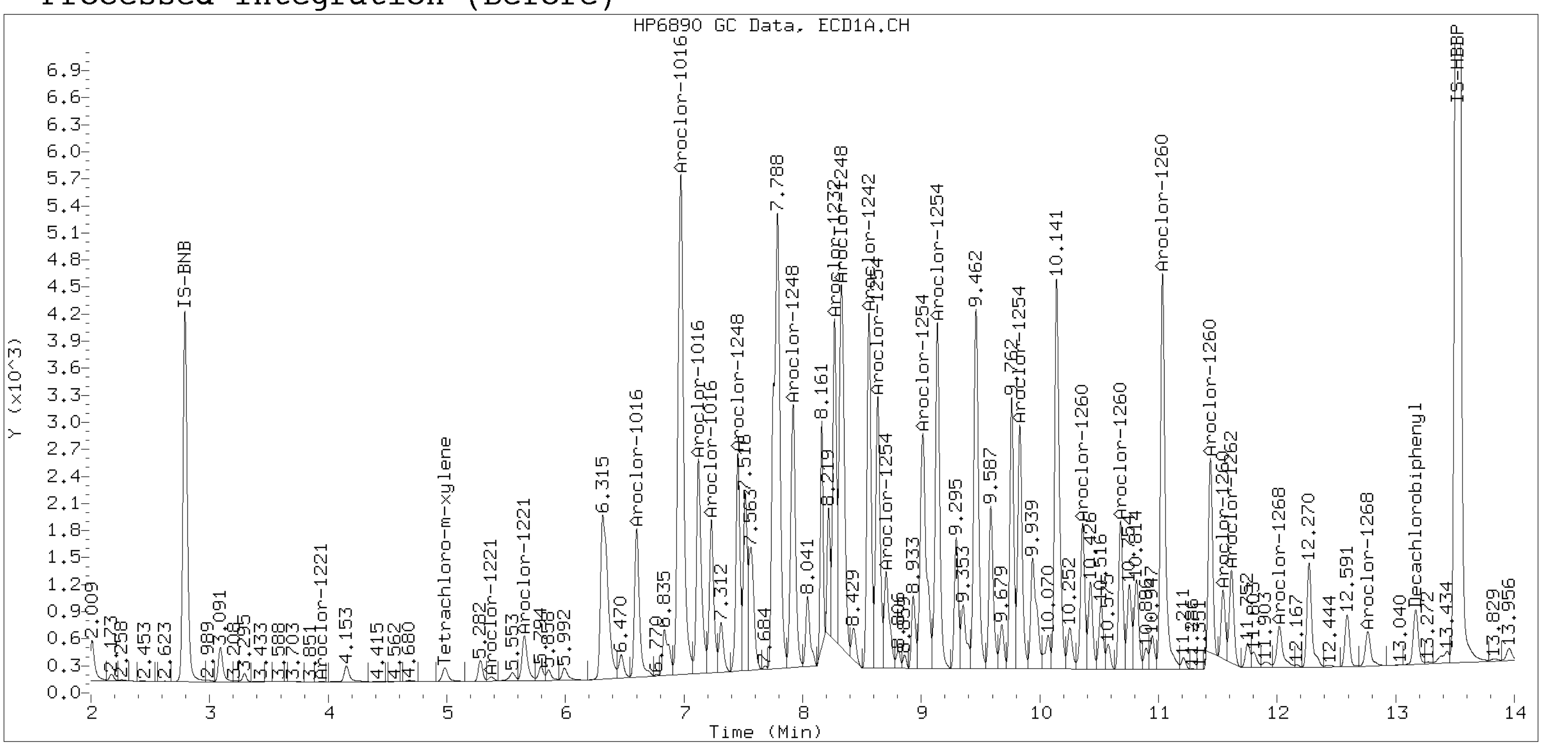
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/210209.b/02092109ECD5.D Injection Date: 09-FEB-2021 19:44

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10NW-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Solid	Laboratory ID:	21A0361-07 A	File ID:	02092110ECD5.D
Sampled:	01/25/21 15:10	Prepared:	02/05/21 16:51	Analyzed:	02/09/21 20:05
% Solids:	81.84	Preparation:	EPA 3546 (Microwave)	Initial/Final:	6.21 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0231	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	19.7	7.9	19.7	U
11104-28-2	Aroclor 1221	1	1	19.7	7.9	19.7	U
11141-16-5	Aroclor 1232	1	1	19.7	7.9	19.7	U
53469-21-9	Aroclor 1242	1	1	19.7	7.9	19.7	U
12672-29-6	Aroclor 1248	1	1	88.1	7.9	19.7	
11097-69-1	Aroclor 1254	1	1	134	7.9	19.7	
11096-82-5	Aroclor 1260	1	1	71.0	9.1	19.7	
37324-23-5	Aroclor 1262	1	1	19.7	9.1	19.7	U
11100-14-4	Aroclor 1268	1	1	19.7	9.1	19.7	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.353*	*30.3*	*76.9*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.353*	*29.9*	*75.9*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092110ECD5.D
Data file 2: /210209.b/210209.b/02092110ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-07
Client ID:
Injection Date: 09-FEB-2021 20:05
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.990	-0.000	101229	5.378	-0.003	192914	30.3	31.7	4.3	Tetrachloro-m-xylene
13.177	-0.009	387754	13.920	-0.007	305815	30.8	30.5	0.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	211483	27.6
Hexabromobiphenyl	1343188	1173400	-12.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	575922	-31.2
Hexabromobiphenyl	850693	572162	-32.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

```
                               ZB5 Col                                 ZB35 Col
 Aroclor    Peak#    RT     Shift     Area     Amount     Peak#   RT      Shift     Area   Amount
 ==========================================================================================
 Aroclor-1016 1   6.603  -0.006      4643    25.4       1    7.052  -0.005     6311    25.3
 Aroclor-1016 2   6.976  -0.007     18267    30.7       2    7.650  -0.007    19826    35.0
 Aroclor-1016 3   7.130  -0.004      7232    25.5       3    7.860  -0.008     5725    23.0
 Aroclor-1016 4   7.235  -0.008      6636    37.3       4    8.118  -0.005    20825   146.9
       Total Col1Ave (4 peaks):    29.7        Total Col2Ave (4 peaks):    57.5   RPD = 64*
       Corrected Ave (3 peaks):    27.2        Corrected Ave (3 peaks):    27.8   RPD = 2

 Aroclor-1221 1   4.019   0.076       265     8.8       1    4.599   3.599      257     7.6
 Aroclor-1221 2   5.375  -0.000       132     3.3       2    6.067   0.008     2947    40.7
 Aroclor-1221 3   5.646  -0.013       415     3.1       3    6.396  -0.002     4877    37.4
       Total Col1Ave (3 peaks):     5.0        Total Col2Ave (3 peaks):    28.6   RPD = 140*
       Corrected Ave: < 3 Peaks                       Corrected Ave: < 3 Peaks

 Aroclor-1232 1   4.019   0.077       265    15.3       1    4.599   3.599      257    14.0
 Aroclor-1232 2   6.603  -0.005      4643    60.0       2    7.052  -0.004     6311    55.1
 Aroclor-1232 3   6.976  -0.007     18267    73.7       3    7.650  -0.008    19826    81.5
 Aroclor-1232 4   8.281  -0.014     26639   307.8       4    8.036  -0.008     3489    75.2
       Total Col1Ave (4 peaks):   114.2        Total Col2Ave (4 peaks):    56.5   RPD = 68*
       Corrected Ave (3 peaks):    49.6        Corrected Ave (3 peaks):    48.1   RPD = 3

 Aroclor-1242 1   6.603  -0.007      4643    31.4       1    7.052  -0.004     6311    30.7
 Aroclor-1242 2   6.976  -0.006     18267    37.3       2    7.650  -0.008    19826    41.1
 Aroclor-1242 3   8.281  -0.010     26639   162.8       3    8.968  -0.014    26085   134.1
 Aroclor-1242 4   8.568  -0.017     29056   174.7       4    9.398  -0.022    17171    90.5
       Total Col1Ave (4 peaks):   101.6        Total Col2Ave (4 peaks):    74.1   RPD = 31
       Corrected Ave (3 peaks):    77.2        Corrected Ave (3 peaks):    54.1   RPD = 35

 Aroclor-1248 1   7.462  -0.006     23332   103.0       1    8.118  -0.005    20825   111.2
 Aroclor-1248 2   7.927  -0.011     17465    51.1       2    8.538  -0.007    17535    75.7
 Aroclor-1248 3   8.350  -0.001     65596    93.0       3    8.968  -0.014    26085    72.6
 Aroclor-1248 4   8.568  -0.018     29056   111.0       4    9.398  -0.022    17171    49.5
       Total Col1Ave (4 peaks):    89.6        Total Col2Ave (4 peaks):    77.2   RPD = 15
       Corrected Ave (3 peaks):    82.4        Corrected Ave (3 peaks):    65.9   RPD = 22

 Aroclor-1254 1   8.645  -0.010     82749   132.5       1    9.265  -0.011    53532   139.5
 Aroclor-1254 2   8.716  -0.009     41166   119.3       2    9.357  -0.013    26131   124.0
 Aroclor-1254 3   9.019  -0.007     58141   140.8       3    9.796  -0.011    32632   115.9
 Aroclor-1254 4   9.150  -0.011    128728   143.9       4    9.946  -0.013    99798   128.1
 Aroclor-1254 5   9.845  -0.015     84997   146.9       5   10.176  -0.023   117067   157.9
       Total Col1Ave (5 peaks):   136.7        Total Col2Ave (5 peaks):   133.1   RPD = 3
       Corrected Ave (4 peaks):   134.1        Corrected Ave (4 peaks):   126.9   RPD = 6

 Aroclor-1260 1  10.371  -0.014     28835    72.6       1   11.015  -0.010    17903    44.7
 Aroclor-1260 2  10.694  -0.013     23890    60.1       2   11.485  -0.004    39874   107.0
 Aroclor-1260 3  11.045  -0.013     75232    66.0       3   11.731  -0.010    54941    53.3
 Aroclor-1260 4  11.447  -0.014     34915    66.2       4   12.320  -0.011    38619    58.0
 Aroclor-1260 5  11.555  -0.010     23582    95.8       NS    ---                       ----
       Total Col1Ave (5 peaks):    72.1        Total Col2Ave (4 peaks):    65.7   RPD = 9
       Corrected Ave (4 peaks):    66.2        Corrected Ave (3 peaks):    52.0   RPD = 24

 Aroclor-1262 1  10.371  -0.017     28835    44.1       1   11.015  -0.011    17903    27.1
 Aroclor-1262 2  11.045  -0.015     75232    48.4       2   11.731  -0.014    54941    37.4
 Aroclor-1262 3  11.555  -0.014     23582    53.5       3   12.247  -0.012    17724    41.7
 Aroclor-1262 4  11.625  -0.015     24912    42.6       4   13.036  -0.097    17674    33.4
       Total Col1Ave (4 peaks):    47.1        Total Col2Ave (4 peaks):    34.9   RPD = 30
       Corrected Ave (3 peaks):    45.0        Corrected Ave (3 peaks):    32.6   RPD = 32

 Aroclor-1268 1  11.555  -0.014     23582    15.7       1   12.247  -0.012    17724    12.2
 Aroclor-1268 2  11.625  -0.013     24912    14.6       2   12.320  -0.016    38619    22.1
 Aroclor-1268 3  12.026   0.011     12419     8.9       3   12.701  -0.012     2694     1.9
 Aroclor-1268 4  12.773  -0.018     28490     5.8       4   13.514  -0.006    12184     2.4
       Total Col1Ave (4 peaks):    11.3        Total Col2Ave (4 peaks):     9.7   RPD = 15
```

Corrected Ave (3 peaks): 9.8 Corrected Ave (3 peaks): 5.5 RPD = 55*

Total PCB Area Col1 (5.090 - 13.086) = 1773476 Col1 Total PCB = 0.2 ppm*

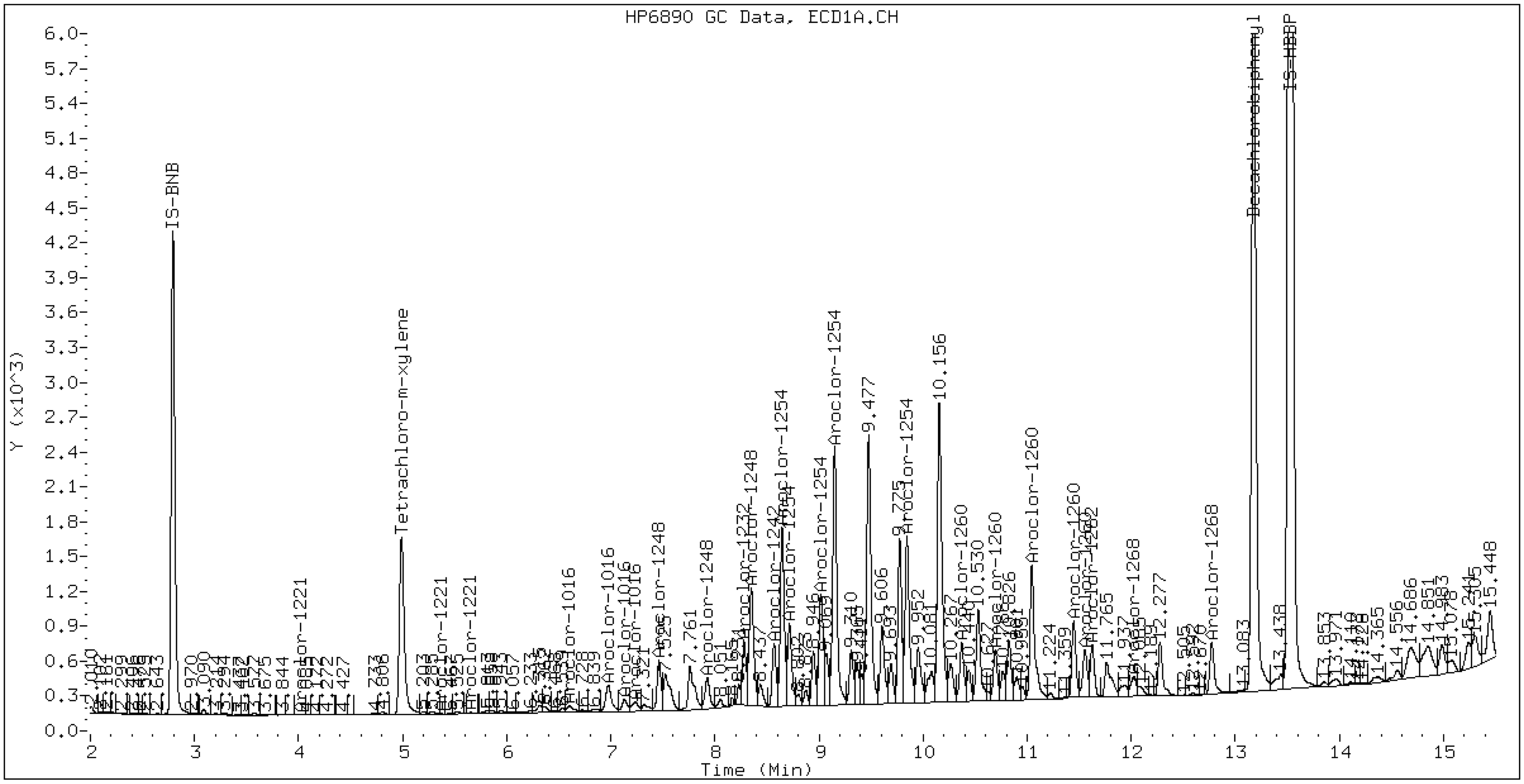
Total PCB Area Col2 (5.090 - 13.086) = 1535419 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

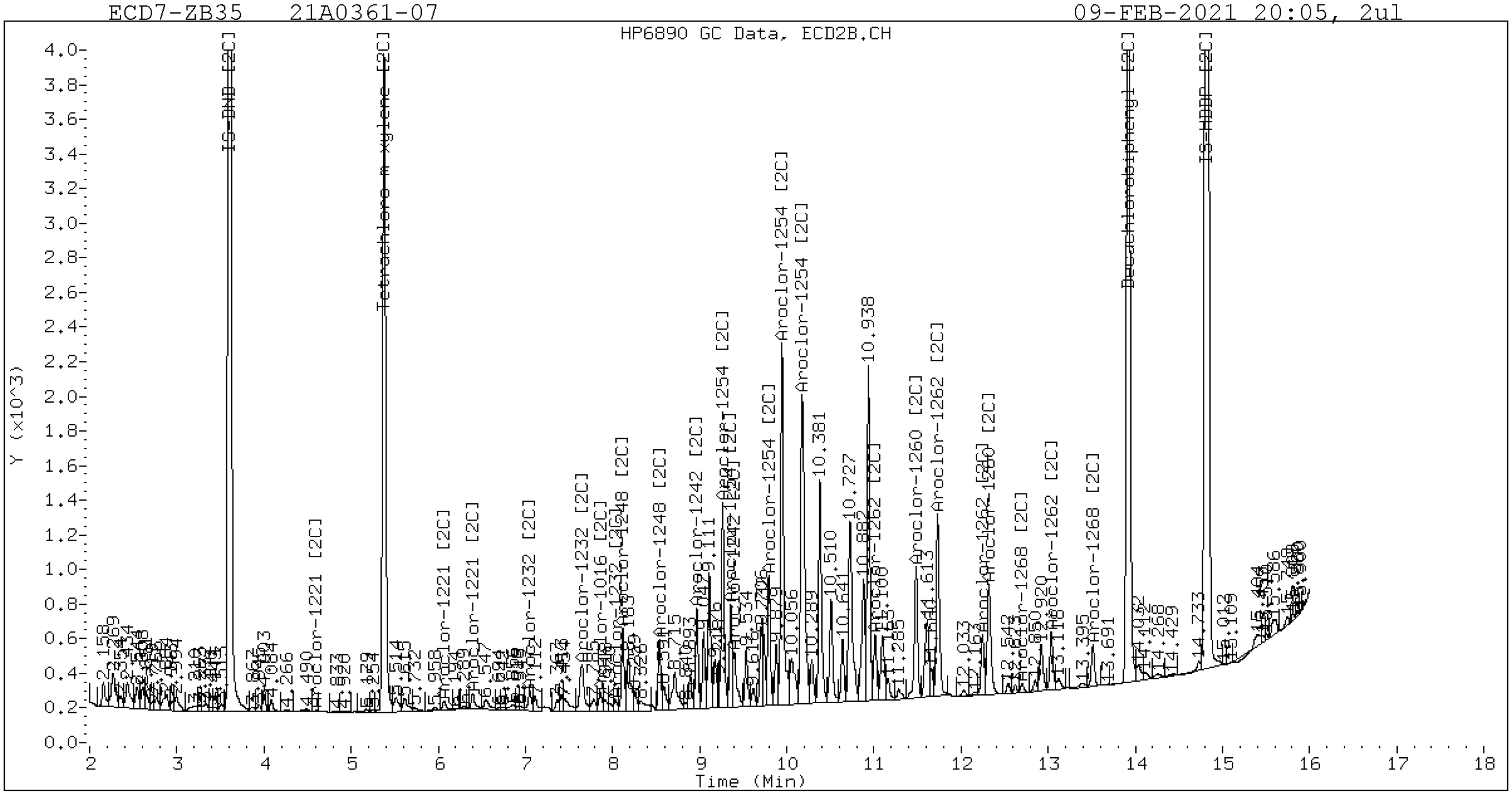
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-07 09-FEB-2021 20:05, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21A0361-07 09-FEB-2021 20:05, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-15SW-1

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Solid	Laboratory ID:	21A0361-09 A	File ID:	02092113ECD5.D
Sampled:	01/25/21 14:15	Prepared:	02/05/21 16:51	Analyzed:	02/09/21 21:06
% Solids:	94.02	Preparation:	EPA 3546 (Microwave)	Initial/Final:	5.41 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0231	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	10	197	78.6	197	U
11104-28-2	Aroclor 1221	1	10	197	78.6	197	U
11141-16-5	Aroclor 1232	1	10	197	78.6	197	U
53469-21-9	Aroclor 1242	1	10	197	78.6	197	U
12672-29-6	Aroclor 1248	2	10	4540	78.6	197	D
11097-69-1	Aroclor 1254	2	10	1850	78.6	197	D
11096-82-5	Aroclor 1260	1	10	2300	91.2	197	D
37324-23-5	Aroclor 1262	1	10	197	91.2	197	U
11100-14-4	Aroclor 1268	1	10	197	91.2	197	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.320*	*37.8*	*96.0*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.320*	*29.6*	*75.3*	*53 - 120*	
Decachlorobiphenyl	*2*	*39.320*	*29.9*	*76.0*	*40 - 133*	
Tetrachlorometaxylene	*2*	*39.320*	*32.5*	*82.7*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092113ECD5.D
Data file 2: /210209.b/210209.b/02092113ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-09
Client ID:
Injection Date: 09-FEB-2021 21:06
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 10.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.987	-0.003	9888	5.376	-0.005	19623	3.0	3.3	9.3	Tetrachloro-m-xylene
13.174	-0.012	52006	13.920	-0.007	32349	3.8	3.0	23.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	208016	25.5
Hexabromobiphenyl	1343188	1260559	-6.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	560926	-33.0
Hexabromobiphenyl	850693	607916	-28.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	6.604	-0.006	52867	294.2	1	7.051	-0.006	93879	385.9	
Aroclor-1016	2	6.978	-0.005	215138	367.6	2	7.649	-0.008	231300	419.6	
Aroclor-1016	3	7.128	-0.006	61907	222.4	3	7.859	-0.009	46940	193.6	
Aroclor-1016	4	7.236	-0.007	43262	247.4	4	8.116	-0.007	85832	621.5	
Total Col1Ave (4 peaks):					282.9	Total Col2Ave (4 peaks):				405.1	RPD = 36
Corrected Ave (3 peaks):					254.6	Corrected Ave (3 peaks):				333.0	RPD = 27
Aroclor-1221	1	---			0.0	1	4.644	3.644	39098	1193.3	
Aroclor-1221	2	5.373	-0.003	718	18.2	2	6.058	-0.002	1477	20.9	
Aroclor-1221	3	5.654	-0.005	7351	54.9	3	6.399	0.001	169916	1336.9	
Col1Ave: <3 Quant Peaks						Col2Ave:				850.4	
Aroclor-1232	1	---			0.0	1	4.644	3.644	39098	2182.5	
Aroclor-1232	2	6.604	-0.005	52867	694.3	2	7.051	-0.006	93879	841.7	
Aroclor-1232	3	6.978	-0.005	215138	882.3	3	7.649	-0.008	231300	976.1	
Aroclor-1232	4	8.279	-0.016	132009	1550.5	4	8.034	-0.010	153000	3387.2	
Total Col1Ave (3 peaks):					1042.4	Total Col2Ave (4 peaks):				1846.9	RPD = 56*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				1333.5	
Aroclor-1242	1	6.604	-0.007	52867	363.5	1	7.051	-0.006	93879	468.5	
Aroclor-1242	2	6.978	-0.005	215138	446.4	2	7.649	-0.008	231300	491.9	
Aroclor-1242	3	8.279	-0.012	132009	820.2	3	8.964	-0.018	141392	746.4	
Aroclor-1242	4	8.570	-0.015	140683	860.2	4	9.398	-0.022	148918	806.0	
Total Col1Ave (4 peaks):					622.6	Total Col2Ave (4 peaks):				628.2	RPD = 1
Corrected Ave (3 peaks):					543.4	Corrected Ave (3 peaks):				568.9	RPD = 5
Aroclor-1248	1	7.461	-0.007	89179	400.4	1	8.116	-0.007	85832	470.7	
Aroclor-1248	2	7.928	-0.010	130698	388.9	2	8.536	-0.009	119751	531.0	
Aroclor-1248	3	8.336	-0.014	211552	305.1	3	8.964	-0.018	141392	403.8	
Aroclor-1248	4	8.570	-0.016	140683	546.6	4	9.398	-0.022	148918	440.5	
Total Col1Ave (4 peaks):					410.2	Total Col2Ave (4 peaks):				461.5	RPD = 12
Corrected Ave (3 peaks):					364.8	Corrected Ave (3 peaks):				438.3	RPD = 18
Aroclor-1254	1	8.644	-0.012	113280	184.3	1	9.262	-0.014	74236	198.7	
Aroclor-1254	2	8.715	-0.010	40379	119.0	2	9.398	0.027	148918	7~~25~~.8	
Aroclor-1254	3	9.025	-0.002	125721	3~~09~~.5	3	9.793	-0.014	40984	149.5	
Aroclor-1254	4	9.147	-0.014	127596	145.1	4	9.948	-0.011	139307	183.6	
Aroclor-1254	5	9.843	-0.017	105653	185.6	5	10.190	-0.009	158123	219.0	
Total Col1Ave (5 peaks):					188.7	Total Col2Ave (5 peaks):				295.3	RPD = 44*
Corrected Ave (4 peaks):					158.5	Corrected Ave (4 peaks):				187.7	RPD = 17
Aroclor-1260	1	10.372	-0.014	102417	240.2	1	11.014	-0.011	80776	189.7	
Aroclor-1260	2	10.692	-0.014	101367	237.2	2	11.478	-0.011	87269	220.5	
Aroclor-1260	3	11.044	-0.014	299500	244.4	3	11.729	-0.012	233224	212.9	
Aroclor-1260	4	11.447	-0.014	139398	245.9	4	12.319	-0.012	144275	203.9	
Aroclor-1260	5	11.553	-0.012	53390	202.0	NS	---			----	
Total Col1Ave (5 peaks):					234.0	Total Col2Ave (4 peaks):				206.7	RPD = 12
Corrected Ave (4 peaks):					231.0	Corrected Ave (3 peaks):				202.2	RPD = 13
Aroclor-1262	1	10.372	-0.016	102417	145.8	1	11.014	-0.012	80776	115.3	
Aroclor-1262	2	11.044	-0.016	299500	179.2	2	11.729	-0.017	233224	149.3	
Aroclor-1262	3	11.553	-0.016	53390	112.7	3	12.247	-0.012	61485	136.1	
Aroclor-1262	4	11.625	-0.015	72943	116.0	4	13.034	-0.099	60644	107.7	
Total Col1Ave (4 peaks):					138.4	Total Col2Ave (4 peaks):				127.1	RPD = 9
Corrected Ave (3 peaks):					124.8	Corrected Ave (3 peaks):				119.7	RPD = 4
Aroclor-1268	1	11.553	-0.016	53390	33.1	1	12.247	-0.012	61485	40.0	
Aroclor-1268	2	11.625	-0.013	72943	39.8	2	12.319	-0.018	144275	77.7	
Aroclor-1268	3	12.028	0.013	36416	24.2	3	12.700	-0.013	2242	1.5	
Aroclor-1268	4	12.773	-0.018	26989	5.1	4	13.514	-0.006	15415	2.9	
Total Col1Ave (4 peaks):					25.6	Total Col2Ave (4 peaks):				30.5	RPD = 18
Corrected Ave (3 peaks):					20.8	Corrected Ave (3 peaks):				14.8	RPD = 34

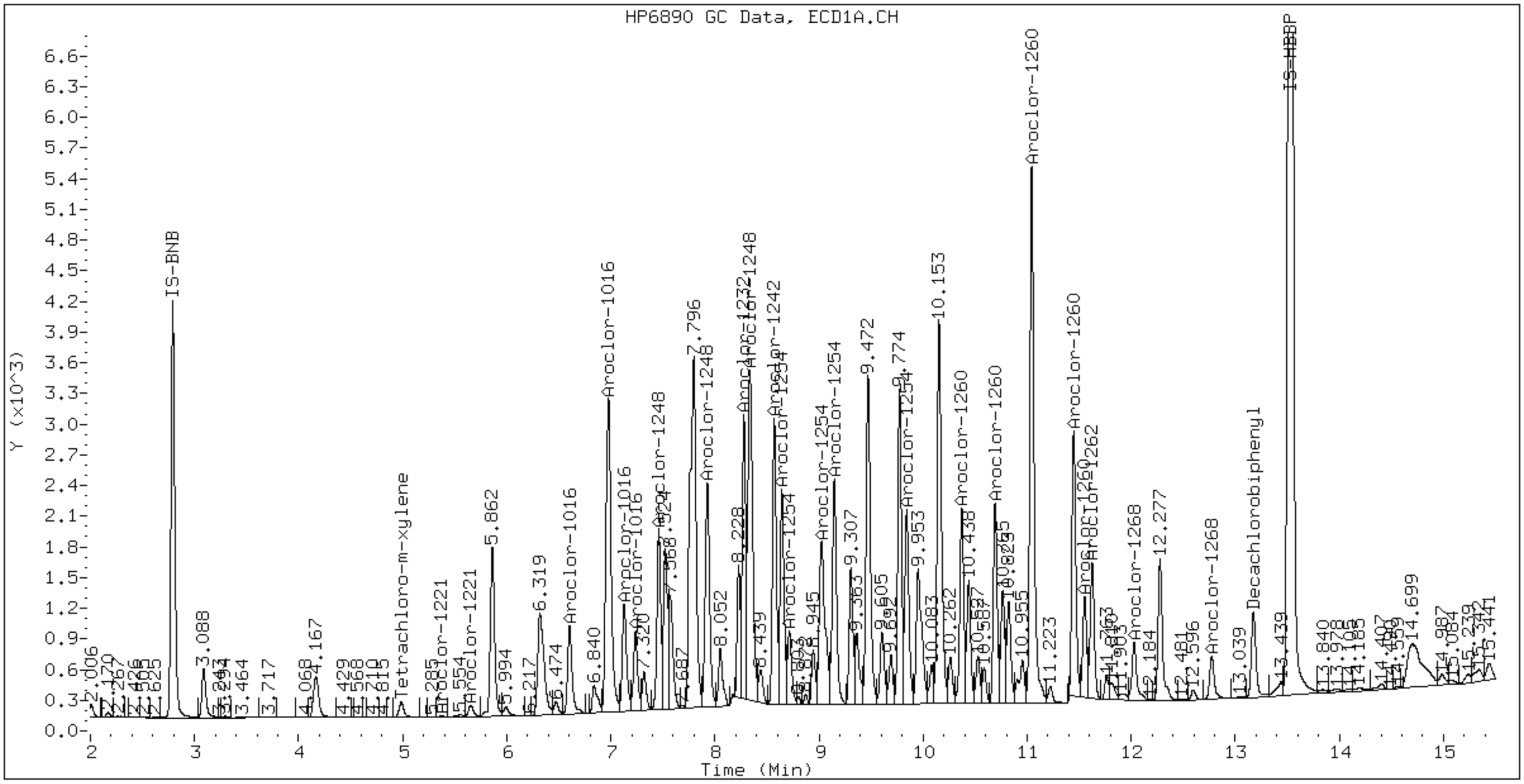
Total PCB Area Col1 (5.090 - 13.086) =	4486981	Col1 Total PCB = 0.6 ppm*
Total PCB Area Col2 (5.090 - 13.086) =	3892965	Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

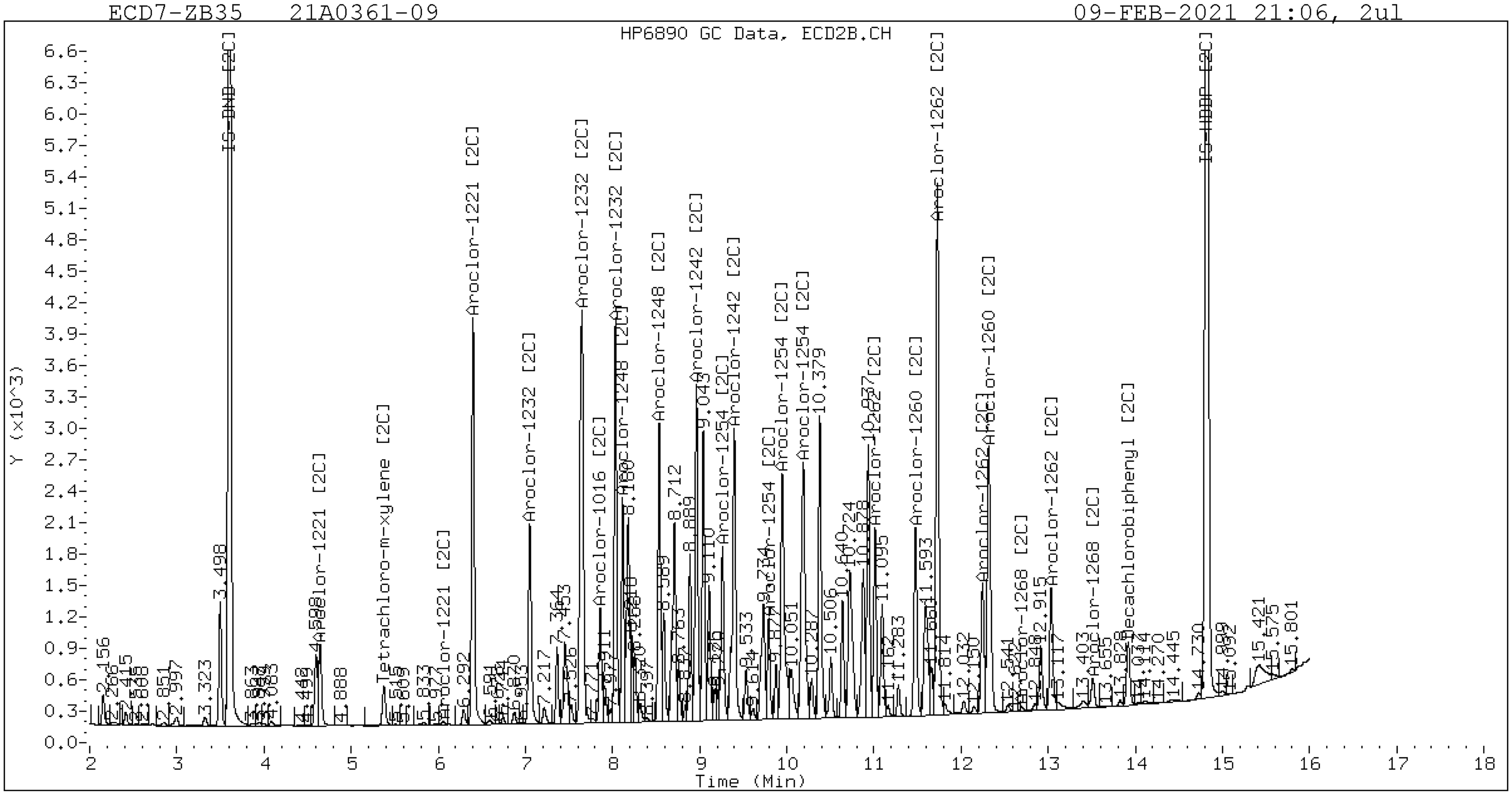
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-09 09-FEB-2021 21:06, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21A0361-09 09-FEB-2021 21:06, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-15SW-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	21A0361-11 A	File ID:	02092116ECD5.D
Sampled:	01/25/21 14:25	Prepared:	02/05/21 16:51	Analyzed:	02/09/21 22:08
% Solids:	84.44	Preparation:	EPA 3546 (Microwave)	Initial/Final:	5.97 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0231	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	19.8	7.9	19.8	U
11104-28-2	Aroclor 1221	1	1	19.8	7.9	19.8	U
11141-16-5	Aroclor 1232	1	1	19.8	7.9	19.8	U
53469-21-9	Aroclor 1242	1	1	19.8	7.9	19.8	U
12672-29-6	Aroclor 1248	1	1	60.1	7.9	19.8	
11097-69-1	Aroclor 1254	1	1	79.1	7.9	19.8	
11096-82-5	Aroclor 1260	1	1	42.1	9.2	19.8	
37324-23-5	Aroclor 1262	1	1	19.8	9.2	19.8	U
11100-14-4	Aroclor 1268	1	1	19.8	9.2	19.8	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.674*	*30.4*	*76.7*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.674*	*31.2*	*78.6*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092116ECD5.D
Data file 2: /210209.b/210209.b/02092116ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-11
Client ID:
Injection Date: 09-FEB-2021 22:08
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.992	0.002	101722	5.381	-0.001	191619	31.4	30.8	2.0	Tetrachloro-m-xylene
13.177	-0.010	422731	13.921	-0.006	359667	30.7	30.7	0.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	205202	23.8
Hexabromobiphenyl	1343188	1283586	-4.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	588515	-29.7
Hexabromobiphenyl	850693	669950	-21.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
	ZB5 Col					ZB35 Col				
Aroclor-1016	1	6.604	-0.006	4023	22.7	1	7.050	-0.006	3876	15.2
Aroclor-1016	2	6.975	-0.008	13262	23.0	2	7.647	-0.010	8985	15.5
Aroclor-1016	3	7.129	-0.005	6488	23.6	3	7.855	-0.013	2006	7.9
Aroclor-1016	4	7.230	-0.013	5936	34.4	4	8.116	-0.007	16180	111.7
Total Col1Ave (4 peaks):				25.9		Total Col2Ave (4 peaks):			37.6	RPD = 37
~~Corrected Ave (3 peaks):~~				~~23.1~~		~~Corrected Ave (3 peaks):~~			~~12.9~~	~~RPD = 57*~~
Aroclor-1221	1	---			0.0	1	4.598	3.598	684	19.9
Aroclor-1221	2	5.285	-0.090	3725	95.7	2	6.069	0.010	3003	40.6
Aroclor-1221	3	5.647	-0.012	585	4.4	3	6.397	-0.002	6537	49.0
~~Col1Ave: <3 Quant Peaks~~						~~Col2Ave:~~			~~36.5~~	
Aroclor-1232	1	---			0.0	1	4.598	3.598	684	36.4
Aroclor-1232	2	6.604	-0.004	4023	53.6	2	7.050	-0.006	3876	33.1
Aroclor-1232	3	6.975	-0.008	13262	55.1	3	7.647	-0.011	8985	36.1
Aroclor-1232	4	8.274	-0.021	14916	177.6	4	8.034	-0.010	264	5.6
~~Total Col1Ave (3 peaks):~~				~~95.4~~		~~Total Col2Ave (4 peaks):~~			~~27.8~~	~~RPD = 110*~~
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			24.9	
Aroclor-1242	1	6.604	-0.006	4023	28.0	1	7.050	-0.006	3876	18.4
Aroclor-1242	2	6.975	-0.008	13262	27.9	2	7.647	-0.011	8985	18.2
Aroclor-1242	3	8.274	-0.017	14916	93.9	3	8.958	-0.024	12161	61.2
Aroclor-1242	4	8.563	-0.022	16394	101.6	4	9.392	-0.027	10380	53.5
Total Col1Ave (4 peaks):				62.9		Total Col2Ave (4 peaks):			37.8	RPD = 50*
Corrected Ave (3 peaks):				50.0		Corrected Ave (3 peaks):			30.1	RPD = 50*
Aroclor-1248	1	7.460	-0.008	17114	77.9	1	8.116	-0.007	16180	84.6
Aroclor-1248	2	7.922	-0.016	14929	45.0	2	8.535	-0.010	11193	47.3
Aroclor-1248	3	8.346	-0.005	37511	54.8	3	8.958	-0.024	12161	33.1
Aroclor-1248	4	8.563	-0.024	16394	64.6	4	9.392	-0.027	10380	29.3
Total Col1Ave (4 peaks):				60.6		Total Col2Ave (4 peaks):			48.6	RPD = 22
Corrected Ave (3 peaks):				54.8		Corrected Ave (3 peaks):			36.6	RPD = 40
Aroclor-1254	1	8.642	-0.014	44900	74.1	1	9.262	-0.015	28603	73.0
Aroclor-1254	2	8.712	-0.014	22642	67.6	2	9.392	0.022	10380	48.2
Aroclor-1254	3	9.026	-0.001	60754	151.6	3	9.792	-0.015	16621	57.8
Aroclor-1254	4	9.146	-0.015	73295	84.5	4	9.937	-0.022	35688	44.8
Aroclor-1254	5	9.843	-0.017	52252	93.1	5	10.171	-0.029	52254	69.0
Total Col1Ave (5 peaks):				94.2		Total Col2Ave (5 peaks):			58.6	RPD = 47*
Corrected Ave (4 peaks):				79.8		Corrected Ave (4 peaks):			55.0	RPD = 37
Aroclor-1260	1	10.367	-0.018	27352	63.0	1	11.014	-0.012	14164	30.2
Aroclor-1260	2	10.692	-0.014	17280	39.7	2	11.482	-0.007	25673	58.9
Aroclor-1260	3	11.043	-0.015	39415	31.6	3	11.731	-0.011	44151	36.6
Aroclor-1260	4	11.447	-0.014	20265	35.1	4	12.316	-0.014	25464	32.7
Aroclor-1260	5	11.554	-0.011	19744	73.4	NS	---			----
Total Col1Ave (5 peaks):				48.6		Total Col2Ave (4 peaks):			39.6	RPD = 20
Corrected Ave (4 peaks):				42.4		Corrected Ave (3 peaks):			33.1	RPD = 24
Aroclor-1262	1	10.367	-0.021	27352	38.2	1	11.014	-0.012	14164	18.3
Aroclor-1262	2	11.043	-0.017	39415	23.2	2	11.731	-0.015	44151	25.6
Aroclor-1262	3	11.554	-0.015	19744	40.9	3	12.244	-0.015	14199	28.5
Aroclor-1262	4	11.624	-0.016	18484	28.9	4	13.036	-0.098	11391	18.4
Total Col1Ave (4 peaks):				32.8		Total Col2Ave (4 peaks):			22.7	RPD = 36
Corrected Ave (3 peaks):				30.1		Corrected Ave (3 peaks):			20.8	RPD = 37
Aroclor-1268	1	11.554	-0.015	19744	12.0	1	12.244	-0.015	14199	8.4
Aroclor-1268	2	11.624	-0.013	18484	9.9	2	12.316	-0.020	25464	12.4
Aroclor-1268	3	12.021	0.005	9938	6.5	3	12.700	-0.013	3027	1.9
Aroclor-1268	4	12.774	-0.017	26566	5.0	4	13.513	-0.006	11372	1.9
~~Total Col1Ave (4 peaks):~~				~~8.3~~		~~Total Col2Ave (4 peaks):~~			~~6.2~~	~~RPD = 30~~
Corrected Ave (3 peaks):				7.1		Corrected Ave (3 peaks):			4.1	RPD = 55*

Total PCB Area Col1 (5.090 - 13.086) = 1207661 Col1 Total PCB = 0.2 ppm*

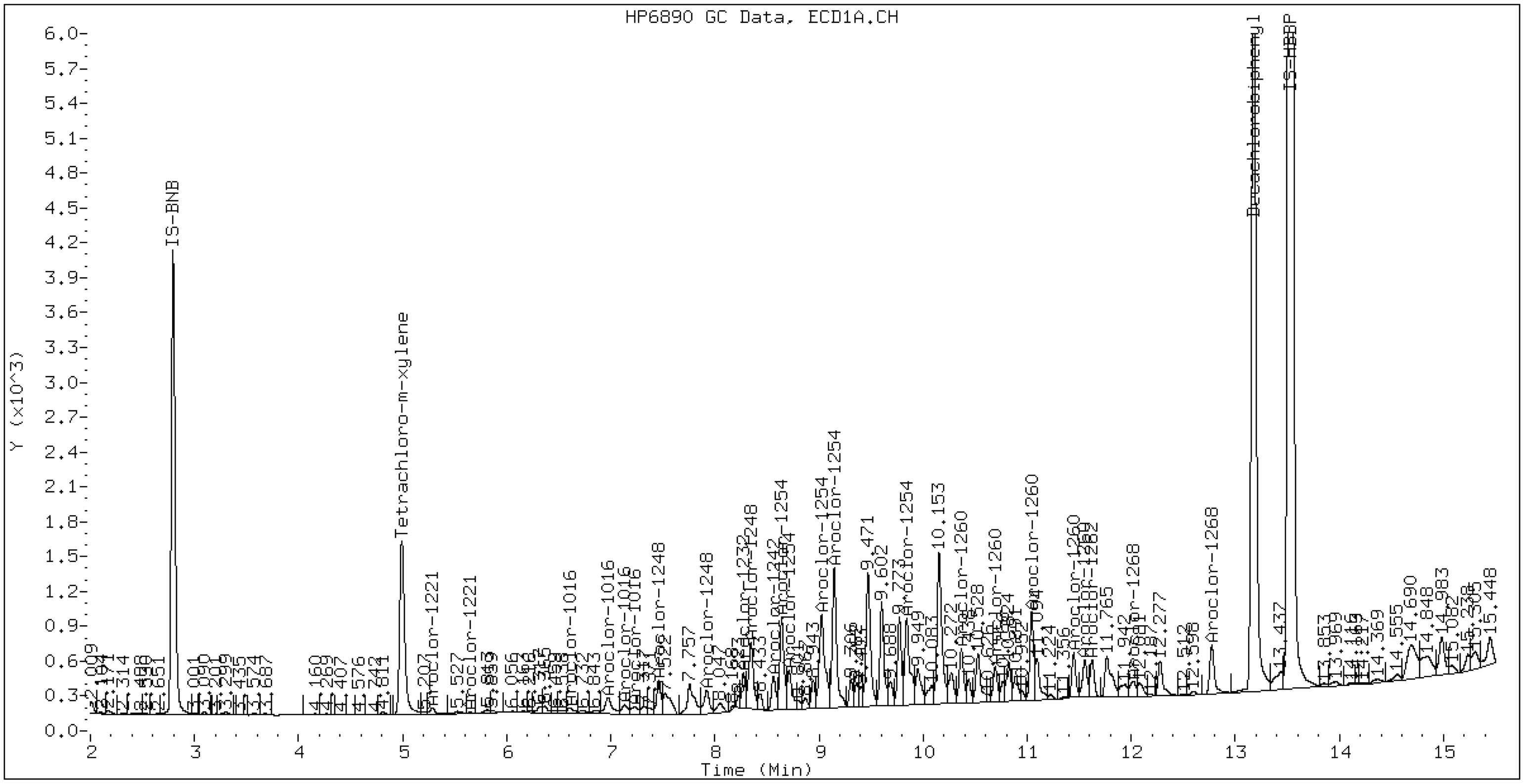
Total PCB Area Col2 (5.090 - 13.086) = 1030781 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

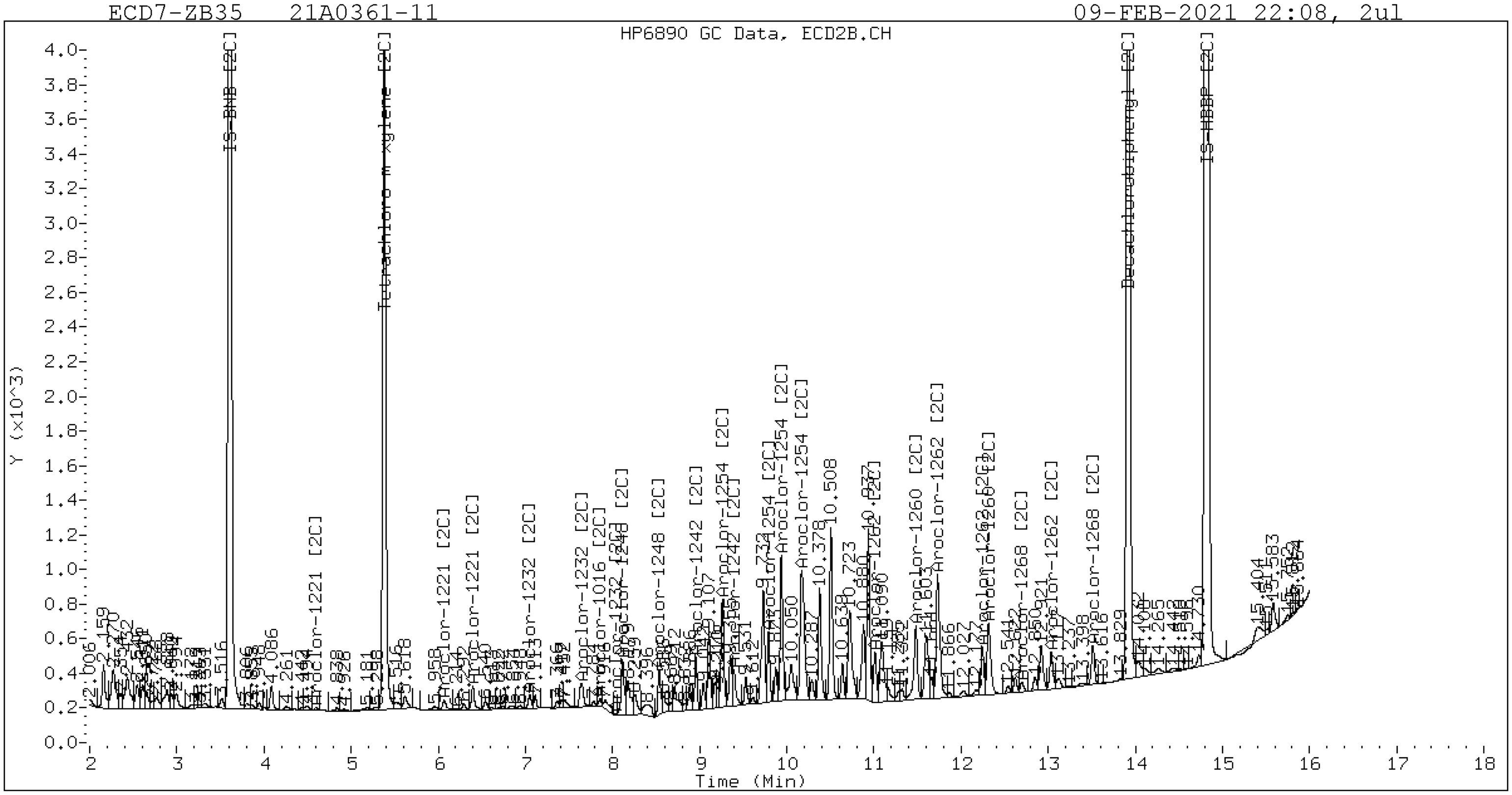
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-11 09-FEB-2021 22:08, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21A0361-11 09-FEB-2021 22:08, 2ul

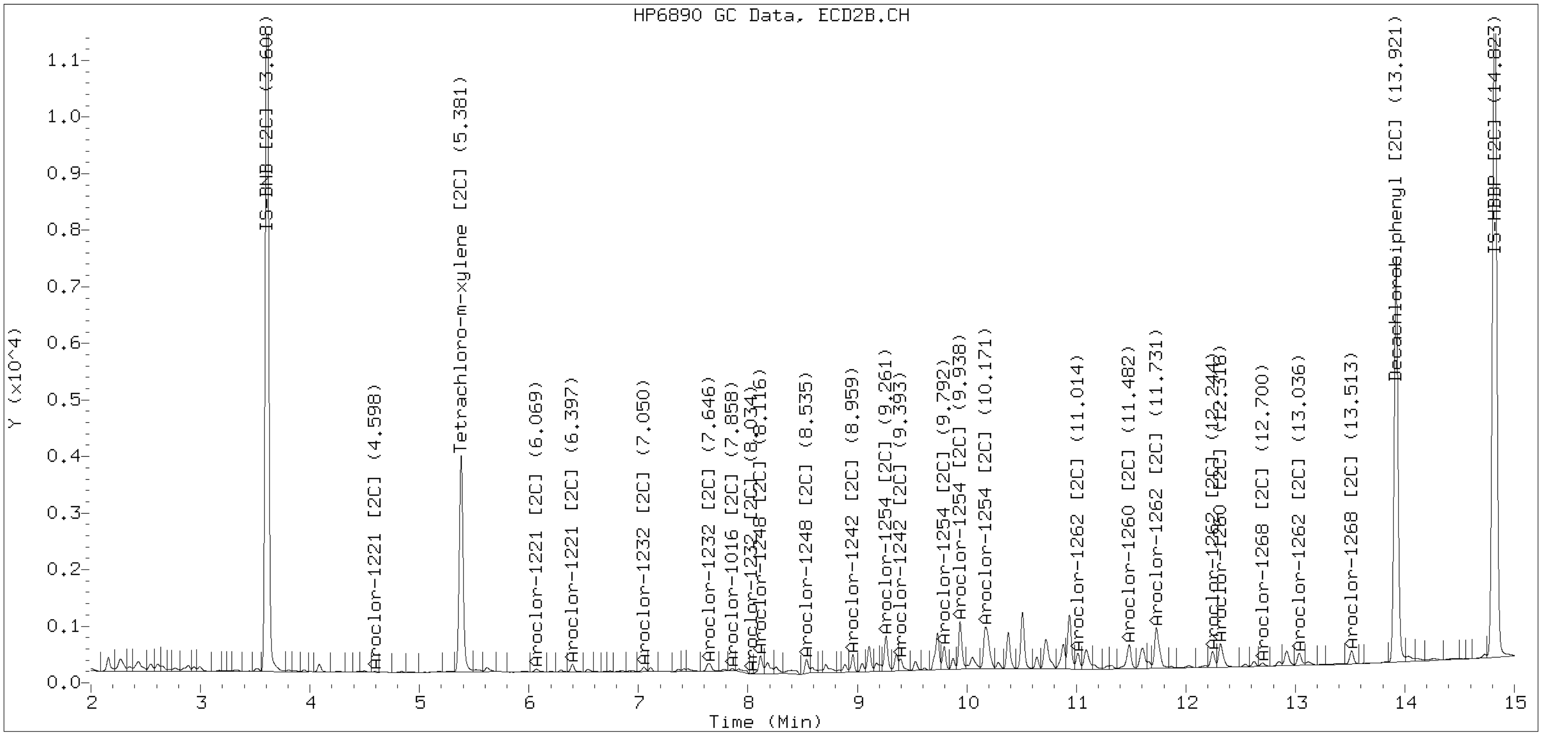


ZB-35 Manual Integration: YES

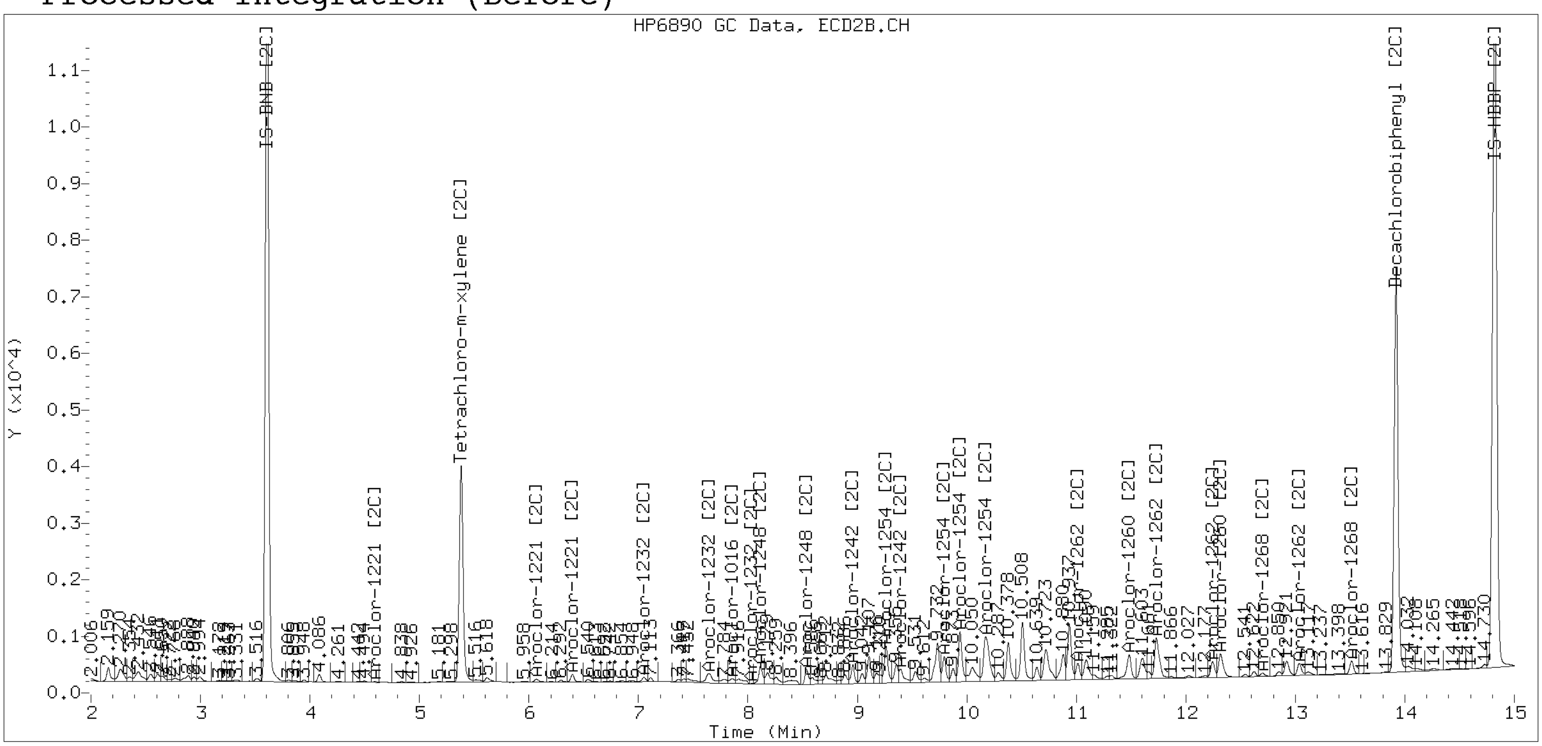
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/210209.b/210209.b/02092116ECD5.D Injection Date: 09-FEB-2021

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10SE-1

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	21A0361-13 A	File ID:	02112105ECD7.D
Sampled:	01/25/21 13:00	Prepared:	02/05/21 16:51	Analyzed:	02/11/21 20:20
% Solids:	94.85	Preparation:	EPA 3546 (Microwave)	Initial/Final:	5.3 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0228	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	50	995	398	995	U
11104-28-2	Aroclor 1221	1	50	995	398	995	U
11141-16-5	Aroclor 1232	1	50	995	398	995	U
53469-21-9	Aroclor 1242	1	50	995	398	995	U
12672-29-6	Aroclor 1248	2	50	11000	398	995	D
11097-69-1	Aroclor 1254	2	50	4340	398	995	D
11096-82-5	Aroclor 1260	1	50	3550	462	995	D
37324-23-5	Aroclor 1262	1	50	995	462	995	U
11100-14-4	Aroclor 1268	1	50	995	462	995	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.785*			*40 - 133*	*D1*
Tetrachlorometaxylene	*1*	*39.785*			*53 - 120*	*D1*
Decachlorobiphenyl	*2*	*39.785*			*40 - 133*	*D1*
Tetrachlorometaxylene	*2*	*39.785*			*53 - 120*	*D1*

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210211.b/02112105ECD7.D
Data file 2: /210211.b/210211.b/02112105ECD7.D
Method: \\target\share\chem4\ecd7.i\210211.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-13RE
Client ID:
Injection Date: 11-FEB-2021 20:20
Report Date: 02/17/2021 10:49
Matrix: NONE
Dilution Factor: 50.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.982	-0.004	1949	5.376	-0.002	4019	0.5	0.6	9.4	Tetrachloro-m-xylene
13.181	-0.005	14626	13.924	-0.009	6464	0.7	0.5	44.0*	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	239124	44.3
Hexabromobiphenyl	1343188	1870499	39.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	669819	-20.0
Hexabromobiphenyl	850693	793588	-6.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

```
                             ZB5 Col                                  ZB35 Col
Aroclor    Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift     Area   Amount
=========================================================================================
Aroclor-1016 1   6.606  -0.002     28435   137.6      1    7.052  -0.004    38265   131.7
Aroclor-1016 2   6.980  -0.004     95275   141.6      2    7.652  -0.005   103488   157.2
Aroclor-1016 3   7.134   0.004     22932    71.7      3    7.864  -0.006    12636    43.6
Aroclor-1016 4   7.237  -0.003     17090    85.0      4    8.119  -0.006    50893   308.6
      Total Col1Ave (4 peaks):    109.0      Total Col2Ave (4 peaks):   160.3   RPD = 38
      Corrected Ave (3 peaks):     98.1      Corrected Ave (3 peaks):   110.9   RPD = 12

Aroclor-1221 1      ---                     0.0      1     ---                        0.0
Aroclor-1221 2     ---                      0.0      2    6.054   0.002      655      7.8
Aroclor-1221 3     ---                      0.0      3    6.396  -0.001     5123     33.8
            Col1Ave: <3 Quant Peaks                        Col2Ave: <3 Quant Peaks

Aroclor-1232 1      ---                     0.0      1     ---                        0.0
Aroclor-1232 2   6.606  -0.002     28435   324.8      2    7.052  -0.005    38265   287.3
Aroclor-1232 3   6.980  -0.003     95275   339.9      3    7.652  -0.008   103488   365.7
Aroclor-1232 4   8.286  -0.009     71074   726.2      4    8.043  -0.006    36756   681.4
      Total Col1Ave (3 peaks):    463.6      Total Col2Ave (3 peaks):   444.8   RPD = 4
      Corrected Ave: < 3 Peaks                     Corrected Ave: < 3 Peaks

Aroclor-1242 1   6.606  -0.002     28435   170.1      1    7.052  -0.004    38265   159.9
Aroclor-1242 2   6.980  -0.003     95275   172.0      2    7.652  -0.008   103488   184.3
Aroclor-1242 3   8.286  -0.007     71074   384.1      3    8.973  -0.018    83244   368.0
Aroclor-1242 4   8.577  -0.014     76233   405.5      4    9.405  -0.027    88481   401.0
      Total Col1Ave (4 peaks):    282.9      Total Col2Ave (4 peaks):   278.3   RPD = 2
      Corrected Ave (3 peaks):    242.1      Corrected Ave (3 peaks):   237.4   RPD = 2

Aroclor-1248 1   7.463  -0.003     49906   194.9      1    8.119  -0.007    50893   233.7
Aroclor-1248 2   7.933  -0.003     75928   196.5      2    8.540  -0.010    62974   233.8
Aroclor-1248 3   8.345  -0.004    119097   149.4      3    8.973  -0.017    83244   199.1
Aroclor-1248 4   8.577  -0.005     76233   257.7      4    9.405  -0.023    88481   219.2
      Total Col1Ave (4 peaks):    199.6      Total Col2Ave (4 peaks):   221.5   RPD = 10
      Corrected Ave (3 peaks):    180.3      Corrected Ave (3 peaks):   217.3   RPD = 19

Aroclor-1254 1   8.650  -0.006     66252    93.8      1    9.270  -0.012    47619   106.7
Aroclor-1254 2   8.727   0.001     32469    83.2      2    9.405   0.029    88481   361.1
Aroclor-1254 3   9.034   0.012     69072   147.9      3    9.800  -0.013    25149    76.8
Aroclor-1254 4   9.156  -0.005     67492    66.7      4    9.955  -0.013    68900    76.1
Aroclor-1254 5   9.853  -0.005     56474    86.3      5   10.197  -0.011    77207    89.5
      Total Col1Ave (5 peaks):     95.6      Total Col2Ave (5 peaks):   142.1   RPD = 39
      Corrected Ave (4 peaks):     82.5      Corrected Ave (4 peaks):    87.3   RPD = 6

Aroclor-1260 1  10.381  -0.004     43113    68.1      1   11.020  -0.010    32943    59.3
Aroclor-1260 2  10.701  -0.004     44067    69.5      2   11.485  -0.009    36651    70.9
Aroclor-1260 3  11.052  -0.004    127172    69.9      3   11.737  -0.011    91186    63.8
Aroclor-1260 4  11.456  -0.003     64634    76.8      4   12.325  -0.011    58018    62.8
Aroclor-1260 5  11.562  -0.002     28503    72.7     NS     ---                        ----
      Total Col1Ave (5 peaks):     71.4      Total Col2Ave (4 peaks):    64.2   RPD = 11
      Corrected Ave (4 peaks):     70.1      Corrected Ave (3 peaks):    61.9   RPD = 12

Aroclor-1262 1  10.381  -0.007     43113    41.4      1   11.020  -0.012    32943    36.0
Aroclor-1262 2  11.052  -0.008    127172    51.3      2   11.737  -0.012    91186    44.7
Aroclor-1262 3  11.562  -0.007     28503    40.6      3   12.253  -0.008    23637    40.1
Aroclor-1262 4  11.633  -0.007     37307    40.0      4   13.122   0.069     4136     5.6
      Total Col1Ave (4 peaks):     43.3      Total Col2Ave (4 peaks):    31.6   RPD = 31
      Corrected Ave (3 peaks):     40.6      Corrected Ave (3 peaks):    27.2   RPD = 39

Aroclor-1268 1  11.562  -0.007     28503    11.9      1   12.253  -0.006    23637    11.8
Aroclor-1268 2  11.633  -0.005     37307    13.7      2   12.325  -0.002    58018    23.9
Aroclor-1268 3  12.036   0.021     19805     8.9      3   12.704  -0.008      738     0.4
Aroclor-1268 4  12.781  -0.011     17244     2.2      4   13.518  -0.013     5770     0.8
      Total Col1Ave (4 peaks):      9.2      Total Col2Ave (4 peaks):     9.2   RPD = 1
      Corrected Ave (3 peaks):      7.7      Corrected Ave (3 peaks):     4.3   RPD = 56*
```

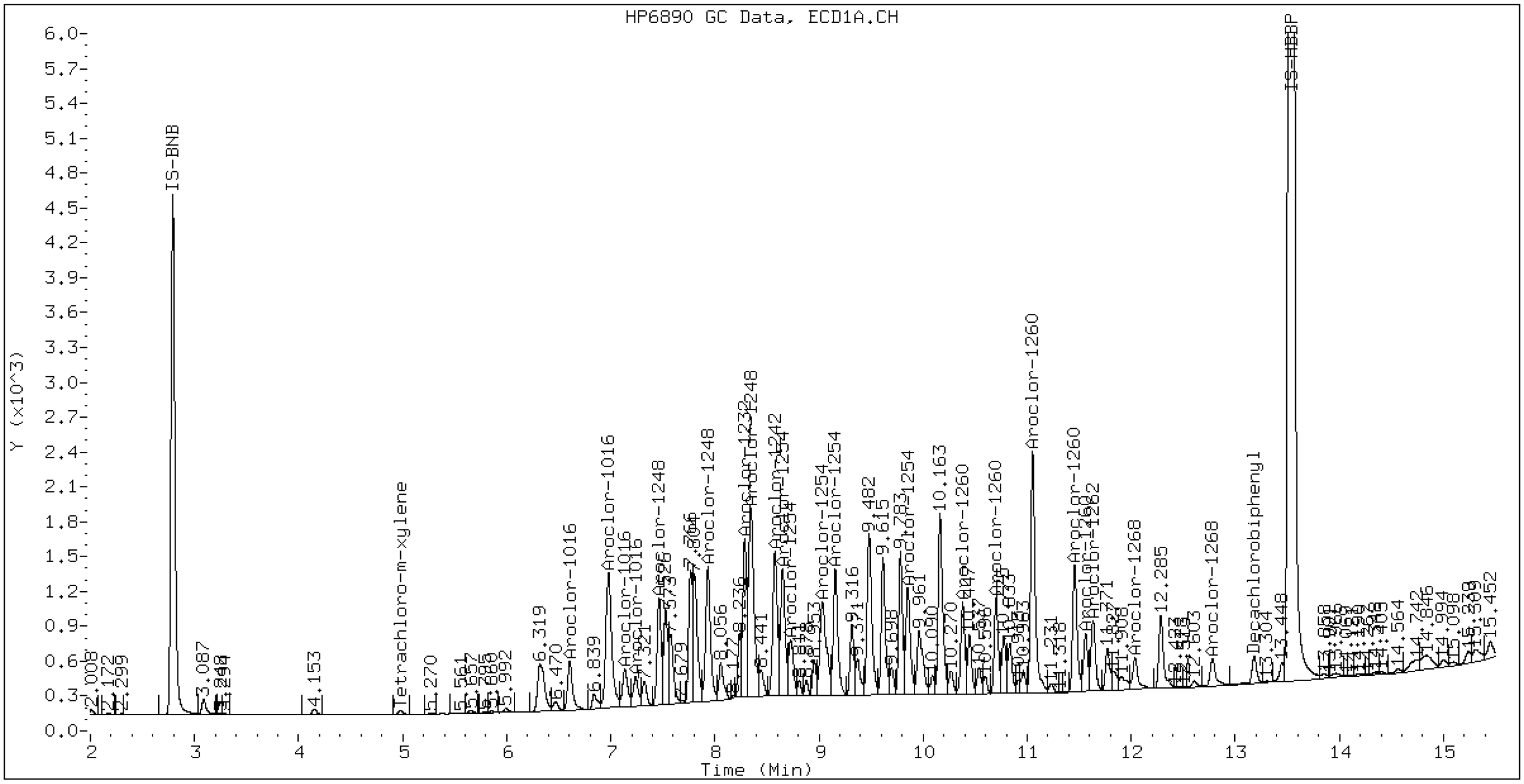
Total PCB Area Col1 (5.086 - 13.086) =	2232568	Col1 Total PCB = 0.2 ppm*
Total PCB Area Col2 (5.086 - 13.086) =	1831557	Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

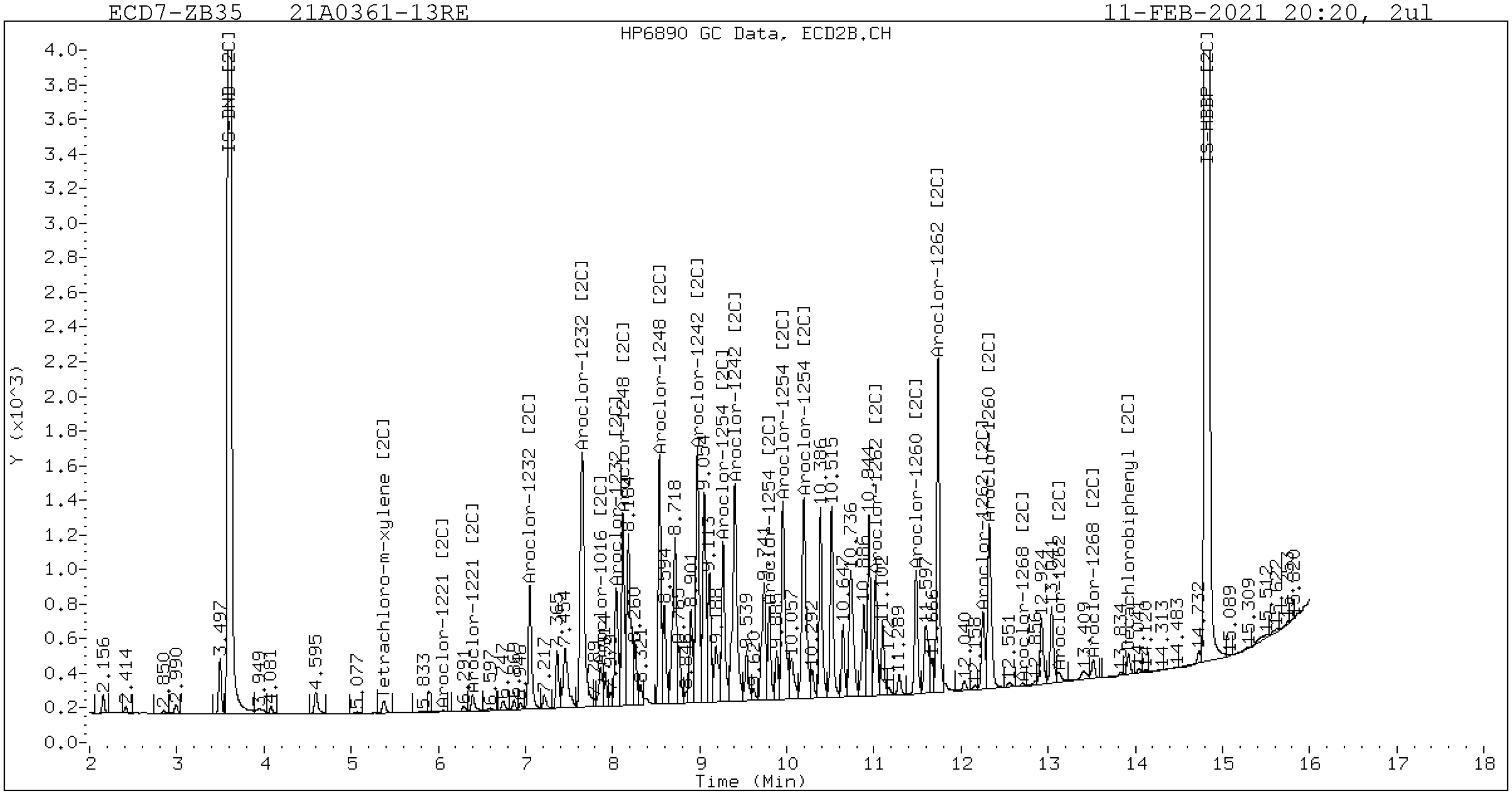
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-13RE 11-FEB-2021 20:20, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21A0361-13RE 11-FEB-2021 20:20, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10SE-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	21A0361-15 A	File ID:	02092118ECD5.D
Sampled:	01/25/21 13:10	Prepared:	02/05/21 16:51	Analyzed:	02/09/21 22:49
% Solids:	92.94	Preparation:	EPA 3546 (Microwave)	Initial/Final:	5.48 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0231	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	19.6	7.9	19.6	U
11104-28-2	Aroclor 1221	1	1	19.6	7.9	19.6	U
11141-16-5	Aroclor 1232	1	1	19.6	7.9	19.6	U
53469-21-9	Aroclor 1242	1	1	19.6	7.9	19.6	U
12672-29-6	Aroclor 1248	1	1	87.5	7.9	19.6	
11097-69-1	Aroclor 1254	1	1	63.2	7.9	19.6	
11096-82-5	Aroclor 1260	1	1	25.6	9.1	19.6	
37324-23-5	Aroclor 1262	1	1	19.6	9.1	19.6	U
11100-14-4	Aroclor 1268	1	1	19.6	9.1	19.6	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.269*	*28.9*	*73.7*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.269*	*29.1*	*74.2*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092118ECD5.D
Data file 2: /210209.b/210209.b/02092118ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-15
Client ID:
Injection Date: 09-FEB-2021 22:49
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.989	-0.001	100321	5.378	-0.003	199160	29.7	28.8	3.0	Tetrachloro-m-xylene
13.179	-0.007	449002	13.923	-0.004	388299	29.5	30.2	2.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	214271	29.3
Hexabromobiphenyl	1343188	1418995	5.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	654227	-21.9
Hexabromobiphenyl	850693	734513	-13.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	6.605	-0.005	10039	54.2	1	7.050	-0.006	11209	39.5	
Aroclor-1016	2	6.976	-0.006	33730	56.0	2	7.651	-0.006	30923	48.1	
Aroclor-1016	3	7.131	-0.003	14450	50.4	3	7.862	-0.006	8458	29.9	
Aroclor-1016	4	7.237	-0.006	9564	53.1	4	8.119	-0.005	19559	121.4	
	Total Col1Ave (4 peaks):			53.4		Total Col2Ave (4 peaks):			59.7		RPD = 11
	Corrected Ave (3 peaks):			52.6		Corrected Ave (3 peaks):			39.2		RPD = 29
Aroclor-1221	1	3.938	-0.005	226	7.4	1	4.593	3.593	452	11.8	
Aroclor-1221	2	5.376	0.001	854	21.0	2	6.062	0.003	5131	62.4	
Aroclor-1221	3	5.655	-0.004	2843	20.6	3	6.393	-0.006	6423	43.3	
	Total Col1Ave (3 peaks):			16.3		Total Col2Ave (3 peaks):			39.2		RPD = 82*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks					
Aroclor-1232	1	3.938	-0.004	226	12.8	1	4.593	3.593	452	21.6	
Aroclor-1232	2	6.605	-0.003	10039	128.0	2	7.050	-0.006	11209	86.2	
Aroclor-1232	3	6.976	-0.006	33730	134.3	3	7.651	-0.006	30923	111.9	
Aroclor-1232	4	8.283	-0.012	27989	319.1	4	8.034	-0.010	2828	53.7	
	Total Col1Ave (4 peaks):			148.6		Total Col2Ave (4 peaks):			68.3		RPD = 74*
	Corrected Ave (3 peaks):			91.7		Corrected Ave (3 peaks):			53.8		RPD = 52*
Aroclor-1242	1	6.605	-0.005	10039	67.0	1	7.050	-0.006	11209	48.0	
Aroclor-1242	2	6.976	-0.006	33730	67.9	2	7.651	-0.006	30923	56.4	
Aroclor-1242	3	8.283	-0.008	27989	168.8	3	8.970	-0.012	24062	108.9	
Aroclor-1242	4	8.574	-0.011	28308	168.0	4	9.402	-0.018	19042	88.4	
	Total Col1Ave (4 peaks):			118.0		Total Col2Ave (4 peaks):			75.4		RPD = 44*
	Corrected Ave (3 peaks):			101.0		Corrected Ave (3 peaks):			64.2		RPD = 44*
Aroclor-1248	1	7.464	-0.004	24714	107.7	1	8.119	-0.005	19559	92.0	
Aroclor-1248	2	7.930	-0.008	25177	72.7	2	8.539	-0.006	18432	70.1	
Aroclor-1248	3	8.348	-0.003	49559	69.4	3	8.970	-0.012	24062	58.9	
Aroclor-1248	4	8.574	-0.013	28308	106.8	4	9.402	-0.018	19042	48.3	
	Total Col1Ave (4 peaks):			89.2		Total Col2Ave (4 peaks):			67.3		RPD = 28
	Corrected Ave (3 peaks):			83.0		Corrected Ave (3 peaks):			59.1		RPD = 34
Aroclor-1254	1	8.648	-0.007	44051	69.6	1	9.267	-0.009	26100	59.9	
Aroclor-1254	2	8.719	-0.006	21310	61.0	2	9.360	-0.010	9346	39.1	
Aroclor-1254	3	9.034	0.007	56931	136.1	3	9.797	-0.010	17048	53.3	
Aroclor-1254	4	9.154	-0.007	58667	64.7	4	9.949	-0.010	39315	44.4	
Aroclor-1254	5	9.850	-0.009	36593	62.4	5	10.184	-0.016	43821	52.0	
	Total Col1Ave (5 peaks):			78.8		Total Col2Ave (5 peaks):			49.7		RPD = 45*
	Corrected Ave (4 peaks):			64.4		Corrected Ave (4 peaks):			47.2		RPD = 31
Aroclor-1260	1	10.375	-0.010	14008	29.2	1	11.018	-0.008	8553	16.6	
Aroclor-1260	2	10.698	-0.009	11432	23.8	2	11.487	-0.002	14125	29.5	
Aroclor-1260	3	11.048	-0.010	33616	24.4	3	11.734	-0.008	22317	16.9	
Aroclor-1260	4	11.451	-0.010	14485	22.7	4	12.323	-0.008	13846	16.2	
Aroclor-1260	5	11.558	-0.007	9012	30.3	NS	---			----	
	Total Col1Ave (5 peaks):			26.1		Total Col2Ave (4 peaks):			19.8		RPD = 27
	Corrected Ave (4 peaks):			25.0		Corrected Ave (3 peaks):			16.6		RPD = 41*
Aroclor-1262	1	10.375	-0.013	14008	17.7	1	11.018	-0.008	8553	10.1	
Aroclor-1262	2	11.048	-0.012	33616	17.9	2	11.734	-0.012	22317	11.8	
Aroclor-1262	3	11.558	-0.011	9012	16.9	3	12.248	-0.011	7366	13.5	
Aroclor-1262	4	11.628	-0.012	9582	13.5	4	13.040	-0.094	6953	10.2	
	Total Col1Ave (4 peaks):			16.5		Total Col2Ave (4 peaks):			11.4		RPD = 36
	Corrected Ave (3 peaks):			16.1		Corrected Ave (3 peaks):			10.7		RPD = 40
Aroclor-1268	1	11.558	-0.011	9012	5.0	1	12.248	-0.011	7366	4.0	
Aroclor-1268	2	11.628	-0.009	9582	4.6	2	12.323	-0.013	13846	6.2	
Aroclor-1268	3	12.023	0.008	6543	3.9	3	12.704	-0.009	1635	0.9	
Aroclor-1268	4	12.776	-0.015	19589	3.3	4	13.516	-0.004	7106	1.1	
	Total Col1Ave (4 peaks):			4.2		Total Col2Ave (4 peaks):			3.0		RPD = 32

Corrected Ave (3 peaks): 3.9 Corrected Ave (3 peaks): 2.0 RPD = 66*

Total PCB Area Col1 (5.090 - 13.086) = 1086937 Col1 Total PCB = 0.1 ppm*

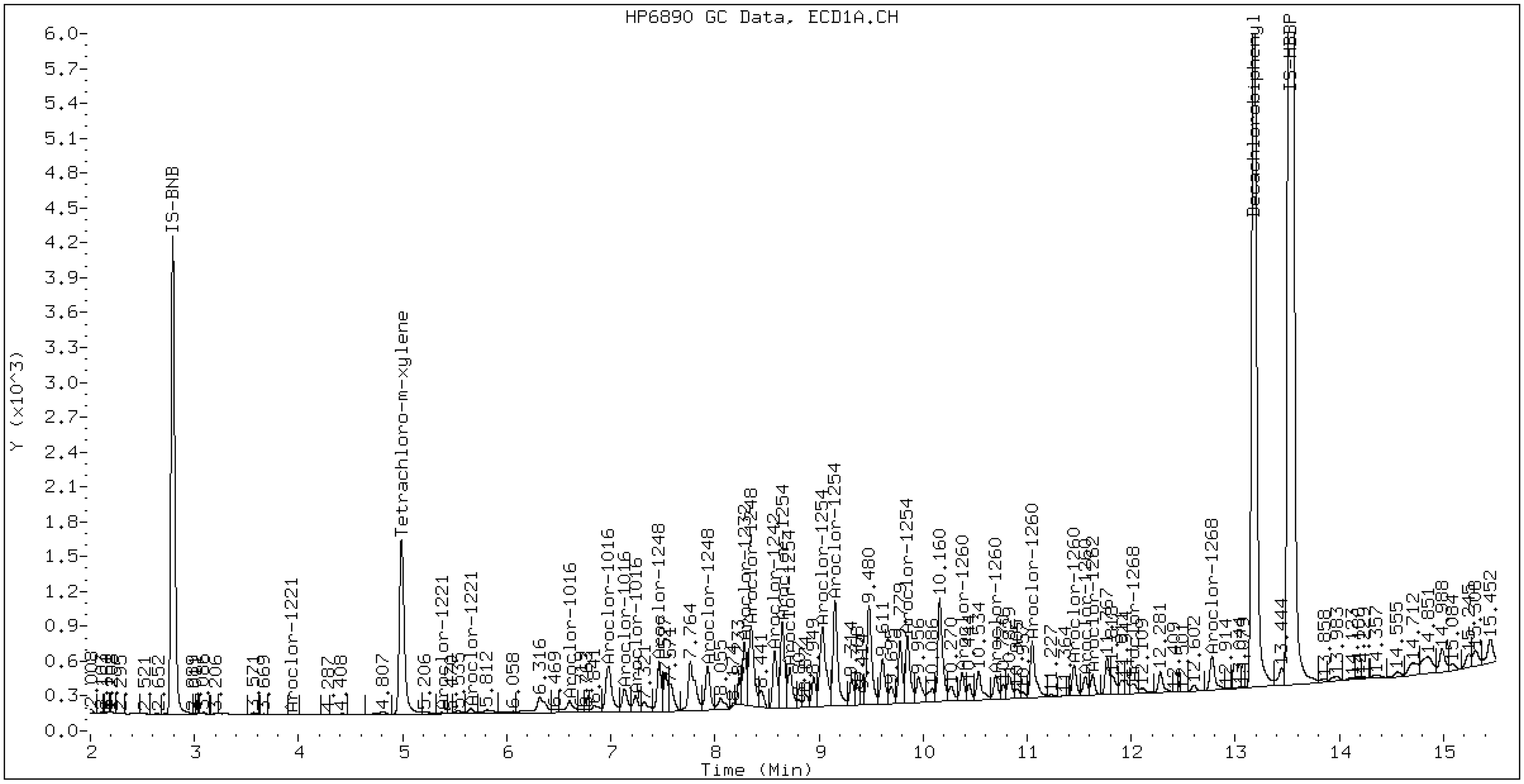
Total PCB Area Col2 (5.090 - 13.086) = 947295 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

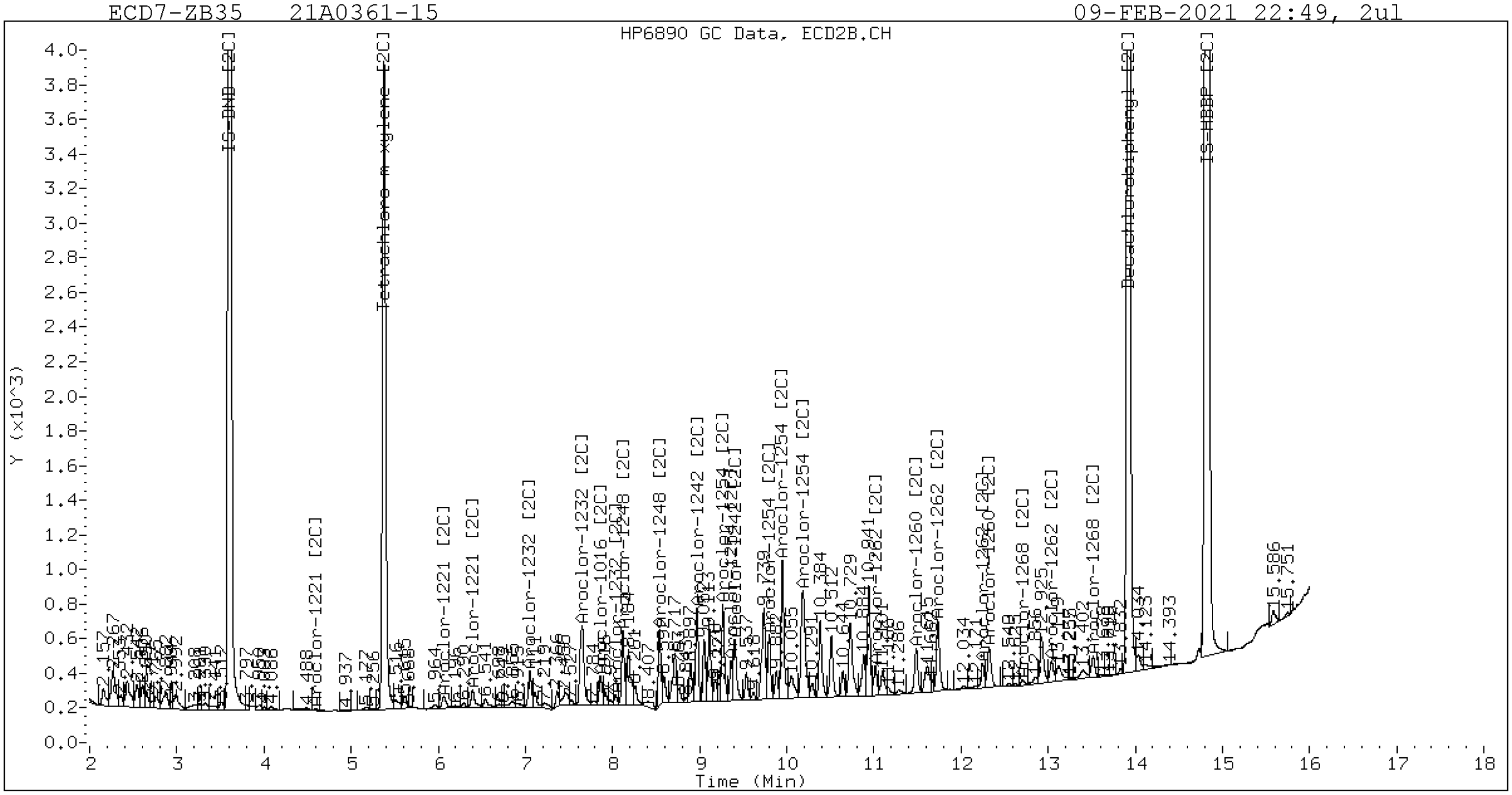
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-15 09-FEB-2021 22:49, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21A0361-15 09-FEB-2021 22:49, 2ul

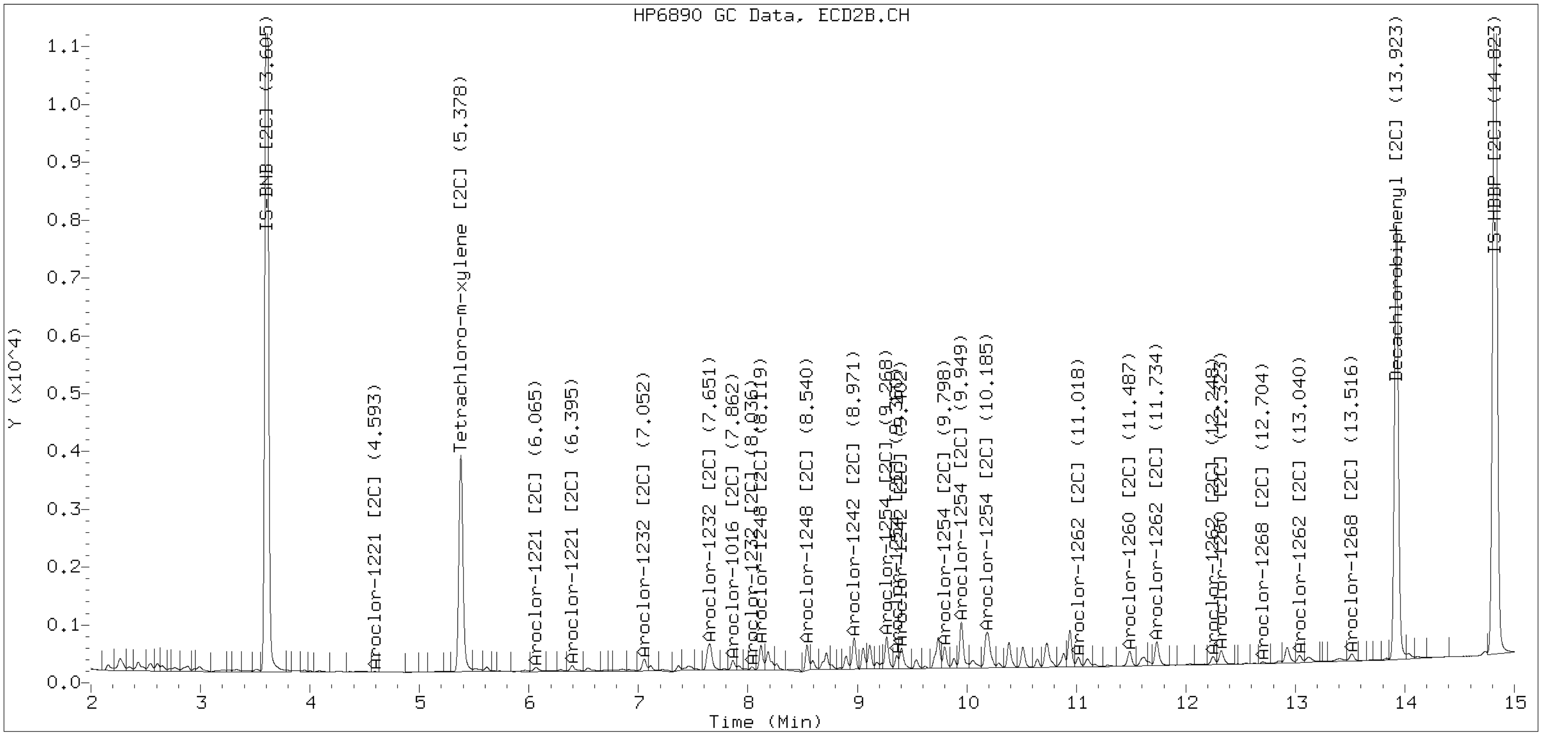


ZB-35 Manual Integration: YES

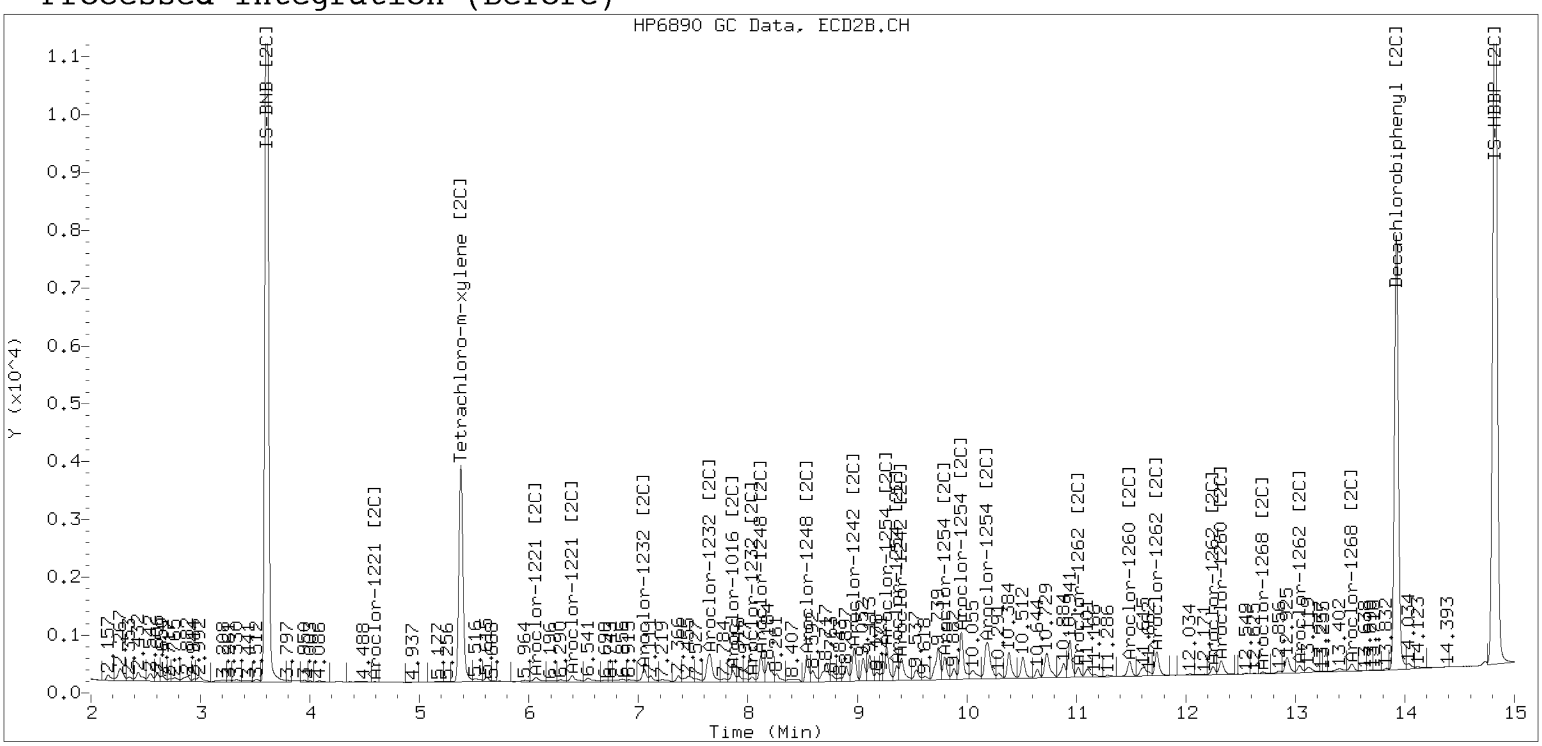
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/210209.b/210209.b/02092118ECD5.D Injection Date: 09-FEB-2021

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10NE-1

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	21A0361-17 A	File ID:	02092119ECD5.D
Sampled:	01/25/21 12:15	Prepared:	02/05/21 16:51	Analyzed:	02/09/21 23:10
% Solids:	79.23	Preparation:	EPA 3546 (Microwave)	Initial/Final:	6.37 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0231	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	25	495	198	495	U
11104-28-2	Aroclor 1221	1	25	495	198	495	U
11141-16-5	Aroclor 1232	1	25	495	198	495	U
53469-21-9	Aroclor 1242	1	25	495	198	495	U
12672-29-6	Aroclor 1248	2	25	15500	198	495	D
11097-69-1	Aroclor 1254	1	25	8820	198	495	D
11096-82-5	Aroclor 1260	1	25	1440	230	495	D
37324-23-5	Aroclor 1262	1	25	495	230	495	U
11100-14-4	Aroclor 1268	1	25	495	230	495	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.628*	*31.8*	*80.1*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.628*	*44.4*	*112*	*53 - 120*	
Decachlorobiphenyl	*2*	*39.628*	*22.6*	*57.1*	*40 - 133*	
Tetrachlorometaxylene	*2*	*39.628*	*29.2*	*73.7*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092119ECD5.D
Data file 2: /210209.b/210209.b/02092119ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-17
Client ID:
Injection Date: 09-FEB-2021 23:10
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 25.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.984	-0.006	6129	5.379	-0.002	8472	1.8	1.2	41.3*	Tetrachloro-m-xylene
13.180	-0.006	21718	13.924	-0.003	12585	1.3	0.9	33.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	216591	30.7
Hexabromobiphenyl	1343188	1577108	17.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	679514	-18.9
Hexabromobiphenyl	850693	787034	-7.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT (ZB5 Col)	Shift	Area	Amount	Peak#	RT (ZB35 Col)	Shift	Area	Amount
Aroclor-1016	1	6.609	-0.001	63647	340.1	1	7.055	-0.002	119852	406.7
Aroclor-1016	2	6.982	-0.001	239608	393.3	2	7.653	-0.004	299069	447.8
Aroclor-1016	3	7.132	-0.002	114563	395.2	3	7.865	-0.003	120992	411.9
Aroclor-1016	4	7.241	-0.002	67476	370.5	4	8.121	-0.002	157466	941.2
Total Col1Ave (4 peaks):				374.8	Total Col2Ave (4 peaks):				551.9	RPD = 38
Corrected Ave (3 peaks):				368.0	Corrected Ave (3 peaks):				422.1	RPD = 14
Aroclor-1221	1	3.946	0.003	1790	57.8	1	4.645	3.645	6049	152.4
Aroclor-1221	2	5.377	0.002	6513	158.5	2	6.055	-0.005	14521	170.0
Aroclor-1221	3	5.659	0.000	32040	229.9	3	6.397	-0.002	45541	295.8
Total Col1Ave (3 peaks):				148.8	Total Col2Ave (3 peaks):				206.1	RPD = 32
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.946	0.004	1790	100.7	1	4.645	3.645	6049	278.7
Aroclor-1232	2	6.609	0.001	63647	802.8	2	7.055	-0.002	119852	887.0
Aroclor-1232	3	6.982	-0.001	239608	943.7	3	7.653	-0.004	299069	1041.8
Aroclor-1232	4	8.286	-0.009	197463	2227.4	4	8.040	-0.004	73229	1338.2
Total Col1Ave (4 peaks):				1018.7	Total Col2Ave (4 peaks):				886.5	RPD = 14
Corrected Ave (3 peaks):				615.7	Corrected Ave (3 peaks):				735.9	RPD = 18
Aroclor-1242	1	6.609	-0.001	63647	420.3	1	7.055	-0.002	119852	493.7
Aroclor-1242	2	6.982	-0.001	239608	477.5	2	7.653	-0.004	299069	525.0
Aroclor-1242	3	8.286	-0.005	197463	1178.3	3	8.973	-0.009	234004	1019.7
Aroclor-1242	4	8.577	-0.008	197039	1157.1	4	9.405	-0.015	212563	949.7
Total Col1Ave (4 peaks):				808.3	Total Col2Ave (4 peaks):				747.0	RPD = 8
Corrected Ave (3 peaks):				685.0	Corrected Ave (3 peaks):				656.2	RPD = 4
Aroclor-1248	1	7.465	-0.002	141997	612.3	1	8.121	-0.002	157466	712.8
Aroclor-1248	2	7.934	-0.004	187120	534.7	2	8.542	-0.004	196098	717.8
Aroclor-1248	3	8.348	-0.002	327447	453.5	3	8.973	-0.009	234004	551.6
Aroclor-1248	4	8.577	-0.010	197039	735.3	4	9.405	-0.015	212563	519.1
Total Col1Ave (4 peaks):				583.9	Total Col2Ave (4 peaks):				625.3	RPD = 7
Corrected Ave (3 peaks):				533.5	Corrected Ave (3 peaks):				594.5	RPD = 11
Aroclor-1254	1	8.650	-0.005	258147	403.5	1	9.270	-0.007	174591	385.7
Aroclor-1254	2	8.721	-0.004	108482	307.0	2	9.365	-0.005	66187	266.3
Aroclor-1254	3	9.040	0.013	400342	946.6	3	9.800	-0.007	135275	407.4
Aroclor-1254	4	9.157	-0.004	315799	344.8	4	9.953	-0.006	300939	327.5
Aroclor-1254	5	9.854	-0.006	219143	369.8	5	10.185	-0.014	298951	341.8
Total Col1Ave (5 peaks):				474.3	Total Col2Ave (5 peaks):				345.7	RPD = 31
Corrected Ave (4 peaks):				356.3	Corrected Ave (4 peaks):				330.3	RPD = 8
Aroclor-1260	1	10.380	-0.006	31294	58.7	1	11.020	-0.005	24684	44.8
Aroclor-1260	2	10.700	-0.006	31673	59.2	2	11.493	0.004	65774	128.3
Aroclor-1260	3	11.052	-0.006	87592	57.1	3	11.737	-0.005	68395	48.2
Aroclor-1260	4	11.455	-0.007	50883	71.8	4	12.326	-0.004	42616	46.5
Aroclor-1260	5	11.560	-0.005	14219	43.0	NS	---			----
Total Col1Ave (5 peaks):				58.0	Total Col2Ave (4 peaks):				67.0	RPD = 14
Corrected Ave (4 peaks):				54.5	Corrected Ave (3 peaks):				46.5	RPD = 16
Aroclor-1262	1	10.380	-0.009	31294	35.6	1	11.020	-0.006	24684	27.2
Aroclor-1262	2	11.052	-0.008	87592	41.9	2	11.737	-0.009	68395	33.8
Aroclor-1262	3	11.560	-0.009	14219	24.0	3	12.252	-0.007	15929	27.2
Aroclor-1262	4	11.633	-0.008	15984	20.3	4	13.043	-0.091	13296	18.2
Total Col1Ave (4 peaks):				30.5	Total Col2Ave (4 peaks):				26.6	RPD = 13
Corrected Ave (3 peaks):				26.6	Corrected Ave (3 peaks):				24.2	RPD = 9
Aroclor-1268	1	11.560	-0.009	14219	7.0	1	12.252	-0.007	15929	8.0
Aroclor-1268	2	11.633	-0.005	15984	7.0	2	12.326	-0.010	42616	17.7
Aroclor-1268	3	12.035	0.019	9912	5.3	3	12.703	-0.010	769	0.4
Aroclor-1268	4	12.778	-0.014	10615	1.6	4	13.516	-0.004	5061	0.7
Total Col1Ave (4 peaks):				5.2	Total Col2Ave (4 peaks):				6.7	RPD = 25

Corrected Ave (3 peaks): 4.6 Corrected Ave (3 peaks): 3.0 RPD = 41*

Total PCB Area Col1 (5.090 - 13.086) = 5317172 Col1 Total PCB = 0.6 ppm*

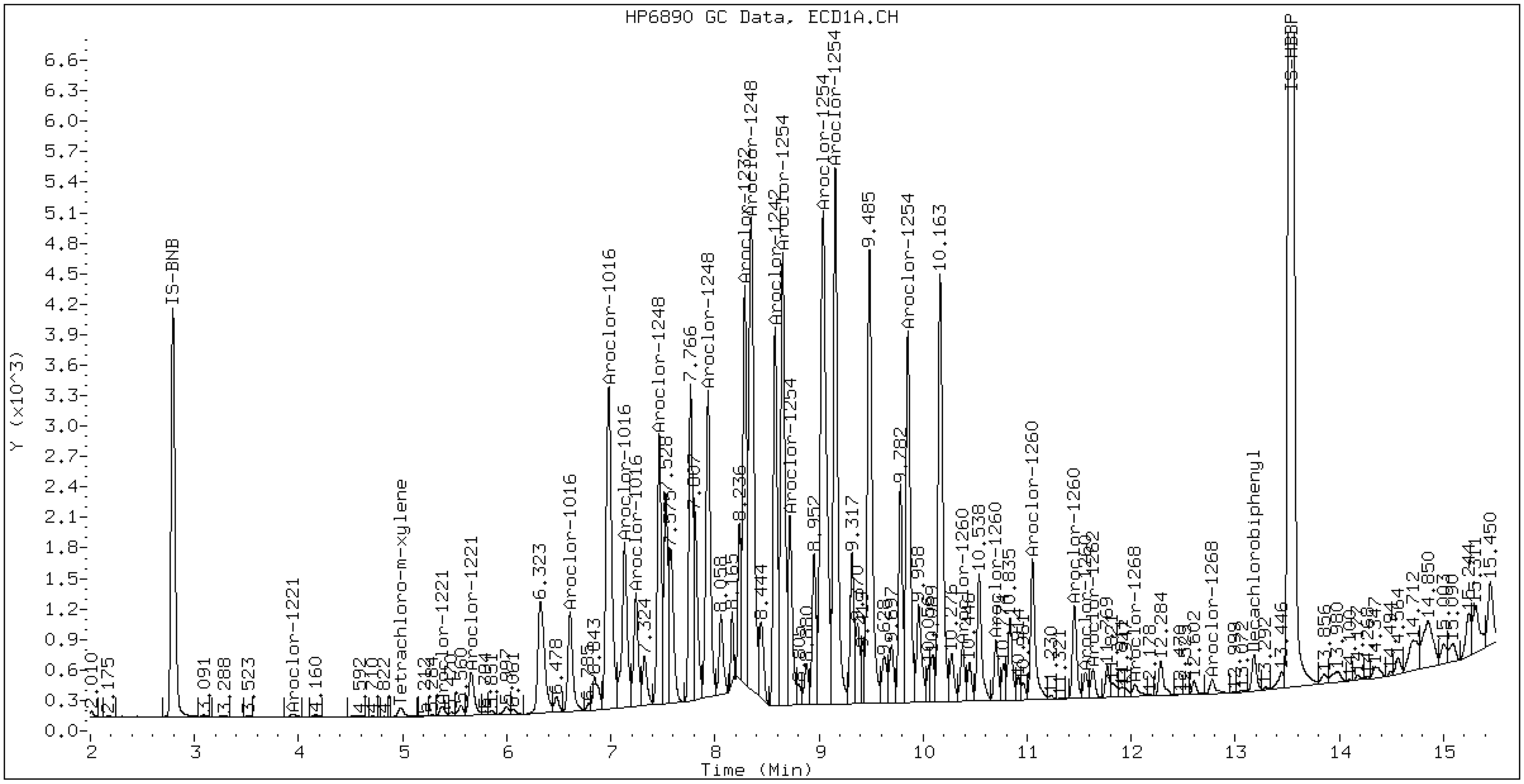
Total PCB Area Col2 (5.090 - 13.086) = 5061334 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

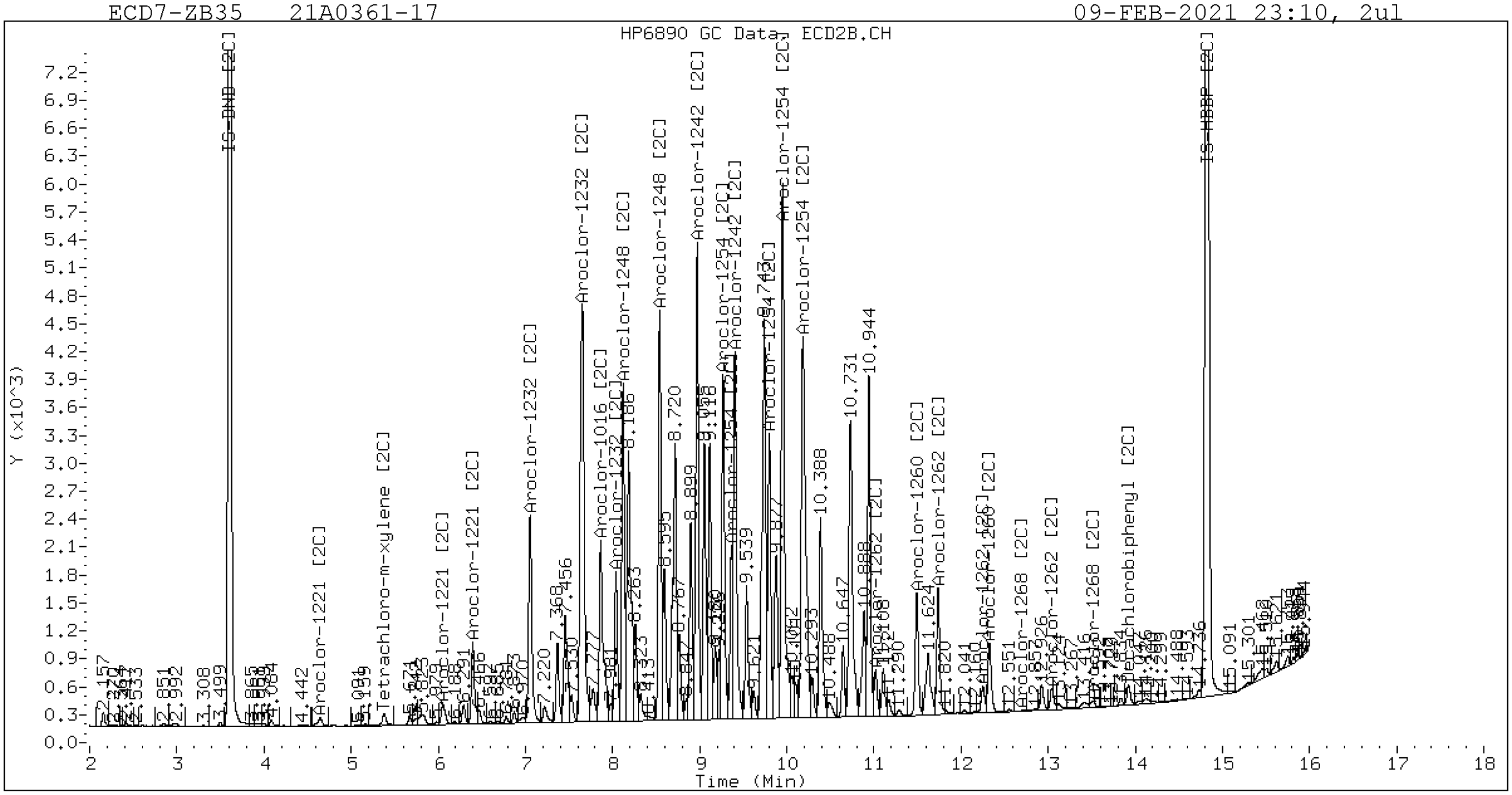
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-17 09-FEB-2021 23:10, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21A0361-17 09-FEB-2021 23:10, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10NE-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	21A0361-19 A	File ID:	02092120ECD5.D
Sampled:	01/25/21 12:25	Prepared:	02/05/21 16:51	Analyzed:	02/09/21 23:30
% Solids:	83.72	Preparation:	EPA 3546 (Microwave)	Initial/Final:	6.04 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0231	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	19.8	7.9	19.8	U
11104-28-2	Aroclor 1221	1	1	19.8	7.9	19.8	U
11141-16-5	Aroclor 1232	1	1	19.8	7.9	19.8	U
53469-21-9	Aroclor 1242	1	1	19.8	7.9	19.8	U
12672-29-6	Aroclor 1248	2	1	186	7.9	19.8	
11097-69-1	Aroclor 1254	1	1	109	7.9	19.8	
11096-82-5	Aroclor 1260	1	1	56.3	9.2	19.8	
37324-23-5	Aroclor 1262	1	1	19.8	9.2	19.8	U
11100-14-4	Aroclor 1268	1	1	19.8	9.2	19.8	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.552*	*31.7*	*80.0*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.552*	*30.3*	*76.6*	*53 - 120*	
Decachlorobiphenyl	*2*	*39.552*	*32.0*	*80.8*	*40 - 133*	
Tetrachlorometaxylene	*2*	*39.552*	*31.5*	*79.6*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092120ECD5.D
Data file 2: /210209.b/210209.b/02092120ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-19
Client ID:
Injection Date: 09-FEB-2021 23:30
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.991	0.001	105234	5.378	-0.003	203161	30.6	31.8	3.8	Tetrachloro-m-xylene
13.177	-0.009	439786	13.921	-0.006	384400	32.0	32.3	1.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	217853	31.5
Hexabromobiphenyl	1343188	1279038	-4.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	603871	-27.9
Hexabromobiphenyl	850693	679522	-20.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

```
                               ZB5 Col                                ZB35 Col
Aroclor   Peak#    RT    Shift     Area    Amount     Peak#   RT      Shift     Area   Amount
=========================================================================================
Aroclor-1016 1   6.602  -0.008     26940   143.1       1    7.051  -0.006    49435   188.7
Aroclor-1016 2   6.976  -0.007    154956   252.8       2    7.648  -0.009   163347   275.2
Aroclor-1016 3   7.127  -0.008     43403   148.9       3    7.857  -0.011    30504   116.9
Aroclor-1016 4   7.233  -0.010     29546   161.3       4    8.115  -0.008    57005   383.4
      Total Col1Ave (4 peaks):   176.5       Total Col2Ave (4 peaks):   241.1   RPD = 31
      Corrected Ave (3 peaks):   151.1       Corrected Ave (3 peaks):   193.6   RPD = 25

Aroclor-1221 1   3.941  -0.002       236     7.6       1    4.647   3.647      734    20.8
Aroclor-1221 2   5.373  -0.002       420    10.2       2    6.066   0.006     3057    40.3
Aroclor-1221 3   5.656  -0.003      2227    15.9       3    6.395  -0.004     8440    61.7
      Total Col1Ave (3 peaks):    11.2       Total Col2Ave (3 peaks):    40.9   RPD = 114*
      Corrected Ave: < 3 Peaks                      Corrected Ave: < 3 Peaks

Aroclor-1232 1   3.941  -0.001       236    13.2       1    4.647   3.647      734    38.1
Aroclor-1232 2   6.602  -0.006     26940   337.8       2    7.051  -0.006    49435   411.7
Aroclor-1232 3   6.976  -0.007    154956   606.8       3    7.648  -0.010   163347   640.3
Aroclor-1232 4   8.276  -0.019     42790   479.9       4    8.032  -0.012    18817   387.0
      Total Col1Ave (4 peaks):   359.4       Total Col2Ave (4 peaks):   369.3   RPD = 3
      Corrected Ave (3 peaks):   277.0       Corrected Ave (3 peaks):   278.9   RPD = 1

Aroclor-1242 1   6.602  -0.008     26940   176.9       1    7.051  -0.006    49435   229.2
Aroclor-1242 2   6.976  -0.006    154956   307.0       2    7.648  -0.010   163347   322.7
Aroclor-1242 3   8.276  -0.015     42790   253.8       3    8.962  -0.020    51095   250.5
Aroclor-1242 4   8.565  -0.020     38237   223.2       4    9.395  -0.025    30095   151.3
      Total Col1Ave (4 peaks):   240.2       Total Col2Ave (4 peaks):   238.4   RPD = 1
      Corrected Ave (3 peaks):   218.0       Corrected Ave (3 peaks):   210.3   RPD = 4

Aroclor-1248 1   7.459  -0.008     63759   273.3       1    8.115  -0.008    57005   290.4
Aroclor-1248 2   7.924  -0.014     59179   168.1       2    8.534  -0.011    59283   244.2
Aroclor-1248 3   8.341  -0.010     78019   107.4       3    8.962  -0.020    51095   135.5
Aroclor-1248 4   8.565  -0.021     38237   141.9       4    9.395  -0.025    30095    82.7
      Total Col1Ave (4 peaks):   172.7       Total Col2Ave (4 peaks):   188.2   RPD = 9
      Corrected Ave (3 peaks):   139.1       Corrected Ave (3 peaks):   154.1   RPD = 10

Aroclor-1254 1   8.642  -0.014     65142   101.2       1    9.261  -0.015    42739   106.2
Aroclor-1254 2   8.712  -0.013     28014    78.8       2    9.395   0.024    30095   136.2
Aroclor-1254 3   9.022  -0.005     72415   170.2       3    9.792  -0.015    26978    91.4
Aroclor-1254 4   9.146  -0.015     93186   101.2       4    9.942  -0.017    68957    84.4
Aroclor-1254 5   9.842  -0.018     60013   100.7       5   10.174  -0.025    81653   105.0
      Total Col1Ave (5 peaks):   110.4       Total Col2Ave (5 peaks):   104.7   RPD = 5
      Corrected Ave (4 peaks):    95.5       Corrected Ave (4 peaks):    96.8   RPD = 1

Aroclor-1260 1  10.369  -0.016     28921    66.8       1   11.013  -0.013    19251    40.4
Aroclor-1260 2  10.691  -0.015     22615    52.2       2   11.482  -0.008    31991    72.3
Aroclor-1260 3  11.042  -0.015     71064    57.2       3   11.730  -0.012    53326    43.5
Aroclor-1260 4  11.446  -0.015     29559    51.4       4   12.317  -0.013    37341    47.2
Aroclor-1260 5  11.552  -0.013     24357    90.8       NS    ---                      ----
      Total Col1Ave (5 peaks):    63.7       Total Col2Ave (4 peaks):    50.9   RPD = 22
      Corrected Ave (4 peaks):    56.9       Corrected Ave (3 peaks):    43.7   RPD = 26

Aroclor-1262 1  10.369  -0.019     28921    40.6       1   11.013  -0.013    19251    24.6
Aroclor-1262 2  11.042  -0.018     71064    41.9       2   11.730  -0.016    53326    30.5
Aroclor-1262 3  11.552  -0.017     24357    50.7       3   12.245  -0.014    18863    37.4
Aroclor-1262 4  11.623  -0.017     26394    41.4       4   13.035  -0.098    18025    28.6
      Total Col1Ave (4 peaks):    43.6       Total Col2Ave (4 peaks):    30.3   RPD = 36
      Corrected Ave (3 peaks):    41.3       Corrected Ave (3 peaks):    27.9   RPD = 39

Aroclor-1268 1  11.552  -0.016     24357    14.9       1   12.245  -0.014    18863    11.0
Aroclor-1268 2  11.623  -0.014     26394    14.2       2   12.317  -0.019    37341    18.0
Aroclor-1268 3  12.024   0.008     12414     8.1       3   12.700  -0.013     2560     1.5
Aroclor-1268 4  12.774  -0.017     29229     5.5       4   13.513  -0.007    14114     2.4
      Total Col1Ave (4 peaks):    10.7       Total Col2Ave (4 peaks):     8.2   RPD = 26
```

Corrected Ave (3 peaks): 9.3 Corrected Ave (3 peaks): 5.0 RPD = 60*

Total PCB Area Col1 (5.090 - 13.086) = 2033834 Col1 Total PCB = 0.2 ppm*

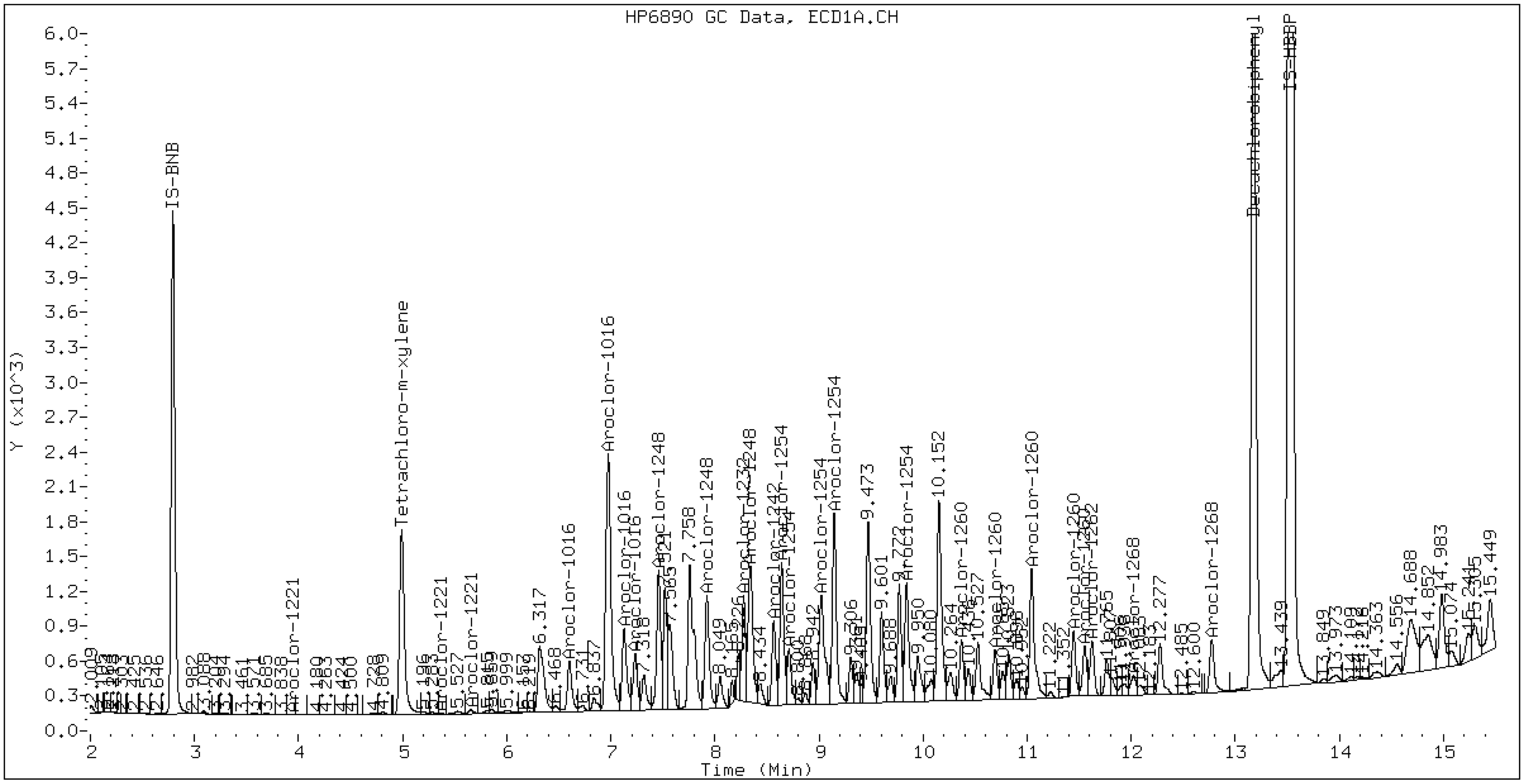
Total PCB Area Col2 (5.090 - 13.086) = 1946226 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

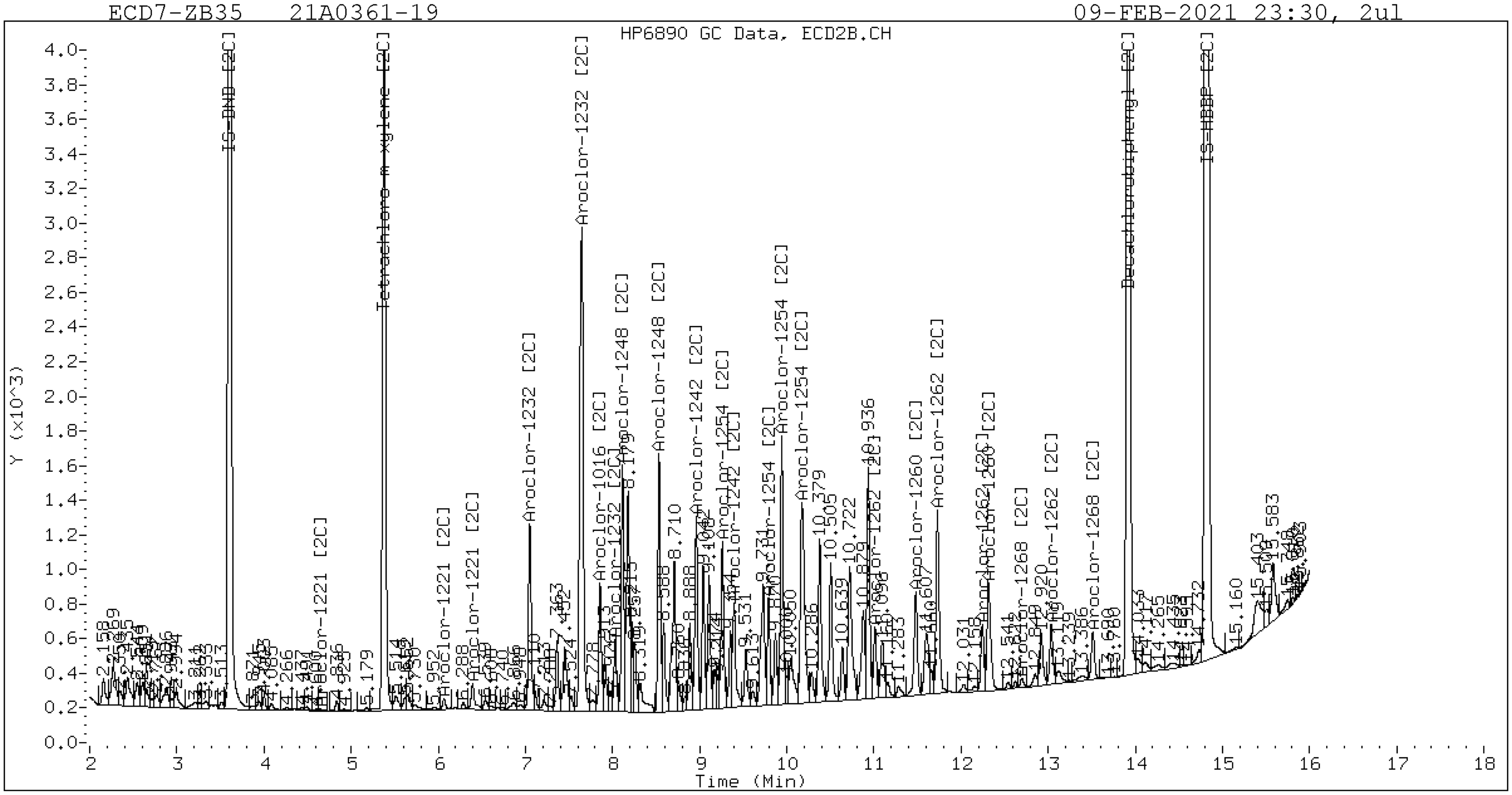
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-19 09-FEB-2021 23:30, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21A0361-19 09-FEB-2021 23:30, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-7W-1

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Solid	Laboratory ID:	21A0361-21 A	File ID:	02112106ECD7.D
Sampled:	01/25/21 10:40	Prepared:	02/05/21 16:51	Analyzed:	02/11/21 20:40
% Solids:	94.12	Preparation:	EPA 3546 (Microwave)	Initial/Final:	5.35 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0228	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	5	99.3	39.7	99.3	U
11104-28-2	Aroclor 1221	1	5	99.3	39.7	99.3	U
11141-16-5	Aroclor 1232	1	5	99.3	39.7	99.3	U
53469-21-9	Aroclor 1242	1	5	99.3	39.7	99.3	U
12672-29-6	Aroclor 1248	2	5	1400	39.7	99.3	D
11097-69-1	Aroclor 1254	1	5	696	39.7	99.3	D
11096-82-5	Aroclor 1260	1	5	502	46.1	99.3	D
37324-23-5	Aroclor 1262	1	5	99.3	46.1	99.3	U
11100-14-4	Aroclor 1268	1	5	99.3	46.1	99.3	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.719*	*26.3*	*66.3*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.719*	*24.4*	*61.4*	*53 - 120*	
Decachlorobiphenyl	*2*	*39.719*	*22.2*	*56.0*	*40 - 133*	
Tetrachlorometaxylene	*2*	*39.719*	*25.9*	*65.1*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210211.b/02112106ECD7.D
Data file 2: /210211.b/210211.b/02112106ECD7.D
Method: \\target\share\chem4\ecd7.i\210211.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-21
Client ID:
Injection Date: 11-FEB-2021 20:40
Report Date: 02/17/2021 10:49
Matrix: NONE
Dilution Factor: 5.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.983	-0.003	15448	5.371	-0.008	25267	4.9	5.2	5.9	Tetrachloro-m-xylene
13.164	-0.022	56889	13.909	-0.023	35351	5.3	4.5	16.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	199423	20.3
Hexabromobiphenyl	1343188	998797	-25.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	458799	-45.2
Hexabromobiphenyl	850693	451180	-47.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

			ZB5 Col					ZB35 Col		
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.594	-0.015	28725	166.7	1	7.043	-0.013	45926	230.8
Aroclor-1016	2	6.966	-0.017	125760	224.2	2	7.637	-0.020	116856	259.2
Aroclor-1016	3	7.115	-0.015	44802	167.9	3	7.848	-0.021	34608	174.5
Aroclor-1016	4	7.223	-0.017	29608	176.6	4	8.105	-0.019	40474	358.3
	~~Total Col1Ave (4 peaks):~~			~~183.8~~		~~Total Col2Ave (4 peaks):~~			~~255.7~~	RPD = 33
	Corrected Ave (3 peaks):			170.4		Corrected Ave (3 peaks):			221.5	RPD = 26
Aroclor-1221	1	3.940	-0.003	180	6.3	1	---			0.0
Aroclor-1221	2	5.374	-0.001	810	21.4	2	6.047	-0.005	1947	33.8
Aroclor-1221	3	5.648	-0.011	9968	77.7	3	6.391	-0.006	38110	366.6
	~~Total Col1Ave (3 peaks):~~			~~35.1~~			~~Col2Ave: <3 Quant Peaks~~			
Aroclor-1232	1	3.940	-0.002	180	11.0	1	---			0.0
Aroclor-1232	2	6.594	-0.015	28725	393.5	2	7.043	-0.014	45926	503.4
Aroclor-1232	3	6.966	-0.017	125760	538.0	3	7.637	-0.023	116856	602.9
Aroclor-1232	4	8.319	0.024	117045	1434.0	4	8.016	-0.034	111798	3026.0
	~~Total Col1Ave (4 peaks):~~			~~594.1~~		~~Total Col2Ave (3 peaks):~~			~~1377.4~~	RPD = 79*
	Corrected Ave (3 peaks):			314.2				Corrected Ave: < 3 Peaks		
Aroclor-1242	1	6.594	-0.015	28725	206.0	1	7.043	-0.013	45926	280.2
Aroclor-1242	2	6.966	-0.017	125760	272.2	2	7.637	-0.023	116856	303.8
Aroclor-1242	3	8.319	0.026	117045	758.5	3	8.950	-0.041	72966	470.9
Aroclor-1242	4	8.626	0.035	71215	454.2	4	9.383	-0.049	80042	529.6
	Total ~~Col1Ave (4 peaks):~~			~~422.7~~		~~Total Col2Ave (4 peaks):~~			~~396.2~~	RPD = 6
	Corrected Ave (3 peaks):			310.8		Corrected Ave (3 peaks):			351.7	RPD = 12
Aroclor-1248	1	7.448	-0.018	50030	234.3	1	8.105	-0.021	40474	271.4
Aroclor-1248	2	7.912	-0.024	68979	214.1	2	8.525	-0.024	58150	315.2
Aroclor-1248	3	8.319	-0.029	117045	176.1	3	8.950	-0.040	72966	254.8
Aroclor-1248	4	8.551	-0.032	86106	349.0	4	9.383	-0.045	80042	289.5
	Total Col1Ave (4 peaks):			243.4		Total Col2Ave (4 peaks):			282.7	RPD = 15
	Corrected Ave (3 peaks):			208.1		Corrected Ave (3 peaks):			271.9	RPD = 27
Aroclor-1254	1	8.626	-0.030	71215	120.9	1	9.250	-0.032	42172	138.0
Aroclor-1254	2	8.697	-0.029	33818	103.9	2	9.383	0.007	80042	~~477.0~~
Aroclor-1254	3	9.011	-0.011	141817	~~364.2~~	3	9.779	-0.034	23534	105.0
Aroclor-1254	4	9.134	-0.027	190452	225.8	4	9.930	-0.038	61361	98.9
Aroclor-1254	5	9.823	-0.036	60122	110.2	5	10.162	-0.046	73256	124.0
	Total Col1Ave (5 peaks):			185.0		Total Col2Ave (5 peaks):			188.6	RPD = 2
	Corrected Ave (4 peaks):			140.2		Corrected Ave (4 peaks):			116.5	RPD = 18
Aroclor-1260	1	10.353	-0.032	36543	108.1	1	10.999	-0.032	23868	75.5
Aroclor-1260	2	10.674	-0.032	33754	99.7	2	11.464	-0.029	29711	101.1
Aroclor-1260	3	11.027	-0.030	96904	99.8	3	11.715	-0.032	64913	79.8
Aroclor-1260	4	11.431	-0.028	46414	103.3	4	12.305	-0.031	39790	75.8
Aroclor-1260	5	11.537	-0.027	19871	94.9	NS	---			----
	Total Col1Ave (5 peaks):			101.2		Total Col2Ave (4 peaks):			83.1	RPD = 20
	Corrected Ave (4 peaks):			99.4		Corrected Ave (3 peaks):			77.0	RPD = 25
Aroclor-1262	1	10.419	0.031	20509	36.8	1	10.999	-0.033	23868	45.9
Aroclor-1262	2	11.027	-0.034	96904	73.2	2	11.715	-0.034	64913	56.0
Aroclor-1262	3	11.537	-0.032	19871	53.0	3	12.233	-0.028	17702	52.8
Aroclor-1262	4	11.608	-0.032	24415	49.0	4	13.108	0.055	1260	3.0
	Total Col1Ave (4 peaks):			53.0		Total Col2Ave (4 peaks):			39.4	RPD = 29
	Corrected Ave (3 peaks):			46.3		Corrected Ave (3 peaks):			33.9	RPD = 31
Aroclor-1268	1	11.537	-0.032	19871	15.6	1	12.233	-0.026	17702	15.5
Aroclor-1268	2	11.608	-0.029	24415	16.8	2	12.305	-0.022	39790	28.9
Aroclor-1268	3	12.011	-0.005	13436	11.3	3	12.687	-0.025	791	0.7
Aroclor-1268	4	~~12.759~~	~~-0.032~~	~~10916~~	~~2.6~~	~~4~~	~~13.502~~	~~-0.029~~	~~5281~~	1.3
	Total Col1Ave (4 peaks):			11.6		Total Col2Ave (4 peaks):			11.6	RPD = 0
	Corrected Ave (3 peaks):			9.8		Corrected Ave (3 peaks):			5.9	RPD = 51*

Total PCB Area Col1 (5.086 - 13.086) = 2833113 Col1 Total PCB = 0.4 ppm*

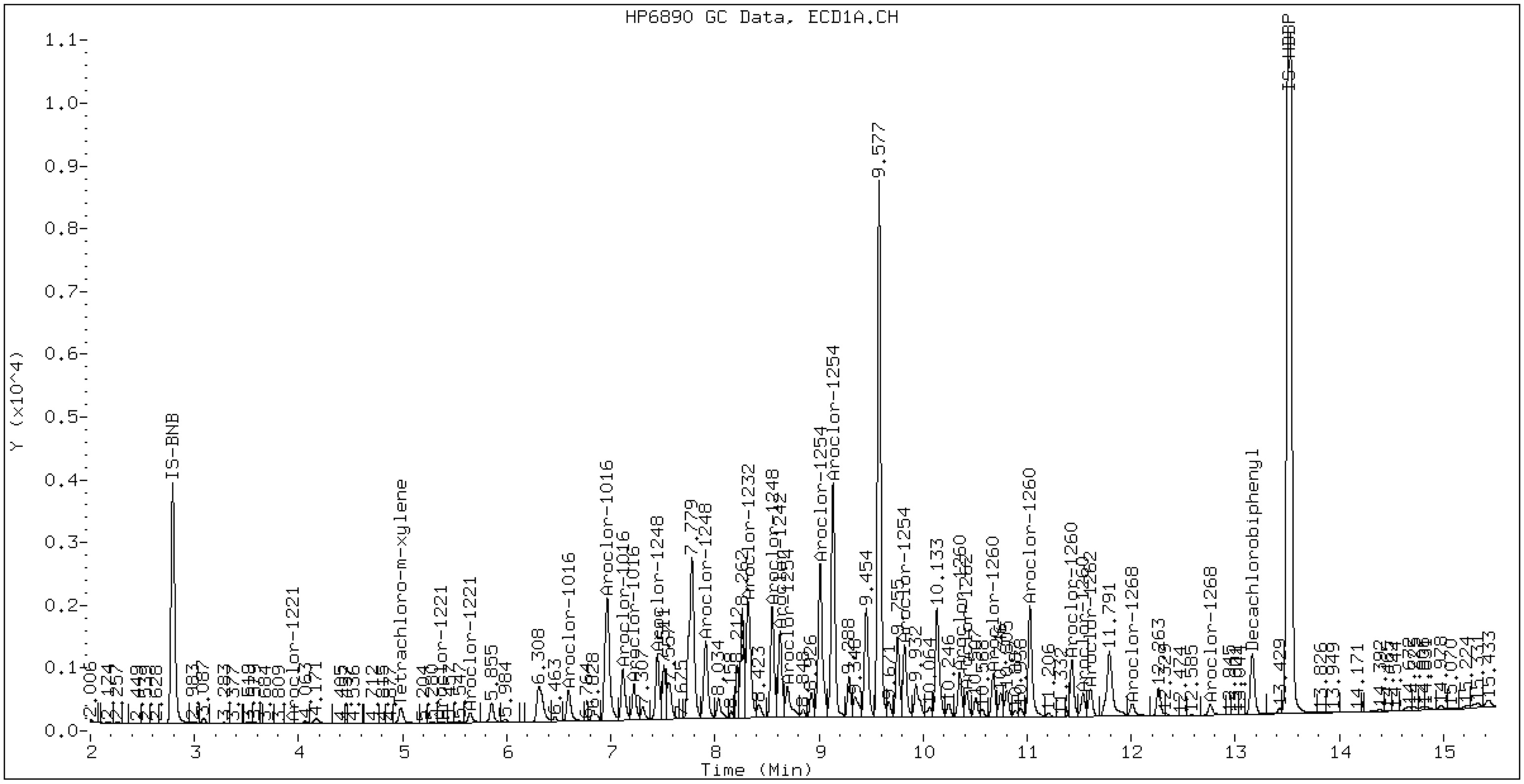
Total PCB Area Col2 (5.086 - 13.086) = 2135447 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

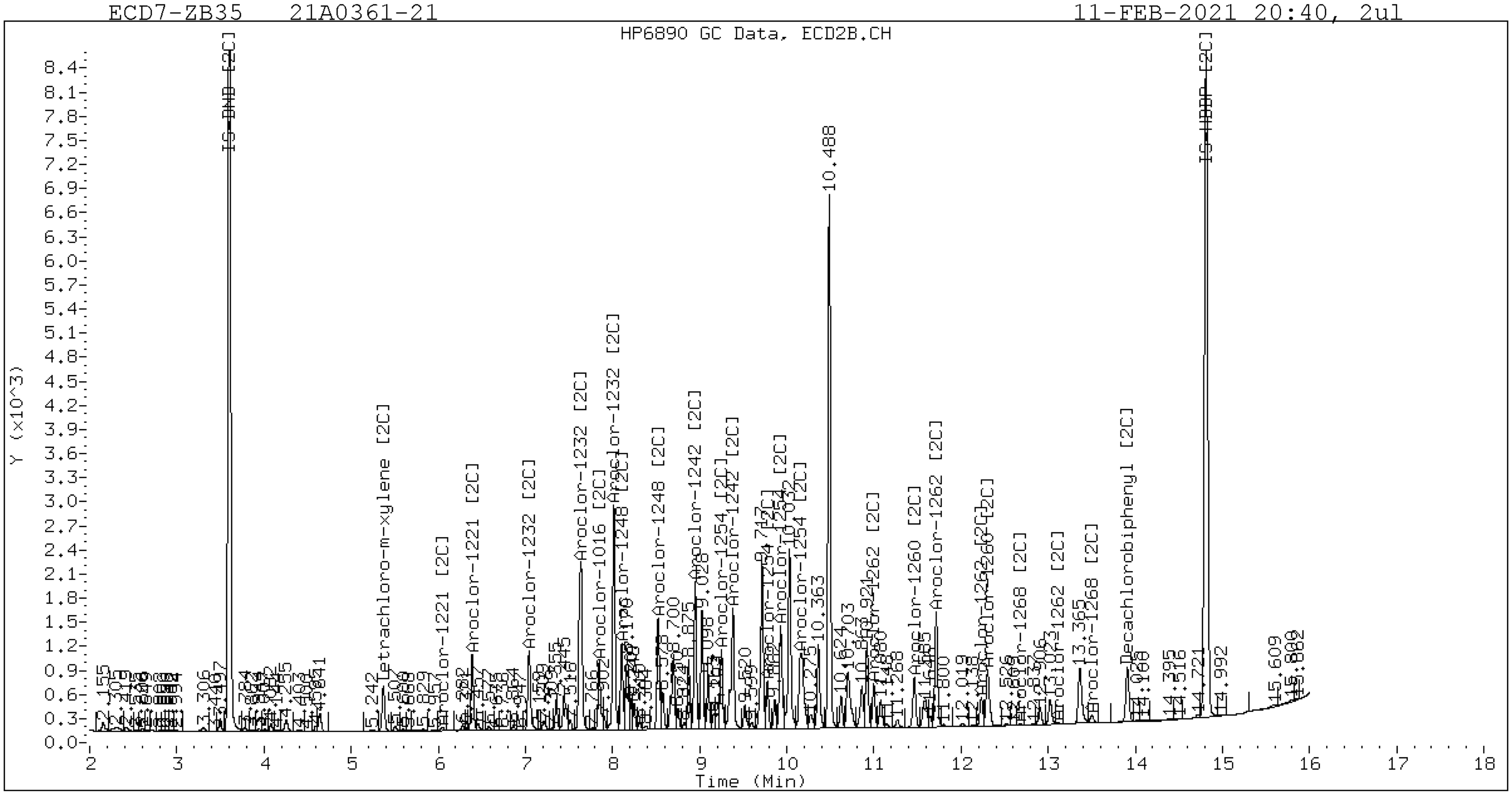
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-21 11-FEB-2021 20:40, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 21A0361-21 11-FEB-2021 20:40, 2ul

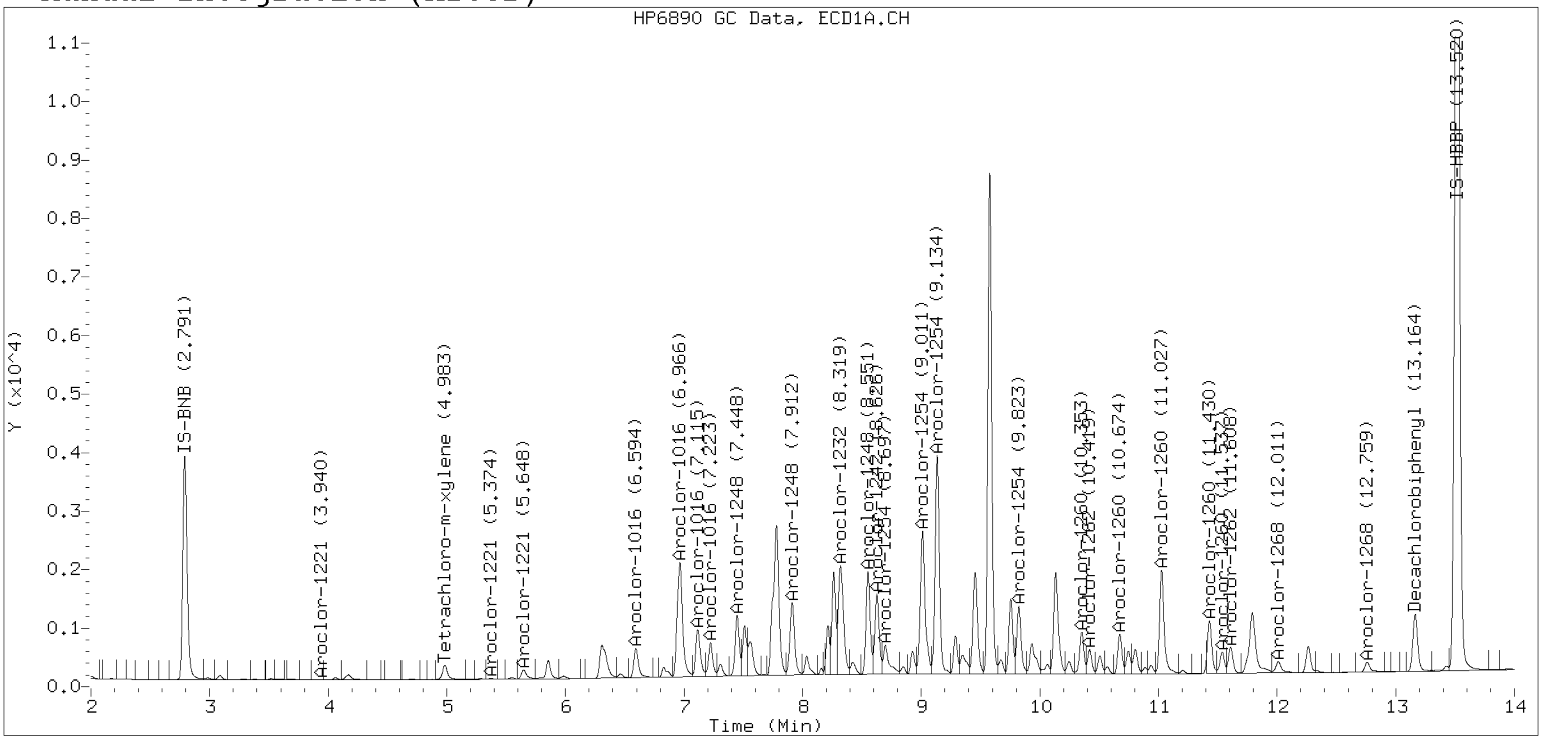


ZB-35 Manual Integration: NO

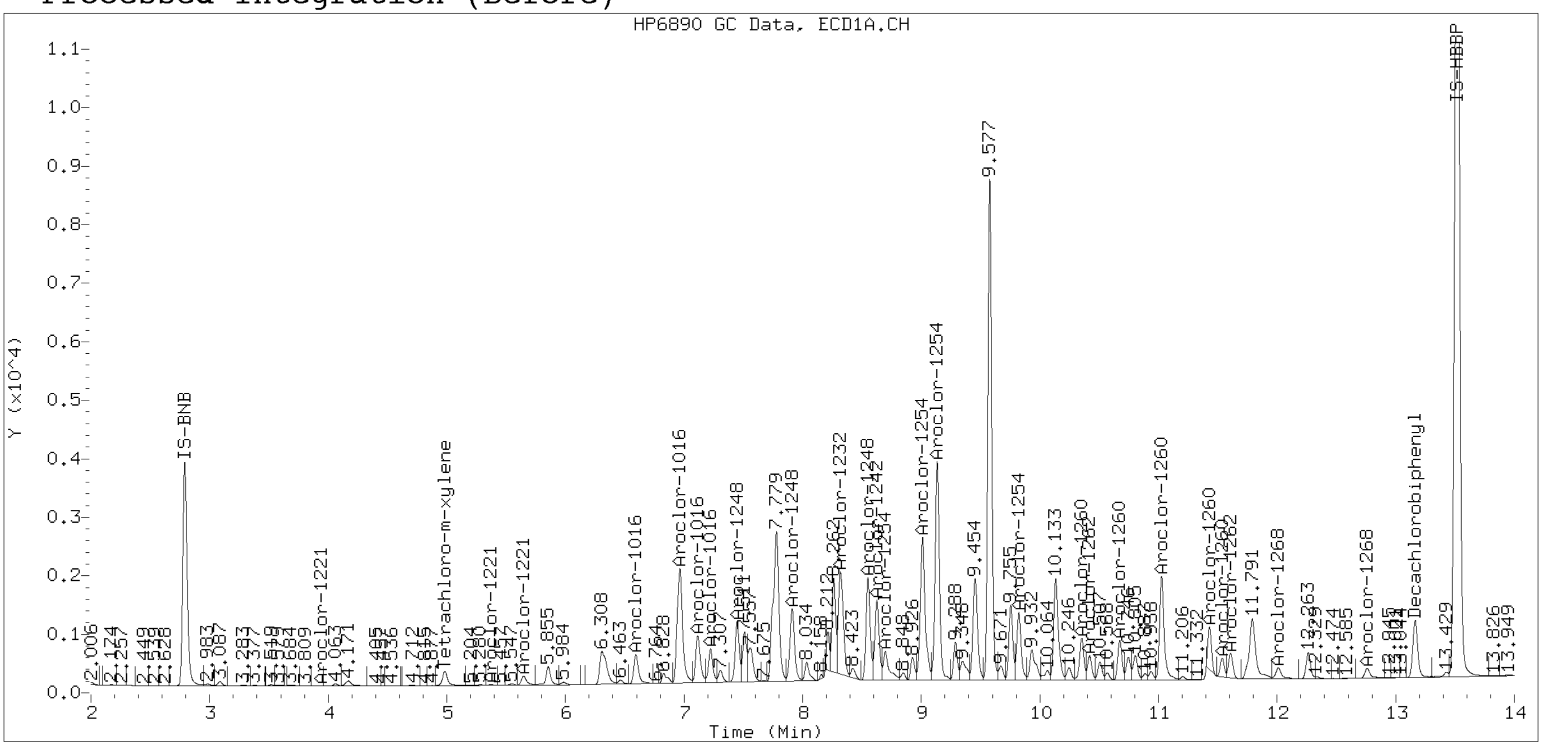
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/210211.b/02112106ECD7.D   Injection Date: 11-FEB-2021 20:40

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-7W-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Solid	Laboratory ID:	21A0361-23 A	File ID:	02092124ECD5.D
Sampled:	01/25/21 10:50	Prepared:	02/05/21 16:51	Analyzed:	02/10/21 00:53
% Solids:	87.83	Preparation:	EPA 3546 (Microwave)	Initial/Final:	5.81 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0231	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	19.6	7.8	19.6	U
11104-28-2	Aroclor 1221	1	1	19.6	7.8	19.6	U
11141-16-5	Aroclor 1232	1	1	19.6	7.8	19.6	U
53469-21-9	Aroclor 1242	1	1	19.6	7.8	19.6	U
12672-29-6	Aroclor 1248	1	1	67.3	7.8	19.6	
11097-69-1	Aroclor 1254	1	1	75.3	7.8	19.6	
11096-82-5	Aroclor 1260	1	1	48.3	9.1	19.6	
37324-23-5	Aroclor 1262	1	1	19.6	9.1	19.6	U
11100-14-4	Aroclor 1268	1	1	19.6	9.1	19.6	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.193*	*29.7*	*75.8*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.193*	*28.7*	*73.1*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092124ECD5.D
Data file 2: /210209.b/210209.b/02092124ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-23
Client ID:
Injection Date: 10-FEB-2021 00:53
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.989	-0.001	93637	5.378	-0.004	184944	29.3	31.4	7.0	Tetrachloro-m-xylene
13.175	-0.011	337372	13.919	-0.008	276738	30.3	30.1	0.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	202934	22.5
Hexabromobiphenyl	1343188	1036667	-22.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	557548	-33.4
Hexabromobiphenyl	850693	525451	-38.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.605	-0.004	4200	24.0	1	7.048	-0.008	5842	24.2
Aroclor-1016	2	6.976	-0.007	14625	25.6	2	7.646	-0.010	14814	27.0
Aroclor-1016	3	7.129	-0.005	5103	18.8	3	7.857	-0.011	3900	16.2
Aroclor-1016	4	7.235	-0.008	3754	22.0	4	8.116	-0.007	16439	119.7
	~~Total Col1Ave (4 peaks):~~			~~22.6~~	~~Total Col2Ave (4 peaks):~~				~~46.8~~	~~RPD = 70*~~
	Corrected Ave (3 peaks):			21.6	Corrected Ave (3 peaks):				22.5	RPD = 4
Aroclor-1221	1	3.938	-0.005	136	4.7	1	---			0.0
Aroclor-1221	2	5.291	-0.084	1428	37.1	2	6.062	0.003	3833	54.7
Aroclor-1221	3	5.655	-0.004	550	4.2	3	6.391	-0.007	4765	37.7
	~~Total Col1Ave (3 peaks):~~			~~15.3~~		~~Col2Ave: <3 Quant Peaks~~				
Aroclor-1232	1	3.938	-0.004	136	8.2	1	---			0.0
Aroclor-1232	2	6.605	-0.003	4200	56.5	2	7.048	-0.008	5842	52.7
Aroclor-1232	3	6.976	-0.007	14625	61.5	3	7.646	-0.011	14814	62.9
Aroclor-1232	4	8.278	-0.017	16612	200.0	4	8.031	-0.013	4441	98.9
	~~Total Col1Ave (4 peaks):~~			~~81.5~~	~~Total Col2Ave (3 peaks):~~				~~71.5~~	~~RPD = 13~~
	Corrected Ave (3 peaks):			42.1			Corrected Ave: < 3 Peaks			
Aroclor-1242	1	6.605	-0.005	4200	29.6	1	7.048	-0.008	5842	29.3
Aroclor-1242	2	6.976	-0.006	14625	31.1	2	7.646	-0.011	14814	31.7
Aroclor-1242	3	8.278	-0.013	16612	105.8	3	8.964	-0.018	14661	77.9
Aroclor-1242	4	8.564	-0.021	23101	144.8	4	9.394	-0.026	10845	59.1
	~~Total Col1Ave (4 peaks):~~			~~77.8~~	~~Total Col2Ave (4 peaks):~~				~~49.5~~	~~RPD = 45*~~
	Corrected Ave (3 peaks):			55.5	Corrected Ave (3 peaks):				40.0	RPD = 32
Aroclor-1248	1	7.461	-0.006	19030	87.6	1	8.116	-0.007	16439	90.7
Aroclor-1248	2	7.927	-0.011	11419	34.8	2	8.536	-0.010	13983	62.4
Aroclor-1248	3	8.350	-0.000	40916	60.5	3	8.964	-0.018	14661	42.1
Aroclor-1248	4	8.564	-0.023	23101	92.0	4	9.394	-0.026	10845	32.3
	Total Col1Ave (4 peaks):			68.7	Total Col2Ave (4 peaks):				56.9	RPD = 19
	Corrected Ave (3 peaks):			61.0	Corrected Ave (3 peaks):				45.6	RPD = 29
Aroclor-1254	1	8.644	-0.012	48933	81.6	1	9.263	-0.013	32440	87.3
Aroclor-1254	2	8.715	-0.010	24283	73.3	2	9.394	0.023	10845	53.2
Aroclor-1254	3	9.031	0.004	65285	164.8	3	9.793	-0.014	16641	61.1
Aroclor-1254	4	9.148	-0.013	70389	82.0	4	9.945	-0.014	47971	63.6
Aroclor-1254	5	9.842	-0.017	39050	70.3	5	10.179	-0.021	49407	68.8
	Total Col1Ave (5 peaks):			94.4	Total Col2Ave (5 peaks):				66.8	RPD = 34
	Corrected Ave (4 peaks):			76.8	Corrected Ave (4 peaks):				61.7	RPD = 22
Aroclor-1260	1	10.369	-0.016	20723	59.1	1	11.011	-0.015	11506	31.3
Aroclor-1260	2	10.691	-0.015	15153	43.1	2	11.480	-0.009	17735	51.8
Aroclor-1260	3	11.042	-0.016	35614	35.3	3	11.728	-0.014	29904	31.6
Aroclor-1260	4	11.445	-0.016	17213	36.9	4	12.315	-0.015	20313	33.2
Aroclor-1260	5	11.552	-0.013	15647	72.0	NS	---			----
	Total Col1Ave (5 peaks):			49.3	Total Col2Ave (4 peaks):				37.0	RPD = 29
	Corrected Ave (4 peaks):			43.6	Corrected Ave (3 peaks):				32.0	RPD = 31
Aroclor-1262	1	10.369	-0.019	20723	35.9	1	11.011	-0.015	11506	19.0
Aroclor-1262	2	11.042	-0.018	35614	25.9	2	11.728	-0.018	29904	22.2
Aroclor-1262	3	11.552	-0.017	15647	40.2	3	12.240	-0.019	15240	39.0
Aroclor-1262	4	11.622	-0.018	14829	28.7	4	13.120	-0.014	3215	6.6
	Total Col1Ave (4 peaks):			32.7	Total Col2Ave (4 peaks):				21.7	RPD = 40*
	Corrected Ave (3 peaks):			30.2	Corrected Ave (3 peaks):				15.9	RPD = 62*
Aroclor-1268	1	11.552	-0.017	15647	11.8	1	12.240	-0.019	15240	11.5
Aroclor-1268	2	11.622	-0.015	14829	9.8	2	12.315	-0.021	20313	12.7
Aroclor-1268	3	12.013	-0.003	9197	7.4	3	12.698	-0.015	2880	2.3
Aroclor-1268	4	12.772	-0.019	25739	5.9	4	13.512	-0.008	14811	3.2
	Total Col1Ave (4 peaks):			8.8	Total Col2Ave (4 peaks):				7.4	RPD = 17
	Corrected Ave (3 peaks):			7.7	Corrected Ave (3 peaks):				5.6	RPD = 31

Total PCB Area Col1 (5.090 - 13.086) = 1112721 Col1 Total PCB = 0.1 ppm*

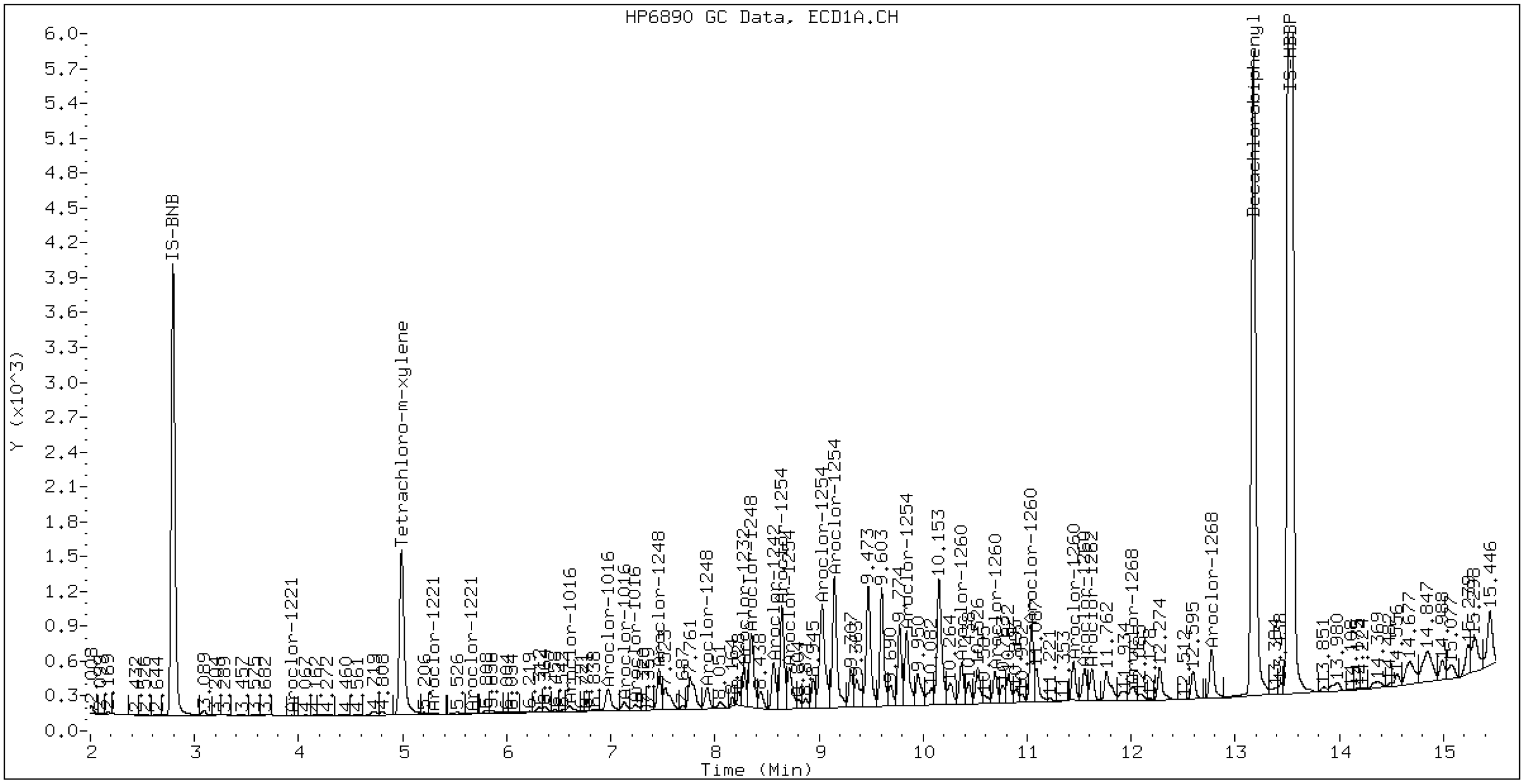
Total PCB Area Col2 (5.090 - 13.086) = 982570 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

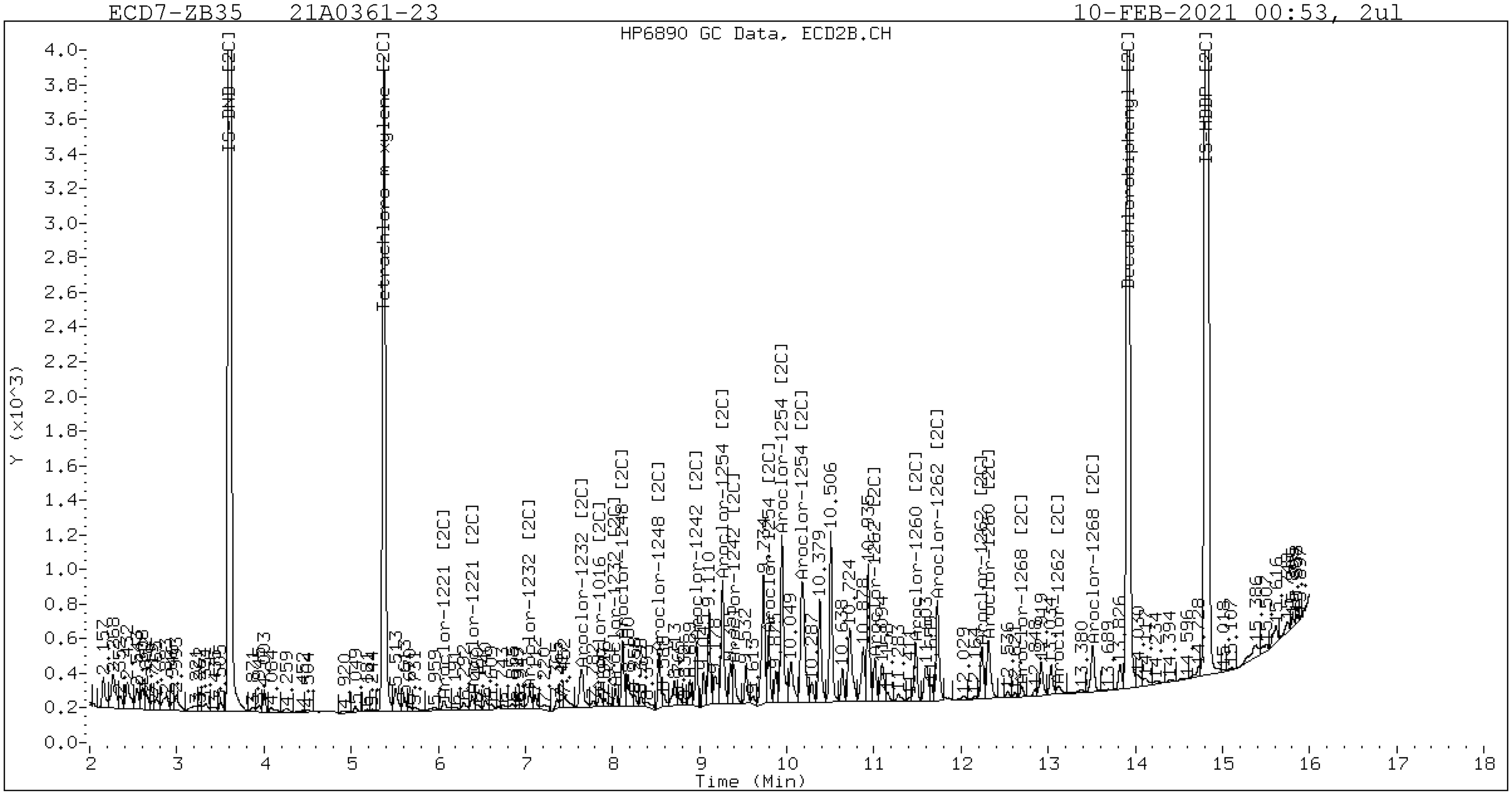
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-23 10-FEB-2021 00:53, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21A0361-23 10-FEB-2021 00:53, 2ul

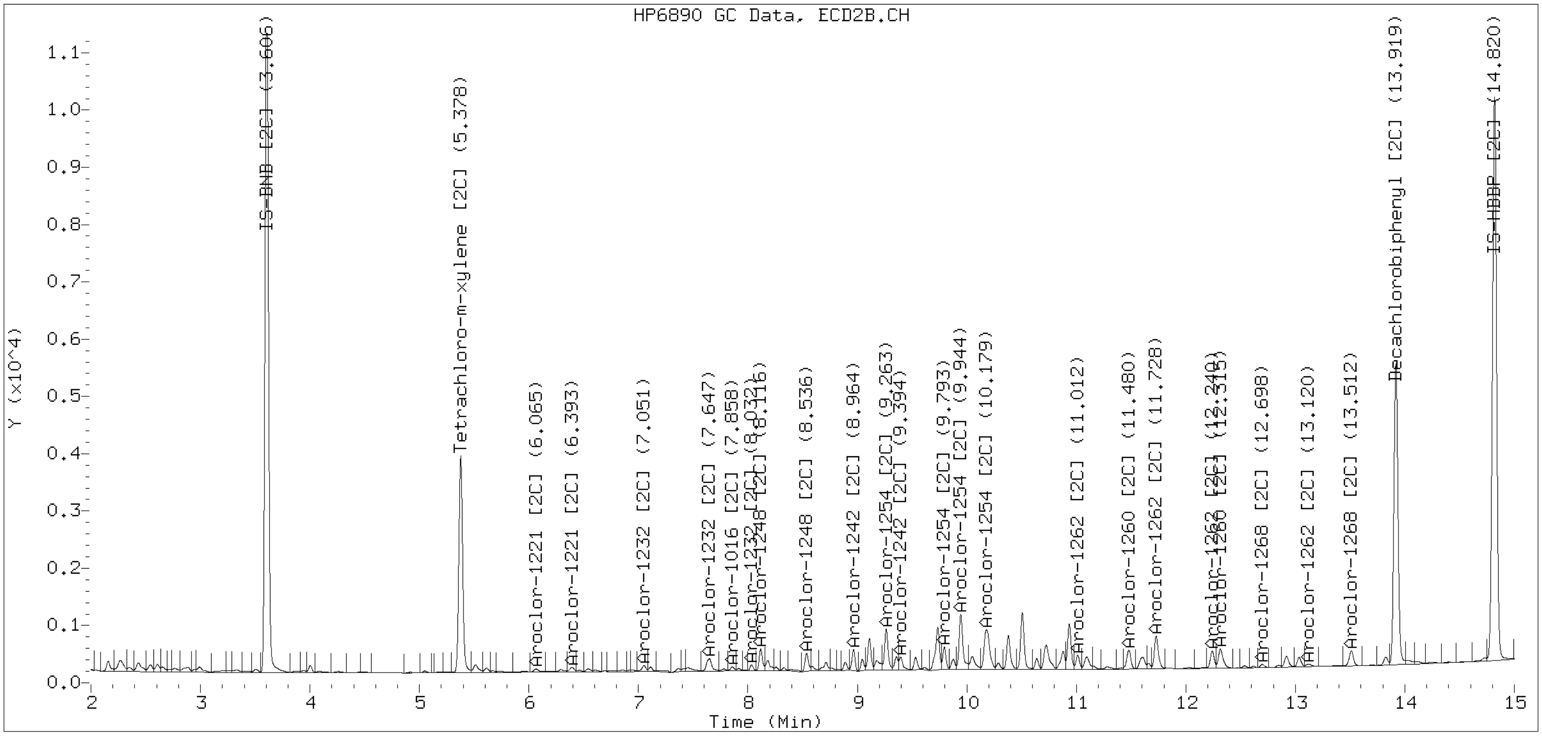


ZB-35 Manual Integration: YES

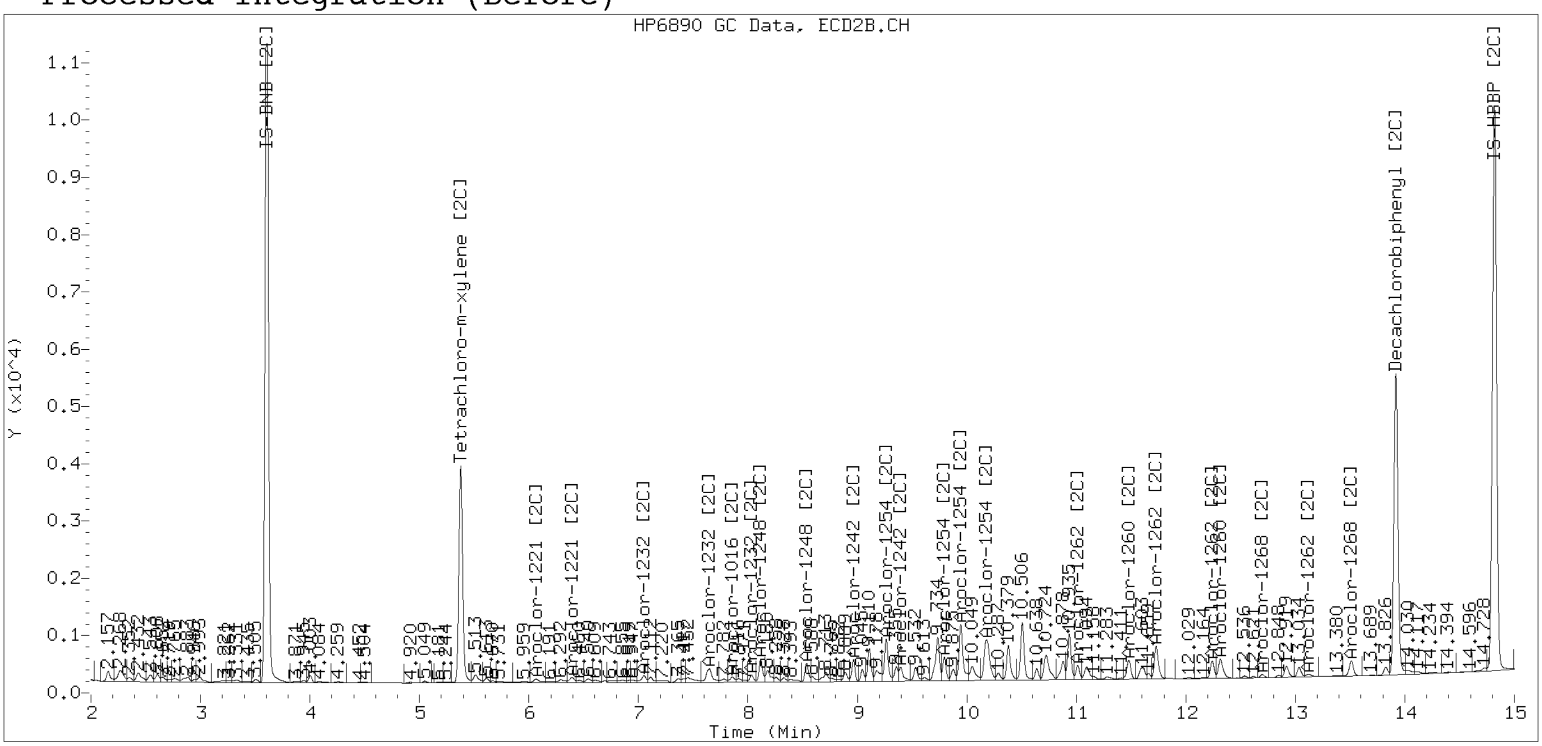
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/210209.b/210209.b/02092124ECD5.D   Injection Date: 10-FEB-2021

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10E-1

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage

Matrix:	Solid	Laboratory ID:	21A0361-25 A	File ID:	02092125ECD5.D
Sampled:	01/25/21 11:30	Prepared:	02/05/21 16:51	Analyzed:	02/10/21 01:13
% Solids:	92.94	Preparation:	EPA 3546 (Microwave)	Initial/Final:	5.88 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0231	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	5	91.5	36.6	91.5	U
11104-28-2	Aroclor 1221	1	5	91.5	36.6	91.5	U
11141-16-5	Aroclor 1232	1	5	91.5	36.6	91.5	U
53469-21-9	Aroclor 1242	1	5	91.5	36.6	91.5	U
12672-29-6	Aroclor 1248	2	5	1060	36.6	91.5	D
11097-69-1	Aroclor 1254	2	5	640	36.6	91.5	D
11096-82-5	Aroclor 1260	1	5	533	42.5	91.5	D
37324-23-5	Aroclor 1262	1	5	91.5	42.5	91.5	U
11100-14-4	Aroclor 1268	1	5	91.5	42.5	91.5	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*36.597*	*29.0*	*79.2*	*40 - 133*	
Tetrachlorometaxylene	*1*	*36.597*	*23.7*	*64.9*	*53 - 120*	
Decachlorobiphenyl	*2*	*36.597*	*25.7*	*70.1*	*40 - 133*	
Tetrachlorometaxylene	*2*	*36.597*	*26.1*	*71.3*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092125ECD5.D
Data file 2: /210209.b/210209.b/02092125ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-25
Client ID:
Injection Date: 10-FEB-2021 01:13
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 5.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.988	-0.002	16888	5.377	-0.005	33478	5.2	5.7	9.5	Tetrachloro-m-xylene
13.173	-0.014	83407	13.917	-0.010	59712	6.3	5.6	12.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	206293	24.5
Hexabromobiphenyl	1343188	1226057	-8.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	555006	-33.7
Hexabromobiphenyl	850693	608311	-28.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT (ZB5 Col)	Shift	Area	Amount	Peak# (ZB35 Col)	RT	Shift	Area	Amount
Aroclor-1016	1	6.603	-0.006	27354	153.5	1	7.050	-0.006	43423	180.4
Aroclor-1016	2	6.976	-0.007	105079	181.1	2	7.647	-0.010	108617	199.1
Aroclor-1016	3	7.126	-0.008	33712	122.1	3	7.857	-0.011	23418	97.6
Aroclor-1016	4	7.233	-0.010	23072	133.0	4	8.114	-0.009	47798	349.8
~~Total Col1Ave (4 peaks):~~				~~147.4~~		~~Total Col2Ave (4 peaks):~~			~~206.7~~	RPD = 33
Corrected Ave (3 peaks):				136.2		Corrected Ave (3 peaks):			159.0	RPD = 15
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	5.372	-0.003	197	5.0	2	6.071	0.012	1927	27.6
Aroclor-1221	3	5.654	-0.005	5019	37.8	3	6.394	-0.005	10793	85.8
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.603	-0.005	27354	362.2	2	7.050	-0.006	43423	393.5
Aroclor-1232	3	6.976	-0.007	105079	434.5	3	7.647	-0.011	108617	463.3
Aroclor-1232	4	~~8.275~~	~~-0.021~~	~~70655~~	~~836.8~~	~~4~~	~~8.030~~	~~-0.014~~	~~42755~~	956.6
Total Col1Ave (3 peaks):				544.5		Total Col2Ave (3 peaks):			604.5	RPD = 10
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.603	-0.007	27354	189.6	1	7.050	-0.006	43423	219.0
Aroclor-1242	2	6.976	-0.007	105079	219.9	2	7.647	-0.011	108617	233.5
Aroclor-1242	3	8.275	-0.016	70655	442.6	3	8.961	-0.021	74137	395.5
Aroclor-1242	4	8.564	-0.021	78770	485.7	4	9.393	-0.027	57478	314.4
Total Col1Ave (4 peaks):				334.5		Total Col2Ave (4 peaks):			290.6	RPD = 14
~~Corrected Ave (3 peaks):~~				~~284.1~~		~~Corrected Ave (3 peaks):~~			~~255.6~~	RPD = 11
Aroclor-1248	1	7.458	-0.010	52461	237.5	1	8.114	-0.009	47798	264.9
Aroclor-1248	2	7.924	-0.014	64228	192.7	2	8.533	-0.012	60804	272.5
Aroclor-1248	3	8.335	-0.015	119160	173.3	3	8.961	-0.021	74137	214.0
Aroclor-1248	4	8.564	-0.022	78770	308.6	4	9.393	-0.027	57478	171.8
Total Col1Ave (4 peaks):				$\boxed{228.0}$		Total Col2Ave (4 peaks):			$\boxed{230.8}$	RPD = 1
Corrected Ave (3 peaks):				201.2		Corrected Ave (3 peaks):			216.9	RPD = 8
Aroclor-1254	1	8.640	-0.016	88373	145.0	1	9.261	-0.016	59668	161.4
Aroclor-1254	2	8.711	-0.014	37409	111.2	2	9.393	0.023	57478	2~~83~~.1
Aroclor-1254	3	9.026	-0.000	135695	3~~36~~.9	3	9.790	-0.017	32664	120.4
Aroclor-1254	4	9.144	-0.017	120361	138.0	4	9.942	-0.017	95570	127.3
Aroclor-1254	5	9.838	-0.021	75219	133.3	5	10.181	-0.018	107831	150.9
Total Col1Ave (5 peaks):				172.9		Total Col2Ave (5 peaks):			168.6	RPD = 2
Corrected Ave (4 peaks):				$\boxed{131.8}$		Corrected Ave (4 peaks):			$\boxed{140.0}$	RPD = 6
Aroclor-1260	1	10.367	-0.019	49824	120.1	1	11.009	-0.016	37954	89.1
Aroclor-1260	2	10.688	-0.019	48507	116.7	2	11.475	-0.014	48564	122.6
Aroclor-1260	3	11.040	-0.018	140496	117.9	3	11.726	-0.016	108482	99.0
Aroclor-1260	4	11.443	-0.019	65860	119.5	4	12.316	-0.015	67992	96.0
Aroclor-1260	5	11.549	-0.016	27974	108.8	NS	---			----
Total Col1Ave (5 peaks):				$\boxed{116.6}$		Total Col2Ave (4 peaks):			$\boxed{101.7}$	RPD = 14
Corrected Ave (4 peaks):				115.7		Corrected Ave (3 peaks):			94.7	RPD = 20
Aroclor-1262	1	10.367	-0.022	49824	72.9	1	11.009	-0.017	37954	54.1
Aroclor-1262	2	11.040	-0.021	140496	86.4	2	11.726	-0.020	108482	69.4
Aroclor-1262	3	11.549	-0.020	27974	60.7	3	12.243	-0.017	31217	69.1
Aroclor-1262	4	11.620	-0.020	34729	56.8	4	13.136	0.003	11678	20.7
~~Total Col1Ave (4 peaks):~~				~~69.2~~		~~Total Col2Ave (4 peaks):~~			~~53.5~~	RPD = 26
Corrected Ave (3 peaks):				63.5		Corrected Ave (3 peaks):			48.0	RPD = 28
Aroclor-1268	1	11.549	-0.020	27974	17.8	1	12.243	-0.017	31217	20.3
Aroclor-1268	2	11.620	-0.017	34729	19.5	2	12.316	-0.021	67992	36.6
Aroclor-1268	3	12.022	0.007	18897	12.9	3	12.695	-0.018	3084	2.1
Aroclor-1268	4	12.771	-0.021	27905	5.5	4	13.510	-0.010	16545	3.1
~~Total Col1Ave (4 peaks):~~				~~13.9~~		~~Total Col2Ave (4 peaks):~~			~~15.5~~	RPD = 11
Corrected Ave (3 peaks):				12.1		Corrected Ave (3 peaks):			8.5	RPD = 35

Total PCB Area Col1 (5.090 - 13.086) = 2650796 Col1 Total PCB = 0.3 ppm*

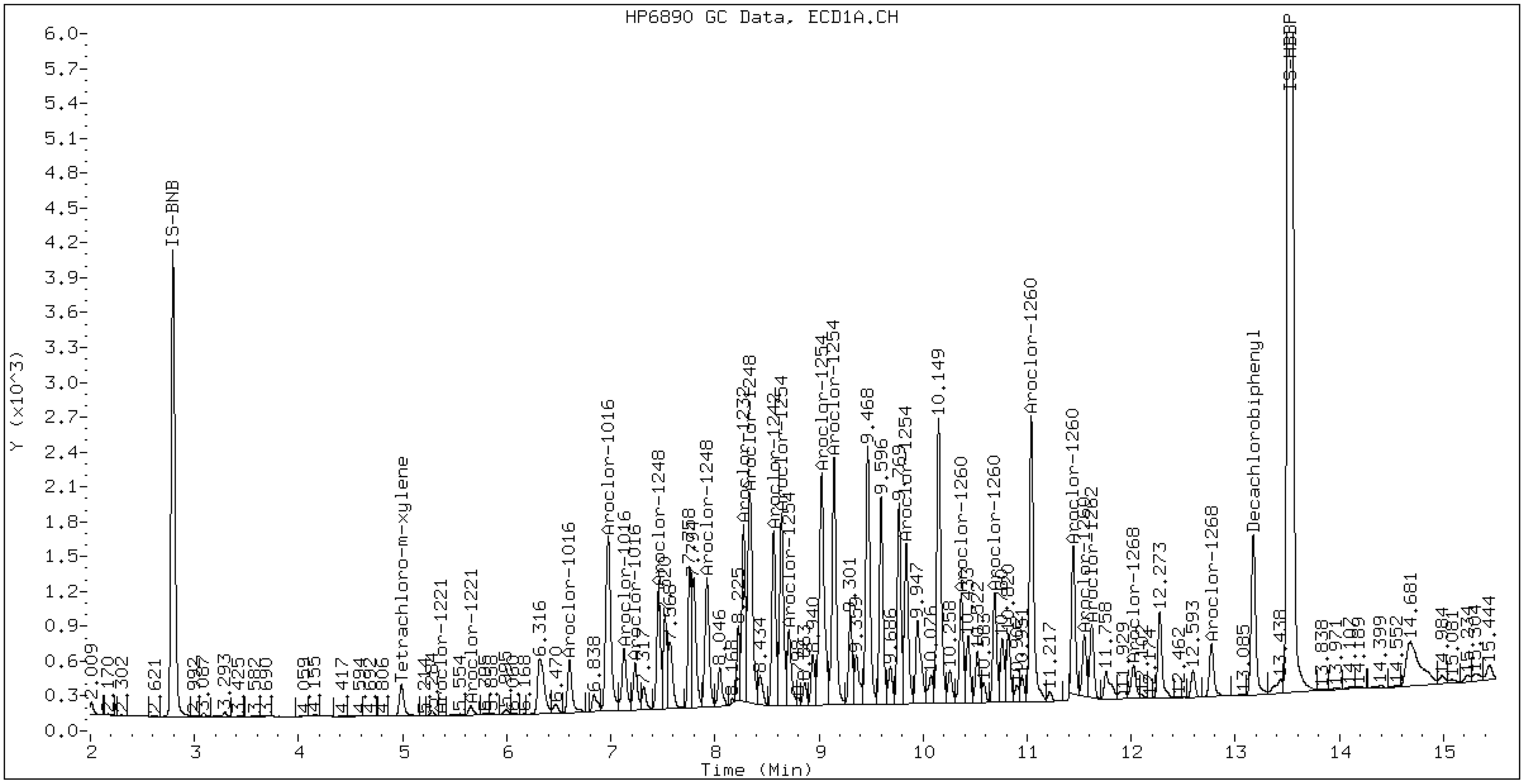
Total PCB Area Col2 (5.090 - 13.086) = 2178808 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

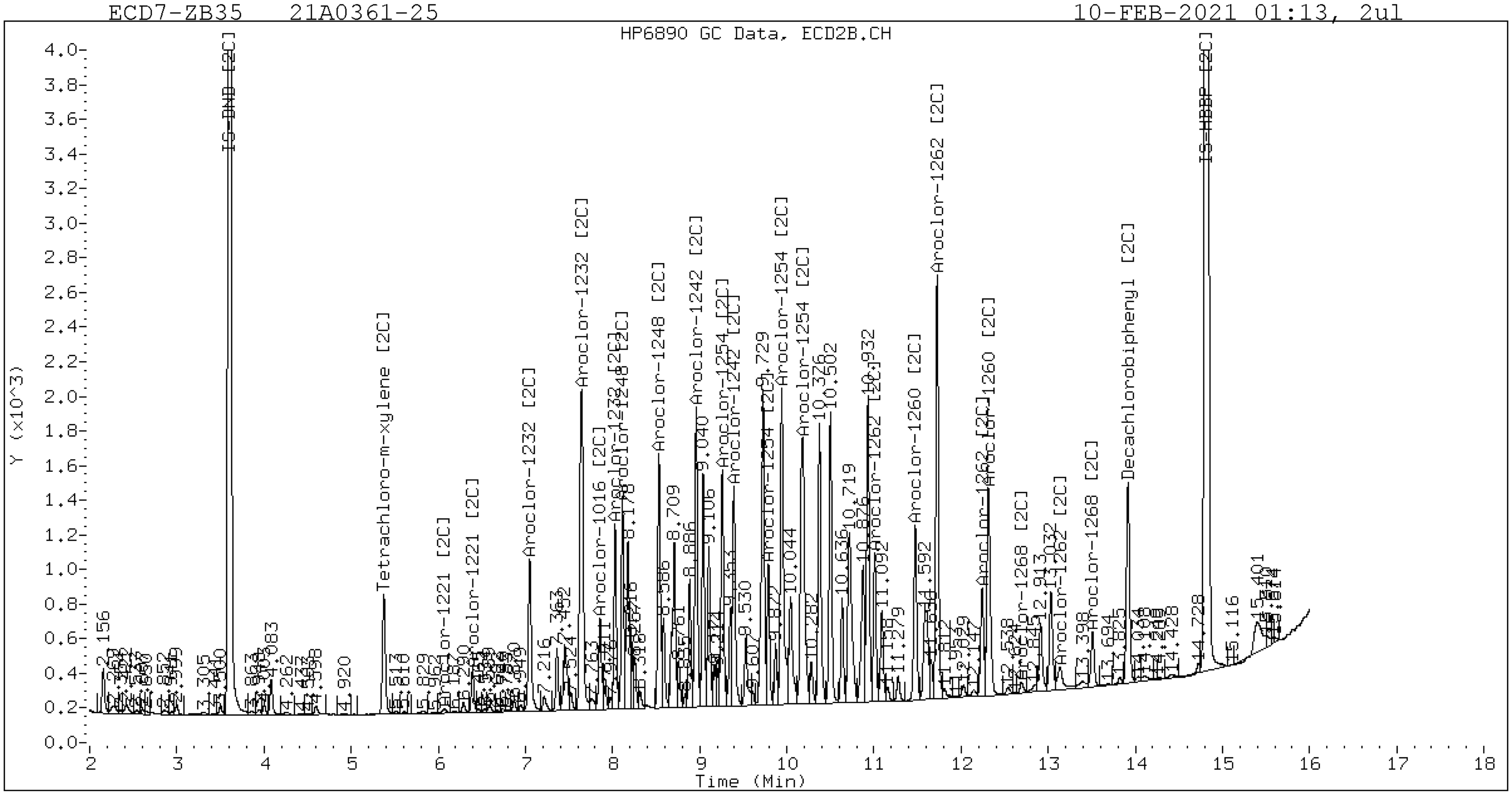
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-25 10-FEB-2021 01:13, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21A0361-25 10-FEB-2021 01:13, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10E-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	21A0361-27 A	File ID:	02092126ECD5.D
Sampled:	01/25/21 11:40	Prepared:	02/05/21 16:51	Analyzed:	02/10/21 01:34
% Solids:	88.17	Preparation:	EPA 3546 (Microwave)	Initial/Final:	5.85 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0231	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	19.4	7.8	19.4	U
11104-28-2	Aroclor 1221	1	1	19.4	7.8	19.4	U
11141-16-5	Aroclor 1232	1	1	19.4	7.8	19.4	U
53469-21-9	Aroclor 1242	1	1	19.4	7.8	19.4	U
12672-29-6	Aroclor 1248	1	1	65.9	7.8	19.4	
11097-69-1	Aroclor 1254	1	1	66.5	7.8	19.4	
11096-82-5	Aroclor 1260	1	1	29.8	9.0	19.4	
37324-23-5	Aroclor 1262	1	1	19.4	9.0	19.4	U
11100-14-4	Aroclor 1268	1	1	19.4	9.0	19.4	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*38.775*	*28.1*	*72.4*	*40 - 133*	
Tetrachlorometaxylene	*1*	*38.775*	*28.2*	*72.7*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092126ECD5.D
Data file 2: /210209.b/210209.b/02092126ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-27
Client ID:
Injection Date: 10-FEB-2021 01:34
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.990	-0.000	96184	5.379	-0.003	195985	29.1	28.2	3.1	Tetrachloro-m-xylene
13.178	-0.009	408176	13.921	-0.006	343585	29.0	29.3	1.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	209575	26.5
Hexabromobiphenyl	1343188	1312387	-2.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	657381	-21.5
Hexabromobiphenyl	850693	670325	-21.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.606	-0.004	6726	37.1	1	7.051	-0.005	3500	12.3
Aroclor-1016	2	6.976	-0.007	15381	26.1	2	7.649	-0.008	13568	21.0
Aroclor-1016	3	7.129	-0.005	7713	27.5	3	7.860	-0.008	3585	12.6
Aroclor-1016	4	7.236	-0.007	5222	29.6	4	8.117	-0.006	12232	75.6
~~Total Col1Ave (4 peaks):~~				~~30.1~~		~~Total Col2Ave (4 peaks):~~			~~30.4~~	RPD = 1
Corrected Ave (3 peaks):				27.7		Corrected Ave (3 peaks):			15.3	RPD = 58*
Aroclor-1221	1	3.923	-0.020	658	22.0	1	---			0.0
Aroclor-1221	2	5.282	-0.094	1481	37.3	2	6.066	0.007	2669	32.3
Aroclor-1221	3	5.649	-0.010	813	6.0	3	6.397	-0.002	3713	24.9
~~Total Col1Ave (3 peaks):~~				~~21.8~~		~~Col2Ave: <3 Quant Peaks~~				
Aroclor-1232	1	3.923	-0.019	658	38.2	1	---			0.0
Aroclor-1232	2	6.606	-0.002	6726	87.7	2	7.051	-0.005	3500	26.8
Aroclor-1232	3	6.976	-0.007	15381	62.6	3	7.649	-0.008	13568	48.9
Aroclor-1232	4	8.280	-0.015	25742	300.1	4	7.976	-0.068	1197	22.6
~~Total Col1Ave (4 peaks):~~				~~122.2~~		~~Total Col2Ave (3 peaks):~~			~~32.7~~	RPD = 115*
Corrected Ave (3 peaks):				62.8		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.606	-0.004	6726	45.9	1	7.051	-0.005	3500	14.9
Aroclor-1242	2	6.976	-0.007	15381	31.7	2	7.649	-0.008	13568	24.6
Aroclor-1242	3	8.280	-0.011	25742	158.7	3	8.967	-0.015	17850	80.4
Aroclor-1242	4	8.568	-0.017	23037	139.8	4	9.398	-0.021	14367	66.3
~~Total Col1Ave (4 peaks):~~				~~94.0~~		~~Total Col2Ave (4 peaks):~~			~~46.6~~	RPD = 68*
Corrected Ave (3 peaks):				72.5		Corrected Ave (3 peaks):			35.3	RPD = 69*
Aroclor-1248	1	7.462	-0.006	16506	73.6	1	8.117	-0.006	12232	57.2
Aroclor-1248	2	7.927	-0.010	17682	52.2	2	8.537	-0.009	11978	45.3
Aroclor-1248	3	8.348	-0.003	40046	57.3	3	8.967	-0.015	17850	43.5
Aroclor-1248	4	8.568	-0.018	23037	88.8	4	9.398	-0.021	14367	36.3
Total Col1Ave (4 peaks):				68.0		Total Col2Ave (4 peaks):			45.6	RPD = 39
Corrected Ave (3 peaks):				61.0		Corrected Ave (3 peaks):			41.7	RPD = 38
Aroclor-1254	1	8.645	-0.010	43529	70.3	1	9.263	-0.013	26887	61.4
Aroclor-1254	2	8.715	-0.010	21123	61.8	2	9.398	0.028	14367	59.7
Aroclor-1254	3	9.026	-0.001	52043	127.2	3	9.794	-0.013	17536	54.6
Aroclor-1254	4	9.151	-0.010	64936	73.3	4	9.945	-0.014	42126	47.4
Aroclor-1254	5	9.846	-0.014	39532	68.9	5	10.178	-0.022	49116	58.0
Total Col1Ave (5 peaks):				80.3		Total Col2Ave (5 peaks):			56.2	RPD = 35
Corrected Ave (4 peaks):				68.6		Corrected Ave (4 peaks):			54.9	RPD = 22
Aroclor-1260	1	10.372	-0.013	15363	34.6	1	11.014	-0.011	9572	20.4
Aroclor-1260	2	10.694	-0.012	12669	28.5	2	11.482	-0.007	17565	40.2
Aroclor-1260	3	11.045	-0.013	35043	27.5	3	11.732	-0.010	26649	22.1
Aroclor-1260	4	11.448	-0.013	15553	26.4	4	12.319	-0.011	16559	21.2
Aroclor-1260	5	11.555	-0.010	10183	37.0	NS	---			----
Total Col1Ave (5 peaks):				30.8		Total Col2Ave (4 peaks):			26.0	RPD = 17
Corrected Ave (4 peaks):				29.2		Corrected Ave (3 peaks):			21.2	RPD = 32
Aroclor-1262	1	10.372	-0.016	15363	21.0	1	11.014	-0.012	9572	12.4
Aroclor-1262	2	11.045	-0.016	35043	20.1	2	11.732	-0.014	26649	15.5
Aroclor-1262	3	11.555	-0.014	10183	20.7	3	12.248	-0.012	8020	16.1
Aroclor-1262	4	11.625	-0.015	10726	16.4	4	13.120	-0.014	4807	7.7
~~Total Col1Ave (4 peaks):~~				~~19.5~~		~~Total Col2Ave (4 peaks):~~			~~12.9~~	RPD = 41*
Corrected Ave (3 peaks):				19.1		Corrected Ave (3 peaks):			11.9	RPD = 46*
Aroclor-1268	1	11.555	-0.014	10183	6.1	1	12.248	-0.012	8020	4.7
Aroclor-1268	2	11.625	-0.012	10726	5.6	2	12.319	-0.017	16559	8.1
Aroclor-1268	3	12.024	0.008	6831	4.4	3	12.703	-0.010	1499	0.9
Aroclor-1268	4	12.775	-0.017	18801	3.4	4	13.515	-0.005	5852	1.0
~~Total Col1Ave (4 peaks):~~				~~4.9~~		~~Total Col2Ave (4 peaks):~~			~~3.7~~	RPD = 28
Corrected Ave (3 peaks):				4.5		Corrected Ave (3 peaks):			2.2	RPD = 68*

Total PCB Area Col1 (5.090 - 13.086) = 992028 Col1 Total PCB = 0.1 ppm*

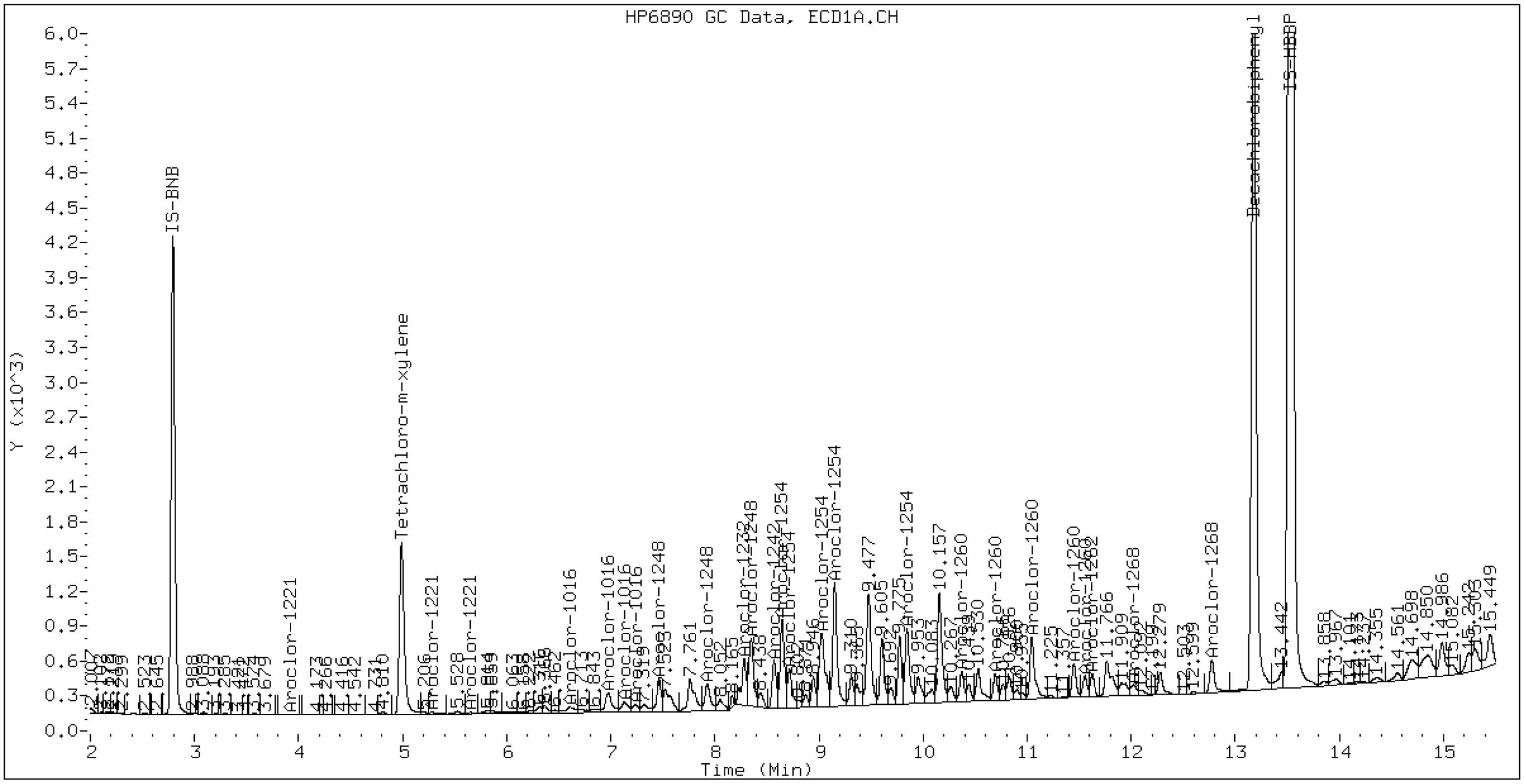
Total PCB Area Col2 (5.090 - 13.086) = 884229 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

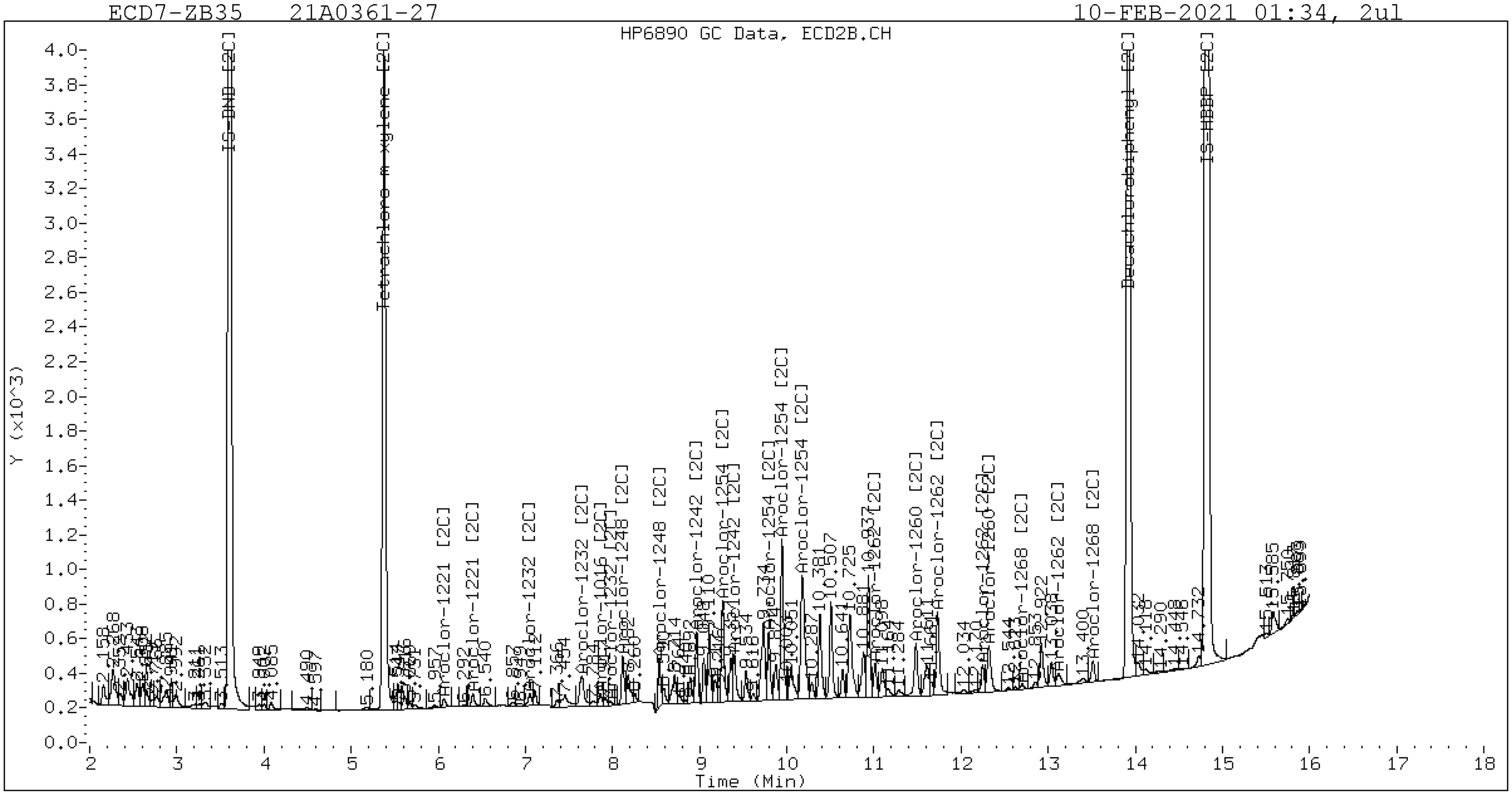
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-27 10-FEB-2021 01:34, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21A0361-27 10-FEB-2021 01:34, 2ul

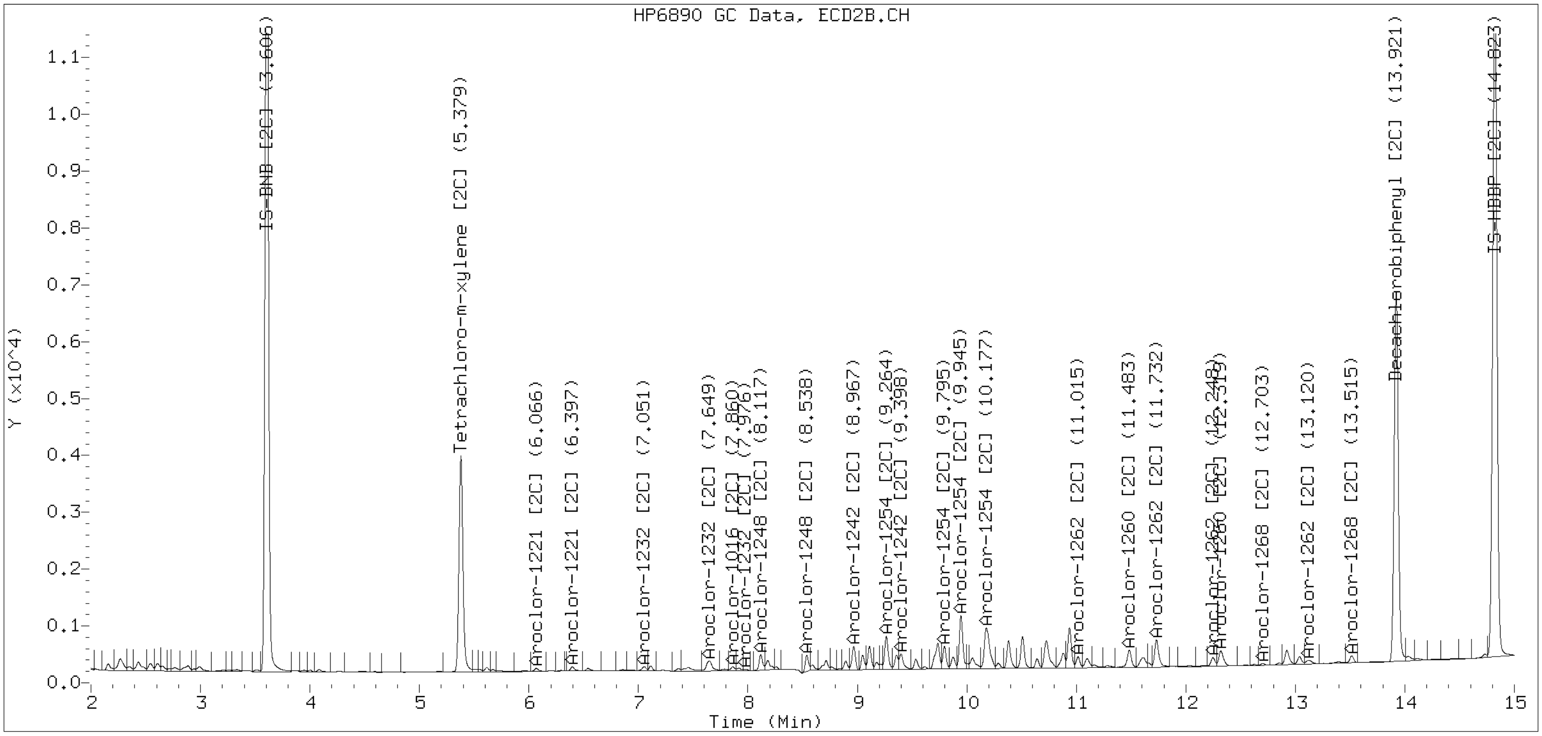


ZB-35 Manual Integration: YES

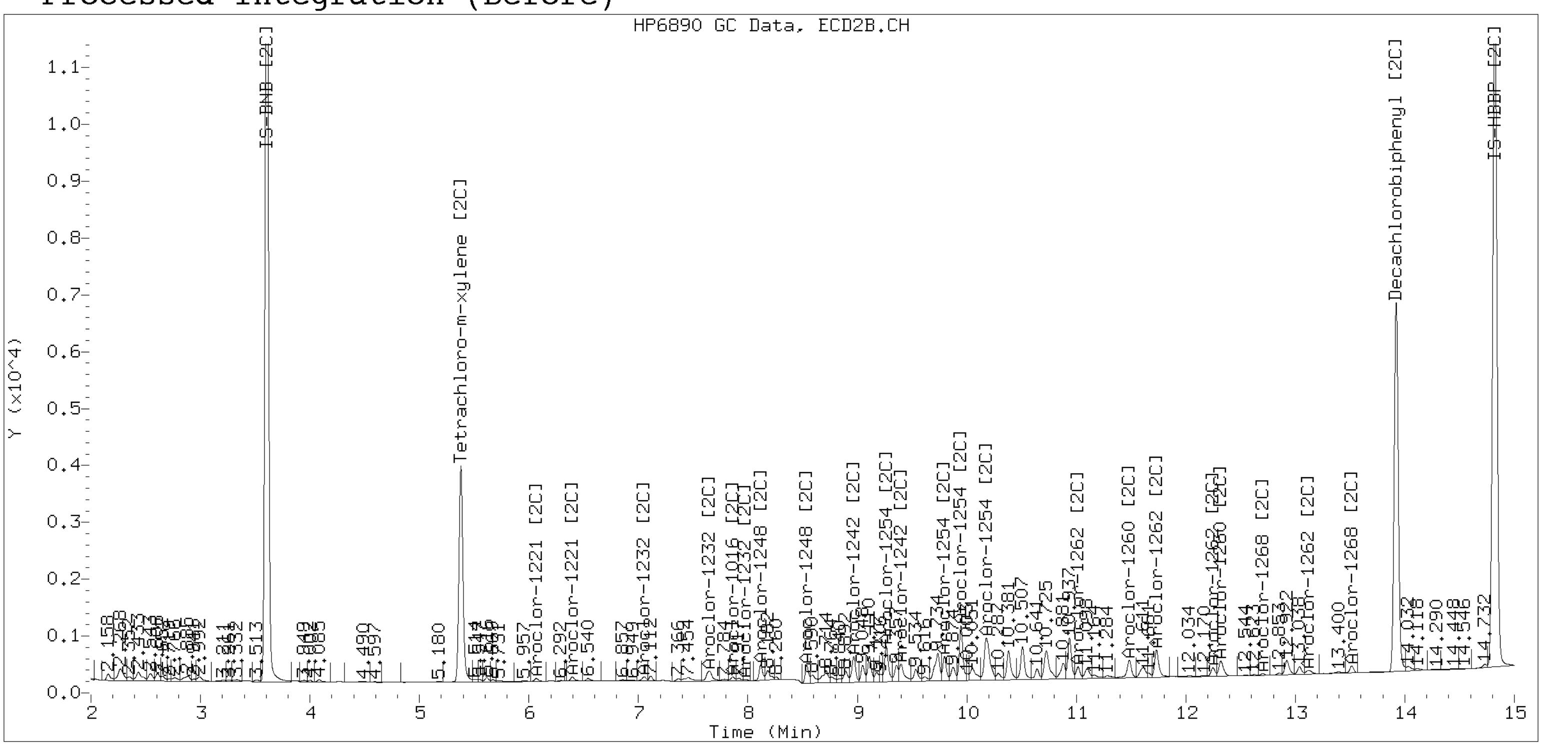
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/210209.b/210209.b/02092126ECD5.D Injection Date: 10-FEB-2021

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10N-1

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	21A0361-29 A	File ID:	02112107ECD7.D
Sampled:	01/25/21 09:25	Prepared:	02/05/21 16:51	Analyzed:	02/11/21 21:01
% Solids:	91.04	Preparation:	EPA 3546 (Microwave)	Initial/Final:	5.59 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0228	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	25	491	196	491	U
11104-28-2	Aroclor 1221	1	25	491	196	491	U
11141-16-5	Aroclor 1232	1	25	491	196	491	U
53469-21-9	Aroclor 1242	1	25	491	196	491	U
12672-29-6	Aroclor 1248	2	25	9060	196	491	D
11097-69-1	Aroclor 1254	1	25	3190	196	491	D
11096-82-5	Aroclor 1260	1	25	2810	228	491	D
37324-23-5	Aroclor 1262	1	25	491	228	491	U
11100-14-4	Aroclor 1268	1	25	491	228	491	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.299*	*37.3*	*94.9*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.299*	*30.5*	*77.5*	*53 - 120*	
Decachlorobiphenyl	*2*	*39.299*	*24.2*	*61.7*	*40 - 133*	
Tetrachlorometaxylene	*2*	*39.299*	*26.9*	*68.6*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210211.b/02112107ECD7.D
Data file 2: /210211.b/210211.b/02112107ECD7.D
Method: \\target\share\chem4\ecd7.i\210211.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-29RE
Client ID:
Injection Date: 11-FEB-2021 21:01
Report Date: 02/17/2021 10:49
Matrix: NONE
Dilution Factor: 25.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.983	-0.002	4251	5.375	-0.004	7287	1.2	1.1	12.3	Tetrachloro-m-xylene
13.180	-0.006	21032	13.923	-0.010	10094	1.5	1.0	42.5*	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	217222	31.1
Hexabromobiphenyl	1343188	1289395	-4.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	628269	-25.0
Hexabromobiphenyl	850693	584791	-31.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.605	-0.004	33877	180.5	1	7.050	-0.007	56045	205.7
Aroclor-1016	2	6.977	-0.007	145630	238.3	2	7.649	-0.008	151768	245.8
Aroclor-1016	3	7.131	0.001	42182	145.1	3	7.861	-0.009	29379	108.2
Aroclor-1016	4	7.237	-0.004	29940	163.9	4	8.117	-0.008	73343	474.1

Total ~~Col1Ave (4 peaks): 182.0 Total Col2Ave (4 peaks): 258.4~~ RPD = 35
Corrected Ave (3 peaks): 163.2 Corrected Ave (3 peaks): 186.5 RPD = 13

Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	5.377	0.002	328	8.0	2	6.057	0.005	333	4.2
Aroclor-1221	3	5.653	-0.006	3597	25.7	3	6.396	-0.001	9853	69.2

~~Col1Ave: <3 Quant Peaks Col2Ave: <3 Quant Peaks~~

Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.605	-0.004	33877	426.0	2	7.050	-0.007	56045	448.6
Aroclor-1232	3	6.977	-0.006	145630	571.9	3	7.649	-0.012	151768	571.8
Aroclor-1232	4	8.283	-0.013	125018	1406.1	4	8.036	-0.014	40634	803.1

Tota~~l Col1Ave (3 peaks): 801.4 Total Col2Ave (3 peaks): 607.9~~ RPD = 27
Corrected Ave: < 3 Peaks Corrected Ave: < 3 Peaks

Aroclor-1242	1	6.605	-0.004	33877	223.1	1	7.050	-0.006	56045	249.7
Aroclor-1242	2	6.977	-0.006	145630	289.4	2	7.649	-0.011	151768	288.2
Aroclor-1242	3	8.283	-0.010	125018	743.8	3	8.968	-0.023	134530	634.0
Aroclor-1242	4	8.575	-0.016	131571	770.4	4	9.400	-0.031	143089	691.4

Total Col1Ave (4 peaks): 506.7 Total Col2Ave (4 peaks): 465.8 RPD = 8
~~Corrected Ave (3 peaks): 418.8 Corrected Ave (3 peaks): 390.6 RPD~~ = 7

Aroclor-1248	1	7.462	-0.003	77373	332.7	1	8.117	-0.009	73343	359.1
Aroclor-1248	2	7.930	-0.005	119169	339.5	2	8.537	-0.012	99867	395.3
Aroclor-1248	3	8.340	-0.009	186850	258.0	3	8.968	-0.022	134530	343.0
Aroclor-1248	4	8.575	-0.008	131571	489.5	4	9.400	-0.027	143089	377.9

Total Col1Ave (4 peaks): 354.9 Total Col2Ave (4 peaks): 368.8 RPD = 4
Corrected Ave (3 peaks): 310.1 Corrected Ave (3 peaks): 360.0 RPD = 15

Aroclor-1254	1	8.648	-0.008	89637	139.7	1	9.265	-0.016	57405	137.2
Aroclor-1254	2	8.721	-0.005	44788	126.4	2	9.400	0.024	143089	6~~22~~.6
Aroclor-1254	3	9.023	0.001	98348	2~~31~~.9	3	9.796	-0.017	37822	123.2
Aroclor-1254	4	9.153	-0.008	103192	112.3	4	9.948	-0.019	100812	118.7
Aroclor-1254	5	9.850	-0.008	83609	140.7	5	10.185	-0.023	111399	137.7

Total Col1Ave (5 peaks): 150.2 Total Col2Ave (5 peaks): 227.9 RPD = 41*
Corrected Ave (4 peaks): 129.8 Corrected Ave (4 peaks): 129.2 RPD = 0

Aroclor-1260	1	10.377	-0.008	48608	111.4	1	11.017	-0.014	38649	94.4
Aroclor-1260	2	10.698	-0.008	48724	111.5	2	11.481	-0.013	42645	112.0
Aroclor-1260	3	11.049	-0.008	141598	113.0	3	11.732	-0.015	107564	102.1
Aroclor-1260	4	11.453	-0.006	71924	124.1	4	12.322	-0.014	68167	100.1
Aroclor-1260	5	11.558	-0.005	30333	112.2	NS	---			----

Total Col1Ave (5 peaks): 114.4 Total Col2Ave (4 peaks): 102.1 RPD = 11
Corrected Ave (4 peaks): 112.0 Corrected Ave (3 peaks): 98.9 RPD = 12

Aroclor-1262	1	10.377	-0.011	48608	67.6	1	11.017	-0.015	38649	57.3
Aroclor-1262	2	11.049	-0.012	141598	82.8	2	11.732	-0.017	107564	71.6
Aroclor-1262	3	11.558	-0.010	30333	62.6	3	12.251	-0.010	29173	67.1
Aroclor-1262	4	11.630	-0.010	39242	61.0	4	13.119	0.066	3897	7.2

Tota~~l Col1Ave (4 peaks): 68.5 Total Col2Ave (4 peaks): 50.8~~ RPD = 30
Corrected Ave (3 peaks): 63.8 Corrected Ave (3 peaks): 43.9 RPD = 37

Aroclor-1268	1	11.558	-0.010	30333	18.4	1	12.251	-0.008	29173	19.7
Aroclor-1268	2	11.630	-0.007	39242	20.9	2	12.322	-0.005	68167	38.2
Aroclor-1268	3	12.034	0.019	20395	13.3	3	12.701	-0.011	1365	1.0
Aroclor-1268	4	12.779	-0.012	16646	3.1	4	13.517	-0.014	6986	1.4

Total ~~Col1Ave (4 peaks): 13.9 Total Col2Ave (4 peaks): 15.0 R~~PD = 8
Corrected Ave (3 peaks): 11.6 Corrected Ave (3 peaks): 7.3 RPD = 45*

Total PCB Area Col1 (5.086 - 13.086) = 2918562 Col1 Total PCB = 0.4 ppm*

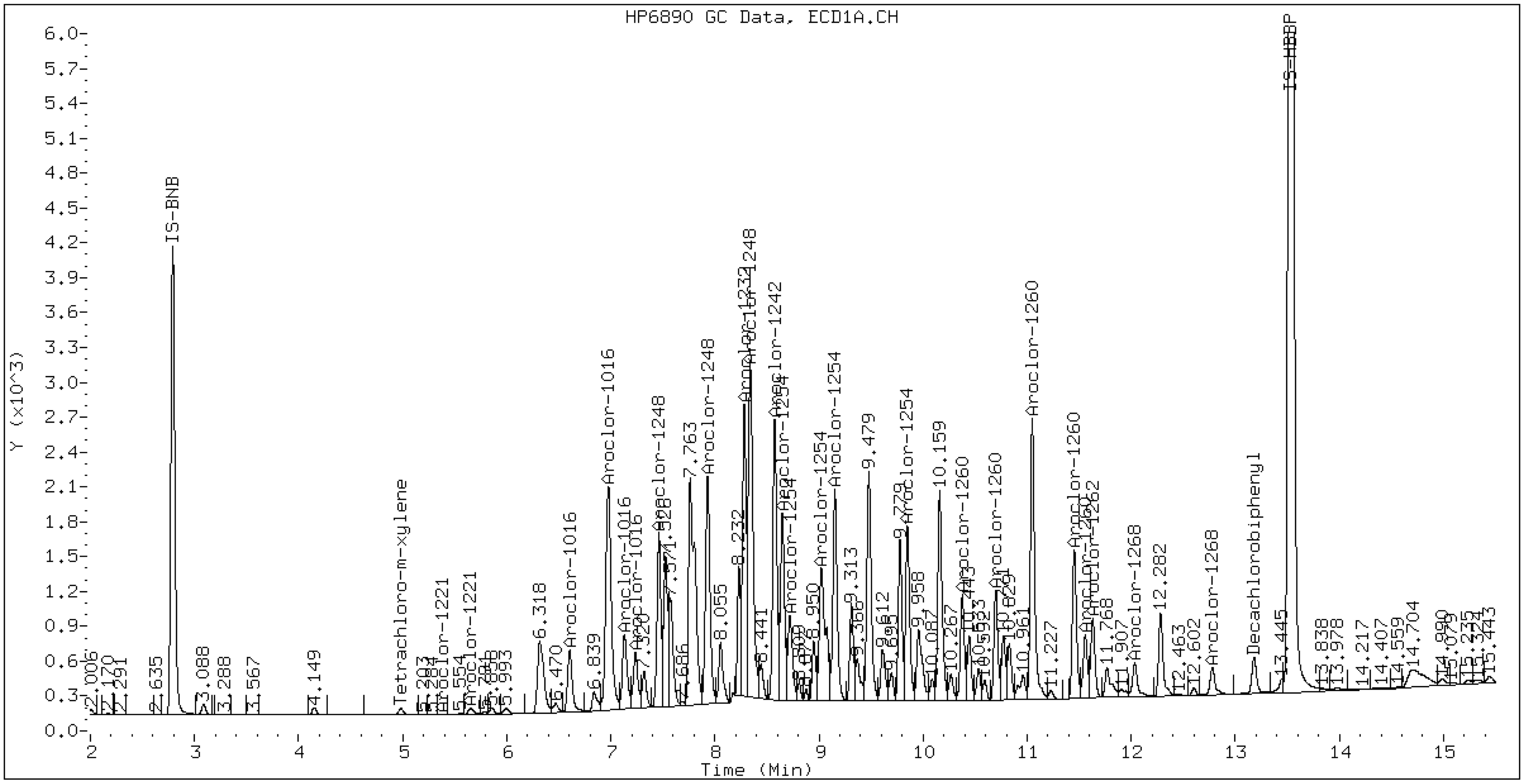
Total PCB Area Col2 (5.086 - 13.086) = 2477207 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

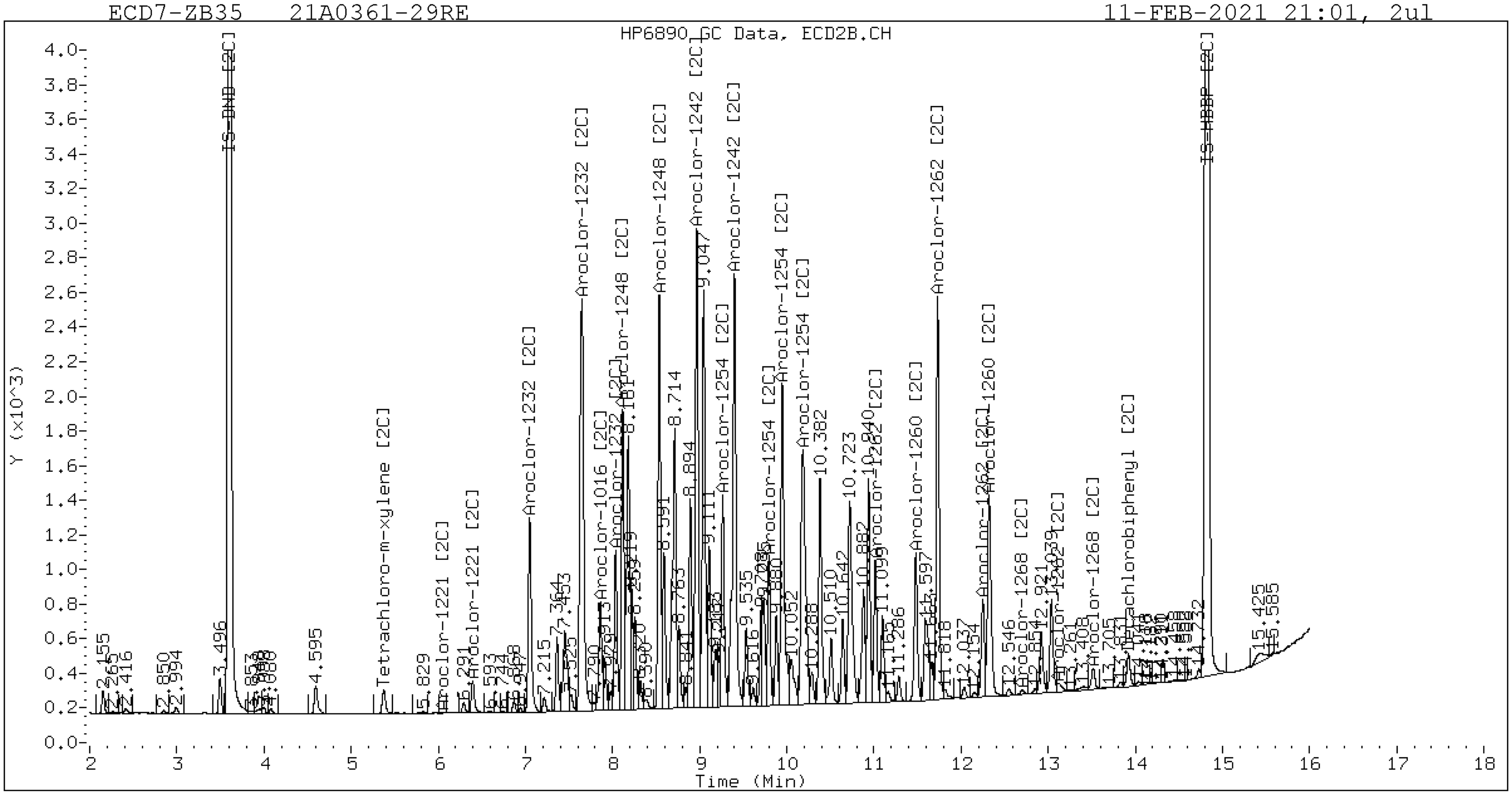
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-29RE 11-FEB-2021 21:01, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21A0361-29RE 11-FEB-2021 21:01, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10N-5

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Solid	Laboratory ID:	21A0361-31 A	File ID:	02092128ECD5.D
Sampled:	01/25/21 09:35	Prepared:	02/05/21 16:51	Analyzed:	02/10/21 02:15
% Solids:	85.05	Preparation:	EPA 3546 (Microwave)	Initial/Final:	5.97 g Wet / 5 mL
Batch:	BJB0165	Sequence:	SJB0231	Calibration:	EB00020
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	19.7	7.9	19.7	U
11104-28-2	Aroclor 1221	1	1	19.7	7.9	19.7	U
11141-16-5	Aroclor 1232	1	1	19.7	7.9	19.7	U
53469-21-9	Aroclor 1242	1	1	19.7	7.9	19.7	U
12672-29-6	Aroclor 1248	1	1	56.9	7.9	19.7	
11097-69-1	Aroclor 1254	1	1	57.7	7.9	19.7	
11096-82-5	Aroclor 1260	1	1	26.1	9.1	19.7	
37324-23-5	Aroclor 1262	1	1	19.7	9.1	19.7	U
11100-14-4	Aroclor 1268	1	1	19.7	9.1	19.7	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*39.390*	*27.8*	*70.6*	*40 - 133*	
Tetrachlorometaxylene	*1*	*39.390*	*30.3*	*77.0*	*53 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092128ECD5.D
Data file 2: /210209.b/210209.b/02092128ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21A0361-31
Client ID:
Injection Date: 10-FEB-2021 02:15
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.989	-0.001	101937	5.378	-0.003	209756	30.8	31.4	2.1	Tetrachloro-m-xylene
13.180	-0.007	373905	13.922	-0.005	317818	28.2	29.6	4.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	209812	26.6
Hexabromobiphenyl	1343188	1233741	-8.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	630907	-24.7
Hexabromobiphenyl	850693	614441	-27.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	6.606	-0.004	3610	19.9	1	7.053	-0.003	5376	19.6
Aroclor-1016	2	6.980	-0.003	11655	19.7	2	7.650	-0.007	15009	24.2
Aroclor-1016	3	7.128	-0.006	4735	16.9	3	7.861	-0.007	4040	14.8
Aroclor-1016	4	7.240	-0.003	3254	18.4	4	8.118	-0.005	12567	80.9
Total Col1Ave (4 peaks):				18.7		Total Col2Ave (4 peaks):			34.9	RPD = 60*
Corrected Ave (3 peaks):				18.4		Corrected Ave (3 peaks):			19.6	RPD = 6
Aroclor-1221	1	3.932	-0.011	1366	45.6	1	---			0.0
Aroclor-1221	2	5.376	0.001	258	6.5	2	6.066	0.006	6378	80.4
Aroclor-1221	3	5.661	0.002	507	3.8	3	6.394	-0.005	4765	33.3
Total Col1Ave (3 peaks):				18.6		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.932	-0.011	1366	79.3	1	---			0.0
Aroclor-1232	2	6.606	-0.003	3610	47.0	2	7.053	-0.003	5376	42.9
Aroclor-1232	3	6.980	-0.003	11655	47.4	3	7.650	-0.008	15009	56.3
Aroclor-1232	4	8.280	-0.016	15289	178.0	4	8.028	-0.016	797	15.7
Total Col1Ave (4 peaks):				87.9		Total Col2Ave (3 peaks):			38.3	RPD = 79*
Corrected Ave (3 peaks):				57.9			Corrected Ave: < 3 Peaks			
Aroclor-1242	1	6.606	-0.005	3610	24.6	1	7.053	-0.003	5376	23.9
Aroclor-1242	2	6.980	-0.003	11655	24.0	2	7.650	-0.008	15009	28.4
Aroclor-1242	3	8.280	-0.011	15289	94.2	3	8.968	-0.014	13919	65.3
Aroclor-1242	4	8.570	-0.015	18694	113.3	4	9.400	-0.020	9718	46.8
Total Col1Ave (4 peaks):				64.0		Total Col2Ave (4 peaks):			41.1	RPD = 44*
Corrected Ave (3 peaks):				47.6		Corrected Ave (3 peaks):			33.0	RPD = 36
Aroclor-1248	1	7.465	-0.003	15118	67.3	1	8.118	-0.005	12567	61.3
Aroclor-1248	2	7.929	-0.009	15397	45.4	2	8.541	-0.005	11050	43.6
Aroclor-1248	3	8.351	0.001	32312	46.2	3	8.968	-0.014	13919	35.3
Aroclor-1248	4	8.570	-0.017	18694	72.0	4	9.400	-0.020	9718	25.6
Total Col1Ave (4 peaks):				57.7		Total Col2Ave (4 peaks):			41.4	RPD = 33
Corrected Ave (3 peaks):				53.0		Corrected Ave (3 peaks):			34.8	RPD = 41*
Aroclor-1254	1	8.648	-0.008	37048	59.8	1	9.266	-0.011	22237	52.9
Aroclor-1254	2	8.719	-0.007	19119	55.9	2	9.400	0.029	9718	42.1
Aroclor-1254	3	9.037	0.010	52480	~~128.1~~	3	9.796	-0.011	13683	44.4
Aroclor-1254	4	9.153	-0.008	56703	63.9	4	9.946	-0.013	29844	35.0
Aroclor-1254	5	9.848	-0.011	31563	55.0	5	10.178	-0.021	36673	45.2
Total Col1Ave (5 peaks):				72.5		Total Col2Ave (5 peaks):			43.9	RPD = 49*
Corrected Ave (4 peaks):				58.6		Corrected Ave (4 peaks):			41.7	RPD = 34
Aroclor-1260	1	10.374	-0.011	13701	32.8	1	11.016	-0.009	7723	17.9
Aroclor-1260	2	10.697	-0.009	10489	25.1	2	11.485	-0.004	15017	37.5
Aroclor-1260	3	11.047	-0.011	26484	22.1	3	11.733	-0.009	22769	20.6
Aroclor-1260	4	11.450	-0.011	10911	19.7	4	12.321	-0.009	13288	18.6
Aroclor-1260	5	11.558	-0.007	8441	32.6	NS	---			----
Total Col1Ave (5 peaks):				26.5		Total Col2Ave (4 peaks):			23.7	RPD = 11
Corrected Ave (4 peaks):				24.9		Corrected Ave (3 peaks):			19.0	RPD = 27
Aroclor-1262	1	10.374	-0.014	13701	19.9	1	11.016	-0.009	7723	10.9
Aroclor-1262	2	11.047	-0.013	26484	16.2	2	11.733	-0.013	22769	14.4
Aroclor-1262	3	11.558	-0.011	8441	18.2	3	12.247	-0.012	6875	15.1
Aroclor-1262	4	11.627	-0.013	8206	13.3	4	13.122	-0.012	11531	20.3
Total Col1Ave (4 peaks):				16.9		Total Col2Ave (4 peaks):			15.2	RPD = 11
Corrected Ave (3 peaks):				15.9		Corrected Ave (3 peaks):			13.5	RPD = 17
Aroclor-1268	1	11.558	-0.011	8441	5.3	1	12.247	-0.012	6875	4.4
Aroclor-1268	2	11.627	-0.011	8206	4.6	2	12.321	-0.015	13288	7.1
Aroclor-1268	3	12.026	0.010	5860	4.0	3	12.703	-0.010	1864	1.2
Aroclor-1268	4	12.777	-0.015	16632	3.2	4	13.516	-0.004	7254	1.3
Total Col1Ave (4 peaks):				4.3		Total Col2Ave (4 peaks):			3.5	RPD = 19
Corrected Ave (3 peaks):				3.9		Corrected Ave (3 peaks):			2.3	RPD = 51*

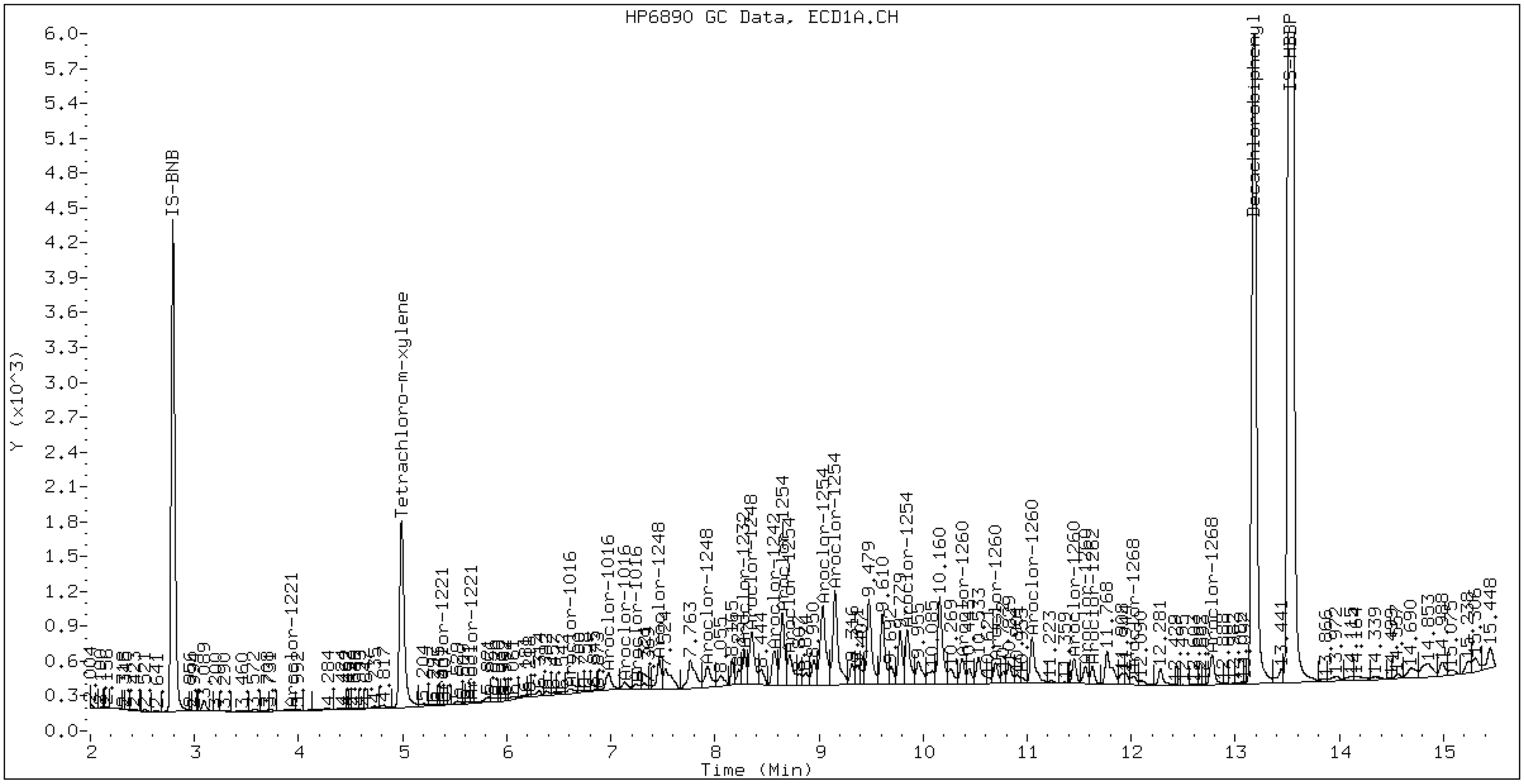
Total PCB Area Col1 (5.090 - 13.086) =	889952	Col1 Total PCB = 0.1 ppm*
Total PCB Area Col2 (5.090 - 13.086) =	862045	Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

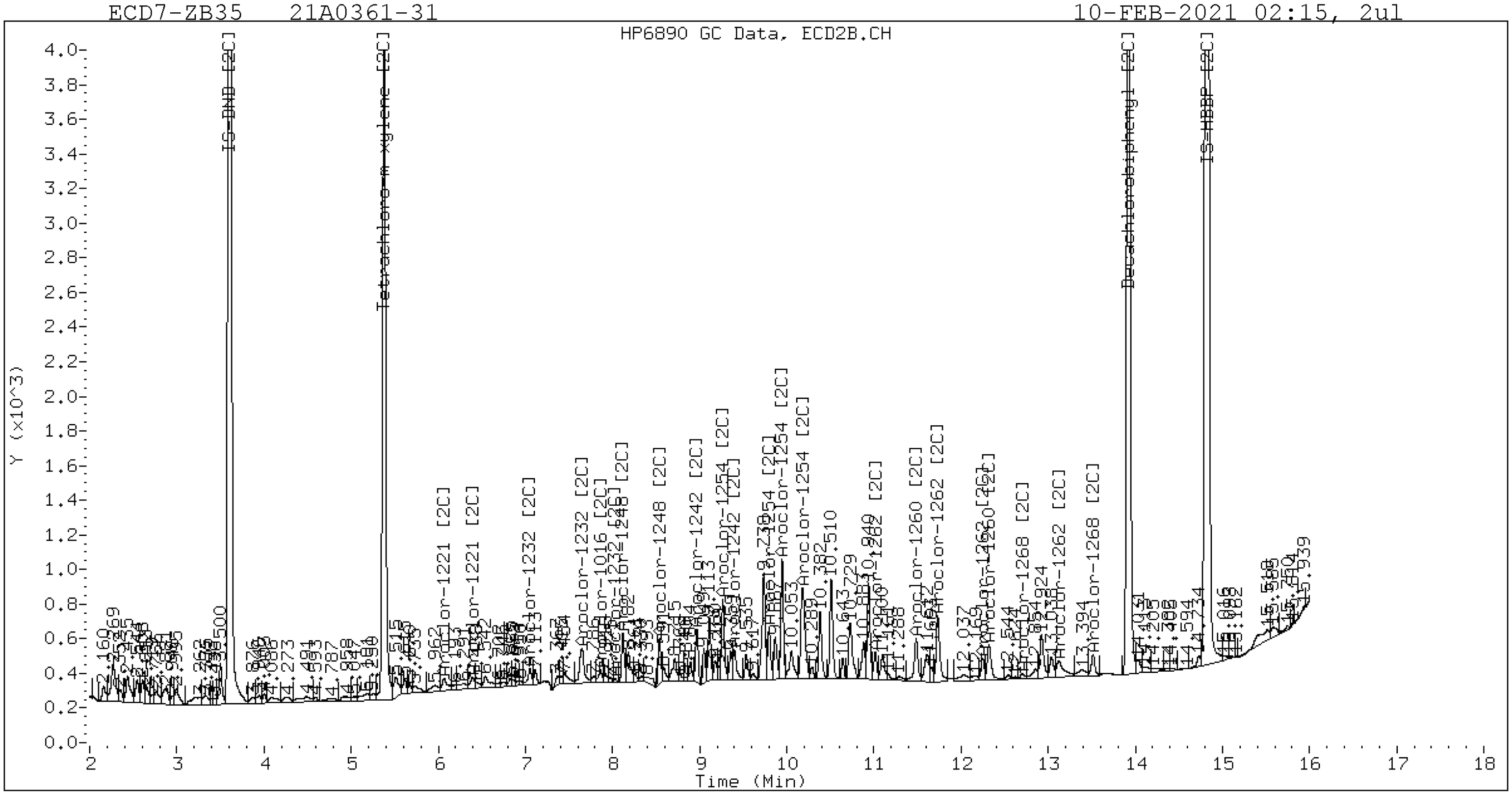
PCB Dual Column Chromatograms

ECD7-ZB5 21A0361-31 10-FEB-2021 02:15, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 21A0361-31 10-FEB-2021 02:15, 2ul

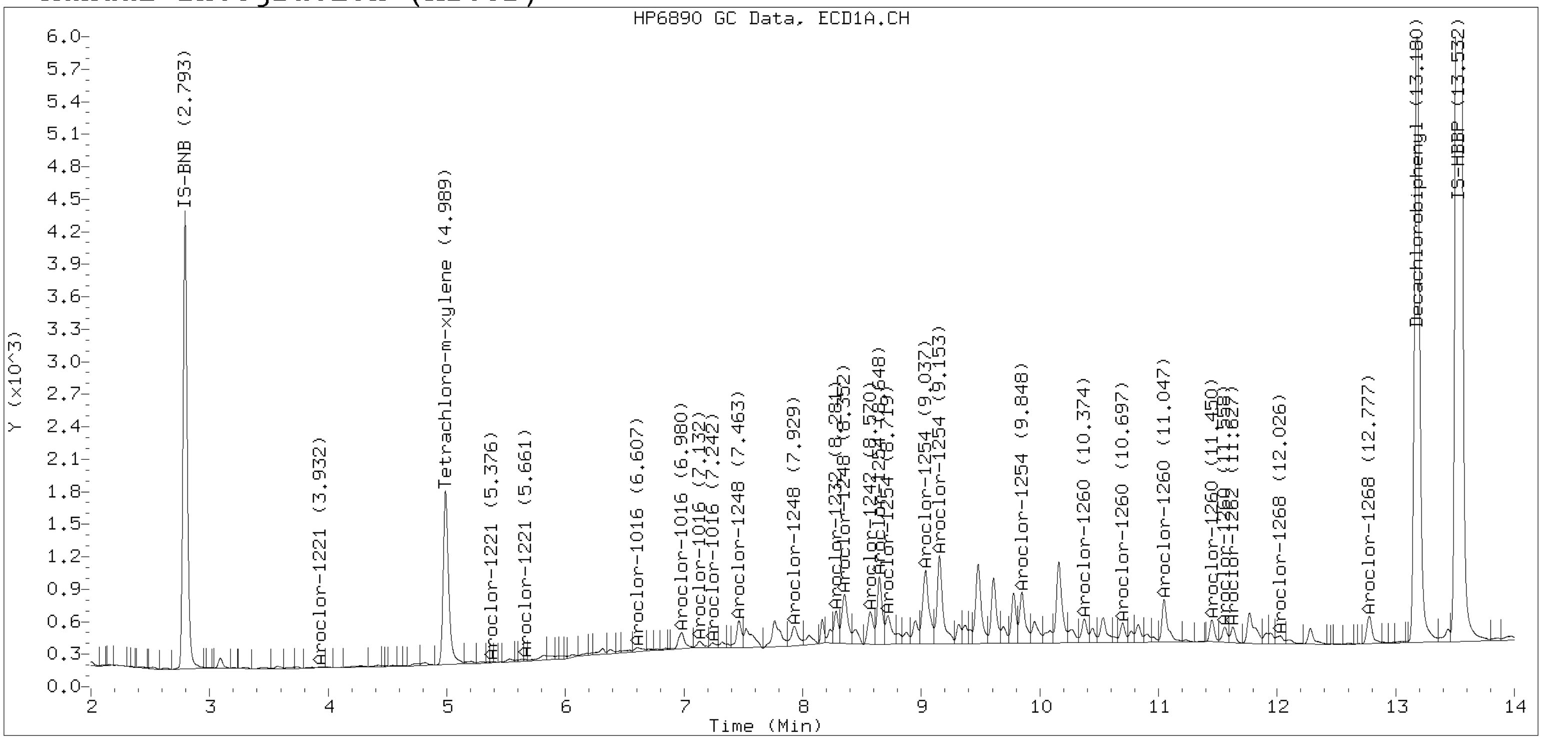


ZB-35 Manual Integration: YES

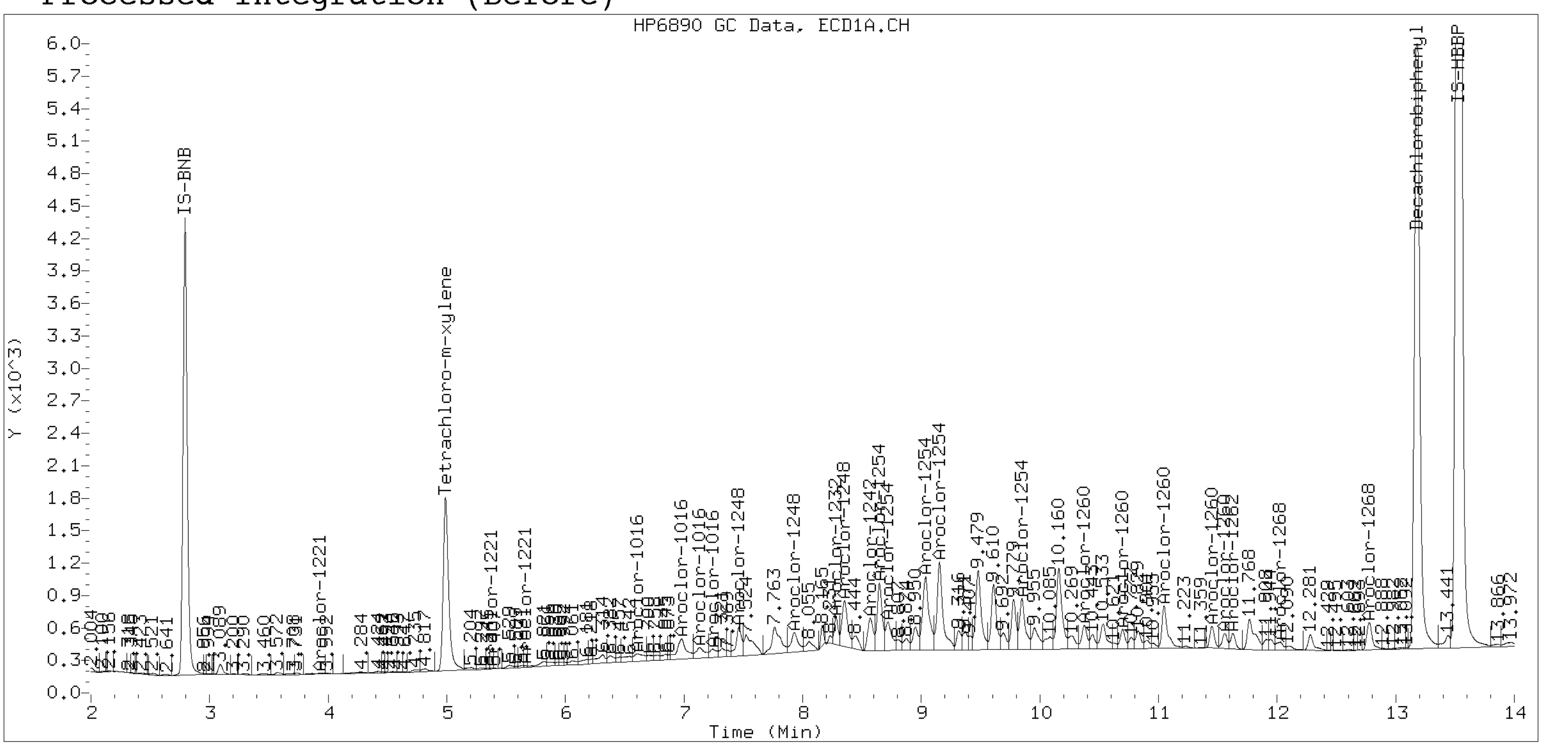
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/210209.b/02092128ECD5.D   Injection Date: 10-FEB-2021 02:15

Manual Integration (After)



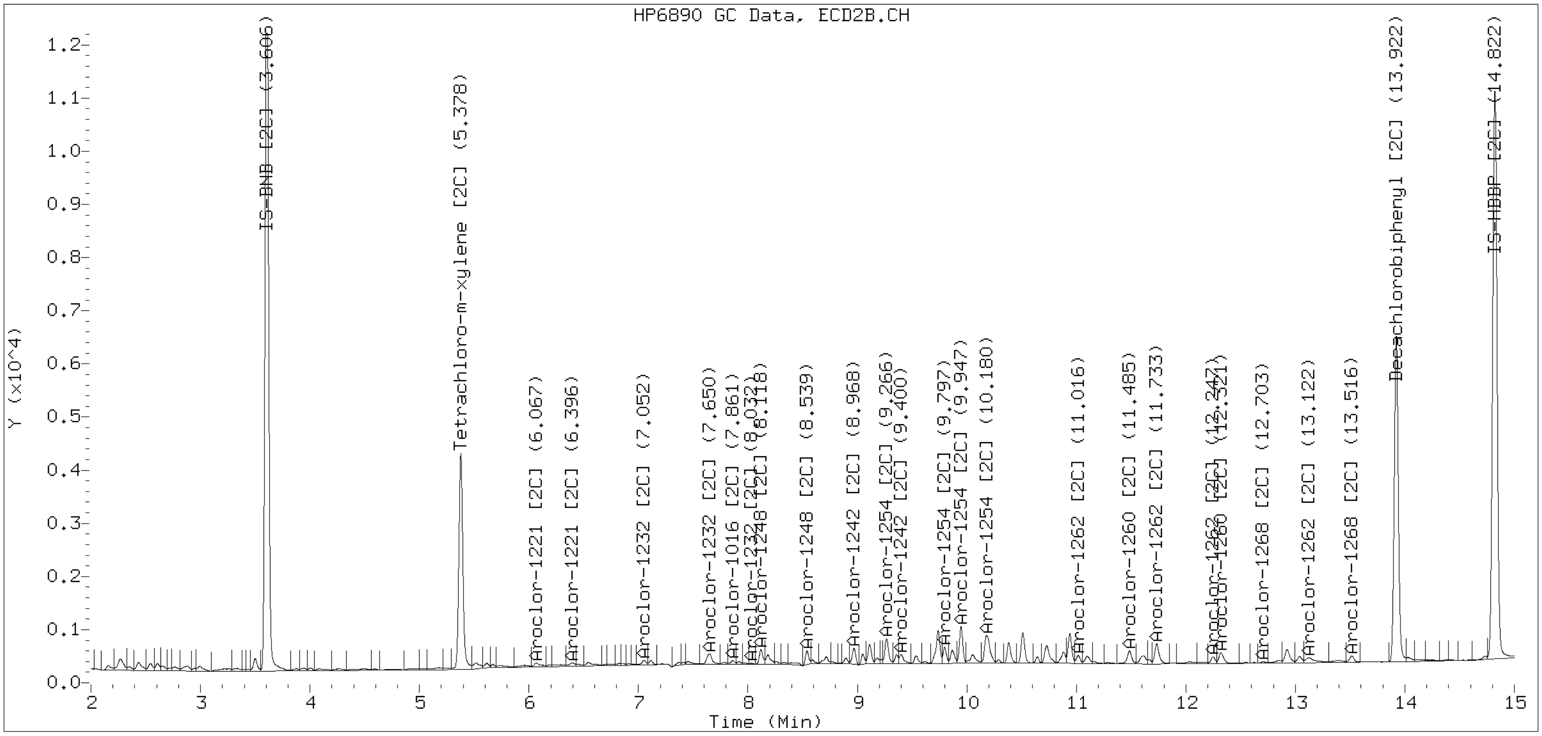
Processed Integration (Before)



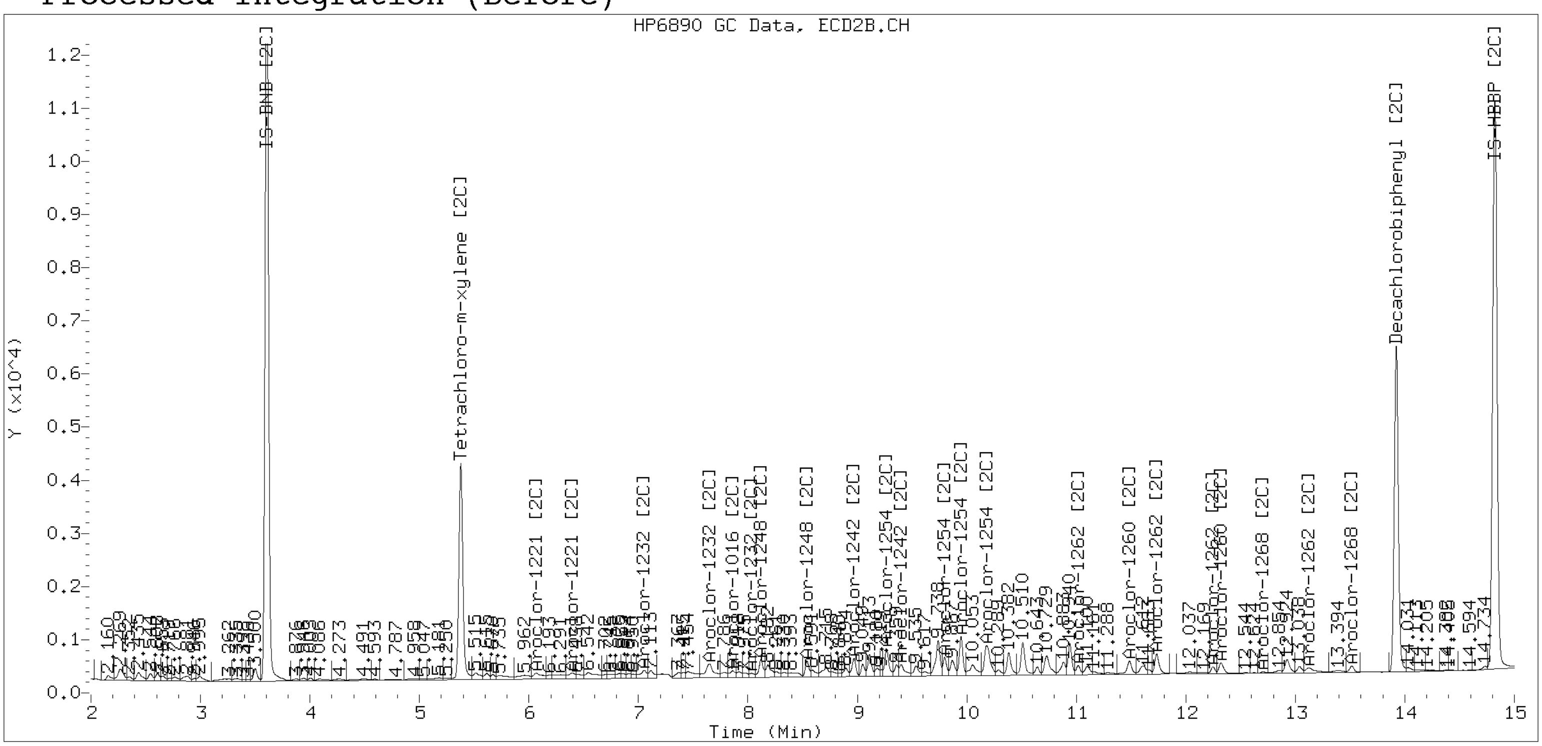
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/210209.b/210209.b/02092128ECD5.D Injection Date: 10-FEB-2021

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Batch: BJB0165 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
P8-20N-1	21A0361-01	02112104ECD7.D	02/05/21 16:51	2020 Samples
P8-20N-5	21A0361-03	02092108ECD5.D	02/05/21 16:51	2020 Samples
P8-10NW-1	21A0361-05	02092109ECD5.D	02/05/21 16:51	2020 Samples
P8-10NW-5	21A0361-07	02092110ECD5.D	02/05/21 16:51	2020 Samples
P8-15SW-1	21A0361-09	02092113ECD5.D	02/05/21 16:51	2020 Samples
P8-15SW-5	21A0361-11	02092116ECD5.D	02/05/21 16:51	2020 Samples
P8-10SE-1	21A0361-13	02112105ECD7.D	02/05/21 16:51	2020 Samples
P8-10SE-5	21A0361-15	02092118ECD5.D	02/05/21 16:51	2020 Samples
P8-10NE-1	21A0361-17	02092119ECD5.D	02/05/21 16:51	2020 Samples
P8-10NE-5	21A0361-19	02092120ECD5.D	02/05/21 16:51	2020 Samples
P8-7W-1	21A0361-21	02112106ECD7.D	02/05/21 16:51	2020 Samples
P8-7W-5	21A0361-23	02092124ECD5.D	02/05/21 16:51	2020 Samples
P8-10E-1	21A0361-25	02092125ECD5.D	02/05/21 16:51	2020 Samples
P8-10E-5	21A0361-27	02092126ECD5.D	02/05/21 16:51	2020 Samples
P8-10N-1	21A0361-29	02112107ECD7.D	02/05/21 16:51	2020 Samples
P8-10N-5	21A0361-31	02092128ECD5.D	02/05/21 16:51	2020 Samples
Blank	BJB0165-BLK1	02092104ECD5.D	02/05/21 16:51	
LCS	BJB0165-BS1	02092105ECD5.D	02/05/21 16:51	
LCS Dup	BJB0165-BSD1	02092106ECD5.D	02/05/21 16:51	
P8-10NW-5	BJB0165-MS1	02092111ECD5.D	02/05/21 16:51	
P8-10NW-5	BJB0165-MSD1	02092112ECD5.D	02/05/21 16:51	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BJB0165

Prepared using: EPA 3546 (Microwave)

8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L) in Solid

Matrix: Solid **Date Prepared:** 2/5/21 **Balance ID:** B139298442 **Set Up By:** GTO 2/4/21

Analysis: 8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)

Lab Number & Container	% Solids	Initial (g) Target Dry: 5 (Wet)	Actual	(Opt) GPC C/U (1:1) Y/N	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL)	(Opt) Silica Gel C/U (1:5) Y/N	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
21A0361-01 A	83.0	(6.03)	6.11	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-03 A	88.8	(5.63)	5.69	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-05 A	88.7	(5.64)	5.74	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-07 A	81.8	(6.11)	6.21	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-09 A	94.0	(5.32)	5.41	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-11 A	84.4	(5.92)	5.97	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-13 A	94.9	(5.27)	5.30	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-15 A	92.9	(5.38)	5.48	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-17 A	79.2	(6.31)	6.37	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-19 A	83.7	(5.97)	6.04	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-21 A	94.1	(5.31)	5.35	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-23 A	87.8	(5.69)	5.81	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-25 A	92.9	(5.38)	5.88	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-27 A	88.2	(5.67)	5.85	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-29 A	91.0	(5.49)	5.59	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
21A0361-31 A	85.1	(5.88)	5.97	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 5 (Wet)	Actual	(Opt) GPC C/U (1:1) Y/N	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL)	(Opt) Silica Gel C/U (1:5) Y/N	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BJB0165-BLK1	100.0	(5.00)	5.00	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
BJB0165-BS1	100.0	(5.00)	5.00	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
BJB0165-BSD1	100.0	(5.00)	5.00	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	
BJB0165-MS1	81.8	(6.11)	6.24	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	Use 21A0361-07
BJB0165-MSD1	81.8	(6.11)	6.32	(1:1)	5.0mL	5.0mL	1mL Y/N	5	1.0	Use 21A0361-07

CH 2/5/21
Client ID verified By Date

BH 2/9/21
Preparation Reviewed By Date

2/5/21 16:51
Extraction Date and Time

Printed: 2/4/2021 3:07:16PM

3017F

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BJB0165

Prepared using: EPA 3546 (Microwave)

8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L) in Solid

Prep Steps
Microwave 1 2 3 — SH 2/5/21 — Analyst/Date
KD 100°C — GPC? Y / N — If No: Hexane Exchange (2 X 20 mL) — 1 2 3 4 5 6 — AR 02/06/21 — Analyst/Date
~~**GPC Prep filter** — Analyst/Date~~
~~**Post GPC KD 80 - 85°C Hexane Exchange (2 X 20mL) 100°C** — 1 2 3 4 5 6 — Analyst/Date~~
TurboVap Pre Cleanups — 1 2 3 4 5 — BH 2/8/21 — Analyst/Date
TurboVap Post Cleanups — 1 2 3 4 5 6 — BH 2/9/21 — Analyst/Date
Vialing — BH 2/9/21 — Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: SH Date: 2/5/21	
1:1 Hexane/Acetone	I010488
Hexane	J009056
Anhydrous Sodium Sulfate	J001270
Neutral Glass Wool	J001130
Pre GPC KD Analyst: AR Date: 02/06/21	
Neutral Glass Wool	N/A
Hexane	I009194
~~**GPC Filter Prep** Analyst: Date:~~	
~~Methylene Chloride~~	
~~**GPC** Analyst: Date:~~	
~~Methylene Chloride~~	
~~GPC Calibration File~~	
~~**Post GPC KD** Analyst: Date:~~	
~~Methylene Chloride~~	
~~Hexane~~	
Vialing Analyst: BH Date: 2/9/21	
Hexane	I009194
Tetrabutylammonium hydrogensulfate (TBAS)	J001056
Concentrated Sulfuric Acid	I011057
Sodium Sulfite	I006339
Silica Gel (SPE) Darts	J000375

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID		Vol uL	Analyst	Witness
Surrogate 2µg/mL	N	I010565 Exp: 02/14/2021	100µL	SH	DP
Spike 20µg/mL	1	I010826 Exp: 05/23/2021	125µL	SH	DP

(V) indicates a virtual standard combining two or more physical standards. In these cases the Standard ID refers to the virtual standard, not the parent standards.

If a Standard ID is missing, but should be present, check the standard definition in Element LIMS to be sure Standard Info 6 has the correct letter or number designator matching the vial designator inthe Standard ID column. If it is correct, check the batch and bench sheet in Element LIMS to be sure the correct standards are selected for surrogate(s) and spike(s).

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BJB0165

Prepared using: EPA 3546 (Microwave)

8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L) in Solid

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3 inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in Refridgerator 05. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into E. flask using a funnel with neutral glasswool plug. 8. Re-homogenize and rinse with 1:1 Hexane/Acetone. 9. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 10. KD on 100° bath. 11. GPC? Y / N 12. If Y, then GPC extracts w/ Method 3. If N, skip to step 13. 13. Exchange (2 X with 20mL) Hexane. 14. TurboVap. 15. Vial 5 mL into labelled scintillation vials using Hexane. Acid/Sulfur cleanups REQUIRED 16. TurboVap (if Silica Clean). 17. Vial with Hexane. A. Need Total Solids Y / N B. Archive/Freeze Y / N	

Printed: 2/4/2021 3:07:16PM

3017F

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PCB	Extraction Batch BJB0165

Total Solids Batch: BJB0035 Work Order(s): 21A0361

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? 40% 1/3" = 1,5,25 20% 1/3" = 3,17 10% 1/4" = 11	DP 2/2/21
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= 5,3,7,9,11,13,15,17,19,21,23,25,27	DP 2/2/21
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☒ Other (Details)= Strong unknown odor = 1	DP 2/2/21
Rocks - 80% 1/4" = 13	
Also fuel odor = 29,31	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / N	DP 2/2/21
☒ Multiple Jars Y N 361-01-31 (odd numbers) x 2	DP 2/2/21
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Batch: BJB0165
Batch Comment: **NONE**
Project: ICS-Former NW Cooperage
Project Comments: <G> Need J-flag Binary files for Aroclors .cdf
Need Acid/Silica Clean-ups for TPHDx if requested
Need MS/MSD if enough volume.
Need organic instrument files uploaded to the secure site for DMD (Raleigh Farlow).
</G>
Work Order:21A0361
Work Order Comments: <G> Need J-flag Binary files for Aroclors .cdf
Need Acid/Silica Clean-ups for TPHDx if requested
Need MS/MSD if enough volume.
Need organic instrument files uploaded to the secure site for DMD (Raleigh Farlow).
</G>
Sample: 21A0361-01
Sample Comments: **NONE**
Sample: 21A0361-03
Sample Comments: **NONE**
Sample: 21A0361-05
Sample Comments: **NONE**
Sample: 21A0361-07
Sample Comments: **NONE**
Sample: 21A0361-09
Sample Comments: **NONE**
Sample: 21A0361-11
Sample Comments: **NONE**
Sample: 21A0361-13
Sample Comments: **NONE**
Sample: 21A0361-15
Sample Comments: **NONE**
Sample: 21A0361-17
Sample Comments: **NONE**
Sample: 21A0361-19
Sample Comments: **NONE**
Sample: 21A0361-21
Sample Comments: **NONE**
Sample: 21A0361-23
Sample Comments: **NONE**
Sample: 21A0361-25
Sample Comments: **NONE**
Sample: 21A0361-27
Sample Comments: **NONE**
Sample: 21A0361-29
Sample Comments: **NONE**
Sample: 21A0361-31
Sample Comments: **NONE**

Data File C:\HPCHEM\1\DATA\020221B\001F0101.D Sample Name: DCM RINSE

===

```
Injection Date  : 2/2/2021 4:41:10 PM          Seq. Line :   1
Sample Name     : DCM RINSE                     Location : Vial 1
Acq. Operator   : DXP                                Inj :   1
                                              Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method     : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed    : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed    : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD
```

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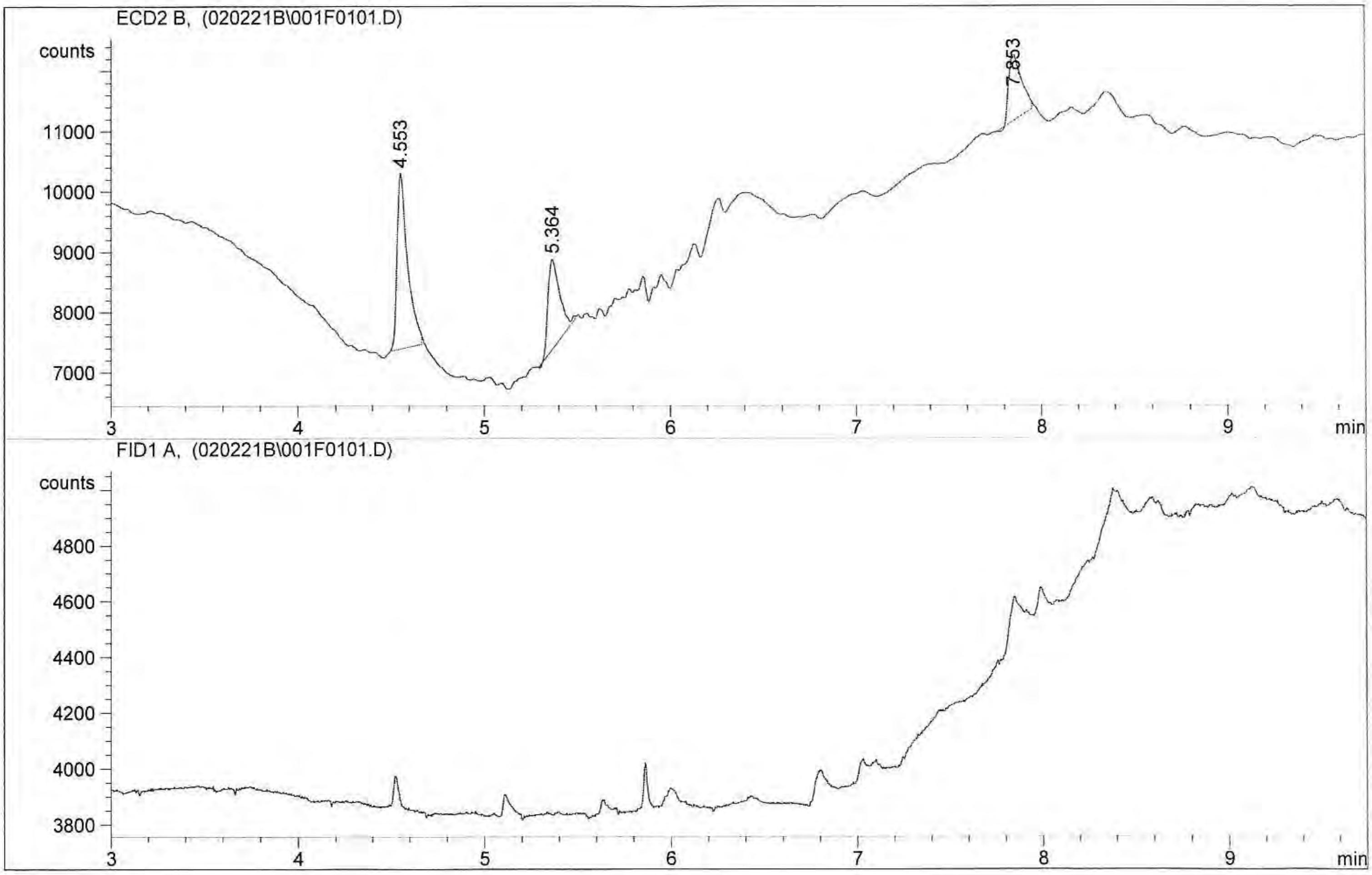

*** End of Report ***

===

Injection Date	: 2/2/2021 4:54:35 PM	Seq. Line :	2
Sample Name	: PNA STD 10 PPM	Location :	Vial 2
Acq. Operator	: DXP	Inj :	1
		Inj Volume :	1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD

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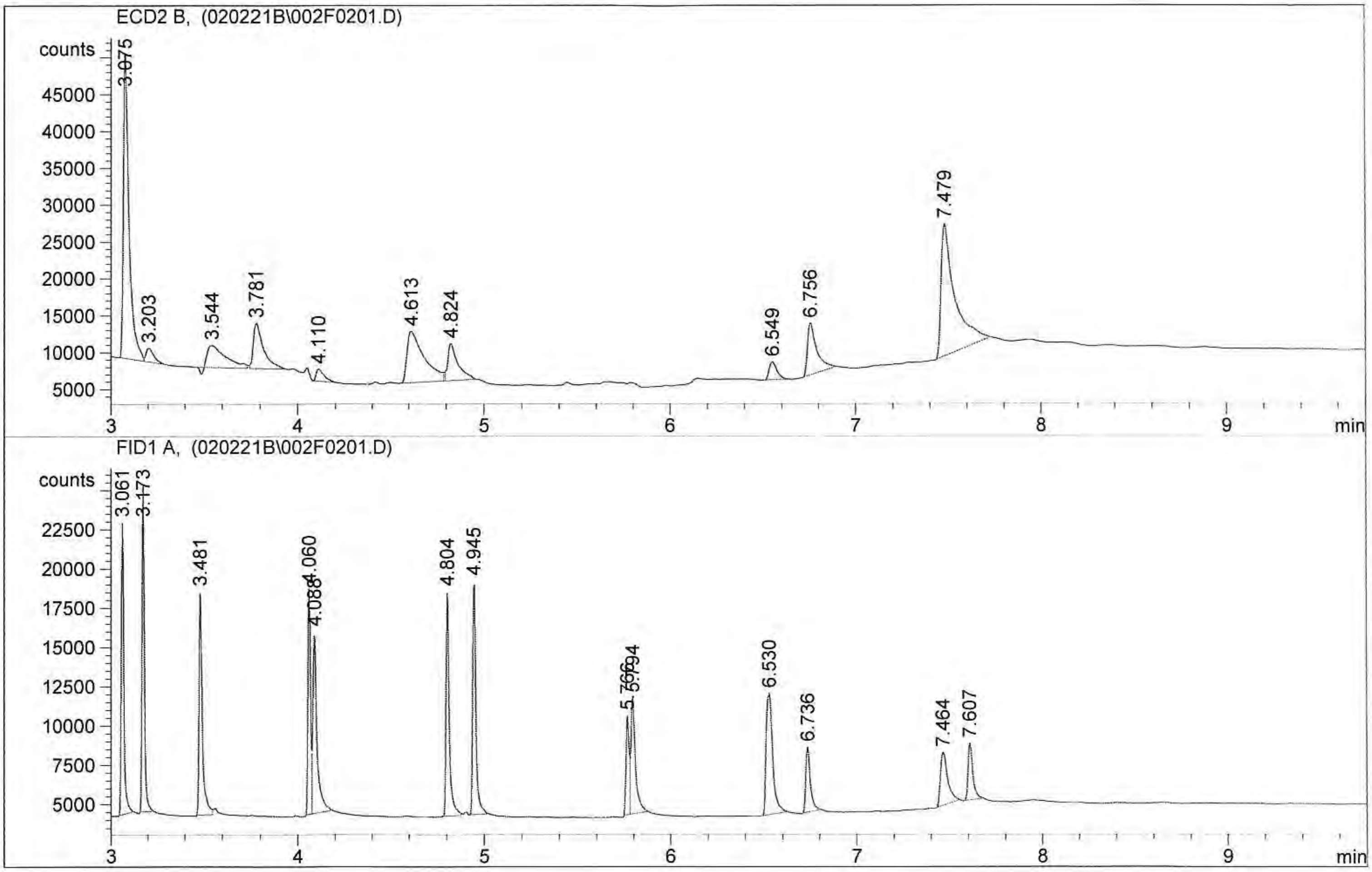

*** End of Report ***

===

Injection Date	: 2/2/2021 5:08:50 PM	Seq. Line :	3
Sample Name	: AR 1660 1 PPM	Location :	Vial 3
Acq. Operator	: DXP	Inj :	1
		Inj Volume :	1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD

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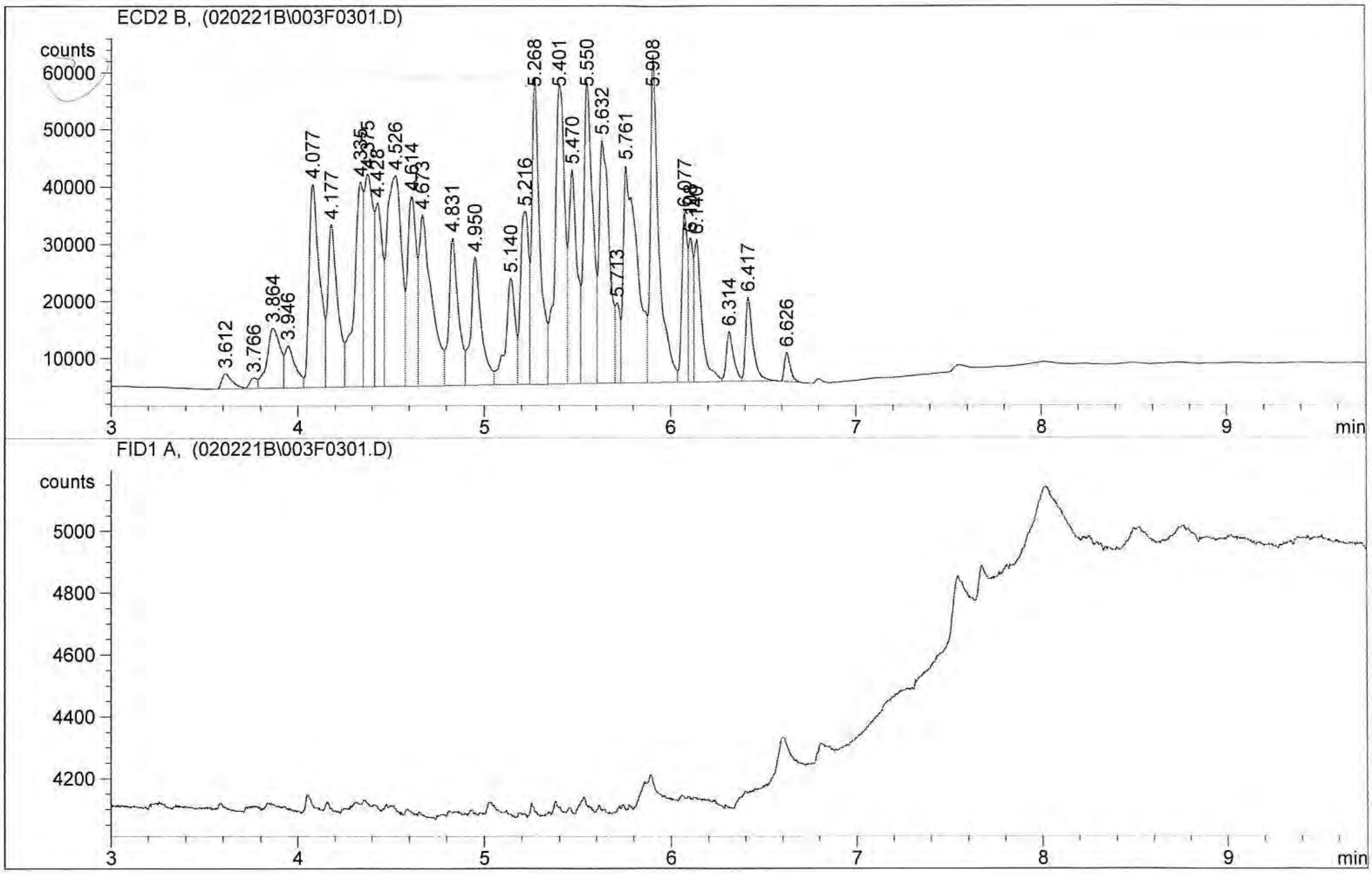
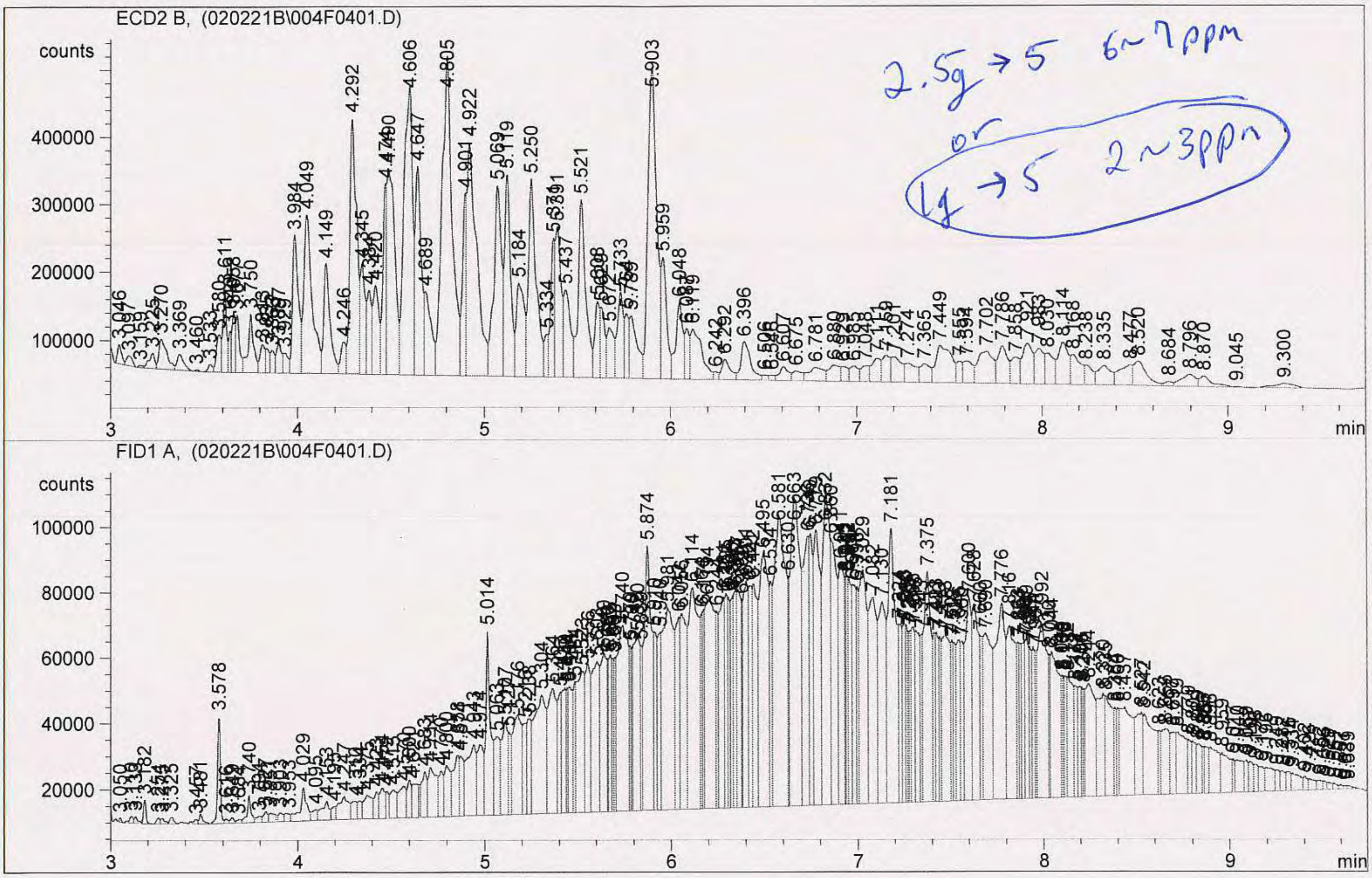


*** End of Report ***

Data File C:\HPCHEM\1\DATA\020221B\004F0401.D Sample Name: 21A0361 01

```
=====================================================================
 Injection Date  : 2/2/2021 5:22:38 PM          Seq. Line :    4
 Sample Name     : 21A0361 01                    Location : Vial 4
 Acq. Operator   : DXP                                Inj :    1
                                               Inj Volume : 1 µl
 Sequence File   : C:\HPCHEM\1\SEQUENCE\020221B.S
 Acq. Method     : C:\HPCHEM\1\METHODS\SCREEN.M
 Last changed    : 9/11/2020 3:50:10 PM by JGR
 Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
 Last changed    : 2/4/2021 10:37:36 AM by DXP
 SCREEN METHOD
=====================================================================
```



*** End of Report ***

===

```
Injection Date  : 2/2/2021 5:36:53 PM          Seq. Line :    5
Sample Name     : 21A0361 03                    Location : Vial 5
Acq. Operator   : DXP                                Inj :    1
                                              Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method     : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed    : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed    : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD
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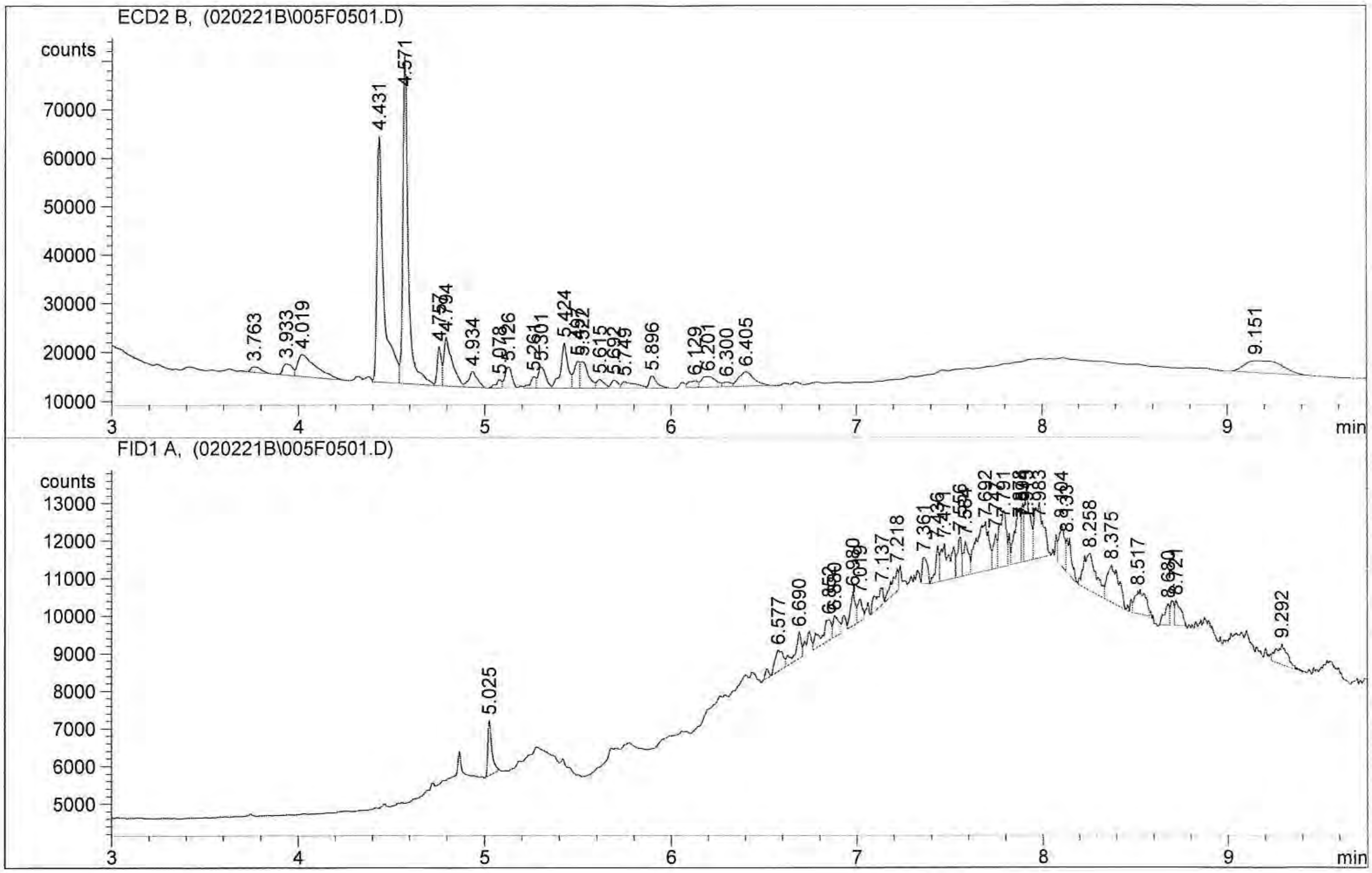

*** End of Report ***

===

Injection Date	: 2/2/2021 5:50:40 PM	Seq. Line :	6
Sample Name	: 21A0361 05	Location :	Vial 6
Acq. Operator	: DXP	Inj :	1
		Inj Volume :	1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD

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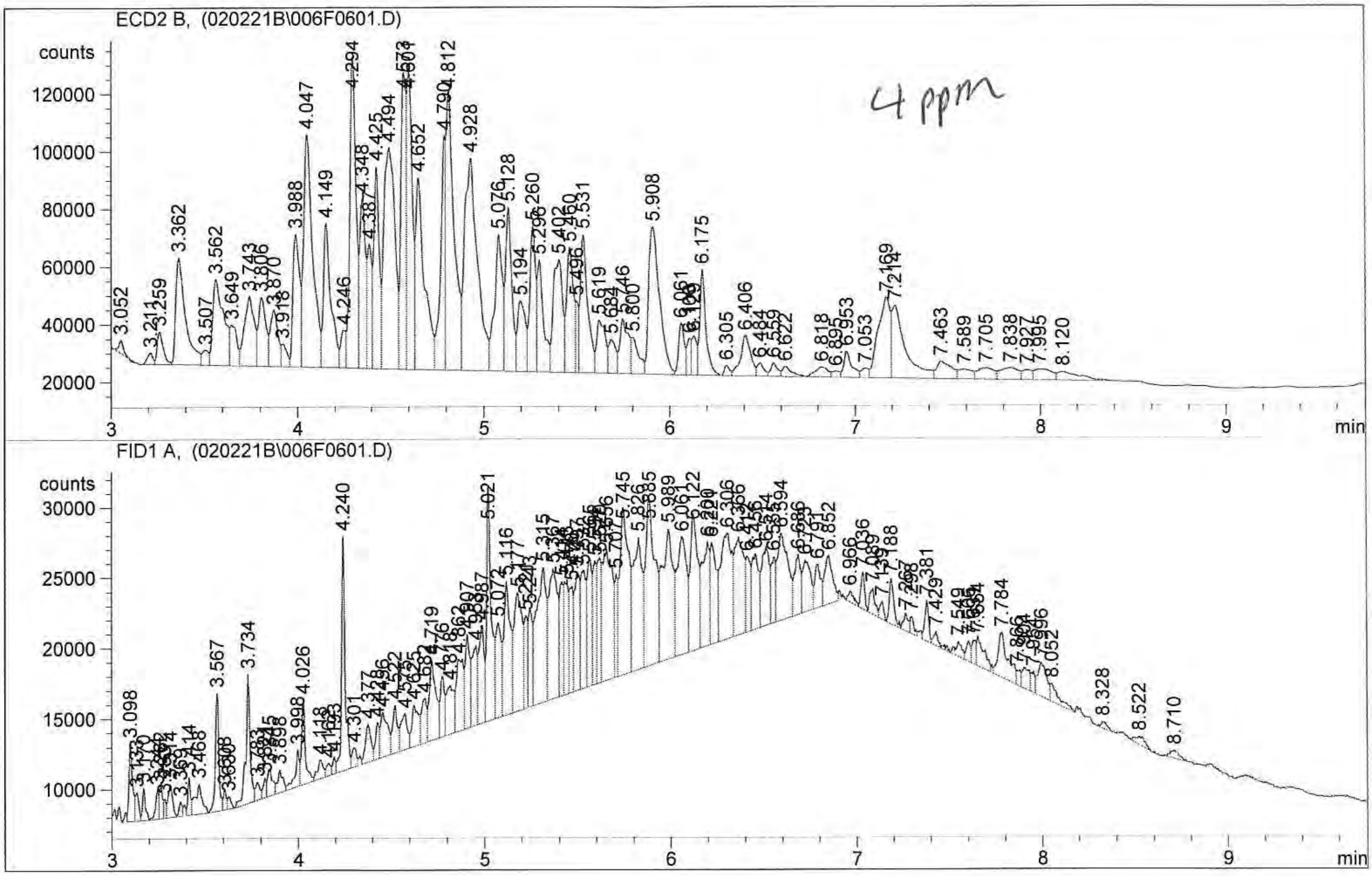

*** End of Report ***

===

Injection Date	: 2/2/2021 6:05:01 PM	Seq. Line :	7
Sample Name	: 21A0361 07	Location :	Vial 7
Acq. Operator	: DXP	Inj :	1
		Inj Volume :	1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD

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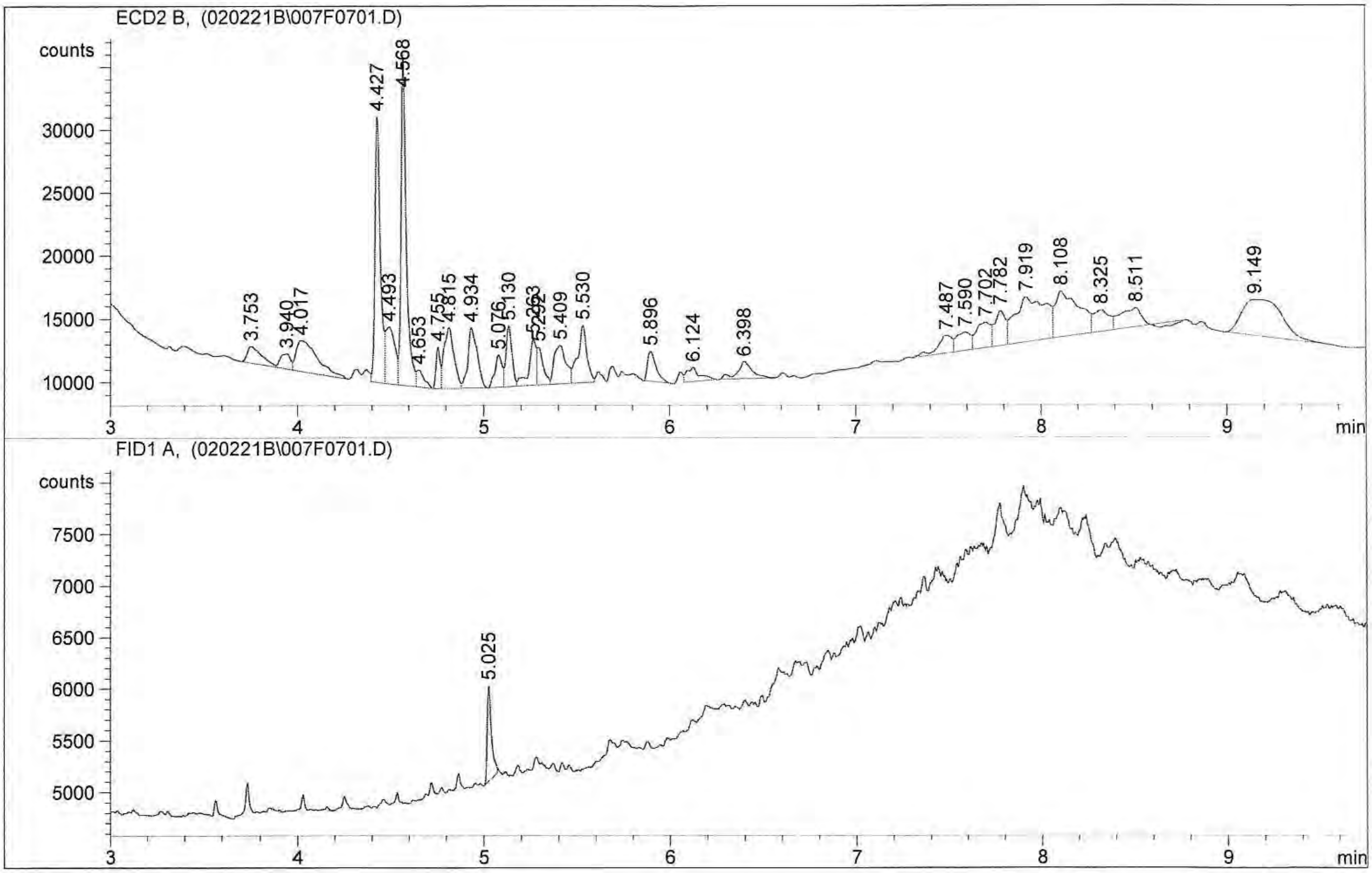
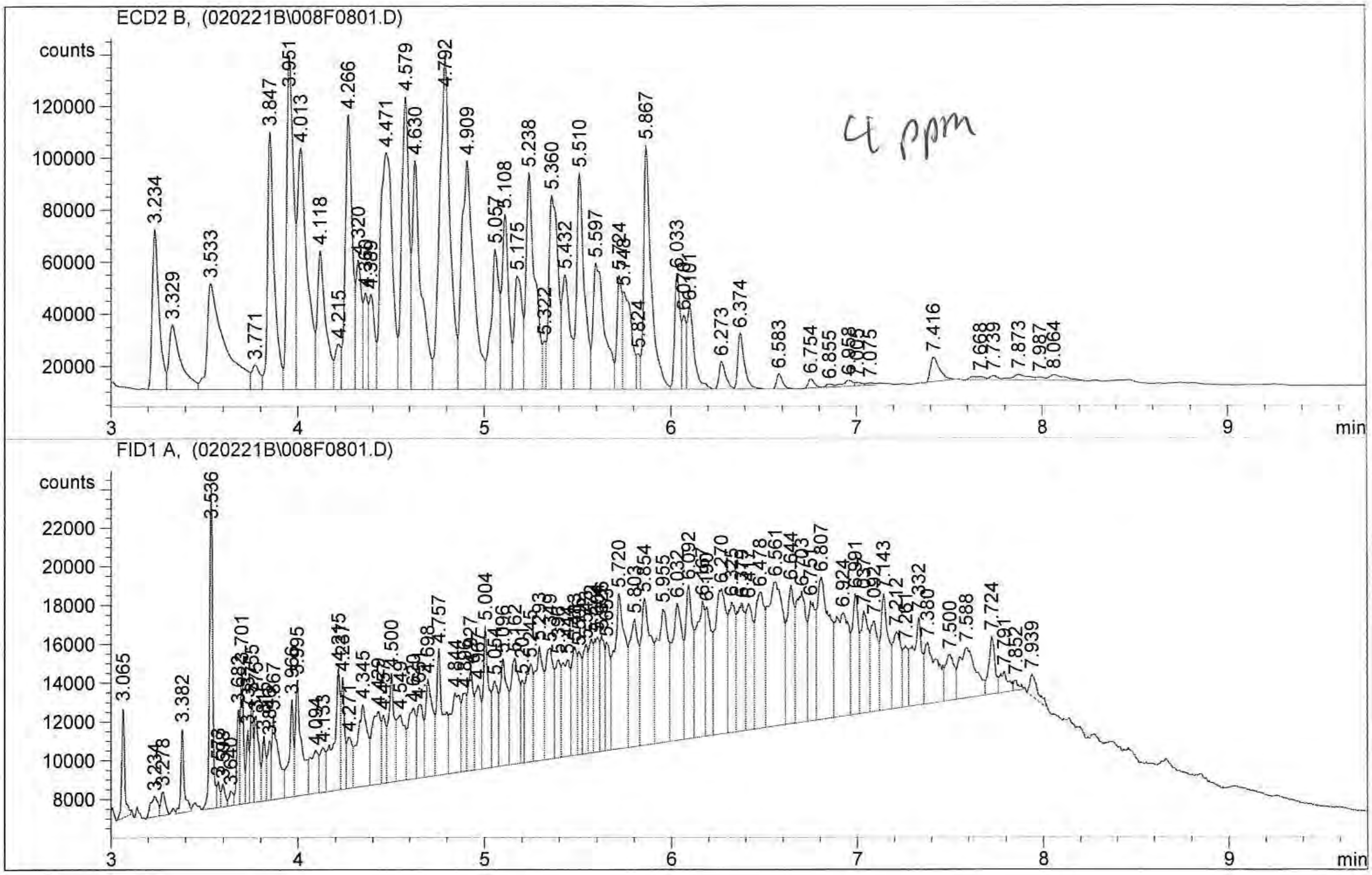


*** End of Report ***

```
=====================================================================
Injection Date   : 2/2/2021 6:18:49 PM            Seq. Line :    8
Sample Name      : 21A0361 09                      Location : Vial 8
Acq. Operator    : DXP                                  Inj :    1
                                                 Inj Volume : 1 µl
Sequence File    : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method      : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed     : 9/11/2020 3:50:10 PM by JGR
Analysis Method  : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed     : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD
=====================================================================
```

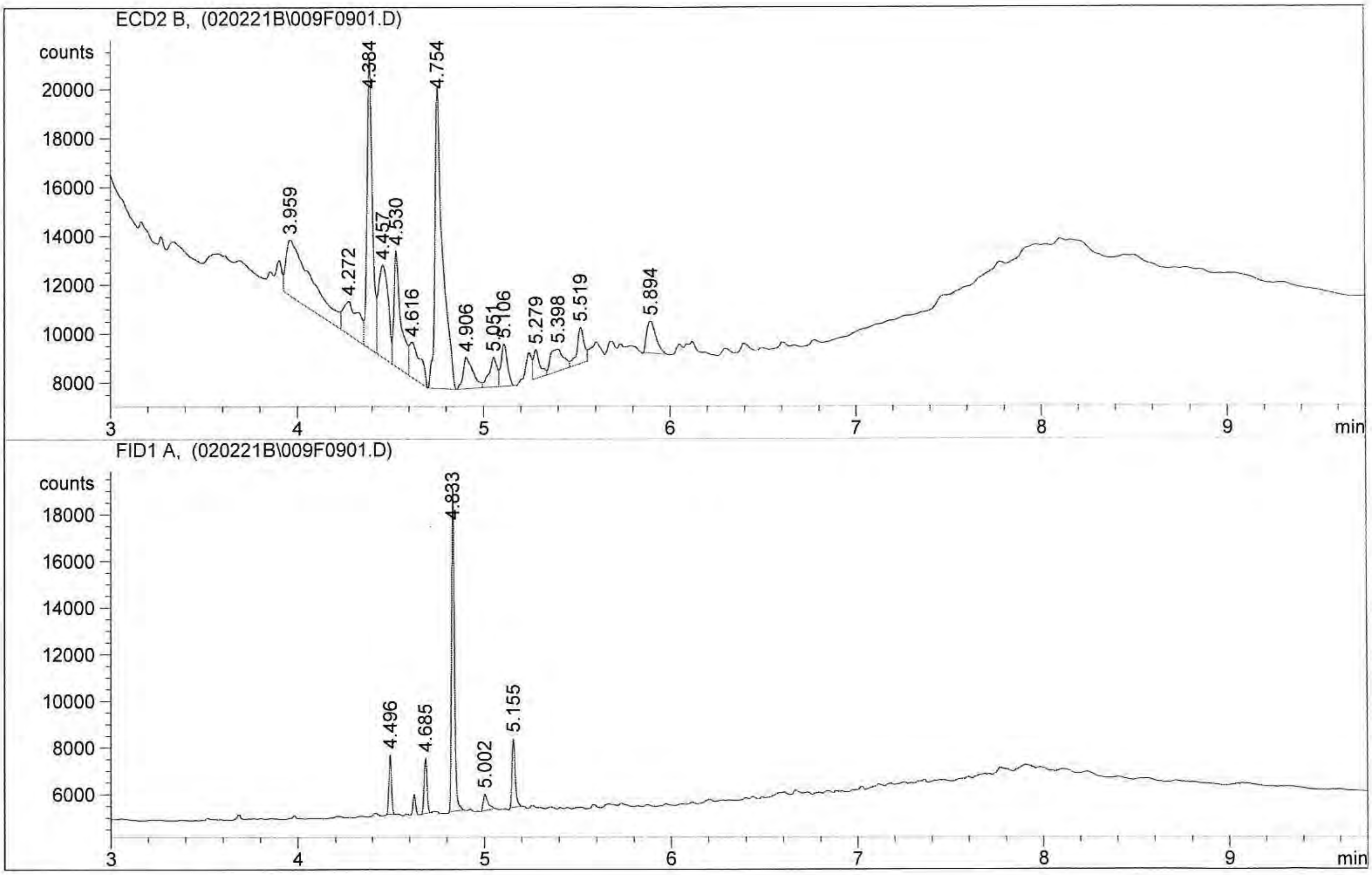


*** End of Report ***

===

Injection Date : 2/2/2021 6:33:09 PM Seq. Line : 9
Sample Name : 21A0361 11 Location : Vial 9
Acq. Operator : DXP Inj : 1
Inj Volume : 1 µl
Sequence File : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD

===



*** End of Report ***

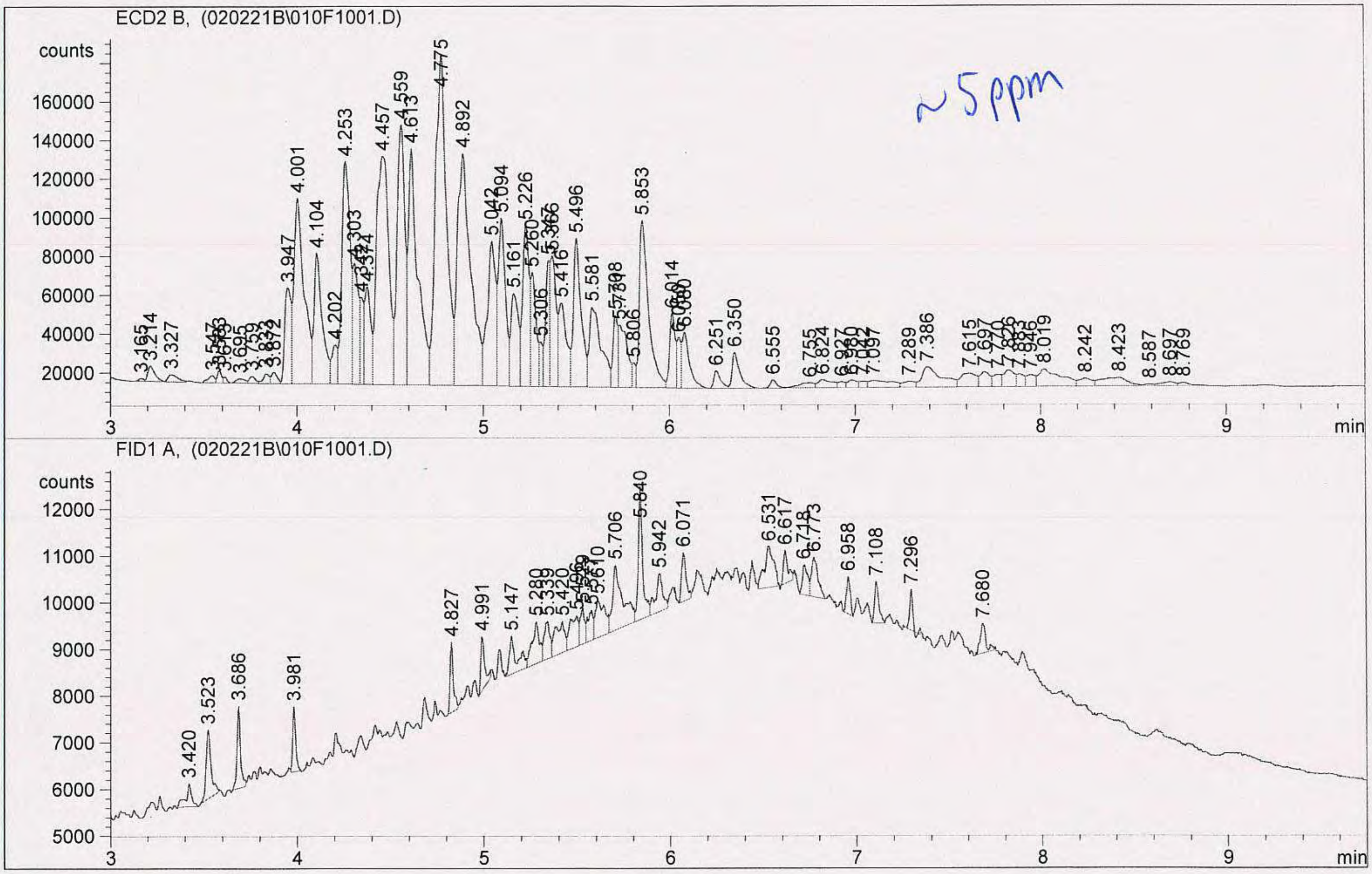
Data File C:\HPCHEM\1\DATA\020221B\010F1001.D Sample Name: 21A0361 13

===

Injection Date : 2/2/2021 6:46:57 PM Seq. Line : 10
Sample Name : 21A0361 13 Location : Vial 10
Acq. Operator : DXP Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD

===



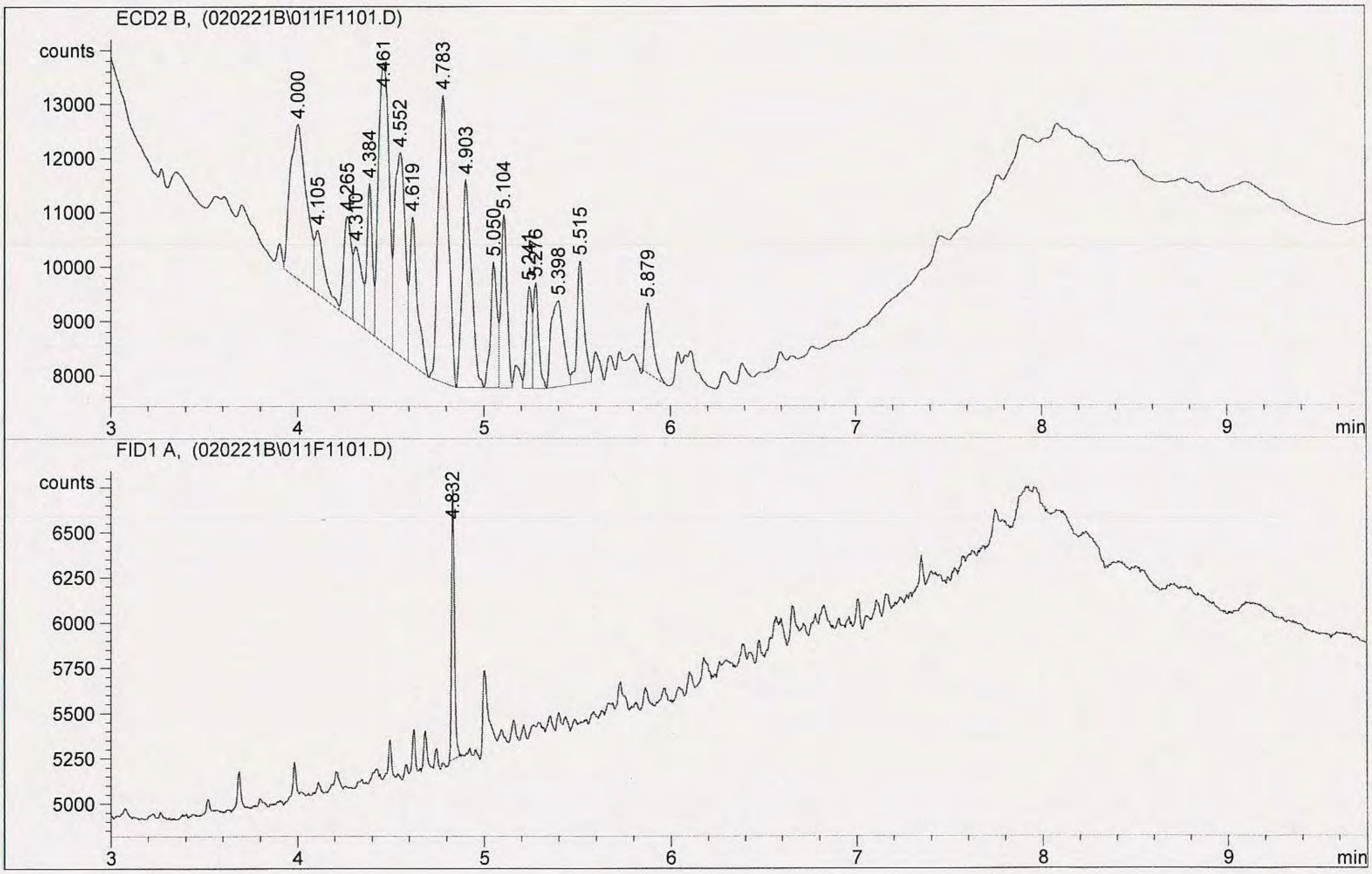
*** End of Report ***

===

Injection Date : 2/2/2021 7:01:18 PM Seq. Line : 11
Sample Name : 21A0361 15 Location : Vial 11
Acq. Operator : DXP Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD

===



*** End of Report ***

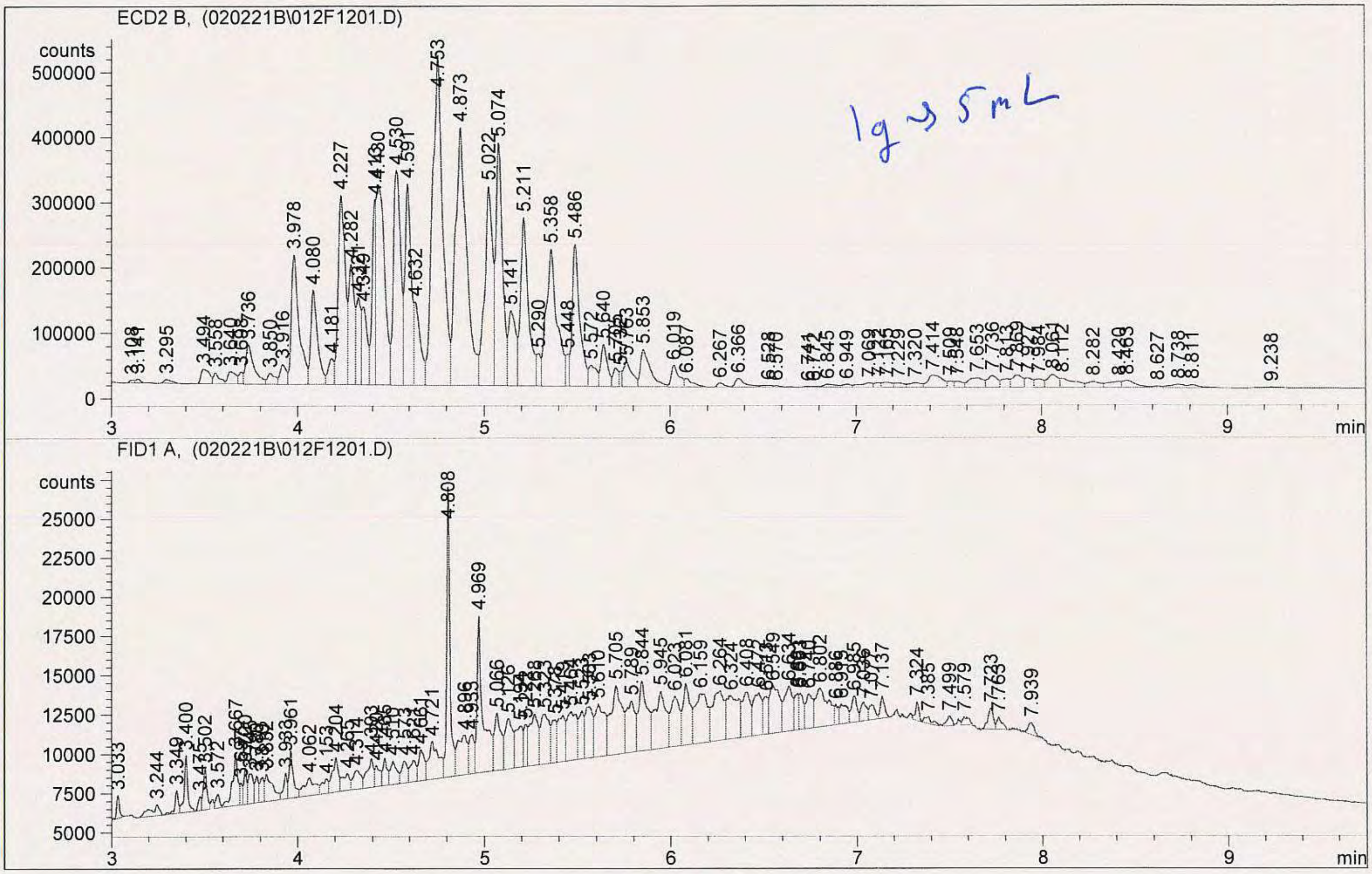
Data File C:\HPCHEM\1\DATA\020221B\012F1201.D Sample Name: 21A0361 17

===

Injection Date : 2/2/2021 7:15:06 PM Seq. Line : 12
Sample Name : 21A0361 17 Location : Vial 12
Acq. Operator : DXP Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD

===

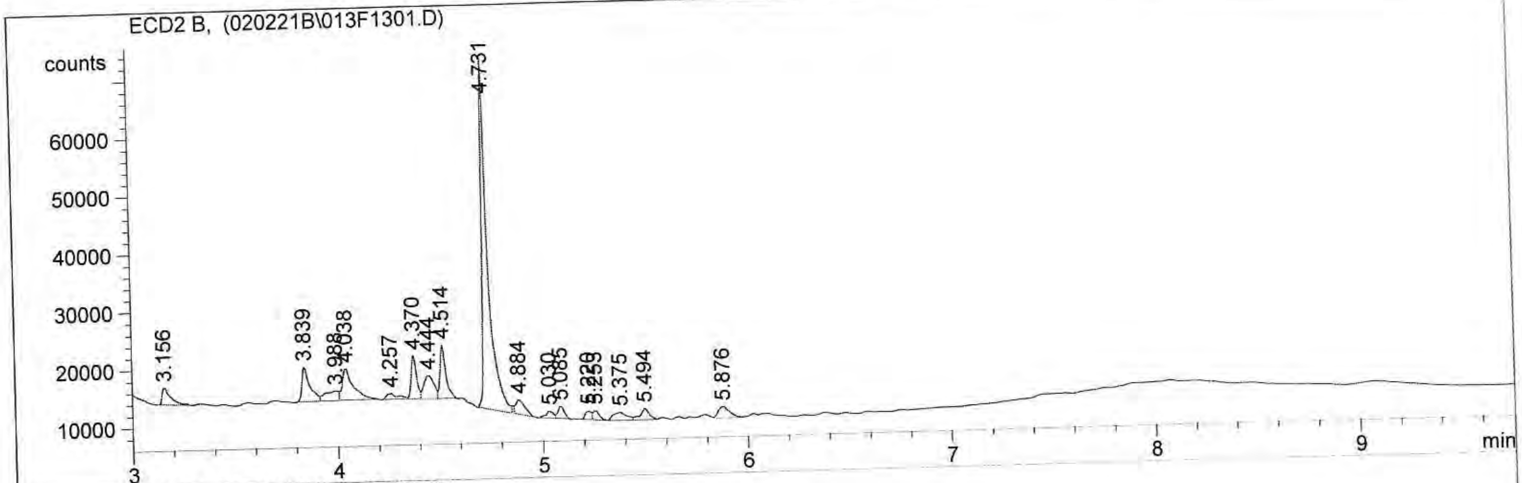


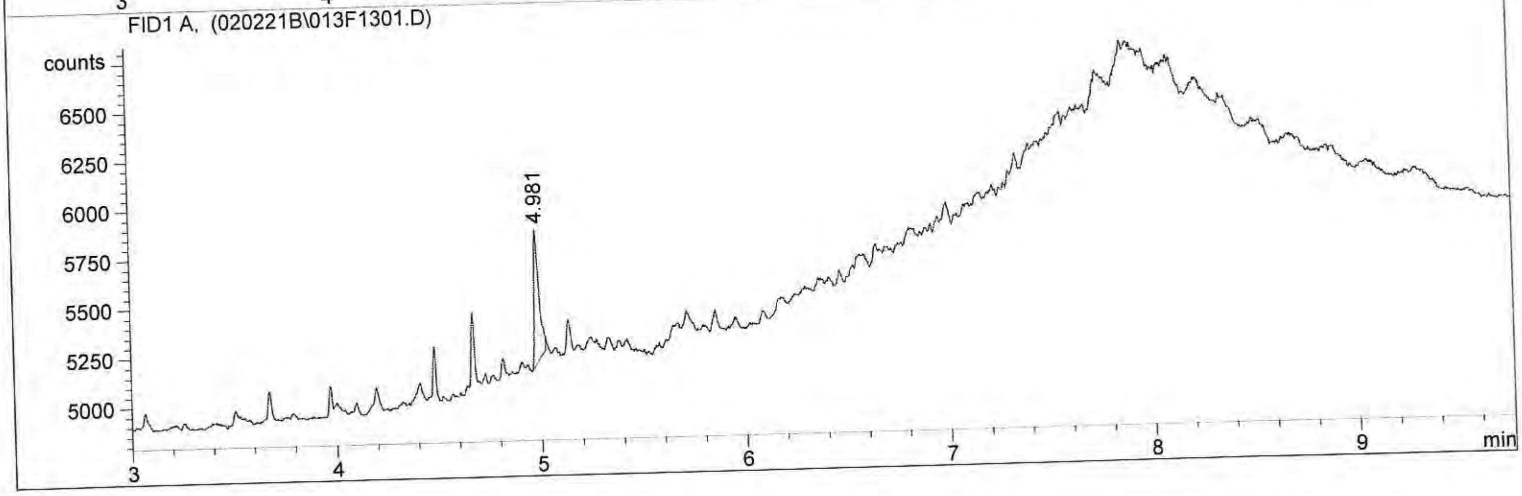
*** End of Report ***

Data File C:\HPCHEM\1\DATA\020221B\013F1301.D

Injection Date	: 2/2/2021 7:29:25 PM	Seq. Line :	13
Sample Name	: 21A0361 19	Location :	Vial 13
Acq. Operator	: DXP	Inj :	1
		Inj Volume :	1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD



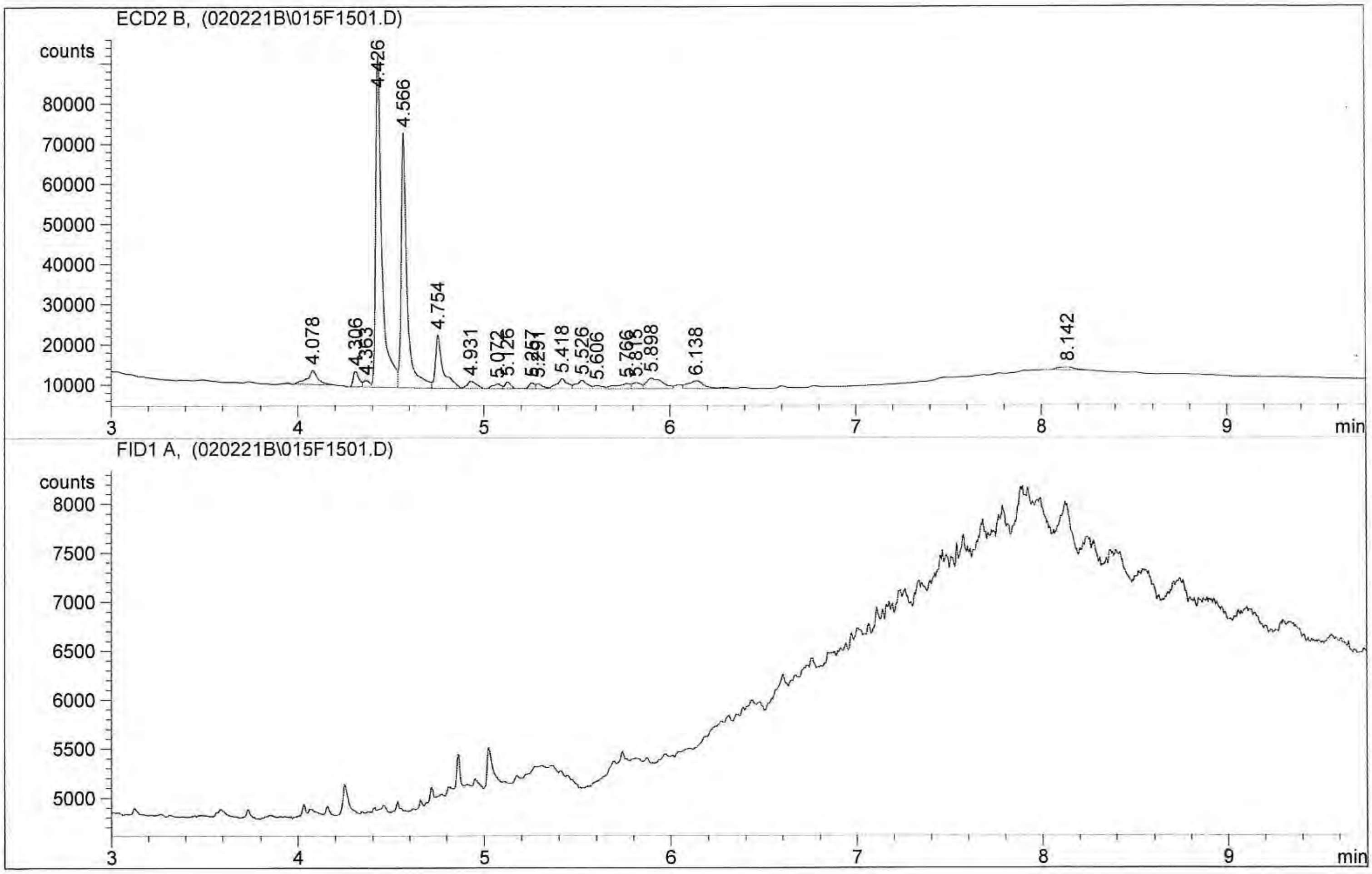


*** End of Report ***

===

Injection Date : 2/2/2021 7:57:36 PM Seq. Line : 15
Sample Name : 21A0361 23 Location : Vial 15
Acq. Operator : DXP Inj : 1
Inj Volume : 1 µl
Sequence File : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD

===

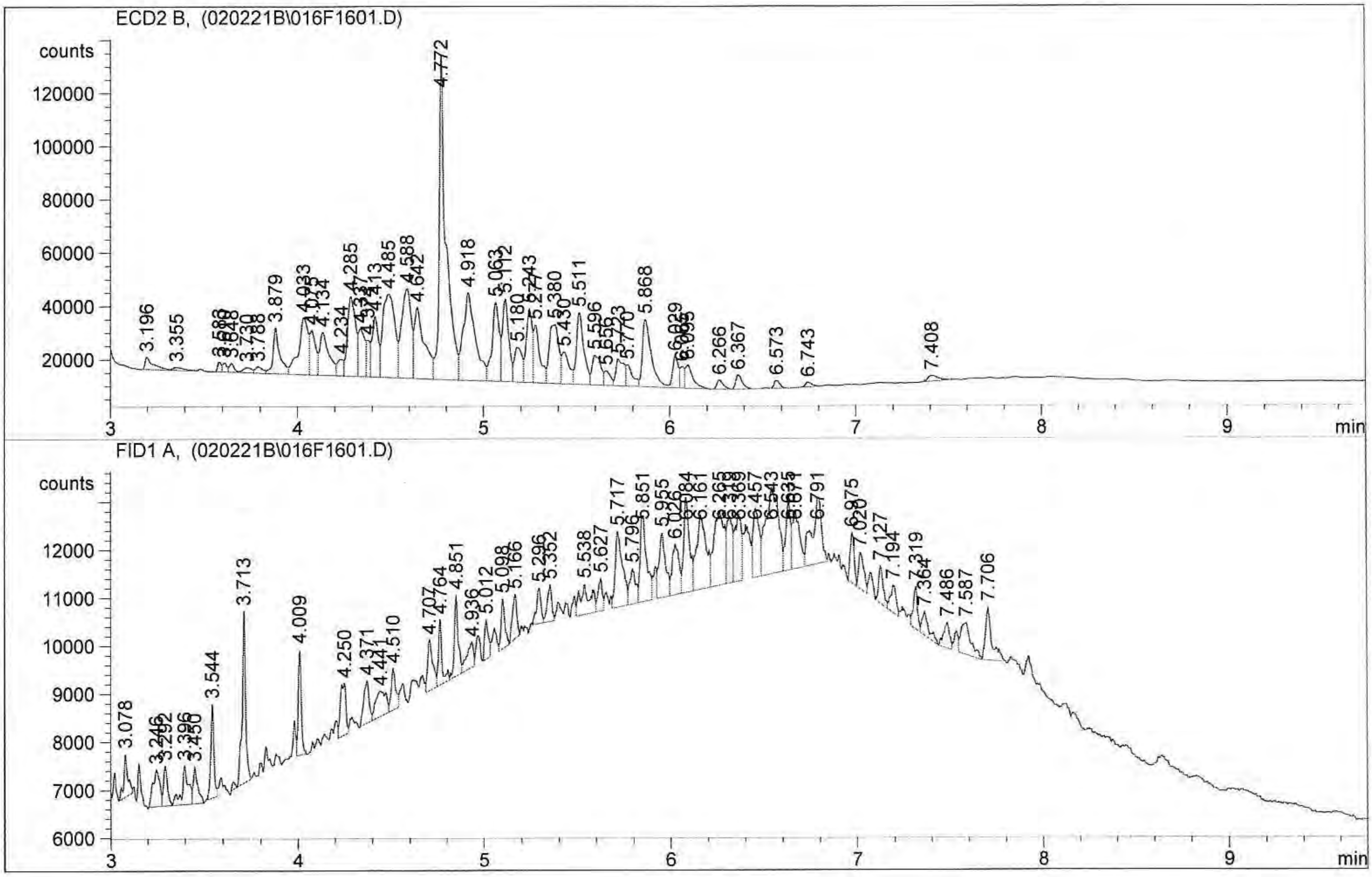


*** End of Report ***

===

Injection Date : 2/2/2021 8:11:23 PM   Seq. Line : 16
Sample Name   : 21A0361 25   Location : Vial 16
Acq. Operator   : DXP   Inj : 1
                                                      Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method   : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed   : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed   : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD

===



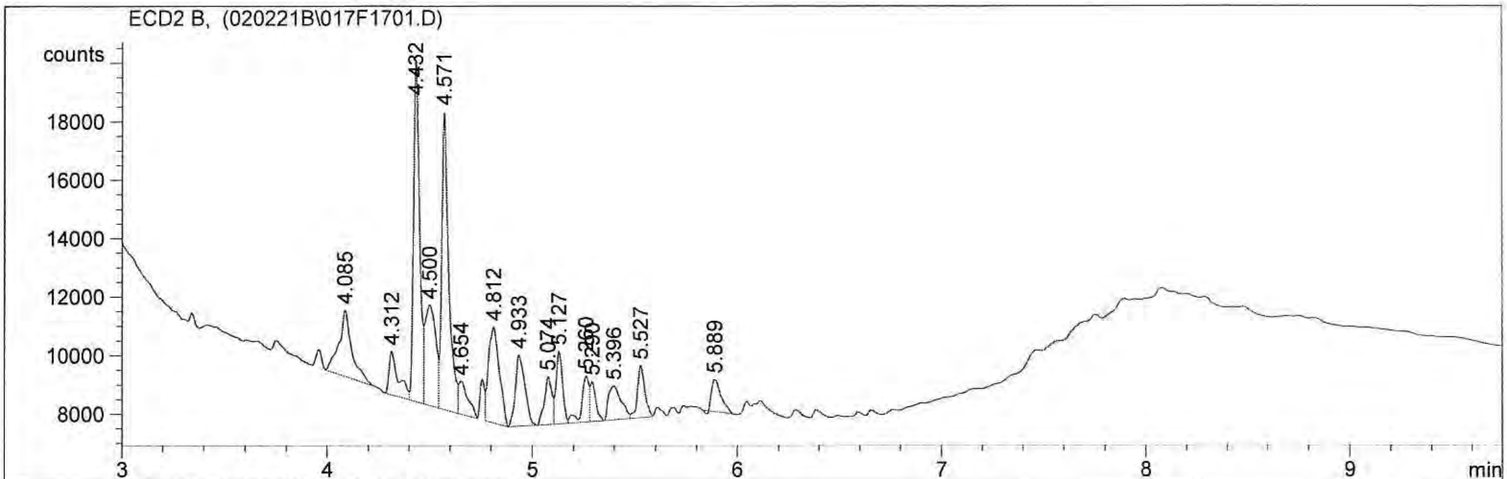
*** End of Report ***

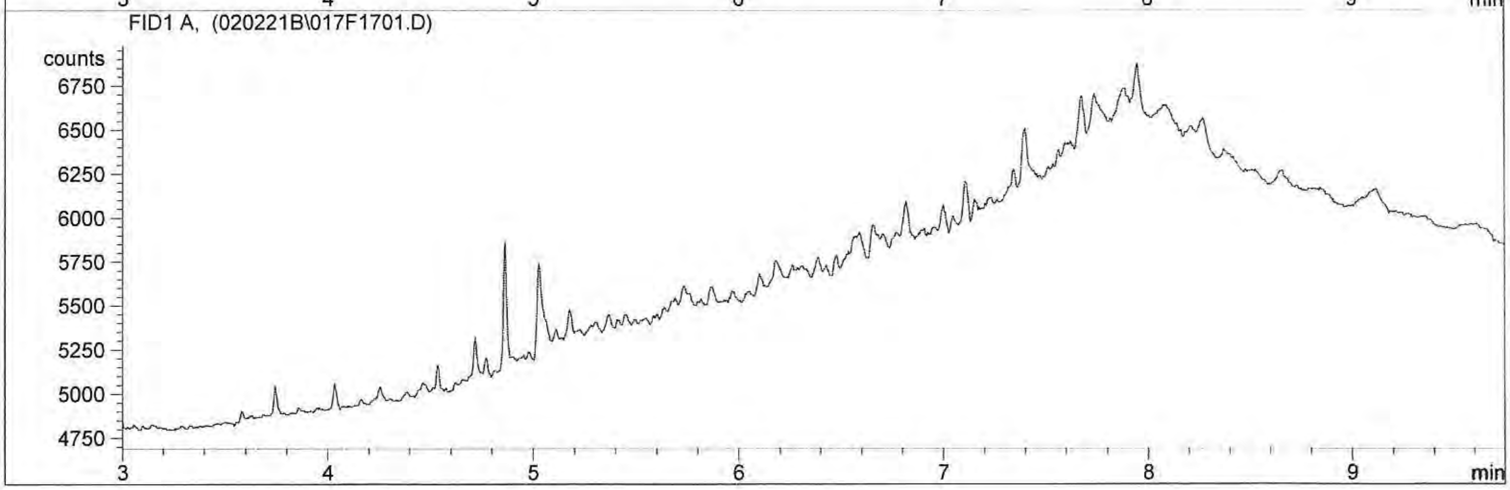
===

Injection Date	: 2/2/2021 8:25:41 PM	Seq. Line :	17
Sample Name	: 21A0361 27	Location :	Vial 17
Acq. Operator	: DXP	Inj :	1
		Inj Volume :	1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD

===



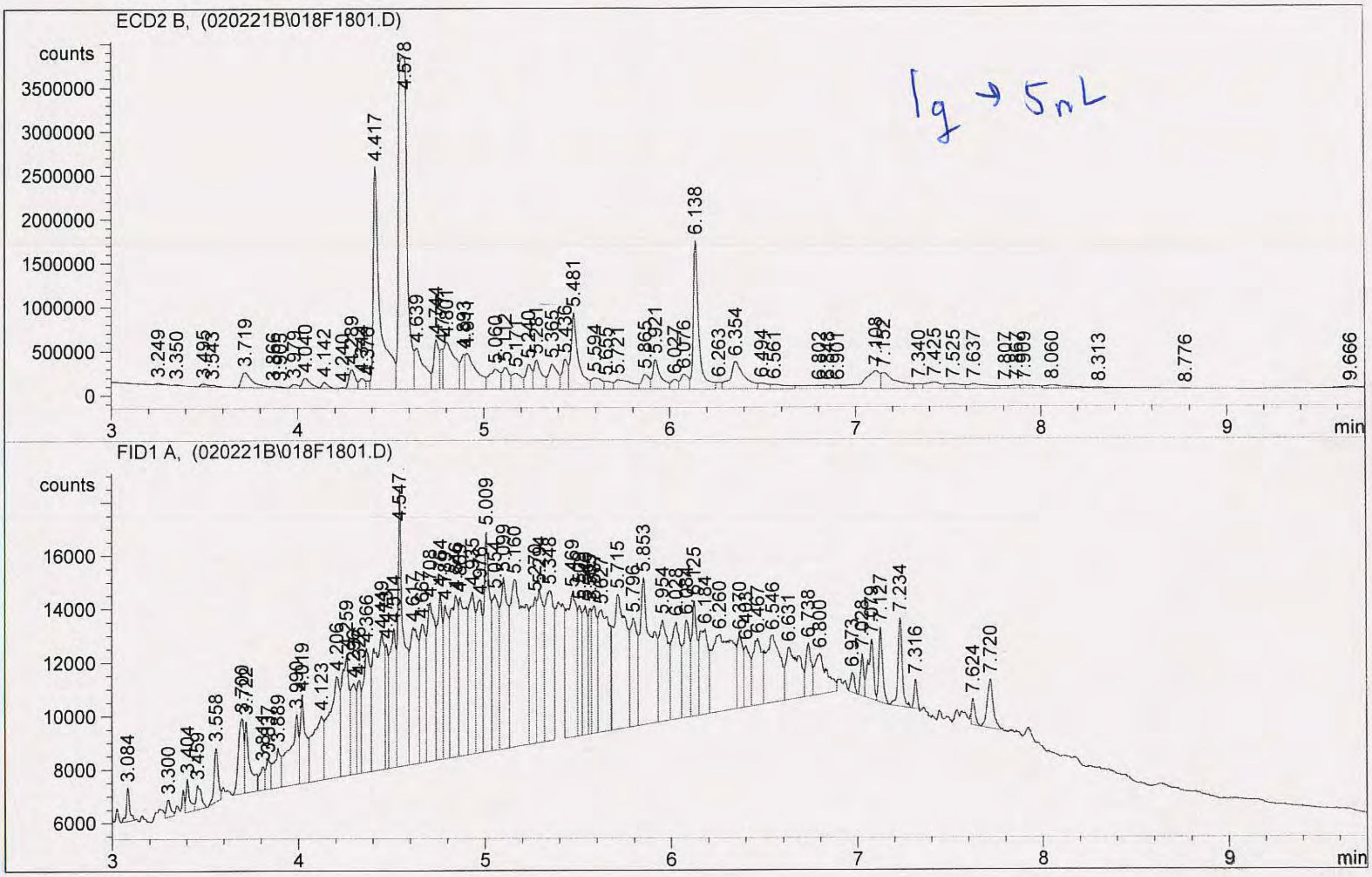


*** End of Report ***

Data File C:\HPCHEM\1\DATA\020221B\018F1801.D Sample Name: 21A0361 29

Injection Date	: 2/2/2021 8:39:26 PM	Seq. Line :	18
Sample Name	: 21A0361 29	Location :	Vial 18
Acq. Operator	: DXP	Inj :	1
		Inj Volume :	1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD



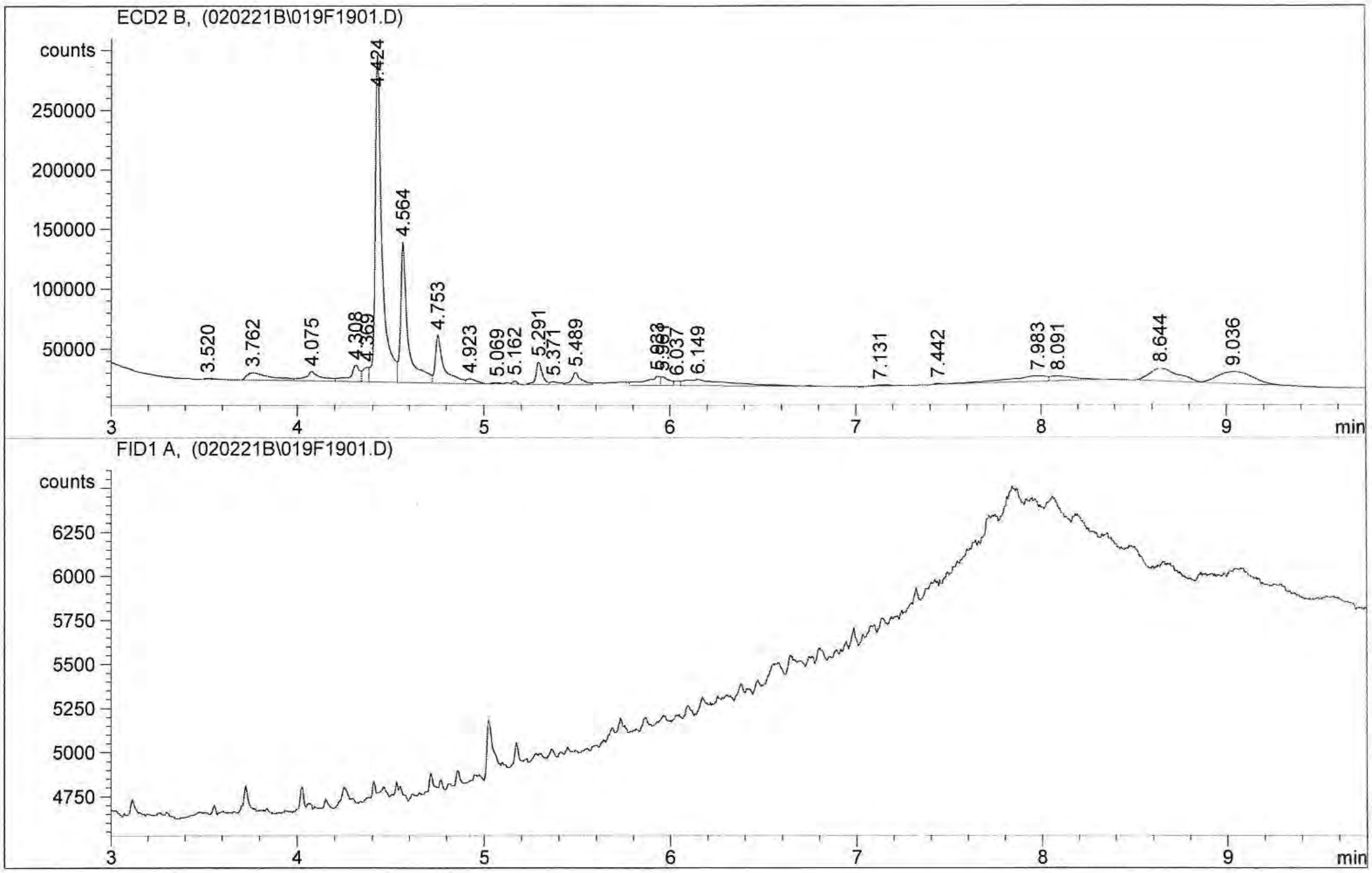
*** End of Report ***

===

Injection Date	: 2/2/2021 8:53:47 PM	Seq. Line :	19
Sample Name	: 21A0361 31	Location :	Vial 19
Acq. Operator	: DXP	Inj :	1
		Inj Volume :	1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\020221B.S
Acq. Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
Analysis Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 2/4/2021 10:37:36 AM by DXP
SCREEN METHOD

===



*** End of Report ***

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Cleanup Batch:	CJB0065	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665A Sulfuric Acid Cleanup	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
P8-20N-5	21A0361-03	02092108ECD5.D	02/09/2021	
P8-10E-1	21A0361-25	02092125ECD5.D	02/09/2021	
P8-7W-5	21A0361-23	02092124ECD5.D	02/09/2021	
P8-7W-1	21A0361-21	02112106ECD7.D	02/09/2021	
P8-20N-1	21A0361-01	02112104ECD7.D	02/09/2021	
P8-15SW-1	21A0361-09	02092113ECD5.D	02/09/2021	
Blank	BJB0165-BLK1	02092104ECD5.D	02/09/2021	
LCS	BJB0165-BS1	02092105ECD5.D	02/09/2021	
LCS Dup	BJB0165-BSD1	02092106ECD5.D	02/09/2021	
P8-15SW-5	21A0361-11	02092116ECD5.D	02/09/2021	
P8-10NE-1	21A0361-17	02092119ECD5.D	02/09/2021	
P8-10SE-5	21A0361-15	02092118ECD5.D	02/09/2021	
Matrix Spike Dup	BJB0165-MSD1	02092112ECD5.D	02/09/2021	
P8-10N-1	21A0361-29	02112107ECD7.D	02/09/2021	
P8-10N-5	21A0361-31	02092128ECD5.D	02/09/2021	
P8-10E-5	21A0361-27	02092126ECD5.D	02/09/2021	
P8-10NE-5	21A0361-19	02092120ECD5.D	02/09/2021	
P8-10NW-1	21A0361-05	02092109ECD5.D	02/09/2021	
P8-10NW-5	21A0361-07	02092110ECD5.D	02/09/2021	
P8-10SE-1	21A0361-13	02112105ECD7.D	02/09/2021	
Matrix Spike	BJB0165-MS1	02092111ECD5.D	02/09/2021	

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CLEANUP BENCH SHEET

CJB0065

Matrix: Solid **Cleanup using: Organics - EPA 3665A Sulfuric Acid Cleanup** **Printed: 2/9/2021 1:26:46PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
21A0361-31	A	P8-10N-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-29	A	P8-10N-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-21	A	P8-7W-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-23	A	P8-7W-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-25	A	P8-10E-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-27	A	P8-10E-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-05	A	P8-10NW-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-07	A	P8-10NW-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-09	A	P8-15SW-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-11	A	P8-15SW-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-13	A	P8-10SE-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-15	A	P8-10SE-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-17	A	P8-10NE-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-19	A	P8-10NE-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-01	A	P8-20N-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-03	A	P8-20N-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
BJB0165-MSD1	-	Matrix Spike Dup	-	5	5	-	2/9/2021	BH	
BJB0165-MS1	-	Matrix Spike	-	5	5	-	2/9/2021	BH	
BJB0165-BLK1	-	Blank	-	5	5	-	2/9/2021	BH	
BJB0165-BS1	-	LCS	-	5	5	-	2/9/2021	BH	
BJB0165-BSD1	-	LCS Dup	-	5	5	-	2/9/2021	BH	

Analytical Resources, Incorporated
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CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Cleanup Batch:	CJB0066	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
P8-7W-5	21A0361-23	02092124ECD5.D	02/09/2021	
P8-10NW-1	21A0361-05	02092109ECD5.D	02/09/2021	
P8-10SE-5	21A0361-15	02092118ECD5.D	02/09/2021	
P8-10SE-1	21A0361-13	02112105ECD7.D	02/09/2021	
P8-10NW-5	21A0361-07	02092110ECD5.D	02/09/2021	
P8-15SW-1	21A0361-09	02092113ECD5.D	02/09/2021	
P8-10NE-5	21A0361-19	02092120ECD5.D	02/09/2021	
P8-10NE-1	21A0361-17	02092119ECD5.D	02/09/2021	
P8-10N-5	21A0361-31	02092128ECD5.D	02/09/2021	
P8-10E-1	21A0361-25	02092125ECD5.D	02/09/2021	
P8-15SW-5	21A0361-11	02092116ECD5.D	02/09/2021	
LCS Dup	BJB0165-BSD1	02092106ECD5.D	02/09/2021	
P8-10N-1	21A0361-29	02112107ECD7.D	02/09/2021	
Matrix Spike Dup	BJB0165-MSD1	02092112ECD5.D	02/09/2021	
P8-20N-1	21A0361-01	02112104ECD7.D	02/09/2021	
Blank	BJB0165-BLK1	02092104ECD5.D	02/09/2021	
LCS	BJB0165-BS1	02092105ECD5.D	02/09/2021	
Matrix Spike	BJB0165-MS1	02092111ECD5.D	02/09/2021	
P8-7W-1	21A0361-21	02112106ECD7.D	02/09/2021	
P8-20N-5	21A0361-03	02092108ECD5.D	02/09/2021	
P8-10E-5	21A0361-27	02092126ECD5.D	02/09/2021	

Analytical Resources, Incorporated
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CLEANUP BENCH SHEET

CJB0066

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup** **Printed: 2/9/2021 1:27:42PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
21A0361-31	A	P8-10N-5	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-29	A	P8-10N-1	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-21	A	P8-7W-1	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-23	A	P8-7W-5	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-25	A	P8-10E-1	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-27	A	P8-10E-5	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-05	A	P8-10NW-1	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-07	A	P8-10NW-5	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-09	A	P8-15SW-1	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-11	A	P8-15SW-5	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-13	A	P8-10SE-1	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-15	A	P8-10SE-5	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-17	A	P8-10NE-1	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-19	A	P8-10NE-5	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-01	A	P8-20N-1	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-03	A	P8-20N-5	A 02	5	5	?A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
BJB0165-MSD1	-	Matrix Spike Dup	-	5	5	-	2/9/2021	BH	
BJB0165-MS1	-	Matrix Spike	-	5	5	-	2/9/2021	BH	
BJB0165-BLK1	-	Blank	-	5	5	-	2/9/2021	BH	
BJB0165-BS1	-	LCS	-	5	5	-	2/9/2021	BH	
BJB0165-BSD1	-	LCS Dup	-	5	5	-	2/9/2021	BH	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Cleanup Batch:	CJB0067	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
P8-10SE-1	21A0361-13	02112105ECD7.D	02/09/2021	
Blank	BJB0165-BLK1	02092104ECD5.D	02/09/2021	
P8-15SW-1	21A0361-09	02092113ECD5.D	02/09/2021	
LCS Dup	BJB0165-BSD1	02092106ECD5.D	02/09/2021	
P8-20N-5	21A0361-03	02092108ECD5.D	02/09/2021	
Matrix Spike	BJB0165-MS1	02092111ECD5.D	02/09/2021	
P8-7W-5	21A0361-23	02092124ECD5.D	02/09/2021	
P8-7W-1	21A0361-21	02112106ECD7.D	02/09/2021	
P8-10E-1	21A0361-25	02092125ECD5.D	02/09/2021	
LCS	BJB0165-BS1	02092105ECD5.D	02/09/2021	
P8-10SE-5	21A0361-15	02092118ECD5.D	02/09/2021	
P8-20N-1	21A0361-01	02112104ECD7.D	02/09/2021	
P8-10NW-5	21A0361-07	02092110ECD5.D	02/09/2021	
P8-10NW-1	21A0361-05	02092109ECD5.D	02/09/2021	
P8-10NE-5	21A0361-19	02092120ECD5.D	02/09/2021	
P8-10NE-1	21A0361-17	02092119ECD5.D	02/09/2021	
P8-10N-5	21A0361-31	02092128ECD5.D	02/09/2021	
P8-10N-1	21A0361-29	02112107ECD7.D	02/09/2021	
P8-10E-5	21A0361-27	02092126ECD5.D	02/09/2021	
Matrix Spike Dup	BJB0165-MSD1	02092112ECD5.D	02/09/2021	
P8-15SW-5	21A0361-11	02092116ECD5.D	02/09/2021	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CJB0067

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup** **Printed: 2/9/2021 1:28:32PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
21A0361-25	A	P8-10E-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-23	A	P8-7W-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-15	A	P8-10SE-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-17	A	P8-10NE-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-19	A	P8-10NE-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-21	A	P8-7W-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-01	A	P8-20N-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-03	A	P8-20N-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-05	A	P8-10NW-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-07	A	P8-10NW-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-09	A	P8-15SW-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-11	A	P8-15SW-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-13	A	P8-10SE-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-31	A	P8-10N-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-27	A	P8-10E-5	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
21A0361-29	A	P8-10N-1	A 02	5	5	2A PCB (20 ug/kg) or (MTCA 0.1 u	2/9/2021	BH	
BJB0165-MSD1	-	Matrix Spike Dup	-	5	5	-	2/9/2021	BH	
BJB0165-MS1	-	Matrix Spike	-	5	5	-	2/9/2021	BH	
BJB0165-BLK1	-	Blank	-	5	5	-	2/9/2021	BH	
BJB0165-BS1	-	LCS	-	5	5	-	2/9/2021	BH	
BJB0165-BSD1	-	LCS Dup	-	5	5	-	2/9/2021	BH	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
METHOD BLANK DATA SHEET
EPA 8082A

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc			Project:	ICS-Former NW Cooperage
Matrix:	Solid	Laboratory ID:	BJB0165-BLK1	File ID:	02092104ECD5.D
Sampled:	N/A	Prepared:	02/05/21 16:51	Analyzed:	02/09/21 18:01
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	5 g / 5 mL
Batch:	BJB0165	Sequence:	SJB0231	Calibration:	EB00020
Instrument:	ECD7	Column:	ZB5	Cleanups:	Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
12674-11-2	Aroclor 1016	1	20.0	U	8.0	20.0
11104-28-2	Aroclor 1221	1	20.0	U	8.0	20.0
11141-16-5	Aroclor 1232	1	20.0	U	8.0	20.0
53469-21-9	Aroclor 1242	1	20.0	U	8.0	20.0
12672-29-6	Aroclor 1248	1	20.0	U	8.0	20.0
11097-69-1	Aroclor 1254	1	20.0	U	8.0	20.0
11096-82-5	Aroclor 1260	1	20.0	U	9.3	20.0
37324-23-5	Aroclor 1262	1	20.0	U	9.3	20.0
11100-14-4	Aroclor 1268	1	20.0	U	9.3	20.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	40.000	33.5	83.8	40 - 133	
Tetrachlorometaxylene	40.000	34.9	87.2	53 - 120	
Decachlorobiphenyl [2C]	40.000	36.2	90.5	40 - 133	
Tetrachlorometaxylene [2C]	40.000	34.3	85.7	53 - 120	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092104ECD5.D
Data file 2: /210209.b/210209.b/02092104ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BJB0165-BLK1
Client ID:
Injection Date: 09-FEB-2021 18:01
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.996	0.006	132438	5.379	-0.002	245967	34.9	34.3	1.7	Tetrachloro-m-xylene
13.192	0.006	734320	13.931	0.004	525651	33.5	36.2	7.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	240813	45.3
Hexabromobiphenyl	1343188	2040350	51.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	678485	-19.0
Hexabromobiphenyl	850693	829476	-2.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

```
                             ZB5 Col                              ZB35 Col
 Aroclor    Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
 ==========================================================================================
 Aroclor-1016 1   6.648   0.039       493     2.4       1    7.114   0.057     3440    11.7
 Aroclor-1016 2   6.989   0.006       295     0.4       2    7.657   0.000      234     0.4
 Aroclor-1016 3   7.170   0.036       719     2.2       3    7.934   0.067      536     1.8
 Aroclor-1016 4     ---                     0.0       4    8.143   0.020     1803    10.8
       Total Col1Ave (3 peaks):     1.7       Total Col2Ave (4 peaks):     6.2   RPD = 114*
       Corrected Ave: < 3 Peaks                 Corrected Ave (3 peaks):     4.3

 Aroclor-1221 1      ---                    0.0       1     ---                        0.0
 Aroclor-1221 2     ---                     0.0       2    6.069   0.010     2572    30.2
 Aroclor-1221 3     ---                     0.0       3    6.402   0.003     1419     9.2
             Col1Ave: <3 Quant Peaks                    Col2Ave: <3 Quant Peaks

 Aroclor-1232 1      ---                    0.0       1     ---                        0.0
 Aroclor-1232 2   6.648   0.040       493     5.6       2    7.114   0.057     3440    25.5
 Aroclor-1232 3   6.989   0.006       295     1.0       3    7.657  -0.001      234     0.8
 Aroclor-1232 4   8.370   0.075       399     4.0       4    8.143   0.099     1803    33.0
       Total Col1Ave (3 peaks):     3.6       Total Col2Ave (3 peaks):    19.8   RPD = 139*
       Corrected Ave: < 3 Peaks                      Corrected Ave: < 3 Peaks

 Aroclor-1242 1   6.648   0.038       493     2.9       1    7.114   0.057     3440    14.2
 Aroclor-1242 2   6.989   0.006       295     0.5       2    7.657  -0.001      234     0.4
 Aroclor-1242 3   8.370   0.079       399     2.1       3     ---                        0.0
 Aroclor-1242 4   8.674   0.089      1297     6.9       4     ---                        0.0
       Total Col1Ave (4 peaks):     3.1                 Col2Ave: <3 Quant Peaks

 Aroclor-1248 1   7.517   0.049       123     0.5       1    8.143   0.020     1803     8.2
 Aroclor-1248 2   7.992   0.054      1019     2.6       2    8.559   0.014     1864     6.8
 Aroclor-1248 3   8.370   0.020       399     0.5       3     ---                        0.0
 Aroclor-1248 4   8.674   0.087      1297     4.4       4     ---                        0.0
       Total Col1Ave (4 peaks):     2.0                 Col2Ave: <3 Quant Peaks

 Aroclor-1254 1   8.674   0.018      1297     1.8       1    9.298   0.022      174     0.4
 Aroclor-1254 2   8.724  -0.001       162     0.4       2     ---                        0.0
 Aroclor-1254 3   9.012  -0.015       617     1.3       3    9.880   0.073      920     2.8
 Aroclor-1254 4   9.189   0.028      1359     1.3       4    9.981   0.022      274     0.3
 Aroclor-1254 5   9.862   0.002      1007     1.5       5   10.216   0.016      140     0.2
       Total Col1Ave (5 peaks):     1.3       Total Col2Ave (4 peaks):     0.9   RPD = 35
       Corrected Ave (4 peaks):     1.1       Corrected Ave (3 peaks):     0.3   RPD = 121*

 Aroclor-1260 1     ---                     0.0       1   11.027   0.001      239     0.4
 Aroclor-1260 2  10.718   0.012       964     1.4       2   11.502   0.013      714     1.3
 Aroclor-1260 3  11.066   0.008      1160     0.6       3   11.745   0.003      511     0.3
 Aroclor-1260 4  11.466   0.005       417     0.5       4   12.345   0.015      322     0.3
 Aroclor-1260 5  11.652   0.087       469     1.1       NS    ---                       ----
       Total Col1Ave (4 peaks):     0.9       Total Col2Ave (4 peaks):     0.6   RPD = 38
       Corrected Ave (3 peaks):     0.7       Corrected Ave (3 peaks):     0.4   RPD = 65*

 Aroclor-1262 1     ---                     0.0       1   11.027   0.001      239     0.2
 Aroclor-1262 2  11.066   0.006      1160     0.4       2   11.745  -0.001      511     0.2
 Aroclor-1262 3  11.652   0.083       469     0.6       3   12.262   0.003     2127     3.5
 Aroclor-1262 4     ---                     0.0       4   13.138   0.004     8686    11.3
             Col1Ave: <3 Quant Peaks                         Col2Ave:     3.8

 Aroclor-1268 1  11.652   0.083       469     0.2       1   12.262   0.003     2127     1.0
 Aroclor-1268 2     ---                     0.0       2   12.345   0.009      322     0.1
 Aroclor-1268 3  11.963  -0.053     34997    14.4       3   12.718   0.004     1201     0.6
 Aroclor-1268 4  12.790  -0.001     33012     3.9       4   13.525   0.005     4386     0.6
       Total Col1Ave (3 peaks):     6.1       Total Col2Ave (4 peaks):     0.6   RPD = 165*
       Corrected Ave: < 3 Peaks                 Corrected Ave (3 peaks):     0.4
```

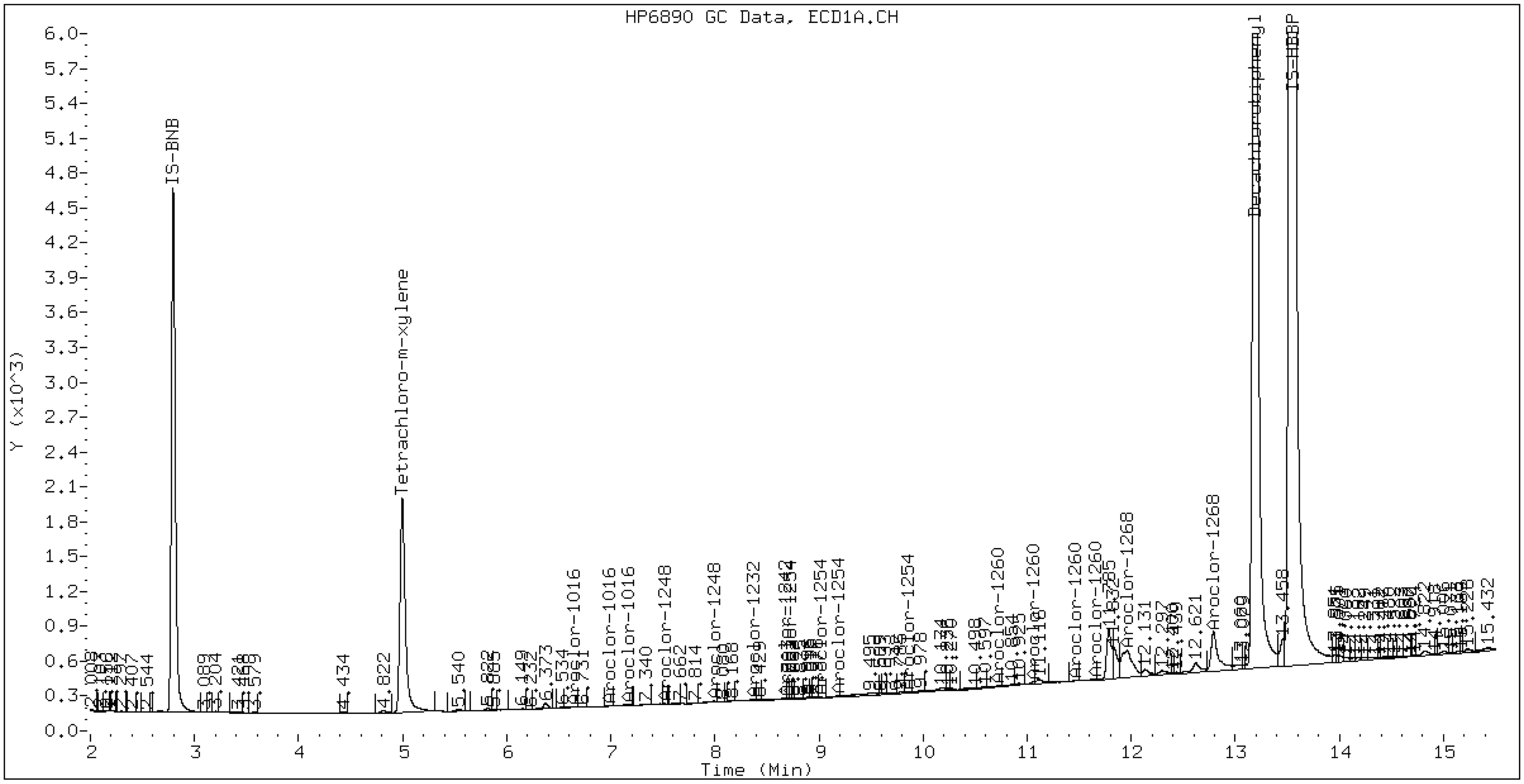
Total PCB Area Col1 (5.090 - 13.086) =	182506	Col1 Total PCB = 0.0 ppm*
Total PCB Area Col2 (5.090 - 13.086) =	304427	Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

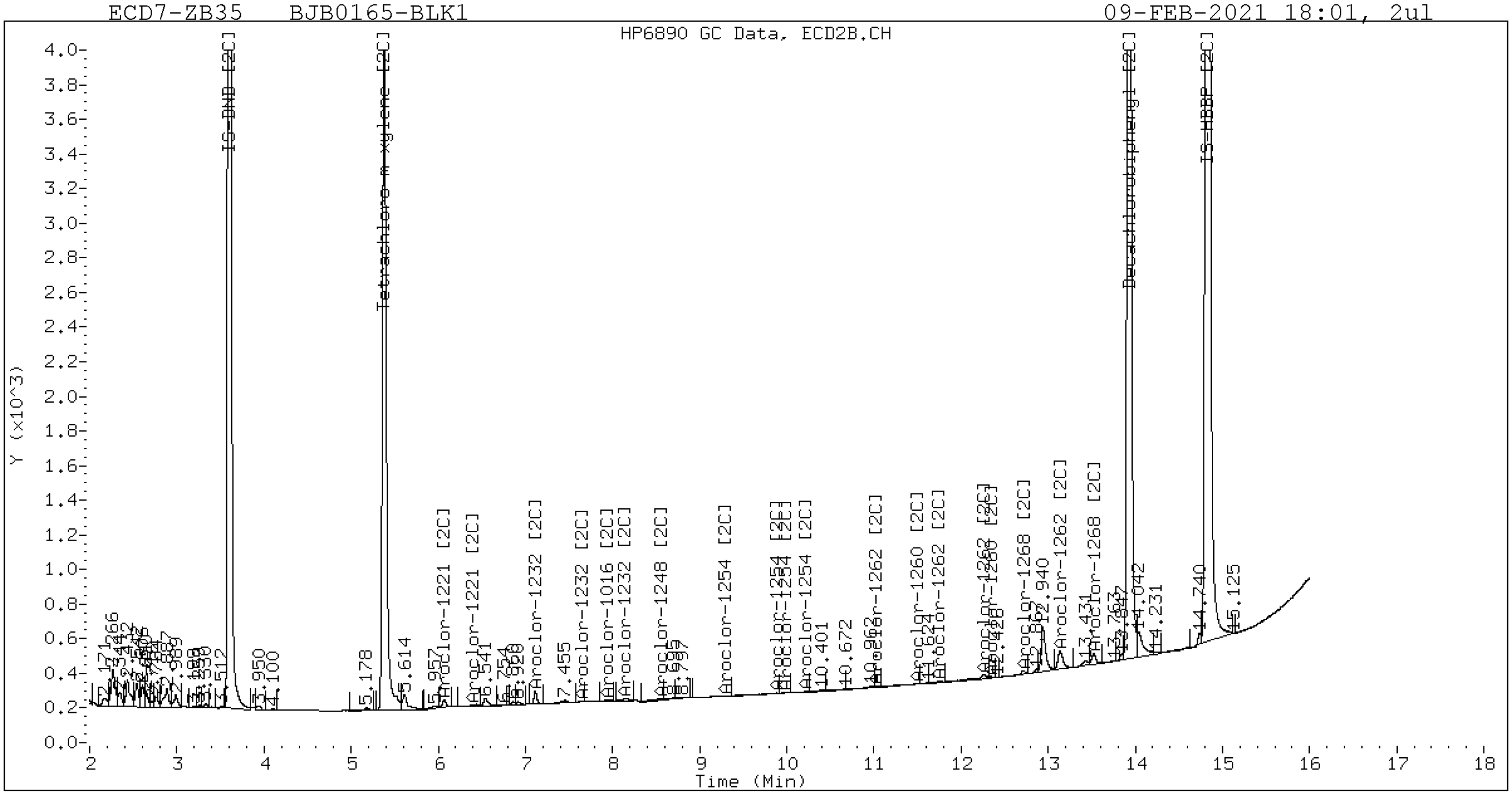
PCB Dual Column Chromatograms

ECD7-ZB5 BJB0165-BLK1 09-FEB-2021 18:01, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BJB0165-BLK1 09-FEB-2021 18:01, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	02/09/21 18:22
Batch:	BJB0165	Laboratory ID:	BJB0165-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	5 g / 5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Aroclor 1016 [2C]	500	449		89.9	52 - 120
Aroclor 1260 [2C]	500	440		88.0	57 - 120

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Aroclor 1016 [2C]	500	447		89.5	0.429	30	52 - 120
Aroclor 1260 [2C]	500	428		85.7	2.67	30	57 - 120

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092105ECD5.D
Data file 2: /210209.b/210209.b/02092105ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BJB0165-BS1
Client ID:
Injection Date: 09-FEB-2021 18:22
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.990	0.001	122435	5.382	0.000	236017	34.6	32.8	5.3	Tetrachloro-m-xylene
13.188	0.002	679553	13.930	0.003	533914	32.6	36.5	11.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	224598	35.5
Hexabromobiphenyl	1343188	1940304	44.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	680863	-18.7
Hexabromobiphenyl	850693	837039	-1.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.610	0.000	78378	403.9	1	7.057	0.001	134559	455.7
Aroclor-1016	2	6.985	0.003	273326	432.6	2	7.658	0.001	328976	491.6
Aroclor-1016	3	7.136	0.001	118154	393.1	3	7.869	0.001	124150	421.8
Aroclor-1016	4	7.245	0.002	78847	417.5	4	8.124	0.001	71791	428.2

Total Col1Ave (4 peaks): 411.8 Total Col2Ave (4 peaks): 449.3 RPD = 9
Corrected Ave (3 peaks): 404.8 Corrected Ave (3 peaks): 435.2 RPD = 7

Aroclor-1221	1	3.937	-0.006	1338	41.7	1	---			0.0
Aroclor-1221	2	5.376	0.001	5442	127.7	2	6.056	-0.003	11172	130.5
Aroclor-1221	3	5.660	0.001	41263	285.6	3	6.398	-0.000	54322	352.1

Total Col1Ave (3 peaks): 151.7 Col2Ave: <3 Quant Peaks

Aroclor-1232	1	3.937	-0.006	1338	72.6	1	---			0.0
Aroclor-1232	2	6.610	0.002	78378	953.3	2	7.057	0.001	134559	993.9
Aroclor-1232	3	6.985	0.003	273326	1038.2	3	7.658	0.001	328976	1143.8
Aroclor-1232	4	8.295	-0.001	14253	155.0	4	8.043	-0.001	72027	1313.7

Total Col1Ave (4 peaks): 554.8 Total Col2Ave (3 peaks): 1150.4 RPD = 70*
Corrected Ave (3 peaks): 393.6 Corrected Ave: < 3 Peaks

Aroclor-1242	1	6.610	-0.000	78378	499.1	1	7.057	0.001	134559	553.2
Aroclor-1242	2	6.985	0.003	273326	525.3	2	7.658	0.001	328976	576.4
Aroclor-1242	3	8.295	0.003	14253	82.0	3	8.969	-0.013	38466	167.3
Aroclor-1242	4	8.581	-0.004	10930	61.9	4	9.423	0.003	5623	25.1

Total Col1Ave (4 peaks): 292.1 Total Col2Ave (4 peaks): 330.5 RPD = 12
Corrected Ave (3 peaks): 214.3 Corrected Ave (3 peaks): 248.5 RPD = 15

Aroclor-1248	1	7.468	0.001	74079	308.1	1	8.124	0.001	71791	324.3
Aroclor-1248	2	7.940	0.002	112049	308.8	2	8.546	0.001	90834	331.8
Aroclor-1248	3	8.364	0.013	91562	122.3	3	8.969	-0.013	38466	90.5
Aroclor-1248	4	8.581	-0.006	10930	39.3	4	9.423	0.003	5623	13.7

Total Col1Ave (4 peaks): 194.6 Total Col2Ave (4 peaks): 190.1 RPD = 2
Corrected Ave (3 peaks): 156.6 Corrected Ave (3 peaks): 142.8 RPD = 9

Aroclor-1254	1	8.657	0.001	93700	141.2	1	9.279	0.003	67264	148.3
Aroclor-1254	2	---			0.0	2	9.423	0.052	5623	22.6
Aroclor-1254	3	9.029	0.002	13446	30.7	3	9.811	0.004	10633	32.0
Aroclor-1254	4	9.158	-0.003	89452	94.2	4	9.977	0.018	168772	183.3
Aroclor-1254	5	9.854	-0.006	132421	215.5	5	10.209	0.009	222754	254.1

Total Col1Ave (4 peaks): 120.4 Total Col2Ave (5 peaks): 128.1 RPD = 6
Corrected Ave (3 peaks): 88.7 Corrected Ave (4 peaks): 96.5 RPD = 8

Aroclor-1260	1	10.388	0.003	278856	424.8	1	11.028	0.003	254670	434.4
Aroclor-1260	2	10.709	0.002	285978	434.8	2	11.490	0.001	237954	436.6
Aroclor-1260	3	11.061	0.003	803585	426.1	3	11.745	0.003	670692	444.6
Aroclor-1260	4	11.464	0.003	365599	419.1	4	12.333	0.003	433148	444.6
Aroclor-1260	5	11.568	0.003	189451	465.7	NS	---			----

Total Col1Ave (5 peaks): 434.1 Total Col2Ave (4 peaks): 440.0 RPD = 1
Corrected Ave (4 peaks): 426.2 Corrected Ave (3 peaks): 438.5 RPD = 3

Aroclor-1262	1	10.388	-0.000	278856	257.9	1	11.028	0.003	254670	264.0
Aroclor-1262	2	11.061	0.000	803585	312.4	2	11.745	-0.001	670692	311.9
Aroclor-1262	3	11.568	-0.001	189451	259.9	3	12.260	0.001	177984	286.1
Aroclor-1262	4	11.639	-0.001	247697	255.9	4	13.049	-0.084	195269	251.9

Total Col1Ave (4 peaks): 271.5 Total Col2Ave (4 peaks): 278.5 RPD = 3
Corrected Ave (3 peaks): 257.9 Corrected Ave (3 peaks): 267.4 RPD = 4

Aroclor-1268	1	11.568	-0.001	189451	76.3	1	12.260	0.001	177984	84.0
Aroclor-1268	2	11.639	0.002	247697	87.7	2	12.333	-0.003	433148	169.4
Aroclor-1268	3	12.045	0.029	121530	52.6	3	12.710	-0.003	6713	3.3
Aroclor-1268	4	12.788	-0.004	83260	10.3	4	13.526	0.006	41229	5.6

Total Col1Ave (4 peaks): 56.7 Total Col2Ave (4 peaks): 65.6 RPD = 14
Corrected Ave (3 peaks): 46.4 Corrected Ave (3 peaks): 31.0 RPD = 40

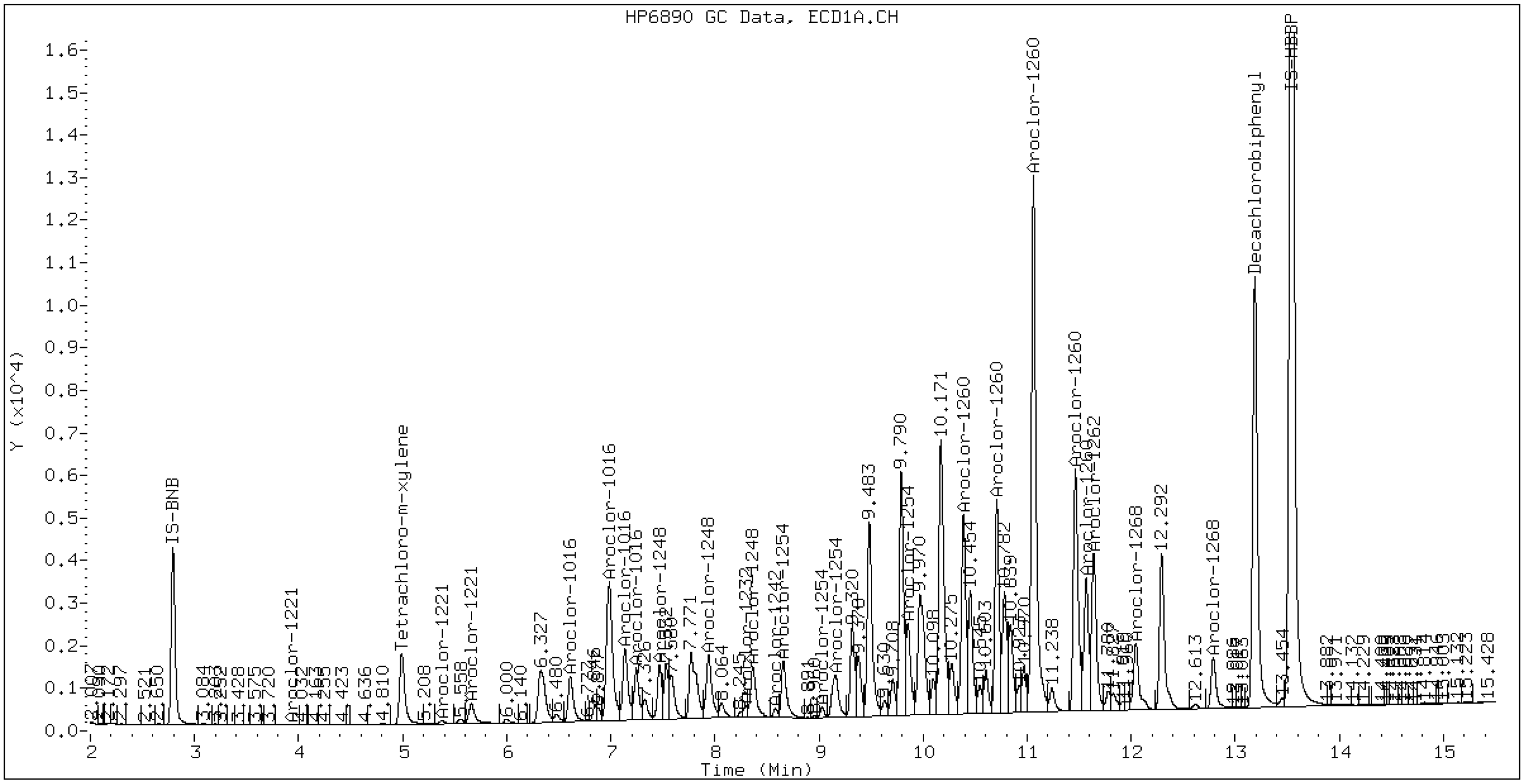
Total PCB Area Col1 (5.090 - 13.086) =	6934788	Col1 Total PCB = 0.8 ppm*
Total PCB Area Col2 (5.090 - 13.086) =	5806396	Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

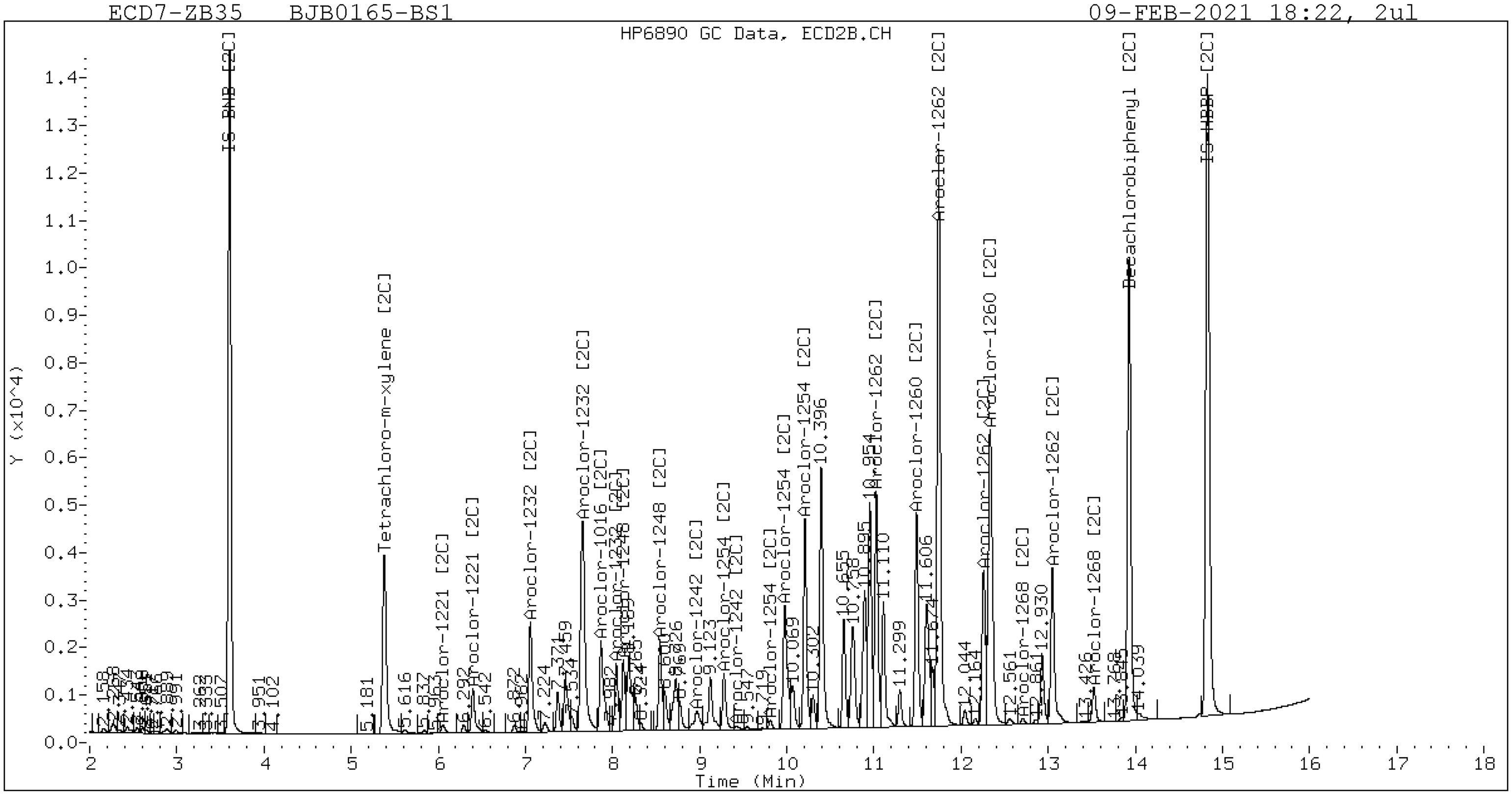
PCB Dual Column Chromatograms

ECD7-ZB5 BJB0165-BS1 09-FEB-2021 18:22, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BJB0165-BS1 09-FEB-2021 18:22, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092106ECD5.D
Data file 2: /210209.b/210209.b/02092106ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BJB0165-BSD1
Client ID:
Injection Date: 09-FEB-2021 18:42
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.993	0.004	117525	5.382	0.001	226871	31.5	31.1	1.0	Tetrachloro-m-xylene
13.188	0.002	676656	13.931	0.004	542160	31.8	35.6	11.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	236879	42.9
Hexabromobiphenyl	1343188	1981150	47.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	689413	-17.7
Hexabromobiphenyl	850693	870528	2.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

```
                             ZB5 Col                                  ZB35 Col
Aroclor   Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
=========================================================================================
Aroclor-1016 1   6.611   0.001     78190   382.0      1    7.057   0.000   134614   450.2
Aroclor-1016 2   6.985   0.002    270016   405.2      2    7.658   0.001   329925   487.0
Aroclor-1016 3   7.135   0.001    116217   366.6      3    7.868   0.000   126649   425.0
Aroclor-1016 4   7.245   0.002     78572   394.5      4    8.124   0.000    72576   427.6
      Total Col1Ave (4 peaks):   387.1       Total Col2Ave (4 peaks):   447.4   RPD = 14
      Corrected Ave (3 peaks):   381.0       Corrected Ave (3 peaks):   434.2   RPD = 13

Aroclor-1221 1   3.956   0.013      1636    48.3      1     ---                       0.0
Aroclor-1221 2   5.382   0.006      5041   112.2      2    6.057  -0.003    11715   135.2
Aroclor-1221 3   5.659  -0.000     37291   244.7      3    6.398  -0.000    54082   346.2
      Total Col1Ave (3 peaks):   135.1                Col2Ave: <3 Quant Peaks

Aroclor-1232 1   3.956   0.014      1636    84.1      1     ---                       0.0
Aroclor-1232 2   6.611   0.003     78190   901.7      2    7.057   0.001   134614   982.0
Aroclor-1232 3   6.985   0.002    270016   972.4      3    7.658   0.000   329925  1132.8
Aroclor-1232 4   8.294  -0.002     13606   140.3      4    8.043  -0.000    74091  1334.6
      Total Col1Ave (4 peaks):   524.7       Total Col2Ave (3 peaks):  1149.8   RPD = 75*
      Corrected Ave (3 peaks):   375.4                     Corrected Ave: < 3 Peaks

Aroclor-1242 1   6.611   0.001     78190   472.1      1    7.057   0.001   134614   546.6
Aroclor-1242 2   6.985   0.003    270016   492.0      2    7.658   0.000   329925   570.9
Aroclor-1242 3   8.294   0.003     13606    74.2      3    8.967  -0.015    40888   175.6
Aroclor-1242 4   8.580  -0.005     10788    57.9      4    9.424   0.004     5970    26.3
      Total Col1Ave (4 peaks):   274.1       Total Col2Ave (4 peaks):   329.8   RPD = 18
      Corrected Ave (3 peaks):   201.4       Corrected Ave (3 peaks):   249.5   RPD = 21

Aroclor-1248 1   7.468   0.001     71716   282.8      1    8.124   0.000    72576   323.8
Aroclor-1248 2   7.938   0.001    109509   286.1      2    8.545  -0.000    93279   336.5
Aroclor-1248 3   8.363   0.013     90254   114.3      3    8.967  -0.015    40888    95.0
Aroclor-1248 4   8.580  -0.007     10788    36.8      4    9.424   0.004     5970    14.4
      Total Col1Ave (4 peaks):   180.0       Total Col2Ave (4 peaks):   192.4   RPD = 7
      Corrected Ave (3 peaks):   144.6       Corrected Ave (3 peaks):   144.4   RPD = 0

Aroclor-1254 1   8.657   0.002     91185   130.3      1    9.279   0.003    68528   149.2
Aroclor-1254 2     ---                       0.0     2    9.424   0.053     5970    23.7
Aroclor-1254 3   9.028   0.002     12993    28.1      3    9.811   0.004    10509    31.2
Aroclor-1254 4   9.157  -0.004     88656    88.5      4    9.977   0.018   170388   182.8
Aroclor-1254 5   9.852  -0.007    131153   202.3      5   10.209   0.010   224787   253.3
      Total Col1Ave (4 peaks):   112.3       Total Col2Ave (5 peaks):   128.0   RPD = 13
      Corrected Ave (3 peaks):    82.3       Corrected Ave (4 peaks):    96.7   RPD = 16

Aroclor-1260 1  10.387   0.002    279916   417.6      1   11.029   0.004   256594   420.8
Aroclor-1260 2  10.708   0.002    279228   415.8      2   11.490   0.001   239961   423.3
Aroclor-1260 3  11.060   0.002    788446   409.4      3   11.746   0.004   686069   437.3
Aroclor-1260 4  11.464   0.002    363406   408.0      4   12.333   0.002   438023   432.3
Aroclor-1260 5  11.567   0.002    186529   449.0     NS     ---                      ----
      Total Col1Ave (5 peaks):   420.0       Total Col2Ave (4 peaks):   428.4   RPD = 2
      Corrected Ave (4 peaks):   412.7       Corrected Ave (3 peaks):   425.5   RPD = 3

Aroclor-1262 1  10.387  -0.001    279916   253.5      1   11.029   0.003   256594   255.7
Aroclor-1262 2  11.060  -0.000    788446   300.2      2   11.746   0.000   686069   306.7
Aroclor-1262 3  11.567  -0.002    186529   250.6      3   12.260   0.000   178005   275.2
Aroclor-1262 4  11.639  -0.001    241790   244.6      4   13.049  -0.085   198858   246.7
      Total Col1Ave (4 peaks):   262.2       Total Col2Ave (4 peaks):   271.1   RPD = 3
      Corrected Ave (3 peaks):   249.6       Corrected Ave (3 peaks):   259.2   RPD = 4

Aroclor-1268 1  11.567  -0.002    186529    73.6      1   12.260   0.000   178005    80.8
Aroclor-1268 2  11.639   0.002    241790    83.9      2   12.333  -0.003   438023   164.7
Aroclor-1268 3  12.044   0.028    119706    50.7      3   12.709  -0.004     6714     3.2
Aroclor-1268 4  12.788  -0.004     83650    10.1      4   13.526   0.006    40654     5.3
      Total Col1Ave (4 peaks):    54.6       Total Col2Ave (4 peaks):    63.5   RPD = 15
      Corrected Ave (3 peaks):    44.8       Corrected Ave (3 peaks):    29.8   RPD = 40*
```

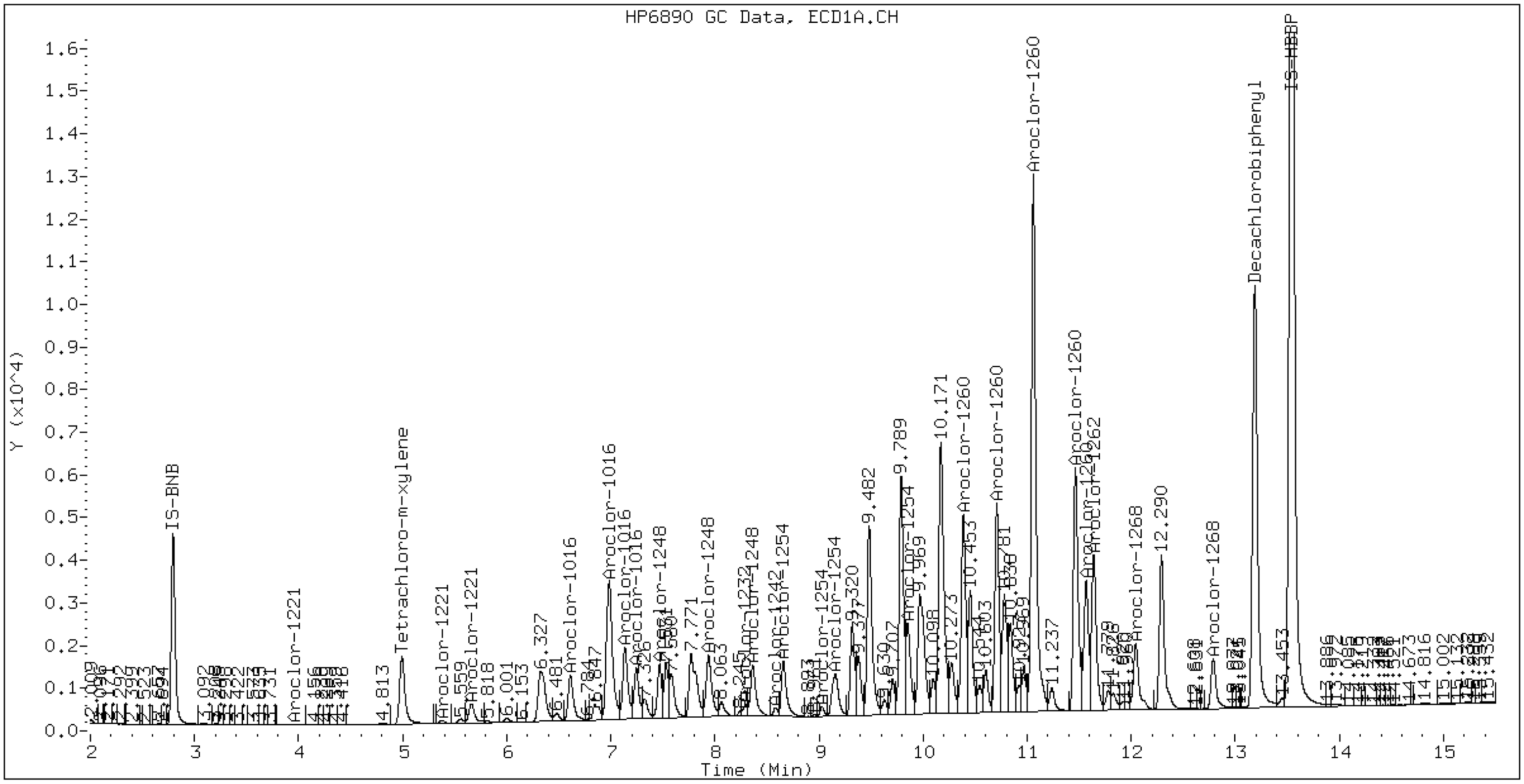
Total PCB Area Col1 (5.090 - 13.086) =	6800661	Col1 Total PCB = 0.8 ppm*
Total PCB Area Col2 (5.090 - 13.086) =	5873681	Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

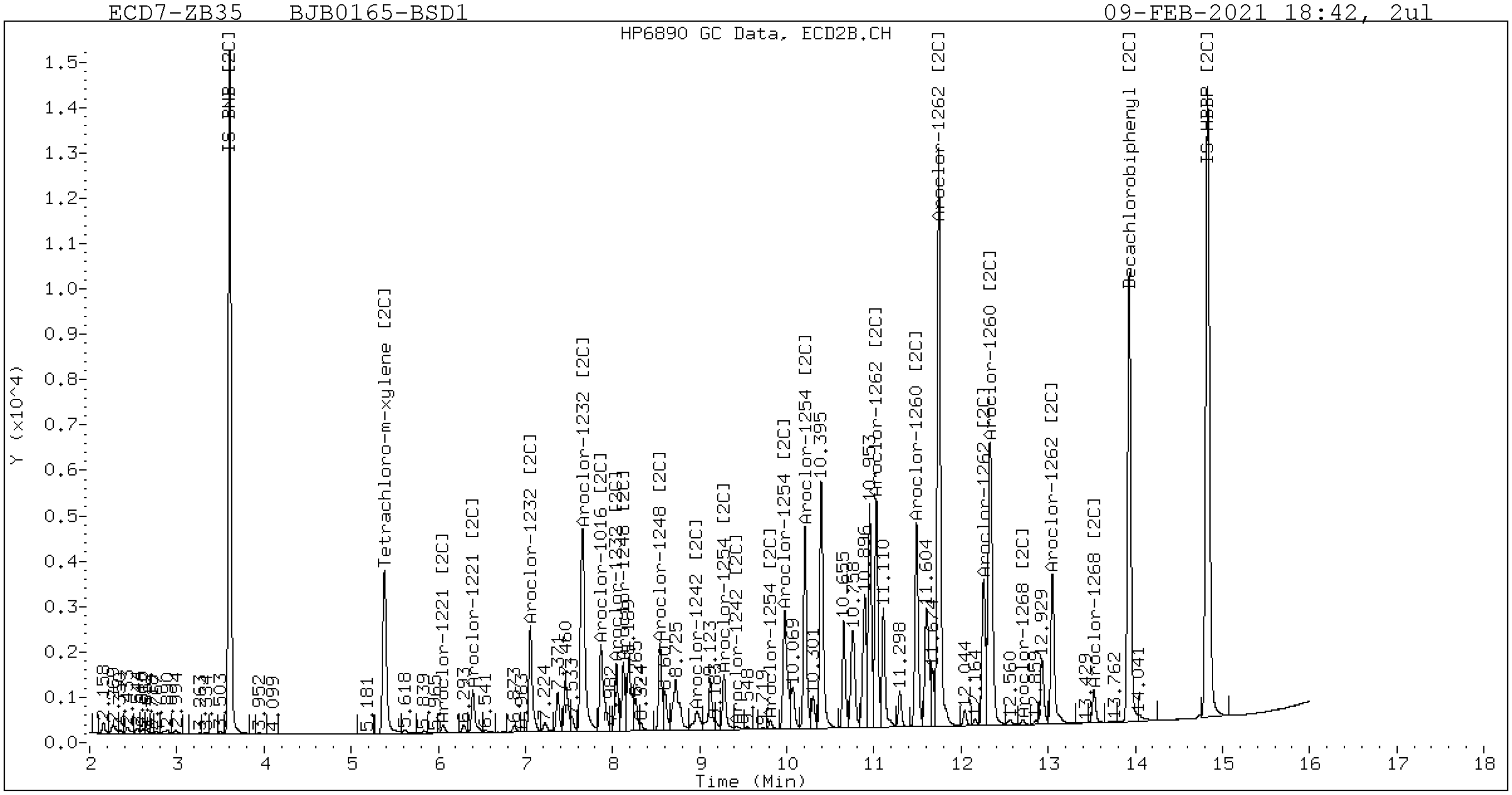
PCB Dual Column Chromatograms

ECD7-ZB5 BJB0165-BSD1 09-FEB-2021 18:42, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BJB0165-BSD1 09-FEB-2021 18:42, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10NW-5

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	02/09/21 20:25
Batch:	BJB0165	Laboratory ID:	BJB0165-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	6.24 g / 5 mL	Source Sample:	P8-10NW-5

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Aroclor 1016	490	ND	U	326		66.5	52 - 120
Aroclor 1260	490	71.0		451		77.6	57 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-10NW-5

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	02/09/21 20:46
Batch:	BJB0165	Laboratory ID:	BJB0165-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	6.32 g / 5 mL	Source Sample:	P8-10NW-5

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor 1016	483	341		70.6	4.70	30	52 - 120
Aroclor 1260	483	450		78.5	0.383	30	57 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092111ECD5.D
Data file 2: /210209.b/210209.b/02092111ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BJB0165-MS1
Client ID:
Injection Date: 09-FEB-2021 20:25
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.991	0.001	97455	5.379	-0.003	187766	29.1	29.9	2.5	Tetrachloro-m-xylene
13.176	-0.010	373318	13.919	-0.008	302281	29.2	29.4	0.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	212157	28.0
Hexabromobiphenyl	1343188	1189047	-11.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	594801	-29.0
Hexabromobiphenyl	850693	587535	-30.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.606	-0.004	60417	329.6	1	7.053	-0.003	108050	418.8
Aroclor-1016	2	6.979	-0.003	221223	370.7	2	7.650	-0.007	241897	413.8
Aroclor-1016	3	7.128	-0.006	86112	303.3	3	7.861	-0.007	89864	349.5
Aroclor-1016	4	7.238	-0.005	58302	326.8	4	8.117	-0.006	64587	441.0
	Total Col1Ave (4 peaks):			332.6		Total Col2Ave (4 peaks):			405.8	RPD = 20
	Corrected Ave (3 peaks):			319.9		Corrected Ave (3 peaks):			394.1	RPD = 21
Aroclor-1221	1	3.943	0.000	416	13.7	1	---			0.0
Aroclor-1221	2	5.378	0.003	4212	104.7	2	6.053	-0.006	10721	143.4
Aroclor-1221	3	5.658	-0.002	28946	212.1	3	6.395	-0.004	42596	316.1
	Total Col1Ave (3 peaks):			110.2		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	3.943	0.001	416	23.9	1	---			0.0
Aroclor-1232	2	6.606	-0.002	60417	777.9	2	7.053	-0.003	108050	913.6
Aroclor-1232	3	6.979	-0.003	221223	889.5	3	7.650	-0.007	241897	962.7
Aroclor-1232	4	8.280	-0.015	37011	426.2	4	8.035	-0.009	43352	905.1
	Total Col1Ave (4 peaks):			529.4		Total Col2Ave (3 peaks):			927.1	RPD = 55*
	Corrected Ave (3 peaks):			409.4		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.606	-0.004	60417	407.3	1	7.053	-0.003	108050	508.5
Aroclor-1242	2	6.979	-0.003	221223	450.1	2	7.650	-0.007	241897	485.1
Aroclor-1242	3	8.280	-0.011	37011	225.5	3	8.965	-0.017	44526	221.7
Aroclor-1242	4	8.569	-0.017	36980	221.7	4	9.398	-0.022	19094	97.5
	Total Col1Ave (4 peaks):			326.1		Total Col2Ave (4 peaks):			328.2	RPD = 1
	Corrected Ave (3 peaks):			284.8		Corrected Ave (3 peaks):			268.1	RPD = 6
Aroclor-1248	1	7.462	-0.006	71145	313.2	1	8.117	-0.006	64587	334.0
Aroclor-1248	2	7.929	-0.008	88609	258.5	2	8.537	-0.008	78925	330.0
Aroclor-1248	3	8.351	0.000	118583	167.7	3	8.965	-0.017	44526	119.9
Aroclor-1248	4	8.569	-0.018	36980	140.9	4	9.398	-0.022	19094	53.3
	Total Col1Ave (4 peaks):			220.1		Total Col2Ave (4 peaks):			209.3	RPD = 5
	Corrected Ave (3 peaks):			189.0		Corrected Ave (3 peaks):			167.7	RPD = 12
Aroclor-1254	1	8.645	-0.010	138388	220.8	1	9.264	-0.012	101619	256.5
Aroclor-1254	2	8.715	-0.010	46668	134.8	2	9.398	0.027	19094	87.8
Aroclor-1254	3	9.019	-0.008	70744	170.8	3	9.795	-0.012	41898	144.1
Aroclor-1254	4	9.149	-0.012	192814	214.9	4	9.950	-0.009	200580	249.4
Aroclor-1254	5	9.843	-0.016	157016	270.5	5	10.192	-0.007	255655	333.9
	Total Col1Ave (5 peaks):			202.4		Total Col2Ave (5 peaks):			214.3	RPD = 6
	Corrected Ave (4 peaks):			185.3		Corrected Ave (4 peaks):			184.4	RPD = 0
Aroclor-1260	1	10.372	-0.013	193792	481.8	1	11.014	-0.011	152731	371.1
Aroclor-1260	2	10.693	-0.013	186777	463.4	2	11.478	-0.011	172017	449.6
Aroclor-1260	3	11.046	-0.012	526633	455.6	3	11.730	-0.012	409007	386.3
Aroclor-1260	4	11.447	-0.014	234202	438.1	4	12.318	-0.012	261402	382.3
Aroclor-1260	5	11.554	-0.011	116070	465.6	NS	---			----
	Total Col1Ave (5 peaks):			460.9		Total Col2Ave (4 peaks):			397.3	RPD = 15
	Corrected Ave (4 peaks):			455.7		Corrected Ave (3 peaks):			379.9	RPD = 18
Aroclor-1262	1	10.372	-0.016	193792	292.4	1	11.014	-0.012	152731	225.5
Aroclor-1262	2	11.046	-0.015	526633	334.1	2	11.730	-0.016	409007	270.9
Aroclor-1262	3	11.554	-0.015	116070	259.8	3	12.246	-0.013	121479	278.2
Aroclor-1262	4	11.625	-0.015	143431	241.8	4	13.035	-0.099	118102	217.1
	Total Col1Ave (4 peaks):			282.0		Total Col2Ave (4 peaks):			248.0	RPD = 13
	Corrected Ave (3 peaks):			264.7		Corrected Ave (3 peaks):			237.9	RPD = 11
Aroclor-1268	1	11.554	-0.015	116070	76.3	1	12.246	-0.013	121479	81.7
Aroclor-1268	2	11.625	-0.013	143431	82.9	2	12.318	-0.018	261402	145.6
Aroclor-1268	3	12.028	0.012	62003	43.8	3	12.698	-0.015	4780	3.3
Aroclor-1268	4	12.774	-0.018	56055	11.3	4	13.512	-0.007	33394	6.5
	Total Col1Ave (4 peaks):			53.6		Total Col2Ave (4 peaks):			59.3	RPD = 10
	Corrected Ave (3 peaks):			43.8		Corrected Ave (3 peaks):			30.5	RPD = 36

Total PCB Area Col1 (5.090 - 13.086) = 5704627 Col1 Total PCB = 0.7 ppm*

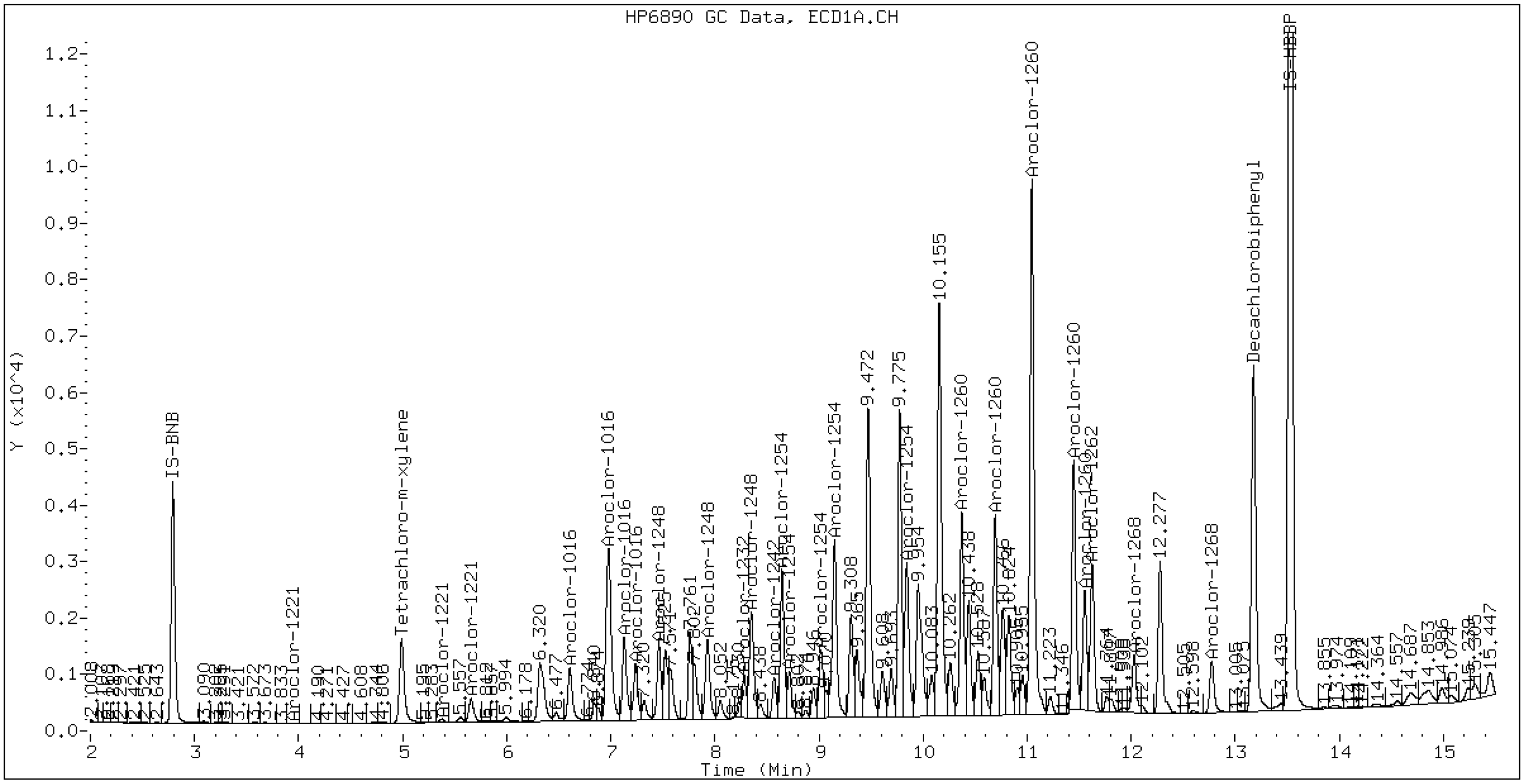
Total PCB Area Col2 (5.090 - 13.086) = 4742031 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

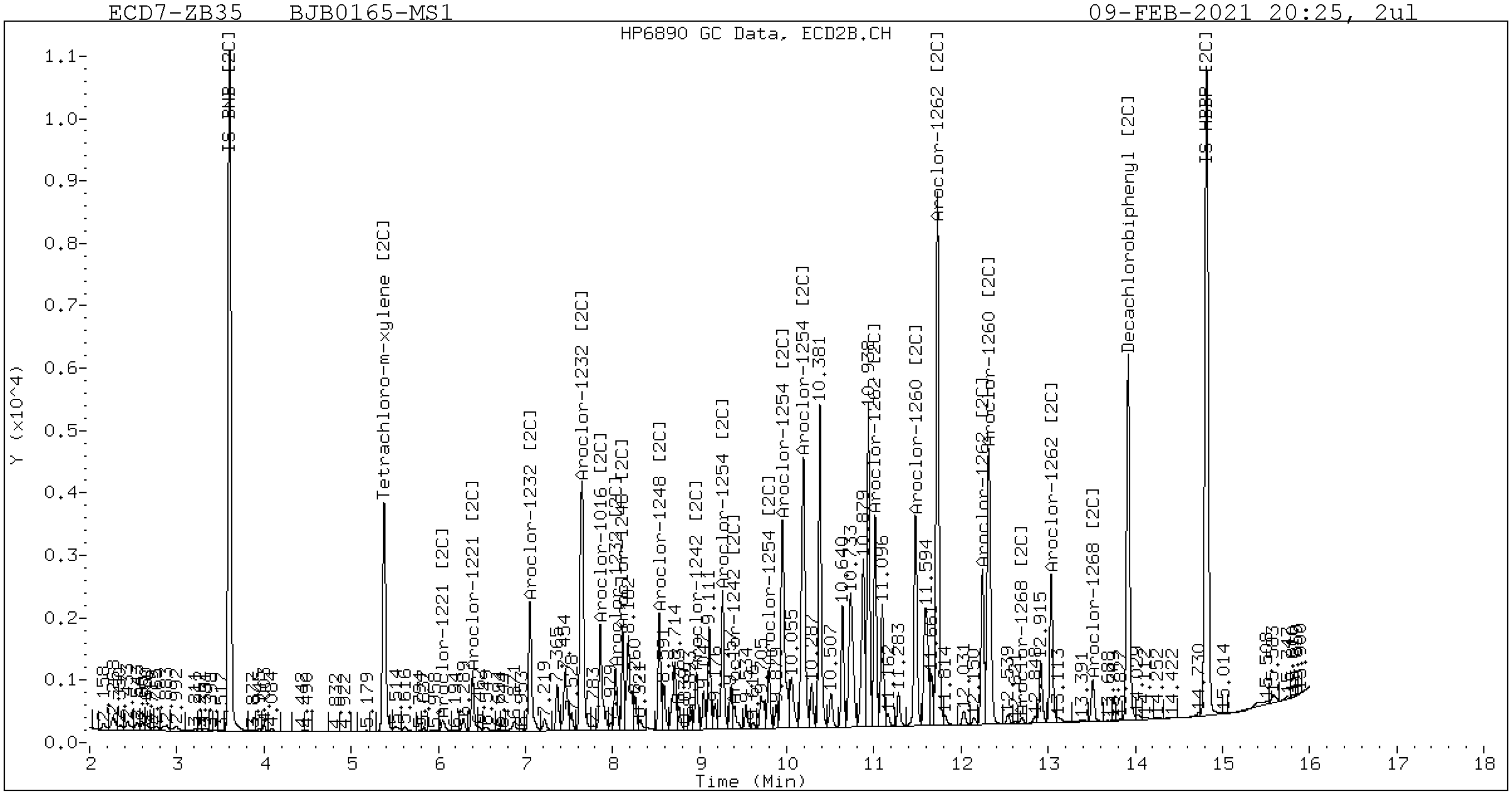
PCB Dual Column Chromatograms

ECD7-ZB5 BJB0165-MS1 09-FEB-2021 20:25, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BJB0165-MS1 09-FEB-2021 20:25, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092112ECD5.D
Data file 2: /210209.b/210209.b/02092112ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BJB0165-MSD1
Client ID:
Injection Date: 09-FEB-2021 20:46
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.988	-0.002	100831	5.378	-0.004	192180	31.7	31.4	0.7	Tetrachloro-m-xylene
13.175	-0.011	366352	13.918	-0.009	293866	29.4	29.3	0.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	201821	21.8
Hexabromobiphenyl	1343188	1159116	-13.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	578117	-31.0
Hexabromobiphenyl	850693	573852	-32.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

```
                           ZB5 Col                                   ZB35 Col
Aroclor   Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
=========================================================================================
Aroclor-1016 1   6.606  -0.004    60515   347.0      1    7.052  -0.004   110969   442.6
Aroclor-1016 2   6.979  -0.004   225177   396.6      2    7.649  -0.008   242601   427.0
Aroclor-1016 3   7.128  -0.006    85845   317.8      3    7.859  -0.008    90857   363.6
Aroclor-1016 4   7.237  -0.006    59521   350.8      4    8.117  -0.006    66420   466.6
      Total Col1Ave (4 peaks):   353.1       Total Col2Ave (4 peaks):   424.9   RPD = 18
      Corrected Ave (3 peaks):   338.5       Corrected Ave (3 peaks):   411.0   RPD = 19

Aroclor-1221 1   3.945   0.002      474    16.4      1     ---                       0.0
Aroclor-1221 2   5.375   0.000     4133   108.0      2    6.053  -0.007    13140   180.8
Aroclor-1221 3   5.656  -0.004    29559   227.7      3    6.394  -0.004    45090   344.2
      Total Col1Ave (3 peaks):   117.4                Col2Ave: <3 Quant Peaks

Aroclor-1232 1   3.945   0.003      474    28.6      1     ---                       0.0
Aroclor-1232 2   6.606  -0.002    60515   819.1      2    7.052  -0.004   110969   965.3
Aroclor-1232 3   6.979  -0.004   225177   951.8      3    7.649  -0.008   242601   993.4
Aroclor-1232 4   8.279  -0.017    37000   447.9      4    8.034  -0.010    44764   961.5
      Total Col1Ave (4 peaks):   561.9       Total Col2Ave (3 peaks):   973.4   RPD = 54*
      Corrected Ave (3 peaks):   431.9                     Corrected Ave: < 3 Peaks

Aroclor-1242 1   6.606  -0.004    60515   428.9      1    7.052  -0.004   110969   537.3
Aroclor-1242 2   6.979  -0.004   225177   481.6      2    7.649  -0.008   242601   500.6
Aroclor-1242 3   8.279  -0.012    37000   236.9      3    8.964  -0.018    45176   231.4
Aroclor-1242 4   8.567  -0.018    37217   234.5      4    9.396  -0.024    18845    99.0
      Total Col1Ave (4 peaks):   345.5       Total Col2Ave (4 peaks):   342.1   RPD = 1
      Corrected Ave (3 peaks):   300.1       Corrected Ave (3 peaks):   277.0   RPD = 8

Aroclor-1248 1   7.461  -0.006    72246   334.3      1    8.117  -0.006    66420   353.4
Aroclor-1248 2   7.928  -0.010    87819   269.3      2    8.536  -0.009    80533   346.5
Aroclor-1248 3   8.350  -0.000   118503   176.1      3    8.964  -0.018    45176   125.2
Aroclor-1248 4   8.567  -0.019    37217   149.0      4    9.396  -0.024    18845    54.1
      Total Col1Ave (4 peaks):   232.2       Total Col2Ave (4 peaks):   219.8   RPD = 5
      Corrected Ave (3 peaks):   198.2       Corrected Ave (3 peaks):   175.2   RPD = 12

Aroclor-1254 1   8.644  -0.012   138510   232.3      1    9.263  -0.013   100248   260.3
Aroclor-1254 2   8.715  -0.011    46655   141.7      2    9.396   0.025    18845    89.1
Aroclor-1254 3   9.017  -0.010    69330   175.9      3    9.794  -0.013    39980   141.5
Aroclor-1254 4   9.148  -0.013   190723   223.5      4    9.949  -0.010   195068   249.5
Aroclor-1254 5   9.841  -0.018   152547   276.2      5   10.192  -0.008   249613   335.4
      Total Col1Ave (5 peaks):   209.9       Total Col2Ave (5 peaks):   215.2   RPD = 2
      Corrected Ave (4 peaks):   193.4       Corrected Ave (4 peaks):   185.1   RPD = 4

Aroclor-1260 1  10.372  -0.013   191879   489.3      1   11.014  -0.011   149058   370.8
Aroclor-1260 2  10.692  -0.014   185065   471.0      2   11.478  -0.011   166982   446.9
Aroclor-1260 3  11.045  -0.013   524354   465.4      3   11.730  -0.012   400938   387.7
Aroclor-1260 4  11.447  -0.015   229359   440.1      4   12.318  -0.013   256360   383.8
Aroclor-1260 5  11.554  -0.012   111617   459.3     NS     ---                      ----
      Total Col1Ave (5 peaks):   465.0       Total Col2Ave (4 peaks):   397.3   RPD = 16
      Corrected Ave (4 peaks):   458.9       Corrected Ave (3 peaks):   380.8   RPD = 19

Aroclor-1262 1  10.372  -0.016   191879   297.0      1   11.014  -0.012   149058   225.4
Aroclor-1262 2  11.045  -0.015   524354   341.3      2   11.730  -0.016   400938   271.9
Aroclor-1262 3  11.554  -0.015   111617   256.3      3   12.247  -0.013   119642   280.6
Aroclor-1262 4  11.625  -0.015   140359   242.7      4   13.035  -0.098   116602   219.4
      Total Col1Ave (4 peaks):   284.3       Total Col2Ave (4 peaks):   249.3   RPD = 13
      Corrected Ave (3 peaks):   265.4       Corrected Ave (3 peaks):   238.9   RPD = 10

Aroclor-1268 1  11.554  -0.015   111617    75.3      1   12.247  -0.013   119642    82.4
Aroclor-1268 2  11.625  -0.013   140359    83.2      2   12.318  -0.018   256360   146.2
Aroclor-1268 3  12.027   0.011    61256    44.3      3   12.698  -0.015     4622     3.3
Aroclor-1268 4  12.773  -0.018    53253    11.0      4   13.513  -0.007    32212     6.4
      Total Col1Ave (4 peaks):    53.5       Total Col2Ave (4 peaks):    59.6   RPD = 11
      Corrected Ave (3 peaks):    43.5       Corrected Ave (3 peaks):    30.7   RPD = 35
```

Total PCB Area Col1 (5.090 - 13.086) = 5664273 Col1 Total PCB = 0.7 ppm*

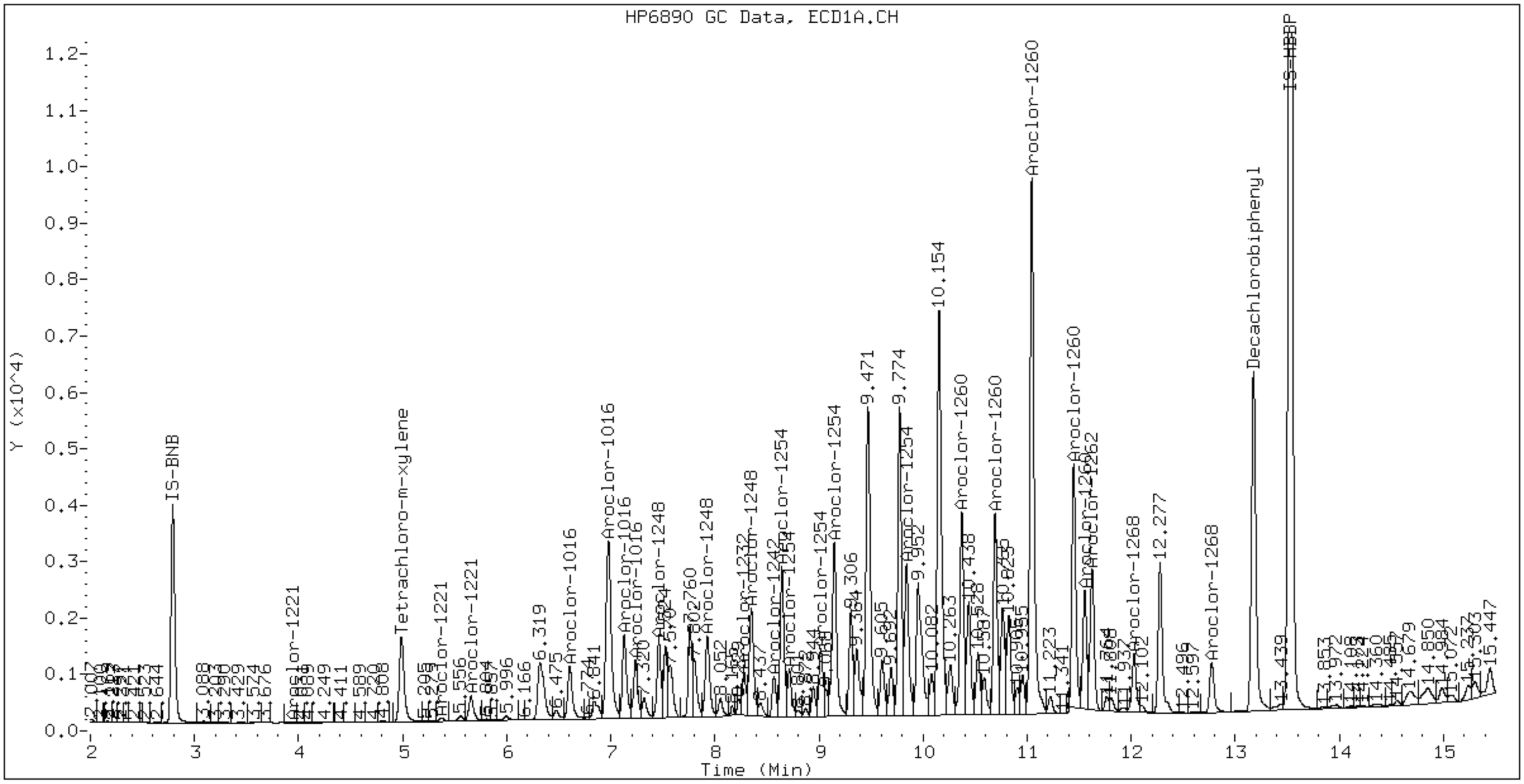
Total PCB Area Col2 (5.090 - 13.086) = 4737763 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

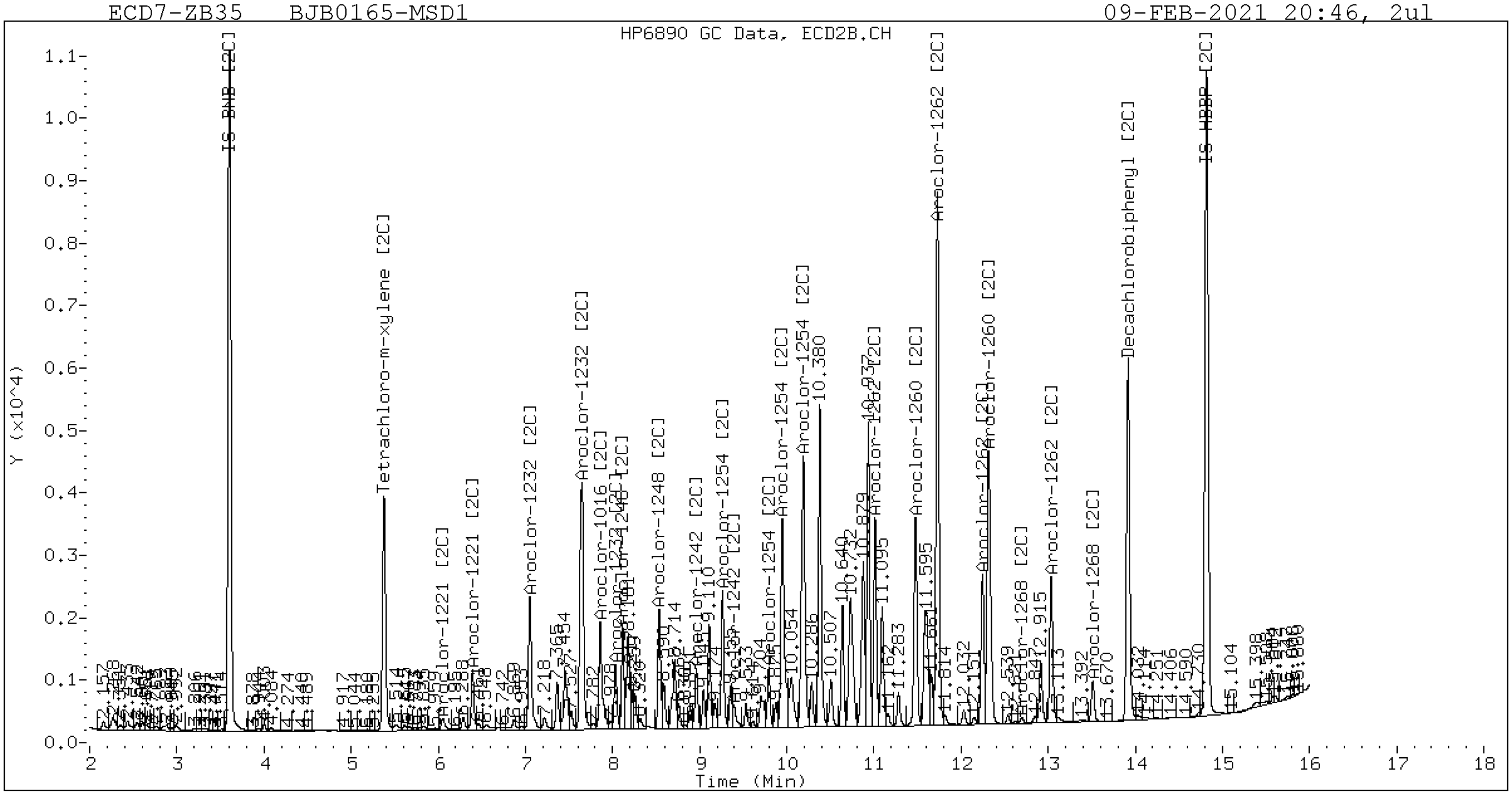
PCB Dual Column Chromatograms

ECD7-ZB5 BJB0165-MSD1 09-FEB-2021 20:46, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BJB0165-MSD1 09-FEB-2021 20:46, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EB00020	Instrument:	ECD7
Calibration Date:	02/06/2021	Column (1):	ZB5

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RRF		RRF		**RRF**		**RRF**		RRF		RRF
Aroclor 1016	250	0.1210992	20	0.1172693	50	0.1162187	1000	0.112163	100	0.117254	500	0.1187563
Aroclor 1260	250	3.819584E-02	20	3.835685E-02	50	0.0366264	1000	3.597116E-02	100	3.645509E-02	500	3.602241E-02
Decachlorobiphenyl	40	0.7995902	3.2	1.013665	8	0.8625914			16	0.8187985	80	0.8010963
Tetrachlorometaxylene	40	1.386027	3.2	1.049981	8	1.118082	160	1.417851	16	1.175876	80	1.423464

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EB00020	Instrument:	ECD7
Calibration Date:	02/06/2021	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RRF		RRF		RRF		RRF		RRF		RRF
Aroclor 1232									250	4.059334E-02		
Aroclor 1242	250	9.151659E-02										
Aroclor 1248			250	0.1451479								
Aroclor 1254					250	0.2160479						
Aroclor 1262							250	5.514886E-02				
Aroclor 1268									250	0.1619735		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EB00020	Instrument:	ECD7
Calibration Date:	02/06/2021	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016	0.1171267	2.5			RSD (20)	
Aroclor 1232		0.0			RSD (20)	
Aroclor 1242		0.0			RSD (20)	
Aroclor 1248		0.0			RSD (20)	
Aroclor 1254		0.0			RSD (20)	
Aroclor 1260	3.693796E-02	2.9			RSD (20)	
Aroclor 1262		0.0			RSD (20)	
Aroclor 1268		0.0			RSD (20)	
Decachlorobiphenyl	0.8591483	10.5			RSD (20)	
Tetrachlorometaxylene	1.26188	13.2			RSD (20)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EB00020	Instrument:	ECD7
Calibration Date:	02/06/2021	Column (2):	ZB35

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RRF		RRF		**RRF**		**RRF**		RRF		RRF
Aroclor 1016 [2C]	250	4.538011E-02	20	3.556153E-02	50	3.920616E-02	1000	4.369476E-02	100	0.0415962	500	4.595989E-02
Aroclor 1260 [2C]	250	9.155709E-02	20	8.116783E-02	50	8.174126E-02	1000	8.870324E-02	100	8.361078E-02	500	9.134333E-02
Decachlorobiphenyl [2C]	40	1.538694	3.2	1.239227	8	1.24169			16	1.385243	80	1.593812
Tetrachlorometaxylene [2C]	40	0.9363431	3.2	0.6677186	8	0.7689352	160	0.9234909	16	0.8409652	80	0.9370605

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EB00020	Instrument:	ECD7
Calibration Date:	02/06/2021	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RRF		RRF		RRF		RRF		RRF		RRF
Aroclor 1232 [2C]									250	1.467499E-02		
Aroclor 1242 [2C]	250	3.725243E-02										
Aroclor 1248 [2C]			250	3.908168E-02								
Aroclor 1254 [2C]					250	6.656405E-02						
Aroclor 1262 [2C]							250	0.1078194				
Aroclor 1268 [2C]									250	0.3353013		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EB00020	Instrument:	ECD7
Calibration Date:	02/06/2021	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016 [2C]	4.189978E-02	9.5			RSD (20)	
Aroclor 1232 [2C]		0.0			RSD (20)	
Aroclor 1242 [2C]		0.0			RSD (20)	
Aroclor 1248 [2C]		0.0			RSD (20)	
Aroclor 1254 [2C]		0.0			RSD (20)	
Aroclor 1260 [2C]	8.635392E-02	5.5			RSD (20)	
Aroclor 1262 [2C]		0.0			RSD (20)	
Aroclor 1268 [2C]		0.0			RSD (20)	
Decachlorobiphenyl [2C]	1.399733	11.7			RSD (20)	
Tetrachlorometaxylene [2C]	0.8457522	13.0			RSD (20)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 2/8/2021 12:17:24PM

ANALYSIS SEQUENCE

SJB0079

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: EB00020

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SJB0079-CAL1	0.25PPM AR1660	QC		1	I007341	I007345	
SJB0079-CAL2	0.02PPM AR1660	QC		2	I007344	I007345	
SJB0079-CAL3	0.05PPM AR1660	QC		3	I007343	I007345	
SJB0079-CAL4	1.0PPM AR1660	QC		4	I007317	I007345	
SJB0079-CAL5	0.1PPM AR1660	QC		5	I007342	I007345	
SJB0079-CAL6	0.5PPM AR1660	QC		6	I007340	I007345	
SJB0079-CAL7	0.25PPM AR1242	QC		7	I007322	I007345	
SJB0079-CAL8	0.25PPM AR1248	QC		8	I007321	I007345	
SJB0079-CAL9	0.25PPM AR1254	QC		9	I007320	I007345	
SJB0079-CALA	0.25PPM AR2162	QC		10	I007319	I007345	
SJB0079-CALB	0.25PPM AR3268	QC		11	I010378	I007345	
SJB0079-SCV1	AR1660SCV1	QC		12	J000948	I007345	
SJB0079-SCV2	AR1242SCV2	QC		13	J000949	I007345	
SJB0079-SCV3	AR1248SCV3	QC		14	J000950	I007345	
SJB0079-SCV4	AR1254SCV4	QC		15	J000951	I007345	
SJB0079-SCV5	AR2162SCV5	QC		16	J000952	I007345	
SJB0079-SCV6	AR3268SCV6	QC		17	J000953	I007345	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210206.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	06-FEB-2021 16:09	02062101.D	1	RINSE	
2	06-FEB-2021 16:30	02062102.D	1	DDT	
3	06-FEB-2021 14:39	02062102a.D	1	DDT	
4	06-FEB-2021 16:50	02062103.D	1	RINSE	
5	06-FEB-2021 14:59	02062103a.D	1	RINSE	
6	06-FEB-2021 17:55	02062104.D	1	RINSE	
7	06-FEB-2021 15:20	02062104a.D	1	RINSE	
8	06-FEB-2021 18:15	02062105.D	1	RINSE	
9	06-FEB-2021 18:36	02062106.D	1	RINSE	
10	06-FEB-2021 18:57	02062107.D	1	RINSE	
11	06-FEB-2021 19:17	02062108.D	1	RINSE	
12	06-FEB-2021 19:38	02062109.D	1	IB	
13	06-FEB-2021 19:58	02062110.D	1	0.25PPMAR1660	
14	06-FEB-2021 20:19	02062111.D	1	0.02PPMAR1660	
15	06-FEB-2021 20:40	02062112.D	1	0.05PPMAR1660	
16	06-FEB-2021 21:00	02062113.D	1	1PPMAR1660	
17	06-FEB-2021 21:21	02062114.D	1	0.1PPMAR1660	
18	06-FEB-2021 21:41	02062115.D	1	0.5PPMAR1660	
19	06-FEB-2021 22:02	02062116.D	1	AR1242	
20	06-FEB-2021 22:22	02062117.D	1	AR1248	
21	06-FEB-2021 22:43	02062118.D	1	AR1254	
22	06-FEB-2021 23:04	02062119.D	1	AR2162	
23	06-FEB-2021 23:24	02062120.D	1	AR3268	
24	06-FEB-2021 23:45	02062121.D	1	AR1660SCV1	
25	07-FEB-2021 00:05	02062122.D	1	AR1242SCV2	
26	07-FEB-2021 00:26	02062123.D	1	AR1248SCV3	
27	07-FEB-2021 00:46	02062124.D	1	AR1254SCV4	
28	07-FEB-2021 01:07	02062125.D	1	AR2162SCV5	
29	07-FEB-2021 01:28	02062126.D	1	AR3268SCV6	
30	07-FEB-2021 01:48	02062127.D	1	0.1PPM DDTS	
31	07-FEB-2021 02:09	02062128.D	1	DDT BD	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210206.b\210206.b

ARI Job No.: IB   Method: PCB.m\PCB2.m   Instrument: ecd7.i   Date: 06-FEB-2021

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1938	02062109ECD7.D	IB		1	NO MANUAL INTEGRATION
1958	02062110ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
2019	02062111ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
2040	02062112ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
2100	02062113ECD7.D	1PPMAR1660		1	NO MANUAL INTEGRATION
2121	02062114ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
2141	02062115ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
2202	02062116ECD7.D	AR1242		1	Aroclor-1242 [2C],
2222	02062117ECD7.D	AR1248		1	NO MANUAL INTEGRATION
2243	02062118ECD7.D	AR1254		1	NO MANUAL INTEGRATION
2303	02062119ECD7.D	AR2162		1	NO MANUAL INTEGRATION
2324	02062120ECD7.D	AR3268		1	NO MANUAL INTEGRATION
2345	02062121ECD7.D	AR1660SCV1		1	NO MANUAL INTEGRATION
0005	02062122ECD7.D	AR1242SCV2		1	NO MANUAL INTEGRATION
0026	02062123ECD7.D	AR1248SCV3		1	NO MANUAL INTEGRATION
0046	02062124ECD7.D	AR1254SCV4		1	NO MANUAL INTEGRATION
0107	02062125ECD7.D	AR2162SCV5		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210206.b\210206.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0128	02062126ECD7.D	AR3268SCV6		1	NO MANUAL INTEGRATION
0148	02062127ECD7.D	0.1PPM DDTS		1	NO MANUAL INTEGRATION
0209	02062128ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
1938	02062109ECD7.D	IB		1	NO MANUAL INTEGRATION
1958	02062110ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
2019	02062111ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
2040	02062112ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
2100	02062113ECD7.D	1PPMAR1660		1	NO MANUAL INTEGRATION
2121	02062114ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
2141	02062115ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
2202	02062116ECD7.D	AR1242		1	Aroclor-1242,
2222	02062117ECD7.D	AR1248		1	NO MANUAL INTEGRATION
2243	02062118ECD7.D	AR1254		1	NO MANUAL INTEGRATION
2304	02062119ECD7.D	AR2162		1	NO MANUAL INTEGRATION
2324	02062120ECD7.D	AR3268		1	NO MANUAL INTEGRATION
2345	02062121ECD7.D	AR1660SCV1		1	NO MANUAL INTEGRATION
0005	02062122ECD7.D	AR1242SCV2		1	NO MANUAL INTEGRATION
0026	02062123ECD7.D	AR1248SCV3		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210206.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0046	02062124ECD7.D	AR1254SCV4		1	NO MANUAL INTEGRATION
0107	02062125ECD7.D	AR2162SCV5		1	NO MANUAL INTEGRATION
0128	02062126ECD7.D	AR3268SCV6		1	NO MANUAL INTEGRATION
0148	02062127ECD7.D	0.1PPM DDTS		1	2,4-DDT, 4,4-DDD,
0209	02062128ECD7.D	DDT BD		1	NO MANUAL INTEGRATION

Security Status Report

Date: 08-Feb-2021 09:37

02062101ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062102aECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062102ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062103aECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062103ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062104aECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062104ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062105ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062106ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062107ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062108ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062109ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062110ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062111ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062112ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062113ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062114ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062115ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062116ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062117ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062118ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062119ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062120ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062121ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062122ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062123ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062124ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062125ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062126ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062127ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062128ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-FEB-2021 19:58
End Cal Date : 07-FEB-2021 01:48
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\210206.b\PCB.m
Last Edit : 07-Feb-2021 13:19 jrains
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\210206.b\02062111.D
Level 2: \\target\share\chem4\ecd7.i\210206.b\02062112.D
Level 3: \\target\share\chem4\ecd7.i\210206.b\02062114.D
Level 4: \\target\share\chem4\ecd7.i\210206.b\02062110.D
Level 5: \\target\share\chem4\ecd7.i\210206.b\02062115.D
Level 6: \\target\share\chem4\ecd7.i\210206.b\02062113.D
Level 7: \\target\share\chem4\ecd7.i\210206.b\02062120.D
Level 8: \\target\share\chem4\ecd7.i\210206.b\02062127.D

	20.000	50.000	100.000	250.000	500.000	1000.000		
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	% RSD
	250.000	0.000e+00						
	Level 7	Level 8						
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01236	+++++					0.01236	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01655	+++++					0.01655	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05487	+++++					0.05487	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05596	+++++					0.05596	0.000

(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18543	+++++					0.18543	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07554	+++++					0.07554	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06293	+++++					0.06293	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00681	+++++					0.00681	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-FEB-2021 19:58
End Cal Date : 07-FEB-2021 01:48
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\210206.b\PCB.m
Last Edit : 07-Feb-2021 13:19 jrains
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2 / 0.000e+00 Level 8	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02929	+++++					0.02929	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09383	+++++					0.09383	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03244	+++++					0.03244	0.000
7 Aroclor-1016(1)	0.07066	0.06693	0.07025	0.06986	0.06884	0.06461		
	+++++	+++++					0.06852	3.412
(2)	0.23387	0.21897	0.22100	0.23413	0.23111	0.22062		
	+++++	+++++					0.22662	3.153
(3)	0.11416	0.10741	0.10770	0.10794	0.10440	0.09696		
	+++++	+++++					0.10643	5.288
(4)	0.06489	0.06698	0.06687	0.06881	0.06878	0.06546		
	+++++	+++++					0.06697	2.432
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		

	0.08471	+++++					0.08471	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.12828	+++++					0.12828	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.26539	+++++					0.26539	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09794	+++++					0.09794	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-FEB-2021 19:58
End Cal Date : 07-FEB-2021 01:48
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\210206.b\PCB.m
Last Edit : 07-Feb-2021 13:19 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.41164	+++++	0.41164	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.29284	+++++	0.29284	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.33378	+++++	0.33378	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.21945	+++++	0.21945	0.000
9 Aroclor-1260(1)	0.02851	0.02727	0.02693	0.02725	0.02639	0.02554	+++++	+++++	0.02698	3.677
(2)	0.02763	0.02712	0.02699	0.02756	0.02663	0.02599	+++++	+++++	0.02699	2.273
(3)	0.07934	0.07660	0.07565	0.08113	0.07491	0.07707				

	+++++	+++++					0.07745	3.039
(4)	0.03522	0.03521	0.03531	0.03663	0.03602	0.03600		
	+++++	+++++					0.03573	1.618
(5)	0.01837	0.01694	0.01740	0.01674	0.01617	0.01526		
	+++++	+++++					0.01681	6.315
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04445	+++++					0.04445	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-FEB-2021 19:58
End Cal Date : 07-FEB-2021 01:48
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\210206.b\PCB.m
Last Edit : 07-Feb-2021 13:19 jrains
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2 / 0.000e+00 Level 8	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10508	+++++					0.10508	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02987	+++++					0.02987	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03957	+++++					0.03957	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10125	+++++					0.10125	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.11540	+++++					0.11540	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09670	+++++					0.09670	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.33091	+++++					0.33091	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		

	+++++	3139					3139	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	3296					3296	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	5358					5358	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-FEB-2021 19:58
End Cal Date : 07-FEB-2021 01:48
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\210206.b\PCB.m
Last Edit : 07-Feb-2021 13:19 jrains
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2 / 0.000e+00 Level 8	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	7746					7746	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	4705					4705	0.000
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 1 Tetrachloro-m-xylene	1.05303	1.10705	1.16132	1.37567	1.41854	1.41467		
	+++++	+++++					1.25504	13.250
$ 13 Decachlorobiphenyl	1.02747	0.86259	0.81880	0.79394	0.80110	+++++		
	+++++	+++++					0.86078	11.261

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-FEB-2021 19:58
End Cal Date : 07-FEB-2021 01:48
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\210206.b\PCB.m\PCB2.m
Last Edit : 08-Feb-2021 08:59 ecd7.i
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\210206.b\210206.b\02062111.D
Level 2: \\target\share\chem4\ecd7.i\210206.b\210206.b\02062112.D
Level 3: \\target\share\chem4\ecd7.i\210206.b\210206.b\02062114.D
Level 4: \\target\share\chem4\ecd7.i\210206.b\210206.b\02062110.D
Level 5: \\target\share\chem4\ecd7.i\210206.b\210206.b\02062115.D
Level 6: \\target\share\chem4\ecd7.i\210206.b\210206.b\02062113.D
Level 7: \\target\share\chem4\ecd7.i\210206.b\210206.b\02062120.D
Level 8: \\target\share\chem4\ecd7.i\210206.b\210206.b\02062127.D

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2 / 0.000e+00 Level 8	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
1 Aroclor-1221 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00467	+++++					0.00467	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01006	+++++					0.01006	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01813	+++++					0.01813	0.000
4 Aroclor-1232 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00255	+++++					0.00255	0.000

(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01591	+++++					0.01591	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03380	+++++					0.03380	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00644	+++++					0.00644	0.000
3 Aroclor-1242 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02858	+++++					0.02858	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-FEB-2021 19:58
End Cal Date : 07-FEB-2021 01:48
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\210206.b\PCB.m\PCB2.m
Last Edit : 08-Feb-2021 08:59 ecd7.i
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2 / 0.000e+00 Level 8	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06706	+++++					0.06706	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02702	+++++					0.02702	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02635	+++++					0.02635	0.000
6 Aroclor-1248 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02601	+++++					0.02601	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03217	+++++					0.03217	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04994	+++++					0.04994	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04821	+++++					0.04821	0.000
7 Aroclor-1016 [2C](1)	0.03133	0.03299	0.03456	0.03706	0.03743	0.03482		

	+++++	+++++					0.03470	6.734
(2)	0.06128	0.07074	0.07739	0.08700	0.08992	0.08540		
	+++++	+++++					0.07862	14.027
(3)	0.03202	0.03359	0.03514	0.03677	0.03548	0.03447		
	+++++	+++++					0.03458	4.743
(4)	0.01762	0.01949	0.01928	0.02069	0.02102	0.02009		
	+++++	+++++					0.01970	6.183

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-FEB-2021 19:58
End Cal Date : 07-FEB-2021 01:48
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\210206.b\PCB.m\PCB2.m
Last Edit : 08-Feb-2021 08:59 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
8 Aroclor-1254 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05329	+++++					0.05329	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02926	+++++					0.02926	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03909	+++++					0.03909	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10819	+++++					0.10819	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10298	+++++					0.10298	0.000
10 Aroclor-1262 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09221	+++++					0.09221	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.20555	+++++					0.20555	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		

	0.05945	+++++					0.05945	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07407	+++++					0.07407	0.000
9 Aroclor-1260 [2C](1)	0.05550	0.05494	0.05509	0.05835	0.05768	0.05466		
	+++++	+++++					0.05604	2.802
(2)	0.04952	0.04934	0.05032	0.05524	0.05473	0.05339		
	+++++	+++++					0.05209	5.141

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-FEB-2021 19:58
End Cal Date : 07-FEB-2021 01:48
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\210206.b\PCB.m\PCB2.m
Last Edit : 08-Feb-2021 08:59 ecd7.i
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2 / 0.000e+00 Level 8	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
(3)	0.13151	0.13519	0.14000	0.15306	0.15437	0.15090		
	+++++	+++++					0.14417	6.843
(4)	0.08814	0.08749	0.08903	0.09958	0.09859	0.09586		
	+++++	+++++					0.09311	5.930
11 Aroclor-1268 [2C] (1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.20251	+++++					0.20251	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.24437	+++++					0.24437	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.19447	+++++					0.19447	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.69984	+++++					0.69984	0.000
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1628					1628	0.000
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++		

	+++++	916					916	0.000
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	952					952	0.000
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1076					1076	0.000
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	990					990	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-FEB-2021 19:58
End Cal Date : 07-FEB-2021 01:48
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\210206.b\PCB.m\PCB2.m
Last Edit : 08-Feb-2021 08:59 ecd7.i
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2 / 0.000e+00 Level 8	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene [2C]	0.66772	0.76894	0.84097	0.93634	0.93706	0.92349		
	+++++	+++++					0.84575	12.975
$ 13 Decachlorobiphenyl [2C]	1.23923	1.24169	1.38524	1.53869	1.59381	+++++		
	+++++	+++++					1.39973	11.735

Report Date : 08-Feb-2021 09:53 Page 1

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\210206.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	02062110ECD7	02062111ECD7	02062112ECD7	02062113ECD7	02062114ECD7	02062115ECD7
INJ.DATE:	06-FEB-2021	06-FEB-2021	06-FEB-2021	06-FEB-2021	06-FEB-2021	06-FEB-2021
INJ.TIME:	19:58	20:19	20:40	21:00	21:21	21:41

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	2.790	2.788	2.793	2.791	2.792	2.790	2.793	2.693-2.893	2.791	0.002
$ 1 Tetrachloro-m-xylene	4.988	4.982	4.986	4.988	4.987	4.987	4.987	4.887-5.087	4.986	0.002
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	3.943	3.843-4.043	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.608	6.508-6.708	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	3.942	3.842-4.042	+++++	+++++
7 Aroclor-1016	6.609	6.606	6.608	6.608	6.609	6.608	6.608	6.508-6.708	6.608	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	7.467	7.367-7.567	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.658	8.558-8.758	+++++	+++++
9 Aroclor-1260	10.387	10.388	10.388	10.387	10.388	10.387	10.387	10.287-10.487	10.388	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.388	10.288-10.488	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.569	11.469-11.669	+++++	+++++
$ 13 Decachlorobiphenyl	13.188	13.189	13.188	13.192	13.188	13.190	13.188	13.088-13.288	13.189	0.002
* 12 IS-HBBP	13.541	13.543	13.544	13.543	13.544	13.543	13.544	13.444-13.644	13.543	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.641	8.591-8.691	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.179	9.129-9.229	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.634	9.584-9.684	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.056	8.956-9.156	+++++	+++++

Reviewer 1 ______________________ Date: ______________
Reviewer 2 ______________________ Date: ______________

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\210206.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.634	9.534-9.734	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.119	10.019-10.219	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\210206.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\210206.b\210206.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	02062110ECD7	02062111ECD7	02062112ECD7	02062113ECD7	02062114ECD7	02062115ECD7
INJ.DATE:	06-FEB-2021	06-FEB-2021	06-FEB-2021	06-FEB-2021	06-FEB-2021	06-FEB-2021
INJ.TIME:	19:58	20:19	20:40	21:00	21:21	21:41

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB [2C]	3.607	3.606	3.608	3.607	3.607	3.607	3.608	3.508-3.708	3.607	0.001
$ 2 Tetrachloro-m-xylene [	5.379	5.377	5.379	5.379	5.377	5.378	5.379	5.279-5.479	5.378	0.001
1 Aroclor-1221 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.640	4.540-4.740	+++++	+++++
4 Aroclor-1232 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.640	4.540-4.740	+++++	+++++
3 Aroclor-1242 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	7.056	6.956-7.156	+++++	+++++
6 Aroclor-1248 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	8.126	8.026-8.226	+++++	+++++
7 Aroclor-1016 [2C]	7.056	7.057	7.057	7.056	7.056	7.056	7.056	6.956-7.156	7.056	0.000
8 Aroclor-1254 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.282	9.182-9.382	+++++	+++++
10 Aroclor-1262 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.032	10.932-11.132	+++++	+++++
9 Aroclor-1260 [2C]	11.030	11.032	11.032	11.028	11.031	11.030	11.030	10.930-11.130	11.031	0.002
11 Aroclor-1268 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	12.259	12.159-12.359	+++++	+++++
$ 13 Decachlorobiphenyl [2C	13.931	13.933	13.933	13.936	13.931	13.932	13.932	13.832-14.032	13.933	0.002
* 12 IS-HBBP [2C]	14.831	14.832	14.833	14.832	14.832	14.832	14.832	14.732-14.932	14.832	0.001
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.758	9.708-9.808	+++++	+++++
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.387	9.337-9.437	+++++	+++++
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.067	9.967-10.167	+++++	+++++
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.527	10.427-10.627	+++++	+++++

Reviewer 1 ______________________ Date: ______________
Reviewer 2 ______________________ Date: ______________

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\210206.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\210206.b\210206.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.947	10.847-11.047	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	7.178	7.078-7.278	+++++	+++++

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062109ECD7.D
Data file 2: /210206.b/210206.b/02062109ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 06-FEB-2021 19:38
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.989	0.002	116968	5.377	-0.001	401867	43.9	45.3	3.1	Tetrachloro-m-xylene
13.189	0.000	560886	13.933	0.001	668267	39.5	45.9	15.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	168732	1.8
Hexabromobiphenyl	1343188	1323526	-1.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	838354	0.1
Hexabromobiphenyl	850693	833000	-2.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

```
                          ZB5 Col                                ZB35 Col
Aroclor   Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
=====================================================================================
Aroclor-1016 1      ---                    0.0      1     ---                     0.0
Aroclor-1016 2   6.949  -0.033       267     0.6      2     ---                     0.0
Aroclor-1016 3   7.115  -0.018       230     1.0      3     ---                     0.0
Aroclor-1016 4   7.295   0.053       278     2.0      4     ---                     0.0
      Total Col1Ave (3 peaks):     1.2               Col2Ave: <3 Quant Peaks

Aroclor-1221 1      ---                    0.0      1     ---                     0.0
Aroclor-1221 2     ---                     0.0      2    6.068   0.016     3359    31.9
Aroclor-1221 3     ---                     0.0      3    6.389  -0.008      594     3.1
            Col1Ave: <3 Quant Peaks                  Col2Ave: <3 Quant Peaks

Aroclor-1232 1   3.942  -0.000       294    21.2      1     ---                     0.0
Aroclor-1232 2      ---                    0.0      2     ---                     0.0
Aroclor-1232 3   6.949  -0.034       267     1.3      3     ---                     0.0
Aroclor-1232 4   8.291  -0.004       353     5.1      4     ---                     0.0
      Total Col1Ave (3 peaks):     9.2               Col2Ave: <3 Quant Peaks

Aroclor-1242 1      ---                    0.0      1     ---                     0.0
Aroclor-1242 2   6.949  -0.034       267     0.7      2     ---                     0.0
Aroclor-1242 3   8.291  -0.002       353     2.7      3     ---                     0.0
Aroclor-1242 4   8.634   0.043       428     3.2      4     ---                     0.0
      Total Col1Ave (3 peaks):     2.2               Col2Ave: <3 Quant Peaks

Aroclor-1248 1   7.459  -0.008       134     0.7      1     ---                     0.0
Aroclor-1248 2   8.017   0.078       541     2.0      2     ---                     0.0
Aroclor-1248 3   8.388   0.035       435     0.8      3     ---                     0.0
Aroclor-1248 4   8.634   0.046       428     2.1      4     ---                     0.0
      Total Col1Ave (4 peaks):     1.4               Col2Ave: <3 Quant Peaks

Aroclor-1254 1   8.634  -0.024       428     0.9      1    9.293   0.011      787     1.4
Aroclor-1254 2      ---                    0.0      2     ---                     0.0
Aroclor-1254 3   9.071   0.042       577     1.8      3    9.855   0.042     2668     6.5
Aroclor-1254 4   9.227   0.062       404     0.6      4    9.907  -0.060      207     0.2
Aroclor-1254 5   9.924   0.062       620     1.3      5   10.265   0.057      332     0.3
      Total Col1Ave (4 peaks):     1.1      Total Col2Ave (4 peaks):     2.1   RPD = 60*
      Corrected Ave (3 peaks):     0.9      Corrected Ave (3 peaks):     0.6   RPD = 37

Aroclor-1260 1  10.417   0.030      1022     2.3      1   11.068   0.038      371     0.6
Aroclor-1260 2  10.723   0.014       151     0.3      2   11.454  -0.040      230     0.4
Aroclor-1260 3  11.048  -0.012       209     0.2      3     ---                     0.0
Aroclor-1260 4  11.436  -0.029       139     0.2      4     ---                     0.0
Aroclor-1260 5  11.585   0.018       288     1.0      NS    ---                    ----
      Total Col1Ave (5 peaks):     0.8               Col2Ave: <3 Quant Peaks

Aroclor-1262 1  10.417   0.029      1022     1.4      1   11.068   0.036      371     0.4
Aroclor-1262 2  11.048  -0.012       209     0.1      2     ---                     0.0
Aroclor-1262 3  11.585   0.016       288     0.6      3   12.164  -0.097      738     1.2
Aroclor-1262 4  11.638  -0.002       311     0.5      4   13.056   0.003      461     0.6
      Total Col1Ave (4 peaks):     0.6      Total Col2Ave (3 peaks):     0.7   RPD = 13
      Corrected Ave (3 peaks):     0.4                     Corrected Ave: < 3 Peaks

Aroclor-1268 1  11.585   0.016       288     0.2      1   12.164  -0.095      738     0.3
Aroclor-1268 2  11.638   0.000       311     0.2      2     ---                     0.0
Aroclor-1268 3  11.962  -0.053     13054     8.3      3   12.720   0.008     1878     0.9
Aroclor-1268 4  12.789  -0.003     16888     3.1      4   13.528  -0.003     7939     1.1
      Total Col1Ave (4 peaks):     2.9      Total Col2Ave (3 peaks):     0.8   RPD = 115*
      Corrected Ave (3 peaks):     1.1                     Corrected Ave: < 3 Peaks
```

Total PCB Area Col1 (5.087 - 13.088) = 101270 Col1 Total PCB = 0.0 ppm*

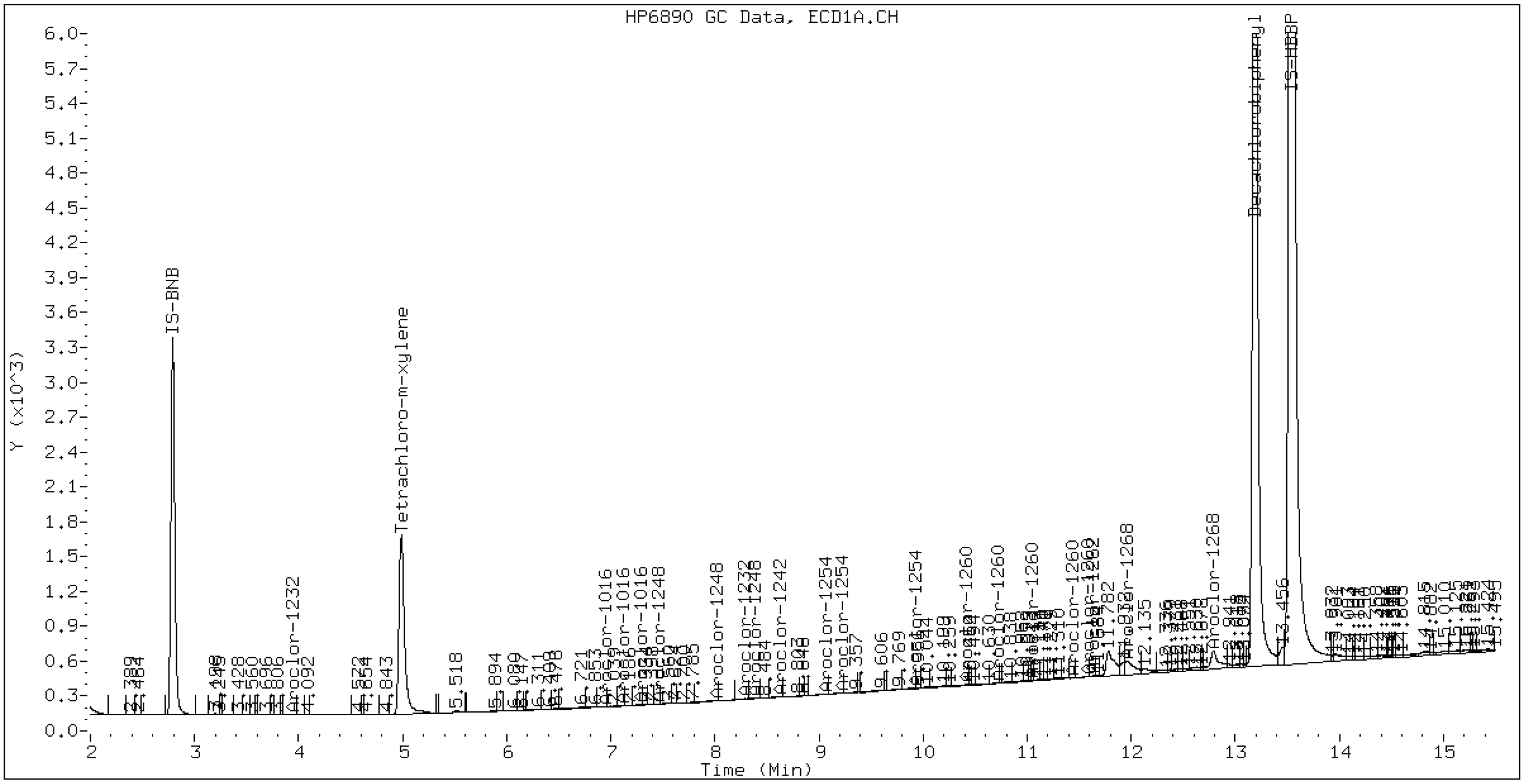
Total PCB Area Col2 (5.087 - 13.088) = 439026 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

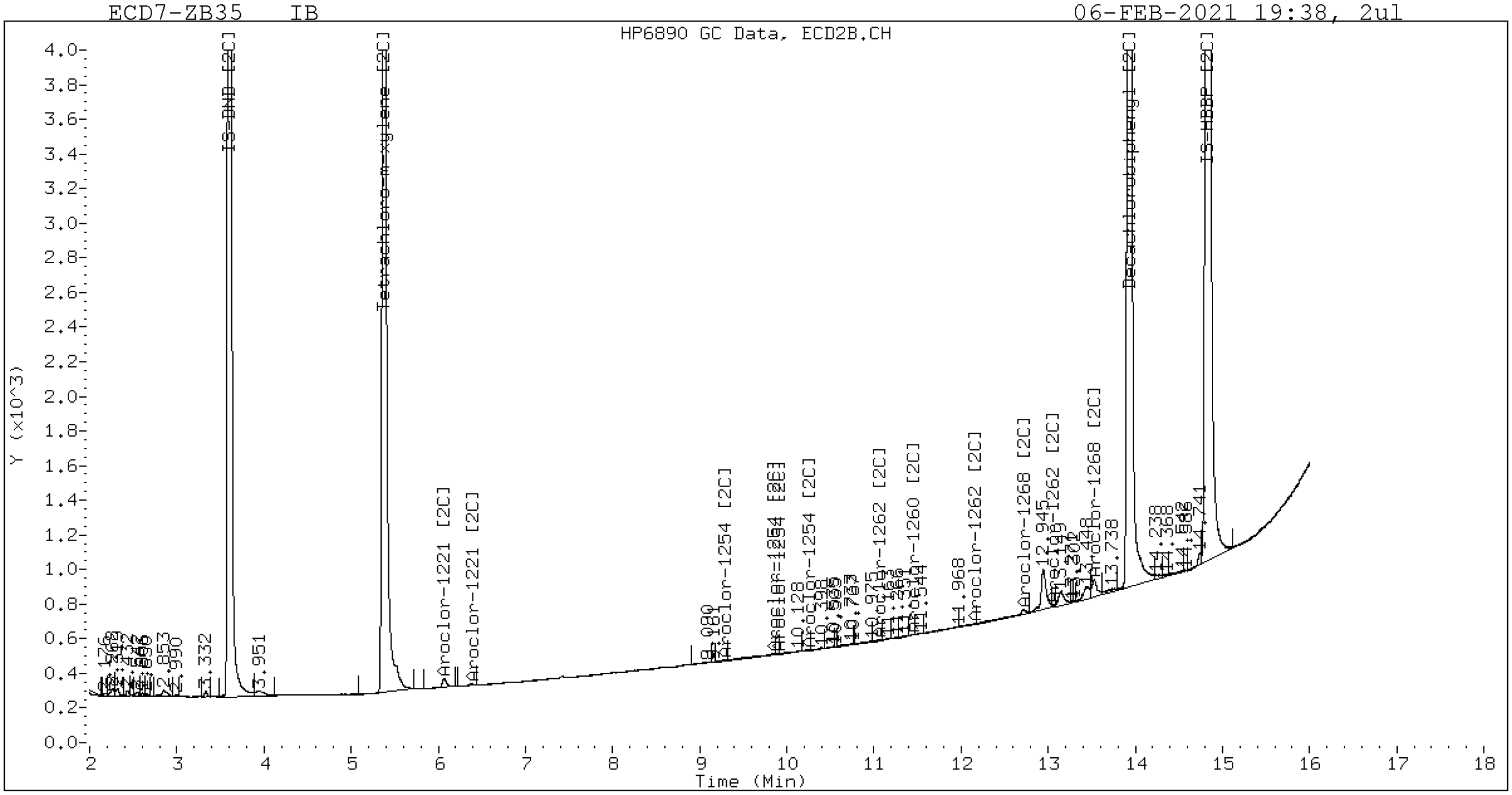
PCB Dual Column Chromatograms

ECD7-ZB5 IB 06-FEB-2021 19:38, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 IB 06-FEB-2021 19:38, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062110ECD7.D
Data file 2: /210206.b/210206.b/02062110ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 06-FEB-2021 19:58
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.988	0.001	114849	5.379	0.001	392045	43.9	44.3	0.8	Tetrachloro-m-xylene
13.188	-0.000	537000	13.931	-0.001	654478	37.2	44.0	16.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	165724	0.0
Hexabromobiphenyl	1343188	1343188	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	837396	0.0
Hexabromobiphenyl	850693	850693	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.609	0.000	36452	254.6	1	7.056	-0.000	96976	267.0
Aroclor-1016	2	6.984	0.002	122261	262.3	2	7.660	0.003	227677	276.7
Aroclor-1016	3	7.133	0.000	56189	253.3	3	7.871	0.001	96229	265.8
Aroclor-1016	4	7.243	0.001	35961	258.1	4	8.126	0.001	54132	262.5

Total Col1Ave (4 peaks): 257.1 Total Col2Ave (4 peaks): 268.0 RPD = 4
Corrected Ave (3 peaks): 255.3 Corrected Ave (3 peaks): 265.1 RPD = 4

CalAmt %D: 2.8 CalAmt %D: 7.2

Aroclor-1260	1	10.387	-0.001	115239	253.6	1	11.030	-0.000	155116	260.3
Aroclor-1260	2	10.708	-0.001	116443	255.8	2	11.494	0.000	146839	265.1
Aroclor-1260	3	11.060	-0.001	343627	263.2	3	11.747	-0.000	406902	265.4
Aroclor-1260	4	11.464	-0.001	155513	257.5	4	12.338	0.001	264730	267.4
Aroclor-1260	5	11.567	-0.001	70806	251.4	NS	---			----

Total Col1Ave (5 peaks): 256.3 Total Col2Ave (4 peaks): 264.5 RPD = 3
Corrected Ave (4 peaks): 254.6 Corrected Ave (3 peaks): 263.6 RPD = 3

CalAmt %D: 2.5 CalAmt %D: 5.8

Total PCB Area Col1 (5.087 - 13.088) = 3160128 Col1 Total PCB = 0.5 ppm*

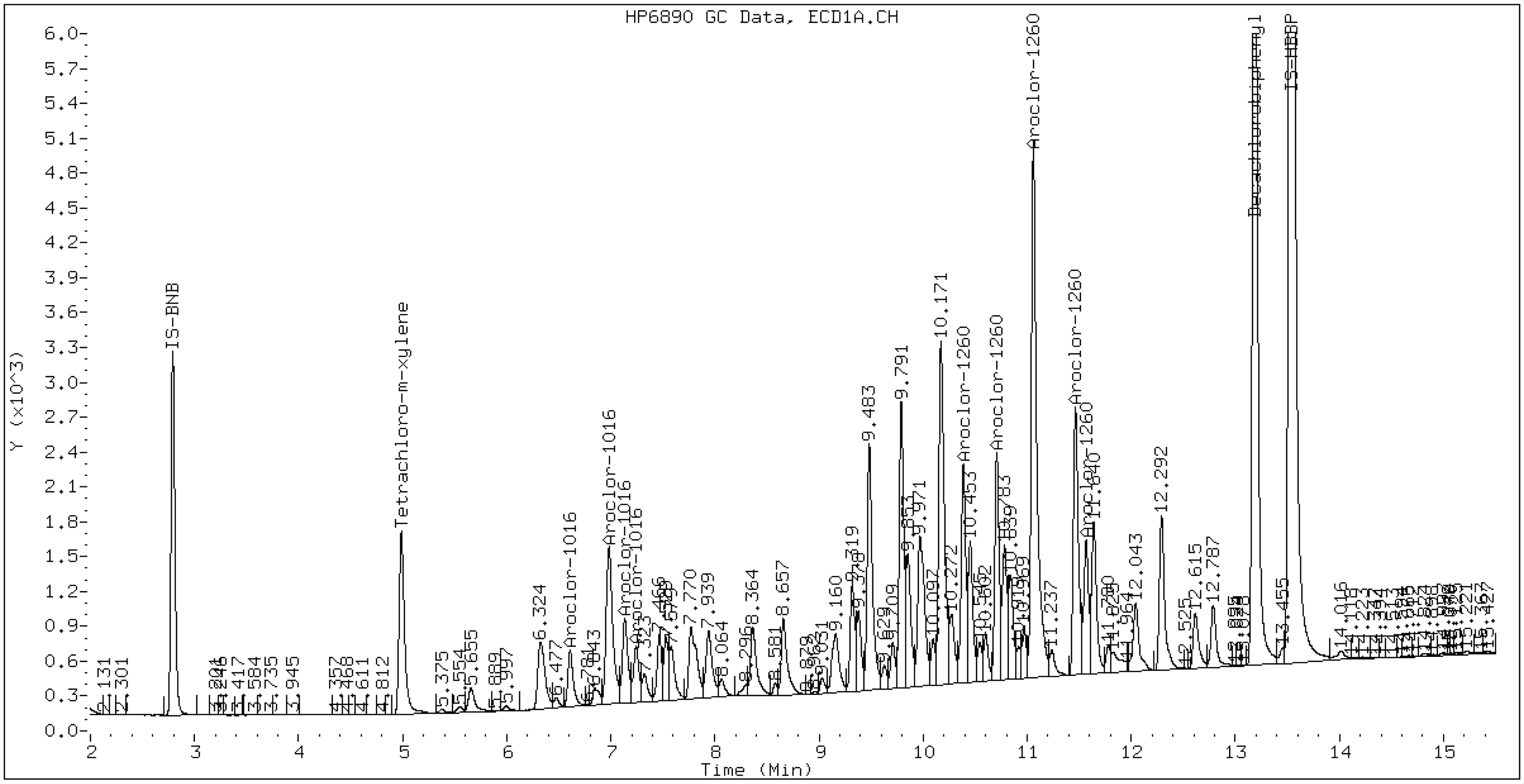
Total PCB Area Col2 (5.087 - 13.088) = 4124051 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

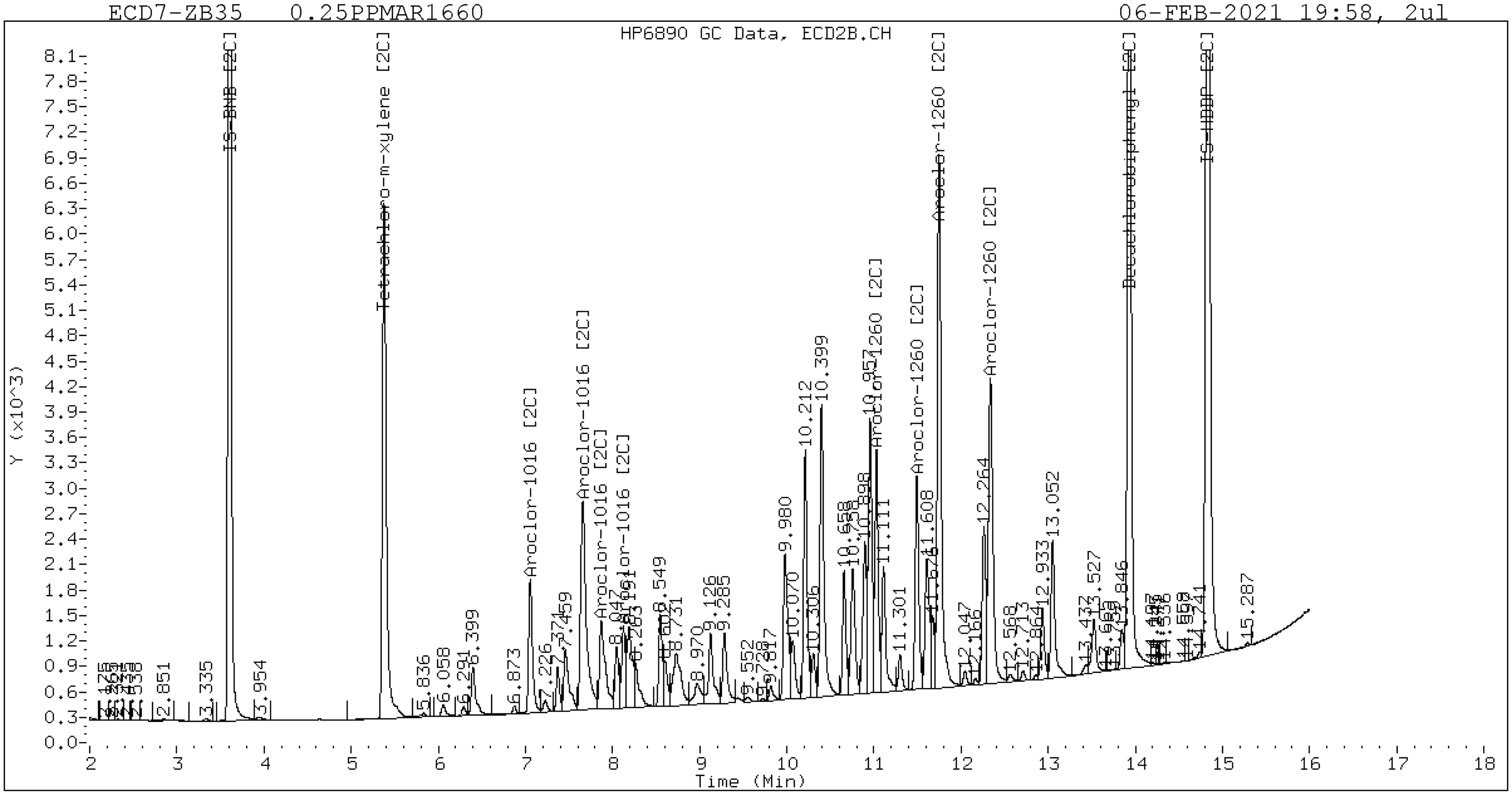
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1660 06-FEB-2021 19:58, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1660 06-FEB-2021 19:58, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062111ECD7.D
Data file 2: /210206.b/210206.b/02062111ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 06-FEB-2021 20:19
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.982	-0.006	7030	5.377	-0.002	22555	2.7	2.5	5.3	Tetrachloro-m-xylene
13.189	0.000	56753	13.933	0.000	42595	3.8	2.8	28.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	167384	1.0
Hexabromobiphenyl	1343188	1399698	4.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	844480	0.8
Hexabromobiphenyl	850693	859306	1.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.606	-0.002	3019	20.9	1	7.057	0.000	6614	18.1
Aroclor-1016	2	6.981	-0.001	9097	19.3	2	7.664	0.007	12937	15.6
Aroclor-1016	3	7.134	0.001	4814	21.5	3	7.878	0.008	6761	18.5
Aroclor-1016	4	7.242	0.000	2699	19.2	4	8.128	0.004	3719	17.9

Total Col1Ave (4 peaks): 20.2 Total Col2Ave (4 peaks): 17.5 RPD = 14
Corrected Ave (3 peaks): 19.8 Corrected Ave (3 peaks): 17.2 RPD = 14

CalAmt %D: 1.1 CalAmt %D: -12.4

Aroclor-1260	1	10.388	0.001	10078	21.3	1	11.032	0.002	11923	19.8
Aroclor-1260	2	10.710	0.001	9879	20.8	2	11.498	0.004	10638	19.0
Aroclor-1260	3	11.062	0.001	28164	20.7	3	11.753	0.006	28252	18.2
Aroclor-1260	4	11.466	0.001	12683	20.2	4	12.343	0.006	18935	18.9
Aroclor-1260	5	11.567	-0.001	6306	21.5	NS	---			----

Total Col1Ave (5 peaks): 20.9 Total Col2Ave (4 peaks): 19.0 RPD = 9
Corrected Ave (4 peaks): 20.7 Corrected Ave (3 peaks): 18.7 RPD = 10

CalAmt %D: 4.4 CalAmt %D: -5.0

Total PCB Area Col1 (5.087 - 13.088) = 321899 Col1 Total PCB = 0.1 ppm*

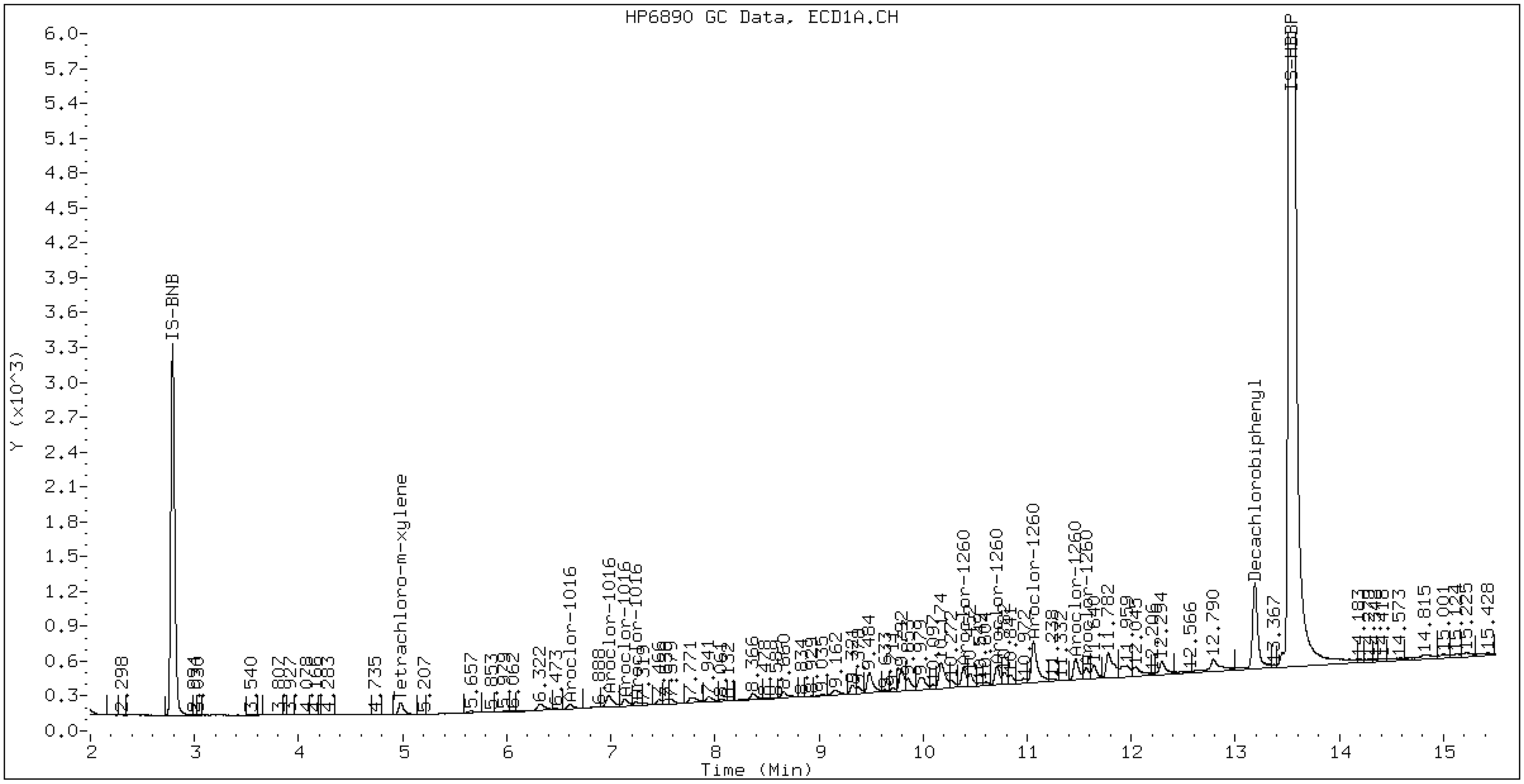
Total PCB Area Col2 (5.087 - 13.088) = 296207 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

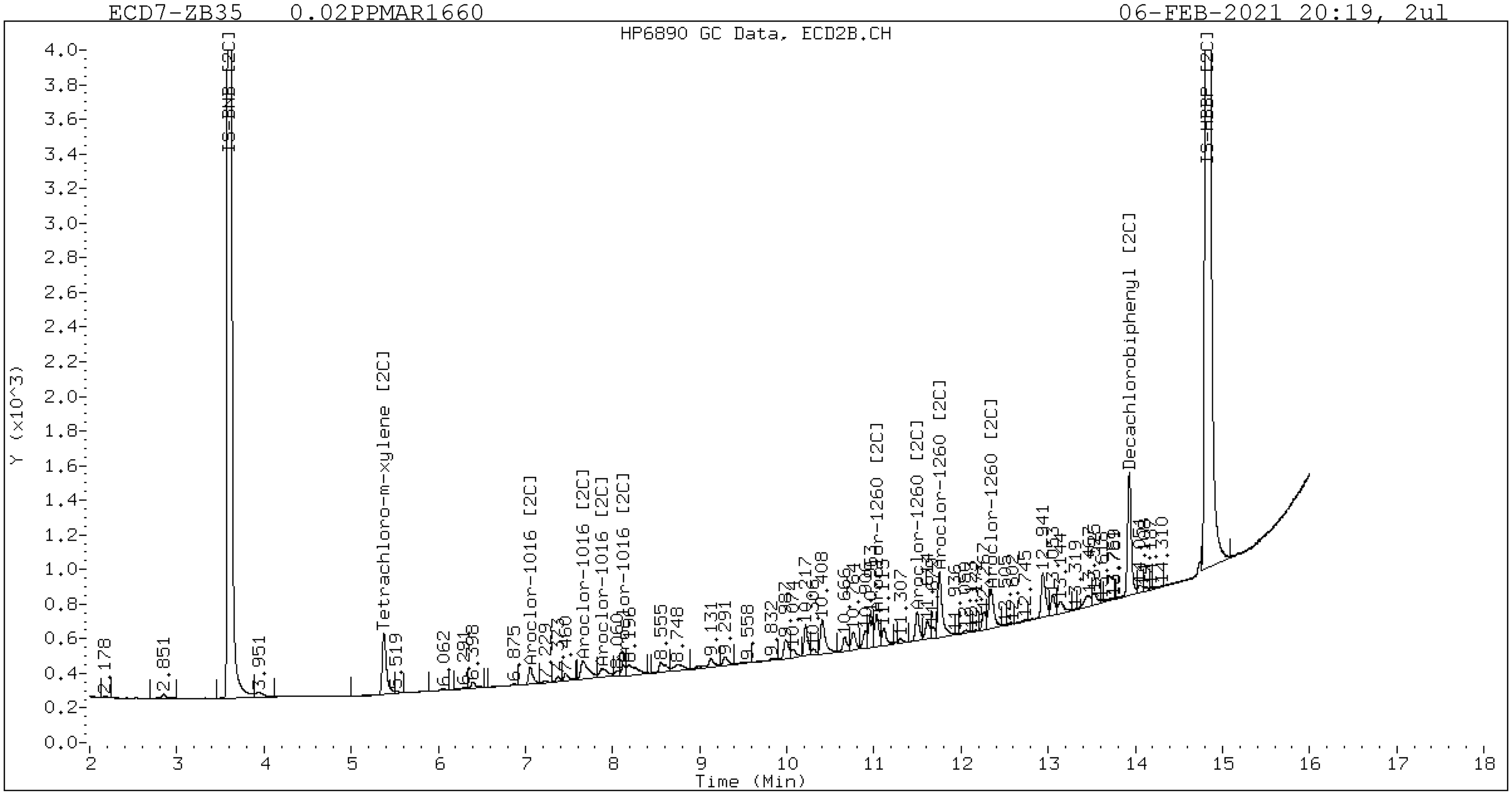
PCB Dual Column Chromatograms

ECD7-ZB5 0.02PPMAR1660 06-FEB-2021 20:19, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.02PPMAR1660 06-FEB-2021 20:19, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062112ECD7.D
Data file 2: /210206.b/210206.b/02062112ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 06-FEB-2021 20:40
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.986	-0.001	18820	5.379	0.001	64247	7.1	7.3	2.6	Tetrachloro-m-xylene
13.188	-0.001	120415	13.933	0.000	107062	8.0	7.1	12.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	168324	1.6
Hexabromobiphenyl	1343188	1395968	3.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	835532	-0.2
Hexabromobiphenyl	850693	862228	1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.608	0.000	7111	48.9	1	7.057	0.001	17230	47.5
Aroclor-1016	2	6.983	0.000	23266	49.1	2	7.663	0.006	36942	45.0
Aroclor-1016	3	7.135	0.002	11412	50.7	3	7.875	0.005	17543	48.6
Aroclor-1016	4	7.244	0.001	7117	50.3	4	8.128	0.004	10180	49.5

Total Col1Ave (4 peaks): 49.7 Total Col2Ave (4 peaks): 47.6 RPD = 4
Corrected Ave (3 peaks): 49.4 Corrected Ave (3 peaks): 47.0 RPD = 5

CalAmt %D: -0.5 CalAmt %D: -4.7

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1260	1	10.388	0.001	23789	50.4	1	11.032	0.002	29609	49.0
Aroclor-1260	2	10.709	0.000	23664	50.0	2	11.495	0.002	26591	47.4
Aroclor-1260	3	11.061	0.000	66830	49.3	3	11.752	0.004	72853	46.9
Aroclor-1260	4	11.466	0.001	30720	48.9	4	12.341	0.005	47146	47.0
Aroclor-1260	5	11.567	-0.001	14776	50.5	NS	---			----

Total Col1Ave (5 peaks): 49.8 Total Col2Ave (4 peaks): 47.6 RPD = 5
Corrected Ave (4 peaks): 49.6 Corrected Ave (3 peaks): 47.1 RPD = 5

CalAmt %D: -0.4 CalAmt %D: -4.9

Total PCB Area Col1 (5.087 - 13.088) = 687372 Col1 Total PCB = 0.1 ppm*

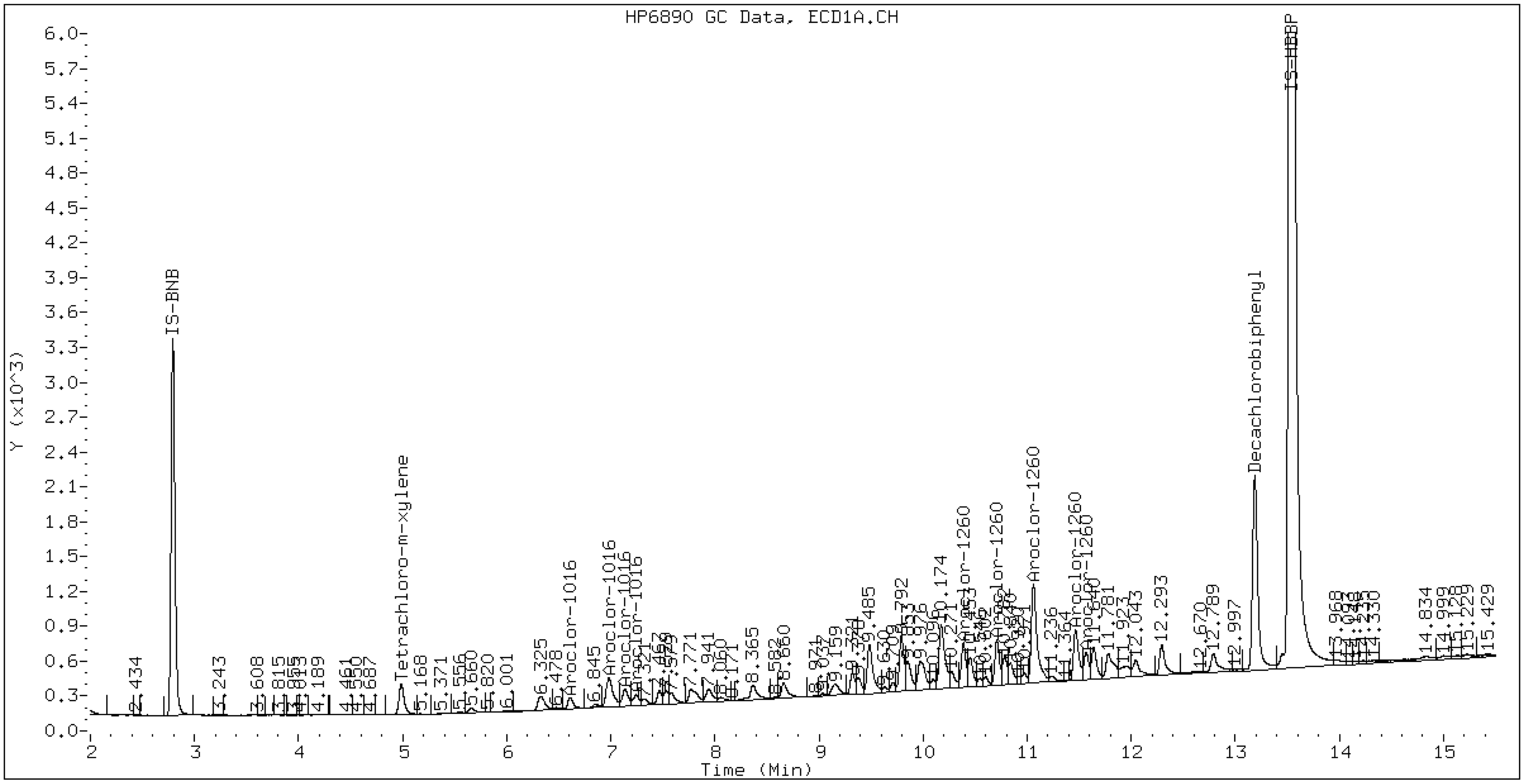
Total PCB Area Col2 (5.087 - 13.088) = 728566 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

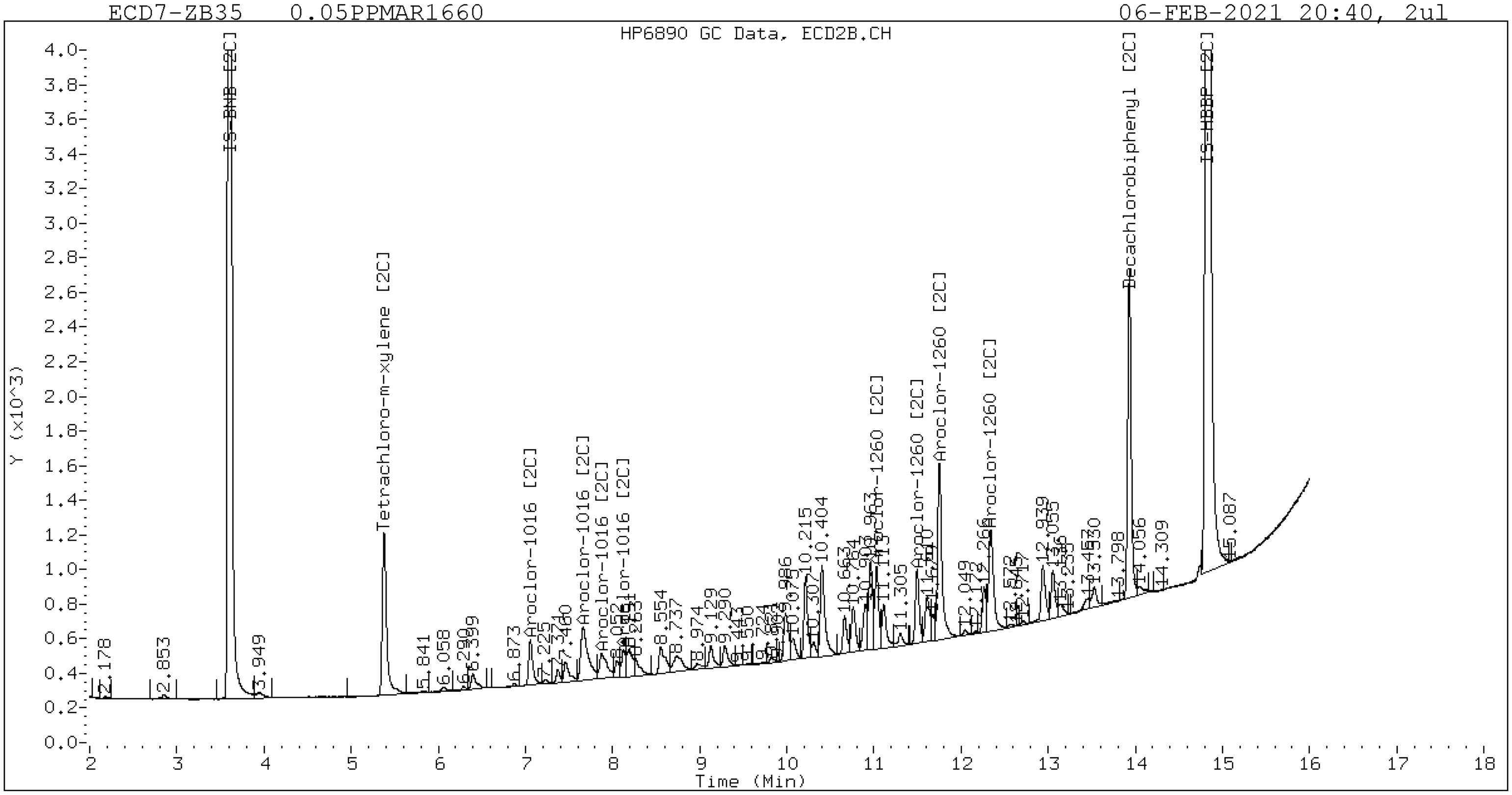
PCB Dual Column Chromatograms

ECD7-ZB5 0.05PPMAR1660 06-FEB-2021 20:40, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.05PPMAR1660 06-FEB-2021 20:40, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062113ECD7.D
Data file 2: /210206.b/210206.b/02062113ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1PPMAR1660
Client ID:
Injection Date: 06-FEB-2021 21:00
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.988	0.000	489649	5.379	0.001	1541068	179.8	174.7	2.9	Tetrachloro-m-xylene
13.192	0.004	2413258	13.936	0.004	2996026	162.0	197.3	19.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	172673	4.2
Hexabromobiphenyl	1343188	1386744	3.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	834371	-0.4
Hexabromobiphenyl	850693	867939	2.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.608	-0.000	139760	936.8	1	7.056	0.000	363139	1003.5
Aroclor-1016	2	6.981	-0.001	477252	982.5	2	7.657	-0.000	890641	1086.2
Aroclor-1016	3	7.132	-0.001	209755	907.6	3	7.867	-0.002	359561	996.9
Aroclor-1016	4	7.242	-0.000	141609	975.4	4	8.124	-0.001	209541	1020.0

Total Col1Ave (4 peaks): 950.6 Total Col2Ave (4 peaks): 1026.6 RPD = 8
Corrected Ave (3 peaks): 939.9 Corrected Ave (3 peaks): 1006.8 RPD = 7

CalAmt %D: -4.9 CalAmt %D: 2.7

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1260	1	10.387	-0.000	442724	943.7	1	11.028	-0.003	593001	975.4
Aroclor-1260	2	10.708	-0.000	450542	958.5	2	11.492	-0.002	579274	1025.0
Aroclor-1260	3	11.061	0.000	1335945	991.1	3	11.747	-0.000	1637152	1046.7
Aroclor-1260	4	11.464	-0.001	623982	1000.7	4	12.336	-0.001	1040023	1029.5
Aroclor-1260	5	11.567	-0.000	264481	909.6	NS	---			----

Total Col1Ave (5 peaks): 960.7 Total Col2Ave (4 peaks): 1019.1 RPD = 6
Corrected Ave (4 peaks): 950.7 Corrected Ave (3 peaks): 1010.0 RPD = 6

CalAmt %D: -3.9 CalAmt %D: 1.9

Total PCB Area Col1 (5.087 - 13.088) = 11790766 Col1 Total PCB = 1.8 ppm*

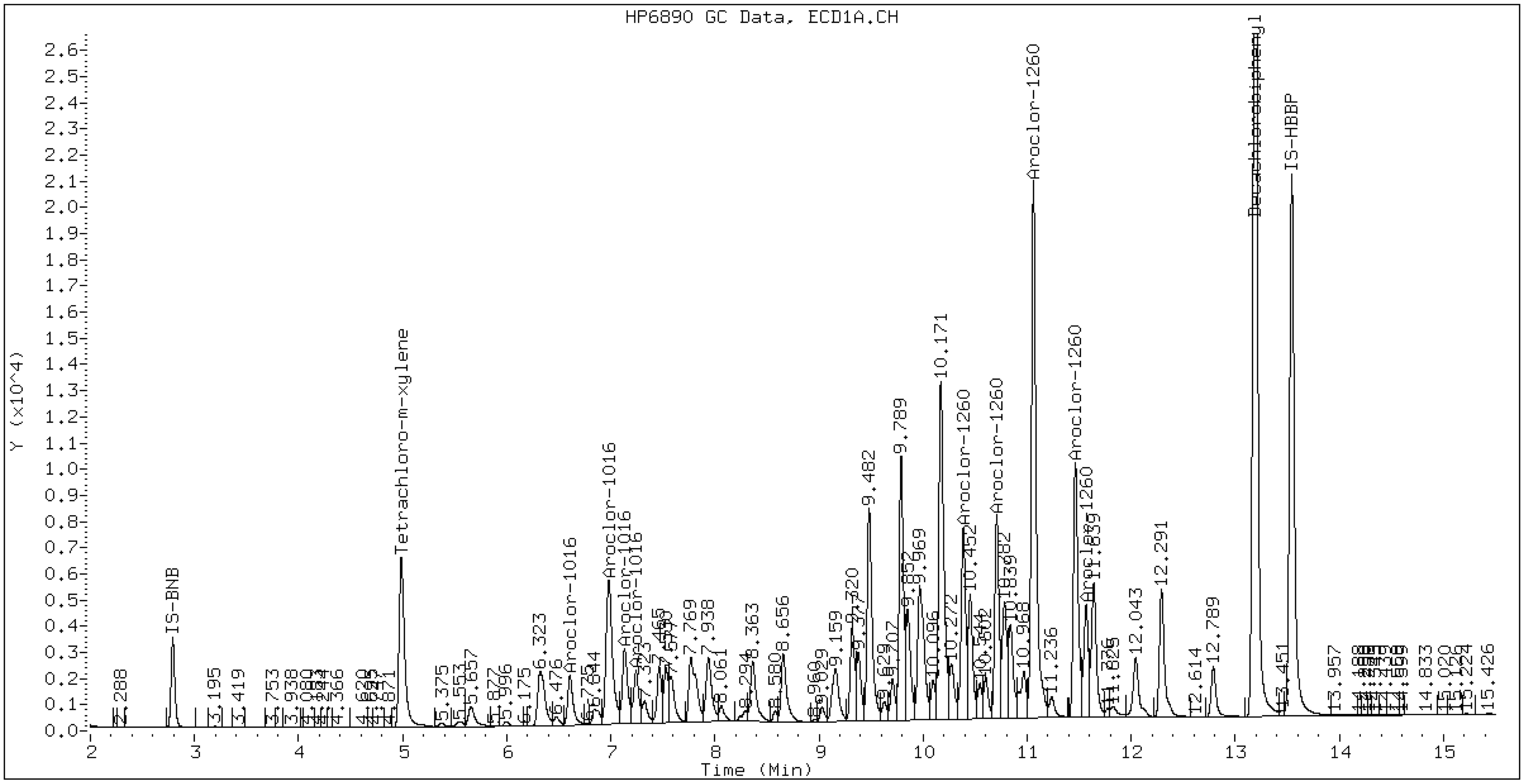
Total PCB Area Col2 (5.087 - 13.088) = 16449572 Col2 Total PCB = 2.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

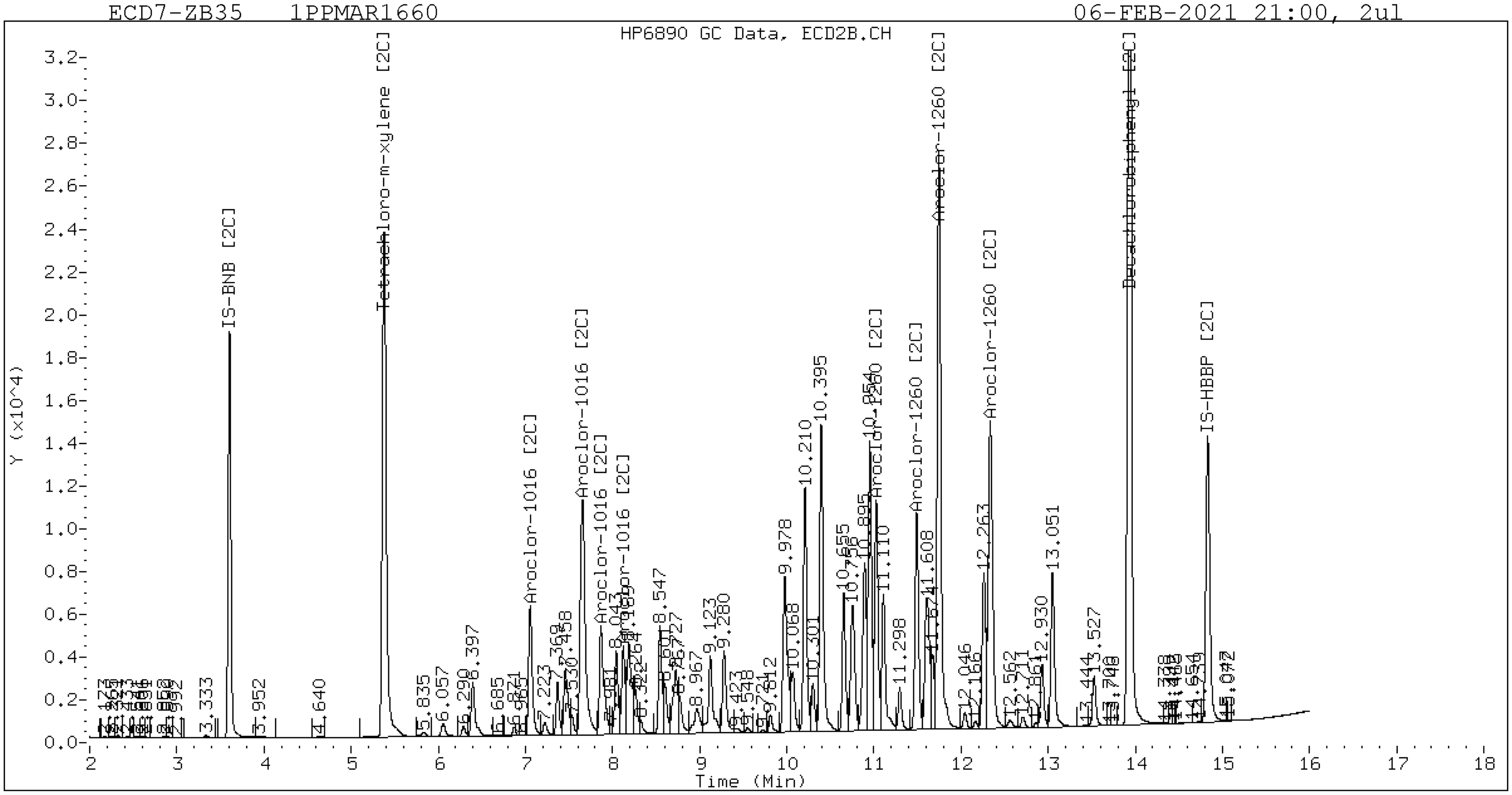
PCB Dual Column Chromatograms

ECD7-ZB5 1PPMAR1660 06-FEB-2021 21:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 1PPMAR1660 06-FEB-2021 21:00, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062114ECD7.D
Data file 2: /210206.b/210206.b/02062114ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 06-FEB-2021 21:21
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.987	-0.000	41091	5.377	-0.002	142276	14.9	15.9	6.5	Tetrachloro-m-xylene
13.188	-0.001	236047	13.931	-0.001	246908	15.2	15.8	3.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	174725	5.4
Hexabromobiphenyl	1343188	1441423	7.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	845909	1.0
Hexabromobiphenyl	850693	891208	4.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.609	0.000	15449	102.3	1	7.056	0.000	36548	99.6
Aroclor-1016	2	6.983	0.001	48599	98.9	2	7.664	0.006	81834	98.4
Aroclor-1016	3	7.135	0.001	23683	101.3	3	7.874	0.005	37161	101.6
Aroclor-1016	4	7.244	0.002	14705	100.1	4	8.126	0.001	20390	97.9
	Total Col1Ave (4 peaks):			100.6		Total Col2Ave (4 peaks):			99.4	RPD = 1
	Corrected Ave (3 peaks):			100.1		Corrected Ave (3 peaks):			98.6	RPD = 1
		CalAmt %D:		0.6			CalAmt %D:		-0.6	
Aroclor-1260	1	10.388	0.001	48524	99.5	1	11.031	0.000	61375	98.3
Aroclor-1260	2	10.709	0.001	48621	99.5	2	11.496	0.003	56060	96.6
Aroclor-1260	3	11.061	0.000	136311	97.3	3	11.750	0.002	155963	97.1
Aroclor-1260	4	11.466	0.001	63622	98.2	4	12.341	0.004	99175	95.6
Aroclor-1260	5	11.568	-0.000	31342	103.7	NS	---			----
	Total Col1Ave (5 peaks):			99.6		Total Col2Ave (4 peaks):			96.9	RPD = 3
	Corrected Ave (4 peaks):			98.6		Corrected Ave (3 peaks):			96.4	RPD = 2
		CalAmt %D:		-0.4			CalAmt %D:		-3.1	

Total PCB Area Col1 (5.087 - 13.088) = 1359545 Col1 Total PCB = 0.2 ppm*

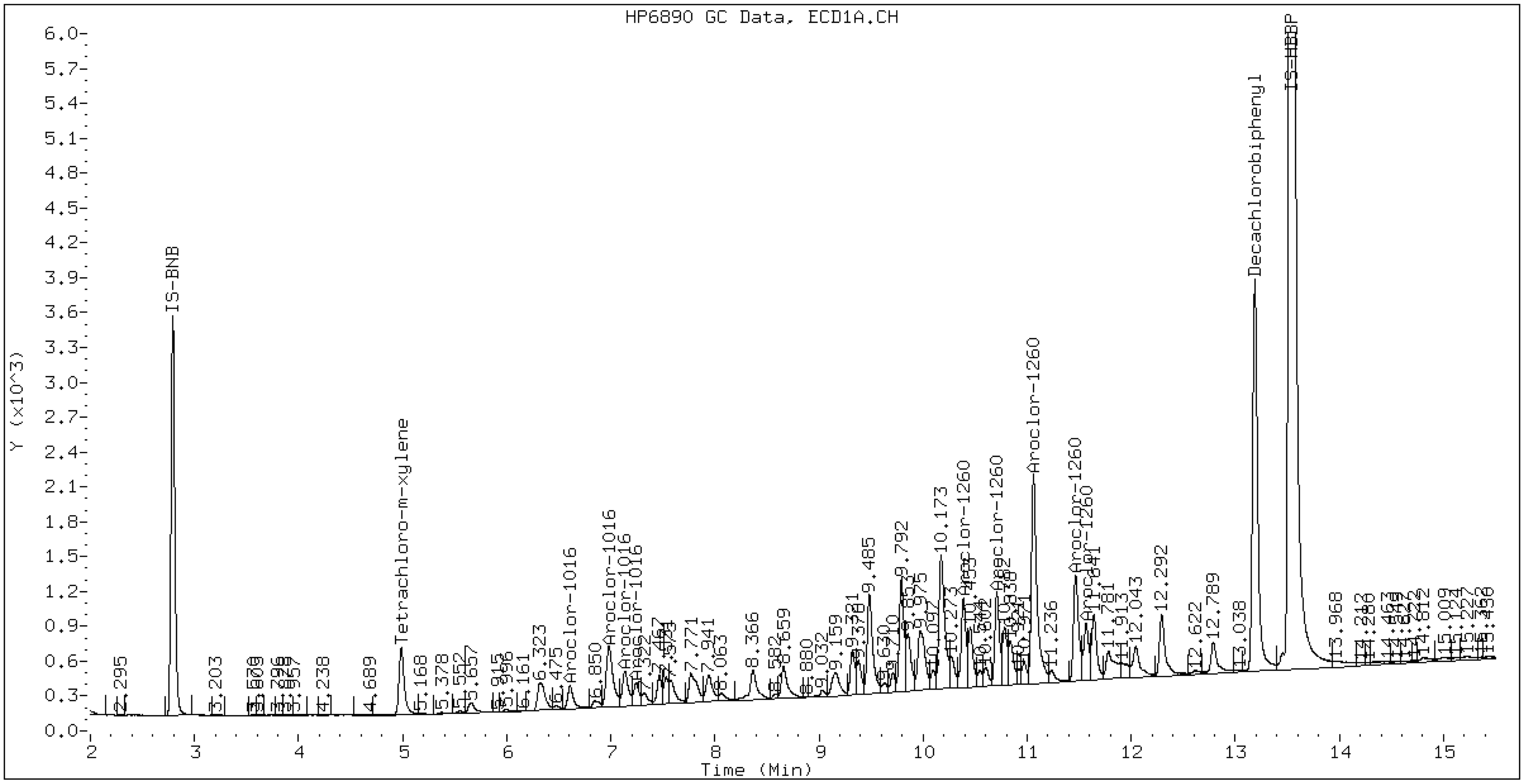
Total PCB Area Col2 (5.087 - 13.088) = 1552681 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

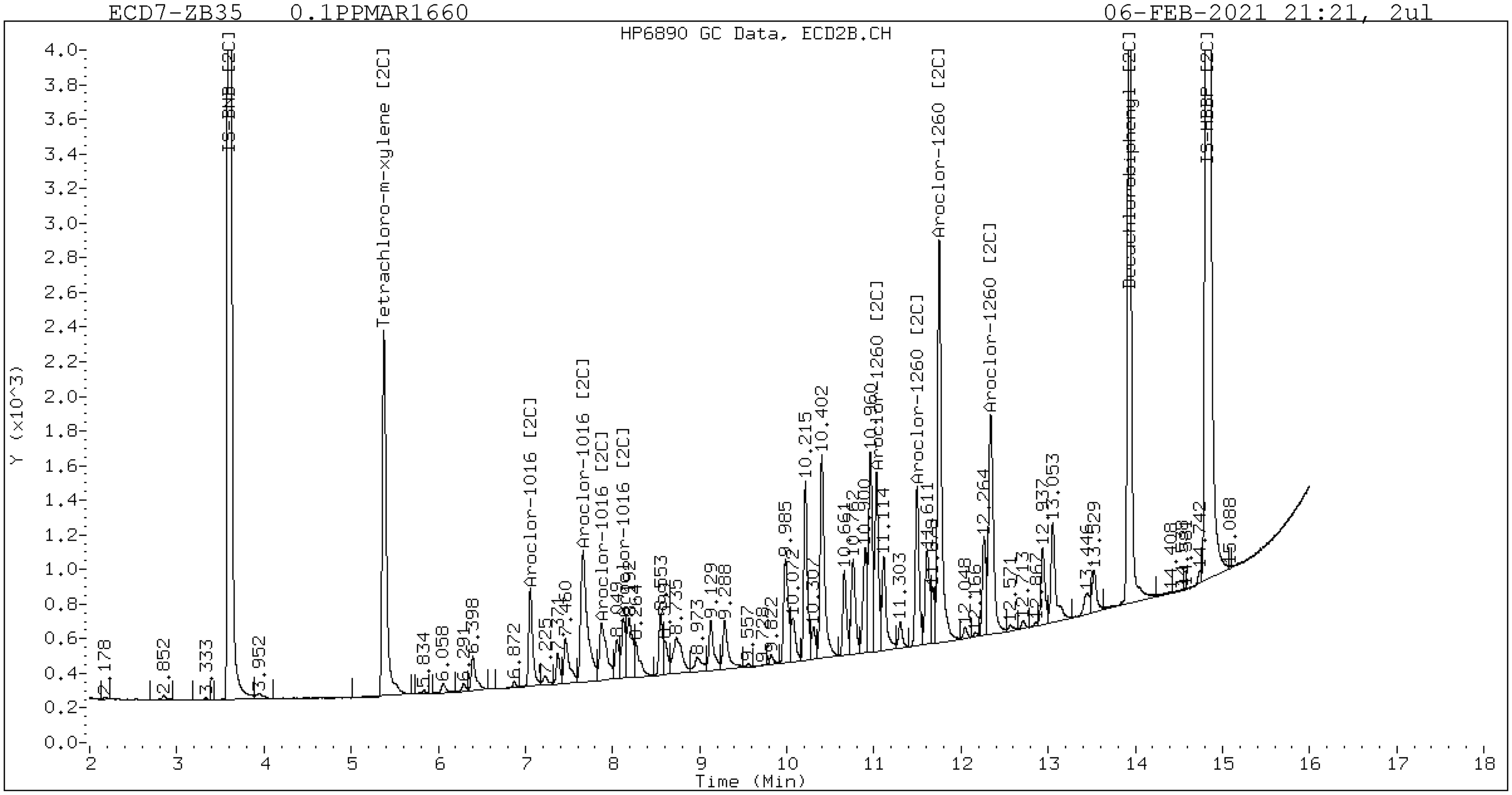
PCB Dual Column Chromatograms

ECD7-ZB5 0.1PPMAR1660 06-FEB-2021 21:21, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.1PPMAR1660 06-FEB-2021 21:21, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062115ECD7.D	ARI ID: 0.5PPMAR1660
Data file 2: /210206.b/210206.b/02062115ECD7.D	Client ID:
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m	Injection Date: 06-FEB-2021 21:41
Compound Sublist: AR1660.sub	Report Date: 02/08/2021 09:30
Instrument, Inj. Vol.: ecd7.i, 2ul	Matrix: NONE
Quant Method: Internal Std	Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.987	-0.001	243334	5.378	-0.000	773743	90.2	88.6	1.8	Tetrachloro-m-xylene
13.190	0.002	1140077	13.932	-0.000	1394788	74.6	91.1	19.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	170945	3.2
Hexabromobiphenyl	1343188	1423146	6.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	825713	-1.4
Hexabromobiphenyl	850693	875127	2.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.608	0.000	73841	499.9	1	7.056	0.000	193144	539.3
Aroclor-1016	2	6.982	0.000	247913	515.5	2	7.657	0.000	464034	571.8
Aroclor-1016	3	7.133	0.000	111985	489.5	3	7.869	0.000	183109	513.0
Aroclor-1016	4	7.242	0.000	73781	513.3	4	8.125	0.000	108455	533.5
Total Col1Ave (4 peaks):				504.6		Total Col2Ave (4 peaks):			539.4	RPD = 7
Corrected Ave (3 peaks):				500.9		Corrected Ave (3 peaks):			528.6	RPD = 5
		CalAmt %D:		0.9			CalAmt %D:		7.9	
Aroclor-1260	1	10.387	0.000	234768	487.6	1	11.030	0.000	315493	514.7
Aroclor-1260	2	10.708	0.000	236867	491.0	2	11.494	0.000	299367	525.4
Aroclor-1260	3	11.061	0.000	666258	481.6	3	11.748	0.000	844331	535.4
Aroclor-1260	4	11.465	0.000	320356	500.6	4	12.337	0.000	539234	529.4
Aroclor-1260	5	11.568	0.000	143787	481.9	NS	---			----
Total Col1Ave (5 peaks):				488.6		Total Col2Ave (4 peaks):			526.2	RPD = 7
Corrected Ave (4 peaks):				485.5		Corrected Ave (3 peaks):			523.1	RPD = 7
		CalAmt %D:		-2.3			CalAmt %D:		5.2	

Total PCB Area Col1 (5.087 - 13.088) = 6208776 Col1 Total PCB = 1.0 ppm*

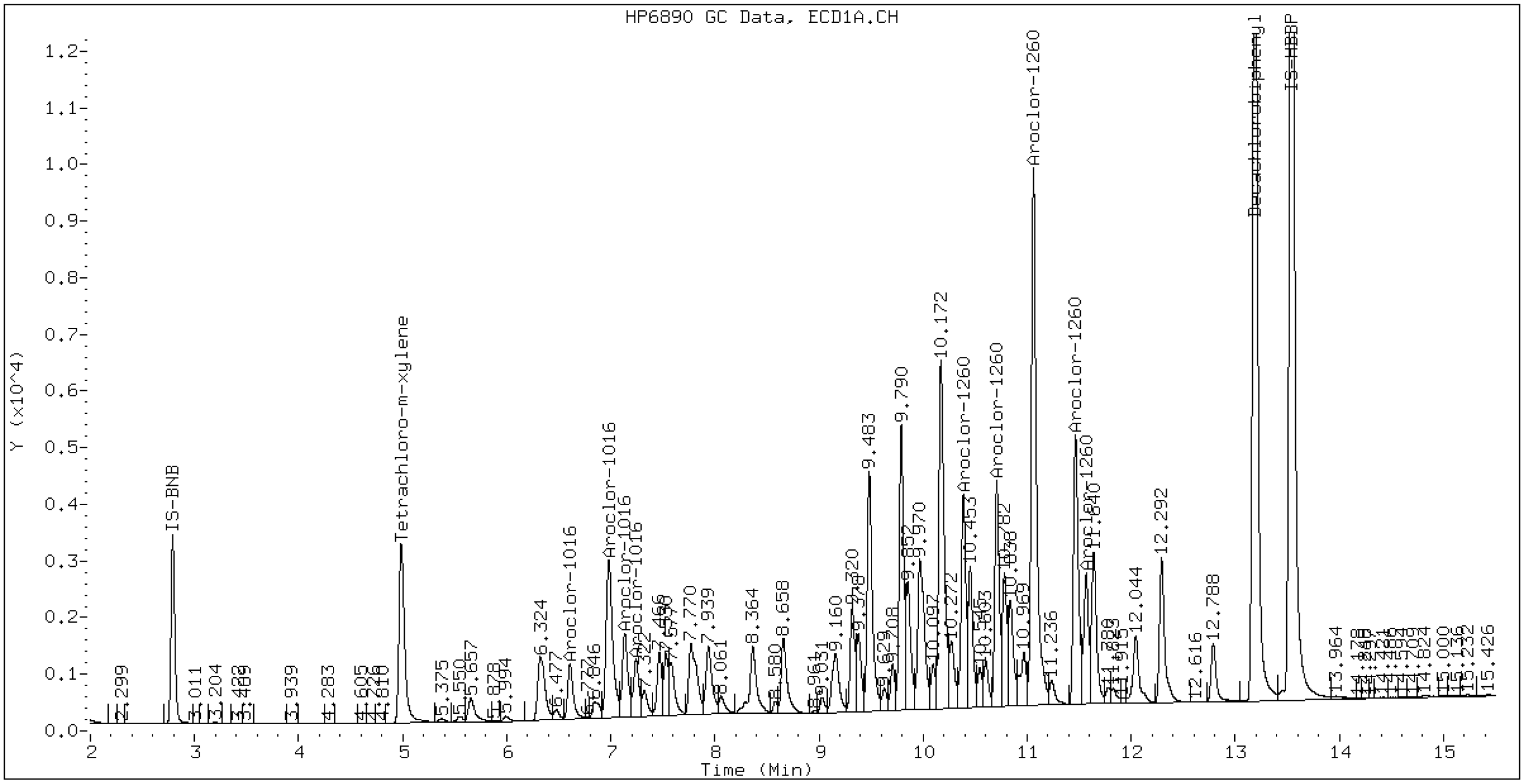
Total PCB Area Col2 (5.087 - 13.088) = 8399810 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

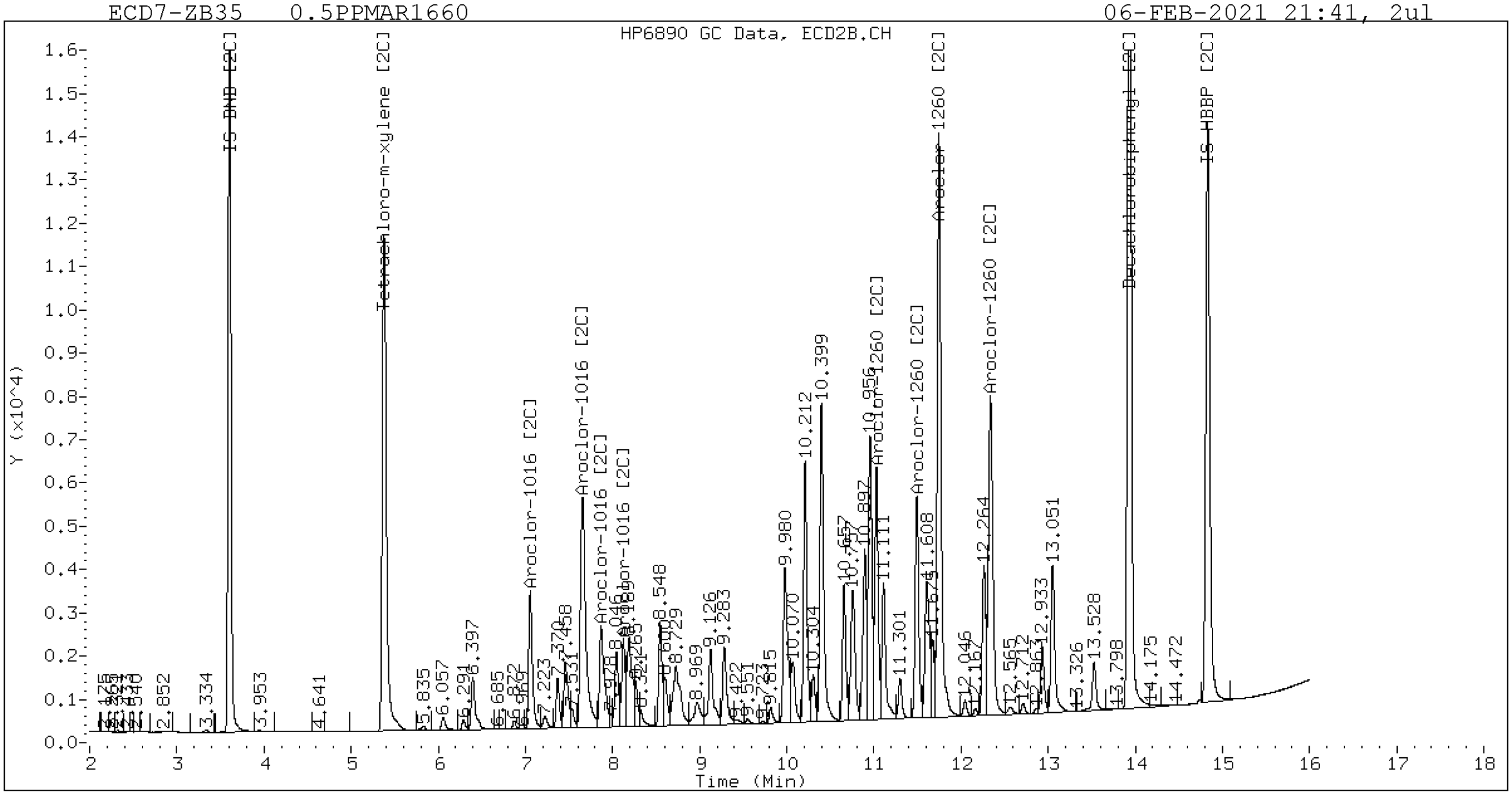
PCB Dual Column Chromatograms

ECD7-ZB5 0.5PPMAR1660 06-FEB-2021 21:41, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.5PPMAR1660 06-FEB-2021 21:41, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062116ECD7.D
Data file 2: /210206.b/210206.b/02062116ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 06-FEB-2021 22:02
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.987	-0.000	123930	5.378	-0.001	410897	45.5	46.1	1.5	Tetrachloro-m-xylene
13.189	0.000	602418	13.934	0.001	716335	38.7	45.8	16.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	172815	4.3
Hexabromobiphenyl	1343188	1449449	7.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	842432	0.6
Hexabromobiphenyl	850693	894009	5.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col		
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.608	0.000	30207	250.0	1	7.056	0.000	75236	250.0
Aroclor-1242	2	6.982	0.000	100089	250.0	2	7.660	0.000	176547	250.0
Aroclor-1242	3	8.293	0.000	33429	250.0	3	8.991	0.000	71128	250.0
Aroclor-1242	4	8.591	0.000	33968	250.0	4	9.431	0.000	69372	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.087 - 13.088) = 879276 Col1 Total PCB = 0.1 ppm*

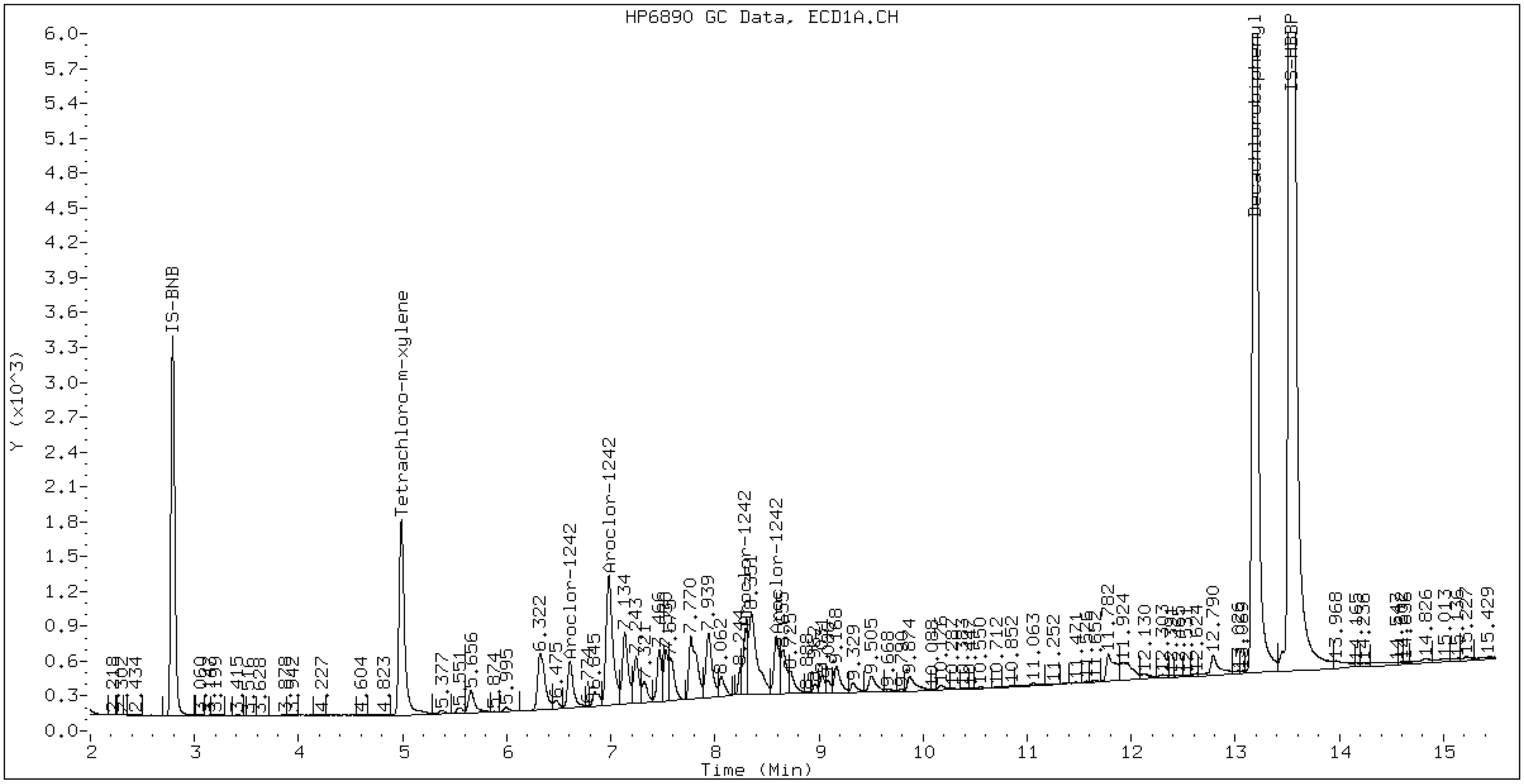
Total PCB Area Col2 (5.087 - 13.088) = 1606503 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

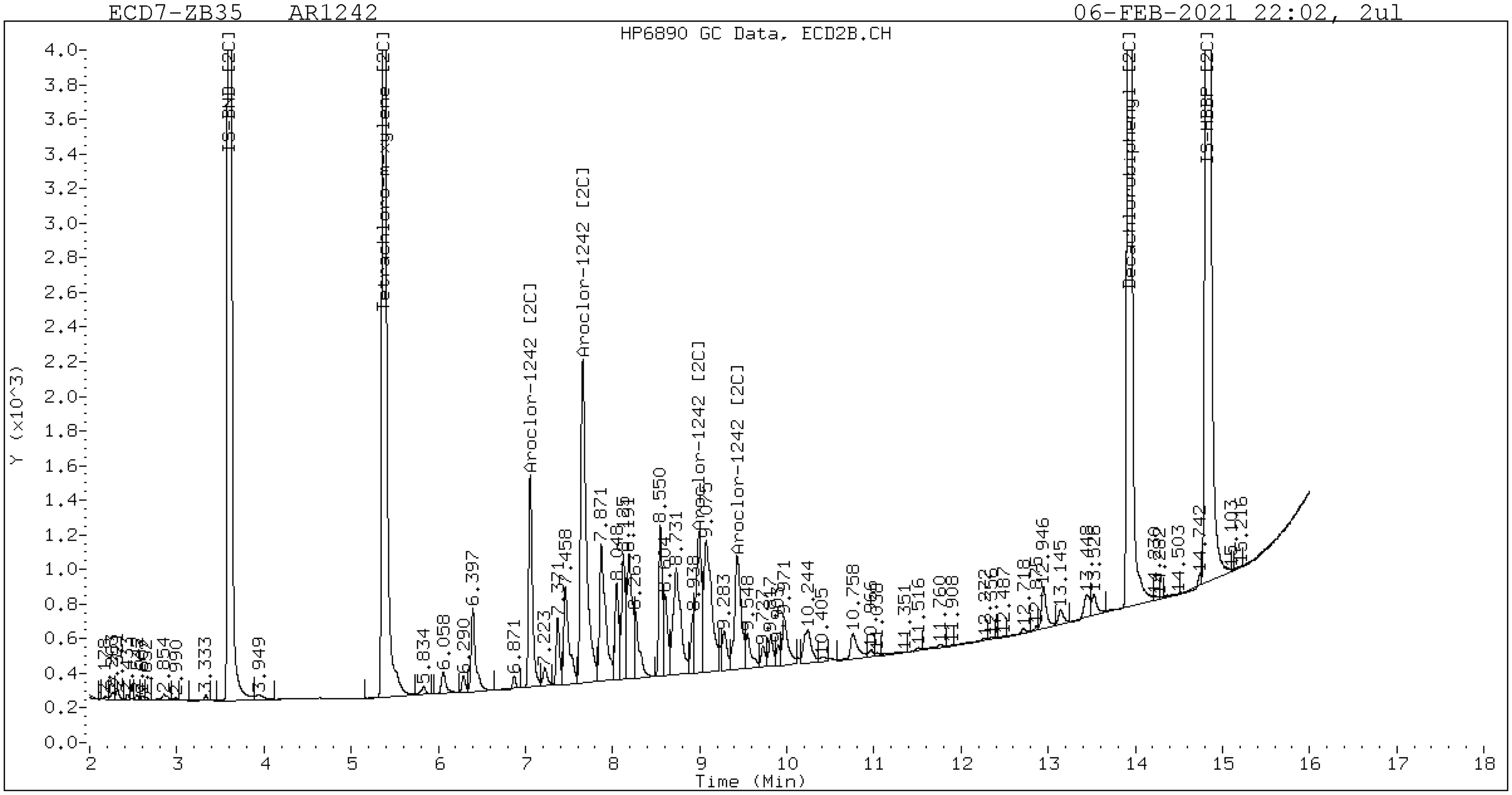
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242 06-FEB-2021 22:02, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1242 06-FEB-2021 22:02, 2ul



ZB-35 Manual Integration: YES

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062117ECD7.D
Data file 2: /210206.b/210206.b/02062117ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 06-FEB-2021 22:22
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.987	0.000	120567	5.378	-0.001	401273	43.3	45.0	3.9	Tetrachloro-m-xylene
13.189	0.000	600393	13.934	0.002	717834	38.5	45.6	16.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	176691	6.6
Hexabromobiphenyl	1343188	1450699	8.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	844066	0.8
Hexabromobiphenyl	850693	899282	5.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	7.467	0.000	47295	250.0	1	8.126	0.000	68600	250.0
Aroclor-1248	2	7.939	0.000	71370	250.0	2	8.549	0.000	84843	250.0
Aroclor-1248	3	8.353	0.000	147259	250.0	3	8.990	0.000	131734	250.0
Aroclor-1248	4	8.588	0.000	54655	250.0	4	9.427	0.000	127167	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.087 - 13.088) = 1198832 Col1 Total PCB = 0.2 ppm*

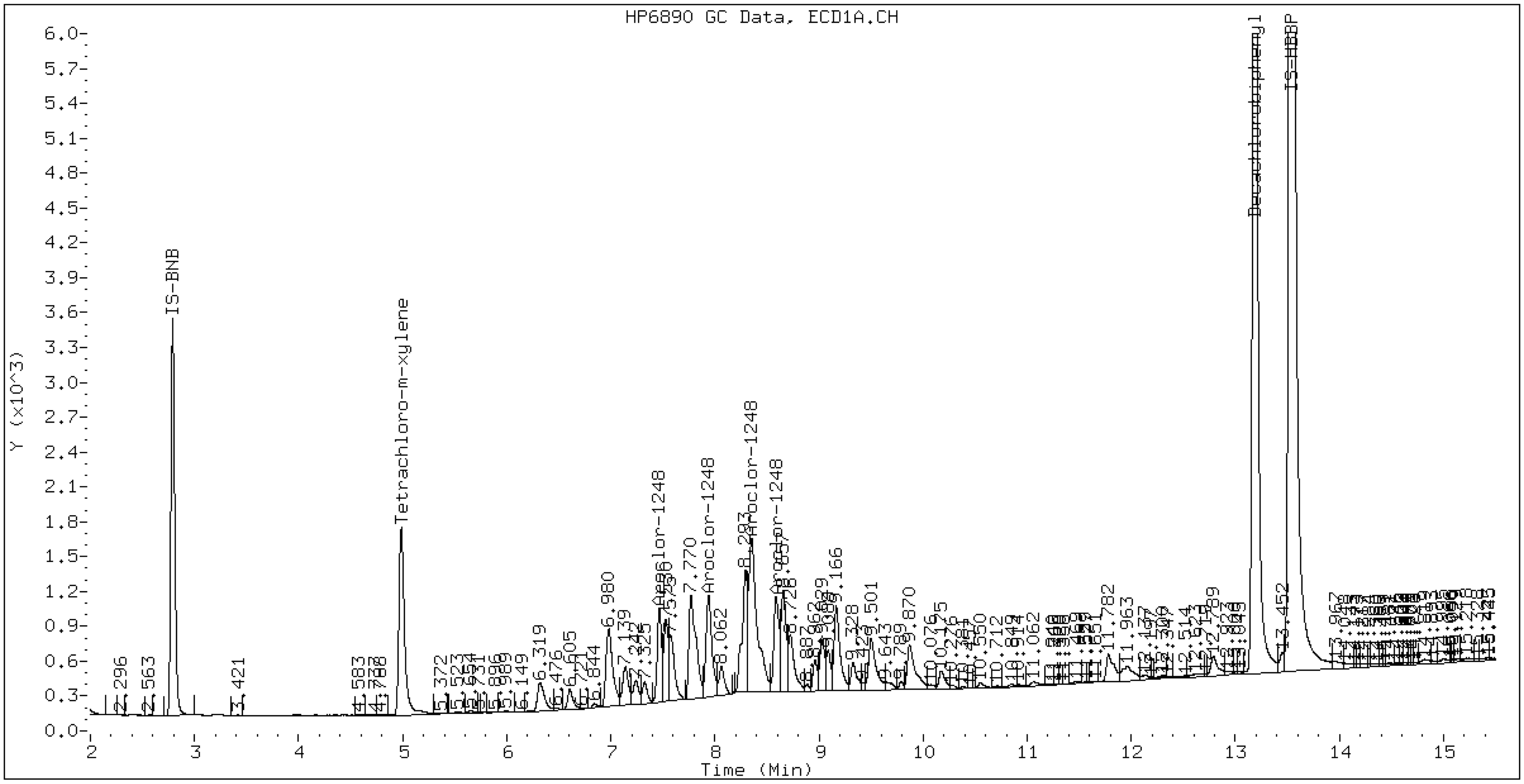
Total PCB Area Col2 (5.087 - 13.088) = 1986513 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

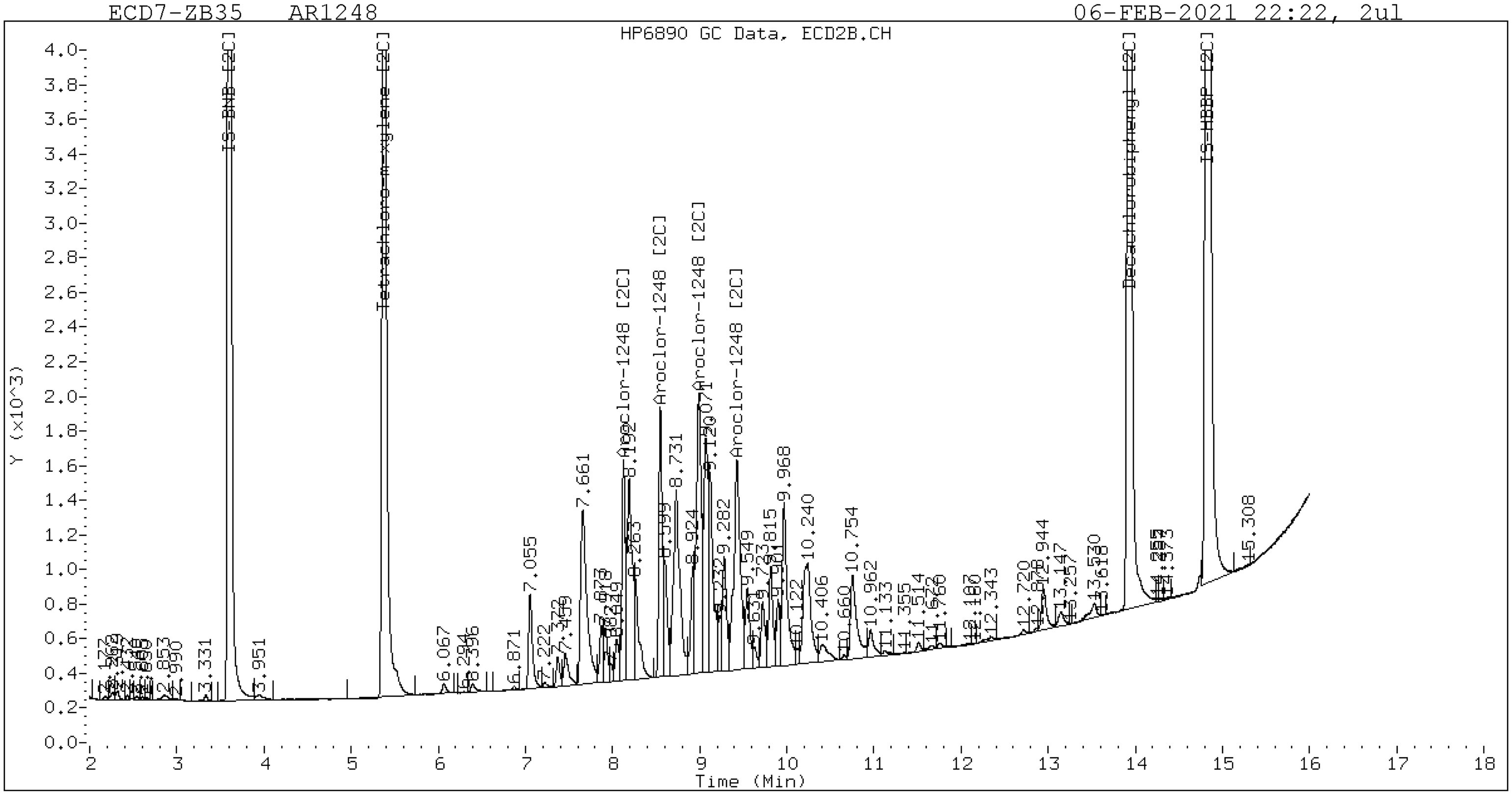
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248 06-FEB-2021 22:22, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248 06-FEB-2021 22:22, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062118ECD7.D
Data file 2: /210206.b/210206.b/02062118ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 06-FEB-2021 22:43
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.986	-0.002	121242	5.379	0.000	398564	42.0	44.2	5.1	Tetrachloro-m-xylene
13.189	0.000	597064	13.935	0.002	719043	38.0	45.0	16.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	183043	10.5
Hexabromobiphenyl	1343188	1461343	8.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	853350	1.9
Hexabromobiphenyl	850693	913617	7.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.658	0.000	135181	250.0	1	9.282	0.000	142112	250.0
Aroclor-1254	2	8.727	0.000	74655	250.0	2	9.376	0.000	78035	250.0
Aroclor-1254	3	9.029	0.000	89352	250.0	3	9.813	0.000	104252	250.0
Aroclor-1254	4	9.165	0.000	193502	250.0	4	9.967	0.000	288512	250.0
Aroclor-1254	5	9.863	0.000	125217	250.0	5	10.208	0.000	274627	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0
Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.087 - 13.088) = 2010047 Col1 Total PCB = 0.3 ppm*

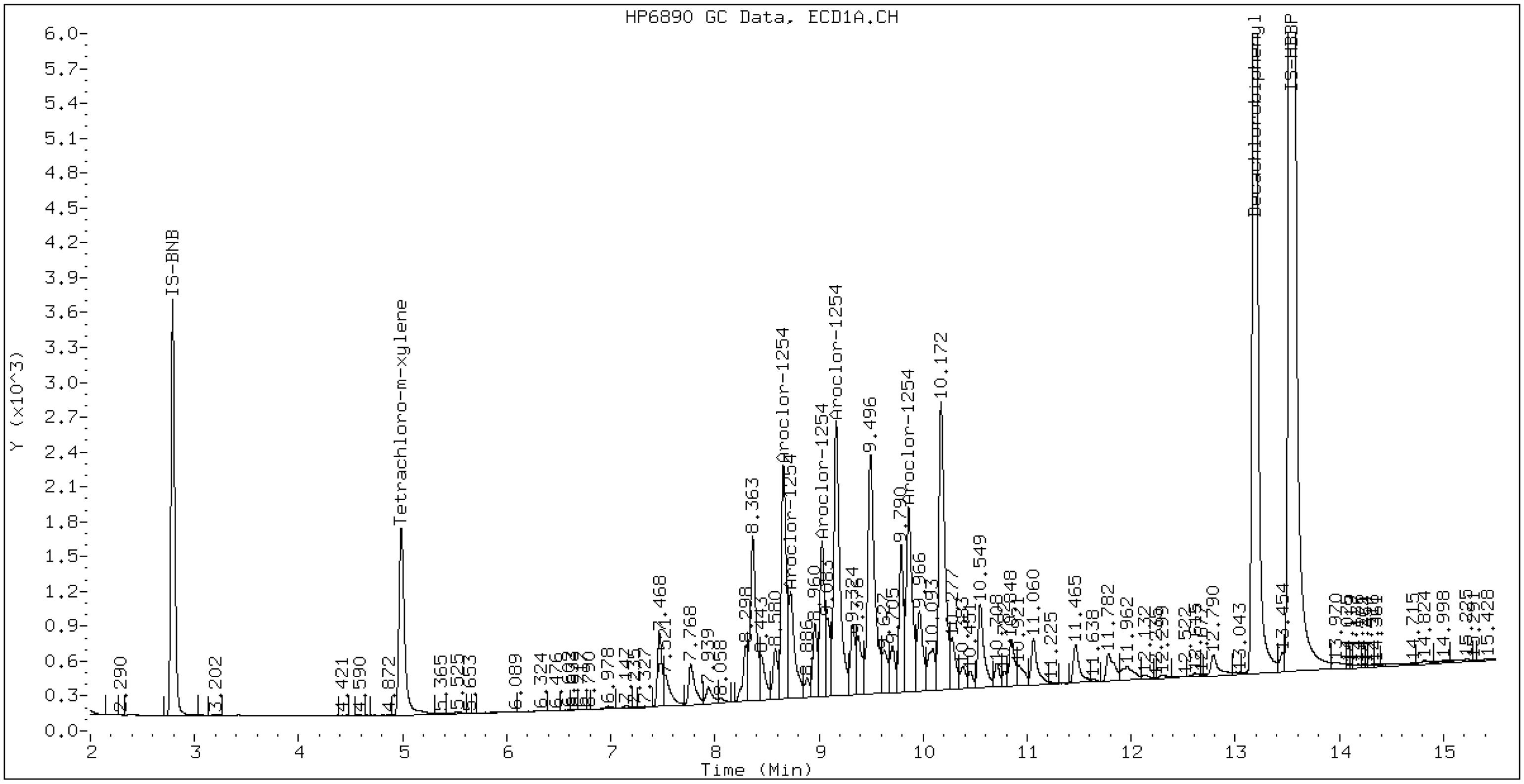
Total PCB Area Col2 (5.087 - 13.088) = 2556839 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

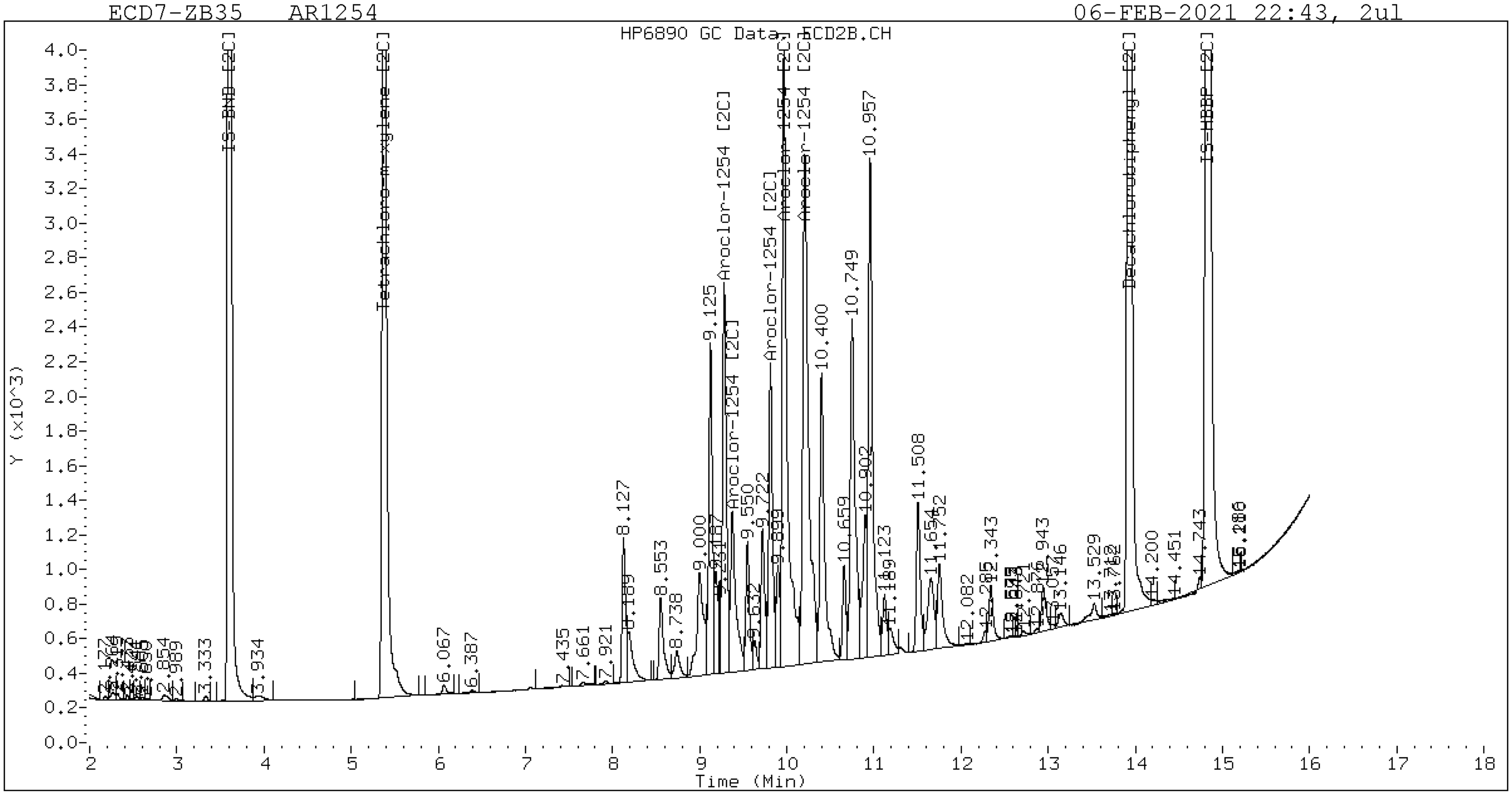
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254 06-FEB-2021 22:43, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254 06-FEB-2021 22:43, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062119ECD7.D
Data file 2: /210206.b/210206.b/02062119ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 06-FEB-2021 23:04
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.988	0.001	121833	5.378	-0.000	392802	42.2	44.4	5.1	Tetrachloro-m-xylene
13.189	0.001	582509	13.935	0.002	706820	37.3	44.3	17.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	183173	10.5
Hexabromobiphenyl	1343188	1454149	8.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	837405	0.0
Hexabromobiphenyl	850693	911719	7.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1221	1	3.943	0.000	6545	250.0	1	4.640	0.000	12229	250.0
Aroclor-1221	2	5.375	0.000	8686	250.0	2	6.052	0.000	26321	250.0
Aroclor-1221	3	5.659	0.000	29460	250.0	3	6.397	0.000	47435	250.0

Total Col1Ave (3 peaks): 250.0 Total Col2Ave (3 peaks): 250.0 RPD = 0
Corrected Ave: < 3 Peaks Corrected Ave: < 3 Peaks

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1262	1	10.388	0.000	202611	250.0	1	11.032	0.000	262709	250.0
Aroclor-1262	2	11.060	0.000	481881	250.0	2	11.749	0.000	585625	250.0
Aroclor-1262	3	11.569	0.000	136584	250.0	3	12.261	0.000	169383	250.0
Aroclor-1262	4	11.640	0.000	181357	250.0	4	13.053	0.000	211045	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.087 - 13.088) = 2946924 Col1 Total PCB = 0.4 ppm*

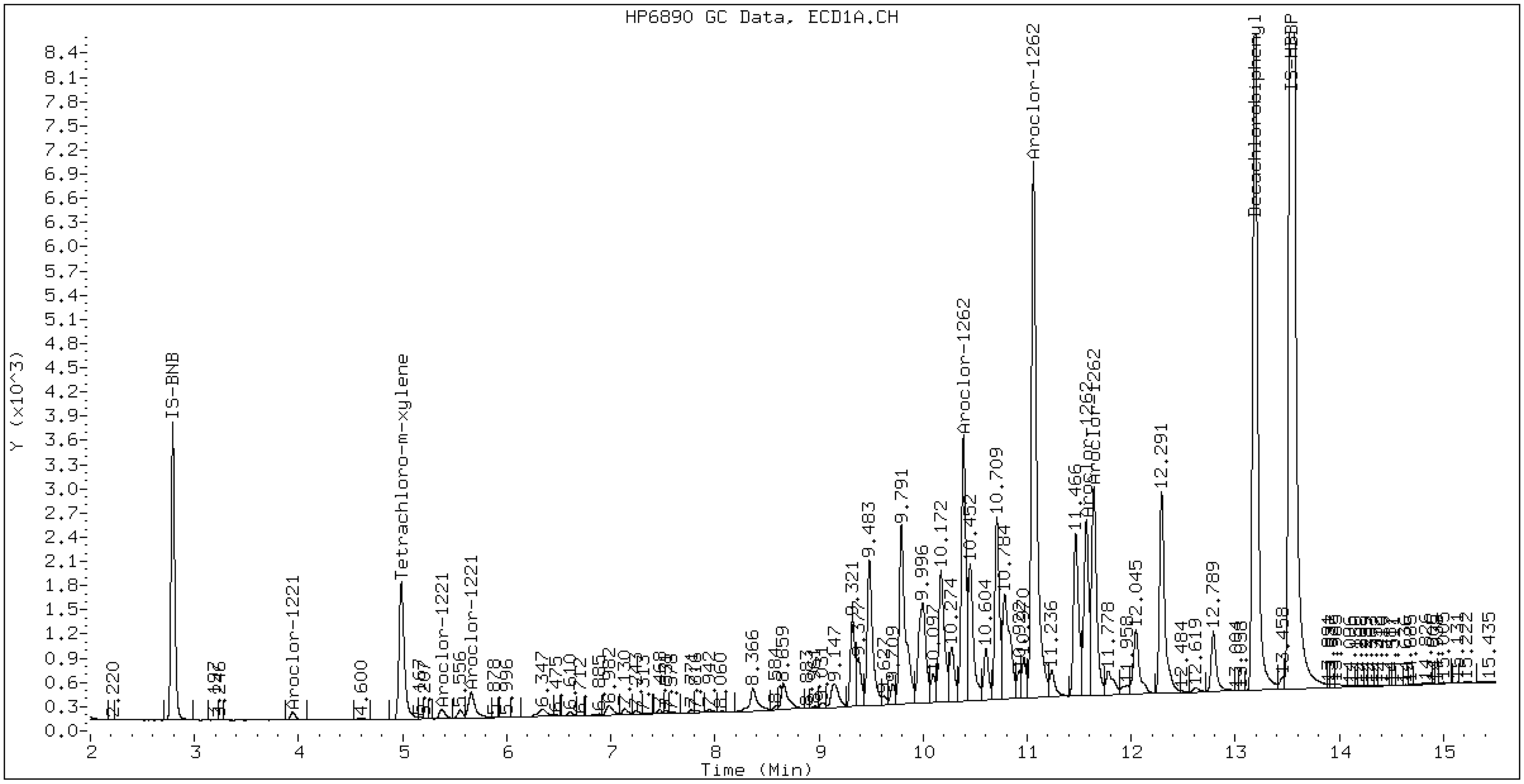
Total PCB Area Col2 (5.087 - 13.088) = 3585128 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

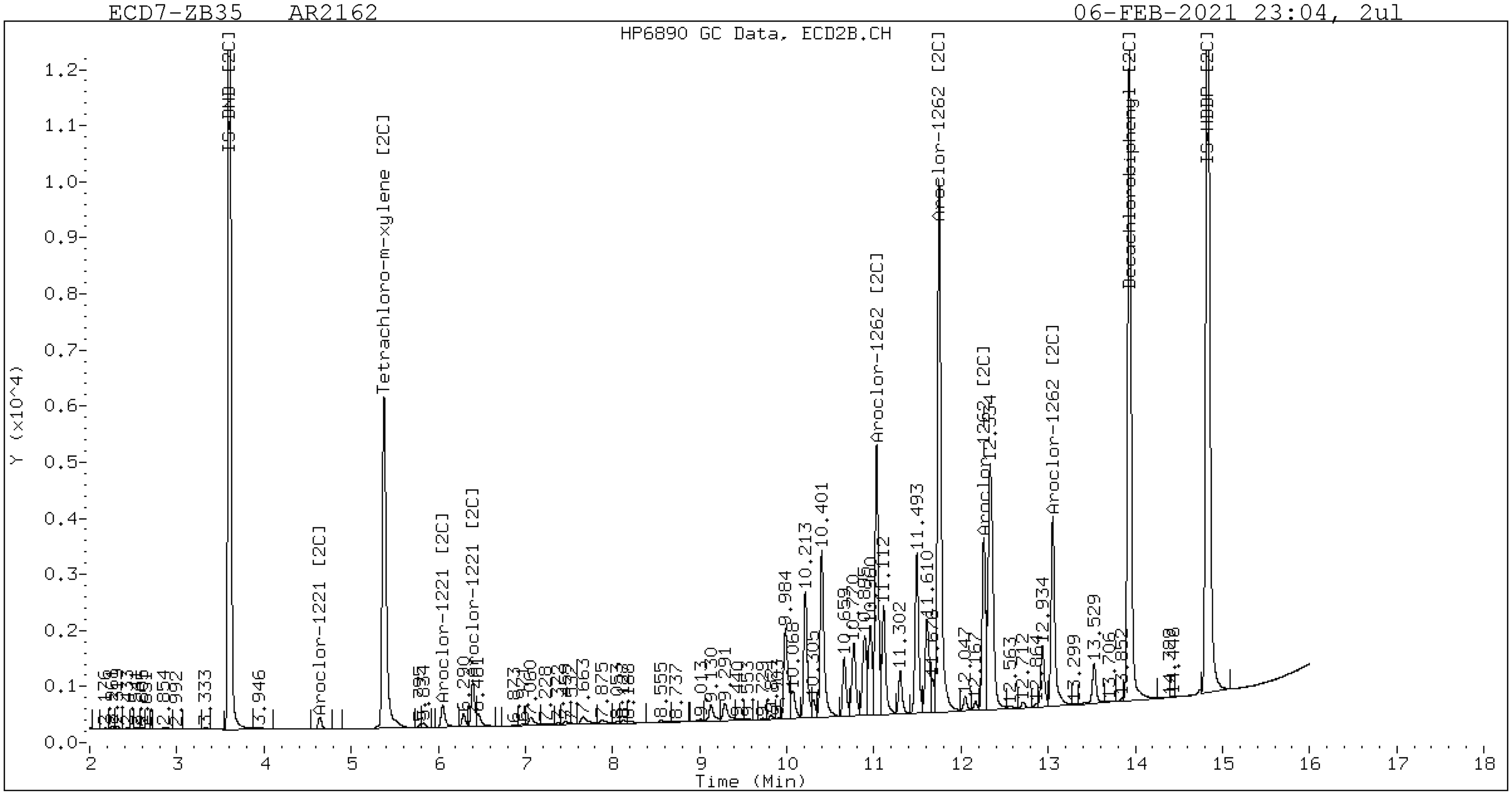
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162 06-FEB-2021 23:04, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162 06-FEB-2021 23:04, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062120ECD7.D
Data file 2: /210206.b/210206.b/02062120ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 06-FEB-2021 23:24
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.987	0.000	124146	5.379	0.000	394337	42.7	44.7	4.5	Tetrachloro-m-xylene
13.188	0.000	879863	13.932	0.000	1104171	57.7	70.0	19.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	184178	11.1
Hexabromobiphenyl	1343188	1420276	5.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	834786	-0.3
Hexabromobiphenyl	850693	901589	6.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	3.942	0.000	3780	250.0	1	4.640	0.000	6665	250.0
Aroclor-1232	2	6.608	0.000	16855	250.0	2	7.056	0.000	41497	250.0
Aroclor-1232	3	6.983	0.000	53974	250.0	3	7.660	0.000	88163	250.0
Aroclor-1232	4	8.295	0.000	18846	250.0	4	8.050	0.000	16806	250.0
	Total Col1Ave (4 peaks):			250.0		Total Col2Ave (4 peaks):			250.0	RPD = 0
	Corrected Ave (3 peaks):			250.0		Corrected Ave (3 peaks):			250.0	RPD = 0
Aroclor-1268	1	11.569	0.000	454154	250.0	1	12.259	0.000	570579	250.0
Aroclor-1268	2	11.638	0.000	516558	250.0	2	12.327	0.000	688518	250.0
Aroclor-1268	3	12.016	0.000	423187	250.0	3	12.712	0.000	547917	250.0
Aroclor-1268	4	12.792	0.000	1481689	250.0	4	13.531	0.000	1971785	250.0
	Total Col1Ave (4 peaks):			250.0		Total Col2Ave (4 peaks):			250.0	RPD = 0
	Corrected Ave (3 peaks):			250.0		Corrected Ave (3 peaks):			250.0	RPD = 0

Total PCB Area Col1 (5.087 - 13.088) = 4046348 Col1 Total PCB = 0.6 ppm*

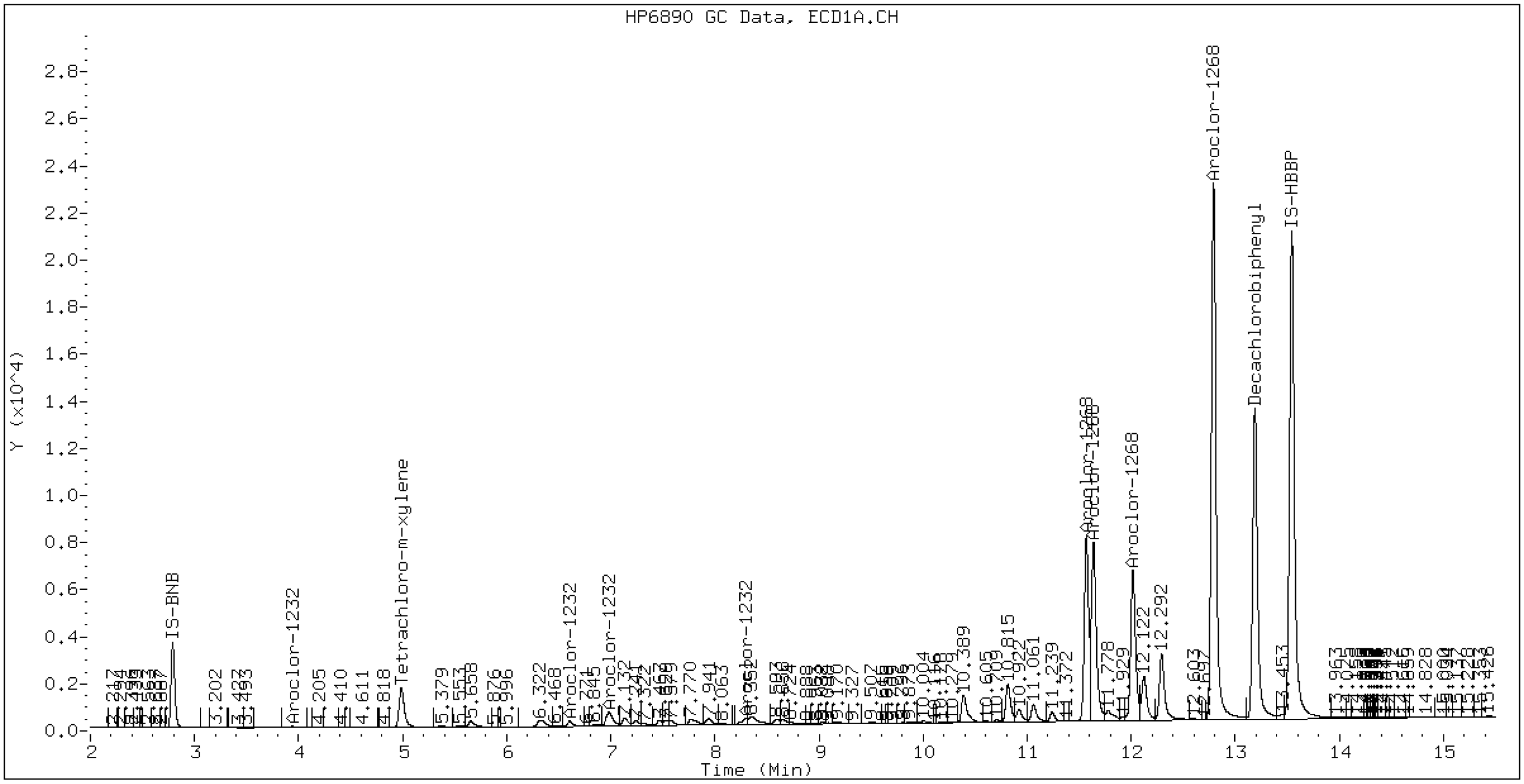
Total PCB Area Col2 (5.087 - 13.088) = 3558294 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

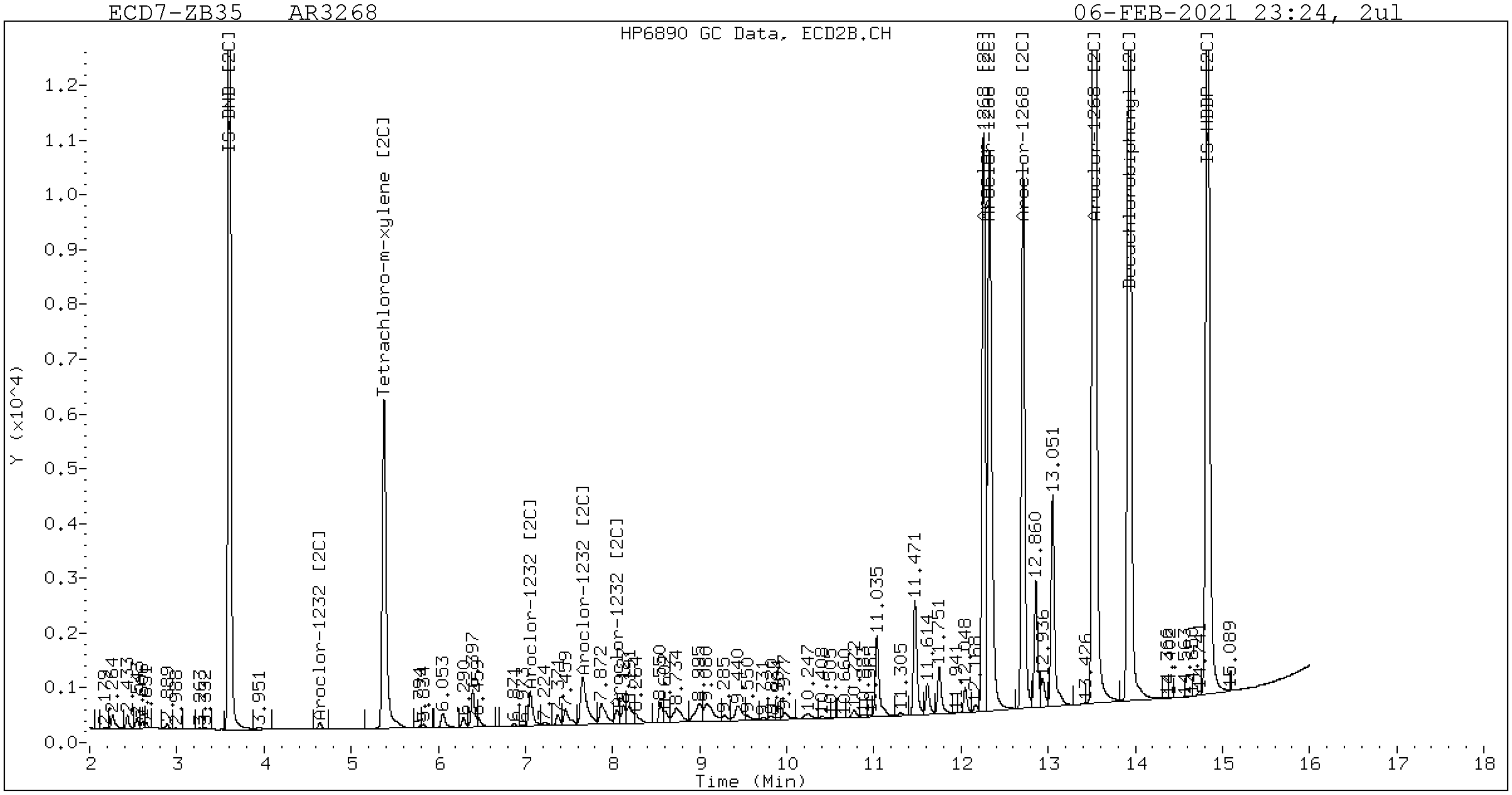
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268 06-FEB-2021 23:24, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268 06-FEB-2021 23:24, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062121ECD7.D
Data file 2: /210206.b/210206.b/02062121ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV1
Client ID:
Injection Date: 06-FEB-2021 23:45
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.986	-0.001	126029	5.377	-0.002	403946	45.8	45.7	0.4	Tetrachloro-m-xylene
13.189	0.000	582082	13.935	0.003	697645	36.7	43.3	16.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	174272	5.2
Hexabromobiphenyl	1343188	1477839	10.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	836903	-0.1
Hexabromobiphenyl	850693	920669	8.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

```
                           ZB5 Col                                ZB35 Col
 Aroclor   Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
 ==========================================================================================
 Aroclor-1016 1   6.607  -0.001    37248   247.4      1    7.055  -0.001    92861   255.8
 Aroclor-1016 2   6.983   0.001   123431   251.8      2    7.659   0.002   216949   263.8
 Aroclor-1016 3   7.133  -0.000    57773   247.7      3    7.870   0.001    92925   256.9
 Aroclor-1016 4   7.242  -0.000    37600   256.6      4    8.124  -0.000    50434   244.8
       Total Col1Ave (4 peaks):   250.9       Total Col2Ave (4 peaks):   255.3   RPD = 2
       Corrected Ave (3 peaks):   248.9       Corrected Ave (3 peaks):   252.5   RPD = 1

 Aroclor-1221 1   3.948   0.005      168     6.7      1     ---                       0.0
 Aroclor-1221 2   5.374  -0.001     2920    88.3      2    6.056   0.004    10032    95.3
 Aroclor-1221 3   5.655  -0.004    21679   193.4      3    6.397   0.000    41212   217.3
       Total Col1Ave (3 peaks):    96.1                Col2Ave: <3 Quant Peaks

 Aroclor-1232 1   3.948   0.006      168    11.7      1     ---                       0.0
 Aroclor-1232 2   6.607  -0.001    37248   583.9      2    7.055  -0.001    92861   558.0
 Aroclor-1232 3   6.983   0.000   123431   604.2      3    7.659  -0.001   216949   613.6
 Aroclor-1232 4   8.296   0.001     7568   106.1      4    8.047  -0.003    42633   632.6
       Total Col1Ave (4 peaks):   326.5       Total Col2Ave (3 peaks):   601.4   RPD = 59*
       Corrected Ave (3 peaks):   233.9                     Corrected Ave: < 3 Peaks

 Aroclor-1242 1   6.607  -0.001    37248   305.7      1    7.055  -0.000    92861   310.6
 Aroclor-1242 2   6.983   0.001   123431   305.7      2    7.659  -0.001   216949   309.2
 Aroclor-1242 3   8.296   0.003     7568    56.1      3    8.970  -0.021    33996   120.3
 Aroclor-1242 4   8.579  -0.011     3524    25.7      4     ---                       0.0
       Total Col1Ave (4 peaks):   173.3       Total Col2Ave (3 peaks):   246.7   RPD = 35
       Corrected Ave (3 peaks):   129.2                     Corrected Ave: < 3 Peaks

 Aroclor-1248 1   7.466  -0.001    34925   187.2      1    8.124  -0.002    50434   185.4
 Aroclor-1248 2   7.939   0.000    56887   202.0      2    8.549   0.000    57869   172.0
 Aroclor-1248 3   8.365   0.012    45727    78.7      3    8.970  -0.020    33996    65.1
 Aroclor-1248 4   8.579  -0.009     3524    16.3      4     ---                       0.0
       Total Col1Ave (4 peaks):   121.1       Total Col2Ave (3 peaks):   140.8   RPD = 15
       Corrected Ave (3 peaks):    94.1                     Corrected Ave: < 3 Peaks

 Aroclor-1254 1   8.658  -0.000    42640    82.8      1    9.286   0.004    44346    79.5
 Aroclor-1254 2      ---                     0.0     2     ---                       0.0
 Aroclor-1254 3   9.032   0.002     4244    12.5      3    9.818   0.005     4655    11.4
 Aroclor-1254 4   9.151  -0.014    40683    55.2      4    9.983   0.016   109770    97.0
 Aroclor-1254 5   9.851  -0.012    69587   145.9      5   10.214   0.006   153177   142.2
       Total Col1Ave (4 peaks):    74.1       Total Col2Ave (4 peaks):    82.5   RPD = 11
       Corrected Ave (3 peaks):    50.2       Corrected Ave (3 peaks):    62.6   RPD = 22

 Aroclor-1260 1  10.388   0.000   142078   284.2      1   11.031   0.001   182948   283.7
 Aroclor-1260 2  10.708  -0.000   139885   279.2      2   11.493  -0.000   162440   271.0
 Aroclor-1260 3  11.061  -0.000   388564   270.5      3   11.749   0.002   476491   287.2
 Aroclor-1260 4  11.466   0.001   171849   258.6      4   12.339   0.002   301699   281.5
 Aroclor-1260 5  11.567  -0.000    90063   290.7     NS     ---                      ----
       Total Col1Ave (5 peaks):   276.6       Total Col2Ave (4 peaks):   280.8   RPD = 2
       Corrected Ave (4 peaks):   273.1       Corrected Ave (3 peaks):   278.7   RPD = 2

 Aroclor-1262 1  10.388  -0.000   142078   172.5      1   11.031  -0.001   182948   172.4
 Aroclor-1262 2  11.061   0.000   388564   198.4      2   11.749  -0.000   476491   201.4
 Aroclor-1262 3  11.567  -0.001    90063   162.2      3   12.264   0.003   107128   156.6
 Aroclor-1262 4  11.640  -0.001   119087   161.5      4   13.052  -0.001   125811   147.6
       Total Col1Ave (4 peaks):   173.6       Total Col2Ave (4 peaks):   169.5   RPD = 2
       Corrected Ave (3 peaks):   165.4       Corrected Ave (3 peaks):   158.9   RPD = 4

 Aroclor-1268 1  11.567  -0.001    90063    47.6      1   12.264   0.005   107128    46.0
 Aroclor-1268 2  11.640   0.002   119087    55.4      2   12.339   0.012   301699   107.3
 Aroclor-1268 3  12.046   0.030    57579    32.7      3   12.713   0.001     4291     1.9
 Aroclor-1268 4  12.787  -0.004    33875     5.5      4   13.530  -0.001    28144     3.5
       Total Col1Ave (4 peaks):    35.3       Total Col2Ave (4 peaks):    39.7   RPD = 12
       Corrected Ave (3 peaks):    28.6       Corrected Ave (3 peaks):    17.1   RPD = 50*
```

Total PCB Area Col1 (5.087 - 13.088) = 3358094 Col1 Total PCB = 0.5 ppm*

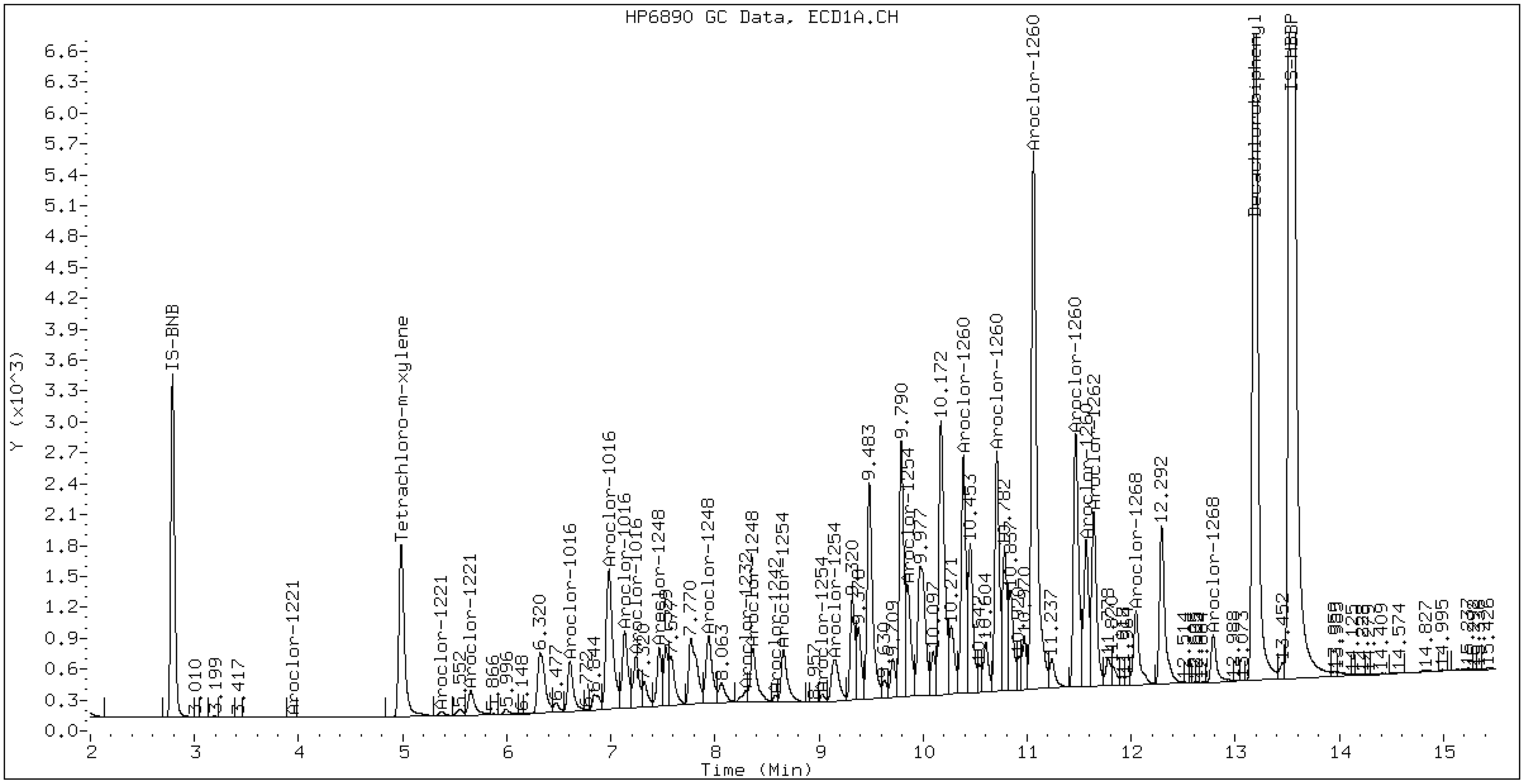
Total PCB Area Col2 (5.087 - 13.088) = 4227207 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

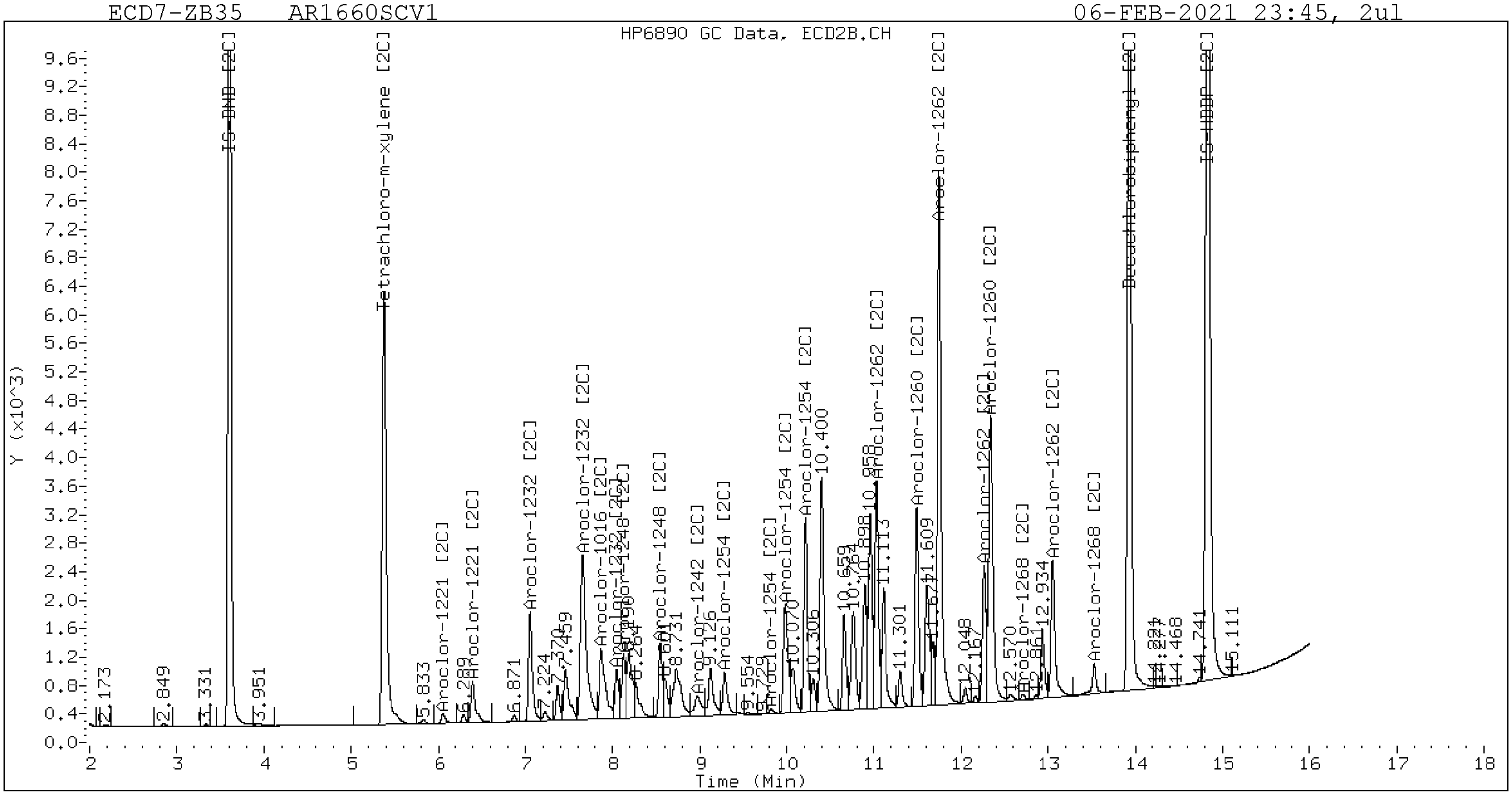
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV1 06-FEB-2021 23:45, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV1 06-FEB-2021 23:45, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062122ECD7.D
Data file 2: /210206.b/210206.b/02062122ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV2
Client ID:
Injection Date: 07-FEB-2021 00:05
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.987	-0.000	122774	5.378	-0.000	399496	43.3	45.1	4.1	Tetrachloro-m-xylene
13.189	0.000	597221	13.935	0.002	705132	36.9	43.2	15.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	179964	8.6
Hexabromobiphenyl	1343188	1508651	12.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	838731	0.2
Hexabromobiphenyl	850693	932542	9.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

//target/share/chem4/ecd7.i/210206.b/02062122ECD7.D AR1242SCV2

Aroclor	Peak# (ZB5 Col)	RT	Shift	Area	Amount	Peak# (ZB35 Col)	RT	Shift	Area	Amount
Aroclor-1016	1	6.609	0.000	28852	185.6	1	7.056	-0.000	71436	196.4
Aroclor-1016	2	6.983	0.001	95901	189.4	2	7.661	0.004	164644	199.7
Aroclor-1016	3	7.134	0.001	44661	185.4	3	7.873	0.003	70189	193.6
Aroclor-1016	4	7.242	-0.001	28554	188.7	4	8.127	0.003	40561	196.4

Total Col1Ave (4 peaks): 187.3 Total Col2Ave (4 peaks): 196.5 RPD = 5
Corrected Ave (3 peaks): 186.6 Corrected Ave (3 peaks): 195.5 RPD = 5

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	3.939	-0.004	228	8.9	1	---			0.0
Aroclor-1221	2	5.376	0.001	2140	62.7	2	6.058	0.006	8969	85.1
Aroclor-1221	3	5.656	-0.004	16904	146.0	3	6.397	0.001	31881	167.8

Total Col1Ave (3 peaks): 72.5 Col2Ave: <3 Quant Peaks

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	3.939	-0.003	228	15.4	1	---			0.0
Aroclor-1232	2	6.609	0.000	28852	438.0	2	7.056	-0.000	71436	428.3
Aroclor-1232	3	6.983	0.000	95901	454.6	3	7.661	0.001	164644	464.7
Aroclor-1232	4	8.295	-0.000	38451	522.0	4	8.049	-0.001	31440	465.5

Total Col1Ave (4 peaks): 357.5 Total Col2Ave (3 peaks): 452.8 RPD = 24
Corrected Ave (3 peaks): 302.7 Corrected Ave: < 3 Peaks

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.609	0.000	28852	229.3	1	7.056	0.001	71436	238.4
Aroclor-1242	2	6.983	0.001	95901	230.0	2	7.661	0.001	164644	234.2
Aroclor-1242	3	8.295	0.002	38451	276.1	3	8.994	0.003	80347	283.6
Aroclor-1242	4	8.590	-0.000	29363	207.5	4	9.433	0.002	62620	226.7

Total Col1Ave (4 peaks): 235.7 Total Col2Ave (4 peaks): 245.7 RPD = 4
Corrected Ave (3 peaks): 222.3 Corrected Ave (3 peaks): 233.1 RPD = 5

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	7.466	-0.000	28196	146.3	1	8.127	0.001	40561	148.8
Aroclor-1248	2	7.941	0.002	45017	154.8	2	8.551	0.002	47176	139.9
Aroclor-1248	3	8.355	0.002	80650	134.4	3	8.994	0.004	80347	153.4
Aroclor-1248	4	8.590	0.002	29363	131.9	4	9.433	0.006	62620	123.9

Total Col1Ave (4 peaks): 141.9 Total Col2Ave (4 peaks): 141.5 RPD = 0
Corrected Ave (3 peaks): 137.5 Corrected Ave (3 peaks): 137.5 RPD = 0

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.657	-0.001	32651	61.4	1	9.285	0.003	23810	42.6
Aroclor-1254	2	8.726	-0.001	18207	62.0	2	9.433	0.057	62620	204.1
Aroclor-1254	3	9.030	0.000	12620	35.9	3	9.818	0.005	15721	38.4
Aroclor-1254	4	9.168	0.003	25714	33.8	4	9.973	0.005	36354	32.1
Aroclor-1254	5	9.869	0.006	14438	29.3	5	10.228	0.021	32819	30.4

Total Col1Ave (5 peaks): 44.5 Total Col2Ave (5 peaks): 69.5 RPD = 44*
Corrected Ave (4 peaks): 40.1 Corrected Ave (4 peaks): 35.9 RPD = 11

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1260	1	10.386	-0.001	485	1.0	1	10.963	-0.068	15171	23.2
Aroclor-1260	2	10.700	-0.009	559	1.1	2	11.516	0.022	3446	5.7
Aroclor-1260	3	11.063	0.003	2483	1.7	3	11.753	0.006	2301	1.4
Aroclor-1260	4	11.468	0.003	1437	2.1	4	12.349	0.013	2531	2.3
Aroclor-1260	5	11.647	0.080	576	1.8	NS	---			----

Total Col1Ave (5 peaks): 1.5 Total Col2Ave (4 peaks): 8.2 RPD = 137*
Corrected Ave (4 peaks): 1.4 Corrected Ave (3 peaks): 3.1 RPD = 77*

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1262	1	10.386	-0.002	485	0.6	1	10.963	-0.069	15171	14.1
Aroclor-1262	2	11.063	0.003	2483	1.2	2	11.753	0.004	2301	1.0
Aroclor-1262	3	11.647	0.078	576	1.0	3	12.349	0.088	2531	3.7
Aroclor-1262	4	---			0.0	4	13.061	0.008	254	0.3

Total Col1Ave (3 peaks): 0.9 Total Col2Ave (4 peaks): 4.8 RPD = 134*
Corrected Ave: < 3 Peaks Corrected Ave (3 peaks): 1.6

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1268	1	11.647	0.078	576	0.3	1	12.349	0.091	2531	1.1
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	11.956	-0.059	15630	8.7	3	12.713	0.001	1611	0.7
Aroclor-1268	4	12.789	-0.002	14751	2.3	4	13.531	0.000	7865	1.0

Total Col1Ave (3 peaks): 3.8 Total Col2Ave (3 peaks): 0.9 RPD = 122*
Corrected Ave: < 3 Peaks Corrected Ave: < 3 Peaks

Total PCB Area Col1 (5.087 - 13.088) = 894559 Col1 Total PCB = 0.1 ppm*

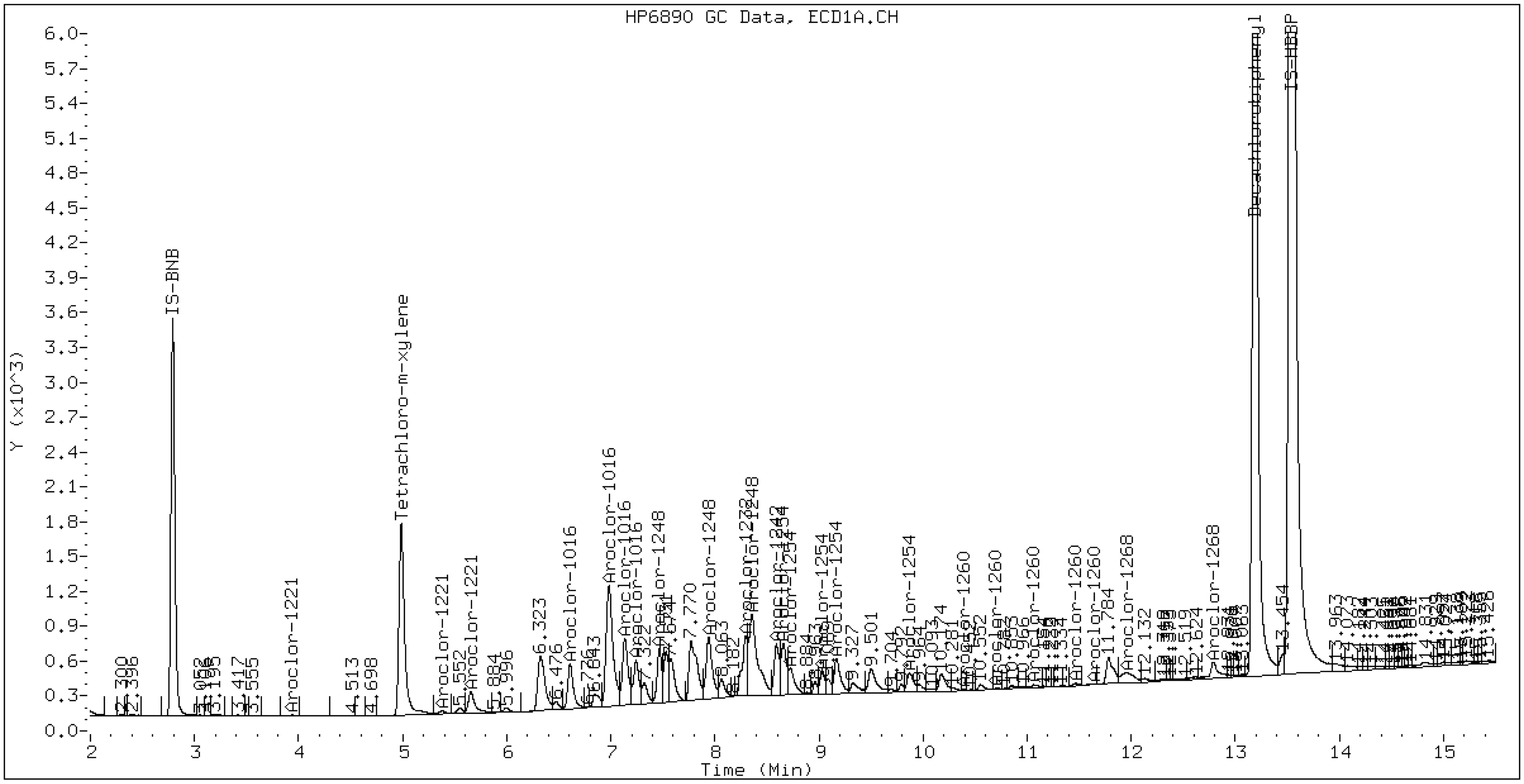
Total PCB Area Col2 (5.087 - 13.088) = 1596498 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

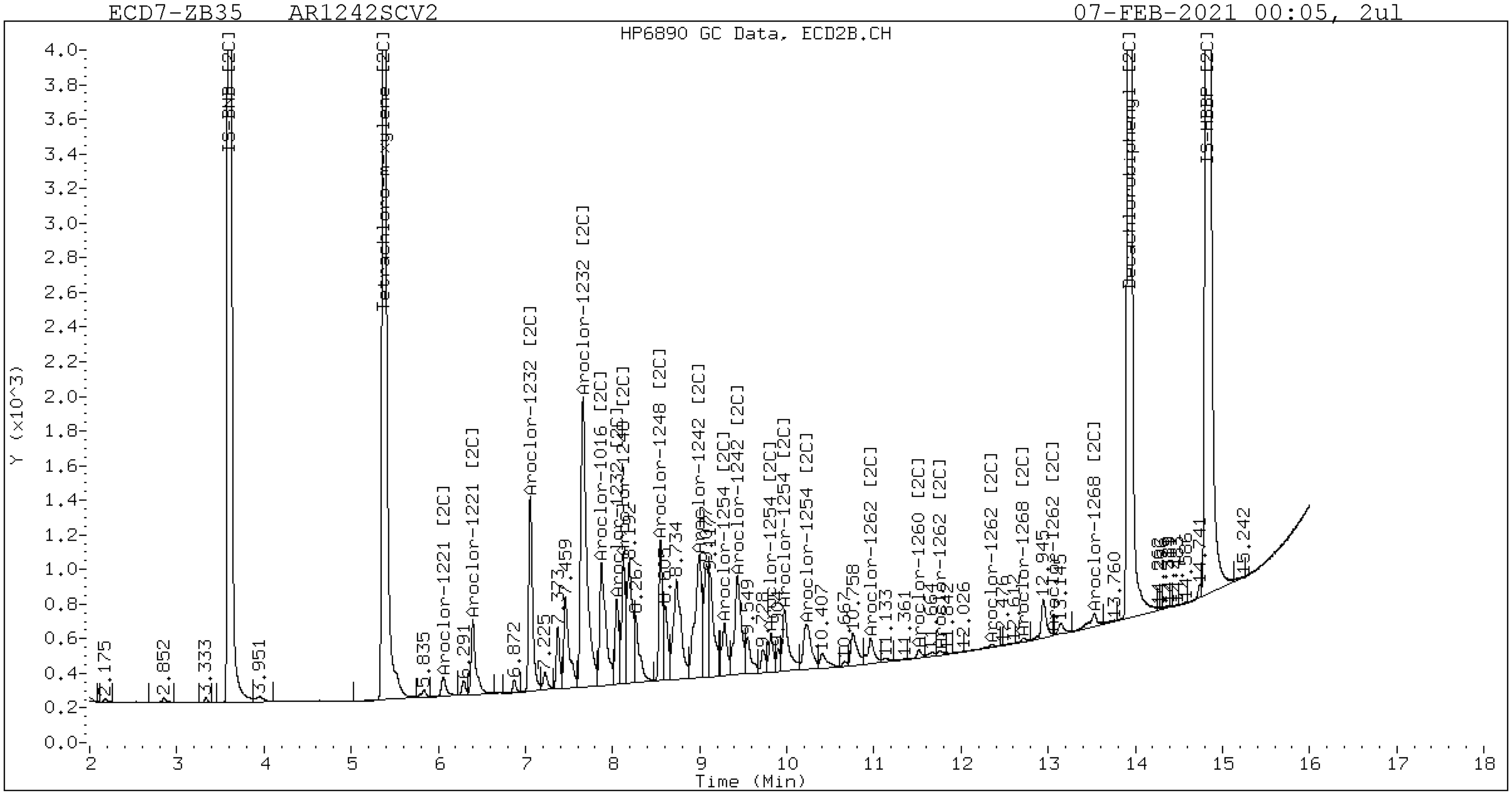
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV2 07-FEB-2021 00:05, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV2 07-FEB-2021 00:05, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062123ECD7.D
Data file 2: /210206.b/210206.b/02062123ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV3
Client ID:
Injection Date: 07-FEB-2021 00:26
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.988	0.001	126492	5.379	-0.000	396578	42.6	45.1	5.7	Tetrachloro-m-xylene
13.189	0.000	603418	13.935	0.003	705735	37.0	43.4	15.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	188074	13.5
Hexabromobiphenyl	1343188	1517886	13.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	830966	-0.8
Hexabromobiphenyl	850693	928957	9.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col						ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	6.609	0.001	15129	93.1	1	7.056	-0.000	35874	99.5	
Aroclor-1016	2	6.982	-0.000	64108	121.2	2	7.662	0.005	103586	126.8	
Aroclor-1016	3	7.139	0.006	28299	112.4	3	7.875	0.005	18669	52.0	
Aroclor-1016	4	7.241	-0.002	16156	102.2	4	8.127	0.003	66156	323.3	
Total Col1Ave (4 peaks):				107.2		Total Col2Ave (4 peaks):			150.4		RPD = 34
Corrected Ave (3 peaks):				102.6		Corrected Ave (3 peaks):			92.8		RPD = 10
Aroclor-1221	1	---			0.0	1	---			0.0	
Aroclor-1221	2	5.392	0.017	601	16.8	2	6.067	0.015	4422	42.3	
Aroclor-1221	3	5.655	-0.004	3716	30.7	3	6.400	0.003	6413	34.1	
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks					
Aroclor-1232	1	---			0.0	1	---			0.0	
Aroclor-1232	2	6.609	0.001	15129	219.8	2	7.056	-0.000	35874	217.1	
Aroclor-1232	3	6.982	-0.001	64108	290.8	3	7.662	0.001	103586	295.1	
Aroclor-1232	4	8.295	-0.000	72316	939.4	4	8.053	0.003	15252	227.9	
Total Col1Ave (3 peaks):				483.3		Total Col2Ave (3 peaks):			246.7		RPD = 65*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks					
Aroclor-1242	1	6.609	0.001	15129	115.1	1	7.056	0.000	35874	120.8	
Aroclor-1242	2	6.982	-0.000	64108	147.1	2	7.662	0.002	103586	148.7	
Aroclor-1242	3	8.295	0.002	72316	496.9	3	8.991	-0.000	147481	525.5	
Aroclor-1242	4	8.588	-0.003	50994	344.9	4	9.430	-0.001	115345	421.4	
Total Col1Ave (4 peaks):				276.0		Total Col2Ave (4 peaks):			304.1		RPD = 10
Corrected Ave (3 peaks):				202.3		Corrected Ave (3 peaks):			230.3		RPD = 13
Aroclor-1248	1	7.467	0.001	46344	230.1	1	8.127	0.001	66156	244.9	
Aroclor-1248	2	7.940	0.000	67912	223.5	2	8.551	0.002	78899	236.2	
Aroclor-1248	3	8.355	0.003	141277	225.3	3	8.991	0.001	147481	284.3	
Aroclor-1248	4	8.588	-0.000	50994	219.1	4	9.430	0.003	115345	230.3	
Total Col1Ave (4 peaks):				224.5		Total Col2Ave (4 peaks):			248.9		RPD = 10
Corrected Ave (3 peaks):				222.7		Corrected Ave (3 peaks):			237.1		RPD = 6
Aroclor-1254	1	8.659	0.001	62415	112.3	1	9.282	0.001	43702	79.0	
Aroclor-1254	2	8.726	-0.001	37929	123.6	2	9.430	0.055	115345	379.5	
Aroclor-1254	3	9.030	0.001	28575	77.8	3	9.816	0.003	35371	87.1	
Aroclor-1254	4	9.167	0.002	58084	73.0	4	9.970	0.003	74404	66.2	
Aroclor-1254	5	9.873	0.010	41357	80.4	5	10.241	0.033	67731	63.3	
Total Col1Ave (5 peaks):				93.4		Total Col2Ave (5 peaks):			135.0		RPD = 36
Corrected Ave (4 peaks):				85.9		Corrected Ave (4 peaks):			73.9		RPD = 15
Aroclor-1260	1	10.391	0.004	1887	3.7	1	10.962	-0.069	14490	22.3	
Aroclor-1260	2	10.714	0.005	1439	2.8	2	11.511	0.018	4513	7.5	
Aroclor-1260	3	11.063	0.002	4890	3.3	3	11.756	0.009	4626	2.8	
Aroclor-1260	4	11.467	0.002	1824	2.7	4	12.342	0.005	2721	2.5	
Aroclor-1260	5	11.567	-0.000	1643	5.2	NS	---			----	
Total Col1Ave (5 peaks):				3.5		Total Col2Ave (4 peaks):			8.8		RPD = 85*
Corrected Ave (4 peaks):				3.1		Corrected Ave (3 peaks):			4.2		RPD = 31
Aroclor-1262	1	10.391	0.003	1887	2.2	1	10.962	-0.070	14490	13.5	
Aroclor-1262	2	11.063	0.003	4890	2.4	2	11.756	0.007	4626	1.9	
Aroclor-1262	3	11.567	-0.001	1643	2.9	3	12.269	0.008	1764	2.6	
Aroclor-1262	4	11.646	0.006	2365	3.1	4	13.054	0.001	1886	2.2	
Total Col1Ave (4 peaks):				2.7		Total Col2Ave (4 peaks):			5.1		RPD = 62*
Corrected Ave (3 peaks):				2.5		Corrected Ave (3 peaks):			2.2		RPD = 12
Aroclor-1268	1	11.567	-0.001	1643	0.8	1	12.269	0.010	1764	0.8	
Aroclor-1268	2	11.646	0.009	2365	1.1	2	12.342	0.015	2721	1.0	
Aroclor-1268	3	11.965	-0.050	15614	8.6	3	12.723	0.011	1139	0.5	
Aroclor-1268	4	12.789	-0.003	16623	2.6	4	13.531	-0.000	9096	1.1	
Total Col1Ave (4 peaks):				3.3		Total Col2Ave (4 peaks):			0.8		RPD = 119*
Corrected Ave (3 peaks):				1.5		Corrected Ave (3 peaks):			0.7		RPD = 69*

Total PCB Area Col1 (5.087 - 13.088) = 1181572 Col1 Total PCB = 0.2 ppm*

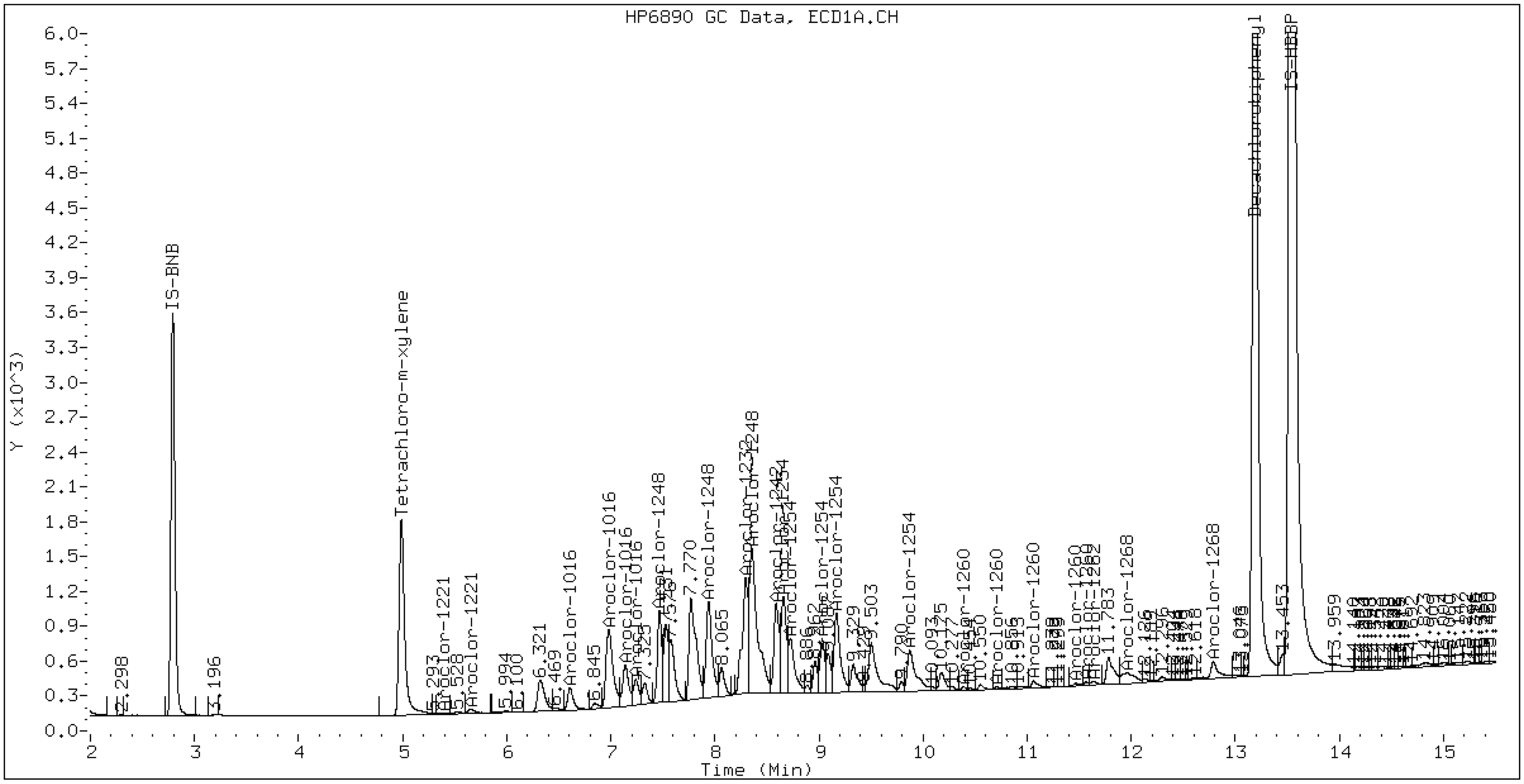
Total PCB Area Col2 (5.087 - 13.088) = 1904576 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

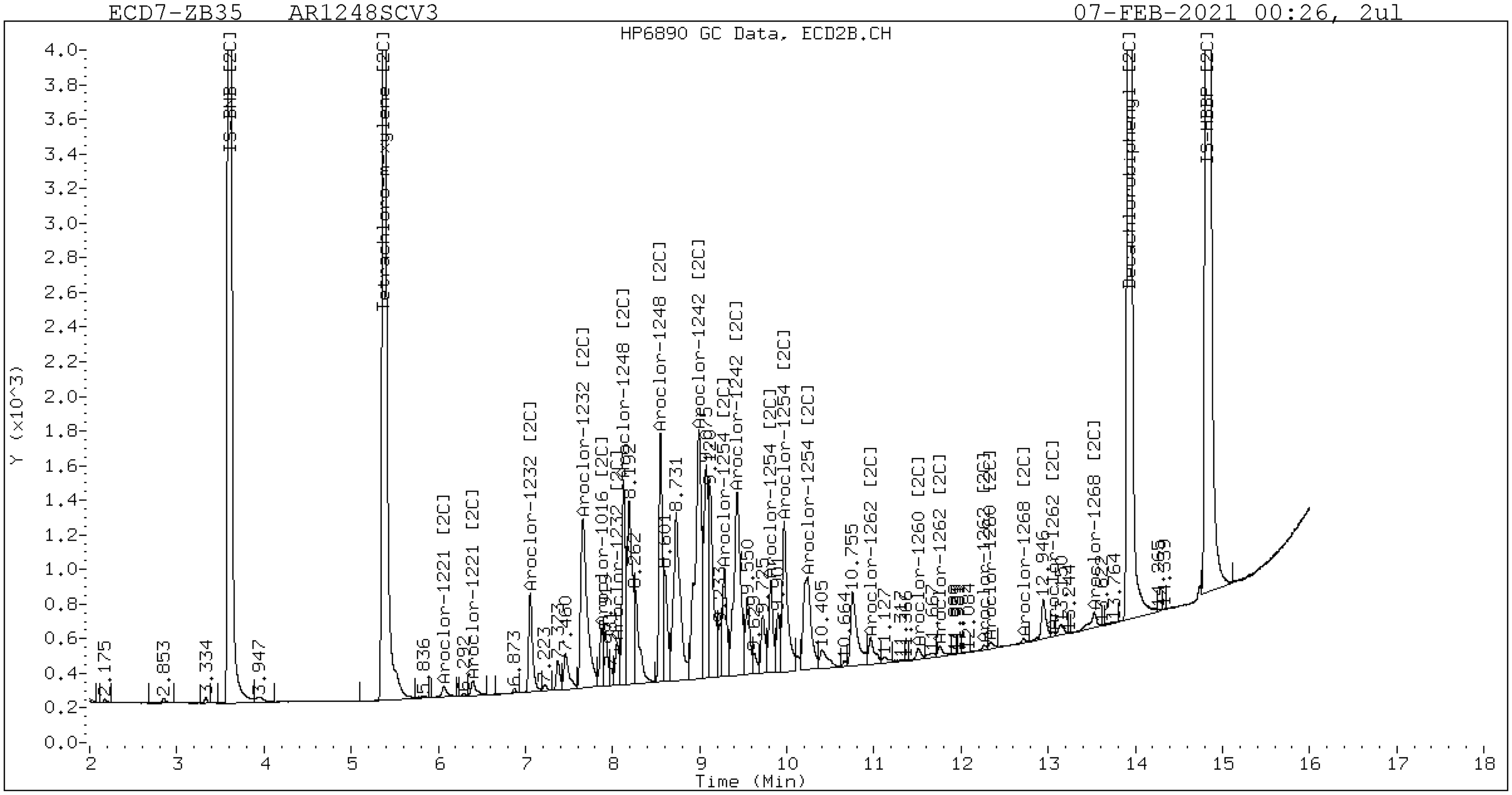
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV3 07-FEB-2021 00:26, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV3 07-FEB-2021 00:26, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062124ECD7.D
Data file 2: /210206.b/210206.b/02062124ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV4
Client ID:
Injection Date: 07-FEB-2021 00:46
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.988	0.001	126335	5.377	-0.001	390705	43.4	44.5	2.5	Tetrachloro-m-xylene
13.189	0.000	596266	13.934	0.002	686915	36.3	42.2	14.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	184551	11.4
Hexabromobiphenyl	1343188	1528201	13.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	830831	-0.8
Hexabromobiphenyl	850693	930682	9.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.614	0.006	455	2.9	1	7.058	0.001	14	0.0
Aroclor-1016	2	6.975	-0.007	1798	3.5	2	7.655	-0.002	1066	1.3
Aroclor-1016	3	7.147	0.014	1455	5.9	3	7.921	0.052	844	2.4
Aroclor-1016	4	7.252	0.009	480	3.1	4	8.129	0.004	64597	315.8
	Total Col1Ave (4 peaks):			3.8	Total Col2Ave (4 peaks):				79.9	RPD = 182*
	Corrected Ave (3 peaks):			3.1	Corrected Ave (3 peaks):				1.2	RPD = 87*
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	5.360	-0.015	276	7.9	2	6.068	0.016	3435	32.9
Aroclor-1221	3	5.660	0.000	336	2.8	3	6.392	-0.005	665	3.5
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.614	0.006	455	6.7	2	7.058	0.001	14	0.1
Aroclor-1232	3	6.975	-0.008	1798	8.3	3	7.655	-0.005	1066	3.0
Aroclor-1232	4	8.299	0.004	25154	333.0	4	8.129	0.079	64597	965.5
	Total Col1Ave (3 peaks):			116.0	Total Col2Ave (3 peaks):				322.9	RPD = 94*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.614	0.006	455	3.5	1	7.058	0.002	14	0.0
Aroclor-1242	2	6.975	-0.007	1798	4.2	2	7.655	-0.005	1066	1.5
Aroclor-1242	3	8.299	0.006	25154	176.2	3	9.003	0.012	53587	191.0
Aroclor-1242	4	8.580	-0.011	26361	181.7	4	9.379	-0.052	73935	270.2
	Total Col1Ave (4 peaks):			91.4	Total Col2Ave (4 peaks):				115.7	RPD = 23
	Corrected Ave (3 peaks):			61.3	Corrected Ave (3 peaks):				64.2	RPD = 5
Aroclor-1248	1	7.468	0.001	57609	291.6	1	8.129	0.003	64597	239.2
Aroclor-1248	2	7.940	0.001	11045	37.0	2	8.555	0.005	28300	84.7
Aroclor-1248	3	8.365	0.012	135738	220.6	3	9.003	0.013	53587	103.3
Aroclor-1248	4	8.580	-0.009	26361	115.4	4	9.379	-0.048	73935	147.7
	Total Col1Ave (4 peaks):			166.2	Total Col2Ave (4 peaks):				143.7	RPD = 14
	Corrected Ave (3 peaks):			124.4	Corrected Ave (3 peaks):				111.9	RPD = 11
Aroclor-1254	1	8.660	0.001	134588	246.9	1	9.284	0.003	147811	267.1
Aroclor-1254	2	8.727	-0.000	76127	252.8	2	9.379	0.003	73935	243.3
Aroclor-1254	3	9.031	0.001	119558	331.8	3	9.815	0.002	100357	247.2
Aroclor-1254	4	9.166	0.001	191003	244.8	4	9.968	0.001	276761	246.3
Aroclor-1254	5	9.863	0.000	124783	247.1	5	10.210	0.002	267233	249.9
	Total Col1Ave (5 peaks):			264.7	Total Col2Ave (5 peaks):				250.7	RPD = 5
	Corrected Ave (4 peaks):			247.9	Corrected Ave (4 peaks):				246.7	RPD = 0
Aroclor-1260	1	10.385	-0.003	14182	27.4	1	10.959	-0.071	209123	320.8
Aroclor-1260	2	10.709	0.001	14671	28.3	2	11.510	0.016	54583	90.1
Aroclor-1260	3	11.062	0.001	35794	24.1	3	11.753	0.005	41402	24.7
Aroclor-1260	4	11.466	0.002	27945	40.7	4	12.342	0.005	23068	21.3
Aroclor-1260	5	11.644	0.076	1548	4.8	NS	---			----
	Total Col1Ave (5 peaks):			25.1	Total Col2Ave (4 peaks):				114.2	RPD = 128*
	Corrected Ave (4 peaks):			21.2	Corrected Ave (3 peaks):				45.4	RPD = 73*
Aroclor-1262	1	10.385	-0.004	14182	16.7	1	10.959	-0.073	209123	195.0
Aroclor-1262	2	11.062	0.001	35794	17.7	2	11.753	0.004	41402	17.3
Aroclor-1262	3	11.644	0.075	1548	2.7	3	12.342	0.081	23068	33.4
Aroclor-1262	4	---			0.0	4	13.053	0.000	1493	1.7
	Total Col1Ave (3 peaks):			12.3	Total Col2Ave (4 peaks):				61.8	RPD = 133*
	Corrected Ave: < 3 Peaks				Corrected Ave (3 peaks):				17.5	
Aroclor-1268	1	11.644	0.075	1548	0.8	1	12.342	0.083	23068	9.8
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	11.959	-0.057	14396	7.9	3	12.712	0.000	1424	0.6
Aroclor-1268	4	12.789	-0.002	14907	2.3	4	13.529	-0.002	8084	1.0
	Total Col1Ave (3 peaks):			3.7	Total Col2Ave (3 peaks):				3.8	RPD = 3
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.087 - 13.088) = 2017140 Col1 Total PCB = 0.3 ppm*

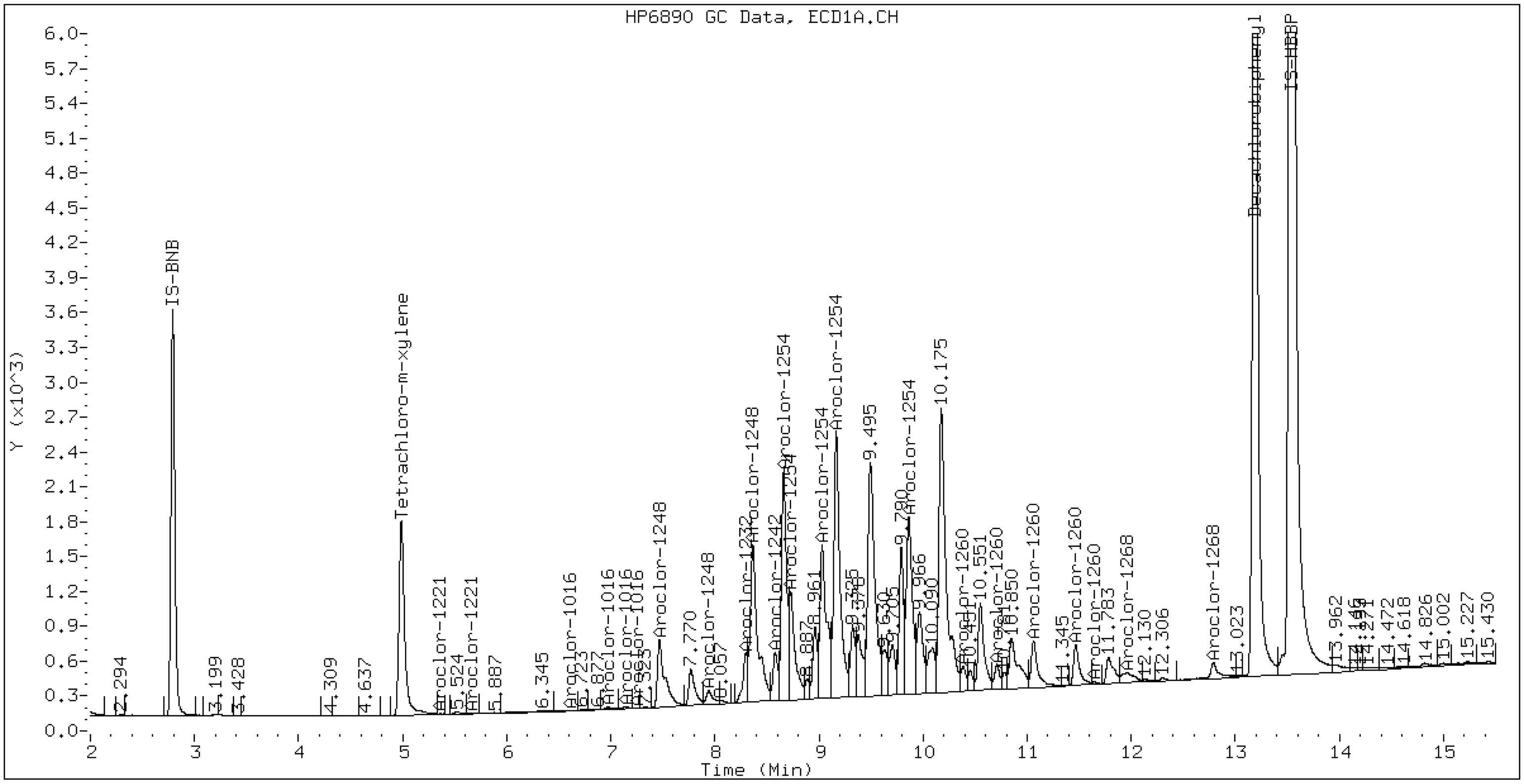
Total PCB Area Col2 (5.087 - 13.088) = 2463558 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

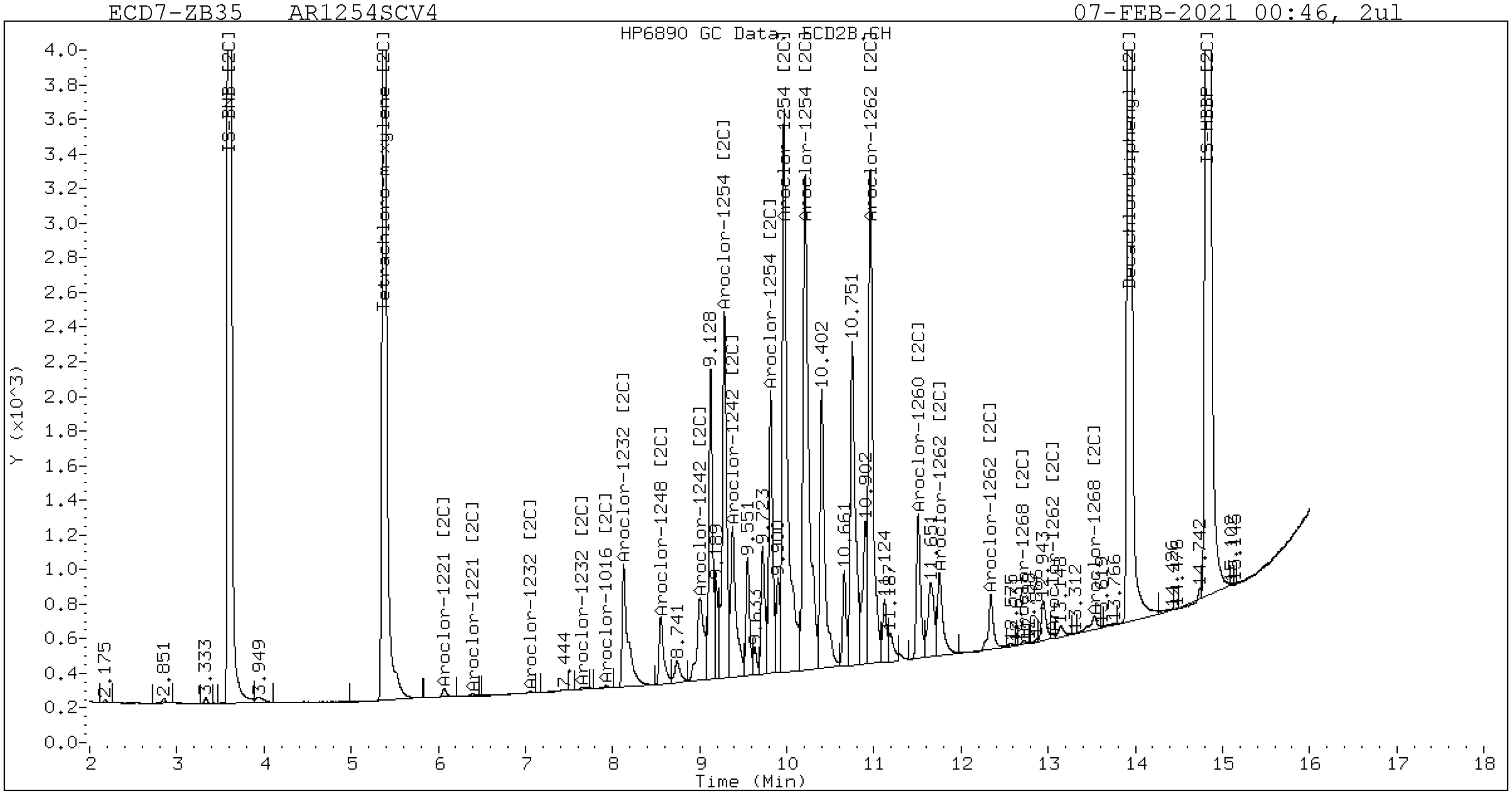
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV4 07-FEB-2021 00:46, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV4 07-FEB-2021 00:46, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062125ECD7.D
Data file 2: /210206.b/210206.b/02062125ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV5
Client ID:
Injection Date: 07-FEB-2021 01:07
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.988	0.001	123457	5.379	0.000	382573	42.4	43.9	3.4	Tetrachloro-m-xylene
13.189	0.000	591968	13.936	0.004	711921	36.5	43.4	17.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	184586	11.4
Hexabromobiphenyl	1343188	1510520	12.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	824502	-1.5
Hexabromobiphenyl	850693	937832	10.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

```
                         ZB5 Col                                 ZB35 Col
Aroclor   Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
=========================================================================================
Aroclor-1016 1   6.610   0.002     3068    19.2      1    7.063   0.006    11548    32.3
Aroclor-1016 2   6.980  -0.002     7817    15.1      2    7.665   0.007    11245    13.9
Aroclor-1016 3   7.138   0.004     4334    17.5      3    7.875   0.005     5499    15.4
Aroclor-1016 4   7.238  -0.004     3225    20.8      4    8.127   0.002     3087    15.2
      Total Col1Ave (4 peaks):    18.2      Total Col2Ave (4 peaks):    19.2   RPD = 6
      Corrected Ave (3 peaks):    17.3      Corrected Ave (3 peaks):    14.8   RPD = 15

Aroclor-1221 1   3.946   0.003     6918   262.2      1    4.640  -0.000    12389   257.2
Aroclor-1221 2   5.379   0.004     9244   264.0      2    6.052   0.000    26161   252.4
Aroclor-1221 3   5.660   0.001    30886   260.1      3    6.397   0.000    46023   246.4
      Total Col1Ave (3 peaks):   262.1      Total Col2Ave (3 peaks):   252.0   RPD = 4
      Corrected Ave: < 3 Peaks                     Corrected Ave: < 3 Peaks

Aroclor-1232 1   3.946   0.004     6918   456.5      1    4.640  -0.000    12389   470.5
Aroclor-1232 2   6.610   0.002     3068    45.4      2    7.063   0.006    11548    70.4
Aroclor-1232 3   6.980  -0.002     7817    36.1      3    7.665   0.004    11245    32.3
Aroclor-1232 4   8.367   0.072    22885   302.9      4    8.051   0.001     1933    29.1
      Total Col1Ave (4 peaks):   210.2      Total Col2Ave (4 peaks):   150.6   RPD = 33
      Corrected Ave (3 peaks):   128.1      Corrected Ave (3 peaks):    43.9   RPD = 98*

Aroclor-1242 1   6.610   0.002     3068    23.8      1    7.063   0.007    11548    39.2
Aroclor-1242 2   6.980  -0.002     7817    18.3      2    7.665   0.004    11245    16.3
Aroclor-1242 3   8.367   0.074    22885   160.2      3    9.020   0.029     1837     6.6
Aroclor-1242 4   8.595   0.004     2130    14.7      4    9.439   0.007     1457     5.4
      Total Col1Ave (4 peaks):    54.2      Total Col2Ave (4 peaks):    16.9   RPD = 105*
      Corrected Ave (3 peaks):    18.9      Corrected Ave (3 peaks):     9.4   RPD = 67*

Aroclor-1248 1   7.467   0.001     2387    12.1      1    8.127   0.001     3087    11.5
Aroclor-1248 2   7.941   0.002     1994     6.7      2    8.558   0.008     2071     6.2
Aroclor-1248 3   8.367   0.014    22885    37.2      3    9.020   0.030     1837     3.6
Aroclor-1248 4   8.595   0.006     2130     9.3      4    9.439   0.011     1457     2.9
      Total Col1Ave (4 peaks):    16.3      Total Col2Ave (4 peaks):     6.1   RPD = 92*
      Corrected Ave (3 peaks):     9.4      Corrected Ave (3 peaks):     4.2   RPD = 75*

Aroclor-1254 1   8.662   0.004    25963    47.6      1    9.291   0.009    19843    36.1
Aroclor-1254 2     ---                      0.0     2    9.439   0.063     1457     4.8
Aroclor-1254 3   9.032   0.003     2989     8.3      3    9.821   0.008     2565     6.4
Aroclor-1254 4   9.141  -0.024    28020    35.9      4    9.985   0.018    95937    86.0
Aroclor-1254 5   9.792  -0.071   165526   327.7      5   10.214   0.006   118922   112.0
      Total Col1Ave (4 peaks):   104.9      Total Col2Ave (5 peaks):    49.1   RPD = 72*
      Corrected Ave (3 peaks):    30.6      Corrected Ave (4 peaks):    33.3   RPD = 9

Aroclor-1260 1  10.389   0.001   200501   392.4      1   11.032   0.001   253043   385.2
Aroclor-1260 2  10.709   0.000   166959   326.1      2   11.493  -0.001   200349   328.1
Aroclor-1260 3  11.062   0.001   435471   296.6      3   11.749   0.002   516473   305.6
Aroclor-1260 4  11.466   0.001   128526   189.2      4   12.337  -0.000   371529   340.4
Aroclor-1260 5  11.569   0.001   174270   550.2      NS    ---                      ----
      Total Col1Ave (5 peaks):   350.9      Total Col2Ave (4 peaks):   339.8   RPD = 3
      Corrected Ave (4 peaks):   301.1      Corrected Ave (3 peaks):   324.7   RPD = 8

Aroclor-1262 1  10.389   0.001   200501   238.2      1   11.032  -0.000   253043   234.1
Aroclor-1262 2  11.062   0.001   435471   217.5      2   11.749   0.000   516473   214.3
Aroclor-1262 3  11.569  -0.000   174270   307.1      3   12.262   0.001   211063   302.8
Aroclor-1262 4  11.639  -0.001   211870   281.2      4   13.054   0.001   201404   231.9
      Total Col1Ave (4 peaks):   261.0      Total Col2Ave (4 peaks):   245.8   RPD = 6
      Corrected Ave (3 peaks):   245.6      Corrected Ave (3 peaks):   226.8   RPD = 8

Aroclor-1268 1  11.569   0.000   174270    90.2      1   12.262   0.003   211063    88.9
Aroclor-1268 2  11.639   0.002   211870    96.4      2   12.337   0.010   371529   129.7
Aroclor-1268 3  12.045   0.030    82619    45.9      3   12.713   0.001    11828     5.2
Aroclor-1268 4  12.789  -0.002    73541    11.7      4   13.530  -0.001    68496     8.3
      Total Col1Ave (4 peaks):    61.0      Total Col2Ave (4 peaks):    58.0   RPD = 5
```

Corrected Ave (3 peaks): 49.3 Corrected Ave (3 peaks): 34.1 RPD = 36

Total PCB Area Col1 (5.087 - 13.088) = 3009418 Col1 Total PCB = 0.4 ppm*

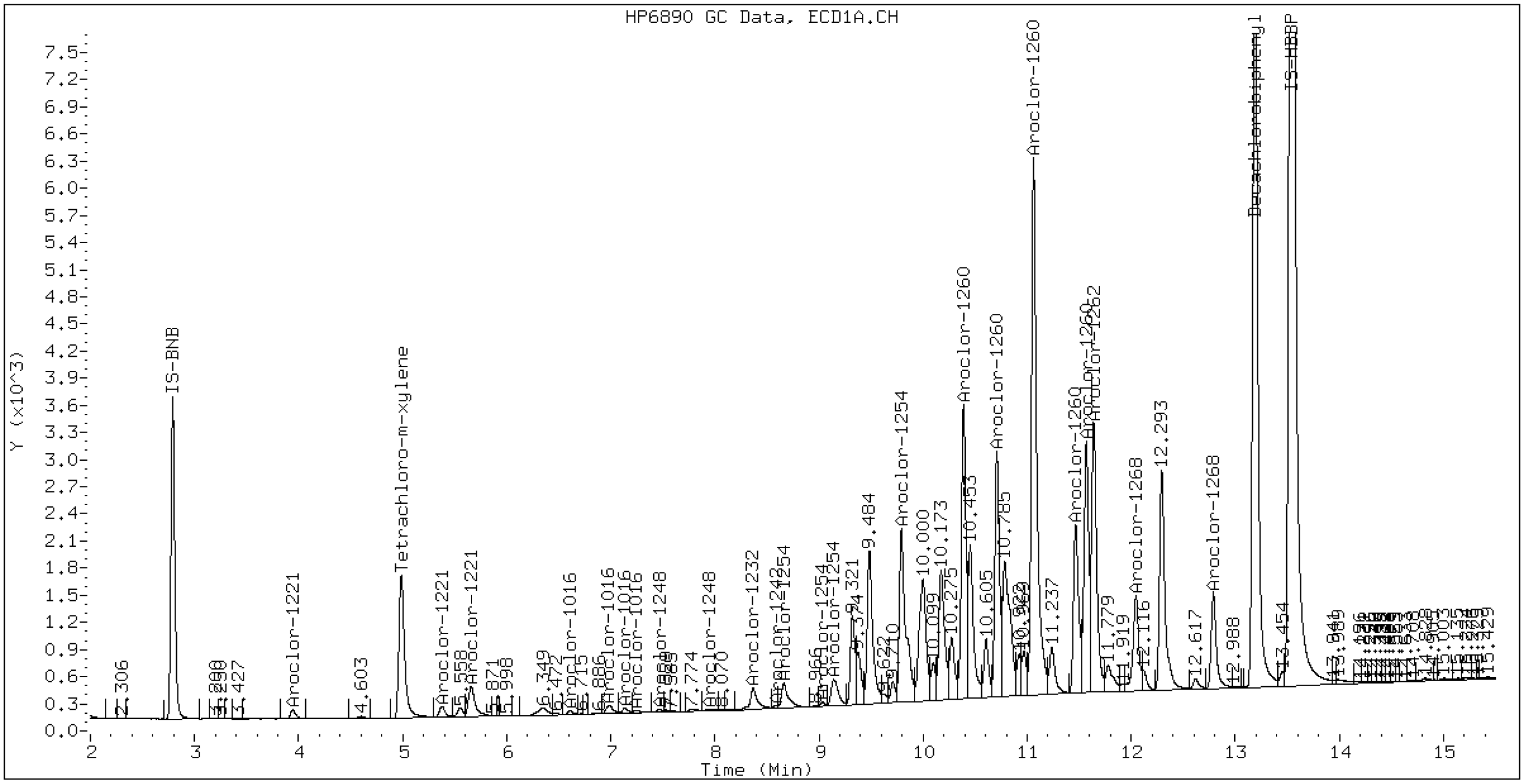
Total PCB Area Col2 (5.087 - 13.088) = 3522199 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

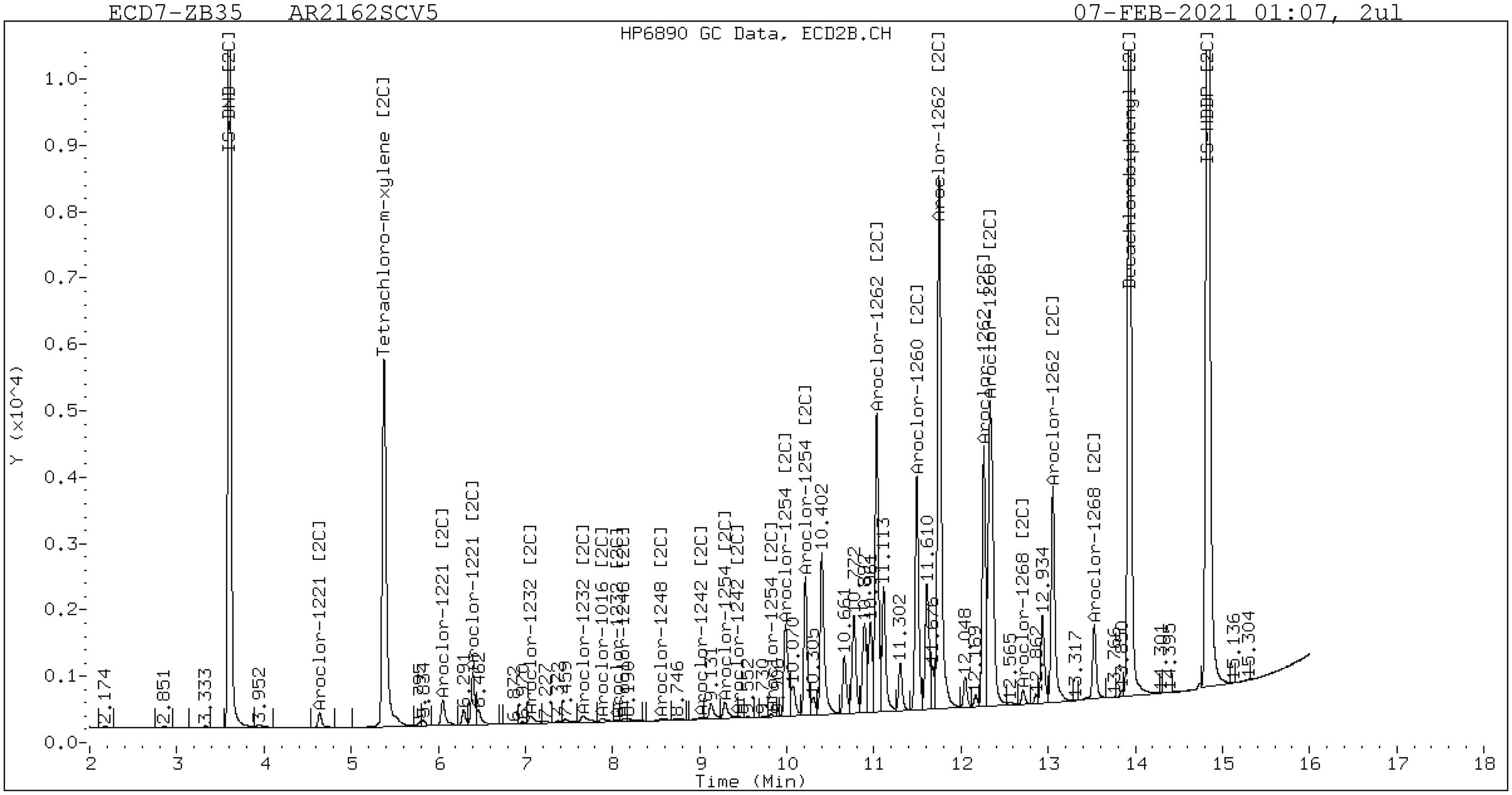
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV5 07-FEB-2021 01:07, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV5 07-FEB-2021 01:07, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062126ECD7.D
Data file 2: /210206.b/210206.b/02062126ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV6
Client ID:
Injection Date: 07-FEB-2021 01:28
Report Date: 02/08/2021 09:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.984	-0.003	126755	5.378	-0.001	391018	42.3	44.6	5.2	Tetrachloro-m-xylene
13.189	0.000	916026	13.934	0.001	1132239	55.6	69.0	21.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	189910	14.6
Hexabromobiphenyl	1343188	1534868	14.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	829853	-0.9
Hexabromobiphenyl	850693	937673	10.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.609	0.001	18345	111.8	1	7.057	0.001	41791	116.1
Aroclor-1016	2	6.985	0.003	56735	106.2	2	7.661	0.004	88789	108.9
Aroclor-1016	3	7.133	-0.000	27062	106.5	3	7.874	0.005	38701	107.9
Aroclor-1016	4	7.242	0.000	17696	110.8	4	8.126	0.001	21120	103.4
Total Col1Ave (4 peaks):				108.8		Total Col2Ave (4 peaks):			109.1	RPD = 0
Corrected Ave (3 peaks):				107.8		Corrected Ave (3 peaks):			106.7	RPD = 1
Aroclor-1221	1	3.941	-0.002	4106	151.3	1	4.640	-0.000	6815	140.6
Aroclor-1221	2	5.380	0.005	6007	166.8	2	6.054	0.002	16150	154.8
Aroclor-1221	3	5.658	-0.001	24949	204.2	3	6.397	0.001	44879	238.7
Total Col1Ave (3 peaks):				174.1		Total Col2Ave (3 peaks):			178.0	RPD = 2
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.941	-0.001	4106	263.4	1	4.640	-0.000	6815	257.1
Aroclor-1232	2	6.609	0.001	18345	263.9	2	7.057	0.000	41791	253.3
Aroclor-1232	3	6.985	0.002	56735	254.9	3	7.661	0.001	88789	253.3
Aroclor-1232	4	8.298	0.002	19184	246.8	4	8.050	0.000	17085	255.7
Total Col1Ave (4 peaks):				257.2		Total Col2Ave (4 peaks):			254.8	RPD = 1
Corrected Ave (3 peaks):				255.0		Corrected Ave (3 peaks):			254.1	RPD = 0
Aroclor-1242	1	6.609	0.001	18345	138.2	1	7.057	0.001	41791	141.0
Aroclor-1242	2	6.985	0.003	56735	129.0	2	7.661	0.001	88789	127.6
Aroclor-1242	3	8.298	0.005	19184	130.6	3	9.000	0.009	37687	134.5
Aroclor-1242	4	8.594	0.003	16438	110.1	4	9.442	0.011	29208	106.9
Total Col1Ave (4 peaks):				126.9		Total Col2Ave (4 peaks):			127.5	RPD = 0
Corrected Ave (3 peaks):				123.2		Corrected Ave (3 peaks):			123.0	RPD = 0
Aroclor-1248	1	7.465	-0.001	14596	71.8	1	8.126	-0.000	21120	78.3
Aroclor-1248	2	7.940	0.001	24254	79.0	2	8.552	0.003	22092	66.2
Aroclor-1248	3	8.355	0.002	42497	67.1	3	9.000	0.010	37687	72.7
Aroclor-1248	4	8.594	0.006	16438	70.0	4	9.442	0.015	29208	58.4
Total Col1Ave (4 peaks):				72.0		Total Col2Ave (4 peaks):			68.9	RPD = 4
Corrected Ave (3 peaks):				69.6		Corrected Ave (3 peaks):			65.8	RPD = 6
Aroclor-1254	1	8.657	-0.001	14199	25.3	1	9.287	0.005	8023	14.5
Aroclor-1254	2	8.721	-0.006	7428	24.0	2	9.442	0.066	29208	96.2
Aroclor-1254	3	9.031	0.001	3678	9.9	3	9.821	0.008	4642	11.4
Aroclor-1254	4	9.171	0.006	7931	9.9	4	9.980	0.013	11446	10.2
Aroclor-1254	5	9.877	0.014	4148	8.0	5	10.245	0.037	9233	8.6
Total Col1Ave (5 peaks):				15.4		Total Col2Ave (5 peaks):			28.2	RPD = 59*
Corrected Ave (4 peaks):				12.9		Corrected Ave (4 peaks):			11.2	RPD = 14
Aroclor-1260	1	10.389	0.002	89573	172.5	1	11.036	0.005	91820	139.8
Aroclor-1260	2	10.710	0.001	5906	11.4	2	11.473	-0.021	117721	192.8
Aroclor-1260	3	11.061	0.000	54855	36.8	3	11.752	0.004	51737	30.6
Aroclor-1260	4	---			0.0	4	12.328	-0.009	676255	619.6
Aroclor-1260	5	11.569	0.002	451487	1402.9	NS	---			----
Total Col1Ave (4 peaks):				405.9		Total Col2Ave (4 peaks):			245.7	RPD = 49*
Corrected Ave (3 peaks):				73.5		Corrected Ave (3 peaks):			121.1	RPD = 49*
Aroclor-1262	1	10.389	0.001	89573	104.7	1	11.036	0.004	91820	85.0
Aroclor-1262	2	11.061	0.001	54855	27.0	2	11.752	0.002	51737	21.5
Aroclor-1262	3	11.569	0.000	451487	782.9	3	12.259	-0.002	563033	808.0
Aroclor-1262	4	11.638	-0.002	520102	679.3	4	13.051	-0.002	216636	249.5
Total Col1Ave (4 peaks):				398.5		Total Col2Ave (4 peaks):			291.0	RPD = 31
Corrected Ave (3 peaks):				270.3		Corrected Ave (3 peaks):			118.7	RPD = 78*
Aroclor-1268	1	11.569	0.000	451487	230.0	1	12.259	0.000	563033	237.2
Aroclor-1268	2	11.638	0.001	520102	232.9	2	12.328	0.001	676255	236.1
Aroclor-1268	3	12.016	0.001	420097	229.6	3	12.713	0.001	543702	238.5
Aroclor-1268	4	12.792	0.000	1494782	233.4	4	13.532	0.001	1974648	240.7
Total Col1Ave (4 peaks):				231.5		Total Col2Ave (4 peaks):			238.1	RPD = 3

Corrected Ave (3 peaks): 230.8 Corrected Ave (3 peaks): 237.3 RPD = 3

Total PCB Area Col1 (5.087 - 13.088) = 4068632 Col1 Total PCB = 0.6 ppm*

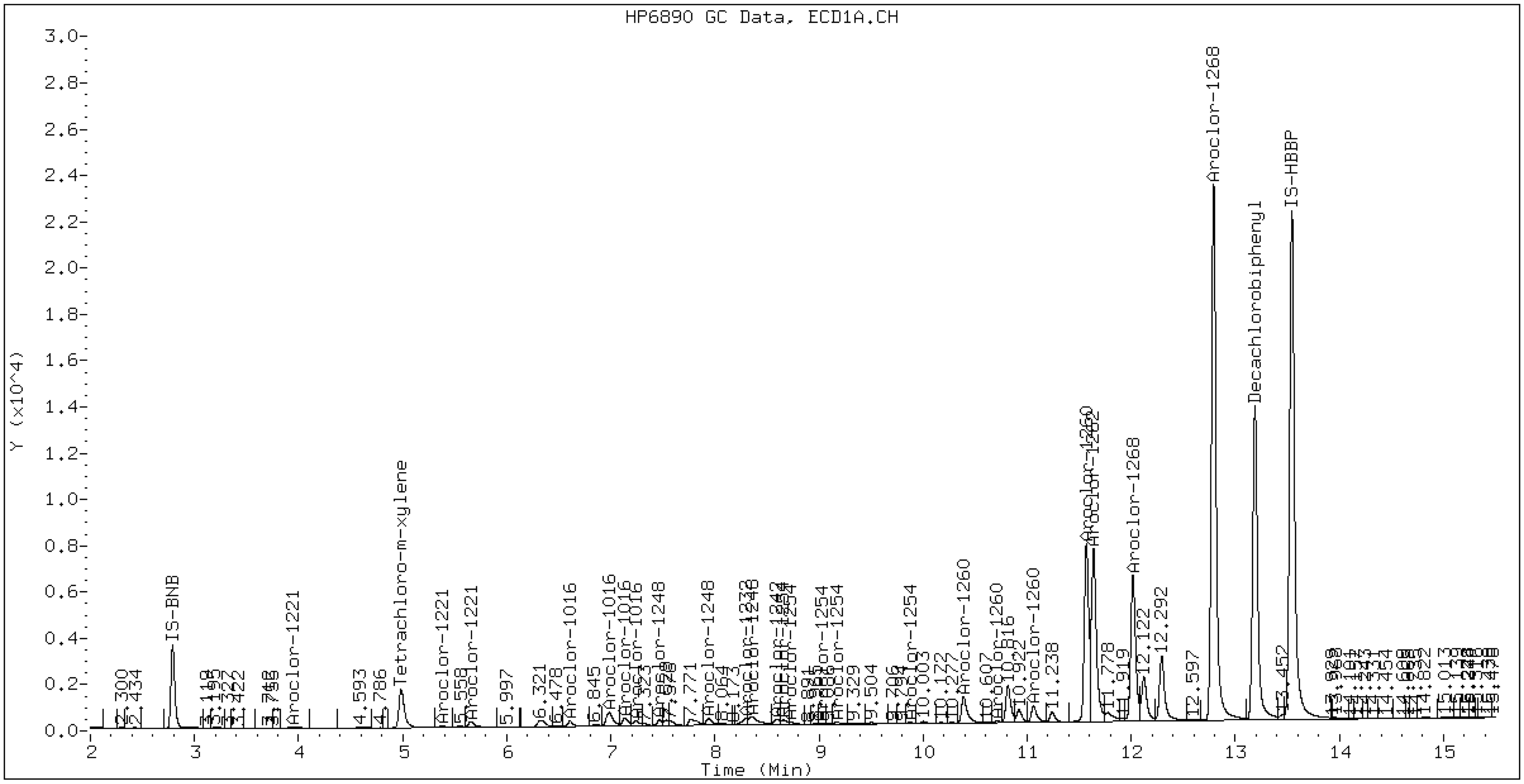
Total PCB Area Col2 (5.087 - 13.088) = 3488238 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

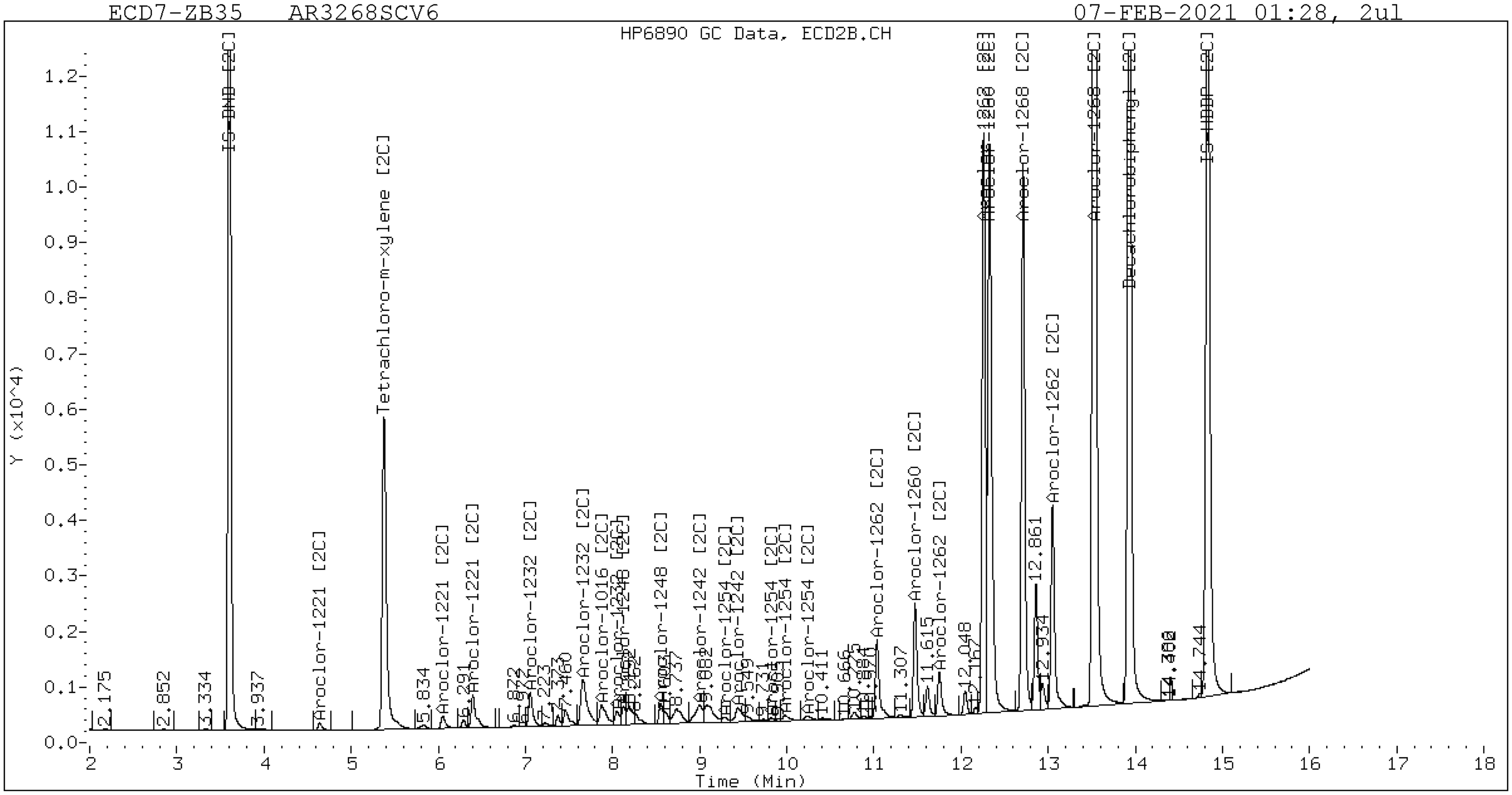
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV6 07-FEB-2021 01:28, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV6 07-FEB-2021 01:28, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /210206.b/02062127ECD7.D ARI ID: 0.1PPM DDTS

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
8.641	0.000	740314	9.758	0.000	1700314	0.100	0.100	0.0	2,4-DDE
9.634	0.000	562577	10.527	0.000	2247011	0.100	0.200#	66.7*	2,4-DDT
9.056	0.000	1265586	10.067	0.000	994561	0.100	0.100	0.0	4,4-DDE
9.634	0.000	562577	10.527	0.000	2247011	0.100	0.200#	66.7*	4,4-DDD

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /210206.b/02062128ECD7.D ARI ID: DDT BD

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
0.000	-8.641	0	9.786	0.029	65331	0.000	0.004	----	2,4-DDE
9.635	0.001	49765	10.538	0.011	244386	0.009	0.022#	86.0*	2,4-DDT
9.074	0.018	31451	10.071	0.004	372	0.002	0.000	193.9*	4,4-DDE
9.552	-0.083	1464	10.538	0.011	244386	0.000	0.022#	195.4*	4,4-DDD

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: EB00020
Sequence: SJB0079

SDG: 21A0361
Project: ICS-Former NW Cooperage
Laboratory ID: SJB0079-SCV1
Sequence Name: AR1660SCV1
Standard ID: J000948

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1016	250.00	251	0.3	20.00
Aroclor 1016 [2C]	250.00	255	2.1	20.00
Aroclor 1260	250.00	277	10.7	20.00
Aroclor 1260 [2C]	250.00	281	12.3	20.00
Decachlorobiphenyl	40.000	36.7	-8.3	20.00
Tetrachlorometaxylene	40.000	45.8	14.6	20.00
Decachlorobiphenyl [2C]	40.000	43.3	8.3	20.00
Tetrachlorometaxylene [2C]	40.000	45.7	14.1	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062121ECD7.D
Data file 2: /210206.b/210206.b/02062121ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV1
Client ID:
Injection Date: 06-FEB-2021 23:45
Report Date: 02/08/2021 12:09
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.986	-0.001	126029	5.377	-0.002	403946	45.8	45.7	0.4	Tetrachloro-m-xylene
13.189	0.000	582082	13.935	0.003	697645	36.7	43.3	16.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	174272	5.2
Hexabromobiphenyl	1343188	1477839	10.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	836903	-0.1
Hexabromobiphenyl	850693	920669	8.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

```
                             ZB5 Col                                ZB35 Col
 Aroclor   Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
=========================================================================================
 Aroclor-1016 1   6.607  -0.001    37248   247.4      1    7.055  -0.001    92861   255.8
 Aroclor-1016 2   6.983   0.001   123431   251.8      2    7.659   0.002   216949   263.8
 Aroclor-1016 3   7.133  -0.000    57773   247.7      3    7.870   0.001    92925   256.9
 Aroclor-1016 4   7.242  -0.000    37600   256.6      4    8.124  -0.000    50434   244.8
       Total Col1Ave (4 peaks):   250.9       Total Col2Ave (4 peaks):   255.3   RPD = 2
       Corrected Ave (3 peaks):   248.9       Corrected Ave (3 peaks):   252.5   RPD = 1

 Aroclor-1221 1   3.948   0.005      168     6.7      1     ---                      0.0
 Aroclor-1221 2   5.374  -0.001     2920    88.3      2    6.056   0.004    10032    95.3
 Aroclor-1221 3   5.655  -0.004    21679   193.4      3    6.397   0.000    41212   217.3
       Total Col1Ave (3 peaks):    96.1                Col2Ave: <3 Quant Peaks

 Aroclor-1232 1   3.948   0.006      168    11.7      1     ---                      0.0
 Aroclor-1232 2   6.607  -0.001    37248   583.9      2    7.055  -0.001    92861   558.0
 Aroclor-1232 3   6.983   0.000   123431   604.2      3    7.659  -0.001   216949   613.6
 Aroclor-1232 4   8.296   0.001     7568   106.1      4    8.047  -0.003    42633   632.6
       Total Col1Ave (4 peaks):   326.5       Total Col2Ave (3 peaks):   601.4   RPD = 59*
       Corrected Ave (3 peaks):   233.9                     Corrected Ave: < 3 Peaks

 Aroclor-1242 1   6.607  -0.001    37248   305.7      1    7.055  -0.000    92861   310.6
 Aroclor-1242 2   6.983   0.001   123431   305.7      2    7.659  -0.001   216949   309.2
 Aroclor-1242 3   8.296   0.003     7568    56.1      3    8.970  -0.021    33996   120.3
 Aroclor-1242 4   8.579  -0.011     3524    25.7      4     ---                      0.0
       Total Col1Ave (4 peaks):   173.3       Total Col2Ave (3 peaks):   246.7   RPD = 35
       Corrected Ave (3 peaks):   129.2                     Corrected Ave: < 3 Peaks

 Aroclor-1248 1   7.466  -0.001    34925   187.2      1    8.124  -0.002    50434   185.4
 Aroclor-1248 2   7.939   0.000    56887   202.0      2    8.549   0.000    57869   172.0
 Aroclor-1248 3   8.365   0.012    45727    78.7      3    8.970  -0.020    33996    65.1
 Aroclor-1248 4   8.579  -0.009     3524    16.3      4     ---                      0.0
       Total Col1Ave (4 peaks):   121.1       Total Col2Ave (3 peaks):   140.8   RPD = 15
       Corrected Ave (3 peaks):    94.1                     Corrected Ave: < 3 Peaks

 Aroclor-1254 1   8.658  -0.000    42640    82.8      1    9.286   0.004    44346    79.5
 Aroclor-1254 2      ---                     0.0     2     ---                      0.0
 Aroclor-1254 3   9.032   0.002     4244    12.5      3    9.818   0.005     4655    11.4
 Aroclor-1254 4   9.151  -0.014    40683    55.2      4    9.983   0.016   109770    97.0
 Aroclor-1254 5   9.851  -0.012    69587   145.9      5   10.214   0.006   153177   142.2
       Total Col1Ave (4 peaks):    74.1       Total Col2Ave (4 peaks):    82.5   RPD = 11
       Corrected Ave (3 peaks):    50.2       Corrected Ave (3 peaks):    62.6   RPD = 22

 Aroclor-1260 1  10.388   0.000   142078   284.2      1   11.031   0.001   182948   283.7
 Aroclor-1260 2  10.708  -0.000   139885   279.2      2   11.493  -0.000   162440   271.0
 Aroclor-1260 3  11.061  -0.000   388564   270.5      3   11.749   0.002   476491   287.2
 Aroclor-1260 4  11.466   0.001   171849   258.6      4   12.339   0.002   301699   281.5
 Aroclor-1260 5  11.567  -0.000    90063   290.7     NS     ---                     ----
       Total Col1Ave (5 peaks):   276.6       Total Col2Ave (4 peaks):   280.8   RPD = 2
       Corrected Ave (4 peaks):   273.1       Corrected Ave (3 peaks):   278.7   RPD = 2

 Aroclor-1262 1  10.388  -0.000   142078   172.5      1   11.031  -0.001   182948   172.4
 Aroclor-1262 2  11.061   0.000   388564   198.4      2   11.749  -0.000   476491   201.4
 Aroclor-1262 3  11.567  -0.001    90063   162.2      3   12.264   0.003   107128   156.6
 Aroclor-1262 4  11.640  -0.001   119087   161.5      4   13.052  -0.001   125811   147.6
       Total Col1Ave (4 peaks):   173.6       Total Col2Ave (4 peaks):   169.5   RPD = 2
       Corrected Ave (3 peaks):   165.4       Corrected Ave (3 peaks):   158.9   RPD = 4

 Aroclor-1268 1  11.567  -0.001    90063    47.6      1   12.264   0.005   107128    46.0
 Aroclor-1268 2  11.640   0.002   119087    55.4      2   12.339   0.012   301699   107.3
 Aroclor-1268 3  12.046   0.030    57579    32.7      3   12.713   0.001     4291     1.9
 Aroclor-1268 4  12.787  -0.004    33875     5.5      4   13.530  -0.001    28144     3.5
       Total Col1Ave (4 peaks):    35.3       Total Col2Ave (4 peaks):    39.7   RPD = 12
       Corrected Ave (3 peaks):    28.6       Corrected Ave (3 peaks):    17.1   RPD = 50*
```

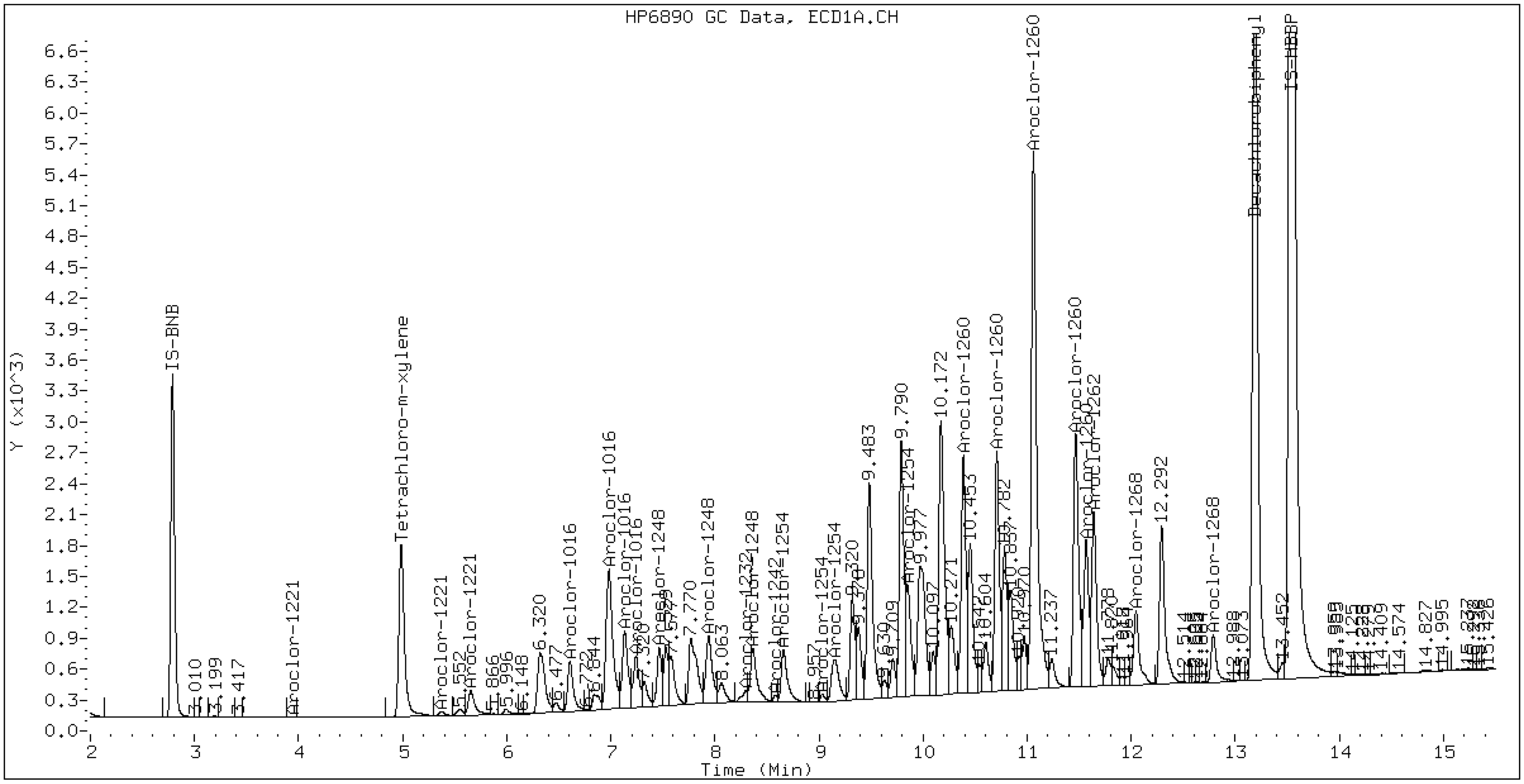
Total PCB Area Col1 (5.087 - 13.088) =	3358094	Col1 Total PCB = 0.5 ppm*
Total PCB Area Col2 (5.087 - 13.088) =	4227207	Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

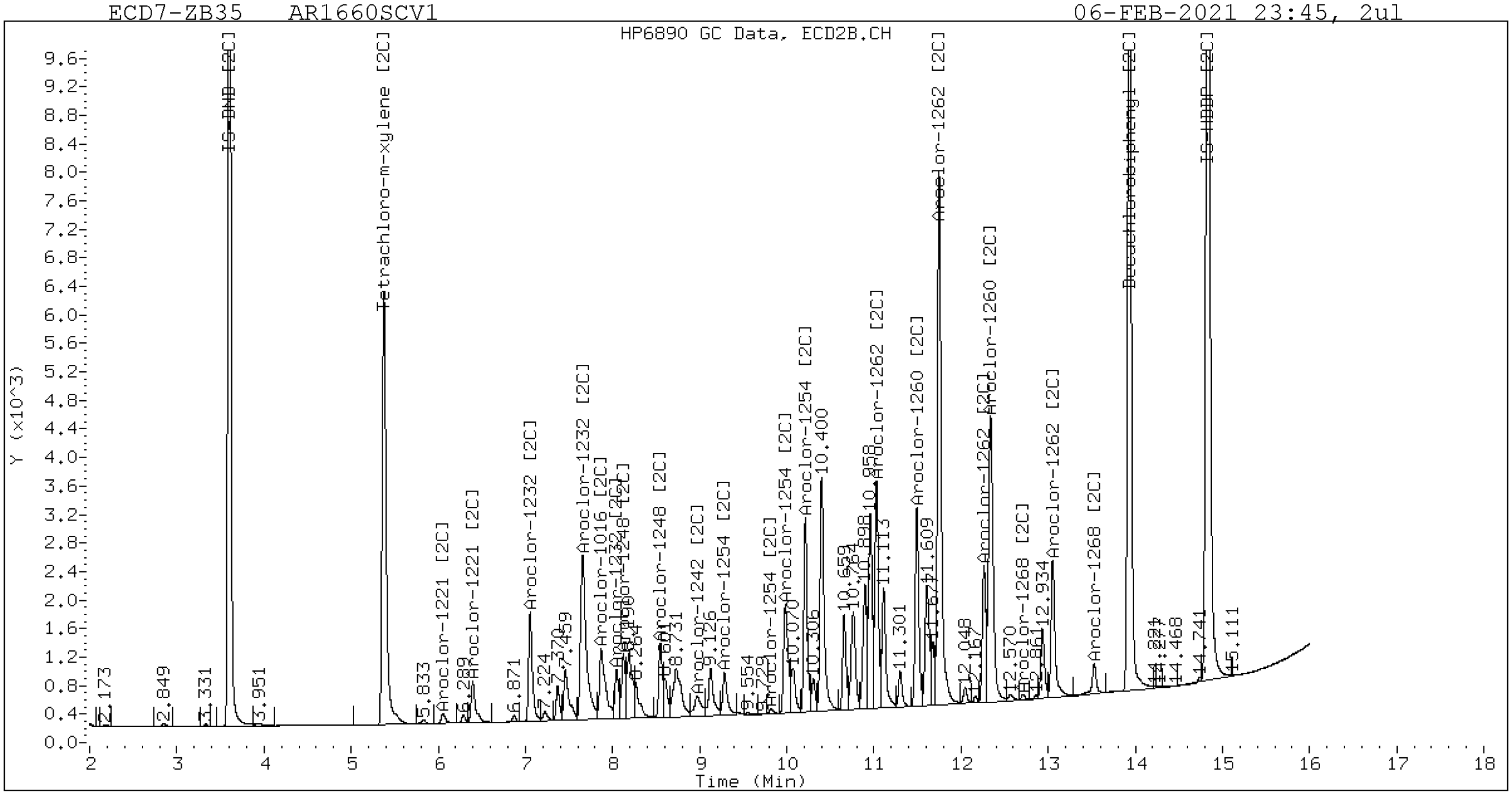
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV1 06-FEB-2021 23:45, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV1 06-FEB-2021 23:45, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Calibration: EB00020

Sequence: SJB0079

SDG: 21A0361

Project: ICS-Former NW Cooperage

Laboratory ID: SJB0079-SCV2

Sequence Name: AR1242SCV2

Standard ID: J000949

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1242	250.00	236	-5.7	20.00
Aroclor 1242 [2C]	250.00	246	-1.7	20.00
Decachlorobiphenyl	40.000	36.9	-7.8	20.00
Tetrachlorometaxylene	40.000	43.3	8.1	20.00
Decachlorobiphenyl [2C]	40.000	43.2	8.0	20.00
Tetrachlorometaxylene [2C]	40.000	45.1	12.6	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062122ECD7.D
Data file 2: /210206.b/210206.b/02062122ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV2
Client ID:
Injection Date: 07-FEB-2021 00:05
Report Date: 02/08/2021 12:09
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.987	-0.000	122774	5.378	-0.000	399496	43.3	45.1	4.1	Tetrachloro-m-xylene
13.189	0.000	597221	13.935	0.002	705132	36.9	43.2	15.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	179964	8.6
Hexabromobiphenyl	1343188	1508651	12.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	838731	0.2
Hexabromobiphenyl	850693	932542	9.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

```
                          ZB5 Col                                 ZB35 Col
Aroclor   Peak#    RT    Shift    Area    Amount    Peak#   RT     Shift    Area   Amount
=========================================================================================
Aroclor-1016 1   6.609   0.000    28852   185.6      1    7.056  -0.000    71436   196.4
Aroclor-1016 2   6.983   0.001    95901   189.4      2    7.661   0.004   164644   199.7
Aroclor-1016 3   7.134   0.001    44661   185.4      3    7.873   0.003    70189   193.6
Aroclor-1016 4   7.242  -0.001    28554   188.7      4    8.127   0.003    40561   196.4
      Total Col1Ave (4 peaks):   187.3       Total Col2Ave (4 peaks):   196.5   RPD = 5
      Corrected Ave (3 peaks):   186.6       Corrected Ave (3 peaks):   195.5   RPD = 5

Aroclor-1221 1   3.939  -0.004      228     8.9      1     ---                       0.0
Aroclor-1221 2   5.376   0.001     2140    62.7      2    6.058   0.006     8969    85.1
Aroclor-1221 3   5.656  -0.004    16904   146.0      3    6.397   0.001    31881   167.8
      Total Col1Ave (3 peaks):    72.5               Col2Ave: <3 Quant Peaks

Aroclor-1232 1   3.939  -0.003      228    15.4      1     ---                       0.0
Aroclor-1232 2   6.609   0.000    28852   438.0      2    7.056  -0.000    71436   428.3
Aroclor-1232 3   6.983   0.000    95901   454.6      3    7.661   0.001   164644   464.7
Aroclor-1232 4   8.295  -0.000    38451   522.0      4    8.049  -0.001    31440   465.5
      Total Col1Ave (4 peaks):   357.5       Total Col2Ave (3 peaks):   452.8   RPD = 24
      Corrected Ave (3 peaks):   302.7                     Corrected Ave: < 3 Peaks

Aroclor-1242 1   6.609   0.000    28852   229.3      1    7.056   0.001    71436   238.4
Aroclor-1242 2   6.983   0.001    95901   230.0      2    7.661   0.001   164644   234.2
Aroclor-1242 3   8.295   0.002    38451   276.1      3    8.994   0.003    80347   283.6
Aroclor-1242 4   8.590  -0.000    29363   207.5      4    9.433   0.002    62620   226.7
      Total Col1Ave (4 peaks):   235.7       Total Col2Ave (4 peaks):   245.7   RPD = 4
      Corrected Ave (3 peaks):   222.3       Corrected Ave (3 peaks):   233.1   RPD = 5

Aroclor-1248 1   7.466  -0.000    28196   146.3      1    8.127   0.001    40561   148.8
Aroclor-1248 2   7.941   0.002    45017   154.8      2    8.551   0.002    47176   139.9
Aroclor-1248 3   8.355   0.002    80650   134.4      3    8.994   0.004    80347   153.4
Aroclor-1248 4   8.590   0.002    29363   131.9      4    9.433   0.006    62620   123.9
      Total Col1Ave (4 peaks):   141.9       Total Col2Ave (4 peaks):   141.5   RPD = 0
      Corrected Ave (3 peaks):   137.5       Corrected Ave (3 peaks):   137.5   RPD = 0

Aroclor-1254 1   8.657  -0.001    32651    61.4      1    9.285   0.003    23810    42.6
Aroclor-1254 2   8.726  -0.001    18207    62.0      2    9.433   0.057    62620   204.1
Aroclor-1254 3   9.030   0.000    12620    35.9      3    9.818   0.005    15721    38.4
Aroclor-1254 4   9.168   0.003    25714    33.8      4    9.973   0.005    36354    32.1
Aroclor-1254 5   9.869   0.006    14438    29.3      5   10.228   0.021    32819    30.4
      Total Col1Ave (5 peaks):    44.5       Total Col2Ave (5 peaks):    69.5   RPD = 44*
      Corrected Ave (4 peaks):    40.1       Corrected Ave (4 peaks):    35.9   RPD = 11

Aroclor-1260 1  10.386  -0.001      485     1.0      1   10.963  -0.068    15171    23.2
Aroclor-1260 2  10.700  -0.009      559     1.1      2   11.516   0.022     3446     5.7
Aroclor-1260 3  11.063   0.003     2483     1.7      3   11.753   0.006     2301     1.4
Aroclor-1260 4  11.468   0.003     1437     2.1      4   12.349   0.013     2531     2.3
Aroclor-1260 5  11.647   0.080      576     1.8      NS    ---                      ----
      Total Col1Ave (5 peaks):     1.5       Total Col2Ave (4 peaks):     8.2   RPD = 137*
      Corrected Ave (4 peaks):     1.4       Corrected Ave (3 peaks):     3.1   RPD = 77*

Aroclor-1262 1  10.386  -0.002      485     0.6      1   10.963  -0.069    15171    14.1
Aroclor-1262 2  11.063   0.003     2483     1.2      2   11.753   0.004     2301     1.0
Aroclor-1262 3  11.647   0.078      576     1.0      3   12.349   0.088     2531     3.7
Aroclor-1262 4     ---                      0.0      4   13.061   0.008      254     0.3
      Total Col1Ave (3 peaks):     0.9       Total Col2Ave (4 peaks):     4.8   RPD = 134*
      Corrected Ave: < 3 Peaks                 Corrected Ave (3 peaks):     1.6

Aroclor-1268 1  11.647   0.078      576     0.3      1   12.349   0.091     2531     1.1
Aroclor-1268 2      ---                     0.0      2     ---                      0.0
Aroclor-1268 3  11.956  -0.059    15630     8.7      3   12.713   0.001     1611     0.7
Aroclor-1268 4  12.789  -0.002    14751     2.3      4   13.531   0.000     7865     1.0
      Total Col1Ave (3 peaks):     3.8       Total Col2Ave (3 peaks):     0.9   RPD = 122*
      Corrected Ave: < 3 Peaks                      Corrected Ave: < 3 Peaks
```

Total PCB Area Col1 (5.087 - 13.088) = 894559 Col1 Total PCB = 0.1 ppm*

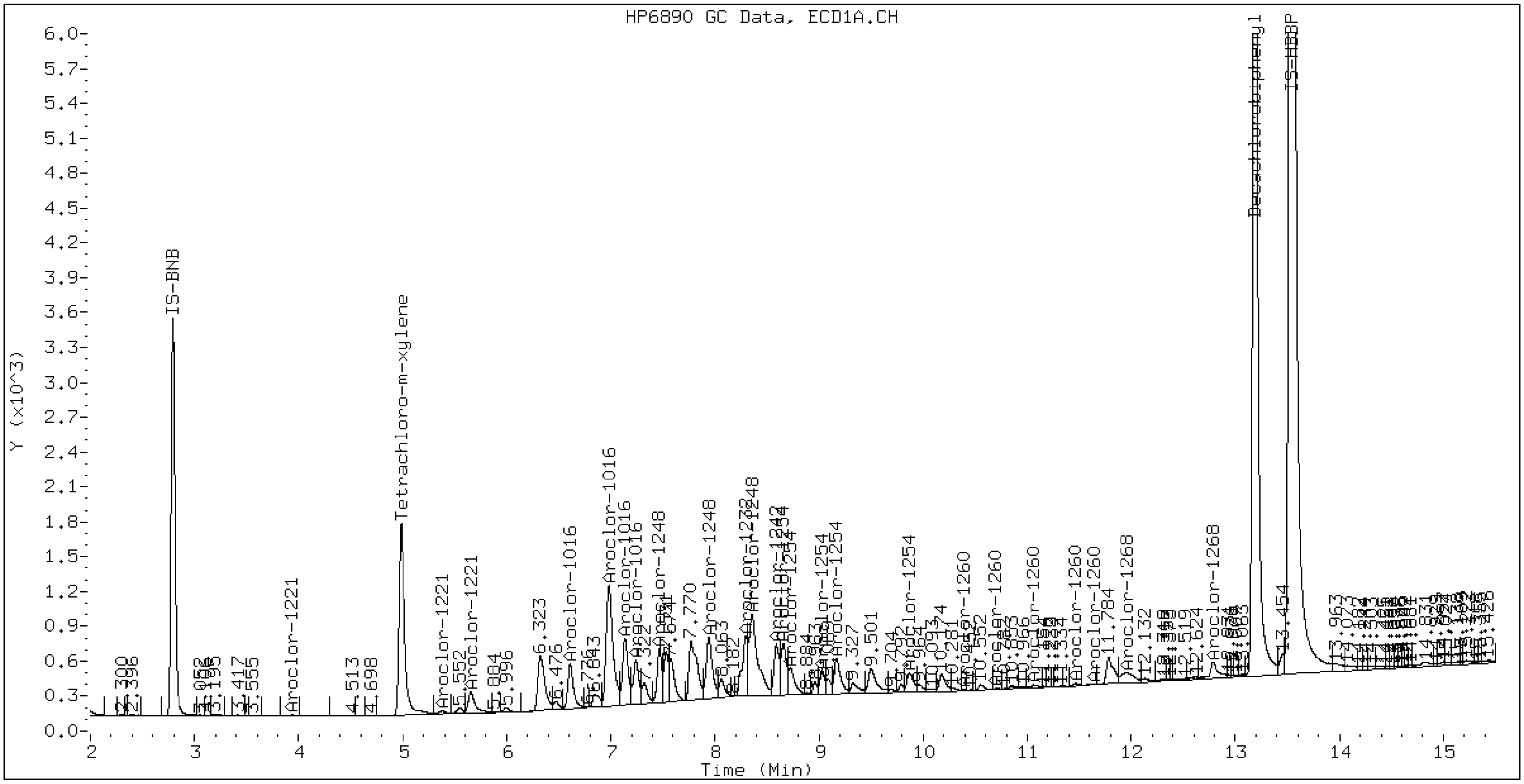
Total PCB Area Col2 (5.087 - 13.088) = 1596498 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

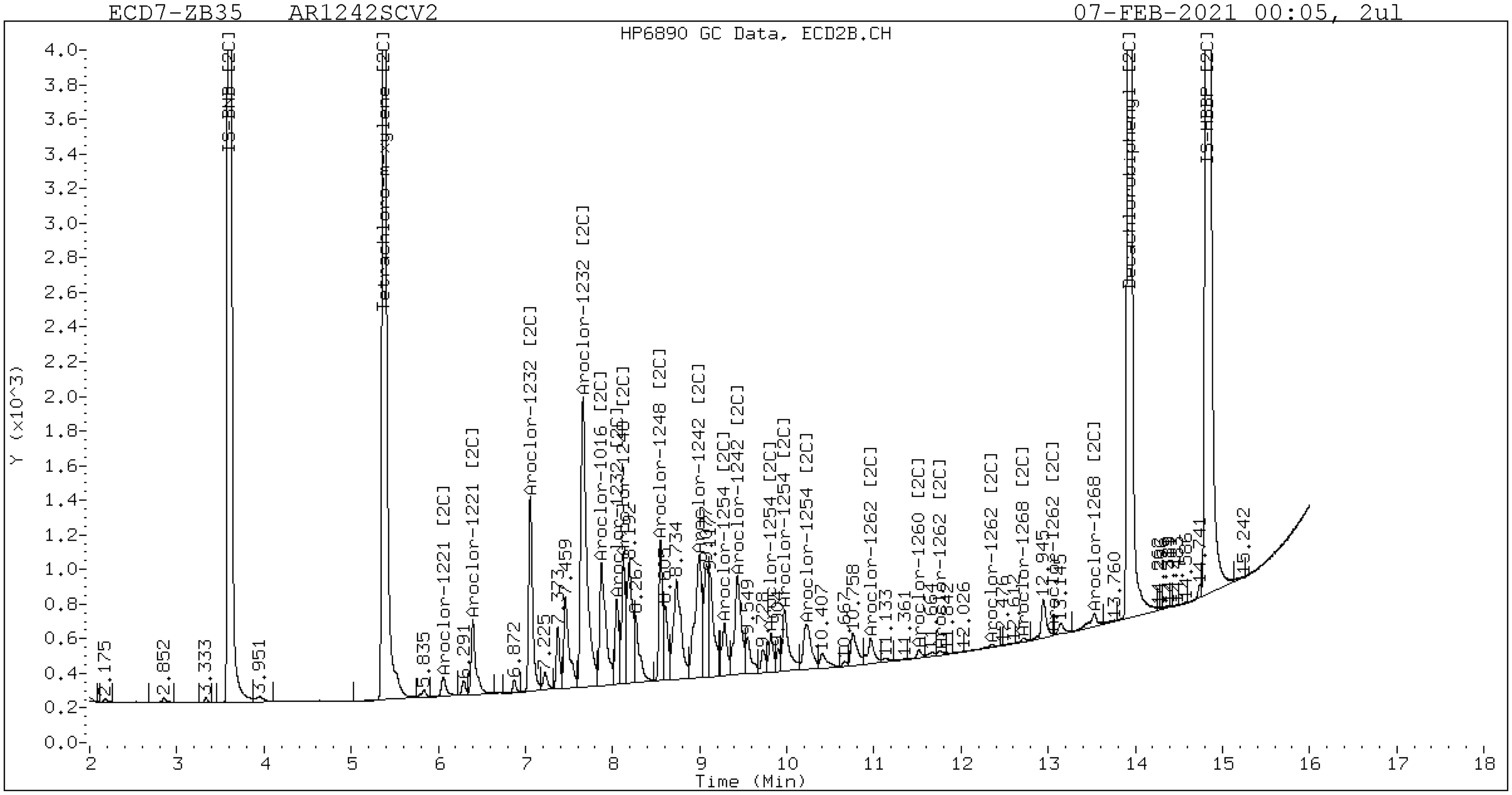
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV2 07-FEB-2021 00:05, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV2 07-FEB-2021 00:05, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Calibration: EB00020

Sequence: SJB0079

SDG: 21A0361

Project: ICS-Former NW Cooperage

Laboratory ID: SJB0079-SCV3

Sequence Name: AR1248SCV3

Standard ID: J000950

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1248	250.00	225	-10.2	20.00
Aroclor 1248 [2C]	250.00	249	-0.4	20.00
Decachlorobiphenyl	40.000	37.0	-7.5	20.00
Tetrachlorometaxylene	40.000	42.6	6.6	20.00
Decachlorobiphenyl [2C]	40.000	43.4	8.6	20.00
Tetrachlorometaxylene [2C]	40.000	45.1	12.9	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062123ECD7.D
Data file 2: /210206.b/210206.b/02062123ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV3
Client ID:
Injection Date: 07-FEB-2021 00:26
Report Date: 02/08/2021 12:09
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.988	0.001	126492	5.379	-0.000	396578	42.6	45.1	5.7	Tetrachloro-m-xylene
13.189	0.000	603418	13.935	0.003	705735	37.0	43.4	15.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	188074	13.5
Hexabromobiphenyl	1343188	1517886	13.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	830966	-0.8
Hexabromobiphenyl	850693	928957	9.2

* Standard Areas taken from Initial Cal Level 3
  Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.609	0.001	15129	93.1	1	7.056	-0.000	35874	99.5
Aroclor-1016	2	6.982	-0.000	64108	121.2	2	7.662	0.005	103586	126.8
Aroclor-1016	3	7.139	0.006	28299	112.4	3	7.875	0.005	18669	52.0
Aroclor-1016	4	7.241	-0.002	16156	102.2	4	8.127	0.003	66156	323.3
Total Col1Ave (4 peaks):					107.2	Total Col2Ave (4 peaks):				150.4 RPD = 34
Corrected Ave (3 peaks):					102.6	Corrected Ave (3 peaks):				92.8 RPD = 10
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	5.392	0.017	601	16.8	2	6.067	0.015	4422	42.3
Aroclor-1221	3	5.655	-0.004	3716	30.7	3	6.400	0.003	6413	34.1
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.609	0.001	15129	219.8	2	7.056	-0.000	35874	217.1
Aroclor-1232	3	6.982	-0.001	64108	290.8	3	7.662	0.001	103586	295.1
Aroclor-1232	4	8.295	-0.000	72316	939.4	4	8.053	0.003	15252	227.9
Total Col1Ave (3 peaks):					483.3	Total Col2Ave (3 peaks):				246.7 RPD = 65*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.609	0.001	15129	115.1	1	7.056	0.000	35874	120.8
Aroclor-1242	2	6.982	-0.000	64108	147.1	2	7.662	0.002	103586	148.7
Aroclor-1242	3	8.295	0.002	72316	496.9	3	8.991	-0.000	147481	525.5
Aroclor-1242	4	8.588	-0.003	50994	344.9	4	9.430	-0.001	115345	421.4
Total Col1Ave (4 peaks):					276.0	Total Col2Ave (4 peaks):				304.1 RPD = 10
Corrected Ave (3 peaks):					202.3	Corrected Ave (3 peaks):				230.3 RPD = 13
Aroclor-1248	1	7.467	0.001	46344	230.1	1	8.127	0.001	66156	244.9
Aroclor-1248	2	7.940	0.000	67912	223.5	2	8.551	0.002	78899	236.2
Aroclor-1248	3	8.355	0.003	141277	225.3	3	8.991	0.001	147481	284.3
Aroclor-1248	4	8.588	-0.000	50994	219.1	4	9.430	0.003	115345	230.3
Total Col1Ave (4 peaks):					224.5	Total Col2Ave (4 peaks):				248.9 RPD = 10
Corrected Ave (3 peaks):					222.7	Corrected Ave (3 peaks):				237.1 RPD = 6
Aroclor-1254	1	8.659	0.001	62415	112.3	1	9.282	0.001	43702	79.0
Aroclor-1254	2	8.726	-0.001	37929	123.6	2	9.430	0.055	115345	379.5
Aroclor-1254	3	9.030	0.001	28575	77.8	3	9.816	0.003	35371	87.1
Aroclor-1254	4	9.167	0.002	58084	73.0	4	9.970	0.003	74404	66.2
Aroclor-1254	5	9.873	0.010	41357	80.4	5	10.241	0.033	67731	63.3
Total Col1Ave (5 peaks):					93.4	Total Col2Ave (5 peaks):				135.0 RPD = 36
Corrected Ave (4 peaks):					85.9	Corrected Ave (4 peaks):				73.9 RPD = 15
Aroclor-1260	1	10.391	0.004	1887	3.7	1	10.962	-0.069	14490	22.3
Aroclor-1260	2	10.714	0.005	1439	2.8	2	11.511	0.018	4513	7.5
Aroclor-1260	3	11.063	0.002	4890	3.3	3	11.756	0.009	4626	2.8
Aroclor-1260	4	11.467	0.002	1824	2.7	4	12.342	0.005	2721	2.5
Aroclor-1260	5	11.567	-0.000	1643	5.2	NS	---			----
Total Col1Ave (5 peaks):					3.5	Total Col2Ave (4 peaks):				8.8 RPD = 85*
Corrected Ave (4 peaks):					3.1	Corrected Ave (3 peaks):				4.2 RPD = 31
Aroclor-1262	1	10.391	0.003	1887	2.2	1	10.962	-0.070	14490	13.5
Aroclor-1262	2	11.063	0.003	4890	2.4	2	11.756	0.007	4626	1.9
Aroclor-1262	3	11.567	-0.001	1643	2.9	3	12.269	0.008	1764	2.6
Aroclor-1262	4	11.646	0.006	2365	3.1	4	13.054	0.001	1886	2.2
Total Col1Ave (4 peaks):					2.7	Total Col2Ave (4 peaks):				5.1 RPD = 62*
Corrected Ave (3 peaks):					2.5	Corrected Ave (3 peaks):				2.2 RPD = 12
Aroclor-1268	1	11.567	-0.001	1643	0.8	1	12.269	0.010	1764	0.8
Aroclor-1268	2	11.646	0.009	2365	1.1	2	12.342	0.015	2721	1.0
Aroclor-1268	3	11.965	-0.050	15614	8.6	3	12.723	0.011	1139	0.5
Aroclor-1268	4	12.789	-0.003	16623	2.6	4	13.531	-0.000	9096	1.1
Total Col1Ave (4 peaks):					3.3	Total Col2Ave (4 peaks):				0.8 RPD = 119*
Corrected Ave (3 peaks):					1.5	Corrected Ave (3 peaks):				0.7 RPD = 69*

Total PCB Area Col1 (5.087 - 13.088) = 1181572 Col1 Total PCB = 0.2 ppm*

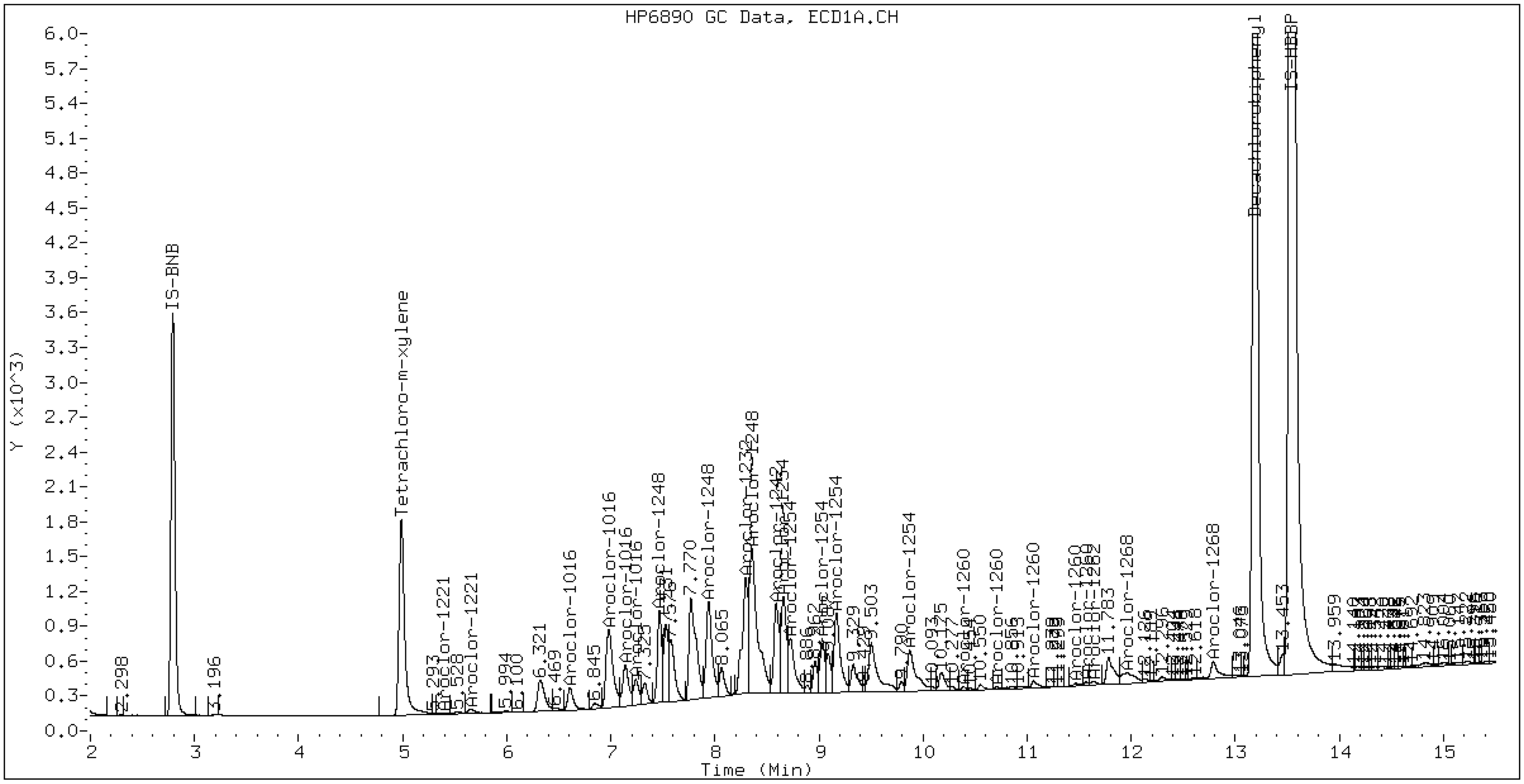
Total PCB Area Col2 (5.087 - 13.088) = 1904576 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

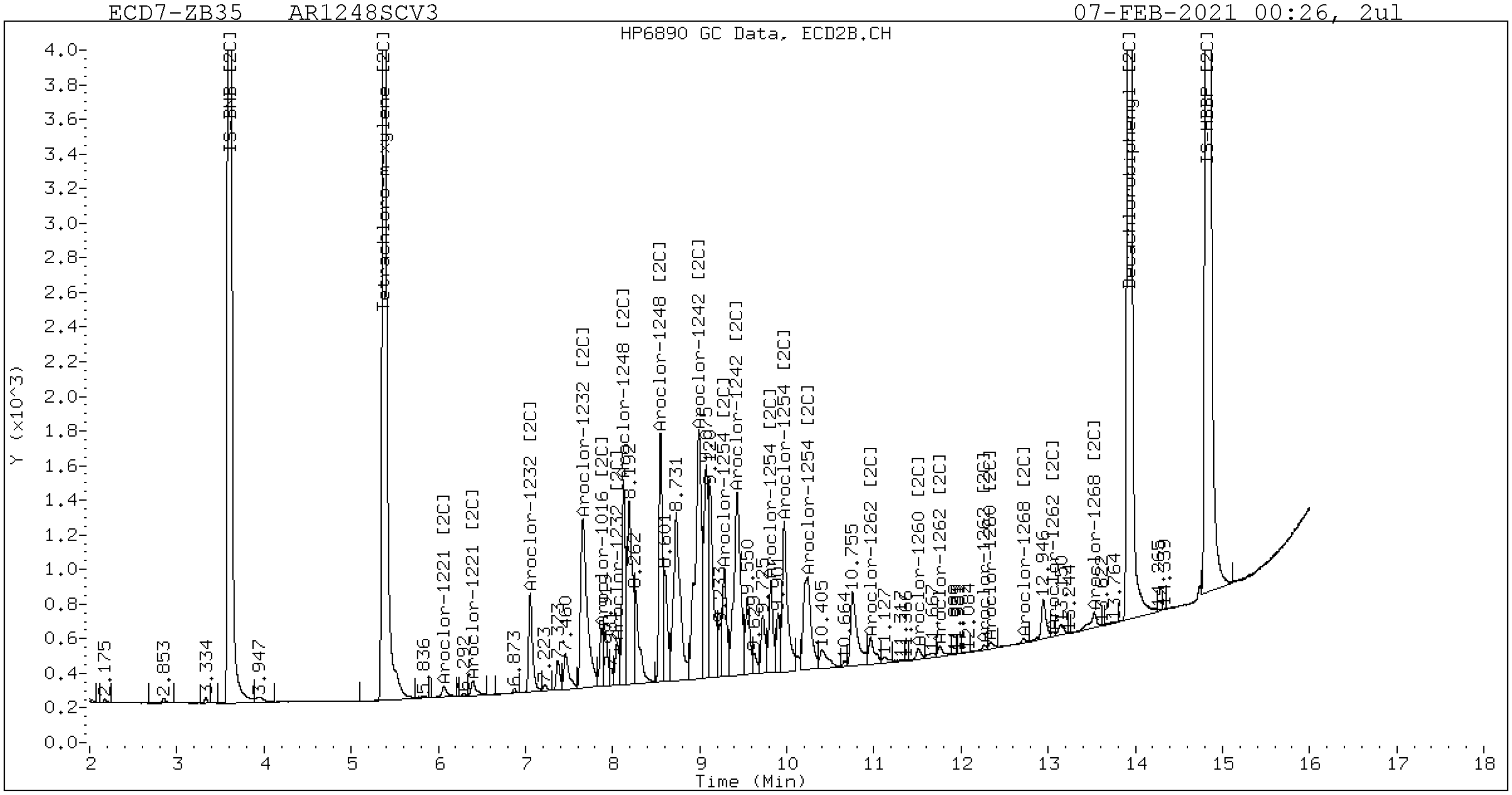
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV3 07-FEB-2021 00:26, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV3 07-FEB-2021 00:26, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: EB00020
Sequence: SJB0079

SDG: 21A0361
Project: ICS-Former NW Cooperage
Laboratory ID: SJB0079-SCV4
Sequence Name: AR1254SCV4
Standard ID: J000951

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1254	250.00	265	5.9	20.00
Aroclor 1254 [2C]	250.00	251	0.3	20.00
Decachlorobiphenyl	40.000	36.3	-9.2	20.00
Tetrachlorometaxylene	40.000	43.4	8.5	20.00
Decachlorobiphenyl [2C]	40.000	42.2	5.5	20.00
Tetrachlorometaxylene [2C]	40.000	44.5	11.2	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062124ECD7.D
Data file 2: /210206.b/210206.b/02062124ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV4
Client ID:
Injection Date: 07-FEB-2021 00:46
Report Date: 02/08/2021 12:09
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.988	0.001	126335	5.377	-0.001	390705	43.4	44.5	2.5	Tetrachloro-m-xylene
13.189	0.000	596266	13.934	0.002	686915	36.3	42.2	14.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	184551	11.4
Hexabromobiphenyl	1343188	1528201	13.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	830831	-0.8
Hexabromobiphenyl	850693	930682	9.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.614	0.006	455	2.9	1	7.058	0.001	14	0.0
Aroclor-1016	2	6.975	-0.007	1798	3.5	2	7.655	-0.002	1066	1.3
Aroclor-1016	3	7.147	0.014	1455	5.9	3	7.921	0.052	844	2.4
Aroclor-1016	4	7.252	0.009	480	3.1	4	8.129	0.004	64597	315.8
Total Col1Ave (4 peaks):				3.8		Total Col2Ave (4 peaks):			79.9	RPD = 182*
Corrected Ave (3 peaks):				3.1		Corrected Ave (3 peaks):			1.2	RPD = 87*
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	5.360	-0.015	276	7.9	2	6.068	0.016	3435	32.9
Aroclor-1221	3	5.660	0.000	336	2.8	3	6.392	-0.005	665	3.5
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.614	0.006	455	6.7	2	7.058	0.001	14	0.1
Aroclor-1232	3	6.975	-0.008	1798	8.3	3	7.655	-0.005	1066	3.0
Aroclor-1232	4	8.299	0.004	25154	333.0	4	8.129	0.079	64597	965.5
Total Col1Ave (3 peaks):				116.0		Total Col2Ave (3 peaks):			322.9	RPD = 94*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.614	0.006	455	3.5	1	7.058	0.002	14	0.0
Aroclor-1242	2	6.975	-0.007	1798	4.2	2	7.655	-0.005	1066	1.5
Aroclor-1242	3	8.299	0.006	25154	176.2	3	9.003	0.012	53587	191.0
Aroclor-1242	4	8.580	-0.011	26361	181.7	4	9.379	-0.052	73935	270.2
Total Col1Ave (4 peaks):				91.4		Total Col2Ave (4 peaks):			115.7	RPD = 23
Corrected Ave (3 peaks):				61.3		Corrected Ave (3 peaks):			64.2	RPD = 5
Aroclor-1248	1	7.468	0.001	57609	291.6	1	8.129	0.003	64597	239.2
Aroclor-1248	2	7.940	0.001	11045	37.0	2	8.555	0.005	28300	84.7
Aroclor-1248	3	8.365	0.012	135738	220.6	3	9.003	0.013	53587	103.3
Aroclor-1248	4	8.580	-0.009	26361	115.4	4	9.379	-0.048	73935	147.7
Total Col1Ave (4 peaks):				166.2		Total Col2Ave (4 peaks):			143.7	RPD = 14
Corrected Ave (3 peaks):				124.4		Corrected Ave (3 peaks):			111.9	RPD = 11
Aroclor-1254	1	8.660	0.001	134588	246.9	1	9.284	0.003	147811	267.1
Aroclor-1254	2	8.727	-0.000	76127	252.8	2	9.379	0.003	73935	243.3
Aroclor-1254	3	9.031	0.001	119558	331.8	3	9.815	0.002	100357	247.2
Aroclor-1254	4	9.166	0.001	191003	244.8	4	9.968	0.001	276761	246.3
Aroclor-1254	5	9.863	0.000	124783	247.1	5	10.210	0.002	267233	249.9
Total Col1Ave (5 peaks):				264.7		Total Col2Ave (5 peaks):			250.7	RPD = 5
Corrected Ave (4 peaks):				247.9		Corrected Ave (4 peaks):			246.7	RPD = 0
Aroclor-1260	1	10.385	-0.003	14182	27.4	1	10.959	-0.071	209123	320.8
Aroclor-1260	2	10.709	0.001	14671	28.3	2	11.510	0.016	54583	90.1
Aroclor-1260	3	11.062	0.001	35794	24.1	3	11.753	0.005	41402	24.7
Aroclor-1260	4	11.466	0.002	27945	40.7	4	12.342	0.005	23068	21.3
Aroclor-1260	5	11.644	0.076	1548	4.8	NS	---			----
Total Col1Ave (5 peaks):				25.1		Total Col2Ave (4 peaks):			114.2	RPD = 128*
Corrected Ave (4 peaks):				21.2		Corrected Ave (3 peaks):			45.4	RPD = 73*
Aroclor-1262	1	10.385	-0.004	14182	16.7	1	10.959	-0.073	209123	195.0
Aroclor-1262	2	11.062	0.001	35794	17.7	2	11.753	0.004	41402	17.3
Aroclor-1262	3	11.644	0.075	1548	2.7	3	12.342	0.081	23068	33.4
Aroclor-1262	4	---			0.0	4	13.053	0.000	1493	1.7
Total Col1Ave (3 peaks):				12.3		Total Col2Ave (4 peaks):			61.8	RPD = 133*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			17.5	
Aroclor-1268	1	11.644	0.075	1548	0.8	1	12.342	0.083	23068	9.8
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	11.959	-0.057	14396	7.9	3	12.712	0.000	1424	0.6
Aroclor-1268	4	12.789	-0.002	14907	2.3	4	13.529	-0.002	8084	1.0
Total Col1Ave (3 peaks):				3.7		Total Col2Ave (3 peaks):			3.8	RPD = 3
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

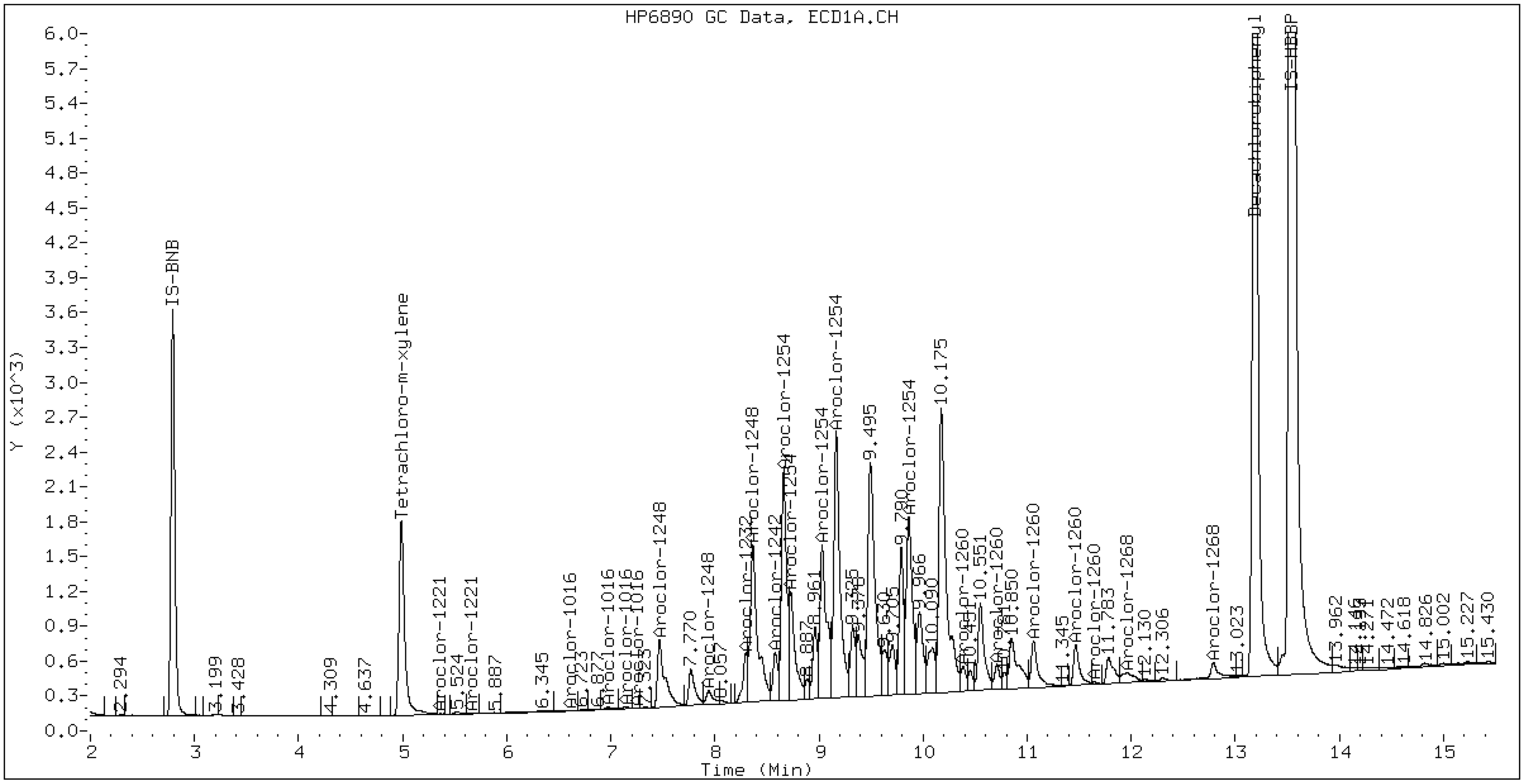
Total PCB Area Col1 (5.087 - 13.088) =	2017140	Col1 Total PCB = 0.3 ppm*
Total PCB Area Col2 (5.087 - 13.088) =	2463558	Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

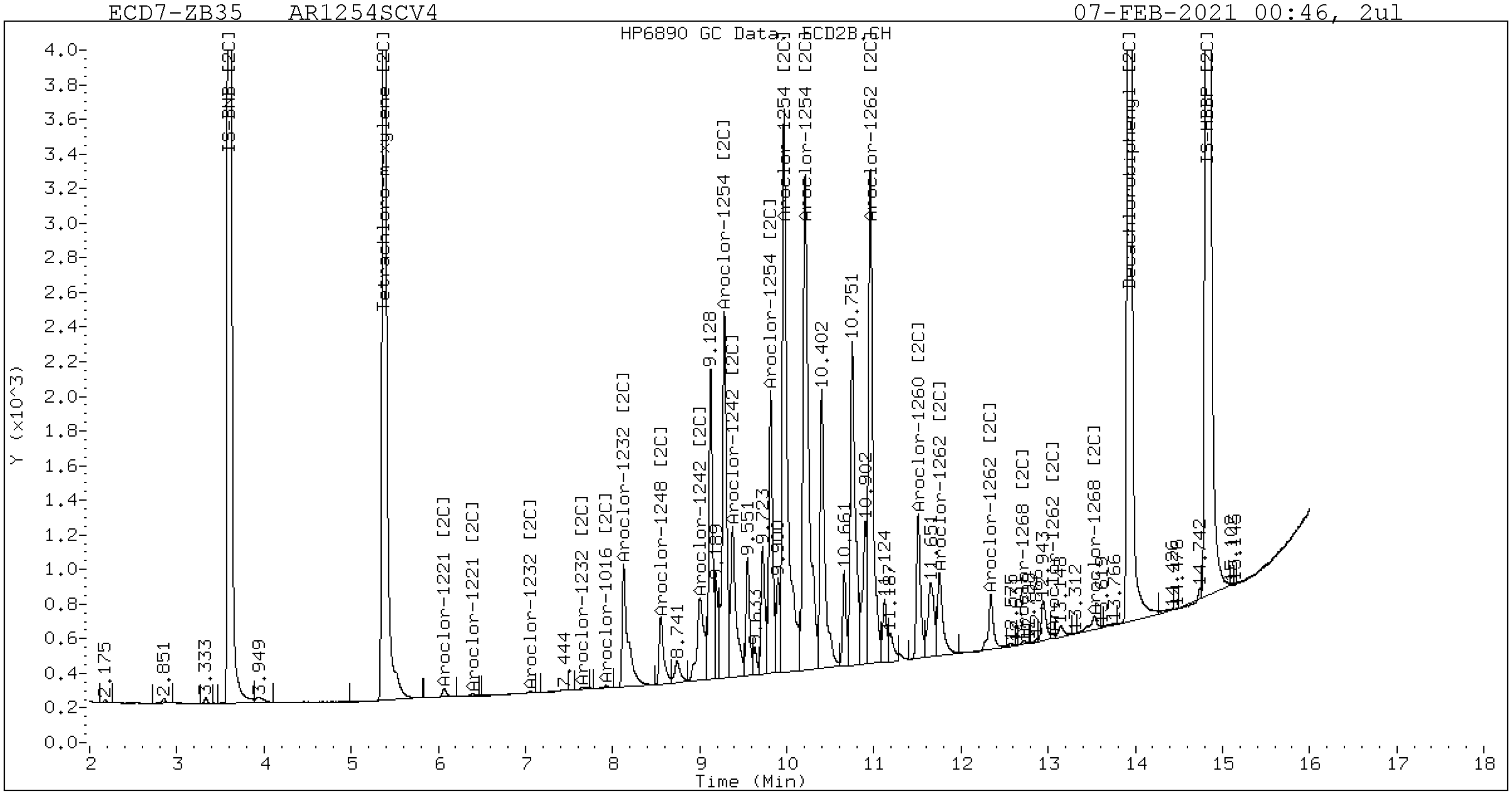
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV4 07-FEB-2021 00:46, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV4 07-FEB-2021 00:46, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION
EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Calibration: EB00020
Sequence: SJB0079

SDG: 21A0361
Project: ICS-Former NW Cooperage
Laboratory ID: SJB0079-SCV5
Sequence Name: AR2162SCV5
Standard ID: J000952

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1221	250.00	262	4.8	20.00
Aroclor 1221 [2C]	250.00	252	0.8	20.00
Aroclor 1262	250.00	261	4.4	20.00
Aroclor 1262 [2C]	250.00	246	-1.7	20.00
Decachlorobiphenyl	40.000	36.5	-8.8	20.00
Tetrachlorometaxylene	40.000	42.4	6.0	20.00
Decachlorobiphenyl [2C]	40.000	43.4	8.5	20.00
Tetrachlorometaxylene [2C]	40.000	43.9	9.7	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062125ECD7.D
Data file 2: /210206.b/210206.b/02062125ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV5
Client ID:
Injection Date: 07-FEB-2021 01:07
Report Date: 02/08/2021 12:09
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.988	0.001	123457	5.379	0.000	382573	42.4	43.9	3.4	Tetrachloro-m-xylene
13.189	0.000	591968	13.936	0.004	711921	36.5	43.4	17.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	184586	11.4
Hexabromobiphenyl	1343188	1510520	12.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	824502	-1.5
Hexabromobiphenyl	850693	937832	10.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.610	0.002	3068	19.2	1	7.063	0.006	11548	32.3
Aroclor-1016	2	6.980	-0.002	7817	15.1	2	7.665	0.007	11245	13.9
Aroclor-1016	3	7.138	0.004	4334	17.5	3	7.875	0.005	5499	15.4
Aroclor-1016	4	7.238	-0.004	3225	20.8	4	8.127	0.002	3087	15.2
	Total Col1Ave (4 peaks):			18.2		Total Col2Ave (4 peaks):			19.2	RPD = 6
	Corrected Ave (3 peaks):			17.3		Corrected Ave (3 peaks):			14.8	RPD = 15
Aroclor-1221	1	3.946	0.003	6918	262.2	1	4.640	-0.000	12389	257.2
Aroclor-1221	2	5.379	0.004	9244	264.0	2	6.052	0.000	26161	252.4
Aroclor-1221	3	5.660	0.001	30886	260.1	3	6.397	0.000	46023	246.4
	Total Col1Ave (3 peaks):			262.1		Total Col2Ave (3 peaks):			252.0	RPD = 4
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.946	0.004	6918	456.5	1	4.640	-0.000	12389	470.5
Aroclor-1232	2	6.610	0.002	3068	45.4	2	7.063	0.006	11548	70.4
Aroclor-1232	3	6.980	-0.002	7817	36.1	3	7.665	0.004	11245	32.3
Aroclor-1232	4	8.367	0.072	22885	302.9	4	8.051	0.001	1933	29.1
	Total Col1Ave (4 peaks):			210.2		Total Col2Ave (4 peaks):			150.6	RPD = 33
	Corrected Ave (3 peaks):			128.1		Corrected Ave (3 peaks):			43.9	RPD = 98*
Aroclor-1242	1	6.610	0.002	3068	23.8	1	7.063	0.007	11548	39.2
Aroclor-1242	2	6.980	-0.002	7817	18.3	2	7.665	0.004	11245	16.3
Aroclor-1242	3	8.367	0.074	22885	160.2	3	9.020	0.029	1837	6.6
Aroclor-1242	4	8.595	0.004	2130	14.7	4	9.439	0.007	1457	5.4
	Total Col1Ave (4 peaks):			54.2		Total Col2Ave (4 peaks):			16.9	RPD = 105*
	Corrected Ave (3 peaks):			18.9		Corrected Ave (3 peaks):			9.4	RPD = 67*
Aroclor-1248	1	7.467	0.001	2387	12.1	1	8.127	0.001	3087	11.5
Aroclor-1248	2	7.941	0.002	1994	6.7	2	8.558	0.008	2071	6.2
Aroclor-1248	3	8.367	0.014	22885	37.2	3	9.020	0.030	1837	3.6
Aroclor-1248	4	8.595	0.006	2130	9.3	4	9.439	0.011	1457	2.9
	Total Col1Ave (4 peaks):			16.3		Total Col2Ave (4 peaks):			6.1	RPD = 92*
	Corrected Ave (3 peaks):			9.4		Corrected Ave (3 peaks):			4.2	RPD = 75*
Aroclor-1254	1	8.662	0.004	25963	47.6	1	9.291	0.009	19843	36.1
Aroclor-1254	2	---			0.0	2	9.439	0.063	1457	4.8
Aroclor-1254	3	9.032	0.003	2989	8.3	3	9.821	0.008	2565	6.4
Aroclor-1254	4	9.141	-0.024	28020	35.9	4	9.985	0.018	95937	86.0
Aroclor-1254	5	9.792	-0.071	165526	327.7	5	10.214	0.006	118922	112.0
	Total Col1Ave (4 peaks):			104.9		Total Col2Ave (5 peaks):			49.1	RPD = 72*
	Corrected Ave (3 peaks):			30.6		Corrected Ave (4 peaks):			33.3	RPD = 9
Aroclor-1260	1	10.389	0.001	200501	392.4	1	11.032	0.001	253043	385.2
Aroclor-1260	2	10.709	0.000	166959	326.1	2	11.493	-0.001	200349	328.1
Aroclor-1260	3	11.062	0.001	435471	296.6	3	11.749	0.002	516473	305.6
Aroclor-1260	4	11.466	0.001	128526	189.2	4	12.337	-0.000	371529	340.4
Aroclor-1260	5	11.569	0.001	174270	550.2	NS	---			----
	Total Col1Ave (5 peaks):			350.9		Total Col2Ave (4 peaks):			339.8	RPD = 3
	Corrected Ave (4 peaks):			301.1		Corrected Ave (3 peaks):			324.7	RPD = 8
Aroclor-1262	1	10.389	0.001	200501	238.2	1	11.032	-0.000	253043	234.1
Aroclor-1262	2	11.062	0.001	435471	217.5	2	11.749	0.000	516473	214.3
Aroclor-1262	3	11.569	-0.000	174270	307.1	3	12.262	0.001	211063	302.8
Aroclor-1262	4	11.639	-0.001	211870	281.2	4	13.054	0.001	201404	231.9
	Total Col1Ave (4 peaks):			261.0		Total Col2Ave (4 peaks):			245.8	RPD = 6
	Corrected Ave (3 peaks):			245.6		Corrected Ave (3 peaks):			226.8	RPD = 8
Aroclor-1268	1	11.569	0.000	174270	90.2	1	12.262	0.003	211063	88.9
Aroclor-1268	2	11.639	0.002	211870	96.4	2	12.337	0.010	371529	129.7
Aroclor-1268	3	12.045	0.030	82619	45.9	3	12.713	0.001	11828	5.2
Aroclor-1268	4	12.789	-0.002	73541	11.7	4	13.530	-0.001	68496	8.3
	Total Col1Ave (4 peaks):			61.0		Total Col2Ave (4 peaks):			58.0	RPD = 5

Corrected Ave (3 peaks): 49.3 Corrected Ave (3 peaks): 34.1 RPD = 36

Total PCB Area Col1 (5.087 - 13.088) = 3009418 Col1 Total PCB = 0.4 ppm*

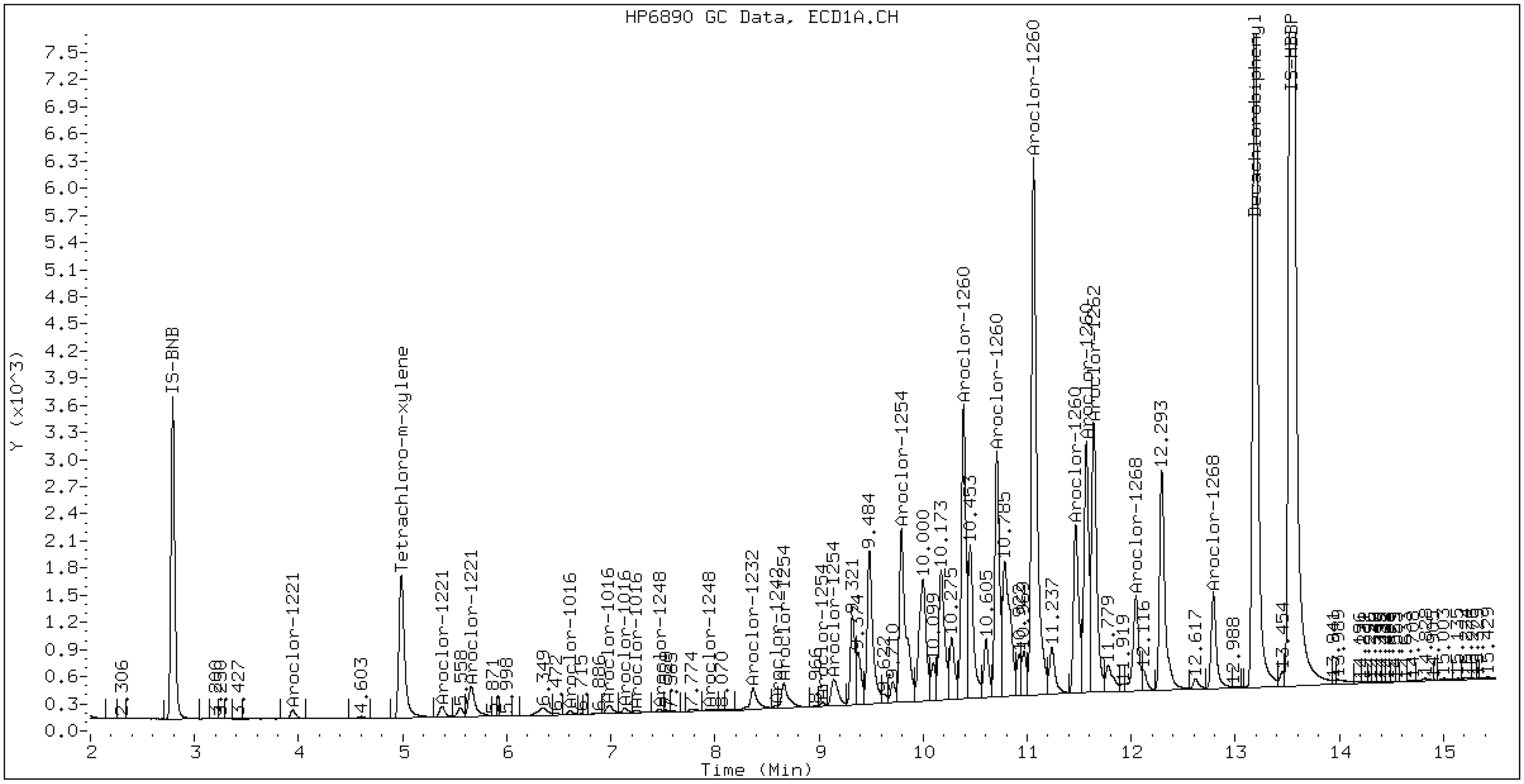
Total PCB Area Col2 (5.087 - 13.088) = 3522199 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

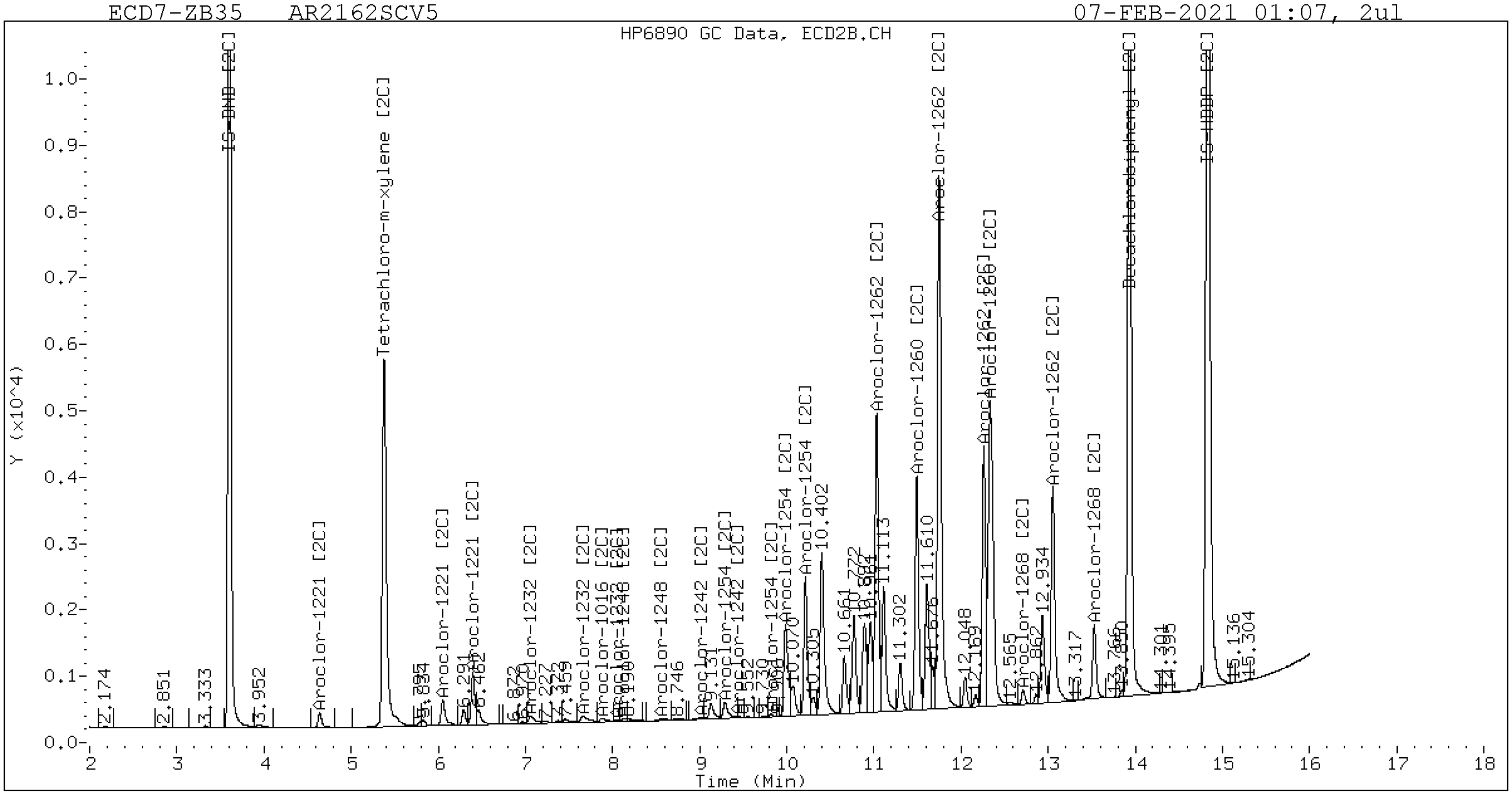
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV5 07-FEB-2021 01:07, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV5 07-FEB-2021 01:07, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Calibration: EB00020

Sequence: SJB0079

SDG: 21A0361

Project: ICS-Former NW Cooperage

Laboratory ID: SJB0079-SCV6

Sequence Name: AR3268SCV6

Standard ID: J000953

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1232	250.00	257	2.9	20.00
Aroclor 1232 [2C]	250.00	255	1.9	20.00
Aroclor 1268	250.00	231	-7.4	20.00
Aroclor 1268 [2C]	250.00	238	-4.7	20.00
Decachlorobiphenyl	40.000	55.6	38.9	20.00
Tetrachlorometaxylene	40.000	42.3	5.8	20.00
Decachlorobiphenyl [2C]	40.000	69.0	72.5	20.00
Tetrachlorometaxylene [2C]	40.000	44.6	11.4	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210206.b/02062126ECD7.D
Data file 2: /210206.b/210206.b/02062126ECD7.D
Method: \\target\share\chem4\ecd7.i\210206.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV6
Client ID:
Injection Date: 07-FEB-2021 01:28
Report Date: 02/08/2021 12:09
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.984	-0.003	126755	5.378	-0.001	391018	42.3	44.6	5.2	Tetrachloro-m-xylene
13.189	0.000	916026	13.934	0.001	1132239	55.6	69.0	21.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	189910	14.6
Hexabromobiphenyl	1343188	1534868	14.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	829853	-0.9
Hexabromobiphenyl	850693	937673	10.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.609	0.001	18345	111.8	1	7.057	0.001	41791	116.1
Aroclor-1016	2	6.985	0.003	56735	106.2	2	7.661	0.004	88789	108.9
Aroclor-1016	3	7.133	-0.000	27062	106.5	3	7.874	0.005	38701	107.9
Aroclor-1016	4	7.242	0.000	17696	110.8	4	8.126	0.001	21120	103.4
	Total Col1Ave (4 peaks):			108.8		Total Col2Ave (4 peaks):			109.1	RPD = 0
	Corrected Ave (3 peaks):			107.8		Corrected Ave (3 peaks):			106.7	RPD = 1
Aroclor-1221	1	3.941	-0.002	4106	151.3	1	4.640	-0.000	6815	140.6
Aroclor-1221	2	5.380	0.005	6007	166.8	2	6.054	0.002	16150	154.8
Aroclor-1221	3	5.658	-0.001	24949	204.2	3	6.397	0.001	44879	238.7
	Total Col1Ave (3 peaks):			174.1		Total Col2Ave (3 peaks):			178.0	RPD = 2
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1232	1	3.941	-0.001	4106	263.4	1	4.640	-0.000	6815	257.1
Aroclor-1232	2	6.609	0.001	18345	263.9	2	7.057	0.000	41791	253.3
Aroclor-1232	3	6.985	0.002	56735	254.9	3	7.661	0.001	88789	253.3
Aroclor-1232	4	8.298	0.002	19184	246.8	4	8.050	0.000	17085	255.7
	Total Col1Ave (4 peaks):			257.2		Total Col2Ave (4 peaks):			254.8	RPD = 1
	Corrected Ave (3 peaks):			255.0		Corrected Ave (3 peaks):			254.1	RPD = 0
Aroclor-1242	1	6.609	0.001	18345	138.2	1	7.057	0.001	41791	141.0
Aroclor-1242	2	6.985	0.003	56735	129.0	2	7.661	0.001	88789	127.6
Aroclor-1242	3	8.298	0.005	19184	130.6	3	9.000	0.009	37687	134.5
Aroclor-1242	4	8.594	0.003	16438	110.1	4	9.442	0.011	29208	106.9
	Total Col1Ave (4 peaks):			126.9		Total Col2Ave (4 peaks):			127.5	RPD = 0
	Corrected Ave (3 peaks):			123.2		Corrected Ave (3 peaks):			123.0	RPD = 0
Aroclor-1248	1	7.465	-0.001	14596	71.8	1	8.126	-0.000	21120	78.3
Aroclor-1248	2	7.940	0.001	24254	79.0	2	8.552	0.003	22092	66.2
Aroclor-1248	3	8.355	0.002	42497	67.1	3	9.000	0.010	37687	72.7
Aroclor-1248	4	8.594	0.006	16438	70.0	4	9.442	0.015	29208	58.4
	Total Col1Ave (4 peaks):			72.0		Total Col2Ave (4 peaks):			68.9	RPD = 4
	Corrected Ave (3 peaks):			69.6		Corrected Ave (3 peaks):			65.8	RPD = 6
Aroclor-1254	1	8.657	-0.001	14199	25.3	1	9.287	0.005	8023	14.5
Aroclor-1254	2	8.721	-0.006	7428	24.0	2	9.442	0.066	29208	96.2
Aroclor-1254	3	9.031	0.001	3678	9.9	3	9.821	0.008	4642	11.4
Aroclor-1254	4	9.171	0.006	7931	9.9	4	9.980	0.013	11446	10.2
Aroclor-1254	5	9.877	0.014	4148	8.0	5	10.245	0.037	9233	8.6
	Total Col1Ave (5 peaks):			15.4		Total Col2Ave (5 peaks):			28.2	RPD = 59*
	Corrected Ave (4 peaks):			12.9		Corrected Ave (4 peaks):			11.2	RPD = 14
Aroclor-1260	1	10.389	0.002	89573	172.5	1	11.036	0.005	91820	139.8
Aroclor-1260	2	10.710	0.001	5906	11.4	2	11.473	-0.021	117721	192.8
Aroclor-1260	3	11.061	0.000	54855	36.8	3	11.752	0.004	51737	30.6
Aroclor-1260	4	---			0.0	4	12.328	-0.009	676255	619.6
Aroclor-1260	5	11.569	0.002	451487	1402.9	NS	---			----
	Total Col1Ave (4 peaks):			405.9		Total Col2Ave (4 peaks):			245.7	RPD = 49*
	Corrected Ave (3 peaks):			73.5		Corrected Ave (3 peaks):			121.1	RPD = 49*
Aroclor-1262	1	10.389	0.001	89573	104.7	1	11.036	0.004	91820	85.0
Aroclor-1262	2	11.061	0.001	54855	27.0	2	11.752	0.002	51737	21.5
Aroclor-1262	3	11.569	0.000	451487	782.9	3	12.259	-0.002	563033	808.0
Aroclor-1262	4	11.638	-0.002	520102	679.3	4	13.051	-0.002	216636	249.5
	Total Col1Ave (4 peaks):			398.5		Total Col2Ave (4 peaks):			291.0	RPD = 31
	Corrected Ave (3 peaks):			270.3		Corrected Ave (3 peaks):			118.7	RPD = 78*
Aroclor-1268	1	11.569	0.000	451487	230.0	1	12.259	0.000	563033	237.2
Aroclor-1268	2	11.638	0.001	520102	232.9	2	12.328	0.001	676255	236.1
Aroclor-1268	3	12.016	0.001	420097	229.6	3	12.713	0.001	543702	238.5
Aroclor-1268	4	12.792	0.000	1494782	233.4	4	13.532	0.001	1974648	240.7
	Total Col1Ave (4 peaks):			231.5		Total Col2Ave (4 peaks):			238.1	RPD = 3

Corrected Ave (3 peaks): 230.8 Corrected Ave (3 peaks): 237.3 RPD = 3

Total PCB Area Col1 (5.087 - 13.088) = 4068632 Col1 Total PCB = 0.6 ppm*

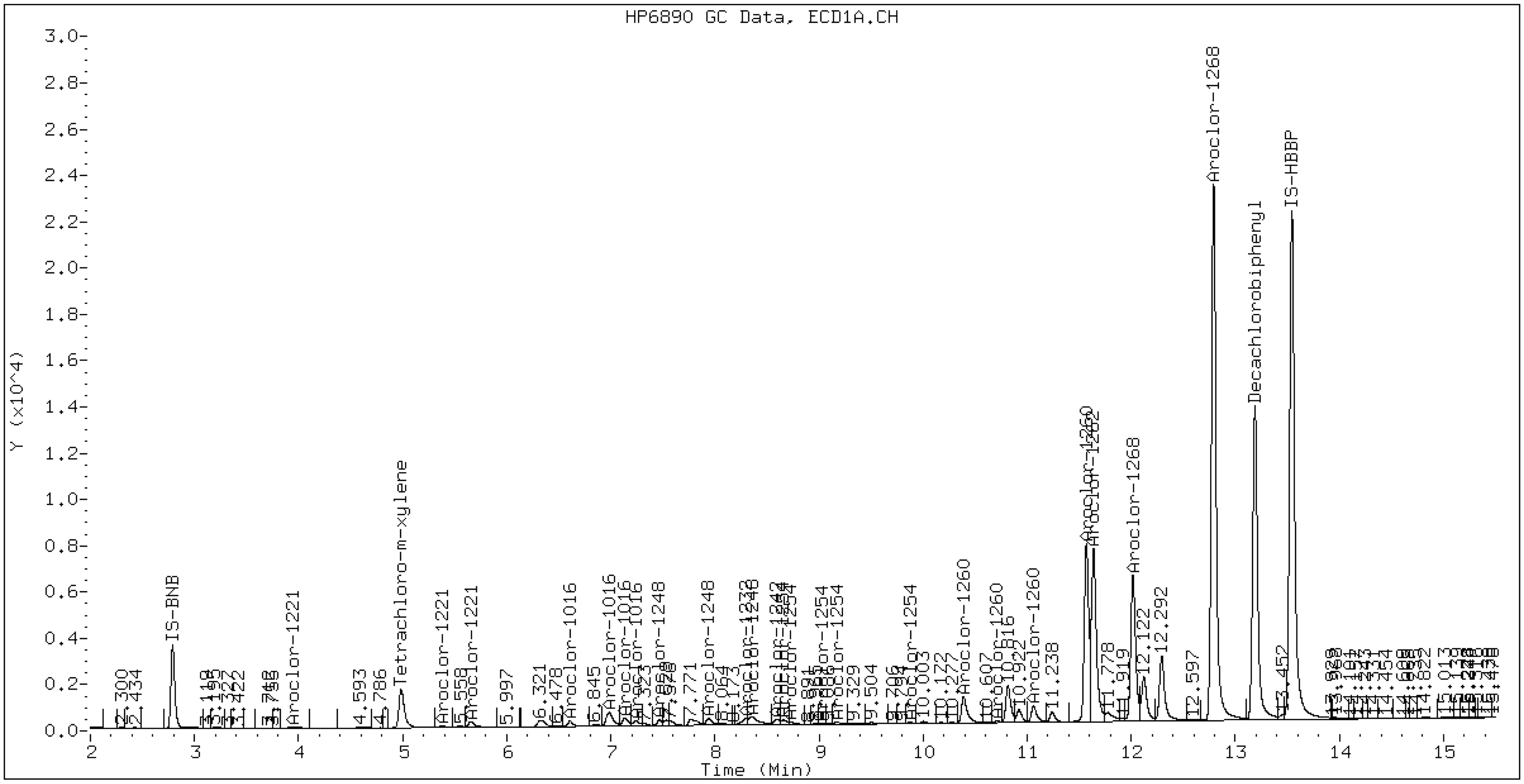
Total PCB Area Col2 (5.087 - 13.088) = 3488238 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

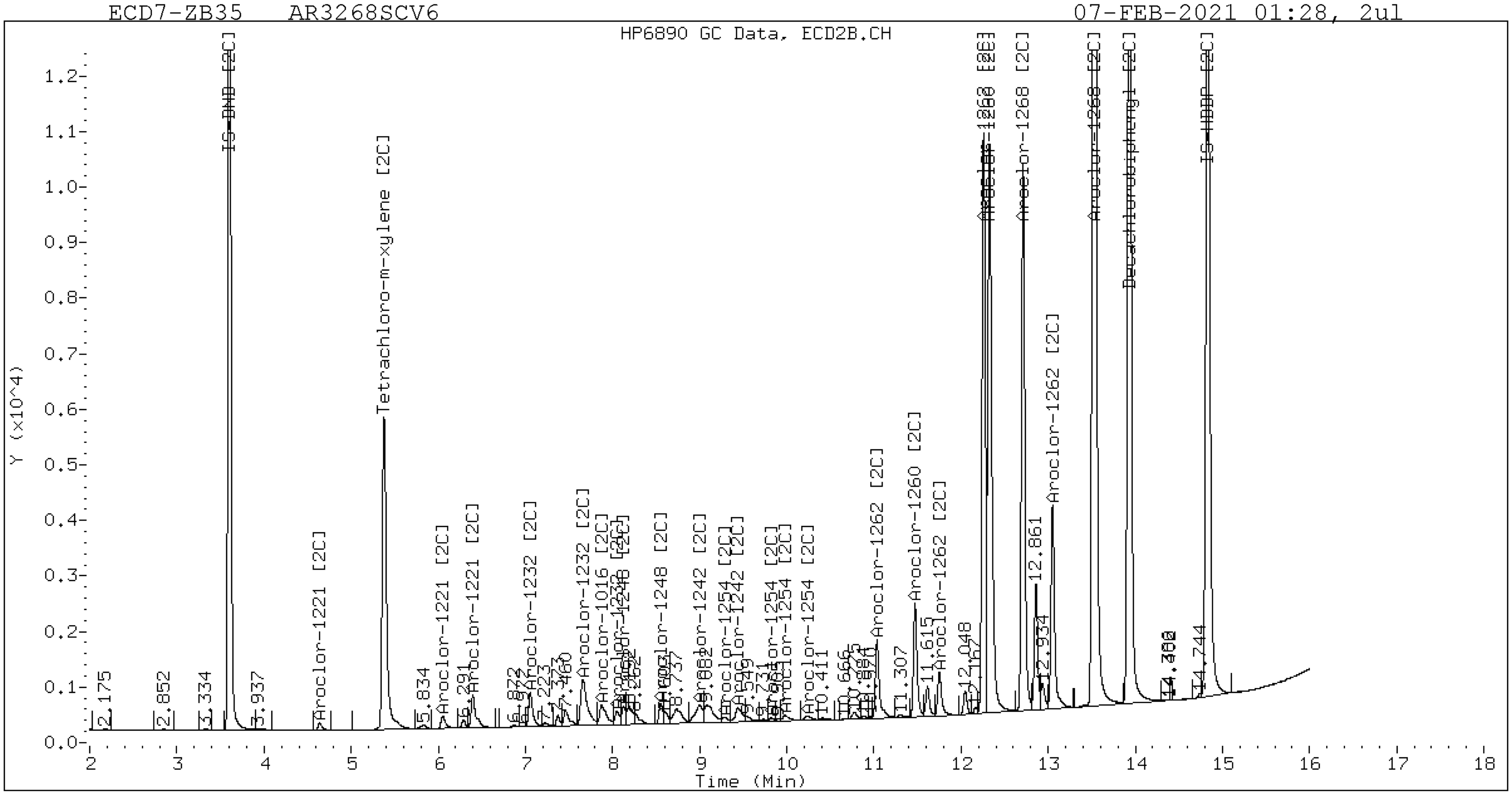
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV6 07-FEB-2021 01:28, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV6 07-FEB-2021 01:28, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	EB00020
Lab File ID:	02112102ECD7.D	Calibration Date:	02/06/2021
Sequence:	SJB0228	Injection Date:	02/11/21
Lab Sample ID:	SJB0228-ICV1	Injection Time:	19:18
Sequence Name:	AR1254ICV1		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	213	0.2160479	0.1856896		-14.7	+/-20
Aroclor 1254 [2C]	A	250.00	227	0.0665641	0.0576980		-9.2	+/-20
Decachlorobiphenyl	A	40.000	34.4	0.8591483	0.7392804		-14.0	+/-20
Tetrachlorometaxylene	A	40.000	43.9	1.2618800	1.3840300		9.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.0	1.3997330	1.3665270		-2.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	46.2	0.8457522	0.9769900		15.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210211.b/02112102ECD7.D	ARI ID: AR1254ICV1
Data file 2: /210211.b/210211.b/02112102ECD7.D	Client ID:
Method: \\target\share\chem4\ecd7.i\210211.b\PCB.m	Injection Date: 11-FEB-2021 19:18
Compound Sublist: AR1254.sub	Report Date: 02/15/2021 16:02
Instrument, Inj. Vol.: ecd7.i, 2ul	Matrix: NONE
Quant Method: Internal Std	Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.991	0.006	160679	5.378	-0.001	313223	43.9	46.2	5.2	Tetrachloro-m-xylene
13.187	0.001	688758	13.926	-0.006	479634	34.4	39.1	12.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	232190	40.1
Hexabromobiphenyl	1343188	1863320	38.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	641200	-23.4
Hexabromobiphenyl	850693	701975	-17.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.656	0.000	154679	225.5	1	9.272	-0.010	106293	248.9
Aroclor-1254	2	8.726	0.000	79162	209.0	2	9.367	-0.009	56293	240.0
Aroclor-1254	3	9.022	0.000	81520	179.8	3	9.804	-0.009	77198	246.4
Aroclor-1254	4	9.161	0.000	202468	206.2	4	9.956	-0.011	164792	190.0
Aroclor-1254	5	9.859	0.000	155847	245.3	5	10.196	-0.012	173486	210.2

Total Col1Ave (5 peaks): 213.2 Total Col2Ave (5 peaks): 227.1 RPD = 6
Corrected Ave (4 peaks): 205.1 Corrected Ave (4 peaks): 221.7 RPD = 8

CalAmt %D: -14.7 CalAmt %D: -9.2

Total PCB Area Col1 (5.086 - 13.086) = 2350325 Col1 Total PCB = 0.3 ppm*

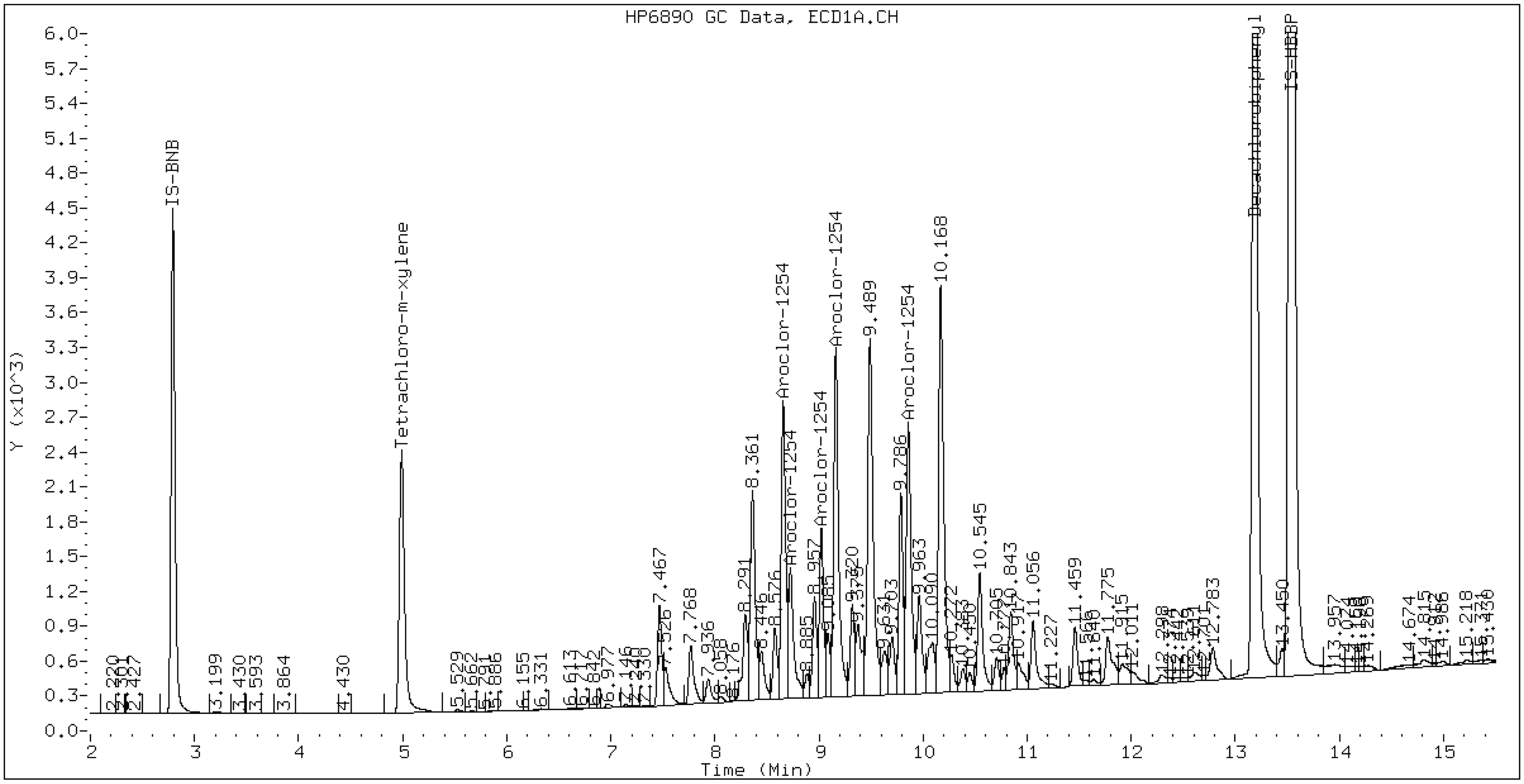
Total PCB Area Col2 (5.086 - 13.086) = 1847482 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

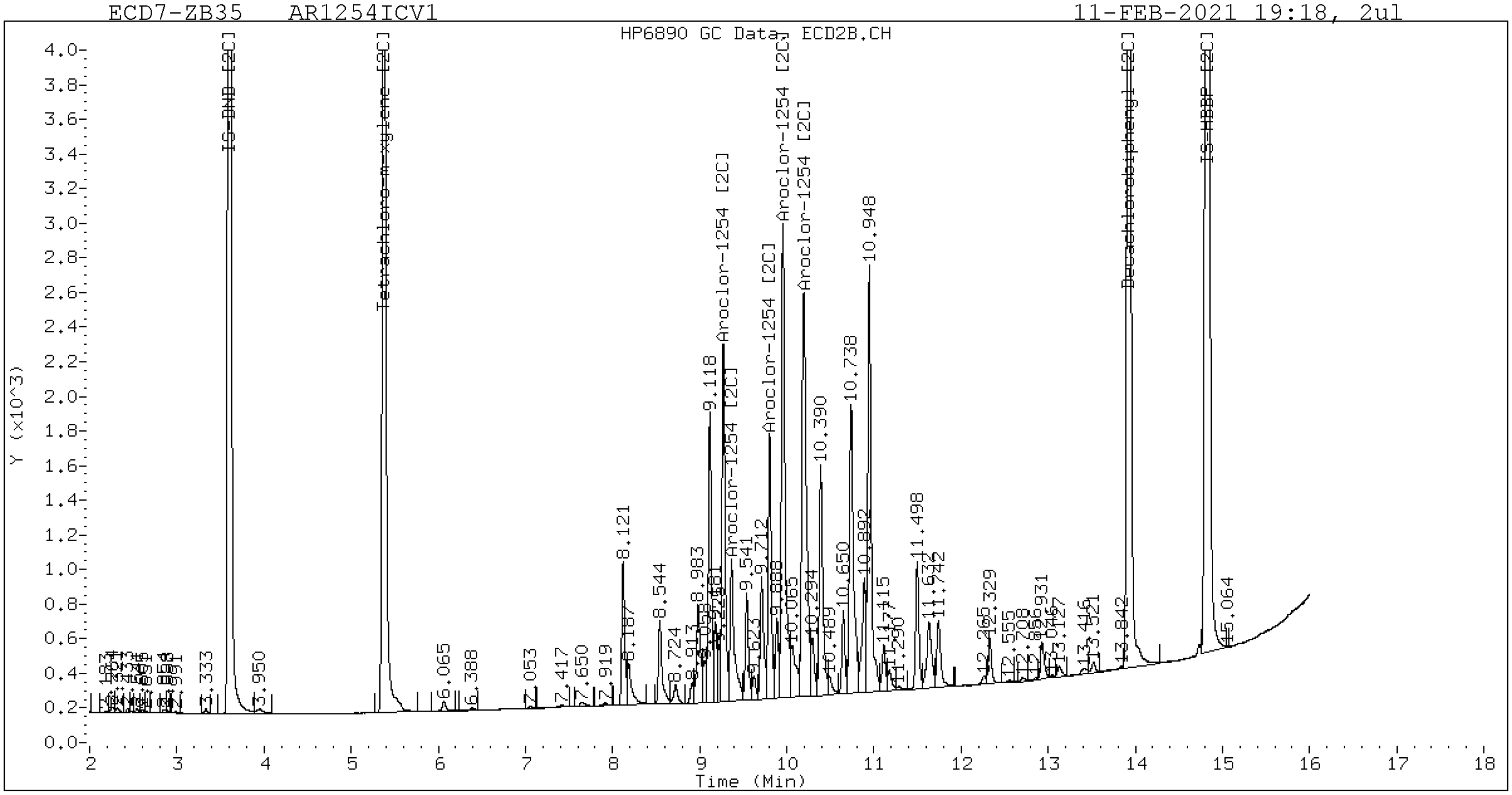
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 11-FEB-2021 19:18, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 11-FEB-2021 19:18, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8082A

Laboratory: Analytical Resources, Inc.

SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Instrument ID: ECD7

Calibration: EB00020

Lab File ID: 02112103ECD7.D

Calibration Date: 02/06/2021

Sequence: SJB0228

Injection Date: 02/11/21

Lab Sample ID: SJB0228-ICV2

Injection Time: 19:39

Sequence Name: AR1660ICV2

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1016	A	250.00	238	0.1171267	0.1124816		-4.7	+/-20
Aroclor 1016 [2C]	A	250.00	261	0.0418998	0.0450636		4.3	+/-20
Aroclor 1260	A	250.00	240	0.0369380	0.0359384		-4.2	+/-20
Aroclor 1260 [2C]	A	250.00	213	0.0863539	0.0737241		-14.9	+/-20
Decachlorobiphenyl	A	40.000	36.0	0.8591483	0.7737900		-10.0	+/-20
Tetrachlorometaxylene	A	40.000	43.4	1.2618800	1.3684410		8.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.6	1.3997330	1.3512260		-3.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	46.2	0.8457522	0.9771269		15.5	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210211.b/02112103ECD7.D
Data file 2: /210211.b/210211.b/02112103ECD7.D
Method: \\target\share\chem4\ecd7.i\210211.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 11-FEB-2021 19:39
Report Date: 02/15/2021 16:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.990	0.005	142348	5.380	0.001	291902	43.4	46.2	6.3	Tetrachloro-m-xylene
13.186	-0.000	647422	13.926	-0.006	453729	36.0	38.6	6.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	208044	25.5
Hexabromobiphenyl	1343188	1673379	24.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	597470	-28.7
Hexabromobiphenyl	850693	671581	-21.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.609	0.000	43328	241.0	1	7.054	-0.002	69199	267.0
Aroclor-1016	2	6.982	-0.002	144537	247.0	2	7.656	-0.002	169071	287.9
Aroclor-1016	3	7.133	0.002	62596	224.8	3	7.866	-0.003	61338	237.5
Aroclor-1016	4	7.241	0.001	42053	240.4	4	8.121	-0.004	36944	251.1
	Total Col1Ave (4 peaks):				238.3	Total Col2Ave (4 peaks):			260.9	RPD = 9
	Corrected Ave (3 peaks):				235.4	Corrected Ave (3 peaks):			251.9	RPD = 7
	CalAmt %D:				-4.7	CalAmt %D:			4.4	
Aroclor-1260	1	10.384	-0.001	123263	217.7	1	11.023	-0.008	92744	197.1
Aroclor-1260	2	10.705	-0.001	144170	254.2	2	11.486	-0.008	97877	223.8
Aroclor-1260	3	11.056	-0.001	408562	251.2	3	11.739	-0.008	260387	215.1
Aroclor-1260	4	11.459	0.001	181392	241.1	4	12.328	-0.009	167888	214.8
Aroclor-1260	5	11.564	0.000	82279	234.5	NS	---			----
	Total Col1Ave (5 peaks):				239.7	Total Col2Ave (4 peaks):			212.7	RPD = 12
	Corrected Ave (4 peaks):				236.1	Corrected Ave (3 peaks):			209.0	RPD = 12
	CalAmt %D:				-4.1	CalAmt %D:			-14.9	

Total PCB Area Col1 (5.086 - 13.086) = 3771694 Col1 Total PCB = 0.5 ppm*

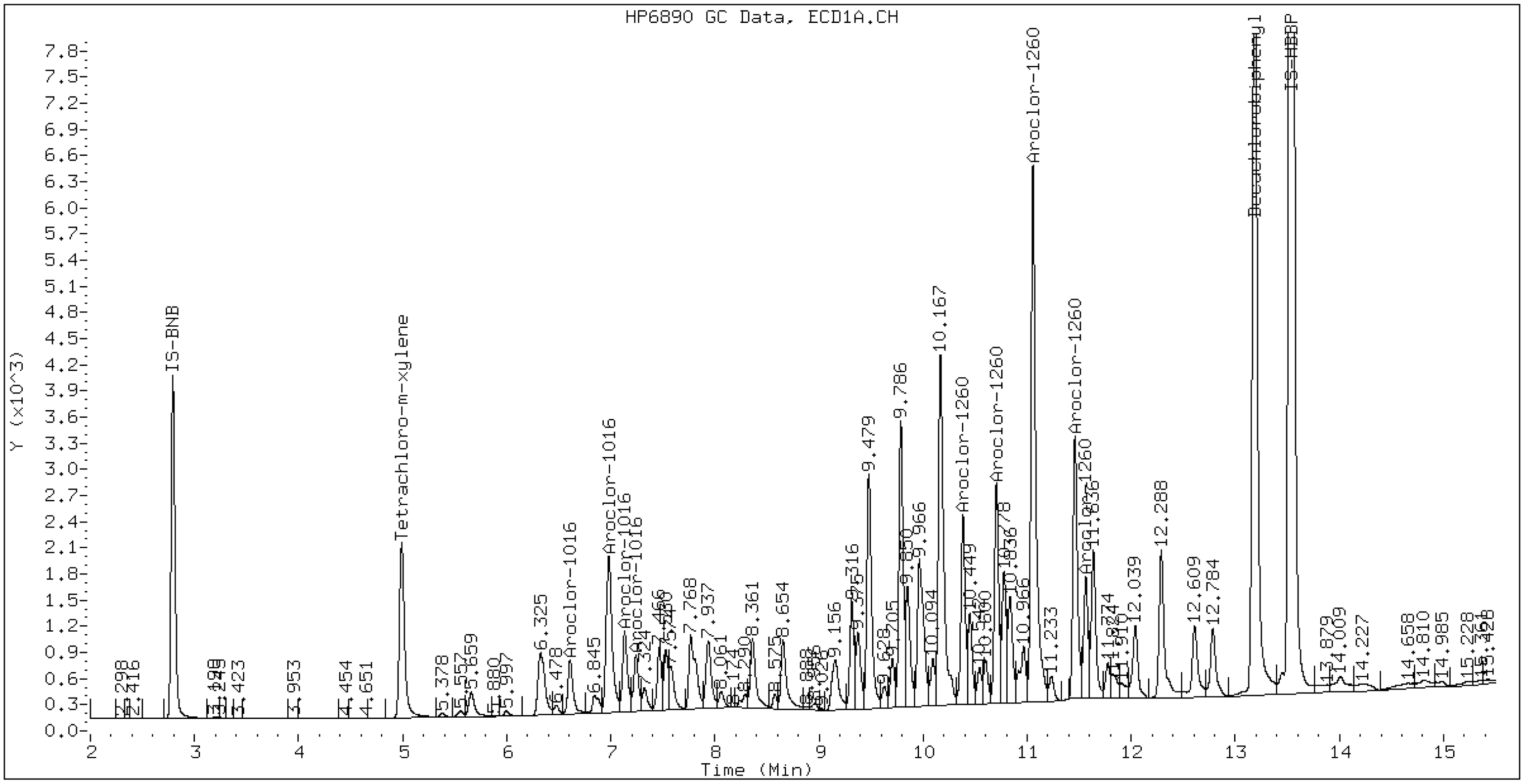
Total PCB Area Col2 (5.086 - 13.086) = 2789315 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

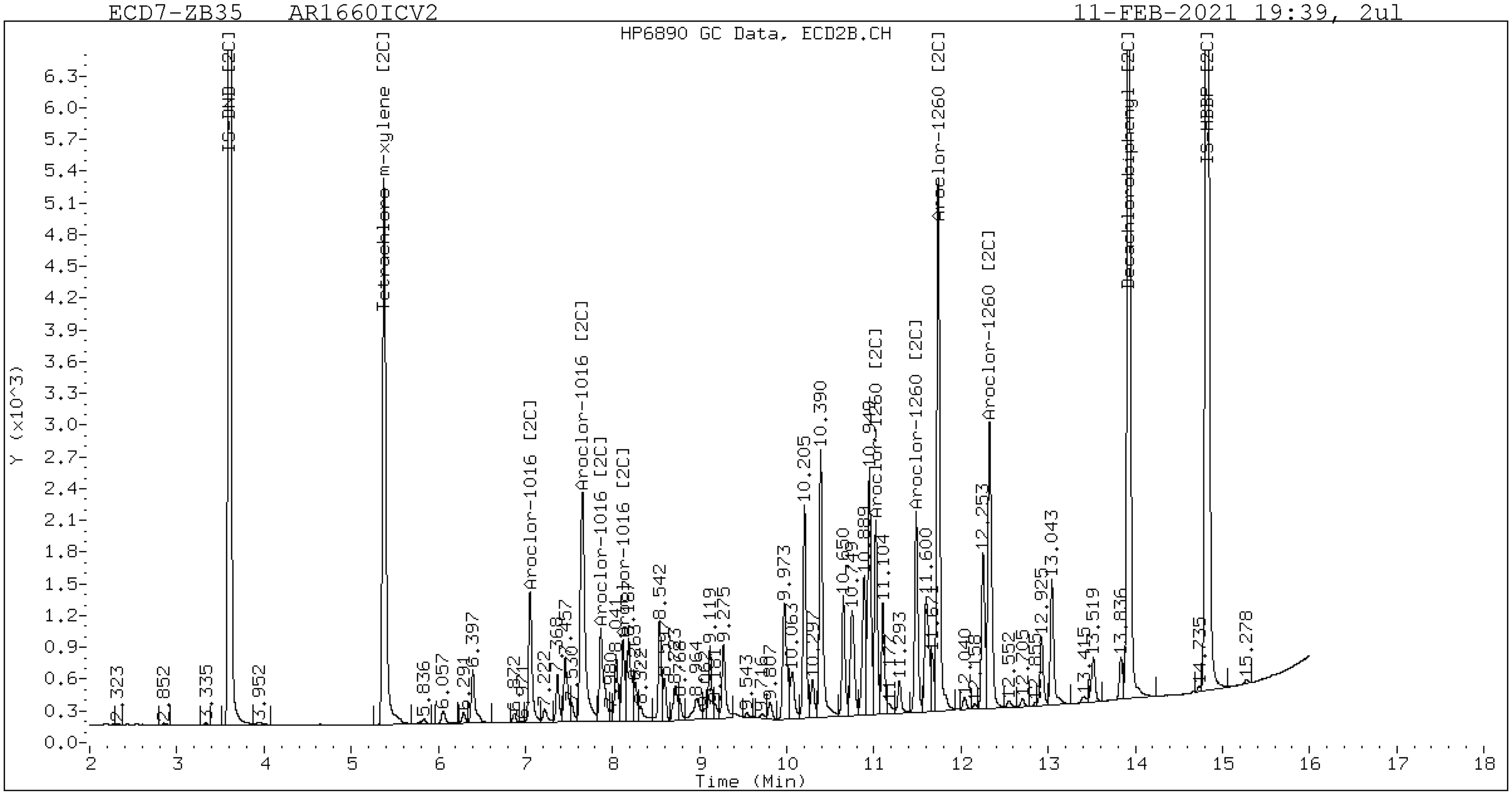
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 11-FEB-2021 19:39, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 11-FEB-2021 19:39, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	EB00020
Lab File ID:	02092102ECD5.D	Calibration Date:	02/06/2021
Sequence:	SJB0231	Injection Date:	02/09/21
Lab Sample ID:	SJB0231-ICV1	Injection Time:	15:41
Sequence Name:	AR1254ICV1		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	248	0.2160479	0.2096139		-0.6	+/-20
Aroclor 1254 [2C]	A	250.00	249	0.0665641	0.0651371		-0.2	+/-20
Decachlorobiphenyl	A	40.000	34.6	0.8591483	0.7440996		-13.5	+/-20
Tetrachlorometaxylene	A	40.000	39.5	1.2618800	1.2468730		-1.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.0	1.3997330	1.3995200		0.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	46.4	0.8457522	0.9807856		16.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092102ECD5.D
Data file 2: /210209.b/210209.b/02092102ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 09-FEB-2021 15:41
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.994	0.004	165230	5.382	0.001	349143	39.5	46.4	16.0	Tetrachloro-m-xylene
13.192	0.005	838204	13.931	0.004	609503	34.6	40.0	14.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	265031	59.9
Hexabromobiphenyl	1343188	2252935	67.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	711966	-15.0
Hexabromobiphenyl	850693	871017	2.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.662	0.006	178662	228.2	1	9.284	0.007	129273	272.6
Aroclor-1254	2	8.729	0.004	101559	234.9	2	9.377	0.007	65117	250.0
Aroclor-1254	3	9.033	0.006	163402	315.8	3	9.814	0.007	88337	253.9
Aroclor-1254	4	9.168	0.007	251928	224.8	4	9.967	0.008	212042	220.2
Aroclor-1254	5	9.865	0.006	172483	237.8	5	10.208	0.009	229847	250.8

Total Col1Ave (5 peaks): 248.3 Total Col2Ave (5 peaks): 249.5 RPD = 0
Corrected Ave (4 peaks): 231.4 Corrected Ave (4 peaks): 243.7 RPD = 5

CalAmt %D: -0.7 CalAmt %D: -0.2

Total PCB Area Col1 (5.090 - 13.086) = 2722185 Col1 Total PCB = 0.3 ppm*

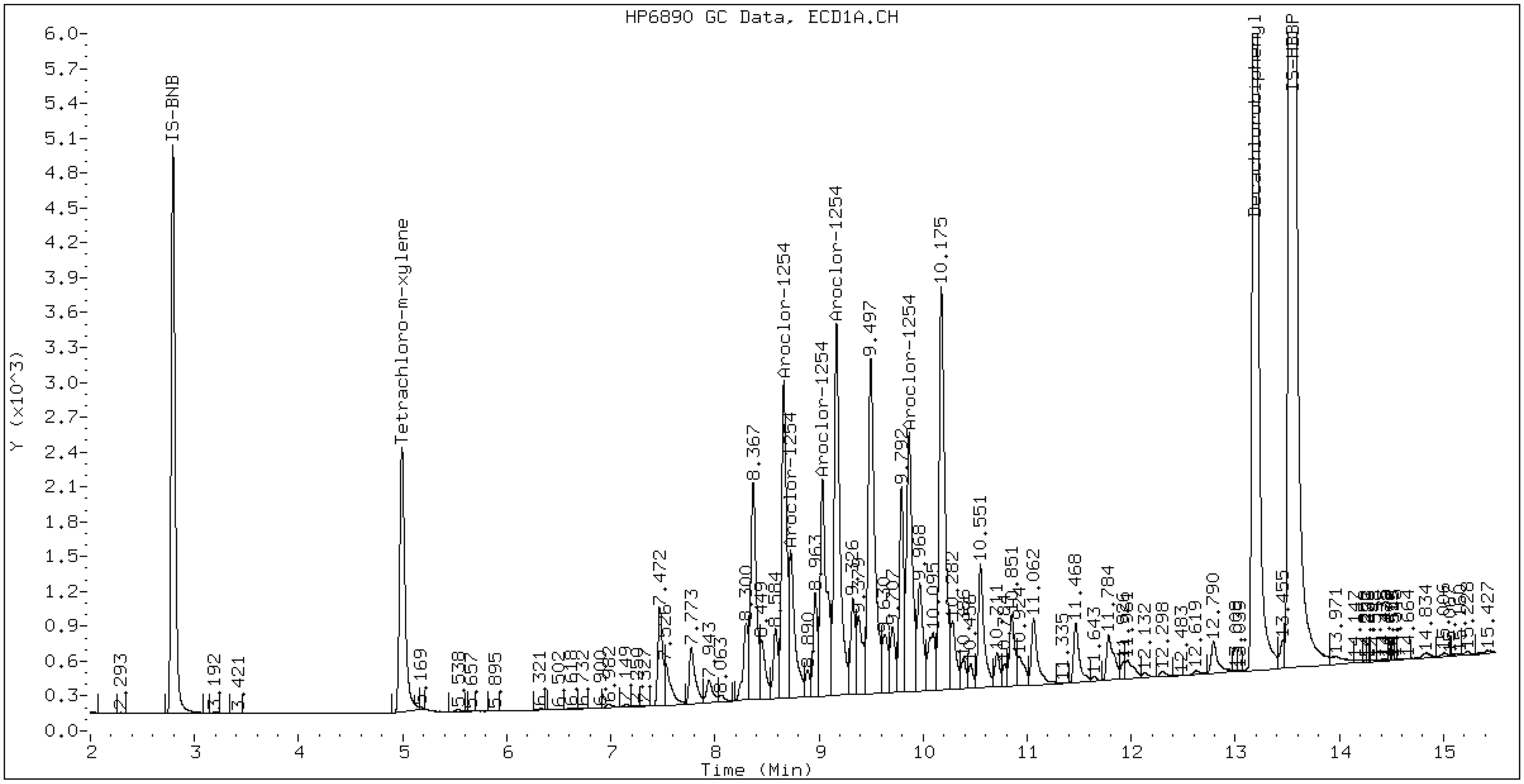
Total PCB Area Col2 (5.090 - 13.086) = 2141096 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

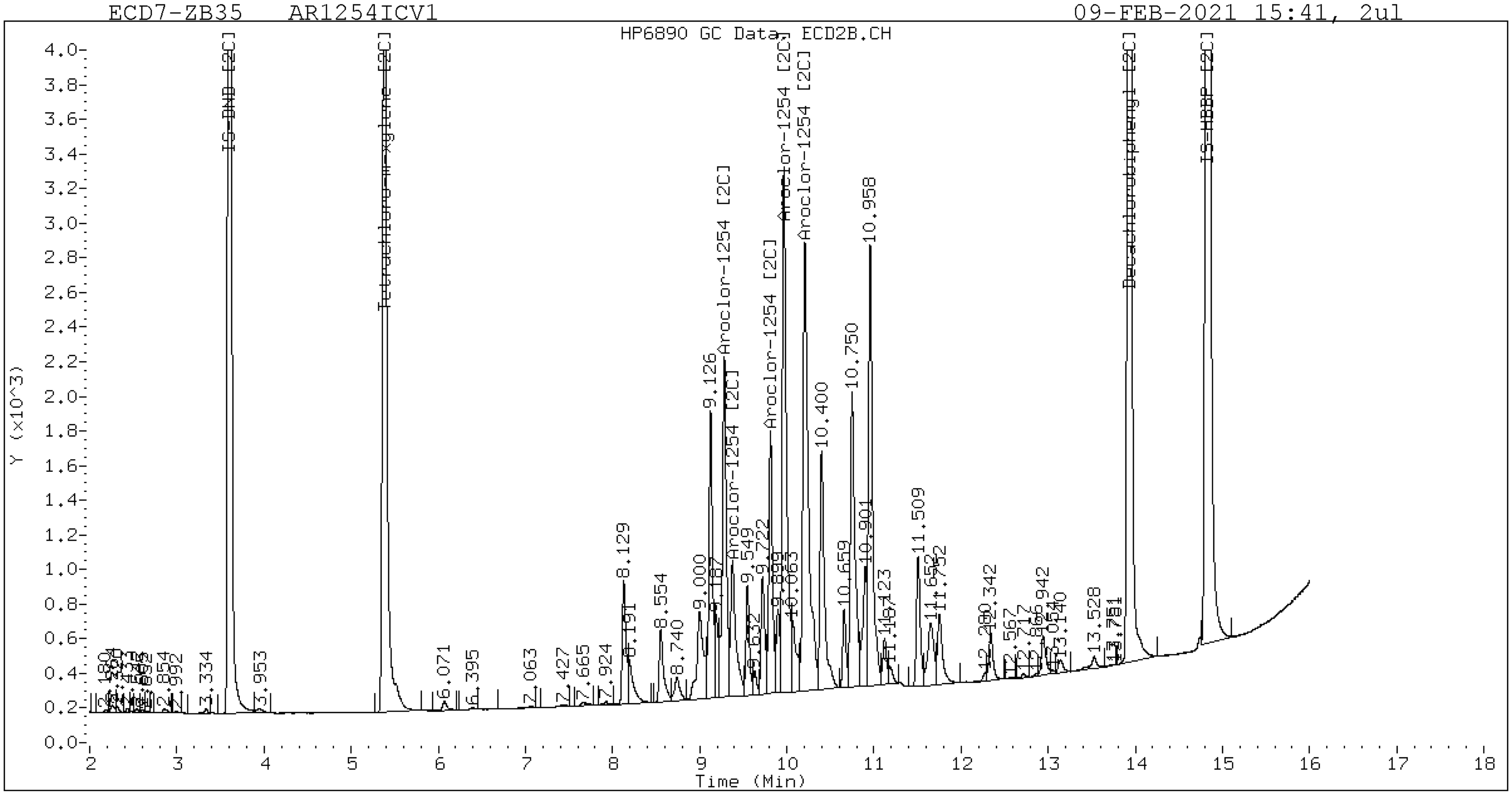
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 09-FEB-2021 15:41, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 09-FEB-2021 15:41, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ECD7
Calibration: EB00020
Lab File ID: 02092103ECD5.D
Calibration Date: 02/06/2021
Sequence: SJB0231
Injection Date: 02/09/21
Lab Sample ID: SJB0231-ICV2
Injection Time: 16:01
Sequence Name: AR1660ICV2

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1016	A	250.00	238	0.1171267	0.1114200		-4.9	+/-20
Aroclor 1016 [2C]	A	250.00	282	0.0418998	0.0475684		12.8	+/-20
Aroclor 1260	A	250.00	225	0.0369380	0.0336082		-9.8	+/-20
Aroclor 1260 [2C]	A	250.00	234	0.0863539	0.0812640		-6.4	+/-20
Decachlorobiphenyl	A	40.000	33.9	0.8591483	0.7274182		-15.3	+/-20
Tetrachlorometaxylene	A	40.000	42.1	1.2618800	1.3290240		5.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.5	1.3997330	1.4158870		1.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	46.6	0.8457522	0.9856744		16.5	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092103ECD5.D
Data file 2: /210209.b/210209.b/02092103ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 09-FEB-2021 16:01
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.994	0.004	160283	5.383	0.002	342614	42.1	46.6	10.1	Tetrachloro-m-xylene
13.190	0.004	779888	13.932	0.005	618497	33.9	40.5	17.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	241204	45.5
Hexabromobiphenyl	1343188	2144263	59.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	695187	-17.0
Hexabromobiphenyl	850693	873653	2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.612	0.003	50051	240.2	1	7.060	0.004	85376	283.2
Aroclor-1016	2	6.986	0.003	162228	239.1	2	7.663	0.007	196563	287.7
Aroclor-1016	3	7.138	0.004	74962	232.2	3	7.873	0.005	83668	278.4
Aroclor-1016	4	7.245	0.002	48696	240.1	4	8.128	0.004	47754	279.0
	Total Col1Ave (4 peaks):				237.9	Total Col2Ave (4 peaks):			282.1	RPD = 17
	Corrected Ave (3 peaks):				237.1	Corrected Ave (3 peaks):			280.2	RPD = 17
			CalAmt %D:		-4.8			CalAmt %D:	12.8	
Aroclor-1260	1	10.390	0.004	153071	211.0	1	11.031	0.006	139733	228.3
Aroclor-1260	2	10.710	0.004	164502	226.3	2	11.495	0.005	132399	232.7
Aroclor-1260	3	11.061	0.003	481582	231.1	3	11.749	0.007	373623	237.3
Aroclor-1260	4	11.465	0.004	225794	234.2	4	12.339	0.008	241702	237.7
Aroclor-1260	5	11.568	0.003	101065	224.8	NS	---			----
	Total Col1Ave (5 peaks):				225.5	Total Col2Ave (4 peaks):			234.0	RPD = 4
	Corrected Ave (4 peaks):				223.3	Corrected Ave (3 peaks):			232.8	RPD = 4
			CalAmt %D:		-9.8			CalAmt %D:	-6.4	

Total PCB Area Col1 (5.090 - 13.086) = 4424007 Col1 Total PCB = 0.5 ppm*

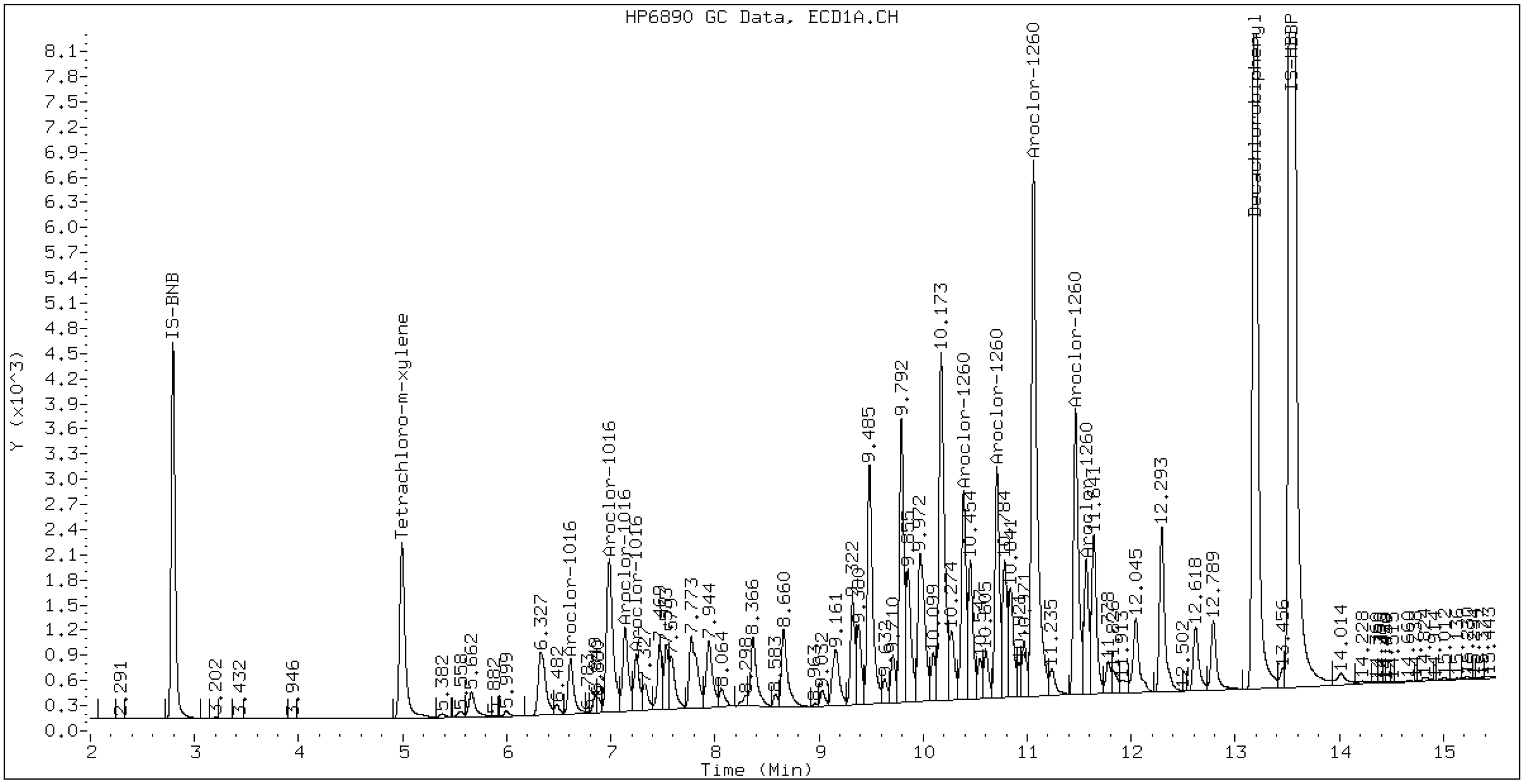
Total PCB Area Col2 (5.090 - 13.086) = 3656739 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

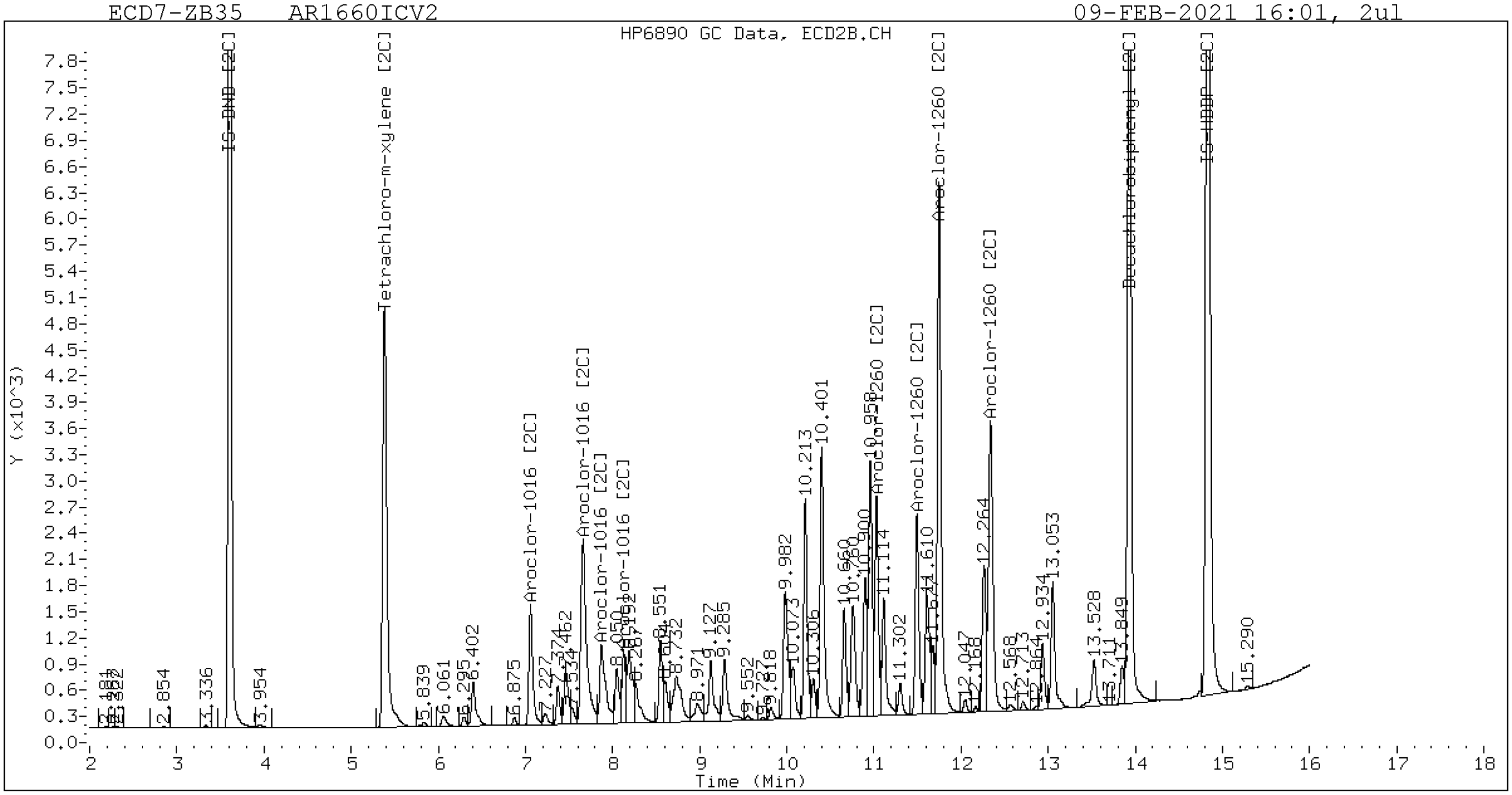
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 09-FEB-2021 16:01, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 09-FEB-2021 16:01, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	EB00020
Lab File ID:	02112114ECD7.D	Calibration Date:	02/06/2021
Sequence:	SJB0228	Injection Date:	02/11/21
Lab Sample ID:	SJB0228-CCV1	Injection Time:	23:25
Sequence Name:	AR1248CCV1		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	231	0.1451479	0.1257746		-7.7	+/-20
Aroclor 1248 [2C]	A	250.00	245	0.0390817	0.0379361		-2.1	+/-20
Decachlorobiphenyl	A	40.000	35.5	0.8591483	0.7630314		-11.3	+/-20
Tetrachlorometaxylene	A	40.000	41.5	1.2618800	1.3097340		3.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.6	1.3997330	1.3845560		-1.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	46.0	0.8457522	0.9728886		15.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210211.b/02112114ECD7.D
Data file 2: /210211.b/210211.b/02112114ECD7.D
Method: \\target\share\chem4\ecd7.i\210211.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 11-FEB-2021 23:25
Report Date: 02/15/2021 16:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.987	0.001	137547	5.378	-0.001	316145	41.5	46.0	10.3	Tetrachloro-m-xylene
13.186	0.000	647547	13.927	-0.005	548177	35.5	39.6	10.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	210038	26.7
Hexabromobiphenyl	1343188	1697301	26.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	649910	-22.4
Hexabromobiphenyl	850693	791845	-6.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

			ZB5 Col				ZB35 Col		
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	7.465	0.000	54663	243.1	1	8.122	-0.004	52366	247.8
Aroclor-1248	2	7.935	0.000	80222	236.4	2	8.544	-0.005	68300	261.4
Aroclor-1248	3	8.348	0.000	127021	181.4	3	8.982	-0.008	90297	222.6
Aroclor-1248	4	8.582	0.000	68312	262.9	4	9.417	-0.010	97225	248.2

Total Col1Ave (4 peaks): 230.9 Total Col2Ave (4 peaks): 245.0 RPD = 6
Corrected Ave (3 peaks): 220.3 Corrected Ave (3 peaks): 239.5 RPD = 8

CalAmt %D: -7.6 CalAmt %D: -2.0

Total PCB Area Col1 (5.086 - 13.086) = 1376852 Col1 Total PCB = 0.2 ppm*

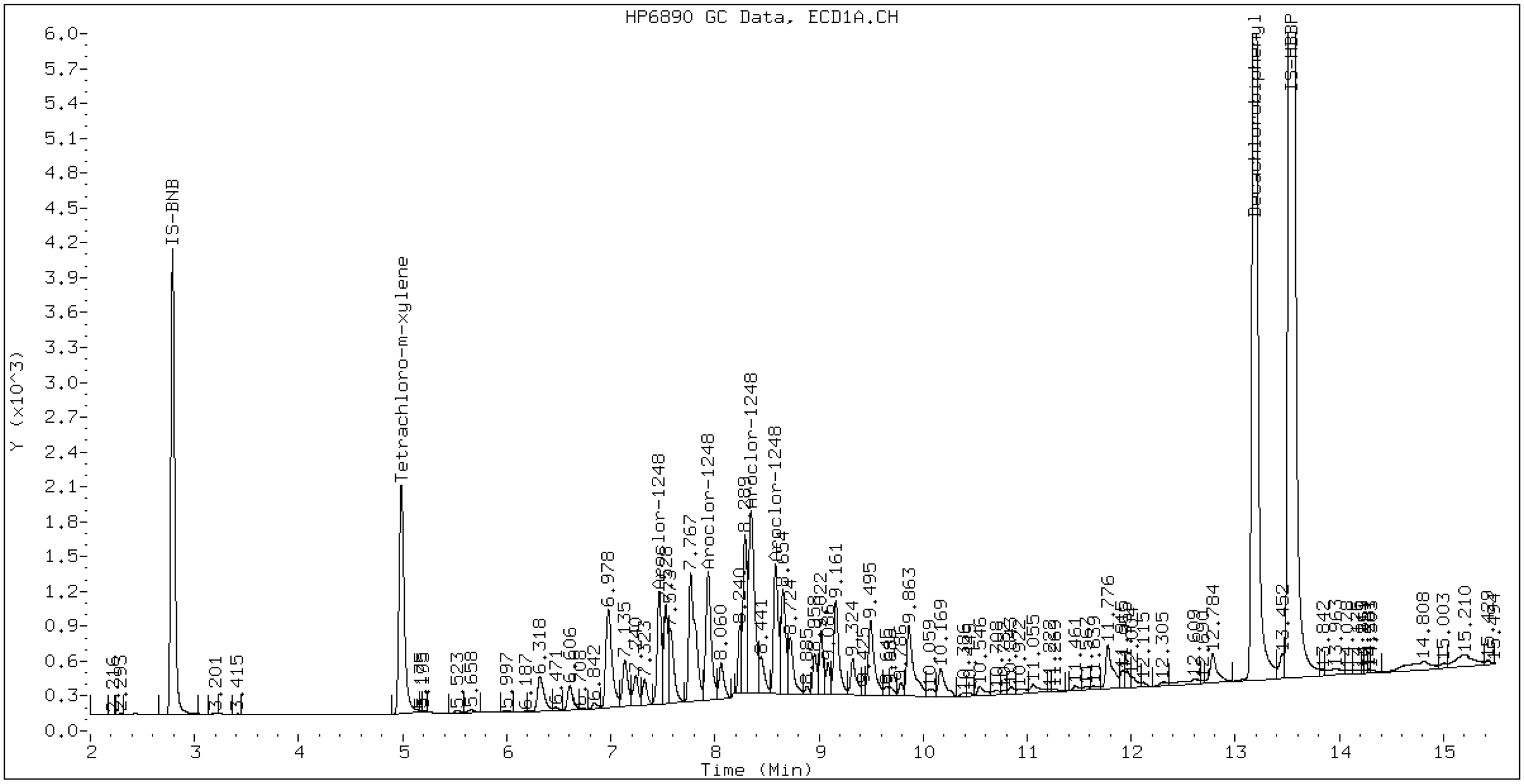
Total PCB Area Col2 (5.086 - 13.086) = 1489286 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

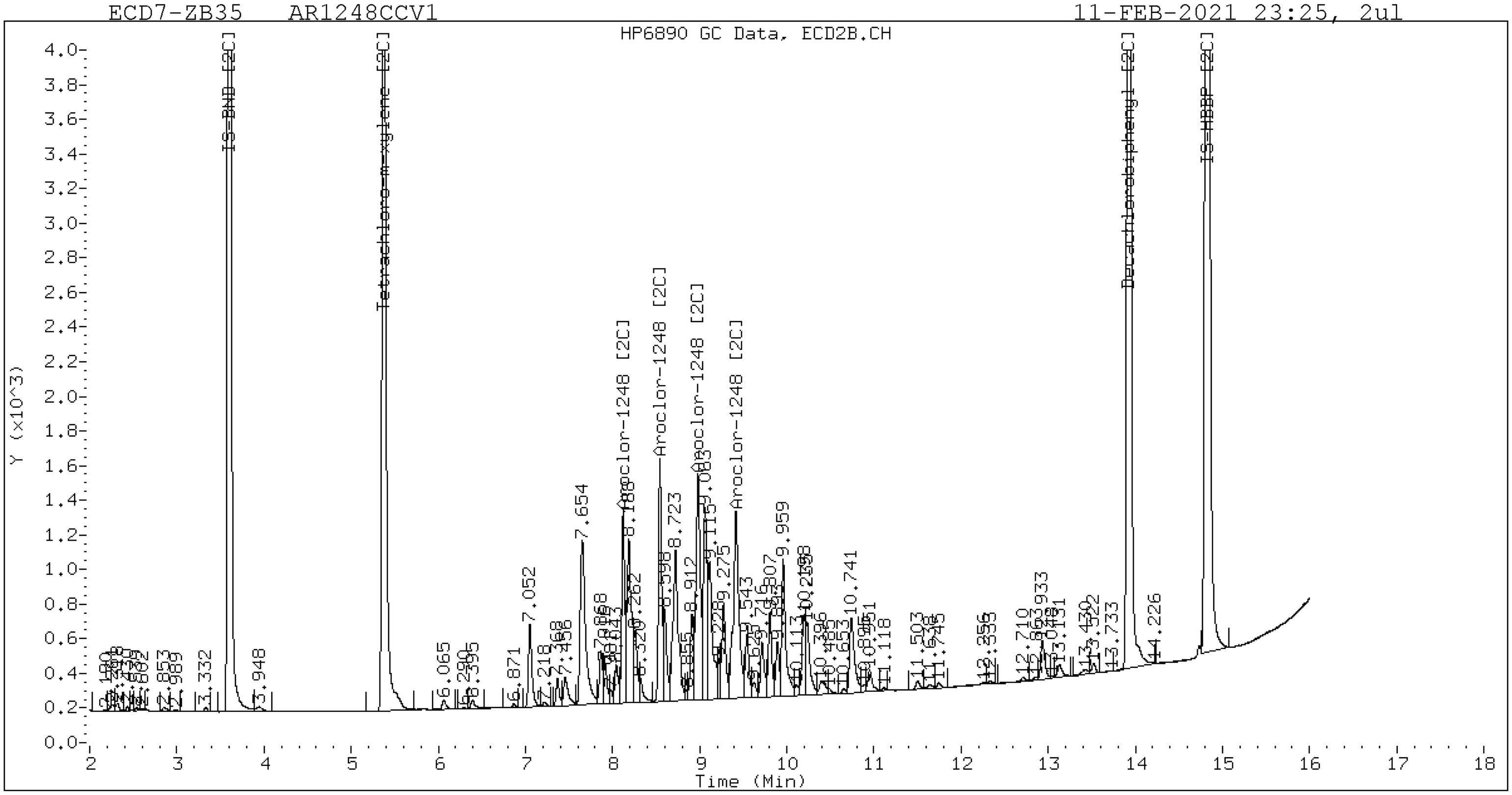
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 11-FEB-2021 23:25, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 11-FEB-2021 23:25, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ECD7
Calibration: EB00020
Lab File ID: 02112115ECD7.D
Calibration Date: 02/06/2021
Sequence: SJB0228
Injection Date: 02/11/21
Lab Sample ID: SJB0228-CCV2
Injection Time: 23:46
Sequence Name: AR1660CCV2

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	239	0.1171267	0.1125844		-4.6	+/-20
Aroclor 1016 [2C]	A	250.00	265	0.0418998	0.0456265		5.9	+/-20
Aroclor 1260	A	250.00	235	0.0369380	0.0353559		-5.8	+/-20
Aroclor 1260 [2C]	A	250.00	203	0.0863539	0.0704703		-18.8	+/-20
Decachlorobiphenyl	A	40.000	35.5	0.8591483	0.7619616		-11.3	+/-20
Tetrachlorometaxylene	A	40.000	43.2	1.2618800	1.3630810		8.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.3	1.3997330	1.3403210		-4.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	45.6	0.8457522	0.9650706		14.0	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210211.b/02112115ECD7.D
Data file 2: /210211.b/210211.b/02112115ECD7.D
Method: \\target\share\chem4\ecd7.i\210211.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 11-FEB-2021 23:46
Report Date: 02/15/2021 16:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.986	0.000	138701	5.378	-0.001	300633	43.2	45.6	5.5	Tetrachloro-m-xylene
13.186	0.000	633725	13.929	-0.003	517362	35.5	38.3	7.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	203511	22.8
Hexabromobiphenyl	1343188	1663404	23.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	623028	-25.6
Hexabromobiphenyl	850693	771997	-9.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.608	0.000	42179	239.9	1	7.053	-0.003	73818	273.2
Aroclor-1016	2	6.983	0.000	141366	246.9	2	7.656	-0.001	176144	287.7
Aroclor-1016	3	7.130	0.000	61856	227.1	3	7.866	-0.003	67364	250.1
Aroclor-1016	4	7.240	0.000	41001	239.6	4	8.122	-0.003	38006	247.8

Total Col1Ave (4 peaks): 238.4 Total Col2Ave (4 peaks): 264.7 RPD = 10
Corrected Ave (3 peaks): 235.5 Corrected Ave (3 peaks): 257.0 RPD = 9

CalAmt %D: -4.6 CalAmt %D: 5.9

Aroclor-1260	1	10.385	0.000	119922	213.1	1	11.025	-0.005	102491	189.5
Aroclor-1260	2	10.706	0.000	139158	246.8	2	11.489	-0.005	105280	209.4
Aroclor-1260	3	11.057	0.000	405384	250.7	3	11.740	-0.007	285619	205.3
Aroclor-1260	4	11.459	0.000	172289	230.4	4	12.328	-0.008	186646	207.7
Aroclor-1260	5	11.564	0.000	82170	235.6	NS	---			----

Total Col1Ave (5 peaks): 235.3 Total Col2Ave (4 peaks): 203.0 RPD = 15
Corrected Ave (4 peaks): 231.5 Corrected Ave (3 peaks): 200.8 RPD = 14

CalAmt %D: -5.9 CalAmt %D: -18.8

Total PCB Area Col1 (5.086 - 13.086) = 3705197 Col1 Total PCB = 0.5 ppm*

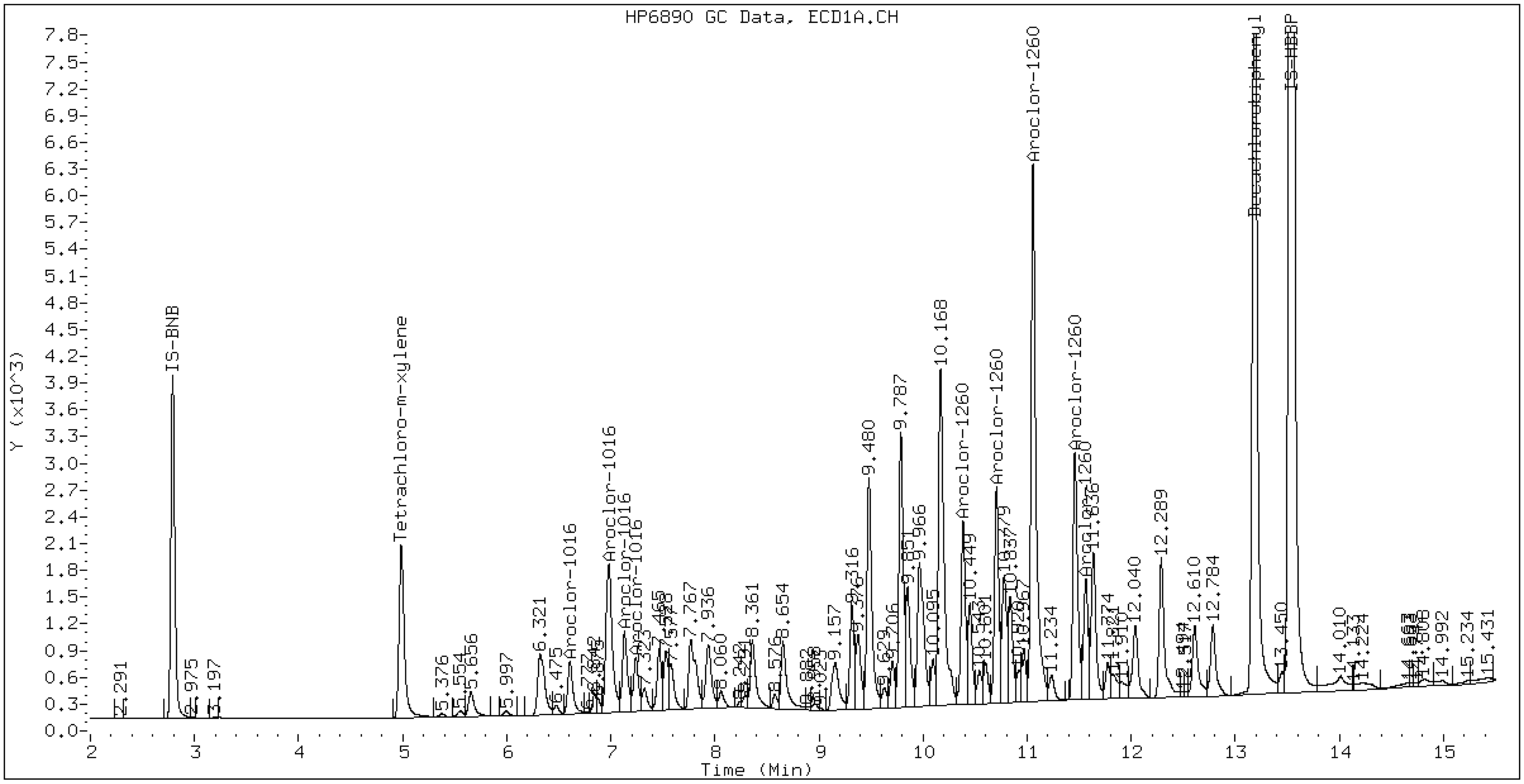
Total PCB Area Col2 (5.086 - 13.086) = 2993259 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

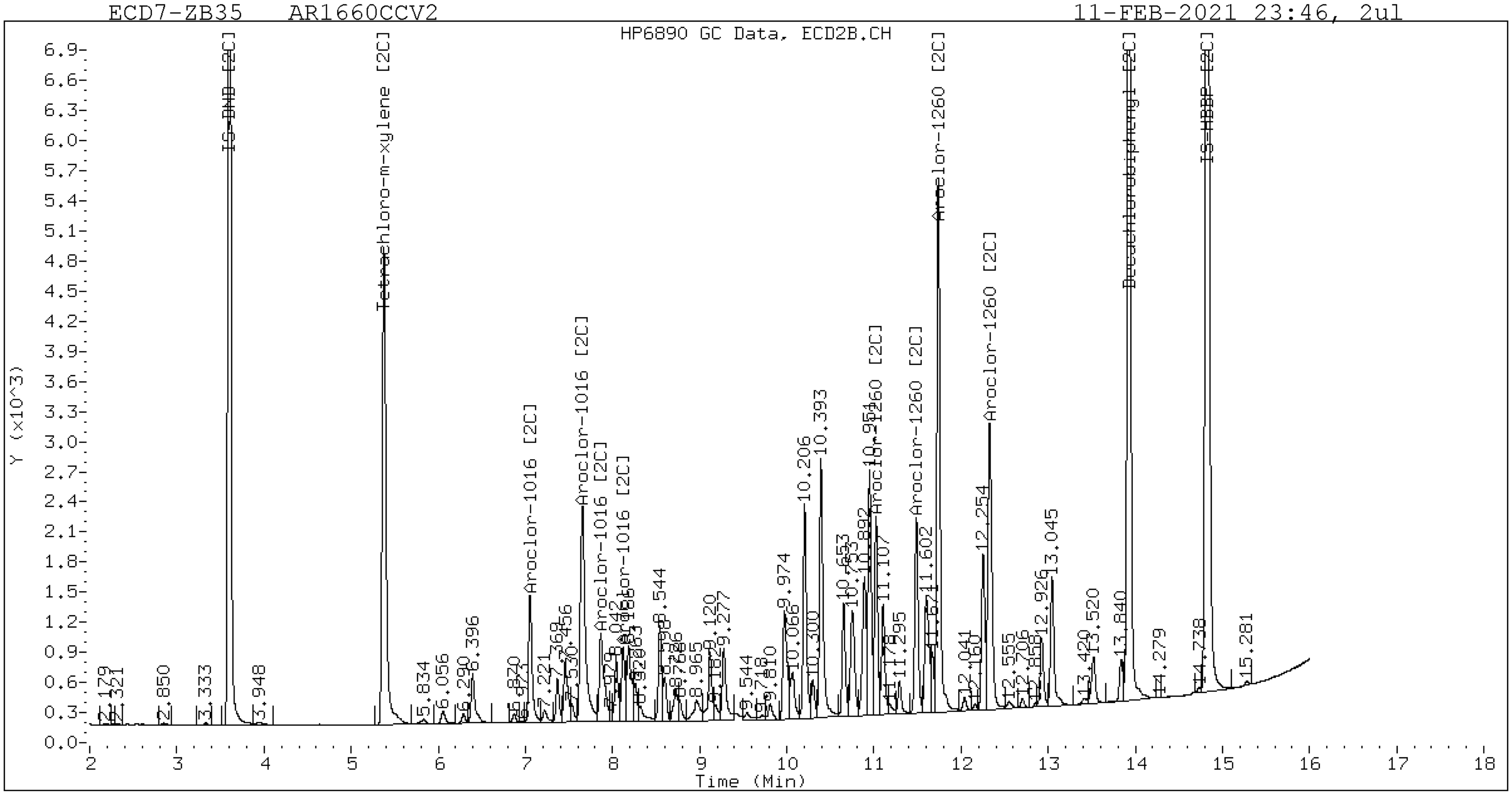
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 11-FEB-2021 23:46, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 11-FEB-2021 23:46, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	EB00020
Lab File ID:	02092114ECD5.D	Calibration Date:	02/06/2021
Sequence:	SJB0231	Injection Date:	02/09/21
Lab Sample ID:	SJB0231-CCV1	Injection Time:	21:27
Sequence Name:	AR1248CCV1		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	236	0.1451479	0.1288022		-5.5	+/-20
Aroclor 1248 [2C]	A	250.00	249	0.0390817	0.0386887		-0.3	+/-20
Decachlorobiphenyl	A	40.000	36.1	0.8591483	0.7753761		-9.8	+/-20
Tetrachlorometaxylene	A	40.000	42.3	1.2618800	1.3346430		5.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.7	1.3997330	1.4238410		1.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	46.2	0.8457522	0.9769290		15.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092114ECD5.D
Data file 2: /210209.b/210209.b/02092114ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 09-FEB-2021 21:27
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.990	-0.000	142632	5.381	-0.001	340937	42.3	46.2	8.8	Tetrachloro-m-xylene
13.187	0.001	612784	13.930	0.003	522453	36.1	40.7	12.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	213738	29.0
Hexabromobiphenyl	1343188	1580611	17.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	697977	-16.6
Hexabromobiphenyl	850693	733864	-13.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	7.468	0.000	57809	252.6	1	8.125	0.002	58101	256.1
Aroclor-1248	2	7.938	0.000	83335	241.3	2	8.547	0.001	72212	257.3
Aroclor-1248	3	8.351	0.000	133023	186.7	3	8.985	0.003	102991	236.4
Aroclor-1248	4	8.587	0.000	69957	264.5	4	9.421	0.002	104244	247.8

Total Col1Ave (4 peaks): 236.3 Total Col2Ave (4 peaks): 249.4 RPD = 5
Corrected Ave (3 peaks): 226.9 Corrected Ave (3 peaks): 246.7 RPD = 8

CalAmt %D: -5.5 CalAmt %D: -0.2

Total PCB Area Col1 (5.090 - 13.086) = 1372819 Col1 Total PCB = 0.2 ppm*

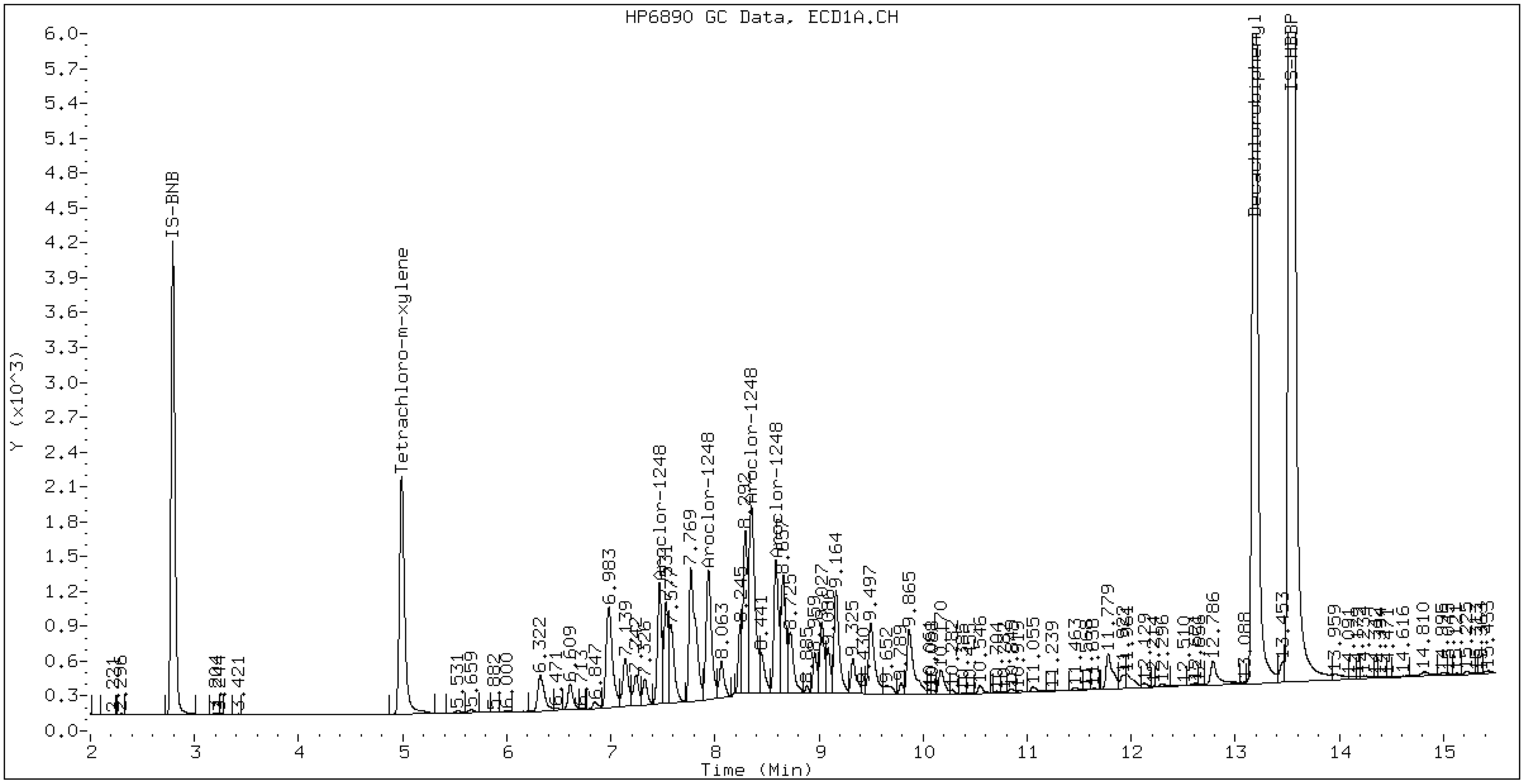
Total PCB Area Col2 (5.090 - 13.086) = 1633977 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

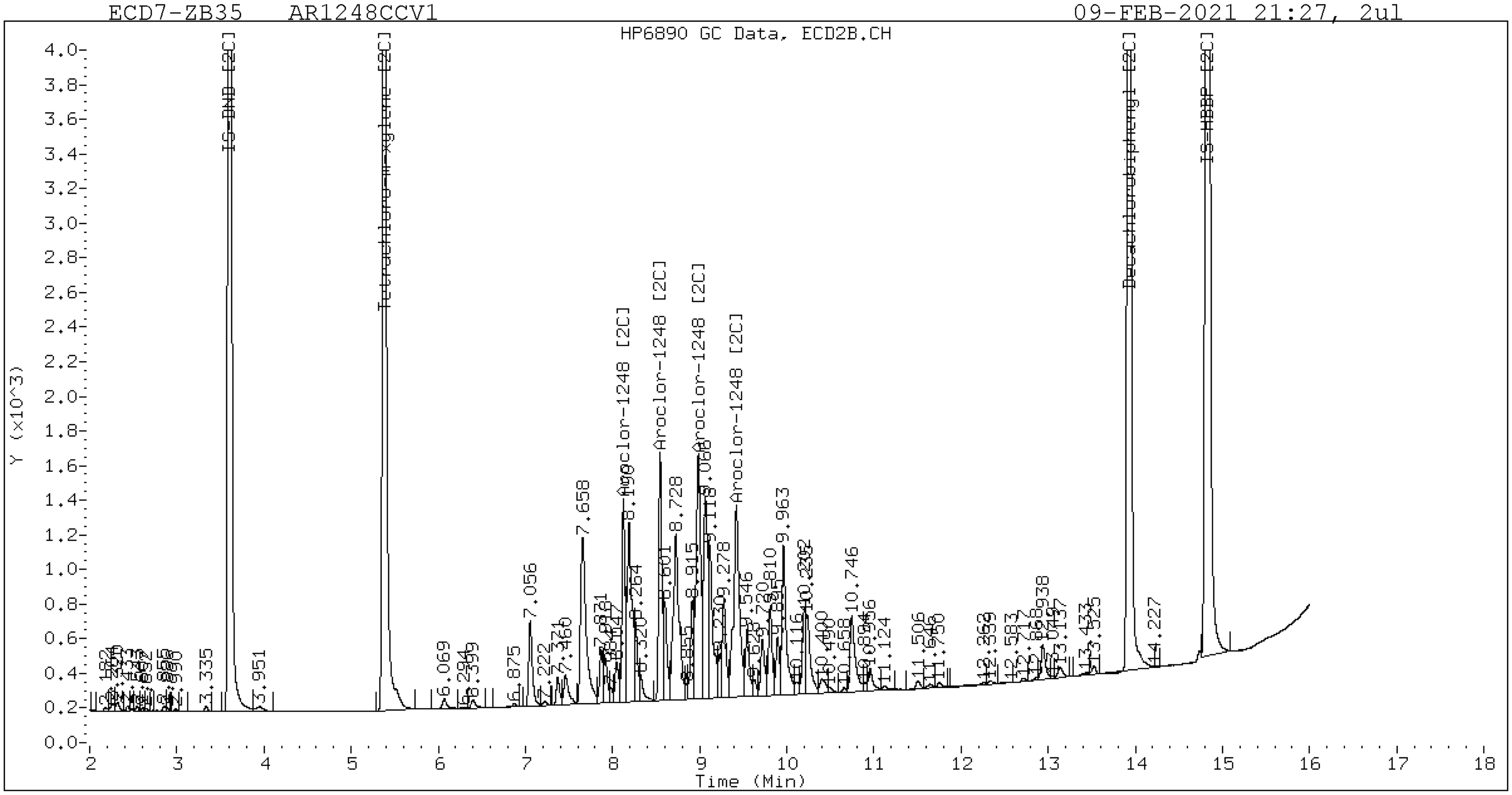
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 09-FEB-2021 21:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 09-FEB-2021 21:27, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	EB00020
Lab File ID:	02092115ECD5.D	Calibration Date:	02/06/2021
Sequence:	SJB0231	Injection Date:	02/09/21
Lab Sample ID:	SJB0231-CCV2	Injection Time:	21:47
Sequence Name:	AR1660CCV2		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	250	0.1171267	0.1182341		0.1	+/-20
Aroclor 1016 [2C]	A	250.00	271	0.0418998	0.0461914		8.3	+/-20
Aroclor 1260	A	250.00	247	0.0369380	0.0370556		-1.0	+/-20
Aroclor 1260 [2C]	A	250.00	242	0.0863539	0.0839855		-3.3	+/-20
Decachlorobiphenyl	A	40.000	35.1	0.8591483	0.7533320		-12.3	+/-20
Tetrachlorometaxylene	A	40.000	43.2	1.2618800	1.3614330		8.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.6	1.3997330	1.4217430		1.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	46.0	0.8457522	0.9726066		15.0	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092115ECD5.D
Data file 2: /210209.b/210209.b/02092115ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 09-FEB-2021 21:47
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.989	-0.000	139990	5.382	0.000	327996	43.2	46.0	6.4	Tetrachloro-m-xylene
13.188	0.002	625304	13.929	0.002	557412	35.1	40.6	14.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	205651	24.1
Hexabromobiphenyl	1343188	1660102	23.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	674468	-19.5
Hexabromobiphenyl	850693	784125	-7.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.610	0.001	44391	249.8	1	7.057	0.001	81802	279.6
Aroclor-1016	2	6.984	0.001	149914	259.1	2	7.660	0.003	190058	286.7
Aroclor-1016	3	7.133	-0.001	66273	240.8	3	7.870	0.002	74144	254.3
Aroclor-1016	4	7.243	-0.000	43359	250.8	4	8.124	0.001	43429	261.5

Total Col1Ave (4 peaks): 250.1 Total Col2Ave (4 peaks): 270.5 RPD = 8
Corrected Ave (3 peaks): 247.1 Corrected Ave (3 peaks): 265.2 RPD = 7

CalAmt %D: 0.1 CalAmt %D: 8.2

Aroclor-1260	1	10.386	0.001	130522	232.4	1	11.027	0.002	128545	234.0
Aroclor-1260	2	10.708	0.001	142579	253.4	2	11.491	0.002	124569	244.0
Aroclor-1260	3	11.059	0.001	413389	256.2	3	11.745	0.003	348185	246.4
Aroclor-1260	4	11.462	0.001	191265	256.2	4	12.334	0.004	221890	243.1
Aroclor-1260	5	11.566	0.001	83433	239.7	NS	---			----

Total Col1Ave (5 peaks): 247.6 Total Col2Ave (4 peaks): 241.9 RPD = 2
Corrected Ave (4 peaks): 245.4 Corrected Ave (3 peaks): 240.4 RPD = 2

CalAmt %D: -1.0 CalAmt %D: -3.2

Total PCB Area Col1 (5.090 - 13.086) = 3805264 Col1 Total PCB = 0.5 ppm*

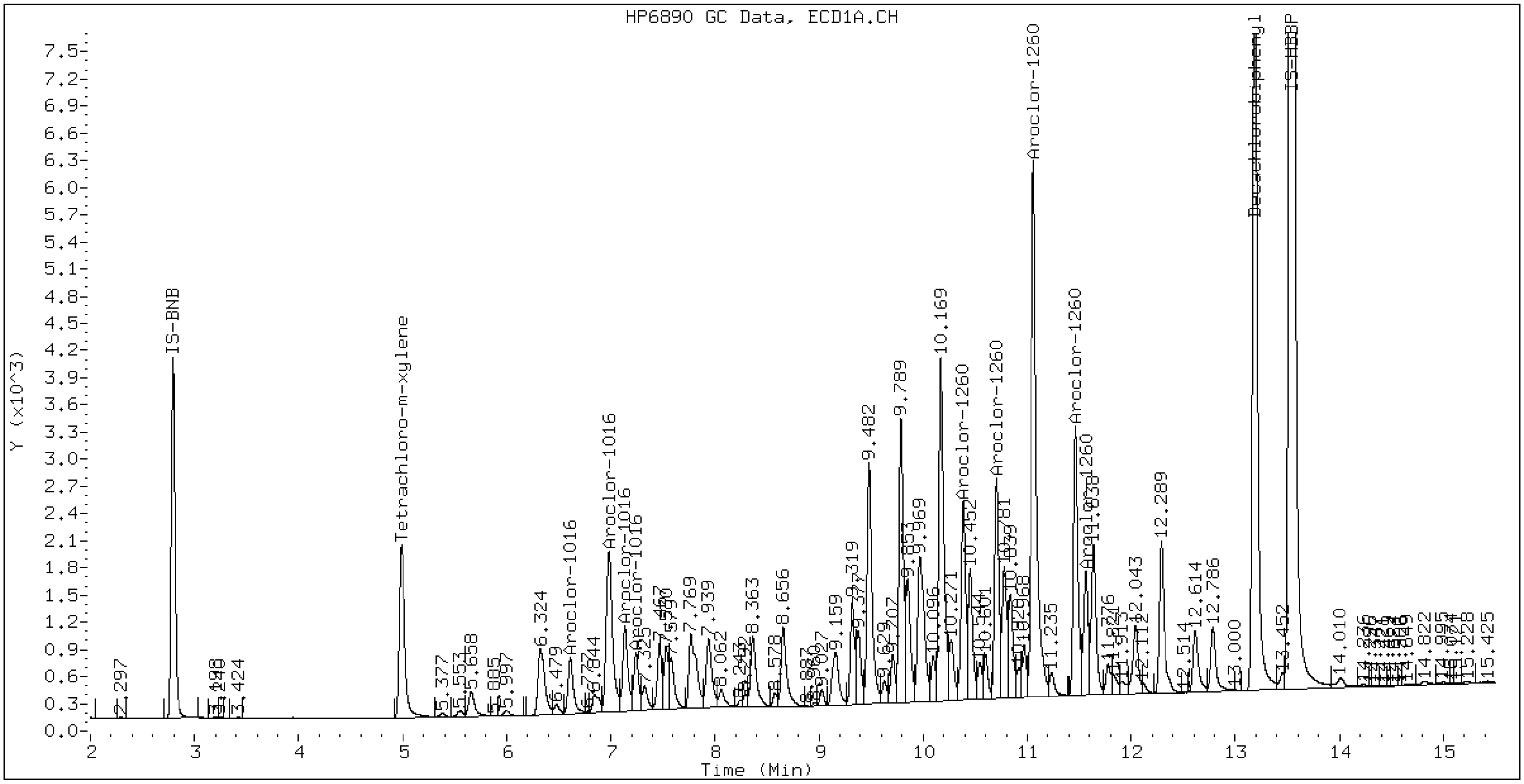
Total PCB Area Col2 (5.090 - 13.086) = 3448137 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

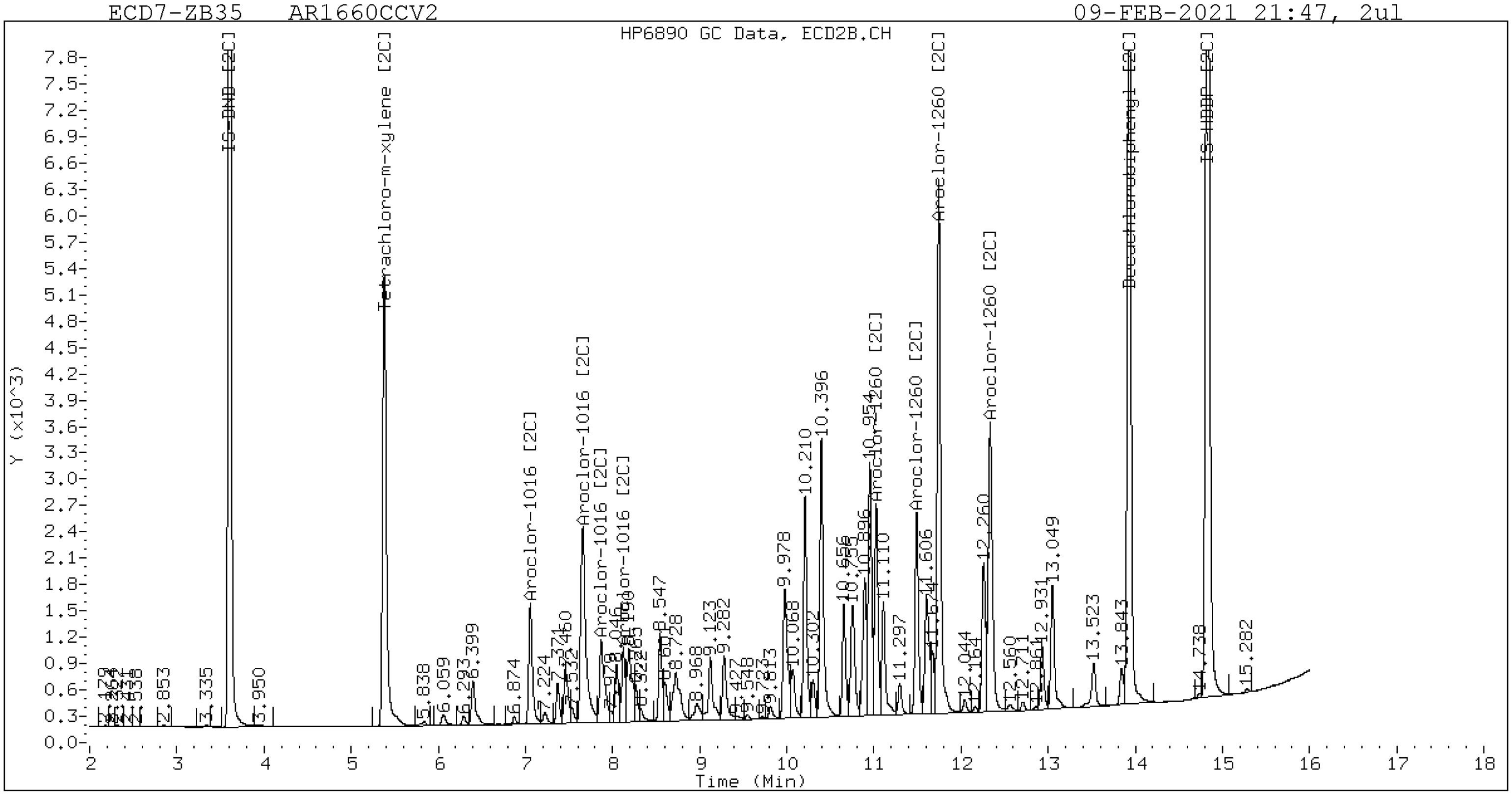
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 09-FEB-2021 21:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 09-FEB-2021 21:47, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	EB00020
Lab File ID:	02092122ECD5.D	Calibration Date:	02/06/2021
Sequence:	SJB0231	Injection Date:	02/10/21
Lab Sample ID:	SJB0231-CCV3	Injection Time:	00:12
Sequence Name:	AR1242CCV3		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1242	A	250.00	238	0.0915166	0.0846000		-4.8	+/-20	
Aroclor 1242 [2C]	A	250.00	200	0.0372524	0.0307322		-20.2	+/-20	*
Decachlorobiphenyl	A	40.000	37.6	0.8591483	0.8066178		-6.0	+/-20	
Tetrachlorometaxylene	A	40.000	43.5	1.2618800	1.3732040		8.8	+/-20	
Decachlorobiphenyl [2C]	A	40.000	36.7	1.3997330	1.2856250		-8.3	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	46.9	0.8457522	0.9909820		17.3	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092122ECD5.D
Data file 2: /210209.b/210209.b/02092122ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 10-FEB-2021 00:12
Report Date: 02/15/2021 19:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.991	0.002	139304	5.381	-0.001	335988	43.5	46.9	7.4	Tetrachloro-m-xylene
13.185	-0.001	335530	13.927	0.000	248303	37.6	36.7	2.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	202889	22.4
Hexabromobiphenyl	1343188	831943	-38.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	678091	-19.0
Hexabromobiphenyl	850693	386276	-54.6 <-

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.610	0.000	31060	219.0	1	7.056	0.000	56177	231.9
Aroclor-1242	2	6.983	0.000	101910	216.8	2	7.657	0.000	126294	222.2
Aroclor-1242	3	8.291	0.000	45188	287.8	3	8.982	0.000	40179	175.4
Aroclor-1242	4	8.585	0.000	36397	228.2	4	9.420	0.000	37840	169.4

Total Col1Ave (4 peaks): 237.9 Total Col2Ave (4 peaks): 199.7 RPD = 17
Corrected Ave (3 peaks): 221.3 Corrected Ave (3 peaks): 189.0 RPD = 16

CalAmt %D: -4.8 CalAmt %D: -20.1

Total PCB Area Col1 (5.090 - 13.086) = 795261 Col1 Total PCB = 0.1 ppm*

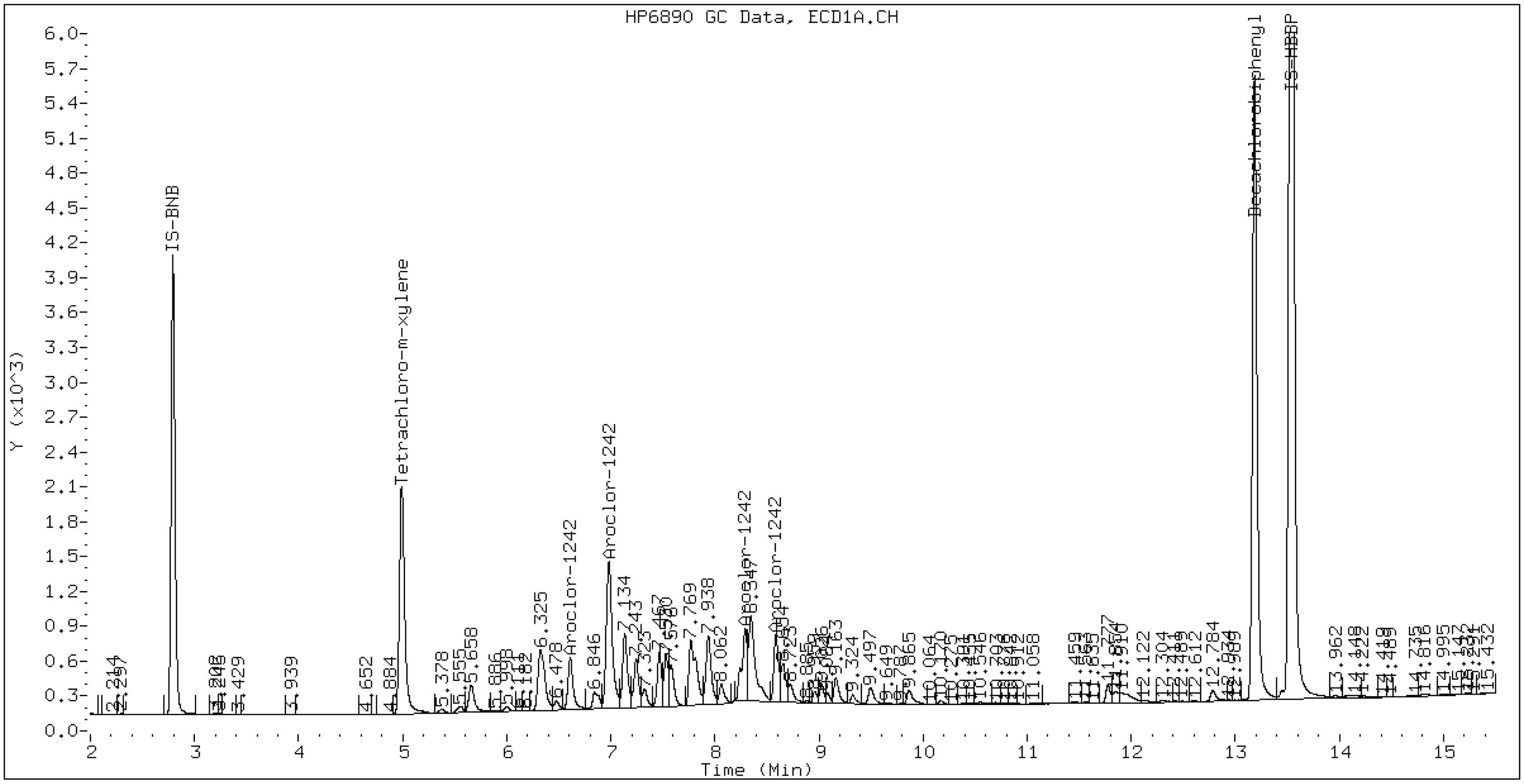
Total PCB Area Col2 (5.090 - 13.086) = 1120469 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

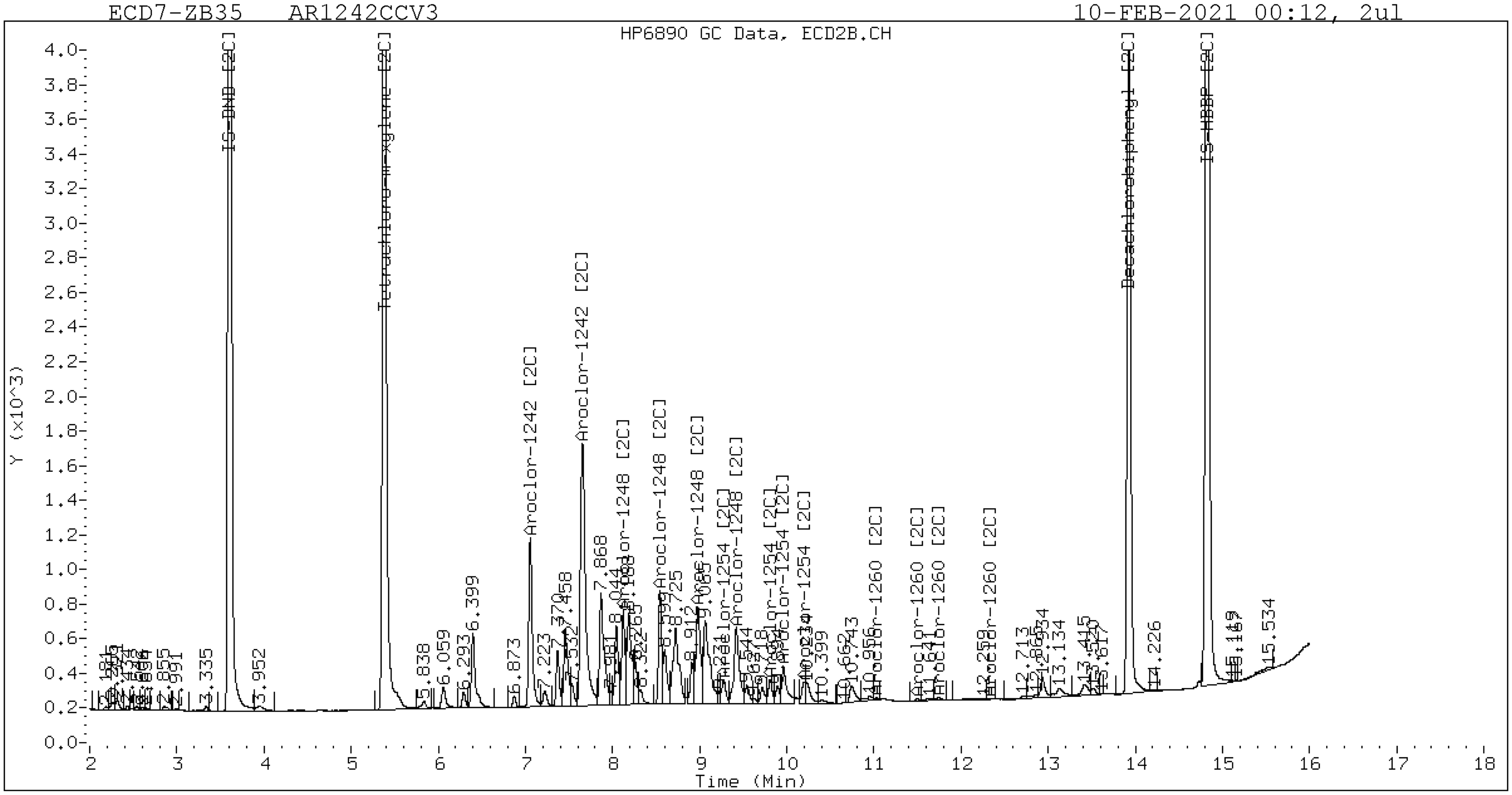
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 10-FEB-2021 00:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3 10-FEB-2021 00:12, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	EB00020
Lab File ID:	02092123ECD5.D	Calibration Date:	02/06/2021
Sequence:	SJB0231	Injection Date:	02/10/21
Lab Sample ID:	SJB0231-CCV4	Injection Time:	00:32
Sequence Name:	AR1660CCV4		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	245	0.1171267	0.1162368		-2.0	+/-20
Aroclor 1016 [2C]	A	250.00	269	0.0418998	0.0461994		7.7	+/-20
Aroclor 1260	A	250.00	275	0.0369380	0.0408872		10.2	+/-20
Aroclor 1260 [2C]	A	250.00	284	0.0863539	0.0973639		13.4	+/-20
Decachlorobiphenyl	A	40.000	34.8	0.8591483	0.7469819		-13.0	+/-20
Tetrachlorometaxylene	A	40.000	43.4	1.2618800	1.3679690		8.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.3	1.3997330	1.3741260		-1.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	45.9	0.8457522	0.9702382		14.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092123ECD5.D
Data file 2: /210209.b/210209.b/02092123ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 10-FEB-2021 00:32
Report Date: 02/15/2021 19:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.991	0.001	141487	5.380	-0.001	331380	43.4	45.9	5.7	Tetrachloro-m-xylene
13.185	-0.001	458992	13.929	0.002	389485	34.8	39.3	12.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	206857	24.8
Hexabromobiphenyl	1343188	1228924	-8.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	683090	-18.4
Hexabromobiphenyl	850693	566884	-33.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.610	0.000	43635	244.1	1	7.056	-0.000	82918	279.9
Aroclor-1016	2	6.983	-0.000	149405	256.7	2	7.658	0.001	193881	288.8
Aroclor-1016	3	7.134	-0.000	64902	234.4	3	7.868	0.000	74761	253.2
Aroclor-1016	4	7.243	-0.001	42613	245.0	4	8.123	-0.000	42919	255.2

Total Col1Ave (4 peaks): 245.1 Total Col2Ave (4 peaks): 269.3 RPD = 9
Corrected Ave (3 peaks): 241.2 Corrected Ave (3 peaks): 262.7 RPD = 9

CalAmt %D: -2.0 CalAmt %D: 7.7

Aroclor-1260	1	10.384	-0.001	120585	290.0	1	11.026	0.000	108524	273.3
Aroclor-1260	2	10.706	-0.001	122342	293.7	2	11.488	-0.001	112711	305.3
Aroclor-1260	3	11.057	-0.001	327489	274.2	3	11.742	0.001	288723	282.6
Aroclor-1260	4	11.461	-0.001	151905	274.9	4	12.330	-0.001	179967	272.8
Aroclor-1260	5	11.565	-0.000	62793	243.7	NS	---			----

Total Col1Ave (5 peaks): 275.3 Total Col2Ave (4 peaks): 283.5 RPD = 3
Corrected Ave (4 peaks): 270.7 Corrected Ave (3 peaks): 276.2 RPD = 2

CalAmt %D: 10.1 CalAmt %D: 13.4

Total PCB Area Col1 (5.090 - 13.086) = 3350220 Col1 Total PCB = 0.4 ppm*

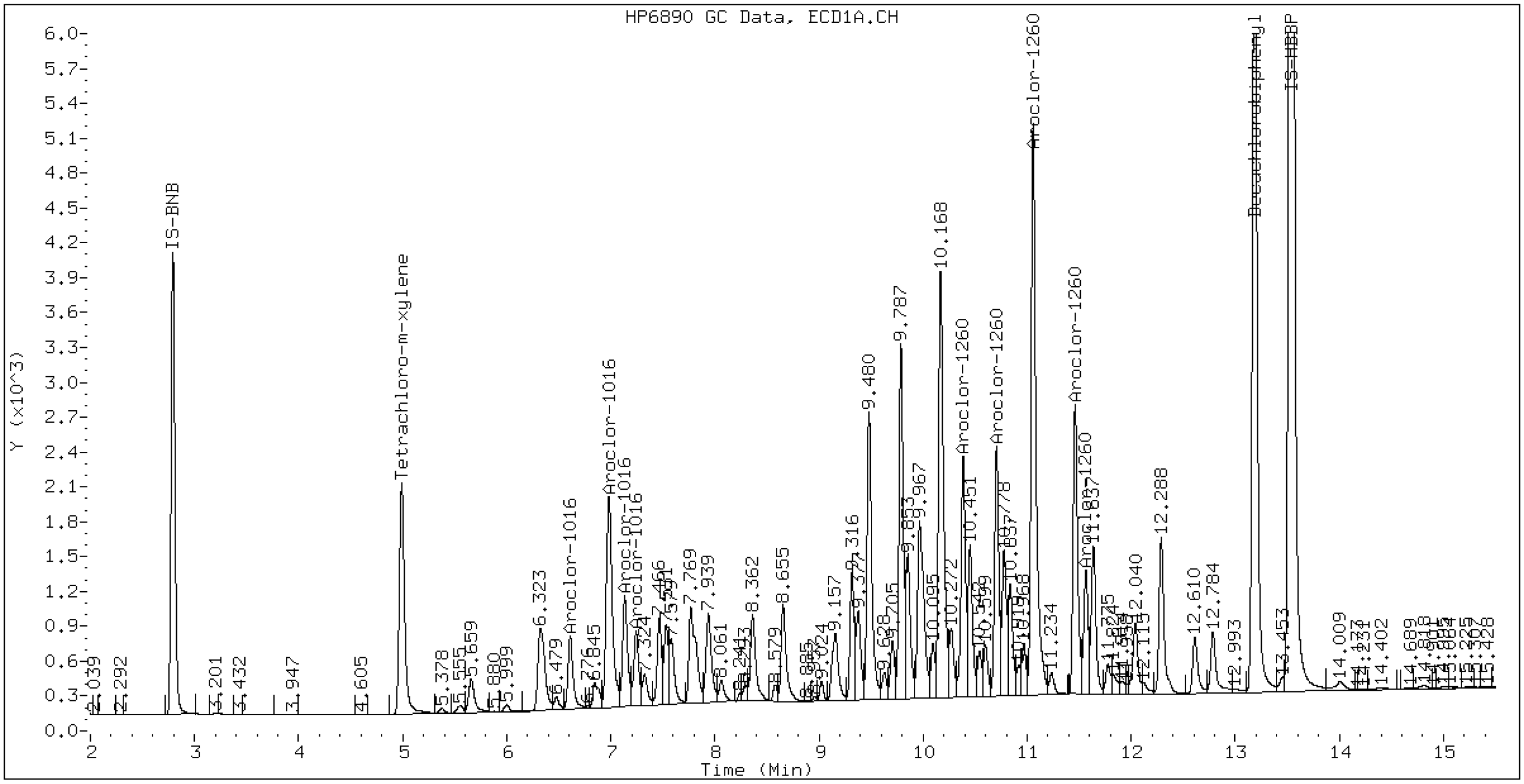
Total PCB Area Col2 (5.090 - 13.086) = 3136295 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

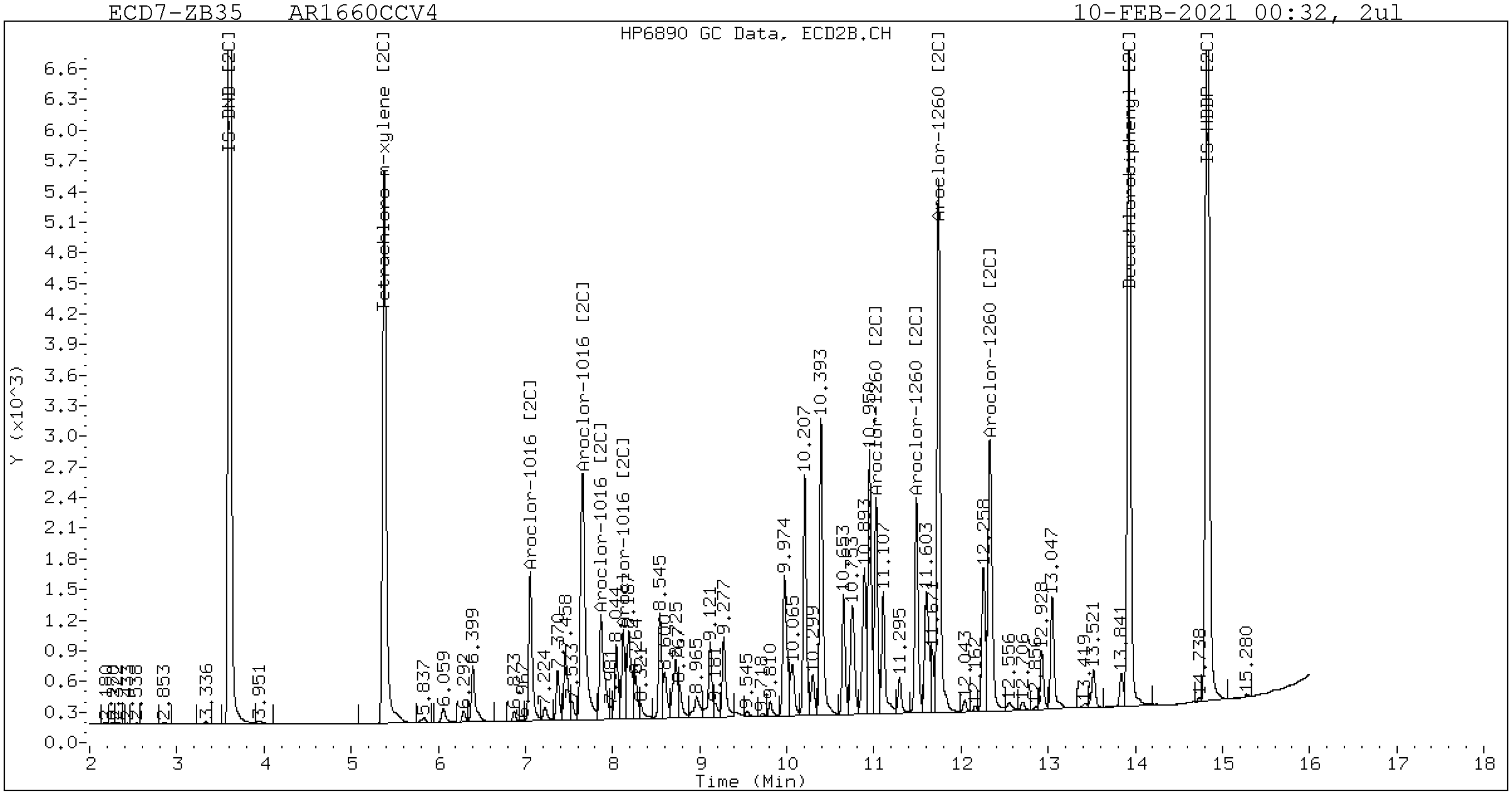
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 10-FEB-2021 00:32, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4 10-FEB-2021 00:32, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument ID:	ECD7	Calibration:	EB00020
Lab File ID:	02092130ECD5.D	Calibration Date:	02/06/2021
Sequence:	SJB0231	Injection Date:	02/10/21
Lab Sample ID:	SJB0231-CCV5	Injection Time:	02:56
Sequence Name:	AR1254CCV5		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	226	0.2160479	0.1950524		-9.7	+/-20
Aroclor 1254 [2C]	A	250.00	241	0.0665641	0.0623311		-3.6	+/-20
Decachlorobiphenyl	A	40.000	35.8	0.8591483	0.7680589		-10.5	+/-20
Tetrachlorometaxylene	A	40.000	41.0	1.2618800	1.2922250		2.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.1	1.3997330	1.4042360		0.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	45.5	0.8457522	0.9627342		13.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092130ECD5.D
Data file 2: /210209.b/210209.b/02092130ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 10-FEB-2021 02:56
Report Date: 02/15/2021 19:17
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.989	-0.000	142420	5.382	-0.000	352173	41.0	45.5	10.6	Tetrachloro-m-xylene
13.187	0.001	590062	13.929	0.002	532645	35.8	40.1	11.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	220426	33.0
Hexabromobiphenyl	1343188	1536502	14.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	731610	-12.6
Hexabromobiphenyl	850693	758626	-10.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.656	0.000	153317	235.5	1	9.276	0.000	132412	271.7
Aroclor-1254	2	8.725	0.000	74514	207.2	2	9.370	0.000	64122	239.6
Aroclor-1254	3	9.027	0.000	101673	236.2	3	9.807	0.000	90261	252.5
Aroclor-1254	4	9.161	0.000	200079	214.7	4	9.959	0.000	215502	217.8
Aroclor-1254	5	9.860	0.000	142208	235.8	5	10.199	0.000	210235	223.2

Total Col1Ave (5 peaks): 225.9 Total Col2Ave (5 peaks): 241.0 RPD = 6
Corrected Ave (4 peaks): 223.3 Corrected Ave (4 peaks): 233.3 RPD = 4

CalAmt %D: -9.7 CalAmt %D: -3.6

Total PCB Area Col1 (5.090 - 13.086) = 2190513 Col1 Total PCB = 0.3 ppm*

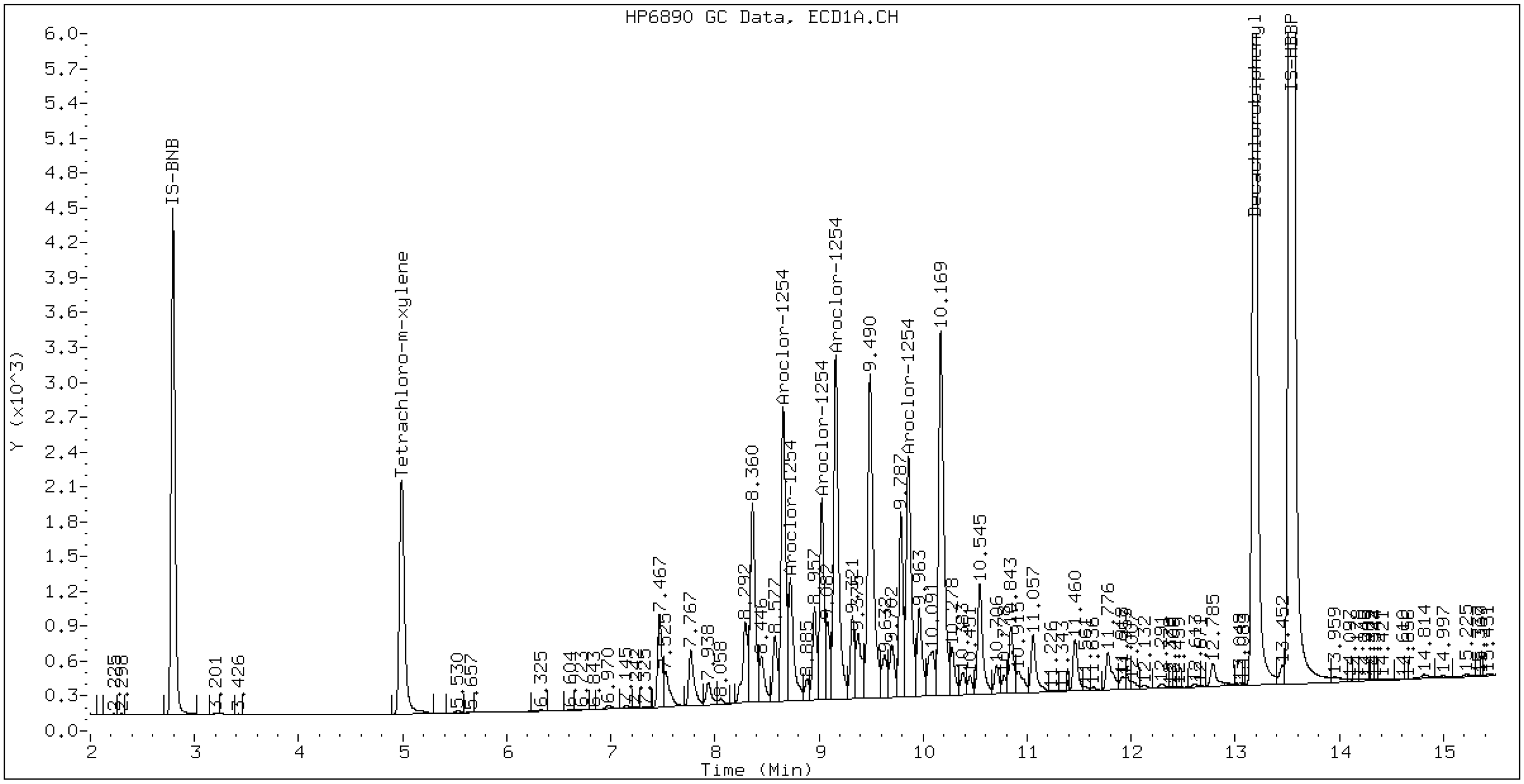
Total PCB Area Col2 (5.090 - 13.086) = 2178045 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

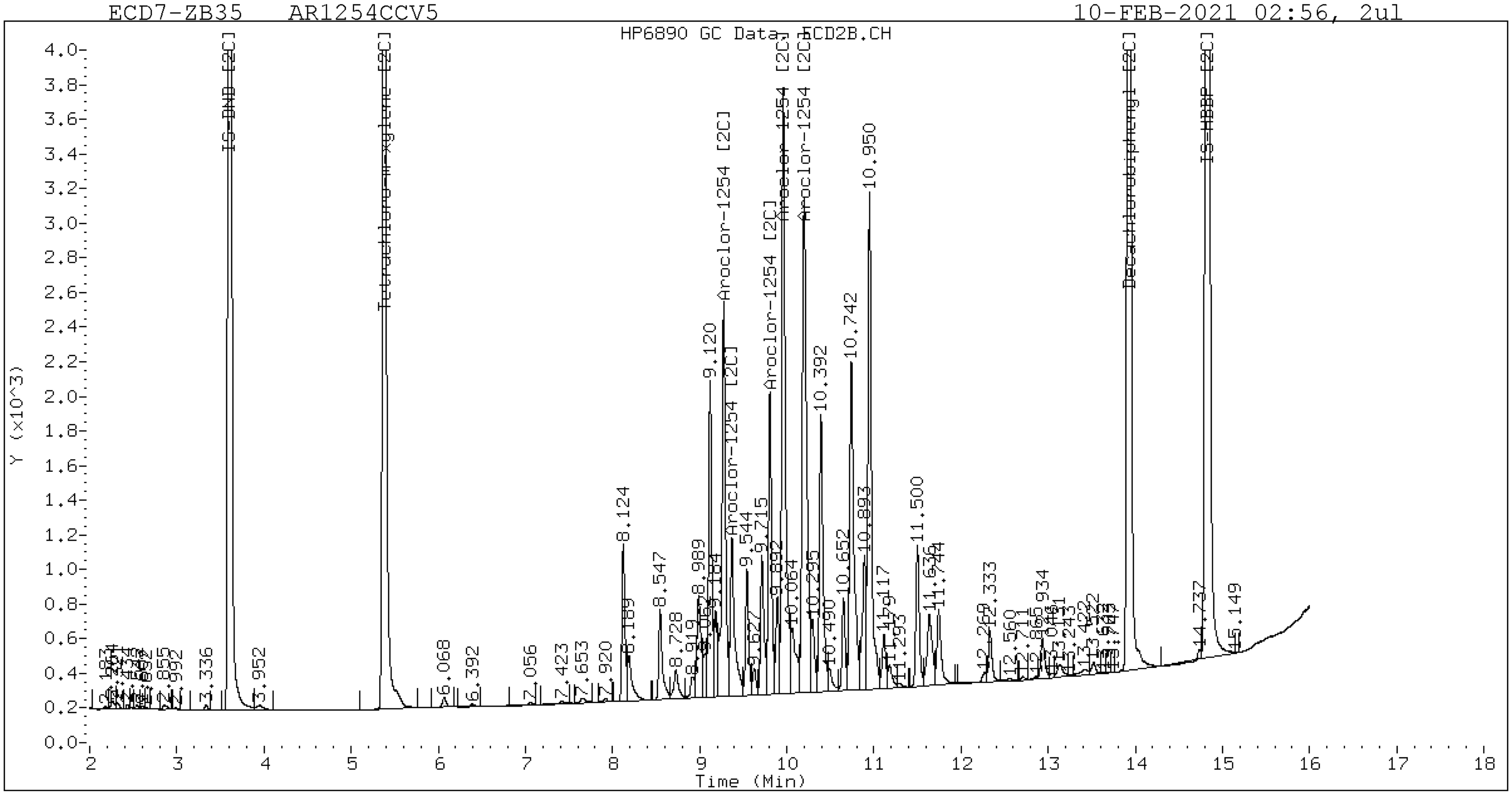
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 10-FEB-2021 02:56, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5 10-FEB-2021 02:56, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ECD7
Calibration: EB00020
Lab File ID: 02092131ECD5.D
Calibration Date: 02/06/2021
Sequence: SJB0231
Injection Date: 02/10/21
Lab Sample ID: SJB0231-CCV6
Injection Time: 03:17
Sequence Name: AR1660CCV6

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	249	0.1171267	0.1178538		-0.4	+/-20
Aroclor 1016 [2C]	A	250.00	273	0.0418998	0.0467460		9.3	+/-20
Aroclor 1260	A	250.00	247	0.0369380	0.0370099		-1.2	+/-20
Aroclor 1260 [2C]	A	250.00	247	0.0863539	0.0853448		-1.3	+/-20
Decachlorobiphenyl	A	40.000	34.3	0.8591483	0.7376607		-14.3	+/-20
Tetrachlorometaxylene	A	40.000	42.9	1.2618800	1.3526360		7.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.2	1.3997330	1.4423880		3.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	46.1	0.8457522	0.9751347		15.3	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /210209.b/02092131ECD5.D
Data file 2: /210209.b/210209.b/02092131ECD5.D
Method: \\target\share\chem4\ecd7.i\210209.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 10-FEB-2021 03:17
Report Date: 02/15/2021 19:17
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.990	0.000	141412	5.382	0.000	347028	42.9	46.1	7.3	Tetrachloro-m-xylene
13.186	0.000	616435	13.927	0.000	586452	34.3	41.2	18.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	165724	209091	26.2
Hexabromobiphenyl	1343188	1671324	24.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	837396	711754	-15.0
Hexabromobiphenyl	850693	813168	-4.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-FEB-2021
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.610	0.000	45743	253.2	1	7.056	0.000	86642	280.7
Aroclor-1016	2	6.983	0.000	152781	259.7	2	7.657	0.000	204419	292.2
Aroclor-1016	3	7.134	0.000	65802	235.1	3	7.868	0.000	78194	254.1
Aroclor-1016	4	7.243	0.000	43701	248.6	4	8.123	0.000	46640	266.1

Total Col1Ave (4 peaks): 249.2 Total Col2Ave (4 peaks): 273.3 RPD = 9
Corrected Ave (3 peaks): 245.6 Corrected Ave (3 peaks): 267.0 RPD = 8

CalAmt %D: -0.3 CalAmt %D: 9.3

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1260	1	10.385	0.000	132619	234.6	1	11.025	0.000	136519	239.7
Aroclor-1260	2	10.706	0.000	143139	252.7	2	11.489	0.000	133273	251.7
Aroclor-1260	3	11.058	0.000	413450	254.5	3	11.742	0.000	365201	249.2
Aroclor-1260	4	11.461	0.000	195325	259.9	4	12.331	0.000	232503	245.7
Aroclor-1260	5	11.565	0.000	81959	233.9	NS	---			----

Total Col1Ave (5 peaks): 247.1 Total Col2Ave (4 peaks): 246.6 RPD = 0
Corrected Ave (4 peaks): 243.9 Corrected Ave (3 peaks): 244.8 RPD = 0

CalAmt %D: -1.2 CalAmt %D: -1.4

Total PCB Area Col1 (5.090 - 13.086) = 3826520 Col1 Total PCB = 0.5 ppm*

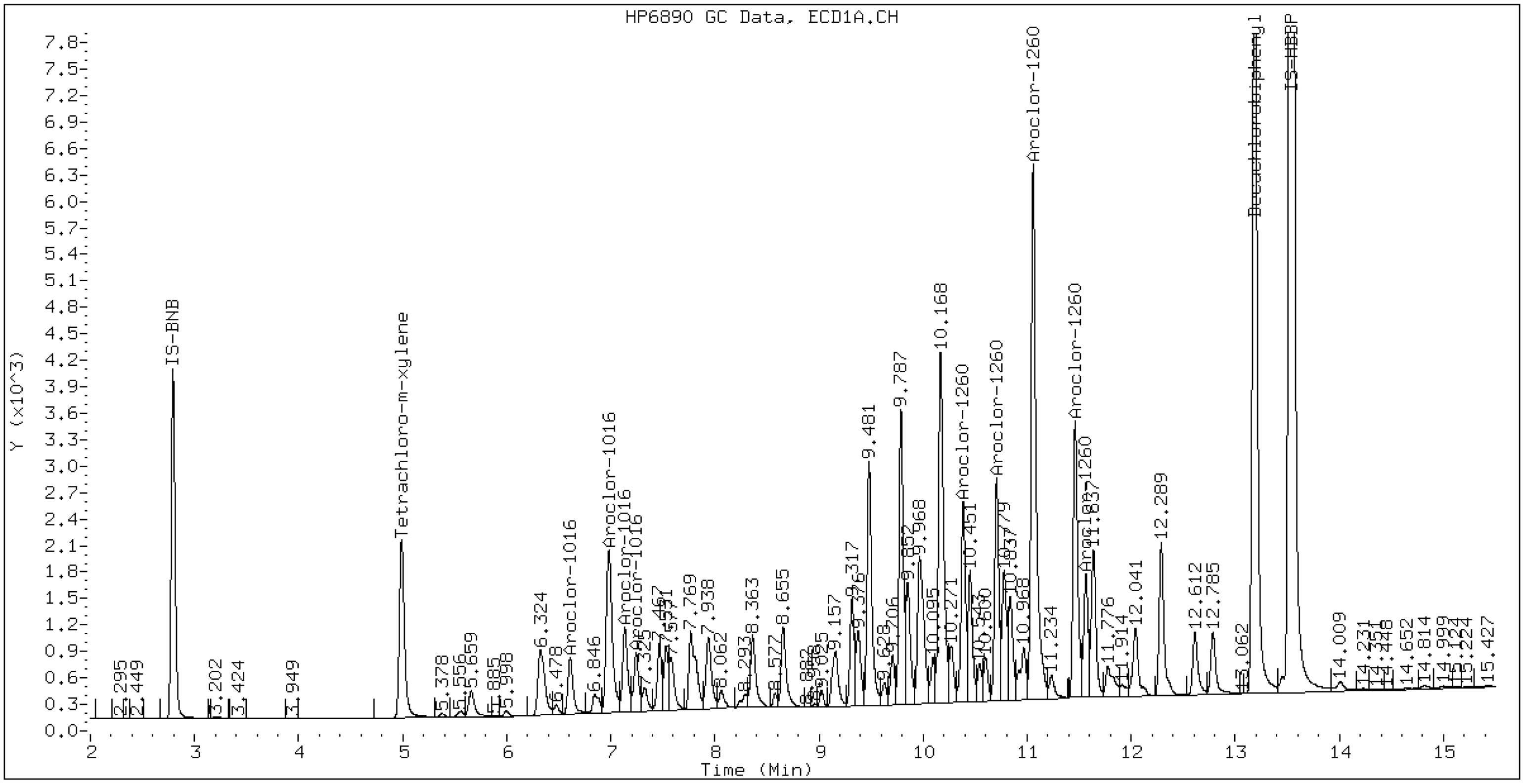
Total PCB Area Col2 (5.090 - 13.086) = 3666531 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

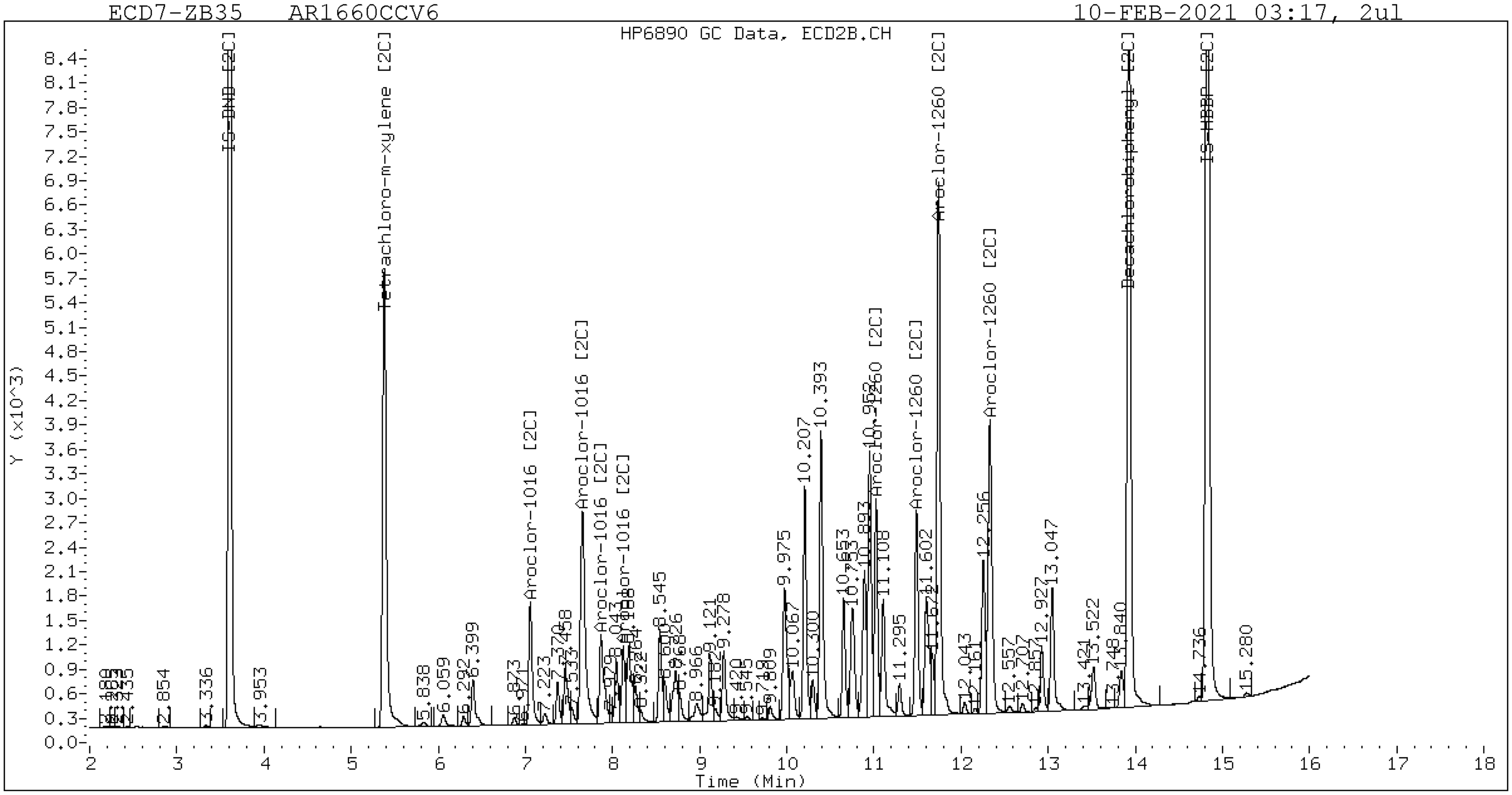
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 10-FEB-2021 03:17, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 10-FEB-2021 03:17, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SJB0079
Instrument: ECD7
Calibration: EB00020

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Cal Standard	SJB0079-CAL1	02062110ECD7.D	02062110ECD7.D	NA	02/06/21 19:58
Cal Standard	SJB0079-CAL2	02062111ECD7.D	02062111ECD7.D	NA	02/06/21 20:19
Cal Standard	SJB0079-CAL3	02062112ECD7.D	02062112ECD7.D	NA	02/06/21 20:40
Cal Standard	SJB0079-CAL4	02062113ECD7.D	02062113ECD7.D	NA	02/06/21 21:00
Cal Standard	SJB0079-CAL5	02062114ECD7.D	02062114ECD7.D	NA	02/06/21 21:21
Cal Standard	SJB0079-CAL6	02062115ECD7.D	02062115ECD7.D	NA	02/06/21 21:41
Cal Standard	SJB0079-CAL7	02062116ECD7.D	02062116ECD7.D	NA	02/06/21 22:02
Cal Standard	SJB0079-CAL8	02062117ECD7.D	02062117ECD7.D	NA	02/06/21 22:22
Cal Standard	SJB0079-CAL9	02062118ECD7.D	02062118ECD7.D	NA	02/06/21 22:43
Cal Standard	SJB0079-CALA	02062119ECD7.D	02062119ECD7.D	NA	02/06/21 23:03
Cal Standard	SJB0079-CALB	02062120ECD7.D	02062120ECD7.D	NA	02/06/21 23:24
Secondary Cal Check	SJB0079-SCV1	02062121ECD7.D	02062121ECD7.D	NA	02/06/21 23:45
Secondary Cal Check	SJB0079-SCV2	02062122ECD7.D	02062122ECD7.D	NA	02/07/21 00:05
Secondary Cal Check	SJB0079-SCV3	02062123ECD7.D	02062123ECD7.D	NA	02/07/21 00:26
Secondary Cal Check	SJB0079-SCV4	02062124ECD7.D	02062124ECD7.D	NA	02/07/21 00:46
Secondary Cal Check	SJB0079-SCV5	02062125ECD7.D	02062125ECD7.D	NA	02/07/21 01:07
Secondary Cal Check	SJB0079-SCV6	02062126ECD7.D	02062126ECD7.D	NA	02/07/21 01:28

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 2/8/2021 12:17:24PM

ANALYSIS SEQUENCE

SJB0079

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: EB00020

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SJB0079-CAL1	0.25PPM AR1660	QC		1	I007341	I007345	
SJB0079-CAL2	0.02PPM AR1660	QC		2	I007344	I007345	
SJB0079-CAL3	0.05PPM AR1660	QC		3	I007343	I007345	
SJB0079-CAL4	1.0PPM AR1660	QC		4	I007317	I007345	
SJB0079-CAL5	0.1PPM AR1660	QC		5	I007342	I007345	
SJB0079-CAL6	0.5PPM AR1660	QC		6	I007340	I007345	
SJB0079-CAL7	0.25PPM AR1242	QC		7	I007322	I007345	
SJB0079-CAL8	0.25PPM AR1248	QC		8	I007321	I007345	
SJB0079-CAL9	0.25PPM AR1254	QC		9	I007320	I007345	
SJB0079-CALA	0.25PPM AR2162	QC		10	I007319	I007345	
SJB0079-CALB	0.25PPM AR3268	QC		11	I010378	I007345	
SJB0079-SCV1	AR1660SCV1	QC		12	J000948	I007345	
SJB0079-SCV2	AR1242SCV2	QC		13	J000949	I007345	
SJB0079-SCV3	AR1248SCV3	QC		14	J000950	I007345	
SJB0079-SCV4	AR1254SCV4	QC		15	J000951	I007345	
SJB0079-SCV5	AR2162SCV5	QC		16	J000952	I007345	
SJB0079-SCV6	AR3268SCV6	QC		17	J000953	I007345	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210206.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	06-FEB-2021 16:09	02062101.D	1	RINSE	
2	06-FEB-2021 16:30	02062102.D	1	DDT	
3	06-FEB-2021 14:39	02062102a.D	1	DDT	
4	06-FEB-2021 16:50	02062103.D	1	RINSE	
5	06-FEB-2021 14:59	02062103a.D	1	RINSE	
6	06-FEB-2021 17:55	02062104.D	1	RINSE	
7	06-FEB-2021 15:20	02062104a.D	1	RINSE	
8	06-FEB-2021 18:15	02062105.D	1	RINSE	
9	06-FEB-2021 18:36	02062106.D	1	RINSE	
10	06-FEB-2021 18:57	02062107.D	1	RINSE	
11	06-FEB-2021 19:17	02062108.D	1	RINSE	
12	06-FEB-2021 19:38	02062109.D	1	IB	
13	06-FEB-2021 19:58	02062110.D	1	0.25PPMAR1660	
14	06-FEB-2021 20:19	02062111.D	1	0.02PPMAR1660	
15	06-FEB-2021 20:40	02062112.D	1	0.05PPMAR1660	
16	06-FEB-2021 21:00	02062113.D	1	1PPMAR1660	
17	06-FEB-2021 21:21	02062114.D	1	0.1PPMAR1660	
18	06-FEB-2021 21:41	02062115.D	1	0.5PPMAR1660	
19	06-FEB-2021 22:02	02062116.D	1	AR1242	
20	06-FEB-2021 22:22	02062117.D	1	AR1248	
21	06-FEB-2021 22:43	02062118.D	1	AR1254	
22	06-FEB-2021 23:04	02062119.D	1	AR2162	
23	06-FEB-2021 23:24	02062120.D	1	AR3268	
24	06-FEB-2021 23:45	02062121.D	1	AR1660SCV1	
25	07-FEB-2021 00:05	02062122.D	1	AR1242SCV2	
26	07-FEB-2021 00:26	02062123.D	1	AR1248SCV3	
27	07-FEB-2021 00:46	02062124.D	1	AR1254SCV4	
28	07-FEB-2021 01:07	02062125.D	1	AR2162SCV5	
29	07-FEB-2021 01:28	02062126.D	1	AR3268SCV6	
30	07-FEB-2021 01:48	02062127.D	1	0.1PPM DDTS	
31	07-FEB-2021 02:09	02062128.D	1	DDT BD	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210206.b\210206.b

ARI Job No.: IB   Method: PCB.m\PCB2.m   Instrument: ecd7.i   Date: 06-FEB-2021

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1938	02062109ECD7.D	IB		1	NO MANUAL INTEGRATION
1958	02062110ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
2019	02062111ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
2040	02062112ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
2100	02062113ECD7.D	1PPMAR1660		1	NO MANUAL INTEGRATION
2121	02062114ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
2141	02062115ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
2202	02062116ECD7.D	AR1242		1	Aroclor-1242 [2C],
2222	02062117ECD7.D	AR1248		1	NO MANUAL INTEGRATION
2243	02062118ECD7.D	AR1254		1	NO MANUAL INTEGRATION
2303	02062119ECD7.D	AR2162		1	NO MANUAL INTEGRATION
2324	02062120ECD7.D	AR3268		1	NO MANUAL INTEGRATION
2345	02062121ECD7.D	AR1660SCV1		1	NO MANUAL INTEGRATION
0005	02062122ECD7.D	AR1242SCV2		1	NO MANUAL INTEGRATION
0026	02062123ECD7.D	AR1248SCV3		1	NO MANUAL INTEGRATION
0046	02062124ECD7.D	AR1254SCV4		1	NO MANUAL INTEGRATION
0107	02062125ECD7.D	AR2162SCV5		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210206.b\210206.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0128	02062126ECD7.D	AR3268SCV6		1	NO MANUAL INTEGRATION
0148	02062127ECD7.D	0.1PPM DDTS		1	NO MANUAL INTEGRATION
0209	02062128ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
1938	02062109ECD7.D	IB		1	NO MANUAL INTEGRATION
1958	02062110ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
2019	02062111ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
2040	02062112ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
2100	02062113ECD7.D	1PPMAR1660		1	NO MANUAL INTEGRATION
2121	02062114ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
2141	02062115ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
2202	02062116ECD7.D	AR1242		1	Aroclor-1242,
2222	02062117ECD7.D	AR1248		1	NO MANUAL INTEGRATION
2243	02062118ECD7.D	AR1254		1	NO MANUAL INTEGRATION
2304	02062119ECD7.D	AR2162		1	NO MANUAL INTEGRATION
2324	02062120ECD7.D	AR3268		1	NO MANUAL INTEGRATION
2345	02062121ECD7.D	AR1660SCV1		1	NO MANUAL INTEGRATION
0005	02062122ECD7.D	AR1242SCV2		1	NO MANUAL INTEGRATION
0026	02062123ECD7.D	AR1248SCV3		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210206.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0046	02062124ECD7.D	AR1254SCV4		1	NO MANUAL INTEGRATION
0107	02062125ECD7.D	AR2162SCV5		1	NO MANUAL INTEGRATION
0128	02062126ECD7.D	AR3268SCV6		1	NO MANUAL INTEGRATION
0148	02062127ECD7.D	0.1PPM DDTS		1	2,4-DDT, 4,4-DDD,
0209	02062128ECD7.D	DDT BD		1	NO MANUAL INTEGRATION

Security Status Report

Date: 08-Feb-2021 09:37

02062101ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062102aECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062102ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062103aECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062103ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062104aECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062104ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062105ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062106ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062107ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062108ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062109ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062110ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062111ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062112ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062113ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062114ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062115ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062116ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062117ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062118ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062119ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062120ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062121ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062122ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062123ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062124ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062125ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062126ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062127ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35
02062128ECD7.D	Data Locked	jrains, 08-Feb-2021 09:35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage

Sequence: SJB0228
Instrument: ECD7

Calibration: EB00020

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SJB0228-ICV1	02112102ECD7.D	02112102ECD7.D	NA	02/11/21 19:18
Initial Cal Check	SJB0228-ICV2	02112103ECD7.D	02112103ECD7.D	NA	02/11/21 19:39
P8-20N-1	21A0361-01	02112104ECD7.D	02112104ECD7.D	Solid	02/11/21 19:59
P8-10SE-1	21A0361-13	02112105ECD7.D	02112105ECD7.D	Solid	02/11/21 20:20
P8-7W-1	21A0361-21	02112106ECD7.D	02112106ECD7.D	Solid	02/11/21 20:40
P8-10N-1	21A0361-29	02112107ECD7.D	02112107ECD7.D	Solid	02/11/21 21:01
Calibration Check	SJB0228-CCV1	02112114ECD7.D	02112114ECD7.D	NA	02/11/21 23:25
Calibration Check	SJB0228-CCV2	02112115ECD7.D	02112115ECD7.D	NA	02/11/21 23:46

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Printed: 2/15/2021 4:03:50PM

ANALYSIS SEQUENCE

SJB0228

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: EB00020

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SJB0228-ICV1	AR1254ICV1	QC		1	I007320	I007345	
SJB0228-ICV2	AR1660ICV2	QC		2	I007341	I007345	
BJB0212-BLK1	Blank	QC		3		I007345	
BJB0212-BS1	LCS	QC		4		I007345	
21A0321-01	DMMU-2	8082A PCB Solid 4	A 05	5		I007345	
BJB0212-MS1	Matrix Spike	QC		6		I007345	
BJB0212-MSD1	Matrix Spike Dup	QC		7		I007345	
BJB0212-SRM1	Reference	QC		8		I007345	
SJB0228-CCV1	AR1248CCV1	QC		9	I007321	I007345	
SJB0228-CCV2	AR1660CCV2	QC		10	I007341	I007345	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210211.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	11-FEB-2021 18:57	02112101ECD7.D	1	DDTS	
2	11-FEB-2021 19:18	02112102ECD7.D	1	AR1254ICV1	
3	11-FEB-2021 19:39	02112103ECD7.D	1	AR1660ICV2	
4	11-FEB-2021 19:59	02112104ECD7.D	250	21A0361-01RE	
5	11-FEB-2021 20:20	02112105ECD7.D	50	21A0361-13RE	
6	11-FEB-2021 20:40	02112106ECD7.D	5	21A0361-21	
7	11-FEB-2021 21:01	02112107ECD7.D	25	21A0361-29RE	
8	11-FEB-2021 21:22	02112108ECD7.D	1	BJB0212-BLK1	
9	11-FEB-2021 21:42	02112109ECD7.D	1	BJB0212-BS1	
10	11-FEB-2021 22:03	02112110ECD7.D	1	21A0321-01	
11	11-FEB-2021 22:23	02112111ECD7.D	1	BJB0212-MS1	
12	11-FEB-2021 22:44	02112112ECD7.D	1	BJB0212-MSD1	
13	11-FEB-2021 23:04	02112113ECD7.D	1	BJB0212-SRM1	
14	11-FEB-2021 23:25	02112114ECD7.D	1	AR1248CCV1	
15	11-FEB-2021 23:46	02112115ECD7.D	1	AR1660CCV2	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210211.b

ARI Job No.: DDTS Method: PCB.m Instrument: ecd7.i Date: 11-FEB-2021

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1857	02112101ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1918	02112102ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1939	02112103ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1959	02112104ECD7.D	21A0361-01RE		250	NO MANUAL INTEGRATION
2020	02112105ECD7.D	21A0361-13RE		50	NO MANUAL INTEGRATION
2040	02112106ECD7.D	21A0361-21		5	NO MANUAL INTEGRATION
2101	02112107ECD7.D	21A0361-29RE		25	NO MANUAL INTEGRATION
2122	02112108ECD7.D	BJB0212-BLK1		1	NO MANUAL INTEGRATION
2142	02112109ECD7.D	BJB0212-BS1		1	NO MANUAL INTEGRATION
2203	02112110ECD7.D	21A0321-01		1	NO MANUAL INTEGRATION
2223	02112111ECD7.D	BJB0212-MS1		1	NO MANUAL INTEGRATION
2244	02112112ECD7.D	BJB0212-MSD1		1	NO MANUAL INTEGRATION
2304	02112113ECD7.D	BJB0212-SRM1		1	NO MANUAL INTEGRATION
2325	02112114ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
2346	02112115ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1857	02112101ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1918	02112102ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210211.b\210211.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1939	02112103ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1959	02112104ECD7.D	21A0361-01RE		250	NO MANUAL INTEGRATION
2020	02112105ECD7.D	21A0361-13RE		50	NO MANUAL INTEGRATION
2040	02112106ECD7.D	21A0361-21		5	NO MANUAL INTEGRATION
2101	02112107ECD7.D	21A0361-29RE		25	NO MANUAL INTEGRATION
2122	02112108ECD7.D	BJB0212-BLK1		1	NO MANUAL INTEGRATION
2142	02112109ECD7.D	BJB0212-BS1		1	NO MANUAL INTEGRATION
2203	02112110ECD7.D	21A0321-01		1	NO MANUAL INTEGRATION
2223	02112111ECD7.D	BJB0212-MS1		1	NO MANUAL INTEGRATION
2244	02112112ECD7.D	BJB0212-MSD1		1	NO MANUAL INTEGRATION
2304	02112113ECD7.D	BJB0212-SRM1		1	NO MANUAL INTEGRATION
2325	02112114ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
2346	02112115ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION

Security Status Report

Date: 15-Feb-2021 16:13

02112102ECD7.D	Data Locked	jrains, 15-Feb-2021 16:13
02112103ECD7.D	Data Locked	jrains, 15-Feb-2021 16:13
02112108ECD7.D	Data Locked	jrains, 15-Feb-2021 16:13
02112109ECD7.D	Data Locked	jrains, 15-Feb-2021 16:13
02112110ECD7.D	Data Locked	jrains, 15-Feb-2021 16:13
02112111ECD7.D	Data Locked	jrains, 15-Feb-2021 16:13
02112112ECD7.D	Data Locked	jrains, 15-Feb-2021 16:13
02112113ECD7.D	Data Locked	jrains, 15-Feb-2021 16:13
02112114ECD7.D	Data Locked	jrains, 15-Feb-2021 16:13
02112115ECD7.D	Data Locked	jrains, 15-Feb-2021 16:13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sequence: SJB0231 Instrument: ECD7

Calibration: EB00020

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SJB0231-ICV1	02092102ECD5.D	02092102ECD5.D	NA	02/09/21 15:41
Initial Cal Check	SJB0231-ICV2	02092103ECD5.D	02092103ECD5.D	NA	02/09/21 16:01
Blank	BJB0165-BLK1	02092104ECD5.D	02092104ECD5.D	Solid	02/09/21 18:01
LCS	BJB0165-BS1	02092105ECD5.D	02092105ECD5.D	Solid	02/09/21 18:22
LCS Dup	BJB0165-BSD1	02092106ECD5.D	02092106ECD5.D	Solid	02/09/21 18:42
P8-20N-5	21A0361-03	02092108ECD5.D	02092108ECD5.D	Solid	02/09/21 19:23
P8-10NW-1	21A0361-05	02092109ECD5.D	02092109ECD5.D	Solid	02/09/21 19:44
P8-10NW-5	21A0361-07	02092110ECD5.D	02092110ECD5.D	Solid	02/09/21 20:05
P8-10NW-5	BJB0165-MS1	02092111ECD5.D	02092111ECD5.D	Solid	02/09/21 20:25
P8-10NW-5	BJB0165-MSD1	02092112ECD5.D	02092112ECD5.D	Solid	02/09/21 20:46
P8-15SW-1	21A0361-09	02092113ECD5.D	02092113ECD5.D	Solid	02/09/21 21:06
Calibration Check	SJB0231-CCV1	02092114ECD5.D	02092114ECD5.D	NA	02/09/21 21:27
Calibration Check	SJB0231-CCV2	02092115ECD5.D	02092115ECD5.D	NA	02/09/21 21:47
P8-15SW-5	21A0361-11	02092116ECD5.D	02092116ECD5.D	Solid	02/09/21 22:08
P8-10SE-5	21A0361-15	02092118ECD5.D	02092118ECD5.D	Solid	02/09/21 22:49
P8-10NE-1	21A0361-17	02092119ECD5.D	02092119ECD5.D	Solid	02/09/21 23:10
P8-10NE-5	21A0361-19	02092120ECD5.D	02092120ECD5.D	Solid	02/09/21 23:30
Calibration Check	SJB0231-CCV3	02092122ECD5.D	02092122ECD5.D	NA	02/10/21 00:12
Calibration Check	SJB0231-CCV4	02092123ECD5.D	02092123ECD5.D	NA	02/10/21 00:32
P8-7W-5	21A0361-23	02092124ECD5.D	02092124ECD5.D	Solid	02/10/21 00:53
P8-10E-1	21A0361-25	02092125ECD5.D	02092125ECD5.D	Solid	02/10/21 01:13
P8-10E-5	21A0361-27	02092126ECD5.D	02092126ECD5.D	Solid	02/10/21 01:34
P8-10N-5	21A0361-31	02092128ECD5.D	02092128ECD5.D	Solid	02/10/21 02:15
Calibration Check	SJB0231-CCV5	02092130ECD5.D	02092130ECD5.D	NA	02/10/21 02:56
Calibration Check	SJB0231-CCV6	02092131ECD5.D	02092131ECD5.D	NA	02/10/21 03:17

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ANALYSIS SEQUENCE

SJB0231

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: EB00020

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SJB0231-ICV1	AR1254ICV1	QC		1	I007320	I007345	
SJB0231-ICV2	AR1660ICV2	QC		2	I007341	I007345	
BJB0165-BLK1	Blank	QC		3		I007345	
BJB0165-BS1	LCS	QC		4		I007345	
BJB0165-BSD1	LCS Dup	QC		5		I007345	
21A0361-03	P8-20N-5	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	6		I007345	2020 Samples
21A0361-05	P8-10NW-1	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	7		I007345	2020 Samples
21A0361-07	P8-10NW-5	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	8		I007345	2020 Samples
BJB0165-MS1	Matrix Spike	QC		9		I007345	
BJB0165-MSD1	Matrix Spike Dup	QC		10		I007345	
21A0361-09	P8-15SW-1	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	11		I007345	2020 Samples
SJB0231-CCV1	AR1248CCV1	QC		12	I007321	I007345	
SJB0231-CCV2	AR1660CCV2	QC		13	I007341	I007345	
21A0361-11	P8-15SW-5	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	14		I007345	2020 Samples
21A0361-15	P8-10SE-5	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	15		I007345	2020 Samples
21A0361-17	P8-10NE-1	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	16		I007345	2020 Samples
21A0361-19	P8-10NE-5	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	17		I007345	2020 Samples
SJB0231-CCV3	AR1242CCV3	QC		18	I007322	I007345	
SJB0231-CCV4	AR1660CCV4	QC		19	I007341	I007345	
21A0361-23	P8-7W-5	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	20		I007345	2020 Samples
21A0361-25	P8-10E-1	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	21		I007345	2020 Samples
21A0361-27	P8-10E-5	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	22		I007345	2020 Samples

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ANALYSIS SEQUENCE

SJB0231

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: EB00020

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
21A0361-31	P8-10N-5	3082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	A 02	23		I007345	2020 Samples
SJB0231-CCV5	AR1254CCV5	QC		24	I007320	I007345	
SJB0231-CCV6	AR1660CCV6	QC		25	I007341	I007345	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210209.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	09-FEB-2021 15:20	02092101ECD5.D	1	DDTS	
2	09-FEB-2021 15:41	02092102ECD5.D	1	AR1254ICV1	
3	09-FEB-2021 16:01	02092103ECD5.D	1	AR1660ICV2	
4	09-FEB-2021 18:01	02092104ECD5.D	1	BJB0165-BLK1	
5	09-FEB-2021 18:22	02092105ECD5.D	1	BJB0165-BS1	
6	09-FEB-2021 18:42	02092106ECD5.D	1	BJB0165-BSD1	
7	09-FEB-2021 19:03	02092107ECD5.D	25	21A0361-01	
8	09-FEB-2021 19:23	02092108ECD5.D	1	21A0361-03	
9	09-FEB-2021 19:44	02092109ECD5.D	10	21A0361-05	
10	09-FEB-2021 20:05	02092110ECD5.D	1	21A0361-07	
11	09-FEB-2021 20:25	02092111ECD5.D	1	BJB0165-MS1	
12	09-FEB-2021 20:46	02092112ECD5.D	1	BJB0165-MSD1	
13	09-FEB-2021 21:06	02092113ECD5.D	10	21A0361-09	
14	09-FEB-2021 21:27	02092114ECD5.D	1	AR1248CCV1	
15	09-FEB-2021 21:47	02092115ECD5.D	1	AR1660CCV2	
16	09-FEB-2021 22:08	02092116ECD5.D	1	21A0361-11	
17	09-FEB-2021 22:29	02092117ECD5.D	10	21A0361-13	
18	09-FEB-2021 22:49	02092118ECD5.D	1	21A0361-15	
19	09-FEB-2021 23:10	02092119ECD5.D	25	21A0361-17	
20	09-FEB-2021 23:30	02092120ECD5.D	1	21A0361-19	
21	09-FEB-2021 23:51	02092121ECD5.D	1	21A0361-21	
22	10-FEB-2021 00:12	02092122ECD5.D	1	AR1242CCV3	
23	10-FEB-2021 00:32	02092123ECD5.D	1	AR1660CCV4	
24	10-FEB-2021 00:53	02092124ECD5.D	1	21A0361-23	
25	10-FEB-2021 01:13	02092125ECD5.D	5	21A0361-25	
26	10-FEB-2021 01:34	02092126ECD5.D	1	21A0361-27	
27	10-FEB-2021 01:54	02092127ECD5.D	1	21A0361-29	
28	10-FEB-2021 02:15	02092128ECD5.D	1	21A0361-31	
29	10-FEB-2021 02:36	02092129ECD5.D	5	21A0361-29RE1	
30	10-FEB-2021 02:56	02092130ECD5.D	1	AR1254CCV5	
31	10-FEB-2021 03:17	02092131ECD5.D	1	AR1660CCV6	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210209.b

ARI Job No.: DDTS   Method: PCB.m   Instrument: ecd7.i   Date: 09-FEB-2021

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1520	02092101ECD5.D	DDTS		1	NO MANUAL INTEGRATION
1541	02092102ECD5.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1601	02092103ECD5.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1801	02092104ECD5.D	BJB0165-BLK1		1	NO MANUAL INTEGRATION
1822	02092105ECD5.D	BJB0165-BS1		1	NO MANUAL INTEGRATION
1842	02092106ECD5.D	BJB0165-BSD1		1	NO MANUAL INTEGRATION
1903	02092107ECD5.D	21A0361-01		25	Aroclor-1248, Aroclor-1254, Aroclor-1260,
1923	02092108ECD5.D	21A0361-03		1	NO MANUAL INTEGRATION
1944	02092109ECD5.D	21A0361-05		10	Aroclor-1248, Aroclor-1260,
2005	02092110ECD5.D	21A0361-07		1	NO MANUAL INTEGRATION
2025	02092111ECD5.D	BJB0165-MS1		1	NO MANUAL INTEGRATION
2046	02092112ECD5.D	BJB0165-MSD1		1	NO MANUAL INTEGRATION
2106	02092113ECD5.D	21A0361-09		10	NO MANUAL INTEGRATION
2127	02092114ECD5.D	AR1248CCV1		1	NO MANUAL INTEGRATION
2147	02092115ECD5.D	AR1660CCV2		1	NO MANUAL INTEGRATION
2208	02092116ECD5.D	21A0361-11		1	NO MANUAL INTEGRATION
2229	02092117ECD5.D	21A0361-13		10	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2249	02092118ECD5.D	21A0361-15		1	NO MANUAL INTEGRATION
2310	02092119ECD5.D	21A0361-17		25	NO MANUAL INTEGRATION
2330	02092120ECD5.D	21A0361-19		1	NO MANUAL INTEGRATION
2351	02092121ECD5.D	21A0361-21		1	Aroclor-1248, Aroclor-1254, Aroclor-1260,
0012	02092122ECD5.D	AR1242CCV3		1	NO MANUAL INTEGRATION
0032	02092123ECD5.D	AR1660CCV4		1	NO MANUAL INTEGRATION
0053	02092124ECD5.D	21A0361-23		1	NO MANUAL INTEGRATION
0113	02092125ECD5.D	21A0361-25		5	NO MANUAL INTEGRATION
0134	02092126ECD5.D	21A0361-27		1	NO MANUAL INTEGRATION
0154	02092127ECD5.D	21A0361-29		1	Aroclor-1248, Aroclor-1260,
0215	02092128ECD5.D	21A0361-31		1	Aroclor-1248,
0236	02092129ECD5.D	21A0361-29RE1		5	Aroclor-1248, Aroclor-1260,
0256	02092130ECD5.D	AR1254CCV5		1	NO MANUAL INTEGRATION
0317	02092131ECD5.D	AR1660CCV6		1	NO MANUAL INTEGRATION
1520	02092101ECD5.D	DDTS		1	NO MANUAL INTEGRATION
1541	02092102ECD5.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1601	02092103ECD5.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1801	02092104ECD5.D	BJB0165-BLK1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210209.b\210209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1822	02092105ECD5.D	BJB0165-BS1		1	NO MANUAL INTEGRATION
1842	02092106ECD5.D	BJB0165-BSD1		1	NO MANUAL INTEGRATION
1903	02092107ECD5.D	21A0361-01		25	NO MANUAL INTEGRATION
1923	02092108ECD5.D	21A0361-03		1	Aroclor-1248 [2C], Tetrachloro-m-xylene [2C],
1944	02092109ECD5.D	21A0361-05		10	NO MANUAL INTEGRATION
2005	02092110ECD5.D	21A0361-07		1	NO MANUAL INTEGRATION
2025	02092111ECD5.D	BJB0165-MS1		1	NO MANUAL INTEGRATION
2046	02092112ECD5.D	BJB0165-MSD1		1	NO MANUAL INTEGRATION
2106	02092113ECD5.D	21A0361-09		10	NO MANUAL INTEGRATION
2127	02092114ECD5.D	AR1248CCV1		1	NO MANUAL INTEGRATION
2147	02092115ECD5.D	AR1660CCV2		1	NO MANUAL INTEGRATION
2208	02092116ECD5.D	21A0361-11		1	Aroclor-1248 [2C], Aroclor-1254 [2C],
2229	02092117ECD5.D	21A0361-13		10	NO MANUAL INTEGRATION
2249	02092118ECD5.D	21A0361-15		1	Aroclor-1248 [2C], Aroclor-1254 [2C],
2310	02092119ECD5.D	21A0361-17		25	NO MANUAL INTEGRATION
2330	02092120ECD5.D	21A0361-19		1	NO MANUAL INTEGRATION
2351	02092121ECD5.D	21A0361-21		1	NO MANUAL INTEGRATION
0012	02092122ECD5.D	AR1242CCV3		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210209.b\210209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0032	02092123ECD5.D	AR1660CCV4		1	NO MANUAL INTEGRATION
0053	02092124ECD5.D	21A0361-23		1	Aroclor-1248 [2C], Aroclor-1254 [2C], Aroclor-1260 [2C],
0113	02092125ECD5.D	21A0361-25		5	NO MANUAL INTEGRATION
0134	02092126ECD5.D	21A0361-27		1	Aroclor-1248 [2C], Aroclor-1254 [2C], Aroclor-1260 [2C],
0154	02092127ECD5.D	21A0361-29		1	NO MANUAL INTEGRATION
0215	02092128ECD5.D	21A0361-31		1	Aroclor-1248 [2C], Aroclor-1254 [2C], Aroclor-1260 [2C],
0236	02092129ECD5.D	21A0361-29RE1		5	NO MANUAL INTEGRATION
0256	02092130ECD5.D	AR1254CCV5		1	NO MANUAL INTEGRATION
0317	02092131ECD5.D	AR1660CCV6		1	NO MANUAL INTEGRATION

Security Status Report

Date: 17-Feb-2021 10:29

02092101ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092102ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092103ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092104ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092105ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092106ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092107ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092108ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092109ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092110ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092111ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092112ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092113ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
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02092120ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092121ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
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02092125ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092126ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092127ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092128ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092129ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092130ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29
02092131ECD5.D	Data Locked	jrains, 17-Feb-2021 10:29

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0079	Instrument:	ECD7
Calibration:	EB00020	Calibration Date:	02/06/2021

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SJB0079-SCV1 (Water)			Lab File ID: 02062121ECD7.D				Analyzed: 02/06/21 23:45	
Decachlorobiphenyl	40.000	91.7	80 - 120	13.188	13.1878	0.0002	N/A	
Tetrachlorometaxylene	40.000	115	80 - 120	4.986	4.985667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	108	80 - 120	13.935	13.9316	0.0034	N/A	
Tetrachlorometaxylene [2C]	40.000	114	80 - 120	5.376	5.377833	-0.0018	N/A	
SJB0079-SCV2 (Water)			Lab File ID: 02062122ECD7.D				Analyzed: 02/07/21 00:05	
Decachlorobiphenyl	40.000	92.2	80 - 120	13.188	13.1878	0.0002	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	4.986	4.985667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	108	80 - 120	13.934	13.9316	0.0024	N/A	
Tetrachlorometaxylene [2C]	40.000	113	80 - 120	5.378	5.377833	0.0002	N/A	
SJB0079-SCV3 (Water)			Lab File ID: 02062123ECD7.D				Analyzed: 02/07/21 00:26	
Decachlorobiphenyl	40.000	92.5	80 - 120	13.188	13.1878	0.0002	N/A	
Tetrachlorometaxylene	40.000	107	80 - 120	4.987	4.985667	0.0013	N/A	
Decachlorobiphenyl [2C]	40.000	109	80 - 120	13.935	13.9316	0.0034	N/A	
Tetrachlorometaxylene [2C]	40.000	113	80 - 120	5.378	5.377833	0.0002	N/A	
SJB0079-SCV4 (Water)			Lab File ID: 02062124ECD7.D				Analyzed: 02/07/21 00:46	
Decachlorobiphenyl	40.000	90.8	80 - 120	13.188	13.1878	0.0002	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	4.987	4.985667	0.0013	N/A	
Decachlorobiphenyl [2C]	40.000	105	80 - 120	13.934	13.9316	0.0024	N/A	
Tetrachlorometaxylene [2C]	40.000	111	80 - 120	5.377	5.377833	-0.0008	N/A	
SJB0079-SCV5 (Water)			Lab File ID: 02062125ECD7.D				Analyzed: 02/07/21 01:07	
Decachlorobiphenyl	40.000	91.2	80 - 120	13.188	13.1878	0.0002	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	4.988	4.985667	0.0023	N/A	
Decachlorobiphenyl [2C]	40.000	108	80 - 120	13.936	13.9316	0.0044	N/A	
Tetrachlorometaxylene [2C]	40.000	110	80 - 120	5.378	5.377833	0.0002	N/A	
SJB0079-SCV6 (Water)			Lab File ID: 02062126ECD7.D				Analyzed: 02/07/21 01:28	
Decachlorobiphenyl	40.000	139	80 - 120	13.188	13.1878	0.0002	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	4.984	4.985667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	173	80 - 120	13.933	13.9316	0.0014	N/A	
Tetrachlorometaxylene [2C]	40.000	111	80 - 120	5.378	5.377833	0.0002	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0228	Instrument:	ECD7
Calibration:	EB00020	Calibration Date:	02/06/2021

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SJB0228-ICV1 (Solid)			Lab File ID: 02112102ECD7.D			Analyzed: 02/11/21 19:18		
Decachlorobiphenyl	40.000	86.0	80 - 120	13.186	13.1878	-0.0018	N/A	
Tetrachlorometaxylene	40.000	110	80 - 120	4.991	4.985667	0.0053	N/A	
Decachlorobiphenyl [2C]	40.000	97.5	80 - 120	13.925	13.9316	-0.0066	N/A	
Tetrachlorometaxylene [2C]	40.000	116	80 - 120	5.377	5.377833	-0.0008	N/A	
SJB0228-ICV2 (Solid)			Lab File ID: 02112103ECD7.D			Analyzed: 02/11/21 19:39		
Decachlorobiphenyl	40.000	90.0	80 - 120	13.186	13.1878	-0.0018	N/A	
Tetrachlorometaxylene	40.000	109	80 - 120	4.99	4.985667	0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	96.5	80 - 120	13.926	13.9316	-0.0056	N/A	
Tetrachlorometaxylene [2C]	40.000	116	80 - 120	5.379	5.377833	0.0012	N/A	
21A0361-01 (Solid)			Lab File ID: 02112104ECD7.D			Analyzed: 02/11/21 19:59		
Decachlorobiphenyl	39.442		40 - 133	13.178	13.1878	-0.0098	N/A	D1
Tetrachlorometaxylene	39.442		53 - 120	4.982	4.985667	-0.0037	N/A	D1
Decachlorobiphenyl [2C]	39.442		40 - 133	13.923	13.9316	-0.0086	N/A	D1
Tetrachlorometaxylene [2C]	39.442		53 - 120	5.376	5.377833	-0.0018	N/A	D1
21A0361-13 (Solid)			Lab File ID: 02112105ECD7.D			Analyzed: 02/11/21 20:20		
Decachlorobiphenyl	39.785		40 - 133	13.181	13.1878	-0.0068	N/A	D1
Tetrachlorometaxylene	39.785		53 - 120	4.981	4.985667	-0.0047	N/A	D1
Decachlorobiphenyl [2C]	39.785		40 - 133	13.923	13.9316	-0.0086	N/A	D1
Tetrachlorometaxylene [2C]	39.785		53 - 120	5.376	5.377833	-0.0018	N/A	D1
21A0361-21 (Solid)			Lab File ID: 02112106ECD7.D			Analyzed: 02/11/21 20:40		
Decachlorobiphenyl	39.719	66.3	40 - 133	13.164	13.1878	-0.0238	N/A	
Tetrachlorometaxylene	39.719	61.4	53 - 120	4.982	4.985667	-0.0037	N/A	
Decachlorobiphenyl [2C]	39.719	56.0	40 - 133	13.909	13.9316	-0.0226	N/A	
Tetrachlorometaxylene [2C]	39.719	65.1	53 - 120	5.37	5.377833	-0.0078	N/A	
21A0361-29 (Solid)			Lab File ID: 02112107ECD7.D			Analyzed: 02/11/21 21:01		
Decachlorobiphenyl	39.299	94.9	40 - 133	13.179	13.1878	-0.0088	N/A	
Tetrachlorometaxylene	39.299	77.5	53 - 120	4.983	4.985667	-0.0027	N/A	
Decachlorobiphenyl [2C]	39.299	61.7	40 - 133	13.922	13.9316	-0.0096	N/A	
Tetrachlorometaxylene [2C]	39.299	68.6	53 - 120	5.374	5.377833	-0.0038	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0228	Instrument:	ECD7
Calibration:	EB00020	Calibration Date:	02/06/2021

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SJB0228-CCV1 (Solid)			Lab File ID: 02112114ECD7.D			Analyzed: 02/11/21 23:25		
Decachlorobiphenyl	40.000	88.8	80 - 120	13.186	13.1878	-0.0018	N/A	
Tetrachlorometaxylene	40.000	104	80 - 120	4.986	4.985667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	99.0	80 - 120	13.927	13.9316	-0.0046	N/A	
Tetrachlorometaxylene [2C]	40.000	115	80 - 120	5.377	5.377833	-0.0008	N/A	
SJB0228-CCV2 (Solid)			Lab File ID: 02112115ECD7.D			Analyzed: 02/11/21 23:46		
Decachlorobiphenyl	40.000	88.8	80 - 120	13.186	13.1878	-0.0018	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	4.985	4.985667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	95.8	80 - 120	13.929	13.9316	-0.0026	N/A	
Tetrachlorometaxylene [2C]	40.000	114	80 - 120	5.377	5.377833	-0.0008	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0231	Instrument:	ECD7
Calibration:	EB00020	Calibration Date:	02/06/2021

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SJB0231-ICV1 (Solid)			Lab File ID: 02092102ECD5.D			Analyzed: 02/09/21 15:41		
Decachlorobiphenyl	40.000	86.5	80 - 120	13.191	13.1878	0.0032	N/A	
Tetrachlorometaxylene	40.000	98.8	80 - 120	4.993	4.985667	0.0073	N/A	
Decachlorobiphenyl [2C]	40.000	100	80 - 120	13.931	13.9316	-0.0006	N/A	
Tetrachlorometaxylene [2C]	40.000	116	80 - 120	5.382	5.377833	0.0042	N/A	
SJB0231-ICV2 (Solid)			Lab File ID: 02092103ECD5.D			Analyzed: 02/09/21 16:01		
Decachlorobiphenyl	40.000	84.8	80 - 120	13.19	13.1878	0.0022	N/A	
Tetrachlorometaxylene	40.000	105	80 - 120	4.993	4.985667	0.0073	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	13.931	13.9316	-0.0006	N/A	
Tetrachlorometaxylene [2C]	40.000	117	80 - 120	5.383	5.377833	0.0052	N/A	
BJB0165-BLK1 (Solid)			Lab File ID: 02092104ECD5.D			Analyzed: 02/09/21 18:01		
Decachlorobiphenyl	40.000	83.8	40 - 133	13.191	13.1878	0.0032	N/A	
Tetrachlorometaxylene	40.000	87.2	53 - 120	4.995	4.985667	0.0093	N/A	
Decachlorobiphenyl [2C]	40.000	90.5	40 - 133	13.931	13.9316	-0.0006	N/A	
Tetrachlorometaxylene [2C]	40.000	85.7	53 - 120	5.379	5.377833	0.0012	N/A	
BJB0165-BS1 (Solid)			Lab File ID: 02092105ECD5.D			Analyzed: 02/09/21 18:22		
Decachlorobiphenyl	40.000	81.5	40 - 133	13.188	13.1878	0.0002	N/A	
Tetrachlorometaxylene	40.000	86.4	53 - 120	4.99	4.985667	0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	91.1	40 - 133	13.93	13.9316	-0.0016	N/A	
Tetrachlorometaxylene [2C]	40.000	82.0	53 - 120	5.381	5.377833	0.0032	N/A	
BJB0165-BSD1 (Solid)			Lab File ID: 02092106ECD5.D			Analyzed: 02/09/21 18:42		
Decachlorobiphenyl	40.000	79.5	40 - 133	13.187	13.1878	-0.0008	N/A	
Tetrachlorometaxylene	40.000	78.6	53 - 120	4.993	4.985667	0.0073	N/A	
Decachlorobiphenyl [2C]	40.000	89.0	40 - 133	13.93	13.9316	-0.0016	N/A	
Tetrachlorometaxylene [2C]	40.000	77.8	53 - 120	5.382	5.377833	0.0042	N/A	
21A0361-03 (Solid)			Lab File ID: 02092108ECD5.D			Analyzed: 02/09/21 19:23		
Decachlorobiphenyl	39.583	73.5	40 - 133	13.177	13.1878	-0.0108	N/A	
Tetrachlorometaxylene	39.583	73.7	53 - 120	4.99	4.985667	0.0043	N/A	
Decachlorobiphenyl [2C]	39.583	72.5	40 - 133	13.921	13.9316	-0.0106	N/A	
Tetrachlorometaxylene [2C]	39.583	70.5	53 - 120	5.379	5.377833	0.0012	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0231	Instrument:	ECD7
Calibration:	EB00020	Calibration Date:	02/06/2021

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
21A0361-05 (Solid)			Lab File ID: 02092109ECD5.D			Analyzed: 02/09/21 19:44		
Decachlorobiphenyl	39.300	74.7	40 - 133	13.168	13.1878	-0.0198	N/A	
Tetrachlorometaxylene	39.300	77.9	53 - 120	4.983	4.985667	-0.0027	N/A	
Decachlorobiphenyl [2C]	39.300	60.1	40 - 133	13.914	13.9316	-0.0176	N/A	
Tetrachlorometaxylene [2C]	39.300	73.0	53 - 120	5.376	5.377833	-0.0018	N/A	
21A0361-07 (Solid)			Lab File ID: 02092110ECD5.D			Analyzed: 02/09/21 20:05		
Decachlorobiphenyl	39.353	76.9	40 - 133	13.176	13.1878	-0.0118	N/A	
Tetrachlorometaxylene	39.353	75.9	53 - 120	4.989	4.985667	0.0033	N/A	
Decachlorobiphenyl [2C]	39.353	76.4	40 - 133	13.92	13.9316	-0.0116	N/A	
Tetrachlorometaxylene [2C]	39.353	79.2	53 - 120	5.378	5.377833	0.0002	N/A	
BJB0165-MS1 (Solid)			Lab File ID: 02092111ECD5.D			Analyzed: 02/09/21 20:25		
Decachlorobiphenyl	39.163	73.1	40 - 133	13.175	13.1878	-0.0128	N/A	
Tetrachlorometaxylene	39.163	72.8	53 - 120	4.99	4.985667	0.0043	N/A	
Decachlorobiphenyl [2C]	39.163	73.5	40 - 133	13.919	13.9316	-0.0126	N/A	
Tetrachlorometaxylene [2C]	39.163	74.7	53 - 120	5.378	5.377833	0.0002	N/A	
BJB0165-MSD1 (Solid)			Lab File ID: 02092112ECD5.D			Analyzed: 02/09/21 20:46		
Decachlorobiphenyl	38.668	73.6	40 - 133	13.175	13.1878	-0.0128	N/A	
Tetrachlorometaxylene	38.668	79.2	53 - 120	4.987	4.985667	0.0013	N/A	
Decachlorobiphenyl [2C]	38.668	73.2	40 - 133	13.918	13.9316	-0.0136	N/A	
Tetrachlorometaxylene [2C]	38.668	78.6	53 - 120	5.377	5.377833	-0.0008	N/A	
21A0361-09 (Solid)			Lab File ID: 02092113ECD5.D			Analyzed: 02/09/21 21:06		
Decachlorobiphenyl	39.320	96.0	40 - 133	13.174	13.1878	-0.0138	N/A	
Tetrachlorometaxylene	39.320	75.3	53 - 120	4.987	4.985667	0.0013	N/A	
Decachlorobiphenyl [2C]	39.320	76.0	40 - 133	13.919	13.9316	-0.0126	N/A	
Tetrachlorometaxylene [2C]	39.320	82.7	53 - 120	5.376	5.377833	-0.0018	N/A	
SJB0231-CCV1 (Solid)			Lab File ID: 02092114ECD5.D			Analyzed: 02/09/21 21:27		
Decachlorobiphenyl	40.000	90.3	80 - 120	13.187	13.1878	-0.0008	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	4.989	4.985667	0.0033	N/A	
Decachlorobiphenyl [2C]	40.000	102	80 - 120	13.929	13.9316	-0.0026	N/A	
Tetrachlorometaxylene [2C]	40.000	116	80 - 120	5.38	5.377833	0.0022	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0231	Instrument:	ECD7
Calibration:	EB00020	Calibration Date:	02/06/2021

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SJB0231-CCV2 (Solid)			Lab File ID: 02092115ECD5.D			Analyzed: 02/09/21 21:47		
Decachlorobiphenyl	40.000	87.8	80 - 120	13.187	13.1878	-0.0008	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	4.989	4.985667	0.0033	N/A	
Decachlorobiphenyl [2C]	40.000	102	80 - 120	13.929	13.9316	-0.0026	N/A	
Tetrachlorometaxylene [2C]	40.000	115	80 - 120	5.381	5.377833	0.0032	N/A	
21A0361-11 (Solid)			Lab File ID: 02092116ECD5.D			Analyzed: 02/09/21 22:08		
Decachlorobiphenyl	39.674	76.7	40 - 133	13.176	13.1878	-0.0118	N/A	
Tetrachlorometaxylene	39.674	78.6	53 - 120	4.991	4.985667	0.0053	N/A	
Decachlorobiphenyl [2C]	39.674	76.7	40 - 133	13.92	13.9316	-0.0116	N/A	
Tetrachlorometaxylene [2C]	39.674	77.0	53 - 120	5.38	5.377833	0.0022	N/A	
21A0361-15 (Solid)			Lab File ID: 02092118ECD5.D			Analyzed: 02/09/21 22:49		
Decachlorobiphenyl	39.269	73.7	40 - 133	13.179	13.1878	-0.0088	N/A	
Tetrachlorometaxylene	39.269	74.2	53 - 120	4.988	4.985667	0.0023	N/A	
Decachlorobiphenyl [2C]	39.269	75.5	40 - 133	13.923	13.9316	-0.0086	N/A	
Tetrachlorometaxylene [2C]	39.269	72.0	53 - 120	5.378	5.377833	0.0002	N/A	
21A0361-17 (Solid)			Lab File ID: 02092119ECD5.D			Analyzed: 02/09/21 23:10		
Decachlorobiphenyl	39.628	80.1	40 - 133	13.18	13.1878	-0.0078	N/A	
Tetrachlorometaxylene	39.628	112	53 - 120	4.983	4.985667	-0.0027	N/A	
Decachlorobiphenyl [2C]	39.628	57.1	40 - 133	13.923	13.9316	-0.0086	N/A	
Tetrachlorometaxylene [2C]	39.628	73.7	53 - 120	5.379	5.377833	0.0012	N/A	
21A0361-19 (Solid)			Lab File ID: 02092120ECD5.D			Analyzed: 02/09/21 23:30		
Decachlorobiphenyl	39.552	80.0	40 - 133	13.176	13.1878	-0.0118	N/A	
Tetrachlorometaxylene	39.552	76.6	53 - 120	4.99	4.985667	0.0043	N/A	
Decachlorobiphenyl [2C]	39.552	80.8	40 - 133	13.92	13.9316	-0.0116	N/A	
Tetrachlorometaxylene [2C]	39.552	79.6	53 - 120	5.378	5.377833	0.0002	N/A	
SJB0231-CCV3 (Solid)			Lab File ID: 02092122ECD5.D			Analyzed: 02/10/21 00:12		
Decachlorobiphenyl	40.000	94.0	80 - 120	13.184	13.1878	-0.0038	N/A	
Tetrachlorometaxylene	40.000	109	80 - 120	4.991	4.985667	0.0053	N/A	
Decachlorobiphenyl [2C]	40.000	91.8	80 - 120	13.927	13.9316	-0.0046	N/A	
Tetrachlorometaxylene [2C]	40.000	117	80 - 120	5.38	5.377833	0.0022	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0231	Instrument:	ECD7
Calibration:	EB00020	Calibration Date:	02/06/2021

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SJB0231-CCV4 (Solid)			Lab File ID: 02092123ECD5.D			Analyzed: 02/10/21 00:32		
Decachlorobiphenyl	40.000	87.0	80 - 120	13.185	13.1878	-0.0028	N/A	
Tetrachlorometaxylene	40.000	109	80 - 120	4.99	4.985667	0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	98.3	80 - 120	13.929	13.9316	-0.0026	N/A	
Tetrachlorometaxylene [2C]	40.000	115	80 - 120	5.38	5.377833	0.0022	N/A	
21A0361-23 (Solid)			Lab File ID: 02092124ECD5.D			Analyzed: 02/10/21 00:53		
Decachlorobiphenyl	39.193	75.8	40 - 133	13.174	13.1878	-0.0138	N/A	
Tetrachlorometaxylene	39.193	73.1	53 - 120	4.989	4.985667	0.0033	N/A	
Decachlorobiphenyl [2C]	39.193	75.3	40 - 133	13.918	13.9316	-0.0136	N/A	
Tetrachlorometaxylene [2C]	39.193	78.4	53 - 120	5.377	5.377833	-0.0008	N/A	
21A0361-25 (Solid)			Lab File ID: 02092125ECD5.D			Analyzed: 02/10/21 01:13		
Decachlorobiphenyl	36.597	79.2	40 - 133	13.172	13.1878	-0.0158	N/A	
Tetrachlorometaxylene	36.597	64.9	53 - 120	4.987	4.985667	0.0013	N/A	
Decachlorobiphenyl [2C]	36.597	70.1	40 - 133	13.916	13.9316	-0.0156	N/A	
Tetrachlorometaxylene [2C]	36.597	71.3	53 - 120	5.376	5.377833	-0.0018	N/A	
21A0361-27 (Solid)			Lab File ID: 02092126ECD5.D			Analyzed: 02/10/21 01:34		
Decachlorobiphenyl	38.775	72.4	40 - 133	13.177	13.1878	-0.0108	N/A	
Tetrachlorometaxylene	38.775	72.7	53 - 120	4.989	4.985667	0.0033	N/A	
Decachlorobiphenyl [2C]	38.775	73.2	40 - 133	13.92	13.9316	-0.0116	N/A	
Tetrachlorometaxylene [2C]	38.775	70.5	53 - 120	5.378	5.377833	0.0002	N/A	
21A0361-31 (Solid)			Lab File ID: 02092128ECD5.D			Analyzed: 02/10/21 02:15		
Decachlorobiphenyl	39.390	70.6	40 - 133	13.179	13.1878	-0.0088	N/A	
Tetrachlorometaxylene	39.390	77.0	53 - 120	4.989	4.985667	0.0033	N/A	
Decachlorobiphenyl [2C]	39.390	73.9	40 - 133	13.922	13.9316	-0.0096	N/A	
Tetrachlorometaxylene [2C]	39.390	78.6	53 - 120	5.378	5.377833	0.0002	N/A	
SJB0231-CCV5 (Solid)			Lab File ID: 02092130ECD5.D			Analyzed: 02/10/21 02:56		
Decachlorobiphenyl	40.000	89.5	80 - 120	13.187	13.1878	-0.0008	N/A	
Tetrachlorometaxylene	40.000	103	80 - 120	4.989	4.985667	0.0033	N/A	
Decachlorobiphenyl [2C]	40.000	100	80 - 120	13.928	13.9316	-0.0036	N/A	
Tetrachlorometaxylene [2C]	40.000	114	80 - 120	5.381	5.377833	0.0032	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0231	Instrument:	ECD7
Calibration:	EB00020	Calibration Date:	02/06/2021

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SJB0231-CCV6 (Solid)			Lab File ID: 02092131ECD5.D			Analyzed: 02/10/21 03:17		
Decachlorobiphenyl	40.000	85.8	80 - 120	13.186	13.1878	-0.0018	N/A	
Tetrachlorometaxylene	40.000	107	80 - 120	4.989	4.985667	0.0033	N/A	
Decachlorobiphenyl [2C]	40.000	103	80 - 120	13.927	13.9316	-0.0046	N/A	
Tetrachlorometaxylene [2C]	40.000	115	80 - 120	5.381	5.377833	0.0032	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0079	Instrument:	ECD7
		Calibration:	EB00020

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SJB0079-SCV1)	(Water)		Lab File ID: 02062121ECD7.D				Analyzed: 02/06/21 23:45		
1-Bromo-2-Nitrobenzene	174272	2.788	165724	2.79	105	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	1477839	13.543	1343188	13.541	110	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	836903	3.604	837396	3.607	100	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	920669	14.832	850693	14.83	108	50 - 200	0.002	+/-0.50	
Secondary Cal Check (SJB0079-SCV2)	(Water)		Lab File ID: 02062122ECD7.D				Analyzed: 02/07/21 00:05		
1-Bromo-2-Nitrobenzene	179964	2.79	165724	2.79	109	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1508651	13.543	1343188	13.541	112	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	838731	3.606	837396	3.607	100	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	932542	14.833	850693	14.83	110	50 - 200	0.003	+/-0.50	
Secondary Cal Check (SJB0079-SCV3)	(Water)		Lab File ID: 02062123ECD7.D				Analyzed: 02/07/21 00:26		
1-Bromo-2-Nitrobenzene	188074	2.792	165724	2.79	113	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	1517886	13.544	1343188	13.541	113	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	830966	3.607	837396	3.607	99	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	928957	14.833	850693	14.83	109	50 - 200	0.003	+/-0.50	
Secondary Cal Check (SJB0079-SCV4)	(Water)		Lab File ID: 02062124ECD7.D				Analyzed: 02/07/21 00:46		
1-Bromo-2-Nitrobenzene	184551	2.789	165724	2.79	111	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1528201	13.543	1343188	13.541	114	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	830831	3.606	837396	3.607	99	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	930682	14.832	850693	14.83	109	50 - 200	0.002	+/-0.50	
Secondary Cal Check (SJB0079-SCV5)	(Water)		Lab File ID: 02062125ECD7.D				Analyzed: 02/07/21 01:07		
1-Bromo-2-Nitrobenzene	184586	2.79	165724	2.79	111	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1510520	13.543	1343188	13.541	112	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	824502	3.606	837396	3.607	98	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	937832	14.833	850693	14.83	110	50 - 200	0.003	+/-0.50	
Secondary Cal Check (SJB0079-SCV6)	(Water)		Lab File ID: 02062126ECD7.D				Analyzed: 02/07/21 01:28		
1-Bromo-2-Nitrobenzene	189910	2.789	165724	2.79	115	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1534868	13.543	1343188	13.541	114	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	829853	3.606	837396	3.607	99	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	937673	14.831	850693	14.83	110	50 - 200	0.001	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0228	Instrument:	ECD7
		Calibration:	EB00020

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SJB0228-ICV1)		(Solid)		Lab File ID: 02112102ECD7.D				Analyzed: 02/11/21 19:18	
1-Bromo-2-Nitrobenzene	232190	2.791	208044	2.791	112	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1863320	13.543	1673379	13.541	111	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	641200	3.604	597470	3.605	107	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	701975	14.827	671581	14.825	105	50 - 200	0.002	+/-0.50	
Initial Cal Check (SJB0228-ICV2)		(Solid)		Lab File ID: 02112103ECD7.D				Analyzed: 02/11/21 19:39	
1-Bromo-2-Nitrobenzene	208044	2.791	208044	2.791	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1673379	13.541	1673379	13.541	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	597470	3.605	597470	3.605	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	671581	14.825	671581	14.825	100	50 - 200	0.000	+/-0.50	
P8-20N-1 (21A0361-01)		(Solid)		Lab File ID: 02112104ECD7.D				Analyzed: 02/11/21 19:59	
1-Bromo-2-Nitrobenzene	221177	2.794	232190	2.791	95	50 - 200	0.003	+/-0.50	
Hexabromobiphenyl	1575719	13.536	1863320	13.543	85	50 - 200	-0.007	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	619443	3.606	641200	3.604	97	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl [2C]	711182	14.823	701975	14.827	101	50 - 200	-0.004	+/-0.50	
P8-10SE-1 (21A0361-13)		(Solid)		Lab File ID: 02112105ECD7.D				Analyzed: 02/11/21 20:20	
1-Bromo-2-Nitrobenzene	239124	2.792	232190	2.791	103	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	1870499	13.54	1863320	13.543	100	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	669819	3.603	641200	3.604	104	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	793588	14.823	701975	14.827	113	50 - 200	-0.004	+/-0.50	
P8-7W-1 (21A0361-21)		(Solid)		Lab File ID: 02112106ECD7.D				Analyzed: 02/11/21 20:40	
1-Bromo-2-Nitrobenzene	199423	2.79	232190	2.791	86	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	998797	13.519	1863320	13.543	54	50 - 200	-0.024	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	458799	3.602	641200	3.604	72	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	451180	14.812	701975	14.827	64	50 - 200	-0.015	+/-0.50	
P8-10N-1 (21A0361-29)		(Solid)		Lab File ID: 02112107ECD7.D				Analyzed: 02/11/21 21:01	
1-Bromo-2-Nitrobenzene	217222	2.79	232190	2.791	94	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1289395	13.535	1863320	13.543	69	50 - 200	-0.008	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	628269	3.602	641200	3.604	98	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	584791	14.822	701975	14.827	83	50 - 200	-0.005	+/-0.50	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0231	Instrument:	ECD7
		Calibration:	EB00020

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SJB0231-ICV1)		(Solid)	Lab File ID: 02092102ECD5.D				Analyzed: 02/09/21 15:41		
1-Bromo-2-Nitrobenzene	265031	2.792	241204	2.792	110	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2252935	13.548	2144263	13.547	105	50 - 200	0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	711966	3.605	695187	3.606	102	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	871017	14.832	873653	14.832	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SJB0231-ICV2)		(Solid)	Lab File ID: 02092103ECD5.D				Analyzed: 02/09/21 16:01		
1-Bromo-2-Nitrobenzene	241204	2.792	241204	2.792	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	2144263	13.547	2144263	13.547	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	695187	3.606	695187	3.606	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	873653	14.832	873653	14.832	100	50 - 200	0.000	+/-0.50	
Blank (BJB0165-BLK1)		(Solid)	Lab File ID: 02092104ECD5.D				Analyzed: 02/09/21 18:01		
1-Bromo-2-Nitrobenzene	240813	2.795	241204	2.792	100	50 - 200	0.003	+/-0.50	
Hexabromobiphenyl	2040350	13.549	2144263	13.547	95	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	678485	3.603	695187	3.606	98	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	829476	14.83	873653	14.832	95	50 - 200	-0.002	+/-0.50	
LCS (BJB0165-BS1)		(Solid)	Lab File ID: 02092105ECD5.D				Analyzed: 02/09/21 18:22		
1-Bromo-2-Nitrobenzene	224598	2.793	241204	2.792	93	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	1940304	13.546	2144263	13.547	90	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	680863	3.605	695187	3.606	98	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	837039	14.829	873653	14.832	96	50 - 200	-0.003	+/-0.50	
LCS Dup (BJB0165-BSD1)		(Solid)	Lab File ID: 02092106ECD5.D				Analyzed: 02/09/21 18:42		
1-Bromo-2-Nitrobenzene	236879	2.794	241204	2.792	98	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	1981150	13.545	2144263	13.547	92	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	689413	3.606	695187	3.606	99	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	870528	14.83	873653	14.832	100	50 - 200	-0.002	+/-0.50	
P8-20N-5 (21A0361-03)		(Solid)	Lab File ID: 02092108ECD5.D				Analyzed: 02/09/21 19:23		
1-Bromo-2-Nitrobenzene	233071	2.791	241204	2.792	97	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1263098	13.532	2144263	13.547	59	50 - 200	-0.015	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	650863	3.604	695187	3.606	94	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	616422	14.822	873653	14.832	71	50 - 200	-0.010	+/-0.50	

Analytical Resources, Incorporated
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INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage
Sequence: SJB0231 Instrument: ECD7
Calibration: EB00020

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
P8-10NW-1 (21A0361-05)		(Solid)		Lab File ID: 02092109ECD5.D				Analyzed: 02/09/21 19:44	
1-Bromo-2-Nitrobenzene	213327	2.791	241204	2.792	88	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1149783	13.525	2144263	13.547	54	50 - 200	-0.022	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	481257	3.605	695187	3.606	69	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	555019	14.816	873653	14.832	64	50 - 200	-0.016	+/-0.50	
P8-10NW-5 (21A0361-07)		(Solid)		Lab File ID: 02092110ECD5.D				Analyzed: 02/09/21 20:05	
1-Bromo-2-Nitrobenzene	211483	2.793	241204	2.792	88	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	1173400	13.531	2144263	13.547	55	50 - 200	-0.016	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	575922	3.606	695187	3.606	83	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	572162	14.82	873653	14.832	65	50 - 200	-0.012	+/-0.50	
Matrix Spike (BJB0165-MS1)		(Solid)		Lab File ID: 02092111ECD5.D				Analyzed: 02/09/21 20:25	
1-Bromo-2-Nitrobenzene	212157	2.791	241204	2.792	88	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1189047	13.53	2144263	13.547	55	50 - 200	-0.017	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	594801	3.605	695187	3.606	86	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	587535	14.819	873653	14.832	67	50 - 200	-0.013	+/-0.50	
Matrix Spike Dup (BJB0165-MSD1)		(Solid)		Lab File ID: 02092112ECD5.D				Analyzed: 02/09/21 20:46	
1-Bromo-2-Nitrobenzene	201821	2.791	241204	2.792	84	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1159116	13.529	2144263	13.547	54	50 - 200	-0.018	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	578117	3.605	695187	3.606	83	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	573852	14.819	873653	14.832	66	50 - 200	-0.013	+/-0.50	
P8-15SW-1 (21A0361-09)		(Solid)		Lab File ID: 02092113ECD5.D				Analyzed: 02/09/21 21:06	
1-Bromo-2-Nitrobenzene	208016	2.79	241204	2.792	86	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	1260559	13.53	2144263	13.547	59	50 - 200	-0.017	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	560926	3.605	695187	3.606	81	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	607916	14.82	873653	14.832	70	50 - 200	-0.012	+/-0.50	
P8-15SW-5 (21A0361-11)		(Solid)		Lab File ID: 02092116ECD5.D				Analyzed: 02/09/21 22:08	
1-Bromo-2-Nitrobenzene	205202	2.793	241204	2.792	85	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	1283586	13.531	2144263	13.547	60	50 - 200	-0.016	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	588515	3.608	695187	3.606	85	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl [2C]	669950	14.822	873653	14.832	77	50 - 200	-0.010	+/-0.50	

Analytical Resources, Incorporated
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INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0231	Instrument:	ECD7
		Calibration:	EB00020

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
P8-10SE-5 (21A0361-15)		(Solid)		Lab File ID: 02092118ECD5.D				Analyzed: 02/09/21 22:49	
1-Bromo-2-Nitrobenzene	214271	2.791	241204	2.792	89	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1418995	13.535	2144263	13.547	66	50 - 200	-0.012	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	654227	3.604	695187	3.606	94	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	734513	14.823	873653	14.832	84	50 - 200	-0.009	+/-0.50	
P8-10NE-1 (21A0361-17)		(Solid)		Lab File ID: 02092119ECD5.D				Analyzed: 02/09/21 23:10	
1-Bromo-2-Nitrobenzene	216591	2.792	241204	2.792	90	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1577108	13.537	2144263	13.547	74	50 - 200	-0.010	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	679514	3.606	695187	3.606	98	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	787034	14.824	873653	14.832	90	50 - 200	-0.008	+/-0.50	
P8-10NE-5 (21A0361-19)		(Solid)		Lab File ID: 02092120ECD5.D				Analyzed: 02/09/21 23:30	
1-Bromo-2-Nitrobenzene	217853	2.792	241204	2.792	90	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1279038	13.53	2144263	13.547	60	50 - 200	-0.017	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	603871	3.606	695187	3.606	87	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	679522	14.823	873653	14.832	78	50 - 200	-0.009	+/-0.50	
P8-7W-5 (21A0361-23)		(Solid)		Lab File ID: 02092124ECD5.D				Analyzed: 02/10/21 00:53	
1-Bromo-2-Nitrobenzene	202934	2.793	241204	2.792	84	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	1036667	13.529	2144263	13.547	48	50 - 200	-0.018	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	557548	3.606	695187	3.606	80	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	525451	14.819	873653	14.832	60	50 - 200	-0.013	+/-0.50	
P8-10E-1 (21A0361-25)		(Solid)		Lab File ID: 02092125ECD5.D				Analyzed: 02/10/21 01:13	
1-Bromo-2-Nitrobenzene	206293	2.793	241204	2.792	86	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	1226057	13.528	2144263	13.547	57	50 - 200	-0.019	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	555006	3.606	695187	3.606	80	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	608311	14.818	873653	14.832	70	50 - 200	-0.014	+/-0.50	
P8-10E-5 (21A0361-27)		(Solid)		Lab File ID: 02092126ECD5.D				Analyzed: 02/10/21 01:34	
1-Bromo-2-Nitrobenzene	209575	2.793	241204	2.792	87	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	1312387	13.532	2144263	13.547	61	50 - 200	-0.015	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	657381	3.605	695187	3.606	95	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	670325	14.823	873653	14.832	77	50 - 200	-0.009	+/-0.50	

Analytical Resources, Incorporated
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INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SJB0231
Instrument: ECD7
Calibration: EB00020

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
P8-10N-5 (21A0361-31)		(Solid)		Lab File ID: 02092128ECD5.D			Analyzed: 02/10/21 02:15		
1-Bromo-2-Nitrobenzene	209812	2.793	241204	2.792	87	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	1233741	13.532	2144263	13.547	58	50 - 200	-0.015	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	630907	3.605	695187	3.606	91	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	614441	14.822	873653	14.832	70	50 - 200	-0.010	+/-0.50	

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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc			Project:	ICS-Former NW Cooperage
Matrix:	Soil	Laboratory ID:	21A0361-01	File ID:	02112104ECD7.D
Sampled:	01/25/21 15:40	Prepared:	02/05/21 16:51	Analyzed:	02/11/21 19:59
Solids:	82.99	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BJB0165	Sequence:	SJB0228		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.576	8.588	0.012	97049	63700	10.1
	* 2	9.403	9.427	0.024	85128	70500	
Aroclor 1254	1	9.85	9.862	0.012	86072	30800	5.4
	* 2	10.194	10.207	0.013	82613.6	32500	
Aroclor 1260	* 1	11.559	11.56667	0.00767	78456.8	26500	14.1
	2	12.322	12.3385	0.0165	70627.5	23000	

* Column used for quantitation

Analytical Resources, Incorporated
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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 21A0361-13 File ID: 02112105ECD7.D

Sampled: 01/25/21 13:00 Prepared: 02/05/21 16:51 Analyzed: 02/11/21 20:20

Solids: 94.85 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BJB0165 Sequence: SJB0228

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.577	8.588	0.011	80291	9930	10.2
	* 2	9.404	9.427	0.023	71398	11000	
Aroclor 1254	1	9.853	9.862	0.009	58351.8	4100	5.7
	* 2	10.196	10.207	0.011	61471.2	4340	
Aroclor 1260	* 1	11.562	11.56667	0.00467	61497.8	3550	10.7
	2	12.325	12.3385	0.0135	54699.5	3190	

* Column used for quantitation

Analytical Resources, Incorporated
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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc			Project:	ICS-Former NW Cooperage
Matrix:	Soil	Laboratory ID:	21A0361-21	File ID:	02112106ECD7.D
Sampled:	01/25/21 10:40	Prepared:	02/05/21 16:51	Analyzed:	02/11/21 20:40
Solids:	94.12	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BJB0165	Sequence:	SJB0228		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.55	8.588	0.038	80540	1210	14.6
	* 2	9.382	9.427	0.045	62908	1400	
Aroclor 1254	* 1	9.822	9.862	0.04	99484.8	696	18.5
	2	10.161	10.207	0.046	56073	578	
Aroclor 1260	* 1	11.536	11.56667	0.0307	46697.2	502	19.7
	2	12.305	12.3385	0.0335	39570.5	412	

* Column used for quantitation

Analytical Resources, Incorporated
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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc			Project:	ICS-Former NW Cooperage
Matrix:	Soil	Laboratory ID:	21A0361-29	File ID:	02112107ECD7.D
Sampled:	01/25/21 09:25	Prepared:	02/05/21 16:51	Analyzed:	02/11/21 21:01
Solids:	91.04	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BJB0165	Sequence:	SJB0228		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.574	8.588	0.014	128740.8	8720	3.8
	* 2	9.399	9.427	0.028	112707.3	9060	
Aroclor 1254	* 1	9.85	9.862	0.012	83914.8	3190	.6
	2	10.184	10.207	0.023	90105.4	3170	
Aroclor 1260	* 1	11.558	11.56667	0.00867	68237.4	2810	11.3
	2	12.322	12.3385	0.0165	64256.25	2510	

* Column used for quantitation

Analytical Resources, Incorporated
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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 21A0361-03 File ID: 02092108ECD5.D

Sampled: 01/25/21 15:50 Prepared: 02/05/21 16:51 Analyzed: 02/09/21 19:23

Solids: 88.80 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BJB0165 Sequence: SJB0231

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND		COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	*	1	8.569	8.588	0.019	24929.25	60.4	2.2
		2	9.399	9.427	0.028	16795.25	59.1	
Aroclor 1254	*	1	9.846	9.862	0.016	52153.8	73.4	16.5
		2	10.19	10.207	0.017	35172.8	62.2	
Aroclor 1260	*	1	11.557	11.56667	0.00967	40435.2	64.7	9.4
		2	12.319	12.3385	0.0195	38212	58.9	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc			Project:	ICS-Former NW Cooperage
Matrix:	Soil	Laboratory ID:	21A0361-05	File ID:	02092109ECD5.D
Sampled:	01/25/21 15:00	Prepared:	02/05/21 16:51	Analyzed:	02/09/21 19:44
Solids:	88.66	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BJB0165	Sequence:	SJB0231		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.559	8.588	0.029	184046.8	5110	20.5
	* 2	9.388	9.427	0.039	145818	6280	
Aroclor 1254	1	9.83	9.862	0.032	151656.8	2680	1.5
	* 2	10.169	10.207	0.038	132124	2720	
Aroclor 1260	* 1	11.543	11.56667	0.0237	119077.6	2190	19.
	2	12.311	12.3385	0.0275	108972	1810	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 21A0361-07 File ID: 02092110ECD5.D

Sampled: 01/25/21 15:10 Prepared: 02/05/21 16:51 Analyzed: 02/09/21 20:05

Solids: 81.84 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BJB0165 Sequence: SJB0231

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.568	8.588	0.02	33862.25	88.1	14.7
	2	9.397	9.427	0.03	20404	76.0	
Aroclor 1254	* 1	9.845	9.862	0.017	79156.2	134	2.3
	2	10.176	10.207	0.031	65832	131	
Aroclor 1260	* 1	11.555	11.56667	0.0117	37290.8	71.0	9.3
	2	12.319	12.3385	0.0195	37834.25	64.7	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc			Project:	ICS-Former NW Cooperage
Matrix:	Soil	Laboratory ID:	21A0361-09	File ID:	02092113ECD5.D
Sampled:	01/25/21 14:15	Prepared:	02/05/21 16:51	Analyzed:	02/09/21 21:06
Solids:	94.02	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BJB0165	Sequence:	SJB0231		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.57	8.588	0.018	143028	4030	11.9
	* 2	9.397	9.427	0.03	123973.3	4540	
Aroclor 1254	1	9.842	9.862	0.02	102525.8	1560	17.
	* 2	10.19	10.207	0.017	112313.6	1850	
Aroclor 1260	* 1	11.552	11.56667	0.0147	139214.4	2300	12.5
	2	12.318	12.3385	0.0205	136386	2030	

* Column used for quantitation

Analytical Resources, Incorporated
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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 21A0361-11 File ID: 02092116ECD5.D

Sampled: 01/25/21 14:25 Prepared: 02/05/21 16:51 Analyzed: 02/09/21 22:08

Solids: 84.44 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BJB0165 Sequence: SJB0231

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.562	8.588	0.026	21487	60.1	22.
	2	9.392	9.427	0.035	12478.5	48.2	
Aroclor 1254	* 1	9.842	9.862	0.02	50768.6	79.1	30.6
	2	10.17	10.207	0.037	28709.2	58.1	
Aroclor 1260	* 1	11.553	11.56667	0.0137	24811.2	42.1	7.1
	2	12.316	12.3385	0.0225	27363	39.2	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 21A0361-15 File ID: 02092118ECD5.D

Sampled: 01/25/21 13:10 Prepared: 02/05/21 16:51 Analyzed: 02/09/21 22:49

Solids: 92.94 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BJB0165 Sequence: SJB0231

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.573	8.588	0.015	31939.5	87.5	27.9
	2	9.401	9.427	0.026	20273.75	66.1	
Aroclor 1254	* 1	9.85	9.862	0.012	43510.4	63.2	25.7
	2	10.183	10.207	0.024	27126	48.8	
Aroclor 1260	* 1	11.557	11.56667	0.00967	16510.6	25.6	27.6
	2	12.322	12.3385	0.0165	14710.25	19.4	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 21A0361-17 File ID: 02092119ECD5.D

Sampled: 01/25/21 12:15 Prepared: 02/05/21 16:51 Analyzed: 02/09/21 23:10

Solids: 79.23 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BJB0165 Sequence: SJB0231

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.577	8.588	0.011	213400.8	14500	6.7
	* 2	9.404	9.427	0.023	200032.8	15500	
Aroclor 1254	* 1	9.853	9.862	0.009	260382.6	8820	3.
	2	10.185	10.207	0.022	195188.6	8560	
Aroclor 1260	* 1	11.559	11.56667	0.00767	43132.2	1440	22.4
	2	12.326	12.3385	0.0125	50367.25	1150	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 21A0361-19 File ID: 02092120ECD5.D

Sampled: 01/25/21 12:25 Prepared: 02/05/21 16:51 Analyzed: 02/09/21 23:30

Solids: 83.72 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BJB0165 Sequence: SJB0231

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.565	8.588	0.023	59798.5	171	8.4
	* 2	9.394	9.427	0.033	49369.5	186	
Aroclor 1254	* 1	9.841	9.862	0.021	63754	109	4.7
	2	10.174	10.207	0.033	50084.4	104	
Aroclor 1260	* 1	11.552	11.56667	0.0147	35303.2	56.3	26.3
	2	12.317	12.3385	0.0215	35477.25	43.2	

* Column used for quantitation

Analytical Resources, Incorporated
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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 21A0361-23 File ID: 02092124ECD5.D

Sampled: 01/25/21 10:50 Prepared: 02/05/21 16:51 Analyzed: 02/10/21 00:53

Solids: 87.83 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BJB0165 Sequence: SJB0231

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.564	8.588	0.024	23616.5	67.3	18.9
	2	9.393	9.427	0.034	13982	55.7	
Aroclor 1254	* 1	9.842	9.862	0.02	49588	75.3	13.9
	2	10.178	10.207	0.029	31460.8	65.5	
Aroclor 1260	* 1	11.552	11.56667	0.0147	20870	48.3	28.6
	2	12.315	12.3385	0.0235	19864.5	36.2	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 21A0361-25 File ID: 02092125ECD5.D

Sampled: 01/25/21 11:30 Prepared: 02/05/21 16:51 Analyzed: 02/10/21 01:13

Solids: 92.94 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BJB0165 Sequence: SJB0231

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.564	8.588	0.024	78654.75	1040	1.9
	* 2	9.393	9.427	0.034	60054.25	1060	
Aroclor 1254	1	9.838	9.862	0.024	91411.4	603	6.
	* 2	10.181	10.207	0.026	70642.2	640	
Aroclor 1260	* 1	11.548	11.56667	0.0187	66532.2	533	13.6
	2	12.315	12.3385	0.0235	65748	465	

* Column used for quantitation

Analytical Resources, Incorporated
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DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Soil Laboratory ID: 21A0361-27 File ID: 02092126ECD5.D

Sampled: 01/25/21 11:40 Prepared: 02/05/21 16:51 Analyzed: 02/10/21 01:34

Solids: 88.17 Preparation: EPA 3546 (Microwave) Instrument: ECD7

Batch: BJB0165 Sequence: SJB0231

GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.568	8.588	0.02	24317.75	65.9	39.4
	2	9.398	9.427	0.029	14106.75	44.2	
Aroclor 1254	* 1	9.845	9.862	0.017	44232.6	66.5	19.8
	2	10.177	10.207	0.03	30006.4	54.5	
Aroclor 1260	* 1	11.555	11.56667	0.0117	17762.2	29.8	36.5
	2	12.319	12.3385	0.0195	17586.25	20.6	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, Inc.   SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc   Project: ICS-Former NW Cooperage

Matrix: Soil   Laboratory ID: 21A0361-31   File ID: 02092128ECD5.D

Sampled: 01/25/21 09:35   Prepared: 02/05/21 16:51   Analyzed: 02/10/21 02:15

Solids: 85.05   Preparation: EPA 3546 (Microwave)   Instrument: ECD7

Batch: BJB0165   Sequence: SJB0231

GC Column(1): ZB5   GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.569	8.588	0.019	20380.25	56.9	33.
	2	9.399	9.427	0.028	11813.5	40.8	
Aroclor 1254	* 1	9.848	9.862	0.014	39382.6	57.7	28.7
	2	10.178	10.207	0.029	22431	43.2	
Aroclor 1260	* 1	11.557	11.56667	0.00967	14005.2	26.1	11.3
	2	12.321	12.3385	0.0175	14699.25	23.3	

* Column used for quantitation

Analytical Resources, Incorporated
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HOLDING TIME SUMMARY

Analysis: EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
P8-20N-1 21A0361-01	01/25/21 15:40	01/26/21 14:20	02/05/21 16:51	11	14	02/11/21 19:59	6	40	
P8-20N-5 21A0361-03	01/25/21 15:50	01/26/21 14:20	02/05/21 16:51	11	14	02/09/21 19:23	4	40	
P8-10NW-1 21A0361-05	01/25/21 15:00	01/26/21 14:20	02/05/21 16:51	11	14	02/09/21 19:44	4	40	
P8-10NW-5 21A0361-07	01/25/21 15:10	01/26/21 14:20	02/05/21 16:51	11	14	02/09/21 20:05	4	40	
P8-15SW-1 21A0361-09	01/25/21 14:15	01/26/21 14:20	02/05/21 16:51	11	14	02/09/21 21:06	4	40	
P8-15SW-5 21A0361-11	01/25/21 14:25	01/26/21 14:20	02/05/21 16:51	11	14	02/09/21 22:08	4	40	
P8-10SE-1 21A0361-13	01/25/21 13:00	01/26/21 14:20	02/05/21 16:51	11	14	02/11/21 20:20	6	40	
P8-10SE-5 21A0361-15	01/25/21 13:10	01/26/21 14:20	02/05/21 16:51	11	14	02/09/21 22:49	4	40	
P8-10NE-1 21A0361-17	01/25/21 12:15	01/26/21 14:20	02/05/21 16:51	11	14	02/09/21 23:10	4	40	
P8-10NE-5 21A0361-19	01/25/21 12:25	01/26/21 14:20	02/05/21 16:51	11	14	02/09/21 23:30	4	40	
P8-7W-1 21A0361-21	01/25/21 10:40	01/26/21 14:20	02/05/21 16:51	11	14	02/11/21 20:40	6	40	
P8-7W-5 21A0361-23	01/25/21 10:50	01/26/21 14:20	02/05/21 16:51	11	14	02/10/21 00:53	4	40	
P8-10E-1 21A0361-25	01/25/21 11:30	01/26/21 14:20	02/05/21 16:51	11	14	02/10/21 01:13	4	40	
P8-10E-5 21A0361-27	01/25/21 11:40	01/26/21 14:20	02/05/21 16:51	11	14	02/10/21 01:34	4	40	
P8-10N-1 21A0361-29	01/25/21 09:25	01/26/21 14:20	02/05/21 16:51	11	14	02/11/21 21:01	6	40	
P8-10N-5 21A0361-31	01/25/21 09:35	01/26/21 14:20	02/05/21 16:51	11	14	02/10/21 02:15	4	40	
Matrix Spike BJB0165-MS1	01/25/21 15:10	01/26/21 14:20	02/05/21 16:51	11	14	02/09/21 20:25	4	40	
Matrix Spike Dup BJB0165-MSD1	01/25/21 15:10	01/26/21 14:20	02/05/21 16:51	11	14	02/09/21 20:46	4	40	

* Indicates hold time exceedance.

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METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Solid Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	8.0	20.0	ug/kg
Aroclor 1016 [2C]	8.0	20.0	ug/kg
Aroclor 1221	8.0	20.0	ug/kg
Aroclor 1221 [2C]	8.0	20.0	ug/kg
Aroclor 1232	8.0	20.0	ug/kg
Aroclor 1232 [2C]	8.0	20.0	ug/kg
Aroclor 1242	8.0	20.0	ug/kg
Aroclor 1242 [2C]	8.0	20.0	ug/kg
Aroclor 1248	8.0	20.0	ug/kg
Aroclor 1248 [2C]	8.0	20.0	ug/kg
Aroclor 1254	8.0	20.0	ug/kg
Aroclor 1254 [2C]	8.0	20.0	ug/kg
Aroclor 1260	9.3	20.0	ug/kg
Aroclor 1260 [2C]	9.3	20.0	ug/kg
Aroclor 1262	9.3	20.0	ug/kg
Aroclor 1262 [2C]	9.3	20.0	ug/kg
Aroclor 1268	9.3	20.0	ug/kg
Aroclor 1268 [2C]	9.3	20.0	ug/kg

Analytical Resources, Incorporated
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METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Water Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	0.018	0.100	ug/L
Aroclor 1016 [2C]	0.018	0.100	ug/L
Aroclor 1221	0.018	0.100	ug/L
Aroclor 1221 [2C]	0.018	0.100	ug/L
Aroclor 1232	0.018	0.100	ug/L
Aroclor 1232 [2C]	0.018	0.100	ug/L
Aroclor 1242	0.018	0.100	ug/L
Aroclor 1242 [2C]	0.018	0.100	ug/L
Aroclor 1248	0.018	0.100	ug/L
Aroclor 1248 [2C]	0.018	0.100	ug/L
Aroclor 1254	0.018	0.100	ug/L
Aroclor 1254 [2C]	0.018	0.100	ug/L
Aroclor 1260	0.017	0.100	ug/L
Aroclor 1260 [2C]	0.017	0.100	ug/L
Aroclor 1262	0.017	0.100	ug/L
Aroclor 1262 [2C]	0.017	0.100	ug/L
Aroclor 1268	0.017	0.100	ug/L
Aroclor 1268 [2C]	0.017	0.100	ug/L

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-20N-1

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-01 C	SDG:	21A0361
Sampled:	01/25/21 15:40	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-014
% Solids:	84.79	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 11:26
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.23 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	3.06	5	0.0269	0.128	D

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-20N-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-03 C	SDG:	21A0361
Sampled:	01/25/21 15:50	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-020
% Solids:	82.91	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 11:38
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.238 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.179	1	0.00532	0.0253	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-10NW-1

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-05 C	SDG:	21A0361
Sampled:	01/25/21 15:00	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-021
% Solids:	89.39	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 11:41
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.224 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.402	1	0.00524	0.0250	

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Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-10NW-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-07 C	SDG:	21A0361
Sampled:	01/25/21 15:10	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-022
% Solids:	80.29	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 11:43
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.24 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.145	1	0.00545	0.0259	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

P8-15SW-1

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-09 C	SDG:	21A0361
Sampled:	01/25/21 14:15	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-036
% Solids:	94.77	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 12:14
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.238 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	2.66	5	0.0233	0.111	D

Analytical Resources, Incorporated
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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-15SW-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-11 C	SDG:	21A0361
Sampled:	01/25/21 14:25	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-023
% Solids:	92.52	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 11:47
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.213 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0762	1	0.00533	0.0254	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-10SE-1

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-13 C	SDG:	21A0361
Sampled:	01/25/21 13:00	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-024
% Solids:	94.98	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 11:49
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.279 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0255	1	0.00396	0.0189	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

P8-10SE-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-15 C	SDG:	21A0361
Sampled:	01/25/21 13:10	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-025
% Solids:	89.61	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 11:51
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.228 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.120	1	0.00514	0.0245	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-10NE-1

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-17 C	SDG:	21A0361
Sampled:	01/25/21 12:15	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-026
% Solids:	80.74	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 11:53
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.281 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.522	1	0.00463	0.0220	

Analytical Resources, Incorporated
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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-10NE-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-19 C	SDG:	21A0361
Sampled:	01/25/21 12:25	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-027
% Solids:	83.66	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 11:55
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.217 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.158	1	0.00578	0.0275	

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Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-7W-1

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-21 C	SDG:	21A0361
Sampled:	01/25/21 10:40	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-030
% Solids:	94.66	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 12:01
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.263 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0575	1	0.00422	0.0201	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

P8-7W-5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	21A0361-23 C	SDG:	21A0361
Sampled:	01/25/21 10:50	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-031
% Solids:	92.84	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 12:03
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.231 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.334	1	0.00490	0.0233	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-10E-1

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	21A0361-25 C	SDG:	21A0361
Sampled:	01/25/21 11:30	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-032
% Solids:	93.40	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 12:06
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.238 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.364	1	0.00472	0.0225	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-10E-5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	21A0361-27 C	SDG:	21A0361
Sampled:	01/25/21 11:40	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-033
% Solids:	90.71	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 12:08
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.215 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0832	1	0.00538	0.0256	

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-10N-1

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	21A0361-29 C	SDG:	21A0361
Sampled:	01/25/21 09:25	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-034
% Solids:	92.13	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 12:10
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.224 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0695	1	0.00509	0.0242	

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B
Total Metals

P8-10N-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-31 C	SDG:	21A0361
Sampled:	01/25/21 09:35	Prepared:	02/01/21 07:05	File ID:	SMM 02-04-21-035
% Solids:	86.10	Preparation:	SMM EPA 7471B	Analyzed:	02/04/21 12:12
Batch:	BJA0791	Sequence:	SJB0070	Initial/Final:	0.238 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	EB00013

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.188	1	0.00512	0.0244	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 7471B

Laboratory: Analytical Resources, Inc.   SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc   Project: ICS-Former NW Cooperage

Batch: BJA0791   Batch Matrix: Solid   Preparation: SMM EPA 7471B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
P8-20N-1	21A0361-01	SMM 02-04-21-014	02/01/21 07:05	
P8-20N-5	21A0361-03	SMM 02-04-21-020	02/01/21 07:05	
P8-10NW-1	21A0361-05	SMM 02-04-21-021	02/01/21 07:05	
P8-10NW-5	21A0361-07	SMM 02-04-21-022	02/01/21 07:05	
P8-15SW-1	21A0361-09	SMM 02-04-21-036	02/01/21 07:05	
P8-15SW-5	21A0361-11	SMM 02-04-21-023	02/01/21 07:05	
P8-10SE-1	21A0361-13	SMM 02-04-21-024	02/01/21 07:05	
P8-10SE-5	21A0361-15	SMM 02-04-21-025	02/01/21 07:05	
P8-10NE-1	21A0361-17	SMM 02-04-21-026	02/01/21 07:05	
P8-10NE-5	21A0361-19	SMM 02-04-21-027	02/01/21 07:05	
P8-7W-1	21A0361-21	SMM 02-04-21-030	02/01/21 07:05	
P8-7W-5	21A0361-23	SMM 02-04-21-031	02/01/21 07:05	
P8-10E-1	21A0361-25	SMM 02-04-21-032	02/01/21 07:05	
P8-10E-5	21A0361-27	SMM 02-04-21-033	02/01/21 07:05	
P8-10N-1	21A0361-29	SMM 02-04-21-034	02/01/21 07:05	
P8-10N-5	21A0361-31	SMM 02-04-21-035	02/01/21 07:05	
Blank	BJA0791-BLK1	SMM 02-04-21-012	02/01/21 07:05	
LCS	BJA0791-BS1	SMM 02-04-21-013	02/01/21 07:05	
P8-20N-1	BJA0791-DUP1	SMM 02-04-21-015	02/01/21 07:05	
P8-20N-1	BJA0791-MS1	SMM 02-04-21-016	02/01/21 07:05	
P8-20N-1	BJA0791-MSD1	SMM 02-04-21-019	02/01/21 07:05	

BJA791

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Mercury Digestion Log

Prep Code: SMM
Analyst: ML, BC
Bath Temp: 96°C
Start Time: 0810
Matrix: Soil
Date: 02/01/21
End Time: 0915

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
21A0361-1	C		0.230	50	1		
-3			0.238				
-5			0.224				
-7			0.240				
-9			0.238				
-11			0.213				
-13			0.279				
-15			0.228				
-17			0.281				
-19			0.217				
-21			0.263				
-23			0.231				
-25			0.238				
-27			0.215				
-29			0.224				
-31			0.238				
BJA0791-blk1	—		—				
-bs1	—		—				
-Dup1	—		0.228				21A0361-1
-ms1	—		0.230				
-msD1	—		0.231				
				BC 02/01/21			

Chemical/Reagent ID:

HNO_3: F10976
H_2SO_4: I 1107
HCl:
5% $K_2S_2O_8$: J447
5% $KMnO_4$: I16915
Digest Tube Lot: 2008043

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Blank

Form I

METHOD BLANK DATA SHEET

EPA 7471B

Total Metals

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Batch: BJA0791
Laboratory ID: BJA0791-BLK1
Prepared: 02/01/21 07:05
Matrix: Solid
Preparation: SMM EPA 7471B
Analyzed: 02/04/21 11:02
Sequence: SJB0070
Calibration: EB00013
Instrument: HYDRA

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	ND	1	0.00525	0.0250	U

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY

EPA 7471B

Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	02/04/21 11:16
Batch:	BJA0791	Laboratory ID:	BJA0791-BS1
Preparation:	SMM EPA 7471B	Sequence Name:	LCS
Initial/Final:	0.2 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Mercury	0.500	0.408		81.6	80 - 120

* Indicates values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-20N-1

DUPLICATES

EPA 7471B

Total Metals

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Matrix: Solid
Laboratory ID: BJA0791-DUP1
Batch: BJA0791
Lab Source ID: 21A0361-01
Preparation: SMM EPA 7471B
Initial/Final: 0.228 g / 50 mL
Source Sample Name: P8-20N-1
% Solids: 84.79

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg dry)	C	DUPLICATE CONCENTRATION (mg/kg dry)	C	RPD %	Q
Mercury	20	3.06	D	3.17	D	3.44	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-20N-1

MS / MS DUPLICATE RECOVERY
EPA 7471B
Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	02/04/21 11:30
Batch:	BJA0791	Laboratory ID:	BJA0791-MS1
Preparation:	SMM EPA 7471B	Sequence Name:	Matrix Spike
Initial/Final:	0.23 g / 50 mL	Source Sample:	P8-20N-1

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Mercury	0.256	3.06	D	4.23	HC, D	454 *	75 - 125

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

P8-20N-1

MS / MS DUPLICATE RECOVERY
EPA 7471B
Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	02/04/21 11:36
Batch:	BJA0791	Laboratory ID:	BJA0791-MSD1
Preparation:	SMM EPA 7471B	Sequence Name:	Matrix Spike Dup
Initial/Final:	0.231 g / 50 mL	Source Sample:	P8-20N-1

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Mercury	0.255	3.53	HC, D	181 *	18.1	20	75 - 125

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EB00013	Instrument:	HYDRA
Calibration Date:	02/04/2021 10:39		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Mercury	0	0	0.0001	5270000	0.0005	5190000	0.001	5148000	0.002	5057500	0.005	5027400

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EB00013	Instrument:	HYDRA
Calibration Date:	02/04/2021 10:39		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Mercury	4282150	49.0	1.0000		0.99	

SMM 02-04-21

Method: ARI 5 ppb (NO 0.05) Operator: Admin Date of Analysis: 04 Feb 2021 10:39:21

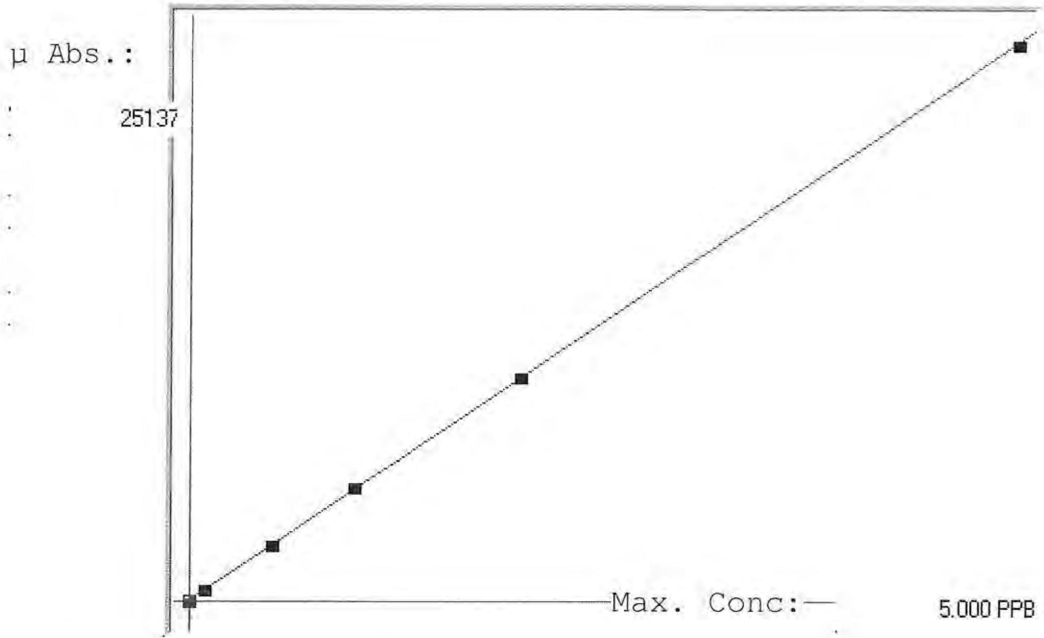
Sample ID	Mean	Units		Date	Method
SEQ-CAL1	-24	PPB		04 Feb 2021 10:39:27	ARI 5 ppb (NO 0.05)
SEQ-CAL2	527	PPB		04 Feb 2021 10:41:28	ARI 5 ppb (NO 0.05)
SEQ-CAL3	2595	PPB		04 Feb 2021 10:43:28	ARI 5 ppb (NO 0.05)
SEQ-CAL4	5148	PPB		04 Feb 2021 10:45:29	ARI 5 ppb (NO 0.05)
SEQ-CAL5	10115	PPB		04 Feb 2021 10:47:29	ARI 5 ppb (NO 0.05)
SEQ-CAL6	25137	PPB		04 Feb 2021 10:49:30	ARI 5 ppb (NO 0.05)
SEQ-ICV	102.1% 4.0849	PPB	✓	04 Feb 2021 10:52:05	ARI 5 ppb (NO 0.05)
SEQ-ICB	-0.0428	PPB	✓	04 Feb 2021 10:54:03	ARI 5 ppb (NO 0.05)
SEQ-CRL	92.8% 0.0928	PPB	✓	04 Feb 2021 10:56:06	ARI 5 ppb (NO 0.05)
SEQ-CCV	102.0% 4.0789	PPB	✓	04 Feb 2021 10:58:07	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0423	PPB	✓	04 Feb 2021 11:00:05	ARI 5 ppb (NO 0.05)
BJA0791-BLK1	-0.0064	PPB	✓	04 Feb 2021 11:02:09	ARI 5 ppb (NO 0.05)
BJA0791-BS1	1.5791	PPB	✗ not reporting	04 Feb 2021 11:04:08	ARI 5 ppb (NO 0.05)
21A0361-01	11.4194	PPB	Conc. High, not reporting	04 Feb 2021 11:06:06	ARI 5 ppb (NO 0.05)
BJA0791-DUP1	12.0462	PPB		04 Feb 2021 11:08:06	ARI 5 ppb (NO 0.05)
BJA0791-MS1	15.7571	PPB		04 Feb 2021 11:10:15	ARI 5 ppb (NO 0.05)
BJA0791-MSD1	13.4093	PPB		04 Feb 2021 11:12:24	ARI 5 ppb (NO 0.05)
BJA0791-BS1	1.6327	PPB	✓	04 Feb 2021 11:16:15	ARI 5 ppb (NO 0.05)
21A0361-01	2.3904	PPB		04 Feb 2021 11:26:24	ARI 5 ppb (NO 0.05)
BJA0791-DUP1	2.4526	PPB	✓	04 Feb 2021 11:28:28	ARI 5 ppb (NO 0.05)
BJA0791-MS1	3.2986	PPB	conc. High for spike	04 Feb 2021 11:30:34	ARI 5 ppb (NO 0.05)
SEQ-CCV	99.6% 3.9860	PPB	✓	04 Feb 2021 11:32:40	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0325	PPB	✓	04 Feb 2021 11:34:45	ARI 5 ppb (NO 0.05)
BJA0791-MSD1	2.7621	PPB	Conc. High for spike	04 Feb 2021 11:36:53	ARI 5 ppb (NO 0.05)
21A0361-03	0.7049	PPB		04 Feb 2021 11:38:58	ARI 5 ppb (NO 0.05)
21A0361-05	1.6082	PPB		04 Feb 2021 11:41:05	ARI 5 ppb (NO 0.05)
21A0361-07	0.5607	PPB		04 Feb 2021 11:43:09	ARI 5 ppb (NO 0.05)
21A0361-09	11.9069	PPB	not reporting	04 Feb 2021 11:45:15	ARI 5 ppb (NO 0.05)
21A0361-11	0.3005	PPB		04 Feb 2021 11:47:18	ARI 5 ppb (NO 0.05)
21A0361-13	0.1354	PPB		04 Feb 2021 11:49:25	ARI 5 ppb (NO 0.05)
21A0361-15	0.4917	PPB		04 Feb 2021 11:51:29	ARI 5 ppb (NO 0.05)
21A0361-17	2.3689	PPB		04 Feb 2021 11:53:33	ARI 5 ppb (NO 0.05)
21A0361-19	0.5723	PPB		04 Feb 2021 11:55:37	ARI 5 ppb (NO 0.05)
SEQ-CCV	98.6% 3.9431	PPB	✓	04 Feb 2021 11:57:43	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0307	PPB	✓	04 Feb 2021 11:59:46	ARI 5 ppb (NO 0.05)
21A0361-21	0.2865	PPB		04 Feb 2021 12:01:54	ARI 5 ppb (NO 0.05)
21A0361-23	1.4324	PPB		04 Feb 2021 12:03:59	ARI 5 ppb (NO 0.05)
21A0361-25	1.6190	PPB		04 Feb 2021 12:06:05	ARI 5 ppb (NO 0.05)
21A0361-27	0.3246	PPB		04 Feb 2021 12:08:11	ARI 5 ppb (NO 0.05)
21A0361-29	0.2867	PPB		04 Feb 2021 12:10:17	ARI 5 ppb (NO 0.05)
21A0361-31	0.7709	PPB		04 Feb 2021 12:12:21	ARI 5 ppb (NO 0.05)
21A0361-09	2.3997	PPB		04 Feb 2021 12:14:26	ARI 5 ppb (NO 0.05)
BJA0795-BLK1	-0.0218	PPB	✓	04 Feb 2021 12:16:29	ARI 5 ppb (NO 0.05)
BJA0795-BS1	1.6196	PPB	✓ %R = 80%	04 Feb 2021 12:18:34	ARI 5 ppb (NO 0.05)
21A0352-01	0.0247	PPB		04 Feb 2021 12:20:39	ARI 5 ppb (NO 0.05)
SEQ-CCV	97.3% 3.8909	PPB	✓	04 Feb 2021 12:22:44	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0333	PPB	✓	04 Feb 2021 12:24:47	ARI 5 ppb (NO 0.05)
BJA0795-DUP1	0.0276	PPB	✓ no RPD	04 Feb 2021 12:26:55	ARI 5 ppb (NO 0.05)
BJA0795-MS1	0.9942	PPB	✓ %R = 96%	04 Feb 2021 12:29:00	ARI 5 ppb (NO 0.05)
BJA0795-MSD1	1.0540	PPB	✓ %R = 102%, RPD=6	04 Feb 2021 12:31:04	ARI 5 ppb (NO 0.05)
21A0323-01	0.6652	PPB		04 Feb 2021 12:33:09	ARI 5 ppb (NO 0.05)
21A0352-02	0.0317	PPB		04 Feb 2021 12:35:14	ARI 5 ppb (NO 0.05)
21A0352-03	0.0588	PPB		04 Feb 2021 12:37:19	ARI 5 ppb (NO 0.05)
21A0352-05	0.2983	PPB		04 Feb 2021 12:39:25	ARI 5 ppb (NO 0.05)
21A0352-06	0.0432	PPB		04 Feb 2021 12:41:29	ARI 5 ppb (NO 0.05)
21A0352-07	0.1505	PPB		04 Feb 2021 12:43:34	ARI 5 ppb (NO 0.05)
21A0352-09	0.0276	PPB		04 Feb 2021 12:45:38	ARI 5 ppb (NO 0.05)
SEQ-CCV	97.1% 3.8845	PPB	✓	04 Feb 2021 12:47:42	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0287	PPB	✓	04 Feb 2021 12:49:45	ARI 5 ppb (NO 0.05)
21A0352-10	0.0287	PPB		04 Feb 2021 12:51:54	ARI 5 ppb (NO 0.05)

SMM 02-04-21

Method: ARI 5 ppb (NO 0.05) Operator: Admin Date of Analysis: 04 Feb 2021 10:39:21

Sample ID	Mean	Units		Date	Method
21A0352-11	0.1363	PPB		04 Feb 2021 12:53:58	ARI 5 ppb (NO 0.05)
21A0352-27	0.7594	PPB		04 Feb 2021 12:56:02	ARI 5 ppb (NO 0.05)
21A0352-28	0.4714	PPB		04 Feb 2021 12:58:06	ARI 5 ppb (NO 0.05)
21A0352-29	0.1195	PPB		04 Feb 2021 13:00:11	ARI 5 ppb (NO 0.05)
21A0352-31	4.1337	PPB		04 Feb 2021 13:02:15	ARI 5 ppb (NO 0.05)
21A0352-33	0.4686	PPB		04 Feb 2021 13:04:20	ARI 5 ppb (NO 0.05)
21A0352-34	0.0282	PPB		04 Feb 2021 13:06:29	ARI 5 ppb (NO 0.05)
21A0352-35	0.2028	PPB		04 Feb 2021 13:08:34	ARI 5 ppb (NO 0.05)
21A0352-37	0.0657	PPB		04 Feb 2021 13:10:38	ARI 5 ppb (NO 0.05)
SEQ-CCV	95.4% 3.8144	PPB	✓	04 Feb 2021 13:12:42	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0299	PPB	✓	04 Feb 2021 13:14:46	ARI 5 ppb (NO 0.05)
21A0352-38	0.0621	PPB		04 Feb 2021 13:16:54	ARI 5 ppb (NO 0.05)
21A0352-39	0.1759	PPB		04 Feb 2021 13:18:58	ARI 5 ppb (NO 0.05)
BJB0054-BLK1	-0.0095	PPB	✓	04 Feb 2021 13:21:03	ARI 5 ppb (NO 0.05)
BJB0054-BS1	1.9222	PPB	✓ %R=96%	04 Feb 2021 13:23:07	ARI 5 ppb (NO 0.05)
21A0377-01	0.2995	PPB		04 Feb 2021 13:25:11	ARI 5 ppb (NO 0.05)
BJB0054-DUP1	0.6289	PPB	x RPD HIGH	04 Feb 2021 13:27:16	ARI 5 ppb (NO 0.05)
BJB0054-MS1	1.7218	PPB	x %R=142%	04 Feb 2021 13:29:21	ARI 5 ppb (NO 0.05)
BJB0054-MSD1	1.4807	PPB	✓ %R=118%, RPD=15	04 Feb 2021 13:31:26	ARI 5 ppb (NO 0.05)
21A0377-02	0.1340	PPB		04 Feb 2021 13:33:32	ARI 5 ppb (NO 0.05)
21A0377-03	0.9817	PPB		04 Feb 2021 13:35:37	ARI 5 ppb (NO 0.05)
SEQ-CCV	93.8% 3.7540	PPB	✓	04 Feb 2021 13:37:43	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0312	PPB	✓	04 Feb 2021 13:39:47	ARI 5 ppb (NO 0.05)
21A0377-04	57.7202	PPB	not reporting	04 Feb 2021 13:41:54	ARI 5 ppb (NO 0.05)
21A0377-04	3.4285	PPB		04 Feb 2021 13:50:11	ARI 5 ppb (NO 0.05)
21A0377-05	0.1380	PPB		04 Feb 2021 13:52:15	ARI 5 ppb (NO 0.05)
21A0377-06	0.2761	PPB		04 Feb 2021 13:54:22	ARI 5 ppb (NO 0.05)
21A0377-07	0.6632	PPB		04 Feb 2021 13:56:26	ARI 5 ppb (NO 0.05)
21A0377-08	1.3350	PPB		04 Feb 2021 13:58:32	ARI 5 ppb (NO 0.05)
21A0377-09	0.3244	PPB		04 Feb 2021 14:00:36	ARI 5 ppb (NO 0.05)
21A0377-10	0.4271	PPB		04 Feb 2021 14:02:42	ARI 5 ppb (NO 0.05)
21A0377-11	0.6908	PPB		04 Feb 2021 14:04:46	ARI 5 ppb (NO 0.05)
21A0377-12	0.0891	PPB		04 Feb 2021 14:06:51	ARI 5 ppb (NO 0.05)
SEQ-CCV	94.2% 3.7684	PPB	✓	04 Feb 2021 14:08:56	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0245	PPB	✓	04 Feb 2021 14:10:59	ARI 5 ppb (NO 0.05)
21A0377-13	0.0797	PPB		04 Feb 2021 14:13:07	ARI 5 ppb (NO 0.05)
21A0377-14	0.0439	PPB		04 Feb 2021 14:15:12	ARI 5 ppb (NO 0.05)
21A0390-01	0.1472	PPB		04 Feb 2021 14:17:18	ARI 5 ppb (NO 0.05)
21A0390-02	0.0053	PPB		04 Feb 2021 14:19:23	ARI 5 ppb (NO 0.05)
21A0393-01	-0.0042	PPB		04 Feb 2021 14:21:27	ARI 5 ppb (NO 0.05)
SEQ-CCV	89.8% 3.5921	PPB	✓	04 Feb 2021 14:25:41	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0253	PPB	✓	04 Feb 2021 14:27:47	ARI 5 ppb (NO 0.05)

ARI 5 ppb (NO 0.05)



Linear

A= 0.0000e+000

B= 1.9911e-004

C= -1.0141e-002

Rho= 0.9999847

Accept=Accepted

Accepted Date=

02/04/21 10:52

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
SEQ-CAL1 - Blank	0.000	-0.015	-0.015	-23	1.886	-21	-25	-25		
SEQ-CAL2 - 0.1 PPB	0.100	0.095	-0.005	527	1.6 %	517	537	528		
SEQ-CAL3 - 0.5 PPB	0.500	0.507	0.007	2595	2.1 %	2531	2591	2663		
SEQ-CAL4 - 1.0 PPB	1.000	1.015	0.015	5147	1.8 %	5023	5235	5185		
SEQ-CAL5 - 2.0 PPB	2.000	2.004	0.004	10114	0.8 %	10004	10181	10159		
SEQ-CAL6 - 5.0 PPB	5.000	4.995	-0.005	25137	1.0 %	24825	25149	25437		

Mercury Analysis Log

Analyst: BC
Instrument: HYDRA
SEQ: SJB70

Date: 02/04/21
Page: 1 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
SEQ-CAL1	SMM	1X		
-CAL2				
-CAL3				
-CAL4				
-CAL5				
-CAL6				
-ICV			4.08	✓
-ICB			-0.0428	✓
-CRL			0.092	✓
-CCV			4.07	✓
-CCB			-0.0423	✓
BJA791-BLK1			-0.0064	✓
-BS1			1.57	X %R=78%
21A361-1			11.4	Conc. HIGH, not reporting
BJA791-DUP1			12.0	
-MS1			15.7	
-MSD1			13.4	
-BS1			1.63	✓ %R=81.6%
21A361-1		5X	2.3	
BJA791-DUP1			2.4	✓ RPD=2.5
-MS1			3.2	Conc. High for spike
SEQ-CCV		1X	3.98	✓
-CCB			-0.0325	✓
BJA79-MSD1		5X	2.76	conc. High for spike
21A361-3		1X		
-5				
-7				
-9				Conc. HIGH, not reporting
-11				
-13				

Chemical/Reagent ID:
10% $SnCl_2$: J992
14% $NH_2OH/NaCl$: I11008

Standard ID:
Standard: J1278-J1283
ICV/CCV: J1284

5026F

Revision 4
1/26/01

Mercury Analysis Log

Analyst: BC
Instrument: HYDRA

Date: 02/04/21
Page: 2 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
21A361-15	SMM	1X		
-17				
-19				
SEQ-CCV			3.94	✓
-CCB			-0.0307	✓
21A361-21				
-23				
-25				
-27				
-29				
-31				
-a		5X		
BJA795-BLK1		1X	-0.0218	✓
-BS1			1.61	✓ %R= 80.9%
21A352-1			0.02	
SEQ-CCV			3.89	✓
-CCB			-0.0333	✓
BJA795-DUP1			0.02	✓ no RPD
-MS1			0.99	✓ %R= 96.9%
-MSD1			1.05	✓ %R= 102.9%, RPD= 5.8
21A323-1				
21A352-2				
-3				
-5				
-6				
-7				
-9				
SEQ-CCV			3.88	✓
-CCB			-0.0287	✓
21A352-10				

Chemical/Reagent ID:
10% $SnCl_2$: —
14% NH_2OH/NaCl: —

Standard ID:
Standard: —
ICV/CCV: —

Mercury Analysis Log

Analyst: BC
Instrument: HYDRA

Date: 02/04/21
Page: 3 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
21A352-11	SMM	1X		
-27				
-28				
-29				
-31				
-33				
-34				
-35				
-37				
SEQ-CCV			3.81	✓
-CCB			-0.0299	✓
21A352-38				
-39				
BJB54-BLK1			-0.0095	✓
-BS1			1.92	✓ %R=96.1%
21A377-1			0.29	
BJB54-DUP1			0.62	X RPD HIGH
-MS1			1.72	X %R=142%
-MSD1			1.48	✓ %R=118%, RPD=15
21A377-2				
-3				
SEQ-CCV			3.75	✓
-CCB			-0.0312	✓
21A377-4				conc. HIGH, not reporting
-4		20X		
-5		1X		
-6				
-7				
-8				
-9				

Chemical/Reagent ID:
10% $SnCl_2$: —
14% NH_2OH/NaCl: —

Standard ID:
Standard: —
ICV/CCV: —

Mercury Analysis Log

Analyst: BC
Instrument: HYDRA

Date: 02/04/21
Page: 4 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
21A377-10	SMM	1X		
↓ -11	↓	↓		
-12				
SEQ-CCV			3.76	✓
↓ -CCB			-0.0245	✓
21A377-13				
↓ -14				
21A390-1				
↓ -2				
21A393-1				
SEQ-CCV			3.59	✓
↓ -CCB	↓	↓	-0.0253	✓
		BC		
			02/04/21	

Chemical/Reagent ID: —
10% $SnCl_2$:

14% NH_2OH/NaCl: —

Standard ID: —
Standard:

ICV/CCV: —

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 7471B

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: HYDRA
Calibration: EB00013
Control Limt: +/- 20.00%
Sequence: SJB0070

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SJB0070-ICV1	Mercury	0.0040000	0.00408	102	mg/L	EPA 7471B
SJB0070-CCV1	Mercury	0.0040000	0.00408	102	mg/L	EPA 7471B
SJB0070-CCV2	Mercury	0.0040000	0.00399	99.7	mg/L	EPA 7471B
SJB0070-CCV3	Mercury	0.0040000	0.00394	98.6	mg/L	EPA 7471B
SJB0070-CCV4	Mercury	0.0040000	0.00389	97.3	mg/L	EPA 7471B
SJB0070-CCV5	Mercury	0.0040000	0.00388	97.1	mg/L	EPA 7471B
SJB0070-CCV6	Mercury	0.0040000	0.00381	95.4	mg/L	EPA 7471B
SJB0070-CCV7	Mercury	0.0040000	0.00375	93.8	mg/L	EPA 7471B
SJB0070-CCV8	Mercury	0.0040000	0.00377	94.2	mg/L	EPA 7471B
SJB0070-CCV9	Mercury	0.0040000	0.00359	89.8	mg/L	EPA 7471B

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 7471B

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Instrument ID: HYDRA
Sequence: SJB0070

SDG: 21A0361
Project: ICS-Former NW Cooperage
Calibration: EB00013
Date Analyzed: 02/04/21 10:54

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SJB0070-ICB1	Mercury	-0.000043	0.000021	0.000100	mg/L	
SJB0070-CCB1	Mercury	-0.000042	0.000021	0.000100	mg/L	
SJB0070-CCB2	Mercury	-0.000033	0.000021	0.000100	mg/L	
SJB0070-CCB3	Mercury	-0.000031	0.000021	0.000100	mg/L	
SJB0070-CCB4	Mercury	-0.000033	0.000021	0.000100	mg/L	
SJB0070-CCB5	Mercury	-0.000029	0.000021	0.000100	mg/L	
SJB0070-CCB6	Mercury	-0.000030	0.000021	0.000100	mg/L	
SJB0070-CCB7	Mercury	-0.000031	0.000021	0.000100	mg/L	
SJB0070-CCB8	Mercury	-0.000025	0.000021	0.000100	mg/L	
SJB0070-CCB9	Mercury	-0.000025	0.000021	0.000100	mg/L	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SJB0070
Instrument: HYDRA
Calibration: EB00013

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SJB0070-CAL1	SMM 02-04-21-001	NA	02/04/21 10:39
Cal Standard	SJB0070-CAL2	SMM 02-04-21-002	NA	02/04/21 10:41
Cal Standard	SJB0070-CAL3	SMM 02-04-21-003	NA	02/04/21 10:43
Cal Standard	SJB0070-CAL4	SMM 02-04-21-004	NA	02/04/21 10:45
Cal Standard	SJB0070-CAL5	SMM 02-04-21-005	NA	02/04/21 10:47
Cal Standard	SJB0070-CAL6	SMM 02-04-21-006	NA	02/04/21 10:49
Initial Cal Check	SJB0070-ICV1	SMM 02-04-21-007	NA	02/04/21 10:52
Initial Cal Blank	SJB0070-ICB1	SMM 02-04-21-008	NA	02/04/21 10:54
Instrument RL Check	SJB0070-CRL1	SMM 02-04-21-009	NA	02/04/21 10:56
Calibration Check	SJB0070-CCV1	SMM 02-04-21-010	NA	02/04/21 10:58
Calibration Blank	SJB0070-CCB1	SMM 02-04-21-011	NA	02/04/21 11:00
Blank	BJA0791-BLK1	SMM 02-04-21-012	Solid	02/04/21 11:02
LCS	BJA0791-BS1	SMM 02-04-21-013	Solid	02/04/21 11:16
P8-20N-1	21A0361-01	SMM 02-04-21-014	Solid	02/04/21 11:26
P8-20N-1	BJA0791-DUP1	SMM 02-04-21-015	Solid	02/04/21 11:28
P8-20N-1	BJA0791-MS1	SMM 02-04-21-016	Solid	02/04/21 11:30
Calibration Check	SJB0070-CCV2	SMM 02-04-21-017	NA	02/04/21 11:32
Calibration Blank	SJB0070-CCB2	SMM 02-04-21-018	NA	02/04/21 11:34
P8-20N-1	BJA0791-MSD1	SMM 02-04-21-019	Solid	02/04/21 11:36
P8-20N-5	21A0361-03	SMM 02-04-21-020	Solid	02/04/21 11:38
P8-10NW-1	21A0361-05	SMM 02-04-21-021	Solid	02/04/21 11:41
P8-10NW-5	21A0361-07	SMM 02-04-21-022	Solid	02/04/21 11:43
P8-15SW-5	21A0361-11	SMM 02-04-21-023	Solid	02/04/21 11:47
P8-10SE-1	21A0361-13	SMM 02-04-21-024	Solid	02/04/21 11:49
P8-10SE-5	21A0361-15	SMM 02-04-21-025	Solid	02/04/21 11:51
P8-10NE-1	21A0361-17	SMM 02-04-21-026	Solid	02/04/21 11:53
P8-10NE-5	21A0361-19	SMM 02-04-21-027	Solid	02/04/21 11:55
Calibration Check	SJB0070-CCV3	SMM 02-04-21-028	NA	02/04/21 11:57
Calibration Blank	SJB0070-CCB3	SMM 02-04-21-029	NA	02/04/21 11:59
P8-7W-1	21A0361-21	SMM 02-04-21-030	Solid	02/04/21 12:01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Sequence: SJB0070

SDG: 21A0361
Project: ICS-Former NW Cooperage
Instrument: HYDRA
Calibration: EB00013

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
P8-7W-5	21A0361-23	SMM 02-04-21-031	Solid	02/04/21 12:03
P8-10E-1	21A0361-25	SMM 02-04-21-032	Solid	02/04/21 12:06
P8-10E-5	21A0361-27	SMM 02-04-21-033	Solid	02/04/21 12:08
P8-10N-1	21A0361-29	SMM 02-04-21-034	Solid	02/04/21 12:10
P8-10N-5	21A0361-31	SMM 02-04-21-035	Solid	02/04/21 12:12
P8-15SW-1	21A0361-09	SMM 02-04-21-036	Solid	02/04/21 12:14
Calibration Check	SJB0070-CCV4	SMM 02-04-21-040	NA	02/04/21 12:22
Calibration Blank	SJB0070-CCB4	SMM 02-04-21-041	NA	02/04/21 12:24
Calibration Check	SJB0070-CCV5	SMM 02-04-21-052	NA	02/04/21 12:47
Calibration Blank	SJB0070-CCB5	SMM 02-04-21-053	NA	02/04/21 12:49
Calibration Check	SJB0070-CCV6	SMM 02-04-21-064	NA	02/04/21 13:12
Calibration Blank	SJB0070-CCB6	SMM 02-04-21-065	NA	02/04/21 13:14
Calibration Check	SJB0070-CCV7	SMM 02-04-21-076	NA	02/04/21 13:37
Calibration Blank	SJB0070-CCB7	SMM 02-04-21-077	NA	02/04/21 13:39
Calibration Check	SJB0070-CCV8	SMM 02-04-21-087	NA	02/04/21 14:08
Calibration Blank	SJB0070-CCB8	SMM 02-04-21-088	NA	02/04/21 14:10
Calibration Check	SJB0070-CCV9	SMM 02-04-21-094	NA	02/04/21 14:25
Calibration Blank	SJB0070-CCB9	SMM 02-04-21-095	NA	02/04/21 14:27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DETECTION LEVEL STANDARD
EPA 7471B

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: HYDRA
Calibration: EB00013
Sequence: SJB0070
Lab Sample ID: SJB0070-CRL1

Analyte	True	Found	%R	Units	QC Limts
Mercury	0.000100	0.000093	92.8	mg/L	70 - 130

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: EPA 7471B

Laboratory: Analytical Resources, Inc. SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
P8-20N-1 21A0361-01	01/25/21 15:40	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 11:26	10	28	
P8-20N-5 21A0361-03	01/25/21 15:50	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 11:38	10	28	
P8-10NW-1 21A0361-05	01/25/21 15:00	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 11:41	10	28	
P8-10NW-5 21A0361-07	01/25/21 15:10	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 11:43	10	28	
P8-15SW-1 21A0361-09	01/25/21 14:15	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 12:14	10	28	
P8-15SW-5 21A0361-11	01/25/21 14:25	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 11:47	10	28	
P8-10SE-1 21A0361-13	01/25/21 13:00	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 11:49	10	28	
P8-10SE-5 21A0361-15	01/25/21 13:10	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 11:51	10	28	
P8-10NE-1 21A0361-17	01/25/21 12:15	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 11:53	10	28	
P8-10NE-5 21A0361-19	01/25/21 12:25	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 11:55	10	28	
P8-7W-1 21A0361-21	01/25/21 10:40	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 12:01	10	28	
P8-7W-5 21A0361-23	01/25/21 10:50	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 12:03	10	28	
P8-10E-1 21A0361-25	01/25/21 11:30	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 12:06	10	28	
P8-10E-5 21A0361-27	01/25/21 11:40	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 12:08	10	28	
P8-10N-1 21A0361-29	01/25/21 09:25	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 12:10	10	28	
P8-10N-5 21A0361-31	01/25/21 09:35	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 12:12	10	28	
Duplicate BJA0791-DUP1	01/25/21 15:40	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 11:28	10	28	
Matrix Spike BJA0791-MS1	01/25/21 15:40	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 11:30	10	28	
Matrix Spike Dup BJA0791-MSD1	01/25/21 15:40	01/26/21 14:20	02/01/21 07:05	6	28	02/04/21 11:36	10	28	

* Indicates hold time exceedance.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

EPA 7471B

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Instrument:	HYDRA

Analyte	MDL	RL	Units
Mercury	0.00525	0.0250	mg/kg

BJB0141

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section: Metals

Oven Identification: 7

Balance ID: B116132369

Samples in Oven: Date: 2/4/21 Time: 1340 Temp: 105°C Analyst: SD

Removed from Oven: Date: 2/5/21 Time: 1255 Temp: 102°C Analyst: SD

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
21A361-1	0.981	10.677	9.202	—	✓
-3	1.019	10.273	8.691	—	✓
-5	1.018	10.430	9.431	—	✓
-7	1.025	10.823	8.892	—	✓
-9	1.021	10.459	9.965	—	✓
-11	1.040	10.527	9.817	—	✓
-13	1.032	10.549	10.071	—	✓
-15	1.028	10.343	9.375	—	✓
-17	1.035	10.560	8.725	—	✓
-19	1.029	10.827	9.226	—	✓
-21	1.049	10.285	9.792	—	✓
-23	1.017	10.247	9.586	—	✓
-25	1.038	10.786	10.143	—	✓
-27	0.982	10.333	9.464	—	✓
-29	0.984	10.314	9.580	—	✓
-31	0.983	10.649	9.305	—	✓

SD 2/5/21

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

5050F

Revision 003
11/20/09

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-20N-1

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-01 C	SDG:	21A0361
Sampled:	01/25/21 15:40	Prepared:	02/01/21 09:57	File ID:	I2210208-047
% Solids:	84.79	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 16:32
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.02 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	3780	10	1.39	11.6	D

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-20N-5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	21A0361-03 C	SDG:	21A0361
Sampled:	01/25/21 15:50	Prepared:	02/01/21 09:57	File ID:	I2210208-020
% Solids:	82.91	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 15:12
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.014 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	68.1	2	0.285	2.38	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-10NW-1

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-05 C	SDG:	21A0361
Sampled:	01/25/21 15:00	Prepared:	02/01/21 09:57	File ID:	I2210208-021
% Solids:	89.39	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 15:15
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.016 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	294	2	0.264	2.20	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-10NW-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-07 C	SDG:	21A0361
Sampled:	01/25/21 15:10	Prepared:	02/01/21 09:57	File ID:	I2210208-022
% Solids:	80.29	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 15:17
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.023 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	54.8	2	0.292	2.43	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-15SW-1

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-09 C	SDG:	21A0361
Sampled:	01/25/21 14:15	Prepared:	02/01/21 09:57	File ID:	I2210208-038
% Solids:	94.77	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 16:04
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.031 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	212	10	1.23	10.2	D

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C

Total Metals

P8-15SW-5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	21A0361-11 C	SDG:	21A0361
Sampled:	01/25/21 14:25	Prepared:	02/01/21 09:57	File ID:	I2210208-024
% Solids:	92.52	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 15:23
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.032 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	17.2	2	0.251	2.09	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-10SE-1

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-13 C	SDG:	21A0361
Sampled:	01/25/21 13:00	Prepared:	02/01/21 09:57	File ID:	I2210208-025
% Solids:	94.98	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 15:26
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.081 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	11.6	2	0.234	1.95	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-10SE-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-15 C	SDG:	21A0361
Sampled:	01/25/21 13:10	Prepared:	02/01/21 09:57	File ID:	I2210208-026
% Solids:	89.61	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 15:29
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.051 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	26.2	2	0.255	2.12	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-10NE-1

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	21A0361-17 C	SDG:	21A0361
Sampled:	01/25/21 12:15	Prepared:	02/01/21 09:57	File ID:	I2210208-039
% Solids:	80.74	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 16:07
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.006 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	6710	50	7.39	61.6	D

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-10NE-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-19 C	SDG:	21A0361
Sampled:	01/25/21 12:25	Prepared:	02/01/21 09:57	File ID:	I2210208-028
% Solids:	83.66	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 15:34
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.034 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	50.0	2	0.277	2.31	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-7W-1

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-21 C	SDG:	21A0361
Sampled:	01/25/21 10:40	Prepared:	02/01/21 09:57	File ID:	I2210208-031
% Solids:	94.66	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 15:43
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.036 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	30.7	2	0.245	2.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-7W-5

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-23 C	SDG:	21A0361
Sampled:	01/25/21 10:50	Prepared:	02/01/21 09:57	File ID:	I2210208-032
% Solids:	92.84	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 15:46
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.011 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	112	2	0.256	2.13	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-10E-1

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix: Soil | Laboratory ID: 21A0361-25 C | SDG: 21A0361

Sampled: 01/25/21 11:30 | Prepared: 02/01/21 09:57 | File ID: I2210208-050

% Solids: 93.40 | Preparation: SWC EPA 3050B | Analyzed: 02/08/21 16:41

Batch: BJA0765 | Sequence: SJB0129 | Initial/Final: 1.059 g Wet / 50 mL

Instrument: ICP2 | Calibration: EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	148	100	12.1	101	D

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-10E-5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	21A0361-27 C	SDG:	21A0361
Sampled:	01/25/21 11:40	Prepared:	02/01/21 09:57	File ID:	I2210208-034
% Solids:	90.71	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 15:52
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.027 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	23.1	2	0.258	2.15	

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-10N-1

Laboratory:	Analytical Resources, Inc.				
Client:	Dalton, Olmsted & Fuglevand, Inc				
Project:	ICS-Former NW Cooperage				
Matrix:	Soil	Laboratory ID:	21A0361-29 C	SDG:	21A0361
Sampled:	01/25/21 09:25	Prepared:	02/01/21 09:57	File ID:	I2210208-035
% Solids:	92.13	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 15:55
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.044 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	77.6	2	0.250	2.08	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6010C
Total Metals

P8-10N-5

Laboratory: Analytical Resources, Inc.

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Matrix:	Soil	Laboratory ID:	21A0361-31 C	SDG:	21A0361
Sampled:	01/25/21 09:35	Prepared:	02/01/21 09:57	File ID:	I2210208-036
% Solids:	86.10	Preparation:	SWC EPA 3050B	Analyzed:	02/08/21 15:57
Batch:	BJA0765	Sequence:	SJB0129	Initial/Final:	1.038 g Wet / 50 mL
Instrument:	ICP2			Calibration:	EB00028

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	31.3	2	0.269	2.24	

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PREPARATION BATCH SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Batch: BJA0765 Batch Matrix: Solid Preparation: SWC EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
P8-20N-1	21A0361-01	I2210208-047	02/01/21 09:57	
P8-20N-5	21A0361-03	I2210208-020	02/01/21 09:57	
P8-10NW-1	21A0361-05	I2210208-021	02/01/21 09:57	
P8-10NW-5	21A0361-07	I2210208-022	02/01/21 09:57	
P8-15SW-1	21A0361-09	I2210208-038	02/01/21 09:57	
P8-15SW-5	21A0361-11	I2210208-024	02/01/21 09:57	
P8-10SE-1	21A0361-13	I2210208-025	02/01/21 09:57	
P8-10SE-5	21A0361-15	I2210208-026	02/01/21 09:57	
P8-10NE-1	21A0361-17	I2210208-039	02/01/21 09:57	
P8-10NE-5	21A0361-19	I2210208-028	02/01/21 09:57	
P8-7W-1	21A0361-21	I2210208-031	02/01/21 09:57	
P8-7W-5	21A0361-23	I2210208-032	02/01/21 09:57	
P8-10E-1	21A0361-25	I2210208-050	02/01/21 09:57	
P8-10E-5	21A0361-27	I2210208-034	02/01/21 09:57	
P8-10N-1	21A0361-29	I2210208-035	02/01/21 09:57	
P8-10N-5	21A0361-31	I2210208-036	02/01/21 09:57	
Blank	BJA0765-BLK1	I2210204-026	02/01/21 09:57	
LCS	BJA0765-BS1	I2210204-027	02/01/21 09:57	
P8-20N-1	BJA0765-DUP1	I2210208-046	02/01/21 09:57	
P8-20N-1	BJA0765-MS1	I2210208-048	02/01/21 09:57	
P8-20N-1	BJA0765-MSD1	I2210208-049	02/01/21 09:57	

BJA765

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Digestion Log

Analyst: ML / BC **Date:** 1/29/21 **Time:** 0820 – 1400

Matrix: Soil **Block ID:** #3 **Block Temp:** 96°C **Thermometer:** 20-3

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) Vol (mL)	Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Final Vol (mL)	Comments
21A0361-1	C		1.020	50			
-3			1.014				
-5			1.016				
-7			1.023				
-9			1.031				
-11			1.032				
-13			1.081				
-15			1.051				
-17			1.006				
-19			1.034				
-21			1.036				
-23			1.011				
-25			1.059				
-27			1.027				
-29			1.044				
-31			1.038				
21A0386-1	A		1.034				
BJA0765-LM	–		–				~~21~~ ml 1/29/21
-bs1	–		–				
-DUP1	–		1.023				21A0361-1
-MS1	–		1.021				
-MSD1	–		1.023				

BC 02/01/21

Chemical/Reagent ID:

HNO_3: I10976 **1:1 HNO_3:** I10417 **HCl:** ~~I10738~~ I9357 BC 02/01/21 **H_2O_2:** I9826

Tube Lot#: 2010025 **Boiling Chip Lot#:** — **(DoD Only)**

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Form I

METHOD BLANK DATA SHEET

EPA 6010C

Total Metals

Blank

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Batch: BJA0765 Laboratory ID: BJA0765-BLK1 Prepared: 02/01/21 09:57

Matrix: Solid Preparation: SWC EPA 3050B Analyzed: 02/04/21 14:44

Sequence: SJB0078 Calibration: EB00014 Instrument: ICP2

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	ND	2	0.240	2.00	U

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LCS / LCS DUPLICATE RECOVERY

EPA 6010C

Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	02/04/21 14:47
Batch:	BJA0765	Laboratory ID:	BJA0765-BS1
Preparation:	SWC EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Lead	200	206		103	80 - 120

* Indicates values outside of QC limits

Analytical Resources, Incorporated
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P8-20N-1

DUPLICATES

EPA 6010C

Total Metals

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Matrix: Solid
Laboratory ID: BJA0765-DUP1
Batch: BJA0765
Lab Source ID: 21A0361-01
Preparation: SWC EPA 3050B
Initial/Final: 1.023 g / 50 mL
Source Sample Name: P8-20N-1
% Solids: 84.79

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg dry)	C	DUPLICATE CONCENTRATION (mg/kg dry)	C	RPD %	Q
Lead	20	3780	D	3650	D	3.34	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

Analytical Resources, Incorporated
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P8-20N-1

MS / MS DUPLICATE RECOVERY
EPA 6010C
Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	02/08/21 16:35
Batch:	BJA0765	Laboratory ID:	BJA0765-MS1
Preparation:	SWC EPA 3050B	Sequence Name:	Matrix Spike
Initial/Final:	1.021 g / 50 mL	Source Sample:	P8-20N-1

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Lead	231	3780	D	4690	HC, D	396 *	75 - 125

* Values outside of QC limits

Analytical Resources, Incorporated
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P8-20N-1

MS / MS DUPLICATE RECOVERY
EPA 6010C
Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Matrix:	Solid	Analyzed:	02/08/21 16:38
Batch:	BJA0765	Laboratory ID:	BJA0765-MSD1
Preparation:	SWC EPA 3050B	Sequence Name:	Matrix Spike Dup
Initial/Final:	1.023 g / 50 mL	Source Sample:	P8-20N-1

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Lead	231	5090	HC, D	569 *	8.09	20	75 - 125

* Values outside of QC limits

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INITIAL CALIBRATION DATA

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EB00014	Instrument:	ICP2
Calibration Date:	02/04/2021 13:46		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Lead	0	0	0		10	8726.046	0		0			

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INITIAL CALIBRATION DATA

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EB00014	Instrument:	ICP2
Calibration Date:	02/04/2021 13:46		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Lead	4363.023	141.4	1.0000			

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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: 2/3/21 Analysis Date: 2/4/21 Analyst: TH
LR Date: 2/3/21 Sequence: SJB0078 Page: 1 of 6

All corrections made by analyst unless otherwise noted. TH 2/4/21

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CAL1	J908		
		-CAL2	J1295		
		-CAL3	J1296		
	✓	-CAL4	J1297		
		-CAL5	J1298		
	✓	-ICV1	I10589 ~~J1297~~		Sb↑
		-CAL4	J1297		
		-ICV1	I10589		
		-ICSI	J908		
		-CRL1	J773		
		-IFA1	I10667		
		-IFB1	J907		
		-CCV1	I10589		
		-CCB1	J908		
		BJB0084-BLK1	LEN	5	
		21A0386-01			
		21A0393-01			
		BJB0084-DUP1			
		21A0392-01			
		BJB0084-MS1			
		BJA0765-BLK1	SWC	2	
		BJA0765-BS1			
		21A0386-01		10	

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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — **Analysis Date:** 2/4/21 **Analyst:** TH

LR Date: — **Sequence:** — **Page:** 2 of 6

All corrections made by analyst unless otherwise noted. TH 2/4/21

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
312		21A0~~302~~ 312-02	TWC	2	
		SEQ-CCV2			
		↓ -CCB2			
		BJB0019-BLK2	TWC		Ba, K, Sb, V only
		BJA0766-BLK2	LEN	5	Ba only
		↓ -DUP2	↓	↓	↓
		21A0323-01			
		BJA0766-MS2			
		21A0398-01	TWC		
		SEQ-IBL1			
	✓	21A0323-01	SWC	5	Fe 7LR
		21A0325-01	↓	50	No K
		BJB0019-BS2	TWC		Ba, K, Sb, V only
		SEQ-CCV3			
		↓ -CCB3			
		21A0402-25	TWC		
		↓ -34	↓		
		BJB0019-DUP1			
		21A0402-24			
		BJB0019-MS1			
		↓ -MSD1			
		BJB0055-BLK1	SWC	2	
		↓ -BS1	↓	↓	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: —
LR Date: —
Analysis Date: 2/4/21
Sequence: — TH 2/4/21
Analyst: TH
Page: 3 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
	✓	21A0393-01	SWC	2	clog
	↓	21A0402-02	↓	↓	↓
	✓	SEQ-CCV4			clog int. STDs ↑ analyte %Rs ↓
	↓	↓ ~~-CCB4~~ CCV4			(backflushed sample intro)
		SEQ-CCV5			for verification
		↓ -CCB4			
0402		21A~~0040~~ 402 -03	SWC	2	
↓		-04			
		-05			
↓		↓ -06			
		BJB0055-DUP1			
		21A0402-01			
		BJB0055-MS1			Sb %R ↓
		-MSD1			↓
		↓ -PS1	↓	↓	0.016mL I4249 Sb only
		SEQ-IBL2			
		-CCV6			
		↓ -CCB5			
		21A0393-01	SWC	10	
		21A0402-02		2	
		-07			
		-08			
		↓ -09	↓	↓	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — Analysis Date: 2/4/21 Analyst: TH
LR Date: — Sequence: — Page: 4 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		21A0402-10	SWC	2	
		-11			
		-12			
		-13			
		-14			
		SEQ-CCV7			
		-CCB6			
		21A0402-15	SWC	2	
		-16			
		-17			
		-18			
		-19			
		-21			
		-22			
		-23			
		-26			
		-27			
		SEQ-CCV8			
		-CCB7			
		BJB0056-BLK1	SWC	2	
		21A0402-28			
		-29			
		-30			

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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — Analysis Date: 2-4-21 Analyst: TH

LR Date: — Sequence: — Page: 5 of 6

All corrections made by analyst unless otherwise noted. TH 2/4/21

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		BJB0056-DUP1	SWC	2	
		21A0402-20	↓	↓	
		BJB0056-MS1			
		-MSD1			
	✓	-PS1			no spike
		↓ -BS1	↓	↓	
		SEQ-CCV9			
		↓ -CCB8			
		21A0402-31	SWC	2	
		-32			
		↓ -33	↓	↓	
		21A0346-01	TWC		
		-03			
		-05			
		↓ -07	↓		
		21A0323-01	SWC	10	Ag ↓ Ag NR
		BJB0056-~~BS~~PS1	↓	2	0.016mL IU249 Sb only
		SEQ-CCVA			
		↓ -CCB9			
		Rinse/DI			
		SEQ-CCVB			
		↓ -CCBA			
	✓	21A0323-01	SWC	10	Ag ↓

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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — Analysis Date: 2-4-21 Analyst: TH

LR Date: — Sequence: — Page: 6 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		21A0323-01RE1	SWC	20	Ag only
		SEQ-CCVC			
		↓ -CCB3			
		Rinse/DI			

TH 2/4/21

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Analysis Begun

Start Time: 2/4/2021 1:46:15 PM **Plasma On Time: 2/4/2021 12:44:21 PM**
Logged In Analyst: Metals Instrument Controller **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\CRISETelmt.sif
Batch ID:
Results Data Set: I2210204
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

===

Method Loaded
Method Name: ELMT7300bcESI2FAST **Method Last Saved: 2/4/2021 12:26:33 PM**
IEC File: IEC020321.iec **MSF File:**
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes

===

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: SEQ-CAL1 **Date Collected: 2/4/2021 1:46:25 PM**
Data Type: Original

Nebulizer Parameters: SEQ-CAL1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CAL1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2538277.5	13461.55	0.53%	100.0	%
ScR 361.383	281147.6	2019.71	0.72%	100.0	%
Ag 328.068†	14.4	71.50	494.83%	[0.00]	mg/L
Al 308.215†	-226.8	13.47	5.94%	[0.00]	mg/L
As 188.979†	-19.2	1.47	7.67%	[0.00]	mg/L
B 249.677†	-104.2	6.62	6.36%	[0.00]	mg/L
Ba 233.527†	71.3	6.69	9.38%	[0.00]	mg/L

Be 313.042†	1716.3	11.23	0.65%	[0.00]	mg/L
Ca 317.933†	-59.5	4.89	8.20%	[0.00]	mg/L
Cd 228.802†	356.4	6.01	1.69%	[0.00]	mg/L
Co 228.616†	-32.6	2.27	6.96%	[0.00]	mg/L
Cr 267.716†	-133.1	6.73	5.06%	[0.00]	mg/L
Cu 324.752†	1449.9	31.60	2.18%	[0.00]	mg/L
Fe 273.955†	67.9	4.60	6.77%	[0.00]	mg/L
K 766.490†	214.5	48.62	22.67%	[0.00]	mg/L
Mg 279.077†	-71.2	3.12	4.38%	[0.00]	mg/L
Mn 257.610†	368.4	3.11	0.84%	[0.00]	mg/L
Mo 202.031†	50.4	1.71	3.40%	[0.00]	mg/L
Na 589.592†	-95.5	18.15	19.01%	[0.00]	mg/L
Na 330.237†	-539.9	1.35	0.25%	[0.00]	mg/L
Ni 231.604†	0.2	11.22	>999.9%	[0.00]	mg/L
Pb 220.353†	90.0	4.98	5.53%	[0.00]	mg/L
Sb 206.836†	64.1	2.49	3.88%	[0.00]	mg/L
Se 196.026†	-59.8	6.36	10.63%	[0.00]	mg/L
Si 288.158†	-402.1	9.33	2.32%	[0.00]	mg/L
Sn 189.927†	-25.0	4.98	19.93%	[0.00]	mg/L
Sr 421.552†	-33.5	10.94	32.63%	[0.00]	mg/L
Ti 334.903†	668.2	7.19	1.08%	[0.00]	mg/L
Tl 190.801†	-18.5	3.07	16.62%	[0.00]	mg/L
V 292.402†	316.9	8.77	2.77%	[0.00]	mg/L
Zn 206.200†	6.2	0.58	9.34%	[0.00]	mg/L

==

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: SEQ-CAL2 **Date Collected: 2/4/2021 1:49:20 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL2

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-CAL2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2554729.3	12421.93	0.49%	100.6	%
ScR 361.383	282931.3	2766.14	0.98%	100.6	%
Ba 233.527†	93546.3	725.10	0.78%	[10]	mg/L
Cd 228.802†	356810.9	879.05	0.25%	[10]	mg/L
Co 228.616†	445527.4	1822.49	0.41%	[10]	mg/L
Cr 267.716†	76565.5	842.79	1.10%	[10]	mg/L
Cu 324.752†	2167399.1	5787.69	0.27%	[10]	mg/L
Mn 257.610†	643926.4	5915.41	0.92%	[10]	mg/L
V 292.402†	1500409.3	6717.08	0.45%	[10]	mg/L

==

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: SEQ-CAL3 **Date Collected: 2/4/2021 1:51:02 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL3

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CAL3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2507542.2	12107.52	0.48%	98.79	%
ScR 361.383	277304.2	1403.96	0.51%	98.63	%
Ag 328.068†	193203.9	663.13	0.34%	[1.0]	mg/L
As 188.979†	16477.7	53.14	0.32%	[10]	mg/L
B 249.677†	80478.7	669.84	0.83%	[10]	mg/L
Be 313.042†	3782994.8	37729.61	1.00%	[5.0]	mg/L
Na 589.592†	554002.9	7190.21	1.30%	[50]	mg/L
Ni 231.604†	37860.1	403.92	1.07%	[10]	mg/L
Pb 220.353†	87260.5	503.98	0.58%	[10]	mg/L

Se 196.026†	13584.0	99.48	0.73%	[10]	mg/L
Sr 421.552†	4356933.5	67536.07	1.55%	[5]	mg/L
Tl 190.801†	23407.6	156.07	0.67%	[10]	mg/L
Zn 206.200†	32697.2	301.77	0.92%	[10]	mg/L

==

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: SEQ-CAL4 DEL **Date Collected: 2/4/2021 1:53:03 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL4

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-CAL4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2568165.0	21259.11	0.83%	101.2	%
ScR 361.383	281028.5	2949.60	1.05%	99.96	%
Mo 202.031†	186655.2	2040.02	1.09%	[10]	mg/L
Sb 206.836†	18893.8	177.74	0.94%	[10]	mg/L
Si 288.158†	21605.6	293.74	1.36%	[10]	mg/L
Sn 189.927†	41398.4	661.07	1.60%	[10]	mg/L
Ti 334.903†	292596.0	1911.56	0.65%	[10]	mg/L

==

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: SEQ-CAL5 **Date Collected: 2/4/2021 1:54:56 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL5

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CAL5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2396514.6	6563.75	0.27%	94.41	%
ScR 361.383	281216.9	2573.89	0.92%	100.0	%
Al 308.215†	51005.2	667.91	1.31%	[30]	mg/L
Ca 317.933†	301970.1	1449.64	0.48%	[30]	mg/L
Fe 273.955†	202733.4	514.67	0.25%	[100]	mg/L
K 766.490†	218213.2	2163.49	0.99%	[100]	mg/L
Mg 279.077†	28833.7	201.02	0.70%	[30]	mg/L
Na 330.237†	2889.9	32.51	1.12%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	193200	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1700	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1648	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	8048	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	9355	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	756600	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	10070	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	35680	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	44550	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	7657	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	216700	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	2027	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2182	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	961.1	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	64390	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	18670	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	11080	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	28.90	0.00000	1.000000	

Ni 231.604	1	Lin Thru 0	0.0	3786	0.00000	1.000000
Pb 220.353	1	Lin Thru 0	0.0	8726	0.00000	1.000000
Sb 206.836	1	Lin Thru 0	0.0	1889	0.00000	1.000000
Se 196.026	1	Lin Thru 0	0.0	1358	0.00000	1.000000
Si 288.158	1	Lin Thru 0	0.0	2161	0.00000	1.000000
Sn 189.927	1	Lin Thru 0	0.0	4140	0.00000	1.000000
Sr 421.552	1	Lin Thru 0	0.0	871400	0.00000	1.000000
Ti 334.903	1	Lin Thru 0	0.0	29260	0.00000	1.000000
Tl 190.801	1	Lin Thru 0	0.0	2341	0.00000	1.000000
V 292.402	1	Lin Thru 0	0.0	150000	0.00000	1.000000
Zn 206.200	1	Lin Thru 0	0.0	3270	0.00000	1.000000

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Analysis Begun

Start Time: 2/4/2021 1:58:39 PM
Plasma On Time: 2/4/2021 12:44:21 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\CRISETelmt.sif
Batch ID:
Results Data Set: I2210204
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==

Sequence No.: 1
Autosampler Location: 7
Sample ID: SEQ-ICV1
Date Collected: 2/4/2021 1:58:47 PM
Data Type: Original
DEL
Dilution: 1X

Nebulizer Parameters: SEQ-ICV1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-ICV1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2508775.8	98.84	%	0.663				0.67%
ScR 361.383	277918.9	98.85	%	1.692				1.71%
Ag 328.068†	206589.5	1.069	mg/L	0.0044	1.069	mg/L	0.0044	0.41%
Al 308.215†	3520.6	2.034	mg/L	0.0108	2.034	mg/L	0.0108	0.53%
As 188.979†	3449.7	2.090	mg/L	0.0242	2.090	mg/L	0.0242	1.16%
B 249.677†	8161.7	1.011	mg/L	0.0061	1.011	mg/L	0.0061	0.60%
Ba 233.527†	9564.6	1.022	mg/L	0.0066	1.022	mg/L	0.0066	0.64%
Be 313.042†	761824.2	1.006	mg/L	0.0068	1.006	mg/L	0.0068	0.68%
Ca 317.933†	20399.5	2.026	mg/L	0.0179	2.026	mg/L	0.0179	0.88%
Cd 228.802†	37849.8	1.046	mg/L	0.0079	1.046	mg/L	0.0079	0.76%
Co 228.616†	45335.9	1.015	mg/L	0.0031	1.015	mg/L	0.0031	0.31%
Cr 267.716†	7818.4	1.026	mg/L	0.0073	1.026	mg/L	0.0073	0.71%
Cu 324.752†	223613.5	1.031	mg/L	0.0097	1.031	mg/L	0.0097	0.94%
Fe 273.955†	4113.5	2.020	mg/L	0.0171	2.020	mg/L	0.0171	0.85%
K 766.490†	44748.7	20.51	mg/L	0.170	20.51	mg/L	0.170	0.83%
Mg 279.077†	1937.4	2.018	mg/L	0.0039	2.018	mg/L	0.0039	0.19%
Mn 257.610†	66477.1	1.033	mg/L	0.0109	1.033	mg/L	0.0109	1.05%
Mo 202.031†	19227.8	1.030	mg/L	0.0056	1.030	mg/L	0.0056	0.55%
Na 589.592†	565261.5	51.02	mg/L	0.129	51.02	mg/L	0.129	0.25%
Na 330.237†	1522.0	52.67	mg/L	0.336	52.67	mg/L	0.336	0.64%
Ni 231.604†	3782.1	0.9988	mg/L	0.00736	0.9988	mg/L	0.00736	0.74%
Pb 220.353†	18033.8	2.066	mg/L	0.0076	2.066	mg/L	0.0076	0.37%
Sb 206.836†	4159.4	2.218	mg/L	0.0306	2.218	mg/L	0.0306	1.38%
Se 196.026†	2857.6	2.103	mg/L	0.0228	2.103	mg/L	0.0228	1.08%
Si 288.158†	4616.2	2.129	mg/L	0.0202	2.129	mg/L	0.0202	0.95%
Sn 189.927†	4309.2	1.044	mg/L	0.0136	1.044	mg/L	0.0136	1.31%
Sr 421.552†	892452.3	1.024	mg/L	0.0049	1.024	mg/L	0.0049	0.48%
Ti 334.903†	30568.5	1.044	mg/L	0.0020	1.044	mg/L	0.0020	0.19%
Tl 190.801†	4854.2	2.066	mg/L	0.0189	2.066	mg/L	0.0189	0.91%
V 292.402†	153219.4	1.027	mg/L	0.0056	1.027	mg/L	0.0056	0.54%
Zn 206.200†	3278.9	1.003	mg/L	0.0082	1.003	mg/L	0.0082	0.81%

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Analysis Begun

Start Time: 2/4/2021 2:01:31 PM
Plasma On Time: 2/4/2021 12:44:21 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\CRISETelmt.sif
Batch ID:
Results Data Set: I2210204
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: SEQ-CAL4
Date Collected: 2/4/2021 2:01:32 PM
Data Type: Original

Nebulizer Parameters: SEQ-CAL4

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-CAL4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2530743.2	22732.66	0.90%	99.70	%
ScR 361.383	277542.2	1971.26	0.71%	98.72	%
Mo 202.031†	189376.3	1669.14	0.88%	[10]	mg/L
Sb 206.836†	19405.7	303.16	1.56%	[10]	mg/L
Si 288.158†	21742.1	317.90	1.46%	[10]	mg/L
Sn 189.927†	42103.6	443.66	1.05%	[10]	mg/L
Ti 334.903†	295420.8	553.40	0.19%	[10]	mg/L

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Analysis Begun

Start Time: 2/4/2021 2:03:53 PM **Plasma On Time: 2/4/2021 12:44:21 PM**
Logged In Analyst: Metals Instrument Controller **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0204.sif
Batch ID:
Results Data Set: I2210204
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 7**
Sample ID: SEQ-ICV1 **Date Collected: 2/4/2021 2:03:54 PM**
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SEQ-ICV1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-ICV1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2502822.0	98.60	%	0.279				0.28%
ScR 361.383	272965.2	97.09	%	0.614				0.63%
Ag 328.068†	206410.2	1.068	mg/L	0.0105	1.068	mg/L	0.0105	0.98%
Al 308.215†	3565.5	2.060	mg/L	0.0372	2.060	mg/L	0.0372	1.80%
As 188.979†	3420.0	2.072	mg/L	0.0108	2.072	mg/L	0.0108	0.52%
B 249.677†	8327.8	1.032	mg/L	0.0046	1.032	mg/L	0.0046	0.45%
Ba 233.527†	9778.8	1.045	mg/L	0.0146	1.045	mg/L	0.0146	1.40%
Be 313.042†	764924.6	1.010	mg/L	0.0052	1.010	mg/L	0.0052	0.52%
Ca 317.933†	20887.0	2.074	mg/L	0.0058	2.074	mg/L	0.0058	0.28%
Cd 228.802†	37547.2	1.038	mg/L	0.0051	1.038	mg/L	0.0051	0.49%
Co 228.616†	45175.8	1.012	mg/L	0.0085	1.012	mg/L	0.0085	0.84%
Cr 267.716†	7991.6	1.049	mg/L	0.0049	1.049	mg/L	0.0049	0.47%
Cu 324.752†	222152.3	1.024	mg/L	0.0066	1.024	mg/L	0.0066	0.64%
Fe 273.955†	4149.4	2.038	mg/L	0.0223	2.038	mg/L	0.0223	1.10%
K 766.490†	45371.8	20.79	mg/L	0.166	20.79	mg/L	0.166	0.80%
Mg 279.077†	1956.0	2.037	mg/L	0.0373	2.037	mg/L	0.0373	1.83%
Mn 257.610†	67671.2	1.051	mg/L	0.0118	1.051	mg/L	0.0118	1.12%
Mo 202.031†	19249.5	1.016	mg/L	0.0107	1.016	mg/L	0.0107	1.06%
Na 589.592†	576015.0	51.99	mg/L	0.835	51.99	mg/L	0.835	1.61%
Na 330.237†	1519.9	52.59	mg/L	0.621	52.59	mg/L	0.621	1.18%
Ni 231.604†	3902.1	1.030	mg/L	0.0123	1.030	mg/L	0.0123	1.19%
Pb 220.353†	17911.8	2.053	mg/L	0.0209	2.053	mg/L	0.0209	1.02%
Sb 206.836†	4159.9	2.160	mg/L	0.0269	2.160	mg/L	0.0269	1.24%
Se 196.026†	2842.2	2.092	mg/L	0.0063	2.092	mg/L	0.0063	0.30%
Si 288.158†	4705.0	2.156	mg/L	0.0199	2.156	mg/L	0.0199	0.92%
Sn 189.927†	4292.3	1.023	mg/L	0.0100	1.023	mg/L	0.0100	0.98%
Sr 421.552†	907432.9	1.041	mg/L	0.0118	1.041	mg/L	0.0118	1.13%
Ti 334.903†	30825.3	1.043	mg/L	0.0061	1.043	mg/L	0.0061	0.59%
Tl 190.801†	4831.2	2.056	mg/L	0.0048	2.056	mg/L	0.0048	0.23%
V 292.402†	152998.0	1.025	mg/L	0.0103	1.025	mg/L	0.0103	1.01%
Zn 206.200†	3343.2	1.023	mg/L	0.0112	1.023	mg/L	0.0112	1.10%

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Sequence No.: 2 **Autosampler Location: 1**
Sample ID: SEQ-ICB1 **Date Collected: 2/4/2021 2:06:20 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-ICB1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-ICB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2546524.3	100.3	%	1.08				1.07%
ScR 361.383	274784.5	97.74	%	0.451				0.46%
Ag 328.068†	38.2	0.00020	mg/L	0.000565	0.00020	mg/L	0.000565	285.86%
Al 308.215†	4.4	0.00255	mg/L	0.008112	0.00255	mg/L	0.008112	317.93%
As 188.979†	0.7	0.00039	mg/L	0.000872	0.00039	mg/L	0.000872	221.68%
B 249.677†	26.2	0.00326	mg/L	0.001974	0.00326	mg/L	0.001974	60.57%
Ba 233.527†	1.2	0.00013	mg/L	0.000799	0.00013	mg/L	0.000799	603.59%
Be 313.042†	29.4	0.00004	mg/L	0.000011	0.00004	mg/L	0.000011	28.22%
Ca 317.933†	12.0	0.00119	mg/L	0.001221	0.00119	mg/L	0.001221	102.22%
Cd 228.802†	5.6	0.00015	mg/L	0.000141	0.00015	mg/L	0.000141	91.86%
Co 228.616†	4.5	0.00010	mg/L	0.000372	0.00010	mg/L	0.000372	370.95%
Cr 267.716†	8.5	0.00112	mg/L	0.001085	0.00112	mg/L	0.001085	96.50%
Cu 324.752†	81.2	0.00037	mg/L	0.000192	0.00037	mg/L	0.000192	51.34%
Fe 273.955†	2.6	0.00126	mg/L	0.001485	0.00126	mg/L	0.001485	117.57%
K 766.490†	-36.6	-0.01677	mg/L	0.013918	-0.01677	mg/L	0.013918	82.97%
Mg 279.077†	-4.1	-0.00425	mg/L	0.010728	-0.00425	mg/L	0.010728	252.26%
Mn 257.610†	4.6	0.00007	mg/L	0.000044	0.00007	mg/L	0.000044	61.93%
Mo 202.031†	38.8	0.00205	mg/L	0.000502	0.00205	mg/L	0.000502	24.46%
Na 589.592†	153.3	0.01384	mg/L	0.001523	0.01384	mg/L	0.001523	11.01%
Na 330.237†	-10.3	-0.3567	mg/L	0.12491	-0.3567	mg/L	0.12491	35.02%
Ni 231.604†	-2.1	-0.00056	mg/L	0.001355	-0.00056	mg/L	0.001355	242.40%
Pb 220.353†	-3.1	-0.00035	mg/L	0.001306	-0.00035	mg/L	0.001306	370.29%
Sb 206.836†	4.9	0.00253	mg/L	0.001647	0.00253	mg/L	0.001647	65.02%
Se 196.026†	1.4	0.00105	mg/L	0.003212	0.00105	mg/L	0.003212	305.92%
Si 288.158†	4.6	0.00213	mg/L	0.002434	0.00213	mg/L	0.002434	114.51%
Sn 189.927†	4.5	0.00108	mg/L	0.000491	0.00108	mg/L	0.000491	45.41%
Sr 421.552†	-15.9	-0.00002	mg/L	0.000032	-0.00002	mg/L	0.000032	175.89%
Ti 334.903†	7.7	0.00026	mg/L	0.000398	0.00026	mg/L	0.000398	152.46%
Tl 190.801†	1.5	0.00065	mg/L	0.000859	0.00065	mg/L	0.000859	131.86%
V 292.402†	12.3	0.00009	mg/L	0.000236	0.00009	mg/L	0.000236	265.71%
Zn 206.200†	3.4	0.00103	mg/L	0.000463	0.00103	mg/L	0.000463	44.79%

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Sequence No.: 3 **Autosampler Location: 301**
Sample ID: SEQ-CRL1 **Date Collected: 2/4/2021 2:09:08 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CRL1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CRL1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2585831.0	101.9	%	0.16				0.16%
ScR 361.383	275836.3	98.11	%	0.163				0.17%
Ag 328.068†	682.5	0.00353	mg/L	0.000165	0.00353	mg/L	0.000165	4.67%
Al 308.215†	118.7	0.06956	mg/L	0.005158	0.06956	mg/L	0.005158	7.42%
As 188.979†	81.4	0.04941	mg/L	0.002129	0.04941	mg/L	0.002129	4.31%
B 249.677†	257.0	0.03187	mg/L	0.000903	0.03187	mg/L	0.000903	2.83%
Ba 233.527†	60.1	0.00642	mg/L	0.000492	0.00642	mg/L	0.000492	7.66%
Be 313.042†	833.7	0.00110	mg/L	0.000005	0.00110	mg/L	0.000005	0.43%
Ca 317.933†	549.8	0.05461	mg/L	0.000830	0.05461	mg/L	0.000830	1.52%
Cd 228.802†	75.7	0.00177	mg/L	0.000132	0.00177	mg/L	0.000132	7.49%
Co 228.616†	131.6	0.00294	mg/L	0.000151	0.00294	mg/L	0.000151	5.14%
Cr 267.716†	79.0	0.01035	mg/L	0.000686	0.01035	mg/L	0.000686	6.63%
Cu 324.752†	682.1	0.00314	mg/L	0.000118	0.00314	mg/L	0.000118	3.74%
Fe 273.955†	104.1	0.05133	mg/L	0.001616	0.05133	mg/L	0.001616	3.15%
K 766.490†	1001.0	0.4587	mg/L	0.01393	0.4587	mg/L	0.01393	3.04%
Mg 279.077†	51.0	0.05300	mg/L	0.006893	0.05300	mg/L	0.006893	13.00%
Mn 257.610†	268.8	0.00418	mg/L	0.000137	0.00418	mg/L	0.000137	3.29%
Mo 202.031†	97.8	0.00516	mg/L	0.000128	0.00516	mg/L	0.000128	2.49%
Na 589.592†	5502.8	0.4966	mg/L	0.01136	0.4966	mg/L	0.01136	2.29%
Na 330.237†	7.7	0.2676	mg/L	0.14134	0.2676	mg/L	0.14134	52.82%
Ni 231.604†	46.5	0.01227	mg/L	0.001374	0.01227	mg/L	0.001374	11.20%
Pb 220.353†	184.8	0.02120	mg/L	0.000405	0.02120	mg/L	0.000405	1.91%
Sb 206.836†	99.7	0.05169	mg/L	0.000840	0.05169	mg/L	0.000840	1.63%
Se 196.026†	77.3	0.05693	mg/L	0.002581	0.05693	mg/L	0.002581	4.53%
Si 288.158†	245.8	0.1129	mg/L	0.00191	0.1129	mg/L	0.00191	1.69%
Sn 189.927†	85.5	0.02037	mg/L	0.000777	0.02037	mg/L	0.000777	3.81%
Sr 421.552†	894.8	0.00103	mg/L	0.000007	0.00103	mg/L	0.000007	0.64%
Ti 334.903†	252.8	0.00855	mg/L	0.000480	0.00855	mg/L	0.000480	5.61%
Tl 190.801†	114.6	0.04893	mg/L	0.002111	0.04893	mg/L	0.002111	4.31%
V 292.402†	435.0	0.00295	mg/L	0.000037	0.00295	mg/L	0.000037	1.26%
Zn 206.200†	69.1	0.02116	mg/L	0.001366	0.02116	mg/L	0.001366	6.45%

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Sequence No.: 4 **Autosampler Location: 302**
Sample ID: SEQ-IFA1 **Date Collected: 2/4/2021 2:11:56 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-IFA1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-IFA1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2487128.4	97.98	%	0.975				0.99%
ScR 361.383	278064.1	98.90	%	1.120				1.13%
Ag 328.068†	-880.9	-0.00224	mg/L	0.000343	-0.00224	mg/L	0.000343	15.32%
Al 308.215†	348844.1	205.2	mg/L	0.13	205.2	mg/L	0.13	0.06%
As 188.979†	-35.4	-0.00690	mg/L	0.003364	-0.00690	mg/L	0.003364	48.73%
B 249.677†	-12.7	-0.00156	mg/L	0.001837	-0.00156	mg/L	0.001837	117.97%
Ba 233.527†	115.0	-0.00113	mg/L	0.000862	-0.00113	mg/L	0.000862	76.31%
Be 313.042†	63.8	0.00009	mg/L	0.000043	0.00009	mg/L	0.000043	50.57%
Ca 317.933†	1000643.1	99.41	mg/L	0.591	99.41	mg/L	0.591	0.59%
Cd 228.802†	86.5	-0.00029	mg/L	0.000241	-0.00029	mg/L	0.000241	82.92%
Co 228.616†	32.1	-0.00222	mg/L	0.000130	-0.00222	mg/L	0.000130	5.85%
Cr 267.716†	-29.0	-0.00257	mg/L	0.000273	-0.00257	mg/L	0.000273	10.62%
Cu 324.752†	-1900.3	0.00307	mg/L	0.000168	0.00307	mg/L	0.000168	5.47%
Fe 273.955†	405497.5	200.0	mg/L	1.19	200.0	mg/L	1.19	0.59%
K 766.490†	-66.8	-0.03063	mg/L	0.004261	-0.03063	mg/L	0.004261	13.91%
Mg 279.077†	99998.1	103.6	mg/L	1.86	103.6	mg/L	1.86	1.80%
Mn 257.610†	225.4	0.00152	mg/L	0.000196	0.00152	mg/L	0.000196	12.86%
Mo 202.031†	23.9	0.00029	mg/L	0.000286	0.00029	mg/L	0.000286	98.08%
Na 589.592†	6.0	0.00054	mg/L	0.005181	0.00054	mg/L	0.005181	951.61%
Na 330.237†	-1.0	-0.03511	mg/L	0.456793	-0.03511	mg/L	0.456793	>999.9%
Ni 231.604†	-10.7	-0.00278	mg/L	0.000721	-0.00278	mg/L	0.000721	25.93%
Pb 220.353†	-360.8	-0.00133	mg/L	0.000446	-0.00133	mg/L	0.000446	33.42%
Sb 206.836†	69.4	0.03550	mg/L	0.005542	0.03550	mg/L	0.005542	15.61%
Se 196.026†	-16.6	0.01351	mg/L	0.001794	0.01351	mg/L	0.001794	13.28%
Si 288.158†	-67.0	-0.03069	mg/L	0.002830	-0.03069	mg/L	0.002830	9.22%
Sn 189.927†	-80.3	-0.00662	mg/L	0.001660	-0.00662	mg/L	0.001660	25.09%
Sr 421.552†	728.0	0.00084	mg/L	0.000026	0.00084	mg/L	0.000026	3.16%
Ti 334.903†	219.4	0.00093	mg/L	0.000102	0.00093	mg/L	0.000102	11.02%
Tl 190.801†	-60.4	0.00077	mg/L	0.002260	0.00077	mg/L	0.002260	294.04%
V 292.402†	-219.4	0.00293	mg/L	0.000201	0.00293	mg/L	0.000201	6.86%
Zn 206.200†	3.0	0.00092	mg/L	0.000791	0.00092	mg/L	0.000791	86.11%

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Sequence No.: 5
Sample ID: SEQ-IFB1
Autosampler Location: 303
Date Collected: 2/4/2021 2:14:50 PM
Data Type: Original

Dilution: 1X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-IFB1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-IFB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2480354.8	97.72	%	0.582				0.60%
ScR 361.383	272827.9	97.04	%	0.678				0.70%
Ag 328.068†	201185.2	1.044	mg/L	0.0016	1.044	mg/L	0.0016	0.15%
Al 308.215†	351815.7	206.9	mg/L	1.91	206.9	mg/L	1.91	0.92%
As 188.979†	1692.4	1.039	mg/L	0.0075	1.039	mg/L	0.0075	0.72%
B 249.677†	34.3	0.00208	mg/L	0.001237	0.00208	mg/L	0.001237	59.53%
Ba 233.527†	9789.6	1.032	mg/L	0.0083	1.032	mg/L	0.0083	0.81%
Be 313.042†	761965.0	1.006	mg/L	0.0100	1.006	mg/L	0.0100	0.99%
Ca 317.933†	1047740.2	104.1	mg/L	1.63	104.1	mg/L	1.63	1.57%
Cd 228.802†	36798.3	1.022	mg/L	0.0015	1.022	mg/L	0.0015	0.15%
Co 228.616†	42162.0	0.9432	mg/L	0.00027	0.9432	mg/L	0.00027	0.03%
Cr 267.716†	8086.9	1.057	mg/L	0.0073	1.057	mg/L	0.0073	0.69%
Cu 324.752†	217572.9	1.016	mg/L	0.0037	1.016	mg/L	0.0037	0.37%
Fe 273.955†	409479.9	202.0	mg/L	0.49	202.0	mg/L	0.49	0.24%
K 766.490†	-2.7	-0.00122	mg/L	0.009838	-0.00122	mg/L	0.009838	804.67%
Mg 279.077†	98790.9	102.3	mg/L	2.09	102.3	mg/L	2.09	2.05%
Mn 257.610†	64903.7	1.006	mg/L	0.0137	1.006	mg/L	0.0137	1.37%
Mo 202.031†	26.0	0.00039	mg/L	0.000154	0.00039	mg/L	0.000154	39.21%
Na 589.592†	1.6	0.00015	mg/L	0.006711	0.00015	mg/L	0.006711	>999.9%
Na 330.237†	8.1	0.2796	mg/L	0.06537	0.2796	mg/L	0.06537	23.38%
Ni 231.604†	3868.2	1.022	mg/L	0.0044	1.022	mg/L	0.0044	0.43%
Pb 220.353†	8699.6	1.037	mg/L	0.0091	1.037	mg/L	0.0091	0.88%
Sb 206.836†	2142.4	1.108	mg/L	0.0134	1.108	mg/L	0.0134	1.21%
Se 196.026†	1439.3	1.085	mg/L	0.0200	1.085	mg/L	0.0200	1.84%
Si 288.158†	-73.9	-0.02921	mg/L	0.003225	-0.02921	mg/L	0.003225	11.04%
Sn 189.927†	-77.2	-0.00442	mg/L	0.001645	-0.00442	mg/L	0.001645	37.19%
Sr 421.552†	780.3	0.00090	mg/L	0.000023	0.00090	mg/L	0.000023	2.58%
Ti 334.903†	248.2	0.00134	mg/L	0.000547	0.00134	mg/L	0.000547	40.67%
Tl 190.801†	2234.3	0.9725	mg/L	0.00527	0.9725	mg/L	0.00527	0.54%
V 292.402†	144612.2	0.9735	mg/L	0.00353	0.9735	mg/L	0.00353	0.36%
Zn 206.200†	3293.9	1.007	mg/L	0.0104	1.007	mg/L	0.0104	1.03%

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Sequence No.: 6 **Autosampler Location: 7**
Sample ID: SEQ-CCV1 **Date Collected: 2/4/2021 2:20:16 PM**
Data Type: Original
Dilution: 1X
Wash Time: 200 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV1

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCV1

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2534916.4	99.87	%	0.435				0.44%
ScR 361.383	277435.9	98.68	%	2.054				2.08%
Ag 328.068†	206157.9	1.067	mg/L	0.0072	1.067	mg/L	0.0072	0.68%
Al 308.215†	3587.7	2.073	mg/L	0.0208	2.073	mg/L	0.0208	1.01%
As 188.979†	3453.6	2.093	mg/L	0.0215	2.093	mg/L	0.0215	1.03%
B 249.677†	8391.0	1.040	mg/L	0.0232	1.040	mg/L	0.0232	2.23%
Ba 233.527†	9805.6	1.047	mg/L	0.0208	1.047	mg/L	0.0208	1.98%
Be 313.042†	762921.7	1.008	mg/L	0.0109	1.008	mg/L	0.0109	1.08%
Ca 317.933†	21305.0	2.116	mg/L	0.0518	2.116	mg/L	0.0518	2.45%
Cd 228.802†	37645.9	1.040	mg/L	0.0058	1.040	mg/L	0.0058	0.56%
Co 228.616†	45228.6	1.013	mg/L	0.0048	1.013	mg/L	0.0048	0.47%
Cr 267.716†	8092.9	1.062	mg/L	0.0187	1.062	mg/L	0.0187	1.76%
Cu 324.752†	221926.7	1.023	mg/L	0.0068	1.023	mg/L	0.0068	0.66%
Fe 273.955†	4213.3	2.070	mg/L	0.0228	2.070	mg/L	0.0228	1.10%
K 766.490†	44981.9	20.61	mg/L	0.304	20.61	mg/L	0.304	1.48%
Mg 279.077†	1983.2	2.066	mg/L	0.0653	2.066	mg/L	0.0653	3.16%
Mn 257.610†	67962.8	1.056	mg/L	0.0210	1.056	mg/L	0.0210	1.99%
Mo 202.031†	19236.9	1.016	mg/L	0.0075	1.016	mg/L	0.0075	0.74%
Na 589.592†	565095.0	51.00	mg/L	0.508	51.00	mg/L	0.508	1.00%
Na 330.237†	1546.9	53.53	mg/L	0.639	53.53	mg/L	0.639	1.19%
Ni 231.604†	3994.2	1.055	mg/L	0.0346	1.055	mg/L	0.0346	3.28%
Pb 220.353†	18043.4	2.068	mg/L	0.0152	2.068	mg/L	0.0152	0.74%
Sb 206.836†	4167.2	2.164	mg/L	0.0168	2.164	mg/L	0.0168	0.78%
Se 196.026†	2881.5	2.121	mg/L	0.0129	2.121	mg/L	0.0129	0.61%
Si 288.158†	4710.5	2.159	mg/L	0.0379	2.159	mg/L	0.0379	1.75%
Sn 189.927†	4313.6	1.028	mg/L	0.0019	1.028	mg/L	0.0019	0.19%
Sr 421.552†	897440.8	1.030	mg/L	0.0107	1.030	mg/L	0.0107	1.03%
Ti 334.903†	30752.1	1.040	mg/L	0.0050	1.040	mg/L	0.0050	0.48%
Tl 190.801†	4871.1	2.073	mg/L	0.0020	2.073	mg/L	0.0020	0.10%
V 292.402†	152613.3	1.023	mg/L	0.0092	1.023	mg/L	0.0092	0.90%
Zn 206.200†	3396.9	1.039	mg/L	0.0277	1.039	mg/L	0.0277	2.66%

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Sequence No.: 7 **Autosampler Location: 1**
Sample ID: SEQ-CCB1 **Date Collected: 2/4/2021 2:23:44 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB1

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCB1

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2558862.9	100.8	%	0.41				0.41%
ScR 361.383	283553.6	100.9	%	1.24				1.23%
Ag 328.068†	34.5	0.00018	mg/L	0.000397	0.00018	mg/L	0.000397	222.35%
Al 308.215†	-3.1	-0.00181	mg/L	0.006807	-0.00181	mg/L	0.006807	375.78%
As 188.979†	-3.0	-0.00183	mg/L	0.003020	-0.00183	mg/L	0.003020	164.63%
B 249.677†	15.6	0.00194	mg/L	0.000546	0.00194	mg/L	0.000546	28.13%
Ba 233.527†	-1.0	-0.00011	mg/L	0.000514	-0.00011	mg/L	0.000514	461.87%
Be 313.042†	35.6	0.00005	mg/L	0.000021	0.00005	mg/L	0.000021	44.66%
Ca 317.933†	13.6	0.00135	mg/L	0.001231	0.00135	mg/L	0.001231	90.95%
Cd 228.802†	3.5	0.00011	mg/L	0.000045	0.00011	mg/L	0.000045	39.99%
Co 228.616†	7.9	0.00018	mg/L	0.000125	0.00018	mg/L	0.000125	71.53%
Cr 267.716†	2.6	0.00034	mg/L	0.000604	0.00034	mg/L	0.000604	177.52%
Cu 324.752†	55.1	0.00025	mg/L	0.000139	0.00025	mg/L	0.000139	54.79%
Fe 273.955†	3.2	0.00157	mg/L	0.002381	0.00157	mg/L	0.002381	151.60%
K 766.490†	-77.0	-0.03529	mg/L	0.009793	-0.03529	mg/L	0.009793	27.75%
Mg 279.077†	2.6	0.00267	mg/L	0.008434	0.00267	mg/L	0.008434	316.20%
Mn 257.610†	-4.6	-0.00007	mg/L	0.000040	-0.00007	mg/L	0.000040	55.80%
Mo 202.031†	5.9	0.00031	mg/L	0.000164	0.00031	mg/L	0.000164	52.42%
Na 589.592†	80.0	0.00722	mg/L	0.007736	0.00722	mg/L	0.007736	107.12%
Na 330.237†	-4.9	-0.1701	mg/L	0.25354	-0.1701	mg/L	0.25354	149.08%
Ni 231.604†	5.1	0.00135	mg/L	0.000404	0.00135	mg/L	0.000404	29.86%
Pb 220.353†	9.2	0.00105	mg/L	0.000945	0.00105	mg/L	0.000945	90.03%
Sb 206.836†	2.2	0.00113	mg/L	0.001888	0.00113	mg/L	0.001888	167.55%
Se 196.026†	6.5	0.00477	mg/L	0.001401	0.00477	mg/L	0.001401	29.37%
Si 288.158†	1.6	0.00074	mg/L	0.004791	0.00074	mg/L	0.004791	643.26%
Sn 189.927†	0.3	0.00007	mg/L	0.000784	0.00007	mg/L	0.000784	>999.9%
Sr 421.552†	-28.4	-0.00003	mg/L	0.000040	-0.00003	mg/L	0.000040	123.85%
Ti 334.903†	15.9	0.00054	mg/L	0.000485	0.00054	mg/L	0.000485	90.41%
Tl 190.801†	1.6	0.00067	mg/L	0.001746	0.00067	mg/L	0.001746	259.20%
V 292.402†	9.9	0.00007	mg/L	0.000057	0.00007	mg/L	0.000057	84.37%
Zn 206.200†	1.7	0.00053	mg/L	0.000927	0.00053	mg/L	0.000927	174.06%

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Sequence No.: 8 **Autosampler Location: 304**
Sample ID: BJB0084-BLK1 **Date Collected: 2/4/2021 2:26:32 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJB0084-BLK1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: BJB0084-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2508220.3	98.82	%	0.302				0.31%
ScR 361.383	286435.9	101.9	%	0.56				0.55%
Ag 328.068†	66.4	0.00034	mg/L	0.000164	0.00171	mg/L	0.000822	48.00%
Al 308.215†	10.8	0.00635	mg/L	0.001580	0.03175	mg/L	0.007900	24.88%
As 188.979†	-4.2	0.01859	mg/L	0.002809	0.09297	mg/L	0.014043	15.10%
B 249.677†	47.0	0.00584	mg/L	0.001088	0.02918	mg/L	0.005442	18.65%
Ba 233.527†	4.9	0.00052	mg/L	0.000292	0.00262	mg/L	0.001459	55.75%
Be 313.042†	59.1	0.00008	mg/L	0.000015	0.00039	mg/L	0.000075	19.20%
Ca 317.933†	508.2	0.04702	mg/L	0.000723	0.2351	mg/L	0.00361	1.54%
Cd 228.802†	2.9	0.00010	mg/L	0.000068	0.00051	mg/L	0.000342	67.14%
Co 228.616†	-0.2	-0.00001	mg/L	0.000226	-0.00004	mg/L	0.001128	>999.9%
Cr 267.716†	3.0	0.00039	mg/L	0.000132	0.00194	mg/L	0.000659	33.97%
Cu 324.752†	155.6	0.00052	mg/L	0.000013	0.00259	mg/L	0.000067	2.59%
Fe 273.955†	7.9	0.00390	mg/L	0.003533	0.01950	mg/L	0.017665	90.58%
K 766.490†	134.1	0.06146	mg/L	0.010774	0.3073	mg/L	0.05387	17.53%
Mg 279.077†	5.0	0.00514	mg/L	0.000480	0.02571	mg/L	0.002398	9.32%
Mn 257.610†	30.0	0.00047	mg/L	0.000065	0.00233	mg/L	0.000323	13.88%
Mo 202.031†	3.3	0.00017	mg/L	0.000200	0.00087	mg/L	0.000999	115.21%
Na 589.592†	3224395.3	291.0	mg/L	3.18	1455	mg/L	15.88	1.09%
Na 330.237†	8596.8	297.5	mg/L	1.19	1487	mg/L	5.93	0.40%
Ni 231.604†	11.2	0.00297	mg/L	0.001280	0.01483	mg/L	0.006402	43.18%
Pb 220.353†	-13.1	-0.00150	mg/L	0.000296	-0.00748	mg/L	0.001482	19.80%
Sb 206.836†	4.4	0.00230	mg/L	0.006284	0.01148	mg/L	0.031422	273.73%
Se 196.026†	6.6	0.00485	mg/L	0.001846	0.02425	mg/L	0.009231	38.06%
Si 288.158†	-3.7	-0.00171	mg/L	0.001172	-0.00855	mg/L	0.005858	68.55%
Sn 189.927†	4.4	0.00105	mg/L	0.001066	0.00525	mg/L	0.005328	101.51%
Sr 421.552†	120.1	0.00014	mg/L	0.000019	0.00069	mg/L	0.000094	13.63%
Ti 334.903†	23.8	0.00080	mg/L	0.000389	0.00400	mg/L	0.001945	48.57%
Tl 190.801†	-3.5	-0.00149	mg/L	0.001262	-0.00744	mg/L	0.006308	84.79%
V 292.402†	11.7	0.00008	mg/L	0.000088	0.00040	mg/L	0.000440	110.36%
Zn 206.200†	-0.5	-0.00016	mg/L	0.000432	-0.00079	mg/L	0.002160	272.12%

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Sequence No.: 9 **Autosampler Location: 305**
Sample ID: 21A0386-01 **Date Collected: 2/4/2021 2:29:28 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0386-01

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: 21A0386-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2442094.8	96.21	%	1.218				1.27%
ScR 361.383	282884.0	100.6	%	1.52				1.51%
Ag 328.068†	131.2	-0.00020	mg/L	0.000267	-0.00099	mg/L	0.001337	134.70%
Al 308.215†	2.9	-0.00175	mg/L	0.005052	-0.00873	mg/L	0.025258	289.18%
As 188.979†	-5.5	0.01731	mg/L	0.002447	0.08656	mg/L	0.012236	14.14%
B 249.677†	166.1	0.01830	mg/L	0.000938	0.09149	mg/L	0.004689	5.12%
Ba 233.527†	222.7	0.02176	mg/L	0.001216	0.1088	mg/L	0.00608	5.59%
Be 313.042†	20.5	0.00003	mg/L	0.000031	0.00014	mg/L	0.000155	112.79%
Ca 317.933†	586909.4	58.30	mg/L	0.938	291.5	mg/L	4.69	1.61%
Cd 228.802†	24.3	0.00035	mg/L	0.000105	0.00177	mg/L	0.000527	29.82%
Co 228.616†	1168.1	0.02584	mg/L	0.000399	0.1292	mg/L	0.00199	1.54%
Cr 267.716†	-6.4	0.00034	mg/L	0.001786	0.00172	mg/L	0.008932	518.80%
Cu 324.752†	-87.1	0.00080	mg/L	0.000206	0.00401	mg/L	0.001030	25.67%
Fe 273.955†	46552.3	22.96	mg/L	0.246	114.8	mg/L	1.23	1.07%
K 766.490†	1498.4	0.6866	mg/L	0.01862	3.433	mg/L	0.0931	2.71%
Mg 279.077†	8762.4	9.055	mg/L	0.1293	45.28	mg/L	0.647	1.43%
Mn 257.610†	177406.2	2.755	mg/L	0.0288	13.77	mg/L	0.144	1.05%
Mo 202.031†	33.9	0.00125	mg/L	0.000495	0.00626	mg/L	0.002474	39.51%
Na 589.592†	3094081.1	279.2	mg/L	5.36	1396	mg/L	26.81	1.92%
Na 330.237†	8282.4	286.6	mg/L	1.02	1433	mg/L	5.10	0.36%
Ni 231.604†	773.8	0.2044	mg/L	0.00551	1.022	mg/L	0.0275	2.69%
Pb 220.353†	18.8	-0.00011	mg/L	0.001114	-0.00055	mg/L	0.005571	>999.9%
Sb 206.836†	17.2	0.00891	mg/L	0.002568	0.04456	mg/L	0.012842	28.82%
Se 196.026†	18.2	0.01637	mg/L	0.004976	0.08183	mg/L	0.024880	30.40%
Si 288.158†	7819.5	3.596	mg/L	0.0265	17.98	mg/L	0.132	0.74%
Sn 189.927†	-7.9	0.00022	mg/L	0.001107	0.00108	mg/L	0.005537	512.68%
Sr 421.552†	181674.4	0.2085	mg/L	0.00277	1.042	mg/L	0.0138	1.33%
Ti 334.903†	116.7	0.00014	mg/L	0.000616	0.00069	mg/L	0.003081	447.78%
Tl 190.801†	-6.1	0.00031	mg/L	0.001304	0.00154	mg/L	0.006518	423.80%
V 292.402†	-94.9	0.00034	mg/L	0.000125	0.00171	mg/L	0.000624	36.51%
Zn 206.200†	1253.1	0.3840	mg/L	0.00636	1.920	mg/L	0.0318	1.66%

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Sequence No.: 10 **Autosampler Location: 306**
Sample ID: 21A0393-01 **Date Collected: 2/4/2021 2:32:24 PM**
Data Type: Original

Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0393-01

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: 21A0393-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2486028.9	97.94	%	0.558				0.57%
ScR 361.383	282911.8	100.6	%	0.90				0.90%
Ag 328.068†	-350.5	-0.00071	mg/L	0.000132	-0.00353	mg/L	0.000661	18.75%
Al 308.215†	3168.1	1.862	mg/L	0.0163	9.308	mg/L	0.0816	0.88%
As 188.979†	-17.9	0.01862	mg/L	0.002654	0.09312	mg/L	0.013270	14.25%
B 249.677†	93.8	0.01049	mg/L	0.001766	0.05245	mg/L	0.008831	16.84%
Ba 233.527†	231.4	0.02044	mg/L	0.001318	0.1022	mg/L	0.00659	6.45%
Be 313.042†	30.0	0.00004	mg/L	0.000012	0.00020	mg/L	0.000062	30.82%
Ca 317.933†	29220.3	2.900	mg/L	0.0560	14.50	mg/L	0.280	1.93%
Cd 228.802†	8.9	0.00035	mg/L	0.000307	0.00176	mg/L	0.001534	87.20%
Co 228.616†	575.4	0.01180	mg/L	0.000193	0.05900	mg/L	0.000967	1.64%
Cr 267.716†	131.2	0.01731	mg/L	0.001748	0.08657	mg/L	0.008738	10.09%
Cu 324.752†	-654.9	0.00114	mg/L	0.000220	0.00571	mg/L	0.001100	19.27%
Fe 273.955†	135096.2	66.64	mg/L	0.607	333.2	mg/L	3.04	0.91%
K 766.490†	400.3	0.1834	mg/L	0.02314	0.9171	mg/L	0.11572	12.62%
Mg 279.077†	1408.4	1.317	mg/L	0.0165	6.584	mg/L	0.0823	1.25%
Mn 257.610†	55532.1	0.8617	mg/L	0.01164	4.309	mg/L	0.0582	1.35%
Mo 202.031†	-3.1	-0.00019	mg/L	0.000177	-0.00093	mg/L	0.000883	94.75%
Na 589.592†	3166833.2	285.8	mg/L	5.02	1429	mg/L	25.10	1.76%
Na 330.237†	8454.7	292.6	mg/L	1.40	1463	mg/L	6.99	0.48%
Ni 231.604†	3285.8	0.8679	mg/L	0.01030	4.340	mg/L	0.0515	1.19%
Pb 220.353†	55.8	0.00041	mg/L	0.001868	0.00203	mg/L	0.009342	459.77%
Sb 206.836†	22.5	0.01186	mg/L	0.001721	0.05931	mg/L	0.008607	14.51%
Se 196.026†	-12.6	-0.00074	mg/L	0.006308	-0.00370	mg/L	0.031539	853.41%
Si 288.158†	3908.6	1.798	mg/L	0.0073	8.989	mg/L	0.0365	0.41%
Sn 189.927†	-2.9	-0.00050	mg/L	0.000579	-0.00250	mg/L	0.002897	115.82%
Sr 421.552†	4424.8	0.00508	mg/L	0.000010	0.02539	mg/L	0.000052	0.20%
Ti 334.903†	3.1	-0.00009	mg/L	0.000374	-0.00045	mg/L	0.001868	417.05%
Tl 190.801†	-19.4	0.00050	mg/L	0.001147	0.00252	mg/L	0.005735	227.92%
V 292.402†	-63.8	0.00127	mg/L	0.000242	0.00636	mg/L	0.001210	19.03%
Zn 206.200†	348.1	0.1068	mg/L	0.00158	0.5341	mg/L	0.00789	1.48%

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Sequence No.: 11
Sample ID: BJB0084-DUP1

Dilution: 5X
Wash Time: 37

Autosampler Location: 307
Date Collected: 2/4/2021 2:35:19 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BJB0084-DUP1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJB0084-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2508141.9	98.81	%	0.972				0.98%
ScR 361.383	282993.5	100.7	%	1.39				1.38%
Ag 328.068†	-888.2	-0.00174	mg/L	0.000151	-0.00869	mg/L	0.000756	8.70%
Al 308.215†	-40.4	-0.02558	mg/L	0.008104	-0.1279	mg/L	0.04052	31.69%
As 188.979†	-35.3	0.02240	mg/L	0.000650	0.1120	mg/L	0.00325	2.90%
B 249.677†	287.1	0.03432	mg/L	0.004861	0.1716	mg/L	0.02431	14.17%
Ba 233.527†	249.6	0.01701	mg/L	0.001405	0.08503	mg/L	0.007023	8.26%
Be 313.042†	55.4	0.00007	mg/L	0.000017	0.00037	mg/L	0.000086	23.44%
Ca 317.933†	71417.4	7.091	mg/L	0.1381	35.46	mg/L	0.690	1.95%
Cd 228.802†	50.4	-0.00027	mg/L	0.000154	-0.00135	mg/L	0.000769	56.92%
Co 228.616†	2436.6	0.05241	mg/L	0.000390	0.2621	mg/L	0.00195	0.74%
Cr 267.716†	-13.0	-0.00160	mg/L	0.001359	-0.00798	mg/L	0.006793	85.09%
Cu 324.752†	-1635.7	0.00238	mg/L	0.000071	0.01188	mg/L	0.000353	2.97%
Fe 273.955†	313717.7	154.7	mg/L	0.51	773.7	mg/L	2.56	0.33%
K 766.490†	2142.2	0.9817	mg/L	0.00908	4.908	mg/L	0.0454	0.92%
Mg 279.077†	1434.0	1.147	mg/L	0.0382	5.733	mg/L	0.1908	3.33%
Mn 257.610†	6366.9	0.09736	mg/L	0.002272	0.4868	mg/L	0.01136	2.33%
Mo 202.031†	-15.3	-0.00088	mg/L	0.000509	-0.00438	mg/L	0.002544	58.11%
Na 589.592†	3534641.8	319.0	mg/L	7.30	1595	mg/L	36.48	2.29%
Na 330.237†	9694.5	335.5	mg/L	7.73	1677	mg/L	38.63	2.30%
Ni 231.604†	252.3	0.06667	mg/L	0.000834	0.3333	mg/L	0.00417	1.25%
Pb 220.353†	129.3	-0.00044	mg/L	0.000540	-0.00221	mg/L	0.002699	122.16%
Sb 206.836†	29.1	0.01501	mg/L	0.003452	0.07503	mg/L	0.017262	23.01%
Se 196.026†	-21.6	0.00393	mg/L	0.004498	0.01966	mg/L	0.022491	114.40%
Si 288.158†	4232.4	1.947	mg/L	0.0364	9.733	mg/L	0.1821	1.87%
Sn 189.927†	-12.3	-0.00264	mg/L	0.001977	-0.01322	mg/L	0.009885	74.80%
Sr 421.552†	598542.3	0.6869	mg/L	0.00432	3.434	mg/L	0.0216	0.63%
Ti 334.903†	40.3	0.00090	mg/L	0.000111	0.00451	mg/L	0.000557	12.37%
Tl 190.801†	-50.8	-0.00146	mg/L	0.002368	-0.00729	mg/L	0.011841	162.49%
V 292.402†	-133.2	0.00253	mg/L	0.000181	0.01265	mg/L	0.000906	7.17%
Zn 206.200†	82.2	0.02554	mg/L	0.000914	0.1277	mg/L	0.00457	3.58%

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Sequence No.: 12
Sample ID: 21A0392-01

Dilution: 5X
Wash Time: 37

Autosampler Location: 308
Date Collected: 2/4/2021 2:38:20 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0392-01

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0392-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2461279.4	96.97	%	1.093				1.13%
ScR 361.383	279528.8	99.42	%	0.013				0.01%
Ag 328.068†	-830.4	-0.00146	mg/L	0.000169	-0.00730	mg/L	0.000846	11.58%
Al 308.215†	-41.9	-0.02649	mg/L	0.001498	-0.1324	mg/L	0.00749	5.66%
As 188.979†	-42.5	0.01810	mg/L	0.002212	0.09050	mg/L	0.011061	12.22%
B 249.677†	263.9	0.03142	mg/L	0.002806	0.1571	mg/L	0.01403	8.93%
Ba 233.527†	255.9	0.01774	mg/L	0.000059	0.08870	mg/L	0.000294	0.33%
Be 313.042†	77.9	0.00010	mg/L	0.000022	0.00052	mg/L	0.000110	21.22%
Ca 317.933†	72946.0	7.243	mg/L	0.0845	36.22	mg/L	0.423	1.17%
Cd 228.802†	55.2	-0.00010	mg/L	0.000176	-0.00048	mg/L	0.000881	185.00%
Co 228.616†	2481.3	0.05343	mg/L	0.000468	0.2672	mg/L	0.00234	0.87%
Cr 267.716†	-10.0	-0.00120	mg/L	0.000814	-0.00599	mg/L	0.004068	67.88%
Cu 324.752†	-1654.4	0.00223	mg/L	0.000257	0.01113	mg/L	0.001283	11.53%
Fe 273.955†	311708.0	153.8	mg/L	1.53	768.8	mg/L	7.67	1.00%
K 766.490†	2225.8	1.020	mg/L	0.0229	5.100	mg/L	0.1145	2.25%
Mg 279.077†	1457.5	1.173	mg/L	0.0063	5.866	mg/L	0.0317	0.54%
Mn 257.610†	6470.1	0.09897	mg/L	0.000597	0.4948	mg/L	0.00298	0.60%
Mo 202.031†	-13.7	-0.00079	mg/L	0.000339	-0.00397	mg/L	0.001696	42.72%
Na 589.592†	3561516.9	321.4	mg/L	5.29	1607	mg/L	26.43	1.64%
Na 330.237†	9661.6	334.3	mg/L	2.60	1672	mg/L	13.02	0.78%
Ni 231.604†	246.0	0.06502	mg/L	0.002924	0.3251	mg/L	0.01462	4.50%
Pb 220.353†	143.7	0.00131	mg/L	0.001256	0.00654	mg/L	0.006280	96.04%
Sb 206.836†	47.9	0.02466	mg/L	0.001551	0.1233	mg/L	0.00775	6.29%
Se 196.026†	-29.1	-0.00168	mg/L	0.006255	-0.00840	mg/L	0.031275	372.24%
Si 288.158†	4269.1	1.964	mg/L	0.0105	9.818	mg/L	0.0526	0.54%
Sn 189.927†	-16.8	-0.00372	mg/L	0.001098	-0.01858	mg/L	0.005491	29.55%
Sr 421.552†	597409.4	0.6856	mg/L	0.00233	3.428	mg/L	0.0116	0.34%
Ti 334.903†	48.8	0.00118	mg/L	0.000596	0.00589	mg/L	0.002982	50.65%
Tl 190.801†	-49.8	-0.00117	mg/L	0.002302	-0.00586	mg/L	0.011511	196.42%
V 292.402†	-155.7	0.00236	mg/L	0.000167	0.01180	mg/L	0.000834	7.07%
Zn 206.200†	54.5	0.01706	mg/L	0.000370	0.08531	mg/L	0.001848	2.17%

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Sequence No.: 13 **Autosampler Location: 309**
Sample ID: BJB0084-MS1 **Date Collected: 2/4/2021 2:41:22 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJB0084-MS1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJB0084-MS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2498534.5	98.43	%	0.357				0.36%
ScR 361.383	277880.3	98.84	%	0.786				0.80%
Ag 328.068†	39139.0	0.2053	mg/L	0.00061	1.027	mg/L	0.0030	0.29%
Al 308.215†	1335.7	0.7814	mg/L	0.00886	3.907	mg/L	0.0443	1.13%
As 188.979†	1373.7	0.8764	mg/L	0.00147	4.382	mg/L	0.0073	0.17%
B 249.677†	290.8	0.03432	mg/L	0.000817	0.1716	mg/L	0.00409	2.38%
Ba 233.527†	7962.4	0.8415	mg/L	0.00818	4.208	mg/L	0.0409	0.97%
Be 313.042†	146684.1	0.1937	mg/L	0.00093	0.9687	mg/L	0.00467	0.48%
Ca 317.933†	110401.6	10.96	mg/L	0.113	54.82	mg/L	0.564	1.03%
Cd 228.802†	7856.4	0.2124	mg/L	0.00068	1.062	mg/L	0.0034	0.32%
Co 228.616†	11243.3	0.2500	mg/L	0.00051	1.250	mg/L	0.0025	0.20%
Cr 267.716†	1559.7	0.2038	mg/L	0.00158	1.019	mg/L	0.0079	0.77%
Cu 324.752†	40422.9	0.1963	mg/L	0.00169	0.9813	mg/L	0.00845	0.86%
Fe 273.955†	308336.2	152.1	mg/L	1.44	760.4	mg/L	7.21	0.95%
K 766.490†	10786.3	4.943	mg/L	0.0176	24.72	mg/L	0.088	0.36%
Mg 279.077†	5389.5	5.268	mg/L	0.0566	26.34	mg/L	0.283	1.08%
Mn 257.610†	18788.3	0.2904	mg/L	0.00066	1.452	mg/L	0.0033	0.23%
Mo 202.031†	-15.5	-0.00091	mg/L	0.000467	-0.00457	mg/L	0.002335	51.10%
Na 589.592†	3530678.8	318.7	mg/L	4.42	1593	mg/L	22.10	1.39%
Na 330.237†	9568.8	331.1	mg/L	3.42	1656	mg/L	17.12	1.03%
Ni 231.604†	1001.7	0.2642	mg/L	0.00127	1.321	mg/L	0.0063	0.48%
Pb 220.353†	7282.1	0.8197	mg/L	0.00024	4.098	mg/L	0.0012	0.03%
Sb 206.836†	35.6	0.01913	mg/L	0.002353	0.09565	mg/L	0.011767	12.30%
Se 196.026†	1142.2	0.8602	mg/L	0.00211	4.301	mg/L	0.0105	0.25%
Si 288.158†	4219.1	1.942	mg/L	0.0281	9.708	mg/L	0.1404	1.45%
Sn 189.927†	-18.5	-0.00389	mg/L	0.000687	-0.01946	mg/L	0.003437	17.67%
Sr 421.552†	763081.2	0.8757	mg/L	0.00466	4.379	mg/L	0.0233	0.53%
Ti 334.903†	51.7	0.00099	mg/L	0.000400	0.00493	mg/L	0.002000	40.58%
Tl 190.801†	1758.9	0.7695	mg/L	0.00469	3.847	mg/L	0.0234	0.61%
V 292.402†	28889.6	0.1969	mg/L	0.00156	0.9846	mg/L	0.00780	0.79%
Zn 206.200†	725.5	0.2223	mg/L	0.00307	1.112	mg/L	0.0154	1.38%

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Sequence No.: 14 **Autosampler Location: 310**
Sample ID: BJA0765-BLK1 **Date Collected: 2/4/2021 2:44:24 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJA0765-BLK1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJA0765-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2612242.9	102.9	%	0.90				0.88%
ScR 361.383	285304.4	101.5	%	1.20				1.18%
Ag 328.068†	95.2	0.00050	mg/L	0.000114	0.00099	mg/L	0.000227	22.90%
Al 308.215†	2.9	0.00172	mg/L	0.003577	0.00343	mg/L	0.007154	208.50%
As 188.979†	-3.3	-0.00195	mg/L	0.001512	-0.00390	mg/L	0.003025	77.63%
B 249.677†	11.7	0.00145	mg/L	0.002514	0.00291	mg/L	0.005028	172.91%
Ba 233.527†	2.7	0.00027	mg/L	0.000175	0.00054	mg/L	0.000350	64.60%
Be 313.042†	22.1	0.00003	mg/L	0.000040	0.00006	mg/L	0.000080	137.16%
Ca 317.933†	121.7	0.01209	mg/L	0.002065	0.02418	mg/L	0.004130	17.08%
Cd 228.802†	-8.1	-0.00022	mg/L	0.000162	-0.00043	mg/L	0.000324	75.12%
Co 228.616†	-1.1	-0.00003	mg/L	0.000226	-0.00006	mg/L	0.000451	738.38%
Cr 267.716†	4.5	0.00059	mg/L	0.000980	0.00118	mg/L	0.001960	166.16%
Cu 324.752†	82.7	0.00039	mg/L	0.000070	0.00079	mg/L	0.000140	17.71%
Fe 273.955†	409.0	0.2017	mg/L	0.02769	0.4035	mg/L	0.05539	13.73%
K 766.490†	-8.0	-0.00367	mg/L	0.004022	-0.00735	mg/L	0.008045	109.47%
Mg 279.077†	1.4	0.00104	mg/L	0.004111	0.00208	mg/L	0.008223	395.74%
Mn 257.610†	104.8	0.00163	mg/L	0.000123	0.00325	mg/L	0.000247	7.59%
Mo 202.031†	-0.8	-0.00004	mg/L	0.000198	-0.00009	mg/L	0.000396	448.72%
Na 589.592†	3047.3	0.2750	mg/L	0.12365	0.5501	mg/L	0.24730	44.96%
Na 330.237†	2.4	0.08249	mg/L	0.131595	0.1650	mg/L	0.26319	159.52%
Ni 231.604†	0.9	0.00023	mg/L	0.000447	0.00045	mg/L	0.000894	197.12%
Pb 220.353†	7.3	0.00081	mg/L	0.000324	0.00163	mg/L	0.000647	39.76%
Sb 206.836†	-2.6	-0.00132	mg/L	0.001276	-0.00264	mg/L	0.002552	96.82%
Se 196.026†	3.9	0.00288	mg/L	0.004363	0.00577	mg/L	0.008725	151.23%
Si 288.158†	-0.5	-0.00025	mg/L	0.001967	-0.00051	mg/L	0.003934	775.14%
Sn 189.927†	2.4	0.00056	mg/L	0.000807	0.00112	mg/L	0.001615	144.60%
Sr 421.552†	183.3	0.00021	mg/L	0.000339	0.00042	mg/L	0.000678	161.15%
Ti 334.903†	35.6	0.00121	mg/L	0.000514	0.00241	mg/L	0.001028	42.63%
Tl 190.801†	-5.2	-0.00221	mg/L	0.003256	-0.00441	mg/L	0.006512	147.58%
V 292.402†	1.0	0.00001	mg/L	0.000122	0.00003	mg/L	0.000243	865.10%
Zn 206.200†	3.0	0.00093	mg/L	0.000271	0.00186	mg/L	0.000542	29.16%

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Sequence No.: 15 **Autosampler Location: 311**
Sample ID: BJA0765-BS1 **Date Collected: 2/4/2021 2:47:12 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJA0765-BS1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJA0765-BS1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2548946.0	100.4	%	1.81				1.81%
ScR 361.383	280653.6	99.82	%	0.612				0.61%
Ag 328.068†	101810.6	0.5268	mg/L	0.00582	1.054	mg/L	0.0116	1.10%
Al 308.215†	3460.4	2.019	mg/L	0.0070	4.037	mg/L	0.0139	0.35%
As 188.979†	3383.3	2.050	mg/L	0.0328	4.099	mg/L	0.0656	1.60%
B 249.677†	15.2	0.00125	mg/L	0.001898	0.00249	mg/L	0.003797	152.27%
Ba 233.527†	19137.4	2.045	mg/L	0.0115	4.090	mg/L	0.0230	0.56%
Be 313.042†	371845.5	0.4911	mg/L	0.00053	0.9823	mg/L	0.00107	0.11%
Ca 317.933†	96121.1	9.549	mg/L	0.1092	19.10	mg/L	0.218	1.14%
Cd 228.802†	18708.5	0.5096	mg/L	0.00431	1.019	mg/L	0.0086	0.85%
Co 228.616†	22358.9	0.5017	mg/L	0.00623	1.003	mg/L	0.0125	1.24%
Cr 267.716†	3847.8	0.5052	mg/L	0.00407	1.010	mg/L	0.0081	0.81%
Cu 324.752†	108561.2	0.5006	mg/L	0.00319	1.001	mg/L	0.0064	0.64%
Fe 273.955†	4141.5	2.039	mg/L	0.0158	4.077	mg/L	0.0316	0.78%
K 766.490†	21611.7	9.904	mg/L	0.0631	19.81	mg/L	0.126	0.64%
Mg 279.077†	9647.0	10.03	mg/L	0.063	20.07	mg/L	0.125	0.62%
Mn 257.610†	32874.6	0.5108	mg/L	0.00203	1.022	mg/L	0.0041	0.40%
Mo 202.031†	9548.8	0.5041	mg/L	0.00703	1.008	mg/L	0.0141	1.40%
Na 589.592†	112623.2	10.16	mg/L	0.064	20.33	mg/L	0.128	0.63%
Na 330.237†	305.0	10.55	mg/L	0.205	21.11	mg/L	0.410	1.94%
Ni 231.604†	1840.4	0.4849	mg/L	0.00475	0.9699	mg/L	0.00951	0.98%
Pb 220.353†	17967.4	2.059	mg/L	0.0253	4.118	mg/L	0.0507	1.23%
Sb 206.836†	5.6	0.00227	mg/L	0.001363	0.00454	mg/L	0.002727	60.07%
Se 196.026†	2777.1	2.044	mg/L	0.0268	4.089	mg/L	0.0535	1.31%
Si 288.158†	-12.3	-0.00331	mg/L	0.001328	-0.00662	mg/L	0.002656	40.14%
Sn 189.927†	2.4	0.00113	mg/L	0.000310	0.00227	mg/L	0.000621	27.37%
Sr 421.552†	436953.9	0.5014	mg/L	0.00256	1.003	mg/L	0.0051	0.51%
Ti 334.903†	42.7	0.00051	mg/L	0.000193	0.00101	mg/L	0.000386	38.12%
Tl 190.801†	4760.2	2.030	mg/L	0.0279	4.060	mg/L	0.0558	1.37%
V 292.402†	75337.4	0.5050	mg/L	0.00236	1.010	mg/L	0.0047	0.47%
Zn 206.200†	1574.3	0.4816	mg/L	0.00388	0.9631	mg/L	0.00775	0.80%

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Sequence No.: 16
Sample ID: 21A0386-01

Dilution: 10X
Wash Time: 37

Autosampler Location: 312
Date Collected: 2/4/2021 2:50:00 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0386-01

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: 21A0386-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2557632.8	100.8	%	0.54				0.54%
ScR 361.383	282558.1	100.5	%	1.30				1.29%
Ag 328.068†	-1100.1	-0.00181	mg/L	0.000324	-0.01807	mg/L	0.003240	17.93%
Al 308.215†	2118.3	1.245	mg/L	0.0144	12.45	mg/L	0.144	1.16%
As 188.979†	-47.4	-0.00075	mg/L	0.001602	-0.00749	mg/L	0.016016	213.72%
B 249.677†	147.2	0.01782	mg/L	0.001153	0.1782	mg/L	0.01153	6.47%
Ba 233.527†	1119.0	0.1058	mg/L	0.00026	1.058	mg/L	0.0026	0.25%
Be 313.042†	-46.8	-0.00007	mg/L	0.000038	-0.00065	mg/L	0.000384	58.87%
Ca 317.933†	138491.1	13.76	mg/L	0.240	137.6	mg/L	2.40	1.75%
Cd 228.802†	232.6	0.00415	mg/L	0.000101	0.04145	mg/L	0.001010	2.44%
Co 228.616†	696.3	0.01229	mg/L	0.000246	0.1229	mg/L	0.00246	2.00%
Cr 267.716†	2028.6	0.2653	mg/L	0.00354	2.653	mg/L	0.0354	1.34%
Cu 324.752†	7899.4	0.05089	mg/L	0.000147	0.5089	mg/L	0.00147	0.29%
Fe 273.955†	447320.5	220.6	mg/L	2.35	2206	mg/L	23.54	1.07%
K 766.490†	411.6	0.1886	mg/L	0.00362	1.886	mg/L	0.0362	1.92%
Mg 279.077†	2872.3	2.496	mg/L	0.0288	24.96	mg/L	0.288	1.15%
Mn 257.610†	64929.4	1.006	mg/L	0.0058	10.06	mg/L	0.058	0.57%
Mo 202.031†	91.1	0.00471	mg/L	0.000350	0.04712	mg/L	0.003502	7.43%
Na 589.592†	2108.1	0.1903	mg/L	0.01053	1.903	mg/L	0.1053	5.54%
Na 330.237†	0.6	0.02091	mg/L	0.262134	0.2091	mg/L	2.62134	>999.9%
Ni 231.604†	553.2	0.1461	mg/L	0.00322	1.461	mg/L	0.0322	2.20%
Pb 220.353†	255.8	0.00829	mg/L	0.001573	0.08288	mg/L	0.015733	18.98%
Sb 206.836†	51.3	0.02642	mg/L	0.003368	0.2642	mg/L	0.03368	12.75%
Se 196.026†	-26.0	0.00931	mg/L	0.005777	0.09312	mg/L	0.057775	62.04%
Si 288.158†	1492.6	0.6867	mg/L	0.00884	6.867	mg/L	0.0884	1.29%
Sn 189.927†	-8.9	-0.00152	mg/L	0.002663	-0.01515	mg/L	0.026626	175.71%
Sr 421.552†	80926.3	0.09287	mg/L	0.001050	0.9287	mg/L	0.01050	1.13%
Ti 334.903†	1360.8	0.04510	mg/L	0.000403	0.4510	mg/L	0.00403	0.89%
Tl 190.801†	-71.5	-0.00145	mg/L	0.003177	-0.01447	mg/L	0.031768	219.52%
V 292.402†	643.1	0.01057	mg/L	0.000301	0.1057	mg/L	0.00301	2.85%
Zn 206.200†	1790.8	0.5477	mg/L	0.00882	5.477	mg/L	0.0882	1.61%

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Sequence No.: 17 21A0312-02
Sample ID: ~~21A0382-02~~
TH 02-04-21
Dilution: 2X
Wash Time: 37

Autosampler Location: 313
Date Collected: 2/4/2021 2:52:48 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: ~~21A0382-02~~ 21A0312-02

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: ~~21A0382-02~~ 21A0312-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2494158.5	98.26	%	0.524				0.53%
ScR 361.383	274912.2	97.78	%	0.078				0.08%
Ag 328.068†	220.8	0.00061	mg/L	0.000149	0.00122	mg/L	0.000297	24.43%
Al 308.215†	15651.8	9.189	mg/L	0.0591	18.38	mg/L	0.118	0.64%
As 188.979†	22.9	0.02746	mg/L	0.002261	0.05492	mg/L	0.004522	8.24%
B 249.677†	248.5	0.01972	mg/L	0.001126	0.03944	mg/L	0.002253	5.71%
Ba 233.527†	1519.8	0.1614	mg/L	0.00068	0.3228	mg/L	0.00136	0.42%
Be 313.042†	209.5	0.00026	mg/L	0.000016	0.00052	mg/L	0.000032	6.15%
Ca 317.933†	406440.0	40.38	mg/L	0.482	80.75	mg/L	0.964	1.19%
Cd 228.802†	79.1	0.00182	mg/L	0.000033	0.00364	mg/L	0.000065	1.80%
Co 228.616†	470.2	0.00976	mg/L	0.000230	0.01951	mg/L	0.000461	2.36%
Cr 267.716†	187.8	0.02518	mg/L	0.000871	0.05036	mg/L	0.001742	3.46%
Cu 324.752†	29009.0	0.1342	mg/L	0.00113	0.2684	mg/L	0.00226	0.84%
Fe 273.955†	21466.1	10.59	mg/L	0.069	21.18	mg/L	0.137	0.65%
K 766.490†	10151.4	4.652	mg/L	0.0421	9.304	mg/L	0.0841	0.90%
Mg 279.077†	6975.6	7.227	mg/L	0.0503	14.45	mg/L	0.101	0.70%
Mn 257.610†	49662.6	0.7712	mg/L	0.00471	1.542	mg/L	0.0094	0.61%
Mo 202.031†	133.8	0.00671	mg/L	0.000345	0.01343	mg/L	0.000690	5.14%
Na 589.592†	2156007.5	194.6	mg/L	2.12	389.2	mg/L	4.25	1.09%
Na 330.237†	5923.6	205.0	mg/L	0.98	410.0	mg/L	1.96	0.48%
Ni 231.604†	88.6	0.02341	mg/L	0.000664	0.04682	mg/L	0.001329	2.84%
Pb 220.353†	1130.1	0.1309	mg/L	0.00089	0.2618	mg/L	0.00178	0.68%
Sb 206.836†	27.4	0.01534	mg/L	0.002118	0.03068	mg/L	0.004235	13.80%
Se 196.026†	8.4	0.00765	mg/L	0.003435	0.01530	mg/L	0.006869	44.89%
Si 288.158†	38226.7	17.58	mg/L	0.143	35.16	mg/L	0.285	0.81%
Sn 189.927†	27.4	0.00853	mg/L	0.001090	0.01707	mg/L	0.002179	12.77%
Sr 421.552†	154838.1	0.1777	mg/L	0.00104	0.3554	mg/L	0.00208	0.59%
Ti 334.903†	9644.7	0.3238	mg/L	0.00217	0.6476	mg/L	0.00435	0.67%
Tl 190.801†	-9.6	-0.00281	mg/L	0.003015	-0.00562	mg/L	0.006030	107.35%
V 292.402†	3009.3	0.02048	mg/L	0.000201	0.04096	mg/L	0.000402	0.98%
Zn 206.200†	1809.3	0.5569	mg/L	0.00707	1.114	mg/L	0.0141	1.27%

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Sequence No.: 18
Sample ID: SEQ-CCV2

Dilution: 1X
Wash Time: 37

Autosampler Location: 7
Date Collected: 2/4/2021 2:55:43 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV2

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCV2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2549203.1	100.4	%	0.21				0.21%
ScR 361.383	276567.9	98.37	%	1.266				1.29%
Ag 328.068†	204739.6	1.060	mg/L	0.0027	1.060	mg/L	0.0027	0.26%
Al 308.215†	3528.6	2.039	mg/L	0.0201	2.039	mg/L	0.0201	0.98%
As 188.979†	3407.7	2.065	mg/L	0.0152	2.065	mg/L	0.0152	0.74%
B 249.677†	8246.2	1.022	mg/L	0.0073	1.022	mg/L	0.0073	0.71%
Ba 233.527†	9712.9	1.037	mg/L	0.0044	1.037	mg/L	0.0044	0.43%
Be 313.042†	761431.0	1.006	mg/L	0.0052	1.006	mg/L	0.0052	0.51%
Ca 317.933†	20917.4	2.077	mg/L	0.0039	2.077	mg/L	0.0039	0.19%
Cd 228.802†	37519.9	1.037	mg/L	0.0074	1.037	mg/L	0.0074	0.71%
Co 228.616†	45142.2	1.011	mg/L	0.0029	1.011	mg/L	0.0029	0.29%
Cr 267.716†	7973.6	1.046	mg/L	0.0063	1.046	mg/L	0.0063	0.61%
Cu 324.752†	220694.0	1.018	mg/L	0.0067	1.018	mg/L	0.0067	0.66%
Fe 273.955†	4121.7	2.024	mg/L	0.0108	2.024	mg/L	0.0108	0.53%
K 766.490†	44856.4	20.56	mg/L	0.030	20.56	mg/L	0.030	0.15%
Mg 279.077†	1990.2	2.073	mg/L	0.0234	2.073	mg/L	0.0234	1.13%
Mn 257.610†	67354.6	1.046	mg/L	0.0045	1.046	mg/L	0.0045	0.43%
Mo 202.031†	19068.1	1.007	mg/L	0.0035	1.007	mg/L	0.0035	0.35%
Na 589.592†	571416.0	51.57	mg/L	0.358	51.57	mg/L	0.358	0.69%
Na 330.237†	1499.0	51.87	mg/L	0.374	51.87	mg/L	0.374	0.72%
Ni 231.604†	3905.5	1.031	mg/L	0.0084	1.031	mg/L	0.0084	0.81%
Pb 220.353†	17896.8	2.051	mg/L	0.0054	2.051	mg/L	0.0054	0.26%
Sb 206.836†	4093.4	2.126	mg/L	0.0161	2.126	mg/L	0.0161	0.76%
Se 196.026†	2833.0	2.085	mg/L	0.0050	2.085	mg/L	0.0050	0.24%
Si 288.158†	4694.2	2.151	mg/L	0.0073	2.151	mg/L	0.0073	0.34%
Sn 189.927†	4242.6	1.011	mg/L	0.0062	1.011	mg/L	0.0062	0.62%
Sr 421.552†	896941.8	1.029	mg/L	0.0011	1.029	mg/L	0.0011	0.10%
Ti 334.903†	30529.8	1.033	mg/L	0.0021	1.033	mg/L	0.0021	0.20%
Tl 190.801†	4793.7	2.040	mg/L	0.0059	2.040	mg/L	0.0059	0.29%
V 292.402†	152809.3	1.024	mg/L	0.0045	1.024	mg/L	0.0045	0.44%
Zn 206.200†	3361.2	1.028	mg/L	0.0058	1.028	mg/L	0.0058	0.56%

Sequence No.: 19
Sample ID: SEQ-CCB2
Dilution: 1X
Wash Time: 100

Autosampler Location: 1
Date Collected: 2/4/2021 2:59:11 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB2

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCB2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2540281.5	100.1	%	0.88				0.88%
ScR 361.383	274659.4	97.69	%	0.581				0.59%
Ag 328.068†	97.7	0.00051	mg/L	0.000134	0.00051	mg/L	0.000134	26.57%
Al 308.215†	-12.2	-0.00720	mg/L	0.005474	-0.00720	mg/L	0.005474	76.05%
As 188.979†	1.3	0.00082	mg/L	0.001141	0.00082	mg/L	0.001141	139.78%
B 249.677†	15.1	0.00188	mg/L	0.000403	0.00188	mg/L	0.000403	21.39%
Ba 233.527†	5.0	0.00054	mg/L	0.000146	0.00054	mg/L	0.000146	27.08%
Be 313.042†	51.1	0.00007	mg/L	0.000024	0.00007	mg/L	0.000024	36.11%
Ca 317.933†	8.6	0.00086	mg/L	0.000318	0.00086	mg/L	0.000318	37.09%
Cd 228.802†	-1.8	-0.00006	mg/L	0.000075	-0.00006	mg/L	0.000075	129.55%
Co 228.616†	-3.8	-0.00009	mg/L	0.000054	-0.00009	mg/L	0.000054	62.40%
Cr 267.716†	11.1	0.00146	mg/L	0.000599	0.00146	mg/L	0.000599	41.13%
Cu 324.752†	15.3	0.00007	mg/L	0.000168	0.00007	mg/L	0.000168	238.94%
Fe 273.955†	2.5	0.00124	mg/L	0.002540	0.00124	mg/L	0.002540	204.19%
K 766.490†	-61.3	-0.02811	mg/L	0.019372	-0.02811	mg/L	0.019372	68.91%
Mg 279.077†	0.4	0.00046	mg/L	0.009478	0.00046	mg/L	0.009478	>999.9%
Mn 257.610†	14.8	0.00023	mg/L	0.000074	0.00023	mg/L	0.000074	32.40%
Mo 202.031†	12.3	0.00065	mg/L	0.000297	0.00065	mg/L	0.000297	45.60%
Na 589.592†	1120.2	0.1011	mg/L	0.00676	0.1011	mg/L	0.00676	6.69%
Na 330.237†	-3.6	-0.1239	mg/L	0.30115	-0.1239	mg/L	0.30115	243.04%
Ni 231.604†	-4.5	-0.00120	mg/L	0.001062	-0.00120	mg/L	0.001062	88.62%
Pb 220.353†	-0.2	-0.00002	mg/L	0.001119	-0.00002	mg/L	0.001119	>999.9%
Sb 206.836†	3.5	0.00181	mg/L	0.000131	0.00181	mg/L	0.000131	7.25%
Se 196.026†	4.8	0.00350	mg/L	0.000805	0.00350	mg/L	0.000805	23.00%
Si 288.158†	4.0	0.00183	mg/L	0.001447	0.00183	mg/L	0.001447	79.27%
Sn 189.927†	-0.2	-0.00005	mg/L	0.000952	-0.00005	mg/L	0.000952	>999.9%
Sr 421.552†	-15.4	-0.00002	mg/L	0.000077	-0.00002	mg/L	0.000077	433.63%
Ti 334.903†	11.7	0.00040	mg/L	0.000419	0.00040	mg/L	0.000419	105.73%
Tl 190.801†	1.8	0.00075	mg/L	0.003968	0.00075	mg/L	0.003968	527.47%
V 292.402†	3.9	0.00003	mg/L	0.000036	0.00003	mg/L	0.000036	107.03%
Zn 206.200†	1.7	0.00052	mg/L	0.001798	0.00052	mg/L	0.001798	345.23%

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Sequence No.: 20 **Autosampler Location: 314**
Sample ID: BJB0019-BLK2 **Date Collected: 2/4/2021 3:01:59 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJB0019-BLK2

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJB0019-BLK2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2541346.1	100.1	%	1.18				1.18%
ScR 361.383	280217.8	99.67	%	1.901				1.91%
Ag 328.068†	77.9	0.00040	mg/L	0.000346	0.00040	mg/L	0.000346	85.74%
Al 308.215†	0.1	0.00007	mg/L	0.002364	0.00007	mg/L	0.002364	>999.9%
As 188.979†	-6.0	-0.00364	mg/L	0.004037	-0.00364	mg/L	0.004037	111.02%
B 249.677†	15.0	0.00186	mg/L	0.001825	0.00186	mg/L	0.001825	98.34%
Ba 233.527†	35.5	0.00379	mg/L	0.000378	0.00379	mg/L	0.000378	9.96%
Be 313.042†	50.4	0.00007	mg/L	0.000041	0.00007	mg/L	0.000041	61.57%
Ca 317.933†	45.7	0.00454	mg/L	0.001204	0.00454	mg/L	0.001204	26.52%
Cd 228.802†	-3.4	-0.00007	mg/L	0.000047	-0.00007	mg/L	0.000047	69.63%
Co 228.616†	-1.6	-0.00004	mg/L	0.000112	-0.00004	mg/L	0.000112	299.73%
Cr 267.716†	8.6	0.00113	mg/L	0.000741	0.00113	mg/L	0.000741	65.76%
Cu 324.752†	72.0	0.00033	mg/L	0.000230	0.00033	mg/L	0.000230	69.14%
Fe 273.955†	5.4	0.00267	mg/L	0.000752	0.00267	mg/L	0.000752	28.15%
K 766.490†	6.7	0.00306	mg/L	0.035397	0.00306	mg/L	0.035397	>999.9%
Mg 279.077†	10.7	0.01115	mg/L	0.006753	0.01115	mg/L	0.006753	60.57%
Mn 257.610†	103.9	0.00161	mg/L	0.000147	0.00161	mg/L	0.000147	9.09%
Mo 202.031†	3.0	0.00016	mg/L	0.000369	0.00016	mg/L	0.000369	235.20%
Na 589.592†	979.8	0.08843	mg/L	0.011139	0.08843	mg/L	0.011139	12.60%
Na 330.237†	-4.0	-0.1381	mg/L	0.39166	-0.1381	mg/L	0.39166	283.53%
Ni 231.604†	-1.0	-0.00025	mg/L	0.002014	-0.00025	mg/L	0.002014	799.33%
Pb 220.353†	7.6	0.00087	mg/L	0.000222	0.00087	mg/L	0.000222	25.56%
Sb 206.836†	2.2	0.00114	mg/L	0.002716	0.00114	mg/L	0.002716	237.20%
Se 196.026†	8.3	0.00611	mg/L	0.005736	0.00611	mg/L	0.005736	93.83%
Si 288.158†	28.0	0.01289	mg/L	0.003974	0.01289	mg/L	0.003974	30.84%
Sn 189.927†	1.6	0.00039	mg/L	0.001076	0.00039	mg/L	0.001076	274.89%
Sr 421.552†	8.7	0.00001	mg/L	0.000059	0.00001	mg/L	0.000059	588.60%
Ti 334.903†	21.5	0.00073	mg/L	0.000345	0.00073	mg/L	0.000345	47.44%
Tl 190.801†	-0.6	-0.00027	mg/L	0.002465	-0.00027	mg/L	0.002465	897.40%
V 292.402†	-2.6	-0.00001	mg/L	0.000025	-0.00001	mg/L	0.000025	219.39%
Zn 206.200†	0.3	0.00009	mg/L	0.001314	0.00009	mg/L	0.001314	>999.9%

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Sequence No.: 21 **Autosampler Location: 315**
Sample ID: BJA0766-BLK2 **Date Collected: 2/4/2021 3:04:48 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJA0766-BLK2

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJA0766-BLK2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2447546.7	96.43	%	0.228				0.24%
ScR 361.383	279399.4	99.38	%	1.560				1.57%
Ag 328.068†	37.5	0.00019	mg/L	0.000064	0.00096	mg/L	0.000320	33.40%
Al 308.215†	-7.7	-0.00456	mg/L	0.002531	-0.02278	mg/L	0.012653	55.55%
As 188.979†	-0.0	0.02220	mg/L	0.003461	0.1110	mg/L	0.01730	15.59%
B 249.677†	98.3	0.01221	mg/L	0.000131	0.06106	mg/L	0.000653	1.07%
Ba 233.527†	10.3	0.00110	mg/L	0.000367	0.00551	mg/L	0.001837	33.34%
Be 313.042†	32.8	0.00004	mg/L	0.000048	0.00022	mg/L	0.000241	111.37%
Ca 317.933†	1643.2	0.1596	mg/L	0.00588	0.7981	mg/L	0.02939	3.68%
Cd 228.802†	7.0	0.00020	mg/L	0.000151	0.00098	mg/L	0.000754	76.91%
Co 228.616†	-1.6	-0.00004	mg/L	0.000207	-0.00018	mg/L	0.001034	576.12%
Cr 267.716†	7.5	0.00098	mg/L	0.001471	0.00491	mg/L	0.007357	149.92%
Cu 324.752†	137.3	0.00042	mg/L	0.000114	0.00212	mg/L	0.000571	26.91%
Fe 273.955†	5.8	0.00285	mg/L	0.000587	0.01426	mg/L	0.002937	20.60%
K 766.490†	190.4	0.08725	mg/L	0.024424	0.4362	mg/L	0.12212	27.99%
Mg 279.077†	31.5	0.03271	mg/L	0.003919	0.1636	mg/L	0.01960	11.98%
Mn 257.610†	9.6	0.00015	mg/L	0.000122	0.00075	mg/L	0.000611	81.66%
Mo 202.031†	3.3	0.00017	mg/L	0.000214	0.00086	mg/L	0.001069	123.64%
Na 589.592†	3391755.4	306.1	mg/L	5.71	1531	mg/L	28.56	1.87%
Na 330.237†	8997.8	311.4	mg/L	0.44	1557	mg/L	2.18	0.14%
Ni 231.604†	5.6	0.00148	mg/L	0.001819	0.00739	mg/L	0.009097	123.10%
Pb 220.353†	-2.4	-0.00028	mg/L	0.000071	-0.00139	mg/L	0.000356	25.61%
Sb 206.836†	1.8	0.00093	mg/L	0.000816	0.00464	mg/L	0.004079	87.92%
Se 196.026†	0.8	0.00055	mg/L	0.003909	0.00277	mg/L	0.019545	706.36%
Si 288.158†	8.7	0.00399	mg/L	0.004382	0.01997	mg/L	0.021912	109.71%
Sn 189.927†	1.8	0.00045	mg/L	0.000536	0.00223	mg/L	0.002681	120.49%
Sr 421.552†	314.8	0.00036	mg/L	0.000042	0.00181	mg/L	0.000210	11.62%
Ti 334.903†	6.3	0.00020	mg/L	0.001103	0.00102	mg/L	0.005515	543.23%
Tl 190.801†	1.7	0.00073	mg/L	0.001730	0.00364	mg/L	0.008652	237.97%
V 292.402†	8.9	0.00006	mg/L	0.000101	0.00032	mg/L	0.000505	157.36%
Zn 206.200†	3.0	0.00091	mg/L	0.000952	0.00454	mg/L	0.004759	104.92%

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Sequence No.: 22 **Autosampler Location: 316**
Sample ID: BJA0766-DUP2 **Date Collected: 2/4/2021 3:07:43 PM**
Data Type: Original

Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJA0766-DUP2

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BJA0766-DUP2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2381642.6	93.83	%	0.199				0.21%
ScR 361.383	273390.4	97.24	%	0.289				0.30%
Ag 328.068†	332.1	-0.00037	mg/L	0.000310	-0.00187	mg/L	0.001548	82.60%
Al 308.215†	220.8	0.1269	mg/L	0.00279	0.6347	mg/L	0.01397	2.20%
As 188.979†	12.4	0.02420	mg/L	0.001472	0.1210	mg/L	0.00736	6.08%
B 249.677†	215.7	0.02493	mg/L	0.000282	0.1247	mg/L	0.00141	1.13%
Ba 233.527†	1013.0	0.1069	mg/L	0.00057	0.5345	mg/L	0.00284	0.53%
Be 313.042†	75.7	0.00010	mg/L	0.000025	0.00050	mg/L	0.000126	25.36%
Ca 317.933†	1363903.3	135.5	mg/L	3.36	677.5	mg/L	16.80	2.48%
Cd 228.802†	47.4	0.00065	mg/L	0.000138	0.00324	mg/L	0.000692	21.36%
Co 228.616†	-32.0	-0.00078	mg/L	0.000143	-0.00388	mg/L	0.000716	18.43%
Cr 267.716†	-9.1	0.00047	mg/L	0.001492	0.00236	mg/L	0.007458	316.46%
Cu 324.752†	395.5	0.00137	mg/L	0.000101	0.00687	mg/L	0.000507	7.38%
Fe 273.955†	324.0	0.1598	mg/L	0.00130	0.7990	mg/L	0.00650	0.81%
K 766.490†	5022.5	2.302	mg/L	0.0446	11.51	mg/L	0.223	1.94%
Mg 279.077†	17771.8	18.47	mg/L	0.173	92.33	mg/L	0.863	0.93%
Mn 257.610†	565.4	0.00878	mg/L	0.000088	0.04390	mg/L	0.000441	1.01%
Mo 202.031†	60.6	0.00188	mg/L	0.000568	0.00938	mg/L	0.002840	30.29%
Na 589.592†	3423935.6	309.0	mg/L	1.12	1545	mg/L	5.61	0.36%
Na 330.237†	9088.6	314.5	mg/L	5.03	1572	mg/L	25.14	1.60%
Ni 231.604†	6.0	0.00159	mg/L	0.000282	0.00794	mg/L	0.001409	17.74%
Pb 220.353†	-0.3	-0.00002	mg/L	0.000319	-0.00010	mg/L	0.001593	>999.9%
Sb 206.836†	19.7	0.01015	mg/L	0.001112	0.05075	mg/L	0.005561	10.96%
Se 196.026†	16.3	0.01203	mg/L	0.002254	0.06015	mg/L	0.011268	18.74%
Si 288.158†	6440.8	2.962	mg/L	0.0279	14.81	mg/L	0.139	0.94%
Sn 189.927†	-15.3	0.00120	mg/L	0.001725	0.00601	mg/L	0.008625	143.46%
Sr 421.552†	1597147.4	1.833	mg/L	0.0112	9.164	mg/L	0.0560	0.61%
Ti 334.903†	730.5	0.01587	mg/L	0.000595	0.07934	mg/L	0.002976	3.75%
Tl 190.801†	0.4	0.00019	mg/L	0.001718	0.00093	mg/L	0.008591	919.83%
V 292.402†	94.3	0.00063	mg/L	0.000228	0.00313	mg/L	0.001140	36.48%
Zn 206.200†	13.7	0.00479	mg/L	0.000986	0.02393	mg/L	0.004932	20.61%

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Sequence No.: 23 **Autosampler Location: 317**
Sample ID: 21A0323-01 **Date Collected: 2/4/2021 3:10:45 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0323-01

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: 21A0323-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2393362.8	94.29	%	0.641				0.68%
ScR 361.383	275123.0	97.86	%	1.619				1.65%
Ag 328.068†	360.6	-0.00019	mg/L	0.000222	-0.00094	mg/L	0.001108	118.24%
Al 308.215†	210.4	0.1209	mg/L	0.00343	0.6044	mg/L	0.01713	2.83%
As 188.979†	5.6	0.01974	mg/L	0.001489	0.09869	mg/L	0.007446	7.54%
B 249.677†	211.8	0.02445	mg/L	0.000840	0.1223	mg/L	0.00420	3.43%
Ba 233.527†	998.8	0.1054	mg/L	0.00243	0.5270	mg/L	0.01216	2.31%
Be 313.042†	69.2	0.00009	mg/L	0.000054	0.00045	mg/L	0.000268	59.02%
Ca 317.933†	1337886.2	132.9	mg/L	1.78	664.6	mg/L	8.92	1.34%
Cd 228.802†	42.6	0.00056	mg/L	0.000284	0.00278	mg/L	0.001421	51.10%
Co 228.616†	-25.4	-0.00062	mg/L	0.000206	-0.00311	mg/L	0.001028	33.09%
Cr 267.716†	-3.8	0.00114	mg/L	0.000588	0.00570	mg/L	0.002941	51.63%
Cu 324.752†	358.6	0.00120	mg/L	0.000046	0.00602	mg/L	0.000228	3.78%
Fe 273.955†	321.6	0.1586	mg/L	0.00228	0.7932	mg/L	0.01141	1.44%
K 766.490†	5088.3	2.332	mg/L	0.0558	11.66	mg/L	0.279	2.39%
Mg 279.077†	17836.3	18.53	mg/L	0.137	92.67	mg/L	0.683	0.74%
Mn 257.610†	559.4	0.00869	mg/L	0.000282	0.04343	mg/L	0.001408	3.24%
Mo 202.031†	57.2	0.00172	mg/L	0.000233	0.00860	mg/L	0.001166	13.55%
Na 589.592†	3363126.9	303.5	mg/L	3.66	1518	mg/L	18.30	1.21%
Na 330.237†	9134.3	316.1	mg/L	6.40	1580	mg/L	32.02	2.03%
Ni 231.604†	6.6	0.00176	mg/L	0.000166	0.00879	mg/L	0.000832	9.46%
Pb 220.353†	-14.7	-0.00167	mg/L	0.002050	-0.00834	mg/L	0.010250	122.94%
Sb 206.836†	14.9	0.00767	mg/L	0.002195	0.03836	mg/L	0.010976	28.61%
Se 196.026†	24.4	0.01802	mg/L	0.002971	0.09011	mg/L	0.014855	16.48%
Si 288.158†	6392.3	2.940	mg/L	0.0558	14.70	mg/L	0.279	1.90%
Sn 189.927†	-17.2	0.00065	mg/L	0.000794	0.00323	mg/L	0.003968	122.98%
Sr 421.552†	1568642.2	1.800	mg/L	0.0260	9.001	mg/L	0.1298	1.44%
Ti 334.903†	645.0	0.01314	mg/L	0.000799	0.06572	mg/L	0.003993	6.08%
Tl 190.801†	-6.3	-0.00265	mg/L	0.000542	-0.01323	mg/L	0.002708	20.46%
V 292.402†	72.6	0.00048	mg/L	0.000094	0.00242	mg/L	0.000469	19.36%
Zn 206.200†	12.9	0.00453	mg/L	0.001522	0.02263	mg/L	0.007612	33.64%

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Sequence No.: 24 **Autosampler Location: 318**
Sample ID: BJA0766-MS2 **Date Collected: 2/4/2021 3:13:47 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJA0766-MS2

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJA0766-MS2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2378653.2	93.71	%	0.467				0.50%
ScR 361.383	271008.3	96.39	%	1.536				1.59%
Ag 328.068†	40459.5	0.2073	mg/L	0.00092	1.036	mg/L	0.0046	0.44%
Al 308.215†	1647.0	0.9634	mg/L	0.01973	4.817	mg/L	0.0986	2.05%
As 188.979†	1398.1	0.8647	mg/L	0.00877	4.323	mg/L	0.0439	1.01%
B 249.677†	218.1	0.02478	mg/L	0.001675	0.1239	mg/L	0.00837	6.76%
Ba 233.527†	8539.5	0.9113	mg/L	0.01699	4.556	mg/L	0.0850	1.86%
Be 313.042†	148805.3	0.1966	mg/L	0.00217	0.9828	mg/L	0.01086	1.11%
Ca 317.933†	1395252.8	138.6	mg/L	1.15	693.1	mg/L	5.77	0.83%
Cd 228.802†	7734.9	0.2101	mg/L	0.00200	1.050	mg/L	0.0100	0.95%
Co 228.616†	8571.6	0.1922	mg/L	0.00195	0.9612	mg/L	0.00975	1.01%
Cr 267.716†	1540.9	0.2029	mg/L	0.00398	1.015	mg/L	0.0199	1.96%
Cu 324.752†	42892.1	0.1975	mg/L	0.00159	0.9875	mg/L	0.00794	0.80%
Fe 273.955†	1910.0	0.9405	mg/L	0.01617	4.702	mg/L	0.0808	1.72%
K 766.490†	14088.2	6.456	mg/L	0.0713	32.28	mg/L	0.356	1.10%
Mg 279.077†	21457.2	22.30	mg/L	0.283	111.5	mg/L	1.41	1.27%
Mn 257.610†	13433.1	0.2087	mg/L	0.00386	1.044	mg/L	0.0193	1.85%
Mo 202.031†	52.0	0.00140	mg/L	0.000263	0.00701	mg/L	0.001314	18.74%
Na 589.592†	3447828.9	311.2	mg/L	7.69	1556	mg/L	38.44	2.47%
Na 330.237†	9251.3	320.1	mg/L	2.59	1601	mg/L	12.93	0.81%
Ni 231.604†	746.7	0.1968	mg/L	0.00405	0.9840	mg/L	0.02023	2.06%
Pb 220.353†	6935.6	0.7949	mg/L	0.00985	3.975	mg/L	0.0493	1.24%
Sb 206.836†	10.2	0.00609	mg/L	0.001733	0.03047	mg/L	0.008663	28.43%
Se 196.026†	1162.2	0.8556	mg/L	0.01121	4.278	mg/L	0.0561	1.31%
Si 288.158†	6442.2	2.964	mg/L	0.0502	14.82	mg/L	0.251	1.69%
Sn 189.927†	-19.5	0.00040	mg/L	0.001391	0.00201	mg/L	0.006953	345.23%
Sr 421.552†	1759747.3	2.019	mg/L	0.0470	10.10	mg/L	0.235	2.33%
Ti 334.903†	606.9	0.01143	mg/L	0.001354	0.05716	mg/L	0.006771	11.84%
Tl 190.801†	1757.4	0.7491	mg/L	0.00692	3.745	mg/L	0.0346	0.92%
V 292.402†	29011.1	0.1944	mg/L	0.00088	0.9718	mg/L	0.00442	0.45%
Zn 206.200†	701.9	0.2153	mg/L	0.00513	1.077	mg/L	0.0256	2.38%

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Sequence No.: 25
Sample ID: 21A0398-01

Dilution: 5X
Wash Time: 37

Autosampler Location: 319
Date Collected: 2/4/2021 3:16:49 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0398-01

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0398-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2282888.3	89.94	%	0.940				1.05%
ScR 361.383	267094.3	95.00	%	0.887				0.93%
Ag 328.068†	48.2	-0.00003	mg/L	0.000222	-0.00014	mg/L	0.001112	786.09%
Al 308.215†	-3.4	-0.00268	mg/L	0.007389	-0.01338	mg/L	0.036943	276.10%
As 188.979†	4.3	0.07061	mg/L	0.004445	0.3531	mg/L	0.02223	6.30%
B 249.677†	149286.4	18.55	mg/L	0.276	92.75	mg/L	1.381	1.49%
Ba 233.527†	22.4	0.00212	mg/L	0.000088	0.01062	mg/L	0.000438	4.13%
Be 313.042†	109.8	0.00014	mg/L	0.000021	0.00072	mg/L	0.000104	14.40%
Ca 317.933†	183974.8	18.27	mg/L	0.363	91.33	mg/L	1.813	1.99%
Cd 228.802†	25.9	0.00062	mg/L	0.000099	0.00310	mg/L	0.000497	16.05%
Co 228.616†	2.5	0.00003	mg/L	0.000172	0.00017	mg/L	0.000861	511.56%
Cr 267.716†	4.9	0.00103	mg/L	0.000088	0.00517	mg/L	0.000442	8.56%
Cu 324.752†	2904.1	0.01273	mg/L	0.000011	0.06363	mg/L	0.000053	0.08%
Fe 273.955†	2518.8	1.242	mg/L	0.0075	6.212	mg/L	0.0373	0.60%
K 766.490†	4568.4	2.094	mg/L	0.0525	10.47	mg/L	0.263	2.51%
Mg 279.077†	274.7	0.2799	mg/L	0.01094	1.399	mg/L	0.0547	3.91%
Mn 257.610†	6276.7	0.09748	mg/L	0.001358	0.4874	mg/L	0.00679	1.39%
Mo 202.031†	608.2	0.03194	mg/L	0.000697	0.1597	mg/L	0.00349	2.18%
Na 589.592†	11124654.8	1004	mg/L	7.24	5020	mg/L	36.19	0.72%
Na 330.237†	30803.8	1066	mg/L	4.58	5330	mg/L	22.91	0.43%
Ni 231.604†	48.0	0.01268	mg/L	0.000446	0.06340	mg/L	0.002231	3.52%
Pb 220.353†	869.4	0.09949	mg/L	0.001036	0.4974	mg/L	0.00518	1.04%
Sb 206.836†	12.3	0.00617	mg/L	0.002149	0.03086	mg/L	0.010743	34.81%
Se 196.026†	2.9	0.00229	mg/L	0.002264	0.01143	mg/L	0.011322	99.05%
Si 288.158†	35.8	0.01647	mg/L	0.001433	0.08235	mg/L	0.007163	8.70%
Sn 189.927†	0.6	0.00080	mg/L	0.000865	0.00400	mg/L	0.004323	108.12%
Sr 421.552†	14348.2	0.01647	mg/L	0.000186	0.08233	mg/L	0.000929	1.13%
Ti 334.903†	86.4	0.00172	mg/L	0.000526	0.00859	mg/L	0.002630	30.61%
Tl 190.801†	-0.7	-0.00009	mg/L	0.004224	-0.00044	mg/L	0.021122	>999.9%
V 292.402†	14.6	0.00016	mg/L	0.000314	0.00082	mg/L	0.001572	190.52%
Zn 206.200†	46.9	0.01435	mg/L	0.001020	0.07175	mg/L	0.005102	7.11%

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Sequence No.: 26 **Autosampler Location: 320**
Sample ID: SEQ-IBL1 **Date Collected: 2/4/2021 3:21:09 PM**
Data Type: Original
Dilution: 1X
Wash Time: 120 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-IBL1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-IBL1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2521391.6	99.33	%	0.051				0.05%
ScR 361.383	279928.0	99.57	%	0.555				0.56%
Ag 328.068†	100.4	0.00052	mg/L	0.000308	0.00052	mg/L	0.000308	59.21%
Al 308.215†	11.0	0.00646	mg/L	0.002178	0.00646	mg/L	0.002178	33.71%
As 188.979†	-3.2	-0.00192	mg/L	0.002566	-0.00192	mg/L	0.002566	133.74%
B 249.677†	176.1	0.02188	mg/L	0.003005	0.02188	mg/L	0.003005	13.74%
Ba 233.527†	-4.1	-0.00044	mg/L	0.000399	-0.00044	mg/L	0.000399	90.59%
Be 313.042†	-4.8	-0.00001	mg/L	0.000046	-0.00001	mg/L	0.000046	726.22%
Ca 317.933†	102.4	0.01017	mg/L	0.003970	0.01017	mg/L	0.003970	39.05%
Cd 228.802†	-4.2	-0.00010	mg/L	0.000133	-0.00010	mg/L	0.000133	126.77%
Co 228.616†	-1.8	-0.00004	mg/L	0.000143	-0.00004	mg/L	0.000143	368.91%
Cr 267.716†	11.3	0.00148	mg/L	0.002315	0.00148	mg/L	0.002315	156.17%
Cu 324.752†	45.1	0.00021	mg/L	0.000127	0.00021	mg/L	0.000127	61.35%
Fe 273.955†	1.9	0.00092	mg/L	0.001602	0.00092	mg/L	0.001602	175.01%
K 766.490†	6.4	0.00292	mg/L	0.025520	0.00292	mg/L	0.025520	874.81%
Mg 279.077†	1.6	0.00170	mg/L	0.008930	0.00170	mg/L	0.008930	526.76%
Mn 257.610†	0.8	0.00001	mg/L	0.000044	0.00001	mg/L	0.000044	339.08%
Mo 202.031†	1.9	0.00010	mg/L	0.000263	0.00010	mg/L	0.000263	258.68%
Na 589.592†	3403.3	0.3072	mg/L	0.00998	0.3072	mg/L	0.00998	3.25%
Na 330.237†	16.8	0.5828	mg/L	0.36062	0.5828	mg/L	0.36062	61.87%
Ni 231.604†	-1.3	-0.00033	mg/L	0.001040	-0.00033	mg/L	0.001040	311.75%
Pb 220.353†	-6.3	-0.00072	mg/L	0.000457	-0.00072	mg/L	0.000457	63.12%
Sb 206.836†	0.3	0.00017	mg/L	0.002999	0.00017	mg/L	0.002999	>999.9%
Se 196.026†	-1.5	-0.00107	mg/L	0.002237	-0.00107	mg/L	0.002237	209.44%
Si 288.158†	13.9	0.00640	mg/L	0.002532	0.00640	mg/L	0.002532	39.53%
Sn 189.927†	-0.9	-0.00021	mg/L	0.000316	-0.00021	mg/L	0.000316	150.36%
Sr 421.552†	39.6	0.00005	mg/L	0.000052	0.00005	mg/L	0.000052	113.77%
Ti 334.903†	-13.4	-0.00045	mg/L	0.000544	-0.00045	mg/L	0.000544	120.13%
Tl 190.801†	-4.0	-0.00169	mg/L	0.002674	-0.00169	mg/L	0.002674	157.86%
V 292.402†	-3.6	-0.00002	mg/L	0.000068	-0.00002	mg/L	0.000068	408.53%
Zn 206.200†	4.9	0.00149	mg/L	0.001065	0.00149	mg/L	0.001065	71.70%

Sequence No.: 27
Sample ID: 21A0323-01
DEL
Dilution: 5X
Wash Time: 37

Autosampler Location: 321
Date Collected: 2/4/2021 3:23:57 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 21A0323-01

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0323-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2529435.9	99.65	%	0.676				0.68%
ScR 361.383	279850.8	99.54	%	0.425				0.43%
Ag 328.068†	-2453.4	-0.00679	mg/L	0.000417	-0.03397	mg/L	0.002087	6.14%
Al 308.215†	357463.1	210.2	mg/L	1.44	1051	mg/L	7.20	0.68%
As 188.979†	-43.8	0.03091	mg/L	0.001797	0.1545	mg/L	0.00899	5.82%
B 249.677†	388.1	0.04667	mg/L	0.002091	0.2334	mg/L	0.01045	4.48%
Ba 233.527†	13143.2	1.379	mg/L	0.0178	6.897	mg/L	0.0888	1.29%
Be 313.042†	7732.1	0.00965	mg/L	0.000171	0.04824	mg/L	0.000853	1.77%
Ca 317.933†	797745.1	79.25	mg/L	0.378	396.3	mg/L	1.89	0.48%
Cd 228.802†	157.6	0.00018	mg/L	0.000276	0.00091	mg/L	0.001381	152.37%
Co 228.616†	12858.0	0.2501	mg/L	0.00238	1.250	mg/L	0.0119	0.95%
Cr 267.716†	5086.4	0.6664	mg/L	0.00679	3.332	mg/L	0.0340	1.02%
Cu 324.752†	96661.7	0.4666	mg/L	0.00190	2.333	mg/L	0.0095	0.41%
Fe 273.955†	795557.3	392.4	mg/L	1.00	1962	mg/L	5.00	0.25%
K 766.490†	55877.3	25.61	mg/L	0.086	128.0	mg/L	0.43	0.33%
Mg 279.077†	54163.3	55.47	mg/L	0.416	277.3	mg/L	2.08	0.75%
Mn 257.610†	462235.8	7.175	mg/L	0.0334	35.87	mg/L	0.167	0.47%
Mo 202.031†	28.6	0.00079	mg/L	0.000469	0.00394	mg/L	0.002346	59.51%
Na 589.592†	97017.8	8.756	mg/L	0.0247	43.78	mg/L	0.124	0.28%
Na 330.237†	155.3	5.372	mg/L	0.2688	26.86	mg/L	1.344	5.00%
Ni 231.604†	2917.3	0.7706	mg/L	0.00896	3.853	mg/L	0.0448	1.16%
Pb 220.353†	811.4	0.1156	mg/L	0.00198	0.5782	mg/L	0.00988	1.71%
Sb 206.836†	-22.7	0.04512	mg/L	0.006809	0.2256	mg/L	0.03404	15.09%
Se 196.026†	-45.0	0.02157	mg/L	0.006389	0.1079	mg/L	0.03194	29.61%
Si 288.158†	3009.8	1.312	mg/L	0.0196	6.558	mg/L	0.0978	1.49%
Sn 189.927†	-106.4	-0.00448	mg/L	0.000779	-0.02240	mg/L	0.003894	17.39%
Sr 421.552†	1163298.9	1.335	mg/L	0.0055	6.675	mg/L	0.0277	0.41%
Ti 334.903†	499050.0	16.89	mg/L	0.051	84.44	mg/L	0.254	0.30%
Tl 190.801†	-67.6	0.01959	mg/L	0.007800	0.09793	mg/L	0.039000	39.82%
V 292.402†	83822.2	0.5685	mg/L	0.00179	2.842	mg/L	0.0090	0.32%
Zn 206.200†	3260.6	0.9973	mg/L	0.01494	4.986	mg/L	0.0747	1.50%

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Sequence No.: 28
Sample ID: 21A0325-01

Dilution: 50X
Wash Time: 37

Autosampler Location: 322
Date Collected: 2/4/2021 3:26:22 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0325-01

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 21A0325-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2571646.7	101.3	%	0.38				0.37%
ScR 361.383	276546.2	98.36	%	2.154				2.19%
Ag 328.068†	-86.5	-0.00022	mg/L	0.000089	-0.01077	mg/L	0.004438	41.20%
Al 308.215†	743.2	0.4370	mg/L	0.00900	21.85	mg/L	0.450	2.06%
As 188.979†	2.2	0.00281	mg/L	0.003931	0.1403	mg/L	0.19656	140.07%
B 249.677†	110.1	0.01362	mg/L	0.000946	0.6811	mg/L	0.04728	6.94%
Ba 233.527†	691.8	0.07204	mg/L	0.002163	3.602	mg/L	0.1081	3.00%
Be 313.042†	44.4	0.00006	mg/L	0.000037	0.00293	mg/L	0.001825	62.23%
Ca 317.933†	175175.7	17.40	mg/L	0.305	870.2	mg/L	15.25	1.75%
Cd 228.802†	201.3	0.00524	mg/L	0.000053	0.2618	mg/L	0.00263	1.00%
Co 228.616†	83.2	0.00143	mg/L	0.000334	0.07140	mg/L	0.016713	23.41%
Cr 267.716†	3155.2	0.4124	mg/L	0.00903	20.62	mg/L	0.451	2.19%
Cu 324.752†	4628.1	0.02318	mg/L	0.000222	1.159	mg/L	0.0111	0.96%
Fe 273.955†	56602.6	27.92	mg/L	0.333	1396	mg/L	16.64	1.19%
K 766.490†	110.2	0.05051	mg/L	0.032954	2.526	mg/L	1.6477	65.24%
Mg 279.077†	672.9	0.6354	mg/L	0.01030	31.77	mg/L	0.515	1.62%
Mn 257.610†	15018.2	0.2330	mg/L	0.00211	11.65	mg/L	0.105	0.91%
Mo 202.031†	35.2	0.00171	mg/L	0.000219	0.08548	mg/L	0.010944	12.80%
Na 589.592†	2136.9	0.1929	mg/L	0.00277	9.643	mg/L	0.1383	1.43%
Na 330.237†	5.9	0.2043	mg/L	0.40747	10.21	mg/L	20.374	199.48%
Ni 231.604†	80.0	0.02113	mg/L	0.002201	1.056	mg/L	0.1100	10.42%
Pb 220.353†	47.4	0.00341	mg/L	0.001156	0.1707	mg/L	0.05779	33.86%
Sb 206.836†	6.0	0.00291	mg/L	0.000820	0.1457	mg/L	0.04099	28.13%
Se 196.026†	9.2	0.01051	mg/L	0.006383	0.5253	mg/L	0.31917	60.76%
Si 288.158†	203.1	0.09380	mg/L	0.002044	4.690	mg/L	0.1022	2.18%
Sn 189.927†	10.4	0.00313	mg/L	0.000519	0.1566	mg/L	0.02593	16.56%
Sr 421.552†	38778.5	0.04450	mg/L	0.000295	2.225	mg/L	0.0148	0.66%
Ti 334.903†	573.5	0.01818	mg/L	0.000599	0.9089	mg/L	0.02994	3.29%
Tl 190.801†	-14.1	-0.00249	mg/L	0.001687	-0.1246	mg/L	0.08435	67.69%
V 292.402†	-56.4	0.00224	mg/L	0.000120	0.1118	mg/L	0.00601	5.37%
Zn 206.200†	1493.2	0.4566	mg/L	0.01118	22.83	mg/L	0.559	2.45%

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Sequence No.: 29 **Autosampler Location: 323**
Sample ID: BJB0019-BS2 **Date Collected: 2/4/2021 3:29:10 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJB0019-BS2

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJB0019-BS2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2519652.3	99.27	%	0.941				0.95%
ScR 361.383	274196.8	97.53	%	0.632				0.65%
Ag 328.068†	101789.0	0.5268	mg/L	0.00490	0.5268	mg/L	0.00490	0.93%
Al 308.215†	3566.4	2.078	mg/L	0.0060	2.078	mg/L	0.0060	0.29%
As 188.979†	3409.0	2.067	mg/L	0.0159	2.067	mg/L	0.0159	0.77%
B 249.677†	4375.0	0.5429	mg/L	0.00243	0.5429	mg/L	0.00243	0.45%
Ba 233.527†	19583.5	2.093	mg/L	0.0142	2.093	mg/L	0.0142	0.68%
Be 313.042†	378651.4	0.5001	mg/L	0.00344	0.5001	mg/L	0.00344	0.69%
Ca 317.933†	100964.1	10.03	mg/L	0.094	10.03	mg/L	0.094	0.94%
Cd 228.802†	18649.3	0.5078	mg/L	0.00339	0.5078	mg/L	0.00339	0.67%
Co 228.616†	22509.1	0.5010	mg/L	0.00446	0.5010	mg/L	0.00446	0.89%
Cr 267.716†	4010.6	0.5265	mg/L	0.00120	0.5265	mg/L	0.00120	0.23%
Cu 324.752†	109349.1	0.5037	mg/L	0.00540	0.5037	mg/L	0.00540	1.07%
Fe 273.955†	4174.0	2.055	mg/L	0.0254	2.055	mg/L	0.0254	1.24%
K 766.490†	22336.4	10.24	mg/L	0.010	10.24	mg/L	0.010	0.10%
Mg 279.077†	10079.8	10.48	mg/L	0.024	10.48	mg/L	0.024	0.23%
Mn 257.610†	33698.5	0.5236	mg/L	0.00239	0.5236	mg/L	0.00239	0.46%
Mo 202.031†	9916.2	0.5235	mg/L	0.00619	0.5235	mg/L	0.00619	1.18%
Na 589.592†	115384.1	10.41	mg/L	0.043	10.41	mg/L	0.043	0.41%
Na 330.237†	295.6	10.23	mg/L	0.402	10.23	mg/L	0.402	3.93%
Ni 231.604†	1941.4	0.5125	mg/L	0.00283	0.5125	mg/L	0.00283	0.55%
Pb 220.353†	17937.0	2.056	mg/L	0.0150	2.056	mg/L	0.0150	0.73%
Sb 206.836†	4190.6	2.173	mg/L	0.0395	2.173	mg/L	0.0395	1.82%
Se 196.026†	2810.7	2.070	mg/L	0.0220	2.070	mg/L	0.0220	1.06%
Si 288.158†	430.7	0.1874	mg/L	0.00397	0.1874	mg/L	0.00397	2.12%
Sn 189.927†	2133.5	0.5107	mg/L	0.00465	0.5107	mg/L	0.00465	0.91%
Sr 421.552†	449488.7	0.5158	mg/L	0.00178	0.5158	mg/L	0.00178	0.35%
Ti 334.903†	61540.8	2.082	mg/L	0.0031	2.082	mg/L	0.0031	0.15%
Tl 190.801†	4857.2	2.071	mg/L	0.0244	2.071	mg/L	0.0244	1.18%
V 292.402†	75185.3	0.5037	mg/L	0.00868	0.5037	mg/L	0.00868	1.72%
Zn 206.200†	1638.7	0.5013	mg/L	0.00058	0.5013	mg/L	0.00058	0.12%

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Sequence No.: 30 **Autosampler Location: 7**
Sample ID: SEQ-CCV3 **Date Collected: 2/4/2021 3:31:59 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV3

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCV3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2482322.6	97.80	%	1.218				1.25%
ScR 361.383	270939.2	96.37	%	0.846				0.88%
Ag 328.068†	203876.2	1.055	mg/L	0.0119	1.055	mg/L	0.0119	1.13%
Al 308.215†	3571.4	2.064	mg/L	0.0391	2.064	mg/L	0.0391	1.89%
As 188.979†	3445.0	2.087	mg/L	0.0179	2.087	mg/L	0.0179	0.86%
B 249.677†	8357.6	1.036	mg/L	0.0085	1.036	mg/L	0.0085	0.82%
Ba 233.527†	9748.1	1.041	mg/L	0.0119	1.041	mg/L	0.0119	1.15%
Be 313.042†	758804.4	1.002	mg/L	0.0118	1.002	mg/L	0.0118	1.18%
Ca 317.933†	21008.7	2.087	mg/L	0.0255	2.087	mg/L	0.0255	1.22%
Cd 228.802†	37205.7	1.028	mg/L	0.0101	1.028	mg/L	0.0101	0.98%
Co 228.616†	44697.3	1.001	mg/L	0.0111	1.001	mg/L	0.0111	1.11%
Cr 267.716†	8004.0	1.050	mg/L	0.0133	1.050	mg/L	0.0133	1.27%
Cu 324.752†	219340.6	1.011	mg/L	0.0101	1.011	mg/L	0.0101	1.00%
Fe 273.955†	4158.5	2.043	mg/L	0.0170	2.043	mg/L	0.0170	0.83%
K 766.490†	45146.7	20.69	mg/L	0.260	20.69	mg/L	0.260	1.26%
Mg 279.077†	1975.8	2.058	mg/L	0.0254	2.058	mg/L	0.0254	1.23%
Mn 257.610†	67618.9	1.050	mg/L	0.0128	1.050	mg/L	0.0128	1.22%
Mo 202.031†	18968.0	1.002	mg/L	0.0082	1.002	mg/L	0.0082	0.82%
Na 589.592†	574937.6	51.89	mg/L	0.619	51.89	mg/L	0.619	1.19%
Na 330.237†	1512.9	52.35	mg/L	0.085	52.35	mg/L	0.085	0.16%
Ni 231.604†	3926.9	1.037	mg/L	0.0085	1.037	mg/L	0.0085	0.82%
Pb 220.353†	17768.2	2.036	mg/L	0.0254	2.036	mg/L	0.0254	1.25%
Sb 206.836†	4152.2	2.156	mg/L	0.0226	2.156	mg/L	0.0226	1.05%
Se 196.026†	2849.8	2.098	mg/L	0.0095	2.098	mg/L	0.0095	0.45%
Si 288.158†	4693.2	2.151	mg/L	0.0343	2.151	mg/L	0.0343	1.59%
Sn 189.927†	4287.9	1.022	mg/L	0.0044	1.022	mg/L	0.0044	0.43%
Sr 421.552†	901689.6	1.035	mg/L	0.0133	1.035	mg/L	0.0133	1.29%
Ti 334.903†	30589.9	1.035	mg/L	0.0122	1.035	mg/L	0.0122	1.18%
Tl 190.801†	4865.4	2.071	mg/L	0.0214	2.071	mg/L	0.0214	1.03%
V 292.402†	150444.5	1.008	mg/L	0.0130	1.008	mg/L	0.0130	1.29%
Zn 206.200†	3337.7	1.021	mg/L	0.0157	1.021	mg/L	0.0157	1.54%

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Sequence No.: 31 **Autosampler Location: 1**
Sample ID: SEQ-CCB3 **Date Collected: 2/4/2021 3:35:27 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB3

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCB3

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2513031.9	99.01	%	0.403				0.41%
ScR 361.383	274325.7	97.57	%	0.087				0.09%
Ag 328.068†	105.6	0.00055	mg/L	0.000184	0.00055	mg/L	0.000184	33.71%
Al 308.215†	10.4	0.00611	mg/L	0.002567	0.00611	mg/L	0.002567	42.02%
As 188.979†	0.4	0.00026	mg/L	0.000444	0.00026	mg/L	0.000444	169.59%
B 249.677†	47.5	0.00590	mg/L	0.000654	0.00590	mg/L	0.000654	11.08%
Ba 233.527†	0.2	0.00002	mg/L	0.000546	0.00002	mg/L	0.000546	>999.9%
Be 313.042†	39.3	0.00005	mg/L	0.000011	0.00005	mg/L	0.000011	20.46%
Ca 317.933†	33.6	0.00334	mg/L	0.000180	0.00334	mg/L	0.000180	5.38%
Cd 228.802†	-1.7	-0.00005	mg/L	0.000111	-0.00005	mg/L	0.000111	229.00%
Co 228.616†	-3.5	-0.00008	mg/L	0.000182	-0.00008	mg/L	0.000182	228.95%
Cr 267.716†	3.4	0.00045	mg/L	0.000706	0.00045	mg/L	0.000706	158.16%
Cu 324.752†	84.1	0.00039	mg/L	0.000151	0.00039	mg/L	0.000151	38.88%
Fe 273.955†	10.8	0.00532	mg/L	0.002984	0.00532	mg/L	0.002984	56.13%
K 766.490†	-24.8	-0.01139	mg/L	0.026072	-0.01139	mg/L	0.026072	228.98%
Mg 279.077†	6.7	0.00696	mg/L	0.011996	0.00696	mg/L	0.011996	172.26%
Mn 257.610†	5.7	0.00009	mg/L	0.000058	0.00009	mg/L	0.000058	66.35%
Mo 202.031†	1.9	0.00010	mg/L	0.000319	0.00010	mg/L	0.000319	319.75%
Na 589.592†	1452.6	0.1311	mg/L	0.00255	0.1311	mg/L	0.00255	1.95%
Na 330.237†	-0.4	-0.01511	mg/L	0.156169	-0.01511	mg/L	0.156169	>999.9%
Ni 231.604†	0.8	0.00023	mg/L	0.001951	0.00023	mg/L	0.001951	866.64%
Pb 220.353†	7.7	0.00088	mg/L	0.001369	0.00088	mg/L	0.001369	155.83%
Sb 206.836†	0.5	0.00027	mg/L	0.002334	0.00027	mg/L	0.002334	858.93%
Se 196.026†	3.3	0.00240	mg/L	0.006498	0.00240	mg/L	0.006498	270.64%
Si 288.158†	-0.4	-0.00017	mg/L	0.001867	-0.00017	mg/L	0.001867	>999.9%
Sn 189.927†	1.3	0.00032	mg/L	0.000630	0.00032	mg/L	0.000630	198.66%
Sr 421.552†	51.6	0.00006	mg/L	0.000078	0.00006	mg/L	0.000078	132.17%
Ti 334.903†	29.7	0.00101	mg/L	0.000380	0.00101	mg/L	0.000380	37.82%
Tl 190.801†	-2.0	-0.00083	mg/L	0.001470	-0.00083	mg/L	0.001470	176.39%
V 292.402†	4.0	0.00003	mg/L	0.000099	0.00003	mg/L	0.000099	344.19%
Zn 206.200†	5.8	0.00178	mg/L	0.001596	0.00178	mg/L	0.001596	89.77%

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Analysis Begun

Start Time: 2/4/2021 3:38:04 PM
Logged In Analyst: Metals Instrument Controller
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 2/4/2021 12:44:21 PM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0204.sif
Batch ID:
Results Data Set: I2210204
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: 21A0402-25
Autosampler Location: 324
Date Collected: 2/4/2021 3:38:12 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: 21A0402-25

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-25

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2546185.7	100.3	%	0.48				0.48%
ScR 361.383	277412.3	98.67	%	0.458				0.46%
Ag 328.068†	77.2	0.00040	mg/L	0.000040	0.00040	mg/L	0.000040	10.06%
Al 308.215†	9.3	0.00508	mg/L	0.006687	0.00508	mg/L	0.006687	131.68%
As 188.979†	-3.0	-0.00181	mg/L	0.000863	-0.00181	mg/L	0.000863	47.59%
B 249.677†	46.8	0.00554	mg/L	0.001502	0.00554	mg/L	0.001502	27.12%
Ba 233.527†	8.1	0.00086	mg/L	0.000300	0.00086	mg/L	0.000300	34.92%
Be 313.042†	-6.6	-0.00001	mg/L	0.000016	-0.00001	mg/L	0.000016	182.90%
Ca 317.933†	1262.9	0.1255	mg/L	0.00194	0.1255	mg/L	0.00194	1.55%
Cd 228.802†	-7.8	-0.00021	mg/L	0.000154	-0.00021	mg/L	0.000154	74.52%
Co 228.616†	-14.5	-0.00033	mg/L	0.000105	-0.00033	mg/L	0.000105	32.19%
Cr 267.716†	11.9	0.00155	mg/L	0.001249	0.00155	mg/L	0.001249	80.59%
Cu 324.752†	99.8	0.00046	mg/L	0.000113	0.00046	mg/L	0.000113	24.52%
Fe 273.955†	69.0	0.03406	mg/L	0.001185	0.03406	mg/L	0.001185	3.48%
K 766.490†	-2.7	-0.00124	mg/L	0.031322	-0.00124	mg/L	0.031322	>999.9%
Mg 279.077†	11.1	0.01140	mg/L	0.005288	0.01140	mg/L	0.005288	46.38%
Mn 257.610†	18.8	0.00029	mg/L	0.000178	0.00029	mg/L	0.000178	60.87%
Mo 202.031†	-4.7	-0.00025	mg/L	0.000068	-0.00025	mg/L	0.000068	27.44%
Na 589.592†	4728.1	0.4267	mg/L	0.00297	0.4267	mg/L	0.00297	0.70%
Na 330.237†	25.0	0.8646	mg/L	0.14145	0.8646	mg/L	0.14145	16.36%
Ni 231.604†	-0.2	-0.00004	mg/L	0.000090	-0.00004	mg/L	0.000090	222.50%
Pb 220.353†	7.2	0.00082	mg/L	0.000899	0.00082	mg/L	0.000899	109.34%
Sb 206.836†	4.4	0.00228	mg/L	0.001890	0.00228	mg/L	0.001890	82.95%
Se 196.026†	4.2	0.00307	mg/L	0.003725	0.00307	mg/L	0.003725	121.26%
Si 288.158†	963.8	0.4433	mg/L	0.00350	0.4433	mg/L	0.00350	0.79%
Sn 189.927†	1.5	0.00037	mg/L	0.000512	0.00037	mg/L	0.000512	137.82%
Sr 421.552†	209.2	0.00024	mg/L	0.000052	0.00024	mg/L	0.000052	21.77%
Ti 334.903†	-11.3	-0.00039	mg/L	0.000456	-0.00039	mg/L	0.000456	116.30%
Tl 190.801†	-6.1	-0.00261	mg/L	0.000526	-0.00261	mg/L	0.000526	20.19%
V 292.402†	-20.5	-0.00013	mg/L	0.000078	-0.00013	mg/L	0.000078	60.29%
Zn 206.200†	6.1	0.00196	mg/L	0.001717	0.00196	mg/L	0.001717	87.63%

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Sequence No.: 2
Sample ID: 21A0402-34

Autosampler Location: 325
Date Collected: 2/4/2021 3:41:07 PM
Data Type: Original

Dilution: 1X
Wash Time: 37

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-34

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-34

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2523669.4	99.42	%	1.931				1.94%
ScR 361.383	271060.4	96.41	%	0.313				0.32%
Ag 328.068†	82.1	0.00042	mg/L	0.000153	0.00042	mg/L	0.000153	36.09%
Al 308.215†	-0.6	-0.00060	mg/L	0.002512	-0.00060	mg/L	0.002512	416.03%
As 188.979†	-1.1	-0.00067	mg/L	0.000514	-0.00067	mg/L	0.000514	76.75%
B 249.677†	38.0	0.00454	mg/L	0.000410	0.00454	mg/L	0.000410	9.04%
Ba 233.527†	7.8	0.00083	mg/L	0.000178	0.00083	mg/L	0.000178	21.52%
Be 313.042†	37.5	0.00005	mg/L	0.000018	0.00005	mg/L	0.000018	36.89%
Ca 317.933†	914.5	0.09085	mg/L	0.000803	0.09085	mg/L	0.000803	0.88%
Cd 228.802†	-7.1	-0.00020	mg/L	0.000165	-0.00020	mg/L	0.000165	84.10%
Co 228.616†	-0.7	-0.00002	mg/L	0.000096	-0.00002	mg/L	0.000096	597.48%
Cr 267.716†	18.9	0.00248	mg/L	0.000867	0.00248	mg/L	0.000867	35.01%
Cu 324.752†	136.9	0.00063	mg/L	0.000171	0.00063	mg/L	0.000171	26.99%
Fe 273.955†	26.3	0.01300	mg/L	0.002588	0.01300	mg/L	0.002588	19.91%
K 766.490†	-59.4	-0.02721	mg/L	0.028319	-0.02721	mg/L	0.028319	104.07%
Mg 279.077†	13.2	0.01367	mg/L	0.012729	0.01367	mg/L	0.012729	93.13%
Mn 257.610†	72.8	0.00113	mg/L	0.000196	0.00113	mg/L	0.000196	17.33%
Mo 202.031†	4.4	0.00023	mg/L	0.000090	0.00023	mg/L	0.000090	38.72%
Na 589.592†	5466.1	0.4933	mg/L	0.00916	0.4933	mg/L	0.00916	1.86%
Na 330.237†	8.8	0.3045	mg/L	0.28948	0.3045	mg/L	0.28948	95.07%
Ni 231.604†	-5.8	-0.00153	mg/L	0.001354	-0.00153	mg/L	0.001354	88.32%
Pb 220.353†	-0.6	-0.00007	mg/L	0.001150	-0.00007	mg/L	0.001150	>999.9%
Sb 206.836†	1.7	0.00087	mg/L	0.001672	0.00087	mg/L	0.001672	191.13%
Se 196.026†	-2.7	-0.00195	mg/L	0.004233	-0.00195	mg/L	0.004233	216.84%
Si 288.158†	625.4	0.2876	mg/L	0.00560	0.2876	mg/L	0.00560	1.95%
Sn 189.927†	1.6	0.00038	mg/L	0.001133	0.00038	mg/L	0.001133	301.49%
Sr 421.552†	122.9	0.00014	mg/L	0.000007	0.00014	mg/L	0.000007	4.74%
Ti 334.903†	9.2	0.00030	mg/L	0.000376	0.00030	mg/L	0.000376	123.39%
Tl 190.801†	4.0	0.00170	mg/L	0.001288	0.00170	mg/L	0.001288	75.55%
V 292.402†	-8.1	-0.00004	mg/L	0.000071	-0.00004	mg/L	0.000071	171.62%
Zn 206.200†	2.9	0.00094	mg/L	0.000983	0.00094	mg/L	0.000983	104.42%

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Sequence No.: 3
Sample ID: BJB0019-DUP1

Dilution: 1X
Wash Time: 37

Autosampler Location: 326
Date Collected: 2/4/2021 3:43:55 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BJB0019-DUP1

Analyte	**Back Pressure**	**Flow**
All	241.0 kPa	0.65 L/min

Mean Data: BJB0019-DUP1

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2497624.7	98.40	%	0.884				0.90%
ScR 361.383	272714.7	97.00	%	0.588				0.61%
Ag 328.068†	64.5	0.00033	mg/L	0.000527	0.00033	mg/L	0.000527	159.23%
Al 308.215†	7.1	0.00329	mg/L	0.001661	0.00329	mg/L	0.001661	50.45%
As 188.979†	-3.9	-0.00233	mg/L	0.000279	-0.00233	mg/L	0.000279	11.98%
B 249.677†	30.2	0.00318	mg/L	0.001233	0.00318	mg/L	0.001233	38.84%
Ba 233.527†	9.2	0.00098	mg/L	0.000210	0.00098	mg/L	0.000210	21.35%
Be 313.042†	74.3	0.00010	mg/L	0.000009	0.00010	mg/L	0.000009	9.37%
Ca 317.933†	2006.1	0.1993	mg/L	0.00432	0.1993	mg/L	0.00432	2.17%
Cd 228.802†	-5.9	-0.00015	mg/L	0.000162	-0.00015	mg/L	0.000162	109.96%
Co 228.616†	-3.9	-0.00009	mg/L	0.000068	-0.00009	mg/L	0.000068	74.92%
Cr 267.716†	4.8	0.00063	mg/L	0.000445	0.00063	mg/L	0.000445	70.50%
Cu 324.752†	204.5	0.00094	mg/L	0.000104	0.00094	mg/L	0.000104	11.04%
Fe 273.955†	7.1	0.00350	mg/L	0.002755	0.00350	mg/L	0.002755	78.64%
K 766.490†	18.7	0.00857	mg/L	0.013494	0.00857	mg/L	0.013494	157.53%
Mg 279.077†	15.1	0.01567	mg/L	0.014674	0.01567	mg/L	0.014674	93.63%
Mn 257.610†	23.3	0.00036	mg/L	0.000111	0.00036	mg/L	0.000111	30.56%
Mo 202.031†	1.1	0.00005	mg/L	0.000063	0.00005	mg/L	0.000063	116.63%
Na 589.592†	6743.6	0.6086	mg/L	0.00782	0.6086	mg/L	0.00782	1.29%
Na 330.237†	2.5	0.08810	mg/L	0.235627	0.08810	mg/L	0.235627	267.46%
Ni 231.604†	6.9	0.00182	mg/L	0.000906	0.00182	mg/L	0.000906	49.84%
Pb 220.353†	1.7	0.00019	mg/L	0.000370	0.00019	mg/L	0.000370	191.58%
Sb 206.836†	1.2	0.00059	mg/L	0.002859	0.00059	mg/L	0.002859	481.31%
Se 196.026†	1.0	0.00070	mg/L	0.005000	0.00070	mg/L	0.005000	709.32%
Si 288.158†	1993.2	0.9167	mg/L	0.00623	0.9167	mg/L	0.00623	0.68%
Sn 189.927†	-1.8	-0.00041	mg/L	0.000669	-0.00041	mg/L	0.000669	163.02%
Sr 421.552†	310.8	0.00036	mg/L	0.000059	0.00036	mg/L	0.000059	16.45%
Ti 334.903†	35.6	0.00119	mg/L	0.000326	0.00119	mg/L	0.000326	27.37%
Tl 190.801†	-2.4	-0.00100	mg/L	0.001154	-0.00100	mg/L	0.001154	114.82%
V 292.402†	-9.6	-0.00006	mg/L	0.000173	-0.00006	mg/L	0.000173	284.44%
Zn 206.200†	6.3	0.00210	mg/L	0.000816	0.00210	mg/L	0.000816	38.91%

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Sequence No.: 4
Sample ID: 21A0402-24

Dilution: 1X
Wash Time: 37

Autosampler Location: 327
Date Collected: 2/4/2021 3:46:43 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-24

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 21A0402-24

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2531123.3	99.72	%	0.941				0.94%
ScR 361.383	270011.3	96.04	%	0.339				0.35%
Ag 328.068†	19.6	0.00010	mg/L	0.000071	0.00010	mg/L	0.000071	72.46%
Al 308.215†	16.6	0.00884	mg/L	0.007690	0.00884	mg/L	0.007690	86.96%
As 188.979†	-2.3	-0.00139	mg/L	0.000042	-0.00139	mg/L	0.000042	3.01%
B 249.677†	25.3	0.00254	mg/L	0.000944	0.00254	mg/L	0.000944	37.17%
Ba 233.527†	11.8	0.00126	mg/L	0.000751	0.00126	mg/L	0.000751	59.58%
Be 313.042†	47.3	0.00006	mg/L	0.000014	0.00006	mg/L	0.000014	21.80%
Ca 317.933†	2111.0	0.2097	mg/L	0.00198	0.2097	mg/L	0.00198	0.94%
Cd 228.802†	-7.4	-0.00020	mg/L	0.000197	-0.00020	mg/L	0.000197	99.54%
Co 228.616†	-10.5	-0.00024	mg/L	0.000124	-0.00024	mg/L	0.000124	52.36%
Cr 267.716†	7.0	0.00092	mg/L	0.000356	0.00092	mg/L	0.000356	38.54%
Cu 324.752†	193.0	0.00089	mg/L	0.000294	0.00089	mg/L	0.000294	33.05%
Fe 273.955†	10.9	0.00539	mg/L	0.001549	0.00539	mg/L	0.001549	28.72%
K 766.490†	-70.4	-0.03225	mg/L	0.015402	-0.03225	mg/L	0.015402	47.76%
Mg 279.077†	10.5	0.01088	mg/L	0.017944	0.01088	mg/L	0.017944	164.91%
Mn 257.610†	17.1	0.00027	mg/L	0.000104	0.00027	mg/L	0.000104	39.15%
Mo 202.031†	3.7	0.00019	mg/L	0.000273	0.00019	mg/L	0.000273	140.62%
Na 589.592†	6910.5	0.6237	mg/L	0.00939	0.6237	mg/L	0.00939	1.50%
Na 330.237†	14.5	0.5022	mg/L	0.23785	0.5022	mg/L	0.23785	47.37%
Ni 231.604†	-2.2	-0.00059	mg/L	0.002033	-0.00059	mg/L	0.002033	346.87%
Pb 220.353†	-4.8	-0.00054	mg/L	0.000845	-0.00054	mg/L	0.000845	155.64%
Sb 206.836†	1.8	0.00092	mg/L	0.000562	0.00092	mg/L	0.000562	60.80%
Se 196.026†	4.3	0.00315	mg/L	0.002917	0.00315	mg/L	0.002917	92.59%
Si 288.158†	2071.2	0.9526	mg/L	0.00488	0.9526	mg/L	0.00488	0.51%
Sn 189.927†	-0.6	-0.00013	mg/L	0.000759	-0.00013	mg/L	0.000759	571.41%
Sr 421.552†	318.0	0.00036	mg/L	0.000045	0.00036	mg/L	0.000045	12.34%
Ti 334.903†	3.2	0.00009	mg/L	0.000111	0.00009	mg/L	0.000111	118.32%
Tl 190.801†	-0.6	-0.00025	mg/L	0.002429	-0.00025	mg/L	0.002429	954.72%
V 292.402†	-26.6	-0.00017	mg/L	0.000094	-0.00017	mg/L	0.000094	54.78%
Zn 206.200†	5.3	0.00181	mg/L	0.001220	0.00181	mg/L	0.001220	67.28%

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Sequence No.: 5
Sample ID: BJB0019-MS1

Dilution: 1X
Wash Time: 37

Autosampler Location: 328
Date Collected: 2/4/2021 3:49:31 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BJB0019-MS1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJB0019-MS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2489063.6	98.06	%	0.503				0.51%
ScR 361.383	268212.4	95.40	%	0.869				0.91%
Ag 328.068†	100993.0	0.5226	mg/L	0.00320	0.5226	mg/L	0.00320	0.61%
Al 308.215†	3583.8	2.088	mg/L	0.0158	2.088	mg/L	0.0158	0.76%
As 188.979†	3348.8	2.031	mg/L	0.0169	2.031	mg/L	0.0169	0.83%
B 249.677†	4376.6	0.5425	mg/L	0.00183	0.5425	mg/L	0.00183	0.34%
Ba 233.527†	19554.2	2.090	mg/L	0.0203	2.090	mg/L	0.0203	0.97%
Be 313.042†	374758.3	0.4950	mg/L	0.00402	0.4950	mg/L	0.00402	0.81%
Ca 317.933†	102916.0	10.22	mg/L	0.034	10.22	mg/L	0.034	0.33%
Cd 228.802†	18447.8	0.5024	mg/L	0.00483	0.5024	mg/L	0.00483	0.96%
Co 228.616†	22225.6	0.4947	mg/L	0.00422	0.4947	mg/L	0.00422	0.85%
Cr 267.716†	3996.1	0.5246	mg/L	0.00177	0.5246	mg/L	0.00177	0.34%
Cu 324.752†	108088.5	0.4979	mg/L	0.00295	0.4979	mg/L	0.00295	0.59%
Fe 273.955†	4130.6	2.033	mg/L	0.0181	2.033	mg/L	0.0181	0.89%
K 766.490†	22314.2	10.23	mg/L	0.057	10.23	mg/L	0.057	0.56%
Mg 279.077†	10090.3	10.50	mg/L	0.058	10.50	mg/L	0.058	0.55%
Mn 257.610†	33651.8	0.5229	mg/L	0.00354	0.5229	mg/L	0.00354	0.68%
Mo 202.031†	9875.5	0.5214	mg/L	0.00508	0.5214	mg/L	0.00508	0.97%
Na 589.592†	121980.6	11.01	mg/L	0.077	11.01	mg/L	0.077	0.70%
Na 330.237†	314.4	10.88	mg/L	0.116	10.88	mg/L	0.116	1.07%
Ni 231.604†	1940.8	0.5123	mg/L	0.00130	0.5123	mg/L	0.00130	0.25%
Pb 220.353†	17745.7	2.034	mg/L	0.0104	2.034	mg/L	0.0104	0.51%
Sb 206.836†	4231.1	2.193	mg/L	0.0360	2.193	mg/L	0.0360	1.64%
Se 196.026†	2772.6	2.042	mg/L	0.0243	2.042	mg/L	0.0243	1.19%
Si 288.158†	2506.4	1.142	mg/L	0.0126	1.142	mg/L	0.0126	1.10%
Sn 189.927†	2103.5	0.5036	mg/L	0.00353	0.5036	mg/L	0.00353	0.70%
Sr 421.552†	451392.6	0.5180	mg/L	0.00255	0.5180	mg/L	0.00255	0.49%
Ti 334.903†	61300.0	2.074	mg/L	0.0079	2.074	mg/L	0.0079	0.38%
Tl 190.801†	4805.5	2.049	mg/L	0.0263	2.049	mg/L	0.0263	1.29%
V 292.402†	73787.9	0.4944	mg/L	0.00415	0.4944	mg/L	0.00415	0.84%
Zn 206.200†	1619.1	0.4955	mg/L	0.00104	0.4955	mg/L	0.00104	0.21%

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Sequence No.: 6 **Autosampler Location: 329**
Sample ID: BJB0019-MSD1 **Date Collected: 2/4/2021 3:52:19 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJB0019-MSD1

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BJB0019-MSD1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2483380.9	97.84	%	1.141				1.17%
ScR 361.383	276556.8	98.37	%	0.337				0.34%
Ag 328.068†	103510.7	0.5357	mg/L	0.00729	0.5357	mg/L	0.00729	1.36%
Al 308.215†	3547.2	2.066	mg/L	0.0082	2.066	mg/L	0.0082	0.40%
As 188.979†	3408.7	2.067	mg/L	0.0125	2.067	mg/L	0.0125	0.60%
B 249.677†	4341.6	0.5381	mg/L	0.00630	0.5381	mg/L	0.00630	1.17%
Ba 233.527†	19340.1	2.067	mg/L	0.0116	2.067	mg/L	0.0116	0.56%
Be 313.042†	375570.9	0.4960	mg/L	0.00168	0.4960	mg/L	0.00168	0.34%
Ca 317.933†	101541.2	10.09	mg/L	0.181	10.09	mg/L	0.181	1.80%
Cd 228.802†	18893.7	0.5147	mg/L	0.00563	0.5147	mg/L	0.00563	1.09%
Co 228.616†	22864.1	0.5090	mg/L	0.00734	0.5090	mg/L	0.00734	1.44%
Cr 267.716†	3965.5	0.5207	mg/L	0.00518	0.5207	mg/L	0.00518	0.99%
Cu 324.752†	110349.9	0.5083	mg/L	0.00764	0.5083	mg/L	0.00764	1.50%
Fe 273.955†	4081.7	2.009	mg/L	0.0151	2.009	mg/L	0.0151	0.75%
K 766.490†	22275.7	10.21	mg/L	0.042	10.21	mg/L	0.042	0.41%
Mg 279.077†	9986.2	10.39	mg/L	0.117	10.39	mg/L	0.117	1.12%
Mn 257.610†	33378.8	0.5187	mg/L	0.00394	0.5187	mg/L	0.00394	0.76%
Mo 202.031†	10075.0	0.5319	mg/L	0.00711	0.5319	mg/L	0.00711	1.34%
Na 589.592†	120833.2	10.91	mg/L	0.099	10.91	mg/L	0.099	0.91%
Na 330.237†	322.4	11.16	mg/L	0.442	11.16	mg/L	0.442	3.96%
Ni 231.604†	1930.4	0.5096	mg/L	0.00647	0.5096	mg/L	0.00647	1.27%
Pb 220.353†	18263.1	2.093	mg/L	0.0325	2.093	mg/L	0.0325	1.55%
Sb 206.836†	4263.3	2.210	mg/L	0.0486	2.210	mg/L	0.0486	2.20%
Se 196.026†	2837.3	2.089	mg/L	0.0218	2.089	mg/L	0.0218	1.04%
Si 288.158†	2520.7	1.149	mg/L	0.0037	1.149	mg/L	0.0037	0.32%
Sn 189.927†	2135.1	0.5111	mg/L	0.00414	0.5111	mg/L	0.00414	0.81%
Sr 421.552†	447439.1	0.5135	mg/L	0.00409	0.5135	mg/L	0.00409	0.80%
Ti 334.903†	61182.3	2.070	mg/L	0.0131	2.070	mg/L	0.0131	0.63%
Tl 190.801†	4871.2	2.077	mg/L	0.0291	2.077	mg/L	0.0291	1.40%
V 292.402†	75776.6	0.5076	mg/L	0.00791	0.5076	mg/L	0.00791	1.56%
Zn 206.200†	1611.3	0.4931	mg/L	0.00497	0.4931	mg/L	0.00497	1.01%

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Sequence No.: 7 **Autosampler Location: 330**
Sample ID: BJB0055-BLK1 **Date Collected: 2/4/2021 3:56:10 PM**
Data Type: Original
Dilution: 2X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJB0055-BLK1

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BJB0055-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2568674.3	101.2	%	0.74				0.73%
ScR 361.383	281233.8	100.0	%	0.77				0.77%
Ag 328.068†	89.0	0.00046	mg/L	0.000202	0.00092	mg/L	0.000404	43.85%
Al 308.215†	21.9	0.01285	mg/L	0.001166	0.02569	mg/L	0.002332	9.08%
As 188.979†	-0.3	-0.00015	mg/L	0.001754	-0.00030	mg/L	0.003508	>999.9%
B 249.677†	25.2	0.00312	mg/L	0.000983	0.00625	mg/L	0.001966	31.46%
Ba 233.527†	-2.0	-0.00021	mg/L	0.000360	-0.00042	mg/L	0.000721	170.30%
Be 313.042†	12.0	0.00002	mg/L	0.000046	0.00003	mg/L	0.000092	291.69%
Ca 317.933†	92.3	0.00916	mg/L	0.000523	0.01833	mg/L	0.001045	5.70%
Cd 228.802†	3.8	0.00011	mg/L	0.000428	0.00021	mg/L	0.000856	399.75%
Co 228.616†	2.6	0.00006	mg/L	0.000468	0.00011	mg/L	0.000937	836.64%
Cr 267.716†	11.3	0.00148	mg/L	0.000374	0.00295	mg/L	0.000748	25.36%
Cu 324.752†	72.2	0.00033	mg/L	0.000219	0.00067	mg/L	0.000438	65.82%
Fe 273.955†	12.9	0.00639	mg/L	0.002503	0.01277	mg/L	0.005006	39.20%
K 766.490†	-40.8	-0.01871	mg/L	0.023098	-0.03741	mg/L	0.046196	123.47%
Mg 279.077†	11.1	0.01157	mg/L	0.006520	0.02314	mg/L	0.013039	56.34%
Mn 257.610†	-0.9	-0.00001	mg/L	0.000219	-0.00003	mg/L	0.000438	>999.9%
Mo 202.031†	4.8	0.00025	mg/L	0.000221	0.00050	mg/L	0.000441	87.54%
Na 589.592†	1093.1	0.09865	mg/L	0.001396	0.1973	mg/L	0.00279	1.42%
Na 330.237†	12.4	0.4284	mg/L	0.08127	0.8568	mg/L	0.16253	18.97%
Ni 231.604†	1.6	0.00043	mg/L	0.000891	0.00085	mg/L	0.001783	208.55%
Pb 220.353†	8.7	0.00100	mg/L	0.002520	0.00200	mg/L	0.005039	252.04%
Sb 206.836†	2.3	0.00117	mg/L	0.003433	0.00235	mg/L	0.006867	292.75%
Se 196.026†	6.8	0.00503	mg/L	0.005682	0.01006	mg/L	0.011365	113.01%
Si 288.158†	7.9	0.00363	mg/L	0.001439	0.00726	mg/L	0.002877	39.61%
Sn 189.927†	1.5	0.00036	mg/L	0.000737	0.00071	mg/L	0.001473	206.79%
Sr 421.552†	11.8	0.00001	mg/L	0.000049	0.00003	mg/L	0.000098	361.73%
Ti 334.903†	18.5	0.00063	mg/L	0.000776	0.00125	mg/L	0.001552	124.03%
Tl 190.801†	2.0	0.00087	mg/L	0.003224	0.00174	mg/L	0.006448	370.34%
V 292.402†	12.5	0.00009	mg/L	0.000495	0.00018	mg/L	0.000990	548.28%
Zn 206.200†	4.3	0.00131	mg/L	0.001279	0.00262	mg/L	0.002558	97.71%

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Sequence No.: 8 **Autosampler Location: 331**
Sample ID: BJB0055-BS1 **Date Collected: 2/4/2021 3:58:58 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJB0055-BS1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJB0055-BS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2492529.6	98.20	%	0.240				0.24%
ScR 361.383	271960.1	96.73	%	1.328				1.37%
Ag 328.068†	104884.9	0.5428	mg/L	0.00509	1.086	mg/L	0.0102	0.94%
Al 308.215†	3532.6	2.071	mg/L	0.0271	4.143	mg/L	0.0541	1.31%
As 188.979†	3421.4	2.076	mg/L	0.0227	4.152	mg/L	0.0454	1.09%
B 249.677†	28.1	0.00231	mg/L	0.001159	0.00462	mg/L	0.002319	50.24%
Ba 233.527†	19423.8	2.076	mg/L	0.0248	4.152	mg/L	0.0496	1.19%
Be 313.042†	378955.3	0.5005	mg/L	0.00131	1.001	mg/L	0.0026	0.26%
Ca 317.933†	99760.8	9.911	mg/L	0.0318	19.82	mg/L	0.064	0.32%
Cd 228.802†	19049.5	0.5190	mg/L	0.00317	1.038	mg/L	0.0063	0.61%
Co 228.616†	22679.7	0.5088	mg/L	0.00451	1.018	mg/L	0.0090	0.89%
Cr 267.716†	3985.2	0.5206	mg/L	0.00726	1.041	mg/L	0.0145	1.40%
Cu 324.752†	105684.6	0.4877	mg/L	0.00179	0.9755	mg/L	0.00357	0.37%
Fe 273.955†	4134.9	2.035	mg/L	0.0237	4.070	mg/L	0.0475	1.17%
K 766.490†	22439.1	10.28	mg/L	0.028	20.57	mg/L	0.056	0.27%
Mg 279.077†	9965.9	10.36	mg/L	0.173	20.73	mg/L	0.346	1.67%
Mn 257.610†	33546.1	0.5213	mg/L	0.00658	1.043	mg/L	0.0132	1.26%
Mo 202.031†	17.0	0.00082	mg/L	0.000235	0.00164	mg/L	0.000471	28.72%
Na 589.592†	115311.7	10.41	mg/L	0.059	20.81	mg/L	0.119	0.57%
Na 330.237†	299.2	10.35	mg/L	0.290	20.71	mg/L	0.579	2.80%
Ni 231.604†	1914.6	0.5054	mg/L	0.01069	1.011	mg/L	0.0214	2.12%
Pb 220.353†	18237.7	2.090	mg/L	0.0343	4.180	mg/L	0.0687	1.64%
Sb 206.836†	4234.5	2.184	mg/L	0.0086	4.368	mg/L	0.0173	0.40%
Se 196.026†	2833.0	2.085	mg/L	0.0233	4.171	mg/L	0.0466	1.12%
Si 288.158†	-3.3	0.00087	mg/L	0.002162	0.00175	mg/L	0.004324	247.17%
Sn 189.927†	-5.2	0.00167	mg/L	0.000214	0.00333	mg/L	0.000427	12.82%
Sr 421.552†	449625.1	0.5160	mg/L	0.00121	1.032	mg/L	0.0024	0.23%
Ti 334.903†	39.1	0.00055	mg/L	0.000167	0.00111	mg/L	0.000334	30.19%
Tl 190.801†	4856.6	2.070	mg/L	0.0139	4.140	mg/L	0.0278	0.67%
V 292.402†	76577.5	0.5130	mg/L	0.00485	1.026	mg/L	0.0097	0.95%
Zn 206.200†	1597.9	0.4888	mg/L	0.00986	0.9776	mg/L	0.01972	2.02%

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Sequence No.: 9
Sample ID: 21A0393-01
Dilution: 2X
Wash Time: 37

DEL
SAMPLE INTRO CLOGGED
TH 02-04-21

Autosampler Location: 332
Date Collected: 2/4/2021 4:01:46 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 21A0393-01

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0393-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3100325.3	122.1	%	10.17				8.33%
ScR 361.383	293288.2	104.3	%	6.13				5.87%
Ag 328.068†	-2833.3	-0.00493	mg/L	0.002020	-0.00985	mg/L	0.004039	41.00%
Al 308.215†	595436.4	350.2	mg/L	29.27	700.4	mg/L	58.54	8.36%
As 188.979†	-95.9	0.02084	mg/L	0.011444	0.04167	mg/L	0.022888	54.92%
B 249.677†	156.8	0.01603	mg/L	0.005168	0.03206	mg/L	0.010336	32.24%
Ba 233.527†	738.8	0.03309	mg/L	0.003509	0.06617	mg/L	0.007017	10.60%
Be 313.042†	511.0	0.00035	mg/L	0.000189	0.00071	mg/L	0.000378	53.39%
Ca 317.933†	1324284.3	131.6	mg/L	11.77	263.1	mg/L	23.55	8.95%
Cd 228.802†	102.2	-0.00302	mg/L	0.001558	-0.00605	mg/L	0.003117	51.54%
Co 228.616†	10055.8	0.2055	mg/L	0.01607	0.4111	mg/L	0.03214	7.82%
Cr 267.716†	6172.1	0.8100	mg/L	0.06810	1.620	mg/L	0.1362	8.41%
Cu 324.752†	236211.1	1.134	mg/L	0.1036	2.268	mg/L	0.2072	9.14%
Fe 273.955†	1433302.6	707.0	mg/L	54.69	1414	mg/L	109.38	7.74%
K 766.490†	809.1	0.3708	mg/L	0.02882	0.7416	mg/L	0.05764	7.77%
Mg 279.077†	73894.6	75.29	mg/L	6.615	150.6	mg/L	13.23	8.79%
Mn 257.610†	856330.2	13.29	mg/L	1.147	26.58	mg/L	2.295	8.63%
Mo 202.031†	453.3	0.02268	mg/L	0.001381	0.04535	mg/L	0.002762	6.09%
Na 589.592†	5302.2	0.4785	mg/L	0.04075	0.9571	mg/L	0.08151	8.52%
Na 330.237†	-0.5	-0.01634	mg/L	0.987274	-0.03268	mg/L	1.974547	>999.9%
Ni 231.604†	11227.8	2.966	mg/L	0.2545	5.931	mg/L	0.5089	8.58%
Pb 220.353†	986.0	0.1444	mg/L	0.00465	0.2888	mg/L	0.00930	3.22%
Sb 206.836†	80.4	0.05917	mg/L	0.009061	0.1183	mg/L	0.01812	15.31%
Se 196.026†	-31.1	0.06913	mg/L	0.014299	0.1383	mg/L	0.02860	20.68%
Si 288.158†	10135.8	4.642	mg/L	0.3671	9.283	mg/L	0.7343	7.91%
Sn 189.927†	-84.8	0.00230	mg/L	0.007767	0.00461	mg/L	0.015535	337.01%
Sr 421.552†	27126.6	0.03113	mg/L	0.002702	0.06226	mg/L	0.005404	8.68%
Ti 334.903†	143649.6	4.854	mg/L	0.4140	9.707	mg/L	0.8279	8.53%
Tl 190.801†	-150.8	0.02668	mg/L	0.014520	0.05335	mg/L	0.029040	54.43%
V 292.402†	60348.2	0.4230	mg/L	0.03583	0.8460	mg/L	0.07166	8.47%
Zn 206.200†	2399.2	0.7345	mg/L	0.06137	1.469	mg/L	0.1227	8.36%

Sequence No.: 10
Sample ID: 21A0402-02
Autosampler Location: 333
Date Collected: 2/4/2021 4:04:36 PM
Data Type: Original

Dilution: 2X
Wash Time: 37
Auto Dilution Factor: 1

DEL
SAMPLE INTRO CLOGGED
TH 02-04-21

Nebulizer Parameters: 21A0402-02

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	6035721.1	237.8	%	19.02				8.00%
ScR 361.383	560078.2	199.2	%	19.27				9.67%
Ag 328.068†	-124.3	0.00004	mg/L	0.000091	0.00008	mg/L	0.000182	218.04%
Al 308.215†	44994.1	26.46	mg/L	7.227	52.92	mg/L	14.453	27.31%
As 188.979†	14.3	0.01458	mg/L	0.002431	0.02915	mg/L	0.004861	16.67%
B 249.677†	83.6	0.00974	mg/L	0.000410	0.01948	mg/L	0.000819	4.20%
Ba 233.527†	991.7	0.1033	mg/L	0.02775	0.2065	mg/L	0.05551	26.88%
Be 313.042†	-578.3	-0.00082	mg/L	0.000210	-0.00163	mg/L	0.000420	25.75%
Ca 317.933†	73761.9	7.328	mg/L	2.1292	14.66	mg/L	4.258	29.06%
Cd 228.802†	-54.9	-0.00205	mg/L	0.000611	-0.00409	mg/L	0.001223	29.87%
Co 228.616†	491.1	0.00686	mg/L	0.002593	0.01372	mg/L	0.005185	37.79%
Cr 267.716†	715.7	0.09365	mg/L	0.019951	0.1873	mg/L	0.03990	21.30%
Cu 324.752†	3400.4	0.01779	mg/L	0.006279	0.03558	mg/L	0.012557	35.29%
Fe 273.955†	86316.9	42.58	mg/L	12.246	85.15	mg/L	24.491	28.76%
K 766.490†	4041.3	1.852	mg/L	0.5187	3.704	mg/L	1.0374	28.01%
Mg 279.077†	16236.4	16.80	mg/L	4.643	33.59	mg/L	9.286	27.64%
Mn 257.610†	38842.9	0.6028	mg/L	0.16866	1.206	mg/L	0.3373	27.98%
Mo 202.031†	-23.3	-0.00130	mg/L	0.000223	-0.00259	mg/L	0.000446	17.18%
Na 589.592†	3890.0	0.3511	mg/L	0.09339	0.7022	mg/L	0.18678	26.60%
Na 330.237†	268.7	9.298	mg/L	0.8808	18.60	mg/L	1.762	9.47%
Ni 231.604†	416.7	0.1100	mg/L	0.02795	0.2201	mg/L	0.05591	25.40%
Pb 220.353†	-40.7	-0.00104	mg/L	0.001983	-0.00209	mg/L	0.003966	189.98%
Sb 206.836†	-41.7	-0.01537	mg/L	0.001549	-0.03074	mg/L	0.003099	10.08%
Se 196.026†	35.8	0.03234	mg/L	0.001558	0.06468	mg/L	0.003115	4.82%
Si 288.158†	2114.8	0.9648	mg/L	0.20186	1.930	mg/L	0.4037	20.92%
Sn 189.927†	10.1	0.00474	mg/L	0.000811	0.00948	mg/L	0.001622	17.12%
Sr 421.552†	29467.9	0.03382	mg/L	0.009338	0.06763	mg/L	0.018676	27.61%
Ti 334.903†	53897.9	1.824	mg/L	0.5125	3.648	mg/L	1.0250	28.10%
Tl 190.801†	3.9	0.00707	mg/L	0.002215	0.01415	mg/L	0.004430	31.31%
V 292.402†	6637.6	0.04538	mg/L	0.013091	0.09075	mg/L	0.026181	28.85%
Zn 206.200†	283.5	0.08687	mg/L	0.023062	0.1737	mg/L	0.04612	26.55%

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Sequence No.: 11 **Autosampler Location: 7**
Sample ID: SEQ-CCV4 **Date Collected: 2/4/2021 4:07:49 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV4

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

User canceled analysis.

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Analysis Begun

Start Time: 2/4/2021 4:16:43 PM **Plasma On Time: 2/4/2021 12:44:21 PM**
Logged In Analyst: Metals Instrument Controller **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0204.sif
Batch ID:
Results Data Set: I2210204
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 11 **Autosampler Location: 7**
Sample ID: SEQ-CCV4 DEL **Date Collected: 2/4/2021 4:16:44 PM**
SAMPLE INTRO CLOGGED **Data Type: Original**
Dilution: 1X TH 02-04-21
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV4

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCV4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3274890.0	129.0	%	5.86				4.55%
ScR 361.383	330705.0	117.6	%	6.35				5.40%
Ag 328.068†	137244.6	0.7103	mg/L	0.04059	0.7103	mg/L	0.04059	5.71%
Al 308.215†	2549.3	1.475	mg/L	0.0492	1.475	mg/L	0.0492	3.34%
As 188.979†	2206.6	1.337	mg/L	0.0620	1.337	mg/L	0.0620	4.63%
B 249.677†	5782.5	0.7167	mg/L	0.03668	0.7167	mg/L	0.03668	5.12%
Ba 233.527†	6792.1	0.7255	mg/L	0.03376	0.7255	mg/L	0.03376	4.65%
Be 313.042†	535364.7	0.7071	mg/L	0.06157	0.7071	mg/L	0.06157	8.71%
Ca 317.933†	14522.0	1.442	mg/L	0.0811	1.442	mg/L	0.0811	5.62%
Cd 228.802†	24981.3	0.6908	mg/L	0.03600	0.6908	mg/L	0.03600	5.21%
Co 228.616†	30036.7	0.6726	mg/L	0.04102	0.6726	mg/L	0.04102	6.10%
Cr 267.716†	5546.1	0.7277	mg/L	0.03603	0.7277	mg/L	0.03603	4.95%
Cu 324.752†	145469.2	0.6707	mg/L	0.03607	0.6707	mg/L	0.03607	5.38%
Fe 273.955†	2894.3	1.422	mg/L	0.0754	1.422	mg/L	0.0754	5.30%
K 766.490†	32027.6	14.68	mg/L	1.373	14.68	mg/L	1.373	9.35%
Mg 279.077†	1373.7	1.431	mg/L	0.0507	1.431	mg/L	0.0507	3.54%
Mn 257.610†	47335.9	0.7353	mg/L	0.03463	0.7353	mg/L	0.03463	4.71%
Mo 202.031†	12729.0	0.6722	mg/L	0.03335	0.6722	mg/L	0.03335	4.96%
Na 589.592†	414625.2	37.42	mg/L	3.503	37.42	mg/L	3.503	9.36%
Na 330.237†	1160.5	40.16	mg/L	0.944	40.16	mg/L	0.944	2.35%
Ni 231.604†	2673.4	0.7060	mg/L	0.03742	0.7060	mg/L	0.03742	5.30%
Pb 220.353†	11877.4	1.361	mg/L	0.0816	1.361	mg/L	0.0816	5.99%
Sb 206.836†	2659.3	1.381	mg/L	0.0771	1.381	mg/L	0.0771	5.58%
Se 196.026†	1831.7	1.348	mg/L	0.0731	1.348	mg/L	0.0731	5.42%
Si 288.158†	3366.6	1.543	mg/L	0.0615	1.543	mg/L	0.0615	3.99%
Sn 189.927†	2770.8	0.6601	mg/L	0.02807	0.6601	mg/L	0.02807	4.25%
Sr 421.552†	640021.8	0.7345	mg/L	0.06388	0.7345	mg/L	0.06388	8.70%
Ti 334.903†	22225.8	0.7518	mg/L	0.03333	0.7518	mg/L	0.03333	4.43%
Tl 190.801†	3162.7	1.346	mg/L	0.0662	1.346	mg/L	0.0662	4.92%
V 292.402†	100811.2	0.6758	mg/L	0.04205	0.6758	mg/L	0.04205	6.22%
Zn 206.200†	2300.2	0.7037	mg/L	0.03808	0.7037	mg/L	0.03808	5.41%

User canceled analysis.

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Analysis Begun

Start Time: 2/4/2021 4:30:37 PM
Plasma On Time: 2/4/2021 12:44:21 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0204.sif
Batch ID:
Results Data Set: I2210204
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 11
Autosampler Location: 7
Sample ID: SEQ-CCV4
Date Collected: 2/4/2021 4:30:38 PM
Data Type: Original
Dilution: 1X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV4

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCV4

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2539610.5	100.1	%	0.14				0.14%
ScR 361.383	278187.8	98.95	%	1.080				1.09%
Ag 328.068†	206344.6	1.068	mg/L	0.0026	1.068	mg/L	0.0026	0.25%
Al 308.215†	3571.8	2.064	mg/L	0.0162	2.064	mg/L	0.0162	0.78%
As 188.979†	3452.5	2.092	mg/L	0.0063	2.092	mg/L	0.0063	0.30%
B 249.677†	8241.5	1.021	mg/L	0.0238	1.021	mg/L	0.0238	2.33%
Ba 233.527†	9708.8	1.037	mg/L	0.0133	1.037	mg/L	0.0133	1.28%
Be 313.042†	761579.6	1.006	mg/L	0.0064	1.006	mg/L	0.0064	0.64%
Ca 317.933†	20779.2	2.064	mg/L	0.0340	2.064	mg/L	0.0340	1.65%
Cd 228.802†	37444.3	1.035	mg/L	0.0039	1.035	mg/L	0.0039	0.38%
Co 228.616†	45205.6	1.013	mg/L	0.0022	1.013	mg/L	0.0022	0.21%
Cr 267.716†	7975.4	1.047	mg/L	0.0162	1.047	mg/L	0.0162	1.55%
Cu 324.752†	221742.3	1.022	mg/L	0.0055	1.022	mg/L	0.0055	0.54%
Fe 273.955†	4107.7	2.018	mg/L	0.0347	2.018	mg/L	0.0347	1.72%
K 766.490†	45115.4	20.67	mg/L	0.097	20.67	mg/L	0.097	0.47%
Mg 279.077†	1965.2	2.047	mg/L	0.0509	2.047	mg/L	0.0509	2.49%
Mn 257.610†	67574.2	1.050	mg/L	0.0138	1.050	mg/L	0.0138	1.31%
Mo 202.031†	19174.8	1.013	mg/L	0.0022	1.013	mg/L	0.0022	0.21%
Na 589.592†	578275.9	52.19	mg/L	0.550	52.19	mg/L	0.550	1.05%
Na 330.237†	1534.4	53.09	mg/L	1.190	53.09	mg/L	1.190	2.24%
Ni 231.604†	3870.5	1.022	mg/L	0.0207	1.022	mg/L	0.0207	2.02%
Pb 220.353†	17954.6	2.057	mg/L	0.0068	2.057	mg/L	0.0068	0.33%
Sb 206.836†	4207.0	2.185	mg/L	0.0123	2.185	mg/L	0.0123	0.57%
Se 196.026†	2863.4	2.108	mg/L	0.0106	2.108	mg/L	0.0106	0.50%
Si 288.158†	4687.3	2.148	mg/L	0.0254	2.148	mg/L	0.0254	1.18%
Sn 189.927†	4310.3	1.027	mg/L	0.0052	1.027	mg/L	0.0052	0.51%
Sr 421.552†	905645.5	1.039	mg/L	0.0091	1.039	mg/L	0.0091	0.87%
Ti 334.903†	30713.7	1.039	mg/L	0.0059	1.039	mg/L	0.0059	0.57%
Tl 190.801†	4887.0	2.080	mg/L	0.0099	2.080	mg/L	0.0099	0.48%
V 292.402†	152197.3	1.020	mg/L	0.0087	1.020	mg/L	0.0087	0.86%
Zn 206.200†	3320.2	1.016	mg/L	0.0224	1.016	mg/L	0.0224	2.21%

Analysis Begun

Start Time: 2/4/2021 4:33:45 PM
Plasma On Time: 2/4/2021 12:44:21 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0204.sif
Batch ID:
Results Data Set: I2210204
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: SEQ-CCV5
VERIFICATION OF CCV4
TH 02-04-21
Dilution: 1X
Autosampler Location: 7
Date Collected: 2/4/2021 4:33:54 PM
Data Type: Original

Nebulizer Parameters: SEQ-CCV5

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: SEQ-CCV5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2541978.2	100.1	%	0.21				0.21%
ScR 361.383	278070.3	98.91	%	0.978				0.99%
Ag 328.068†	203127.3	1.051	mg/L	0.0059	1.051	mg/L	0.0059	0.56%
Al 308.215†	3492.2	2.018	mg/L	0.0296	2.018	mg/L	0.0296	1.47%
As 188.979†	3359.6	2.036	mg/L	0.0075	2.036	mg/L	0.0075	0.37%
B 249.677†	8174.8	1.013	mg/L	0.0094	1.013	mg/L	0.0094	0.93%
Ba 233.527†	9493.0	1.014	mg/L	0.0120	1.014	mg/L	0.0120	1.19%
Be 313.042†	748993.4	0.9893	mg/L	0.00482	0.9893	mg/L	0.00482	0.49%
Ca 317.933†	20524.2	2.038	mg/L	0.0174	2.038	mg/L	0.0174	0.85%
Cd 228.802†	37111.8	1.026	mg/L	0.0030	1.026	mg/L	0.0030	0.29%
Co 228.616†	44471.9	0.9961	mg/L	0.00577	0.9961	mg/L	0.00577	0.58%
Cr 267.716†	7813.0	1.025	mg/L	0.0096	1.025	mg/L	0.0096	0.94%
Cu 324.752†	219304.0	1.011	mg/L	0.0025	1.011	mg/L	0.0025	0.24%
Fe 273.955†	4037.5	1.983	mg/L	0.0215	1.983	mg/L	0.0215	1.08%
K 766.490†	44386.2	20.34	mg/L	0.141	20.34	mg/L	0.141	0.70%
Mg 279.077†	1923.2	2.003	mg/L	0.0108	2.003	mg/L	0.0108	0.54%
Mn 257.610†	66189.6	1.028	mg/L	0.0123	1.028	mg/L	0.0123	1.20%
Mo 202.031†	18832.9	0.9945	mg/L	0.00886	0.9945	mg/L	0.00886	0.89%
Na 589.592†	568845.5	51.34	mg/L	0.311	51.34	mg/L	0.311	0.61%
Na 330.237†	1479.6	51.20	mg/L	0.565	51.20	mg/L	0.565	1.10%
Ni 231.604†	3845.7	1.016	mg/L	0.0135	1.016	mg/L	0.0135	1.33%
Pb 220.353†	17646.7	2.022	mg/L	0.0137	2.022	mg/L	0.0137	0.68%
Sb 206.836†	4100.4	2.129	mg/L	0.0252	2.129	mg/L	0.0252	1.18%
Se 196.026†	2799.6	2.061	mg/L	0.0148	2.061	mg/L	0.0148	0.72%
Si 288.158†	4587.9	2.103	mg/L	0.0142	2.103	mg/L	0.0142	0.67%
Sn 189.927†	4186.3	0.9974	mg/L	0.00481	0.9974	mg/L	0.00481	0.48%
Sr 421.552†	891431.0	1.023	mg/L	0.0057	1.023	mg/L	0.0057	0.56%
Ti 334.903†	30146.3	1.020	mg/L	0.0024	1.020	mg/L	0.0024	0.24%
Tl 190.801†	4772.7	2.032	mg/L	0.0063	2.032	mg/L	0.0063	0.31%
V 292.402†	149802.9	1.004	mg/L	0.0063	1.004	mg/L	0.0063	0.63%
Zn 206.200†	3273.2	1.001	mg/L	0.0108	1.001	mg/L	0.0108	1.08%

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Sequence No.: 2 **Autosampler Location: 1**
Sample ID: SEQ-CCB4 **Date Collected: 2/4/2021 4:36:25 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB4

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCB4

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2638375.7	103.9	%	0.85				0.82%
ScR 361.383	290346.6	103.3	%	1.23				1.19%
Ag 328.068†	77.1	0.00040	mg/L	0.000276	0.00040	mg/L	0.000276	69.26%
Al 308.215†	3.4	0.00196	mg/L	0.003278	0.00196	mg/L	0.003278	167.35%
As 188.979†	2.4	0.00146	mg/L	0.003407	0.00146	mg/L	0.003407	233.79%
B 249.677†	30.8	0.00382	mg/L	0.002745	0.00382	mg/L	0.002745	71.94%
Ba 233.527†	-1.5	-0.00016	mg/L	0.000447	-0.00016	mg/L	0.000447	278.84%
Be 313.042†	-33.7	-0.00004	mg/L	0.000052	-0.00004	mg/L	0.000052	116.66%
Ca 317.933†	10.2	0.00100	mg/L	0.000976	0.00100	mg/L	0.000976	97.11%
Cd 228.802†	-3.4	-0.00011	mg/L	0.000080	-0.00011	mg/L	0.000080	74.35%
Co 228.616†	-1.3	-0.00003	mg/L	0.000134	-0.00003	mg/L	0.000134	493.72%
Cr 267.716†	15.7	0.00205	mg/L	0.000687	0.00205	mg/L	0.000687	33.51%
Cu 324.752†	6.4	0.00003	mg/L	0.000094	0.00003	mg/L	0.000094	327.47%
Fe 273.955†	-2.4	-0.00118	mg/L	0.002464	-0.00118	mg/L	0.002464	208.20%
K 766.490†	-58.0	-0.02658	mg/L	0.005687	-0.02658	mg/L	0.005687	21.39%
Mg 279.077†	-5.0	-0.00517	mg/L	0.002465	-0.00517	mg/L	0.002465	47.64%
Mn 257.610†	-16.1	-0.00025	mg/L	0.000044	-0.00025	mg/L	0.000044	17.53%
Mo 202.031†	11.3	0.00060	mg/L	0.000070	0.00060	mg/L	0.000070	11.64%
Na 589.592†	561.7	0.05070	mg/L	0.003630	0.05070	mg/L	0.003630	7.16%
Na 330.237†	31.5	1.090	mg/L	0.0926	1.090	mg/L	0.0926	8.50%
Ni 231.604†	-0.4	-0.00011	mg/L	0.000565	-0.00011	mg/L	0.000565	507.10%
Pb 220.353†	-8.5	-0.00097	mg/L	0.000490	-0.00097	mg/L	0.000490	50.50%
Sb 206.836†	2.1	0.00110	mg/L	0.001483	0.00110	mg/L	0.001483	134.27%
Se 196.026†	13.2	0.00970	mg/L	0.005002	0.00970	mg/L	0.005002	51.54%
Si 288.158†	23.2	0.01068	mg/L	0.005841	0.01068	mg/L	0.005841	54.70%
Sn 189.927†	1.2	0.00029	mg/L	0.000522	0.00029	mg/L	0.000522	179.99%
Sr 421.552†	36.6	0.00004	mg/L	0.000054	0.00004	mg/L	0.000054	127.69%
Ti 334.903†	-16.8	-0.00057	mg/L	0.000165	-0.00057	mg/L	0.000165	28.98%
Tl 190.801†	-0.7	-0.00031	mg/L	0.000988	-0.00031	mg/L	0.000988	322.81%
V 292.402†	-21.2	-0.00013	mg/L	0.000141	-0.00013	mg/L	0.000141	107.59%
Zn 206.200†	0.3	0.00008	mg/L	0.000476	0.00008	mg/L	0.000476	595.75%

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Sequence No.: 3
Sample ID: ~~21A040-03~~ 21A0402-03

Dilution: 2X TH 02-04-21
Wash Time: 37

Autosampler Location: 334
Date Collected: 2/4/2021 4:39:14 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: ~~21A040-03~~ 21A0402-03

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: ~~21A040-03~~ 21A0402-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2606721.3	102.7	%	0.32				0.31%
ScR 361.383	296127.2	105.3	%	0.42				0.40%
Ag 328.068†	-767.3	-0.00147	mg/L	0.000294	-0.00295	mg/L	0.000589	19.99%
Al 308.215†	228112.0	134.2	mg/L	0.59	268.3	mg/L	1.18	0.44%
As 188.979†	61.0	0.05721	mg/L	0.007388	0.1144	mg/L	0.01478	12.91%
B 249.677†	117.2	0.01341	mg/L	0.000285	0.02681	mg/L	0.000569	2.12%
Ba 233.527†	7041.5	0.7424	mg/L	0.00305	1.485	mg/L	0.0061	0.41%
Be 313.042†	1695.8	0.00196	mg/L	0.000047	0.00392	mg/L	0.000093	2.37%
Ca 317.933†	236680.3	23.51	mg/L	0.272	47.03	mg/L	0.545	1.16%
Cd 228.802†	106.1	0.00093	mg/L	0.000122	0.00186	mg/L	0.000243	13.09%
Co 228.616†	3123.0	0.05658	mg/L	0.000189	0.1132	mg/L	0.00038	0.33%
Cr 267.716†	2338.2	0.3061	mg/L	0.00005	0.6123	mg/L	0.00010	0.02%
Cu 324.752†	19405.4	0.09786	mg/L	0.000434	0.1957	mg/L	0.00087	0.44%
Fe 273.955†	321778.0	158.7	mg/L	0.27	317.4	mg/L	0.53	0.17%
K 766.490†	9946.6	4.558	mg/L	0.0204	9.116	mg/L	0.0408	0.45%
Mg 279.077†	46627.8	48.16	mg/L	0.477	96.31	mg/L	0.955	0.99%
Mn 257.610†	195849.0	3.040	mg/L	0.0204	6.080	mg/L	0.0409	0.67%
Mo 202.031†	46.6	0.00225	mg/L	0.000305	0.00451	mg/L	0.000610	13.54%
Na 589.592†	9178.6	0.8284	mg/L	0.00596	1.657	mg/L	0.0119	0.72%
Na 330.237†	33.7	1.167	mg/L	0.2045	2.335	mg/L	0.4091	17.52%
Ni 231.604†	1105.4	0.2920	mg/L	0.00186	0.5840	mg/L	0.00371	0.64%
Pb 220.353†	410.3	0.07072	mg/L	0.001580	0.1414	mg/L	0.00316	2.23%
Sb 206.836†	0.4	0.02010	mg/L	0.001304	0.04021	mg/L	0.002608	6.49%
Se 196.026†	-18.2	0.00839	mg/L	0.003354	0.01678	mg/L	0.006708	39.98%
Si 288.158†	3413.7	1.545	mg/L	0.0066	3.091	mg/L	0.0131	0.42%
Sn 189.927†	-50.2	-0.00224	mg/L	0.000806	-0.00448	mg/L	0.001612	35.96%
Sr 421.552†	102279.6	0.1174	mg/L	0.00055	0.2348	mg/L	0.00110	0.47%
Ti 334.903†	170077.1	5.756	mg/L	0.0136	11.51	mg/L	0.027	0.24%
Tl 190.801†	-53.1	-0.00314	mg/L	0.003426	-0.00627	mg/L	0.006853	109.26%
V 292.402†	48161.6	0.3254	mg/L	0.00237	0.6507	mg/L	0.00474	0.73%
Zn 206.200†	1446.0	0.4425	mg/L	0.00334	0.8850	mg/L	0.00668	0.75%

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Sequence No.: 4
Sample ID: ~~21A040-04~~ 21A0402-04

Dilution: 2X TH 02-04-21
Wash Time: 37

Autosampler Location: 335
Date Collected: 2/4/2021 4:42:03 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: ~~21A040-04~~ 21A0402-04

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: ~~21A040-04~~ 21A0402-04

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2652461.1	104.5	%	1.13				1.08%
ScR 361.383	299937.6	106.7	%	0.57				0.54%
Ag 328.068†	-834.1	-0.00189	mg/L	0.000397	-0.00379	mg/L	0.000794	20.95%
Al 308.215†	204068.0	120.0	mg/L	0.29	240.0	mg/L	0.59	0.25%
As 188.979†	34.5	0.04406	mg/L	0.001715	0.08812	mg/L	0.003431	3.89%
B 249.677†	141.7	0.01586	mg/L	0.001762	0.03172	mg/L	0.003525	11.11%
Ba 233.527†	4313.1	0.4498	mg/L	0.00254	0.8996	mg/L	0.00509	0.57%
Be 313.042†	1455.8	0.00157	mg/L	0.000018	0.00314	mg/L	0.000037	1.17%
Ca 317.933†	486070.8	48.29	mg/L	0.126	96.58	mg/L	0.252	0.26%
Cd 228.802†	125.0	0.00136	mg/L	0.000492	0.00272	mg/L	0.000983	36.08%
Co 228.616†	3780.6	0.06721	mg/L	0.000580	0.1344	mg/L	0.00116	0.86%
Cr 267.716†	2202.9	0.2887	mg/L	0.00187	0.5774	mg/L	0.00375	0.65%
Cu 324.752†	34372.3	0.1669	mg/L	0.00289	0.3339	mg/L	0.00579	1.73%
Fe 273.955†	343701.2	169.5	mg/L	1.32	339.1	mg/L	2.64	0.78%
K 766.490†	17006.1	7.793	mg/L	0.0279	15.59	mg/L	0.056	0.36%
Mg 279.077†	56490.9	58.39	mg/L	0.258	116.8	mg/L	0.52	0.44%
Mn 257.610†	187705.7	2.913	mg/L	0.0080	5.827	mg/L	0.0160	0.27%
Mo 202.031†	64.0	0.00293	mg/L	0.000175	0.00585	mg/L	0.000349	5.97%
Na 589.592†	33044.6	2.982	mg/L	0.0205	5.965	mg/L	0.0410	0.69%
Na 330.237†	84.2	2.915	mg/L	0.3242	5.829	mg/L	0.6485	11.13%
Ni 231.604†	1260.0	0.3328	mg/L	0.00257	0.6656	mg/L	0.00513	0.77%
Pb 220.353†	802.7	0.1103	mg/L	0.00217	0.2207	mg/L	0.00434	1.97%
Sb 206.836†	-10.8	0.02136	mg/L	0.001845	0.04272	mg/L	0.003690	8.64%
Se 196.026†	-12.6	0.01441	mg/L	0.013563	0.02883	mg/L	0.027127	94.09%
Si 288.158†	5336.0	2.421	mg/L	0.0248	4.841	mg/L	0.0495	1.02%
Sn 189.927†	-52.0	-0.00133	mg/L	0.001956	-0.00266	mg/L	0.003911	146.94%
Sr 421.552†	165260.3	0.1897	mg/L	0.00042	0.3793	mg/L	0.00084	0.22%
Ti 334.903†	231187.0	7.822	mg/L	0.0081	15.64	mg/L	0.016	0.10%
Tl 190.801†	-46.0	0.00101	mg/L	0.002947	0.00202	mg/L	0.005895	291.27%
V 292.402†	59540.8	0.4009	mg/L	0.00711	0.8019	mg/L	0.01423	1.77%
Zn 206.200†	1264.3	0.3871	mg/L	0.00068	0.7742	mg/L	0.00135	0.17%

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Sequence No.: 5
Sample ID: ~~21A040-05~~ 21A0402-05

Dilution: 2X
Wash Time: 37

TH 02-04-21

Autosampler Location: 336
Date Collected: 2/4/2021 4:44:51 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: ~~21A040-05~~ 21A0402-05

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: ~~21A040-05~~ 21A0402-05

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2647098.7	104.3	%	0.52				0.50%
ScR 361.383	290684.2	103.4	%	0.59				0.57%
Ag 328.068†	-591.2	-0.00209	mg/L	0.000162	-0.00417	mg/L	0.000324	7.75%
Al 308.215†	190190.9	111.9	mg/L	0.73	223.7	mg/L	1.46	0.65%
As 188.979†	117.3	0.08748	mg/L	0.004020	0.1750	mg/L	0.00804	4.60%
B 249.677†	137.2	0.01499	mg/L	0.000327	0.02998	mg/L	0.000654	2.18%
Ba 233.527†	4676.4	0.4889	mg/L	0.00279	0.9779	mg/L	0.00557	0.57%
Be 313.042†	1331.2	0.00148	mg/L	0.000023	0.00295	mg/L	0.000046	1.56%
Ca 317.933†	1237928.4	123.0	mg/L	1.26	246.0	mg/L	2.52	1.02%
Cd 228.802†	96.6	0.00009	mg/L	0.000045	0.00017	mg/L	0.000090	52.12%
Co 228.616†	3542.0	0.06437	mg/L	0.000487	0.1287	mg/L	0.00097	0.76%
Cr 267.716†	2531.3	0.3324	mg/L	0.00155	0.6649	mg/L	0.00309	0.46%
Cu 324.752†	40497.7	0.1944	mg/L	0.00198	0.3888	mg/L	0.00396	1.02%
Fe 273.955†	310240.4	153.0	mg/L	0.35	306.1	mg/L	0.70	0.23%
K 766.490†	13403.4	6.142	mg/L	0.0607	12.28	mg/L	0.121	0.99%
Mg 279.077†	58103.5	60.09	mg/L	0.663	120.2	mg/L	1.33	1.10%
Mn 257.610†	150326.3	2.333	mg/L	0.0166	4.666	mg/L	0.0331	0.71%
Mo 202.031†	51.1	0.00153	mg/L	0.000443	0.00305	mg/L	0.000886	29.04%
Na 589.592†	18831.6	1.700	mg/L	0.0130	3.399	mg/L	0.0260	0.76%
Na 330.237†	64.7	2.240	mg/L	0.2609	4.480	mg/L	0.5218	11.65%
Ni 231.604†	1358.8	0.3589	mg/L	0.00275	0.7179	mg/L	0.00549	0.77%
~~Pb 220.353†~~	~~186.8~~	~~0.03903~~	~~mg/L~~	0.000920	0.07807	mg/L	0.001841	2.36%
Sb 206.836†	2.9	0.02423	mg/L	0.008064	0.04845	mg/L	0.016128	33.29%
Se 196.026†	3.0	0.02355	mg/L	0.001946	0.04709	mg/L	0.003892	8.27%
Si 288.158†	6442.6	2.935	mg/L	0.0260	5.869	mg/L	0.0521	0.89%
Sn 189.927†	-48.2	0.00125	mg/L	0.000984	0.00250	mg/L	0.001967	78.64%
Sr 421.552†	196546.9	0.2256	mg/L	0.00119	0.4511	mg/L	0.00238	0.53%
Ti 334.903†	196239.8	6.635	mg/L	0.0306	13.27	mg/L	0.061	0.46%
Tl 190.801†	-63.9	-0.00856	mg/L	0.002688	-0.01711	mg/L	0.005375	31.41%
V 292.402†	46462.0	0.3137	mg/L	0.00429	0.6275	mg/L	0.00858	1.37%
Zn 206.200†	1754.4	0.5371	mg/L	0.00509	1.074	mg/L	0.0102	0.95%

TH 02-05-21

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Sequence No.: 6
Sample ID: ~~21A040-06~~ 21A0402-06

Dilution: 2X
Wash Time: 37

TH 02-04-21

Autosampler Location: 337
Date Collected: 2/4/2021 4:47:40 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: ~~21A040-06~~ 21A0402-06

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: ~~21A040-06~~ 21A0402-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2654786.6	104.6	%	0.50				0.48%
ScR 361.383	297188.9	105.7	%	0.95				0.90%
Ag 328.068†	-1034.5	-0.00214	mg/L	0.000331	-0.00427	mg/L	0.000662	15.50%
Al 308.215†	179001.7	105.3	mg/L	0.84	210.5	mg/L	1.67	0.79%
As 188.979†	170.3	0.1296	mg/L	0.00297	0.2593	mg/L	0.00593	2.29%
B 249.677†	104.0	0.01059	mg/L	0.001384	0.02117	mg/L	0.002768	13.08%
Ba 233.527†	5271.3	0.5511	mg/L	0.00388	1.102	mg/L	0.0078	0.70%
Be 313.042†	1630.8	0.00182	mg/L	0.000039	0.00364	mg/L	0.000078	2.13%
Ca 317.933†	247196.9	24.56	mg/L	0.663	49.12	mg/L	1.326	2.70%
Cd 228.802†	102.3	0.00001	mg/L	0.000029	0.00001	mg/L	0.000058	571.15%
Co 228.616†	3603.5	0.06501	mg/L	0.000893	0.1300	mg/L	0.00179	1.37%
Cr 267.716†	2193.9	0.2873	mg/L	0.00272	0.5746	mg/L	0.00544	0.95%
Cu 324.752†	30817.5	0.1523	mg/L	0.00050	0.3046	mg/L	0.00100	0.33%
Fe 273.955†	389268.9	192.0	mg/L	1.52	384.0	mg/L	3.05	0.79%
K 766.490†	12060.6	5.527	mg/L	0.0389	11.05	mg/L	0.078	0.70%
Mg 279.077†	57075.6	58.95	mg/L	1.274	117.9	mg/L	2.55	2.16%
Mn 257.610†	174036.3	2.701	mg/L	0.0279	5.402	mg/L	0.0558	1.03%
Mo 202.031†	244.2	0.01267	mg/L	0.000304	0.02533	mg/L	0.000607	2.40%
Na 589.592†	11685.7	1.055	mg/L	0.0119	2.109	mg/L	0.0238	1.13%
Na 330.237†	21.4	0.7414	mg/L	0.25142	1.483	mg/L	0.5028	33.91%
Ni 231.604† TH 02-05-21	1426.6	0.3768	mg/L	0.00167	0.7537	mg/L	0.00334	0.44%
~~Pb 220.353†~~	~~209.2~~	~~0.03586~~	mg/L	0.002064	0.07172	mg/L	0.004128	5.76%
Sb 206.836†	-6.1	0.02017	mg/L	0.005677	0.04034	mg/L	0.011354	28.15%
Se 196.026†	-19.5	0.01194	mg/L	0.003221	0.02388	mg/L	0.006441	26.98%
Si 288.158†	7413.0	3.381	mg/L	0.0254	6.761	mg/L	0.0507	0.75%
Sn 189.927†	-58.0	-0.00481	mg/L	0.001156	-0.00962	mg/L	0.002311	24.03%
Sr 421.552†	97618.1	0.1120	mg/L	0.00139	0.2241	mg/L	0.00277	1.24%
Ti 334.903†	198744.7	6.726	mg/L	0.0541	13.45	mg/L	0.108	0.80%
Tl 190.801†	-39.9	0.00667	mg/L	0.007230	0.01334	mg/L	0.014459	108.37%
V 292.402†	58419.3	0.3941	mg/L	0.00305	0.7883	mg/L	0.00610	0.77%
Zn 206.200†	1039.3	0.3185	mg/L	0.00382	0.6369	mg/L	0.00764	1.20%

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Sequence No.: 7
Sample ID: BJB0055-DUP1

Dilution: 2X
Wash Time: 37

Autosampler Location: 338
Date Collected: 2/4/2021 4:50:28 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BJB0055-DUP1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJB0055-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2596543.6	102.3	%	0.67				0.65%
ScR 361.383	293456.7	104.4	%	1.10				1.06%
Ag 328.068†	-839.7	-0.00172	mg/L	0.000313	-0.00344	mg/L	0.000625	18.18%
Al 308.215†	241805.3	142.2	mg/L	1.01	284.4	mg/L	2.02	0.71%
As 188.979†	86.7	0.07385	mg/L	0.003877	0.1477	mg/L	0.00775	5.25%
B 249.677†	117.1	0.01292	mg/L	0.000287	0.02584	mg/L	0.000575	2.22%
Ba 233.527†	7983.7	0.8425	mg/L	0.01015	1.685	mg/L	0.0203	1.21%
Be 313.042†	1820.9	0.00212	mg/L	0.000047	0.00424	mg/L	0.000094	2.21%
Ca 317.933†	238713.3	23.72	mg/L	0.350	47.43	mg/L	0.700	1.48%
Cd 228.802†	110.5	0.00082	mg/L	0.000353	0.00164	mg/L	0.000706	42.96%
Co 228.616†	3232.9	0.05867	mg/L	0.000599	0.1173	mg/L	0.00120	1.02%
Cr 267.716†	2841.7	0.3720	mg/L	0.00376	0.7439	mg/L	0.00752	1.01%
Cu 324.752†	20631.0	0.1042	mg/L	0.00092	0.2083	mg/L	0.00185	0.89%
Fe 273.955†	343373.4	169.4	mg/L	2.40	338.7	mg/L	4.81	1.42%
K 766.490†	10706.6	4.907	mg/L	0.1264	9.813	mg/L	0.2528	2.58%
Mg 279.077†	48873.6	50.47	mg/L	0.569	100.9	mg/L	1.14	1.13%
Mn 257.610†	229450.9	3.562	mg/L	0.0202	7.123	mg/L	0.0405	0.57%
Mo 202.031†	38.3	0.00181	mg/L	0.000168	0.00362	mg/L	0.000337	9.29%
Na 589.592†	9738.7	0.8789	mg/L	0.01574	1.758	mg/L	0.0315	1.79%
Na 330.237†	22.4	0.7746	mg/L	0.23012	1.549	mg/L	0.4602	29.71%
Ni 231.604†	1167.0	0.3083	mg/L	0.00516	0.6166	mg/L	0.01031	1.67%
Pb 220.353†	442.1	0.07575	mg/L	0.001255	0.1515	mg/L	0.00251	1.66%
Sb 206.836†	1.6	0.02107	mg/L	0.002934	0.04213	mg/L	0.005868	13.93%
Se 196.026†	-4.6	0.01981	mg/L	0.010339	0.03962	mg/L	0.020678	52.19%
Si 288.158†	5013.4	2.281	mg/L	0.0349	4.562	mg/L	0.0699	1.53%
Sn 189.927†	-46.1	-0.00087	mg/L	0.000962	-0.00173	mg/L	0.001924	111.06%
Sr 421.552†	112410.3	0.1290	mg/L	0.00117	0.2580	mg/L	0.00235	0.91%
Ti 334.903†	173450.5	5.870	mg/L	0.0418	11.74	mg/L	0.084	0.71%
Tl 190.801†	-41.9	0.00298	mg/L	0.004257	0.00596	mg/L	0.008514	142.87%
V 292.402†	49285.7	0.3335	mg/L	0.00495	0.6669	mg/L	0.00989	1.48%
Zn 206.200†	1530.5	0.4684	mg/L	0.00793	0.9369	mg/L	0.01586	1.69%

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Sequence No.: 8
Sample ID: 21A0402-01

Dilution: 2X
Wash Time: 37

Autosampler Location: 339
Date Collected: 2/4/2021 4:53:16 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-01

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-01

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2591489.5	102.1	%	0.23				0.22%
ScR 361.383	293569.3	104.4	%	0.70				0.67%
Ag 328.068†	-852.7	-0.00187	mg/L	0.000361	-0.00373	mg/L	0.000722	19.36%
Al 308.215†	231430.0	136.1	mg/L	0.43	272.2	mg/L	0.86	0.32%
As 188.979†	62.2	0.05863	mg/L	0.007530	0.1173	mg/L	0.01506	12.84%
B 249.677†	110.7	0.01209	mg/L	0.000887	0.02418	mg/L	0.001773	7.33%
Ba 233.527†	7309.1	0.7707	mg/L	0.00380	1.541	mg/L	0.0076	0.49%
Be 313.042†	1663.7	0.00191	mg/L	0.000023	0.00381	mg/L	0.000046	1.21%
Ca 317.933†	247746.5	24.61	mg/L	0.161	49.23	mg/L	0.321	0.65%
Cd 228.802†	104.4	0.00082	mg/L	0.000121	0.00164	mg/L	0.000242	14.75%
Co 228.616†	3231.9	0.05827	mg/L	0.000378	0.1165	mg/L	0.00076	0.65%
Cr 267.716†	2578.8	0.3376	mg/L	0.00142	0.6752	mg/L	0.00284	0.42%
Cu 324.752†	19595.9	0.09890	mg/L	0.001015	0.1978	mg/L	0.00203	1.03%
Fe 273.955†	330280.3	162.9	mg/L	0.36	325.8	mg/L	0.72	0.22%
K 766.490†	10828.7	4.962	mg/L	0.0356	9.925	mg/L	0.0712	0.72%
Mg 279.077†	48216.4	49.80	mg/L	0.342	99.60	mg/L	0.684	0.69%
Mn 257.610†	208262.5	3.233	mg/L	0.0209	6.465	mg/L	0.0418	0.65%
Mo 202.031†	43.2	0.00206	mg/L	0.000531	0.00413	mg/L	0.001062	25.73%
Na 589.592†	9444.2	0.8524	mg/L	0.00431	1.705	mg/L	0.0086	0.51%
Na 330.237†	31.3	1.084	mg/L	0.3695	2.169	mg/L	0.7391	34.08%
Ni 231.604†	1117.8	0.2953	mg/L	0.00473	0.5906	mg/L	0.00946	1.60%
Pb 220.353†	394.6	0.06912	mg/L	0.001066	0.1382	mg/L	0.00213	1.54%
Sb 206.836†	-12.4	0.01470	mg/L	0.000614	0.02941	mg/L	0.001228	4.17%
Se 196.026†	-9.5	0.01544	mg/L	0.010021	0.03089	mg/L	0.020043	64.89%
Si 288.158†	5128.7	2.333	mg/L	0.0140	4.665	mg/L	0.0281	0.60%
Sn 189.927†	-50.8	-0.00208	mg/L	0.000761	-0.00416	mg/L	0.001522	36.57%
Sr 421.552†	105530.1	0.1211	mg/L	0.00042	0.2422	mg/L	0.00084	0.35%
Ti 334.903†	180697.8	6.115	mg/L	0.0208	12.23	mg/L	0.042	0.34%
Tl 190.801†	-50.2	-0.00144	mg/L	0.003966	-0.00288	mg/L	0.007932	275.05%
V 292.402†	50154.0	0.3389	mg/L	0.00181	0.6777	mg/L	0.00362	0.53%
Zn 206.200†	1443.7	0.4419	mg/L	0.00317	0.8838	mg/L	0.00635	0.72%

Sequence No.: 9
Sample ID: BJB0055-MS1

Dilution: 2X
Wash Time: 37

Autosampler Location: 340
Date Collected: 2/4/2021 4:56:04 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BJB0055-MS1

Analyte	Back Pressure	Flow
All	239.0 kPa	0.65 L/min

Mean Data: BJB0055-MS1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2623341.1	103.4	%	0.34				0.33%
ScR 361.383	293827.1	104.5	%	1.04				1.00%
Ag 328.068†	95956.5	0.4991	mg/L	0.00512	0.9982	mg/L	0.01024	1.03%
Al 308.215†	237205.2	139.5	mg/L	1.67	279.0	mg/L	3.34	1.20%
As 188.979†	3337.5	2.045	mg/L	0.0350	4.090	mg/L	0.0700	1.71%
B 249.677†	129.8	0.01308	mg/L	0.003965	0.02617	mg/L	0.007931	30.31%
Ba 233.527†	25403.2	2.704	mg/L	0.0359	5.409	mg/L	0.0717	1.33%
Be 313.042†	365007.5	0.4818	mg/L	0.00392	0.9637	mg/L	0.00784	0.81%
Ca 317.933†	332404.5	33.02	mg/L	0.684	66.05	mg/L	1.368	2.07%
Cd 228.802†	18732.7	0.5086	mg/L	0.00579	1.017	mg/L	0.0116	1.14%
Co 228.616†	24687.1	0.5412	mg/L	0.00637	1.082	mg/L	0.0127	1.18%
Cr 267.716†	6031.6	0.7886	mg/L	0.01337	1.577	mg/L	0.0267	1.70%
Cu 324.752†	128113.8	0.6000	mg/L	0.00388	1.200	mg/L	0.0078	0.65%
Fe 273.955†	336283.8	165.9	mg/L	1.38	331.7	mg/L	2.77	0.83%
K 766.490†	30230.5	13.85	mg/L	0.102	27.71	mg/L	0.205	0.74%
Mg 279.077†	57734.8	59.70	mg/L	1.244	119.4	mg/L	2.49	2.08%
Mn 257.610†	241249.0	3.745	mg/L	0.0453	7.490	mg/L	0.0906	1.21%
Mo 202.031†	47.0	0.00220	mg/L	0.000219	0.00440	mg/L	0.000438	9.96%
Na 589.592†	118907.5	10.73	mg/L	0.126	21.46	mg/L	0.252	1.17%
Na 330.237†	308.3	10.67	mg/L	0.286	21.34	mg/L	0.572	2.68%
Ni 231.604†	2877.1	0.7591	mg/L	0.00626	1.518	mg/L	0.0125	0.83%
Pb 220.353†	17694.5	2.052	mg/L	0.0286	4.104	mg/L	0.0571	1.39%
Sb 206.836†	1056.6	0.5649	mg/L	0.00912	1.130	mg/L	0.0182	1.61%
Se 196.026†	2679.4	1.995	mg/L	0.0239	3.989	mg/L	0.0478	1.20%
Si 288.158†	6005.7	2.742	mg/L	0.0180	5.484	mg/L	0.0360	0.66%
Sn 189.927†	-51.9	-0.00162	mg/L	0.002308	-0.00325	mg/L	0.004616	142.14%
Sr 421.552†	529173.2	0.6073	mg/L	0.00802	1.215	mg/L	0.0160	1.32%
Ti 334.903†	156457.4	5.294	mg/L	0.0446	10.59	mg/L	0.089	0.84%
Tl 190.801†	4390.1	1.891	mg/L	0.0193	3.783	mg/L	0.0386	1.02%
V 292.402†	119986.5	0.8067	mg/L	0.00411	1.613	mg/L	0.0082	0.51%
Zn 206.200†	2964.3	0.9071	mg/L	0.00793	1.814	mg/L	0.0159	0.87%

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Sequence No.: 10 **Autosampler Location: 341**
Sample ID: BJB0055-MSD1 **Date Collected: 2/4/2021 4:58:29 PM**
Data Type: Original

Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJB0055-MSD1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJB0055-MSD1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2655949.7	104.6	%	0.75				0.71%
ScR 361.383	301068.3	107.1	%	1.00				0.93%
Ag 328.068†	96305.3	0.5010	mg/L	0.00309	1.002	mg/L	0.0062	0.62%
Al 308.215†	237548.0	139.7	mg/L	0.39	279.4	mg/L	0.77	0.28%
As 188.979†	3367.9	2.064	mg/L	0.0155	4.128	mg/L	0.0309	0.75%
B 249.677†	137.4	0.01355	mg/L	0.002468	0.02710	mg/L	0.004937	18.21%
Ba 233.527†	26139.8	2.783	mg/L	0.0298	5.566	mg/L	0.0596	1.07%
Be 313.042†	366406.6	0.4837	mg/L	0.00142	0.9674	mg/L	0.00285	0.29%
Ca 317.933†	344351.5	34.21	mg/L	0.160	68.42	mg/L	0.320	0.47%
Cd 228.802†	18813.5	0.5107	mg/L	0.00391	1.021	mg/L	0.0078	0.77%
Co 228.616†	24830.6	0.5441	mg/L	0.00383	1.088	mg/L	0.0077	0.70%
Cr 267.716†	6107.8	0.7986	mg/L	0.00670	1.597	mg/L	0.0134	0.84%
Cu 324.752†	128453.3	0.6018	mg/L	0.00462	1.204	mg/L	0.0092	0.77%
Fe 273.955†	343255.6	169.3	mg/L	0.79	338.6	mg/L	1.57	0.46%
K 766.490†	30307.7	13.89	mg/L	0.071	27.78	mg/L	0.141	0.51%
Mg 279.077†	56061.9	57.95	mg/L	0.453	115.9	mg/L	0.91	0.78%
Mn 257.610†	241570.8	3.750	mg/L	0.0114	7.500	mg/L	0.0227	0.30%
Mo 202.031†	56.3	0.00268	mg/L	0.000220	0.00536	mg/L	0.000441	8.22%
Na 589.592†	117104.4	10.57	mg/L	0.046	21.14	mg/L	0.093	0.44%
Na 330.237†	341.7	11.82	mg/L	0.920	23.65	mg/L	1.840	7.78%
Ni 231.604†	2943.9	0.7767	mg/L	0.00770	1.553	mg/L	0.0154	0.99%
Pb 220.353†	17834.5	2.068	mg/L	0.0059	4.136	mg/L	0.0119	0.29%
Sb 206.836†	1079.1	0.5768	mg/L	0.00814	1.154	mg/L	0.0163	1.41%
Se 196.026†	2722.2	2.027	mg/L	0.0065	4.053	mg/L	0.0130	0.32%
Si 288.158†	7639.2	3.493	mg/L	0.0416	6.986	mg/L	0.0831	1.19%
Sn 189.927†	-53.0	-0.00176	mg/L	0.001483	-0.00352	mg/L	0.002966	84.26%
Sr 421.552†	531420.6	0.6099	mg/L	0.00248	1.220	mg/L	0.0050	0.41%
Ti 334.903†	159413.2	5.394	mg/L	0.0033	10.79	mg/L	0.007	0.06%
Tl 190.801†	4421.5	1.905	mg/L	0.0083	3.811	mg/L	0.0165	0.43%
V 292.402†	119641.6	0.8045	mg/L	0.00446	1.609	mg/L	0.0089	0.55%
Zn 206.200†	3061.7	0.9371	mg/L	0.01255	1.874	mg/L	0.0251	1.34%

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Sequence No.: 11 **Autosampler Location: 342**
Sample ID: BJB0055-PS1 **Date Collected: 2/4/2021 5:00:54 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJB0055-PS1

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: BJB0055-PS1

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2663384.0	104.9	%	0.20				0.19%
ScR 361.383	301675.6	107.3	%	0.75				0.70%
Ag 328.068†	-830.6	-0.00171	mg/L	0.000169	-0.00342	mg/L	0.000338	9.89%
Al 308.215†	232866.1	137.0	mg/L	0.48	273.9	mg/L	0.96	0.35%
As 188.979†	63.4	0.06002	mg/L	0.004765	0.1200	mg/L	0.00953	7.94%
B 249.677†	114.5	0.01250	mg/L	0.000775	0.02501	mg/L	0.001549	6.19%
Ba 233.527†	7439.8	0.7845	mg/L	0.00647	1.569	mg/L	0.0129	0.83%
Be 313.042†	1679.6	0.00193	mg/L	0.000032	0.00385	mg/L	0.000064	1.65%
Ca 317.933†	252170.4	25.05	mg/L	0.039	50.11	mg/L	0.078	0.15%
Cd 228.802†	104.0	0.00078	mg/L	0.000330	0.00156	mg/L	0.000660	42.38%
Co 228.616†	3246.4	0.05844	mg/L	0.000311	0.1169	mg/L	0.00062	0.53%
Cr 267.716†	2628.8	0.3441	mg/L	0.00089	0.6883	mg/L	0.00179	0.26%
Cu 324.752†	19666.7	0.09938	mg/L	0.000923	0.1988	mg/L	0.00185	0.93%
Fe 273.955†	335741.2	165.6	mg/L	0.78	331.2	mg/L	1.57	0.47%
K 766.490†	10948.4	5.017	mg/L	0.0049	10.03	mg/L	0.010	0.10%
Mg 279.077†	48775.8	50.38	mg/L	0.145	100.8	mg/L	0.29	0.29%
Mn 257.610†	210612.8	3.269	mg/L	0.0095	6.538	mg/L	0.0191	0.29%
Mo 202.031†	37.2	0.00174	mg/L	0.000206	0.00348	mg/L	0.000413	11.87%
Na 589.592†	9479.6	0.8556	mg/L	0.00365	1.711	mg/L	0.0073	0.43%
Na 330.237†	35.0	1.211	mg/L	0.0939	2.422	mg/L	0.1878	7.75%
Ni 231.604†	1147.1	0.3039	mg/L	0.00165	0.6077	mg/L	0.00329	0.54%
Pb 220.353†	384.7	0.06798	mg/L	0.001271	0.1360	mg/L	0.00254	1.87%
Sb 206.836†	3861.8	2.011	mg/L	0.0191	4.023	mg/L	0.0383	0.95%
Se 196.026†	-7.4	0.01740	mg/L	0.004087	0.03481	mg/L	0.008174	23.48%
Si 288.158†	5351.4	2.435	mg/L	0.0146	4.870	mg/L	0.0292	0.60%
Sn 189.927†	-53.7	-0.00057	mg/L	0.000994	-0.00114	mg/L	0.001988	175.06%
Sr 421.552†	106389.1	0.1221	mg/L	0.00059	0.2442	mg/L	0.00118	0.48%
Ti 334.903†	182490.1	6.176	mg/L	0.0097	12.35	mg/L	0.019	0.16%
Tl 190.801†	-48.4	-0.00029	mg/L	0.005729	-0.00058	mg/L	0.011457	>999.9%
V 292.402†	50327.9	0.3401	mg/L	0.00265	0.6802	mg/L	0.00530	0.78%
Zn 206.200†	1486.9	0.4551	mg/L	0.00114	0.9103	mg/L	0.00229	0.25%

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Sequence No.: 12
Sample ID: SEQ-IBL2

Dilution: 1X
Wash Time: 37

Autosampler Location: 343
Date Collected: 2/4/2021 5:03:42 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-IBL2

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-IBL2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2738618.7	107.9	%	0.18				0.16%
ScR 361.383	303875.4	108.1	%	0.96				0.89%
Ag 328.068†	103.0	0.00053	mg/L	0.000192	0.00053	mg/L	0.000192	35.95%
Al 308.215†	21.2	0.01246	mg/L	0.006773	0.01246	mg/L	0.006773	54.37%
As 188.979†	-1.2	-0.00071	mg/L	0.000107	-0.00071	mg/L	0.000107	15.06%
B 249.677†	24.1	0.00299	mg/L	0.000787	0.00299	mg/L	0.000787	26.36%
Ba 233.527†	-0.0	-0.00000	mg/L	0.000436	-0.00000	mg/L	0.000436	>999.9%
Be 313.042†	-114.1	-0.00015	mg/L	0.000024	-0.00015	mg/L	0.000024	16.05%
Ca 317.933†	17.1	0.00168	mg/L	0.000741	0.00168	mg/L	0.000741	44.09%
Cd 228.802†	-11.9	-0.00033	mg/L	0.000092	-0.00033	mg/L	0.000092	27.87%
Co 228.616†	-3.7	-0.00008	mg/L	0.000243	-0.00008	mg/L	0.000243	306.20%
Cr 267.716†	10.8	0.00141	mg/L	0.000823	0.00141	mg/L	0.000823	58.46%
Cu 324.752†	-51.9	-0.00024	mg/L	0.000112	-0.00024	mg/L	0.000112	46.75%
Fe 273.955†	10.0	0.00492	mg/L	0.001727	0.00492	mg/L	0.001727	35.12%
K 766.490†	-31.2	-0.01432	mg/L	0.022364	-0.01432	mg/L	0.022364	156.19%
Mg 279.077†	5.0	0.00515	mg/L	0.008341	0.00515	mg/L	0.008341	162.04%
Mn 257.610†	-26.9	-0.00042	mg/L	0.000095	-0.00042	mg/L	0.000095	22.61%
Mo 202.031†	-2.4	-0.00013	mg/L	0.000356	-0.00013	mg/L	0.000356	276.74%
Na 589.592†	353.0	0.03186	mg/L	0.001048	0.03186	mg/L	0.001048	3.29%
Na 330.237†	37.2	1.289	mg/L	0.3537	1.289	mg/L	0.3537	27.45%
Ni 231.604†	-3.5	-0.00092	mg/L	0.000511	-0.00092	mg/L	0.000511	55.68%
Pb 220.353†	-7.3	-0.00084	mg/L	0.001746	-0.00084	mg/L	0.001746	208.77%
Sb 206.836†	-2.6	-0.00133	mg/L	0.000830	-0.00133	mg/L	0.000830	62.64%
Se 196.026†	5.5	0.00406	mg/L	0.003916	0.00406	mg/L	0.003916	96.43%
Si 288.158†	27.5	0.01265	mg/L	0.001019	0.01265	mg/L	0.001019	8.06%
Sn 189.927†	2.5	0.00060	mg/L	0.000486	0.00060	mg/L	0.000486	80.78%
Sr 421.552†	8.3	0.00001	mg/L	0.000039	0.00001	mg/L	0.000039	407.54%
Ti 334.903†	-43.4	-0.00147	mg/L	0.000281	-0.00147	mg/L	0.000281	19.17%
Tl 190.801†	1.7	0.00074	mg/L	0.000577	0.00074	mg/L	0.000577	78.51%
V 292.402†	-32.2	-0.00021	mg/L	0.000065	-0.00021	mg/L	0.000065	31.20%
Zn 206.200†	-0.0	-0.00001	mg/L	0.000605	-0.00001	mg/L	0.000605	>999.9%

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Sequence No.: 13
Sample ID: SEQ-CCV6

Dilution: 1X
Wash Time: 37

Autosampler Location: 7
Date Collected: 2/4/2021 5:06:30 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV6

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCV6

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2635523.2	103.8	%	0.03				0.03%
ScR 361.383	292668.9	104.1	%	1.00				0.96%
Ag 328.068†	195021.2	1.009	mg/L	0.0091	1.009	mg/L	0.0091	0.90%
Al 308.215†	3339.3	1.929	mg/L	0.0157	1.929	mg/L	0.0157	0.82%
As 188.979†	3241.6	1.964	mg/L	0.0207	1.964	mg/L	0.0207	1.06%
B 249.677†	7713.9	0.9560	mg/L	0.01216	0.9560	mg/L	0.01216	1.27%
Ba 233.527†	9070.9	0.9689	mg/L	0.01405	0.9689	mg/L	0.01405	1.45%
Be 313.042†	709013.2	0.9365	mg/L	0.00687	0.9365	mg/L	0.00687	0.73%
Ca 317.933†	19388.3	1.926	mg/L	0.0372	1.926	mg/L	0.0372	1.93%
Cd 228.802†	35445.1	0.9796	mg/L	0.00552	0.9796	mg/L	0.00552	0.56%
Co 228.616†	42576.4	0.9537	mg/L	0.01145	0.9537	mg/L	0.01145	1.20%
Cr 267.716†	7368.8	0.9671	mg/L	0.01202	0.9671	mg/L	0.01202	1.24%
Cu 324.752†	208657.2	0.9620	mg/L	0.00636	0.9620	mg/L	0.00636	0.66%
Fe 273.955†	3884.1	1.908	mg/L	0.0285	1.908	mg/L	0.0285	1.49%
K 766.490†	42080.8	19.28	mg/L	0.133	19.28	mg/L	0.133	0.69%
Mg 279.077†	1826.8	1.903	mg/L	0.0352	1.903	mg/L	0.0352	1.85%
Mn 257.610†	62716.3	0.9743	mg/L	0.01103	0.9743	mg/L	0.01103	1.13%
Mo 202.031†	18083.5	0.9549	mg/L	0.00927	0.9549	mg/L	0.00927	0.97%
Na 589.592†	533915.4	48.19	mg/L	0.557	48.19	mg/L	0.557	1.16%
Na 330.237†	1451.7	50.23	mg/L	0.652	50.23	mg/L	0.652	1.30%
Ni 231.604†	3576.4	0.9444	mg/L	0.01730	0.9444	mg/L	0.01730	1.83%
Pb 220.353†	16998.8	1.948	mg/L	0.0185	1.948	mg/L	0.0185	0.95%
Sb 206.836†	3908.7	2.030	mg/L	0.0109	2.030	mg/L	0.0109	0.54%
Se 196.026†	2697.9	1.986	mg/L	0.0169	1.986	mg/L	0.0169	0.85%
Si 288.158†	4395.0	2.014	mg/L	0.0191	2.014	mg/L	0.0191	0.95%
Sn 189.927†	4043.3	0.9632	mg/L	0.00803	0.9632	mg/L	0.00803	0.83%
Sr 421.552†	840322.5	0.9644	mg/L	0.01104	0.9644	mg/L	0.01104	1.14%
Ti 334.903†	28628.6	0.9684	mg/L	0.00526	0.9684	mg/L	0.00526	0.54%
Tl 190.801†	4589.7	1.954	mg/L	0.0131	1.954	mg/L	0.0131	0.67%
V 292.402†	143497.0	0.9616	mg/L	0.01007	0.9616	mg/L	0.01007	1.05%
Zn 206.200†	3069.6	0.9391	mg/L	0.01145	0.9391	mg/L	0.01145	1.22%

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Sequence No.: 14 **Autosampler Location: 1**
Sample ID: SEQ-CCB5 **Date Collected: 2/4/2021 5:09:58 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB5

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCB5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2566778.7	101.1	%	0.64				0.63%
ScR 361.383	280216.1	99.67	%	0.287				0.29%
Ag 328.068†	44.9	0.00023	mg/L	0.000187	0.00023	mg/L	0.000187	80.44%
Al 308.215†	10.7	0.00625	mg/L	0.005351	0.00625	mg/L	0.005351	85.57%
As 188.979†	2.0	0.00122	mg/L	0.001544	0.00122	mg/L	0.001544	126.16%
B 249.677†	22.9	0.00284	mg/L	0.000865	0.00284	mg/L	0.000865	30.45%
Ba 233.527†	-2.1	-0.00022	mg/L	0.000727	-0.00022	mg/L	0.000727	325.14%
Be 313.042†	32.1	0.00004	mg/L	0.000027	0.00004	mg/L	0.000027	62.82%
Ca 317.933†	11.8	0.00116	mg/L	0.000370	0.00116	mg/L	0.000370	31.74%
Cd 228.802†	-2.8	-0.00009	mg/L	0.000140	-0.00009	mg/L	0.000140	162.20%
Co 228.616†	-3.2	-0.00007	mg/L	0.000222	-0.00007	mg/L	0.000222	311.46%
Cr 267.716†	5.5	0.00072	mg/L	0.000397	0.00072	mg/L	0.000397	55.12%
Cu 324.752†	67.0	0.00031	mg/L	0.000117	0.00031	mg/L	0.000117	38.06%
Fe 273.955†	5.9	0.00292	mg/L	0.000999	0.00292	mg/L	0.000999	34.24%
K 766.490†	-2.6	-0.00117	mg/L	0.012862	-0.00117	mg/L	0.012862	>999.9%
Mg 279.077†	0.8	0.00078	mg/L	0.004112	0.00078	mg/L	0.004112	528.75%
Mn 257.610†	-3.2	-0.00005	mg/L	0.000061	-0.00005	mg/L	0.000061	123.15%
Mo 202.031†	11.2	0.00059	mg/L	0.000244	0.00059	mg/L	0.000244	41.15%
Na 589.592†	297.7	0.02687	mg/L	0.003717	0.02687	mg/L	0.003717	13.83%
Na 330.237†	7.7	0.2661	mg/L	0.15501	0.2661	mg/L	0.15501	58.26%
Ni 231.604†	-0.2	-0.00005	mg/L	0.001804	-0.00005	mg/L	0.001804	>999.9%
Pb 220.353†	-1.4	-0.00015	mg/L	0.000574	-0.00015	mg/L	0.000574	375.18%
Sb 206.836†	-2.4	-0.00124	mg/L	0.002249	-0.00124	mg/L	0.002249	182.12%
Se 196.026†	3.8	0.00280	mg/L	0.001708	0.00280	mg/L	0.001708	60.95%
Si 288.158†	2.4	0.00111	mg/L	0.002792	0.00111	mg/L	0.002792	251.28%
Sn 189.927†	-0.5	-0.00011	mg/L	0.000216	-0.00011	mg/L	0.000216	189.26%
Sr 421.552†	9.5	0.00001	mg/L	0.000085	0.00001	mg/L	0.000085	784.23%
Ti 334.903†	3.9	0.00013	mg/L	0.000487	0.00013	mg/L	0.000487	370.06%
Tl 190.801†	-0.1	-0.00005	mg/L	0.001145	-0.00005	mg/L	0.001145	>999.9%
V 292.402†	-0.3	0.00000	mg/L	0.000103	0.00000	mg/L	0.000103	>999.9%
Zn 206.200†	-0.6	-0.00019	mg/L	0.001006	-0.00019	mg/L	0.001006	541.33%

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Sequence No.: 15
Sample ID: 21A0393-01

Dilution: 10X
Wash Time: 37

Autosampler Location: 344
Date Collected: 2/4/2021 5:12:46 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0393-01

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0393-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2666911.2	105.1	%	0.27				0.26%
ScR 361.383	301317.3	107.2	%	0.87				0.81%
Ag 328.068†	-624.1	-0.00128	mg/L	0.000420	-0.01284	mg/L	0.004202	32.74%
Al 308.215†	113933.6	67.01	mg/L	0.587	670.1	mg/L	5.87	0.88%
As 188.979†	-29.6	-0.00222	mg/L	0.001073	-0.02223	mg/L	0.010726	48.25%
B 249.677†	62.3	0.00696	mg/L	0.000541	0.06962	mg/L	0.005413	7.78%
Ba 233.527†	143.0	0.00621	mg/L	0.000486	0.06206	mg/L	0.004861	7.83%
Be 313.042†	221.3	0.00022	mg/L	0.000509	0.00215	mg/L	0.005089	236.39%
Ca 317.933†	251964.5	25.03	mg/L	0.358	250.3	mg/L	3.58	1.43%
Cd 228.802†	36.3	-0.00011	mg/L	0.000294	-0.00108	mg/L	0.002937	272.02%
Co 228.616†	2642.6	0.05535	mg/L	0.000170	0.5535	mg/L	0.00170	0.31%
Cr 267.716†	1225.9	0.1609	mg/L	0.00138	1.609	mg/L	0.0138	0.86%
Cu 324.752†	57813.5	0.2755	mg/L	0.00313	2.755	mg/L	0.0313	1.14%
Fe 273.955†	283626.5	139.9	mg/L	0.91	1399	mg/L	9.07	0.65%
K 766.490†	131.2	0.06011	mg/L	0.003447	0.6011	mg/L	0.03447	5.74%
Mg 279.077†	13999.9	14.25	mg/L	0.238	142.5	mg/L	2.38	1.67%
Mn 257.610†	167960.1	2.607	mg/L	0.0241	26.07	mg/L	0.241	0.93%
Mo 202.031†	135.9	0.00694	mg/L	0.000529	0.06937	mg/L	0.005288	7.62%
Na 589.592†	1164.9	0.1051	mg/L	0.00528	1.051	mg/L	0.0528	5.02%
Na 330.237†	42.6	1.475	mg/L	0.2499	14.75	mg/L	2.499	16.94%
Ni 231.604†	2184.0	0.5769	mg/L	0.00965	5.769	mg/L	0.0965	1.67%
Pb 220.353†	262.3	0.03551	mg/L	0.001422	0.3551	mg/L	0.01422	4.00%
Sb 206.836†	32.7	0.02036	mg/L	0.002558	0.2036	mg/L	0.02558	12.57%
Se 196.026†	-8.2	0.01212	mg/L	0.006265	0.1212	mg/L	0.06265	51.69%
Si 288.158†	2219.8	1.017	mg/L	0.0114	10.17	mg/L	0.114	1.12%
Sn 189.927†	-21.5	-0.00080	mg/L	0.001589	-0.00802	mg/L	0.015890	198.16%
Sr 421.552†	5270.1	0.00605	mg/L	0.000134	0.06048	mg/L	0.001335	2.21%
Ti 334.903†	28005.2	0.9463	mg/L	0.00400	9.463	mg/L	0.0400	0.42%
Tl 190.801†	-44.8	-0.00125	mg/L	0.000143	-0.01251	mg/L	0.001427	11.40%
V 292.402†	15120.6	0.1049	mg/L	0.00135	1.049	mg/L	0.0135	1.28%
Zn 206.200†	466.1	0.1427	mg/L	0.00334	1.427	mg/L	0.0334	2.34%

Sequence No.: 16
Sample ID: 21A0402-02

Dilution: 2X
Wash Time: 37

Autosampler Location: 345
Date Collected: 2/4/2021 5:15:35 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-02

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2631470.0	103.7	%	0.24				0.23%
ScR 361.383	300717.6	107.0	%	1.12				1.05%
Ag 328.068†	-889.5	-0.00196	mg/L	0.000121	-0.00391	mg/L	0.000241	6.17%
Al 308.215†	168077.0	98.84	mg/L	0.344	197.7	mg/L	0.69	0.35%
As 188.979†	-1.9	0.02136	mg/L	0.001107	0.04272	mg/L	0.002214	5.18%
B 249.677†	119.3	0.01217	mg/L	0.001724	0.02435	mg/L	0.003447	14.16%
Ba 233.527†	4152.0	0.4332	mg/L	0.00794	0.8665	mg/L	0.01587	1.83%
Be 313.042†	1144.5	0.00122	mg/L	0.000042	0.00243	mg/L	0.000084	3.44%
Ca 317.933†	281331.5	27.95	mg/L	0.205	55.90	mg/L	0.411	0.74%
Cd 228.802†	78.1	0.00051	mg/L	0.000134	0.00101	mg/L	0.000269	26.52%
Co 228.616†	3951.9	0.07269	mg/L	0.000124	0.1454	mg/L	0.00025	0.17%
Cr 267.716†	2619.9	0.3428	mg/L	0.00438	0.6857	mg/L	0.00875	1.28%
Cu 324.752†	31249.8	0.1522	mg/L	0.00026	0.3045	mg/L	0.00051	0.17%
Fe 273.955†	328939.1	162.2	mg/L	1.01	324.5	mg/L	2.01	0.62%
K 766.490†	15207.2	6.969	mg/L	0.0561	13.94	mg/L	0.112	0.81%
Mg 279.077†	60297.7	62.37	mg/L	0.567	124.7	mg/L	1.13	0.91%
Mn 257.610†	147907.4	2.295	mg/L	0.0167	4.591	mg/L	0.0335	0.73%
Mo 202.031†	39.9	0.00185	mg/L	0.000412	0.00370	mg/L	0.000823	22.26%
Na 589.592†	13756.3	1.242	mg/L	0.0170	2.483	mg/L	0.0340	1.37%
Na 330.237†	49.6	1.717	mg/L	0.2804	3.434	mg/L	0.5609	16.33%
Ni 231.604†	1689.4	0.4463	mg/L	0.00756	0.8925	mg/L	0.01513	1.70%
Pb 220.353†	117.0	0.02644	mg/L	0.000685	0.05288	mg/L	0.001371	2.59%
Sb 206.836†	-11.5	0.01807	mg/L	0.003977	0.03615	mg/L	0.007953	22.00%
Se 196.026†	-10.7	0.01475	mg/L	0.001720	0.02951	mg/L	0.003439	11.66%
Si 288.158†	8402.0	3.834	mg/L	0.0611	7.668	mg/L	0.1222	1.59%
Sn 189.927†	-55.3	-0.00417	mg/L	0.001593	-0.00834	mg/L	0.003186	38.18%
Sr 421.552†	111989.3	0.1285	mg/L	0.00031	0.2570	mg/L	0.00062	0.24%
Ti 334.903†	207521.7	7.023	mg/L	0.0044	14.05	mg/L	0.009	0.06%
Tl 190.801†	-36.3	0.00438	mg/L	0.007552	0.00876	mg/L	0.015104	172.34%
V 292.402†	48500.9	0.3275	mg/L	0.00369	0.6550	mg/L	0.00738	1.13%
Zn 206.200†	1181.1	0.3619	mg/L	0.00779	0.7238	mg/L	0.01558	2.15%

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Sequence No.: 17
Sample ID: 21A0402-07

Dilution: 2X
Wash Time: 37

Autosampler Location: 346
Date Collected: 2/4/2021 5:18:23 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-07

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-07

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2662242.5	104.9	%	1.11				1.06%
ScR 361.383	299130.8	106.4	%	1.10				1.03%
Ag 328.068†	-844.9	-0.00187	mg/L	0.000527	-0.00374	mg/L	0.001054	28.17%
Al 308.215†	182425.0	107.3	mg/L	1.21	214.6	mg/L	2.42	1.13%
As 188.979†	24.3	0.03611	mg/L	0.007132	0.07222	mg/L	0.014264	19.75%
B 249.677†	116.0	0.01175	mg/L	0.001416	0.02349	mg/L	0.002831	12.05%
Ba 233.527†	4628.5	0.4845	mg/L	0.00535	0.9689	mg/L	0.01071	1.11%
Be 313.042†	1238.3	0.00133	mg/L	0.000042	0.00266	mg/L	0.000083	3.12%
Ca 317.933†	311677.0	30.96	mg/L	0.516	61.93	mg/L	1.032	1.67%
Cd 228.802†	86.1	0.00061	mg/L	0.000265	0.00122	mg/L	0.000530	43.43%
Co 228.616†	3656.2	0.06622	mg/L	0.000603	0.1324	mg/L	0.00121	0.91%
Cr 267.716†	2449.8	0.3207	mg/L	0.00246	0.6413	mg/L	0.00491	0.77%
Cu 324.752†	33370.7	0.1616	mg/L	0.00078	0.3233	mg/L	0.00155	0.48%
Fe 273.955†	318393.4	157.0	mg/L	1.17	314.1	mg/L	2.34	0.75%
K 766.490†	11823.1	5.418	mg/L	0.0348	10.84	mg/L	0.070	0.64%
Mg 279.077†	63810.1	66.04	mg/L	1.276	132.1	mg/L	2.55	1.93%
Mn 257.610†	147900.3	2.295	mg/L	0.0242	4.591	mg/L	0.0484	1.05%
Mo 202.031†	37.3	0.00169	mg/L	0.000074	0.00338	mg/L	0.000149	4.40%
Na 589.592†	14023.5	1.266	mg/L	0.0174	2.531	mg/L	0.0349	1.38%
Na 330.237†	43.6	1.507	mg/L	0.0720	3.015	mg/L	0.1440	4.78%
Ni 231.604†	1483.0	0.3917	mg/L	0.00560	0.7834	mg/L	0.01119	1.43%
Pb 220.353†	221.3	0.04131	mg/L	0.001417	0.08261	mg/L	0.002835	3.43%
Sb 206.836†	-12.8	0.01732	mg/L	0.006657	0.03463	mg/L	0.013314	38.45%
Se 196.026†	-11.6	0.01338	mg/L	0.009512	0.02676	mg/L	0.019024	71.09%
Si 288.158†	8501.6	3.880	mg/L	0.0451	7.760	mg/L	0.0902	1.16%
Sn 189.927†	-55.3	-0.00372	mg/L	0.000342	-0.00744	mg/L	0.000685	9.20%
Sr 421.552†	109549.0	0.1257	mg/L	0.00132	0.2514	mg/L	0.00263	1.05%
Ti 334.903†	206287.5	6.981	mg/L	0.0465	13.96	mg/L	0.093	0.67%
Tl 190.801†	-41.7	0.00136	mg/L	0.001044	0.00272	mg/L	0.002087	76.71%
V 292.402†	50524.6	0.3408	mg/L	0.00484	0.6816	mg/L	0.00968	1.42%
Zn 206.200†	1515.4	0.4642	mg/L	0.00661	0.9283	mg/L	0.01321	1.42%

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Sequence No.: 18
Sample ID: 21A0402-08

Dilution: 2X
Wash Time: 37

Autosampler Location: 347
Date Collected: 2/4/2021 5:21:12 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-08

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-08

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2619251.7	103.2	%	0.52				0.50%
ScR 361.383	300965.2	107.0	%	1.95				1.82%
Ag 328.068†	-531.7	0.00046	mg/L	0.000030	0.00093	mg/L	0.000060	6.50%
Al 308.215†	280162.3	164.8	mg/L	1.94	329.5	mg/L	3.89	1.18%
As 188.979†	33.2	0.04691	mg/L	0.002421	0.09381	mg/L	0.004843	5.16%
B 249.677†	216.4	0.02446	mg/L	0.000785	0.04893	mg/L	0.001570	3.21%
Ba 233.527†	5150.0	0.5367	mg/L	0.00570	1.073	mg/L	0.0114	1.06%
Be 313.042†	2014.4	0.00227	mg/L	0.000079	0.00455	mg/L	0.000158	3.47%
Ca 317.933†	463174.0	46.02	mg/L	0.958	92.03	mg/L	1.917	2.08%
Cd 228.802†	170.9	0.00232	mg/L	0.000131	0.00463	mg/L	0.000262	5.65%
Co 228.616†	4183.8	0.07417	mg/L	0.000241	0.1483	mg/L	0.00048	0.33%
Cr 267.716†	3954.9	0.5176	mg/L	0.00701	1.035	mg/L	0.0140	1.35%
Cu 324.752†	57289.2	0.2749	mg/L	0.00153	0.5497	mg/L	0.00306	0.56%
Fe 273.955†	425463.4	209.9	mg/L	0.72	419.7	mg/L	1.44	0.34%
K 766.490†	12010.0	5.504	mg/L	0.0735	11.01	mg/L	0.147	1.34%
Mg 279.077†	77945.6	80.62	mg/L	1.734	161.2	mg/L	3.47	2.15%
Mn 257.610†	206542.9	3.206	mg/L	0.0471	6.411	mg/L	0.0941	1.47%
Mo 202.031†	75.2	0.00353	mg/L	0.000286	0.00707	mg/L	0.000573	8.11%
Na 589.592†	15798.1	1.426	mg/L	0.0256	2.852	mg/L	0.0513	1.80%
Na 330.237†	39.6	1.372	mg/L	0.4364	2.744	mg/L	0.8728	31.81%
Ni 231.604†	1803.5	0.4764	mg/L	0.00869	0.9528	mg/L	0.01737	1.82%
Pb 220.353†	919.7	0.1330	mg/L	0.00042	0.2659	mg/L	0.00085	0.32%
Sb 206.836†	-1.6	0.02867	mg/L	0.006824	0.05734	mg/L	0.013647	23.80%
Se 196.026†	-18.0	0.01589	mg/L	0.012140	0.03178	mg/L	0.024279	76.39%
Si 288.158†	7593.3	3.456	mg/L	0.0486	6.911	mg/L	0.0972	1.41%
Sn 189.927†	-64.1	-0.00192	mg/L	0.000451	-0.00384	mg/L	0.000901	23.47%
Sr 421.552†	152054.9	0.1745	mg/L	0.00184	0.3490	mg/L	0.00368	1.05%
Ti 334.903†	253944.5	8.593	mg/L	0.0701	17.19	mg/L	0.140	0.82%
Tl 190.801†	-55.5	0.00204	mg/L	0.001014	0.00408	mg/L	0.002027	49.64%
V 292.402†	65265.3	0.4410	mg/L	0.00404	0.8820	mg/L	0.00808	0.92%
Zn 206.200†	1420.5	0.4350	mg/L	0.00729	0.8700	mg/L	0.01457	1.68%

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Sequence No.: 19
Sample ID: 21A0402-09

Dilution: 2X
Wash Time: 37

Autosampler Location: 348
Date Collected: 2/4/2021 5:24:00 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-09

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-09

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2673622.3	105.3	%	0.13				0.13%
ScR 361.383	300706.9	107.0	%	0.42				0.39%
Ag 328.068†	-821.9	-0.00171	mg/L	0.000268	-0.00342	mg/L	0.000536	15.67%
Al 308.215†	219641.8	129.2	mg/L	0.47	258.3	mg/L	0.95	0.37%
As 188.979†	30.7	0.03860	mg/L	0.007709	0.07720	mg/L	0.015419	19.97%
B 249.677†	109.2	0.01142	mg/L	0.001011	0.02283	mg/L	0.002022	8.86%
Ba 233.527†	5263.1	0.5527	mg/L	0.00558	1.105	mg/L	0.0112	1.01%
Be 313.042†	1447.6	0.00161	mg/L	0.000022	0.00322	mg/L	0.000044	1.38%
Ca 317.933†	192712.5	19.15	mg/L	0.228	38.29	mg/L	0.456	1.19%
Cd 228.802†	59.8	0.00016	mg/L	0.000179	0.00031	mg/L	0.000357	114.14%
Co 228.616†	3796.0	0.07040	mg/L	0.000490	0.1408	mg/L	0.00098	0.70%
Cr 267.716†	2480.9	0.3246	mg/L	0.00273	0.6493	mg/L	0.00546	0.84%
Cu 324.752†	24985.3	0.1227	mg/L	0.00092	0.2453	mg/L	0.00184	0.75%
Fe 273.955†	309626.4	152.7	mg/L	1.64	305.4	mg/L	3.27	1.07%
K 766.490†	8525.2	3.907	mg/L	0.0321	7.814	mg/L	0.0641	0.82%
Mg 279.077†	75295.3	78.00	mg/L	0.498	156.0	mg/L	1.00	0.64%
Mn 257.610†	166591.8	2.586	mg/L	0.0168	5.171	mg/L	0.0336	0.65%
Mo 202.031†	31.4	0.00148	mg/L	0.000477	0.00296	mg/L	0.000953	32.24%
Na 589.592†	12140.8	1.096	mg/L	0.0136	2.191	mg/L	0.0271	1.24%
Na 330.237†	29.2	1.011	mg/L	0.6675	2.023	mg/L	1.3350	66.00%
Ni 231.604†	2284.7	0.6035	mg/L	0.00311	1.207	mg/L	0.0062	0.51%
Pb 220.353†	67.9	0.03061	mg/L	0.000660	0.06122	mg/L	0.001319	2.16%
Sb 206.836†	-16.2	0.01401	mg/L	0.005067	0.02802	mg/L	0.010134	36.17%
Se 196.026†	-14.7	0.01038	mg/L	0.003362	0.02076	mg/L	0.006725	32.39%
Si 288.158†	6709.4	3.058	mg/L	0.0075	6.116	mg/L	0.0151	0.25%
Sn 189.927†	-47.6	-0.00164	mg/L	0.002035	-0.00328	mg/L	0.004069	123.99%
Sr 421.552†	96510.0	0.1108	mg/L	0.00064	0.2215	mg/L	0.00127	0.57%
Ti 334.903†	190642.8	6.452	mg/L	0.0351	12.90	mg/L	0.070	0.54%
Tl 190.801†	-35.0	0.00363	mg/L	0.006127	0.00726	mg/L	0.012253	168.85%
V 292.402†	51494.6	0.3473	mg/L	0.00284	0.6947	mg/L	0.00567	0.82%
Zn 206.200†	835.2	0.2560	mg/L	0.00378	0.5119	mg/L	0.00757	1.48%

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Sequence No.: 20 **Autosampler Location: 349**
Sample ID: 21A0402-10 **Date Collected: 2/4/2021 5:26:49 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0402-10

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-10

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2693586.1	106.1	%	0.78				0.74%
ScR 361.383	303488.1	107.9	%	0.79				0.73%
Ag 328.068†	-981.0	-0.00242	mg/L	0.000577	-0.00484	mg/L	0.001154	23.83%
Al 308.215†	200420.9	117.9	mg/L	0.50	235.7	mg/L	0.99	0.42%
As 188.979†	8.4	0.03061	mg/L	0.003874	0.06122	mg/L	0.007749	12.66%
B 249.677†	175.8	0.01985	mg/L	0.000920	0.03971	mg/L	0.001840	4.63%
Ba 233.527†	3949.4	0.4095	mg/L	0.00328	0.8190	mg/L	0.00657	0.80%
Be 313.042†	1451.8	0.00156	mg/L	0.000037	0.00312	mg/L	0.000073	2.35%
Ca 317.933†	554171.9	55.06	mg/L	0.408	110.1	mg/L	0.82	0.74%
Cd 228.802†	83.9	0.00017	mg/L	0.000115	0.00033	mg/L	0.000231	69.42%
Co 228.616†	4327.2	0.07822	mg/L	0.000867	0.1564	mg/L	0.00173	1.11%
Cr 267.716†	2914.9	0.3819	mg/L	0.00221	0.7638	mg/L	0.00441	0.58%
Cu 324.752†	34494.6	0.1685	mg/L	0.00169	0.3371	mg/L	0.00338	1.00%
Fe 273.955†	386582.1	190.7	mg/L	0.84	381.4	mg/L	1.67	0.44%
K 766.490†	16413.8	7.522	mg/L	0.0393	15.04	mg/L	0.079	0.52%
Mg 279.077†	76311.8	78.97	mg/L	0.757	157.9	mg/L	1.51	0.96%
Mn 257.610†	223513.1	3.469	mg/L	0.0092	6.938	mg/L	0.0185	0.27%
Mo 202.031†	26.3	0.00087	mg/L	0.000553	0.00175	mg/L	0.001107	63.31%
Na 589.592†	27476.2	2.480	mg/L	0.0015	4.960	mg/L	0.0030	0.06%
Na 330.237†	67.7	2.343	mg/L	0.3027	4.687	mg/L	0.6053	12.92%
Ni 231.604†	1752.1	0.4628	mg/L	0.00248	0.9256	mg/L	0.00497	0.54%
Pb 220.353†	77.1	0.02463	mg/L	0.001412	0.04926	mg/L	0.002824	5.73%
Sb 206.836†	-19.0	0.01865	mg/L	0.001299	0.03730	mg/L	0.002599	6.97%
Se 196.026†	-14.0	0.01626	mg/L	0.004141	0.03251	mg/L	0.008281	25.47%
Si 288.158†	6040.0	2.742	mg/L	0.0304	5.485	mg/L	0.0608	1.11%
Sn 189.927†	-63.2	-0.00359	mg/L	0.001770	-0.00718	mg/L	0.003541	49.33%
Sr 421.552†	190630.8	0.2188	mg/L	0.00039	0.4375	mg/L	0.00078	0.18%
Ti 334.903†	245550.9	8.308	mg/L	0.0093	16.62	mg/L	0.019	0.11%
Tl 190.801†	-43.9	0.00462	mg/L	0.004500	0.00923	mg/L	0.009000	97.48%
V 292.402†	58664.0	0.3960	mg/L	0.00298	0.7920	mg/L	0.00596	0.75%
Zn 206.200†	1507.7	0.4615	mg/L	0.00336	0.9231	mg/L	0.00673	0.73%

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Sequence No.: 21 **Autosampler Location: 350**
Sample ID: 21A0402-11 **Date Collected: 2/4/2021 5:29:38 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0402-11

Analyte	**Back Pressure**	**Flow**
All	241.0 kPa	0.65 L/min

Mean Data: 21A0402-11

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2694356.5	106.1	%	0.87				0.82%
ScR 361.383	303936.3	108.1	%	0.87				0.80%
Ag 328.068†	-737.8	-0.00132	mg/L	0.000029	-0.00264	mg/L	0.000057	2.16%
Al 308.215†	230913.9	135.8	mg/L	0.91	271.6	mg/L	1.81	0.67%
As 188.979†	79.6	0.07031	mg/L	0.001351	0.1406	mg/L	0.00270	1.92%
B 249.677†	111.7	0.01102	mg/L	0.000338	0.02204	mg/L	0.000676	3.07%
Ba 233.527†	5191.2	0.5450	mg/L	0.00176	1.090	mg/L	0.0035	0.32%
Be 313.042†	1716.0	0.00195	mg/L	0.000031	0.00390	mg/L	0.000063	1.60%
Ca 317.933†	162833.3	16.18	mg/L	0.191	32.35	mg/L	0.382	1.18%
Cd 228.802†	86.8	0.00036	mg/L	0.000077	0.00072	mg/L	0.000154	21.35%
Co 228.616†	3396.0	0.05885	mg/L	0.000322	0.1177	mg/L	0.00064	0.55%
Cr 267.716†	2305.8	0.3019	mg/L	0.00147	0.6038	mg/L	0.00293	0.49%
Cu 324.752†	18778.5	0.09423	mg/L	0.000519	0.1885	mg/L	0.00104	0.55%
Fe 273.955†	310815.4	153.3	mg/L	1.22	306.6	mg/L	2.45	0.80%
K 766.490†	8267.9	3.789	mg/L	0.0112	7.578	mg/L	0.0225	0.30%
Mg 279.077†	35011.7	36.08	mg/L	0.425	72.17	mg/L	0.850	1.18%
Mn 257.610†	230478.9	3.578	mg/L	0.0349	7.156	mg/L	0.0699	0.98%
Mo 202.031†	71.8	0.00365	mg/L	0.000371	0.00730	mg/L	0.000742	10.17%
Na 589.592†	8777.5	0.7922	mg/L	0.01215	1.584	mg/L	0.0243	1.53%
Na 330.237†	11.8	0.4070	mg/L	0.45979	0.8140	mg/L	0.91957	112.97%
Ni 231.604†	947.8	0.2504	mg/L	0.00193	0.5007	mg/L	0.00386	0.77%
Pb 220.353†	397.0	0.07022	mg/L	0.002284	0.1404	mg/L	0.00457	3.25%
Sb 206.836†	-26.0	0.01322	mg/L	0.001266	0.02643	mg/L	0.002532	9.58%
Se 196.026†	-16.0	0.00985	mg/L	0.004660	0.01970	mg/L	0.009321	47.31%
Si 288.158†	9201.7	4.199	mg/L	0.0262	8.397	mg/L	0.0523	0.62%
Sn 189.927†	-48.3	-0.00093	mg/L	0.001255	-0.00185	mg/L	0.002510	135.61%
Sr 421.552†	79286.0	0.09099	mg/L	0.000705	0.1820	mg/L	0.00141	0.77%
Ti 334.903†	230851.8	7.813	mg/L	0.0387	15.63	mg/L	0.077	0.50%
Tl 190.801†	-34.1	0.00416	mg/L	0.009515	0.00832	mg/L	0.019030	228.83%
V 292.402†	51285.0	0.3457	mg/L	0.00192	0.6915	mg/L	0.00385	0.56%
Zn 206.200†	1141.5	0.3499	mg/L	0.00214	0.6998	mg/L	0.00428	0.61%

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Sequence No.: 22 **Autosampler Location: 351**
Sample ID: 21A0402-12 **Date Collected: 2/4/2021 5:32:26 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0402-12

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-12

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2643565.8	104.1	%	0.11				0.11%
ScR 361.383	299331.9	106.5	%	0.13				0.13%
Ag 328.068†	-813.8	-0.00173	mg/L	0.000330	-0.00346	mg/L	0.000660	19.04%
Al 308.215†	179263.3	105.4	mg/L	0.60	210.8	mg/L	1.21	0.57%
As 188.979†	11.9	0.02869	mg/L	0.005576	0.05739	mg/L	0.011152	19.43%
B 249.677†	113.0	0.01300	mg/L	0.001108	0.02599	mg/L	0.002217	8.53%
Ba 233.527†	3970.7	0.4143	mg/L	0.00255	0.8285	mg/L	0.00509	0.61%
Be 313.042†	1270.0	0.00138	mg/L	0.000023	0.00276	mg/L	0.000046	1.65%
Ca 317.933†	288783.8	28.69	mg/L	0.398	57.38	mg/L	0.796	1.39%
Cd 228.802†	73.5	0.00033	mg/L	0.000035	0.00067	mg/L	0.000071	10.59%
Co 228.616†	4094.4	0.07579	mg/L	0.000155	0.1516	mg/L	0.00031	0.20%
Cr 267.716†	2501.7	0.3275	mg/L	0.00171	0.6549	mg/L	0.00342	0.52%
Cu 324.752†	35073.2	0.1694	mg/L	0.00158	0.3388	mg/L	0.00316	0.93%
Fe 273.955†	315646.2	155.7	mg/L	0.37	311.4	mg/L	0.73	0.23%
K 766.490†	12137.8	5.562	mg/L	0.0303	11.12	mg/L	0.061	0.54%
Mg 279.077†	62555.9	64.74	mg/L	0.797	129.5	mg/L	1.59	1.23%
Mn 257.610†	161576.2	2.508	mg/L	0.0212	5.015	mg/L	0.0424	0.85%
Mo 202.031†	27.1	0.00116	mg/L	0.000160	0.00233	mg/L	0.000321	13.79%
Na 589.592†	10933.6	0.9868	mg/L	0.01113	1.974	mg/L	0.0223	1.13%
Na 330.237†	17.7	0.6128	mg/L	0.08915	1.226	mg/L	0.1783	14.55%
Ni 231.604†	1462.3	0.3863	mg/L	0.00218	0.7725	mg/L	0.00436	0.56%
Pb 220.353†	68.7	0.02341	mg/L	0.000689	0.04681	mg/L	0.001378	2.94%
Sb 206.836†	-21.9	0.01310	mg/L	0.004047	0.02621	mg/L	0.008094	30.88%
Se 196.026†	-19.1	0.00777	mg/L	0.004504	0.01553	mg/L	0.009009	58.00%
Si 288.158†	2869.9	1.289	mg/L	0.0057	2.579	mg/L	0.0113	0.44%
Sn 189.927†	-53.2	-0.00331	mg/L	0.000239	-0.00663	mg/L	0.000478	7.21%
Sr 421.552†	119264.6	0.1369	mg/L	0.00069	0.2737	mg/L	0.00137	0.50%
Ti 334.903†	210790.7	7.133	mg/L	0.0213	14.27	mg/L	0.043	0.30%
Tl 190.801†	-39.0	0.00235	mg/L	0.009570	0.00470	mg/L	0.019139	407.37%
V 292.402†	48881.7	0.3298	mg/L	0.00435	0.6597	mg/L	0.00871	1.32%
Zn 206.200†	1059.5	0.3242	mg/L	0.00242	0.6484	mg/L	0.00483	0.75%

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Sequence No.: 23
Sample ID: 21A0402-13

Dilution: 2X
Wash Time: 37

Autosampler Location: 352
Date Collected: 2/4/2021 5:35:14 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-13

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-13

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2625227.8	103.4	%	0.86				0.83%
ScR 361.383	295023.0	104.9	%	1.18				1.12%
Ag 328.068†	-1020.9	-0.00235	mg/L	0.000163	-0.00471	mg/L	0.000325	6.91%
Al 308.215†	225607.4	132.7	mg/L	0.82	265.4	mg/L	1.64	0.62%
As 188.979†	21.9	0.03794	mg/L	0.007411	0.07588	mg/L	0.014821	19.53%
B 249.677†	145.5	0.01587	mg/L	0.001931	0.03173	mg/L	0.003862	12.17%
Ba 233.527†	5289.6	0.5540	mg/L	0.00911	1.108	mg/L	0.0182	1.64%
Be 313.042†	1541.4	0.00169	mg/L	0.000056	0.00339	mg/L	0.000112	3.30%
Ca 317.933†	279012.9	27.72	mg/L	0.448	55.44	mg/L	0.896	1.62%
Cd 228.802†	77.0	0.00016	mg/L	0.000164	0.00033	mg/L	0.000329	100.49%
Co 228.616†	4194.2	0.07491	mg/L	0.000659	0.1498	mg/L	0.00132	0.88%
Cr 267.716†	2708.2	0.3544	mg/L	0.00187	0.7088	mg/L	0.00375	0.53%
Cu 324.752†	35066.2	0.1702	mg/L	0.00097	0.3404	mg/L	0.00195	0.57%
Fe 273.955†	355443.0	175.3	mg/L	1.77	350.6	mg/L	3.55	1.01%
K 766.490†	16731.7	7.668	mg/L	0.0191	15.34	mg/L	0.038	0.25%
Mg 279.077†	65721.9	67.99	mg/L	0.750	136.0	mg/L	1.50	1.10%
Mn 257.610†	162206.9	2.517	mg/L	0.0132	5.035	mg/L	0.0264	0.52%
Mo 202.031†	59.7	0.00289	mg/L	0.000329	0.00579	mg/L	0.000658	11.37%
Na 589.592†	11759.3	1.061	mg/L	0.0100	2.123	mg/L	0.0199	0.94%
Na 330.237†	11.3	0.3919	mg/L	0.20088	0.7838	mg/L	0.40176	51.26%
Ni 231.604†	1510.6	0.3990	mg/L	0.00469	0.7980	mg/L	0.00938	1.18%
Pb 220.353†	77.7	0.03048	mg/L	0.001680	0.06097	mg/L	0.003360	5.51%
Sb 206.836†	-24.5	0.01660	mg/L	0.003821	0.03319	mg/L	0.007642	23.02%
Se 196.026†	-18.8	0.01087	mg/L	0.005603	0.02175	mg/L	0.011207	51.53%
Si 288.158†	6837.8	3.108	mg/L	0.0539	6.216	mg/L	0.1078	1.73%
Sn 189.927†	-71.0	-0.00562	mg/L	0.001760	-0.01125	mg/L	0.003520	31.30%
Sr 421.552†	120760.0	0.1386	mg/L	0.00059	0.2772	mg/L	0.00117	0.42%
Ti 334.903†	253989.3	8.596	mg/L	0.0429	17.19	mg/L	0.086	0.50%
Tl 190.801†	-32.9	0.00740	mg/L	0.004288	0.01480	mg/L	0.008576	57.96%
V 292.402†	54934.9	0.3705	mg/L	0.00318	0.7409	mg/L	0.00635	0.86%
Zn 206.200†	1144.4	0.3505	mg/L	0.00264	0.7010	mg/L	0.00527	0.75%

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Sequence No.: 24
Sample ID: 21A0402-14

Dilution: 2X
Wash Time: 37

Autosampler Location: 353
Date Collected: 2/4/2021 5:38:02 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-14

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-14

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2622328.3	103.3	%	1.21				1.17%
ScR 361.383	293238.7	104.3	%	0.69				0.66%
Ag 328.068†	-781.1	-0.00160	mg/L	0.000209	-0.00321	mg/L	0.000419	13.07%
Al 308.215†	188591.3	110.9	mg/L	0.68	221.8	mg/L	1.37	0.62%
As 188.979†	29.9	0.04015	mg/L	0.002009	0.08030	mg/L	0.004018	5.00%
B 249.677†	128.4	0.01400	mg/L	0.001708	0.02800	mg/L	0.003416	12.20%
Ba 233.527†	3920.4	0.4087	mg/L	0.00368	0.8174	mg/L	0.00737	0.90%
Be 313.042†	1395.8	0.00151	mg/L	0.000045	0.00302	mg/L	0.000090	3.00%
Ca 317.933†	350875.7	34.86	mg/L	0.423	69.72	mg/L	0.845	1.21%
Cd 228.802†	71.0	0.00010	mg/L	0.000188	0.00020	mg/L	0.000376	190.33%
Co 228.616†	3607.3	0.06367	mg/L	0.001079	0.1273	mg/L	0.00216	1.69%
Cr 267.716†	2514.7	0.3292	mg/L	0.00227	0.6585	mg/L	0.00454	0.69%
Cu 324.752†	28806.7	0.1405	mg/L	0.00115	0.2810	mg/L	0.00230	0.82%
Fe 273.955†	319318.1	157.5	mg/L	0.48	315.0	mg/L	0.97	0.31%
K 766.490†	11393.9	5.221	mg/L	0.0251	10.44	mg/L	0.050	0.48%
Mg 279.077†	56953.5	58.90	mg/L	0.913	117.8	mg/L	1.83	1.55%
Mn 257.610†	167045.7	2.593	mg/L	0.0197	5.185	mg/L	0.0393	0.76%
Mo 202.031†	56.2	0.00265	mg/L	0.000362	0.00529	mg/L	0.000724	13.67%
Na 589.592†	16831.9	1.519	mg/L	0.0126	3.038	mg/L	0.0251	0.83%
Na 330.237†	37.1	1.284	mg/L	0.1837	2.568	mg/L	0.3673	14.31%
Ni 231.604†	1337.7	0.3533	mg/L	0.00484	0.7067	mg/L	0.00968	1.37%
Pb 220.353†	84.6	0.02671	mg/L	0.002258	0.05341	mg/L	0.004516	8.46%
Sb 206.836†	-17.5	0.01746	mg/L	0.001222	0.03492	mg/L	0.002443	7.00%
Se 196.026†	-8.6	0.01582	mg/L	0.006469	0.03164	mg/L	0.012938	40.89%
Si 288.158†	6053.7	2.751	mg/L	0.0314	5.502	mg/L	0.0628	1.14%
Sn 189.927†	-59.9	-0.00412	mg/L	0.002648	-0.00823	mg/L	0.005296	64.33%
Sr 421.552†	126838.0	0.1456	mg/L	0.00141	0.2911	mg/L	0.00282	0.97%
Ti 334.903†	228543.1	7.734	mg/L	0.0287	15.47	mg/L	0.057	0.37%
Tl 190.801†	-24.1	0.00885	mg/L	0.006350	0.01771	mg/L	0.012700	71.72%
V 292.402†	55409.1	0.3733	mg/L	0.00103	0.7466	mg/L	0.00205	0.28%
Zn 206.200†	1425.7	0.4365	mg/L	0.00287	0.8730	mg/L	0.00574	0.66%

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Sequence No.: 25 **Autosampler Location: 7**
Sample ID: SEQ-CCV7 **Date Collected: 2/4/2021 5:40:51 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV7

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCV7

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2624245.9	103.4	%	0.53				0.51%
ScR 361.383	292630.4	104.1	%	0.94				0.90%
Ag 328.068†	197550.9	1.022	mg/L	0.0025	1.022	mg/L	0.0025	0.25%
Al 308.215†	3345.1	1.932	mg/L	0.0403	1.932	mg/L	0.0403	2.08%
As 188.979†	3307.3	2.004	mg/L	0.0014	2.004	mg/L	0.0014	0.07%
B 249.677†	7743.4	0.9596	mg/L	0.02186	0.9596	mg/L	0.02186	2.28%
Ba 233.527†	9093.5	0.9713	mg/L	0.02159	0.9713	mg/L	0.02159	2.22%
Be 313.042†	721083.0	0.9524	mg/L	0.00445	0.9524	mg/L	0.00445	0.47%
Ca 317.933†	19587.7	1.945	mg/L	0.0516	1.945	mg/L	0.0516	2.65%
Cd 228.802†	36224.8	1.001	mg/L	0.0052	1.001	mg/L	0.0052	0.52%
Co 228.616†	43461.4	0.9735	mg/L	0.00234	0.9735	mg/L	0.00234	0.24%
Cr 267.716†	7430.0	0.9752	mg/L	0.02494	0.9752	mg/L	0.02494	2.56%
Cu 324.752†	212924.9	0.9817	mg/L	0.00636	0.9817	mg/L	0.00636	0.65%
Fe 273.955†	3906.3	1.918	mg/L	0.0403	1.918	mg/L	0.0403	2.10%
K 766.490†	42672.0	19.56	mg/L	0.085	19.56	mg/L	0.085	0.43%
Mg 279.077†	1843.3	1.920	mg/L	0.0564	1.920	mg/L	0.0564	2.94%
Mn 257.610†	63062.9	0.9797	mg/L	0.02195	0.9797	mg/L	0.02195	2.24%
Mo 202.031†	18380.6	0.9706	mg/L	0.00473	0.9706	mg/L	0.00473	0.49%
Na 589.592†	540379.9	48.77	mg/L	0.333	48.77	mg/L	0.333	0.68%
Na 330.237†	1442.4	49.91	mg/L	1.814	49.91	mg/L	1.814	3.63%
Ni 231.604†	3642.8	0.9619	mg/L	0.02544	0.9619	mg/L	0.02544	2.64%
Pb 220.353†	17293.4	1.982	mg/L	0.0065	1.982	mg/L	0.0065	0.33%
Sb 206.836†	3911.8	2.032	mg/L	0.0059	2.032	mg/L	0.0059	0.29%
Se 196.026†	2737.7	2.015	mg/L	0.0083	2.015	mg/L	0.0083	0.41%
Si 288.158†	4380.8	2.007	mg/L	0.0423	2.007	mg/L	0.0423	2.11%
Sn 189.927†	4101.1	0.9770	mg/L	0.00554	0.9770	mg/L	0.00554	0.57%
Sr 421.552†	848596.5	0.9738	mg/L	0.00805	0.9738	mg/L	0.00805	0.83%
Ti 334.903†	28897.4	0.9774	mg/L	0.00309	0.9774	mg/L	0.00309	0.32%
Tl 190.801†	4640.8	1.975	mg/L	0.0052	1.975	mg/L	0.0052	0.26%
V 292.402†	146363.4	0.9808	mg/L	0.00760	0.9808	mg/L	0.00760	0.77%
Zn 206.200†	3118.6	0.9541	mg/L	0.02448	0.9541	mg/L	0.02448	2.57%

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Sequence No.: 26 **Autosampler Location: 1**
Sample ID: SEQ-CCB6 **Date Collected: 2/4/2021 5:44:20 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB6

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCB6

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2676487.0	105.4	%	0.74				0.70%
ScR 361.383	294040.6	104.6	%	1.64				1.57%
Ag 328.068†	43.0	0.00022	mg/L	0.000275	0.00022	mg/L	0.000275	123.82%
Al 308.215†	7.1	0.00414	mg/L	0.001333	0.00414	mg/L	0.001333	32.16%
As 188.979†	3.9	0.00239	mg/L	0.003792	0.00239	mg/L	0.003792	158.77%
B 249.677†	17.7	0.00220	mg/L	0.001056	0.00220	mg/L	0.001056	48.02%
Ba 233.527†	1.7	0.00019	mg/L	0.000383	0.00019	mg/L	0.000383	206.30%
Be 313.042†	-33.0	-0.00004	mg/L	0.000024	-0.00004	mg/L	0.000024	55.73%
Ca 317.933†	6.6	0.00065	mg/L	0.001108	0.00065	mg/L	0.001108	171.40%
Cd 228.802†	-11.5	-0.00034	mg/L	0.000254	-0.00034	mg/L	0.000254	74.62%
Co 228.616†	3.4	0.00008	mg/L	0.000180	0.00008	mg/L	0.000180	234.02%
Cr 267.716†	7.8	0.00102	mg/L	0.000120	0.00102	mg/L	0.000120	11.75%
Cu 324.752†	-18.6	-0.00009	mg/L	0.000071	-0.00009	mg/L	0.000071	82.29%
Fe 273.955†	4.1	0.00201	mg/L	0.002183	0.00201	mg/L	0.002183	108.69%
K 766.490†	-24.0	-0.01102	mg/L	0.026987	-0.01102	mg/L	0.026987	244.99%
Mg 279.077†	-2.7	-0.00277	mg/L	0.010262	-0.00277	mg/L	0.010262	370.97%
Mn 257.610†	-15.5	-0.00024	mg/L	0.000200	-0.00024	mg/L	0.000200	83.16%
Mo 202.031†	3.9	0.00021	mg/L	0.000089	0.00021	mg/L	0.000089	43.49%
Na 589.592†	139.4	0.01258	mg/L	0.001705	0.01258	mg/L	0.001705	13.56%
Na 330.237†	24.4	0.8460	mg/L	0.34162	0.8460	mg/L	0.34162	40.38%
Ni 231.604†	-5.5	-0.00146	mg/L	0.000510	-0.00146	mg/L	0.000510	34.81%
Pb 220.353†	-7.9	-0.00090	mg/L	0.001146	-0.00090	mg/L	0.001146	126.82%
Sb 206.836†	2.1	0.00110	mg/L	0.000690	0.00110	mg/L	0.000690	62.86%
Se 196.026†	1.7	0.00128	mg/L	0.000644	0.00128	mg/L	0.000644	50.36%
Si 288.158†	24.4	0.01124	mg/L	0.002502	0.01124	mg/L	0.002502	22.26%
Sn 189.927†	-0.2	-0.00005	mg/L	0.001246	-0.00005	mg/L	0.001246	>999.9%
Sr 421.552†	27.4	0.00003	mg/L	0.000056	0.00003	mg/L	0.000056	177.13%
Ti 334.903†	-13.4	-0.00045	mg/L	0.000283	-0.00045	mg/L	0.000283	62.56%
Tl 190.801†	0.0	0.00000	mg/L	0.001381	0.00000	mg/L	0.001381	>999.9%
V 292.402†	-19.7	-0.00013	mg/L	0.000067	-0.00013	mg/L	0.000067	53.11%
Zn 206.200†	-0.3	-0.00010	mg/L	0.001610	-0.00010	mg/L	0.001610	>999.9%

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Sequence No.: 27
Sample ID: 21A0402-15

Dilution: 2X
Wash Time: 37

Autosampler Location: 354
Date Collected: 2/4/2021 5:47:08 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-15

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-15

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2658826.7	104.7	%	1.08				1.03%
ScR 361.383	301966.0	107.4	%	2.33				2.17%
Ag 328.068†	-580.9	-0.00173	mg/L	0.000054	-0.00347	mg/L	0.000108	3.13%
Al 308.215†	139576.4	82.08	mg/L	1.512	164.2	mg/L	3.02	1.84%
As 188.979†	13.6	0.02036	mg/L	0.002895	0.04072	mg/L	0.005789	14.22%
B 249.677†	232.8	0.02753	mg/L	0.001555	0.05506	mg/L	0.003110	5.65%
Ba 233.527†	3573.5	0.3762	mg/L	0.00847	0.7525	mg/L	0.01693	2.25%
Be 313.042†	1005.0	0.00112	mg/L	0.000087	0.00225	mg/L	0.000174	7.71%
Ca 317.933†	257644.9	25.60	mg/L	0.942	51.19	mg/L	1.883	3.68%
Cd 228.802†	39.7	0.00010	mg/L	0.000100	0.00021	mg/L	0.000200	97.02%
Co 228.616†	2271.8	0.03860	mg/L	0.000828	0.07720	mg/L	0.001656	2.15%
Cr 267.716†	2706.7	0.3540	mg/L	0.00926	0.7081	mg/L	0.01851	2.61%
Cu 324.752†	14065.0	0.06861	mg/L	0.000629	0.1372	mg/L	0.00126	0.92%
Fe 273.955†	175245.4	86.44	mg/L	1.246	172.9	mg/L	2.49	1.44%
K 766.490†	20428.6	9.362	mg/L	0.2145	18.72	mg/L	0.429	2.29%
Mg 279.077†	33958.0	35.14	mg/L	1.261	70.27	mg/L	2.523	3.59%
Mn 257.610†	98363.5	1.527	mg/L	0.0350	3.053	mg/L	0.0700	2.29%
Mo 202.031†	20.8	0.00085	mg/L	0.000344	0.00169	mg/L	0.000688	40.66%
Na 589.592†	23137.3	2.088	mg/L	0.0527	4.176	mg/L	0.1054	2.52%
Na 330.237†	72.7	2.517	mg/L	0.1611	5.034	mg/L	0.3223	6.40%
Ni 231.604†	914.8	0.2416	mg/L	0.00749	0.4833	mg/L	0.01497	3.10%
Pb 220.353†	31.4	0.01940	mg/L	0.000848	0.03879	mg/L	0.001696	4.37%
Sb 206.836†	-15.5	0.01132	mg/L	0.001759	0.02265	mg/L	0.003518	15.54%
Se 196.026†	0.1	0.01271	mg/L	0.003675	0.02543	mg/L	0.007349	28.90%
Si 288.158†	4377.3	1.989	mg/L	0.0493	3.977	mg/L	0.0986	2.48%
Sn 189.927†	-26.8	0.00112	mg/L	0.000510	0.00224	mg/L	0.001019	45.48%
Sr 421.552†	132398.6	0.1519	mg/L	0.00318	0.3039	mg/L	0.00636	2.09%
Ti 334.903†	169705.8	5.743	mg/L	0.0876	11.49	mg/L	0.175	1.53%
Tl 190.801†	-26.2	-0.00079	mg/L	0.003408	-0.00157	mg/L	0.006817	433.65%
V 292.402†	30610.9	0.2068	mg/L	0.00140	0.4135	mg/L	0.00280	0.68%
Zn 206.200†	620.8	0.1902	mg/L	0.00480	0.3803	mg/L	0.00961	2.53%

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Sequence No.: 28
Sample ID: 21A0402-16

Dilution: 2X
Wash Time: 37

Autosampler Location: 355
Date Collected: 2/4/2021 5:49:56 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-16

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-16

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2596526.0	102.3	%	1.17				1.14%
ScR 361.383	291634.9	103.7	%	0.92				0.89%
Ag 328.068†	-819.3	-0.00168	mg/L	0.000146	-0.00337	mg/L	0.000291	8.64%
Al 308.215†	168055.3	98.83	mg/L	0.767	197.7	mg/L	1.53	0.78%
As 188.979†	48.8	0.05107	mg/L	0.003165	0.1021	mg/L	0.00633	6.20%
B 249.677†	121.3	0.01270	mg/L	0.001091	0.02540	mg/L	0.002183	8.59%
Ba 233.527†	3838.2	0.4000	mg/L	0.00345	0.8000	mg/L	0.00689	0.86%
Be 313.042†	1210.3	0.00132	mg/L	0.000024	0.00264	mg/L	0.000047	1.79%
Ca 317.933†	235697.5	23.42	mg/L	0.306	46.83	mg/L	0.612	1.31%
Cd 228.802†	66.6	0.00000	mg/L	0.000025	0.00000	mg/L	0.000050	>999.9%
Co 228.616†	3879.5	0.07233	mg/L	0.000854	0.1447	mg/L	0.00171	1.18%
Cr 267.716†	3013.6	0.3943	mg/L	0.00419	0.7886	mg/L	0.00837	1.06%
Cu 324.752†	31932.3	0.1554	mg/L	0.00110	0.3107	mg/L	0.00220	0.71%
Fe 273.955†	321562.8	158.6	mg/L	1.15	317.2	mg/L	2.30	0.72%
K 766.490†	11165.5	5.117	mg/L	0.0285	10.23	mg/L	0.057	0.56%
Mg 279.077†	55345.1	57.23	mg/L	0.729	114.5	mg/L	1.46	1.27%
Mn 257.610†	176441.0	2.739	mg/L	0.0179	5.477	mg/L	0.0357	0.65%
Mo 202.031†	69.8	0.00346	mg/L	0.000573	0.00692	mg/L	0.001147	16.56%
Na 589.592†	11649.9	1.051	mg/L	0.0104	2.103	mg/L	0.0208	0.99%
Na 330.237†	24.1	0.8323	mg/L	0.47620	1.665	mg/L	0.9524	57.22%
Ni 231.604†	1598.2	0.4221	mg/L	0.00610	0.8443	mg/L	0.01219	1.44%
Pb 220.353†	118.0	0.02698	mg/L	0.001714	0.05396	mg/L	0.003428	6.35%
Sb 206.836†	-11.7	0.01588	mg/L	0.006992	0.03177	mg/L	0.013983	44.01%
Se 196.026†	-11.4	0.01363	mg/L	0.003515	0.02725	mg/L	0.007031	25.80%
Si 288.158†	7444.4	3.397	mg/L	0.0362	6.793	mg/L	0.0724	1.07%
Sn 189.927†	-43.7	-0.00192	mg/L	0.001360	-0.00383	mg/L	0.002720	70.96%
Sr 421.552†	92313.4	0.1059	mg/L	0.00072	0.2119	mg/L	0.00144	0.68%
Ti 334.903†	189104.9	6.400	mg/L	0.0295	12.80	mg/L	0.059	0.46%
Tl 190.801†	-41.9	0.00152	mg/L	0.004493	0.00304	mg/L	0.008985	295.97%
V 292.402†	46813.0	0.3166	mg/L	0.00194	0.6332	mg/L	0.00387	0.61%
Zn 206.200†	963.9	0.2954	mg/L	0.00430	0.5907	mg/L	0.00859	1.45%

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Sequence No.: 29 **Autosampler Location: 356**
Sample ID: 21A0402-17 **Date Collected: 2/4/2021 5:52:44 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0402-17

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-17

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2644177.4	104.2	%	0.40				0.38%
ScR 361.383	296369.9	105.4	%	2.56				2.43%
Ag 328.068†	-843.1	-0.00199	mg/L	0.000303	-0.00397	mg/L	0.000606	15.26%
Al 308.215†	163281.2	96.02	mg/L	1.437	192.0	mg/L	2.87	1.50%
As 188.979†	41.5	0.04369	mg/L	0.006030	0.08738	mg/L	0.012060	13.80%
B 249.677†	138.3	0.01480	mg/L	0.000934	0.02960	mg/L	0.001869	6.31%
Ba 233.527†	3550.5	0.3699	mg/L	0.00958	0.7399	mg/L	0.01915	2.59%
Be 313.042†	1163.7	0.00128	mg/L	0.000100	0.00256	mg/L	0.000200	7.81%
Ca 317.933†	231915.4	23.04	mg/L	0.662	46.08	mg/L	1.323	2.87%
Cd 228.802†	61.7	0.00006	mg/L	0.000226	0.00012	mg/L	0.000452	372.23%
Co 228.616†	3395.7	0.06238	mg/L	0.000056	0.1248	mg/L	0.00011	0.09%
Cr 267.716†	5153.2	0.6737	mg/L	0.01791	1.347	mg/L	0.0358	2.66%
Cu 324.752†	27900.5	0.1360	mg/L	0.00095	0.2721	mg/L	0.00190	0.70%
Fe 273.955†	298411.2	147.2	mg/L	1.94	294.4	mg/L	3.87	1.31%
K 766.490†	10735.2	4.920	mg/L	0.0987	9.839	mg/L	0.1974	2.01%
Mg 279.077†	62378.0	64.57	mg/L	1.581	129.1	mg/L	3.16	2.45%
Mn 257.610†	153981.8	2.390	mg/L	0.0330	4.780	mg/L	0.0660	1.38%
Mo 202.031†	52.2	0.00252	mg/L	0.000754	0.00504	mg/L	0.001509	29.91%
Na 589.592†	11317.9	1.021	mg/L	0.0266	2.043	mg/L	0.0531	2.60%
Na 330.237†	39.9	1.380	mg/L	0.5265	2.760	mg/L	1.0530	38.15%
Ni 231.604†	1679.9	0.4437	mg/L	0.01283	0.8875	mg/L	0.02565	2.89%
Pb 220.353†	55.4	0.02059	mg/L	0.000656	0.04118	mg/L	0.001312	3.18%
Sb 206.836†	-20.8	0.00965	mg/L	0.001469	0.01929	mg/L	0.002939	15.23%
Se 196.026†	-13.6	0.01053	mg/L	0.002571	0.02106	mg/L	0.005142	24.41%
Si 288.158†	7595.4	3.468	mg/L	0.0803	6.936	mg/L	0.1605	2.31%
Sn 189.927†	-52.0	-0.00422	mg/L	0.001323	-0.00845	mg/L	0.002647	31.33%
Sr 421.552†	89007.3	0.1021	mg/L	0.00168	0.2043	mg/L	0.00337	1.65%
Ti 334.903†	177897.0	6.020	mg/L	0.0689	12.04	mg/L	0.138	1.14%
Tl 190.801†	-41.3	0.00033	mg/L	0.014034	0.00066	mg/L	0.028069	>999.9%
V 292.402†	42601.2	0.2896	mg/L	0.00176	0.5793	mg/L	0.00352	0.61%
Zn 206.200†	921.4	0.2823	mg/L	0.00842	0.5646	mg/L	0.01685	2.98%

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Sequence No.: 30 **Autosampler Location: 357**
Sample ID: 21A0402-18 **Date Collected: 2/4/2021 5:55:32 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0402-18

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-18

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2615763.8	103.1	%	0.43				0.42%
ScR 361.383	294604.3	104.8	%	1.14				1.09%
Ag 328.068†	-399.6	-0.00081	mg/L	0.000173	-0.00163	mg/L	0.000347	21.31%
Al 308.215†	138582.3	81.50	mg/L	0.272	163.0	mg/L	0.54	0.33%
As 188.979†	39.3	0.03659	mg/L	0.003561	0.07318	mg/L	0.007121	9.73%
B 249.677†	100.1	0.01089	mg/L	0.001416	0.02177	mg/L	0.002833	13.01%
Ba 233.527†	3498.1	0.3679	mg/L	0.00524	0.7358	mg/L	0.01047	1.42%
Be 313.042†	981.8	0.00105	mg/L	0.000048	0.00209	mg/L	0.000096	4.57%
Ca 317.933†	325378.2	32.33	mg/L	0.335	64.65	mg/L	0.671	1.04%
Cd 228.802†	76.5	0.00090	mg/L	0.000189	0.00181	mg/L	0.000377	20.87%
Co 228.616†	2246.6	0.03736	mg/L	0.000488	0.07472	mg/L	0.000977	1.31%
Cr 267.716†	2212.5	0.2896	mg/L	0.00381	0.5791	mg/L	0.00762	1.32%
Cu 324.752†	17947.4	0.08667	mg/L	0.000820	0.1733	mg/L	0.00164	0.95%
Fe 273.955†	180301.3	88.93	mg/L	1.211	177.9	mg/L	2.42	1.36%
K 766.490†	8014.9	3.673	mg/L	0.0384	7.346	mg/L	0.0767	1.04%
Mg 279.077†	30952.8	32.00	mg/L	0.134	64.00	mg/L	0.268	0.42%
Mn 257.610†	93481.2	1.451	mg/L	0.0049	2.902	mg/L	0.0099	0.34%
Mo 202.031†	54.1	0.00255	mg/L	0.000520	0.00510	mg/L	0.001040	20.41%
Na 589.592†	21321.2	1.924	mg/L	0.0216	3.849	mg/L	0.0433	1.12%
Na 330.237†	66.1	2.286	mg/L	0.1714	4.572	mg/L	0.3428	7.50%
Ni 231.604†	716.1	0.1892	mg/L	0.00410	0.3783	mg/L	0.00819	2.17%
Pb 220.353†	403.8	0.06152	mg/L	0.001333	0.1230	mg/L	0.00267	2.17%
Sb 206.836†	-26.4	0.00709	mg/L	0.001821	0.01419	mg/L	0.003641	25.66%
Se 196.026†	-1.4	0.01197	mg/L	0.005942	0.02394	mg/L	0.011884	49.64%
Si 288.158†	4921.1	2.237	mg/L	0.0293	4.475	mg/L	0.0585	1.31%
Sn 189.927†	-34.2	-0.00026	mg/L	0.001453	-0.00053	mg/L	0.002906	549.32%
Sr 421.552†	150393.1	0.1726	mg/L	0.00100	0.3452	mg/L	0.00200	0.58%
Ti 334.903†	179536.2	6.075	mg/L	0.0275	12.15	mg/L	0.055	0.45%
Tl 190.801†	-21.3	0.00145	mg/L	0.005249	0.00291	mg/L	0.010497	361.32%
V 292.402†	40790.8	0.2743	mg/L	0.00152	0.5486	mg/L	0.00303	0.55%
Zn 206.200†	845.0	0.2588	mg/L	0.00329	0.5176	mg/L	0.00658	1.27%

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Sequence No.: 31 **Autosampler Location: 358**
Sample ID: 21A0402-19 **Date Collected: 2/4/2021 5:58:20 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0402-19

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-19

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2631510.4	103.7	%	0.12				0.12%
ScR 361.383	296322.7	105.4	%	0.47				0.44%
Ag 328.068†	-611.1	-0.00102	mg/L	0.000470	-0.00204	mg/L	0.000940	46.14%
Al 308.215†	241272.5	141.9	mg/L	1.85	283.8	mg/L	3.70	1.31%
As 188.979†	65.4	0.05956	mg/L	0.004501	0.1191	mg/L	0.00900	7.56%
B 249.677†	116.6	0.01266	mg/L	0.001670	0.02532	mg/L	0.003339	13.19%
Ba 233.527†	5927.6	0.6250	mg/L	0.00503	1.250	mg/L	0.0101	0.81%
Be 313.042†	1772.8	0.00203	mg/L	0.000029	0.00407	mg/L	0.000058	1.43%
Ca 317.933†	208361.2	20.70	mg/L	0.564	41.40	mg/L	1.128	2.73%
Cd 228.802†	90.7	0.00072	mg/L	0.000218	0.00144	mg/L	0.000435	30.25%
Co 228.616†	2850.7	0.04600	mg/L	0.000616	0.09200	mg/L	0.001232	1.34%
Cr 267.716†	1479.5	0.1939	mg/L	0.00264	0.3879	mg/L	0.00528	1.36%
Cu 324.752†	17034.7	0.08482	mg/L	0.001531	0.1696	mg/L	0.00306	1.81%
Fe 273.955†	269459.5	132.9	mg/L	1.14	265.8	mg/L	2.27	0.85%
K 766.490†	8470.7	3.882	mg/L	0.0754	7.764	mg/L	0.1507	1.94%
Mg 279.077†	26988.4	27.78	mg/L	0.683	55.56	mg/L	1.366	2.46%
Mn 257.610†	188200.0	2.921	mg/L	0.0383	5.843	mg/L	0.0766	1.31%
Mo 202.031†	43.2	0.00210	mg/L	0.000108	0.00419	mg/L	0.000216	5.14%
Na 589.592†	8266.9	0.7461	mg/L	0.00471	1.492	mg/L	0.0094	0.63%
Na 330.237†	3.4	0.1192	mg/L	0.11342	0.2384	mg/L	0.22684	95.16%
Ni 231.604†	778.7	0.2057	mg/L	0.00169	0.4114	mg/L	0.00338	0.82%
Pb 220.353†	599.0	0.09699	mg/L	0.000949	0.1940	mg/L	0.00190	0.98%
Sb 206.836†	-35.2	0.00997	mg/L	0.003433	0.01995	mg/L	0.006866	34.42%
Se 196.026†	-5.7	0.01495	mg/L	0.001638	0.02989	mg/L	0.003276	10.96%
Si 288.158†	5756.7	2.612	mg/L	0.0363	5.224	mg/L	0.0725	1.39%
Sn 189.927†	-50.8	-0.00085	mg/L	0.001511	-0.00170	mg/L	0.003021	177.90%
Sr 421.552†	83753.5	0.09612	mg/L	0.001621	0.1922	mg/L	0.00324	1.69%
Ti 334.903†	244711.2	8.282	mg/L	0.0803	16.56	mg/L	0.161	0.97%
Tl 190.801†	-19.3	0.00795	mg/L	0.010550	0.01589	mg/L	0.021100	132.77%
V 292.402†	47787.6	0.3213	mg/L	0.00728	0.6425	mg/L	0.01455	2.26%
Zn 206.200†	1019.3	0.3122	mg/L	0.00060	0.6244	mg/L	0.00120	0.19%

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Sequence No.: 32
Sample ID: 21A0402-21

Dilution: 2X
Wash Time: 37

Autosampler Location: 359
Date Collected: 2/4/2021 6:01:08 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-21

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 21A0402-21

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2620471.2	103.2	%	0.15				0.15%
ScR 361.383	297532.3	105.8	%	1.42				1.34%
Ag 328.068†	-746.3	-0.00155	mg/L	0.000328	-0.00309	mg/L	0.000655	21.18%
Al 308.215†	165120.6	97.11	mg/L	0.744	194.2	mg/L	1.49	0.77%
As 188.979†	3.1	0.02142	mg/L	0.002982	0.04285	mg/L	0.005963	13.92%
B 249.677†	108.0	0.01149	mg/L	0.001765	0.02298	mg/L	0.003530	15.36%
Ba 233.527†	3735.2	0.3902	mg/L	0.00654	0.7803	mg/L	0.01307	1.67%
Be 313.042†	1090.5	0.00117	mg/L	0.000067	0.00234	mg/L	0.000133	5.69%
Ca 317.933†	221615.7	22.02	mg/L	0.252	44.03	mg/L	0.503	1.14%
Cd 228.802†	65.6	0.00035	mg/L	0.000167	0.00070	mg/L	0.000334	47.73%
Co 228.616†	3323.1	0.06001	mg/L	0.000098	0.1200	mg/L	0.00020	0.16%
Cr 267.716†	2100.0	0.2748	mg/L	0.00343	0.5497	mg/L	0.00687	1.25%
Cu 324.752†	30720.2	0.1485	mg/L	0.00106	0.2970	mg/L	0.00212	0.71%
Fe 273.955†	283606.0	139.9	mg/L	2.09	279.8	mg/L	4.18	1.49%
K 766.490†	11805.6	5.410	mg/L	0.0719	10.82	mg/L	0.144	1.33%
Mg 279.077†	56628.6	58.60	mg/L	0.808	117.2	mg/L	1.62	1.38%
Mn 257.610†	133359.4	2.070	mg/L	0.0189	4.139	mg/L	0.0379	0.92%
Mo 202.031†	33.9	0.00159	mg/L	0.000439	0.00318	mg/L	0.000878	27.63%
Na 589.592†	9225.3	0.8326	mg/L	0.01392	1.665	mg/L	0.0278	1.67%
Na 330.237†	31.5	1.091	mg/L	0.1805	2.181	mg/L	0.3610	16.55%
Ni 231.604†	1354.6	0.3578	mg/L	0.00524	0.7156	mg/L	0.01047	1.46%
Pb 220.353†	69.4	0.02259	mg/L	0.000952	0.04517	mg/L	0.001905	4.22%
Sb 206.836†	-16.9	0.01336	mg/L	0.001067	0.02672	mg/L	0.002134	7.99%
Se 196.026†	-19.3	0.00536	mg/L	0.003622	0.01072	mg/L	0.007243	67.58%
Si 288.158†	6038.5	2.750	mg/L	0.0270	5.499	mg/L	0.0539	0.98%
Sn 189.927†	-48.9	-0.00325	mg/L	0.001291	-0.00650	mg/L	0.002583	39.76%
Sr 421.552†	81204.2	0.09319	mg/L	0.000794	0.1864	mg/L	0.00159	0.85%
Ti 334.903†	190807.1	6.457	mg/L	0.0420	12.91	mg/L	0.084	0.65%
Tl 190.801†	-48.0	-0.00340	mg/L	0.003117	-0.00681	mg/L	0.006235	91.60%
V 292.402†	44139.9	0.2977	mg/L	0.00099	0.5954	mg/L	0.00197	0.33%
Zn 206.200†	958.8	0.2937	mg/L	0.00591	0.5874	mg/L	0.01182	2.01%

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Sequence No.: 33
Sample ID: 21A0402-22

Dilution: 2X
Wash Time: 37

Autosampler Location: 360
Date Collected: 2/4/2021 6:03:56 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-22

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-22

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2612334.4	102.9	%	1.22				1.18%
ScR 361.383	295093.2	105.0	%	0.61				0.58%
Ag 328.068†	-956.7	-0.00194	mg/L	0.000179	-0.00388	mg/L	0.000358	9.23%
Al 308.215†	263079.2	154.7	mg/L	0.64	309.4	mg/L	1.29	0.42%
As 188.979†	90.0	0.07964	mg/L	0.002380	0.1593	mg/L	0.00476	2.99%
B 249.677†	132.6	0.01528	mg/L	0.001300	0.03056	mg/L	0.002600	8.51%
Ba 233.527†	6674.5	0.7009	mg/L	0.00155	1.402	mg/L	0.0031	0.22%
Be 313.042†	1946.7	0.00222	mg/L	0.000023	0.00444	mg/L	0.000045	1.02%
Ca 317.933†	255684.3	25.40	mg/L	0.323	50.80	mg/L	0.645	1.27%
Cd 228.802†	121.0	0.00085	mg/L	0.000107	0.00171	mg/L	0.000213	12.51%
Co 228.616†	3728.2	0.06730	mg/L	0.000613	0.1346	mg/L	0.00123	0.91%
Cr 267.716†	2836.5	0.3714	mg/L	0.00348	0.7429	mg/L	0.00695	0.94%
Cu 324.752†	33781.2	0.1660	mg/L	0.00059	0.3321	mg/L	0.00118	0.36%
Fe 273.955†	392333.5	193.5	mg/L	1.88	387.0	mg/L	3.76	0.97%
K 766.490†	12489.5	5.724	mg/L	0.0229	11.45	mg/L	0.046	0.40%
Mg 279.077†	54835.8	56.62	mg/L	0.637	113.2	mg/L	1.27	1.13%
Mn 257.610†	274448.8	4.260	mg/L	0.0175	8.520	mg/L	0.0350	0.41%
Mo 202.031†	115.1	0.00587	mg/L	0.000630	0.01175	mg/L	0.001259	10.72%
Na 589.592†	15052.3	1.359	mg/L	0.0186	2.717	mg/L	0.0371	1.37%
Na 330.237†	38.3	1.324	mg/L	0.3460	2.649	mg/L	0.6919	26.13%
Ni 231.604†	1394.4	0.3683	mg/L	0.00536	0.7367	mg/L	0.01073	1.46%
Pb 220.353†	1815.7	0.2343	mg/L	0.00333	0.4686	mg/L	0.00667	1.42%
Sb 206.836†	-2.5	0.02288	mg/L	0.003804	0.04576	mg/L	0.007608	16.62%
Se 196.026†	-11.6	0.01800	mg/L	0.004385	0.03600	mg/L	0.008771	24.36%
Si 288.158†	3445.3	1.555	mg/L	0.0081	3.109	mg/L	0.0162	0.52%
Sn 189.927†	-52.9	-0.00127	mg/L	0.001366	-0.00254	mg/L	0.002732	107.76%
Sr 421.552†	112090.5	0.1286	mg/L	0.00085	0.2573	mg/L	0.00170	0.66%
Ti 334.903†	206101.7	6.975	mg/L	0.0271	13.95	mg/L	0.054	0.39%
Tl 190.801†	-46.3	0.00397	mg/L	0.006646	0.00794	mg/L	0.013291	167.46%
V 292.402†	61488.8	0.4152	mg/L	0.00100	0.8305	mg/L	0.00201	0.24%
Zn 206.200†	2273.7	0.6956	mg/L	0.00756	1.391	mg/L	0.0151	1.09%

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Sequence No.: 34
Sample ID: 21A0402-23

Dilution: 2X
Wash Time: 37

Autosampler Location: 361
Date Collected: 2/4/2021 6:06:44 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-23

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-23

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2621170.3	103.3	%	0.09				0.09%
ScR 361.383	295184.3	105.0	%	1.13				1.08%
Ag 328.068†	-793.9	-0.00170	mg/L	0.000598	-0.00339	mg/L	0.001196	35.23%
Al 308.215†	243037.2	142.9	mg/L	0.63	285.9	mg/L	1.25	0.44%
As 188.979†	56.5	0.05517	mg/L	0.000704	0.1103	mg/L	0.00141	1.28%
B 249.677†	134.9	0.01547	mg/L	0.000953	0.03094	mg/L	0.001905	6.16%
Ba 233.527†	4763.7	0.4986	mg/L	0.00232	0.9973	mg/L	0.00463	0.46%
Be 313.042†	1569.7	0.00177	mg/L	0.000046	0.00353	mg/L	0.000093	2.63%
Ca 317.933†	352853.8	35.06	mg/L	0.284	70.11	mg/L	0.567	0.81%
Cd 228.802†	81.2	0.00022	mg/L	0.000026	0.00044	mg/L	0.000052	11.79%
Co 228.616†	3531.9	0.06379	mg/L	0.000227	0.1276	mg/L	0.00045	0.36%
Cr 267.716†	2404.0	0.3148	mg/L	0.00269	0.6297	mg/L	0.00538	0.86%
Cu 324.752†	30803.6	0.1503	mg/L	0.00302	0.3005	mg/L	0.00604	2.01%
Fe 273.955†	326162.6	160.9	mg/L	0.45	321.8	mg/L	0.89	0.28%
K 766.490†	10746.9	4.925	mg/L	0.0385	9.850	mg/L	0.0770	0.78%
Mg 279.077†	52515.8	54.28	mg/L	0.484	108.6	mg/L	0.97	0.89%
Mn 257.610†	188973.3	2.933	mg/L	0.0087	5.866	mg/L	0.0174	0.30%
Mo 202.031†	53.2	0.00248	mg/L	0.000439	0.00496	mg/L	0.000878	17.70%
Na 589.592†	50007.9	4.513	mg/L	0.0207	9.027	mg/L	0.0413	0.46%
Na 330.237†	133.5	4.620	mg/L	0.1783	9.240	mg/L	0.3566	3.86%
Ni 231.604†	1300.3	0.3435	mg/L	0.00321	0.6870	mg/L	0.00642	0.93%
Pb 220.353†	354.2	0.06655	mg/L	0.002199	0.1331	mg/L	0.00440	3.30%
Sb 206.836†	-6.2	0.02007	mg/L	0.006191	0.04014	mg/L	0.012383	30.84%
Se 196.026†	-15.3	0.01105	mg/L	0.007490	0.02210	mg/L	0.014979	67.76%
Si 288.158†	3811.2	1.724	mg/L	0.0196	3.448	mg/L	0.0391	1.13%
Sn 189.927†	-55.4	-0.00215	mg/L	0.001339	-0.00431	mg/L	0.002678	62.20%
Sr 421.552†	169391.8	0.1944	mg/L	0.00064	0.3888	mg/L	0.00127	0.33%
Ti 334.903†	199914.0	6.765	mg/L	0.0107	13.53	mg/L	0.021	0.16%
Tl 190.801†	-55.1	-0.00385	mg/L	0.005313	-0.00770	mg/L	0.010626	138.00%
V 292.402†	52051.3	0.3512	mg/L	0.00539	0.7023	mg/L	0.01078	1.53%
Zn 206.200†	1215.5	0.3720	mg/L	0.00539	0.7440	mg/L	0.01078	1.45%

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Sequence No.: 35
Sample ID: 21A0402-26

Dilution: 2X
Wash Time: 37

Autosampler Location: 362
Date Collected: 2/4/2021 6:09:32 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-26

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-26

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2650541.6	104.4	%	0.20				0.19%
ScR 361.383	295643.9	105.2	%	0.71				0.67%
Ag 328.068†	-761.0	-0.00171	mg/L	0.000431	-0.00342	mg/L	0.000862	25.25%
Al 308.215†	164524.3	96.76	mg/L	0.846	193.5	mg/L	1.69	0.87%
As 188.979†	-4.4	0.01843	mg/L	0.001759	0.03686	mg/L	0.003518	9.54%
B 249.677†	116.6	0.01361	mg/L	0.001473	0.02722	mg/L	0.002946	10.83%
Ba 233.527†	2928.3	0.3029	mg/L	0.00186	0.6057	mg/L	0.00373	0.62%
Be 313.042†	1121.3	0.00115	mg/L	0.000028	0.00231	mg/L	0.000056	2.44%
Ca 317.933†	424795.1	42.20	mg/L	0.671	84.40	mg/L	1.341	1.59%
Cd 228.802†	66.0	0.00014	mg/L	0.000216	0.00029	mg/L	0.000432	150.56%
Co 228.616†	3360.3	0.05914	mg/L	0.000615	0.1183	mg/L	0.00123	1.04%
Cr 267.716†	2167.6	0.2840	mg/L	0.00068	0.5680	mg/L	0.00136	0.24%
Cu 324.752†	23641.8	0.1164	mg/L	0.00108	0.2328	mg/L	0.00216	0.93%
Fe 273.955†	309818.9	152.8	mg/L	0.95	305.6	mg/L	1.89	0.62%
K 766.490†	12963.4	5.941	mg/L	0.0316	11.88	mg/L	0.063	0.53%
Mg 279.077†	65353.3	67.65	mg/L	1.058	135.3	mg/L	2.12	1.56%
Mn 257.610†	163492.3	2.537	mg/L	0.0210	5.075	mg/L	0.0420	0.83%
Mo 202.031†	36.5	0.00152	mg/L	0.000485	0.00305	mg/L	0.000970	31.84%
Na 589.592†	26942.9	2.432	mg/L	0.0194	4.863	mg/L	0.0389	0.80%
Na 330.237†	73.7	2.549	mg/L	0.0645	5.098	mg/L	0.1289	2.53%
Ni 231.604†	1364.3	0.3604	mg/L	0.00301	0.7207	mg/L	0.00602	0.83%
Pb 220.353†	8.8	0.01434	mg/L	0.000795	0.02868	mg/L	0.001590	5.54%
Sb 206.836†	-21.3	0.01402	mg/L	0.005888	0.02803	mg/L	0.011775	42.01%
Se 196.026†	-16.7	0.00915	mg/L	0.011001	0.01831	mg/L	0.022003	120.18%
Si 288.158†	2414.9	1.079	mg/L	0.0173	2.159	mg/L	0.0346	1.60%
Sn 189.927†	-49.4	-0.00225	mg/L	0.000885	-0.00450	mg/L	0.001771	39.37%
Sr 421.552†	160774.0	0.1845	mg/L	0.00184	0.3690	mg/L	0.00367	1.00%
Ti 334.903†	214188.7	7.247	mg/L	0.0442	14.49	mg/L	0.088	0.61%
Tl 190.801†	-38.8	0.00198	mg/L	0.012970	0.00396	mg/L	0.025939	654.75%
V 292.402†	55336.4	0.3726	mg/L	0.00209	0.7452	mg/L	0.00417	0.56%
Zn 206.200†	850.0	0.2601	mg/L	0.00197	0.5202	mg/L	0.00394	0.76%

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Sequence No.: 36
Sample ID: 21A0402-27

Dilution: 2X
Wash Time: 37

Autosampler Location: 363
Date Collected: 2/4/2021 6:12:20 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-27

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-27

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2683258.2	105.7	%	1.27				1.20%
ScR 361.383	297981.3	106.0	%	1.62				1.53%
Ag 328.068†	-798.2	-0.00176	mg/L	0.000269	-0.00351	mg/L	0.000539	15.34%
Al 308.215†	229386.2	134.9	mg/L	0.83	269.8	mg/L	1.66	0.62%
As 188.979†	71.4	0.06299	mg/L	0.002438	0.1260	mg/L	0.00488	3.87%
B 249.677†	162.5	0.01865	mg/L	0.001528	0.03730	mg/L	0.003056	8.19%
Ba 233.527†	7650.8	0.8074	mg/L	0.01142	1.615	mg/L	0.0228	1.41%
Be 313.042†	1717.2	0.00200	mg/L	0.000067	0.00400	mg/L	0.000133	3.33%
Ca 317.933†	330861.7	32.87	mg/L	0.340	65.74	mg/L	0.681	1.04%
Cd 228.802†	225.2	0.00425	mg/L	0.000182	0.00850	mg/L	0.000365	4.29%
Co 228.616†	3498.4	0.06469	mg/L	0.001002	0.1294	mg/L	0.00200	1.55%
Cr 267.716†	2686.2	0.3517	mg/L	0.00268	0.7034	mg/L	0.00537	0.76%
Cu 324.752†	38660.7	0.1866	mg/L	0.00043	0.3732	mg/L	0.00086	0.23%
Fe 273.955†	322385.0	159.0	mg/L	0.77	318.0	mg/L	1.54	0.48%
K 766.490†	11743.8	5.382	mg/L	0.0325	10.76	mg/L	0.065	0.60%
Mg 279.077†	52881.2	54.66	mg/L	0.664	109.3	mg/L	1.33	1.21%
Mn 257.610†	186017.0	2.887	mg/L	0.0223	5.774	mg/L	0.0447	0.77%
Mo 202.031†	65.1	0.00318	mg/L	0.000367	0.00637	mg/L	0.000734	11.53%
Na 589.592†	10711.5	0.9667	mg/L	0.00727	1.933	mg/L	0.0145	0.75%
Na 330.237†	43.1	1.490	mg/L	0.5280	2.981	mg/L	1.0560	35.43%
Ni 231.604†	1404.8	0.3711	mg/L	0.00022	0.7422	mg/L	0.00043	0.06%
Pb 220.353†	844.2	0.1205	mg/L	0.00104	0.2411	mg/L	0.00208	0.86%
Sb 206.836†	-17.7	0.01125	mg/L	0.001922	0.02250	mg/L	0.003845	17.09%
Se 196.026†	-11.3	0.01360	mg/L	0.007451	0.02720	mg/L	0.014902	54.80%
Si 288.158†	4697.2	2.135	mg/L	0.0107	4.270	mg/L	0.0213	0.50%
Sn 189.927†	-23.1	0.00464	mg/L	0.001948	0.00927	mg/L	0.003896	42.02%
Sr 421.552†	149141.2	0.1712	mg/L	0.00068	0.3423	mg/L	0.00135	0.40%
Ti 334.903†	174682.3	5.911	mg/L	0.0275	11.82	mg/L	0.055	0.47%
Tl 190.801†	-28.6	0.00734	mg/L	0.006810	0.01468	mg/L	0.013620	92.79%
V 292.402†	45526.6	0.3080	mg/L	0.00159	0.6159	mg/L	0.00317	0.51%
Zn 206.200†	3162.8	0.9676	mg/L	0.00731	1.935	mg/L	0.0146	0.76%

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Sequence No.: 37 **Autosampler Location: 7**
Sample ID: SEQ-CCV8 **Date Collected: 2/4/2021 6:15:08 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV8

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCV8

Analyte	**Mean Corrected Intensity**	**Calib. Conc.**	**Units**	**Std.Dev.**	**Sample Conc.**	**Units**	**Std.Dev.**	**RSD**
ScA 357.253	2648355.0	104.3	%	0.40				0.39%
ScR 361.383	295673.7	105.2	%	0.56				0.54%
Ag 328.068†	196523.0	1.017	mg/L	0.0100	1.017	mg/L	0.0100	0.99%
Al 308.215†	3363.9	1.943	mg/L	0.0265	1.943	mg/L	0.0265	1.37%
As 188.979†	3327.7	2.016	mg/L	0.0038	2.016	mg/L	0.0038	0.19%
B 249.677†	7756.0	0.9612	mg/L	0.00739	0.9612	mg/L	0.00739	0.77%
Ba 233.527†	9197.8	0.9824	mg/L	0.00581	0.9824	mg/L	0.00581	0.59%
Be 313.042†	718823.7	0.9494	mg/L	0.00433	0.9494	mg/L	0.00433	0.46%
Ca 317.933†	19749.5	1.961	mg/L	0.0127	1.961	mg/L	0.0127	0.65%
Cd 228.802†	36381.4	1.006	mg/L	0.0030	1.006	mg/L	0.0030	0.30%
Co 228.616†	43552.2	0.9755	mg/L	0.00953	0.9755	mg/L	0.00953	0.98%
Cr 267.716†	7525.9	0.9877	mg/L	0.00466	0.9877	mg/L	0.00466	0.47%
Cu 324.752†	212828.2	0.9813	mg/L	0.00657	0.9813	mg/L	0.00657	0.67%
Fe 273.955†	3998.2	1.964	mg/L	0.0291	1.964	mg/L	0.0291	1.48%
K 766.490†	42129.6	19.31	mg/L	0.056	19.31	mg/L	0.056	0.29%
Mg 279.077†	1860.0	1.937	mg/L	0.0410	1.937	mg/L	0.0410	2.12%
Mn 257.610†	63620.6	0.9883	mg/L	0.00702	0.9883	mg/L	0.00702	0.71%
Mo 202.031†	18355.6	0.9693	mg/L	0.00865	0.9693	mg/L	0.00865	0.89%
Na 589.592†	528102.8	47.66	mg/L	0.321	47.66	mg/L	0.321	0.67%
Na 330.237†	1443.1	49.94	mg/L	0.872	49.94	mg/L	0.872	1.75%
Ni 231.604†	3658.1	0.9660	mg/L	0.01364	0.9660	mg/L	0.01364	1.41%
Pb 220.353†	17295.7	1.982	mg/L	0.0249	1.982	mg/L	0.0249	1.25%
Sb 206.836†	3940.1	2.046	mg/L	0.0026	2.046	mg/L	0.0026	0.13%
Se 196.026†	2761.8	2.033	mg/L	0.0024	2.033	mg/L	0.0024	0.12%
Si 288.158†	4439.9	2.035	mg/L	0.0122	2.035	mg/L	0.0122	0.60%
Sn 189.927†	4118.4	0.9811	mg/L	0.00569	0.9811	mg/L	0.00569	0.58%
Sr 421.552†	837273.7	0.9609	mg/L	0.00613	0.9609	mg/L	0.00613	0.64%
Ti 334.903†	28821.1	0.9749	mg/L	0.00342	0.9749	mg/L	0.00342	0.35%
Tl 190.801†	4645.0	1.977	mg/L	0.0050	1.977	mg/L	0.0050	0.25%
V 292.402†	146707.9	0.9831	mg/L	0.00739	0.9831	mg/L	0.00739	0.75%
Zn 206.200†	3148.1	0.9631	mg/L	0.00142	0.9631	mg/L	0.00142	0.15%

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Sequence No.: 38 **Autosampler Location: 1**
Sample ID: SEQ-CCB7 **Date Collected: 2/4/2021 6:18:36 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB7

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCB7

Analyte	**Mean Corrected Intensity**	**Calib. Conc.**	**Units**	**Std.Dev.**	**Sample Conc.**	**Units**	**Std.Dev.**	**RSD**
ScA 357.253	2687688.3	105.9	%	0.64				0.61%
ScR 361.383	300522.8	106.9	%	1.33				1.24%
Ag 328.068†	104.7	0.00054	mg/L	0.000251	0.00054	mg/L	0.000251	46.23%
Al 308.215†	19.8	0.01162	mg/L	0.000729	0.01162	mg/L	0.000729	6.27%
As 188.979†	0.8	0.00046	mg/L	0.000619	0.00046	mg/L	0.000619	134.53%
B 249.677†	11.6	0.00144	mg/L	0.000748	0.00144	mg/L	0.000748	51.91%
Ba 233.527†	-1.7	-0.00019	mg/L	0.000721	-0.00019	mg/L	0.000721	386.46%
Be 313.042†	-50.9	-0.00007	mg/L	0.000062	-0.00007	mg/L	0.000062	91.53%
Ca 317.933†	14.4	0.00142	mg/L	0.001035	0.00142	mg/L	0.001035	72.95%
Cd 228.802†	-10.2	-0.00029	mg/L	0.000170	-0.00029	mg/L	0.000170	58.60%
Co 228.616†	-3.6	-0.00008	mg/L	0.000111	-0.00008	mg/L	0.000111	141.08%
Cr 267.716†	10.3	0.00135	mg/L	0.001037	0.00135	mg/L	0.001037	77.04%
Cu 324.752†	-42.5	-0.00020	mg/L	0.000146	-0.00020	mg/L	0.000146	74.22%
Fe 273.955†	0.5	0.00026	mg/L	0.002554	0.00026	mg/L	0.002554	996.25%
K 766.490†	-90.6	-0.04153	mg/L	0.026222	-0.04153	mg/L	0.026222	63.14%
Mg 279.077†	10.1	0.01054	mg/L	0.003444	0.01054	mg/L	0.003444	32.68%
Mn 257.610†	-22.8	-0.00035	mg/L	0.000178	-0.00035	mg/L	0.000178	50.29%
Mo 202.031†	2.1	0.00011	mg/L	0.000211	0.00011	mg/L	0.000211	192.78%
Na 589.592†	76.0	0.00686	mg/L	0.005989	0.00686	mg/L	0.005989	87.30%
Na 330.237†	25.7	0.8889	mg/L	0.44288	0.8889	mg/L	0.44288	49.82%
Ni 231.604†	2.4	0.00064	mg/L	0.001266	0.00064	mg/L	0.001266	197.93%
Pb 220.353†	-4.8	-0.00054	mg/L	0.001068	-0.00054	mg/L	0.001068	197.54%
Sb 206.836†	1.5	0.00077	mg/L	0.002341	0.00077	mg/L	0.002341	304.02%
Se 196.026†	4.7	0.00345	mg/L	0.007386	0.00345	mg/L	0.007386	214.06%
Si 288.158†	20.4	0.00941	mg/L	0.005156	0.00941	mg/L	0.005156	54.81%
Sn 189.927†	-2.6	-0.00062	mg/L	0.000944	-0.00062	mg/L	0.000944	153.46%
Sr 421.552†	41.4	0.00005	mg/L	0.000055	0.00005	mg/L	0.000055	116.51%
Ti 334.903†	-25.7	-0.00087	mg/L	0.000651	-0.00087	mg/L	0.000651	74.66%
Tl 190.801†	1.2	0.00050	mg/L	0.001692	0.00050	mg/L	0.001692	340.47%
V 292.402†	-19.2	-0.00012	mg/L	0.000056	-0.00012	mg/L	0.000056	46.16%
Zn 206.200†	2.5	0.00077	mg/L	0.000832	0.00077	mg/L	0.000832	107.72%

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Sequence No.: 39
Sample ID: BJB0056-BLK1

Dilution: 2X
Wash Time: 37

Autosampler Location: 364
Date Collected: 2/4/2021 6:21:24 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BJB0056-BLK1

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BJB0056-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2688866.5	105.9	%	0.41				0.39%
ScR 361.383	293950.4	104.6	%	1.21				1.16%
Ag 328.068†	49.9	0.00026	mg/L	0.000248	0.00052	mg/L	0.000496	95.86%
Al 308.215†	14.6	0.00856	mg/L	0.005736	0.01711	mg/L	0.011472	67.04%
As 188.979†	-3.6	-0.00216	mg/L	0.002016	-0.00432	mg/L	0.004031	93.29%
B 249.677†	13.2	0.00163	mg/L	0.001501	0.00325	mg/L	0.003002	92.24%
Ba 233.527†	-5.0	-0.00053	mg/L	0.000119	-0.00106	mg/L	0.000238	22.40%
Be 313.042†	-71.2	-0.00009	mg/L	0.000012	-0.00019	mg/L	0.000025	13.21%
Ca 317.933†	65.0	0.00644	mg/L	0.001483	0.01289	mg/L	0.002966	23.02%
Cd 228.802†	-15.2	-0.00041	mg/L	0.000214	-0.00082	mg/L	0.000427	51.86%
Co 228.616†	-8.4	-0.00019	mg/L	0.000045	-0.00037	mg/L	0.000090	24.02%
Cr 267.716†	13.2	0.00173	mg/L	0.001085	0.00345	mg/L	0.002170	62.90%
Cu 324.752†	-9.8	-0.00004	mg/L	0.000056	-0.00009	mg/L	0.000112	125.44%
Fe 273.955†	20.1	0.00994	mg/L	0.000816	0.01987	mg/L	0.001632	8.21%
K 766.490†	-60.6	-0.02775	mg/L	0.007594	-0.05550	mg/L	0.015188	27.37%
Mg 279.077†	8.8	0.00911	mg/L	0.014073	0.01821	mg/L	0.028146	154.56%
Mn 257.610†	-17.0	-0.00026	mg/L	0.000081	-0.00053	mg/L	0.000161	30.59%
Mo 202.031†	-1.5	-0.00008	mg/L	0.000104	-0.00016	mg/L	0.000208	132.10%
Na 589.592†	77.8	0.00702	mg/L	0.003676	0.01405	mg/L	0.007352	52.33%
Na 330.237†	27.9	0.9662	mg/L	0.54913	1.932	mg/L	1.0983	56.83%
Ni 231.604†	-5.8	-0.00154	mg/L	0.002202	-0.00309	mg/L	0.004404	142.63%
Pb 220.353†	-9.7	-0.00111	mg/L	0.000740	-0.00222	mg/L	0.001480	66.75%
Sb 206.836†	-1.2	-0.00059	mg/L	0.000194	-0.00117	mg/L	0.000388	33.00%
Se 196.026†	7.2	0.00532	mg/L	0.001466	0.01064	mg/L	0.002932	27.55%
Si 288.158†	26.6	0.01223	mg/L	0.002635	0.02446	mg/L	0.005270	21.55%
Sn 189.927†	4.8	0.00114	mg/L	0.000640	0.00229	mg/L	0.001280	55.95%
Sr 421.552†	-19.7	-0.00002	mg/L	0.000055	-0.00005	mg/L	0.000109	241.55%
Ti 334.903†	-15.8	-0.00054	mg/L	0.000219	-0.00107	mg/L	0.000439	40.92%
Tl 190.801†	1.1	0.00047	mg/L	0.000433	0.00094	mg/L	0.000866	92.50%
V 292.402†	-25.3	-0.00016	mg/L	0.000172	-0.00032	mg/L	0.000343	107.37%
Zn 206.200†	1.5	0.00045	mg/L	0.001070	0.00090	mg/L	0.002140	237.50%

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Sequence No.: 40 **Autosampler Location: 365**
Sample ID: 21A0402-28 **Date Collected: 2/4/2021 6:24:13 PM**
Data Type: Original

Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0402-28

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-28

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2638431.9	103.9	%	1.41				1.36%
ScR 361.383	294231.3	104.7	%	1.29				1.23%
Ag 328.068†	-722.4	-0.00147	mg/L	0.000260	-0.00295	mg/L	0.000519	17.62%
Al 308.215†	250452.7	147.3	mg/L	1.28	294.6	mg/L	2.55	0.87%
As 188.979†	63.0	0.05872	mg/L	0.003996	0.1174	mg/L	0.00799	6.81%
B 249.677†	132.5	0.01502	mg/L	0.000428	0.03005	mg/L	0.000856	2.85%
Ba 233.527†	8819.2	0.9323	mg/L	0.01381	1.865	mg/L	0.0276	1.48%
Be 313.042†	1972.4	0.00231	mg/L	0.000052	0.00462	mg/L	0.000104	2.25%
Ca 317.933†	244932.8	24.33	mg/L	0.383	48.67	mg/L	0.766	1.57%
Cd 228.802†	89.1	0.00045	mg/L	0.000038	0.00091	mg/L	0.000076	8.39%
Co 228.616†	3461.1	0.06345	mg/L	0.000713	0.1269	mg/L	0.00143	1.12%
Cr 267.716†	2199.9	0.2884	mg/L	0.00256	0.5768	mg/L	0.00513	0.89%
Cu 324.752†	25956.1	0.1281	mg/L	0.00076	0.2563	mg/L	0.00153	0.60%
Fe 273.955†	326547.9	161.1	mg/L	0.67	322.1	mg/L	1.34	0.42%
K 766.490†	11222.1	5.143	mg/L	0.0661	10.29	mg/L	0.132	1.29%
Mg 279.077†	47313.2	48.86	mg/L	0.707	97.73	mg/L	1.414	1.45%
Mn 257.610†	313884.7	4.873	mg/L	0.0443	9.746	mg/L	0.0886	0.91%
Mo 202.031†	38.6	0.00182	mg/L	0.000117	0.00364	mg/L	0.000235	6.46%
Na 589.592†	10958.5	0.9890	mg/L	0.01175	1.978	mg/L	0.0235	1.19%
Na 330.237†	34.1	1.180	mg/L	0.3251	2.359	mg/L	0.6502	27.56%
Ni 231.604†	1290.2	0.3408	mg/L	0.00480	0.6816	mg/L	0.00961	1.41%
Pb 220.353†	368.2	0.06940	mg/L	0.001237	0.1388	mg/L	0.00247	1.78%
Sb 206.836†	-8.6	0.01664	mg/L	0.000465	0.03329	mg/L	0.000931	2.80%
Se 196.026†	-6.2	0.01765	mg/L	0.008943	0.03529	mg/L	0.017886	50.68%
Si 288.158†	4331.5	1.966	mg/L	0.0258	3.932	mg/L	0.0517	1.31%
Sn 189.927†	-55.2	-0.00266	mg/L	0.000564	-0.00533	mg/L	0.001128	21.17%
Sr 421.552†	113925.6	0.1307	mg/L	0.00122	0.2615	mg/L	0.00245	0.94%
Ti 334.903†	180333.1	6.103	mg/L	0.0302	12.21	mg/L	0.060	0.50%
Tl 190.801†	-29.5	0.00715	mg/L	0.012584	0.01430	mg/L	0.025168	176.05%
V 292.402†	50744.0	0.3428	mg/L	0.00401	0.6856	mg/L	0.00802	1.17%
Zn 206.200†	1251.4	0.3830	mg/L	0.00454	0.7661	mg/L	0.00909	1.19%

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Sequence No.: 41
Sample ID: 21A0402-29

Dilution: 2X
Wash Time: 37

Autosampler Location: 366
Date Collected: 2/4/2021 6:27:01 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-29

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-29

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2640400.5	104.0	%	0.83				0.80%
ScR 361.383	297593.0	105.8	%	1.60				1.51%
Ag 328.068†	5482.9	0.03088	mg/L	0.000190	0.06175	mg/L	0.000380	0.62%
Al 308.215†	239950.0	141.1	mg/L	1.14	282.2	mg/L	2.28	0.81%
As 188.979†	38.1	0.04243	mg/L	0.003360	0.08487	mg/L	0.006719	7.92%
B 249.677†	130.2	0.01468	mg/L	0.001294	0.02935	mg/L	0.002588	8.82%
Ba 233.527†	6641.4	0.6995	mg/L	0.00956	1.399	mg/L	0.0191	1.37%
Be 313.042†	1752.1	0.00205	mg/L	0.000087	0.00409	mg/L	0.000174	4.26%
Ca 317.933†	195738.7	19.45	mg/L	0.350	38.89	mg/L	0.700	1.80%
Cd 228.802†	84.5	0.00053	mg/L	0.000173	0.00106	mg/L	0.000347	32.66%
Co 228.616†	3452.3	0.06477	mg/L	0.000358	0.1295	mg/L	0.00072	0.55%
Cr 267.716†	3670.0	0.4801	mg/L	0.00728	0.9603	mg/L	0.01456	1.52%
Cu 324.752†	25492.7	0.1261	mg/L	0.00122	0.2522	mg/L	0.00244	0.97%
Fe 273.955†	327512.3	161.5	mg/L	1.04	323.1	mg/L	2.08	0.64%
K 766.490†	9589.8	4.395	mg/L	0.0454	8.789	mg/L	0.0908	1.03%
Mg 279.077†	56873.3	58.81	mg/L	0.841	117.6	mg/L	1.68	1.43%
Mn 257.610†	237729.9	3.690	mg/L	0.0394	7.381	mg/L	0.0789	1.07%
Mo 202.031†	37.6	0.00181	mg/L	0.000259	0.00361	mg/L	0.000517	14.32%
Na 589.592†	9311.0	0.8403	mg/L	0.00397	1.681	mg/L	0.0079	0.47%
Na 330.237†	39.4	1.365	mg/L	0.6078	2.730	mg/L	1.2157	44.53%
Ni 231.604†	1578.8	0.4170	mg/L	0.00949	0.8340	mg/L	0.01897	2.27%
Pb 220.353†	136.8	0.04135	mg/L	0.000892	0.08270	mg/L	0.001784	2.16%
Sb 206.836†	-4.2	0.01624	mg/L	0.001859	0.03248	mg/L	0.003718	11.45%
Se 196.026†	-14.7	0.01126	mg/L	0.003864	0.02253	mg/L	0.007728	34.31%
Si 288.158†	4562.7	2.076	mg/L	0.0247	4.152	mg/L	0.0495	1.19%
Sn 189.927†	-41.3	-0.00022	mg/L	0.001330	-0.00044	mg/L	0.002661	611.47%
Sr 421.552†	92342.9	0.1060	mg/L	0.00079	0.2119	mg/L	0.00158	0.75%
Ti 334.903†	157065.4	5.315	mg/L	0.0325	10.63	mg/L	0.065	0.61%
Tl 190.801†	-37.2	0.00393	mg/L	0.001894	0.00786	mg/L	0.003788	48.17%
V 292.402†	47135.1	0.3196	mg/L	0.00111	0.6392	mg/L	0.00222	0.35%
Zn 206.200†	1314.8	0.4024	mg/L	0.00643	0.8048	mg/L	0.01286	1.60%

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Sequence No.: 42
Sample ID: 21A0402-30

Dilution: 2X
Wash Time: 37

Autosampler Location: 367
Date Collected: 2/4/2021 6:29:49 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-30

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 21A0402-30

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2591590.3	102.1	%	0.57				0.56%
ScR 361.383	291230.9	103.6	%	0.67				0.65%
Ag 328.068†	-537.7	-0.00198	mg/L	0.000279	-0.00396	mg/L	0.000557	14.07%
Al 308.215†	208112.8	122.4	mg/L	0.53	244.8	mg/L	1.05	0.43%
As 188.979†	139.8	0.1013	mg/L	0.00573	0.2026	mg/L	0.01146	5.66%
B 249.677†	166.5	0.01914	mg/L	0.000474	0.03828	mg/L	0.000948	2.48%
Ba 233.527†	4946.4	0.5169	mg/L	0.00132	1.034	mg/L	0.0026	0.26%
Be 313.042†	1422.9	0.00156	mg/L	0.000031	0.00312	mg/L	0.000062	1.98%
Ca 317.933†	1471612.1	146.2	mg/L	1.58	292.4	mg/L	3.17	1.08%
Cd 228.802†	131.6	0.00075	mg/L	0.000108	0.00149	mg/L	0.000216	14.49%
Co 228.616†	3718.8	0.06704	mg/L	0.000535	0.1341	mg/L	0.00107	0.80%
Cr 267.716†	3330.9	0.4372	mg/L	0.00226	0.8744	mg/L	0.00452	0.52%
Cu 324.752†	37158.0	0.1795	mg/L	0.00131	0.3589	mg/L	0.00262	0.73%
Fe 273.955†	330009.3	162.8	mg/L	0.93	325.6	mg/L	1.85	0.57%
K 766.490†	12840.6	5.884	mg/L	0.0104	11.77	mg/L	0.021	0.18%
Mg 279.077†	60330.8	62.38	mg/L	0.653	124.8	mg/L	1.31	1.05%
Mn 257.610†	164727.7	2.557	mg/L	0.0213	5.113	mg/L	0.0426	0.83%
Mo 202.031†	67.6	0.00217	mg/L	0.000429	0.00434	mg/L	0.000858	19.76%
Na 589.592†	17801.4	1.607	mg/L	0.0165	3.213	mg/L	0.0329	1.03%
Na 330.237†	66.3	2.295	mg/L	0.4518	4.589	mg/L	0.9036	19.69%
Ni 231.604†	1387.7	0.3666	mg/L	0.00378	0.7331	mg/L	0.00756	1.03%
Pb 220.353†	485.5	0.07557	mg/L	0.001469	0.1511	mg/L	0.00294	1.94%
Sb 206.836†	14.2	0.03217	mg/L	0.000782	0.06435	mg/L	0.001565	2.43%
Se 196.026†	-2.4	0.02102	mg/L	0.007860	0.04204	mg/L	0.015719	37.39%
Si 288.158†	4640.3	2.103	mg/L	0.0045	4.206	mg/L	0.0090	0.21%
Sn 189.927†	-32.6	0.00657	mg/L	0.002977	0.01314	mg/L	0.005955	45.31%
Sr 421.552†	199832.3	0.2293	mg/L	0.00177	0.4587	mg/L	0.00354	0.77%
Ti 334.903†	214030.7	7.235	mg/L	0.0400	14.47	mg/L	0.080	0.55%
Tl 190.801†	-36.1	0.00440	mg/L	0.003632	0.00879	mg/L	0.007264	82.61%
V 292.402†	53572.0	0.3618	mg/L	0.00393	0.7235	mg/L	0.00785	1.09%
Zn 206.200†	1891.6	0.5788	mg/L	0.00522	1.158	mg/L	0.0104	0.90%

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Sequence No.: 43
Sample ID: BJB0056-DUP1

Dilution: 2X
Wash Time: 37

Autosampler Location: 368
Date Collected: 2/4/2021 6:32:38 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BJB0056-DUP1

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BJB0056-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2650638.2	104.4	%	0.62				0.60%
ScR 361.383	301191.6	107.1	%	1.16				1.08%
Ag 328.068†	-754.8	-0.00160	mg/L	0.000235	-0.00320	mg/L	0.000470	14.67%
Al 308.215†	187355.4	110.2	mg/L	0.88	220.4	mg/L	1.76	0.80%
As 188.979†	10.6	0.02586	mg/L	0.002853	0.05171	mg/L	0.005707	11.04%
B 249.677†	85.4	0.00877	mg/L	0.000497	0.01754	mg/L	0.000994	5.67%
Ba 233.527†	4656.0	0.4887	mg/L	0.00569	0.9774	mg/L	0.01137	1.16%
Be 313.042†	1110.3	0.00113	mg/L	0.000034	0.00227	mg/L	0.000069	3.03%
Ca 317.933†	268803.9	26.71	mg/L	0.353	53.41	mg/L	0.706	1.32%
Cd 228.802†	86.8	0.00081	mg/L	0.000057	0.00163	mg/L	0.000113	6.96%
Co 228.616†	3899.6	0.07107	mg/L	0.000551	0.1421	mg/L	0.00110	0.78%
Cr 267.716†	2856.2	0.3736	mg/L	0.00384	0.7472	mg/L	0.00768	1.03%
Cu 324.752†	21038.3	0.1036	mg/L	0.00010	0.2072	mg/L	0.00020	0.10%
Fe 273.955†	277872.8	137.1	mg/L	1.03	274.1	mg/L	2.06	0.75%
K 766.490†	6978.9	3.198	mg/L	0.0293	6.396	mg/L	0.0586	0.92%
Mg 279.077†	41165.1	42.52	mg/L	0.519	85.04	mg/L	1.038	1.22%
Mn 257.610†	108539.3	1.684	mg/L	0.0144	3.368	mg/L	0.0287	0.85%
Mo 202.031†	47.0	0.00222	mg/L	0.000180	0.00445	mg/L	0.000360	8.11%
Na 589.592†	10894.2	0.9832	mg/L	0.00824	1.966	mg/L	0.0165	0.84%
Na 330.237†	32.6	1.128	mg/L	0.0345	2.257	mg/L	0.0690	3.06%
Ni 231.604†	951.5	0.2513	mg/L	0.00391	0.5027	mg/L	0.00783	1.56%
Pb 220.353†	109.2	0.03146	mg/L	0.000411	0.06293	mg/L	0.000822	1.31%
Sb 206.836†	-23.0	0.01376	mg/L	0.006539	0.02752	mg/L	0.013079	47.53%
Se 196.026†	-15.0	0.00846	mg/L	0.001949	0.01692	mg/L	0.003898	23.05%
Si 288.158†	5644.3	2.564	mg/L	0.0472	5.128	mg/L	0.0943	1.84%
Sn 189.927†	-46.5	-0.00142	mg/L	0.000791	-0.00284	mg/L	0.001581	55.72%
Sr 421.552†	136403.2	0.1565	mg/L	0.00146	0.3131	mg/L	0.00292	0.93%
Ti 334.903†	220465.5	7.461	mg/L	0.0435	14.92	mg/L	0.087	0.58%
Tl 190.801†	-44.4	-0.00260	mg/L	0.002589	-0.00520	mg/L	0.005178	99.54%
V 292.402†	56087.8	0.3775	mg/L	0.00246	0.7550	mg/L	0.00492	0.65%
Zn 206.200†	845.6	0.2590	mg/L	0.00394	0.5181	mg/L	0.00788	1.52%

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Sequence No.: 44
Sample ID: 21A0402-20

Dilution: 2X
Wash Time: 37

Autosampler Location: 369
Date Collected: 2/4/2021 6:35:26 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-20

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-20

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2646802.6	104.3	%	0.55				0.52%
ScR 361.383	303993.2	108.1	%	0.45				0.42%
Ag 328.068†	-702.7	-0.00161	mg/L	0.000255	-0.00322	mg/L	0.000510	15.87%
Al 308.215†	185406.5	109.0	mg/L	0.66	218.1	mg/L	1.31	0.60%
As 188.979†	9.2	0.02300	mg/L	0.005936	0.04599	mg/L	0.011872	25.81%
B 249.677†	94.3	0.01007	mg/L	0.000446	0.02013	mg/L	0.000892	4.43%
Ba 233.527†	4889.4	0.5146	mg/L	0.00092	1.029	mg/L	0.0018	0.18%
Be 313.042†	996.4	0.00100	mg/L	0.000023	0.00201	mg/L	0.000047	2.32%
Ca 317.933†	264235.1	26.25	mg/L	0.262	52.50	mg/L	0.525	1.00%
Cd 228.802†	82.3	0.00086	mg/L	0.000149	0.00173	mg/L	0.000297	17.23%
Co 228.616†	3319.4	0.05859	mg/L	0.000389	0.1172	mg/L	0.00078	0.66%
Cr 267.716†	2548.1	0.3333	mg/L	0.00270	0.6666	mg/L	0.00540	0.81%
Cu 324.752†	20573.3	0.1005	mg/L	0.00166	0.2010	mg/L	0.00333	1.66%
Fe 273.955†	246265.5	121.5	mg/L	0.65	242.9	mg/L	1.30	0.53%
K 766.490†	7265.4	3.329	mg/L	0.0389	6.659	mg/L	0.0777	1.17%
Mg 279.077†	38409.8	39.69	mg/L	0.516	79.38	mg/L	1.032	1.30%
Mn 257.610†	95330.8	1.479	mg/L	0.0135	2.959	mg/L	0.0269	0.91%
Mo 202.031†	60.6	0.00295	mg/L	0.000401	0.00590	mg/L	0.000802	13.59%
Na 589.592†	11438.9	1.032	mg/L	0.0112	2.065	mg/L	0.0224	1.09%
Na 330.237†	46.0	1.590	mg/L	0.1508	3.180	mg/L	0.3015	9.48%
Ni 231.604†	859.2	0.2270	mg/L	0.00322	0.4539	mg/L	0.00644	1.42%
Pb 220.353†	135.1	0.03558	mg/L	0.000741	0.07117	mg/L	0.001482	2.08%
Sb 206.836†	-13.0	0.01821	mg/L	0.001560	0.03643	mg/L	0.003121	8.57%
Se 196.026†	-1.5	0.01636	mg/L	0.012627	0.03272	mg/L	0.025254	77.17%
Si 288.158†	5100.3	2.314	mg/L	0.0143	4.629	mg/L	0.0286	0.62%
Sn 189.927†	-50.4	-0.00249	mg/L	0.000306	-0.00499	mg/L	0.000611	12.24%
Sr 421.552†	130487.8	0.1497	mg/L	0.00098	0.2995	mg/L	0.00195	0.65%
Ti 334.903†	215652.3	7.298	mg/L	0.0210	14.60	mg/L	0.042	0.29%
Tl 190.801†	-23.8	0.00432	mg/L	0.013302	0.00864	mg/L	0.026603	308.04%
V 292.402†	51472.7	0.3462	mg/L	0.00707	0.6924	mg/L	0.01413	2.04%
Zn 206.200†	812.4	0.2488	mg/L	0.00319	0.4976	mg/L	0.00637	1.28%

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Sequence No.: 45
Sample ID: BJB0056-MS1

Dilution: 2X
Wash Time: 37

Autosampler Location: 370
Date Collected: 2/4/2021 6:38:14 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BJB0056-MS1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJB0056-MS1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2650015.0	104.4	%	0.63				0.60%
ScR 361.383	297398.6	105.8	%	0.73				0.69%
Ag 328.068†	93600.4	0.4865	mg/L	0.00216	0.9730	mg/L	0.00432	0.44%
Al 308.215†	191260.3	112.5	mg/L	0.62	224.9	mg/L	1.24	0.55%
As 188.979†	3191.2	1.954	mg/L	0.0024	3.907	mg/L	0.0048	0.12%
B 249.677†	96.5	0.00783	mg/L	0.001430	0.01566	mg/L	0.002859	18.26%
Ba 233.527†	23019.4	2.452	mg/L	0.0259	4.903	mg/L	0.0518	1.06%
Be 313.042†	355032.8	0.4686	mg/L	0.00239	0.9373	mg/L	0.00478	0.51%
Ca 317.933†	354582.5	35.23	mg/L	0.268	70.45	mg/L	0.536	0.76%
Cd 228.802†	18275.8	0.4968	mg/L	0.00214	0.9936	mg/L	0.00429	0.43%
Co 228.616†	24444.7	0.5340	mg/L	0.00341	1.068	mg/L	0.0068	0.64%
Cr 267.716†	6526.3	0.8530	mg/L	0.00954	1.706	mg/L	0.0191	1.12%
Cu 324.752†	127911.8	0.5967	mg/L	0.00787	1.193	mg/L	0.0157	1.32%
Fe 273.955†	268507.5	132.4	mg/L	0.69	264.9	mg/L	1.37	0.52%
K 766.490†	26546.3	12.17	mg/L	0.040	24.33	mg/L	0.079	0.33%
Mg 279.077†	50237.2	51.97	mg/L	0.427	103.9	mg/L	0.85	0.82%
Mn 257.610†	137569.1	2.135	mg/L	0.0135	4.271	mg/L	0.0271	0.63%
Mo 202.031†	43.2	0.00196	mg/L	0.000134	0.00391	mg/L	0.000268	6.84%
Na 589.592†	116421.8	10.51	mg/L	0.109	21.01	mg/L	0.219	1.04%
Na 330.237†	315.3	10.91	mg/L	0.331	21.82	mg/L	0.661	3.03%
Ni 231.604†	2662.9	0.7025	mg/L	0.00976	1.405	mg/L	0.0195	1.39%
Pb 220.353†	16962.1	1.964	mg/L	0.0121	3.927	mg/L	0.0241	0.61%
Sb 206.836†	1045.3	0.5630	mg/L	0.01391	1.126	mg/L	0.0278	2.47%
Se 196.026†	2619.8	1.947	mg/L	0.0208	3.894	mg/L	0.0416	1.07%
Si 288.158†	9915.8	4.535	mg/L	0.0507	9.070	mg/L	0.1015	1.12%
Sn 189.927†	-46.8	-0.00090	mg/L	0.000709	-0.00180	mg/L	0.001418	78.84%
Sr 421.552†	542149.4	0.6222	mg/L	0.00457	1.244	mg/L	0.0091	0.73%
Ti 334.903†	191213.9	6.470	mg/L	0.0243	12.94	mg/L	0.049	0.38%
Tl 190.801†	4303.0	1.850	mg/L	0.0115	3.699	mg/L	0.0230	0.62%
V 292.402†	123671.5	0.8304	mg/L	0.00819	1.661	mg/L	0.0164	0.99%
Zn 206.200†	2375.6	0.7274	mg/L	0.00923	1.455	mg/L	0.0185	1.27%

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Sequence No.: 46 **Autosampler Location: 371**
Sample ID: BJB0056-MSD1 **Date Collected: 2/4/2021 6:41:04 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJB0056-MSD1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJB0056-MSD1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2643094.2	104.1	%	0.14				0.13%
ScR 361.383	293028.2	104.2	%	0.28				0.27%
Ag 328.068†	93592.7	0.4864	mg/L	0.00311	0.9729	mg/L	0.00622	0.64%
Al 308.215†	200755.8	118.1	mg/L	0.32	236.1	mg/L	0.64	0.27%
As 188.979†	3171.9	1.942	mg/L	0.0086	3.884	mg/L	0.0173	0.44%
B 249.677†	105.2	0.00912	mg/L	0.000467	0.01823	mg/L	0.000933	5.12%
Ba 233.527†	24012.1	2.558	mg/L	0.0197	5.116	mg/L	0.0393	0.77%
Be 313.042†	354123.1	0.4674	mg/L	0.00147	0.9349	mg/L	0.00294	0.31%
Ca 317.933†	365453.3	36.31	mg/L	0.353	72.61	mg/L	0.707	0.97%
Cd 228.802†	18235.8	0.4958	mg/L	0.00278	0.9915	mg/L	0.00555	0.56%
Co 228.616†	24308.2	0.5305	mg/L	0.00201	1.061	mg/L	0.0040	0.38%
Cr 267.716†	6466.3	0.8452	mg/L	0.00698	1.690	mg/L	0.0140	0.83%
Cu 324.752†	127939.8	0.5967	mg/L	0.00204	1.193	mg/L	0.0041	0.34%
Fe 273.955†	268226.1	132.3	mg/L	1.19	264.6	mg/L	2.39	0.90%
K 766.490†	28303.8	12.97	mg/L	0.082	25.94	mg/L	0.165	0.63%
Mg 279.077†	53690.1	55.56	mg/L	0.308	111.1	mg/L	0.62	0.55%
Mn 257.610†	144671.0	2.246	mg/L	0.0075	4.491	mg/L	0.0149	0.33%
Mo 202.031†	48.2	0.00221	mg/L	0.000261	0.00443	mg/L	0.000523	11.81%
Na 589.592†	119836.9	10.82	mg/L	0.077	21.63	mg/L	0.154	0.71%
Na 330.237†	344.8	11.93	mg/L	0.143	23.86	mg/L	0.286	1.20%
Ni 231.604†	2717.1	0.7168	mg/L	0.01029	1.434	mg/L	0.0206	1.44%
Pb 220.353†	17073.0	1.978	mg/L	0.0078	3.956	mg/L	0.0157	0.40%
Sb 206.836†	1027.4	0.5543	mg/L	0.00083	1.109	mg/L	0.0017	0.15%
Se 196.026†	2606.3	1.937	mg/L	0.0092	3.874	mg/L	0.0183	0.47%
Si 288.158†	9208.5	4.209	mg/L	0.0316	8.418	mg/L	0.0633	0.75%
Sn 189.927†	-56.9	-0.00292	mg/L	0.001346	-0.00583	mg/L	0.002692	46.15%
Sr 421.552†	570053.5	0.6542	mg/L	0.00287	1.308	mg/L	0.0057	0.44%
Ti 334.903†	197223.3	6.673	mg/L	0.0251	13.35	mg/L	0.050	0.38%
Tl 190.801†	4282.5	1.841	mg/L	0.0061	3.682	mg/L	0.0123	0.33%
V 292.402†	120193.4	0.8071	mg/L	0.00916	1.614	mg/L	0.0183	1.14%
Zn 206.200†	2476.9	0.7583	mg/L	0.00378	1.517	mg/L	0.0076	0.50%

Sequence No.: 47
Sample ID: BJB0056-PS1
DEL
NO SPIKE
TH 02-04-21
Dilution: 2X
Wash Time: 37

Autosampler Location: 372
Date Collected: 2/4/2021 6:43:30 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: BJB0056-PS1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: BJB0056-PS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2654761.6	104.6	%	0.70				0.67%
ScR 361.383	297971.2	106.0	%	0.83				0.78%
Ag 328.068†	-645.2	-0.00129	mg/L	0.000297	-0.00258	mg/L	0.000594	23.03%
Al 308.215†	187844.9	110.5	mg/L	0.06	220.9	mg/L	0.11	0.05%
As 188.979†	13.5	0.02579	mg/L	0.004421	0.05158	mg/L	0.008841	17.14%
B 249.677†	93.1	0.00988	mg/L	0.000672	0.01975	mg/L	0.001343	6.80%
Ba 233.527†	5023.6	0.5289	mg/L	0.00400	1.058	mg/L	0.0080	0.76%
Be 313.042†	1051.9	0.00108	mg/L	0.000028	0.00215	mg/L	0.000056	2.62%
Ca 317.933†	268055.4	26.63	mg/L	0.153	53.26	mg/L	0.306	0.57%
Cd 228.802†	83.0	0.00085	mg/L	0.000388	0.00171	mg/L	0.000776	45.45%
Co 228.616†	3331.5	0.05871	mg/L	0.000694	0.1174	mg/L	0.00139	1.18%
Cr 267.716†	2600.4	0.3401	mg/L	0.00020	0.6803	mg/L	0.00041	0.06%
Cu 324.752†	20607.3	0.1007	mg/L	0.00099	0.2015	mg/L	0.00198	0.98%
Fe 273.955†	248859.6	122.7	mg/L	0.82	245.5	mg/L	1.64	0.67%
K 766.490†	7300.7	3.346	mg/L	0.0369	6.691	mg/L	0.0738	1.10%
Mg 279.077†	39000.1	40.30	mg/L	0.112	80.60	mg/L	0.225	0.28%
Mn 257.610†	96074.7	1.491	mg/L	0.0058	2.982	mg/L	0.0116	0.39%
Mo 202.031†	54.5	0.00262	mg/L	0.000382	0.00525	mg/L	0.000764	14.55%
Na 589.592†	11474.6	1.036	mg/L	0.0125	2.071	mg/L	0.0249	1.20%
Na 330.237†	41.0	1.419	mg/L	0.0628	2.839	mg/L	0.1256	4.42%
Ni 231.604†	892.0	0.2356	mg/L	0.00433	0.4712	mg/L	0.00866	1.84%
Pb 220.353†	137.4	0.03614	mg/L	0.002133	0.07228	mg/L	0.004267	5.90%
Sb 206.836†	-22.2	0.01374	mg/L	0.003005	0.02748	mg/L	0.006010	21.87%
Se 196.026†	-6.1	0.01314	mg/L	0.004520	0.02628	mg/L	0.009040	34.40%
Si 288.158†	5234.9	2.376	mg/L	0.0187	4.752	mg/L	0.0373	0.79%
Sn 189.927†	-41.7	-0.00030	mg/L	0.000517	-0.00060	mg/L	0.001035	172.24%
Sr 421.552†	131551.3	0.1510	mg/L	0.00050	0.3019	mg/L	0.00100	0.33%
Ti 334.903†	217657.8	7.366	mg/L	0.0192	14.73	mg/L	0.038	0.26%
Tl 190.801†	-29.4	0.00207	mg/L	0.004744	0.00415	mg/L	0.009488	228.76%
V 292.402†	51529.4	0.3466	mg/L	0.00348	0.6932	mg/L	0.00696	1.00%
Zn 206.200†	828.1	0.2537	mg/L	0.00062	0.5073	mg/L	0.00125	0.25%

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Sequence No.: 48 **Autosampler Location: 373**
Sample ID: BJB0056-BS1 **Date Collected: 2/4/2021 6:46:18 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJB0056-BS1

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: BJB0056-BS1

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2653708.5	104.5	%	0.07				0.06%
ScR 361.383	296099.7	105.3	%	1.32				1.26%
Ag 328.068†	96564.8	0.4997	mg/L	0.00631	0.9994	mg/L	0.01262	1.26%
Al 308.215†	3287.5	1.928	mg/L	0.0267	3.855	mg/L	0.0534	1.39%
As 188.979†	3272.9	1.986	mg/L	0.0056	3.972	mg/L	0.0112	0.28%
B 249.677†	30.2	0.00264	mg/L	0.001666	0.00527	mg/L	0.003331	63.18%
Ba 233.527†	18225.4	1.948	mg/L	0.0257	3.896	mg/L	0.0515	1.32%
Be 313.042†	351276.2	0.4640	mg/L	0.00311	0.9280	mg/L	0.00622	0.67%
Ca 317.933†	92147.6	9.155	mg/L	0.1976	18.31	mg/L	0.395	2.16%
Cd 228.802†	17761.0	0.4835	mg/L	0.00562	0.9670	mg/L	0.01123	1.16%
Co 228.616†	21126.4	0.4740	mg/L	0.00701	0.9479	mg/L	0.01402	1.48%
Cr 267.716†	3689.9	0.4820	mg/L	0.00687	0.9641	mg/L	0.01374	1.43%
Cu 324.752†	102918.1	0.4750	mg/L	0.00447	0.9499	mg/L	0.00893	0.94%
Fe 273.955†	3914.6	1.927	mg/L	0.0356	3.854	mg/L	0.0712	1.85%
K 766.490†	20607.2	9.444	mg/L	0.0626	18.89	mg/L	0.125	0.66%
Mg 279.077†	9202.9	9.570	mg/L	0.1568	19.14	mg/L	0.314	1.64%
Mn 257.610†	31073.0	0.4829	mg/L	0.00638	0.9657	mg/L	0.01276	1.32%
Mo 202.031†	13.4	0.00063	mg/L	0.000224	0.00127	mg/L	0.000449	35.46%
Na 589.592†	104969.4	9.474	mg/L	0.1724	18.95	mg/L	0.345	1.82%
Na 330.237†	320.3	11.08	mg/L	0.216	22.17	mg/L	0.432	1.95%
Ni 231.604†	1765.6	0.4661	mg/L	0.01208	0.9321	mg/L	0.02415	2.59%
Pb 220.353†	17045.6	1.954	mg/L	0.0270	3.907	mg/L	0.0540	1.38%
Sb 206.836†	4002.9	2.065	mg/L	0.0297	4.129	mg/L	0.0595	1.44%
Se 196.026†	2709.9	1.995	mg/L	0.0147	3.990	mg/L	0.0294	0.74%
Si 288.158†	24.6	0.01356	mg/L	0.004129	0.02711	mg/L	0.008258	30.45%
Sn 189.927†	-8.1	0.00080	mg/L	0.001131	0.00160	mg/L	0.002263	140.98%
Sr 421.552†	414699.7	0.4759	mg/L	0.00608	0.9518	mg/L	0.01216	1.28%
Ti 334.903†	27.0	0.00020	mg/L	0.000583	0.00040	mg/L	0.001166	291.16%
Tl 190.801†	4610.8	1.966	mg/L	0.0153	3.931	mg/L	0.0306	0.78%
V 292.402†	70940.2	0.4752	mg/L	0.00676	0.9504	mg/L	0.01352	1.42%
Zn 206.200†	1493.5	0.4569	mg/L	0.00957	0.9137	mg/L	0.01913	2.09%

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Sequence No.: 49 **Autosampler Location: 7**
Sample ID: SEQ-CCV9 **Date Collected: 2/4/2021 6:49:06 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV9

Analyte	**Back Pressure**	**Flow**
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCV9

Analyte	**Mean Corrected Intensity**	**Calib. Conc.**	**Units**	**Std.Dev.**	**Sample Conc.**	**Units**	**Std.Dev.**	**RSD**
ScA 357.253	2649599.1	104.4	%	0.71				0.68%
ScR 361.383	300105.6	106.7	%	0.35				0.32%
Ag 328.068†	196253.7	1.016	mg/L	0.0041	1.016	mg/L	0.0041	0.41%
Al 308.215†	3312.5	1.913	mg/L	0.0100	1.913	mg/L	0.0100	0.52%
As 188.979†	3286.6	1.991	mg/L	0.0173	1.991	mg/L	0.0173	0.87%
B 249.677†	7586.0	0.9401	mg/L	0.00621	0.9401	mg/L	0.00621	0.66%
Ba 233.527†	8996.9	0.9610	mg/L	0.00816	0.9610	mg/L	0.00816	0.85%
Be 313.042†	707288.6	0.9342	mg/L	0.00227	0.9342	mg/L	0.00227	0.24%
Ca 317.933†	19084.9	1.895	mg/L	0.0242	1.895	mg/L	0.0242	1.28%
Cd 228.802†	35941.4	0.9933	mg/L	0.00841	0.9933	mg/L	0.00841	0.85%
Co 228.616†	43161.4	0.9668	mg/L	0.00192	0.9668	mg/L	0.00192	0.20%
Cr 267.716†	7274.9	0.9549	mg/L	0.00647	0.9549	mg/L	0.00647	0.68%
Cu 324.752†	211607.5	0.9756	mg/L	0.00780	0.9756	mg/L	0.00780	0.80%
Fe 273.955†	3855.9	1.894	mg/L	0.0080	1.894	mg/L	0.0080	0.42%
K 766.490†	41768.4	19.14	mg/L	0.063	19.14	mg/L	0.063	0.33%
Mg 279.077†	1792.1	1.867	mg/L	0.0144	1.867	mg/L	0.0144	0.77%
Mn 257.610†	62267.6	0.9673	mg/L	0.00859	0.9673	mg/L	0.00859	0.89%
Mo 202.031†	18199.5	0.9610	mg/L	0.00215	0.9610	mg/L	0.00215	0.22%
Na 589.592†	529516.4	47.79	mg/L	0.053	47.79	mg/L	0.053	0.11%
Na 330.237†	1440.9	49.86	mg/L	0.546	49.86	mg/L	0.546	1.10%
Ni 231.604†	3544.0	0.9359	mg/L	0.00962	0.9359	mg/L	0.00962	1.03%
Pb 220.353†	17151.7	1.965	mg/L	0.0061	1.965	mg/L	0.0061	0.31%
Sb 206.836†	3878.4	2.014	mg/L	0.0137	2.014	mg/L	0.0137	0.68%
Se 196.026†	2718.5	2.001	mg/L	0.0267	2.001	mg/L	0.0267	1.34%
Si 288.158†	4324.2	1.982	mg/L	0.0235	1.982	mg/L	0.0235	1.19%
Sn 189.927†	4073.3	0.9704	mg/L	0.00853	0.9704	mg/L	0.00853	0.88%
Sr 421.552†	827169.5	0.9493	mg/L	0.00413	0.9493	mg/L	0.00413	0.44%
Ti 334.903†	28346.3	0.9588	mg/L	0.00278	0.9588	mg/L	0.00278	0.29%
Tl 190.801†	4594.9	1.956	mg/L	0.0153	1.956	mg/L	0.0153	0.78%
V 292.402†	145601.3	0.9756	mg/L	0.00064	0.9756	mg/L	0.00064	0.07%
Zn 206.200†	3051.0	0.9334	mg/L	0.01394	0.9334	mg/L	0.01394	1.49%

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Sequence No.: 50
Sample ID: SEQ-CCB8

Dilution: 1X
Wash Time: 100

Autosampler Location: 1
Date Collected: 2/4/2021 6:52:34 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB8

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCB8

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2712032.3	106.8	%	0.57				0.53%
ScR 361.383	298053.5	106.0	%	1.79				1.69%
Ag 328.068†	49.5	0.00026	mg/L	0.000519	0.00026	mg/L	0.000519	202.76%
Al 308.215†	16.3	0.00958	mg/L	0.012103	0.00958	mg/L	0.012103	126.36%
As 188.979†	-4.5	-0.00275	mg/L	0.001370	-0.00275	mg/L	0.001370	49.85%
B 249.677†	14.3	0.00177	mg/L	0.000983	0.00177	mg/L	0.000983	55.40%
Ba 233.527†	-1.7	-0.00019	mg/L	0.000521	-0.00019	mg/L	0.000521	280.41%
Be 313.042†	-68.3	-0.00009	mg/L	0.000026	-0.00009	mg/L	0.000026	28.41%
Ca 317.933†	15.5	0.00153	mg/L	0.001009	0.00153	mg/L	0.001009	66.05%
Cd 228.802†	-19.3	-0.00052	mg/L	0.000077	-0.00052	mg/L	0.000077	14.77%
Co 228.616†	0.1	0.00000	mg/L	0.000100	0.00000	mg/L	0.000100	>999.9%
Cr 267.716†	14.4	0.00188	mg/L	0.000961	0.00188	mg/L	0.000961	51.25%
Cu 324.752†	-6.1	-0.00003	mg/L	0.000059	-0.00003	mg/L	0.000059	203.56%
Fe 273.955†	1.3	0.00064	mg/L	0.001185	0.00064	mg/L	0.001185	184.44%
K 766.490†	-15.5	-0.00709	mg/L	0.008928	-0.00709	mg/L	0.008928	126.00%
Mg 279.077†	12.5	0.01305	mg/L	0.009669	0.01305	mg/L	0.009669	74.06%
Mn 257.610†	-28.1	-0.00044	mg/L	0.000140	-0.00044	mg/L	0.000140	32.08%
Mo 202.031†	2.7	0.00014	mg/L	0.000158	0.00014	mg/L	0.000158	112.98%
Na 589.592†	39.9	0.00361	mg/L	0.001984	0.00361	mg/L	0.001984	55.03%
Na 330.237†	32.2	1.114	mg/L	0.5464	1.114	mg/L	0.5464	49.05%
Ni 231.604†	3.4	0.00090	mg/L	0.000712	0.00090	mg/L	0.000712	79.47%
Pb 220.353†	-3.8	-0.00042	mg/L	0.000293	-0.00042	mg/L	0.000293	69.00%
Sb 206.836†	0.3	0.00017	mg/L	0.000478	0.00017	mg/L	0.000478	289.78%
Se 196.026†	8.0	0.00587	mg/L	0.002399	0.00587	mg/L	0.002399	40.87%
Si 288.158†	23.1	0.01063	mg/L	0.005258	0.01063	mg/L	0.005258	49.47%
Sn 189.927†	-1.9	-0.00046	mg/L	0.000479	-0.00046	mg/L	0.000479	103.77%
Sr 421.552†	16.5	0.00002	mg/L	0.000053	0.00002	mg/L	0.000053	278.64%
Ti 334.903†	-28.2	-0.00095	mg/L	0.000506	-0.00095	mg/L	0.000506	53.00%
Tl 190.801†	-0.5	-0.00021	mg/L	0.002966	-0.00021	mg/L	0.002966	>999.9%
V 292.402†	-30.1	-0.00019	mg/L	0.000062	-0.00019	mg/L	0.000062	32.44%
Zn 206.200†	0.7	0.00021	mg/L	0.002143	0.00021	mg/L	0.002143	996.87%

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Sequence No.: 51 **Autosampler Location: 374**
Sample ID: 21A0402-31 **Date Collected: 2/4/2021 6:55:22 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0402-31

Analyte	**Back Pressure**	**Flow**
All	241.0 kPa	0.65 L/min

Mean Data: 21A0402-31

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2708501.7	106.7	%	0.82				0.77%
ScR 361.383	306881.6	109.2	%	0.65				0.59%
Ag 328.068†	-893.0	-0.00179	mg/L	0.000335	-0.00358	mg/L	0.000670	18.71%
Al 308.215†	185102.7	108.9	mg/L	0.59	217.7	mg/L	1.18	0.54%
As 188.979†	562.1	0.3667	mg/L	0.00579	0.7334	mg/L	0.01159	1.58%
B 249.677†	313.6	0.03750	mg/L	0.001804	0.07499	mg/L	0.003608	4.81%
Ba 233.527†	4140.2	0.4298	mg/L	0.00306	0.8595	mg/L	0.00611	0.71%
Be 313.042†	1740.5	0.00199	mg/L	0.000039	0.00397	mg/L	0.000079	1.98%
Ca 317.933†	470948.2	46.79	mg/L	0.705	93.57	mg/L	1.410	1.51%
Cd 228.802†	180.1	0.00021	mg/L	0.000085	0.00042	mg/L	0.000169	39.94%
Co 228.616†	3499.6	0.06367	mg/L	0.000805	0.1273	mg/L	0.00161	1.26%
Cr 267.716†	2143.2	0.2810	mg/L	0.00226	0.5619	mg/L	0.00452	0.80%
Cu 324.752†	46056.9	0.2230	mg/L	0.00201	0.4461	mg/L	0.00401	0.90%
Fe 273.955†	395328.6	195.0	mg/L	2.12	390.0	mg/L	4.24	1.09%
K 766.490†	14854.6	6.807	mg/L	0.0554	13.61	mg/L	0.111	0.81%
Mg 279.077†	49283.6	50.84	mg/L	0.641	101.7	mg/L	1.28	1.26%
Mn 257.610†	204488.7	3.174	mg/L	0.0160	6.347	mg/L	0.0321	0.51%
Mo 202.031†	95.2	0.00460	mg/L	0.000527	0.00919	mg/L	0.001054	11.47%
Na 589.592†	55407.9	5.001	mg/L	0.0288	10.00	mg/L	0.058	0.58%
Na 330.237†	171.8	5.946	mg/L	0.1296	11.89	mg/L	0.259	2.18%
Ni 231.604†	1068.9	0.2824	mg/L	0.00469	0.5647	mg/L	0.00939	1.66%
Pb 220.353†	511.5	0.07111	mg/L	0.000951	0.1422	mg/L	0.00190	1.34%
Sb 206.836†	17.3	0.03044	mg/L	0.001117	0.06088	mg/L	0.002235	3.67%
Se 196.026†	-16.6	0.01433	mg/L	0.004973	0.02867	mg/L	0.009946	34.70%
Si 288.158†	4420.8	2.007	mg/L	0.0141	4.013	mg/L	0.0283	0.71%
Sn 189.927†	-56.1	-0.00367	mg/L	0.002169	-0.00735	mg/L	0.004338	59.03%
Sr 421.552†	260044.8	0.2984	mg/L	0.00238	0.5969	mg/L	0.00476	0.80%
Ti 334.903†	183239.7	6.200	mg/L	0.0343	12.40	mg/L	0.069	0.55%
Tl 190.801†	-41.8	0.00631	mg/L	0.005893	0.01261	mg/L	0.011786	93.45%
V 292.402†	54947.5	0.3712	mg/L	0.00594	0.7424	mg/L	0.01189	1.60%
Zn 206.200†	1541.7	0.4718	mg/L	0.00837	0.9437	mg/L	0.01675	1.77%

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Sequence No.: 52
Sample ID: 21A0402-32

Dilution: 2X
Wash Time: 37

Autosampler Location: 375
Date Collected: 2/4/2021 6:58:11 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0402-32

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-32

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2671322.0	105.2	%	0.67				0.63%
ScR 361.383	300296.0	106.8	%	1.78				1.66%
Ag 328.068†	-549.2	-0.00126	mg/L	0.000263	-0.00253	mg/L	0.000525	20.76%
Al 308.215†	122684.9	72.15	mg/L	0.605	144.3	mg/L	1.21	0.84%
As 188.979†	38.8	0.03802	mg/L	0.001810	0.07605	mg/L	0.003620	4.76%
B 249.677†	140.0	0.01517	mg/L	0.001199	0.03034	mg/L	0.002397	7.90%
Ba 233.527†	2884.7	0.3013	mg/L	0.00545	0.6025	mg/L	0.01090	1.81%
Be 313.042†	883.5	0.00092	mg/L	0.000057	0.00185	mg/L	0.000113	6.15%
Ca 317.933†	328121.7	32.60	mg/L	0.412	65.20	mg/L	0.825	1.26%
Cd 228.802†	80.0	0.00093	mg/L	0.000119	0.00185	mg/L	0.000238	12.83%
Co 228.616†	2497.9	0.04409	mg/L	0.000317	0.08817	mg/L	0.000635	0.72%
Cr 267.716†	1920.5	0.2514	mg/L	0.00368	0.5028	mg/L	0.00735	1.46%
Cu 324.752†	28776.1	0.1377	mg/L	0.00156	0.2754	mg/L	0.00312	1.13%
Fe 273.955†	215155.8	106.1	mg/L	1.09	212.3	mg/L	2.18	1.02%
K 766.490†	8405.9	3.852	mg/L	0.0733	7.704	mg/L	0.1466	1.90%
Mg 279.077†	49339.0	51.09	mg/L	0.760	102.2	mg/L	1.52	1.49%
Mn 257.610†	84270.6	1.308	mg/L	0.0111	2.615	mg/L	0.0222	0.85%
Mo 202.031†	63.5	0.00304	mg/L	0.000321	0.00609	mg/L	0.000642	10.54%
Na 589.592†	25093.8	2.265	mg/L	0.0324	4.530	mg/L	0.0649	1.43%
Na 330.237†	90.1	3.116	mg/L	0.2114	6.233	mg/L	0.4228	6.78%
Ni 231.604†	1234.8	0.3262	mg/L	0.00407	0.6523	mg/L	0.00815	1.25%
Pb 220.353†	2964.1	0.3504	mg/L	0.00181	0.7007	mg/L	0.00362	0.52%
Sb 206.836†	-10.6	0.01305	mg/L	0.003375	0.02611	mg/L	0.006750	25.86%
Se 196.026†	-1.3	0.01398	mg/L	0.001878	0.02797	mg/L	0.003756	13.43%
Si 288.158†	7192.4	3.285	mg/L	0.0286	6.570	mg/L	0.0572	0.87%
Sn 189.927†	-28.3	0.00041	mg/L	0.001343	0.00082	mg/L	0.002685	327.77%
Sr 421.552†	141527.1	0.1624	mg/L	0.00162	0.3248	mg/L	0.00325	1.00%
Ti 334.903†	158806.4	5.373	mg/L	0.0319	10.75	mg/L	0.064	0.59%
Tl 190.801†	-23.7	0.00263	mg/L	0.003487	0.00525	mg/L	0.006973	132.80%
V 292.402†	41276.3	0.2778	mg/L	0.00390	0.5557	mg/L	0.00780	1.40%
Zn 206.200†	818.8	0.2511	mg/L	0.00306	0.5021	mg/L	0.00612	1.22%

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Sequence No.: 53 **Autosampler Location: 376**
Sample ID: 21A0402-33 **Date Collected: 2/4/2021 7:00:59 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0402-33

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0402-33

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2674190.4	105.4	%	0.55				0.52%
ScR 361.383	301763.6	107.3	%	2.48				2.31%
Ag 328.068†	-694.3	-0.00160	mg/L	0.000083	-0.00319	mg/L	0.000165	5.17%
Al 308.215†	156685.6	92.15	mg/L	1.111	184.3	mg/L	2.22	1.21%
As 188.979†	6.5	0.02273	mg/L	0.003583	0.04546	mg/L	0.007166	15.76%
B 249.677†	129.4	0.01463	mg/L	0.001301	0.02926	mg/L	0.002601	8.89%
Ba 233.527†	3233.5	0.3363	mg/L	0.00847	0.6726	mg/L	0.01694	2.52%
Be 313.042†	1188.3	0.00128	mg/L	0.000090	0.00256	mg/L	0.000180	7.04%
Ca 317.933†	424525.1	42.18	mg/L	0.959	84.35	mg/L	1.918	2.27%
Cd 228.802†	55.5	-0.00003	mg/L	0.000316	-0.00006	mg/L	0.000632	>999.9%
Co 228.616†	3148.9	0.05597	mg/L	0.000251	0.1119	mg/L	0.00050	0.45%
Cr 267.716†	2462.0	0.3224	mg/L	0.00737	0.6448	mg/L	0.01474	2.29%
Cu 324.752†	24961.6	0.1219	mg/L	0.00117	0.2437	mg/L	0.00234	0.96%
Fe 273.955†	283480.7	139.8	mg/L	2.00	279.7	mg/L	4.00	1.43%
K 766.490†	14807.3	6.786	mg/L	0.0554	13.57	mg/L	0.111	0.82%
Mg 279.077†	60790.2	62.93	mg/L	1.222	125.9	mg/L	2.44	1.94%
Mn 257.610†	141853.3	2.202	mg/L	0.0184	4.403	mg/L	0.0367	0.83%
Mo 202.031†	33.7	0.00137	mg/L	0.000370	0.00275	mg/L	0.000740	26.93%
Na 589.592†	31900.8	2.879	mg/L	0.0015	5.758	mg/L	0.0031	0.05%
Na 330.237†	88.4	3.058	mg/L	0.6129	6.117	mg/L	1.2258	20.04%
Ni 231.604†	1403.5	0.3707	mg/L	0.00974	0.7415	mg/L	0.01949	2.63%
Pb 220.353†	15.3	0.01507	mg/L	0.001264	0.03015	mg/L	0.002528	8.39%
Sb 206.836†	-16.6	0.01385	mg/L	0.003953	0.02770	mg/L	0.007907	28.55%
Se 196.026†	-8.4	0.01345	mg/L	0.007855	0.02689	mg/L	0.015709	58.42%
Si 288.158†	4405.5	1.998	mg/L	0.0406	3.996	mg/L	0.0812	2.03%
Sn 189.927†	-47.6	-0.00239	mg/L	0.003444	-0.00478	mg/L	0.006889	143.97%
Sr 421.552†	177840.0	0.2041	mg/L	0.00182	0.4082	mg/L	0.00364	0.89%
Ti 334.903†	192941.6	6.528	mg/L	0.0514	13.06	mg/L	0.103	0.79%
Tl 190.801†	-45.4	-0.00239	mg/L	0.004674	-0.00478	mg/L	0.009348	195.62%
V 292.402†	48624.2	0.3278	mg/L	0.00285	0.6556	mg/L	0.00570	0.87%
Zn 206.200†	811.1	0.2484	mg/L	0.00433	0.4967	mg/L	0.00865	1.74%

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Analysis Begun

Start Time: 2/4/2021 7:03:52 PM
Plasma On Time: 2/4/2021 12:44:21 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0204.sif
Batch ID:
Results Data Set: I2210204
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 377
Sample ID: 21A0346-01
Date Collected: 2/4/2021 7:04:02 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: 21A0346-01

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: 21A0346-01

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2664455.0	105.0	%	0.82				0.78%
ScR 361.383	298605.1	106.2	%	0.28				0.26%
Ag 328.068†	167.3	0.00038	mg/L	0.000031	0.00038	mg/L	0.000031	8.12%
Al 308.215†	633.7	0.3662	mg/L	0.00526	0.3662	mg/L	0.00526	1.44%
As 188.979†	7.3	0.00476	mg/L	0.002714	0.00476	mg/L	0.002714	57.01%
B 249.677†	312.7	0.03462	mg/L	0.001355	0.03462	mg/L	0.001355	3.91%
Ba 233.527†	660.3	0.07022	mg/L	0.000759	0.07022	mg/L	0.000759	1.08%
Be 313.042†	-61.6	-0.00008	mg/L	0.000018	-0.00008	mg/L	0.000018	22.01%
Ca 317.933†	319034.2	31.69	mg/L	0.433	31.69	mg/L	0.433	1.37%
Cd 228.802†	6.7	0.00000	mg/L	0.000109	0.00000	mg/L	0.000109	>999.9%
Co 228.616†	5.7	0.00007	mg/L	0.000023	0.00007	mg/L	0.000023	31.18%
Cr 267.716†	31.5	0.00454	mg/L	0.001134	0.00454	mg/L	0.001134	25.00%
Cu 324.752†	4029.2	0.01850	mg/L	0.000539	0.01850	mg/L	0.000539	2.91%
Fe 273.955†	1426.0	0.7034	mg/L	0.00445	0.7034	mg/L	0.00445	0.63%
K 766.490†	4783.0	2.192	mg/L	0.0363	2.192	mg/L	0.0363	1.66%
Mg 279.077†	7694.9	7.999	mg/L	0.1631	7.999	mg/L	0.1631	2.04%
Mn 257.610†	3770.4	0.05855	mg/L	0.000620	0.05855	mg/L	0.000620	1.06%
Mo 202.031†	84.2	0.00414	mg/L	0.000447	0.00414	mg/L	0.000447	10.78%
Na 589.592†	261255.3	23.58	mg/L	0.278	23.58	mg/L	0.278	1.18%
Na 330.237†	748.2	25.89	mg/L	0.379	25.89	mg/L	0.379	1.47%
Ni 231.604†	17.1	0.00451	mg/L	0.004010	0.00451	mg/L	0.004010	88.91%
Pb 220.353†	23.6	0.00271	mg/L	0.001910	0.00271	mg/L	0.001910	70.39%
Sb 206.836†	12.5	0.00652	mg/L	0.005275	0.00652	mg/L	0.005275	80.91%
Se 196.026†	17.5	0.01294	mg/L	0.002267	0.01294	mg/L	0.002267	17.52%
Si 288.158†	14577.1	6.704	mg/L	0.0915	6.704	mg/L	0.0915	1.37%
Sn 189.927†	8.3	0.00314	mg/L	0.000702	0.00314	mg/L	0.000702	22.37%
Sr 421.552†	239342.8	0.2747	mg/L	0.00324	0.2747	mg/L	0.00324	1.18%
Ti 334.903†	583.2	0.01767	mg/L	0.000152	0.01767	mg/L	0.000152	0.86%
Tl 190.801†	-5.6	-0.00230	mg/L	0.000581	-0.00230	mg/L	0.000581	25.25%
V 292.402†	269.8	0.00184	mg/L	0.000141	0.00184	mg/L	0.000141	7.63%
Zn 206.200†	244.1	0.07599	mg/L	0.001710	0.07599	mg/L	0.001710	2.25%

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Sequence No.: 2
Sample ID: 21A0346-03

Dilution: 1X
Wash Time: 37

Autosampler Location: 378
Date Collected: 2/4/2021 7:07:03 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0346-03

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0346-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2678027.2	105.5	%	0.43				0.41%
ScR 361.383	296750.6	105.5	%	0.48				0.46%
Ag 328.068†	115.0	0.00011	mg/L	0.000175	0.00011	mg/L	0.000175	163.00%
Al 308.215†	343.1	0.1962	mg/L	0.00594	0.1962	mg/L	0.00594	3.03%
As 188.979†	0.6	0.00065	mg/L	0.002277	0.00065	mg/L	0.002277	352.60%
B 249.677†	333.6	0.03782	mg/L	0.001195	0.03782	mg/L	0.001195	3.16%
Ba 233.527†	460.4	0.04888	mg/L	0.000404	0.04888	mg/L	0.000404	0.83%
Be 313.042†	-63.3	-0.00008	mg/L	0.000042	-0.00008	mg/L	0.000042	49.39%
Ca 317.933†	317746.6	31.57	mg/L	0.502	31.57	mg/L	0.502	1.59%
Cd 228.802†	-2.3	-0.00022	mg/L	0.000288	-0.00022	mg/L	0.000288	133.19%
Co 228.616†	-8.0	-0.00020	mg/L	0.000061	-0.00020	mg/L	0.000061	29.87%
Cr 267.716†	18.7	0.00285	mg/L	0.000681	0.00285	mg/L	0.000681	23.91%
Cu 324.752†	2535.3	0.01159	mg/L	0.000276	0.01159	mg/L	0.000276	2.39%
Fe 273.955†	648.4	0.3198	mg/L	0.00120	0.3198	mg/L	0.00120	0.38%
K 766.490†	5112.1	2.343	mg/L	0.0240	2.343	mg/L	0.0240	1.03%
Mg 279.077†	7499.7	7.797	mg/L	0.1082	7.797	mg/L	0.1082	1.39%
Mn 257.610†	2044.2	0.03174	mg/L	0.000214	0.03174	mg/L	0.000214	0.67%
Mo 202.031†	89.1	0.00440	mg/L	0.000419	0.00440	mg/L	0.000419	9.53%
Na 589.592†	262215.3	23.67	mg/L	0.226	23.67	mg/L	0.226	0.96%
Na 330.237†	757.2	26.20	mg/L	0.383	26.20	mg/L	0.383	1.46%
Ni 231.604†	4.6	0.00121	mg/L	0.002225	0.00121	mg/L	0.002225	183.60%
Pb 220.353†	-5.5	-0.00062	mg/L	0.001178	-0.00062	mg/L	0.001178	188.52%
Sb 206.836†	11.1	0.00570	mg/L	0.003072	0.00570	mg/L	0.003072	53.93%
Se 196.026†	12.4	0.00917	mg/L	0.005137	0.00917	mg/L	0.005137	55.99%
Si 288.158†	12480.3	5.740	mg/L	0.0513	5.740	mg/L	0.0513	0.89%
Sn 189.927†	-0.6	0.00099	mg/L	0.001477	0.00099	mg/L	0.001477	148.86%
Sr 421.552†	223267.8	0.2562	mg/L	0.00244	0.2562	mg/L	0.00244	0.95%
Ti 334.903†	254.2	0.00654	mg/L	0.000515	0.00654	mg/L	0.000515	7.87%
Tl 190.801†	-0.8	-0.00029	mg/L	0.003511	-0.00029	mg/L	0.003511	>999.9%
V 292.402†	101.2	0.00070	mg/L	0.000202	0.00070	mg/L	0.000202	28.87%
Zn 206.200†	76.1	0.02443	mg/L	0.000510	0.02443	mg/L	0.000510	2.09%

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Sequence No.: 3 **Autosampler Location: 379**
Sample ID: 21A0346-05 **Date Collected: 2/4/2021 7:09:57 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0346-05

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0346-05

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2673046.1	105.3	%	0.47				0.44%
ScR 361.383	298239.2	106.1	%	0.79				0.75%
Ag 328.068†	118.5	0.00013	mg/L	0.000073	0.00013	mg/L	0.000073	57.66%
Al 308.215†	321.7	0.1835	mg/L	0.00886	0.1835	mg/L	0.00886	4.83%
As 188.979†	5.3	0.00354	mg/L	0.001338	0.00354	mg/L	0.001338	37.79%
B 249.677†	289.5	0.03225	mg/L	0.001791	0.03225	mg/L	0.001791	5.55%
Ba 233.527†	248.0	0.02616	mg/L	0.000183	0.02616	mg/L	0.000183	0.70%
Be 313.042†	-74.7	-0.00010	mg/L	0.000030	-0.00010	mg/L	0.000030	30.39%
Ca 317.933†	318303.2	31.62	mg/L	0.270	31.62	mg/L	0.270	0.85%
Cd 228.802†	5.2	-0.00003	mg/L	0.000155	-0.00003	mg/L	0.000155	617.00%
Co 228.616†	-16.1	-0.00038	mg/L	0.000070	-0.00038	mg/L	0.000070	18.20%
Cr 267.716†	25.9	0.00379	mg/L	0.000997	0.00379	mg/L	0.000997	26.30%
Cu 324.752†	2128.3	0.00970	mg/L	0.000195	0.00970	mg/L	0.000195	2.01%
Fe 273.955†	632.5	0.3120	mg/L	0.00319	0.3120	mg/L	0.00319	1.02%
K 766.490†	7639.5	3.501	mg/L	0.0100	3.501	mg/L	0.0100	0.28%
Mg 279.077†	7674.7	7.979	mg/L	0.0639	7.979	mg/L	0.0639	0.80%
Mn 257.610†	1323.9	0.02056	mg/L	0.000154	0.02056	mg/L	0.000154	0.75%
Mo 202.031†	86.6	0.00427	mg/L	0.000091	0.00427	mg/L	0.000091	2.13%
Na 589.592†	274125.3	24.74	mg/L	0.182	24.74	mg/L	0.182	0.73%
Na 330.237†	795.0	27.51	mg/L	0.292	27.51	mg/L	0.292	1.06%
Ni 231.604†	11.6	0.00306	mg/L	0.002544	0.00306	mg/L	0.002544	83.26%
Pb 220.353†	1.6	0.00020	mg/L	0.000799	0.00020	mg/L	0.000799	400.72%
Sb 206.836†	11.3	0.00583	mg/L	0.003224	0.00583	mg/L	0.003224	55.31%
Se 196.026†	13.4	0.00989	mg/L	0.005177	0.00989	mg/L	0.005177	52.35%
Si 288.158†	12812.1	5.893	mg/L	0.0693	5.893	mg/L	0.0693	1.18%
Sn 189.927†	5.6	0.00247	mg/L	0.000704	0.00247	mg/L	0.000704	28.54%
Sr 421.552†	175315.1	0.2012	mg/L	0.00125	0.2012	mg/L	0.00125	0.62%
Ti 334.903†	252.7	0.00648	mg/L	0.000200	0.00648	mg/L	0.000200	3.08%
Tl 190.801†	-3.6	-0.00147	mg/L	0.001770	-0.00147	mg/L	0.001770	120.21%
V 292.402†	112.8	0.00078	mg/L	0.000304	0.00078	mg/L	0.000304	38.99%
Zn 206.200†	69.8	0.02252	mg/L	0.001322	0.02252	mg/L	0.001322	5.87%

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Sequence No.: 4 **Autosampler Location: 380**
Sample ID: 21A0346-07 **Date Collected: 2/4/2021 7:12:51 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0346-07

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0346-07

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2666818.7	105.1	%	0.57				0.54%
ScR 361.383	295362.7	105.1	%	1.44				1.37%
Ag 328.068†	95.8	0.00001	mg/L	0.000118	0.00001	mg/L	0.000118	891.37%
Al 308.215†	703.2	0.4070	mg/L	0.01152	0.4070	mg/L	0.01152	2.83%
As 188.979†	8.4	0.00544	mg/L	0.001780	0.00544	mg/L	0.001780	32.72%
B 249.677†	321.4	0.03564	mg/L	0.000839	0.03564	mg/L	0.000839	2.35%
Ba 233.527†	660.2	0.07021	mg/L	0.001379	0.07021	mg/L	0.001379	1.96%
Be 313.042†	-76.2	-0.00010	mg/L	0.000039	-0.00010	mg/L	0.000039	38.62%
Ca 317.933†	316815.4	31.47	mg/L	0.451	31.47	mg/L	0.451	1.43%
Cd 228.802†	5.2	-0.00004	mg/L	0.000022	-0.00004	mg/L	0.000022	51.45%
Co 228.616†	-2.1	-0.00010	mg/L	0.000049	-0.00010	mg/L	0.000049	47.39%
Cr 267.716†	32.8	0.00470	mg/L	0.000821	0.00470	mg/L	0.000821	17.48%
Cu 324.752†	4008.7	0.01841	mg/L	0.000488	0.01841	mg/L	0.000488	2.65%
Fe 273.955†	1486.6	0.7332	mg/L	0.01475	0.7332	mg/L	0.01475	2.01%
K 766.490†	4736.3	2.170	mg/L	0.0027	2.170	mg/L	0.0027	0.12%
Mg 279.077†	7598.9	7.899	mg/L	0.0984	7.899	mg/L	0.0984	1.25%
Mn 257.610†	3792.1	0.05888	mg/L	0.001173	0.05888	mg/L	0.001173	1.99%
Mo 202.031†	86.2	0.00425	mg/L	0.000468	0.00425	mg/L	0.000468	11.00%
Na 589.592†	263452.7	23.78	mg/L	0.167	23.78	mg/L	0.167	0.70%
Na 330.237†	757.4	26.21	mg/L	0.331	26.21	mg/L	0.331	1.26%
Ni 231.604†	13.8	0.00366	mg/L	0.000221	0.00366	mg/L	0.000221	6.04%
Pb 220.353†	21.7	0.00251	mg/L	0.000570	0.00251	mg/L	0.000570	22.72%
Sb 206.836†	14.5	0.00751	mg/L	0.002676	0.00751	mg/L	0.002676	35.61%
Se 196.026†	13.0	0.00970	mg/L	0.001341	0.00970	mg/L	0.001341	13.82%
Si 288.158†	14728.4	6.774	mg/L	0.0690	6.774	mg/L	0.0690	1.02%
Sn 189.927†	5.0	0.00235	mg/L	0.000593	0.00235	mg/L	0.000593	25.18%
Sr 421.552†	240201.8	0.2757	mg/L	0.00207	0.2757	mg/L	0.00207	0.75%
Ti 334.903†	615.7	0.01878	mg/L	0.000452	0.01878	mg/L	0.000452	2.41%
Tl 190.801†	1.1	0.00055	mg/L	0.003239	0.00055	mg/L	0.003239	592.69%
V 292.402†	280.6	0.00192	mg/L	0.000199	0.00192	mg/L	0.000199	10.36%
Zn 206.200†	245.7	0.07649	mg/L	0.001159	0.07649	mg/L	0.001159	1.52%

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Sequence No.: 5
Sample ID: 21A0323-01

Dilution: 10X
Wash Time: 37

Autosampler Location: 381
Date Collected: 2/4/2021 7:15:45 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0323-01

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0323-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2693141.8	106.1	%	0.54				0.51%
ScR 361.383	297423.6	105.8	%	1.52				1.44%
Ag 328.068†	-1161.8	-0.00317	mg/L	0.000388	-0.03166	mg/L	0.003877	12.25%
Al 308.215†	169662.1	99.78	mg/L	0.762	997.8	mg/L	7.62	0.76%
As 188.979†	-19.5	0.01578	mg/L	0.002673	0.1578	mg/L	0.02673	16.94%
B 249.677†	147.4	0.01755	mg/L	0.000535	0.1755	mg/L	0.00535	3.05%
Ba 233.527†	6266.1	0.6576	mg/L	0.01231	6.576	mg/L	0.1231	1.87%
Be 313.042†	3666.0	0.00457	mg/L	0.000115	0.04569	mg/L	0.001150	2.52%
Ca 317.933†	373320.7	37.09	mg/L	0.630	370.9	mg/L	6.30	1.70%
Cd 228.802†	69.2	-0.00010	mg/L	0.000105	-0.00098	mg/L	0.001050	107.64%
Co 228.616†	6207.3	0.1209	mg/L	0.00064	1.209	mg/L	0.0064	0.53%
Cr 267.716†	2425.5	0.3178	mg/L	0.00444	3.178	mg/L	0.0444	1.40%
Cu 324.752†	46436.9	0.2242	mg/L	0.00188	2.242	mg/L	0.0188	0.84%
Fe 273.955†	381636.6	188.2	mg/L	1.20	1882	mg/L	12.00	0.64%
K 766.490†	26708.5	12.24	mg/L	0.091	122.4	mg/L	0.91	0.75%
Mg 279.077†	25725.2	26.34	mg/L	0.378	263.4	mg/L	3.78	1.44%
Mn 257.610†	221523.2	3.438	mg/L	0.0320	34.38	mg/L	0.320	0.93%
Mo 202.031†	15.4	0.00048	mg/L	0.000010	0.00475	mg/L	0.000097	2.04%
Na 589.592†	44860.2	4.049	mg/L	0.0421	40.49	mg/L	0.421	1.04%
Na 330.237†	114.7	3.969	mg/L	0.2105	39.69	mg/L	2.105	5.30%
Ni 231.604†	1388.9	0.3669	mg/L	0.00627	3.669	mg/L	0.0627	1.71%
Pb 220.353†	398.9	0.05627	mg/L	0.002407	0.5627	mg/L	0.02407	4.28%
Sb 206.836†	-9.7	0.02225	mg/L	0.002908	0.2225	mg/L	0.02908	13.07%
Se 196.026†	-7.2	0.02099	mg/L	0.005323	0.2099	mg/L	0.05323	25.37%
Si 288.158†	1485.9	0.6486	mg/L	0.01316	6.486	mg/L	0.1316	2.03%
Sn 189.927†	-51.5	-0.00235	mg/L	0.001284	-0.02350	mg/L	0.012842	54.64%
Sr 421.552†	558635.1	0.6411	mg/L	0.00558	6.411	mg/L	0.0558	0.87%
Ti 334.903†	238973.7	8.087	mg/L	0.0315	80.87	mg/L	0.315	0.39%
Tl 190.801†	-38.3	0.00686	mg/L	0.005196	0.06856	mg/L	0.051957	75.78%
V 292.402†	40694.9	0.2759	mg/L	0.00251	2.759	mg/L	0.0251	0.91%
Zn 206.200†	1545.2	0.4726	mg/L	0.00623	4.726	mg/L	0.0623	1.32%

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Sequence No.: 6
Sample ID: BJB0056-PS1

Dilution: 2X
Wash Time: 37

Autosampler Location: 382
Date Collected: 2/4/2021 7:18:34 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BJB0056-PS1

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BJB0056-PS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2682855.2	105.7	%	0.78				0.73%
ScR 361.383	303689.9	108.0	%	0.89				0.83%
Ag 328.068†	-674.8	-0.00146	mg/L	0.000103	-0.00292	mg/L	0.000206	7.04%
Al 308.215†	183690.6	108.0	mg/L	0.70	216.1	mg/L	1.40	0.65%
As 188.979†	10.7	0.02419	mg/L	0.003314	0.04838	mg/L	0.006628	13.70%
B 249.677†	85.7	0.00896	mg/L	0.002051	0.01792	mg/L	0.004101	22.89%
Ba 233.527†	4911.1	0.5170	mg/L	0.00203	1.034	mg/L	0.0041	0.39%
Be 313.042†	1008.9	0.00103	mg/L	0.000018	0.00205	mg/L	0.000035	1.72%
Ca 317.933†	262471.2	26.08	mg/L	0.391	52.15	mg/L	0.782	1.50%
Cd 228.802†	72.2	0.00058	mg/L	0.000209	0.00115	mg/L	0.000419	36.36%
Co 228.616†	3237.2	0.05686	mg/L	0.000284	0.1137	mg/L	0.00057	0.50%
Cr 267.716†	2531.9	0.3312	mg/L	0.00093	0.6624	mg/L	0.00186	0.28%
Cu 324.752†	19952.7	0.09767	mg/L	0.001126	0.1953	mg/L	0.00225	1.15%
Fe 273.955†	246169.9	121.4	mg/L	0.62	242.8	mg/L	1.24	0.51%
K 766.490†	7290.9	3.341	mg/L	0.0127	6.682	mg/L	0.0254	0.38%
Mg 279.077†	37953.3	39.21	mg/L	0.563	78.43	mg/L	1.127	1.44%
Mn 257.610†	93943.5	1.458	mg/L	0.0127	2.915	mg/L	0.0254	0.87%
Mo 202.031†	61.8	0.00302	mg/L	0.000570	0.00603	mg/L	0.001141	18.91%
Na 589.592†	11241.3	1.015	mg/L	0.0153	2.029	mg/L	0.0307	1.51%
Na 330.237†	44.8	1.550	mg/L	0.1761	3.101	mg/L	0.3522	11.36%
Ni 231.604†	854.3	0.2264	mg/L	0.00028	0.4529	mg/L	0.00056	0.12%
Pb 220.353†	123.1	0.03392	mg/L	0.001143	0.06784	mg/L	0.002287	3.37%
Sb 206.836†	3621.5	1.891	mg/L	0.0186	3.782	mg/L	0.0371	0.98%
Se 196.026†	-10.6	0.00963	mg/L	0.001713	0.01926	mg/L	0.003426	17.79%
Si 288.158†	5249.9	2.384	mg/L	0.0251	4.767	mg/L	0.0502	1.05%
Sn 189.927†	-57.0	-0.00216	mg/L	0.000451	-0.00432	mg/L	0.000901	20.89%
Sr 421.552†	129037.8	0.1481	mg/L	0.00128	0.2962	mg/L	0.00256	0.87%
Ti 334.903†	213981.3	7.241	mg/L	0.0278	14.48	mg/L	0.056	0.38%
Tl 190.801†	-34.9	-0.00040	mg/L	0.004079	-0.00081	mg/L	0.008159	>999.9%
V 292.402†	50194.9	0.3377	mg/L	0.00503	0.6753	mg/L	0.01006	1.49%
Zn 206.200†	806.6	0.2471	mg/L	0.00071	0.4942	mg/L	0.00142	0.29%

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Sequence No.: 7 **Autosampler Location: 7**
Sample ID: SEQ-CCVA **Date Collected: 2/4/2021 7:22:45 PM**
Data Type: Original
Dilution: 1X
Wash Time: 120 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCVA

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCVA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2651193.3	104.4	%	0.22				0.21%
ScR 361.383	292703.9	104.1	%	0.71				0.68%
Ag 328.068†	193263.8	1.000	mg/L	0.0045	1.000	mg/L	0.0045	0.45%
Al 308.215†	3352.3	1.937	mg/L	0.0035	1.937	mg/L	0.0035	0.18%
As 188.979†	3279.2	1.987	mg/L	0.0198	1.987	mg/L	0.0198	0.99%
B 249.677†	7704.3	0.9548	mg/L	0.00747	0.9548	mg/L	0.00747	0.78%
Ba 233.527†	9040.9	0.9657	mg/L	0.00591	0.9657	mg/L	0.00591	0.61%
Be 313.042†	717356.2	0.9475	mg/L	0.00331	0.9475	mg/L	0.00331	0.35%
Ca 317.933†	19391.6	1.926	mg/L	0.0210	1.926	mg/L	0.0210	1.09%
Cd 228.802†	35504.8	0.9811	mg/L	0.00687	0.9811	mg/L	0.00687	0.70%
Co 228.616†	42333.1	0.9482	mg/L	0.00198	0.9482	mg/L	0.00198	0.21%
Cr 267.716†	7339.7	0.9633	mg/L	0.00428	0.9633	mg/L	0.00428	0.44%
Cu 324.752†	209524.8	0.9660	mg/L	0.00564	0.9660	mg/L	0.00564	0.58%
Fe 273.955†	3949.4	1.940	mg/L	0.0137	1.940	mg/L	0.0137	0.70%
K 766.490†	42218.9	19.35	mg/L	0.080	19.35	mg/L	0.080	0.41%
Mg 279.077†	1818.6	1.894	mg/L	0.0245	1.894	mg/L	0.0245	1.30%
Mn 257.610†	62843.1	0.9762	mg/L	0.00751	0.9762	mg/L	0.00751	0.77%
Mo 202.031†	17875.8	0.9439	mg/L	0.00236	0.9439	mg/L	0.00236	0.25%
Na 589.592†	533531.9	48.15	mg/L	0.233	48.15	mg/L	0.233	0.48%
Na 330.237†	1446.2	50.04	mg/L	0.782	50.04	mg/L	0.782	1.56%
Ni 231.604†	3552.6	0.9381	mg/L	0.01032	0.9381	mg/L	0.01032	1.10%
Pb 220.353†	16786.8	1.924	mg/L	0.0142	1.924	mg/L	0.0142	0.74%
Sb 206.836†	3830.7	1.990	mg/L	0.0151	1.990	mg/L	0.0151	0.76%
Se 196.026†	2707.5	1.993	mg/L	0.0149	1.993	mg/L	0.0149	0.75%
Si 288.158†	4401.0	2.017	mg/L	0.0140	2.017	mg/L	0.0140	0.69%
Sn 189.927†	4054.8	0.9659	mg/L	0.00364	0.9659	mg/L	0.00364	0.38%
Sr 421.552†	839524.3	0.9634	mg/L	0.00258	0.9634	mg/L	0.00258	0.27%
Ti 334.903†	28788.5	0.9738	mg/L	0.00291	0.9738	mg/L	0.00291	0.30%
Tl 190.801†	4565.8	1.944	mg/L	0.0042	1.944	mg/L	0.0042	0.22%
V 292.402†	143829.9	0.9638	mg/L	0.00450	0.9638	mg/L	0.00450	0.47%
Zn 206.200†	3035.2	0.9286	mg/L	0.01235	0.9286	mg/L	0.01235	1.33%

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Sequence No.: 8 **Autosampler Location: 1**
Sample ID: SEQ-CCB9 **Date Collected: 2/4/2021 7:26:13 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB9

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCB9

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2725744.1	107.4	%	0.32				0.29%
ScR 361.383	303762.4	108.0	%	0.89				0.83%
Ag 328.068†	90.4	0.00047	mg/L	0.000121	0.00047	mg/L	0.000121	25.94%
Al 308.215†	10.6	0.00619	mg/L	0.006498	0.00619	mg/L	0.006498	105.05%
As 188.979†	1.2	0.00075	mg/L	0.002227	0.00075	mg/L	0.002227	297.46%
B 249.677†	12.7	0.00156	mg/L	0.000739	0.00156	mg/L	0.000739	47.31%
Ba 233.527†	1.1	0.00012	mg/L	0.000077	0.00012	mg/L	0.000077	63.83%
Be 313.042†	-90.0	-0.00012	mg/L	0.000027	-0.00012	mg/L	0.000027	22.85%
Ca 317.933†	16.3	0.00160	mg/L	0.001075	0.00160	mg/L	0.001075	67.00%
Cd 228.802†	-19.8	-0.00056	mg/L	0.000097	-0.00056	mg/L	0.000097	17.31%
Co 228.616†	1.6	0.00004	mg/L	0.000181	0.00004	mg/L	0.000181	476.57%
Cr 267.716†	15.6	0.00204	mg/L	0.000526	0.00204	mg/L	0.000526	25.85%
Cu 324.752†	-70.2	-0.00032	mg/L	0.000151	-0.00032	mg/L	0.000151	46.50%
Fe 273.955†	-0.1	-0.00004	mg/L	0.001312	-0.00004	mg/L	0.001312	>999.9%
K 766.490†	-12.1	-0.00555	mg/L	0.022588	-0.00555	mg/L	0.022588	406.78%
Mg 279.077†	3.5	0.00364	mg/L	0.008767	0.00364	mg/L	0.008767	240.67%
Mn 257.610†	-34.8	-0.00054	mg/L	0.000126	-0.00054	mg/L	0.000126	23.26%
Mo 202.031†	7.0	0.00037	mg/L	0.000092	0.00037	mg/L	0.000092	24.96%
Na 589.592†	60.5	0.00546	mg/L	0.003838	0.00546	mg/L	0.003838	70.28%
Na 330.237†	36.8	1.274	mg/L	0.3150	1.274	mg/L	0.3150	24.72%
Ni 231.604†	-4.7	-0.00124	mg/L	0.000569	-0.00124	mg/L	0.000569	46.03%
Pb 220.353†	-6.8	-0.00077	mg/L	0.000613	-0.00077	mg/L	0.000613	79.43%
Sb 206.836†	-2.5	-0.00130	mg/L	0.000420	-0.00130	mg/L	0.000420	32.39%
Se 196.026†	7.2	0.00532	mg/L	0.005188	0.00532	mg/L	0.005188	97.56%
Si 288.158†	40.4	0.01857	mg/L	0.003369	0.01857	mg/L	0.003369	18.14%
Sn 189.927†	0.7	0.00017	mg/L	0.000568	0.00017	mg/L	0.000568	335.21%
Sr 421.552†	11.5	0.00001	mg/L	0.000023	0.00001	mg/L	0.000023	172.27%
Ti 334.903†	-32.1	-0.00109	mg/L	0.000351	-0.00109	mg/L	0.000351	32.28%
Tl 190.801†	-2.7	-0.00117	mg/L	0.002464	-0.00117	mg/L	0.002464	210.97%
V 292.402†	-39.5	-0.00025	mg/L	0.000090	-0.00025	mg/L	0.000090	35.40%
Zn 206.200†	1.9	0.00059	mg/L	0.000700	0.00059	mg/L	0.000700	118.95%

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Sequence No.: 9 **Autosampler Location: 9**
Sample ID: RINSE - 1 **Date Collected: 2/4/2021 7:29:01 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: RINSE - 1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: RINSE - 1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2730632.0	107.6	%	1.31				1.22%
ScR 361.383	300883.9	107.0	%	1.12				1.05%
Ag 328.068†	32.7	0.00017	mg/L	0.000216	0.00017	mg/L	0.000216	127.72%
Al 308.215†	20.7	0.01217	mg/L	0.003066	0.01217	mg/L	0.003066	25.20%
As 188.979†	-1.5	-0.00091	mg/L	0.004290	-0.00091	mg/L	0.004290	471.97%
B 249.677†	16.5	0.00204	mg/L	0.000923	0.00204	mg/L	0.000923	45.18%
Ba 233.527†	-3.8	-0.00040	mg/L	0.000687	-0.00040	mg/L	0.000687	170.79%
Be 313.042†	-85.2	-0.00011	mg/L	0.000011	-0.00011	mg/L	0.000011	9.95%
Ca 317.933†	17.2	0.00169	mg/L	0.000854	0.00169	mg/L	0.000854	50.49%
Cd 228.802†	-13.8	-0.00038	mg/L	0.000125	-0.00038	mg/L	0.000125	32.90%
Co 228.616†	0.5	0.00001	mg/L	0.000096	0.00001	mg/L	0.000096	652.57%
Cr 267.716†	15.8	0.00207	mg/L	0.000981	0.00207	mg/L	0.000981	47.49%
Cu 324.752†	-87.7	-0.00040	mg/L	0.000102	-0.00040	mg/L	0.000102	25.28%
Fe 273.955†	0.6	0.00032	mg/L	0.001025	0.00032	mg/L	0.001025	323.37%
K 766.490†	-12.8	-0.00585	mg/L	0.015305	-0.00585	mg/L	0.015305	261.45%
Mg 279.077†	1.4	0.00149	mg/L	0.003606	0.00149	mg/L	0.003606	242.34%
Mn 257.610†	-32.1	-0.00050	mg/L	0.000071	-0.00050	mg/L	0.000071	14.23%
Mo 202.031†	-3.6	-0.00019	mg/L	0.000165	-0.00019	mg/L	0.000165	85.97%
Na 589.592†	18.1	0.00163	mg/L	0.006017	0.00163	mg/L	0.006017	368.96%
Na 330.237†	32.6	1.129	mg/L	0.3674	1.129	mg/L	0.3674	32.53%
Ni 231.604†	1.0	0.00027	mg/L	0.001126	0.00027	mg/L	0.001126	411.50%
Pb 220.353†	-6.2	-0.00071	mg/L	0.000168	-0.00071	mg/L	0.000168	23.85%
Sb 206.836†	-5.2	-0.00269	mg/L	0.002381	-0.00269	mg/L	0.002381	88.36%
Se 196.026†	7.9	0.00581	mg/L	0.007567	0.00581	mg/L	0.007567	130.17%
Si 288.158†	32.5	0.01496	mg/L	0.000875	0.01496	mg/L	0.000875	5.85%
Sn 189.927†	-1.2	-0.00028	mg/L	0.000521	-0.00028	mg/L	0.000521	187.75%
Sr 421.552†	-45.4	-0.00005	mg/L	0.000079	-0.00005	mg/L	0.000079	152.39%
Ti 334.903†	-39.8	-0.00135	mg/L	0.000471	-0.00135	mg/L	0.000471	34.92%
Tl 190.801†	-0.5	-0.00023	mg/L	0.000828	-0.00023	mg/L	0.000828	354.37%
V 292.402†	-32.0	-0.00020	mg/L	0.000053	-0.00020	mg/L	0.000053	26.18%
Zn 206.200†	3.9	0.00121	mg/L	0.000180	0.00121	mg/L	0.000180	14.85%

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Sequence No.: 10
Sample ID: RINSE - 2

Autosampler Location: 9
Date Collected: 2/4/2021 7:31:49 PM
Data Type: Original

Dilution: 1X
Wash Time: 37

Auto Dilution Factor: 1

Nebulizer Parameters: RINSE - 2

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: RINSE - 2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2718671.8	107.1	%	1.09				1.02%
ScR 361.383	302006.6	107.4	%	1.04				0.97%
Ag 328.068†	43.8	0.00023	mg/L	0.000248	0.00023	mg/L	0.000248	109.52%
Al 308.215†	19.4	0.01140	mg/L	0.006306	0.01140	mg/L	0.006306	55.30%
As 188.979†	-0.7	-0.00046	mg/L	0.001260	-0.00046	mg/L	0.001260	275.31%
B 249.677†	23.4	0.00289	mg/L	0.001563	0.00289	mg/L	0.001563	53.99%
Ba 233.527†	-7.6	-0.00081	mg/L	0.000560	-0.00081	mg/L	0.000560	69.29%
Be 313.042†	-102.5	-0.00014	mg/L	0.000030	-0.00014	mg/L	0.000030	22.10%
Ca 317.933†	22.9	0.00226	mg/L	0.000339	0.00226	mg/L	0.000339	14.97%
Cd 228.802†	-4.7	-0.00013	mg/L	0.000371	-0.00013	mg/L	0.000371	285.84%
Co 228.616†	9.9	0.00023	mg/L	0.000326	0.00023	mg/L	0.000326	144.50%
Cr 267.716†	19.4	0.00253	mg/L	0.001350	0.00253	mg/L	0.001350	53.34%
Cu 324.752†	-57.8	-0.00027	mg/L	0.000125	-0.00027	mg/L	0.000125	46.72%
Fe 273.955†	5.1	0.00253	mg/L	0.001292	0.00253	mg/L	0.001292	51.02%
K 766.490†	-48.0	-0.02198	mg/L	0.019625	-0.02198	mg/L	0.019625	89.28%
Mg 279.077†	8.3	0.00866	mg/L	0.009185	0.00866	mg/L	0.009185	106.01%
Mn 257.610†	-35.3	-0.00055	mg/L	0.000096	-0.00055	mg/L	0.000096	17.60%
Mo 202.031†	1.3	0.00007	mg/L	0.000245	0.00007	mg/L	0.000245	349.27%
Na 589.592†	36.5	0.00329	mg/L	0.006517	0.00329	mg/L	0.006517	197.96%
Na 330.237†	37.0	1.280	mg/L	0.1341	1.280	mg/L	0.1341	10.48%
Ni 231.604†	-4.5	-0.00118	mg/L	0.002153	-0.00118	mg/L	0.002153	182.02%
Pb 220.353†	-11.1	-0.00127	mg/L	0.000416	-0.00127	mg/L	0.000416	32.88%
Sb 206.836†	0.4	0.00021	mg/L	0.002254	0.00021	mg/L	0.002254	>999.9%
Se 196.026†	9.8	0.00720	mg/L	0.000548	0.00720	mg/L	0.000548	7.61%
Si 288.158†	35.4	0.01627	mg/L	0.004824	0.01627	mg/L	0.004824	29.64%
Sn 189.927†	-2.3	-0.00054	mg/L	0.001031	-0.00054	mg/L	0.001031	190.51%
Sr 421.552†	1.2	0.00000	mg/L	0.000049	0.00000	mg/L	0.000049	>999.9%
Ti 334.903†	-36.7	-0.00124	mg/L	0.000626	-0.00124	mg/L	0.000626	50.35%
Tl 190.801†	3.2	0.00137	mg/L	0.000503	0.00137	mg/L	0.000503	36.62%
V 292.402†	6.4	0.00005	mg/L	0.000493	0.00005	mg/L	0.000493	900.52%
Zn 206.200†	1.1	0.00034	mg/L	0.000193	0.00034	mg/L	0.000193	56.60%

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Sequence No.: 11
Sample ID: RINSE - 3

Dilution: 1X
Wash Time: 37

Autosampler Location: 9
Date Collected: 2/4/2021 7:34:37 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: RINSE - 3

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: RINSE - 3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1923698.8	75.79	%	54.613				72.06%
ScR 361.383	300922.8	107.0	%	3.72				3.47%
Ag 328.068†	300.3	0.00155	mg/L	0.002336	0.00155	mg/L	0.002336	150.35%
Al 308.215†	10.4	0.00594	mg/L	0.009985	0.00594	mg/L	0.009985	167.96%
As 188.979†	-50.0	-0.03038	mg/L	0.056475	-0.03038	mg/L	0.056475	185.90%
B 249.677†	13.5	0.00167	mg/L	0.000715	0.00167	mg/L	0.000715	42.73%
Ba 233.527†	-0.7	-0.00008	mg/L	0.001067	-0.00008	mg/L	0.001067	>999.9%
Be 313.042†	-104.3	-0.00014	mg/L	0.000078	-0.00014	mg/L	0.000078	55.76%
Ca 317.933†	12.0	0.00117	mg/L	0.000678	0.00117	mg/L	0.000678	57.84%
Cd 228.802†	192.7	0.00562	mg/L	0.014121	0.00562	mg/L	0.014121	251.18%
Co 228.616†	-77.5	-0.00174	mg/L	0.002830	-0.00174	mg/L	0.002830	163.00%
Cr 267.716†	17.6	0.00232	mg/L	0.000471	0.00232	mg/L	0.000471	20.31%
Cu 324.752†	3241.0	0.01495	mg/L	0.026712	0.01495	mg/L	0.026712	178.70%
Fe 273.955†	-0.9	-0.00048	mg/L	0.001065	-0.00048	mg/L	0.001065	221.16%
K 766.490†	-41.4	-0.01897	mg/L	0.022486	-0.01897	mg/L	0.022486	118.52%
Mg 279.077†	7.6	0.00793	mg/L	0.004146	0.00793	mg/L	0.004146	52.25%
Mn 257.610†	-32.4	-0.00050	mg/L	0.000205	-0.00050	mg/L	0.000205	41.12%
Mo 202.031†	103.0	0.00544	mg/L	0.009857	0.00544	mg/L	0.009857	181.19%
Na 589.592†	-45.1	-0.00407	mg/L	0.008159	-0.00407	mg/L	0.008159	200.47%
Na 330.237†	43.4	1.502	mg/L	0.7984	1.502	mg/L	0.7984	53.15%
Ni 231.604†	-1.5	-0.00037	mg/L	0.002311	-0.00037	mg/L	0.002311	624.12%
Pb 220.353†	220.9	0.02529	mg/L	0.047148	0.02529	mg/L	0.047148	186.45%
Sb 206.836†	154.0	0.07911	mg/L	0.138336	0.07911	mg/L	0.138336	174.86%
Se 196.026†	-118.3	-0.08712	mg/L	0.158147	-0.08712	mg/L	0.158147	181.53%
Si 288.158†	37.9	0.01758	mg/L	0.005625	0.01758	mg/L	0.005625	31.99%
Sn 189.927†	-63.6	-0.01501	mg/L	0.026573	-0.01501	mg/L	0.026573	176.99%
Sr 421.552†	35.8	0.00004	mg/L	0.000044	0.00004	mg/L	0.000044	106.68%
Ti 334.903†	-45.1	-0.00153	mg/L	0.001190	-0.00153	mg/L	0.001190	77.78%
Tl 190.801†	-20.9	-0.00891	mg/L	0.017318	-0.00891	mg/L	0.017318	194.33%
V 292.402†	642.4	0.00430	mg/L	0.007932	0.00430	mg/L	0.007932	184.63%
Zn 206.200†	2.9	0.00090	mg/L	0.001183	0.00090	mg/L	0.001183	131.78%

Sequence No.: 12
Sample ID: RINSE - 4
Dilution: 1X
Wash Time: 37

Autosampler Location: 9
Date Collected: 2/4/2021 7:37:25 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: RINSE - 4

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: RINSE - 4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	6197.0	0.2441	%	0.00509				2.09%
ScR 361.383	-124.8	-0.04439	%	0.002403				5.41%
Ag 328.068†	15013.5	0.07616	mg/L	0.081201	0.07616	mg/L	0.081201	106.62%
Al 308.215†	505719.7	297.1	mg/L	7.47	297.1	mg/L	7.47	2.52%
As 188.979†	-8056.4	-5.073	mg/L	1.2827	-5.073	mg/L	1.2827	25.29%
B 249.677†	216123.8	26.59	mg/L	3.566	26.59	mg/L	3.566	13.41%
Ba 233.527†	-168980.9	-18.06	mg/L	1.239	-18.06	mg/L	1.239	6.86%
Be 313.042†	-3891694.7	-5.144	mg/L	0.2309	-5.144	mg/L	0.2309	4.49%
Ca 317.933†	114551.1	10.89	mg/L	2.022	10.89	mg/L	2.022	18.57%
Cd 228.802†	52508.0	1.504	mg/L	0.0676	1.504	mg/L	0.0676	4.50%
Co 228.616†	-11758.8	-0.1616	mg/L	0.04445	-0.1616	mg/L	0.04445	27.50%
Cr 267.716†	277853.8	36.29	mg/L	1.014	36.29	mg/L	1.014	2.79%
Cu 324.752†	615200.6	2.818	mg/L	0.0996	2.818	mg/L	0.0996	3.53%
Fe 273.955†	-154534.7	-76.18	mg/L	9.569	-76.18	mg/L	9.569	12.56%
K 766.490†	-431930.9	-197.9	mg/L	58.00	-197.9	mg/L	58.00	29.30%
Mg 279.077†	157596.8	164.2	mg/L	10.08	164.2	mg/L	10.08	6.14%
Mn 257.610†	-804274.8	-12.49	mg/L	0.977	-12.49	mg/L	0.977	7.83%
Mo 202.031†	21949.7	1.157	mg/L	0.0698	1.157	mg/L	0.0698	6.03%
Na 589.592†	239343.4	21.60	mg/L	14.139	21.60	mg/L	14.139	65.45%
Na 330.237†	1206947.8	41760	mg/L	2721.43	41760	mg/L	2721.43	6.52%
Ni 231.604†	-17751.6	-4.682	mg/L	1.4725	-4.682	mg/L	1.4725	31.45%
Pb 220.353†	33996.4	4.042	mg/L	0.3371	4.042	mg/L	0.3371	8.34%
Sb 206.836†	25373.7	12.84	mg/L	1.592	12.84	mg/L	1.592	12.40%
Se 196.026†	-20804.4	-15.33	mg/L	0.369	-15.33	mg/L	0.369	2.41%
Si 288.158†	899717.0	414.1	mg/L	32.29	414.1	mg/L	32.29	7.80%
Sn 189.927†	-11763.1	-2.793	mg/L	0.1454	-2.793	mg/L	0.1454	5.20%
Sr 421.552†	19193.9	0.02203	mg/L	0.180549	0.02203	mg/L	0.180549	819.68%
Ti 334.903†	-1494789.3	-50.61	mg/L	3.722	-50.61	mg/L	3.722	7.36%
Tl 190.801†	-6068.6	-2.616	mg/L	0.2666	-2.616	mg/L	0.2666	10.19%
V 292.402†	117039.0	0.9592	mg/L	0.01956	0.9592	mg/L	0.01956	2.04%
Zn 206.200†	-14374.8	-4.324	mg/L	1.6364	-4.324	mg/L	1.6364	37.84%

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Sequence No.: 13 **Autosampler Location: 10**
Sample ID: DI - 1 **Date Collected: 2/4/2021 7:40:07 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: DI - 1

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: DI - 1

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	6508.7	0.2564	%	0.00417				1.63%
ScR 361.383	19.3	0.00688	%	0.099369				>999.9%
Ag 328.068†	12758.6	0.06529	mg/L	0.033004	0.06529	mg/L	0.033004	50.55%
Al 308.215†	226056.6	132.8	mg/L	201.50	132.8	mg/L	201.50	151.75%
As 188.979†	-5299.5	-3.301	mg/L	0.5146	-3.301	mg/L	0.5146	15.59%
B 249.677†	100154.4	12.33	mg/L	19.136	12.33	mg/L	19.136	155.18%
Ba 233.527†	-63165.0	-6.751	mg/L	12.1504	-6.751	mg/L	12.1504	179.99%
Be 313.042†	-1826753.7	-2.415	mg/L	3.7408	-2.415	mg/L	3.7408	154.92%
Ca 317.933†	67331.8	6.453	mg/L	8.4720	6.453	mg/L	8.4720	131.28%
Cd 228.802†	47493.6	1.353	mg/L	0.0365	1.353	mg/L	0.0365	2.70%
Co 228.616†	-13687.1	-0.2602	mg/L	0.10746	-0.2602	mg/L	0.10746	41.30%
Cr 267.716†	128904.3	16.84	mg/L	25.513	16.84	mg/L	25.513	151.50%
Cu 324.752†	578178.6	2.657	mg/L	0.0878	2.657	mg/L	0.0878	3.30%
Fe 273.955†	-65643.2	-32.36	mg/L	54.855	-32.36	mg/L	54.855	169.51%
K 766.490†	-132744.7	-60.83	mg/L	127.080	-60.83	mg/L	127.080	208.90%
Mg 279.077†	67823.1	70.66	mg/L	115.832	70.66	mg/L	115.832	163.92%
Mn 257.610†	-368733.3	-5.725	mg/L	8.9829	-5.725	mg/L	8.9829	156.90%
Mo 202.031†	20115.1	1.061	mg/L	0.0427	1.061	mg/L	0.0427	4.02%
Na 589.592†	167747.1	15.14	mg/L	21.697	15.14	mg/L	21.697	143.32%
Na 330.237†	585035.0	20240	mg/L	31171.44	20240	mg/L	31171.44	153.98%
Ni 231.604†	-9274.9	-2.443	mg/L	1.2476	-2.443	mg/L	1.2476	51.07%
Pb 220.353†	32368.3	3.773	mg/L	0.4382	3.773	mg/L	0.4382	11.62%
Sb 206.836†	23994.2	12.24	mg/L	0.579	12.24	mg/L	0.579	4.73%
Se 196.026†	-19938.4	-14.68	mg/L	1.569	-14.68	mg/L	1.569	10.69%
Si 288.158†	396267.8	182.4	mg/L	278.00	182.4	mg/L	278.00	152.41%
Sn 189.927†	-10218.8	-2.420	mg/L	0.1456	-2.420	mg/L	0.1456	6.02%
Sr 421.552†	58856.8	0.06754	mg/L	0.087370	0.06754	mg/L	0.087370	129.35%
Ti 334.903†	-688114.4	-23.30	mg/L	35.917	-23.30	mg/L	35.917	154.17%
Tl 190.801†	-6315.0	-2.708	mg/L	0.4471	-2.708	mg/L	0.4471	16.51%
V 292.402†	116720.8	0.8614	mg/L	0.15197	0.8614	mg/L	0.15197	17.64%
Zn 206.200†	-10337.5	-3.130	mg/L	5.1383	-3.130	mg/L	5.1383	164.17%

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Sequence No.: 14 **Autosampler Location: 10**
Sample ID: DI - 2 **Date Collected: 2/4/2021 7:42:47 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: DI - 2

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: DI - 2

Analyte	**Mean Corrected Intensity**	**Calib. Conc.**	**Units**	**Std.Dev.**	**Sample Conc.**	**Units**	**Std.Dev.**	**RSD**
ScA 357.253	6320.5	0.2490	%	0.00153				0.61%
ScR 361.383	-144.5	-0.05141	%	0.002924				5.69%
Ag 328.068†	-138.6	-0.00206	mg/L	0.068313	-0.00206	mg/L	0.068313	>999.9%
Al 308.215†	423475.5	248.8	mg/L	11.90	248.8	mg/L	11.90	4.78%
As 188.979†	-6274.1	-3.972	mg/L	0.9717	-3.972	mg/L	0.9717	24.47%
B 249.677†	190283.2	23.43	mg/L	2.899	23.43	mg/L	2.899	12.37%
Ba 233.527†	-145597.3	-15.56	mg/L	1.604	-15.56	mg/L	1.604	10.31%
Be 313.042†	-3407982.2	-4.504	mg/L	0.2384	-4.504	mg/L	0.2384	5.29%
Ca 317.933†	102046.6	9.709	mg/L	1.6321	9.709	mg/L	1.6321	16.81%
Cd 228.802†	47926.3	1.371	mg/L	0.0163	1.371	mg/L	0.0163	1.19%
Co 228.616†	-13205.8	-0.2101	mg/L	0.07567	-0.2101	mg/L	0.07567	36.02%
Cr 267.716†	255927.5	33.43	mg/L	0.888	33.43	mg/L	0.888	2.66%
Cu 324.752†	582743.9	2.670	mg/L	0.0649	2.670	mg/L	0.0649	2.43%
Fe 273.955†	-135644.0	-66.87	mg/L	4.459	-66.87	mg/L	4.459	6.67%
K 766.490†	-374790.7	-171.8	mg/L	39.80	-171.8	mg/L	39.80	23.17%
Mg 279.077†	129822.6	135.3	mg/L	10.45	135.3	mg/L	10.45	7.73%
Mn 257.610†	-687187.0	-10.67	mg/L	0.522	-10.67	mg/L	0.522	4.90%
Mo 202.031†	18623.7	0.9814	mg/L	0.01411	0.9814	mg/L	0.01411	1.44%
Na 589.592†	178984.0	16.15	mg/L	2.688	16.15	mg/L	2.688	16.64%
Na 330.237†	1064470.8	36830	mg/L	2138.20	36830	mg/L	2138.20	5.80%
Ni 231.604†	-4048.5	-1.063	mg/L	0.2185	-1.063	mg/L	0.2185	20.56%
Pb 220.353†	31197.3	3.702	mg/L	0.1360	3.702	mg/L	0.1360	3.67%
Sb 206.836†	23396.0	11.86	mg/L	1.675	11.86	mg/L	1.675	14.12%
Se 196.026†	-22283.2	-16.41	mg/L	0.172	-16.41	mg/L	0.172	1.05%
Si 288.158†	726134.8	334.2	mg/L	24.50	334.2	mg/L	24.50	7.33%
Sn 189.927†	-9926.5	-2.356	mg/L	0.4062	-2.356	mg/L	0.4062	17.24%
Sr 421.552†	29253.4	0.03357	mg/L	0.077199	0.03357	mg/L	0.077199	229.96%
Ti 334.903†	-1265723.5	-42.85	mg/L	3.211	-42.85	mg/L	3.211	7.49%
Tl 190.801†	-5537.3	-2.387	mg/L	0.5349	-2.387	mg/L	0.5349	22.41%
V 292.402†	118667.9	0.9553	mg/L	0.02710	0.9553	mg/L	0.02710	2.84%
Zn 206.200†	-17045.8	-5.156	mg/L	2.2624	-5.156	mg/L	2.2624	43.88%

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Sequence No.: 15 **Autosampler Location: 10**
Sample ID: DI - 3 **Date Collected: 2/4/2021 7:45:28 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: DI - 3

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: DI - 3

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	5969.8	0.2352	%	0.00079				0.34%
ScR 361.383	-140.2	-0.04986	%	0.004736				9.50%
Ag 328.068†	-1916.3	-0.01119	mg/L	0.023083	-0.01119	mg/L	0.023083	206.26%
Al 308.215†	429189.7	252.1	mg/L	12.70	252.1	mg/L	12.70	5.04%
As 188.979†	-8440.6	-5.277	mg/L	1.1990	-5.277	mg/L	1.1990	22.72%
B 249.677†	182980.3	22.52	mg/L	3.046	22.52	mg/L	3.046	13.52%
Ba 233.527†	-130857.1	-13.99	mg/L	1.021	-13.99	mg/L	1.021	7.30%
Be 313.042†	-3375638.4	-4.462	mg/L	0.4284	-4.462	mg/L	0.4284	9.60%
Ca 317.933†	102326.6	9.741	mg/L	2.0805	9.741	mg/L	2.0805	21.36%
Cd 228.802†	49007.3	1.411	mg/L	0.0342	1.411	mg/L	0.0342	2.43%
Co 228.616†	-14279.8	-0.2364	mg/L	0.05236	-0.2364	mg/L	0.05236	22.15%
Cr 267.716†	237094.7	30.97	mg/L	3.222	30.97	mg/L	3.222	10.40%
Cu 324.752†	613686.8	2.813	mg/L	0.0714	2.813	mg/L	0.0714	2.54%
Fe 273.955†	-127056.1	-62.63	mg/L	6.973	-62.63	mg/L	6.973	11.13%
K 766.490†	-309323.6	-141.8	mg/L	32.69	-141.8	mg/L	32.69	23.06%
Mg 279.077†	135408.1	141.1	mg/L	18.03	141.1	mg/L	18.03	12.78%
Mn 257.610†	-671546.1	-10.43	mg/L	0.922	-10.43	mg/L	0.922	8.84%
Mo 202.031†	16568.0	0.8730	mg/L	0.07834	0.8730	mg/L	0.07834	8.97%
Na 589.592†	96961.5	8.751	mg/L	5.2053	8.751	mg/L	5.2053	59.48%
Na 330.237†	1052651.1	36430	mg/L	3810.98	36430	mg/L	3810.98	10.46%
Ni 231.604†	-4820.6	-1.267	mg/L	5.6242	-1.267	mg/L	5.6242	443.94%
Pb 220.353†	30635.5	3.634	mg/L	0.1048	3.634	mg/L	0.1048	2.88%
Sb 206.836†	22784.2	11.55	mg/L	2.933	11.55	mg/L	2.933	25.39%
Se 196.026†	-20636.3	-15.20	mg/L	0.989	-15.20	mg/L	0.989	6.50%
Si 288.158†	740048.7	340.6	mg/L	35.90	340.6	mg/L	35.90	10.54%
Sn 189.927†	-9809.5	-2.328	mg/L	0.1099	-2.328	mg/L	0.1099	4.72%
Sr 421.552†	-45316.0	-0.05200	mg/L	0.095892	-0.05200	mg/L	0.095892	184.39%
Ti 334.903†	-1236393.3	-41.86	mg/L	3.075	-41.86	mg/L	3.075	7.35%
Tl 190.801†	-5839.9	-2.515	mg/L	0.4906	-2.515	mg/L	0.4906	19.51%
V 292.402†	115581.6	0.9229	mg/L	0.02160	0.9229	mg/L	0.02160	2.34%
Zn 206.200†	-12401.0	-3.734	mg/L	3.5736	-3.734	mg/L	3.5736	95.71%

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Sequence No.: 16 **Autosampler Location: 10**
Sample ID: DI - 4 **Date Collected: 2/4/2021 7:48:09 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: DI - 4

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: DI - 4

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	6101.7	0.2404	%	0.00423				1.76%
ScR 361.383	-138.0	-0.04907	%	0.003556				7.25%
Ag 328.068†	-4365.4	-0.02397	mg/L	0.066698	-0.02397	mg/L	0.066698	278.29%
Al 308.215†	440864.5	259.0	mg/L	18.79	259.0	mg/L	18.79	7.25%
As 188.979†	-5624.6	-3.565	mg/L	0.4634	-3.565	mg/L	0.4634	13.00%
B 249.677†	200148.0	24.65	mg/L	1.860	24.65	mg/L	1.860	7.55%
Ba 233.527†	-145754.6	-15.58	mg/L	1.160	-15.58	mg/L	1.160	7.45%
Be 313.042†	-3464890.5	-4.580	mg/L	0.3424	-4.580	mg/L	0.3424	7.48%
Ca 317.933†	103105.9	9.811	mg/L	2.2502	9.811	mg/L	2.2502	22.94%
Cd 228.802†	47063.1	1.343	mg/L	0.0676	1.343	mg/L	0.0676	5.03%
Co 228.616†	-13806.5	-0.2217	mg/L	0.03778	-0.2217	mg/L	0.03778	17.04%
Cr 267.716†	227560.7	29.72	mg/L	1.768	29.72	mg/L	1.768	5.95%
Cu 324.752†	591227.5	2.709	mg/L	0.0560	2.709	mg/L	0.0560	2.07%
Fe 273.955†	-136701.2	-67.39	mg/L	1.864	-67.39	mg/L	1.864	2.77%
K 766.490†	-294344.8	-134.9	mg/L	47.66	-134.9	mg/L	47.66	35.33%
Mg 279.077†	118470.3	123.5	mg/L	21.30	123.5	mg/L	21.30	17.25%
Mn 257.610†	-692756.7	-10.76	mg/L	0.963	-10.76	mg/L	0.963	8.95%
Mo 202.031†	18102.7	0.9540	mg/L	0.09758	0.9540	mg/L	0.09758	10.23%
Na 589.592†	172126.1	15.53	mg/L	11.679	15.53	mg/L	11.679	75.18%
Na 330.237†	1073263.9	37140	mg/L	2464.92	37140	mg/L	2464.92	6.64%
Ni 231.604†	-6447.9	-1.696	mg/L	1.9862	-1.696	mg/L	1.9862	117.11%
Pb 220.353†	35269.2	4.166	mg/L	0.3636	4.166	mg/L	0.3636	8.73%
Sb 206.836†	24511.9	12.44	mg/L	0.695	12.44	mg/L	0.695	5.59%
Se 196.026†	-18148.9	-13.37	mg/L	1.589	-13.37	mg/L	1.589	11.88%
Si 288.158†	743775.4	342.3	mg/L	22.38	342.3	mg/L	22.38	6.54%
Sn 189.927†	-9419.7	-2.235	mg/L	0.2467	-2.235	mg/L	0.2467	11.04%
Sr 421.552†	-18199.5	-0.02089	mg/L	0.080866	-0.02089	mg/L	0.080866	387.18%
Ti 334.903†	-1294728.8	-43.83	mg/L	3.007	-43.83	mg/L	3.007	6.86%
Tl 190.801†	-6881.6	-2.960	mg/L	0.5948	-2.960	mg/L	0.5948	20.10%
V 292.402†	118458.1	0.9365	mg/L	0.05478	0.9365	mg/L	0.05478	5.85%
Zn 206.200†	-16918.7	-5.115	mg/L	2.8220	-5.115	mg/L	2.8220	55.17%

Analysis Begun

Start Time: 2/4/2021 8:07:13 PM
Plasma On Time: 2/4/2021 12:44:21 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0204.sif
Batch ID:
Results Data Set: I2210204
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Autosampler Location: 7
Sample ID: SEQ-CCVB
Date Collected: 2/4/2021 8:07:22 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SEQ-CCVB

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCVB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2589428.8	102.0	%	0.99				0.97%
ScR 361.383	285533.2	101.6	%	0.63				0.62%
Ag 328.068†	195907.0	1.014	mg/L	0.0154	1.014	mg/L	0.0154	1.52%
Al 308.215†	3398.3	1.964	mg/L	0.0306	1.964	mg/L	0.0306	1.56%
As 188.979†	3280.7	1.988	mg/L	0.0099	1.988	mg/L	0.0099	0.50%
B 249.677†	7772.5	0.9633	mg/L	0.01505	0.9633	mg/L	0.01505	1.56%
Ba 233.527†	9161.7	0.9786	mg/L	0.01302	0.9786	mg/L	0.01302	1.33%
Be 313.042†	720538.8	0.9517	mg/L	0.00885	0.9517	mg/L	0.00885	0.93%
Ca 317.933†	19329.2	1.920	mg/L	0.0471	1.920	mg/L	0.0471	2.45%
Cd 228.802†	35779.4	0.9888	mg/L	0.01779	0.9888	mg/L	0.01779	1.80%
Co 228.616†	42514.0	0.9522	mg/L	0.01682	0.9522	mg/L	0.01682	1.77%
Cr 267.716†	7389.9	0.9699	mg/L	0.01888	0.9699	mg/L	0.01888	1.95%
Cu 324.752†	212669.3	0.9805	mg/L	0.01634	0.9805	mg/L	0.01634	1.67%
Fe 273.955†	3938.3	1.934	mg/L	0.0225	1.934	mg/L	0.0225	1.16%
K 766.490†	42881.7	19.65	mg/L	0.099	19.65	mg/L	0.099	0.51%
Mg 279.077†	1798.1	1.873	mg/L	0.0616	1.873	mg/L	0.0616	3.29%
Mn 257.610†	63188.0	0.9816	mg/L	0.01383	0.9816	mg/L	0.01383	1.41%
Mo 202.031†	18000.9	0.9506	mg/L	0.01638	0.9506	mg/L	0.01638	1.72%
Na 589.592†	540274.3	48.76	mg/L	0.510	48.76	mg/L	0.510	1.05%
Na 330.237†	1452.6	50.26	mg/L	1.481	50.26	mg/L	1.481	2.95%
Ni 231.604†	3567.6	0.9421	mg/L	0.03106	0.9421	mg/L	0.03106	3.30%
Pb 220.353†	16814.0	1.927	mg/L	0.0427	1.927	mg/L	0.0427	2.22%
Sb 206.836†	3863.1	2.007	mg/L	0.0247	2.007	mg/L	0.0247	1.23%
Se 196.026†	2701.0	1.988	mg/L	0.0148	1.988	mg/L	0.0148	0.75%
Si 288.158†	4430.6	2.030	mg/L	0.0291	2.030	mg/L	0.0291	1.43%
Sn 189.927†	4063.9	0.9681	mg/L	0.00691	0.9681	mg/L	0.00691	0.71%
Sr 421.552†	853792.0	0.9798	mg/L	0.01269	0.9798	mg/L	0.01269	1.29%
Ti 334.903†	29046.3	0.9825	mg/L	0.00863	0.9825	mg/L	0.00863	0.88%
Tl 190.801†	4597.7	1.957	mg/L	0.0118	1.957	mg/L	0.0118	0.60%
V 292.402†	145312.7	0.9737	mg/L	0.01353	0.9737	mg/L	0.01353	1.39%
Zn 206.200†	3070.9	0.9395	mg/L	0.02319	0.9395	mg/L	0.02319	2.47%

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Sequence No.: 2 **Autosampler Location: 1**
Sample ID: SEQ-CCBA **Date Collected: 2/4/2021 8:10:56 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCBA

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCBA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2669662.3	105.2	%	0.80				0.76%
ScR 361.383	293267.8	104.3	%	0.87				0.84%
Ag 328.068†	107.7	0.00056	mg/L	0.000191	0.00056	mg/L	0.000191	34.23%
Al 308.215†	14.8	0.00870	mg/L	0.001707	0.00870	mg/L	0.001707	19.63%
As 188.979†	1.5	0.00089	mg/L	0.002394	0.00089	mg/L	0.002394	269.03%
B 249.677†	29.3	0.00363	mg/L	0.000467	0.00363	mg/L	0.000467	12.85%
Ba 233.527†	-2.5	-0.00026	mg/L	0.000666	-0.00026	mg/L	0.000666	251.71%
Be 313.042†	-36.0	-0.00005	mg/L	0.000026	-0.00005	mg/L	0.000026	53.89%
Ca 317.933†	25.9	0.00255	mg/L	0.000460	0.00255	mg/L	0.000460	18.02%
Cd 228.802†	-13.0	-0.00037	mg/L	0.000259	-0.00037	mg/L	0.000259	69.92%
Co 228.616†	4.5	0.00010	mg/L	0.000034	0.00010	mg/L	0.000034	32.27%
Cr 267.716†	12.6	0.00165	mg/L	0.001000	0.00165	mg/L	0.001000	60.63%
Cu 324.752†	-30.8	-0.00014	mg/L	0.000112	-0.00014	mg/L	0.000112	78.24%
Fe 273.955†	-0.1	-0.00004	mg/L	0.001442	-0.00004	mg/L	0.001442	>999.9%
K 766.490†	-75.7	-0.03468	mg/L	0.020769	-0.03468	mg/L	0.020769	59.88%
Mg 279.077†	11.3	0.01181	mg/L	0.007467	0.01181	mg/L	0.007467	63.23%
Mn 257.610†	-26.3	-0.00041	mg/L	0.000037	-0.00041	mg/L	0.000037	9.10%
Mo 202.031†	11.4	0.00060	mg/L	0.000142	0.00060	mg/L	0.000142	23.74%
Na 589.592†	79.1	0.00714	mg/L	0.004554	0.00714	mg/L	0.004554	63.81%
Na 330.237†	34.2	1.183	mg/L	0.0764	1.183	mg/L	0.0764	6.46%
Ni 231.604†	-2.8	-0.00073	mg/L	0.000762	-0.00073	mg/L	0.000762	104.19%
Pb 220.353†	-10.2	-0.00117	mg/L	0.000299	-0.00117	mg/L	0.000299	25.60%
Sb 206.836†	1.7	0.00090	mg/L	0.000898	0.00090	mg/L	0.000898	100.31%
Se 196.026†	7.3	0.00537	mg/L	0.003481	0.00537	mg/L	0.003481	64.87%
Si 288.158†	23.0	0.01056	mg/L	0.002012	0.01056	mg/L	0.002012	19.05%
Sn 189.927†	1.8	0.00043	mg/L	0.000584	0.00043	mg/L	0.000584	135.24%
Sr 421.552†	38.8	0.00004	mg/L	0.000026	0.00004	mg/L	0.000026	57.76%
Ti 334.903†	-33.0	-0.00112	mg/L	0.000630	-0.00112	mg/L	0.000630	56.30%
Tl 190.801†	1.0	0.00043	mg/L	0.000609	0.00043	mg/L	0.000609	142.56%
V 292.402†	-14.1	-0.00009	mg/L	0.000082	-0.00009	mg/L	0.000082	95.76%
Zn 206.200†	0.6	0.00019	mg/L	0.001751	0.00019	mg/L	0.001751	923.78%

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Sequence No.: 3
Sample ID: 21A0323-01

Dilution: 10X
Wash Time: 37

DEL

Autosampler Location: 383
Date Collected: 2/4/2021 8:13:44 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0323-01

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: 21A0323-01

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2700069.0	106.4	%	0.34				0.32%
ScR 361.383	300341.7	106.8	%	1.50				1.41%
Ag 328.068†	-1150.7	-0.00323	mg/L	0.000507	-0.03226	mg/L	0.005075	15.73%
Al 308.215†	164440.9	96.71	mg/L	0.453	967.1	mg/L	4.53	0.47%
As 188.979†	-15.5	0.01723	mg/L	0.001118	0.1723	mg/L	0.01118	6.49%
B 249.677†	156.4	0.01869	mg/L	0.000601	0.1869	mg/L	0.00601	3.22%
Ba 233.527†	6022.5	0.6320	mg/L	0.00919	6.320	mg/L	0.0919	1.45%
Be 313.042†	3506.8	0.00437	mg/L	0.000096	0.04367	mg/L	0.000964	2.21%
Ca 317.933†	364012.8	36.16	mg/L	0.102	361.6	mg/L	1.02	0.28%
Cd 228.802†	61.3	-0.00026	mg/L	0.000196	-0.00261	mg/L	0.001958	74.93%
Co 228.616†	6006.7	0.1169	mg/L	0.00039	1.169	mg/L	0.0039	0.33%
Cr 267.716†	2330.7	0.3054	mg/L	0.00330	3.054	mg/L	0.0330	1.08%
Cu 324.752†	45606.8	0.2199	mg/L	0.00210	2.199	mg/L	0.0210	0.95%
Fe 273.955†	367112.6	181.1	mg/L	0.50	1811	mg/L	4.99	0.28%
K 766.490†	25826.0	11.84	mg/L	0.082	118.4	mg/L	0.82	0.70%
Mg 279.077†	24716.7	25.31	mg/L	0.154	253.1	mg/L	1.54	0.61%
Mn 257.610†	215182.9	3.340	mg/L	0.0207	33.40	mg/L	0.207	0.62%
Mo 202.031†	19.0	0.00067	mg/L	0.000158	0.00675	mg/L	0.001584	23.48%
Na 589.592†	43591.9	3.934	mg/L	0.0246	39.34	mg/L	0.246	0.63%
Na 330.237†	121.6	4.208	mg/L	0.4424	42.08	mg/L	4.424	10.51%
Ni 231.604†	1321.7	0.3491	mg/L	0.00683	3.491	mg/L	0.0683	1.96%
Pb 220.353†	372.8	0.05308	mg/L	0.001337	0.5308	mg/L	0.01337	2.52%
Sb 206.836†	-12.2	0.02019	mg/L	0.007150	0.2019	mg/L	0.07150	35.40%
Se 196.026†	-19.0	0.01128	mg/L	0.000874	0.1128	mg/L	0.00874	7.75%
Si 288.158†	1462.1	0.6386	mg/L	0.00291	6.386	mg/L	0.0291	0.45%
Sn 189.927†	-47.5	-0.00169	mg/L	0.000265	-0.01692	mg/L	0.002647	15.64%
Sr 421.552†	537858.4	0.6172	mg/L	0.00056	6.172	mg/L	0.0056	0.09%
Ti 334.903†	232109.6	7.854	mg/L	0.0087	78.54	mg/L	0.087	0.11%
Tl 190.801†	-43.4	0.00381	mg/L	0.005828	0.03809	mg/L	0.058280	153.01%
V 292.402†	39589.7	0.2684	mg/L	0.00303	2.684	mg/L	0.0303	1.13%
Zn 206.200†	1476.1	0.4515	mg/L	0.00558	4.515	mg/L	0.0558	1.24%

Analysis Begun

Start Time: 2/4/2021 8:17:57 PM
Plasma On Time: 2/4/2021 12:44:21 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0204.sif
Batch ID:
Results Data Set: I2210204
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Autosampler Location: 384
Sample ID: 21A0323-01RE1
Date Collected: 2/4/2021 8:18:05 PM
Data Type: Original
Dilution: 20X

Nebulizer Parameters: 21A0323-01RE1

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: 21A0323-01RE1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2731638.9	107.6	%	0.91				0.84%
ScR 361.383	301258.5	107.2	%	0.43				0.40%
Ag 328.068†	-587.4	-0.00168	mg/L	0.000104	-0.03369	mg/L	0.002086	6.19%
Al 308.215†	79953.6	47.02	mg/L	0.128	940.4	mg/L	2.57	0.27%
As 188.979†	-9.5	0.00739	mg/L	0.002160	0.1478	mg/L	0.04319	29.22%
B 249.677†	94.7	0.01140	mg/L	0.001708	0.2280	mg/L	0.03416	14.98%
Ba 233.527†	2953.2	0.3099	mg/L	0.00230	6.198	mg/L	0.0460	0.74%
Be 313.042†	1739.9	0.00217	mg/L	0.000011	0.04342	mg/L	0.000220	0.51%
Ca 317.933†	172932.6	17.18	mg/L	0.078	343.6	mg/L	1.56	0.45%
Cd 228.802†	22.9	-0.00032	mg/L	0.000194	-0.00648	mg/L	0.003882	59.92%
Co 228.616†	2963.8	0.05777	mg/L	0.000406	1.155	mg/L	0.0081	0.70%
Cr 267.716†	1151.3	0.1508	mg/L	0.00076	3.016	mg/L	0.0152	0.50%
Cu 324.752†	21406.1	0.1035	mg/L	0.00096	2.069	mg/L	0.0191	0.92%
Fe 273.955†	180794.8	89.18	mg/L	0.426	1784	mg/L	8.53	0.48%
K 766.490†	12554.5	5.753	mg/L	0.0362	115.1	mg/L	0.72	0.63%
Mg 279.077†	11861.0	12.14	mg/L	0.110	242.8	mg/L	2.20	0.91%
Mn 257.610†	104503.6	1.622	mg/L	0.0092	32.44	mg/L	0.185	0.57%
Mo 202.031†	10.9	0.00042	mg/L	0.000254	0.00843	mg/L	0.005082	60.29%
Na 589.592†	21359.0	1.928	mg/L	0.0181	38.55	mg/L	0.361	0.94%
Na 330.237†	72.8	2.519	mg/L	0.1484	50.37	mg/L	2.968	5.89%
Ni 231.604†	646.9	0.1709	mg/L	0.00219	3.418	mg/L	0.0439	1.28%
Pb 220.353†	182.2	0.02581	mg/L	0.000946	0.5163	mg/L	0.01891	3.66%
Sb 206.836†	-6.9	0.00936	mg/L	0.002367	0.1873	mg/L	0.04733	25.28%
Se 196.026†	-0.7	0.01193	mg/L	0.002034	0.2385	mg/L	0.04068	17.05%
Si 288.158†	737.0	0.3224	mg/L	0.00184	6.449	mg/L	0.0367	0.57%
Sn 189.927†	-20.8	-0.00027	mg/L	0.000619	-0.00532	mg/L	0.012386	232.99%
Sr 421.552†	266292.8	0.3056	mg/L	0.00152	6.112	mg/L	0.0304	0.50%
Ti 334.903†	113507.9	3.841	mg/L	0.0102	76.82	mg/L	0.204	0.27%
Tl 190.801†	-13.3	0.00534	mg/L	0.002249	0.1068	mg/L	0.04498	42.12%
V 292.402†	18830.5	0.1277	mg/L	0.00146	2.555	mg/L	0.0293	1.15%
Zn 206.200†	717.7	0.2195	mg/L	0.00040	4.390	mg/L	0.0079	0.18%

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Sequence No.: 2
Sample ID: SEQ-CCVC

Dilution: 1X
Wash Time: 37

Autosampler Location: 7
Date Collected: 2/4/2021 8:21:00 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCVC

Analyte	**Back Pressure**	**Flow**
All	240.0 kPa	0.65 L/min

Mean Data: SEQ-CCVC

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2708932.7	106.7	%	0.41				0.38%
ScR 361.383	297305.4	105.7	%	0.87				0.82%
Ag 328.068†	189385.7	0.9802	mg/L	0.00839	0.9802	mg/L	0.00839	0.86%
Al 308.215†	3314.5	1.916	mg/L	0.0113	1.916	mg/L	0.0113	0.59%
As 188.979†	3163.4	1.917	mg/L	0.0098	1.917	mg/L	0.0098	0.51%
B 249.677†	7473.7	0.9262	mg/L	0.01178	0.9262	mg/L	0.01178	1.27%
Ba 233.527†	8852.9	0.9456	mg/L	0.01097	0.9456	mg/L	0.01097	1.16%
Be 313.042†	696322.0	0.9197	mg/L	0.00707	0.9197	mg/L	0.00707	0.77%
Ca 317.933†	18734.3	1.861	mg/L	0.0266	1.861	mg/L	0.0266	1.43%
Cd 228.802†	34712.1	0.9594	mg/L	0.00787	0.9594	mg/L	0.00787	0.82%
Co 228.616†	41226.1	0.9234	mg/L	0.00665	0.9234	mg/L	0.00665	0.72%
Cr 267.716†	7165.0	0.9404	mg/L	0.00974	0.9404	mg/L	0.00974	1.04%
Cu 324.752†	206400.5	0.9516	mg/L	0.00702	0.9516	mg/L	0.00702	0.74%
Fe 273.955†	3883.5	1.908	mg/L	0.0225	1.908	mg/L	0.0225	1.18%
K 766.490†	41467.0	19.00	mg/L	0.158	19.00	mg/L	0.158	0.83%
Mg 279.077†	1766.3	1.840	mg/L	0.0174	1.840	mg/L	0.0174	0.94%
Mn 257.610†	61291.8	0.9521	mg/L	0.00968	0.9521	mg/L	0.00968	1.02%
Mo 202.031†	17467.8	0.9224	mg/L	0.00742	0.9224	mg/L	0.00742	0.80%
Na 589.592†	522080.7	47.12	mg/L	0.417	47.12	mg/L	0.417	0.88%
Na 330.237†	1430.9	49.51	mg/L	0.335	49.51	mg/L	0.335	0.68%
Ni 231.604†	3469.8	0.9163	mg/L	0.01318	0.9163	mg/L	0.01318	1.44%
Pb 220.353†	16370.9	1.876	mg/L	0.0137	1.876	mg/L	0.0137	0.73%
Sb 206.836†	3727.2	1.936	mg/L	0.0143	1.936	mg/L	0.0143	0.74%
Se 196.026†	2619.1	1.928	mg/L	0.0098	1.928	mg/L	0.0098	0.51%
Si 288.158†	4285.5	1.964	mg/L	0.0231	1.964	mg/L	0.0231	1.17%
Sn 189.927†	3915.7	0.9328	mg/L	0.00476	0.9328	mg/L	0.00476	0.51%
Sr 421.552†	821901.6	0.9432	mg/L	0.00752	0.9432	mg/L	0.00752	0.80%
Ti 334.903†	28095.6	0.9503	mg/L	0.00452	0.9503	mg/L	0.00452	0.48%
Tl 190.801†	4417.9	1.880	mg/L	0.0048	1.880	mg/L	0.0048	0.26%
V 292.402†	140530.4	0.9417	mg/L	0.00756	0.9417	mg/L	0.00756	0.80%
Zn 206.200†	2965.8	0.9074	mg/L	0.02004	0.9074	mg/L	0.02004	2.21%

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Sequence No.: 3 **Autosampler Location: 1**
Sample ID: SEQ-CCBB **Date Collected: 2/4/2021 8:24:28 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCBB

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCBB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2695599.6	106.2	%	1.04				0.98%
ScR 361.383	301663.9	107.3	%	1.29				1.21%
Ag 328.068†	103.0	0.00053	mg/L	0.000196	0.00053	mg/L	0.000196	36.74%
Al 308.215†	33.1	0.01946	mg/L	0.006900	0.01946	mg/L	0.006900	35.45%
As 188.979†	-5.9	-0.00357	mg/L	0.000928	-0.00357	mg/L	0.000928	25.96%
B 249.677†	19.9	0.00246	mg/L	0.001913	0.00246	mg/L	0.001913	77.81%
Ba 233.527†	-0.5	-0.00006	mg/L	0.000775	-0.00006	mg/L	0.000775	>999.9%
Be 313.042†	-99.7	-0.00013	mg/L	0.000018	-0.00013	mg/L	0.000018	13.95%
Ca 317.933†	34.2	0.00338	mg/L	0.001216	0.00338	mg/L	0.001216	35.96%
Cd 228.802†	-17.8	-0.00047	mg/L	0.000074	-0.00047	mg/L	0.000074	15.59%
Co 228.616†	2.8	0.00006	mg/L	0.000053	0.00006	mg/L	0.000053	81.86%
Cr 267.716†	23.2	0.00304	mg/L	0.000431	0.00304	mg/L	0.000431	14.21%
Cu 324.752†	-64.8	-0.00030	mg/L	0.000074	-0.00030	mg/L	0.000074	24.82%
Fe 273.955†	10.0	0.00494	mg/L	0.001204	0.00494	mg/L	0.001204	24.36%
K 766.490†	-32.7	-0.01496	mg/L	0.021510	-0.01496	mg/L	0.021510	143.74%
Mg 279.077†	13.7	0.01428	mg/L	0.008737	0.01428	mg/L	0.008737	61.18%
Mn 257.610†	-24.9	-0.00039	mg/L	0.000103	-0.00039	mg/L	0.000103	26.72%
Mo 202.031†	6.9	0.00037	mg/L	0.000137	0.00037	mg/L	0.000137	37.35%
Na 589.592†	20.2	0.00182	mg/L	0.000655	0.00182	mg/L	0.000655	35.91%
Na 330.237†	47.7	1.651	mg/L	0.3158	1.651	mg/L	0.3158	19.13%
Ni 231.604†	-2.7	-0.00071	mg/L	0.001539	-0.00071	mg/L	0.001539	217.07%
Pb 220.353†	-7.3	-0.00083	mg/L	0.000516	-0.00083	mg/L	0.000516	62.15%
Sb 206.836†	2.7	0.00136	mg/L	0.001450	0.00136	mg/L	0.001450	106.29%
Se 196.026†	12.5	0.00917	mg/L	0.002502	0.00917	mg/L	0.002502	27.29%
Si 288.158†	35.7	0.01641	mg/L	0.005077	0.01641	mg/L	0.005077	30.93%
Sn 189.927†	-1.7	-0.00041	mg/L	0.000500	-0.00041	mg/L	0.000500	122.19%
Sr 421.552†	96.1	0.00011	mg/L	0.000051	0.00011	mg/L	0.000051	45.86%
Ti 334.903†	-19.6	-0.00067	mg/L	0.000486	-0.00067	mg/L	0.000486	72.96%
Tl 190.801†	-0.1	-0.00006	mg/L	0.000510	-0.00006	mg/L	0.000510	917.27%
V 292.402†	-12.7	-0.00007	mg/L	0.000097	-0.00007	mg/L	0.000097	138.41%
Zn 206.200†	1.5	0.00048	mg/L	0.000790	0.00048	mg/L	0.000790	166.15%

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Analysis Begun

Start Time: 2/4/2021 8:28:10 PM
Plasma On Time: 2/4/2021 12:44:21 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\RINSE-DIX2.sif
Batch ID:
Results Data Set: I2210204
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 9
Sample ID: RINSE
Date Collected: 2/4/2021 8:28:18 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: RINSE

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: RINSE

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1028374.7	40.51	%	57.823				142.72%
ScR 361.383	294061.4	104.6	%	0.65				0.62%
Ag 328.068†	622.3	0.00322	mg/L	0.002527	0.00322	mg/L	0.002527	78.57%
Al 308.215†	21.5	0.01147	mg/L	0.009090	0.01147	mg/L	0.009090	79.25%
As 188.979†	-280.7	-0.1705	mg/L	0.21858	-0.1705	mg/L	0.21858	128.20%
B 249.677†	15.1	0.00194	mg/L	0.000070	0.00194	mg/L	0.000070	3.64%
Ba 233.527†	1.5	0.00014	mg/L	0.000401	0.00014	mg/L	0.000401	295.96%
Be 313.042†	-83.0	-0.00013	mg/L	0.000030	-0.00013	mg/L	0.000030	23.32%
Ca 317.933†	20.2	0.00200	mg/L	0.000678	0.00200	mg/L	0.000678	33.92%
Cd 228.802†	1618.7	0.04661	mg/L	0.066293	0.04661	mg/L	0.066293	142.22%
Co 228.616†	-540.1	-0.01212	mg/L	0.016253	-0.01212	mg/L	0.016253	134.13%
Cr 267.716†	19.1	0.00268	mg/L	0.000602	0.00268	mg/L	0.000602	22.46%
Cu 324.752†	20270.0	0.09349	mg/L	0.121286	0.09349	mg/L	0.121286	129.73%
Fe 273.955†	0.1	-0.00023	mg/L	0.000887	-0.00023	mg/L	0.000887	390.73%
K 766.490†	-36.6	-0.01679	mg/L	0.018180	-0.01679	mg/L	0.018180	108.26%
Mg 279.077†	14.1	0.01487	mg/L	0.009917	0.01487	mg/L	0.009917	66.68%
Mn 257.610†	-24.7	-0.00037	mg/L	0.000095	-0.00037	mg/L	0.000095	25.91%
Mo 202.031†	749.8	0.03959	mg/L	0.052333	0.03959	mg/L	0.052333	132.18%
Na 589.592†	28.9	0.00261	mg/L	0.004035	0.00261	mg/L	0.004035	154.71%
Na 330.237†	33.9	1.172	mg/L	0.2863	1.172	mg/L	0.2863	24.44%
Ni 231.604†	-4.7	-0.00097	mg/L	0.001089	-0.00097	mg/L	0.001089	112.37%
Pb 220.353†	1034.6	0.1184	mg/L	0.14882	0.1184	mg/L	0.14882	125.70%
Sb 206.836†	977.8	0.5027	mg/L	0.64343	0.5027	mg/L	0.64343	128.01%
Se 196.026†	-777.4	-0.5723	mg/L	0.73871	-0.5723	mg/L	0.73871	129.07%
Si 288.158†	22.8	0.01125	mg/L	0.002043	0.01125	mg/L	0.002043	18.15%
Sn 189.927†	-331.7	-0.07824	mg/L	0.095741	-0.07824	mg/L	0.095741	122.37%
Sr 421.552†	2.8	0.00000	mg/L	0.000005	0.00000	mg/L	0.000005	157.70%
Ti 334.903†	-26.1	-0.00090	mg/L	0.000453	-0.00090	mg/L	0.000453	50.35%
Tl 190.801†	-243.5	-0.1040	mg/L	0.14093	-0.1040	mg/L	0.14093	135.50%
V 292.402†	3946.5	0.02634	mg/L	0.034089	0.02634	mg/L	0.034089	129.41%
Zn 206.200†	2.7	0.00086	mg/L	0.000896	0.00086	mg/L	0.000896	104.70%

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Sequence No.: 2
Autosampler Location: 9
Sample ID: RINSE
Date Collected: 2/4/2021 8:31:13 PM
Data Type: Original
Dilution: 1X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: RINSE

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: RINSE

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	6267.7	0.2469	%	0.00116				0.47%
ScR 361.383	-114.8	-0.04085	%	0.003995				9.78%
Ag 328.068†	19307.2	0.09813	mg/L	0.020692	0.09813	mg/L	0.020692	21.09%
Al 308.215†	532345.1	312.7	mg/L	33.77	312.7	mg/L	33.77	10.80%
As 188.979†	-8959.0	-5.643	mg/L	1.2758	-5.643	mg/L	1.2758	22.61%
B 249.677†	239222.8	29.45	mg/L	4.308	29.45	mg/L	4.308	14.63%
Ba 233.527†	-173232.4	-18.51	mg/L	1.305	-18.51	mg/L	1.305	7.05%
Be 313.042†	-4226216.4	-5.586	mg/L	0.5805	-5.586	mg/L	0.5805	10.39%
Ca 317.933†	110192.1	10.42	mg/L	0.111	10.42	mg/L	0.111	1.06%
Cd 228.802†	50923.0	1.460	mg/L	0.0272	1.460	mg/L	0.0272	1.86%
Co 228.616†	-11621.9	-0.1464	mg/L	0.10696	-0.1464	mg/L	0.10696	73.08%
Cr 267.716†	313710.1	40.98	mg/L	2.177	40.98	mg/L	2.177	5.31%
Cu 324.752†	603258.2	2.761	mg/L	0.0184	2.761	mg/L	0.0184	0.67%
Fe 273.955†	-178015.8	-87.75	mg/L	8.681	-87.75	mg/L	8.681	9.89%
K 766.490†	-404681.1	-185.5	mg/L	49.80	-185.5	mg/L	49.80	26.85%
Mg 279.077†	192883.4	200.9	mg/L	17.92	200.9	mg/L	17.92	8.92%
Mn 257.610†	-864901.3	-13.43	mg/L	1.448	-13.43	mg/L	1.448	10.78%
Mo 202.031†	19163.3	1.009	mg/L	0.1478	1.009	mg/L	0.1478	14.64%
Na 589.592†	309304.3	27.92	mg/L	6.645	27.92	mg/L	6.645	23.80%
Na 330.237†	1297769.4	44910	mg/L	4859.29	44910	mg/L	4859.29	10.82%
Ni 231.604†	-30080.7	-7.937	mg/L	4.1206	-7.937	mg/L	4.1206	51.91%
Pb 220.353†	35996.0	4.284	mg/L	0.3132	4.284	mg/L	0.3132	7.31%
Sb 206.836†	25726.1	13.01	mg/L	0.414	13.01	mg/L	0.414	3.18%
Se 196.026†	-23110.4	-17.03	mg/L	1.687	-17.03	mg/L	1.687	9.91%
Si 288.158†	947538.4	436.1	mg/L	41.94	436.1	mg/L	41.94	9.62%
Sn 189.927†	-9437.6	-2.243	mg/L	0.1804	-2.243	mg/L	0.1804	8.04%
Sr 421.552†	86180.4	0.09890	mg/L	0.124154	0.09890	mg/L	0.124154	125.53%
Ti 334.903†	-1668288.2	-56.48	mg/L	7.003	-56.48	mg/L	7.003	12.40%
Tl 190.801†	-8681.0	-3.736	mg/L	0.7956	-3.736	mg/L	0.7956	21.30%
V 292.402†	113282.6	0.9570	mg/L	0.04649	0.9570	mg/L	0.04649	4.86%
Zn 206.200†	-21972.5	-6.645	mg/L	2.3033	-6.645	mg/L	2.3033	34.66%

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Sequence No.: 3 **Autosampler Location: 10**
Sample ID: DI **Date Collected: 2/4/2021 8:33:55 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: DI

Analyte	Back Pressure	Flow
All	240.0 kPa	0.65 L/min

Mean Data: DI

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	6800.8	0.2679	%	0.00749				2.80%
ScR 361.383	-93.7	-0.03331	%	0.001852				5.56%
Ag 328.068†	15874.8	0.08017	mg/L	0.184580	0.08017	mg/L	0.184580	230.24%
Al 308.215†	650592.7	382.2	mg/L	20.77	382.2	mg/L	20.77	5.44%
As 188.979†	-4358.8	-2.886	mg/L	0.9898	-2.886	mg/L	0.9898	34.30%
B 249.677†	270200.7	33.26	mg/L	5.636	33.26	mg/L	5.636	16.95%
Ba 233.527†	-217874.9	-23.28	mg/L	1.614	-23.28	mg/L	1.614	6.93%
Be 313.042†	-5195111.2	-6.866	mg/L	0.4038	-6.866	mg/L	0.4038	5.88%
Ca 317.933†	124970.7	11.76	mg/L	2.219	11.76	mg/L	2.219	18.87%
Cd 228.802†	44275.8	1.257	mg/L	0.0590	1.257	mg/L	0.0590	4.69%
Co 228.616†	-11539.6	-0.1253	mg/L	0.03884	-0.1253	mg/L	0.03884	31.00%
Cr 267.716†	375573.4	49.05	mg/L	2.677	49.05	mg/L	2.677	5.46%
Cu 324.752†	532353.9	2.428	mg/L	0.0785	2.428	mg/L	0.0785	3.23%
Fe 273.955†	-208417.6	-102.7	mg/L	2.13	-102.7	mg/L	2.13	2.07%
K 766.490†	-450342.3	-206.4	mg/L	69.07	-206.4	mg/L	69.07	33.47%
Mg 279.077†	188376.1	196.3	mg/L	4.56	196.3	mg/L	4.56	2.32%
Mn 257.610†	-1036663.3	-16.10	mg/L	1.045	-16.10	mg/L	1.045	6.49%
Mo 202.031†	16543.4	0.8707	mg/L	0.06247	0.8707	mg/L	0.06247	7.18%
Na 589.592†	432026.4	38.99	mg/L	8.284	38.99	mg/L	8.284	21.25%
Na 330.237†	1626788.3	56290	mg/L	3670.34	56290	mg/L	3670.34	6.52%
Ni 231.604†	-16083.7	-4.242	mg/L	3.5951	-4.242	mg/L	3.5951	84.74%
Pb 220.353†	29365.5	3.559	mg/L	0.3043	3.559	mg/L	0.3043	8.55%
Sb 206.836†	21628.4	10.87	mg/L	0.785	10.87	mg/L	0.785	7.22%
Se 196.026†	-17393.9	-12.82	mg/L	0.145	-12.82	mg/L	0.145	1.13%
Si 288.158†	1090368.4	501.9	mg/L	33.96	501.9	mg/L	33.96	6.77%
Sn 189.927†	-9160.5	-2.181	mg/L	0.4586	-2.181	mg/L	0.4586	21.02%
Sr 421.552†	-45168.9	-0.05184	mg/L	0.079663	-0.05184	mg/L	0.079663	153.68%
Ti 334.903†	-1958312.2	-66.30	mg/L	2.306	-66.30	mg/L	2.306	3.48%
Tl 190.801†	-4772.0	-2.071	mg/L	0.4000	-2.071	mg/L	0.4000	19.32%
V 292.402†	103601.9	0.9319	mg/L	0.02030	0.9319	mg/L	0.02030	2.18%
Zn 206.200†	-19736.6	-5.951	mg/L	3.1355	-5.951	mg/L	3.1355	52.69%

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Sequence No.: 4 **Autosampler Location: 10**
Sample ID: DI **Date Collected: 2/4/2021 8:36:35 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: DI

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: DI

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	6344.4	0.2499	%	0.00382				1.53%
ScR 361.383	-83.1	-0.02954	%	0.008388				28.39%
Ag 328.068†	11214.9	0.05563	mg/L	0.080657	0.05563	mg/L	0.080657	144.99%
Al 308.215†	751776.6	441.7	mg/L	117.83	441.7	mg/L	117.83	26.68%
As 188.979†	-6815.6	-4.415	mg/L	0.6321	-4.415	mg/L	0.6321	14.32%
B 249.677†	343871.2	42.36	mg/L	12.468	42.36	mg/L	12.468	29.44%
Ba 233.527†	-261697.0	-27.97	mg/L	10.992	-27.97	mg/L	10.992	39.30%
Be 313.042†	-6063915.7	-8.014	mg/L	2.3465	-8.014	mg/L	2.3465	29.28%
Ca 317.933†	188015.0	17.93	mg/L	6.045	17.93	mg/L	6.045	33.71%

Cd 228.802†	47151.9	1.350 mg/L	0.0897	1.350 mg/L	0.0897	6.64%
Co 228.616†	-13131.4	-0.1403 mg/L	0.05787	-0.1403 mg/L	0.05787	41.23%
Cr 267.716†	431124.2	56.31 mg/L	14.282	56.31 mg/L	14.282	25.36%
Cu 324.752†	551508.7	2.513 mg/L	0.0552	2.513 mg/L	0.0552	2.20%
Fe 273.955†	-251971.9	-124.2 mg/L	42.07	-124.2 mg/L	42.07	33.87%
K 766.490†	-614454.7	-281.6 mg/L	85.86	-281.6 mg/L	85.86	30.49%
Mg 279.077†	231838.5	241.6 mg/L	81.78	241.6 mg/L	81.78	33.85%
Mn 257.610†	-1211958.8	-18.82 mg/L	5.604	-18.82 mg/L	5.604	29.78%
Mo 202.031†	16473.1	0.8664 mg/L	0.01741	0.8664 mg/L	0.01741	2.01%
Na 589.592†	439354.6	39.65 mg/L	9.129	39.65 mg/L	9.129	23.02%
Na 330.237†	1847938.7	63940 mg/L	17673.48	63940 mg/L	17673.48	27.64%
Ni 231.604†	-10754.7	-2.834 mg/L	7.6377	-2.834 mg/L	7.6377	269.52%
Pb 220.353†	32705.7	3.973 mg/L	0.2003	3.973 mg/L	0.2003	5.04%
Sb 206.836†	23051.0	11.56 mg/L	0.453	11.56 mg/L	0.453	3.92%
Se 196.026†	-21091.8	-15.55 mg/L	1.454	-15.55 mg/L	1.454	9.35%
Si 288.158†	1279963.2	589.1 mg/L	159.32	589.1 mg/L	159.32	27.04%
Sn 189.927†	-8982.0	-2.141 mg/L	0.1054	-2.141 mg/L	0.1054	4.92%
Sr 421.552†	40267.1	0.04621 mg/L	0.095094	0.04621 mg/L	0.095094	205.78%
Ti 334.903†	-2264321.5	-76.66 mg/L	24.237	-76.66 mg/L	24.237	31.62%
Tl 190.801†	-6910.2	-2.990 mg/L	0.4587	-2.990 mg/L	0.4587	15.34%
V 292.402†	112860.3	1.029 mg/L	0.1072	1.029 mg/L	0.1072	10.41%
Zn 206.200†	-27510.5	-8.313 mg/L	5.3024	-8.313 mg/L	5.3024	63.78%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EB00028	Instrument:	ICP2
Calibration Date:	02/08/2021 14:30		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Lead	0	0	0		10	8118.725	0		0			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Calibration:	EB00028	Instrument:	ICP2
Calibration Date:	02/08/2021 14:30		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Lead	4059.363	141.4	1.0000			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: 2/3/21 Analysis Date: 2/8/21 Analyst: TH
LR Date: 2/3/21 Sequence: SJB0129 Page: 1 of 3

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CAL1	J908		
		-CAL2	J1295		
		-CAL3	J1296		
		-CAL4	J1297		
		-CAL5	J1298		
		-ICV1	I10589		
		-ICB1	J908		
		-CRL1	J773		
		-IFA1	I10667		
		-IFB1	J907		
		DI Check	—		
		SEQ-CCV1	I10589		
		-CCB1	J908		
		21A0360-01	TWC		
		21A0361-03	SWC	2	
		-05			
		-07			
	✓	-09			Ca 7LR
		-11			
		-13			
		-15			
	✓	-17		10	Fe 7LR
		-19		2	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: — Analysis Date: 2/8/21 Analyst: TK
LR Date: — Sequence: — Page: 2 of 3

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CCV2			
		↓ -CCB2			
		21A0361-21	SWC	2	
		-23		↓	
	✓	-25		10	Fe7LR
		-27		2	
		-29			
		↓ -31		↓	
	✓	BJA0765-DUP1		5	Fe7LR
		21A0361-09		10	
		-17		50	
	✓	↓ -25	↓	↓	Fe7LR
		SEQ-CCV3			
		↓ -CCB3			Fe↑ C.O.
	✓	BJB0182-BLK1	TWC		
		-BS1			No spike
	↓	↓ -BS1	↓		↓
		BJA0765-DUP1	SWC	10	Mo RPD↑
		21A0361-01			
		BJA0765-MS1			Pb STL ; Mo %R↑
		↓ -MSD1		↓	↓ ↓
361		21A0361-25	↓	100	
		SEQ-CCV4			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: –

Analysis Date: 2/8/21

Analyst: TH

LR Date: –

Sequence: –

Page: 3 of 3

All corrections made by analyst unless otherwise noted. TH 2/8/21

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SEQ-CCB4			Ca, Mg, Sb, Si ↑
		-CAL4			
		-CAL5			
		-CCV5			
		-CCB5			
		21A0383-01	TWC		
		-02			
		21A0384-01			
		BJA0665-DUP1	SWC	5	Ba, Co, Cr, Cu, Fe, Mn, Ni, V, Zn RPD↑
		21A0296-06			~~Ba, Co, Cr, Cu, Fe, Mn, Ni, V, Zn RPD~~ K only
		BJA0665-MS2			
		BJA0692-DUP3	TWC		No Sn
		21A0243-04			
0692		BJA0692-MS3			
		-MSD3			
		SEQ-CCV6			
		-CCB6			
		BJA0692-DUP4	TWC		No Sn
		21A0243-08			
		BJA0692-MS4			
		-MSD4			
		SEQ-CCV7			
		-CCB7			Na 330 Si noisy

Rinse/DI

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

2/8/2021 2:05:54 PM Hg ReAlign... Actual peak offset (nm): 0.003
Drift (nm): -0.001 Slit adjustment: -5

Analysis Begun

Start Time: 2/8/2021 2:13:44 PM
Plasma On Time: 2/8/2021 1:15:23 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\BLKS.sif
Batch ID:
Results Data Set: I2210208
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded
Method Name: ELMT7300bcESI2FAST
Method Last Saved: 2/4/2021 12:26:33 PM
IEC File: IEC020321.iec
MSF File:
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes

~~**Sequence No.: 1**~~
~~**Autosampler Location: 1**~~
~~**Sample ID: B1**~~ TH 02-09-21
~~**Date Collected: 2/8/2021 2:13:55 PM**~~
~~**Data Type: Original**~~
~~**Dilution: 1X**~~

~~**Nebulizer Parameters: B1**~~

~~Analyte~~	~~Back Pressure~~	~~Flow~~
~~All~~	~~241.0 kPa~~	~~0.65 L/min~~

==

Analysis Begun

Start Time: 2/8/2021 2:30:42 PM
Plasma On Time: 2/8/2021 1:15:23 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\CRISETelmt.sif
Batch ID:
Results Data Set: I2210208
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==

Sequence No.: 1
Autosampler Location: 1
Sample ID: SEQ-CAL1
Date Collected: 2/8/2021 2:30:50 PM
Data Type: Original

Nebulizer Parameters: SEQ-CAL1

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-CAL1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2444281.5	10258.49	0.42%	100.0	%
ScR 361.383	268545.3	843.70	0.31%	100.0	%
Ag 328.068†	147.6	19.24	13.03%	[0.00]	mg/L
Al 308.215†	-127.5	10.95	8.59%	[0.00]	mg/L
As 188.979†	-15.3	2.65	17.28%	[0.00]	mg/L
B 249.677†	-109.4	10.70	9.79%	[0.00]	mg/L
Ba 233.527†	81.6	3.27	4.01%	[0.00]	mg/L
Be 313.042†	1719.1	8.08	0.47%	[0.00]	mg/L
Ca 317.933†	-9.9	5.95	60.34%	[0.00]	mg/L
Cd 228.802†	323.3	4.01	1.24%	[0.00]	mg/L
Co 228.616†	-36.1	6.41	17.77%	[0.00]	mg/L
Cr 267.716†	-133.9	4.68	3.50%	[0.00]	mg/L
Cu 324.752†	1366.8	14.84	1.09%	[0.00]	mg/L
Fe 273.955†	62.4	4.45	7.13%	[0.00]	mg/L
K 766.490†	165.0	52.60	31.87%	[0.00]	mg/L
Mg 279.077†	-78.2	4.68	5.98%	[0.00]	mg/L
Mn 257.610†	340.5	4.24	1.24%	[0.00]	mg/L
Mo 202.031†	54.2	9.41	17.38%	[0.00]	mg/L
Na 589.592†	-239.3	78.35	32.74%	[0.00]	mg/L
Na 330.237†	-519.9	4.91	0.94%	[0.00]	mg/L
Ni 231.604†	-0.9	3.89	445.21%	[0.00]	mg/L
Pb 220.353†	85.0	6.63	7.80%	[0.00]	mg/L
Sb 206.836†	49.0	4.31	8.81%	[0.00]	mg/L
Se 196.026†	-48.6	2.30	4.73%	[0.00]	mg/L
Si 288.158†	-356.6	5.58	1.56%	[0.00]	mg/L
Sn 189.927†	-21.7	2.61	11.99%	[0.00]	mg/L
Sr 421.552†	-11.8	43.51	369.46%	[0.00]	mg/L
Ti 334.903†	659.7	4.86	0.74%	[0.00]	mg/L
Tl 190.801†	-14.6	3.91	26.85%	[0.00]	mg/L
V 292.402†	315.1	7.61	2.42%	[0.00]	mg/L
Zn 206.200†	10.1	2.65	26.18%	[0.00]	mg/L

==

Sequence No.: 2
Autosampler Location: 2
Sample ID: SEQ-CAL2
Date Collected: 2/8/2021 2:33:45 PM
Data Type: Original
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CAL2

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CAL2

Mean Corrected Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	2426134.7	18353.64	0.76%	99.26	%
ScR 361.383	265408.4	641.93	0.24%	98.83	%
Ba 233.527†	95523.6	440.49	0.46%	[10]	mg/L
Cd 228.802†	350517.7	1695.51	0.48%	[10]	mg/L
Co 228.616†	425113.1	1855.48	0.44%	[10]	mg/L
Cr 267.716†	76203.5	585.86	0.77%	[10]	mg/L
Cu 324.752†	2138227.4	6349.47	0.30%	[10]	mg/L
Mn 257.610†	624306.7	4392.78	0.70%	[10]	mg/L
V 292.402†	1422181.2	8916.76	0.63%	[10]	mg/L

==

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: SEQ-CAL3 **Date Collected: 2/8/2021 2:35:27 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL3

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CAL3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2381956.5	22639.20	0.95%	97.45	%
ScR 361.383	256579.1	771.24	0.30%	95.54	%
Ag 328.068†	189953.3	327.00	0.17%	[1.0]	mg/L
As 188.979†	15045.5	273.77	1.82%	[10]	mg/L
B 249.677†	79578.2	888.64	1.12%	[10]	mg/L
Be 313.042†	3779498.7	16768.57	0.44%	[5.0]	mg/L
Na 589.592†	581288.9	1203.29	0.21%	[50]	mg/L
Ni 231.604†	38366.9	425.07	1.11%	[10]	mg/L
Pb 220.353†	81187.2	173.56	0.21%	[10]	mg/L
Se 196.026†	12737.4	232.31	1.82%	[10]	mg/L
Sr 421.552†	4412986.6	27789.91	0.63%	[5]	mg/L
Tl 190.801†	20909.0	300.02	1.43%	[10]	mg/L
Zn 206.200†	29903.5	242.66	0.81%	[10]	mg/L

==

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: SEQ-CAL4 **Date Collected: 2/8/2021 2:37:27 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL4

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CAL4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2433862.9	39153.93	1.61%	99.57	%
ScR 361.383	264285.9	1190.64	0.45%	98.41	%
Mo 202.031†	172427.3	1587.84	0.92%	[10]	mg/L
Sb 206.836†	17063.2	195.16	1.14%	[10]	mg/L
Si 288.158†	21367.9	202.07	0.95%	[10]	mg/L
Sn 189.927†	37312.5	281.87	0.76%	[10]	mg/L
Ti 334.903†	292629.8	1431.61	0.49%	[10]	mg/L

==

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: SEQ-CAL5 **Date Collected: 2/8/2021 2:39:20 PM**
Data Type: Original
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CAL5

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-CAL5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2276303.9	2721.93	0.12%	93.13	%
ScR 361.383	267074.1	2217.21	0.83%	99.45	%
Al 308.215†	50552.0	279.97	0.55%	[30]	mg/L
Ca 317.933†	299417.5	2042.05	0.68%	[30]	mg/L
Fe 273.955†	204725.2	1119.53	0.55%	[100]	mg/L
K 766.490†	214523.1	496.08	0.23%	[100]	mg/L
Mg 279.077†	27708.6	144.47	0.52%	[30]	mg/L
Na 330.237†	2886.8	13.22	0.46%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	190000	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1685	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1505	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7958	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	9552	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	755900	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	9981	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	35050	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	42510	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	7620	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	213800	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	2047	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2145	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	923.6	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	62430	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	17240	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	11630	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	28.87	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3837	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	8119	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	1706	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1274	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2137	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3731	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	882600	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	29260	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2091	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	142200	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	2990	0.00000	1.000000	

==

Analysis Begun

Start Time: 2/8/2021 2:43:18 PM
Plasma On Time: 2/8/2021 1:15:23 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0208.sif
Batch ID:
Results Data Set: I2210208
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==

Sequence No.: 1
Autosampler Location: 7
Sample ID: SEQ-ICV1
Date Collected: 2/8/2021 2:43:26 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SEQ-ICV1

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-ICV1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2415321.1	98.82	%	1.402				1.42%
ScR 361.383	262270.6	97.66	%	0.841				0.86%
Ag 328.068†	198266.4	1.044	mg/L	0.0115	1.044	mg/L	0.0115	1.10%
Al 308.215†	3476.0	2.027	mg/L	0.0154	2.027	mg/L	0.0154	0.76%
As 188.979†	2957.9	1.963	mg/L	0.0252	1.963	mg/L	0.0252	1.28%
B 249.677†	7890.6	0.9890	mg/L	0.01553	0.9890	mg/L	0.01553	1.57%
Ba 233.527†	9518.8	0.9957	mg/L	0.01152	0.9957	mg/L	0.01152	1.16%
Be 313.042†	712356.1	0.9417	mg/L	0.00530	0.9417	mg/L	0.00530	0.56%
Ca 317.933†	20245.1	2.028	mg/L	0.0262	2.028	mg/L	0.0262	1.29%
Cd 228.802†	35942.6	1.012	mg/L	0.0125	1.012	mg/L	0.0125	1.24%
Co 228.616†	41697.2	0.9788	mg/L	0.01450	0.9788	mg/L	0.01450	1.48%
Cr 267.716†	7622.1	1.005	mg/L	0.0133	1.005	mg/L	0.0133	1.33%
Cu 324.752†	215846.1	1.009	mg/L	0.0089	1.009	mg/L	0.0089	0.88%
Fe 273.955†	4135.8	2.012	mg/L	0.0168	2.012	mg/L	0.0168	0.84%
K 766.490†	43330.6	20.20	mg/L	0.107	20.20	mg/L	0.107	0.53%
Mg 279.077†	1854.7	2.010	mg/L	0.0222	2.010	mg/L	0.0222	1.11%
Mn 257.610†	59863.6	0.9592	mg/L	0.00160	0.9592	mg/L	0.00160	0.17%
Mo 202.031†	16981.2	0.9848	mg/L	0.01543	0.9848	mg/L	0.01543	1.57%
Na 589.592†	573587.9	49.34	mg/L	0.144	49.34	mg/L	0.144	0.29%
Na 330.237†	1503.5	52.08	mg/L	0.062	52.08	mg/L	0.062	0.12%
Ni 231.604†	3766.5	0.9815	mg/L	0.01462	0.9815	mg/L	0.01462	1.49%
Pb 220.353†	16056.5	1.978	mg/L	0.0306	1.978	mg/L	0.0306	1.55%
Sb 206.836†	3513.2	2.075	mg/L	0.0334	2.075	mg/L	0.0334	1.61%
Se 196.026†	2523.5	1.981	mg/L	0.0162	1.981	mg/L	0.0162	0.82%
Si 288.158†	4470.3	2.085	mg/L	0.0205	2.085	mg/L	0.0205	0.98%
Sn 189.927†	3638.6	0.9782	mg/L	0.01004	0.9782	mg/L	0.01004	1.03%
Sr 421.552†	878215.1	0.9950	mg/L	0.00262	0.9950	mg/L	0.00262	0.26%
Ti 334.903†	29230.0	0.9981	mg/L	0.00298	0.9981	mg/L	0.00298	0.30%
Tl 190.801†	4105.5	1.956	mg/L	0.0327	1.956	mg/L	0.0327	1.67%
V 292.402†	141738.3	1.002	mg/L	0.0044	1.002	mg/L	0.0044	0.44%
Zn 206.200†	2871.8	0.9607	mg/L	0.01708	0.9607	mg/L	0.01708	1.78%

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Sequence No.: 2 **Autosampler Location: 1**
Sample ID: SEQ-ICB1 **Date Collected: 2/8/2021 2:46:22 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-ICB1

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-ICB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2432337.1	99.51	%	0.838				0.84%
ScR 361.383	265852.6	99.00	%	0.170				0.17%
Ag 328.068†	7.2	0.00004	mg/L	0.000194	0.00004	mg/L	0.000194	514.61%
Al 308.215†	-11.2	-0.00666	mg/L	0.002579	-0.00666	mg/L	0.002579	38.73%
As 188.979†	-2.5	-0.00169	mg/L	0.000786	-0.00169	mg/L	0.000786	46.63%
B 249.677†	45.1	0.00566	mg/L	0.001104	0.00566	mg/L	0.001104	19.48%
Ba 233.527†	-0.6	-0.00007	mg/L	0.000552	-0.00007	mg/L	0.000552	821.04%
Be 313.042†	44.3	0.00006	mg/L	0.000027	0.00006	mg/L	0.000027	46.79%
Ca 317.933†	0.7	0.00006	mg/L	0.000771	0.00006	mg/L	0.000771	>999.9%
Cd 228.802†	-1.4	-0.00003	mg/L	0.000083	-0.00003	mg/L	0.000083	280.47%
Co 228.616†	2.8	0.00007	mg/L	0.000192	0.00007	mg/L	0.000192	288.52%
Cr 267.716†	12.9	0.00170	mg/L	0.000982	0.00170	mg/L	0.000982	57.64%
Cu 324.752†	120.2	0.00056	mg/L	0.000134	0.00056	mg/L	0.000134	23.85%
Fe 273.955†	5.6	0.00273	mg/L	0.000696	0.00273	mg/L	0.000696	25.49%
K 766.490†	21.8	0.01018	mg/L	0.006714	0.01018	mg/L	0.006714	65.96%
Mg 279.077†	-0.9	-0.00097	mg/L	0.001029	-0.00097	mg/L	0.001029	106.14%
Mn 257.610†	12.9	0.00021	mg/L	0.000065	0.00021	mg/L	0.000065	31.64%
Mo 202.031†	18.2	0.00106	mg/L	0.000353	0.00106	mg/L	0.000353	33.33%
Na 589.592†	207.4	0.01784	mg/L	0.005621	0.01784	mg/L	0.005621	31.51%
Na 330.237†	4.6	0.1598	mg/L	0.15409	0.1598	mg/L	0.15409	96.45%
Ni 231.604†	-3.1	-0.00080	mg/L	0.003047	-0.00080	mg/L	0.003047	380.39%
Pb 220.353†	8.4	0.00104	mg/L	0.001176	0.00104	mg/L	0.001176	113.16%
Sb 206.836†	6.4	0.00375	mg/L	0.005292	0.00375	mg/L	0.005292	141.09%
Se 196.026†	1.2	0.00098	mg/L	0.003617	0.00098	mg/L	0.003617	369.27%
Si 288.158†	7.8	0.00365	mg/L	0.003408	0.00365	mg/L	0.003408	93.30%
Sn 189.927†	-2.5	-0.00067	mg/L	0.000479	-0.00067	mg/L	0.000479	71.52%
Sr 421.552†	35.1	0.00004	mg/L	0.000054	0.00004	mg/L	0.000054	136.02%
Ti 334.903†	1.5	0.00005	mg/L	0.000455	0.00005	mg/L	0.000455	876.27%
Tl 190.801†	5.7	0.00273	mg/L	0.001935	0.00273	mg/L	0.001935	71.01%
V 292.402†	-29.2	-0.00020	mg/L	0.000142	-0.00020	mg/L	0.000142	72.16%
Zn 206.200†	-2.8	-0.00093	mg/L	0.002172	-0.00093	mg/L	0.002172	233.83%

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Sequence No.: 3 **Autosampler Location: 301**
Sample ID: SEQ-CRL1 **Date Collected: 2/8/2021 2:49:10 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CRL1

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CRL1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2444811.4	100.0	%	0.71				0.71%
ScR 361.383	264998.6	98.68	%	0.455				0.46%
Ag 328.068†	549.4	0.00289	mg/L	0.000372	0.00289	mg/L	0.000372	12.88%
Al 308.215†	105.2	0.06220	mg/L	0.002696	0.06220	mg/L	0.002696	4.33%
As 188.979†	68.0	0.04519	mg/L	0.002600	0.04519	mg/L	0.002600	5.75%
B 249.677†	264.8	0.03320	mg/L	0.000429	0.03320	mg/L	0.000429	1.29%
Ba 233.527†	54.0	0.00565	mg/L	0.000553	0.00565	mg/L	0.000553	9.79%
Be 313.042†	715.2	0.00094	mg/L	0.000025	0.00094	mg/L	0.000025	2.66%
Ca 317.933†	478.6	0.04795	mg/L	0.001716	0.04795	mg/L	0.001716	3.58%
Cd 228.802†	80.3	0.00197	mg/L	0.000096	0.00197	mg/L	0.000096	4.89%
Co 228.616†	125.0	0.00292	mg/L	0.000188	0.00292	mg/L	0.000188	6.44%
Cr 267.716†	78.0	0.01026	mg/L	0.000333	0.01026	mg/L	0.000333	3.25%
Cu 324.752†	638.0	0.00298	mg/L	0.000071	0.00298	mg/L	0.000071	2.37%
Fe 273.955†	107.0	0.05225	mg/L	0.000907	0.05225	mg/L	0.000907	1.74%
K 766.490†	1015.0	0.4731	mg/L	0.00439	0.4731	mg/L	0.00439	0.93%
Mg 279.077†	58.3	0.06303	mg/L	0.009352	0.06303	mg/L	0.009352	14.84%
Mn 257.610†	245.1	0.00393	mg/L	0.000145	0.00393	mg/L	0.000145	3.69%
Mo 202.031†	83.4	0.00484	mg/L	0.000186	0.00484	mg/L	0.000186	3.84%
Na 589.592†	5619.3	0.4833	mg/L	0.00262	0.4833	mg/L	0.00262	0.54%
Na 330.237†	25.4	0.8814	mg/L	0.33781	0.8814	mg/L	0.33781	38.33%
Ni 231.604†	40.4	0.01052	mg/L	0.002203	0.01052	mg/L	0.002203	20.94%
Pb 220.353†	164.9	0.02034	mg/L	0.000713	0.02034	mg/L	0.000713	3.51%
Sb 206.836†	86.3	0.05089	mg/L	0.001781	0.05089	mg/L	0.001781	3.50%
Se 196.026†	64.8	0.05092	mg/L	0.001387	0.05092	mg/L	0.001387	2.72%
Si 288.158†	222.6	0.1040	mg/L	0.00117	0.1040	mg/L	0.00117	1.13%
Sn 189.927†	71.5	0.01923	mg/L	0.000917	0.01923	mg/L	0.000917	4.77%
Sr 421.552†	856.1	0.00097	mg/L	0.000060	0.00097	mg/L	0.000060	6.22%
Ti 334.903†	234.1	0.00799	mg/L	0.000594	0.00799	mg/L	0.000594	7.44%
Tl 190.801†	99.2	0.04744	mg/L	0.003677	0.04744	mg/L	0.003677	7.75%
V 292.402†	428.6	0.00307	mg/L	0.000048	0.00307	mg/L	0.000048	1.58%
Zn 206.200†	56.8	0.01900	mg/L	0.001586	0.01900	mg/L	0.001586	8.35%

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Sequence No.: 4 **Autosampler Location: 302**
Sample ID: SEQ-IFA1 **Date Collected: 2/8/2021 2:51:58 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-IFA1

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-IFA1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2406818.1	98.47	%	0.474				0.48%
ScR 361.383	266919.9	99.39	%	1.745				1.76%
Ag 328.068†	-882.1	-0.00231	mg/L	0.000353	-0.00231	mg/L	0.000353	15.27%
Al 308.215†	342982.1	203.5	mg/L	1.62	203.5	mg/L	1.62	0.80%
As 188.979†	-25.8	-0.00254	mg/L	0.005131	-0.00254	mg/L	0.005131	201.91%
B 249.677†	19.6	0.00247	mg/L	0.002502	0.00247	mg/L	0.002502	101.13%
Ba 233.527†	108.1	-0.00208	mg/L	0.000606	-0.00208	mg/L	0.000606	29.18%
Be 313.042†	26.8	0.00004	mg/L	0.000065	0.00004	mg/L	0.000065	176.47%
Ca 317.933†	979552.6	98.15	mg/L	1.398	98.15	mg/L	1.398	1.42%
Cd 228.802†	88.2	-0.00022	mg/L	0.000076	-0.00022	mg/L	0.000076	34.86%
Co 228.616†	23.2	-0.00239	mg/L	0.000194	-0.00239	mg/L	0.000194	8.13%
Cr 267.716†	-13.7	-0.00059	mg/L	0.001669	-0.00059	mg/L	0.001669	285.08%
Cu 324.752†	-1882.9	0.00304	mg/L	0.000212	0.00304	mg/L	0.000212	6.98%
Fe 273.955†	408891.7	199.7	mg/L	1.34	199.7	mg/L	1.34	0.67%
K 766.490†	-11.8	-0.00551	mg/L	0.011410	-0.00551	mg/L	0.011410	207.13%
Mg 279.077†	94517.7	101.9	mg/L	2.39	101.9	mg/L	2.39	2.34%
Mn 257.610†	228.7	0.00169	mg/L	0.000399	0.00169	mg/L	0.000399	23.58%
Mo 202.031†	46.8	0.00176	mg/L	0.000235	0.00176	mg/L	0.000235	13.36%
Na 589.592†	174.8	0.01503	mg/L	0.004870	0.01503	mg/L	0.004870	32.39%
Na 330.237†	10.5	0.3625	mg/L	0.16260	0.3625	mg/L	0.16260	44.86%
Ni 231.604†	-5.4	-0.00138	mg/L	0.000768	-0.00138	mg/L	0.000768	55.56%
Pb 220.353†	-326.4	-0.00064	mg/L	0.000963	-0.00064	mg/L	0.000963	151.70%
Sb 206.836†	36.0	0.02085	mg/L	0.010233	0.02085	mg/L	0.010233	49.07%
Se 196.026†	4.9	0.02950	mg/L	0.004990	0.02950	mg/L	0.004990	16.92%
Si 288.158†	-50.0	-0.02329	mg/L	0.001886	-0.02329	mg/L	0.001886	8.10%
Sn 189.927†	-55.2	-0.00246	mg/L	0.001304	-0.00246	mg/L	0.001304	53.09%
Sr 421.552†	764.0	0.00087	mg/L	0.000030	0.00087	mg/L	0.000030	3.43%
Ti 334.903†	201.9	0.00048	mg/L	0.000595	0.00048	mg/L	0.000595	123.33%
Tl 190.801†	-76.6	-0.01009	mg/L	0.001775	-0.01009	mg/L	0.001775	17.59%
V 292.402†	-346.8	0.00195	mg/L	0.000413	0.00195	mg/L	0.000413	21.13%
Zn 206.200†	0.6	0.00020	mg/L	0.001583	0.00020	mg/L	0.001583	802.12%

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Sequence No.: 5 **Autosampler Location: 303**
Sample ID: SEQ-IFB1 **Date Collected: 2/8/2021 2:54:52 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-IFB1

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-IFB1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2386022.6	97.62	%	0.756				0.77%
ScR 361.383	263745.7	98.21	%	1.124				1.14%
Ag 328.068†	194565.0	1.027	mg/L	0.0070	1.027	mg/L	0.0070	0.68%
Al 308.215†	343446.1	203.8	mg/L	1.13	203.8	mg/L	1.13	0.55%
As 188.979†	1447.4	0.9739	mg/L	0.02054	0.9739	mg/L	0.02054	2.11%
B 249.677†	37.4	0.00258	mg/L	0.000939	0.00258	mg/L	0.000939	36.45%
Ba 233.527†	9617.2	0.9928	mg/L	0.00893	0.9928	mg/L	0.00893	0.90%
Be 313.042†	721389.8	0.9537	mg/L	0.00622	0.9537	mg/L	0.00622	0.65%
Ca 317.933†	1011206.2	101.3	mg/L	1.05	101.3	mg/L	1.05	1.04%
Cd 228.802†	35311.4	0.9982	mg/L	0.00457	0.9982	mg/L	0.00457	0.46%
Co 228.616†	39048.9	0.9154	mg/L	0.00425	0.9154	mg/L	0.00425	0.46%
Cr 267.716†	7706.2	1.012	mg/L	0.0113	1.012	mg/L	0.0113	1.12%
Cu 324.752†	213252.2	1.010	mg/L	0.0025	1.010	mg/L	0.0025	0.25%
Fe 273.955†	409267.1	199.9	mg/L	0.31	199.9	mg/L	0.31	0.15%
K 766.490†	56.2	0.02619	mg/L	0.015991	0.02619	mg/L	0.015991	61.06%
Mg 279.077†	92225.6	99.39	mg/L	1.336	99.39	mg/L	1.336	1.34%
Mn 257.610†	60311.4	0.9642	mg/L	0.00558	0.9642	mg/L	0.00558	0.58%
Mo 202.031†	27.6	0.00065	mg/L	0.000296	0.00065	mg/L	0.000296	45.88%
Na 589.592†	134.2	0.01154	mg/L	0.005465	0.01154	mg/L	0.005465	47.34%
Na 330.237†	19.5	0.6754	mg/L	0.28239	0.6754	mg/L	0.28239	41.81%
Ni 231.604†	3716.0	0.9686	mg/L	0.01257	0.9686	mg/L	0.01257	1.30%
Pb 220.353†	7716.6	0.9896	mg/L	0.01451	0.9896	mg/L	0.01451	1.47%
Sb 206.836†	1795.3	1.056	mg/L	0.0176	1.056	mg/L	0.0176	1.66%
Se 196.026†	1280.6	1.030	mg/L	0.0137	1.030	mg/L	0.0137	1.33%
Si 288.158†	-63.5	-0.02506	mg/L	0.001578	-0.02506	mg/L	0.001578	6.30%
Sn 189.927†	-65.8	-0.00401	mg/L	0.002114	-0.00401	mg/L	0.002114	52.69%
Sr 421.552†	762.2	0.00086	mg/L	0.000009	0.00086	mg/L	0.000009	1.07%
Ti 334.903†	230.0	0.00100	mg/L	0.000644	0.00100	mg/L	0.000644	64.56%
Tl 190.801†	1876.7	0.9155	mg/L	0.01076	0.9155	mg/L	0.01076	1.17%
V 292.402†	135423.4	0.9616	mg/L	0.00740	0.9616	mg/L	0.00740	0.77%
Zn 206.200†	2830.4	0.9463	mg/L	0.01340	0.9463	mg/L	0.01340	1.42%

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Sequence No.: 6
Sample ID: DI CHECK

Autosampler Location: 304
Date Collected: 2/8/2021 3:00:18 PM
Data Type: Original

Dilution: 1X
Wash Time: 200

Auto Dilution Factor: 1

Nebulizer Parameters: DI CHECK

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: DI CHECK

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2468768.0	101.0	%	0.75				0.74%
ScR 361.383	269919.4	100.5	%	0.66				0.65%
Ag 328.068†	211.9	0.00112	mg/L	0.000164	0.00112	mg/L	0.000164	14.68%
Al 308.215†	-6.2	-0.00369	mg/L	0.003763	-0.00369	mg/L	0.003763	102.10%
As 188.979†	0.2	0.00016	mg/L	0.003300	0.00016	mg/L	0.003300	>999.9%
B 249.677†	7.4	0.00092	mg/L	0.000662	0.00092	mg/L	0.000662	71.64%
Ba 233.527†	-1.7	-0.00018	mg/L	0.000327	-0.00018	mg/L	0.000327	185.98%
Be 313.042†	-20.7	-0.00003	mg/L	0.000020	-0.00003	mg/L	0.000020	73.50%
Ca 317.933†	3.0	0.00030	mg/L	0.000805	0.00030	mg/L	0.000805	269.19%
Cd 228.802†	-5.6	-0.00016	mg/L	0.000068	-0.00016	mg/L	0.000068	41.23%
Co 228.616†	6.9	0.00016	mg/L	0.000090	0.00016	mg/L	0.000090	54.60%
Cr 267.716†	11.1	0.00146	mg/L	0.000131	0.00146	mg/L	0.000131	8.99%
Cu 324.752†	-27.4	-0.00013	mg/L	0.000138	-0.00013	mg/L	0.000138	107.50%
Fe 273.955†	2.5	0.00122	mg/L	0.000827	0.00122	mg/L	0.000827	67.53%
K 766.490†	20.6	0.00960	mg/L	0.009642	0.00960	mg/L	0.009642	100.42%
Mg 279.077†	11.7	0.01263	mg/L	0.008554	0.01263	mg/L	0.008554	67.76%
Mn 257.610†	-3.5	-0.00006	mg/L	0.000094	-0.00006	mg/L	0.000094	168.03%
Mo 202.031†	-3.8	-0.00022	mg/L	0.000326	-0.00022	mg/L	0.000326	149.35%
Na 589.592†	-20.1	-0.00173	mg/L	0.004922	-0.00173	mg/L	0.004922	285.13%
Na 330.237†	5.8	0.2009	mg/L	0.16572	0.2009	mg/L	0.16572	82.49%
Ni 231.604†	-11.7	-0.00306	mg/L	0.001384	-0.00306	mg/L	0.001384	45.26%
Pb 220.353†	-5.6	-0.00069	mg/L	0.000759	-0.00069	mg/L	0.000759	109.95%
Sb 206.836†	-3.3	-0.00197	mg/L	0.001886	-0.00197	mg/L	0.001886	95.51%
Se 196.026†	8.6	0.00679	mg/L	0.004308	0.00679	mg/L	0.004308	63.45%
Si 288.158†	36.6	0.01715	mg/L	0.000720	0.01715	mg/L	0.000720	4.20%
Sn 189.927†	-3.1	-0.00085	mg/L	0.000204	-0.00085	mg/L	0.000204	24.16%
Sr 421.552†	-5.5	-0.00001	mg/L	0.000074	-0.00001	mg/L	0.000074	>999.9%
Ti 334.903†	-11.8	-0.00040	mg/L	0.000734	-0.00040	mg/L	0.000734	182.51%
Tl 190.801†	3.3	0.00157	mg/L	0.002371	0.00157	mg/L	0.002371	151.37%
V 292.402†	8.6	0.00007	mg/L	0.000045	0.00007	mg/L	0.000045	66.93%
Zn 206.200†	1.4	0.00046	mg/L	0.000301	0.00046	mg/L	0.000301	65.14%

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Sequence No.: 7 | Autosampler Location: 7
Sample ID: SEQ-CCV1 | Date Collected: 2/8/2021 3:03:06 PM
Data Type: Original
Dilution: 1X
Wash Time: 37 | Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV1

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-CCV1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2403553.7	98.33	%	1.106				1.12%
ScR 361.383	254846.2	94.90	%	1.102				1.16%
Ag 328.068†	195853.3	1.031	mg/L	0.0081	1.031	mg/L	0.0081	0.79%
Al 308.215†	3543.8	2.067	mg/L	0.0117	2.067	mg/L	0.0117	0.57%
As 188.979†	2952.6	1.959	mg/L	0.0197	1.959	mg/L	0.0197	1.01%
B 249.677†	7985.6	1.001	mg/L	0.0131	1.001	mg/L	0.0131	1.31%
Ba 233.527†	9779.6	1.023	mg/L	0.0062	1.023	mg/L	0.0062	0.61%
Be 313.042†	711553.3	0.9407	mg/L	0.00489	0.9407	mg/L	0.00489	0.52%
Ca 317.933†	20687.3	2.072	mg/L	0.0382	2.072	mg/L	0.0382	1.85%
Cd 228.802†	35470.2	0.9983	mg/L	0.00462	0.9983	mg/L	0.00462	0.46%
Co 228.616†	41172.6	0.9664	mg/L	0.00495	0.9664	mg/L	0.00495	0.51%
Cr 267.716†	7719.0	1.018	mg/L	0.0127	1.018	mg/L	0.0127	1.25%
Cu 324.752†	212793.7	0.9945	mg/L	0.00923	0.9945	mg/L	0.00923	0.93%
Fe 273.955†	4236.1	2.061	mg/L	0.0035	2.061	mg/L	0.0035	0.17%
K 766.490†	43821.1	20.43	mg/L	0.108	20.43	mg/L	0.108	0.53%
Mg 279.077†	1860.5	2.016	mg/L	0.0792	2.016	mg/L	0.0792	3.93%
Mn 257.610†	63561.8	1.018	mg/L	0.0115	1.018	mg/L	0.0115	1.13%
Mo 202.031†	17162.5	0.9954	mg/L	0.01130	0.9954	mg/L	0.01130	1.14%
Na 589.592†	580268.8	49.91	mg/L	0.460	49.91	mg/L	0.460	0.92%
Na 330.237†	1526.8	52.89	mg/L	0.181	52.89	mg/L	0.181	0.34%
Ni 231.604†	3864.3	1.007	mg/L	0.0258	1.007	mg/L	0.0258	2.56%
Pb 220.353†	15789.1	1.945	mg/L	0.0068	1.945	mg/L	0.0068	0.35%
Sb 206.836†	3509.7	2.073	mg/L	0.0306	2.073	mg/L	0.0306	1.48%
Se 196.026†	2510.9	1.971	mg/L	0.0337	1.971	mg/L	0.0337	1.71%
Si 288.158†	4537.9	2.116	mg/L	0.0083	2.116	mg/L	0.0083	0.39%
Sn 189.927†	3633.6	0.9768	mg/L	0.00997	0.9768	mg/L	0.00997	1.02%
Sr 421.552†	887111.3	1.005	mg/L	0.0063	1.005	mg/L	0.0063	0.63%
Ti 334.903†	29346.2	1.002	mg/L	0.0039	1.002	mg/L	0.0039	0.38%
Tl 190.801†	4098.8	1.953	mg/L	0.0206	1.953	mg/L	0.0206	1.06%
V 292.402†	140353.0	0.9924	mg/L	0.01303	0.9924	mg/L	0.01303	1.31%
Zn 206.200†	2958.4	0.9897	mg/L	0.02783	0.9897	mg/L	0.02783	2.81%

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Sequence No.: 8 **Autosampler Location: 1**
Sample ID: SEQ-CCB1 **Date Collected: 2/8/2021 3:06:34 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB1

Analyte	**Back Pressure**	**Flow**
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-CCB1

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2486760.5	101.7	%	0.33				0.32%
ScR 361.383	268436.1	99.96	%	0.749				0.75%
Ag 328.068†	25.2	0.00013	mg/L	0.000394	0.00013	mg/L	0.000394	296.56%
Al 308.215†	-1.8	-0.00106	mg/L	0.005135	-0.00106	mg/L	0.005135	484.79%
As 188.979†	-5.7	-0.00382	mg/L	0.001730	-0.00382	mg/L	0.001730	45.34%
B 249.677†	25.7	0.00323	mg/L	0.000813	0.00323	mg/L	0.000813	25.17%
Ba 233.527†	-6.6	-0.00069	mg/L	0.000431	-0.00069	mg/L	0.000431	62.07%
Be 313.042†	-12.0	-0.00002	mg/L	0.000022	-0.00002	mg/L	0.000022	141.28%
Ca 317.933†	6.7	0.00066	mg/L	0.000505	0.00066	mg/L	0.000505	76.35%
Cd 228.802†	-4.1	-0.00009	mg/L	0.000070	-0.00009	mg/L	0.000070	78.25%
Co 228.616†	3.4	0.00008	mg/L	0.000101	0.00008	mg/L	0.000101	127.11%
Cr 267.716†	9.6	0.00126	mg/L	0.000359	0.00126	mg/L	0.000359	28.46%
Cu 324.752†	8.6	0.00004	mg/L	0.000169	0.00004	mg/L	0.000169	423.50%
Fe 273.955†	8.0	0.00392	mg/L	0.001347	0.00392	mg/L	0.001347	34.40%
K 766.490†	-3.8	-0.00179	mg/L	0.024546	-0.00179	mg/L	0.024546	>999.9%
Mg 279.077†	12.9	0.01392	mg/L	0.009858	0.01392	mg/L	0.009858	70.84%
Mn 257.610†	-3.3	-0.00005	mg/L	0.000091	-0.00005	mg/L	0.000091	170.54%
Mo 202.031†	8.9	0.00052	mg/L	0.000113	0.00052	mg/L	0.000113	21.98%
Na 589.592†	124.6	0.01072	mg/L	0.005740	0.01072	mg/L	0.005740	53.55%
Na 330.237†	14.1	0.4874	mg/L	0.14542	0.4874	mg/L	0.14542	29.84%
Ni 231.604†	-6.1	-0.00159	mg/L	0.000692	-0.00159	mg/L	0.000692	43.41%
Pb 220.353†	3.5	0.00043	mg/L	0.001213	0.00043	mg/L	0.001213	280.76%
Sb 206.836†	7.6	0.00446	mg/L	0.006202	0.00446	mg/L	0.006202	139.08%
Se 196.026†	4.9	0.00381	mg/L	0.000886	0.00381	mg/L	0.000886	23.26%
Si 288.158†	13.1	0.00614	mg/L	0.004010	0.00614	mg/L	0.004010	65.34%
Sn 189.927†	0.5	0.00013	mg/L	0.000420	0.00013	mg/L	0.000420	322.64%
Sr 421.552†	53.9	0.00006	mg/L	0.000045	0.00006	mg/L	0.000045	73.13%
Ti 334.903†	3.6	0.00012	mg/L	0.000727	0.00012	mg/L	0.000727	591.89%
Tl 190.801†	3.4	0.00165	mg/L	0.001456	0.00165	mg/L	0.001456	88.42%
V 292.402†	-8.7	-0.00005	mg/L	0.000055	-0.00005	mg/L	0.000055	99.52%
Zn 206.200†	-1.5	-0.00049	mg/L	0.001631	-0.00049	mg/L	0.001631	334.54%

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Sequence No.: 9 **Autosampler Location: 305**
Sample ID: 21A0360-01 **Date Collected: 2/8/2021 3:09:22 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0360-01

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0360-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2330815.1	95.36	%	1.656				1.74%
ScR 361.383	275552.7	102.6	%	0.65				0.63%
Ag 328.068†	35.0	0.00013	mg/L	0.000067	0.00013	mg/L	0.000067	50.32%
Al 308.215†	966.6	0.5546	mg/L	0.00858	0.5546	mg/L	0.00858	1.55%
As 188.979†	2.2	0.01933	mg/L	0.001185	0.01933	mg/L	0.001185	6.13%
B 249.677†	1821.1	0.2169	mg/L	0.00198	0.2169	mg/L	0.00198	0.91%
Ba 233.527†	598.1	0.06231	mg/L	0.000851	0.06231	mg/L	0.000851	1.37%
Be 313.042†	-63.3	-0.00009	mg/L	0.000031	-0.00009	mg/L	0.000031	35.42%
Ca 317.933†	54145.3	5.422	mg/L	0.0272	5.422	mg/L	0.0272	0.50%
Cd 228.802†	66.0	0.00189	mg/L	0.000141	0.00189	mg/L	0.000141	7.46%
Co 228.616†	712.7	0.01667	mg/L	0.000130	0.01667	mg/L	0.000130	0.78%
Cr 267.716†	115.3	0.01548	mg/L	0.000649	0.01548	mg/L	0.000649	4.19%
Cu 324.752†	21917.1	0.1024	mg/L	0.00284	0.1024	mg/L	0.00284	2.77%
Fe 273.955†	7492.4	3.660	mg/L	0.0476	3.660	mg/L	0.0476	1.30%
K 766.490†	26648.7	12.42	mg/L	0.091	12.42	mg/L	0.091	0.74%
Mg 279.077†	2065.8	2.228	mg/L	0.0385	2.228	mg/L	0.0385	1.73%
Mn 257.610†	10530.5	0.1686	mg/L	0.00163	0.1686	mg/L	0.00163	0.97%
Mo 202.031†	865.9	0.05025	mg/L	0.000702	0.05025	mg/L	0.000702	1.40%
Na 589.592†	2884689.6	248.1	mg/L	4.88	248.1	mg/L	4.88	1.97%
Na 330.237†	7584.3	262.7	mg/L	1.37	262.7	mg/L	1.37	0.52%
Ni 231.604†	341.5	0.08902	mg/L	0.001928	0.08902	mg/L	0.001928	2.17%
Pb 220.353†	158.1	0.01911	mg/L	0.000509	0.01911	mg/L	0.000509	2.66%
Sb 206.836†	48.4	0.02826	mg/L	0.002410	0.02826	mg/L	0.002410	8.53%
Se 196.026†	5.5	0.00475	mg/L	0.003532	0.00475	mg/L	0.003532	74.34%
Si 288.158†	40413.8	18.91	mg/L	0.084	18.91	mg/L	0.084	0.45%
Sn 189.927†	18.8	0.00530	mg/L	0.001360	0.00530	mg/L	0.001360	25.63%
Sr 421.552†	38279.1	0.04337	mg/L	0.000288	0.04337	mg/L	0.000288	0.66%
Ti 334.903†	407.9	0.01356	mg/L	0.000289	0.01356	mg/L	0.000289	2.13%
Tl 190.801†	-4.1	-0.00150	mg/L	0.003709	-0.00150	mg/L	0.003709	247.41%
V 292.402†	593.0	0.00438	mg/L	0.000213	0.00438	mg/L	0.000213	4.87%
Zn 206.200†	2897.3	0.9727	mg/L	0.01257	0.9727	mg/L	0.01257	1.29%

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Sequence No.: 10 **Autosampler Location: 306**
Sample ID: 21A0361-03 **Date Collected: 2/8/2021 3:12:18 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0361-03

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-03

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2506564.2	102.5	%	1.59				1.55%
ScR 361.383	282983.8	105.4	%	0.68				0.65%
Ag 328.068†	-694.9	-0.00147	mg/L	0.000455	-0.00294	mg/L	0.000909	30.93%
Al 308.215†	130353.8	77.34	mg/L	0.228	154.7	mg/L	0.46	0.29%
As 188.979†	20.4	0.03395	mg/L	0.002228	0.06789	mg/L	0.004456	6.56%
B 249.677†	286.0	0.03114	mg/L	0.001203	0.06228	mg/L	0.002406	3.86%
Ba 233.527†	15894.9	1.655	mg/L	0.0154	3.310	mg/L	0.0307	0.93%
Be 313.042†	990.1	0.00099	mg/L	0.000025	0.00199	mg/L	0.000049	2.47%
Ca 317.933†	350522.3	35.12	mg/L	0.420	70.24	mg/L	0.839	1.19%
Cd 228.802†	260.6	0.00561	mg/L	0.000422	0.01122	mg/L	0.000843	7.51%
Co 228.616†	2443.3	0.04264	mg/L	0.000937	0.08528	mg/L	0.001875	2.20%
Cr 267.716†	1645.0	0.2164	mg/L	0.00369	0.4329	mg/L	0.00738	1.71%
Cu 324.752†	64062.5	0.3065	mg/L	0.00505	0.6130	mg/L	0.01010	1.65%
Fe 273.955†	278277.0	135.9	mg/L	0.26	271.8	mg/L	0.53	0.19%
K 766.490†	12632.8	5.889	mg/L	0.0187	11.78	mg/L	0.037	0.32%
Mg 279.077†	23902.6	25.57	mg/L	0.264	51.14	mg/L	0.527	1.03%
Mn 257.610†	70227.5	1.124	mg/L	0.0061	2.247	mg/L	0.0122	0.54%
Mo 202.031†	78.8	0.00433	mg/L	0.000454	0.00866	mg/L	0.000908	10.49%
Na 589.592†	87210.0	7.501	mg/L	0.0221	15.00	mg/L	0.044	0.29%
Na 330.237†	235.9	8.171	mg/L	0.3226	16.34	mg/L	0.645	3.95%
Ni 231.604†	452.4	0.1179	mg/L	0.00165	0.2359	mg/L	0.00330	1.40%
Pb 220.353†	4573.7	0.5722	mg/L	0.00832	1.144	mg/L	0.0166	1.45%
Sb 206.836†	-27.3	0.00695	mg/L	0.003566	0.01390	mg/L	0.007132	51.33%
Se 196.026†	0.1	0.01917	mg/L	0.005452	0.03833	mg/L	0.010903	28.44%
Si 288.158†	15771.0	7.352	mg/L	0.0758	14.70	mg/L	0.152	1.03%
Sn 189.927†	9.3	0.01058	mg/L	0.000370	0.02116	mg/L	0.000739	3.49%
Sr 421.552†	539175.9	0.6109	mg/L	0.00124	1.222	mg/L	0.0025	0.20%
Ti 334.903†	192868.8	6.589	mg/L	0.0059	13.18	mg/L	0.012	0.09%
Tl 190.801†	-52.7	-0.00876	mg/L	0.011473	-0.01752	mg/L	0.022947	131.00%
V 292.402†	51294.0	0.3636	mg/L	0.00603	0.7273	mg/L	0.01205	1.66%
Zn 206.200†	4003.8	1.340	mg/L	0.0161	2.681	mg/L	0.0322	1.20%

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Sequence No.: 11 **Autosampler Location: 307**
Sample ID: 21A0361-05 **Date Collected: 2/8/2021 3:15:07 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0361-05

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-05

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2481716.4	101.5	%	0.46				0.45%
ScR 361.383	281023.3	104.6	%	0.91				0.87%
Ag 328.068†	-659.2	-0.00116	mg/L	0.000184	-0.00233	mg/L	0.000369	15.85%
Al 308.215†	216126.3	128.2	mg/L	0.60	256.5	mg/L	1.20	0.47%
As 188.979†	14.1	0.02839	mg/L	0.005946	0.05678	mg/L	0.011892	20.94%
B 249.677†	526.9	0.06053	mg/L	0.001422	0.1211	mg/L	0.00284	2.35%
Ba 233.527†	5452.3	0.5592	mg/L	0.00350	1.118	mg/L	0.0070	0.63%
Be 313.042†	1119.2	0.00108	mg/L	0.000021	0.00217	mg/L	0.000041	1.90%
Ca 317.933†	726379.3	72.78	mg/L	0.290	145.6	mg/L	0.58	0.40%
Cd 228.802†	303.4	0.00628	mg/L	0.000077	0.01255	mg/L	0.000155	1.23%
Co 228.616†	3853.5	0.07170	mg/L	0.000669	0.1434	mg/L	0.00134	0.93%
Cr 267.716†	12018.8	1.578	mg/L	0.0090	3.157	mg/L	0.0180	0.57%
Cu 324.752†	57937.4	0.2796	mg/L	0.00190	0.5592	mg/L	0.00381	0.68%
Fe 273.955†	349858.2	170.9	mg/L	0.59	341.8	mg/L	1.18	0.35%
K 766.490†	10385.6	4.841	mg/L	0.0275	9.682	mg/L	0.0550	0.57%
Mg 279.077†	29439.4	31.48	mg/L	0.309	62.97	mg/L	0.619	0.98%
Mn 257.610†	94570.0	1.514	mg/L	0.0111	3.027	mg/L	0.0222	0.73%
Mo 202.031†	248.6	0.01393	mg/L	0.000393	0.02786	mg/L	0.000785	2.82%
Na 589.592†	134622.6	11.58	mg/L	0.094	23.16	mg/L	0.188	0.81%
Na 330.237†	369.4	12.80	mg/L	0.236	25.59	mg/L	0.472	1.84%
Ni 231.604†	518.9	0.1353	mg/L	0.00126	0.2705	mg/L	0.00251	0.93%
Pb 220.353†	21465.0	2.666	mg/L	0.0190	5.333	mg/L	0.0379	0.71%
Sb 206.836†	-46.6	0.00192	mg/L	0.005125	0.00384	mg/L	0.010250	267.12%
Se 196.026†	17.9	0.03844	mg/L	0.004746	0.07688	mg/L	0.009492	12.35%
Si 288.158†	18506.6	8.625	mg/L	0.0421	17.25	mg/L	0.084	0.49%
Sn 189.927†	143.5	0.05123	mg/L	0.000577	0.1025	mg/L	0.00115	1.13%
Sr 421.552†	520749.6	0.5900	mg/L	0.00290	1.180	mg/L	0.0058	0.49%
Ti 334.903†	249632.0	8.526	mg/L	0.0179	17.05	mg/L	0.036	0.21%
Tl 190.801†	-44.6	-0.00139	mg/L	0.000548	-0.00278	mg/L	0.001096	39.46%
V 292.402†	63554.9	0.4568	mg/L	0.00240	0.9136	mg/L	0.00481	0.53%
Zn 206.200†	10452.6	3.497	mg/L	0.0156	6.994	mg/L	0.0311	0.44%

Sequence No.: 12
Sample ID: 21A0361-07
Autosampler Location: 308
Date Collected: 2/8/2021 3:17:56 PM
Data Type: Original

Dilution: 2X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: 21A0361-07

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-07

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2514711.9	102.9	%	0.32				0.31%
ScR 361.383	278043.7	103.5	%	0.79				0.76%
Ag 328.068†	-697.4	-0.00168	mg/L	0.000234	-0.00336	mg/L	0.000467	13.90%
Al 308.215†	122786.8	72.85	mg/L	0.536	145.7	mg/L	1.07	0.74%
As 188.979†	15.8	0.02939	mg/L	0.002181	0.05878	mg/L	0.004363	7.42%
B 249.677†	187.4	0.01791	mg/L	0.000794	0.03581	mg/L	0.001589	4.44%
Ba 233.527†	4143.0	0.4254	mg/L	0.00600	0.8508	mg/L	0.01199	1.41%
Be 313.042†	899.6	0.00088	mg/L	0.000043	0.00177	mg/L	0.000086	4.88%
Ca 317.933†	350010.6	35.07	mg/L	0.499	70.14	mg/L	0.997	1.42%
Cd 228.802†	136.0	0.00220	mg/L	0.000194	0.00441	mg/L	0.000388	8.80%
Co 228.616†	2403.4	0.04209	mg/L	0.000404	0.08418	mg/L	0.000809	0.96%
Cr 267.716†	1767.6	0.2325	mg/L	0.00249	0.4650	mg/L	0.00497	1.07%
Cu 324.752†	42279.7	0.2039	mg/L	0.00163	0.4079	mg/L	0.00326	0.80%
Fe 273.955†	255846.9	125.0	mg/L	0.54	249.9	mg/L	1.08	0.43%
K 766.490†	11608.0	5.411	mg/L	0.0396	10.82	mg/L	0.079	0.73%
Mg 279.077†	22086.1	23.63	mg/L	0.407	47.26	mg/L	0.814	1.72%
Mn 257.610†	66120.8	1.058	mg/L	0.0108	2.116	mg/L	0.0217	1.02%
Mo 202.031†	57.0	0.00306	mg/L	0.000092	0.00613	mg/L	0.000183	2.99%
Na 589.592†	81629.4	7.021	mg/L	0.0748	14.04	mg/L	0.150	1.07%
Na 330.237†	202.7	7.020	mg/L	0.2028	14.04	mg/L	0.406	2.89%
Ni 231.604†	415.3	0.1083	mg/L	0.00181	0.2165	mg/L	0.00362	1.67%
Pb 220.353†	3582.9	0.4502	mg/L	0.00202	0.9004	mg/L	0.00404	0.45%
Sb 206.836†	-28.7	0.00582	mg/L	0.006649	0.01165	mg/L	0.013297	114.14%
Se 196.026†	8.0	0.02391	mg/L	0.002564	0.04782	mg/L	0.005128	10.73%
Si 288.158†	18598.5	8.676	mg/L	0.1438	17.35	mg/L	0.288	1.66%
Sn 189.927†	1.6	0.00827	mg/L	0.001331	0.01654	mg/L	0.002662	16.10%
Sr 421.552†	327785.8	0.3714	mg/L	0.00410	0.7428	mg/L	0.00820	1.10%
Ti 334.903†	190945.7	6.523	mg/L	0.0490	13.05	mg/L	0.098	0.75%
Tl 190.801†	-28.6	0.00135	mg/L	0.002721	0.00270	mg/L	0.005442	201.59%
V 292.402†	49228.4	0.3489	mg/L	0.00213	0.6979	mg/L	0.00425	0.61%
Zn 206.200†	4051.0	1.356	mg/L	0.0234	2.713	mg/L	0.0468	1.73%

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Sequence No.: 13 **Autosampler Location: 309**
Sample ID: 21A0361-09 **Date Collected: 2/8/2021 3:20:45 PM**
DEL
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0361-09

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 21A0361-09

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2398235.7	98.12	%	0.482				0.49%
ScR 361.383	272680.9	101.5	%	0.41				0.40%
Ag 328.068†	656.8	-0.00162	mg/L	0.000191	-0.00324	mg/L	0.000381	11.77%
Al 308.215†	239988.5	142.4	mg/L	0.74	284.8	mg/L	1.47	0.52%
As 188.979†	18.3	0.02190	mg/L	0.011856	0.04380	mg/L	0.023712	54.14%
B 249.677†	222.3	0.02158	mg/L	0.000641	0.04317	mg/L	0.001282	2.97%
Ba 233.527†	5870.1	0.5931	mg/L	0.00540	1.186	mg/L	0.0108	0.91%
Be 313.042†	1382.8	0.00133	mg/L	0.000050	0.00266	mg/L	0.000101	3.79%
Ca 317.933†	6247206.7	625.9	mg/L	12.24	1252	mg/L	24.48	1.96%
Cd 228.802†	247.3	0.00134	mg/L	0.000283	0.00268	mg/L	0.000566	21.12%
Co 228.616†	9177.6	0.1923	mg/L	0.00213	0.3846	mg/L	0.00426	1.11%
Cr 267.716†	2782.7	0.3732	mg/L	0.00218	0.7464	mg/L	0.00436	0.58%
Cu 324.752†	94918.6	0.4560	mg/L	0.00125	0.9120	mg/L	0.00249	0.27%
Fe 273.955†	485879.7	237.3	mg/L	0.67	474.7	mg/L	1.34	0.28%
K 766.490†	13931.7	6.494	mg/L	0.0578	12.99	mg/L	0.116	0.89%
Mg 279.077†	61232.2	65.66	mg/L	0.725	131.3	mg/L	1.45	1.10%
Mn 257.610†	171452.4	2.744	mg/L	0.0120	5.488	mg/L	0.0240	0.44%
Mo 202.031†	254.3	0.00873	mg/L	0.000320	0.01745	mg/L	0.000640	3.66%
Na 589.592†	310754.6	26.73	mg/L	0.050	53.46	mg/L	0.100	0.19%
Na 330.237†	827.8	28.68	mg/L	0.480	57.35	mg/L	0.959	1.67%
Ni 231.604†	772.2	0.2013	mg/L	0.00229	0.4027	mg/L	0.00458	1.14%
Pb 220.353†	15018.7	1.868	mg/L	0.0105	3.735	mg/L	0.0211	0.56%
Sb 206.836†	-21.8	0.02376	mg/L	0.003280	0.04752	mg/L	0.006559	13.80%
Se 196.026†	11.2	0.04178	mg/L	0.005127	0.08357	mg/L	0.010253	12.27%
Si 288.158†	19774.5	9.209	mg/L	0.0697	18.42	mg/L	0.139	0.76%
Sn 189.927†	117.6	0.06547	mg/L	0.000650	0.1309	mg/L	0.00130	0.99%
Sr 421.552†	1480867.2	1.678	mg/L	0.0093	3.356	mg/L	0.0186	0.55%
Ti 334.903†	304034.3	10.35	mg/L	0.028	20.70	mg/L	0.057	0.27%
Tl 190.801†	-57.6	0.00067	mg/L	0.005037	0.00134	mg/L	0.010073	749.26%
V 292.402†	81138.7	0.5760	mg/L	0.00349	1.152	mg/L	0.0070	0.61%
Zn 206.200†	3929.1	1.316	mg/L	0.0060	2.632	mg/L	0.0120	0.45%

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Sequence No.: 14 **Autosampler Location: 310**
Sample ID: 21A0361-11 **Date Collected: 2/8/2021 3:23:35 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0361-11

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-11

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2524803.9	103.3	%	0.58				0.57%
ScR 361.383	279986.8	104.3	%	1.60				1.54%
Ag 328.068†	-744.7	-0.00190	mg/L	0.000253	-0.00381	mg/L	0.000506	13.30%
Al 308.215†	141865.2	84.17	mg/L	0.891	168.3	mg/L	1.78	1.06%
As 188.979†	15.5	0.03012	mg/L	0.000221	0.06025	mg/L	0.000441	0.73%
B 249.677†	210.5	0.02087	mg/L	0.001189	0.04174	mg/L	0.002378	5.70%
Ba 233.527†	3566.3	0.3645	mg/L	0.00711	0.7290	mg/L	0.01421	1.95%
Be 313.042†	1064.8	0.00107	mg/L	0.000061	0.00214	mg/L	0.000123	5.74%
Ca 317.933†	420107.7	42.09	mg/L	0.771	84.18	mg/L	1.541	1.83%
Cd 228.802†	111.3	0.00137	mg/L	0.000106	0.00275	mg/L	0.000212	7.72%
Co 228.616†	2474.8	0.04264	mg/L	0.000322	0.08528	mg/L	0.000643	0.75%
Cr 267.716†	1298.6	0.1711	mg/L	0.00317	0.3421	mg/L	0.00635	1.86%
Cu 324.752†	24231.5	0.1198	mg/L	0.00101	0.2396	mg/L	0.00202	0.84%
Fe 273.955†	269829.7	131.8	mg/L	1.72	263.6	mg/L	3.44	1.31%
K 766.490†	14947.7	6.968	mg/L	0.0998	13.94	mg/L	0.200	1.43%
Mg 279.077†	24784.9	26.53	mg/L	0.514	53.07	mg/L	1.028	1.94%
Mn 257.610†	79730.6	1.276	mg/L	0.0102	2.552	mg/L	0.0204	0.80%
Mo 202.031†	58.8	0.00308	mg/L	0.000217	0.00617	mg/L	0.000435	7.05%
Na 589.592†	72864.9	6.268	mg/L	0.0743	12.54	mg/L	0.149	1.19%
Na 330.237†	196.7	6.815	mg/L	0.5595	13.63	mg/L	1.119	8.21%
Ni 231.604†	378.3	0.09862	mg/L	0.003113	0.1972	mg/L	0.00623	3.16%
Pb 220.353†	1241.0	0.1644	mg/L	0.00182	0.3288	mg/L	0.00363	1.10%
Sb 206.836†	-38.6	0.00187	mg/L	0.004406	0.00375	mg/L	0.008813	235.09%
Se 196.026†	3.1	0.02103	mg/L	0.005828	0.04207	mg/L	0.011655	27.71%
Si 288.158†	18371.3	8.567	mg/L	0.1682	17.13	mg/L	0.336	1.96%
Sn 189.927†	-22.3	0.00287	mg/L	0.000789	0.00574	mg/L	0.001577	27.50%
Sr 421.552†	355866.2	0.4032	mg/L	0.00454	0.8064	mg/L	0.00908	1.13%
Ti 334.903†	206602.8	7.057	mg/L	0.0571	14.11	mg/L	0.114	0.81%
Tl 190.801†	-50.6	-0.00834	mg/L	0.006240	-0.01667	mg/L	0.012479	74.86%
V 292.402†	54818.3	0.3880	mg/L	0.00214	0.7761	mg/L	0.00429	0.55%
Zn 206.200†	3205.7	1.074	mg/L	0.0159	2.147	mg/L	0.0319	1.48%

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Sequence No.: 15
Sample ID: 21A0361-13

Dilution: 2X
Wash Time: 37

Autosampler Location: 311
Date Collected: 2/8/2021 3:26:24 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0361-13

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 21A0361-13

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2536329.9	103.8	%	0.94				0.91%
ScR 361.383	279909.3	104.2	%	1.54				1.48%
Ag 328.068†	-1052.5	-0.00264	mg/L	0.000139	-0.00528	mg/L	0.000279	5.28%
Al 308.215†	234309.7	139.0	mg/L	0.70	278.0	mg/L	1.40	0.50%
As 188.979†	-1.7	0.02716	mg/L	0.000871	0.05432	mg/L	0.001742	3.21%
B 249.677†	222.1	0.02067	mg/L	0.001783	0.04133	mg/L	0.003566	8.63%
Ba 233.527†	5363.2	0.5477	mg/L	0.00907	1.095	mg/L	0.0181	1.66%
Be 313.042†	1657.9	0.00175	mg/L	0.000084	0.00351	mg/L	0.000167	4.77%
Ca 317.933†	660970.2	66.23	mg/L	0.462	132.5	mg/L	0.92	0.70%
Cd 228.802†	96.8	0.00035	mg/L	0.000082	0.00069	mg/L	0.000164	23.60%
Co 228.616†	4632.1	0.08648	mg/L	0.000924	0.1730	mg/L	0.00185	1.07%
Cr 267.716†	2981.3	0.3925	mg/L	0.00628	0.7850	mg/L	0.01257	1.60%
Cu 324.752†	52305.3	0.2546	mg/L	0.00174	0.5091	mg/L	0.00347	0.68%
Fe 273.955†	419929.8	205.1	mg/L	1.58	410.2	mg/L	3.16	0.77%
K 766.490†	18674.2	8.705	mg/L	0.0976	17.41	mg/L	0.195	1.12%
Mg 279.077†	66233.5	71.24	mg/L	0.516	142.5	mg/L	1.03	0.72%
Mn 257.610†	189182.3	3.028	mg/L	0.0117	6.057	mg/L	0.0234	0.39%
Mo 202.031†	156.5	0.00845	mg/L	0.000579	0.01690	mg/L	0.001157	6.85%
Na 589.592†	53318.5	4.586	mg/L	0.0274	9.172	mg/L	0.0548	0.60%
Na 330.237†	117.1	4.057	mg/L	0.1512	8.115	mg/L	0.3025	3.73%
Ni 231.604†	1611.1	0.4199	mg/L	0.00692	0.8399	mg/L	0.01383	1.65%
Pb 220.353†	804.3	0.1195	mg/L	0.00309	0.2389	mg/L	0.00619	2.59%
Sb 206.836†	-48.9	0.00582	mg/L	0.006611	0.01165	mg/L	0.013221	113.53%
Se 196.026†	6.3	0.03381	mg/L	0.004859	0.06761	mg/L	0.009719	14.37%
Si 288.158†	23621.4	11.01	mg/L	0.193	22.02	mg/L	0.385	1.75%
Sn 189.927†	-48.8	0.00054	mg/L	0.001470	0.00109	mg/L	0.002941	270.21%
Sr 421.552†	311890.9	0.3534	mg/L	0.00150	0.7068	mg/L	0.00299	0.42%
Ti 334.903†	294194.3	10.05	mg/L	0.039	20.10	mg/L	0.079	0.39%
Tl 190.801†	-56.1	-0.00193	mg/L	0.002008	-0.00387	mg/L	0.004016	103.90%
V 292.402†	69174.9	0.4914	mg/L	0.00437	0.9828	mg/L	0.00873	0.89%
Zn 206.200†	1323.1	0.4445	mg/L	0.00842	0.8891	mg/L	0.01683	1.89%

Sequence No.: 16
Sample ID: 21A0361-15
Autosampler Location: 312
Date Collected: 2/8/2021 3:29:07 PM
Data Type: Original
Dilution: 2X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: 21A0361-15

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-15

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2531613.8	103.6	%	1.05				1.01%
ScR 361.383	277082.2	103.2	%	1.87				1.81%
Ag 328.068†	-713.0	-0.00177	mg/L	0.000135	-0.00353	mg/L	0.000270	7.66%
Al 308.215†	134242.6	79.65	mg/L	0.895	159.3	mg/L	1.79	1.12%
As 188.979†	-4.7	0.01602	mg/L	0.001369	0.03204	mg/L	0.002739	8.55%
B 249.677†	137.4	0.01187	mg/L	0.000590	0.02374	mg/L	0.001180	4.97%
Ba 233.527†	3233.2	0.3301	mg/L	0.00544	0.6602	mg/L	0.01088	1.65%
Be 313.042†	963.2	0.00094	mg/L	0.000059	0.00188	mg/L	0.000118	6.25%
Ca 317.933†	371530.9	37.23	mg/L	0.677	74.45	mg/L	1.354	1.82%
Cd 228.802†	101.5	0.00129	mg/L	0.000284	0.00257	mg/L	0.000567	22.06%
Co 228.616†	2340.7	0.03960	mg/L	0.000386	0.07921	mg/L	0.000772	0.97%
Cr 267.716†	1569.8	0.2066	mg/L	0.00299	0.4131	mg/L	0.00598	1.45%
Cu 324.752†	24815.2	0.1221	mg/L	0.00107	0.2442	mg/L	0.00215	0.88%
Fe 273.955†	255918.3	125.0	mg/L	1.62	250.0	mg/L	3.25	1.30%
K 766.490†	12083.1	5.633	mg/L	0.0418	11.27	mg/L	0.084	0.74%
Mg 279.077†	22428.3	24.00	mg/L	0.392	48.00	mg/L	0.785	1.64%
Mn 257.610†	67548.9	1.081	mg/L	0.0106	2.162	mg/L	0.0212	0.98%
Mo 202.031†	50.4	0.00261	mg/L	0.000473	0.00523	mg/L	0.000946	18.10%
Na 589.592†	65707.8	5.652	mg/L	0.0538	11.30	mg/L	0.108	0.95%
Na 330.237†	168.5	5.836	mg/L	0.4712	11.67	mg/L	0.942	8.07%
Ni 231.604†	333.5	0.08694	mg/L	0.002480	0.1739	mg/L	0.00496	2.85%
Pb 220.353†	1913.7	0.2467	mg/L	0.00389	0.4934	mg/L	0.00777	1.58%
Sb 206.836†	-29.6	0.00715	mg/L	0.001069	0.01430	mg/L	0.002137	14.95%
Se 196.026†	1.9	0.01923	mg/L	0.006765	0.03845	mg/L	0.013530	35.18%
Si 288.158†	17776.9	8.289	mg/L	0.1446	16.58	mg/L	0.289	1.74%
Sn 189.927†	-3.2	0.00763	mg/L	0.001948	0.01525	mg/L	0.003896	25.54%
Sr 421.552†	324935.9	0.3682	mg/L	0.00445	0.7363	mg/L	0.00891	1.21%
Ti 334.903†	206415.4	7.051	mg/L	0.0618	14.10	mg/L	0.124	0.88%
Tl 190.801†	-38.1	-0.00325	mg/L	0.009320	-0.00651	mg/L	0.018641	286.48%
V 292.402†	53703.9	0.3802	mg/L	0.00272	0.7604	mg/L	0.00543	0.71%
Zn 206.200†	2304.9	0.7724	mg/L	0.01716	1.545	mg/L	0.0343	2.22%

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Sequence No.: 17 **Autosampler Location: 313**
Sample ID: 21A0361-17 **Date Collected: 2/8/2021 3:31:56 PM**
DEL **Data Type: Original**
Dilution: 10X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0361-17

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-17

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2553953.8	104.5	%	0.69				0.66%
ScR 361.383	275803.2	102.7	%	0.25				0.24%
Ag 328.068†	-2823.7	-0.00203	mg/L	0.000775	-0.02031	mg/L	0.007748	38.15%
Al 308.215†	21896.4	12.98	mg/L	0.092	129.8	mg/L	0.92	0.71%
As 188.979†	-101.5	0.02554	mg/L	0.003777	0.2554	mg/L	0.03777	14.78%
B 249.677†	474.3	0.05838	mg/L	0.003233	0.5838	mg/L	0.03233	5.54%
Ba 233.527†	18649.5	1.908	mg/L	0.0124	19.08	mg/L	0.124	0.65%
Be 313.042†	139.0	0.00008	mg/L	0.000021	0.00079	mg/L	0.000210	26.51%
Ca 317.933†	266825.2	26.73	mg/L	0.311	267.3	mg/L	3.11	1.16%
Cd 228.802†	1285.3	0.02868	mg/L	0.000336	0.2868	mg/L	0.00336	1.17%
Co 228.616†	7680.8	0.1593	mg/L	0.00217	1.593	mg/L	0.0217	1.36%
Cr 267.716†	11401.0	1.498	mg/L	0.0114	14.98	mg/L	0.114	0.76%
Cu 324.752†	496721.5	2.368	mg/L	0.0147	23.68	mg/L	0.147	0.62%
Fe 273.955†	1458386.6	712.4	mg/L	5.95	7124	mg/L	59.52	0.84%
K 766.490†	971.0	0.4526	mg/L	0.00314	4.526	mg/L	0.0314	0.69%
Mg 279.077†	12370.1	11.81	mg/L	0.080	118.1	mg/L	0.80	0.68%
Mn 257.610†	185249.4	2.962	mg/L	0.0272	29.62	mg/L	0.272	0.92%
Mo 202.031†	2943.1	0.1708	mg/L	0.00131	1.708	mg/L	0.0131	0.76%
Na 589.592†	15370.4	1.322	mg/L	0.0102	13.22	mg/L	0.102	0.77%
Na 330.237†	33.3	1.153	mg/L	0.2269	11.53	mg/L	2.269	19.68%
Ni 231.604†	1001.7	0.2613	mg/L	0.00291	2.613	mg/L	0.0291	1.11%
Pb 220.353†	81049.8	9.915	mg/L	0.1045	99.15	mg/L	1.045	1.05%
Sb 206.836†	292.7	0.1952	mg/L	0.00514	1.952	mg/L	0.0514	2.63%
Se 196.026†	-57.9	0.04792	mg/L	0.009466	0.4792	mg/L	0.09466	19.75%
Si 288.158†	3288.1	1.512	mg/L	0.0045	15.12	mg/L	0.045	0.30%
Sn 189.927†	1836.6	0.4975	mg/L	0.00512	4.975	mg/L	0.0512	1.03%
Sr 421.552†	68796.2	0.07795	mg/L	0.000430	0.7795	mg/L	0.00430	0.55%
Ti 334.903†	163939.2	5.600	mg/L	0.0302	56.00	mg/L	0.302	0.54%
Tl 190.801†	-222.1	-0.01392	mg/L	0.002940	-0.1392	mg/L	0.02940	21.12%
V 292.402†	7875.5	0.07774	mg/L	0.000904	0.7774	mg/L	0.00904	1.16%
Zn 206.200†	14483.3	4.844	mg/L	0.0581	48.44	mg/L	0.581	1.20%

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Sequence No.: 18
Sample ID: 21A0361-19

Dilution: 2X
Wash Time: 37

Autosampler Location: 314
Date Collected: 2/8/2021 3:34:40 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0361-19

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-19

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2590436.3	106.0	%	0.08				0.08%
ScR 361.383	285989.2	106.5	%	0.93				0.88%
Ag 328.068†	-642.0	-0.00135	mg/L	0.000284	-0.00269	mg/L	0.000568	21.13%
Al 308.215†	126997.9	75.35	mg/L	0.435	150.7	mg/L	0.87	0.58%
As 188.979†	7.7	0.02455	mg/L	0.001329	0.04910	mg/L	0.002657	5.41%
B 249.677†	155.6	0.01461	mg/L	0.000885	0.02923	mg/L	0.001771	6.06%
Ba 233.527†	3584.7	0.3667	mg/L	0.00266	0.7333	mg/L	0.00533	0.73%
Be 313.042†	903.4	0.00089	mg/L	0.000030	0.00177	mg/L	0.000059	3.34%
Ca 317.933†	377121.0	37.79	mg/L	0.377	75.57	mg/L	0.754	1.00%
Cd 228.802†	125.4	0.00186	mg/L	0.000215	0.00373	mg/L	0.000430	11.52%
Co 228.616†	2388.2	0.04144	mg/L	0.000128	0.08288	mg/L	0.000256	0.31%
Cr 267.716†	1607.3	0.2115	mg/L	0.00051	0.4230	mg/L	0.00102	0.24%
Cu 324.752†	39197.3	0.1898	mg/L	0.00304	0.3796	mg/L	0.00608	1.60%
Fe 273.955†	264278.8	129.1	mg/L	1.19	258.2	mg/L	2.37	0.92%
K 766.490†	11411.3	5.319	mg/L	0.0623	10.64	mg/L	0.125	1.17%
Mg 279.077†	20415.6	21.81	mg/L	0.202	43.62	mg/L	0.404	0.93%
Mn 257.610†	66309.4	1.061	mg/L	0.0036	2.122	mg/L	0.0071	0.34%
Mo 202.031†	73.1	0.00393	mg/L	0.000294	0.00786	mg/L	0.000589	7.49%
Na 589.592†	78604.0	6.761	mg/L	0.0193	13.52	mg/L	0.039	0.29%
Na 330.237†	199.6	6.915	mg/L	0.1282	13.83	mg/L	0.256	1.85%
Ni 231.604†	355.2	0.09259	mg/L	0.001648	0.1852	mg/L	0.00330	1.78%
Pb 220.353†	3440.1	0.4329	mg/L	0.00308	0.8658	mg/L	0.00616	0.71%
Sb 206.836†	-24.3	0.00880	mg/L	0.005125	0.01761	mg/L	0.010250	58.21%
Se 196.026†	-4.6	0.01457	mg/L	0.003024	0.02914	mg/L	0.006047	20.75%
Si 288.158†	16208.5	7.557	mg/L	0.0644	15.11	mg/L	0.129	0.85%
Sn 189.927†	7.2	0.01003	mg/L	0.000875	0.02007	mg/L	0.001750	8.72%
Sr 421.552†	340606.7	0.3859	mg/L	0.00124	0.7718	mg/L	0.00248	0.32%
Ti 334.903†	194498.7	6.644	mg/L	0.0325	13.29	mg/L	0.065	0.49%
Tl 190.801†	-43.2	-0.00510	mg/L	0.007117	-0.01019	mg/L	0.014234	139.66%
V 292.402†	49733.1	0.3525	mg/L	0.00492	0.7049	mg/L	0.00983	1.39%
Zn 206.200†	2452.6	0.8217	mg/L	0.00791	1.643	mg/L	0.0158	0.96%

Sequence No.: 19 | Autosampler Location: 7
Sample ID: SEQ-CCV2 | Date Collected: 2/8/2021 3:37:29 PM
Data Type: Original
Dilution: 1X
Wash Time: 37 | Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV2

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCV2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2544819.9	104.1	%	0.40				0.38%
ScR 361.383	276308.5	102.9	%	0.84				0.82%
Ag 328.068†	192326.1	1.012	mg/L	0.0085	1.012	mg/L	0.0085	0.84%
Al 308.215†	3333.2	1.943	mg/L	0.0346	1.943	mg/L	0.0346	1.78%
As 188.979†	2979.3	1.977	mg/L	0.0071	1.977	mg/L	0.0071	0.36%
B 249.677†	7551.7	0.9464	mg/L	0.01284	0.9464	mg/L	0.01284	1.36%
Ba 233.527†	9264.8	0.9691	mg/L	0.01093	0.9691	mg/L	0.01093	1.13%
Be 313.042†	712400.2	0.9418	mg/L	0.00438	0.9418	mg/L	0.00438	0.46%
Ca 317.933†	19788.2	1.982	mg/L	0.0366	1.982	mg/L	0.0366	1.85%
Cd 228.802†	34988.8	0.9844	mg/L	0.00974	0.9844	mg/L	0.00974	0.99%
Co 228.616†	40875.7	0.9595	mg/L	0.01127	0.9595	mg/L	0.01127	1.17%
Cr 267.716†	7327.1	0.9663	mg/L	0.01467	0.9663	mg/L	0.01467	1.52%
Cu 324.752†	207544.6	0.9700	mg/L	0.00178	0.9700	mg/L	0.00178	0.18%
Fe 273.955†	4061.1	1.975	mg/L	0.0290	1.975	mg/L	0.0290	1.47%
K 766.490†	42485.7	19.80	mg/L	0.165	19.80	mg/L	0.165	0.83%
Mg 279.077†	1819.3	1.972	mg/L	0.0046	1.972	mg/L	0.0046	0.24%
Mn 257.610†	60908.0	0.9759	mg/L	0.01176	0.9759	mg/L	0.01176	1.21%
Mo 202.031†	16518.7	0.9580	mg/L	0.01234	0.9580	mg/L	0.01234	1.29%
Na 589.592†	573706.8	49.35	mg/L	0.737	49.35	mg/L	0.737	1.49%
Na 330.237†	1460.6	50.60	mg/L	1.722	50.60	mg/L	1.722	3.40%
Ni 231.604†	3644.7	0.9498	mg/L	0.02788	0.9498	mg/L	0.02788	2.94%
Pb 220.353†	15766.1	1.942	mg/L	0.0289	1.942	mg/L	0.0289	1.49%
Sb 206.836†	3529.4	2.085	mg/L	0.0228	2.085	mg/L	0.0228	1.09%
Se 196.026†	2535.6	1.991	mg/L	0.0061	1.991	mg/L	0.0061	0.31%
Si 288.158†	4373.2	2.039	mg/L	0.0305	2.039	mg/L	0.0305	1.50%
Sn 189.927†	3669.3	0.9864	mg/L	0.00367	0.9864	mg/L	0.00367	0.37%
Sr 421.552†	870063.1	0.9858	mg/L	0.01012	0.9858	mg/L	0.01012	1.03%
Ti 334.903†	28949.9	0.9886	mg/L	0.00864	0.9886	mg/L	0.00864	0.87%
Tl 190.801†	4104.0	1.956	mg/L	0.0069	1.956	mg/L	0.0069	0.35%
V 292.402†	137756.9	0.9739	mg/L	0.00890	0.9739	mg/L	0.00890	0.91%
Zn 206.200†	2833.0	0.9477	mg/L	0.01034	0.9477	mg/L	0.01034	1.09%

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Sequence No.: 20 **Autosampler Location: 1**
Sample ID: SEQ-CCB2 **Date Collected: 2/8/2021 3:40:57 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB2

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCB2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2552145.9	104.4	%	0.18				0.17%
ScR 361.383	283123.6	105.4	%	1.13				1.07%
Ag 328.068†	-23.7	-0.00012	mg/L	0.000237	-0.00012	mg/L	0.000237	190.52%
Al 308.215†	11.3	0.00667	mg/L	0.005503	0.00667	mg/L	0.005503	82.56%
As 188.979†	-1.5	-0.00104	mg/L	0.000782	-0.00104	mg/L	0.000782	75.18%
B 249.677†	25.2	0.00316	mg/L	0.001265	0.00316	mg/L	0.001265	40.06%
Ba 233.527†	-4.5	-0.00047	mg/L	0.000190	-0.00047	mg/L	0.000190	40.08%
Be 313.042†	-46.7	-0.00006	mg/L	0.000038	-0.00006	mg/L	0.000038	61.37%
Ca 317.933†	11.5	0.00114	mg/L	0.000163	0.00114	mg/L	0.000163	14.30%
Cd 228.802†	0.2	0.00001	mg/L	0.000079	0.00001	mg/L	0.000079	597.06%
Co 228.616†	0.1	0.00000	mg/L	0.000113	0.00000	mg/L	0.000113	>999.9%
Cr 267.716†	17.6	0.00231	mg/L	0.000295	0.00231	mg/L	0.000295	12.76%
Cu 324.752†	24.0	0.00011	mg/L	0.000112	0.00011	mg/L	0.000112	100.22%
Fe 273.955†	23.0	0.01126	mg/L	0.003978	0.01126	mg/L	0.003978	35.33%
K 766.490†	33.7	0.01571	mg/L	0.032119	0.01571	mg/L	0.032119	204.47%
Mg 279.077†	28.3	0.03067	mg/L	0.010308	0.03067	mg/L	0.010308	33.61%
Mn 257.610†	-5.4	-0.00009	mg/L	0.000219	-0.00009	mg/L	0.000219	252.85%
Mo 202.031†	9.7	0.00056	mg/L	0.000315	0.00056	mg/L	0.000315	55.85%
Na 589.592†	263.4	0.02265	mg/L	0.003564	0.02265	mg/L	0.003564	15.73%
Na 330.237†	31.1	1.079	mg/L	0.1260	1.079	mg/L	0.1260	11.68%
Ni 231.604†	-2.2	-0.00057	mg/L	0.001120	-0.00057	mg/L	0.001120	195.80%
Pb 220.353†	0.3	0.00004	mg/L	0.000760	0.00004	mg/L	0.000760	>999.9%
Sb 206.836†	-0.1	-0.00006	mg/L	0.003037	-0.00006	mg/L	0.003037	>999.9%
Se 196.026†	0.2	0.00019	mg/L	0.002161	0.00019	mg/L	0.002161	>999.9%
Si 288.158†	24.5	0.01145	mg/L	0.003166	0.01145	mg/L	0.003166	27.64%
Sn 189.927†	1.9	0.00052	mg/L	0.000624	0.00052	mg/L	0.000624	120.23%
Sr 421.552†	110.7	0.00013	mg/L	0.000070	0.00013	mg/L	0.000070	55.56%
Ti 334.903†	-18.2	-0.00062	mg/L	0.000349	-0.00062	mg/L	0.000349	56.03%
Tl 190.801†	0.5	0.00022	mg/L	0.001088	0.00022	mg/L	0.001088	490.40%
V 292.402†	0.4	0.00001	mg/L	0.000071	0.00001	mg/L	0.000071	486.97%
Zn 206.200†	-1.3	-0.00044	mg/L	0.000566	-0.00044	mg/L	0.000566	128.29%

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Sequence No.: 21
Sample ID: 21A0361-21

Dilution: 2X
Wash Time: 37

Autosampler Location: 315
Date Collected: 2/8/2021 3:43:45 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0361-21

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 21A0361-21

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2544637.0	104.1	%	0.13				0.12%
ScR 361.383	277241.3	103.2	%	0.50				0.48%
Ag 328.068†	-699.1	-0.00165	mg/L	0.000130	-0.00329	mg/L	0.000260	7.88%
Al 308.215†	155073.6	92.01	mg/L	0.296	184.0	mg/L	0.59	0.32%
As 188.979†	3.4	0.02214	mg/L	0.003066	0.04428	mg/L	0.006132	13.85%
B 249.677†	171.4	0.01606	mg/L	0.000862	0.03211	mg/L	0.001725	5.37%
Ba 233.527†	4580.0	0.4706	mg/L	0.00262	0.9412	mg/L	0.00523	0.56%
Be 313.042†	1073.2	0.00107	mg/L	0.000009	0.00215	mg/L	0.000018	0.86%
Ca 317.933†	417394.0	41.82	mg/L	0.427	83.64	mg/L	0.855	1.02%
Cd 228.802†	110.3	0.00139	mg/L	0.000271	0.00279	mg/L	0.000542	19.44%
Co 228.616†	2424.5	0.04107	mg/L	0.000366	0.08214	mg/L	0.000731	0.89%
Cr 267.716†	1753.0	0.2307	mg/L	0.00146	0.4614	mg/L	0.00291	0.63%
Cu 324.752†	25587.8	0.1261	mg/L	0.00136	0.2523	mg/L	0.00271	1.07%
Fe 273.955†	271222.9	132.5	mg/L	1.00	265.0	mg/L	1.99	0.75%
K 766.490†	14585.9	6.799	mg/L	0.0541	13.60	mg/L	0.108	0.80%
Mg 279.077†	23870.3	25.54	mg/L	0.098	51.08	mg/L	0.196	0.38%
Mn 257.610†	83415.1	1.335	mg/L	0.0051	2.670	mg/L	0.0102	0.38%
Mo 202.031†	57.8	0.00300	mg/L	0.000261	0.00600	mg/L	0.000522	8.71%
Na 589.592†	96642.1	8.313	mg/L	0.0552	16.63	mg/L	0.110	0.66%
Na 330.237†	243.9	8.449	mg/L	0.2693	16.90	mg/L	0.539	3.19%
Ni 231.604†	364.3	0.09496	mg/L	0.001991	0.1899	mg/L	0.00398	2.10%
Pb 220.353†	2328.9	0.3007	mg/L	0.00207	0.6014	mg/L	0.00413	0.69%
Sb 206.836†	-32.6	0.00604	mg/L	0.004345	0.01209	mg/L	0.008690	71.88%
Se 196.026†	10.8	0.02725	mg/L	0.003392	0.05450	mg/L	0.006784	12.45%
Si 288.158†	18044.4	8.413	mg/L	0.0349	16.83	mg/L	0.070	0.42%
Sn 189.927†	-14.5	0.00540	mg/L	0.000769	0.01080	mg/L	0.001539	14.25%
Sr 421.552†	429111.0	0.4862	mg/L	0.00257	0.9724	mg/L	0.00513	0.53%
Ti 334.903†	212180.7	7.248	mg/L	0.0313	14.50	mg/L	0.063	0.43%
Tl 190.801†	-39.5	-0.00300	mg/L	0.011703	-0.00599	mg/L	0.023406	390.58%
V 292.402†	56375.4	0.3993	mg/L	0.00506	0.7985	mg/L	0.01013	1.27%
Zn 206.200†	2337.1	0.7832	mg/L	0.00054	1.566	mg/L	0.0011	0.07%

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Sequence No.: 22 **Autosampler Location: 316**
Sample ID: 21A0361-23 **Date Collected: 2/8/2021 3:46:34 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0361-23

Analyte	**Back Pressure**	**Flow**
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-23

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2544163.5	104.1	%	0.14				0.13%
ScR 361.383	279951.3	104.2	%	0.62				0.59%
Ag 328.068†	-651.9	-0.00150	mg/L	0.000341	-0.00301	mg/L	0.000682	22.70%
Al 308.215†	138436.2	82.13	mg/L	0.280	164.3	mg/L	0.56	0.34%
As 188.979†	11.0	0.02449	mg/L	0.003982	0.04898	mg/L	0.007964	16.26%
B 249.677†	122.3	0.01013	mg/L	0.001516	0.02026	mg/L	0.003033	14.97%
Ba 233.527†	4638.7	0.4772	mg/L	0.00715	0.9545	mg/L	0.01431	1.50%
Be 313.042†	973.3	0.00095	mg/L	0.000032	0.00191	mg/L	0.000065	3.39%
Ca 317.933†	402702.3	40.35	mg/L	0.265	80.70	mg/L	0.530	0.66%
Cd 228.802†	172.7	0.00324	mg/L	0.000019	0.00647	mg/L	0.000038	0.59%
Co 228.616†	2399.5	0.04081	mg/L	0.000210	0.08163	mg/L	0.000420	0.51%
Cr 267.716†	5421.4	0.7120	mg/L	0.00617	1.424	mg/L	0.0123	0.87%
Cu 324.752†	29789.3	0.1453	mg/L	0.00179	0.2907	mg/L	0.00358	1.23%
Fe 273.955†	254812.8	124.5	mg/L	0.60	248.9	mg/L	1.19	0.48%
K 766.490†	13468.2	6.278	mg/L	0.0097	12.56	mg/L	0.019	0.16%
Mg 279.077†	22225.8	23.78	mg/L	0.201	47.56	mg/L	0.401	0.84%
Mn 257.610†	67886.3	1.086	mg/L	0.0029	2.173	mg/L	0.0057	0.26%
Mo 202.031†	53.0	0.00291	mg/L	0.000755	0.00582	mg/L	0.001511	25.94%
Na 589.592†	75680.9	6.510	mg/L	0.0363	13.02	mg/L	0.073	0.56%
Na 330.237†	206.5	7.153	mg/L	0.1271	14.31	mg/L	0.254	1.78%
Ni 231.604†	342.9	0.08940	mg/L	0.001610	0.1788	mg/L	0.00322	1.80%
Pb 220.353†	8401.9	1.047	mg/L	0.0054	2.095	mg/L	0.0107	0.51%
Sb 206.836†	-29.1	0.00743	mg/L	0.004412	0.01486	mg/L	0.008824	59.38%
Se 196.026†	13.9	0.02881	mg/L	0.001214	0.05762	mg/L	0.002428	4.21%
Si 288.158†	17233.6	8.035	mg/L	0.0775	16.07	mg/L	0.155	0.96%
Sn 189.927†	-10.2	0.00605	mg/L	0.000320	0.01211	mg/L	0.000641	5.29%
Sr 421.552†	358792.8	0.4065	mg/L	0.00205	0.8130	mg/L	0.00410	0.50%
Ti 334.903†	209275.4	7.149	mg/L	0.0209	14.30	mg/L	0.042	0.29%
Tl 190.801†	-30.9	-0.00012	mg/L	0.001257	-0.00024	mg/L	0.002514	>999.9%
V 292.402†	53580.5	0.3817	mg/L	0.00315	0.7634	mg/L	0.00629	0.82%
Zn 206.200†	9402.0	3.146	mg/L	0.0361	6.291	mg/L	0.0722	1.15%

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Sequence No.: 23
Sample ID: 21A0361-25
Dilution: 10X DEL
Wash Time: 37

Autosampler Location: 317
Date Collected: 2/8/2021 3:49:23 PM
Data Type: Original
Auto Dilution Factor: 1

Nebulizer Parameters: 21A0361-25

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-25

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2533650.1	103.7	%	1.10				1.07%
ScR 361.383	282499.7	105.2	%	0.54				0.51%
Ag 328.068†	-6749.0	-0.01447	mg/L	0.000449	-0.1447	mg/L	0.00449	3.10%
Al 308.215†	11645.3	6.903	mg/L	0.0458	69.03	mg/L	0.458	0.66%
As 188.979†	-14.3	0.1447	mg/L	0.00624	1.447	mg/L	0.0624	4.31%
B 249.677†	26.9	0.00162	mg/L	0.008719	0.01616	mg/L	0.087191	539.58%
Ba 233.527†	1884.6	0.1236	mg/L	0.00271	1.236	mg/L	0.0271	2.19%
Be 313.042†	93.8	0.00009	mg/L	0.000011	0.00085	mg/L	0.000113	13.24%
Ca 317.933†	103242.6	10.34	mg/L	0.064	103.4	mg/L	0.64	0.62%
Cd 228.802†	340.0	-0.00380	mg/L	0.000309	-0.03801	mg/L	0.003090	8.13%
Co 228.616†	4618.5	0.08948	mg/L	0.001109	0.8948	mg/L	0.01109	1.24%
Cr 267.716†	7826.6	1.030	mg/L	0.0066	10.30	mg/L	0.066	0.64%
Cu 324.752†	493294.5	2.384	mg/L	0.0114	23.84	mg/L	0.114	0.48%
Fe 273.955†	2423454.7	1184	mg/L	12.42	11840	mg/L	124.18	1.05%
K 766.490†	668.6	0.3117	mg/L	0.01005	3.117	mg/L	0.1005	3.22%
Mg 279.077†	6745.3	4.671	mg/L	0.0721	46.71	mg/L	0.721	1.54%
Mn 257.610†	583493.4	9.335	mg/L	0.0489	93.35	mg/L	0.489	0.52%
Mo 202.031†	2868.5	0.1662	mg/L	0.00317	1.662	mg/L	0.0317	1.91%
Na 589.592†	5415.0	0.4658	mg/L	0.00625	4.658	mg/L	0.0625	1.34%
Na 330.237†	-27.4	-0.9506	mg/L	0.47271	-9.506	mg/L	4.7271	49.73%
Ni 231.604†	3011.0	0.7850	mg/L	0.00773	7.850	mg/L	0.0773	0.98%
Pb 220.353†	2863.2	0.2353	mg/L	0.00195	2.353	mg/L	0.0195	0.83%
Sb 206.836†	228.3	0.1369	mg/L	0.00884	1.369	mg/L	0.0884	6.45%
Se 196.026†	-98.4	0.07530	mg/L	0.010415	0.7530	mg/L	0.10415	13.83%
Si 288.158†	5661.9	2.646	mg/L	0.0158	26.46	mg/L	0.158	0.60%
Sn 189.927†	326.7	0.08887	mg/L	0.001972	0.8887	mg/L	0.01972	2.22%
Sr 421.552†	30588.7	0.03466	mg/L	0.000056	0.3466	mg/L	0.00056	0.16%
Ti 334.903†	26993.8	0.9215	mg/L	0.00207	9.215	mg/L	0.0207	0.23%
Tl 190.801†	-372.5	-0.02179	mg/L	0.003701	-0.2179	mg/L	0.03701	16.99%
V 292.402†	5988.0	0.07460	mg/L	0.002517	0.7460	mg/L	0.02517	3.37%
Zn 206.200†	1140.0	0.3815	mg/L	0.00414	3.815	mg/L	0.0414	1.08%

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Sequence No.: 24
Sample ID: 21A0361-27

Dilution: 2X
Wash Time: 37

Autosampler Location: 318
Date Collected: 2/8/2021 3:52:18 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0361-27

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-27

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2606321.3	106.6	%	0.69				0.65%
ScR 361.383	289274.2	107.7	%	1.46				1.36%
Ag 328.068†	-818.6	-0.00194	mg/L	0.000446	-0.00387	mg/L	0.000893	23.05%
Al 308.215†	124403.1	73.81	mg/L	0.096	147.6	mg/L	0.19	0.13%
As 188.979†	7.4	0.02702	mg/L	0.003382	0.05405	mg/L	0.006765	12.52%
B 249.677†	103.6	0.00761	mg/L	0.001819	0.01523	mg/L	0.003639	23.89%
Ba 233.527†	3539.5	0.3610	mg/L	0.00473	0.7219	mg/L	0.00946	1.31%
Be 313.042†	939.7	0.00090	mg/L	0.000036	0.00181	mg/L	0.000072	3.97%
Ca 317.933†	359884.9	36.06	mg/L	0.294	72.12	mg/L	0.588	0.82%
Cd 228.802†	127.7	0.00174	mg/L	0.000180	0.00349	mg/L	0.000361	10.34%
Co 228.616†	2484.3	0.04264	mg/L	0.000871	0.08529	mg/L	0.001743	2.04%
Cr 267.716†	1306.6	0.1720	mg/L	0.00282	0.3441	mg/L	0.00565	1.64%
Cu 324.752†	23274.2	0.1162	mg/L	0.00149	0.2324	mg/L	0.00299	1.28%
Fe 273.955†	296383.5	144.8	mg/L	0.81	289.5	mg/L	1.62	0.56%
K 766.490†	10824.9	5.046	mg/L	0.0358	10.09	mg/L	0.072	0.71%
Mg 279.077†	22541.6	24.08	mg/L	0.401	48.15	mg/L	0.802	1.66%
Mn 257.610†	75101.2	1.202	mg/L	0.0021	2.403	mg/L	0.0042	0.18%
Mo 202.031†	54.0	0.00284	mg/L	0.000287	0.00569	mg/L	0.000573	10.08%
Na 589.592†	56575.1	4.866	mg/L	0.0060	9.733	mg/L	0.0119	0.12%
Na 330.237†	137.7	4.771	mg/L	0.3809	9.542	mg/L	0.7617	7.98%
Ni 231.604†	345.1	0.08996	mg/L	0.001316	0.1799	mg/L	0.00263	1.46%
Pb 220.353†	1688.0	0.2152	mg/L	0.00286	0.4304	mg/L	0.00572	1.33%
Sb 206.836†	-27.1	0.00867	mg/L	0.003788	0.01734	mg/L	0.007576	43.68%
Se 196.026†	2.3	0.02211	mg/L	0.003296	0.04421	mg/L	0.006593	14.91%
Si 288.158†	17768.7	8.285	mg/L	0.1132	16.57	mg/L	0.226	1.37%
Sn 189.927†	-22.0	0.00229	mg/L	0.001885	0.00458	mg/L	0.003769	82.23%
Sr 421.552†	299847.5	0.3397	mg/L	0.00072	0.6795	mg/L	0.00144	0.21%
Ti 334.903†	207089.1	7.074	mg/L	0.0107	14.15	mg/L	0.021	0.15%
Tl 190.801†	-37.9	-0.00055	mg/L	0.002728	-0.00110	mg/L	0.005456	495.00%
V 292.402†	55269.3	0.3915	mg/L	0.00428	0.7830	mg/L	0.00856	1.09%
Zn 206.200†	2603.6	0.8723	mg/L	0.01255	1.745	mg/L	0.0251	1.44%

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Sequence No.: 25 **Autosampler Location: 319**
Sample ID: 21A0361-29 **Date Collected: 2/8/2021 3:55:07 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0361-29

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-29

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2602814.1	106.5	%	0.26				0.25%
ScR 361.383	289915.9	108.0	%	0.61				0.57%
Ag 328.068†	-944.6	-0.00213	mg/L	0.000231	-0.00425	mg/L	0.000462	10.87%
Al 308.215†	135086.0	80.15	mg/L	0.352	160.3	mg/L	0.70	0.44%
As 188.979†	55.8	0.05602	mg/L	0.004638	0.1120	mg/L	0.00928	8.28%
B 249.677†	201.5	0.01955	mg/L	0.000227	0.03910	mg/L	0.000454	1.16%
Ba 233.527†	5799.5	0.5958	mg/L	0.00637	1.192	mg/L	0.0127	1.07%
Be 313.042†	1010.7	0.00099	mg/L	0.000021	0.00199	mg/L	0.000041	2.08%
Ca 317.933†	406672.5	40.75	mg/L	0.335	81.49	mg/L	0.669	0.82%
Cd 228.802†	721.5	0.01809	mg/L	0.000144	0.03619	mg/L	0.000287	0.79%
Co 228.616†	4496.2	0.08915	mg/L	0.000154	0.1783	mg/L	0.00031	0.17%
Cr 267.716†	15912.5	2.089	mg/L	0.0196	4.178	mg/L	0.0393	0.94%
Cu 324.752†	30091.2	0.1499	mg/L	0.00297	0.2999	mg/L	0.00594	1.98%
Fe 273.955†	353979.6	172.9	mg/L	1.26	345.8	mg/L	2.52	0.73%
K 766.490†	10517.6	4.903	mg/L	0.0145	9.806	mg/L	0.0291	0.30%
Mg 279.077†	22593.7	24.07	mg/L	0.256	48.15	mg/L	0.512	1.06%
Mn 257.610†	75460.0	1.207	mg/L	0.0093	2.414	mg/L	0.0186	0.77%
Mo 202.031†	187.7	0.01084	mg/L	0.000812	0.02168	mg/L	0.001624	7.49%
Na 589.592†	84207.6	7.243	mg/L	0.0635	14.49	mg/L	0.127	0.88%
Na 330.237†	261.9	9.072	mg/L	0.1239	18.14	mg/L	0.248	1.37%
Ni 231.604†	384.0	0.1001	mg/L	0.00159	0.2002	mg/L	0.00318	1.59%
Pb 220.353†	5982.1	0.7461	mg/L	0.00287	1.492	mg/L	0.0057	0.39%
Sb 206.836†	6.5	0.02802	mg/L	0.002089	0.05604	mg/L	0.004178	7.45%
Se 196.026†	12.7	0.03447	mg/L	0.004981	0.06895	mg/L	0.009962	14.45%
Si 288.158†	18655.8	8.701	mg/L	0.0856	17.40	mg/L	0.171	0.98%
Sn 189.927†	7.7	0.01087	mg/L	0.001276	0.02173	mg/L	0.002552	11.74%
Sr 421.552†	423762.4	0.4801	mg/L	0.00271	0.9603	mg/L	0.00543	0.57%
Ti 334.903†	214013.6	7.310	mg/L	0.0334	14.62	mg/L	0.067	0.46%
Tl 190.801†	-30.8	0.00555	mg/L	0.004327	0.01110	mg/L	0.008654	77.96%
V 292.402†	55565.0	0.4033	mg/L	0.00548	0.8065	mg/L	0.01097	1.36%
Zn 206.200†	15980.5	5.345	mg/L	0.0665	10.69	mg/L	0.133	1.24%

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Sequence No.: 26 **Autosampler Location: 320**
Sample ID: 21A0361-31 **Date Collected: 2/8/2021 3:57:56 PM**
Data Type: Original
Dilution: 2X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0361-31

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-31

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2598858.0	106.3	%	1.10				1.03%
ScR 361.383	286825.9	106.8	%	0.27				0.25%
Ag 328.068†	-609.2	-0.00141	mg/L	0.000209	-0.00282	mg/L	0.000418	14.82%
Al 308.215†	117977.0	69.99	mg/L	0.473	140.0	mg/L	0.95	0.68%
As 188.979†	5.6	0.02139	mg/L	0.001056	0.04278	mg/L	0.002112	4.94%
B 249.677†	120.4	0.00999	mg/L	0.000373	0.01998	mg/L	0.000746	3.73%
Ba 233.527†	3092.3	0.3161	mg/L	0.00075	0.6323	mg/L	0.00150	0.24%
Be 313.042†	835.9	0.00080	mg/L	0.000015	0.00160	mg/L	0.000030	1.91%
Ca 317.933†	347715.5	34.84	mg/L	0.367	69.68	mg/L	0.735	1.05%
Cd 228.802†	107.0	0.00155	mg/L	0.000192	0.00311	mg/L	0.000385	12.39%
Co 228.616†	2251.1	0.03836	mg/L	0.000754	0.07672	mg/L	0.001508	1.97%
Cr 267.716†	1617.0	0.2127	mg/L	0.00087	0.4255	mg/L	0.00173	0.41%
Cu 324.752†	24418.8	0.1196	mg/L	0.00120	0.2392	mg/L	0.00240	1.00%
Fe 273.955†	231817.4	113.2	mg/L	0.83	226.5	mg/L	1.65	0.73%
K 766.490†	10542.2	4.914	mg/L	0.0484	9.829	mg/L	0.0969	0.99%
Mg 279.077†	20298.6	21.72	mg/L	0.052	43.44	mg/L	0.104	0.24%
Mn 257.610†	60536.5	0.9686	mg/L	0.00748	1.937	mg/L	0.0150	0.77%
Mo 202.031†	73.8	0.00402	mg/L	0.000348	0.00803	mg/L	0.000696	8.66%
Na 589.592†	78656.4	6.766	mg/L	0.0762	13.53	mg/L	0.152	1.13%
Na 330.237†	200.3	6.939	mg/L	0.2447	13.88	mg/L	0.489	3.53%
Ni 231.604†	344.4	0.08978	mg/L	0.002869	0.1796	mg/L	0.00574	3.20%
Pb 220.353†	2198.6	0.2801	mg/L	0.00484	0.5603	mg/L	0.00969	1.73%
Sb 206.836†	-28.7	0.00634	mg/L	0.001293	0.01269	mg/L	0.002585	20.38%
Se 196.026†	4.0	0.01937	mg/L	0.002626	0.03873	mg/L	0.005253	13.56%
Si 288.158†	16948.3	7.903	mg/L	0.0227	15.81	mg/L	0.045	0.29%
Sn 189.927†	-9.7	0.00520	mg/L	0.001776	0.01040	mg/L	0.003553	34.16%
Sr 421.552†	299469.6	0.3393	mg/L	0.00342	0.6786	mg/L	0.00683	1.01%
Ti 334.903†	195928.9	6.693	mg/L	0.0413	13.39	mg/L	0.083	0.62%
Tl 190.801†	-42.6	-0.00686	mg/L	0.003241	-0.01372	mg/L	0.006481	47.24%
V 292.402†	49345.8	0.3494	mg/L	0.00466	0.6987	mg/L	0.00933	1.33%
Zn 206.200†	3125.5	1.047	mg/L	0.0042	2.094	mg/L	0.0084	0.40%

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Sequence No.: 27 **Autosampler Location: 321**
Sample ID: BJA0765-DUP1 **Date Collected: 2/8/2021 4:00:45 PM**
DEL
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJA0765-DUP1

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: BJA0765-DUP1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2584054.9	105.7	%	0.99				0.94%
ScR 361.383	281891.2	105.0	%	0.61				0.58%
Ag 328.068†	-1533.6	-0.00252	mg/L	0.000122	-0.01262	mg/L	0.000610	4.83%
Al 308.215†	54059.0	32.07	mg/L	0.199	160.4	mg/L	0.99	0.62%
As 188.979†	-4.3	0.01395	mg/L	0.002906	0.06974	mg/L	0.014532	20.84%
B 249.677†	273.7	0.03237	mg/L	0.002172	0.1618	mg/L	0.01086	6.71%
Ba 233.527†	10600.6	1.090	mg/L	0.0100	5.449	mg/L	0.0502	0.92%
Be 313.042†	199.7	0.00016	mg/L	0.000018	0.00079	mg/L	0.000091	11.55%
Ca 317.933†	245816.5	24.63	mg/L	0.066	123.1	mg/L	0.33	0.27%
Cd 228.802†	580.0	0.01287	mg/L	0.000159	0.06436	mg/L	0.000797	1.24%
Co 228.616†	4751.4	0.09937	mg/L	0.001322	0.4969	mg/L	0.00661	1.33%
Cr 267.716†	59957.8	7.869	mg/L	0.0231	39.35	mg/L	0.116	0.29%
Cu 324.752†	106024.0	0.5155	mg/L	0.00564	2.577	mg/L	0.0282	1.09%
Fe 273.955†	645127.8	315.1	mg/L	1.67	1576	mg/L	8.33	0.53%
K 766.490†	3115.0	1.452	mg/L	0.0253	7.260	mg/L	0.1264	1.74%
Mg 279.077†	10809.9	11.01	mg/L	0.118	55.04	mg/L	0.588	1.07%
Mn 257.610†	100163.5	1.603	mg/L	0.0078	8.016	mg/L	0.0389	0.48%
Mo 202.031†	2181.5	0.1265	mg/L	0.00184	0.6324	mg/L	0.00920	1.45%
Na 589.592†	32497.5	2.795	mg/L	0.0082	13.98	mg/L	0.041	0.29%
Na 330.237†	130.0	4.505	mg/L	0.0984	22.52	mg/L	0.492	2.18%
Ni 231.604†	943.7	0.2460	mg/L	0.00399	1.230	mg/L	0.0200	1.62%
Pb 220.353†	101174.6	12.45	mg/L	0.199	62.26	mg/L	0.995	1.60%
Sb 206.836†	-12.4	0.00223	mg/L	0.000700	0.01115	mg/L	0.003500	31.40%
Se 196.026†	-11.5	0.03480	mg/L	0.010141	0.1740	mg/L	0.05070	29.14%
Si 288.158†	6409.2	2.990	mg/L	0.0212	14.95	mg/L	0.106	0.71%
Sn 189.927†	308.7	0.08798	mg/L	0.003295	0.4399	mg/L	0.01647	3.74%
Sr 421.552†	4485544.9	5.082	mg/L	0.0092	25.41	mg/L	0.046	0.18%
Ti 334.903†	121050.3	4.133	mg/L	0.0216	20.67	mg/L	0.108	0.52%
Tl 190.801†	-83.1	-0.00263	mg/L	0.006970	-0.01317	mg/L	0.034851	264.69%
V 292.402†	12073.9	0.1288	mg/L	0.00219	0.6441	mg/L	0.01094	1.70%
Zn 206.200†	20134.1	6.733	mg/L	0.0548	33.66	mg/L	0.274	0.81%

User canceled analysis.

==
Analysis Begun

Start Time: 2/8/2021 4:04:47 PM
Plasma On Time: 2/8/2021 1:15:23 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0208.sif
Batch ID:
Results Data Set: I2210208
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==
Sequence No.: 1
Autosampler Location: 322
Sample ID: 21A0361-09
Date Collected: 2/8/2021 4:04:55 PM
Data Type: Original
Dilution: 10X

Nebulizer Parameters: 21A0361-09

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 21A0361-09

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2470729.2	101.1	%	0.48				0.48%
ScR 361.383	275812.1	102.7	%	1.65				1.61%
Ag 328.068†	179.5	-0.00013	mg/L	0.000501	-0.00127	mg/L	0.005007	394.32%
Al 308.215†	47407.8	28.13	mg/L	0.618	281.3	mg/L	6.18	2.20%
As 188.979†	12.8	0.01041	mg/L	0.001061	0.1041	mg/L	0.01061	10.19%
B 249.677†	47.8	0.00472	mg/L	0.000376	0.04719	mg/L	0.003760	7.97%
Ba 233.527†	1216.8	0.1229	mg/L	0.00298	1.229	mg/L	0.0298	2.43%
Be 313.042†	253.1	0.00023	mg/L	0.000051	0.00229	mg/L	0.000513	22.36%
Ca 317.933†	1304379.9	130.7	mg/L	3.53	1307	mg/L	35.31	2.70%
Cd 228.802†	72.8	0.00085	mg/L	0.000145	0.00850	mg/L	0.001445	17.01%
Co 228.616†	2008.1	0.04241	mg/L	0.000407	0.4241	mg/L	0.00407	0.96%
Cr 267.716†	586.7	0.07868	mg/L	0.001369	0.7868	mg/L	0.01369	1.74%
Cu 324.752†	19794.6	0.09507	mg/L	0.000849	0.9507	mg/L	0.00849	0.89%
Fe 273.955†	100319.1	49.00	mg/L	1.385	490.0	mg/L	13.85	2.83%
K 766.490†	2665.8	1.243	mg/L	0.0284	12.43	mg/L	0.284	2.28%
Mg 279.077†	12770.2	13.69	mg/L	0.317	136.9	mg/L	3.17	2.32%
Mn 257.610†	35804.9	0.5731	mg/L	0.01222	5.731	mg/L	0.1222	2.13%
Mo 202.031†	86.4	0.00375	mg/L	0.000104	0.03754	mg/L	0.001040	2.77%
Na 589.592†	60488.2	5.203	mg/L	0.1421	52.03	mg/L	1.421	2.73%
Na 330.237†	171.3	5.933	mg/L	0.7356	59.33	mg/L	7.356	12.40%
Ni 231.604†	170.9	0.04457	mg/L	0.002601	0.4457	mg/L	0.02601	5.84%
Pb 220.353†	3339.2	0.4146	mg/L	0.00312	4.146	mg/L	0.0312	0.75%
Sb 206.836†	7.1	0.01173	mg/L	0.003337	0.1173	mg/L	0.03337	28.44%
Se 196.026†	26.0	0.02722	mg/L	0.002366	0.2722	mg/L	0.02366	8.69%
Si 288.158†	3973.9	1.850	mg/L	0.0414	18.50	mg/L	0.414	2.24%
Sn 189.927†	43.1	0.01856	mg/L	0.001140	0.1856	mg/L	0.01140	6.14%
Sr 421.552†	301537.7	0.3416	mg/L	0.00758	3.416	mg/L	0.0758	2.22%
Ti 334.903†	62132.8	2.115	mg/L	0.0507	21.15	mg/L	0.507	2.40%
Tl 190.801†	-34.2	-0.01055	mg/L	0.001787	-0.1055	mg/L	0.01787	16.94%
V 292.402†	17360.6	0.1232	mg/L	0.00104	1.232	mg/L	0.0104	0.85%
Zn 206.200†	853.4	0.2858	mg/L	0.00813	2.858	mg/L	0.0813	2.85%

===

Sequence No.: 2 **Autosampler Location: 323**
Sample ID: 21A0361-17 **Date Collected: 2/8/2021 4:07:56 PM**
Data Type: Original
Dilution: 50X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0361-17

Analyte	**Back Pressure**	**Flow**
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-17

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2508356.3	102.6	%	0.94				0.92%
ScR 361.383	270318.8	100.7	%	2.27				2.25%
Ag 328.068†	-547.9	-0.00019	mg/L	0.000242	-0.00972	mg/L	0.012097	124.48%
Al 308.215†	4471.4	2.651	mg/L	0.0493	132.6	mg/L	2.46	1.86%
As 188.979†	-22.7	0.00442	mg/L	0.004322	0.2210	mg/L	0.21611	97.80%
B 249.677†	116.3	0.01436	mg/L	0.001023	0.7181	mg/L	0.05117	7.13%
Ba 233.527†	3843.3	0.3930	mg/L	0.00721	19.65	mg/L	0.361	1.84%
Be 313.042†	3.9	-0.00002	mg/L	0.000045	-0.00081	mg/L	0.002226	276.39%
Ca 317.933†	55600.4	5.571	mg/L	0.1980	278.5	mg/L	9.90	3.55%
Cd 228.802†	286.4	0.00651	mg/L	0.000105	0.3253	mg/L	0.00523	1.61%
Co 228.616†	1656.1	0.03452	mg/L	0.000088	1.726	mg/L	0.0044	0.25%
Cr 267.716†	2360.0	0.3101	mg/L	0.00621	15.50	mg/L	0.311	2.00%
Cu 324.752†	101424.1	0.4838	mg/L	0.00180	24.19	mg/L	0.090	0.37%
Fe 273.955†	305496.4	149.2	mg/L	1.86	7461	mg/L	93.19	1.25%
K 766.490†	236.4	0.1102	mg/L	0.01882	5.511	mg/L	0.9411	17.08%
Mg 279.077†	2566.2	2.446	mg/L	0.0538	122.3	mg/L	2.69	2.20%
Mn 257.610†	38494.8	0.6155	mg/L	0.01127	30.77	mg/L	0.563	1.83%
Mo 202.031†	620.3	0.03599	mg/L	0.000617	1.799	mg/L	0.0309	1.72%
Na 589.592†	3205.9	0.2758	mg/L	0.00555	13.79	mg/L	0.278	2.01%
Na 330.237†	6.8	0.2345	mg/L	0.10223	11.73	mg/L	5.111	43.59%
Ni 231.604†	213.7	0.05574	mg/L	0.000387	2.787	mg/L	0.0194	0.69%
Pb 220.353†	17820.7	2.181	mg/L	0.0432	109.0	mg/L	2.16	1.98%
Sb 206.836†	63.4	0.04207	mg/L	0.002929	2.104	mg/L	0.1465	6.96%
Se 196.026†	-9.6	0.01205	mg/L	0.008683	0.6027	mg/L	0.43417	72.03%
Si 288.158†	684.0	0.3147	mg/L	0.00006	15.73	mg/L	0.003	0.02%
Sn 189.927†	385.4	0.1044	mg/L	0.00086	5.220	mg/L	0.0428	0.82%
Sr 421.552†	14230.4	0.01612	mg/L	0.000302	0.8062	mg/L	0.01509	1.87%
Ti 334.903†	33913.5	1.158	mg/L	0.0138	57.92	mg/L	0.692	1.19%
Tl 190.801†	-45.1	-0.00225	mg/L	0.001809	-0.1127	mg/L	0.09046	80.28%
V 292.402†	1529.1	0.01542	mg/L	0.000393	0.7710	mg/L	0.01963	2.55%
Zn 206.200†	3023.1	1.011	mg/L	0.0188	50.56	mg/L	0.939	1.86%

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Sequence No.: 3 **Autosampler Location: 324**
Sample ID: 21A0361-25 **Date Collected: 2/8/2021 4:10:44 PM**
DEL **Data Type: Original**
Dilution: 50X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0361-25

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-25

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2527234.9	103.4	%	0.86				0.84%
ScR 361.383	273491.9	101.8	%	0.59				0.58%
Ag 328.068†	-1469.1	-0.00317	mg/L	0.000182	-0.1587	mg/L	0.00911	5.74%
Al 308.215†	2421.4	1.435	mg/L	0.0080	71.77	mg/L	0.400	0.56%
As 188.979†	-9.9	0.02673	mg/L	0.005355	1.336	mg/L	0.2678	20.04%
B 249.677†	9.4	0.00081	mg/L	0.000677	0.04061	mg/L	0.033850	83.36%
Ba 233.527†	399.2	0.02588	mg/L	0.000836	1.294	mg/L	0.0418	3.23%
Be 313.042†	32.0	0.00003	mg/L	0.000016	0.00172	mg/L	0.000801	46.58%
Ca 317.933†	21173.5	2.121	mg/L	0.0457	106.1	mg/L	2.28	2.15%
Cd 228.802†	73.3	-0.00079	mg/L	0.000195	-0.03961	mg/L	0.009744	24.60%
Co 228.616†	983.5	0.01901	mg/L	0.000151	0.9504	mg/L	0.00754	0.79%
Cr 267.716†	1641.8	0.2160	mg/L	0.00176	10.80	mg/L	0.088	0.81%
Cu 324.752†	103715.4	0.5017	mg/L	0.00204	25.09	mg/L	0.102	0.41%
Fe 273.955†	523147.2	255.5	mg/L	3.98	12780	mg/L	199.25	1.56%
K 766.490†	143.0	0.06668	mg/L	0.004630	3.334	mg/L	0.2315	6.94%
Mg 279.077†	1439.7	0.9905	mg/L	0.00408	49.52	mg/L	0.204	0.41%
Mn 257.610†	120646.6	1.930	mg/L	0.0181	96.50	mg/L	0.905	0.94%
Mo 202.031†	618.9	0.03587	mg/L	0.000478	1.793	mg/L	0.0239	1.33%
Na 589.592†	1200.2	0.1032	mg/L	0.00174	5.162	mg/L	0.0871	1.69%
Na 330.237†	-11.5	-0.3993	mg/L	0.22966	-19.97	mg/L	11.483	57.51%
Ni 231.604†	641.5	0.1672	mg/L	0.00172	8.362	mg/L	0.0859	1.03%
Pb 220.353†	604.4	0.04911	mg/L	0.001951	2.455	mg/L	0.0975	3.97%
Sb 206.836†	49.8	0.02983	mg/L	0.003028	1.492	mg/L	0.1514	10.15%
Se 196.026†	-27.6	0.01129	mg/L	0.006220	0.5647	mg/L	0.31098	55.07%
Si 288.158†	1192.2	0.5572	mg/L	0.00736	27.86	mg/L	0.368	1.32%
Sn 189.927†	60.9	0.01661	mg/L	0.001409	0.8304	mg/L	0.07043	8.48%
Sr 421.552†	6467.7	0.00733	mg/L	0.000056	0.3664	mg/L	0.00282	0.77%
Ti 334.903†	5663.3	0.1933	mg/L	0.00361	9.666	mg/L	0.1803	1.87%
Tl 190.801†	-72.8	-0.00106	mg/L	0.001911	-0.05316	mg/L	0.095545	179.72%
V 292.402†	1201.2	0.01542	mg/L	0.000394	0.7709	mg/L	0.01968	2.55%
Zn 206.200†	247.8	0.08292	mg/L	0.000654	4.146	mg/L	0.0327	0.79%

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Sequence No.: 4
Sample ID: SEQ-CCV3

Dilution: 1X
Wash Time: 37

Autosampler Location: 7
Date Collected: 2/8/2021 4:13:32 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCV3

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-CCV3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2526016.1	103.3	%	1.30				1.26%
ScR 361.383	269744.9	100.4	%	0.61				0.61%
Ag 328.068†	197050.3	1.037	mg/L	0.0174	1.037	mg/L	0.0174	1.67%
Al 308.215†	3505.5	2.044	mg/L	0.0079	2.044	mg/L	0.0079	0.38%
As 188.979†	3006.2	1.995	mg/L	0.0302	1.995	mg/L	0.0302	1.52%
B 249.677†	7899.1	0.9900	mg/L	0.00919	0.9900	mg/L	0.00919	0.93%
Ba 233.527†	9734.2	1.018	mg/L	0.0090	1.018	mg/L	0.0090	0.88%
Be 313.042†	723613.6	0.9566	mg/L	0.00278	0.9566	mg/L	0.00278	0.29%
Ca 317.933†	20937.4	2.097	mg/L	0.0189	2.097	mg/L	0.0189	0.90%
Cd 228.802†	35900.0	1.010	mg/L	0.0138	1.010	mg/L	0.0138	1.37%
Co 228.616†	42200.3	0.9906	mg/L	0.01699	0.9906	mg/L	0.01699	1.71%
Cr 267.716†	7767.8	1.024	mg/L	0.0100	1.024	mg/L	0.0100	0.98%
Cu 324.752†	210508.7	0.9838	mg/L	0.01493	0.9838	mg/L	0.01493	1.52%
Fe 273.955†	4253.9	2.069	mg/L	0.0182	2.069	mg/L	0.0182	0.88%
K 766.490†	43461.3	20.26	mg/L	0.071	20.26	mg/L	0.071	0.35%
Mg 279.077†	1901.3	2.061	mg/L	0.0077	2.061	mg/L	0.0077	0.37%
Mn 257.610†	63795.6	1.022	mg/L	0.0102	1.022	mg/L	0.0102	1.00%
Mo 202.031†	17010.1	0.9865	mg/L	0.01720	0.9865	mg/L	0.01720	1.74%
Na 589.592†	578111.7	49.73	mg/L	0.074	49.73	mg/L	0.074	0.15%
Na 330.237†	1481.2	51.31	mg/L	0.399	51.31	mg/L	0.399	0.78%
Ni 231.604†	3894.8	1.015	mg/L	0.0049	1.015	mg/L	0.0049	0.49%
Pb 220.353†	16341.4	2.013	mg/L	0.0363	2.013	mg/L	0.0363	1.80%
Sb 206.836†	3592.7	2.122	mg/L	0.0407	2.122	mg/L	0.0407	1.92%
Se 196.026†	2553.9	2.005	mg/L	0.0401	2.005	mg/L	0.0401	2.00%
Si 288.158†	4521.9	2.109	mg/L	0.0217	2.109	mg/L	0.0217	1.03%
Sn 189.927†	3701.2	0.9950	mg/L	0.01455	0.9950	mg/L	0.01455	1.46%
Sr 421.552†	885570.9	1.003	mg/L	0.0023	1.003	mg/L	0.0023	0.22%
Ti 334.903†	29569.7	1.010	mg/L	0.0021	1.010	mg/L	0.0021	0.20%
Tl 190.801†	4163.2	1.984	mg/L	0.0344	1.984	mg/L	0.0344	1.73%
V 292.402†	140886.3	0.9962	mg/L	0.01977	0.9962	mg/L	0.01977	1.98%
Zn 206.200†	3025.3	1.012	mg/L	0.0156	1.012	mg/L	0.0156	1.54%

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Sequence No.: 5
Sample ID: SEQ-CCB3

Dilution: 1X
Wash Time: 100

Autosampler Location: 1
Date Collected: 2/8/2021 4:17:00 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: SEQ-CCB3

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-CCB3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2537625.0	103.8	%	0.54				0.52%
ScR 361.383	276212.8	102.9	%	1.86				1.81%
Ag 328.068†	-28.3	-0.00015	mg/L	0.000439	-0.00015	mg/L	0.000439	295.95%
Al 308.215†	4.7	0.00279	mg/L	0.001464	0.00279	mg/L	0.001464	52.54%
As 188.979†	-4.7	-0.00312	mg/L	0.003345	-0.00312	mg/L	0.003345	107.24%
B 249.677†	12.6	0.00158	mg/L	0.002386	0.00158	mg/L	0.002386	151.28%
Ba 233.527†	-3.2	-0.00034	mg/L	0.000203	-0.00034	mg/L	0.000203	59.74%
Be 313.042†	18.6	0.00002	mg/L	0.000047	0.00002	mg/L	0.000047	191.49%
Ca 317.933†	80.6	0.00807	mg/L	0.001376	0.00807	mg/L	0.001376	17.05%
Cd 228.802†	5.2	0.00017	mg/L	0.000049	0.00017	mg/L	0.000049	28.67%
Co 228.616†	0.5	0.00001	mg/L	0.000178	0.00001	mg/L	0.000178	>999.9%
Cr 267.716†	10.5	0.00137	mg/L	0.001038	0.00137	mg/L	0.001038	75.60%
Cu 324.752†	36.3	0.00017	mg/L	0.000138	0.00017	mg/L	0.000138	80.07%
Fe 273.955†	109.9	0.05366	mg/L	0.012048	0.05366	mg/L	0.012048	22.45%
K 766.490†	18.1	0.00844	mg/L	0.023136	0.00844	mg/L	0.023136	274.04%
Mg 279.077†	11.9	0.01274	mg/L	0.011158	0.01274	mg/L	0.011158	87.60%
Mn 257.610†	28.8	0.00046	mg/L	0.000138	0.00046	mg/L	0.000138	29.97%
Mo 202.031†	6.4	0.00037	mg/L	0.000109	0.00037	mg/L	0.000109	29.42%
Na 589.592†	173.9	0.01496	mg/L	0.005558	0.01496	mg/L	0.005558	37.15%
Na 330.237†	9.3	0.3219	mg/L	0.67571	0.3219	mg/L	0.67571	209.92%
Ni 231.604†	0.1	0.00002	mg/L	0.001019	0.00002	mg/L	0.001019	>999.9%
Pb 220.353†	5.6	0.00069	mg/L	0.000559	0.00069	mg/L	0.000559	80.74%
Sb 206.836†	5.6	0.00327	mg/L	0.003406	0.00327	mg/L	0.003406	104.19%
Se 196.026†	3.8	0.00299	mg/L	0.003296	0.00299	mg/L	0.003296	110.32%
Si 288.158†	7.8	0.00363	mg/L	0.003884	0.00363	mg/L	0.003884	107.00%
Sn 189.927†	-1.0	-0.00027	mg/L	0.001086	-0.00027	mg/L	0.001086	403.55%
Sr 421.552†	211.4	0.00024	mg/L	0.000116	0.00024	mg/L	0.000116	48.53%
Ti 334.903†	43.5	0.00149	mg/L	0.000414	0.00149	mg/L	0.000414	27.81%
Tl 190.801†	1.1	0.00055	mg/L	0.002045	0.00055	mg/L	0.002045	374.10%
V 292.402†	2.3	0.00002	mg/L	0.000093	0.00002	mg/L	0.000093	390.74%
Zn 206.200†	-1.3	-0.00042	mg/L	0.000198	-0.00042	mg/L	0.000198	47.12%

User canceled analysis.

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Analysis Begun

Start Time: 2/8/2021 4:20:18 PM
Plasma On Time: 2/8/2021 1:15:23 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0208.sif
Batch ID:
Results Data Set: I2210208
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 6
Autosampler Location: 325
Sample ID: BJB0182-BLK1
Date Collected: 2/8/2021 4:20:19 PM
DEL
Data Type: Original
Dilution: 1X

Nebulizer Parameters: BJB0182-BLK1

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: BJB0182-BLK1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2525935.8	103.3	%	1.65				1.60%
ScR 361.383	272292.7	101.4	%	0.25				0.24%
Ag 328.068†	-55.9	-0.00029	mg/L	0.000146	-0.00029	mg/L	0.000146	49.67%
Al 308.215†	-1.4	-0.00085	mg/L	0.004878	-0.00085	mg/L	0.004878	570.62%
As 188.979†	-3.4	-0.00228	mg/L	0.002524	-0.00228	mg/L	0.002524	110.68%
B 249.677†	5.3	0.00066	mg/L	0.001058	0.00066	mg/L	0.001058	159.37%
Ba 233.527†	-2.3	-0.00025	mg/L	0.000721	-0.00025	mg/L	0.000721	293.65%
Be 313.042†	50.3	0.00007	mg/L	0.000021	0.00007	mg/L	0.000021	32.28%
Ca 317.933†	36.2	0.00363	mg/L	0.000281	0.00363	mg/L	0.000281	7.72%
Cd 228.802†	4.8	0.00015	mg/L	0.000190	0.00015	mg/L	0.000190	125.27%
Co 228.616†	4.9	0.00011	mg/L	0.000143	0.00011	mg/L	0.000143	126.44%
Cr 267.716†	6.1	0.00080	mg/L	0.000502	0.00080	mg/L	0.000502	62.65%
Cu 324.752†	21.6	0.00010	mg/L	0.000139	0.00010	mg/L	0.000139	136.24%
Fe 273.955†	32.9	0.01605	mg/L	0.000670	0.01605	mg/L	0.000670	4.18%
K 766.490†	69.3	0.03233	mg/L	0.026413	0.03233	mg/L	0.026413	81.71%
Mg 279.077†	8.7	0.00939	mg/L	0.010995	0.00939	mg/L	0.010995	117.08%
Mn 257.610†	16.4	0.00026	mg/L	0.000198	0.00026	mg/L	0.000198	75.19%
Mo 202.031†	-0.7	-0.00004	mg/L	0.000227	-0.00004	mg/L	0.000227	530.69%
Na 589.592†	69.9	0.00602	mg/L	0.007739	0.00602	mg/L	0.007739	128.64%
Na 330.237†	-10.7	-0.3704	mg/L	0.34505	-0.3704	mg/L	0.34505	93.16%
Ni 231.604†	-5.5	-0.00144	mg/L	0.002935	-0.00144	mg/L	0.002935	204.32%
Pb 220.353†	9.9	0.00122	mg/L	0.001144	0.00122	mg/L	0.001144	93.60%
Sb 206.836†	-0.7	-0.00042	mg/L	0.002815	-0.00042	mg/L	0.002815	677.90%
Se 196.026†	3.5	0.00275	mg/L	0.009196	0.00275	mg/L	0.009196	333.79%
Si 288.158†	0.7	0.00030	mg/L	0.006168	0.00030	mg/L	0.006168	>999.9%
Sn 189.927†	-0.1	-0.00004	mg/L	0.001290	-0.00004	mg/L	0.001290	>999.9%
Sr 421.552†	35.7	0.00004	mg/L	0.000055	0.00004	mg/L	0.000055	136.15%
Ti 334.903†	34.0	0.00116	mg/L	0.001043	0.00116	mg/L	0.001043	89.80%
Tl 190.801†	-0.1	-0.00006	mg/L	0.003020	-0.00006	mg/L	0.003020	>999.9%
V 292.402†	13.7	0.00010	mg/L	0.000172	0.00010	mg/L	0.000172	171.52%
Zn 206.200†	-2.3	-0.00077	mg/L	0.001932	-0.00077	mg/L	0.001932	249.41%

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Sequence No.: 7
Sample ID: BJB0182-BS1

NO SPIKE
DEL
TH 02-08-21

Dilution: 1X
Wash Time: 37

Autosampler Location: 326
Date Collected: 2/8/2021 4:23:09 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BJB0182-BS1

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: BJB0182-BS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2527232.5	103.4	%	0.70				0.67%
ScR 361.383	269853.4	100.5	%	0.41				0.40%
Ag 328.068†	-63.4	-0.00033	mg/L	0.000062	-0.00033	mg/L	0.000062	18.60%
Al 308.215†	-12.5	-0.00745	mg/L	0.001224	-0.00745	mg/L	0.001224	16.43%
As 188.979†	-1.8	-0.00118	mg/L	0.001637	-0.00118	mg/L	0.001637	138.17%
B 249.677†	14.7	0.00184	mg/L	0.001113	0.00184	mg/L	0.001113	60.46%
Ba 233.527†	-1.9	-0.00019	mg/L	0.000477	-0.00019	mg/L	0.000477	245.06%
Be 313.042†	7.5	0.00001	mg/L	0.000030	0.00001	mg/L	0.000030	298.16%
Ca 317.933†	42.2	0.00422	mg/L	0.000892	0.00422	mg/L	0.000892	21.11%
Cd 228.802†	2.9	0.00009	mg/L	0.000068	0.00009	mg/L	0.000068	74.82%
Co 228.616†	6.4	0.00015	mg/L	0.000066	0.00015	mg/L	0.000066	43.45%
Cr 267.716†	5.9	0.00077	mg/L	0.000171	0.00077	mg/L	0.000171	22.08%
Cu 324.752†	22.2	0.00010	mg/L	0.000169	0.00010	mg/L	0.000169	161.54%
Fe 273.955†	21.6	0.01054	mg/L	0.001614	0.01054	mg/L	0.001614	15.31%
K 766.490†	-16.3	-0.00760	mg/L	0.005318	-0.00760	mg/L	0.005318	69.97%
Mg 279.077†	9.1	0.00978	mg/L	0.009082	0.00978	mg/L	0.009082	92.84%
Mn 257.610†	1.7	0.00003	mg/L	0.000069	0.00003	mg/L	0.000069	249.65%
Mo 202.031†	0.7	0.00004	mg/L	0.000111	0.00004	mg/L	0.000111	261.12%
Na 589.592†	37.3	0.00321	mg/L	0.002669	0.00321	mg/L	0.002669	83.25%
Na 330.237†	0.9	0.03072	mg/L	0.328243	0.03072	mg/L	0.328243	>999.9%
Ni 231.604†	0.8	0.00021	mg/L	0.000690	0.00021	mg/L	0.000690	336.48%
Pb 220.353†	2.4	0.00029	mg/L	0.001419	0.00029	mg/L	0.001419	489.72%
Sb 206.836†	-1.3	-0.00073	mg/L	0.001035	-0.00073	mg/L	0.001035	142.40%
Se 196.026†	1.2	0.00098	mg/L	0.003154	0.00098	mg/L	0.003154	323.43%
Si 288.158†	13.2	0.00618	mg/L	0.004595	0.00618	mg/L	0.004595	74.34%
Sn 189.927†	2.2	0.00059	mg/L	0.000925	0.00059	mg/L	0.000925	156.05%
Sr 421.552†	15.3	0.00002	mg/L	0.000036	0.00002	mg/L	0.000036	209.22%
Ti 334.903†	2.4	0.00008	mg/L	0.000197	0.00008	mg/L	0.000197	244.88%
Tl 190.801†	1.6	0.00076	mg/L	0.002830	0.00076	mg/L	0.002830	374.77%
V 292.402†	-18.6	-0.00013	mg/L	0.000081	-0.00013	mg/L	0.000081	64.03%
Zn 206.200†	-0.1	-0.00003	mg/L	0.000476	-0.00003	mg/L	0.000476	>999.9%

User canceled analysis.

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Analysis Begun

Start Time: 2/8/2021 4:26:39 PM
Plasma On Time: 2/8/2021 1:15:23 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0208.sif
Batch ID:
Results Data Set: I2210208
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 7
Autosampler Location: 326
Sample ID: BJB0182-BS1
NO SPIKE
DEL
TH 02-08-21
Date Collected: 2/8/2021 4:26:40 PM
Data Type: Original
Dilution: 1X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: BJB0182-BS1

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: BJB0182-BS1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2522319.1	103.2	%	0.97				0.94%
ScR 361.383	272611.3	101.5	%	0.89				0.87%
Ag 328.068†	-90.5	-0.00048	mg/L	0.000261	-0.00048	mg/L	0.000261	54.83%
Al 308.215†	-11.0	-0.00655	mg/L	0.004495	-0.00655	mg/L	0.004495	68.65%
As 188.979†	-4.5	-0.00302	mg/L	0.003838	-0.00302	mg/L	0.003838	127.11%
B 249.677†	16.3	0.00205	mg/L	0.000886	0.00205	mg/L	0.000886	43.26%
Ba 233.527†	-3.5	-0.00037	mg/L	0.000303	-0.00037	mg/L	0.000303	82.83%
Be 313.042†	-36.9	-0.00005	mg/L	0.000024	-0.00005	mg/L	0.000024	49.37%
Ca 317.933†	45.1	0.00452	mg/L	0.000115	0.00452	mg/L	0.000115	2.54%
Cd 228.802†	-1.8	-0.00003	mg/L	0.000067	-0.00003	mg/L	0.000067	217.00%
Co 228.616†	3.2	0.00007	mg/L	0.000107	0.00007	mg/L	0.000107	144.86%
Cr 267.716†	9.9	0.00130	mg/L	0.001376	0.00130	mg/L	0.001376	105.58%
Cu 324.752†	42.8	0.00020	mg/L	0.000192	0.00020	mg/L	0.000192	96.02%
Fe 273.955†	19.5	0.00952	mg/L	0.001569	0.00952	mg/L	0.001569	16.48%
K 766.490†	54.1	0.02520	mg/L	0.023108	0.02520	mg/L	0.023108	91.69%
Mg 279.077†	16.2	0.01755	mg/L	0.003671	0.01755	mg/L	0.003671	20.92%
Mn 257.610†	-2.9	-0.00005	mg/L	0.000157	-0.00005	mg/L	0.000157	338.20%
Mo 202.031†	-2.1	-0.00012	mg/L	0.000095	-0.00012	mg/L	0.000095	78.33%
Na 589.592†	144.6	0.01244	mg/L	0.010614	0.01244	mg/L	0.010614	85.34%
Na 330.237†	11.2	0.3865	mg/L	0.30955	0.3865	mg/L	0.30955	80.09%
Ni 231.604†	-4.9	-0.00127	mg/L	0.000662	-0.00127	mg/L	0.000662	52.12%
Pb 220.353†	3.2	0.00039	mg/L	0.001010	0.00039	mg/L	0.001010	255.93%
Sb 206.836†	3.2	0.00187	mg/L	0.001209	0.00187	mg/L	0.001209	64.68%
Se 196.026†	6.2	0.00485	mg/L	0.002069	0.00485	mg/L	0.002069	42.62%
Si 288.158†	16.8	0.00784	mg/L	0.003469	0.00784	mg/L	0.003469	44.23%
Sn 189.927†	1.4	0.00039	mg/L	0.000355	0.00039	mg/L	0.000355	91.67%
Sr 421.552†	49.5	0.00006	mg/L	0.000082	0.00006	mg/L	0.000082	146.32%
Ti 334.903†	16.1	0.00055	mg/L	0.000418	0.00055	mg/L	0.000418	75.96%
Tl 190.801†	-1.7	-0.00083	mg/L	0.001344	-0.00083	mg/L	0.001344	162.27%
V 292.402†	1.5	0.00002	mg/L	0.000056	0.00002	mg/L	0.000056	334.44%
Zn 206.200†	1.3	0.00044	mg/L	0.000884	0.00044	mg/L	0.000884	200.06%

User canceled analysis.

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Analysis Begun

Start Time: 2/8/2021 4:29:48 PM
Plasma On Time: 2/8/2021 1:15:23 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0208.sif
Batch ID:
Results Data Set: I2210208
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 331
Sample ID: BJA0765-DUP1
Date Collected: 2/8/2021 4:29:57 PM
Data Type: Original
Dilution: 10X

Nebulizer Parameters: BJA0765-DUP1

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: BJA0765-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2506703.3	102.6	%	0.61				0.59%
ScR 361.383	270747.4	100.8	%	0.77				0.76%
Ag 328.068†	-674.7	-0.00077	mg/L	0.000486	-0.00770	mg/L	0.004860	63.15%
Al 308.215†	28528.9	16.92	mg/L	0.095	169.2	mg/L	0.95	0.56%
As 188.979†	-3.1	0.00559	mg/L	0.001776	0.05587	mg/L	0.017763	31.79%
B 249.677†	150.7	0.01790	mg/L	0.000516	0.1790	mg/L	0.00516	2.88%
Ba 233.527†	5367.5	0.5519	mg/L	0.00493	5.519	mg/L	0.0493	0.89%
Be 313.042†	105.6	0.00009	mg/L	0.000020	0.00086	mg/L	0.000197	22.81%
Ca 317.933†	125027.4	12.53	mg/L	0.242	125.3	mg/L	2.42	1.93%
Cd 228.802†	296.3	0.00662	mg/L	0.000098	0.06618	mg/L	0.000976	1.48%
Co 228.616†	2429.9	0.05089	mg/L	0.000515	0.5089	mg/L	0.00515	1.01%
Cr 267.716†	31811.2	4.175	mg/L	0.0246	41.75	mg/L	0.246	0.59%
Cu 324.752†	52862.4	0.2571	mg/L	0.00089	2.571	mg/L	0.0089	0.35%
Fe 273.955†	324041.0	158.3	mg/L	1.27	1583	mg/L	12.72	0.80%
K 766.490†	1558.8	0.7266	mg/L	0.01090	7.266	mg/L	0.1090	1.50%
Mg 279.077†	5513.9	5.621	mg/L	0.0535	56.21	mg/L	0.535	0.95%
Mn 257.610†	51647.7	0.8267	mg/L	0.01447	8.267	mg/L	0.1447	1.75%
Mo 202.031†	1124.6	0.06520	mg/L	0.001127	0.6520	mg/L	0.01127	1.73%
Na 589.592†	16752.9	1.441	mg/L	0.0158	14.41	mg/L	0.158	1.10%
Na 330.237†	73.4	2.541	mg/L	0.2454	25.41	mg/L	2.454	9.66%
Ni 231.604†	493.3	0.1286	mg/L	0.00180	1.286	mg/L	0.0180	1.40%
Pb 220.353†	51468.5	6.335	mg/L	0.0387	63.35	mg/L	0.387	0.61%
Sb 206.836†	-2.7	0.00315	mg/L	0.003738	0.03152	mg/L	0.037381	118.58%
Se 196.026†	-7.7	0.01603	mg/L	0.005858	0.1603	mg/L	0.05858	36.54%
Si 288.158†	3268.4	1.525	mg/L	0.0050	15.25	mg/L	0.050	0.33%
Sn 189.927†	157.7	0.04496	mg/L	0.001383	0.4496	mg/L	0.01383	3.08%
Sr 421.552†	2279312.3	2.583	mg/L	0.0262	25.83	mg/L	0.262	1.01%
Ti 334.903†	61583.2	2.103	mg/L	0.0187	21.03	mg/L	0.187	0.89%
Tl 190.801†	-44.5	-0.00276	mg/L	0.002763	-0.02763	mg/L	0.027625	99.99%
V 292.402†	6030.3	0.06552	mg/L	0.000285	0.6552	mg/L	0.00285	0.43%
Zn 206.200†	10312.9	3.448	mg/L	0.0271	34.48	mg/L	0.271	0.79%

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Sequence No.: 2
Sample ID: 21A0361-01
Autosampler Location: 332
Date Collected: 2/8/2021 4:32:58 PM
Data Type: Original

Dilution: 10X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: 21A0361-01

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0361-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2521962.9	103.2	%	0.83				0.81%
ScR 361.383	273772.1	101.9	%	0.87				0.85%
Ag 328.068†	-630.1	-0.00094	mg/L	0.000029	-0.00943	mg/L	0.000292	3.10%
Al 308.215†	31826.6	18.88	mg/L	0.214	188.8	mg/L	2.14	1.13%
As 188.979†	0.2	0.00422	mg/L	0.003318	0.04216	mg/L	0.033184	78.70%
B 249.677†	166.3	0.02013	mg/L	0.000692	0.2013	mg/L	0.00692	3.44%
Ba 233.527†	5788.3	0.5974	mg/L	0.00776	5.974	mg/L	0.0776	1.30%
Be 313.042†	114.8	0.00010	mg/L	0.000017	0.00096	mg/L	0.000168	17.53%
Ca 317.933†	121500.5	12.17	mg/L	0.111	121.7	mg/L	1.11	0.91%
Cd 228.802†	297.7	0.00692	mg/L	0.000194	0.06916	mg/L	0.001935	2.80%
Co 228.616†	2425.2	0.05085	mg/L	0.000928	0.5085	mg/L	0.00928	1.83%
Cr 267.716†	32894.1	4.317	mg/L	0.0299	43.17	mg/L	0.299	0.69%
Cu 324.752†	46818.2	0.2273	mg/L	0.00232	2.273	mg/L	0.0232	1.02%
Fe 273.955†	277345.2	135.5	mg/L	0.16	1355	mg/L	1.62	0.12%
K 766.490†	1381.9	0.6442	mg/L	0.01018	6.442	mg/L	0.1018	1.58%
Mg 279.077†	6491.4	6.730	mg/L	0.0900	67.30	mg/L	0.900	1.34%
Mn 257.610†	44849.2	0.7181	mg/L	0.00617	7.181	mg/L	0.0617	0.86%
Mo 202.031†	780.6	0.04529	mg/L	0.000900	0.4529	mg/L	0.00900	1.99%
Na 589.592†	14872.2	1.279	mg/L	0.0112	12.79	mg/L	0.112	0.88%
Na 330.237†	80.7	2.795	mg/L	0.0875	27.95	mg/L	0.875	3.13%
Ni 231.604†	490.2	0.1278	mg/L	0.00330	1.278	mg/L	0.0330	2.59%
Pb 220.353†	53036.2	6.531	mg/L	0.0781	65.31	mg/L	0.781	1.20%
Sb 206.836†	-9.5	-0.00030	mg/L	0.004140	-0.00295	mg/L	0.041399	>999.9%
Se 196.026†	-9.3	0.01192	mg/L	0.006824	0.1192	mg/L	0.06824	57.24%
Si 288.158†	2269.0	1.057	mg/L	0.0035	10.57	mg/L	0.035	0.33%
Sn 189.927†	178.0	0.05057	mg/L	0.000441	0.5057	mg/L	0.00441	0.87%
Sr 421.552†	1831809.2	2.075	mg/L	0.0387	20.75	mg/L	0.387	1.87%
Ti 334.903†	65581.6	2.239	mg/L	0.0078	22.39	mg/L	0.078	0.35%
Tl 190.801†	-39.1	-0.00328	mg/L	0.001035	-0.03281	mg/L	0.010348	31.54%
V 292.402†	6255.5	0.06722	mg/L	0.000483	0.6722	mg/L	0.00483	0.72%
Zn 206.200†	11912.7	3.983	mg/L	0.0328	39.83	mg/L	0.328	0.82%

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Sequence No.: 3 Autosampler Location: 333
Sample ID: BJA0765-MS1 Date Collected: 2/8/2021 4:35:53 PM
Data Type: Original
Dilution: 10X
Wash Time: 37 Auto Dilution Factor: 1

Nebulizer Parameters: BJA0765-MS1

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BJA0765-MS1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2479520.3	101.4	%	0.44				0.43%
ScR 361.383	267865.6	99.75	%	2.349				2.35%
Ag 328.068†	18806.1	0.1022	mg/L	0.00041	1.022	mg/L	0.0041	0.41%
Al 308.215†	34493.2	20.46	mg/L	0.519	204.6	mg/L	5.19	2.54%
As 188.979†	557.7	0.3830	mg/L	0.00604	3.830	mg/L	0.0604	1.58%
B 249.677†	172.5	0.02038	mg/L	0.002128	0.2038	mg/L	0.02128	10.44%
Ba 233.527†	10366.6	1.073	mg/L	0.0269	10.73	mg/L	0.269	2.50%
Be 313.042†	73235.5	0.09676	mg/L	0.001236	0.9676	mg/L	0.01236	1.28%
Ca 317.933†	191825.3	19.22	mg/L	0.497	192.2	mg/L	4.97	2.59%
Cd 228.802†	4167.6	0.1140	mg/L	0.00075	1.140	mg/L	0.0075	0.66%
Co 228.616†	7383.0	0.1666	mg/L	0.00041	1.666	mg/L	0.0041	0.24%
Cr 267.716†	29329.5	3.850	mg/L	0.1051	38.50	mg/L	1.051	2.73%
Cu 324.752†	87997.1	0.4233	mg/L	0.00250	4.233	mg/L	0.0250	0.59%
Fe 273.955†	389836.1	190.4	mg/L	1.82	1904	mg/L	18.17	0.95%
K 766.490†	5935.1	2.767	mg/L	0.0356	27.67	mg/L	0.356	1.29%
Mg 279.077†	8977.2	9.298	mg/L	0.2780	92.98	mg/L	2.780	2.99%
Mn 257.610†	76515.2	1.225	mg/L	0.0228	12.25	mg/L	0.228	1.86%
Mo 202.031†	3035.2	0.1760	mg/L	0.00118	1.760	mg/L	0.0118	0.67%
Na 589.592†	42605.7	3.665	mg/L	0.0786	36.65	mg/L	0.786	2.15%
Na 330.237†	136.1	4.714	mg/L	0.3753	47.14	mg/L	3.753	7.96%
Ni 231.604†	1002.7	0.2612	mg/L	0.00959	2.612	mg/L	0.0959	3.67%
Pb 220.353†	66005.9	8.123	mg/L STL	0.0711	81.23	mg/L	0.711	0.88%
Sb 206.836†	12.9	0.01320	mg/L	0.002956	0.1320	mg/L	0.02956	22.39%
Se 196.026†	487.2	0.4086	mg/L	0.00911	4.086	mg/L	0.0911	2.23%
Si 288.158†	3612.5	1.685	mg/L	0.0422	16.85	mg/L	0.422	2.50%
Sn 189.927†	229.1	0.06471	mg/L	0.001228	0.6471	mg/L	0.01228	1.90%
Sr 421.552†	1868345.7	2.117	mg/L	0.0634	21.17	mg/L	0.634	3.00%
Ti 334.903†	66288.4	2.263	mg/L	0.0199	22.63	mg/L	0.199	0.88%
Tl 190.801†	770.0	0.3902	mg/L	0.00058	3.902	mg/L	0.0058	0.15%
V 292.402†	21358.2	0.1726	mg/L	0.00147	1.726	mg/L	0.0147	0.85%
Zn 206.200†	11488.8	3.842	mg/L	0.1207	38.42	mg/L	1.207	3.14%

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Sequence No.: 4
Sample ID: BJA0765-MSD1

Dilution: 10X
Wash Time: 37

Autosampler Location: 334
Date Collected: 2/8/2021 4:38:48 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BJA0765-MSD1

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BJA0765-MSD1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2441599.5	99.89	%	1.225				1.23%
ScR 361.383	270704.1	100.8	%	0.60				0.60%
Ag 328.068†	18830.9	0.1028	mg/L	0.00143	1.028	mg/L	0.0143	1.39%
Al 308.215†	34783.1	20.63	mg/L	0.181	206.3	mg/L	1.81	0.88%
As 188.979†	572.1	0.3943	mg/L	0.00796	3.943	mg/L	0.0796	2.02%
B 249.677†	157.6	0.01836	mg/L	0.000991	0.1836	mg/L	0.00991	5.40%
Ba 233.527†	9759.7	1.008	mg/L	0.0088	10.08	mg/L	0.088	0.87%
Be 313.042†	73495.6	0.09710	mg/L	0.000143	0.9710	mg/L	0.00143	0.15%
Ca 317.933†	177235.2	17.76	mg/L	0.169	177.6	mg/L	1.69	0.95%
Cd 228.802†	4275.0	0.1168	mg/L	0.00210	1.168	mg/L	0.0210	1.80%
Co 228.616†	7612.3	0.1718	mg/L	0.00227	1.718	mg/L	0.0227	1.32%
Cr 267.716†	31879.6	4.185	mg/L	0.0502	41.85	mg/L	0.502	1.20%
Cu 324.752†	83352.9	0.4031	mg/L	0.00705	4.031	mg/L	0.0705	1.75%
Fe 273.955†	434037.1	212.0	mg/L	2.21	2120	mg/L	22.09	1.04%
K 766.490†	5870.4	2.737	mg/L	0.0247	27.37	mg/L	0.247	0.90%
Mg 279.077†	8899.7	9.167	mg/L	0.1182	91.67	mg/L	1.182	1.29%
Mn 257.610†	77605.0	1.242	mg/L	0.0033	12.42	mg/L	0.033	0.27%
Mo 202.031†	3476.0	0.2015	mg/L	0.00343	2.015	mg/L	0.0343	1.70%
Na 589.592†	55687.4	4.790	mg/L	0.0308	47.90	mg/L	0.308	0.64%
Na 330.237†	161.1	5.582	mg/L	0.0276	55.82	mg/L	0.276	0.50%
Ni 231.604†	1086.8	0.2831	mg/L	0.00560	2.831	mg/L	0.0560	1.98%
Pb 220.353†	71719.3	8.825	mg/L STL	0.1528	88.25	mg/L	1.528	1.73%
Sb 206.836†	27.0	0.02080	mg/L	0.002476	0.2080	mg/L	0.02476	11.90%
Se 196.026†	497.5	0.4195	mg/L	0.00330	4.195	mg/L	0.0330	0.79%
Si 288.158†	4151.8	1.938	mg/L	0.0059	19.38	mg/L	0.059	0.30%
Sn 189.927†	193.4	0.05510	mg/L	0.001189	0.5510	mg/L	0.01189	2.16%
Sr 421.552†	2163572.0	2.451	mg/L	0.0059	24.51	mg/L	0.059	0.24%
Ti 334.903†	64415.5	2.199	mg/L	0.0131	21.99	mg/L	0.131	0.59%
Tl 190.801†	769.4	0.3926	mg/L	0.00450	3.926	mg/L	0.0450	1.15%
V 292.402†	21309.7	0.1743	mg/L	0.00282	1.743	mg/L	0.0282	1.62%
Zn 206.200†	10367.2	3.467	mg/L	0.0592	34.67	mg/L	0.592	1.71%

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Sequence No.: 5 **Autosampler Location: 335**
Sample ID: ~~21A0365-25~~ 21A0361-25 **Date Collected: 2/8/2021 4:41:43 PM**
Data Type: Original
Dilution: 100X TH 02-08-21
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: ~~21A0365-25~~ 21A0361-25

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: ~~21A0365-25~~ 21A0361-25

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2445195.4	100.0	%	0.52				0.52%
ScR 361.383	255379.8	95.10	%	0.706				0.74%
Ag 328.068†	-635.3	-0.00092	mg/L	0.000026	-0.09202	mg/L	0.002586	2.81%
Al 308.215†	1311.6	0.7776	mg/L	0.00889	77.76	mg/L	0.889	1.14%
As 188.979†	-9.1	0.01167	mg/L	0.001772	1.167	mg/L	0.1772	15.18%
B 249.677†	6.7	0.00065	mg/L	0.001979	0.06515	mg/L	0.197911	303.79%
Ba 233.527†	217.8	0.01433	mg/L	0.001440	1.433	mg/L	0.1440	10.04%
Be 313.042†	184.1	0.00024	mg/L	0.000022	0.02396	mg/L	0.002179	9.09%
Ca 317.933†	11436.0	1.146	mg/L	0.0111	114.6	mg/L	1.11	0.97%
Cd 228.802†	56.6	0.00010	mg/L	0.000141	0.01042	mg/L	0.014090	135.17%
Co 228.616†	505.4	0.00969	mg/L	0.000109	0.9691	mg/L	0.01090	1.12%
Cr 267.716†	891.2	0.1172	mg/L	0.00066	11.72	mg/L	0.066	0.56%
Cu 324.752†	53210.8	0.2577	mg/L	0.00298	25.77	mg/L	0.298	1.16%
Fe 273.955†	278266.0	135.9	mg/L	0.96	13590	mg/L	95.85	0.71%
K 766.490†	34.0	0.01583	mg/L	0.024584	1.583	mg/L	2.4584	155.26%
Mg 279.077†	780.2	0.5425	mg/L	0.01154	54.25	mg/L	1.154	2.13%
Mn 257.610†	65000.3	1.040	mg/L	0.0026	104.0	mg/L	0.26	0.25%
Mo 202.031†	322.2	0.01868	mg/L	0.000328	1.868	mg/L	0.0328	1.76%
Na 589.592†	570.2	0.04905	mg/L	0.005881	4.905	mg/L	0.5881	11.99%
Na 330.237†	-47.9	-1.658	mg/L	0.5411	-165.8	mg/L	54.11	32.64%
Ni 231.604†	352.7	0.09194	mg/L	0.001910	9.194	mg/L	0.1910	2.08%
Pb 220.353†	347.6	0.02936	mg/L	0.000808	2.936	mg/L	0.0808	2.75%
Sb 206.836†	29.5	0.01761	mg/L	0.003144	1.761	mg/L	0.3144	17.85%
Se 196.026†	-10.7	0.00913	mg/L	0.004048	0.9131	mg/L	0.40483	44.34%
Si 288.158†	622.8	0.2911	mg/L	0.00318	29.11	mg/L	0.318	1.09%
Sn 189.927†	31.5	0.00859	mg/L	0.001155	0.8592	mg/L	0.11554	13.45%
Sr 421.552†	3824.7	0.00433	mg/L	0.000058	0.4333	mg/L	0.00579	1.34%
Ti 334.903†	3076.1	0.1050	mg/L	0.00204	10.50	mg/L	0.204	1.94%
Tl 190.801†	-35.2	0.00111	mg/L	0.002527	0.1112	mg/L	0.25272	227.29%
V 292.402†	581.2	0.00781	mg/L	0.000247	0.7808	mg/L	0.02467	3.16%
Zn 206.200†	138.7	0.04640	mg/L	0.001107	4.640	mg/L	0.1107	2.39%

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Analysis Begun

Start Time: 2/8/2021 4:48:16 PM
Plasma On Time: 2/8/2021 1:15:23 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0208.sif
Batch ID:
Results Data Set: I2210208
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 7
Sample ID: SEQ-CCV4
Date Collected: 2/8/2021 4:48:24 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SEQ-CCV4

Analyte	**Back Pressure**	**Flow**
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCV4

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2393824.2	97.94	%	0.524				0.53%
ScR 361.383	252070.6	93.87	%	1.969				2.10%
Ag 328.068†	205660.1	1.083	mg/L	0.0101	1.083	mg/L	0.0101	0.93%
Al 308.215†	3729.6	2.175	mg/L	0.0462	2.175	mg/L	0.0462	2.12%
As 188.979†	3105.2	2.060	mg/L	0.0095	2.060	mg/L	0.0095	0.46%
B 249.677†	8532.3	1.069	mg/L	0.0260	1.069	mg/L	0.0260	2.43%
Ba 233.527†	10268.5	1.074	mg/L	0.0183	1.074	mg/L	0.0183	1.70%
Be 313.042†	757552.2	1.002	mg/L	0.0104	1.002	mg/L	0.0104	1.04%
Ca 317.933†	22595.3	2.263	mg/L	0.0481	2.263	mg/L	0.0481	2.13%
Cd 228.802†	37523.4	1.056	mg/L	0.0139	1.056	mg/L	0.0139	1.32%
Co 228.616†	43923.3	1.031	mg/L	0.0107	1.031	mg/L	0.0107	1.04%
Cr 267.716†	8307.0	1.095	mg/L	0.0231	1.095	mg/L	0.0231	2.11%
Cu 324.752†	221448.9	1.035	mg/L	0.0109	1.035	mg/L	0.0109	1.05%
Fe 273.955†	4427.2	2.154	mg/L	0.0489	2.154	mg/L	0.0489	2.27%
K 766.490†	46065.5	21.47	mg/L	0.310	21.47	mg/L	0.310	1.45%
Mg 279.077†	2072.1	2.246	mg/L	0.0403	2.246	mg/L	0.0403	1.80%
Mn 257.610†	68568.8	1.099	mg/L	0.0195	1.099	mg/L	0.0195	1.78%
Mo 202.031†	18259.6	1.059	mg/L	0.0084	1.059	mg/L	0.0084	0.79%
Na 589.592†	623584.2	53.64	mg/L	0.733	53.64	mg/L	0.733	1.37%
Na 330.237†	1557.5	53.95	mg/L	0.613	53.95	mg/L	0.613	1.14%
Ni 231.604†	4255.3	1.109	mg/L	0.0257	1.109	mg/L	0.0257	2.31%
Pb 220.353†	16972.7	2.091	mg/L	0.0224	2.091	mg/L	0.0224	1.07%
Sb 206.836†	3844.0	2.270	mg/L	0.0141	2.270	mg/L	0.0141	0.62%
Se 196.026†	2670.6	2.097	mg/L	0.0179	2.097	mg/L	0.0179	0.86%
Si 288.158†	4807.3	2.242	mg/L	0.0514	2.242	mg/L	0.0514	2.29%
Sn 189.927†	3845.5	1.034	mg/L	0.0081	1.034	mg/L	0.0081	0.78%
Sr 421.552†	947230.1	1.073	mg/L	0.0198	1.073	mg/L	0.0198	1.84%
Ti 334.903†	31079.3	1.061	mg/L	0.0126	1.061	mg/L	0.0126	1.19%
Tl 190.801†	4389.4	2.092	mg/L	0.0148	2.092	mg/L	0.0148	0.71%
V 292.402†	145663.3	1.030	mg/L	0.0118	1.030	mg/L	0.0118	1.15%
Zn 206.200†	3261.5	1.091	mg/L	0.0135	1.091	mg/L	0.0135	1.24%

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Sequence No.: 2 **Autosampler Location: 1**
Sample ID: SEQ-CCB4 **Date Collected: 2/8/2021 4:51:58 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB4

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-CCB4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2437224.0	99.71	%	1.110				1.11%
ScR 361.383	262539.6	97.76	%	0.477				0.49%
Ag 328.068†	-38.6	-0.00020	mg/L	0.000077	-0.00020	mg/L	0.000077	38.08%
Al 308.215†	-10.9	-0.00650	mg/L	0.009822	-0.00650	mg/L	0.009822	151.06%
As 188.979†	-3.5	-0.00230	mg/L	0.002579	-0.00230	mg/L	0.002579	112.11%
B 249.677†	18.5	0.00232	mg/L	0.000820	0.00232	mg/L	0.000820	35.32%
Ba 233.527†	-0.7	-0.00008	mg/L	0.000354	-0.00008	mg/L	0.000354	445.80%
Be 313.042†	106.5	0.00014	mg/L	0.000009	0.00014	mg/L	0.000009	6.65%
Ca 317.933†	9.2	0.00092	mg/L	0.000808	0.00092	mg/L	0.000808	87.58%
Cd 228.802†	10.7	0.00032	mg/L	0.000298	0.00032	mg/L	0.000298	92.81%
Co 228.616†	2.1	0.00005	mg/L	0.000031	0.00005	mg/L	0.000031	65.89%
Cr 267.716†	9.3	0.00123	mg/L	0.000666	0.00123	mg/L	0.000666	54.18%
Cu 324.752†	142.7	0.00067	mg/L	0.000173	0.00067	mg/L	0.000173	25.90%
Fe 273.955†	37.8	0.01847	mg/L	0.006046	0.01847	mg/L	0.006046	32.74%
K 766.490†	-13.7	-0.00640	mg/L	0.010691	-0.00640	mg/L	0.010691	167.17%
Mg 279.077†	7.0	0.00752	mg/L	0.007240	0.00752	mg/L	0.007240	96.30%
Mn 257.610†	20.7	0.00033	mg/L	0.000022	0.00033	mg/L	0.000022	6.69%
Mo 202.031†	12.9	0.00075	mg/L	0.000405	0.00075	mg/L	0.000405	54.01%
Na 589.592†	188.8	0.01624	mg/L	0.004892	0.01624	mg/L	0.004892	30.12%
Na 330.237†	-7.3	-0.2533	mg/L	0.07128	-0.2533	mg/L	0.07128	28.14%
Ni 231.604†	-1.9	-0.00050	mg/L	0.001129	-0.00050	mg/L	0.001129	223.88%
Pb 220.353†	3.1	0.00038	mg/L	0.000685	0.00038	mg/L	0.000685	179.80%
Sb 206.836†	2.2	0.00129	mg/L	0.001096	0.00129	mg/L	0.001096	84.83%
Se 196.026†	-0.3	-0.00027	mg/L	0.002588	-0.00027	mg/L	0.002588	962.35%
Si 288.158†	-7.1	-0.00332	mg/L	0.002900	-0.00332	mg/L	0.002900	87.27%
Sn 189.927†	2.3	0.00062	mg/L	0.001177	0.00062	mg/L	0.001177	189.41%
Sr 421.552†	202.0	0.00023	mg/L	0.000100	0.00023	mg/L	0.000100	43.54%
Ti 334.903†	33.1	0.00113	mg/L	0.000783	0.00113	mg/L	0.000783	69.31%
Tl 190.801†	4.2	0.00199	mg/L	0.002051	0.00199	mg/L	0.002051	103.17%
V 292.402†	11.2	0.00009	mg/L	0.000008	0.00009	mg/L	0.000008	9.56%
Zn 206.200†	-0.7	-0.00023	mg/L	0.000236	-0.00023	mg/L	0.000236	100.72%

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Analysis Begun

Start Time: 2/8/2021 4:56:26 PM **Plasma On Time: 2/8/2021 1:15:23 PM**
Logged In Analyst: Metals Instrument Controller **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0208.sif
Batch ID:
Results Data Set: I2210208
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: SEQ-CAL4 **Date Collected: 2/8/2021 4:56:27 PM**
Data Type: Original

Nebulizer Parameters: SEQ-CAL4

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-CAL4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2509313.7	19128.01	0.76%	102.7	%
ScR 361.383	273005.5	5481.70	2.01%	101.7	%
Mo 202.031†	170618.4	1574.24	0.92%	[10]	mg/L
Sb 206.836†	17496.4	264.13	1.51%	[10]	mg/L
Si 288.158†	21141.9	563.19	2.66%	[10]	mg/L
Sn 189.927†	36669.3	324.78	0.89%	[10]	mg/L
Ti 334.903†	287388.9	262.65	0.09%	[10]	mg/L

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Analysis Begun

Start Time: 2/8/2021 4:58:27 PM
Plasma On Time: 2/8/2021 1:15:23 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0208.sif
Batch ID:
Results Data Set: I2210208
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 2
Sample ID: SEQ-CAL5
Date Collected: 2/8/2021 4:58:28 PM
Data Type: Original

Nebulizer Parameters: SEQ-CAL5

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CAL5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2311456.1	9845.83	0.43%	94.57	%
ScR 361.383	264306.4	3683.50	1.39%	98.42	%
Al 308.215†	52564.4	449.13	0.85%	[30]	mg/L
Ca 317.933†	311783.9	3566.91	1.14%	[30]	mg/L
Fe 273.955†	206570.1	1256.05	0.61%	[100]	mg/L
K 766.490†	219610.2	866.17	0.39%	[100]	mg/L
Mg 279.077†	29652.0	154.15	0.52%	[30]	mg/L
Na 330.237†	2939.0	31.28	1.06%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	190000	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1752	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1505	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7958	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	9552	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	755900	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	10390	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	35050	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	42510	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	7620	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	213800	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	2066	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2196	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	988.4	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	62430	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	17060	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	11630	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	29.39	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3837	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	8119	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	1750	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1274	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2114	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3667	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	882600	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	28740	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2091	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	142200	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	2990	0.00000	1.000000	

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Analysis Begun

Start Time: 2/8/2021 5:00:57 PM
Plasma On Time: 2/8/2021 1:15:23 PM
Logged In Analyst: Metals Instrument Controller
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\0208.sif
Batch ID:
Results Data Set: I2210208
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Autosampler Location: 7
Sample ID: SEQ-CCV5
Date Collected: 2/8/2021 5:00:58 PM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SEQ-CCV5

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-CCV5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2443701.1	99.98	%	0.447				0.45%
ScR 361.383	261749.1	97.47	%	0.543				0.56%
Ag 328.068†	201347.8	1.060	mg/L	0.0029	1.060	mg/L	0.0029	0.28%
Al 308.215†	3560.4	1.995	mg/L	0.0318	1.995	mg/L	0.0318	1.60%
As 188.979†	3030.2	2.011	mg/L	0.0101	2.011	mg/L	0.0101	0.50%
B 249.677†	8153.4	1.022	mg/L	0.0191	1.022	mg/L	0.0191	1.87%
Ba 233.527†	9843.3	1.030	mg/L	0.0187	1.030	mg/L	0.0187	1.82%
Be 313.042†	730850.1	0.9662	mg/L	0.00458	0.9662	mg/L	0.00458	0.47%
Ca 317.933†	21480.7	2.066	mg/L	0.0397	2.066	mg/L	0.0397	1.92%
Cd 228.802†	36545.1	1.029	mg/L	0.0049	1.029	mg/L	0.0049	0.47%
Co 228.616†	43014.6	1.010	mg/L	0.0013	1.010	mg/L	0.0013	0.13%
Cr 267.716†	7937.2	1.047	mg/L	0.0199	1.047	mg/L	0.0199	1.90%
Cu 324.752†	214982.0	1.005	mg/L	0.0032	1.005	mg/L	0.0032	0.32%
Fe 273.955†	4229.8	2.039	mg/L	0.0369	2.039	mg/L	0.0369	1.81%
K 766.490†	44477.8	20.25	mg/L	0.211	20.25	mg/L	0.211	1.04%
Mg 279.077†	1984.1	2.010	mg/L	0.0310	2.010	mg/L	0.0310	1.54%
Mn 257.610†	65472.8	1.049	mg/L	0.0200	1.049	mg/L	0.0200	1.90%
Mo 202.031†	17800.6	1.043	mg/L	0.0004	1.043	mg/L	0.0004	0.04%
Na 589.592†	599869.6	51.60	mg/L	0.395	51.60	mg/L	0.395	0.77%
Na 330.237†	1504.2	51.18	mg/L	1.536	51.18	mg/L	1.536	3.00%
Ni 231.604†	4014.4	1.046	mg/L	0.0289	1.046	mg/L	0.0289	2.76%
Pb 220.353†	16611.3	2.046	mg/L	0.0053	2.046	mg/L	0.0053	0.26%
Sb 206.836†	3734.0	2.151	mg/L	0.0232	2.151	mg/L	0.0232	1.08%
Se 196.026†	2601.5	2.042	mg/L	0.0146	2.042	mg/L	0.0146	0.72%
Si 288.158†	4615.0	2.175	mg/L	0.0382	2.175	mg/L	0.0382	1.76%
Sn 189.927†	3763.1	1.029	mg/L	0.0044	1.029	mg/L	0.0044	0.43%
Sr 421.552†	911504.3	1.033	mg/L	0.0081	1.033	mg/L	0.0081	0.78%
Ti 334.903†	30035.3	1.044	mg/L	0.0050	1.044	mg/L	0.0050	0.48%
Tl 190.801†	4254.8	2.027	mg/L	0.0047	2.027	mg/L	0.0047	0.23%
V 292.402†	143320.1	1.013	mg/L	0.0039	1.013	mg/L	0.0039	0.39%
Zn 206.200†	3130.1	1.047	mg/L	0.0112	1.047	mg/L	0.0112	1.07%

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Sequence No.: 2 **Autosampler Location: 1**
Sample ID: SEQ-CCB5 **Date Collected: 2/8/2021 5:04:27 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB5

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-CCB5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2520914.0	103.1	%	0.29				0.29%
ScR 361.383	270955.4	100.9	%	1.06				1.05%
Ag 328.068†	70.1	0.00037	mg/L	0.000314	0.00037	mg/L	0.000314	85.18%
Al 308.215†	-7.8	-0.00447	mg/L	0.005831	-0.00447	mg/L	0.005831	130.53%
As 188.979†	-2.2	-0.00149	mg/L	0.002868	-0.00149	mg/L	0.002868	192.11%
B 249.677†	19.2	0.00241	mg/L	0.000774	0.00241	mg/L	0.000774	32.14%
Ba 233.527†	-7.1	-0.00074	mg/L	0.000721	-0.00074	mg/L	0.000721	97.44%
Be 313.042†	75.8	0.00010	mg/L	0.000053	0.00010	mg/L	0.000053	53.26%
Ca 317.933†	20.6	0.00197	mg/L	0.000511	0.00197	mg/L	0.000511	25.95%
Cd 228.802†	4.6	0.00014	mg/L	0.000141	0.00014	mg/L	0.000141	99.99%
Co 228.616†	-6.5	-0.00015	mg/L	0.000116	-0.00015	mg/L	0.000116	75.28%
Cr 267.716†	10.7	0.00141	mg/L	0.000856	0.00141	mg/L	0.000856	60.61%
Cu 324.752†	75.6	0.00035	mg/L	0.000040	0.00035	mg/L	0.000040	11.42%
Fe 273.955†	16.8	0.00815	mg/L	0.000963	0.00815	mg/L	0.000963	11.81%
K 766.490†	129.2	0.05881	mg/L	0.031272	0.05881	mg/L	0.031272	53.17%
Mg 279.077†	15.9	0.01612	mg/L	0.010423	0.01612	mg/L	0.010423	64.65%
Mn 257.610†	8.9	0.00014	mg/L	0.000078	0.00014	mg/L	0.000078	54.67%
Mo 202.031†	13.3	0.00078	mg/L	0.000113	0.00078	mg/L	0.000113	14.48%
Na 589.592†	485.8	0.04178	mg/L	0.001112	0.04178	mg/L	0.001112	2.66%
Na 330.237†	23.0	0.7819	mg/L	0.34855	0.7819	mg/L	0.34855	44.58%
Ni 231.604†	-1.0	-0.00026	mg/L	0.001047	-0.00026	mg/L	0.001047	395.02%
Pb 220.353†	-0.7	-0.00009	mg/L	0.000591	-0.00009	mg/L	0.000591	639.19%
Sb 206.836†	1.3	0.00075	mg/L	0.002620	0.00075	mg/L	0.002620	349.11%
Se 196.026†	10.5	0.00828	mg/L	0.007544	0.00828	mg/L	0.007544	91.12%
Si 288.158†	14.9	0.00705	mg/L	0.008228	0.00705	mg/L	0.008228	116.64%
Sn 189.927†	-3.2	-0.00086	mg/L	0.000772	-0.00086	mg/L	0.000772	89.92%
Sr 421.552†	142.5	0.00016	mg/L	0.000082	0.00016	mg/L	0.000082	50.65%
Ti 334.903†	18.6	0.00065	mg/L	0.000664	0.00065	mg/L	0.000664	102.42%
Tl 190.801†	-0.0	-0.00002	mg/L	0.003267	-0.00002	mg/L	0.003267	>999.9%
V 292.402†	-10.7	-0.00007	mg/L	0.000123	-0.00007	mg/L	0.000123	180.16%
Zn 206.200†	0.1	0.00005	mg/L	0.000423	0.00005	mg/L	0.000423	846.84%

Sequence No.: 3
Sample ID: 21A0383-01
Autosampler Location: 336
Date Collected: 2/8/2021 5:07:16 PM
Data Type: Original
Dilution: 1X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: 21A0383-01

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 21A0383-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2480853.2	101.5	%	0.77				0.76%
ScR 361.383	270584.5	100.8	%	1.86				1.85%
Ag 328.068†	77.1	-0.00003	mg/L	0.000286	-0.00003	mg/L	0.000286	853.65%
Al 308.215†	-0.5	-0.01525	mg/L	0.003304	-0.01525	mg/L	0.003304	21.67%
As 188.979†	25.9	0.01707	mg/L	0.001645	0.01707	mg/L	0.001645	9.64%
B 249.677†	753.2	0.08470	mg/L	0.001756	0.08470	mg/L	0.001756	2.07%
Ba 233.527†	680.0	0.07090	mg/L	0.001530	0.07090	mg/L	0.001530	2.16%
Be 313.042†	-39.1	-0.00005	mg/L	0.000062	-0.00005	mg/L	0.000062	120.09%
Ca 317.933†	285957.8	27.51	mg/L	0.394	27.51	mg/L	0.394	1.43%
Cd 228.802†	20.1	0.00032	mg/L	0.000149	0.00032	mg/L	0.000149	46.37%
Co 228.616†	-26.0	-0.00062	mg/L	0.000223	-0.00062	mg/L	0.000223	35.78%
Cr 267.716†	9.2	0.00158	mg/L	0.000711	0.00158	mg/L	0.000711	45.03%
Cu 324.752†	173.3	0.00069	mg/L	0.000128	0.00069	mg/L	0.000128	18.57%
Fe 273.955†	155.7	0.07537	mg/L	0.004453	0.07537	mg/L	0.004453	5.91%
K 766.490†	7349.0	3.346	mg/L	0.0381	3.346	mg/L	0.0381	1.14%
Mg 279.077†	7334.8	7.416	mg/L	0.1459	7.416	mg/L	0.1459	1.97%
Mn 257.610†	6179.1	0.09898	mg/L	0.001471	0.09898	mg/L	0.001471	1.49%
Mo 202.031†	62.6	0.00340	mg/L	0.000321	0.00340	mg/L	0.000321	9.45%
Na 589.592†	194042.2	16.69	mg/L	0.184	16.69	mg/L	0.184	1.10%
Na 330.237†	520.7	17.72	mg/L	0.333	17.72	mg/L	0.333	1.88%
Ni 231.604†	8.2	0.00214	mg/L	0.000848	0.00214	mg/L	0.000848	39.69%
Pb 220.353†	22.9	0.00281	mg/L	0.001077	0.00281	mg/L	0.001077	38.34%
Sb 206.836†	10.8	0.00619	mg/L	0.003240	0.00619	mg/L	0.003240	52.35%
Se 196.026†	15.1	0.01187	mg/L	0.005910	0.01187	mg/L	0.005910	49.81%
Si 288.158†	33218.3	15.71	mg/L	0.133	15.71	mg/L	0.133	0.85%
Sn 189.927†	7.4	0.00300	mg/L	0.001226	0.00300	mg/L	0.001226	40.92%
Sr 421.552†	162733.6	0.1844	mg/L	0.00143	0.1844	mg/L	0.00143	0.78%
Ti 334.903†	46.1	-0.00020	mg/L	0.000551	-0.00020	mg/L	0.000551	281.37%
Tl 190.801†	-7.8	-0.00371	mg/L	0.002954	-0.00371	mg/L	0.002954	79.71%
V 292.402†	-11.7	-0.00006	mg/L	0.000131	-0.00006	mg/L	0.000131	234.69%
Zn 206.200†	4.0	0.00449	mg/L	0.001038	0.00449	mg/L	0.001038	23.12%

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Sequence No.: 4 **Autosampler Location: 337**
Sample ID: 21A0383-02 **Date Collected: 2/8/2021 5:10:05 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0383-02

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0383-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2508507.1	102.6	%	1.30				1.27%
ScR 361.383	266873.9	99.38	%	0.522				0.53%
Ag 328.068†	21.6	-0.00013	mg/L	0.000215	-0.00013	mg/L	0.000215	170.17%
Al 308.215†	-0.6	-0.01306	mg/L	0.006169	-0.01306	mg/L	0.006169	47.23%
As 188.979†	-1.5	-0.00144	mg/L	0.002815	-0.00144	mg/L	0.002815	195.25%
B 249.677†	102.5	0.00440	mg/L	0.001622	0.00440	mg/L	0.001622	36.84%
Ba 233.527†	19.2	0.00181	mg/L	0.000014	0.00181	mg/L	0.000014	0.80%
Be 313.042†	-15.8	-0.00002	mg/L	0.000024	-0.00002	mg/L	0.000024	113.04%
Ca 317.933†	167069.8	16.08	mg/L	0.097	16.08	mg/L	0.097	0.60%
Cd 228.802†	10.6	0.00023	mg/L	0.000100	0.00023	mg/L	0.000100	43.66%
Co 228.616†	-18.8	-0.00045	mg/L	0.000218	-0.00045	mg/L	0.000218	48.34%
Cr 267.716†	11.1	0.00166	mg/L	0.001299	0.00166	mg/L	0.001299	78.35%
Cu 324.752†	184.0	0.00075	mg/L	0.000108	0.00075	mg/L	0.000108	14.32%
Fe 273.955†	1015.2	0.4914	mg/L	0.00332	0.4914	mg/L	0.00332	0.68%
K 766.490†	1391.7	0.6337	mg/L	0.01802	0.6337	mg/L	0.01802	2.84%
Mg 279.077†	10552.3	10.67	mg/L	0.118	10.67	mg/L	0.118	1.10%
Mn 257.610†	237.7	0.00380	mg/L	0.000043	0.00380	mg/L	0.000043	1.14%
Mo 202.031†	27.0	0.00144	mg/L	0.000308	0.00144	mg/L	0.000308	21.34%
Na 589.592†	58397.5	5.023	mg/L	0.0381	5.023	mg/L	0.0381	0.76%
Na 330.237†	174.4	5.933	mg/L	0.3177	5.933	mg/L	0.3177	5.35%
Ni 231.604†	2.7	0.00070	mg/L	0.001838	0.00070	mg/L	0.001838	263.69%
Pb 220.353†	11.9	0.00142	mg/L	0.001269	0.00142	mg/L	0.001269	89.38%
Sb 206.836†	10.2	0.00586	mg/L	0.005082	0.00586	mg/L	0.005082	86.69%
Se 196.026†	11.4	0.00901	mg/L	0.002954	0.00901	mg/L	0.002954	32.80%
Si 288.158†	28288.6	13.38	mg/L	0.071	13.38	mg/L	0.071	0.53%
Sn 189.927†	2.6	0.00130	mg/L	0.001116	0.00130	mg/L	0.001116	86.01%
Sr 421.552†	70549.6	0.07993	mg/L	0.000500	0.07993	mg/L	0.000500	0.63%
Ti 334.903†	29.1	-0.00004	mg/L	0.000714	-0.00004	mg/L	0.000714	>999.9%
Tl 190.801†	-4.5	-0.00210	mg/L	0.002459	-0.00210	mg/L	0.002459	116.92%
V 292.402†	61.0	0.00045	mg/L	0.000076	0.00045	mg/L	0.000076	16.92%
Zn 206.200†	593.0	0.2010	mg/L	0.00074	0.2010	mg/L	0.00074	0.37%

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Sequence No.: 5 **Autosampler Location: 338**
Sample ID: 21A0384-01 **Date Collected: 2/8/2021 5:12:53 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0384-01

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 21A0384-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2484461.3	101.6	%	1.10				1.08%
ScR 361.383	267737.8	99.70	%	0.111				0.11%
Ag 328.068†	79.4	0.00001	mg/L	0.000319	0.00001	mg/L	0.000319	>999.9%
Al 308.215†	34.7	0.01052	mg/L	0.004236	0.01052	mg/L	0.004236	40.28%
As 188.979†	0.5	-0.00067	mg/L	0.003353	-0.00067	mg/L	0.003353	499.90%
B 249.677†	92.5	0.00545	mg/L	0.000756	0.00545	mg/L	0.000756	13.88%
Ba 233.527†	44.9	0.00437	mg/L	0.000700	0.00437	mg/L	0.000700	16.01%
Be 313.042†	-6.0	-0.00001	mg/L	0.000015	-0.00001	mg/L	0.000015	168.82%
Ca 317.933†	283237.1	27.25	mg/L	0.400	27.25	mg/L	0.400	1.47%
Cd 228.802†	15.1	0.00029	mg/L	0.000177	0.00029	mg/L	0.000177	60.71%
Co 228.616†	-21.1	-0.00051	mg/L	0.000082	-0.00051	mg/L	0.000082	15.96%
Cr 267.716†	22.0	0.00323	mg/L	0.001228	0.00323	mg/L	0.001228	37.99%
Cu 324.752†	856.2	0.00390	mg/L	0.000214	0.00390	mg/L	0.000214	5.50%
Fe 273.955†	1795.2	0.8691	mg/L	0.00749	0.8691	mg/L	0.00749	0.86%
K 766.490†	1333.4	0.6072	mg/L	0.04417	0.6072	mg/L	0.04417	7.27%
Mg 279.077†	12209.4	12.35	mg/L	0.196	12.35	mg/L	0.196	1.58%
Mn 257.610†	613.5	0.00982	mg/L	0.000025	0.00982	mg/L	0.000025	0.25%
Mo 202.031†	31.0	0.00155	mg/L	0.000091	0.00155	mg/L	0.000091	5.88%
Na 589.592†	41031.8	3.529	mg/L	0.0133	3.529	mg/L	0.0133	0.38%
Na 330.237†	124.7	4.242	mg/L	0.1600	4.242	mg/L	0.1600	3.77%
Ni 231.604†	1.2	0.00032	mg/L	0.000850	0.00032	mg/L	0.000850	265.86%
Pb 220.353†	14.9	0.00175	mg/L	0.001362	0.00175	mg/L	0.001362	77.61%
Sb 206.836†	3.2	0.00184	mg/L	0.001743	0.00184	mg/L	0.001743	94.69%
Se 196.026†	11.3	0.00898	mg/L	0.005787	0.00898	mg/L	0.005787	64.44%
Si 288.158†	20614.6	9.751	mg/L	0.0730	9.751	mg/L	0.0730	0.75%
Sn 189.927†	3.7	0.00197	mg/L	0.002113	0.00197	mg/L	0.002113	107.11%
Sr 421.552†	90895.8	0.1030	mg/L	0.00076	0.1030	mg/L	0.00076	0.74%
Ti 334.903†	74.6	0.00081	mg/L	0.000615	0.00081	mg/L	0.000615	75.80%
Tl 190.801†	-11.4	-0.00533	mg/L	0.002338	-0.00533	mg/L	0.002338	43.90%
V 292.402†	182.9	0.00132	mg/L	0.000172	0.00132	mg/L	0.000172	13.00%
Zn 206.200†	51.4	0.01912	mg/L	0.001116	0.01912	mg/L	0.001116	5.83%

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Sequence No.: 6 **Autosampler Location: 339**
Sample ID: BJA0665-DUP1 **Date Collected: 2/8/2021 5:15:41 PM**
Data Type: Original
Dilution: 5X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJA0665-DUP1

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BJA0665-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2534485.2	103.7	%	0.74				0.72%
ScR 361.383	269503.3	100.4	%	0.94				0.94%
Ag 328.068†	-705.7	-0.00168	mg/L	0.000235	-0.00842	mg/L	0.001174	13.95%
Al 308.215†	123775.4	70.63	mg/L	0.480	353.2	mg/L	2.40	0.68%
As 188.979†	20.7	0.02821	mg/L	0.001772	0.1410	mg/L	0.00886	6.28%
B 249.677†	34.4	0.00134	mg/L	0.002056	0.00670	mg/L	0.010280	153.40%
Ba 233.527†	4689.3	0.4831	mg/L	0.00279	2.415	mg/L	0.0140	0.58%
Be 313.042†	2097.7	0.00256	mg/L	0.000027	0.01282	mg/L	0.000136	1.06%
Ca 317.933†	115556.4	11.12	mg/L	0.207	55.59	mg/L	1.035	1.86%
Cd 228.802†	47.4	-0.00015	mg/L	0.000288	-0.00073	mg/L	0.001440	197.09%
Co 228.616†	2324.9	0.04925	mg/L	0.000670	0.2462	mg/L	0.00335	1.36%
Cr 267.716†	1792.4	0.2356	mg/L	0.00309	1.178	mg/L	0.0155	1.31%
Cu 324.752†	14146.4	0.07342	mg/L	0.001072	0.3671	mg/L	0.00536	1.46%
Fe 273.955†	251368.5	121.7	mg/L	1.16	608.4	mg/L	5.82	0.96%
K 766.490†	5853.1	2.665	mg/L	0.0287	13.33	mg/L	0.143	1.07%
Mg 279.077†	19641.3	19.60	mg/L	0.268	98.00	mg/L	1.338	1.37%
Mn 257.610†	112799.1	1.806	mg/L	0.0157	9.028	mg/L	0.0787	0.87%
Mo 202.031†	7.9	0.00036	mg/L	0.000545	0.00178	mg/L	0.002723	153.01%
Na 589.592†	7946.0	0.6835	mg/L	0.01623	3.417	mg/L	0.0811	2.37%
Na 330.237†	19.2	0.6541	mg/L	0.35015	3.271	mg/L	1.7508	53.53%
Ni 231.604†	599.7	0.1563	mg/L	0.00310	0.7817	mg/L	0.01548	1.98%
Pb 220.353†	191.5	0.03239	mg/L	0.000482	0.1620	mg/L	0.00241	1.49%
Sb 206.836†	-0.9	0.00669	mg/L	0.004053	0.03347	mg/L	0.020267	60.55%
Se 196.026†	-1.6	0.01476	mg/L	0.003484	0.07381	mg/L	0.017422	23.60%
Si 288.158†	9524.8	4.497	mg/L	0.0370	22.49	mg/L	0.185	0.82%
Sn 189.927†	-20.9	-0.00126	mg/L	0.002558	-0.00630	mg/L	0.012788	203.12%
Sr 421.552†	122509.6	0.1388	mg/L	0.00140	0.6940	mg/L	0.00698	1.01%
Ti 334.903†	53810.9	1.872	mg/L	0.0132	9.358	mg/L	0.0661	0.71%
Tl 190.801†	-23.5	0.00360	mg/L	0.001921	0.01801	mg/L	0.009606	53.33%
V 292.402†	41242.2	0.2937	mg/L	0.00213	1.469	mg/L	0.0106	0.72%
Zn 206.200†	499.9	0.1680	mg/L	0.00249	0.8400	mg/L	0.01247	1.48%

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Sequence No.: 7
Sample ID: 21A0296-06

Dilution: 5X
Wash Time: 37

Autosampler Location: 340
Date Collected: 2/8/2021 5:18:29 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: 21A0296-06

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0296-06

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2536382.2	103.8	%	0.45				0.43%
ScR 361.383	271616.6	101.1	%	1.30				1.28%
Ag 328.068†	-566.2	-0.00153	mg/L	0.000151	-0.00764	mg/L	0.000754	9.88%
Al 308.215†	127479.2	72.74	mg/L	0.930	363.7	mg/L	4.65	1.28%
As 188.979†	5.3	0.01396	mg/L	0.001901	0.06980	mg/L	0.009505	13.62%
B 249.677†	27.6	-0.00162	mg/L	0.000260	-0.00810	mg/L	0.001301	16.06%
Ba 233.527†	4204.3	0.4343	mg/L	0.00690	2.172	mg/L	0.0345	1.59%
Be 313.042†	1546.4	0.00189	mg/L	0.000056	0.00946	mg/L	0.000278	2.94%
Ca 317.933†	109768.4	10.56	mg/L	0.237	52.81	mg/L	1.186	2.25%
Cd 228.802†	37.5	0.00003	mg/L	0.000053	0.00016	mg/L	0.000263	166.00%
Co 228.616†	1882.7	0.03926	mg/L	0.000378	0.1963	mg/L	0.00189	0.96%
Cr 267.716†	1199.4	0.1577	mg/L	0.00173	0.7887	mg/L	0.00867	1.10%
Cu 324.752†	12298.2	0.06268	mg/L	0.000461	0.3134	mg/L	0.00231	0.74%
Fe 273.955†	185114.0	89.61	mg/L	0.425	448.1	mg/L	2.13	0.47%
K 766.490†	5439.9	2.477	mg/L	0.0428	12.39	mg/L	0.214	1.73%
Mg 279.077†	18448.9	18.46	mg/L	0.473	92.32	mg/L	2.366	2.56%
Mn 257.610†	91086.2	1.458	mg/L	0.0195	7.291	mg/L	0.0974	1.34%
Mo 202.031†	11.2	0.00056	mg/L	0.000429	0.00279	mg/L	0.002145	76.96%
Na 589.592†	8154.0	0.7014	mg/L	0.00954	3.507	mg/L	0.0477	1.36%
Na 330.237†	16.3	0.5534	mg/L	0.30663	2.767	mg/L	1.5332	55.41%
Ni 231.604†	542.9	0.1415	mg/L	0.00195	0.7075	mg/L	0.00975	1.38%
Pb 220.353†	51.8	0.01885	mg/L	0.000821	0.09426	mg/L	0.004104	4.35%
Sb 206.836†	-5.5	0.00386	mg/L	0.003093	0.01929	mg/L	0.015467	80.19%
Se 196.026†	-0.3	0.01173	mg/L	0.006199	0.05867	mg/L	0.030995	52.83%
Si 288.158†	16639.8	7.862	mg/L	0.1099	39.31	mg/L	0.549	1.40%
Sn 189.927†	-17.1	-0.00015	mg/L	0.000722	-0.00074	mg/L	0.003609	490.40%
Sr 421.552†	116059.1	0.1315	mg/L	0.00224	0.6575	mg/L	0.01120	1.70%
Ti 334.903†	54679.2	1.902	mg/L	0.0139	9.509	mg/L	0.0697	0.73%
Tl 190.801†	-20.5	0.00113	mg/L	0.006166	0.00563	mg/L	0.030830	547.30%
V 292.402†	28598.4	0.2037	mg/L	0.00244	1.018	mg/L	0.0122	1.20%
Zn 206.200†	435.8	0.1473	mg/L	0.00154	0.7363	mg/L	0.00770	1.05%

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Sequence No.: 8
Sample ID: BJA0665-MS2

Dilution: 5X
Wash Time: 37

Autosampler Location: 341
Date Collected: 2/8/2021 5:21:17 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BJA0665-MS2

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BJA0665-MS2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2494041.3	102.0	%	0.39				0.38%
ScR 361.383	272888.8	101.6	%	0.81				0.80%
Ag 328.068†	38136.7	0.2020	mg/L	0.00200	1.010	mg/L	0.0100	0.99%
Al 308.215†	129664.8	73.99	mg/L	0.663	369.9	mg/L	3.31	0.90%
As 188.979†	1171.9	0.7876	mg/L	0.00790	3.938	mg/L	0.0395	1.00%
B 249.677†	32.5	-0.00067	mg/L	0.001155	-0.00334	mg/L	0.005774	172.81%
Ba 233.527†	12038.0	1.254	mg/L	0.0161	6.271	mg/L	0.0804	1.28%
Be 313.042†	147773.5	0.1952	mg/L	0.00147	0.9761	mg/L	0.00736	0.75%
Ca 317.933†	194895.9	18.75	mg/L	0.278	93.76	mg/L	1.392	1.48%
Cd 228.802†	7509.5	0.2076	mg/L	0.00079	1.038	mg/L	0.0039	0.38%
Co 228.616†	10754.9	0.2484	mg/L	0.00115	1.242	mg/L	0.0058	0.46%
Cr 267.716†	2771.0	0.3649	mg/L	0.00231	1.825	mg/L	0.0116	0.63%
Cu 324.752†	57558.7	0.2743	mg/L	0.00285	1.371	mg/L	0.0143	1.04%
Fe 273.955†	185941.5	90.01	mg/L	0.465	450.1	mg/L	2.33	0.52%
K 766.490†	13742.4	6.258	mg/L	0.0376	31.29	mg/L	0.188	0.60%
Mg 279.077†	24154.3	24.24	mg/L	0.170	121.2	mg/L	0.85	0.70%
Mn 257.610†	124230.6	1.989	mg/L	0.0119	9.946	mg/L	0.0593	0.60%
Mo 202.031†	2725.5	0.1596	mg/L	0.00126	0.7979	mg/L	0.00629	0.79%
Na 589.592†	55481.2	4.772	mg/L	0.0167	23.86	mg/L	0.084	0.35%
Na 330.237†	131.9	4.488	mg/L	0.4081	22.44	mg/L	2.041	9.09%
Ni 231.604†	1348.0	0.3510	mg/L	0.00348	1.755	mg/L	0.0174	0.99%
Pb 220.353†	6778.5	0.8476	mg/L	0.00354	4.238	mg/L	0.0177	0.42%
Sb 206.836†	289.0	0.1713	mg/L	0.00119	0.8564	mg/L	0.00596	0.70%
Se 196.026†	1009.0	0.8039	mg/L	0.01323	4.020	mg/L	0.0661	1.65%
Si 288.158†	14460.7	6.834	mg/L	0.0639	34.17	mg/L	0.320	0.94%
Sn 189.927†	-22.7	-0.00122	mg/L	0.002675	-0.00612	mg/L	0.013373	218.66%
Sr 421.552†	309820.4	0.3510	mg/L	0.00375	1.755	mg/L	0.0188	1.07%
Ti 334.903†	47722.1	1.659	mg/L	0.0105	8.296	mg/L	0.0525	0.63%
Tl 190.801†	1635.2	0.7914	mg/L	0.00947	3.957	mg/L	0.0473	1.20%
V 292.402†	55180.3	0.3918	mg/L	0.00597	1.959	mg/L	0.0299	1.52%
Zn 206.200†	1017.4	0.3416	mg/L	0.00215	1.708	mg/L	0.0108	0.63%

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Sequence No.: 9 **Autosampler Location: 342**
Sample ID: BJA0692-DUP3 **Date Collected: 2/8/2021 5:24:06 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJA0692-DUP3

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BJA0692-DUP3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2465109.8	100.9	%	0.11				0.11%
ScR 361.383	272987.9	101.7	%	0.44				0.43%
Ag 328.068†	45.1	-0.00010	mg/L	0.000155	-0.00010	mg/L	0.000155	154.86%
Al 308.215†	192.1	0.09254	mg/L	0.007663	0.09254	mg/L	0.007663	8.28%
As 188.979†	3.3	0.00182	mg/L	0.002602	0.00182	mg/L	0.002602	142.70%
B 249.677†	236.4	0.01833	mg/L	0.001081	0.01833	mg/L	0.001081	5.90%
Ba 233.527†	129.8	0.01338	mg/L	0.000115	0.01338	mg/L	0.000115	0.86%
Be 313.042†	-21.5	-0.00003	mg/L	0.000011	-0.00003	mg/L	0.000011	37.83%
Ca 317.933†	195278.9	18.79	mg/L	0.151	18.79	mg/L	0.151	0.80%
Cd 228.802†	25.8	0.00063	mg/L	0.000171	0.00063	mg/L	0.000171	26.94%
Co 228.616†	-6.6	-0.00017	mg/L	0.000606	-0.00017	mg/L	0.000606	363.90%
Cr 267.716†	9.7	0.00157	mg/L	0.000570	0.00157	mg/L	0.000570	36.24%
Cu 324.752†	257.0	0.00103	mg/L	0.000177	0.00103	mg/L	0.000177	17.24%
Fe 273.955†	268.0	0.1297	mg/L	0.00030	0.1297	mg/L	0.00030	0.23%
K 766.490†	6917.8	3.150	mg/L	0.0227	3.150	mg/L	0.0227	0.72%
Mg 279.077†	12477.7	12.62	mg/L	0.103	12.62	mg/L	0.103	0.82%
Mn 257.610†	20244.5	0.3243	mg/L	0.00122	0.3243	mg/L	0.00122	0.38%
Mo 202.031†	67.9	0.00379	mg/L	0.000245	0.00379	mg/L	0.000245	6.47%
Na 589.592†	99203.3	8.533	mg/L	0.0426	8.533	mg/L	0.0426	0.50%
Na 330.237†	272.3	9.266	mg/L	0.2645	9.266	mg/L	0.2645	2.85%
Ni 231.604†	3.9	0.00103	mg/L	0.000749	0.00103	mg/L	0.000749	72.63%
Pb 220.353†	13.2	0.00165	mg/L	0.002719	0.00165	mg/L	0.002719	165.05%
Sb 206.836†	8.4	0.00479	mg/L	0.001458	0.00479	mg/L	0.001458	30.41%
Se 196.026†	9.3	0.00735	mg/L	0.002301	0.00735	mg/L	0.002301	31.30%
Si 288.158†	37954.3	17.95	mg/L	0.082	17.95	mg/L	0.082	0.46%
Sn 189.927†	-0.5	0.00054	mg/L	0.001102	0.00054	mg/L	0.001102	202.38%
Sr 421.552†	97526.7	0.1105	mg/L	0.00086	0.1105	mg/L	0.00086	0.78%
Ti 334.903†	139.0	0.00361	mg/L	0.000234	0.00361	mg/L	0.000234	6.50%
Tl 190.801†	-5.0	-0.00239	mg/L	0.001161	-0.00239	mg/L	0.001161	48.61%
V 292.402†	120.9	0.00092	mg/L	0.000176	0.00092	mg/L	0.000176	19.17%
Zn 206.200†	0.6	0.00381	mg/L	0.000275	0.00381	mg/L	0.000275	7.22%

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Sequence No.: 10 **Autosampler Location: 343**
Sample ID: 21A0243-04 **Date Collected: 2/8/2021 5:26:54 PM**
Data Type: Original

Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0243-04

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: 21A0243-04

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2417474.5	98.90	%	0.599				0.61%
ScR 361.383	264086.5	98.34	%	1.065				1.08%
Ag 328.068†	68.1	0.00001	mg/L	0.000346	0.00001	mg/L	0.000346	>999.9%
Al 308.215†	220.5	0.1083	mg/L	0.00738	0.1083	mg/L	0.00738	6.82%
As 188.979†	4.1	0.00235	mg/L	0.001027	0.00235	mg/L	0.001027	43.66%
B 249.677†	244.1	0.01901	mg/L	0.000981	0.01901	mg/L	0.000981	5.16%
Ba 233.527†	135.3	0.01396	mg/L	0.000230	0.01396	mg/L	0.000230	1.65%
Be 313.042†	38.9	0.00005	mg/L	0.000031	0.00005	mg/L	0.000031	60.02%
Ca 317.933†	200277.1	19.27	mg/L	0.184	19.27	mg/L	0.184	0.96%
Cd 228.802†	19.2	0.00044	mg/L	0.000091	0.00044	mg/L	0.000091	20.60%
Co 228.616†	-23.4	-0.00056	mg/L	0.000130	-0.00056	mg/L	0.000130	23.10%
Cr 267.716†	8.0	0.00136	mg/L	0.000967	0.00136	mg/L	0.000967	70.92%
Cu 324.752†	275.6	0.00111	mg/L	0.000174	0.00111	mg/L	0.000174	15.66%
Fe 273.955†	265.0	0.1283	mg/L	0.00019	0.1283	mg/L	0.00019	0.15%
K 766.490†	7013.0	3.193	mg/L	0.0199	3.193	mg/L	0.0199	0.62%
Mg 279.077†	12679.5	12.82	mg/L	0.151	12.82	mg/L	0.151	1.18%
Mn 257.610†	20652.8	0.3308	mg/L	0.00365	0.3308	mg/L	0.00365	1.10%
Mo 202.031†	62.4	0.00347	mg/L	0.000408	0.00347	mg/L	0.000408	11.76%
Na 589.592†	102446.2	8.812	mg/L	0.1396	8.812	mg/L	0.1396	1.58%
Na 330.237†	277.7	9.450	mg/L	0.1696	9.450	mg/L	0.1696	1.79%
Ni 231.604†	11.7	0.00306	mg/L	0.002859	0.00306	mg/L	0.002859	93.31%
Pb 220.353†	1.3	0.00019	mg/L	0.000746	0.00019	mg/L	0.000746	396.39%
Sb 206.836†	8.1	0.00466	mg/L	0.004350	0.00466	mg/L	0.004350	93.40%
Se 196.026†	9.2	0.00726	mg/L	0.008747	0.00726	mg/L	0.008747	120.47%
Si 288.158†	38953.8	18.42	mg/L	0.088	18.42	mg/L	0.088	0.48%
Sn 189.927†	2.1	0.00128	mg/L	0.001421	0.00128	mg/L	0.001421	111.26%
Sr 421.552†	100230.1	0.1136	mg/L	0.00129	0.1136	mg/L	0.00129	1.13%
Ti 334.903†	162.2	0.00438	mg/L	0.000245	0.00438	mg/L	0.000245	5.59%
Tl 190.801†	-10.8	-0.00516	mg/L	0.002334	-0.00516	mg/L	0.002334	45.27%
V 292.402†	112.8	0.00086	mg/L	0.000102	0.00086	mg/L	0.000102	11.92%
Zn 206.200†	-1.8	0.00308	mg/L	0.000202	0.00308	mg/L	0.000202	6.56%

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Sequence No.: 11 **Autosampler Location: 344**
Sample ID: ~~BJA692-MS3~~ BJA0692-MS3 **Date Collected: 2/8/2021 5:29:42 PM**
Data Type: Original
Dilution: 1X
TH 02-08-21
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: ~~BJA692-MS3~~ BJA0692-MS3

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: ~~BJA692-MS3~~ BJA0692-MS3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2405947.1	98.43	%	0.161				0.16%
ScR 361.383	263222.7	98.02	%	1.022				1.04%
Ag 328.068†	98885.1	0.5201	mg/L	0.00333	0.5201	mg/L	0.00333	0.64%
Al 308.215†	3658.8	2.064	mg/L	0.0327	2.064	mg/L	0.0327	1.58%
As 188.979†	2961.1	1.967	mg/L	0.0165	1.967	mg/L	0.0165	0.84%
B 249.677†	318.1	0.02706	mg/L	0.001645	0.02706	mg/L	0.001645	6.08%
Ba 233.527†	19379.9	2.028	mg/L	0.0192	2.028	mg/L	0.0192	0.95%
Be 313.042†	359436.9	0.4752	mg/L	0.00190	0.4752	mg/L	0.00190	0.40%
Ca 317.933†	297118.2	28.59	mg/L	0.317	28.59	mg/L	0.317	1.11%
Cd 228.802†	17915.6	0.4969	mg/L	0.00352	0.4969	mg/L	0.00352	0.71%
Co 228.616†	20567.5	0.4836	mg/L	0.00212	0.4836	mg/L	0.00212	0.44%
Cr 267.716†	3875.3	0.5089	mg/L	0.00493	0.5089	mg/L	0.00493	0.97%
Cu 324.752†	104804.2	0.4901	mg/L	0.00132	0.4901	mg/L	0.00132	0.27%
Fe 273.955†	4357.1	2.105	mg/L	0.0237	2.105	mg/L	0.0237	1.13%
K 766.490†	28772.0	13.10	mg/L	0.075	13.10	mg/L	0.075	0.57%
Mg 279.077†	22780.9	23.04	mg/L	0.219	23.04	mg/L	0.219	0.95%
Mn 257.610†	50842.5	0.8147	mg/L	0.00413	0.8147	mg/L	0.00413	0.51%
Mo 202.031†	63.7	0.00347	mg/L	0.000176	0.00347	mg/L	0.000176	5.07%
Na 589.592†	219951.6	18.92	mg/L	0.127	18.92	mg/L	0.127	0.67%
Na 330.237†	567.1	19.30	mg/L	0.055	19.30	mg/L	0.055	0.28%
Ni 231.604†	1916.8	0.4985	mg/L	0.00435	0.4985	mg/L	0.00435	0.87%
Pb 220.353†	16137.8	1.988	mg/L	0.0065	1.988	mg/L	0.0065	0.33%
Sb 206.836†	-16.5	-0.00010	mg/L	0.002595	-0.00010	mg/L	0.002595	>999.9%
Se 196.026†	2502.3	1.964	mg/L	0.0079	1.964	mg/L	0.0079	0.40%
Si 288.158†	39312.0	18.59	mg/L	0.176	18.59	mg/L	0.176	0.94%
Sn 189.927†	1855.0	0.5071	mg/L	0.00388	0.5071	mg/L	0.00388	0.77%
Sr 421.552†	548297.5	0.6212	mg/L	0.00299	0.6212	mg/L	0.00299	0.48%
Ti 334.903†	169.2	0.00390	mg/L	0.000402	0.00390	mg/L	0.000402	10.33%
Tl 190.801†	4079.9	1.947	mg/L	0.0097	1.947	mg/L	0.0097	0.50%
V 292.402†	69449.4	0.4909	mg/L	0.00744	0.4909	mg/L	0.00744	1.52%
Zn 206.200†	1424.8	0.4803	mg/L	0.00349	0.4803	mg/L	0.00349	0.73%

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Sequence No.: 12 **Autosampler Location: 345**
Sample ID: BJA0692-MSD3 **Date Collected: 2/8/2021 5:32:30 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJA0692-MSD3

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: BJA0692-MSD3

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2373969.5	97.12	%	0.201				0.21%
ScR 361.383	260512.8	97.01	%	0.573				0.59%
Ag 328.068†	101173.3	0.5322	mg/L	0.00216	0.5322	mg/L	0.00216	0.41%
Al 308.215†	3763.3	2.123	mg/L	0.0225	2.123	mg/L	0.0225	1.06%
As 188.979†	3055.2	2.029	mg/L	0.0141	2.029	mg/L	0.0141	0.69%
B 249.677†	313.9	0.02611	mg/L	0.001453	0.02611	mg/L	0.001453	5.56%
Ba 233.527†	19862.2	2.079	mg/L	0.0084	2.079	mg/L	0.0084	0.40%
Be 313.042†	364478.6	0.4819	mg/L	0.00358	0.4819	mg/L	0.00358	0.74%
Ca 317.933†	297508.4	28.63	mg/L	0.234	28.63	mg/L	0.234	0.82%
Cd 228.802†	18273.3	0.5067	mg/L	0.00224	0.5067	mg/L	0.00224	0.44%
Co 228.616†	21050.3	0.4949	mg/L	0.00218	0.4949	mg/L	0.00218	0.44%
Cr 267.716†	3964.1	0.5206	mg/L	0.00384	0.5206	mg/L	0.00384	0.74%
Cu 324.752†	107284.3	0.5017	mg/L	0.00405	0.5017	mg/L	0.00405	0.81%
Fe 273.955†	4438.2	2.144	mg/L	0.0049	2.144	mg/L	0.0049	0.23%
K 766.490†	29165.4	13.28	mg/L	0.079	13.28	mg/L	0.079	0.59%
Mg 279.077†	23423.5	23.69	mg/L	0.237	23.69	mg/L	0.237	1.00%
Mn 257.610†	51413.2	0.8238	mg/L	0.00518	0.8238	mg/L	0.00518	0.63%
Mo 202.031†	65.0	0.00355	mg/L	0.000212	0.00355	mg/L	0.000212	5.98%
Na 589.592†	222250.1	19.12	mg/L	0.040	19.12	mg/L	0.040	0.21%
Na 330.237†	591.2	20.11	mg/L	0.323	20.11	mg/L	0.323	1.61%
Ni 231.604†	1964.7	0.5109	mg/L	0.00765	0.5109	mg/L	0.00765	1.50%
Pb 220.353†	16438.7	2.025	mg/L	0.0073	2.025	mg/L	0.0073	0.36%
Sb 206.836†	-9.1	0.00452	mg/L	0.000870	0.00452	mg/L	0.000870	19.27%
Se 196.026†	2596.6	2.038	mg/L	0.0091	2.038	mg/L	0.0091	0.45%
Si 288.158†	40656.5	19.23	mg/L	0.113	19.23	mg/L	0.113	0.59%
Sn 189.927†	1939.8	0.5302	mg/L	0.00406	0.5302	mg/L	0.00406	0.77%
Sr 421.552†	553464.0	0.6271	mg/L	0.00291	0.6271	mg/L	0.00291	0.46%
Ti 334.903†	180.0	0.00427	mg/L	0.000418	0.00427	mg/L	0.000418	9.79%
Tl 190.801†	4220.8	2.014	mg/L	0.0071	2.014	mg/L	0.0071	0.35%
V 292.402†	71317.0	0.5041	mg/L	0.00361	0.5041	mg/L	0.00361	0.72%
Zn 206.200†	1470.5	0.4957	mg/L	0.00239	0.4957	mg/L	0.00239	0.48%

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Sequence No.: 13 **Autosampler Location: 7**
Sample ID: SEQ-CCV6 **Date Collected: 2/8/2021 5:35:18 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV6

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: SEQ-CCV6

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2397003.9	98.07	%	0.138				0.14%
ScR 361.383	255531.3	95.15	%	0.272				0.29%
Ag 328.068†	201470.1	1.061	mg/L	0.0029	1.061	mg/L	0.0029	0.28%
Al 308.215†	3588.6	2.011	mg/L	0.0099	2.011	mg/L	0.0099	0.49%
As 188.979†	3026.3	2.008	mg/L	0.0151	2.008	mg/L	0.0151	0.75%
B 249.677†	8160.0	1.023	mg/L	0.0172	1.023	mg/L	0.0172	1.68%
Ba 233.527†	9859.9	1.031	mg/L	0.0124	1.031	mg/L	0.0124	1.20%
Be 313.042†	733920.0	0.9703	mg/L	0.00416	0.9703	mg/L	0.00416	0.43%
Ca 317.933†	21461.5	2.064	mg/L	0.0340	2.064	mg/L	0.0340	1.65%
Cd 228.802†	36373.8	1.024	mg/L	0.0035	1.024	mg/L	0.0035	0.34%
Co 228.616†	42799.1	1.005	mg/L	0.0046	1.005	mg/L	0.0046	0.45%
Cr 267.716†	7923.5	1.045	mg/L	0.0117	1.045	mg/L	0.0117	1.12%
Cu 324.752†	214957.0	1.005	mg/L	0.0062	1.005	mg/L	0.0062	0.61%
Fe 273.955†	4217.4	2.033	mg/L	0.0190	2.033	mg/L	0.0190	0.93%
K 766.490†	44852.2	20.42	mg/L	0.115	20.42	mg/L	0.115	0.56%
Mg 279.077†	1988.9	2.015	mg/L	0.0312	2.015	mg/L	0.0312	1.55%
Mn 257.610†	65497.8	1.049	mg/L	0.0120	1.049	mg/L	0.0120	1.14%
Mo 202.031†	17314.4	1.015	mg/L	0.0021	1.015	mg/L	0.0021	0.21%
Na 589.592†	606194.5	52.14	mg/L	0.567	52.14	mg/L	0.567	1.09%
Na 330.237†	1521.6	51.77	mg/L	0.494	51.77	mg/L	0.494	0.96%
Ni 231.604†	4036.7	1.052	mg/L	0.0199	1.052	mg/L	0.0199	1.89%
Pb 220.353†	16478.1	2.030	mg/L	0.0118	2.030	mg/L	0.0118	0.58%
Sb 206.836†	3729.5	2.148	mg/L	0.0204	2.148	mg/L	0.0204	0.95%
Se 196.026†	2582.9	2.028	mg/L	0.0191	2.028	mg/L	0.0191	0.94%
Si 288.158†	4654.8	2.194	mg/L	0.0187	2.194	mg/L	0.0187	0.85%
Sn 189.927†	3731.7	1.021	mg/L	0.0111	1.021	mg/L	0.0111	1.09%
Sr 421.552†	922224.7	1.045	mg/L	0.0113	1.045	mg/L	0.0113	1.09%
Ti 334.903†	30100.9	1.047	mg/L	0.0072	1.047	mg/L	0.0072	0.68%
Tl 190.801†	4249.1	2.025	mg/L	0.0190	2.025	mg/L	0.0190	0.94%
V 292.402†	142007.4	1.004	mg/L	0.0046	1.004	mg/L	0.0046	0.46%
Zn 206.200†	3064.8	1.025	mg/L	0.0177	1.025	mg/L	0.0177	1.72%

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Sequence No.: 14 **Autosampler Location: 1**
Sample ID: SEQ-CCB6 **Date Collected: 2/8/2021 5:38:46 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB6

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-CCB6

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2437198.8	99.71	%	0.430				0.43%
ScR 361.383	261198.4	97.26	%	0.847				0.87%
Ag 328.068†	44.6	0.00023	mg/L	0.000067	0.00023	mg/L	0.000067	28.52%
Al 308.215†	-6.2	-0.00359	mg/L	0.007325	-0.00359	mg/L	0.007325	204.02%
As 188.979†	-5.1	-0.00337	mg/L	0.001814	-0.00337	mg/L	0.001814	53.74%
B 249.677†	8.4	0.00105	mg/L	0.000388	0.00105	mg/L	0.000388	37.01%
Ba 233.527†	1.0	0.00011	mg/L	0.000141	0.00011	mg/L	0.000141	134.04%
Be 313.042†	119.2	0.00016	mg/L	0.000041	0.00016	mg/L	0.000041	25.98%
Ca 317.933†	6.7	0.00065	mg/L	0.000350	0.00065	mg/L	0.000350	54.02%
Cd 228.802†	7.9	0.00025	mg/L	0.000028	0.00025	mg/L	0.000028	11.22%
Co 228.616†	-2.5	-0.00006	mg/L	0.000107	-0.00006	mg/L	0.000107	179.05%
Cr 267.716†	12.0	0.00157	mg/L	0.000147	0.00157	mg/L	0.000147	9.31%
Cu 324.752†	99.7	0.00047	mg/L	0.000178	0.00047	mg/L	0.000178	38.15%
Fe 273.955†	13.7	0.00665	mg/L	0.001007	0.00665	mg/L	0.001007	15.15%
K 766.490†	5.1	0.00233	mg/L	0.013217	0.00233	mg/L	0.013217	566.99%
Mg 279.077†	11.1	0.01126	mg/L	0.012645	0.01126	mg/L	0.012645	112.29%
Mn 257.610†	21.2	0.00034	mg/L	0.000052	0.00034	mg/L	0.000052	15.28%
Mo 202.031†	16.0	0.00094	mg/L	0.000276	0.00094	mg/L	0.000276	29.50%
Na 589.592†	214.2	0.01843	mg/L	0.004898	0.01843	mg/L	0.004898	26.58%
Na 330.237†	-15.2	-0.5178	mg/L	0.17592	-0.5178	mg/L	0.17592	33.98%
Ni 231.604†	4.2	0.00109	mg/L	0.000904	0.00109	mg/L	0.000904	82.79%
Pb 220.353†	9.0	0.00111	mg/L	0.001008	0.00111	mg/L	0.001008	90.76%
Sb 206.836†	4.3	0.00244	mg/L	0.002805	0.00244	mg/L	0.002805	114.80%
Se 196.026†	2.4	0.00189	mg/L	0.003882	0.00189	mg/L	0.003882	205.92%
Si 288.158†	10.6	0.00503	mg/L	0.003916	0.00503	mg/L	0.003916	77.90%
Sn 189.927†	-1.7	-0.00047	mg/L	0.001612	-0.00047	mg/L	0.001612	340.55%
Sr 421.552†	54.2	0.00006	mg/L	0.000027	0.00006	mg/L	0.000027	43.30%
Ti 334.903†	23.9	0.00083	mg/L	0.000404	0.00083	mg/L	0.000404	48.50%
Tl 190.801†	2.5	0.00120	mg/L	0.001665	0.00120	mg/L	0.001665	138.36%
V 292.402†	5.8	0.00005	mg/L	0.000044	0.00005	mg/L	0.000044	88.81%
Zn 206.200†	-1.0	-0.00032	mg/L	0.000914	-0.00032	mg/L	0.000914	287.90%

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Sequence No.: 15
Sample ID: BJA0692-DUP4

Dilution: 1X
Wash Time: 37

Autosampler Location: 346
Date Collected: 2/8/2021 5:41:34 PM
Data Type: Original

Auto Dilution Factor: 1

Nebulizer Parameters: BJA0692-DUP4

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BJA0692-DUP4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2455691.9	100.5	%	0.44				0.43%
ScR 361.383	261824.2	97.50	%	0.707				0.73%
Ag 328.068†	38.2	0.00008	mg/L	0.000050	0.00008	mg/L	0.000050	61.06%
Al 308.215†	2376.2	1.339	mg/L	0.0134	1.339	mg/L	0.0134	1.00%
As 188.979†	-1.7	-0.00058	mg/L	0.002666	-0.00058	mg/L	0.002666	461.71%
B 249.677†	275.1	0.02295	mg/L	0.001157	0.02295	mg/L	0.001157	5.04%
Ba 233.527†	128.3	0.01326	mg/L	0.001051	0.01326	mg/L	0.001051	7.93%
Be 313.042†	48.5	0.00006	mg/L	0.000050	0.00006	mg/L	0.000050	82.34%
Ca 317.933†	92569.1	8.907	mg/L	0.1362	8.907	mg/L	0.1362	1.53%
Cd 228.802†	12.4	0.00031	mg/L	0.000134	0.00031	mg/L	0.000134	43.74%
Co 228.616†	4.3	-0.00005	mg/L	0.000118	-0.00005	mg/L	0.000118	219.83%
Cr 267.716†	38.4	0.00520	mg/L	0.000622	0.00520	mg/L	0.000622	11.97%
Cu 324.752†	1086.5	0.00503	mg/L	0.000102	0.00503	mg/L	0.000102	2.02%
Fe 273.955†	2651.5	1.284	mg/L	0.0041	1.284	mg/L	0.0041	0.32%
K 766.490†	8090.8	3.684	mg/L	0.0386	3.684	mg/L	0.0386	1.05%
Mg 279.077†	6695.8	6.770	mg/L	0.1185	6.770	mg/L	0.1185	1.75%
Mn 257.610†	3752.9	0.06010	mg/L	0.000656	0.06010	mg/L	0.000656	1.09%
Mo 202.031†	113.0	0.00654	mg/L	0.000338	0.00654	mg/L	0.000338	5.17%
Na 589.592†	142671.4	12.27	mg/L	0.147	12.27	mg/L	0.147	1.20%
Na 330.237†	376.2	12.80	mg/L	0.131	12.80	mg/L	0.131	1.02%
Ni 231.604†	6.1	0.00158	mg/L	0.001750	0.00158	mg/L	0.001750	110.58%
Pb 220.353†	15.4	0.00216	mg/L	0.001774	0.00216	mg/L	0.001774	81.94%
Sb 206.836†	9.5	0.00569	mg/L	0.003584	0.00569	mg/L	0.003584	62.99%
Se 196.026†	5.9	0.00483	mg/L	0.003504	0.00483	mg/L	0.003504	72.60%
Si 288.158†	38812.3	18.36	mg/L	0.119	18.36	mg/L	0.119	0.65%
Sn 189.927†	8.3	0.00267	mg/L	0.000540	0.00267	mg/L	0.000540	20.23%
Sr 421.552†	48047.2	0.05444	mg/L	0.000459	0.05444	mg/L	0.000459	0.84%
Ti 334.903†	2021.5	0.06976	mg/L	0.002099	0.06976	mg/L	0.002099	3.01%
Tl 190.801†	-4.8	-0.00212	mg/L	0.001490	-0.00212	mg/L	0.001490	70.13%
V 292.402†	524.2	0.00374	mg/L	0.000060	0.00374	mg/L	0.000060	1.62%
Zn 206.200†	16.9	0.00932	mg/L	0.000683	0.00932	mg/L	0.000683	7.33%

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Sequence No.: 16 **Autosampler Location: 347**
Sample ID: 21A0243-08 **Date Collected: 2/8/2021 5:44:22 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: 21A0243-08

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: 21A0243-08

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2428085.4	99.34	%	0.779				0.78%
ScR 361.383	262989.4	97.93	%	0.705				0.72%
Ag 328.068†	-22.5	-0.00024	mg/L	0.000046	-0.00024	mg/L	0.000046	19.49%
Al 308.215†	2427.8	1.368	mg/L	0.0208	1.368	mg/L	0.0208	1.52%
As 188.979†	2.6	0.00225	mg/L	0.004571	0.00225	mg/L	0.004571	203.29%
B 249.677†	281.3	0.02356	mg/L	0.000684	0.02356	mg/L	0.000684	2.90%
Ba 233.527†	137.8	0.01425	mg/L	0.000824	0.01425	mg/L	0.000824	5.78%
Be 313.042†	39.6	0.00005	mg/L	0.000023	0.00005	mg/L	0.000023	46.41%
Ca 317.933†	92431.7	8.894	mg/L	0.0350	8.894	mg/L	0.0350	0.39%
Cd 228.802†	13.5	0.00032	mg/L	0.000106	0.00032	mg/L	0.000106	33.41%
Co 228.616†	8.2	0.00004	mg/L	0.000263	0.00004	mg/L	0.000263	688.95%
Cr 267.716†	36.8	0.00498	mg/L	0.001254	0.00498	mg/L	0.001254	25.19%
Cu 324.752†	1091.1	0.00505	mg/L	0.000064	0.00505	mg/L	0.000064	1.26%
Fe 273.955†	2707.7	1.311	mg/L	0.0201	1.311	mg/L	0.0201	1.53%
K 766.490†	8148.0	3.710	mg/L	0.0389	3.710	mg/L	0.0389	1.05%
Mg 279.077†	6681.2	6.755	mg/L	0.0541	6.755	mg/L	0.0541	0.80%
Mn 257.610†	3771.3	0.06040	mg/L	0.000452	0.06040	mg/L	0.000452	0.75%
Mo 202.031†	119.3	0.00691	mg/L	0.000551	0.00691	mg/L	0.000551	7.98%
Na 589.592†	143130.1	12.31	mg/L	0.033	12.31	mg/L	0.033	0.26%
Na 330.237†	371.2	12.63	mg/L	0.252	12.63	mg/L	0.252	1.99%
Ni 231.604†	12.2	0.00319	mg/L	0.001576	0.00319	mg/L	0.001576	49.48%
Pb 220.353†	14.7	0.00208	mg/L	0.001034	0.00208	mg/L	0.001034	49.75%
Sb 206.836†	10.5	0.00619	mg/L	0.003992	0.00619	mg/L	0.003992	64.49%
Se 196.026†	2.0	0.00174	mg/L	0.005954	0.00174	mg/L	0.005954	341.72%
Si 288.158†	39361.9	18.62	mg/L	0.098	18.62	mg/L	0.098	0.53%
Sn 189.927†	2.3	0.00104	mg/L	0.001913	0.00104	mg/L	0.001913	183.34%
Sr 421.552†	48537.0	0.05499	mg/L	0.000209	0.05499	mg/L	0.000209	0.38%
Ti 334.903†	2005.1	0.06918	mg/L	0.002609	0.06918	mg/L	0.002609	3.77%
Tl 190.801†	-5.5	-0.00247	mg/L	0.001253	-0.00247	mg/L	0.001253	50.70%
V 292.402†	549.1	0.00391	mg/L	0.000022	0.00391	mg/L	0.000022	0.55%
Zn 206.200†	16.1	0.00910	mg/L	0.001953	0.00910	mg/L	0.001953	21.46%

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Sequence No.: 17 **Autosampler Location: 348**
Sample ID: BJA0692-MS4 **Date Collected: 2/8/2021 5:47:10 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: BJA0692-MS4

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BJA0692-MS4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2377529.0	97.27	%	0.383				0.39%
ScR 361.383	258267.5	96.17	%	0.214				0.22%
Ag 328.068†	101409.9	0.5336	mg/L	0.00247	0.5336	mg/L	0.00247	0.46%
Al 308.215†	5898.1	3.341	mg/L	0.0286	3.341	mg/L	0.0286	0.86%
As 188.979†	3051.6	2.028	mg/L	0.0020	2.028	mg/L	0.0020	0.10%
B 249.677†	362.1	0.03193	mg/L	0.000431	0.03193	mg/L	0.000431	1.35%
Ba 233.527†	20237.2	2.118	mg/L	0.0165	2.118	mg/L	0.0165	0.78%
Be 313.042†	372161.6	0.4920	mg/L	0.00014	0.4920	mg/L	0.00014	0.03%
Ca 317.933†	201359.0	19.37	mg/L	0.124	19.37	mg/L	0.124	0.64%
Cd 228.802†	18350.6	0.5089	mg/L	0.00210	0.5089	mg/L	0.00210	0.41%
Co 228.616†	21289.8	0.5004	mg/L	0.00471	0.5004	mg/L	0.00471	0.94%
Cr 267.716†	4078.7	0.5355	mg/L	0.00301	0.5355	mg/L	0.00301	0.56%
Cu 324.752†	109278.8	0.5111	mg/L	0.00289	0.5111	mg/L	0.00289	0.56%
Fe 273.955†	6875.9	3.324	mg/L	0.0383	3.324	mg/L	0.0383	1.15%
K 766.490†	30974.5	14.10	mg/L	0.142	14.10	mg/L	0.142	1.01%
Mg 279.077†	17427.8	17.62	mg/L	0.125	17.62	mg/L	0.125	0.71%
Mn 257.610†	35440.5	0.5680	mg/L	0.00289	0.5680	mg/L	0.00289	0.51%
Mo 202.031†	129.6	0.00742	mg/L	0.000163	0.00742	mg/L	0.000163	2.20%
Na 589.592†	271685.2	23.37	mg/L	0.100	23.37	mg/L	0.100	0.43%
Na 330.237†	692.4	23.56	mg/L	0.254	23.56	mg/L	0.254	1.08%
Ni 231.604†	2022.1	0.5259	mg/L	0.00533	0.5259	mg/L	0.00533	1.01%
Pb 220.353†	16505.1	2.033	mg/L	0.0190	2.033	mg/L	0.0190	0.93%
Sb 206.836†	-11.3	0.00351	mg/L	0.002839	0.00351	mg/L	0.002839	80.79%
Se 196.026†	2607.2	2.047	mg/L	0.0122	2.047	mg/L	0.0122	0.59%
Si 288.158†	41450.3	19.60	mg/L	0.141	19.60	mg/L	0.141	0.72%
Sn 189.927†	1949.8	0.5327	mg/L	0.00188	0.5327	mg/L	0.00188	0.35%
Sr 421.552†	518878.1	0.5879	mg/L	0.00230	0.5879	mg/L	0.00230	0.39%
Ti 334.903†	1978.1	0.06743	mg/L	0.000602	0.06743	mg/L	0.000602	0.89%
Tl 190.801†	4295.4	2.050	mg/L	0.0074	2.050	mg/L	0.0074	0.36%
V 292.402†	71575.6	0.5060	mg/L	0.00204	0.5060	mg/L	0.00204	0.40%
Zn 206.200†	1531.7	0.5162	mg/L	0.00552	0.5162	mg/L	0.00552	1.07%

Sequence No.: 18
Sample ID: BJA0692-MSD4
Autosampler Location: 349
Date Collected: 2/8/2021 5:49:58 PM
Data Type: Original

Dilution: 1X
Wash Time: 37
Auto Dilution Factor: 1

Nebulizer Parameters: BJA0692-MSD4

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: BJA0692-MSD4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2440163.4	99.83	%	1.005				1.01%
ScR 361.383	264569.8	98.52	%	0.295				0.30%
Ag 328.068†	99739.3	0.5248	mg/L	0.00356	0.5248	mg/L	0.00356	0.68%
Al 308.215†	5682.6	3.219	mg/L	0.0221	3.219	mg/L	0.0221	0.69%
As 188.979†	2996.4	1.991	mg/L	0.0070	1.991	mg/L	0.0070	0.35%
B 249.677†	347.7	0.03046	mg/L	0.001397	0.03046	mg/L	0.001397	4.59%
Ba 233.527†	19857.1	2.078	mg/L	0.0149	2.078	mg/L	0.0149	0.72%
Be 313.042†	365251.6	0.4829	mg/L	0.00292	0.4829	mg/L	0.00292	0.60%
Ca 317.933†	196747.5	18.93	mg/L	0.127	18.93	mg/L	0.127	0.67%
Cd 228.802†	18152.5	0.5035	mg/L	0.00362	0.5035	mg/L	0.00362	0.72%
Co 228.616†	20992.6	0.4934	mg/L	0.00324	0.4934	mg/L	0.00324	0.66%
Cr 267.716†	3986.3	0.5234	mg/L	0.00341	0.5234	mg/L	0.00341	0.65%
Cu 324.752†	107844.6	0.5044	mg/L	0.00366	0.5044	mg/L	0.00366	0.73%
Fe 273.955†	6677.6	3.228	mg/L	0.0225	3.228	mg/L	0.0225	0.70%
K 766.490†	30228.4	13.76	mg/L	0.118	13.76	mg/L	0.118	0.86%
Mg 279.077†	17042.8	17.23	mg/L	0.074	17.23	mg/L	0.074	0.43%
Mn 257.610†	34816.8	0.5580	mg/L	0.00245	0.5580	mg/L	0.00245	0.44%
Mo 202.031†	121.9	0.00698	mg/L	0.000633	0.00698	mg/L	0.000633	9.07%
Na 589.592†	266614.8	22.93	mg/L	0.077	22.93	mg/L	0.077	0.33%
Na 330.237†	698.8	23.78	mg/L	0.225	23.78	mg/L	0.225	0.95%
Ni 231.604†	1970.8	0.5125	mg/L	0.00353	0.5125	mg/L	0.00353	0.69%
Pb 220.353†	16292.8	2.007	mg/L	0.0229	2.007	mg/L	0.0229	1.14%
Sb 206.836†	-14.6	0.00131	mg/L	0.003364	0.00131	mg/L	0.003364	255.86%
Se 196.026†	2562.5	2.012	mg/L	0.0072	2.012	mg/L	0.0072	0.36%
Si 288.158†	40346.2	19.08	mg/L	0.109	19.08	mg/L	0.109	0.57%
Sn 189.927†	1890.4	0.5165	mg/L	0.00251	0.5165	mg/L	0.00251	0.49%
Sr 421.552†	508072.5	0.5757	mg/L	0.00175	0.5757	mg/L	0.00175	0.30%
Ti 334.903†	1792.7	0.06102	mg/L	0.000260	0.06102	mg/L	0.000260	0.43%
Tl 190.801†	4206.8	2.008	mg/L	0.0072	2.008	mg/L	0.0072	0.36%
V 292.402†	70370.5	0.4975	mg/L	0.00238	0.4975	mg/L	0.00238	0.48%
Zn 206.200†	1492.3	0.5029	mg/L	0.00313	0.5029	mg/L	0.00313	0.62%

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Sequence No.: 19 **Autosampler Location: 7**
Sample ID: SEQ-CCV7 **Date Collected: 2/8/2021 5:52:46 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCV7

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-CCV7

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2446111.7	100.1	%	0.65				0.65%
ScR 361.383	261773.6	97.48	%	1.360				1.40%
Ag 328.068†	201671.6	1.062	mg/L	0.0163	1.062	mg/L	0.0163	1.54%
Al 308.215†	3600.5	2.018	mg/L	0.0279	2.018	mg/L	0.0279	1.38%
As 188.979†	3031.6	2.012	mg/L	0.0259	2.012	mg/L	0.0259	1.29%
B 249.677†	8183.2	1.026	mg/L	0.0259	1.026	mg/L	0.0259	2.53%
Ba 233.527†	9869.7	1.032	mg/L	0.0190	1.032	mg/L	0.0190	1.84%
Be 313.042†	722364.8	0.9550	mg/L	0.00730	0.9550	mg/L	0.00730	0.76%
Ca 317.933†	21409.1	2.059	mg/L	0.0456	2.059	mg/L	0.0456	2.21%
Cd 228.802†	36515.6	1.028	mg/L	0.0143	1.028	mg/L	0.0143	1.39%
Co 228.616†	42980.5	1.009	mg/L	0.0155	1.009	mg/L	0.0155	1.54%
Cr 267.716†	7943.1	1.047	mg/L	0.0240	1.047	mg/L	0.0240	2.30%
Cu 324.752†	217232.2	1.015	mg/L	0.0238	1.015	mg/L	0.0238	2.35%
Fe 273.955†	4189.3	2.019	mg/L	0.0479	2.019	mg/L	0.0479	2.37%
K 766.490†	44113.4	20.09	mg/L	0.307	20.09	mg/L	0.307	1.53%
Mg 279.077†	1989.5	2.015	mg/L	0.0180	2.015	mg/L	0.0180	0.89%
Mn 257.610†	65594.5	1.051	mg/L	0.0198	1.051	mg/L	0.0198	1.89%
Mo 202.031†	17401.3	1.020	mg/L	0.0169	1.020	mg/L	0.0169	1.65%
Na 589.592†	596523.9	51.31	mg/L	0.990	51.31	mg/L	0.990	1.93%
Na 330.237†	1539.8	52.39	mg/L	1.831	52.39	mg/L	1.831	3.50%
Ni 231.604†	4040.8	1.053	mg/L	0.0273	1.053	mg/L	0.0273	2.60%
Pb 220.353†	16570.0	2.041	mg/L	0.0359	2.041	mg/L	0.0359	1.76%
Sb 206.836†	3738.4	2.153	mg/L	0.0459	2.153	mg/L	0.0459	2.13%
Se 196.026†	2590.2	2.033	mg/L	0.0317	2.033	mg/L	0.0317	1.56%
Si 288.158†	4657.3	2.195	mg/L	0.0406	2.195	mg/L	0.0406	1.85%
Sn 189.927†	3737.7	1.022	mg/L	0.0134	1.022	mg/L	0.0134	1.31%
Sr 421.552†	906350.5	1.027	mg/L	0.0146	1.027	mg/L	0.0146	1.42%
Ti 334.903†	29754.7	1.035	mg/L	0.0128	1.035	mg/L	0.0128	1.23%
Tl 190.801†	4264.0	2.032	mg/L	0.0252	2.032	mg/L	0.0252	1.24%
V 292.402†	143115.5	1.012	mg/L	0.0258	1.012	mg/L	0.0258	2.55%
Zn 206.200†	3089.1	1.033	mg/L	0.0158	1.033	mg/L	0.0158	1.52%

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Sequence No.: 20 **Autosampler Location: 1**
Sample ID: SEQ-CCB7 **Date Collected: 2/8/2021 5:56:14 PM**
Data Type: Original
Dilution: 1X
Wash Time: 100 **Auto Dilution Factor: 1**

Nebulizer Parameters: SEQ-CCB7

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: SEQ-CCB7

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2523981.7	103.3	%	0.48				0.46%
ScR 361.383	268809.0	100.1	%	0.34				0.34%
Ag 328.068†	9.8	0.00005	mg/L	0.000168	0.00005	mg/L	0.000168	327.89%
Al 308.215†	-4.7	-0.00270	mg/L	0.011152	-0.00270	mg/L	0.011152	413.12%
As 188.979†	-0.4	-0.00025	mg/L	0.002930	-0.00025	mg/L	0.002930	>999.9%
B 249.677†	15.1	0.00189	mg/L	0.000660	0.00189	mg/L	0.000660	34.87%
Ba 233.527†	1.9	0.00019	mg/L	0.000263	0.00019	mg/L	0.000263	136.00%
Be 313.042†	80.1	0.00011	mg/L	0.000013	0.00011	mg/L	0.000013	12.28%
Ca 317.933†	9.1	0.00087	mg/L	0.000945	0.00087	mg/L	0.000945	108.13%
Cd 228.802†	9.2	0.00027	mg/L	0.000262	0.00027	mg/L	0.000262	98.83%
Co 228.616†	-4.6	-0.00011	mg/L	0.000122	-0.00011	mg/L	0.000122	113.02%
Cr 267.716†	11.0	0.00144	mg/L	0.001075	0.00144	mg/L	0.001075	74.45%
Cu 324.752†	75.2	0.00035	mg/L	0.000092	0.00035	mg/L	0.000092	26.16%
Fe 273.955†	8.0	0.00389	mg/L	0.002268	0.00389	mg/L	0.002268	58.37%
K 766.490†	-8.6	-0.00391	mg/L	0.017830	-0.00391	mg/L	0.017830	456.22%
Mg 279.077†	11.7	0.01186	mg/L	0.001641	0.01186	mg/L	0.001641	13.84%
Mn 257.610†	12.4	0.00020	mg/L	0.000069	0.00020	mg/L	0.000069	34.72%
Mo 202.031†	9.9	0.00058	mg/L	0.000211	0.00058	mg/L	0.000211	36.45%
Na 589.592†	178.2	0.01533	mg/L	0.004630	0.01533	mg/L	0.004630	30.20%
Na 330.237†	0.5	0.01804	mg/L	0.457529	0.01804	mg/L	0.457529	>999.9%
Ni 231.604†	5.8	0.00151	mg/L	0.001977	0.00151	mg/L	0.001977	130.52%
Pb 220.353†	-2.3	-0.00029	mg/L	0.001875	-0.00029	mg/L	0.001875	655.90%
Sb 206.836†	-0.4	-0.00024	mg/L	0.004270	-0.00024	mg/L	0.004270	>999.9%
Se 196.026†	5.4	0.00422	mg/L	0.001146	0.00422	mg/L	0.001146	27.17%
Si 288.158†	18.1	0.00855	mg/L	0.005144	0.00855	mg/L	0.005144	60.14%
Sn 189.927†	2.0	0.00055	mg/L	0.000861	0.00055	mg/L	0.000861	155.46%
Sr 421.552†	99.3	0.00011	mg/L	0.000078	0.00011	mg/L	0.000078	69.74%
Ti 334.903†	13.1	0.00046	mg/L	0.000776	0.00046	mg/L	0.000776	170.23%
Tl 190.801†	2.1	0.00100	mg/L	0.002124	0.00100	mg/L	0.002124	211.55%
V 292.402†	-6.6	-0.00004	mg/L	0.000083	-0.00004	mg/L	0.000083	212.38%
Zn 206.200†	-1.8	-0.00061	mg/L	0.000724	-0.00061	mg/L	0.000724	118.07%

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Sequence No.: 21 **Autosampler Location: 9**
Sample ID: RINSE - 1 **Date Collected: 2/8/2021 5:59:02 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: RINSE - 1

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: RINSE - 1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2500974.0	102.3	%	0.79				0.77%
ScR 361.383	266081.8	99.08	%	0.425				0.43%
Ag 328.068†	-35.3	-0.00019	mg/L	0.000081	-0.00019	mg/L	0.000081	43.41%
Al 308.215†	-1.3	-0.00073	mg/L	0.006492	-0.00073	mg/L	0.006492	890.96%
As 188.979†	-6.7	-0.00445	mg/L	0.004049	-0.00445	mg/L	0.004049	90.94%
B 249.677†	19.0	0.00239	mg/L	0.000613	0.00239	mg/L	0.000613	25.67%
Ba 233.527†	3.8	0.00040	mg/L	0.000284	0.00040	mg/L	0.000284	71.45%
Be 313.042†	104.8	0.00014	mg/L	0.000027	0.00014	mg/L	0.000027	19.79%
Ca 317.933†	-3.6	-0.00034	mg/L	0.000653	-0.00034	mg/L	0.000653	193.32%
Cd 228.802†	8.6	0.00028	mg/L	0.000131	0.00028	mg/L	0.000131	47.45%
Co 228.616†	-3.1	-0.00008	mg/L	0.000128	-0.00008	mg/L	0.000128	166.84%
Cr 267.716†	4.5	0.00059	mg/L	0.000202	0.00059	mg/L	0.000202	34.08%
Cu 324.752†	65.0	0.00030	mg/L	0.000060	0.00030	mg/L	0.000060	19.60%
Fe 273.955†	12.0	0.00579	mg/L	0.001379	0.00579	mg/L	0.001379	23.83%
K 766.490†	-13.7	-0.00622	mg/L	0.026656	-0.00622	mg/L	0.026656	428.68%
Mg 279.077†	9.2	0.00926	mg/L	0.009366	0.00926	mg/L	0.009366	101.13%
Mn 257.610†	15.0	0.00024	mg/L	0.000060	0.00024	mg/L	0.000060	24.92%
Mo 202.031†	2.1	0.00012	mg/L	0.000100	0.00012	mg/L	0.000100	80.05%
Na 589.592†	162.9	0.01401	mg/L	0.002760	0.01401	mg/L	0.002760	19.71%
Na 330.237†	-21.9	-0.7454	mg/L	0.16283	-0.7454	mg/L	0.16283	21.84%
Ni 231.604†	-2.1	-0.00056	mg/L	0.002823	-0.00056	mg/L	0.002823	504.72%
Pb 220.353†	1.1	0.00014	mg/L	0.001719	0.00014	mg/L	0.001719	>999.9%
Sb 206.836†	4.4	0.00252	mg/L	0.003123	0.00252	mg/L	0.003123	123.76%
Se 196.026†	1.6	0.00122	mg/L	0.004277	0.00122	mg/L	0.004277	350.02%
Si 288.158†	0.5	0.00023	mg/L	0.002172	0.00023	mg/L	0.002172	948.63%
Sn 189.927†	-2.0	-0.00053	mg/L	0.000513	-0.00053	mg/L	0.000513	96.12%
Sr 421.552†	35.8	0.00004	mg/L	0.000025	0.00004	mg/L	0.000025	61.46%
Ti 334.903†	42.0	0.00146	mg/L	0.000593	0.00146	mg/L	0.000593	40.61%
Tl 190.801†	3.1	0.00150	mg/L	0.003171	0.00150	mg/L	0.003171	210.76%
V 292.402†	-6.3	-0.00004	mg/L	0.000053	-0.00004	mg/L	0.000053	126.20%
Zn 206.200†	-1.0	-0.00033	mg/L	0.000793	-0.00033	mg/L	0.000793	237.52%

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Sequence No.: 22 **Autosampler Location: 9**
Sample ID: RINSE - 2 **Date Collected: 2/8/2021 6:01:50 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: RINSE - 2

Analyte	**Back Pressure**	**Flow**
All	242.0 kPa	0.65 L/min

Mean Data: RINSE - 2

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2491844.8	101.9	%	0.10				0.10%
ScR 361.383	263757.6	98.22	%	1.043				1.06%
Ag 328.068†	-22.5	-0.00012	mg/L	0.000238	-0.00012	mg/L	0.000238	200.95%
Al 308.215†	-3.5	-0.00202	mg/L	0.008920	-0.00202	mg/L	0.008920	440.89%
As 188.979†	-1.7	-0.00112	mg/L	0.001640	-0.00112	mg/L	0.001640	146.64%
B 249.677†	15.6	0.00196	mg/L	0.001413	0.00196	mg/L	0.001413	72.06%
Ba 233.527†	2.0	0.00021	mg/L	0.000325	0.00021	mg/L	0.000325	156.81%
Be 313.042†	67.9	0.00009	mg/L	0.000021	0.00009	mg/L	0.000021	22.99%
Ca 317.933†	4.7	0.00045	mg/L	0.000347	0.00045	mg/L	0.000347	77.19%
Cd 228.802†	3.4	0.00010	mg/L	0.000129	0.00010	mg/L	0.000129	124.22%
Co 228.616†	-5.2	-0.00012	mg/L	0.000233	-0.00012	mg/L	0.000233	187.56%
Cr 267.716†	6.3	0.00082	mg/L	0.001150	0.00082	mg/L	0.001150	139.62%
Cu 324.752†	44.5	0.00021	mg/L	0.000164	0.00021	mg/L	0.000164	78.84%
Fe 273.955†	5.9	0.00286	mg/L	0.002464	0.00286	mg/L	0.002464	86.13%
K 766.490†	-27.6	-0.01258	mg/L	0.011700	-0.01258	mg/L	0.011700	93.00%
Mg 279.077†	10.1	0.01016	mg/L	0.008242	0.01016	mg/L	0.008242	81.09%
Mn 257.610†	11.7	0.00019	mg/L	0.000037	0.00019	mg/L	0.000037	19.87%
Mo 202.031†	-3.2	-0.00019	mg/L	0.000400	-0.00019	mg/L	0.000400	214.67%
Na 589.592†	137.0	0.01179	mg/L	0.002286	0.01179	mg/L	0.002286	19.39%
Na 330.237†	3.7	0.1248	mg/L	0.09653	0.1248	mg/L	0.09653	77.36%
Ni 231.604†	-6.6	-0.00171	mg/L	0.001355	-0.00171	mg/L	0.001355	79.29%
Pb 220.353†	3.1	0.00038	mg/L	0.001339	0.00038	mg/L	0.001339	353.42%
Sb 206.836†	-3.0	-0.00171	mg/L	0.001490	-0.00171	mg/L	0.001490	87.37%
Se 196.026†	-0.7	-0.00053	mg/L	0.001694	-0.00053	mg/L	0.001694	317.62%
Si 288.158†	8.9	0.00422	mg/L	0.003390	0.00422	mg/L	0.003390	80.39%
Sn 189.927†	-0.9	-0.00025	mg/L	0.001339	-0.00025	mg/L	0.001339	534.65%
Sr 421.552†	40.1	0.00005	mg/L	0.000043	0.00005	mg/L	0.000043	94.19%
Ti 334.903†	14.0	0.00049	mg/L	0.000910	0.00049	mg/L	0.000910	186.80%
Tl 190.801†	-0.9	-0.00044	mg/L	0.001439	-0.00044	mg/L	0.001439	325.46%
V 292.402†	-7.5	-0.00005	mg/L	0.000025	-0.00005	mg/L	0.000025	51.74%
Zn 206.200†	-3.2	-0.00108	mg/L	0.000904	-0.00108	mg/L	0.000904	83.37%

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Sequence No.: 23 **Autosampler Location: 9**
Sample ID: RINSE - 3 **Date Collected: 2/8/2021 6:04:38 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: RINSE - 3

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: RINSE - 3

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2434287.7	99.59	%	0.434				0.44%
ScR 361.383	263843.8	98.25	%	0.479				0.49%
Ag 328.068†	-60.4	-0.00032	mg/L	0.000255	-0.00032	mg/L	0.000255	80.32%
Al 308.215†	1.8	0.00103	mg/L	0.000591	0.00103	mg/L	0.000591	57.36%
As 188.979†	-3.2	-0.00216	mg/L	0.001956	-0.00216	mg/L	0.001956	90.38%
B 249.677†	7.0	0.00087	mg/L	0.001396	0.00087	mg/L	0.001396	160.35%
Ba 233.527†	1.0	0.00010	mg/L	0.000294	0.00010	mg/L	0.000294	288.04%
Be 313.042†	34.4	0.00005	mg/L	0.000018	0.00005	mg/L	0.000018	40.26%
Ca 317.933†	-0.1	-0.00001	mg/L	0.000384	-0.00001	mg/L	0.000384	>999.9%
Cd 228.802†	7.6	0.00023	mg/L	0.000268	0.00023	mg/L	0.000268	115.88%
Co 228.616†	1.6	0.00004	mg/L	0.000060	0.00004	mg/L	0.000060	156.19%
Cr 267.716†	9.1	0.00120	mg/L	0.000903	0.00120	mg/L	0.000903	75.14%
Cu 324.752†	98.5	0.00046	mg/L	0.000085	0.00046	mg/L	0.000085	18.50%
Fe 273.955†	9.2	0.00446	mg/L	0.001257	0.00446	mg/L	0.001257	28.18%
K 766.490†	-35.1	-0.01597	mg/L	0.030897	-0.01597	mg/L	0.030897	193.53%
Mg 279.077†	4.5	0.00454	mg/L	0.010011	0.00454	mg/L	0.010011	220.56%
Mn 257.610†	5.2	0.00008	mg/L	0.000047	0.00008	mg/L	0.000047	56.40%
Mo 202.031†	3.6	0.00021	mg/L	0.000350	0.00021	mg/L	0.000350	164.99%
Na 589.592†	47.4	0.00407	mg/L	0.002320	0.00407	mg/L	0.002320	56.97%
Na 330.237†	-2.5	-0.08444	mg/L	0.148416	-0.08444	mg/L	0.148416	175.77%
Ni 231.604†	-5.4	-0.00140	mg/L	0.001387	-0.00140	mg/L	0.001387	98.81%
Pb 220.353†	6.0	0.00073	mg/L	0.001801	0.00073	mg/L	0.001801	245.26%
Sb 206.836†	3.4	0.00193	mg/L	0.003727	0.00193	mg/L	0.003727	193.03%
Se 196.026†	6.6	0.00518	mg/L	0.004876	0.00518	mg/L	0.004876	94.10%
Si 288.158†	14.5	0.00685	mg/L	0.003521	0.00685	mg/L	0.003521	51.36%
Sn 189.927†	-2.6	-0.00071	mg/L	0.000833	-0.00071	mg/L	0.000833	117.90%
Sr 421.552†	-45.7	-0.00005	mg/L	0.000053	-0.00005	mg/L	0.000053	101.74%
Ti 334.903†	3.4	0.00012	mg/L	0.000492	0.00012	mg/L	0.000492	411.59%
Tl 190.801†	-5.4	-0.00260	mg/L	0.001142	-0.00260	mg/L	0.001142	43.99%
V 292.402†	-13.9	-0.00009	mg/L	0.000044	-0.00009	mg/L	0.000044	47.60%
Zn 206.200†	-5.8	-0.00192	mg/L	0.000154	-0.00192	mg/L	0.000154	7.98%

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Sequence No.: 24 **Autosampler Location: 9**
Sample ID: RINSE - 4 **Date Collected: 2/8/2021 6:07:26 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: RINSE - 4

Analyte	Back Pressure	Flow
All	241.0 kPa	0.65 L/min

Mean Data: RINSE - 4

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2446344.0	100.1	%	1.12				1.11%
ScR 361.383	263882.5	98.26	%	0.965				0.98%
Ag 328.068†	-41.7	-0.00022	mg/L	0.000110	-0.00022	mg/L	0.000110	50.09%
Al 308.215†	-0.8	-0.00048	mg/L	0.002097	-0.00048	mg/L	0.002097	438.72%
As 188.979†	-3.8	-0.00255	mg/L	0.002173	-0.00255	mg/L	0.002173	85.12%
B 249.677†	9.3	0.00117	mg/L	0.001164	0.00117	mg/L	0.001164	99.15%
Ba 233.527†	2.2	0.00023	mg/L	0.000314	0.00023	mg/L	0.000314	133.78%
Be 313.042†	83.0	0.00011	mg/L	0.000013	0.00011	mg/L	0.000013	12.18%
Ca 317.933†	-3.9	-0.00037	mg/L	0.000235	-0.00037	mg/L	0.000235	63.64%
Cd 228.802†	4.9	0.00016	mg/L	0.000013	0.00016	mg/L	0.000013	8.59%
Co 228.616†	-6.8	-0.00016	mg/L	0.000045	-0.00016	mg/L	0.000045	28.16%
Cr 267.716†	9.7	0.00127	mg/L	0.000624	0.00127	mg/L	0.000624	49.15%
Cu 324.752†	75.2	0.00035	mg/L	0.000067	0.00035	mg/L	0.000067	19.15%
Fe 273.955†	9.4	0.00453	mg/L	0.001450	0.00453	mg/L	0.001450	31.99%
K 766.490†	-8.0	-0.00367	mg/L	0.025771	-0.00367	mg/L	0.025771	703.10%
Mg 279.077†	18.0	0.01820	mg/L	0.012838	0.01820	mg/L	0.012838	70.53%
Mn 257.610†	23.9	0.00038	mg/L	0.000267	0.00038	mg/L	0.000267	69.84%
Mo 202.031†	2.5	0.00015	mg/L	0.000340	0.00015	mg/L	0.000340	230.36%
Na 589.592†	65.8	0.00566	mg/L	0.001650	0.00566	mg/L	0.001650	29.17%
Na 330.237†	-9.1	-0.3103	mg/L	0.08696	-0.3103	mg/L	0.08696	28.02%
Ni 231.604†	-2.1	-0.00055	mg/L	0.001701	-0.00055	mg/L	0.001701	311.15%
Pb 220.353†	5.9	0.00072	mg/L	0.001216	0.00072	mg/L	0.001216	167.86%
Sb 206.836†	1.9	0.00107	mg/L	0.001645	0.00107	mg/L	0.001645	154.00%
Se 196.026†	4.6	0.00359	mg/L	0.003061	0.00359	mg/L	0.003061	85.30%
Si 288.158†	-0.1	-0.00003	mg/L	0.003534	-0.00003	mg/L	0.003534	>999.9%
Sn 189.927†	0.8	0.00021	mg/L	0.001529	0.00021	mg/L	0.001529	738.11%
Sr 421.552†	-2.7	-0.00000	mg/L	0.000059	-0.00000	mg/L	0.000059	>999.9%
Ti 334.903†	13.4	0.00046	mg/L	0.000614	0.00046	mg/L	0.000614	132.08%
Tl 190.801†	2.3	0.00111	mg/L	0.000306	0.00111	mg/L	0.000306	27.50%
V 292.402†	-19.2	-0.00013	mg/L	0.000036	-0.00013	mg/L	0.000036	28.28%
Zn 206.200†	-3.6	-0.00122	mg/L	0.000789	-0.00122	mg/L	0.000789	64.90%

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Sequence No.: 25 **Autosampler Location: 10**
Sample ID: DI - 1 **Date Collected: 2/8/2021 6:10:14 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: DI - 1

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: DI - 1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2541575.5	104.0	%	0.30				0.29%
ScR 361.383	269257.6	100.3	%	0.52				0.52%
Ag 328.068†	-69.7	-0.00037	mg/L	0.000171	-0.00037	mg/L	0.000171	46.66%
Al 308.215†	-0.6	-0.00034	mg/L	0.006138	-0.00034	mg/L	0.006138	>999.9%
As 188.979†	-2.6	-0.00171	mg/L	0.000852	-0.00171	mg/L	0.000852	49.99%
B 249.677†	19.6	0.00244	mg/L	0.000167	0.00244	mg/L	0.000167	6.84%
Ba 233.527†	-2.1	-0.00022	mg/L	0.000231	-0.00022	mg/L	0.000231	106.45%
Be 313.042†	4.8	0.00001	mg/L	0.000023	0.00001	mg/L	0.000023	353.08%
Ca 317.933†	0.4	0.00004	mg/L	0.000543	0.00004	mg/L	0.000543	>999.9%
Cd 228.802†	1.7	0.00006	mg/L	0.000097	0.00006	mg/L	0.000097	160.02%
Co 228.616†	3.1	0.00007	mg/L	0.000083	0.00007	mg/L	0.000083	112.66%
Cr 267.716†	6.7	0.00088	mg/L	0.000977	0.00088	mg/L	0.000977	111.29%
Cu 324.752†	-31.4	-0.00015	mg/L	0.000206	-0.00015	mg/L	0.000206	140.76%
Fe 273.955†	3.5	0.00170	mg/L	0.001852	0.00170	mg/L	0.001852	109.04%
K 766.490†	-24.2	-0.01101	mg/L	0.006920	-0.01101	mg/L	0.006920	62.87%
Mg 279.077†	14.3	0.01447	mg/L	0.006028	0.01447	mg/L	0.006028	41.67%
Mn 257.610†	-9.8	-0.00016	mg/L	0.000028	-0.00016	mg/L	0.000028	18.05%
Mo 202.031†	-5.9	-0.00034	mg/L	0.000168	-0.00034	mg/L	0.000168	48.74%
Na 589.592†	12.3	0.00105	mg/L	0.001948	0.00105	mg/L	0.001948	184.70%
Na 330.237†	1.1	0.03617	mg/L	0.337932	0.03617	mg/L	0.337932	934.26%
Ni 231.604†	-2.5	-0.00066	mg/L	0.001059	-0.00066	mg/L	0.001059	160.02%
Pb 220.353†	-3.1	-0.00038	mg/L	0.000743	-0.00038	mg/L	0.000743	196.97%
Sb 206.836†	-7.6	-0.00436	mg/L	0.003243	-0.00436	mg/L	0.003243	74.41%
Se 196.026†	9.6	0.00757	mg/L	0.003580	0.00757	mg/L	0.003580	47.32%
Si 288.158†	67.2	0.03178	mg/L	0.002941	0.03178	mg/L	0.002941	9.25%
Sn 189.927†	-0.3	-0.00008	mg/L	0.000967	-0.00008	mg/L	0.000967	>999.9%
Sr 421.552†	36.1	0.00004	mg/L	0.000032	0.00004	mg/L	0.000032	79.31%
Ti 334.903†	-14.7	-0.00051	mg/L	0.000795	-0.00051	mg/L	0.000795	155.66%
Tl 190.801†	5.9	0.00282	mg/L	0.002424	0.00282	mg/L	0.002424	85.92%
V 292.402†	-17.6	-0.00012	mg/L	0.000046	-0.00012	mg/L	0.000046	38.34%
Zn 206.200†	-0.9	-0.00029	mg/L	0.001369	-0.00029	mg/L	0.001369	468.92%

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Sequence No.: 26
Sample ID: DI - 2

Autosampler Location: 10
Date Collected: 2/8/2021 6:13:01 PM
Data Type: Original

Dilution: 1X
Wash Time: 37

Auto Dilution Factor: 1

Nebulizer Parameters: DI - 2

Analyte	**Back Pressure**	**Flow**
All	241.0 kPa	0.65 L/min

Mean Data: DI - 2

Analyte	**Mean Corrected Intensity**	**Conc.**	**Calib. Units**	**Std.Dev.**	**Conc.**	**Sample Units**	**Std.Dev.**	**RSD**
ScA 357.253	2528768.2	103.5	%	1.42				1.37%
ScR 361.383	272541.8	101.5	%	1.52				1.50%
Ag 328.068†	-39.5	-0.00021	mg/L	0.000109	-0.00021	mg/L	0.000109	52.56%
Al 308.215†	8.6	0.00490	mg/L	0.002598	0.00490	mg/L	0.002598	52.99%
As 188.979†	-2.0	-0.00135	mg/L	0.002198	-0.00135	mg/L	0.002198	162.93%
B 249.677†	8.6	0.00107	mg/L	0.000396	0.00107	mg/L	0.000396	36.96%
Ba 233.527†	1.0	0.00011	mg/L	0.000693	0.00011	mg/L	0.000693	637.89%
Be 313.042†	-10.9	-0.00001	mg/L	0.000052	-0.00001	mg/L	0.000052	358.43%
Ca 317.933†	2.5	0.00023	mg/L	0.000626	0.00023	mg/L	0.000626	267.37%
Cd 228.802†	0.3	0.00002	mg/L	0.000128	0.00002	mg/L	0.000128	682.71%
Co 228.616†	3.7	0.00009	mg/L	0.000167	0.00009	mg/L	0.000167	186.53%
Cr 267.716†	9.0	0.00119	mg/L	0.000184	0.00119	mg/L	0.000184	15.52%
Cu 324.752†	25.7	0.00012	mg/L	0.000150	0.00012	mg/L	0.000150	125.27%
Fe 273.955†	-1.0	-0.00048	mg/L	0.002270	-0.00048	mg/L	0.002270	476.78%
K 766.490†	73.5	0.03346	mg/L	0.016283	0.03346	mg/L	0.016283	48.66%
Mg 279.077†	12.4	0.01252	mg/L	0.000758	0.01252	mg/L	0.000758	6.05%
Mn 257.610†	-18.3	-0.00029	mg/L	0.000051	-0.00029	mg/L	0.000051	17.33%
Mo 202.031†	0.5	0.00003	mg/L	0.000294	0.00003	mg/L	0.000294	>999.9%
Na 589.592†	57.9	0.00498	mg/L	0.002286	0.00498	mg/L	0.002286	45.88%
Na 330.237†	14.1	0.4786	mg/L	0.41842	0.4786	mg/L	0.41842	87.43%
Ni 231.604†	4.9	0.00129	mg/L	0.001240	0.00129	mg/L	0.001240	96.37%
Pb 220.353†	-2.7	-0.00033	mg/L	0.001865	-0.00033	mg/L	0.001865	557.14%
Sb 206.836†	-0.4	-0.00022	mg/L	0.001191	-0.00022	mg/L	0.001191	542.10%
Se 196.026†	5.4	0.00424	mg/L	0.003280	0.00424	mg/L	0.003280	77.29%
Si 288.158†	49.7	0.02353	mg/L	0.005686	0.02353	mg/L	0.005686	24.17%
Sn 189.927†	-1.1	-0.00029	mg/L	0.000906	-0.00029	mg/L	0.000906	308.50%
Sr 421.552†	9.3	0.00001	mg/L	0.000045	0.00001	mg/L	0.000045	430.47%
Ti 334.903†	-36.2	-0.00126	mg/L	0.000472	-0.00126	mg/L	0.000472	37.42%
Tl 190.801†	0.9	0.00043	mg/L	0.001075	0.00043	mg/L	0.001075	249.77%
V 292.402†	-10.0	-0.00006	mg/L	0.000045	-0.00006	mg/L	0.000045	70.50%
Zn 206.200†	-3.8	-0.00126	mg/L	0.001120	-0.00126	mg/L	0.001120	89.07%

===

Sequence No.: 27 **Autosampler Location: 10**
Sample ID: DI - 3 **Date Collected: 2/8/2021 6:15:49 PM**
Data Type: Original
Dilution: 1X
Wash Time: 37 **Auto Dilution Factor: 1**

Nebulizer Parameters: DI - 3

Analyte	Back Pressure	Flow
All	242.0 kPa	0.65 L/min

Mean Data: DI - 3

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2517023.1	103.0	%	0.47				0.45%
ScR 361.383	272349.1	101.4	%	1.98				1.95%
Ag 328.068†	-64.1	-0.00034	mg/L	0.000176	-0.00034	mg/L	0.000176	52.14%
Al 308.215†	1.5	0.00085	mg/L	0.006715	0.00085	mg/L	0.006715	787.01%
As 188.979†	-1.0	-0.00065	mg/L	0.002684	-0.00065	mg/L	0.002684	412.19%
B 249.677†	16.6	0.00207	mg/L	0.001632	0.00207	mg/L	0.001632	78.65%
Ba 233.527†	-5.5	-0.00058	mg/L	0.000610	-0.00058	mg/L	0.000610	105.38%
Be 313.042†	-27.7	-0.00004	mg/L	0.000047	-0.00004	mg/L	0.000047	127.22%
Ca 317.933†	12.2	0.00117	mg/L	0.000762	0.00117	mg/L	0.000762	65.14%
Cd 228.802†	6.8	0.00020	mg/L	0.000027	0.00020	mg/L	0.000027	13.62%
Co 228.616†	3.1	0.00007	mg/L	0.000145	0.00007	mg/L	0.000145	195.48%
Cr 267.716†	12.9	0.00169	mg/L	0.001058	0.00169	mg/L	0.001058	62.74%
Cu 324.752†	27.9	0.00013	mg/L	0.000210	0.00013	mg/L	0.000210	160.71%
Fe 273.955†	3.2	0.00156	mg/L	0.001410	0.00156	mg/L	0.001410	90.56%
K 766.490†	45.3	0.02061	mg/L	0.010995	0.02061	mg/L	0.010995	53.35%
Mg 279.077†	14.3	0.01445	mg/L	0.010228	0.01445	mg/L	0.010228	70.79%
Mn 257.610†	-13.8	-0.00022	mg/L	0.000117	-0.00022	mg/L	0.000117	53.18%
Mo 202.031†	-5.4	-0.00032	mg/L	0.000390	-0.00032	mg/L	0.000390	123.07%
Na 589.592†	28.6	0.00246	mg/L	0.007715	0.00246	mg/L	0.007715	313.43%
Na 330.237†	9.2	0.3115	mg/L	0.30851	0.3115	mg/L	0.30851	99.04%
Ni 231.604†	-12.7	-0.00332	mg/L	0.001871	-0.00332	mg/L	0.001871	56.33%
Pb 220.353†	-0.5	-0.00006	mg/L	0.001172	-0.00006	mg/L	0.001172	>999.9%
Sb 206.836†	-1.8	-0.00105	mg/L	0.000969	-0.00105	mg/L	0.000969	91.95%
Se 196.026†	5.9	0.00466	mg/L	0.002032	0.00466	mg/L	0.002032	43.63%
Si 288.158†	53.2	0.02516	mg/L	0.002030	0.02516	mg/L	0.002030	8.07%
Sn 189.927†	-3.1	-0.00083	mg/L	0.000657	-0.00083	mg/L	0.000657	78.76%
Sr 421.552†	-36.9	-0.00004	mg/L	0.000059	-0.00004	mg/L	0.000059	140.41%
Ti 334.903†	-26.4	-0.00092	mg/L	0.000182	-0.00092	mg/L	0.000182	19.84%
Tl 190.801†	0.3	0.00014	mg/L	0.001172	0.00014	mg/L	0.001172	831.76%
V 292.402†	-14.2	-0.00009	mg/L	0.000080	-0.00009	mg/L	0.000080	87.01%
Zn 206.200†	-2.1	-0.00069	mg/L	0.000886	-0.00069	mg/L	0.000886	127.98%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: EB00014
Control Limt: +/- 10.00%
Sequence: SJB0078

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SJB0078-ICV1	Lead	2.0000	2.05	103	mg/L	EPA 6010C
SJB0078-CCV1	Lead	2.0000	2.07	103	mg/L	EPA 6010C
SJB0078-CCV2	Lead	2.0000	2.05	103	mg/L	EPA 6010C
SJB0078-CCV3	Lead	2.0000	2.04	102	mg/L	EPA 6010C
SJB0078-CCV4	Lead	2.0000	2.06	103	mg/L	EPA 6010C
SJB0078-CCV5	Lead	2.0000	2.02	101	mg/L	EPA 6010C
SJB0078-CCV6	Lead	2.0000	1.95	97.4	mg/L	EPA 6010C
SJB0078-CCV7	Lead	2.0000	1.98	99.1	mg/L	EPA 6010C
SJB0078-CCV8	Lead	2.0000	1.98	99.1	mg/L	EPA 6010C
SJB0078-CCV9	Lead	2.0000	1.97	98.3	mg/L	EPA 6010C
SJB0078-CCVA	Lead	2.0000	1.92	96.2	mg/L	EPA 6010C
SJB0078-CCVB	Lead	2.0000	1.93	96.3	mg/L	EPA 6010C
SJB0078-CCVC	Lead	2.0000	1.88	93.8	mg/L	EPA 6010C

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Instrument ID: ICP2
Control Limt: +/- 10.00%

SDG: 21A0361
Project: ICS-Former NW Cooperage
Calibration: EB00028
Sequence: SJB0129

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SJB0129-ICV1	Lead	2.0000	1.98	98.9	mg/L	EPA 6010C
SJB0129-CCV1	Lead	2.0000	1.94	97.2	mg/L	EPA 6010C
SJB0129-CCV2	Lead	2.0000	1.94	97.1	mg/L	EPA 6010C
SJB0129-CCV3	Lead	2.0000	2.01	101	mg/L	EPA 6010C
SJB0129-CCV4	Lead	2.0000	2.09	105	mg/L	EPA 6010C
SJB0129-CCV5	Lead	2.0000	2.05	102	mg/L	EPA 6010C
SJB0129-CCV6	Lead	2.0000	2.03	101	mg/L	EPA 6010C
SJB0129-CCV7	Lead	2.0000	2.04	102	mg/L	EPA 6010C

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: EB00014
Sequence: SJB0078
Date Analyzed: 02/04/21 14:06

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SJB0078-ICB1	Lead	-0.0004	0.0024	0.0200	mg/L	
SJB0078-CCB1	Lead	0.0010	0.0024	0.0200	mg/L	
SJB0078-CCB2	Lead	-0.00002	0.0024	0.0200	mg/L	
SJB0078-IBL1	Lead	-0.0007	0.0024	0.0200	mg/L	
SJB0078-CCB3	Lead	0.0009	0.0024	0.0200	mg/L	
SJB0078-CCB4	Lead	-0.0010	0.0024	0.0200	mg/L	
SJB0078-IBL2	Lead	-0.0008	0.0024	0.0200	mg/L	
SJB0078-CCB5	Lead	-0.0002	0.0024	0.0200	mg/L	
SJB0078-CCB6	Lead	-0.0009	0.0024	0.0200	mg/L	
SJB0078-CCB7	Lead	-0.0005	0.0024	0.0200	mg/L	
SJB0078-CCB8	Lead	-0.0004	0.0024	0.0200	mg/L	
SJB0078-CCB9	Lead	-0.0008	0.0024	0.0200	mg/L	
SJB0078-CCBA	Lead	-0.0012	0.0024	0.0200	mg/L	
SJB0078-CCBB	Lead	-0.0008	0.0024	0.0200	mg/L	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: EB00028
Sequence: SJB0129
Date Analyzed: 02/08/21 14:46

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SJB0129-ICB1	Lead	0.0010	0.0024	0.0200	mg/L	
SJB0129-CCB1	Lead	0.0004	0.0024	0.0200	mg/L	
SJB0129-CCB2	Lead	0.00004	0.0024	0.0200	mg/L	
SJB0129-CCB3	Lead	0.0007	0.0024	0.0200	mg/L	
SJB0129-CCB4	Lead	0.0004	0.0024	0.0200	mg/L	
SJB0129-CCB5	Lead	-0.00009	0.0024	0.0200	mg/L	
SJB0129-CCB6	Lead	0.0011	0.0024	0.0200	mg/L	
SJB0129-CCB7	Lead	-0.0003	0.0024	0.0200	mg/L	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0078	Instrument:	ICP2
		Calibration:	EB00014

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SJB0078-CAL1	I2210204-006	NA	02/04/21 13:46
CAL 1 - LOW CHECK	SJB0078-CAL2	I2210204-007	NA	02/04/21 13:49
CAL 2	SJB0078-CAL3	I2210204-008	NA	02/04/21 13:51
CAL 4	SJB0078-CAL5	I2210204-010	NA	02/04/21 13:54
CAL 3	SJB0078-CAL4	I2210204-012	NA	02/04/21 14:01
Initial Cal Check	SJB0078-ICV1	I2210204-013	NA	02/04/21 14:03
Initial Cal Blank	SJB0078-ICB1	I2210204-014	NA	02/04/21 14:06
Instrument RL Check	SJB0078-CRL1	I2210204-015	NA	02/04/21 14:09
Interference Check A	SJB0078-IFA1	I2210204-016	NA	02/04/21 14:11
Interference Check B	SJB0078-IFB1	I2210204-017	NA	02/04/21 14:14
Calibration Check	SJB0078-CCV1	I2210204-018	NA	02/04/21 14:20
Calibration Blank	SJB0078-CCB1	I2210204-019	NA	02/04/21 14:23
ZZZZZ	21A0386-01	I2210204-021	Solid	02/04/21 14:29
ZZZZZ	21A0386-01	I2210204-021	Solid	02/04/21 14:29
ZZZZZ	21A0386-01	I2210204-021	Solid	02/04/21 14:29
ZZZZZ	21A0386-01	I2210204-021	Solid	02/04/21 14:29
ZZZZZ	21A0386-01	I2210204-021	Solid	02/04/21 14:29
ZZZZZ	21A0393-01	I2210204-022	Solid	02/04/21 14:32
ZZZZZ	21A0393-01	I2210204-022	Solid	02/04/21 14:32
ZZZZZ	21A0393-01	I2210204-022	Solid	02/04/21 14:32
ZZZZZ	21A0393-01	I2210204-022	Solid	02/04/21 14:32
ZZZZZ	21A0393-01	I2210204-022	Solid	02/04/21 14:32
ZZZZZ	21A0393-01	I2210204-022	Solid	02/04/21 14:32
ZZZZZ	21A0393-01	I2210204-022	Solid	02/04/21 14:32
ZZZZZ	21A0392-01	I2210204-024	Solid	02/04/21 14:38
ZZZZZ	21A0392-01	I2210204-024	Solid	02/04/21 14:38
ZZZZZ	21A0392-01	I2210204-024	Solid	02/04/21 14:38
ZZZZZ	21A0392-01	I2210204-024	Solid	02/04/21 14:38
ZZZZZ	21A0392-01	I2210204-024	Solid	02/04/21 14:38
ZZZZZ	21A0392-01	I2210204-024	Solid	02/04/21 14:38

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Sequence: SJB0078
SDG: 21A0361
Project: ICS-Former NW Cooperage
Instrument: ICP2
Calibration: EB00014

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	21A0392-01	I2210204-024	Solid	02/04/21 14:38
ZZZZZ	21A0392-01	I2210204-024	Solid	02/04/21 14:38
ZZZZZ	21A0392-01	I2210204-024	Solid	02/04/21 14:38
Blank	BJA0765-BLK1	I2210204-026	Solid	02/04/21 14:44
LCS	BJA0765-BS1	I2210204-027	Solid	02/04/21 14:47
ZZZZZ	21A0386-01	I2210204-028	Solid	02/04/21 14:50
Calibration Check	SJB0078-CCV2	I2210204-030	NA	02/04/21 14:55
Calibration Blank	SJB0078-CCB2	I2210204-031	NA	02/04/21 14:59
ZZZZZ	21A0323-01	I2210204-035	Solid	02/04/21 15:10
ZZZZZ	21A0398-01	I2210204-037	Water	02/04/21 15:16
ZZZZZ	21A0398-01	I2210204-037	Water	02/04/21 15:16
ZZZZZ	21A0398-01	I2210204-037	Water	02/04/21 15:16
RINSE	SJB0078-IBL1	I2210204-038	NA	02/04/21 15:21
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0078	Instrument:	ICP2
		Calibration:	EB00014

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
ZZZZZ	21A0325-01	I2210204-040	Solid	02/04/21 15:26
Calibration Check	SJB0078-CCV3	I2210204-042	NA	02/04/21 15:31
Calibration Blank	SJB0078-CCB3	I2210204-043	NA	02/04/21 15:35
ZZZZZ	21A0402-25	I2210204-044	Water	02/04/21 15:38
ZZZZZ	21A0402-34	I2210204-045	Water	02/04/21 15:41
ZZZZZ	21A0402-24	I2210204-047	Water	02/04/21 15:46
ZZZZZ	21A0402-24	I2210204-047	Water	02/04/21 15:46
ZZZZZ	21A0402-24	I2210204-047	Water	02/04/21 15:46
ZZZZZ	21A0402-24	I2210204-047	Water	02/04/21 15:46
ZZZZZ	BJB0055-BLK1	I2210204-050	Solid	02/04/21 15:56
ZZZZZ	BJB0055-BS1	I2210204-051	Solid	02/04/21 15:58
Calibration Check	SJB0078-CCV4	I2210204-055	NA	02/04/21 16:30
Calibration Check	SJB0078-CCV5	I2210204-056	NA	02/04/21 16:33
Calibration Blank	SJB0078-CCB4	I2210204-057	NA	02/04/21 16:36
ZZZZZ	21A0402-03	I2210204-058	Solid	02/04/21 16:39
ZZZZZ	21A0402-04	I2210204-059	Solid	02/04/21 16:42
ZZZZZ	21A0402-05	I2210204-060	Solid	02/04/21 16:44
ZZZZZ	21A0402-06	I2210204-061	Solid	02/04/21 16:47
ZZZZZ	21A0402-01	I2210204-063	Solid	02/04/21 16:53
ZZZZZ	21A0402-01	I2210204-063	Solid	02/04/21 16:53
ZZZZZ	21A0402-01	I2210204-063	Solid	02/04/21 16:53
ZZZZZ	21A0402-01	I2210204-063	Solid	02/04/21 16:53
ZZZZZ	21A0402-01	I2210204-063	Solid	02/04/21 16:53
ZZZZZ	21A0402-01	I2210204-063	Solid	02/04/21 16:53
ZZZZZ	21A0402-01	I2210204-063	Solid	02/04/21 16:53
ZZZZZ	21A0402-01	I2210204-063	Solid	02/04/21 16:53
Instrument Blank	SJB0078-IBL2	I2210204-067	NA	02/04/21 17:03

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SJB0078
Instrument: ICP2
Calibration: EB00014

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SJB0078-CCV6	I2210204-068	NA	02/04/21 17:06
Calibration Blank	SJB0078-CCB5	I2210204-069	NA	02/04/21 17:09
ZZZZZ	21A0393-01	I2210204-070	Solid	02/04/21 17:12
ZZZZZ	21A0393-01	I2210204-070	Solid	02/04/21 17:12
ZZZZZ	21A0393-01	I2210204-070	Solid	02/04/21 17:12
ZZZZZ	21A0393-01	I2210204-070	Solid	02/04/21 17:12
ZZZZZ	21A0393-01	I2210204-070	Solid	02/04/21 17:12
ZZZZZ	21A0393-01	I2210204-070	Solid	02/04/21 17:12
ZZZZZ	21A0393-01	I2210204-070	Solid	02/04/21 17:12
ZZZZZ	21A0402-02	I2210204-071	Solid	02/04/21 17:15
ZZZZZ	21A0402-07	I2210204-072	Solid	02/04/21 17:18
ZZZZZ	21A0402-08	I2210204-073	Solid	02/04/21 17:21
ZZZZZ	21A0402-09	I2210204-074	Solid	02/04/21 17:24
ZZZZZ	21A0402-10	I2210204-075	Solid	02/04/21 17:26
ZZZZZ	21A0402-11	I2210204-076	Solid	02/04/21 17:29
ZZZZZ	21A0402-12	I2210204-077	Solid	02/04/21 17:32
ZZZZZ	21A0402-13	I2210204-078	Solid	02/04/21 17:35
ZZZZZ	21A0402-14	I2210204-079	Solid	02/04/21 17:38
Calibration Check	SJB0078-CCV7	I2210204-080	NA	02/04/21 17:40
Calibration Blank	SJB0078-CCB6	I2210204-081	NA	02/04/21 17:44
ZZZZZ	21A0402-15	I2210204-082	Solid	02/04/21 17:47
ZZZZZ	21A0402-16	I2210204-083	Solid	02/04/21 17:49
ZZZZZ	21A0402-17	I2210204-084	Solid	02/04/21 17:52
ZZZZZ	21A0402-18	I2210204-085	Solid	02/04/21 17:55
ZZZZZ	21A0402-19	I2210204-086	Solid	02/04/21 17:58
ZZZZZ	21A0402-21	I2210204-087	Solid	02/04/21 18:01
ZZZZZ	21A0402-22	I2210204-088	Solid	02/04/21 18:03
ZZZZZ	21A0402-23	I2210204-089	Solid	02/04/21 18:06
ZZZZZ	21A0402-26	I2210204-090	Solid	02/04/21 18:09
ZZZZZ	21A0402-27	I2210204-091	Solid	02/04/21 18:12

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Sequence:	SJB0078	Instrument:	ICP2
		Calibration:	EB00014

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SJB0078-CCV8	I2210204-092	NA	02/04/21 18:15
Calibration Blank	SJB0078-CCB7	I2210204-093	NA	02/04/21 18:18
ZZZZZ	21A0402-28	I2210204-095	Solid	02/04/21 18:24
ZZZZZ	21A0402-29	I2210204-096	Solid	02/04/21 18:27
ZZZZZ	21A0402-30	I2210204-097	Solid	02/04/21 18:29
ZZZZZ	21A0402-20	I2210204-099	Solid	02/04/21 18:35
Calibration Check	SJB0078-CCV9	I2210204-104	NA	02/04/21 18:49
Calibration Blank	SJB0078-CCB8	I2210204-105	NA	02/04/21 18:52
ZZZZZ	21A0402-31	I2210204-106	Solid	02/04/21 18:55
ZZZZZ	21A0402-32	I2210204-107	Solid	02/04/21 18:58
ZZZZZ	21A0402-33	I2210204-108	Solid	02/04/21 19:00
ZZZZZ	21A0346-01	I2210204-109	Water	02/04/21 19:04
ZZZZZ	21A0346-01	I2210204-109	Water	02/04/21 19:04
ZZZZZ	21A0346-03	I2210204-110	Water	02/04/21 19:07
ZZZZZ	21A0346-03	I2210204-110	Water	02/04/21 19:07
ZZZZZ	21A0346-05	I2210204-111	Water	02/04/21 19:09
ZZZZZ	21A0346-05	I2210204-111	Water	02/04/21 19:09
ZZZZZ	21A0346-07	I2210204-112	Water	02/04/21 19:12
ZZZZZ	21A0346-07	I2210204-112	Water	02/04/21 19:12
ZZZZZ	21A0323-01	I2210204-113	Solid	02/04/21 19:15
ZZZZZ	21A0323-01	I2210204-113	Solid	02/04/21 19:15
ZZZZZ	21A0323-01	I2210204-113	Solid	02/04/21 19:15
ZZZZZ	21A0323-01	I2210204-113	Solid	02/04/21 19:15
ZZZZZ	21A0323-01	I2210204-113	Solid	02/04/21 19:15
ZZZZZ	21A0323-01	I2210204-113	Solid	02/04/21 19:15
ZZZZZ	21A0323-01	I2210204-113	Solid	02/04/21 19:15
ZZZZZ	21A0323-01	I2210204-113	Solid	02/04/21 19:15
Calibration Check	SJB0078-CCVA	I2210204-115	NA	02/04/21 19:22
Calibration Blank	SJB0078-CCB9	I2210204-116	NA	02/04/21 19:26
Calibration Check	SJB0078-CCVB	I2210204-125	NA	02/04/21 20:07

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
Client: Dalton, Olmsted & Fuglevand, Inc
Sequence: SJB0078
SDG: 21A0361
Project: ICS-Former NW Cooperage
Instrument: ICP2
Calibration: EB00014

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SJB0078-CCBA	I2210204-126	NA	02/04/21 20:10
ZZZZZ	21A0323-01RE1	I2210204-128	Solid	02/04/21 20:18
Calibration Check	SJB0078-CCVC	I2210204-129	NA	02/04/21 20:21
Calibration Blank	SJB0078-CCBB	I2210204-130	NA	02/04/21 20:24

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SJB0129
Instrument: ICP2
Calibration: EB00028

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SJB0129-CAL1	I2210208-006	NA	02/08/21 14:30
CAL 1 - LOW CHECK	SJB0129-CAL2	I2210208-007	NA	02/08/21 14:33
CAL 2	SJB0129-CAL3	I2210208-008	NA	02/08/21 14:35
CAL 3	SJB0129-CAL4	I2210208-009	NA	02/08/21 14:37
CAL 4	SJB0129-CAL5	I2210208-010	NA	02/08/21 14:39
Initial Cal Check	SJB0129-ICV1	I2210208-011	NA	02/08/21 14:43
Initial Cal Blank	SJB0129-ICB1	I2210208-012	NA	02/08/21 14:46
Instrument RL Check	SJB0129-CRL1	I2210208-013	NA	02/08/21 14:49
Interference Check A	SJB0129-IFA1	I2210208-014	NA	02/08/21 14:51
Interference Check B	SJB0129-IFB1	I2210208-015	NA	02/08/21 14:54
Calibration Check	SJB0129-CCV1	I2210208-017	NA	02/08/21 15:03
Calibration Blank	SJB0129-CCB1	I2210208-018	NA	02/08/21 15:06
P8-20N-5	21A0361-03	I2210208-020	Solid	02/08/21 15:12
P8-10NW-1	21A0361-05	I2210208-021	Solid	02/08/21 15:15
P8-10NW-5	21A0361-07	I2210208-022	Solid	02/08/21 15:17
P8-15SW-5	21A0361-11	I2210208-024	Solid	02/08/21 15:23
P8-10SE-1	21A0361-13	I2210208-025	Solid	02/08/21 15:26
P8-10SE-5	21A0361-15	I2210208-026	Solid	02/08/21 15:29
P8-10NE-5	21A0361-19	I2210208-028	Solid	02/08/21 15:34
Calibration Check	SJB0129-CCV2	I2210208-029	NA	02/08/21 15:37
Calibration Blank	SJB0129-CCB2	I2210208-030	NA	02/08/21 15:40
P8-7W-1	21A0361-21	I2210208-031	Solid	02/08/21 15:43
P8-7W-5	21A0361-23	I2210208-032	Solid	02/08/21 15:46
P8-10E-5	21A0361-27	I2210208-034	Solid	02/08/21 15:52
P8-10N-1	21A0361-29	I2210208-035	Solid	02/08/21 15:55
P8-10N-5	21A0361-31	I2210208-036	Solid	02/08/21 15:57
P8-15SW-1	21A0361-09	I2210208-038	Solid	02/08/21 16:04
P8-10NE-1	21A0361-17	I2210208-039	Solid	02/08/21 16:07
Calibration Check	SJB0129-CCV3	I2210208-041	NA	02/08/21 16:13
Calibration Blank	SJB0129-CCB3	I2210208-042	NA	02/08/21 16:17

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Sequence: SJB0129
Instrument: ICP2
Calibration: EB00028

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
P8-20N-1	BJA0765-DUP1	I2210208-046	Solid	02/08/21 16:29
P8-20N-1	21A0361-01	I2210208-047	Solid	02/08/21 16:32
P8-20N-1	BJA0765-MS1	I2210208-048	Solid	02/08/21 16:35
P8-20N-1	BJA0765-MSD1	I2210208-049	Solid	02/08/21 16:38
P8-10E-1	21A0361-25	I2210208-050	Solid	02/08/21 16:41
Calibration Check	SJB0129-CCV4	I2210208-051	NA	02/08/21 16:48
Calibration Blank	SJB0129-CCB4	I2210208-052	NA	02/08/21 16:51
Calibration Check	SJB0129-CCV5	I2210208-055	NA	02/08/21 17:00
Calibration Blank	SJB0129-CCB5	I2210208-056	NA	02/08/21 17:04
ZZZZZ	21A0296-06	I2210208-061	Solid	02/08/21 17:18
ZZZZZ	21A0243-04	I2210208-064	Water	02/08/21 17:26
ZZZZZ	21A0243-04	I2210208-064	Water	02/08/21 17:26
ZZZZZ	21A0243-04	I2210208-064	Water	02/08/21 17:26
ZZZZZ	21A0243-04	I2210208-064	Water	02/08/21 17:26
ZZZZZ	21A0243-04	I2210208-064	Water	02/08/21 17:26
ZZZZZ	21A0243-04	I2210208-064	Water	02/08/21 17:26
ZZZZZ	21A0243-04	I2210208-064	Water	02/08/21 17:26
Calibration Check	SJB0129-CCV6	I2210208-067	NA	02/08/21 17:35
Calibration Blank	SJB0129-CCB6	I2210208-068	NA	02/08/21 17:38
ZZZZZ	21A0243-08	I2210208-070	Water	02/08/21 17:44
ZZZZZ	21A0243-08	I2210208-070	Water	02/08/21 17:44
ZZZZZ	21A0243-08	I2210208-070	Water	02/08/21 17:44
ZZZZZ	21A0243-08	I2210208-070	Water	02/08/21 17:44
ZZZZZ	21A0243-08	I2210208-070	Water	02/08/21 17:44
ZZZZZ	21A0243-08	I2210208-070	Water	02/08/21 17:44
ZZZZZ	21A0243-08	I2210208-070	Water	02/08/21 17:44
Calibration Check	SJB0129-CCV7	I2210208-073	NA	02/08/21 17:52
Calibration Blank	SJB0129-CCB7	I2210208-074	NA	02/08/21 17:56

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Instrument ID: ICP2 Calibration: EB00014

Sequence: SJB0078 Standard ID: I010667

Lab Sample ID	Analyte	True	Found	%R	Units
SJB0078-IFA1	Lead	0	-0.0013		mg/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: Analytical Resources, Inc.

SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Instrument ID: ICP2

Calibration: EB00014

Sequence: SJB0078

Standard ID: I010667

Lab Sample ID	Analyte	True	Found	%R	Units
SJB0078-IFB1	Lead	1.0000	1.0368	104	mg/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: Analytical Resources, Inc.

SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc

Project: ICS-Former NW Cooperage

Instrument ID: ICP2

Calibration: EB00028

Sequence: SJB0129

Standard ID: I010667

Lab Sample ID	Analyte	True	Found	%R	Units
SJB0129-IFA1	Lead	0	-0.0006		mg/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
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ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Instrument ID: ICP2 Calibration: EB00028

Sequence: SJB0129 Standard ID: I010667

Lab Sample ID	Analyte	True	Found	%R	Units
SJB0129-IFB1	Lead	1.0000	0.9896	99.0	mg/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTER-ELEMENT CORRECTION FACTORS

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument:	ICP2	IEC Date:	12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Sb
Lead	220.35	-0.29953		0.039965		
Molybdenum	202.03		0.015288		0.01216	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTER-ELEMENT CORRECTION FACTORS

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument:	ICP2	IEC Date:	12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		As	Ba	Be	Cd	Cr
Lead	220.35					-2.014266
Molybdenum	202.03					

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTER-ELEMENT CORRECTION FACTORS

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Instrument: ICP2 IEC Date: 12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Co	Cu	Pb	Mn	Mo
Lead	220.35	-0.160377	1.479952			
Molybdenum	202.03					

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTER-ELEMENT CORRECTION FACTORS

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument:	ICP2	IEC Date:	12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ni	K	Si	Ag	Tl
Lead	220.35	-0.149057				
Molybdenum	202.03					

Analytical Resources, Incorporated
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INTER-ELEMENT CORRECTION FACTORS

Laboratory:	Analytical Resources, Inc.	SDG:	21A0361
Client:	Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage
Instrument:	ICP2	IEC Date:	12/02/2020

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Sn	Ti	V	Zn	
Lead	220.35					
Molybdenum	202.03					

DETECTION LEVEL STANDARD
EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: EB00014
Sequence: SJB0078
Lab Sample ID: SJB0078-CRL1

Analyte	True	Found	%R	Units	QC Limts
Lead	0.0200	0.0212	106	mg/L	50 - 150

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DETECTION LEVEL STANDARD
EPA 6010C

Laboratory: Analytical Resources, Inc.
SDG: 21A0361
Client: Dalton, Olmsted & Fuglevand, Inc
Project: ICS-Former NW Cooperage
Instrument ID: ICP2
Calibration: EB00028
Sequence: SJB0129
Lab Sample ID: SJB0129-CRL1

Analyte	True	Found	%R	Units	QC Limts
Lead	0.0200	0.0203	102	mg/L	50 - 150

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
P8-20N-1 21A0361-01	01/25/21 15:40	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 16:32	14	180	
P8-20N-5 21A0361-03	01/25/21 15:50	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 15:12	14	180	
P8-10NW-1 21A0361-05	01/25/21 15:00	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 15:15	14	180	
P8-10NW-5 21A0361-07	01/25/21 15:10	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 15:17	14	180	
P8-15SW-1 21A0361-09	01/25/21 14:15	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 16:04	14	180	
P8-15SW-5 21A0361-11	01/25/21 14:25	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 15:23	14	180	
P8-10SE-1 21A0361-13	01/25/21 13:00	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 15:26	14	180	
P8-10SE-5 21A0361-15	01/25/21 13:10	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 15:29	14	180	
P8-10NE-1 21A0361-17	01/25/21 12:15	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 16:07	14	180	
P8-10NE-5 21A0361-19	01/25/21 12:25	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 15:34	14	180	
P8-7W-1 21A0361-21	01/25/21 10:40	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 15:43	14	180	
P8-7W-5 21A0361-23	01/25/21 10:50	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 15:46	14	180	
P8-10E-1 21A0361-25	01/25/21 11:30	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 16:41	14	180	
P8-10E-5 21A0361-27	01/25/21 11:40	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 15:52	14	180	
P8-10N-1 21A0361-29	01/25/21 09:25	01/26/21 14:20	02/01/21 09:57	7	180	02/08/21 15:55	14	180	
P8-10N-5 21A0361-31	01/25/21 09:35	01/26/21 14:20	02/01/21 09:57	7	180	02/08/21 15:57	14	180	
Duplicate BJA0765-DUP1	01/25/21 15:40	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 16:29	14	180	
Matrix Spike BJA0765-MS1	01/25/21 15:40	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 16:35	14	180	
Matrix Spike Dup BJA0765-MSD1	01/25/21 15:40	01/26/21 14:20	02/01/21 09:57	6	180	02/08/21 16:38	14	180	

* Indicates hold time exceedance.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Solid Instrument: ICP2

Analyte	MDL	RL	Units
Lead	0.240	2.00	mg/kg

METHOD DETECTION
AND REPORTING LIMITS
EPA 6010C

Laboratory: Analytical Resources, Inc. SDG: 21A0361

Client: Dalton, Olmsted & Fuglevand, Inc Project: ICS-Former NW Cooperage

Matrix: Water Instrument: ICP2

Analyte	MDL	RL	Units
Lead	0.0024	0.0200	mg/L

TOTAL SOLIDS BENCHSHEET		Batch:	BJB0035
Method: PSEP 1986		Date:	2/1/2021 14:21
(dry at 103-105 C)		Analyst:	DxP
Instrumentation		Drying Oven:	15
		Analytical Balance:	B139298002

Batch drying time		
record times as mm/dd/yy hh:mm		
date/time in oven:	2/2/2021 16:15	
date/time out:	2/3/2021 9:50	
elapsed hrs:	17.6	

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
21A0361-01	0.8000	12.0900	10.1700	9.37	**82.99%**	No
21A0361-03	0.8000	12.0500	10.7900	9.99	**88.80%**	No
21A0361-05	0.7900	11.9900	10.7200	9.93	**88.66%**	No
21A0361-07	0.8000	11.2100	9.3200	8.52	**81.84%**	No
21A0361-09	0.7900	12.5000	11.8000	11.01	**94.02%**	No
21A0361-11	0.8000	12.9500	11.0600	10.26	**84.44%**	No
21A0361-13	0.8000	11.0900	10.5600	9.76	**94.85%**	No
21A0361-15	0.8000	11.2800	10.5400	9.74	**92.94%**	No
21A0361-17	0.8000	12.7900	10.3000	9.50	**79.23%**	No
21A0361-19	0.8100	11.6800	9.9100	9.10	**83.72%**	No
21A0361-21	0.8000	12.0200	11.3600	10.56	**94.12%**	No
21A0361-23	0.8100	12.6400	11.2000	10.39	**87.83%**	No
21A0361-25	0.8000	12.1300	11.3300	10.53	**92.94%**	No
21A0361-27	0.8000	11.1100	9.8900	9.09	**88.17%**	No
21A0361-29	0.8000	12.1800	11.1600	10.36	**91.04%**	No
21A0361-31	0.7900	12.7600	10.9700	10.18	**85.05%**	No

Analytical Resources, Incorporated
Analytical Chemists and Consultants

10 March 2021

Matt Dalton
Dalton, Olmsted & Fuglevand, Inc
6034 N Star Rd
Ferndale, WA 98248

RE: ICS-Former NW Cooperage

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
21A0366	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21A0366	Turn-around Requested: NORMAL	Page: 1 of 1
ARI Client Company: DOF	Phone: 206 660 3466	Date: 1/27/21 — Ice Present?
Client Contact: DAVE COOPER / MATT DALTON		No. of Coolers: 1 — Cooler Temps: 3.0
Client Project Name: ICS		
Client Project #: SUM-008-03	Samplers: A. CERRUTI	

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-Dx ~~EPA 6010C~~	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 METALS (1)			ARCHIVE	Notes/Comments
P8-20NW-1	1/26/21	0815	S	3	X	X	X	X					
P8-20NW-2.5	1/26/21	0820	S	3								X	
P8-20NW-5	1/26/21	0825	S	3	X	X	X	X					
P8-20NW-7.5	1/26/21	0830	S	3								X	
P8-30NW-1	1/26/21	1230	S	3	X	X	X	X					
P8-30NW-2.5	1/26/21	1235	S	3								X	
P8-30NW-5	1/26/21	1240	S	3	X	X	X	X					
P8-30NW-7.5	1/26/21	1245	S	3								X	
P8-30N-1	1/26/21	1400	S	3	X	X	X	X					
P8-30N-2.5	1/26/21	1405	S	3								X	

Comments/Special Instructions: (1) BASED ON TOTAL METALS

	Relinquished by	Received by	Relinquished by	Received by
(Signature)	[signature]	[signature]		
Printed Name	ANTHONY CERRUTI	Samantha Colon		
Company	DOF	ARI		
Date & Time	1/27/21 0948	1/27/21 0948		

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

ARI Assigned Number: 21A0366	Turn-around Requested: NORMAL	Page: 2	of 2
ARI Client Company: DOF	Phone: (206) 660 3466	Date: 1/27/21	Ice Present?
Client Contact: DAVE COOPER / MATT DALTON		No. of Coolers: 1	Cooler Temps: 3.0
Client Project Name: ICS			
Client Project #: SUM-008-03	Samplers: A. CERRUTI		

Sample ID	Date	Time	Matrix	No. Containers	PCBs 8082A	NWTPH-DX	Pb 6010C	Hg 7471A	TCLP RCRA 8 METALS (1)			ARCHIVE	Notes/Comments
P8-30N-5	1/26/21	1410	S	3	X	X	X	X					
P8-30N-7.5	1/26/21	1415	S	3								X	

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) BASED ON TOTAL METALS	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: ANTHONY CERRUTI	Printed Name: Samantha Colon	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 1/27/21 0948	Date & Time: 1/27/21 0948	Date & Time:	Date & Time:

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
P8-20NW-1	21A0366-01	Solid	26-Jan-2021 08:15	27-Jan-2021 09:48
P8-20NW-5	21A0366-03	Solid	26-Jan-2021 08:25	27-Jan-2021 09:48
P8-30NW-1	21A0366-05	Solid	26-Jan-2021 12:30	27-Jan-2021 09:48
P8-30NW-5	21A0366-07	Solid	26-Jan-2021 12:40	27-Jan-2021 09:48
P8-30N-1	21A0366-09	Solid	26-Jan-2021 14:00	27-Jan-2021 09:48
P8-30N-5	21A0366-11	Solid	26-Jan-2021 14:10	27-Jan-2021 09:48

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Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage	
6034 N Star Rd	Project Number:	SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager:	Matt Dalton	10-Mar-2021 19:27

Work Order Case Narrative

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits with the exception of of the surrogates flagged on the associated forms for sample 21A0366-01.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

Total Metals - EPA Method 6010C and 7471B

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were outside of the advisory control limits and flagged on the associated forms.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were outside of the advisory control limits and flagged on the associated forms.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: DOF

COC No(s): ______ NA

Assigned ARI Job No: 21A0366

Project Name: ICS

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: ______

Tracking No: ______ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 0948 3.0

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: DOO 5206

Cooler Accepted by: SC Date: 1/27/21 Time: 0948

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: ______			
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA	______	

Were the sample(s) split by ARI? NA YES Date/Time: ______ Equipment: ______ Split by: ______

Samples Logged by: JB Date: 01/27/2021 Time: 1038 Labels checked by: JB

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-20NW-1

21A0366-01 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/26/2021 08:15

Instrument: FID4 Analyst: CTO — Analyzed: 02/13/2021 06:59

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0366-01 A 01

Preparation Batch: BJA0754 — Sample Size: 10.04 g (wet) — Dry Weight:8.80 g

Prepared: 02/03/2021 — Final Volume: 10 mL — % Solids: 87.66

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	10	568	6490	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	10	1140	13900	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*97.8*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-20NW-1

21A0366-01 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/26/2021 08:15

Instrument: ECD7 Analyst: JGR — Analyzed: 03/01/2021 15:43

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0366-01 A 02
	Preparation Batch: BJB0185	Sample Size: 1.01 g (wet)	Dry Weight:0.89 g
	Prepared: 02/06/2021	Final Volume: 5 mL	% Solids: 87.66
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0366-01 A 02
	Cleanup Batch: CJB0113	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0366-01 A 02
	Cleanup Batch: CJB0111	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0366-01 A 02
	Cleanup Batch: CJB0112	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	10	452	1130	ND	ug/kg	U
Aroclor 1221	11104-28-2	10	452	1130	ND	ug/kg	U
Aroclor 1232	11141-16-5	10	452	1130	ND	ug/kg	U
Aroclor 1242	53469-21-9	10	452	1130	ND	ug/kg	U
Aroclor 1248	12672-29-6	10	452	1130	12700	ug/kg	D
Aroclor 1254	11097-69-1	10	452	1130	5760	ug/kg	D
Aroclor 1260	11096-82-5	10	524	1130	12300	ug/kg	P1, D
Aroclor 1262	37324-23-5	10	524	1130	ND	ug/kg	U
Aroclor 1268	11100-14-4	10	524	1130	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*91.2*	*%*	P1
Surrogate: Tetrachlorometaxylene				*53-120 %*	*78.1*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*176*	*%*	*, P1
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*98.0*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-20NW-1

21A0366-01 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/26/2021 08:15

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 14:39

Sample Preparation:			
	Preparation Method: SWC EPA 3050B		Extract ID: 21A0366-01 C 01
	Preparation Batch: BJB0143	Sample Size: 1.008 g (wet)	Dry Weight:0.88 g
	Prepared: 02/08/2021	Final Volume: 50 mL	% Solids: 87.72

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	5	0.679	5.65	226	mg/kg	D

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-20NW-1

21A0366-01 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/26/2021 08:15

Instrument: HYDRA Analyst: BLC — Analyzed: 01/29/2021 13:56

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0366-01 C

Preparation Batch: BJA0731 — Sample Size: 0.23 g (wet) — Dry Weight:0.20 g

Prepared: 01/28/2021 — Final Volume: 50 mL — % Solids: 87.72

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00520	0.0248	1.09	mg/kg	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-20NW-5

21A0366-03 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/26/2021 08:25

Instrument: FID4 Analyst: CTO — Analyzed: 02/07/2021 01:04

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0366-03 A 01

Preparation Batch: BJA0754 — Sample Size: 10.01 g (wet) — Dry Weight:8.23 g

Prepared: 02/03/2021 — Final Volume: 1 mL — % Solids: 82.23

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	5	30.4	119	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	5	60.7	443	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*92.0*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-20NW-5

21A0366-03 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/26/2021 08:25

Instrument: ECD7 Analyst: JGR — Analyzed: 03/01/2021 16:03

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0366-03 A 02
	Preparation Batch: BJB0185	Sample Size: 6.1 g (wet)	Dry Weight:5.02 g
	Prepared: 02/06/2021	Final Volume: 5 mL	% Solids: 82.23
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0366-03 A 02
	Cleanup Batch: CJB0113	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0366-03 A 02
	Cleanup Batch: CJB0111	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0366-03 A 02
	Cleanup Batch: CJB0112	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	8.0	19.9	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	8.0	19.9	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	8.0	19.9	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	8.0	19.9	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	8.0	19.9	59.9	ug/kg	
Aroclor 1254	11097-69-1	1	8.0	19.9	82.3	ug/kg	
Aroclor 1260	11096-82-5	1	9.3	19.9	35.7	ug/kg	
Aroclor 1262	37324-23-5	1	9.3	19.9	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.3	19.9	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*71.8*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*82.3*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*77.1*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*77.4*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-20NW-5

21A0366-03 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/26/2021 08:25

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 14:01

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21A0366-03 C 01
	Preparation Batch: BJB0143	Sample Size: 1.013 g (wet)	Dry Weight:0.84 g
	Prepared: 02/08/2021	Final Volume: 50 mL	% Solids: 83.16

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	5	0.712	5.94	207	mg/kg	D

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-20NW-5

21A0366-03 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/26/2021 08:25

Instrument: HYDRA Analyst: BLC — Analyzed: 01/29/2021 13:58

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0366-03 C

Preparation Batch: BJA0731 — Sample Size: 0.234 g (wet) — Dry Weight:0.19 g

Prepared: 01/28/2021 — Final Volume: 50 mL — % Solids: 83.16

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00540	0.0257	0.711	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30NW-1

21A0366-05 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/26/2021 12:30

Instrument: FID4 Analyst: CTO — Analyzed: 02/13/2021 08:01

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0366-05 A 01

Preparation Batch: BJA0754 — Sample Size: 10.04 g (wet) — Dry Weight:9.07 g

Prepared: 02/03/2021 — Final Volume: 1 mL — % Solids: 90.35

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	100	551	4250	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	100	1100	14200	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*71.1*	*%*	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30NW-1

21A0366-05 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/26/2021 12:30

Instrument: ECD7 Analyst: JGR — Analyzed: 03/01/2021 16:24

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0366-05 A 02
	Preparation Batch: BJB0185	Sample Size: 1.02 g (wet)	Dry Weight:0.92 g
	Prepared: 02/06/2021	Final Volume: 5 mL	% Solids: 90.35
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0366-05 A 02
	Cleanup Batch: CJB0113	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0366-05 A 02
	Cleanup Batch: CJB0111	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0366-05 A 02
	Cleanup Batch: CJB0112	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	25	1090	2710	ND	ug/kg	U
Aroclor 1221	11104-28-2	25	1090	2710	ND	ug/kg	U
Aroclor 1232	11141-16-5	25	1090	2710	ND	ug/kg	U
Aroclor 1242	53469-21-9	25	1090	2710	ND	ug/kg	U
Aroclor 1248	12672-29-6	25	1090	2710	40600	ug/kg	D
Aroclor 1254	11097-69-1	25	1090	2710	18900	ug/kg	D
Aroclor 1260	11096-82-5	25	1260	2710	4780	ug/kg	D
Aroclor 1262	37324-23-5	25	1260	2710	ND	ug/kg	U
Aroclor 1268	11100-14-4	25	1260	2710	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*96.2*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*85.0*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*70.1*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*86.3*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30NW-1

21A0366-05 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/26/2021 12:30

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 16:10

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0366-05 C 01

Preparation Batch: BJB0143 — Sample Size: 1.043 g (wet) — Dry Weight:0.93 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 89.31

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	10	1.29	10.7	74.9	mg/kg	D

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30NW-1

21A0366-05 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/26/2021 12:30

Instrument: HYDRA Analyst: BLC — Analyzed: 01/29/2021 14:00

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0366-05 C

Preparation Batch: BJA0731 — Sample Size: 0.215 g (wet) — Dry Weight:0.19 g

Prepared: 01/28/2021 — Final Volume: 50 mL — % Solids: 89.31

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00547	0.0260	0.517	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30NW-5

21A0366-07 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/26/2021 12:40

Instrument: FID4 Analyst: CTO — Analyzed: 02/07/2021 01:46

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0366-07 A 01

Preparation Batch: BJA0754 — Sample Size: 10.05 g (wet) — Dry Weight:8.98 g

Prepared: 02/03/2021 — Final Volume: 1 mL — % Solids: 89.34

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.57	151	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	11.1	138	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*93.5*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30NW-5

21A0366-07 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/26/2021 12:40

Instrument: ECD7 Analyst: JGR — Analyzed: 03/01/2021 16:44

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0366-07 A 02
	Preparation Batch: BJB0185	Sample Size: 5.65 g (wet)	Dry Weight:5.05 g
	Prepared: 02/06/2021	Final Volume: 5 mL	% Solids: 89.34
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0366-07 A 02
	Cleanup Batch: CJB0113	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0366-07 A 02
	Cleanup Batch: CJB0111	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0366-07 A 02
	Cleanup Batch: CJB0112	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.9	19.8	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.9	19.8	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.9	19.8	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.9	19.8	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.9	19.8	176	ug/kg	
Aroclor 1254	11097-69-1	1	7.9	19.8	147	ug/kg	
Aroclor 1260	11096-82-5	1	9.2	19.8	20.8	ug/kg	
Aroclor 1262	37324-23-5	1	9.2	19.8	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.2	19.8	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*72.3*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*77.9*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*85.2*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*85.8*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30NW-5

21A0366-07 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/26/2021 12:40

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 15:18

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0366-07 C 01

Preparation Batch: BJB0143 — Sample Size: 1.005 g (wet) — Dry Weight:0.88 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 87.84

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.272	2.27	5.65	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30NW-5

21A0366-07 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/26/2021 12:40

Instrument: HYDRA Analyst: BLC — Analyzed: 01/29/2021 14:06

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0366-07 C

Preparation Batch: BJA0731 — Sample Size: 0.22 g (wet) — Dry Weight:0.19 g

Prepared: 01/28/2021 — Final Volume: 50 mL — % Solids: 87.84

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00543	0.0259	0.0381	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30N-1

21A0366-09 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/26/2021 14:00

Instrument: FID4 Analyst: CTO — Analyzed: 02/07/2021 02:07

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0366-09 A 01

Preparation Batch: BJA0754 — Sample Size: 10.05 g (wet) — Dry Weight:8.77 g

Prepared: 02/03/2021 — Final Volume: 10 mL — % Solids: 87.29

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	5	285	2700	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	5	570	7270	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*80.0*	*%*	

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Analytical Chemists and Consultants

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30N-1

21A0366-09 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/26/2021 14:00

Instrument: ECD7 Analyst: JGR — Analyzed: 03/01/2021 17:05

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0366-09 A 02
	Preparation Batch: BJB0185	Sample Size: 1.03 g (wet)	Dry Weight:0.90 g
	Prepared: 02/06/2021	Final Volume: 5 mL	% Solids: 87.29
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0366-09 A 02
	Cleanup Batch: CJB0113	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0366-09 A 02
	Cleanup Batch: CJB0111	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0366-09 A 02
	Cleanup Batch: CJB0112	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	222	556	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	222	556	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	222	556	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	222	556	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	222	556	9670	ug/kg	D
Aroclor 1254	11097-69-1	5	222	556	4540	ug/kg	D
Aroclor 1260	11096-82-5	5	258	556	1660	ug/kg	D
Aroclor 1262	37324-23-5	5	258	556	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	258	556	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*81.3*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*81.6*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*71.0*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*85.3*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30N-1

21A0366-09 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/26/2021 14:00

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 14:10

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0366-09 C 01

Preparation Batch: BJB0143 — Sample Size: 1.057 g (wet) — Dry Weight:0.93 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 87.56

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	10	1.30	10.8	1440	mg/kg	D

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30N-1

21A0366-09 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/26/2021 14:00

Instrument: HYDRA Analyst: BLC — Analyzed: 01/29/2021 14:08

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0366-09 C

Preparation Batch: BJA0731 — Sample Size: 0.251 g (wet) — Dry Weight:0.22 g

Prepared: 01/28/2021 — Final Volume: 50 mL — % Solids: 87.56

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00478	0.0228	0.697	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30N-5

21A0366-11 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx | Sampled: 01/26/2021 14:10

Instrument: FID4 Analyst: CTO | Analyzed: 02/07/2021 02:28

Sample Preparation: Preparation Method: EPA 3546 (Microwave) | Extract ID: 21A0366-11 A 01

Preparation Batch: BJA0754 | Sample Size: 10.01 g (wet) | Dry Weight:8.79 g

Prepared: 02/03/2021 | Final Volume: 1 mL | % Solids: 87.84

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.69	23.1	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	11.4	19.3	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*92.8*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30N-5

21A0366-11 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/26/2021 14:10

Instrument: ECD7 Analyst: JGR — Analyzed: 03/01/2021 17:25

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0366-11 A 02
	Preparation Batch: BJB0185	Sample Size: 5.7 g (wet)	Dry Weight:5.01 g
	Prepared: 02/06/2021	Final Volume: 5 mL	% Solids: 87.84
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0366-11 A 02
	Cleanup Batch: CJB0113	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0366-11 A 02
	Cleanup Batch: CJB0111	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0366-11 A 02
	Cleanup Batch: CJB0112	Initial Volume: 5 mL	
	Cleaned: 18-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	8.0	20.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	8.0	20.0	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	8.0	20.0	20.0	ug/kg	
Aroclor 1254	11097-69-1	1	8.0	20.0	13.1	ug/kg	J
Aroclor 1260	11096-82-5	1	9.3	20.0	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	9.3	20.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.3	20.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*76.7*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*88.5*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*89.3*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*92.1*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30N-5

21A0366-11 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/26/2021 14:10

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 14:19

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0366-11 C 01

Preparation Batch: BJB0143 — Sample Size: 1.058 g (wet) — Dry Weight:0.91 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 86.24

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.263	2.19	4.49	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

P8-30N-5

21A0366-11 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/26/2021 14:10

Instrument: HYDRA Analyst: BLC — Analyzed: 01/29/2021 14:10

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0366-11 C

Preparation Batch: BJA0731 — Sample Size: 0.23 g (wet) — Dry Weight:0.20 g

Prepared: 01/28/2021 — Final Volume: 50 mL — % Solids: 86.24

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00529	0.0252	ND	mg/kg	U

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

Petroleum Hydrocarbons - Quality Control

Batch BJA0754 - EPA 3546 (Microwave)

Instrument: FID4 Analyst: CTO

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJA0754-BLK1)				Prepared: 03-Feb-2021	Analyzed: 07-Feb-2021 00:01					
Diesel Range Organics (C12-C24)	ND	5.00	mg/kg							U
Motor Oil Range Organics (C24-C38)	ND	10.0	mg/kg							U
Surrogate: o-Terphenyl	11.3		mg/kg	*11.3*		*101*	*50-150*			
LCS (BJA0754-BS1)				Prepared: 03-Feb-2021	Analyzed: 07-Feb-2021 00:22					
Diesel Range Organics (C12-C24)	124	5.00	mg/kg	150		82.8	63-120			
Surrogate: o-Terphenyl	10.2		mg/kg	*11.3*		*90.4*	*50-150*			
Matrix Spike (BJA0754-MS1)	**Source: 21A0366-11**			Prepared: 03-Feb-2021	Analyzed: 07-Feb-2021 02:49					
Diesel Range Organics (C12-C24)	266	5.69	mg/kg	171	23.1	142	63-120			*
Surrogate: o-Terphenyl	12.5		mg/kg	*12.8*	*11.9*	*98.0*	*50-150*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJA0754-MSD1)	**Source: 21A0366-11**			Prepared: 03-Feb-2021	Analyzed: 07-Feb-2021 03:10					
Diesel Range Organics (C12-C24)	225	5.69	mg/kg	171	23.1	118	63-120	16.70	30	
Surrogate: o-Terphenyl	13.2		mg/kg	*12.8*	*11.9*	*103*	*50-150*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

Aroclor PCB - Quality Control

Batch BJB0185 - EPA 3546 (Microwave)

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0185-BLK1)					Prepared: 06-Feb-2021	Analyzed: 01-Mar-2021 15:02					
Aroclor 1016	ND	8.0	20.0	ug/kg							U
Aroclor 1221	ND	8.0	20.0	ug/kg							U
Aroclor 1232	ND	8.0	20.0	ug/kg							U
Aroclor 1242	ND	8.0	20.0	ug/kg							U
Aroclor 1248	ND	8.0	20.0	ug/kg							U
Aroclor 1254	ND	8.0	20.0	ug/kg							U
Aroclor 1260	ND	9.3	20.0	ug/kg							U
Aroclor 1262	ND	9.3	20.0	ug/kg							U
Aroclor 1268	ND	9.3	20.0	ug/kg							U
Surrogate: Decachlorobiphenyl	30.3			ug/kg	*40.0*		*75.8*	*40-133*			
Surrogate: Tetrachlorometaxylene	33.4			ug/kg	*40.0*		*83.6*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	37.0			ug/kg	*40.0*		*92.6*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	30.1			ug/kg	*40.0*		*75.2*	*53-120*			
LCS (BJB0185-BS1)					Prepared: 06-Feb-2021	Analyzed: 01-Mar-2021 15:22					
Aroclor 1016 [2C]	448	8.0	20.0	ug/kg	500		89.5	52-120			
Aroclor 1260 [2C]	409	9.3	20.0	ug/kg	500		81.7	57-120			
Surrogate: Decachlorobiphenyl	29.1			ug/kg	*40.0*		*72.7*	*40-133*			
Surrogate: Tetrachlorometaxylene	32.5			ug/kg	*40.0*		*81.3*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	36.1			ug/kg	*40.0*		*90.2*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	27.7			ug/kg	*40.0*		*69.4*	*53-120*			
Matrix Spike (BJB0185-MS1)	**Source: 21A0366-11**				Prepared: 06-Feb-2021	Analyzed: 01-Mar-2021 17:46					
Aroclor 1016	458	8.0	20.0	ug/kg	500	ND	91.6	52-120			
Aroclor 1260	382	9.3	20.0	ug/kg	500	ND	76.3	57-120			
Surrogate: Decachlorobiphenyl	28.9			ug/kg	*40.0*		*72.2*	*40-133*			
Surrogate: Tetrachlorometaxylene	33.6			ug/kg	*40.0*		*84.0*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	33.7			ug/kg	*40.0*		*84.3*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	35.6			ug/kg	*40.0*		*88.9*	*53-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0185-MSD1)	**Source: 21A0366-11**				Prepared: 06-Feb-2021	Analyzed: 01-Mar-2021 18:07					
Aroclor 1016	478	8.0	20.0	ug/kg	500	ND	95.6	52-120	4.27	30	
Aroclor 1260	387	9.3	20.0	ug/kg	500	ND	77.4	57-120	1.43	30	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

Aroclor PCB - Quality Control

Batch BJB0185 - EPA 3546 (Microwave)

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0185-MSD1)	**Source: 21A0366-11**			Prepared: 06-Feb-2021	Analyzed: 01-Mar-2021 18:07						
Surrogate: Decachlorobiphenyl	29.5			ug/kg	*40.0*		*73.7*	*40-133*			
Surrogate: Tetrachlorometaxylene	33.3			ug/kg	*40.0*		*83.2*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	36.2			ug/kg	*40.0*		*90.6*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	34.3			ug/kg	*40.0*		*85.8*	*53-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

Metals and Metallic Compounds - Quality Control

Batch BJA0731 - SMM EPA 7471B

Instrument: HYDRA Analyst: BLC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJA0731-BLK1)					Prepared: 28-Jan-2021	Analyzed: 29-Jan-2021 13:28					
Mercury	ND	0.00525	0.0250	mg/kg							U
LCS (BJA0731-BS1)					Prepared: 28-Jan-2021	Analyzed: 29-Jan-2021 13:30					
Mercury	0.471	0.00525	0.0250	mg/kg	0.500		94.2	80-120			
Reference (BJA0731-SRM1)					Prepared: 28-Jan-2021	Analyzed: 29-Jan-2021 13:44					
Mercury	6.68	0.0498	0.237	mg/kg	5.99		111	74.1-126			D

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

Metals and Metallic Compounds - Quality Control

Batch BJB0143 - SWC EPA 3050B

Instrument: ICP2 Analyst: TCH

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0143-BLK1)				Prepared: 08-Feb-2021 Analyzed: 09-Feb-2021 13:56							
Lead	ND	0.240	2.00	mg/kg							U
LCS (BJB0143-BS1)				Prepared: 08-Feb-2021 Analyzed: 09-Feb-2021 13:59							
Lead	200	0.240	2.00	mg/kg	200		99.9	80-120			
Duplicate (BJB0143-DUP1)	**Source: 21A0366-01**			Prepared: 08-Feb-2021 Analyzed: 09-Feb-2021 14:36							
Lead	280	0.677	5.64	mg/kg		226			21.60	20	*, D
Matrix Spike (BJB0143-MS1)	**Source: 21A0366-01**			Prepared: 08-Feb-2021 Analyzed: 09-Feb-2021 14:41							
Lead	520	0.681	5.67	mg/kg	227	226	130	75-125			*, D

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0143-MSD1)	**Source: 21A0366-01**			Prepared: 08-Feb-2021 Analyzed: 09-Feb-2021 14:44							
Lead	395	0.677	5.64	mg/kg	226	226	74.9	75-125	27.30	20	*, D

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

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Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

Certified Analyses included in this Report

Analyte	Certifications
EPA 6010C in Solid	
Lead	NELAP,WADOE,DoD-ELAP,ADEC
Lead	NELAP,WADOE,DoD-ELAP,ADEC
Lead	WADOE,DoD-ELAP,ADEC
Lead	NELAP,DoD-ELAP,ADEC
EPA 7471B in Solid	
Mercury	WADOE,DoD-ELAP,CALAP
Mercury	NELAP,DoD-ELAP,CALAP
Mercury	WADOE,NELAP,DoD-ELAP
Mercury	WADOE,NELAP,DoD-ELAP,CALAP
EPA 8082A in Solid	
Aroclor 1016	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1016	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1016 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1221	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1221 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1232	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1232 [2C]	DoD-ELAP,NELAP,CALAP,ADEC

Aroclor 1242	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1242	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1242 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1248	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1248 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1254 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1260	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1260 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1262 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1268 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

NWTPH-Dx in Solid

Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP
Diesel Range Organics (Tol-C18)	DoD-ELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,WADOE
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP
Motor Oil Range Organics (C25-C36)	DoD-ELAP,WADOE

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP
Motor Oil Range Organics (C24-C40)	DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP
JP8 Range Organics (C8-C18)	DoD-ELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP
JP4 Range Organics (Tol-C14)	DoD-ELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP
Kerosene Range Organics (Tol-C18)	DoD-ELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP
Creosote Range Organics (C12-C22)	DoD-ELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP
Bunker C Range Organics (C10-C38)	DoD-ELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/28/2022

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	10-Mar-2021 19:27

Notes and Definitions

*	Flagged value is not within established control limits.
D	The reported value is from a dilution
D1	Surrogate was not detected due to sample extract dilution
J	Estimated concentration value detected below the reporting limit.
NRS	This surrogate not reported due to chromatographic interference
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

03 March 2021

Matt Dalton
Dalton, Olmsted & Fuglevand, Inc
6034 N Star Rd
Ferndale, WA 98248

RE: ICS-Former NW Cooperage

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
21A0377	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Cert# 100006-012

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21A0377	Turn-around Requested: Normal	Date: 1/28/21	
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466	Page: 1 of 2	
Client Contact: Matt Dalton / Dave Cooper		No. of Coolers: 1	Cooler Temps: 2.4
Client Project Name: ICS/Former NW Cooperage			
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)					ARCHIVE	Notes/Comments
LP8-10	1/27/2021	1520	soil	1-8oz 2-4oz	X	X	X	X							
LP8-12	1/27/2021	1530	soil	1-8oz 2-4oz	X	X	X	X							
LP6-6	1/28/2021	1330	soil	1-8oz 2-4oz	X	X	X	X							
LP6-10	1/29/2021	1340	soil	1-8oz 2-4oz	X	X	X	X							
LP6-12	1/30/2021	1350	soil	1-8oz 2-4oz	X	X	X	X							
LP11-3	1/31/2021	1150	soil	1-8oz 2-4oz	X	X	X	X							
LP11-6	2/1/2021	1200	soil	1-8oz 2-4oz	X	X	X	X							
LP11-11	2/2/2021	1210	soil	1-8oz 2-4oz	X	X	X	X							
LP10-5	2/3/2021	1100	soil	1-8oz 2-4oz	X	X	X	X							
LP10-7	2/4/2021	1110	soil	1-8oz 2-4oz	X	X	X	X							
LP10-710	2/5/2021	1120	soil	1-8oz 2-4oz	X	X	X	X							
LP9-5	2/6/2021	0920	soil	1-8oz 2-4oz	X	X	X	X							

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) Based on total metals	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: DG COOPER	Printed Name: BOB CONGLETON	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 1/28/21 0750	Date & Time: 1-28-21 750	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21A0377	Turn-around Requested: Normal	Date: 1/28/21	**Analytical Resources, Incorporated**
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466	Page: 2 of 2	Analytical Chemists and Consultants
Client Contact: Matt Dalton / Dave Cooper		No. of Coolers: 1 / Cooler Temps: 2.4	4611 South 134th Place, Suite 100, Tukwila, WA 98168
Client Project Name: ICS/Former NW Cooperage			206-695-6200 206-695-6201 (fax)
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti		

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
LP9-8	1/27/2021	0930	soil	1-8oz 2-4oz	X	X	X	X								
LP9-11	1/27/2021	0940	soil	1-8oz 2-4oz	X	X	X	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) Based on total metals	(Signature) [signature]	(Signature) Bob Congleton	(Signature)	(Signature)
	Printed Name: DG COOPER	Printed Name: BOB CONGLETON	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 1/28/21 0750	Date & Time: 1-28-21 750	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LP8-10	21A0377-01	Solid	27-Jan-2021 15:20	28-Jan-2021 07:50
LP8-12	21A0377-02	Solid	27-Jan-2021 15:30	28-Jan-2021 07:50
LP6-6	21A0377-03	Solid	27-Jan-2021 13:30	28-Jan-2021 07:50
LP6-10	21A0377-04	Solid	27-Jan-2021 13:40	28-Jan-2021 07:50
LP6-12	21A0377-05	Solid	27-Jan-2021 13:50	28-Jan-2021 07:50
LP11-3	21A0377-06	Solid	27-Jan-2021 11:50	28-Jan-2021 07:50
LP11-6	21A0377-07	Solid	27-Jan-2021 12:00	28-Jan-2021 07:50
LP11-11	21A0377-08	Solid	27-Jan-2021 12:10	28-Jan-2021 07:50
LP10-5	21A0377-09	Solid	27-Jan-2021 11:00	28-Jan-2021 07:50
LP10-7	21A0377-10	Solid	27-Jan-2021 11:10	28-Jan-2021 07:50
LP10-10	21A0377-11	Solid	27-Jan-2021 11:20	28-Jan-2021 07:50
LP9-5	21A0377-12	Solid	27-Jan-2021 09:20	28-Jan-2021 07:50
LP9-8	21A0377-13	Solid	27-Jan-2021 09:30	28-Jan-2021 07:50
LP9-11	21A0377-14	Solid	27-Jan-2021 09:40	28-Jan-2021 07:50

Work Order Case Narrative

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements with the exception of ar1260 ccv6 which fails low on one column. The second column is in control for SJB0353.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits with the exception of analytes flagged on the associated forms.

Total Metals - EPA Method 6010C and 7471B

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits with the exception of analytes flagged on the associated forms.

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Cooler Receipt Form

ARI Client: DOE
Project Name: ICS/NW Cooperage
COC No(s): NA
Delivered by: Fed-Ex UPS Courier Hand Delivered Other:
Assigned ARI Job No: 21A0377
Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler? YES **NO**

Were custody papers included with the cooler? ... **YES** NO

Were custody papers properly filled out (ink, signed, etc.) ... **YES** NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 0750 2.4

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: DOO 5206

Cooler Accepted by: JJ for Bob Congleton Date: 01/28/2021 Time: 0750

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? ... YES **NO**

What kind of packing material was used? ... Bubble Wrap **Wet Ice** Gel Packs **Baggies** Foam Block Paper Other:

Was sufficient ice used (if appropriate)? ... NA **YES** NO

How were bottles sealed in plastic bags? ... Individually **Grouped** Not

Did all bottles arrive in good condition (unbroken)? ... **YES** NO

Were all bottle labels complete and legible? ... **YES** NO

Did the number of containers listed on COC match with the number of containers received? ... **YES** NO

Did all bottle labels and tags agree with custody papers? ... YES **NO**

Were all bottles used correct for the requested analyses? ... **YES** NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ... **NA** YES NO

Were all VOC vials free of air bubbles? ... **NA** YES NO

Was sufficient amount of sample sent in each bottle? ... **YES** NO

Date VOC Trip Blank was made at ARI ... **NA**

Were the sample(s) split by ARI? **NA** YES Date/Time: Equipment: Split by:

Samples Logged by: JJ Date: 01/28/2021 Time: 0926 Labels checked by: JJ

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
LP10-10	LP10-710		
	JJ	01/28/2021	

Additional Notes, Discrepancies, & Resolutions:

Client has sampling dates in the future, logged w/date listed on sample labels 01/27/2021.

By: JJ Date: 01/28/2021

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP8-10

21A0377-01 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 15:20

Instrument: FID4 Analyst: CTO — Analyzed: 02/23/2021 15:59

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-01 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:7.22 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 71.86

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.92	333	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.8	531	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*88.9*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP8-10

21A0377-01 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/27/2021 15:20
Instrument: ECD7 Analyst: JGR — Analyzed: 02/23/2021 10:23

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0377-01 A 02
	Preparation Batch: BJB0265	Sample Size: 6.99 g (wet)	Dry Weight:5.02 g
	Prepared: 02/10/2021	Final Volume: 5 mL	% Solids: 71.86
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0377-01 A 02
	Cleanup Batch: CJB0143	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0377-01 A 02
	Cleanup Batch: CJB0141	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0377-01 A 02
	Cleanup Batch: CJB0142	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	39.8	99.5	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	39.8	99.5	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	39.8	99.5	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	39.8	99.5	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	39.8	99.5	4310	ug/kg	D
Aroclor 1254	11097-69-1	5	39.8	99.5	2210	ug/kg	D
Aroclor 1260	11096-82-5	5	46.2	99.5	1150	ug/kg	D
Aroclor 1262	37324-23-5	5	46.2	99.5	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.2	99.5	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*81.1*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*87.8*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*79.0*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*75.9*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP8-10

21A0377-01 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/27/2021 15:20

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 14:22

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0377-01 B 01

Preparation Batch: BJB0143 — Sample Size: 1.022 g (wet) — Dry Weight:0.76 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 74.79

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.314	2.62	30.5	mg/kg	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP8-10

21A0377-01 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/27/2021 15:20

Instrument: HYDRA Analyst: BLC — Analyzed: 02/04/2021 13:25

Sample Preparation:	Preparation Method: SMM EPA 7471B		Extract ID: 21A0377-01 C
	Preparation Batch: BJB0054	Sample Size: 0.28 g (wet)	Dry Weight:0.21 g
	Prepared: 02/02/2021	Final Volume: 50 mL	% Solids: 74.79

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00501	0.0239	0.0715	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP8-12

21A0377-02 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 15:30

Instrument: FID4 Analyst: CTO — Analyzed: 02/23/2021 16:20

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-02 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:7.35 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 73.10

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.81	71.9	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.6	73.1	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*90.8*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP8-12

21A0377-02 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/27/2021 15:30

Instrument: ECD7 Analyst: JGR — Analyzed: 02/23/2021 10:44

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0377-02 A 02
	Preparation Batch: BJB0265	Sample Size: 6.89 g (wet)	Dry Weight:5.04 g
	Prepared: 02/10/2021	Final Volume: 5 mL	% Solids: 73.10
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0377-02 A 02
	Cleanup Batch: CJB0143	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0377-02 A 02
	Cleanup Batch: CJB0141	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0377-02 A 02
	Cleanup Batch: CJB0142	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.9	19.9	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.9	19.9	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.9	19.9	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.9	19.9	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.9	19.9	361	ug/kg	
Aroclor 1254	11097-69-1	1	7.9	19.9	169	ug/kg	
Aroclor 1260	11096-82-5	1	9.2	19.9	118	ug/kg	
Aroclor 1262	37324-23-5	1	9.2	19.9	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.2	19.9	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*69.4*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*72.7*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*83.4*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*63.0*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP8-12

21A0377-02 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/27/2021 15:30

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 14:25

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0377-02 B 01

Preparation Batch: BJB0143 — Sample Size: 1.005 g (wet) — Dry Weight:0.76 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 75.51

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.316	2.64	2.25	mg/kg	J

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP8-12

21A0377-02 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/27/2021 15:30

Instrument: HYDRA Analyst: BLC — Analyzed: 02/04/2021 13:33

Sample Preparation:	Preparation Method: SMM EPA 7471B		Extract ID: 21A0377-02 C
	Preparation Batch: BJB0054	Sample Size: 0.264 g (wet)	Dry Weight:0.20 g
	Prepared: 02/02/2021	Final Volume: 50 mL	% Solids: 75.51

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00527	0.0251	0.0336	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP6-6

21A0377-03 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 13:30

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 06:46

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-03 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:8.25 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 82.05

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	10	60.6	565	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	10	121	1300	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*114*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP6-6

21A0377-03 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/27/2021 13:30

Instrument: ECD7 Analyst: JGR — Analyzed: 02/23/2021 11:04

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0377-03 A 02
	Preparation Batch: BJB0265	Sample Size: 6.09 g (wet)	Dry Weight:5.00 g
	Prepared: 02/10/2021	Final Volume: 5 mL	% Solids: 82.05
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0377-03 A 02
	Cleanup Batch: CJB0143	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0377-03 A 02
	Cleanup Batch: CJB0141	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0377-03 A 02
	Cleanup Batch: CJB0142	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	10	80.1	200	ND	ug/kg	U
Aroclor 1221	11104-28-2	10	80.1	200	ND	ug/kg	U
Aroclor 1232	11141-16-5	10	80.1	200	ND	ug/kg	U
Aroclor 1242	53469-21-9	10	80.1	200	ND	ug/kg	U
Aroclor 1248	12672-29-6	10	80.1	200	1930	ug/kg	D
Aroclor 1254	11097-69-1	10	80.1	200	916	ug/kg	D
Aroclor 1260	11096-82-5	10	92.9	200	799	ug/kg	D
Aroclor 1262	37324-23-5	10	92.9	200	ND	ug/kg	U
Aroclor 1268	11100-14-4	10	92.9	200	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*89.5*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*76.0*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*78.9*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*69.8*	*%*	

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Analytical Report

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6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP6-6

21A0377-03 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/27/2021 13:30

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 14:27

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0377-03 B 01

Preparation Batch: BJB0143 — Sample Size: 1.077 g (wet) — Dry Weight:0.86 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 80.10

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.278	2.32	210	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP6-6

21A0377-03 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/27/2021 13:30

Instrument: HYDRA Analyst: BLC — Analyzed: 02/04/2021 13:35

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0377-03 C

Preparation Batch: BJB0054 — Sample Size: 0.282 g (wet) — Dry Weight:0.23 g

Prepared: 02/02/2021 — Final Volume: 50 mL — % Solids: 80.10

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00465	0.0221	0.217	mg/kg	

Analytical Resources, Incorporated
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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP6-10

21A0377-04 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 13:40

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 10:35

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-04 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:5.61 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 55.82

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	50	446	9940	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	50	891	23500	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*84.4*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP6-10

21A0377-04 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/27/2021 13:40

Instrument: ECD7 Analyst: JGR — Analyzed: 02/23/2021 11:25

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0377-04 A 02
	Preparation Batch: BJB0265	Sample Size: 1 g (wet)	Dry Weight:0.56 g
	Prepared: 02/10/2021	Final Volume: 5 mL	% Solids: 55.82
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0377-04 A 02
	Cleanup Batch: CJB0143	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0377-04 A 02
	Cleanup Batch: CJB0141	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0377-04 A 02
	Cleanup Batch: CJB0142	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	10	717	1790	ND	ug/kg	U
Aroclor 1221	11104-28-2	10	717	1790	ND	ug/kg	U
Aroclor 1232	11141-16-5	10	717	1790	ND	ug/kg	U
Aroclor 1242	53469-21-9	10	717	1790	ND	ug/kg	U
Aroclor 1248	12672-29-6	10	717	1790	22500	ug/kg	D
Aroclor 1254	11097-69-1	10	717	1790	18500	ug/kg	D
Aroclor 1260	11096-82-5	10	831	1790	11000	ug/kg	D
Aroclor 1262	37324-23-5	10	831	1790	ND	ug/kg	U
Aroclor 1268	11100-14-4	10	831	1790	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*82.9*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*64.3*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*78.4*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*67.2*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP6-10

21A0377-04 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/27/2021 13:40

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 14:30

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0377-04 B 01

Preparation Batch: BJB0143 — Sample Size: 1.034 g (wet) — Dry Weight:0.52 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 50.50

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	5	1.15	9.58	892	mg/kg	D

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP6-10

21A0377-04 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/27/2021 13:40

Instrument: HYDRA Analyst: BLC — Analyzed: 02/04/2021 13:50

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0377-04 C

Preparation Batch: BJB0054 — Sample Size: 0.244 g (wet) — Dry Weight:0.12 g

Prepared: 02/02/2021 — Final Volume: 50 mL — % Solids: 50.50

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	20	0.170	0.812	27.8	mg/kg	D

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP6-12

21A0377-05 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 13:50

Instrument: FID4 Analyst: CTO — Analyzed: 02/23/2021 17:23

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-05 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:7.21 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 71.71

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.94	128	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.9	228	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*106*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP6-12

21A0377-05 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/27/2021 13:50

Instrument: ECD7 Analyst: JGR — Analyzed: 02/23/2021 11:45

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0377-05 A 02
	Preparation Batch: BJB0265	Sample Size: 7 g (wet)	Dry Weight:5.02 g
	Prepared: 02/10/2021	Final Volume: 5 mL	% Solids: 71.71
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0377-05 A 02
	Cleanup Batch: CJB0143	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0377-05 A 02
	Cleanup Batch: CJB0141	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0377-05 A 02
	Cleanup Batch: CJB0142	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	39.8	99.6	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	39.8	99.6	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	39.8	99.6	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	39.8	99.6	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	39.8	99.6	1270	ug/kg	D
Aroclor 1254	11097-69-1	5	39.8	99.6	793	ug/kg	D
Aroclor 1260	11096-82-5	5	46.2	99.6	720	ug/kg	D
Aroclor 1262	37324-23-5	5	46.2	99.6	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.2	99.6	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*80.3*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*75.0*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*80.0*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*69.5*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP6-12

21A0377-05 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/27/2021 13:50

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 14:33

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0377-05 B 01

Preparation Batch: BJB0143 — Sample Size: 1.094 g (wet) — Dry Weight:0.79 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 72.14

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.304	2.53	6.46	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP6-12

21A0377-05 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/27/2021 13:50

Instrument: HYDRA Analyst: BLC — Analyzed: 02/04/2021 13:52

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0377-05 C

Preparation Batch: BJB0054 — Sample Size: 0.206 g (wet) — Dry Weight:0.15 g

Prepared: 02/02/2021 — Final Volume: 50 mL — % Solids: 72.14

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00707	0.0336	0.0464	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP11-3

21A0377-06 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 11:50

Instrument: FID4 Analyst: CTO — Analyzed: 02/23/2021 17:44

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-06 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:8.82 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 87.80

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.67	175	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	11.3	443	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*96.8*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP11-3

21A0377-06 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/27/2021 11:50

Instrument: ECD7 Analyst: JGR — Analyzed: 02/23/2021 12:06

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0377-06 A 02
	Preparation Batch: BJB0265	Sample Size: 5.73 g (wet)	Dry Weight:5.03 g
	Prepared: 02/10/2021	Final Volume: 5 mL	% Solids: 87.80
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0377-06 A 02
	Cleanup Batch: CJB0143	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0377-06 A 02
	Cleanup Batch: CJB0141	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0377-06 A 02
	Cleanup Batch: CJB0142	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	39.8	99.4	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	39.8	99.4	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	39.8	99.4	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	39.8	99.4	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	39.8	99.4	226	ug/kg	D
Aroclor 1254	11097-69-1	5	39.8	99.4	133	ug/kg	D
Aroclor 1260	11096-82-5	5	46.1	99.4	ND	ug/kg	U
Aroclor 1262	37324-23-5	5	46.1	99.4	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.1	99.4	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*88.9*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*79.8*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*83.1*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*75.6*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP11-3

21A0377-06 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/27/2021 11:50

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 14:53

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0377-06 B 01

Preparation Batch: BJB0143 — Sample Size: 1.038 g (wet) — Dry Weight:0.81 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 78.25

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.295	2.46	18.5	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP11-3

21A0377-06 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B | Sampled: 01/27/2021 11:50

Instrument: HYDRA Analyst: BLC | Analyzed: 02/04/2021 13:54

Sample Preparation: Preparation Method: SMM EPA 7471B | Extract ID: 21A0377-06 C

Preparation Batch: BJB0054 | Sample Size: 0.253 g (wet) | Dry Weight:0.20 g

Prepared: 02/02/2021 | Final Volume: 50 mL | % Solids: 78.25

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00530	0.0253	0.0697	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP11-6

21A0377-07 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 12:00

Instrument: FID4 Analyst: CTO — Analyzed: 02/23/2021 18:05

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-07 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:8.49 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 84.48

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.89	631	mg/kg	E
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	11.8	1030	mg/kg	E
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*89.0*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP11-6

21A0377-07 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/27/2021 12:00

Instrument: ECD7 Analyst: JGR — Analyzed: 02/25/2021 09:16

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0377-07 A 02
	Preparation Batch: BJB0265	Sample Size: 5.96 g (wet)	Dry Weight:5.04 g
	Prepared: 02/10/2021	Final Volume: 5 mL	% Solids: 84.48
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0377-07 A 02
	Cleanup Batch: CJB0143	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0377-07 A 02
	Cleanup Batch: CJB0141	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0377-07 A 02
	Cleanup Batch: CJB0142	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	50	397	993	ND	ug/kg	U
Aroclor 1221	11104-28-2	50	397	993	ND	ug/kg	U
Aroclor 1232	11141-16-5	50	397	993	ND	ug/kg	U
Aroclor 1242	53469-21-9	50	397	993	ND	ug/kg	U
Aroclor 1248	12672-29-6	50	397	993	11800	ug/kg	D
Aroclor 1254	11097-69-1	50	397	993	4410	ug/kg	D
Aroclor 1260	11096-82-5	50	461	993	2900	ug/kg	D
Aroclor 1262	37324-23-5	50	461	993	ND	ug/kg	U
Aroclor 1268	11100-14-4	50	461	993	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*		*D1*	D1, P1
Surrogate: Tetrachlorometaxylene				*53-120 %*		*D1*	D1
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*		*D1*	D1, P1
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*		*D1*	D1

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP11-6

21A0377-07 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/27/2021 12:00

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 14:56

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0377-07 B 01

Preparation Batch: BJB0143 — Sample Size: 1.026 g (wet) — Dry Weight:0.87 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 85.20

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.275	2.29	144	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP11-6

21A0377-07 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/27/2021 12:00

Instrument: HYDRA Analyst: BLC — Analyzed: 02/04/2021 13:56

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0377-07 C

Preparation Batch: BJB0054 — Sample Size: 0.263 g (wet) — Dry Weight:0.22 g

Prepared: 02/02/2021 — Final Volume: 50 mL — % Solids: 85.20

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00469	0.0223	0.148	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP11-6

21A0377-07RE1 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 12:00

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 10:56

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-07RE1 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:8.49 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 84.48

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	10	58.9	704	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	10	118	1200	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*115*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP11-11

21A0377-08 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 12:10

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 11:17

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-08 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:8.12 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 80.75

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	10	61.6	751	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	10	123	1260	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*109*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP11-11

21A0377-08 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/27/2021 12:10

Instrument: ECD7 Analyst: JGR — Analyzed: 02/25/2021 09:37

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0377-08 A 02
	Preparation Batch: BJB0265	Sample Size: 6.21 g (wet)	Dry Weight:5.01 g
	Prepared: 02/10/2021	Final Volume: 5 mL	% Solids: 80.75
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0377-08 A 02
	Cleanup Batch: CJB0143	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0377-08 A 02
	Cleanup Batch: CJB0141	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0377-08 A 02
	Cleanup Batch: CJB0142	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	25	199	499	ND	ug/kg	U
Aroclor 1221	11104-28-2	25	199	499	ND	ug/kg	U
Aroclor 1232	11141-16-5	25	199	499	ND	ug/kg	U
Aroclor 1242	53469-21-9	25	199	499	ND	ug/kg	U
Aroclor 1248	12672-29-6	25	199	499	10600	ug/kg	D
Aroclor 1254	11097-69-1	25	199	499	8530	ug/kg	D
Aroclor 1260	11096-82-5	25	231	499	13000	ug/kg	D
Aroclor 1262	37324-23-5	25	231	499	ND	ug/kg	U
Aroclor 1268	11100-14-4	25	231	499	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*103*	*%*	P1
Surrogate: Tetrachlorometaxylene				*53-120 %*	*84.8*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*64.8*	*%*	P1
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*80.4*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP11-11

21A0377-08 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/27/2021 12:10

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 14:59

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0377-08 B 01

Preparation Batch: BJB0143 — Sample Size: 1.044 g (wet) — Dry Weight:0.83 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 79.37

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.290	2.41	381	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP11-11

21A0377-08 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/27/2021 12:10

Instrument: HYDRA Analyst: BLC — Analyzed: 02/04/2021 13:58

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0377-08 C

Preparation Batch: BJB0054 — Sample Size: 0.224 g (wet) — Dry Weight:0.18 g

Prepared: 02/02/2021 — Final Volume: 50 mL — % Solids: 79.37

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00591	0.0281	0.375	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP10-5

21A0377-09 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 11:00

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 11:38

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-09 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:8.32 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 82.82

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	10	60.1	559	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	10	120	1180	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*108*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP10-5

21A0377-09 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/27/2021 11:00

Instrument: ECD7 Analyst: JGR — Analyzed: 02/25/2021 09:57

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0377-09 A 02
	Preparation Batch: BJB0265	Sample Size: 6.06 g (wet)	Dry Weight:5.02 g
	Prepared: 02/10/2021	Final Volume: 5 mL	% Solids: 82.82
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0377-09 A 02
	Cleanup Batch: CJB0143	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0377-09 A 02
	Cleanup Batch: CJB0141	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0377-09 A 02
	Cleanup Batch: CJB0142	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	10	79.7	199	ND	ug/kg	U
Aroclor 1221	11104-28-2	10	79.7	199	ND	ug/kg	U
Aroclor 1232	11141-16-5	10	79.7	199	ND	ug/kg	U
Aroclor 1242	53469-21-9	10	79.7	199	ND	ug/kg	U
Aroclor 1248	12672-29-6	10	79.7	199	4090	ug/kg	D
Aroclor 1254	11097-69-1	10	79.7	199	2820	ug/kg	P1, D
Aroclor 1260	11096-82-5	10	92.5	199	1600	ug/kg	D
Aroclor 1262	37324-23-5	10	92.5	199	ND	ug/kg	U
Aroclor 1268	11100-14-4	10	92.5	199	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*88.7*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*77.9*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*60.5*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*73.7*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP10-5

21A0377-09 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/27/2021 11:00

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 15:02

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0377-09 B 01

Preparation Batch: BJB0143 — Sample Size: 1.036 g (wet) — Dry Weight:0.88 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 85.13

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.272	2.27	119	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP10-5

21A0377-09 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/27/2021 11:00

Instrument: HYDRA Analyst: BLC — Analyzed: 02/04/2021 14:00

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0377-09 C

Preparation Batch: BJB0054 — Sample Size: 0.216 g (wet) — Dry Weight:0.18 g

Prepared: 02/02/2021 — Final Volume: 50 mL — % Solids: 85.13

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00571	0.0272	0.0882	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP10-7

21A0377-10 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 11:10

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 12:41

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-10 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:7.02 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 69.88

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	50	356	3680	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	50	712	11200	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*111*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP10-7

21A0377-10 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/27/2021 11:10

Instrument: ECD7 Analyst: JGR — Analyzed: 02/25/2021 10:18

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0377-10 A 02
	Preparation Batch: BJB0265	Sample Size: 1.03 g (wet)	Dry Weight:0.72 g
	Prepared: 02/10/2021	Final Volume: 5 mL	% Solids: 69.88
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0377-10 A 02
	Cleanup Batch: CJB0143	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0377-10 A 02
	Cleanup Batch: CJB0141	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0377-10 A 02
	Cleanup Batch: CJB0142	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	10	556	1390	ND	ug/kg	U
Aroclor 1221	11104-28-2	10	556	1390	ND	ug/kg	U
Aroclor 1232	11141-16-5	10	556	1390	ND	ug/kg	U
Aroclor 1242	53469-21-9	10	556	1390	ND	ug/kg	U
Aroclor 1248	12672-29-6	10	556	1390	10500	ug/kg	D
Aroclor 1254	11097-69-1	10	556	1390	7580	ug/kg	D
Aroclor 1260	11096-82-5	10	645	1390	4320	ug/kg	D
Aroclor 1262	37324-23-5	10	645	1390	ND	ug/kg	U
Aroclor 1268	11100-14-4	10	645	1390	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*110*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*76.0*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*77.1*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*77.9*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP10-7

21A0377-10 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/27/2021 11:10

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 15:04

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0377-10 B 01

Preparation Batch: BJB0143 — Sample Size: 1.059 g (wet) — Dry Weight:0.78 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 73.21

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.310	2.58	311	mg/kg	

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6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP10-7

21A0377-10 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/27/2021 11:10

Instrument: HYDRA Analyst: BLC — Analyzed: 02/04/2021 14:02

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0377-10 C

Preparation Batch: BJB0054 — Sample Size: 0.236 g (wet) — Dry Weight:0.17 g

Prepared: 02/02/2021 — Final Volume: 50 mL — % Solids: 73.21

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00608	0.0289	0.124	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP10-10

21A0377-11 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 11:20

Instrument: FID4 Analyst: CTO — Analyzed: 02/23/2021 20:53

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-11 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:7.20 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 71.64

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.94	90.1	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.9	122	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*110*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP10-10

21A0377-11 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/27/2021 11:20

Instrument: ECD7 Analyst: JGR — Analyzed: 02/25/2021 10:38

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0377-11 A 02
	Preparation Batch: BJB0265	Sample Size: 7 g (wet)	Dry Weight:5.01 g
	Prepared: 02/10/2021	Final Volume: 5 mL	% Solids: 71.64
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0377-11 A 02
	Cleanup Batch: CJB0143	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0377-11 A 02
	Cleanup Batch: CJB0141	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0377-11 A 02
	Cleanup Batch: CJB0142	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	39.9	99.7	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	39.9	99.7	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	39.9	99.7	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	39.9	99.7	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	39.9	99.7	759	ug/kg	D
Aroclor 1254	11097-69-1	5	39.9	99.7	455	ug/kg	D
Aroclor 1260	11096-82-5	5	46.3	99.7	269	ug/kg	D
Aroclor 1262	37324-23-5	5	46.3	99.7	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.3	99.7	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*83.4*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*78.1*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*66.9*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*73.7*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP10-10

21A0377-11 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/27/2021 11:20

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 15:07

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0377-11 B 01

Preparation Batch: BJB0143 — Sample Size: 1.038 g (wet) — Dry Weight:0.73 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 69.91

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.331	2.76	7.61	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP10-10

21A0377-11 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/27/2021 11:20

Instrument: HYDRA Analyst: BLC — Analyzed: 02/04/2021 14:04

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0377-11 C

Preparation Batch: BJB0054 — Sample Size: 0.288 g (wet) — Dry Weight:0.20 g

Prepared: 02/02/2021 — Final Volume: 50 mL — % Solids: 69.91

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00522	0.0248	0.172	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP9-5

21A0377-12 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 09:20

Instrument: FID4 Analyst: CTO — Analyzed: 02/23/2021 21:14

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-12 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:7.66 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 76.19

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.53	ND	mg/kg	U
Motor Oil Range Organics (C24-C38)	RRO	1	13.1	16.1	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*114*	*%*	

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6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP9-5

21A0377-12 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/27/2021 09:20

Instrument: ECD7 Analyst: JGR — Analyzed: 02/25/2021 10:59

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0377-12 A 02
	Preparation Batch: BJB0265	Sample Size: 6.58 g (wet)	Dry Weight:5.01 g
	Prepared: 02/10/2021	Final Volume: 5 mL	% Solids: 76.19
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0377-12 A 02
	Cleanup Batch: CJB0143	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0377-12 A 02
	Cleanup Batch: CJB0141	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0377-12 A 02
	Cleanup Batch: CJB0142	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	8.0	19.9	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	8.0	19.9	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	8.0	19.9	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	8.0	19.9	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	8.0	19.9	68.5	ug/kg	
Aroclor 1254	11097-69-1	1	8.0	19.9	67.1	ug/kg	
Aroclor 1260	11096-82-5	1	9.3	19.9	32.8	ug/kg	
Aroclor 1262	37324-23-5	1	9.3	19.9	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.3	19.9	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*79.4*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*87.3*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*97.0*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*71.7*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP9-5

21A0377-12 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/27/2021 09:20

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 15:10

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0377-12 B 01

Preparation Batch: BJB0143 — Sample Size: 1.065 g (wet) — Dry Weight:0.79 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 74.52

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.302	2.52	2.94	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP9-5

21A0377-12 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/27/2021 09:20

Instrument: HYDRA Analyst: BLC — Analyzed: 02/04/2021 14:06

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0377-12 C

Preparation Batch: BJB0054 — Sample Size: 0.229 g (wet) — Dry Weight:0.17 g

Prepared: 02/02/2021 — Final Volume: 50 mL — % Solids: 74.52

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00615	0.0293	0.0261	mg/kg	J

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP9-8

21A0377-13 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 09:30

Instrument: FID4 Analyst: CTO — Analyzed: 02/23/2021 21:34

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-13 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:7.32 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 72.82

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.83	7.05	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.7	20.2	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*112*	*%*	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP9-8

21A0377-13 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/27/2021 09:30

Instrument: ECD7 Analyst: JGR — Analyzed: 02/25/2021 11:19

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0377-13 A 02
	Preparation Batch: BJB0265	Sample Size: 6.94 g (wet)	Dry Weight:5.05 g
	Prepared: 02/10/2021	Final Volume: 5 mL	% Solids: 72.82
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0377-13 A 02
	Cleanup Batch: CJB0143	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0377-13 A 02
	Cleanup Batch: CJB0141	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0377-13 A 02
	Cleanup Batch: CJB0142	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.9	19.8	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.9	19.8	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.9	19.8	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.9	19.8	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.9	19.8	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	7.9	19.8	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	9.2	19.8	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	9.2	19.8	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.2	19.8	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*71.0*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*81.7*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*79.7*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*62.8*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP9-8

21A0377-13 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/27/2021 09:30

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 15:13

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0377-13 B 01

Preparation Batch: BJB0143 — Sample Size: 1.066 g (wet) — Dry Weight:0.73 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 68.30

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.330	2.75	3.06	mg/kg	

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Analytical Chemists and Consultants

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP9-8

21A0377-13 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/27/2021 09:30

Instrument: HYDRA Analyst: BLC — Analyzed: 02/04/2021 14:13

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0377-13 C

Preparation Batch: BJB0054 — Sample Size: 0.216 g (wet) — Dry Weight:0.15 g

Prepared: 02/02/2021 — Final Volume: 50 mL — % Solids: 68.30

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00712	0.0339	0.0270	mg/kg	J

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP9-11

21A0377-14 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/27/2021 09:40

Instrument: FID4 Analyst: CTO — Analyzed: 02/23/2021 21:55

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0377-14 A 01

Preparation Batch: BJB0263 — Sample Size: 10.05 g (wet) — Dry Weight:7.28 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 72.41

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.87	8.27	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.7	23.7	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*118*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP9-11

21A0377-14 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/27/2021 09:40

Instrument: ECD7 Analyst: JGR — Analyzed: 02/25/2021 11:40

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0377-14 A 02
	Preparation Batch: BJB0265	Sample Size: 6.97 g (wet)	Dry Weight:5.05 g
	Prepared: 02/10/2021	Final Volume: 5 mL	% Solids: 72.41
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0377-14 A 02
	Cleanup Batch: CJB0143	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0377-14 A 02
	Cleanup Batch: CJB0141	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0377-14 A 02
	Cleanup Batch: CJB0142	Initial Volume: 5 mL	
	Cleaned: 22-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.9	19.8	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.9	19.8	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.9	19.8	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.9	19.8	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.9	19.8	58.9	ug/kg	
Aroclor 1254	11097-69-1	1	7.9	19.8	30.6	ug/kg	
Aroclor 1260	11096-82-5	1	9.2	19.8	20.5	ug/kg	
Aroclor 1262	37324-23-5	1	9.2	19.8	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.2	19.8	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*64.7*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*71.5*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*71.5*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*58.3*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP9-11

21A0377-14 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/27/2021 09:40

Instrument: ICP2 Analyst: TCH — Analyzed: 02/09/2021 15:16

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0377-14 B 01

Preparation Batch: BJB0143 — Sample Size: 1.023 g (wet) — Dry Weight:0.71 g

Prepared: 02/08/2021 — Final Volume: 50 mL — % Solids: 69.80

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.336	2.80	2.31	mg/kg	J

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

LP9-11

21A0377-14 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/27/2021 09:40

Instrument: HYDRA Analyst: BLC — Analyzed: 02/04/2021 14:15

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0377-14 C

Preparation Batch: BJB0054 — Sample Size: 0.221 g (wet) — Dry Weight:0.15 g

Prepared: 02/02/2021 — Final Volume: 50 mL — % Solids: 69.80

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00681	0.0324	0.0142	mg/kg	J

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

Petroleum Hydrocarbons - Quality Control

Batch BJB0263 - EPA 3546 (Microwave)

Instrument: FID4 Analyst: CTO

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0263-BLK1)				Prepared: 10-Feb-2021	Analyzed: 23-Feb-2021 15:18					
Diesel Range Organics (C12-C24)	ND	5.00	mg/kg							U
Motor Oil Range Organics (C24-C38)	ND	10.0	mg/kg							U
Surrogate: o-Terphenyl	10.5		mg/kg	*11.3*		*93.7*	*50-150*			
LCS (BJB0263-BS1)				Prepared: 10-Feb-2021	Analyzed: 23-Feb-2021 15:38					
Diesel Range Organics (C12-C24)	150	5.00	mg/kg	150		100	63-120			
Surrogate: o-Terphenyl	14.0		mg/kg	*11.3*		*125*	*50-150*			
Matrix Spike (BJB0263-MS1)	**Source: 21A0377-07**			Prepared: 10-Feb-2021	Analyzed: 23-Feb-2021 18:47					
Diesel Range Organics (C12-C24)	827	5.89	mg/kg	177	631	111	63-120			E
Surrogate: o-Terphenyl	9.73		mg/kg	*13.3*	*11.8*	*73.4*	*50-150*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0263-MSD1)	**Source: 21A0377-07**			Prepared: 10-Feb-2021	Analyzed: 23-Feb-2021 19:08					
Diesel Range Organics (C12-C24)	907	5.89	mg/kg	177	631	156	63-120	9.22	30	*, E
Surrogate: o-Terphenyl	12.6		mg/kg	*13.3*	*11.8*	*94.8*	*50-150*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

Aroclor PCB - Quality Control

Batch BJB0265 - EPA 3546 (Microwave)

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0265-BLK1)					Prepared: 10-Feb-2021	Analyzed: 23-Feb-2021 09:42					
Aroclor 1016	ND	8.0	20.0	ug/kg							U
Aroclor 1221	ND	8.0	20.0	ug/kg							U
Aroclor 1232	ND	8.0	20.0	ug/kg							U
Aroclor 1242	ND	8.0	20.0	ug/kg							U
Aroclor 1248	ND	8.0	20.0	ug/kg							U
Aroclor 1254	ND	8.0	20.0	ug/kg							U
Aroclor 1260	ND	9.3	20.0	ug/kg							U
Aroclor 1262	ND	9.3	20.0	ug/kg							U
Aroclor 1268	ND	9.3	20.0	ug/kg							U
Surrogate: Decachlorobiphenyl	30.1			ug/kg	*40.0*		*75.4*	*40-133*			
Surrogate: Tetrachlorometaxylene	31.6			ug/kg	*40.0*		*79.1*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	36.6			ug/kg	*40.0*		*91.4*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	25.4			ug/kg	*40.0*		*63.5*	*53-120*			
LCS (BJB0265-BS1)					Prepared: 10-Feb-2021	Analyzed: 23-Feb-2021 10:03					
Aroclor 1016 [2C]	426	8.0	20.0	ug/kg	500		85.1	52-120			
Aroclor 1260 [2C]	474	9.3	20.0	ug/kg	500		94.8	57-120			
Surrogate: Decachlorobiphenyl	31.4			ug/kg	*40.0*		*78.5*	*40-133*			
Surrogate: Tetrachlorometaxylene	31.8			ug/kg	*40.0*		*79.5*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	38.6			ug/kg	*40.0*		*96.5*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	25.6			ug/kg	*40.0*		*64.1*	*53-120*			
Matrix Spike (BJB0265-MS1)		**Source: 21A0377-06**			Prepared: 10-Feb-2021	Analyzed: 23-Feb-2021 12:26					
Aroclor 1016	585	39.5	98.9	ug/kg	494	ND	118	52-120			D
Aroclor 1260 [2C]	426	45.9	98.9	ug/kg	494	51.1	86.2	57-120			D
Surrogate: Decachlorobiphenyl	35.0			ug/kg	*39.5*		*88.6*	*40-133*			
Surrogate: Tetrachlorometaxylene	32.2			ug/kg	*39.5*		*81.4*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	33.7			ug/kg	*39.5*		*85.3*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	28.8			ug/kg	*39.5*		*72.7*	*53-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0265-MSD1)		**Source: 21A0377-06**			Prepared: 10-Feb-2021	Analyzed: 23-Feb-2021 12:47					
Aroclor 1016	527	39.7	99.2	ug/kg	496	ND	106	52-120	10.40	30	D
Aroclor 1260 [2C]	344	46.0	99.2	ug/kg	496	ND	69.3	57-120	21.20	30	D

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

Aroclor PCB - Quality Control

Batch BJB0265 - EPA 3546 (Microwave)

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0265-MSD1)	**Source: 21A0377-06**			Prepared: 10-Feb-2021 Analyzed: 23-Feb-2021 12:47							
Surrogate: Decachlorobiphenyl	32.0			ug/kg	*39.7*		*80.7*	*40-133*			
Surrogate: Tetrachlorometaxylene	29.2			ug/kg	*39.7*		*73.5*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	30.7			ug/kg	*39.7*		*77.3*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	26.8			ug/kg	*39.7*		*67.4*	*53-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

Metals and Metallic Compounds - Quality Control

Batch BJB0054 - SMM EPA 7471B

Instrument: HYDRA Analyst: BLC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0054-BLK1)				Prepared: 02-Feb-2021 Analyzed: 04-Feb-2021 13:21							
Mercury	ND	0.00525	0.0250	mg/kg							U
LCS (BJB0054-BS1)				Prepared: 02-Feb-2021 Analyzed: 04-Feb-2021 13:23							
Mercury	0.481	0.00525	0.0250	mg/kg	0.500		96.1	80-120			
Duplicate (BJB0054-DUP1)	**Source: 21A0377-01**			Prepared: 02-Feb-2021 Analyzed: 04-Feb-2021 13:27							
Mercury	0.152	0.00507	0.0241	mg/kg		0.0715			71.90	20	*
Matrix Spike (BJB0054-MS1)	**Source: 21A0377-01**			Prepared: 02-Feb-2021 Analyzed: 04-Feb-2021 13:29							
Mercury	0.410	0.00500	0.0238	mg/kg	0.238	0.0715	142	75-125			*

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0054-MSD1)	**Source: 21A0377-01**			Prepared: 02-Feb-2021 Analyzed: 04-Feb-2021 13:31							
Mercury	0.355	0.00503	0.0240	mg/kg	0.240	0.0715	118	75-125	14.30	20	

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

Metals and Metallic Compounds - Quality Control

Batch BJB0143 - SWC EPA 3050B

Instrument: ICP2 Analyst: TCH

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0143-BLK1)					Prepared: 08-Feb-2021 Analyzed: 09-Feb-2021 13:56						
Lead	ND	0.240	2.00	mg/kg							U
LCS (BJB0143-BS1)					Prepared: 08-Feb-2021 Analyzed: 09-Feb-2021 13:59						
Lead	200	0.240	2.00	mg/kg	200		99.9	80-120			

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

Certified Analyses included in this Report

Analyte	Certifications
EPA 6010C in Solid	
Lead	NELAP,WADOE,DoD-ELAP,ADEC
Lead	NELAP,WADOE,DoD-ELAP,ADEC
Lead	WADOE,DoD-ELAP,ADEC
Lead	NELAP,DoD-ELAP,ADEC
EPA 7471B in Solid	
Mercury	WADOE,DoD-ELAP,CALAP
Mercury	NELAP,DoD-ELAP,CALAP
Mercury	WADOE,NELAP,DoD-ELAP
Mercury	WADOE,NELAP,DoD-ELAP,CALAP
EPA 8082A in Solid	
Aroclor 1016	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1016	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1016 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1221	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1221 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1232	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1232 [2C]	DoD-ELAP,NELAP,CALAP,ADEC

Aroclor 1242	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1242	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1242 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1248	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1248 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1254 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1260	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1260 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1262 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1268 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

NWTPH-Dx in Solid

Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP
Diesel Range Organics (Tol-C18)	DoD-ELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,WADOE
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP
Motor Oil Range Organics (C25-C36)	DoD-ELAP,WADOE

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP
Motor Oil Range Organics (C24-C40)	DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP
JP8 Range Organics (C8-C18)	DoD-ELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP
JP4 Range Organics (Tol-C14)	DoD-ELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP
Kerosene Range Organics (Tol-C18)	DoD-ELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP
Creosote Range Organics (C12-C22)	DoD-ELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP
Bunker C Range Organics (C10-C38)	DoD-ELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/28/2022

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	03-Mar-2021 14:50

Notes and Definitions

*	Flagged value is not within established control limits.
D	The reported value is from a dilution
D1	Surrogate was not detected due to sample extract dilution
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
J	Estimated concentration value detected below the reporting limit.
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

15 March 2021

Matt Dalton
Dalton, Olmsted & Fuglevand, Inc
6034 N Star Rd
Ferndale, WA 98248

RE: ICS-Former NW Cooperage

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
21A0396	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21A0396	Turn-around Requested: Normal
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466
Client Contact: Matt Dalton / Dave Cooper	
Client Project Name: ICS/Former NW Cooperage	
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti

Date:	1/29/21
Page: 1	of 2
No. of Coolers: 2	Cooler Temps: 3.9 1.7

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)					ARCHIVE	Notes/Comments
LP15-5	1/28/2021	1500	soil	1-8oz 2-4oz	X	X	X	X							
LP15-7	1/28/2021	1505	soil	1-8oz 2-4oz										X	
LP15-10	1/28/2021	1510	soil	1-8oz 2-4oz	X	X	X	X							
LP15-12	1/28/2021	1520	soil	1-8oz 2-4oz										X	
LP15-14	1/28/2021	1530	soil	1-8oz 2-4oz	X	X	X	X							
LP16-5	1/28/2021	1400	soil	1-8oz 2-4oz	X	X	X	X							
LP16-7	1/28/2021	1410	soil	1-8oz 2-4oz	X	X	X	X							
LP16-10	1/28/2021	1420	soil	1-8oz 2-4oz	X	X	X	X							
LP14-5	1/28/2021	1250	soil	1-8oz 2-4oz	X	X	X	X							
LP14-7	1/28/2021	1300	soil	1-8oz 2-4oz	X	X	X	X							
LP14-10	1/28/2021	1310	soil	1-8oz 2-4oz	X	X	X	X							
LP13-5	1/28/2021	1020	soil	1-8oz 2-4oz	X	X	X	X							

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) Based on total metals	(Signature)	(Signature)	(Signature)	(Signature)
	Printed Name: DG Cooper	Printed Name: Jacob Schultz	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 1/29/21 1105	Date & Time: 01/29/2021 1105	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21A0396	Turn-around Requested: Normal
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466
Client Contact: Matt Dalton / Dave Cooper	
Client Project Name: ICS/Former NW Cooperage	
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti

Date: 1/29/21	
Page: 2	of 2
No. of Coolers: 2	Cooler Temps: 3.9 1.7

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
LP13-7	1/28/2021	1025	soil	1-8oz 2-4oz											X	
LP13-10	1/28/2021	1120	soil	1-8oz 2-4oz	X	X	X	X								
LP13-12	1/28/2021	1125	soil	1-8oz 2-4oz	X	X	X	X								
LP12-5	1/28/2021	0940	soil	1-8oz 2-4oz	X	X	X	X								
LP12-7	1/28/2021	0945	soil	1-8oz 2-4oz	X	X	X	X								
LP12-10	1/28/2021	0950	soil	1-8oz 2-4oz	X	X	X	X								
LP5-5	1/28/2021	0840	soil	1-8oz 2-4oz	X	X	X	X								
LP5-7	1/28/2021	0845	soil	1-8oz 2-4oz	X	X	X	X								
LP5-10	1/28/2021	0850	soil	1-8oz 2-4oz	X	X	X	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) Based on total metals	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: DG Cooper	Printed Name: Jacob Walter	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 1/29/21 1105	Date & Time: 01/29/2021 1105	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LP15-5	21A0396-01	Solid	28-Jan-2021 15:00	29-Jan-2021 11:05
LP15-10	21A0396-03	Solid	28-Jan-2021 15:10	29-Jan-2021 11:05
LP15-14	21A0396-05	Solid	28-Jan-2021 15:30	29-Jan-2021 11:05
LP16-5	21A0396-06	Solid	28-Jan-2021 14:00	29-Jan-2021 11:05
LP16-7	21A0396-07	Solid	28-Jan-2021 14:10	29-Jan-2021 11:05
LP16-10	21A0396-08	Solid	28-Jan-2021 14:20	29-Jan-2021 11:05
LP14-5	21A0396-09	Solid	28-Jan-2021 12:50	29-Jan-2021 11:05
LP14-7	21A0396-10	Solid	28-Jan-2021 13:00	29-Jan-2021 11:05
LP14-10	21A0396-11	Solid	28-Jan-2021 13:10	29-Jan-2021 11:05
LP13-5	21A0396-12	Solid	28-Jan-2021 10:20	29-Jan-2021 11:05
LP13-10	21A0396-14	Solid	28-Jan-2021 11:20	29-Jan-2021 11:05
LP13-12	21A0396-15	Solid	28-Jan-2021 11:25	29-Jan-2021 11:05
LP12-5	21A0396-16	Solid	28-Jan-2021 09:40	29-Jan-2021 11:05
LP12-7	21A0396-17	Solid	28-Jan-2021 09:45	29-Jan-2021 11:05
LP12-10	21A0396-18	Solid	28-Jan-2021 09:50	29-Jan-2021 11:05
LP5-5	21A0396-19	Solid	28-Jan-2021 08:40	29-Jan-2021 11:05
LP5-7	21A0396-20	Solid	28-Jan-2021 08:45	29-Jan-2021 11:05
LP5-10	21A0396-21	Solid	28-Jan-2021 08:50	29-Jan-2021 11:05

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

Work Order Case Narrative

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements with the exception of ar1260ccvwhich fails high on both colums for SJC0096.

The ar1260ccva/ccvc fails low on one column the data was reported from the column in control for SJC0098.

The ar1254icv1 fails low on one column. The data was reported from the column in control.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits with the exception of surrogates flagged on the associated forms.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

Total Metals - EPA Method 6010C and 7471

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits with the exception of analytes flagged on the associated forms.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

Analytical Resources, Incorporated
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Cooler Receipt Form

ARI Client: D.O.F.

Project Name: ICS/Former Mn Cooperage

COC No(s): NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No: 21A0396

Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1105 3.9 1.7

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: DOO 5206

Cooler Accepted by: JG Date: 01/29/2021 Time: 1105

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:

Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Were the sample(s) split by ARI? NA YES Date/Time: Equipment: Split by:

Samples Logged by: JG Date: 01/29/2021 Time: 1131 Labels checked by: JG

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP15-5

21A0396-01 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 15:00

Instrument: FID4 Analyst: CTO — Analyzed: 02/23/2021 22:58

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-01 A 01

Preparation Batch: BJB0336 — Sample Size: 10.02 g (wet) — Dry Weight:8.88 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 88.67

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.63	57.2	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	11.3	170	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*95.2*	*%*	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP15-5

21A0396-01 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 15:00

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 01:58

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-01 A 02
	Preparation Batch: BJB0351	Sample Size: 5.66 g (wet)	Dry Weight:5.02 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 88.67
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-01 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-01 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-01 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	8.0	19.9	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	8.0	19.9	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	8.0	19.9	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	8.0	19.9	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	8.0	19.9	15.1	ug/kg	J
Aroclor 1254	11097-69-1	1	8.0	19.9	13.9	ug/kg	J
Aroclor 1260	11096-82-5	1	9.2	19.9	16.9	ug/kg	J
Aroclor 1262	37324-23-5	1	9.2	19.9	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.2	19.9	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*78.5*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*84.5*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*78.5*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*67.8*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP15-5

21A0396-01 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 15:00

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 18:18

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21A0396-01 B 02
	Preparation Batch: BJB0280	Sample Size: 1.004 g (wet)	Dry Weight:0.89 g
	Prepared: 02/10/2021	Final Volume: 50 mL	% Solids: 89.03

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.268	2.24	21.7	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP15-5

21A0396-01 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 15:00

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 11:20

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0396-01 C

Preparation Batch: BJB0281 — Sample Size: 0.208 g (wet) — Dry Weight:0.19 g

Prepared: 02/09/2021 — Final Volume: 50 mL — % Solids: 89.03

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00567	0.0270	0.0451	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP15-10

21A0396-03 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 15:10

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 13:02

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-03 A 01

Preparation Batch: BJB0336 — Sample Size: 10.12 g (wet) — Dry Weight:5.32 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 52.54

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	10	94.0	1310	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	10	188	3060	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*96.0*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP15-10

21A0396-03 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 15:10

Instrument: ECD7 Analyst: JGR — Analyzed: 03/08/2021 16:57

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-03 A 02
	Preparation Batch: BJB0351	Sample Size: 9.59 g (wet)	Dry Weight:5.04 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 52.54
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-03 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-03 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-03 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	39.7	99.2	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	39.7	99.2	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	39.7	99.2	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	39.7	99.2	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	39.7	99.2	303	ug/kg	P1, D
Aroclor 1254	11097-69-1	5	39.7	99.2	430	ug/kg	D
Aroclor 1260	11096-82-5	5	46.0	99.2	433	ug/kg	D
Aroclor 1262	37324-23-5	5	46.0	99.2	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.0	99.2	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*85.0*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*49.4*	*%*	*
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*64.9*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*47.2*	*%*	*

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP15-10

21A0396-03 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 15:10

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 18:25

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0396-03 B 02

Preparation Batch: BJB0280 — Sample Size: 1.013 g (wet) — Dry Weight:0.54 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 53.19

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.445	3.71	48.4	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP15-10

21A0396-03 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 15:10

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 11:33

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0396-03 C

Preparation Batch: BJB0281 — Sample Size: 0.262 g (wet) — Dry Weight:0.14 g

Prepared: 02/09/2021 — Final Volume: 50 mL — % Solids: 53.19

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00753	0.0359	0.305	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP15-14

21A0396-05 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 15:30

Instrument: FID4 Analyst: CTO — Analyzed: 02/24/2021 00:21

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-05 A 01

Preparation Batch: BJB0336 — Sample Size: 10.16 g (wet) — Dry Weight:6.74 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 66.36

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	7.42	33.0	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	14.8	112	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*96.5*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP15-14

21A0396-05 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 15:30

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 04:02

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-05 A 02
	Preparation Batch: BJB0351	Sample Size: 7.54 g (wet)	Dry Weight:5.00 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 66.36
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-05 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-05 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-05 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	8.0	20.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	8.0	20.0	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	8.0	20.0	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	8.0	20.0	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	9.3	20.0	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	9.3	20.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.3	20.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*64.4*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*63.1*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*63.8*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*54.0*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP15-14

21A0396-05 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 15:30

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 18:38

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0396-05 B 02

Preparation Batch: BJB0280 — Sample Size: 1.023 g (wet) — Dry Weight:0.70 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 68.81

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.341	2.84	4.55	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP15-14

21A0396-05 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 15:30

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 11:35

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0396-05 C

Preparation Batch: BJB0281 — Sample Size: 0.296 g (wet) — Dry Weight:0.20 g

Prepared: 02/09/2021 — Final Volume: 50 mL — % Solids: 68.81

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00516	0.0245	0.0563	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP16-5

21A0396-06 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 14:00

Instrument: FID4 Analyst: CTO — Analyzed: 02/24/2021 00:42

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-06 A 01

Preparation Batch: BJB0336 — Sample Size: 10.05 g (wet) — Dry Weight:7.53 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 74.93

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.64	103	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.3	290	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*85.9*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP16-5

21A0396-06 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 14:00

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 04:22

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-06 A 02
	Preparation Batch: BJB0351	Sample Size: 6.69 g (wet)	Dry Weight:5.01 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 74.93
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-06 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-06 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-06 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	8.0	19.9	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	8.0	19.9	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	8.0	19.9	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	8.0	19.9	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	8.0	19.9	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	8.0	19.9	262	ug/kg	
Aroclor 1260	11096-82-5	1	9.3	19.9	463	ug/kg	
Aroclor 1262	37324-23-5	1	9.3	19.9	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.3	19.9	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*67.4*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*59.6*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*69.7*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*52.5*	*%*	*

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP16-5

21A0396-06 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 14:00

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 18:40

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0396-06 B 02

Preparation Batch: BJB0280 — Sample Size: 1.038 g (wet) — Dry Weight:0.81 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 78.37

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.295	2.46	60.1	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP16-5

21A0396-06 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 14:00

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 11:37

Sample Preparation:		
Preparation Method: SMM EPA 7471B		Extract ID: 21A0396-06 C
Preparation Batch: BJB0281	Sample Size: 0.225 g (wet)	Dry Weight:0.18 g
Prepared: 02/09/2021	Final Volume: 50 mL	% Solids: 78.37

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00595	0.0284	0.119	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP16-7

21A0396-07 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 14:10

Instrument: FID4 Analyst: CTO — Analyzed: 02/24/2021 01:03

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-07 A 01

Preparation Batch: BJB0336 — Sample Size: 10.18 g (wet) — Dry Weight:7.19 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 70.62

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.95	ND	mg/kg	U
Motor Oil Range Organics (C24-C38)	RRO	1	13.9	20.4	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*86.7*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP16-7

21A0396-07 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 14:10

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 04:43

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-07 A 02
	Preparation Batch: BJB0351	Sample Size: 7.08 g (wet)	Dry Weight:5.00 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 70.62
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-07 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-07 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-07 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	8.0	20.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	8.0	20.0	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	8.0	20.0	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	8.0	20.0	18.1	ug/kg	J
Aroclor 1260	11096-82-5	1	9.3	20.0	14.1	ug/kg	J
Aroclor 1262	37324-23-5	1	9.3	20.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.3	20.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*75.2*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*65.9*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*71.7*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*58.0*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP16-7

21A0396-07 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 14:10

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 18:43

Sample Preparation:			
	Preparation Method: SWC EPA 3050B		Extract ID: 21A0396-07 B 02
	Preparation Batch: BJB0280	Sample Size: 1.012 g (wet)	Dry Weight:0.73 g
	Prepared: 02/10/2021	Final Volume: 50 mL	% Solids: 72.24

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.328	2.74	12.6	mg/kg	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP16-7

21A0396-07 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 14:10

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 11:39

Sample Preparation:	Preparation Method: SMM EPA 7471B		Extract ID: 21A0396-07 C
	Preparation Batch: BJB0281	Sample Size: 0.289 g (wet)	Dry Weight:0.21 g
	Prepared: 02/09/2021	Final Volume: 50 mL	% Solids: 72.24

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00503	0.0239	0.278	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP16-10

21A0396-08 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 14:20

Instrument: FID4 Analyst: CTO — Analyzed: 02/24/2021 01:24

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-08 A 01

Preparation Batch: BJB0336 — Sample Size: 10.17 g (wet) — Dry Weight:7.03 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 69.15

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	7.11	18.3	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	14.2	101	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*91.2*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP16-10

21A0396-08 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 14:20

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 05:03

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-08 A 02
	Preparation Batch: BJB0351	Sample Size: 7.24 g (wet)	Dry Weight:5.01 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 69.15
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-08 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-08 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-08 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	8.0	20.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	8.0	20.0	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	8.0	20.0	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	8.0	20.0	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	9.3	20.0	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	9.3	20.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.3	20.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*70.2*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*74.2*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*75.0*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*62.2*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP16-10

21A0396-08 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 14:20

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 18:46

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21A0396-08 B 02
	Preparation Batch: BJB0280	Sample Size: 1.089 g (wet)	Dry Weight:0.78 g
	Prepared: 02/10/2021	Final Volume: 50 mL	% Solids: 71.52

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.308	2.57	1.89	mg/kg	J

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP16-10

21A0396-08 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 14:20

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 11:41

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0396-08 C

Preparation Batch: BJB0281 — Sample Size: 0.265 g (wet) — Dry Weight:0.19 g

Prepared: 02/09/2021 — Final Volume: 50 mL — % Solids: 71.52

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00554	0.0264	0.0361	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP14-5

21A0396-09 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 12:50

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 13:23

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-09 A 01

Preparation Batch: BJB0336 — Sample Size: 10.06 g (wet) — Dry Weight:8.44 g

Prepared: 02/10/2021 — Final Volume: 5 mL — % Solids: 83.85

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	10	296	1770	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	10	593	4450	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*80.0*	*%*	

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6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP14-5

21A0396-09 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 12:50

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 05:24

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-09 A 02
	Preparation Batch: BJB0351	Sample Size: 5.97 g (wet)	Dry Weight:5.01 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 83.85
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-09 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-09 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-09 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	25	200	499	ND	ug/kg	U
Aroclor 1221	11104-28-2	25	200	499	ND	ug/kg	U
Aroclor 1232	11141-16-5	25	200	499	ND	ug/kg	U
Aroclor 1242	53469-21-9	25	200	499	ND	ug/kg	U
Aroclor 1248	12672-29-6	25	200	499	5900	ug/kg	D
Aroclor 1254	11097-69-1	25	200	499	2360	ug/kg	D
Aroclor 1260	11096-82-5	25	232	499	1070	ug/kg	D
Aroclor 1262	37324-23-5	25	232	499	ND	ug/kg	U
Aroclor 1268	11100-14-4	25	232	499	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*102*	*%*	P1
Surrogate: Tetrachlorometaxylene				*53-120 %*	*81.4*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*62.1*	*%*	P1
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*79.3*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP14-5

21A0396-09 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 12:50

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 18:49

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0396-09 B 02

Preparation Batch: BJB0280 — Sample Size: 1.015 g (wet) — Dry Weight:0.80 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 79.12

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.299	2.49	41.9	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP14-5

21A0396-09 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 12:50

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 11:44

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0396-09 C

Preparation Batch: BJB0281 — Sample Size: 0.222 g (wet) — Dry Weight:0.18 g

Prepared: 02/09/2021 — Final Volume: 50 mL — % Solids: 79.12

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00598	0.0285	0.405	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP14-7

21A0396-10 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 13:00

Instrument: FID4 Analyst: CTO — Analyzed: 02/24/2021 02:47

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-10 A 01
	Preparation Batch: BJB0336	Sample Size: 10.16 g (wet)	Dry Weight:8.24 g
	Prepared: 02/10/2021	Final Volume: 1 mL	% Solids: 81.14

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.07	103	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	12.1	240	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*91.8*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP14-7

21A0396-10 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 13:00

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 05:44

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-10 A 02
	Preparation Batch: BJB0351	Sample Size: 6.2 g (wet)	Dry Weight:5.03 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 81.14
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-10 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-10 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-10 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	39.8	99.4	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	39.8	99.4	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	39.8	99.4	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	39.8	99.4	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	39.8	99.4	466	ug/kg	D
Aroclor 1254	11097-69-1	5	39.8	99.4	326	ug/kg	D
Aroclor 1260	11096-82-5	5	46.1	99.4	264	ug/kg	D
Aroclor 1262	37324-23-5	5	46.1	99.4	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.1	99.4	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*82.5*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*65.0*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*65.5*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*66.7*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP14-7

21A0396-10 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 13:00

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 18:52

Sample Preparation:			
	Preparation Method: SWC EPA 3050B		Extract ID: 21A0396-10 B 02
	Preparation Batch: BJB0280	Sample Size: 1.089 g (wet)	Dry Weight:0.90 g
	Prepared: 02/10/2021	Final Volume: 50 mL	% Solids: 82.61

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.267	2.22	4.31	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP14-7

21A0396-10 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 13:00

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 11:46

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0396-10 C

Preparation Batch: BJB0281 — Sample Size: 0.278 g (wet) — Dry Weight:0.23 g

Prepared: 02/09/2021 — Final Volume: 50 mL — % Solids: 82.61

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00457	0.0218	0.149	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP14-10

21A0396-11 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 13:10

Instrument: FID4 Analyst: CTO — Analyzed: 02/24/2021 03:08

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-11 A 01

Preparation Batch: BJB0336 — Sample Size: 10.06 g (wet) — Dry Weight:7.29 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 72.48

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.86	186	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.7	237	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*84.4*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP14-10

21A0396-11 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 13:10

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 06:05

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-11 A 02
	Preparation Batch: BJB0351	Sample Size: 6.97 g (wet)	Dry Weight:5.05 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 72.48
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-11 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-11 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-11 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	39.6	99.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	39.6	99.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	39.6	99.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	39.6	99.0	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	39.6	99.0	1080	ug/kg	D
Aroclor 1254	11097-69-1	5	39.6	99.0	468	ug/kg	D
Aroclor 1260	11096-82-5	5	45.9	99.0	414	ug/kg	D
Aroclor 1262	37324-23-5	5	45.9	99.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	45.9	99.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*80.5*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*71.0*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*64.5*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*67.3*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP14-10

21A0396-11 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 13:10

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 18:54

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21A0396-11 B 02
	Preparation Batch: BJB0280	Sample Size: 1.031 g (wet)	Dry Weight:0.76 g
	Prepared: 02/10/2021	Final Volume: 50 mL	% Solids: 74.09

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.314	2.62	5.56	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP14-10

21A0396-11 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 13:10

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 11:48

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0396-11 C

Preparation Batch: BJB0281 — Sample Size: 0.222 g (wet) — Dry Weight:0.16 g

Prepared: 02/09/2021 — Final Volume: 50 mL — % Solids: 74.09

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00638	0.0304	0.0605	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP13-5

21A0396-12 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 10:20

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 13:44

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-12 A 01

Preparation Batch: BJB0336 — Sample Size: 10.16 g (wet) — Dry Weight:8.86 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 87.21

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	5	28.2	346	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	5	56.4	708	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*98.7*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP13-5

21A0396-12 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 10:20

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 07:07

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-12 A 02
	Preparation Batch: BJB0351	Sample Size: 5.76 g (wet)	Dry Weight:5.02 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 87.21
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-12 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-12 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-12 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	10	79.6	199	ND	ug/kg	U
Aroclor 1221	11104-28-2	10	79.6	199	ND	ug/kg	U
Aroclor 1232	11141-16-5	10	79.6	199	ND	ug/kg	U
Aroclor 1242	53469-21-9	10	79.6	199	ND	ug/kg	U
Aroclor 1248	12672-29-6	10	79.6	199	2360	ug/kg	D
Aroclor 1254	11097-69-1	10	79.6	199	1480	ug/kg	D
Aroclor 1260	11096-82-5	10	92.4	199	1010	ug/kg	D
Aroclor 1262	37324-23-5	10	92.4	199	ND	ug/kg	U
Aroclor 1268	11100-14-4	10	92.4	199	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*90.8*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*71.3*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*65.5*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*69.0*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP13-5

21A0396-12 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 10:20

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 18:57

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21A0396-12 B 02
	Preparation Batch: BJB0280	Sample Size: 1.059 g (wet)	Dry Weight:0.91 g
	Prepared: 02/10/2021	Final Volume: 50 mL	% Solids: 86.14

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.263	2.19	39.5	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP13-5

21A0396-12 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 10:20

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 11:50

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0396-12 C

Preparation Batch: BJB0281 — Sample Size: 0.248 g (wet) — Dry Weight:0.21 g

Prepared: 02/09/2021 — Final Volume: 50 mL — % Solids: 86.14

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00492	0.0234	0.137	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP13-10

21A0396-14 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 11:20

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 14:05

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-14 A 01

Preparation Batch: BJB0336 — Sample Size: 10.21 g (wet) — Dry Weight:5.91 g

Prepared: 02/10/2021 — Final Volume: 5 mL — % Solids: 57.86

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	10	423	9000	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	10	846	20100	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*116*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP13-10

21A0396-14 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 11:20

Instrument: ECD7 Analyst: JGR — Analyzed: 02/28/2021 03:27

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-14 A 02
	Preparation Batch: BJB0351	Sample Size: 8.76 g (wet)	Dry Weight:5.07 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 57.86
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-14 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-14 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-14 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	10	78.9	197	ND	ug/kg	U
Aroclor 1221	11104-28-2	10	78.9	197	ND	ug/kg	U
Aroclor 1232	11141-16-5	10	78.9	197	ND	ug/kg	U
Aroclor 1242	53469-21-9	10	78.9	197	ND	ug/kg	U
Aroclor 1248	12672-29-6	10	78.9	197	2780	ug/kg	D
Aroclor 1254	11097-69-1	10	78.9	197	3290	ug/kg	D
Aroclor 1260	11096-82-5	10	91.5	197	2900	ug/kg	D
Aroclor 1262	37324-23-5	10	91.5	197	ND	ug/kg	U
Aroclor 1268	11100-14-4	10	91.5	197	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*76.6*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*46.0*	*%*	*
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*70.9*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*52.5*	*%*	*

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP13-10

21A0396-14 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 11:20

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 20:10

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0396-14 B 02

Preparation Batch: BJB0280 — Sample Size: 1.091 g (wet) — Dry Weight:0.64 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 58.67

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	5	0.937	7.81	69.0	mg/kg	D

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP13-10

21A0396-14 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 11:20

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 11:57

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0396-14 C

Preparation Batch: BJB0281 — Sample Size: 0.29 g (wet) — Dry Weight:0.17 g

Prepared: 02/09/2021 — Final Volume: 50 mL — % Solids: 58.67

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00617	0.0294	0.846	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP13-12

21A0396-15 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 11:25

Instrument: FID4 Analyst: CTO — Analyzed: 02/24/2021 04:10

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-15 A 01

Preparation Batch: BJB0336 — Sample Size: 10.1 g (wet) — Dry Weight:7.47 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 73.96

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.69	105	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.4	182	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*97.9*	*%*	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP13-12

21A0396-15 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 11:25

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 07:48

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-15 A 02
	Preparation Batch: BJB0351	Sample Size: 6.77 g (wet)	Dry Weight:5.01 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 73.96
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-15 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-15 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-15 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	8.0	20.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	8.0	20.0	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	8.0	20.0	217	ug/kg	
Aroclor 1254	11097-69-1	1	8.0	20.0	130	ug/kg	
Aroclor 1260	11096-82-5	1	9.3	20.0	109	ug/kg	
Aroclor 1262	37324-23-5	1	9.3	20.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.3	20.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*74.5*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*78.2*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*64.1*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*65.8*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP13-12

21A0396-15 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 11:25

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 19:30

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0396-15 B 02

Preparation Batch: BJB0280 — Sample Size: 1.031 g (wet) — Dry Weight:0.75 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 72.38

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.322	2.68	2.02	mg/kg	J

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP13-12

21A0396-15 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 11:25

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 11:59

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0396-15 C

Preparation Batch: BJB0281 — Sample Size: 0.255 g (wet) — Dry Weight:0.18 g

Prepared: 02/09/2021 — Final Volume: 50 mL — % Solids: 72.38

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00569	0.0271	0.0231	mg/kg	J

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP12-5

21A0396-16 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 09:40

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 14:26

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-16 A 01

Preparation Batch: BJB0336 — Sample Size: 10.13 g (wet) — Dry Weight:8.33 g

Prepared: 02/10/2021 — Final Volume: 5 mL — % Solids: 82.28

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	10	300	5040	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	10	600	10800	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*111*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP12-5

21A0396-16 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 09:40

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 08:08

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-16 A 02
	Preparation Batch: BJB0351	Sample Size: 1.02 g (wet)	Dry Weight:0.84 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 82.28
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-16 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-16 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-16 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	10	477	1190	ND	ug/kg	U
Aroclor 1221	11104-28-2	10	477	1190	ND	ug/kg	U
Aroclor 1232	11141-16-5	10	477	1190	ND	ug/kg	U
Aroclor 1242	53469-21-9	10	477	1190	ND	ug/kg	U
Aroclor 1248	12672-29-6	10	477	1190	24600	ug/kg	D
Aroclor 1254	11097-69-1	10	477	1190	18300	ug/kg	D
Aroclor 1260	11096-82-5	10	553	1190	11800	ug/kg	D
Aroclor 1262	37324-23-5	10	553	1190	ND	ug/kg	U
Aroclor 1268	11100-14-4	10	553	1190	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*83.1*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*76.0*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*61.3*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*70.8*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP12-5

21A0396-16 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 09:40

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 19:33

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0396-16 B 02

Preparation Batch: BJB0280 — Sample Size: 1.058 g (wet) — Dry Weight:0.83 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 78.32

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	5	0.724	6.03	179	mg/kg	D

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP12-5

21A0396-16 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 09:40

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 12:01

Sample Preparation:	Preparation Method: SMM EPA 7471B		Extract ID: 21A0396-16 C
	Preparation Batch: BJB0281	Sample Size: 0.289 g (wet)	Dry Weight:0.23 g
	Prepared: 02/09/2021	Final Volume: 50 mL	% Solids: 78.32

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00464	0.0221	0.194	mg/kg	

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6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP12-7

21A0396-17 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 09:45

Instrument: FID4 Analyst: CTO — Analyzed: 02/24/2021 04:52

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-17 A 01

Preparation Batch: BJB0336 — Sample Size: 10.16 g (wet) — Dry Weight:7.55 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 74.30

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.62	128	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.2	240	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*88.2*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP12-7

21A0396-17 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 09:45

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 08:29

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-17 A 02
	Preparation Batch: BJB0351	Sample Size: 6.76 g (wet)	Dry Weight:5.02 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 74.30
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-17 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-17 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-17 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	39.8	99.5	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	39.8	99.5	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	39.8	99.5	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	39.8	99.5	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	39.8	99.5	967	ug/kg	D
Aroclor 1254	11097-69-1	5	39.8	99.5	569	ug/kg	D
Aroclor 1260	11096-82-5	5	46.2	99.5	490	ug/kg	D
Aroclor 1262	37324-23-5	5	46.2	99.5	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.2	99.5	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*86.0*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*69.9*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*67.9*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*66.0*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP12-7

21A0396-17 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 09:45

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 19:36

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21A0396-17 B 02
	Preparation Batch: BJB0280	Sample Size: 1.048 g (wet)	Dry Weight:0.77 g
	Prepared: 02/10/2021	Final Volume: 50 mL	% Solids: 73.42

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.312	2.60	6.97	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP12-7

21A0396-17 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 09:45

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 12:03

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0396-17 C

Preparation Batch: BJB0281 — Sample Size: 0.238 g (wet) — Dry Weight:0.17 g

Prepared: 02/09/2021 — Final Volume: 50 mL — % Solids: 73.42

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00601	0.0286	0.0781	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP12-10

21A0396-18 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 09:50

Instrument: FID4 Analyst: CTO — Analyzed: 02/24/2021 05:12

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-18 A 01

Preparation Batch: BJB0336 — Sample Size: 10.18 g (wet) — Dry Weight:7.01 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 68.90

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	7.13	82.3	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	14.3	123	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*97.8*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP12-10

21A0396-18 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 09:50

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 08:49

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-18 A 02
	Preparation Batch: BJB0351	Sample Size: 7.27 g (wet)	Dry Weight:5.01 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 68.90
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-18 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-18 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-18 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	8.0	20.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	8.0	20.0	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	8.0	20.0	202	ug/kg	
Aroclor 1254	11097-69-1	1	8.0	20.0	143	ug/kg	
Aroclor 1260	11096-82-5	1	9.3	20.0	116	ug/kg	
Aroclor 1262	37324-23-5	1	9.3	20.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.3	20.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*76.1*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*80.3*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*79.7*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*68.0*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP12-10

21A0396-18 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 09:50

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 19:38

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0396-18 B 02

Preparation Batch: BJB0280 — Sample Size: 1.054 g (wet) — Dry Weight:0.71 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 67.60

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.337	2.81	3.02	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP12-10

21A0396-18 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 09:50

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 12:05

Sample Preparation:			
	Preparation Method: SMM EPA 7471B		Extract ID: 21A0396-18 C
	Preparation Batch: BJB0281	Sample Size: 0.252 g (wet)	Dry Weight:0.17 g
	Prepared: 02/09/2021	Final Volume: 50 mL	% Solids: 67.60

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00616	0.0294	0.0460	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP5-5

21A0396-19 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 08:40

Instrument: FID4 Analyst: CTO — Analyzed: 02/24/2021 05:33

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-19 A 01

Preparation Batch: BJB0336 — Sample Size: 10.1 g (wet) — Dry Weight:7.46 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 73.85

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.70	189	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.4	509	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*86.4*	*%*	

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6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP5-5

21A0396-19 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 08:40
Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 09:10

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-19 A 02
	Preparation Batch: BJB0351	Sample Size: 6.79 g (wet)	Dry Weight:5.01 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 73.85
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-19 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-19 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-19 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	10	79.8	199	ND	ug/kg	U
Aroclor 1221	11104-28-2	10	79.8	199	ND	ug/kg	U
Aroclor 1232	11141-16-5	10	79.8	199	ND	ug/kg	U
Aroclor 1242	53469-21-9	10	79.8	199	ND	ug/kg	U
Aroclor 1248	12672-29-6	10	79.8	199	4280	ug/kg	D
Aroclor 1254	11097-69-1	10	79.8	199	2150	ug/kg	D
Aroclor 1260	11096-82-5	10	92.5	199	1800	ug/kg	D
Aroclor 1262	37324-23-5	10	92.5	199	ND	ug/kg	U
Aroclor 1268	11100-14-4	10	92.5	199	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*89.2*	*%*	P1
Surrogate: Tetrachlorometaxylene				*53-120 %*	*69.4*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*58.9*	*%*	P1
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*62.5*	*%*	

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6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP5-5

21A0396-19 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 08:40

Instrument: ICP2 Analyst: SKM — Analyzed: 02/10/2021 19:41

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0396-19 B 02

Preparation Batch: BJB0280 — Sample Size: 1.013 g (wet) — Dry Weight:0.75 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 74.43

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.318	2.65	9.85	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP5-5

21A0396-19 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 08:40

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 12:07

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0396-19 C

Preparation Batch: BJB0281 — Sample Size: 0.236 g (wet) — Dry Weight:0.18 g

Prepared: 02/09/2021 — Final Volume: 50 mL — % Solids: 74.43

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00598	0.0285	0.171	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP5-7

21A0396-20 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 08:45

Instrument: FID4 Analyst: CTO — Analyzed: 02/24/2021 06:36

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-20 A 01

Preparation Batch: BJB0336 — Sample Size: 10.1 g (wet) — Dry Weight:7.92 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 78.40

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.31	62.4	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	12.6	112	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*77.0*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP5-7

21A0396-20 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 08:45

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 09:31

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-20 A 02
	Preparation Batch: BJB0351	Sample Size: 6.39 g (wet)	Dry Weight:5.01 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 78.40
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-20 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-20 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-20 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	39.9	99.8	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	39.9	99.8	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	39.9	99.8	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	39.9	99.8	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	39.9	99.8	839	ug/kg	D
Aroclor 1254	11097-69-1	5	39.9	99.8	420	ug/kg	D
Aroclor 1260	11096-82-5	5	46.3	99.8	217	ug/kg	D
Aroclor 1262	37324-23-5	5	46.3	99.8	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.3	99.8	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*75.8*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*54.9*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*52.3*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*51.0*	*%*	*

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP5-7

21A0396-20 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 08:45

Instrument: ICP2 Analyst: SKM — Analyzed: 02/11/2021 16:57

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21A0396-20 C 01
	Preparation Batch: BJB0317	Sample Size: 1.051 g (wet)	Dry Weight:0.75 g
	Prepared: 02/10/2021	Final Volume: 50 mL	% Solids: 71.32

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.320	2.67	5.53	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP5-7

21A0396-20 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 08:45

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 12:10

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21A0396-20 C

Preparation Batch: BJB0281 — Sample Size: 0.288 g (wet) — Dry Weight:0.21 g

Prepared: 02/09/2021 — Final Volume: 50 mL — % Solids: 71.32

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00511	0.0243	0.0735	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP5-10

21A0396-21 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/28/2021 08:50

Instrument: FID4 Analyst: CTO — Analyzed: 02/24/2021 06:57

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21A0396-21 A 01

Preparation Batch: BJB0336 — Sample Size: 10.15 g (wet) — Dry Weight:7.54 g

Prepared: 02/10/2021 — Final Volume: 1 mL — % Solids: 74.31

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.63	27.6	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.3	51.1	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*99.0*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP5-10

21A0396-21 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/28/2021 08:50

Instrument: ECD7 Analyst: JGR — Analyzed: 02/26/2021 09:51

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21A0396-21 A 02
	Preparation Batch: BJB0351	Sample Size: 6.74 g (wet)	Dry Weight:5.01 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 74.31
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21A0396-21 A 02
	Cleanup Batch: CJB0156	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21A0396-21 A 02
	Cleanup Batch: CJB0154	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21A0396-21 A 02
	Cleanup Batch: CJB0155	Initial Volume: 5 mL	
	Cleaned: 24-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	8.0	20.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	8.0	20.0	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	8.0	20.0	126	ug/kg	
Aroclor 1254	11097-69-1	1	8.0	20.0	68.5	ug/kg	
Aroclor 1260	11096-82-5	1	9.3	20.0	47.8	ug/kg	
Aroclor 1262	37324-23-5	1	9.3	20.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.3	20.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*60.3*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*62.6*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*62.5*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*52.0*	*%*	*

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP5-10

21A0396-21 (Solid)

Metals and Metallic Compounds

Method: EPA 6010C — Sampled: 01/28/2021 08:50

Instrument: ICP2 Analyst: SKM — Analyzed: 02/11/2021 16:59

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21A0396-21 C 01

Preparation Batch: BJB0317 — Sample Size: 1.016 g (wet) — Dry Weight:0.74 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 73.02

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.324	2.70	2.58	mg/kg	J

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

LP5-10

21A0396-21 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/28/2021 08:50

Instrument: HYDRA Analyst: BLC — Analyzed: 02/11/2021 12:12

Sample Preparation:	Preparation Method: SMM EPA 7471B		Extract ID: 21A0396-21 C
	Preparation Batch: BJB0281	Sample Size: 0.21 g (wet)	Dry Weight:0.15 g
	Prepared: 02/09/2021	Final Volume: 50 mL	% Solids: 73.02

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00685	0.0326	0.0219	mg/kg	J

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

Petroleum Hydrocarbons - Quality Control

Batch BJB0336 - EPA 3546 (Microwave)

Instrument: FID4 Analyst: CTO

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0336-BLK1)				Prepared: 10-Feb-2021	Analyzed: 23-Feb-2021 22:16					
Diesel Range Organics (C12-C24)	ND	5.00	mg/kg							U
Motor Oil Range Organics (C24-C38)	ND	10.0	mg/kg							U
Surrogate: o-Terphenyl	12.1		mg/kg	*11.3*		*107*	*50-150*			
LCS (BJB0336-BS1)				Prepared: 10-Feb-2021	Analyzed: 23-Feb-2021 22:37					
Diesel Range Organics (C12-C24)	176	5.00	mg/kg	150		117	63-120			
Surrogate: o-Terphenyl	13.5		mg/kg	*11.3*		*120*	*50-150*			
Matrix Spike (BJB0336-MS1)	**Source: 21A0396-01**			Prepared: 10-Feb-2021	Analyzed: 23-Feb-2021 23:19					
Diesel Range Organics (C12-C24)	199	5.54	mg/kg	166	57.2	85.1	63-120			
Surrogate: o-Terphenyl	11.7		mg/kg	*12.5*	*12.1*	*93.9*	*50-150*			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike Dup (BJB0336-MSD1)	**Source: 21A0396-01**			Prepared: 10-Feb-2021	Analyzed: 23-Feb-2021 23:40					
Diesel Range Organics (C12-C24)	230	5.56	mg/kg	167	57.2	104	63-120	14.60	30	
Surrogate: o-Terphenyl	12.9		mg/kg	*12.5*	*12.1*	*103*	*50-150*			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

Aroclor PCB - Quality Control

Batch BJB0351 - EPA 3546 (Microwave)

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0351-BLK1)				Prepared: 11-Feb-2021	Analyzed: 26-Feb-2021 00:57						
Aroclor 1016	ND	8.0	20.0	ug/kg							U
Aroclor 1221	ND	8.0	20.0	ug/kg							U
Aroclor 1232	ND	8.0	20.0	ug/kg							U
Aroclor 1242	ND	8.0	20.0	ug/kg							U
Aroclor 1248	ND	8.0	20.0	ug/kg							U
Aroclor 1254	ND	8.0	20.0	ug/kg							U
Aroclor 1260	ND	9.3	20.0	ug/kg							U
Aroclor 1262	ND	9.3	20.0	ug/kg							U
Aroclor 1268	ND	9.3	20.0	ug/kg							U
Surrogate: Decachlorobiphenyl	32.1			ug/kg	*40.0*		*80.3*	*40-133*			
Surrogate: Tetrachlorometaxylene	33.9			ug/kg	*40.0*		*84.7*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	32.1			ug/kg	*40.0*		*80.2*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	27.7			ug/kg	*40.0*		*69.4*	*53-120*			
LCS (BJB0351-BS1)				Prepared: 11-Feb-2021	Analyzed: 26-Feb-2021 01:17						
Aroclor 1016	432	8.0	20.0	ug/kg	500		86.4	52-120			
Aroclor 1260	502	9.3	20.0	ug/kg	500		100	57-120			
Surrogate: Decachlorobiphenyl	32.6			ug/kg	*40.0*		*81.5*	*40-133*			
Surrogate: Tetrachlorometaxylene	33.8			ug/kg	*40.0*		*84.6*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	31.8			ug/kg	*40.0*		*79.4*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	27.2			ug/kg	*40.0*		*68.1*	*53-120*			
LCS Dup (BJB0351-BSD1)				Prepared: 11-Feb-2021	Analyzed: 26-Feb-2021 01:38						
Aroclor 1016	472	8.0	20.0	ug/kg	500		94.4	52-120	8.76	30	
Aroclor 1260	522	9.3	20.0	ug/kg	500		104	57-120	4.09	30	
Surrogate: Decachlorobiphenyl	35.6			ug/kg	*40.0*		*89.1*	*40-133*			
Surrogate: Tetrachlorometaxylene	36.6			ug/kg	*40.0*		*91.4*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	38.3			ug/kg	*40.0*		*95.7*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	29.5			ug/kg	*40.0*		*73.7*	*53-120*			
Matrix Spike (BJB0351-MS1)	**Source: 21A0396-01**			Prepared: 11-Feb-2021	Analyzed: 26-Feb-2021 02:19						
Aroclor 1016	411	8.0	20.0	ug/kg	500	ND	82.2	52-120			
Aroclor 1260	414	9.3	20.0	ug/kg	500	16.9	79.4	57-120			
Surrogate: Decachlorobiphenyl	30.3			ug/kg	*40.0*		*75.7*	*40-133*			

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

Aroclor PCB - Quality Control

Batch BJB0351 - EPA 3546 (Microwave)

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BJB0351-MS1)		**Source: 21A0396-01**		Prepared: 11-Feb-2021		Analyzed: 26-Feb-2021 02:19					
Surrogate: Tetrachlorometaxylene	33.9			ug/kg	*40.0*		*84.9*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	28.8			ug/kg	*40.0*		*72.0*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	27.0			ug/kg	*40.0*		*67.4*	*53-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0351-MSD1)		**Source: 21A0396-01**		Prepared: 11-Feb-2021		Analyzed: 26-Feb-2021 02:39					
Aroclor 1016	401	8.0	20.0	ug/kg	500	ND	80.2	52-120	2.57	30	
Aroclor 1260	425	9.3	20.0	ug/kg	500	16.9	81.6	57-120	2.64	30	
Surrogate: Decachlorobiphenyl	29.9			ug/kg	*40.0*		*74.9*	*40-133*			
Surrogate: Tetrachlorometaxylene	31.9			ug/kg	*40.0*		*79.7*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	26.8			ug/kg	*40.0*		*67.1*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	25.9			ug/kg	*40.0*		*64.8*	*53-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

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6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

Metals and Metallic Compounds - Quality Control

Batch BJB0280 - SWC EPA 3050B

Instrument: ICP2 Analyst: SKM

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0280-BLK1)				Prepared: 10-Feb-2021 Analyzed: 10-Feb-2021 18:02							
Lead	ND	0.240	2.00	mg/kg							U
LCS (BJB0280-BS1)				Prepared: 10-Feb-2021 Analyzed: 10-Feb-2021 18:28							
Lead	193	0.240	2.00	mg/kg	200		96.3	80-120			
Duplicate (BJB0280-DUP1)		**Source: 21A0396-01**		Prepared: 10-Feb-2021 Analyzed: 10-Feb-2021 18:15							
Lead	59.4	0.268	2.24	mg/kg		21.7			93.00	20	*
Matrix Spike (BJB0280-MS1)		**Source: 21A0396-01**		Prepared: 10-Feb-2021 Analyzed: 10-Feb-2021 18:20							
Lead	270	0.268	2.24	mg/kg	224	21.7	111	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0280-MSD1)		**Source: 21A0396-01**		Prepared: 10-Feb-2021 Analyzed: 10-Feb-2021 18:23							
Lead	279	0.269	2.24	mg/kg	224	21.7	115	75-125	3.34	20	

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

Metals and Metallic Compounds - Quality Control

Batch BJB0281 - SMM EPA 7471B

Instrument: HYDRA Analyst: BLC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0281-BLK1)				Prepared: 09-Feb-2021	Analyzed: 11-Feb-2021 11:16						
Mercury	ND	0.00525	0.0250	mg/kg							U
LCS (BJB0281-BS1)				Prepared: 09-Feb-2021	Analyzed: 11-Feb-2021 11:18						
Mercury	0.536	0.00525	0.0250	mg/kg	0.500		107	80-120			
Duplicate (BJB0281-DUP1)	**Source: 21A0396-01**			Prepared: 09-Feb-2021	Analyzed: 11-Feb-2021 11:22						
Mercury	0.0579	0.00567	0.0270	mg/kg		0.0451			24.90	20	L
Matrix Spike (BJB0281-MS1)	**Source: 21A0396-01**			Prepared: 09-Feb-2021	Analyzed: 11-Feb-2021 11:24						
Mercury	0.371	0.00564	0.0269	mg/kg	0.269	0.0451	121	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0281-MSD1)	**Source: 21A0396-01**			Prepared: 09-Feb-2021	Analyzed: 11-Feb-2021 11:31						
Mercury	0.358	0.00564	0.0269	mg/kg	0.269	0.0451	116	75-125	3.69	20	

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage	
6034 N Star Rd	Project Number:	SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager:	Matt Dalton	15-Mar-2021 17:52

Metals and Metallic Compounds - Quality Control

Batch BJB0317 - SWC EPA 3050B

Instrument: ICP2 Analyst: SKM

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0317-BLK1)					Prepared: 10-Feb-2021 Analyzed: 11-Feb-2021 16:54						
Lead	ND	0.240	2.00	mg/kg							U
LCS (BJB0317-BS1)					Prepared: 10-Feb-2021 Analyzed: 11-Feb-2021 17:22						
Lead	201	0.240	2.00	mg/kg	200		101	80-120			

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

Certified Analyses included in this Report

Analyte	Certifications
EPA 6010C in Solid	
Lead	NELAP,WADOE,DoD-ELAP,ADEC
Lead	NELAP,WADOE,DoD-ELAP,ADEC
Lead	WADOE,DoD-ELAP,ADEC
Lead	NELAP,DoD-ELAP,ADEC
EPA 7471B in Solid	
Mercury	WADOE,DoD-ELAP,CALAP
Mercury	NELAP,DoD-ELAP,CALAP
Mercury	WADOE,NELAP,DoD-ELAP
Mercury	WADOE,NELAP,DoD-ELAP,CALAP
EPA 8082A in Solid	
Aroclor 1016	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1016	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1016 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1221	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1221 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1232	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1232 [2C]	DoD-ELAP,NELAP,CALAP,ADEC

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

Aroclor 1242	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1242	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1242 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1248	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1248 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1254 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1260	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1260 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1262 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1268 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

NWTPH-Dx in Solid

Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP
Diesel Range Organics (Tol-C18)	DoD-ELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,WADOE
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP
Motor Oil Range Organics (C25-C36)	DoD-ELAP,WADOE

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 17:52

Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP
Motor Oil Range Organics (C24-C40)	DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP
JP8 Range Organics (C8-C18)	DoD-ELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP
JP4 Range Organics (Tol-C14)	DoD-ELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP
Kerosene Range Organics (Tol-C18)	DoD-ELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE

Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP
Creosote Range Organics (C12-C22)	DoD-ELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP
Bunker C Range Organics (C10-C38)	DoD-ELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/28/2022

Dalton, Olmsted & Fuglevand, Inc	Project:	ICS-Former NW Cooperage	
6034 N Star Rd	Project Number:	SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager:	Matt Dalton	15-Mar-2021 17:52

Notes and Definitions

*	Flagged value is not within established control limits.
D	The reported value is from a dilution
J	Estimated concentration value detected below the reporting limit.
L	Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to +/- RL instead of 20% RPD
NRS	This surrogate not reported due to chromatographic interference
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

15 March 2021

Matt Dalton
Dalton, Olmsted & Fuglevand, Inc
6034 N Star Rd
Ferndale, WA 98248

RE: ICS-Former NW Cooperage

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
21B0031	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21B0031	Turn-around Requested: Normal	Date: 2/1/21	
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466	Page: 1 of 2	
Client Contact: Matt Dalton / Dave Cooper		No. of Coolers: 1	Cooler Temps: 0.5
Client Project Name: ICS/Former NW Cooperage			
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
LP17-6	1/29/2021	0910	soil	1-8oz 2-4oz	X	X	X	X								
LP-17-10	1/29/2021	0920	soil	1-8oz 2-4oz	X	X	X	X								
LP17-14	1/29/2021	0930	soil	1-8oz 2-4oz	X	X	X	X								
LP18-5	1/29/2021	0950	soil	1-8oz 2-4oz	X	X	X	X								
LP18-7	1/29/2021	1000	soil	1-8oz 2-4oz	X	X	X	X								
LP18-10	1/29/2021	1010	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10S-5	1/29/2021	1200	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10S-6	1/29/2021	1210	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10S-10	1/29/2021	1240	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10W-3	1/29/2021	1310	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10W-6	1/29/2021	1315	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10W-10	1/29/2021	1330	soil	1-8oz 2-4oz	X	X	X	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) Based on total metals	(Signature)	(Signature)	(Signature)	(Signature)
	Printed Name: DG Cooper	Printed Name: Jacob Walter	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 2/1/21 1125	Date & Time: 02/01/2021 1125	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21B0031	Turn-around Requested: Normal	Date: 2/1/21	
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466	Page: 2 of 2	
Client Contact: Matt Dalton / Dave Cooper		No. of Coolers: 1	Cooler Temps: 0.5
Client Project Name: ICS/Former NW Cooperage			
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
LP3-10W-14	1/29/2021	1340	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10N-3	1/29/2021	1420	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10N-6	1/29/2021	1430	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10N-10	1/29/2021	1440	soil	1-8oz 2-4oz	X	X	X	X								
LP-DUP	1/29/2021	1015	soil	1-8oz 2-4oz	X	X	X	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) Based on total metals	(Signature)	(Signature)	(Signature)	(Signature)
	Printed Name: D. Cooper	Printed Name: Jacob Walter	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 2/1/21 1125	Date & Time: 02/01/2021 1125	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LP 17-6	21B0031-01	Solid	29-Jan-2021 09:10	01-Feb-2021 11:25
LP-17-10	21B0031-02	Solid	29-Jan-2021 09:20	01-Feb-2021 11:25
LP17-14	21B0031-03	Solid	29-Jan-2021 09:30	01-Feb-2021 11:25
LP18-5	21B0031-04	Solid	29-Jan-2021 09:50	01-Feb-2021 11:25
LP18-7	21B0031-05	Solid	29-Jan-2021 10:00	01-Feb-2021 11:25
LP18-10	21B0031-06	Solid	29-Jan-2021 10:10	01-Feb-2021 11:25
LP3-10S-5	21B0031-07	Solid	29-Jan-2021 12:00	01-Feb-2021 11:25
LP3-10S-6	21B0031-08	Solid	29-Jan-2021 12:10	01-Feb-2021 11:25
LP3-10S-10	21B0031-09	Solid	29-Jan-2021 12:40	01-Feb-2021 11:25
LP3-10W-3	21B0031-10	Solid	29-Jan-2021 13:10	01-Feb-2021 11:25
LP3-10W-6	21B0031-11	Solid	29-Jan-2021 13:15	01-Feb-2021 11:25
LP3-10W-10	21B0031-12	Solid	29-Jan-2021 13:30	01-Feb-2021 11:25
LP3-10W-14	21B0031-13	Solid	29-Jan-2021 13:40	01-Feb-2021 11:25
LP3-10N-3	21B0031-14	Solid	29-Jan-2021 14:20	01-Feb-2021 11:25
LP3-10N-6	21B0031-15	Solid	29-Jan-2021 14:30	01-Feb-2021 11:25
LP3-10N-10	21B0031-16	Solid	29-Jan-2021 14:40	01-Feb-2021 11:25
LP-DUP	21B0031-17	Solid	29-Jan-2021 10:15	01-Feb-2021 11:25

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

Work Order Case Narrative

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements with the excption of the CCV for ar1260ccva/ccvc which is out of control low on one column. The data is reported from the column in control for SJC0098.

AR1254ccv5 fails low on both columns for SJC0192. The CCAL was reanalyzed with QC in control.

Internal standard areas were within limits with the exception of HBBP which is outside the control limits on one column in samples 21B0031-05,07 and 11. The data was reported from the column in control for SJC0141.

The surrogate percent recoveries were within control limits with the exception of surrogates flagged on the associated forms.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

Total Metals - EPA Method 6010D and 7471B

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits with the exception of analytes flagged on the associated forms.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: **(206) 695-6200** • Fax: **(206) 695-6202**

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: DOF

Project Name: ICS/Former Nw Cooperage

COC No(s): NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No: 21B0031

Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1125 0.5

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: DOO 006

Cooler Accepted by: JS Date: 02/01/2021 Time: 1125

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:

Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Were the sample(s) split by ARI? NA YES Date/Time: Equipment: Split by:

Samples Logged by: SC Date: 2/2/21 Time: 1622 Labels checked by: SC

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP 17-6

21B0031-01 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 09:10
Instrument: FID4 Analyst: CTO — Analyzed: 02/24/2021 23:30

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-01 A 01
Preparation Batch: BJB0337 — Sample Size: 10.18 g (wet) — Dry Weight:8.77 g
Prepared: 02/11/2021 — Final Volume: 1 mL — % Solids: 86.17

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.70	43.5	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	11.4	205	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*107*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP 17-6

21B0031-01 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 09:10

Instrument: ECD7 Analyst: JGR — Analyzed: 02/28/2021 14:04

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-01 A 02
	Preparation Batch: BJB0352	Sample Size: 5.92 g (wet)	Dry Weight:5.10 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 86.17
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-01 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-01 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-01 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.8	19.6	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.8	19.6	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.8	19.6	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.8	19.6	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.8	19.6	46.2	ug/kg	
Aroclor 1254	11097-69-1	1	7.8	19.6	57.5	ug/kg	
Aroclor 1260	11096-82-5	1	9.1	19.6	48.9	ug/kg	
Aroclor 1262	37324-23-5	1	9.1	19.6	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.1	19.6	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*68.0*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*81.7*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*77.5*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*67.2*	*%*	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP 17-6

21B0031-01 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 09:10

Instrument: ICP2 Analyst: SKM — Analyzed: 02/11/2021 18:33

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0031-01 C 01

Preparation Batch: BJB0317 — Sample Size: 1.002 g (wet) — Dry Weight:0.89 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 88.56

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.270	2.25	68.6	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP 17-6

21B0031-01 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 09:10

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 09:43

Sample Preparation:			
	Preparation Method: SMM EPA 7471B		Extract ID: 21B0031-01 C
	Preparation Batch: BJB0379	Sample Size: 0.233 g (wet)	Dry Weight:0.21 g
	Prepared: 02/12/2021	Final Volume: 50 mL	% Solids: 88.56

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00509	0.0242	0.0447	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP-17-10

21B0031-02 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 09:20

Instrument: FID4 Analyst: CTO — Analyzed: 02/27/2021 12:48

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-02 A 01

Preparation Batch: BJB0337 — Sample Size: 10.13 g (wet) — Dry Weight:6.28 g

Prepared: 02/11/2021 — Final Volume: 1 mL — % Solids: 62.04

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	10	79.6	1870	mg/kg	D
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	10	159	1430	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*104*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP-17-10

21B0031-02 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 09:20

Instrument: ECD7 Analyst: JGR — Analyzed: 02/28/2021 15:06

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-02 A 02
	Preparation Batch: BJB0352	Sample Size: 8.31 g (wet)	Dry Weight:5.16 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 62.04
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-02 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-02 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-02 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.8	19.4	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.8	19.4	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.8	19.4	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.8	19.4	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.8	19.4	121	ug/kg	
Aroclor 1254	11097-69-1	1	7.8	19.4	97.1	ug/kg	
Aroclor 1260	11096-82-5	1	9.0	19.4	63.3	ug/kg	
Aroclor 1262	37324-23-5	1	9.0	19.4	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.0	19.4	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*79.9*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*61.3*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*83.2*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*56.5*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP-17-10

21B0031-02 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 09:20

Instrument: ICP2 Analyst: SKM — Analyzed: 02/11/2021 17:02

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0031-02 C 01

Preparation Batch: BJB0317 — Sample Size: 1.004 g (wet) — Dry Weight:0.55 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 55.23

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.433	3.61	238	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP-17-10

21B0031-02 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 09:20

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 09:53

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0031-02 C

Preparation Batch: BJB0379 — Sample Size: 0.212 g (wet) — Dry Weight:0.12 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 55.23

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00897	0.0427	0.887	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP17-14

21B0031-03 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 09:30

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 00:53

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-03 A 01

Preparation Batch: BJB0337 — Sample Size: 10.23 g (wet) — Dry Weight:7.55 g

Prepared: 02/11/2021 — Final Volume: 1 mL — % Solids: 73.79

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.62	10.0	mg/kg	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	13.2	77.2	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*102*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP17-14

21B0031-03 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 09:30

Instrument: ECD7 Analyst: JGR — Analyzed: 02/28/2021 15:26

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-03 A 02
	Preparation Batch: BJB0352	Sample Size: 6.84 g (wet)	Dry Weight:5.05 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 73.79
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-03 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-03 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-03 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.9	19.8	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.9	19.8	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.9	19.8	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.9	19.8	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.9	19.8	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	7.9	19.8	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	9.2	19.8	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	9.2	19.8	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.2	19.8	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*71.1*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*88.2*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*80.8*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*67.7*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP17-14

21B0031-03 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 09:30

Instrument: ICP2 Analyst: SKM — Analyzed: 02/11/2021 17:05

Sample Preparation:			
	Preparation Method: SWC EPA 3050B		Extract ID: 21B0031-03 C 01
	Preparation Batch: BJB0317	Sample Size: 1.08 g (wet)	Dry Weight:0.79 g
	Prepared: 02/10/2021	Final Volume: 50 mL	% Solids: 73.46

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.303	2.52	0.987	mg/kg	J

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP17-14

21B0031-03 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 09:30

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 09:56

Sample Preparation:	Preparation Method: SMM EPA 7471B		Extract ID: 21B0031-03 C
	Preparation Batch: BJB0379	Sample Size: 0.253 g (wet)	Dry Weight:0.19 g
	Prepared: 02/12/2021	Final Volume: 50 mL	% Solids: 73.46

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00565	0.0269	ND	mg/kg	U

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP18-5

21B0031-04 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 09:50

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 01:14

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-04 A 01

Preparation Batch: BJB0337 — Sample Size: 10.26 g (wet) — Dry Weight:8.25 g

Prepared: 02/11/2021 — Final Volume: 1 mL — % Solids: 80.41

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.06	29.0	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	12.1	228	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*114*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP18-5

21B0031-04 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 09:50

Instrument: ECD7 Analyst: JGR — Analyzed: 02/28/2021 15:47

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-04 A 02
	Preparation Batch: BJB0352	Sample Size: 6.37 g (wet)	Dry Weight:5.12 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 80.41
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-04 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-04 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-04 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.8	19.5	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.8	19.5	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.8	19.5	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.8	19.5	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.8	19.5	19.1	ug/kg	J
Aroclor 1254	11097-69-1	1	7.8	19.5	29.9	ug/kg	
Aroclor 1260	11096-82-5	1	9.1	19.5	35.7	ug/kg	
Aroclor 1262	37324-23-5	1	9.1	19.5	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.1	19.5	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*70.2*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*88.7*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*77.7*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*68.9*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP18-5

21B0031-04 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 09:50

Instrument: ICP2 Analyst: SKM — Analyzed: 02/11/2021 17:40

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21B0031-04 C 01
	Preparation Batch: BJB0317	Sample Size: 1.056 g (wet)	Dry Weight:0.85 g
	Prepared: 02/10/2021	Final Volume: 50 mL	% Solids: 80.38

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.283	2.36	371	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP18-5

21B0031-04 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 09:50

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 09:58

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0031-04 C

Preparation Batch: BJB0379 — Sample Size: 0.24 g (wet) — Dry Weight:0.19 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 80.38

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00544	0.0259	0.125	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP18-7

21B0031-05 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx | Sampled: 01/29/2021 10:00

Instrument: FID4 Analyst: CTO | Analyzed: 02/25/2021 01:35

Sample Preparation: Preparation Method: EPA 3546 (Microwave) | Extract ID: 21B0031-05 A 01

Preparation Batch: BJB0337 | Sample Size: 10.14 g (wet) | Dry Weight:5.48 g

Prepared: 02/11/2021 | Final Volume: 5 mL | % Solids: 54.09

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	5	228	2040	mg/kg	D
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	5	456	6290	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*97.8*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP18-7

21B0031-05 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 10:00

Instrument: ECD7 Analyst: JGR — Analyzed: 03/01/2021 20:51

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-05 A 02
	Preparation Batch: BJB0352	Sample Size: 9.36 g (wet)	Dry Weight:5.06 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 54.09
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-05 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-05 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-05 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	39.5	98.8	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	39.5	98.8	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	39.5	98.8	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	39.5	98.8	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	39.5	98.8	1500	ug/kg	D
Aroclor 1254	11097-69-1	5	39.5	98.8	1270	ug/kg	D
Aroclor 1260	11096-82-5	5	45.8	98.8	1310	ug/kg	D
Aroclor 1262	37324-23-5	5	45.8	98.8	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	45.8	98.8	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*68.2*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*53.7*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*60.3*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*52.1*	*%*	*

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP18-7

21B0031-05 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 10:00

Instrument: ICP2 Analyst: SKM — Analyzed: 02/12/2021 17:16

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0031-05 C 01

Preparation Batch: BJB0317 — Sample Size: 1.049 g (wet) — Dry Weight:0.56 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 53.43

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	5	1.07	8.92	447	mg/kg	D

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP18-7

21B0031-05 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 10:00

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 10:04

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0031-05 C

Preparation Batch: BJB0379 — Sample Size: 0.24 g (wet) — Dry Weight:0.13 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 53.43

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00819	0.0390	0.345	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP18-10

21B0031-06 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 10:10

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 01:55

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-06 A 01

Preparation Batch: BJB0337 — Sample Size: 10.08 g (wet) — Dry Weight:7.13 g

Prepared: 02/11/2021 — Final Volume: 1 mL — % Solids: 70.69

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	7.02	13.5	mg/kg	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	14.0	80.7	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*91.1*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP18-10

21B0031-06 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 10:10

Instrument: ECD7 Analyst: JGR — Analyzed: 02/28/2021 16:28

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-06 A 02
	Preparation Batch: BJB0352	Sample Size: 7.19 g (wet)	Dry Weight:5.08 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 70.69
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-06 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-06 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-06 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.9	19.7	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.9	19.7	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.9	19.7	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.9	19.7	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.9	19.7	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	7.9	19.7	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	9.1	19.7	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	9.1	19.7	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.1	19.7	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*64.7*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*73.1*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*70.6*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*60.0*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP18-10

21B0031-06 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 10:10

Instrument: ICP2 Analyst: SKM — Analyzed: 02/11/2021 17:46

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0031-06 C 01

Preparation Batch: BJB0317 — Sample Size: 1.086 g (wet) — Dry Weight:0.97 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 88.98

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.248	2.07	55.6	mg/kg	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP18-10

21B0031-06 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 10:10

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 10:06

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0031-06 C

Preparation Batch: BJB0379 — Sample Size: 0.22 g (wet) — Dry Weight:0.20 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 88.98

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00536	0.0255	0.0246	mg/kg	J

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10S-5

21B0031-07 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 12:00

Instrument: FID4 Analyst: CTO — Analyzed: 02/27/2021 13:09

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-07 A 01

Preparation Batch: BJB0337 — Sample Size: 10.08 g (wet) — Dry Weight:8.41 g

Prepared: 02/11/2021 — Final Volume: 1 mL — % Solids: 83.41

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	10	59.5	438	mg/kg	D
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	10	119	1370	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*99.6*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10S-5

21B0031-07 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 12:00

Instrument: ECD7 Analyst: JGR — Analyzed: 03/01/2021 21:11

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-07 A 02
	Preparation Batch: BJB0352	Sample Size: 6.04 g (wet)	Dry Weight:5.04 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 83.41
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-07 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-07 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-07 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	50	397	992	ND	ug/kg	U
Aroclor 1221	11104-28-2	50	397	992	ND	ug/kg	U
Aroclor 1232	11141-16-5	50	397	992	ND	ug/kg	U
Aroclor 1242	53469-21-9	50	397	992	ND	ug/kg	U
Aroclor 1248	12672-29-6	50	397	992	10000	ug/kg	D
Aroclor 1254	11097-69-1	50	397	992	7260	ug/kg	D
Aroclor 1260	11096-82-5	50	461	992	5950	ug/kg	D
Aroclor 1262	37324-23-5	50	461	992	ND	ug/kg	U
Aroclor 1268	11100-14-4	50	461	992	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*		*D1*	D1
Surrogate: Tetrachlorometaxylene				*53-120 %*		*D1*	D1
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*		*D1*	D1
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*		*D1*	D1

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10S-5

21B0031-07 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 12:00

Instrument: ICP2 Analyst: SKM — Analyzed: 02/11/2021 17:49

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0031-07 C 01

Preparation Batch: BJB0317 — Sample Size: 1.057 g (wet) — Dry Weight:1.05 g

Prepared: 02/10/2021 — Final Volume: 50 mL — % Solids: 99.35

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.229	1.90	53.4	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10S-5

21B0031-07 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 12:00

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 10:09

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0031-07 C

Preparation Batch: BJB0379 — Sample Size: 0.257 g (wet) — Dry Weight:0.26 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 99.35

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00411	0.0196	0.163	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10S-6

21B0031-08 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 12:10

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 02:37

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-08 A 01

Preparation Batch: BJB0337 — Sample Size: 10.15 g (wet) — Dry Weight:8.44 g

Prepared: 02/11/2021 — Final Volume: 10 mL — % Solids: 83.15

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	5	296	12800	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	5	592	24700	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*107*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10S-6

21B0031-08 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 12:10

Instrument: ECD7 Analyst: JGR — Analyzed: 03/01/2021 21:32

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-08 A 02
	Preparation Batch: BJB0352	Sample Size: 6.07 g (wet)	Dry Weight:5.05 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 83.15
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-08 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-08 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-08 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	100	793	1980	ND	ug/kg	U
Aroclor 1221	11104-28-2	100	793	1980	ND	ug/kg	U
Aroclor 1232	11141-16-5	100	793	1980	ND	ug/kg	U
Aroclor 1242	53469-21-9	100	793	1980	ND	ug/kg	U
Aroclor 1248	12672-29-6	100	793	1980	61000	ug/kg	D
Aroclor 1254	11097-69-1	100	793	1980	24100	ug/kg	D
Aroclor 1260	11096-82-5	100	919	1980	11700	ug/kg	D
Aroclor 1262	37324-23-5	100	919	1980	ND	ug/kg	U
Aroclor 1268	11100-14-4	100	919	1980	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*		*D1*	D1, P1
Surrogate: Tetrachlorometaxylene				*53-120 %*		*D1*	D1, P1
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*		*D1*	D1, P1
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*		*D1*	D1, P1

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10S-6

21B0031-08 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 12:10

Instrument: ICP2 Analyst: SKM — Analyzed: 02/12/2021 19:04

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21B0031-08 B 01
	Preparation Batch: BJB0377	Sample Size: 1.006 g (wet)	Dry Weight:0.81 g
	Prepared: 02/12/2021	Final Volume: 50 mL	% Solids: 80.93

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	5	0.737	6.14	5070	mg/kg	D

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10S-6

21B0031-08 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 12:10

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 11:39

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0031-08 C

Preparation Batch: BJB0379 — Sample Size: 0.224 g (wet) — Dry Weight:0.18 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 80.93

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	5	0.0290	0.138	4.10	mg/kg	D

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10S-10

21B0031-09 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 12:40

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 03:39

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-09 A 01

Preparation Batch: BJB0337 — Sample Size: 10.04 g (wet) — Dry Weight:7.40 g

Prepared: 02/11/2021 — Final Volume: 1 mL — % Solids: 73.66

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.76	105	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.5	113	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*90.4*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10S-10

21B0031-09 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 12:40

Instrument: ECD7 Analyst: JGR — Analyzed: 02/28/2021 17:30

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-09 A 02
	Preparation Batch: BJB0352	Sample Size: 6.9 g (wet)	Dry Weight:5.08 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 73.66
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-09 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-09 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-09 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.9	19.7	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.9	19.7	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.9	19.7	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.9	19.7	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.9	19.7	395	ug/kg	
Aroclor 1254	11097-69-1	1	7.9	19.7	149	ug/kg	
Aroclor 1260	11096-82-5	1	9.1	19.7	87.4	ug/kg	
Aroclor 1262	37324-23-5	1	9.1	19.7	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.1	19.7	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*69.2*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*78.7*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*76.9*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*70.5*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10S-10

21B0031-09 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 12:40

Instrument: ICP2 Analyst: SKM — Analyzed: 02/12/2021 18:50

Sample Preparation:			
	Preparation Method: SWC EPA 3050B		Extract ID: 21B0031-09 B 01
	Preparation Batch: BJB0377	Sample Size: 1.017 g (wet)	Dry Weight:0.75 g
	Prepared: 02/12/2021	Final Volume: 50 mL	% Solids: 73.51

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.321	2.68	4.33	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10S-10

21B0031-09 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 12:40

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 11:41

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0031-09 C

Preparation Batch: BJB0379 — Sample Size: 0.24 g (wet) — Dry Weight:0.18 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 73.51

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00595	0.0283	0.0586	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-3

21B0031-10 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 13:10

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 04:00

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-10 A 01

Preparation Batch: BJB0337 — Sample Size: 10.06 g (wet) — Dry Weight:8.86 g

Prepared: 02/11/2021 — Final Volume: 1 mL — % Solids: 88.11

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.64	84.5	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	11.3	335	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*112*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-3

21B0031-10 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 13:10

Instrument: ECD7 Analyst: JGR — Analyzed: 02/28/2021 18:32

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-10 A 02
	Preparation Batch: BJB0352	Sample Size: 5.72 g (wet)	Dry Weight:5.04 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 88.11
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-10 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-10 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-10 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	39.7	99.2	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	39.7	99.2	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	39.7	99.2	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	39.7	99.2	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	39.7	99.2	809	ug/kg	D
Aroclor 1254	11097-69-1	5	39.7	99.2	698	ug/kg	D
Aroclor 1260	11096-82-5	5	46.0	99.2	193	ug/kg	D
Aroclor 1262	37324-23-5	5	46.0	99.2	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.0	99.2	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*74.5*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*74.6*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*72.8*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*69.1*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-3

21B0031-10 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 13:10

Instrument: ICP2 Analyst: SKM — Analyzed: 02/12/2021 18:53

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21B0031-10 B 01
	Preparation Batch: BJB0377	Sample Size: 1.016 g (wet)	Dry Weight:0.92 g
	Prepared: 02/12/2021	Final Volume: 50 mL	% Solids: 90.36

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.261	2.18	150	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-3

21B0031-10 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 13:10

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 10:15

Sample Preparation:
Preparation Method: SMM EPA 7471B — Extract ID: 21B0031-10 C
Preparation Batch: BJB0379 — Sample Size: 0.213 g (wet) — Dry Weight:0.19 g
Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 90.36

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00546	0.0260	0.311	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-6

21B0031-11 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 13:15

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 04:21

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-11 A 01
	Preparation Batch: BJB0337	Sample Size: 10.23 g (wet)	Dry Weight:8.36 g
	Prepared: 02/11/2021	Final Volume: 10 mL	% Solids: 81.68

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	5	299	10500	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	5	598	21300	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*88.9*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-6

21B0031-11 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 13:15

Instrument: ECD7 Analyst: JGR — Analyzed: 03/01/2021 21:52

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-11 A 02
	Preparation Batch: BJB0352	Sample Size: 6.22 g (wet)	Dry Weight:5.08 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 81.68
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-11 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-11 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-11 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	250	1970	4920	ND	ug/kg	U
Aroclor 1221	11104-28-2	250	1970	4920	ND	ug/kg	U
Aroclor 1232	11141-16-5	250	1970	4920	ND	ug/kg	U
Aroclor 1242	53469-21-9	250	1970	4920	ND	ug/kg	U
Aroclor 1248	12672-29-6	250	1970	4920	101000	ug/kg	D
Aroclor 1254	11097-69-1	250	1970	4920	78600	ug/kg	D
Aroclor 1260	11096-82-5	250	2280	4920	29700	ug/kg	D
Aroclor 1262	37324-23-5	250	2280	4920	ND	ug/kg	U
Aroclor 1268	11100-14-4	250	2280	4920	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*		*D1*	D1
Surrogate: Tetrachlorometaxylene				*53-120 %*		*D1*	D1, P1
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*		*D1*	D1
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*		*D1*	D1, P1

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-6

21B0031-11 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 13:15

Instrument: ICP2 Analyst: SKM — Analyzed: 02/12/2021 18:56

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0031-11 B 01

Preparation Batch: BJB0377 — Sample Size: 1.082 g (wet) — Dry Weight:0.89 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 82.17

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	5	0.675	5.62	3100	mg/kg	D

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-6

21B0031-11 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 13:15

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 11:48

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0031-11 C

Preparation Batch: BJB0379 — Sample Size: 0.208 g (wet) — Dry Weight:0.17 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 82.17

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	5	0.0307	0.146	5.96	mg/kg	D

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-10

21B0031-12 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 13:30

Instrument: FID4 Analyst: CTO — Analyzed: 02/27/2021 13:30

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-12 A 01

Preparation Batch: BJB0337 — Sample Size: 10.15 g (wet) — Dry Weight:6.84 g

Prepared: 02/11/2021 — Final Volume: 1 mL — % Solids: 67.41

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	20	146	3300	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	20	292	7630	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*96.0*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-10

21B0031-12 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 13:30

Instrument: ECD7 Analyst: JGR — Analyzed: 02/28/2021 19:13

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-12 A 02
	Preparation Batch: BJB0352	Sample Size: 7.54 g (wet)	Dry Weight:5.08 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 67.41
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-12 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-12 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-12 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	25	197	492	ND	ug/kg	U
Aroclor 1221	11104-28-2	25	197	492	ND	ug/kg	U
Aroclor 1232	11141-16-5	25	197	492	ND	ug/kg	U
Aroclor 1242	53469-21-9	25	197	492	ND	ug/kg	U
Aroclor 1248	12672-29-6	25	197	492	6470	ug/kg	D
Aroclor 1254	11097-69-1	25	197	492	4430	ug/kg	D
Aroclor 1260	11096-82-5	25	228	492	4680	ug/kg	D
Aroclor 1262	37324-23-5	25	228	492	ND	ug/kg	U
Aroclor 1268	11100-14-4	25	228	492	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*91.8*	*%*	P1
Surrogate: Tetrachlorometaxylene				*53-120 %*	*74.1*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*52.9*	*%*	P1
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*70.1*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-10

21B0031-12 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 13:30

Instrument: ICP2 Analyst: SKM — Analyzed: 02/12/2021 18:59

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21B0031-12 B 01
	Preparation Batch: BJB0377	Sample Size: 1.073 g (wet)	Dry Weight:0.78 g
	Prepared: 02/12/2021	Final Volume: 50 mL	% Solids: 72.83

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.307	2.56	79.5	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-10

21B0031-12 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 13:30

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 11:50

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0031-12 C

Preparation Batch: BJB0379 — Sample Size: 0.281 g (wet) — Dry Weight:0.20 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 72.83

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00513	0.0244	0.381	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-14

21B0031-13 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 13:40

Instrument: FID4 Analyst: CTO — Analyzed: 02/27/2021 13:51

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-13 A 01

Preparation Batch: BJB0337 — Sample Size: 10.13 g (wet) — Dry Weight:6.02 g

Prepared: 02/11/2021 — Final Volume: 1 mL — % Solids: 59.45

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	5	41.5	416	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	5	83.0	459	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*88.4*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-14

21B0031-13 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 13:40

Instrument: ECD7 Analyst: JGR — Analyzed: 02/28/2021 19:33

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-13 A 02
	Preparation Batch: BJB0352	Sample Size: 8.6 g (wet)	Dry Weight:5.11 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 59.45
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-13 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-13 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-13 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.8	19.6	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.8	19.6	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.8	19.6	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.8	19.6	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.8	19.6	38.5	ug/kg	
Aroclor 1254	11097-69-1	1	7.8	19.6	29.7	ug/kg	
Aroclor 1260	11096-82-5	1	9.1	19.6	64.6	ug/kg	
Aroclor 1262	37324-23-5	1	9.1	19.6	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.1	19.6	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*67.3*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*67.8*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*75.7*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*60.4*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-14

21B0031-13 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 13:40

Instrument: ICP2 Analyst: SKM — Analyzed: 02/12/2021 19:22

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21B0031-13 B 01
	Preparation Batch: BJB0377	Sample Size: 1.039 g (wet)	Dry Weight:0.59 g
	Prepared: 02/12/2021	Final Volume: 50 mL	% Solids: 56.53

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.409	3.41	11.9	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10W-14

21B0031-13 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 13:40

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 10:22

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0031-13 C

Preparation Batch: BJB0379 — Sample Size: 0.293 g (wet) — Dry Weight:0.17 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 56.53

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00634	0.0302	0.137	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10N-3

21B0031-14 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 14:20

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 05:23

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-14 A 01

Preparation Batch: BJB0337 — Sample Size: 10.12 g (wet) — Dry Weight:8.75 g

Prepared: 02/11/2021 — Final Volume: 1 mL — % Solids: 86.45

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.72	17.1	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	11.4	81.0	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*103*	*%*	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10N-3

21B0031-14 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 14:20

Instrument: ECD7 Analyst: JGR — Analyzed: 02/28/2021 19:54

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-14 A 02
	Preparation Batch: BJB0352	Sample Size: 5.97 g (wet)	Dry Weight:5.16 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 86.45
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-14 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-14 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-14 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.8	19.4	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.8	19.4	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.8	19.4	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.8	19.4	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.8	19.4	504	ug/kg	
Aroclor 1254	11097-69-1	1	7.8	19.4	474	ug/kg	
Aroclor 1260	11096-82-5	1	9.0	19.4	236	ug/kg	
Aroclor 1262	37324-23-5	1	9.0	19.4	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.0	19.4	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*69.4*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*83.5*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*78.4*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*67.0*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10N-3

21B0031-14 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 14:20

Instrument: ICP2 Analyst: SKM — Analyzed: 02/12/2021 19:25

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0031-14 B 01

Preparation Batch: BJB0377 — Sample Size: 1.048 g (wet) — Dry Weight:0.90 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 85.57

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.268	2.23	153	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10N-3

21B0031-14 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 14:20

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 10:24

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0031-14 C

Preparation Batch: BJB0379 — Sample Size: 0.232 g (wet) — Dry Weight:0.20 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 85.57

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00529	0.0252	0.969	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10N-6

21B0031-15 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 14:30

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 05:44

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-15 A 01

Preparation Batch: BJB0337 — Sample Size: 10.11 g (wet) — Dry Weight:8.58 g

Prepared: 02/11/2021 — Final Volume: 10 mL — % Solids: 84.89

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	5	291	11800	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	5	583	21700	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*102*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10N-6

21B0031-15 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 14:30

Instrument: ECD7 Analyst: JGR — Analyzed: 03/10/2021 08:32

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-15 A 02
	Preparation Batch: BJB0352	Sample Size: 5.92 g (wet)	Dry Weight:5.03 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 84.89
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-15 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-15 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-15 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	125	995	2490	ND	ug/kg	U
Aroclor 1221	11104-28-2	125	995	2490	ND	ug/kg	U
Aroclor 1232	11141-16-5	125	995	2490	ND	ug/kg	U
Aroclor 1242	53469-21-9	125	995	2490	ND	ug/kg	U
Aroclor 1248	12672-29-6	125	995	2490	51500	ug/kg	D
Aroclor 1254	11097-69-1	125	995	2490	28200	ug/kg	D
Aroclor 1260	11096-82-5	125	1150	2490	6660	ug/kg	D
Aroclor 1262	37324-23-5	125	1150	2490	ND	ug/kg	U
Aroclor 1268	11100-14-4	125	1150	2490	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*		*D1*	D1
Surrogate: Tetrachlorometaxylene				*53-120 %*		*D1*	D1
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*		*D1*	D1
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*		*D1*	D1

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10N-6

21B0031-15 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 14:30

Instrument: ICP2 Analyst: SKM — Analyzed: 02/12/2021 19:28

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21B0031-15 B 01
	Preparation Batch: BJB0377	Sample Size: 1.049 g (wet)	Dry Weight:0.88 g
	Prepared: 02/12/2021	Final Volume: 50 mL	% Solids: 84.27

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	5	0.679	5.66	669	mg/kg	D

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Analytical Report

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6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10N-6

21B0031-15 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 14:30

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 11:52

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0031-15 C

Preparation Batch: BJB0379 — Sample Size: 0.205 g (wet) — Dry Weight:0.17 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 84.27

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	2	0.0122	0.0579	1.48	mg/kg	D

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10N-10

21B0031-16 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 14:40

Instrument: FID4 Analyst: CTO — Analyzed: 02/27/2021 14:54

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-16 A 01

Preparation Batch: BJB0337 — Sample Size: 10.1 g (wet) — Dry Weight:7.31 g

Prepared: 02/11/2021 — Final Volume: 1 mL — % Solids: 72.40

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	5	34.2	379	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	5	68.4	663	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*97.3*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10N-10

21B0031-16 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 14:40

Instrument: ECD7 Analyst: JGR — Analyzed: 02/28/2021 20:35

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-16 A 02
	Preparation Batch: BJB0352	Sample Size: 7.04 g (wet)	Dry Weight:5.10 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 72.40
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-16 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-16 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-16 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.8	19.6	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.8	19.6	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.8	19.6	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.8	19.6	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.8	19.6	778	ug/kg	
Aroclor 1254	11097-69-1	1	7.8	19.6	443	ug/kg	
Aroclor 1260	11096-82-5	1	9.1	19.6	202	ug/kg	
Aroclor 1262	37324-23-5	1	9.1	19.6	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.1	19.6	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*60.3*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*74.2*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*65.0*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*67.3*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10N-10

21B0031-16 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 14:40

Instrument: ICP2 Analyst: SKM — Analyzed: 02/12/2021 19:30

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0031-16 B 01

Preparation Batch: BJB0377 — Sample Size: 1.067 g (wet) — Dry Weight:0.78 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 73.32

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.307	2.56	6.26	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP3-10N-10

21B0031-16 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 14:40

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 11:54

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0031-16 C

Preparation Batch: BJB0379 — Sample Size: 0.227 g (wet) — Dry Weight:0.17 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 73.32

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00631	0.0300	0.105	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP-DUP

21B0031-17 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/29/2021 10:15

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 06:25

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0031-17 A 01
Preparation Batch: BJB0337 — Sample Size: 10.08 g (wet) — Dry Weight:7.14 g
Prepared: 02/11/2021 — Final Volume: 1 mL — % Solids: 70.88

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	7.00	23.4	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	14.0	115	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*104*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP-DUP

21B0031-17 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/29/2021 10:15

Instrument: ECD7 Analyst: JGR — Analyzed: 02/28/2021 20:56

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0031-17 A 02
	Preparation Batch: BJB0352	Sample Size: 7.15 g (wet)	Dry Weight:5.07 g
	Prepared: 02/11/2021	Final Volume: 5 mL	% Solids: 70.88
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0031-17 A 02
	Cleanup Batch: CJB0181	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0031-17 A 02
	Cleanup Batch: CJB0179	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0031-17 A 02
	Cleanup Batch: CJB0180	Initial Volume: 5 mL	
	Cleaned: 26-Feb-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.9	19.7	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.9	19.7	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.9	19.7	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.9	19.7	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.9	19.7	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	7.9	19.7	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	9.2	19.7	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	9.2	19.7	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.2	19.7	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*62.1*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*70.6*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*75.1*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*58.6*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP-DUP

21B0031-17 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 10:15

Instrument: ICP2 Analyst: SKM — Analyzed: 02/12/2021 19:33

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0031-17 B 01

Preparation Batch: BJB0377 — Sample Size: 1.08 g (wet) — Dry Weight:0.77 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 71.02

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.313	2.61	2.44	mg/kg	J

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

LP-DUP

21B0031-17 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 01/29/2021 10:15

Instrument: HYDRA Analyst: BLC — Analyzed: 02/15/2021 10:35

Sample Preparation:	Preparation Method: SMM EPA 7471B		Extract ID: 21B0031-17 C
	Preparation Batch: BJB0379	Sample Size: 0.219 g (wet)	Dry Weight:0.16 g
	Prepared: 02/12/2021	Final Volume: 50 mL	% Solids: 71.02

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00675	0.0321	0.0297	mg/kg	J

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

Petroleum Hydrocarbons - Quality Control

Batch BJB0337 - EPA 3546 (Microwave)

Instrument: FID4 Analyst: CTO

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0337-BLK1)				Prepared: 11-Feb-2021 Analyzed: 24-Feb-2021 22:48						
Diesel Range Organics (C12-C24)	ND	5.00	mg/kg							U
Motor Oil Range Organics (C24-C38)	ND	10.0	mg/kg							U
Surrogate: o-Terphenyl	10.5		mg/kg	*11.3*		*92.9*	*50-150*			
LCS (BJB0337-BS1)				Prepared: 11-Feb-2021 Analyzed: 24-Feb-2021 23:09						
Diesel Range Organics (C12-C24)	157	5.00	mg/kg	150		104	63-120			
Surrogate: o-Terphenyl	11.7		mg/kg	*11.3*		*104*	*50-150*			
Matrix Spike (BJB0337-MS1)	**Source: 21B0031-01**			Prepared: 11-Feb-2021 Analyzed: 24-Feb-2021 23:51						
Diesel Range Organics (C12-C24)	210	5.69	mg/kg	171	43.5	97.6	63-120			
Surrogate: o-Terphenyl	12.5		mg/kg	*12.8*	*13.8*	*97.7*	*50-150*			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike Dup (BJB0337-MSD1)	**Source: 21B0031-01**			Prepared: 11-Feb-2021 Analyzed: 25-Feb-2021 00:12						
Diesel Range Organics (C12-C24)	206	5.73	mg/kg	172	43.5	94.4	63-120	2.10	30	
Surrogate: o-Terphenyl	11.8		mg/kg	*12.9*	*13.8*	*91.6*	*50-150*			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

Aroclor PCB - Quality Control

Batch BJB0352 - EPA 3546 (Microwave)

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0352-BLK1)					Prepared: 11-Feb-2021	Analyzed: 28-Feb-2021 13:03					
Aroclor 1016	ND	8.0	20.0	ug/kg							U
Aroclor 1221	ND	8.0	20.0	ug/kg							U
Aroclor 1232	ND	8.0	20.0	ug/kg							U
Aroclor 1242	ND	8.0	20.0	ug/kg							U
Aroclor 1248	ND	8.0	20.0	ug/kg							U
Aroclor 1254	ND	8.0	20.0	ug/kg							U
Aroclor 1260	ND	9.3	20.0	ug/kg							U
Aroclor 1262	ND	9.3	20.0	ug/kg							U
Aroclor 1268	ND	9.3	20.0	ug/kg							U
Surrogate: Decachlorobiphenyl	27.5			ug/kg	*40.0*		*68.8*	*40-133*			
Surrogate: Tetrachlorometaxylene	35.1			ug/kg	*40.0*		*87.7*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	34.8			ug/kg	*40.0*		*86.9*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	28.0			ug/kg	*40.0*		*70.0*	*53-120*			
LCS (BJB0352-BS1)					Prepared: 11-Feb-2021	Analyzed: 28-Feb-2021 13:23					
Aroclor 1016	433	8.0	20.0	ug/kg	500		86.6	52-120			
Aroclor 1260 [2C]	419	9.3	20.0	ug/kg	500		83.9	57-120			
Surrogate: Decachlorobiphenyl	27.6			ug/kg	*40.0*		*68.9*	*40-133*			
Surrogate: Tetrachlorometaxylene	35.0			ug/kg	*40.0*		*87.6*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	35.7			ug/kg	*40.0*		*89.1*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	27.8			ug/kg	*40.0*		*69.5*	*53-120*			
LCS Dup (BJB0352-BSD1)					Prepared: 11-Feb-2021	Analyzed: 28-Feb-2021 13:44					
Aroclor 1016 [2C]	438	8.0	20.0	ug/kg	500		87.5	52-120	2.18	30	
Aroclor 1260 [2C]	420	9.3	20.0	ug/kg	500		84.0	57-120	0.13	30	
Surrogate: Decachlorobiphenyl	28.3			ug/kg	*40.0*		*70.8*	*40-133*			
Surrogate: Tetrachlorometaxylene	34.1			ug/kg	*40.0*		*85.1*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	36.5			ug/kg	*40.0*		*91.1*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	27.5			ug/kg	*40.0*		*68.9*	*53-120*			
Matrix Spike (BJB0352-MS1)	**Source: 21B0031-01**				Prepared: 11-Feb-2021	Analyzed: 28-Feb-2021 14:25					
Aroclor 1016	342	7.8	19.6	ug/kg	490	ND	69.8	52-120			
Aroclor 1260	340	9.1	19.6	ug/kg	490	48.9	59.4	57-120			
Surrogate: Decachlorobiphenyl	25.9			ug/kg	*39.2*		*66.0*	*40-133*			

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

Aroclor PCB - Quality Control

Batch BJB0352 - EPA 3546 (Microwave)

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BJB0352-MS1)		**Source: 21B0031-01**		Prepared: 11-Feb-2021		Analyzed: 28-Feb-2021 14:25					
Surrogate: Tetrachlorometaxylene	30.3			ug/kg	*39.2*		*77.4*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	29.1			ug/kg	*39.2*		*74.2*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	25.3			ug/kg	*39.2*		*64.5*	*53-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0352-MSD1)		**Source: 21B0031-01**		Prepared: 11-Feb-2021		Analyzed: 28-Feb-2021 14:45					
Aroclor 1016	374	7.9	19.8	ug/kg	494	ND	75.7	52-120	8.96	30	
Aroclor 1260	381	9.2	19.8	ug/kg	494	48.9	67.2	57-120	11.30	30	
Surrogate: Decachlorobiphenyl	28.7			ug/kg	*39.5*		*72.6*	*40-133*			
Surrogate: Tetrachlorometaxylene	33.8			ug/kg	*39.5*		*85.4*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	32.5			ug/kg	*39.5*		*82.1*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	27.4			ug/kg	*39.5*		*69.2*	*53-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

Metals and Metallic Compounds - Quality Control

Batch BJB0317 - SWC EPA 3050B

Instrument: ICP2 Analyst: SKM

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0317-BLK1)				Prepared: 10-Feb-2021 Analyzed: 11-Feb-2021 16:54							
Lead	ND	0.240	2.00	mg/kg							U
LCS (BJB0317-BS1)				Prepared: 10-Feb-2021 Analyzed: 11-Feb-2021 17:22							
Lead	201	0.240	2.00	mg/kg	200		101	80-120			
Duplicate (BJB0317-DUP1)		**Source: 21B0031-01**		Prepared: 10-Feb-2021 Analyzed: 11-Feb-2021 18:31							
Lead	43.3	0.270	2.25	mg/kg		68.6			45.30	20	*
Matrix Spike (BJB0317-MS1)		**Source: 21B0031-01**		Prepared: 10-Feb-2021 Analyzed: 11-Feb-2021 18:36							
Lead	281	0.271	2.26	mg/kg	226	68.6	94.2	75-125			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											
Matrix Spike Dup (BJB0317-MSD1)		**Source: 21B0031-01**		Prepared: 10-Feb-2021 Analyzed: 11-Feb-2021 18:39							
Lead	298	0.271	2.26	mg/kg	226	68.6	102	75-125	5.91	20	
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

Metals and Metallic Compounds - Quality Control

Batch BJB0377 - SWC EPA 3050B

Instrument: ICP2 Analyst: SKM

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0377-BLK1)				Prepared: 12-Feb-2021 Analyzed: 12-Feb-2021 18:47							
Lead	ND	0.240	2.00	mg/kg							U
LCS (BJB0377-BS1)				Prepared: 12-Feb-2021 Analyzed: 12-Feb-2021 19:13							
Lead	194	0.240	2.00	mg/kg	200		97.0	80-120			
Duplicate (BJB0377-DUP1)	**Source: 21B0031-08**			Prepared: 12-Feb-2021 Analyzed: 12-Feb-2021 19:01							
Lead	2690	0.739	6.16	mg/kg		5070			61.30	20	*, D
Matrix Spike (BJB0377-MS1)	**Source: 21B0031-08**			Prepared: 12-Feb-2021 Analyzed: 12-Feb-2021 19:07							
Lead	1600	0.738	6.15	mg/kg	246	5070	-1410	75-125			HC, D

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0377-MSD1)	**Source: 21B0031-08**			Prepared: 12-Feb-2021 Analyzed: 12-Feb-2021 19:10							
Lead	5390	0.736	6.14	mg/kg	245	5070	133	75-125	108.00	20	HC, D

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

Metals and Metallic Compounds - Quality Control

Batch BJB0379 - SMM EPA 7471B

Instrument: HYDRA Analyst: BLC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0379-BLK1)				Prepared: 12-Feb-2021 Analyzed: 15-Feb-2021 09:38							
Mercury	ND	0.00525	0.0250	mg/kg							U
LCS (BJB0379-BS1)				Prepared: 12-Feb-2021 Analyzed: 15-Feb-2021 09:41							
Mercury	0.481	0.00525	0.0250	mg/kg	0.500		96.1	80-120			
Duplicate (BJB0379-DUP1)		**Source: 21B0031-01**		Prepared: 12-Feb-2021 Analyzed: 15-Feb-2021 09:45							
Mercury	0.0418	0.00509	0.0242	mg/kg		0.0447			6.61	20	
Matrix Spike (BJB0379-MS1)		**Source: 21B0031-01**		Prepared: 12-Feb-2021 Analyzed: 15-Feb-2021 09:47							
Mercury	0.333	0.00502	0.0239	mg/kg	0.239	0.0447	120	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0379-MSD1)		**Source: 21B0031-01**		Prepared: 12-Feb-2021 Analyzed: 15-Feb-2021 09:49							
Mercury	0.317	0.00500	0.0238	mg/kg	0.238	0.0447	114	75-125	4.74	20	

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

Certified Analyses included in this Report

Analyte	Certifications
EPA 6010D in Solid	
Lead	NELAP,WADOE,DoD-ELAP,ADEC
Lead	NELAP,WADOE,DoD-ELAP,ADEC
Lead	WADOE,DoD-ELAP,ADEC
Lead	NELAP,DoD-ELAP,ADEC
EPA 7471B in Solid	
Mercury	WADOE,DoD-ELAP,CALAP
Mercury	NELAP,DoD-ELAP,CALAP
Mercury	WADOE,NELAP,DoD-ELAP
Mercury	WADOE,NELAP,DoD-ELAP,CALAP
EPA 8082A in Solid	
Aroclor 1016	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1016	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1016 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1221	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1221 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1232	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1232 [2C]	DoD-ELAP,NELAP,CALAP,ADEC

Aroclor 1242	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1242	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1242 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1248	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1248 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1254 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1260	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1260 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1262 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1268 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

NWTPH-Dx in Solid

Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP
Diesel Range Organics (Tol-C18)	DoD-ELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,WADOE
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP
Motor Oil Range Organics (C25-C36)	DoD-ELAP,WADOE

Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP
Motor Oil Range Organics (C24-C40)	DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP
JP8 Range Organics (C8-C18)	DoD-ELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP
JP4 Range Organics (Tol-C14)	DoD-ELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP
Kerosene Range Organics (Tol-C18)	DoD-ELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE

Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP
Creosote Range Organics (C12-C22)	DoD-ELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP
Bunker C Range Organics (C10-C38)	DoD-ELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/28/2022

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: SUM-008-03	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	15-Mar-2021 16:57

Notes and Definitions

*	Flagged value is not within established control limits.
D	The reported value is from a dilution
D1	Surrogate was not detected due to sample extract dilution
HC	The natural concentration of the spiked analyte is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
J	Estimated concentration value detected below the reporting limit.
NRS	This surrogate not reported due to chromatographic interference
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

16 March 2021

Matt Dalton
Dalton, Olmsted & Fuglevand, Inc
6034 N Star Rd
Ferndale, WA 98248

RE: ICS-Former NW Cooperage

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
21B0072	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Cert# 100006-012

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21B0072	Turn-around Requested:	Page: 1 of 2	
ARI Client Company: DOF	Phone: 206-660-3466	Date: 2/1/21	Ice Present?
Client Contact: DAVE COOPER / MATT DALTON		No. of Coolers: 1	Cooler Temps: 5.4
Client Project Name: ICS SUM-008-03 FS			
Client Project #:	Samplers: A. CERRUTI		

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Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-Dx	Pb EPA-6010C	Hg EPA 7471A	TCLP RCRA 8 METALS (1)			ARCHIVE	Notes/Comments
LP3-20S-5	2/1/2021	0930	SOIL	3	X	X	X	X					
LP3-20S-7	2/1/2021	0935	SOIL	3	X	X	X	X					
LP3-20S-10	2/1/2021	0940	SOIL	3	X	X	X	X					
LP3-20N-2	2/1/2021	1200	SOIL	3	X	X	X	X					
LP3-20N-6	2/1/2021	1205	SOIL	3	X	X	X	X					
LP3-20N-10	2/1/2021	1210	SOIL	3	X	X	X	X					
LP3-20W-2	2/1/2021	1045	SOIL	3	X	X	X	X					
LP3-20W-6	2/1/2021	1050	SOIL	3	X	X	X	X					
LP3-20W-10	2/1/2021	1055	SOIL	3	X	X	X	X					
LP3-10E-2	2/1/2021	1330	SOIL	3	X	X	X	X					

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) BASED ON TOTAL METALS	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: ANTHONY CERRUTI	Printed Name: Samantha Colon	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 2/2/2021 1235	Date & Time: 2/2/21 1235	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21B0072	Turn-around Requested:	Page: 2 of 2	
ARI Client Company: DOF	Phone: 206-660-3466	Date: 2/1/21	Ice Present?
Client Contact: DAVE COOPER / MATT DALTON		No. of Coolers: 1	Cooler Temps: 5.4
Client Project Name: ICS FS			
Client Project #: SUM-008-03	Samplers: A. CERRUTI		

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Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs by EPA 8082A	NWTPH-Dx	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 METALS (1)				Notes/Comments
LP3-10E-5	2/1/2021	1335	SOIL	3	X	X	X	X					
LP3-10E-10	2/1/2021	1340	SOIL	3	X	X	X	X					

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) BASED ON TOTAL METALS	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: ANTHONY CERRUTI	Printed Name: Samantha Colan	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 2/2/2021 1235	Date & Time: 2/2/21 1235	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LP3-20S-5	21B0072-01	Solid	01-Feb-2021 09:30	03-Feb-2021 12:35
LP3-20S-7	21B0072-02	Solid	01-Feb-2021 09:35	03-Feb-2021 12:35
LP3-20S-10	21B0072-03	Solid	01-Feb-2021 09:40	03-Feb-2021 12:35
LP3-20N-2	21B0072-04	Solid	01-Feb-2021 12:00	03-Feb-2021 12:35
LP3-20N-6	21B0072-05	Solid	01-Feb-2021 12:05	03-Feb-2021 12:35
LP3-20N-10	21B0072-06	Solid	01-Feb-2021 12:10	03-Feb-2021 12:35
LP3-20W-2	21B0072-07	Solid	01-Feb-2021 10:45	03-Feb-2021 12:35
LP3-20W-6	21B0072-08	Solid	01-Feb-2021 10:50	03-Feb-2021 12:35
LP3-20W-10	21B0072-09	Solid	01-Feb-2021 10:55	03-Feb-2021 12:35
LP3-10E-2	21B0072-10	Solid	01-Feb-2021 13:30	03-Feb-2021 12:35
LP3-10E-5	21B0072-11	Solid	01-Feb-2021 13:35	03-Feb-2021 12:35
LP3-10E-10	21B0072-12	Solid	01-Feb-2021 13:40	03-Feb-2021 12:35

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

Work Order Case Narrative

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times for frozen samples.

Initial and continuing calibrations were within method requirements with the exception of ar1260icv2/ccv2 which is out of control low on one column for SJC0106 and ar1260ccv4 fails low on one column, ar1260ccv6/ccv8 fail high on one column.

ar1260ccva fails high on both columns no data reported from affected bracket and ar 1260ccvc fails high on one column. The data was repoerted from the column in control for SJC0106.

The closing ar1260 ccv2 fails low on one column. The data is reported from the column in control for SJC0214.

The ar1242ccv3 fails high on one column for SJC0228.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits with the exception of surrogates flagged on the associated forms.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

Total Metals - EPA Method 6010D and 7471

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits with the exception of analytes flagged on the associated forms.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: DOF

Project Name: ICS SUM-008-03 FS

COC No(s): NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No: 21 B0072

Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1235 5.4

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: D005200

Cooler Accepted by: SC Date: 2/2/21 Time: 1235

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES SC	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:			
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Were the sample(s) split by ARI? NA YES Date/Time: Equipment: Split by:

Samples Logged by: KP Date: 2/3/21 Time: 1220 Labels checked by: KP

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20S-5

21B0072-01 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 02/01/2021 09:30

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 19:27

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0072-01 A 01

Preparation Batch: BJB0388 — Sample Size: 10.02 g (wet) — Dry Weight:7.90 g

Prepared: 02/12/2021 — Final Volume: 1 mL — % Solids: 78.83

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.33	92.8	mg/kg	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	12.7	265	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*90.3*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20S-5

21B0072-01 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 02/01/2021 09:30

Instrument: ECD7 Analyst: JGR — Analyzed: 03/07/2021 14:53

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0072-01 A 02
	Preparation Batch: BJB0452	Sample Size: 6.34 g (wet)	Dry Weight:5.00 g
	Prepared: 02/18/2021	Final Volume: 5 mL	% Solids: 78.83
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0072-01 A 02
	Cleanup Batch: CJC0003	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0072-01 A 02
	Cleanup Batch: CJC0001	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0072-01 A 02
	Cleanup Batch: CJC0002	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	40.0	100	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	40.0	100	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	40.0	100	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	40.0	100	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	40.0	100	1940	ug/kg	D
Aroclor 1254	11097-69-1	5	40.0	100	1590	ug/kg	D
Aroclor 1260	11096-82-5	5	46.4	100	930	ug/kg	D
Aroclor 1262	37324-23-5	5	46.4	100	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.4	100	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*72.8*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*70.7*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*70.8*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*68.4*	*%*	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20S-5

21B0072-01 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 02/01/2021 09:30

Instrument: ICP2 Analyst: SKM — Analyzed: 02/15/2021 16:43

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0072-01 C 01

Preparation Batch: BJB0377 — Sample Size: 1.033 g (wet) — Dry Weight:0.84 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 81.55

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.285	2.37	46.3	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20S-5

21B0072-01 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 02/01/2021 09:30

Instrument: HYDRA Analyst: BLC — Analyzed: 02/19/2021 10:30

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0072-01 C

Preparation Batch: BJB0437 — Sample Size: 0.233 g (wet) — Dry Weight:0.19 g

Prepared: 02/15/2021 — Final Volume: 50 mL — % Solids: 81.55

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00553	0.0263	0.0412	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20S-7

21B0072-02 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 02/01/2021 09:35

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 19:48

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0072-02 A 01

Preparation Batch: BJB0388 — Sample Size: 10.02 g (wet) — Dry Weight:7.53 g

Prepared: 02/12/2021 — Final Volume: 5 mL — % Solids: 75.14

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	10	332	11000	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	10	664	24800	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*107*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20S-7

21B0072-02 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 02/01/2021 09:35

Instrument: ECD7 Analyst: JGR — Analyzed: 03/06/2021 09:58

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0072-02 A 02
	Preparation Batch: BJB0452	Sample Size: 1 g (wet)	Dry Weight:0.75 g
	Prepared: 02/18/2021	Final Volume: 5 mL	% Solids: 75.14
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0072-02 A 02
	Cleanup Batch: CJC0003	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0072-02 A 02
	Cleanup Batch: CJC0001	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0072-02 A 02
	Cleanup Batch: CJC0002	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	50	2660	6650	ND	ug/kg	U
Aroclor 1221	11104-28-2	50	2660	6650	ND	ug/kg	U
Aroclor 1232	11141-16-5	50	2660	6650	ND	ug/kg	U
Aroclor 1242	53469-21-9	50	2660	6650	ND	ug/kg	U
Aroclor 1248	12672-29-6	50	2660	6650	90600	ug/kg	D
Aroclor 1254	11097-69-1	50	2660	6650	55800	ug/kg	D
Aroclor 1260	11096-82-5	50	3090	6650	24300	ug/kg	D
Aroclor 1262	37324-23-5	50	3090	6650	ND	ug/kg	U
Aroclor 1268	11100-14-4	50	3090	6650	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*		*D1*	D1
Surrogate: Tetrachlorometaxylene				*53-120 %*		*D1*	D1
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*		*D1*	D1
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*		*D1*	D1

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20S-7

21B0072-02 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 02/01/2021 09:35

Instrument: ICP2 Analyst: SKM — Analyzed: 02/15/2021 16:46

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0072-02 C 01

Preparation Batch: BJB0377 — Sample Size: 1.088 g (wet) — Dry Weight:0.86 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 79.00

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	5	0.698	5.82	2890	mg/kg	D

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20S-7

21B0072-02 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 02/01/2021 09:35

Instrument: HYDRA Analyst: BLC — Analyzed: 02/19/2021 12:42

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0072-02 C

Preparation Batch: BJB0437 — Sample Size: 0.229 g (wet) — Dry Weight:0.18 g

Prepared: 02/15/2021 — Final Volume: 50 mL — % Solids: 79.00

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	5	0.0290	0.138	5.75	mg/kg	D

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20S-10

21B0072-03 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 02/01/2021 09:40

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 20:09

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0072-03 A 01

Preparation Batch: BJB0388 — Sample Size: 10.03 g (wet) — Dry Weight:7.47 g

Prepared: 02/12/2021 — Final Volume: 1 mL — % Solids: 74.50

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.69	238	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.4	237	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*98.2*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20S-10

21B0072-03 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 02/01/2021 09:40

Instrument: ECD7 Analyst: JGR — Analyzed: 03/06/2021 10:18

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0072-03 A 02
	Preparation Batch: BJB0452	Sample Size: 6.72 g (wet)	Dry Weight:5.01 g
	Prepared: 02/18/2021	Final Volume: 5 mL	% Solids: 74.50
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0072-03 A 02
	Cleanup Batch: CJC0003	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0072-03 A 02
	Cleanup Batch: CJC0001	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0072-03 A 02
	Cleanup Batch: CJC0002	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	8.0	20.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	8.0	20.0	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	8.0	20.0	577	ug/kg	
Aroclor 1254	11097-69-1	1	8.0	20.0	284	ug/kg	
Aroclor 1260	11096-82-5	1	9.3	20.0	135	ug/kg	
Aroclor 1262	37324-23-5	1	9.3	20.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.3	20.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*62.7*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*65.3*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*63.6*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*64.9*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20S-10

21B0072-03 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 02/01/2021 09:40

Instrument: ICP2 Analyst: SKM — Analyzed: 02/15/2021 16:48

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0072-03 C 01

Preparation Batch: BJB0377 — Sample Size: 1.059 g (wet) — Dry Weight:0.78 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 73.53

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.308	2.57	4.93	mg/kg	

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6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20S-10

21B0072-03 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 02/01/2021 09:40

Instrument: HYDRA Analyst: BLC — Analyzed: 02/19/2021 12:40

Sample Preparation:	Preparation Method: SMM EPA 7471B		Extract ID: 21B0072-03 C
	Preparation Batch: BJB0437	Sample Size: 0.275 g (wet)	Dry Weight:0.20 g
	Prepared: 02/15/2021	Final Volume: 50 mL	% Solids: 73.53

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00519	0.0247	0.0316	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20N-2

21B0072-04 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 02/01/2021 12:00
Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 20:30

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0072-04 A 01
Preparation Batch: BJB0388 — Sample Size: 10.05 g (wet) — Dry Weight:8.99 g
Prepared: 02/12/2021 — Final Volume: 5 mL — % Solids: 89.46

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	27.8	135	mg/kg	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	55.6	599	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*97.8*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20N-2

21B0072-04 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 02/01/2021 12:00
Instrument: ECD7 Analyst: JGR — Analyzed: 03/07/2021 15:14

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0072-04 A 02
	Preparation Batch: BJB0452	Sample Size: 5.59 g (wet)	Dry Weight:5.00 g
	Prepared: 02/18/2021	Final Volume: 5 mL	% Solids: 89.46
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0072-04 A 02
	Cleanup Batch: CJC0003	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0072-04 A 02
	Cleanup Batch: CJC0001	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0072-04 A 02
	Cleanup Batch: CJC0002	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	40.0	100	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	40.0	100	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	40.0	100	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	40.0	100	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	40.0	100	1260	ug/kg	D
Aroclor 1254	11097-69-1	5	40.0	100	873	ug/kg	D
Aroclor 1260	11096-82-5	5	46.4	100	345	ug/kg	D
Aroclor 1262	37324-23-5	5	46.4	100	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.4	100	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*82.1*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*73.1*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*69.7*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*71.4*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20N-2

21B0072-04 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 02/01/2021 12:00

Instrument: ICP2 Analyst: SKM — Analyzed: 02/15/2021 16:51

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21B0072-04 C 01
	Preparation Batch: BJB0377	Sample Size: 1.054 g (wet)	Dry Weight:0.94 g
	Prepared: 02/12/2021	Final Volume: 50 mL	% Solids: 88.73

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.257	2.14	586	mg/kg	

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6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20N-2

21B0072-04 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 02/01/2021 12:00

Instrument: HYDRA Analyst: BLC — Analyzed: 02/19/2021 10:48

Sample Preparation:
Preparation Method: SMM EPA 7471B — Extract ID: 21B0072-04 C
Preparation Batch: BJB0437 — Sample Size: 0.219 g (wet) — Dry Weight:0.19 g
Prepared: 02/15/2021 — Final Volume: 50 mL — % Solids: 88.73

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00540	0.0257	0.375	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20N-6

21B0072-05 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 02/01/2021 12:05

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 20:51

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0072-05 A 01

Preparation Batch: BJB0388 — Sample Size: 10.05 g (wet) — Dry Weight:8.70 g

Prepared: 02/12/2021 — Final Volume: 10 mL — % Solids: 86.59

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	5	287	10900	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	5	575	19700	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*147*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20N-6

21B0072-05 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 02/01/2021 12:05

Instrument: ECD7 Analyst: JGR — Analyzed: 03/06/2021 10:59

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0072-05 A 02
	Preparation Batch: BJB0452	Sample Size: 1.05 g (wet)	Dry Weight:0.91 g
	Prepared: 02/18/2021	Final Volume: 5 mL	% Solids: 86.59
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0072-05 A 02
	Cleanup Batch: CJC0003	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0072-05 A 02
	Cleanup Batch: CJC0001	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0072-05 A 02
	Cleanup Batch: CJC0002	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	50	2200	5500	ND	ug/kg	U
Aroclor 1221	11104-28-2	50	2200	5500	ND	ug/kg	U
Aroclor 1232	11141-16-5	50	2200	5500	ND	ug/kg	U
Aroclor 1242	53469-21-9	50	2200	5500	ND	ug/kg	U
Aroclor 1248	12672-29-6	50	2200	5500	34800	ug/kg	D
Aroclor 1254	11097-69-1	50	2200	5500	21400	ug/kg	D
Aroclor 1260	11096-82-5	50	2550	5500	4700	ug/kg	J, D
Aroclor 1262	37324-23-5	50	2550	5500	ND	ug/kg	U
Aroclor 1268	11100-14-4	50	2550	5500	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*115*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*108*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*109*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*76.8*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20N-6

21B0072-05 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 02/01/2021 12:05

Instrument: ICP2 Analyst: SKM — Analyzed: 02/15/2021 16:54

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0072-05 C 01

Preparation Batch: BJB0377 — Sample Size: 1.044 g (wet) — Dry Weight:0.88 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 84.62

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	5	0.679	5.66	2370	mg/kg	D

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20N-6

21B0072-05 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 02/01/2021 12:05

Instrument: HYDRA Analyst: BLC — Analyzed: 02/19/2021 12:44

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0072-05 C

Preparation Batch: BJB0437 — Sample Size: 0.228 g (wet) — Dry Weight:0.19 g

Prepared: 02/15/2021 — Final Volume: 50 mL — % Solids: 84.62

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	4	0.0218	0.104	4.86	mg/kg	D

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20N-10

21B0072-06 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 02/01/2021 12:10

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 21:12

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0072-06 A 01

Preparation Batch: BJB0388 — Sample Size: 10.05 g (wet) — Dry Weight:7.23 g

Prepared: 02/12/2021 — Final Volume: 1 mL — % Solids: 71.95

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.91	215	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	13.8	455	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*85.1*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20N-10

21B0072-06 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 02/01/2021 12:10

Instrument: ECD7 Analyst: JGR — Analyzed: 03/14/2021 10:08

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0072-06 A 02
	Preparation Batch: BJB0452	Sample Size: 6.99 g (wet)	Dry Weight:5.03 g
	Prepared: 02/18/2021	Final Volume: 5 mL	% Solids: 71.95
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0072-06 A 02
	Cleanup Batch: CJC0003	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0072-06 A 02
	Cleanup Batch: CJC0001	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0072-06 A 02
	Cleanup Batch: CJC0002	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	39.8	99.4	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	39.8	99.4	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	39.8	99.4	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	39.8	99.4	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	39.8	99.4	1110	ug/kg	D
Aroclor 1254	11097-69-1	5	39.8	99.4	603	ug/kg	D
Aroclor 1260	11096-82-5	5	46.1	99.4	348	ug/kg	D
Aroclor 1262	37324-23-5	5	46.1	99.4	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.1	99.4	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*84.5*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*74.2*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*62.2*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*72.9*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20N-10

21B0072-06 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 02/01/2021 12:10

Instrument: ICP2 Analyst: SKM — Analyzed: 02/15/2021 16:57

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0072-06 C 01

Preparation Batch: BJB0377 — Sample Size: 1.093 g (wet) — Dry Weight:0.74 g

Prepared: 02/12/2021 — Final Volume: 50 mL — % Solids: 67.53

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.325	2.71	64.0	mg/kg	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20N-10

21B0072-06 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 02/01/2021 12:10

Instrument: HYDRA Analyst: BLC — Analyzed: 02/19/2021 10:54

Sample Preparation:	Preparation Method: SMM EPA 7471B		Extract ID: 21B0072-06 C
	Preparation Batch: BJB0437	Sample Size: 0.208 g (wet)	Dry Weight:0.14 g
	Prepared: 02/15/2021	Final Volume: 50 mL	% Solids: 67.53

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00748	0.0356	0.0961	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20W-2

21B0072-07 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 02/01/2021 10:45

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 21:33

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0072-07 A 01

Preparation Batch: BJB0388 — Sample Size: 10.03 g (wet) — Dry Weight:8.80 g

Prepared: 02/12/2021 — Final Volume: 5 mL — % Solids: 87.78

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	5	142	2460	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	5	284	5530	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*86.7*	*%*	

LP3-20W-2

21B0072-07 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 02/01/2021 10:45

Instrument: ECD7 Analyst: JGR — Analyzed: 03/06/2021 11:40

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0072-07 A 02
	Preparation Batch: BJB0452	Sample Size: 1.03 g (wet)	Dry Weight:0.90 g
	Prepared: 02/18/2021	Final Volume: 5 mL	% Solids: 87.78
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0072-07 A 02
	Cleanup Batch: CJC0003	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0072-07 A 02
	Cleanup Batch: CJC0001	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0072-07 A 02
	Cleanup Batch: CJC0002	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	25	1110	2770	ND	ug/kg	U
Aroclor 1221	11104-28-2	25	1110	2770	ND	ug/kg	U
Aroclor 1232	11141-16-5	25	1110	2770	ND	ug/kg	U
Aroclor 1242	53469-21-9	25	1110	2770	ND	ug/kg	U
Aroclor 1248	12672-29-6	25	1110	2770	6460	ug/kg	D
Aroclor 1254	11097-69-1	25	1110	2770	4480	ug/kg	D
Aroclor 1260	11096-82-5	25	1280	2770	ND	ug/kg	U
Aroclor 1262	37324-23-5	25	1280	2770	ND	ug/kg	U
Aroclor 1268	11100-14-4	25	1280	2770	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*162*	*%*	*
Surrogate: Tetrachlorometaxylene				*53-120 %*	*69.5*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*126*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*61.1*	*%*	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20W-2

21B0072-07 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 02/01/2021 10:45

Instrument: ICP2 Analyst: SKM — Analyzed: 03/04/2021 14:06

Sample Preparation:			
	Preparation Method: SWC EPA 3050B		Extract ID: 21B0072-07 C 01
	Preparation Batch: BJB0435	Sample Size: 1.091 g (wet)	Dry Weight:0.96 g
	Prepared: 02/15/2021	Final Volume: 50 mL	% Solids: 88.29

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.249	2.08	113	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20W-2

21B0072-07 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 02/01/2021 10:45

Instrument: HYDRA Analyst: BLC — Analyzed: 02/19/2021 10:56

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 21B0072-07 C

Preparation Batch: BJB0437 — Sample Size: 0.277 g (wet) — Dry Weight:0.24 g

Prepared: 02/15/2021 — Final Volume: 50 mL — % Solids: 88.29

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00429	0.0204	0.196	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20W-6

21B0072-08 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 02/01/2021 10:50

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 21:54

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0072-08 A 01

Preparation Batch: BJB0388 — Sample Size: 10.04 g (wet) — Dry Weight:8.36 g

Prepared: 02/12/2021 — Final Volume: 5 mL — % Solids: 83.24

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	10	299	3880	mg/kg	D
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	10	598	8880	mg/kg	D
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*84.4*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20W-6

21B0072-08 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 02/01/2021 10:50

Instrument: ECD7 Analyst: JGR — Analyzed: 03/07/2021 05:08

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0072-08 A 02
	Preparation Batch: BJB0452	Sample Size: 1.02 g (wet)	Dry Weight:0.85 g
	Prepared: 02/18/2021	Final Volume: 5 mL	% Solids: 83.24
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0072-08 A 02
	Cleanup Batch: CJC0003	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0072-08 A 02
	Cleanup Batch: CJC0001	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0072-08 A 02
	Cleanup Batch: CJC0002	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	25	1180	2940	ND	ug/kg	U
Aroclor 1221	11104-28-2	25	1180	2940	ND	ug/kg	U
Aroclor 1232	11141-16-5	25	1180	2940	ND	ug/kg	U
Aroclor 1242	53469-21-9	25	1180	2940	ND	ug/kg	U
Aroclor 1248	12672-29-6	25	1180	2940	27800	ug/kg	D
Aroclor 1254	11097-69-1	25	1180	2940	15000	ug/kg	D
Aroclor 1260	11096-82-5	25	1370	2940	5380	ug/kg	D
Aroclor 1262	37324-23-5	25	1370	2940	ND	ug/kg	U
Aroclor 1268	11100-14-4	25	1370	2940	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*117*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*87.8*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*98.2*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*87.9*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20W-6

21B0072-08 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 02/01/2021 10:50

Instrument: ICP2 Analyst: SKM — Analyzed: 03/04/2021 15:14

Sample Preparation:	Preparation Method: SWC EPA 3050B		Extract ID: 21B0072-08 C 01
	Preparation Batch: BJB0435	Sample Size: 1.024 g (wet)	Dry Weight:0.71 g
	Prepared: 02/15/2021	Final Volume: 50 mL	% Solids: 69.17

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	5	0.847	7.06	1580	mg/kg	D

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20W-6

21B0072-08 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 02/01/2021 10:50

Instrument: HYDRA Analyst: BLC — Analyzed: 02/19/2021 12:46

Sample Preparation:			
	Preparation Method: SMM EPA 7471B		Extract ID: 21B0072-08 C
	Preparation Batch: BJB0437	Sample Size: 0.227 g (wet)	Dry Weight:0.16 g
	Prepared: 02/15/2021	Final Volume: 50 mL	% Solids: 69.17

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	10	0.0669	0.318	12.1	mg/kg	D

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20W-10

21B0072-09 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 02/01/2021 10:55

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 22:56

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0072-09 A 01

Preparation Batch: BJB0388 — Sample Size: 10.06 g (wet) — Dry Weight:7.16 g

Prepared: 02/12/2021 — Final Volume: 1 mL — % Solids: 71.13

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.99	249	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	14.0	299	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*62.3*	*%*	

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20W-10

21B0072-09 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 02/01/2021 10:55

Instrument: ECD7 Analyst: JGR — Analyzed: 03/07/2021 15:35

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0072-09 A 02
	Preparation Batch: BJB0452	Sample Size: 7.08 g (wet)	Dry Weight:5.04 g
	Prepared: 02/18/2021	Final Volume: 5 mL	% Solids: 71.13
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0072-09 A 02
	Cleanup Batch: CJC0003	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0072-09 A 02
	Cleanup Batch: CJC0001	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0072-09 A 02
	Cleanup Batch: CJC0002	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	39.7	99.3	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	39.7	99.3	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	39.7	99.3	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	39.7	99.3	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	39.7	99.3	1970	ug/kg	D
Aroclor 1254	11097-69-1	5	39.7	99.3	1000	ug/kg	D
Aroclor 1260	11096-82-5	5	46.1	99.3	427	ug/kg	D
Aroclor 1262	37324-23-5	5	46.1	99.3	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.1	99.3	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*80.6*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*76.7*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*66.4*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*75.2*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20W-10

21B0072-09 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 02/01/2021 10:55

Instrument: ICP2 Analyst: SKM — Analyzed: 03/04/2021 13:52

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0072-09 C 01

Preparation Batch: BJB0435 — Sample Size: 1.026 g (wet) — Dry Weight:0.74 g

Prepared: 02/15/2021 — Final Volume: 50 mL — % Solids: 72.11

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.324	2.70	6.61	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-20W-10

21B0072-09 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 02/01/2021 10:55

Instrument: HYDRA Analyst: BLC — Analyzed: 02/19/2021 11:02

Sample Preparation:	Preparation Method: SMM EPA 7471B		Extract ID: 21B0072-09 C
	Preparation Batch: BJB0437	Sample Size: 0.277 g (wet)	Dry Weight:0.20 g
	Prepared: 02/15/2021	Final Volume: 50 mL	% Solids: 72.11

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00526	0.0250	0.0658	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-10E-2

21B0072-10 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 02/01/2021 13:30

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 23:17

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0072-10 A 01

Preparation Batch: BJB0388 — Sample Size: 10.05 g (wet) — Dry Weight:8.96 g

Prepared: 02/12/2021 — Final Volume: 1 mL — % Solids: 89.17

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.58	45.8	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	11.2	238	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*84.4*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-10E-2

21B0072-10 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 02/01/2021 13:30

Instrument: ECD7 Analyst: JGR — Analyzed: 03/07/2021 15:55

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0072-10 A 02
	Preparation Batch: BJB0452	Sample Size: 5.61 g (wet)	Dry Weight:5.00 g
	Prepared: 02/18/2021	Final Volume: 5 mL	% Solids: 89.17
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0072-10 A 02
	Cleanup Batch: CJC0003	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0072-10 A 02
	Cleanup Batch: CJC0001	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0072-10 A 02
	Cleanup Batch: CJC0002	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	40.0	100	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	40.0	100	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	40.0	100	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	40.0	100	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	40.0	100	1060	ug/kg	D
Aroclor 1254	11097-69-1	5	40.0	100	1230	ug/kg	D
Aroclor 1260	11096-82-5	5	46.4	100	495	ug/kg	D
Aroclor 1262	37324-23-5	5	46.4	100	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.4	100	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*82.6*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*71.6*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*85.1*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*69.1*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-10E-2

21B0072-10 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 02/01/2021 13:30

Instrument: ICP2 Analyst: SKM — Analyzed: 03/04/2021 13:55

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0072-10 C 01

Preparation Batch: BJB0435 — Sample Size: 1.015 g (wet) — Dry Weight:0.91 g

Prepared: 02/15/2021 — Final Volume: 50 mL — % Solids: 89.73

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.264	2.20	134	mg/kg	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-10E-2

21B0072-10 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 02/01/2021 13:30

Instrument: HYDRA Analyst: BLC — Analyzed: 02/19/2021 11:04

Sample Preparation:	Preparation Method: SMM EPA 7471B		Extract ID: 21B0072-10 C
	Preparation Batch: BJB0437	Sample Size: 0.276 g (wet)	Dry Weight:0.25 g
	Prepared: 02/15/2021	Final Volume: 50 mL	% Solids: 89.73

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00424	0.0202	0.231	mg/kg	

Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-10E-5

21B0072-11 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 02/01/2021 13:35

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 23:38

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0072-11 A 01

Preparation Batch: BJB0388 — Sample Size: 10.01 g (wet) — Dry Weight:8.47 g

Prepared: 02/12/2021 — Final Volume: 1 mL — % Solids: 84.57

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.91	37.8	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	11.8	188	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*95.2*	*%*	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-10E-5

21B0072-11 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 02/01/2021 13:35

Instrument: ECD7 Analyst: JGR — Analyzed: 03/07/2021 16:16

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0072-11 A 02
	Preparation Batch: BJB0452	Sample Size: 5.94 g (wet)	Dry Weight:5.02 g
	Prepared: 02/18/2021	Final Volume: 5 mL	% Solids: 84.57
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0072-11 A 02
	Cleanup Batch: CJC0003	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0072-11 A 02
	Cleanup Batch: CJC0001	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0072-11 A 02
	Cleanup Batch: CJC0002	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	39.8	99.5	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	39.8	99.5	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	39.8	99.5	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	39.8	99.5	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	39.8	99.5	1280	ug/kg	D
Aroclor 1254	11097-69-1	5	39.8	99.5	1260	ug/kg	D
Aroclor 1260	11096-82-5	5	46.2	99.5	555	ug/kg	D
Aroclor 1262	37324-23-5	5	46.2	99.5	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	46.2	99.5	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*85.2*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*75.4*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*100*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*71.6*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-10E-5

21B0072-11 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 02/01/2021 13:35

Instrument: ICP2 Analyst: SKM — Analyzed: 03/04/2021 13:57

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0072-11 C 01

Preparation Batch: BJB0435 — Sample Size: 1.084 g (wet) — Dry Weight:0.92 g

Prepared: 02/15/2021 — Final Volume: 50 mL — % Solids: 85.13

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.260	2.17	88.4	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-10E-5

21B0072-11 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 02/01/2021 13:35

Instrument: HYDRA Analyst: BLC — Analyzed: 02/19/2021 11:10

Sample Preparation:	Preparation Method: SMM EPA 7471B		Extract ID: 21B0072-11 C
	Preparation Batch: BJB0437	Sample Size: 0.255 g (wet)	Dry Weight:0.22 g
	Prepared: 02/15/2021	Final Volume: 50 mL	% Solids: 85.13

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00484	0.0230	0.0366	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-10E-10

21B0072-12 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 02/01/2021 13:40

Instrument: FID4 Analyst: CTO — Analyzed: 02/25/2021 23:59

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21B0072-12 A 01

Preparation Batch: BJB0388 — Sample Size: 10.06 g (wet) — Dry Weight:7.06 g

Prepared: 02/12/2021 — Final Volume: 1 mL — % Solids: 70.18

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	7.08	18.7	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	14.2	56.7	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*97.8*	*%*	

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-10E-10

21B0072-12 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 02/01/2021 13:40

Instrument: ECD7 Analyst: JGR — Analyzed: 03/07/2021 07:12

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21B0072-12 A 02
	Preparation Batch: BJB0452	Sample Size: 7.14 g (wet)	Dry Weight:5.01 g
	Prepared: 02/18/2021	Final Volume: 5 mL	% Solids: 70.18
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21B0072-12 A 02
	Cleanup Batch: CJC0003	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:21B0072-12 A 02
	Cleanup Batch: CJC0001	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:21B0072-12 A 02
	Cleanup Batch: CJC0002	Initial Volume: 5 mL	
	Cleaned: 01-Mar-2021	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	8.0	20.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	8.0	20.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	8.0	20.0	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	8.0	20.0	46.6	ug/kg	
Aroclor 1254	11097-69-1	1	8.0	20.0	33.1	ug/kg	P1
Aroclor 1260	11096-82-5	1	9.3	20.0	22.8	ug/kg	
Aroclor 1262	37324-23-5	1	9.3	20.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.3	20.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*81.0*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*88.3*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*88.4*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*71.4*	*%*	

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6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-10E-10

21B0072-12 (Solid)

Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 02/01/2021 13:40

Instrument: ICP2 Analyst: SKM — Analyzed: 03/04/2021 14:00

Sample Preparation: Preparation Method: SWC EPA 3050B — Extract ID: 21B0072-12 C 01

Preparation Batch: BJB0435 — Sample Size: 1.048 g (wet) — Dry Weight:0.71 g

Prepared: 02/15/2021 — Final Volume: 50 mL — % Solids: 68.13

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	2	0.336	2.80	4.01	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

LP3-10E-10

21B0072-12 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 02/01/2021 13:40

Instrument: HYDRA Analyst: BLC — Analyzed: 02/19/2021 11:12

Sample Preparation:	Preparation Method: SMM EPA 7471B		Extract ID: 21B0072-12 C
	Preparation Batch: BJB0437	Sample Size: 0.281 g (wet)	Dry Weight:0.19 g
	Prepared: 02/15/2021	Final Volume: 50 mL	% Solids: 68.13

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00548	0.0261	0.0414	mg/kg	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

Petroleum Hydrocarbons - Quality Control

Batch BJB0388 - EPA 3546 (Microwave)

Instrument: FID4 Analyst: CTO

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0388-BLK1)				Prepared: 12-Feb-2021 Analyzed: 25-Feb-2021 18:45						
Diesel Range Organics (C12-C24)	ND	5.00	mg/kg							U
Motor Oil Range Organics (C24-C38)	ND	10.0	mg/kg							U
Surrogate: o-Terphenyl	11.4		mg/kg	*11.3*		*101*	*50-150*			
LCS (BJB0388-BS1)				Prepared: 12-Feb-2021 Analyzed: 25-Feb-2021 19:06						
Diesel Range Organics (C12-C24)	154	5.00	mg/kg	150		103	63-120			
Surrogate: o-Terphenyl	12.1		mg/kg	*11.3*		*107*	*50-150*			
Matrix Spike (BJB0388-MS1)	**Source: 21B0072-12**			Prepared: 12-Feb-2021 Analyzed: 26-Feb-2021 00:20						
Diesel Range Organics (C12-C24)	219	7.08	mg/kg	212	18.7	94.1	63-120			
Surrogate: o-Terphenyl	14.9		mg/kg	*15.9*	*15.6*	*93.5*	*50-150*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0388-MSD1)	**Source: 21B0072-12**			Prepared: 12-Feb-2021 Analyzed: 26-Feb-2021 00:41						
Diesel Range Organics (C12-C24)	250	7.08	mg/kg	212	18.7	109	63-120	13.20	30	
Surrogate: o-Terphenyl	16.2		mg/kg	*15.9*	*15.6*	*102*	*50-150*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

Aroclor PCB - Quality Control

Batch BJB0452 - EPA 3546 (Microwave)

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0452-BLK1)				Prepared: 18-Feb-2021 Analyzed: 06-Mar-2021 07:54							
Aroclor 1016	ND	8.0	20.0	ug/kg							U
Aroclor 1221	ND	8.0	20.0	ug/kg							U
Aroclor 1232	ND	8.0	20.0	ug/kg							U
Aroclor 1242	ND	8.0	20.0	ug/kg							U
Aroclor 1248	ND	8.0	20.0	ug/kg							U
Aroclor 1254	ND	8.0	20.0	ug/kg							U
Aroclor 1260	ND	9.3	20.0	ug/kg							U
Aroclor 1262	ND	9.3	20.0	ug/kg							U
Aroclor 1268	ND	9.3	20.0	ug/kg							U
Surrogate: Decachlorobiphenyl	33.9			ug/kg	*40.0*		*84.7*	*40-133*			
Surrogate: Tetrachlorometaxylene	32.7			ug/kg	*40.0*		*81.8*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	36.5			ug/kg	*40.0*		*91.3*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	29.5			ug/kg	*40.0*		*73.9*	*53-120*			
LCS (BJB0452-BS1)				Prepared: 18-Feb-2021 Analyzed: 06-Mar-2021 08:15							
Aroclor 1016 [2C]	471	8.0	20.0	ug/kg	500		94.2	52-120			
Aroclor 1260 [2C]	420	9.3	20.0	ug/kg	500		84.0	57-120			
Surrogate: Decachlorobiphenyl	29.8			ug/kg	*40.0*		*74.6*	*40-133*			
Surrogate: Tetrachlorometaxylene	29.8			ug/kg	*40.0*		*74.4*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	34.8			ug/kg	*40.0*		*87.0*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	27.1			ug/kg	*40.0*		*67.7*	*53-120*			
LCS Dup (BJB0452-BSD1)				Prepared: 18-Feb-2021 Analyzed: 06-Mar-2021 08:36							
Aroclor 1016 [2C]	449	8.0	20.0	ug/kg	500		89.8	52-120	4.77	30	
Aroclor 1260 [2C]	415	9.3	20.0	ug/kg	500		83.1	57-120	1.07	30	
Surrogate: Decachlorobiphenyl	30.5			ug/kg	*40.0*		*76.1*	*40-133*			
Surrogate: Tetrachlorometaxylene	32.6			ug/kg	*40.0*		*81.5*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	35.3			ug/kg	*40.0*		*88.2*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	28.2			ug/kg	*40.0*		*70.4*	*53-120*			
Matrix Spike (BJB0452-MS1)	**Source: 21B0072-10**			Prepared: 18-Feb-2021 Analyzed: 07-Mar-2021 06:10							
Aroclor 1016	584	8.0	20.0	ug/kg	500	ND	117	52-120			
Aroclor 1260 [2C]	1060	9.3	20.0	ug/kg	500	495	113	57-120			E
Surrogate: Decachlorobiphenyl	31.5			ug/kg	*40.0*		*78.9*	*40-133*			

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

Aroclor PCB - Quality Control

Batch BJB0452 - EPA 3546 (Microwave)

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BJB0452-MS1)	**Source: 21B0072-10**			Prepared: 18-Feb-2021 Analyzed: 07-Mar-2021 06:10							
Surrogate: Tetrachlorometaxylene	35.0			ug/kg	*40.0*		*87.6*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	36.7			ug/kg	*40.0*		*91.7*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	27.4			ug/kg	*40.0*		*68.6*	*53-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0452-MSD1)	**Source: 21B0072-10**			Prepared: 18-Feb-2021 Analyzed: 07-Mar-2021 06:31							
Aroclor 1016	565	8.0	20.0	ug/kg	500	ND	113	52-120	3.36	30	
Aroclor 1260 [2C]	998	9.3	20.0	ug/kg	500	495	101	57-120	5.87	30	E
Surrogate: Decachlorobiphenyl	30.6			ug/kg	*40.0*		*76.6*	*40-133*			
Surrogate: Tetrachlorometaxylene	34.1			ug/kg	*40.0*		*85.3*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	36.0			ug/kg	*40.0*		*90.1*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	26.3			ug/kg	*40.0*		*65.7*	*53-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

Metals and Metallic Compounds - Quality Control

Batch BJB0377 - SWC EPA 3050B

Instrument: ICP2 Analyst: SKM

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0377-BLK1)					Prepared: 12-Feb-2021 Analyzed: 12-Feb-2021 18:47						
Lead	ND	0.240	2.00	mg/kg							U
LCS (BJB0377-BS1)					Prepared: 12-Feb-2021 Analyzed: 12-Feb-2021 19:13						
Lead	194	0.240	2.00	mg/kg	200		97.0	80-120			

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

Metals and Metallic Compounds - Quality Control

Batch BJB0435 - SWC EPA 3050B

Instrument: ICP2 Analyst: SKM

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0435-BLK1)				Prepared: 15-Feb-2021 Analyzed: 04-Mar-2021 13:49							
Lead	ND	0.240	2.00	mg/kg							U
LCS (BJB0435-BS1)				Prepared: 15-Feb-2021 Analyzed: 04-Mar-2021 14:16							
Lead	211	0.240	2.00	mg/kg	200		105	80-120			
Duplicate (BJB0435-DUP1)	**Source: 21B0072-07**			Prepared: 15-Feb-2021 Analyzed: 04-Mar-2021 14:03							
Lead	217	0.249	2.07	mg/kg		113			63.00	20	*
Matrix Spike (BJB0435-MS1)	**Source: 21B0072-07**			Prepared: 15-Feb-2021 Analyzed: 04-Mar-2021 14:09							
Lead	745	0.249	2.07	mg/kg	207	113	305	75-125			*

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0435-MSD1)	**Source: 21B0072-07**			Prepared: 15-Feb-2021 Analyzed: 04-Mar-2021 14:12							
Lead	329	0.249	2.08	mg/kg	208	113	104	75-125	77.50	20	*

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

Metals and Metallic Compounds - Quality Control

Batch BJB0437 - SMM EPA 7471B

Instrument: HYDRA Analyst: BLC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0437-BLK1)				Prepared: 15-Feb-2021 Analyzed: 19-Feb-2021 10:26							
Mercury	ND	0.00525	0.0250	mg/kg							U
LCS (BJB0437-BS1)				Prepared: 15-Feb-2021 Analyzed: 19-Feb-2021 10:28							
Mercury	0.459	0.00525	0.0250	mg/kg	0.500		91.9	80-120			
Duplicate (BJB0437-DUP1)		**Source: 21B0072-01**		Prepared: 15-Feb-2021 Analyzed: 19-Feb-2021 10:32							
Mercury	0.0968	0.00548	0.0261	mg/kg		0.0412			80.50	20	*, L
Matrix Spike (BJB0437-MS1)		**Source: 21B0072-01**		Prepared: 15-Feb-2021 Analyzed: 19-Feb-2021 10:34							
Mercury	0.702	0.00550	0.0262	mg/kg	0.262	0.0412	252	75-125			*

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJB0437-MSD1)		**Source: 21B0072-01**		Prepared: 15-Feb-2021 Analyzed: 19-Feb-2021 10:41							
Mercury	0.323	0.00550	0.0262	mg/kg	0.262	0.0412	108	75-125	73.80	20	*

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

Certified Analyses included in this Report

Analyte	Certifications
EPA 6010D in Solid	
Lead	NELAP,WADOE,DoD-ELAP,ADEC
Lead	NELAP,WADOE,DoD-ELAP,ADEC
Lead	WADOE,DoD-ELAP,ADEC
Lead	NELAP,DoD-ELAP,ADEC
EPA 7471B in Solid	
Mercury	WADOE,DoD-ELAP,CALAP
Mercury	NELAP,DoD-ELAP,CALAP
Mercury	WADOE,NELAP,DoD-ELAP
Mercury	WADOE,NELAP,DoD-ELAP,CALAP
EPA 8082A in Solid	
Aroclor 1016	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1016	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1016 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1221	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1221 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1232	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1232 [2C]	DoD-ELAP,NELAP,CALAP,ADEC

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

Aroclor 1242	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1242	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1242 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1248	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1248 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1254 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1260	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1260 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1262 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,CALAP,ADEC
Aroclor 1268 [2C]	DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

NWTPH-Dx in Solid

Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,WADOE
Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP
Diesel Range Organics (Tol-C18)	DoD-ELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,WADOE
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C22)	DoD-ELAP
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP
Motor Oil Range Organics (C25-C36)	DoD-ELAP,WADOE

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP
Motor Oil Range Organics (C24-C40)	DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Residual Range Organics (C23-C32)	DoD-ELAP
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP
JP8 Range Organics (C8-C18)	DoD-ELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP
JP4 Range Organics (Tol-C14)	DoD-ELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP
Kerosene Range Organics (Tol-C18)	DoD-ELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP
Creosote Range Organics (C12-C22)	DoD-ELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP
Bunker C Range Organics (C10-C38)	DoD-ELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/28/2022

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	16-Mar-2021 14:29

Notes and Definitions

*	Flagged value is not within established control limits.
D	The reported value is from a dilution
D1	Surrogate was not detected due to sample extract dilution
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
H	Hold time violation - Hold time was exceeded.
J	Estimated concentration value detected below the reporting limit.
L	Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to +/- RL instead of 20% RPD
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

23 April 2021

Matt Dalton
Dalton, Olmsted & Fuglevand, Inc
6034 N Star Rd
Ferndale, WA 98248

RE: ICS-Former NW Cooperage

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
21D0115	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Cert# 100006-012

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21D0115

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 20K0126	Turn-around Requested: Normal
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466
Client Contact: Matt Dalton / Dave Cooper	
Client Project Name: ICS/Former NW Cooperage	
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti

Date: 11/5/20 | Page: 1 of 3 | No. of Coolers: 3 | Cooler Temps: See CRF

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
PP15-2.5	11/4/2020	0930	soil	1-8oz 2-4oz	X	X	X	X								
PP15-5	11/4/2020	0935	soil	1-8oz 2-4oz	X	X	X	X								
PP15-7.5	11/4/2020	0940	soil	1-8oz 2-4oz											X	Archive
PP15-10	11/4/2020	0945	soil	1-8oz 2-4oz											X	Archive
PP15-12.5	11/4/2020	0950	soil	1-8oz 2-4oz											X	Archive
PP16-2.5	11/4/2020	1025	soil	1-8oz 2-4oz	X	X	X	X								
PP16-5	11/4/2020	1030	soil	1-8oz 2-4oz	X	X	X	X								
PP16-7.5	11/4/2020	1035	soil	1-8oz 2-4oz											X	Archive
PP16-10	11/4/2020	1040	soil	1-8oz 2-4oz											X	Archive
PP16-12.5	11/4/2020	1045	soil	1-8oz 2-4oz											X	Archive
PP13-2.5	11/4/2020	1235	soil	1-8oz 2-4oz	X	X	X	X								
PP13-5	11/4/2020	1240	soil	1-8oz 2-4oz	X	X	X	X								

Comments/Special Instructions	Relinquished by	Received by	Relinquished by	Received by
(1) Based on total metals	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: ANTHONY CERRUTI	Printed Name: Jacob Lalte	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 11/5/2020 1547	Date & Time: 11/05/2020 1547	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

21D0115

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 20K0126	Turn-around Requested: Normal	Date: 11/5/20	Page: 2 of 3	No. of Coolers: 3	Cooler Temps: See CRF

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

ARI Client Company: Dalton Olmsted & Fuglevand
Phone: 206-660-3466
Client Contact: Matt Dalton / Dave Cooper
Client Project Name: ICS/Former NW Cooperage
Client Project #: SUM-008-03
Samplers: DG Cooper, A Cerruti

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
PP13-7.5	11/4/2020	1245	soil	1-8oz 2-4oz											X	Archive
PP13-10	11/4/2020	1250	soil	1-8oz 2-4oz											X	Archive
PP13-12.5	11/4/2020	1255	soil	1-8oz 2-4oz											X	Archive
PP7-2.5	11/4/2020	1330	soil	1-8oz 2-4oz	X	X	X	X								
PP7-5	11/4/2020	1335	soil	1-8oz 2-4oz											X	Archive
PP7-7.5	11/4/2020	1340	soil	1-8oz 2-4oz	X	X	X	X								
PP7-10	11/4/2020	1345	soil	1-8oz 2-4oz											X	Archive
PP7-12.5	11/4/2020	1350	soil	1-8oz 2-4oz											X	Archive
PP7-14	11/4/2020	1355	soil	1-8oz 2-4oz											X	
PP3-2	11/4/2020	1440	soil	1-8oz											X	Archive
PP3-2.5	11/4/2020	1445	soil	1-8oz 2-4oz	X	X	X	X								
PP3-5	11/4/2020	1450	soil	1-8oz 2-4oz	X	X	X	X								

Comments/Special Instructions: (1) Based on total metals

	Relinquished by	Received by	Relinquished by	Received by
(Signature)	[signature]	[signature]		
Printed Name	ANTHONY CERRUTI	Jacob Shraatt		
Company	DOF	ARI		
Date & Time	11/5/2020 1547	11/05/2020 1547		

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

21D0115

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 20K0126	Turn-around Requested: Normal
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466
Client Contact: Matt Dalton / Dave Cooper	
Client Project Name: ICS/Former NW Cooperage	
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti

Date: 11/5/20	
Page: 3 of 3	
No. of Coolers: 3	Cooler Temps: See CRF

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
PP3-7.5	11/4/2020	1455	soil	1-8oz 2-4oz											X	Archive
PP3-10	11/4/2020	1500	soil	1-8oz 2-4oz											X	Archive
PP3-12.5	11/4/2020	1505	soil	1-8oz 2-4oz											X	Archive

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) Based on total metals	(Signature)	(Signature)	(Signature)	(Signature)
	Printed Name: ANTHONY CERRUTI	Printed Name: Iacobialli	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 11/5/2020 1547	Date & Time: 11/05/2020 1547	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

21D0115

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21H0361	Turn-around Requested: Normal			
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466			
Client Contact: Matt Dalton / Dave Cooper				
Client Project Name: ICS/Former NW Cooperage				
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti			

Date: 1/26/21 | Page: 1 of 3 | No. of Coolers: 3 | Cooler Temps: See CRF

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
P8-20N-1	1/25/2021	1540	soil	1-8oz 2-4oz	X	X	X	X								
P8-20N-2.5	1/25/2021	1545	soil	1-8oz 2-4oz											X	
P8-20N-5	1/25/2021	1550	soil	1-8oz 2-4oz	X	X	X	X								
P8-20N-7.5	1/25/2021	1555	soil	1-8oz 2-4oz											X	
P8-10NW-1	1/25/2021	1500	soil	1-8oz 2-4oz	X	X	X	X								
P8-10NW-2.5	1/25/2021	1505	soil	1-8oz 2-4oz											X	
P8-10NW-5	1/25/2021	1510	soil	1-8oz 2-4oz	X	X	X	X								
P8-10NW-7	1/25/2021	1515	soil	1-8oz 2-4oz											X	
P8-15SW-1	1/25/2021	1415	soil	1-8oz 2-4oz	X	X	X	X								
P8-15SW-2.5	1/25/2021	1420	soil	1-8oz 2-4oz											X	
P8-15SW-5	1/25/2021	1425	soil	1-8oz 2-4oz	X	X	X	X								
P8-15SW-7.5	1/25/2021	1430	soil	1-8oz 2-4oz											X	

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) Based on total metals	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: DG Cooper	Printed Name: Samanthan Colon	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 1/26/21 1420	Date & Time: 1/26/21 1420	Date & Time:	Date & Time:

21D0115

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21A0361	Turn-around Requested: Normal	Date: 1/26/21		
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466	Page: 2 of 3		
Client Contact: Matt Dalton / Dave Cooper		No. of Coolers: 3	Cooler Temps: See CRF	
Client Project Name: ICS/Former NW Cooperage				
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti			

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
P8-10SE-1	1/25/2021	1300	soil	1-8oz 2-4oz	X	X	X	X								
P8-10SE-2.5	1/25/2021	1305	soil	1-8oz 2-4oz											X	
P8-10SE-5	1/25/2021	1310	soil	1-8oz 2-4oz	X	X	X	X								
P8-10SE-7.5	1/25/2021	1315	soil	1-8oz 2-4oz											X	
P8-10NE-1	1/25/2021	1215	soil	1-8oz 2-4oz	X	X	X	X								
P8-10NE-2.5	1/25/2021	1220	soil	1-8oz 2-4oz											X	
P8-10NE-5	1/25/2021	1225	soil	1-8oz 2-4oz	X	X	X	X								
P8-10NE-7.5	1/25/2021	1230	soil	1-8oz 2-4oz											X	
P8-7W-1	1/25/2021	1040	soil	1-8oz 2-4oz	X	X	X	X								
P8-7W-2.5	1/25/2021	1045	soil	1-8oz 2-4oz											X	
P8-7W-5	1/25/2021	1050	soil	1-8oz 2-4oz	X	X	X	X								
P8-7W-7.5	1/25/2021	1055	soil	1-8oz 2-4oz											X	

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) Based on total metals	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: D. Cooper	Printed Name: Samantha Caison	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 1/26/21 1420	Date & Time: 1/26/21 1420	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

21D0115

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21A0361	Turn-around Requested: Normal	Date: 1/26/21	
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466	Page: 3 of 3	
Client Contact: Matt Dalton / Dave Cooper		No. of Coolers: 3	Cooler Temps: See CRF
Client Project Name: ICS/Former NW Cooperage			
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
P8-10E-1	1/25/2021	1130	soil	1-8oz 2-4oz	X	X	X	X								
P8-10E-2.5	1/25/2021	1135	soil	1-8oz 2-4oz											X	
P8-10E-5	1/26/2021	1140	soil	1-8oz 2-4oz	X	X	X	X								
P8-10E-7.5	1/27/2021	1145	soil	1-8oz 2-4oz											X	
P8-10N-1	1/25/2021	0925	soil	1-8oz 2-4oz	X	X	X	X								
P8-10N-2.5	1/25/2021	0930	soil	1-8oz 2-4oz											X	
P8-10N-5	1/25/2021	0935	soil	1-8oz 2-4oz	X	X	X	X								

Comments/Special Instructions	Relinquished by	Received by	Relinquished by	Received by
(1) Based on total metals	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: D. Cooper	Printed Name: Samantha Colvin	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 1/26/21 1420	Date & Time: 1/26/21 1420	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

21D0115

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21A0377	Turn-around Requested: Normal	Date: 1/28/21	
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466	Page: 1 of 2	
Client Contact: Matt Dalton / Dave Cooper		No. of Coolers: 1	Cooler Temps: 2.4
Client Project Name: ICS/Former NW Cooperage			
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)							ARCHIVE	Notes/Comments
LP8-10	1/27/2021	1520	soil	1-8oz 2-4oz	X	X	X	X									
LP8-12	1/27/2021	1530	soil	1-8oz 2-4oz	X	X	X	X									
LP6-6	1/28/2021	1330	soil	1-8oz 2-4oz	X	X	X	X									
LP6-10	1/29/2021	1340	soil	1-8oz 2-4oz	X	X	X	X									
LP6-12	1/30/2021	1350	soil	1-8oz 2-4oz	X	X	X	X									
LP11-3	1/31/2021	1150	soil	1-8oz 2-4oz	X	X	X	X									
LP11-6	2/1/2021	1200	soil	1-8oz 2-4oz	X	X	X	X									
LP11-11	2/2/2021	1210	soil	1-8oz 2-4oz	X	X	X	X									
LP10-5	2/3/2021	1100	soil	1-8oz 2-4oz	X	X	X	X									
LP10-7	2/4/2021	1110	soil	1-8oz 2-4oz	X	X	X	X									
LP10-710	2/5/2021	1120	soil	1-8oz 2-4oz	X	X	X	X									
LP9-5	2/6/2021	0920	soil	1-8oz 2-4oz	X	X	X	X									

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) Based on total metals	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: DG COOPER	Printed Name: BOB CONGLETON	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 1/28/21 0750	Date & Time: 1-28-21 750	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

21D0115

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21A0377	Turn-around Requested: Normal	Date: 1/28/21		
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466	Page: 2 of 2		
Client Contact: Matt Dalton / Dave Cooper		No. of Coolers: 1	Cooler Temps: 2.4	
Client Project Name: ICS/Former NW Cooperage				
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti			

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
LP9-8	1/27/2021	0930	soil	1-8oz 2-4oz	X	X	X	X								
LP9-11	1/27/2021	0940	soil	1-8oz 2-4oz	X	X	X	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) Based on total metals	(Signature) [signature]	(Signature) Bob Congleton	(Signature)	(Signature)
	Printed Name: D. COOPER	Printed Name: BOB CONGLETON	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 1/28/21 0750	Date & Time: 1-28-21 750	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

21D0115

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21B0031	Turn-around Requested: Normal
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466
Client Contact: Matt Dalton / Dave Cooper	
Client Project Name: ICS/Former NW Cooperage	
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti

Date: 2/1/21 | Page: 1 of 2 | No. of Coolers: 1 | Cooler Temps: 0.5

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Analysis Requested

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)						ARCHIVE	Notes/Comments
LP17-6	1/29/2021	0910	soil	1-8oz 2-4oz	X	X	X	X								
LP-17-10	1/29/2021	0920	soil	1-8oz 2-4oz	X	X	X	X								
LP17-14	1/29/2021	0930	soil	1-8oz 2-4oz	X	X	X	X								
LP18-5	1/29/2021	0950	soil	1-8oz 2-4oz	X	X	X	X								
LP18-7	1/29/2021	1000	soil	1-8oz 2-4oz	X	X	X	X								
LP18-10	1/29/2021	1010	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10S-5	1/29/2021	1200	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10S-6	1/29/2021	1210	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10S-10	1/29/2021	1240	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10W-3	1/29/2021	1310	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10W-6	1/29/2021	1315	soil	1-8oz 2-4oz	X	X	X	X								
LP3-10W-10	1/29/2021	1330	soil	1-8oz 2-4oz	X	X	X	X								

Comments/Special Instructions	Relinquished by	Received by	Relinquished by	Received by
(1) Based on total metals	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: DG Cooper	Printed Name: Jacob Walter	Printed Name	Printed Name
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 2/1/21 1125	Date & Time: 02/01/2021 1125	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

21D0115

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21B0031	Turn-around Requested: Normal
ARI Client Company: Dalton Olmsted & Fuglevand	Phone: 206-660-3466
Client Contact: Matt Dalton / Dave Cooper	
Client Project Name: ICS/Former NW Cooperage	
Client Project #: SUM-008-03	Samplers: DG Cooper, A Cerruti

Date:	2/1/21
Page: 2 of 2	
No. of Coolers: 1	Cooler Temps: 0.5

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-DX	Pb EPA 6010C	Hg EPA 7471A	TCLP RCRA 8 Metals (1)							ARCHIVE	Notes/Comments
LP3-10W-14	1/29/2021	1340	soil	1-8oz 2-4oz	X	X	X	X									
LP3-10N-3	1/29/2021	1420	soil	1-8oz 2-4oz	X	X	X	X									
LP3-10N-6	1/29/2021	1430	soil	1-8oz 2-4oz	X	X	X	X									
LP3-10N-10	1/29/2021	1440	soil	1-8oz 2-4oz	X	X	X	X									
LP-DUP	1/29/2021	1015	soil	1-8oz 2-4oz	X	X	X	X									

Comments/Special Instructions	Relinquished by	Received by	Relinquished by	Received by
(1) Based on total metals	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: D. Cooper	Printed Name: Iacobellis	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 2/1/21 1125	Date & Time: 02/01/2021 1125	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

21D0115

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21B0072	Turn-around Requested:	Page: 1 of 2	
ARI Client Company: DOF	Phone: 206-660-3466	Date: 2/1/21	Ice Present?
Client Contact: DAVE COOPER / MATT DALTON		No. of Coolers: 1	Cooler Temps: 5.4
Client Project Name: ICS SUM-008-03 FS			
Client Project #:	Samplers: A. CERRUTI		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	PCBs EPA 8082A	NWTPH-Dx	Pb EPA-6010C	Hg EPA 7471A	TCLP RCRA 8 METALS (1)			ARCHIVE	Notes/Comments
LP3-20S-5	2/1/2021	0930	SOIL	3	X	X	X	X					
LP3-20S-7	2/1/2021	0935	SOIL	3	X	X	X	X					
LP3-20S-10	2/1/2021	0940	SOIL	3	X	X	X	X					
LP3-20N-2	2/1/2021	1200	SOIL	3	X	X	X	X					
LP3-20N-6	2/1/2021	1205	SOIL	3	X	X	X	X					
LP3-20N-10	2/1/2021	1210	SOIL	3	X	X	X	X					
LP3-20W-2	2/1/2021	1045	SOIL	3	X	X	X	X					
LP3-20W-6	2/1/2021	1050	SOIL	3	X	X	X	X					
LP3-20W-10	2/1/2021	1055	SOIL	3	X	X	X	X					
LP3-10E-2	2/1/2021	1330	SOIL	3	X	X	X	X					

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
(1) BASED ON TOTAL METALS	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: ANTHONY CERRUTI	Printed Name: Samantha Colon	Printed Name:	Printed Name:
	Company: DOF	Company: ARI	Company:	Company:
	Date & Time: 2/2/2021 1235	Date & Time: 2/2/21 1235	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

21D0115

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21B0072	Turn-around Requested:
ARI Client Company: DOF	Phone: 206-660-3466
Client Contact: DAVE COOPER / MATT DALTON	
Client Project Name: ICS FS	
Client Project #: SUM-008-03	Samplers: A. CERRUTI

Page: 2	of 2
Date: 2/1/21	Ice Present?
No. of Coolers: 1	Cooler Temps: 5.4

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	PCBs by EPA 8082A	NWTPH-Dx	Pb EPA 6010	Hg EPA 7471A	TCLP RCRA 8 METALS (1)				Notes/Comments
LP3-10E-5	2/1/2021	1335	SOIL	3	X	X	X	X					
LP3-10E-10	2/1/2021	1340	SOIL	3	X	X	X	X					

Comments/Special Instructions: (1) BASED ON TOTAL METALS

	Relinquished by:	Received by:	Relinquished by:	Received by:
(Signature)	[signature]	[signature]		
Printed Name:	ANTHONY CERRUTI	Samantha Colon		
Company:	DOF	ARI		
Date & Time:	2/2/2021 1235	2/2/21 1235		

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Reply all | Delete | Junk | Block

Fw: ICS - Request TCLP Testing

https://www.arilabs.com

Version changes coming this summer to SW-846 8260 and 8270 analyses, see our recent post explaining the details.

"Never interrupt someone doing something you said couldn't be done" - Amelia Earhart

***Before printing, think about ENVIRONMENTAL responsibility

From: Matt Dalton <mdalton@dofnw.com>
Sent: Friday, April 9, 2021 10:18 AM
To: Kelly Bottem <kelly.bottem@arilabs.com>
Cc: Raleigh Farlow <dmdinc111@gmail.com>
Subject: ICS - Request TCLP Testing

Kelly: 21D0115

We should have the following soil samples archived with ARI. I would like to have RCRA Metals TCLP testing done on the following samples:

ARI Wk Order	Sample Name	ARI Sample No.
20K0126	PP-16-2.5'	20K0126-06
21A0361	P8-20N-1'	21A0361-01
21A0361	P8-10NE-1'	21A0361-17
21B0072	LP3-20W-6'	21B0072-08
21B0031	LP3-10S-6'	21B0031-08
21A0377	LP-6-10'	21A0377-04

Please let me know if there is sufficient sample remaining to complete the TCLP analyses.

Thanks

Matt Dalton
DOF
206-498-6616

P.S. – Raleigh – just an FYI.

Reply | Reply all | Forward

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PP16-2.5	21D0115-01	Solid	04-Nov-2020 10:25	09-Apr-2021 14:14
P8-20N-1	21D0115-02	Solid	25-Jan-2021 15:40	09-Apr-2021 14:14
P8-10NE-1	21D0115-03	Solid	25-Jan-2021 12:15	09-Apr-2021 14:14
LP6-10	21D0115-04	Solid	29-Jan-2021 13:40	09-Apr-2021 14:14
LP3-10S-6	21D0115-05	Solid	29-Jan-2021 12:10	09-Apr-2021 14:14
LP3-20W-6	21D0115-06	Solid	29-Jan-2021 12:10	09-Apr-2021 14:14

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6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

Work Order Case Narrative

TCLP Metals

The sample(s) were digested and analyzed within the recommended holding times with the exception of mercury. Mercury hjas been flagged with a "H" qualifer. The samples were stored frozen.

Initial and continuing calibrations were within method requirements.

The method blank was clean at the reporting limits.

The matrix spike (MS) percent recoveries were within control limits.

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

PP16-2.5

21D0115-01 (Solid)

TCLP Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 11/04/2020 10:25

Instrument: ICP2 Analyst: SKD — Analyzed: 04/14/2021 22:12

Sample Preparation: Preparation Method: LEN Digestion of EPA 1311 Elutriate — Extract ID: 21D0115-01 A 03

Preparation Batch: BJD0311 — Sample Size: 25 mL (wet)

Prepared: 04/13/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	5	0.0140	0.250	ND	mg/L	U
Barium	7440-39-3	5	0.0075	0.0150	ND	mg/L	U
Cadmium	7440-43-9	5	0.0006	0.0100	0.0038	mg/L	J
Chromium	7440-47-3	5	0.0024	0.0250	ND	mg/L	U
Lead	7439-92-1	5	0.0065	0.100	0.267	mg/L	
Selenium	7782-49-2	5	0.0408	0.250	ND	mg/L	U
Silver	7440-22-4	5	0.0022	0.0150	ND	mg/L	U

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

PP16-2.5

21D0115-01 (Solid)

TCLP Metals and Metallic Compounds

Method: EPA 7470A — Sampled: 11/04/2020 10:25

Instrument: HYDRA Analyst: BLC — Analyzed: 04/15/2021 10:25

Sample Preparation: Preparation Method: LEM 7470A Digestion of EPA 1311 Elutriate for Hg — Extract ID: 21D0115-01 A 01

Preparation Batch: BJD0312 — Sample Size: 20 mL (wet)

Prepared: 04/13/2021 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.000007	0.000100	ND	mg/L	H, U

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

P8-20N-1

21D0115-02 (Solid)

TCLP Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/25/2021 15:40

Instrument: ICP2 Analyst: SKD — Analyzed: 04/21/2021 15:44

Sample Preparation: Preparation Method: LEN Digestion of EPA 1311 Elutriate — Extract ID: 21D0115-02 A 03

Preparation Batch: BJD0311 — Sample Size: 25 mL (wet)

Prepared: 04/13/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	5	0.0140	0.250	ND	mg/L	U
Barium	7440-39-3	5	0.0075	0.0150	2.16	mg/L	
Cadmium	7440-43-9	5	0.0006	0.0100	0.0123	mg/L	
Chromium	7440-47-3	5	0.0024	0.0250	1.36	mg/L	
Lead	7439-92-1	5	0.0065	0.100	6.72	mg/L	
Selenium	7782-49-2	5	0.0408	0.250	0.0472	mg/L	J
Silver	7440-22-4	5	0.0022	0.0150	ND	mg/L	U

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

P8-20N-1

21D0115-02 (Solid)

TCLP Metals and Metallic Compounds

Method: EPA 7470A — Sampled: 01/25/2021 15:40

Instrument: HYDRA Analyst: BLC — Analyzed: 04/15/2021 10:35

Sample Preparation: Preparation Method: LEM 7470A Digestion of EPA 1311 Elutriate for Hg — Extract ID: 21D0115-02 A 01

Preparation Batch: BJD0312 — Sample Size: 20 mL (wet)

Prepared: 04/13/2021 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.000007	0.000100	ND	mg/L	H, U

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6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

P8-10NE-1

21D0115-03 (Solid)

TCLP Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/25/2021 12:15

Instrument: ICP2 Analyst: SKD — Analyzed: 04/21/2021 15:47

Sample Preparation: Preparation Method: LEN Digestion of EPA 1311 Elutriate — Extract ID: 21D0115-03 A 03

Preparation Batch: BJD0311 — Sample Size: 25 mL (wet)

Prepared: 04/13/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	5	0.0140	0.250	ND	mg/L	U
Barium	7440-39-3	5	0.0075	0.0150	11.7	mg/L	
Cadmium	7440-43-9	5	0.0006	0.0100	0.212	mg/L	
Chromium	7440-47-3	5	0.0024	0.0250	0.0069	mg/L	J
Lead	7439-92-1	5	0.0065	0.100	2.84	mg/L	
Selenium	7782-49-2	5	0.0408	0.250	0.211	mg/L	J
Silver	7440-22-4	5	0.0022	0.0150	ND	mg/L	U

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6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

P8-10NE-1

21D0115-03 (Solid)

TCLP Metals and Metallic Compounds

Method: EPA 7470A — Sampled: 01/25/2021 12:15

Instrument: HYDRA Analyst: BLC — Analyzed: 04/15/2021 10:37

Sample Preparation: Preparation Method: LEM 7470A Digestion of EPA 1311 Elutriate for Hg — Extract ID: 21D0115-03 A 01

Preparation Batch: BJD0312 — Sample Size: 20 mL (wet)

Prepared: 04/13/2021 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.000007	0.000100	ND	mg/L	H, U

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6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

LP6-10

21D0115-04 (Solid)

TCLP Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 13:40

Instrument: ICP2 Analyst: SKD — Analyzed: 04/21/2021 15:50

Sample Preparation: Preparation Method: LEN Digestion of EPA 1311 Elutriate — Extract ID: 21D0115-04 A 03

Preparation Batch: BJD0311 — Sample Size: 25 mL (wet)

Prepared: 04/13/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	5	0.0140	0.250	ND	mg/L	U
Barium	7440-39-3	5	0.0075	0.0150	0.357	mg/L	
Cadmium	7440-43-9	5	0.0006	0.0100	0.0017	mg/L	J
Chromium	7440-47-3	5	0.0024	0.0250	0.0195	mg/L	J
Lead	7439-92-1	5	0.0065	0.100	0.787	mg/L	
Selenium	7782-49-2	5	0.0408	0.250	0.0722	mg/L	J
Silver	7440-22-4	5	0.0022	0.0150	ND	mg/L	U

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

LP6-10

21D0115-04 (Solid)

TCLP Metals and Metallic Compounds

Method: EPA 7470A — Sampled: 01/29/2021 13:40

Instrument: HYDRA Analyst: BLC — Analyzed: 04/15/2021 10:39

Sample Preparation: Preparation Method: LEM 7470A Digestion of EPA 1311 Elutriate for Hg — Extract ID: 21D0115-04 A 01

Preparation Batch: BJD0312 — Sample Size: 20 mL (wet)

Prepared: 04/13/2021 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.000007	0.000100	0.000020	mg/L	H, J

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6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

LP3-10S-6

21D0115-05 (Solid)

TCLP Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 12:10

Instrument: ICP2 Analyst: SKD — Analyzed: 04/21/2021 15:53

Sample Preparation: Preparation Method: LEN Digestion of EPA 1311 Elutriate — Extract ID: 21D0115-05 A 03

Preparation Batch: BJD0311 — Sample Size: 25 mL (wet)

Prepared: 04/13/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	5	0.0140	0.250	ND	mg/L	U
Barium	7440-39-3	5	0.0075	0.0150	1.59	mg/L	
Cadmium	7440-43-9	5	0.0006	0.0100	0.0030	mg/L	J
Chromium	7440-47-3	5	0.0024	0.0250	0.0512	mg/L	
Lead	7439-92-1	5	0.0065	0.100	2.80	mg/L	
Selenium	7782-49-2	5	0.0408	0.250	0.0985	mg/L	J
Silver	7440-22-4	5	0.0022	0.0150	ND	mg/L	U

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6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

LP3-10S-6

21D0115-05 (Solid)

TCLP Metals and Metallic Compounds

Method: EPA 7470A — Sampled: 01/29/2021 12:10

Instrument: HYDRA Analyst: BLC — Analyzed: 04/15/2021 10:41

Sample Preparation: Preparation Method: LEM 7470A Digestion of EPA 1311 Elutriate for Hg — Extract ID: 21D0115-05 A 01

Preparation Batch: BJD0312 — Sample Size: 20 mL (wet)

Prepared: 04/13/2021 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.000007	0.000100	ND	mg/L	H, U

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Analytical Report

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

LP3-20W-6

21D0115-06 (Solid)

TCLP Metals and Metallic Compounds

Method: EPA 6010D — Sampled: 01/29/2021 12:10

Instrument: ICP2 Analyst: SKD — Analyzed: 04/21/2021 15:56

Sample Preparation: Preparation Method: LEN Digestion of EPA 1311 Elutriate — Extract ID: 21D0115-06 A 03

Preparation Batch: BJD0311 — Sample Size: 25 mL (wet)

Prepared: 04/13/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	5	0.0140	0.250	ND	mg/L	U
Barium	7440-39-3	5	0.0075	0.0150	1.11	mg/L	
Cadmium	7440-43-9	5	0.0006	0.0100	ND	mg/L	U
Chromium	7440-47-3	5	0.0024	0.0250	ND	mg/L	U
Lead	7439-92-1	5	0.0065	0.100	0.257	mg/L	
Selenium	7782-49-2	5	0.0408	0.250	0.113	mg/L	J
Silver	7440-22-4	5	0.0022	0.0150	ND	mg/L	U

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Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

LP3-20W-6

21D0115-06 (Solid)

TCLP Metals and Metallic Compounds

Method: EPA 7470A — Sampled: 01/29/2021 12:10

Instrument: HYDRA Analyst: BLC — Analyzed: 04/15/2021 10:44

Sample Preparation: Preparation Method: LEM 7470A Digestion of EPA 1311 Elutriate for Hg — Extract ID: 21D0115-06 A 01

Preparation Batch: BJD0312 — Sample Size: 20 mL (wet)

Prepared: 04/13/2021 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.000007	0.000100	ND	mg/L	H, U

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

TCLP Metals and Metallic Compounds - Quality Control

Batch BJD0311 - LEN Digestion of EPA 1311 Elutriate

Instrument: ICP2 Analyst: SKD

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJD0311-BLK1)				Prepared: 13-Apr-2021 Analyzed: 14-Apr-2021 22:04							
Arsenic	ND	0.0140	0.250	mg/L							U
Barium	ND	0.0075	0.0150	mg/L							U
Cadmium	0.0033	0.0006	0.0100	mg/L							J
Chromium	ND	0.0024	0.0250	mg/L							U
Lead	ND	0.0065	0.100	mg/L							U
Selenium	ND	0.0408	0.250	mg/L							U
Silver	0.0023	0.0022	0.0150	mg/L							J
Duplicate (BJD0311-DUP1)		**Source: 21D0115-01**		Prepared: 13-Apr-2021 Analyzed: 14-Apr-2021 22:09							
Arsenic	ND	0.0140	0.250	mg/L		ND					U
Barium	ND	0.0075	0.0150	mg/L		ND					U
Cadmium	0.0026	0.0006	0.0100	mg/L		0.0038			37.30	20	L, J
Chromium	ND	0.0024	0.0250	mg/L		ND					U
Lead	0.252	0.0065	0.100	mg/L		0.267			5.64	20	
Selenium	ND	0.0408	0.250	mg/L		ND					U
Silver	0.0032	0.0022	0.0150	mg/L		ND					J
Matrix Spike (BJD0311-MS1)		**Source: 21D0115-01**		Prepared: 13-Apr-2021 Analyzed: 14-Apr-2021 22:15							
Arsenic	4.00	0.0140	0.250	mg/L	4.00	ND	100	75-125			
Barium	4.18	0.0075	0.0150	mg/L	4.00	ND	105	75-125			
Cadmium	1.09	0.0006	0.0100	mg/L	1.00	0.0038	109	75-125			
Chromium	1.03	0.0024	0.0250	mg/L	1.00	ND	103	75-125			
Lead	4.21	0.0065	0.100	mg/L	4.00	0.267	98.6	75-125			
Selenium	4.08	0.0408	0.250	mg/L	4.00	ND	102	75-125			
Silver	1.02	0.0022	0.0150	mg/L	1.00	ND	102	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJD0311-MSD1)		**Source: 21D0115-01**		Prepared: 13-Apr-2021 Analyzed: 14-Apr-2021 22:18							
Arsenic	4.03	0.0140	0.250	mg/L	4.00	ND	101	75-125	0.63	20	
Barium	4.14	0.0075	0.0150	mg/L	4.00	ND	103	75-125	1.20	20	
Cadmium	1.10	0.0006	0.0100	mg/L	1.00	0.0038	110	75-125	0.67	20	
Chromium	1.03	0.0024	0.0250	mg/L	1.00	ND	103	75-125	0.34	20	
Lead	4.25	0.0065	0.100	mg/L	4.00	0.267	99.5	75-125	0.85	20	
Selenium	4.14	0.0408	0.250	mg/L	4.00	ND	103	75-125	1.33	20	
Silver	1.03	0.0022	0.0150	mg/L	1.00	ND	103	75-125	1.55	20	

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

TCLP Metals and Metallic Compounds - Quality Control

Batch BJD0311 - LEN Digestion of EPA 1311 Elutriate

Instrument: ICP2 Analyst: SKD

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

TCLP Metals and Metallic Compounds - Quality Control

Batch BJD0312 - LEM 7470A Digestion of EPA 1311 Elutriate for Hg

Instrument: HYDRA Analyst: BLC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJD0312-BLK1)				Prepared: 13-Apr-2021 Analyzed: 15-Apr-2021 10:23							
Mercury	ND	0.000007	0.000100	mg/L							U
Duplicate (BJD0312-DUP1)	**Source: 21D0115-01**			Prepared: 13-Apr-2021 Analyzed: 15-Apr-2021 10:28							
Mercury	ND	0.000007	0.000100	mg/L		ND					H, U
Matrix Spike (BJD0312-MS1)	**Source: 21D0115-01**			Prepared: 13-Apr-2021 Analyzed: 15-Apr-2021 10:30							
Mercury	0.00102	0.000007	0.000100	mg/L	0.00100	ND	102	75-125			H

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJD0312-MSD1)	**Source: 21D0115-01**			Prepared: 13-Apr-2021 Analyzed: 15-Apr-2021 10:32							
Mercury	0.00103	0.000007	0.000100	mg/L	0.00100	ND	103	75-125	1.18	20	H

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

Certified Analyses included in this Report

Analyte	Certifications
EPA 6010D in Solid	
Silver	WADOE,DoD-ELAP
Silver	NELAP,DoD-ELAP
Silver	NELAP,WADOE,DoD-ELAP
Silver	NELAP,WADOE,DoD-ELAP
Arsenic	CALAP,NELAP,WADOE
Arsenic	NELAP,WADOE
Arsenic	CALAP,WADOE
Arsenic	CALAP,NELAP
Barium	CALAP,NELAP,WADOE
Barium	CALAP,NELAP
Barium	NELAP,WADOE
Barium	CALAP,WADOE
Cadmium	NELAP,DoD-ELAP
Cadmium	NELAP,WADOE,DoD-ELAP
Cadmium	WADOE,DoD-ELAP
Cadmium	NELAP,WADOE,DoD-ELAP
Chromium	WADOE,DoD-ELAP
Chromium	NELAP,DoD-ELAP
Chromium	NELAP,WADOE,DoD-ELAP
Chromium	NELAP,WADOE,DoD-ELAP
Lead	NELAP,WADOE,DoD-ELAP
Lead	NELAP,WADOE,DoD-ELAP
Lead	WADOE,DoD-ELAP
Lead	NELAP,DoD-ELAP
Selenium	NELAP,WADOE,DoD-ELAP
Selenium	NELAP,DoD-ELAP
Selenium	NELAP,WADOE,DoD-ELAP
Selenium	WADOE,DoD-ELAP
EPA 7470A in Solid	
Mercury	WADOE,NELAP,DoD-ELAP
Mercury	WADOE,NELAP,DoD-ELAP
Mercury	WADOE,DoD-ELAP
Mercury	NELAP,DoD-ELAP

Dalton, Olmsted & Fuglevand, Inc	Project: ICS-Former NW Cooperage	
6034 N Star Rd	Project Number: ICS-NW Cooperage	**Reported:**
Ferndale WA, 98248	Project Manager: Matt Dalton	23-Apr-2021 10:44

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/28/2022

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Notes and Definitions

D	The reported value is from a dilution
H	Hold time violation - Hold time was exceeded.
J	Estimated concentration value detected below the reporting limit.
L	Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to +/- RL instead of 20% RPD
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.