	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
	35 Benzo(a)pyrene	252	Compound Not Detected.					
*	36 Perylene-d12	264	20.945	20.935	(1.000)	406802	200.000	
	37 Perylene	252	Compound Not Detected.					
$	38 Dibenzo(a,h)anthracene-d14	292	23.830	23.830	(1.138)	191100	159.327	159
	39 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	40 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	41 Benzo(g,h,i)perylene	276	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121708.D
Lab Smp Id: 16K0321-23
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161217.b\lowsim.m
Misc Info:

Calibration Date: 17-DEC-2016
Calibration Time: 12:40
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	353447	3.46
11 Acenaphthene-d10	209310	104655	418620	217745	4.03
18 Phenanthrene-d10	404977	202489	809954	468182	15.61
28 Chrysene-d12	465046	232523	930092	425443	-8.52
36 Perylene-d12	454694	227347	909388	406802	-10.53

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.21	-0.37
11 Acenaphthene-d10	10.26	9.76	10.76	10.25	-0.09
18 Phenanthrene-d10	12.96	12.46	13.46	12.95	-0.08
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.95	0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121708.D

Lab ID: 16K0321-23
nt11.i, 20161217.b\lowsim.m,   17-DEC-2016 15:46

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

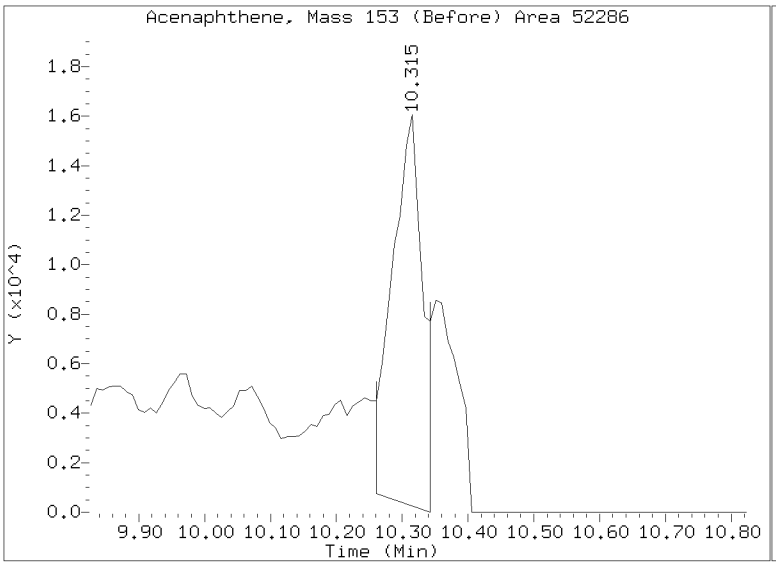
NONE

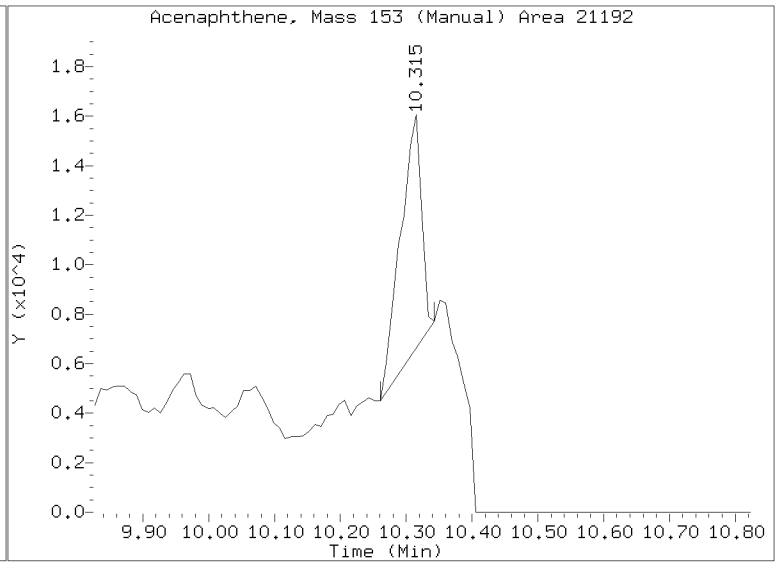
On Column LOD for nt11.i, 20161217.b\lowsim.m, allpna.sub = 3.0000

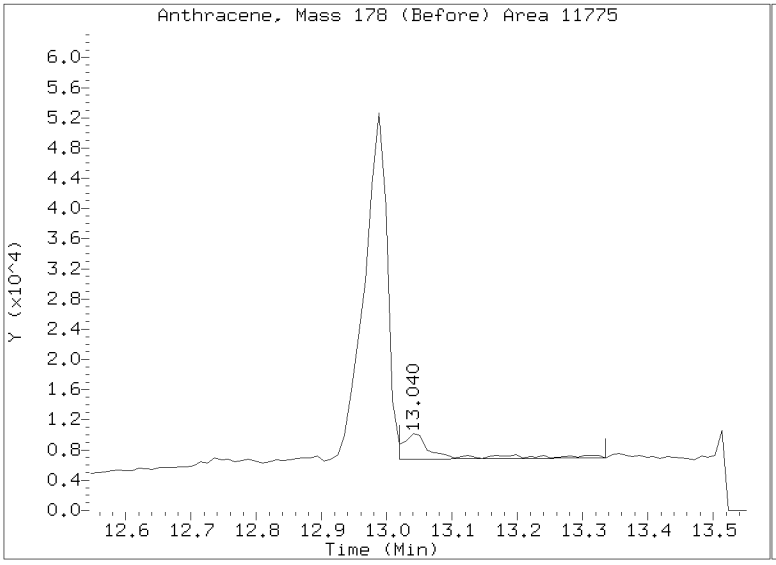
Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

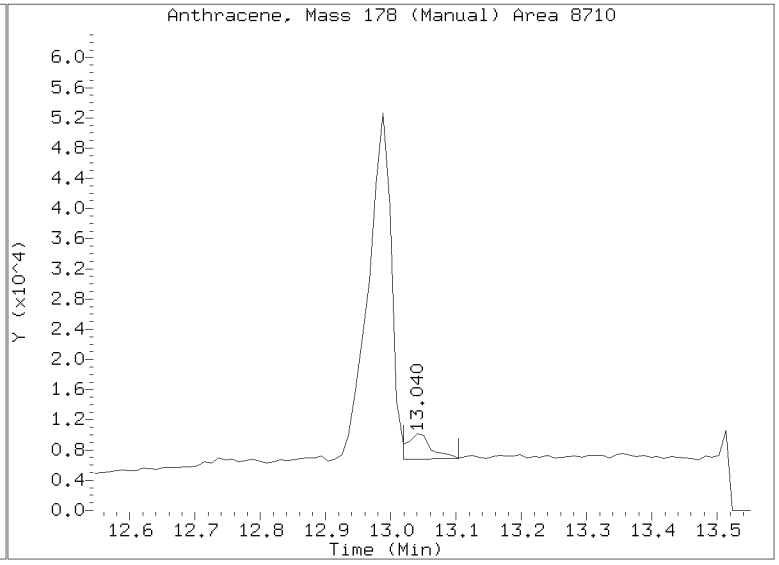
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20161217.b/N1116121708.D
Injection Date: 17-DEC-2016 15:46
Lab ID:16K0321-23 Client ID:
Report Date: 12/20/2016 09:40









Analytical Resources, Incorporated
Analytical Chemists and Consultants

PG-FB-SMA2-PEMD-161122

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270D-SIM

8270D-SIM PAH (0.01 ug/L)

Laboratory:	Analytical Resources, Inc.			SDG:	16K0321
Client:	Anchor QEA, LLC			Project:	Port Gamble Shellfish Monitoring
Matrix:	Tissue	Laboratory ID:	16K0321-24	File ID:	N1116121709.D
Sampled:	11/22/16 09:50	Prepared:	11/24/16 08:25	Analyzed:	12/17/16 16:17
Solids:		Preparation:	EPA 3550C-Mod (Ultrasonic	Initial/Final:	0.886 g / 0.1 mL
Batch:	BEK0658	Sequence:	SEL0255	Calibration:	ZL00052
Instrument:	NT11	Column:	RXi-17Sil-MS		

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	18.2	B	1.13	1.35
91-57-6	2-Methylnaphthalene	1	24.1		1.13	1.13
208-96-8	Acenaphthylene	1	1.13	U	1.13	1.13
83-32-9	Acenaphthene	1	12.6		1.13	1.13
86-73-7	Fluorene	1	7.16		1.13	1.13
85-01-8	Phenanthrene	1	10.4		1.13	1.13
120-12-7	Anthracene	1	1.13	U	1.13	1.13
206-44-0	Fluoranthene	1	4.76		1.13	1.13
129-00-0	Pyrene	1	5.92		1.13	1.13
56-55-3	Benzo(a)anthracene	1	1.13	U	1.13	1.13
218-01-9	Chrysene	1	1.13	U	1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.13	U	1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	19.0	56.0	30 - 160	
Dibenzo[a,h]anthracene-d14	33.860	19.7	58.3	30 - 160	
Fluoranthene-d10	33.860	22.0	64.8	30 - 160	
Fluorene-d10	21.163	13.6	64.1	30 - 160	
Anthracene-d10	21.163	11.4	53.9	30 - 160	
Benzo(e)pyrene-d12	21.163	13.7	64.6	30 - 160	

Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121709.D

Date : 17-DEC-2016 16:17

Client ID:

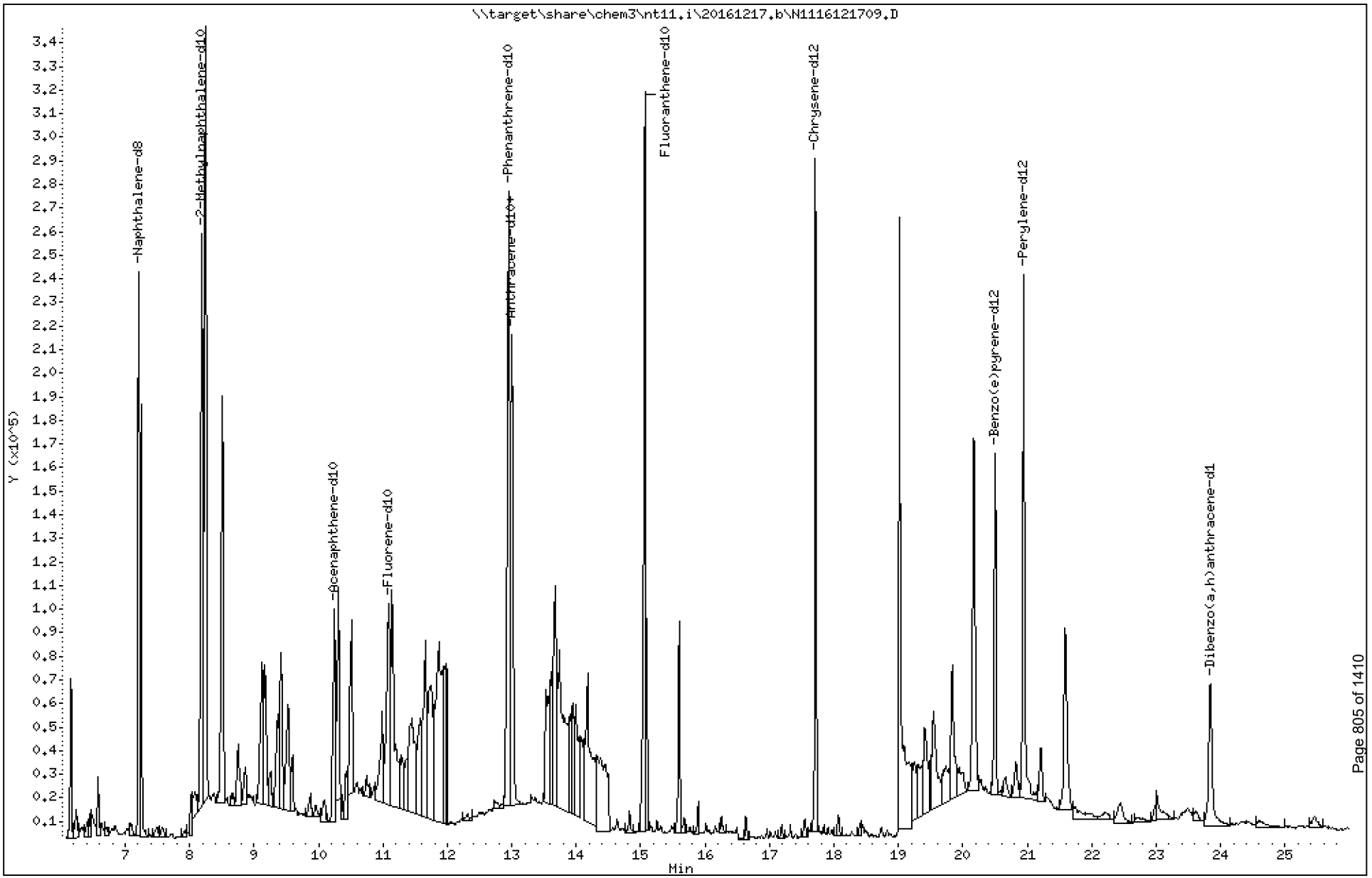
Instrument: nt11.i

Sample Info: 16K0321-24

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121709.D

Date : 17-DEC-2016 16:17

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-24

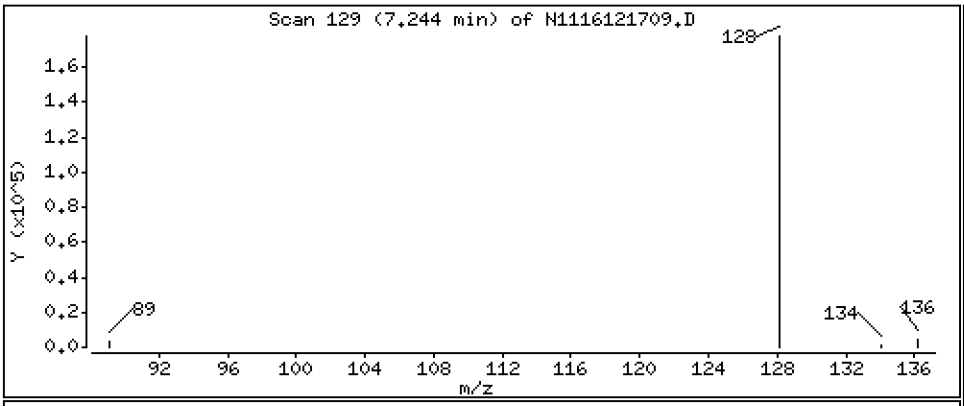
Operator: VTS

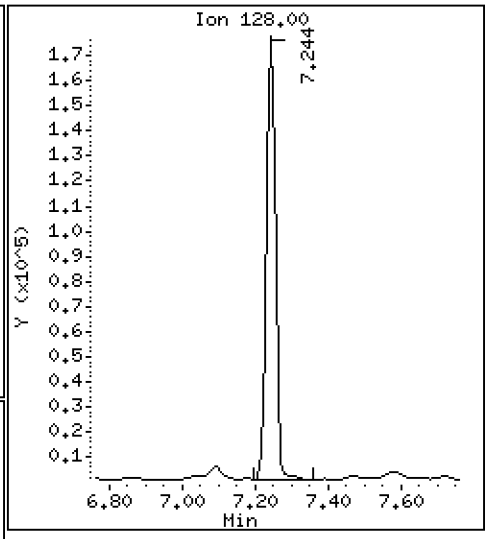
Column phase: Rxi-17Sil MS

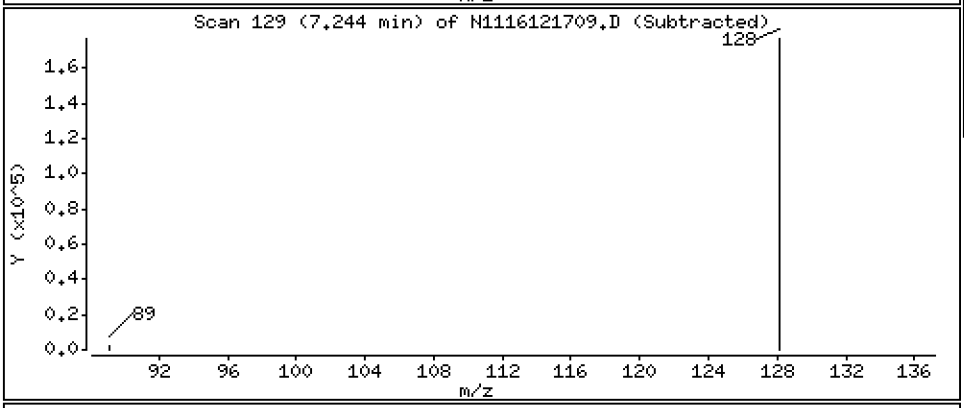
Column diameter: 0.25

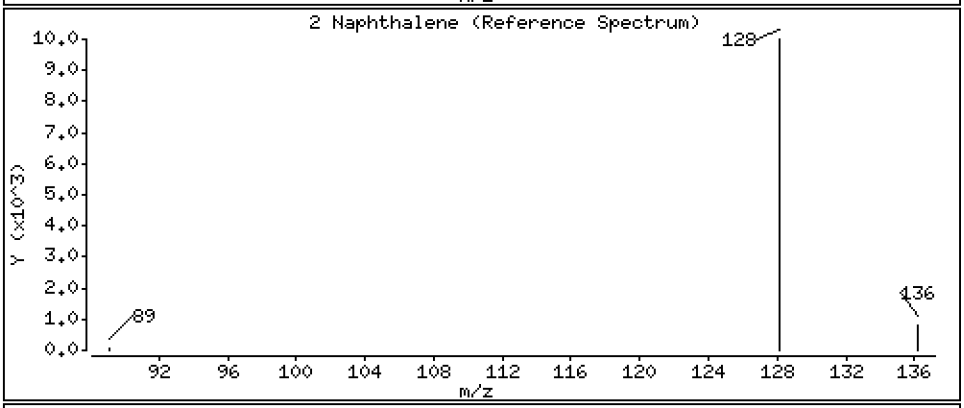
2 Naphthalene

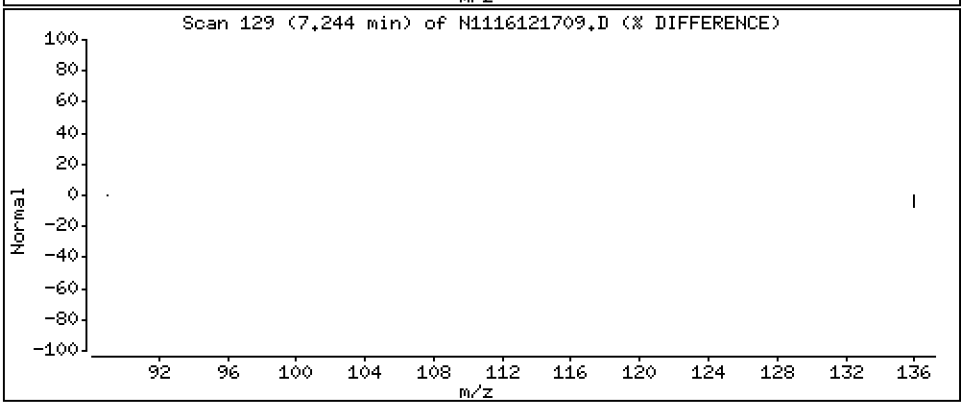
Concentration: 161 ng/mL











Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121709.D

Date : 17-DEC-2016 16:17

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-24

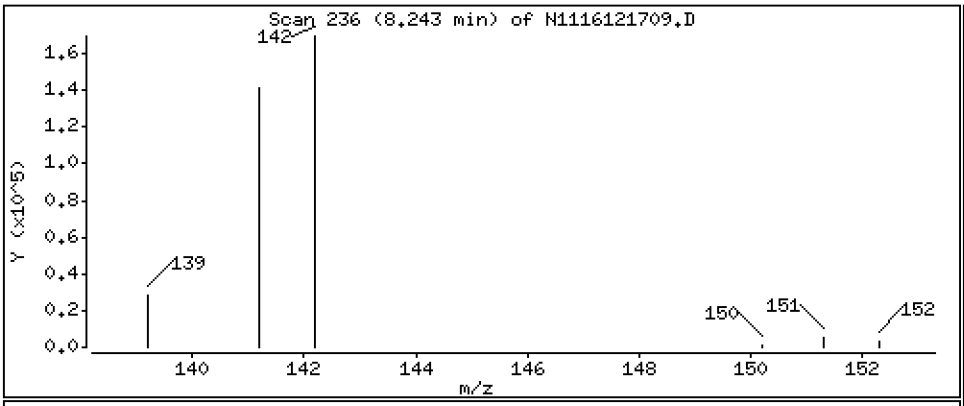
Operator: VTS

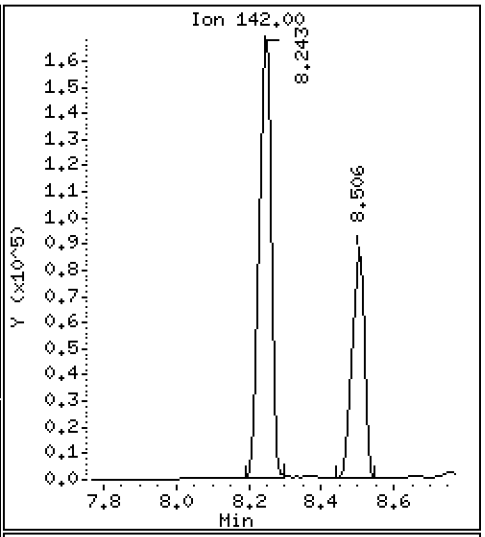
Column phase: Rxi-17Sil MS

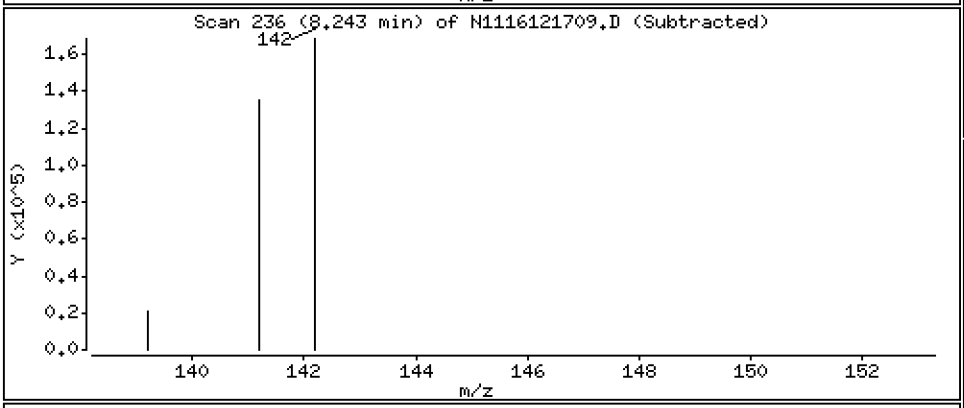
Column diameter: 0.25

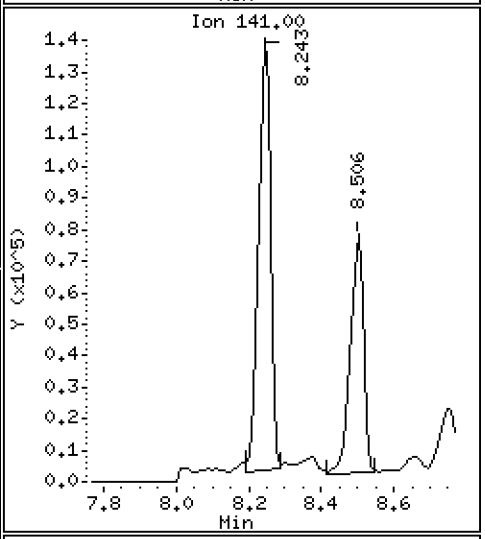
5 2-Methylnaphthalene

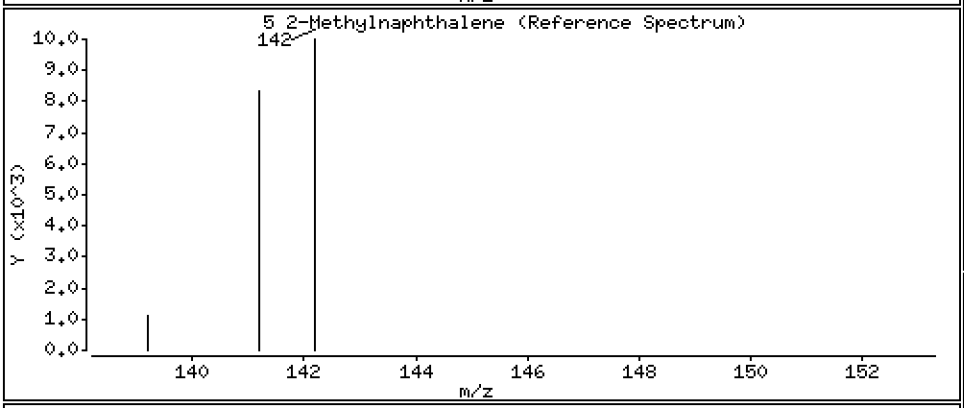
Concentration: 213 ng/mL

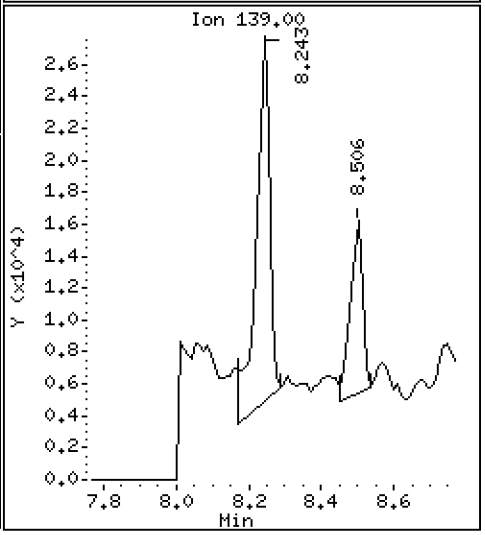


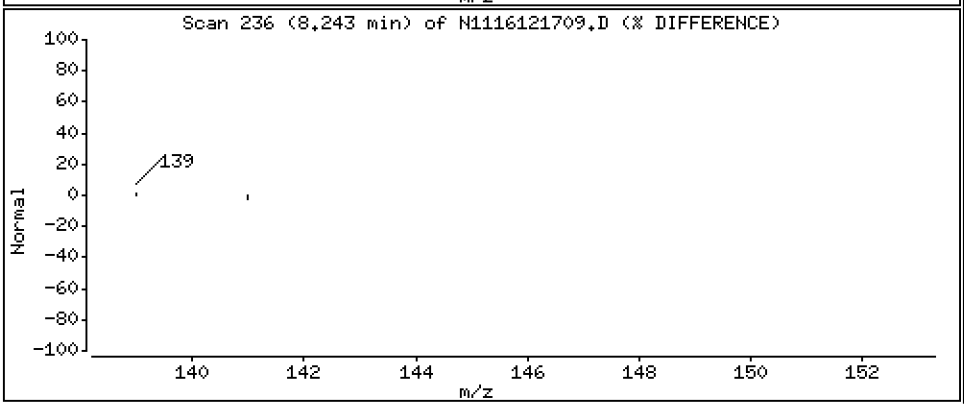












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121709.D

Date : 17-DEC-2016 16:17

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-24

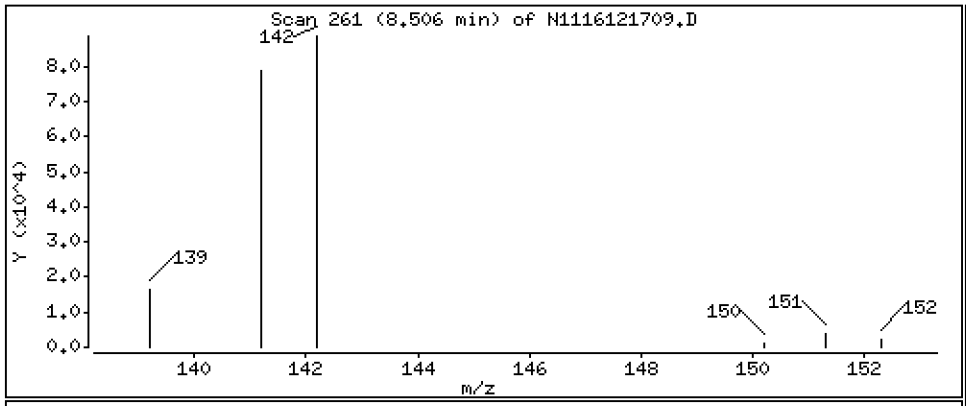
Operator: VTS

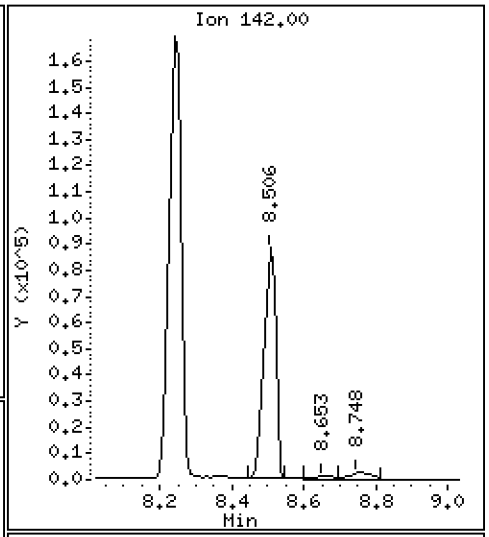
Column phase: Rxi-17Sil MS

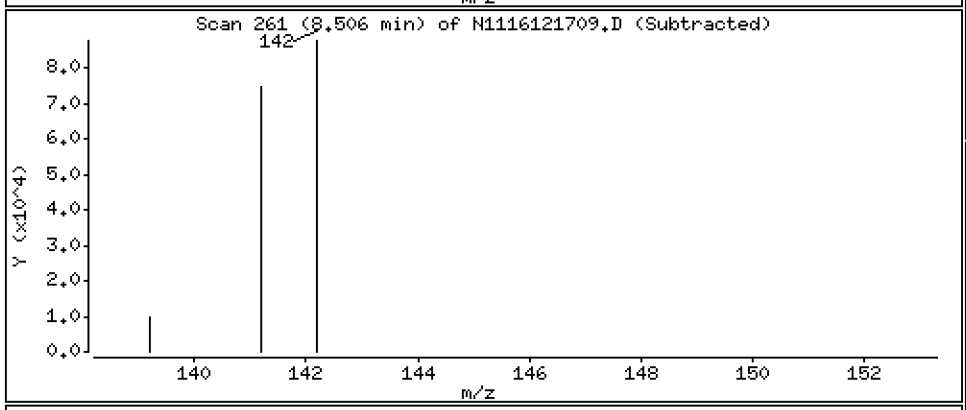
Column diameter: 0.25

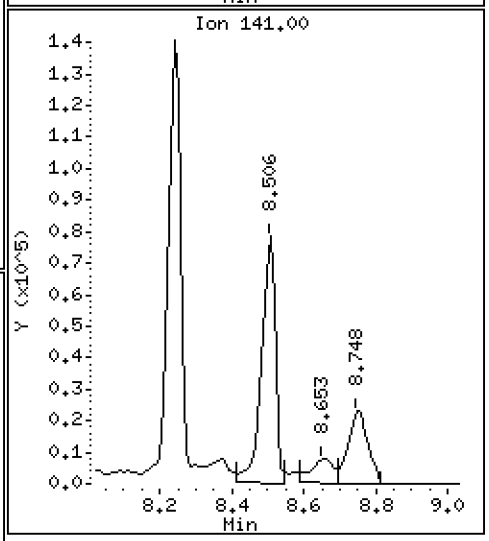
6 1-Methylnaphthalene

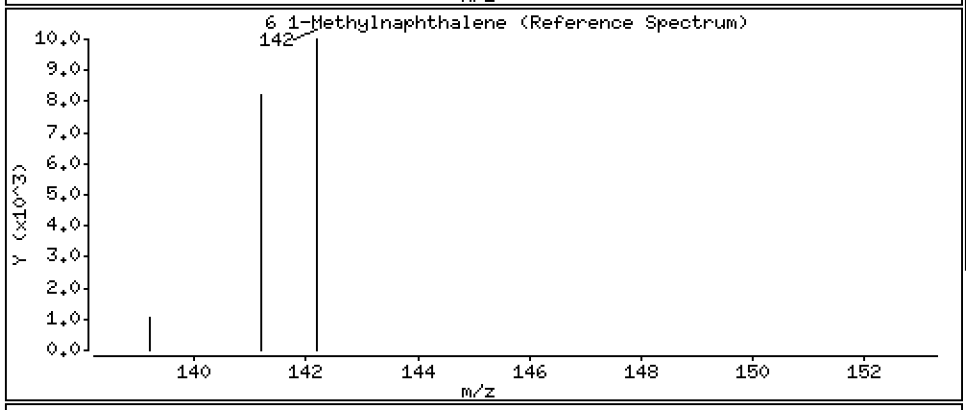
Concentration: 115 ng/mL

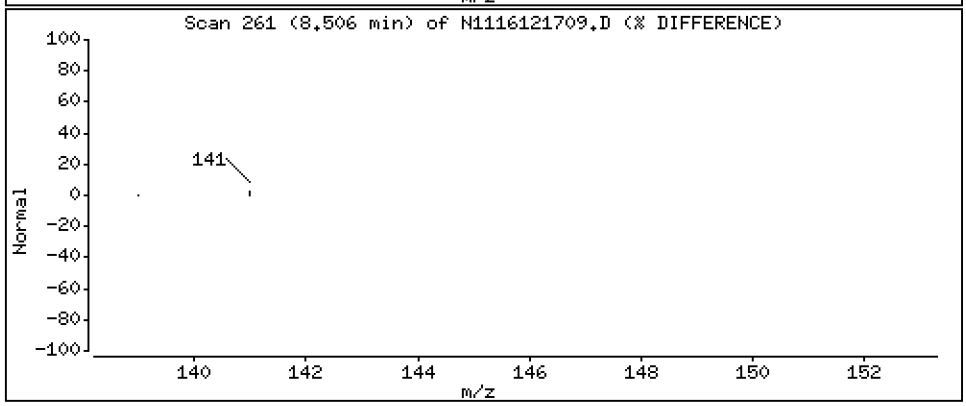












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121709.D

Date : 17-DEC-2016 16:17

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-24

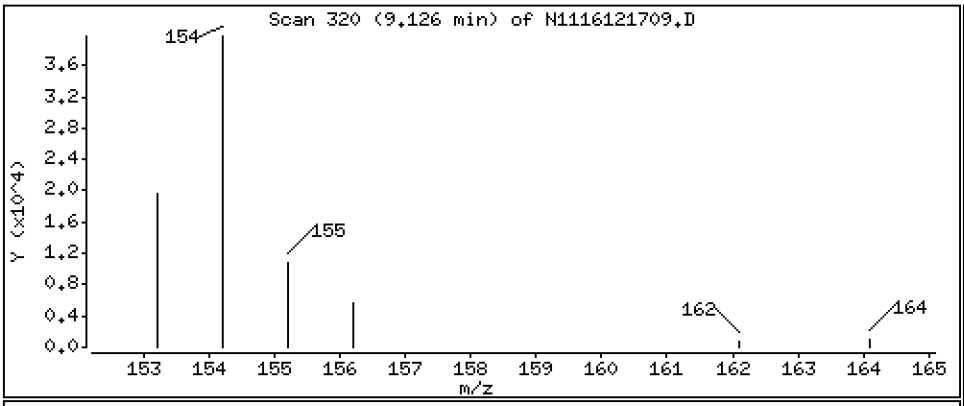
Operator: VTS

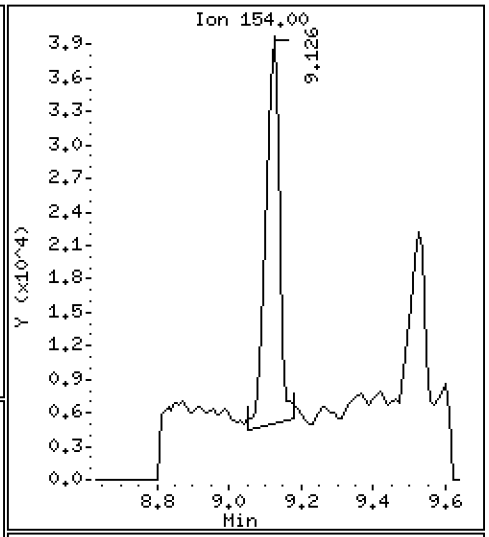
Column phase: Rxi-17Sil MS

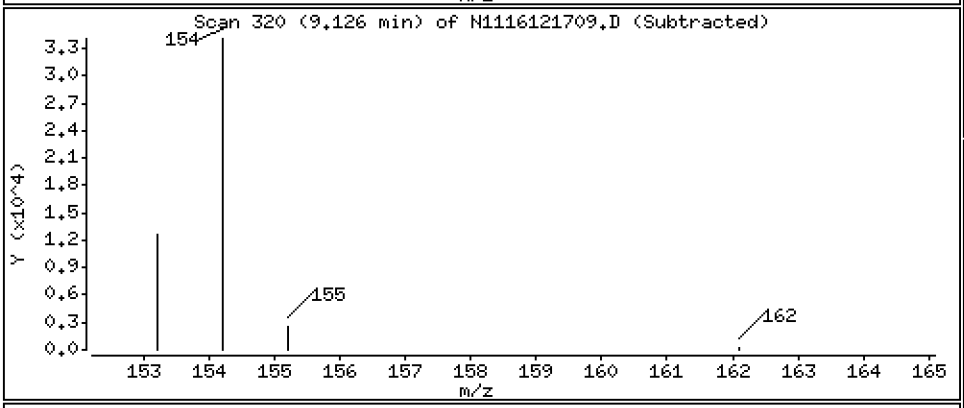
Column diameter: 0.25

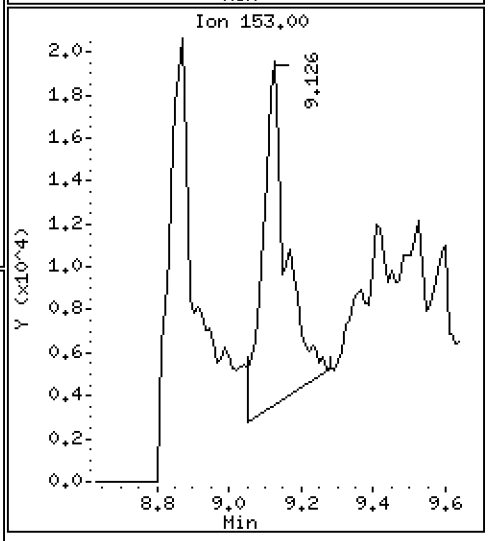
8 Biphenyl

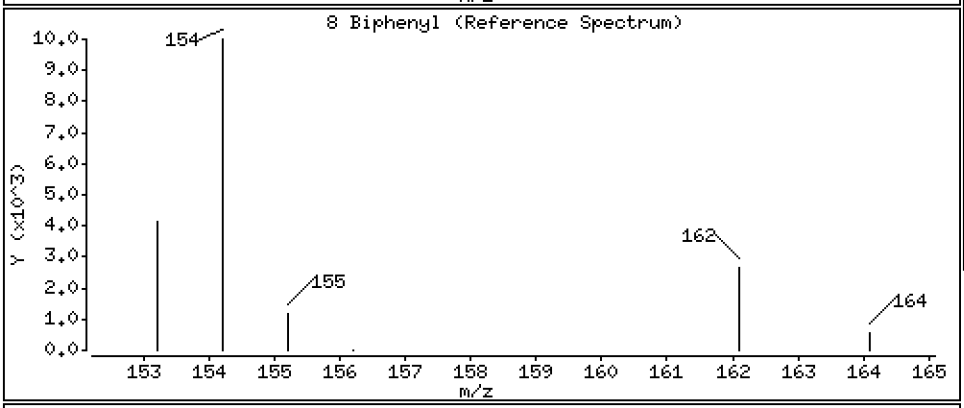
Concentration: 38.8 ng/mL

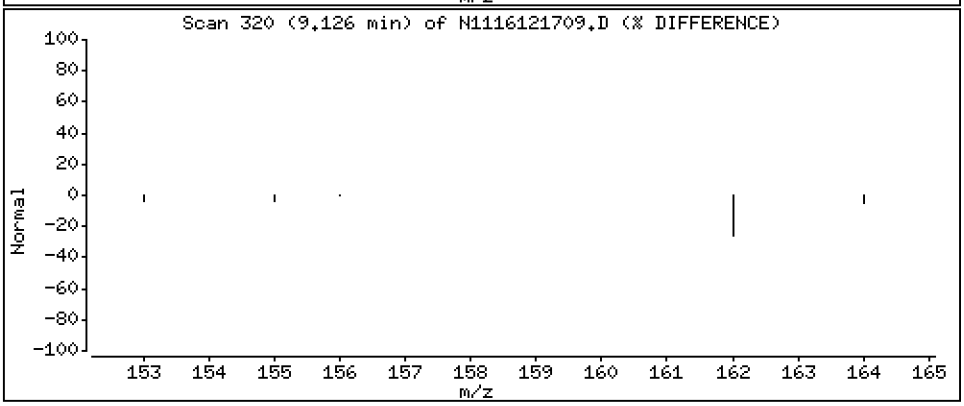












Date : 17-DEC-2016 16:17

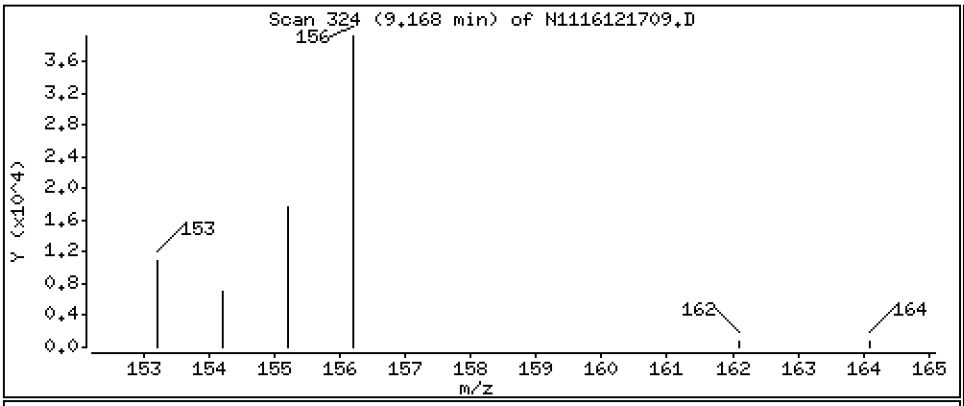
Client ID: Instrument: nt11.i

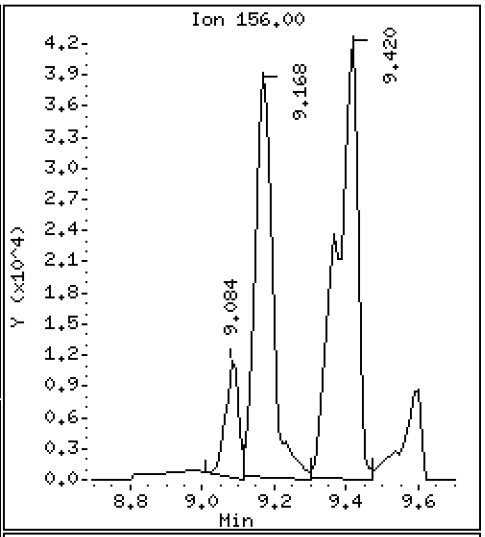
Sample Info: 16K0321-24

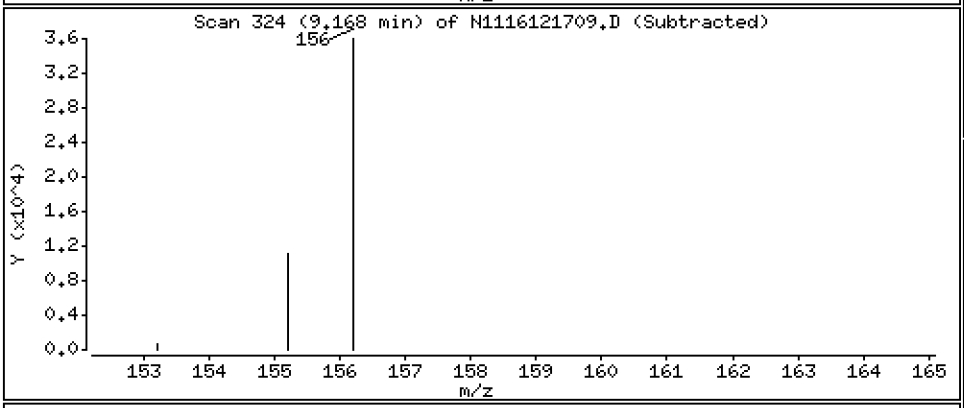
Operator: VTS

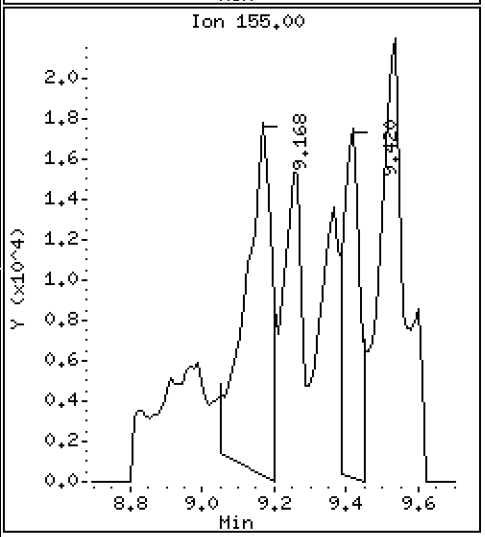
Column phase: Rxi-17Sil MS Column diameter: 0.25

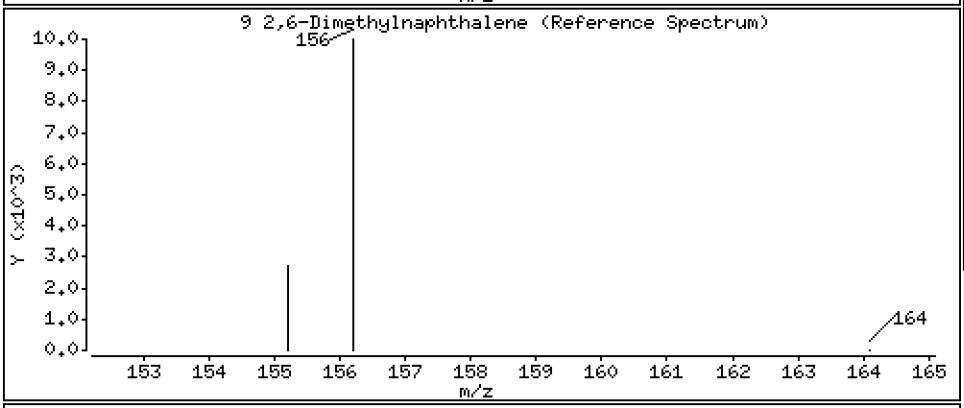
9 2,6-Dimethylnaphthalene Concentration: 73.1 ng/mL

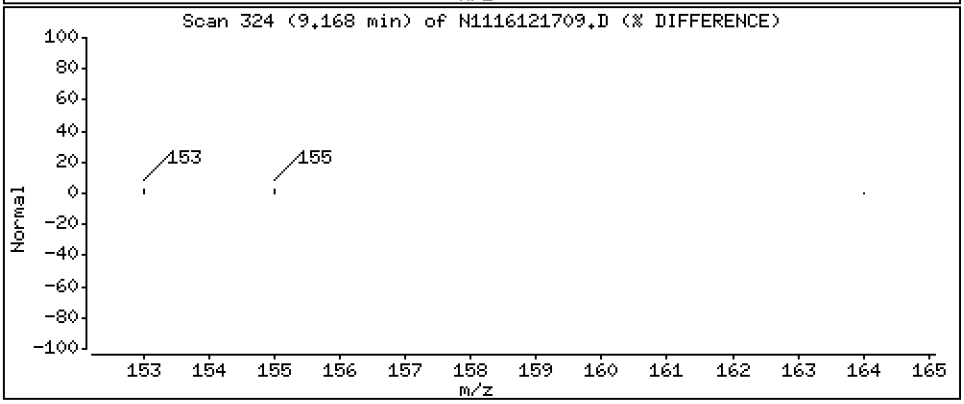












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121709.D

Date : 17-DEC-2016 16:17

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-24

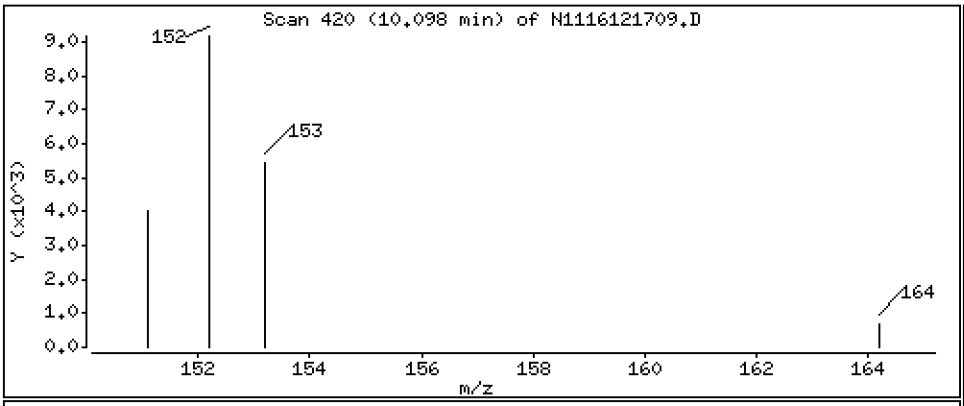
Operator: VTS

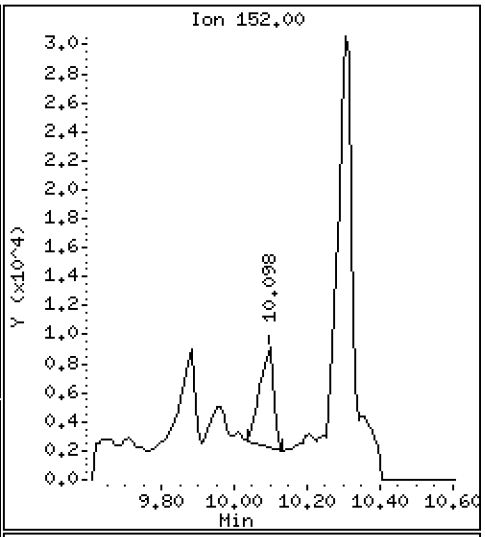
Column phase: Rxi-17Sil MS

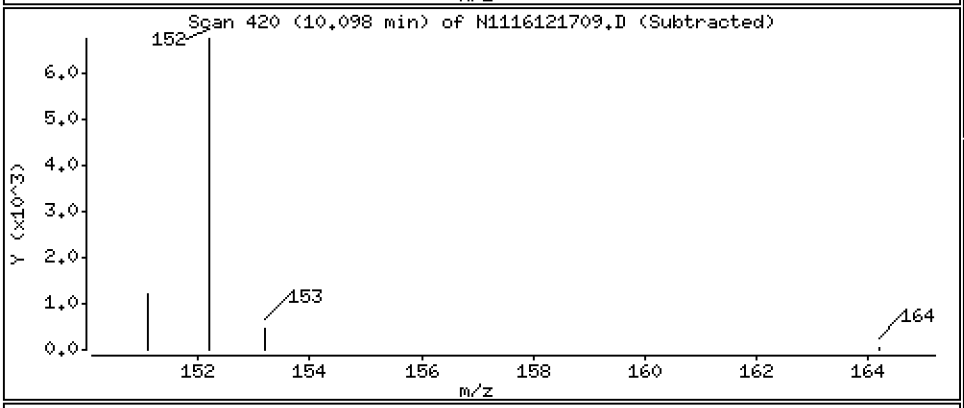
Column diameter: 0.25

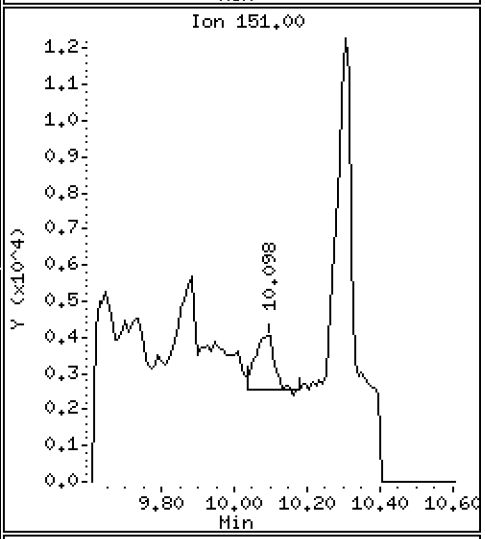
10 Acenaphthylene

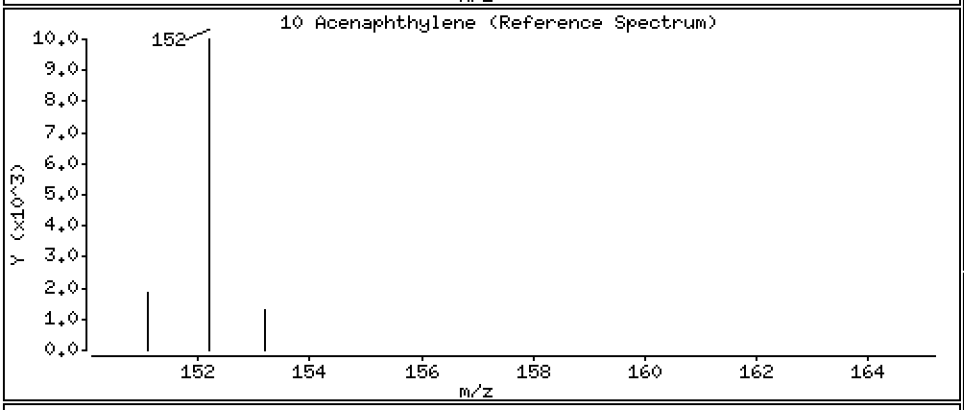
Concentration: 9.16 ng/mL

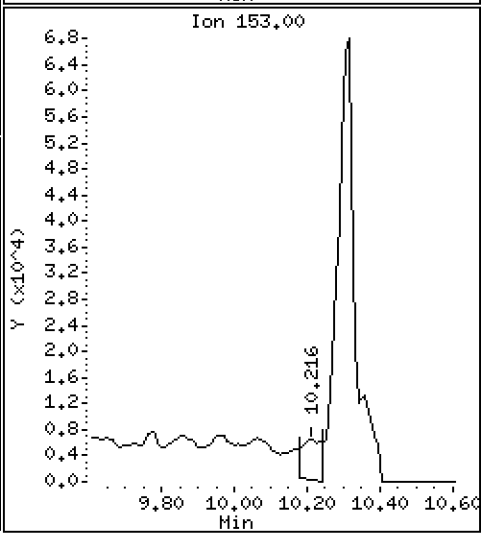


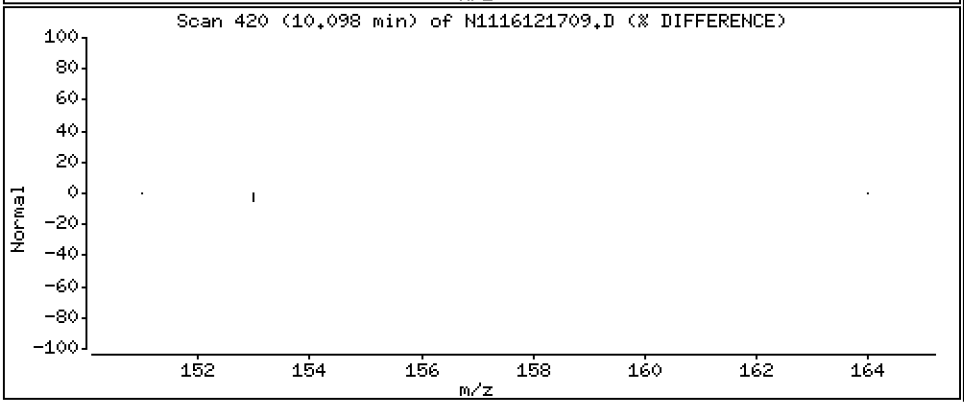












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121709.D

Date : 17-DEC-2016 16:17

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-24

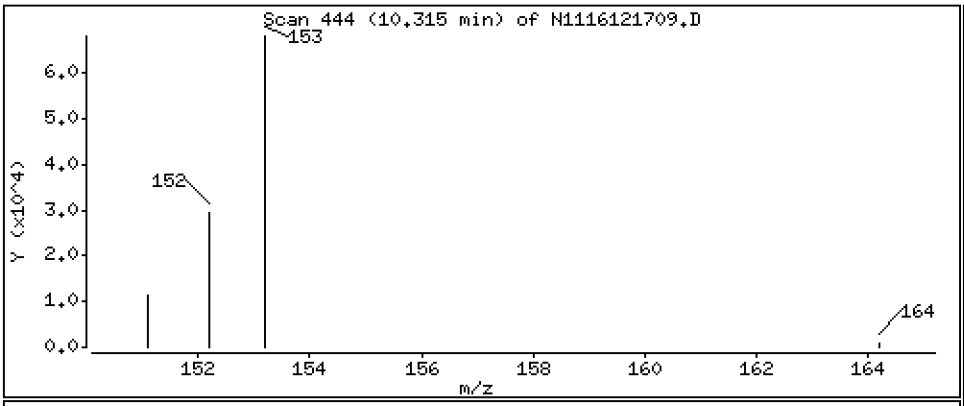
Operator: VTS

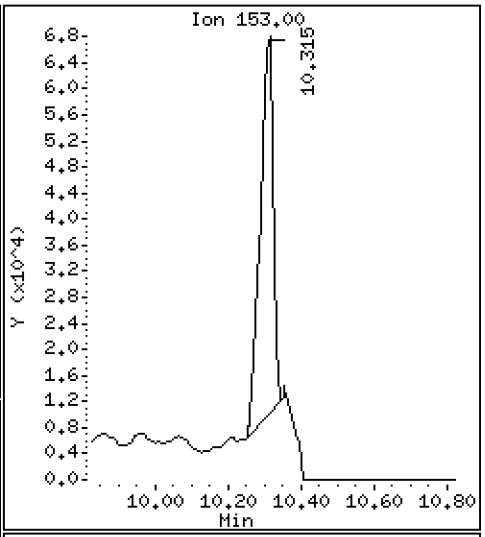
Column phase: Rxi-17Sil MS

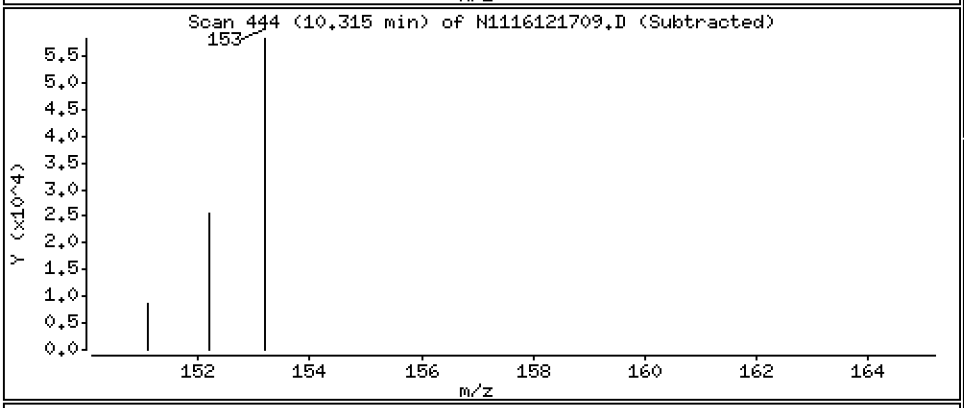
Column diameter: 0.25

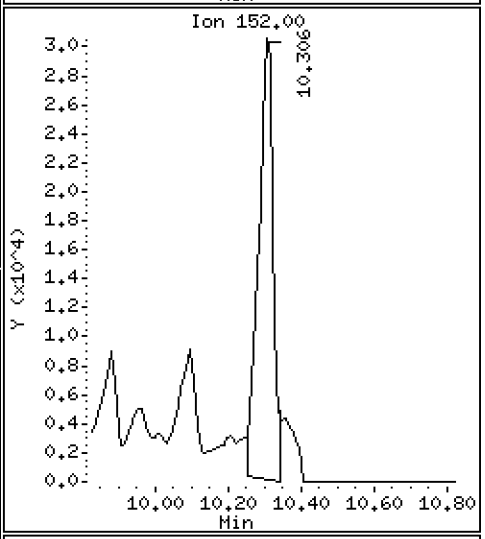
12 Acenaphthene

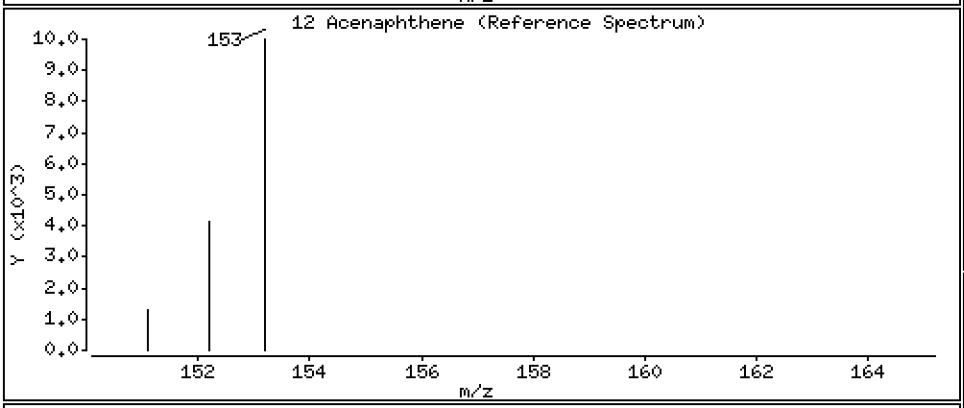
Concentration: 112 ng/mL

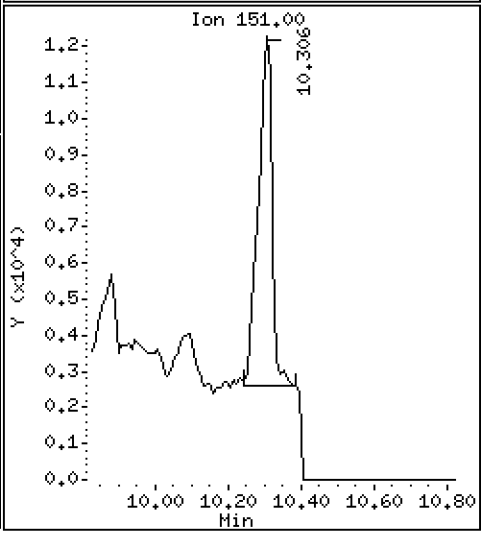


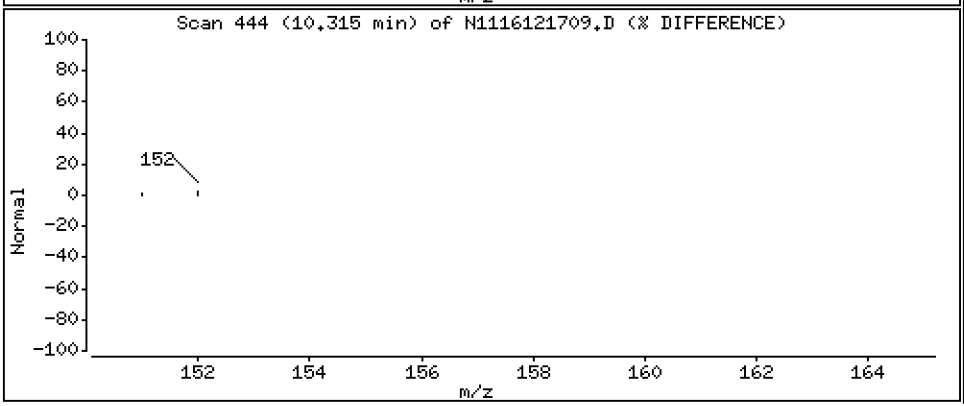












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121709.D

Date : 17-DEC-2016 16:17

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-24

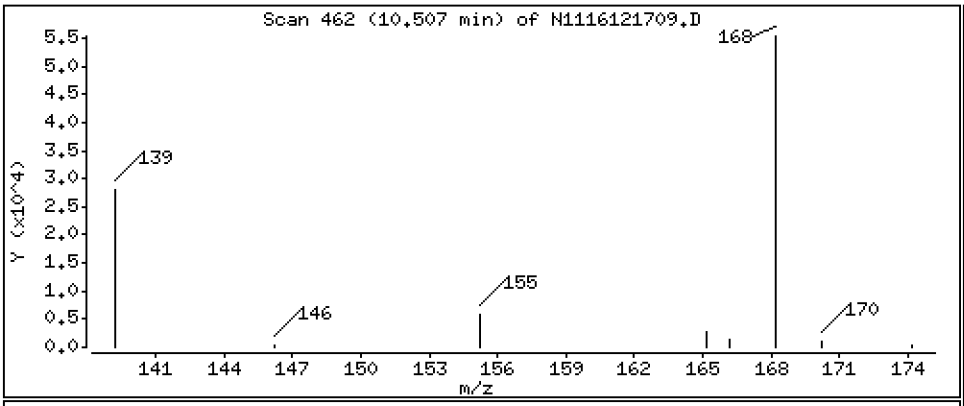
Operator: VTS

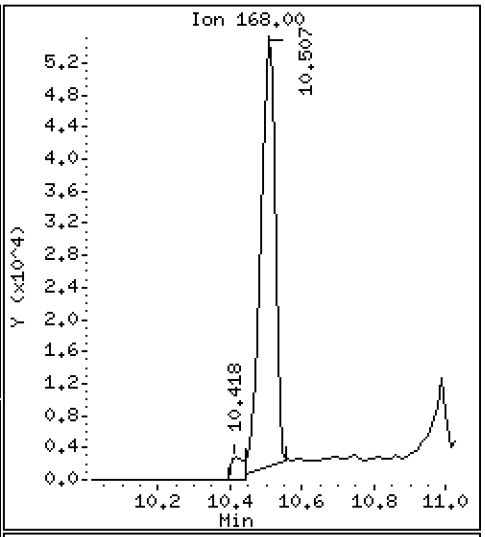
Column phase: Rxi-17Sil MS

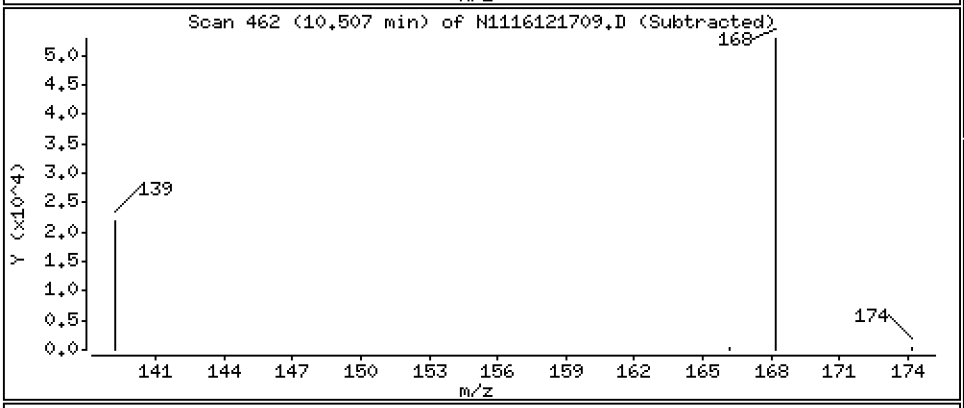
Column diameter: 0.25

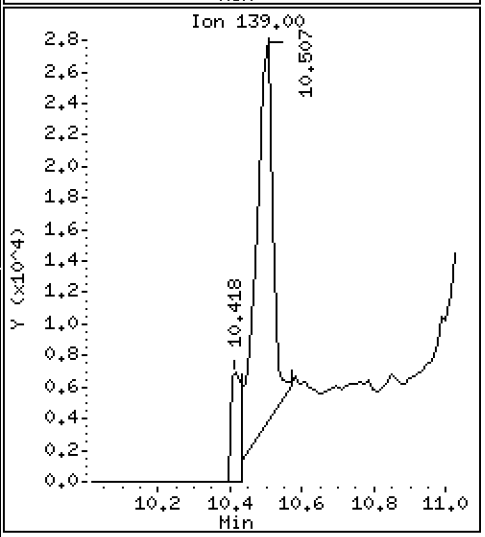
13 Dibenzofuran

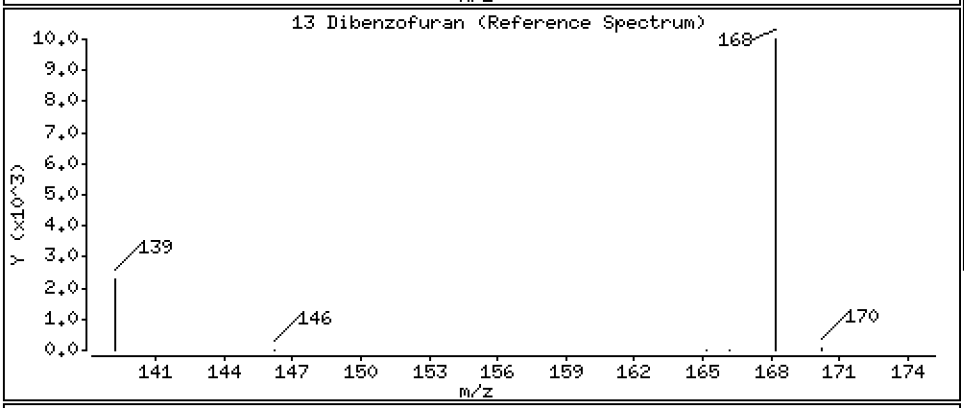
Concentration: 75.7 ng/mL

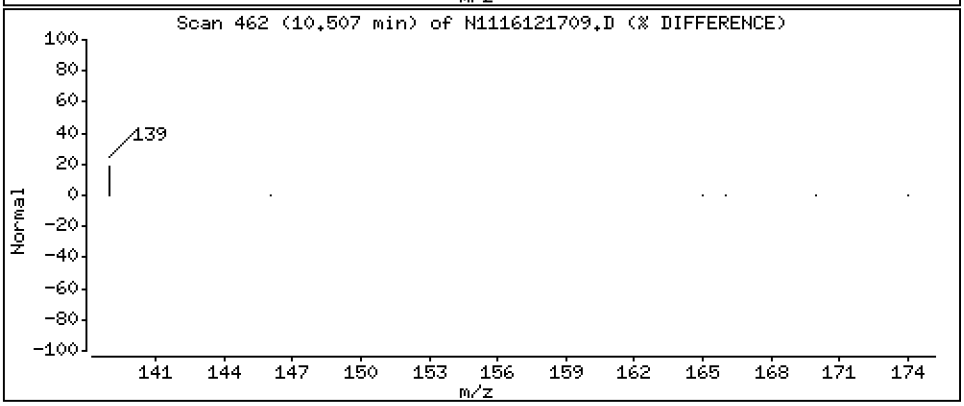












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121709.D

Date : 17-DEC-2016 16:17

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-24

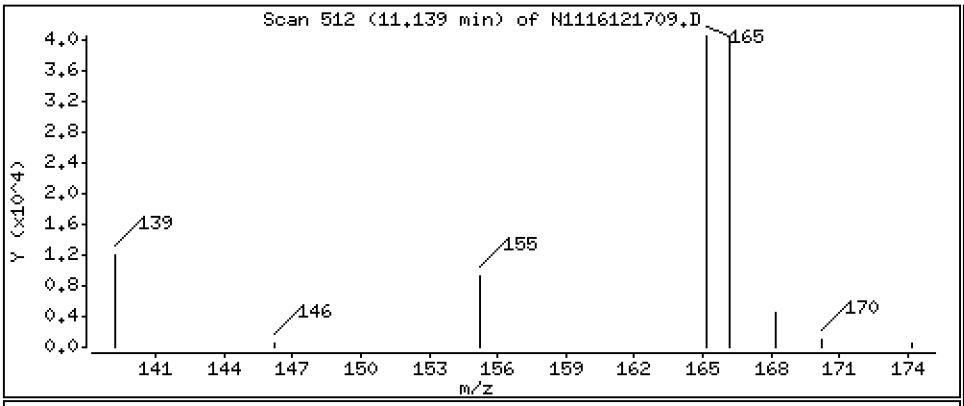
Operator: VTS

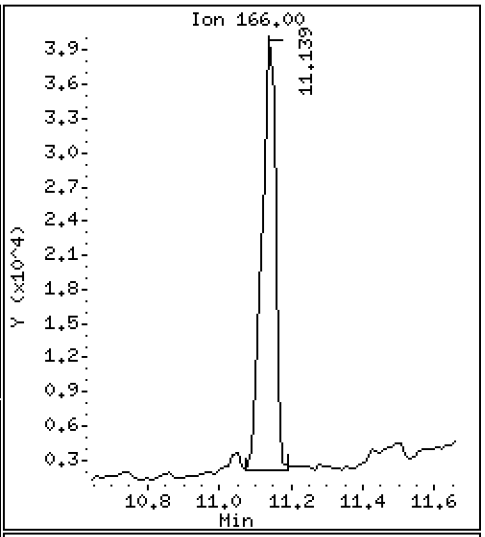
Column phase: Rxi-17Sil MS

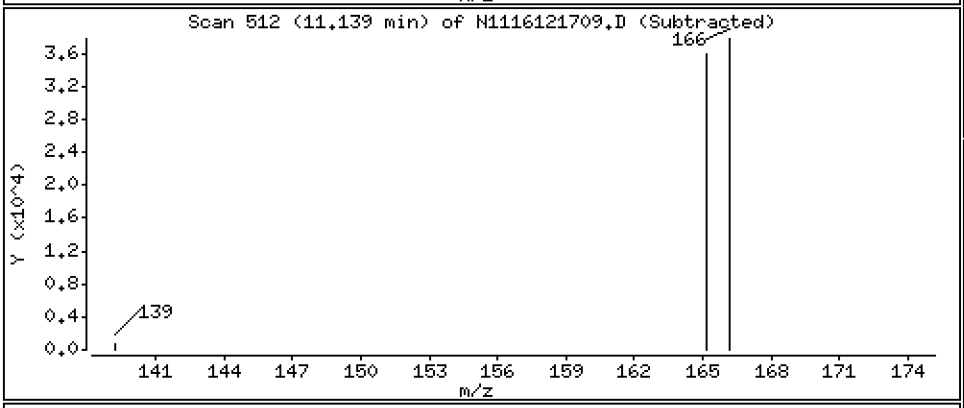
Column diameter: 0.25

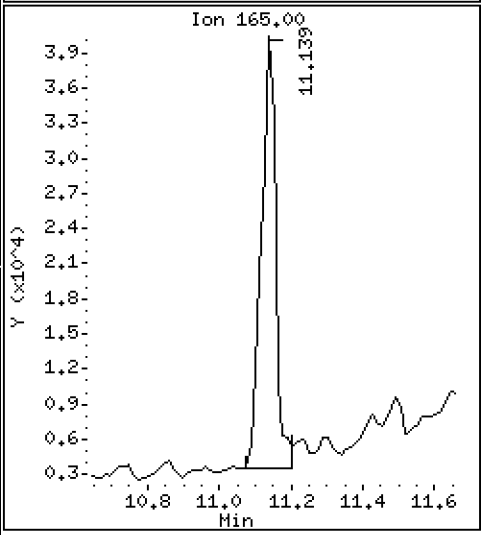
16 Fluorene

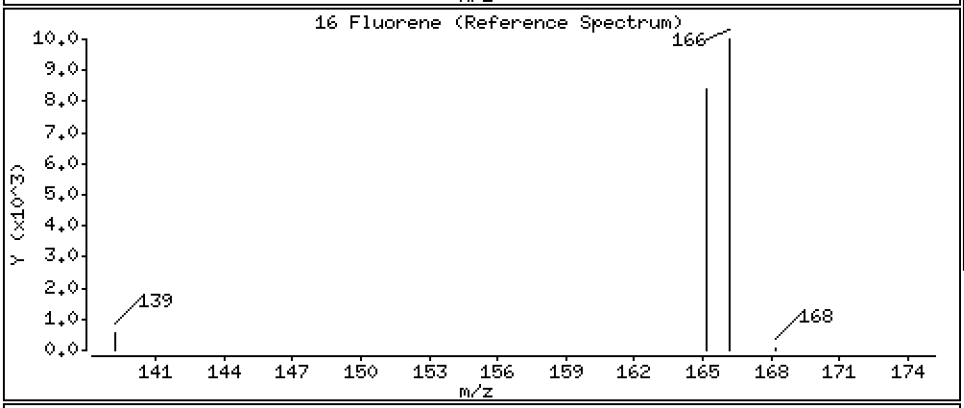
Concentration: 63.5 ng/mL

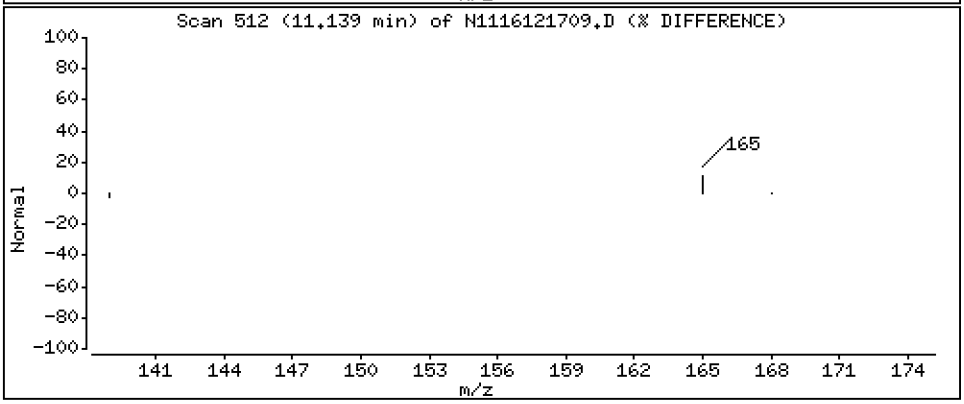












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121709.D

Date : 17-DEC-2016 16:17

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-24

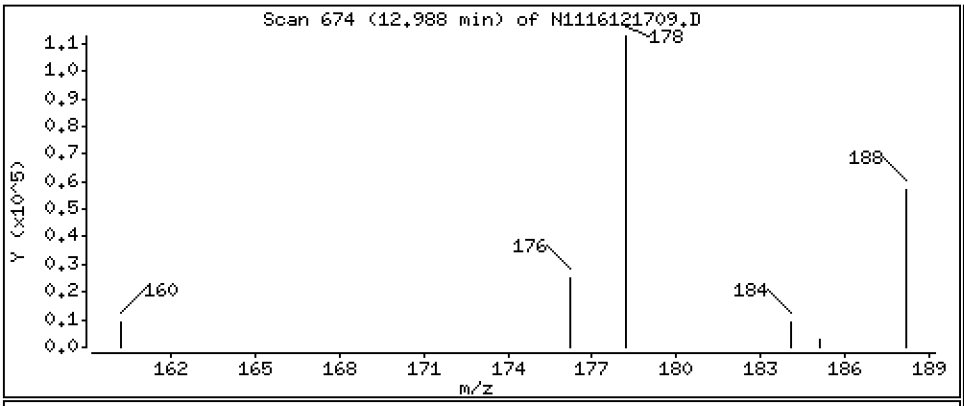
Operator: VTS

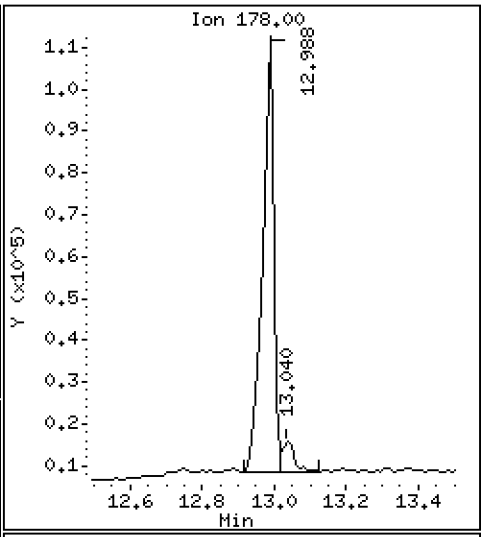
Column phase: Rxi-17Sil MS

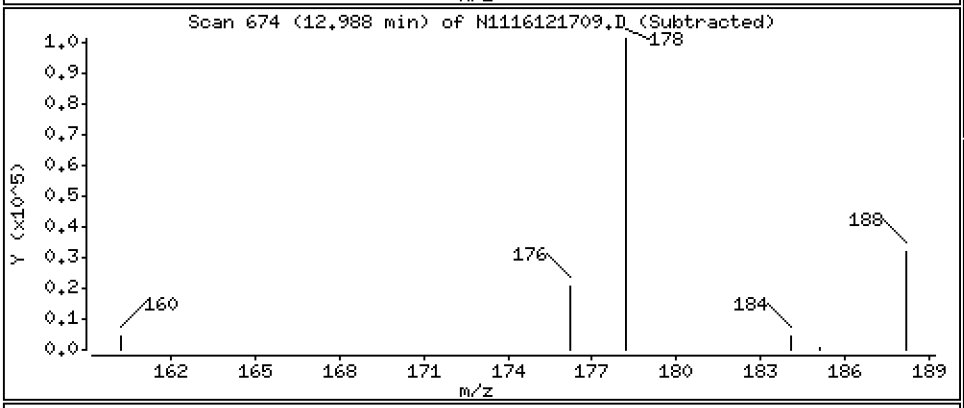
Column diameter: 0.25

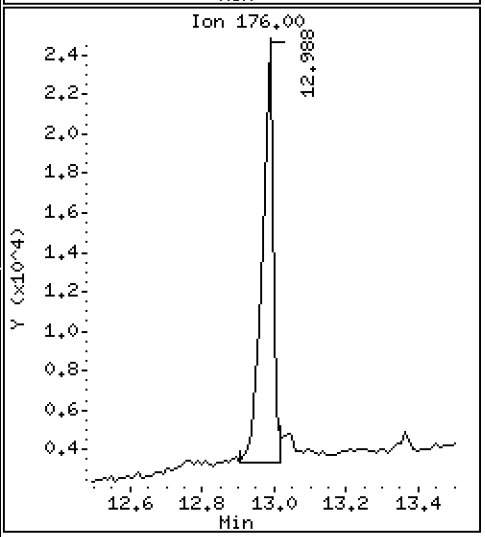
19 Phenanthrene

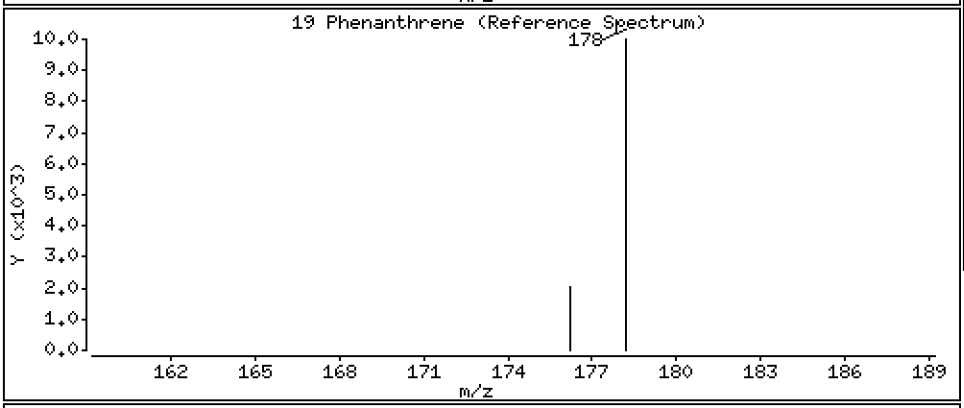
Concentration: 92.5 ng/mL

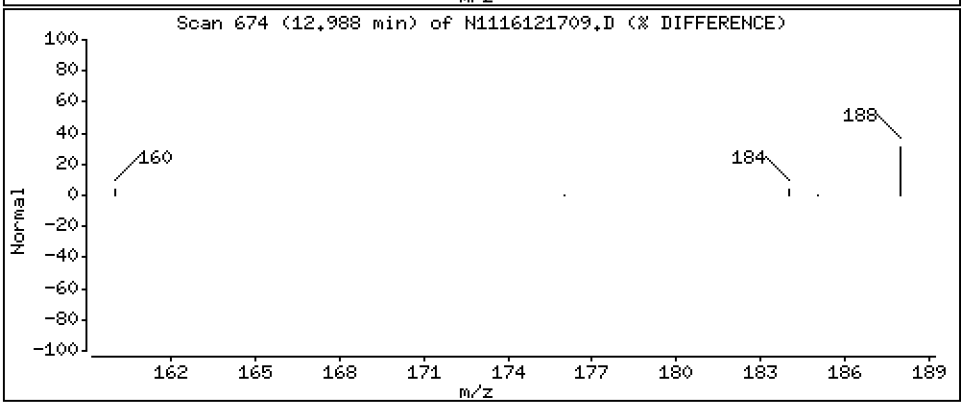












ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161217.b\N1116121709.D
Lab Smp Id: 16K0321-24
Inj Date : 17-DEC-2016 16:17 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : 16K0321-24
Misc Info :
Comment   :
Method   : \\target\share\chem3\nt11.i\20161217.b\lowsim.m
Meth Date : 17-Dec-2016 13:15 van Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1 Naphthalene-d8	136	7.207	7.234	(1.000)	373113	200.000	
	2 Naphthalene	128	7.243	7.261	(1.005)	298155	161.223	161
	3 Benzo(b)thiophene	134	Compound Not Detected.					
$	4 2-Methylnaphthalene-d10	152	8.190	8.211	(1.136)	273510	167.986	168
	5 2-Methylnaphthalene	142	8.243	8.264	(1.144)	387500	213.312	213
	6 1-Methylnaphthalene	142	8.505	8.526	(1.180)	204745	114.720	115
	7 2-Chloronaphthalene	162	Compound Not Detected.					
	8 Biphenyl	154	9.125	9.136	(0.890)	91336	38.7922	38.8
	9 2,6-Dimethylnaphthalene	156	9.167	9.199	(0.894)	131431	73.0512	73.1
	10 Acenaphthylene	152	10.098	10.107	(0.985)	18340	9.15558	9.16(M)
*	11 Acenaphthene-d10	164	10.252	10.260	(1.000)	224239	200.000	
	12 Acenaphthene	153	10.315	10.324	(1.006)	146581	111.842	112(M)
	13 Dibenzofuran	168	10.506	10.519	(1.025)	147206	75.7174	75.7
	14 2,3,5-Trimethylnaphthalene	170	Compound Not Detected.					
$	15 Fluorene-d10	174	11.088	11.100	(1.082)	129383	120.118	120
	16 Fluorene	166	11.138	11.151	(1.086)	98870	63.4507	63.5
	17 Dibenzothiophene	184	Compound Not Detected.					
*	18 Phenanthrene-d10	188	12.945	12.956	(1.000)	481831	200.000	
	19 Phenanthrene	178	12.987	12.998	(1.003)	249133	92.4886	92.5
$	20 Anthracene-d10	188	13.008	13.019	(1.005)	241152	101.046	101
	21 Anthracene	178	13.040	13.050	(1.007)	19716	7.67409	7.67
	22 Carbazole	167	Compound Not Detected.					
	23 1-Methylphenanthrene	192	13.993	13.993	(1.081)	20173	7.40236	7.40
$	24 Fluoranthene-d10	212	15.065	15.065	(1.164)	499288	194.541	195
	25 Fluoranthene	202	15.094	15.093	(1.166)	130821	42.1483	42.1
	26 Pyrene	202	15.603	15.603	(0.881)	126461	52.4428	52.4
	27 Benzo(a)anthracene	228	Compound Not Detected.					
*	28 Chrysene-d12	240	17.710	17.710	(1.000)	421388	200.000	
	29 Chrysene	228	Compound Not Detected.					
	30 Benzo(b)fluoranthene	252	Compound Not Detected.					
	31 Benzo(k)fluoranthene	252	Compound Not Detected.					
	32 Benzo(j)fluoranthene	252	Compound Not Detected.					
$	33 Benzo(e)pyrene-d12	264	20.503	20.493	(0.979)	242867	121.188	121
	34 Benzo(e)pyrene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
	35 Benzo(a)pyrene	252	Compound Not Detected.					
*	36 Perylene-d12	264	20.945	20.935	(1.000)	402590	200.000	
	37 Perylene	252	Compound Not Detected.					
$	38 Dibenzo(a,h)anthracene-d14	292	23.841	23.830	(1.138)	207578	174.876	175
	39 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	40 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	41 Benzo(g,h,i)perylene	276	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121709.D
Lab Smp Id: 16K0321-24
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161217.b\lowsim.m
Misc Info:

Calibration Date: 17-DEC-2016
Calibration Time: 12:40
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	373113	9.21
11 Acenaphthene-d10	209310	104655	418620	224239	7.13
18 Phenanthrene-d10	404977	202489	809954	481831	18.98
28 Chrysene-d12	465046	232523	930092	421388	-9.39
36 Perylene-d12	454694	227347	909388	402590	-11.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.21	-0.37
11 Acenaphthene-d10	10.26	9.76	10.76	10.25	-0.09
18 Phenanthrene-d10	12.96	12.46	13.46	12.95	-0.08
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.95	0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121709.D

Lab ID: 16K0321-24
nt11.i, 20161217.b\lowsim.m,   17-DEC-2016 16:17

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

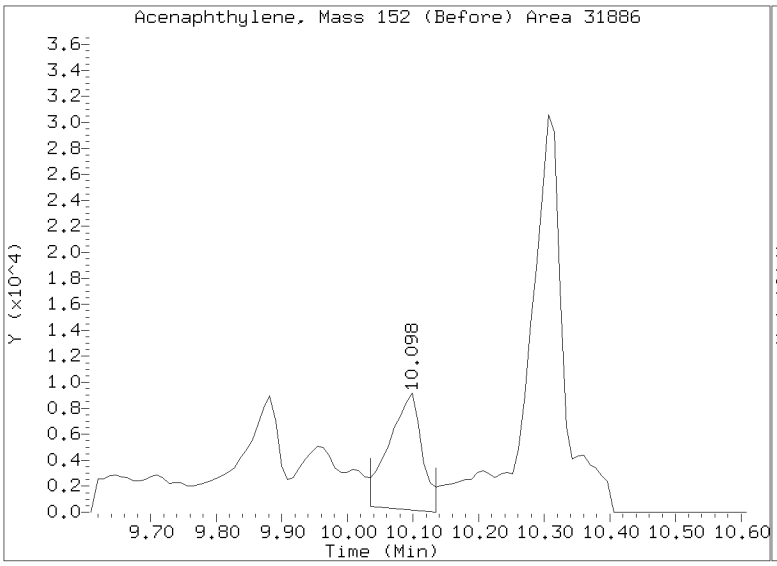
NONE

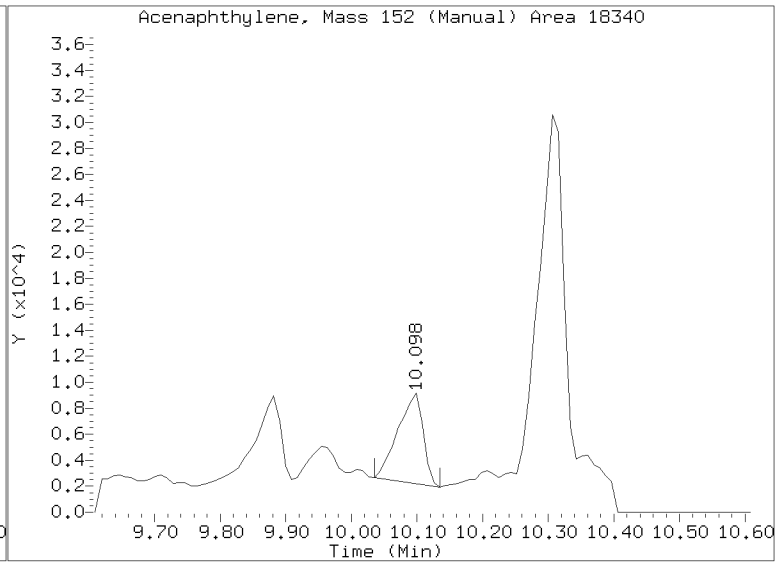
On Column LOD for nt11.i, 20161217.b\lowsim.m, allpna.sub = 3.0000

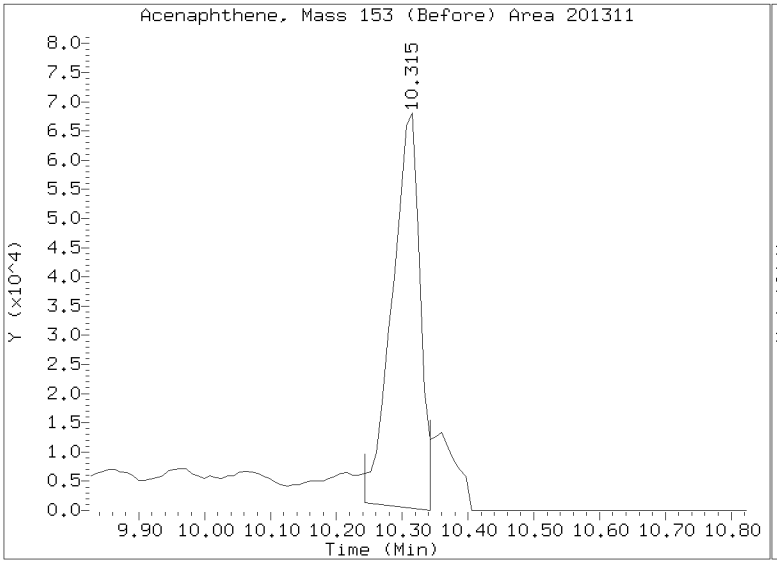
Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

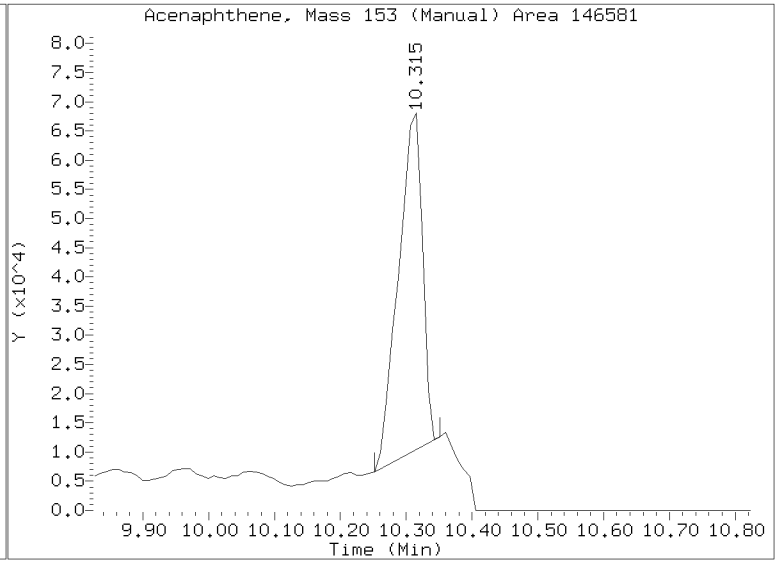
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20161217.b/N1116121709.D
Injection Date: 17-DEC-2016 16:17
Lab ID:16K0321-24 Client ID:
Report Date: 12/20/2016 09:40









Analytical Resources, Incorporated
Analytical Chemists and Consultants

PG-TB-PEMD-161122

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270D-SIM

8270D-SIM PAH (0.01 ug/L)

Laboratory:	Analytical Resources, Inc.			SDG:	16K0321
Client:	Anchor QEA, LLC			Project:	Port Gamble Shellfish Monitoring
Matrix:	Tissue	Laboratory ID:	16K0321-25	File ID:	N1116121710.D
Sampled:	11/22/16 13:20	Prepared:	11/24/16 08:25	Analyzed:	12/17/16 16:48
Solids:		Preparation:	EPA 3550C-Mod (Ultrasonic	Initial/Final:	0.886 g / 0.1 mL
Batch:	BEK0658	Sequence:	SEL0255	Calibration:	ZL00052
Instrument:	NT11	Column:	RXi-17Sil-MS		

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	18.9	B	1.13	1.35
91-57-6	2-Methylnaphthalene	1	13.9		1.13	1.13
208-96-8	Acenaphthylene	1	1.13	U	1.13	1.13
83-32-9	Acenaphthene	1	1.48		1.13	1.13
86-73-7	Fluorene	1	1.13	U	1.13	1.13
85-01-8	Phenanthrene	1	2.24		1.13	1.13
120-12-7	Anthracene	1	1.13	U	1.13	1.13
206-44-0	Fluoranthene	1	1.44		1.13	1.13
129-00-0	Pyrene	1	2.74		1.13	1.13
56-55-3	Benzo(a)anthracene	1	1.13	U	1.13	1.13
218-01-9	Chrysene	1	1.13	U	1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.13	U	1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	19.9	58.7	30 - 160	
Dibenzo[a,h]anthracene-d14	33.860	21.2	62.7	30 - 160	
Fluoranthene-d10	33.860	23.6	69.6	30 - 160	
Fluorene-d10	21.163	14.0	65.9	30 - 160	
Anthracene-d10	21.163	11.6	54.7	30 - 160	
Benzo(e)pyrene-d12	21.163	16.1	75.9	30 - 160	

Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121710.D

Date : 17-DEC-2016 16:48

Client ID:

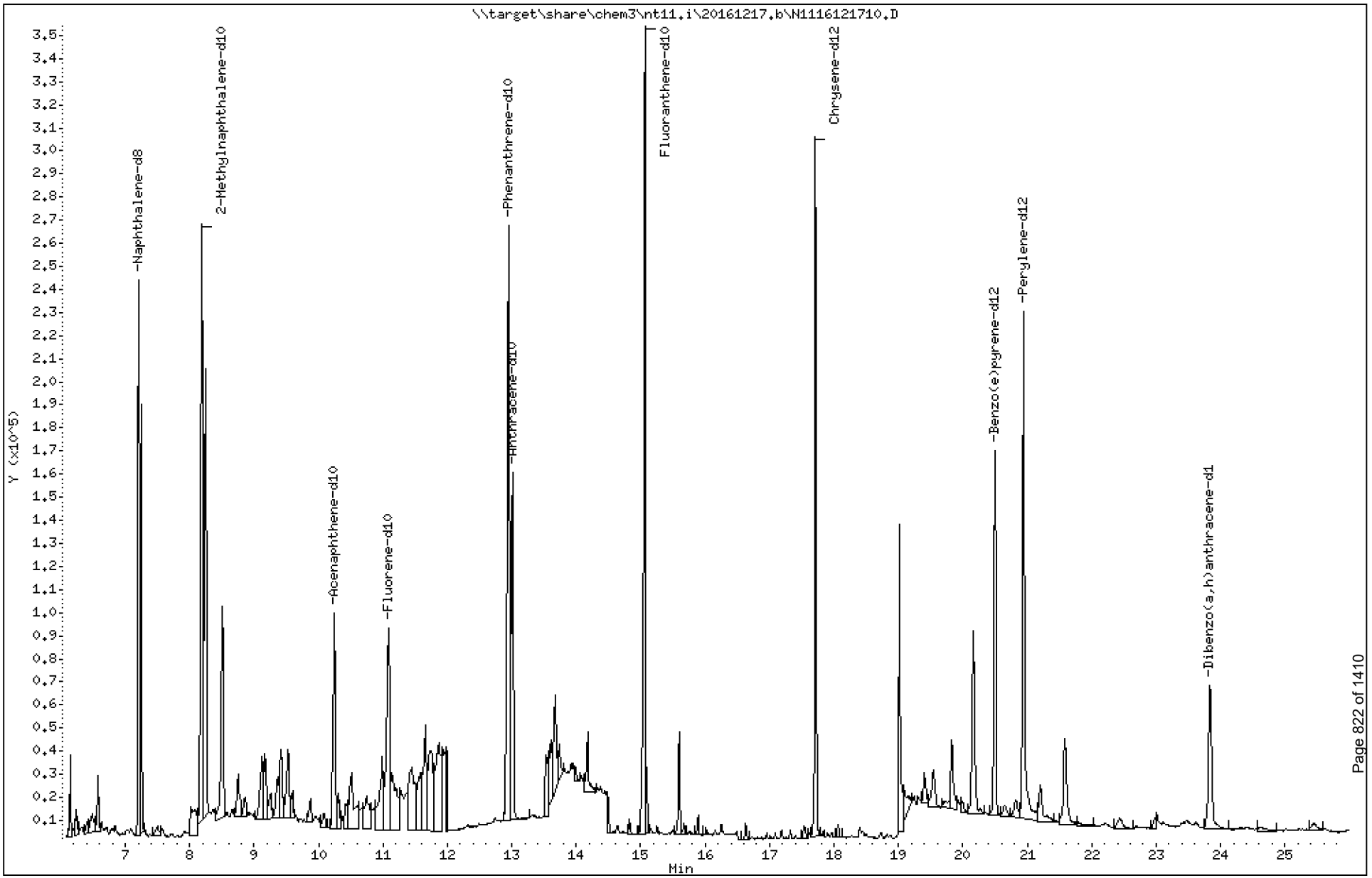
Instrument: nt11.i

Sample Info: 16K0321-25

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121710.D

Date : 17-DEC-2016 16:48

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-25

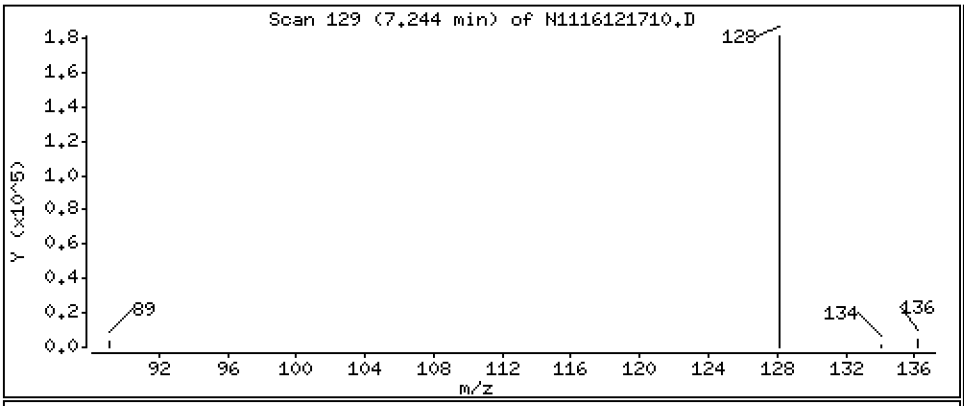
Operator: VTS

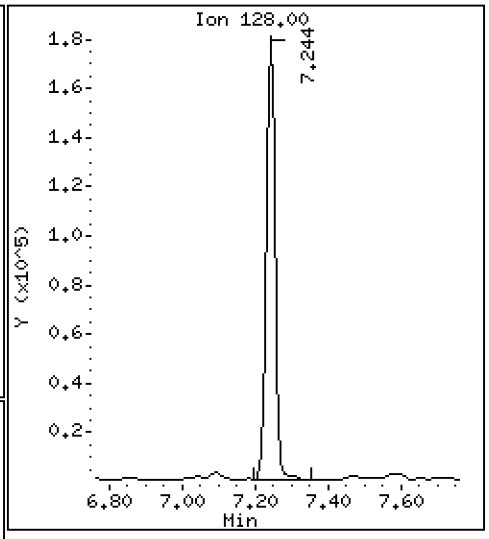
Column phase: Rxi-17Sil MS

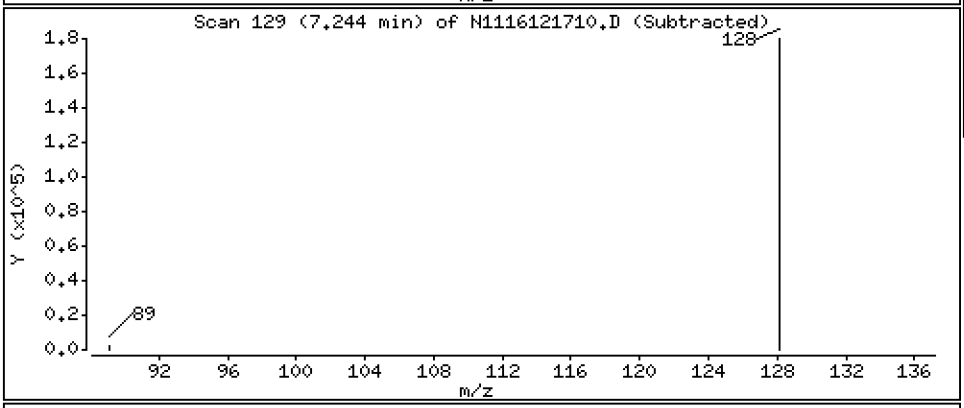
Column diameter: 0.25

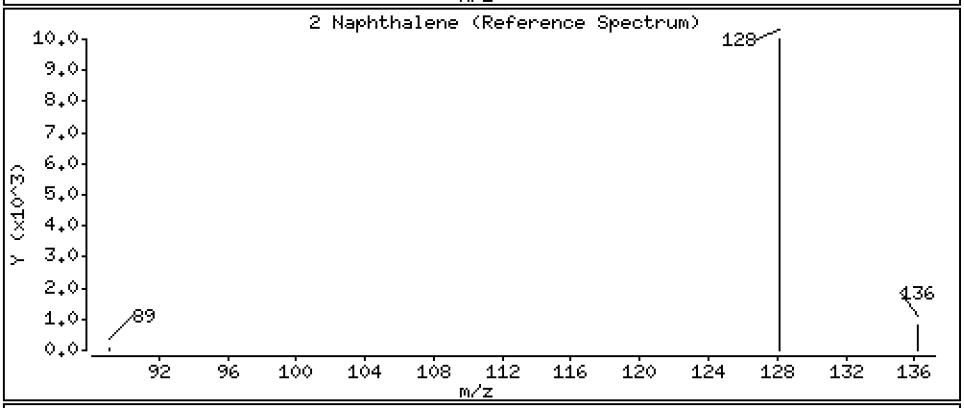
2 Naphthalene

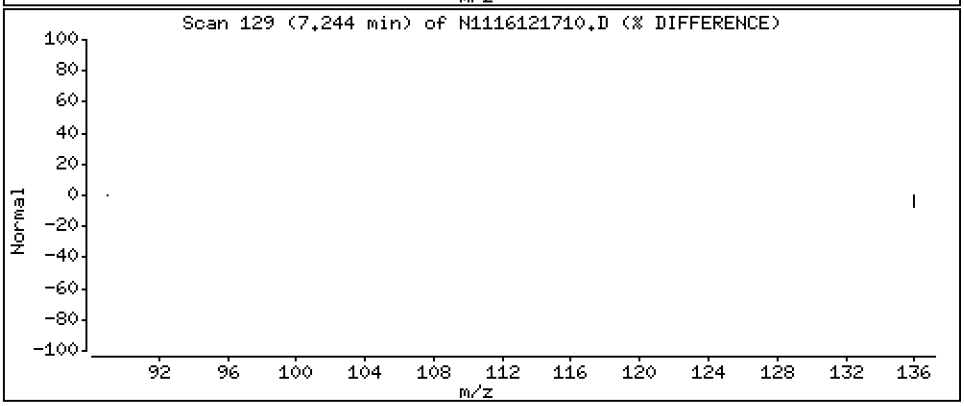
Concentration: 167 ng/mL











Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121710.D

Date : 17-DEC-2016 16:48

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-25

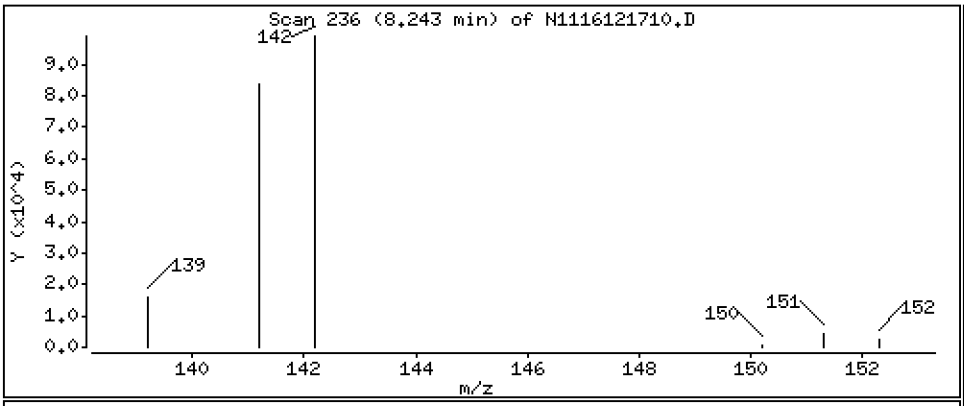
Operator: VTS

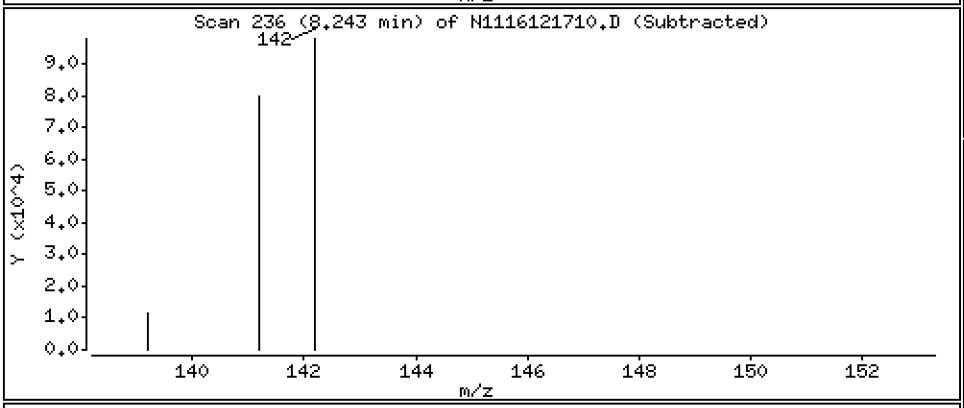
Column phase: Rxi-17Sil MS

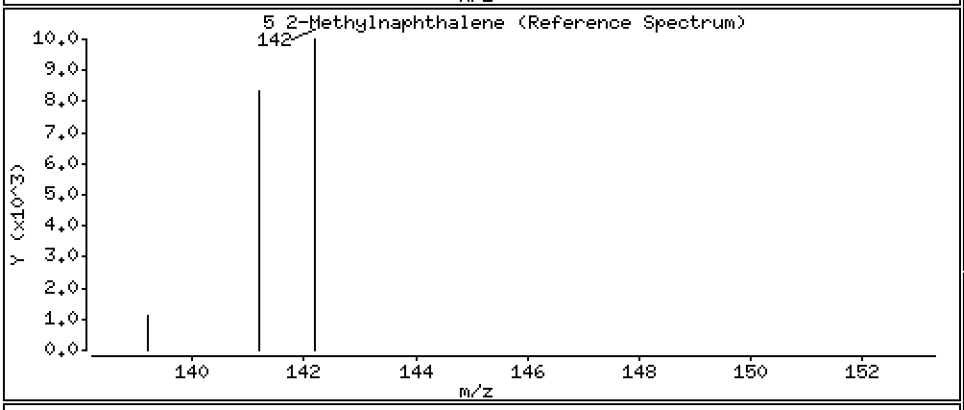
Column diameter: 0.25

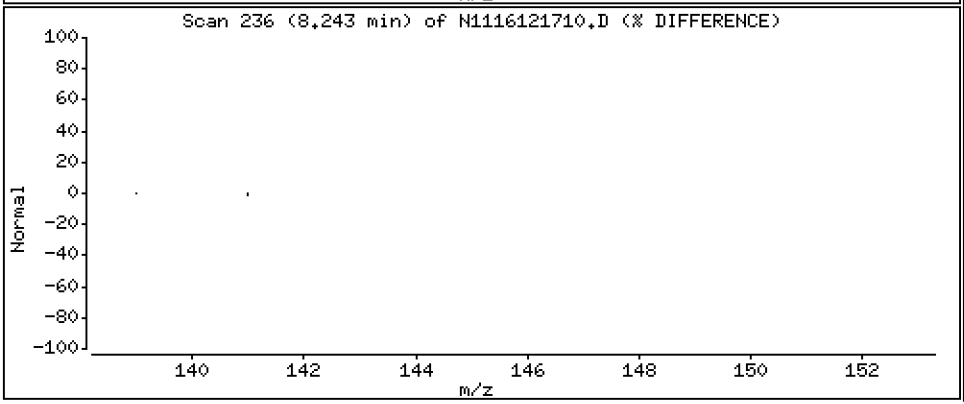
5 2-Methylnaphthalene

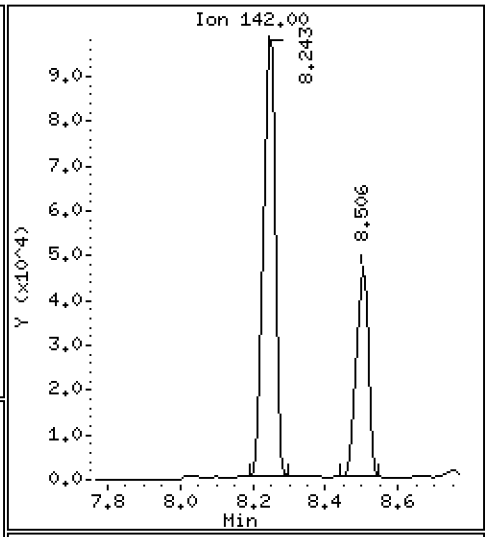
Concentration: 123 ng/mL

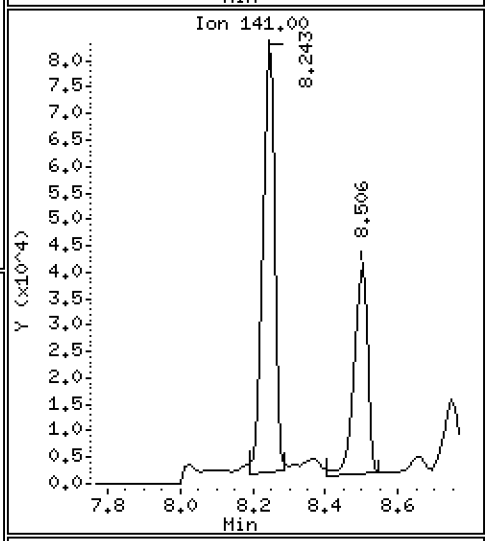


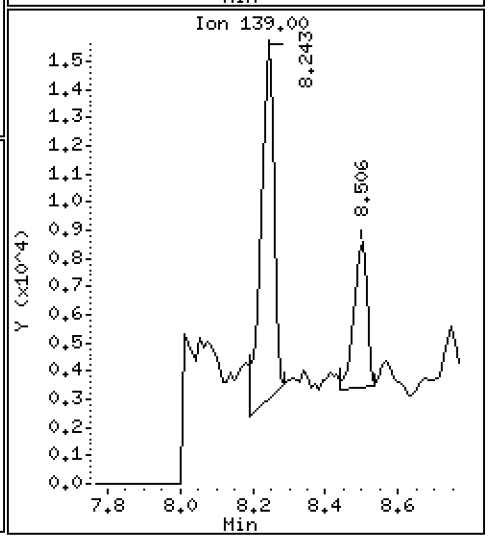












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121710.D

Date : 17-DEC-2016 16:48

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-25

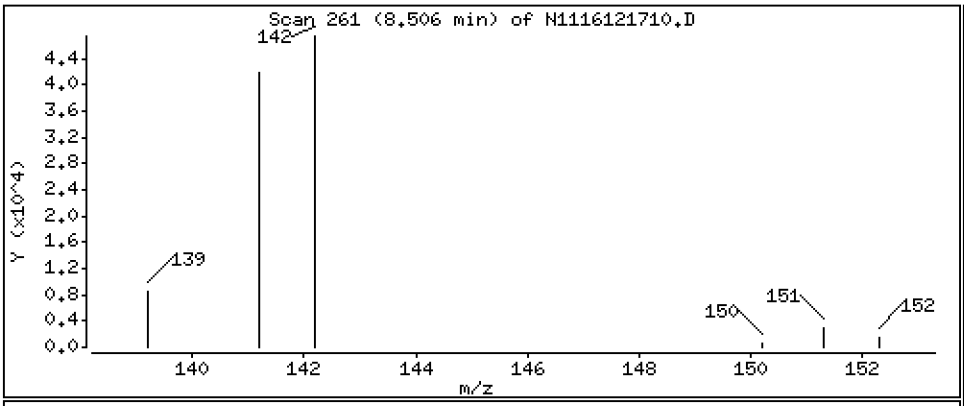
Operator: VTS

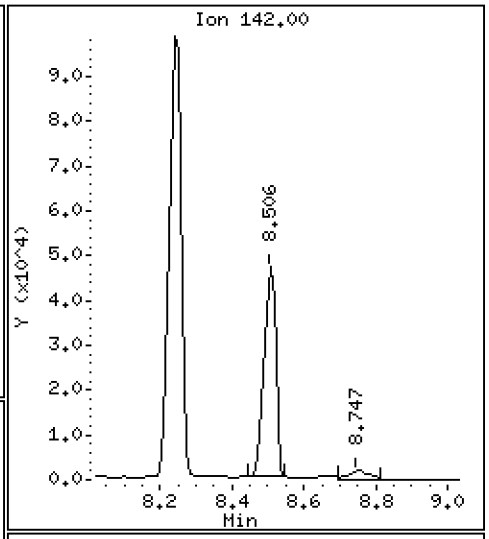
Column phase: Rxi-17Sil MS

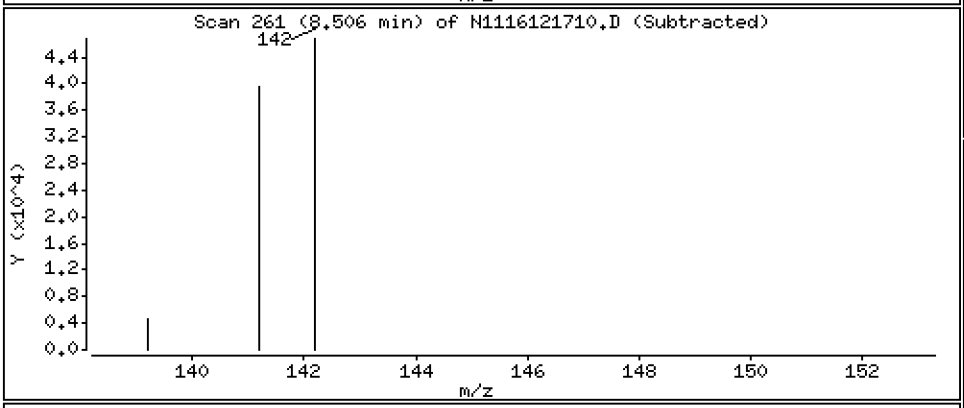
Column diameter: 0.25

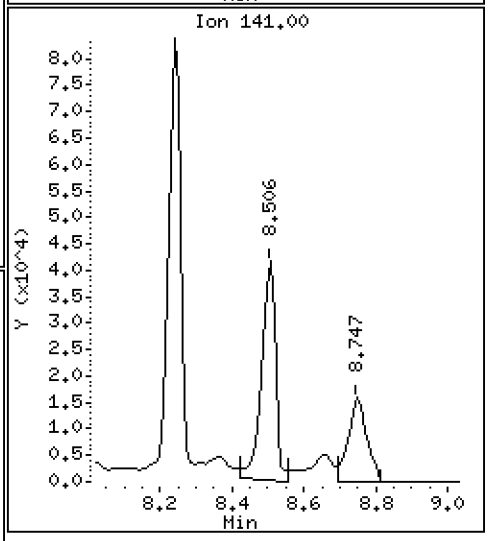
6 1-Methylnaphthalene

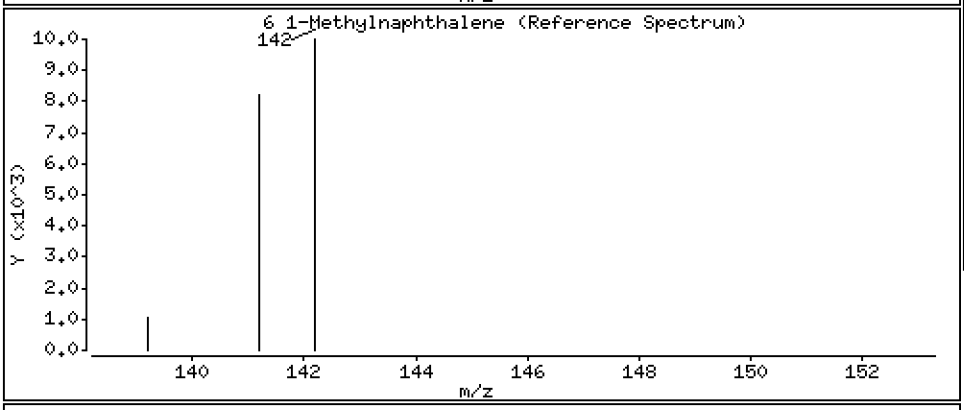
Concentration: 60.4 ng/mL

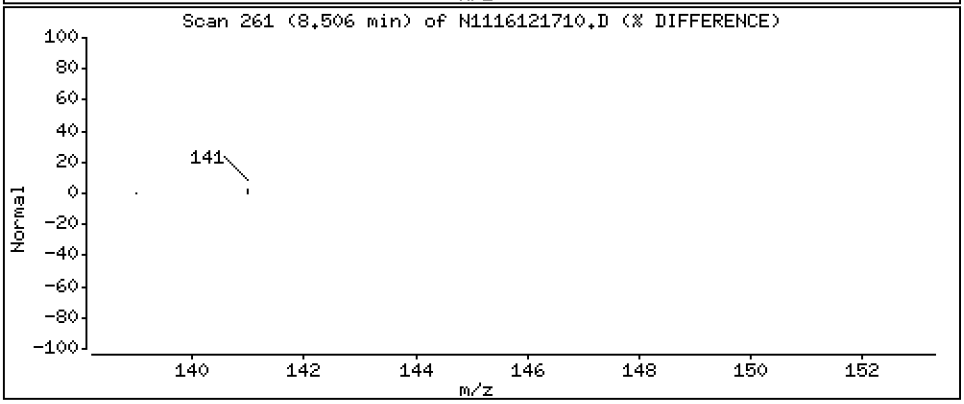












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121710.D

Date : 17-DEC-2016 16:48

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-25

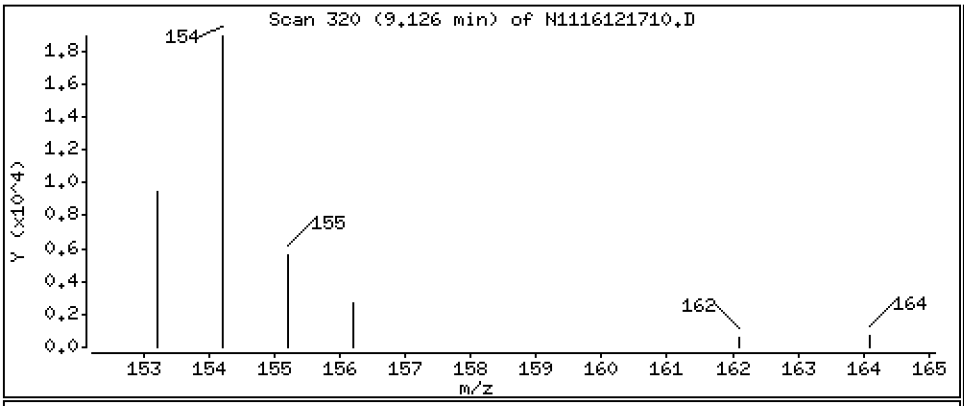
Operator: VTS

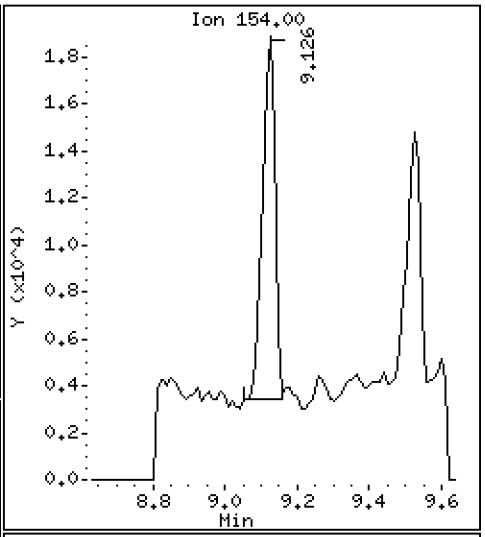
Column phase: Rxi-17Sil MS

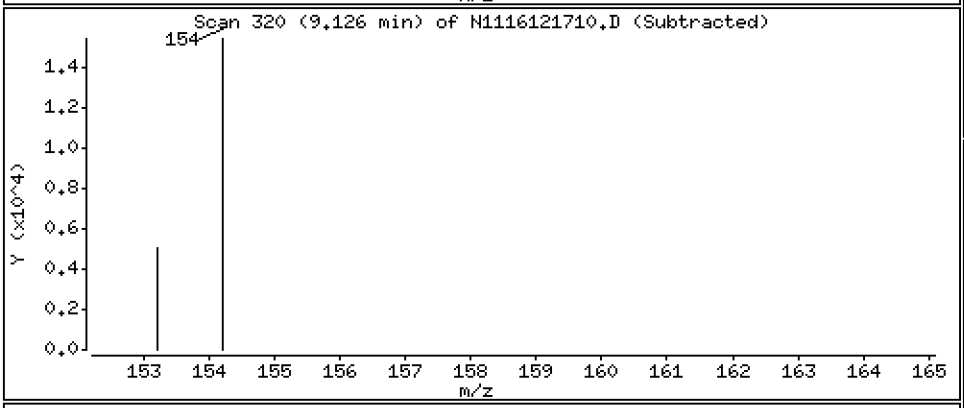
Column diameter: 0.25

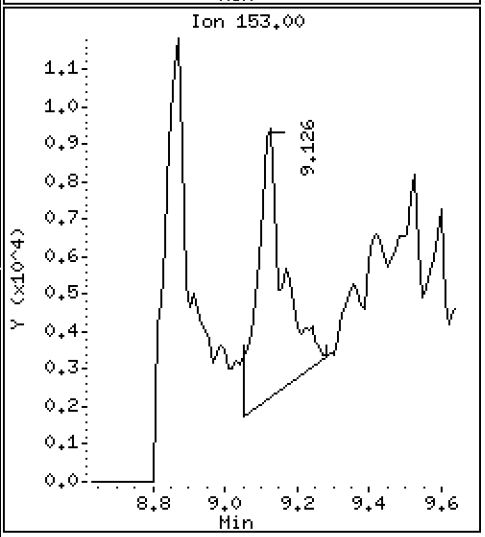
8 Biphenyl

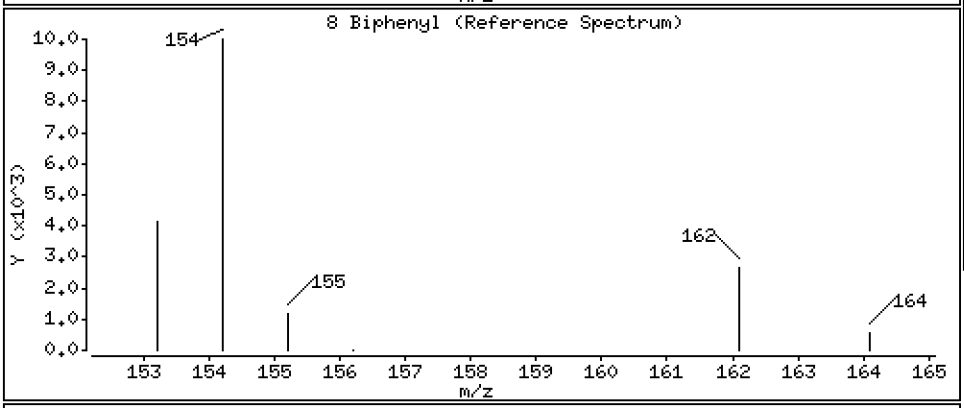
Concentration: 15.7 ng/mL

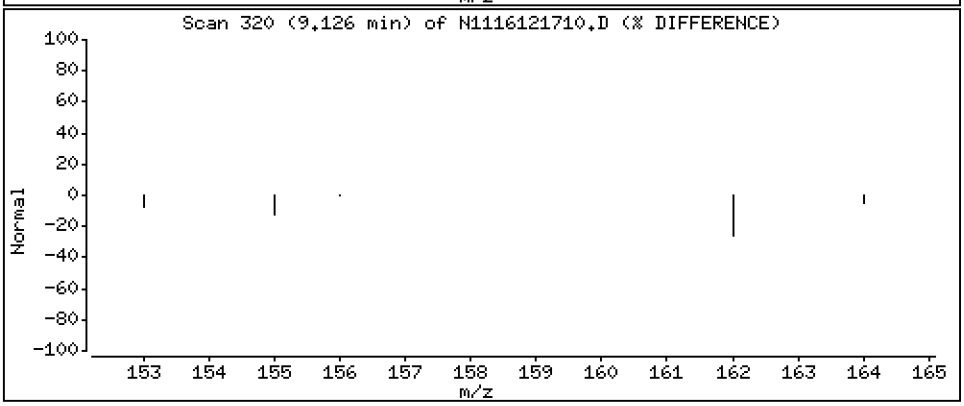












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121710.D

Date : 17-DEC-2016 16:48

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-25

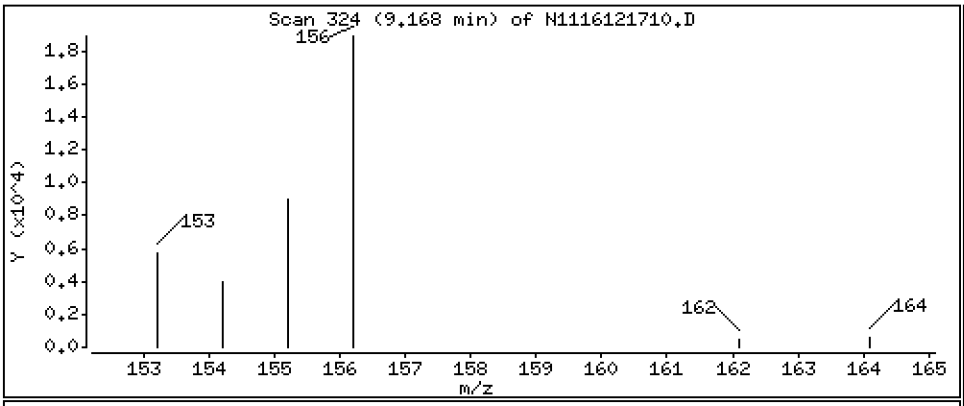
Operator: VTS

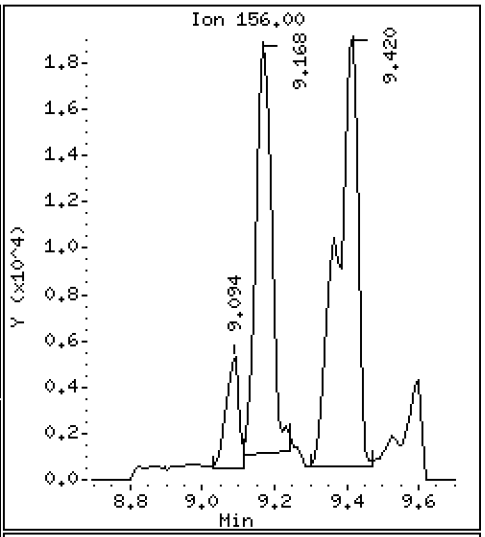
Column phase: Rxi-17Sil MS

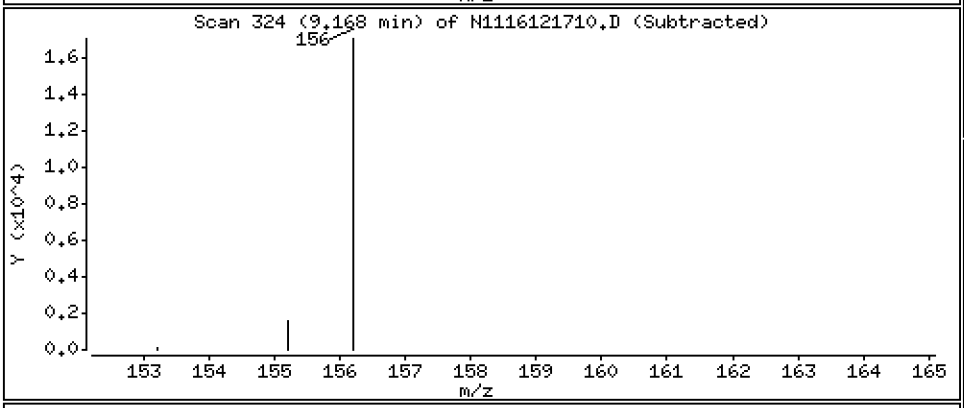
Column diameter: 0.25

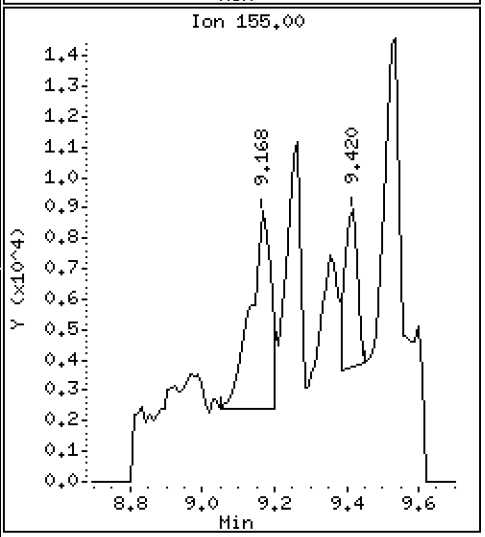
9 2,6-Dimethylnaphthalene

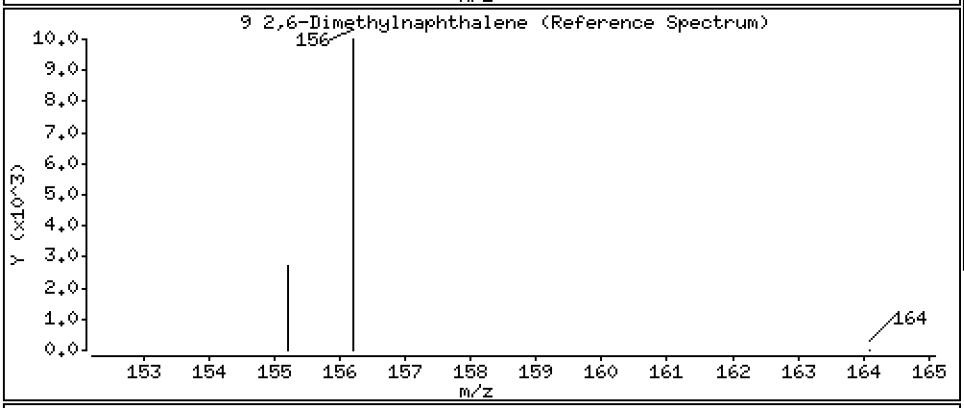
Concentration: 29.2 ng/mL

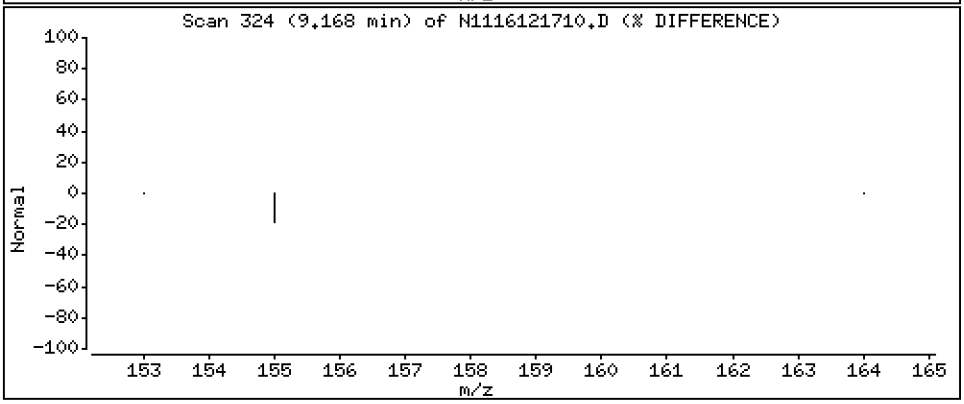












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121710.D

Date : 17-DEC-2016 16:48

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-25

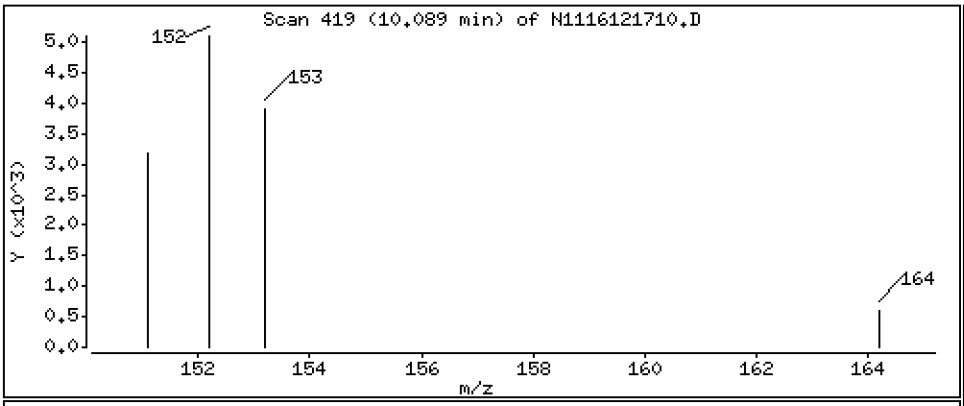
Operator: VTS

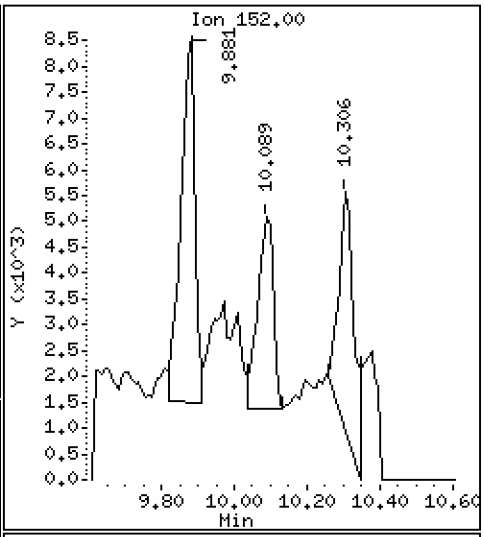
Column phase: Rxi-17Sil MS

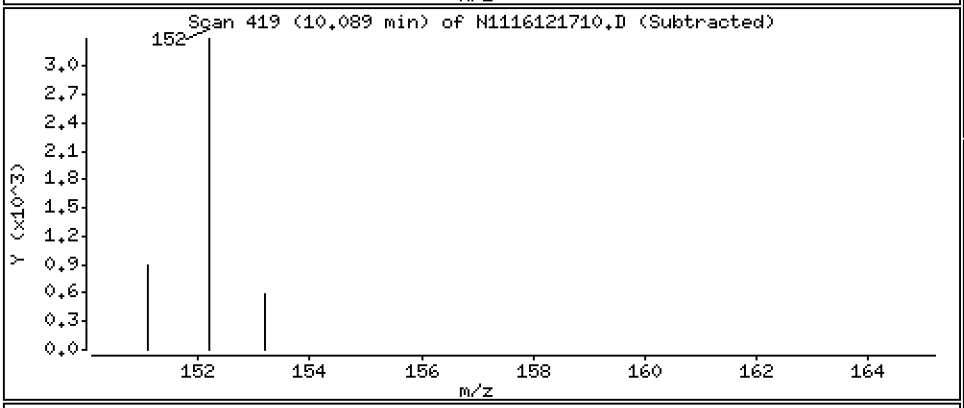
Column diameter: 0.25

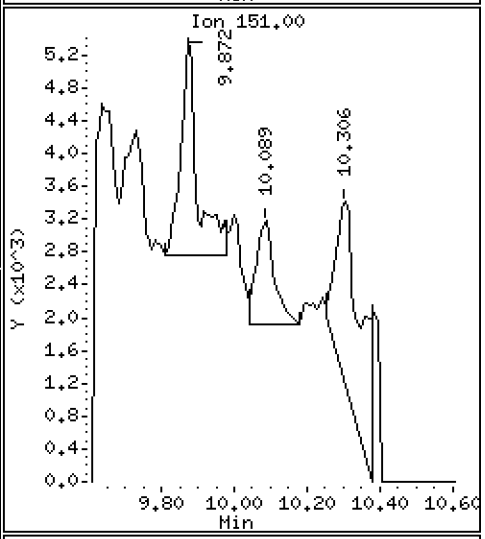
10 Acenaphthylene

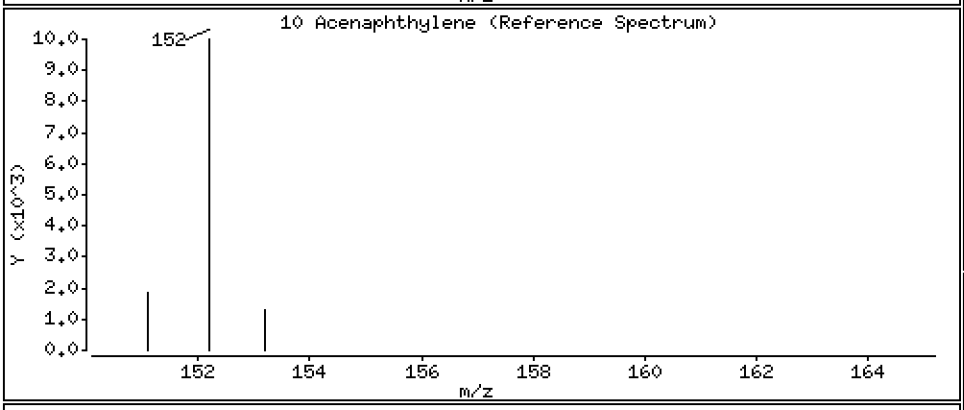
Concentration: 5.60 ng/mL

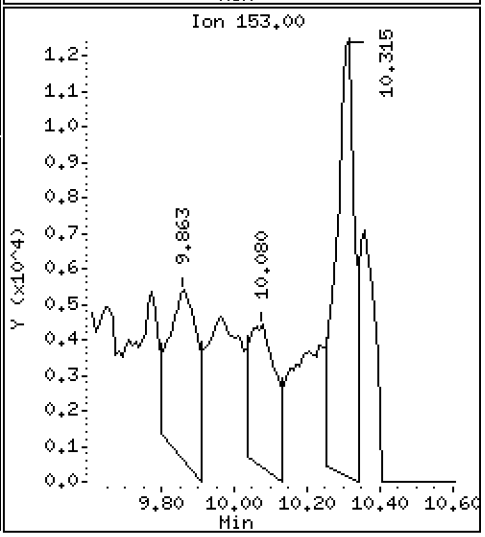


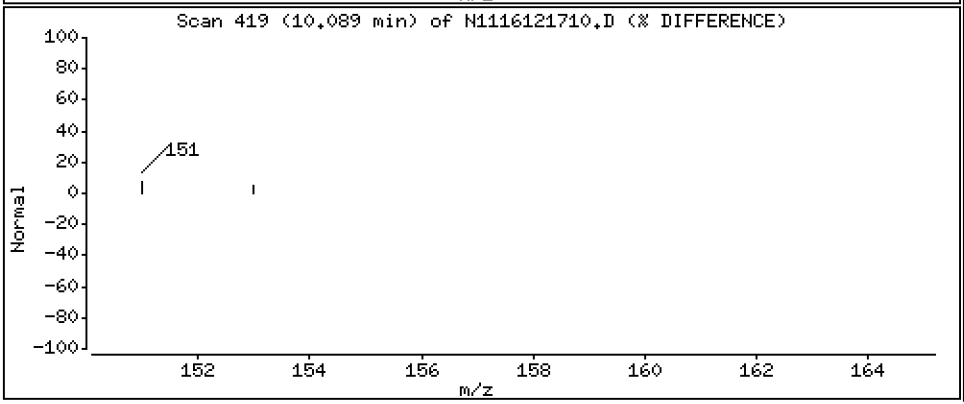












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121710.D

Date : 17-DEC-2016 16:48

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-25

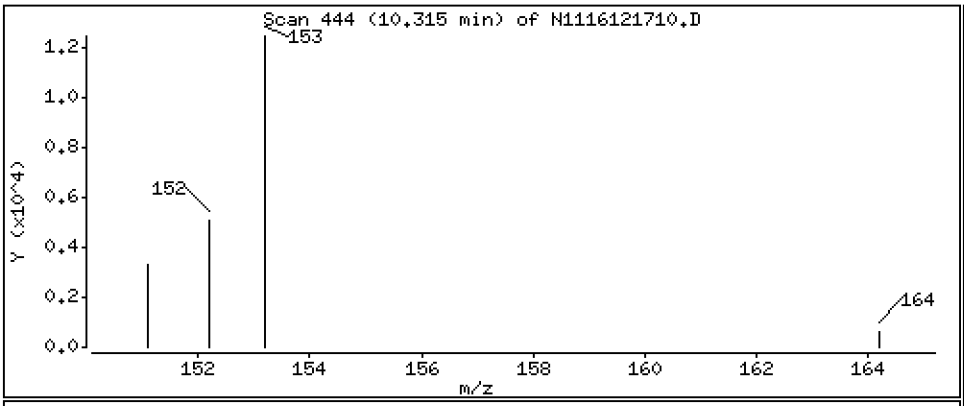
Operator: VTS

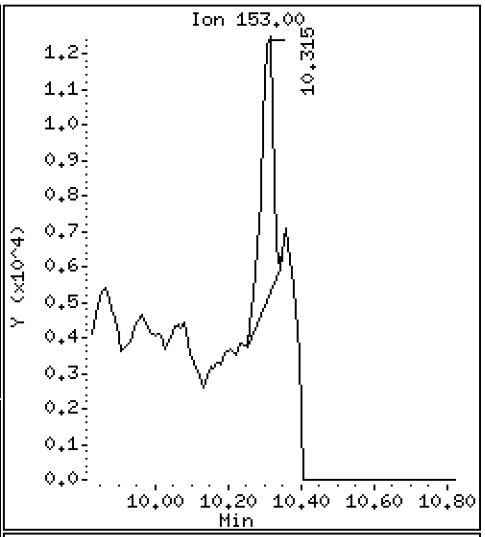
Column phase: Rxi-17Sil MS

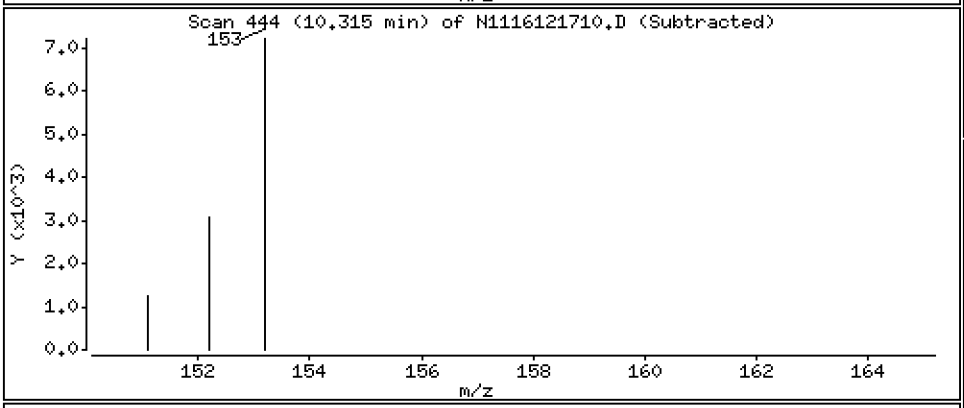
Column diameter: 0.25

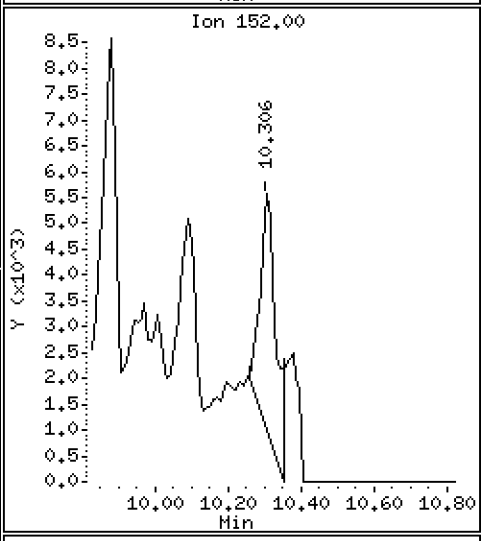
12 Acenaphthene

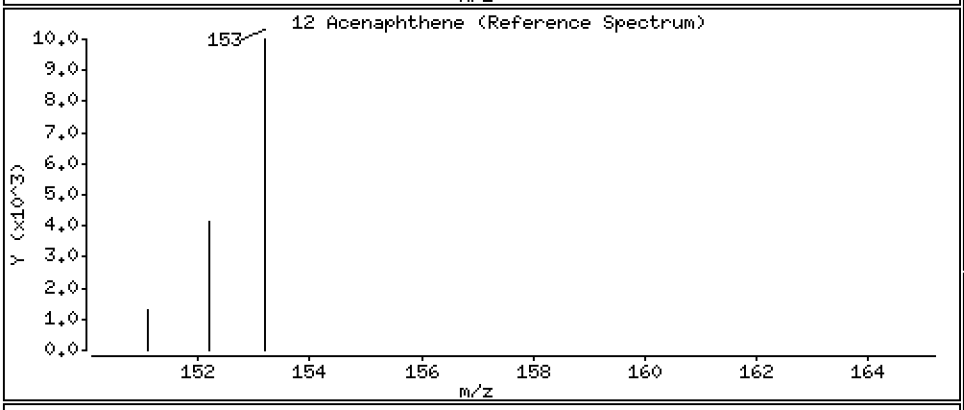
Concentration: 13.1 ng/mL

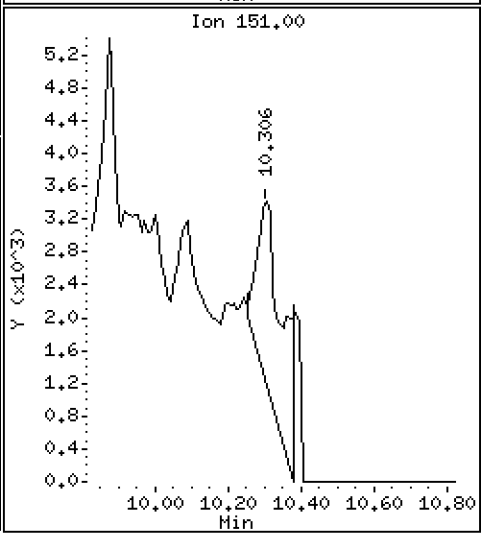


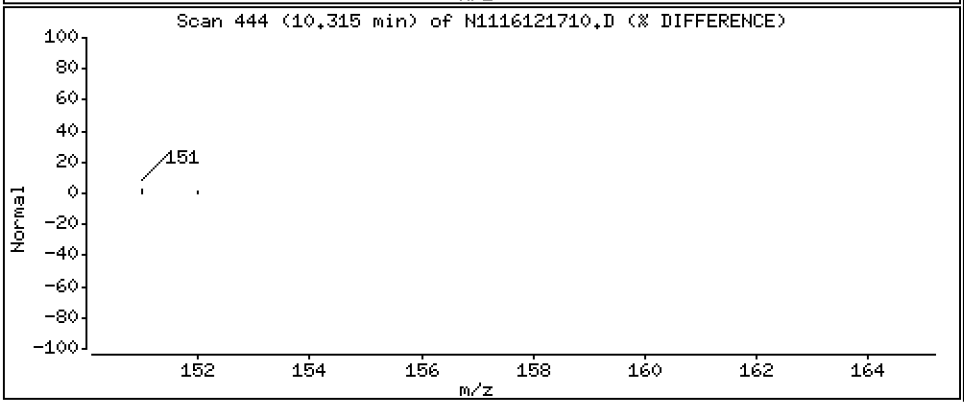












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121710.D

Date : 17-DEC-2016 16:48

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-25

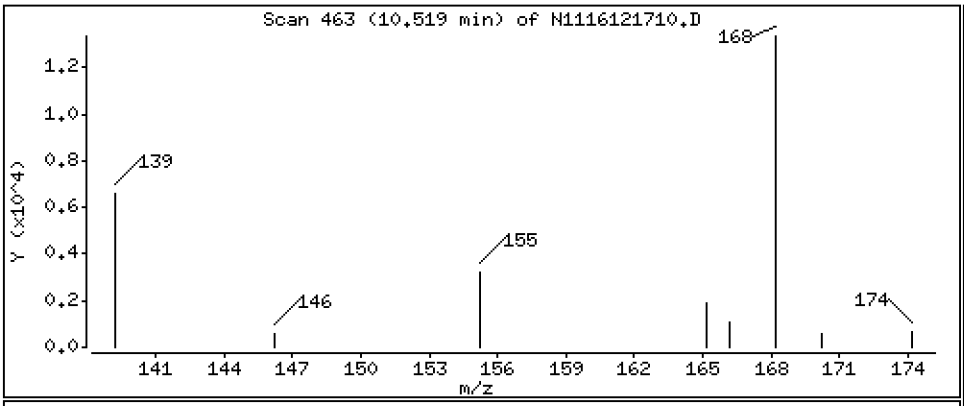
Operator: VTS

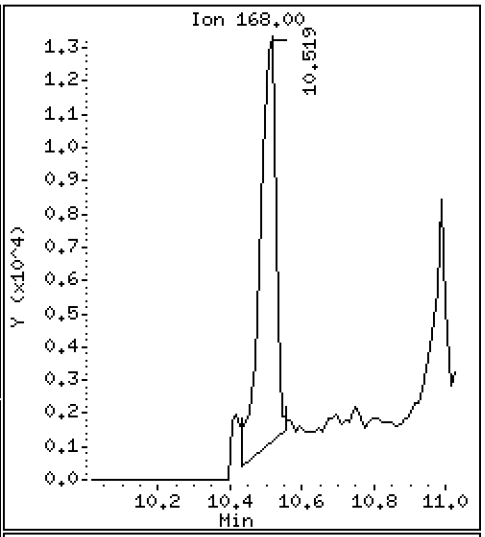
Column phase: Rxi-17Sil MS

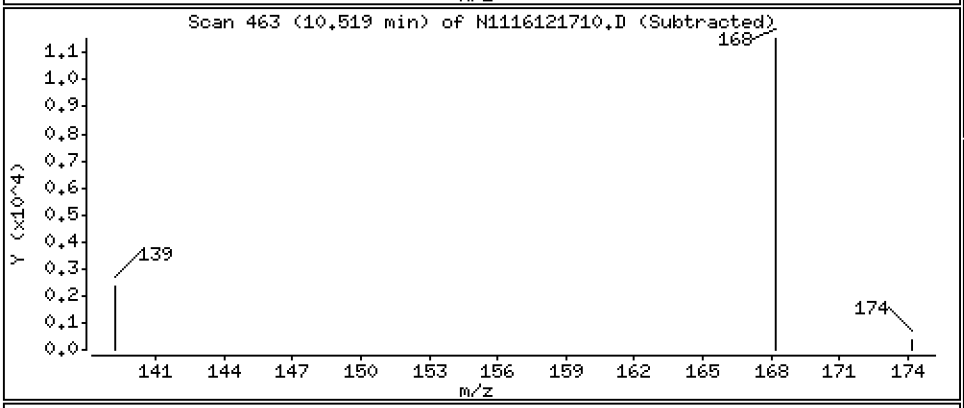
Column diameter: 0.25

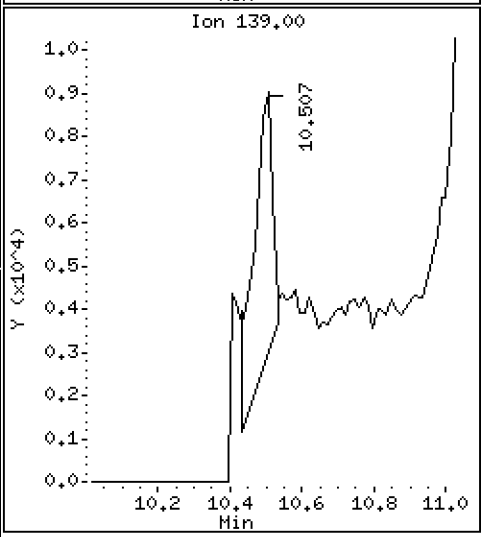
13 Dibenzofuran

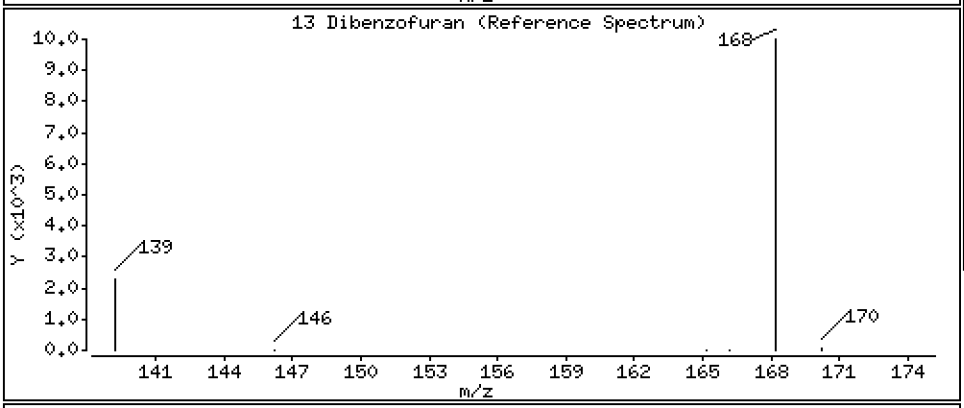
Concentration: 18.8 ng/mL

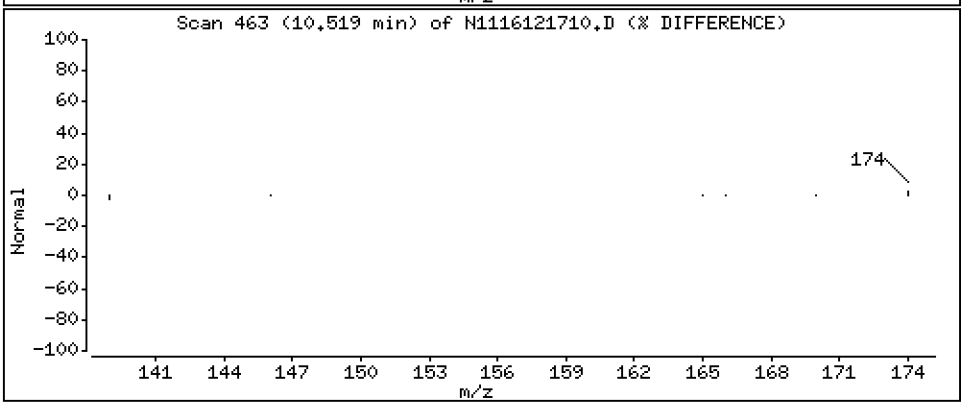












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121710.D

Date : 17-DEC-2016 16:48

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-25

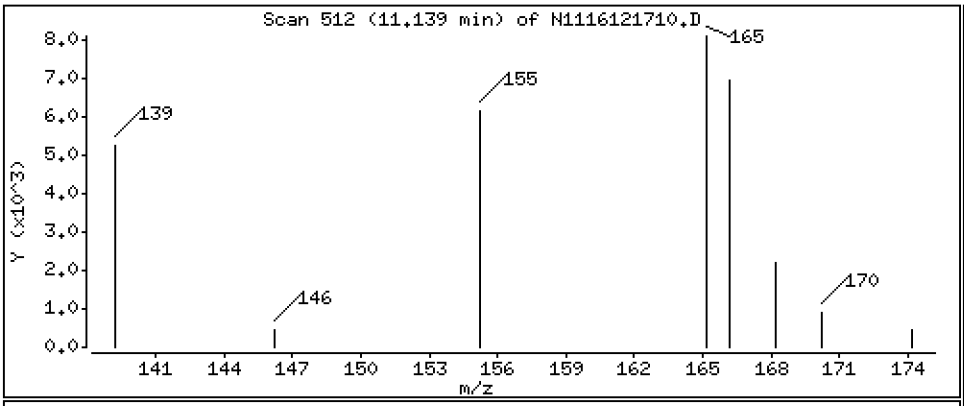
Operator: VTS

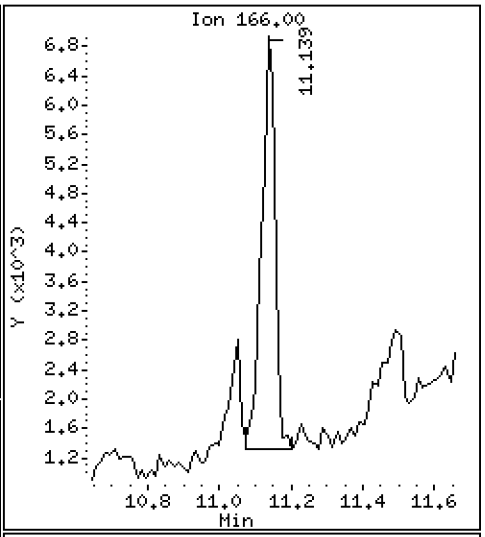
Column phase: Rxi-17Sil MS

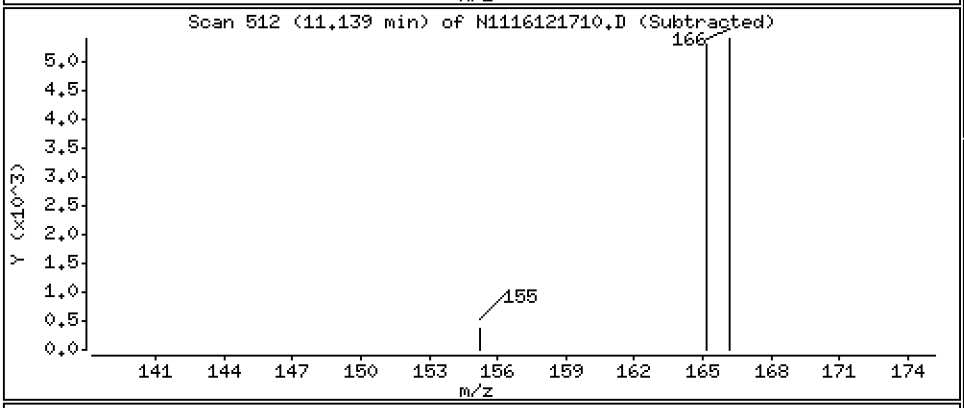
Column diameter: 0.25

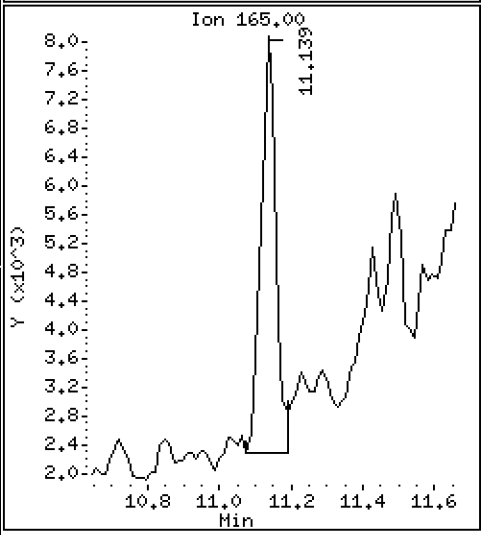
16 Fluorene

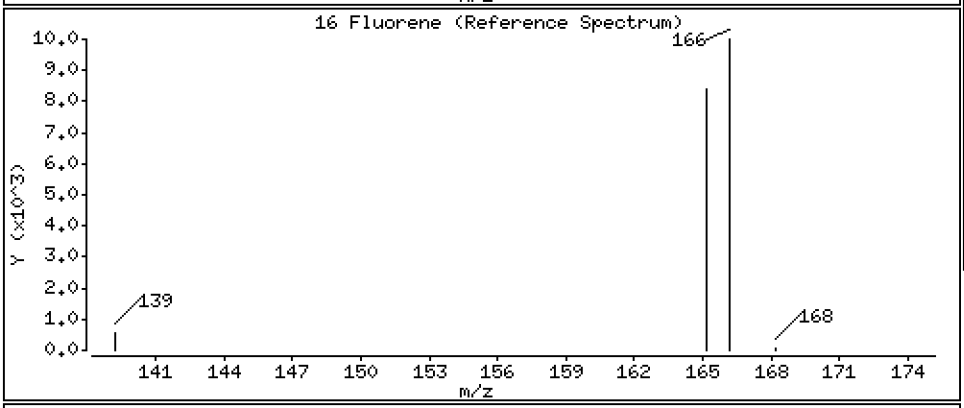
Concentration: 9.45 ng/mL

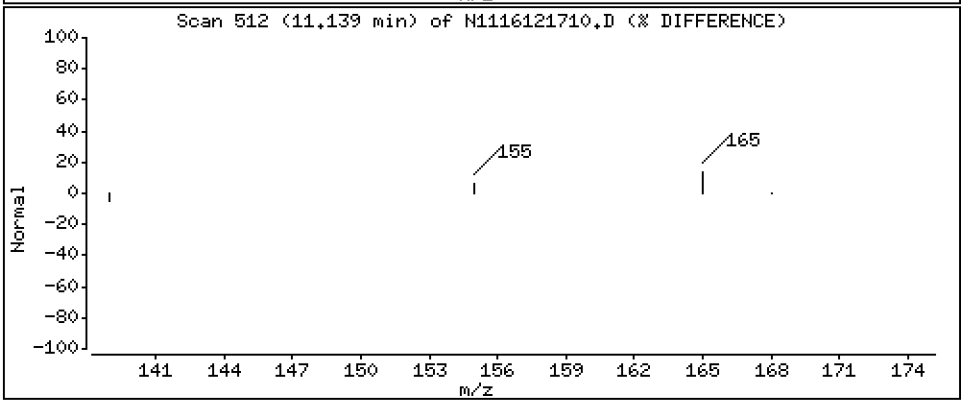












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121710.D

Date : 17-DEC-2016 16:48

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-25

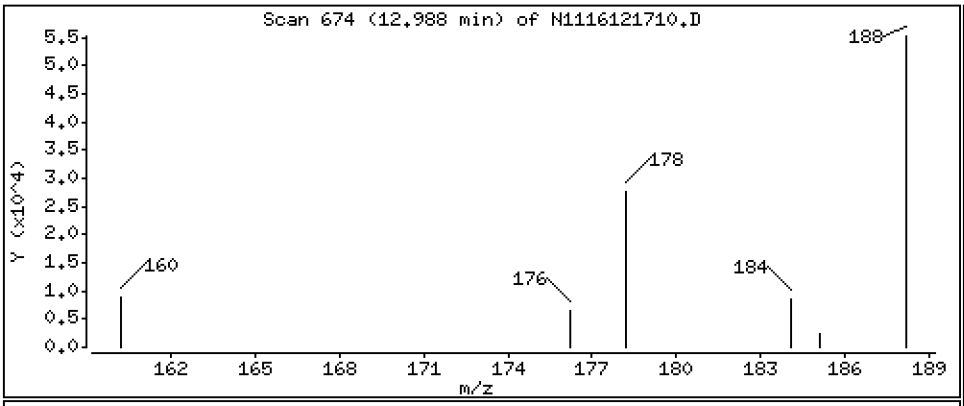
Operator: VTS

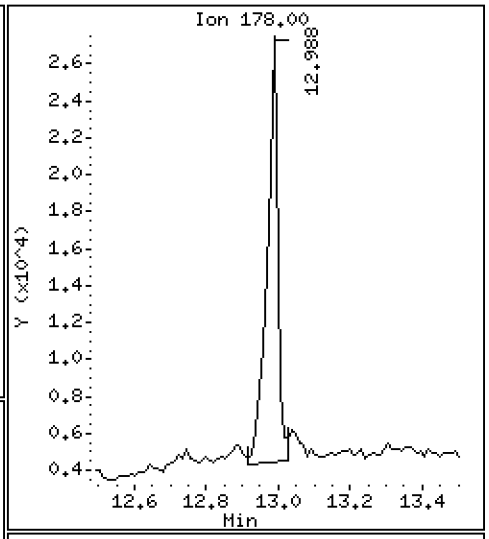
Column phase: Rxi-17Sil MS

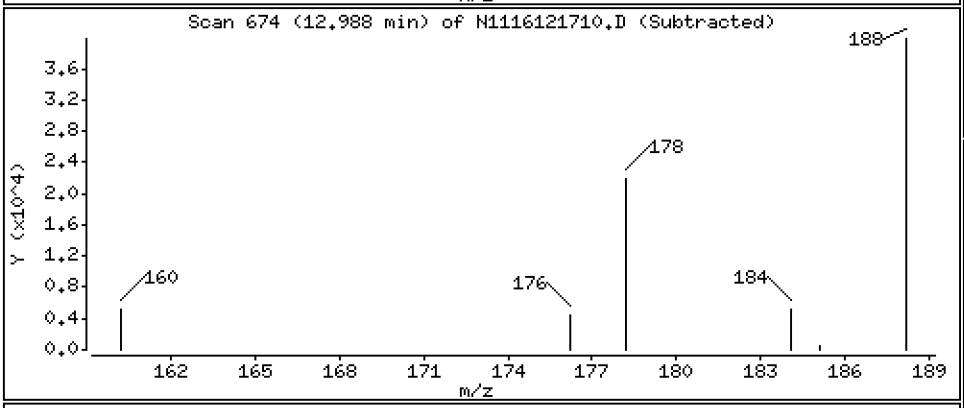
Column diameter: 0.25

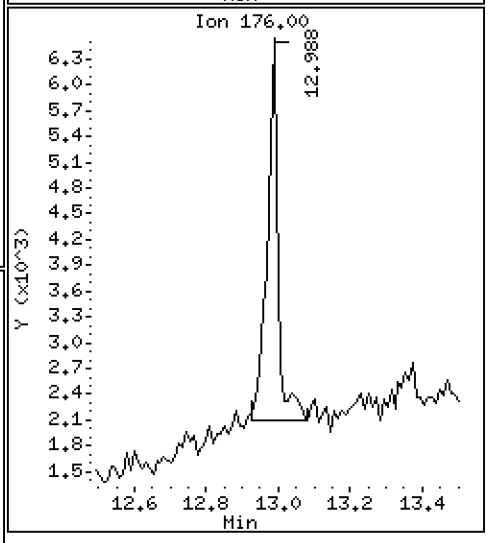
19 Phenanthrene

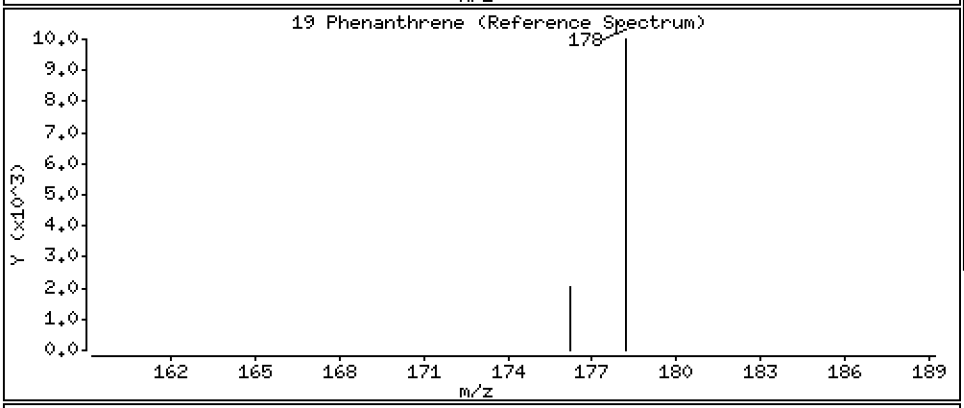
Concentration: 19.8 ng/mL

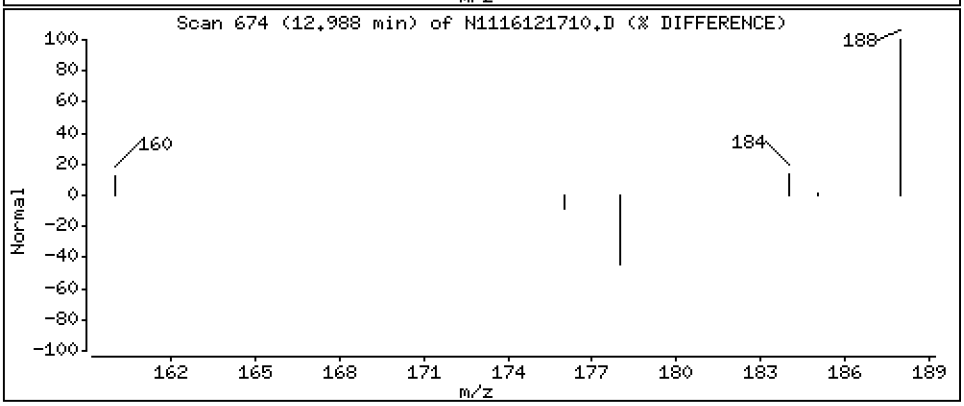












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121710.D

Date : 17-DEC-2016 16:48

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-25

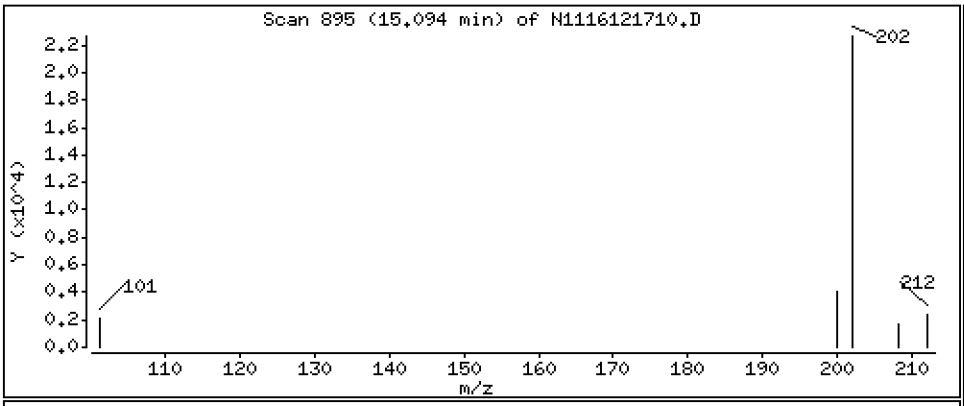
Operator: VTS

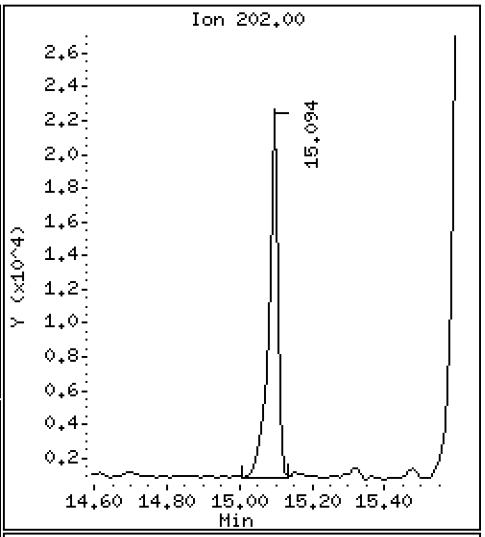
Column phase: Rxi-17Sil MS

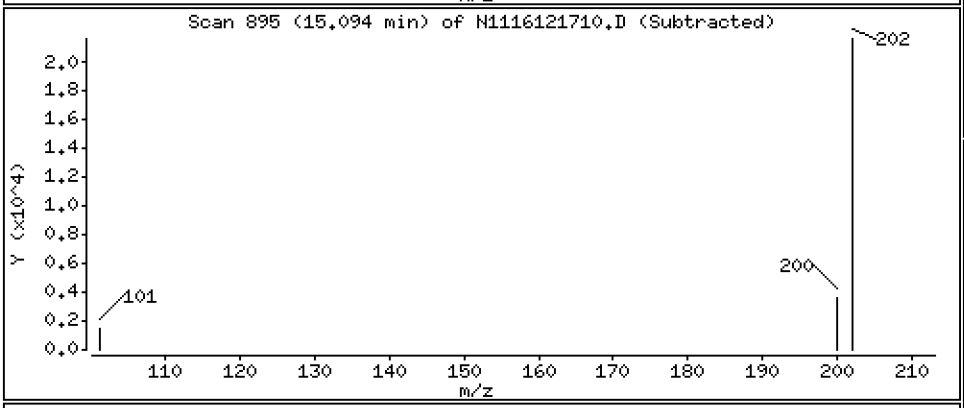
Column diameter: 0.25

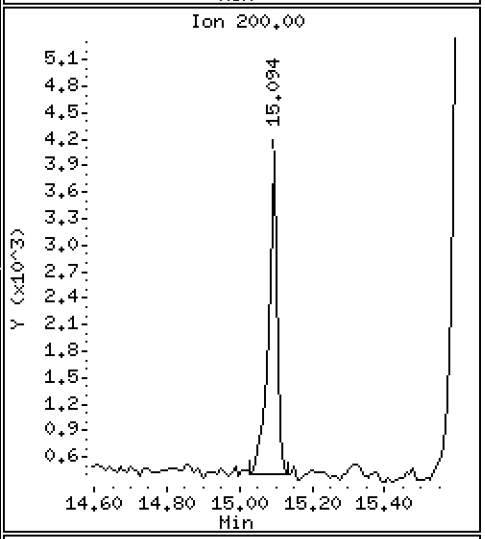
25 Fluoranthene

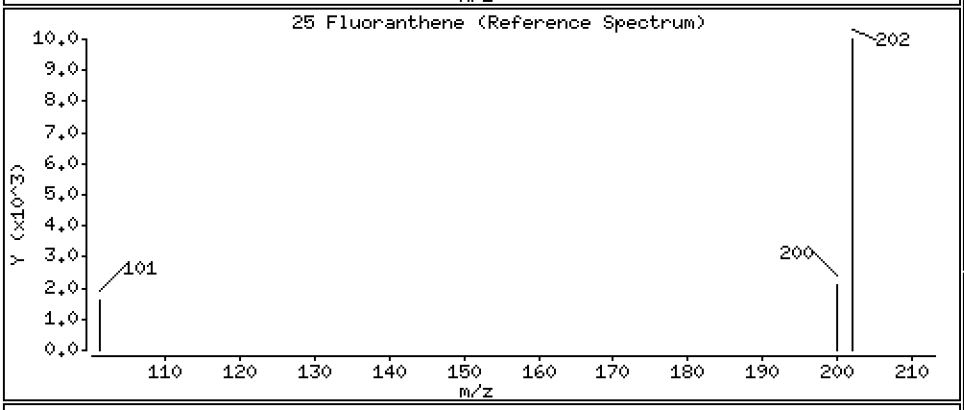
Concentration: 12.8 ng/mL

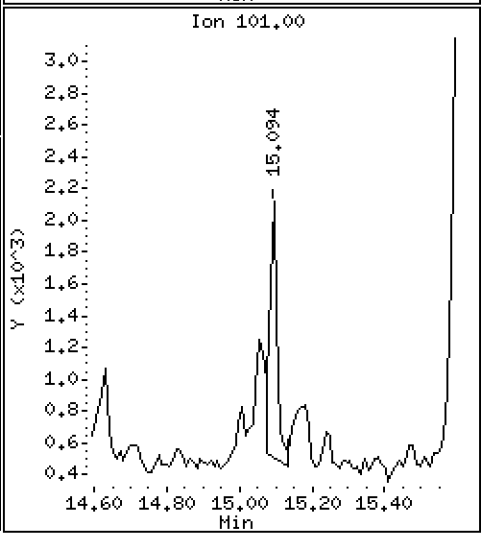


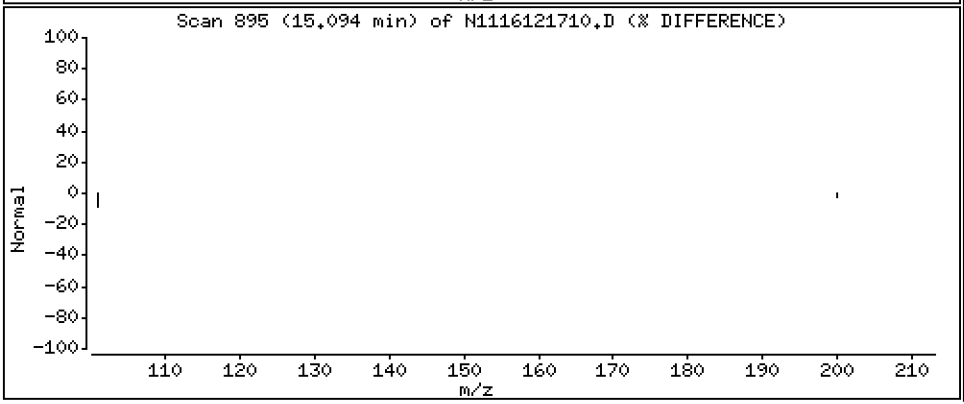












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121710.D

Date : 17-DEC-2016 16:48

Client ID:

Instrument: nt11.i

Sample Info: 16K0321-25

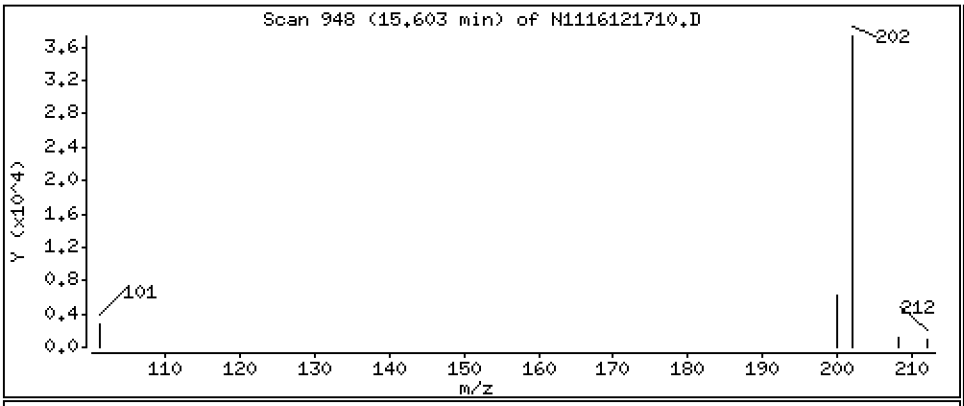
Operator: VTS

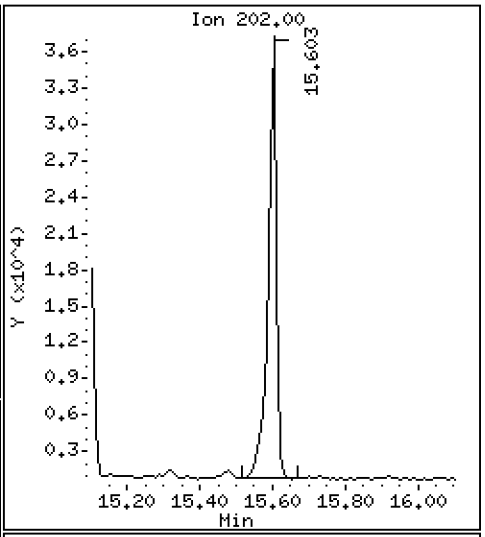
Column phase: Rxi-17Sil MS

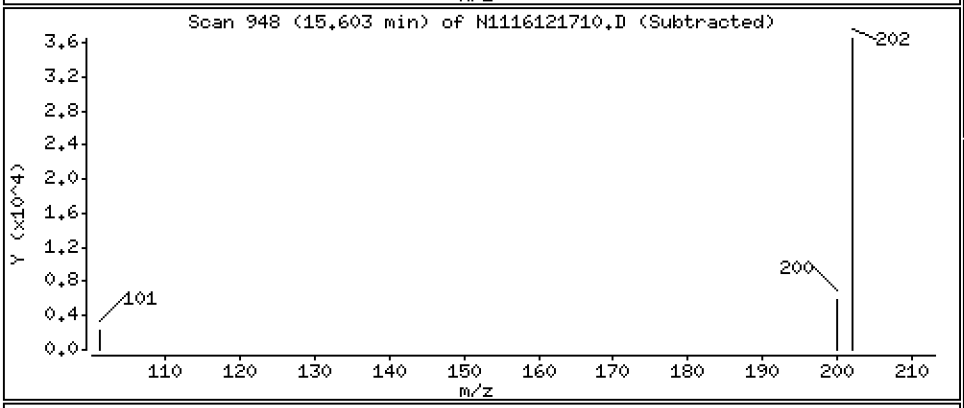
Column diameter: 0.25

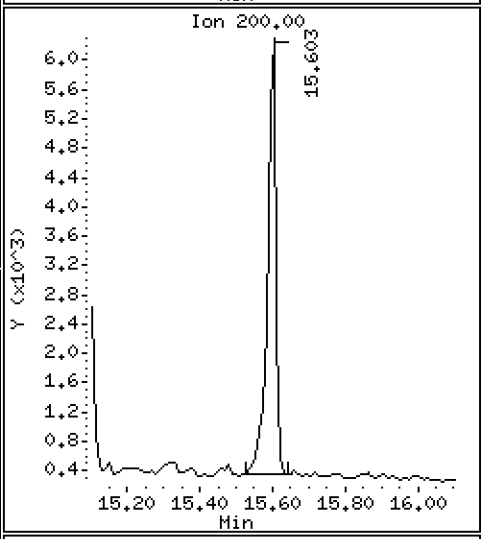
26 Pyrene

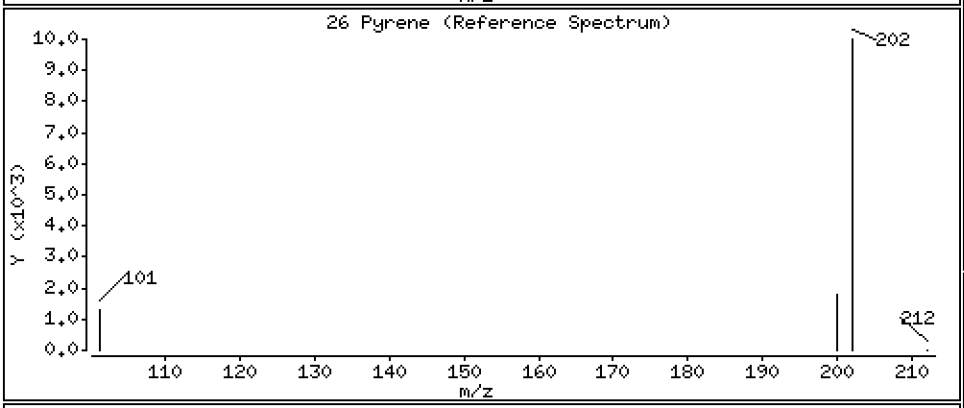
Concentration: 24.3 ng/mL

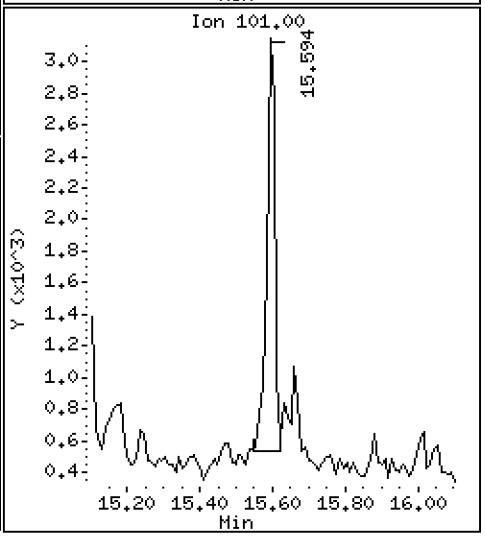


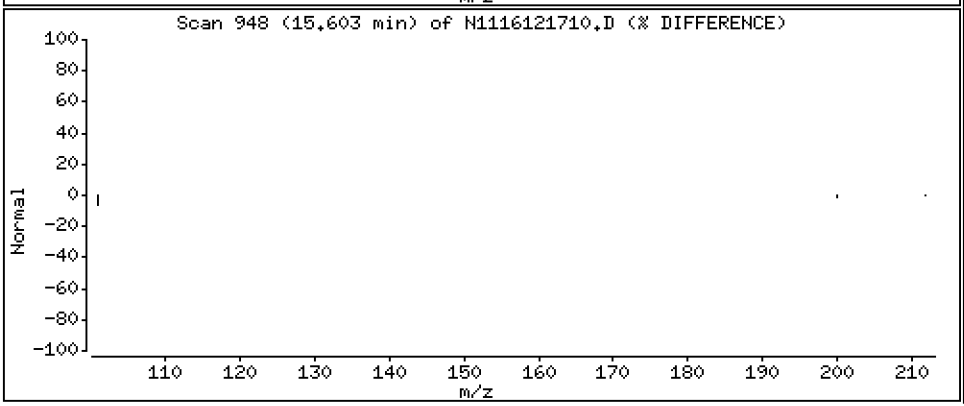












ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161217.b\N1116121710.D
Lab Smp Id: 16K0321-25
Inj Date : 17-DEC-2016 16:48 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : 16K0321-25
Misc Info :
Comment   :
Method   : \\target\share\chem3\nt11.i\20161217.b\lowsim.m
Meth Date : 17-Dec-2016 13:15 van Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1 Naphthalene-d8	136	7.207	7.234	(1.000)	374048	200.000	
	2 Naphthalene	128	7.243	7.261	(1.005)	309808	167.105	167
	3 Benzo(b)thiophene	134	Compound Not Detected.					
$	4 2-Methylnaphthalene-d10	152	8.190	8.211	(1.136)	287443	176.102	176
	5 2-Methylnaphthalene	142	8.243	8.264	(1.144)	224169	123.093	123
	6 1-Methylnaphthalene	142	8.505	8.526	(1.180)	108149	60.4449	60.4
	7 2-Chloronaphthalene	162	Compound Not Detected.					
	8 Biphenyl	154	9.125	9.136	(0.890)	37444	15.6918	15.7
	9 2,6-Dimethylnaphthalene	156	9.167	9.199	(0.894)	53326	29.2453	29.2
	10 Acenaphthylene	152	10.089	10.107	(0.984)	11367	5.59913	5.60
*	11 Acenaphthene-d10	164	10.251	10.260	(1.000)	227260	200.000	
	12 Acenaphthene	153	10.315	10.324	(1.006)	17385	13.0885	13.1(M)
	13 Dibenzofuran	168	10.519	10.519	(1.026)	37126	18.8424	18.8
	14 2,3,5-Trimethylnaphthalene	170	Compound Not Detected.					
$	15 Fluorene-d10	174	11.087	11.100	(1.082)	134948	123.619	124
	16 Fluorene	166	11.138	11.151	(1.086)	14929	9.45346	9.45
	17 Dibenzothiophene	184	Compound Not Detected.					
*	18 Phenanthrene-d10	188	12.945	12.956	(1.000)	486646	200.000	
	19 Phenanthrene	178	12.987	12.998	(1.003)	53920	19.8193	19.8
$	20 Anthracene-d10	188	13.008	13.019	(1.005)	247300	102.597	103
	21 Anthracene	178	Compound Not Detected.					
	22 Carbazole	167	Compound Not Detected.					
	23 1-Methylphenanthrene	192	Compound Not Detected.					
$	24 Fluoranthene-d10	212	15.065	15.065	(1.164)	541385	208.856	209
	25 Fluoranthene	202	15.093	15.093	(1.166)	39970	12.7503	12.8
	26 Pyrene	202	15.603	15.603	(0.881)	59691	24.3110	24.3
	27 Benzo(a)anthracene	228	Compound Not Detected.					
*	28 Chrysene-d12	240	17.710	17.710	(1.000)	429059	200.000	
	29 Chrysene	228	Compound Not Detected.					
	30 Benzo(b)fluoranthene	252	Compound Not Detected.					
	31 Benzo(k)fluoranthene	252	Compound Not Detected.					
	32 Benzo(j)fluoranthene	252	Compound Not Detected.					
$	33 Benzo(e)pyrene-d12	264	20.493	20.493	(0.978)	279332	142.400	142
	34 Benzo(e)pyrene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
	35 Benzo(a)pyrene	252	Compound Not Detected.					
*	36 Perylene-d12	264	20.945	20.935	(1.000)	394062	200.000	
	37 Perylene	252	Compound Not Detected.					
$	38 Dibenzo(a,h)anthracene-d14	292	23.830	23.830	(1.138)	218530	188.087	188
	39 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	40 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	41 Benzo(g,h,i)perylene	276	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121710.D
Lab Smp Id: 16K0321-25
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161217.b\lowsim.m
Misc Info:

Calibration Date: 17-DEC-2016
Calibration Time: 12:40
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	374048	9.49
11 Acenaphthene-d10	209310	104655	418620	227260	8.58
18 Phenanthrene-d10	404977	202489	809954	486646	20.17
28 Chrysene-d12	465046	232523	930092	429059	-7.74
36 Perylene-d12	454694	227347	909388	394062	-13.33

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.21	-0.37
11 Acenaphthene-d10	10.26	9.76	10.76	10.25	-0.09
18 Phenanthrene-d10	12.96	12.46	13.46	12.95	-0.08
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.95	0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121710.D

Lab ID: 16K0321-25
nt11.i, 20161217.b\lowsim.m,   17-DEC-2016 16:48

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

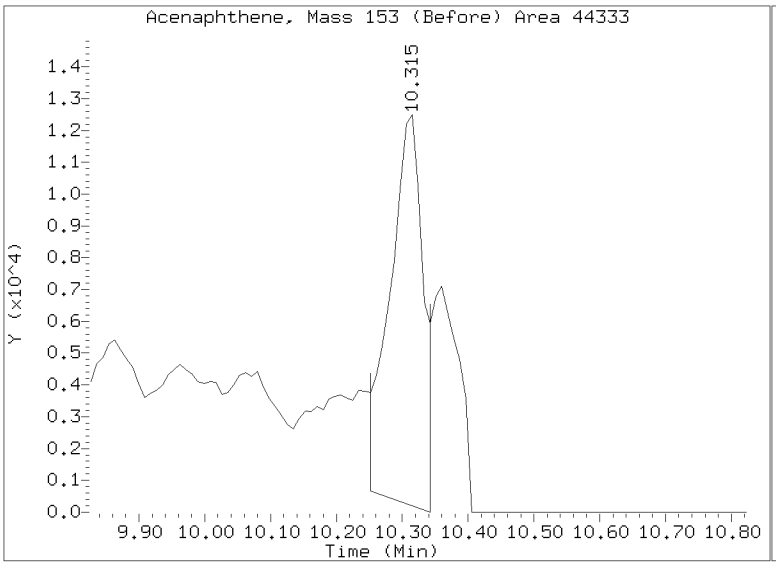
NONE

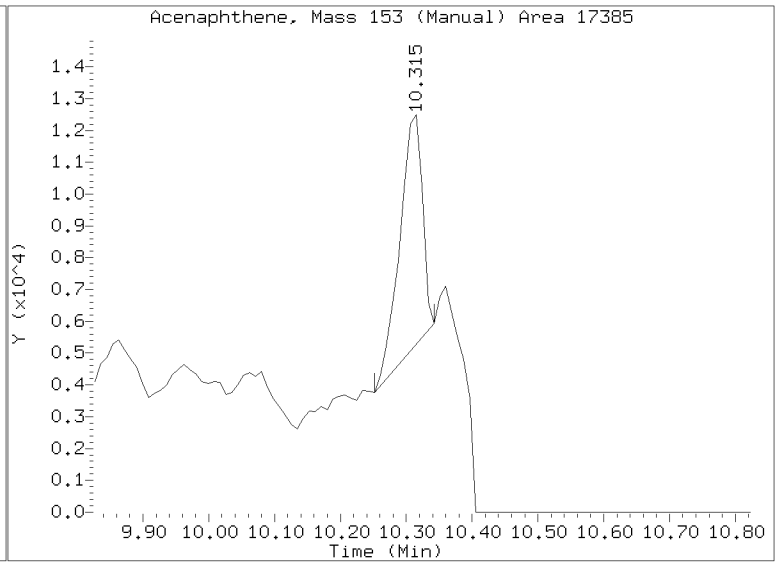
On Column LOD for nt11.i, 20161217.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20161217.b/N1116121710.D
Injection Date: 17-DEC-2016 16:48
Lab ID:16K0321-25 Client ID:
Report Date: 12/20/2016 09:41





PREPARATION BATCH SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc. SDG: 16K0321

Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring (PEMD)

Batch: BEK0657 Batch Matrix: Tissue Preparation: EPA 3550C-Mod (Ultrasonic)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
PG-SMA1-1-PEMD-161122-A	16K0321-01	N1116121209.D	11/24/16 08:25	
PG-SMA1-1-PEMD-161122-A	16K0321-01RE1	N1116121604.D	11/24/16 08:25	Added 12/15/2016 by VTS
PG-SMA1-2-PEMD-161122-A	16K0321-03	N1116121210.D	11/24/16 08:25	
PG-SMA1-2-PEMD-161122-A	16K0321-03RE1	N1116121319.D	11/24/16 08:25	Added 12/15/2016 by VTS
PG-SMA1-3-PEMD-161122-A	16K0321-05	N1116121211.D	11/24/16 08:25	
PG-SMA1-3-PEMD-161122-A	16K0321-05RE1	N1116121605.D	11/24/16 08:25	Added 12/15/2016 by VTS
PG-SMA1-103-PEMD-161122-A	16K0321-06	N1116121212.D	11/24/16 08:25	
PG-SMA1-103-PEMD-161122-A	16K0321-06RE1	N1116121321.D	11/24/16 08:25	Added 12/15/2016 by VTS
PG-SMA2-1-PEMD-161122-A	16K0321-07	N1116121213.D	11/24/16 08:25	
PG-SMA2-1-PEMD-161122-A	16K0321-07RE1	N1116121322.D	11/24/16 08:25	Added 12/15/2016 by VTS
PG-SMA2-2-PEMD-161122-A	16K0321-09	N1116121214.D	11/24/16 08:25	
PG-SMA2-2-PEMD-161122-A	16K0321-09RE1	N1116121323.D	11/24/16 08:25	Added 12/15/2016 by VTS
PG-SMA2-102-PEMD-161122-A	16K0321-10	N1116121215.D	11/24/16 08:25	
PG-SMA2-102-PEMD-161122-A	16K0321-10RE1	N1116121324.D	11/24/16 08:25	Added 12/15/2016 by VTS
PG-SMA2-3-PEMD-161122-A	16K0321-11	N1116121216.D	11/24/16 08:25	
PG-SMA2-3-PEMD-161122-A	16K0321-11RE1	N1116121606.D	11/24/16 08:25	Added 12/15/2016 by VTS
PG-SMA2-4-PEMD-161122-A	16K0321-13	N1116121217.D	11/24/16 08:25	
PG-SMA2-4-PEMD-161122-A	16K0321-13RE1	N1116121607.D	11/24/16 08:25	Added 12/15/2016 by VTS
PG-SMA2-5-PEMD-161122-A	16K0321-15	N1116121218.D	11/24/16 08:25	
PG-SMA2-5-PEMD-161122-A	16K0321-15RE1	N1116121608.D	11/24/16 08:25	Added 12/15/2016 by VTS
PG-PJ-1-PEMD-161122-A	16K0321-17	N1116121219.D	11/24/16 08:25	
PG-PJ-1-PEMD-161122-A	16K0321-17RE1	N1116121328.D	11/24/16 08:25	Added 12/15/2016 by VTS
Blank	BEK0657-BLK1	N1116121207.D	11/24/16 08:25	
Blank	BEK0657-BLK2	N111612112.D	10/28/16 12:15	
LCS	BEK0657-BS1	N1116121208.D	11/24/16 08:25	
LCS	BEK0657-BS2	N111612113.D	10/28/16 12:15	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8270D) Low Level SIM PNA-PEMD Sonication (3550C) (SOP # 3323S)

Preparation Test Low Level SIM PNA PEMD # 10 Low Level (0.5ppb)

Lab Number(s) 16K0321 Page 1 of 2 Batch set up by: ~~JH~~

Batch ID BEK0657

JAR ID	Extraction Requirements	Weight Extracted (1 Each) (0.886g)	Sonic Horn ID + Check	(REQ) Silica Gel Clean (1:1) EPH Aromatic	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	BEK0657 BLK	1 Each	#5	(1:1)	0.1mL	0.1mL		RH 11/24/16 Analyst/Date
	↓ BS	1 Each	#16	(1:1)	0.1mL	0.1mL		
	~~BSDup.~~	~~1 Each~~		~~(1:1)~~	~~0.1mL~~	~~0.1mL~~		KD 80°C
A	16K0321 - 01	1 Each	#4	(1:1)	0.1mL	0.1mL		Hexane Exchange (2X 20mL) 100°C 1 2 3 4 5 6
A	-02	1 Each	#15	(1:1)	0.1mL	0.1mL		
A	-03	1 Each	#6	(1:1)	0.1mL	0.1mL		RMH 12/5/16
A	-04	1 Each	#3	(1:1)	0.1mL	0.1mL		
A	-05	1 Each	#4	(1:1)	0.1mL	0.1mL		
A	-06	1 Each	#5	(1:1)	0.1mL	0.1mL		Analyst/Date
A	-07	1 Each	#6	(1:1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Pre-Cleanups
A	-08	1 Each	#3	(1:1)	0.1mL	0.1mL		
A	-09	1 Each	#4	(1:1)	0.1mL	0.1mL		SR 12/6/16
A	-10	1 Each	#5	(1:1)	0.1mL	0.1mL		Analyst/Date
A	-11	1 Each	#6	(1:1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Post Cleanups
A	-12	1 Each	#3	(1:1)	0.1mL	0.1mL		12/9/16
Analyst/Date	RH 11/24/16			SR 12/6/16	12/9/16	12/9/16	Reviewed by/Date 12/9/16	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	1 (E060470)	3/15µg/mL	20µL	11/09/17	~~JH~~	RMH
Spike	18 (E060379)	1.5µg/mL	20µL	11/09/17	~~JH~~	RMH
Extraction Time: 8:25				Balance ID:		

SPECIAL INSTRUCTIONS: **Follow SOP 3323S for assembly and disassembly of PEMD(s).**

1. Place each LPDE strip into a 600mL beaker. 2. Add 1:1 Low Level DCM/Pentane to the beaker. 3. Add surr/spike. 4. Sonicate 2X with 1:1 Low Level DCM/Pentane for 5 minutes each. 5. Decant 1:1 Low Level DCM/Pentane into labeled 500mL Erlenmeyer flask with a funnel (No glasswool or Sodium Sulfate). 6. After the last sonication, rinse the LPDE strip with Low Level DCM and add rinsate to the E-Flask. 7. KD: (using Low Level DCM) to 5mL at 80°C. 8. Exchange to Hexane (2X with 20mL) at 100 °C. 9. TurboVap to 2mL. 10. Silica Clean-up =REQ. Extract~2mL in Hexane (Collect EPH Aromatic fraction only). 11. TurboVap to 0.5mL. 12. Vial in a 1.5mL amber vial at 0.5mL using Low Level DCM. 13. IN DIOXIN LAB: TurboVap and exchange to Iso-Octane. 14. Vial 0.1mL in Iso-Ocatane for analysis.

NOTE: (An average weight of 20cm X 5cm pre-cleaned PEMD LPDE strips was determined to be 0.886g for BLK, BS, BSdup).

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8270D) Low Level SIM PNA-PEMD Sonication (3550C) (SOP # 3323S)

Preparation Test Low Level SIM PNA PEMD # 10 Low Level (0.5ppb)

Lab Number(s) 16K0321 Page 2 of 2 Batch set up by: SB

Batch ID BEK0657

JAR ID	Extraction Requirements	Weight Extracted (1 Each) (0.886g)	Sonic Horn ID + Check	(REQ) Silica Gel Clean (1:1) EPH Aromatic	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	~~BLK~~	~~1 Each~~		~~(1:1)~~	~~0.1mL~~	~~0.1mL~~		Analyst/Date
	~~BS~~	~~1 Each~~		~~(1:1)~~	~~0.1mL~~	0.1mL		KD 80°C
	~~BSDup.~~	~~1 Each~~		~~(1:1)~~	~~0.1mL~~	0.1mL		Hexane Exchange (2X 20mL) 100°C 1 2 3 4 5 6
A	16K0321-13	1 Each	#4	(1:1)	0.1mL	0.1mL		RML4 12/5/16
A	-14	1 Each	#5	(1:1)	0.1mL	0.1mL		
A	-15	1 Each	#6	(1:1)	0.1mL	0.1mL		
A	-16	1 Each	#3	(1:1)	0.1mL	0.1mL		
A	-17	1 Each	#4	(1:1)	0.1mL	0.1mL		
A	-18	1 Each	#5	(1:1)	0.1mL	0.1mL		Analyst/Date
				(1:1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Pre-Cleanups
				(1:1)	0.1mL	0.1mL		SB 12/6/16
				(1:1)	0.1mL	0.1mL		Analyst/Date
				(1:1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Post Cleanups
				(1:1)	0.1mL	0.1mL		12/9/16
Analyst/Date				SB 12/6/16	12/9/16	12/9/16	Reviewed by/Date 12/9/16	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	I (E060474)	3/15µg/mL	20µL	11/09/17	SB	RML4
~~Spike~~	~~18 ( )~~	~~1.5µg/mL~~	~~20µL~~			~~RML4~~ Donna
Extraction Time: 825				Balance ID:		

SPECIAL INSTRUCTIONS: **Follow SOP 3323S for assembly and disassembly of PEMD(s).**

1. Place each LPDE strip into a 600mL beaker. 2. Add 1:1 Low Level DCM/Pentane to the beaker. 3. Add surr/spike. 4. Sonicate 2X with 1:1 Low Level DCM/Pentane for 5 minutes each. 5. Decant 1:1 Low Level DCM/Pentane into labeled 500mL Erlenmeyer flask with a funnel (No glasswool or Sodium Sulfate). 6. After the last sonication, rinse the LPDE strip with Low Level DCM and add rinsate to the E-Flask. 7. KD: (using Low Level DCM) to 5mL at 80°C. 8. Exchange to Hexane (2X with 20mL) at 100 °C. 9. TurboVap to 2mL. 10. Silica Clean-up =REQ. Extract~2mL in Hexane (Collect EPH Aromatic fraction only). 11. TurboVap to 0.5mL. 12. Vial in a 1.5mL amber vial at 0.5mL using Low Level DCM. 13. IN DIOXIN LAB: TurboVap and exchange to Iso-Octane. 14. Vial 0.1mL in Iso-Ocatane for analysis.

NOTE: (An average weight of 20cm X 5cm pre-cleaned PEMD LPDE strips was determined to be 0.886g for BLK, BS, BSdup).

Organic Extractions
Reagent and Solutions Identification

(8270D) Low Level SIM PNA-PEMD
Sonication (3550C) (SOP # 3323S)

Lab Number(s) 16K0321

(8270D) Low Level SIM PNA PEMD:	Analyst/Date
Sonication Station: 20cm X 5cm LPDE strips for BLK, BS, BSDup: ( ) 32cm X 5cm LPDE strips for samples: ( ) 1:1Low Level DCM/Pentane: (EQ06986) Low Level DCM: (EQ04229)	Sonication 11/24/16 RH
KD Station: Low Level DCM: (EQ06715) Hexane: (EQ06964)	KD RMH 12/5/16
Vialing Station: Low Level DCM: ( ) 60:40 Pentane/Low Level DCM: ( ) Hexane: ( ) Pentane: ( ) Neutral Sodium Sulfate: ( ) 0% Silica Gel: ( )	Vialing

Organic Extractions
Reagent and Solutions Identification

(8270D) Low Level SIM PNA-PEMD
Sonication (3550C) (SOP # 3323S)

Lab Number(s) 16K0321

(8270D) Low Level SIM PNA PEMD:	Analyst/Date
Sonication Station: 20cm X 5cm LPDE strips for BLK, BS, BSDup: ( ) 32cm X 5cm LPDE strips for samples: ( ) 1:1Low Level DCM/Pentane: ( ) Low Level DCM: ( )	Sonication RH/RMH 11/24/16
KD Station: Low Level DCM: (EQQ6715) Hexane: (EQQ6904)	KD RMH 12/5/16
Vialing Station: Low Level DCM: (EQQ6715) 60:40 Pentane/Low Level DCM: (EQQ7157) Hexane: (EQQ6564) Pentane: (EQQ5354) Neutral Sodium Sulfate: (EQQ5874) 0% Silica Gel: (EQQ7164)	Vialing SP 12/6/16 12/9/16

Iso-Octane: DQQ0647

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8270D) Low Level SIM PNA-PEMD Sonication (3550C) (SOP # 3323S)

CLOSED!

Preparation Test Low Level SIM PNA PEMD # 10 Low Level (0.5ppb)

Lab Number(s) PEMD Prep only Page 1 of 2 Batch set up by: JV

Batch ID

JAR ID	Extraction Requirements	Weight Extracted (1 Each) (0 886g)	Sonic Horn ID + Check Pre-clean	(REQ) Silica Gel Clean (1:1) EPH Aromatic	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	PEMD Prep BLK	1 Each	#3	(1 1)	0.1mL	0.1mL		Analyst/Date
	BS	1 Each	#4 #3 2nd	(1 1)	0.1mL	0.1mL		KD 80°C
	~~BSDup~~	~~1 Each~~		~~(1 1)~~	~~0.1mL~~	~~0.1mL~~		Hexane Exchange (2X 20mL) 100°C 1 2 3 4 5 6
	PEMD Prep # 1	1 each	#3	(1 1)	0.1mL	0.1mL		
	2		#3	(1 1)	0.1mL	0.1mL		
	3		#3	(1 1)	0.1mL	0.1mL		
	4		#3	(1 1)	0.1mL	0.1mL		
	5		#3	(1 1)	0.1mL	0.1mL		
	6		#3	(1 1)	0.1mL	0.1mL		Analyst/Date
	7		#4	(1 1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Pre-Cleanups
	8		#4	(1 1)	0.1mL	0.1mL		
	9		#4	(1 1)	0.1mL	0.1mL		
	10		#4	(1 1)	0.1mL	0.1mL		Analyst/Date
	11		#4	(1 1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Post Cleanups
	12		#4	(1 1)	0.1mL	0.1mL		
Analyst/Date							Reviewed by/Date	Analyst/Date

	Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
ALL	Field Spike	(EΦΦ376i)	1.5ng/mL	20 mL	2/08/17	JV	JV
BLK 8.3 ONLY	Surrogate	I (DΦΦ3238)	3/15µg/mL	20µL	5/11/16	JV	JV
	Spike	18 (EΦΦ3179)	1.5µg/mL	20µL	5/11/16	JV	JV
~~Extraction Time:~~ Tumble Start 10/28/16 12:15					~~Balance ID:~~ Tumble Stop 10/31/16 12:34		

SPECIAL INSTRUCTIONS: **Follow SOP 3323S for assembly and disassembly of PEMD(s).**

1. Place each LPDE strip into a 600mL beaker. 2. Add 1:1 Low Level DCM/Pentane to the beaker. 3. Add surr/spike. 4. Sonicate 2X with 1:1 Low Level DCM/Pentane for 5 minutes each. 5. Decant 1:1 Low Level DCM/Pentane into labeled 500mL Erlenmeyer flask with a funnel (No glasswool or Sodium Sulfate). 6. After the last sonication, rinse the LPDE strip with Low Level DCM and add rinsate to the E-Flask. 7. KD: (using Low Level DCM) to 5mL at 80°C. 8. Exchange to Hexane (2X with 20mL) at 100 °C. 9. TurboVap to 2mL. 10. Silica Clean-up =REQ. Extract~2mL in Hexane (Collect EPH Aromatic fraction only). 11. TurboVap to 0.5mL. 12. Vial in a 1.5mL amber vial at 0.5mL using Low Level DCM. 13. IN DIOXIN LAB: TurboVap and exchange to Iso-Octane. 14. Vial 0.1mL in Iso-Ocatane for analysis.

NOTE: (An average weight of 20cm X 5cm pre-cleaned PEMD LPDE strips was determined to be 0.886g for BLK, BS, BSdup).

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8270D) Low Level SIM PNA-PEMD Sonication (3550C) (SOP # 3323S)

Preparation Test Low Level SIM PNA PEMD # 10 Low Level (0.5ppb)

Lab Number(s) PEMD Prep only Page 2 of 2 Batch set up by: ~~SH~~

Batch ID _____

JAR ID	Extraction Requirements	Weight Extracted (1 Each) (0.886g)	Sonic Horn ID + Check	(REQ) Silica Gel Clean (1:1) EPH Aromatic	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	~~BLK~~	1 Each		(1:1)	~~0.1mL~~	~~0.1mL~~		Analyst/Date
	PEMD Prep # 13 ~~BS~~	1 Each	#5	(1:1)	0.1mL	0.1mL		
	14 ~~BSDup~~	1 Each	#5	(1:1)	0.1mL	0.1mL		KD 80°C
	15	1 Each	#5	(1:1)	0.1mL	0.1mL		Hexane Exchange (2X 20mL) 100°C 1 2 3 4 5 6
	16		#5	(1:1)	0.1mL	0.1mL		
	17		#5	(1:1)	0.1mL	0.1mL		
	18		#6	(1:1)	0.1mL	0.1mL		
	19		#6	(1:1)	0.1mL	0.1mL		
	20		#6	(1:1)	0.1mL	0.1mL		Analyst/Date
	21		#6	(1:1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Pre-Cleanups
	22		#6	(1:1)	0.1mL	0.1mL		
	23		#7	(1:1)	0.1mL	0.1mL		
	24		#7	(1:1)	0.1mL	0.1mL		Analyst/Date
	25		#7	(1:1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Post Cleanups
	26		#7	(1:1)	0.1mL	0.1mL		
Analyst/Date							Reviewed by/Date	Analyst/Date

Field Spike (EP43768) 1.5ng/mL 20mL 2/9/17

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
~~Surrogate~~	~~1 ( )~~	~~3/15pg/mL~~	~~20µL~~			
~~Spike~~	~~18 ( )~~	~~1.5pg/mL~~	~~20µL~~			
~~Extraction Time:~~			~~Balance ID:~~			

SPECIAL INSTRUCTIONS: **Follow SOP 3323S for assembly and disassembly of PEMD(s).**

1. Place each LPDE strip into a 600mL beaker. 2. Add 1:1 Low Level DCM/Pentane to the beaker. 3. Add surr/spike. 4. Sonicate 2X with 1:1 Low Level DCM/Pentane for 5 minutes each. 5. Decant 1:1 Low Level DCM/Pentane into labeled 500mL Erlenmeyer flask with a funnel (No glasswool or Sodium Sulfate). 6. After the last sonication, rinse the LPDE strip with Low Level DCM and add rinsate to the E-Flask. 7. KD: (using Low Level DCM) to 5mL at 80°C. 8. Exchange to Hexane (2X with 20mL) at 100 °C. 9. TurboVap to 2mL. 10. Silica Clean-up =REQ. Extract~2mL in Hexane (Collect EPH Aromatic fraction only). 11. TurboVap to 0.5mL. 12. Vial in a 1.5mL amber vial at 0.5mL using Low Level DCM. 13. IN DIOXIN LAB: TurboVap and exchange to Iso-Octane. 14. Vial 0.1mL in Iso-Ocatane for analysis.

NOTE: (An average weight of 20cm X 5cm pre-cleaned PEMD LPDE strips was determined to be 0.886g for BLK, BS, BSdup).

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8270D) Low Level SIM PNA-PEMD Sonication (3550C) (SOP # 3323S)

BEK0657

RUSH!

Preparation Test Low Level SIM PNA PEMD # 10 Low Level (0.5ppb)

Lab Number(s) PEMD Prep only Page 1 of 2 Batch set up by: JH

Batch ID

JAR ID	Extraction Requirements	Weight Extracted (1 Each) (0.886g)	Sonic Horn ID + Check Pre-clean	(REQ) Silica Gel Clean (1:1) EPH Aromatic	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	PEMD Prep BLK	1 Each	#3	(1:1)	0.1mL	0.1mL		Analyst/Date
	BS	1 Each	#4 ~~#3~~ RH	(1:1)	0.1mL	0.1mL		KD 80°C
	~~BSDup~~	~~1 Each~~		(1:1)	~~0.1mL~~	~~0.1mL~~		Hexane Exchange (2X 20mL) 100°C 1 2 3 4 5 6
	PEMD Prep # 1	1 each	#3	(1:1)	0.1mL	0.1mL		
	2		#3	(1:1)	0.1mL	0.1mL		
	3		#3	(1:1)	0.1mL	0.1mL		
	4		#3	(1:1)	0.1mL	0.1mL		
	5		#3	(1:1)	0.1mL	0.1mL		
	6		#3	(1:1)	0.1mL	0.1mL		Analyst/Date
	7		#4	(1:1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Pre-Cleanups
	8		#4	(1:1)	0.1mL	0.1mL		
	9		#4	(1:1)	0.1mL	0.1mL		
	10		#4	(1:1)	0.1mL	0.1mL		Analyst/Date
	11		#4	(1:1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Post Cleanups
	12		#4	(1:1)	0.1mL	0.1mL		
Analyst/Date							Reviewed by/Date	Analyst/Date

AH- Field Spike (EΦΦ3769) | 1.5ppb/mL | 20µL | 2/08/17 | JH | JH

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
BLK/BS only Surrogate	I (DΦΦ5238)	3/15µg/mL	20µL	1/31/16	JH	JH
Spike	18 (EΦΦ3179)	1.5µg/mL	20µL	1/31/16	JH	JH
~~Extraction Time:~~ Tumble start 1Φ/28/16 12:15				~~Balance ID:~~ Tumble stop 1Φ/31/16 12:34		

SPECIAL INSTRUCTIONS: **Follow SOP 3323S for assembly and disassembly of PEMD(s).**

1. Place each LPDE strip into a 600mL beaker. 2. Add 1:1 Low Level DCM/Pentane to the beaker. 3. Add surr/spike. 4. Sonicate 2X with 1:1 Low Level DCM/Pentane for 5 minutes each. 5. Decant 1:1 Low Level DCM/Pentane into labeled 500mL Erlenmeyer flask with a funnel (No glasswool or Sodium Sulfate). 6. After the last sonication, rinse the LPDE strip with Low Level DCM and add rinsate to the E-Flask. 7. KD: (using Low Level DCM) to 5mL at 80°C. 8. Exchange to Hexane (2X with 20mL) at 100 °C. 9. TurboVap to 2mL. 10. Silica Clean-up =REQ. Extract~2mL in Hexane (Collect EPH Aromatic fraction only). 11. TurboVap to 0.5mL. 12. Vial in a 1.5mL amber vial at 0.5mL using Low Level DCM. 13. IN DIOXIN LAB: TurboVap and exchange to Iso-Octane. 14. Vial 0.1mL in Iso-Ocatane for analysis.

NOTE: (An average weight of 20cm X 5cm pre-cleaned PEMD LPDE strips was determined to be 0.886g for BLK, BS, BSdup).

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8270D) Low Level SIM PNA-PEMD Sonication (3550C) (SOP # 3323S)

Preparation Test Low Level SIM PNA PEMD # 10 Low Level (0.5ppb)

Lab Number(s) PEMD Prep only Page 1 of 2 Batch set up by: JH

Batch ID _____

JAR ID	Extraction Requirements	Weight Extracted (1 Each) (0.886g)	Sonic Horn ID + Check	(REQ) Silica Gel Clean (1:1) EPH Aromatic	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	~~BLK~~	1 Each		(1:1)	~~0.1mL~~	~~0.1mL~~		Analyst/Date
	PEMD Prep # 13 ~~BS~~	1 Each	#5	(1:1)	0.1mL	0.1mL		KD 80°C
	14 ~~BSDup.~~	1 Each	#5	(1:1)	0.1mL	0.1mL		Hexane Exchange (2X 20mL) 100°C 1 2 3 4 5 6
	15	1 Each	#5	(1:1)	0.1mL	0.1mL		
	16		#5	(1:1)	0.1mL	0.1mL		
	17		#5	(1:1)	0.1mL	0.1mL		
	18		#6	(1:1)	0.1mL	0.1mL		
	19		#6	(1:1)	0.1mL	0.1mL		
	24		#6	(1:1)	0.1mL	0.1mL		Analyst/Date
	21		#6	(1:1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Pre-Cleanups
	22		#6	(1:1)	0.1mL	0.1mL		
	23		#7	(1:1)	0.1mL	0.1mL		
	24		#7	(1:1)	0.1mL	0.1mL		Analyst/Date
	25		#7	(1:1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Post Cleanups
	26		#7	(1:1)	0.1mL	0.1mL		
Analyst/Date							Reviewed by/Date	Analyst/Date

Field spike (E44376?) 1.5ng/mL 20uL 2/24/17

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
~~Surrogate~~	~~I ( )~~	~~3/15µg/mL~~	~~20µL~~			
~~Spike~~	~~18 ( )~~	~~1.5µg/mL~~	~~20µL~~			
~~Extraction Time:~~				~~Balance ID:~~		

SPECIAL INSTRUCTIONS: **Follow SOP 3323S for assembly and disassembly of PEMD(s).**

1. Place each LPDE strip into a 600mL beaker. 2. Add 1:1 Low Level DCM/Pentane to the beaker. 3. Add surr/spike. 4. Sonicate 2X with 1:1 Low Level DCM/Pentane for 5 minutes each. 5. Decant 1:1 Low Level DCM/Pentane into labeled 500mL Erlenmeyer flask with a funnel (No glasswool or Sodium Sulfate). 6. After the last sonication, rinse the LPDE strip with Low Level DCM and add rinsate to the E-Flask. 7. KD: (using Low Level DCM) to 5mL at 80°C. 8. Exchange to Hexane (2X with 20mL) at 100 °C. 9. TurboVap to 2mL. 10. Silica Clean-up =REQ. Extract~2mL in Hexane (Collect EPH Aromatic fraction only). 11. TurboVap to 0.5mL. 12. Vial in a 1.5mL amber vial at 0.5mL using Low Level DCM. 13. IN DIOXIN LAB: TurboVap and exchange to Iso-Octane. 14. Vial 0.1mL in Iso-Ocatane for analysis.

NOTE: (An average weight of 20cm X 5cm pre-cleaned PEMD LPDE strips was determined to be 0.886g for BLK, BS, BSdup).

PREPARATION BATCH SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc. SDG: 16K0321

Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring (PEMD)

Batch: BEK0658 Batch Matrix: Tissue Preparation: EPA 3550C-Mod (Ultrasonic)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
PG-GP-1-PEMD-161122-A	16K0321-19	N1116121706.D	11/24/16 08:25	
PG-GP-1-PEMD-161122-A	16K0321-19RE1	N1116122003.D	11/24/16 08:25	Added 12/20/2016 by VTS
PG-WS-1-PEMD-161122-A	16K0321-21	N1116121707.D	11/24/16 08:25	
PG-WS-1-PEMD-161122-A	16K0321-21RE1	N1116122004.D	11/24/16 08:25	Added 12/20/2016 by VTS
PG-FB-SMA1-PEMD-161122	16K0321-23	N1116121708.D	11/24/16 08:25	
PG-FB-SMA2-PEMD-161122	16K0321-24	N1116121709.D	11/24/16 08:25	
PG-TB-PEMD-161122	16K0321-25	N1116121710.D	11/24/16 08:25	
Blank	BEK0658-BLK1	N1116121704.D	11/24/16 08:25	
LCS	BEK0658-BS1	N1116121705.D	11/24/16 08:25	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8270D) Low Level SIM PNA-PEMD Sonication (3550C) (SOP # 3323S)

Preparation Test Low Level SIM PNA PEMD # 10 Low Level (0.5ppb)

Lab Number(s) 16K0321 Page 1 of 1 Batch set up by: ~~JH~~

Batch ID BEK0658

JAR ID	Extraction Requirements	Weight Extracted (1 Each) (0.886g)	Sonic Horn ID + Check	(REQ) Silica Gel Clean (1:1) EPH Aromatic	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	BEK0658 BLK	1 Each	#3	(1:1)	0.1mL	0.1mL		RH 11/24/16 Analyst/Date
	↓ BS	1 Each	#4	(1:1)	0.1mL	0.1mL		
	~~BSDup.~~	~~1 Each~~		~~(1:1)~~	~~0.1mL~~	~~0.1mL~~		KD 80°C
A	16K0321-19	1Each	#3	(1:1)	0.1mL	0.1mL		Hexane Exchange (2X 20mL) 100°C 1 2 3 4 5 6
A	-20	1Each	#4	(1:1)	0.1mL	0.1mL		
A	-21	1Each	#5	(1:1)	0.1mL	0.1mL		RMU 12/5/16
A	-22	1Each	#6	(1:1)	0.1mL	0.1mL		
A	-23	1Each	#3	(1:1)	0.1mL	0.1mL		
A	-24	1Each	#4	(1:1)	0.1mL	0.1mL		Analyst/Date
A	-25	1Each	#5	(1:1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Pre-Cleanups
				(1:1)	0.1mL	0.1mL		
				(1:1)	0.1mL	0.1mL		SG 12/6/16 Analyst/Date
				(1:1)	0.1mL	0.1mL		
				(1:1)	0.1mL	0.1mL		
				(1:1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Post Cleanups
Analyst/Date	RH 11/24/16			SG 12/6/16	MW 12/9/16	MW 12/9/16	Reviewed by/Date MW 12/9/16	12/9/16 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	I (E#6474)	3/15µg/mL	20µL	11/19/17	~~JH~~	RMU
Spike	18 (E#6379)	1.5µg/mL	20µL	11/19/17	~~JH~~	RMU
Extraction Time: 8:25				Balance ID:		

SPECIAL INSTRUCTIONS: **Follow SOP 3323S for assembly and disassembly of PEMD(s).**

1. Place each LPDE strip into a 600mL beaker. 2. Add 1:1 Low Level DCM/Pentane to the beaker. 3. Add surr/spike. 4. Sonicate 2X with 1:1 Low Level DCM/Pentane for 5 minutes each. 5. Decant 1:1 Low Level DCM/Pentane into labeled 500mL Erlenmeyer flask with a funnel (No glasswool or Sodium Sulfate). 6. After the last sonication, rinse the LPDE strip with Low Level DCM and add rinsate to the E-Flask. 7. KD: (using Low Level DCM) to 5mL at 80°C. 8. Exchange to Hexane (2X with 20mL) at 100 °C. 9. TurboVap to 2mL. 10. Silica Clean-up =REQ. Extract~2mL in Hexane (Collect EPH Aromatic fraction only). 11. TurboVap to 0.5mL. 12. Vial in a 1.5mL amber vial at 0.5mL using Low Level DCM. 13. IN DIOXIN LAB: TurboVap and exchange to Iso-Octane. 14. Vial 0.1mL in Iso-Ocatane for analysis.

NOTE: (An average weight of 20cm X 5cm pre-cleaned PEMD LPDE strips was determined to be 0.886g for BLK, BS, BSdup).

Organic Extractions
Reagent and Solutions Identification

(8270D) Low Level SIM PNA-PEMD
Sonication (3550C) (SOP # 3323S)

Lab Number(s) 166324 II

(8270D) Low Level SIM PNA PEMD:	Analyst/Date
Sonication Station: 20cm X 5cm LPDE strips for BLK, BS, BSDup: ( ) 32cm X 5cm LPDE strips for samples: ( ) 1:1Low Level DCM/Pentane: (EQQ 6986) Low Level DCM: (EQQ4229)	Sonication 11/24/16 RH
KD Station: Low Level DCM: (EQQ 6715) Hexane: (EQQC9644)	KD 12/5/16 RMH
Vialing Station: Low Level DCM: (EQQ6715) 60:40 Pentane/Low Level DCM: (EQQ7157) glass wool EQQ3664 Hexane: (EQQ6964) Pentane: (EQQ5354) Neutral Sodium Sulfate: (EQQ5874) 0% Silica Gel: (EQQ7623)	Vialing SP 12/6/16 MM 12/9/16

ISO-Octane D000647

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SIM PNA Low Lvl (PEMP)

Element Batch: BEK0658 Work Order(s): 16K0321 #

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=	
☐ 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=	

Analytical Resources, Incorporated

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEM
Cleanup Batch:	CEL0061	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup	Analysis:	EPA 8270D-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARE	OBSERVATIONS
PG-FB-SMA1-PEMD-161122	16K0321-23	N1116121708.D	12/06/2016	
PG-WS-1-PEMD-161122-A	16K0321-21	N1116121707.D	12/06/2016	
PG-TB-PEMD-161122	16K0321-25	N1116121710.D	12/06/2016	
PG-GP-1-PEMD-161122-A	16K0321-19	N1116121706.D	12/06/2016	
PG-FB-SMA2-PEMD-161122	16K0321-24	N1116121709.D	12/06/2016	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CEL0061

Matrix: Tissue **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup** **Printed: 12/9/2016 6:35:00PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
16K0321-19	A	PG-GP-1-PEMD-161122-A	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-20	A	PG-GP-1-PEMD-161122-B	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-21	A	PG-WS-1-PEMD-161122-A	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-22	A	PG-WS-1-PEMD-161122-B	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-23	A	PG-FB-SMA1-PEMD-161122	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-24	A	PG-FB-SMA2-PEMD-161122	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-25	A	PG-TB-PEMD-161122	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
BEK0658-BLK1	-	Blank	-	0.1	0.1	-	12/6/2016	SDP	
BEK0658-BS1	-	LCS	-	0.1	0.1	-	12/6/2016	SDP	

Cleanup Reviewed By Date

Analytical Resources, Incorporated

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEM
Cleanup Batch:	CEL0062	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup	Analysis:	EPA 8270D-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARE	OBSERVATIONS
PG-SMA1-2-PEMD-161122-A	16K0321-03	N1116121210.D	12/06/2016	
PG-SMA2-5-PEMD-161122-A	16K0321-15	N1116121218.D	12/06/2016	
PG-SMA2-4-PEMD-161122-A	16K0321-13	N1116121217.D	12/06/2016	
PG-SMA2-3-PEMD-161122-A	16K0321-11	N1116121216.D	12/06/2016	
PG-SMA2-2-PEMD-161122-A	16K0321-09	N1116121214.D	12/06/2016	
PG-SMA2-1-PEMD-161122-A	16K0321-07	N1116121213.D	12/06/2016	
PG-SMA1-3-PEMD-161122-A	16K0321-05	N1116121211.D	12/06/2016	
PG-SMA1-1-PEMD-161122-A	16K0321-01	N1116121209.D	12/06/2016	
PG-SMA1-103-PEMD-161122-A	16K0321-06	N1116121212.D	12/06/2016	
PG-PJ-1-PEMD-161122-A	16K0321-17	N1116121219.D	12/06/2016	
PG-SMA2-102-PEMD-161122-A	16K0321-10	N1116121215.D	12/06/2016	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CEL0062

Matrix: Tissue **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup** **Printed: 12/9/2016 6:41:31PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
16K0321-18	A	PG-PJ-1-PEMD-161122-B	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-17	A	PG-PJ-1-PEMD-161122-A	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-16	A	PG-SMA2-5-PEMD-161122-B	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-15	A	PG-SMA2-5-PEMD-161122-A	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-14	A	PG-SMA2-4-PEMD-161122-B	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-13	A	PG-SMA2-4-PEMD-161122-A	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-12	A	PG-SMA2-3-PEMD-161122-B	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-11	A	PG-SMA2-3-PEMD-161122-A	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-10	A	PG-SMA2-102-PEMD-161122-A	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-09	A	PG-SMA2-2-PEMD-161122-A	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-08	A	PG-SMA2-1-PEMD-161122-B	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-07	A	PG-SMA2-1-PEMD-161122-A	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-06	A	PG-SMA1-103-PEMD-161122-A	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-05	A	PG-SMA1-3-PEMD-161122-A	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-04	A	PG-SMA1-2-PEMD-161122-B	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-03	A	PG-SMA1-2-PEMD-161122-A	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-02	A	PG-SMA1-1-PEMD-161122-B	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
16K0321-01	A	PG-SMA1-1-PEMD-161122-A	A 01	0.1	0.1	70D-SIM PAH Low (0.01 ug/L - 0.5 ug/	12/6/2016	SDP	
BEK0657-BS1	-	LCS	-	0.1	0.1	-	12/6/2016	SDP	
BEK0657-BLK1	-	Blank	-	0.1	0.1	-	12/6/2016	SDP	

Cleanup Reviewed By Date

Analytical Resources, Incorporated

Form I
METHOD BLANK DATA SHEET
EPA 8270D-SIM

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	16K0321
Client:	Anchor QEA, LLC			Project:	Port Gamble Shellfish Monitoring
Matrix:	Tissue	Laboratory ID:	BEK0657-BLK1	File ID:	N1116121207.D
Sampled:	N/A	Prepared:	11/24/16 08:25	Analyzed:	12/12/16 11:28
Solids:		Preparation:	EPA 3550C-Mod (Ultrasonic	Initial/Final:	0.886 g / 0.1 mL
Batch:	BEK0657	Sequence:	SEL0155	Calibration:	ZK00080
Instrument:	NT11	Column:	RXi-17Sil-MS		

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	1.35	U	1.13	1.35
91-57-6	2-Methylnaphthalene	1	1.13	U	1.13	1.13
208-96-8	Acenaphthylene	1	1.13	U	1.13	1.13
83-32-9	Acenaphthene	1	1.13	U	1.13	1.13
86-73-7	Fluorene	1	1.13	U	1.13	1.13
85-01-8	Phenanthrene	1	1.13	U	1.13	1.13
120-12-7	Anthracene	1	1.13	U	1.13	1.13
206-44-0	Fluoranthene	1	1.13	U	1.13	1.13
129-00-0	Pyrene	1	1.13	U	1.13	1.13
56-55-3	Benzo(a)anthracene	1	1.13	U	1.13	1.13
218-01-9	Chrysene	1	1.13	U	1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.13	U	1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	7.89	23.3	30 - 160	*
Dibenzo[a,h]anthracene-d14	33.860	9.28	27.4	30 - 160	*
Fluoranthene-d10	33.860	10.1	30.0	30 - 160	
Fluorene-d10		0.00		30 - 160	
Anthracene-d10		25.0		30 - 160	
Benzo(e)pyrene-d12		0.00		30 - 160	

Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121207.D

Date : 12-DEC-2016 11:28

Client ID:

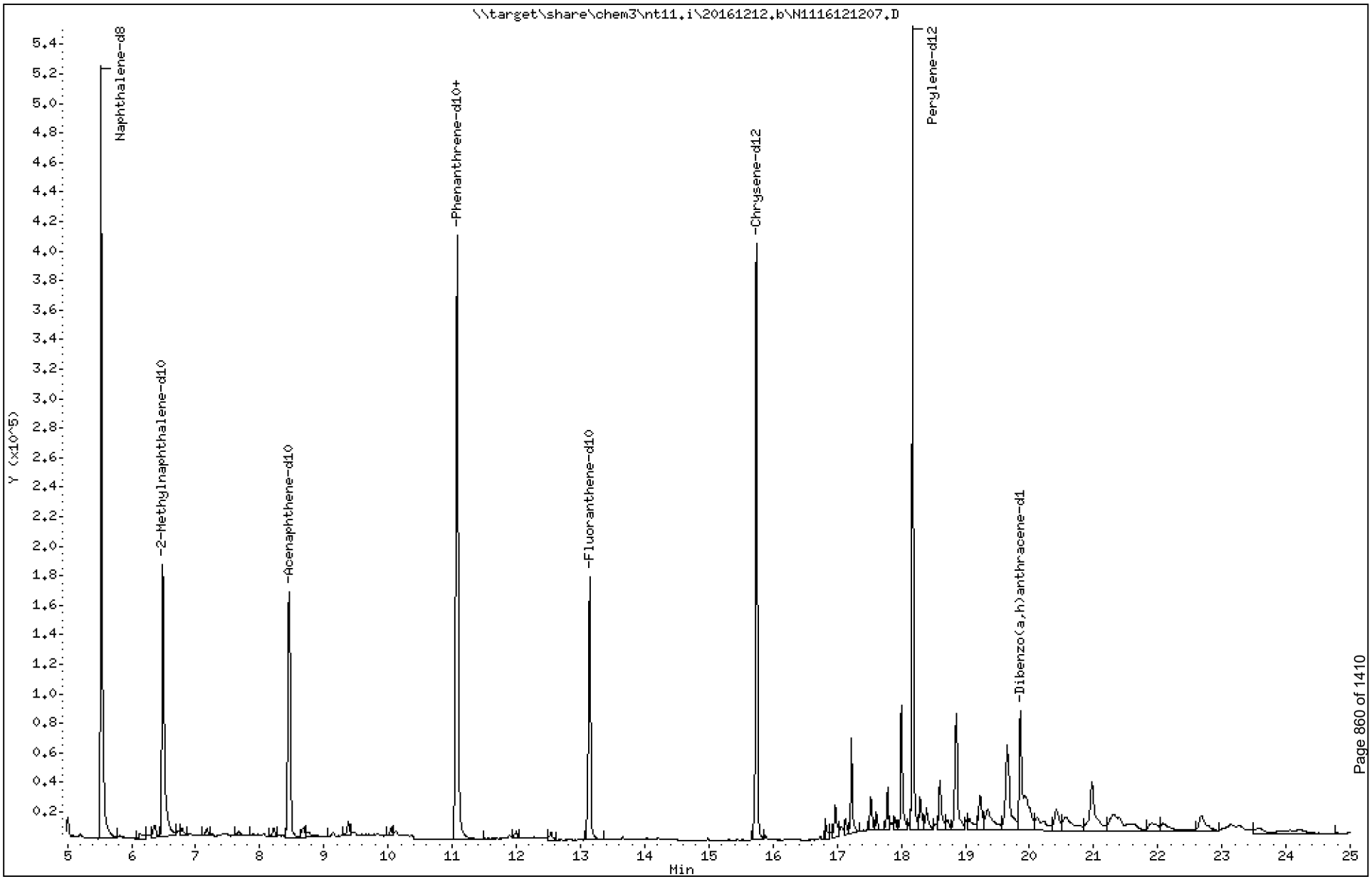
Instrument: nt11.i

Sample Info: BEK0657-BLK1

Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161212.b\N1116121207.D
Lab Smp Id: BEK0657-BLK1
Inj Date : 12-DEC-2016 11:28 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : BEK0657-BLK1
Misc Info :
Comment   :
Method   : \\target\share\chem3\nt11.i\20161212.b\lowsim.m
Meth Date : 15-Dec-2016 09:33 nt11.i Quant Type: ISTD
Cal Date : 25-NOV-2016 10:20 Cal File: 16112510.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1 Naphthalene-d8	136	5.529	5.547	(1.000)	891712	200.000	
	2 Naphthalene	128	Compound Not Detected.					
	3 Benzo(b)thiophene	134	Compound Not Detected.					
$	4 2-Methylnaphthalene-d10	152	6.484	6.505	(1.173)	235058	69.9198	69.9
	5 2-Methylnaphthalene	142	Compound Not Detected.					
	6 1-Methylnaphthalene	142	Compound Not Detected.					
	7 2-Chloronaphthalene	162	Compound Not Detected.					
	8 Biphenyl	154	Compound Not Detected.					
	9 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.456	8.474	(1.000)	469612	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	13 Dibenzofuran	168	Compound Not Detected.					
	14 2,3,5-Trimethylnaphthalene	170	Compound Not Detected.					
$	15 Fluorene-d10	174	Compound Not Detected.					
	16 Fluorene	166	Compound Not Detected.					
	17 Dibenzothiophene	184	Compound Not Detected.					
*	18 Phenanthrene-d10	188	11.079	11.089	(1.000)	820573	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
$	20 Anthracene-d10	188	11.079	11.152	(1.000)	822215	221.163	221
	21 Anthracene	178	Compound Not Detected.					
	22 Carbazole	167	Compound Not Detected.					
	23 1-Methylphenanthrene	192	Compound Not Detected.					
$	24 Fluoranthene-d10	212	13.142	13.142	(1.186)	329276	89.8956	89.9
	25 Fluoranthene	202	Compound Not Detected.					
	26 Pyrene	202	Compound Not Detected.					
	27 Benzo(a)anthracene	228	Compound Not Detected.					
*	28 Chrysene-d12	240	15.744	15.743	(1.000)	724709	200.000	
	29 Chrysene	228	Compound Not Detected.					
	30 Benzo(b)fluoranthene	252	Compound Not Detected.					
	31 Benzo(k)fluoranthene	252	Compound Not Detected.					
	32 Benzo(j)fluoranthene	252	Compound Not Detected.					
$	33 Benzo(e)pyrene-d12	264	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
34	Benzo(e)pyrene	252	Compound Not Detected.					
35	Benzo(a)pyrene	252	Compound Not Detected.					
* 36	Perylene-d12	264	18.179	18.179	(1.000)	747250	200.000	
37	Perylene	252	Compound Not Detected.					
$ 38	Dibenzo(a,h)anthracene-d14	292	19.858	19.858	(1.092)	205801	82.2219	82.2
39	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
40	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
41	Benzo(g,h,i)perylene	276	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121207.D
Lab Smp Id: BEK0657-BLK1
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161212.b\lowsim.m
Misc Info:

Calibration Date: 12-DEC-2016
Calibration Time: 09:14
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	891712	80.67
11 Acenaphthene-d10	240770	120385	481540	469612	95.05
18 Phenanthrene-d10	429271	214636	858542	820573	91.16
28 Chrysene-d12	387691	193846	775382	724709	86.93
36 Perylene-d12	386259	193130	772518	747250	93.46

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.55	5.05	6.05	5.53	-0.32
11 Acenaphthene-d10	8.47	7.97	8.97	8.46	-0.21
18 Phenanthrene-d10	11.09	10.59	11.59	11.08	-0.09
28 Chrysene-d12	15.74	15.24	16.24	15.74	0.00
36 Perylene-d12	18.18	17.68	18.68	18.18	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121207.D

Lab ID: BEK0657-BLK1
nt11.i, 20161212.b\lowsim.m,   12-DEC-2016 11:28

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161212.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Analytical Resources, Incorporated

Form I
METHOD BLANK DATA SHEET
EPA 8270D-SIM

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	16K0321
Client:	Anchor QEA, LLC			Project:	Port Gamble Shellfish Monitoring
Matrix:	Tissue	Laboratory ID:	BEK0657-BLK2	File ID:	N111612112.D
Sampled:	N/A	Prepared:	10/28/16 12:15	Analyzed:	12/10/16 14:51
Solids:		Preparation:	EPA 3550C-Mod (Ultrasonic	Initial/Final:	0.886 g / 0.1 mL
Batch:	BEK0657	Sequence:	SEL0145	Calibration:	ZK00080
Instrument:	NT11	Column:	RXi-17Sil-MS		

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	2.58		1.13	1.35
91-57-6	2-Methylnaphthalene	1	1.29		1.13	1.13
208-96-8	Acenaphthylene	1	1.13	U	1.13	1.13
83-32-9	Acenaphthene	1	1.13	U	1.13	1.13
86-73-7	Fluorene	1	1.13	U	1.13	1.13
85-01-8	Phenanthrene	1	1.13	U	1.13	1.13
120-12-7	Anthracene	1	1.13	U	1.13	1.13
206-44-0	Fluoranthene	1	1.13	U	1.13	1.13
129-00-0	Pyrene	1	1.13	U	1.13	1.13
56-55-3	Benzo(a)anthracene	1	1.13	U	1.13	1.13
218-01-9	Chrysene	1	1.13	U	1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.13	U	1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	14.3	42.3	30 - 160	
Dibenzo[a,h]anthracene-d14	33.860	28.4	83.9	30 - 160	
Fluoranthene-d10	33.860	28.1	82.9	30 - 160	
Fluorene-d10		19.0		30 - 160	
Anthracene-d10		23.8		30 - 160	
Benzo(e)pyrene-d12		22.2		30 - 160	

Data File: \\target\share\chem3\nt11.i\20161210.b\N111612112.D

Date : 10-DEC-2016 14:51

Client ID:

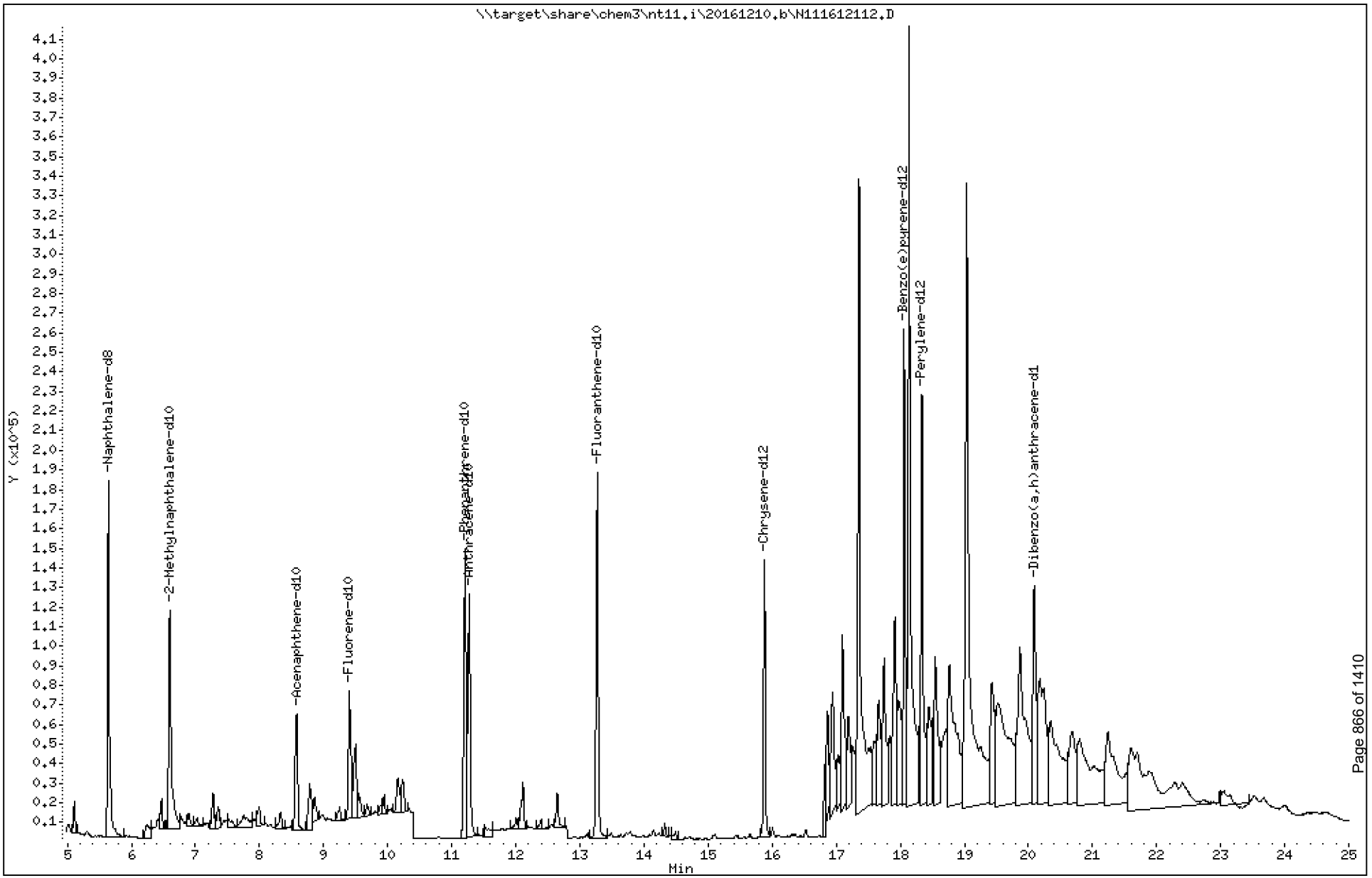
Instrument: nt11.i

Sample Info: BEK0657-BLK2

Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20161210.b\N111612112.D

Date : 10-DEC-2016 14:51

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BLK2

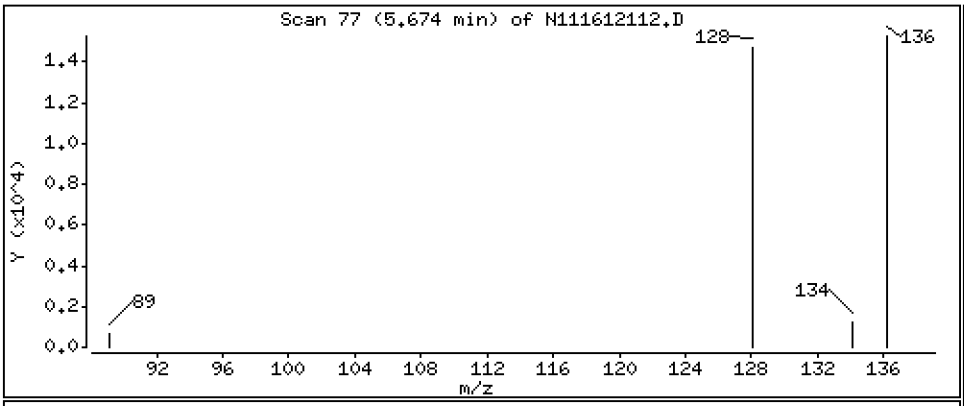
Operator: JW

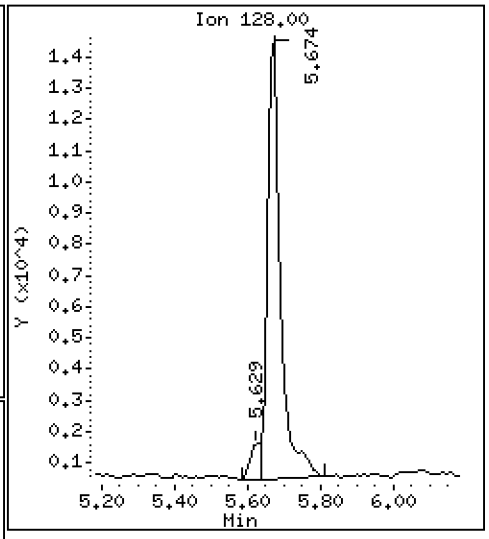
Column phase: Rxi-17Sil MS

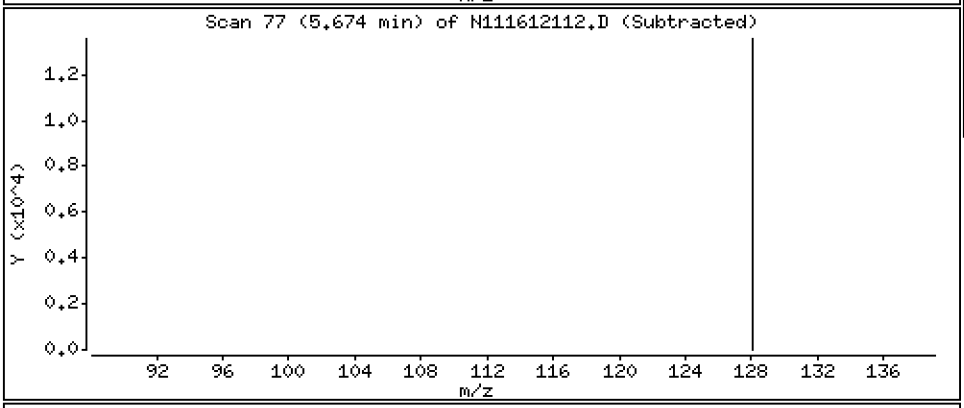
Column diameter: 0.25

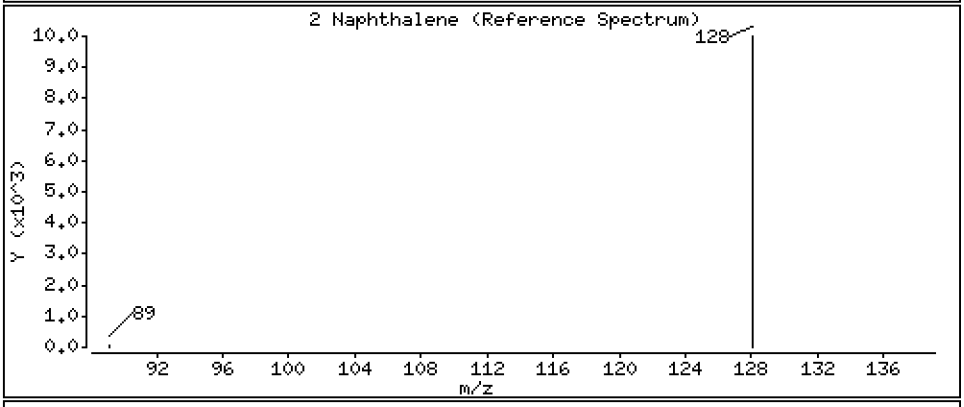
2 Naphthalene

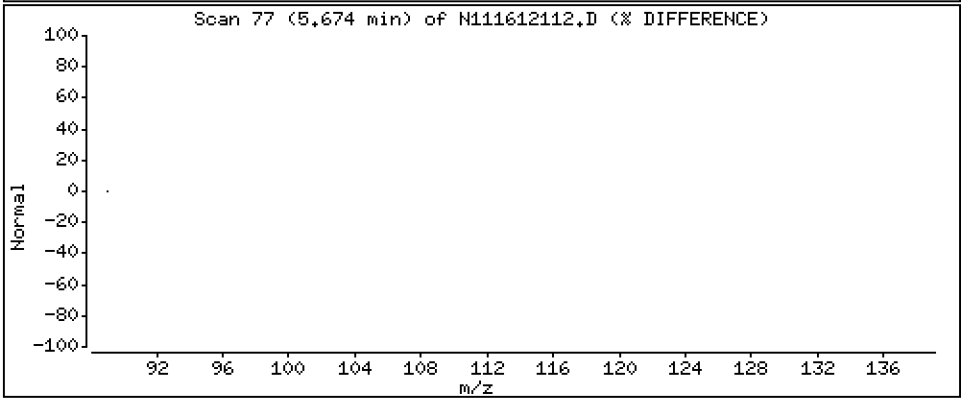
Concentration: 22.8 ng/mL











Data File: \\target\share\chem3\nt11.i\20161210.b\N111612112.D

Date : 10-DEC-2016 14:51

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BLK2

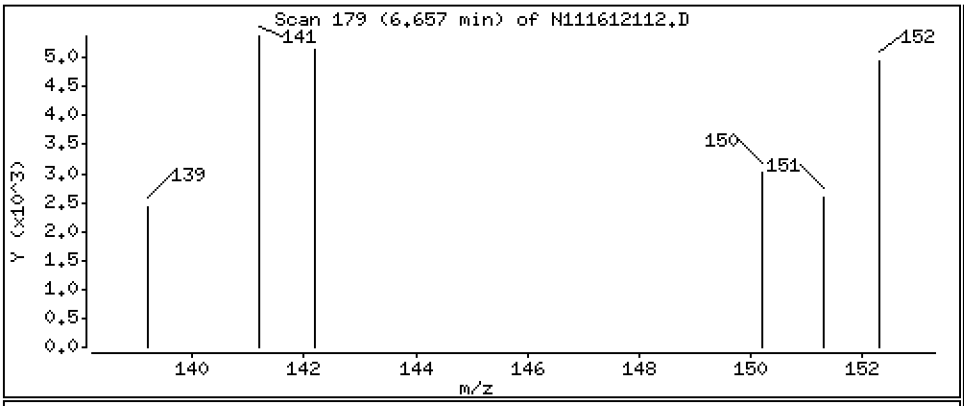
Operator: JW

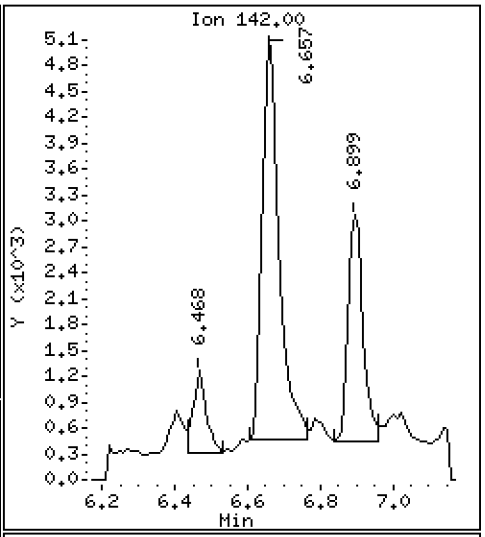
Column phase: Rxi-17Sil MS

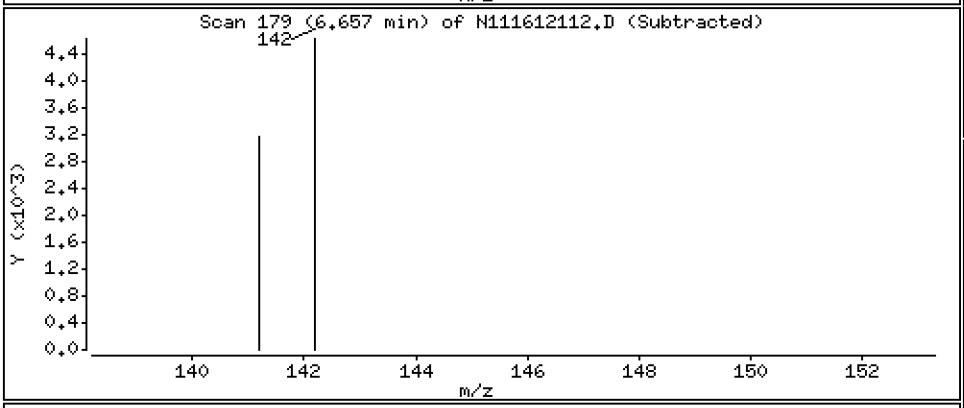
Column diameter: 0.25

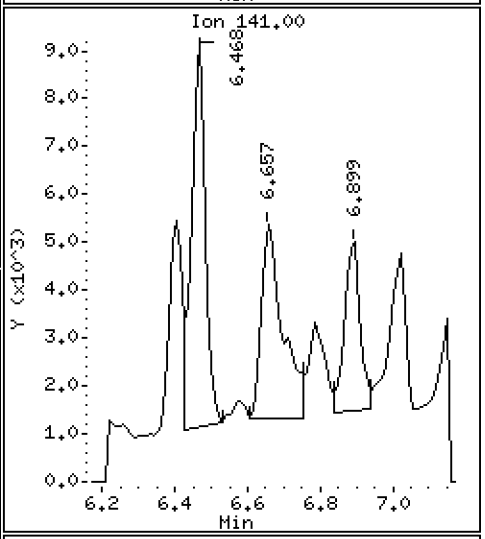
5 2-Methylnaphthalene

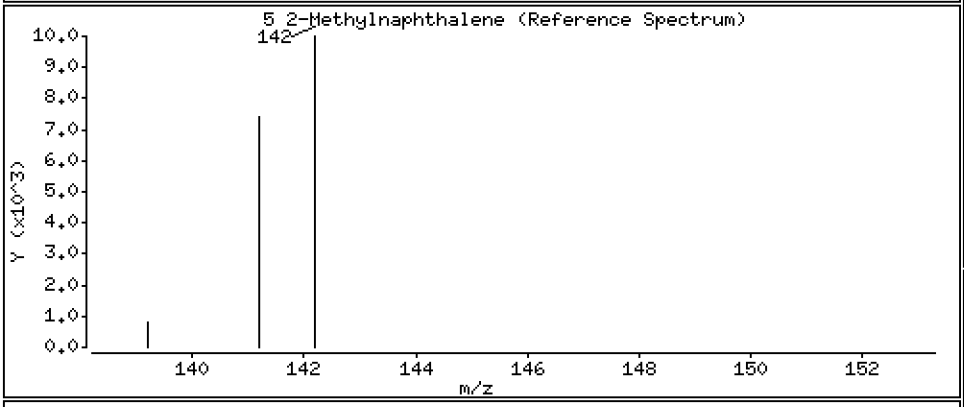
Concentration: 11.4 ng/mL

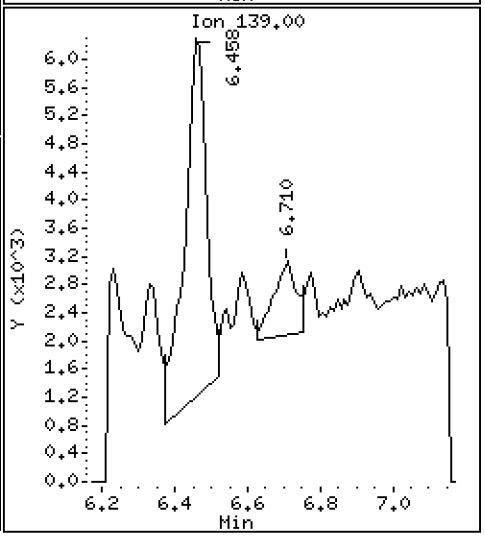


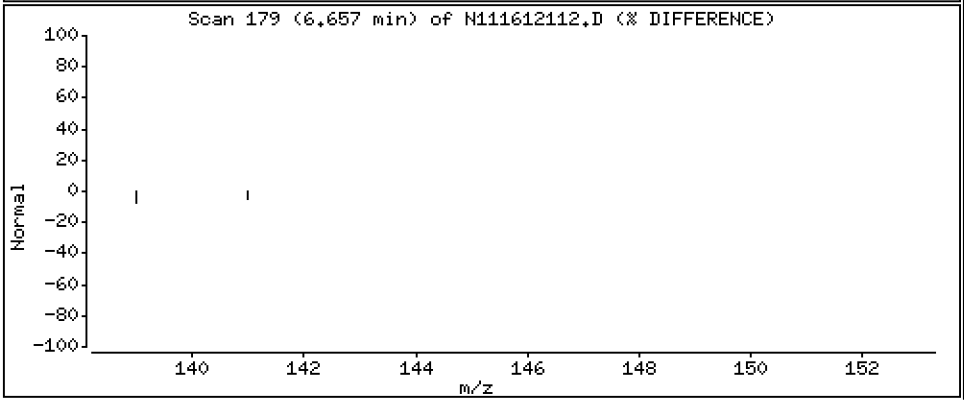












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612112.D

Date : 10-DEC-2016 14:51

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BLK2

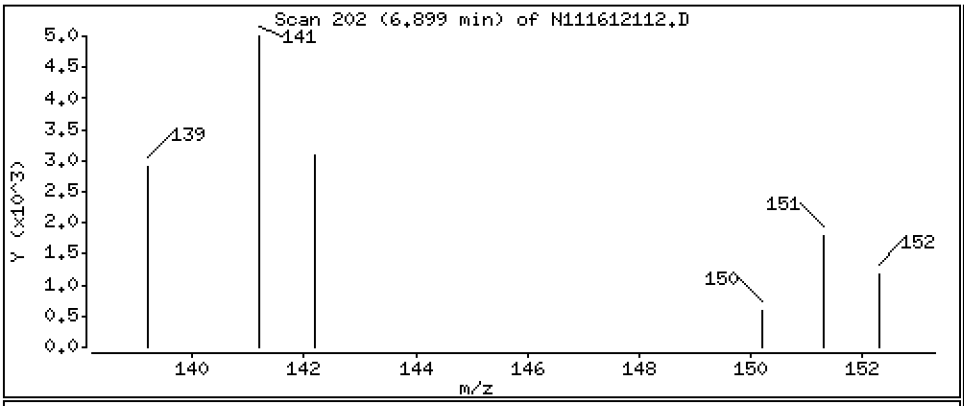
Operator: JW

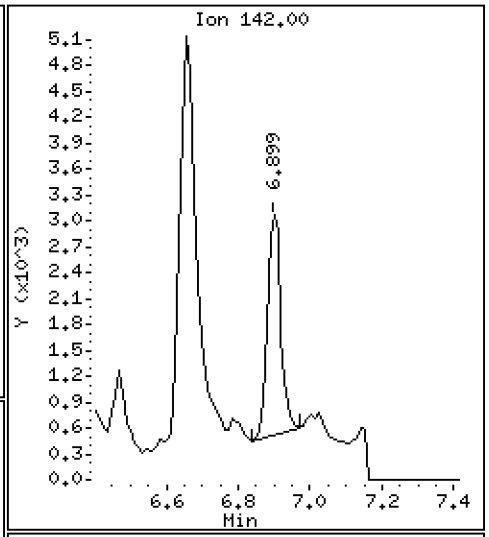
Column phase: Rxi-17Sil MS

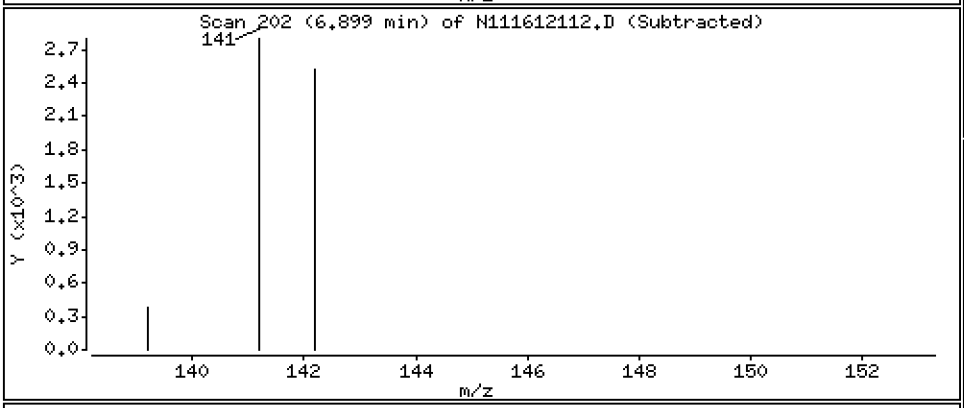
Column diameter: 0.25

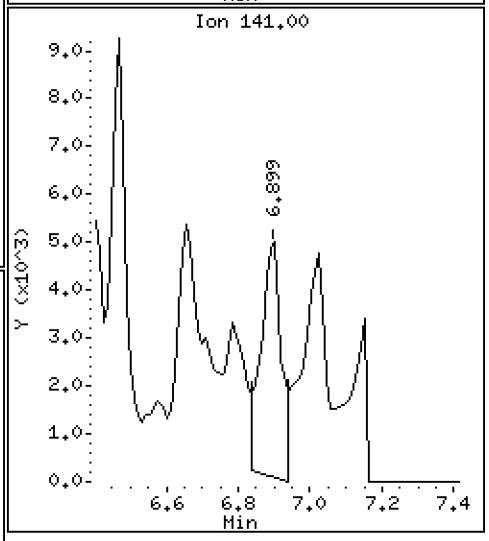
6 1-Methylnaphthalene

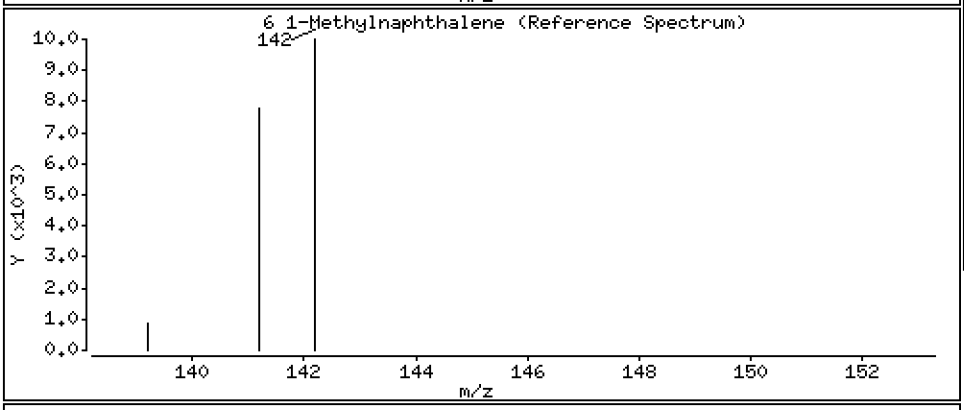
Concentration: 5.52 ng/mL

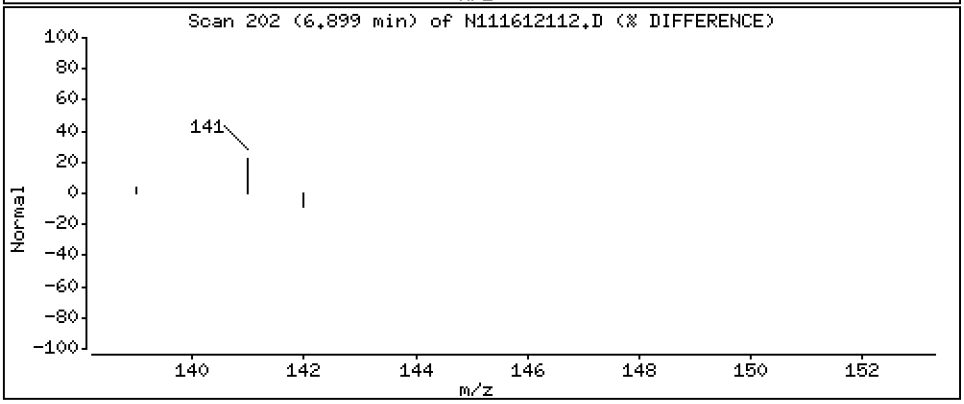












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612112.D

Date : 10-DEC-2016 14:51

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BLK2

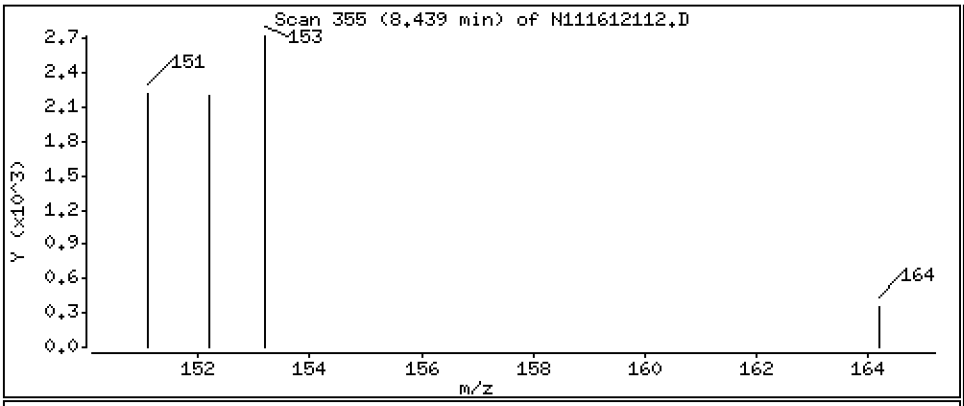
Operator: JW

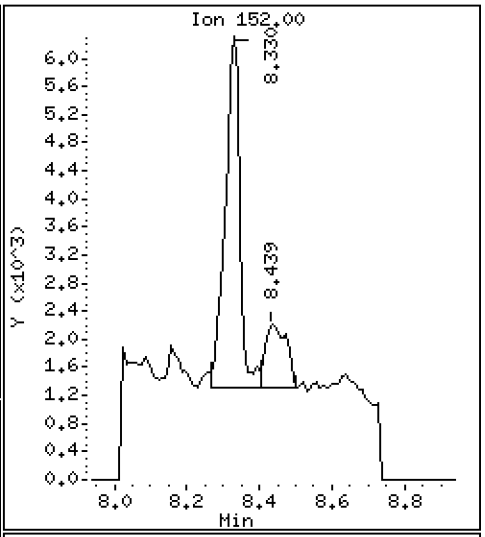
Column phase: Rxi-17Sil MS

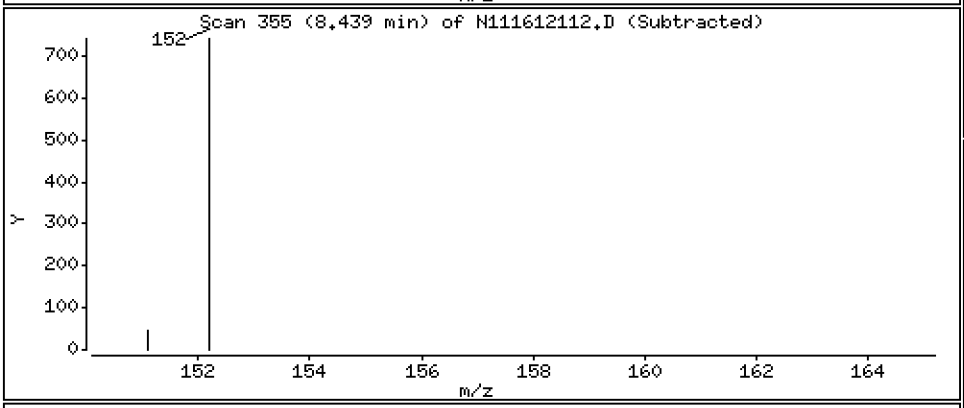
Column diameter: 0.25

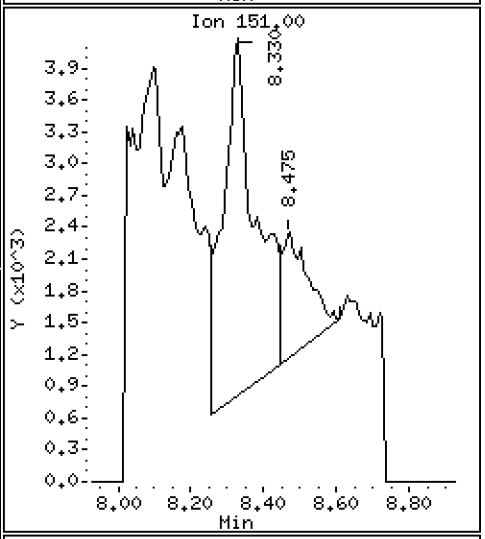
10 Acenaphthylene

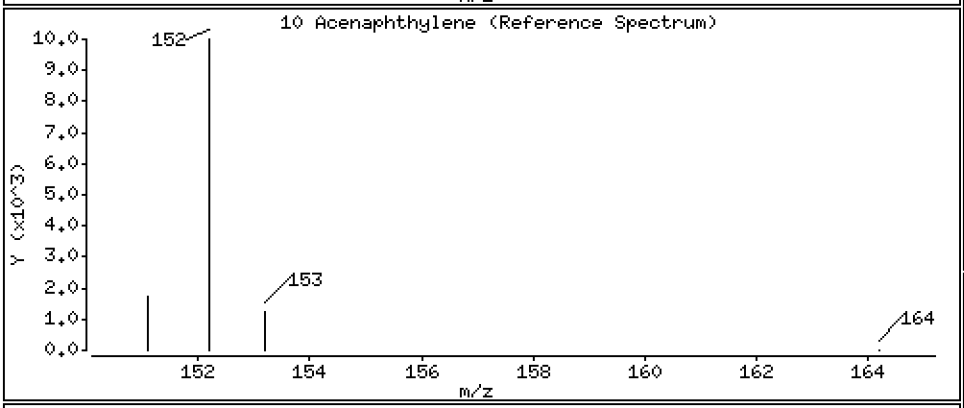
Concentration: 2.60 ng/mL

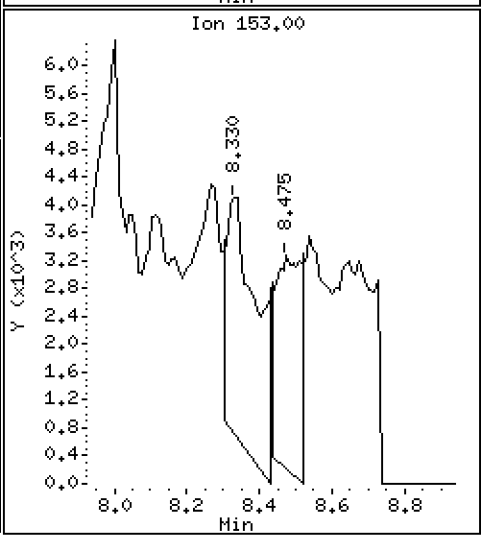


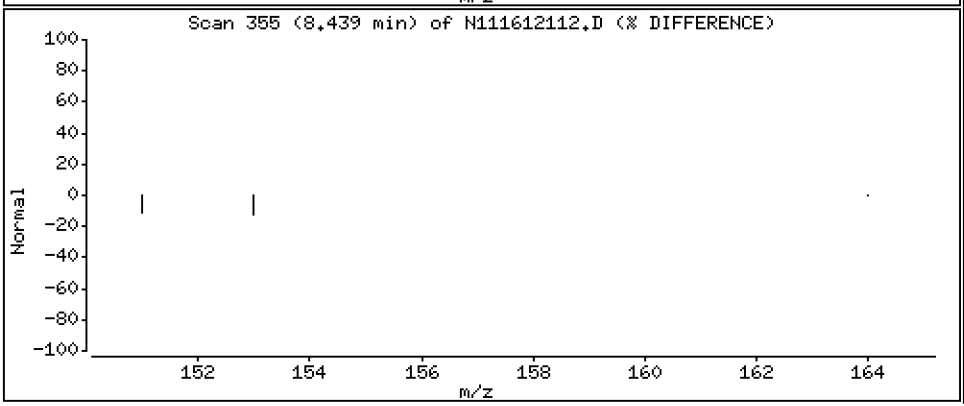












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612112.D

Date : 10-DEC-2016 14:51

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BLK2

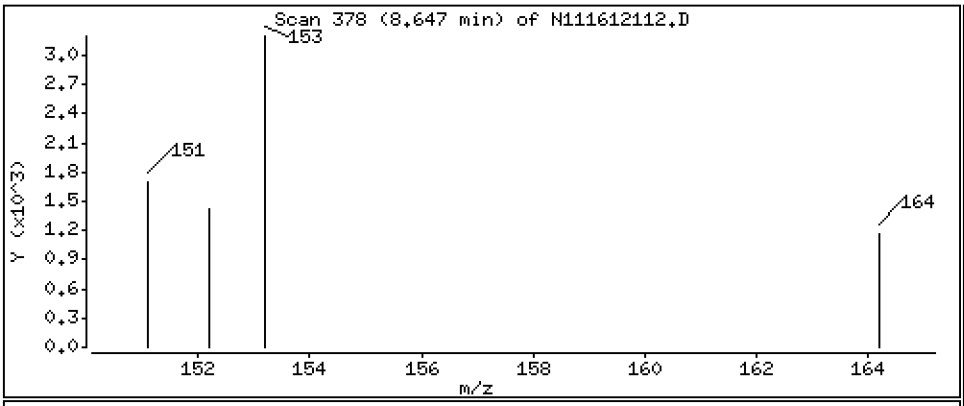
Operator: JW

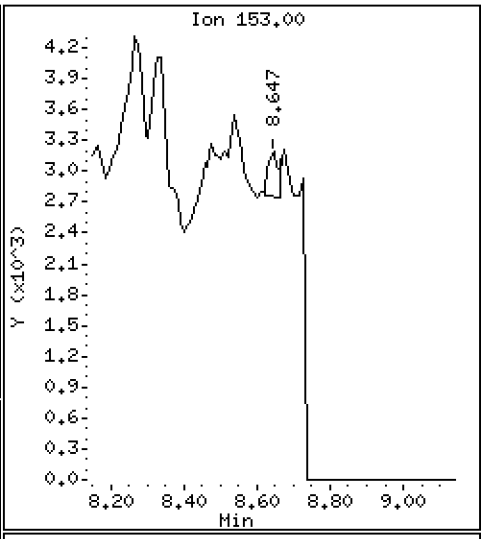
Column phase: Rxi-17Sil MS

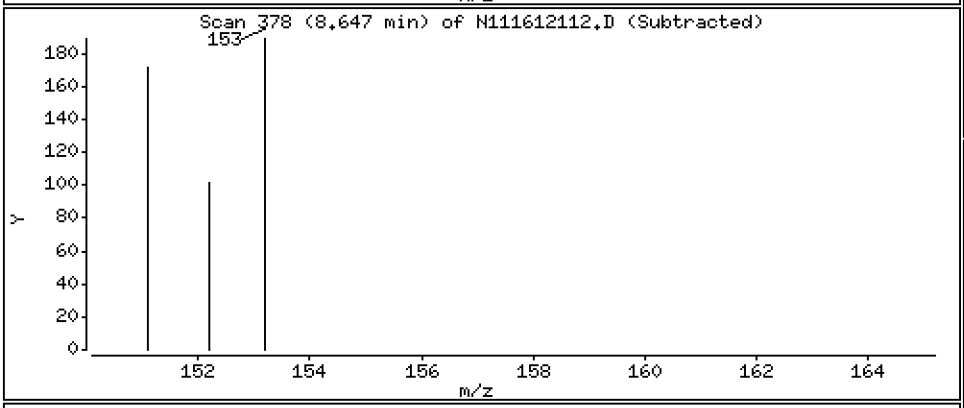
Column diameter: 0.25

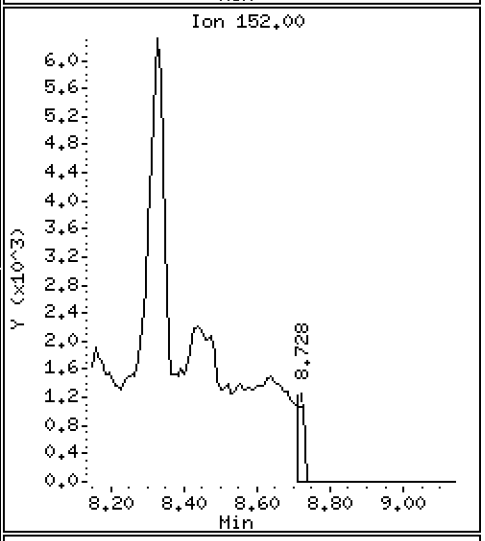
12 Acenaphthene

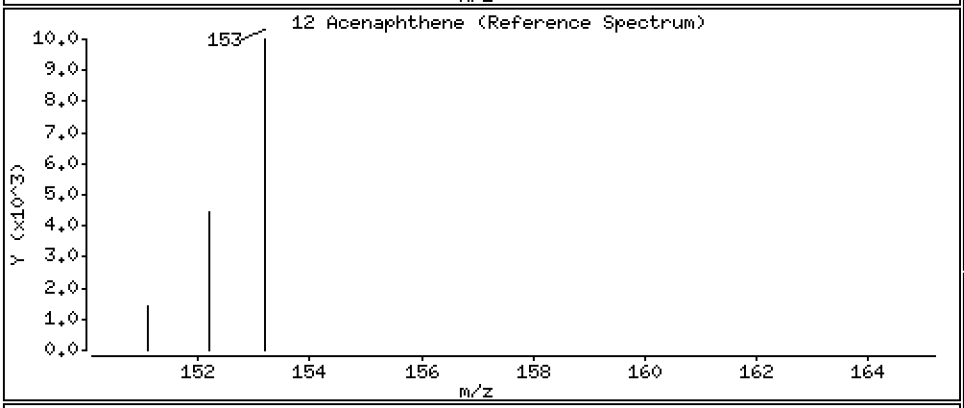
Concentration: 0.958 ng/mL

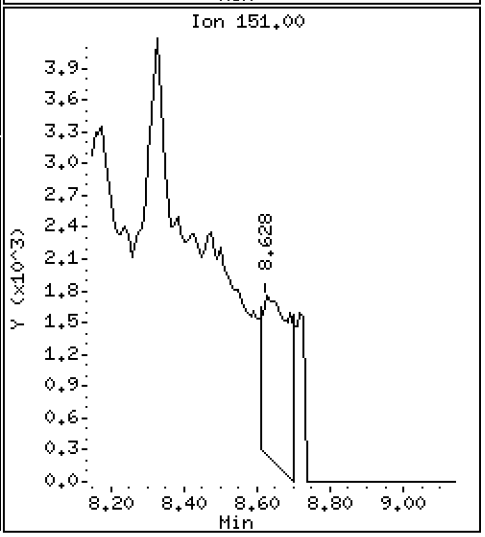


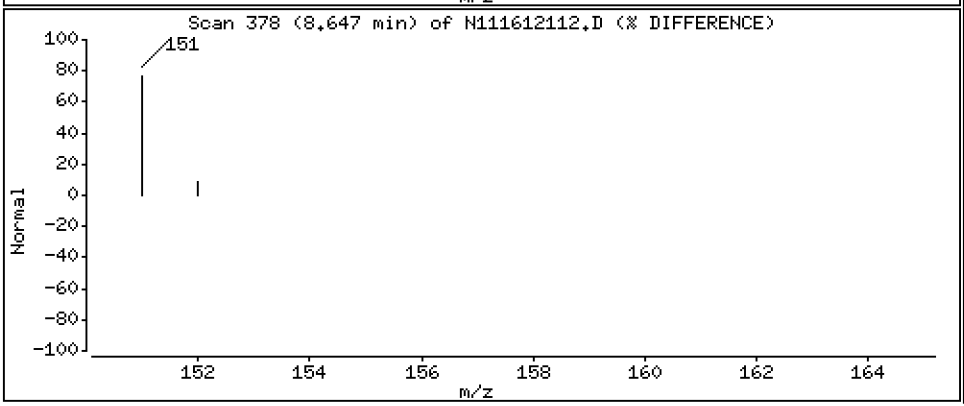












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612112.D

Date : 10-DEC-2016 14:51

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BLK2

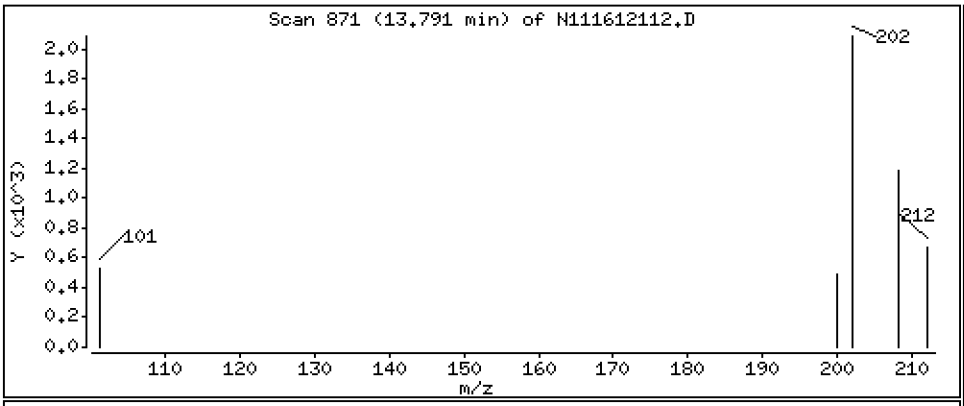
Operator: JW

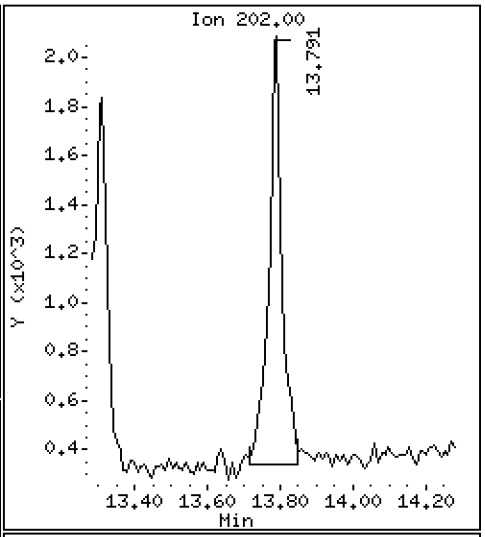
Column phase: Rxi-17Sil MS

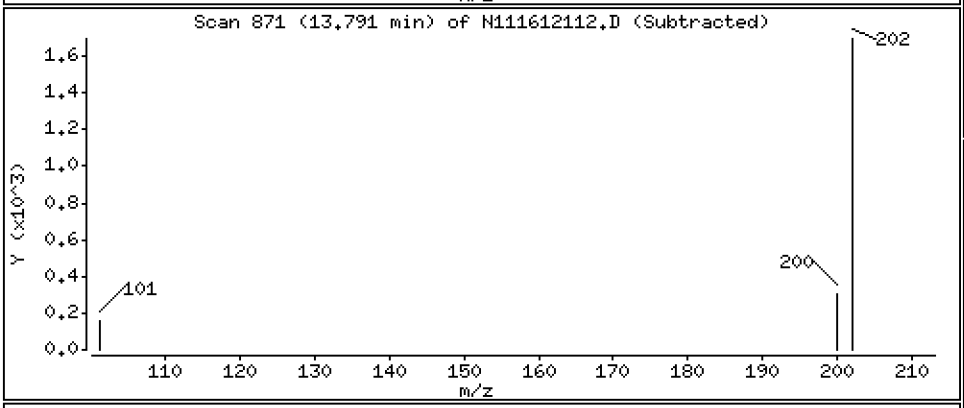
Column diameter: 0.25

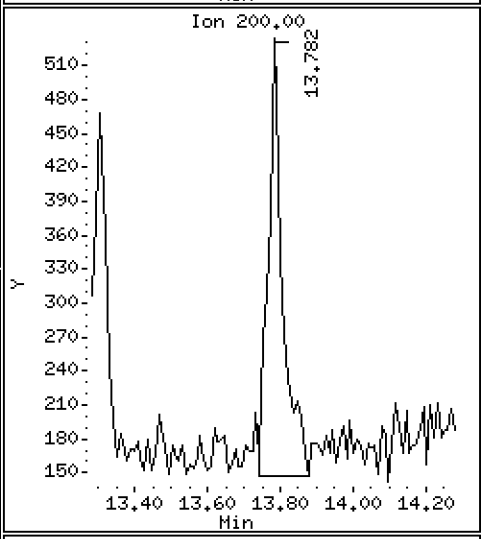
26 Pyrene

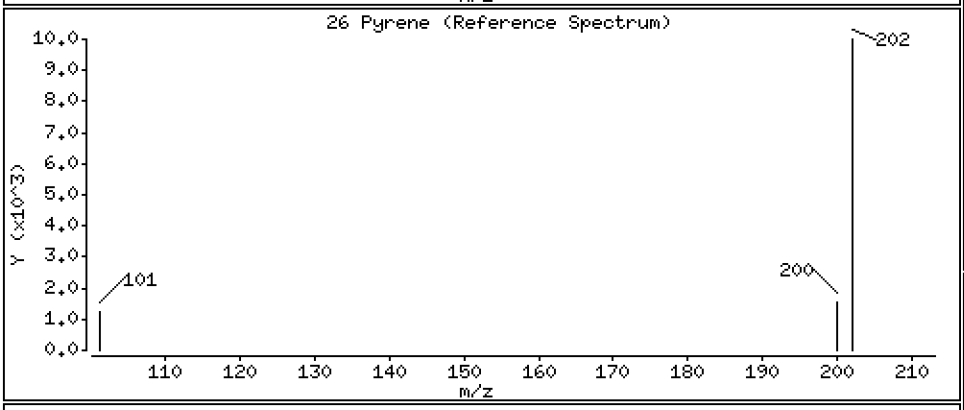
Concentration: 2.77 ng/mL

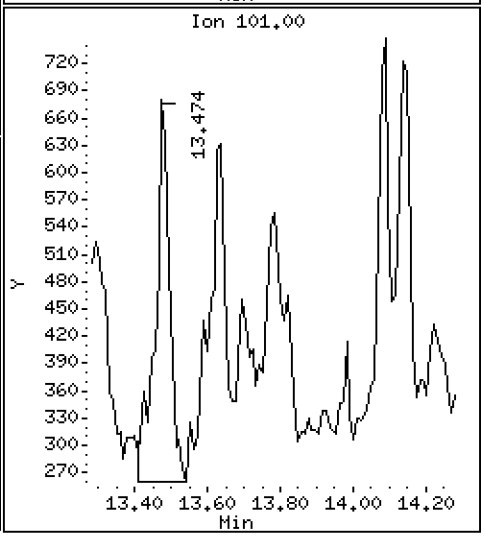


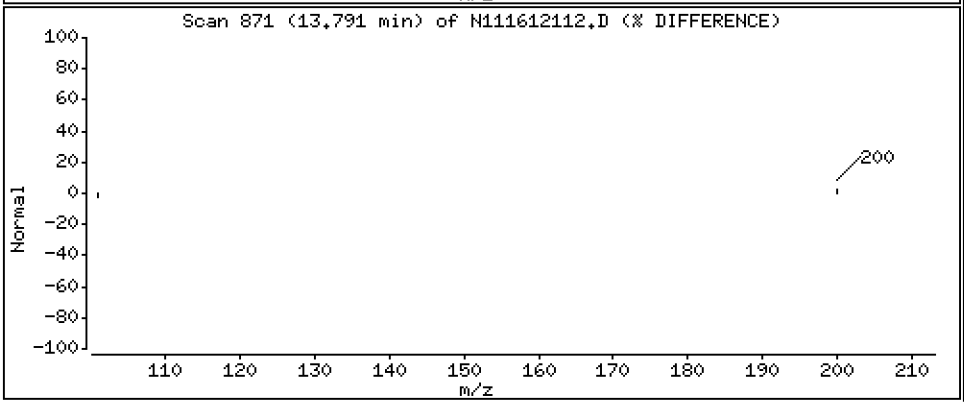












ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161210.b\N111612112.D
Lab Smp Id: BEK0657-BLK2
Inj Date : 10-DEC-2016 14:51 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : BEK0657-BLK2
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161210.b\lowsim.m
Meth Date : 12-Dec-2016 07:55 nt11.i Quant Type: ISTD
Cal Date : 25-NOV-2016 10:20 Cal File: 16112510.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpnamdl.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1 Naphthalene-d8	136	5.637	5.655	(1.000)	303813	200.000	
	2 Naphthalene	128	5.673	5.682	(1.006)	35646	22.8202	22.8
	3 Benzo(b)thiophene	134	Compound Not Detected.					
$	4 2-Methylnaphthalene-d10	152	6.604	6.615	(1.172)	145451	126.987	127
	5 2-Methylnaphthalene	142	6.657	6.667	(1.181)	14993	11.4323	11.4
	6 1-Methylnaphthalene	142	6.898	6.909	(1.224)	7096	5.51675	5.52(M)
	7 2-Chloronaphthalene	162	Compound Not Detected.					
	8 Biphenyl	154	Compound Not Detected.					
	9 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	10 Acenaphthylene	152	8.438	8.438	(0.983)	3641	2.60109	2.60
*	11 Acenaphthene-d10	164	8.583	8.592	(1.000)	151511	200.000	
	12 Acenaphthene	153	8.646	8.646	(1.007)	920	0.95796	0.958(M)
	13 Dibenzofuran	168	Compound Not Detected.					
	14 2,3,5-Trimethylnaphthalene	170	Compound Not Detected.					
$	15 Fluorene-d10	174	9.406	9.419	(1.096)	124782	168.654	169
	16 Fluorene	166	Compound Not Detected.					
	17 Dibenzothiophene	184	Compound Not Detected.					
*	18 Phenanthrene-d10	188	11.203	11.214	(1.000)	279463	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
$	20 Anthracene-d10	188	11.277	11.277	(1.007)	267178	211.019	211(H)
	21 Anthracene	178	Compound Not Detected.					
	22 Carbazole	167	Compound Not Detected.					
	23 1-Methylphenanthrene	192	Compound Not Detected.					
$	24 Fluoranthene-d10	212	13.272	13.272	(1.185)	310303	248.747	249
	25 Fluoranthene	202	Compound Not Detected.					
	26 Pyrene	202	13.791	13.781	(0.868)	4584	2.77402	2.77(M)
	27 Benzo(a)anthracene	228	Compound Not Detected.					
*	28 Chrysene-d12	240	15.881	15.881	(1.000)	253981	200.000	
	29 Chrysene	228	Compound Not Detected.					
	30 Benzo(b)fluoranthene	252	Compound Not Detected.					
	31 Benzo(k)fluoranthene	252	Compound Not Detected.					
	32 Benzo(j)fluoranthene	252	Compound Not Detected.					
$	33 Benzo(e)pyrene-d12	264	18.060	18.062	(0.985)	265946	196.731	197
	34 Benzo(e)pyrene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
35	Benzo(a)pyrene	252	Compound Not Detected.					
* 36	Perylene-d12	264	18.339	18.331	(1.000)	280517	200.000	
37	Perylene	252	Compound Not Detected.					
$ 38	Dibenzo(a,h)anthracene-d14	292	20.092	20.082	(1.096)	236610	251.814	252
39	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
40	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
41	Benzo(g,h,i)perylene	276	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N111612112.D
Lab Smp Id: BEK0657-BLK2
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161210.b\lowsim.m
Misc Info:

Calibration Date: 10-DEC-2016
Calibration Time: 09:37
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	303813	-38.44
11 Acenaphthene-d10	240770	120385	481540	151511	-37.07
18 Phenanthrene-d10	429271	214636	858542	279463	-34.90
28 Chrysene-d12	387691	193846	775382	253981	-34.49
36 Perylene-d12	386259	193130	772518	280517	-27.38

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.66	5.16	6.16	5.64	-0.32
11 Acenaphthene-d10	8.59	8.09	9.09	8.58	-0.11
18 Phenanthrene-d10	11.21	10.71	11.71	11.20	-0.09
28 Chrysene-d12	15.88	15.38	16.38	15.88	-0.00
36 Perylene-d12	18.33	17.83	18.83	18.34	0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N111612112.D

Lab ID: BEK0657-BLK2
nt11.i, 20161210.b\lowsim.m,   10-DEC-2016 14:51

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

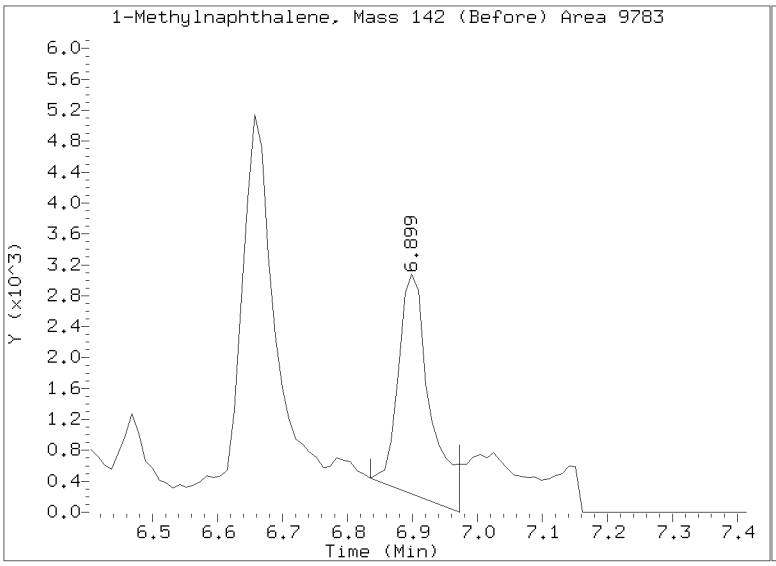
NONE

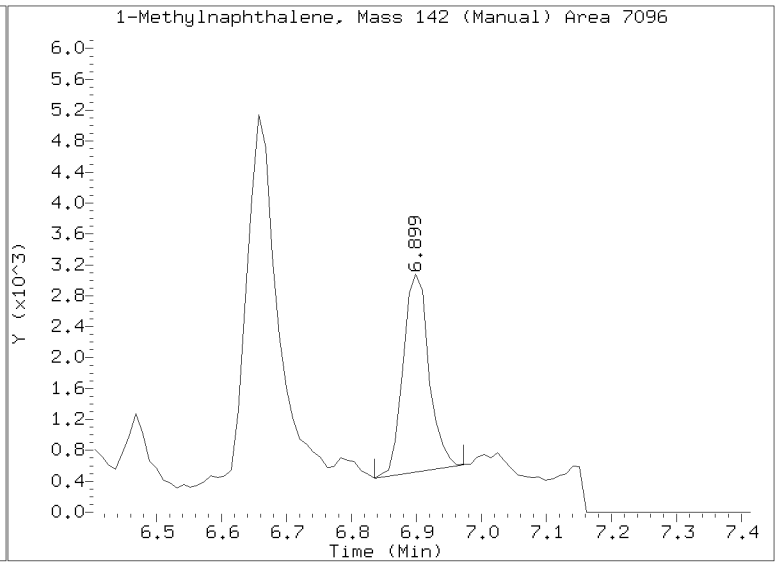
On Column LOD for nt11.i, 20161210.b\lowsim.m, allpnamdl.sub = 0.0000

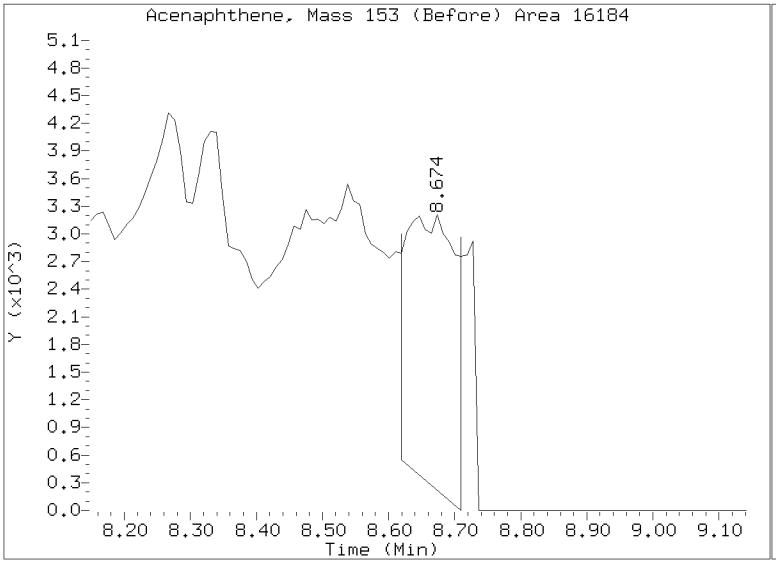
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

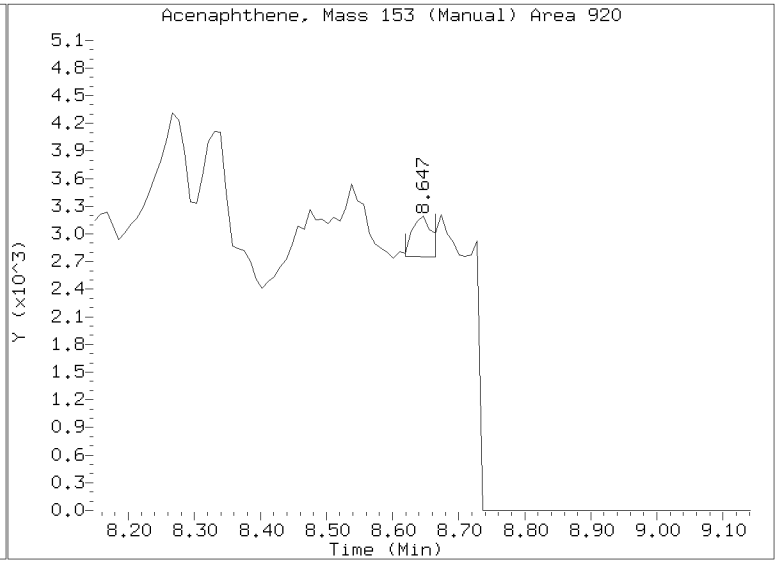
Quant Ion Manual Peak Adjustment Report

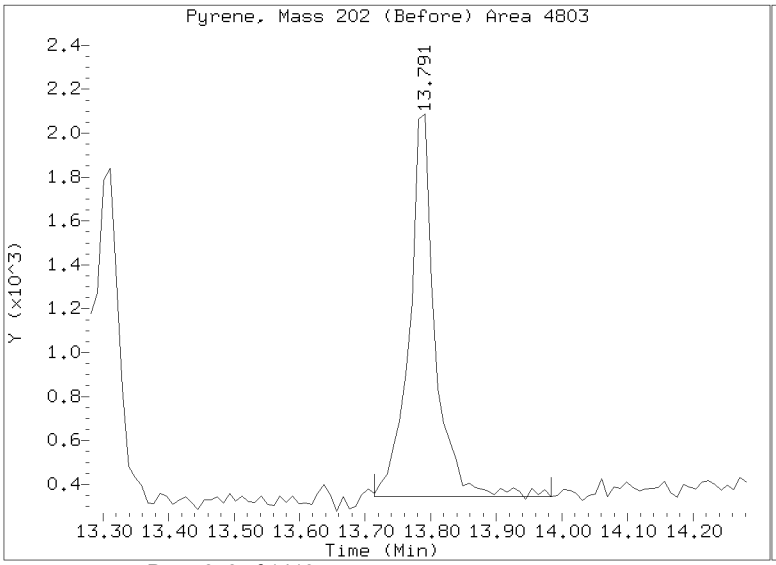
Datafile: //target/share/chem3/nt11.i/20161210.b/N111612112.D
Injection Date: 10-DEC-2016 14:51
Lab ID:BEK0657-BLK2 Client ID:
Report Date: 12/22/2016 08:18

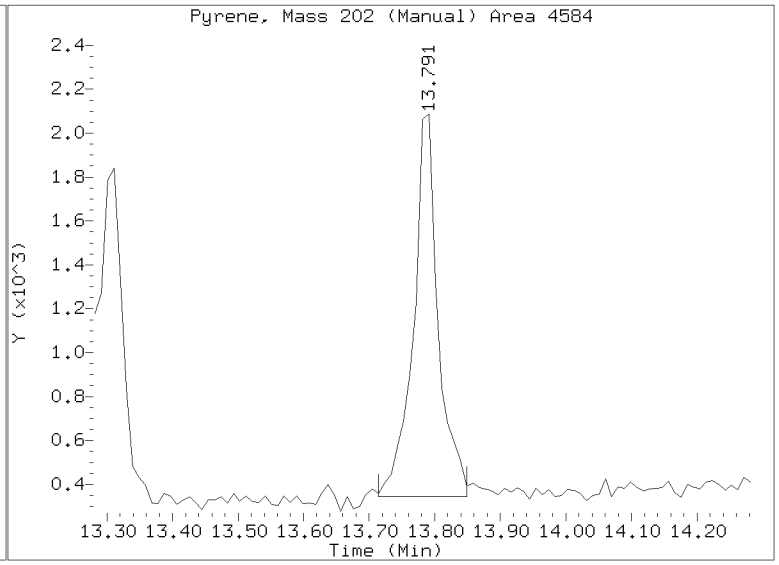












Analytical Resources, Incorporated

Form I
METHOD BLANK DATA SHEET
EPA 8270D-SIM

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	16K0321
Client:	Anchor QEA, LLC			Project:	Port Gamble Shellfish Monitoring
Matrix:	Tissue	Laboratory ID:	BEK0658-BLK1	File ID:	N1116121704.D
Sampled:	N/A	Prepared:	11/24/16 08:25	Analyzed:	12/17/16 13:42
Solids:		Preparation:	EPA 3550C-Mod (Ultrasonic	Initial/Final:	0.886 g / 0.1 mL
Batch:	BEK0658	Sequence:	SEL0255	Calibration:	ZL00052
Instrument:	NT11	Column:	RXi-17Sil-MS		

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	1.64		1.13	1.35
91-57-6	2-Methylnaphthalene	1	1.13	U	1.13	1.13
208-96-8	Acenaphthylene	1	1.13	U	1.13	1.13
83-32-9	Acenaphthene	1	1.13	U	1.13	1.13
86-73-7	Fluorene	1	1.13	U	1.13	1.13
85-01-8	Phenanthrene	1	1.13	U	1.13	1.13
120-12-7	Anthracene	1	1.13	U	1.13	1.13
206-44-0	Fluoranthene	1	1.13	U	1.13	1.13
129-00-0	Pyrene	1	1.13	U	1.13	1.13
56-55-3	Benzo(a)anthracene	1	1.13	U	1.13	1.13
218-01-9	Chrysene	1	1.13	U	1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.13	U	1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	15.0	44.3	30 - 160	
Dibenzo[a,h]anthracene-d14	33.860	18.3	54.0	30 - 160	
Fluoranthene-d10	33.860	19.7	58.1	30 - 160	
Fluorene-d10		0.00		30 - 160	*
Anthracene-d10		0.00		30 - 160	*
Benzo(e)pyrene-d12		0.00		30 - 160	*

Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121704.D

Date : 17-DEC-2016 13:42

Client ID:

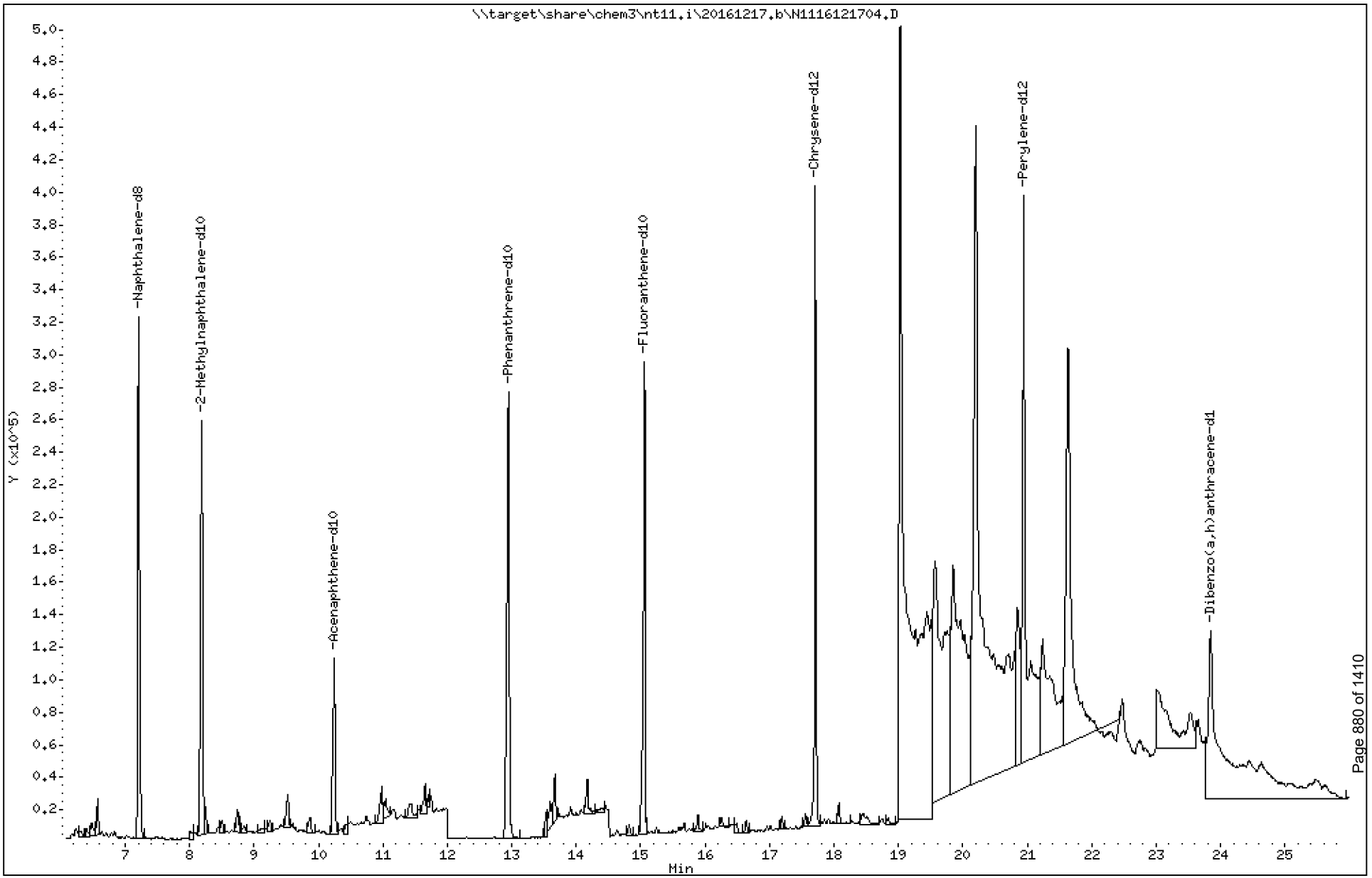
Instrument: nt11.i

Sample Info: BEK0658-BLK1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121704.D

Date : 17-DEC-2016 13:42

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BLK1

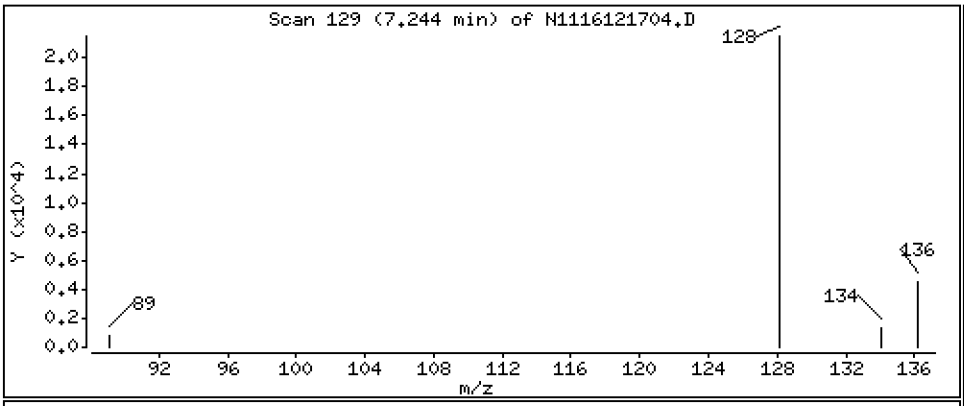
Operator: VTS

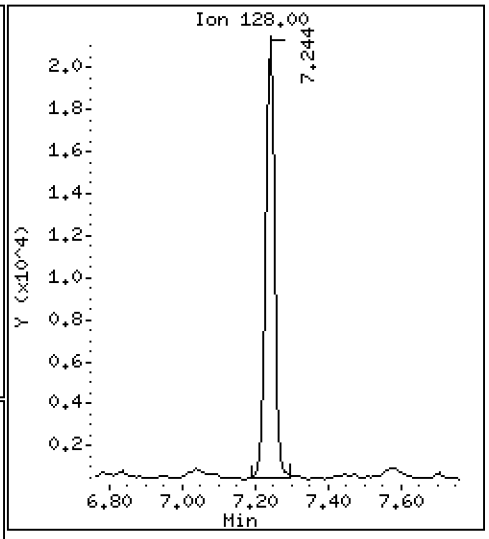
Column phase: Rxi-17Sil MS

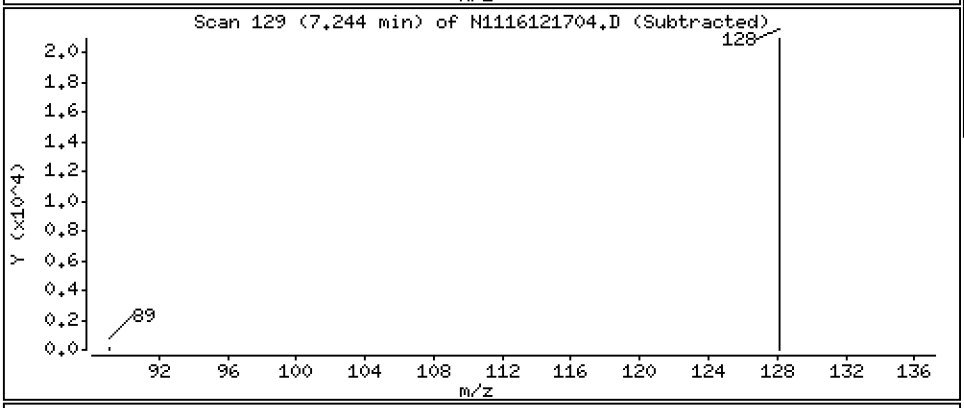
Column diameter: 0.25

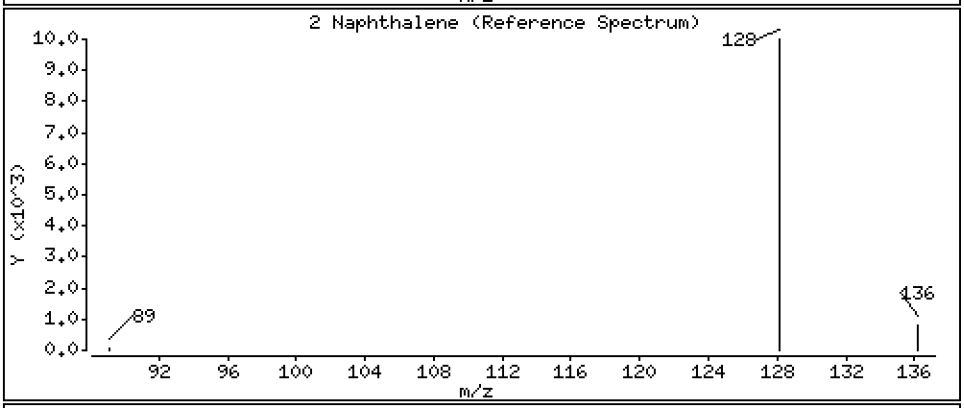
2 Naphthalene

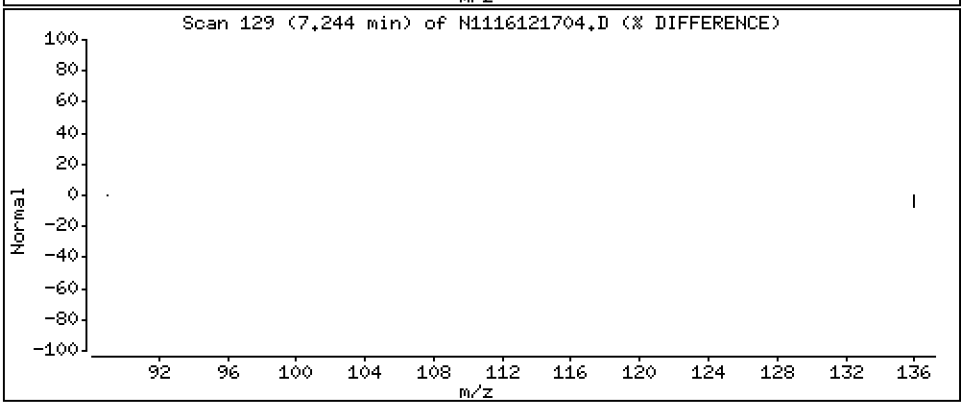
Concentration: 14.5 ng/mL











Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121704.D

Date : 17-DEC-2016 13:42

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BLK1

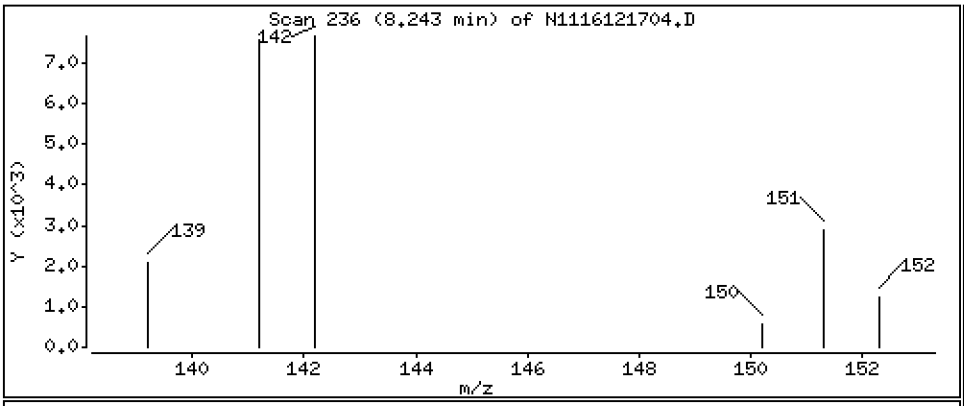
Operator: VTS

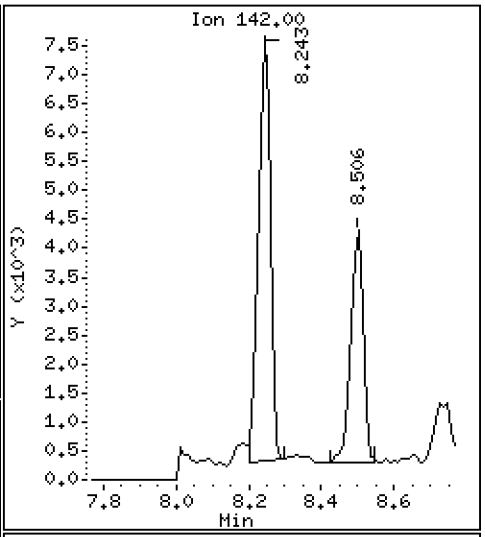
Column phase: Rxi-17Sil MS

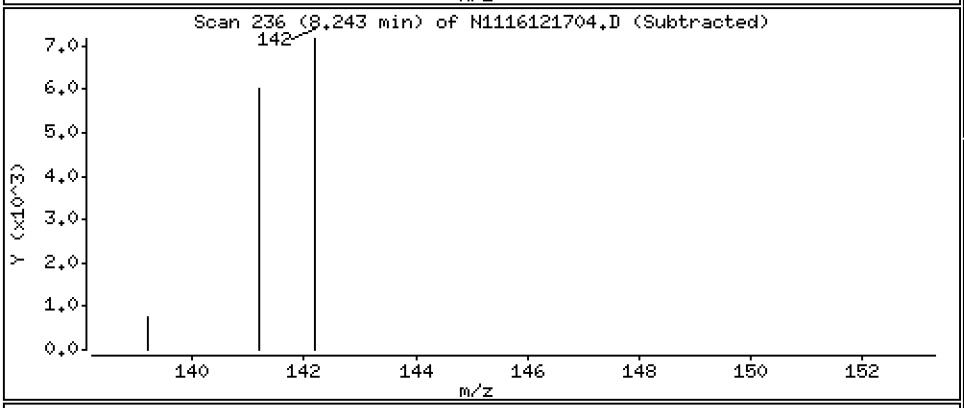
Column diameter: 0.25

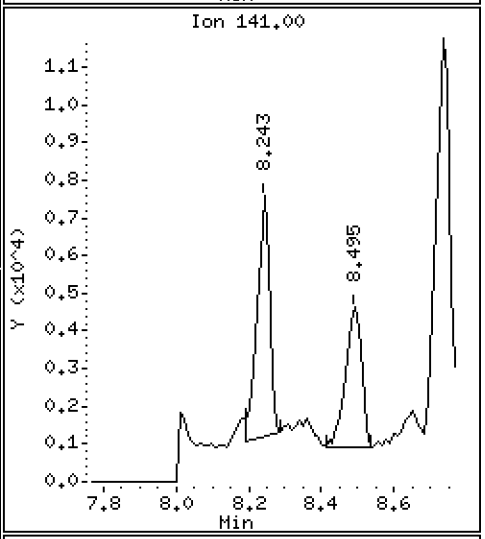
5 2-Methylnaphthalene

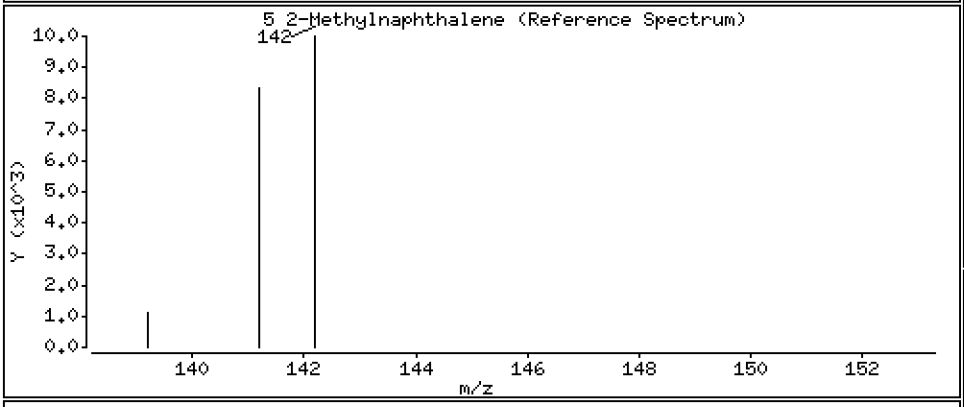
Concentration: 6.83 ng/mL

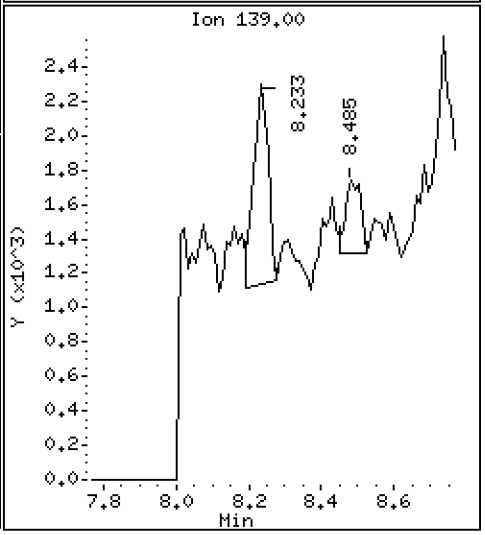


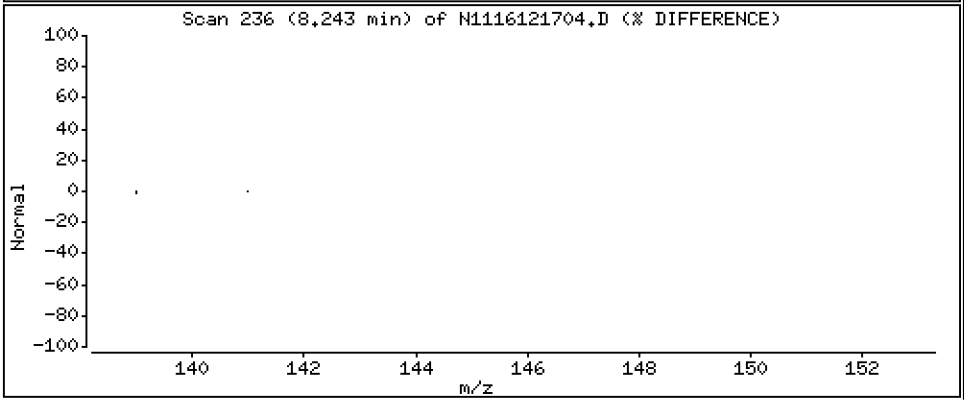












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121704.D

Date : 17-DEC-2016 13:42

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BLK1

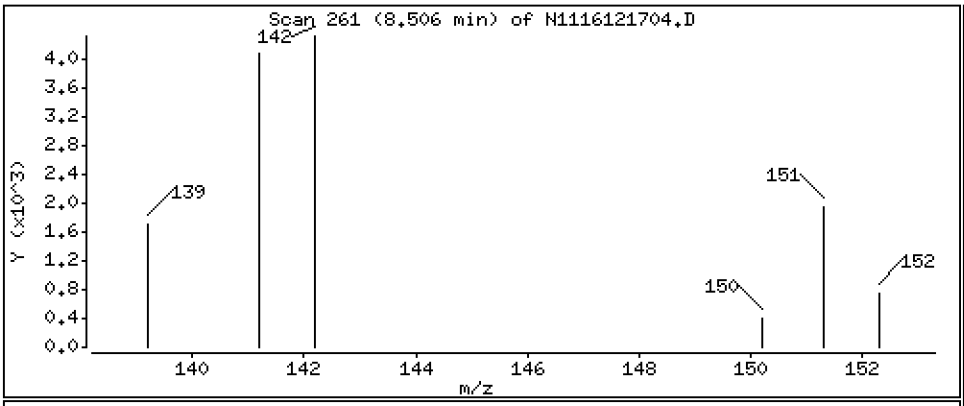
Operator: VTS

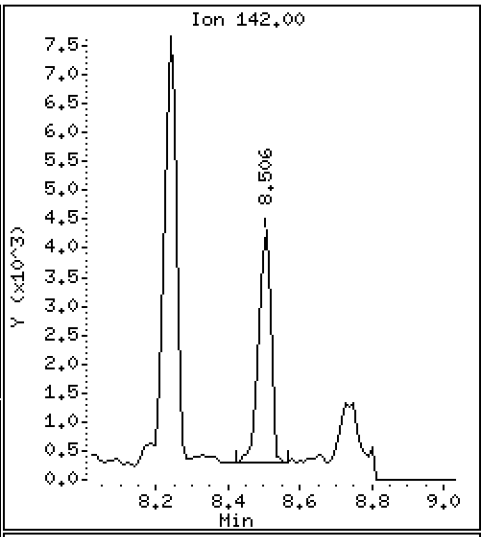
Column phase: Rxi-17Sil MS

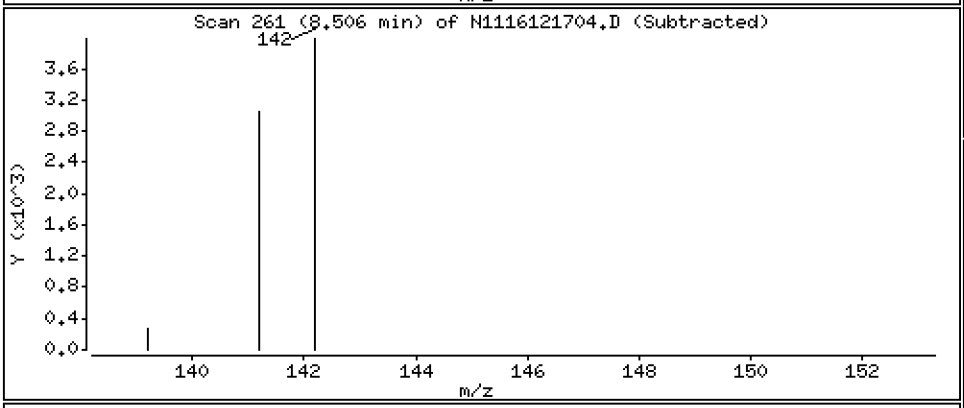
Column diameter: 0.25

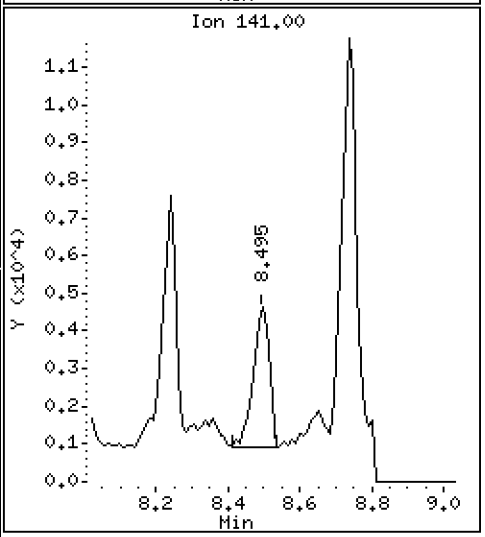
6 1-Methylnaphthalene

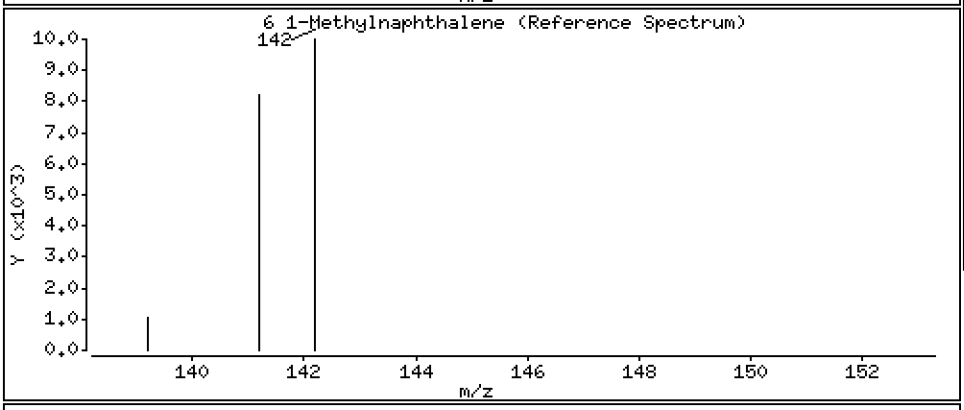
Concentration: 4.00 ng/mL

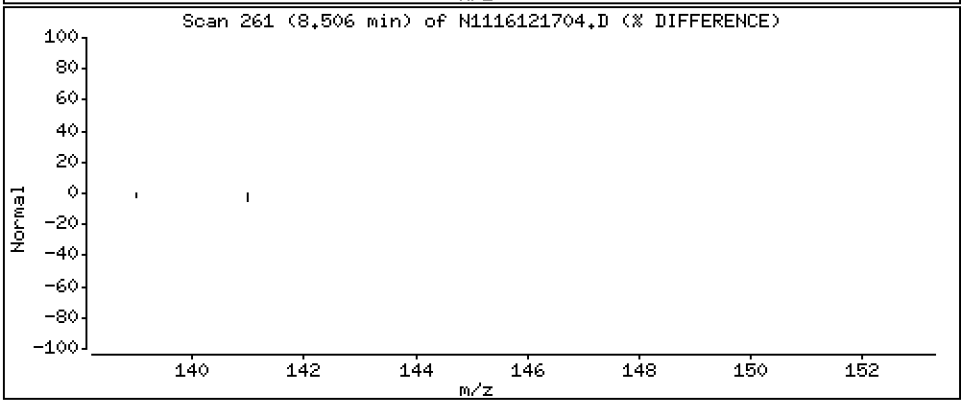












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121704.D

Date : 17-DEC-2016 13:42

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BLK1

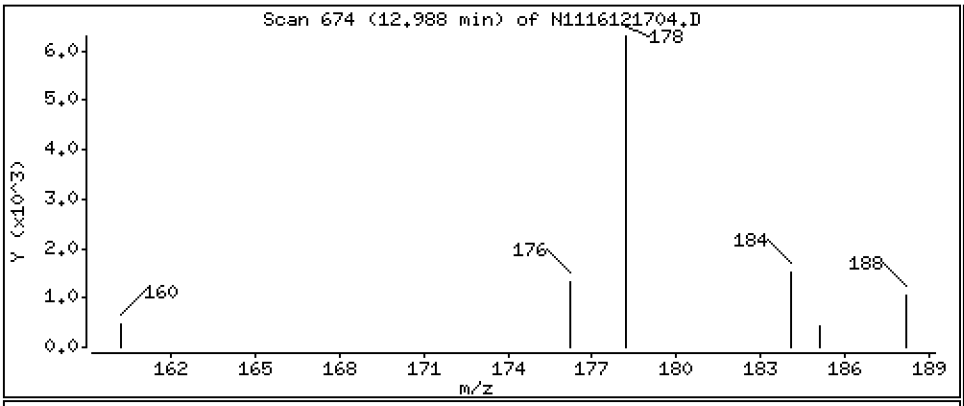
Operator: VTS

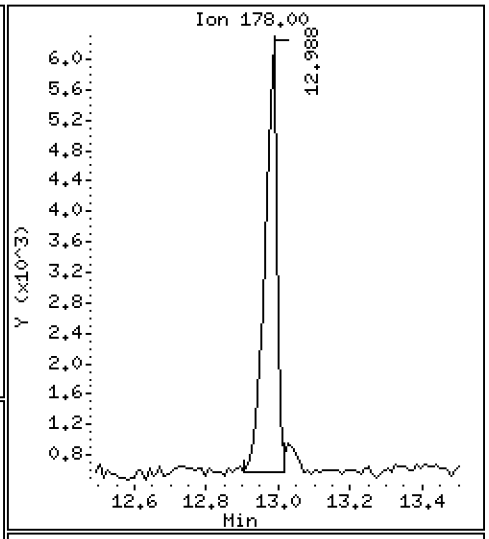
Column phase: Rxi-17Sil MS

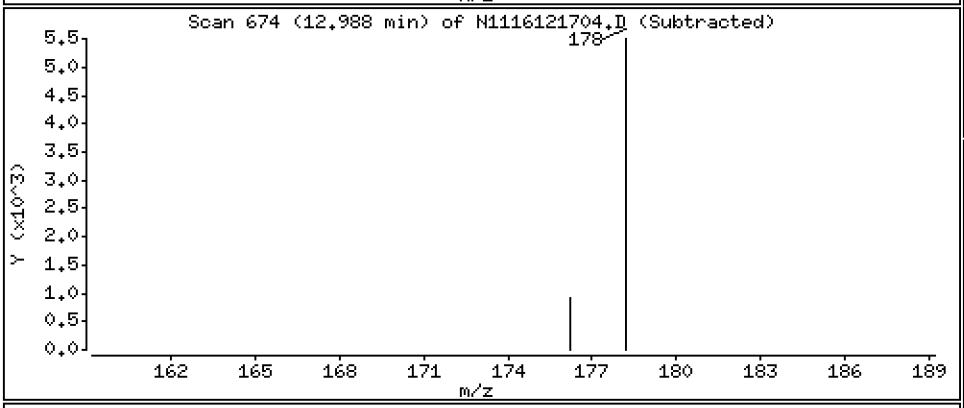
Column diameter: 0.25

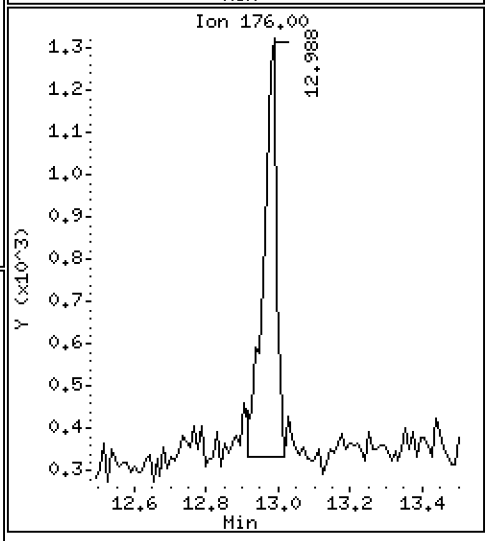
19 Phenanthrene

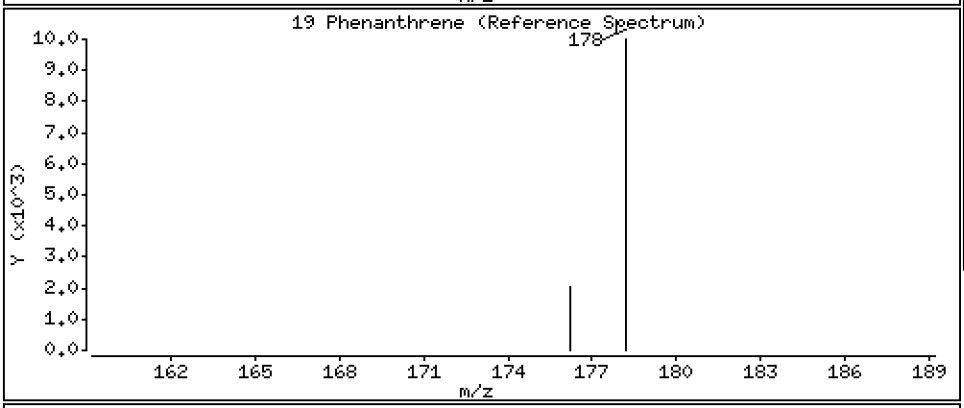
Concentration: 4.77 ng/mL

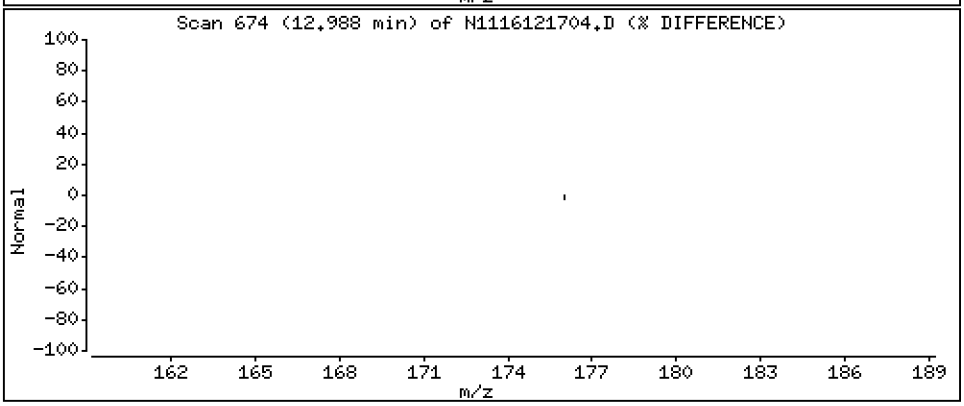












ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161217.b\N1116121704.D
Lab Smp Id: BEK0658-BLK1
Inj Date : 17-DEC-2016 13:42 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : BEK0658-BLK1
Misc Info :
Comment   :
Method   : \\target\share\chem3\nt11.i\20161217.b\lowsim.m
Meth Date : 17-Dec-2016 13:15 van Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1	Naphthalene-d8	136	7.207	7.234	(1.000)	510932	200.000	
	2	Naphthalene	128	7.243	7.261	(1.005)	36697	14.4908	14.5
	3	Benzo(b)thiophene	134	Compound Not Detected.					
$	4	2-Methylnaphthalene-d10	152	8.190	8.211	(1.136)	296607	133.032	133
	5	2-Methylnaphthalene	142	8.243	8.264	(1.144)	16980	6.82589	6.83
	6	1-Methylnaphthalene	142	8.505	8.526	(1.180)	9765	3.99553	4.00
	7	2-Chloronaphthalene	162	Compound Not Detected.					
	8	Biphenyl	154	Compound Not Detected.					
	9	2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	10	Acenaphthylene	152	Compound Not Detected.					
*	11	Acenaphthene-d10	164	10.242	10.260	(1.000)	280556	200.000	
	12	Acenaphthene	153	Compound Not Detected.					
	13	Dibenzofuran	168	Compound Not Detected.					
	14	2,3,5-Trimethylnaphthalene	170	Compound Not Detected.					
$	15	Fluorene-d10	174	Compound Not Detected.					
	16	Fluorene	166	Compound Not Detected.					
	17	Dibenzothiophene	184	Compound Not Detected.					
*	18	Phenanthrene-d10	188	12.945	12.956	(1.000)	544758	200.000	
	19	Phenanthrene	178	12.987	12.998	(1.003)	14521	4.76809	4.77
$	20	Anthracene-d10	188	Compound Not Detected.					
	21	Anthracene	178	Compound Not Detected.					
	22	Carbazole	167	Compound Not Detected.					
	23	1-Methylphenanthrene	192	Compound Not Detected.					
$	24	Fluoranthene-d10	212	15.055	15.065	(1.163)	505653	174.262	174
	25	Fluoranthene	202	Compound Not Detected.					
	26	Pyrene	202	Compound Not Detected.					
	27	Benzo(a)anthracene	228	Compound Not Detected.					
*	28	Chrysene-d12	240	17.710	17.710	(1.000)	556252	200.000	
	29	Chrysene	228	Compound Not Detected.					
	30	Benzo(b)fluoranthene	252	Compound Not Detected.					
	31	Benzo(k)fluoranthene	252	Compound Not Detected.					
	32	Benzo(j)fluoranthene	252	Compound Not Detected.					
$	33	Benzo(e)pyrene-d12	264	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
34	Benzo(e)pyrene	252	Compound Not Detected.					
35	Benzo(a)pyrene	252	Compound Not Detected.					
* 36	Perylene-d12	264	20.945	20.935	(1.000)	546798	200.000	
37	Perylene	252	Compound Not Detected.					
$ 38	Dibenzo(a,h)anthracene-d14	292	23.841	23.830	(1.138)	261363	162.117	162
39	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
40	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
41	Benzo(g,h,i)perylene	276	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121704.D
Lab Smp Id: BEK0658-BLK1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161217.b\lowsim.m
Misc Info:

Calibration Date: 17-DEC-2016
Calibration Time: 12:40
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	510932	49.55
11 Acenaphthene-d10	209310	104655	418620	280556	34.04
18 Phenanthrene-d10	404977	202489	809954	544758	34.52
28 Chrysene-d12	465046	232523	930092	556252	19.61
36 Perylene-d12	454694	227347	909388	546798	20.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.21	-0.37
11 Acenaphthene-d10	10.26	9.76	10.76	10.24	-0.18
18 Phenanthrene-d10	12.96	12.46	13.46	12.95	-0.08
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.95	0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121704.D

Lab ID: BEK0658-BLK1
nt11.i, 20161217.b\lowsim.m,   17-DEC-2016 13:42

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161217.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

LCS / LCS DUPLICATE RECOVERY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Matrix:	Tissue	Analyzed:	12/12/16 11:58
Batch:	BEK0657	Laboratory ID:	BEK0657-BS1
Preparation:	EPA 3550C-Mod (Ultrasonic)	Sequence Name:	LCS
Initial/Final:	0.886 g / 0.1 mL		

COMPOUND	SPIKE ADDED (ug/kg)	LCS CONCENTRATION (ug/kg)	LCS % REC. #	QC LIMITS REC.
Naphthalene	33.9	14.7	43.5	30 - 160
2-Methylnaphthalene	33.9	15.5	45.7	30 - 160
Acenaphthylene	33.9	15.0	44.2	30 - 160
Acenaphthene	33.9	16.1	47.5	30 - 160
Fluorene	33.9	16.6	49.1	30 - 160
Phenanthrene	33.9	20.2	59.6	30 - 160
Anthracene	33.9	17.0	50.1	30 - 160
Fluoranthene	33.9	19.1	56.4	30 - 160
Pyrene	33.9	18.8	55.6	30 - 160
Benzo(a)anthracene	33.9	18.2	53.8	30 - 160
Chrysene	33.9	17.6	51.9	30 - 160
Benzo(b)fluoranthene	33.9	17.7	52.3	30 - 160
Benzo(k)fluoranthene	33.9	16.5	48.8	30 - 160
Benzo(a)pyrene	33.9	15.3	45.0	30 - 160
Indeno(1,2,3-cd)pyrene	33.9	17.3	51.0	30 - 160
Dibenzo(a,h)anthracene	33.9	17.8	52.6	30 - 160
Benzo(g,h,i)perylene	33.9	16.7	49.3	30 - 160
Perylene	33.9	9.55	28.2 *	30 - 160
Benzo(e)pyrene	33.9	16.6	49.0	30 - 160

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Page 1

Date : 12-DEC-2016 11:58

Client ID:

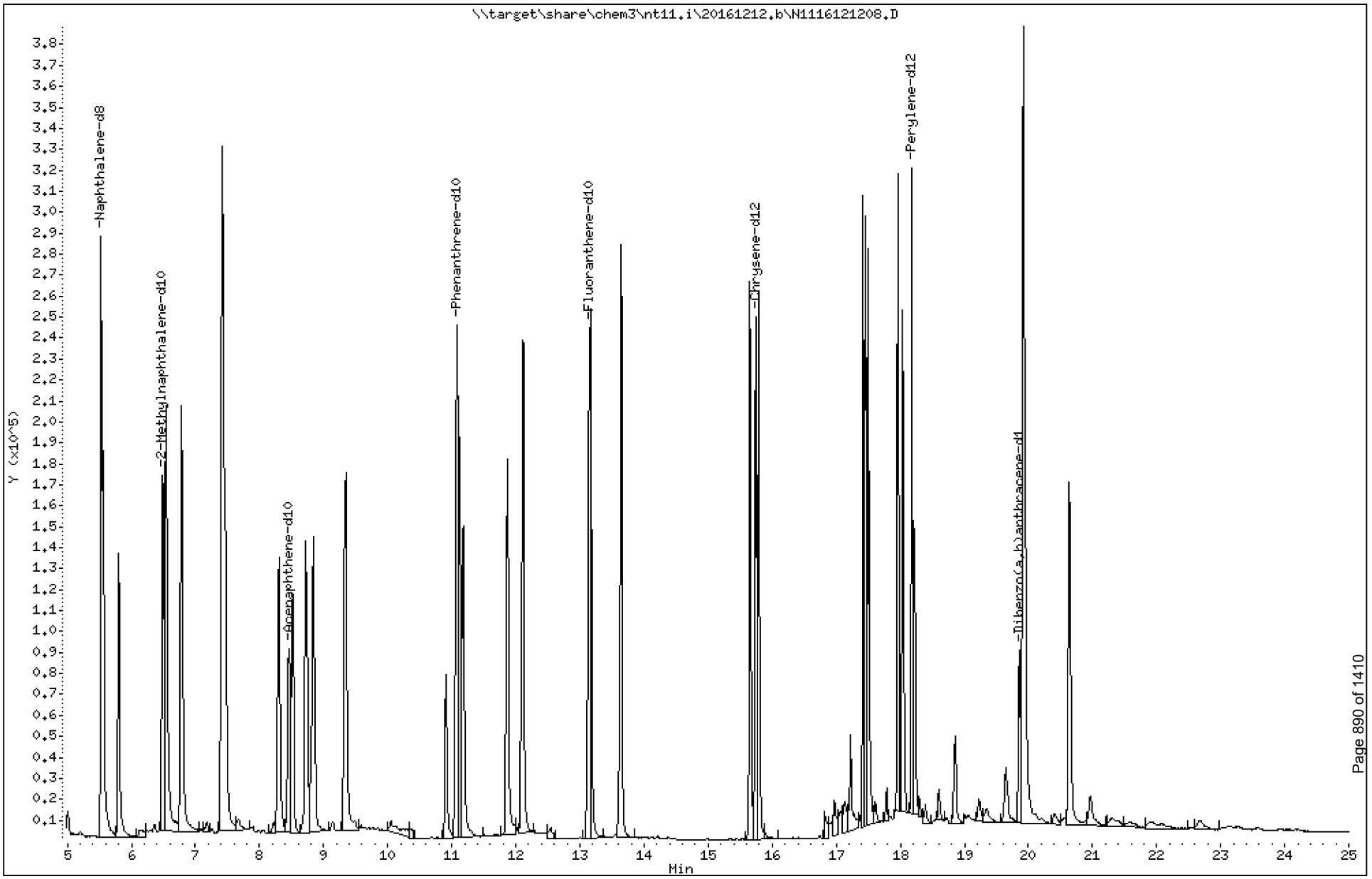
Instrument: nt11.i

Sample Info: BEK0657-BS1

Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

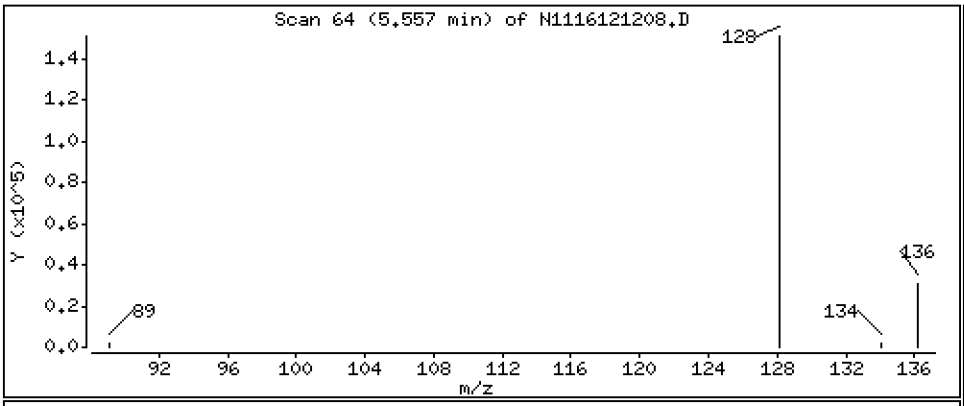
Operator: JW

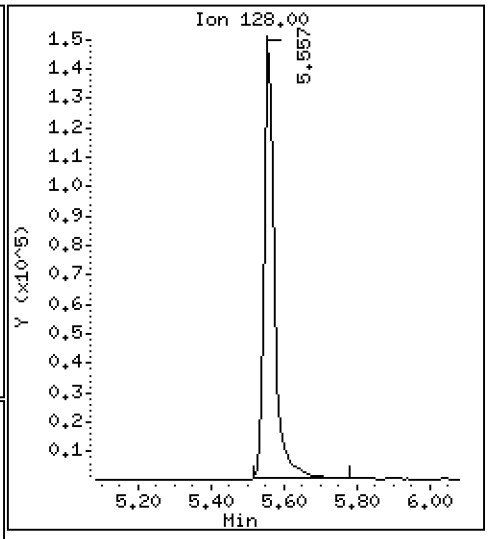
Column phase: Rxi-17Sil MS

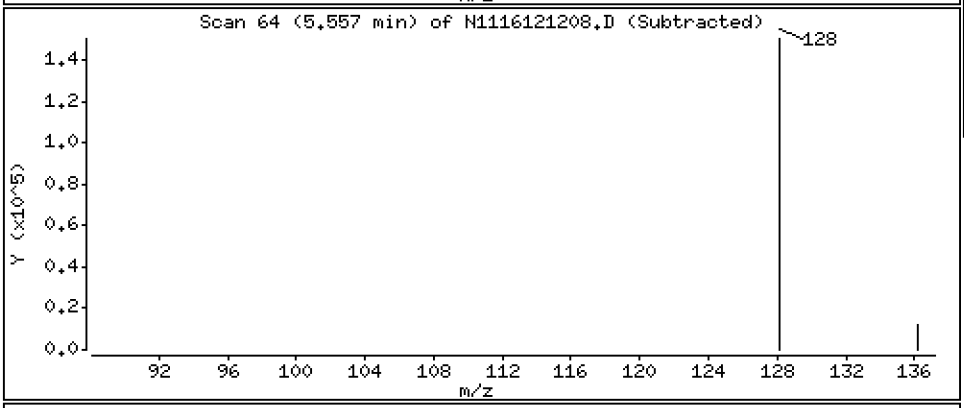
Column diameter: 0.25

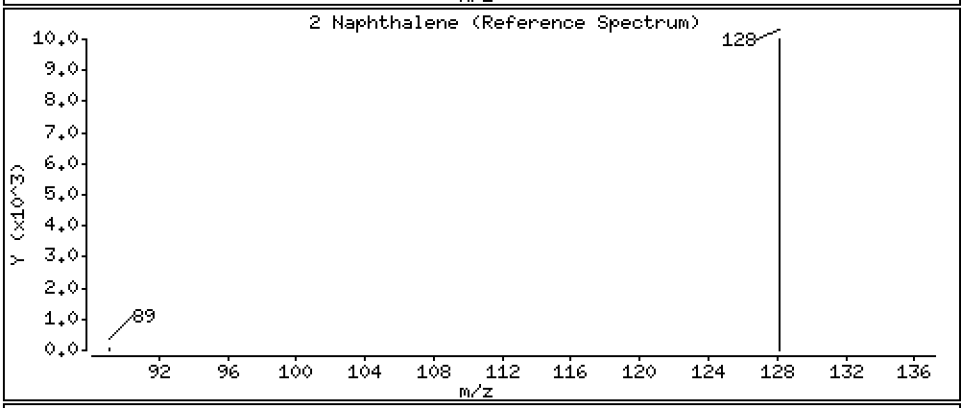
2 Naphthalene

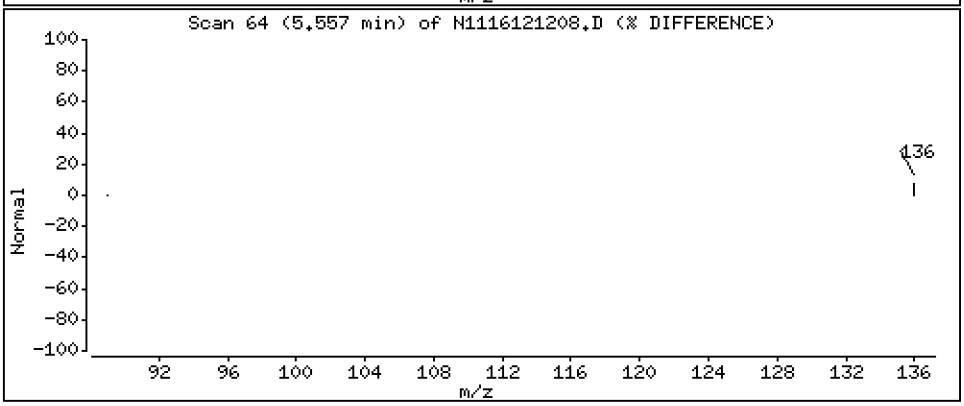
Concentration: 131 ng/mL











Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

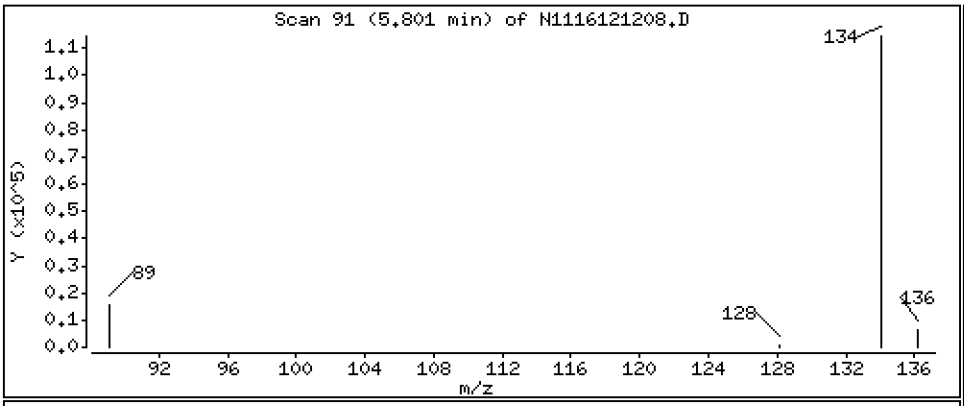
Operator: JW

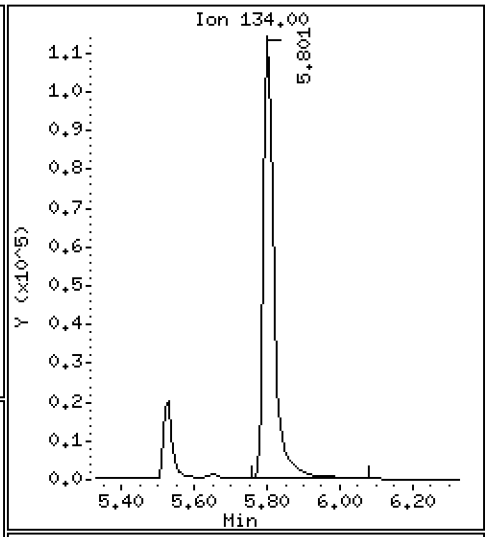
Column phase: Rxi-17Sil MS

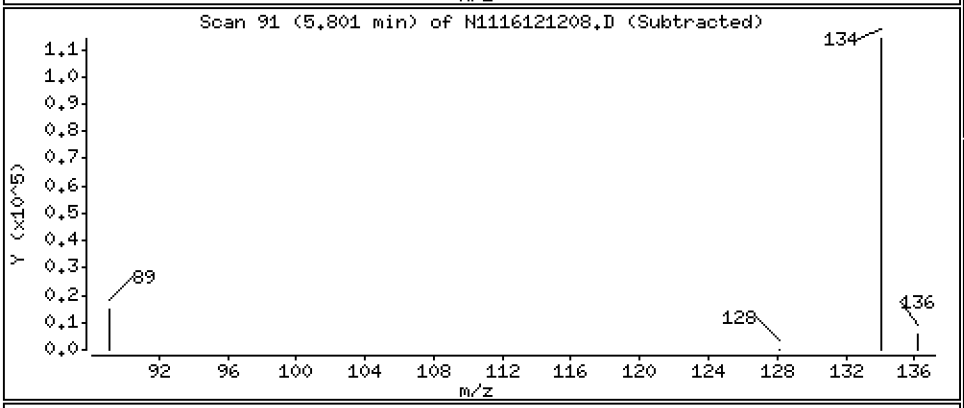
Column diameter: 0.25

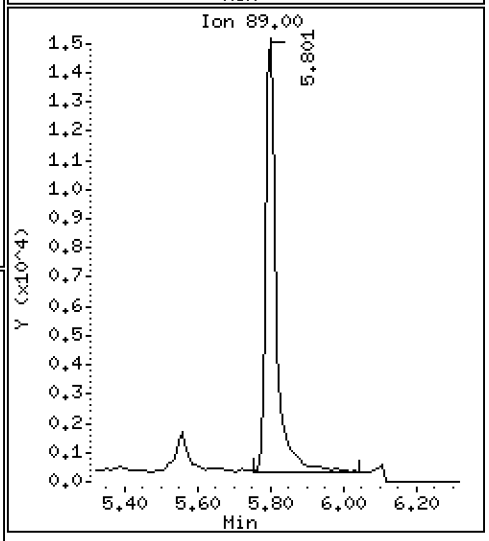
3 Benzo(b)thiophene

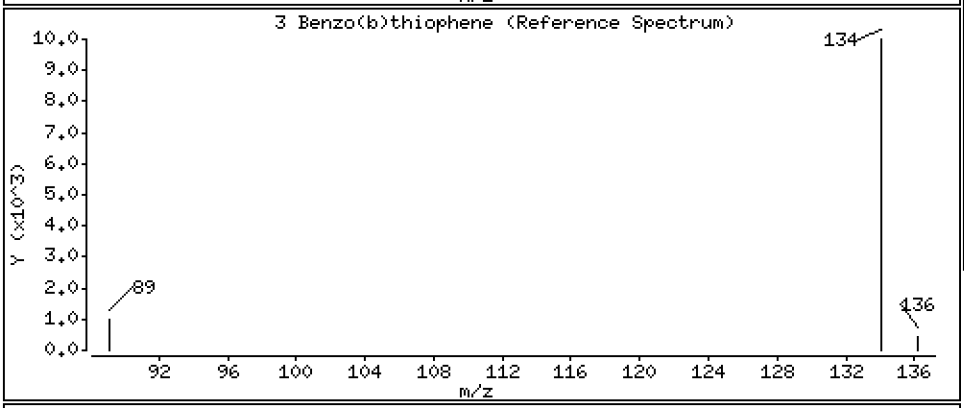
Concentration: 118 ng/mL

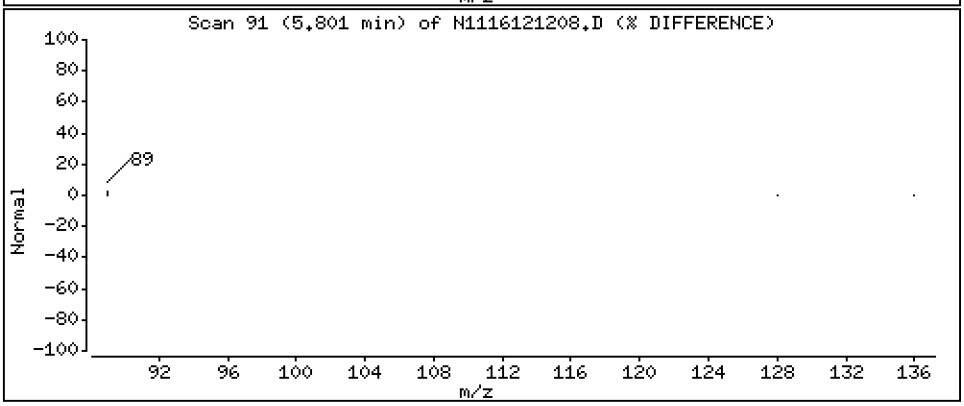












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

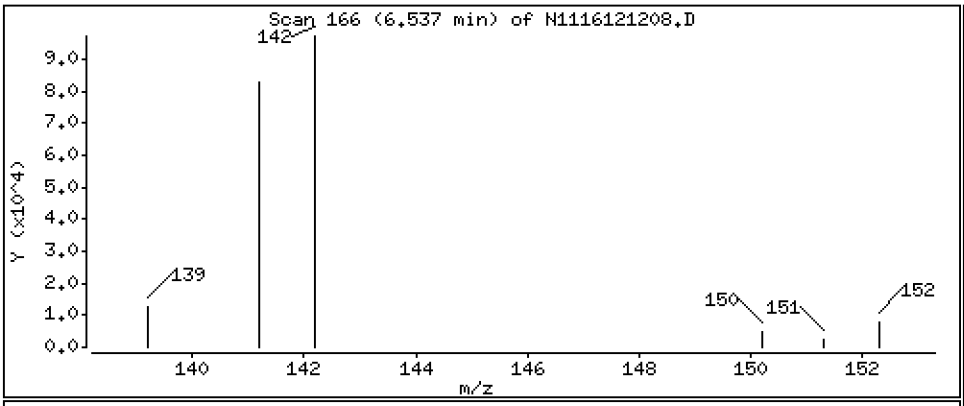
Operator: JW

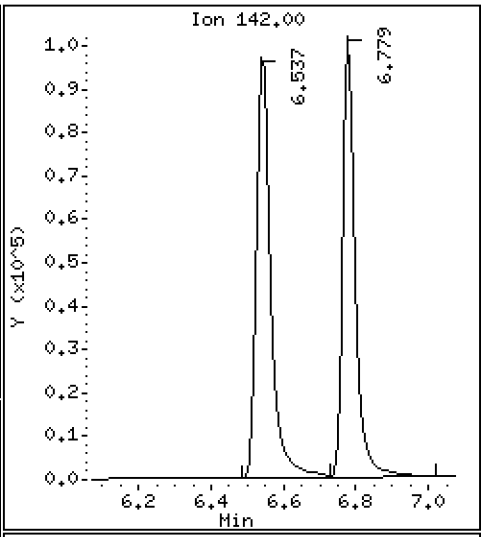
Column phase: Rxi-17Sil MS

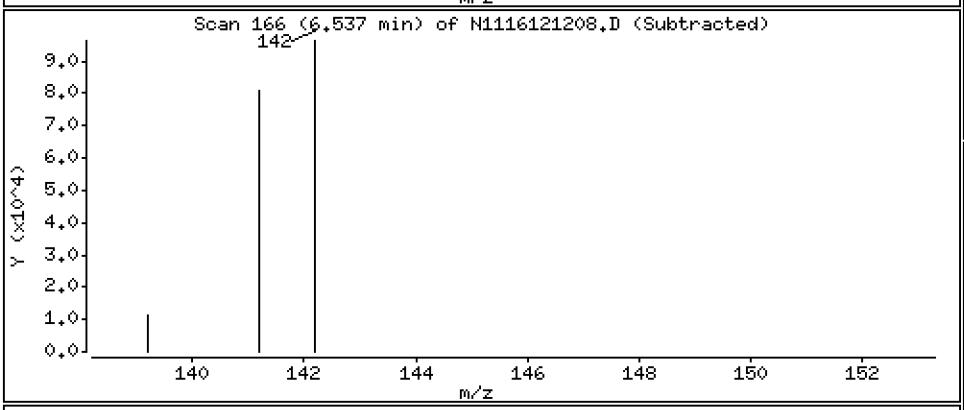
Column diameter: 0.25

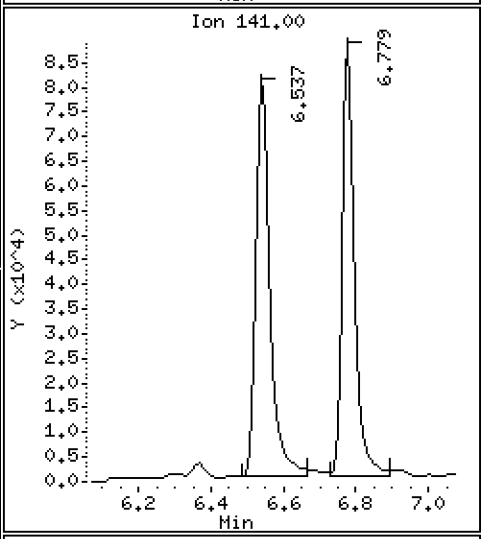
5 2-Methylnaphthalene

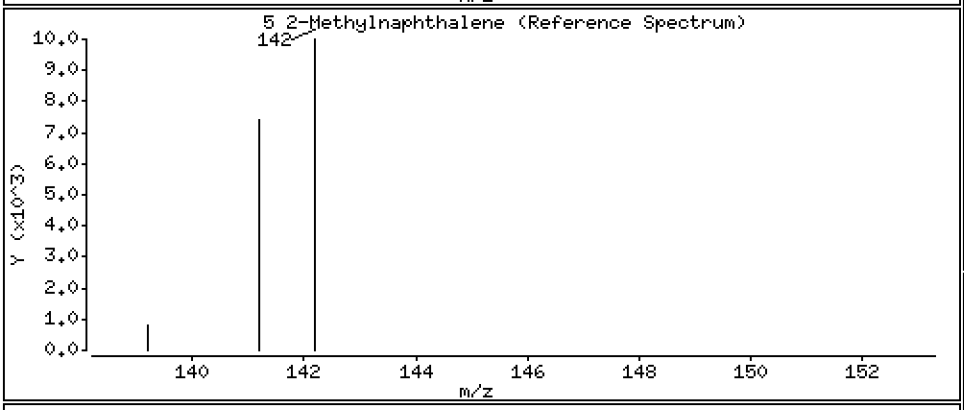
Concentration: 137 ng/mL

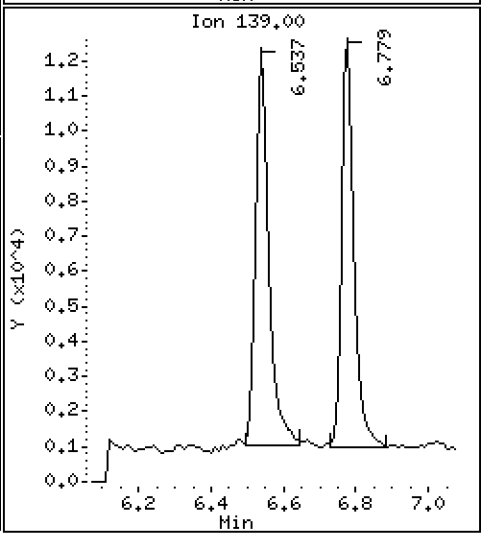


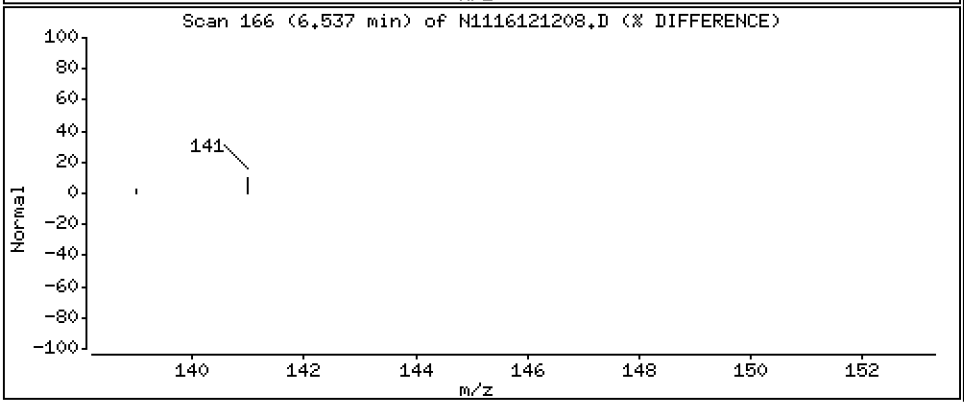












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

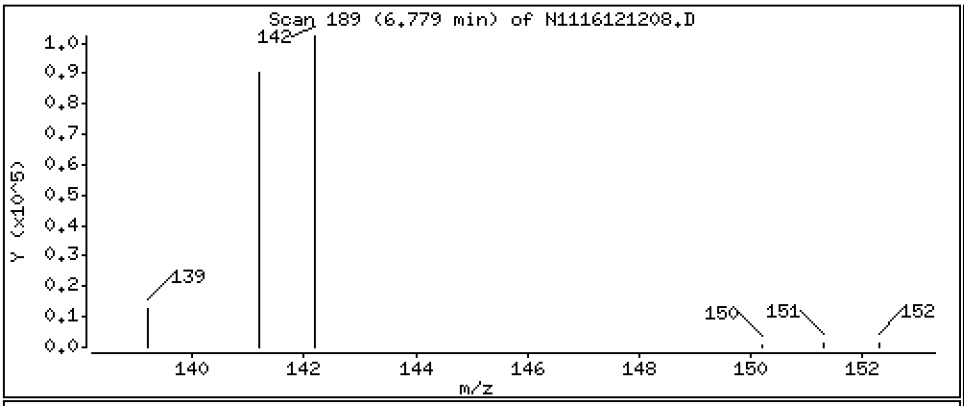
Operator: JW

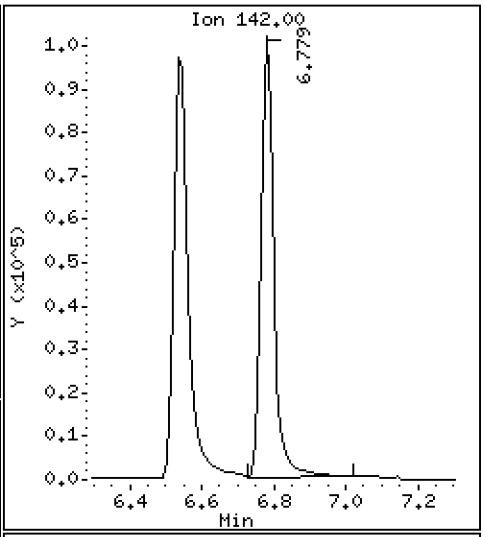
Column phase: Rxi-17Sil MS

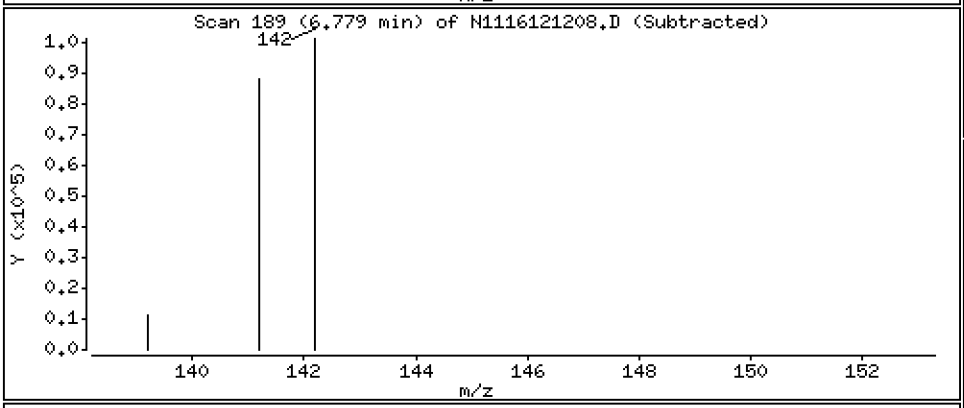
Column diameter: 0.25

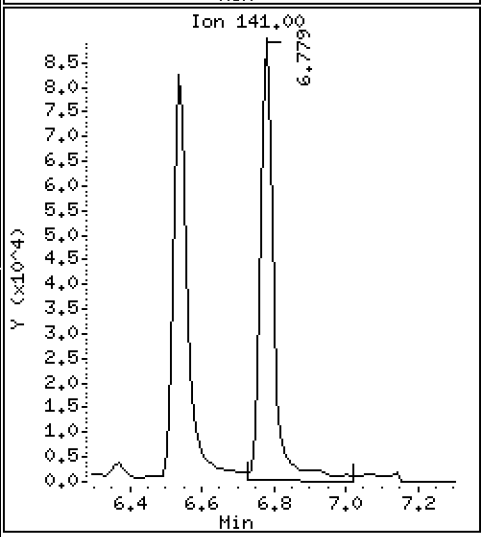
6 1-Methylnaphthalene

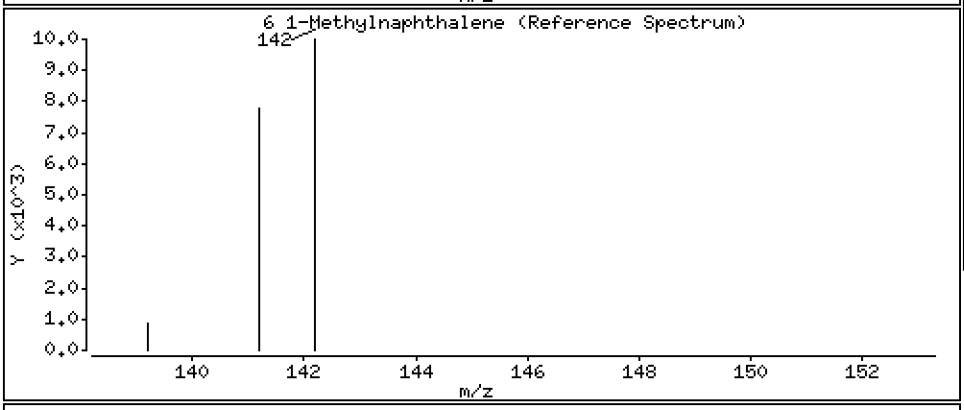
Concentration: 136 ng/mL

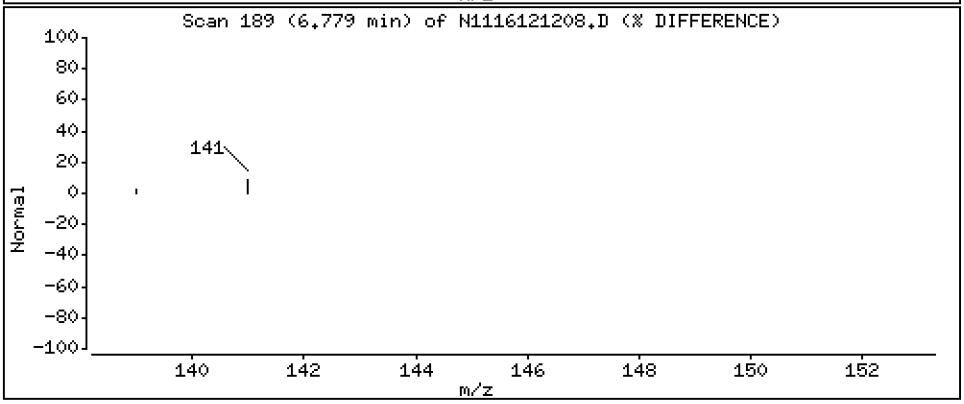












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

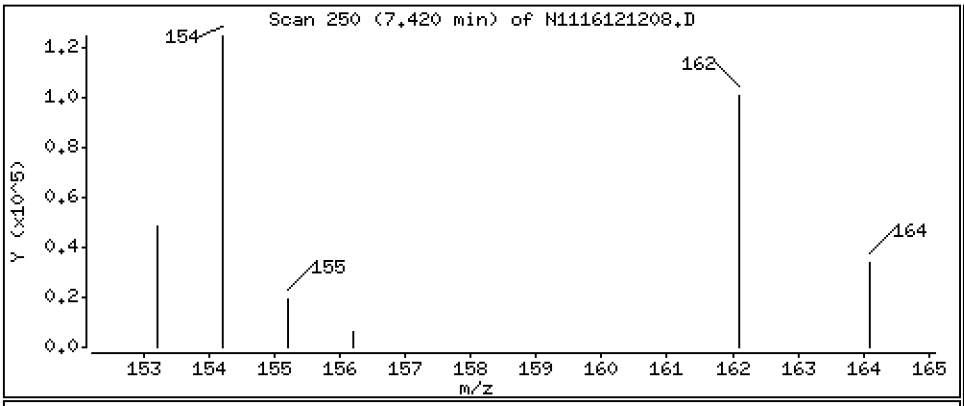
Operator: JW

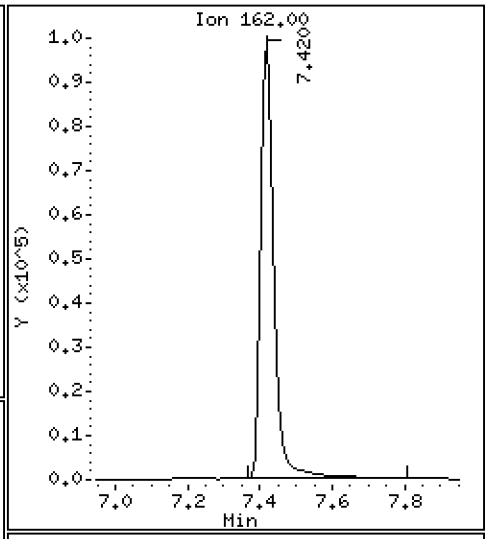
Column phase: Rxi-17Sil MS

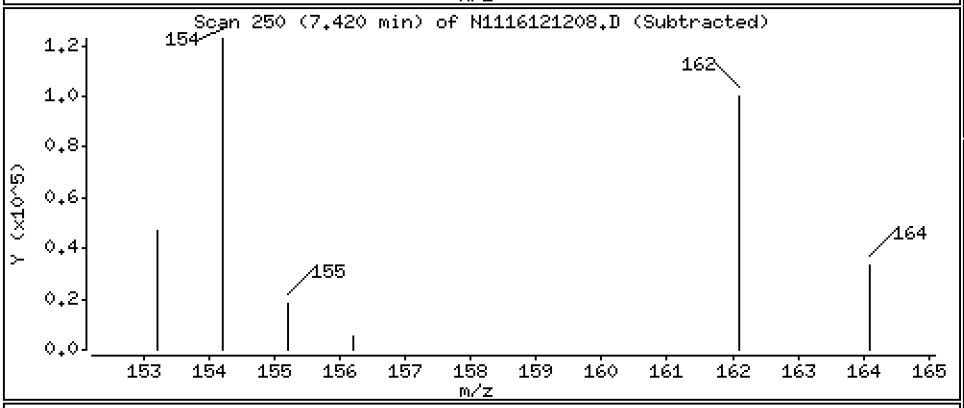
Column diameter: 0.25

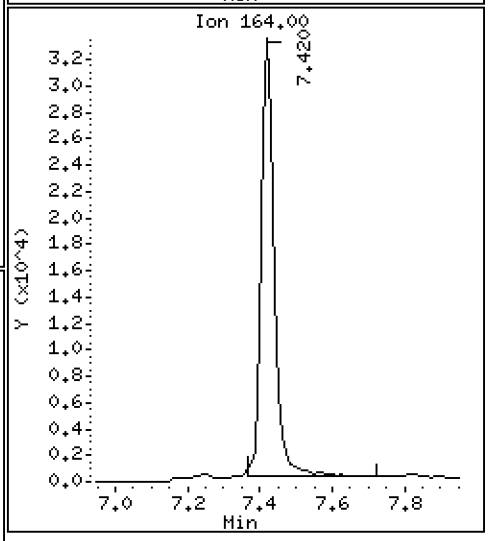
7 2-Chloronaphthalene

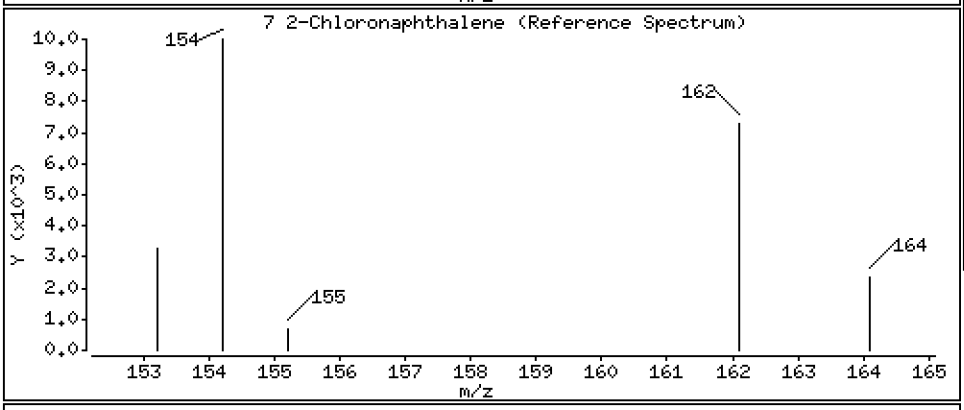
Concentration: 124 ng/mL

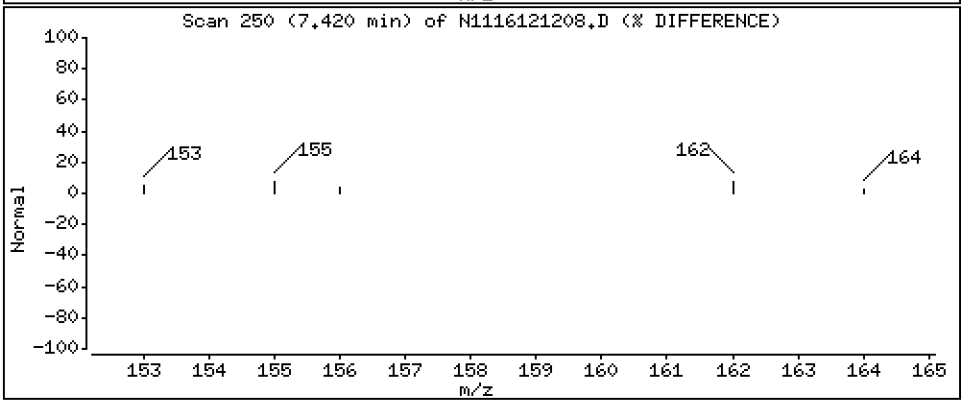












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

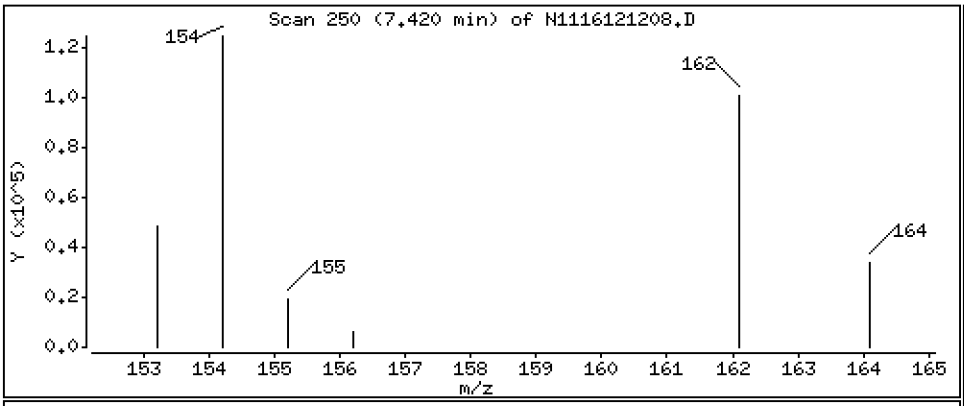
Operator: JW

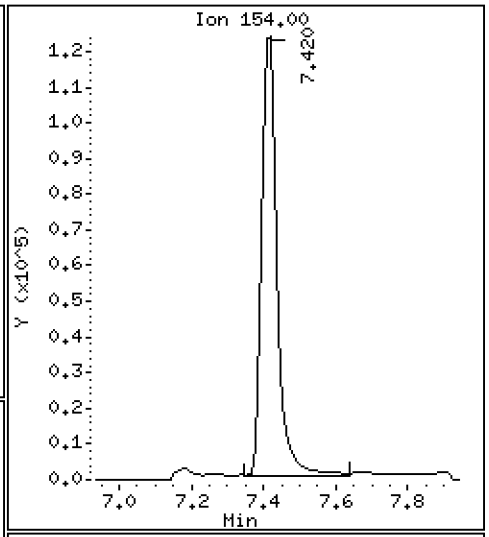
Column phase: Rxi-17Sil MS

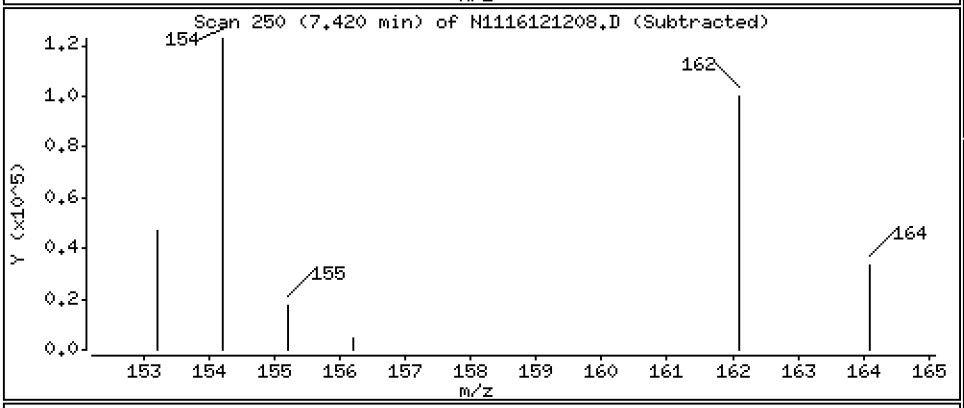
Column diameter: 0.25

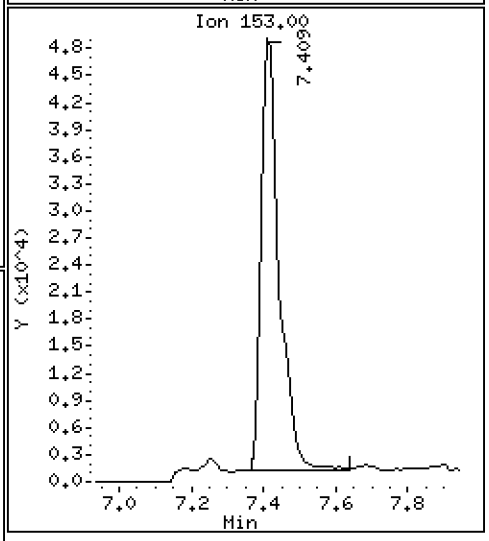
8 Biphenyl

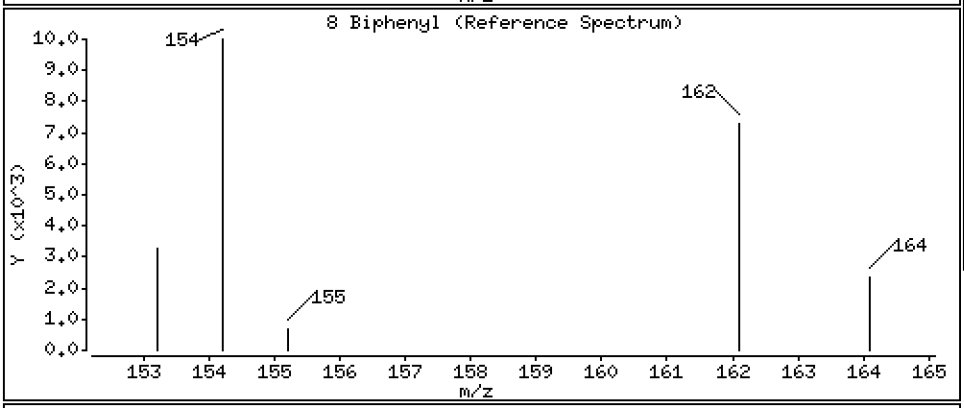
Concentration: 132 ng/mL

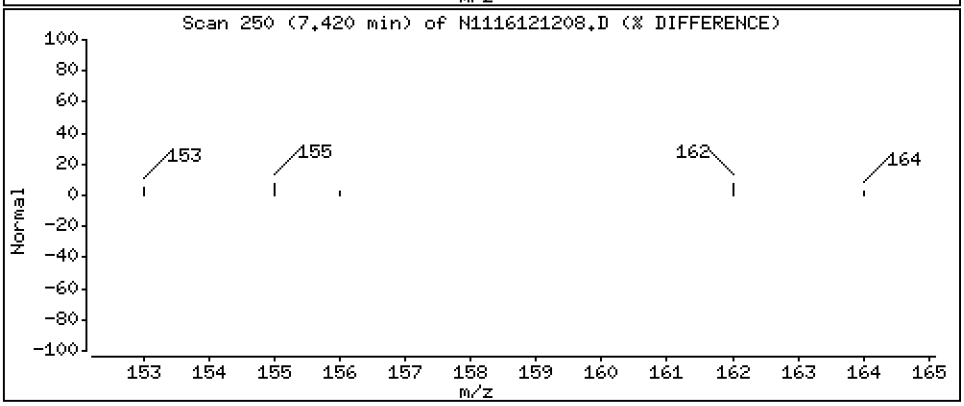












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

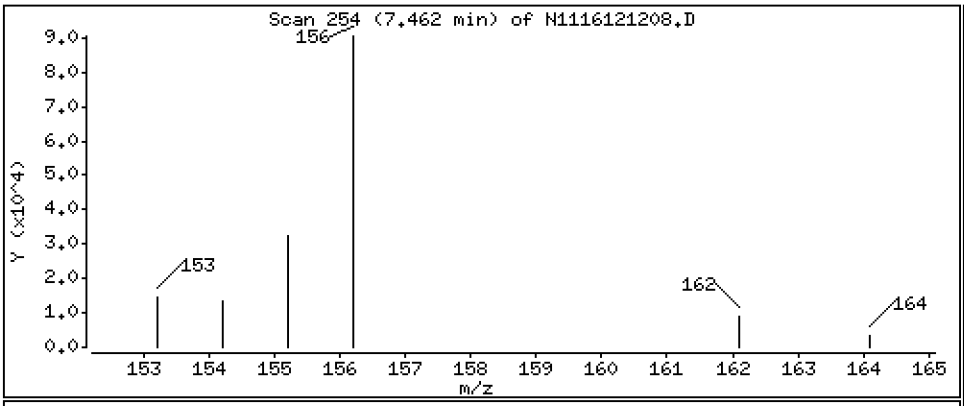
Operator: JW

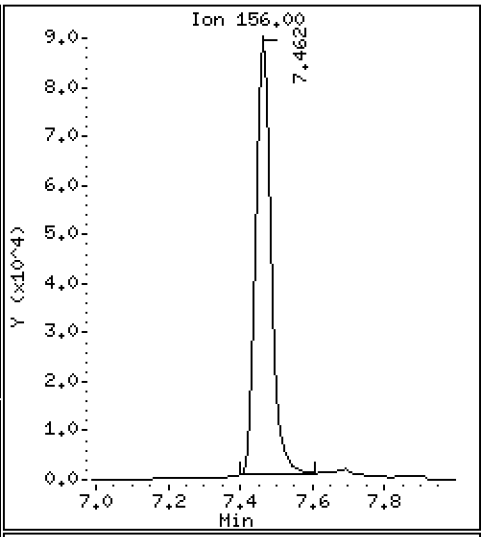
Column phase: Rxi-17Sil MS

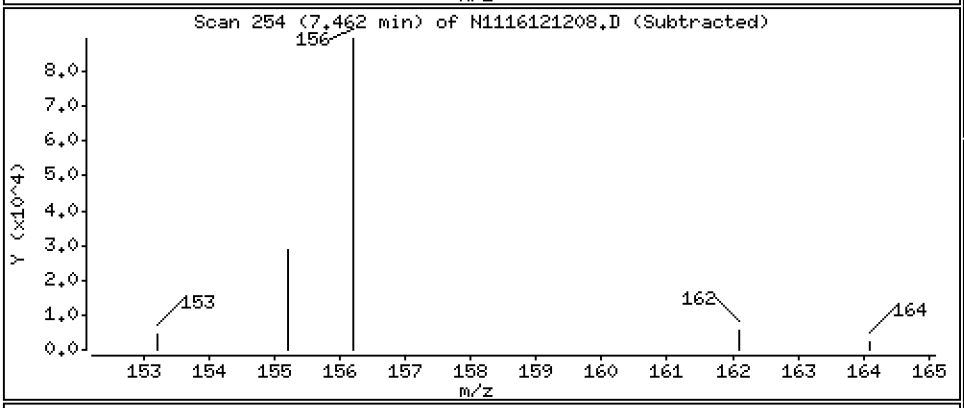
Column diameter: 0.25

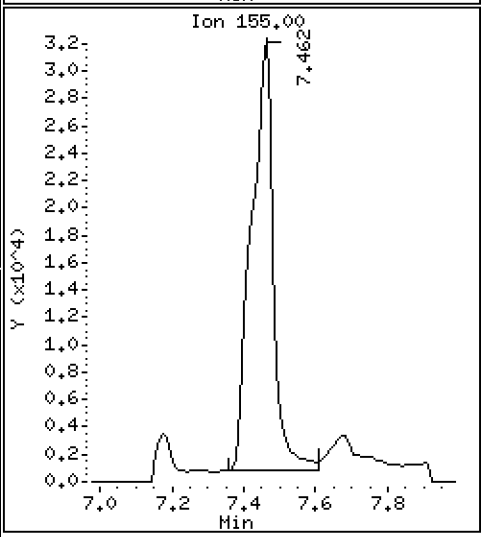
9 2,6-Dimethylnaphthalene

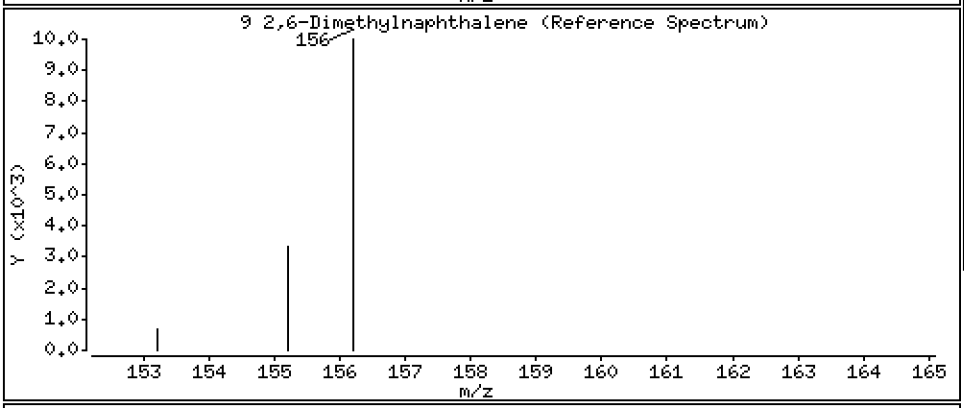
Concentration: 134 ng/mL

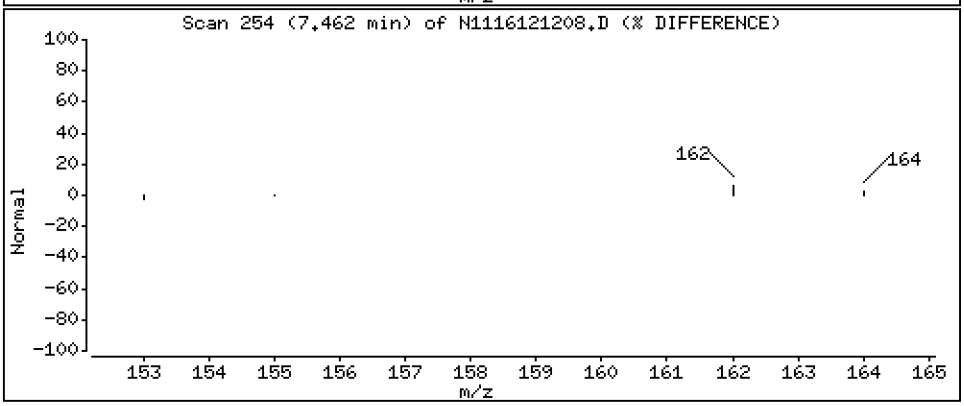












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

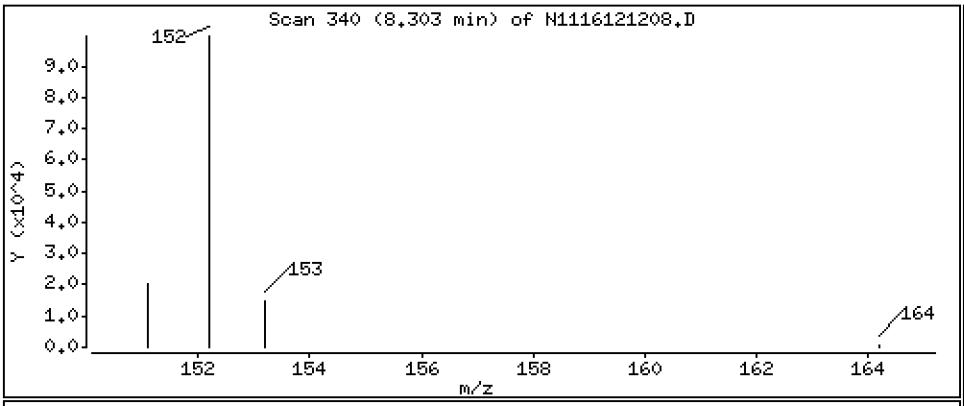
Operator: JW

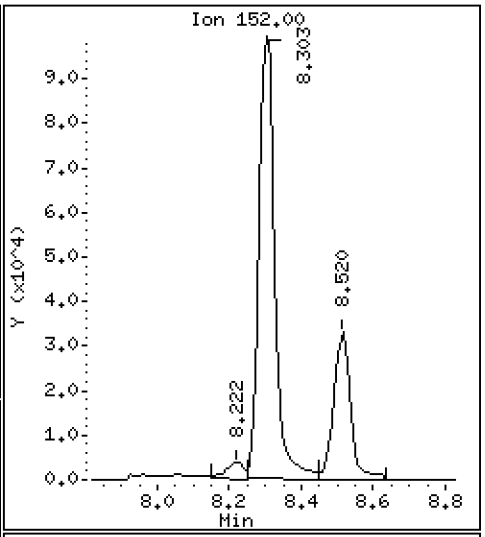
Column phase: Rxi-17Sil MS

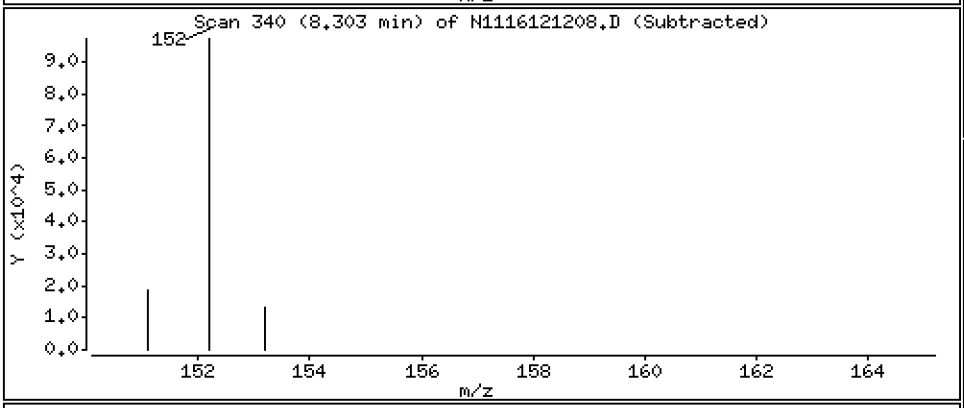
Column diameter: 0.25

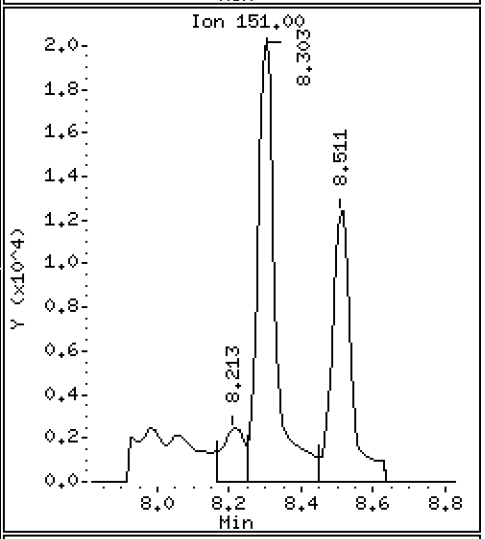
10 Acenaphthylene

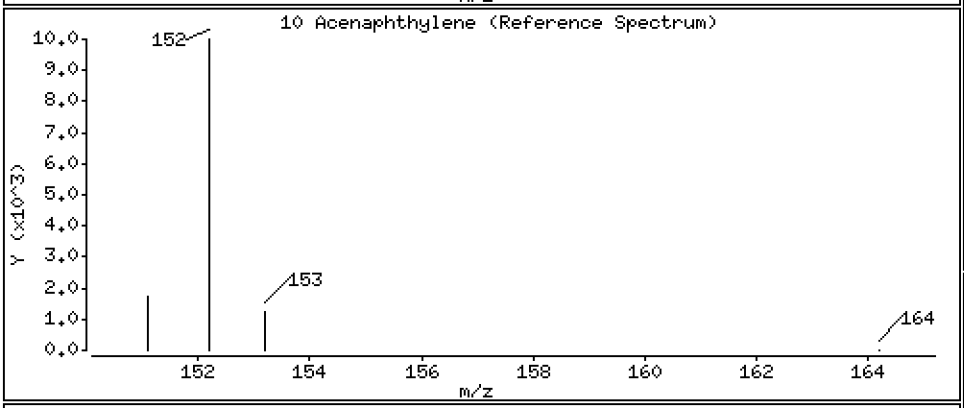
Concentration: 133 ng/mL

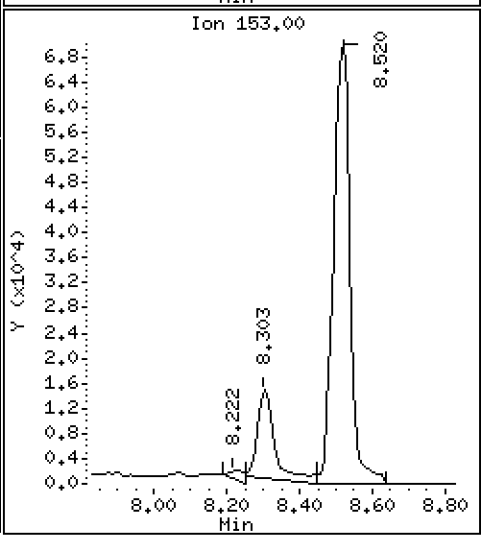


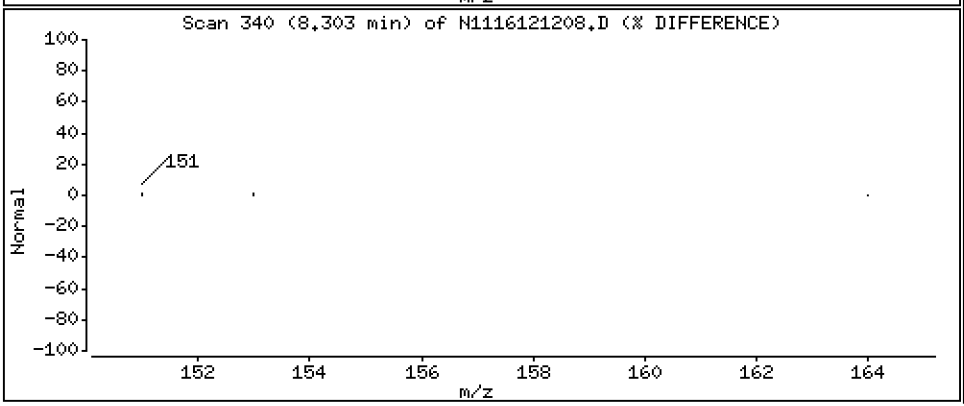












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

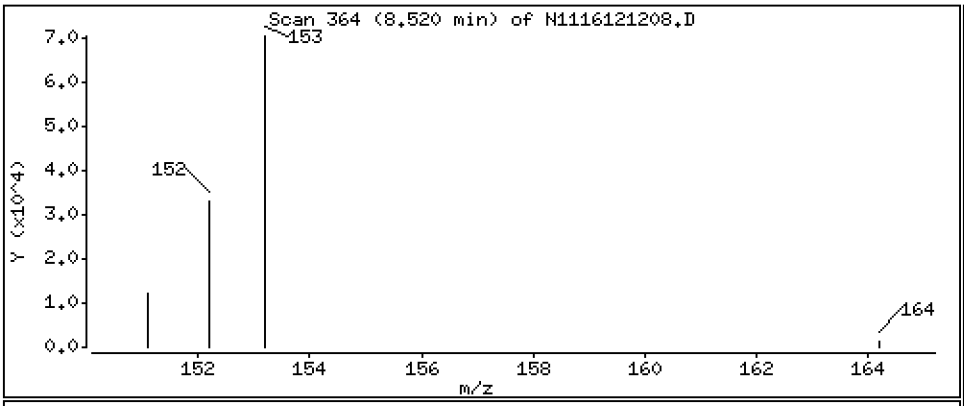
Operator: JW

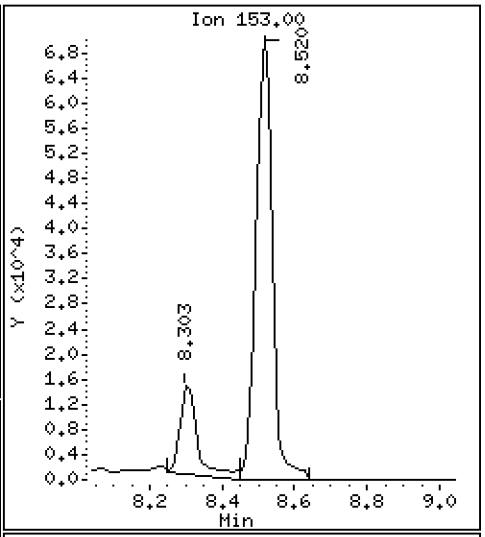
Column phase: Rxi-17Sil MS

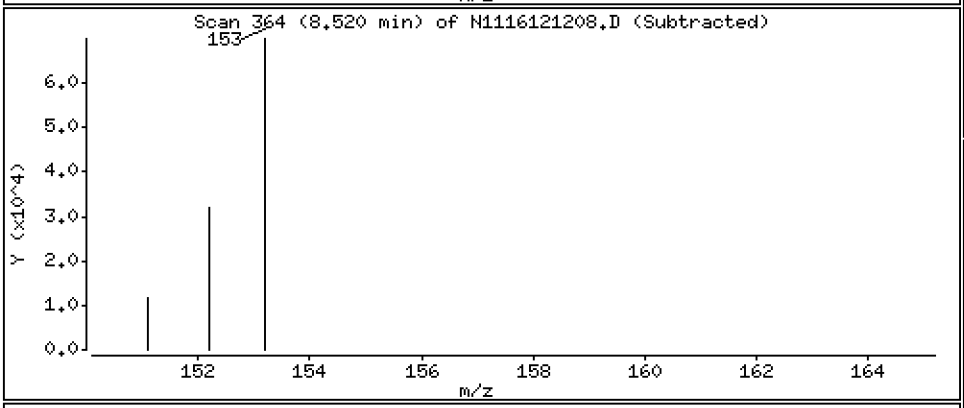
Column diameter: 0.25

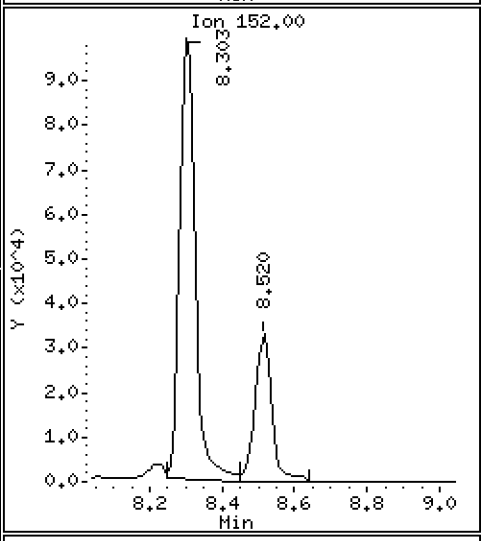
12 Acenaphthene

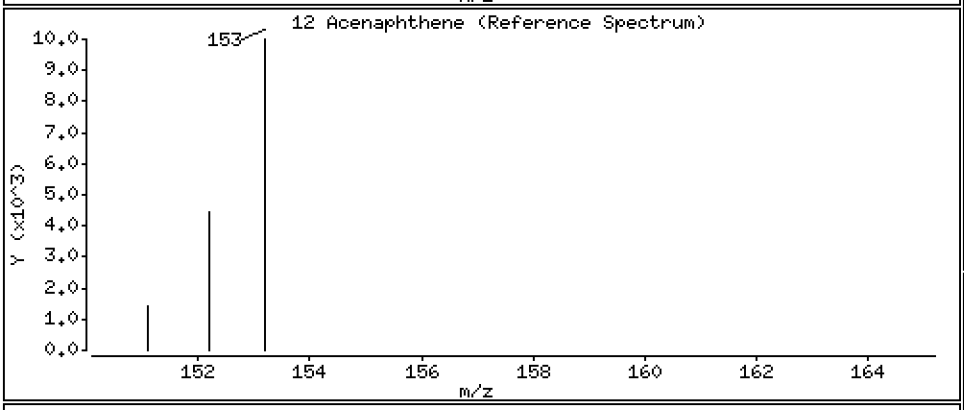
Concentration: 143 ng/mL

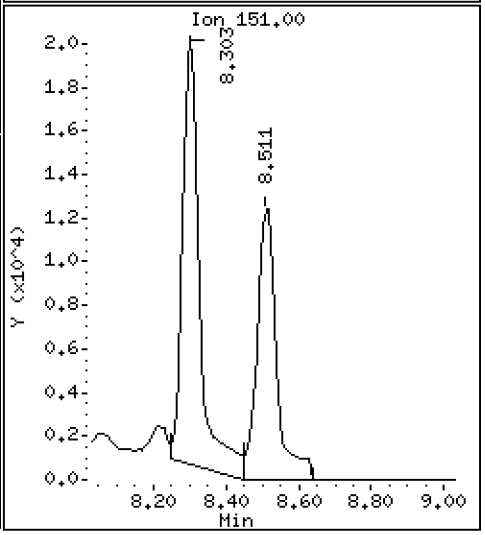


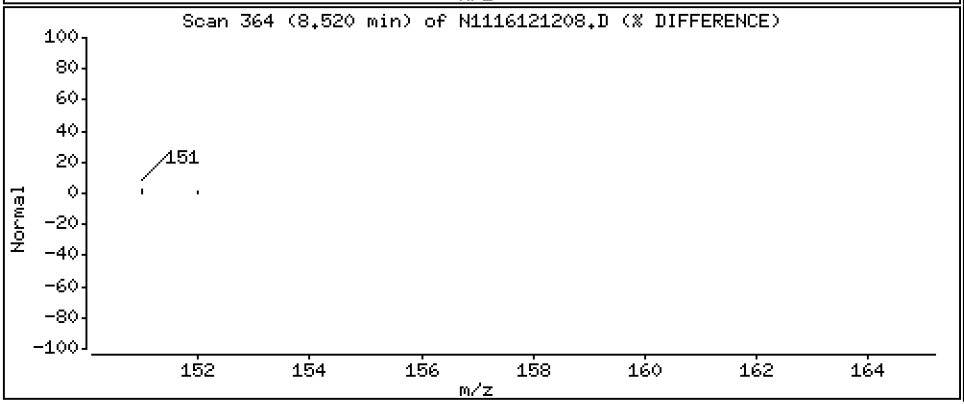












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

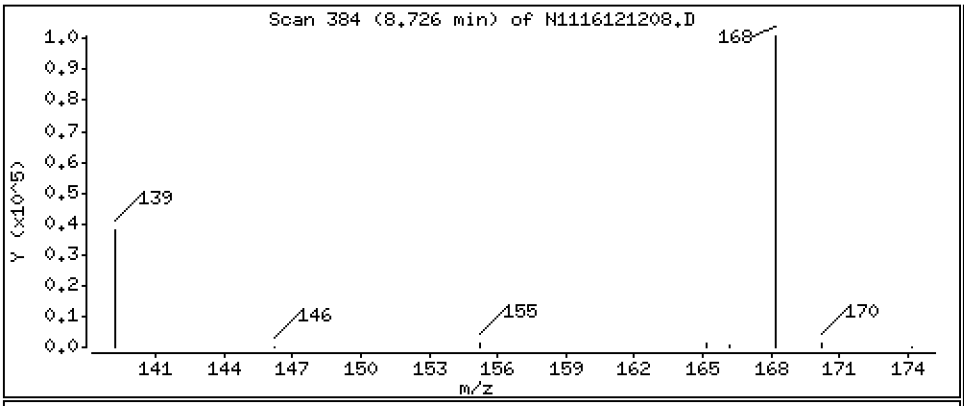
Operator: JW

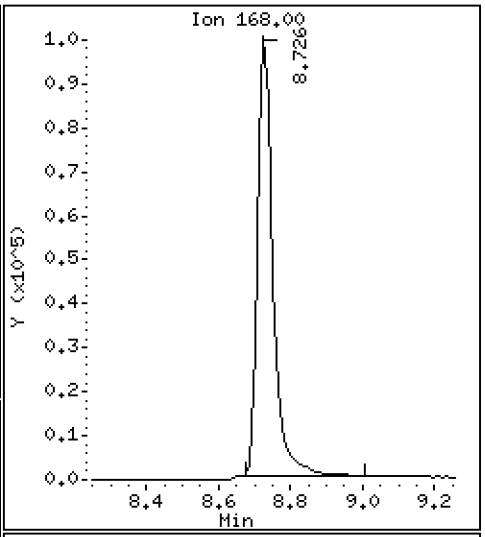
Column phase: Rxi-17Sil MS

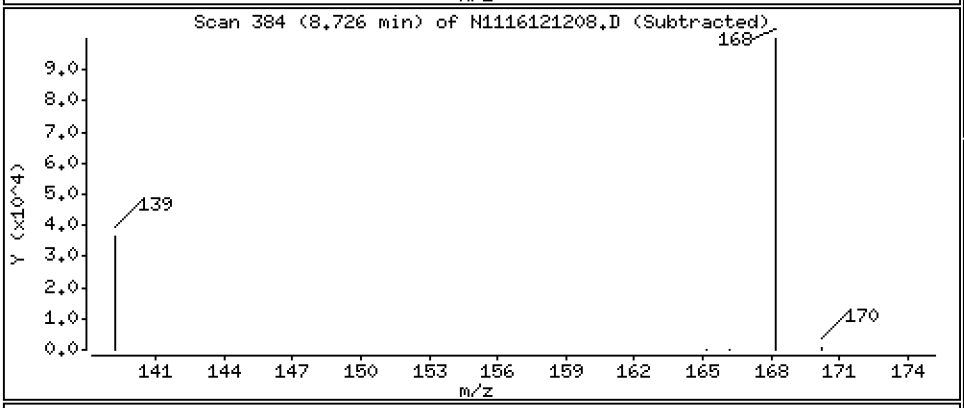
Column diameter: 0.25

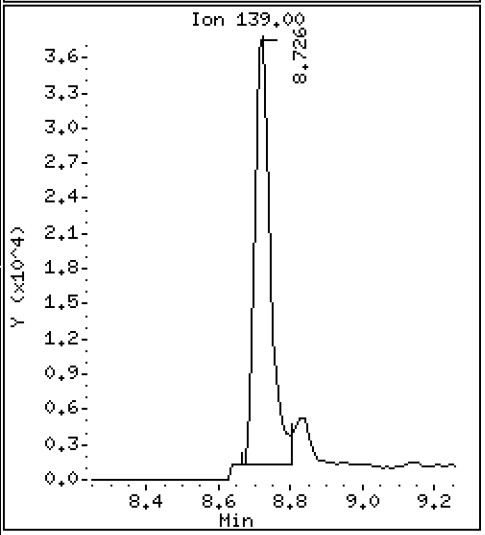
13 Dibenzofuran

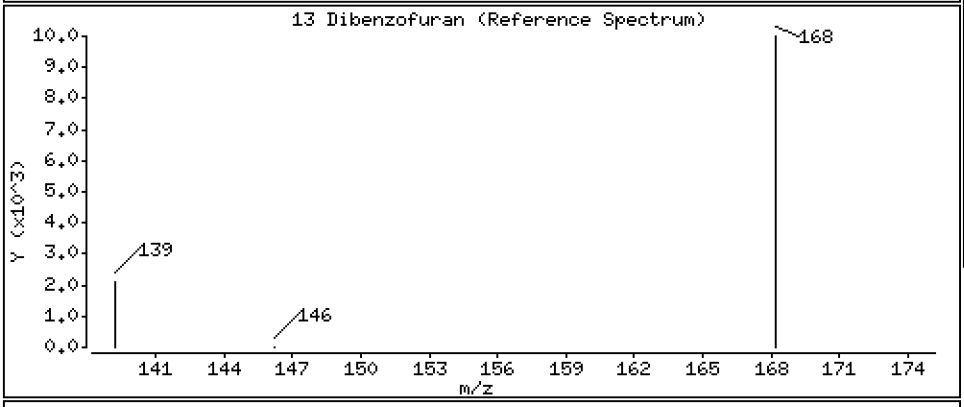
Concentration: 134 ng/mL

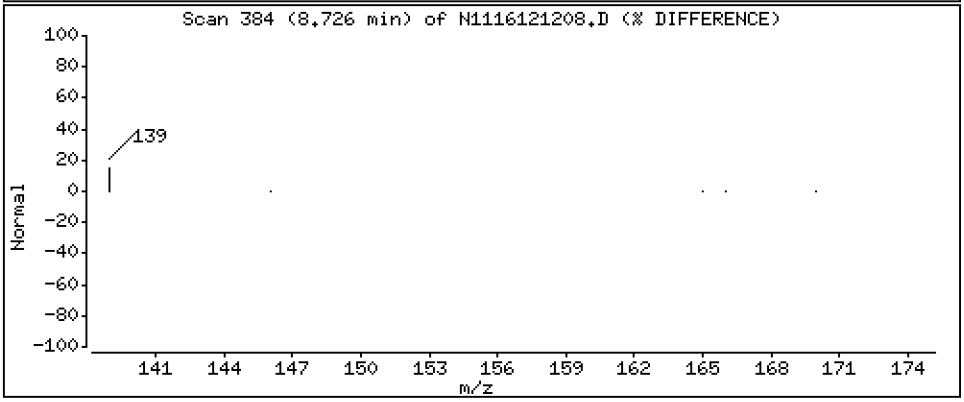












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

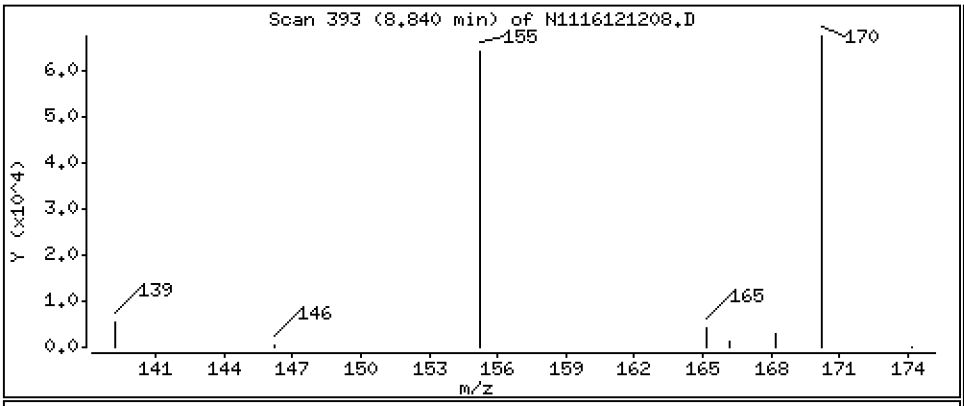
Operator: JW

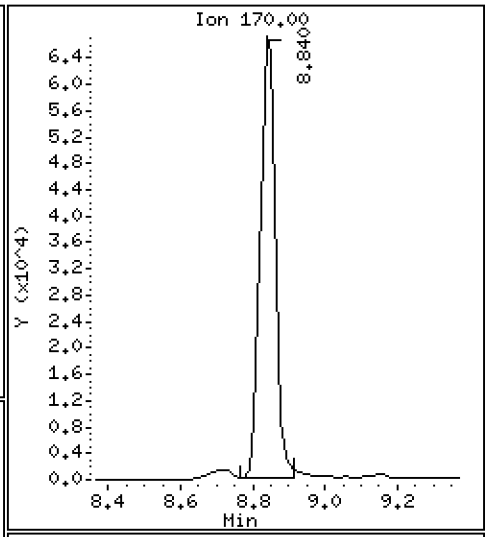
Column phase: Rxi-17Sil MS

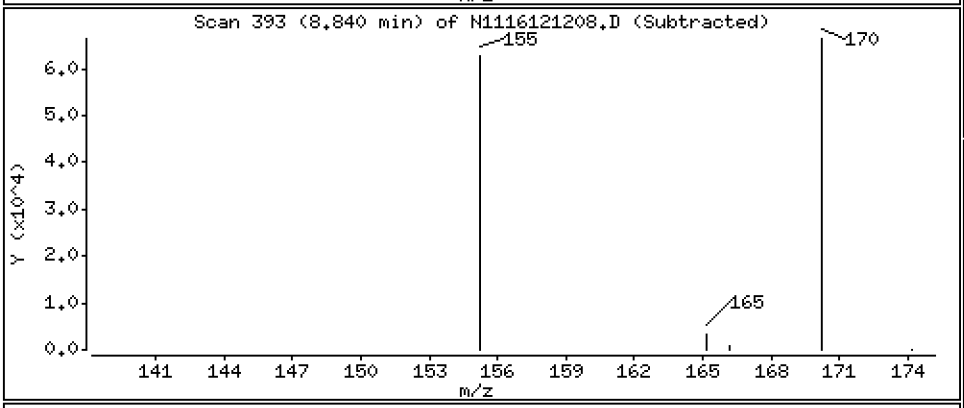
Column diameter: 0.25

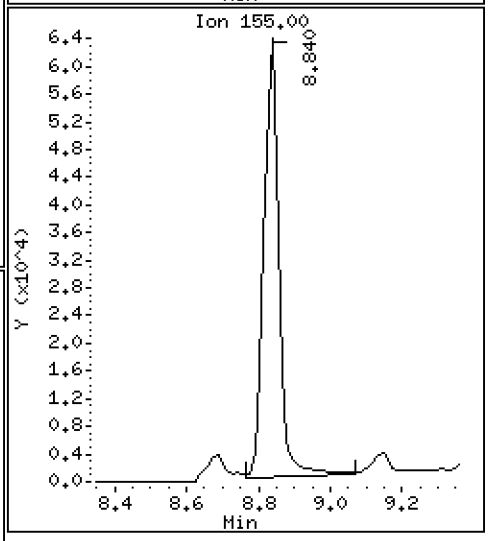
14 2,3,5-Trimethylnaphthalene

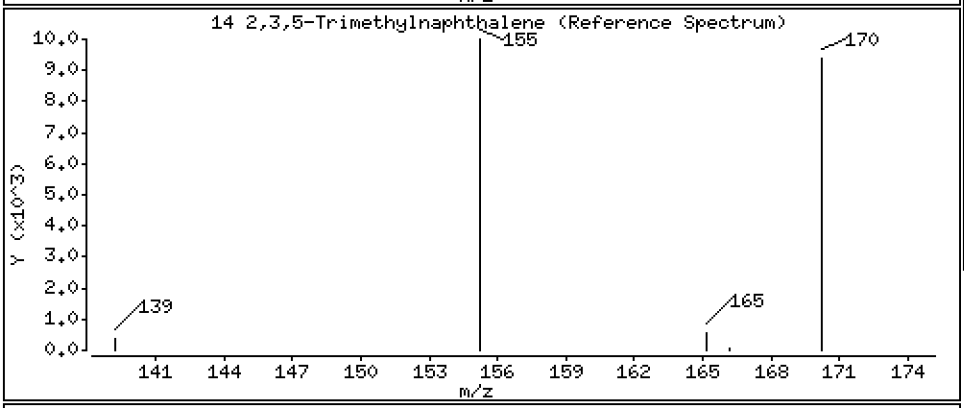
Concentration: 143 ng/mL

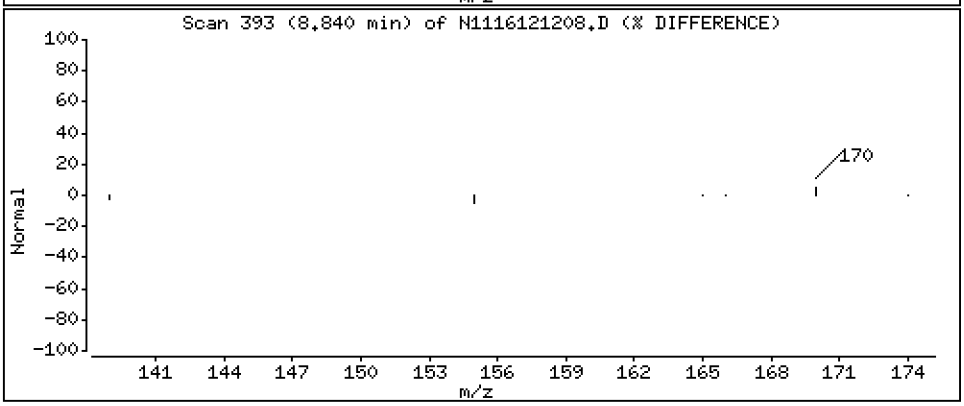












Date : 12-DEC-2016 11:58

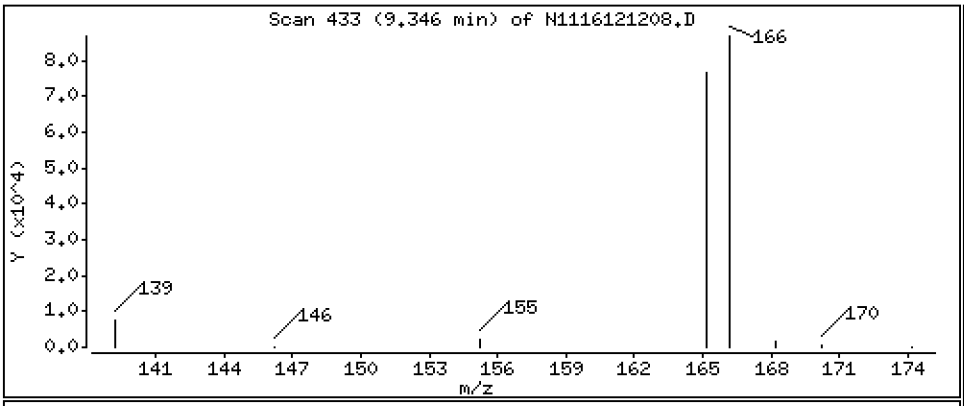
Client ID: Instrument: nt11.i

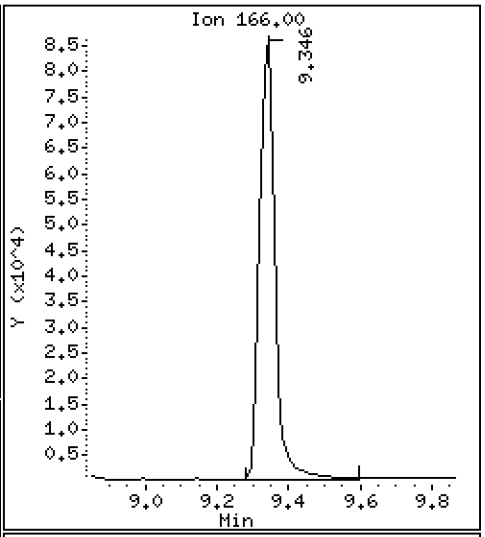
Sample Info: BEK0657-BS1

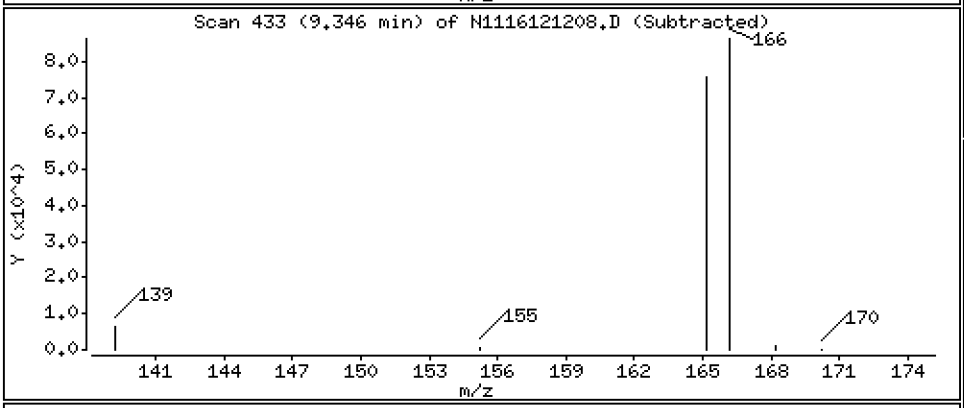
Operator: JW

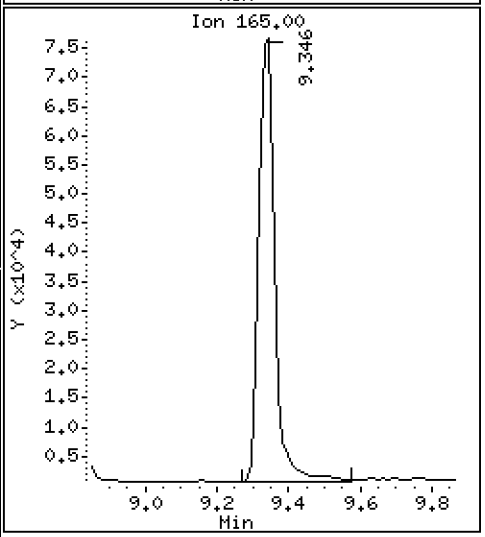
Column phase: Rxi-17Sil MS Column diameter: 0.25

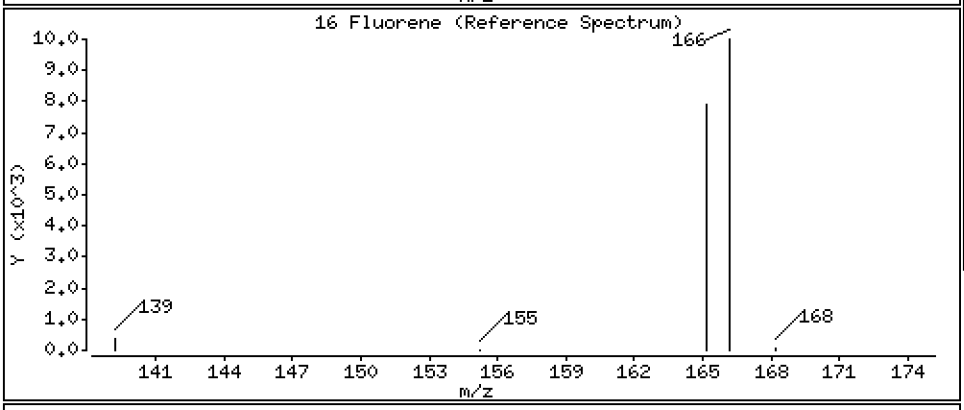
16 Fluorene Concentration: 147 ng/mL

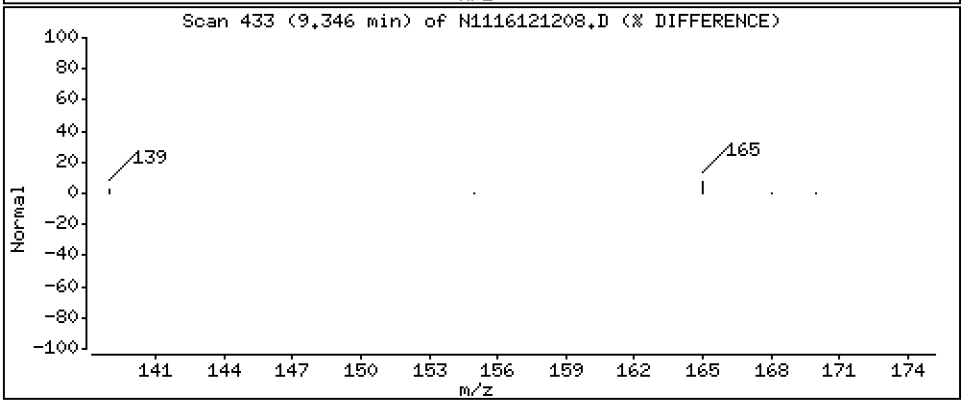












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

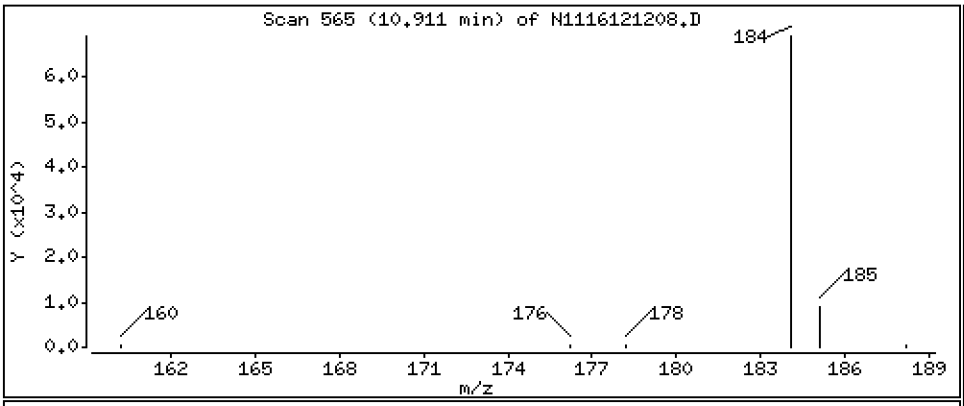
Operator: JW

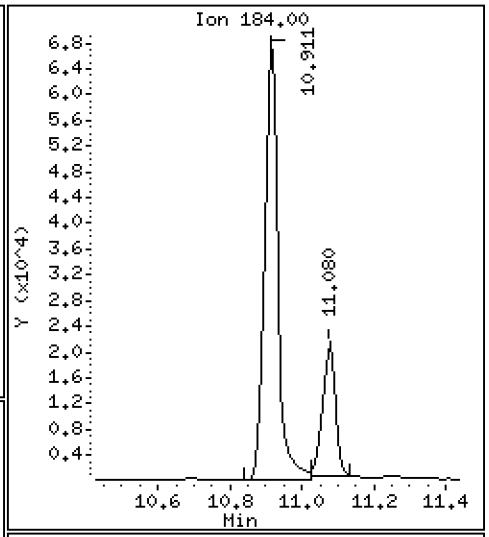
Column phase: Rxi-17Sil MS

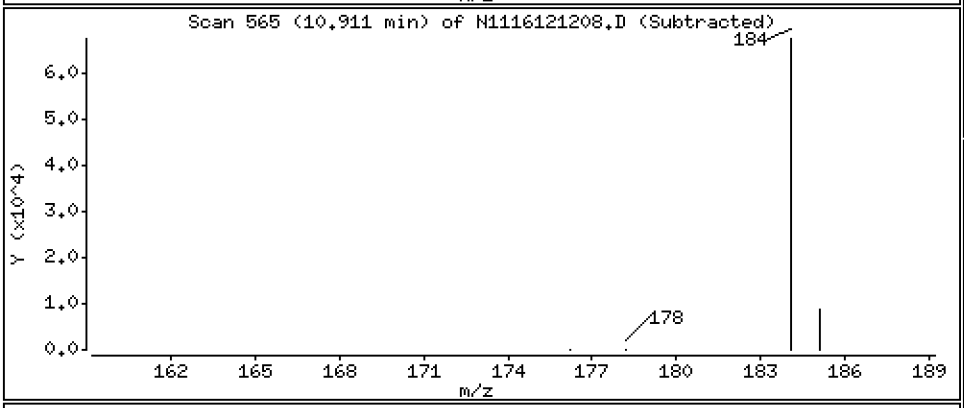
Column diameter: 0.25

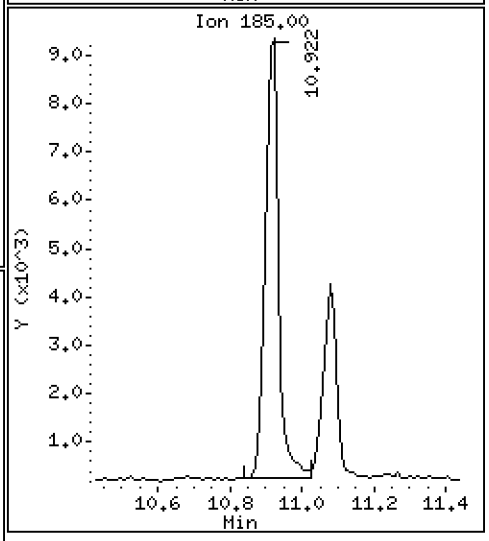
17 Dibenzothiophene

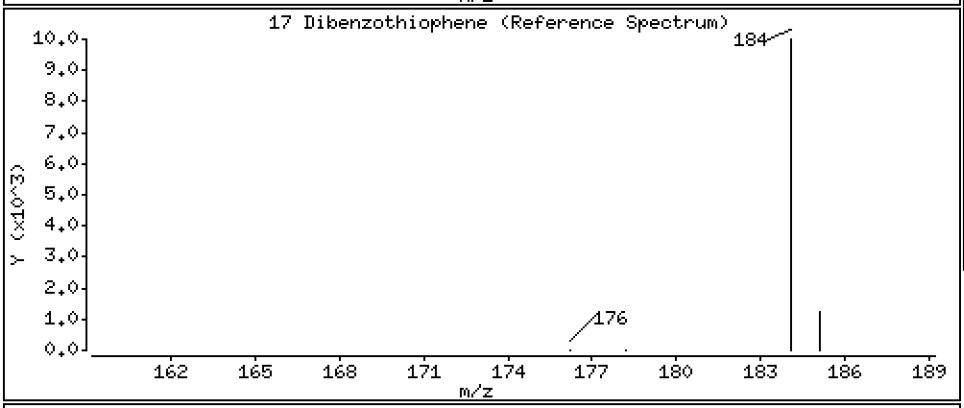
Concentration: 85.5 ng/mL

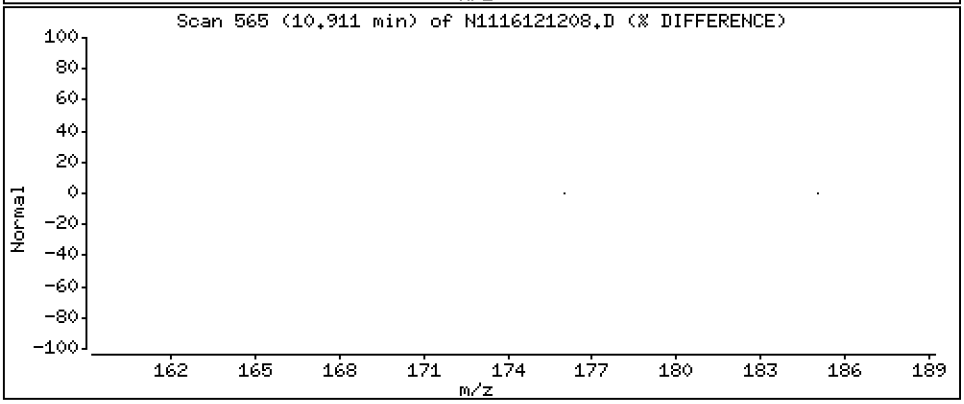












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

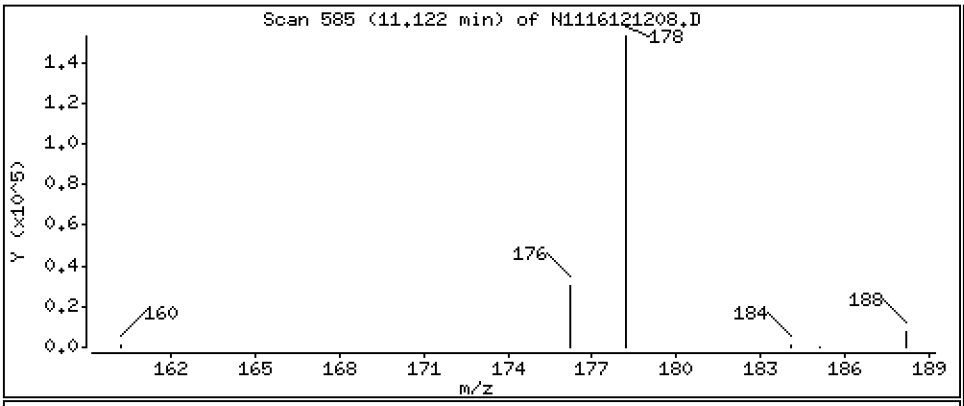
Operator: JW

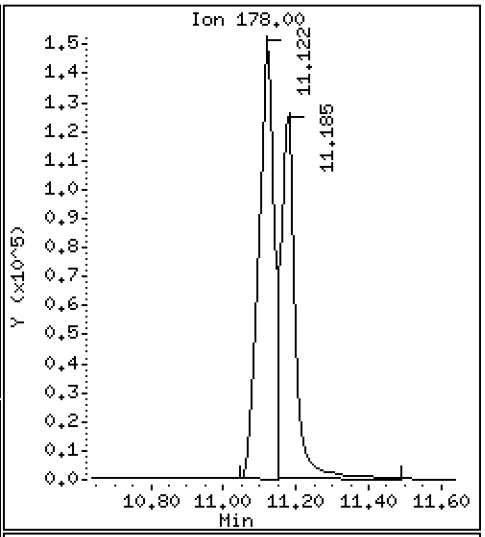
Column phase: Rxi-17Sil MS

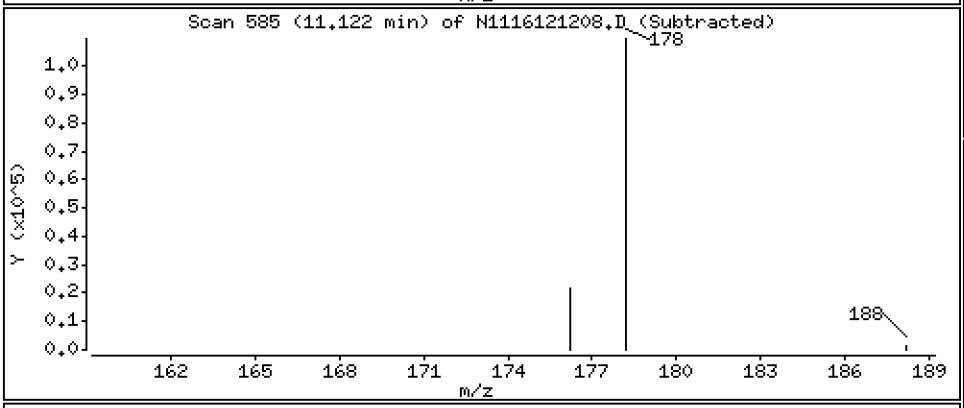
Column diameter: 0.25

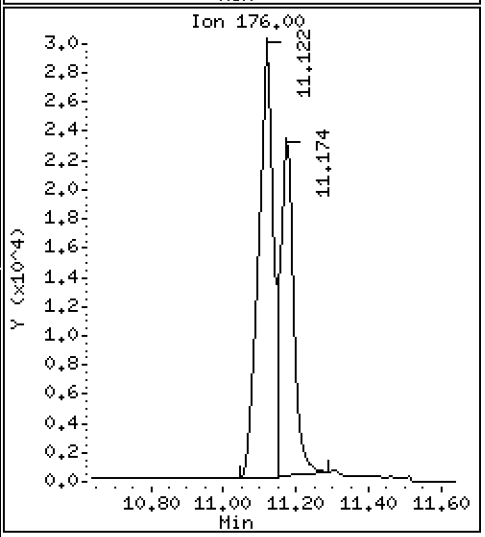
19 Phenanthrene

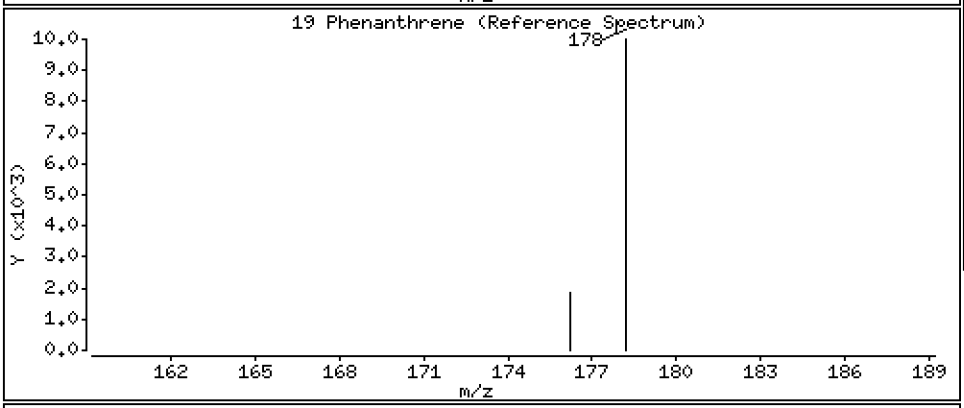
Concentration: 179 ng/mL

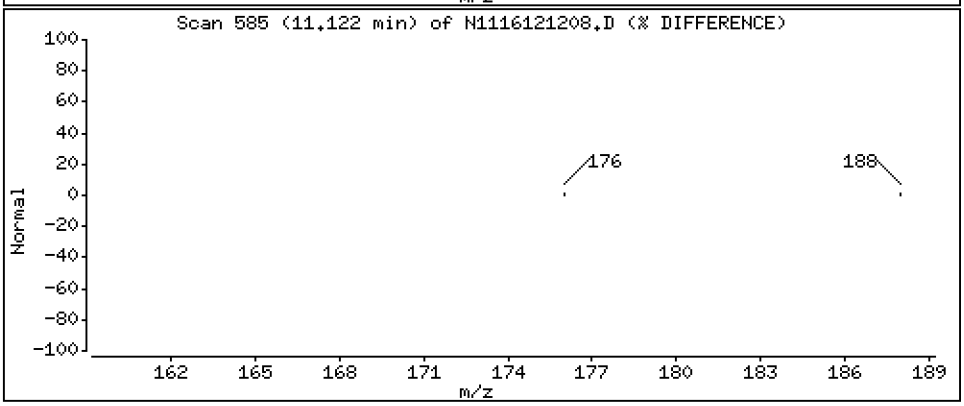












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

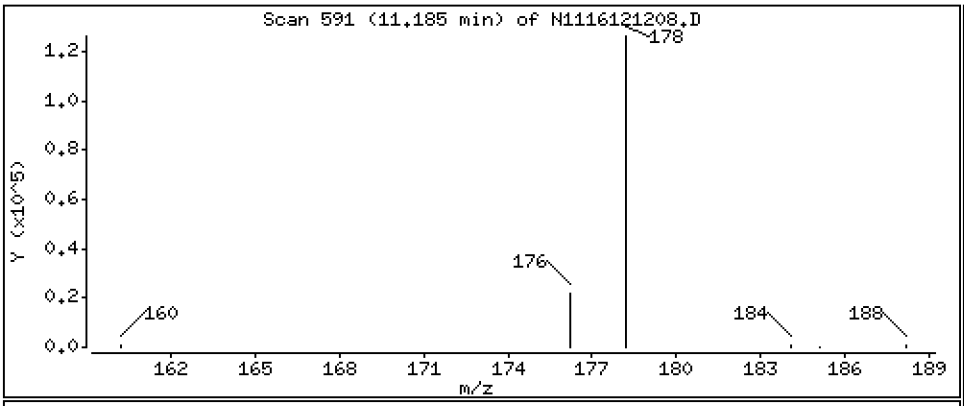
Operator: JW

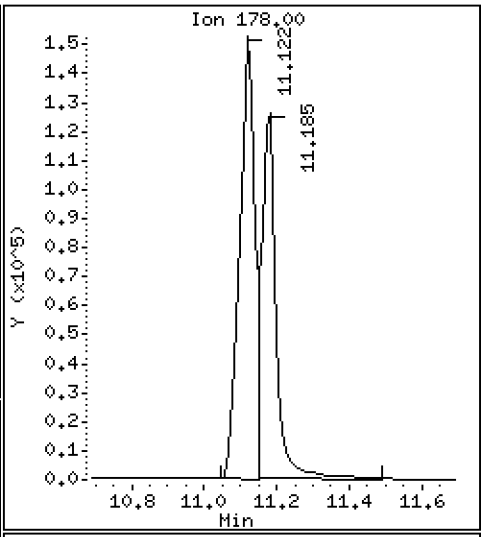
Column phase: Rxi-17Sil MS

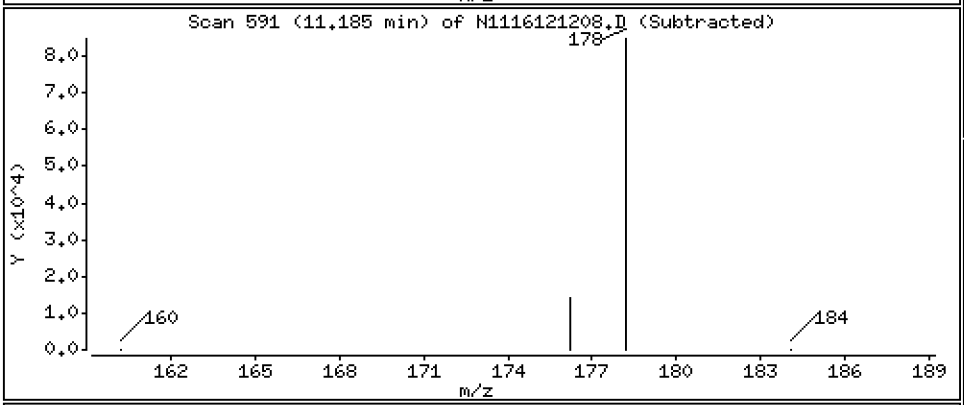
Column diameter: 0.25

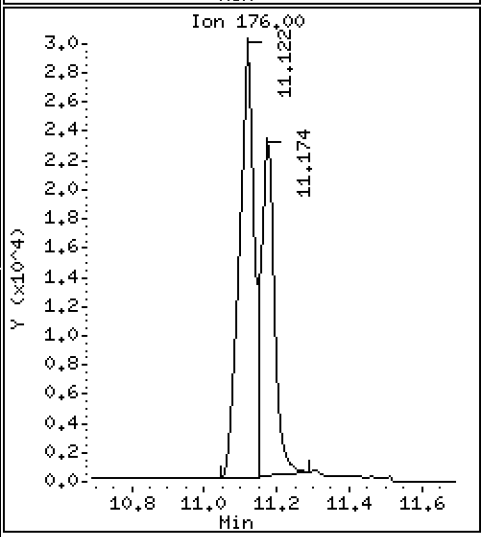
21 Anthracene

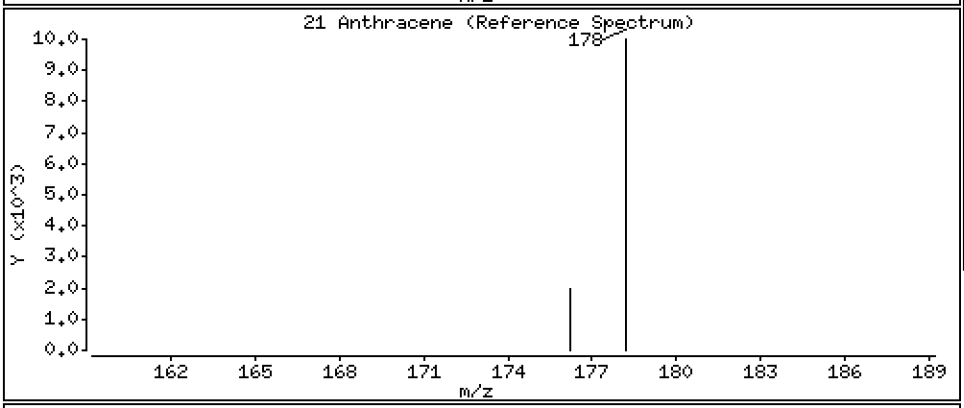
Concentration: 150 ng/mL

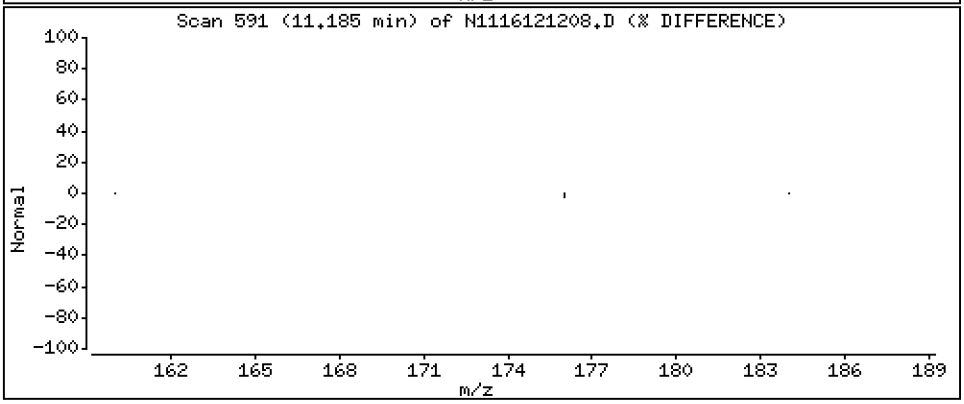












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

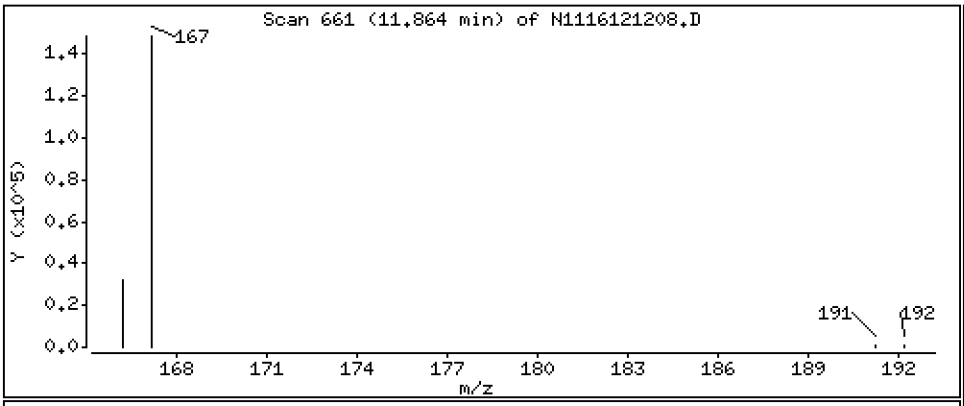
Operator: JW

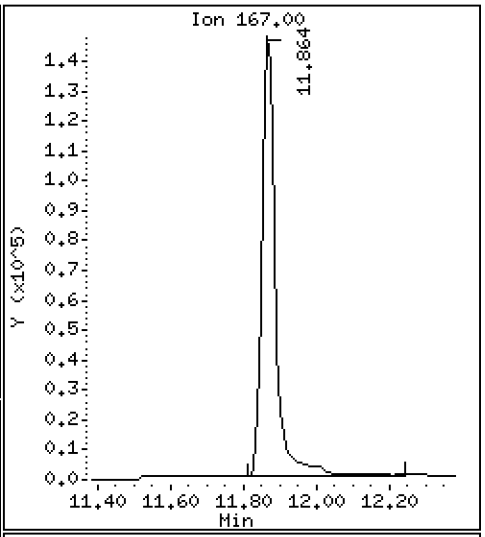
Column phase: Rxi-17Sil MS

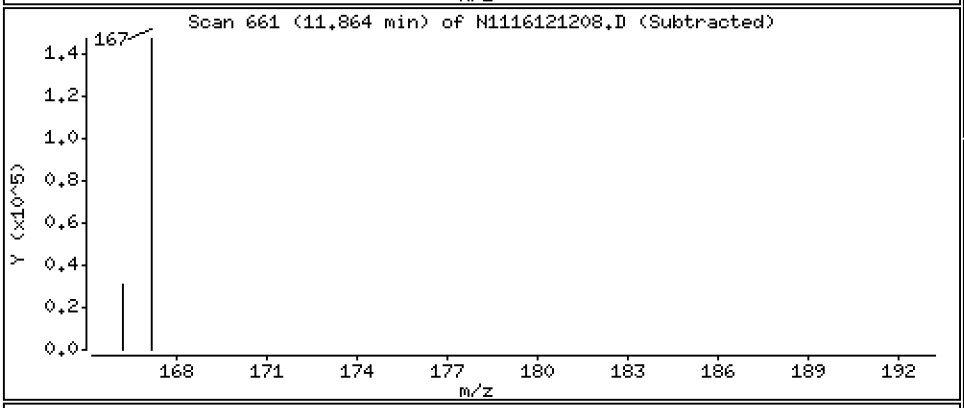
Column diameter: 0.25

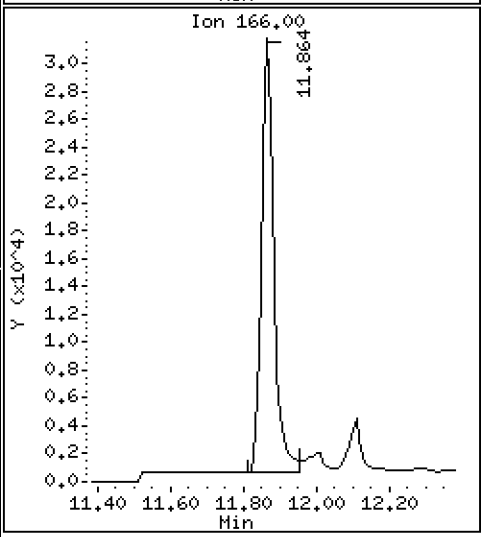
22 Carbazole

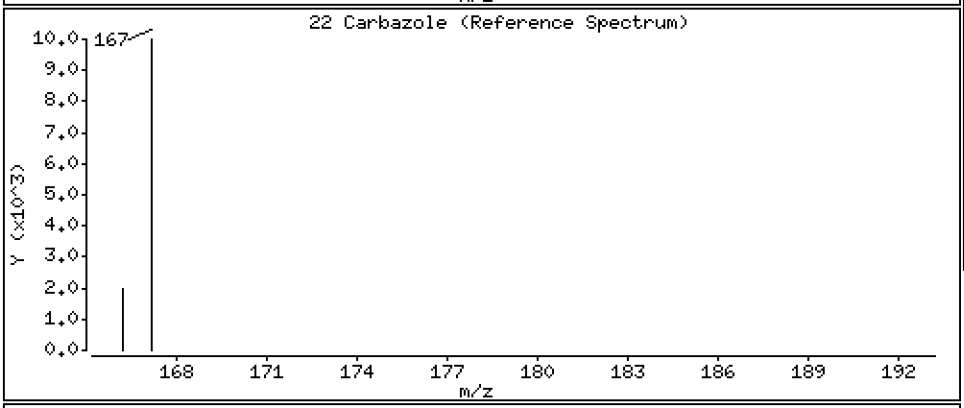
Concentration: 136 ng/mL

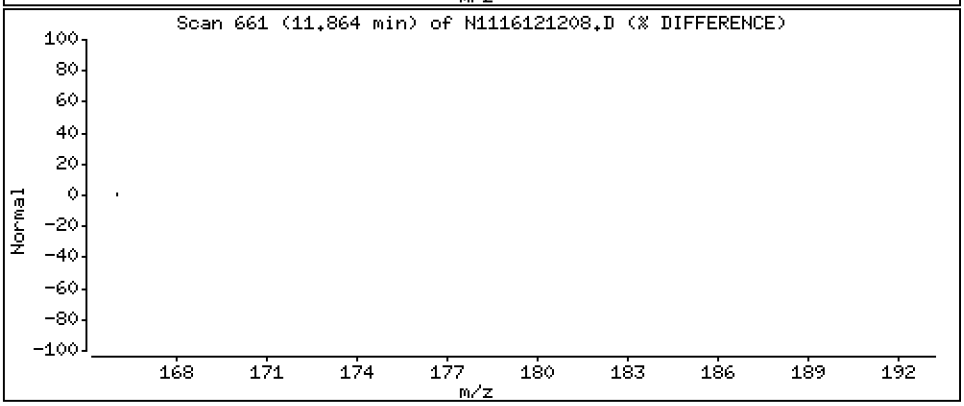












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

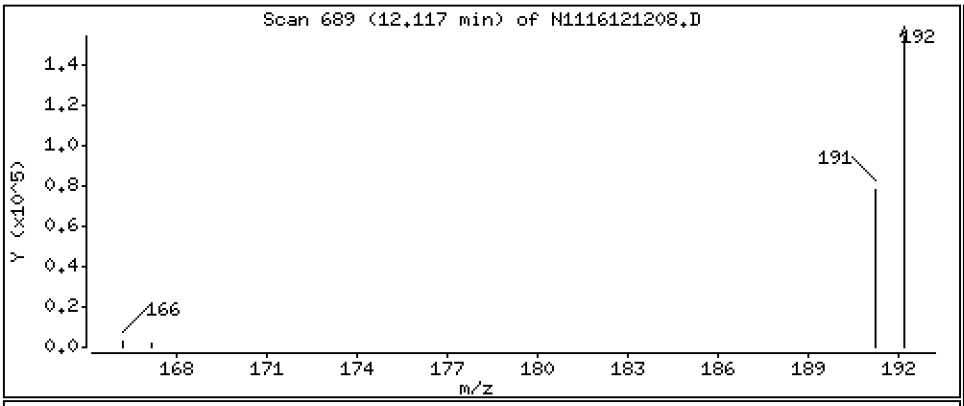
Operator: JW

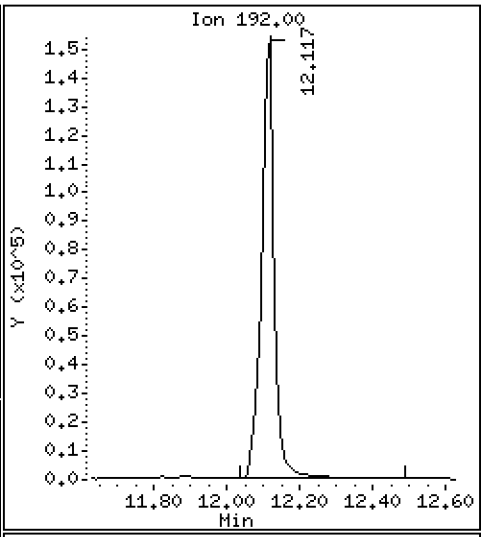
Column phase: Rxi-17Sil MS

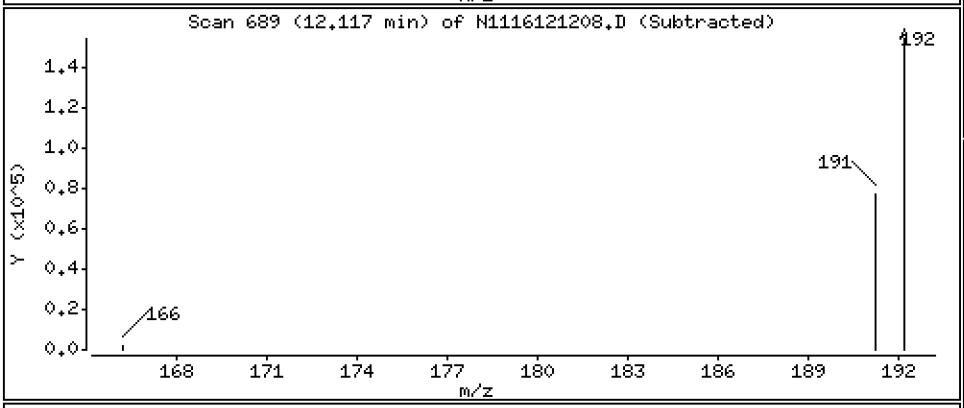
Column diameter: 0.25

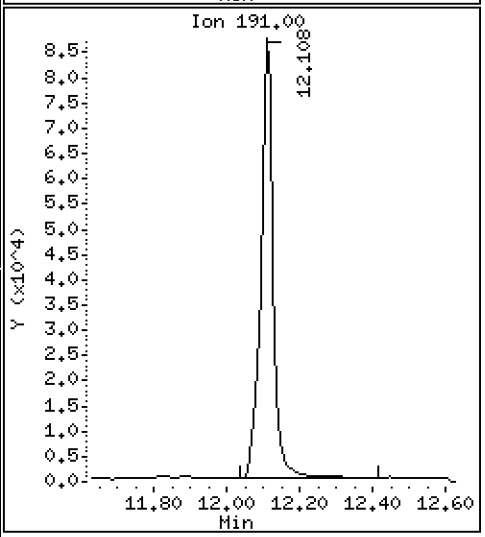
23 1-Methylphenanthrene

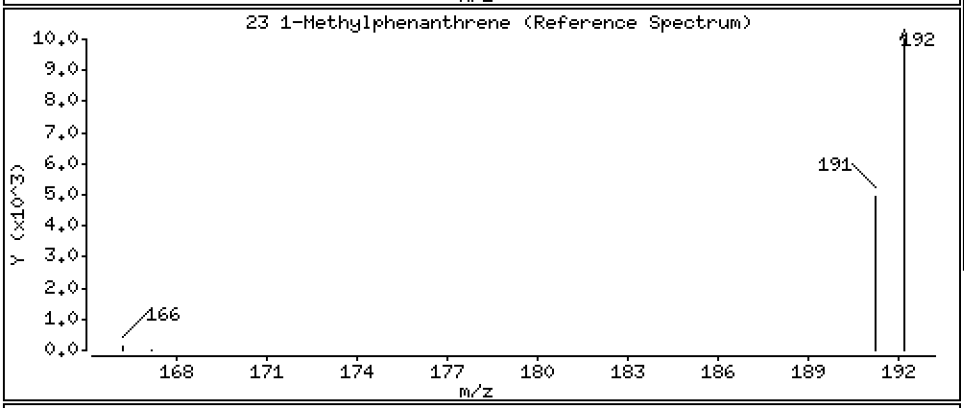
Concentration: 167 ng/mL

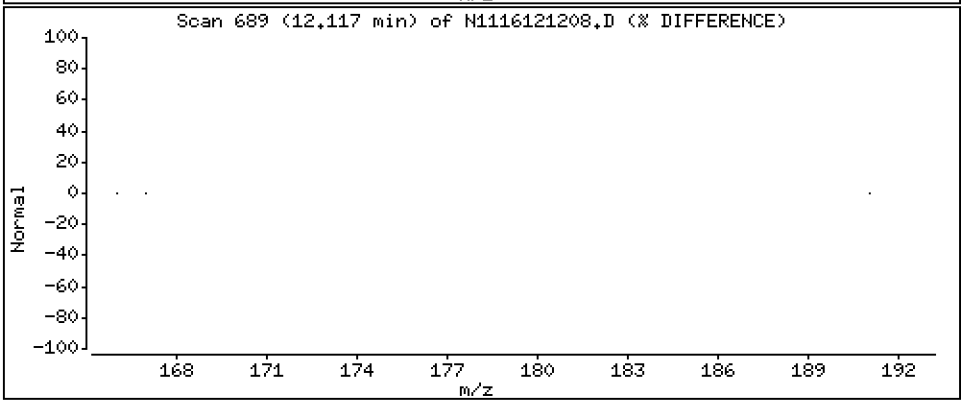












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

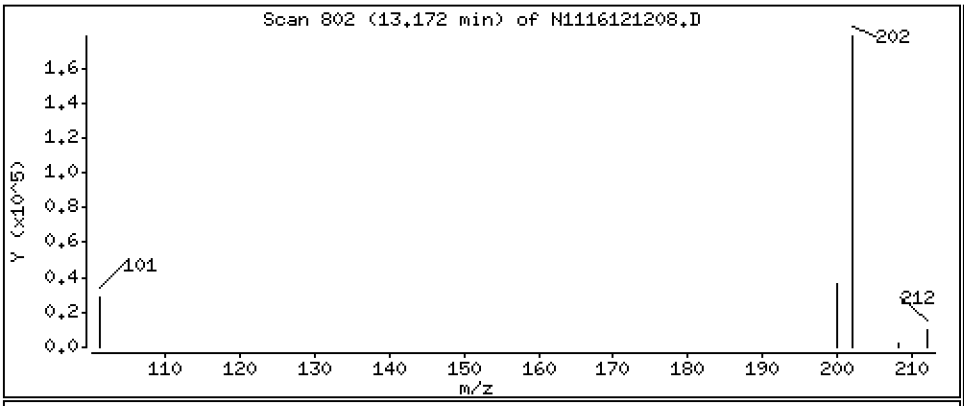
Operator: JW

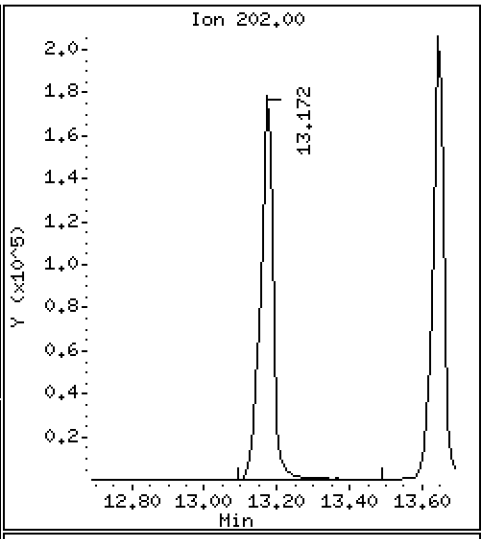
Column phase: Rxi-17Sil MS

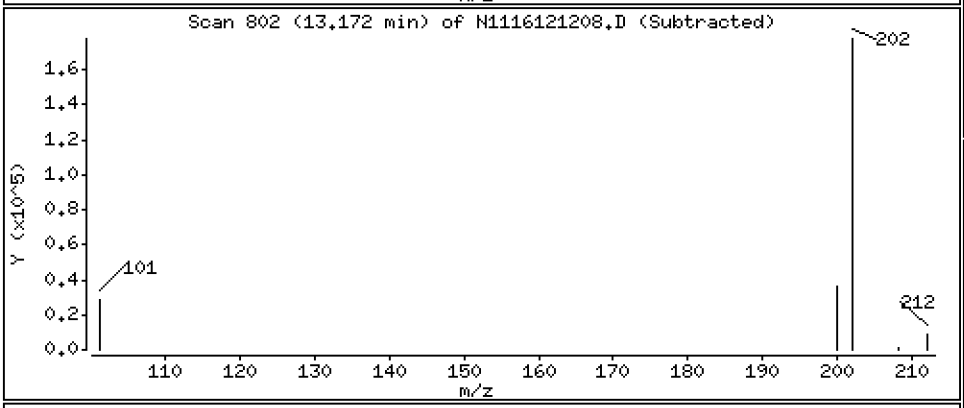
Column diameter: 0.25

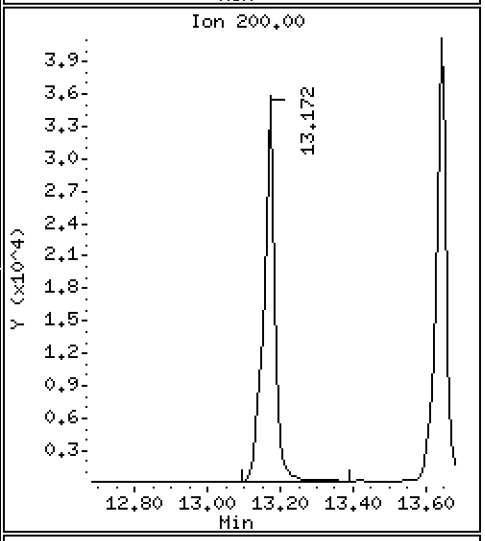
25 Fluoranthene

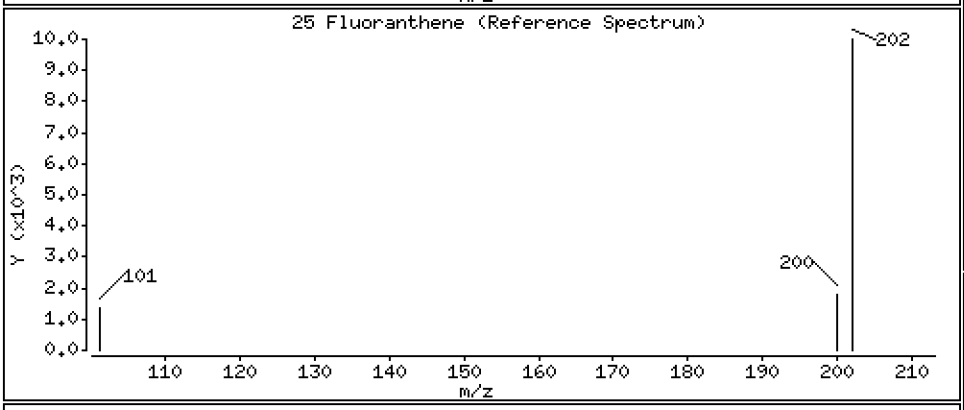
Concentration: 169 ng/mL

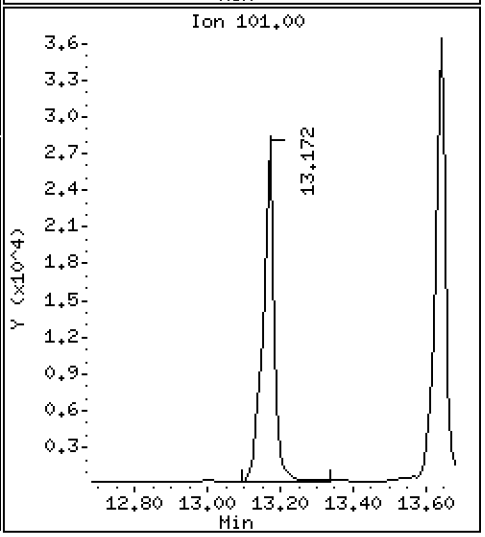


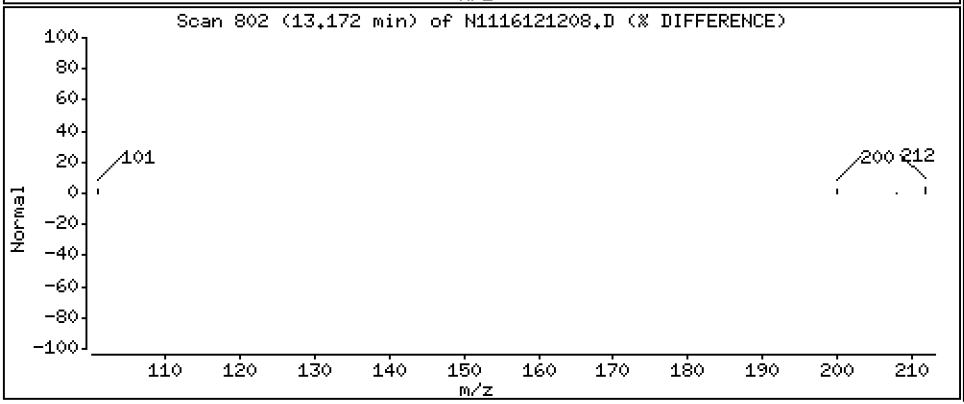












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

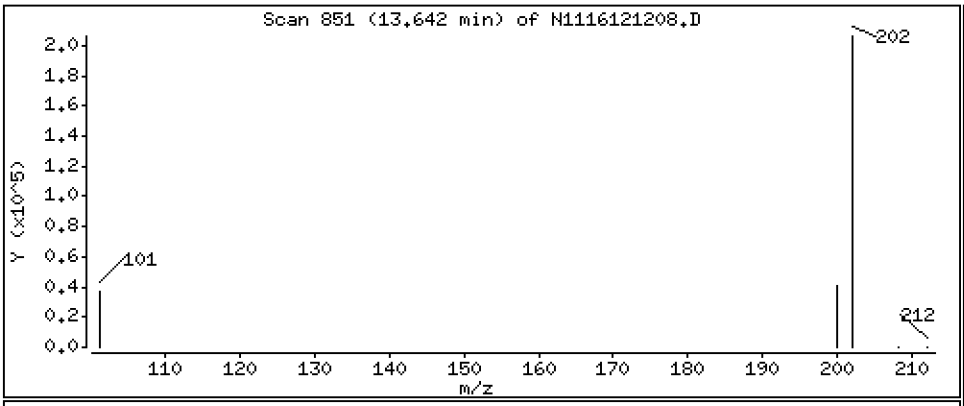
Operator: JW

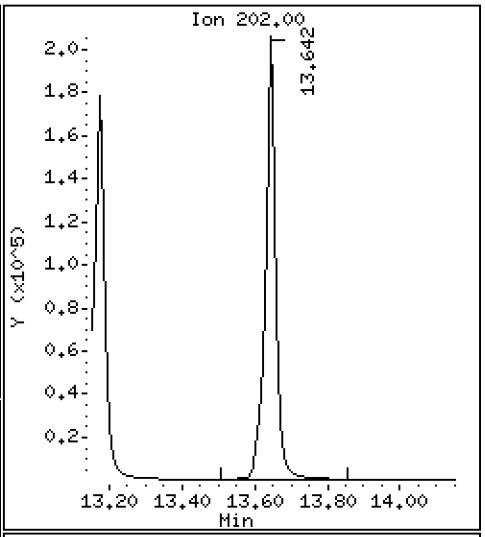
Column phase: Rxi-17Sil MS

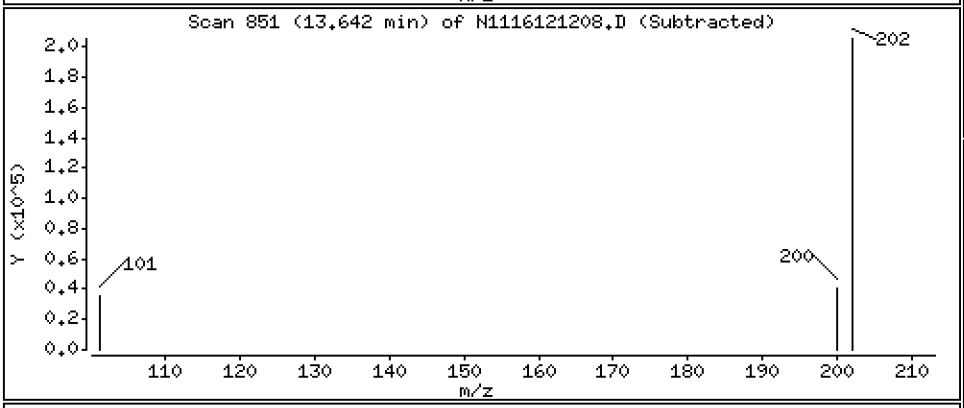
Column diameter: 0.25

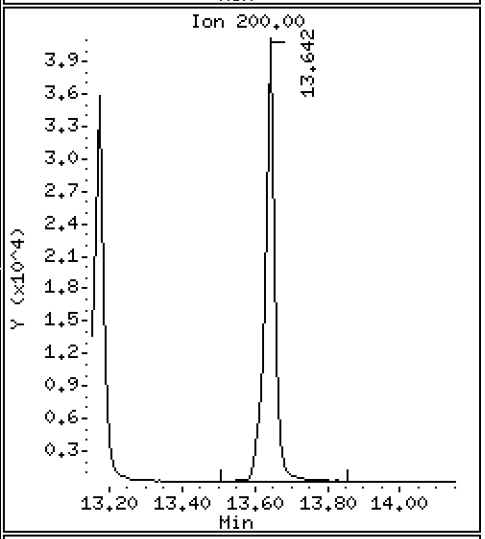
26 Pyrene

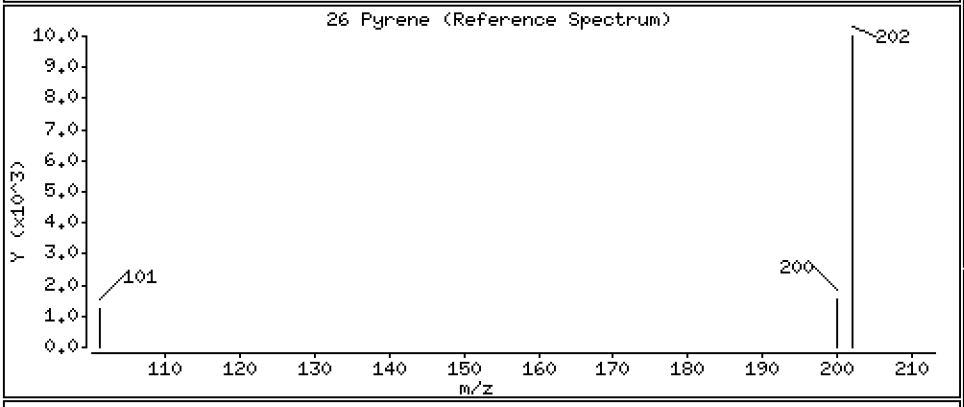
Concentration: 167 ng/mL

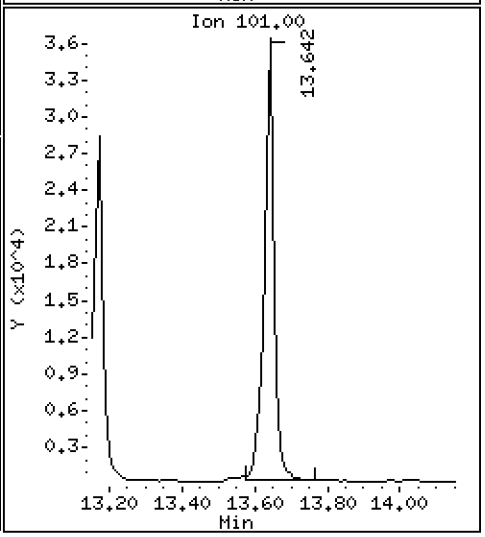


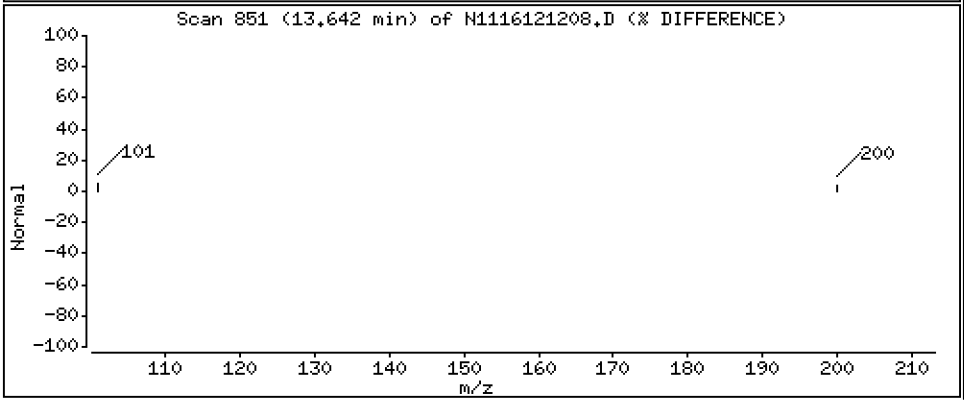












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

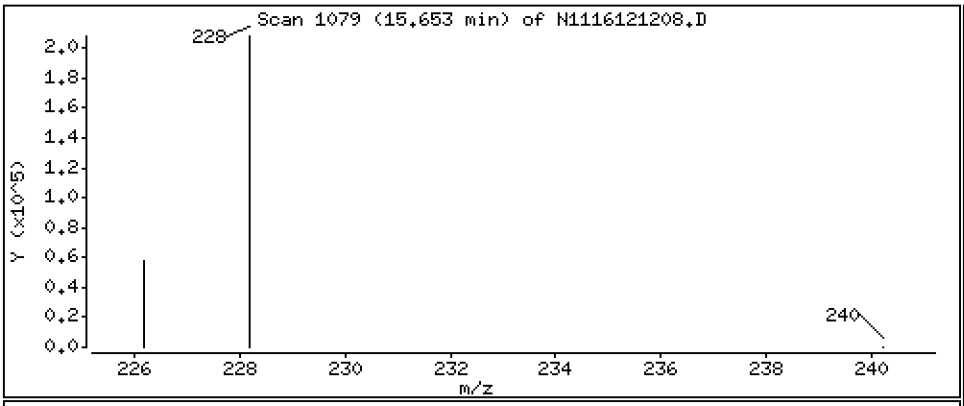
Operator: JW

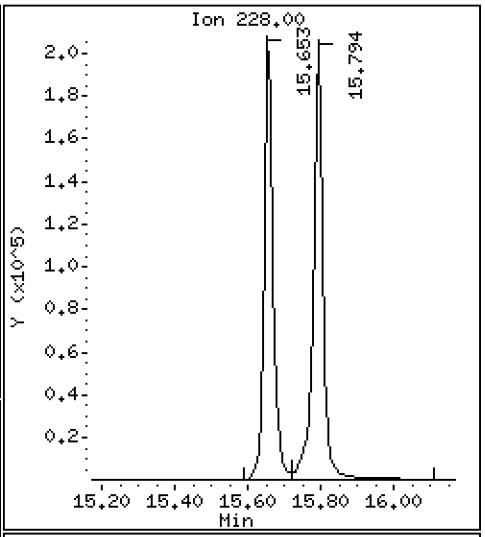
Column phase: Rxi-17Sil MS

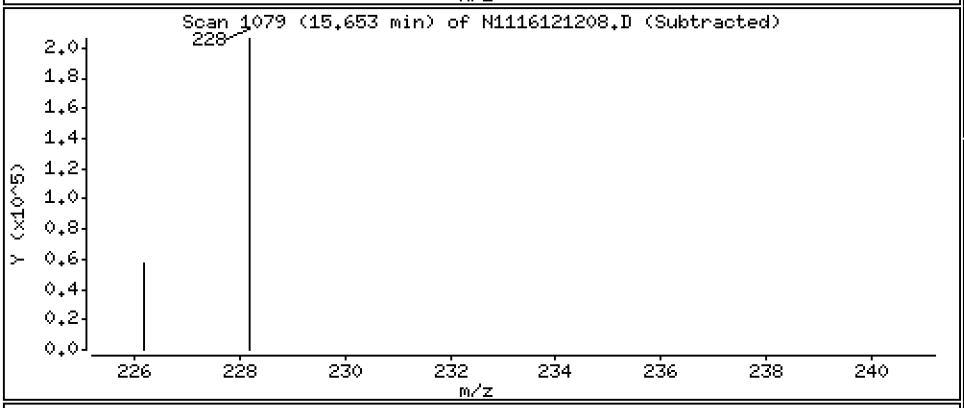
Column diameter: 0.25

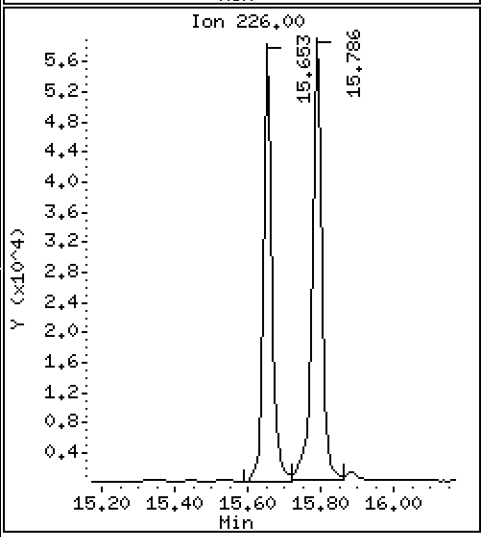
27 Benzo(a)anthracene

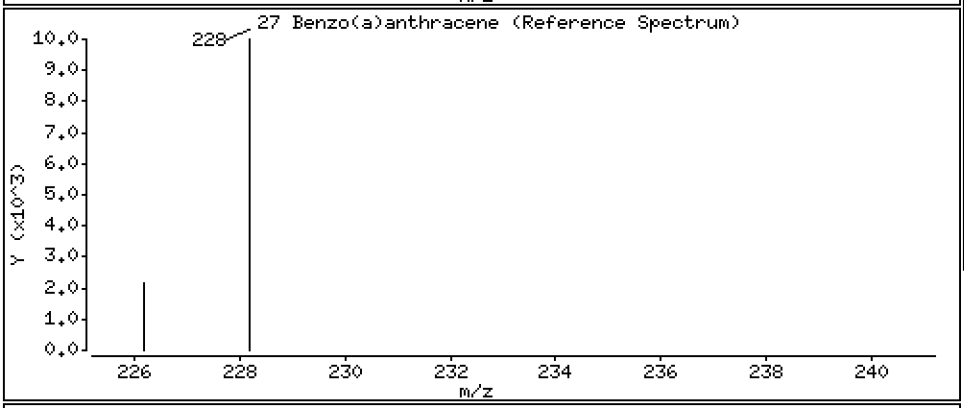
Concentration: 161 ng/mL

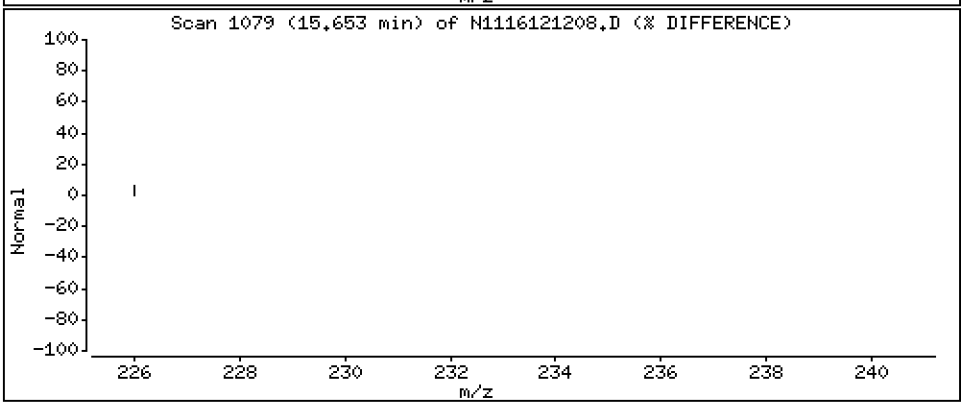












Date : 12-DEC-2016 11:58

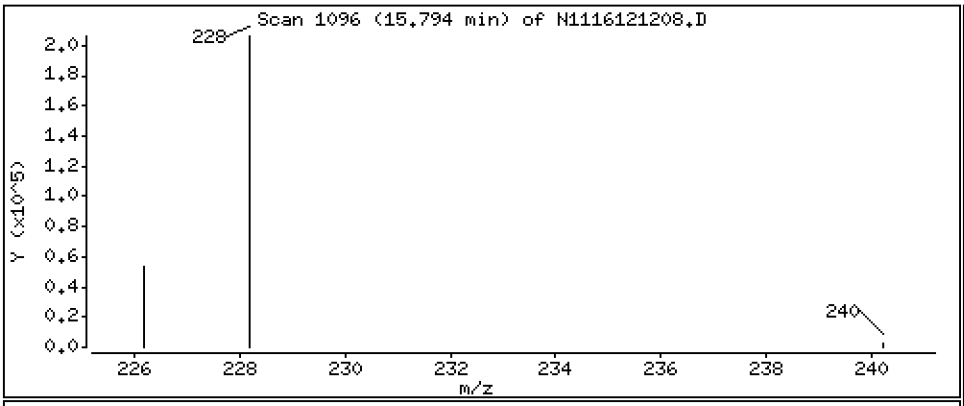
Client ID: Instrument: nt11.i

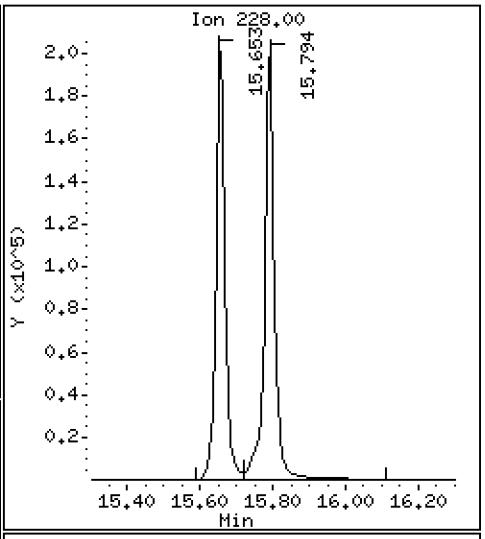
Sample Info: BEK0657-BS1

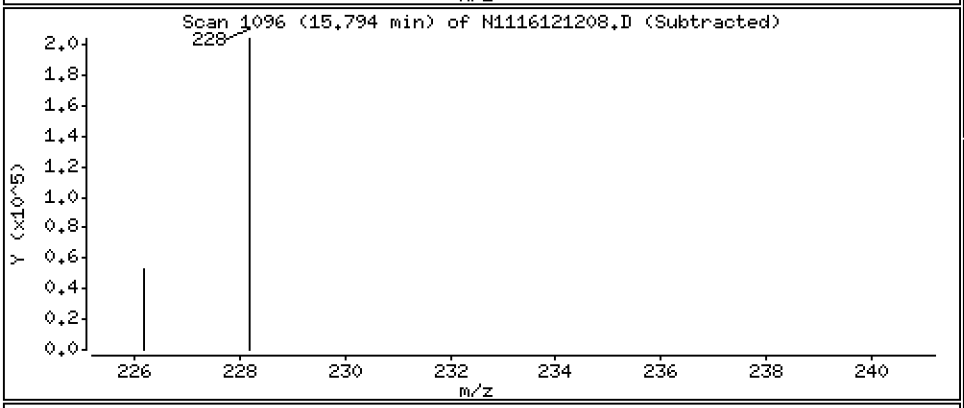
Operator: JW

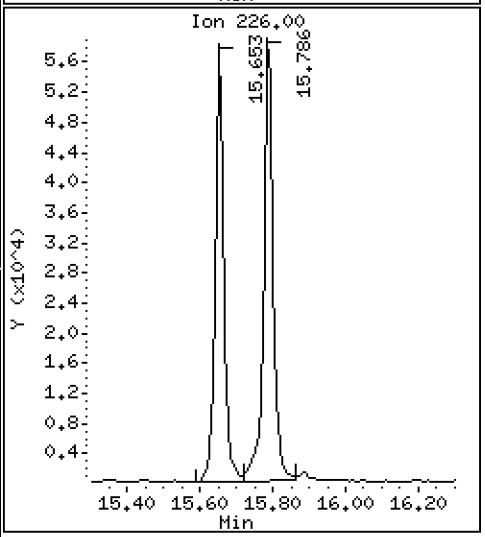
Column phase: Rxi-17Sil MS Column diameter: 0.25

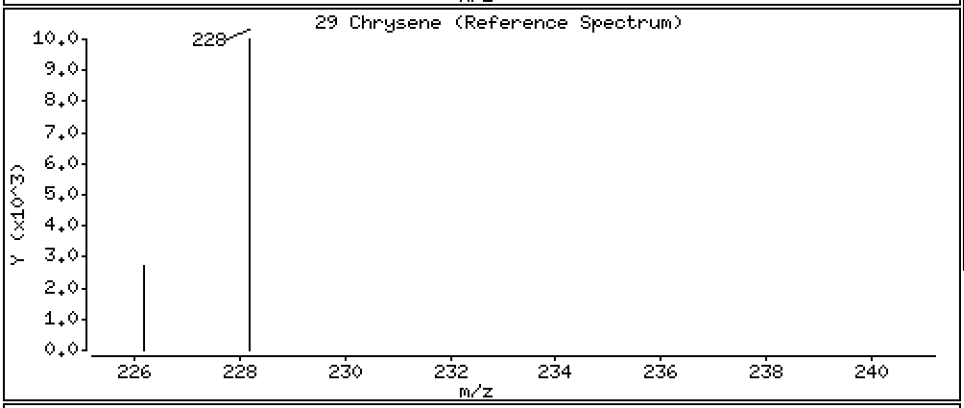
29 Chrysene Concentration: 156 ng/mL

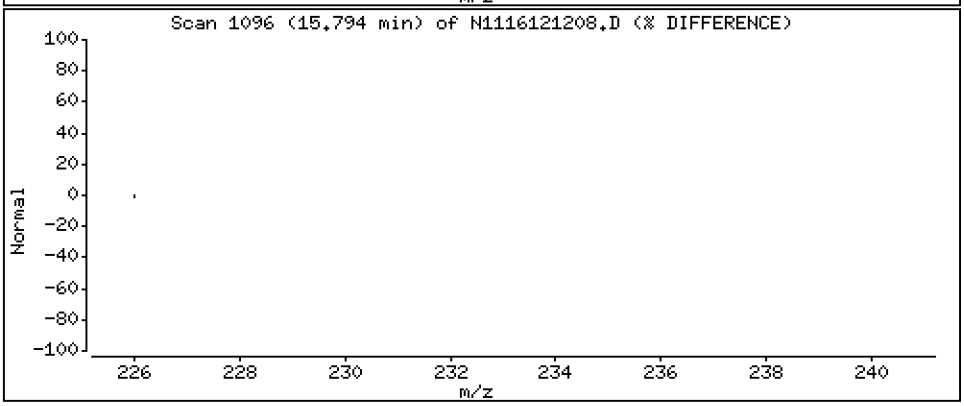












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

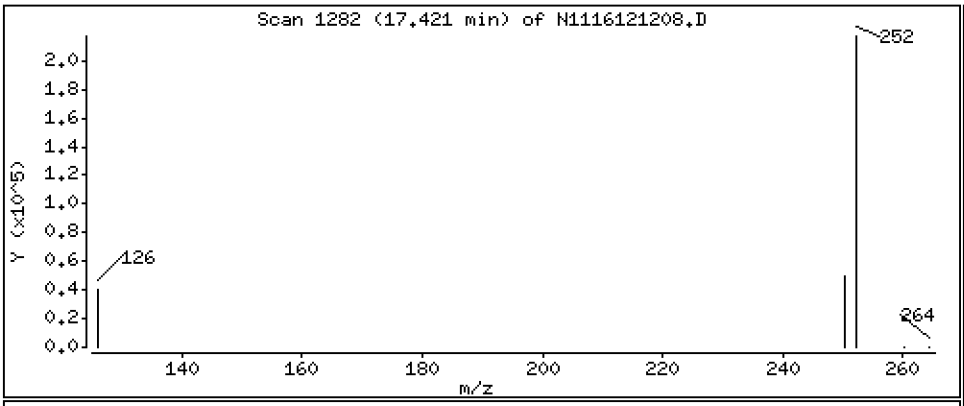
Operator: JW

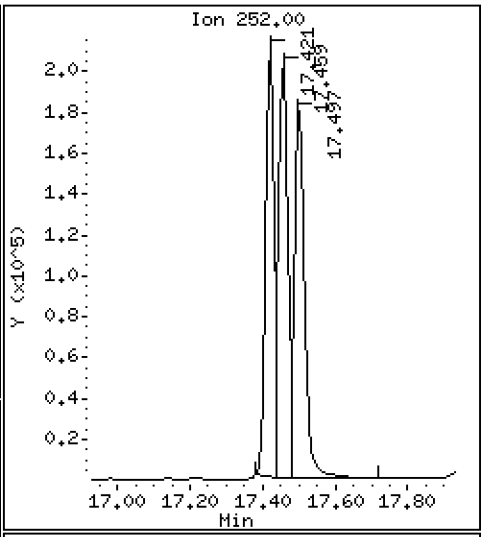
Column phase: Rxi-17Sil MS

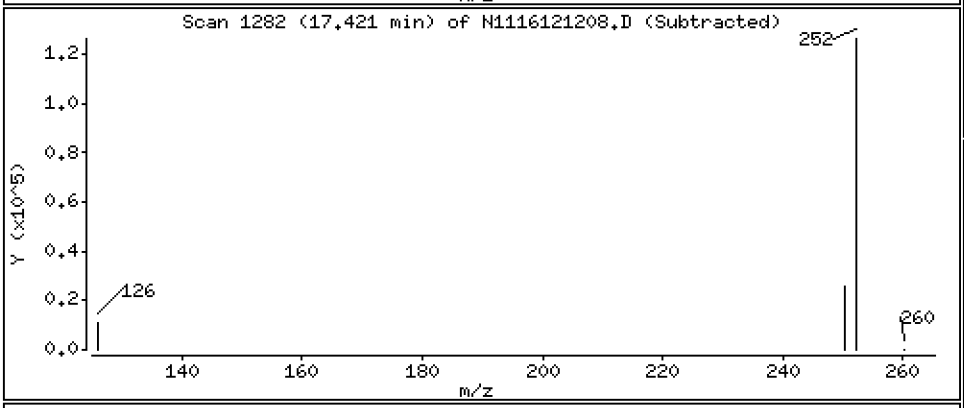
Column diameter: 0.25

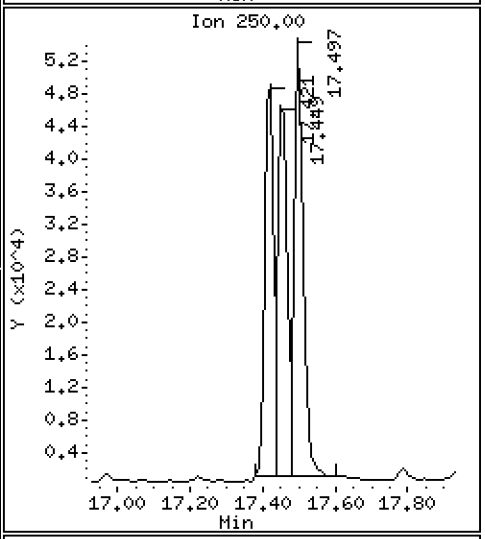
30 Benzo(b)fluoranthene

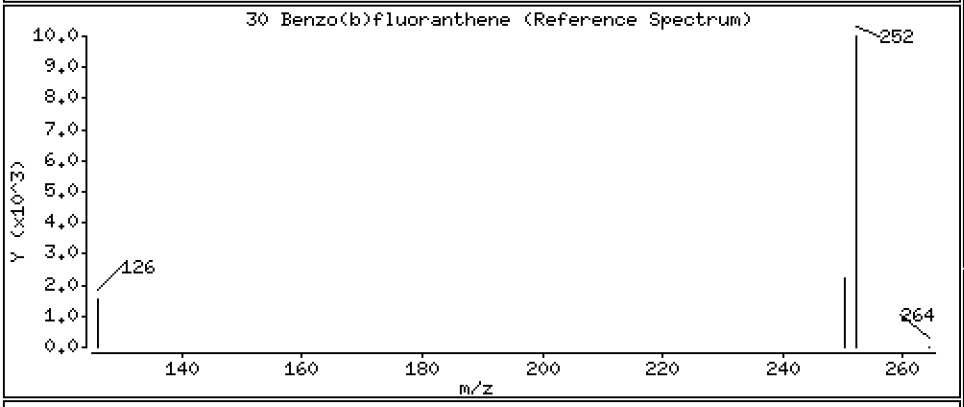
Concentration: 157 ng/mL

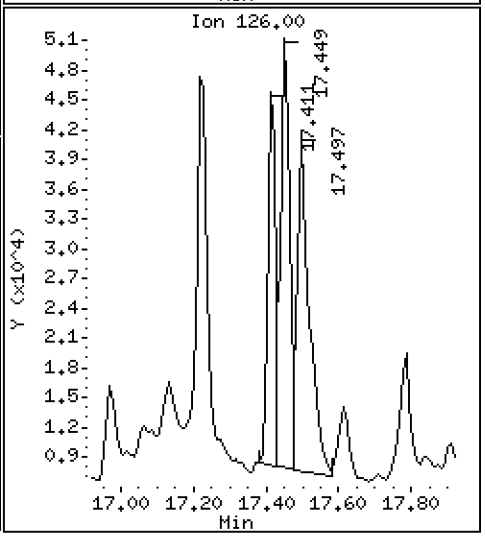


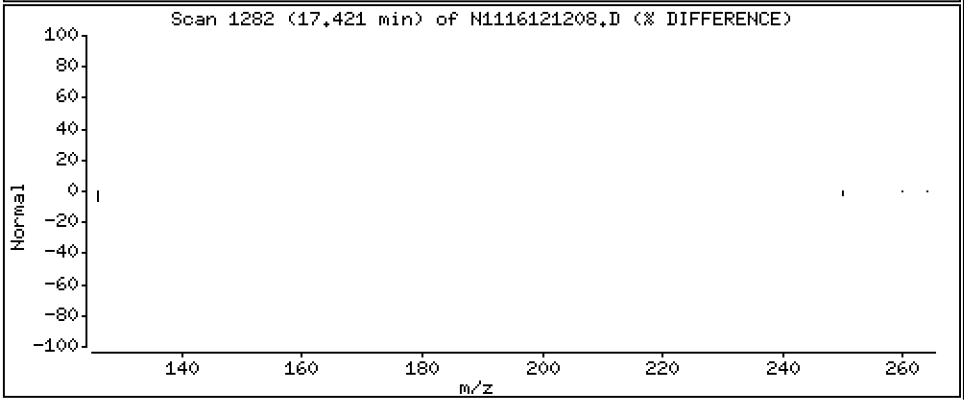












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

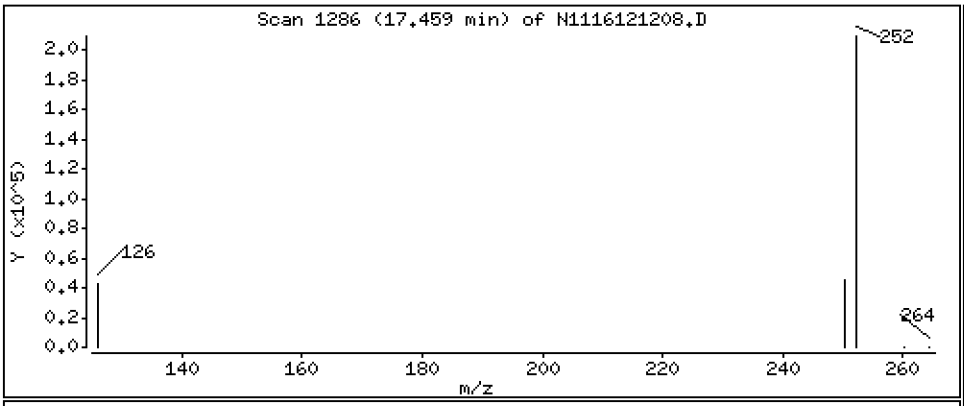
Operator: JW

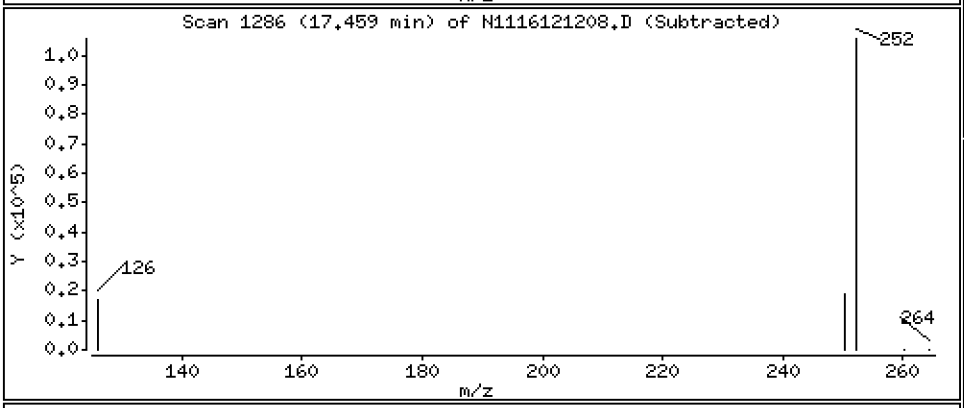
Column phase: Rxi-17Sil MS

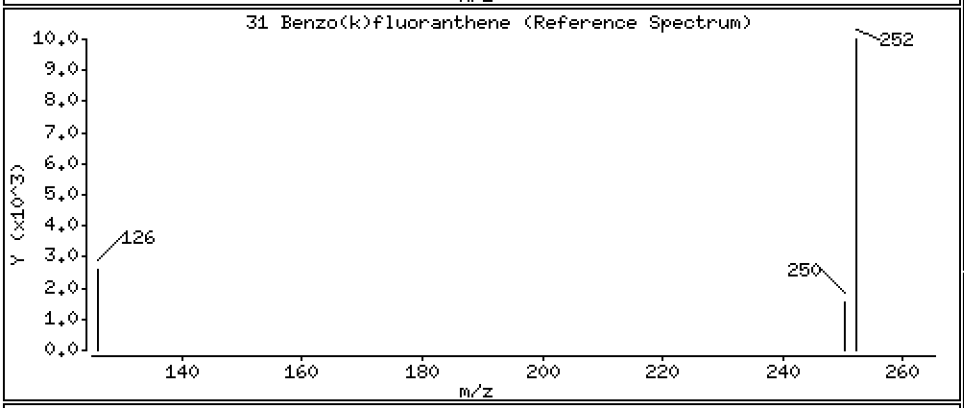
Column diameter: 0.25

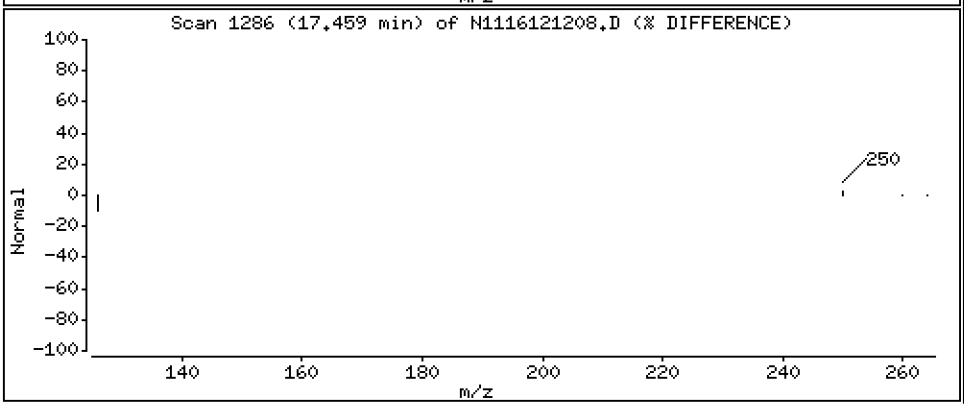
31 Benzo(k)fluoranthene

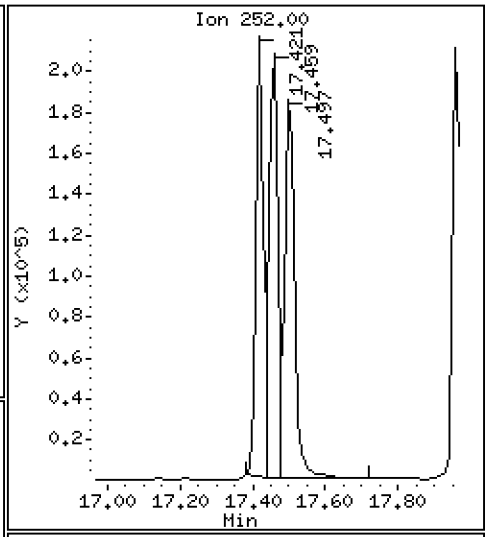
Concentration: 147 ng/mL

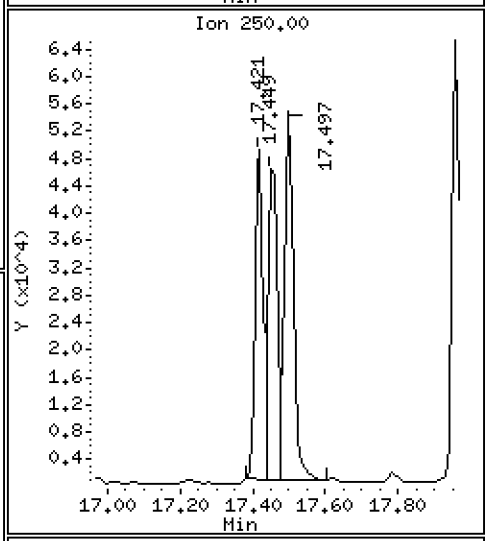


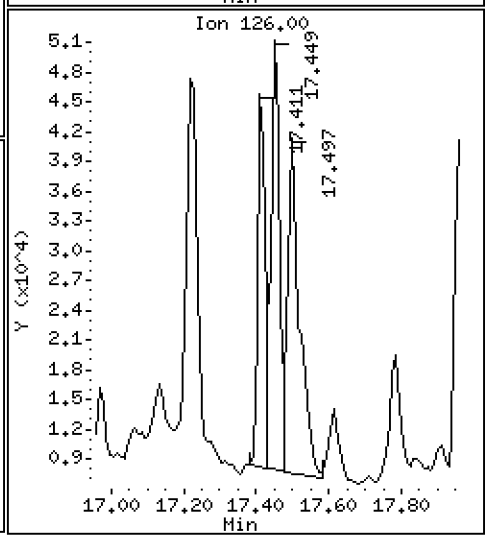












Date : 12-DEC-2016 11:58

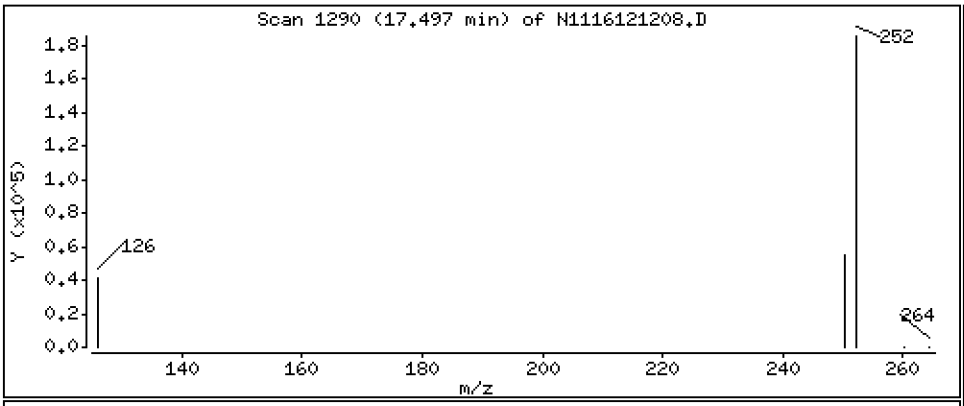
Client ID: Instrument: nt11.i

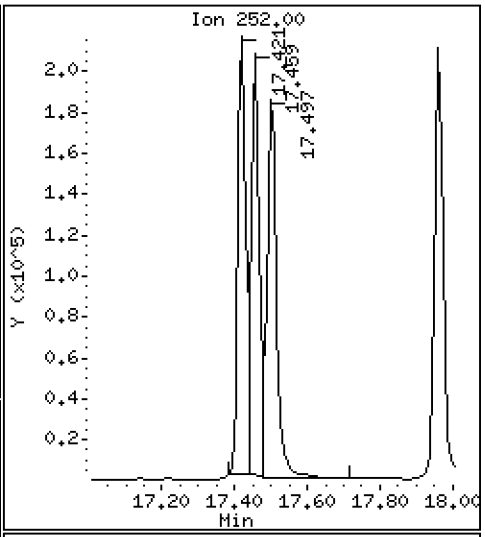
Sample Info: BEK0657-BS1

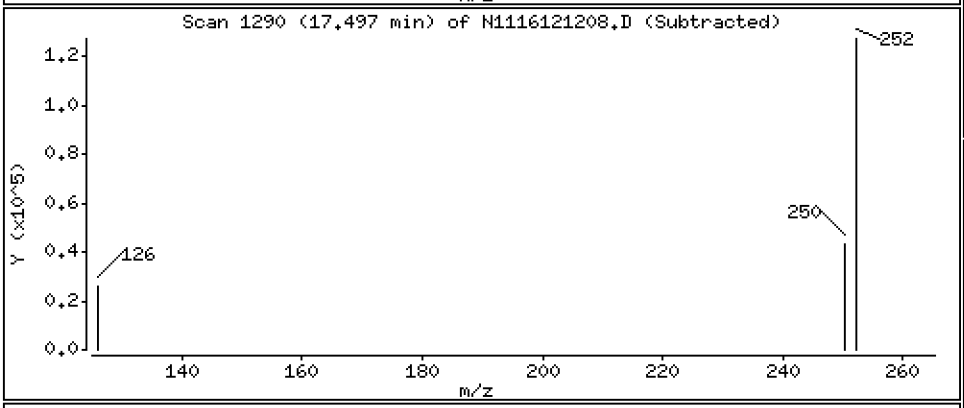
Operator: JW

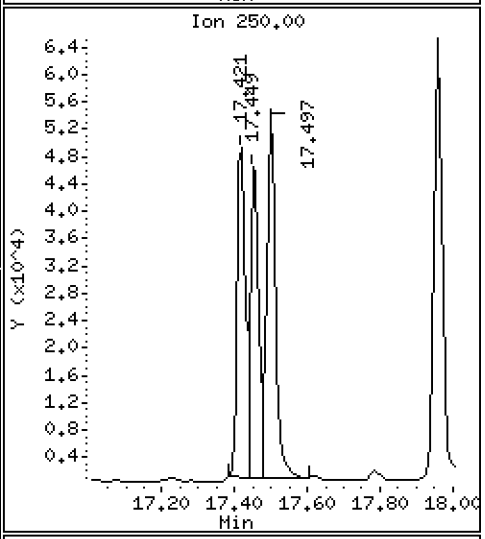
Column phase: Rxi-17Sil MS Column diameter: 0.25

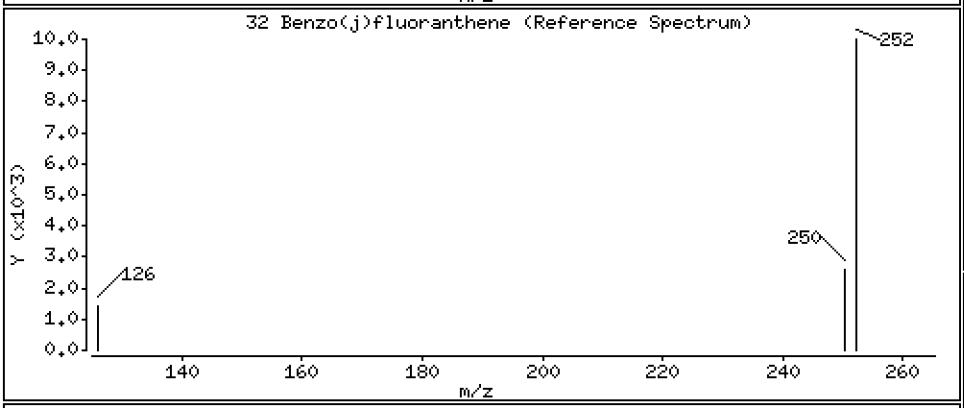
32 Benzo(j)fluoranthene Concentration: 157 ng/mL

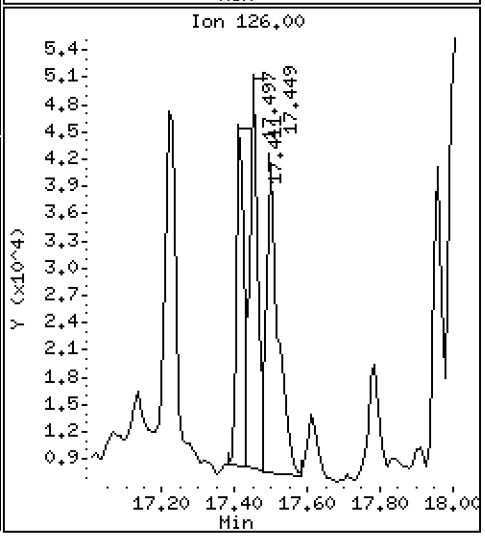


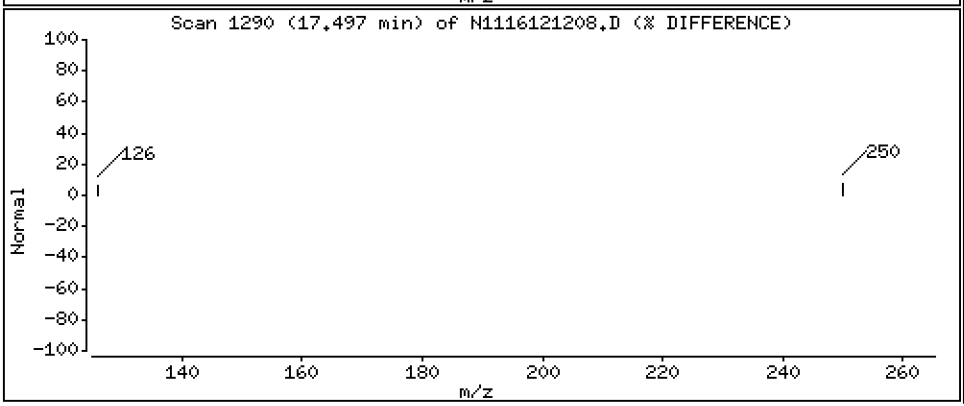












Date : 12-DEC-2016 11:58

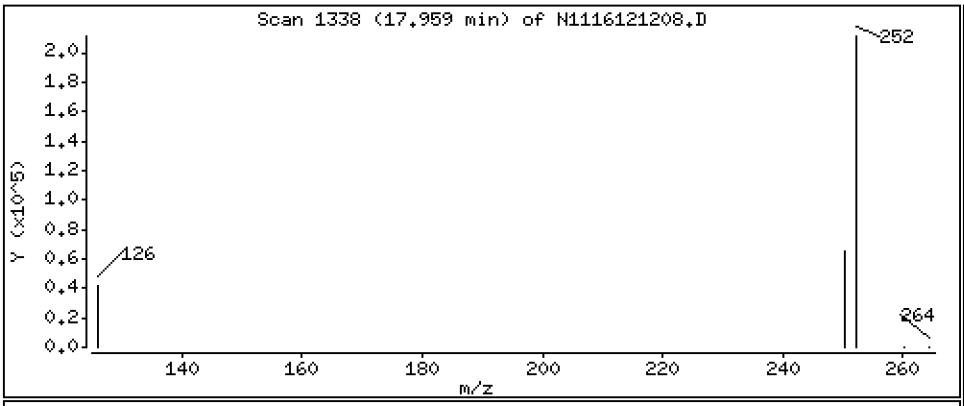
Client ID: Instrument: nt11.i

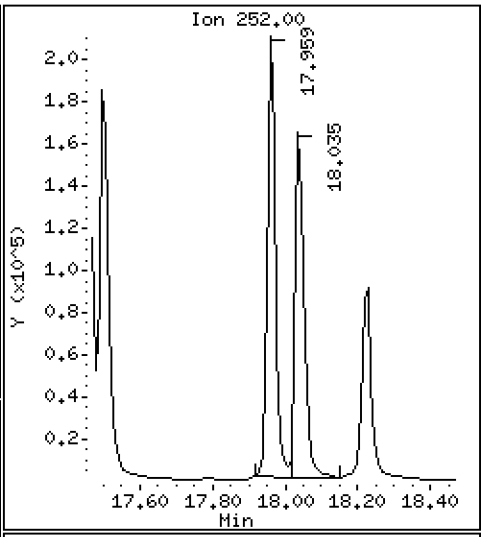
Sample Info: BEK0657-BS1

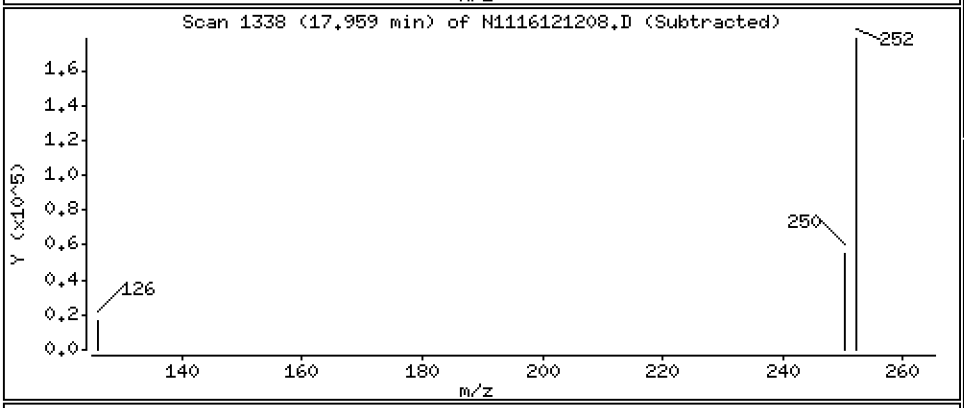
Operator: JW

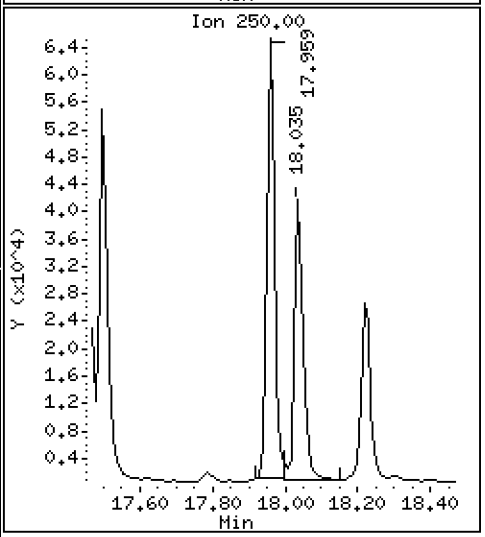
Column phase: Rxi-17Sil MS Column diameter: 0.25

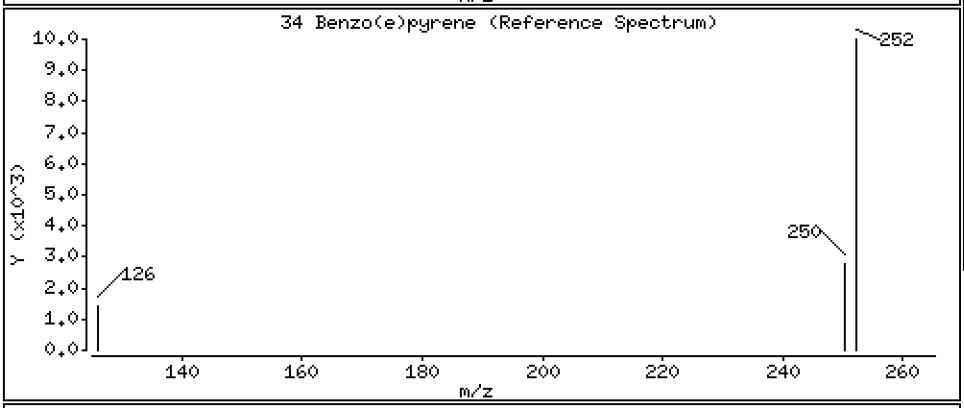
34 Benzo(e)pyrene Concentration: 147 ng/mL

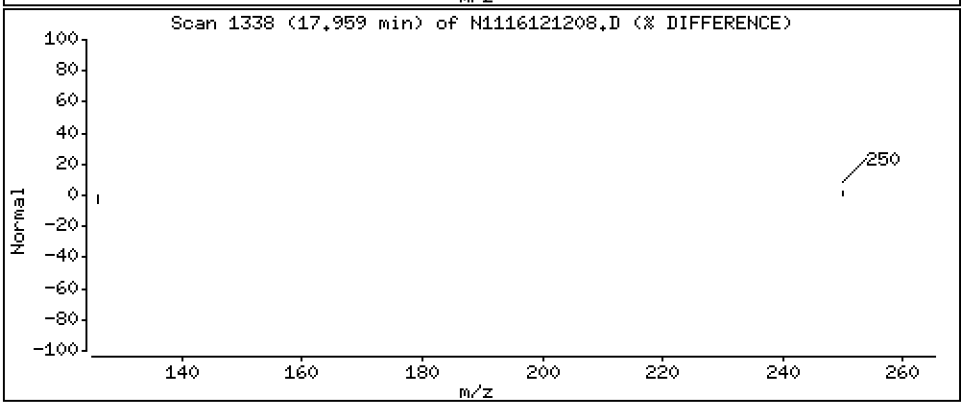












Date : 12-DEC-2016 11:58

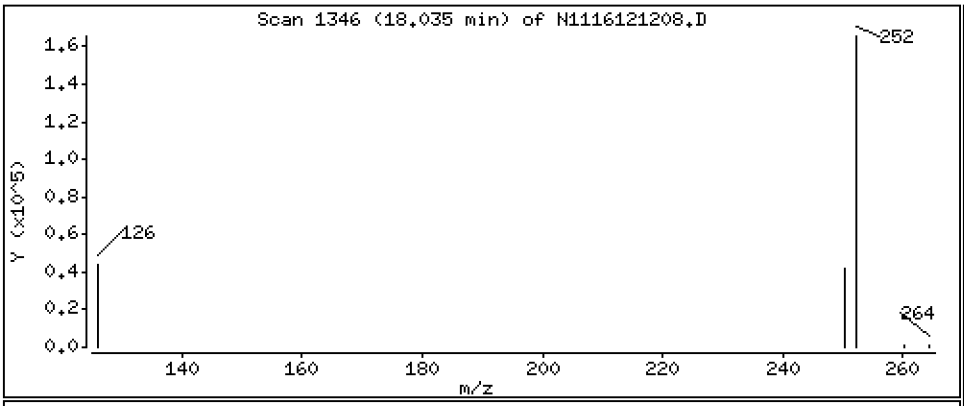
Client ID: Instrument: nt11.i

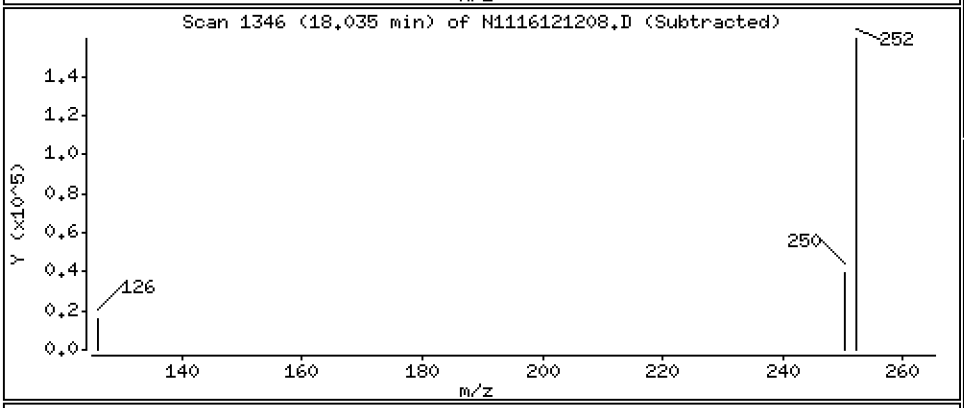
Sample Info: BEK0657-BS1

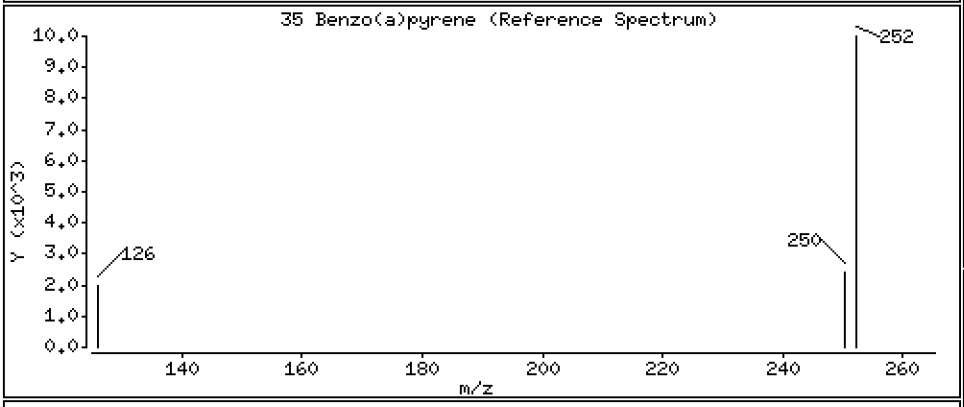
Operator: JW

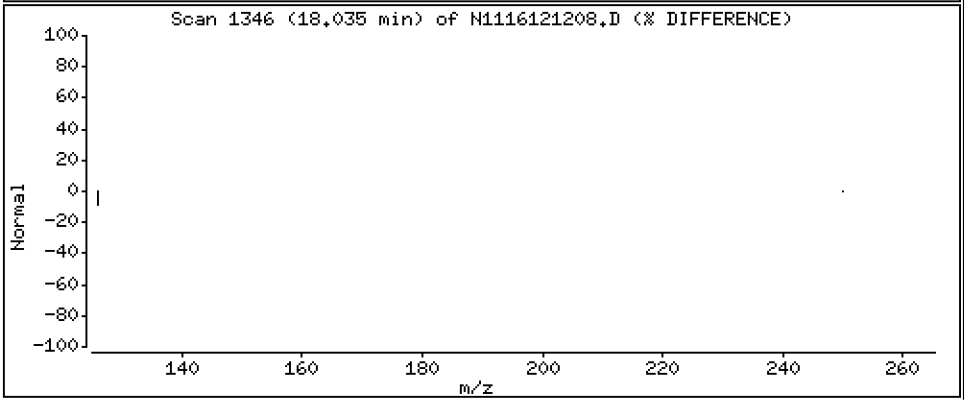
Column phase: Rxi-17Sil MS Column diameter: 0.25

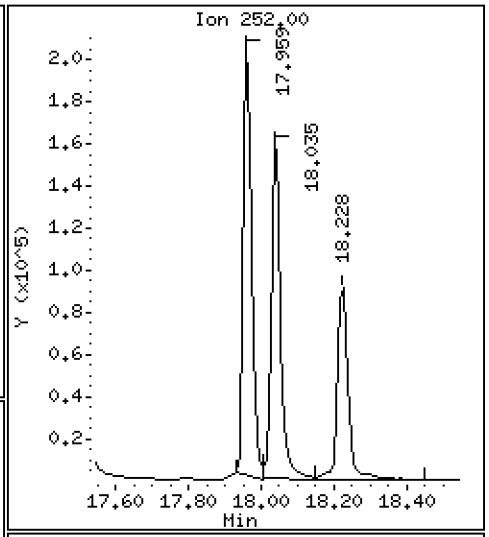
35 Benzo(a)pyrene Concentration: 135 ng/mL

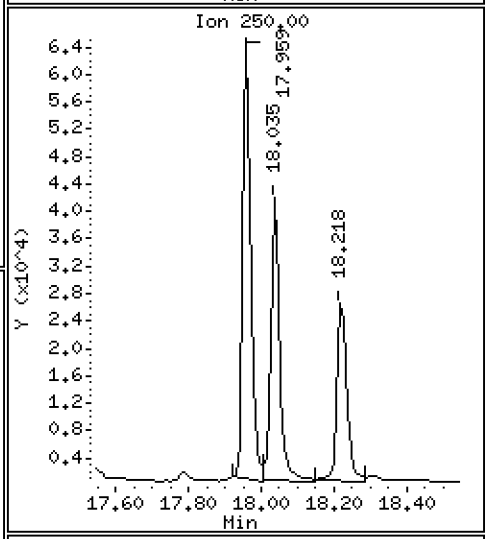


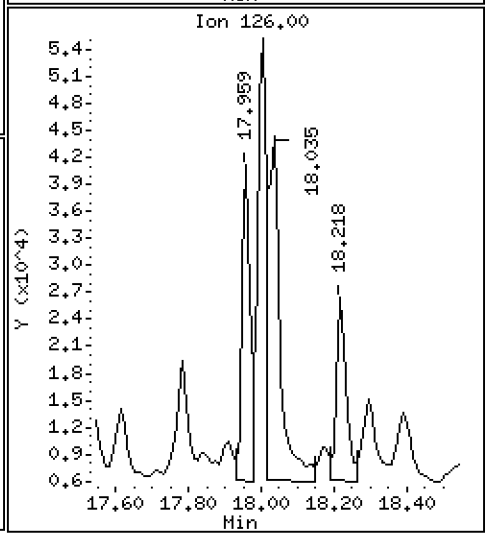












Date : 12-DEC-2016 11:58

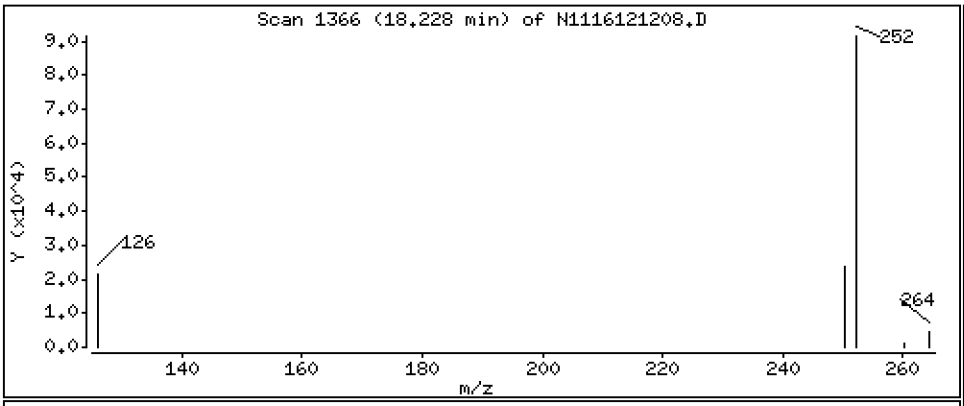
Client ID: Instrument: nt11.i

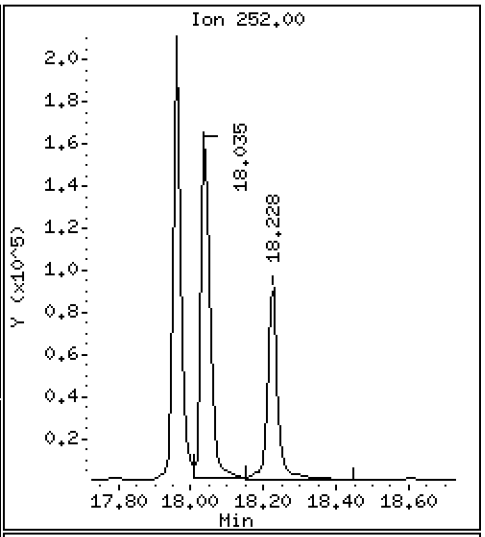
Sample Info: BEK0657-BS1

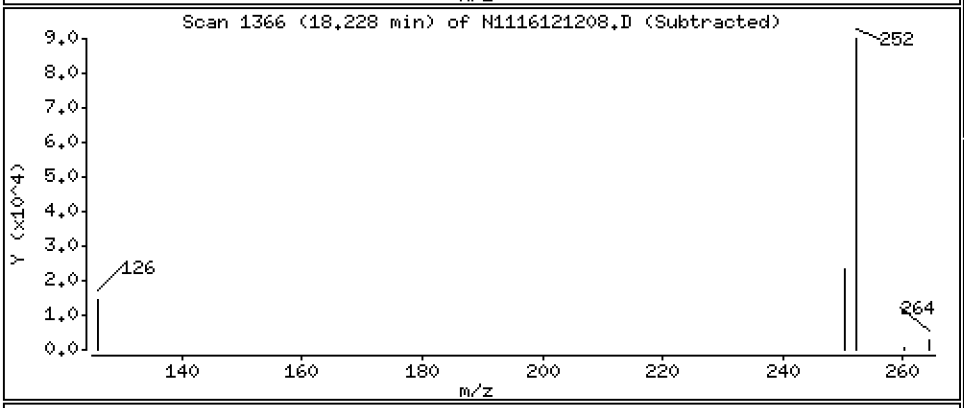
Operator: JW

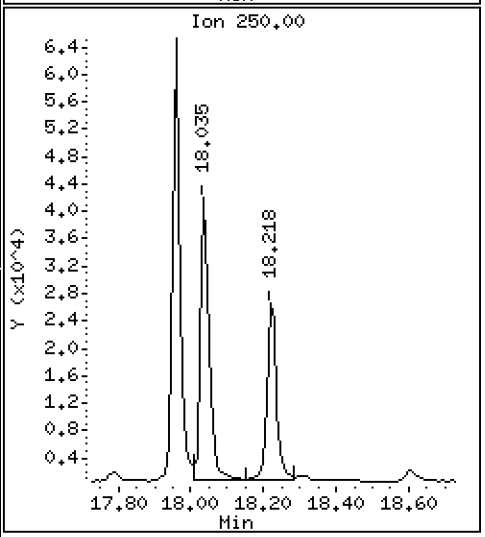
Column phase: Rxi-17Sil MS Column diameter: 0.25

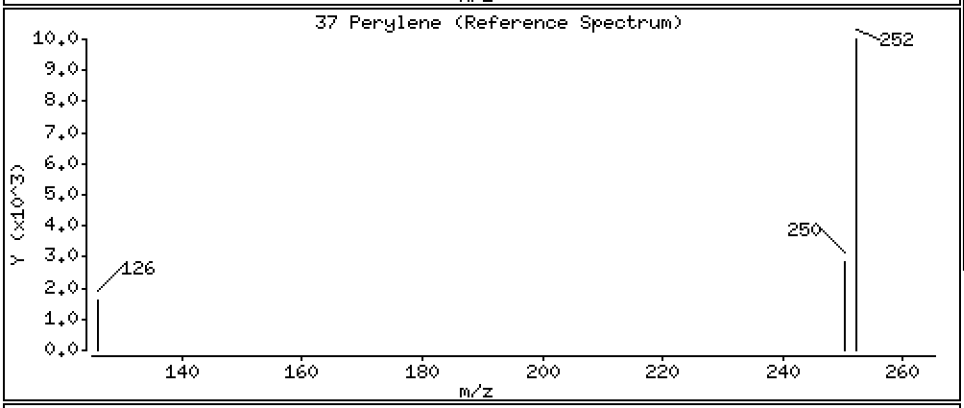
37 Perylene Concentration: 84.6 ng/mL

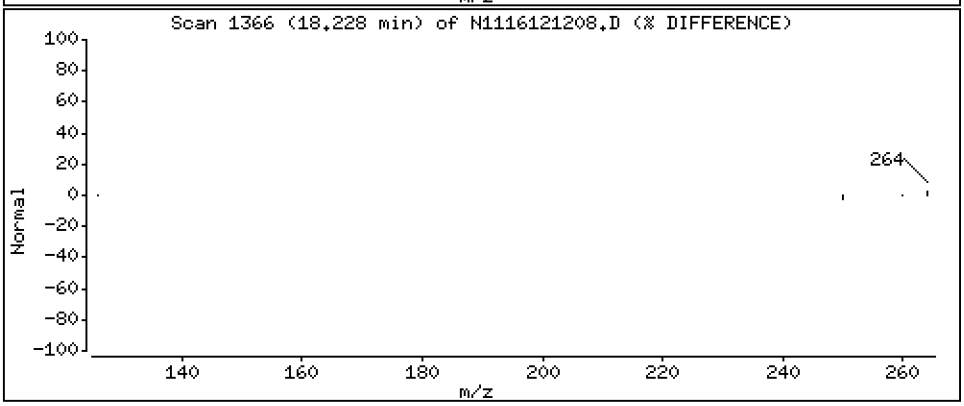












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

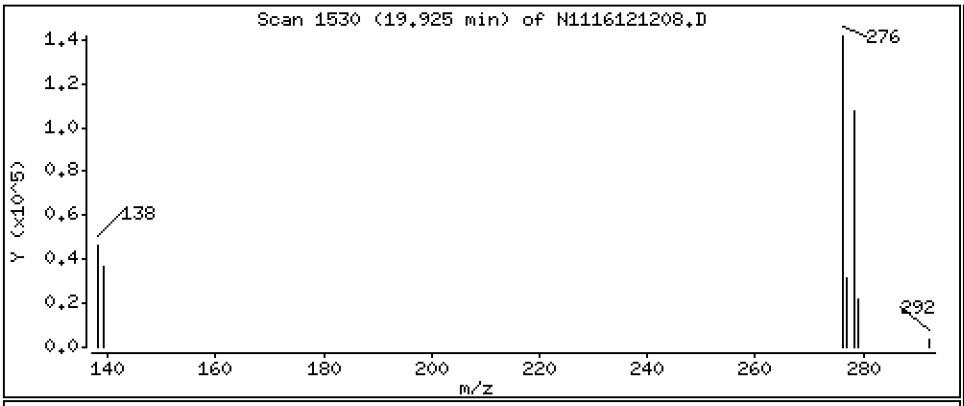
Operator: JW

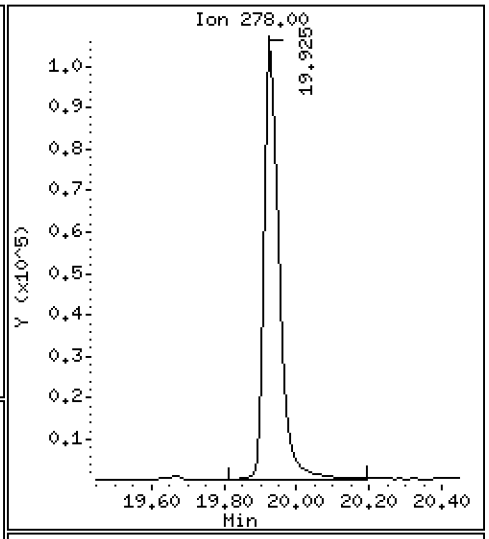
Column phase: Rxi-17Sil MS

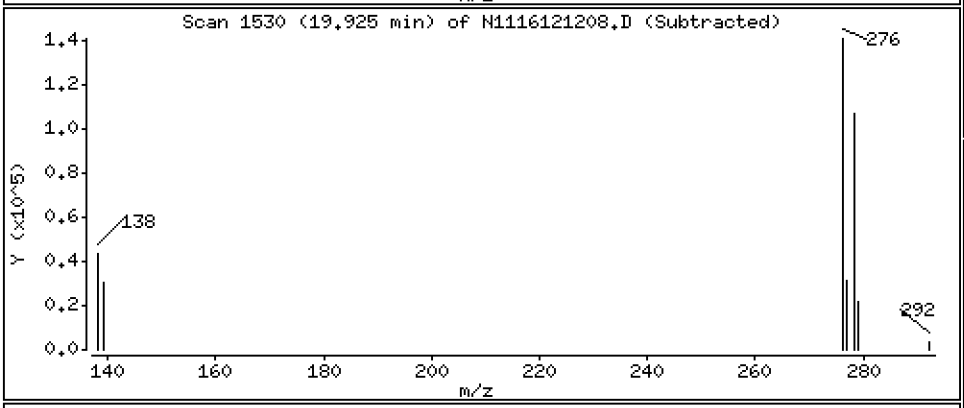
Column diameter: 0.25

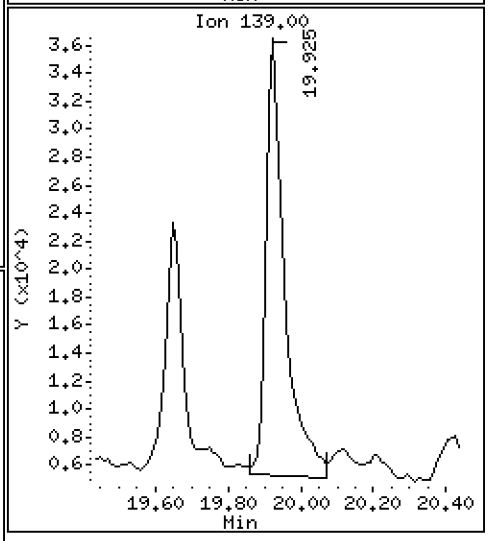
39 Dibenzo(a,h)anthracene

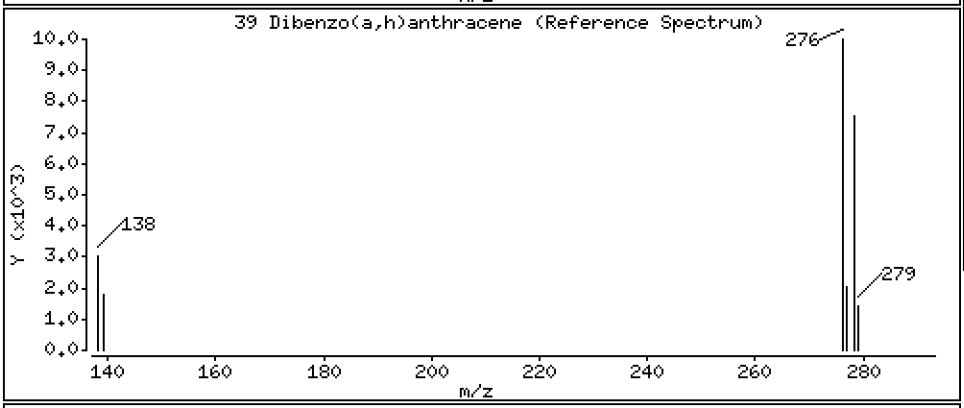
Concentration: 158 ng/mL

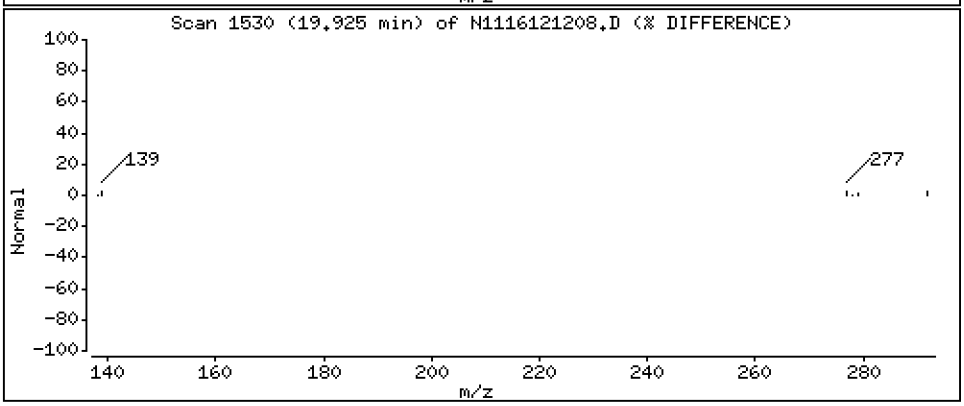












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

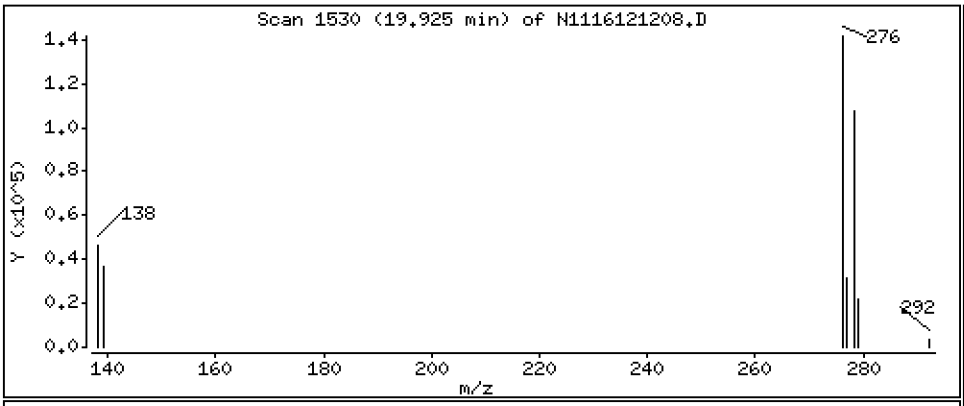
Operator: JW

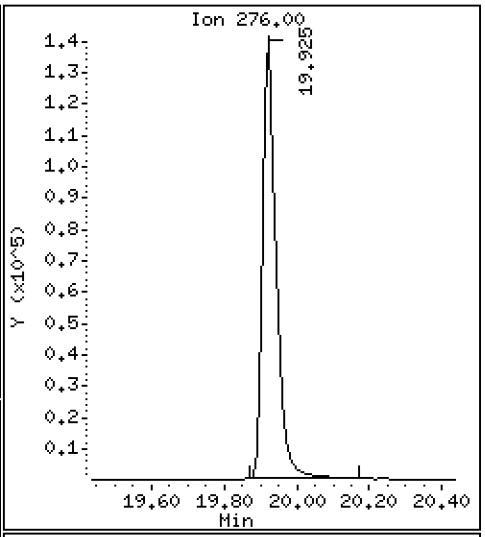
Column phase: Rxi-17Sil MS

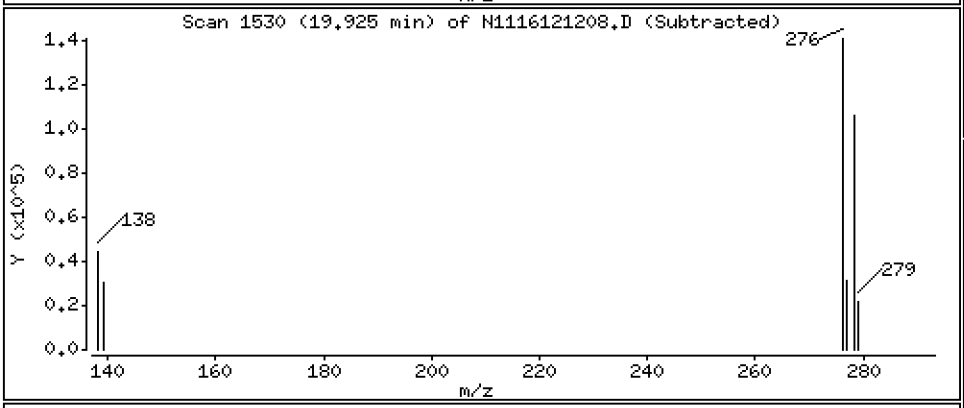
Column diameter: 0.25

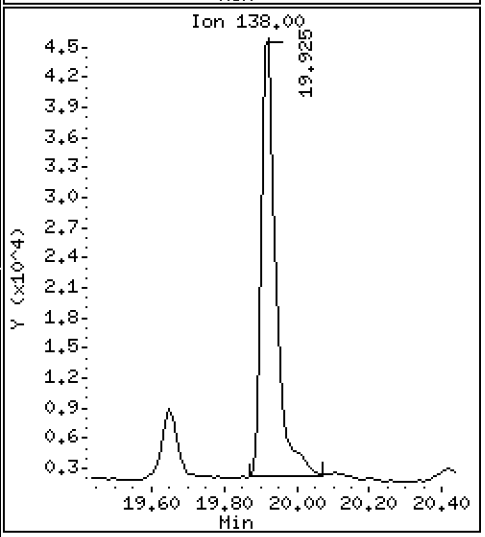
40 Indeno(1,2,3-cd)pyrene

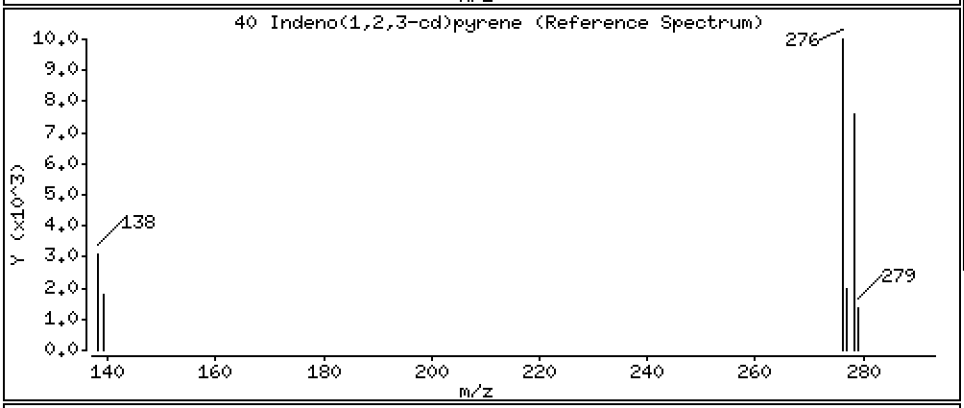
Concentration: 153 ng/mL

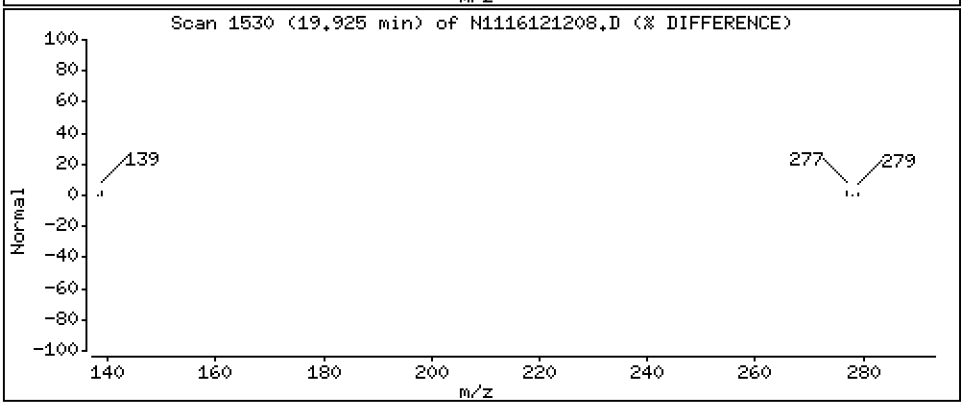












Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121208.D

Date : 12-DEC-2016 11:58

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS1

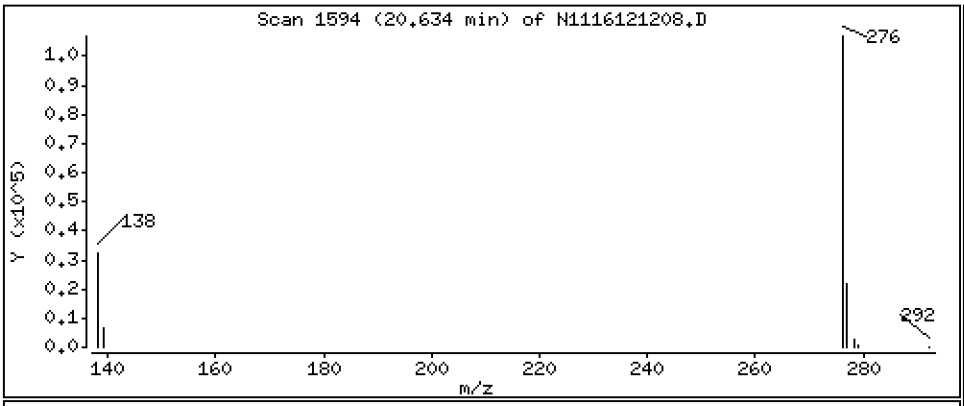
Operator: JW

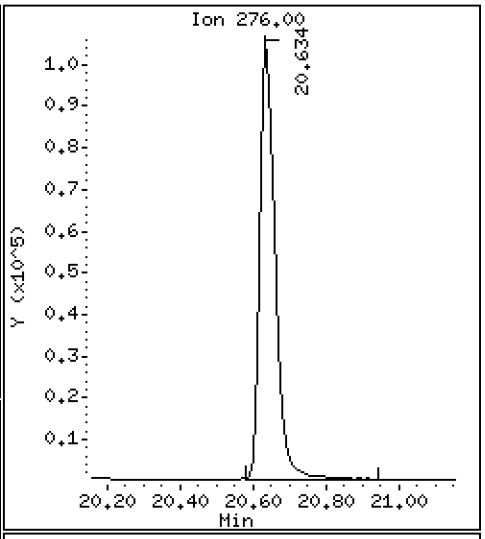
Column phase: Rxi-17Sil MS

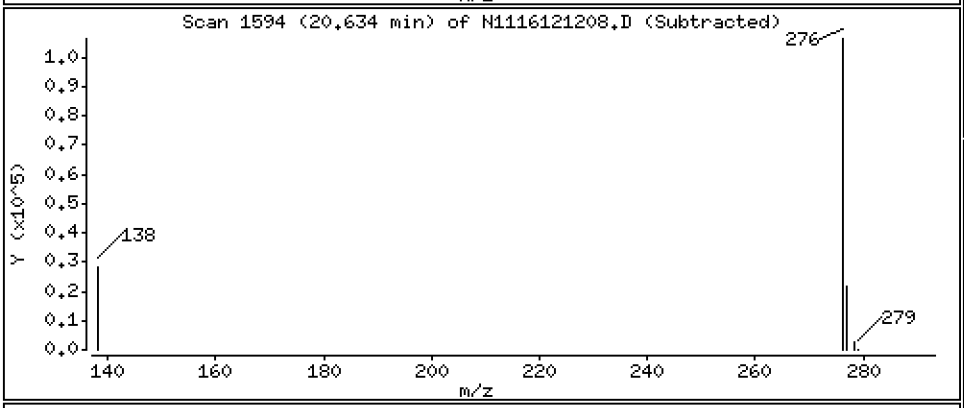
Column diameter: 0.25

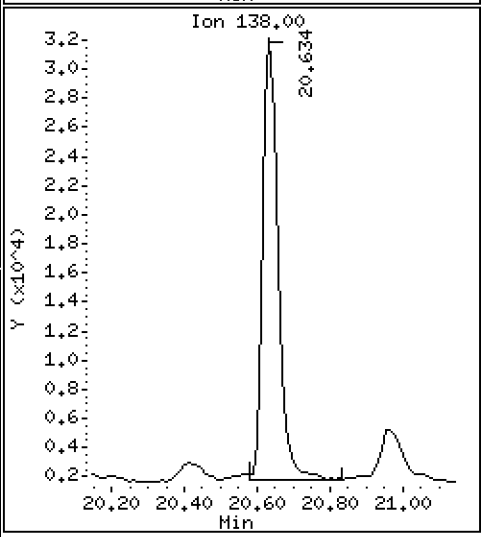
41 Benzo(g,h,i)perylene

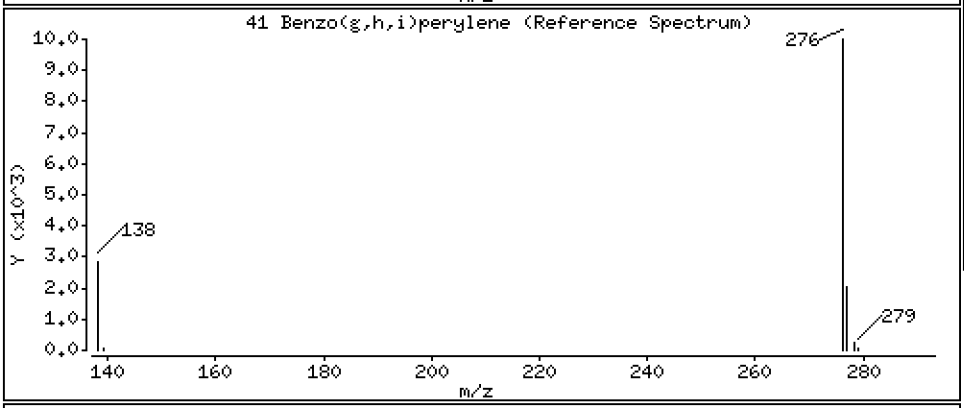
Concentration: 148 ng/mL

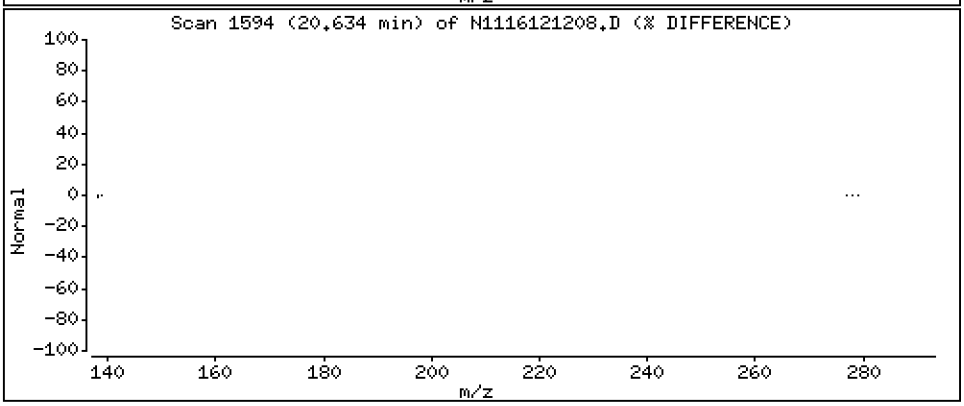












ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161212.b\N1116121208.D
Lab Smp Id: BEK0657-BS1
Inj Date : 12-DEC-2016 11:58 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : BEK0657-BS1
Misc Info :
Comment   :
Method   : \\target\share\chem3\nt11.i\20161212.b\lowsim.m
Meth Date : 15-Dec-2016 09:33 nt11.i Quant Type: ISTD
Cal Date : 25-NOV-2016 10:20 Cal File: 16112510.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1 Naphthalene-d8	136	5.529	5.547	(1.000)	452591	200.000	
	2 Naphthalene	128	5.556	5.574	(1.005)	303892	130.596	131
	3 Benzo(b)thiophene	134	5.800	5.818	(1.049)	227915	118.410	118
$	4 2-Methylnaphthalene-d10	152	6.495	6.505	(1.175)	209570	122.821	123
	5 2-Methylnaphthalene	142	6.537	6.557	(1.182)	268118	137.237	137
	6 1-Methylnaphthalene	142	6.778	6.799	(1.226)	259695	135.529	136
	7 2-Chloronaphthalene	162	7.419	7.429	(0.877)	248217	124.088	124
	8 Biphenyl	154	7.419	7.429	(0.877)	361819	131.809	132
	9 2,6-Dimethylnaphthalene	156	7.461	7.482	(0.882)	264503	134.091	134
	10 Acenaphthylene	152	8.303	8.321	(0.982)	301401	132.562	133
*	11 Acenaphthene-d10	164	8.457	8.474	(1.000)	246096	200.000	
	12 Acenaphthene	153	8.520	8.538	(1.007)	222394	142.567	143
	13 Dibenzofuran	168	8.726	8.738	(1.032)	297308	134.115	134
	14 2,3,5-Trimethylnaphthalene	170	8.839	8.852	(1.045)	197673	143.435	143
$	15 Fluorene-d10	174	Compound Not Detected.					
	16 Fluorene	166	9.345	9.357	(1.105)	252093	147.193	147
	17 Dibenzothiophene	184	10.911	10.921	(0.985)	180237	85.4967	85.5
*	18 Phenanthrene-d10	188	11.079	11.089	(1.000)	426508	200.000	
	19 Phenanthrene	178	11.121	11.131	(1.004)	457696	178.653	179
$	20 Anthracene-d10	188	Compound Not Detected.					
	21 Anthracene	178	11.184	11.184	(1.009)	362284	150.277	150
	22 Carbazole	167	11.864	11.872	(1.071)	381206	136.350	136
	23 1-Methylphenanthrene	192	12.117	12.116	(1.094)	377456	167.207	167
$	24 Fluoranthene-d10	212	13.142	13.142	(1.186)	310406	163.042	163
	25 Fluoranthene	202	13.171	13.180	(1.189)	420828	169.287	169
	26 Pyrene	202	13.642	13.651	(0.867)	428718	166.669	167
	27 Benzo(a)anthracene	228	15.652	15.660	(0.994)	359447	161.487	161
*	28 Chrysene-d12	240	15.744	15.743	(1.000)	395351	200.000	
	29 Chrysene	228	15.793	15.793	(1.003)	384704	155.828	156
	30 Benzo(b)fluoranthene	252	17.420	17.420	(0.958)	359323	157.036	157
	31 Benzo(k)fluoranthene	252	17.458	17.458	(0.960)	364231	146.502	147
	32 Benzo(j)fluoranthene	252	17.497	17.506	(0.962)	362797	157.421	157
$	33 Benzo(e)pyrene-d12	264	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
	34 Benzo(e)pyrene	252	17.958	17.958	(0.988)	327061	147.094	147
	35 Benzo(a)pyrene	252	18.035	18.044	(0.992)	283118	135.140	135
*	36 Perylene-d12	264	18.179	18.179	(1.000)	402537	200.000	
	37 Perylene	252	18.227	18.227	(1.003)	184037	84.6133	84.6
$	38 Dibenzo(a,h)anthracene-d14	292	19.858	19.858	(1.092)	202709	150.340	150
	39 Dibenzo(a,h)anthracene	278	19.925	19.925	(1.096)	298194	157.817	158
	40 Indeno(1,2,3-cd)pyrene	276	19.925	19.925	(1.096)	355745	152.979	153
	41 Benzo(g,h,i)perylene	276	20.634	20.644	(1.135)	297376	148.021	148

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121208.D
Lab Smp Id: BEK0657-BS1
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161212.b\lowsim.m
Misc Info:

Calibration Date: 12-DEC-2016
Calibration Time: 09:14
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	452591	-8.30
11 Acenaphthene-d10	240770	120385	481540	246096	2.21
18 Phenanthrene-d10	429271	214636	858542	426508	-0.64
28 Chrysene-d12	387691	193846	775382	395351	1.98
36 Perylene-d12	386259	193130	772518	402537	4.21

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.55	5.05	6.05	5.53	-0.32
11 Acenaphthene-d10	8.47	7.97	8.97	8.46	-0.21
18 Phenanthrene-d10	11.09	10.59	11.59	11.08	-0.09
28 Chrysene-d12	15.74	15.24	16.24	15.74	0.00
36 Perylene-d12	18.18	17.68	18.68	18.18	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121208.D

Lab ID: BEK0657-BS1
nt11.i, 20161212.b\lowsim.m,   12-DEC-2016 11:58

RT	CO-ELUTION COMPOUNDS
19.925	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
19.925	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

On Column LOD for nt11.i, 20161212.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

LCS / LCS DUPLICATE RECOVERY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Matrix:	Tissue	Analyzed:	12/10/16 15:21
Batch:	BEK0657	Laboratory ID:	BEK0657-BS2
Preparation:	EPA 3550C-Mod (Ultrasonic)	Sequence Name:	Day zero LCS
Initial/Final:	0.886 g / 0.1 mL		

COMPOUND	SPIKE ADDED (ug/kg)	LCS CONCENTRATION (ug/kg)	LCS % REC. #	QC LIMITS REC.
Naphthalene	33.9	14.5	42.9	30 - 160
2-Methylnaphthalene	33.9	17.1	50.4	30 - 160
Acenaphthylene	33.9	15.3	45.1	30 - 160
Acenaphthene	33.9	17.7	52.3	30 - 160
Fluorene	33.9	21.4	63.2	30 - 160
Phenanthrene	33.9	23.6	69.8	30 - 160
Anthracene	33.9	21.8	64.2	30 - 160
Fluoranthene	33.9	24.3	71.8	30 - 160
Pyrene	33.9	22.3	65.7	30 - 160
Benzo(a)anthracene	33.9	22.2	65.4	30 - 160
Chrysene	33.9	20.9	61.8	30 - 160
Benzo(b)fluoranthene	33.9	18.7	55.3	30 - 160
Benzo(k)fluoranthene	33.9	17.0	50.3	30 - 160
Benzo(a)pyrene	33.9	16.9	49.8	30 - 160
Indeno(1,2,3-cd)pyrene	33.9	18.3	54.0	30 - 160
Dibenzo(a,h)anthracene	33.9	18.7	55.3	30 - 160
Benzo(g,h,i)perylene	33.9	17.9	52.9	30 - 160
Perylene	33.9	8.26	24.4 *	30 - 160
Benzo(e)pyrene	33.9	17.5	51.6	30 - 160

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

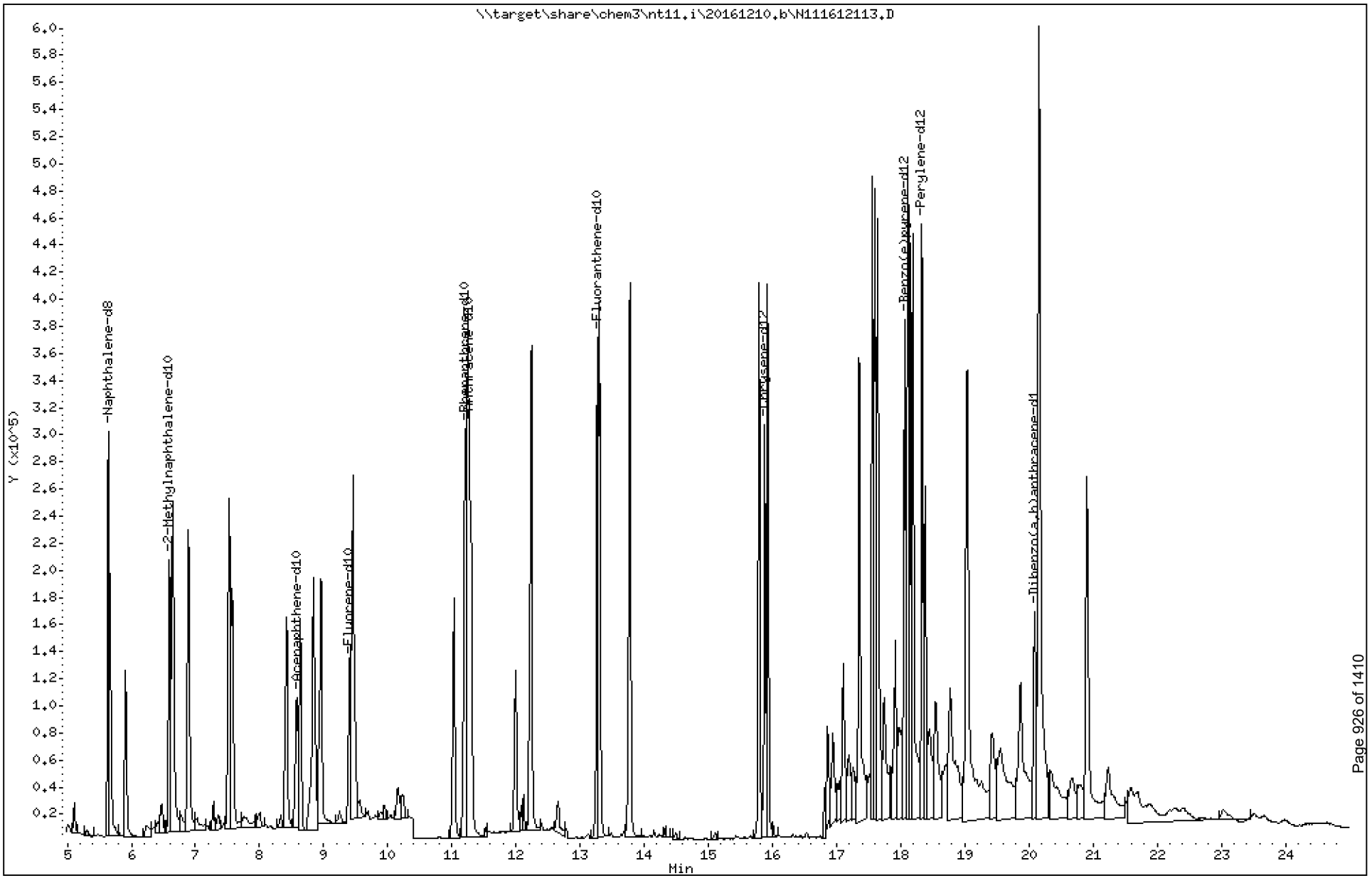
Instrument: nt11.i

Sample Info: BEK0657-BS2

Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

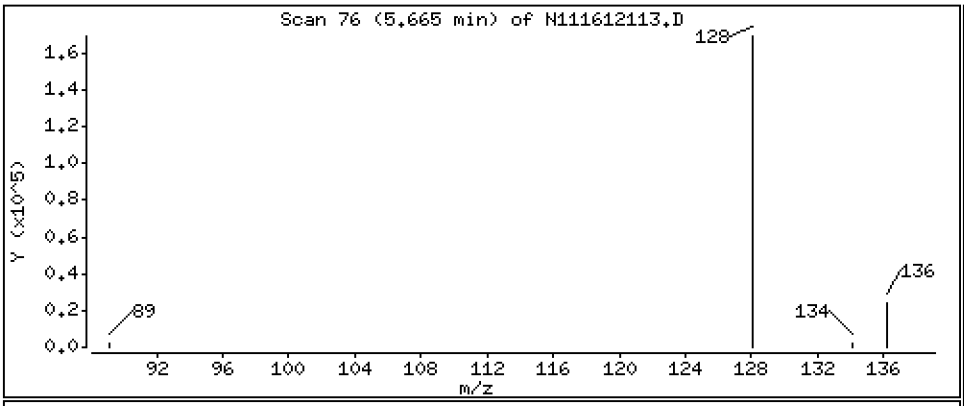
Operator: JW

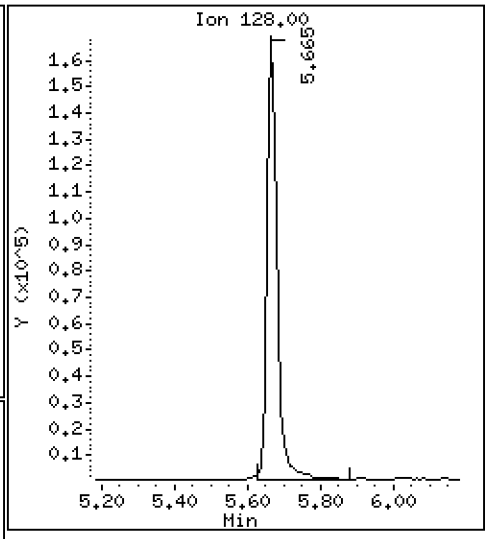
Column phase: Rxi-17Sil MS

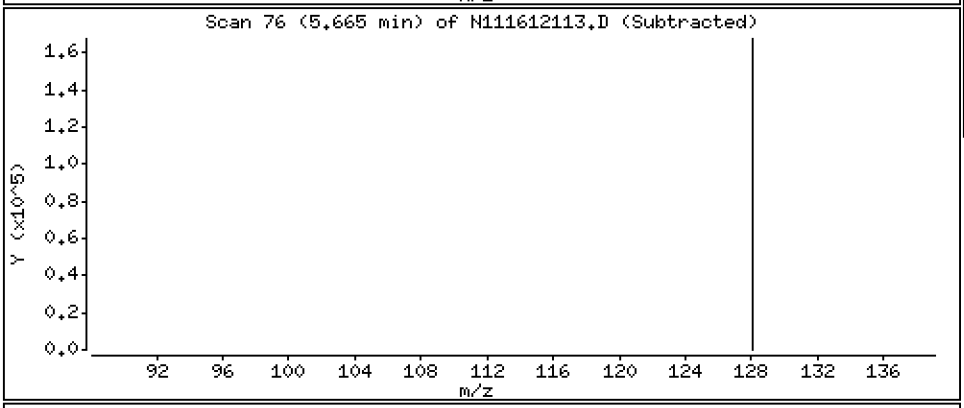
Column diameter: 0.25

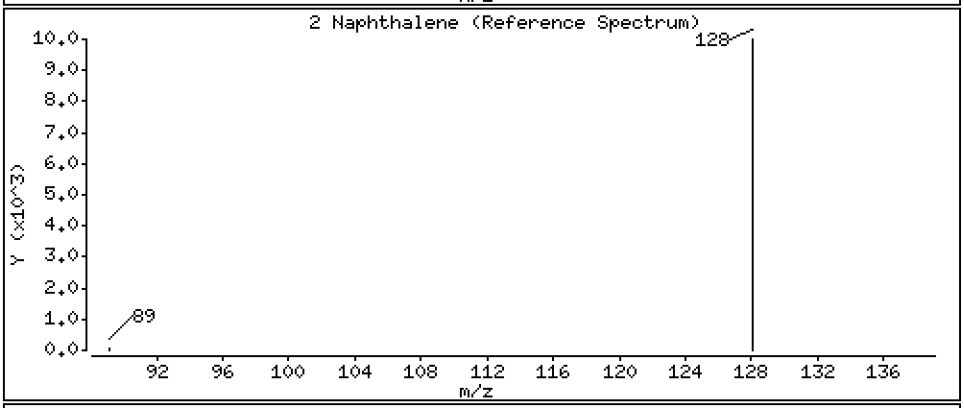
2 Naphthalene

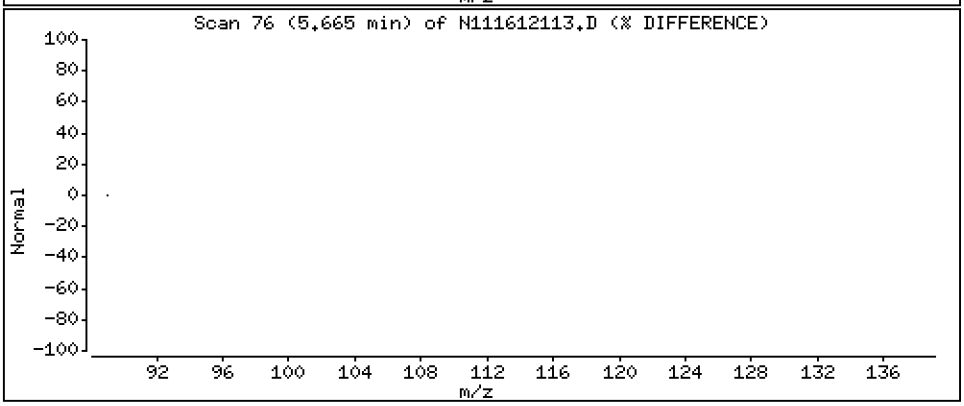
Concentration: 129 ng/mL











Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

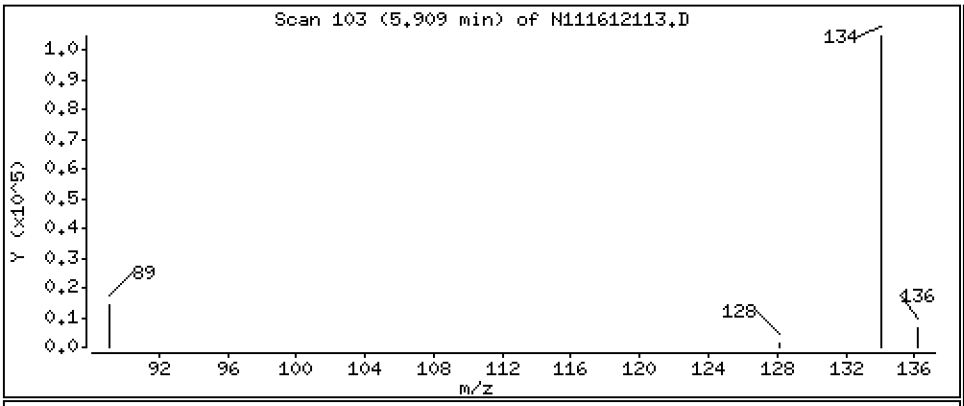
Operator: JW

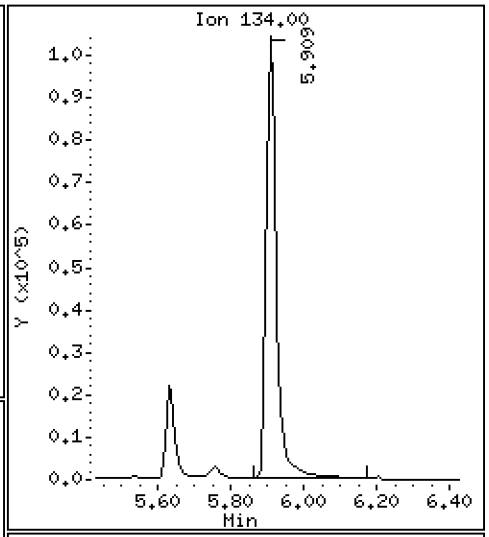
Column phase: Rxi-17Sil MS

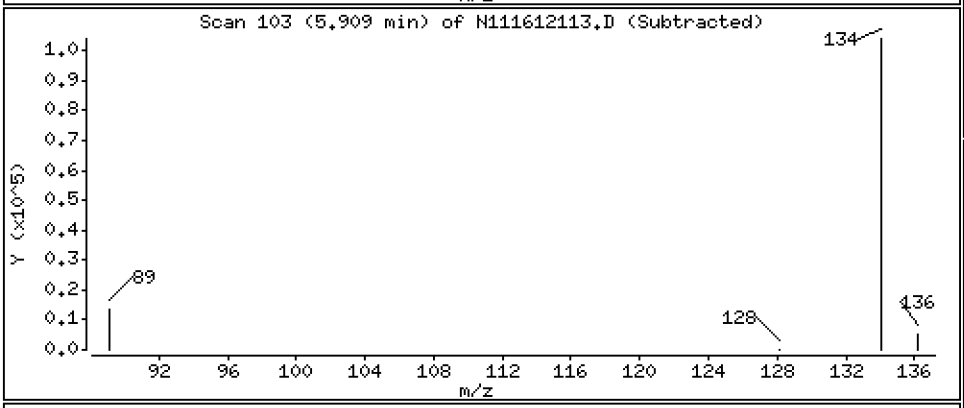
Column diameter: 0.25

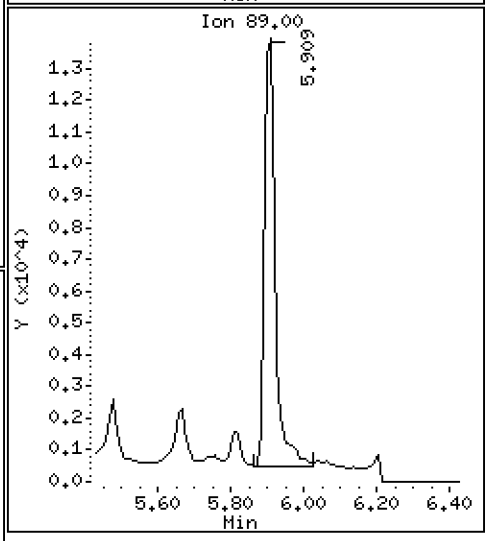
3 Benzo(b)thiophene

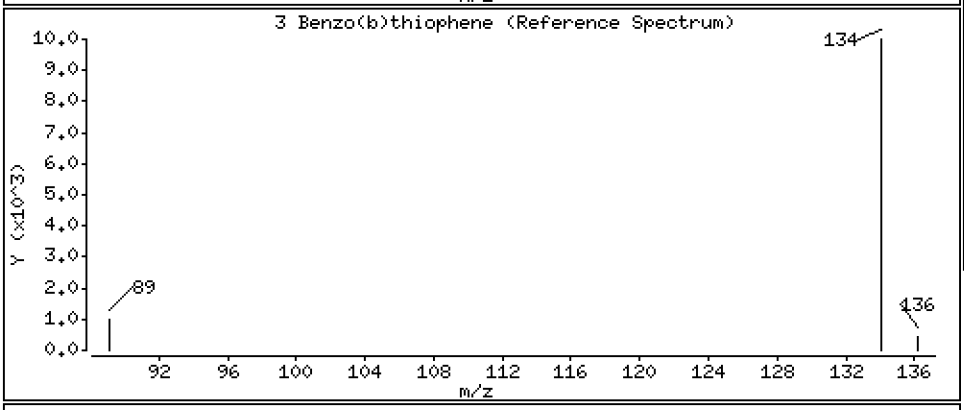
Concentration: 98.4 ng/mL

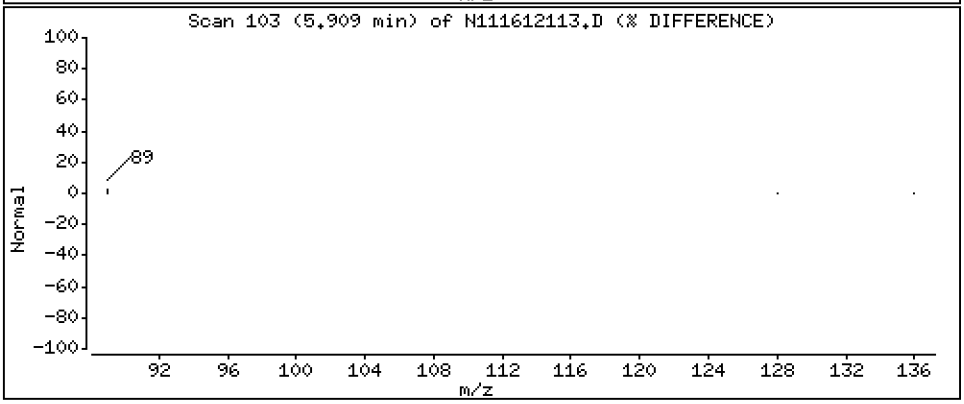












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

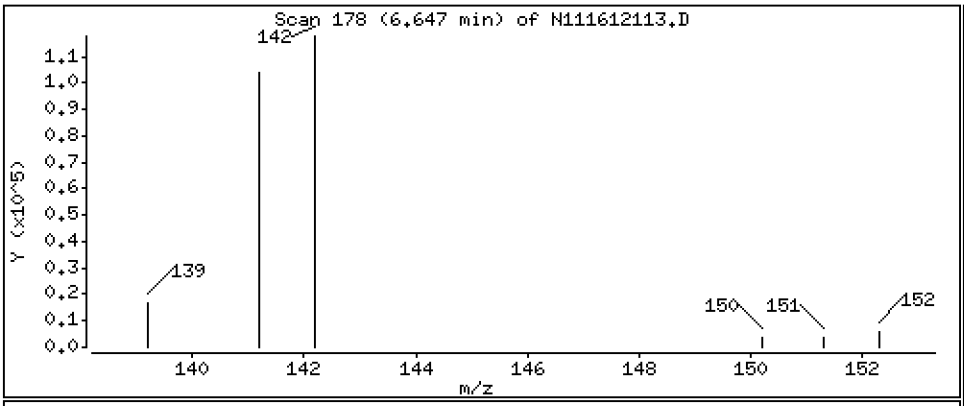
Operator: JW

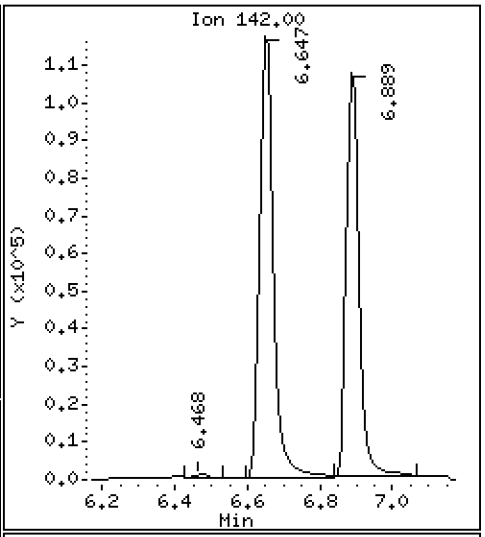
Column phase: Rxi-17Sil MS

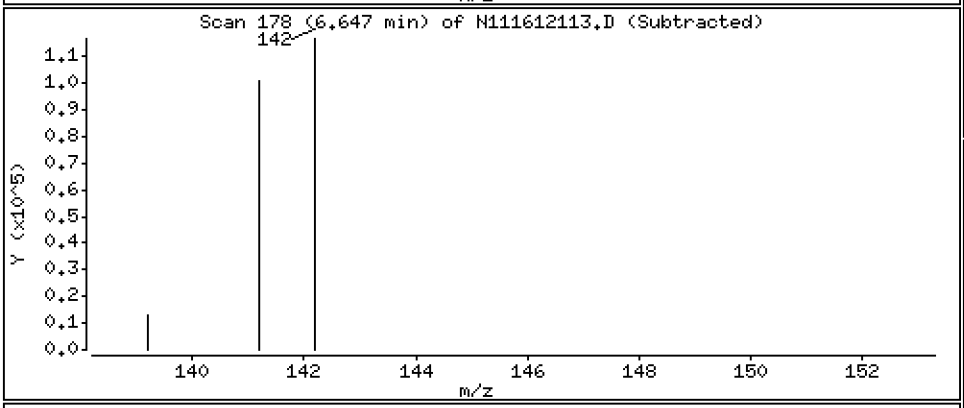
Column diameter: 0.25

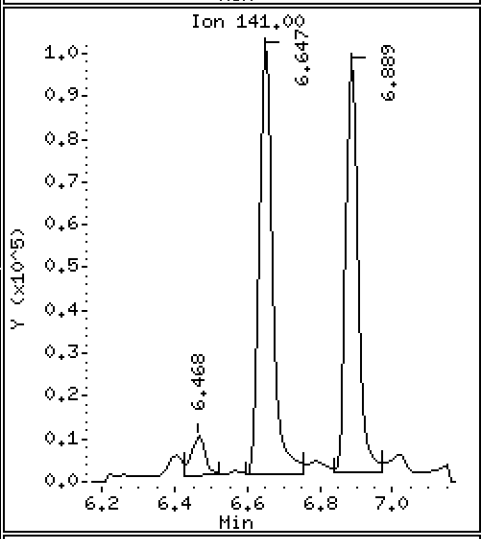
5 2-Methylnaphthalene

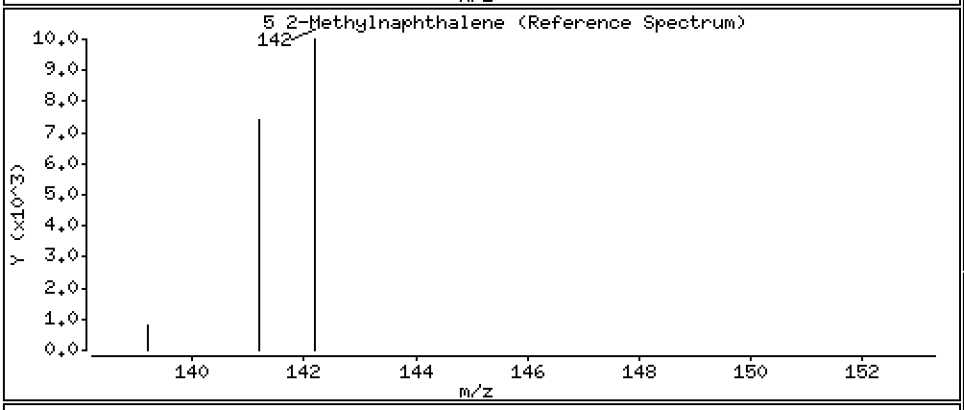
Concentration: 151 ng/mL

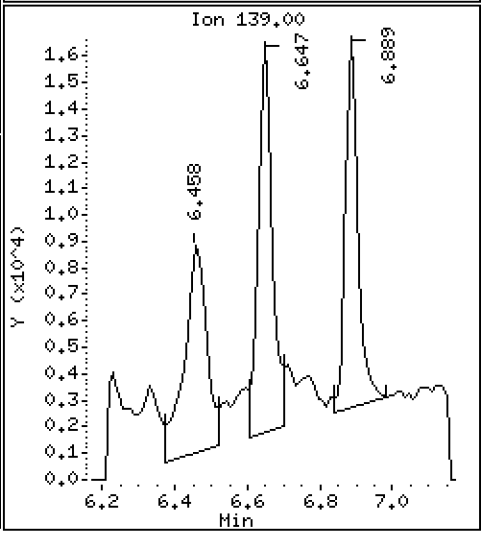


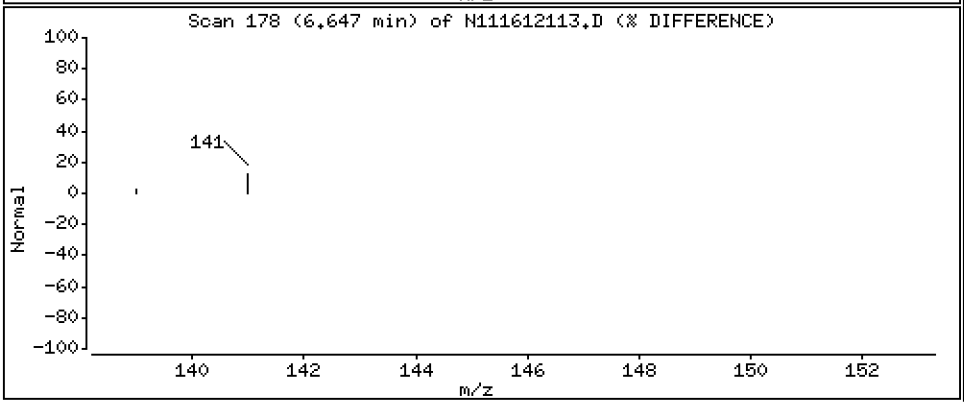












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

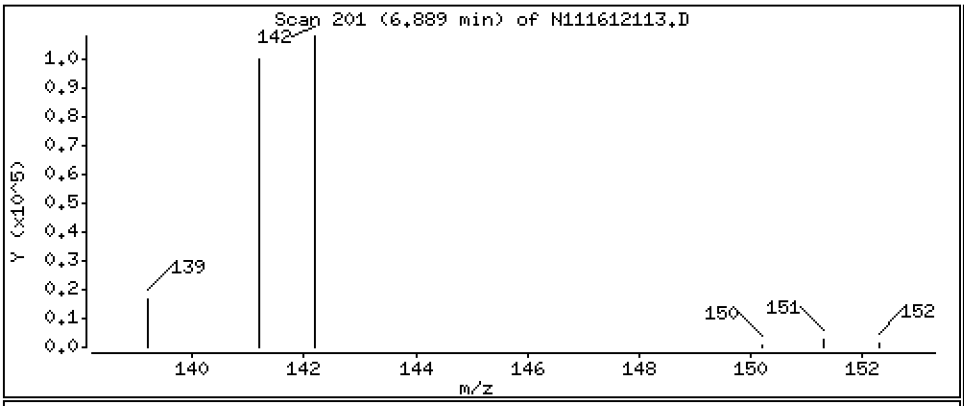
Operator: JW

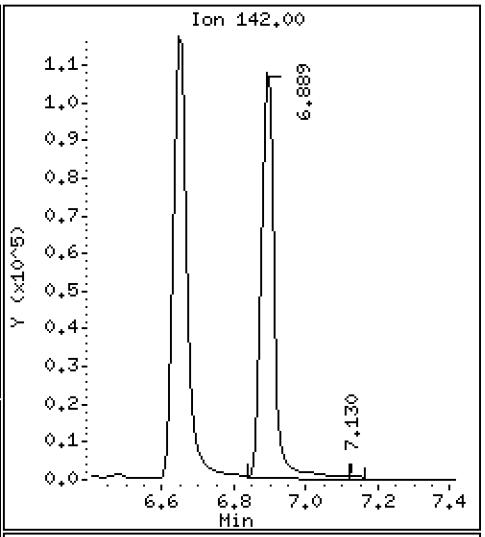
Column phase: Rxi-17Sil MS

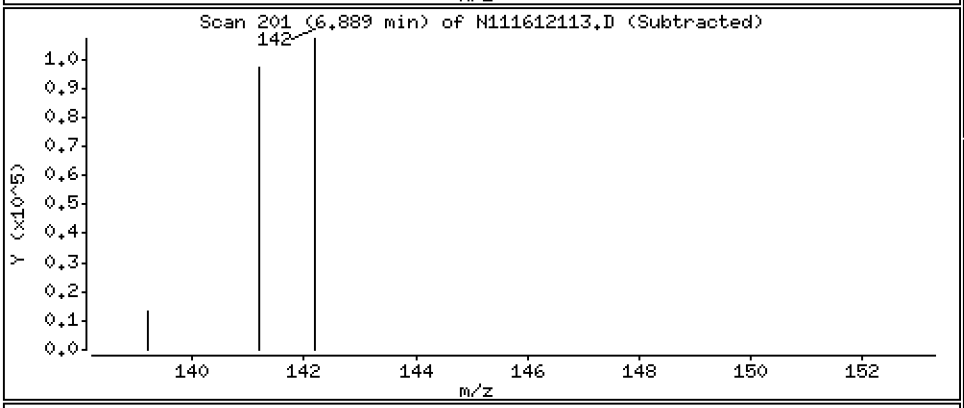
Column diameter: 0.25

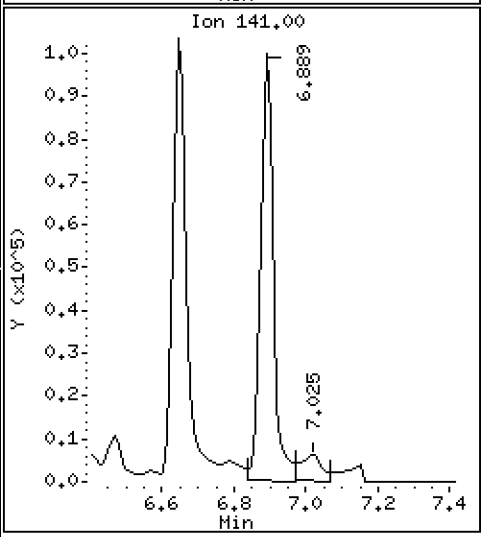
6 1-Methylnaphthalene

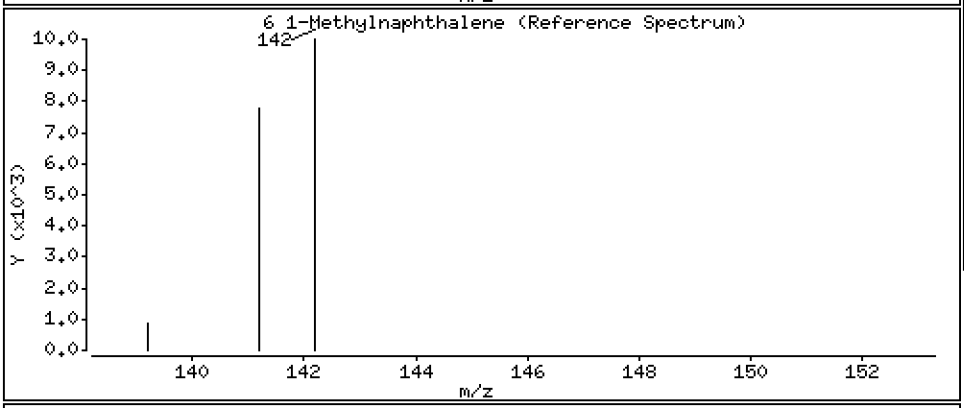
Concentration: 143 ng/mL

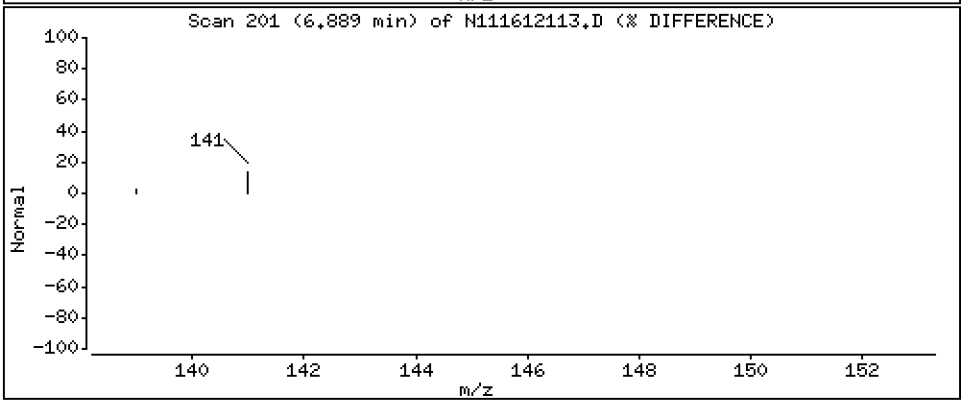












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

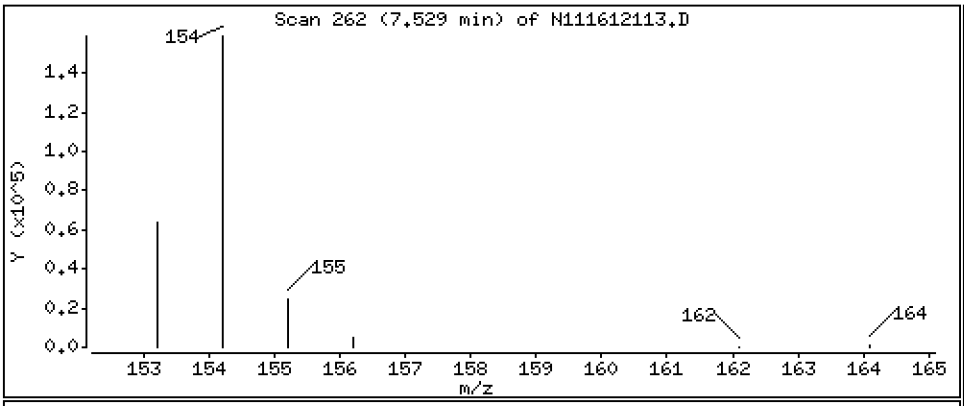
Operator: JW

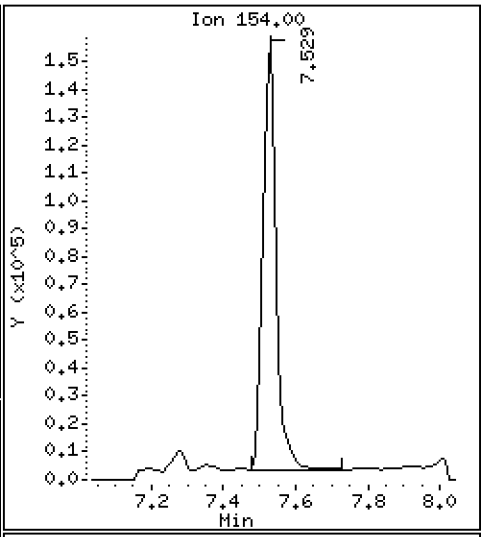
Column phase: Rxi-17Sil MS

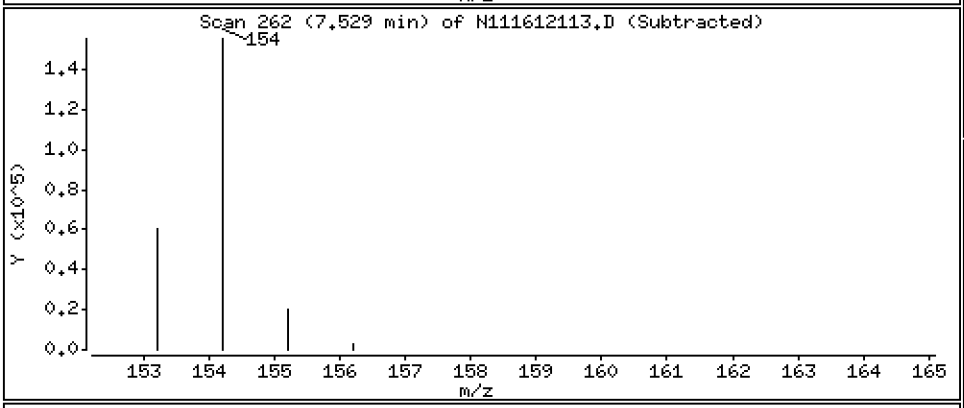
Column diameter: 0.25

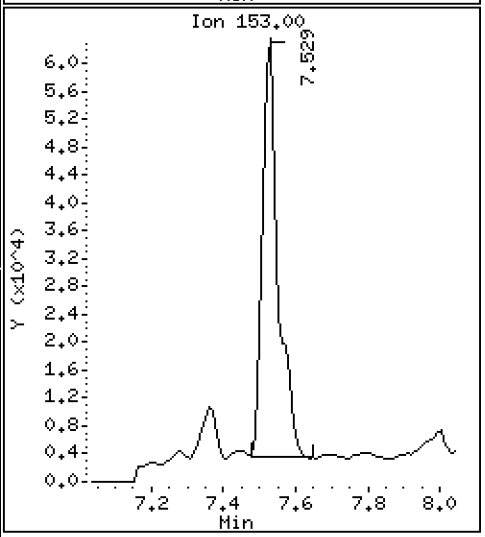
8 Biphenyl

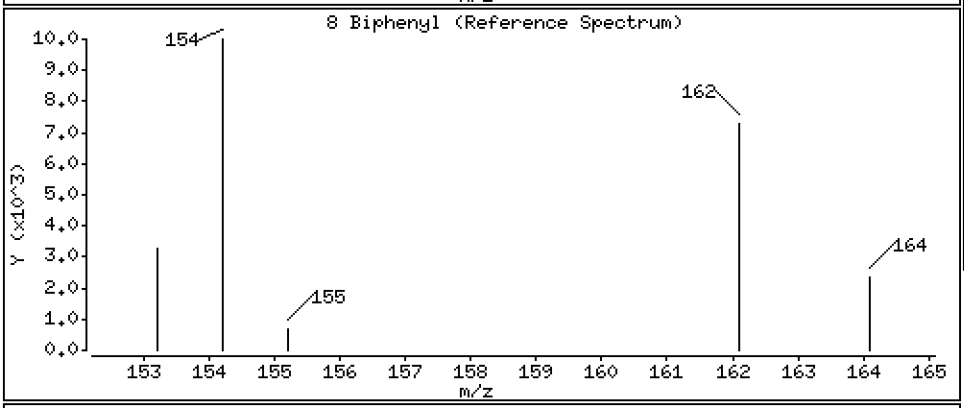
Concentration: 138 ng/mL

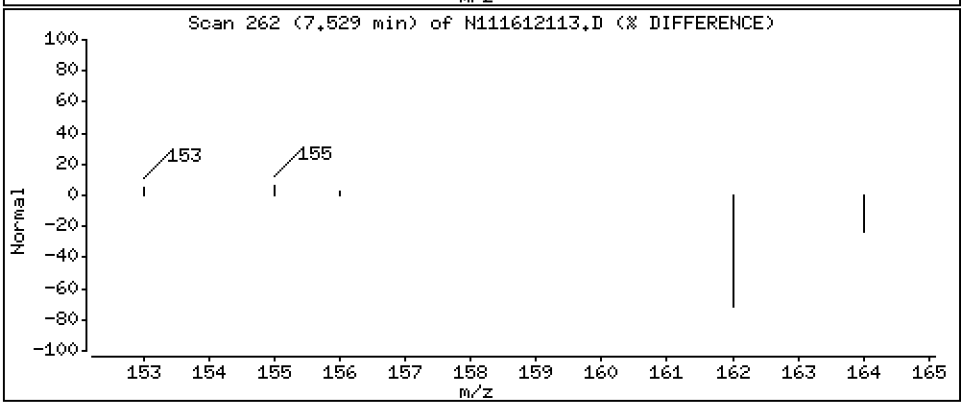












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

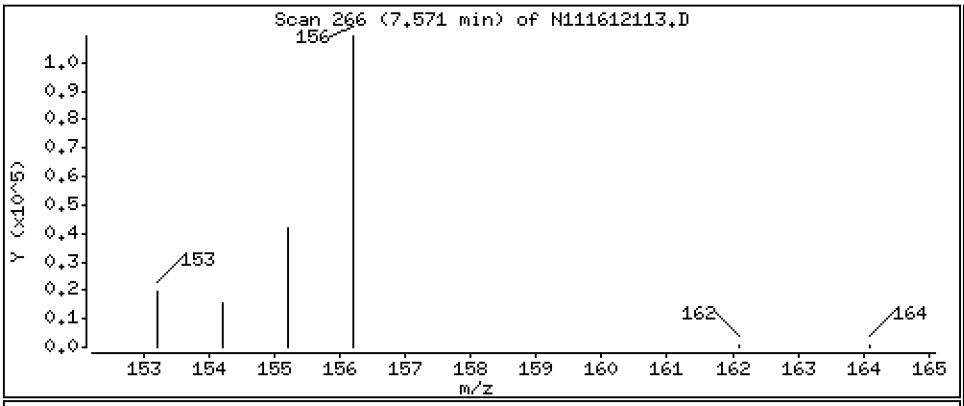
Operator: JW

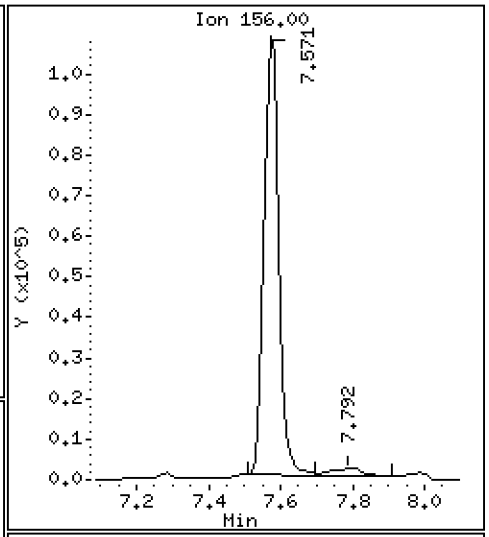
Column phase: Rxi-17Sil MS

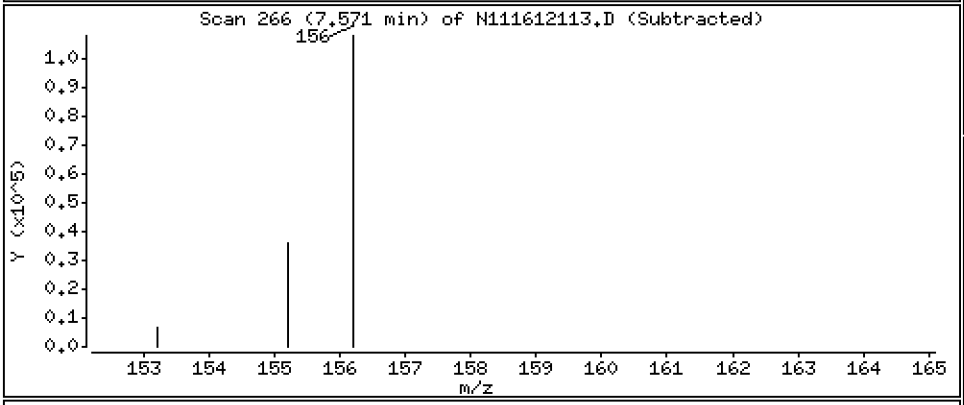
Column diameter: 0.25

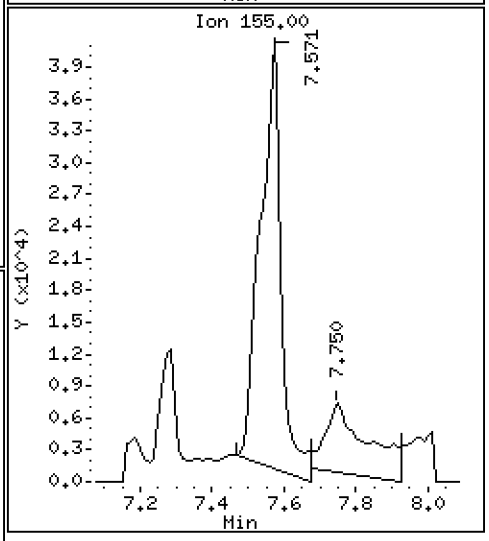
9 2,6-Dimethylnaphthalene

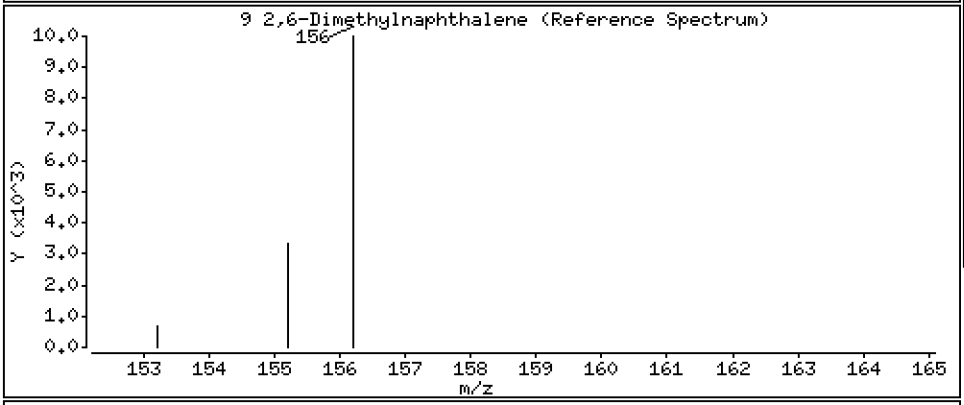
Concentration: 152 ng/mL

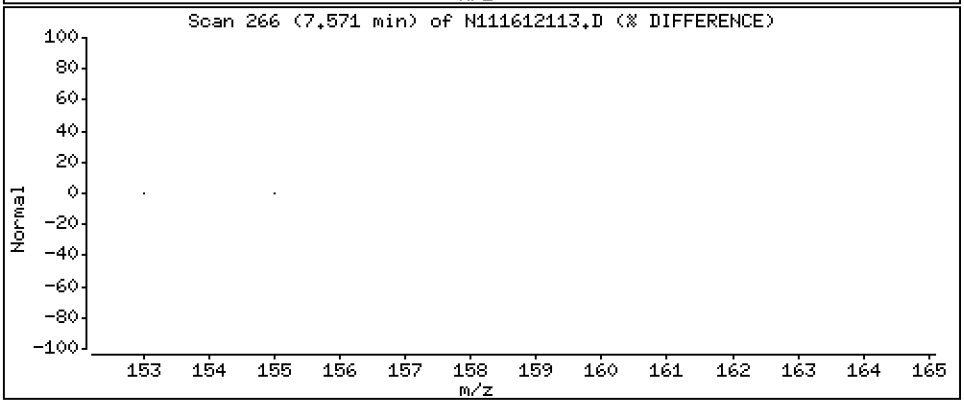












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

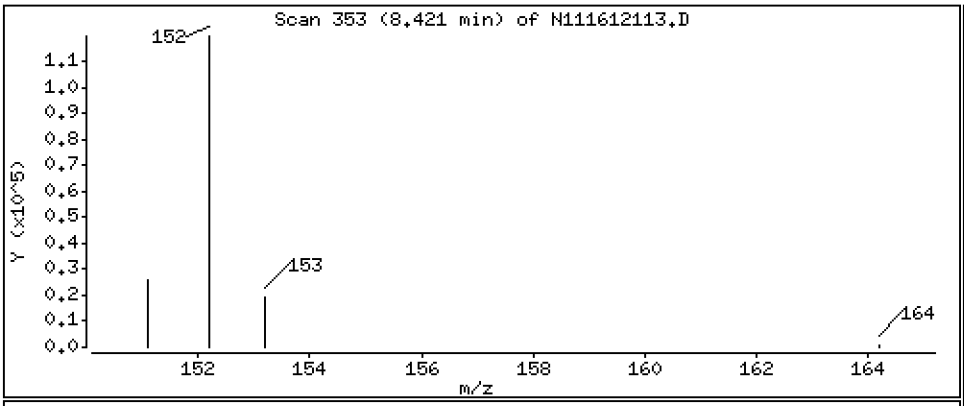
Operator: JW

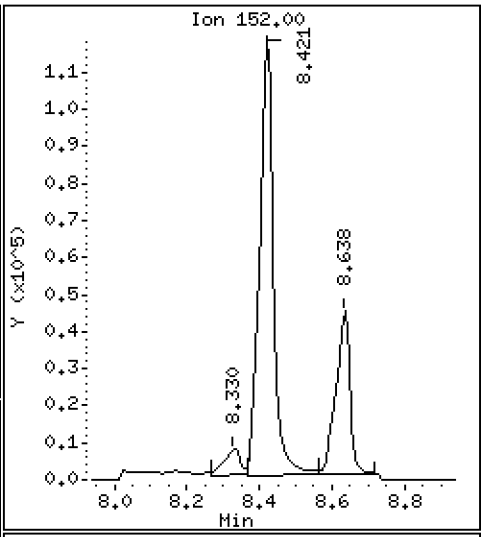
Column phase: Rxi-17Sil MS

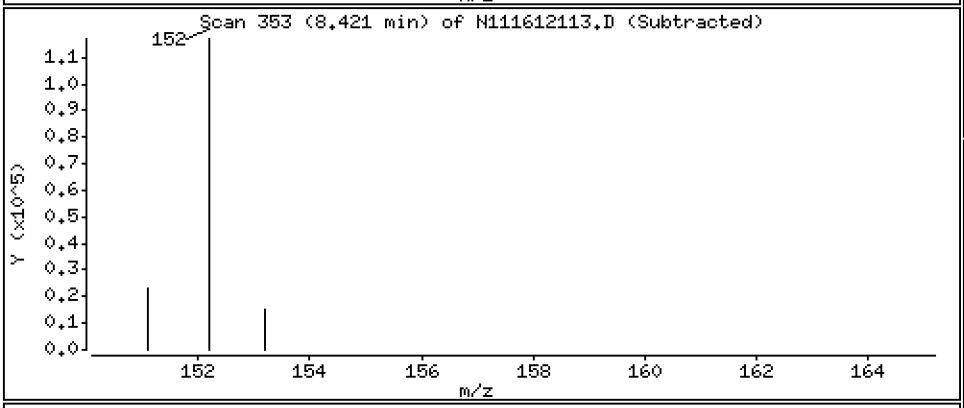
Column diameter: 0.25

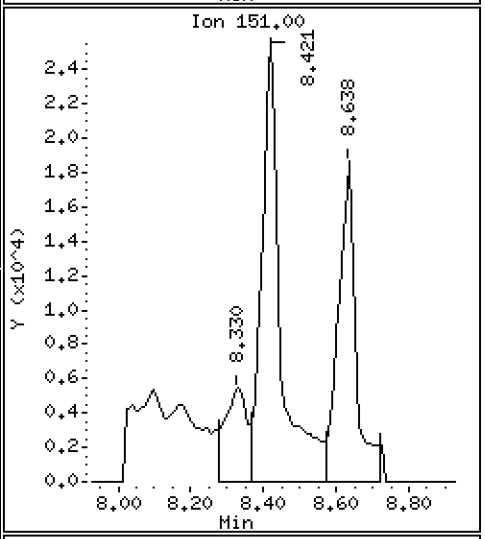
10 Acenaphthylene

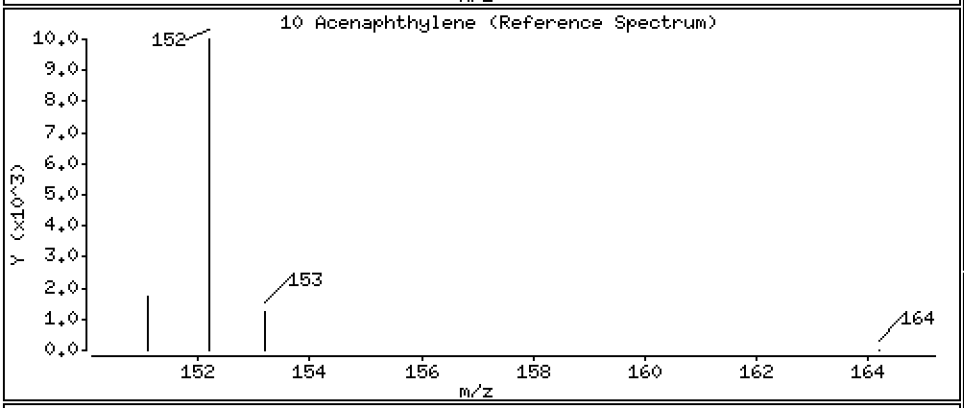
Concentration: 135 ng/mL

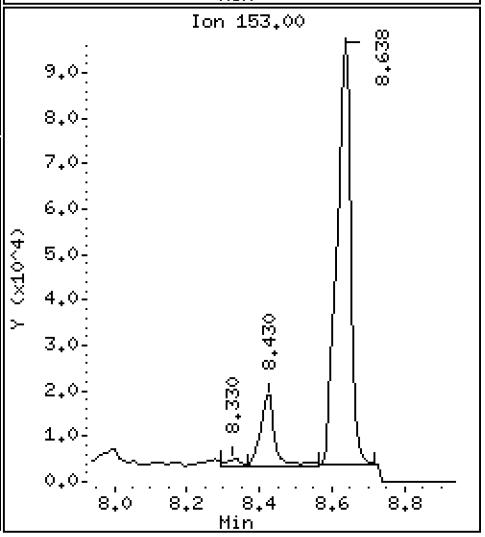


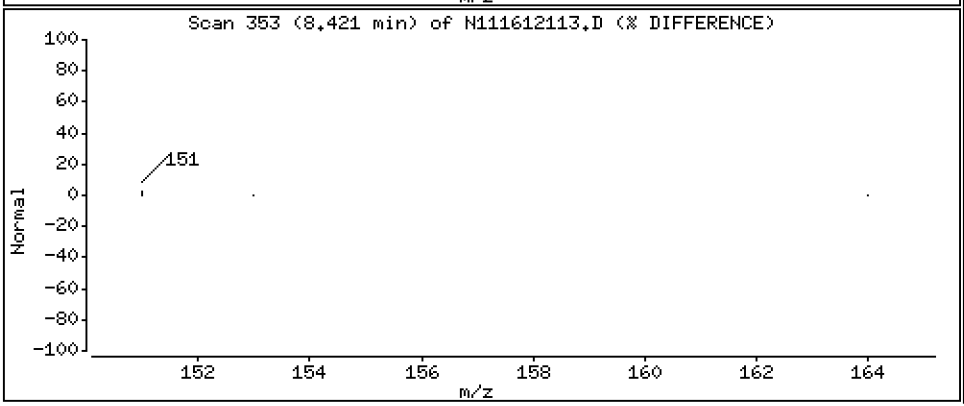












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

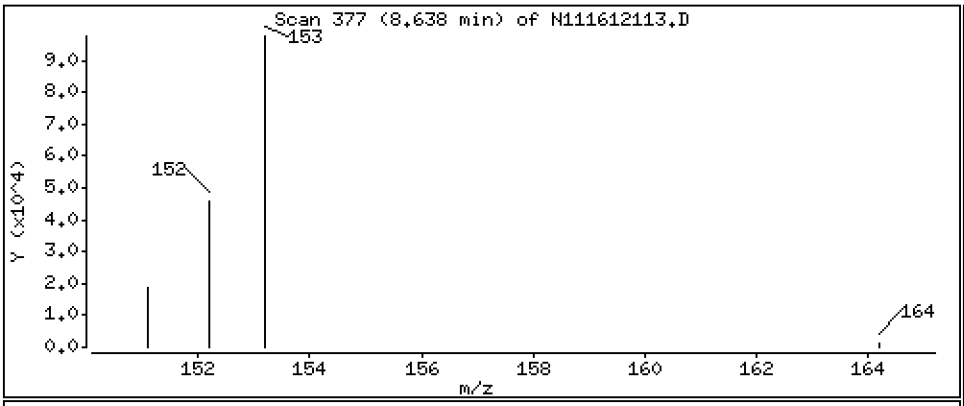
Operator: JW

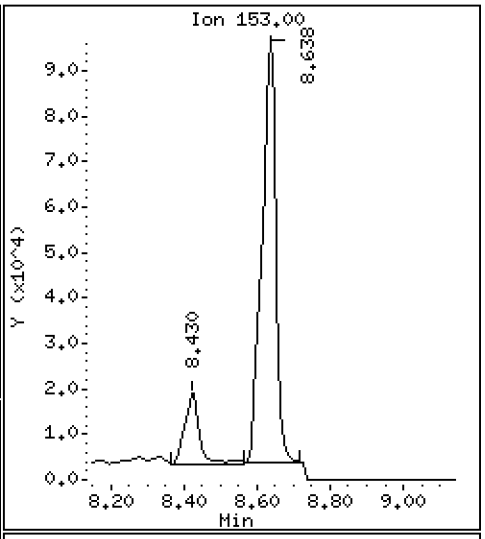
Column phase: Rxi-17Sil MS

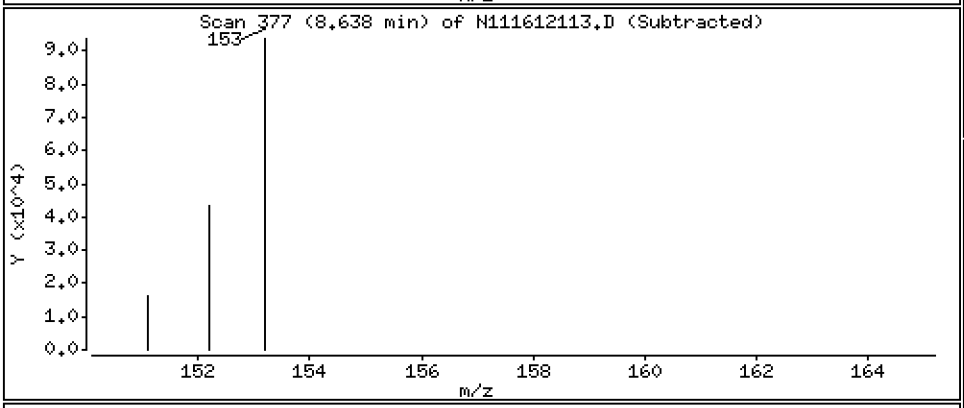
Column diameter: 0.25

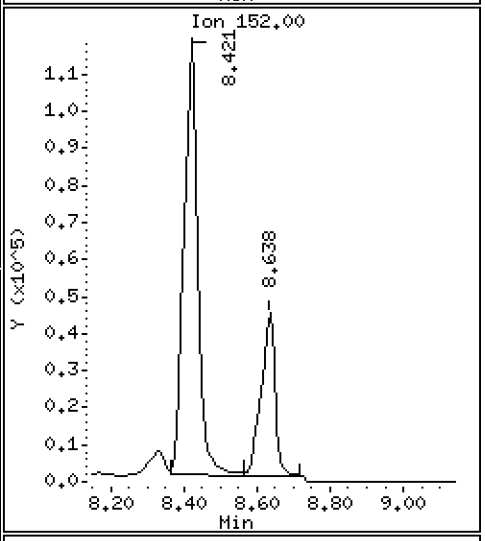
12 Acenaphthene

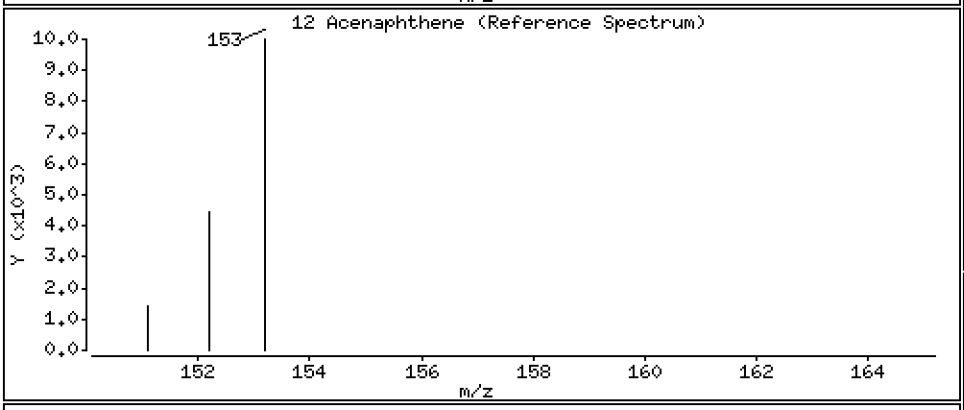
Concentration: 157 ng/mL

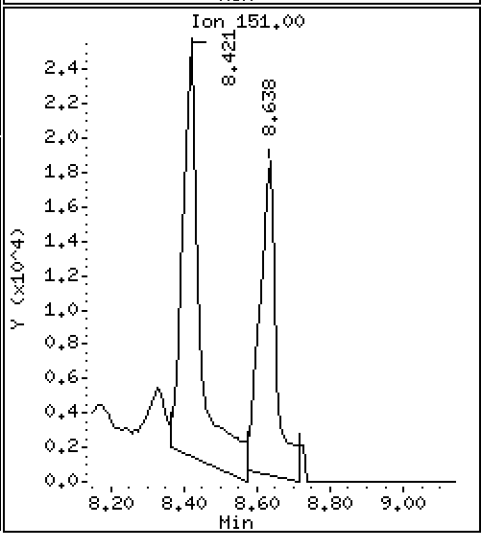


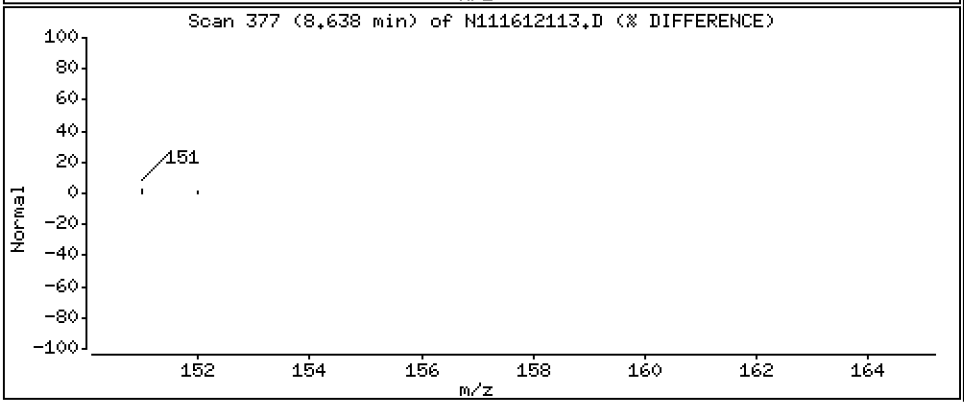












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

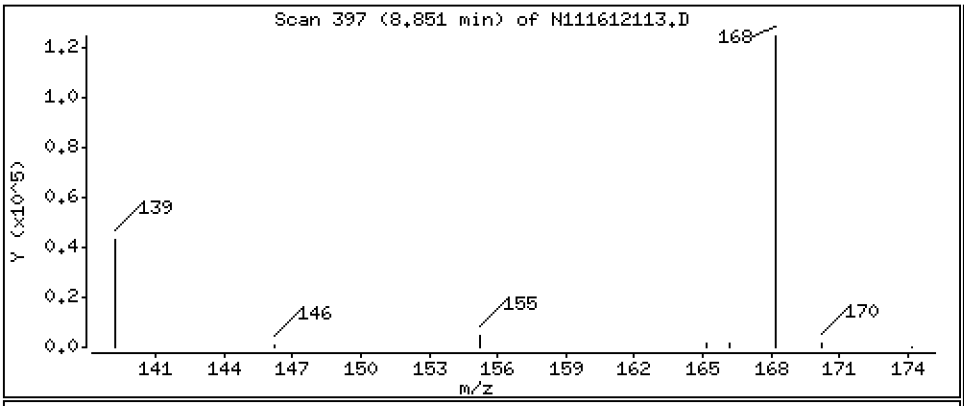
Operator: JW

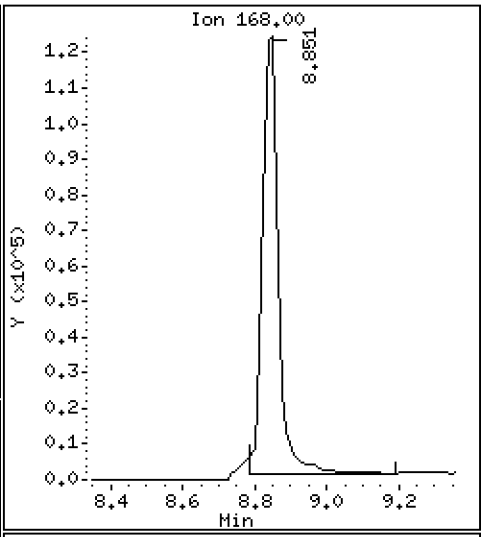
Column phase: Rxi-17Sil MS

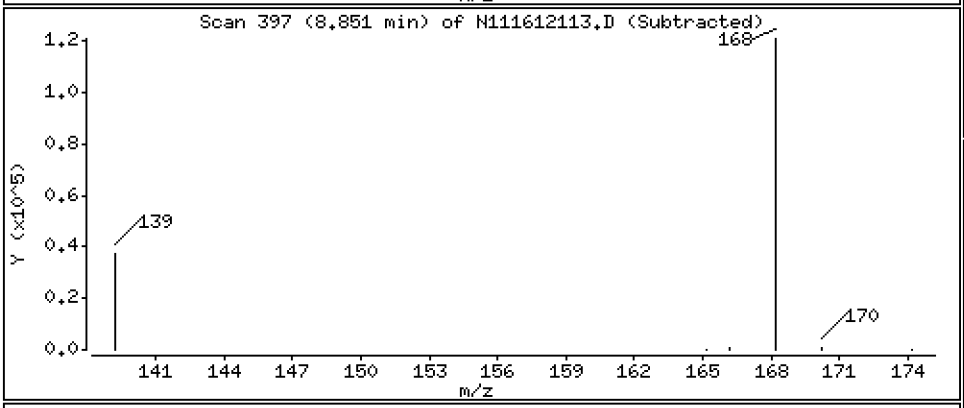
Column diameter: 0.25

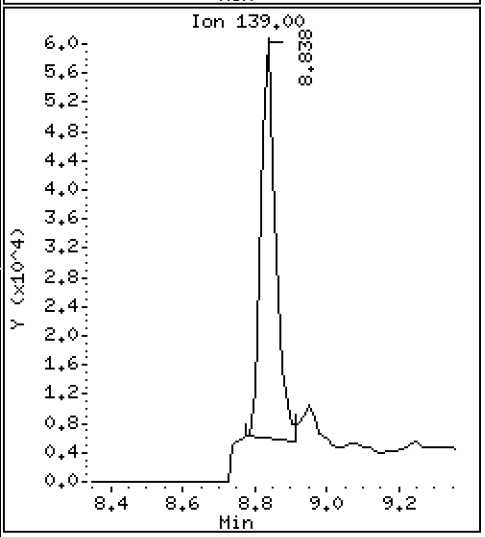
13 Dibenzofuran

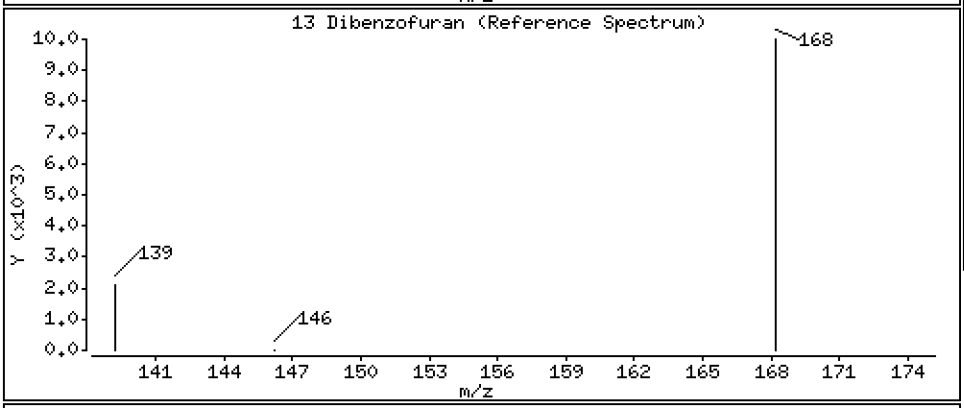
Concentration: 164 ng/mL

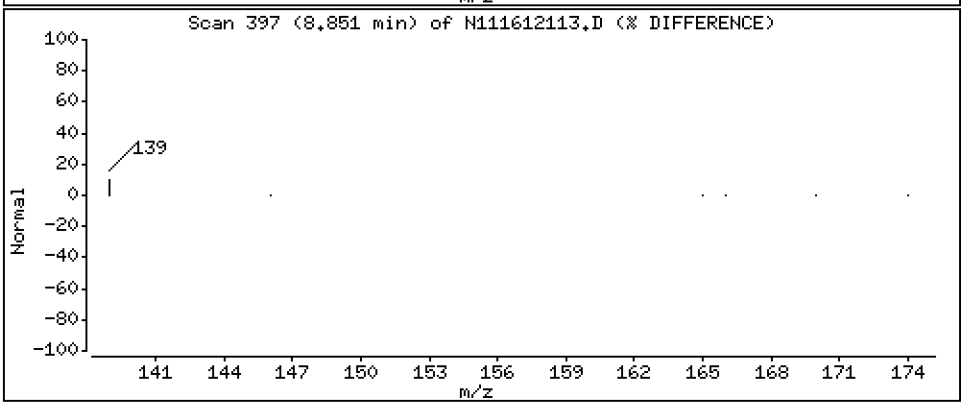












Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

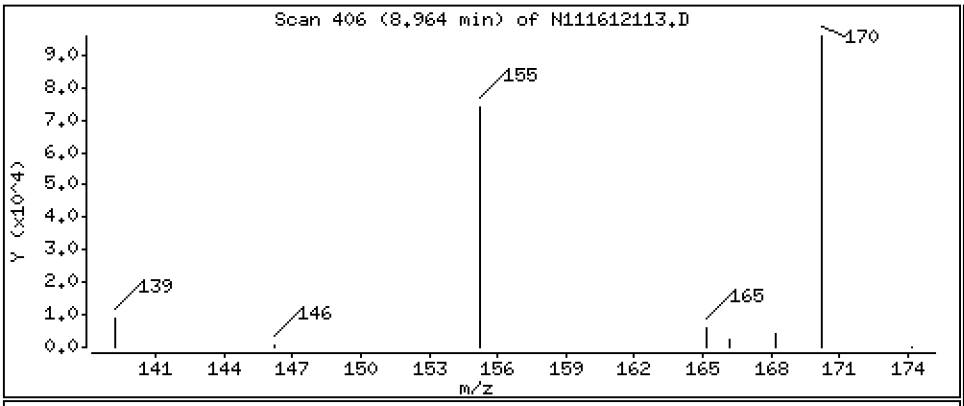
Operator: JW

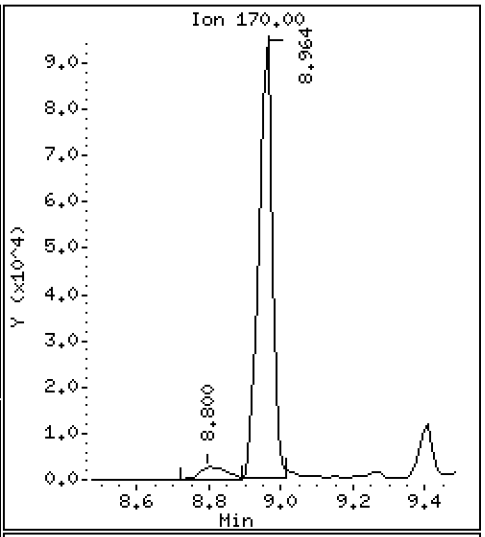
Column phase: Rxi-17Sil MS

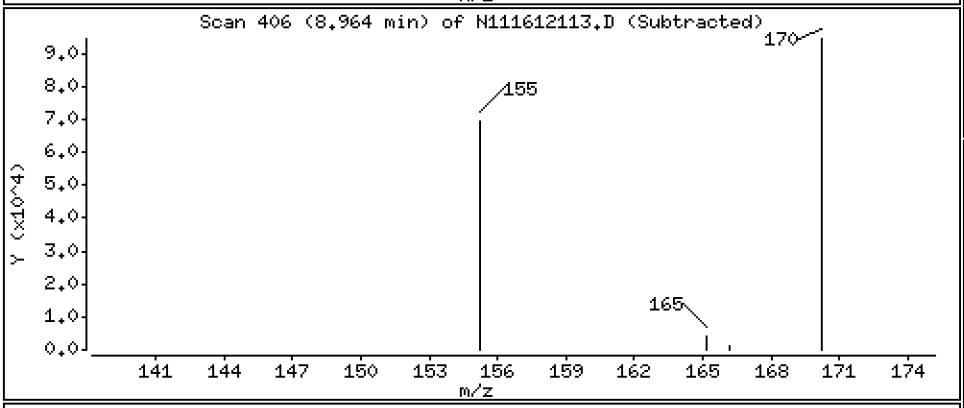
Column diameter: 0.25

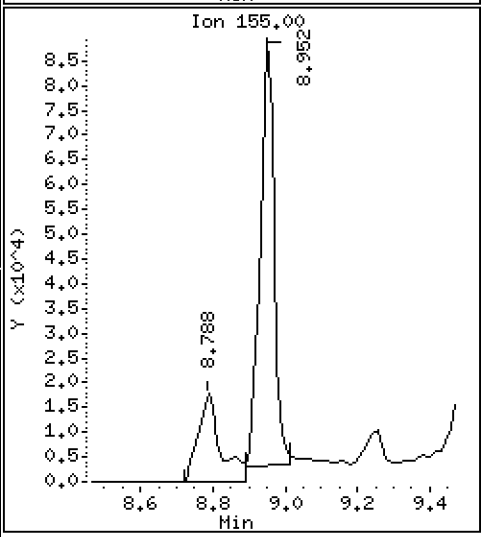
14 2,3,5-Trimethylnaphthalene

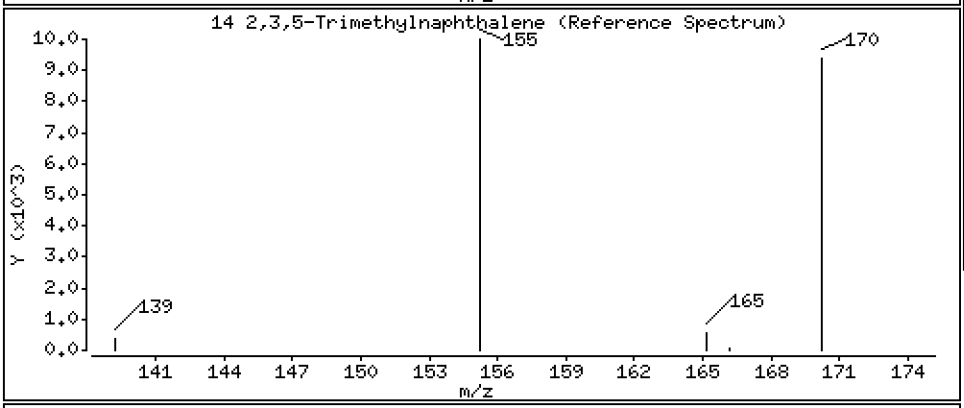
Concentration: 175 ng/mL

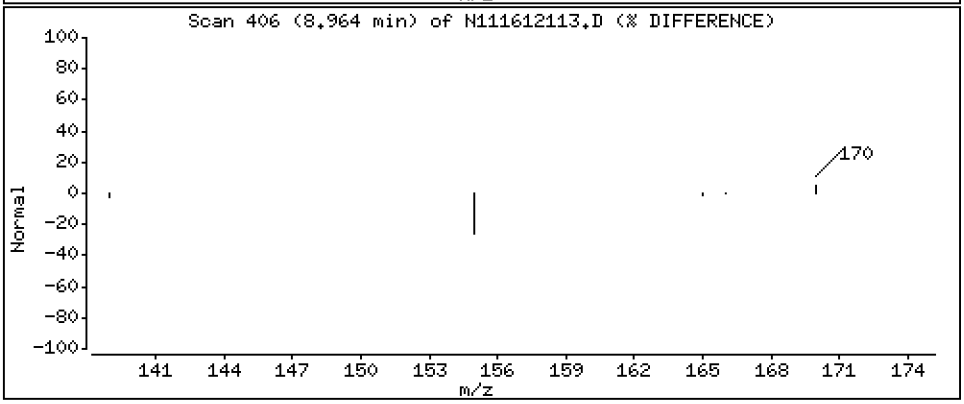












Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

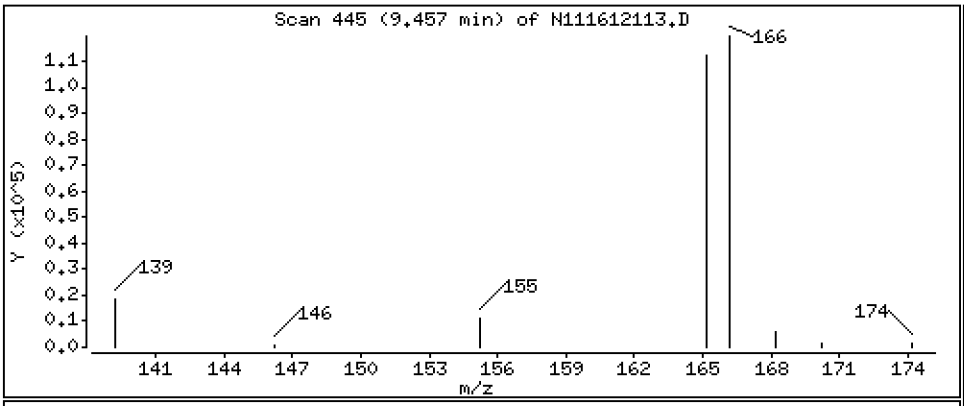
Operator: JW

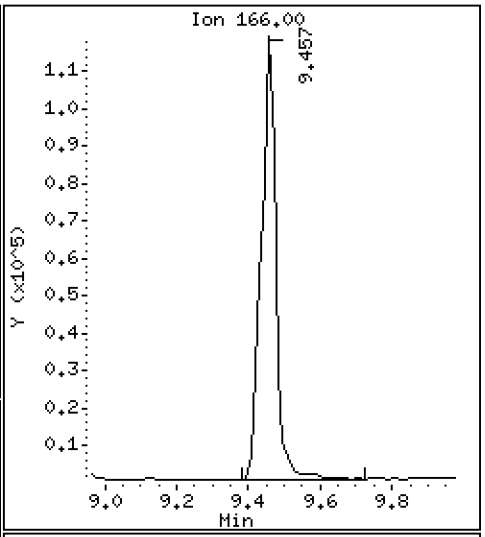
Column phase: Rxi-17Sil MS

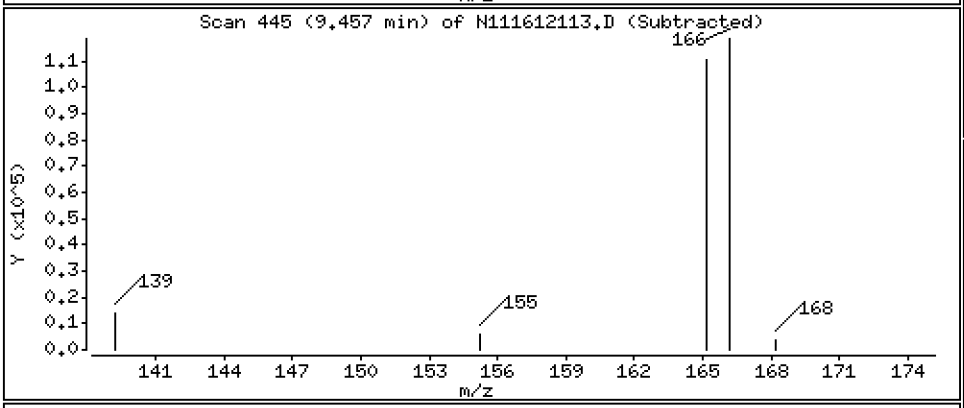
Column diameter: 0.25

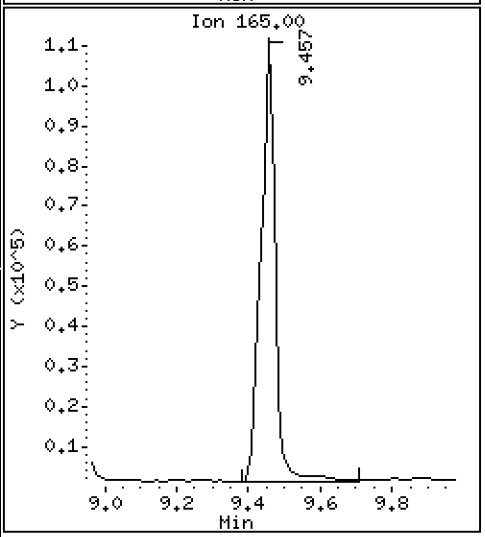
16 Fluorene

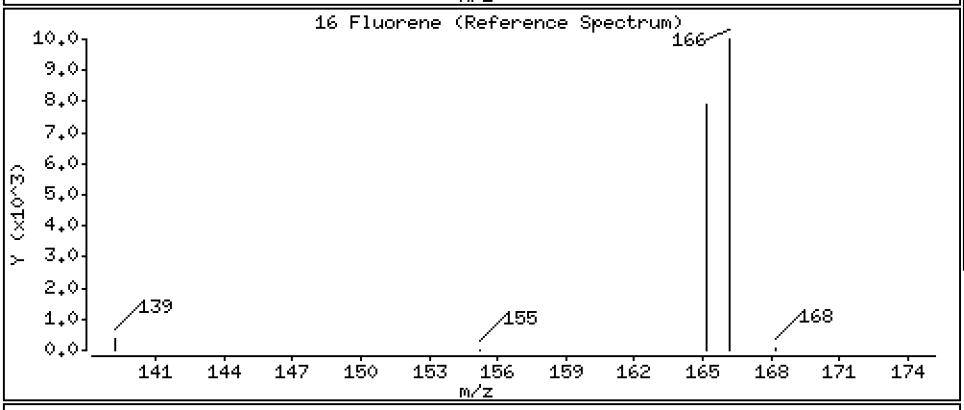
Concentration: 190 ng/mL

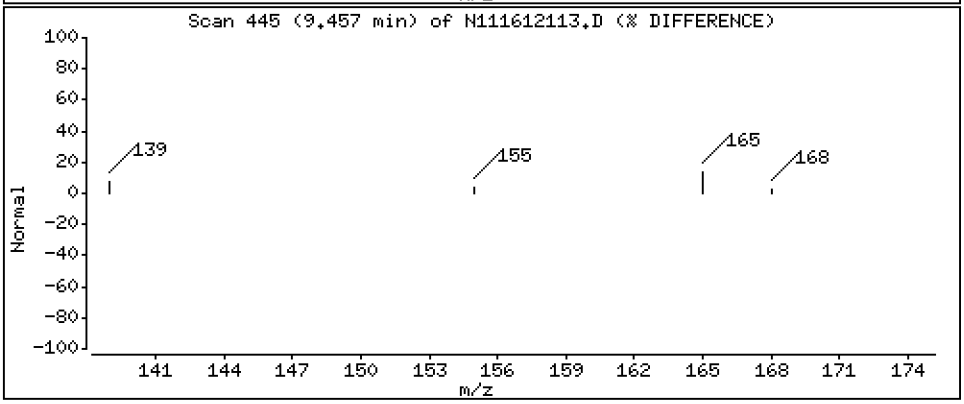












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

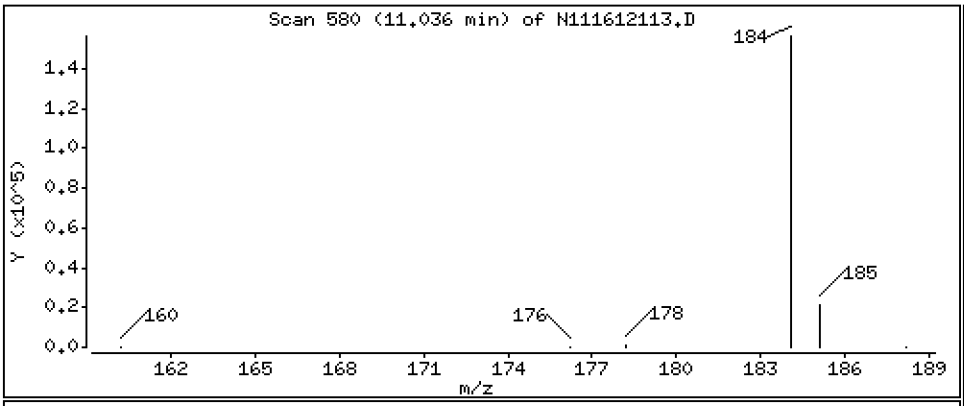
Operator: JW

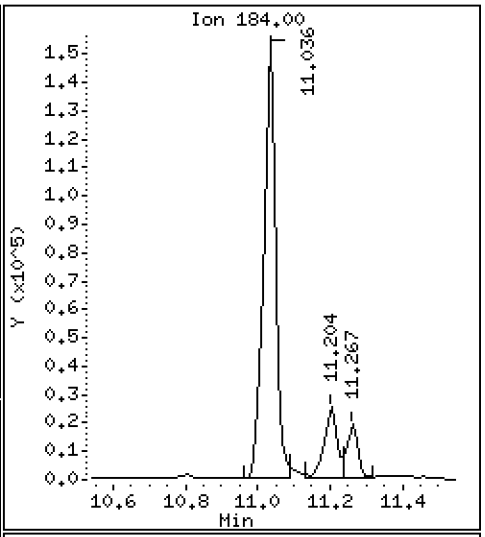
Column phase: Rxi-17Sil MS

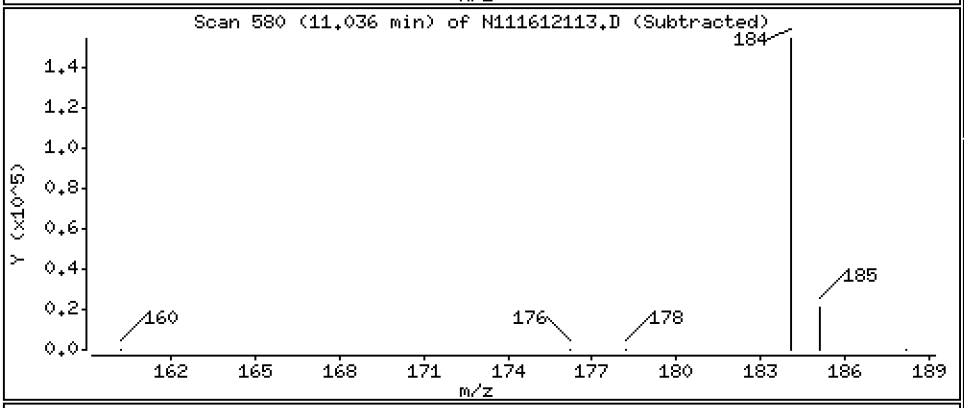
Column diameter: 0.25

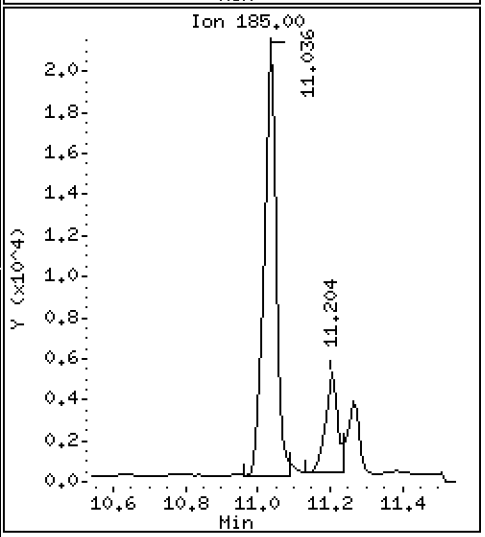
17 Dibenzothiophene

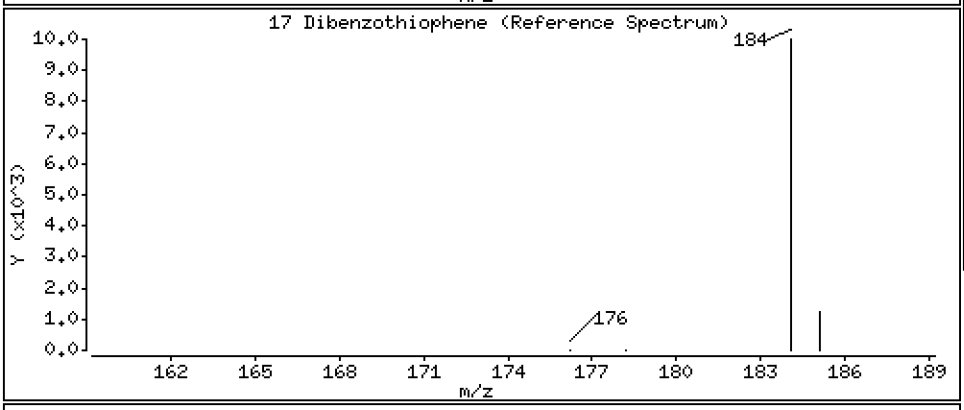
Concentration: 148 ng/mL

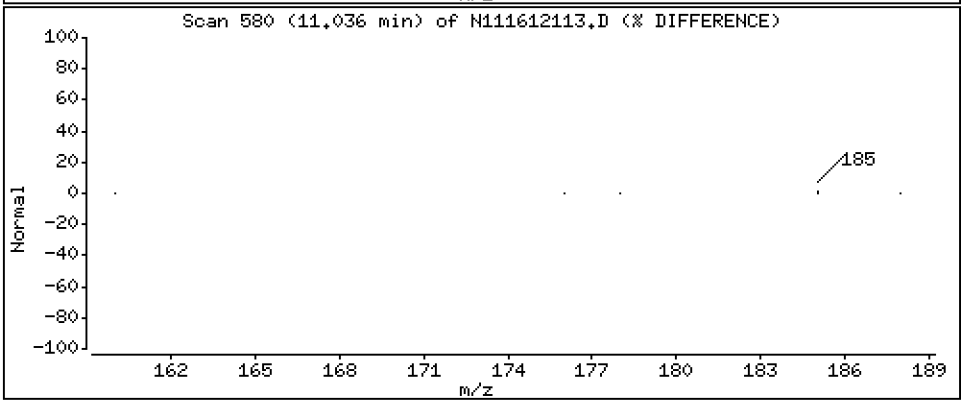












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

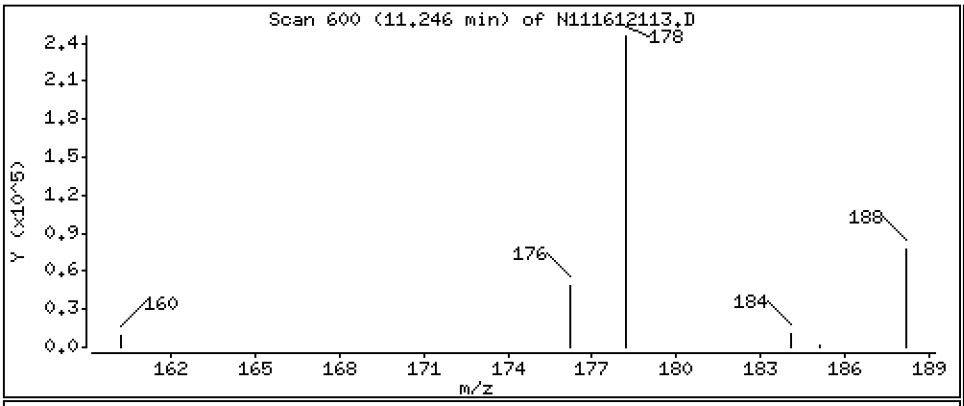
Operator: JW

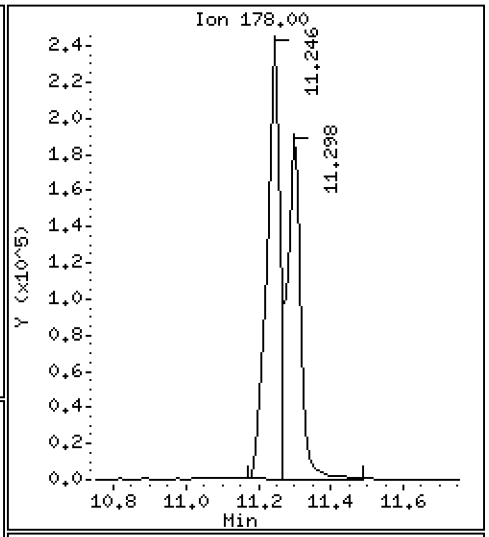
Column phase: Rxi-17Sil MS

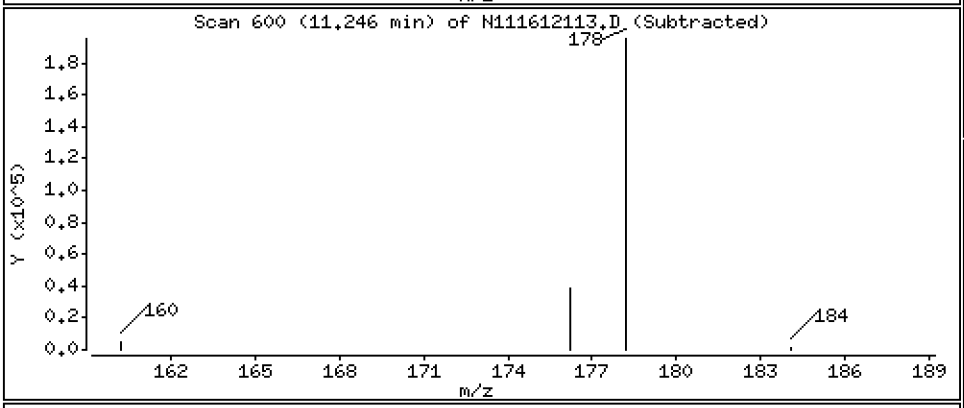
Column diameter: 0.25

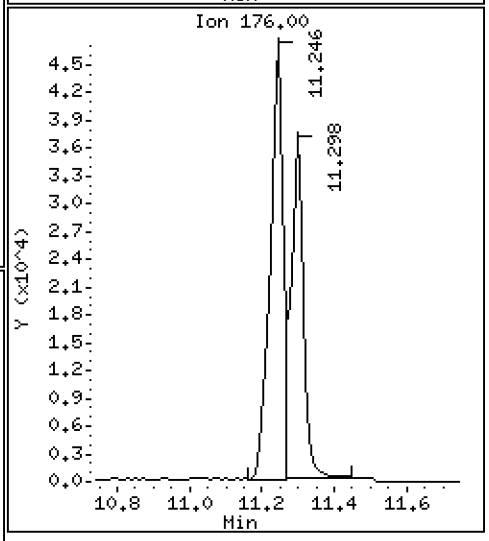
19 Phenanthrene

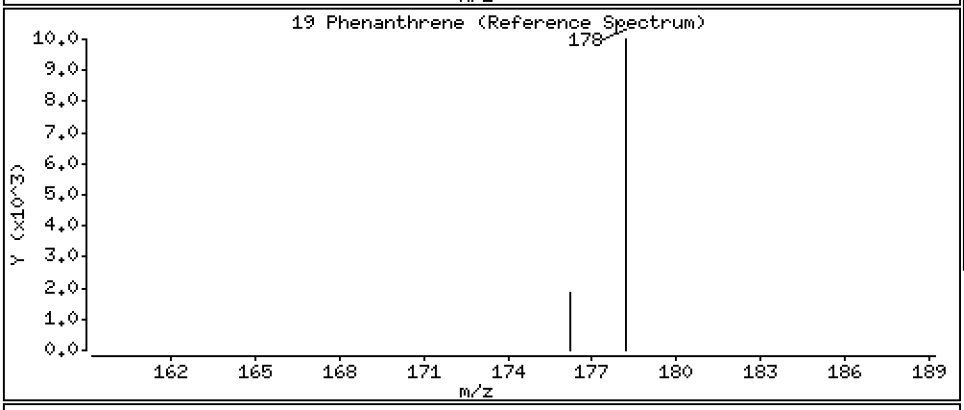
Concentration: 210 ng/mL

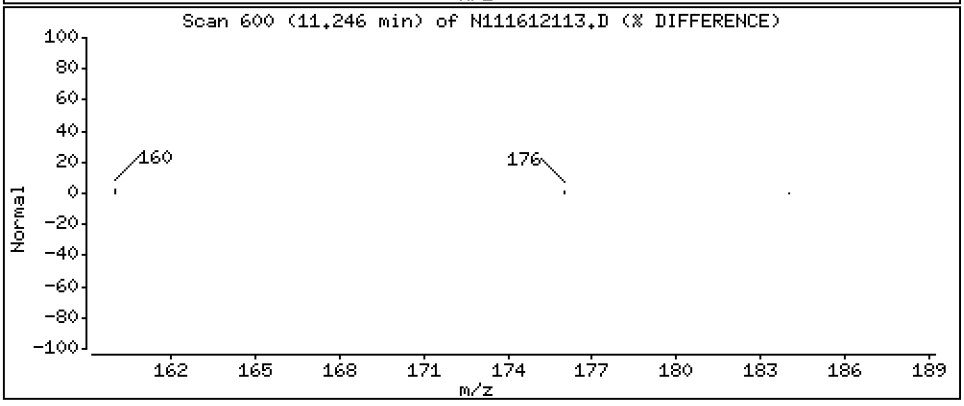












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

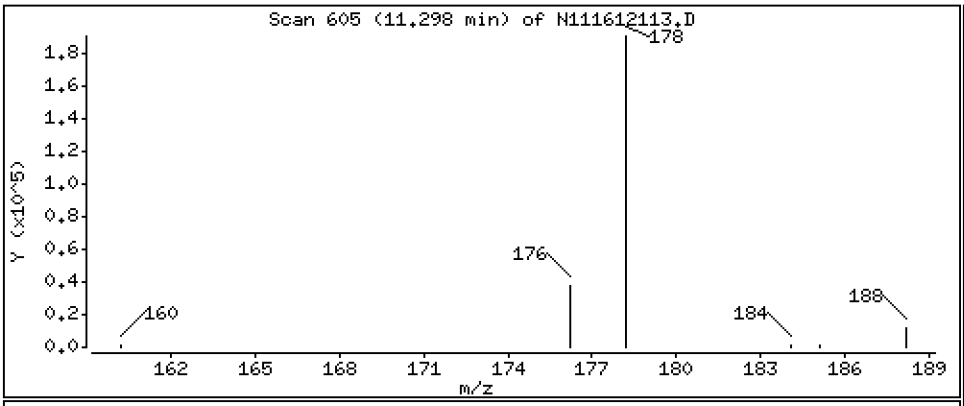
Operator: JW

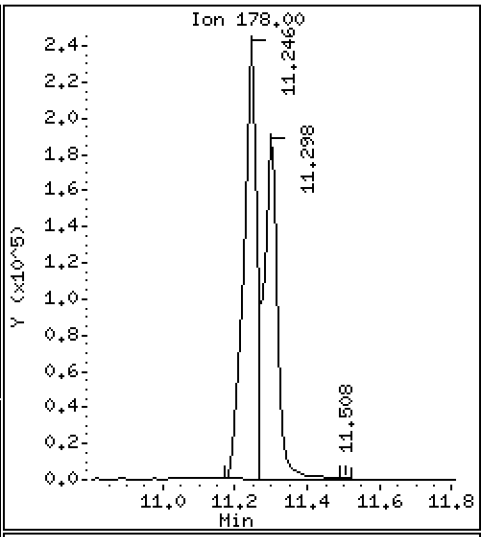
Column phase: Rxi-17Sil MS

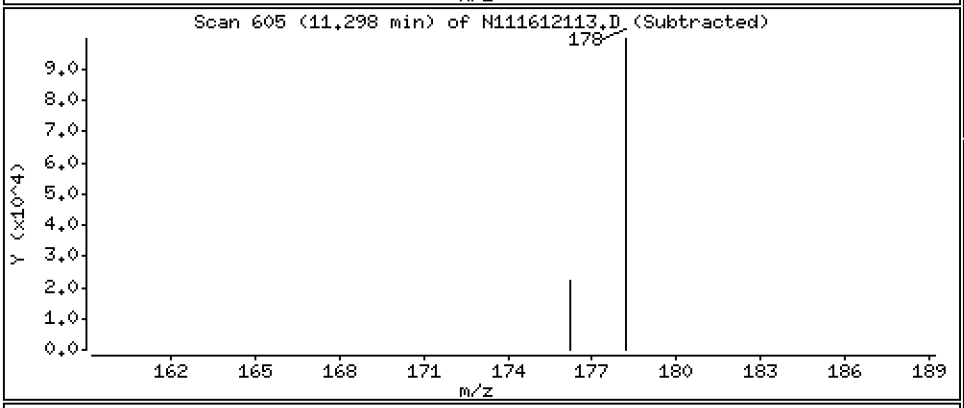
Column diameter: 0.25

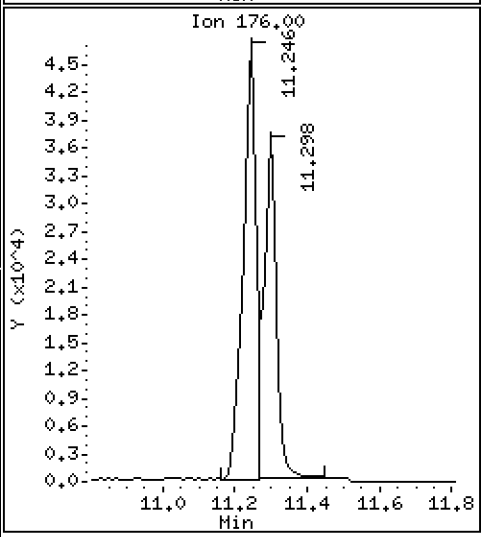
21 Anthracene

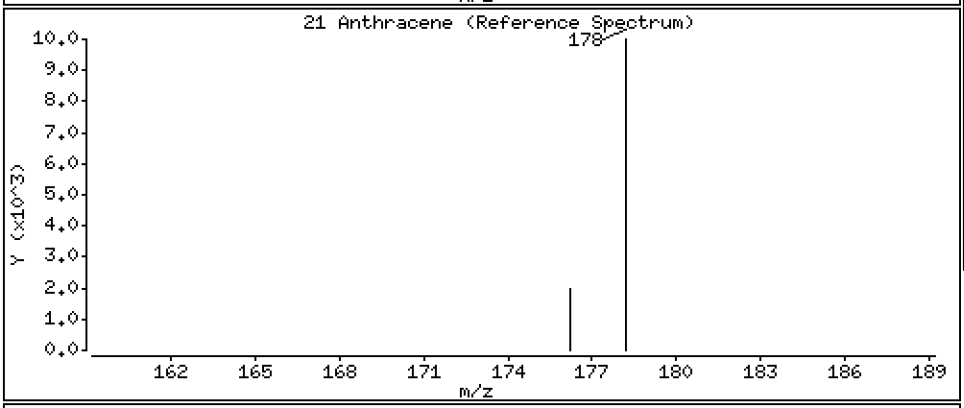
Concentration: 193 ng/mL

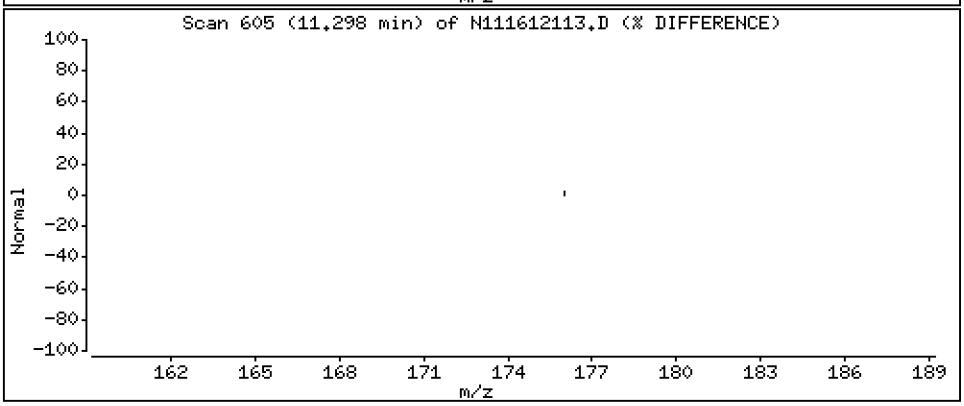












Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

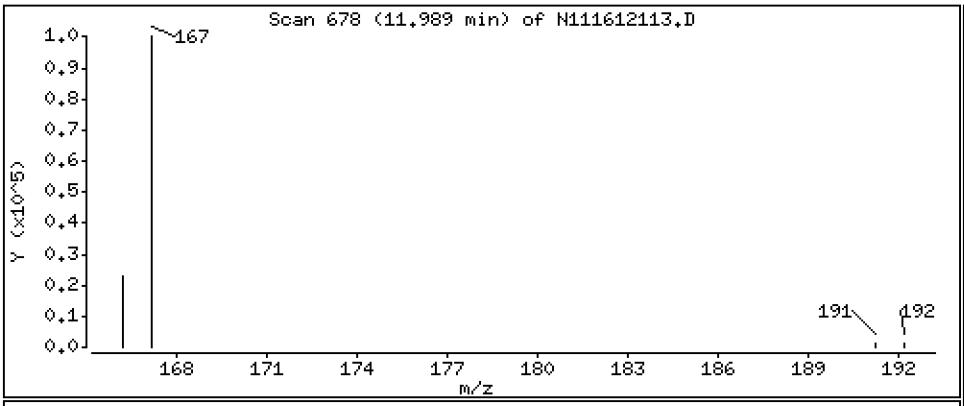
Operator: JW

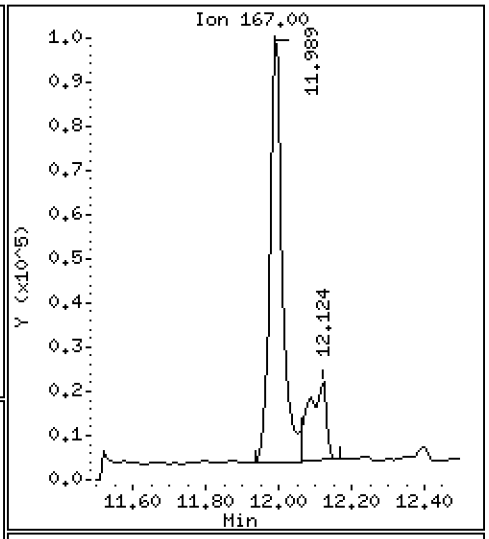
Column phase: Rxi-17Sil MS

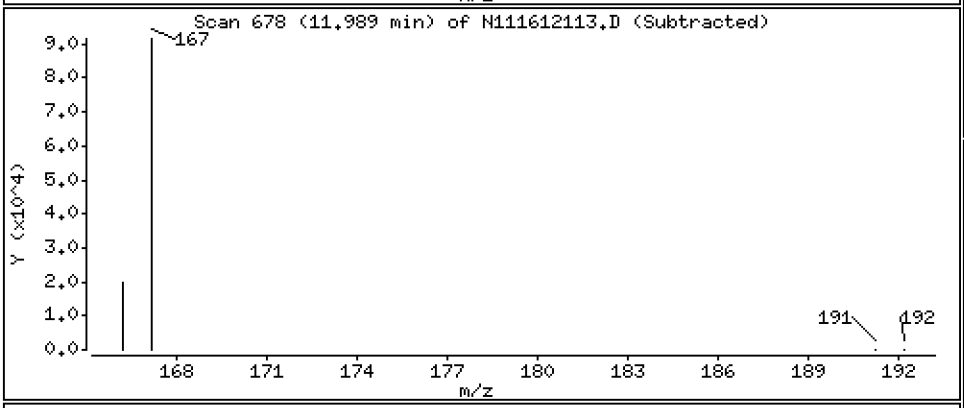
Column diameter: 0.25

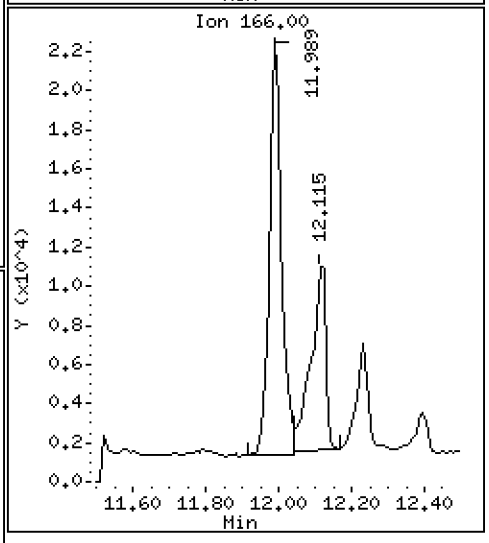
22 Carbazole

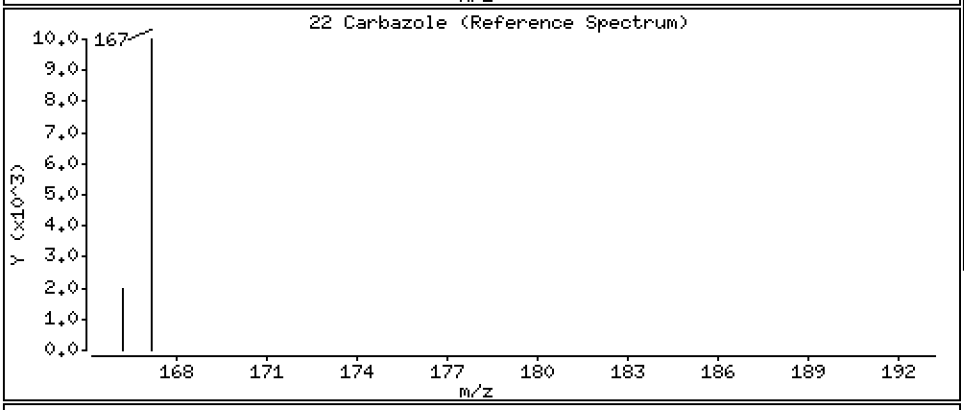
Concentration: 73.4 ng/mL

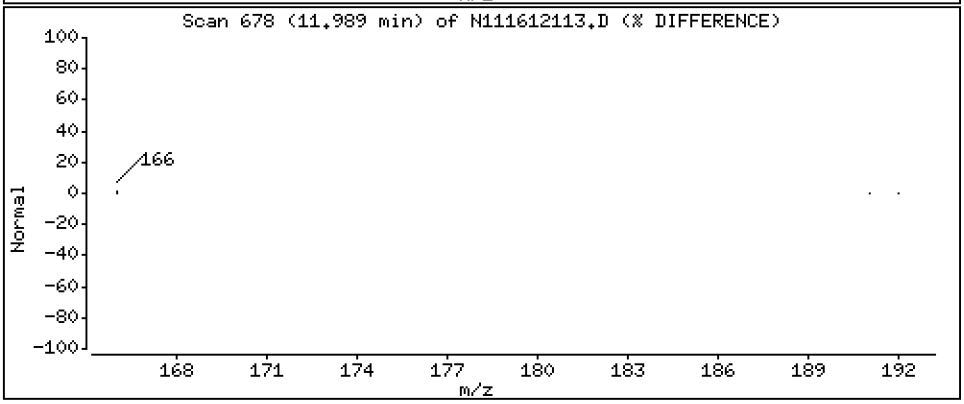












Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

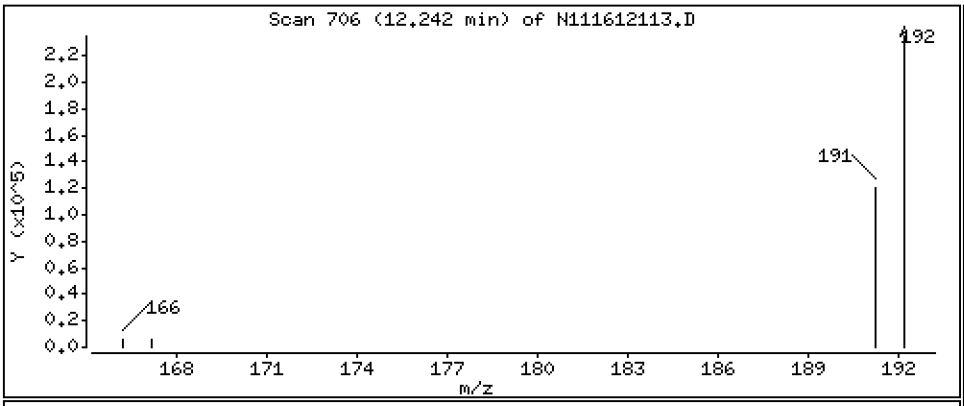
Operator: JW

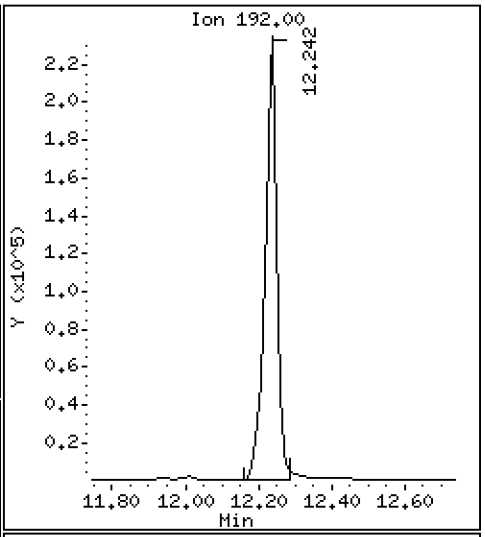
Column phase: Rxi-17Sil MS

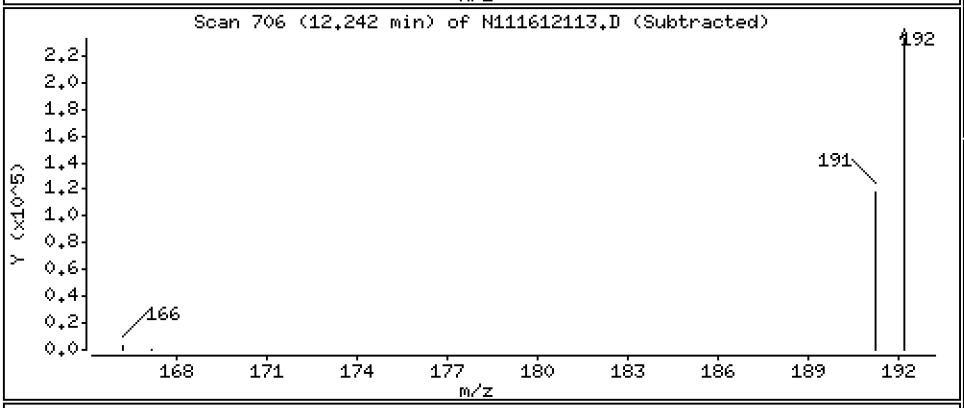
Column diameter: 0.25

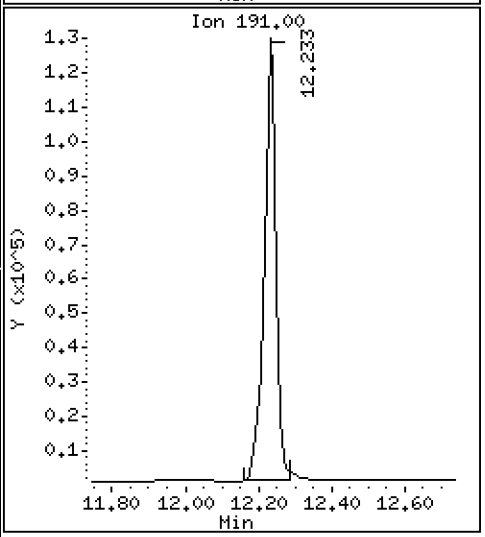
23 1-Methylphenanthrene

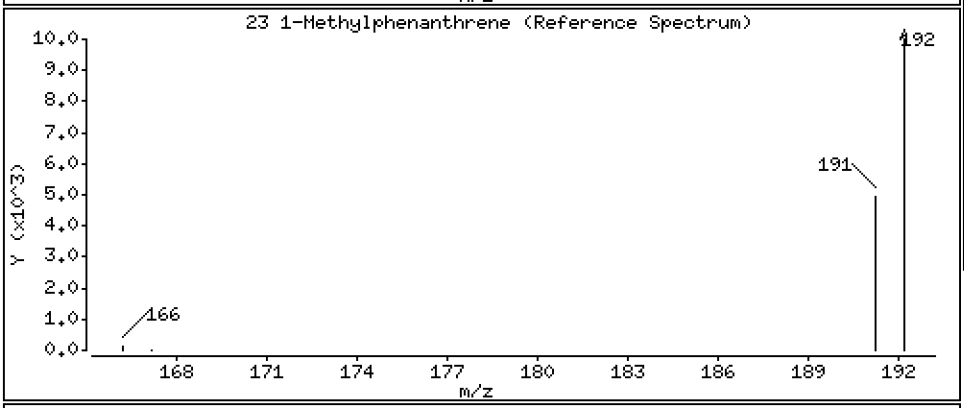
Concentration: 206 ng/mL

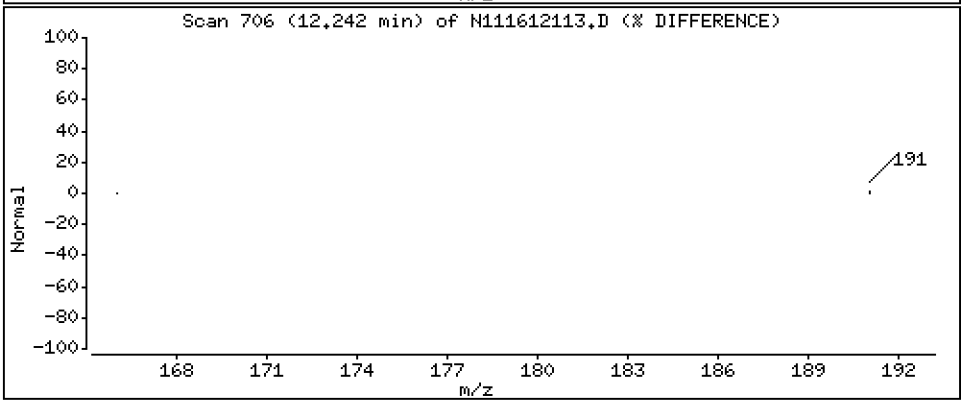












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

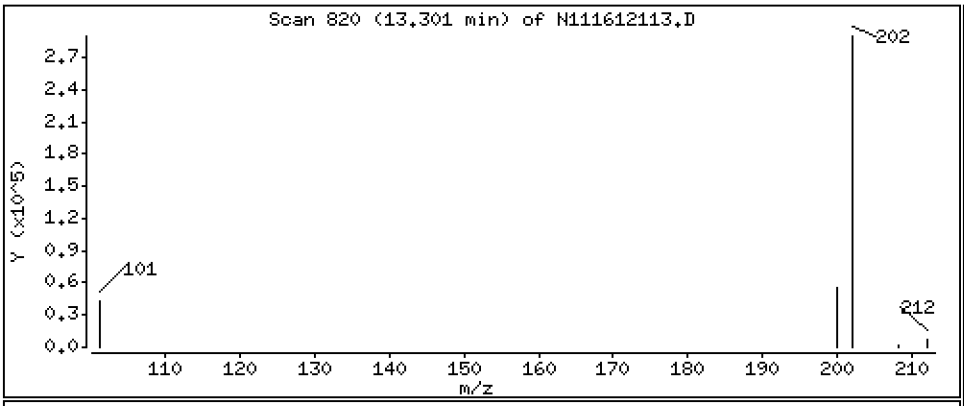
Operator: JW

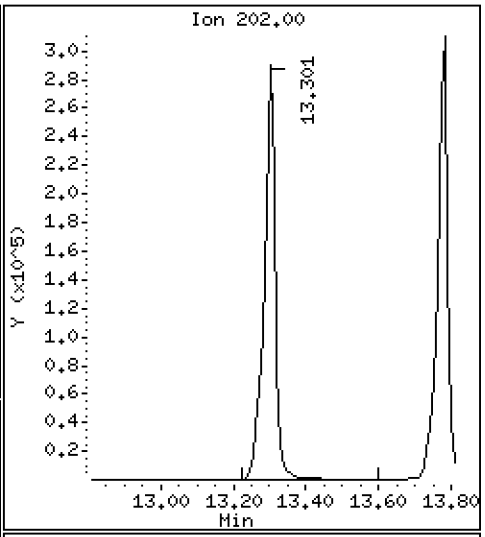
Column phase: Rxi-17Sil MS

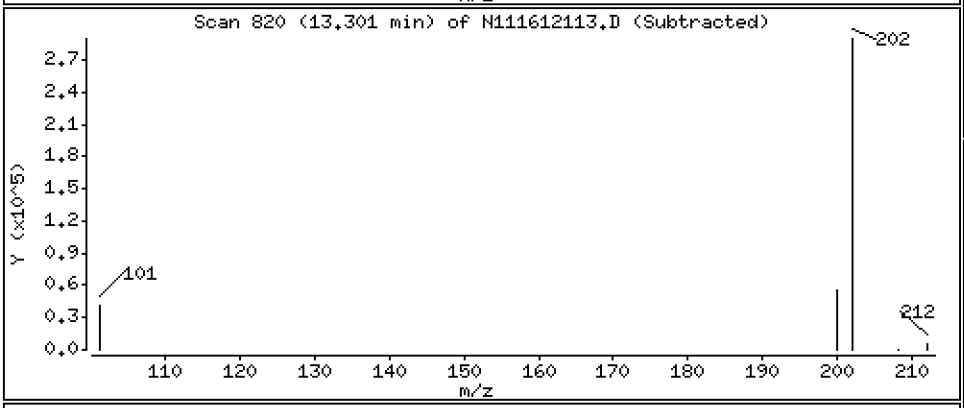
Column diameter: 0.25

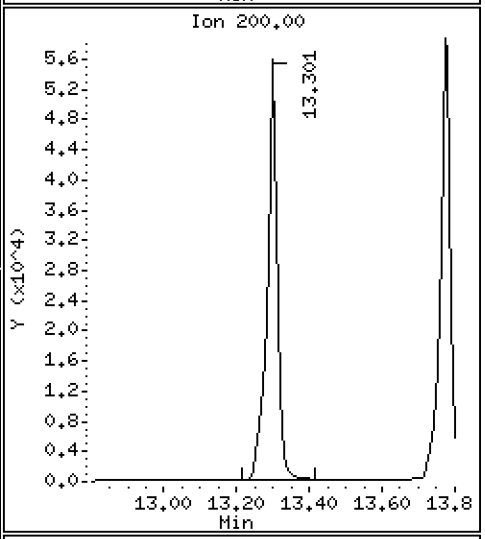
25 Fluoranthene

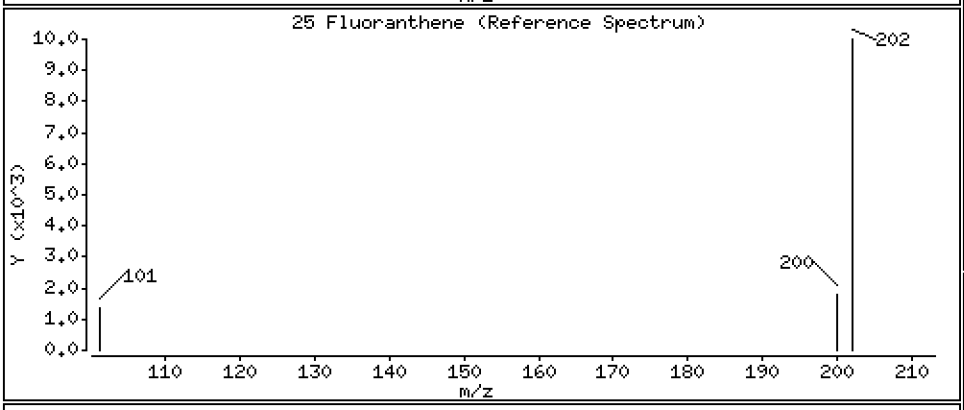
Concentration: 216 ng/mL

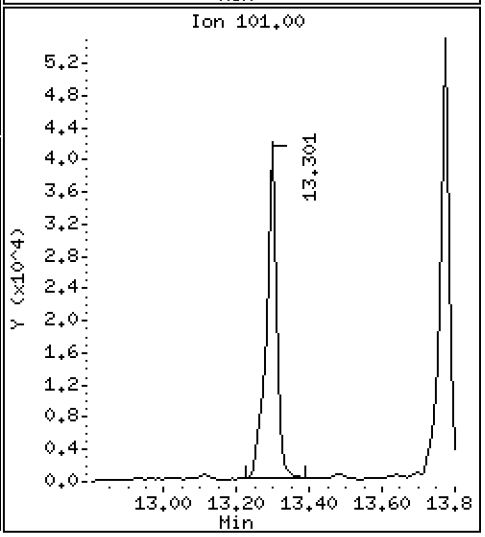


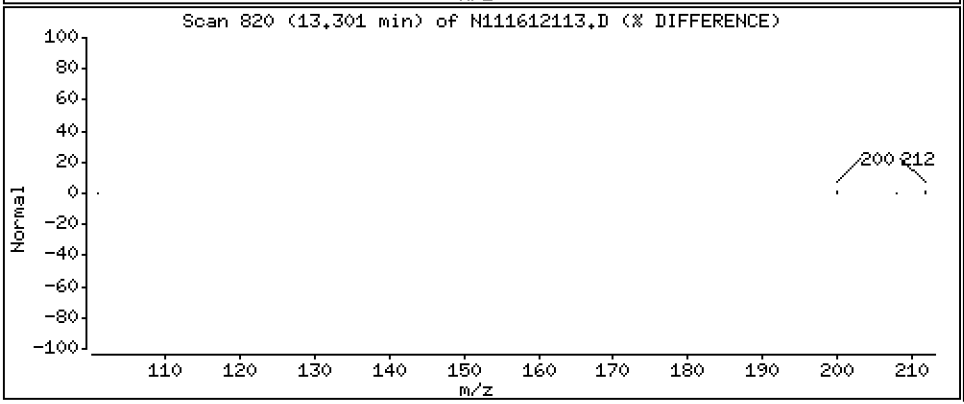












Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

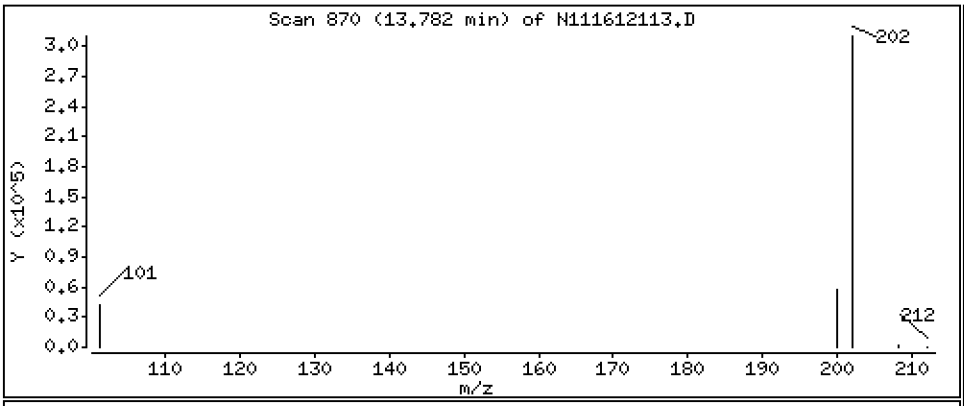
Operator: JW

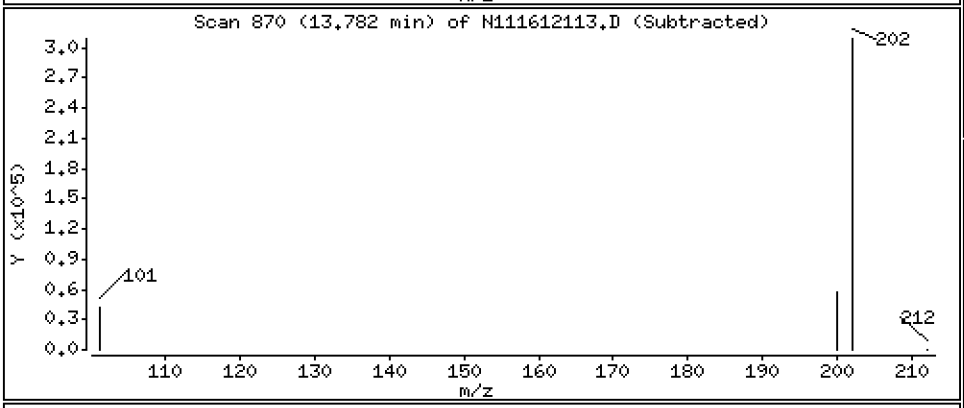
Column phase: Rxi-17Sil MS

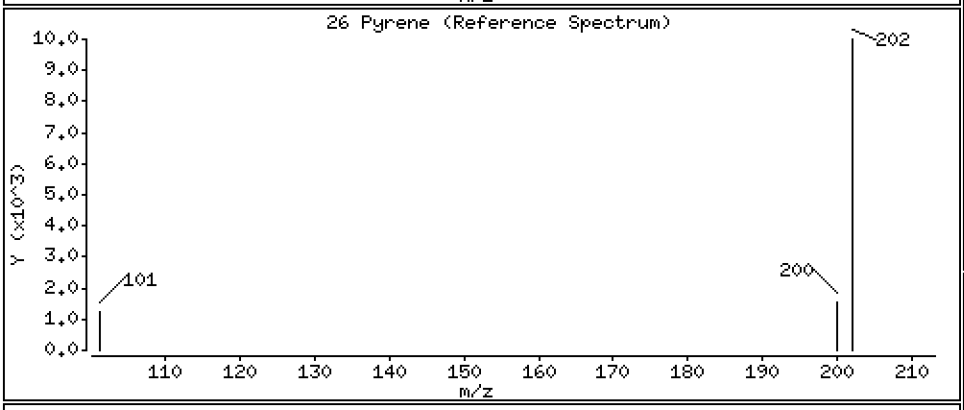
Column diameter: 0.25

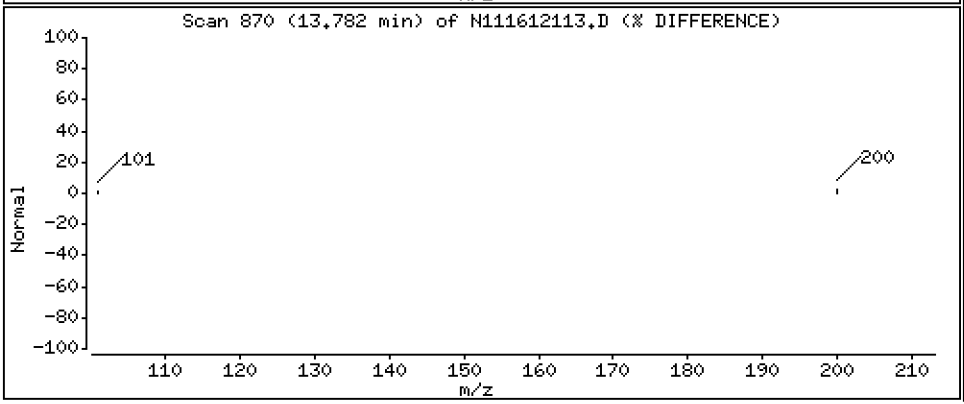
26 Pyrene

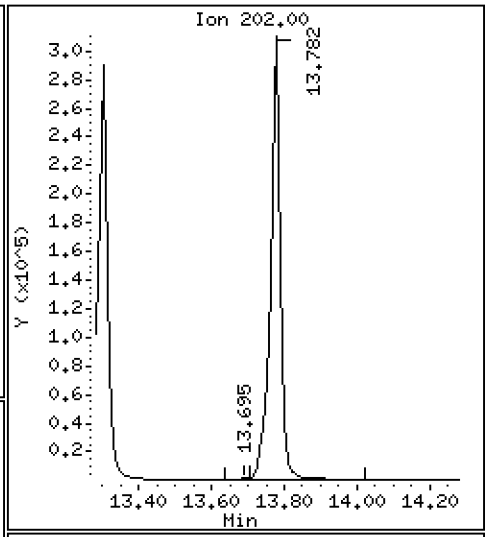
Concentration: 197 ng/mL

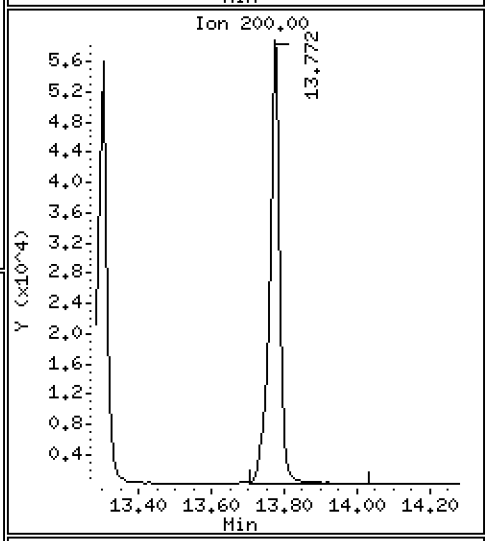


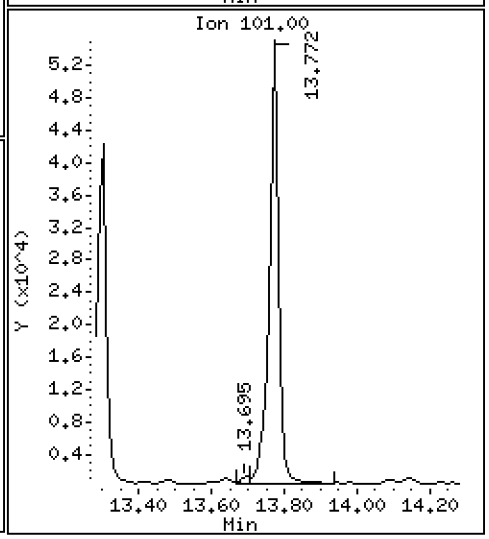












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

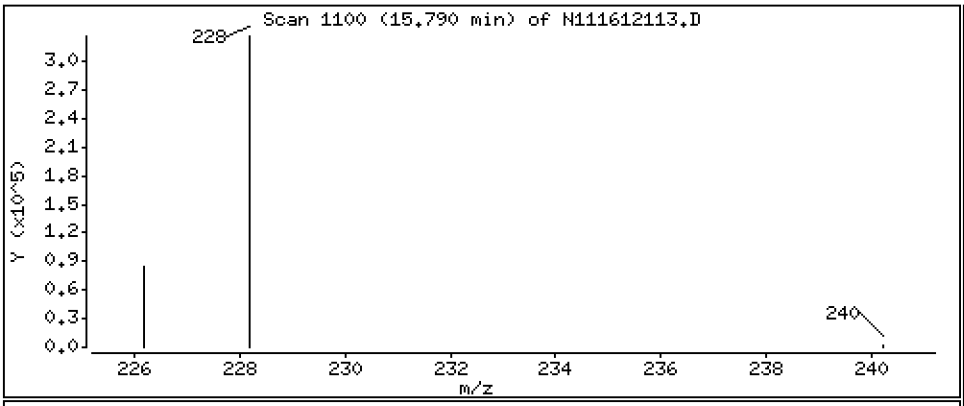
Operator: JW

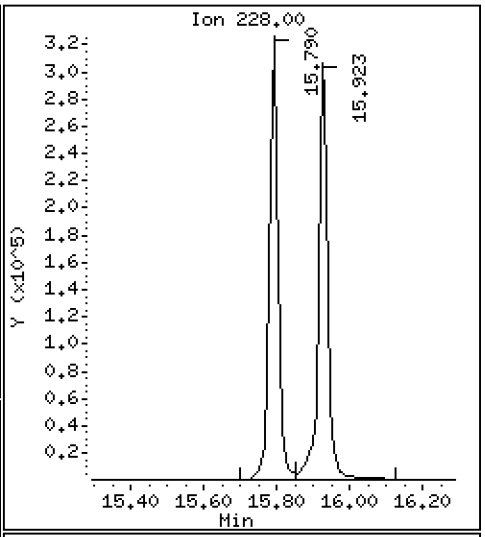
Column phase: Rxi-17Sil MS

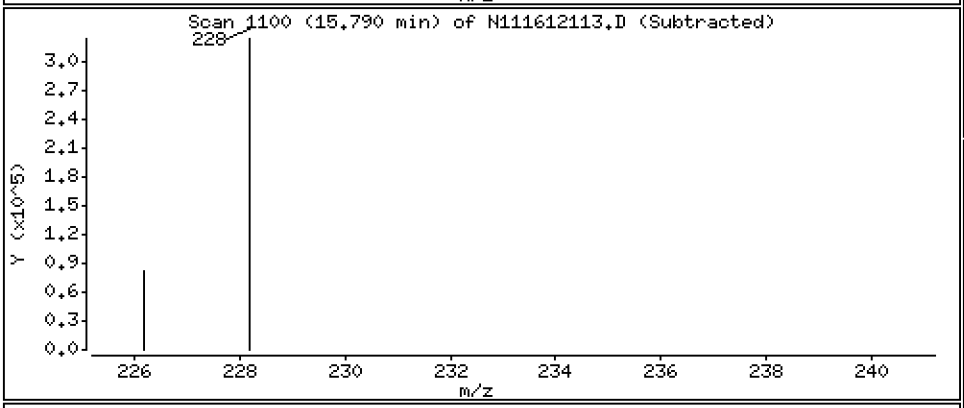
Column diameter: 0.25

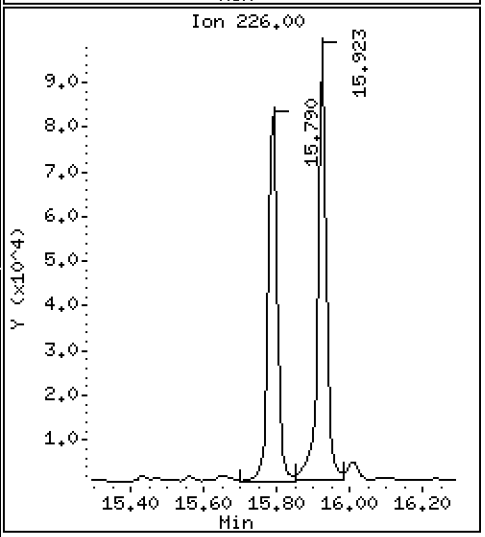
27 Benzo(a)anthracene

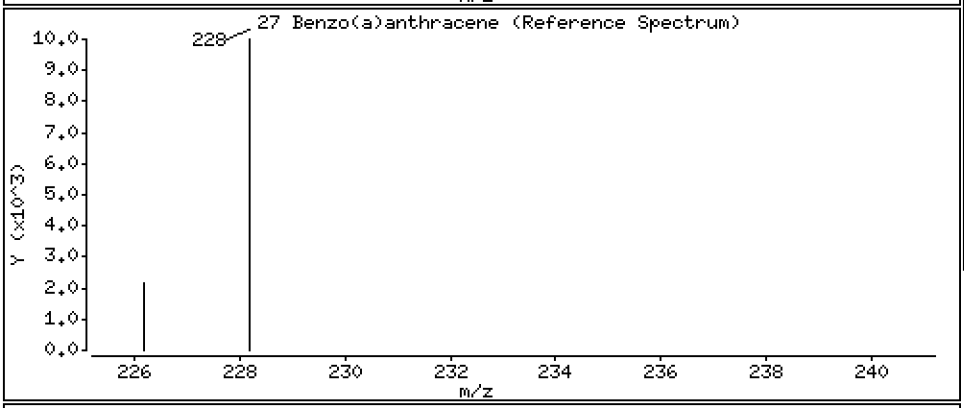
Concentration: 196 ng/mL

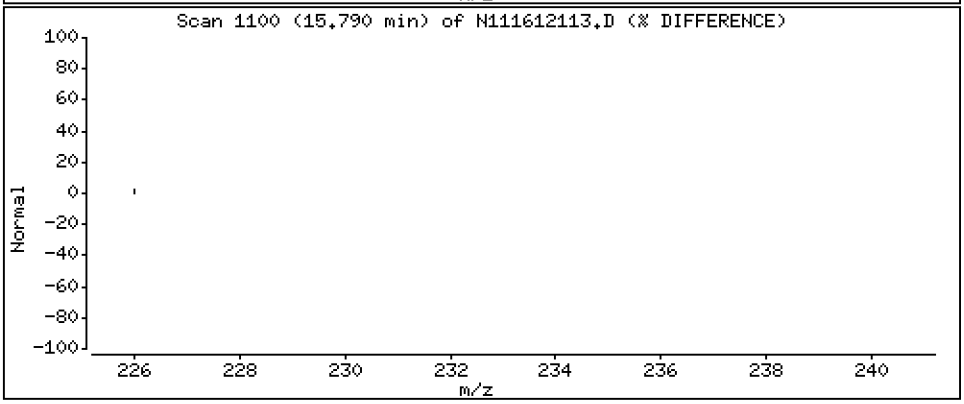












Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

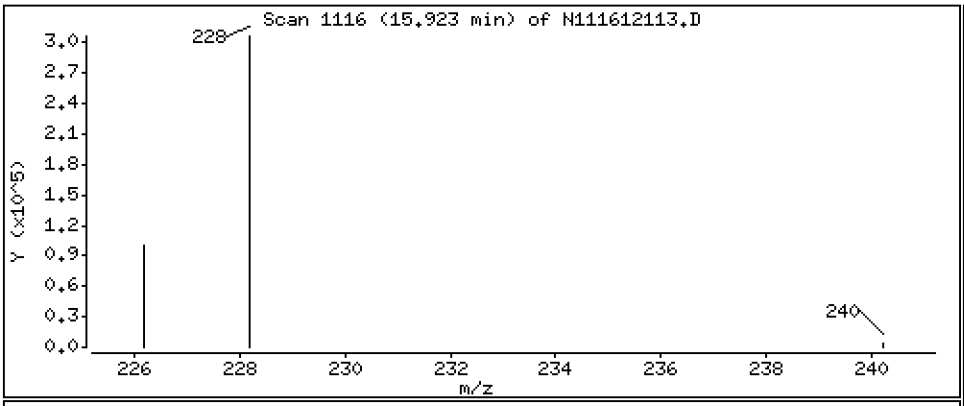
Operator: JW

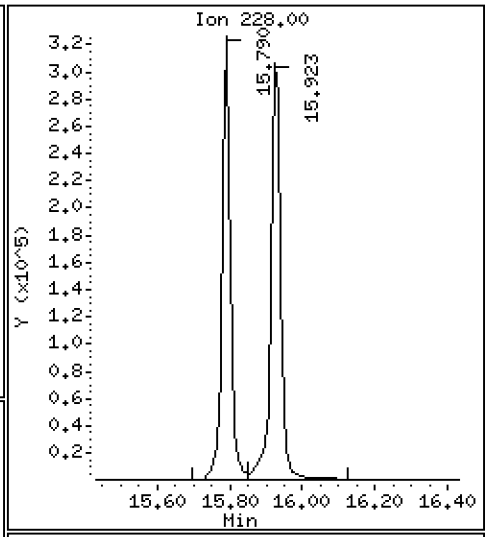
Column phase: Rxi-17Sil MS

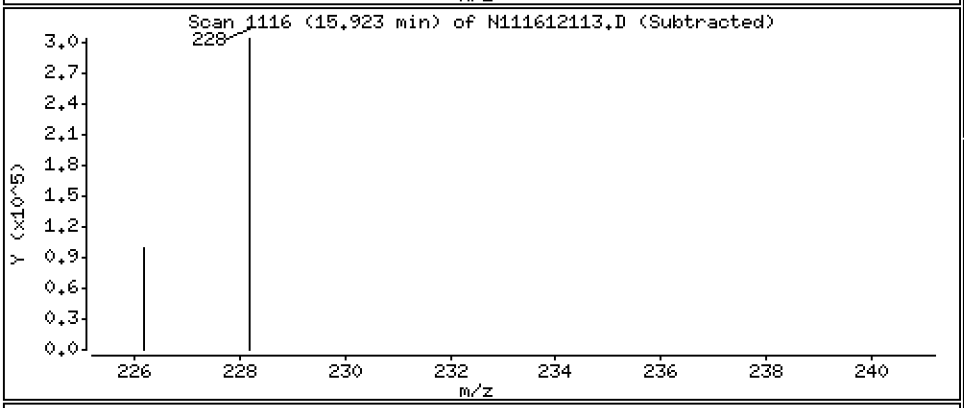
Column diameter: 0.25

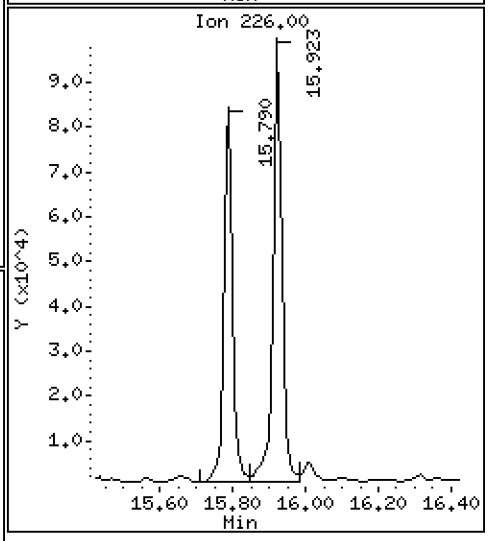
29 Chrysene

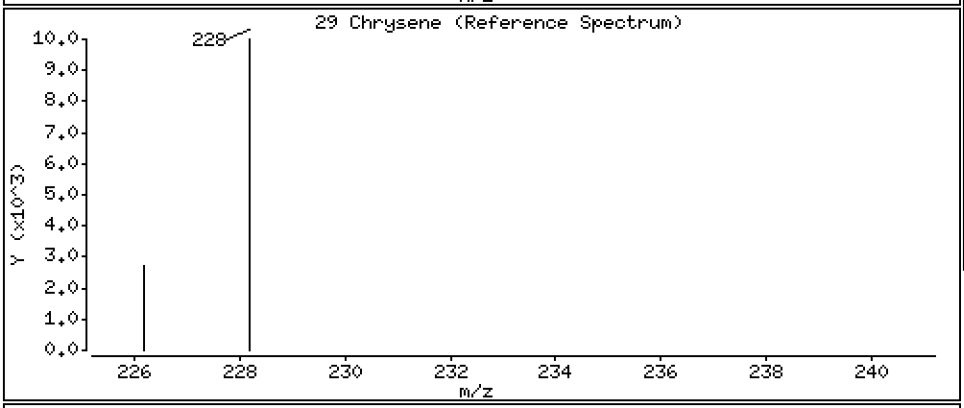
Concentration: 185 ng/mL

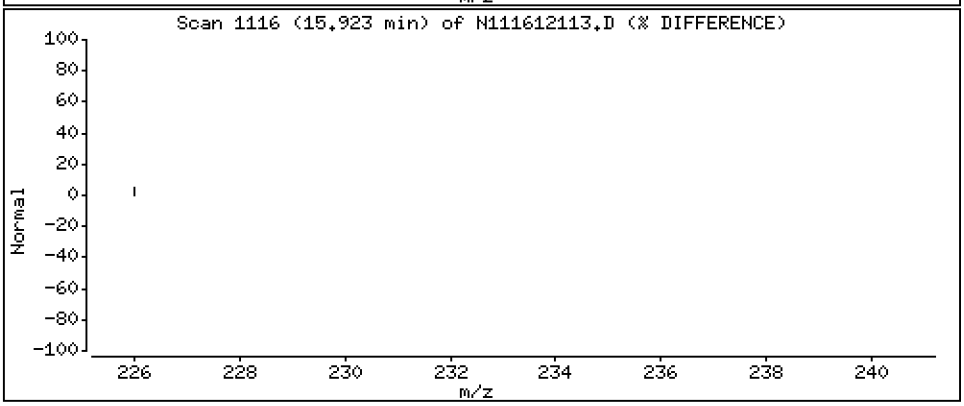












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

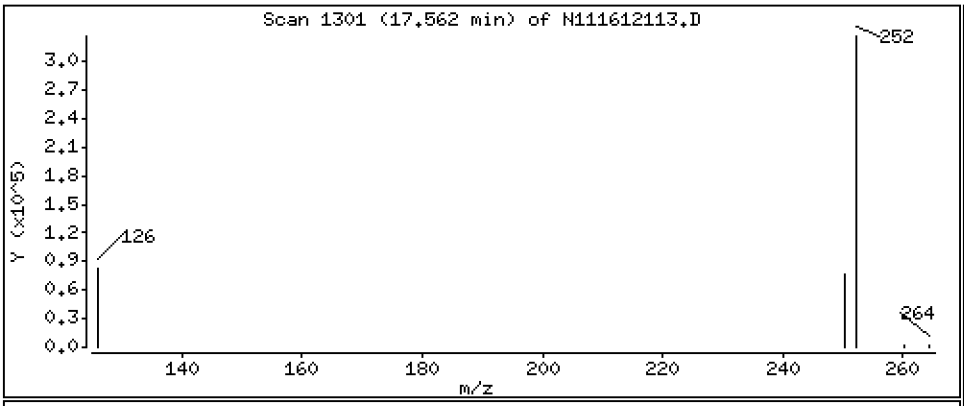
Operator: JW

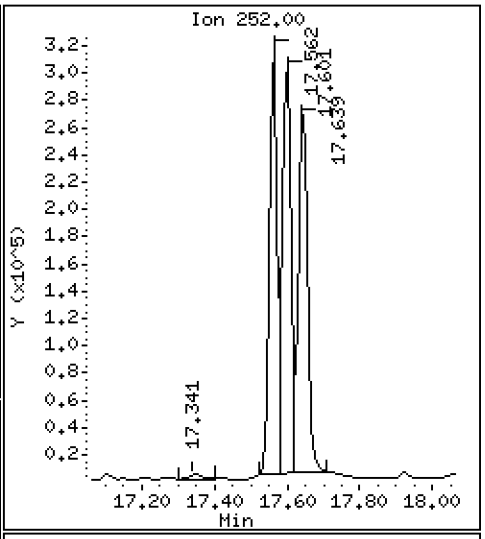
Column phase: Rxi-17Sil MS

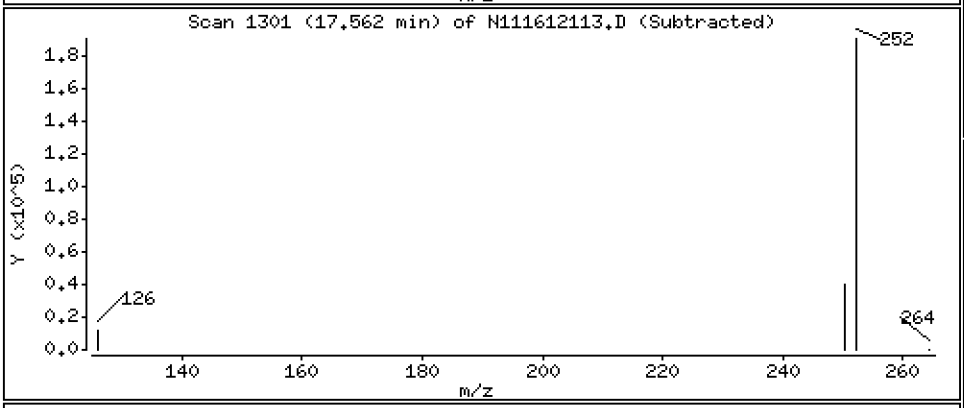
Column diameter: 0.25

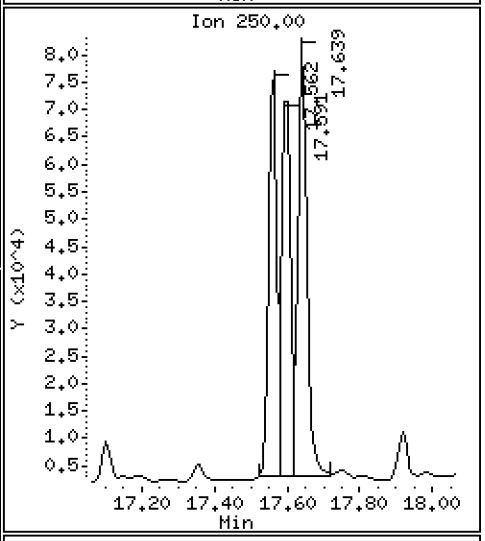
30 Benzo(b)fluoranthene

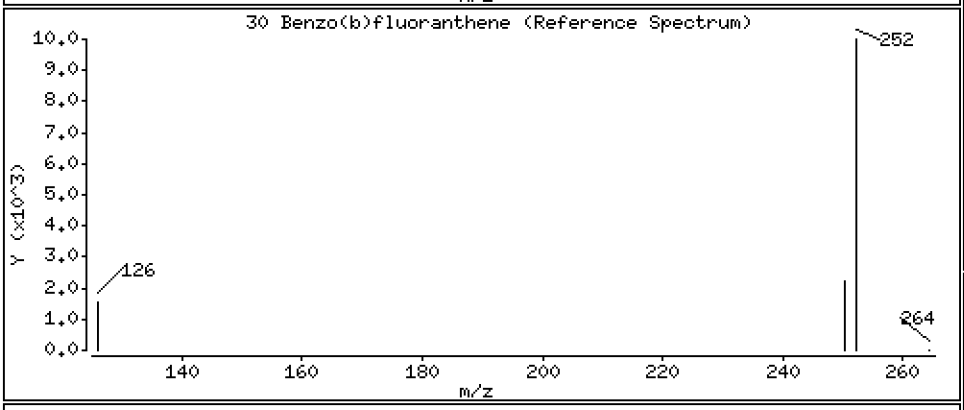
Concentration: 166 ng/mL

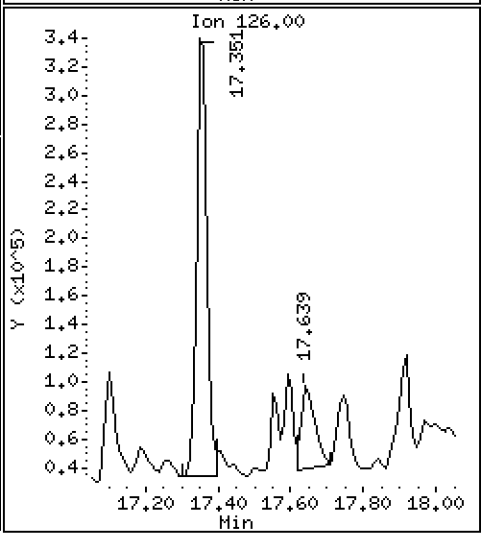


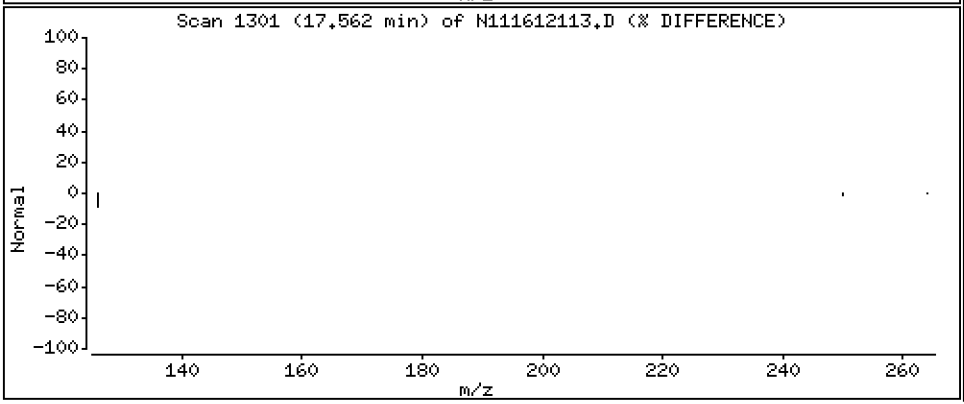












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

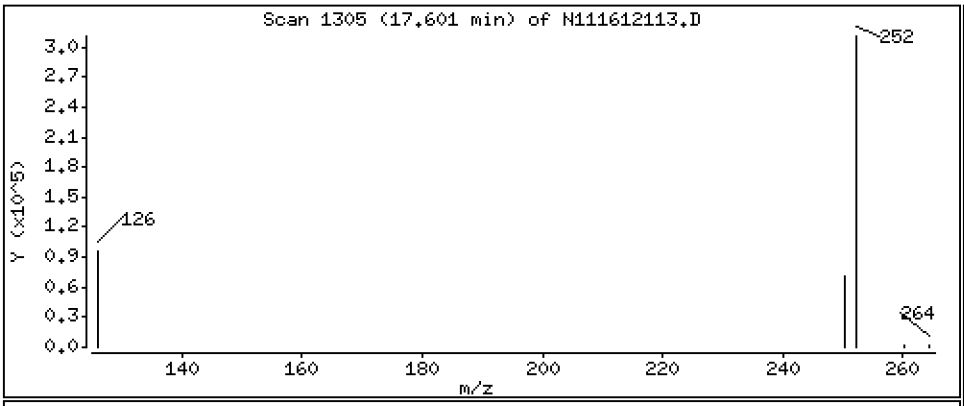
Operator: JW

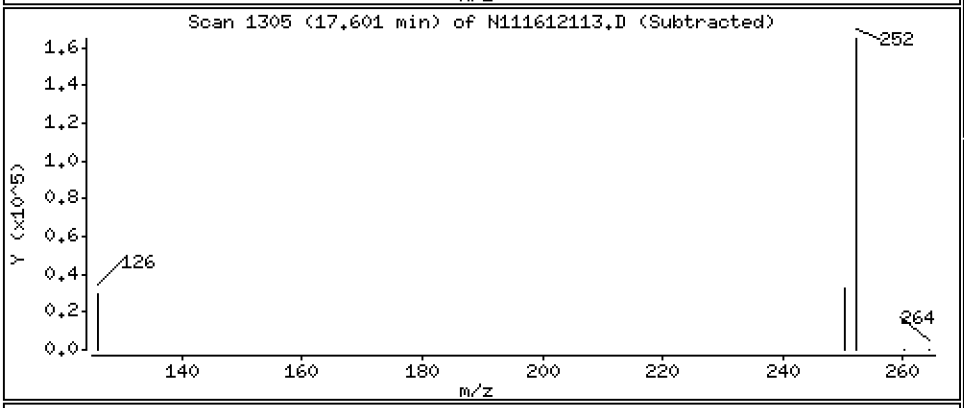
Column phase: Rxi-17Sil MS

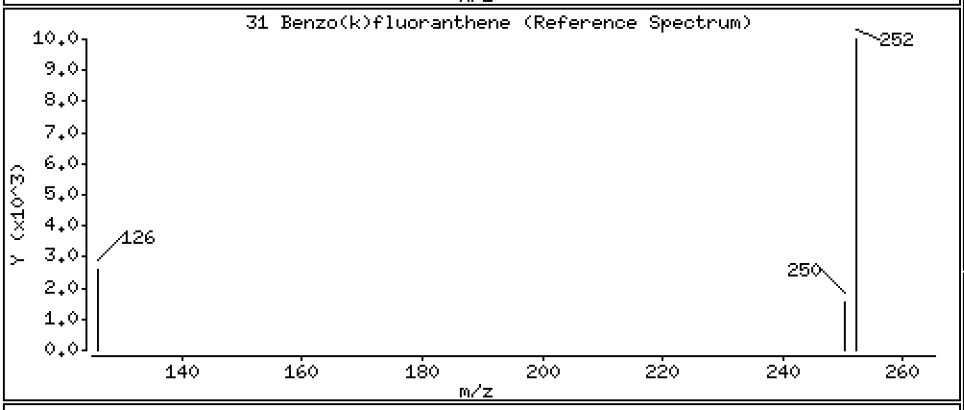
Column diameter: 0.25

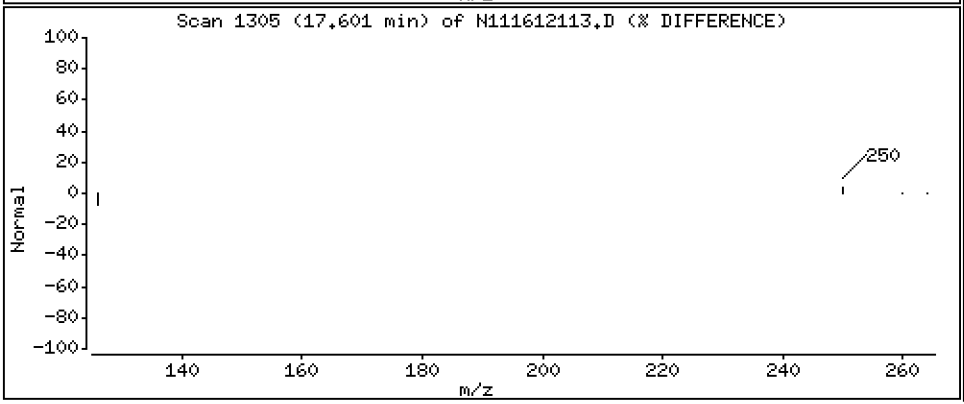
31 Benzo(k)fluoranthene

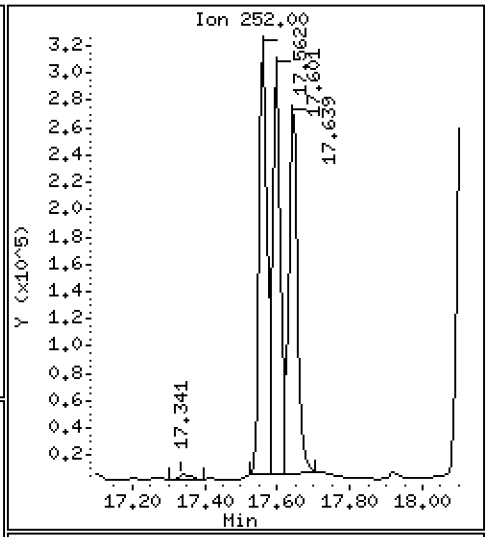
Concentration: 151 ng/mL

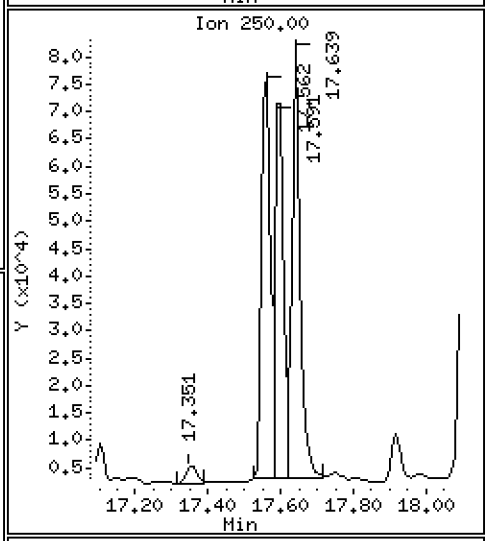


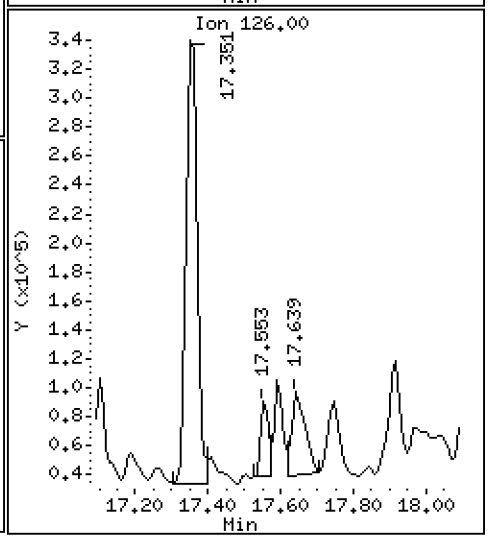












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

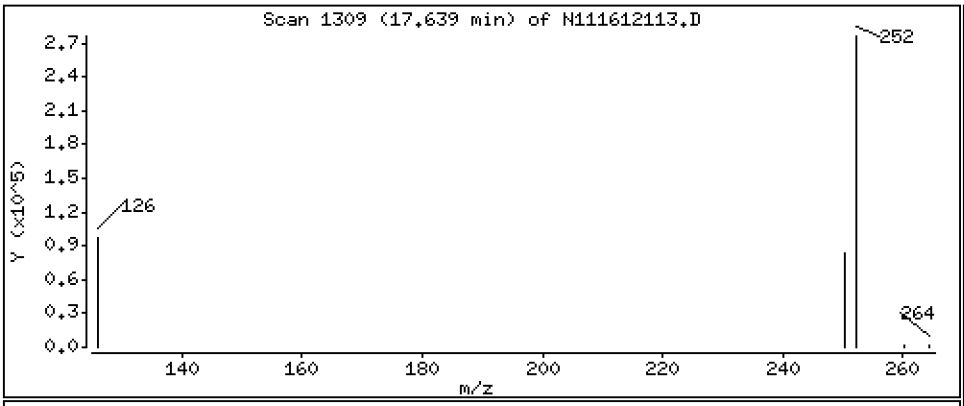
Operator: JW

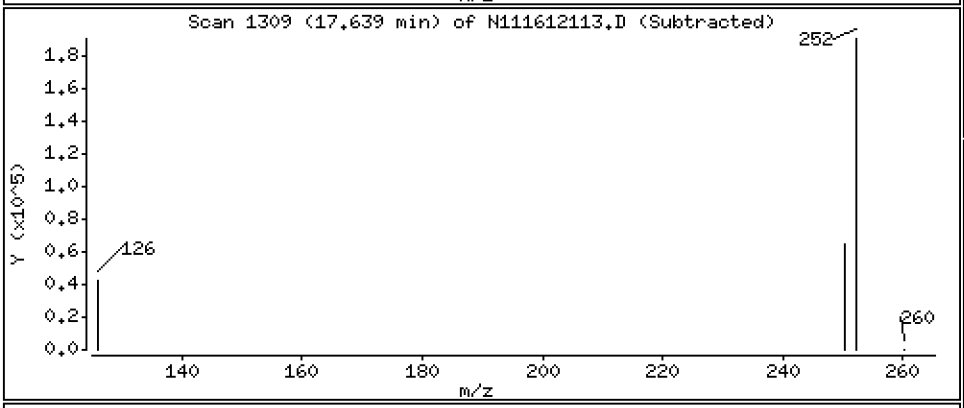
Column phase: Rxi-17Sil MS

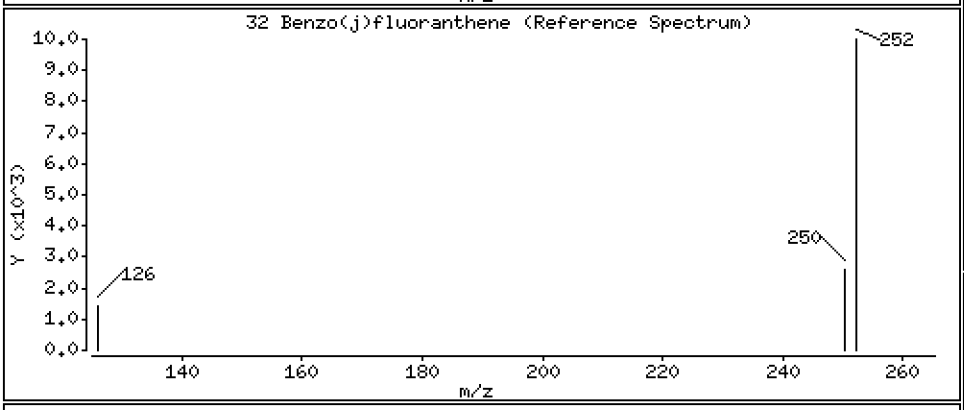
Column diameter: 0.25

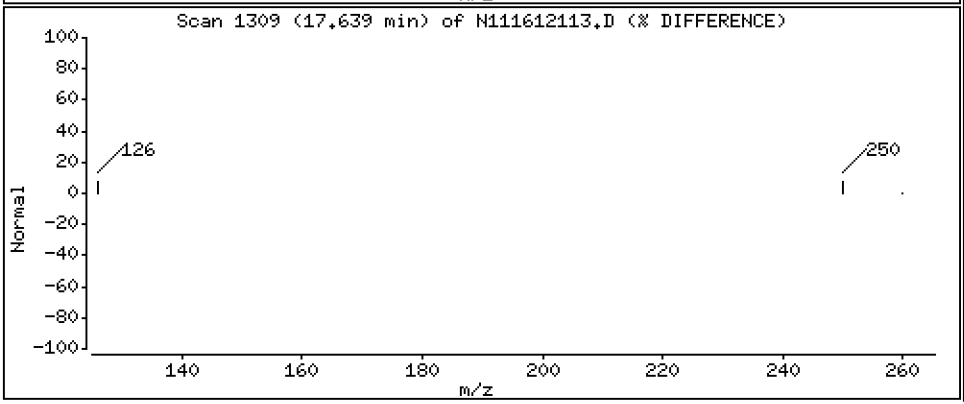
32 Benzo(j)fluoranthene

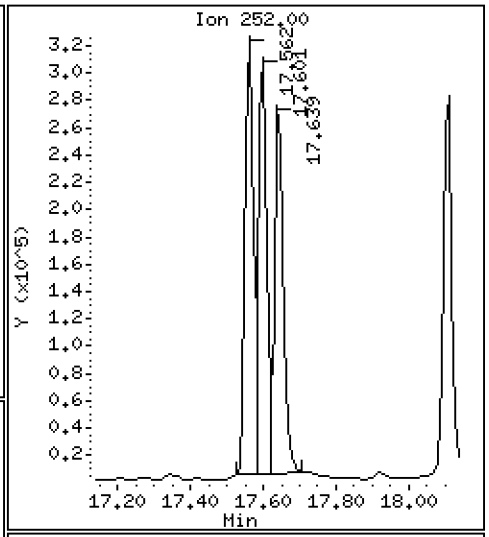
Concentration: 150 ng/mL

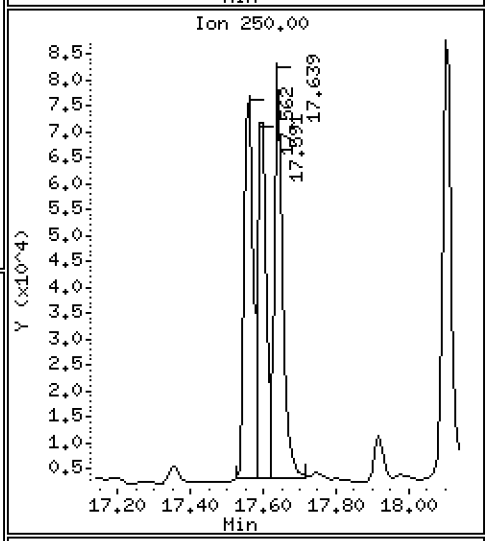


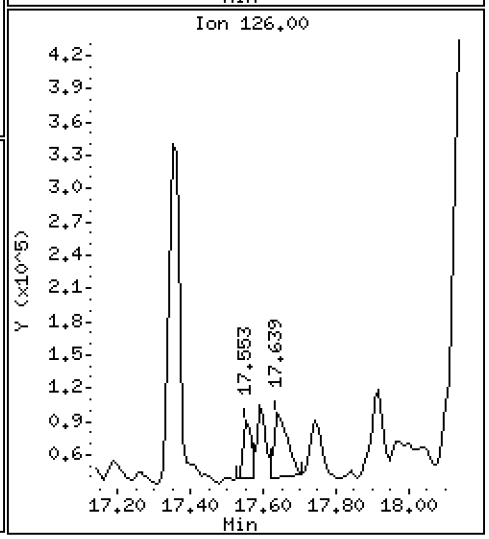












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

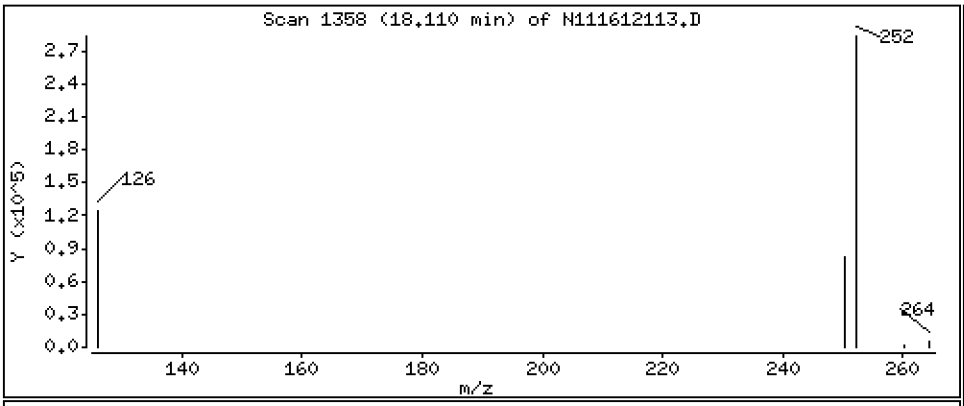
Operator: JW

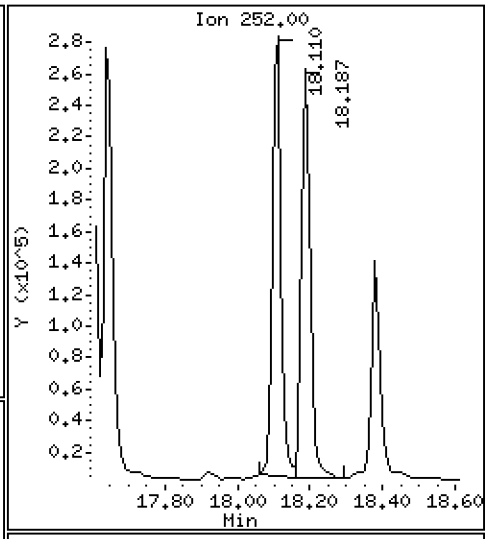
Column phase: Rxi-17Sil MS

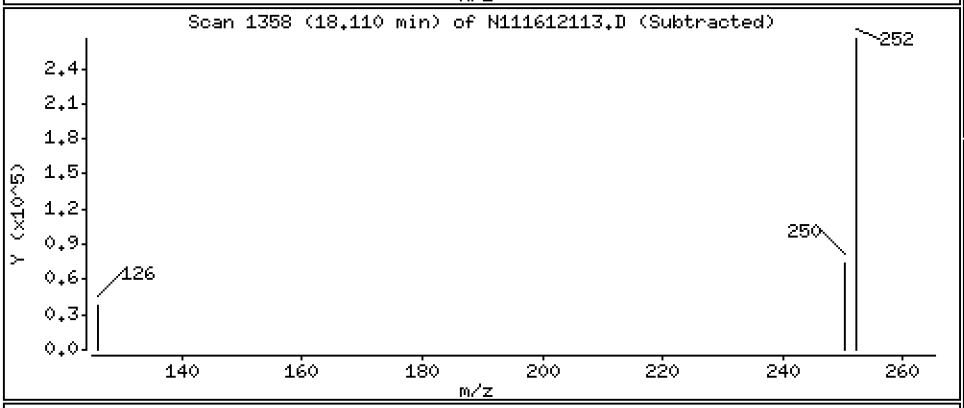
Column diameter: 0.25

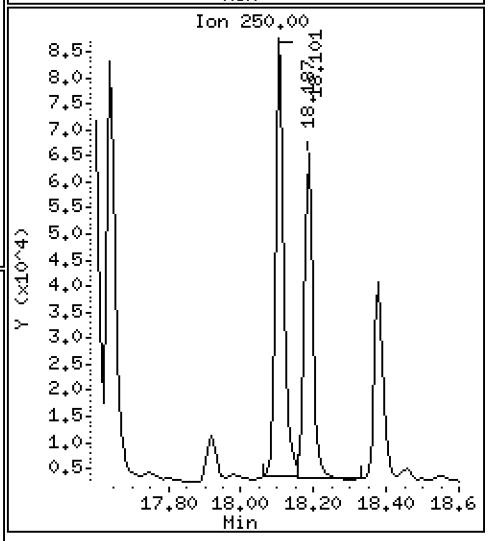
34 Benzo(e)pyrene

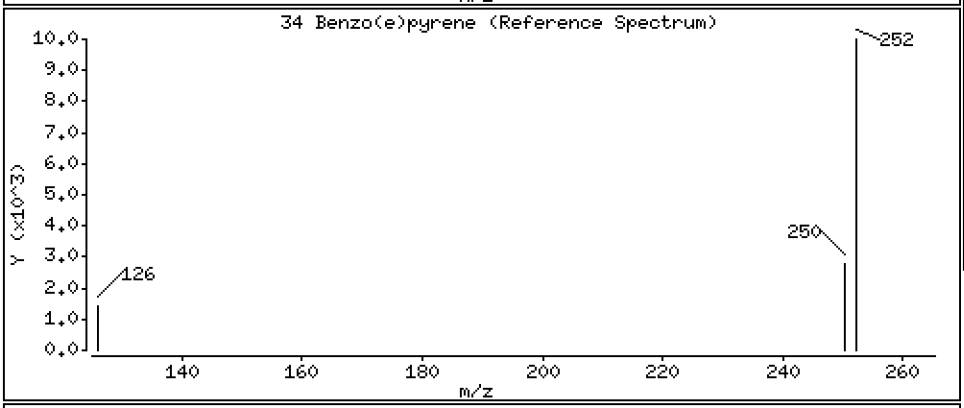
Concentration: 155 ng/mL

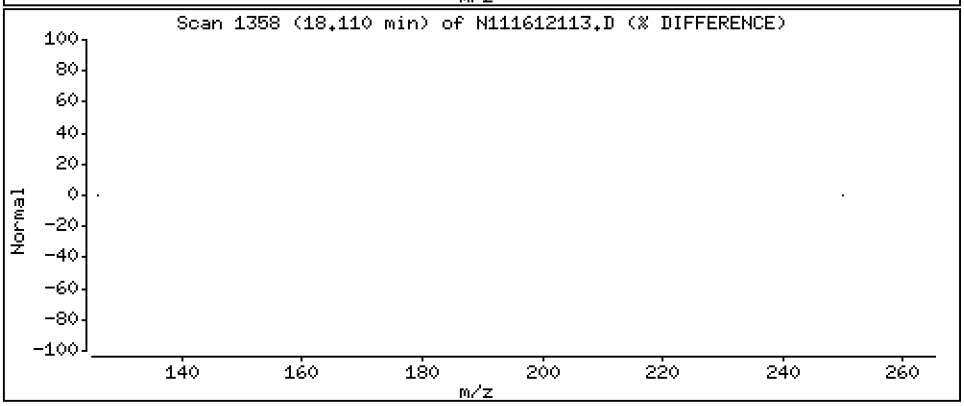












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

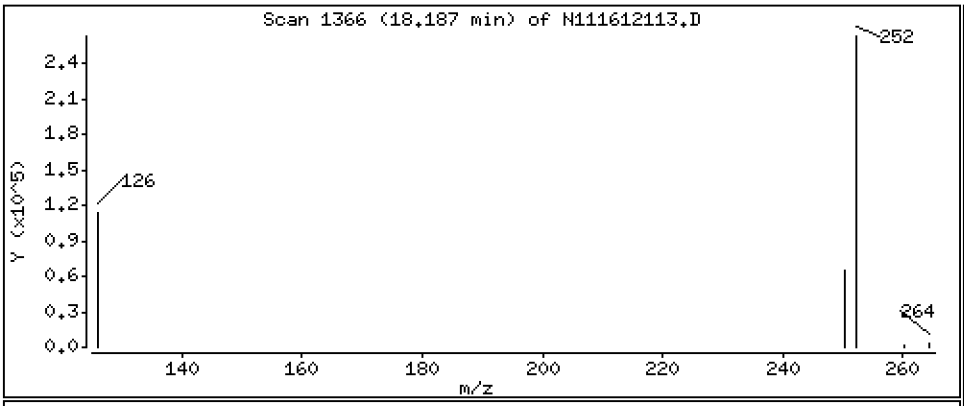
Operator: JW

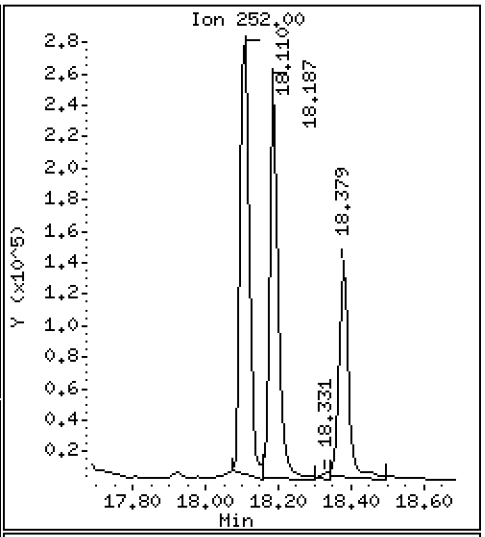
Column phase: Rxi-17Sil MS

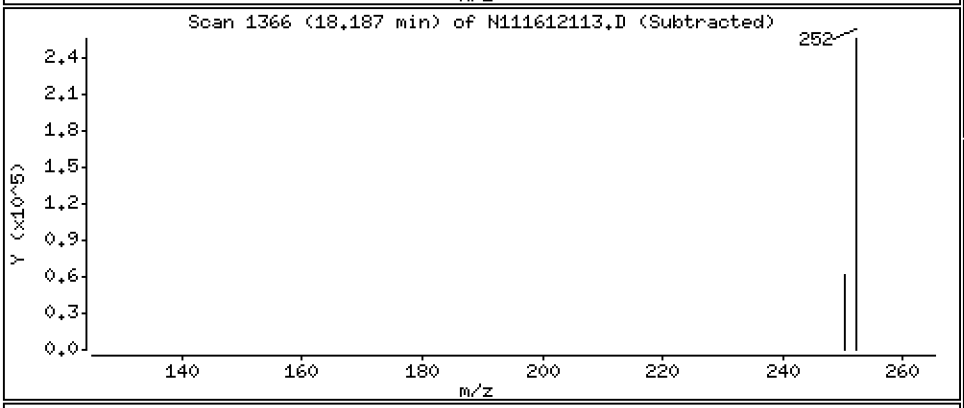
Column diameter: 0.25

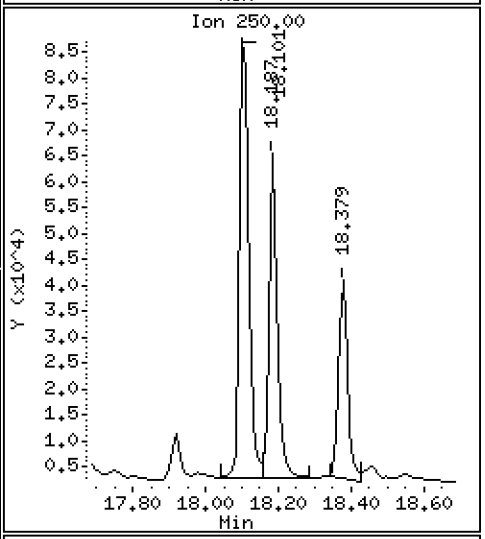
35 Benzo(a)pyrene

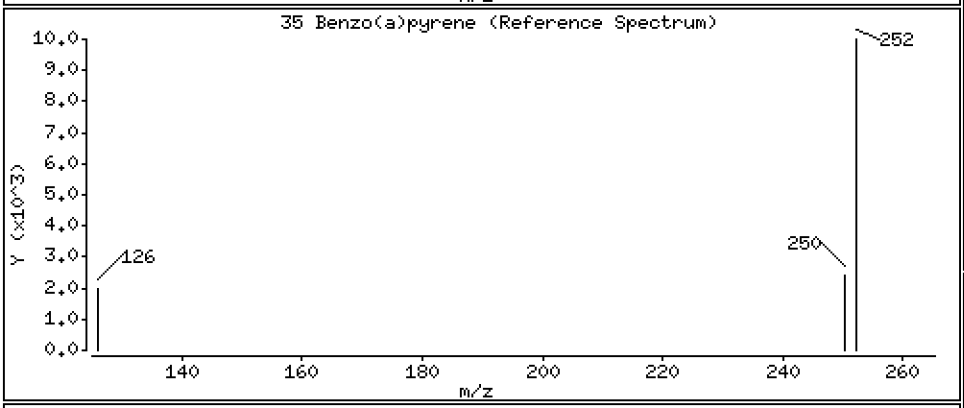
Concentration: 149 ng/mL

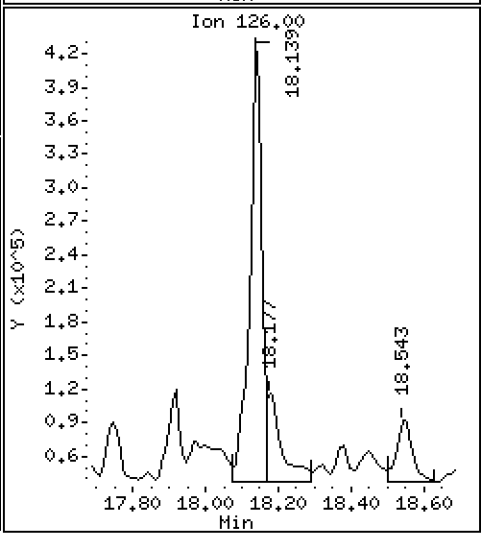


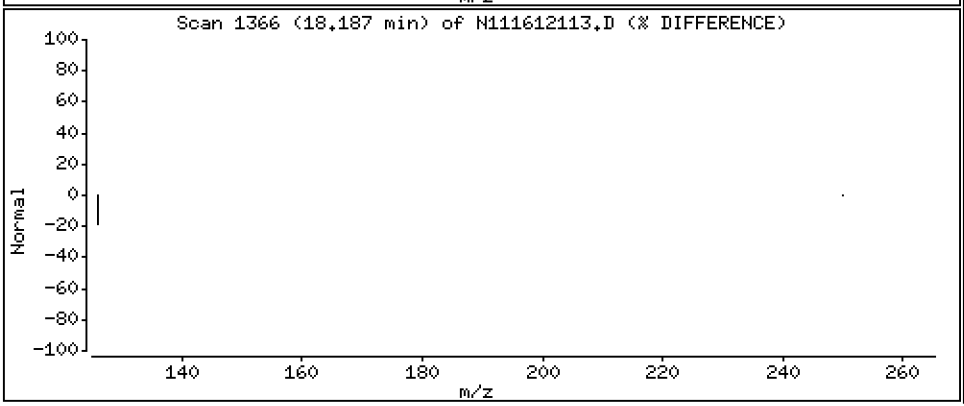












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

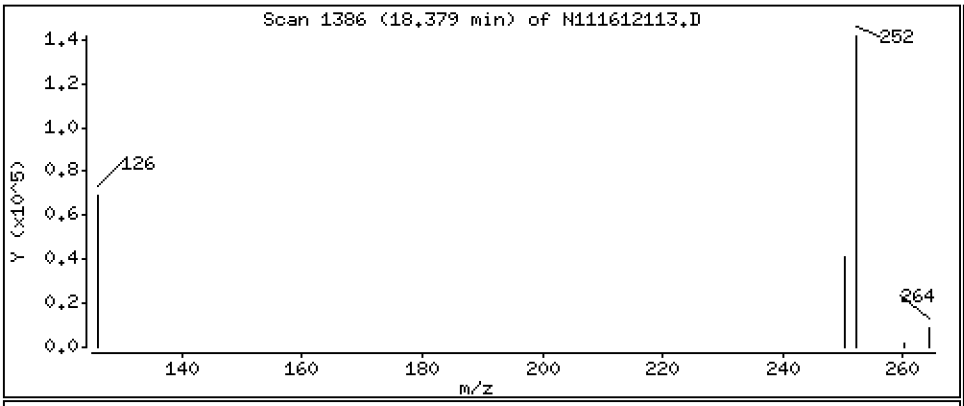
Operator: JW

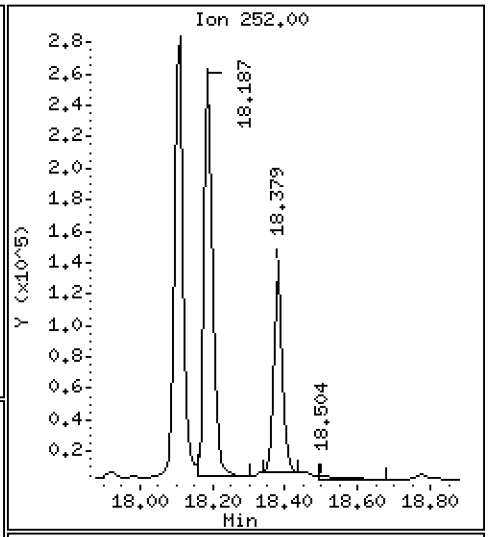
Column phase: Rxi-17Sil MS

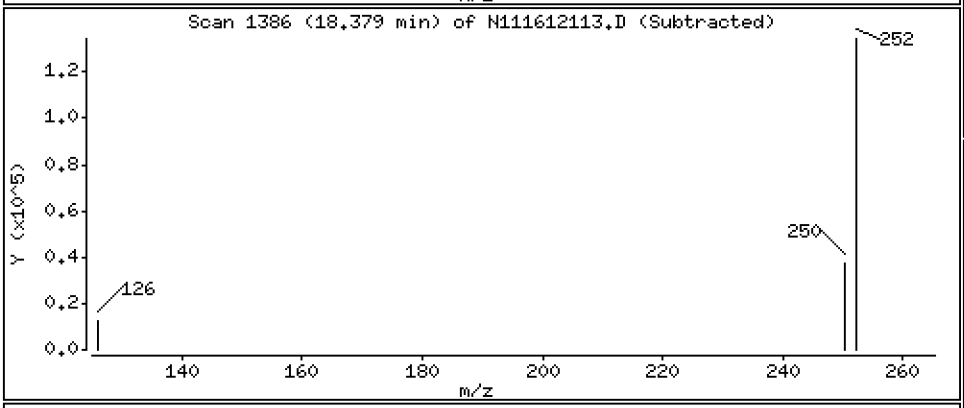
Column diameter: 0.25

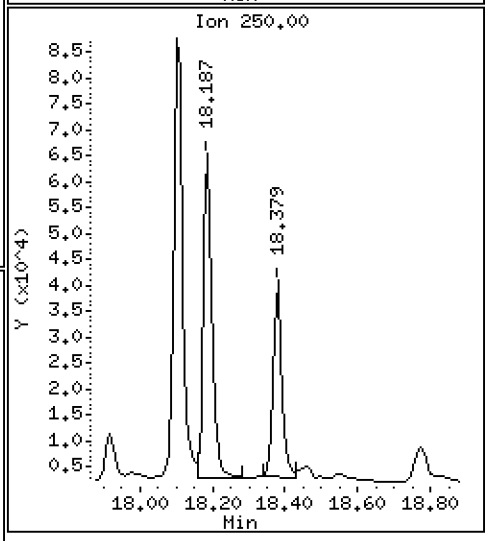
37 Perylene

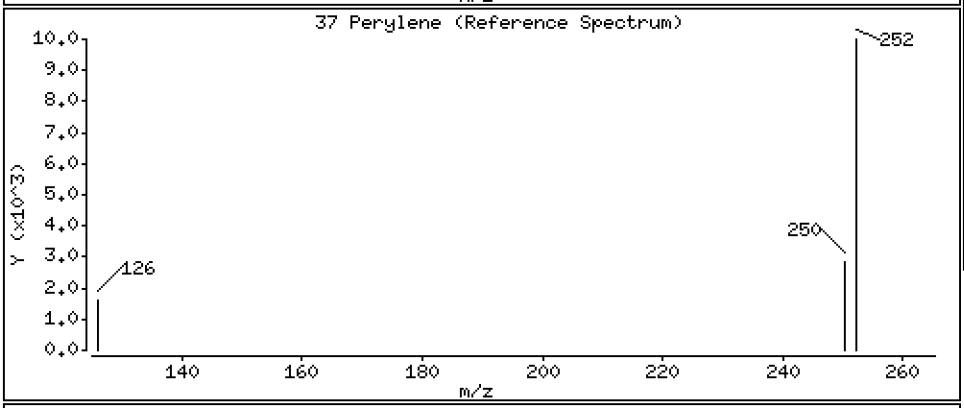
Concentration: 73.2 ng/mL

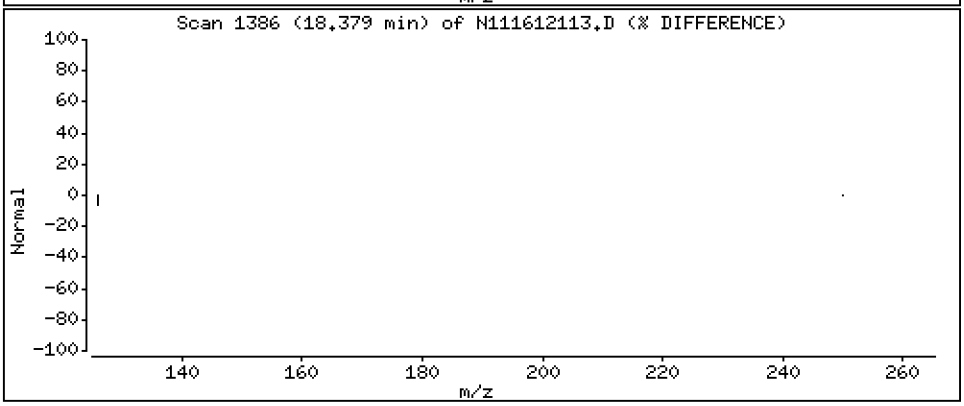












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

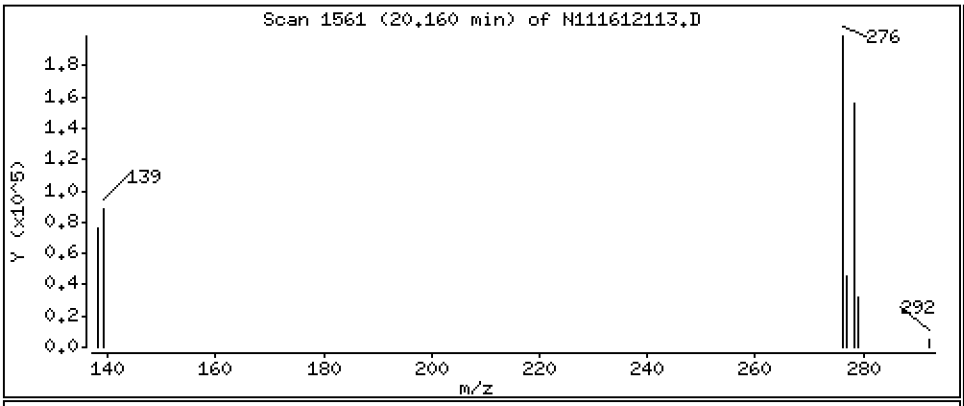
Operator: JW

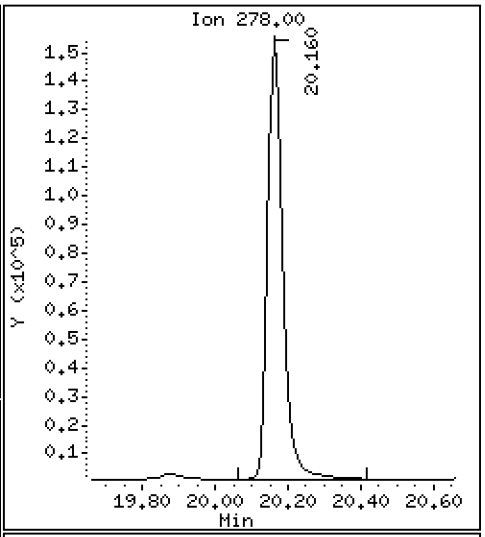
Column phase: Rxi-17Sil MS

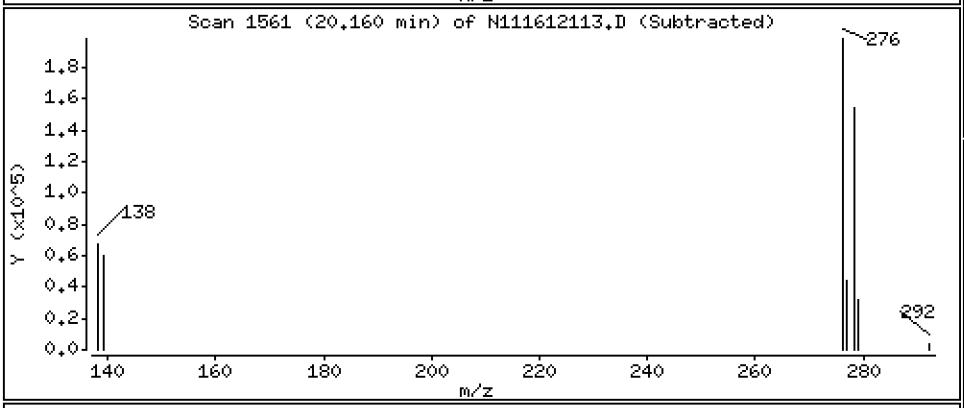
Column diameter: 0.25

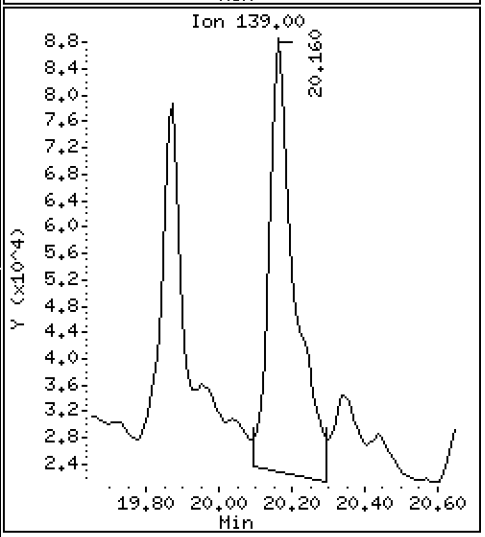
39 Dibenzo(a,h)anthracene

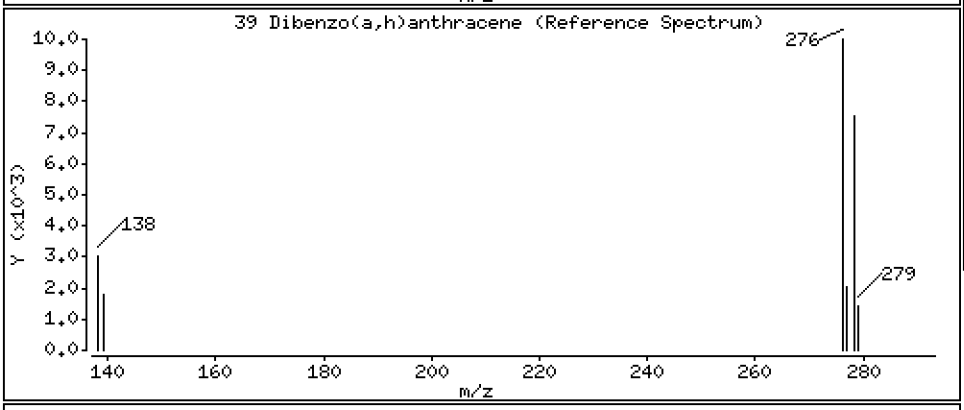
Concentration: 166 ng/mL

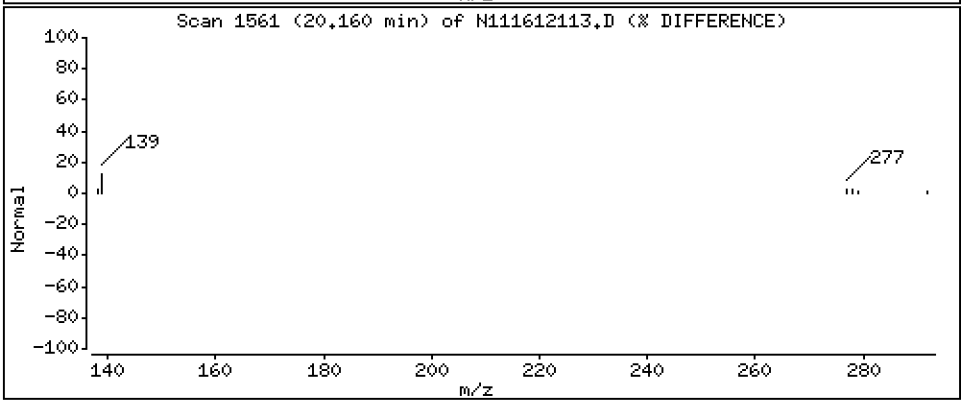












Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

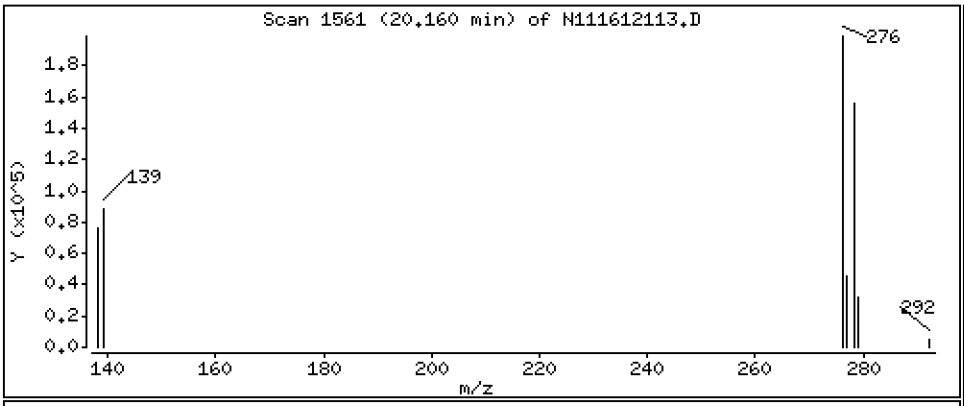
Operator: JW

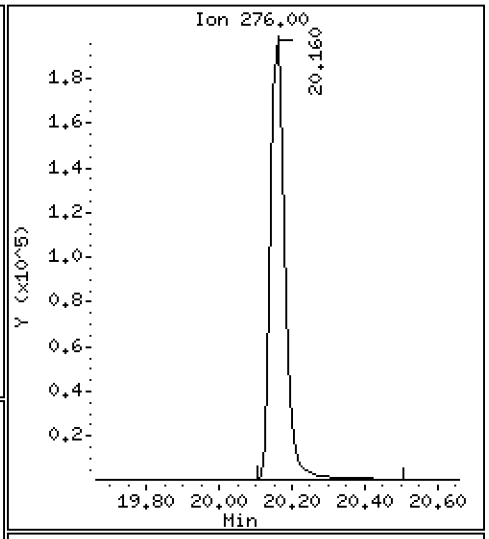
Column phase: Rxi-17Sil MS

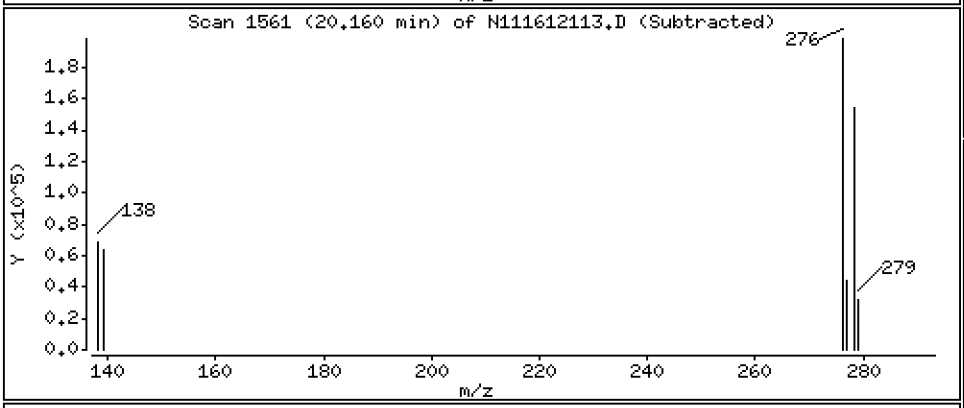
Column diameter: 0.25

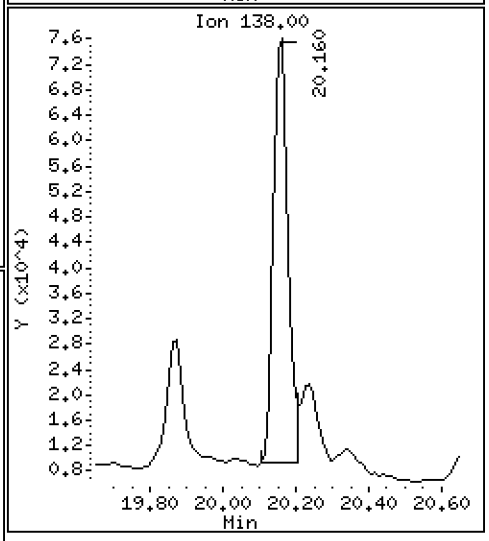
40 Indeno(1,2,3-cd)pyrene

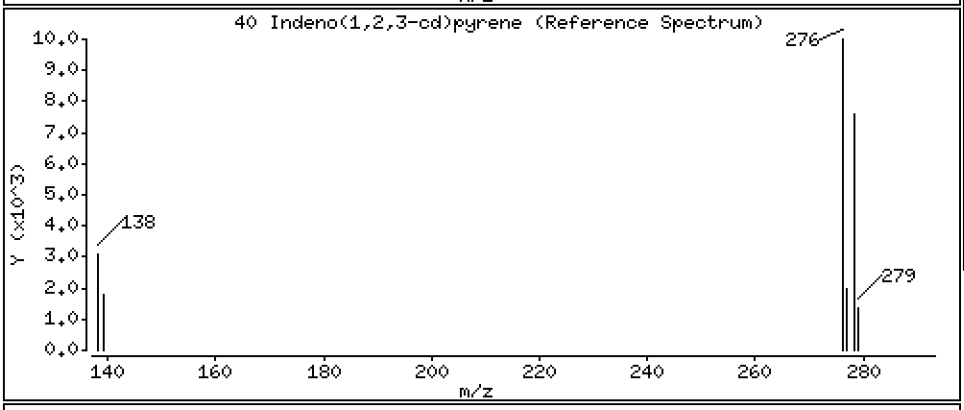
Concentration: 162 ng/mL

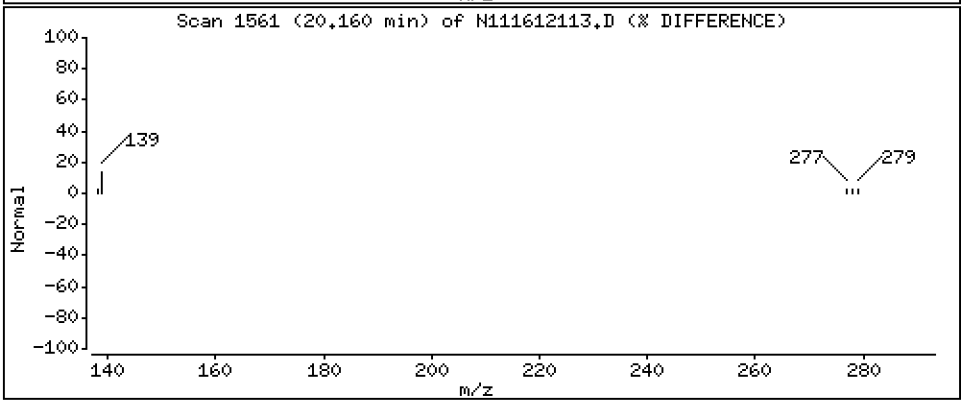












Data File: \\target\share\chem3\nt11.i\20161210.b\N111612113.D

Date : 10-DEC-2016 15:21

Client ID:

Instrument: nt11.i

Sample Info: BEK0657-BS2

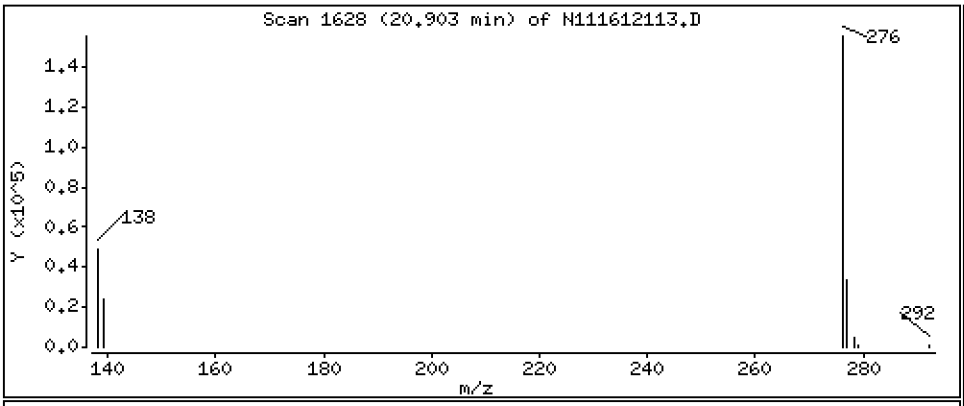
Operator: JW

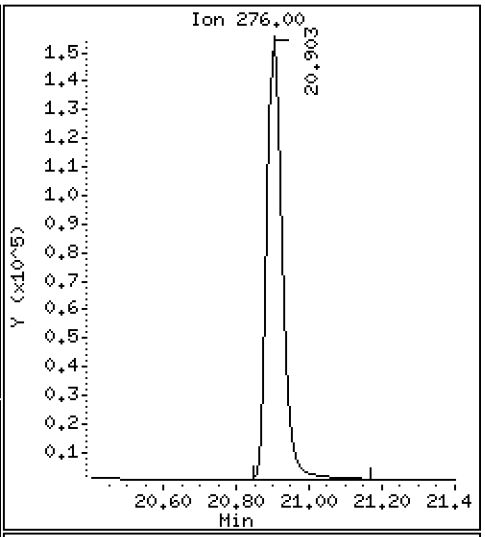
Column phase: Rxi-17Sil MS

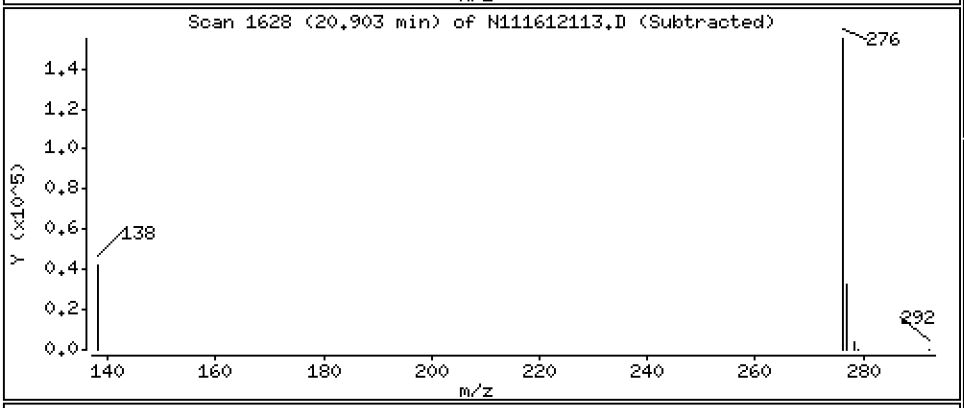
Column diameter: 0.25

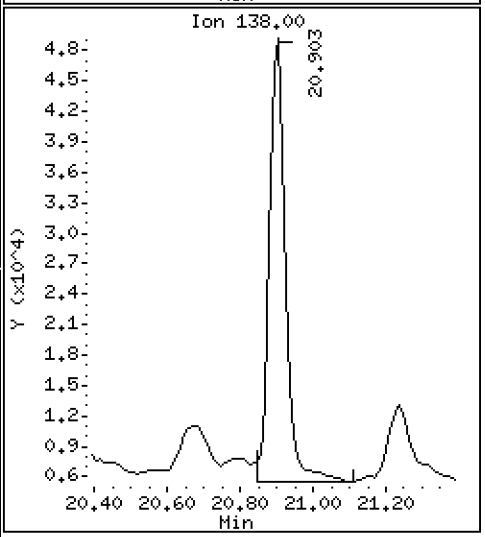
41 Benzo(g,h,i)perylene

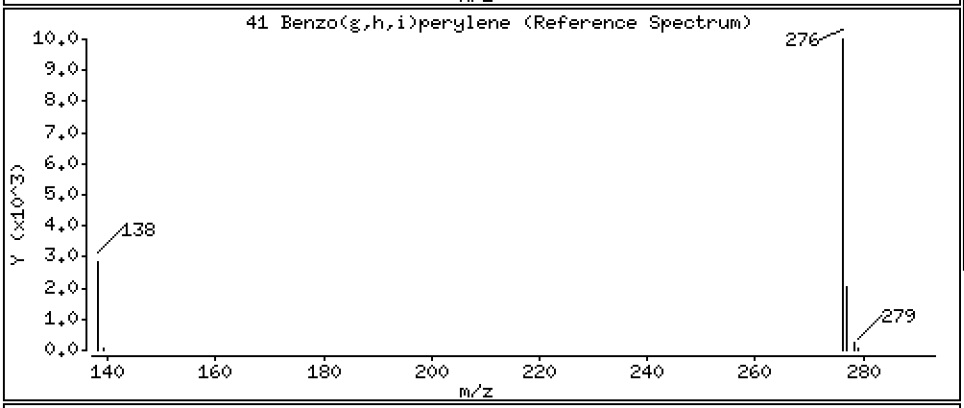
Concentration: 159 ng/mL

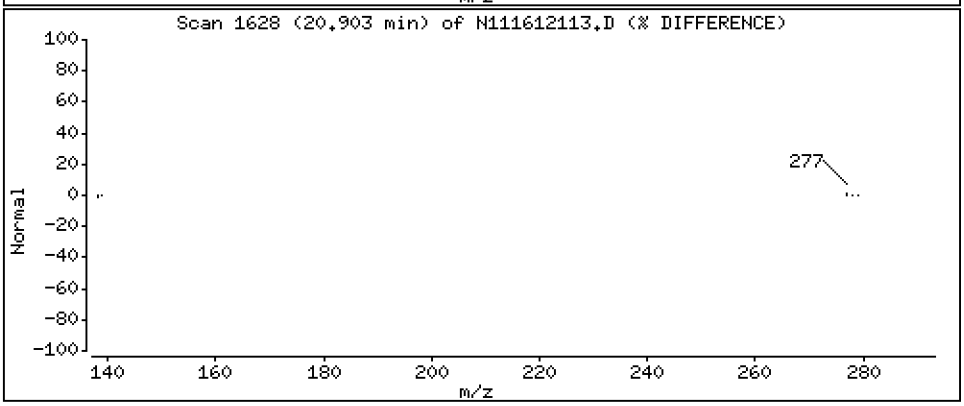












ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161210.b\N111612113.D
Lab Smp Id: BEK0657-BS2
Inj Date : 10-DEC-2016 15:21 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : BEK0657-BS2
Misc Info :
Comment   :
Method   : \\target\share\chem3\nt11.i\20161210.b\lowsim.m
Meth Date : 12-Dec-2016 07:55 nt11.i Quant Type: ISTD
Cal Date : 25-NOV-2016 10:20 Cal File: 16112510.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpnamdl.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1 Naphthalene-d8	136	5.637	5.655	(1.000)	471964	200.000	
	2 Naphthalene	128	5.664	5.682	(1.005)	312270	128.688	129
	3 Benzo(b)thiophene	134	5.908	5.926	(1.048)	197534	98.4136	98.4
$	4 2-Methylnaphthalene-d10	152	6.594	6.615	(1.170)	228861	128.621	129
	5 2-Methylnaphthalene	142	6.646	6.667	(1.179)	308117	151.237	151
	6 1-Methylnaphthalene	142	6.888	6.909	(1.222)	286063	143.162	143
	7 2-Chloronaphthalene	162	Compound Not Detected.					
	8 Biphenyl	154	7.529	7.539	(0.878)	387591	138.414	138
	9 2,6-Dimethylnaphthalene	156	7.571	7.592	(0.883)	306619	152.377	152
	10 Acenaphthylene	152	8.420	8.438	(0.982)	314057	135.405	135
*	11 Acenaphthene-d10	164	8.574	8.592	(1.000)	251045	200.000	
	12 Acenaphthene	153	8.637	8.646	(1.007)	249693	156.912	157
	13 Dibenzofuran	168	8.850	8.850	(1.032)	370773	163.958	164
	14 2,3,5-Trimethylnaphthalene	170	8.964	8.977	(1.046)	246620	175.423	175
$	15 Fluorene-d10	174	9.406	9.419	(1.097)	196926	160.635	161
	16 Fluorene	166	9.457	9.470	(1.103)	331445	189.710	190
	17 Dibenzothiophene	184	11.035	11.046	(0.985)	352431	147.914	148
*	18 Phenanthrene-d10	188	11.203	11.214	(1.000)	482057	200.000	
	19 Phenanthrene	178	11.245	11.256	(1.004)	606729	209.535	210
$	20 Anthracene-d10	188	11.266	11.277	(1.006)	365710	167.449	167
	21 Anthracene	178	11.298	11.308	(1.008)	525193	192.749	193
	22 Carbazole	167	11.988	11.997	(1.070)	231827	73.3648	73.4
	23 1-Methylphenanthrene	192	12.241	12.241	(1.093)	524564	205.597	206
$	24 Fluoranthene-d10	212	13.272	13.272	(1.185)	447008	207.736	208
	25 Fluoranthene	202	13.301	13.310	(1.187)	605481	215.501	216
	26 Pyrene	202	13.781	13.781	(0.868)	616631	197.234	197
	27 Benzo(a)anthracene	228	15.790	15.790	(0.994)	531113	196.318	196
*	28 Chrysene-d12	240	15.881	15.881	(1.000)	480519	200.000	
	29 Chrysene	228	15.923	15.931	(1.003)	556107	185.331	185
	30 Benzo(b)fluoranthene	252	17.562	17.562	(0.958)	523827	165.956	166
	31 Benzo(k)fluoranthene	252	17.600	17.600	(0.960)	517296	150.833	151
	32 Benzo(j)fluoranthene	252	17.639	17.639	(0.962)	478244	150.431	150
$	33 Benzo(e)pyrene-d12	264	18.062	18.062	(0.985)	393344	146.993	147

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
	34 Benzo(e)pyrene	252	18.110	18.110	(0.988)	474452	154.685	155
	35 Benzo(a)pyrene	252	18.187	18.186	(0.992)	431788	149.409	149
*	36 Perylene-d12	264	18.331	18.331	(1.000)	555286	200.000	
	37 Perylene	252	18.379	18.379	(1.003)	219540	73.1705	73.2
$	38 Dibenzo(a,h)anthracene-d14	292	20.082	20.082	(1.096)	337353	181.374	181
	39 Dibenzo(a,h)anthracene	278	20.160	20.160	(1.100)	432270	165.844	166
	40 Indeno(1,2,3-cd)pyrene	276	20.160	20.160	(1.100)	519988	162.097	162
	41 Benzo(g,h,i)perylene	276	20.902	20.902	(1.140)	439467	158.574	159

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N111612113.D
Lab Smp Id: BEK0657-BS2
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161210.b\lowsim.m
Misc Info:

Calibration Date: 10-DEC-2016
Calibration Time: 09:37
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	471964	-4.37
11 Acenaphthene-d10	240770	120385	481540	251045	4.27
18 Phenanthrene-d10	429271	214636	858542	482057	12.30
28 Chrysene-d12	387691	193846	775382	480519	23.94
36 Perylene-d12	386259	193130	772518	555286	43.76

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.66	5.16	6.16	5.64	-0.32
11 Acenaphthene-d10	8.59	8.09	9.09	8.57	-0.21
18 Phenanthrene-d10	11.21	10.71	11.71	11.20	-0.09
28 Chrysene-d12	15.88	15.38	16.38	15.88	0.00
36 Perylene-d12	18.33	17.83	18.83	18.33	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N111612113.D

Lab ID: BEK0657-BS2
nt11.i, 20161210.b\lowsim.m,   10-DEC-2016 15:21

RT	CO-ELUTION COMPOUNDS
20.160	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.160	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

On Column LOD for nt11.i, 20161210.b\lowsim.m, allpnamdl.sub = 0.0000

Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

LCS / LCS DUPLICATE RECOVERY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Matrix:	Tissue	Analyzed:	12/17/16 14:13
Batch:	BEK0658	Laboratory ID:	BEK0658-BS1
Preparation:	EPA 3550C-Mod (Ultrasonic)	Sequence Name:	LCS
Initial/Final:	0.886 g / 0.1 mL		

COMPOUND	SPIKE ADDED (ug/kg)	LCS CONCENTRATION (ug/kg)	LCS % REC. #	QC LIMITS REC.
Naphthalene	33.9	16.5	48.7	30 - 160
2-Methylnaphthalene	33.9	17.6	52.1	30 - 160
Acenaphthylene	33.9	17.2	50.8	30 - 160
Acenaphthene	33.9	18.0	53.2	30 - 160
Fluorene	33.9	19.7	58.3	30 - 160
Phenanthrene	33.9	23.6	69.6	30 - 160
Anthracene	33.9	18.5	54.7	30 - 160
Fluoranthene	33.9	19.7	58.3	30 - 160
Pyrene	33.9	23.2	68.4	30 - 160
Benzo(a)anthracene	33.9	20.8	61.4	30 - 160
Chrysene	33.9	20.6	60.9	30 - 160
Benzo(b)fluoranthene	33.9	19.7	58.1	30 - 160
Benzo(k)fluoranthene	33.9	20.3	59.9	30 - 160
Benzo(a)pyrene	33.9	17.6	52.0	30 - 160
Indeno(1,2,3-cd)pyrene	33.9	20.9	61.6	30 - 160
Dibenzo(a,h)anthracene	33.9	21.4	63.3	30 - 160
Benzo(g,h,i)perylene	33.9	19.8	58.5	30 - 160
Perylene	33.9	8.66	25.6 *	30 - 160
Benzo(e)pyrene	33.9	19.1	56.5	30 - 160

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

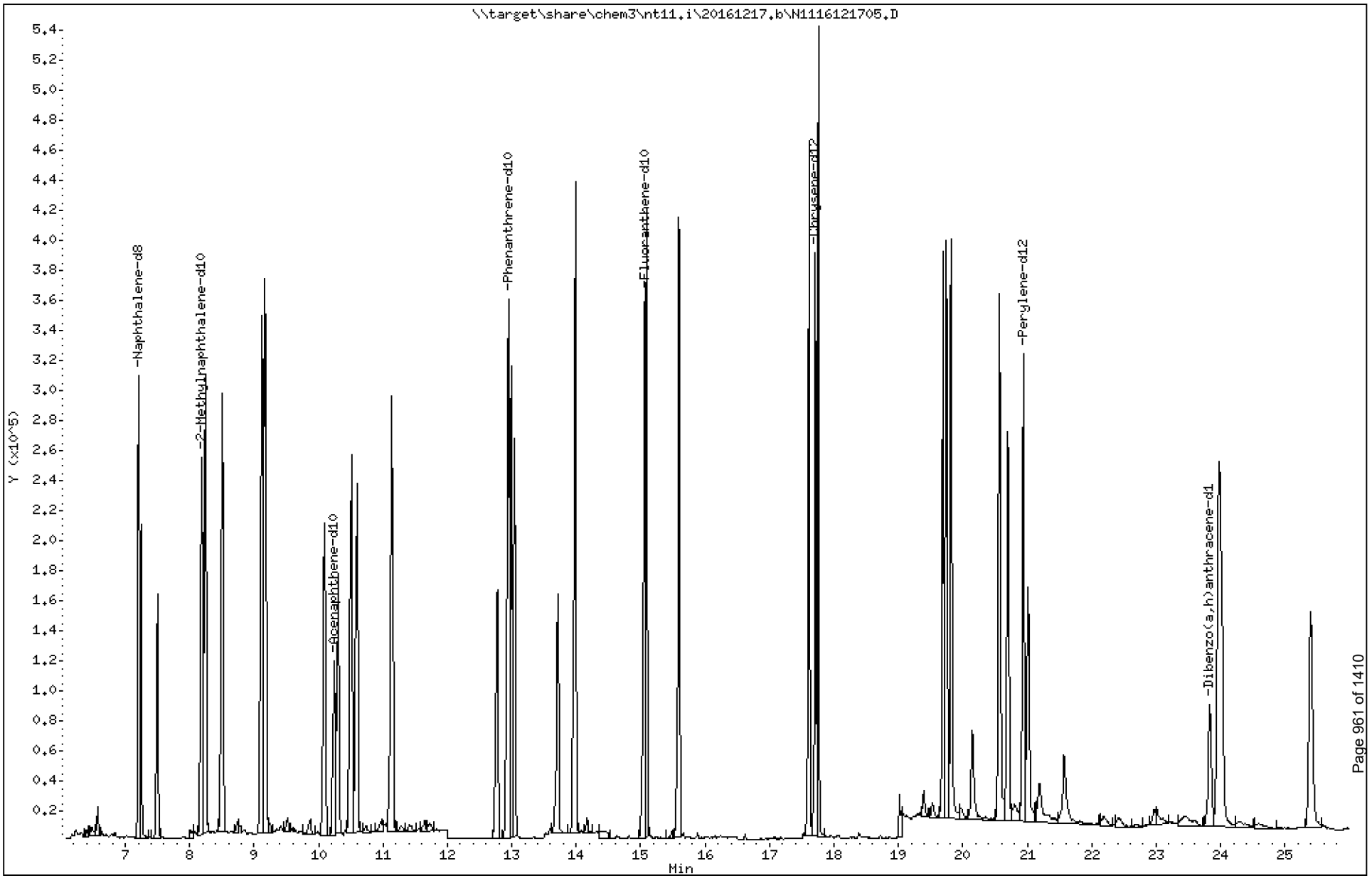
Instrument: nt11.i

Sample Info: BEK0658-BS1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

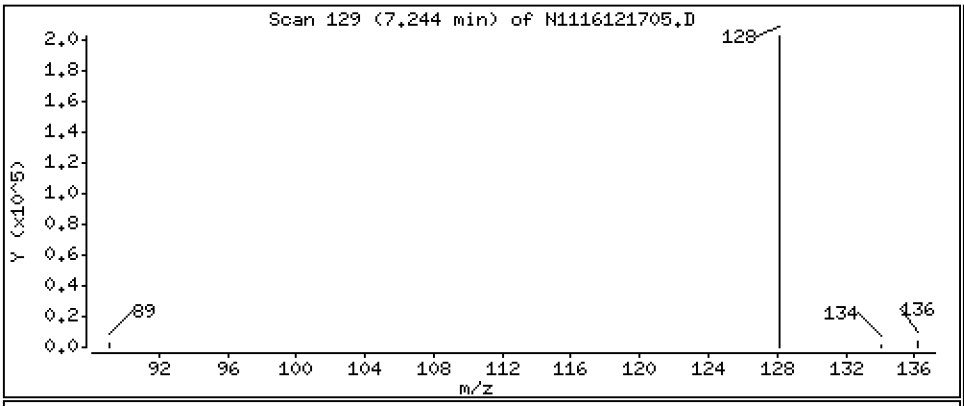
Operator: VTS

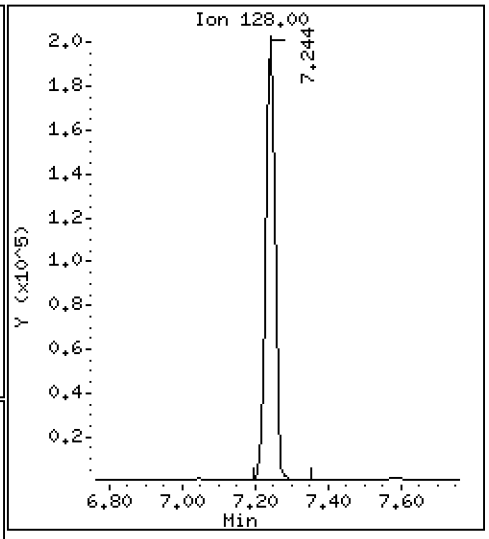
Column phase: Rxi-17Sil MS

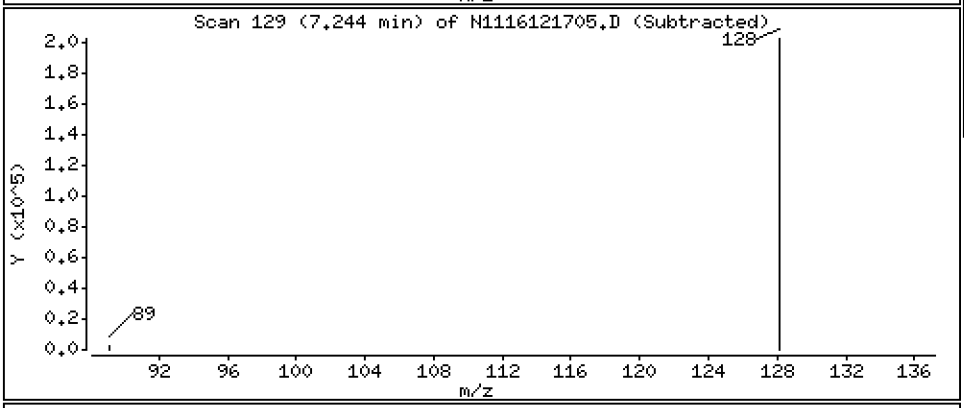
Column diameter: 0.25

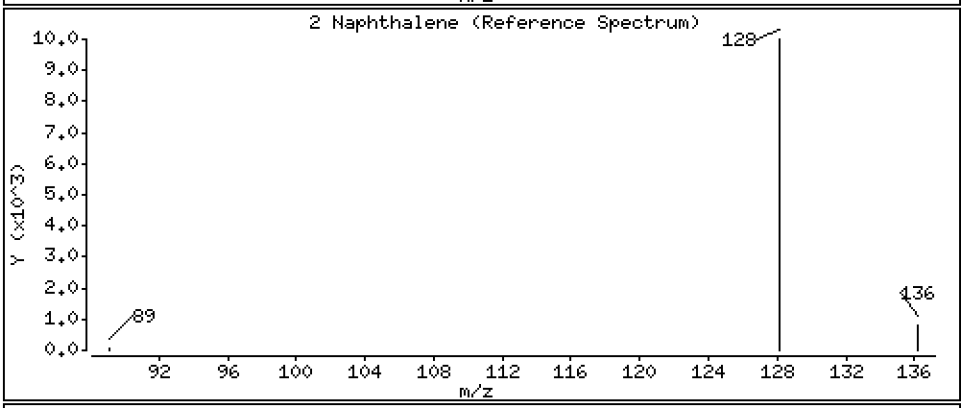
2 Naphthalene

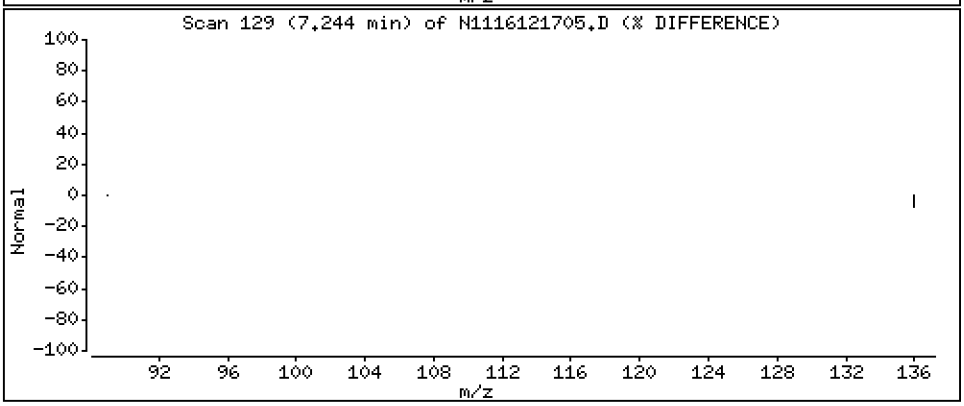
Concentration: 146 ng/mL











Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

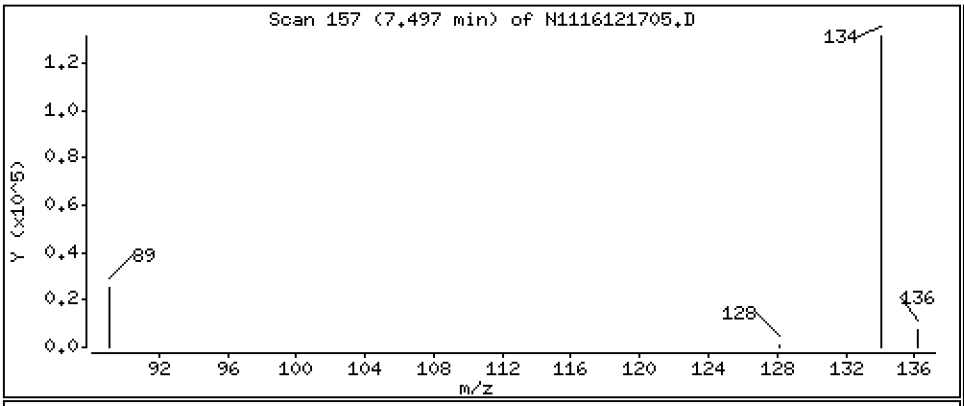
Operator: VTS

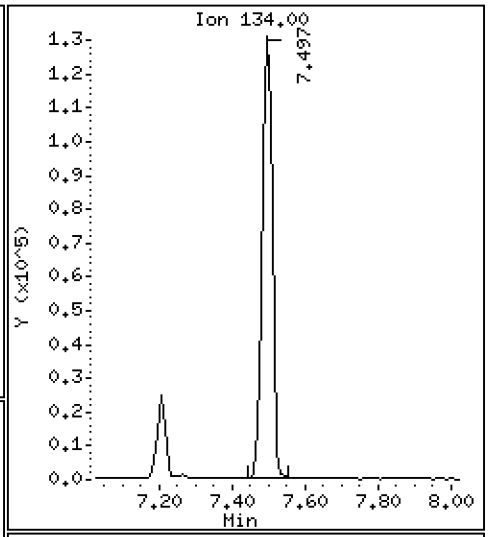
Column phase: Rxi-17Sil MS

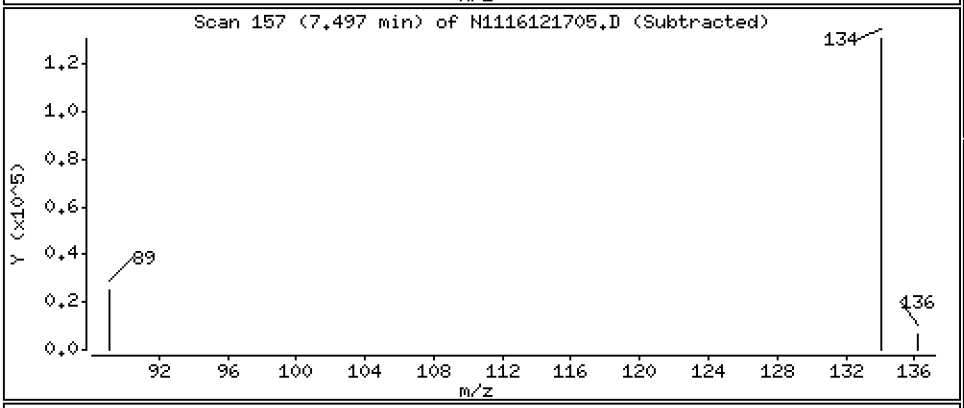
Column diameter: 0.25

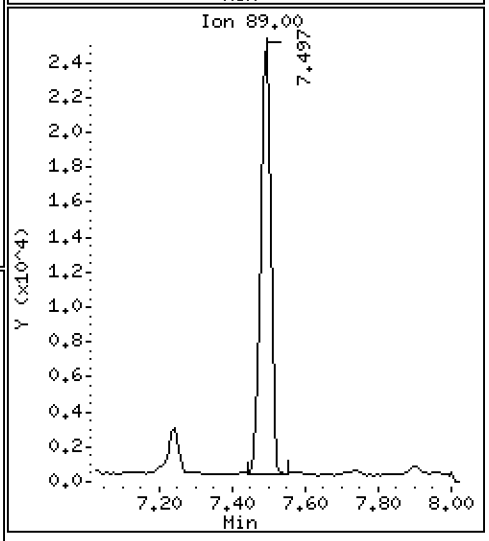
3 Benzo(b)thiophene

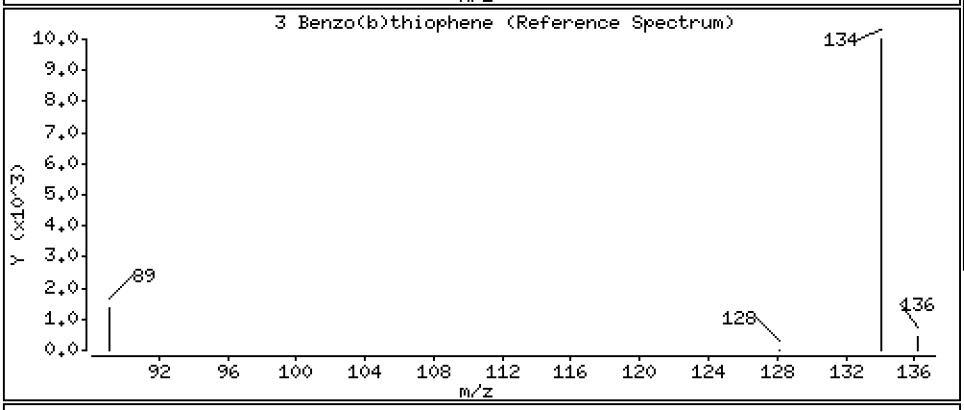
Concentration: 125 ng/mL

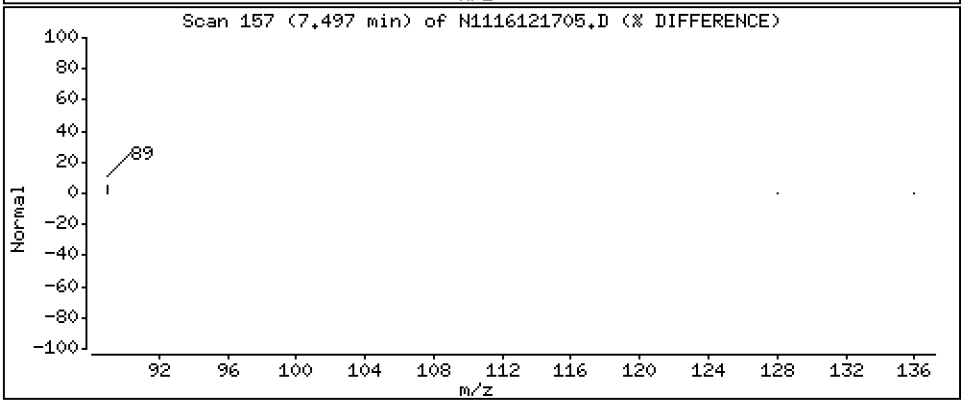












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

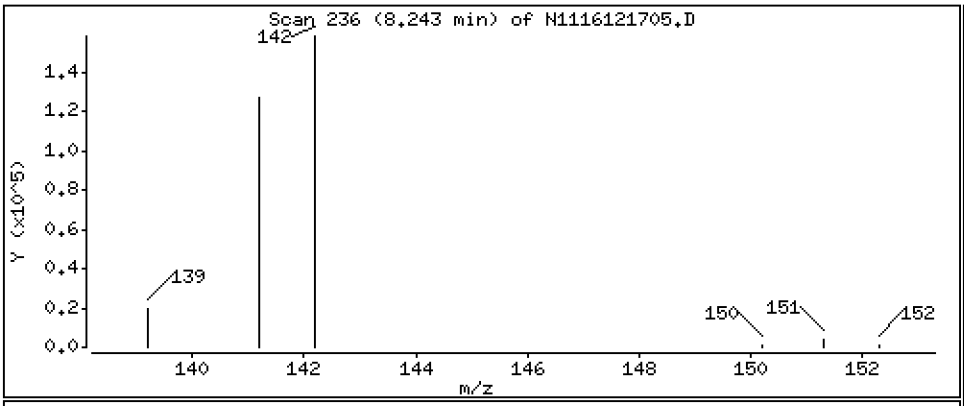
Operator: VTS

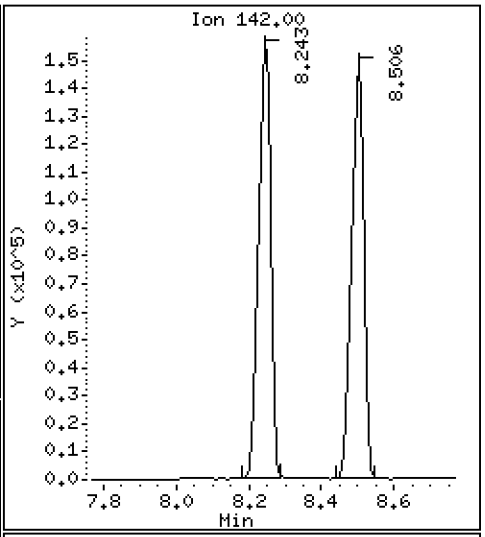
Column phase: Rxi-17Sil MS

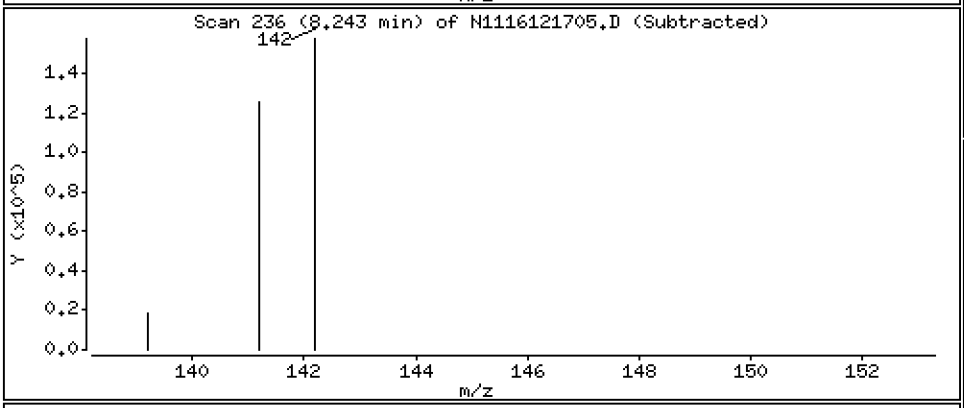
Column diameter: 0.25

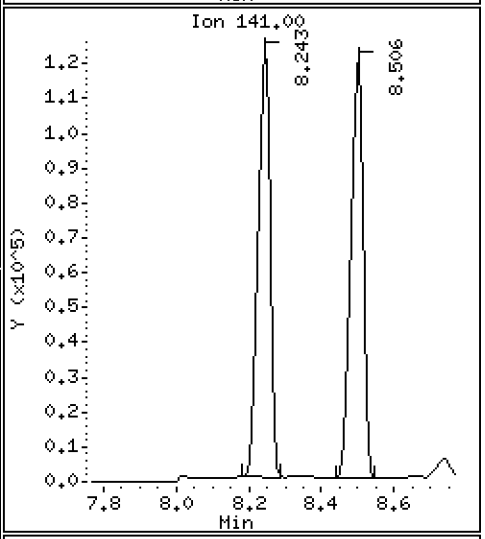
5 2-Methylnaphthalene

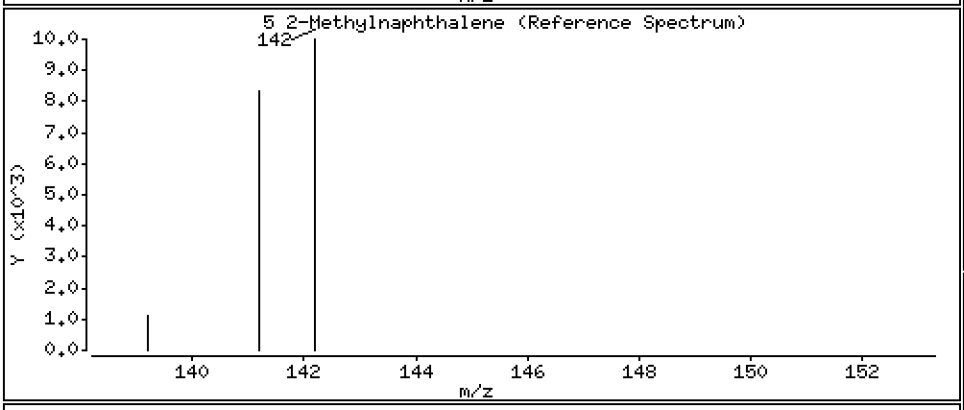
Concentration: 156 ng/mL

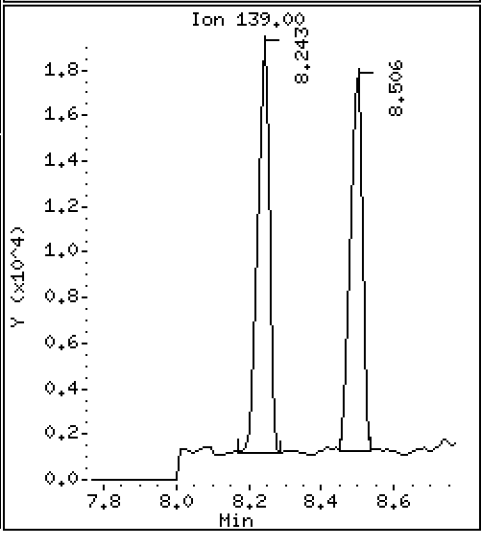


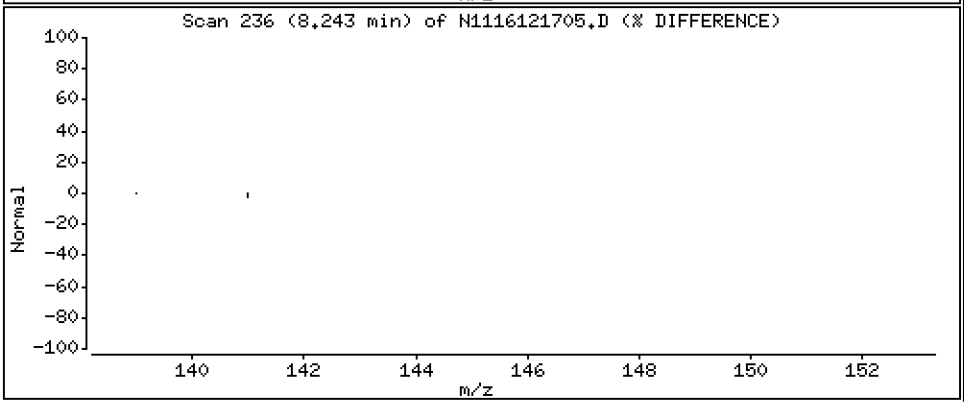












Date : 17-DEC-2016 14:13

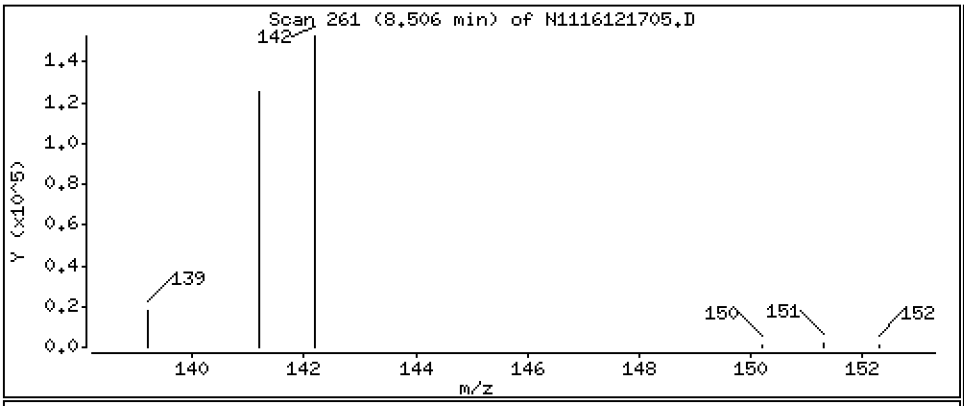
Client ID: Instrument: nt11.i

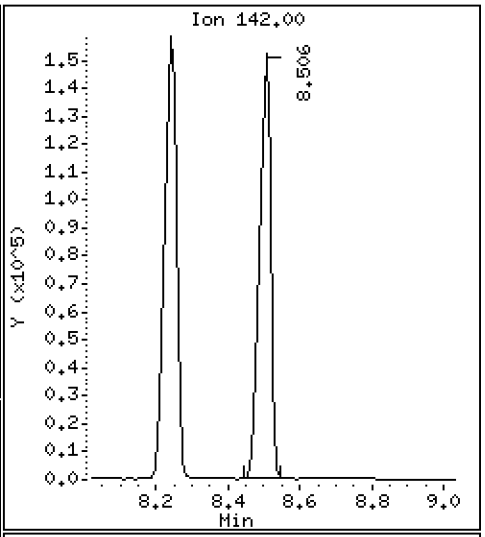
Sample Info: BEK0658-BS1

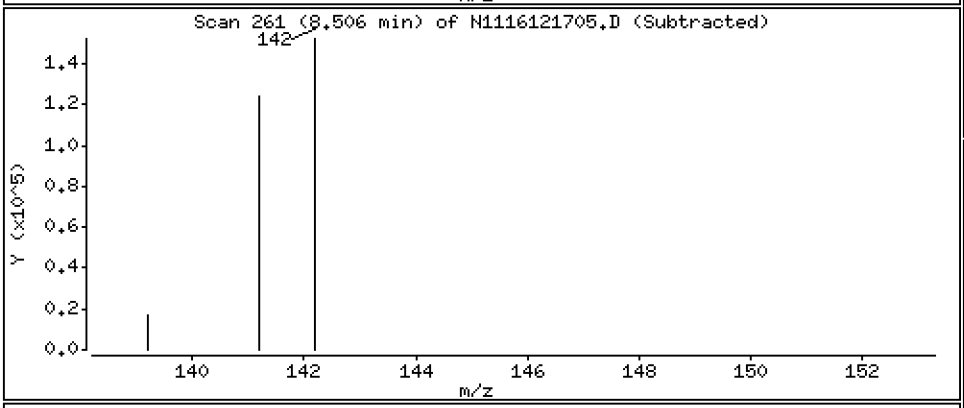
Operator: VTS

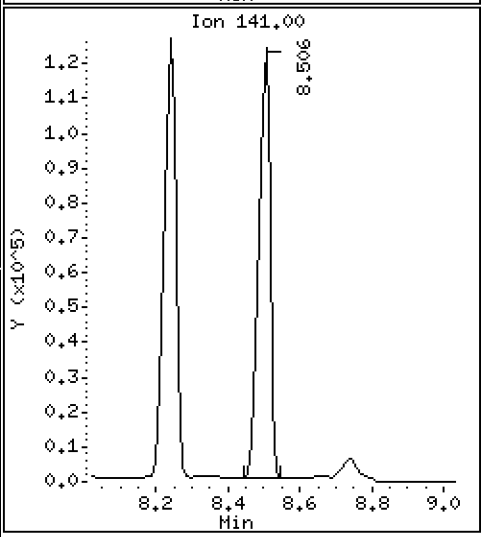
Column phase: Rxi-17Sil MS Column diameter: 0.25

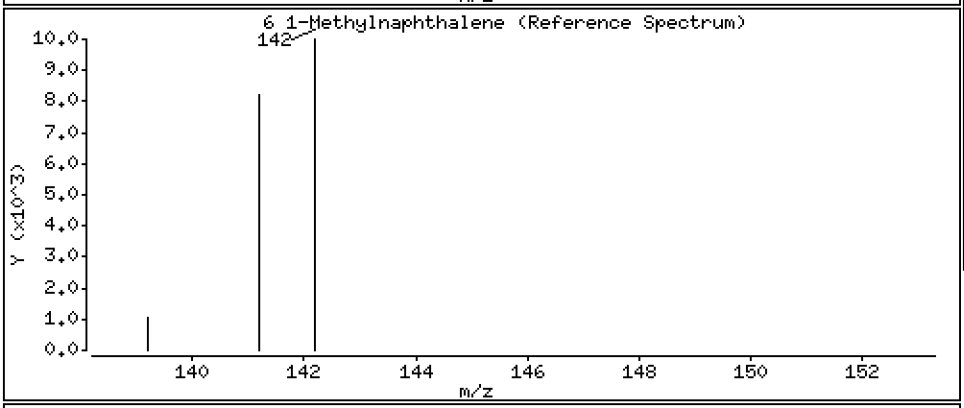
6 1-Methylnaphthalene Concentration: 152 ng/mL

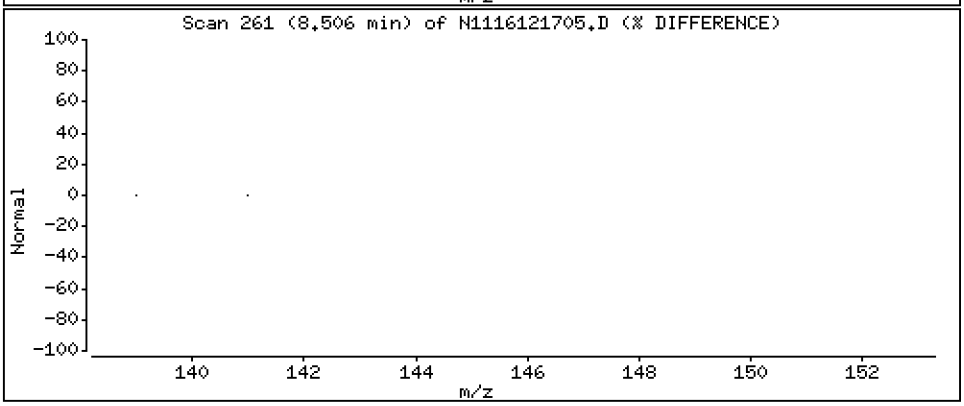












Date : 17-DEC-2016 14:13

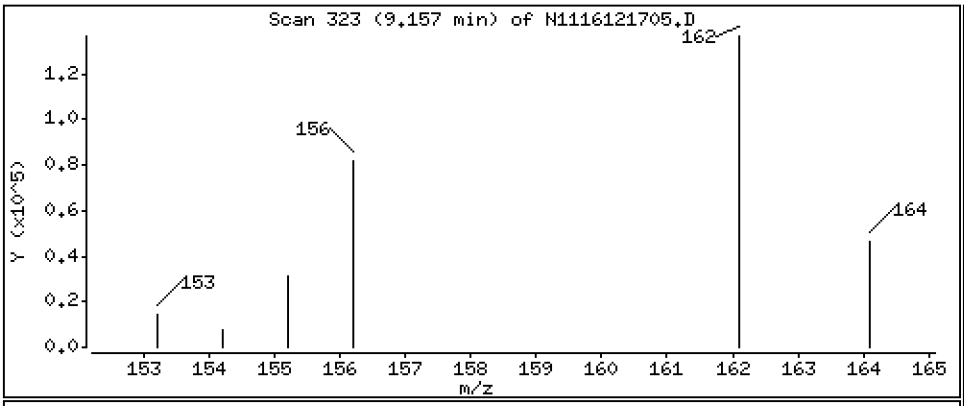
Client ID: Instrument: nt11.i

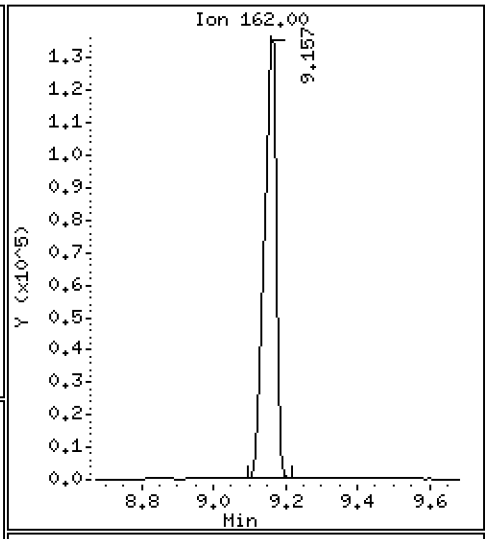
Sample Info: BEK0658-BS1

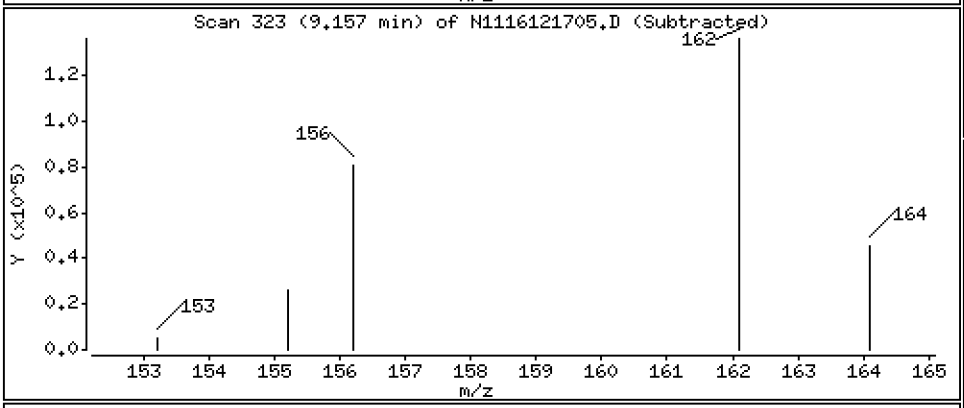
Operator: VTS

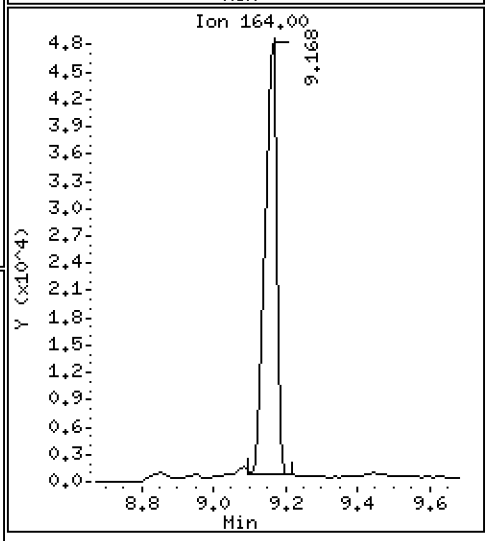
Column phase: Rxi-17Sil MS Column diameter: 0.25

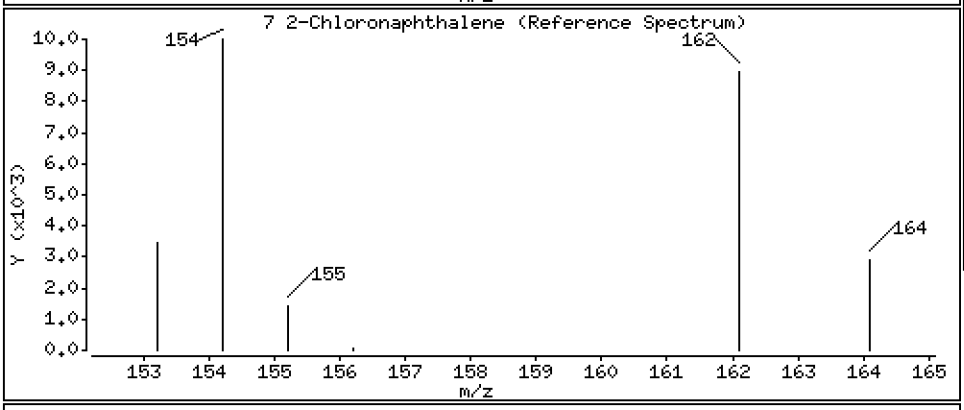
7 2-Chloronaphthalene Concentration: 147 ng/mL

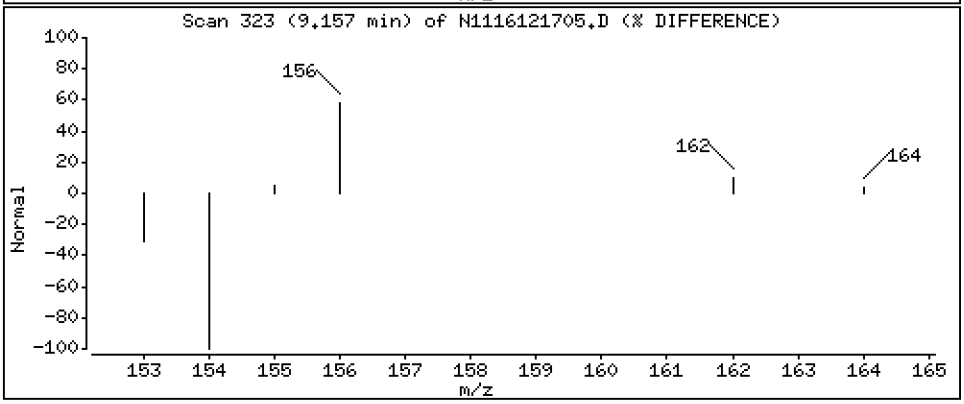












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

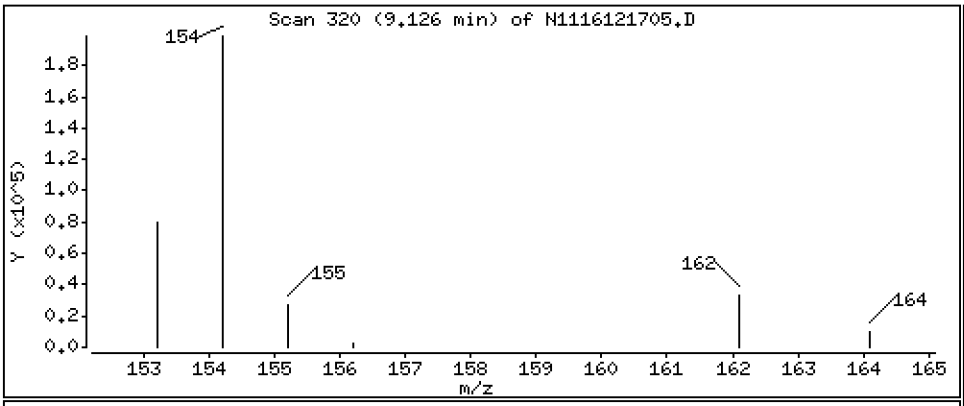
Operator: VTS

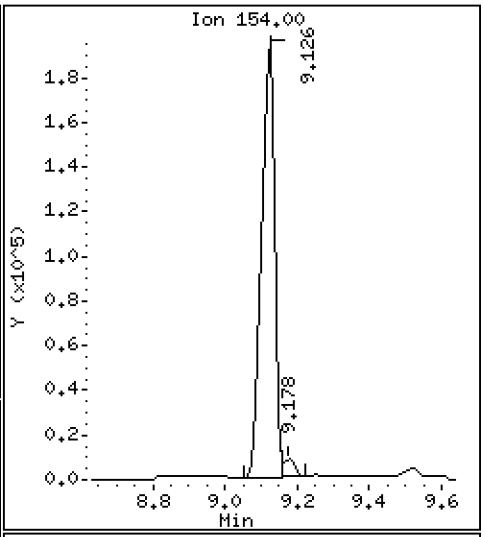
Column phase: Rxi-17Sil MS

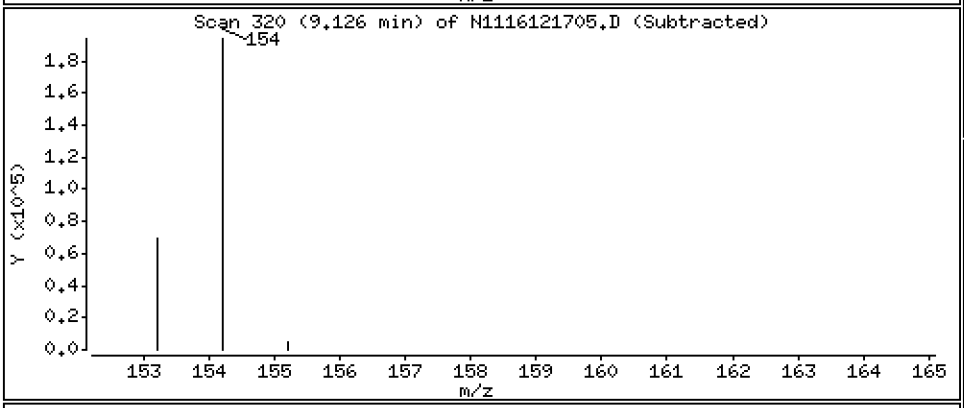
Column diameter: 0.25

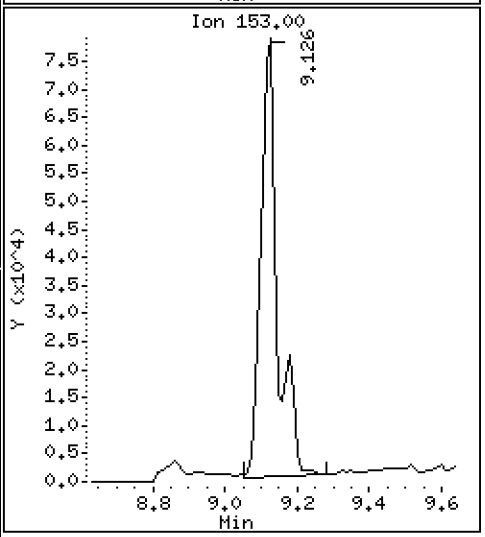
8 Biphenyl

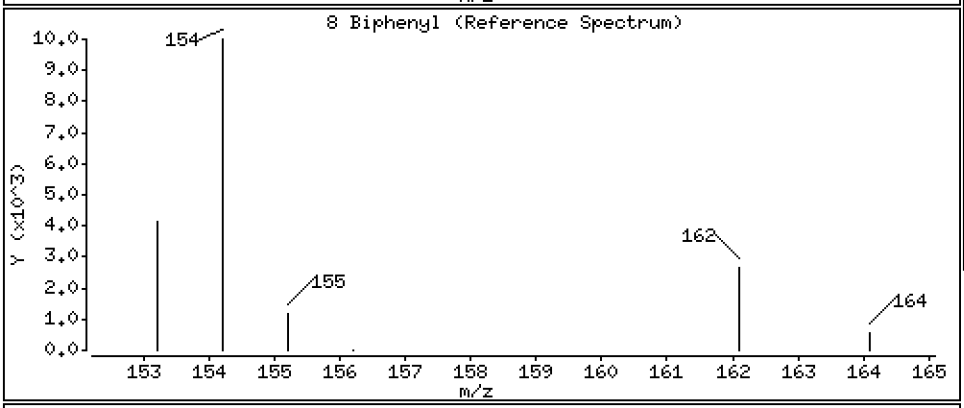
Concentration: 156 ng/mL

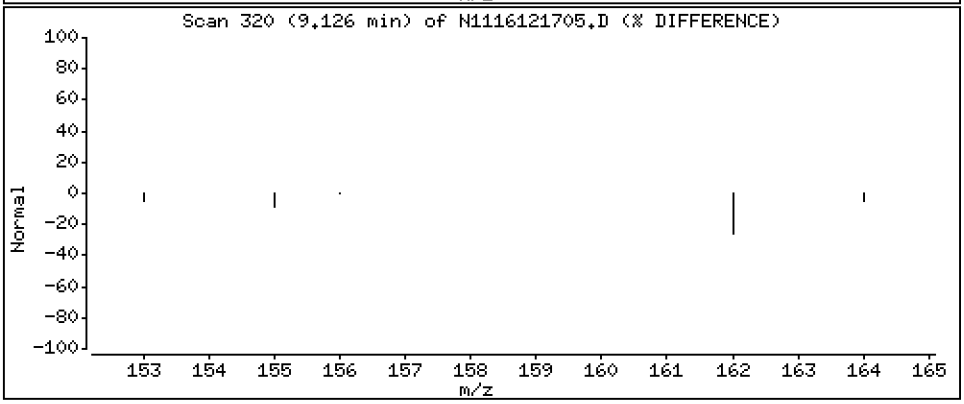












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

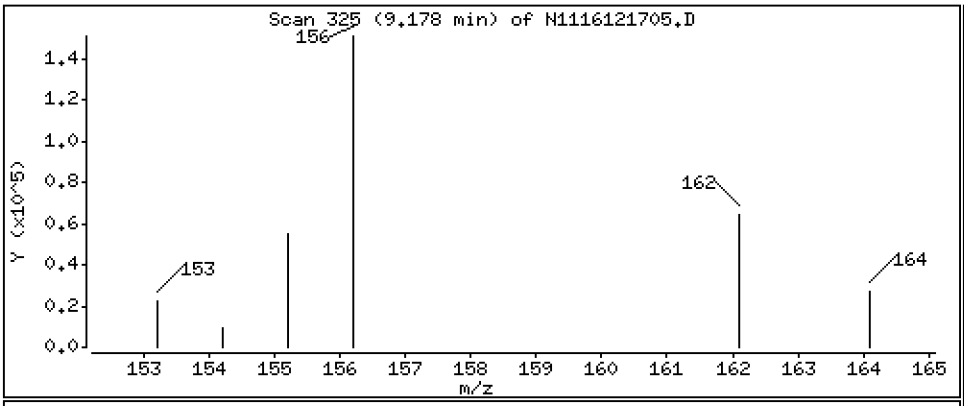
Operator: VTS

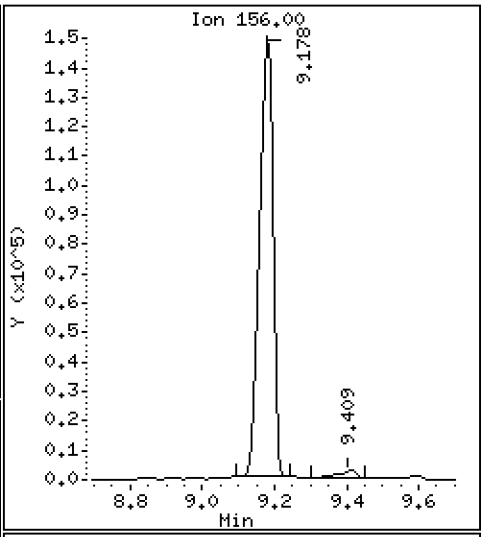
Column phase: Rxi-17Sil MS

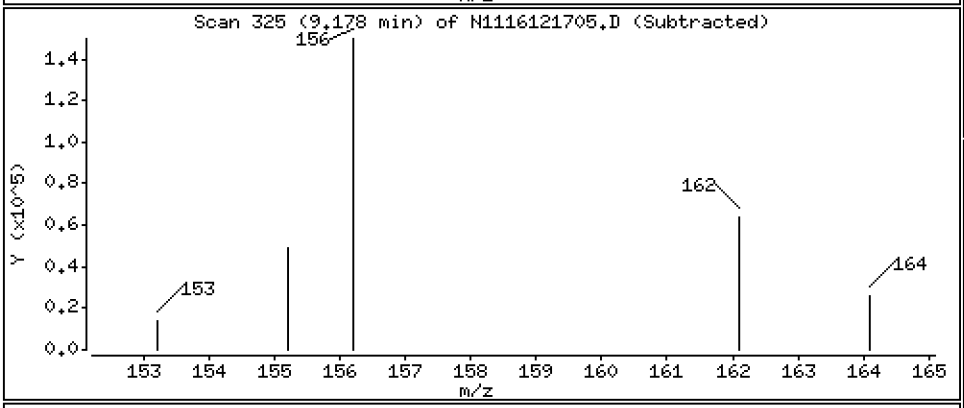
Column diameter: 0.25

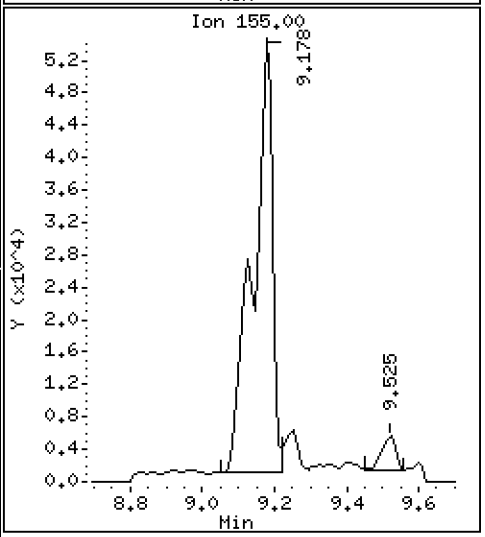
9 2,6-Dimethylnaphthalene

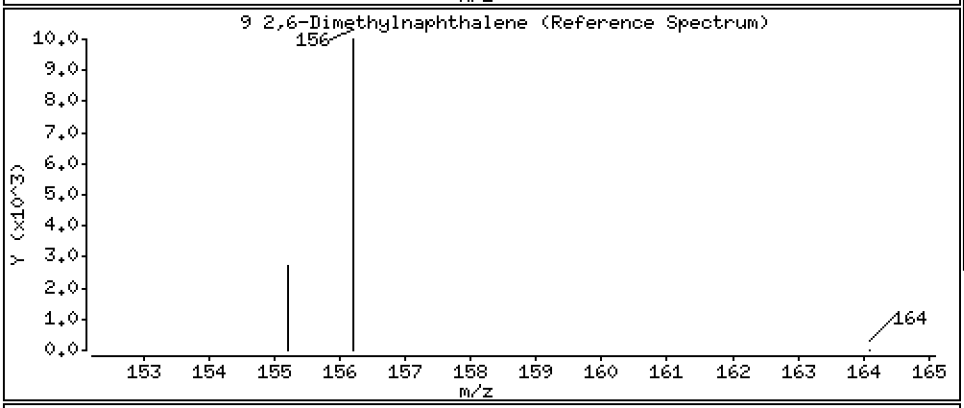
Concentration: 162 ng/mL

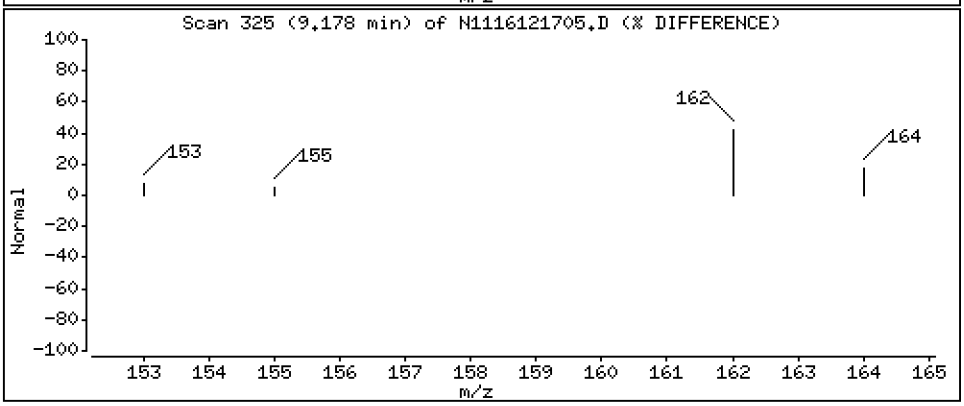












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

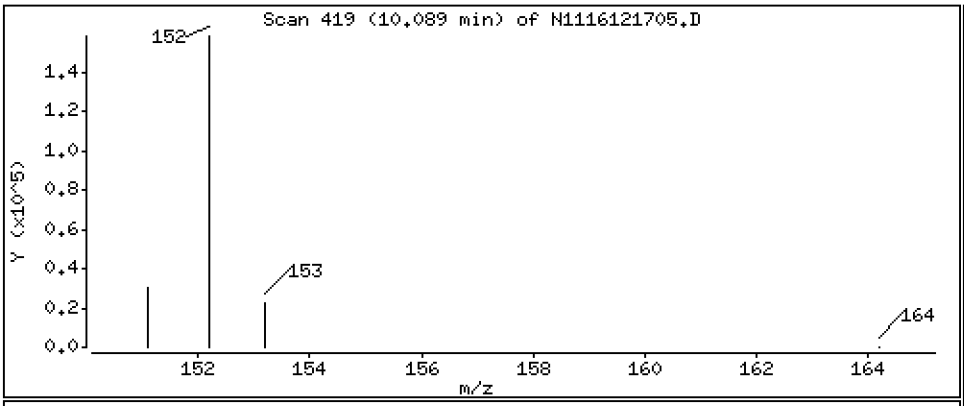
Operator: VTS

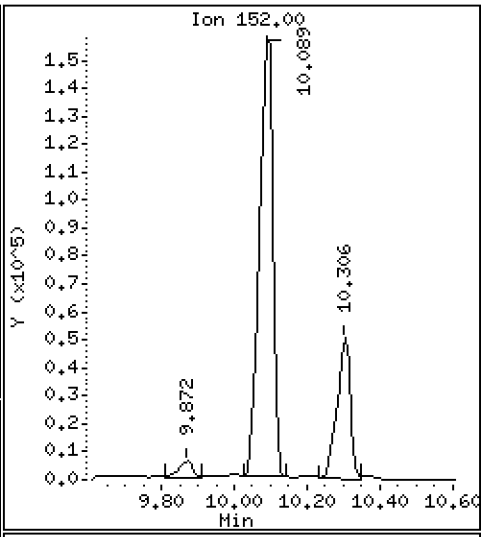
Column phase: Rxi-17Sil MS

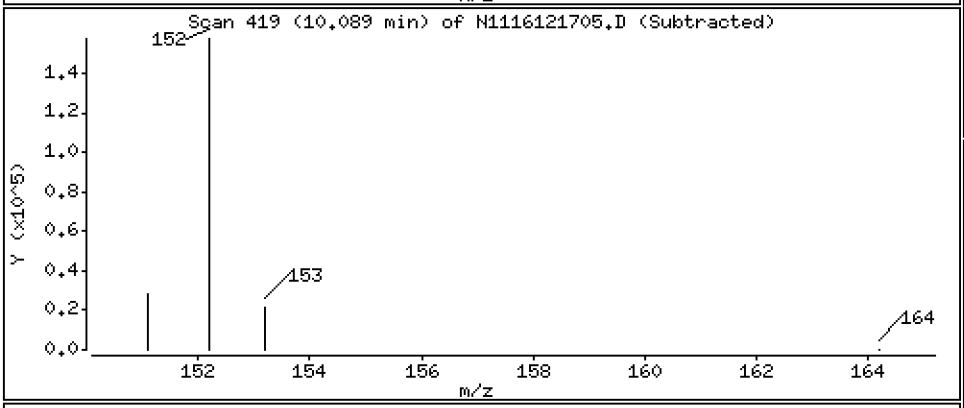
Column diameter: 0.25

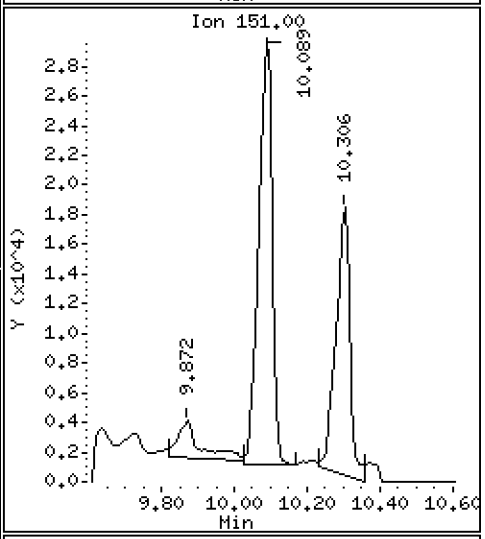
10 Acenaphthylene

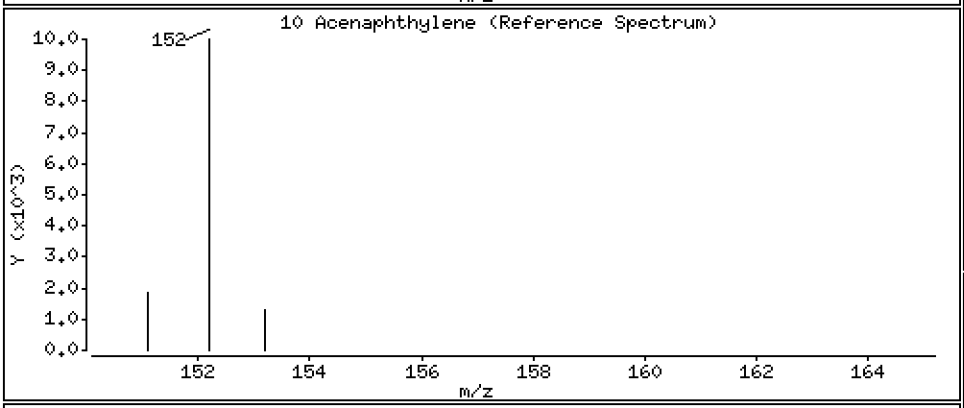
Concentration: 152 ng/mL

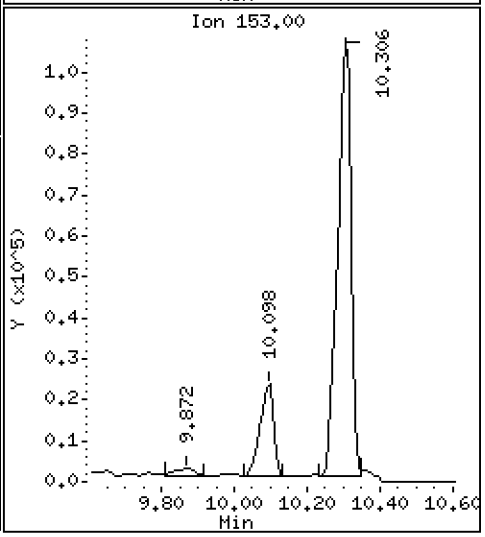


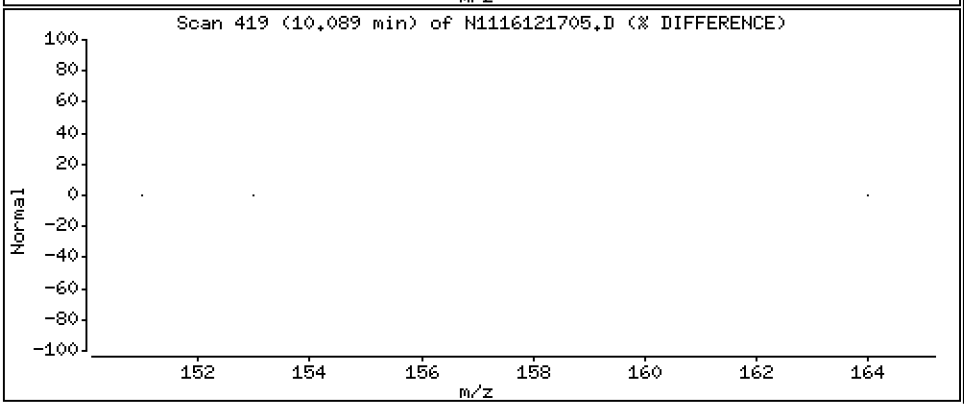












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

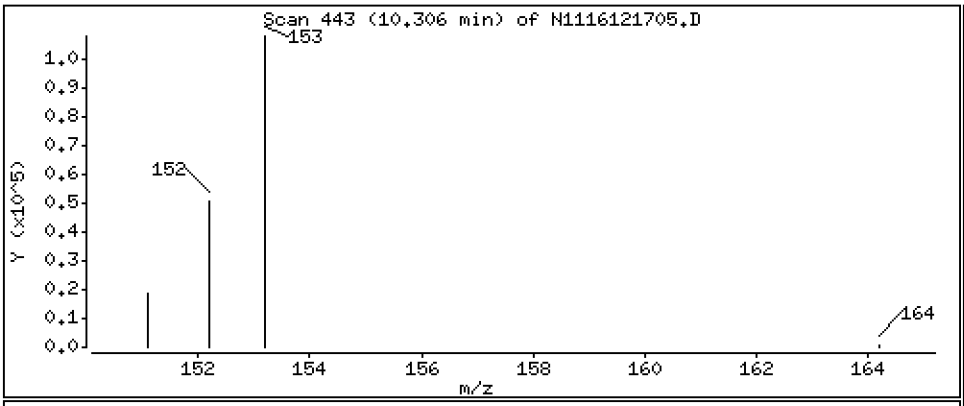
Operator: VTS

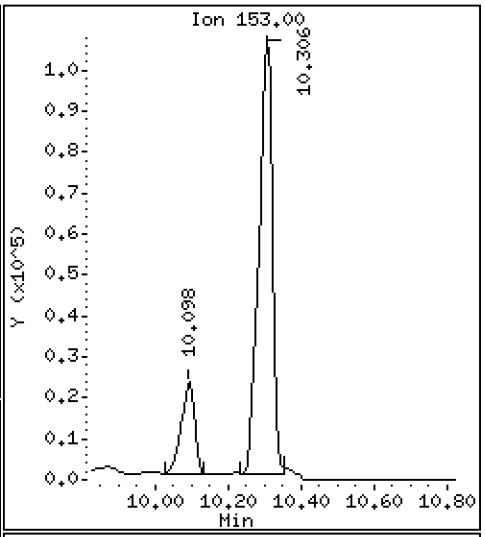
Column phase: Rxi-17Sil MS

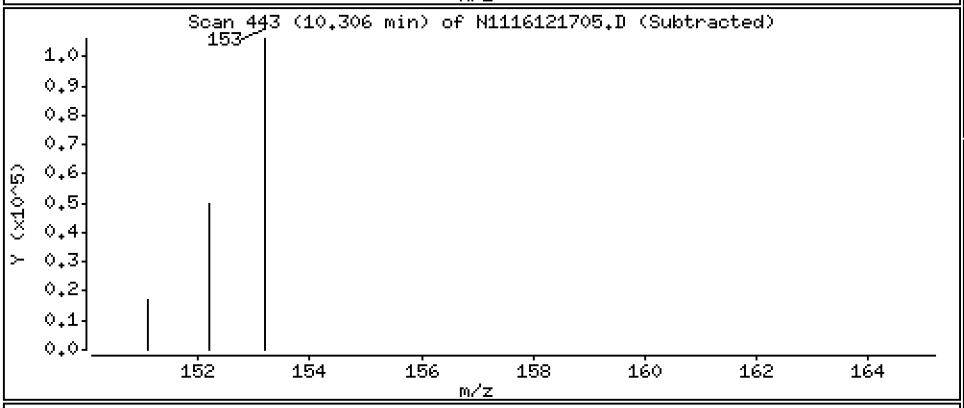
Column diameter: 0.25

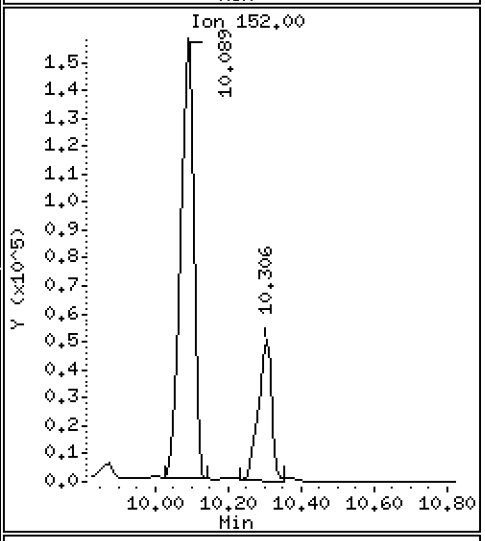
12 Acenaphthene

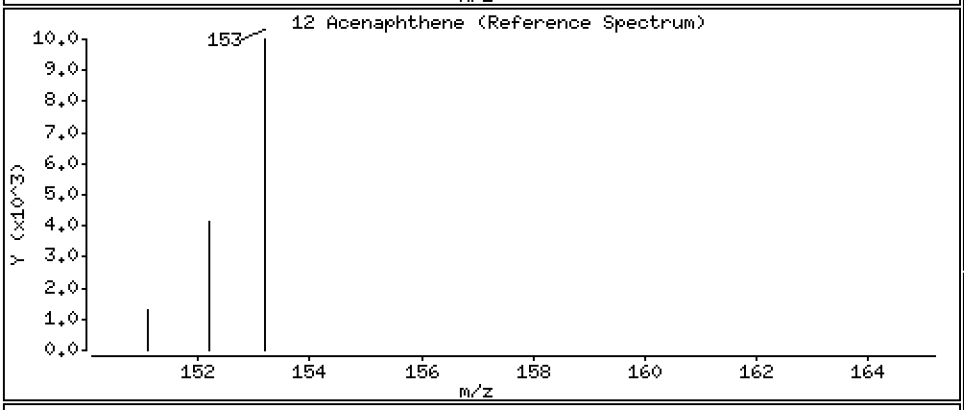
Concentration: 160 ng/mL

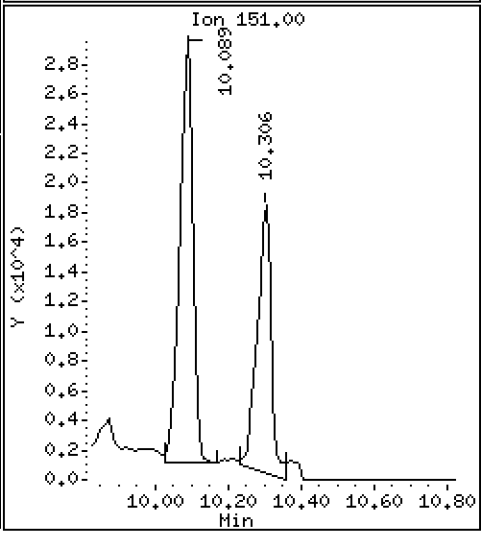


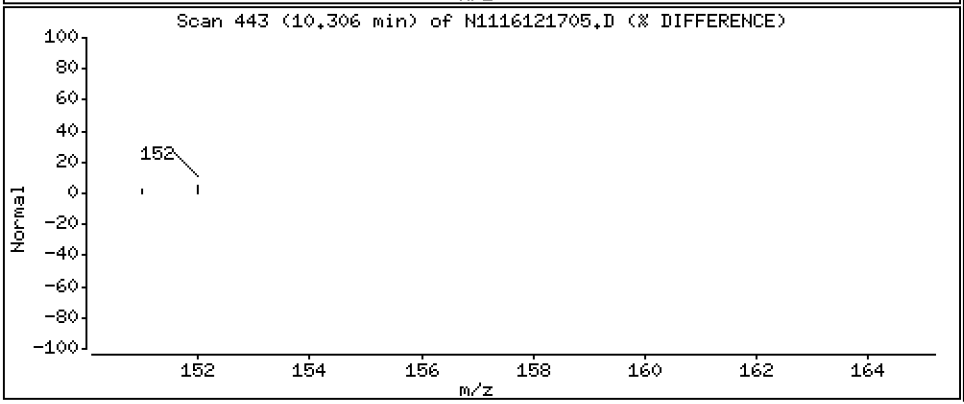












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

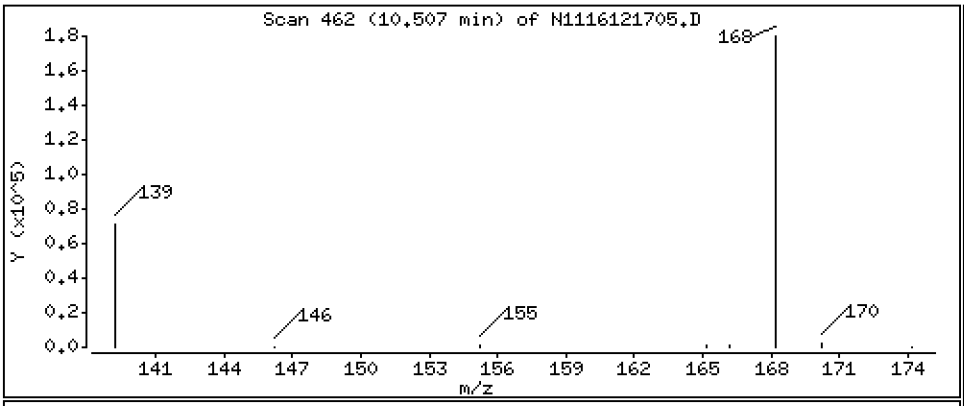
Operator: VTS

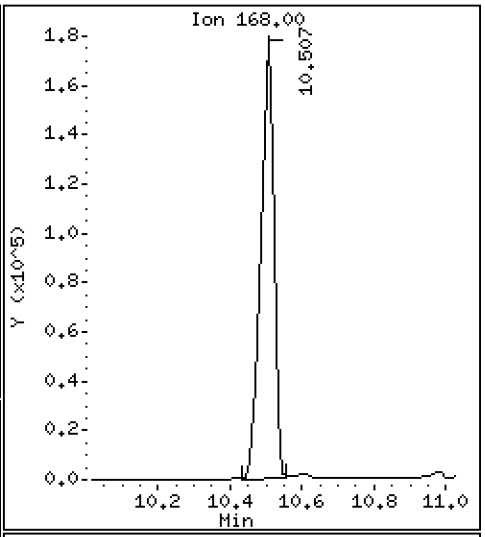
Column phase: Rxi-17Sil MS

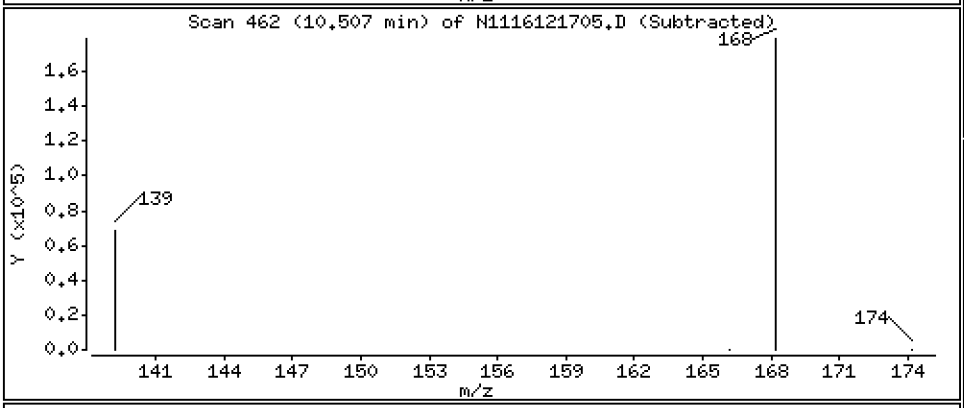
Column diameter: 0.25

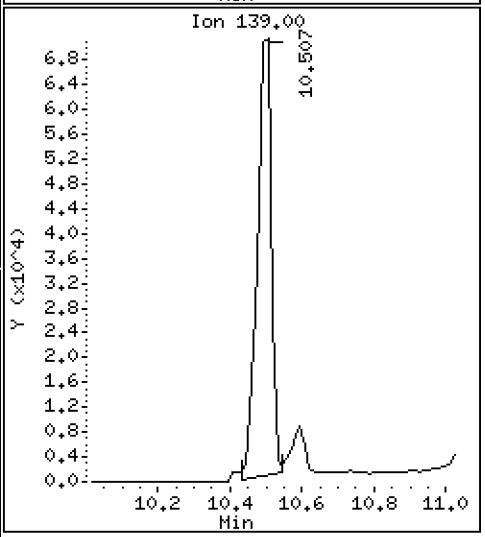
13 Dibenzofuran

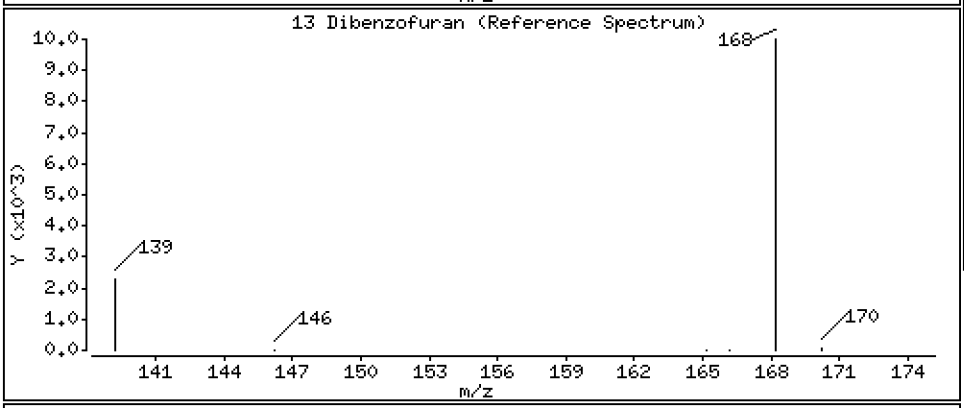
Concentration: 171 ng/mL

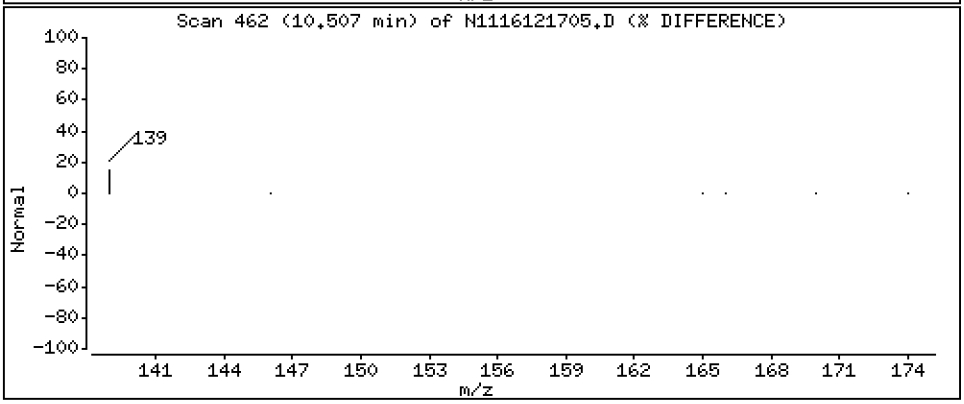












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

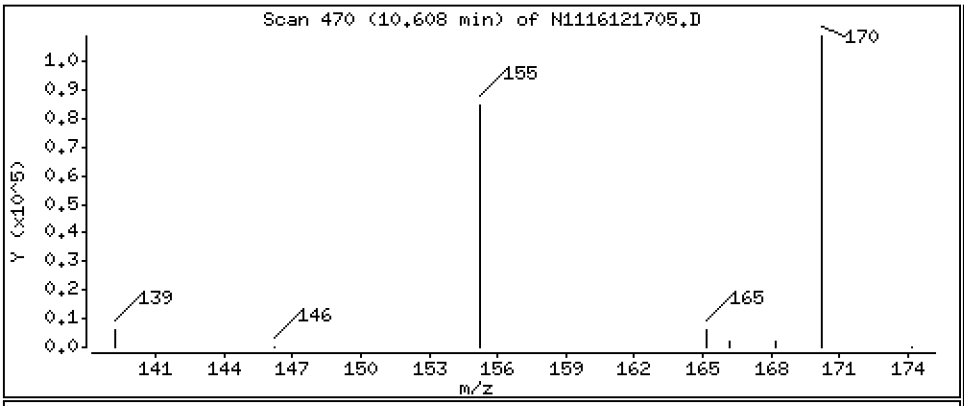
Operator: VTS

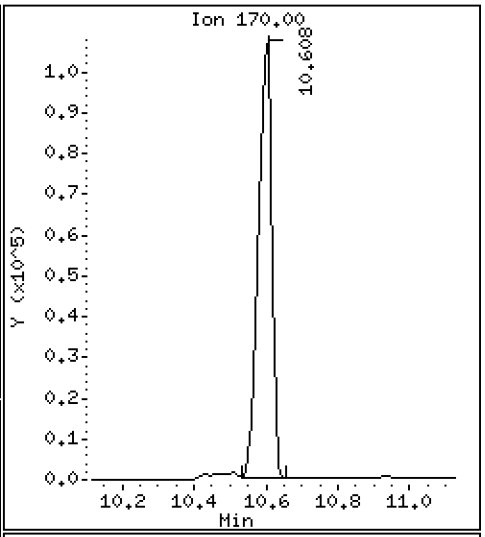
Column phase: Rxi-17Sil MS

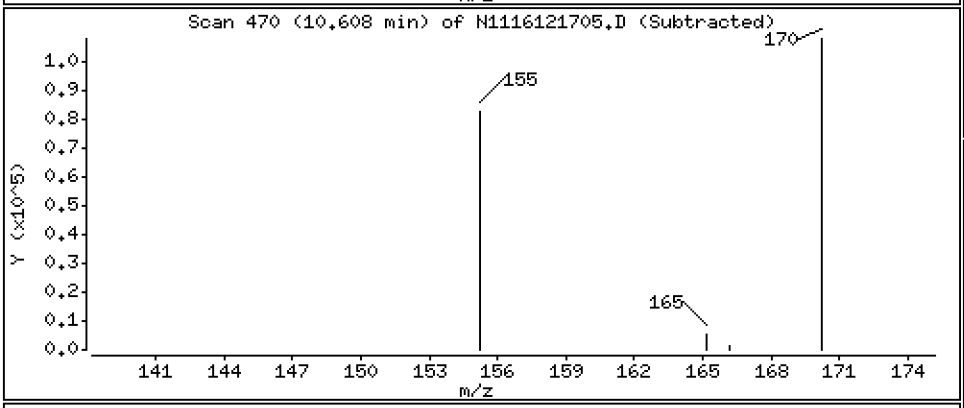
Column diameter: 0.25

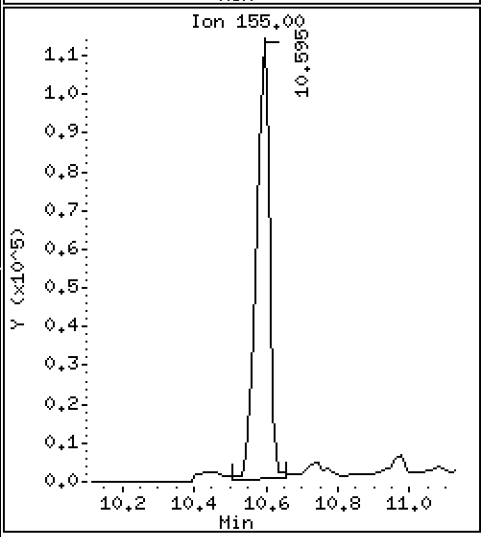
14 2,3,5-Trimethylnaphthalene

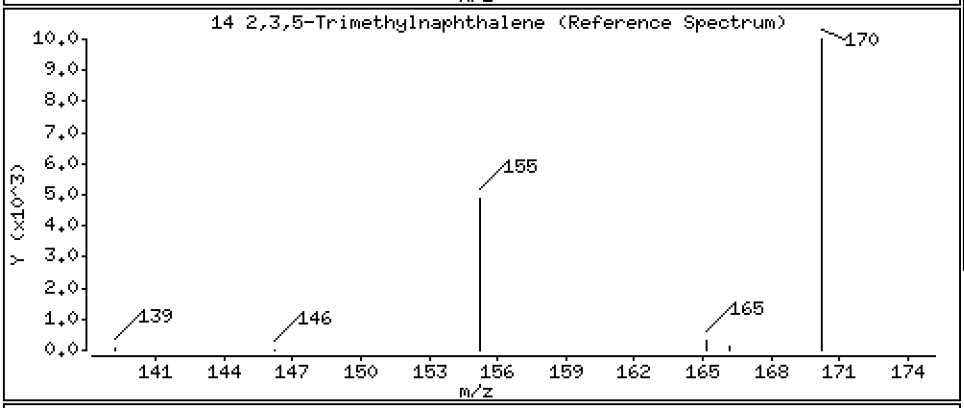
Concentration: 171 ng/mL

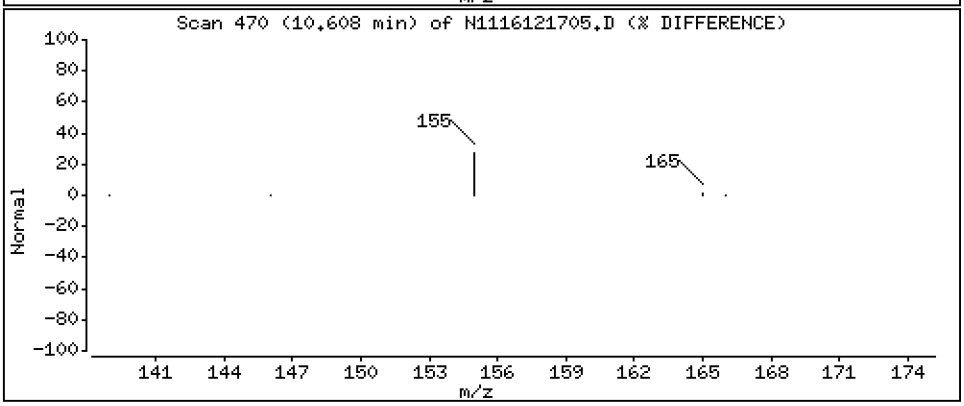












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

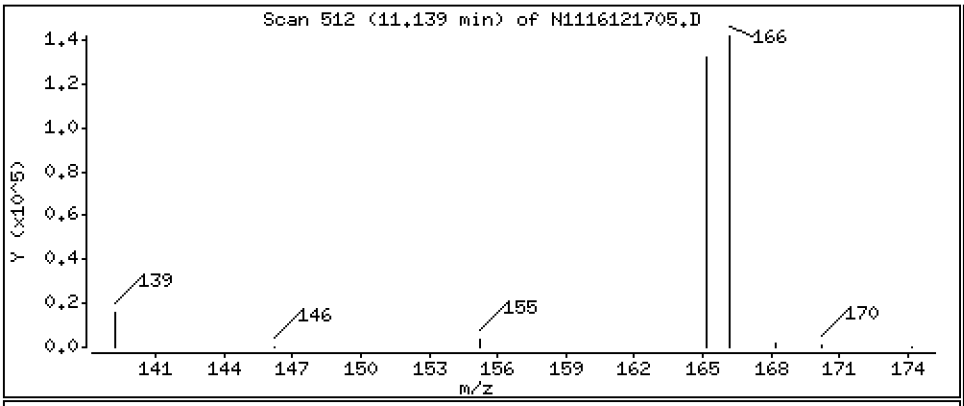
Operator: VTS

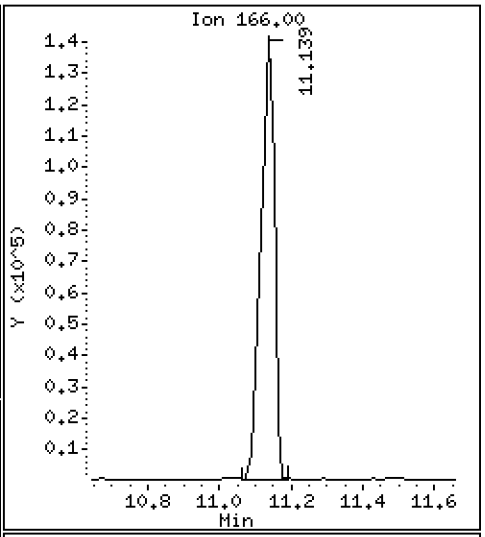
Column phase: Rxi-17Sil MS

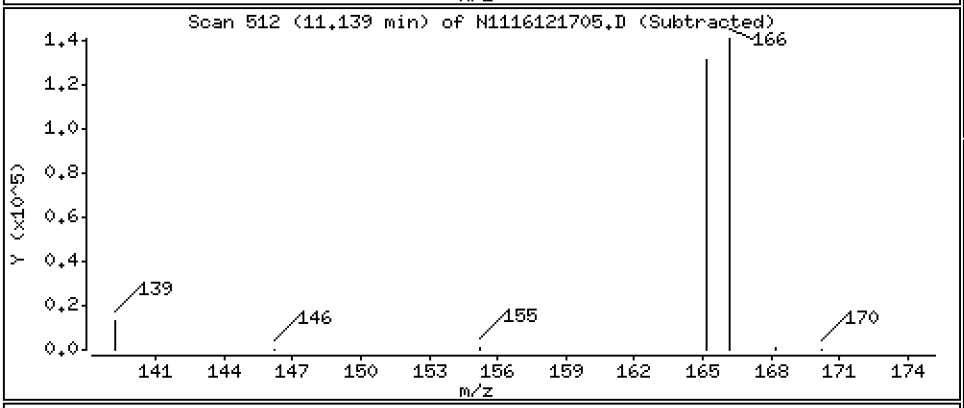
Column diameter: 0.25

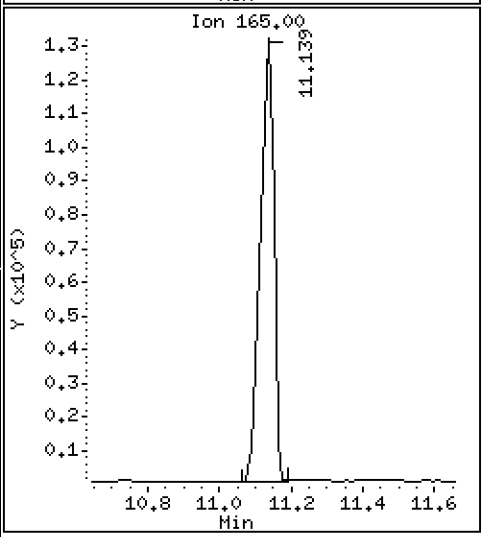
16 Fluorene

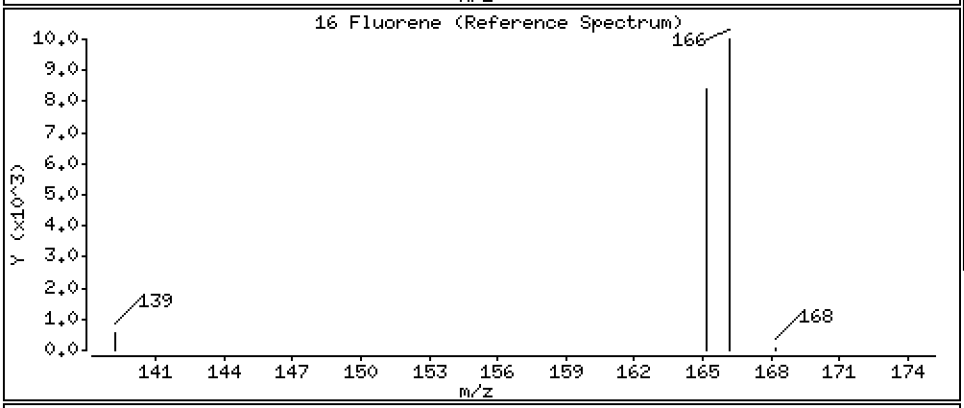
Concentration: 175 ng/mL

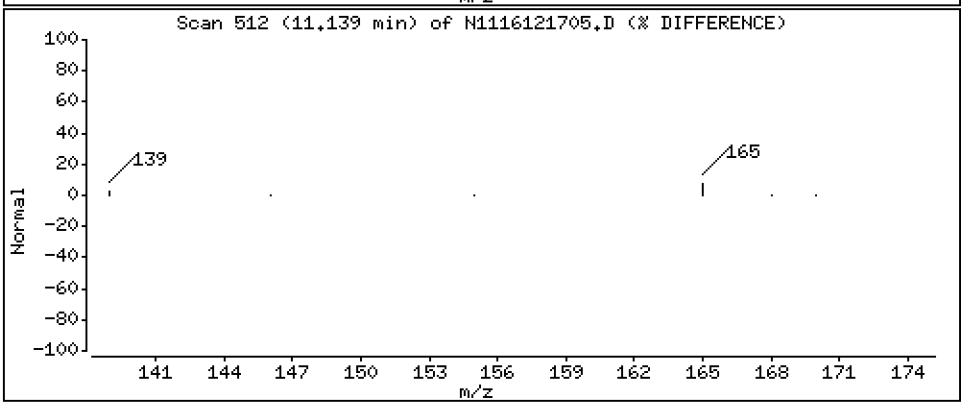












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

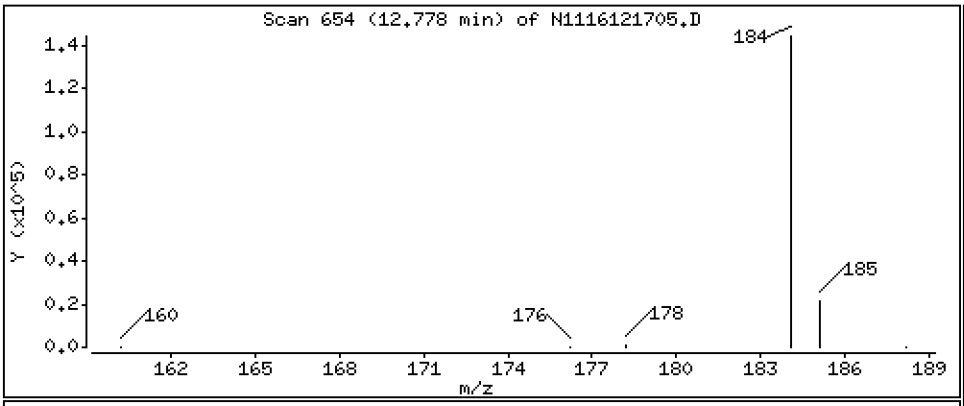
Operator: VTS

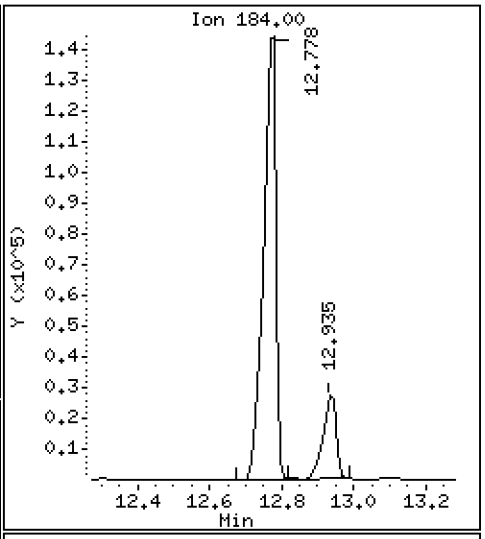
Column phase: Rxi-17Sil MS

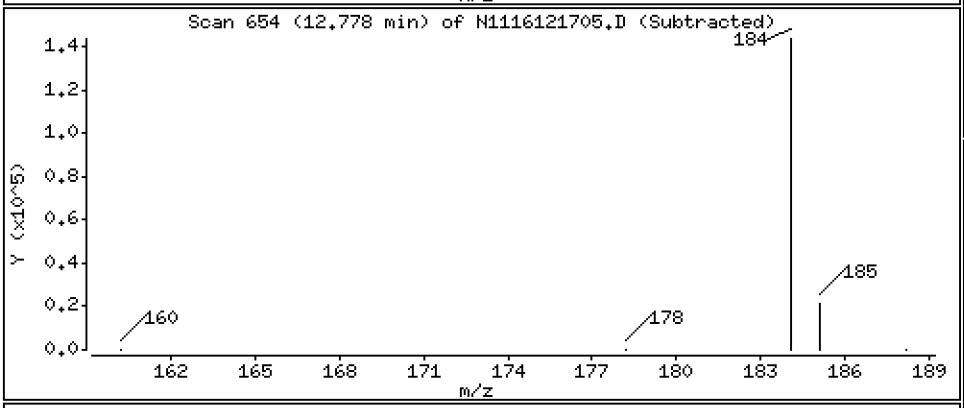
Column diameter: 0.25

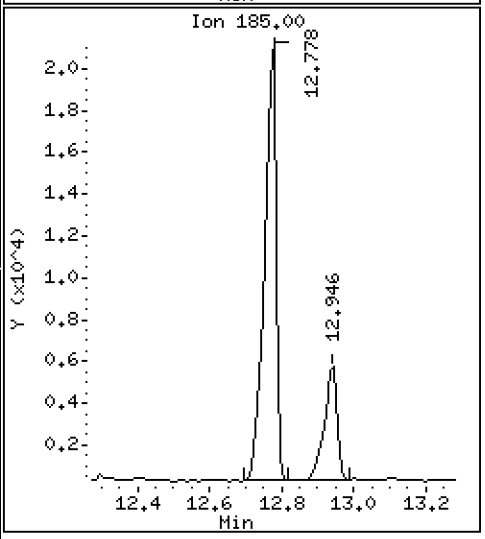
17 Dibenzothiophene

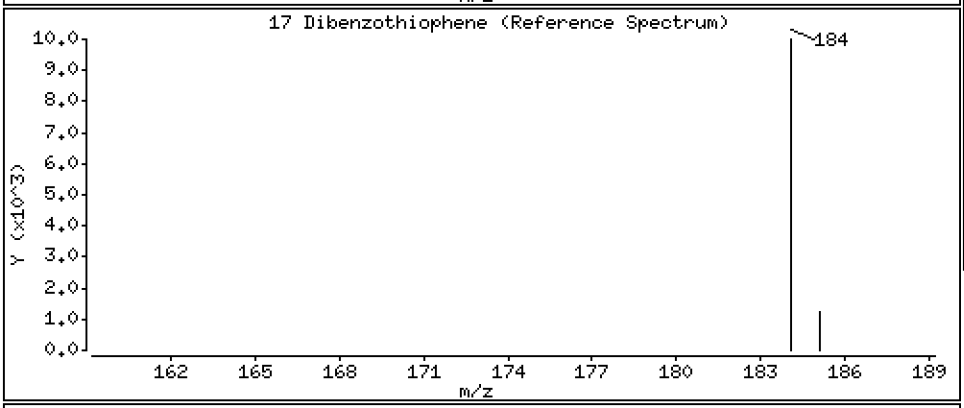
Concentration: 143 ng/mL

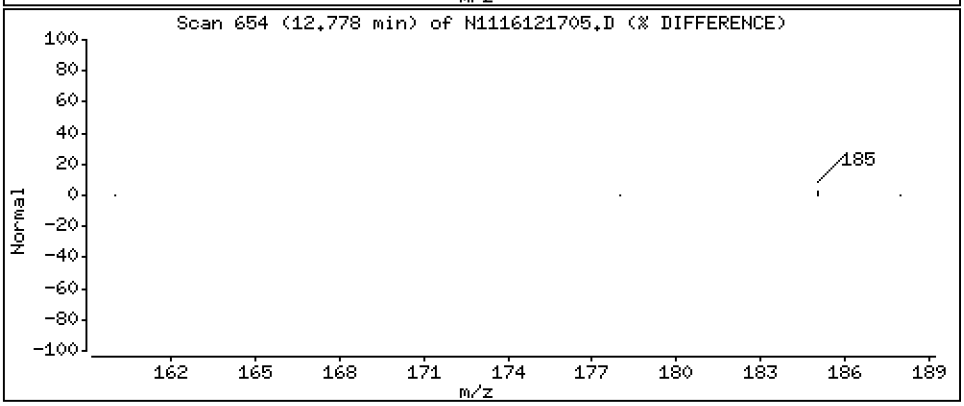












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

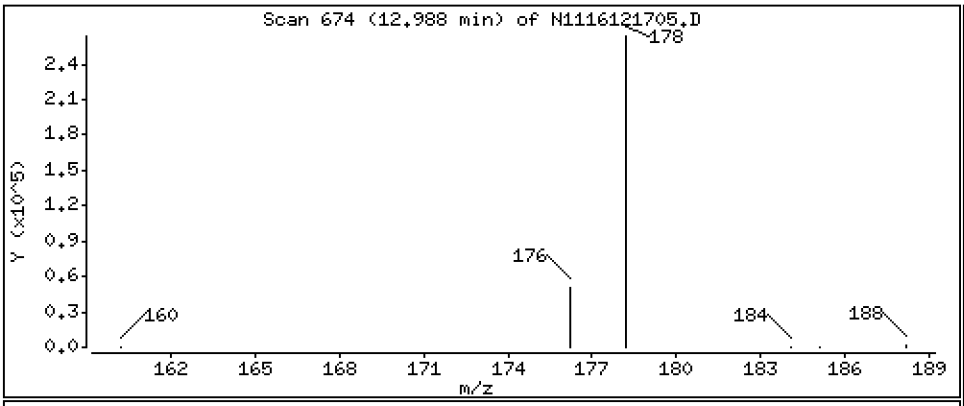
Operator: VTS

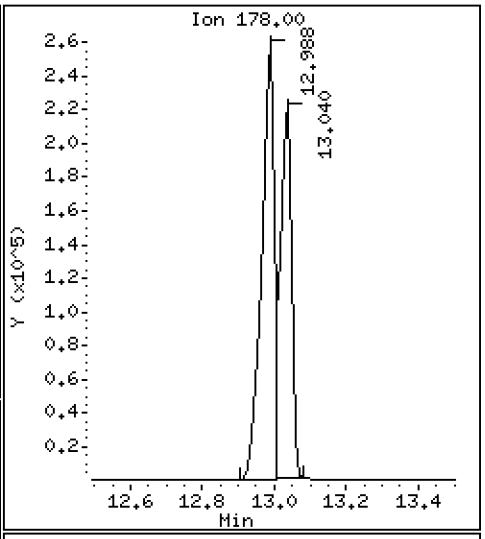
Column phase: Rxi-17Sil MS

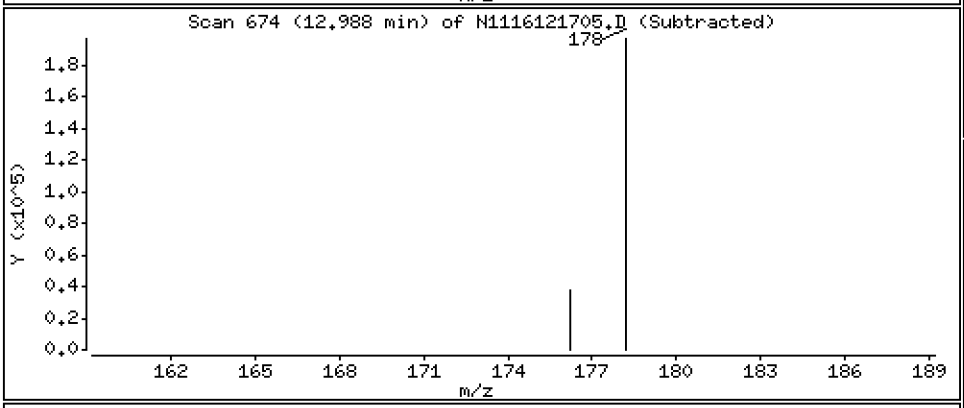
Column diameter: 0.25

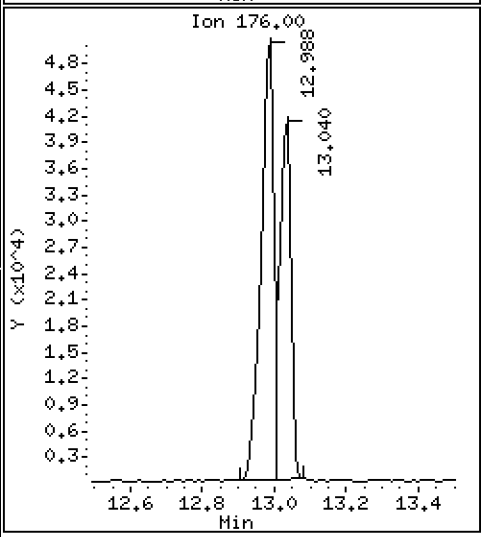
19 Phenanthrene

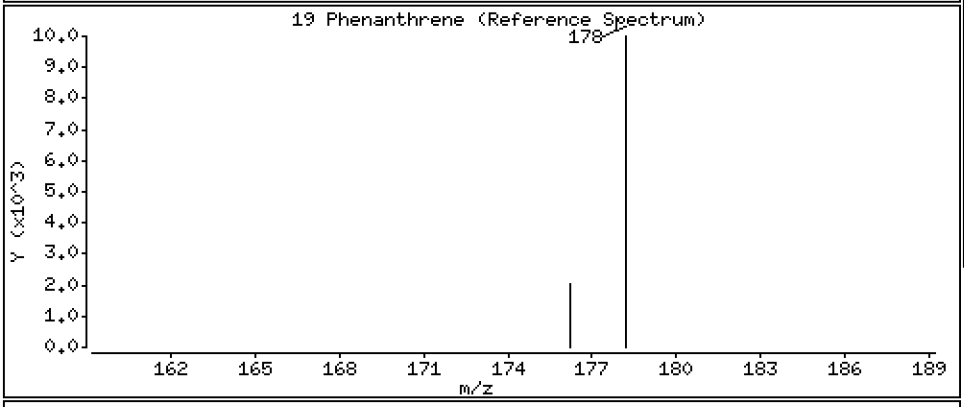
Concentration: 209 ng/mL

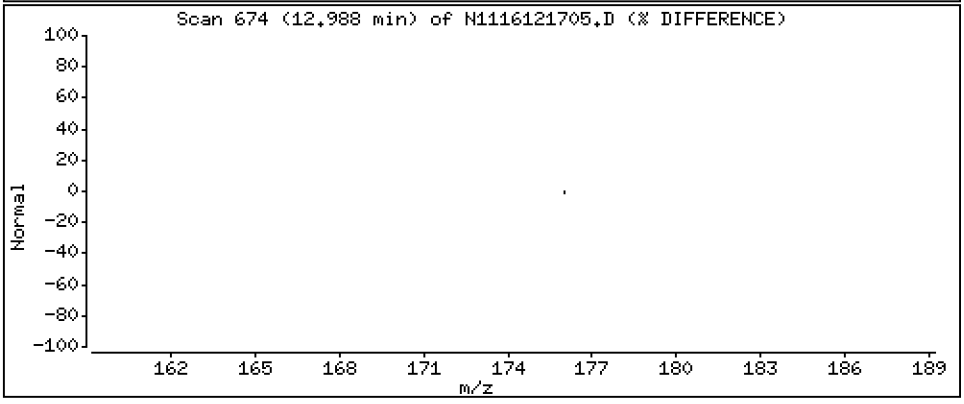












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

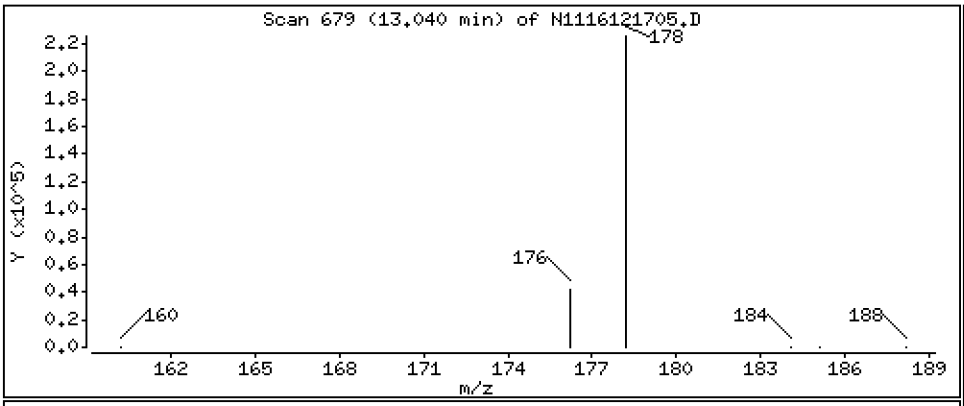
Operator: VTS

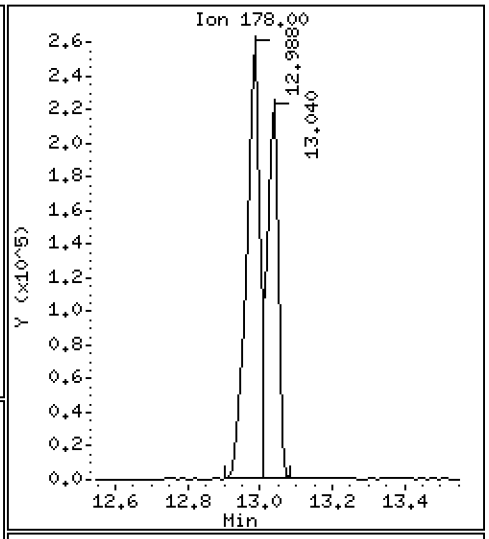
Column phase: Rxi-17Sil MS

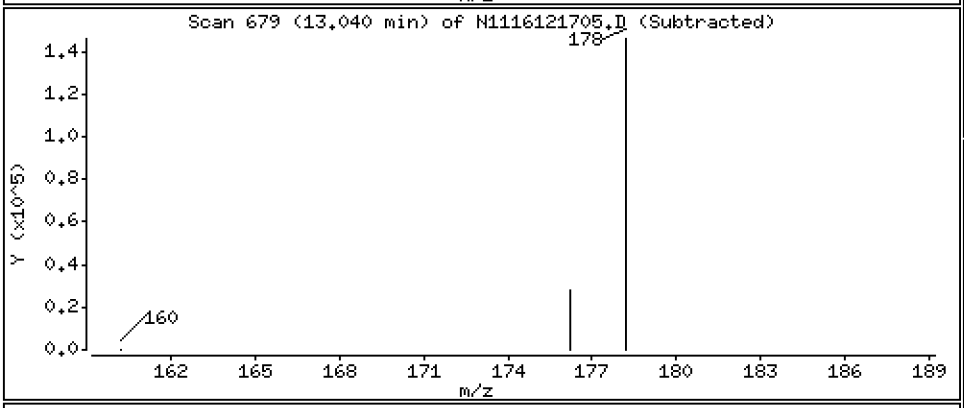
Column diameter: 0.25

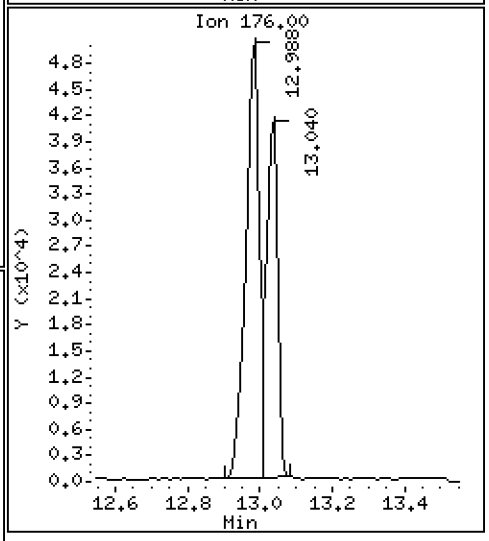
21 Anthracene

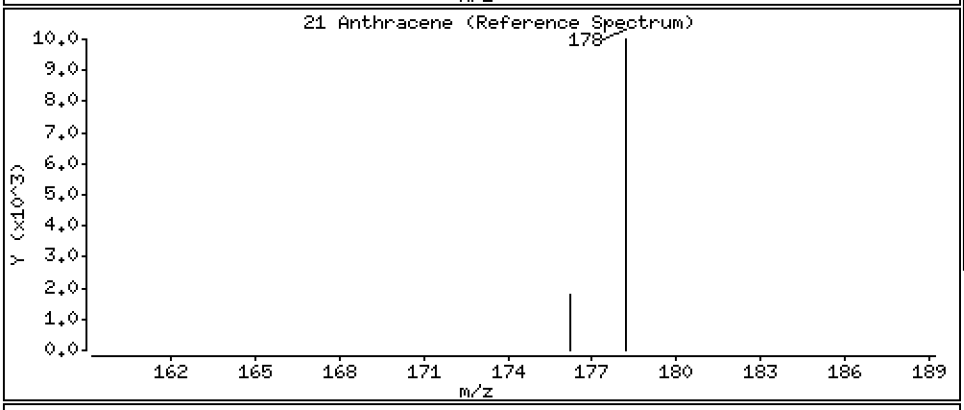
Concentration: 164 ng/mL

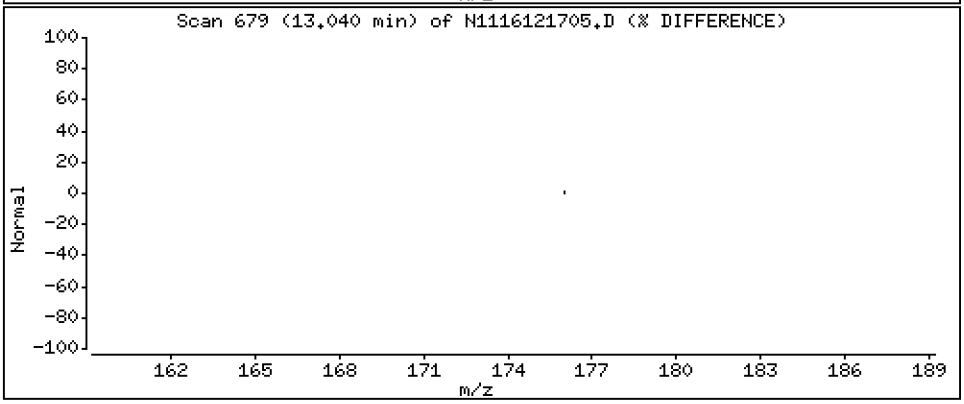












Date : 17-DEC-2016 14:13

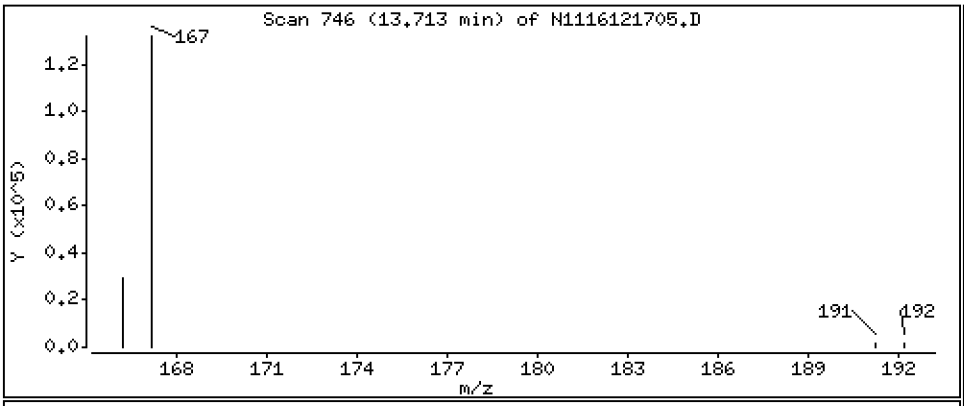
Client ID: Instrument: nt11.i

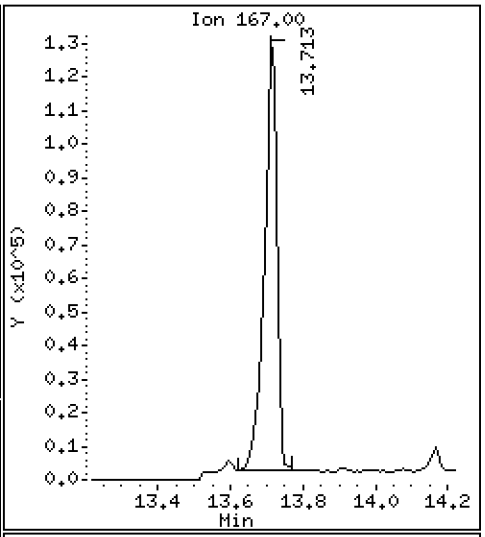
Sample Info: BEK0658-BS1

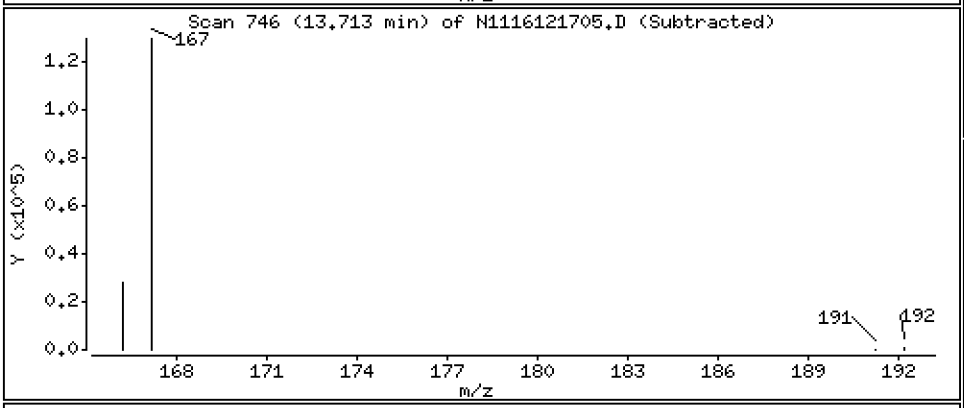
Operator: VTS

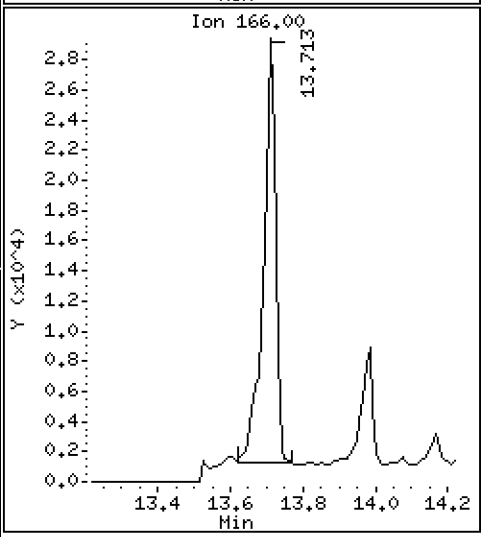
Column phase: Rxi-17Sil MS Column diameter: 0.25

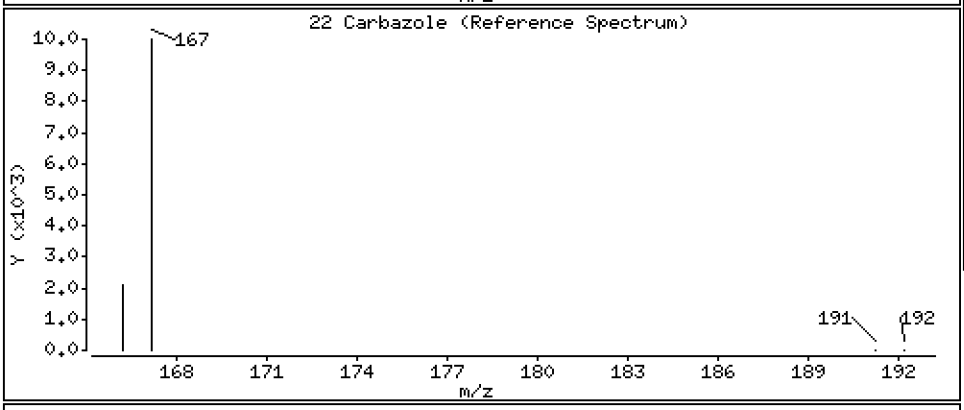
22 Carbazole Concentration: 93.4 ng/mL

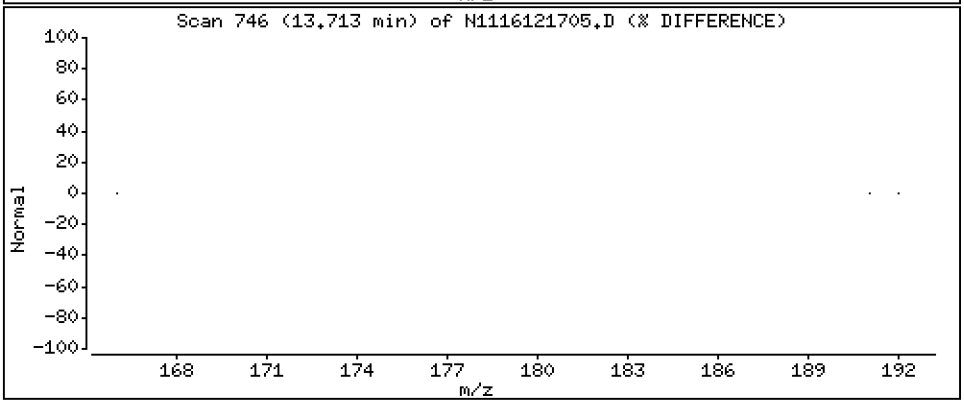












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

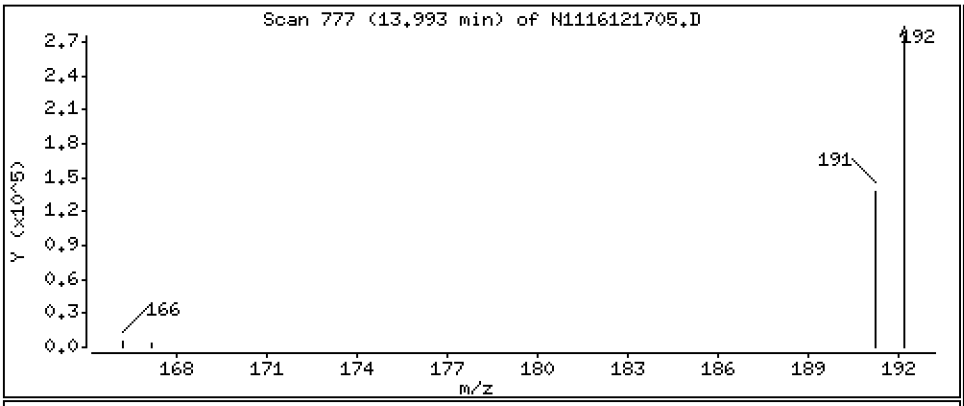
Operator: VTS

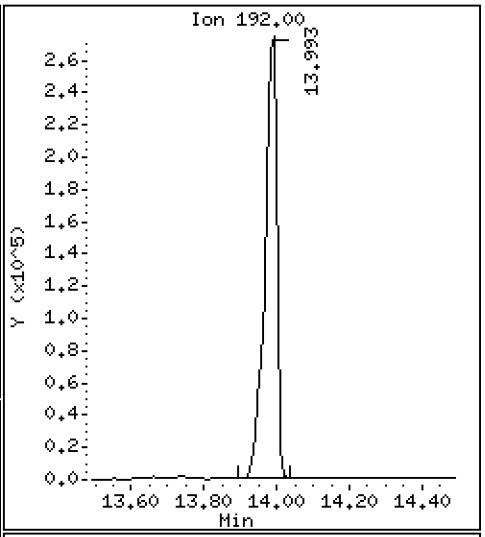
Column phase: Rxi-17Sil MS

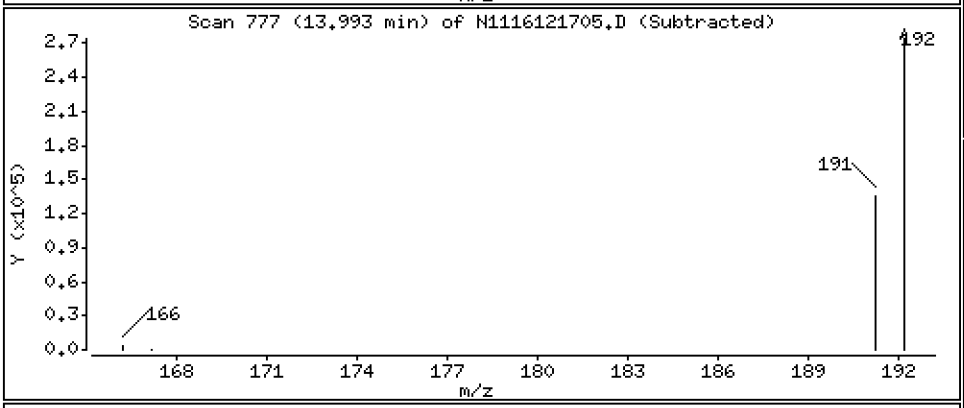
Column diameter: 0.25

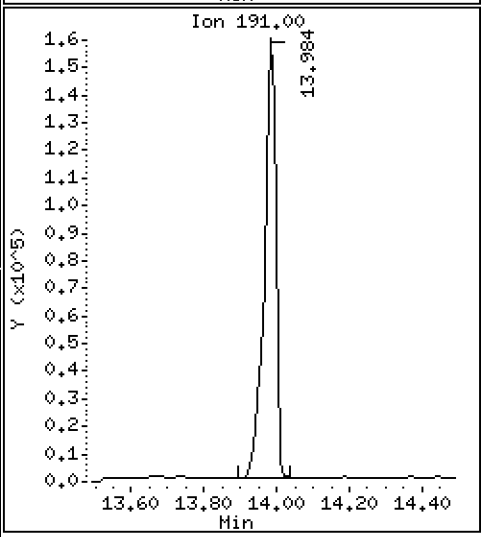
23 1-Methylphenanthrene

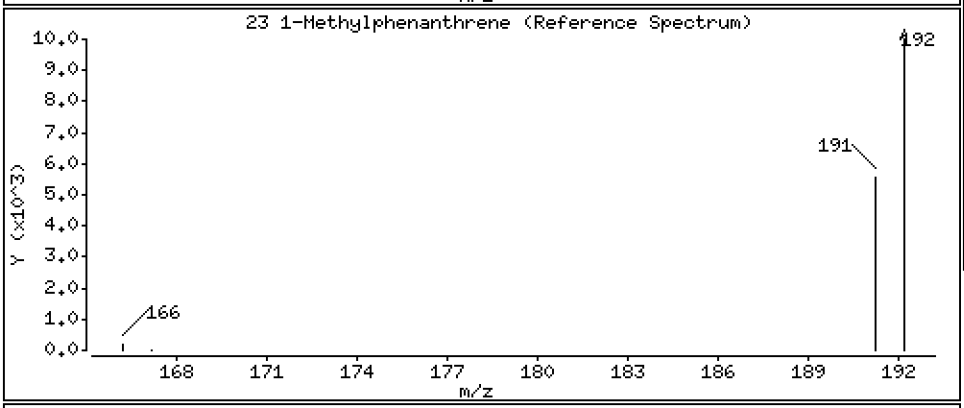
Concentration: 189 ng/mL

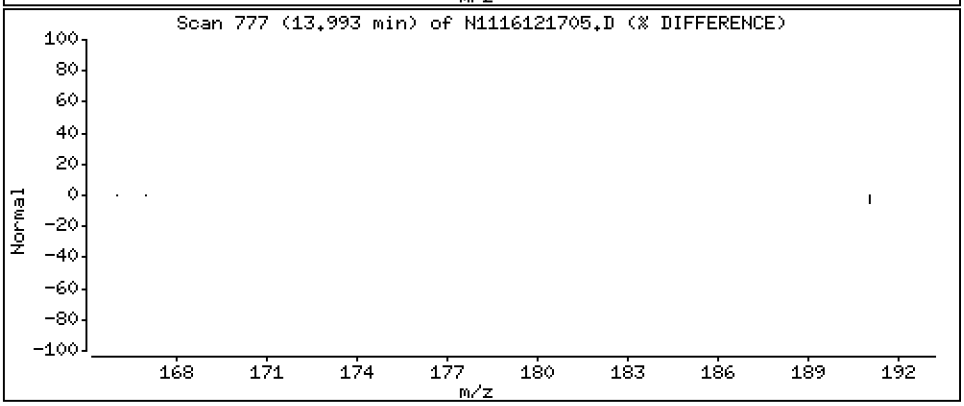












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

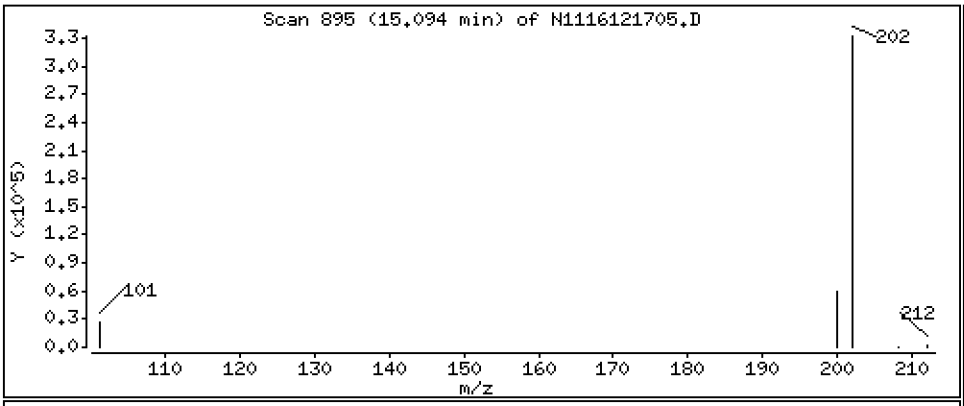
Operator: VTS

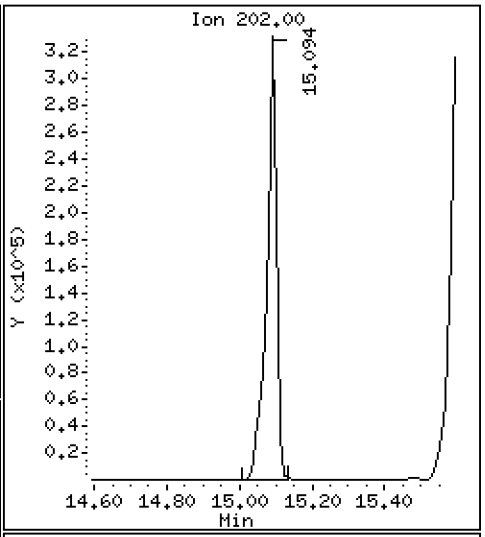
Column phase: Rxi-17Sil MS

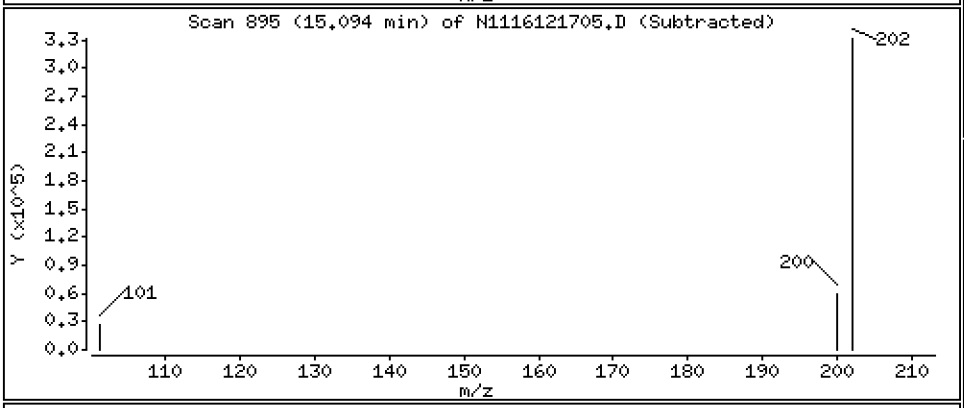
Column diameter: 0.25

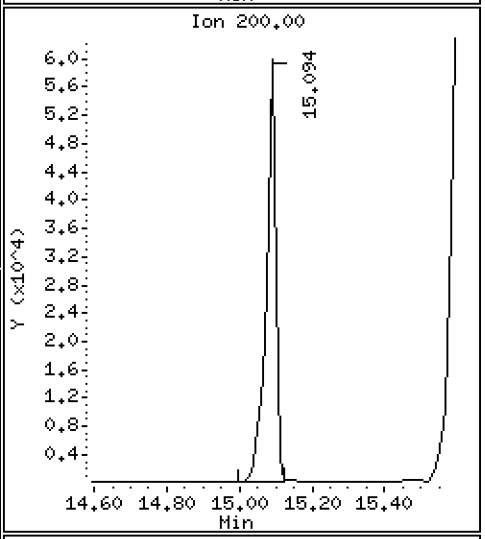
25 Fluoranthene

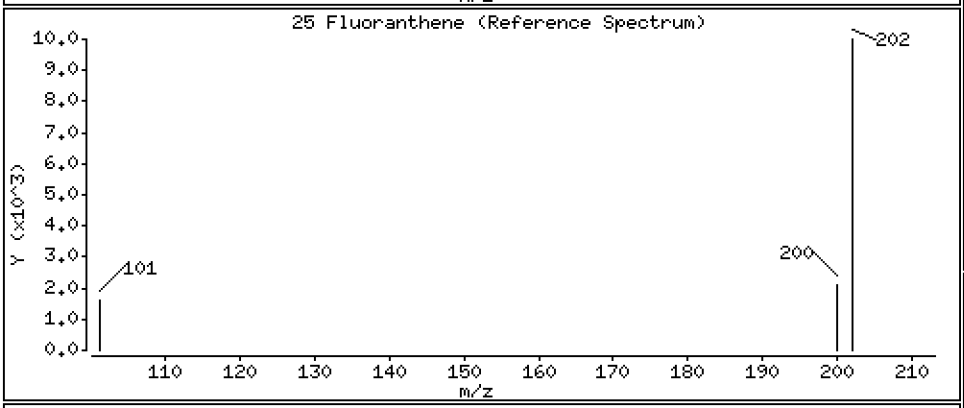
Concentration: 175 ng/mL

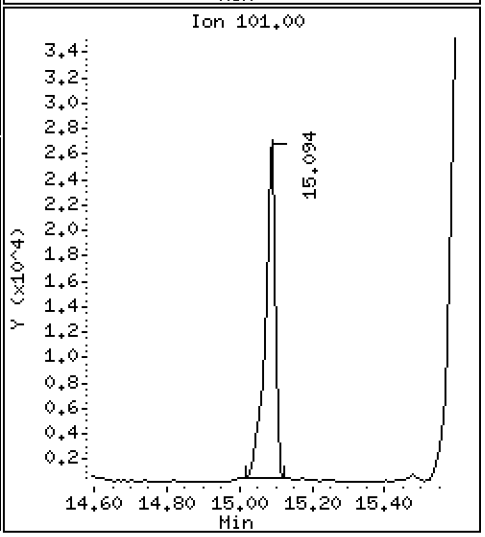


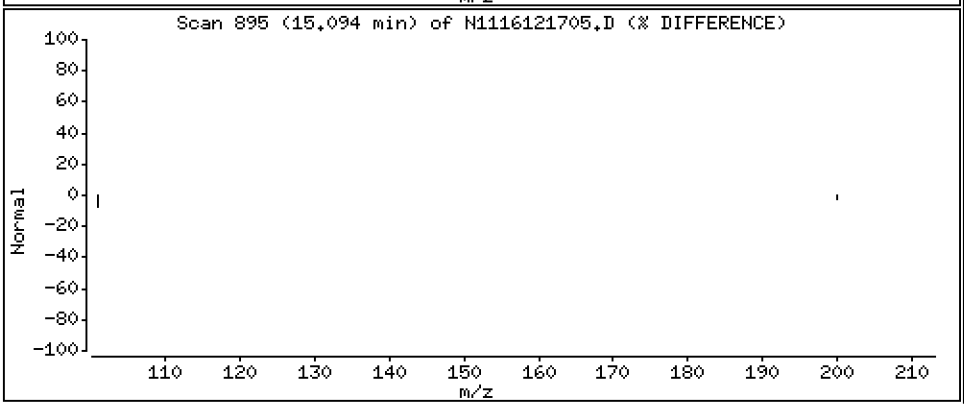












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

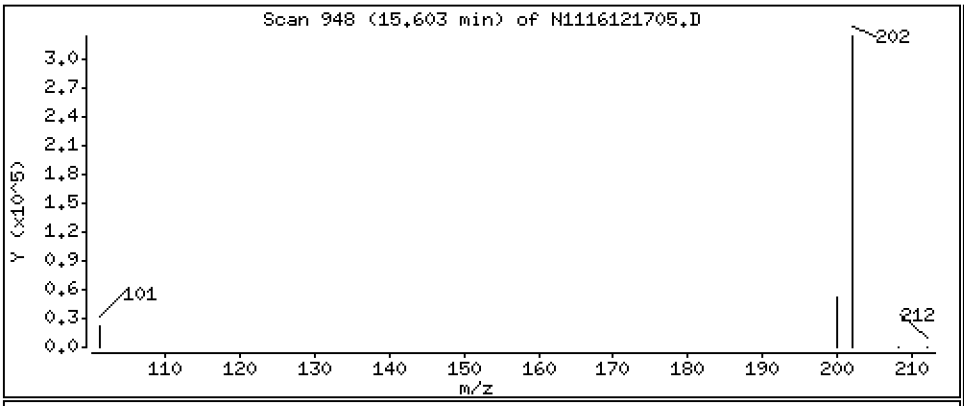
Operator: VTS

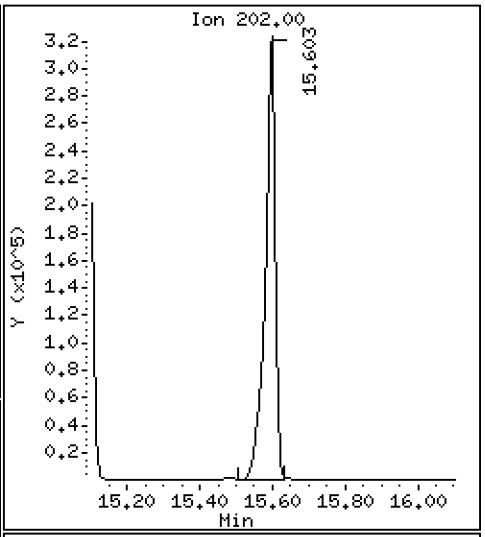
Column phase: Rxi-17Sil MS

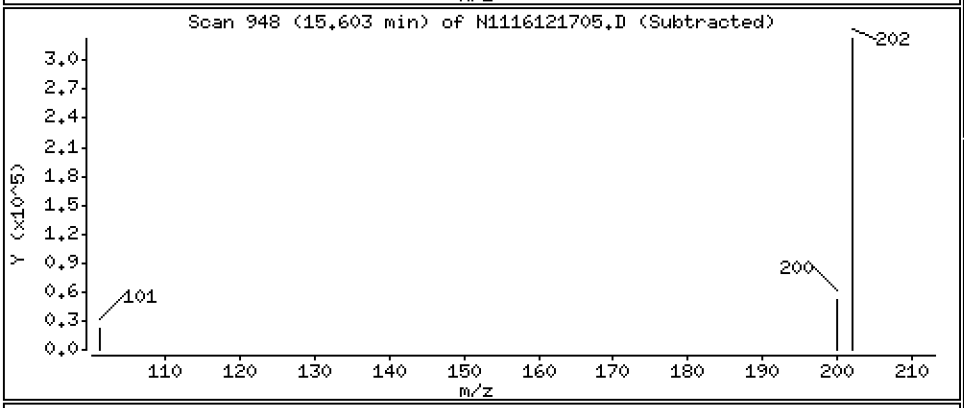
Column diameter: 0.25

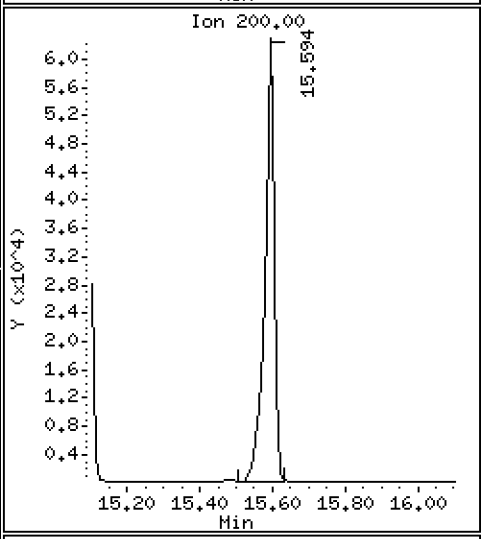
26 Pyrene

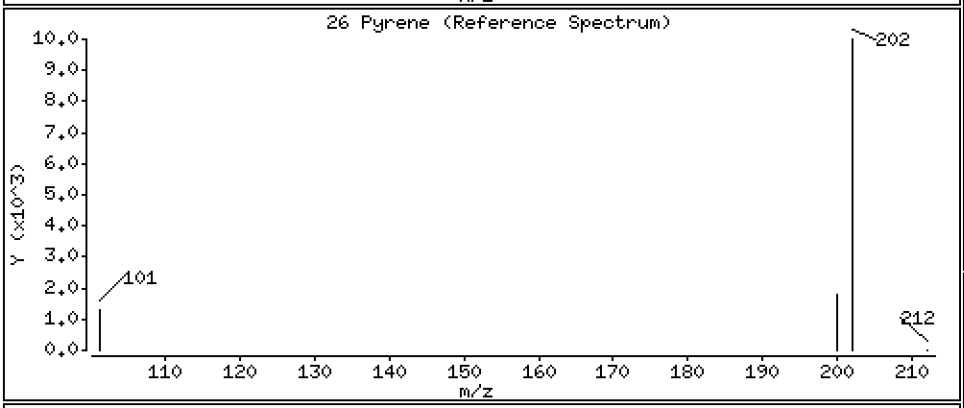
Concentration: 205 ng/mL

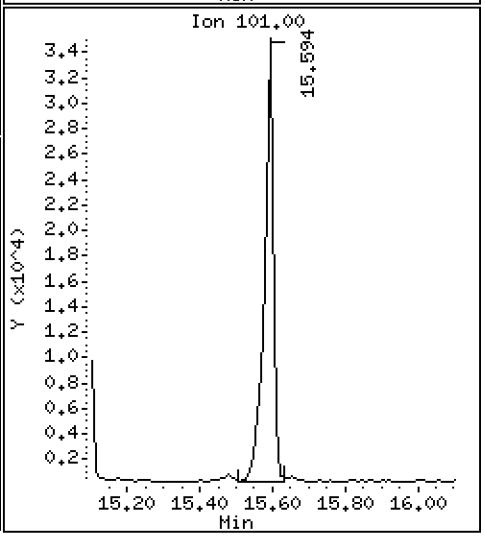


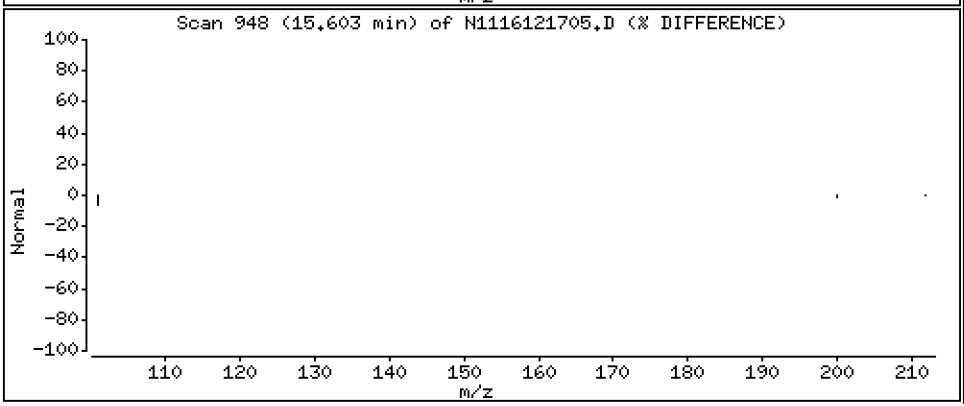












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

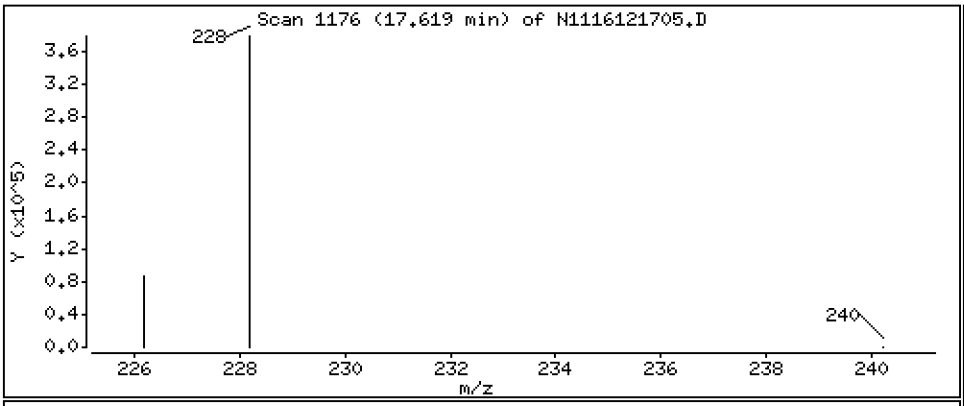
Operator: VTS

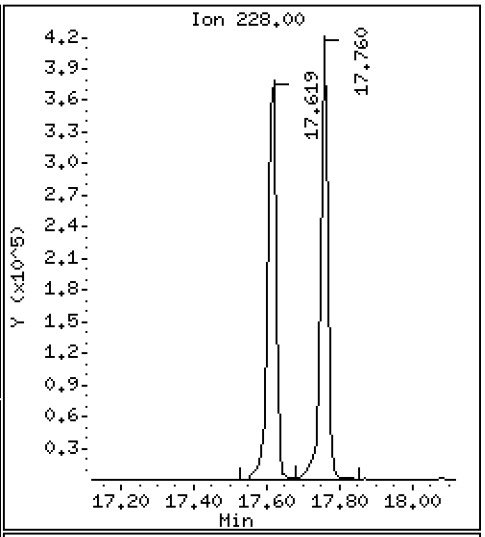
Column phase: Rxi-17Sil MS

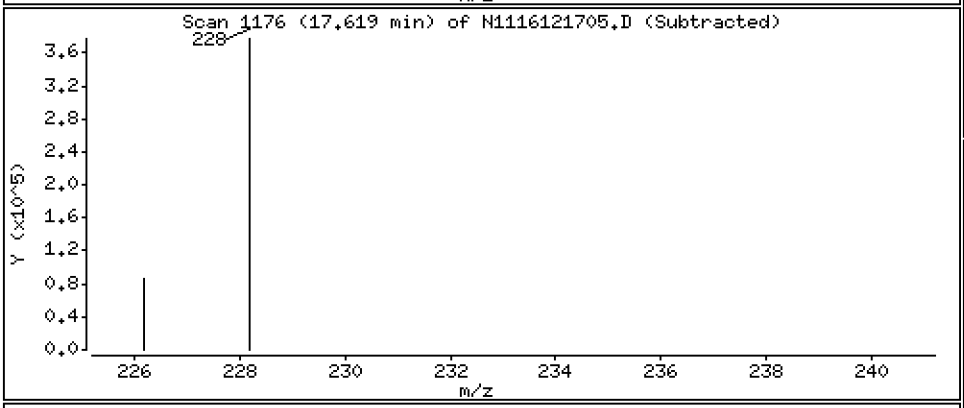
Column diameter: 0.25

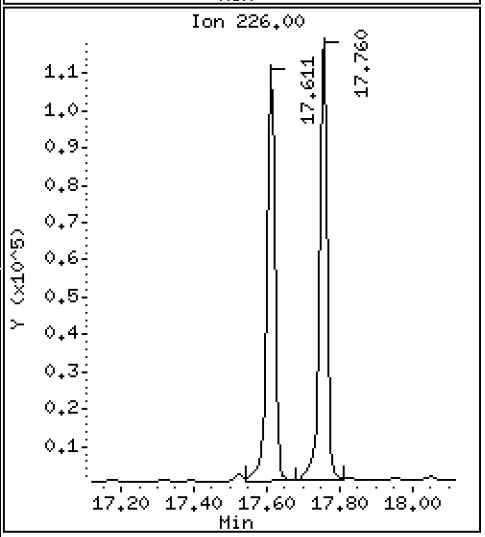
27 Benzo(a)anthracene

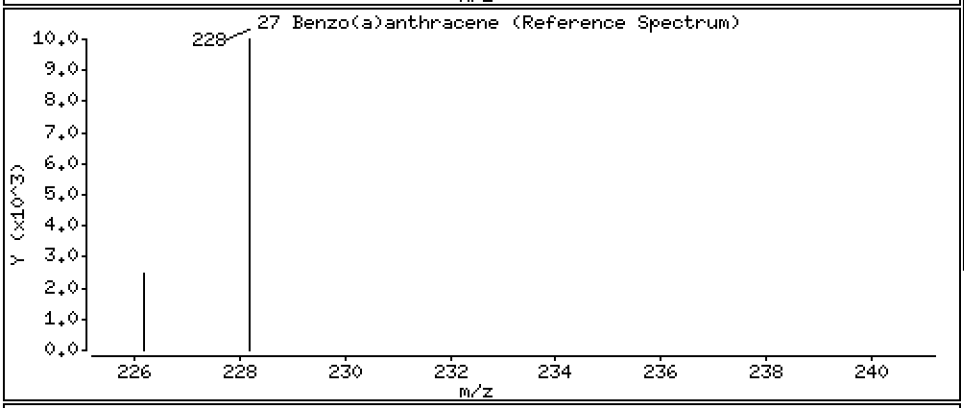
Concentration: 184 ng/mL

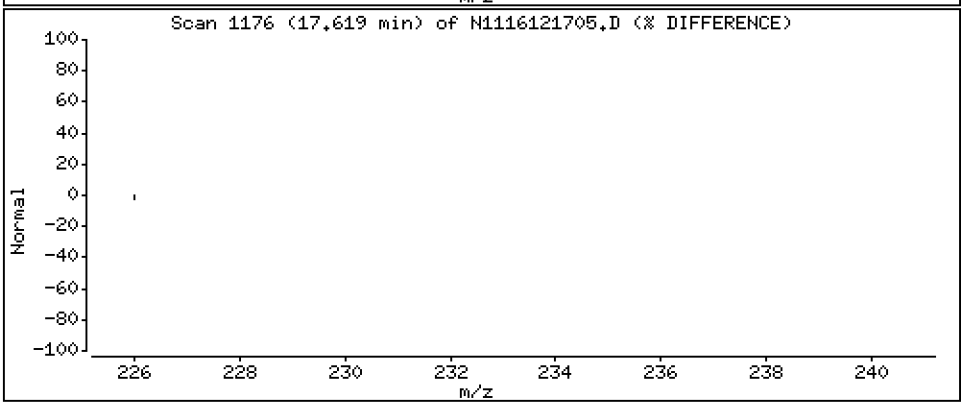












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

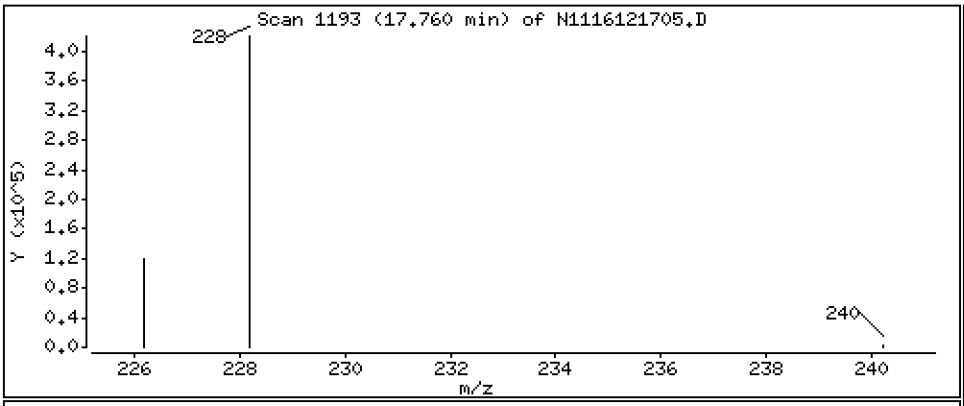
Operator: VTS

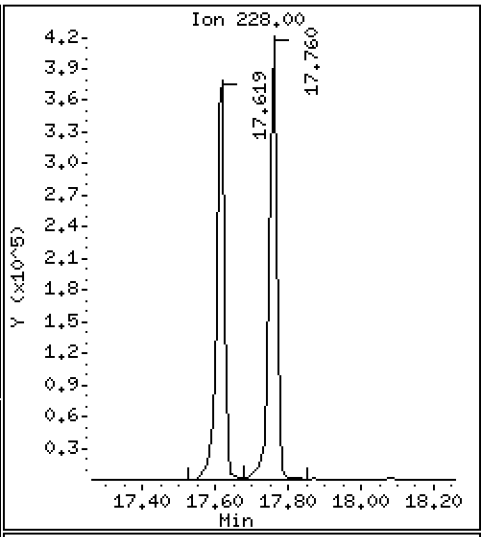
Column phase: Rxi-17Sil MS

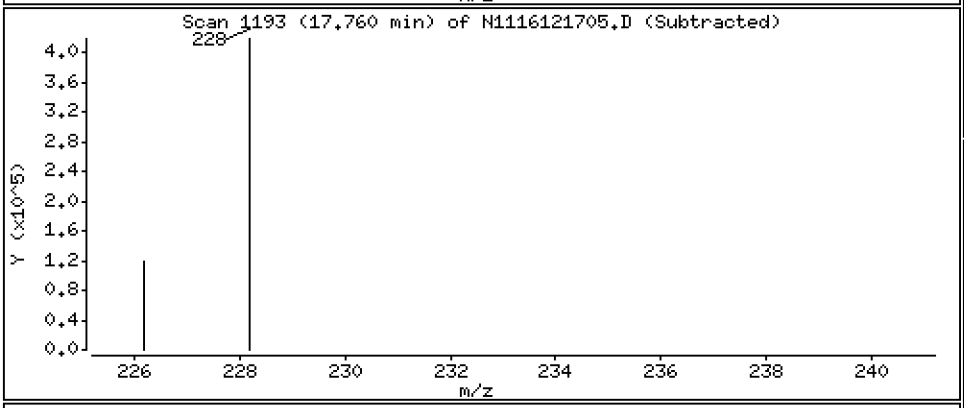
Column diameter: 0.25

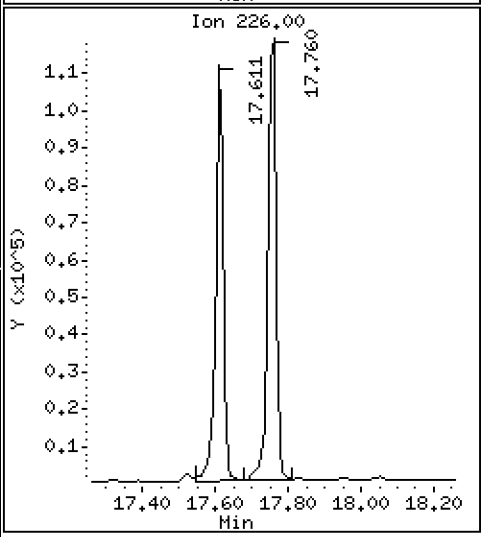
29 Chrysene

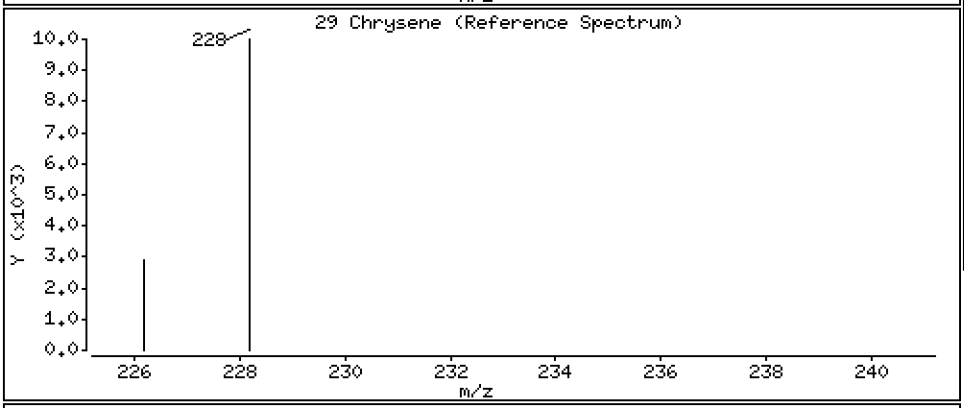
Concentration: 183 ng/mL

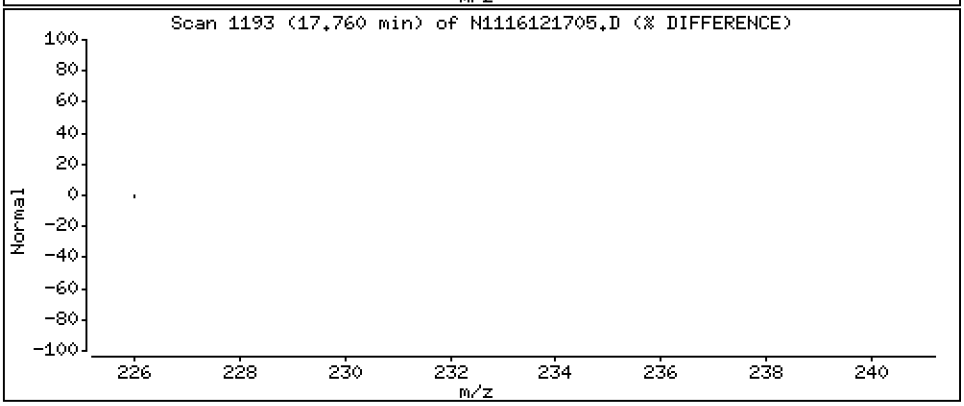












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

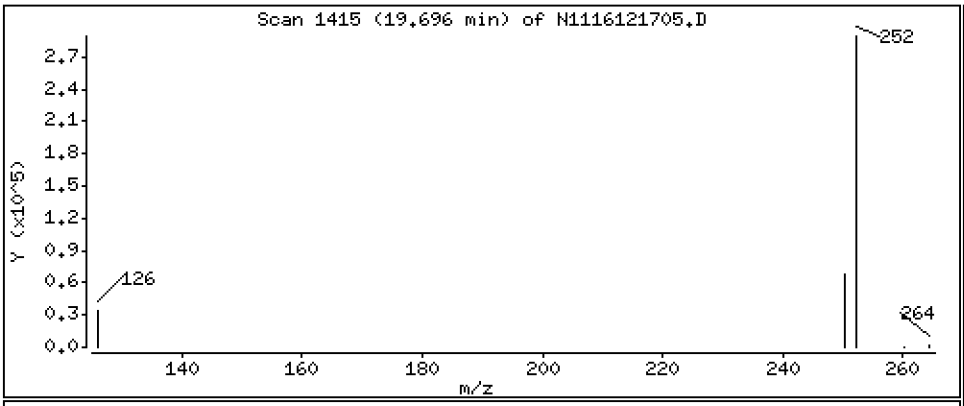
Operator: VTS

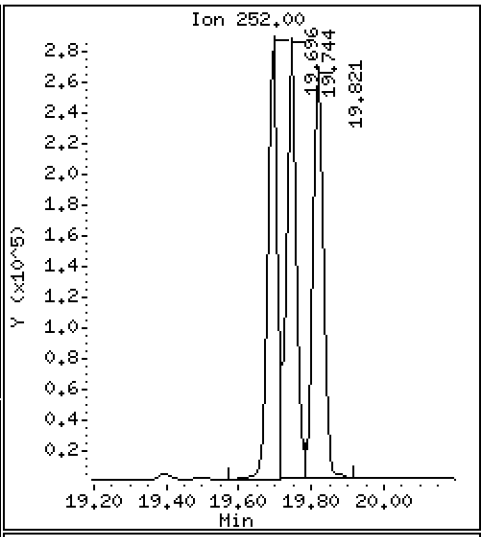
Column phase: Rxi-17Sil MS

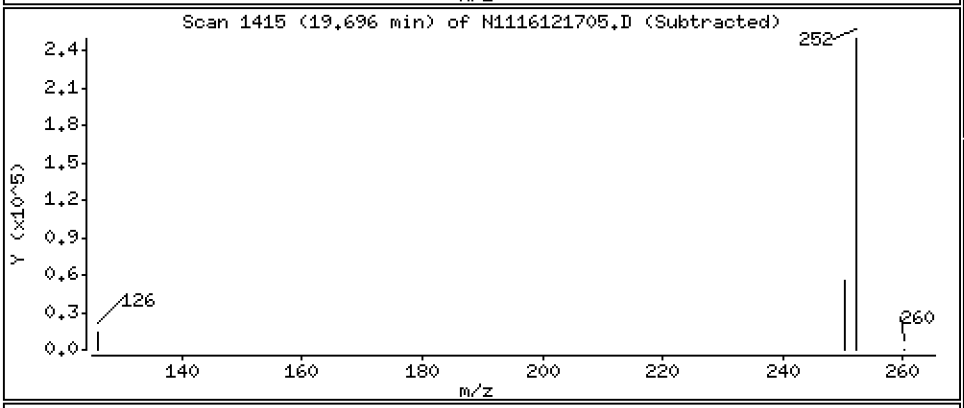
Column diameter: 0.25

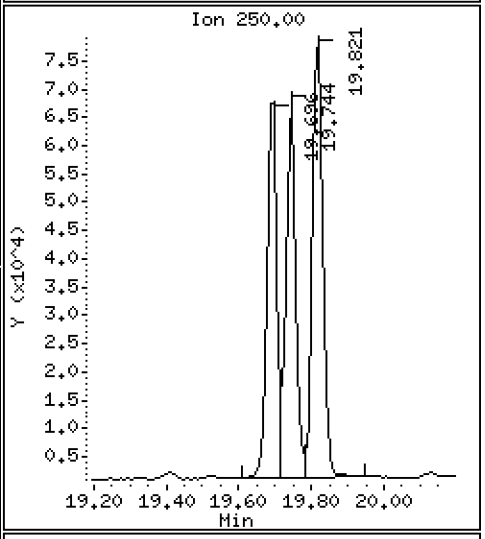
30 Benzo(b)fluoranthene

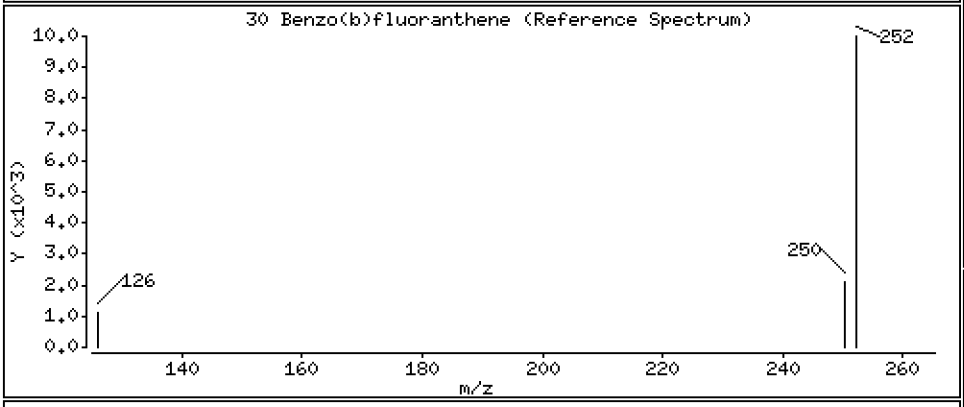
Concentration: 174 ng/mL

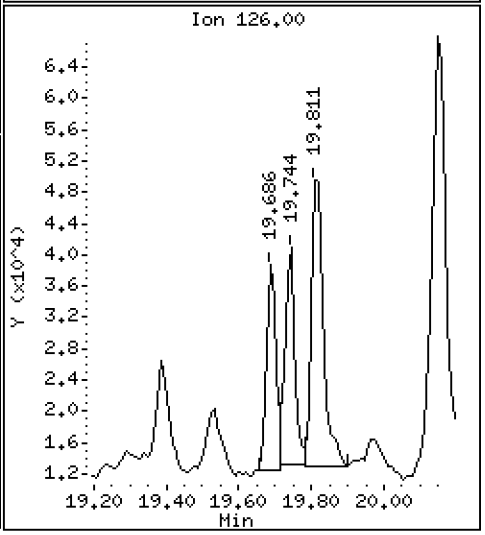


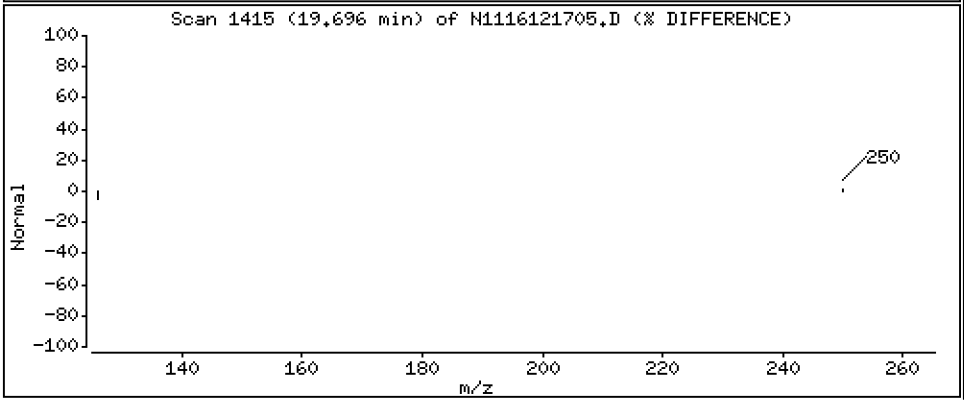












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

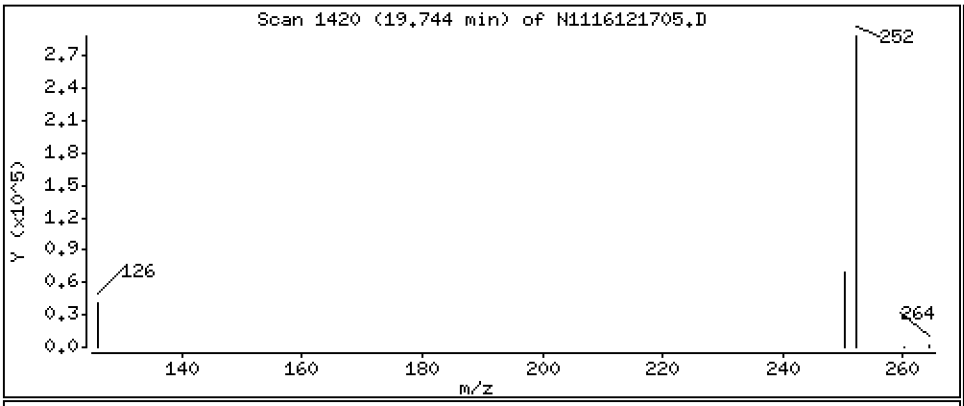
Operator: VTS

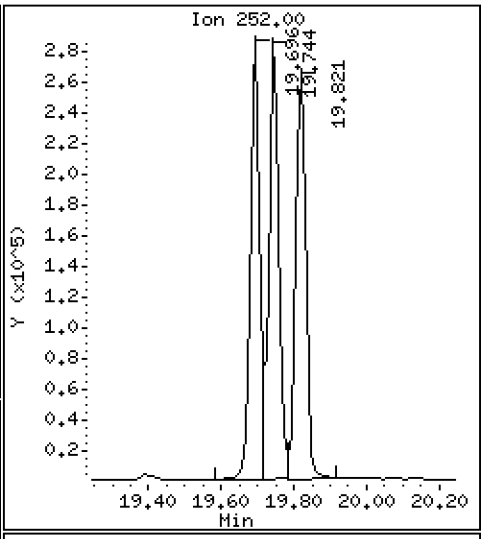
Column phase: Rxi-17Sil MS

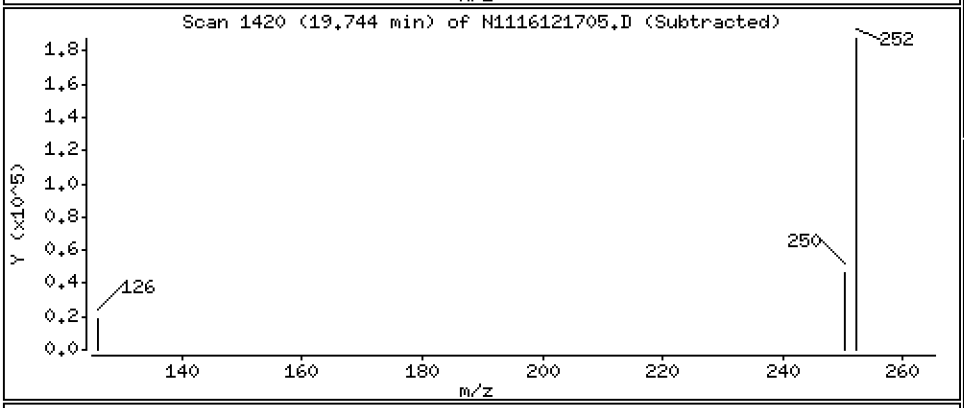
Column diameter: 0.25

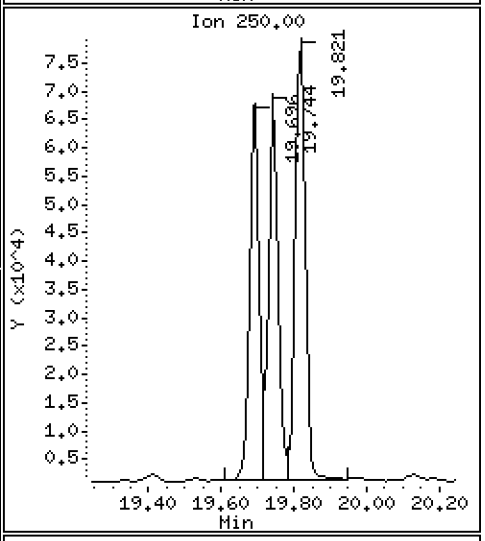
31 Benzo(k)fluoranthene

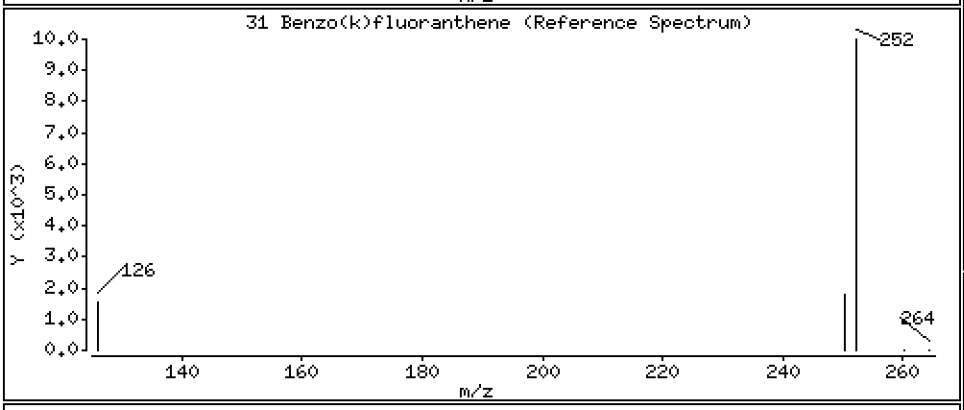
Concentration: 180 ng/mL

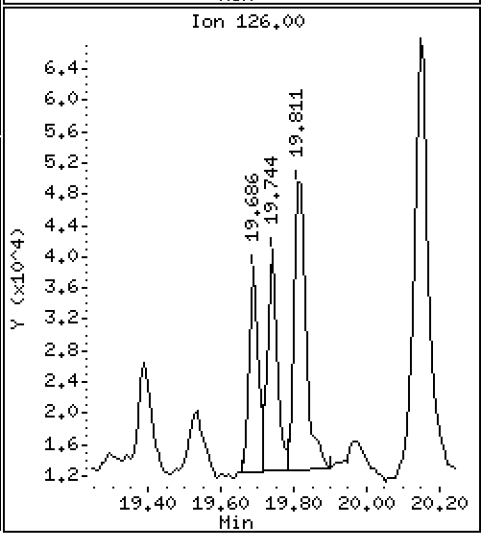


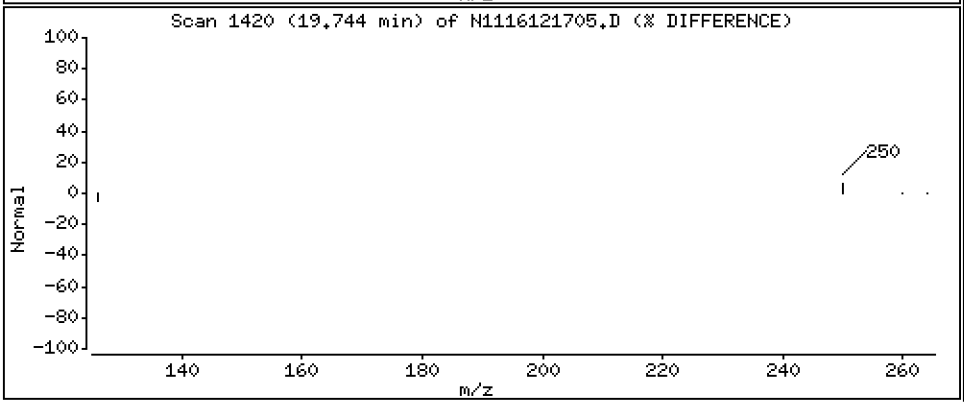












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

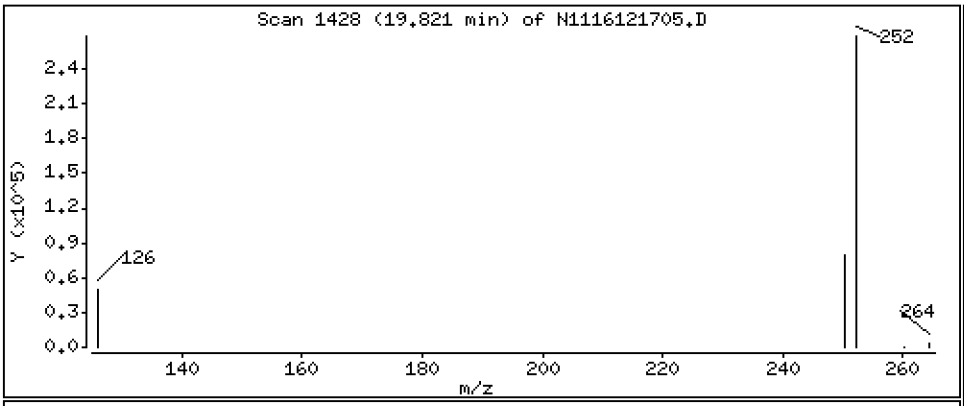
Operator: VTS

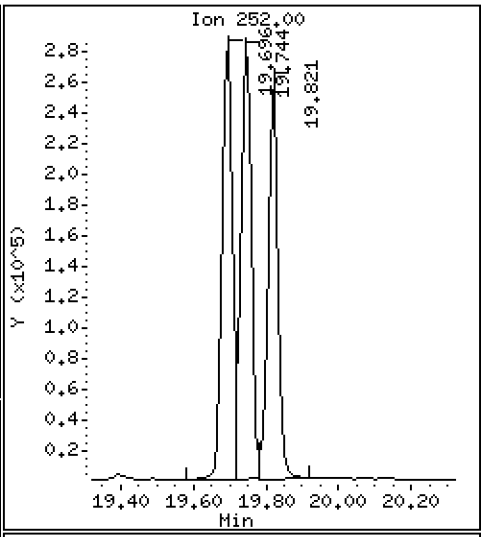
Column phase: Rxi-17Sil MS

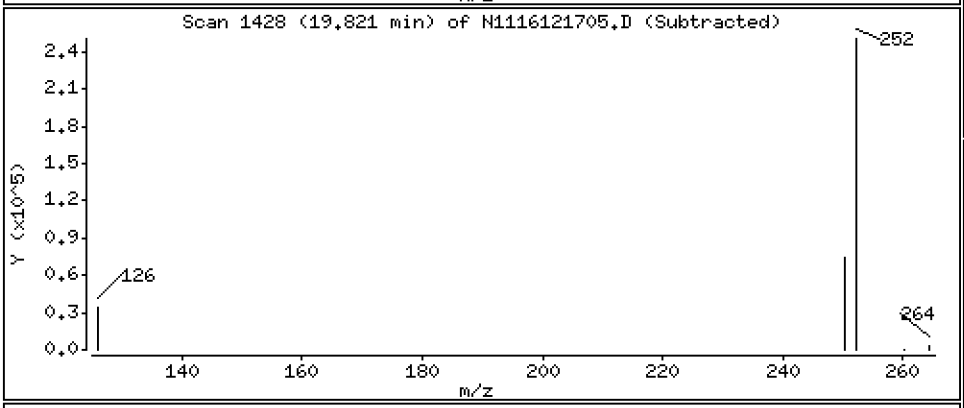
Column diameter: 0.25

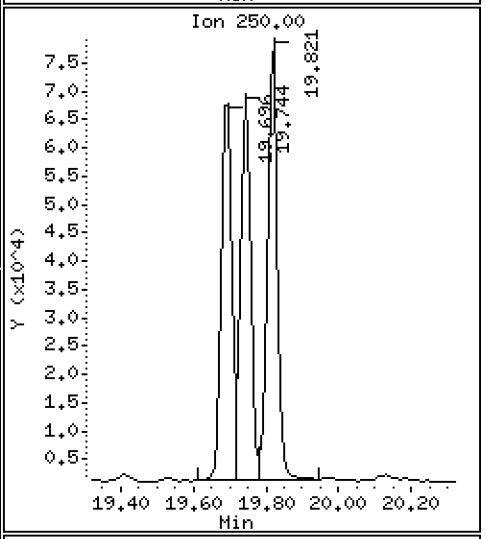
32 Benzo(j)fluoranthene

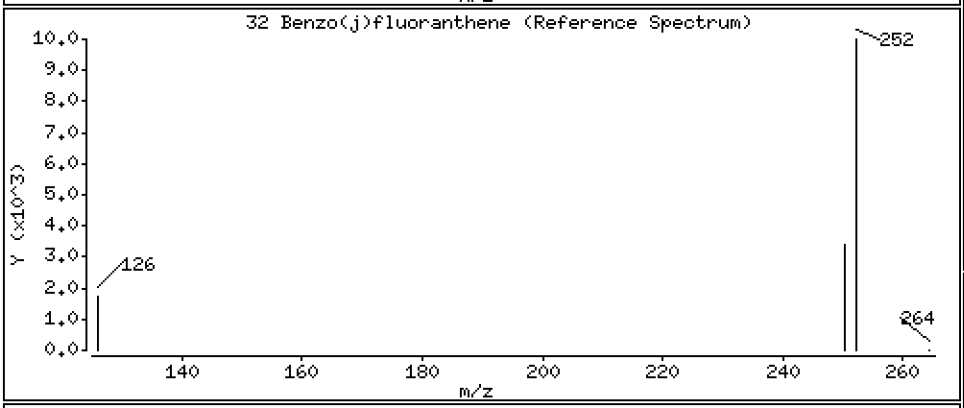
Concentration: 174 ng/mL

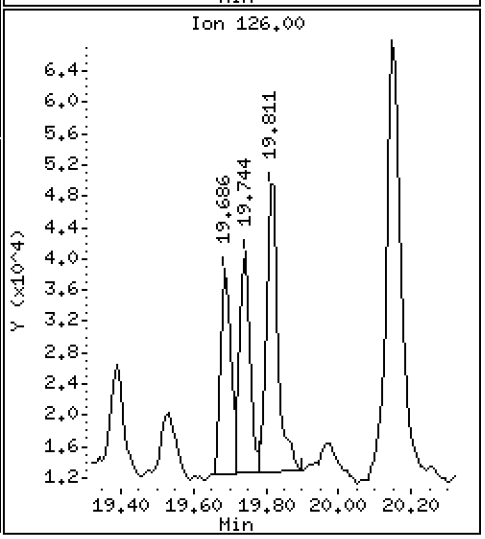


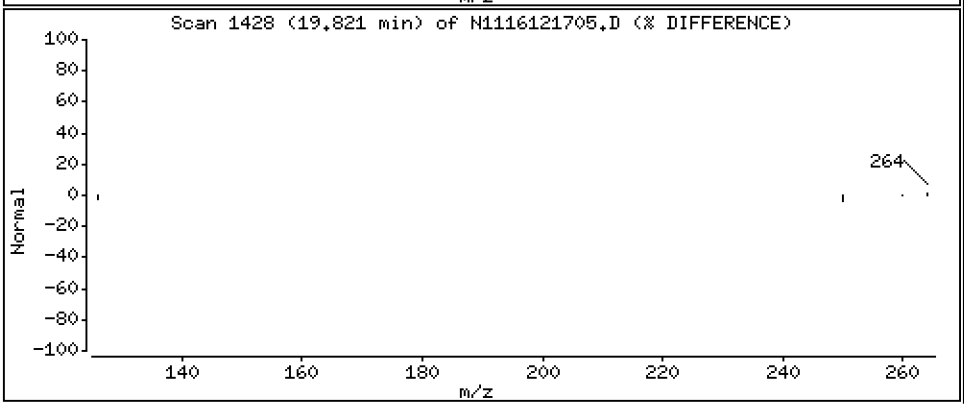












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

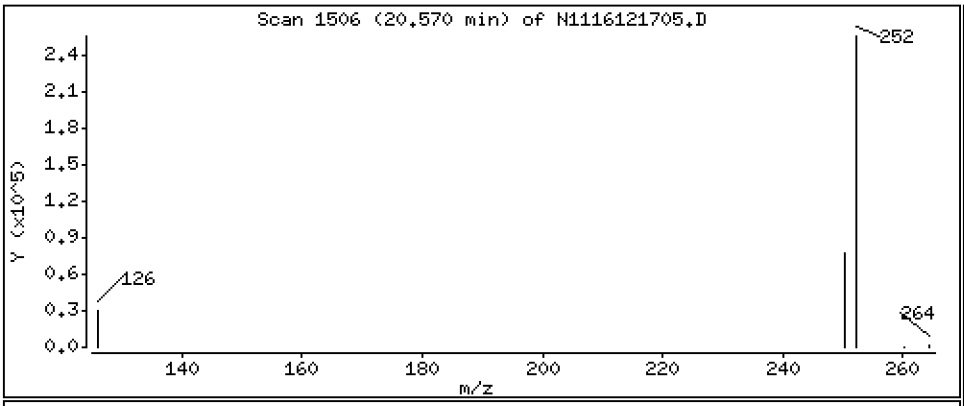
Operator: VTS

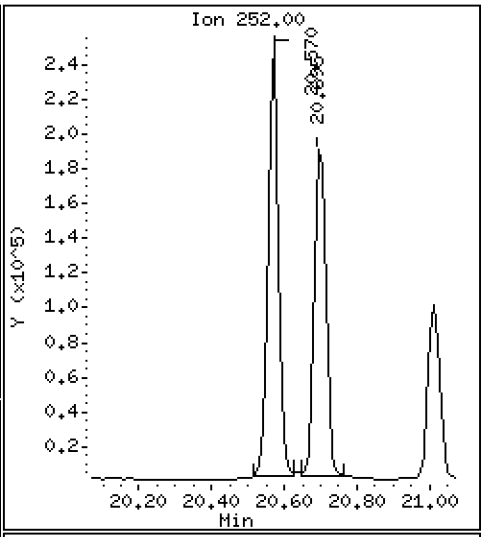
Column phase: Rxi-17Sil MS

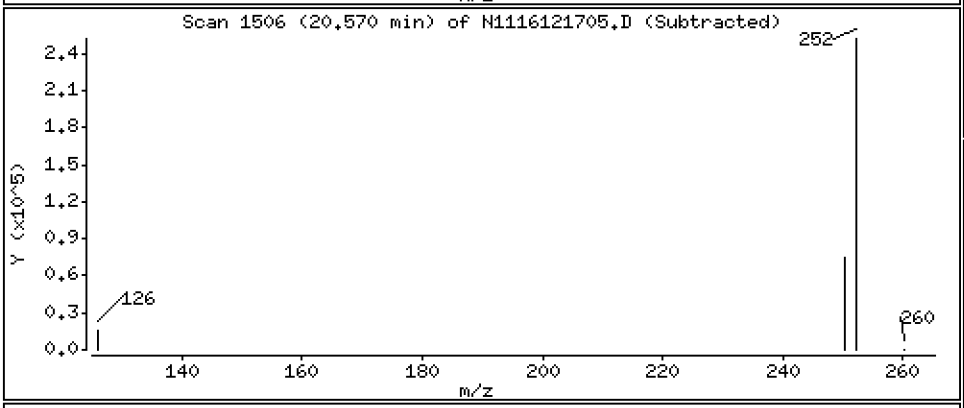
Column diameter: 0.25

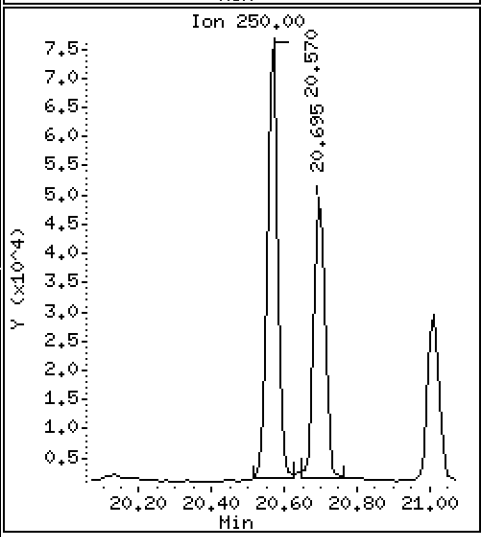
34 Benzo(e)pyrene

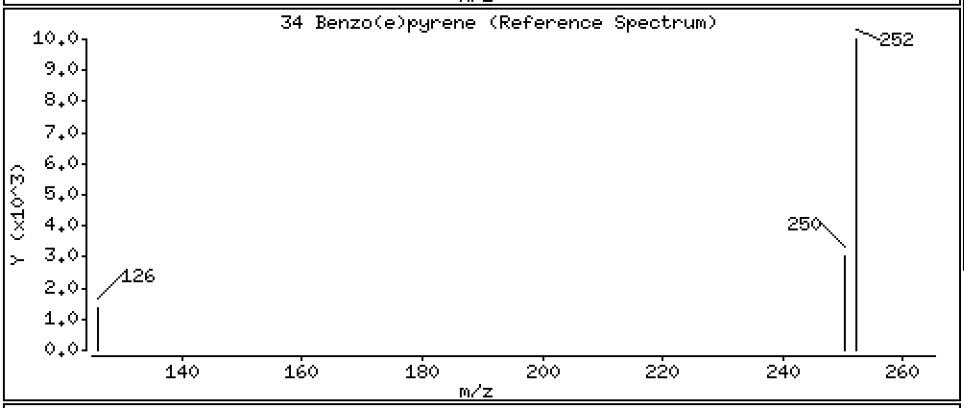
Concentration: 169 ng/mL

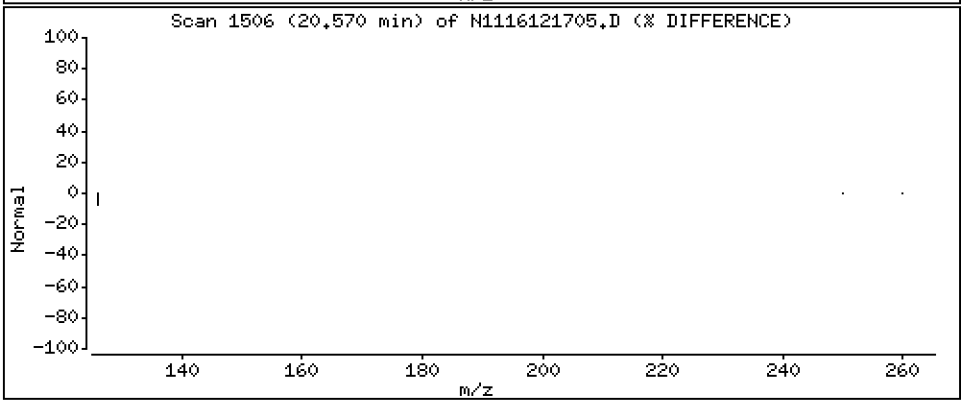












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

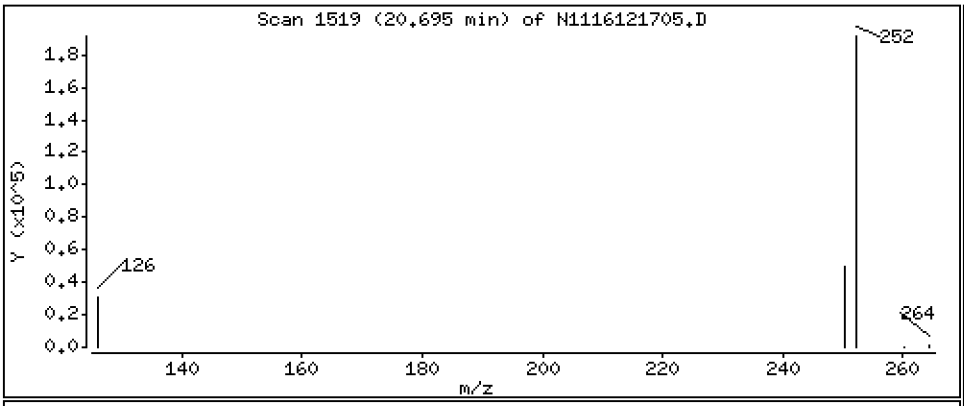
Operator: VTS

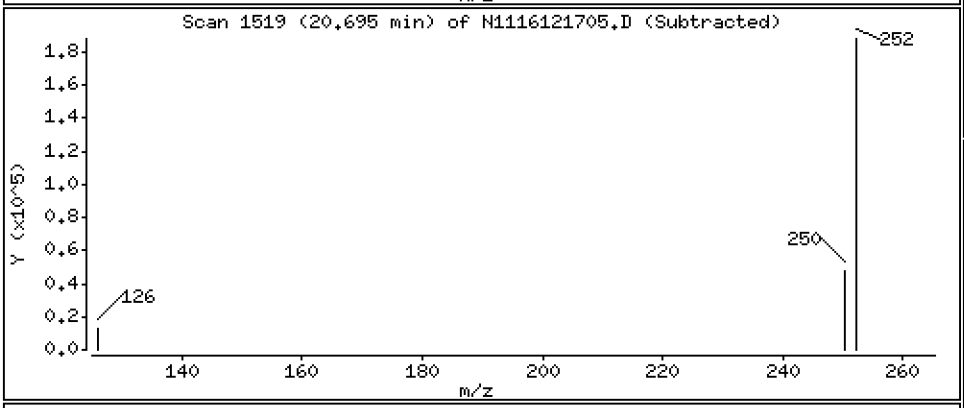
Column phase: Rxi-17Sil MS

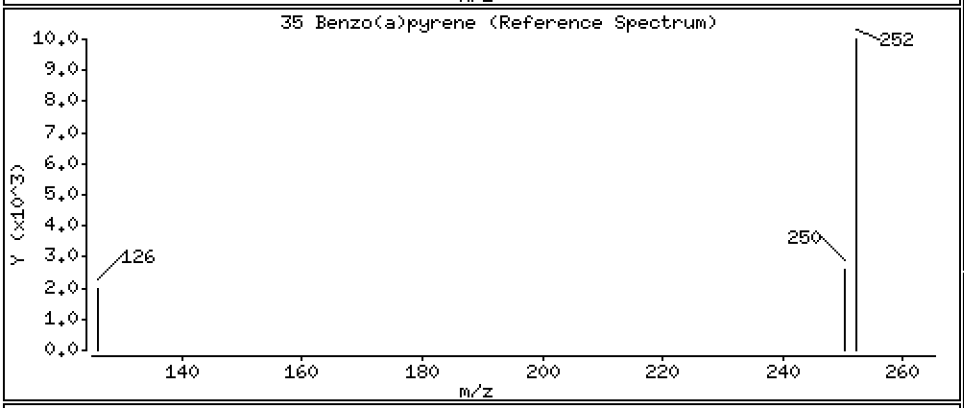
Column diameter: 0.25

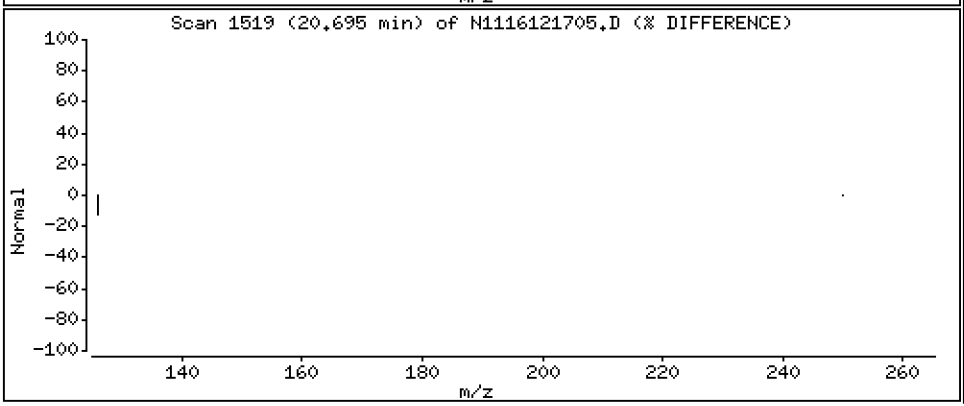
35 Benzo(a)pyrene

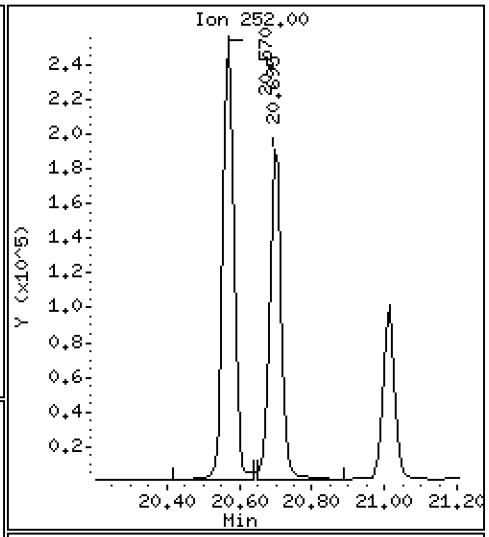
Concentration: 156 ng/mL

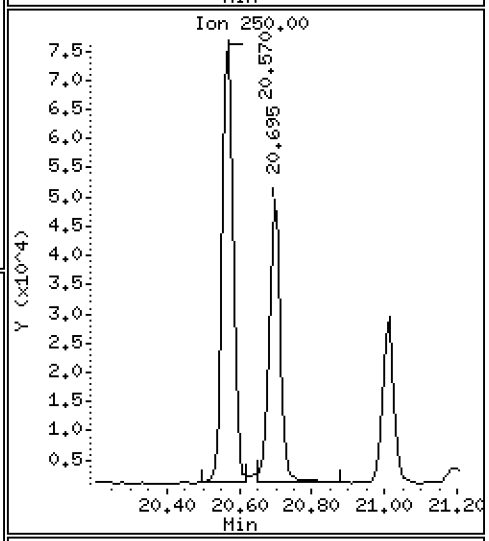


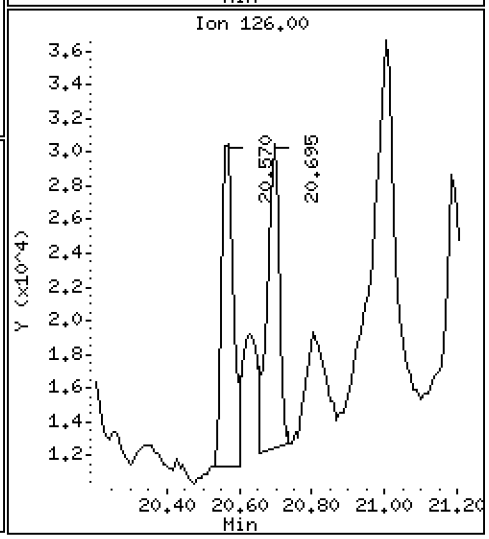












Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

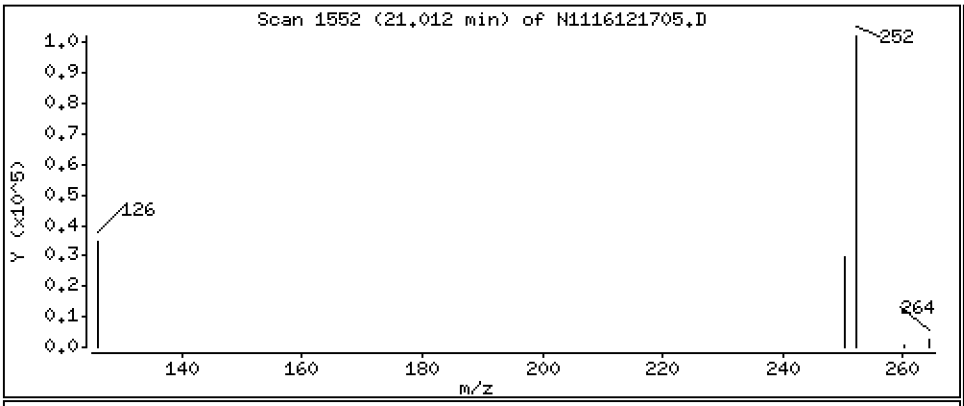
Operator: VTS

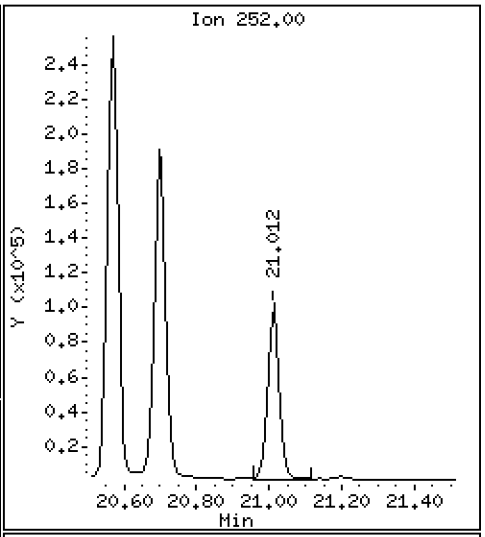
Column phase: Rxi-17Sil MS

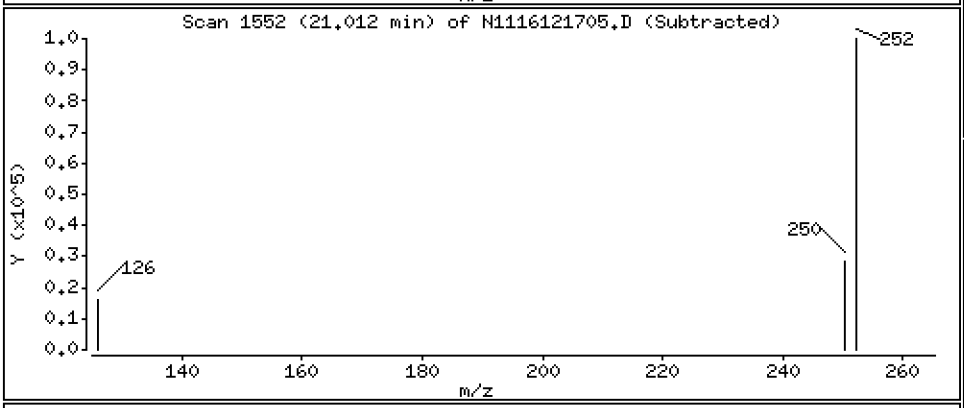
Column diameter: 0.25

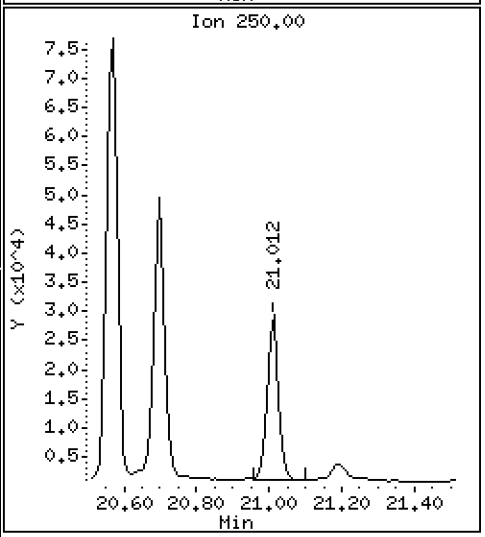
37 Perylene

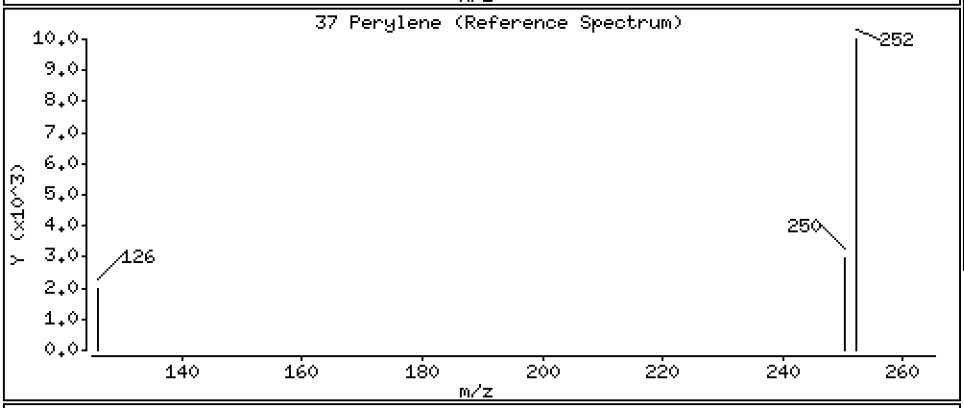
Concentration: 76.8 ng/mL

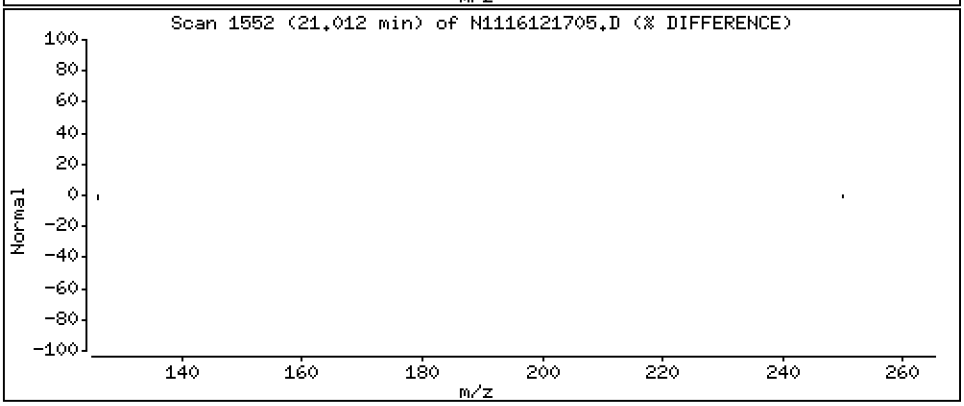












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

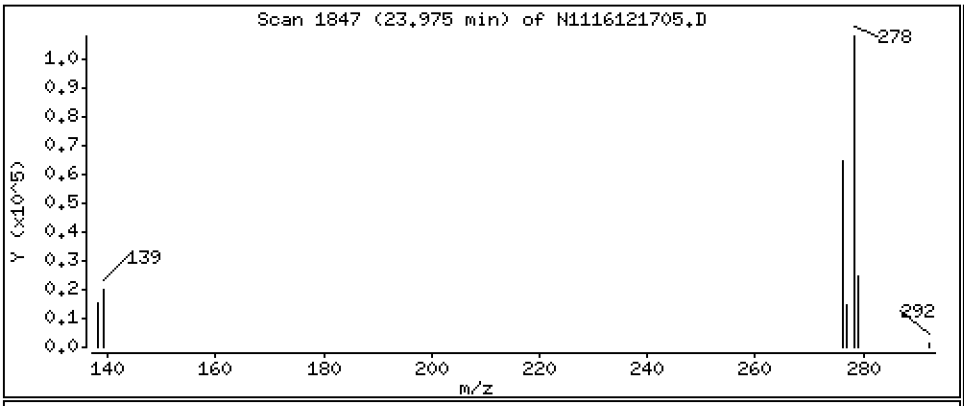
Operator: VTS

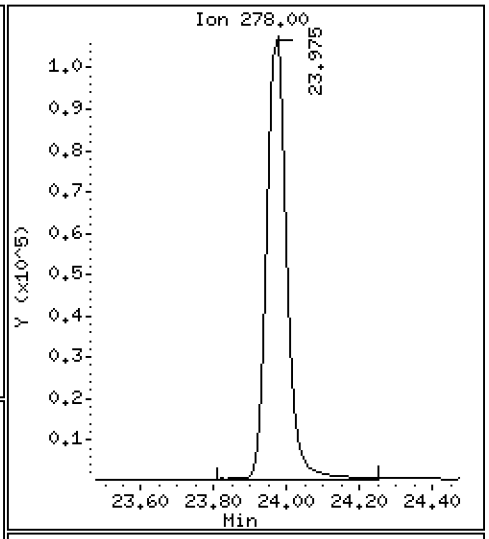
Column phase: Rxi-17Sil MS

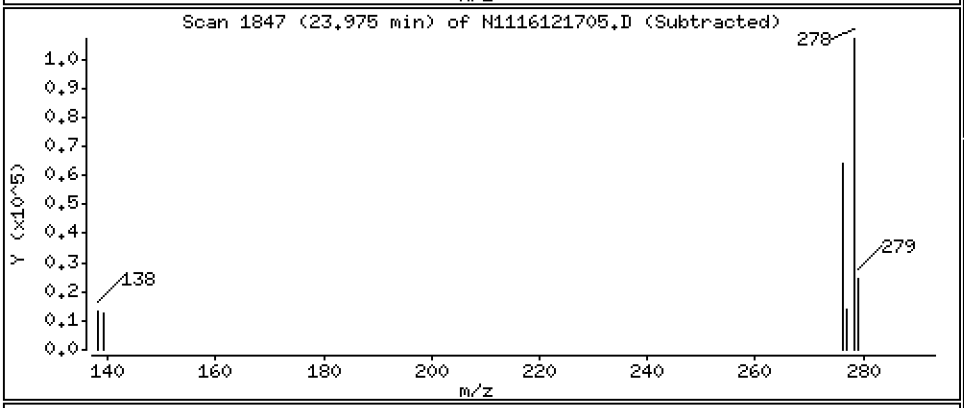
Column diameter: 0.25

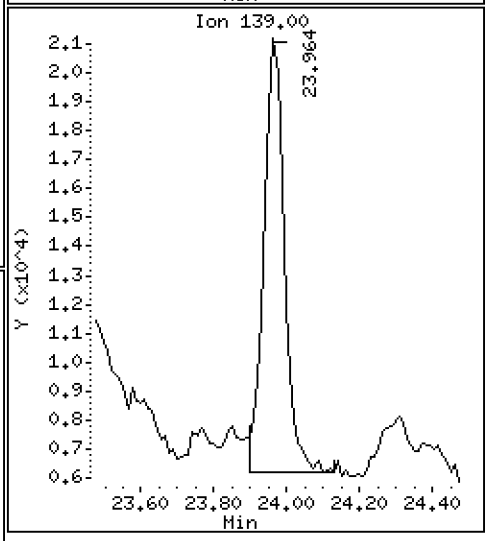
39 Dibenzo(a,h)anthracene

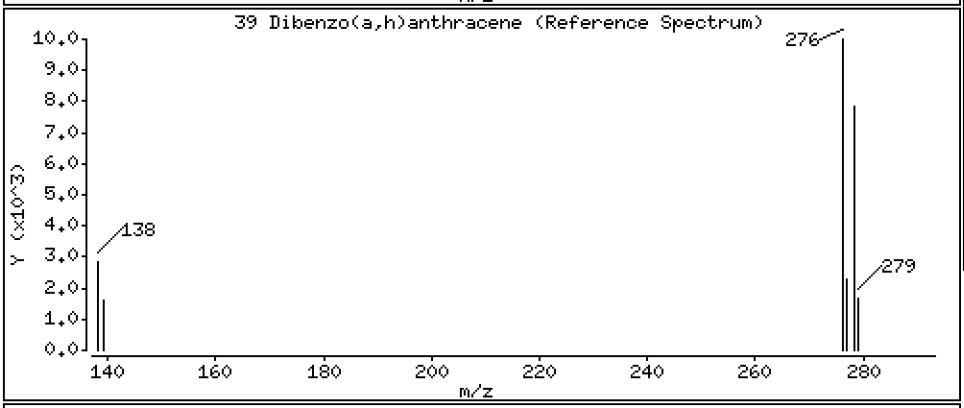
Concentration: 190 ng/mL

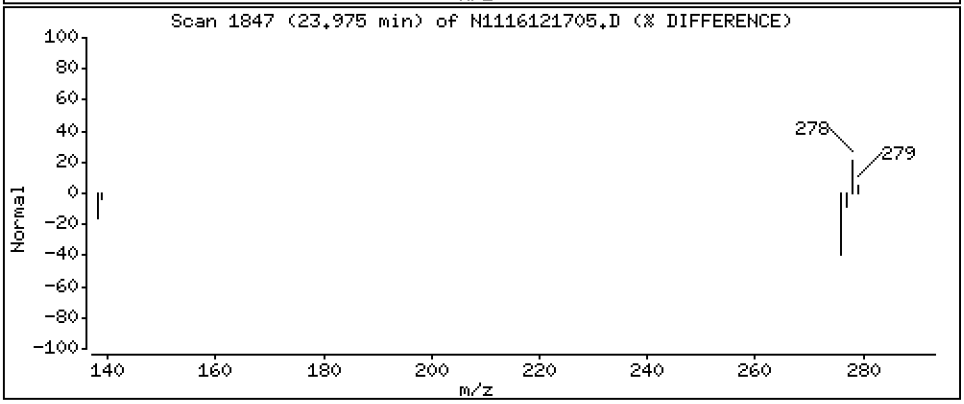












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

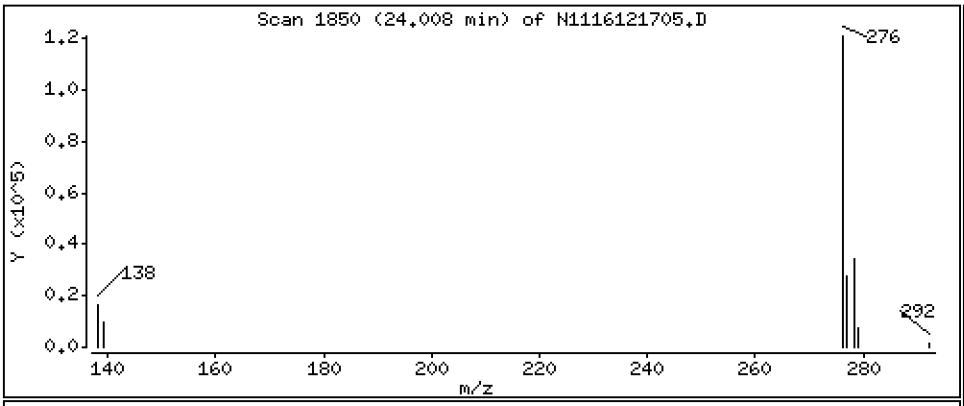
Operator: VTS

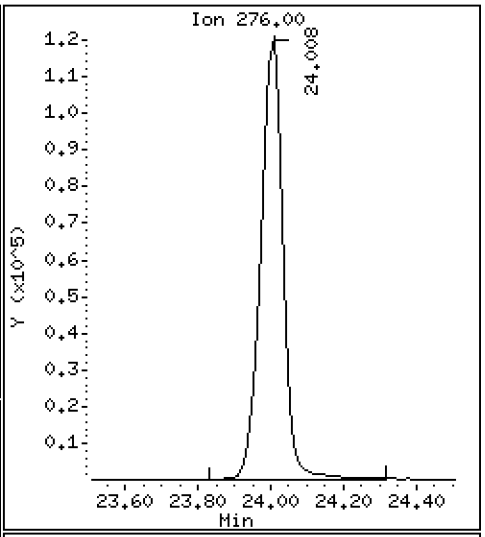
Column phase: Rxi-17Sil MS

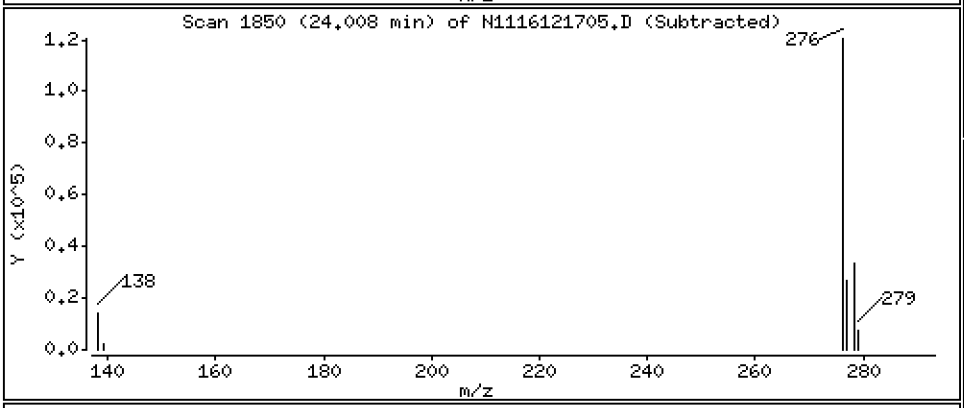
Column diameter: 0.25

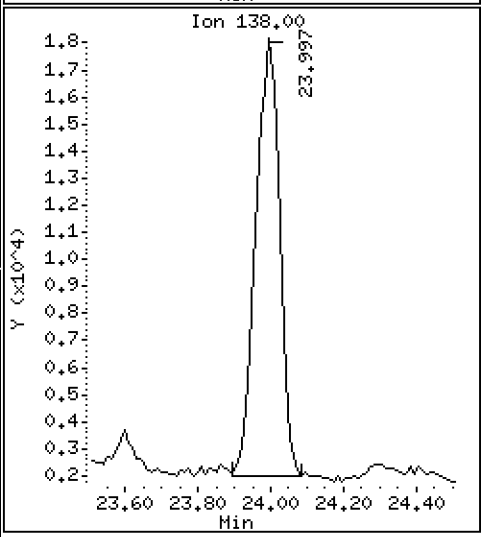
40 Indeno(1,2,3-cd)pyrene

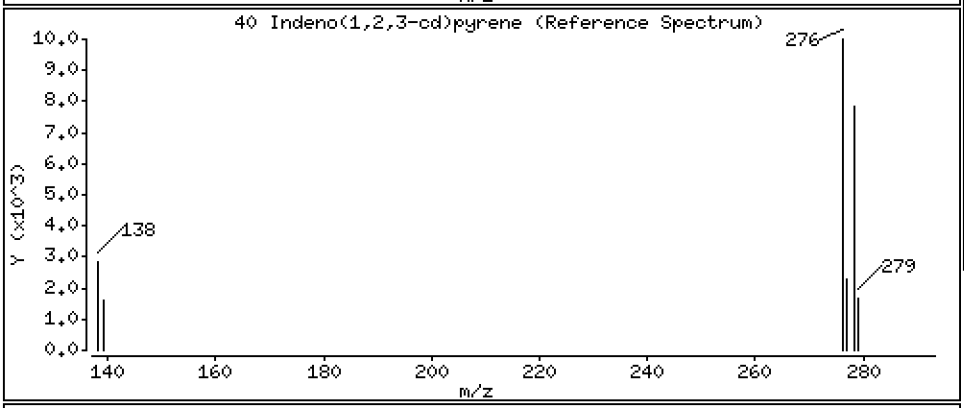
Concentration: 185 ng/mL

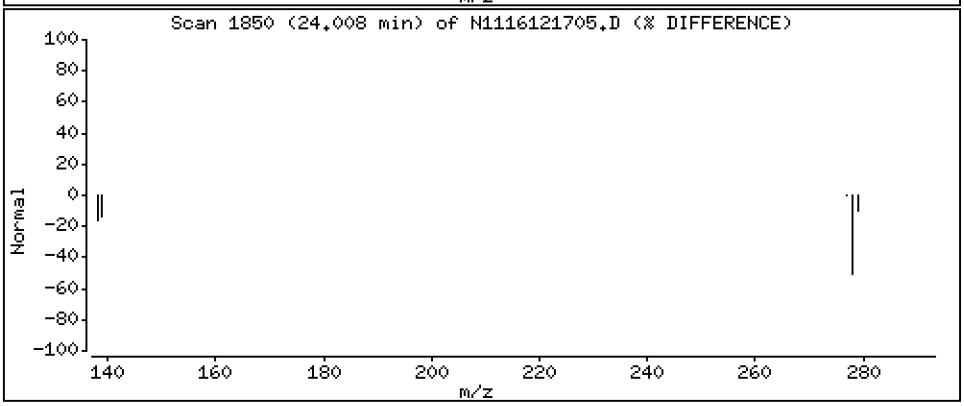












Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121705.D

Date : 17-DEC-2016 14:13

Client ID:

Instrument: nt11.i

Sample Info: BEK0658-BS1

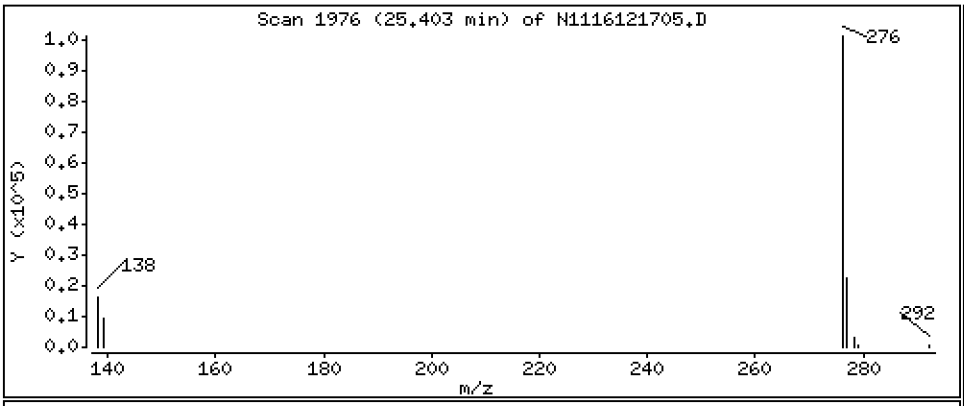
Operator: VTS

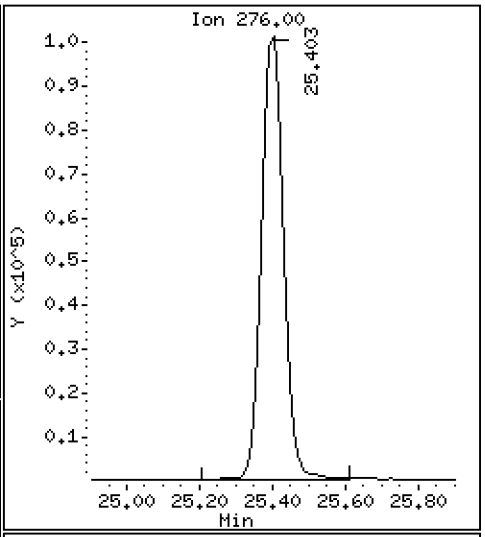
Column phase: Rxi-17Sil MS

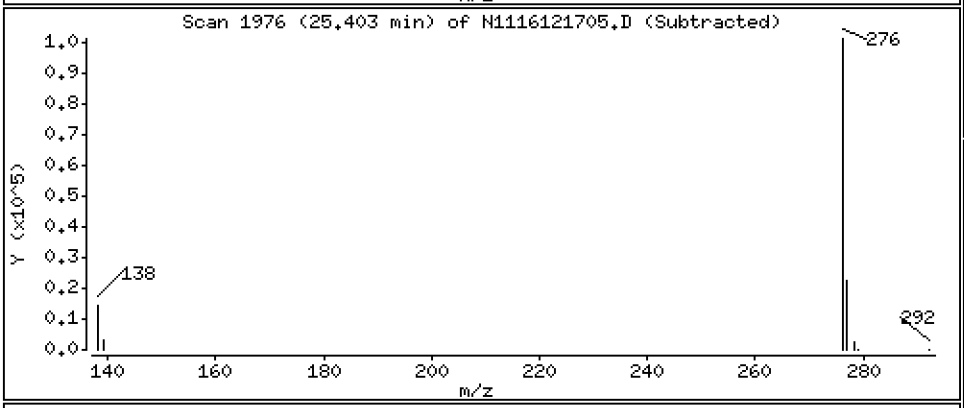
Column diameter: 0.25

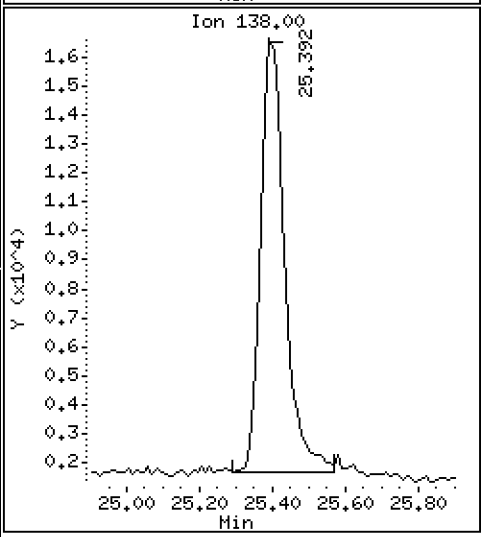
41 Benzo(g,h,i)perylene

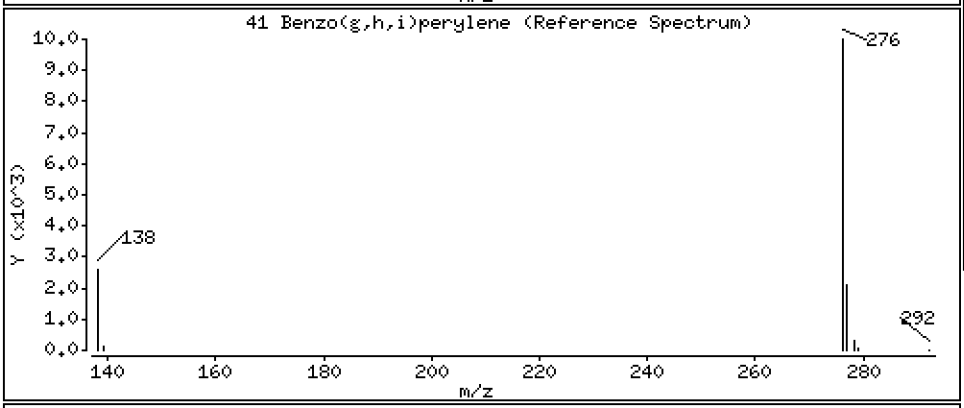
Concentration: 176 ng/mL

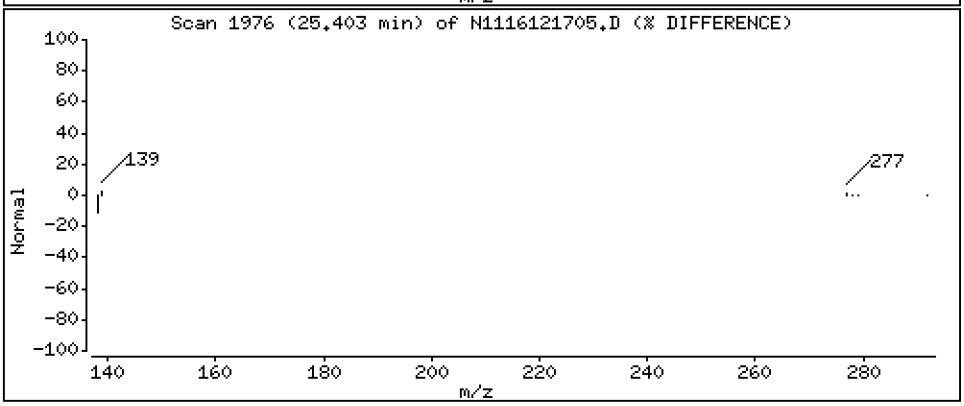












ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161217.b\N1116121705.D
Lab Smp Id: BEK0658-BS1
Inj Date : 17-DEC-2016 14:13 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : BEK0658-BS1
Misc Info :
Comment   :
Method   : \\target\share\chem3\nt11.i\20161217.b\lowsim.m
Meth Date : 17-Dec-2016 13:15 van Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1 Naphthalene-d8	136	7.207	7.234	(1.000)	478888	200.000	
	2 Naphthalene	128	7.243	7.261	(1.005)	346720	146.073	146
	3 Benzo(b)thiophene	134	7.496	7.523	(1.040)	246615	124.647	125
$	4 2-Methylnaphthalene-d10	152	8.190	8.211	(1.136)	293216	140.311	140
	5 2-Methylnaphthalene	142	8.243	8.264	(1.144)	364542	156.350	156
	6 1-Methylnaphthalene	142	8.505	8.526	(1.180)	348221	152.015	152
	7 2-Chloronaphthalene	162	9.157	9.178	(0.894)	342692	147.462	147
	8 Biphenyl	154	9.125	9.136	(0.891)	488296	156.267	156
	9 2,6-Dimethylnaphthalene	156	9.178	9.199	(0.896)	386755	161.974	162
	10 Acenaphthylene	152	10.089	10.107	(0.985)	405220	152.426	152
*	11 Acenaphthene-d10	164	10.242	10.260	(1.000)	297598	200.000	
	12 Acenaphthene	153	10.306	10.324	(1.006)	277805	159.715	160
	13 Dibenzofuran	168	10.506	10.519	(1.026)	442349	171.442	171
	14 2,3,5-Trimethylnaphthalene	170	10.607	10.620	(1.036)	287526	171.432	171
$	15 Fluorene-d10	174	Compound Not Detected.					
	16 Fluorene	166	11.138	11.151	(1.087)	361444	174.781	175
	17 Dibenzothiophene	184	12.777	12.777	(0.987)	371472	143.087	143
*	18 Phenanthrene-d10	188	12.945	12.956	(1.000)	577524	200.000	
	19 Phenanthrene	178	12.987	12.998	(1.003)	674555	208.929	209
$	20 Anthracene-d10	188	Compound Not Detected.					
	21 Anthracene	178	13.040	13.050	(1.007)	505501	164.155	164
	22 Carbazole	167	13.713	13.722	(1.059)	303602	93.4367	93.4
	23 1-Methylphenanthrene	192	13.993	13.993	(1.081)	618136	189.238	189
$	24 Fluoranthene-d10	212	15.055	15.065	(1.163)	510659	166.003	166
	25 Fluoranthene	202	15.093	15.093	(1.166)	650358	174.816	175
	26 Pyrene	202	15.603	15.603	(0.881)	656817	205.282	205
	27 Benzo(a)anthracene	228	17.618	17.618	(0.995)	599663	184.116	184
*	28 Chrysene-d12	240	17.710	17.710	(1.000)	559121	200.000	
	29 Chrysene	228	17.760	17.760	(1.003)	607507	182.611	183
	30 Benzo(b)fluoranthene	252	19.696	19.696	(0.941)	542521	174.165	174
	31 Benzo(k)fluoranthene	252	19.744	19.744	(0.943)	584023	179.635	180
	32 Benzo(j)fluoranthene	252	19.820	19.820	(0.947)	515210	173.595	174
$	33 Benzo(e)pyrene-d12	264	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
	34 Benzo(e)pyrene	252	20.570	20.570	(0.983)	508688	169.426	169
	35 Benzo(a)pyrene	252	20.695	20.704	(0.989)	431168	155.992	156
*	36 Perylene-d12	264	20.935	20.935	(1.000)	556541	200.000	
	37 Perylene	252	21.012	21.012	(1.004)	225827	76.7686	76.8
$	38 Dibenzo(a,h)anthracene-d14	292	23.830	23.830	(1.138)	282604	172.224	172
	39 Dibenzo(a,h)anthracene	278	23.974	23.974	(1.145)	400671	189.754	190
	40 Indeno(1,2,3-cd)pyrene	276	24.007	24.007	(1.147)	498847	184.786	185
	41 Benzo(g,h,i)perylene	276	25.403	25.403	(1.213)	416919	175.610	176

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121705.D
Lab Smp Id: BEK0658-BS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161217.b\lowsim.m
Misc Info:

Calibration Date: 17-DEC-2016
Calibration Time: 12:40
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	478888	40.17
11 Acenaphthene-d10	209310	104655	418620	297598	42.18
18 Phenanthrene-d10	404977	202489	809954	577524	42.61
28 Chrysene-d12	465046	232523	930092	559121	20.23
36 Perylene-d12	454694	227347	909388	556541	22.40

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.21	-0.37
11 Acenaphthene-d10	10.26	9.76	10.76	10.24	-0.18
18 Phenanthrene-d10	12.96	12.46	13.46	12.95	-0.08
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.94	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121705.D

Lab ID: BEK0658-BS1
nt11.i, 20161217.b\lowsim.m,   17-DEC-2016 14:13

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161217.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM

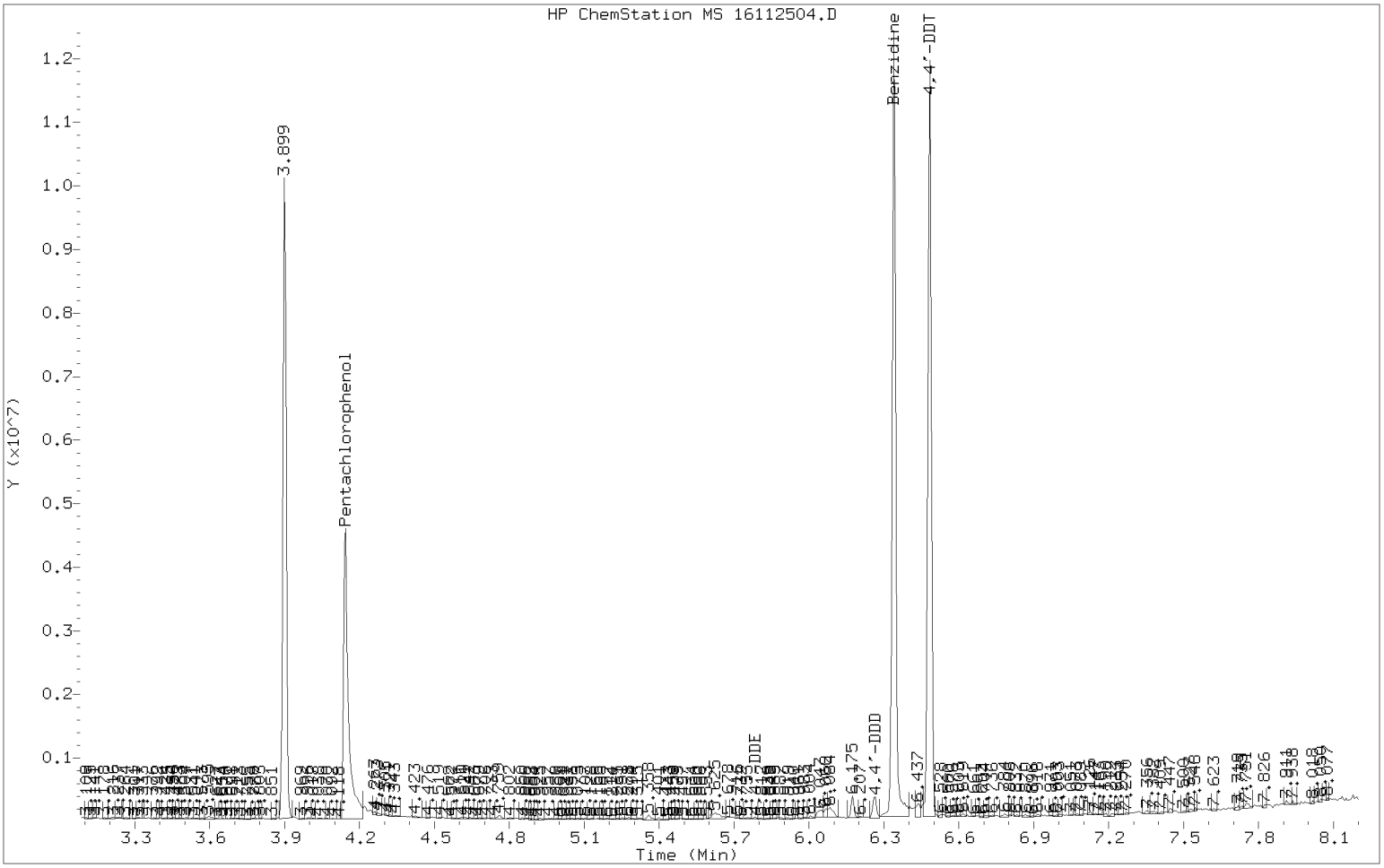
Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Lab File ID:	16112504.D	Injection Date:	11/25/16
Instrument ID:	NT11	Injection Time:	07:31
Sequence:	SEK0335	Lab Sample ID:	SEK0335-TUN1

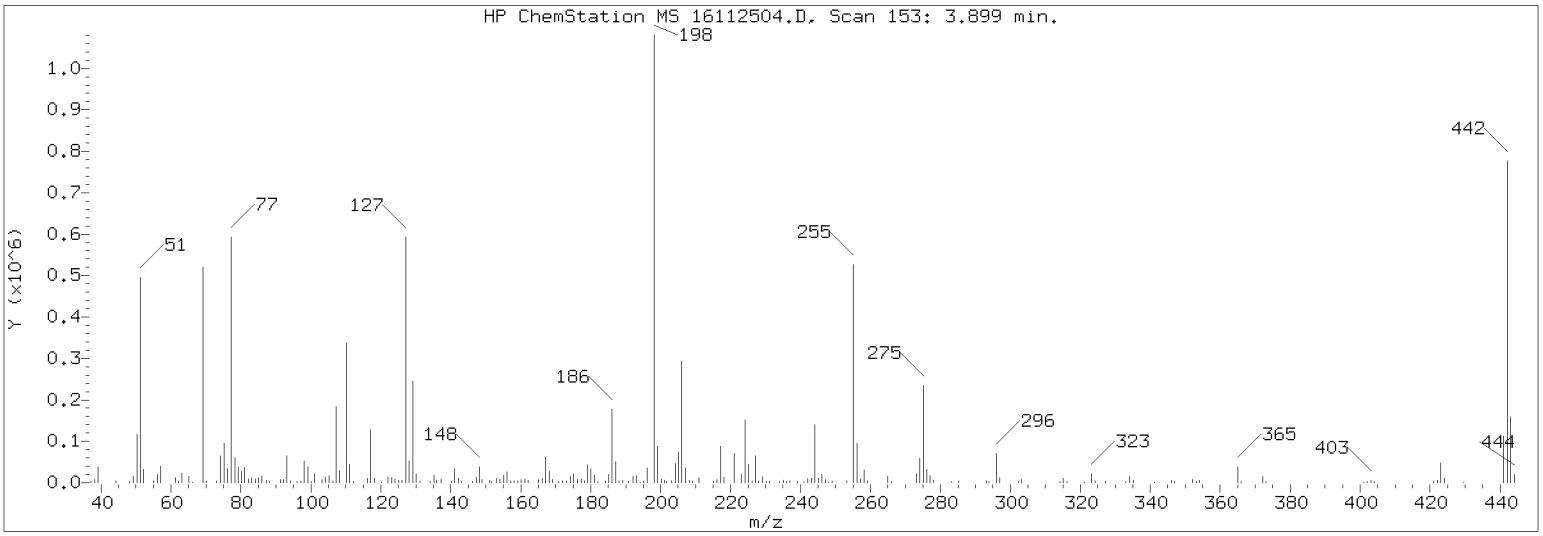
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	44.1	PASS
68	Less than 2% of 69	0	PASS
69	Less than 100% of 198	48.7	PASS
70	Less than 2% of 69	0.856	PASS
127	10 - 80% of 198	54.8	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	8.19	PASS
275	10 - 60% of 198	23.8	PASS
365	1 - 100% of 198	3.43	PASS
441	0.1 - 24% of 442	15.1	PASS
442	50 - 200% of 198	74.8	PASS
443	15 - 24% of 442	20.1	PASS

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SEK0335-TUN1	16112504.D	11/25/2016	7:31
Cal Standard	SEK0335-CAL4	16112505.D	11/25/2016	7:49
Cal Standard	SEK0335-CAL1	16112506.D	11/25/2016	8:19
Cal Standard	SEK0335-CAL5	16112507.D	11/25/2016	8:49
Cal Standard	SEK0335-CAL2	16112508.D	11/25/2016	9:20
Cal Standard	SEK0335-CAL3	16112509.D	11/25/2016	9:50
Cal Standard	SEK0335-CAL6	16112510.D	11/25/2016	10:20
Secondary Cal Check	SEK0335-SCV1	16112511.D	11/25/2016	10:50
Blank	BEK0480-BLK1	16112512.D	11/25/2016	11:20
LCS	BEK0480-BS1	16112513.D	11/25/2016	11:50
ZZZZZ	16K0221-01	16112514.D	11/25/2016	12:21
Calibration Check	SEK0335-CCV1	16112515.D	11/25/2016	12:51

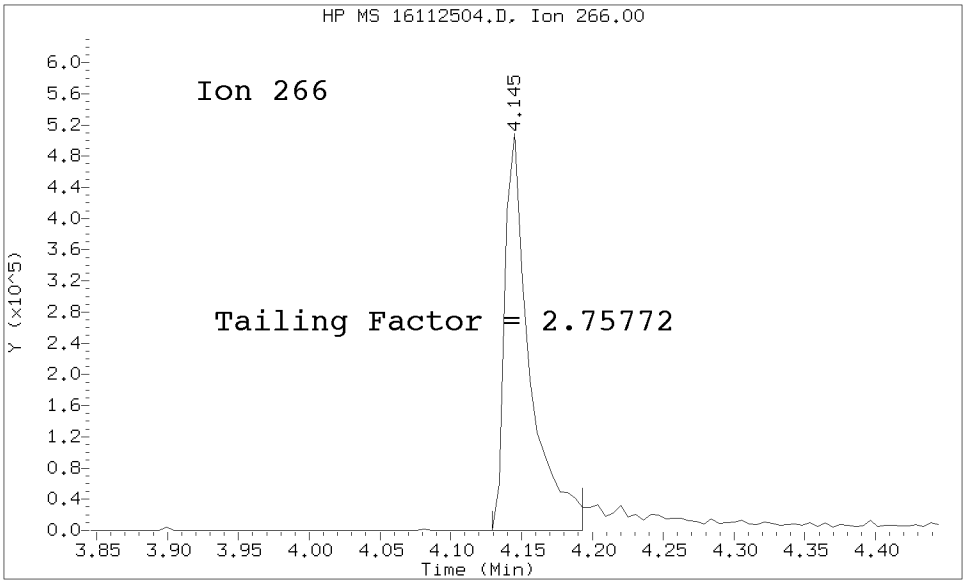
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20161125.b/16112504.D/16112504.D
Method Used: \20161125.b\DFTPP.m Inst: nt11
Injection Date: 25-NOV-2016 07:31 Operator: JW
Sample Info: SEK0335-TUN1 SEK0335-TUN1
Report Date: 11/30/2016 07:02





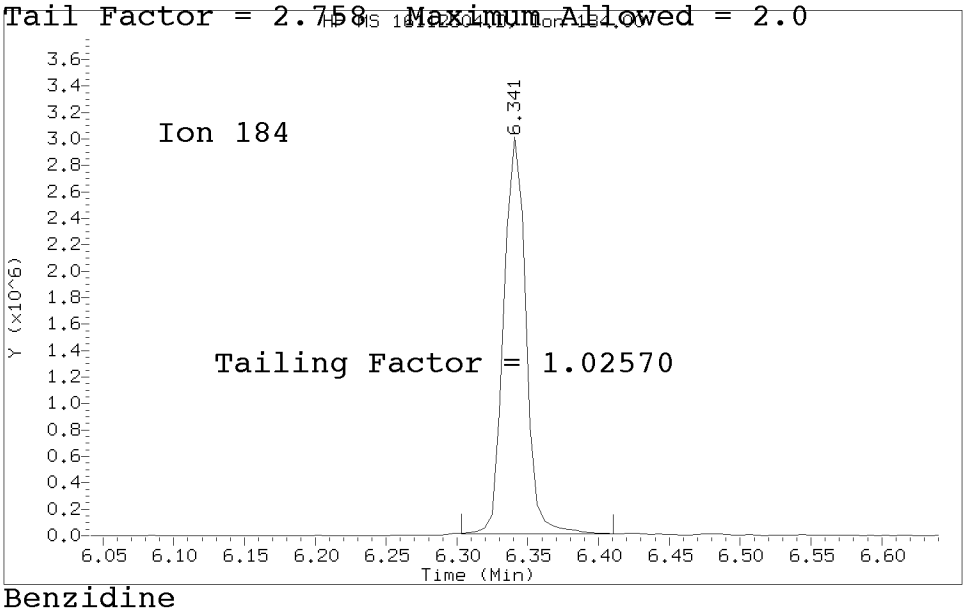
Datafile Analyzed: /20161125.b/16112504.D/16112504.D
Method Used: \20161125.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 25-NOV-2016 07:31 Operator: JW
Sample Info: SEK0335-TUN1
Report Date: 11/30/2016 07:02



Pentachlorophenol
==========
Exp. RT = 4.177
Found RT = 4.145

The tailing factor for Pentachlorophenol EXCEEDED

Tail Factor = 2.758 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 6.394
Found RT = 6.341

Tail Factor = 1.026 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test	
Pentachlorophenol	2.7577160	2.000	FAIL	[Failure]
Benzidine	1.0256983	2.000	PASS	

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1746894			N/A
4,4-DDE	4790	0.3	20.0	PASS
4,4-DDD	58824	3.3	20.0	PASS
4,4-DDD + DDE	63614	3.5	20.0	PASS

Tuning Sample, nt11.i/20161125.b/16112504.D, *** FAILED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	44.09
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	48.71
70	Less than 2.00% of mass 69	0.42 (0.86)
127	10.00 - 80.00% of mass 198	54.80
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.19
275	10.00 - 60.00% of mass 198	23.77
365	Greater than 1.00% of mass 198	3.43
441	0.01 - 24.00% of mass 442	11.31 (15.12)
442	50.00 - 200.00% of mass 198	74.79
443	15.00 - 24.00% of mass 442	15.00 (20.05)

Data File: 16112504.D
Spectrum: Avg. Scans 152-154 (3.90), Background Scan 146
Location of Maximum: 198.00
Number of points: 246

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	751	119.00	692	189.00	7801	273.00	15209
37.00	1413	120.00	726	191.00	3680	274.00	41472
38.00	4923	122.00	9321	192.00	10606	275.00	205184
39.00	30208	123.00	12803	193.00	10976	276.00	24120
40.00	1239	124.00	7114	194.00	1396	277.00	17176
44.00	1442	125.00	5452	195.00	3003	278.00	3292
47.00	2135	126.00	1932	196.00	28024	283.00	1582
48.00	1000	127.00	473024	198.00	863232	284.00	1044
49.00	2926	128.00	42688	199.00	70664	285.00	2872
50.00	95776	129.00	187968	200.00	7048	289.00	705
51.00	380608	130.00	15495	201.00	4674	293.00	4455
52.00	23496	131.00	3637	202.00	3542	294.00	1048
55.00	1432	133.00	1522	203.00	4382	295.00	710
56.00	12064	134.00	4453	204.00	34328	296.00	55136
57.00	29592	135.00	14514	205.00	58464	297.00	8651
58.00	1159	136.00	5432	206.00	229056	302.00	1575
61.00	7119	137.00	6924	207.00	31416	303.00	5572
62.00	4288	138.00	860	208.00	5664	304.00	962
63.00	16880	140.00	1142	209.00	2230	310.00	735
65.00	10313	141.00	22808	210.00	2417	314.00	1931
66.00	1405	142.00	7545	211.00	9195	315.00	6321
69.00	420480	143.00	4613	212.00	2411	316.00	3682
70.00	3598	144.00	1367	215.00	2772	317.00	948
73.00	3770	146.00	4157	216.00	5151	321.00	730
74.00	43752	147.00	11168	217.00	62696	322.00	1024
75.00	75512	148.00	27112	218.00	9934	323.00	19600
76.00	24944	149.00	5929	221.00	54288	324.00	2579
77.00	478720	151.00	4736	222.00	10187	327.00	3085
78.00	37912	152.00	2729	223.00	15339	328.00	1126
79.00	28656	153.00	8223	224.00	124704	333.00	836
80.00	20624	154.00	6245	225.00	28456	334.00	12349
81.00	30600	155.00	14179	226.00	2165	335.00	4224
82.00	7220	156.00	20176	227.00	51920	341.00	2449
83.00	9851	157.00	4083	228.00	4744	346.00	3435
85.00	7264	158.00	4685	229.00	11863	347.00	788
86.00	6574	159.00	2412	230.00	1866	352.00	4991
87.00	4735	160.00	7329	231.00	4343	353.00	3488
88.00	1900	161.00	8631	234.00	2737	354.00	5928
91.00	8383	162.00	3070	235.00	3356	355.00	811
92.00	6575	165.00	8013	236.00	1953	365.00	29600
93.00	47120	166.00	6913	237.00	3537	366.00	3250
94.00	4113	167.00	49440	239.00	2846	371.00	696
95.00	979	168.00	21224	241.00	2382	372.00	12084
96.00	2145	169.00	4504	242.00	7205	373.00	2677
97.00	1309	170.00	862	243.00	7835	383.00	1178
98.00	41480	171.00	974	244.00	102712	390.00	1081
99.00	30664	172.00	2763	245.00	10934	391.00	912
100.00	3355	173.00	4704	246.00	18816	401.00	690
101.00	18848	174.00	10383	247.00	5156	402.00	3741

103.00	6417	175.00	20008	248.00	701	403.00	7115
104.00	11280	176.00	9458	249.00	2584	404.00	932
105.00	12462	177.00	6963	250.00	670	421.00	6637
106.00	3447	178.00	4805	252.00	1792	422.00	5216
107.00	134144	179.00	34616	253.00	3486	423.00	43512
108.00	22528	180.00	26616	254.00	3274	424.00	8883
110.00	265920	181.00	10578	255.00	438656	429.00	771
111.00	42048	182.00	1648	256.00	73304	441.00	97616
112.00	3712	184.00	3789	257.00	4834	442.00	645632
115.00	761	185.00	15623	258.00	23320	443.00	129480
116.00	8006	186.00	131200	259.00	4646	444.00	14687
117.00	100248	187.00	35840	265.00	11549		
118.00	7074	188.00	4279	266.00	1284		

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM

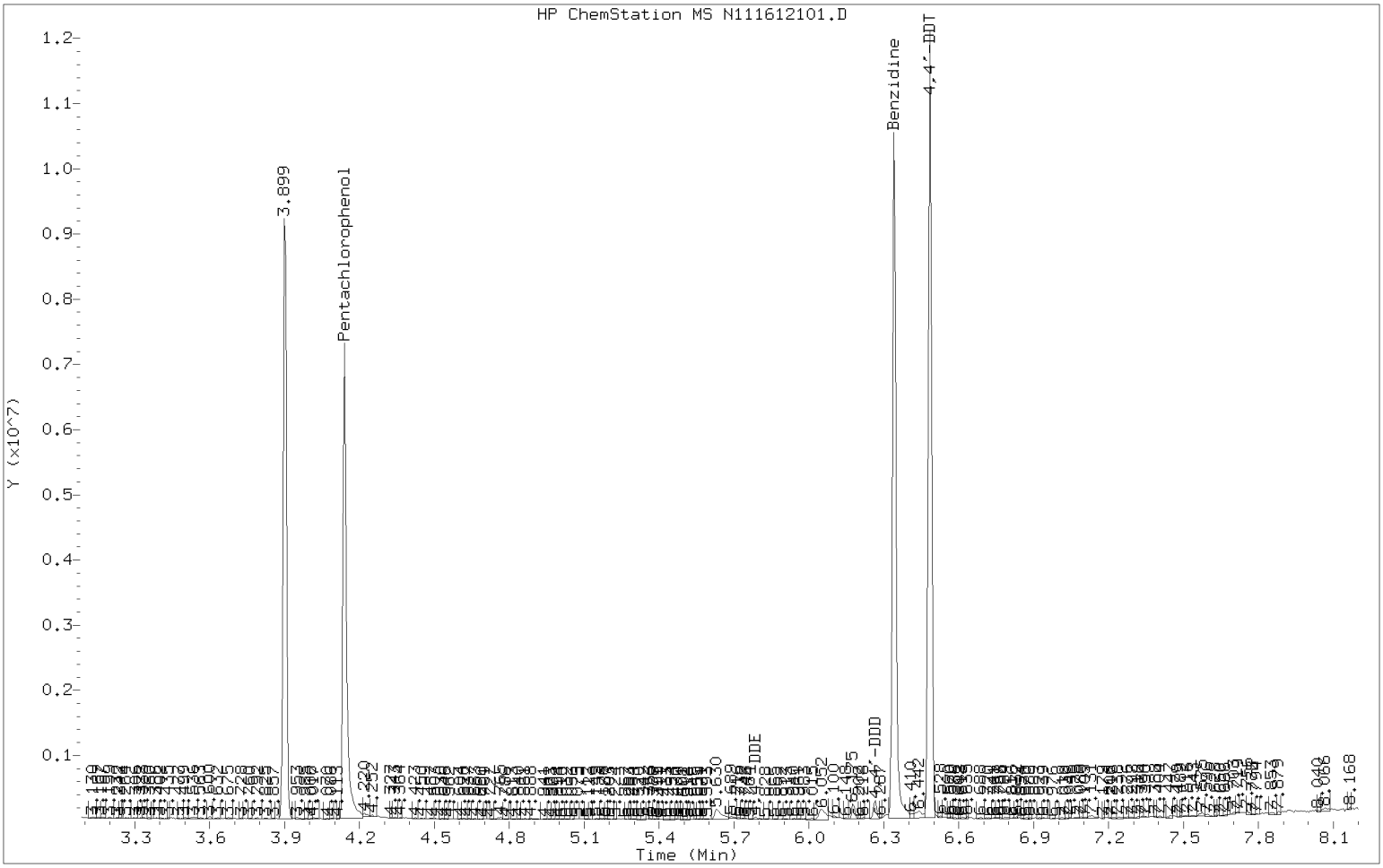
Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Lab File ID:	N111612101.D	Injection Date:	12/10/16
Instrument ID:	NT11	Injection Time:	09:22
Sequence:	SEL0145	Lab Sample ID:	SEL0145-TUN1

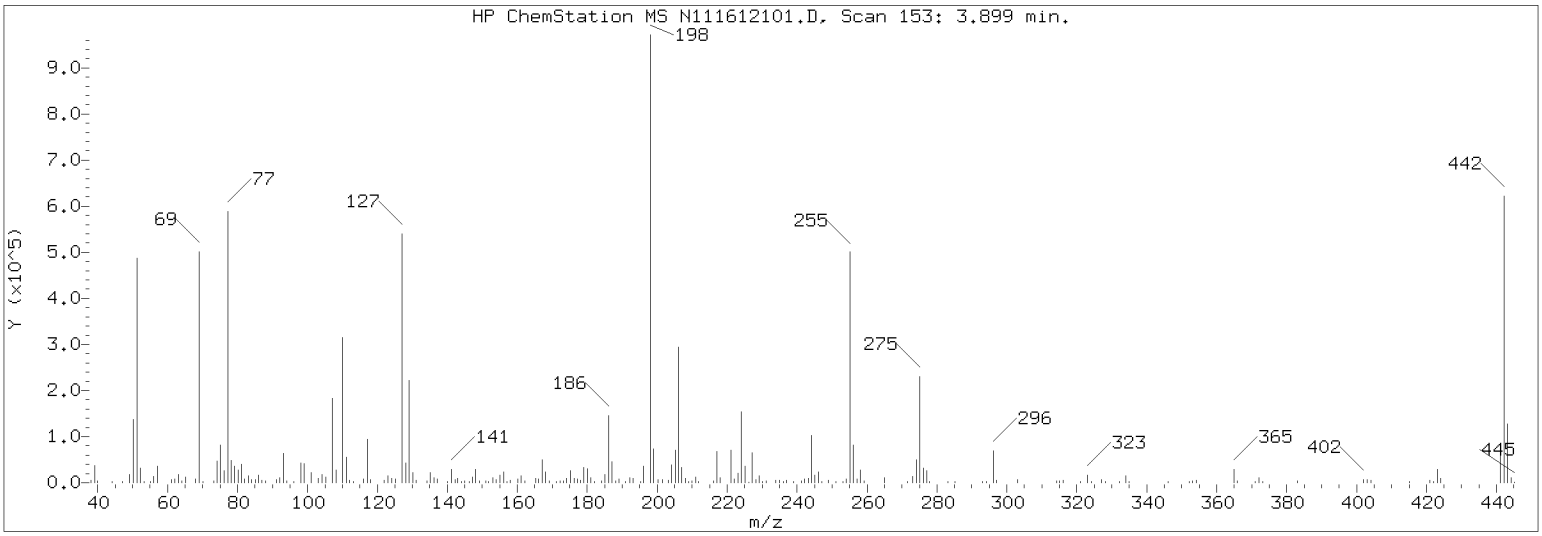
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	47	PASS
68	Less than 2% of 69	0.732	PASS
69	Less than 100% of 198	50.6	PASS
70	Less than 2% of 69	0.403	PASS
127	10 - 80% of 198	55.9	PASS
197	Less than 2% of 198	0.887	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.49	PASS
275	10 - 60% of 198	24.9	PASS
365	1 - 100% of 198	3.05	PASS
441	0.1 - 24% of 442	14.8	PASS
442	50 - 200% of 198	73.4	PASS
443	15 - 24% of 442	20.2	PASS

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SEL0145-TUN1	N111612101.D	12/10/2016	9:22
Initial Cal Check	SEL0145-ICV1	N111612102.D	12/10/2016	9:37
Blank	BEL0014-BLK1	N111612104.D	12/10/2016	10:50
LCS	BEL0014-BS1	N111612105.D	12/10/2016	11:20
Reference	BEL0014-SRM1	N111612106.D	12/10/2016	11:50
ZZZZZ	16K0356-01	N111612107.D	12/10/2016	12:21
ZZZZZ	16K0356-02	N111612108.D	12/10/2016	12:51
ZZZZZ	16K0356-03	N111612111.D	12/10/2016	14:21
Blank	BEK0657-BLK2	N111612112.D	12/10/2016	14:51
LCS	BEK0657-BS2	N111612113.D	12/10/2016	15:21
Calibration Check	SEL0145-CCV1	N111612114.D	12/10/2016	15:51

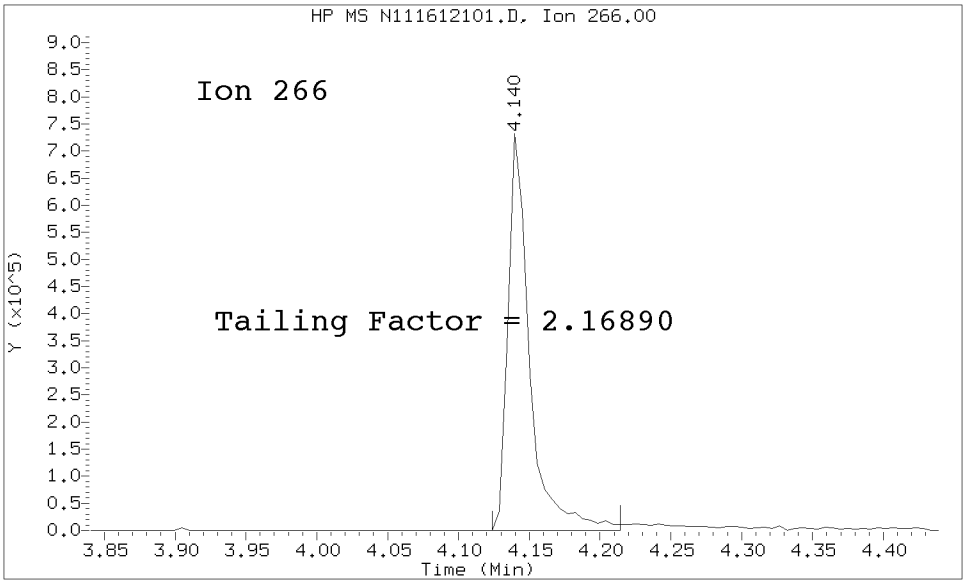
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20161210.b/N111612101.D/N111612101.D
Method Used: \20161210.b\DFTPP.m Inst: nt11
Injection Date: 10-DEC-2016 09:22 Operator: JW
Sample Info: SEL0145-TUN1 SEL0145-TUN1
Report Date: 12/12/2016 12:49





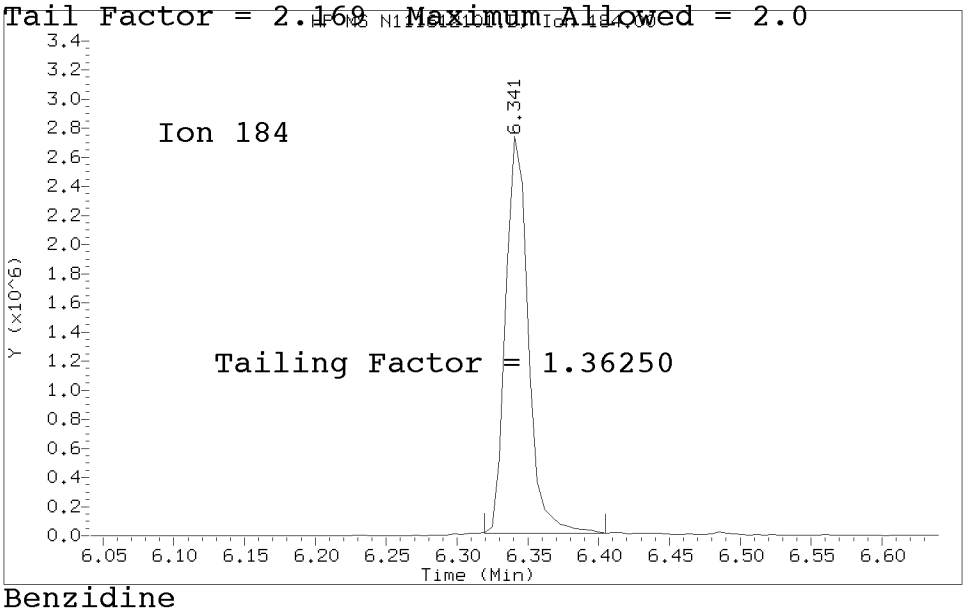
Datafile Analyzed: /20161210.b/N111612101.D/N111612101.D
Method Used: \20161210.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 10-DEC-2016 09:22 Operator: JW
Sample Info: SEL0145-TUN1
Report Date: 12/12/2016 12:49



Pentachlorophenol
==========
Exp. RT = 4.177
Found RT = 4.140

The tailing factor for Pentachlorophenol EXCEEDED

Tail Factor = 2.169 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 6.394
Found RT = 6.341

Tail Factor = 1.363 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test	
Pentachlorophenol	2.1688963	2.000	FAIL	[Failure]
Benzidine	1.3625000	2.000	PASS	

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1762627			N/A
4,4-DDE	4424	0.3	20.0	PASS
4,4-DDD	46973	2.6	20.0	PASS
4,4-DDD + DDE	51397	2.8	20.0	PASS

Tuning Sample, nt11.i/20161210.b/N111612101.D, *** FAILED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	47.01
68	Less than 2.00% of mass 69	0.37 (0.73)
69	Mass 69 relative abundance	50.56
70	Less than 2.00% of mass 69	0.20 (0.40)
127	10.00 - 80.00% of mass 198	55.88
197	Less than 2.00% of mass 198	0.89
199	5.00 - 9.00% of mass 198	7.49
275	10.00 - 60.00% of mass 198	24.85
365	Greater than 1.00% of mass 198	3.05
441	0.01 - 24.00% of mass 442	10.84 (14.76)
442	50.00 - 200.00% of mass 198	73.43
443	15.00 - 24.00% of mass 442	14.86 (20.23)

Data File: N111612101.D
Spectrum: Avg. Scans 152-154 (3.90), Background Scan 148
Location of Maximum: 198.00
Number of points: 235

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	699	117.00	82728	187.00	35384	266.00	1407
38.00	4832	118.00	5755	188.00	3706	272.00	2603
39.00	31368	120.00	1503	189.00	7425	273.00	11699
40.00	3088	122.00	6038	191.00	4321	274.00	38096
43.00	815	123.00	12474	192.00	8924	275.00	194176
49.00	4933	124.00	6612	193.00	9617	276.00	28752
50.00	99552	125.00	5961	195.00	742	277.00	19440
51.00	367296	127.00	436608	196.00	28512	278.00	2546
52.00	22952	128.00	35720	197.00	6934	283.00	1673
53.00	867	129.00	176064	198.00	781376	284.00	693
55.00	1696	130.00	17752	199.00	58496	285.00	3669
56.00	11604	131.00	1706	200.00	4731	293.00	2502
57.00	29008	134.00	4571	201.00	3550	294.00	1480
61.00	4607	135.00	14130	203.00	4849	296.00	56800
62.00	5310	136.00	7591	204.00	28008	297.00	5851
63.00	13537	137.00	6564	205.00	53424	303.00	6693
64.00	2063	138.00	1165	206.00	223744	304.00	1313
65.00	9047	140.00	1768	207.00	25688	309.00	867
68.00	2890	141.00	22200	208.00	5700	314.00	3270
69.00	395072	142.00	8504	209.00	2432	315.00	3887
70.00	1594	143.00	6661	210.00	2797	316.00	3568
73.00	3726	144.00	1893	211.00	9363	321.00	1803
74.00	37136	145.00	1200	212.00	1863	323.00	14767
75.00	62768	146.00	2077	216.00	2910	324.00	2399
76.00	22680	147.00	11277	217.00	54576	327.00	4630
77.00	462528	148.00	21216	218.00	7735	328.00	921
78.00	36592	149.00	5653	221.00	54584	332.00	714
79.00	27688	151.00	3806	222.00	6190	333.00	1311
80.00	20184	152.00	2149	223.00	15641	334.00	12773
81.00	31616	153.00	9294	224.00	120984	335.00	1768
82.00	8223	154.00	3964	225.00	29784	336.00	866
83.00	10518	155.00	12304	226.00	3297	341.00	1165
84.00	837	156.00	19464	227.00	49392	346.00	3463
85.00	5871	157.00	1806	228.00	7819	352.00	4609
86.00	7466	158.00	3935	229.00	12589	353.00	3503
87.00	3846	159.00	1785	230.00	817	354.00	4721
88.00	2011	160.00	6201	231.00	3654	355.00	668
91.00	6674	161.00	11459	234.00	3518	365.00	23816
92.00	7267	162.00	3288	235.00	3891	366.00	2970
93.00	46376	165.00	7176	236.00	1791	371.00	922
94.00	3343	166.00	6108	237.00	3647	372.00	9003
95.00	778	167.00	36728	239.00	2100	373.00	1011
96.00	1870	168.00	21336	241.00	1942	383.00	1892
98.00	35176	169.00	3605	242.00	7402	402.00	3175
99.00	29304	171.00	1519	243.00	6033	403.00	4907
100.00	2312	172.00	2875	244.00	87280	404.00	1859
101.00	17024	173.00	4158	245.00	13532	415.00	977
103.00	7053	174.00	9456	246.00	17592	421.00	3733
104.00	12872	175.00	18824	247.00	2412	422.00	3600

105.00	9042	176.00	6562	249.00	3029	423.00	31640
106.00	1190	177.00	7779	251.00	873	424.00	8505
107.00	139136	178.00	2676	253.00	2796	434.00	741
108.00	22168	179.00	27264	254.00	4798	440.00	919
109.00	1615	180.00	22944	255.00	400960	441.00	84664
110.00	251264	181.00	9663	256.00	64984	442.00	573760
111.00	36752	182.00	699	257.00	5997	443.00	116080
112.00	4735	184.00	3558	258.00	24184	444.00	11046
113.00	1073	185.00	14249	259.00	4966	445.00	688
116.00	4601	186.00	119864	265.00	7468		

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM

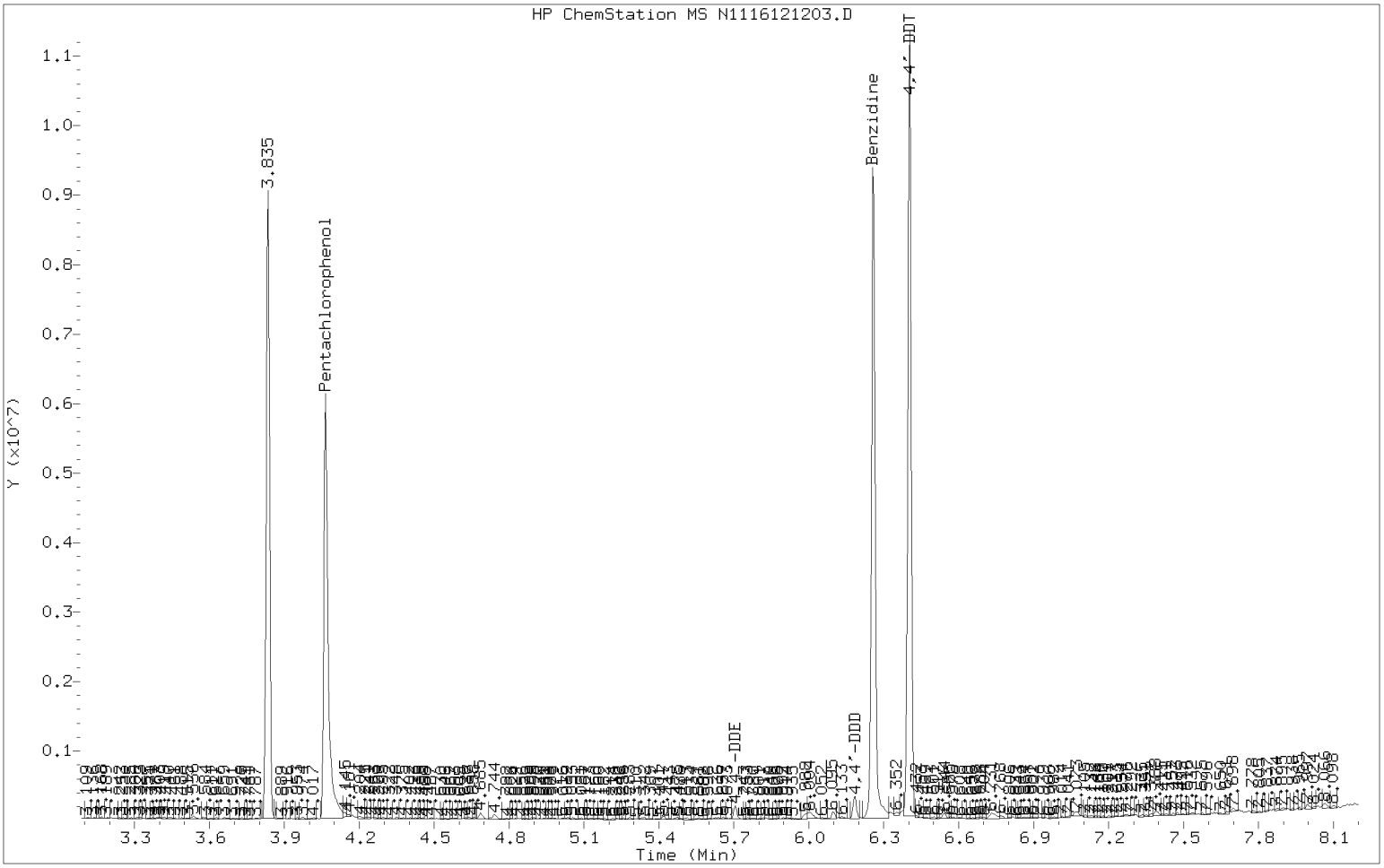
Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Lab File ID:	N1116121203.D	Injection Date:	12/12/16
Instrument ID:	NT11	Injection Time:	08:59
Sequence:	SEL0155	Lab Sample ID:	SEL0155-TUN1

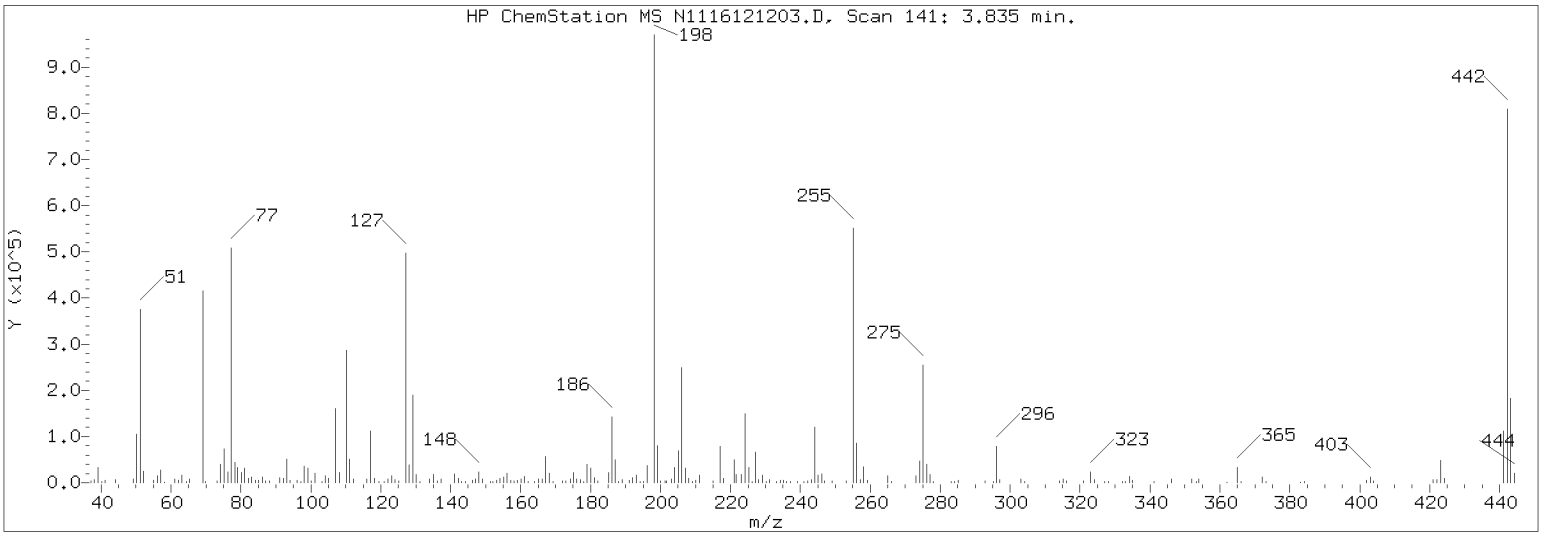
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	40.3	PASS
68	Less than 2% of 69	0	PASS
69	Less than 100% of 198	44.6	PASS
70	Less than 2% of 69	0.647	PASS
127	10 - 80% of 198	52.3	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	8.1	PASS
275	10 - 60% of 198	25.5	PASS
365	1 - 100% of 198	3.44	PASS
441	0.1 - 24% of 442	15.1	PASS
442	50 - 200% of 198	82.2	PASS
443	15 - 24% of 442	20.6	PASS

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SEL0155-TUN1	N1116121203.D	12/12/2016	8:59
Initial Cal Check	SEL0155-ICV1	N1116121204.D	12/12/2016	9:14
ZZZZZ	16K0356-01RE1	N1116121205.D	12/12/2016	10:27
ZZZZZ	16K0356-02RE1	N1116121206.D	12/12/2016	10:57
Blank	BEK0657-BLK1	N1116121207.D	12/12/2016	11:28
LCS	BEK0657-BS1	N1116121208.D	12/12/2016	11:58
G-SMA1-1-PEMD-161122-	16K0321-01	N1116121209.D	12/12/2016	12:28
G-SMA1-2-PEMD-161122-	16K0321-03	N1116121210.D	12/12/2016	12:58
G-SMA1-3-PEMD-161122-	16K0321-05	N1116121211.D	12/12/2016	13:28
-SMA1-103-PEMD-16112	16K0321-06	N1116121212.D	12/12/2016	13:58
G-SMA2-1-PEMD-161122-	16K0321-07	N1116121213.D	12/12/2016	14:28
G-SMA2-2-PEMD-161122-	16K0321-09	N1116121214.D	12/12/2016	14:59
-SMA2-102-PEMD-16112	16K0321-10	N1116121215.D	12/12/2016	15:29
G-SMA2-3-PEMD-161122-	16K0321-11	N1116121216.D	12/12/2016	15:59
G-SMA2-4-PEMD-161122-	16K0321-13	N1116121217.D	12/12/2016	16:29
G-SMA2-5-PEMD-161122-	16K0321-15	N1116121218.D	12/12/2016	16:59
PG-PJ-1-PEMD-161122-A	16K0321-17	N1116121219.D	12/12/2016	17:29
Calibration Check	SEL0155-CCV1	N1116121220.D	12/12/2016	17:59

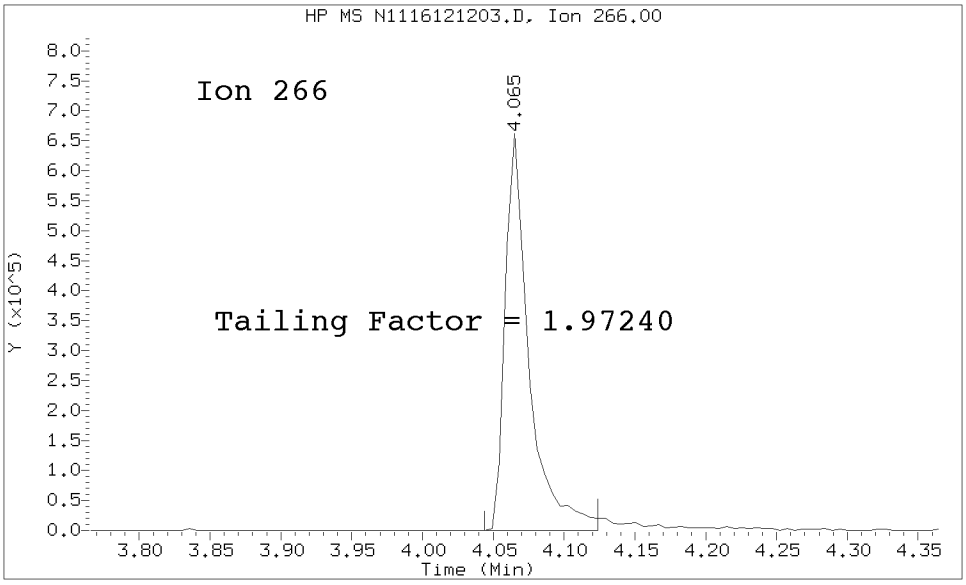
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20161212.b/N1116121203.D/N1116121203.D
Method Used: \20161212.b\DFTPP.m Inst: nt11
Injection Date: 12-DEC-2016 08:59 Operator: JW
Sample Info: SEL0155-TUN1 SEL0155-TUN1
Report Date: 12/15/2016 10:02



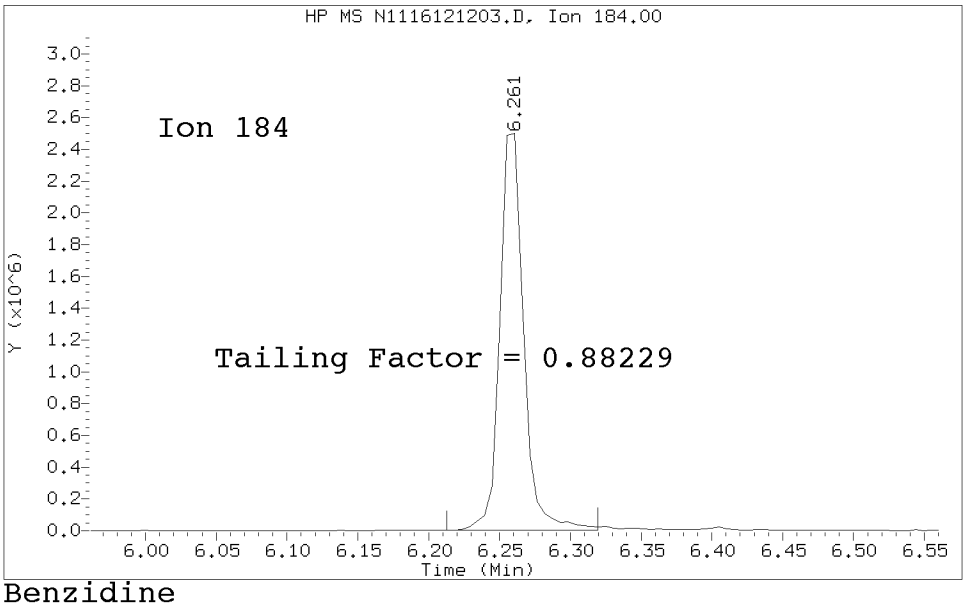


Datafile Analyzed: /20161212.b/N1116121203.D/N1116121203.D
Method Used: \20161212.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 12-DEC-2016 08:59 Operator: JW
Sample Info: SEL0-TUN1
Report Date: 12/15/2016 10:02



Pentachlorophenol
==========
Exp. RT = 4.060
Found RT = 4.065

Tail Factor = 1.972 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 6.250
Found RT = 6.261

Tail Factor = 0.882 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.9724047	2.000	PASS
Benzidine	0.8822938	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1694688			N/A
4,4-DDE	20506	1.2	20.0	PASS
4,4-DDD	61982	3.5	20.0	PASS
4,4-DDD + DDE	82488	4.6	20.0	PASS

Tuning Sample, nt11.i/20161212.b/N1116121203.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	40.25
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	44.55
70	Less than 2.00% of mass 69	0.29 (0.65)
127	10.00 - 80.00% of mass 198	52.27
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.10
275	10.00 - 60.00% of mass 198	25.49
365	Greater than 1.00% of mass 198	3.44
441	0.01 - 24.00% of mass 442	12.44 (15.14)
442	50.00 - 200.00% of mass 198	82.19
443	15.00 - 24.00% of mass 442	16.90 (20.56)

Data File: N1116121203.D
Spectrum: Avg. Scans 140-142 (3.84), Background Scan 134
Location of Maximum: 198.00
Number of points: 236

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1158	112.00	4696	185.00	14425	258.00	26408
38.00	4748	116.00	6721	186.00	120512	259.00	4021
39.00	27152	117.00	86760	187.00	32608	265.00	10311
40.00	1739	118.00	7804	188.00	2426	266.00	896
41.00	3894	119.00	738	189.00	5664	270.00	1424
43.00	1513	121.00	718	191.00	3996	273.00	13671
44.00	1156	122.00	7110	192.00	10233	274.00	38632
49.00	4058	123.00	11782	193.00	11636	275.00	199232
50.00	84696	124.00	5668	194.00	2046	276.00	28856
51.00	314688	125.00	4271	195.00	753	277.00	14689
52.00	19672	126.00	922	196.00	28104	278.00	2734
53.00	1242	127.00	408640	198.00	781760	283.00	2759
55.00	1964	128.00	31624	199.00	63360	284.00	1891
56.00	12737	129.00	162944	200.00	3092	285.00	3772
57.00	21952	130.00	15666	201.00	2275	293.00	3070
58.00	674	131.00	2359	202.00	1516	295.00	1042
61.00	5071	134.00	6337	203.00	7261	296.00	62168
62.00	4891	135.00	13831	204.00	28456	297.00	6855
63.00	13759	136.00	4387	205.00	55376	303.00	5370
64.00	2528	137.00	8121	206.00	208768	304.00	1632
65.00	8932	141.00	16752	207.00	29072	308.00	1291
67.00	1830	142.00	6825	208.00	6744	314.00	1285
69.00	348288	143.00	4474	209.00	2110	315.00	5894
70.00	2253	144.00	907	210.00	4671	316.00	1178
71.00	734	145.00	748	211.00	10499	321.00	2224
73.00	2811	146.00	3496	212.00	916	323.00	16520
74.00	34464	147.00	9016	215.00	1283	324.00	4891
75.00	59120	148.00	21160	216.00	2398	327.00	3505
76.00	20464	149.00	5827	217.00	57632	328.00	1041
77.00	412736	150.00	919	218.00	7312	332.00	868
78.00	30920	151.00	3502	221.00	43752	333.00	906
79.00	25736	152.00	708	222.00	8049	334.00	10403
80.00	21160	153.00	6462	223.00	11591	335.00	3831
81.00	30200	154.00	6766	224.00	110144	341.00	1087
82.00	6966	155.00	11063	225.00	27688	346.00	4572
83.00	8852	156.00	15817	226.00	3626	352.00	6530
84.00	578	157.00	3462	227.00	53392	353.00	2177
85.00	3852	158.00	3212	228.00	5006	354.00	6934
86.00	4652	159.00	2726	229.00	10886	362.00	689
87.00	4060	160.00	5955	230.00	789	365.00	26928
88.00	2202	161.00	11116	231.00	5462	366.00	4904
89.00	817	162.00	2401	233.00	992	372.00	12215
91.00	10113	164.00	717	234.00	4023	373.00	2598
92.00	7042	165.00	6583	235.00	3981	383.00	684
93.00	41400	166.00	7529	236.00	1995	384.00	902
94.00	2846	167.00	40888	237.00	3760	402.00	3993
96.00	2754	168.00	18432	239.00	1660	403.00	8473
97.00	1594	169.00	2886	241.00	2743	404.00	3256
98.00	31888	172.00	3897	242.00	5605	421.00	5598

99.00	28824	173.00	4318	243.00	6300	422.00	6013
100.00	2613	174.00	9289	244.00	96088	423.00	39488
101.00	18528	175.00	16496	245.00	12281	424.00	6788
103.00	3873	176.00	5664	246.00	16760	441.00	97256
104.00	9354	177.00	5808	247.00	2943	442.00	642496
105.00	8565	178.00	2560	249.00	4255	443.00	132096
106.00	892	179.00	32376	253.00	2415	444.00	13026
107.00	133312	180.00	25552	254.00	2042		
108.00	18632	181.00	9909	255.00	424704		
110.00	242432	182.00	1494	256.00	70752		
111.00	40080	184.00	1827	257.00	6341		

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM

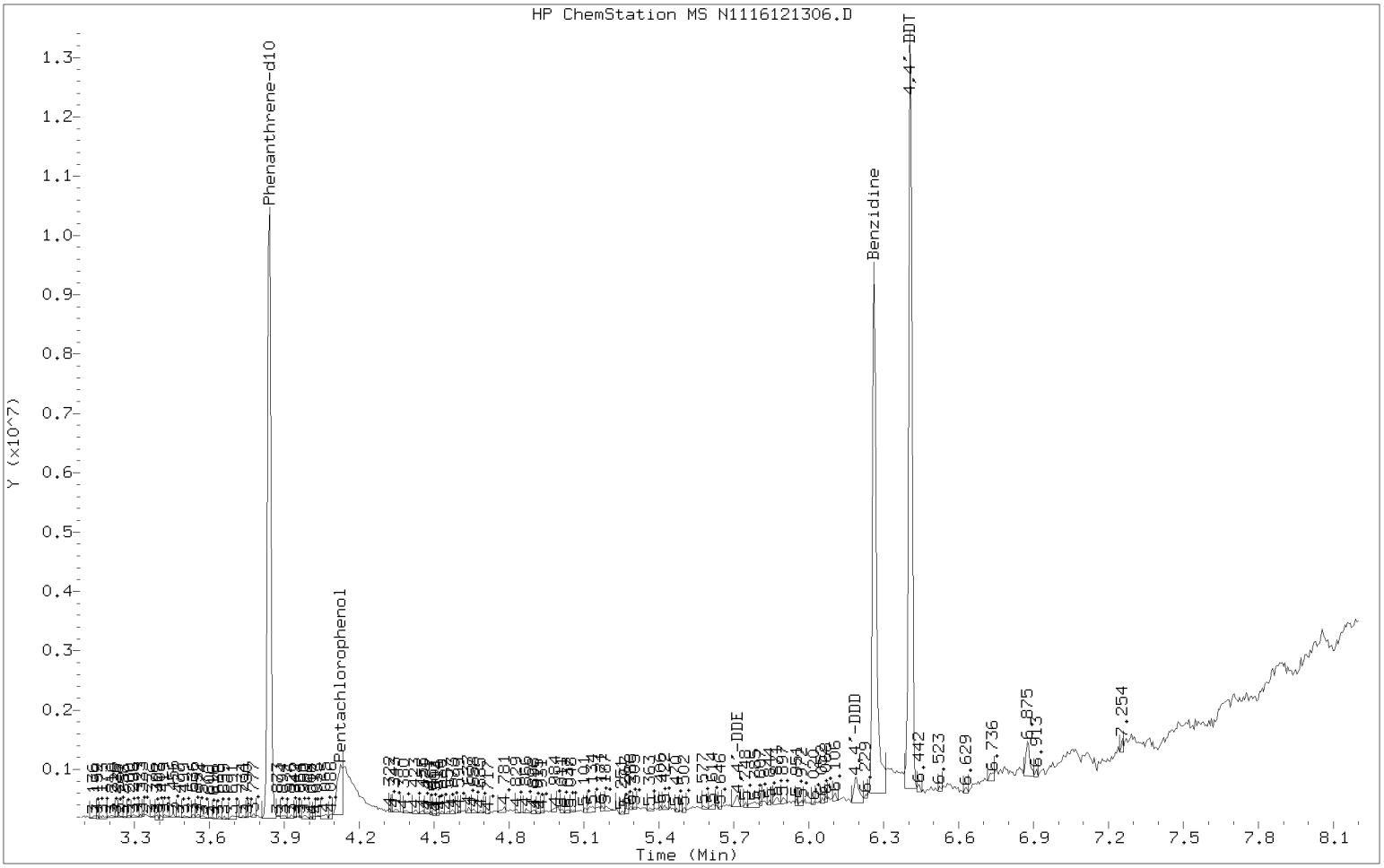
Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Lab File ID:	N1116121306.D	Injection Date:	12/13/16
Instrument ID:	NT11	Injection Time:	14:53
Sequence:	SEL0164	Lab Sample ID:	SEL0164-TUN1

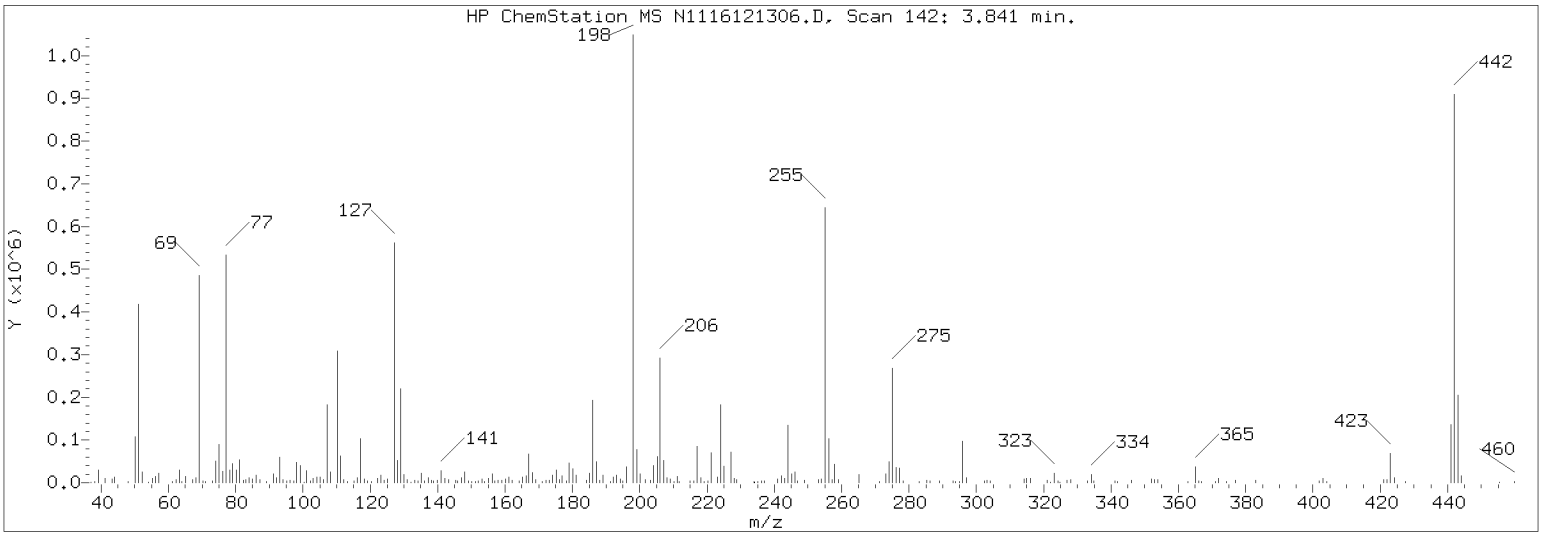
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	39.2	PASS
68	Less than 2% of 69	1.62	PASS
69	Less than 100% of 198	45	PASS
70	Less than 2% of 69	0.261	PASS
127	10 - 80% of 198	54.1	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.12	PASS
275	10 - 60% of 198	24.3	PASS
365	1 - 100% of 198	3.46	PASS
441	0.1 - 24% of 442	16.5	PASS
442	50 - 200% of 198	79.4	PASS
443	15 - 24% of 442	23.6	PASS

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SEL0164-TUN1	N1116121306.D	12/13/2016	14:53
Initial Cal Check	SEL0164-ICV1	N1116121307.D	12/13/2016	15:08
G-SMA1-2-PEMD-161122-	16K0321-03RE1	N1116121319.D	12/13/2016	21:04
-SMA1-103-PEMD-16112	16K0321-06RE1	N1116121321.D	12/13/2016	22:00
G-SMA2-1-PEMD-161122-	16K0321-07RE1	N1116121322.D	12/13/2016	22:28
G-SMA2-2-PEMD-161122-	16K0321-09RE1	N1116121323.D	12/13/2016	22:56
-SMA2-102-PEMD-16112	16K0321-10RE1	N1116121324.D	12/13/2016	23:24
PG-PJ-1-PEMD-161122-A	16K0321-17RE1	N1116121328.D	12/14/2016	1:17
Calibration Check	SEL0164-CCV1	N1116121329.D	12/14/2016	1:45

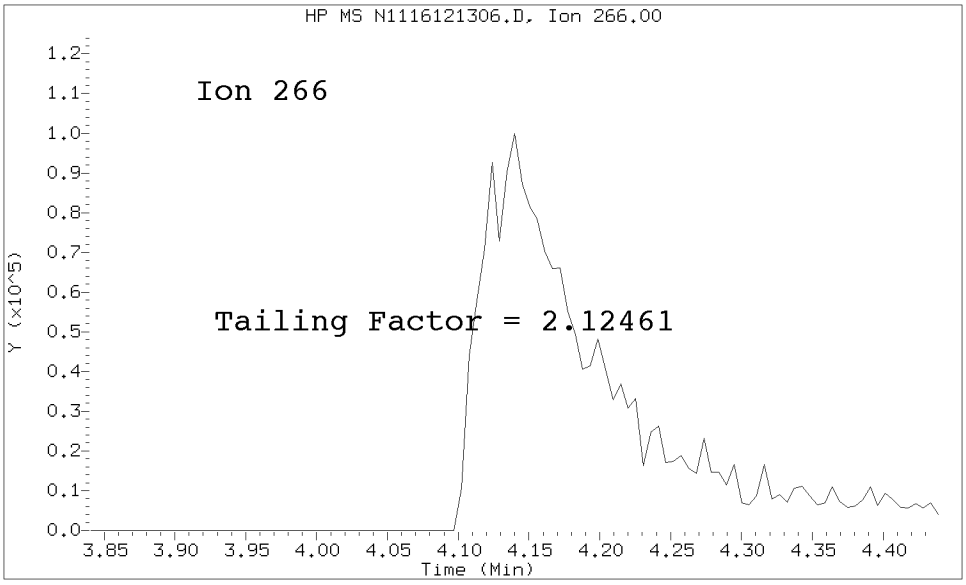
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20161213.b/N1116121306.D/N1116121306.D
Method Used: \20161213.b\DFTPP.m Inst: nt11
Injection Date: 13-DEC-2016 14:53 Operator: VTS
Sample Info: SEL0164-TUN1 SEL0164-TUN1
Report Date: 12/16/2016 10:01





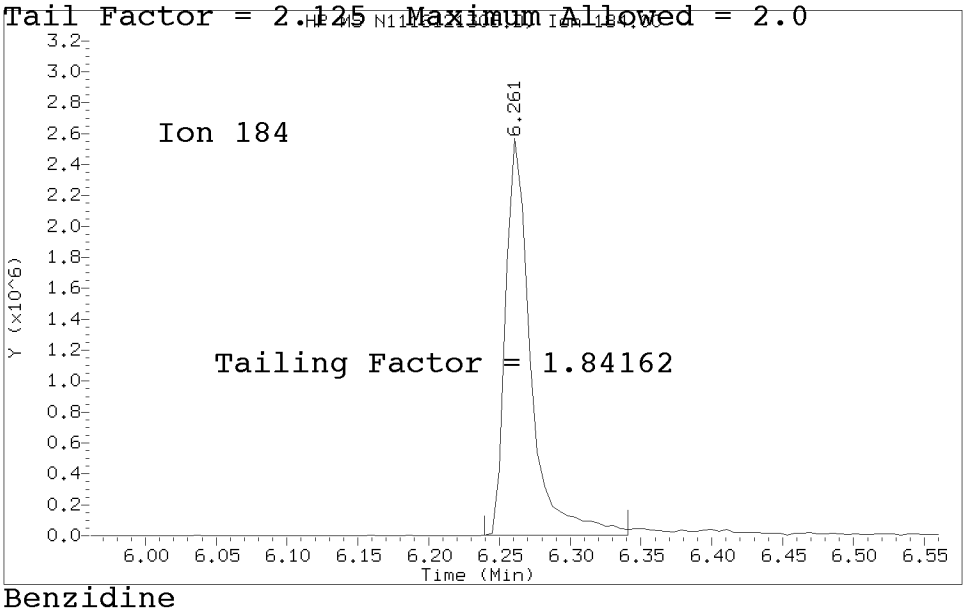
Datafile Analyzed: /20161213.b/N1116121306.D/N1116121306.D
Method Used: \20161213.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 13-DEC-2016 14:53 Operator: JW
Sample Info: SEL0164-TUN1
Report Date: 12/16/2016 10:01



Pentachlorophenol
==========
 Exp. RT = 4.140
Found RT = 4.140

The tailing factor for Pentachlorophenol EXCEEDED

Tail Factor = 2.125 Maximum Allowed = 2.0



Benzidine
==========
 Exp. RT = 6.261
Found RT = 6.261

Tail Factor = 1.842 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test	
Pentachlorophenol	2.1246064	2.000	FAIL	[Failure]
Benzidine	1.8416230	2.000	PASS	

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1950575			N/A
4,4-DDE	24330	1.2	20.0	PASS
4,4-DDD	58481	2.9	20.0	PASS
4,4-DDD + DDE	82811	4.1	20.0	PASS

Tuning Sample, nt11.i/20161213.b/N1116121306.D, *** FAILED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	39.25
68	Less than 2.00% of mass 69	0.64 (1.39)
69	Mass 69 relative abundance	46.26
70	Less than 2.00% of mass 69	0.43 (0.93)
127	10.00 - 80.00% of mass 198	54.11
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.12
275	10.00 - 60.00% of mass 198	24.25
365	Greater than 1.00% of mass 198	3.46
441	0.01 - 24.00% of mass 442	13.07 (16.47)
442	50.00 - 200.00% of mass 198	79.39
443	15.00 - 24.00% of mass 442	18.77 (23.64)

Data File: N1116121306.D
Spectrum: Avg. Scans 141-143 (3.84), Background Scan 136
Location of Maximum: 198.00
Number of points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	714	115.00	2596	190.00	1158	276.00	27056
38.00	5339	116.00	9103	191.00	2917	277.00	22264
39.00	31808	117.00	87744	192.00	12151	278.00	3736
40.00	1455	118.00	7918	193.00	10997	279.00	704
41.00	4288	119.00	1277	194.00	2961	280.00	1347
42.00	2266	120.00	2233	195.00	3008	283.00	770
43.00	3046	122.00	9559	196.00	34880	285.00	4736
44.00	1586	123.00	13026	198.00	897664	286.00	2335
45.00	849	124.00	6639	199.00	63928	289.00	1423
47.00	1063	125.00	6500	200.00	9653	291.00	692
48.00	1657	127.00	485696	201.00	2277	293.00	3902
49.00	574	128.00	38600	202.00	1659	294.00	2890
50.00	96512	129.00	171584	203.00	7235	295.00	1016
51.00	352320	130.00	15550	204.00	32696	296.00	73768
52.00	27072	131.00	4079	205.00	58928	297.00	8106
55.00	5603	132.00	673	206.00	253184	301.00	762
56.00	12203	133.00	1976	207.00	38952	302.00	2298
57.00	16608	134.00	5806	208.00	6836	303.00	5901
58.00	1728	135.00	15349	209.00	3474	304.00	2205
59.00	1744	136.00	5646	210.00	8892	309.00	690
60.00	1080	137.00	8747	211.00	11961	314.00	2981
61.00	3582	138.00	2867	212.00	1224	316.00	6179
62.00	3615	139.00	1981	215.00	1730	321.00	1808
63.00	19744	140.00	4541	216.00	4907	322.00	682
64.00	3071	141.00	20664	217.00	62816	323.00	19104
65.00	10262	142.00	7521	218.00	12325	324.00	5482
67.00	6955	143.00	6846	219.00	2124	325.00	728
68.00	5773	145.00	1816	220.00	1323	327.00	2105
69.00	415232	146.00	1545	221.00	50624	328.00	3389
70.00	3861	147.00	8792	222.00	7243	333.00	3511
71.00	308	148.00	21656	223.00	11742	334.00	15317
72.00	1749	149.00	4771	224.00	142976	335.00	4018
73.00	2680	150.00	826	225.00	37096	341.00	4343
74.00	42888	151.00	2162	226.00	2350	342.00	1977
75.00	74760	152.00	2712	227.00	61040	346.00	4142
76.00	24360	153.00	6896	228.00	7281	347.00	702
77.00	466944	154.00	2919	229.00	10015	352.00	5894
78.00	30272	155.00	10369	231.00	2249	353.00	7243
79.00	26008	156.00	18624	234.00	2215	354.00	6579
80.00	27504	157.00	3068	235.00	2765	363.00	976
81.00	37512	158.00	5582	236.00	2448	365.00	31024
82.00	7341	159.00	2990	237.00	2837	366.00	4292
83.00	7809	160.00	6898	239.00	1470	367.00	1077
84.00	3277	161.00	11175	240.00	797	371.00	2725
85.00	2290	162.00	4650	241.00	4929	372.00	10090
86.00	13019	163.00	750	242.00	8905	373.00	2658
87.00	6278	164.00	1579	243.00	9643	374.00	959
88.00	705	165.00	10934	244.00	109912	377.00	3061
89.00	1057	166.00	9345	245.00	15156	383.00	3357

91.00	8296	167.00	53152	246.00	17624	390.00	713
92.00	8816	168.00	20024	247.00	3370	402.00	4167
93.00	50592	169.00	4890	248.00	699	403.00	7481
94.00	4921	171.00	2354	249.00	3772	404.00	1746
96.00	3376	172.00	6862	251.00	1556	419.00	675
98.00	43504	173.00	6402	253.00	5717	421.00	4400
99.00	37296	174.00	10273	254.00	5559	422.00	7664
100.00	1815	175.00	20232	255.00	523136	423.00	51672
101.00	19808	176.00	6379	256.00	82632	424.00	8310
102.00	2395	177.00	10028	257.00	5735	425.00	1072
103.00	8651	178.00	3317	258.00	31808	427.00	751
104.00	11675	179.00	34336	259.00	5250	440.00	1564
105.00	11252	180.00	30192	261.00	992	441.00	117368
106.00	5199	181.00	11763	265.00	11327	442.00	712640
107.00	156672	184.00	2156	266.00	1868	443.00	168448
108.00	21920	185.00	18984	267.00	695	444.00	13789
110.00	264192	186.00	139520	271.00	1038	455.00	743
111.00	42408	187.00	41312	273.00	16304	460.00	868
112.00	5598	188.00	3518	274.00	46128		
113.00	1712	189.00	10714	275.00	217728		

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM

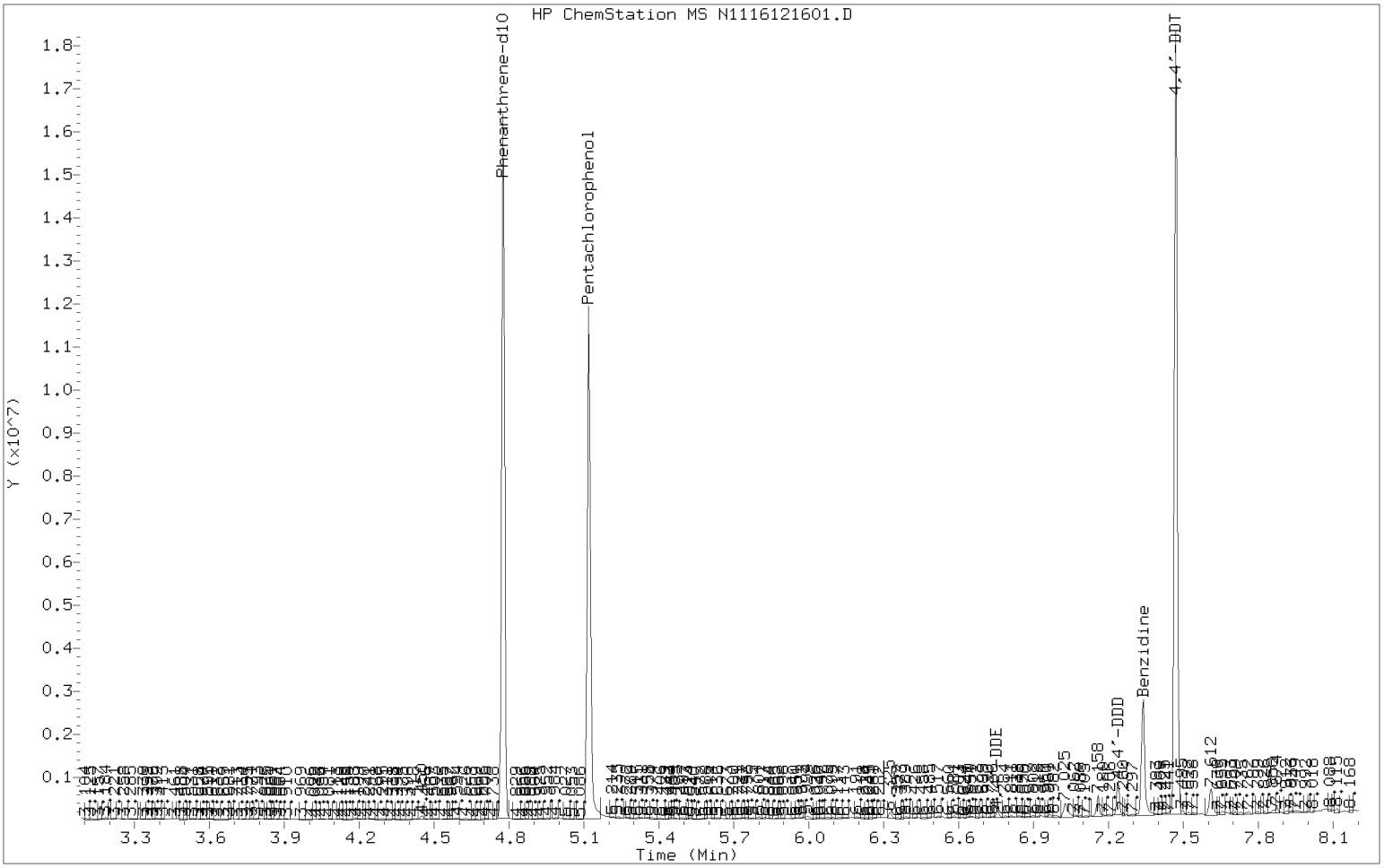
Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Lab File ID:	N1116121601.D	Injection Date:	12/16/16
Instrument ID:	NT11	Injection Time:	09:31
Sequence:	SEL0234	Lab Sample ID:	SEL0234-TUN1

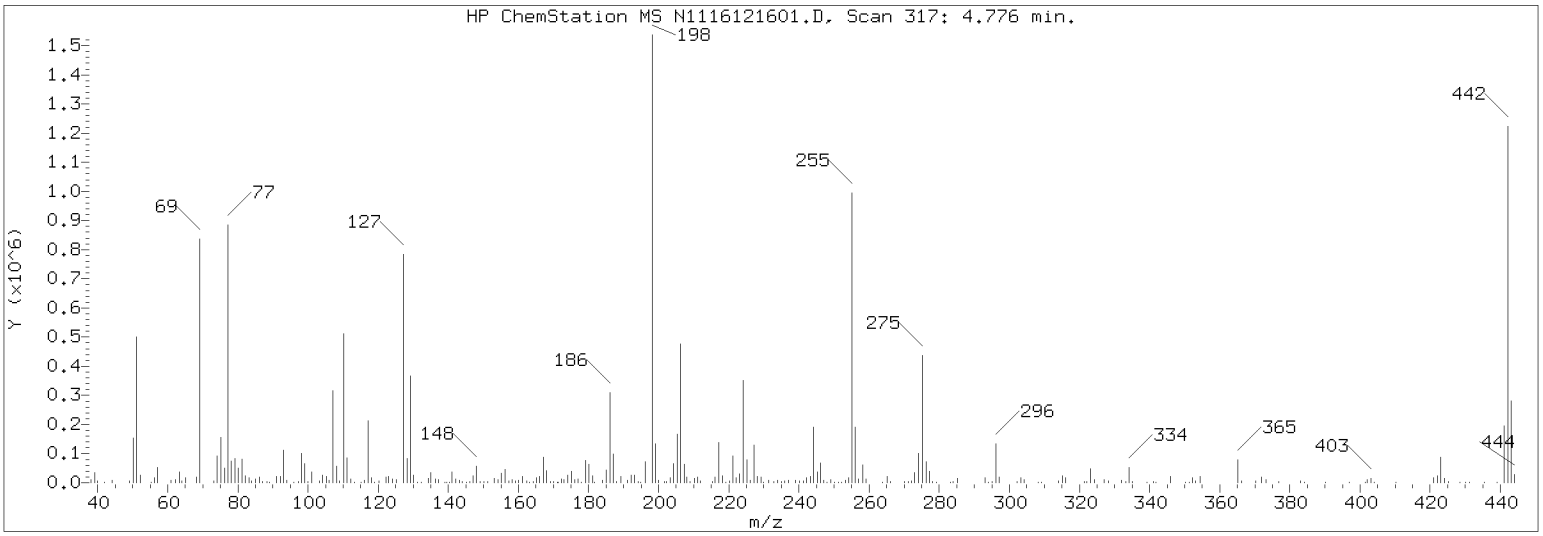
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	27.6	PASS
68	Less than 2% of 69	1.82	PASS
69	Less than 100% of 198	47.8	PASS
70	Less than 2% of 69	0.361	PASS
127	10 - 80% of 198	44.8	PASS
197	Less than 2% of 198	0.358	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.76	PASS
275	10 - 60% of 198	25.9	PASS
365	1 - 100% of 198	4.12	PASS
441	0.1 - 24% of 442	15.9	PASS
442	50 - 200% of 198	71.8	PASS
443	15 - 24% of 442	22.3	PASS

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SEL0234-TUN1	N1116121601.D	12/16/2016	9:31
Initial Cal Check	SEL0234-ICV1	N1116121602.D	12/16/2016	9:46
Low Cal Check	SEL0234-LCV1	N1116121603.D	12/16/2016	10:32
G-SMA1-1-PEMD-161122-	16K0321-01RE1	N1116121604.D	12/16/2016	11:03
G-SMA1-3-PEMD-161122-	16K0321-05RE1	N1116121605.D	12/16/2016	11:34
G-SMA2-3-PEMD-161122-	16K0321-11RE1	N1116121606.D	12/16/2016	12:06
G-SMA2-4-PEMD-161122-	16K0321-13RE1	N1116121607.D	12/16/2016	12:37
G-SMA2-5-PEMD-161122-	16K0321-15RE1	N1116121608.D	12/16/2016	13:08
Calibration Check	SEL0234-CCV1	N1116121610X.D	12/16/2016	13:50

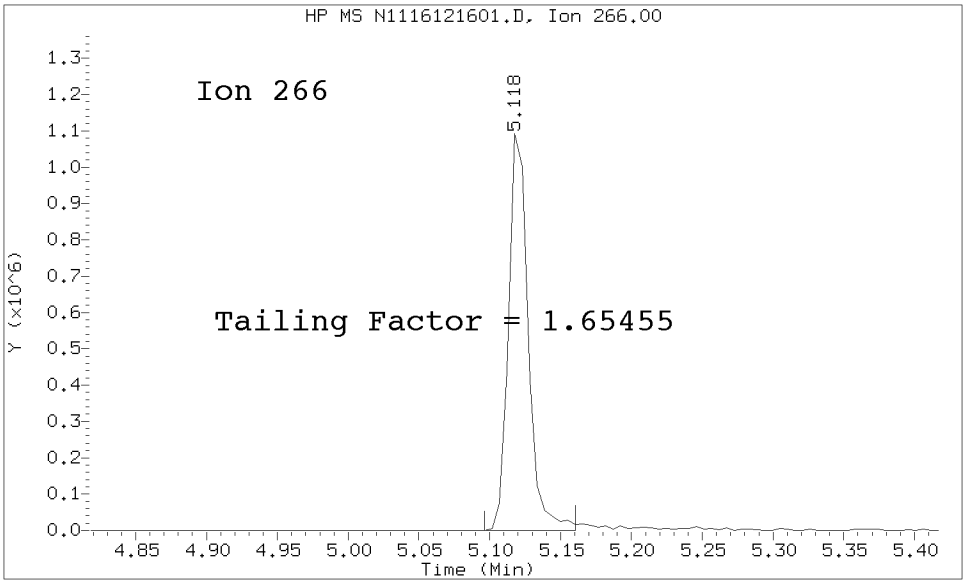
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20161216.b/N1116121601.D/N1116121601.D
Method Used: \20161216.b\DFTPP.m Inst: nt11
Injection Date: 16-DEC-2016 09:31 Operator: VTS
Sample Info: SEL0234-TUN1 SEL0234-TUN1
Report Date: 12/17/2016 11:00



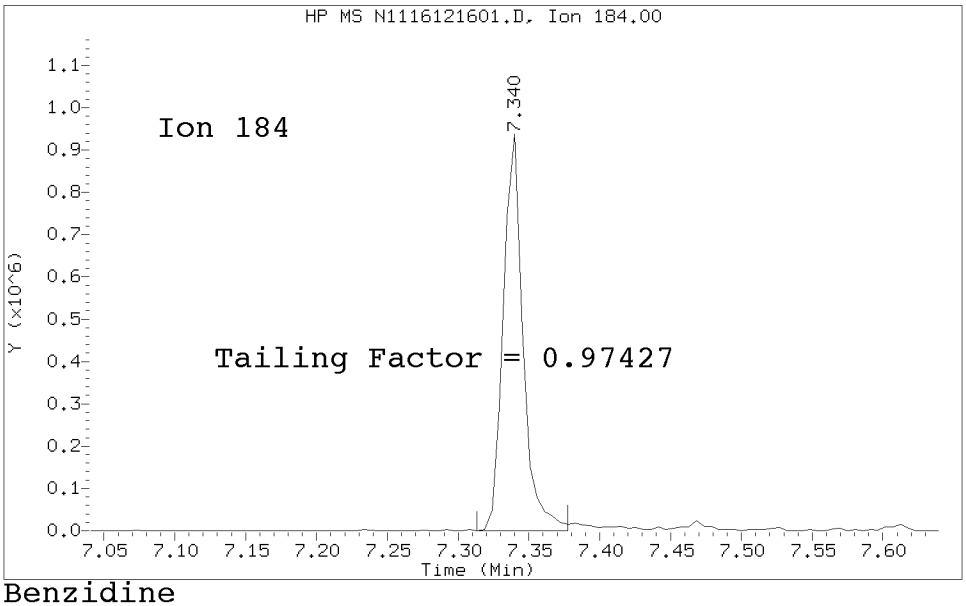


Datafile Analyzed: /20161216.b/N1116121601.D/N1116121601.D
Method Used: \20161216.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 16-DEC-2016 09:31 Operator: JW
Sample Info: SEL0234-TUN1 SEL0234-TUN1
Report Date: 12/17/2016 11:00



Pentachlorophenol
==========
Exp. RT = 5.118
Found RT = 5.118

Tail Factor = 1.655 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.340
Found RT = 7.340

Tail Factor = 0.974 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.6545455	2.000	PASS
Benzidine	0.9742729	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2149607			N/A
4,4-DDE	18070	0.8	20.0	PASS
4,4-DDD	116856	5.2	20.0	PASS
4,4-DDD + DDE	134926	5.9	20.0	PASS

Tuning Sample, nt11.i/20161216.b/N1116121601.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	27.65
68	Less than 2.00% of mass 69	0.87 (1.82)
69	Mass 69 relative abundance	47.75
70	Less than 2.00% of mass 69	0.17 (0.36)
127	10.00 - 80.00% of mass 198	44.83
197	Less than 2.00% of mass 198	0.36
199	5.00 - 9.00% of mass 198	7.76
275	10.00 - 60.00% of mass 198	25.91
365	Greater than 1.00% of mass 198	4.12
441	0.01 - 24.00% of mass 442	11.41 (15.89)
442	50.00 - 200.00% of mass 198	71.83
443	15.00 - 24.00% of mass 442	16.05 (22.35)

Data File: N1116121601.D
Spectrum: Average Spectrum: 4.770 to 4.781 min.
Location of Maximum: 198.00
Number of points: 303

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1212	129.00	252352	207.00	54928	295.00	1342
38.00	4981	130.00	24120	208.00	13915	296.00	107704
39.00	27632	131.00	3971	209.00	3379	297.00	15557
40.00	5284	132.00	750	210.00	8609	302.00	3408
42.00	698	134.00	10468	211.00	15190	303.00	13537
43.00	923	135.00	21888	212.00	3551	304.00	4410
44.00	7937	136.00	5470	213.00	675	306.00	857
49.00	5875	137.00	14503	214.00	690	308.00	2006
50.00	102824	138.00	1032	215.00	2523	309.00	2912
51.00	365824	139.00	1494	216.00	12091	312.00	780
52.00	18424	140.00	2251	217.00	110040	313.00	920
53.00	786	141.00	33312	218.00	16944	314.00	5383
55.00	3716	142.00	9119	219.00	1938	315.00	15908
56.00	14282	143.00	6967	220.00	2061	316.00	9303
57.00	39472	144.00	1788	221.00	73976	321.00	3336
58.00	875	145.00	1736	222.00	9396	322.00	1432
61.00	6500	146.00	4621	223.00	25736	323.00	40440
62.00	6198	147.00	18152	224.00	236864	324.00	5877
63.00	26368	148.00	37128	225.00	51744	326.00	879
64.00	2201	149.00	5680	226.00	7325	327.00	7215
65.00	13372	150.00	1359	227.00	101160	328.00	3759
66.00	697	151.00	3332	228.00	14564	332.00	3365
68.00	11522	152.00	776	229.00	21480	333.00	5944
69.00	631872	153.00	11538	230.00	1889	334.00	28312
70.00	2281	154.00	9566	231.00	6548	335.00	2792
73.00	9595	155.00	21664	233.00	2441	339.00	687
74.00	69408	156.00	32216	234.00	5833	341.00	4308
75.00	114784	157.00	3117	235.00	7383	342.00	682
76.00	38840	158.00	8214	236.00	4656	346.00	12997
77.00	668864	159.00	7600	237.00	7378	347.00	679
78.00	53160	160.00	7601	239.00	4113	350.00	727
79.00	49752	161.00	18832	240.00	3731	351.00	760
80.00	42168	162.00	5229	241.00	5648	352.00	14162
81.00	59120	163.00	2408	242.00	11186	353.00	8568
82.00	13210	164.00	2431	243.00	14762	354.00	12215
83.00	12462	165.00	12709	244.00	151936	355.00	1724
84.00	4511	166.00	13882	245.00	25704	365.00	54560
85.00	9761	167.00	65696	246.00	41264	366.00	4787
86.00	19336	168.00	32560	247.00	6102	370.00	2250
87.00	5344	169.00	3731	248.00	838	371.00	791
88.00	3439	170.00	3149	249.00	7134	372.00	15224
89.00	700	171.00	3052	250.00	2137	373.00	4805
91.00	14784	172.00	7336	251.00	1074	377.00	3378
92.00	13807	173.00	7455	252.00	2778	383.00	7334
93.00	81976	174.00	17960	253.00	7108	384.00	1067
94.00	5095	175.00	23392	254.00	9312	385.00	685
96.00	3663	176.00	9103	255.00	760256	390.00	3446
97.00	1226	177.00	10799	256.00	131200	391.00	687
98.00	68632	178.00	3960	257.00	10202	393.00	696

99.00	52712	179.00	53592	258.00	44600	397.00	738
100.00	3838	180.00	43480	259.00	10256	401.00	837
101.00	26488	181.00	18008	260.00	925	402.00	9734
102.00	2391	182.00	910	261.00	2406	403.00	12552
103.00	8111	184.00	2962	264.00	1594	404.00	4314
104.00	20152	185.00	27856	265.00	18656	410.00	851
105.00	18792	186.00	219904	266.00	4093	411.00	856
106.00	5389	187.00	69232	267.00	893	421.00	11538
107.00	236800	188.00	4763	270.00	2327	422.00	12137
108.00	41336	189.00	15434	271.00	2312	423.00	68896
109.00	4601	190.00	2186	272.00	3024	424.00	12129
110.00	371648	191.00	6437	273.00	25352	425.00	2727
111.00	63240	192.00	15586	274.00	74584	426.00	782
112.00	8398	193.00	21824	275.00	342848	428.00	754
113.00	2157	194.00	5673	276.00	48376	429.00	813
115.00	893	195.00	5196	277.00	35848	430.00	781
116.00	10618	196.00	40984	278.00	4725	431.00	884
117.00	158016	197.00	4737	279.00	710	433.00	716
118.00	13790	198.00	1195520	283.00	3243	434.00	891
119.00	1619	199.00	102736	284.00	1102	435.00	832
120.00	2594	200.00	6260	285.00	10111	439.00	913
122.00	11507	201.00	5003	289.00	1288	441.00	150976
123.00	17560	202.00	4997	290.00	1035	442.00	950400
124.00	11490	203.00	12090	291.00	786	443.00	212352
125.00	7491	204.00	47056	292.00	707	444.00	21672
127.00	593216	205.00	116528	293.00	10202	466.00	719
128.00	57552	206.00	361152	294.00	836		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Lab File ID:	N1116121609.D	Injection Date:	12/16/16
Instrument ID:	NT11	Injection Time:	13:34
Sequence:	SEL0249	Lab Sample ID:	SEL0249-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	29.6	PASS
68	Less than 2% of 69	1.63	PASS
69	Less than 100% of 198	51.4	PASS
70	Less than 2% of 69	0.295	PASS
127	10 - 80% of 198	50	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	8.44	PASS
275	10 - 60% of 198	29.5	PASS
365	1 - 100% of 198	4.03	PASS
441	0.1 - 24% of 442	15.7	PASS
442	50 - 200% of 198	77.1	PASS
443	15 - 24% of 442	22	PASS

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SEL0249-TUN1	N1116121609.D	12/16/2016	13:34
Cal Standard	SEL0249-CAL4	N1116121610.D	12/16/2016	13:50
Cal Standard	SEL0249-CAL6	N1116121611.D	12/16/2016	14:28
Cal Standard	SEL0249-CAL1	N1116121612.D	12/16/2016	14:59
Cal Standard	SEL0249-CAL5	N1116121613.D	12/16/2016	15:30
Cal Standard	SEL0249-CAL2	N1116121614.D	12/16/2016	16:01
Cal Standard	SEL0249-CAL3	N1116121615.D	12/16/2016	16:32
Secondary Cal Check	SEL0249-SCV1	N1116121616.D	12/16/2016	17:04
Blank	BEL0032-BLK1	N1116121617.D	12/16/2016	17:35
LCS	BEL0032-BS1	N1116121618.D	12/16/2016	18:06
LCS Dup	BEL0032-BSD1	N1116121619.D	12/16/2016	18:36
ZZZZZ	16K0376-01	N1116121620.D	12/16/2016	19:08
ZZZZZ	16K0376-02	N1116121621.D	12/16/2016	19:38
ZZZZZ	16K0376-03	N1116121622.D	12/16/2016	20:09
ZZZZZ	16K0376-04	N1116121623.D	12/16/2016	20:40
ZZZZZ	16K0376-05	N1116121624.D	12/16/2016	21:11
ZZZZZ	16K0376-06	N1116121625.D	12/16/2016	21:42
ZZZZZ	16K0376-07	N1116121626.D	12/16/2016	22:13
ZZZZZ	16K0376-22	N1116121627.D	12/16/2016	22:44
ZZZZZ	16K0376-23	N1116121628.D	12/16/2016	23:15
ZZZZZ	16K0376-24	N1116121629.D	12/16/2016	23:46
ZZZZZ	16K0376-25	N1116121630.D	12/17/2016	0:17
ZZZZZ	16K0376-26	N1116121631.D	12/17/2016	0:47
ZZZZZ	16K0376-27	N1116121632.D	12/17/2016	1:18

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM

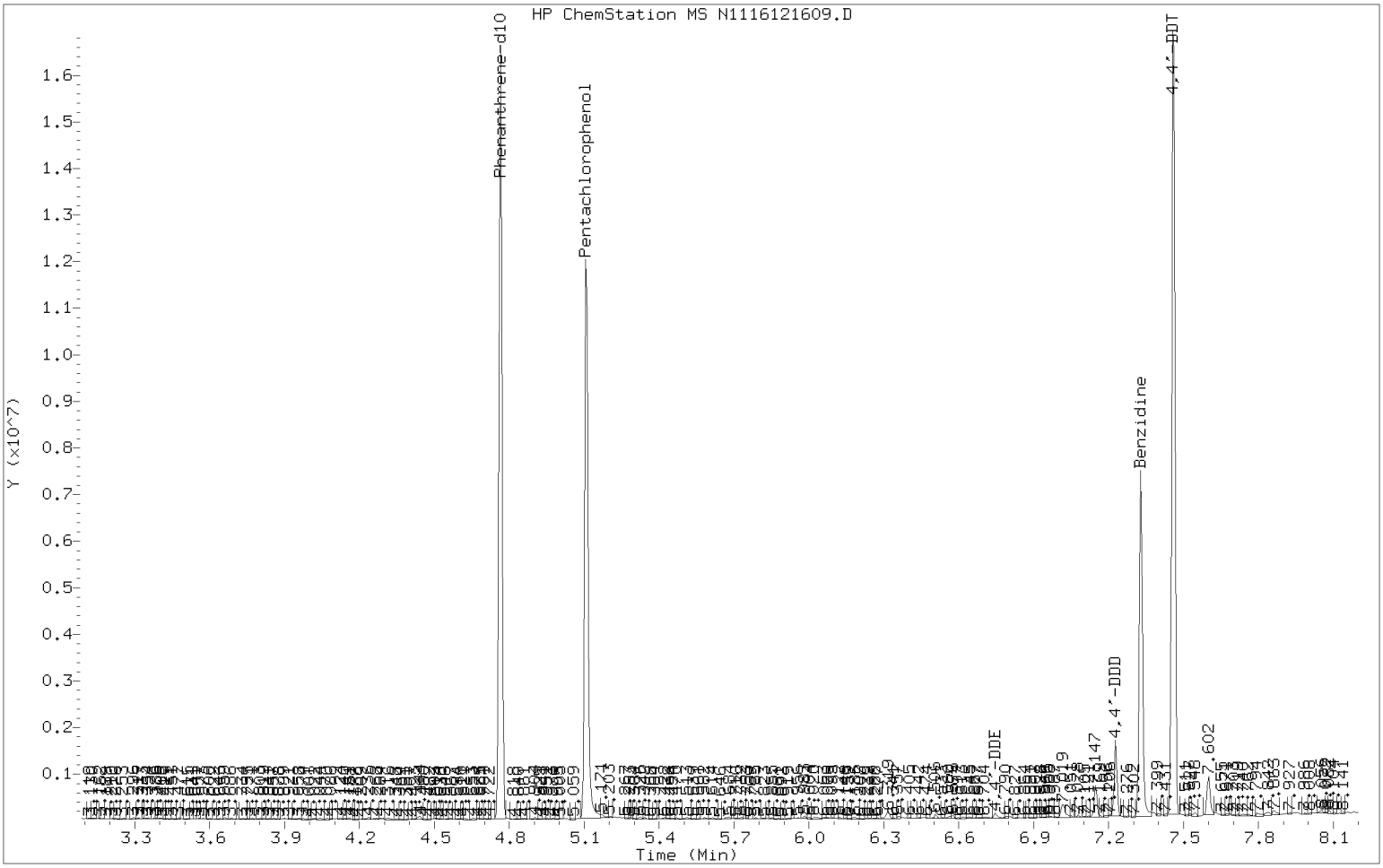
Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Lab File ID:	N1116121609.D	Injection Date:	12/16/16
Instrument ID:	NT11	Injection Time:	13:34
Sequence:	SEL0249	Lab Sample ID:	SEL0249-TUN1

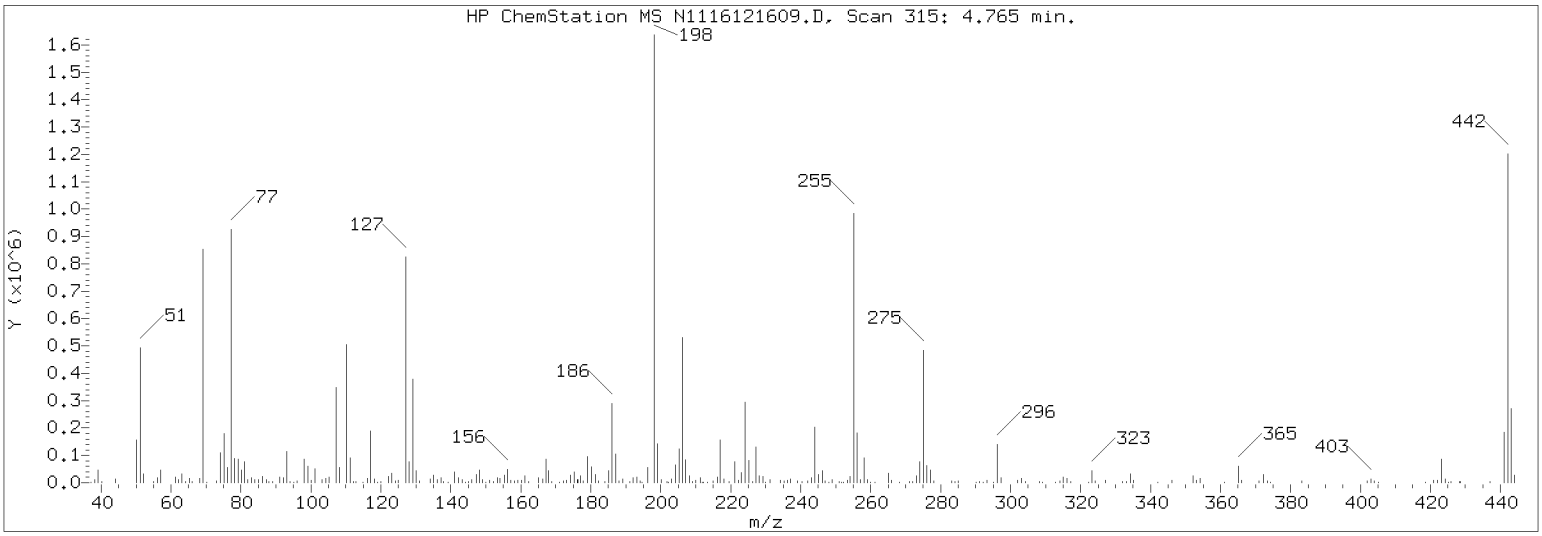
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	29.6	PASS
68	Less than 2% of 69	1.63	PASS
69	Less than 100% of 198	51.4	PASS
70	Less than 2% of 69	0.295	PASS
127	10 - 80% of 198	50	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	8.44	PASS
275	10 - 60% of 198	29.5	PASS
365	1 - 100% of 198	4.03	PASS
441	0.1 - 24% of 442	15.7	PASS
442	50 - 200% of 198	77.1	PASS
443	15 - 24% of 442	22	PASS

Calibration Check	SEL0249-CCV1	N1116121634.D	12/17/2016	2:20

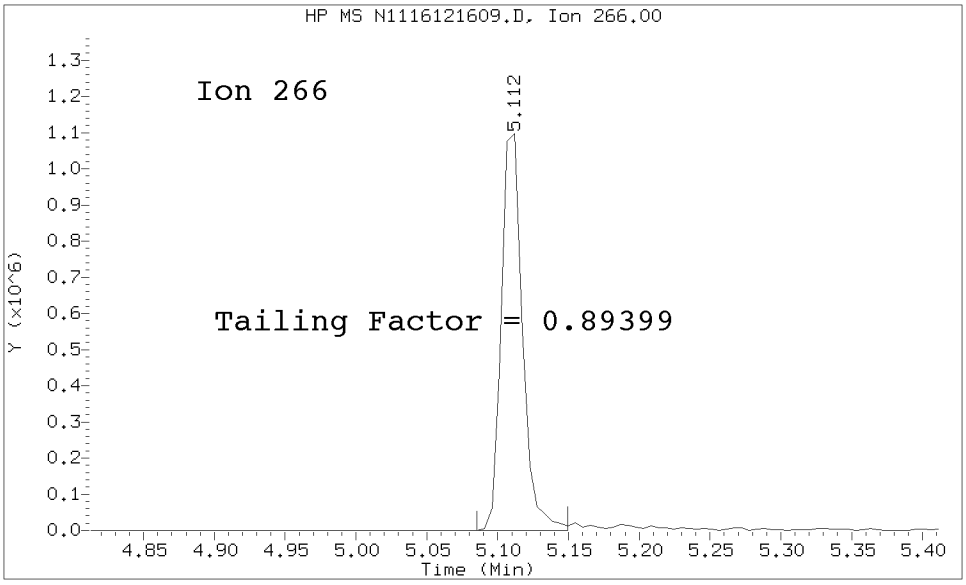
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20161216A.b/N1116121609.D/N1116121609.D
Method Used: \20161216A.b\DFTPP.m Inst: nt11
Injection Date: 16-DEC-2016 13:34 Operator: VTS
Sample Info: SEL0249-TUN1 SEL0249-TUN1
Report Date: 12/17/2016 08:48



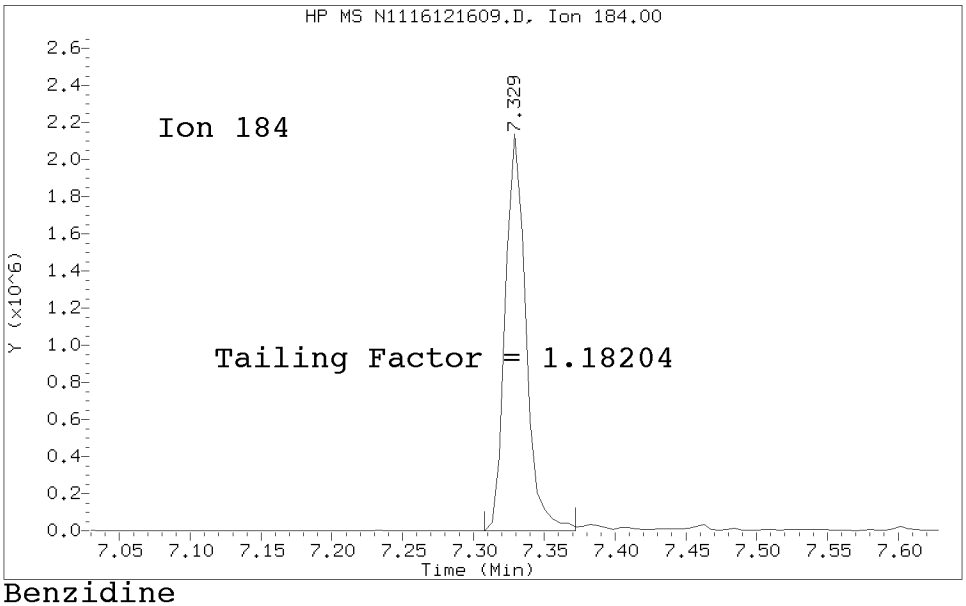


Datafile Analyzed: /20161216A.b/N1116121609.D/N1116121609.D
Method Used: \20161216A.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 16-DEC-2016 13:34 Operator: JW
Sample Info: SELXXXX-TUN1
Report Date: 12/17/2016 08:48



Pentachlorophenol
==========
Exp. RT = 5.112
Found RT = 5.112

Tail Factor = 0.894 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.329
Found RT = 7.329

Tail Factor = 1.182 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	0.8939891	2.000	PASS
Benzidine	1.1820449	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2187223			N/A
4,4-DDE	10282	0.5	20.0	PASS
4,4-DDD	237259	9.8	20.0	PASS
4,4-DDD + DDE	247541	10.2	20.0	PASS

Tuning Sample, nt11.i/20161216A.b/N1116121609.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	29.55
68	Less than 2.00% of mass 69	0.84 (1.63)
69	Mass 69 relative abundance	51.42
70	Less than 2.00% of mass 69	0.15 (0.29)
127	10.00 - 80.00% of mass 198	49.96
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.44
275	10.00 - 60.00% of mass 198	29.47
365	Greater than 1.00% of mass 198	4.03
441	0.01 - 24.00% of mass 442	12.08 (15.67)
442	50.00 - 200.00% of mass 198	77.06
443	15.00 - 24.00% of mass 442	16.93 (21.97)

Data File: N1116121609.D
Spectrum: Avg. Scans 314-316 (4.76), Background Scan 310
Location of Maximum: 198.00
Number of points: 280

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1295	127.00	627520	202.00	6028	291.00	2287
37.00	3070	128.00	50888	203.00	9124	292.00	2684
38.00	7357	129.00	279424	204.00	47232	293.00	6539
39.00	31272	130.00	26824	205.00	96600	295.00	881
40.00	2933	131.00	4866	206.00	392256	296.00	104176
43.00	712	132.00	836	207.00	55584	297.00	15641
44.00	8229	133.00	666	208.00	19768	301.00	1429
49.00	1767	134.00	6702	209.00	5104	302.00	3991
50.00	114912	135.00	18928	210.00	8447	303.00	13284
51.00	371136	136.00	8940	211.00	13860	304.00	4809
52.00	23048	137.00	12915	212.00	1664	308.00	1555
55.00	3572	138.00	3215	213.00	727	309.00	706
56.00	15853	139.00	950	215.00	4378	310.00	815
57.00	35392	140.00	1046	216.00	12044	313.00	1068
58.00	830	141.00	31768	217.00	115592	314.00	2142
61.00	11081	142.00	11546	218.00	13237	315.00	12229
62.00	9249	143.00	5225	219.00	2089	316.00	9312
63.00	23000	144.00	953	220.00	812	317.00	2206
64.00	3042	145.00	1273	221.00	66736	321.00	772
65.00	13674	146.00	6756	222.00	13387	322.00	1557
66.00	1914	147.00	22432	223.00	28544	323.00	29536
68.00	10496	148.00	38192	224.00	218880	324.00	5555
69.00	645760	149.00	8846	225.00	56696	327.00	5987
70.00	1902	150.00	731	226.00	4497	328.00	980
73.00	4833	151.00	7228	227.00	100024	332.00	3704
74.00	79072	152.00	1552	228.00	17648	333.00	4314
75.00	118568	153.00	13948	229.00	20096	334.00	24992
76.00	42120	154.00	12455	230.00	2444	335.00	7245
77.00	692608	155.00	20352	231.00	7942	341.00	3413
78.00	61616	156.00	37248	234.00	6690	342.00	691
79.00	61232	157.00	6979	235.00	9114	346.00	7810
80.00	36680	158.00	7532	236.00	4249	352.00	12607
81.00	62960	159.00	4284	237.00	6600	353.00	5154
82.00	11302	160.00	10826	239.00	4632	354.00	9413
83.00	11714	161.00	20264	240.00	3095	355.00	672
84.00	2288	162.00	2940	241.00	4013	361.00	694
85.00	10941	165.00	14392	242.00	10249	365.00	50608
86.00	14661	166.00	11002	243.00	13962	366.00	5850
87.00	8162	167.00	67392	244.00	163456	371.00	4167
88.00	4239	168.00	29784	245.00	23256	372.00	21112
89.00	2470	169.00	5569	246.00	32624	373.00	6617
91.00	13526	171.00	2101	247.00	6378	374.00	927
92.00	15469	172.00	7457	248.00	3527	378.00	1133
93.00	82056	173.00	7051	249.00	8312	383.00	4387
94.00	6913	174.00	20576	251.00	3561	390.00	1430
96.00	5277	175.00	30496	252.00	1668	391.00	705
98.00	61328	176.00	12810	253.00	7660	402.00	7325
99.00	50936	177.00	19168	254.00	10809	403.00	13559
100.00	6649	178.00	2220	255.00	777216	404.00	4684

101.00	31824	179.00	60000	256.00	133888	405.00	706
103.00	10788	180.00	40184	257.00	7982	418.00	739
104.00	19984	181.00	21896	258.00	53904	421.00	8302
105.00	16191	182.00	4303	259.00	8840	422.00	7358
106.00	3472	183.00	1249	260.00	995	423.00	70440
107.00	244992	184.00	4278	261.00	2895	424.00	11608
108.00	36784	185.00	30768	264.00	672	425.00	1037
109.00	4839	186.00	207744	265.00	27400	426.00	1222
110.00	392192	187.00	72256	266.00	5286	428.00	1299
111.00	60200	188.00	6257	268.00	1642	429.00	2022
112.00	5991	189.00	13560	271.00	2273	432.00	1536
113.00	1256	190.00	2115	272.00	3546	435.00	902
115.00	927	191.00	7330	273.00	22616	437.00	1257
116.00	12115	192.00	17664	274.00	66184	441.00	151680
117.00	149888	193.00	17736	275.00	370176	442.00	967808
118.00	13513	194.00	5354	276.00	48944	443.00	212672
119.00	725	195.00	954	277.00	33176	444.00	22864
120.00	4220	196.00	37752	278.00	3424	451.00	711
122.00	17136	198.00	1255936	283.00	5117		
123.00	21728	199.00	106008	284.00	1447		
124.00	8748	200.00	7072	285.00	5325		
125.00	8713	201.00	2933	290.00	710		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM

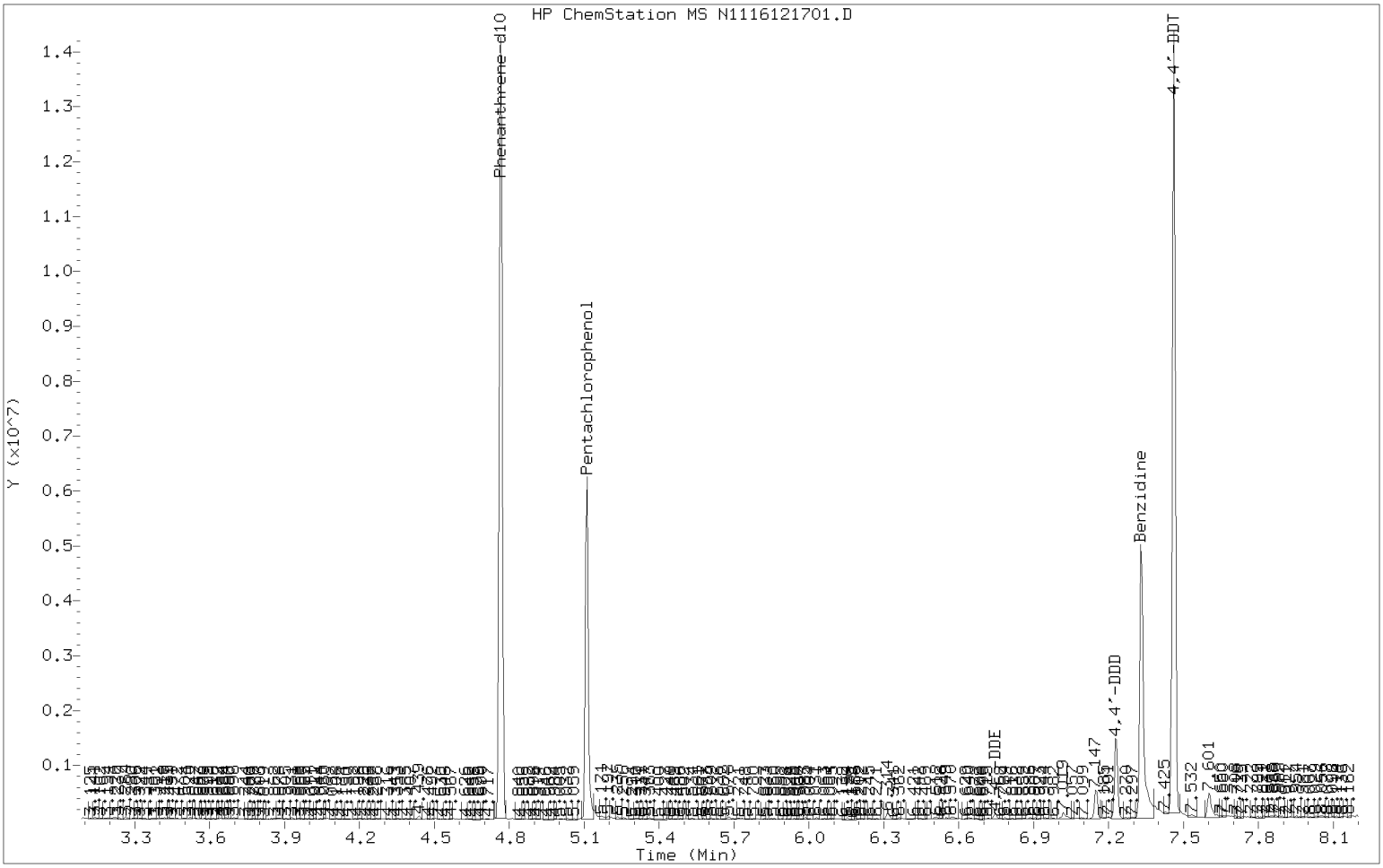
Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Lab File ID:	N1116121701.D	Injection Date:	12/17/16
Instrument ID:	NT11	Injection Time:	12:24
Sequence:	SEL0255	Lab Sample ID:	SEL0255-TUN1

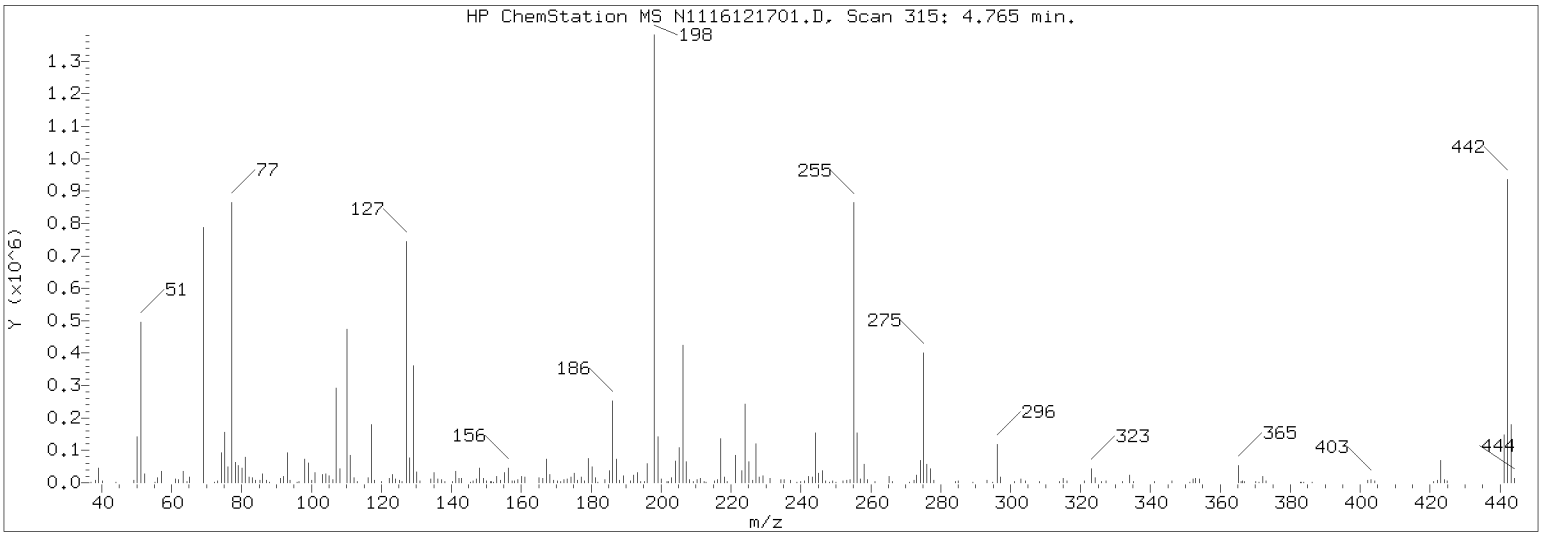
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	31.3	PASS
68	Less than 2% of 69	0	PASS
69	Less than 100% of 198	53.4	PASS
70	Less than 2% of 69	0.682	PASS
127	10 - 80% of 198	51	PASS
197	Less than 2% of 198	0.21	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	8.79	PASS
275	10 - 60% of 198	28.4	PASS
365	1 - 100% of 198	4.37	PASS
441	0.1 - 24% of 442	15.3	PASS
442	50 - 200% of 198	74.2	PASS
443	15 - 24% of 442	22	PASS

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SEL0255-TUN1	N1116121701.D	12/17/2016	12:24
Initial Cal Check	SEL0255-ICV1	N1116121702.D	12/17/2016	12:40
ZZZZZ	16K0376-28	N1116121703.D	12/17/2016	13:11
Blank	BEK0658-BLK1	N1116121704.D	12/17/2016	13:42
LCS	BEK0658-BS1	N1116121705.D	12/17/2016	14:13
PG-GP-1-PEMD-161122-A	16K0321-19	N1116121706.D	12/17/2016	14:44
PG-WS-1-PEMD-161122-A	16K0321-21	N1116121707.D	12/17/2016	15:15
G-FB-SMA1-PEMD-16112	16K0321-23	N1116121708.D	12/17/2016	15:46
G-FB-SMA2-PEMD-16112	16K0321-24	N1116121709.D	12/17/2016	16:17
PG-TB-PEMD-161122	16K0321-25	N1116121710.D	12/17/2016	16:48
Blank	BEK0709-BLK1	N1116121711.D	12/17/2016	17:19
LCS	BEK0709-BS1	BEK0709-BS1.D	12/17/2016	17:49
ZZZZZ	16K0255-01	N1116121712.D	12/17/2016	17:49
ZZZZZ	16K0255-02	N1116121713.D	12/17/2016	18:20
ZZZZZ	16K0255-03	N1116121714.D	12/17/2016	18:51
ZZZZZ	16K0255-04	N1116121715.D	12/17/2016	19:22
ZZZZZ	16K0255-05	N1116121716.D	12/17/2016	19:53
ZZZZZ	16K0255-06	N1116121717.D	12/17/2016	20:24
ZZZZZ	16K0255-07	N1116121718.D	12/17/2016	20:55
ZZZZZ	16K0255-08	N1116121719.D	12/17/2016	21:25
LCS	BEK0709-BS2	BEK0709-BS2.D	12/17/2016	21:56
ZZZZZ	16K0255-09	N1116121720.D	12/17/2016	21:56
Calibration Check	SEL0255-CCV1	N1116121721.D	12/17/2016	22:27

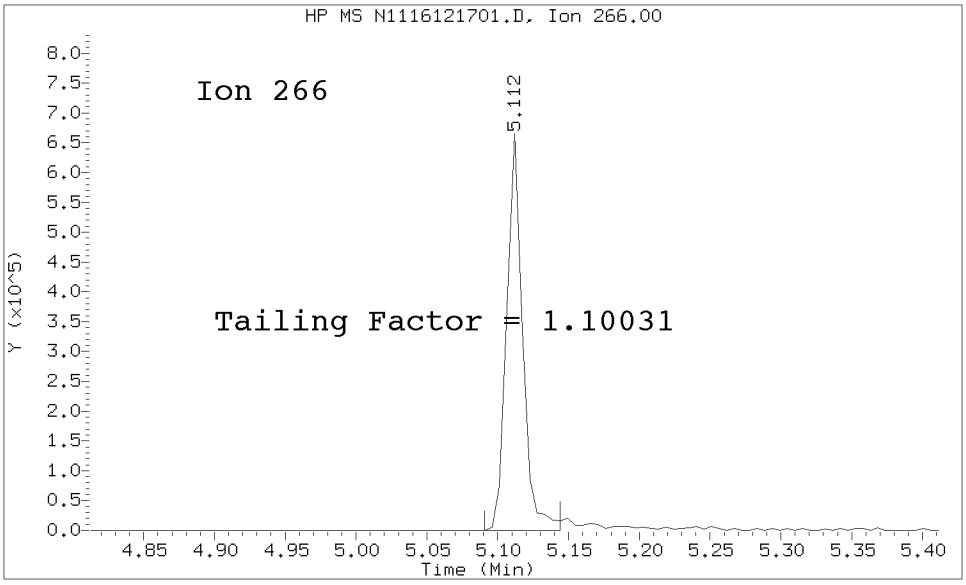
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20161217.b/N1116121701.D/N1116121701.D
Method Used: \20161217.b\DFTPP.m Inst: nt11
Injection Date: 17-DEC-2016 12:24 Operator: VTS
Sample Info: SEL0255-TUN1 SEL0255-TUN1
Report Date: 12/17/2016 12:43



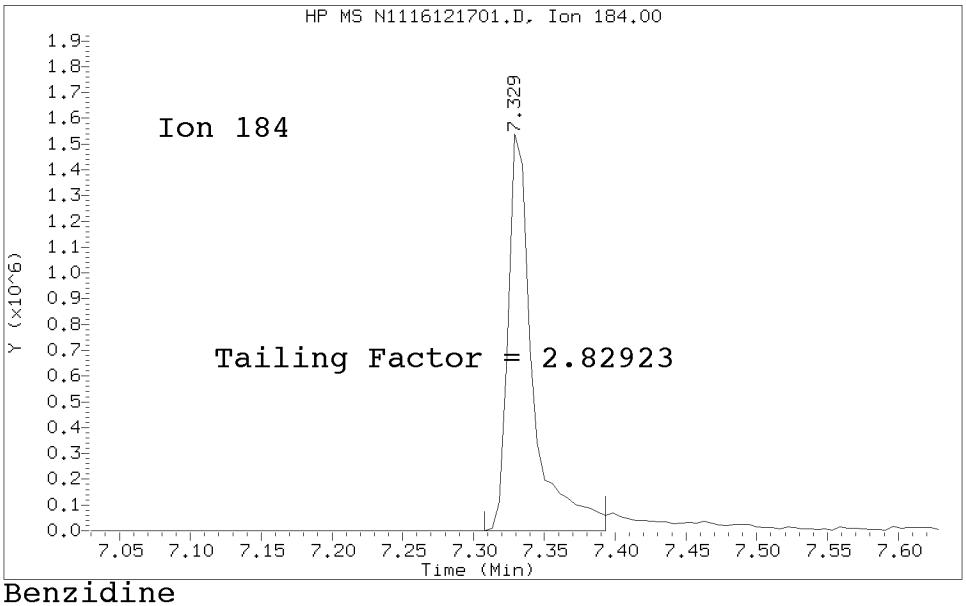


Datafile Analyzed: /20161217.b/N1116121701.D/N1116121701.D
Method Used: \20161217.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 17-DEC-2016 12:24 Operator: JW
Sample Info: SEL0255-TUN1
Report Date: 12/17/2016 12:43



Pentachlorophenol
==========
 Exp. RT = 5.112
Found RT = 5.112

Tail Factor = 1.100 Maximum Allowed = 2.0



Benzidine
==========
 Exp. RT = 7.329
Found RT = 7.329

The tailing factor for Benzidine EXCEEDED

Tail Factor = 2.829 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test	
Pentachlorophenol	1.1003086	2.000	PASS	
Benzidine	2.8292282	2.000	FAIL	[Failure]

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1684340			N/A
4,4-DDE	15856	0.9	20.0	PASS
4,4-DDD	234139	12.2	20.0	PASS
4,4-DDD + DDE	249995	12.9	20.0	PASS

Tuning Sample, nt11.i/20161217.b/N1116121701.D, *** FAILED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	31.26
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	53.44
70	Less than 2.00% of mass 69	0.36 (0.68)
127	10.00 - 80.00% of mass 198	51.02
197	Less than 2.00% of mass 198	0.21
199	5.00 - 9.00% of mass 198	8.79
275	10.00 - 60.00% of mass 198	28.41
365	Greater than 1.00% of mass 198	4.37
441	0.01 - 24.00% of mass 442	11.34 (15.28)
442	50.00 - 200.00% of mass 198	74.22
443	15.00 - 24.00% of mass 442	16.34 (22.02)

Data File: N1116121701.D
Spectrum: Avg. Scans 314-316 (4.76), Background Scan 310
Location of Maximum: 198.00
Number of points: 280

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	746	126.00	2532	201.00	2928	285.00	3699
37.00	2600	127.00	567424	202.00	2852	286.00	716
38.00	6225	128.00	58688	203.00	13572	288.00	700
39.00	36192	129.00	247744	204.00	45272	289.00	2195
40.00	4224	130.00	21264	205.00	88896	290.00	853
41.00	936	131.00	6391	206.00	324992	292.00	1165
44.00	598	132.00	1095	207.00	49448	293.00	5789
48.00	787	134.00	7619	208.00	9661	294.00	2366
49.00	4933	135.00	20168	209.00	2766	295.00	895
50.00	103552	136.00	10287	210.00	7670	296.00	101224
51.00	347584	137.00	8887	211.00	17072	297.00	16091
52.00	18344	138.00	2360	212.00	2388	301.00	1028
55.00	1935	140.00	3493	213.00	1762	303.00	12588
56.00	12258	141.00	34992	215.00	3032	304.00	3230
57.00	26944	142.00	9788	216.00	10375	308.00	1232
58.00	720	143.00	9226	217.00	102816	310.00	1047
61.00	8340	144.00	3831	218.00	11623	313.00	803
62.00	9797	145.00	779	219.00	3447	314.00	3243
63.00	27448	146.00	4668	220.00	1055	315.00	7525
64.00	1424	147.00	13383	221.00	63840	316.00	4560
65.00	12984	148.00	34736	222.00	9002	321.00	3058
66.00	911	149.00	9505	223.00	20976	322.00	735
69.00	594240	150.00	4053	224.00	184000	323.00	36080
70.00	4054	151.00	6846	225.00	52248	324.00	6970
72.00	896	152.00	1768	226.00	7255	326.00	2840
73.00	4862	153.00	11785	227.00	88272	327.00	5766
74.00	69328	154.00	8107	228.00	12117	328.00	752
75.00	118152	155.00	20232	229.00	17992	332.00	3259
76.00	37616	156.00	28640	230.00	744	334.00	19768
77.00	628736	157.00	5446	231.00	9387	335.00	2654
78.00	47888	158.00	4998	233.00	779	341.00	2893
79.00	43232	159.00	6574	234.00	7260	346.00	5651
80.00	38200	160.00	12817	235.00	9035	347.00	884
81.00	53800	161.00	19064	236.00	1219	351.00	770
82.00	13816	162.00	2596	237.00	7838	352.00	7251
83.00	10748	164.00	1213	239.00	2327	353.00	7111
84.00	5695	165.00	9896	240.00	2418	354.00	8796
85.00	7552	166.00	9823	241.00	3846	355.00	1216
86.00	17072	167.00	57112	242.00	12447	358.00	737
87.00	6421	168.00	21208	243.00	10386	365.00	48640
88.00	2115	169.00	5662	244.00	133504	366.00	7655
89.00	676	170.00	1744	245.00	20576	367.00	1011
91.00	8028	171.00	989	246.00	26648	370.00	1546
92.00	12080	172.00	7212	247.00	7681	371.00	1695
93.00	71392	173.00	8329	248.00	950	372.00	15560
94.00	5630	174.00	13504	249.00	6353	373.00	3187
96.00	4029	175.00	20216	250.00	1999	374.00	718
98.00	53032	176.00	5556	251.00	759	377.00	1001
99.00	46016	177.00	11603	252.00	1847	383.00	3900

100.00	5072	178.00	3084	253.00	5415	384.00	719
101.00	26488	179.00	52000	254.00	5403	386.00	709
103.00	13497	180.00	37672	255.00	694656	390.00	2005
104.00	17312	181.00	15745	256.00	118568	402.00	5335
105.00	16832	182.00	1580	257.00	9173	403.00	9029
106.00	6612	184.00	6142	258.00	41160	404.00	3526
107.00	215680	185.00	29504	259.00	7267	421.00	5710
108.00	36224	186.00	194752	260.00	791	422.00	6416
109.00	2915	187.00	59080	261.00	1446	423.00	57264
110.00	349248	188.00	5116	265.00	21008	424.00	13402
111.00	61200	189.00	17144	266.00	2555	425.00	1906
112.00	7962	190.00	1476	271.00	876	434.00	1342
113.00	2132	191.00	6835	272.00	4178	439.00	766
116.00	12360	192.00	16037	273.00	24608	441.00	126080
117.00	145344	193.00	21112	274.00	59176	442.00	825344
118.00	7506	194.00	4329	275.00	315904	443.00	181760
120.00	2368	195.00	3355	276.00	43800	444.00	13368
121.00	679	196.00	36864	277.00	28264	453.00	678
122.00	12113	197.00	2330	278.00	5883		
123.00	18384	198.00	1112064	282.00	687		
124.00	8849	199.00	97736	283.00	1797		
125.00	9349	200.00	6604	284.00	1223		

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM

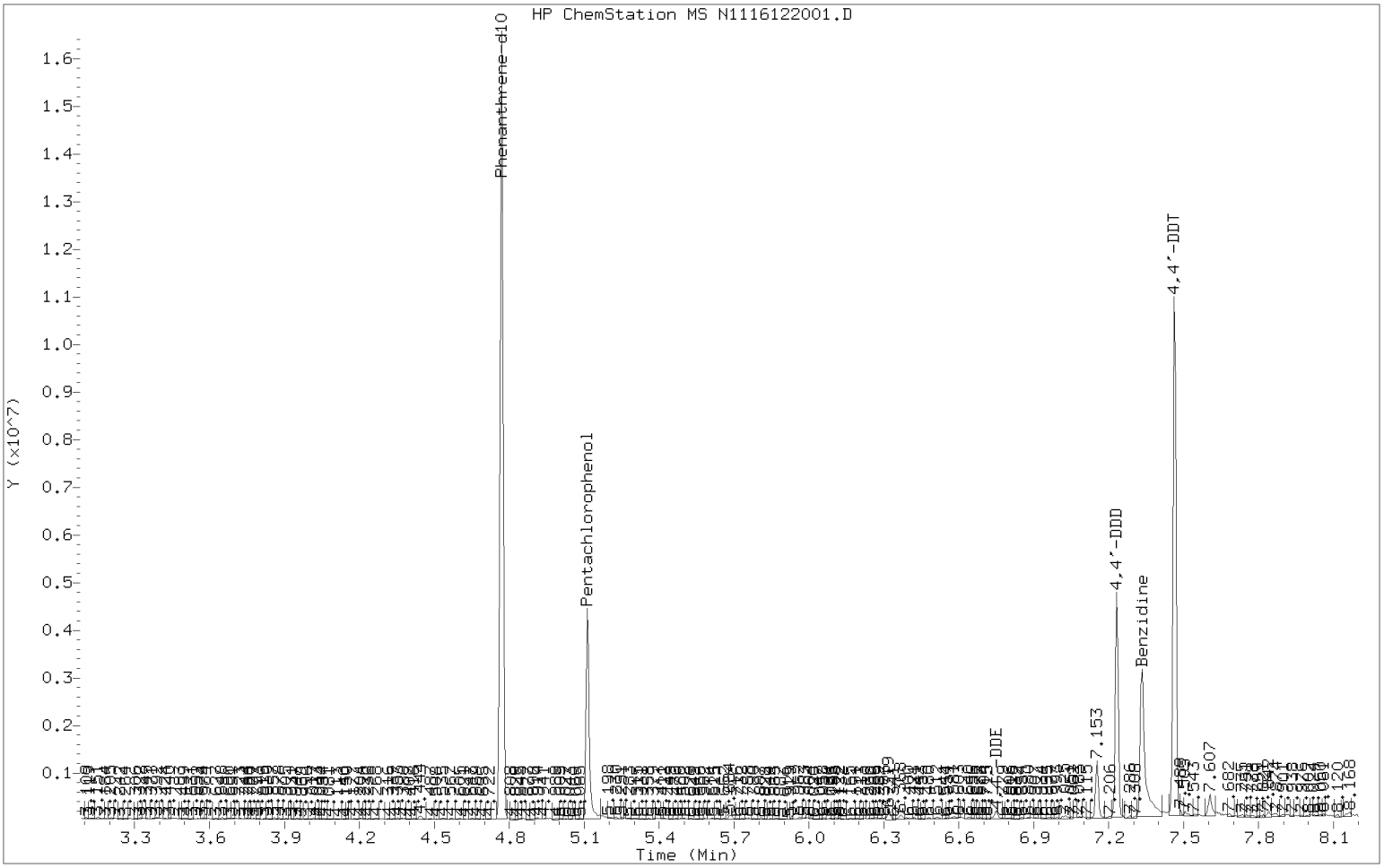
Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Lab File ID:	N1116122001.D	Injection Date:	12/20/16
Instrument ID:	NT11	Injection Time:	09:29
Sequence:	SEL0277	Lab Sample ID:	SEL0277-TUN1

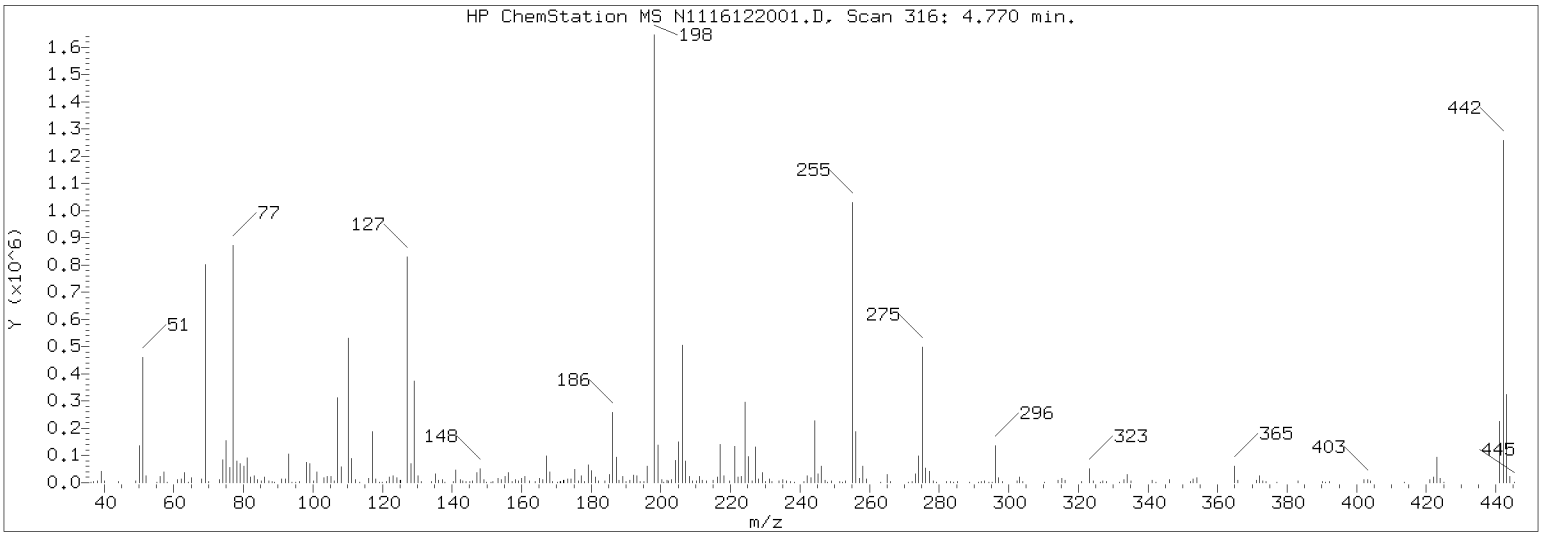
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	28.7	PASS
68	Less than 2% of 69	1.13	PASS
69	Less than 100% of 198	49.4	PASS
70	Less than 2% of 69	0.815	PASS
127	10 - 80% of 198	47.8	PASS
197	Less than 2% of 198	0.0667	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	8.71	PASS
275	10 - 60% of 198	27	PASS
365	1 - 100% of 198	3.79	PASS
441	0.1 - 24% of 442	16.6	PASS
442	50 - 200% of 198	79.5	PASS
443	15 - 24% of 442	22.5	PASS

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SEL0277-TUN1	N1116122001.D	12/20/2016	9:29
Initial Cal Check	SEL0277-ICV1	N1116122002.D	12/20/2016	9:45
PG-GP-1-PEMD-161122-A	16K0321-19RE1	N1116122003.D	12/20/2016	10:16
PG-WS-1-PEMD-161122-A	16K0321-21RE1	N1116122004.D	12/20/2016	10:47
Calibration Check	SEL0277-CCV1	N1116122005.D	12/20/2016	11:18

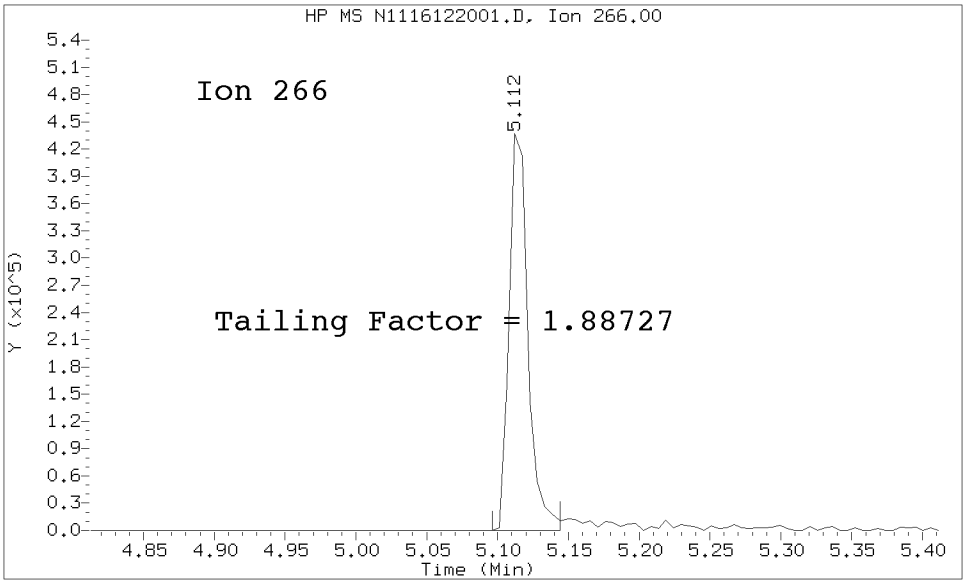
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20161220.b/N1116122001.D/N1116122001.D
Method Used: \20161220.b\DFTPP.m Inst: nt11
Injection Date: 20-DEC-2016 09:29 Operator: VTS
Sample Info: SEL0277-TUN1 SEL0277-TUN1
Report Date: 12/20/2016 12:20



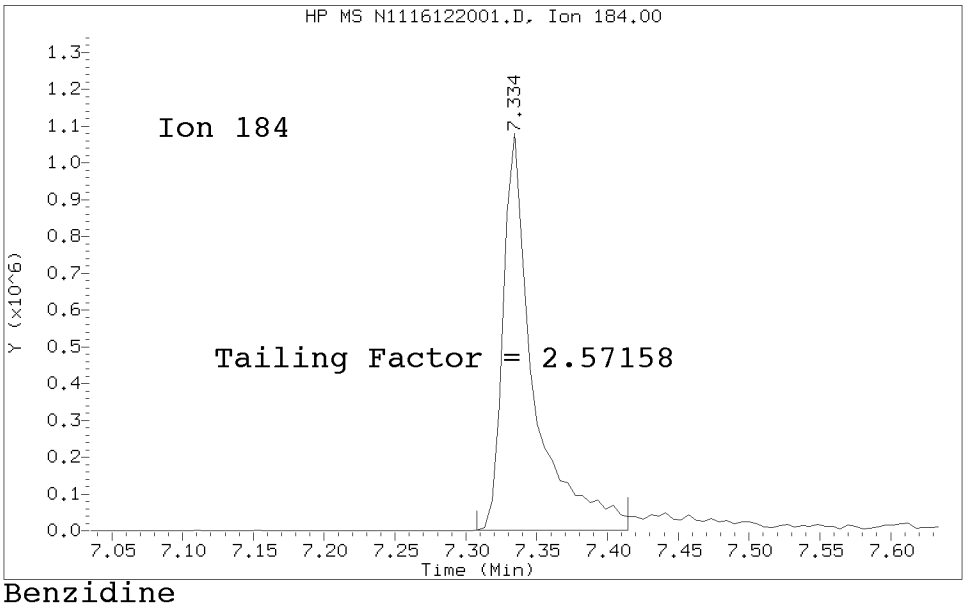


Datafile Analyzed: /20161220.b/N1116122001.D/N1116122001.D
Method Used: \20161220.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 20-DEC-2016 09:29 Operator: JW
Sample Info: SEL0277-TUN1
Report Date: 12/20/2016 12:20



Pentachlorophenol
==========
 Exp. RT = 5.112
Found RT = 5.112

Tail Factor = 1.887 Maximum Allowed = 2.0



Benzidine
==========
 Exp. RT = 7.334
Found RT = 7.334

The tailing factor for Benzidine EXCEEDED

Tail Factor = 2.572 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test	
Pentachlorophenol	1.8872727	2.000	PASS	
Benzidine	2.5715847	2.000	FAIL	[Failure]

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test	
4,4-DDT	1311505			N/A	
4,4-DDE	15457	1.2	20.0	PASS	
4,4-DDD	697345	34.7	20.0	FAIL	[Failure]
4,4-DDD + DDE	712802	35.2	20.0	FAIL	[Failure]

Tuning Sample, nt11.i/20161220.b/N1116122001.D, *** FAILED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	28.71
68	Less than 2.00% of mass 69	0.56 (1.13)
69	Mass 69 relative abundance	49.44
70	Less than 2.00% of mass 69	0.40 (0.82)
127	10.00 - 80.00% of mass 198	47.84
197	Less than 2.00% of mass 198	0.07
199	5.00 - 9.00% of mass 198	8.71
275	10.00 - 60.00% of mass 198	27.01
365	Greater than 1.00% of mass 198	3.79
441	0.01 - 24.00% of mass 442	13.22 (16.64)
442	50.00 - 200.00% of mass 198	79.48
443	15.00 - 24.00% of mass 442	17.84 (22.45)

Data File: N1116122001.D
Spectrum: Average Spectrum: 4.749 to 4.792 min. (SUB)
Location of Maximum: 198.00
Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1540	124.00	4608	201.00	816	281.00	259
37.00	489	125.00	5457	202.00	3092	282.00	533
38.00	2041	126.00	373	203.00	4404	283.00	1303
39.00	12219	127.00	238976	204.00	21392	284.00	1095
40.00	3816	128.00	21328	205.00	37896	285.00	1827
41.00	958	129.00	103120	206.00	142912	286.00	371
44.00	1328	130.00	6937	207.00	20000	289.00	977
47.00	265	131.00	1515	208.00	5888	291.00	378
48.00	535	132.00	229	209.00	1783	292.00	1117
49.00	1396	134.00	2376	210.00	3453	293.00	2416
50.00	37248	135.00	9043	211.00	6813	294.00	902
51.00	143424	136.00	2861	212.00	929	295.00	718
52.00	8561	137.00	4123	213.00	756	296.00	33912
53.00	402	138.00	1021	214.00	241	297.00	5333
55.00	1162	140.00	1036	215.00	2456	298.00	457
56.00	6312	141.00	13506	216.00	3345	302.00	1320
57.00	12841	142.00	4135	217.00	40624	303.00	5237
58.00	607	143.00	2447	218.00	5332	304.00	1203
60.00	361	144.00	414	220.00	1074	309.00	281
61.00	3284	145.00	674	221.00	34128	310.00	231
62.00	4594	146.00	2572	222.00	7813	314.00	2294
63.00	10528	147.00	9340	223.00	7752	315.00	6684
64.00	1340	148.00	13639	224.00	82216	316.00	2870
65.00	4345	149.00	3710	225.00	27368	321.00	1042
66.00	276	150.00	550	226.00	1028	322.00	517
67.00	536	151.00	1013	227.00	40424	323.00	12001
68.00	2802	152.00	498	228.00	3783	324.00	2751
69.00	246976	153.00	4823	229.00	8607	326.00	271
70.00	2014	154.00	3133	230.00	763	327.00	1859
74.00	27128	155.00	7308	231.00	3094	328.00	1501
75.00	47016	156.00	12661	232.00	849	332.00	356
76.00	15655	157.00	2469	233.00	683	333.00	2136
77.00	272128	158.00	2663	234.00	2443	334.00	7816
78.00	20880	159.00	2912	235.00	2712	335.00	2468
79.00	21560	160.00	4454	236.00	1656	339.00	309
80.00	17368	161.00	6651	237.00	2883	341.00	1435
81.00	23256	162.00	1727	238.00	367	342.00	489
82.00	5735	163.00	745	239.00	1034	346.00	2252
83.00	6240	164.00	1214	240.00	256	347.00	274
84.00	148	165.00	5555	241.00	1276	352.00	3498
85.00	709	166.00	4598	242.00	5379	353.00	3012
86.00	3648	167.00	26776	243.00	4215	354.00	4916
87.00	2170	168.00	12797	244.00	62224	355.00	257
89.00	258	169.00	1290	245.00	8963	365.00	18944
91.00	3740	170.00	239	246.00	14868	366.00	3227
92.00	5583	171.00	1437	247.00	2616	371.00	1970
93.00	30840	172.00	2562	248.00	714	372.00	8667
94.00	3138	173.00	3650	249.00	1446	373.00	1354
95.00	272	174.00	5537	250.00	261	374.00	396

96.00	1230	175.00	14123	251.00	763	377.00	1724
97.00	393	176.00	2696	252.00	232	383.00	1919
98.00	22752	177.00	5340	253.00	1691	384.00	977
99.00	20000	178.00	1257	254.00	933	390.00	1416
100.00	1527	179.00	19240	255.00	287680	391.00	456
101.00	11723	180.00	13978	256.00	47944	392.00	1128
102.00	242	181.00	6627	257.00	4693	402.00	3279
103.00	4278	182.00	2476	258.00	15832	403.00	4603
104.00	6638	183.00	462	259.00	3652	404.00	1886
105.00	6510	184.00	1304	260.00	319	405.00	230
106.00	2100	185.00	9517	261.00	464	409.00	234
107.00	87952	186.00	80352	263.00	222	414.00	280
108.00	16117	187.00	26824	264.00	294	421.00	3282
109.00	406	188.00	3029	265.00	7239	422.00	4375
110.00	150976	189.00	4797	266.00	1073	423.00	27208
111.00	26240	190.00	1151	267.00	317	424.00	4475
112.00	2612	191.00	2334	268.00	295	425.00	335
113.00	566	192.00	4026	271.00	893	441.00	66064
116.00	4969	193.00	6772	272.00	1235	442.00	397056
117.00	51056	194.00	476	273.00	9367	443.00	89144
118.00	3909	195.00	1006	274.00	25240	444.00	7721
119.00	492	196.00	15176	275.00	134912	445.00	621
120.00	507	197.00	333	276.00	15363	482.00	230
121.00	817	198.00	499584	277.00	11831		
122.00	6129	199.00	43504	278.00	1704		
123.00	8299	200.00	3172	279.00	288		

INITIAL CALIBRATION DATA

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Calibration:	ZK00080	Instrument:	NT11
Calibration Date:	11/25/2016 6:30	Column (1):	RXi-17Sil-MS

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Naphthalene	10	2.432729	50	2.142325	100	2.213779	250	2.045497	500	1.966638	1000	1.825642
2-Methylnaphthalene	10	0.9142177	50	0.8476831	100	0.9061937	250	0.8508507	500	0.8600251	1000	0.8010261
Acenaphthylene	10	1.994701	50	1.765885	100	1.85769	250	1.875513	500	1.838891	1000	1.754042
Acenaphthene	10	1.409387	50	1.226141	100	1.330929	250	1.24258	500	1.231943	1000	1.165421
Dibenzofuran	10	2.041121	50	1.821246	100	1.846361	250	1.764393	500	1.736157	1000	1.600239
Fluorene	10	1.470126	50	1.332011	100	1.416896	250	1.40064	500	1.40324	1000	1.328326
Phenanthrene	10	1.334302	50	1.227796	100	1.259567	250	1.170912	500	1.152051	1000	1.063489
Anthracene	10	1.17844	50	1.109693	100	1.180613	250	1.135723	500	1.120897	1000	1.057449
Fluoranthene	10	1.240622	50	1.117768	100	1.212441	250	1.156072	500	1.166998	1000	1.100249
Pyrene	10	1.428551	50	1.29078	100	1.319647	250	1.27536	500	1.280326	1000	1.212889
Benzo(a)anthracene	10	1.295942	50	1.079377	100	1.111839	250	1.100668	500	1.107911	1000	1.060369
Chrysene	10	1.518597	50	1.249669	100	1.266327	250	1.182075	500	1.177151	1000	1.099604
Benzo(b)fluoranthene	10	1.397521	50	1.08324	100	1.097723	250	1.158135	500	1.070246	1000	1.014323
Benzo(k)fluoranthene	10	1.565074	50	1.149649	100	1.183535	250	1.073988	500	1.232378	1000	1.206902
Benzo(j)fluoranthene	10	1.312937	50	1.162779	100	1.240302	250	1.061215	500	1.074235	1000	1.018827
Benzo(a)pyrene	10	1.215535	50	0.9971594	100	1.037246	250	0.9928923	500	1.013373	1000	0.9891662
Indeno(1,2,3-cd)pyrene	10	1.369923	50	1.077524	100	1.12061	250	1.089723	500	1.140135	1000	1.134472
Dibenzo(a,h)anthracene	10	1.094172	50	0.8797108	100	0.9070567	250	0.8832167	500	0.9327959	1000	0.9357988
Benzo(g,h,i)perylene	10	1.21617	50	0.9681903	100	0.9787505	250	0.9147748	500	0.9566701	1000	0.9545035
1-Methylnaphthalene	10	0.9079637	50	0.8363304	100	0.9007954	250	0.8216778	500	0.8279646	1000	0.7857541
Perylene	10	1.272175	50	1.048463	100	1.086225	250	1.023585	500	1.043986	1000	1.009554
Benzo(e)pyrene	10	1.316112	50	1.084078	100	1.107992	250	1.048538	500	1.063273	1000	1.008423
2-Methylnaphthalene-d10	10	0.7967809	50	0.7425135	100	0.7839188	250	0.738492	500	0.7506695	1000	0.7117203
Dibenzo[a,h]anthracene-d14	10	0.7420922	50	0.640039	100	0.654882	250	0.6353022	500	0.6710147	1000	0.6761985
Fluoranthene-d10	10	0.9384812	50	0.8582052	100	0.9037605	250	0.8900876	500	0.8963937	1000	0.8696266
Fluorene-d10	10	1.094842	50	0.9441298	100	0.9745215	250	0.9571957	500	0.9681218	1000	0.921118
Anthracene-d10	10	1.002396	50	0.8741104	100	0.8880401	250	0.905401	500	0.9003111	1000	0.8664562
Benzo(e)pyrene-d12	10	1.030199	50	0.9466931	100	0.9863331	250	0.9351901	500	0.9581713	1000	0.9262623

INITIAL CALIBRATION DATA

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Calibration:	ZK00080	Instrument:	NT11
Calibration Date:	11/25/2016 6:30	Column (1):	RXi-17Sil-MS

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Naphthalene	2.104435	10.0			RSD (20)	
2-Methylnaphthalene	0.8633327	4.8			RSD (20)	
Acenaphthylene	1.847787	4.7			RSD (20)	
Acenaphthene	1.267734	6.9			RSD (20)	
Dibenzofuran	1.801586	8.1			RSD (20)	
Fluorene	1.391873	3.9			RSD (20)	
Phenanthrene	1.201353	7.8			RSD (20)	
Anthracene	1.130469	4.1			RSD (20)	
Fluoranthene	1.165692	4.6			RSD (20)	
Pyrene	1.301259	5.5			RSD (20)	
Benzo(a)anthracene	1.126018	7.6			RSD (20)	
Chrysene	1.248904	11.6			RSD (20)	
Benzo(b)fluoranthene	1.136865	11.9			RSD (20)	
Benzo(k)fluoranthene	1.235254	13.8			RSD (20)	
Benzo(j)fluoranthene	1.145049	10.0			RSD (20)	
Benzo(a)pyrene	1.040895	8.4			RSD (20)	
Indeno(1,2,3-cd)pyrene	1.155398	9.3			RSD (20)	
Dibenzo(a,h)anthracene	0.9387918	8.5			RSD (20)	
Benzo(g,h,i)perylene	0.9981765	10.9			RSD (20)	
1-Methylnaphthalene	0.8467477	5.7			RSD (20)	
Perylene	1.080665	9.0			RSD (20)	
Benzo(e)pyrene	1.104736	9.9			RSD (20)	
2-Methylnaphthalene-d10	0.7540158	4.2			RSD (20)	
Dibenzo[a,h]anthracene-d14	0.6699214	5.8			RSD (20)	
Fluoranthene-d10	0.8927591	3.2			RSD (20)	
Fluorene-d10	0.9766548	6.2			RSD (20)	
Anthracene-d10	0.9061191	5.5			RSD (20)	
Benzo(e)pyrene-d12	0.9638081	4.0			RSD (20)	

Central Waterfront RI-FS
16K0221

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Initial Calibration Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
1	Element Calibration Code	YES	JLW	11/30/2016
	Comments: *ZK00080*			
2	DFTPP Tune met criteria	YES	JLW	11/30/2016
3	DDT breakdown <20%	YES	JLW	11/30/2016
4	Peak Tailing factor <= 2%	NO	JLW	11/30/2016
	Comments: *PCP TF @ 2.76*			
5	ICal meets 20% RSD, LR COD, and QR COD limits	YES	JLW	11/30/2016
6	NO ICAL Q Flag applied	YES	JLW	11/30/2016
7	Manual integrations include before/after pictures	YES	JLW	11/30/2016
8	Spectral Library matches updated	YES	JLW	11/30/2016
9	Internal Standard areas within 50-200% from reference	YES	JLW	11/30/2016
10	Minimum response factors met	YES	JLW	11/30/2016
11	All SCV within +/- 20% (DOD)	YES	JLW	11/30/2016
12	All SCV within +/- 30%	YES	JLW	11/30/2016
	Comments: *Not all compounds spiked new stock on order*			
13	NO Linear or Quadratic fits used	YES	JLW	11/30/2016
14	NO Calibration points dropped	YES	JLW	11/30/2016
15	Additional notes	NA	JLW	11/30/2016
16	Reviewer approval (Reviewer)	NA	BB	11/30/2016

* = Indicates Automated Response from Element DataSyst

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-NOV-2016 07:49
End Cal Date : 25-NOV-2016 10:20
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Last Edit : 30-Nov-2016 08:20 nt11.i
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem3\nt11.i\20161125.b\16112506.D
Level 2: \\target\share\chem3\nt11.i\20161125.b\16112508.D
Level 3: \\target\share\chem3\nt11.i\20161125.b\16112509.D
Level 4: \\target\share\chem3\nt11.i\20161125.b\16112505.D
Level 5: \\target\share\chem3\nt11.i\20161125.b\16112507.D
Level 6: \\target\share\chem3\nt11.i\20161125.b\16112510.D

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250 000 Level 4	500.000 Level 5	1000 000 Level 6	RRF	% RSD
2 Naphthalene	1.15852	1.04118	1.08622	0 99785	0.97262	0 91335	1 02829	8.446
3 Benzo(b)thiophene	0 91965	0 83836	0 88261	0 84086	0 83124	0 79067	0.85057	5.259
5 2-Methylnaphthalene	0.91422	0 84768	0.90619	0.85085	0.86003	0.80103	0.86333	4.837
6 1-Methylnaphthalene	0 90796	0.83633	0.90080	0.82168	0.82796	0 78575	0 84675	5.659
7 2-Chloronaphthalene	1.76196	1.57400	1.67827	1.64233	1 60739	1 48994	1 62565	5.708
8 Biphenyl	2.51481	2.20883	2.35460	2 21759	2.14408	1 94527	2 23086	8.638
9 2,6-Dimethylnaphthalene	1 71773	1.55128	1.65158	1.63510	1.58531	1 47751	1 60309	5.241
10 Acenaphthylene	1 99470	1.76588	1.85769	1.87551	1.83889	1 75404	1 84779	4 720
12 Acenaphthene	1 40939	1.22614	1.33093	1 24258	1.23194	1 16542	1.26773	6.892
13 Dibenzofuran	2 04112	1 82125	1.84636	1 76439	1.73616	1 60024	1.80159	8.081
14 2,3,5-Trimethylnaphthalene	1 20255	1.07577	1.12508	1.11176	1.12336	1 08151	1 12000	4.064
16 Fluorene	1.47013	1.33201	1.41690	1 40064	1.40324	1 32833	1 39187	3.879
17 Dibenzothiophene	1 07701	0.98424	1.00814	0 97522	0.96373	0 92294	0.98855	5.222
19 Phenanthrene	1 33430	1 22780	1.25957	1.17091	1.15205	1.06349	1.20135	7.820
21 Anthracene	1 17844	1.10969	1.18061	1.13572	1.12090	1 05745	1 13047	4 092
22 Carbazole	1.47013	1.24483	1.32275	1.30926	1.30294	1 21619	1 31102	6.728
23 1-Methylphenanthrene	1 10882	1 02410	1.07891	1 06119	1 06794	1 01038	1.05856	3.418
25 Fluoranthene	1 24062	1.11777	1.21244	1 15607	1 16700	1 10025	1.16569	4.616
26 Pyrene	1 42855	1 29078	1.31965	1 27536	1.28033	1.21289	1.30126	5.496
27 Benzo(a)anthracene	1 29594	1.07938	1 11184	1.10067	1.10791	1.06037	1.12602	7.591
29 Chrysene	1.51860	1.24967	1 26633	1 18208	1.17715	1 09960	1 24890	11.600
30 Benzo(b)fluoranthene	1 39752	1 08324	1 09772	1 15813	1 07025	1 01432	1.13686	11.948
31 Benzo(k)fluoranthene	1 56507	1 14965	1 18354	1 07399	1 23238	1.20690	1.23525	13.815
32 Benzo(j)fluoranthene	1.31294	1 16278	1 24030	1.06122	1.07424	1 01883	1 14505	9.999
34 Benzo(e)pyrene	1.31611	1 08408	1 10799	1 04854	1 06327	1 00842	1.10474	9.855
35 Benzo(a)pyrene	1.21553	0.99716	1 03725	0 99289	1 01337	0.98917	1 04090	8.393
37 Perylene	1.27217	1 04846	1 08622	1 02358	1 04393	1.00955	1.08066	9.010
39 Dibenzo(a,h)anthracene	1.09417	0 87371	0.90706	0.88322	0 93280	0.93580	0 93879	8.491

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-NOV-2016 07:49
End Cal Date : 25-NOV-2016 10:20
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Last Edit : 30-Nov-2016 08:20 nt11.i
Curve Type : Average

Compound	10.000 Level 1	50 000 Level 2	100 000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
40 Indeno(1,2,3-cd)pyrene	1.36992	1.07752	1.12061	1.08972	1 14014	1 13447	1.15540	9 344
41 Benzo(g,h,i)perylene	1.21617	0.96819	0 97875	0 91477	0 95667	0 95450	0 99818	10 918
$ 4 2-Methylnaphthalene-d10	0.79678	0.74251	0.78392	0.73849	0.75067	0 71172	0 75402	4 150
$ 15 Fluorene-d10	1.09484	0.94413	0 97452	0.95720	0 96812	0 92112	0 97665	6 239
$ 20 Anthracene-d10	1.00240	0 87411	0 88804	0.90540	0.90031	0 86646	0 90612	5.458
$ 24 Fluoranthene-d10	0.93848	0 85821	0 90376	0.89009	0.89639	0.86963	0 89276	3 153
$ 33 Benzo(e)pyrene-d12	1.03020	0.94669	0 98633	0.93519	0.95817	0.92626	0 96381	4 010
$ 38 Dibenzo(a,h)anthracene-d14	0.74209	0 64004	0 65488	0.63530	0 67101	0 67620	0 66992	5 807

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20161125.b
Inst ID: nt11.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME	16112505	16112506	16112507	16112508	16112509	16112510
INJ.DATE	25-NOV-2016	25-NOV-2016	25-NOV-2016	25-NOV-2016	25-NOV-2016	25-NOV-2016
INJ.TIME:	07 49	08.19	08:49	09:20	09·50	10:20

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	1 Naphthalene-d8	5.656	5.647	5 656	5 647	5 647	5.647	5 647	5.397-5.897	5.650	0.005
	2 Naphthalene	5.683	5 683	5 683	5 683	5 683	5 683	5 683	5.433-5 933	5.683	0 000
	3 Benzo(b)thiophene	5.927	5.927	5.927	5.927	5.927	5.927	5.927	5.677-6.177	5.927	0.000
$	4 2-Methylnaphthalene-d1	6.615	6.616	6.605	6.605	6.605	6.605	6.605	6.355-6.855	6.608	0.005
	5 2-Methylnaphthalene	6 668	6.668	6.657	6 657	6.657	6 657	6.657	6.407-6 907	6.661	0 005
	6 1-Methylnaphthalene	6 909	6 910	6.910	6.910	6 899	6 910	6.899	6 649-7 149	6.908	0 004
	7 2-Chloronaphthalene	7 540	7 540	7 540	7.540	7 540	7 540	7.540	7.290-7.790	7.540	0.000
	8 Biphenyl	7 540	7.540	7 540	7.540	7 540	7.540	7 540	7 290-7.790	7.540	0.000
	9 2,6-Dimethylnaphthalen	7.582	7.582	7 582	7 582	7 582	7 582	7 582	7.332-7 832	7 582	0.000
	10 Acenaphthylene	8 430	8.430	8 430	8 430	8.430	8 430	8.430	8 180-8 680	8 430	0 000
*	11 Acenaphthene-d10	8.592	8.584	8.592	8.583	8.583	8.583	8.583	8.333-8.833	8.586	0.005
	12 Acenaphthene	8.647	8.647	8 647	8 647	8 647	8 647	8.647	8.397-8 897	8 647	0 000
	13 Dibenzofuran	8.851	8.851	8.851	8 851	8.851	8 851	8.851	8.601-9 101	8 851	0 000
	14 2,3,5-Trimethylnaphtha	8.977	8.965	8.964	8 964	8.964	8.965	8.964	8.714-9.214	8.967	0.005
$	15 Fluorene-d10	9 419	9.407	9.407	9.407	9.407	9.407	9.407	9 157-9.657	9 409	0.005
	16 Fluorene	9 470	9.470	9.470	9 470	9.470	9.470	9.470	9 220-9 720	9 470	0.000
	17 Dibenzothiophene	11 046	11.036	11.036	11.036	11.036	11.036	11.036	10 786-11 286	11 037	0.004

Reviewer 1 _____ Date: 11/30/16
Reviewer 2 _____ Date: 11/30/16

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20161125.b
Inst ID: nt11.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	18 Phenanthrene-d10	11 214	11 204	11 204	11 204	11 204	11.204	11 214	10.964-11.464	11.206	0.004
	19 Phenanthrene	11 256	11.246	11 246	11 246	11 246	11.246	11 246	10.996-11.496	11.248	0 004
$	20 Anthracene-d10	11.277	11.267	11.267	11.267	11 267	11.267	11.267	11.017-11 517	11.269	0 004
	21 Anthracene	11.309	11.298	11.298	11.298	11.298	11.298	11.298	11.048-11 548	11.300	0.004
	22 Carbazole	11 998	11 989	11 989	11.989	11 989	11.989	11.989	11.739-12 239	11.990	0.004
	23 1-Methylphenanthrene	12.242	12.242	12.242	12.242	12.242	12.242	12.242	11.992-12 492	12.242	0 000
$	24 Fluoranthene-d10	13.272	13.273	13.272	13.272	13.272	13.272	13 272	13.022-13.522	13.272	0 000
	25 Fluoranthene	13.301	13 301	13 301	13.301	13 301	13.301	13 301	13.051-13.551	13.301	0.000
	26 Pyrene	13.781	13 782	13 782	13.782	13 782	13 782	13 782	13.532-14 032	13.782	0.000
	27 Benzo(a)anthracene	15.790	15 791	15 790	15.790	15 790	15.790	15 790	15.540-16 040	15 790	0.000
*	28 Chrysene-d12	15.882	15.874	15.873	15.873	15.873	15.873	15.873	15.623-16.123	15.875	0.003
	29 Chrysene	15.923	15 923	15 923	15.923	15 923	15 923	15 923	15 673-16.173	15 923	0 000
	30 Benzo(b)fluoranthene	17.561	17.553	17.553	17.553	17.553	17.553	17.553	17 303-17.803	17 554	0 003
	31 Benzo(k)fluoranthene	17.590	17.591	17 591	17 591	17.591	17.591	17.591	17.341-17.841	17.591	0.001
	32 Benzo(j)fluoranthene	17.638	17 639	17 639	17 639	17 639	17 639	17 639	17 389-17.889	17.639	0 001
$	33 Benzo(e)pyrene-d12	18.061	18.062	18 062	18 062	18.062	18 062	18 062	17 812-18.312	18 062	0 001
	34 Benzo(e)pyrene	18.109	18 101	18 101	18 101	18.101	18.101	18.101	17.851-18.351	18.102	0.003
	35 Benzo(a)pyrene	18 186	18 178	18 177	18 177	18 177	18.177	18 177	17.927-18.427	18 179	0.003
*	36 Perylene-d12	18.330	18.331	18 331	18.331	18 331	18 331	18 331	18.081-18.581	18 331	0.001
	37 Perylene	18 378	18 370	18 370	18 370	18 370	18.370	18.370	18.120-18.620	18.371	0.003
$	38 Dibenzo(a,h)anthracene	20 082	20 072	20.072	20.072	20 072	20.072	20.072	19 822-20.322	20 073	0.004
	39 Dibenzo(a,h)anthracene	20.159	20.150	20.149	20.149	20.149	20 149	20.149	19 899-20.399	20 151	0.004

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20161125.b
Inst ID: nt11.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 Indeno(1,2,3-cd)pyrene	20.148	20.150	20.149	20.149	20.149	20.149	20.149	19.899-20.399	20.149	0.001
41 Benzo(g,h,i)perylene	20.890	20 892	20.891	20.892	20 891	20 892	20.891	20.641-21 141	20 891	0.001

Printed: 11/30/2016 8:40:42AM

ANALYSIS SEQUENCE

SEK0335

Page 16 of 16

Instrument: NT11 Element Column ID: D005437
Calibration ID: ZK00080 Tune File: 160805.U
EM Voltage: 2224

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SEK0335-TUN1	Tune 10	QC		1	E000099		
SEK0335-CAL4	SIMPNA 250 ppb	QC		2	E006577	E002870	
SEK0335-CAL1	SIMPNA 10 ppb	QC		3	E006574	E002870	
SEK0335-CAL5	SIMPNA 500 ppb	QC		4	E006578	E002870	
SEK0335-CAL2	SIMPNA 50 ppb	QC		5	E006575	E002870	
SEK0335-CAL3	SIMPNA 100 ppb	QC		6	E006576	E002870	
SEK0335-CAL6	SIMPNA 1000 ppb	QC		7	E006579	E002870	
SEK0335-SCV1	SIMPNA SCV	QC		8	D004766	E002870	
BEK0480-BLK1	Blank	QC		9			
BEK0480-BS1	LCS	QC		10			
16K0221-01	RMW-7-111416	SIM PAH Low (0.01 ug/L - 0.	A 01	11			
SEK0335-CCV1	SIM PAH 250	QC		12	E006577	E002870	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161125.b

	Time	Filename	LabID	ClientId	DF								
1	0647	16112501.D	RT		1	5.65	312724	8.59	167525	11.20	313058	15.87	286393	18.33	270461
2	0727	16112502.D	SEK0335-TUN1		1	NO ISTDS FOUND									
3	0719	16112503.D	RINSE		1	NO ISTDS FOUND									
4	0731	16112504.D	SEK0335-TUN1		1	NO ISTDS FOUND									
5	0749	16112505.D	SEF0335-CAL4		1	5.66	493555	8.59	240770	11.21	429271	15.88	387691	18.33	386259
6	0819	16112506.D	SEK0335-CAL1		1	5.65	460503	8.58	219301	11.20	392400	15.87	349599	18.33	346399
7	0849	16112507.D	SEK0335-CAL5		1	5.66	482225	8.59	238489	11.20	423343	15.87	383318	18.33	378099
8	0920	16112508.D	SEK0335-CAL2		1	5.65	464735	8.58	225863	11.20	391319	15.87	349398	18.33	348510
9	0950	16112509.D	SEK0335-CAL3		1	5.65	461632	8.58	226505	11.20	397446	15.87	362603	18.33	361091
10	1020	16112510.D	SEK0335-CAL6		1	5.65	475772	8.58	238024	11.20	418191	15.87	386429	18.33	381102
11	1050	16112511.D	SEK0335-SCV1		1	5.66	443736	8.58	219883	11.21	374597	15.87	357859	18.33	351854
12	1120	16112512.D	BEK0480-BLK1		1	5.66	448581	8.59	210964	11.21	374350	15.87	333237	18.33	323481
13	1150	16112513.D	BEK0480-BS1		1	5.66	445435	8.58	220395	11.21	381687	15.87	352142	18.33	336447
14	1221	16112514.D	16K0221-01		1	5.65	452522	8.58	213028	11.21	389669	15.87	342780	18.33	328563
15	1251	16112515.D	SEK0335-CCV1		1	5.65	459619	8.58	226734	11.21	399049	15.87	367657	18.33	368104
16	1321	16112516.D	E006715		1	5.65	447668	8.58	207221	11.21	369089	15.87	330663	18.33	313815
17	1351	16112517.D	E006964		1	5.64	466511	8.58	229315	11.20	392739	15.87	345411	18.33	292229

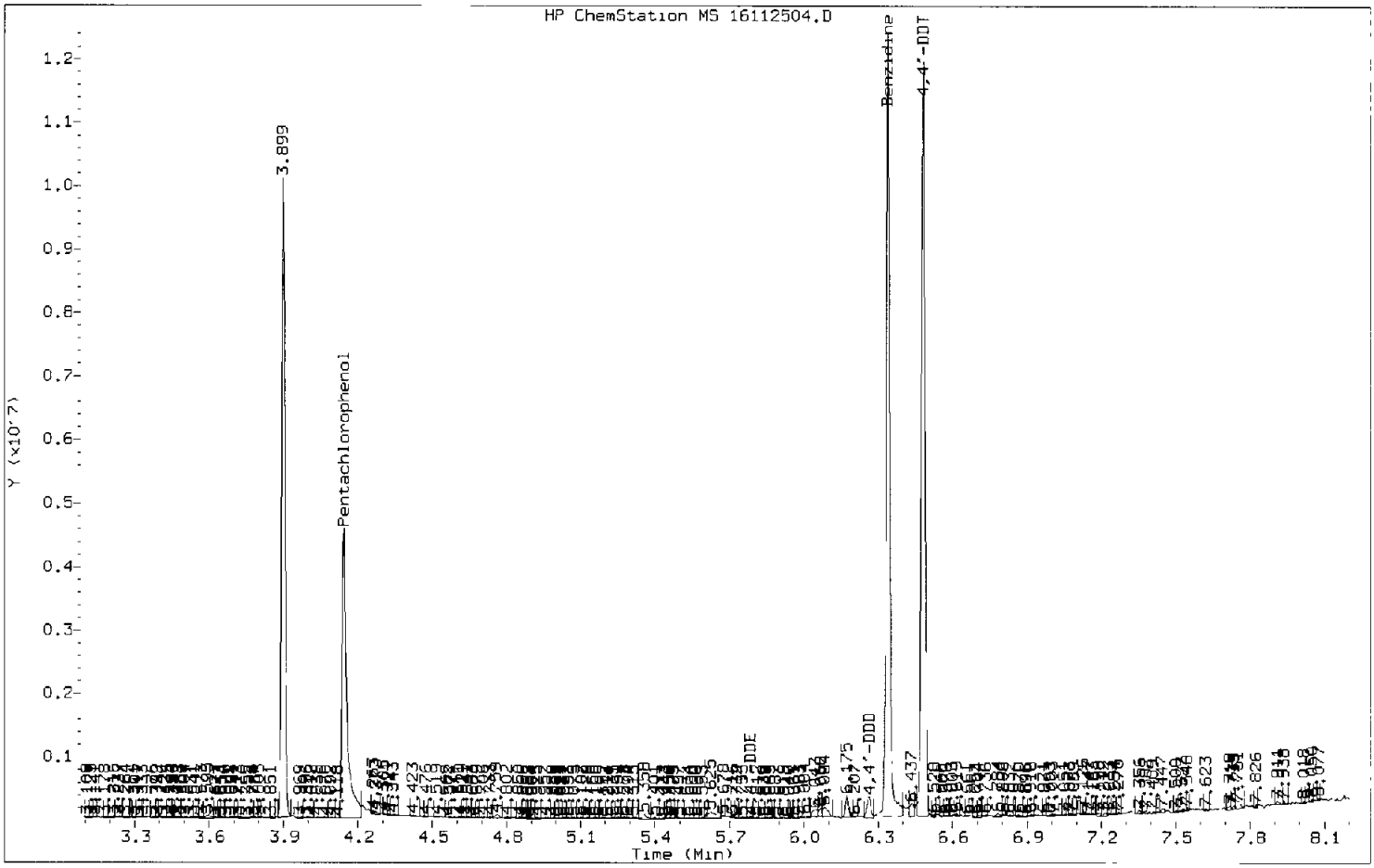
MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161125.b

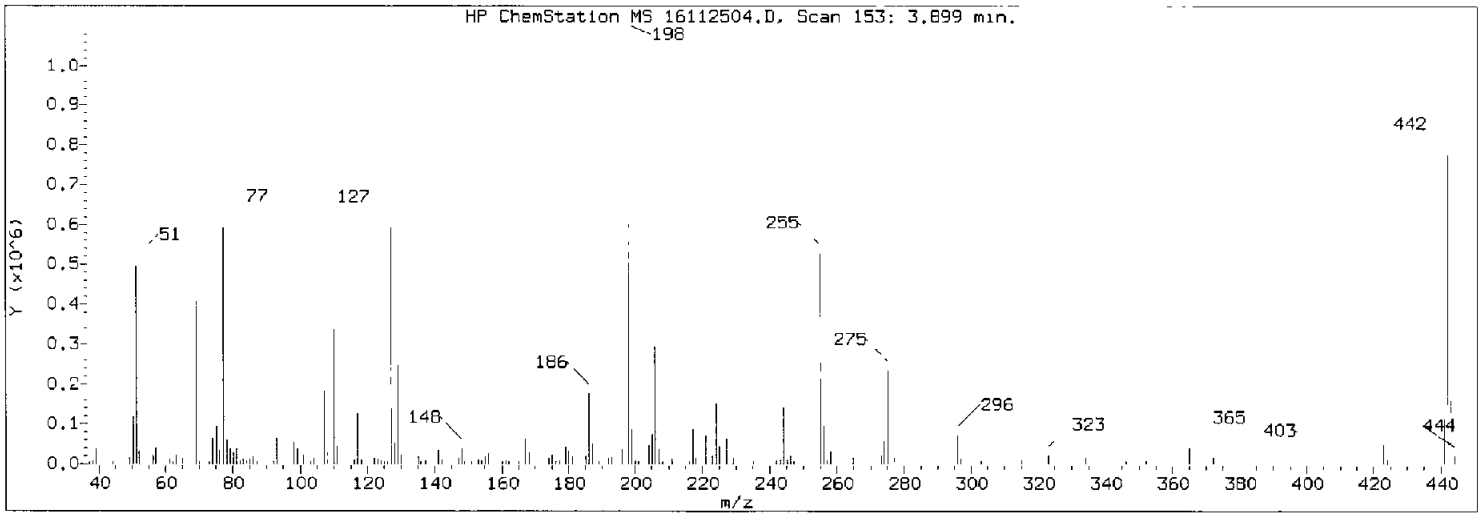
ARI Job No.: SEK0 Method: DFTPP.m Instrument: nt11.i Date: 25-NOV-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0731	16112504.D	SEK0335-TUN1		1	NO MANUAL INTEGRATION
0749	16112505.D	SEK0335-CAL4		1	NO MANUAL INTEGRATION
0819	16112506.D	SEK0335-CAL1		1	Biphenyl,
0849	16112507.D	SEK0335-CAL5		1	NO MANUAL INTEGRATION
0920	16112508.D	SEK0335-CAL2		1	Biphenyl,
0950	16112509.D	SEK0335-CAL3		1	Biphenyl,
1020	16112510.D	SEK0335-CAL6		1	NO MANUAL INTEGRATION
1050	16112511.D	SEK0335-SCV1		1	NO MANUAL INTEGRATION

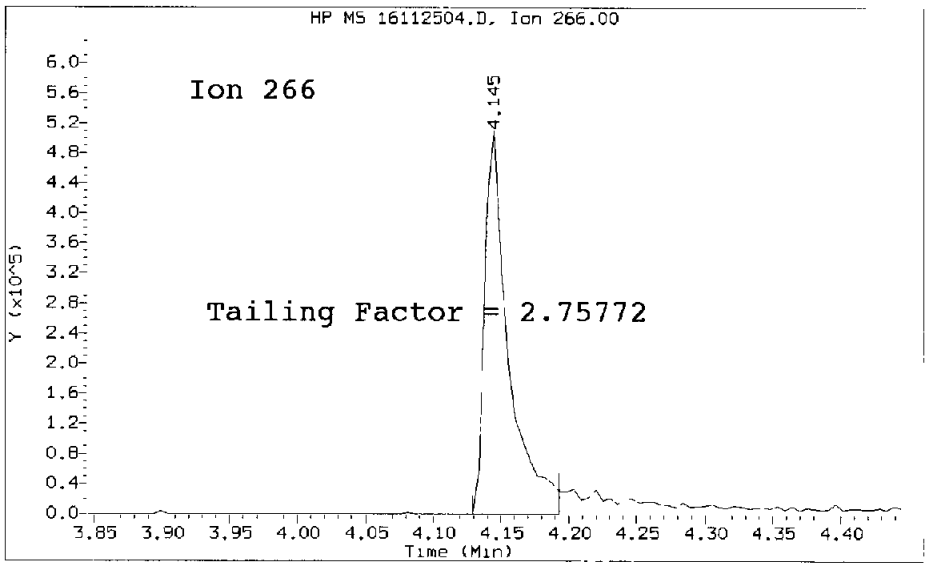
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20161125.b/16112504.D/16112504.D
Method Used: \20161125.b\DFTPP.m Inst: nt11
Injection Date: 25-NOV-2016 07:31 Operator: JW
Sample Info: SEK0335-TUN1 SEK0335-TUN1
Report Date: 11/30/2016 07:02





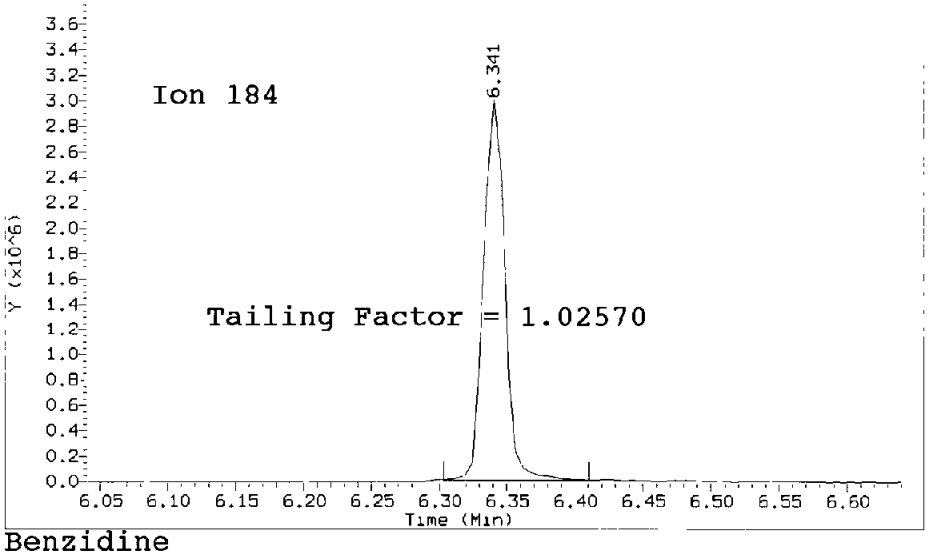
Datafile Analyzed: /20161125.b/16112504.D/16112504.D
Method Used: \20161125.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 25-NOV-2016 07:31 Operator: JW
Sample Info: SEK0335-TUN1
Report Date: 11/30/2016 07:02



Pentachlorophenol
==========
Exp. RT = 4.177
Found RT = 4.145

The tailing factor for Pentachlorophenol EXCEEDED

Tail Factor = 2.758 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 6.394
Found RT = 6.341

Tail Factor = 1.026 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test	
Pentachlorophenol	2.7577160	2.000	FAIL	[Failure]
Benzidine	1.0256983	2.000	PASS	

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1746894			N/A
4,4-DDE	4790	0.3	20.0	PASS
4,4-DDD	58824	3.3	20.0	PASS
4,4-DDD + DDE	63614	3.5	20.0	PASS

Tuning Sample, nt11.i/20161125.b/16112504.D, *** FAILED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	44.09
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	48.71
70	Less than 2.00% of mass 69	0.42 (0.86)
127	10.00 - 80.00% of mass 198	54.80
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.19
275	10.00 - 60.00% of mass 198	23.77
365	Greater than 1.00% of mass 198	3.43
441	0.01 - 24.00% of mass 442	11.31 (15.12)
442	50.00 - 200.00% of mass 198	74.79
443	15.00 - 24.00% of mass 442	15.00 (20.05)

Data File: 16112504.D
Spectrum: Avg. Scans 152-154 (3.90), Background Scan 146
Location of Maximum: 198.00
Number of points: 246

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	751	119.00	692	189.00	7801	273.00	15209
37.00	1413	120.00	726	191.00	3680	274.00	41472
38.00	4923	122.00	9321	192.00	10606	275.00	205184
39.00	30208	123.00	12803	193.00	10976	276.00	24120
40.00	1239	124.00	7114	194.00	1396	277.00	17176
44.00	1442	125.00	5452	195.00	3003	278.00	3292
47.00	2135	126.00	1932	196.00	28024	283.00	1582
48.00	1000	127.00	473024	198.00	863232	284.00	1044
49.00	2926	128.00	42688	199.00	70664	285.00	2872
50.00	95776	129.00	187968	200.00	7048	289.00	705
51.00	380608	130.00	15495	201.00	4674	293.00	4455
52.00	23496	131.00	3637	202.00	3542	294.00	1048
55.00	1432	133.00	1522	203.00	4382	295.00	710
56.00	12064	134.00	4453	204.00	34328	296.00	55136
57.00	29592	135.00	14514	205.00	58464	297.00	8651
58.00	1159	136.00	5432	206.00	229056	302.00	1575
61.00	7119	137.00	6924	207.00	31416	303.00	5572
62.00	4288	138.00	860	208.00	5664	304.00	962
63.00	16880	140.00	1142	209.00	2230	310.00	735
65.00	10313	141.00	22808	210.00	2417	314.00	1931
66.00	1405	142.00	7545	211.00	9195	315.00	6321
69.00	420480	143.00	4613	212.00	2411	316.00	3682
70.00	3598	144.00	1367	215.00	2772	317.00	948
73.00	3770	146.00	4157	216.00	5151	321.00	730
74.00	43752	147.00	11168	217.00	62696	322.00	1024
75.00	75512	148.00	27112	218.00	9934	323.00	19600
76.00	24944	149.00	5929	221.00	54288	324.00	2579
77.00	478720	151.00	4736	222.00	10187	327.00	3085
78.00	37912	152.00	2729	223.00	15339	328.00	1126
79.00	28656	153.00	8223	224.00	124704	333.00	836
80.00	20624	154.00	6245	225.00	28456	334.00	12349
81.00	30600	155.00	14179	226.00	2165	335.00	4224
82.00	7220	156.00	20176	227.00	51920	341.00	2449
83.00	9851	157.00	4083	228.00	4744	346.00	3435
85.00	7264	158.00	4685	229.00	11863	347.00	788
86.00	6574	159.00	2412	230.00	1866	352.00	4991
87.00	4735	160.00	7329	231.00	4343	353.00	3488
88.00	1900	161.00	8631	234.00	2737	354.00	5928
91.00	8383	162.00	3070	235.00	3356	355.00	811
92.00	6575	165.00	8013	236.00	1953	365.00	29600
93.00	47120	166.00	6913	237.00	3537	366.00	3250
94.00	4113	167.00	49440	239.00	2846	371.00	696
95.00	979	168.00	21224	241.00	2382	372.00	12084
96.00	2145	169.00	4504	242.00	7205	373.00	2677
97.00	1309	170.00	862	243.00	7835	383.00	1178
98.00	41480	171.00	974	244.00	102712	390.00	1081
99.00	30664	172.00	2763	245.00	10934	391.00	912
100.00	3355	173.00	4704	246.00	18816	401.00	690
101.00	18848	174.00	10383	247.00	5156	402.00	3741

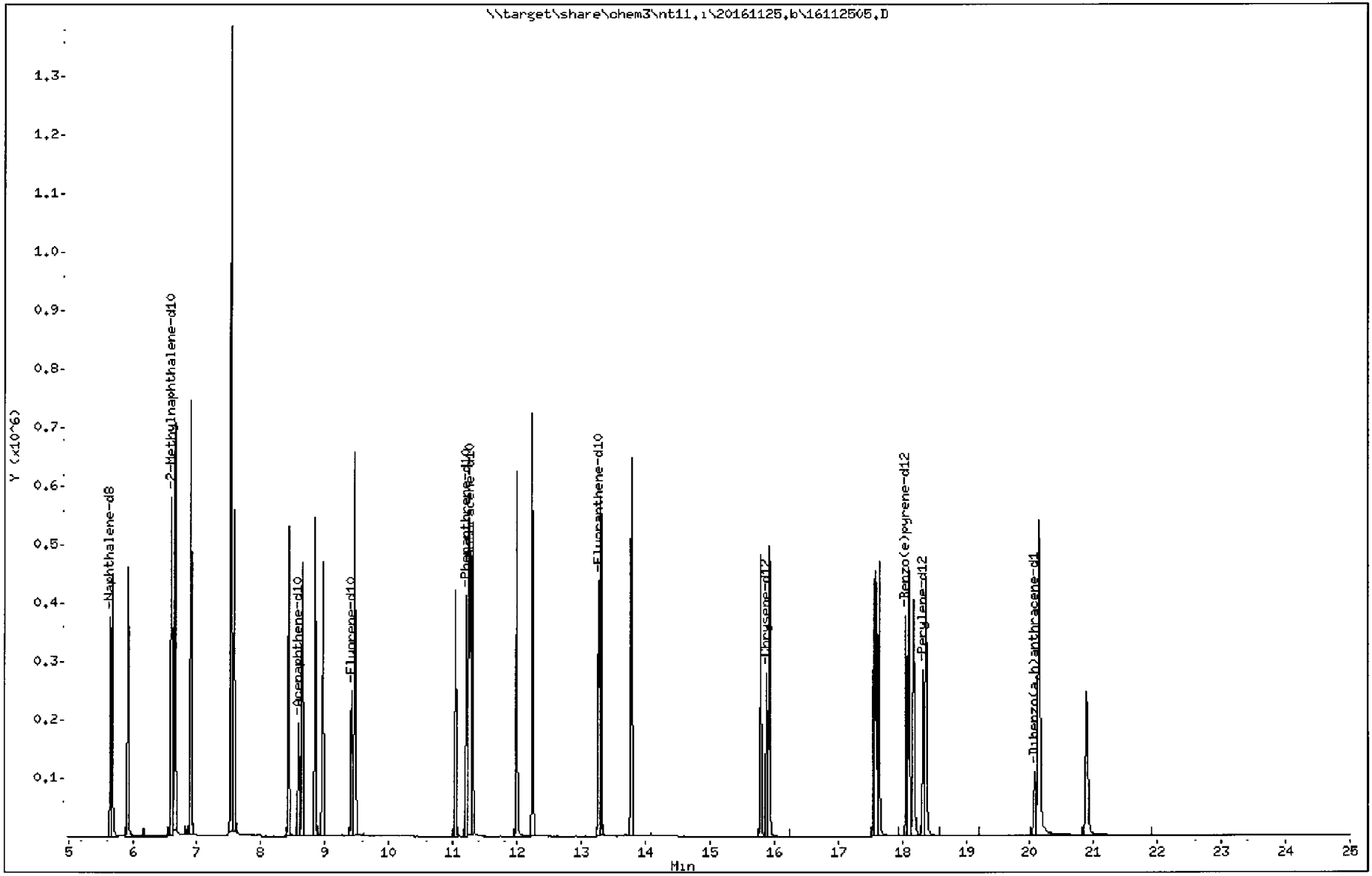
103.00	6417	175.00	20008	248.00	701	403.00	7115
104.00	11280	176.00	9458	249.00	2584	404.00	932
105.00	12462	177.00	6963	250.00	670	421.00	6637
106.00	3447	178.00	4805	252.00	1792	422.00	5216
107.00	134144	179.00	34616	253.00	3486	423.00	43512
108.00	22528	180.00	26616	254.00	3274	424.00	8883
110.00	265920	181.00	10578	255.00	438656	429.00	771
111.00	42048	182.00	1648	256.00	73304	441.00	97616
112.00	3712	184.00	3789	257.00	4834	442.00	645632
115.00	761	185.00	15623	258.00	23320	443.00	129480
116.00	8006	186.00	131200	259.00	4646	444.00	14687
117.00	100248	187.00	35840	265.00	11549		
118.00	7074	188.00	4279	266.00	1284		

Data File: \\target\share\chem3\nt11.i\20161125.b\16112505.D
Date : 25-NOV-2016 07:49
Client ID:
Sample Info: SEK0335-CAL4

Instrument: nt11.i

Operator: JW
Column diameter: 0.25

Column phase: Rx1-17Sil MS



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161125.b\16112505.D
Lab Smp Id: SEK0335-CAL4
Inj Date : 25-NOV-2016 07:49 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : SEK0335-CAL4
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Meth Date : 30-Nov-2016 07:48 jonathonw Quant Type: ISTD
Cal Date : 25-NOV-2016 09:50 Cal File: 16112509.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	1 Naphthalene-d8	136	5.655	5.646	(1.000)	493555	200.000	
	2 Naphthalene	128	5.682	5.683	(1.005)	615618	250.000	243
	3 Benzo(b)thiophene	134	5.926	5.927	(1.048)	518765	250.000	247
$	4 2-Methylnaphthalene-d10	152	6.615	6.604	(1.170)	455608	250.000	245
	5 2-Methylnaphthalene	142	6.667	6.657	(1.179)	524927	250.000	246
	6 1-Methylnaphthalene	142	6.903	6.899	(1.222)	506929	250.000	243
	7 2-Chloronaphthalene	162	7.539	7.539	(0.878)	494279	250.000	253
	8 Biphenyl	154	7.539	7.539	(0.878)	667410	250.000	249
	9 2,6-Dimethylnaphthalene	156	7.581	7.581	(0.882)	492105	250.000	255
	10 Acenaphthylene	152	8.429	8.429	(0.981)	564459	250.000	254
*	11 Acenaphthene-d10	164	8.592	8.583	(1.000)	240770	200.000	
	12 Acenaphthene	153	8.646	8.646	(1.006)	373979	250.000	245
	13 Dibenzofuran	168	8.850	8.850	(1.030)	531016	250.000	245
	14 2,3,5-Trimethylnaphthalene	170	8.977	8.964	(1.045)	334596	250.000	248
$	15 Fluorene-d10	174	9.419	9.406	(1.096)	288080	250.000	245
	16 Fluorene	166	9.469	9.470	(1.102)	421540	250.000	252
	17 Dibenzothiophene	184	11.040	11.035	(0.985)	523791	250.000	247
*	18 Phenanthrene-d10	188	11.214	11.214	(1.000)	429271	200.000	
	19 Phenanthrene	178	11.256	11.245	(1.004)	626298	250.000	244
$	20 Anthracene-d10	188	11.277	11.266	(1.006)	485828	250.000	250
	21 Anthracene	178	11.308	11.298	(1.008)	604416	250.000	251
	22 Carbazole	167	11.997	11.988	(1.070)	702533	250.000	250
	23 1-Methylphenanthrene	192	12.241	12.241	(1.092)	569420	250.000	251
$	24 Fluoranthene-d10	212	13.272	13.272	(1.184)	477611	250.000	249
	25 Fluoranthene	202	13.301	13.301	(1.186)	620335	250.000	246
	26 Pyrene	202	13.781	13.781	(0.868)	618057	250.000	245
	27 Benzo(a)anthracene	228	15.790	15.790	(0.994)	533399	250.000	244
*	28 Chrysene-d12	240	15.881	15.873	(1.000)	387691	200.000	
	29 Chrysene	228	15.923	15.923	(1.003)	572850	250.000	237
	30 Benzo(b)fluoranthene	252	17.561	17.552	(0.958)	559175	250.000	255
	31 Benzo(k)fluoranthene	252	17.589	17.591	(0.960)	518547	250.000	217
	32 Benzo(j)fluoranthene	252	17.637	17.639	(0.962)	512380	250.000	232
$	33 Benzo(e)pyrene-d12	264	18.060	18.062	(0.985)	451532	250.000	243

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	18.106	18.100	(0.988)	506259	250.000	237
	35 Benzo(a)pyrene	252	18.185	18.177	(0.992)	479392	250.000	238
*	36 Perylene-d12	264	18.329	18.331	(1.000)	386259	200.000	
	37 Perylene	252	18.377	18.369	(1.003)	494211	250.000	237
$	38 Dibenzo(a,h)anthracene-d14	292	20.081	20.071	(1.096)	306739	250.000	237
	39 Dibenzo(a,h)anthracene	278	20.159	20.149	(1.100)	426436	250.000	235
	40 Indeno(1,2,3-cd)pyrene	276	20.148	20.149	(1.099)	526144	250.000	236
	41 Benzo(g,h,i)perylene	276	20.890	20.891	(1.140)	441675	250.000	229

Report Date: 30-Nov-2016 08:05

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16112505.D
Lab Smp Id: SEK0335-CAL4
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Misc Info:

Calibration Date: 25-NOV-2016
Calibration Time: 12:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	493555	0.00
11 Acenaphthene-d10	240770	120385	481540	240770	0.00
18 Phenanthrene-d10	429271	214636	858542	429271	0.00
28 Chrysene-d12	387691	193846	775382	387691	0.00
36 Perylene-d12	386259	193130	772518	386259	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.65	5.15	6.15	5.66	0.16
11 Acenaphthene-d10	8.58	8.08	9.08	8.59	0.10
18 Phenanthrene-d10	11.21	10.71	11.71	11.21	-0.00
28 Chrysene-d12	15.87	15.37	16.37	15.88	0.05
36 Perylene-d12	18.33	17.83	18.83	18.33	-0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16112505.D

Lab ID: SEK0335-CAL4
nt11.i, 20161125.b\lowsim.m, 25-NOV-2016 07:49

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161125.b\lowsim.m, all.sub = 0.0000

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161125.b

Instrument: nt11.i Date: 25-NOV-2016 Method: 20161125.b\lowsim.m

INITIAL CAL: 25-NOV-2016

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: 16112505.D 25-NOV-2016 07:49

Compound	%D
NO Q-FLAGS	

Data File: \\target\share\chem3\nt11.1\20161125.b\16112506.D

Page 1

Date : 25-NOV-2016 08:19

Client ID:

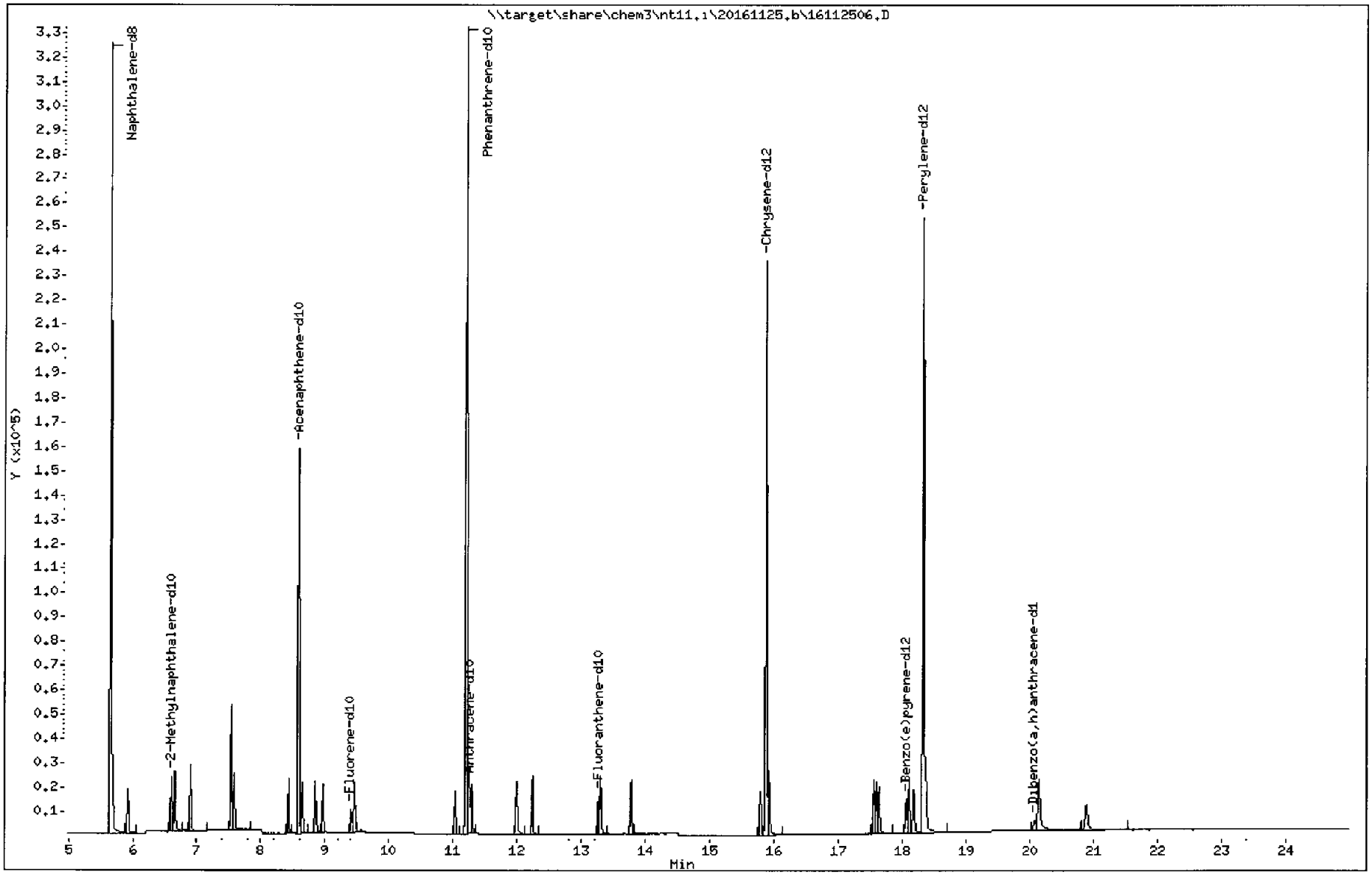
Instrument: nt11.1

Sample Info: SEK0335-CAL1

Operator: JW

Column phase: Rx1-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161125.b\16112506.D
Lab Smp Id: SEK0335-CAL1
Inj Date : 25-NOV-2016 08:19 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : SEK0335-CAL1
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Meth Date : 30-Nov-2016 07:48 jonathonw Quant Type: ISTD
Cal Date : 25-NOV-2016 09:50 Cal File: 16112509.D
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	1 Naphthalene-d8	136	5.646	5.646	(1.000)	460503	200.000	
	2 Naphthalene	128	5.683	5.683	(1.006)	26675	10.0000	11.3
	3 Benzo(b)thiophene	134	5.927	5.927	(1.050)	21175	10.0000	10.8
$	4 2-Methylnaphthalene-d10	152	6.615	6.604	(1.172)	18346	10.0000	10.6
	5 2-Methylnaphthalene	142	6.668	6.657	(1.181)	21050	10.0000	10.6
	6 1-Methylnaphthalene	142	6.909	6.899	(1.224)	20906	10.0000	10.7
	7 2-Chloronaphthalene	162	7.540	7.539	(0.878)	19320	10.0000	10.8
	8 Biphenyl	154	7.540	7.539	(0.878)	27575	10.0000	11.3(M)
	9 2,6-Dimethylnaphthalene	156	7.582	7.581	(0.883)	18835	10.0000	10.7
	10 Acenaphthylene	152	8.429	8.429	(0.982)	21872	10.0000	10.8
*	11 Acenaphthene-d10	164	8.583	8.583	(1.000)	219301	200.000	
	12 Acenaphthene	153	8.646	8.646	(1.007)	15454	10.0000	11.1
	13 Dibenzofuran	168	8.850	8.850	(1.031)	22381	10.0000	11.3
	14 2,3,5-Trimethylnaphthalene	170	8.964	8.964	(1.044)	13186	10.0000	10.7
$	15 Fluorene-d10	174	9.406	9.406	(1.096)	12005	10.0000	11.2
	16 Fluorene	166	9.470	9.470	(1.103)	16120	10.0000	10.6
	17 Dibenzothiophene	184	11.035	11.035	(0.985)	21131	10.0000	10.9
*	18 Phenanthrene-d10	188	11.203	11.214	(1.000)	392409	200.000	
	19 Phenanthrene	178	11.245	11.245	(1.004)	26179	10.0000	11.1
$	20 Anthracene-d10	188	11.266	11.266	(1.006)	19667	10.0000	11.1
	21 Anthracene	178	11.298	11.298	(1.008)	23121	10.0000	10.4
	22 Carbazole	167	11.988	11.988	(1.070)	28844	10.0000	11.2
	23 1-Methylphenanthrene	192	12.242	12.241	(1.093)	21755	10.0000	10.5
$	24 Fluoranthene-d10	212	13.272	13.272	(1.185)	18413	10.0000	10.5
	25 Fluoranthene	202	13.301	13.301	(1.187)	24341	10.0000	10.6
	26 Pyrene	202	13.781	13.781	(0.868)	24971	10.0000	11.0
	27 Benzo(a)anthracene	228	15.790	15.790	(0.995)	22653	10.0000	11.5
*	28 Chrysene-d12	240	15.873	15.873	(1.000)	343599	200.000	
	29 Chrysene	228	15.923	15.923	(1.003)	26545	10.0000	12.2
	30 Benzo(b)fluoranthene	252	17.552	17.552	(0.958)	24205	10.0000	12.3
	31 Benzo(k)fluoranthene	252	17.591	17.591	(0.960)	27107	10.0000	12.7
	32 Benzo(j)fluoranthene	252	17.639	17.639	(0.962)	22740	10.0000	11.5
$	33 Benzo(e)pyrene-d12	264	18.062	18.062	(0.985)	17843	10.0000	10.7

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	18.100	18.100	(0.987)	22795	10.0000	11.9
	35 Benzo(a)pyrene	252	18.177	18.177	(0.992)	21053	10.0000	11.7
*	36 Perylene-d12	264	18.331	18.331	(1.000)	346399	200.000	
	37 Perylene	252	18.369	18.369	(1.002)	22034	10.0000	11.8
$	38 Dibenzo(a,h)anthracene-d14	292	20.072	20.071	(1.095)	22853	10.0000	11.1
	39 Dibenzo(a,h)anthracene	278	20.149	20.149	(1.099)	18351	10.0000	11.7
	40 Indeno(1,2,3-cd)pyrene	276	20.149	20.149	(1.099)	23727	10.0000	11.9
	41 Benzo(g,h,i)perylene	276	20.891	20.891	(1.140)	21064	10.0000	12.2

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16112506.D
Lab Smp Id: SEK0335-CAL1
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Misc Info:

Calibration Date: 25-NOV-2016
Calibration Time: 12:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	460503	-6.70
11 Acenaphthene-d10	240770	120385	481540	219301	-8.92
18 Phenanthrene-d10	429271	214636	858542	392400	-8.59
28 Chrysene-d12	387691	193846	775382	349599	-9.83
36 Perylene-d12	386259	193130	772518	346399	-10.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.65	5.15	6.15	5.65	0.00
11 Acenaphthene-d10	8.58	8.08	9.08	8.58	0.00
18 Phenanthrene-d10	11.21	10.71	11.71	11.20	-0.09
28 Chrysene-d12	15.87	15.37	16.37	15.87	0.00
36 Perylene-d12	18.33	17.83	18.83	18.33	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16112506.D

Lab ID: SEK0335-CAL1
nt11.i, 20161125.b\lowsim.m, 25-NOV-2016 08:19

RT	CO-ELUTION COMPOUNDS
20.150	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.150	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

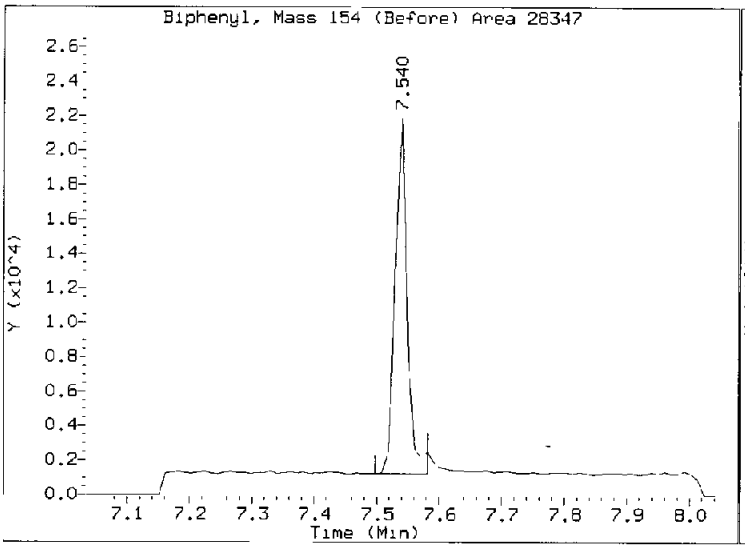
RRT CHECK

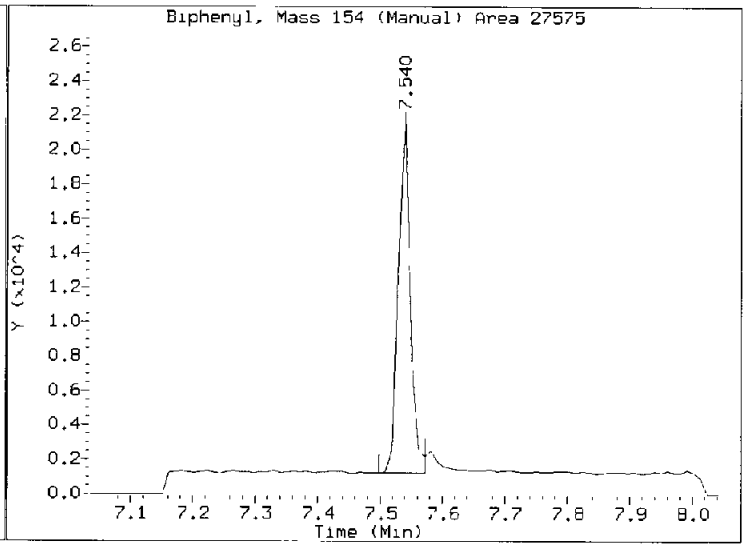
RRT	CCV RRT	DELTA	COMPOUND
NONE			

On Column LOD for nt11.i, 20161125.b\lowsim.m, all.sub = 0.0000

Quant Ion Manual Peak Adjustment Report

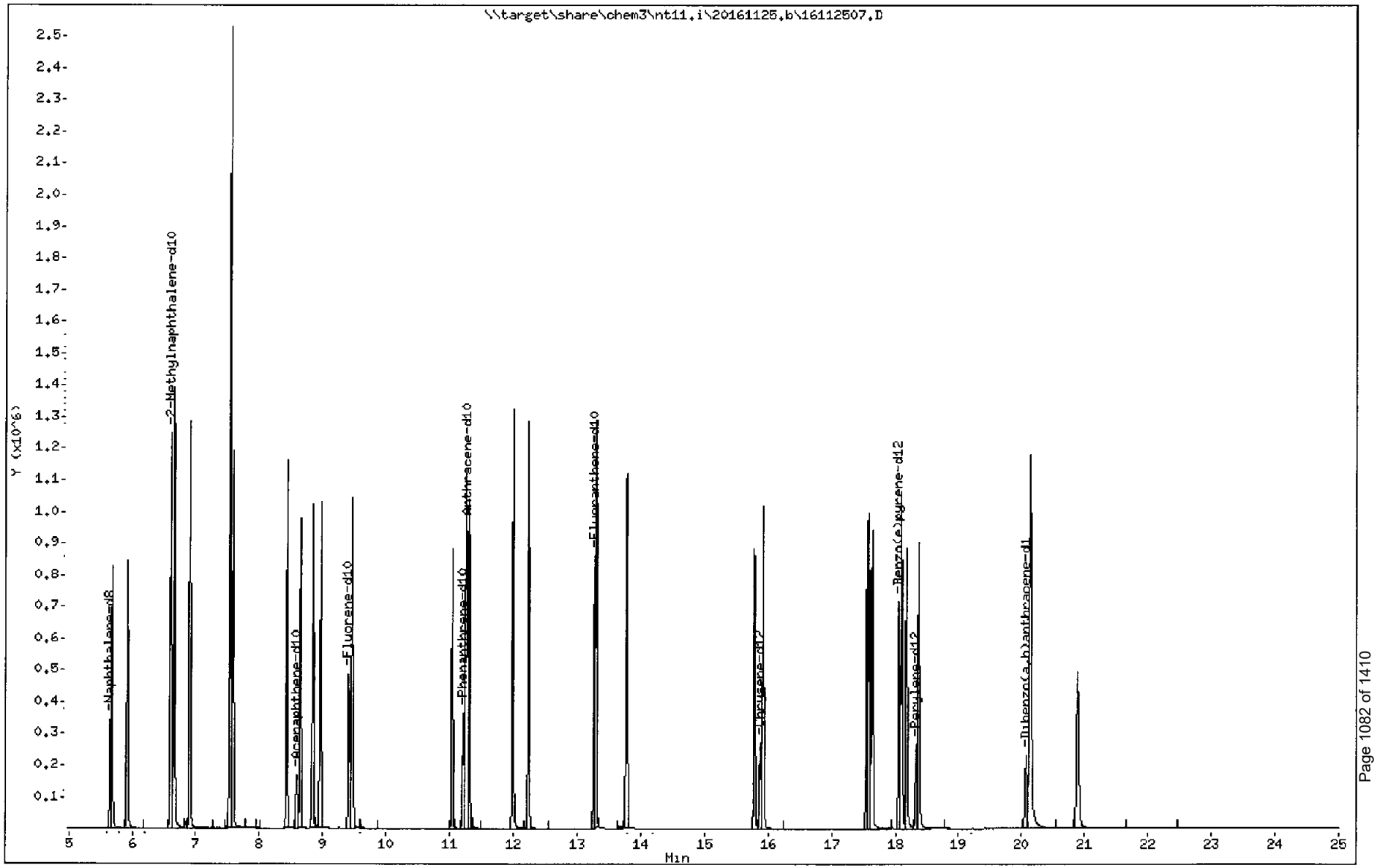
Datafile: //target/share/chem3/nt11.i/20161125.b/16112506.D
Injection Date: 25-NOV-2016 08:19
Lab ID:SEK0335-CAL1 Client ID:
Report Date: 11/30/2016 08:05





Data File: \\target\share\chem3\nt11.i\20161125.b\16112507.D
Date : 25-NOV-2016 08:49
Client ID:
Sample Info: SEK0335-CAL5

Instrument: nt11.i
Operator: JW
Column phase: Rx1-17Sil MS
Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161125.b\16112507.D
Lab Smp Id: SEK0335-CAL5
Inj Date : 25-NOV-2016 08:49 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : SEK0335-CAL5
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Meth Date : 30-Nov-2016 07:48 jonathonw Quant Type: ISTD
Cal Date : 25-NOV-2016 09:50 Cal File: 16112509.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	1 Naphthalene-d8	136	5.655	5.646	(1.000)	482225	200.000	
	2 Naphthalene	128	5.682	5.683	(1.005)	1172554	500.000	473
	3 Benzo(b)thiophene	134	5.926	5.917	(1.048)	1002116	500.000	489
$	4 2-Methylnaphthalene-d10	152	6.604	6.604	(1.168)	904979	500.000	496
	5 2-Methylnaphthalene	142	6.657	6.657	(1.177)	1036814	500.000	496
	6 1-Methylnaphthalene	142	6.909	6.899	(1.222)	998163	500.000	489
	7 2-Chloronaphthalene	162	7.539	7.539	(0.878)	958363	500.000	494
	8 Biphenyl	154	7.539	7.539	(0.878)	1278351	500.000	481
	9 2,6-Dimethylnaphthalene	156	7.581	7.581	(0.882)	945199	500.000	494
	10 Acenaphthylene	152	8.429	8.429	(0.981)	1096368	500.000	498
*	11 Acenaphthene-d10	164	8.592	8.583	(1.000)	238489	200.000	
	12 Acenaphthene	153	8.647	8.646	(1.006)	734512	500.000	486
	13 Dibenzofuran	168	8.850	8.850	(1.030)	1035136	500.000	487
	14 2,3,5-Trimethylnaphthalene	170	8.964	8.964	(1.043)	669771	500.000	501
$	15 Fluorene-d10	174	9.408	9.408	(1.095)	577216	500.000	496
	16 Fluorene	166	9.470	9.470	(1.102)	836643	500.000	504
	17 Dibenzothiophene	184	11.035	11.035	(0.985)	1019975	500.000	487
*	18 Phenanthrene-d10	188	11.203	11.214	(1.000)	423343	200.000	
	19 Phenanthrene	178	11.245	11.245	(1.004)	1219282	500.000	479
$	20 Anthracene-d10	188	11.266	11.266	(1.006)	952851	500.000	497
	21 Anthracene	178	11.298	11.298	(1.009)	1180310	500.000	496
	22 Carbazole	167	11.988	11.988	(1.070)	1376973	500.000	497
	23 1-Methylphenanthrene	192	12.241	12.241	(1.093)	1132281	500.000	504
$	24 Fluoranthene-d10	212	13.272	13.272	(1.185)	948705	500.000	502
	25 Fluoranthene	202	13.301	13.301	(1.187)	1235101	500.000	501
	26 Pyrene	202	13.781	13.781	(0.868)	1296930	500.000	492
	27 Benzo(a)anthracene	228	15.790	15.790	(0.995)	1061706	500.000	492
*	28 Chrysene-d12	240	15.873	15.873	(1.000)	333318	200.000	
	29 Chrysene	228	15.923	15.923	(1.003)	1128058	500.000	471
	30 Benzo(b)fluoranthene	252	17.552	17.552	(0.958)	1011647	500.000	471
	31 Benzo(k)fluoranthene	252	17.591	17.591	(0.960)	1164902	500.000	499
	32 Benzo(j)fluoranthene	252	17.639	17.639	(0.962)	1015418	500.000	469
$	33 Benzo(e)pyrene-d12	264	18.062	18.062	(0.985)	905709	500.000	497

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	34 Benzo(c)pyrene	252	18.100	18.100	(0.987)	1005056	500.000	481
	35 Benzo(a)pyrene	252	18.177	18.177	(0.992)	957088	500.000	487
+	36 Perylene-d12	264	18.331	18.331	(1.000)	378099	200.000	
	37 Perylene	252	18.369	18.369	(1.002)	986825	500.000	483
$	38 Dibenz[a,h]anthracene-d14	292	20.071	20.071	(1.095)	634275	500.000	501
	39 Dibenz[a,h]anthracene	278	20.149	20.149	(1.099)	881723	500.000	497
	40 Indeno(1,2,3-cd)pyrene	276	20.149	20.149	(1.099)	1077710	500.000	493
	41 Benzo(g,h,i)perylene	276	20.891	20.891	(1.140)	904290	500.000	479

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16112507.D
Lab Smp Id: SEK0335-CAL5
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Misc Info:

Calibration Date: 25-NOV-2016
Calibration Time: 12:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	482225	-2.30
11 Acenaphthene-d10	240770	120385	481540	238489	-0.95
18 Phenanthrene-d10	429271	214636	858542	423343	-1.38
28 Chrysene-d12	387691	193846	775382	383318	-1.13
36 Perylene-d12	386259	193130	772518	378099	-2.11

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.65	5.15	6.15	5.66	0.16
11 Acenaphthene-d10	8.58	8.08	9.08	8.59	0.11
18 Phenanthrene-d10	11.21	10.71	11.71	11.20	-0.09
28 Chrysene-d12	15.87	15.37	16.37	15.87	-0.00
36 Perylene-d12	18.33	17.83	18.83	18.33	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16112507.D

Lab ID: SEK0335-CAL5
nt11.i, 20161125.b\lowsim.m, 25-NOV-2016 08:49

RT	CO-ELUTION COMPOUNDS
20.149	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.149	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

On Column LOD for nt11.i, 20161125.b\lowsim.m, all.sub = 0.0000

Data File: \\target\share\chem3\nt11.i\20161125.b\16112508.D

Page 1

Date : 25-NOV-2016 09:20

Client ID:

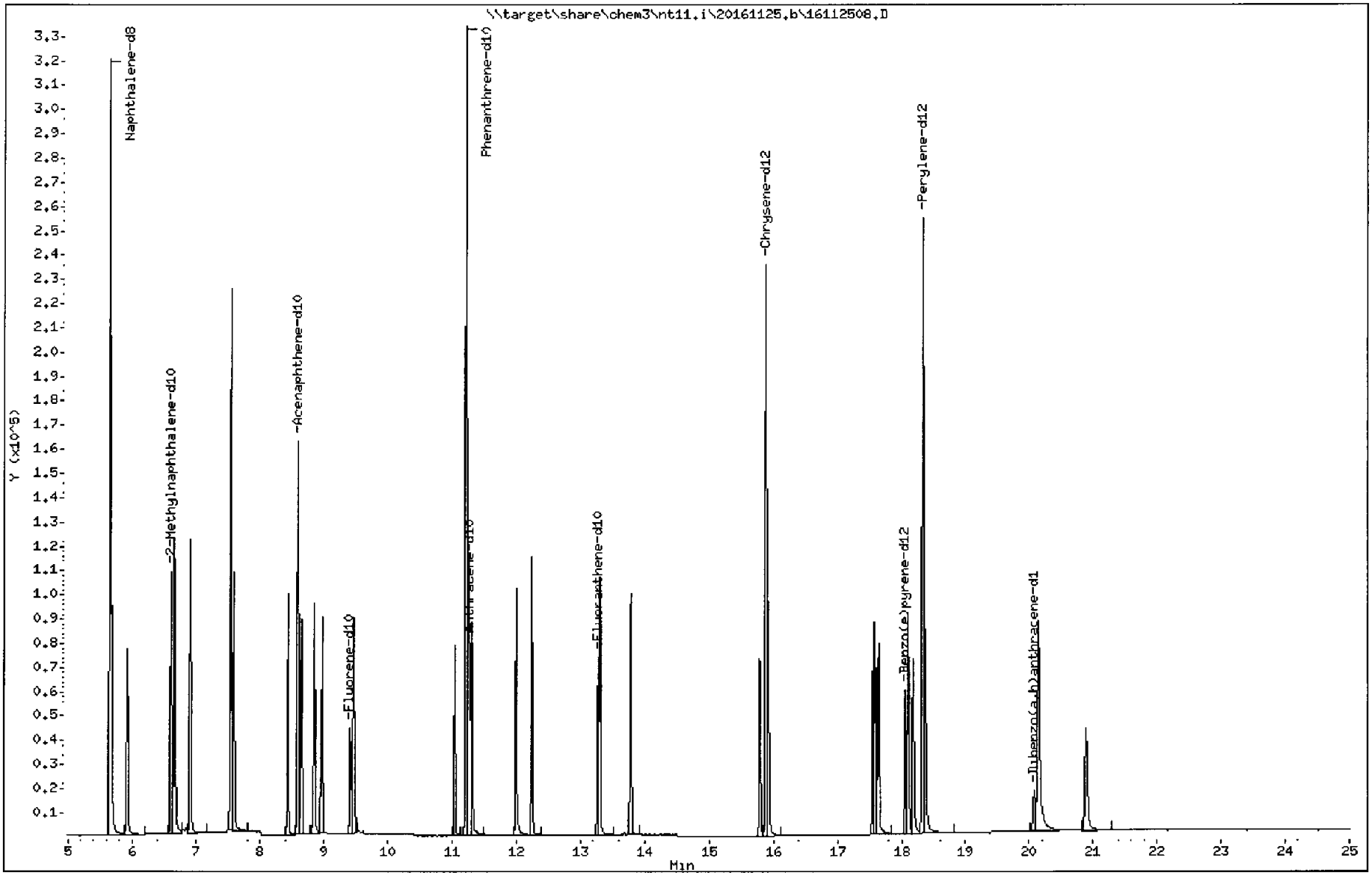
Instrument: nt11.i

Sample Info: SEK0335-CAL2

Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161125.b\16112508.D
Lab Smp Id: SEK0335-CAL2
Inj Date : 25-NOV-2016 09:20 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : SEK0335-CAL2
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Meth Date : 30-Nov-2016 07:48 jonathonw Quant Type: ISTD
Cal Date : 25-NOV-2016 09:50 Cal File: 16112509.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	1 Naphthalene-d8	136	5.646	5.646	(1.000)	464735	200.000	
	2 Naphthalene	128	5.683	5.683	(1.006)	120968	50.0000	50.6
	3 Benzo(b)thiophene	134	5.927	5.927	(1.050)	97404	50.0000	49.3
$	4 2-Methylnaphthalene-d10	152	6.604	6.604	(1.170)	86268	50.0000	49.2
	5 2-Methylnaphthalene	142	6.657	6.657	(1.179)	98487	50.0000	49.1
	6 1-Methylnaphthalene	142	6.909	6.899	(1.224)	97168	50.0000	49.4
	7 2-Chloronaphthalene	162	7.539	7.539	(0.878)	88877	50.0000	48.4
	8 Biphenyl	154	7.539	7.539	(0.878)	124723	50.0000	49.5(M)
	9 2,6-Dimethylnaphthalene	156	7.581	7.581	(0.883)	87594	50.0000	48.4
	10 Acenaphthylene	152	8.429	8.429	(0.982)	99712	50.0000	47.8
*	11 Acenaphthene-d10	164	8.583	8.583	(1.000)	225863	200.000	
	12 Acenaphthene	153	8.646	8.646	(1.007)	69235	50.0000	48.4
	13 Dibenzofuran	168	8.850	8.850	(1.031)	102838	50.0000	50.5
	14 2,3,5-Trimethylnaphthalene	170	8.964	8.964	(1.044)	60744	50.0000	48.0
$	15 Fluorene-d10	174	9.406	9.406	(1.096)	53311	50.0000	48.3
	16 Fluorene	166	9.470	9.470	(1.103)	75213	50.0000	47.8
	17 Dibenzothiophene	184	11.035	11.035	(0.985)	96288	50.0000	49.8
*	18 Phenanthrene-d10	188	11.203	11.214	(1.000)	331319	200.000	
	19 Phenanthrene	178	11.245	11.245	(1.004)	120115	50.0000	51.1
$	20 Anthracene-d10	186	11.266	11.266	(1.006)	85514	50.0000	48.2
	21 Anthracene	178	11.298	11.298	(1.008)	108561	50.0000	49.1
	22 Carbazole	167	11.988	11.988	(1.070)	121761	50.0000	47.5
	23 1-Methylphenanthrene	192	12.241	12.241	(1.093)	100167	50.0000	48.4
$	24 Fluoranthene-d10	212	13.272	13.272	(1.185)	83958	50.0000	48.1
	25 Fluoranthene	202	13.301	13.301	(1.187)	109351	50.0000	47.9
	26 Pyrene	202	13.781	13.781	(0.868)	112749	50.0000	49.6
	27 Benzo(a)anthracene	228	15.790	15.790	(0.995)	94283	50.0000	47.9
*	28 Chrysene-d12	240	15.873	15.873	(1.000)	349398	200.000	
	29 Chrysene	228	15.923	15.923	(1.003)	109158	50.0000	50.0
	30 Benzo(b)fluoranthene	252	17.552	17.552	(0.958)	94380	50.0000	47.3
	31 Benzo(k)fluoranthene	252	17.591	17.591	(0.960)	100166	50.0000	46.5
	32 Benzo(j)fluoranthene	252	17.639	17.639	(0.962)	101310	50.0000	50.8
$	33 Benzo(e)pyrene-d12	264	18.062	18.062	(0.985)	82483	50.0000	49.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	18.100	18.100	(0.987)	94453	50.0000	49.1
	35 Benzo(a)pyrene	252	18.177	18.177	(0.992)	96080	50.0000	47.9
*	36 Perylene-d12	264	18.331	18.331	(1.000)	348510	200.000	
	37 Perylene	252	18.369	18.369	(1.002)	91350	50.0000	48.5
$	38 Dibenzo(a,h)anthracene-d14	292	20.071	20.071	(1.095)	55765	50.0000	47.8
	39 Dibenzo(a,h)anthracene	278	20.149	20.149	(1.099)	76347	50.0000	46.9
	40 Indeno(1,2,3-cd)pyrene	276	20.149	20.149	(1.099)	95862	50.0000	46.6
	41 Benzo(g,h,i)perylene	276	20.891	20.891	(1.140)	84356	50.0000	48.5

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16112508.D
Lab Smp Id: SEK0335-CAL2
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Misc Info:

Calibration Date: 25-NOV-2016
Calibration Time: 12:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	464735	-5.84
11 Acenaphthene-d10	240770	120385	481540	225863	-6.19
18 Phenanthrene-d10	429271	214636	858542	391319	-8.84
28 Chrysene-d12	387691	193846	775382	349398	-9.88
36 Perylene-d12	386259	193130	772518	348510	-9.77

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.65	5.15	6.15	5.65	0.00
11 Acenaphthene-d10	8.58	8.08	9.08	8.58	0.00
18 Phenanthrene-d10	11.21	10.71	11.71	11.20	-0.09
28 Chrysene-d12	15.87	15.37	16.37	15.87	0.00
36 Perylene-d12	18.33	17.83	18.83	18.33	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16112508.D

Lab ID: SEK0335-CAL2
nt11.i, 20161125.b\lowsim.m, 25-NOV-2016 09:20

RT	CO-ELUTION COMPOUNDS
20.149	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.149	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

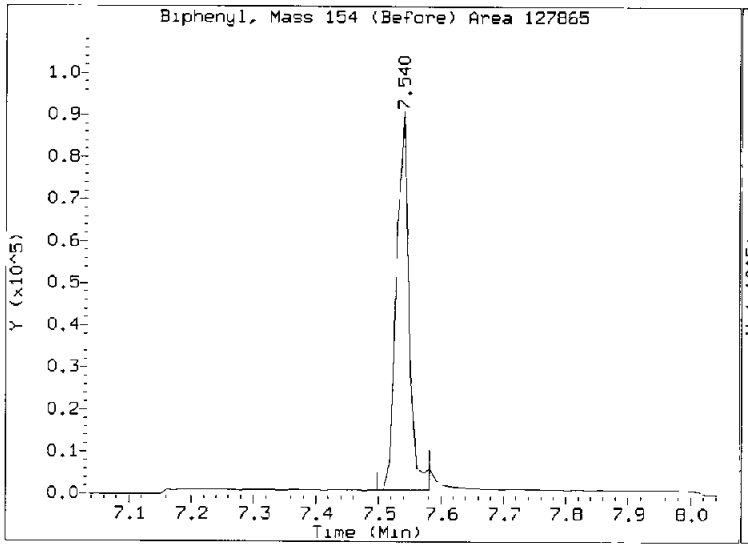
RRT CHECK

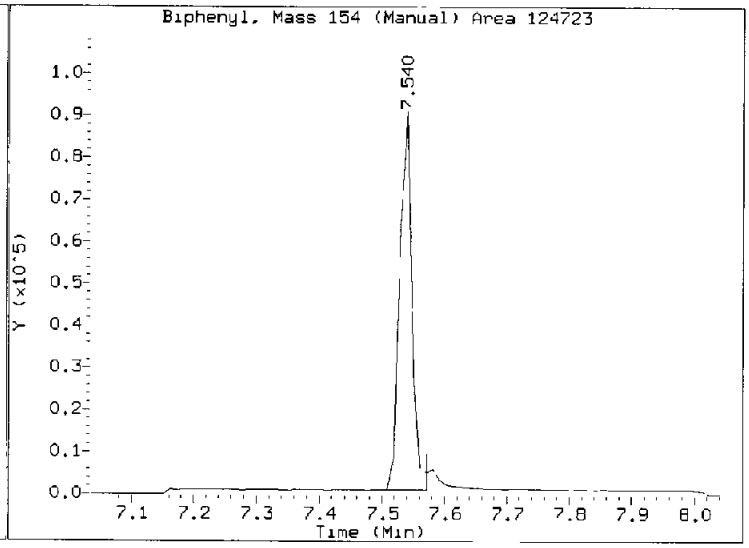
RRT	CCV RRT	DELTA	COMPOUND
NONE			

On Column LOD for nt11.i, 20161125.b\lowsim.m, all.sub = 0.0000

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20161125.b/16112508.D
Injection Date: 25-NOV-2016 09:20
Lab ID:SEK0335-CAL2 Client ID:
Report Date: 11/30/2016 08:05





Data File: \\target\share\chem3\nt11.i\20161125.b\16112509.D

Page 1

Date : 25-NOV-2016 09:50

Client ID:

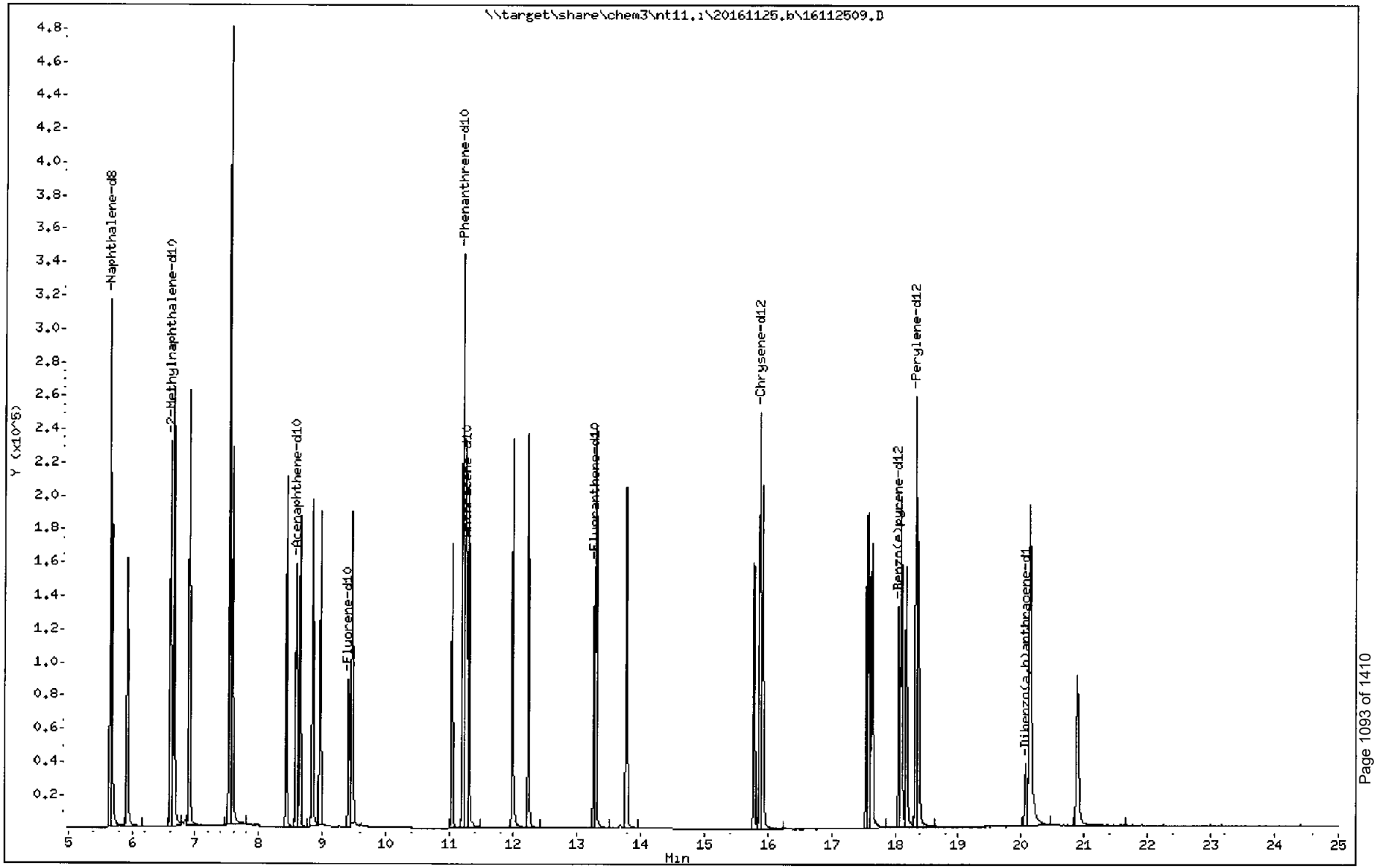
Instrument: nt11.i

Sample Info: SEK0335-CAL3

Operator: JW

Column phase: Rx1-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161125.b\16112509.D
Lab Smp Id: SEK0335-CAL3
Inj Date : 25-NOV-2016 09:50 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : SEK0335-CAL3
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Meth Date : 30-Nov-2016 07:48 jonathonw Quant Type: ISTD
Cal Date : 25-NOV-2016 09:50 Cal File: 16112509.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	1 Naphthalene-d8	136	5.643	5.646	(1.000)	461632	200.000	
	2 Naphthalene	128	5.682	5.683	(1.006)	210716	100.000	106
	3 Benzo(b)thiophene	134	5.925	5.927	(1.050)	203720	100.000	104
$	4 2-Methylnaphthalene-d10	152	6.604	6.604	(1.170)	130941	100.000	104
	5 2-Methylnaphthalene	142	6.657	6.657	(1.179)	209104	100.000	105
	6 1-Methylnaphthalene	142	6.899	6.899	(1.222)	207928	100.000	106
	7 2-Chloronaphthalene	162	7.539	7.539	(0.878)	193028	100.000	103
	8 Biphenyl	154	7.539	7.539	(0.878)	266654	100.000	106(M)
	9 2,6-Dimethylnaphthalene	156	7.581	7.581	(0.883)	187046	100.000	103
	10 Acenaphthylene	152	8.429	8.429	(0.982)	210388	100.000	101
*	11 Acenaphthene-d10	164	8.583	8.583	(1.000)	226505	200.000	
	12 Acenaphthene	153	8.646	8.646	(1.007)	150731	100.000	105
	13 Dibenzofuran	168	8.850	8.850	(1.031)	209105	100.000	102
	14 2,3,5-Trimethylnaphthalene	170	8.964	8.964	(1.044)	127418	100.000	100
$	15 Fluorene-d10	174	9.406	9.406	(1.096)	110367	100.000	99.8
	16 Fluorene	166	9.470	9.470	(1.103)	160167	100.000	102
	17 Dibenzothiophene	184	11.035	11.035	(0.985)	200340	100.000	102
*	18 Phenanthrene-d10	188	11.203	11.214	(1.000)	397416	200.000	
	19 Phenanthrene	178	11.245	11.245	(1.004)	250305	100.000	105
$	20 Anthracene-d10	188	11.266	11.266	(1.006)	176474	100.000	98.0
	21 Anthracene	178	11.298	11.298	(1.008)	234615	100.000	104
	22 Carbazole	167	11.988	11.988	(1.070)	262661	100.000	101
	23 1-Methylphenanthrene	192	12.241	12.241	(1.093)	214405	100.000	102
$	24 Fluoranthene-d10	212	13.272	13.272	(1.185)	179598	100.000	101
	25 Fluoranthene	202	13.301	13.301	(1.187)	240940	100.000	104
	26 Pyrene	202	13.781	13.781	(1.868)	239254	100.000	101
	27 Benzo(a)anthracene	228	15.790	15.790	(0.995)	201578	100.000	98.7
*	28 Chrysene-d12	240	15.873	15.873	(1.000)	362603	200.000	
	29 Chrysene	228	15.923	15.923	(1.003)	229587	100.000	101
	30 Benzo(b)fluoranthene	252	17.552	17.552	(0.958)	198189	100.000	96.6
	31 Benzo(k)fluoranthene	252	17.591	17.591	(0.960)	213682	100.000	95.8
	32 Benzo(j)fluoranthene	252	17.639	17.639	(0.962)	223931	100.000	108
$	33 Benzo(e)pyrene-d12	264	18.062	18.062	(0.985)	178078	100.000	102

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	18.100	18.100	(0.987)	200043	100.000	100
	35 Benzo(a)pyrene	252	18.177	18.177	(0.992)	137270	100.000	99.6
*	36 Perylene-d12	264	18.331	18.331	(1.000)	351091	200.000	
	37 Perylene	252	18.369	18.369	(1.002)	196113	100.000	101
$	38 Dibenzo(a,h)anthracene-d14	292	20.071	20.071	(1.095)	118236	100.000	97.8
	39 Dibenzo(a,h)anthracene	278	20.149	20.149	(1.099)	183765	100.000	96.6
	40 Indeno(1,2,3-cd)pyrene	276	20.149	20.149	(1.099)	202321	100.000	97.0
	41 Benzo(g,h,i)perylene	276	20.891	20.891	(1.140)	176709	100.000	98.1

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16112509.D
Lab Smp Id: SEK0335-CAL3
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Misc Info:

Calibration Date: 25-NOV-2016
Calibration Time: 12:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	461632	-6.47
11 Acenaphthene-d10	240770	120385	481540	226505	-5.92
18 Phenanthrene-d10	429271	214636	858542	397446	-7.41
28 Chrysene-d12	387691	193846	775382	362603	-6.47
36 Perylene-d12	386259	193130	772518	361091	-6.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.65	5.15	6.15	5.65	-0.00
11 Acenaphthene-d10	8.58	8.08	9.08	8.58	-0.00
18 Phenanthrene-d10	11.21	10.71	11.71	11.20	-0.09
28 Chrysene-d12	15.87	15.37	16.37	15.87	-0.00
36 Perylene-d12	18.33	17.83	18.83	18.33	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16112509.D

Lab ID: SEK0335-CAL3
nt11.i, 20161125.b\lowsim.m, 25-NOV-2016 09:50

RT	CO-ELUTION COMPOUNDS
20.149	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.149	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

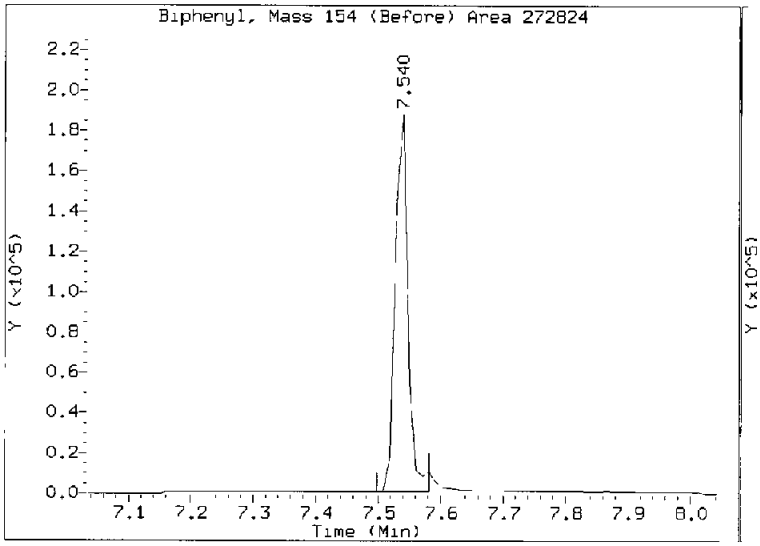
RRT CHECK

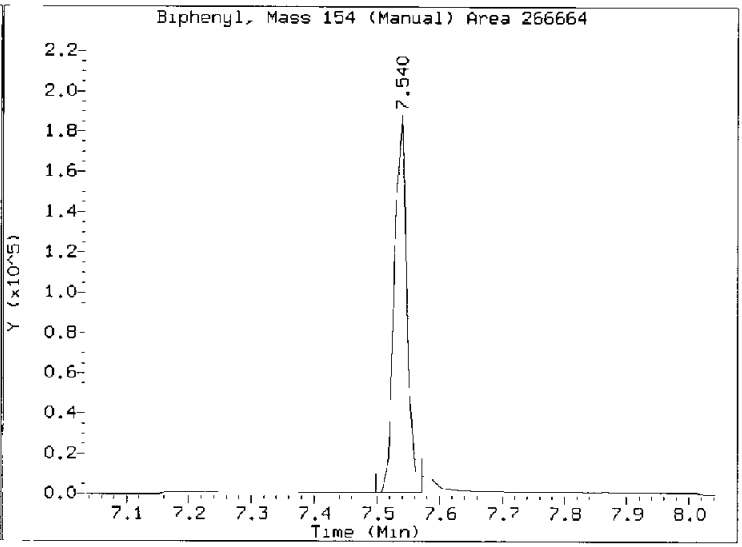
RRT	CCV RRT	DELTA	COMPOUND
NONE			

On Column LOD for nt11.i, 20161125.b\lowsim.m, all.sub = 0.0000

Quant Ion Manual Peak Adjustment Report

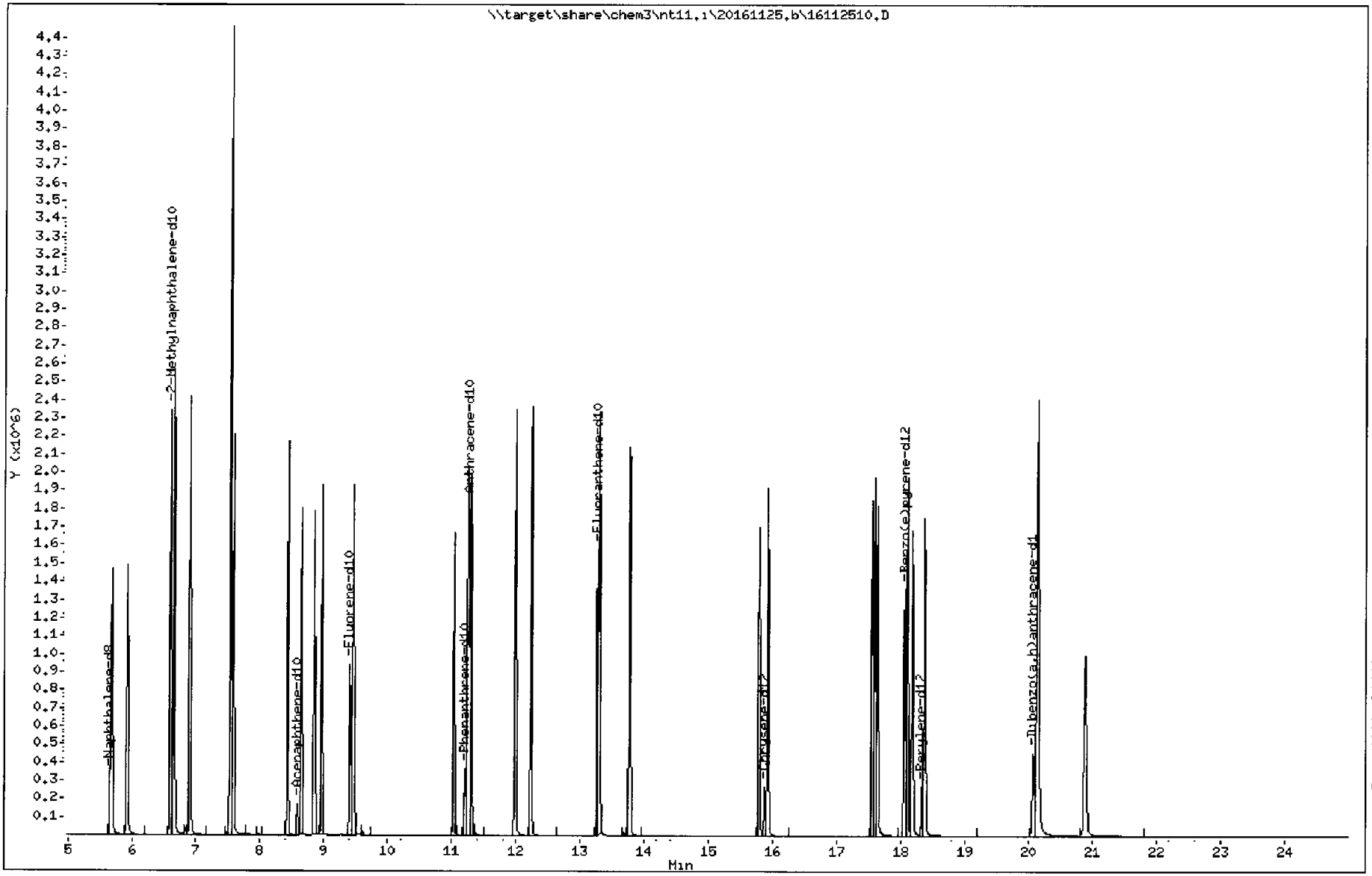
Datafile: //target/share/chem3/nt11.i/20161125.b/16112509.D
Injection Date: 25-NOV-2016 09:50
Lab ID:SEK0335-CAL3 Client ID:
Report Date: 11/30/2016 08:05





Data File: \\target\share\chem3\nt11.1\20161125.b\16112510.D
Date : 25-NOV-2016 10:20
Client ID:
Sample Info: SEK0335-CAL6

Instrument: nt11.1
Operator: JW
Column phase: Rx1-17Sil MS
Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161125.b\16112510.D
Lab Smp Id: SEK0335-CAL6
Inj Date : 25-NOV-2016 10:20 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : SEK0335-CAL6
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Meth Date : 30-Nov-2016 07:48 jonathonw Quant Type: ISTD
Cal Date : 25-NOV-2016 09:50 Cal File: 16112509.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1 Naphthalene-d8	136	5.640	5.643	(1.000)	475772	200.000	
	2 Naphthalene	128	5.683	5.683	(1.006)	2172733	888.224	666
	3 Benzo(b)thiophene	134	5.927	5.927	(1.050)	1980891	929.581	930
$	4 2-Methylnaphthalene-d10	152	6.604	6.604	(1.170)	1693083	943.906	944
	5 2-Methylnaphthalene	142	6.657	6.657	(1.179)	1905529	927.830	928
	6 1-Methylnaphthalene	142	6.909	6.899	(1.224)	1869199	927.957	928
	7 2-Chloronaphthalene	162	7.539	7.539	(0.878)	1773211	916.527	917
	8 Biphenyl	154	7.539	7.539	(0.878)	2315107	871.982	872
	9 2,6-Dimethylnaphthalene	156	7.581	7.581	(0.883)	1758412	921.635	922
	10 Acenaphthylene	152	8.429	8.429	(0.982)	2087520	949.236	949
*	11 Acenaphthene-d10	164	8.583	8.583	(1.000)	236024	200.000	
	12 Acenaphthene	153	8.646	8.646	(1.007)	1386991	919.235	919
	13 Dibenzofuran	168	8.850	8.850	(1.031)	1904476	888.230	888
	14 2,3,5-Trimethylnaphthalene	170	8.964	8.964	(1.044)	1287121	965.627	966
$	15 Fluorene-d10	174	9.406	9.405	(1.096)	1096241	943.136	943
	16 Fluorene	166	9.470	9.470	(1.103)	1580867	954.344	954
	17 Dibenzothiophene	184	11.035	11.035	(0.985)	1929826	933.633	934
*	18 Phenanthrene-d10	188	11.203	11.214	(1.000)	416191	200.000	
	19 Phenanthrene	178	11.245	11.245	(1.004)	2223707	885.243	885
$	20 Anthracene-d10	188	11.266	11.266	(1.006)	1811721	956.228	956
	21 Anthracene	178	11.298	11.298	(1.008)	2211078	935.407	935
	22 Carbazole	167	11.988	11.988	(1.070)	2562932	927.668	928
	23 1-Methylphenanthrene	192	12.241	12.241	(1.093)	2112658	954.439	954
$	24 Fluoranthene-d10	212	13.272	13.272	(1.185)	1818350	974.039	974
	25 Fluoranthene	202	13.301	13.301	(1.187)	2306571	943.859	944
	26 Pyrene	202	13.781	13.781	(0.868)	2343478	932.089	932
	27 Benzo(a)anthracene	228	15.790	15.790	(0.995)	2048787	941.699	942
*	28 Chrysene-d12	240	15.873	15.873	(1.000)	386429	200.000	
	29 Chrysene	228	15.923	15.923	(1.003)	2124595	880.455	880
	30 Benzo(b)fluoranthene	252	17.552	17.552	(0.958)	1932802	892.211	892
	31 Benzo(k)fluoranthene	252	17.591	17.591	(0.960)	2299764	977.047	977
	32 Benzo(j)fluoranthene	252	17.639	17.639	(0.962)	1941385	889.767	890
$	33 Benzo(e)pyrene-d12	264	18.062	18.062	(0.985)	1765002	961.044	961

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
	34 Benzo(e)pyrene	252	18.100	18.100	(0.937)	1921560	912.818	913
	35 Benzo(a)pyrene	252	18.177	18.177	(0.932)	1884866	950.303	950
*	36 Perylene-d12	264	18.331	18.331	(1.000)	381102	200.000	
	37 Perylene	252	18.369	18.369	(1.002)	1923715	934.197	934
$	38 Dibenz[a,h]anthracene-d14	292	20.071	20.071	(1.095)	1238503	1009.37	1010
	39 Dibenzo(a,h)anthracene	278	20.149	20.149	(1.099)	1785174	996.812	997
	40 Indeno(1,2,3-cd)pyrene	276	20.149	20.149	(1.099)	2161748	981.889	982
	41 Benzo(g,h,i)perylene	276	20.891	20.891	(1.140)	1818816	956.247	956

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16112510.D
Lab Smp Id: SEK0335-CAL6
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Misc Info:

Calibration Date: 25-NOV-2016
Calibration Time: 12:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	475772	-3.60
11 Acenaphthene-d10	240770	120385	481540	238024	-1.14
18 Phenanthrene-d10	429271	214636	858542	418191	-2.58
28 Chrysene-d12	387691	193846	775382	386429	-0.33
36 Perylene-d12	386259	193130	772518	381102	-1.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.65	5.15	6.15	5.65	0.00
11 Acenaphthene-d10	8.58	8.08	9.08	8.58	0.00
18 Phenanthrene-d10	11.21	10.71	11.71	11.20	-0.09
28 Chrysene-d12	15.87	15.37	16.37	15.87	0.00
36 Perylene-d12	18.33	17.83	18.83	18.33	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16112510.D

Lab ID: SEK0335-CAL6
nt11.i, 20161125.b\lowsim.m, 25-NOV-2016 10:20

RT	CO-ELUTION COMPOUNDS
20.149	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.149	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

RRT CHECK

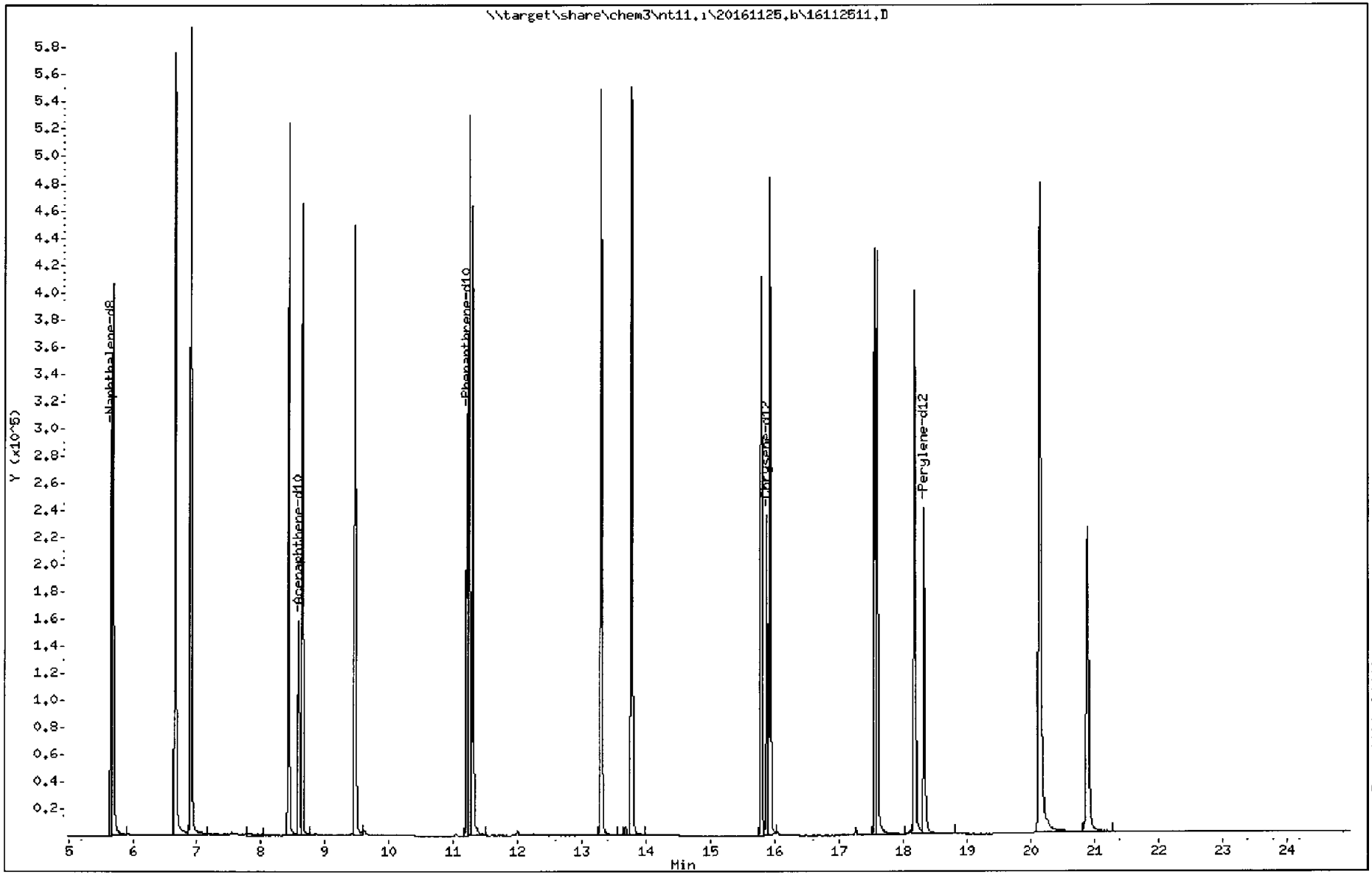
RRT	CCV RRT	DELTA	COMPOUND
NONE			

On Column LOD for nt11.i, 20161125.b\lowsim.m, all.sub = 0.0000

Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D
Date : 25-NOV-2016 10:50
Client ID:
Sample Info: SEK0335-SCV1

Instrument: nt11.i
Operator: JW
Column diameter: 0.25

Column phase: Rx1-17Sil MS



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161125.b\16112511.D
Lab Smp Id: SEK0335-SCV1
Inj Date : 25-NOV-2016 10:50 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : SEK0335-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Meth Date : 30-Nov-2016 07:48 jonathonw Quant Type: ISTD
Cal Date : 25-NOV-2016 09:50 Cal File: 16112509.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1 Naphthalene-d8	136	5.636	5.640	(1.000)	443736	200.000	
	2 Naphthalene	128	5.683	5.683	(1.005)	594052	260.364	260
	3 Benzo(b)thiophene	134	Compound Not Detected.					
$	4 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	5 2-Methylnaphthalene	142	6.668	6.657	(1.179)	475379	248.180	248
	6 1-Methylnaphthalene	142	6.909	6.899	(1.222)	478188	254.536	255
	7 2-Chloronaphthalene	162	Compound Not Detected.					
	8 Biphenyl	154	Compound Not Detected.					
	9 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	10 Acenaphthylene	152	8.429	8.429	(0.982)	516928	254.456	254
*	11 Acenaphthene-d10	164	8.583	8.583	(1.000)	219883	200.000	
	12 Acenaphthene	153	8.646	8.646	(1.007)	369656	265.221	265
	13 Dibenzofuran	168	Compound Not Detected.					
	14 2,3,5-Trimethylnaphthalene	170	Compound Not Detected.					
$	15 Fluorene-d10	174	Compound Not Detected.					
	16 Fluorene	166	9.470	9.470	(1.103)	368785	240.997	241
	17 Dibenzothiophene	184	Compound Not Detected.					
*	18 Phenanthrene-d10	188	11.214	11.214	(1.000)	374597	200.000	
	19 Phenanthrene	178	11.245	11.245	(1.003)	581156	258.279	258
$	20 Anthracene-d10	188	Compound Not Detected.					
	21 Anthracene	178	11.298	11.298	(1.007)	559319	264.160	264
	22 Carbazole	167	Compound Not Detected.					
	23 1-Methylphenanthrene	192	Compound Not Detected.					
$	24 Fluoranthene-d10	212	Compound Not Detected.					
	25 Fluoranthene	202	13.301	13.301	(1.186)	552443	253.029	253
	26 Pyrene	202	13.781	13.781	(0.868)	625741	268.750	269
	27 Benzo(a)anthracene	228	15.790	15.790	(0.995)	502188	249.252	249
*	28 Chrysene-d12	240	15.873	15.873	(1.000)	357859	200.000	
	29 Chrysene	228	15.923	15.923	(1.003)	516302	244.468	244
	30 Benzo(b)fluoranthene	252	17.552	17.552	(0.958)	462371	231.180	231
	31 Benzo(k)fluoranthene	252	17.591	17.591	(0.960)	528068	242.937	243
	32 Benzo(j)fluoranthene	252	Compound Not Detected.					
$	33 Benzo(e)pyrene-d12	264	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
	34 Benzo(e)pyrene	252	Compound Not Detected.					
	35 Benzo(a)pyrene	252	18.177	18.177	(0.992)	456908	249.511	250
*	36 Perylene-d12	264	18.331	18.331	(1.000)	351854	200.000	
	37 Perylene	252	Compound Not Detected.					
$	38 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	39 Dibenzo(a,h)anthracene	278	20.149	20.149	(1.099)	402829	243.904	244
	40 Indeno(1,2,3-cd)pyrene	276	20.149	20.149	(1.099)	431258	241.683	242
	41 Benzo(g,h,i)perylene	276	20.891	20.891	(1.140)	429481	244.571	245

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16112511.D
Lab Smp Id: SEK0335-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Misc Info:

Calibration Date: 25-NOV-2016
Calibration Time: 12:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	443736	-10.09
11 Acenaphthene-d10	240770	120385	481540	219883	-8.68
18 Phenanthrene-d10	429271	214636	858542	374597	-12.74
28 Chrysene-d12	387691	193846	775382	357859	-7.69
36 Perylene-d12	386259	193130	772518	351854	-8.91

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.65	5.15	6.15	5.66	0.16
11 Acenaphthene-d10	8.58	8.08	9.08	8.58	0.00
18 Phenanthrene-d10	11.21	10.71	11.71	11.21	0.00
28 Chrysene-d12	15.87	15.37	16.37	15.87	0.00
36 Perylene-d12	18.33	17.83	18.83	18.33	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16112511.D

Lab ID: SEK0335-SCV1
nt11.i, 20161125.b\lowsim.m, 25-NOV-2016 10:50

RT	CO-ELUTION COMPOUNDS
20.150	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.150	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161125.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

INITIAL CALIBRATION DATA

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Calibration:	ZL00052	Instrument:	NT11
Calibration Date:	12/16/2016 0:00	Column (1):	RXi-17Sil-MS

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Naphthalene	10	1.01097	50	1.016496	100	0.983559	250	1.011624	500	0.9787533	1000	0.9463923
2-Methylnaphthalene	10	0.895676	50	0.97195	100	0.9841544	250	1.009196	500	1.011905	1000	0.9695914
Acenaphthylene	10	1.675264	50	1.78907	100	1.826146	250	1.834221	500	1.828635	1000	1.766388
Acenaphthene	10	1.070241	50	1.193733	100	1.18574	250	1.200283	500	1.193341	1000	1.170316
Dibenzofuran	10	1.602441	50	1.773539	100	1.76275	250	1.774061	500	1.775672	1000	1.715531
Fluorene	10	1.254702	50	1.389308	100	1.41401	250	1.438892	500	1.435262	1000	1.406525
Phenanthrene	10	1.15079	50	1.129185	100	1.142986	250	1.134911	500	1.116834	1000	1.033856
Anthracene	10	1.028827	50	1.045809	100	1.086195	250	1.107055	500	1.101064	1000	1.029557
Fluoranthene	10	1.355185	50	1.260742	100	1.307449	250	1.308426	500	1.306993	1000	1.191276
Pyrene	10	1.185931	50	1.131265	100	1.179988	250	1.156956	500	1.125701	1000	1.0872
Benzo(a)anthracene	10	1.192628	50	1.151564	100	1.187866	250	1.186006	500	1.166345	1000	1.105808
Chrysene	10	1.252492	50	1.201203	100	1.227181	250	1.189161	500	1.177942	1000	1.092033
Benzo(b)fluoranthene	10	1.090987	50	1.096221	100	1.123859	250	1.125453	500	1.137002	1000	1.14293
Benzo(k)fluoranthene	10	1.112759	50	1.156384	100	1.194702	250	1.196077	500	1.219899	1000	1.130257
Carbazole	10	1.018486	50	1.038495	100	1.137948	250	1.182817	500	1.214536	1000	1.159185
Benzo(j)fluoranthene	10	0.9710788	50	1.071717	100	1.094343	250	1.082951	500	1.109219	1000	1.069974
Benzo(a)pyrene	10	0.9281339	50	0.9583327	100	1.007304	250	1.008055	500	1.039797	1000	1.018143
Indeno(1,2,3-cd)pyrene	10	0.792713	50	0.8596	100	0.9521011	250	1.019126	500	1.077724	1000	1.119527
Dibenzo(a,h)anthracene	10	0.5505556	50	0.676477	100	0.7540838	250	0.8020708	500	0.8638025	1000	0.9058283
Benzo(g,h,i)perylene	10	0.7433997	50	0.8003114	100	0.8512771	250	0.8686422	500	0.9139202	1000	0.9414759
1-Methylnaphthalene	10	0.9201615	50	0.9614588	100	0.9578966	250	0.9809156	500	0.9778154	1000	0.9418132
Perylene	10	1.086252	50	1.032454	100	1.055743	250	1.052451	500	1.067624	1000	1.048207
Benzo(e)pyrene	10	1.029645	50	1.074393	100	1.087424	250	1.091491	500	1.115754	1000	1.07505
2-Chloronaphthalene	10	1.39382	50	1.603662	100	1.602993	250	1.614352	500	1.613459	1000	1.542507
2-Methylnaphthalene-d10	10	0.8115885	50	0.8762596	100	0.8770089	250	0.8987613	500	0.8982374	1000	0.8746557
Dibenzo[a,h]anthracene-d14			50	0.4932581	100	0.5421749	250	0.6062996	500	0.6360603	1000	0.6706181
Fluoranthene-d10	10	1.036273	50	1.057842	100	1.072895	250	1.090057	500	1.105037	1000	1.029746
Fluorene-d10	10	0.8814285	50	0.9710497	100	0.9600696	250	0.9901944	500	0.9803333	1000	0.9811187

INITIAL CALIBRATION DATA

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Calibration:	ZL00052	Instrument:	NT11
Calibration Date:	12/16/2016 0:00	Column (1):	RXi-17Sil-MS

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Anthracene-d10	10	1.264835	50	0.9171402	100	0.9156021	250	0.9714981	500	0.9546435	1000	0.9200183
Benzo(e)pyrene-d12	10	0.9386388	50	0.9923703	100	1.006716	250	1.006314	500	1.03151	1000	0.9979241

INITIAL CALIBRATION DATA

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Calibration:	ZL00052	Instrument:	NT11
Calibration Date:	12/16/2016 0:00	Column (1):	RXi-17Sil-MS

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Naphthalene	0.9912991	2.7			RSD (20)	
2-Methylnaphthalene	0.9737454	4.3			RSD (20)	
Acenaphthylene	1.786621	3.4			RSD (20)	
Acenaphthene	1.168942	4.2			RSD (20)	
Dibenzofuran	1.733999	3.9			RSD (20)	
Fluorene	1.389783	4.9			RSD (20)	
Phenanthrene	1.118094	3.8			RSD (20)	
Anthracene	1.066418	3.4			RSD (20)	
Fluoranthene	1.288345	4.4			RSD (20)	
Pyrene	1.144507	3.3			RSD (20)	
Benzo(a)anthracene	1.165036	2.8			RSD (20)	
Chrysene	1.190002	4.6			RSD (20)	
Benzo(b)fluoranthene	1.119409	1.9			RSD (20)	
Benzo(k)fluoranthene	1.168346	3.6			RSD (20)	
Carbazole	1.125244	7.1			RSD (20)	
Benzo(j)fluoranthene	1.066547	4.6			RSD (20)	
Benzo(a)pyrene	0.9932942	4.2			RSD (20)	
Indeno(1,2,3-cd)pyrene	0.9701319	13.1			RSD (20)	
Dibenzo(a,h)anthracene	0.758803	17.2			RSD (20)	
Benzo(g,h,i)perylene	0.8531711	8.5			RSD (20)	
1-Methylnaphthalene	0.9566768	2.4			RSD (20)	
Perylene	1.057122	1.7			RSD (20)	
Benzo(e)pyrene	1.07896	2.6			RSD (20)	
2-Chloronaphthalene	1.561799	5.5			RSD (20)	
2-Methylnaphthalene-d10	0.8727519	3.7			RSD (20)	
Dibenzo[a,h]anthracene-d14	0.5896822	12.1			RSD (20)	
Fluoranthene-d10	1.065308	2.8			RSD (20)	
Fluorene-d10	0.9606991	4.2			RSD (20)	
Anthracene-d10	0.9906229	13.8			RSD (20)	
Benzo(e)pyrene-d12	0.9955788	3.1			RSD (20)	

Lakeside
16K0376

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Initial Calibration Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
1	Element Calibration Code	YES	VTS	12/17/2016
	Comments: *ZL00052*			
2	DFTPP Tune met criteria	YES	VTS	12/17/2016
3	DDT breakdown <20%	YES	VTS	12/17/2016
4	Peak Tailing factor <= 2%	YES	VTS	12/17/2016
5	ICal meets 20% RSD, LR COD, and QR COD limits	YES	VTS	12/17/2016
6	NO ICAL Q Flag applied	YES	VTS	12/17/2016
7	Manual integrations include before/after pictures	YES	VTS	12/17/2016
8	Spectral Library matches updated	YES	VTS	12/17/2016
9	Internal Standard areas within 50-200% from reference	YES	VTS	12/17/2016
10	Minimum response factors met	YES	VTS	12/17/2016
11	All SCV within +/- 20% (DOD)	YES	VTS	12/17/2016
12	All SCV within +/- 30%	YES	VTS	12/17/2016
13	NO Linear or Quadratic fits used	NA	VTS	12/17/2016
14	NO Calibration points dropped	NO	VTS	12/17/2016
	Comments: *Dropped low point for d14-Dibenzo(a,h)anthracene-using 5 points.*			
15	Additional notes	NA	VTS	12/17/2016
16	Reviewer approval (Reviewer)	YES	BB	12/19/2016

* = Indicates Automated Response from Element DataSyst

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161216A.b

Instrument: nt11.i Date: 16-DEC-2016 Method: 20161216A.b\lowsim.m

INITIAL CAL: 16-DEC-2016

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: N1116121610.D 16-DEC-2016 13:50

Compound	%D
NO Q-FLAGS	

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20161216A.b
Inst ID: nt11.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	N1116121610	N1116121611	N1116121612	N1116121613	N1116121614	N1116121615
INJ.DATE:	16-DEC-2016	16-DEC-2016	16-DEC-2016	16-DEC-2016	16-DEC-2016	16-DEC-2016
INJ.TIME:	13:50	14:28	14:59	15:30	16:01	16:32

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	1 Naphthalene-d8	7.235	7.235	7.235	7.235	7.235	7.235	7.235	6.985-7.485	7.235	0.000
	2 Naphthalene	7.271	7.271	7.262	7.262	7.262	7.262	7.262	7.012-7.512	7.265	0.005
	3 Benzo(b)thiophene	7.524	7.524	7.524	7.524	7.515	7.524	7.524	7.274-7.774	7.523	0.004
$	4 2-Methylnaphthalene-d1	8.212	8.212	8.212	8.212	8.212	8.212	8.212	7.962-8.462	8.212	0.000
	5 2-Methylnaphthalene	8.264	8.264	8.264	8.264	8.264	8.264	8.264	8.014-8.514	8.264	0.000
	6 1-Methylnaphthalene	8.527	8.527	8.527	8.527	8.527	8.527	8.527	8.277-8.777	8.527	0.000
	7 2-Chloronaphthalene	9.178	9.178	9.178	9.178	9.178	9.178	9.178	8.928-9.428	9.178	0.000
	8 Biphenyl	9.136	9.147	9.136	9.136	9.136	9.136	9.136	8.886-9.386	9.138	0.004
	9 2,6-Dimethylnaphthalen	9.199	9.199	9.199	9.199	9.199	9.199	9.199	8.949-9.449	9.199	0.000
	10 Acenaphthylene	10.107	10.116	10.107	10.107	10.107	10.107	10.107	9.857-10.357	10.109	0.004
*	11 Acenaphthene-d10	10.261	10.261	10.261	10.261	10.261	10.261	10.261	10.011-10.511	10.261	0.000
	12 Acenaphthene	10.324	10.324	10.324	10.324	10.324	10.324	10.324	10.074-10.574	10.324	0.000
	13 Dibenzofuran	10.519	10.532	10.519	10.519	10.519	10.519	10.519	10.269-10.769	10.521	0.005
	14 2,3,5-Trimethylnaphtha	10.620	10.620	10.621	10.621	10.620	10.620	10.620	10.370-10.870	10.620	0.000
$	15 Fluorene-d10	11.101	11.101	11.101	11.101	11.101	11.101	11.101	10.851-11.351	11.101	0.000
	16 Fluorene	11.151	11.151	11.151	11.151	11.151	11.151	11.151	10.901-11.401	11.151	0.000
	17 Dibenzothiophene	12.778	12.788	12.778	12.778	12.778	12.778	12.778	12.528-13.028	12.779	0.004

Reviewer 1 VD Date: 12·17·16
Reviewer 2 Date: 12/19/16

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20161216A.b
Inst ID: nt11.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	18 Phenanthrene-d10	12.956	12.956	12.956	12.956	12.956	12.946	12.946	12.696-13.196	12.954	0.004
	19 Phenanthrene	12.998	12.998	12.998	12.988	12.988	12.988	12.988	12.738-13.238	12.993	0.006
$	20 Anthracene-d10	13.009	13.019	13.009	13.009	13.009	13.009	13.009	12.759-13.259	13.011	0.004
	21 Anthracene	13.051	13.051	13.051	13.051	13.051	13.051	13.051	12.801-13.301	13.051	0.000
	22 Carbazole	13.722	13.722	13.723	13.722	13.722	13.722	13.722	13.472-13.972	13.722	0.000
	23 1-Methylphenanthrene	13.993	13.993	13.994	13.994	13.994	13.994	13.994	13.744-14.244	13.993	0.000
$	24 Fluoranthene-d10	15.065	15.065	15.065	15.065	15.065	15.056	15.056	14.806-15.306	15.064	0.004
	25 Fluoranthene	15.094	15.104	15.094	15.094	15.094	15.094	15.094	14.844-15.344	15.096	0.004
	26 Pyrene	15.603	15.603	15.603	15.603	15.603	15.603	15.603	15.353-15.853	15.603	0.000
	27 Benzo(a)anthracene	17.619	17.619	17.611	17.611	17.611	17.611	17.611	17.361-17.861	17.613	0.004
*	28 Chrysene-d12	17.710	17.710	17.710	17.710	17.710	17.710	17.710	17.460-17.960	17.710	0.000
	29 Chrysene	17.760	17.760	17.760	17.760	17.760	17.760	17.760	17.510-18.010	17.760	0.000
	30 Benzo(b)fluoranthene	19.686	19.696	19.687	19.687	19.687	19.687	19.687	19.437-19.937	19.688	0.004
	31 Benzo(k)fluoranthene	19.744	19.744	19.744	19.744	19.744	19.744	19.744	19.494-19.994	19.744	0.000
	32 Benzo(j)fluoranthene	19.811	19.821	19.812	19.812	19.811	19.811	19.811	19.561-20.061	19.813	0.004
$	33 Benzo(e)pyrene-d12	20.493	20.494	20.494	20.494	20.494	20.494	20.494	20.244-20.744	20.494	0.000
	34 Benzo(e)pyrene	20.561	20.570	20.561	20.571	20.561	20.561	20.561	20.311-20.811	20.564	0.005
	35 Benzo(a)pyrene	20.695	20.705	20.696	20.696	20.695	20.695	20.695	20.445-20.945	20.697	0.004
*	36 Perylene-d12	20.935	20.935	20.936	20.936	20.936	20.936	20.936	20.686-21.186	20.936	0.000
	37 Perylene	21.012	21.012	21.003	21.013	21.013	21.013	21.013	20.763-21.263	21.011	0.004
$	38 Dibenzo(a,h)anthracene	23.831	23.831	23.831	23.820	23.820	23.820	23.820	23.570-24.070	23.825	0.006
	39 Dibenzo(a,h)anthracene	23.963	23.975	23.964	23.964	23.964	23.964	23.964	23.714-24.214	23.965	0.004

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20161216A.b
Inst ID: nt11.i

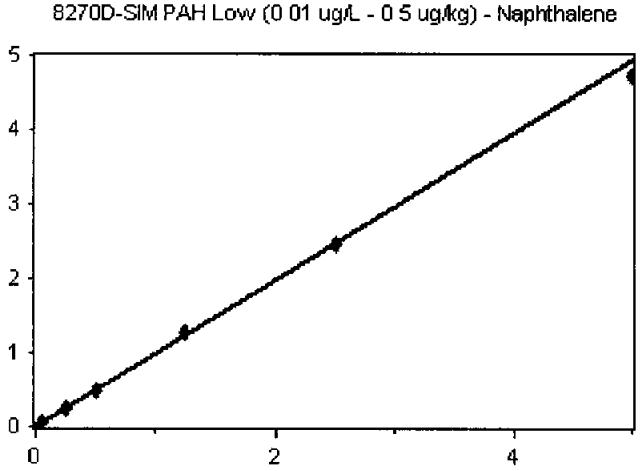
Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 Indeno(1,2,3-cd)pyrene	23.997	24.008	24.008	23.997	23.997	23.997	23.997	23.747-24.247	24.001	0.006
41 Benzo(g,h,i)perylene	25.392	25.403	25.393	25.393	25.392	25.392	25.392	25.142-25.642	25.394	0.004

Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**16-Dec-2016 00:00 By VTS**
Calibration ID:	**ZL00052**	**Last Edit Date:**	**17-Dec-2016 09:59 By VTS**

8270D-SIM PAH Low (0.0

Naphthalene

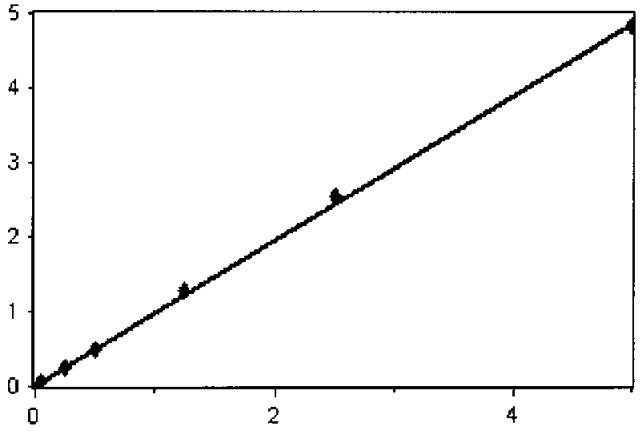


Average RF

RF RSD: 2.732575

[Conc] = 0.9912991 * [Response]

2-Methylnaphthalene

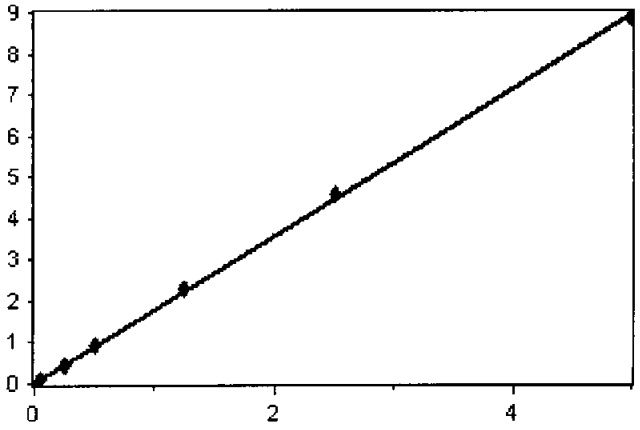


Average RF

RF RSD: 4.34165

[Conc] = 0.9737454 * [Response]

Acenaphthylene



Average RF

RF RSD: 3.396247

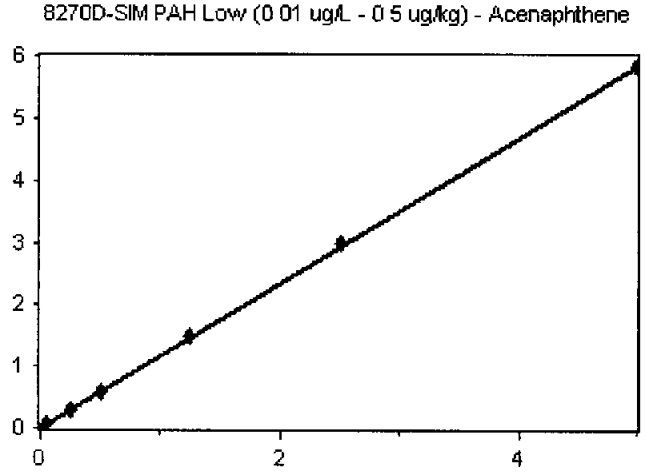
[Conc] = 1.786621 * [Response]

Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**16-Dec-2016 00:00 By VTS**
Calibration ID:	**ZL00052**	**Last Edit Date:**	**17-Dec-2016 09:41 By VTS**

8270D-SIM PAH Low (0.0

Acenaphthene

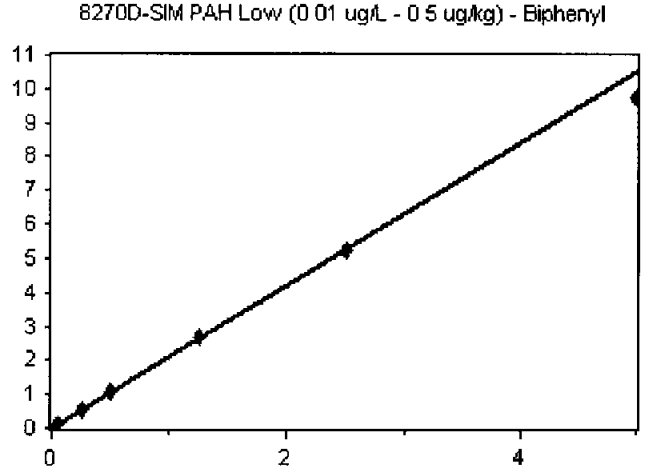


Average RF

RF RSD: 4.228862

[Conc] = 1.168942 * [Response]

Biphenyl

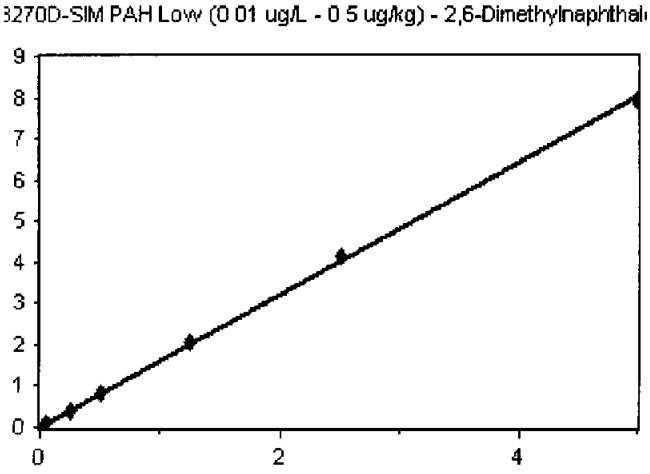


Average RF

RF RSD: 4.180515

[Conc] = 2.099986 * [Response]

2,6-Dimethylnaphthalene



Average RF

RF RSD: 3.511338

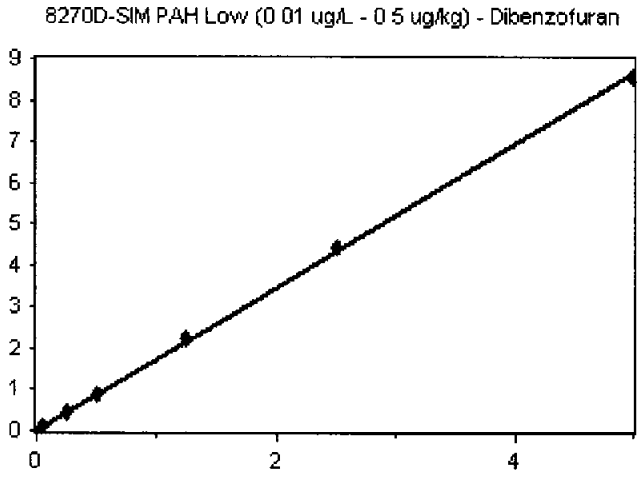
[Conc] = 1.604684 * [Response]

Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**16-Dec-2016 00:00 By VTS**
Calibration ID:	**ZL00052**	**Last Edit Date:**	**17-Dec-2016 09:41 By VTS**

8270D-SIM PAH Low (0.0

Dibenzofuran

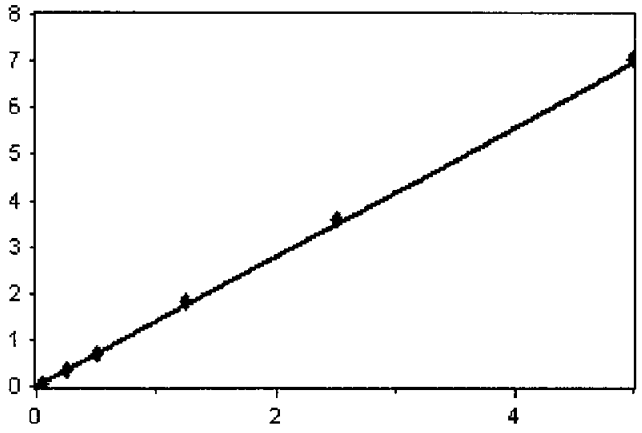


Average RF

RF RSD: 3.943565

[Conc] = 1.733999 * [Response]

Fluorene

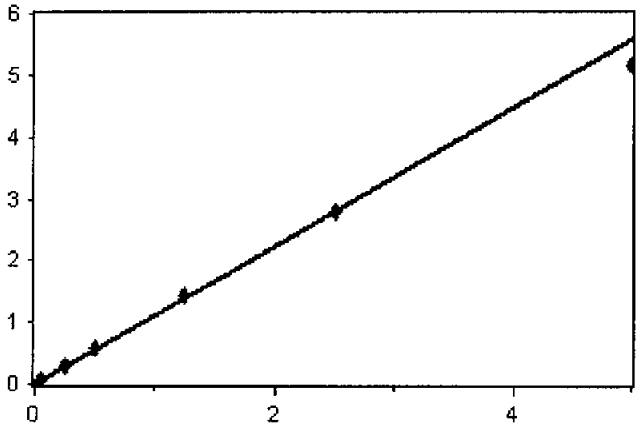


Average RF

RF RSD: 4.942787

[Conc] = 1.389783 * [Response]

Phenanthrene



Average RF

RF RSD: 3.83479

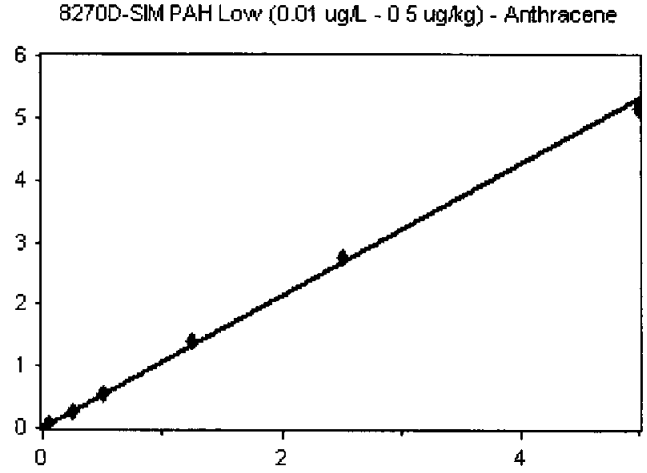
[Conc] = 1.118094 * [Response]

Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**16-Dec-2016 00:00 By VTS**
Calibration ID:	**ZL00052**	**Last Edit Date:**	**17-Dec-2016 09:41 By VTS**

8270D-SIM PAH Low (0.0

Anthracene

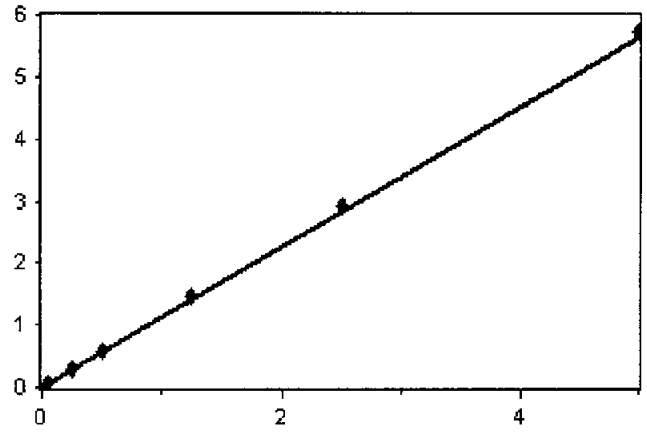


Average RF

RF RSD: 3.365198

[Conc] = 1.066418 * [Response]

2,3,5-Trimethylnaphthalene

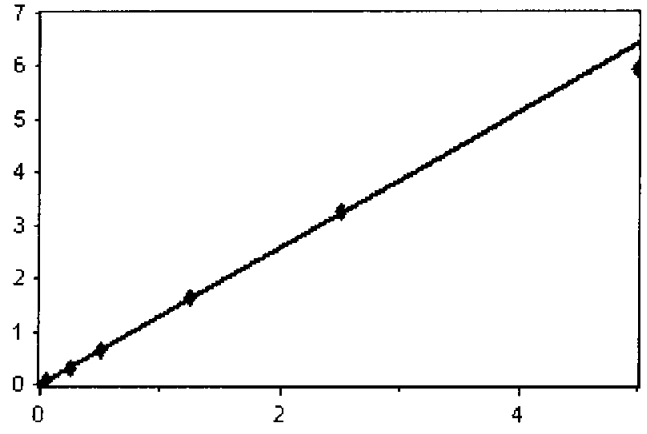


Average RF

RF RSD: 5.673818

[Conc] = 1.127162 * [Response]

Fluoranthene



Average RF

RF RSD: 4.358838

[Conc] = 1.288345 * [Response]

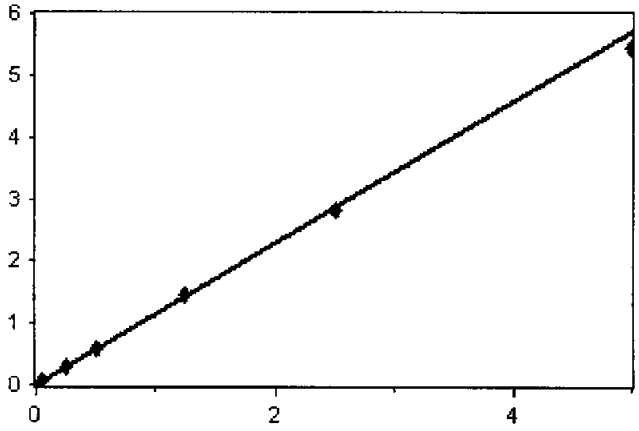
Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**16-Dec-2016 00:00 By VTS**
Calibration ID:	**ZL00052**	**Last Edit Date:**	**17-Dec-2016 09:41 By VTS**

8270D-SIM PAH Low (0.0

Pyrene

8270D-SIM PAH Low (0.01 ug/L - 0 5 ug/kg) - Pyrene



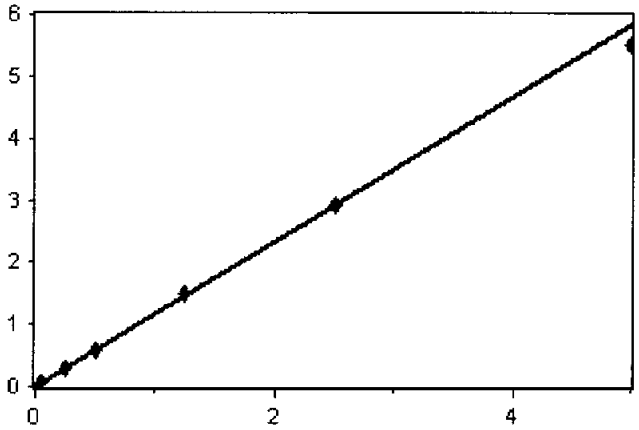
Average RF

RF RSD: 3.255896

[Conc] = 1.144507 * [Response]

Benzo(a)anthracene

8270D-SIM PAH Low (0.01 ug/L - 0 5 ug/kg) - Benzo(a)anthracer



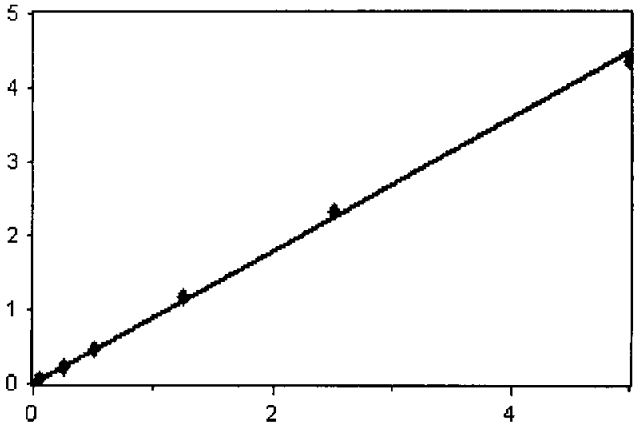
Average RF

RF RSD: 2.824278

[Conc] = 1.165036 * [Response]

Dibenzothiophene

8270D-SIM PAH Low (0.01 ug/L - 0 5 ug/kg) - Dibenzothiophene



Average RF

RF RSD: 3.678343

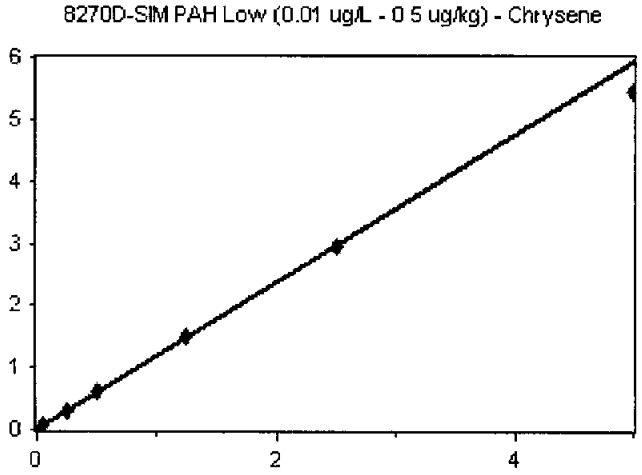
[Conc] = 0.8990517 * [Response]

Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**16-Dec-2016 00:00 By VTS**
Calibration ID:	**ZL00052**	**Last Edit Date:**	**17-Dec-2016 09:41 By VTS**

8270D-SIM PAH Low (0.0

Chrysene

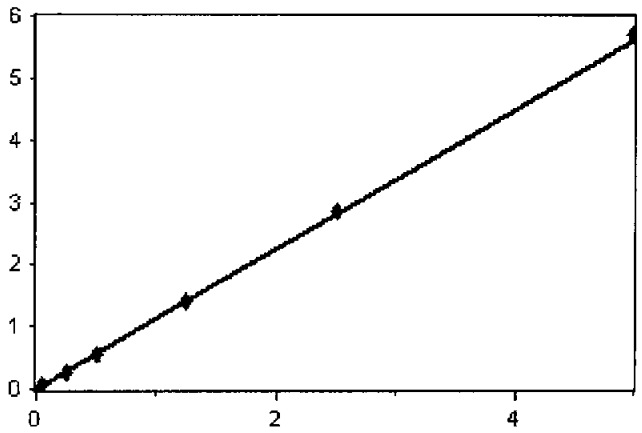


Average RF

RF RSD: 4.626699

[Conc] = 1.190002 * [Response]

Benzo(b)fluoranthene

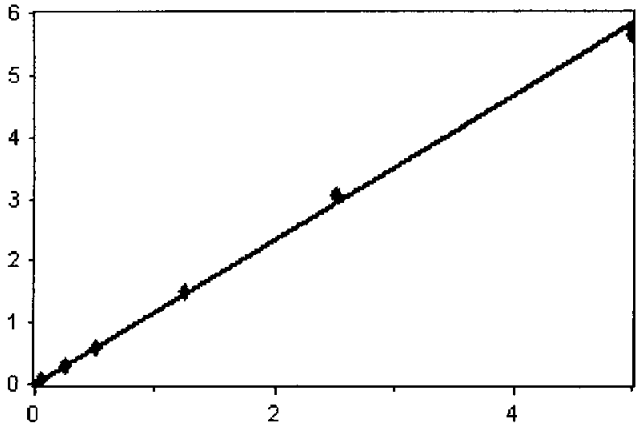


Average RF

RF RSD: 1.901169

[Conc] = 1.119409 * [Response]

Benzo(k)fluoranthene



Average RF

RF RSD: 3.591792

[Conc] = 1.168346 * [Response]

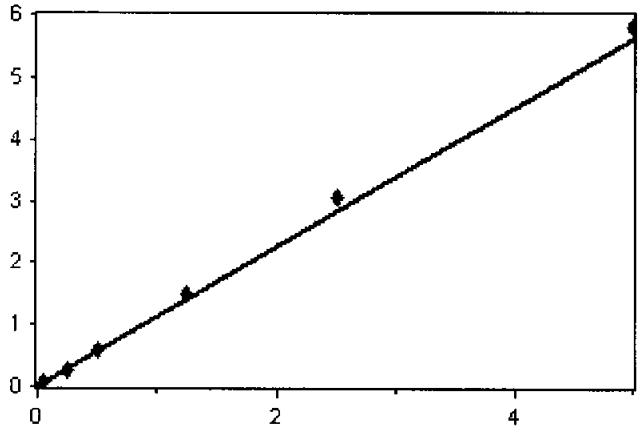
Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**16-Dec-2016 00:00 By VTS**
Calibration ID:	**ZL00052**	**Last Edit Date:**	**17-Dec-2016 09:41 By VTS**

8270D-SIM PAH Low (0.0

Carbazole

8270D-SIM PAH Low (0 01 ug/L - 0 5 ug/kg) - Carbazole



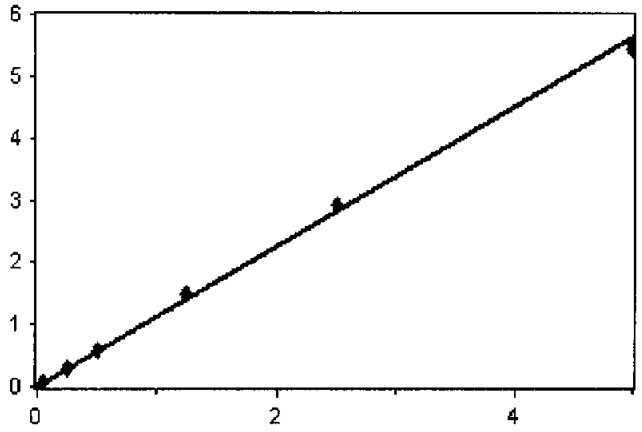
Average RF

RF RSD: 7.056421 ✓

[Conc] = 1.125245 * [Response]

1-Methylphenanthrene

8270D-SIM PAH Low (0.01 ug/L - 0 5 ug/kg) - 1-Methylphenanthre



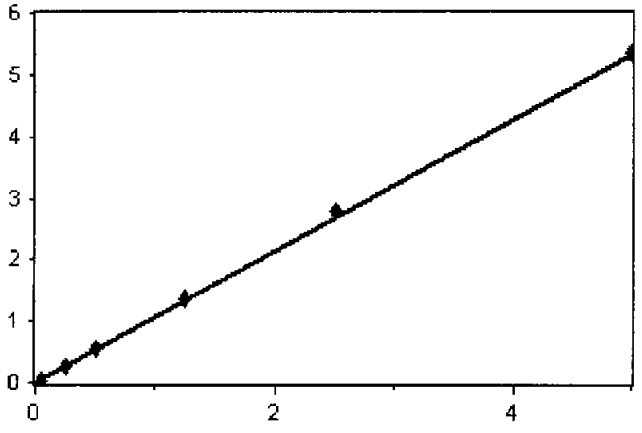
Average RF

RF RSD: 4.039872 ✓

[Conc] = 1.13119 * [Response]

Benzo(j)fluoranthene

8270D-SIM PAH Low (0 01 ug/L - 0.5 ug/kg) - Benzo(j)fluoranther



Average RF

RF RSD: 4.596242 ✓

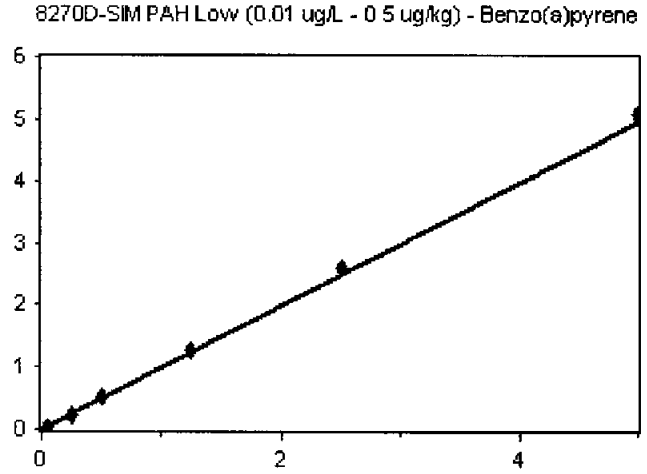
[Conc] = 1.066547 * [Response]

Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**16-Dec-2016 00:00 By VTS**
Calibration ID:	**ZL00052**	**Last Edit Date:**	**17-Dec-2016 09:41 By VTS**

8270D-SIM PAH Low (0.0

Benzo(a)pyrene

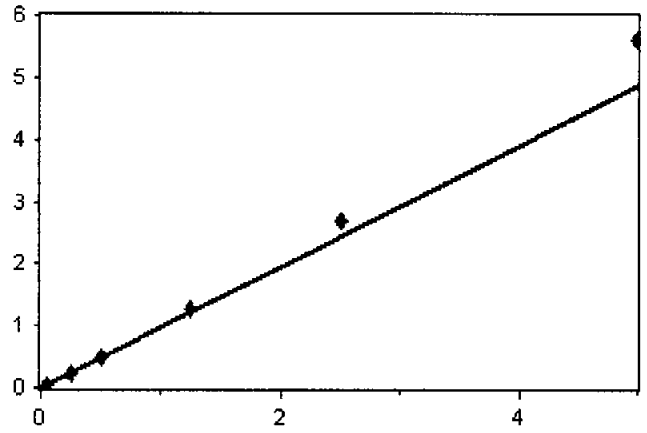


Average RF

RF RSD: 4.190388

[Conc] = 0.9932944 * [Response]

Indeno(1,2,3-cd)pyrene

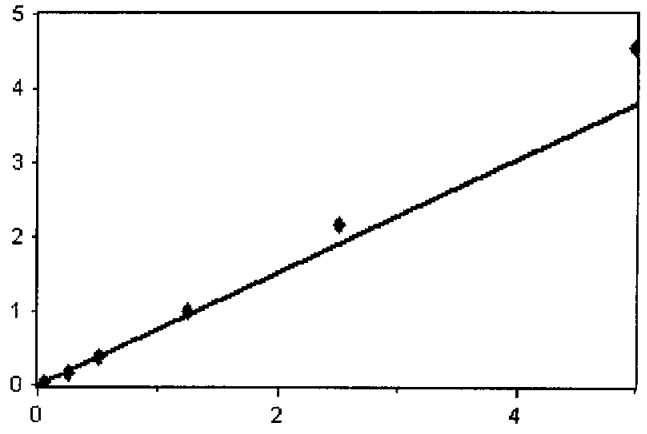


Average RF

RF RSD: 13.0642

[Conc] = 0.9701317 * [Response]

Dibenzo(a,h)anthracene



Average RF

RF RSD: 17.15051

[Conc] = 0.758803 * [Response]

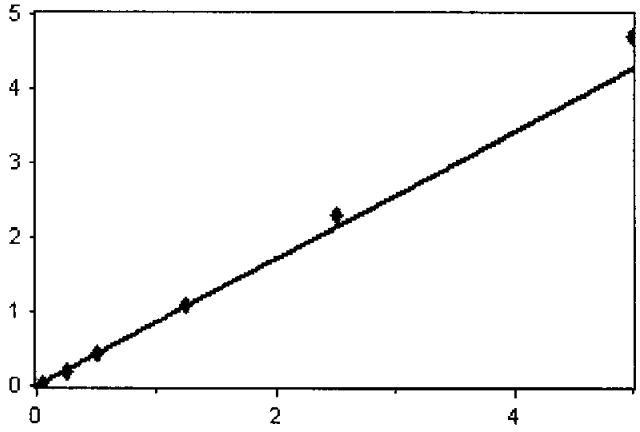
Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**16-Dec-2016 00:00 By VTS**
Calibration ID:	**ZL00052**	**Last Edit Date:**	**17-Dec-2016 09:41 By VTS**

8270D-SIM PAH Low (0.0

Benzo(g,h,i)perylene

8270D-SIM PAH Low (0 01 ug/L - 0 5 ug/kg) - Benzo(g,h,i)perylen



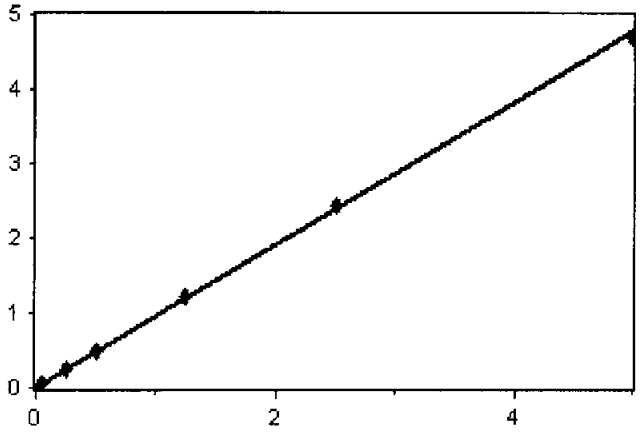
Average RF

RF RSD: 8.545085

[Conc] = 0.8531711 * [Response]

1-Methylnaphthalene

8270D-SIM PAH Low (0 01 ug/L - 0 5 ug/kg) - 1-Methylnaphthaler



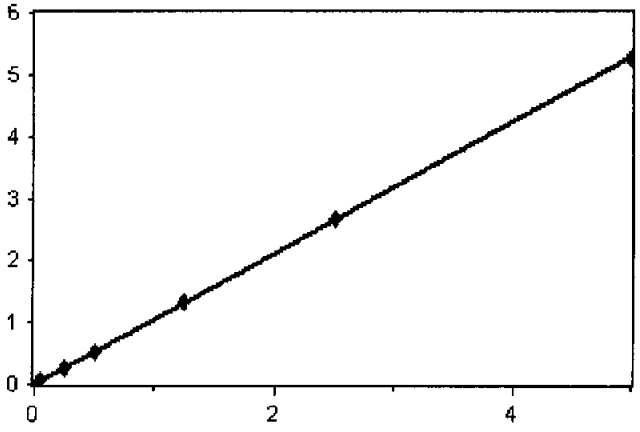
Average RF

RF RSD: 2.389557

[Conc] = 0.9566768 * [Response]

Perylene

8270D-SIM PAH Low (0 01 ug/L - 0 5 ug/kg) - Perylene



Average RF

RF RSD: 1.729042

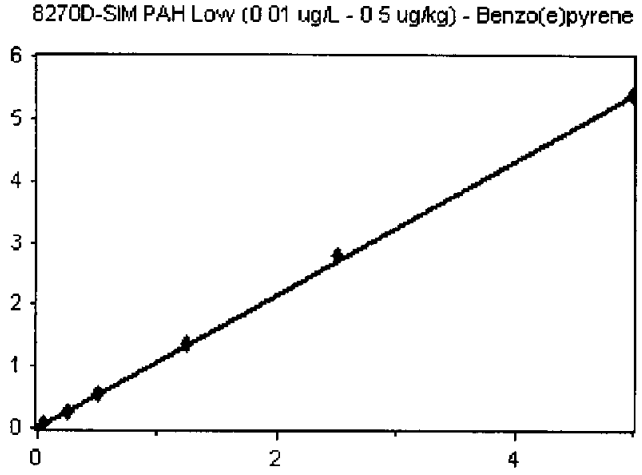
[Conc] = 1.057122 * [Response]

Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**16-Dec-2016 00:00 By VTS**
Calibration ID:	**ZL00052**	**Last Edit Date:**	**17-Dec-2016 09:41 By VTS**

8270D-SIM PAH Low (0.0

Benzo(e)pyrene

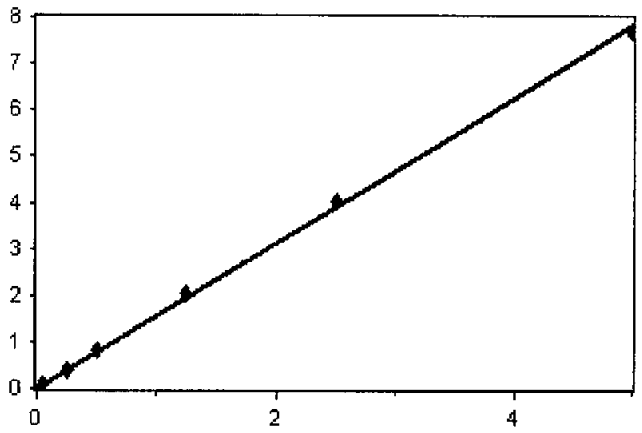


Average RF

RF RSD: 2.637976

[Conc] = 1.07896 * [Response]

2-Chloronaphthalene

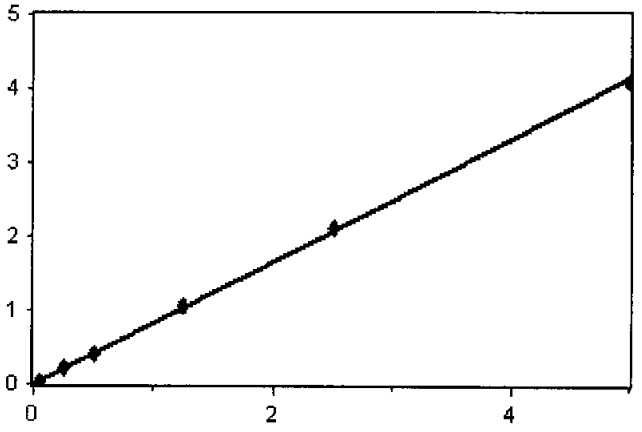


Average RF

RF RSD: 5.542764

[Conc] = 1.561799 * [Response]

Benzo(b)thiophene



Average RF

RF RSD: 1.720503

[Conc] = 0.8262938 * [Response]

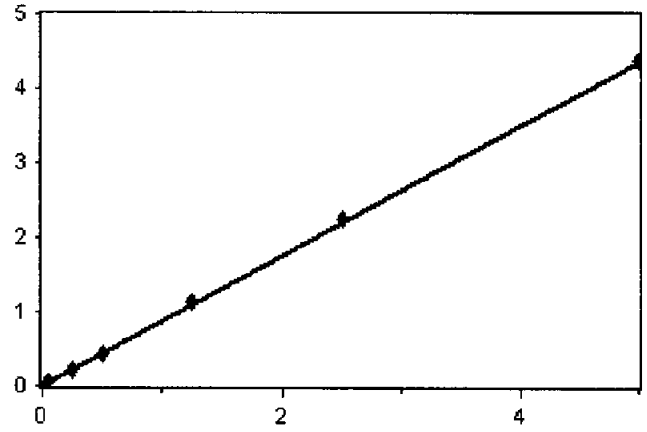
Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**16-Dec-2016 00:00 By VTS**
Calibration ID:	**ZL00052**	**Last Edit Date:**	**17-Dec-2016 09:41 By VTS**

8270D-SIM PAH Low (0.0

2-Methylnaphthalene-d10

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - 2-Methylnaphthalene-



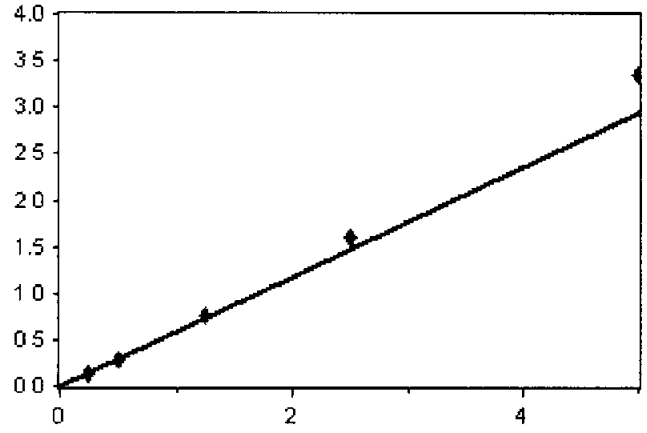
Average RF

RF RSD: 3.659757 ✓

[Conc] = 0.8727519 * [Response]

Dibenzo[a,h]anthracene-d14

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Dibenzo[a,h]anthracer



Average RF

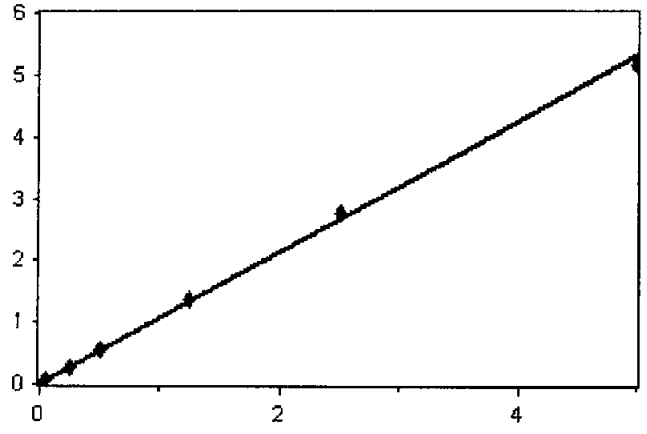
RF RSD: 12.14984

[Conc] = 0.5896822 * [Response]

(5 pts)

Fluoranthene-d10

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Fluoranthene-d10



Average RF

RF RSD: 2.788374

[Conc] = 1.065308 * [Response]

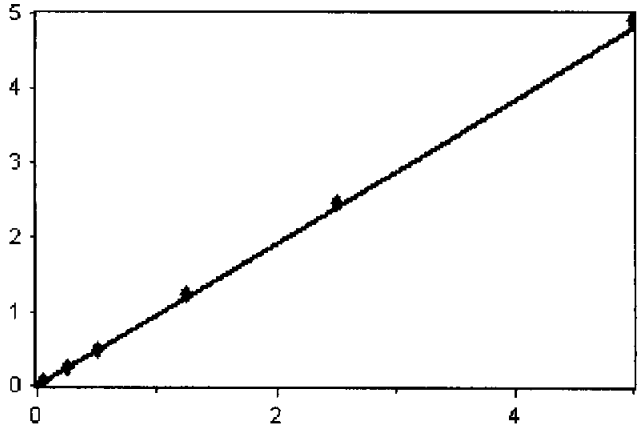
Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**16-Dec-2016 00:00 By VTS**
Calibration ID:	**ZL00052**	**Last Edit Date:**	**17-Dec-2016 09:41 By VTS**

8270D-SIM PAH Low (0.0

Fluorene-d10

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Fluorene-d10



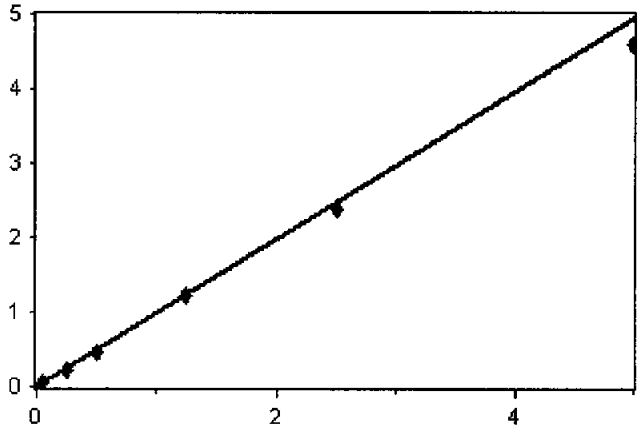
Average RF

RF RSD: 4.180185

[Conc] = 0.960699 * [Response]

Anthracene-d10

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Anthracene-d10



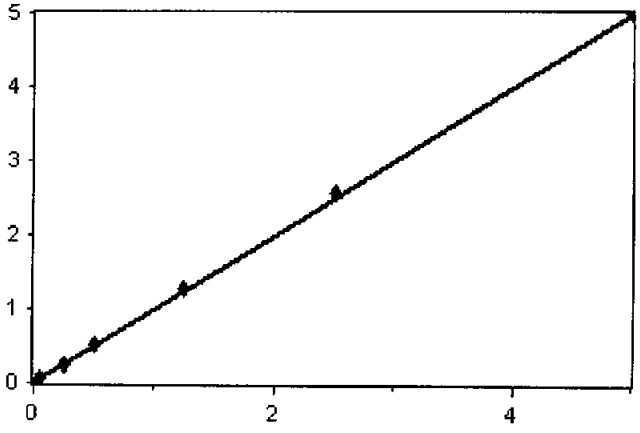
Average RF

RF RSD: 13.75731

[Conc] = 0.9906229 * [Response]

Benzo(e)pyrene-d12

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(e)pyrene-d1



Average RF

RF RSD: 3.108291

[Conc] = 0.9955787 * [Response]

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-DEC-2016 13:50
End Cal Date : 16-DEC-2016 16:32
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Last Edit : 17-Dec-2016 07:53 nt11.i
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem3\nt11.i\20161216A.b\N1116121612.D
Level 2: \\target\share\chem3\nt11.i\20161216A.b\N1116121614.D
Level 3: \\target\share\chem3\nt11.i\20161216A.b\N1116121615.D
Level 4: \\target\share\chem3\nt11.i\20161216A.b\N1116121610.D
Level 5: \\target\share\chem3\nt11.i\20161216A.b\N1116121613.D
Level 6: \\target\share\chem3\nt11.i\20161216A.b\N1116121611.D

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
2 Naphthalene	1.01097	1.01650	0.98356	1.01162	0.97875	0.94639	0.99130	2.733
3 Benzo(b)thiophene	0.80884	0.82797	0.82078	0.84588	0.83913	0.81515	0.82629	1.720
5 2-Methylnaphthalene	0.89568	0.97195	0.98415	1.00920	1.01191	0.96959	0.97375	4.342
6 1-Methylnaphthalene	0 92016	0.96146	0.95790	0.98092	0.97782	0.94181	0.95668	2.390
7 2-Chloronaphthalene	1 39382	1.60366	1.60299	1.61435	1.61346	1.54251	1.56180	5.543
8 Biphenyl	2.06251	2.21109	2.15636	2.12194	2.09322	1.95479	2.09999	4.181
9 2,6-Dimethylnaphthalene	1 49870	1.62863	1.61795	1.64761	1.64690	1.58831	1.60468	3.511
10 Acenaphthylene	1.67526	1.78907	1.82615	1.83422	1.82863	1.76639	1.78662	3.396
12 Acenaphthene	1.07024	1.19373	1.18574	1.20028	1.19334	1.17032	1.16894	4.229
13 Dibenzofuran	1.60244	1.77354	1.76275	1.77406	1.77567	1.71553	1.73400	3.944
14 2,3,5-Trimethylnaphthalene	1.00120	1.12429	1.14876	1.16944	1.16991	1.14937	1.12716	5.674
16 Fluorene	1.25470	1.38931	1.41401	1.43889	1.43526	1.40652	1.38978	4.943
17 Dibenzothiophene	0.84695	0.91186	0.90475	0.93127	0.92730	0.87220	0.89905	3.678
19 Phenanthrene	1.15079	1.12919	1.14299	1.13491	1.11683	1.03386	1.11809	3.835
21 Anthracene	1.02883	1.04581	1.08619	1.10706	1.10106	1.02956	1.06642	3.365
22 Carbazole	1.01849	1.03849	1.13795	1.18282	1.21454	1.15918	1.12524	7.056
23 1-Methylphenanthrene	1.07137	1.12548	1.14294	1.18574	1.17392	1.08769	1.13119	4.040
25 Fluoranthene	1.35519	1.26074	1.30745	1.30843	1.30699	1.19128	1.28835	4.359
26 Pyrene	1.18593	1.13127	1.17999	1.15696	1.12570	1.08720	1.14451	3.256
27 Benzo(a)anthracene	1.19263	1.15156	1.18787	1.18601	1.16634	1.10581	1.16504	2.824
29 Chrysene	1.25249	1.20120	1.22718	1.18916	1.17794	1.09203	1.19000	4.627
30 Benzo(b)fluoranthene	1.09099	1.09622	1.12386	1.12545	1.13700	1.14293	1.11941	1.901
31 Benzo(k)fluoranthene	1.11276	1.15638	1.19470	1.19608	1.21990	1.13026	1.16835	3.592
32 Benzo(j)fluoranthene	0.97108	1.07172	1.09434	1.08295	1.10922	1.06997	1.06655	4.596
34 Benzo(e)pyrene	1.02965	1.07439	1.08742	1.09149	1.11575	1.07505	1.07896	2.638
35 Benzo(a)pyrene	0.92813	0.95833	1.00730	1.00806	1.03980	1.01814	0.99329	4.190
37 Perylene	1.08625	1.03245	1.05574	1.05245	1.06762	1.04821	1.05712	1.729
39 Dibenzo(a,h)anthracene	0.55056	0.67648	0.75408	0.80207	0.86380	0.90583	0.75880	17.151

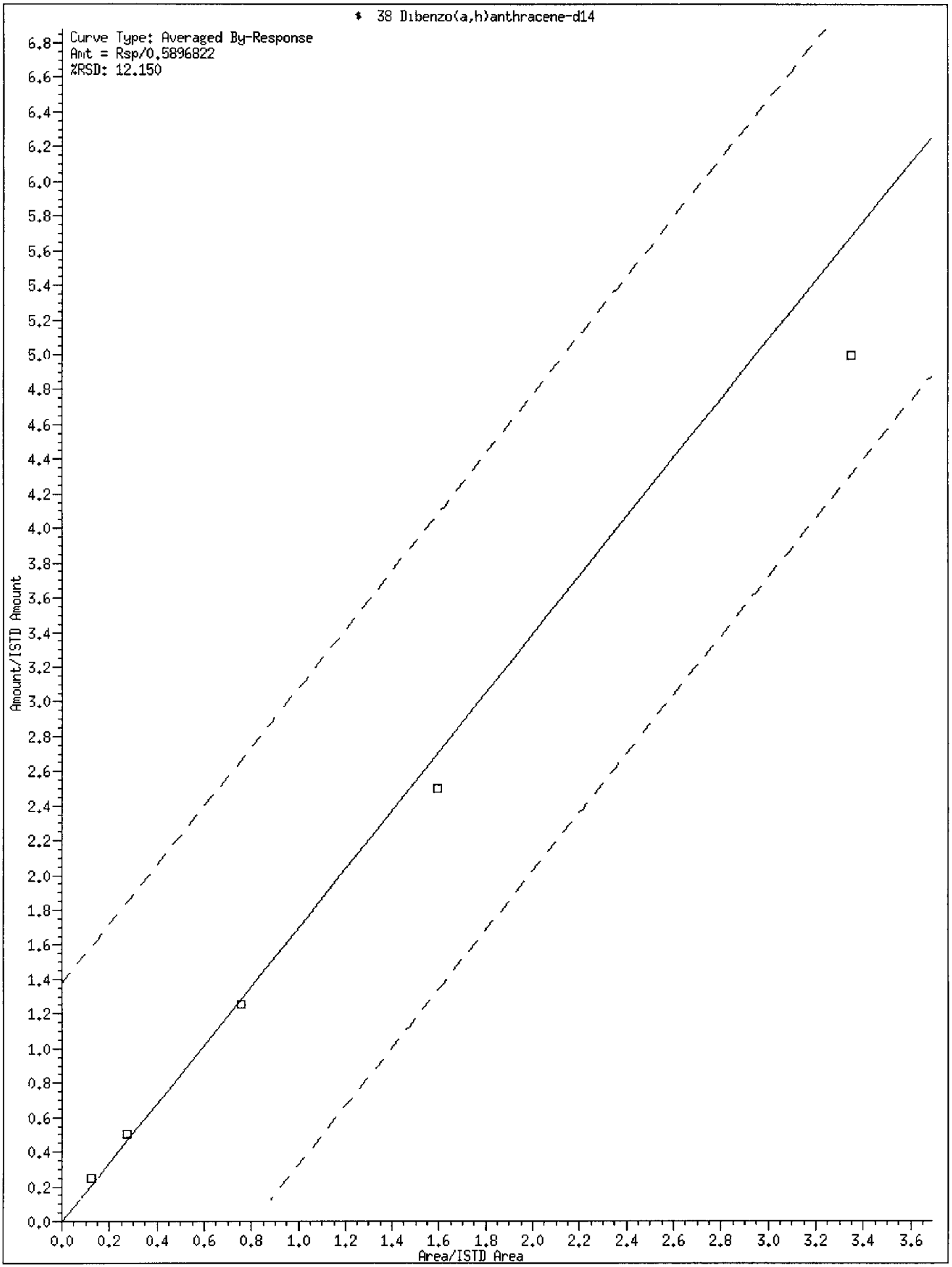
ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-DEC-2016 13:50
End Cal Date : 16-DEC-2016 16:32
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Last Edit : 17-Dec-2016 07:53 nt11.i
Curve Type : Average

	Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD	
	40 Indeno(1,2,3-cd)pyrene	0.79271	0.85960	0.95210	1.01913	1.07772	1.11953	0.97013	13.064	
	41 Benzo(g,h,i)perylene	0.74340	0.80031	0.85128	0.86864	0.91392	0.94148	0.85317	8.545	
$	4 2-Methylnaphthalene-d10	0.81159	0.87626	0.87701	0.89876	0.89824	0.87466	0.87275	3.660	
$	15 Fluorene-d10	0.88143	0.97105	0.96007	0.99019	0.98033	0.98112	0.96070	4.180	
$	20 Anthracene-d10	1.26484	0.91714	0.91560	0.97150	0.95464	0.92002	0.99062	13.757	
$	24 Fluoranthene-d10	1.03627	1.05784	1.07290	1.09006	1.10504	1.02975	1.06531	2.788	
$	33 Benzo(e)pyrene-d12	0.93864	0.99237	1.00672	1.00631	1.03151	0 99792	0.99558	3.108	
$	38 Dibenzo(a,h)anthracene-d14	0.35412	0.49326	0.54217	0.60630	0.63606	0.67062	0.55042	20.995	<-

Dropping


* 38 Dibenzo(a,h)anthracene-d14
Curve Type: Averaged By-Response
Amt = Rsp/0.5896822
%RSD: 12.150
Amount/ISTD Amount
Area/ISTD Area
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
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 6.4 6.6 6.8

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-DEC-2016 13:50
End Cal Date : 16-DEC-2016 16:32
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Last Edit : 17-Dec-2016 07:55 van
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem3\nt11.i\20161216A.b\N1116121612.D
Level 2: \\target\share\chem3\nt11.i\20161216A.b\N1116121614.D
Level 3: \\target\share\chem3\nt11.i\20161216A.b\N1116121615.D
Level 4: \\target\share\chem3\nt11.i\20161216A.b\N1116121610.D
Level 5: \\target\share\chem3\nt11.i\20161216A.b\N1116121613.D
Level 6: \\target\share\chem3\nt11.i\20161216A.b\N1116121611.D

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
2 Naphthalene	1.01097	1.01650	0.98356	1.01162	0.97875	0.94639	0.99130	2.733
3 Benzo(b)thiophene	0.80884	0.82797	0.82078	0.84588	0.83913	0.81515	0.82629	1.720
5 2-Methylnaphthalene	0.89568	0.97195	0.98415	1.00920	1.01191	0.96959	0.97375	4.342
6 1-Methylnaphthalene	0.92016	0.96146	0.95790	0.98092	0.97782	0.94181	0.95668	2.390
7 2-Chloronaphthalene	1.39382	1.60366	1.60299	1.61435	1.61346	1.54251	1.56180	5.543
8 Biphenyl	2.06251	2.21109	2.15636	2.12194	2.09322	1.95479	2.09999	4.181
9 2,6-Dimethylnaphthalene	1.49870	1.62863	1.61795	1.64761	1.64690	1.58831	1.60468	3.511
10 Acenaphthylene	1.67526	1.78907	1.82615	1.83422	1.82863	1.76639	1.78662	3.396
12 Acenaphthene	1.07024	1.19373	1.18574	1.20028	1.19334	1.17032	1.16894	4.229
13 Dibenzofuran	1.60244	1.77354	1.76275	1.77406	1.77567	1.71553	1.73400	3.944
14 2,3,5-Trimethylnaphthalene	1.00120	1.12429	1.14876	1.16944	1.16991	1.14937	1.12716	5.674
16 Fluorene	1.25470	1.38931	1.41401	1.43889	1.43526	1.40652	1.38978	4.943
17 Dibenzothiophene	0.84695	0.91186	0.90475	0.93127	0.92730	0.87220	0.89905	3.678
19 Phenanthrene	1.15079	1.12919	1.14299	1.13491	1.11683	1.03386	1.11809	3.835
21 Anthracene	1.02883	1.04581	1.08619	1.10706	1.10106	1.02956	1.06642	3.365
22 Carbazole	1.01849	1.03849	1.13795	1.18282	1.21454	1.15918	1.12524	7.056
23 1-Methylphenanthrene	1.07137	1.12548	1.14294	1.18574	1.17392	1.08769	1.13119	4.040
25 Fluoranthene	1.35519	1.26074	1.30745	1.30843	1.30699	1.19128	1.28835	4.359
26 Pyrene	1 18593	1.13127	1.17999	1.15696	1.12570	1.08720	1.14451	3.256
27 Benzo(a)anthracene	1.19263	1.15156	1.18787	1.18601	1.16634	1.10581	1.16504	2.824
29 Chrysene	1.25249	1.20120	1.22718	1.18916	1.17794	1.09203	1.19000	4.627
30 Benzo(b)fluoranthene	1.09099	1.09622	1.12386	1.12545	1.13700	1.14293	1.11941	1.901
31 Benzo(k)fluoranthene	1.11276	1.15638	1.19470	1.19608	1.21990	1.13026	1.16835	3.592
32 Benzo(j)fluoranthene	0.97108	1.07172	1.09434	1.08295	1.10922	1.06997	1.06655	4.596
34 Benzo(e)pyrene	1.02965	1.07439	1.08742	1.09149	1.11575	1.07505	1.07896	2.638
35 Benzo(a)pyrene	0.92813	0.95833	1.00730	1.00806	1.03980	1.01814	0.99329	4.190
37 Perylene	1.08625	1.03245	1.05574	1.05245	1.06762	1.04821	1.05712	1.729
39 Dibenzo(a,h)anthracene	0.55056	0.67648	0.75408	0.80207	0.86380	0.90583	0.75880	17.151

ARI Labs, Inc.

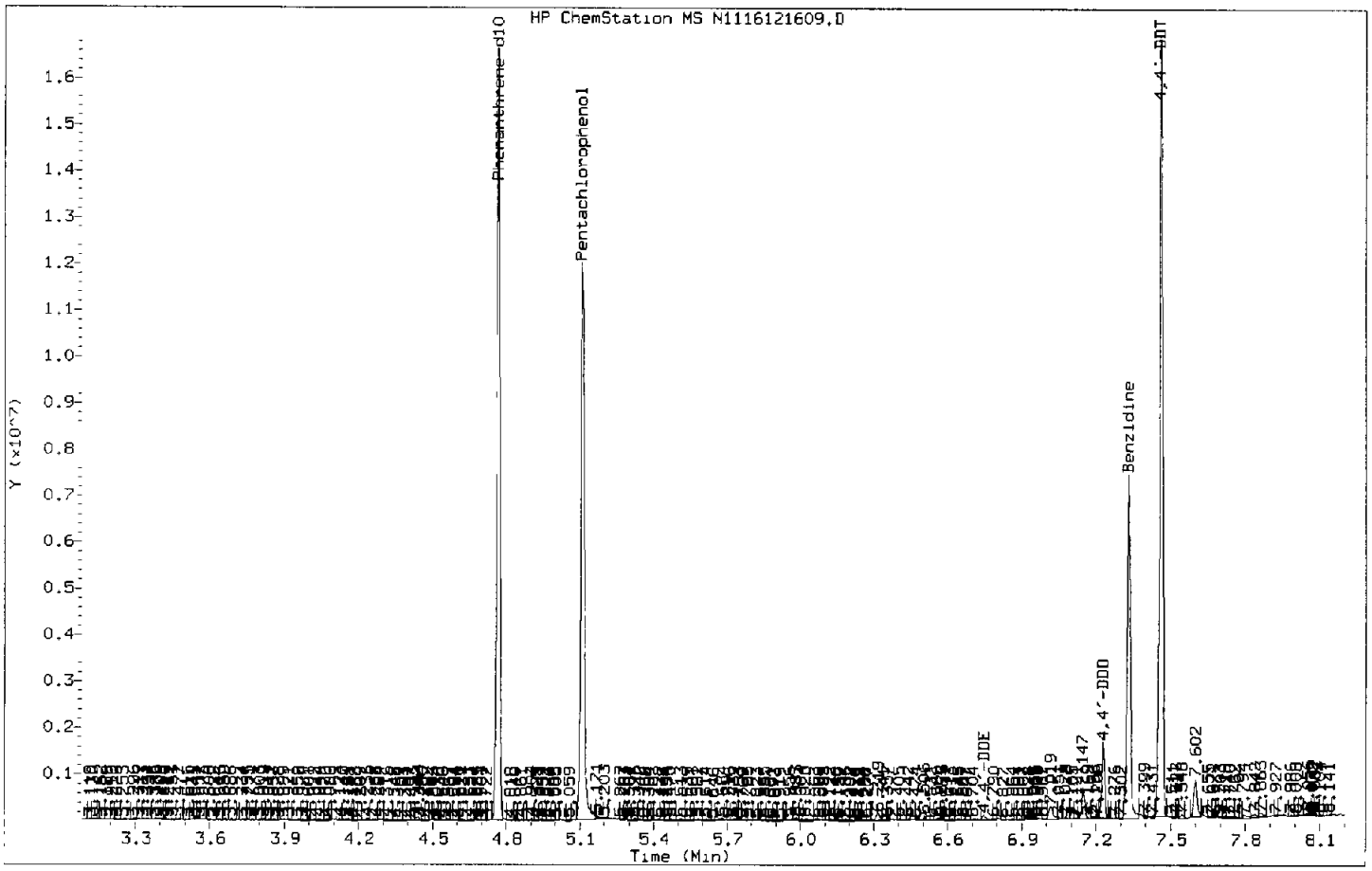
INITIAL CALIBRATION DATA

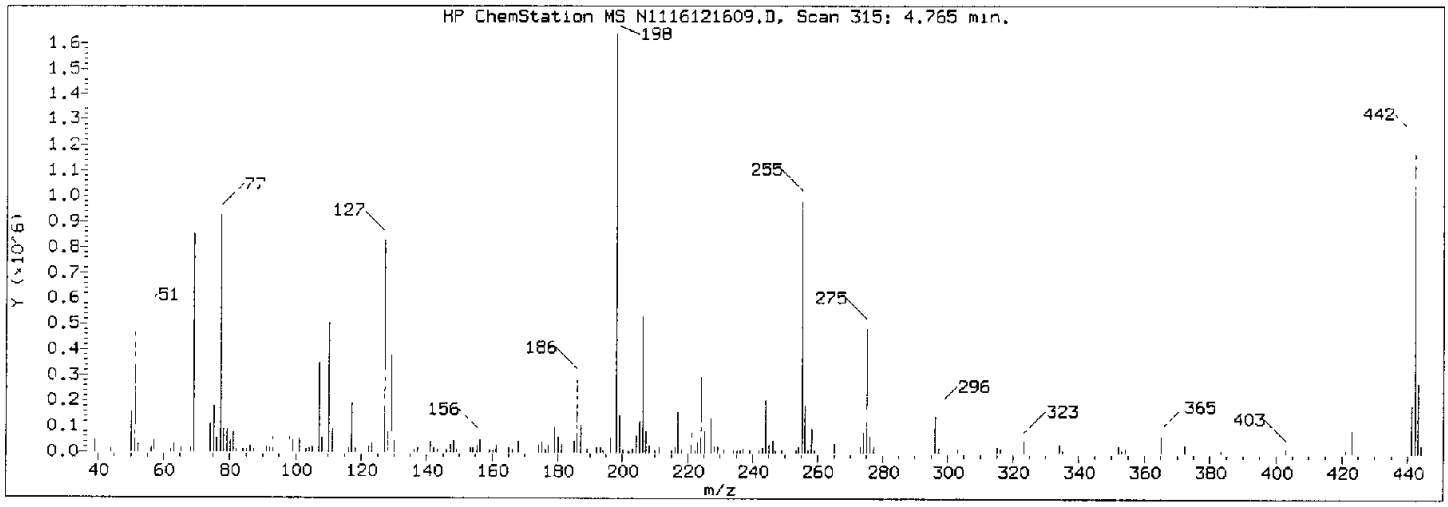
Start Cal Date : 16-DEC-2016 13:50
End Cal Date : 16-DEC-2016 16:32
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Last Edit : 17-Dec-2016 07:55 van
Curve Type : Average

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	___ RRF	% RSD
40 Indeno(1,2,3-cd)pyrene	0.79271	0.85960	0.95210	1.01913	1.07772	1.11953	0.97013	13.064
41 Benzo(g,h,i)perylene	0.74340	0.80031	0.85128	0.86864	0.91392	0.94148	0.85317	8.545
$ 4 2-Methylnaphthalene-d10	0.81159	0.87626	0.87701	0.89876	0.89824	0.87466	0.87275	3.660
$ 15 Fluorene-d10	0.88143	0.97105	0.96007	0.99019	0.98033	0.98112	0.96070	4.180
$ 20 Anthracene-d10	1.26484	0.91714	0.91560	0.97150	0.95464	0.92002	0.99062	13.757
$ 24 Fluoranthene-d10	1.03627	1.05784	1.07290	1.09006	1.10504	1.02975	1.06531	2.788
$ 33 Benzo(e)pyrene-d12	0.93864	0.99237	1.00672	1.00631	1.03151	0.99792	0.99558	3.108
$ 38 Dibenzo(a,h)anthracene-d14	+++++	0.49326	0.54217	0.60630	0.63606	0.67062	0.58968	12.150

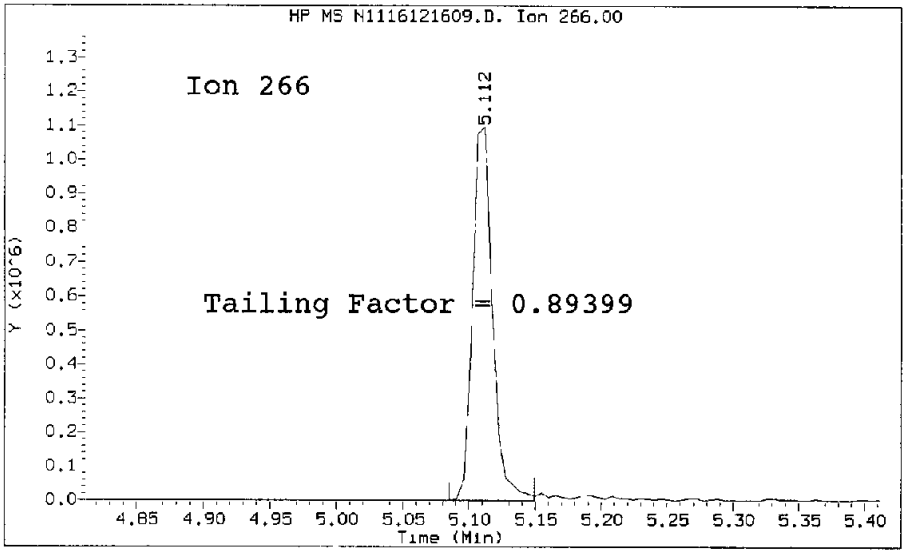
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20161216A.b/N1116121609.D/N1116121609.D
Method Used: \20161216A.b\DFTPP.m Inst: nt11
Injection Date: 16-DEC-2016 13:34 Operator: VTS
Sample Info: SEL0249-TUN1 SEL0249-TUN1
Report Date: 12/17/2016 08:48



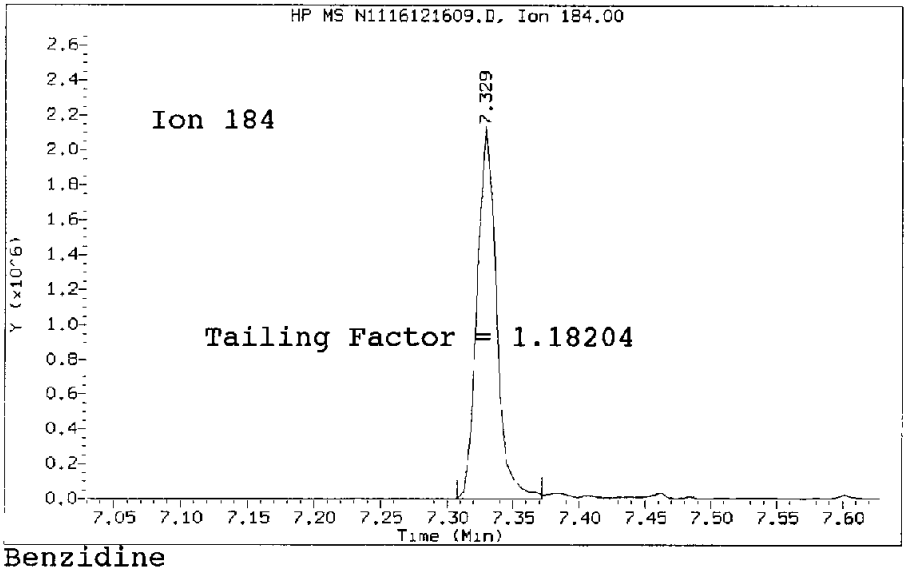


Datafile Analyzed: /20161216A.b/N1116121609.D/N1116121609.D
Method Used: \20161216A.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 16-DEC-2016 13:34 Operator: JW
Sample Info: SELXXXX-TUN1
Report Date: 12/17/2016 08:48



Pentachlorophenol
==========
Exp. RT = 5.112
Found RT = 5.112

Tail Factor = 0.894 Maximum Allowed = 2.0



Benzidine
=========
Exp. RT = 7.329
Found RT = 7.329

Tail Factor = 1.182 Maximum Allowed = 2.0

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	29.55
68	Less than 2.00% of mass 69	0.84 (1.63)
69	Mass 69 relative abundance	51.42
70	Less than 2.00% of mass 69	0.15 (0.29)
127	10.00 - 80.00% of mass 198	49.96
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.44
275	10.00 - 60.00% of mass 198	29.47
365	Greater than 1.00% of mass 198	4.03
441	0.01 - 24.00% of mass 442	12.08 (15.67)
442	50.00 - 200.00% of mass 198	77.06
443	15.00 - 24.00% of mass 442	16.93 (21.97)

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	0.8939891	2.000	PASS
Benzidine	1.1820449	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2187223			N/A
4,4-DDE	10282	0.5	20.0	PASS
4,4-DDD	237259	9.8	20.0	PASS
4,4-DDD + DDE	247541	10.2	20.0	PASS

Tuning Sample, nt11.i/20161216A.b/N1116121609.D, *** PASSED ***

Data File: N1116121609.D
Spectrum: Avg. Scans 314-316 (4.76), Background Scan 310
Location of Maximum: 198.00
Number of points: 280

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1295	127.00	627520	202.00	6028	291.00	2287
37.00	3070	128.00	50888	203.00	9124	292.00	2684
38.00	7357	129.00	279424	204.00	47232	293.00	6539
39.00	31272	130.00	26824	205.00	96600	295.00	881
40.00	2933	131.00	4866	206.00	392256	296.00	104176
43.00	712	132.00	836	207.00	55584	297.00	15641
44.00	8229	133.00	666	208.00	19768	301.00	1429
49.00	1767	134.00	6702	209.00	5104	302.00	3991
50.00	114912	135.00	18928	210.00	8447	303.00	13284
51.00	371136	136.00	8940	211.00	13860	304.00	4809
52.00	23048	137.00	12915	212.00	1664	308.00	1555
55.00	3572	138.00	3215	213.00	727	309.00	706
56.00	15853	139.00	950	215.00	4378	310.00	815
57.00	35392	140.00	1046	216.00	12044	313.00	1068
58.00	830	141.00	31768	217.00	115592	314.00	2142
61.00	11081	142.00	11546	218.00	13237	315.00	12229
62.00	9249	143.00	5225	219.00	2089	316.00	9312
63.00	23000	144.00	953	220.00	812	317.00	2206
64.00	3042	145.00	1273	221.00	66736	321.00	772
65.00	13674	146.00	6756	222.00	13387	322.00	1557
66.00	1914	147.00	22432	223.00	28544	323.00	29536
68.00	10496	148.00	38192	224.00	218880	324.00	5555
69.00	645760	149.00	8846	225.00	56696	327.00	5987
70.00	1902	150.00	731	226.00	4497	328.00	980
73.00	4833	151.00	7228	227.00	100024	332.00	3704
74.00	79072	152.00	1552	228.00	17648	333.00	4314
75.00	118568	153.00	13948	229.00	20096	334.00	24992
76.00	42120	154.00	12455	230.00	2444	335.00	7245
77.00	692608	155.00	20352	231.00	7942	341.00	3413
78.00	61616	156.00	37248	234.00	6690	342.00	691
79.00	61232	157.00	6979	235.00	9114	346.00	7810
80.00	36680	158.00	7532	236.00	4249	352.00	12607
81.00	62960	159.00	4284	237.00	6600	353.00	5154
82.00	11302	160.00	10826	239.00	4632	354.00	9413
83.00	11714	161.00	20264	240.00	3095	355.00	672
84.00	2288	162.00	2940	241.00	4013	361.00	694
85.00	10941	165.00	14392	242.00	10249	365.00	50608
86.00	14661	166.00	11002	243.00	13962	366.00	5850
87.00	8162	167.00	67392	244.00	163456	371.00	4167
88.00	4239	168.00	29784	245.00	23256	372.00	21112
89.00	2470	169.00	5569	246.00	32624	373.00	6617
91.00	13526	171.00	2101	247.00	6378	374.00	927
92.00	15469	172.00	7457	248.00	3527	378.00	1133
93.00	82056	173.00	7051	249.00	8312	383.00	4387
94.00	6913	174.00	20576	251.00	3561	390.00	1430
96.00	5277	175.00	30496	252.00	1668	391.00	705
98.00	61328	176.00	12810	253.00	7660	402.00	7325
99.00	50936	177.00	19168	254.00	10809	403.00	13559
100.00	6649	178.00	2220	255.00	777216	404.00	4684

101.00	31824	179.00	60000	256.00	133888	405.00	706
103.00	10788	180.00	40184	257.00	7982	418.00	739
104.00	19984	181.00	21896	258.00	53904	421.00	8302
105.00	16191	182.00	4303	259.00	8840	422.00	7358
106.00	3472	183.00	1249	260.00	995	423.00	70440
107.00	244992	184.00	4278	261.00	2895	424.00	11608
108.00	36784	185.00	30768	264.00	672	425.00	1037
109.00	4839	186.00	207744	265.00	27400	426.00	1222
110.00	392192	187.00	72256	266.00	5286	428.00	1299
111.00	60200	188.00	6257	268.00	1642	429.00	2022
112.00	5991	189.00	13560	271.00	2273	432.00	1536
113.00	1256	190.00	2115	272.00	3546	435.00	902
115.00	927	191.00	7330	273.00	22616	437.00	1257
116.00	12115	192.00	17664	274.00	66184	441.00	151680
117.00	149888	193.00	17736	275.00	370176	442.00	967808
118.00	13513	194.00	5354	276.00	48944	443.00	212672
119.00	725	195.00	954	277.00	33176	444.00	22864
120.00	4220	196.00	37752	278.00	3424	451.00	711
122.00	17136	198.00	1255936	283.00	5117		
123.00	21728	199.00	106008	284.00	1447		
124.00	8748	200.00	7072	285.00	5325		
125.00	8713	201.00	2933	290.00	710		

Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121612.D

Date : 16-DEC-2016 14:59

Client ID:

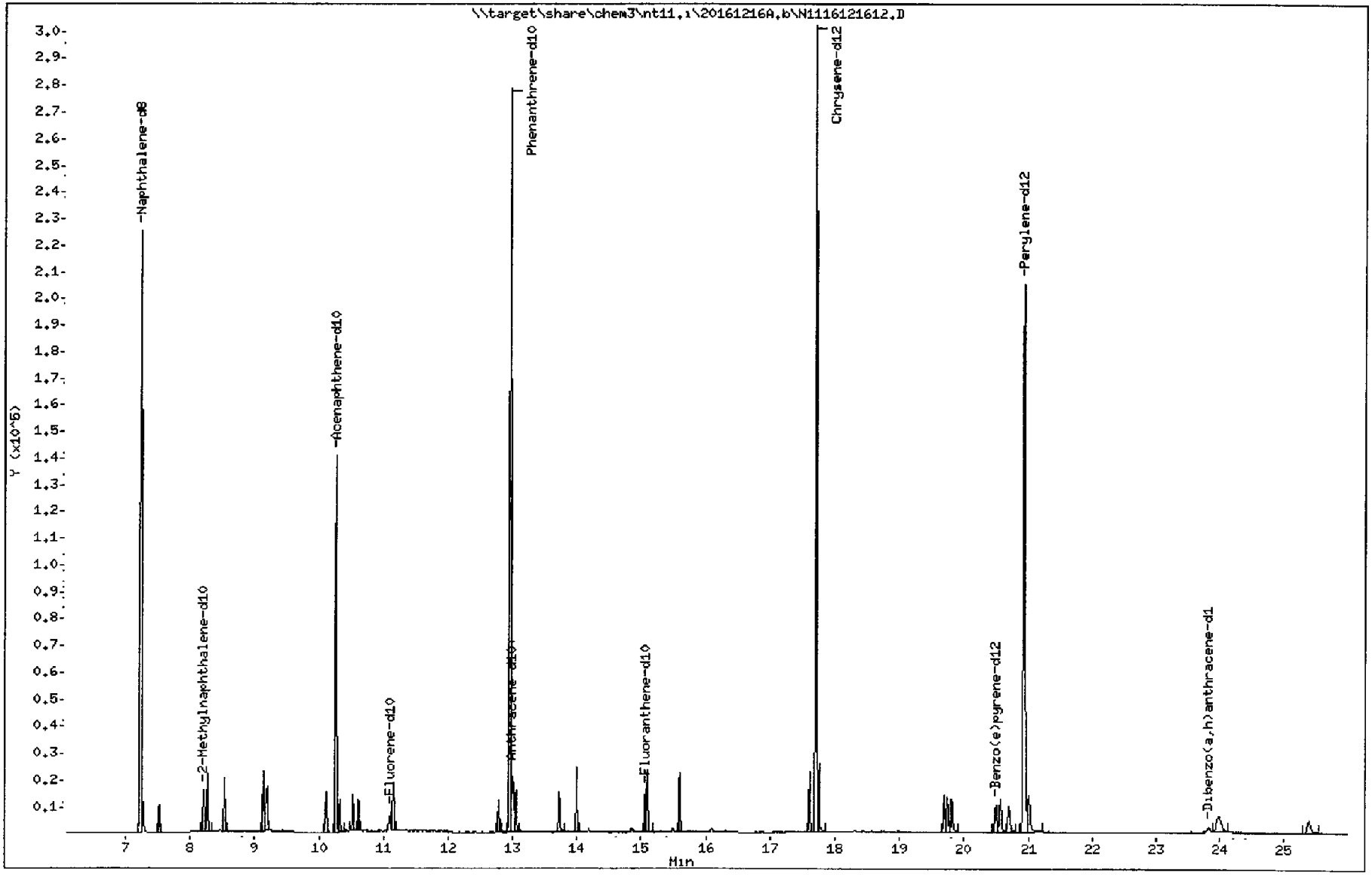
Sample Info: SEL0249-CAL1

Instrument: nt11.i

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161216A.b\N1116121612.D
Lab Smp Id: SEL0249-CAL1
Inj Date : 16-DEC-2016 14:59 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : SEL0249-CAL1
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Meth Date : 17-Dec-2016 08:19 van Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 12 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	1	Naphthalene-d8	136	7.235	7.234	(1.000)	291601	200.000	
	2	Naphthalene	128	7.262	7.262	(1.004)	14740	10.0000	10.2
	3	Benzo(b)thiophene	134	7.524	7.524	(1.040)	11793	10.0000	9.79
S	4	2-Methylnaphthalene-d10	152	8.211	8.211	(1.135)	11833	10.0000	9.30
	5	2-Methylnaphthalene	142	8.264	8.264	(1.142)	13059	10.0000	9.20
	6	1-Methylnaphthalene	142	8.526	8.526	(1.179)	13416	10.0000	9.62
	7	2-Chloronaphthalene	162	9.178	9.178	(0.894)	12173	10.0000	8.92
	8	Biphenyl	154	9.136	9.136	(0.890)	18013	10.0000	9.82
	9	2,6-Dimethylnaphthalene	156	9.199	9.199	(0.897)	13089	10.0000	9.34
	10	Acenaphthylene	152	10.107	10.107	(0.985)	14631	10.0000	9.38
*	11	Acenaphthene-d10	164	10.261	10.261	(1.000)	174671	200.000	
	12	Acenaphthene	153	10.324	10.324	(1.006)	9347	10.0000	9.16
	13	Dibenzofuran	168	10.519	10.519	(1.025)	13995	10.0000	9.24
	14	2,3,5-Trimethylnaphthalene	170	10.620	10.620	(1.035)	8744	10.0000	8.88 (M)
S	15	Fluorene-d10	174	11.100	11.100	(1.082)	7698	10.0000	9.17 (M)
	16	Fluorene	166	11.151	11.151	(1.087)	10958	10.0000	9.03
	17	Dibenzothiophene	184	12.777	12.777	(0.986)	14333	10.0000	9.42
*	18	Phenanthrene-d10	188	12.956	12.945	(1.000)	338463	200.000	
	19	Phenanthrene	178	12.998	12.987	(1.003)	19475	10.0000	10.3
S	20	Anthracene-d10	188	13.008	13.008	(1.004)	21405	10.0000	12.6
	21	Anthracene	178	13.050	13.050	(1.007)	17411	10.0000	9.65
	22	Carbazole	167	13.722	13.722	(1.059)	17236	10.0000	9.05
	23	1-Methylphenanthrene	192	13.993	13.993	(1.080)	18131	10.0000	9.47
S	24	Fluoranthene-d10	212	15.065	15.055	(1.163)	17537	10.0000	9.73
	25	Fluoranthene	202	15.094	15.094	(1.165)	22934	10.0000	10.5
	26	Pyrene	202	15.603	15.603	(0.861)	23376	10.0000	10.4
	27	Benzo(a)anthracene	228	17.610	17.610	(0.994)	23508	10.0000	10.2
*	28	Chrysene-d12	240	17.710	17.710	(1.000)	394222	200.000	
	29	Chrysene	228	17.760	17.760	(1.003)	24688	10.0000	10.5
	30	Benzo(b)fluoranthene	252	19.686	19.686	(0.940)	20044	10.0000	9.75
	31	Benzo(k)fluoranthene	252	19.744	19.744	(0.943)	20444	10.0000	9.52
	32	Benzo(j)fluoranthene	252	19.811	19.811	(0.946)	17341	10.0000	9.10
S	33	Benzo(e)pyrene-d12	264	20.493	20.493	(0.979)	17245	10.0000	9.43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	20.561	20.560	(0.982)	18917	10.0000	9.54
	35 Benzo(a)pyrene	252	20.695	20.695	(0.989)	17052	10.0000	9.34
	36 Perylene-d12	264	20.935	20.935	(1.000)	367447	200.000	
	37 Perylene	252	21.003	21.012	(1.003)	19957	10.0000	10.3
S	38 Dibenzo(a,h)anthracene-d14	292	23.830	23.820	(1.138)	6506	10.0000	6.01
	39 Dibenzo(a,h)anthracene	278	23.963	23.963	(1.145)	10115	10.0000	7.26
	40 Indeno(1,2,3-cd)pyrene	276	24.008	23.996	(1.147)	14564	10.0000	8.17
	41 Benzo(g,h,i)perylene	276	25.392	25.392	(1.213)	13658	10.0000	8.71

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121612.D
Lab Smp Id: SEL0249-CAL1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Misc Info:

Calibration Date: 16-DEC-2016
Calibration Time: 13:50
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	291601	-14.65
11 Acenaphthene-d10	209310	104655	418620	174671	-16.55
18 Phenanthrene-d10	404977	202489	809954	338463	-16.42
28 Chrysene-d12	465046	232523	930092	394222	-15.23
36 Perylene-d12	454694	227347	909388	367447	-19.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.24	0.00
11 Acenaphthene-d10	10.26	9.76	10.76	10.26	0.00
18 Phenanthrene-d10	12.96	12.46	13.46	12.96	0.00
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.94	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121612.D

Lab ID: SEL0249-CAL1
nt11.i, 20161216A.b\lowsim.m, 16-DEC-2016 14:59

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

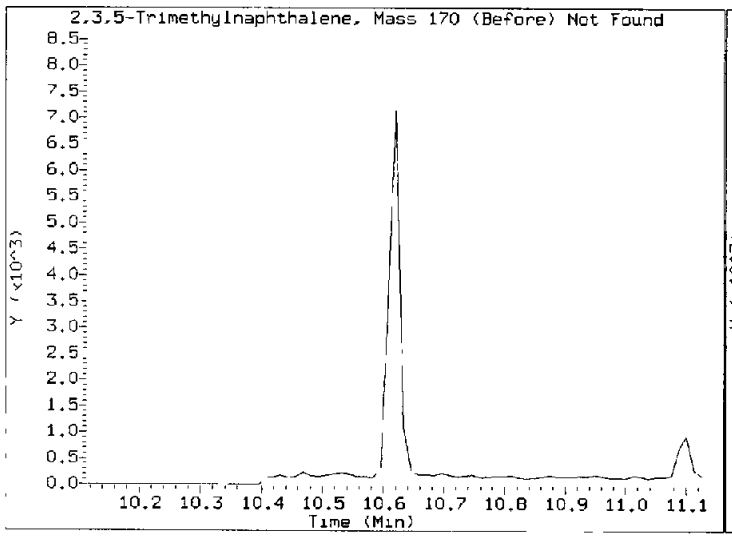
NONE

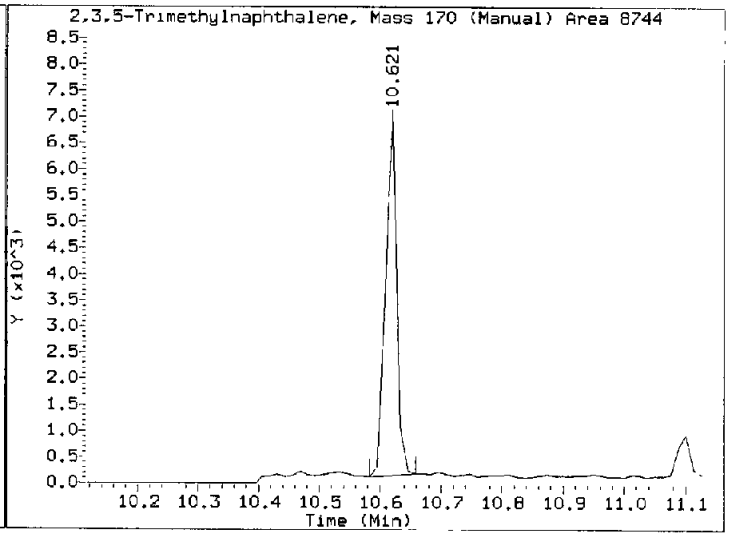
On Column LOD for nt11.i, 20161216A.b\lowsim.m, allpna.sub = 3.0000

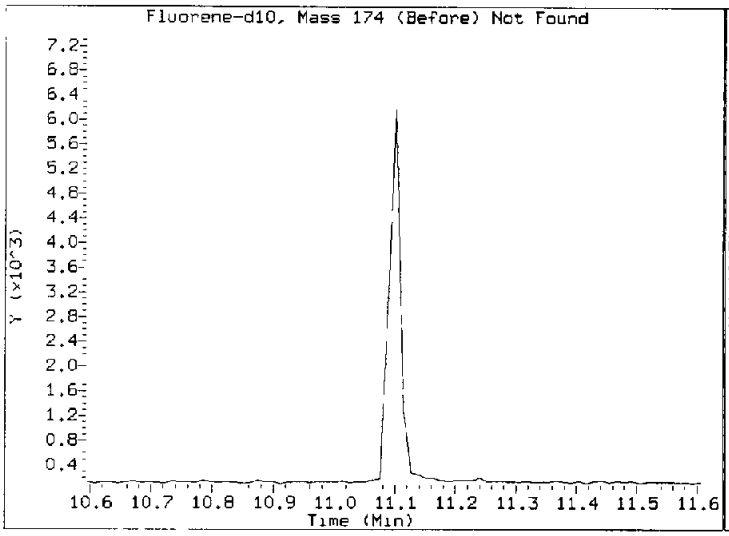
Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

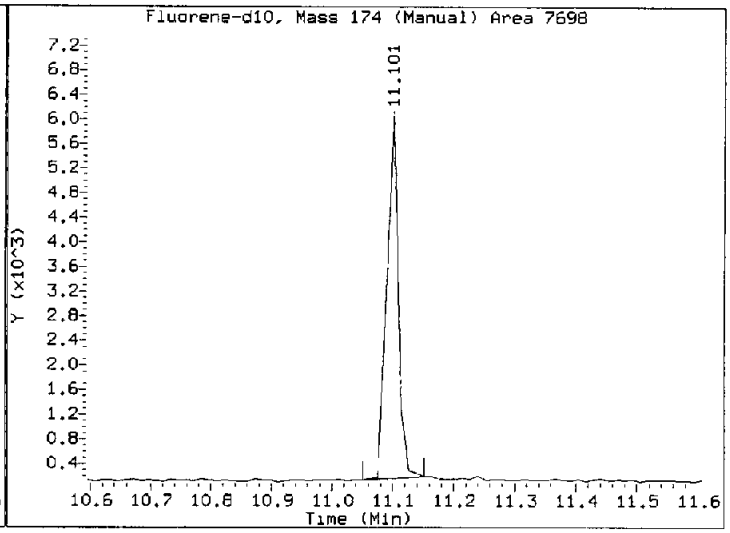
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20161216A.b/N1116121612.D
Injection Date: 16-DEC-2016 14:59
Lab ID:SEL0249-CAL1 Client ID:
Report Date: 12/17/2016 08:51









Data File: \\target\share\chem3\nt11.1\20161216A.b\N1116121614.D

Page 1

Date : 16-DEC-2016 16:01

Client ID:

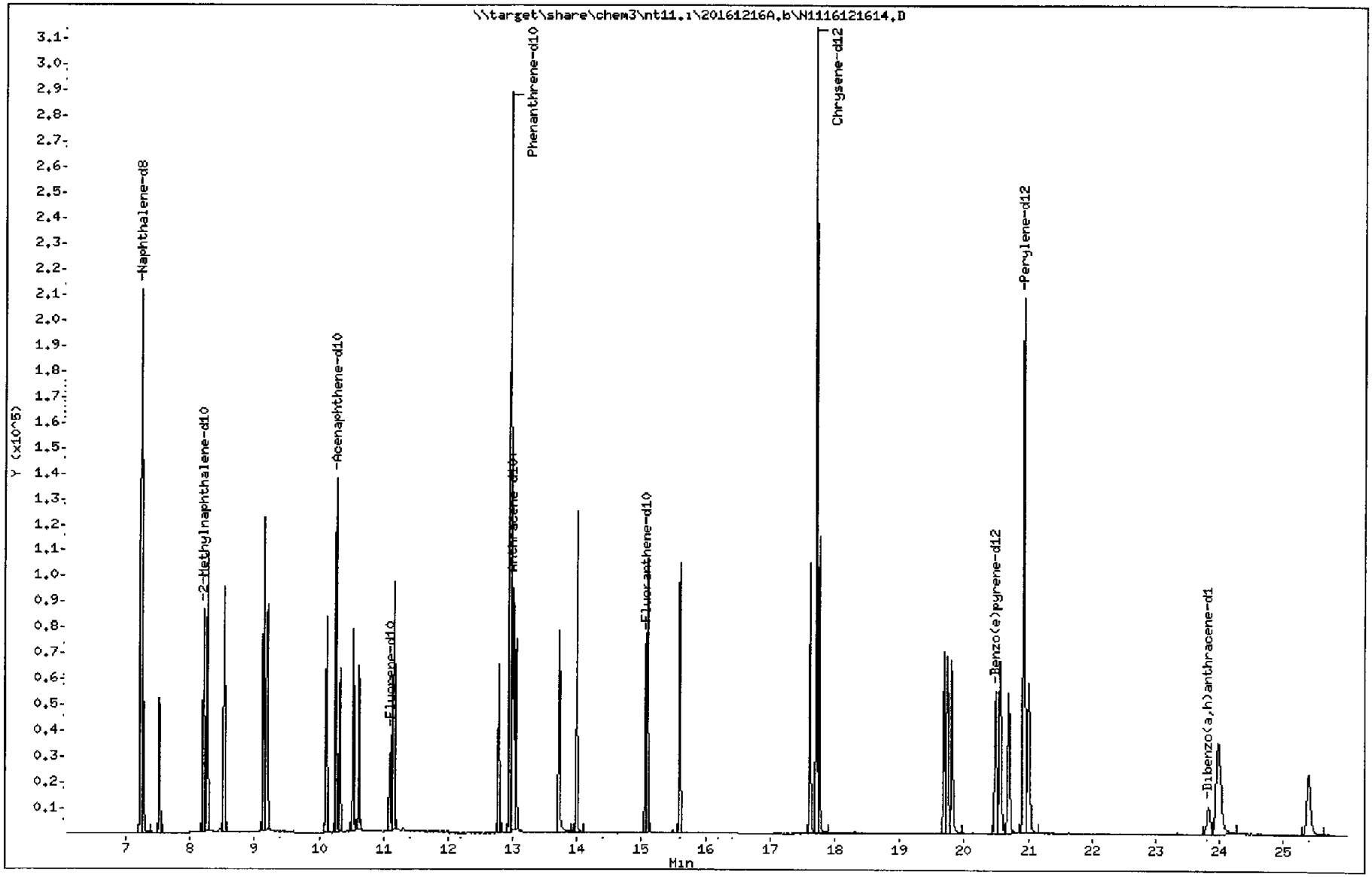
Instrument: nt11.1

Sample Info: SEL0249-CAL2

Operator: VTS

Column phase: Rx1-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161216A.b\N1116121614.D
Lab Smp Id: SEL0249-CAL2
Inj Date : 16-DEC-2016 16:01 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : SEL0249-CAL2
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Meth Date : 17-Dec-2016 08:19 van Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 14 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	1 Naphthalene-d8	136	7.234	7.234	(1.000)	289768	200.000	
	2 Naphthalene	128	7.262	7.262	(1.004)	73637	50.0000	51.3
	3 Benzo(b)thiophene	134	7.515	7.524	(1.039)	59980	50.0000	50.1
S	4 2-Methylnaphthalene-d10	152	8.211	8.211	(1.135)	63478	50.0000	50.2
	5 2-Methylnaphthalene	142	8.264	8.264	(1.142)	70410	50.0000	49.9
	6 1-Methylnaphthalene	142	8.526	8.526	(1.179)	69650	50.0000	50.2
	7 2-Chloronaphthalene	162	9.178	9.178	(0.894)	68148	50.0000	51.3
	8 Biphenyl	154	9.136	9.136	(0.890)	93961	50.0000	52.6
	9 2,6-Dimethylnaphthalene	156	9.199	9.199	(0.897)	69209	50.0000	50.7
	10 Acenaphthylene	152	10.107	10.107	(0.985)	76027	50.0000	50.1
*	11 Acenaphthene-d10	164	10.261	10.261	(1.000)	169981	200.000	
	12 Acenaphthene	153	10.324	10.324	(1.006)	50723	50.0000	51.1
	13 Dibenzofuran	168	10.519	10.519	(1.025)	75367	50.0000	51.1
	14 2,3,5-Trimethylnaphthalene	170	10.620	10.620	(1.035)	47777	50.0000	49.9
$	15 Fluorene-d10	174	11.100	11.100	(1.082)	41265	50.0000	50.5
	16 Fluorene	166	11.151	11.151	(1.087)	59039	50.0000	50.0
	17 Dibenzothiophene	184	12.777	12.777	(0.985)	77672	50.0000	50.7
*	18 Phenanthrene-d10	188	12.956	12.945	(1.000)	340720	200.000	
	19 Phenanthrene	178	12.987	12.987	(1.002)	96184	50.0000	50.5
$	20 Anthracene-d10	188	13.008	13.008	(1.004)	78122	50.0000	46.3
	21 Anthracene	178	13.050	13.050	(1.007)	89082	50.0000	49.0
	22 Carbazole	167	13.722	13.722	(1.059)	88459	50.0000	46.1
	23 1-Methylphenanthrene	192	13.993	13.993	(1.080)	95868	50.0000	49.7
*	24 Fluoranthene-d10	212	15.065	15.055	(1.163)	90107	50.0000	49.6
	25 Fluoranthene	202	15.094	15.094	(1.165)	107390	50.0000	48.9
	26 Pyrene	202	15.603	15.603	(0.881)	112353	50.0000	49.4
	27 Benzo(a)anthracene	228	17.610	17.610	(0.994)	114369	50.0000	49.4
*	28 Chrysene-d12	240	17.710	17.710	(1.000)	397265	200.000	
	29 Chrysene	228	17.760	17.760	(1.003)	119299	50.0000	50.5
	30 Benzo(b)fluoranthene	252	19.686	19.686	(0.940)	102802	50.0000	49.0
	31 Benzo(k)fluoranthene	252	19.744	19.744	(0.943)	108444	50.0000	49.5
	32 Benzo(j)fluoranthene	252	19.811	19.811	(0.946)	100504	50.0000	50.2
S	33 Benzo(e)pyrene-d12	264	20.493	20.493	(0.979)	93063	50.0000	49.8

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	20.560	20.560	(0.982)	100755	50.0000	49.8
	35 Benzo(a)pyrene	252	20.695	20.695	(0.989)	89871	50.0000	48.2
*	36 Perylene-d12	264	20.935	20.935	(1.000)	375114	200.000	
	37 Perylene	252	21.012	21.012	(1.004)	96822	50.0000	48.8
S	38 Dibenzo(a,h)anthracene-d14	292	23.819	23.820	(1.138)	46257	50.0000	41.8
	39 Dibenzo(a,h)anthracene	276	23.963	23.963	(1.145)	63439	50.0000	44.6
	40 Indeno(1,2,3-cd)pyrene	276	23.996	23.996	(1.146)	80612	50.0000	44.3
	41 Benzo(g,h,i)perylene	276	25.392	25.392	(1.213)	75052	50.0000	46.9

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121614.D
Lab Smp Id: SEL0249-CAL2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Misc Info:

Calibration Date: 16-DEC-2016
Calibration Time: 13:50
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	289768	-15.18
11 Acenaphthene-d10	209310	104655	418620	169981	-18.79
18 Phenanthrene-d10	404977	202489	809954	340720	-15.87
28 Chrysene-d12	465046	232523	930092	397265	-14.58
36 Perylene-d12	454694	227347	909388	375114	-17.50

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.23	0.00
11 Acenaphthene-d10	10.26	9.76	10.76	10.26	0.00
18 Phenanthrene-d10	12.96	12.46	13.46	12.96	0.00
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.94	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121614.D

Lab ID: SEL0249-CAL2
nt11.i, 20161216A.b\lowsim.m, 16-DEC-2016 16:01

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161216A.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121615.D

Page 1

Date : 16-DEC-2016 16:32

Client ID:

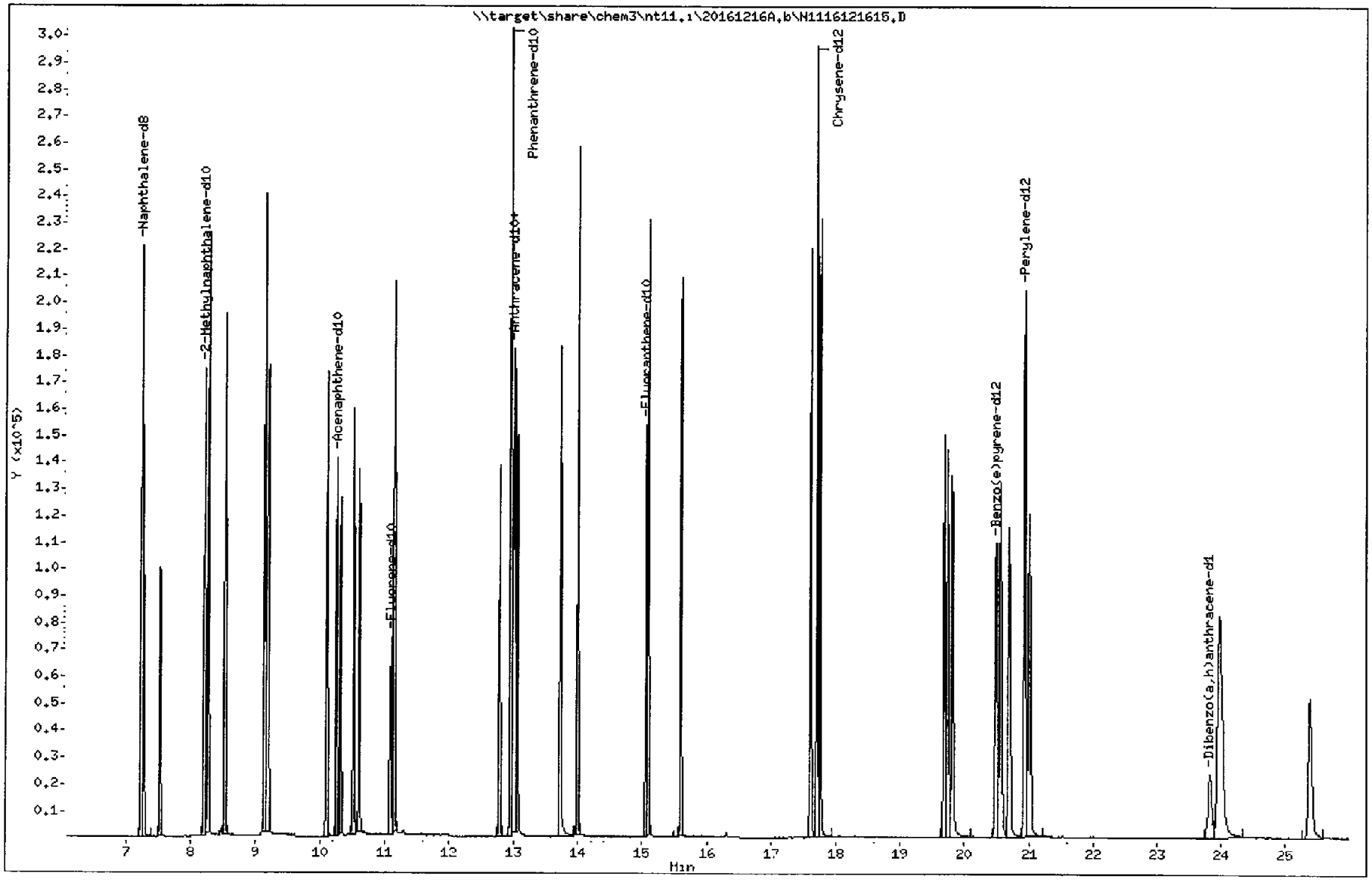
Instrument: nt11.i

Sample Info: SEL0249-CAL3

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161216A.b\N1116121615.D
Lab Smp Id: SEL0249-CAL3
Inj Date : 16-DEC-2016 16:32 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : SEL0249-CAL3
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Meth Date : 17-Dec-2016 08:19 van Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 15 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
	1	Naphthalene-d8	136	7.234	7.234	(1.000)	292257	200.000	
	2	Naphthalene	128	7.262	7.262	(1.004)	143726	100.000	99.2
	3	Benzo(b)thiophene	134	7.524	7.524	(1.040)	119939	100.000	99.3
$	4	2-Methylnaphthalene-d10	152	8.211	8.211	(1.135)	128156	100.000	100
	5	2-Methylnaphthalene	142	8.264	8.264	(1.142)	143813	100.000	101
	6	1-Methylnaphthalene	142	8.526	8.526	(1.179)	139976	100.000	100
	7	2-Chloronaphthalene	162	9.178	9.178	(0.894)	138158	100.000	103
	8	Biphenyl	154	9.136	9.136	(0.890)	185851	100.000	103
	9	2,6-Dimethylnaphthalene	156	9.199	9.199	(0.897)	139447	100.000	101
	10	Acenaphthylene	152	10.107	10.107	(0.965)	157391	100.000	102
*	11	Acenaphthene-d10	164	10.261	10.261	(1.000)	172375	200.000	
	12	Acenaphthene	153	10.324	10.324	(1.006)	102196	100.000	101
	13	Dibenzofuran	168	10.519	10.519	(1.025)	151927	100.000	102
	14	1,3,5-Trimethylnaphthalene	170	10.620	10.620	(1.035)	99009	100.000	102
$	15	Fluorene-d10	174	11.100	11.100	(1.082)	82746	100.000	99.9
	16	Fluorene	166	11.151	11.151	(1.087)	121870	100.000	102
	17	Dibenzothiophene	184	12.777	12.777	(0.987)	154084	100.000	101
*	18	Phenanthrene-d10	188	12.945	12.945	(1.000)	340613	200.000	
	19	Phenanthrene	178	12.987	12.987	(1.003)	194658	100.000	102
$	20	Anthracene-d10	188	13.008	13.008	(1.005)	155933	100.000	92.4
	21	Anthracene	178	13.050	13.050	(1.008)	184986	100.000	102
	22	Carbazole	167	13.722	13.722	(1.060)	193800	100.000	101
	23	1-Methylphenanthrene	192	13.993	13.993	(1.081)	194650	100.000	101
$	24	Fluoranthene-d10	212	15.055	15.055	(1.163)	182721	100.000	101
	25	Fluoranthene	202	15.094	15.094	(1.166)	222667	100.000	101
	26	Pyrene	202	15.603	15.603	(0.881)	229156	100.000	103
	27	Benzo(a)anthracene	228	17.610	17.610	(0.994)	230686	100.000	102
*	28	Chrysene-d12	240	17.710	17.710	(1.000)	388404	200.000	
	29	Chrysene	228	17.760	17.760	(1.003)	238321	100.000	103
	30	Benzo(b)fluoranthene	252	19.686	19.686	(0.940)	210183	100.000	100
	31	Benzo(k)fluoranthene	252	19.744	19.744	(0.943)	223432	100.000	102
	32	Benzo(j)fluoranthene	252	19.811	19.811	(0.946)	204663	100.000	103
$	33	Benzo(e)pyrene-d12	264	20.493	20.493	(0.979)	188275	100.000	101

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	20.560	20.560	(0.982)	203369	100.000	101
	35 Benzo(a)pyrene	252	20.695	20.695	(0.989)	188385	100.000	101
*	36 Perylene-d12	264	20.935	20.935	(1.000)	374038	200.000	
	37 Perylene	252	21.012	21.012	(1.004)	197444	100.000	99.9
S	38 Dibenzo(a,h)anthracene-d14	292	23.819	23.820	(1.138)	101397	100.000	91.9
	39 Dibenzo(a,h)anthracene	278	23.963	23.963	(1.145)	141028	100.000	99.4
	40 Indeno(1,2,3-cd)pyrene	276	23.996	23.996	(1.146)	178061	100.000	98.1
	41 Benzo(g,h,i)perylene	276	25.392	25.392	(1.213)	159205	100.000	99.8

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121615.D
Lab Smp Id: SEL0249-CAL3
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Misc Info:

Calibration Date: 16-DEC-2016
Calibration Time: 13:50
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	292257	-14.45
11 Acenaphthene-d10	209310	104655	418620	172375	-17.65
18 Phenanthrene-d10	404977	202489	809954	340613	-15.89
28 Chrysene-d12	465046	232523	930092	388404	-16.48
36 Perylene-d12	454694	227347	909388	374038	-17.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.23	0.00
11 Acenaphthene-d10	10.26	9.76	10.76	10.26	0.00
18 Phenanthrene-d10	12.96	12.46	13.46	12.95	-0.08
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.94	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121615.D

Lab ID: SEL0249-CAL3
nt11.i, 20161216A.b\lowsim.m, 16-DEC-2016 16:32

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161216A.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121610.D

Date : 16-DEC-2016 13:50

Client ID:

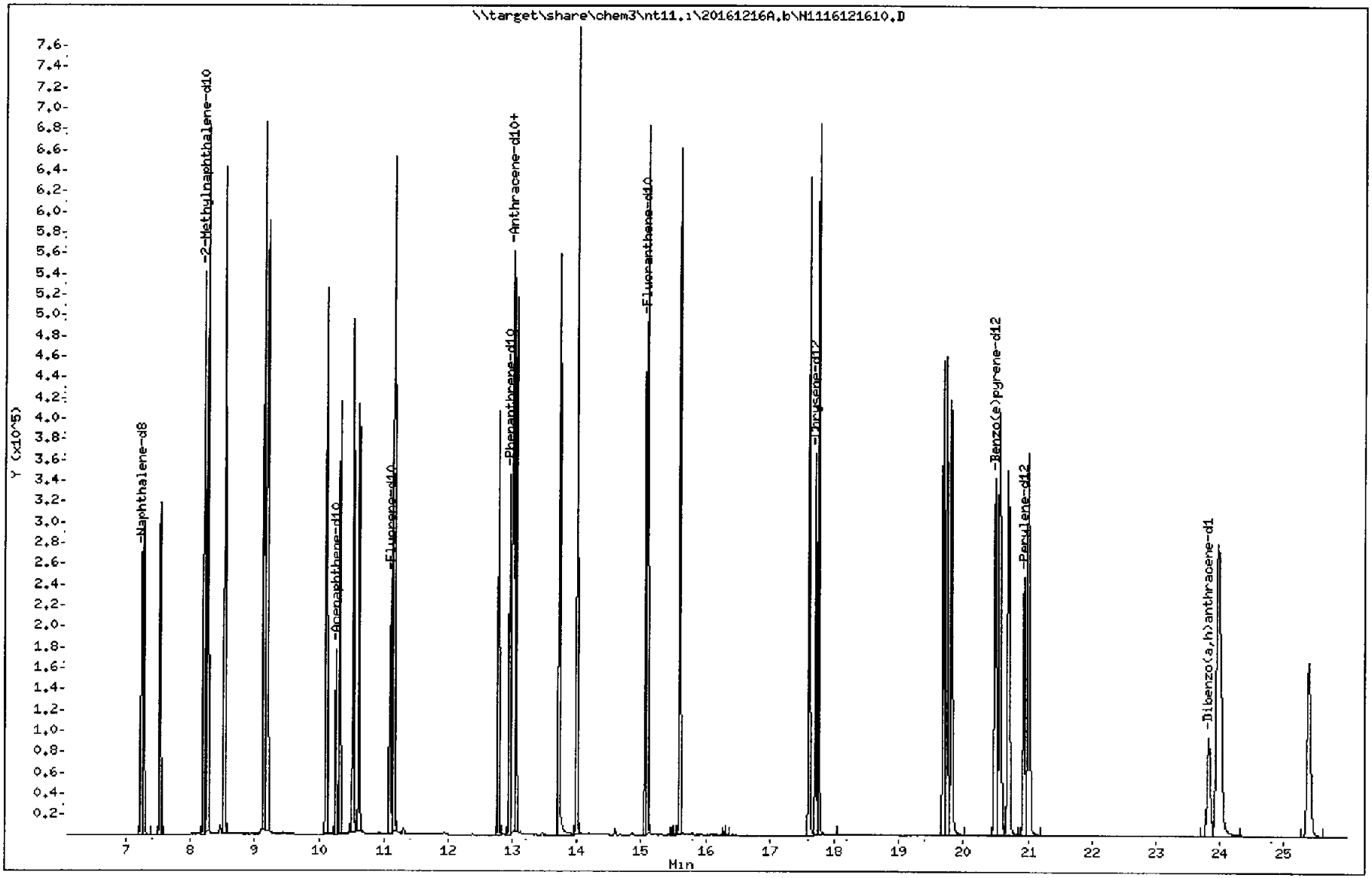
Instrument: nt11.i

Sample Info: SEL0249-CAL4

Operator: VTS

Column phase: Rx1-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161216A.b\N1116121610.D
Lab Smp Id: SEL0249-CAL4
Inj Date : 16-DEC-2016 13:50 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : SEL0249-CAL4
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Meth Date : 17-Dec-2016 08:19 van Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 10 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	1	Naphthalene-d8	136	7.234	7.234	(1.000)	341640	200.000	
	2	Naphthalene	128	7.270	7.262	(1.005)	432014	250.000	255
	3	Benzo(b)thiophene	134	7.523	7.524	(1.040)	361234	250.000	256
$	4	2-Methylnaphthalene-d10	152	8.211	8.211	(1.135)	383816	250.000	257
	5	2-Methylnaphthalene	142	8.264	8.264	(1.142)	430977	250.000	259
	6	1-Methylnaphthalene	142	8.526	8.526	(1.179)	418900	250.000	256
	7	2-Chloronaphthalene	162	9.178	9.178	(0.894)	422375	250.000	258
	8	Biphenyl	154	9.136	9.136	(0.890)	555179	250.000	253
	9	2,6-Dimethylnaphthalene	156	9.199	9.199	(0.897)	431077	250.000	257
	10	Acenaphthylene	152	10.107	10.107	(0.985)	479901	250.000	257
*	11	Acenaphthene-d10	164	10.260	10.261	(1.000)	209310	200.000	
	12	Acenaphthene	153	10.324	10.324	(1.006)	314039	250.000	257
	13	Dibenzofuran	168	10.519	10.519	(1.025)	464151	250.000	256
	14	2,3,6-Trimethylnaphthalene	170	10.620	10.620	(1.035)	305969	250.000	259
$	15	Fluorene-d10	174	11.100	11.100	(1.082)	259072	250.000	258
	16	Fluorene	166	11.151	11.151	(1.087)	376468	250.000	259
	17	Dibenzothiophene	184	12.777	12.777	(0.986)	471427	250.000	259
*	18	Phenanthrene-d10	188	12.956	12.945	(1.000)	404977	200.000	
	19	Phenanthrene	178	12.998	12.987	(1.003)	574516	250.000	254
$	20	Anthracene-d10	188	13.008	13.008	(1.004)	491793	250.000	245
	21	Anthracene	178	13.050	13.050	(1.007)	560415	250.000	260
	22	Carbazole	167	13.722	13.722	(1.059)	598767	250.000	263
	23	1-Methylphenanthrene	192	13.993	13.993	(1.080)	600246	250.000	262
$	24	Fluoranthene-d10	212	15.065	15.055	(1.163)	551810	250.000	256
	25	Fluoranthene	202	15.093	15.094	(1.165)	662353	250.000	254
	26	Pyrene	202	15.603	15.603	(0.881)	672547	250.000	253
	27	Benzo(a)anthracene	228	17.618	17.610	(0.995)	689434	250.000	254
*	28	Chrysene-d12	240	17.710	17.710	(1.000)	465046	200.000	
	29	Chrysene	228	17.760	17.760	(1.003)	691268	250.000	250
	30	Benzo(b)fluoranthene	252	19.686	19.686	(0.940)	639671	250.000	251
	31	Benzo(k)fluoranthene	252	19.744	19.744	(0.943)	679811	250.000	256
	32	Benzo(j)fluoranthene	252	19.811	19.811	(0.946)	615514	250.000	254
$	33	Benzo(e)pyrene-d12	264	20.493	20.493	(0.979)	571956	250.000	253

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	20.560	20.560	(0.982)	620368	250.000	253
	35 Benzo(a)pyrene	252	20.695	20.695	(0.989)	572946	250.000	254
*	36 Perylene-d12	264	20.935	20.935	(1.000)	454694	200.000	
	37 Perylene	252	21.012	21.012	(1.004)	598179	250.000	249
$	38 Dibenzo(a,h)anthracene-d14	292	23.830	23.820	(1.138)	344601	250.000	257
	39 Dibenzo(a,h)anthracene	278	23.963	23.963	(1.145)	455871	250.000	264
	40 Indeno(1,2,3-cd)pyrene	276	23.996	23.996	(1.146)	579238	250.000	263
	41 Benzo(g,h,i)perylene	276	25.392	25.392	(1.213)	493708	250.000	255

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121610.D
Lab Smp Id: SEL0249-CAL4
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Misc Info:

Calibration Date: 16-DEC-2016
Calibration Time: 13:50
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	341640	0.00
11 Acenaphthene-d10	209310	104655	418620	209310	0.00
18 Phenanthrene-d10	404977	202489	809954	404977	0.00
28 Chrysene-d12	465046	232523	930092	465046	0.00
36 Perylene-d12	454694	227347	909388	454694	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.23	0.00
11 Acenaphthene-d10	10.26	9.76	10.76	10.26	0.00
18 Phenanthrene-d10	12.96	12.46	13.46	12.96	0.00
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.94	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121610.D

Lab ID: SEL0249-CAL4
nt11.i, 20161216A.b\lowsim.m, 16-DEC-2016 13:50

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161216A.b\lowsim.m, allpna.sub = 3.0000

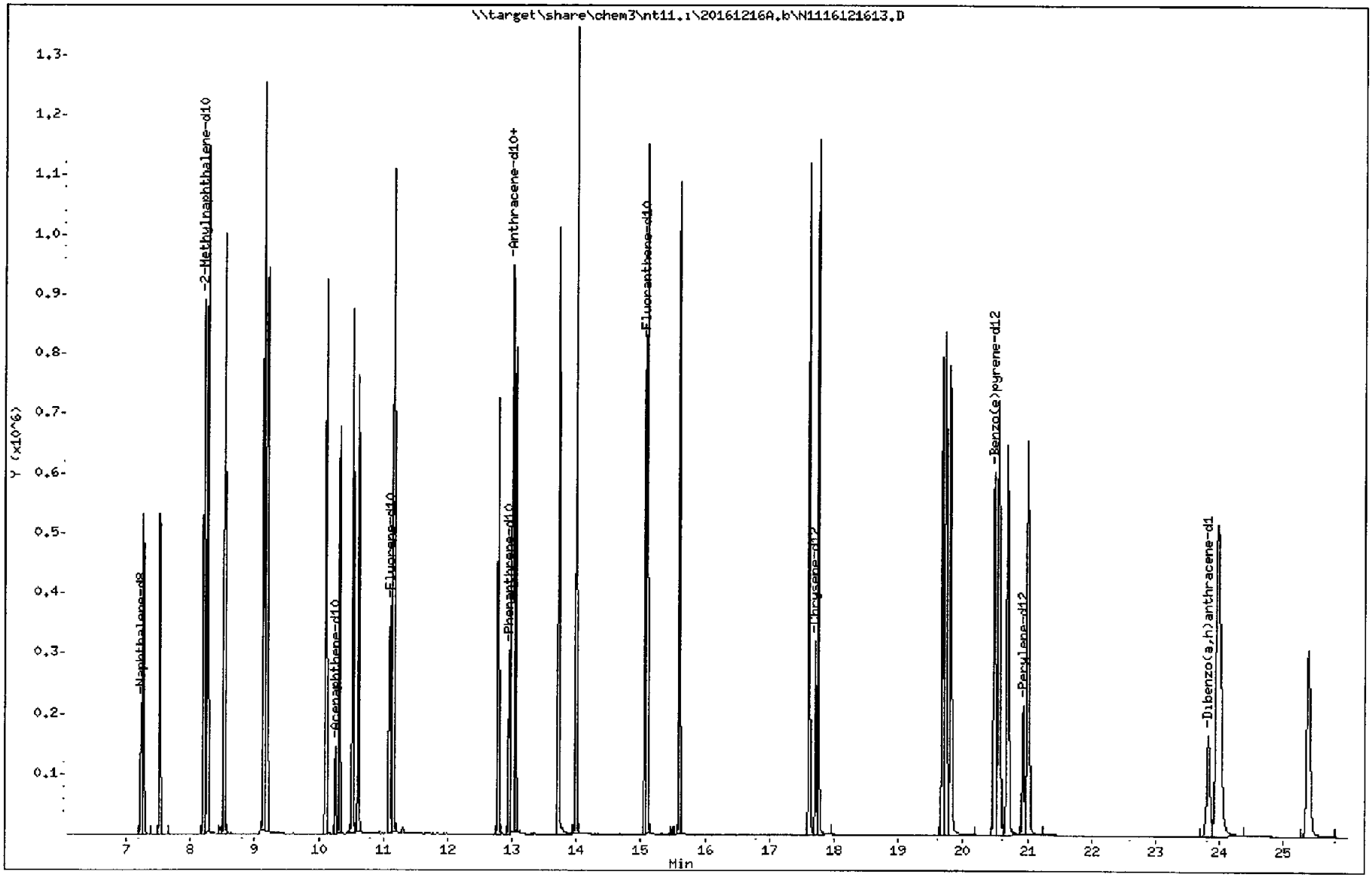
Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Data File: \\target\share\chem3\nt11.1\20161216A.b\N1116121613.D
Date : 16-DEC-2016 15:30
Client ID:
Sample Info: SEL0249-CAL5

Instrument: nt11.1

Operator: VTS
Column diameter: 0.25

Column phase: Rx1-17Sil MS



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161216A.b\N1116121613.D
Lab Smp Id: SEL0249-CAL5
Inj Date : 16-DEC-2016 15:30 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : SEL0249-CAL5
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Meth Date : 17-Dec-2016 08:19 van Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 13 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	1	Naphthalene-d8	136	7.234	7.234	(1.000)	291734	200.000	
	2	Naphthalene	128	7.262	7.262	(1.004)	713839	500.000	494
	3	Benzo(b)thiophene	134	7.524	7.524	(1.040)	612010	500.000	508
$	4	2-Methylnaphthalene-d10	152	8.211	8.211	(1.135)	655116	500.000	515
	5	2-Methylnaphthalene	142	8.264	8.264	(1.142)	738018	500.000	520
	6	1-Methylnaphthalene	142	8.526	8.526	(1.179)	713155	500.000	511
	7	2-Chloronaphthalene	162	9.178	9.178	(0.894)	721297	500.000	517
	8	Biphenyl	154	9.136	9.136	(0.890)	935776	500.000	498
	9	2,6-Dimethylnaphthalene	156	9.199	9.199	(0.897)	736247	500.000	513
	10	Acenaphthylene	152	10.107	10.107	(0.985)	817491	500.000	512
*	11	Acenaphthene-d10	164	10.261	10.261	(1.000)	178820	200.000	
	12	Acenaphthene	153	10.324	10.324	(1.006)	533463	500.000	510
	13	Dibenzofuran	168	10.519	10.519	(1.025)	793814	500.000	512
	14	2,3,5-Trimethylnaphthalene	170	10.620	10.620	(1.035)	523009	500.000	519
$	15	Fluorene-d10	174	11.100	11.100	(1.082)	438259	500.000	510
	16	Fluorene	166	11.151	11.151	(1.087)	641634	500.000	516
	17	Dibenzothiophene	184	12.777	12.777	(0.986)	804303	500.000	516
*	18	Phenanthrene-d10	188	12.956	12.945	(1.000)	346945	200.000	
	19	Phenanthrene	178	12.987	12.987	(1.002)	968700	500.000	499
$	20	Anthracene-d10	188	13.008	13.008	(1.004)	828022	500.000	482
	21	Anthracene	178	13.050	13.050	(1.007)	955022	500.000	516
	22	Carbazole	167	13.722	13.722	(1.059)	1053443	500.000	540
	23	1-Methylphenanthrene	192	13.993	13.993	(1.080)	1018214	500.000	519
$	24	Fluoranthene-d10	212	15.065	15.055	(1.163)	958468	500.000	519
	25	Fluoranthene	202	15.094	15.094	(1.165)	1133637	500.000	507
	26	Pyrene	202	15.603	15.603	(0.881)	1137006	500.000	492
	27	Benzo(a)anthracene	228	17.610	17.610	(0.994)	1178058	500.000	501
*	28	Chrysene-d12	240	17.710	17.710	(1.000)	404017	200.000	
	29	Chrysene	228	17.760	17.760	(1.003)	1189771	500.000	495
	30	Benzo(b)fluoranthene	252	19.686	19.686	(0.940)	1133287	500.000	508
	31	Benzo(k)fluoranthene	252	19.744	19.744	(0.943)	1215913	500.000	522
	32	Benzo(j)fluoranthene	252	19.811	19.811	(0.946)	1105595	500.000	520
$	33	Benzo(e)pyrene-d12	264	20.493	20.493	(0.979)	1028139	500.000	518

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS CV-COL (ng/mL)
	34 Benzo(e)pyrene	252	20.570	20.560	(0.983)	1112108	500.000	517
	35 Benzo(a)pyrene	252	20.695	20.695	(0.989)	1036399	500.000	523
*	36 Perylene-d12	264	20.935	20.935	(1.000)	398693	200.000	
	37 Perylene	252	21.012	21.012	(1.004)	1064136	500.000	505
S	38 Dibenz(a,h)anthracene-d14	292	23.819	23.820	(1.138)	633982	500.000	539
	39 Dibenzo(a,h)anthracene	278	23.963	23.963	(1.145)	860980	500.000	569
	40 Indeno(1,2,3-cd)pyrene	276	23.996	23.996	(1.146)	1074202	500.000	555
	41 Benzo(g,h,i)perylene	276	25.392	25.392	(1.213)	910954	500.000	536

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121613.D
Lab Smp Id: SEL0249-CAL5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Misc Info:

Calibration Date: 16-DEC-2016
Calibration Time: 13:50
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	291734	-14.61
11 Acenaphthene-d10	209310	104655	418620	178820	-14.57
18 Phenanthrene-d10	404977	202489	809954	346945	-14.33
28 Chrysene-d12	465046	232523	930092	404017	-13.12
36 Perylene-d12	454694	227347	909388	398693	-12.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.23	0.00
11 Acenaphthene-d10	10.26	9.76	10.76	10.26	0.00
18 Phenanthrene-d10	12.96	12.46	13.46	12.96	0.00
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.94	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121613.D

Lab ID: SEL0249-CAL5
nt11.i, 20161216A.b\lowsim.m, 16-DEC-2016 15:30

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161216A.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121611.D

Date : 16-DEC-2016 14:28

Client ID:

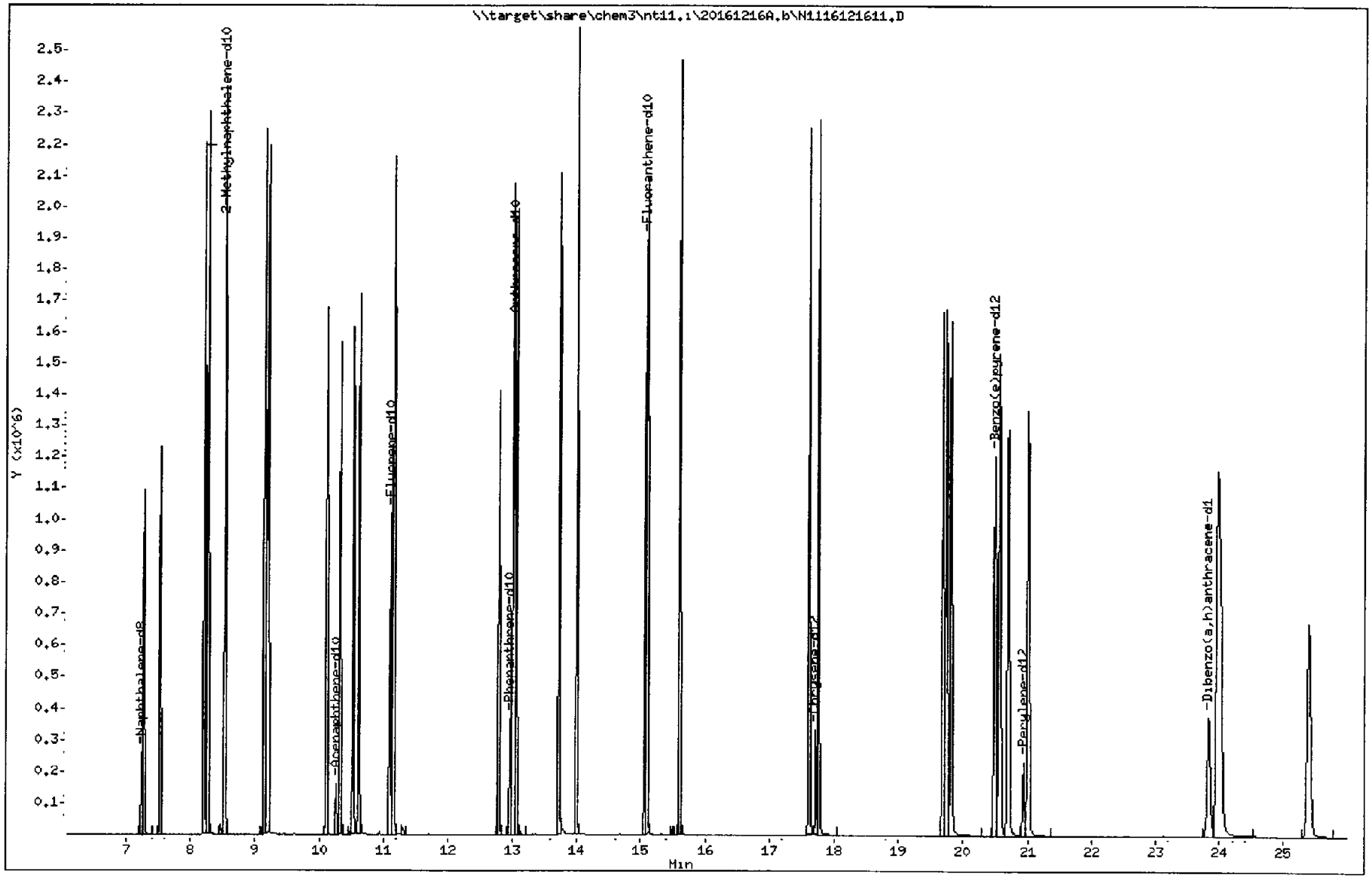
Sample Info: SEL0249-CAL6

Column phase: Rx1-17Sil MS

Instrument: nt11.i

Operator: WTS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161216A.b\N1116121611.D
Lab Smp Id: SEL0249-CAL6
Inj Date : 16-DEC-2016 14:28 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : SEL0249-CAL6
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Meth Date : 17-Dec-2016 08:19 van Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 11 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	1 Naphthalene-d8	136	7.234	7.234	(1.000)	315917	200.000	
	2 Naphthalene	128	7.270	7.262	(1.005)	1494907	1000.00	955
	3 Benzo(b)thiophene	134	7.523	7.524	(1.040)	1287600	1000.00	987
$	4 2-Methylnaphthalene-d10	152	8.211	8.211	(1.135)	1381593	1000.00	1000
	5 2-Methylnaphthalene	142	8.264	8.264	(1.142)	1531552	1000.00	996
	6 1-Methylnaphthalene	142	8.526	8.526	(.179)	1487674	1000.00	984
	7 2-Chloronaphthalene	162	9.178	9.178	(0.894)	1501391	1000.00	988
	8 Biphenyl	154	9.146	9.136	(0.891)	1902689	1000.00	931
	9 2,6-Dimethylnaphthalene	156	9.199	9.199	(0.897)	1545972	1000.00	990
	10 Acenaphthylene	152	10.116	10.107	(0.986)	1719305	1000.00	989
*	11 Acenaphthene-d10	164	10.260	10.261	(1.000)	194669	200.000	
	12 Acenaphthene	153	10.324	10.324	(1.006)	1139121	1000.00	1000
	13 Dibenzofuran	168	10.531	10.519	(1.026)	1669803	1000.00	989
	14 2,3,5-Trimethylnaphthalene	170	10.620	10.620	(1.035)	1118733	1000.00	1020
$	15 Fluorene-d10	174	11.100	11.100	(1.082)	954967	1000.00	1020
	16 Fluorene	166	11.151	11.151	(1.087)	1369034	1000.00	1010
	17 Dibenzothiophene	184	12.788	12.777	(0.987)	1666791	1000.00	970
*	18 Phenanthrene-d10	188	12.956	12.945	(1.000)	382205	200.000	
	19 Phenanthrene	178	12.998	12.987	(1.003)	1975724	1000.00	925
$	20 Anthracene-d10	188	13.019	13.008	(1.005)	1758178	1000.00	929
	21 Anthracene	178	13.050	13.050	(1.007)	1967509	1000.00	965
	22 Carbazole	167	13.722	13.722	(1.059)	2215231	1000.00	1030
	23 1-Methylphenanthrene	192	13.993	13.993	(1.080)	2078611	1000.00	962
*	24 Fluoranthene-d10	212	15.065	15.055	(1.163)	1967870	1000.00	967
	25 Fluoranthene	202	15.103	15.094	(1.166)	2276558	1000.00	925
	26 Pyrene	202	15.603	15.603	(0.881)	2297548	1000.00	950
	27 Benzo(a)anthracene	228	17.618	17.610	(0.995)	2336871	1000.00	949
*	28 Chrysene-d12	240	17.710	17.710	(1.000)	422654	200.000	
	29 Chrysene	228	17.760	17.760	(1.003)	2307760	1000.00	918
	30 Benzo(b)fluoranthene	252	19.695	19.686	(0.941)	2360241	1000.00	1020
	31 Benzo(k)fluoranthene	252	19.744	19.744	(0.943)	2334070	1000.00	967
	32 Benzo(j)fluoranthene	252	19.820	19.811	(0.947)	2209582	1000.00	1000
$	33 Benzo(e)pyrene-d12	264	20.493	20.493	(0.979)	2060793	1000.00	1000

	Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	20.570	20.560	(0.983)	2220064	1000.00	996
	35 Benzo(a)pyrene	252	20.704	20.695	(0.989)	2102547	1000.00	1030
>	36 Perylene-d12	264	20.935	20.935	(1.000)	413016	200.000	
	37 Perylene	252	21.012	21.012	(1.004)	2164631	1000.00	992
$	38 Dibenzo(a,l)anthracene-d14	292	23.830	23.820	(1.138)	1384880	1000.00	1140
	39 Dibenzo(a,h)anthracene	278	23.974	23.963	(1.145)	1870608	1000.00	1130
	40 Indeno(1,2,3-cd)pyrene	276	24.007	23.996	(1.147)	2311912	1000.00	1150
	41 Benzo(g,h,i)perylene	276	25.403	25.392	(1.213)	1944223	1000.00	1100

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121611.D
Lab Smp Id: SEL0249-CAL6
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Misc Info:

Calibration Date: 16-DEC-2016
Calibration Time: 13:50
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	315917	-7.53
11 Acenaphthene-d10	209310	104655	418620	194669	-6.99
18 Phenanthrene-d10	404977	202489	809954	382205	-5.62
28 Chrysene-d12	465046	232523	930092	422654	-9.12
36 Perylene-d12	454694	227347	909388	413016	-9.17

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.23	0.00
11 Acenaphthene-d10	10.26	9.76	10.76	10.26	0.00
18 Phenanthrene-d10	12.96	12.46	13.46	12.96	0.00
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.94	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121611.D

Lab ID: SEL0249-CAL6
nt11.i, 20161216A.b\lowsim.m, 16-DEC-2016 14:28

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161216A.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

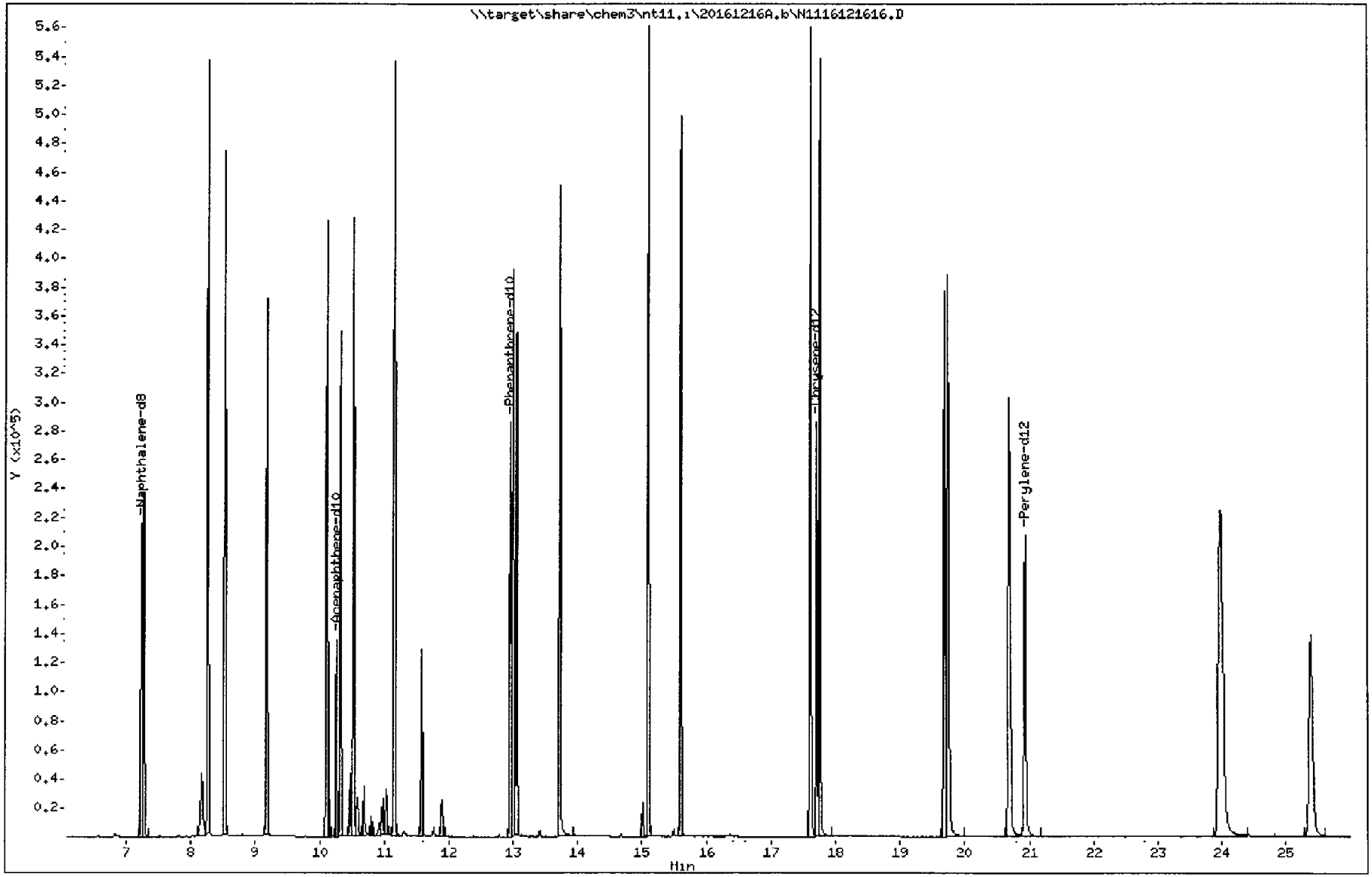
Instrument: nt11.i

Sample Info: SEL0249-SCV1

Operator: VTS

Column phase: Rx1-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D
Lab Smp Id: SEL0249-SCV1
Inj Date : 16-DEC-2016 17:04 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : SEL0249-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Meth Date : 17-Dec-2016 08:19 van Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1 Naphthalene-d8	136	7.235	7.234	(1.000)	270210	200.000	
	2 Naphthalene	128	7.271	7.262	(1.005)	341030	254.634	255
	3 Benzo(b)thiophene	134	Compound Not Detected.					
$	4 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	5 2-Methylnaphthalene	142	8.264	8.264	(1.142)	332105	252.440	252
	6 1-Methylnaphthalene	142	8.526	8.526	(1.179)	317530	245.660	246
	7 2-Chloronaphthalene	162	9.178	9.178	(0.894)	317244	249.528	250
	8 Biphenyl	154	Compound Not Detected.					
	9 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	10 Acenaphthylene	152	10.107	10.107	(0.985)	373828	257.034	257
*	11 Acenaphthene-d10	164	10.261	10.261	(1.000)	162809	200.000	
	12 Acenaphthene	153	10.324	10.324	(1.006)	266766	280.343	280
	13 Dibenzofuran	168	10.519	10.519	(1.025)	390311	276.512	277
	14 2,3,5-Trimethylnaphthalene	170	Compound Not Detected.					
$	15 Fluorene-d10	174	Compound Not Detected.					
	16 Fluorene	166	11.151	11.151	(1.087)	305233	269.796	270
	17 Dibenzothiophene	184	Compound Not Detected.					
*	18 Phenanthrene-d10	188	12.945	12.945	(1.000)	315262	200.000	
	19 Phenanthrene	178	12.987	12.987	(1.003)	448527	254.489	254
$	20 Anthracene-d10	188	Compound Not Detected.					
	21 Anthracene	178	13.050	13.050	(1.008)	435839	259.275	259
	22 Carbazole	167	13.722	13.722	(1.060)	482620	272.093	272
	23 1-Methylphenanthrene	192	Compound Not Detected.					
$	24 Fluoranthene-d10	212	Compound Not Detected.					
	25 Fluoranthene	202	15.094	15.094	(1.166)	531729	261.826	262
	26 Pyrene	202	15.603	15.603	(0.881)	541966	249.918	250
	27 Benzo(a)anthracene	228	17.610	17.610	(0.994)	572198	259.210	259
*	28 Chrysene-d12	240	17.710	17.710	(1.000)	378953	200.000	
	29 Chrysene	228	17.760	17.760	(1.003)	555847	246.520	247
	30 Benzo(b)fluoranthene	252	19.686	19.686	(0.940)	540310	259.312	259
	31 Benzo(k)fluoranthene	252	19.744	19.744	(0.943)	590842	271.687	272
	32 Benzo(j)fluoranthene	252	Compound Not Detected.					
$	33 Benzo(e)pyrene-d12	264	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (rg/mL)	FINAL (ng/mL)
	34 Benzo(e)pyrene	252	Compound Not Detected.					
	35 Benzo(a)pyrene	252	20.695	20.695	(0.989)	484854	262.242	262
+	36 Perylene-d12	264	20.935	20.935	(1.000)	372273	200.000	
	37 Perylene	252	Compound Not Detected.					
$	38 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	39 Dibenzo(a,h)anthracene	278	23.963	23.963	(1.145)	374624	265.238	265
	40 Indeno(1,2,3-cd)pyrene	276	23.996	23.996	(1.146)	482901	267.421	267
	41 Benzo(g,h,i)perylene	276	25.392	25.392	(1.213)	419896	264.408	264

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121616.D
Lab Smp Id: SEL0249-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Misc Info:

Calibration Date: 16-DEC-2016
Calibration Time: 13:50
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	270210	-20.91
11 Acenaphthene-d10	209310	104655	418620	162809	-22.22
18 Phenanthrene-d10	404977	202489	809954	315262	-22.15
28 Chrysene-d12	465046	232523	930092	378953	-18.51
36 Perylene-d12	454694	227347	909388	372273	-18.13

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.24	0.00
11 Acenaphthene-d10	10.26	9.76	10.76	10.26	0.00
18 Phenanthrene-d10	12.96	12.46	13.46	12.95	-0.08
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.94	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121616.D

Lab ID: SEL0249-SCV1
nt11.i, 20161216A.b\lowsim.m, 16-DEC-2016 17:04

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161216A.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Analytical Resources, Incorporated

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Calibration: ZK00080
Laboratory ID: SEK0335-SCV1
Sequence: SEK0335
Sequence Name: SIMPNA SCV
Standard ID: D004766

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Naphthalene	250.00	260	4.2	20.00
2-Methylnaphthalene	250.00	248	-0.7	20.00
Acenaphthylene	250.00	254	1.8	20.00
Acenaphthene	250.00	265	6.1	20.00
Fluorene	250.00	241	-3.6	20.00
Phenanthrene	250.00	258	3.3	20.00
Anthracene	250.00	264	5.7	20.00
Fluoranthene	250.00	253	1.2	20.00
Pyrene	250.00	269	7.5	20.00
Benzo(a)anthracene	250.00	249	-0.3	20.00
Chrysene	250.00	244	-2.2	20.00
Benzo(b)fluoranthene	250.00	231	-7.5	20.00
Benzo(k)fluoranthene	250.00	243	-2.8	20.00
Benzo(a)pyrene	250.00	250	-0.2	20.00
Indeno(1,2,3-cd)pyrene	250.00	242	-3.3	20.00
Dibenzo(a,h)anthracene	250.00	244	-2.4	20.00
Benzo(g,h,i)perylene	250.00	245	-2.2	20.00

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

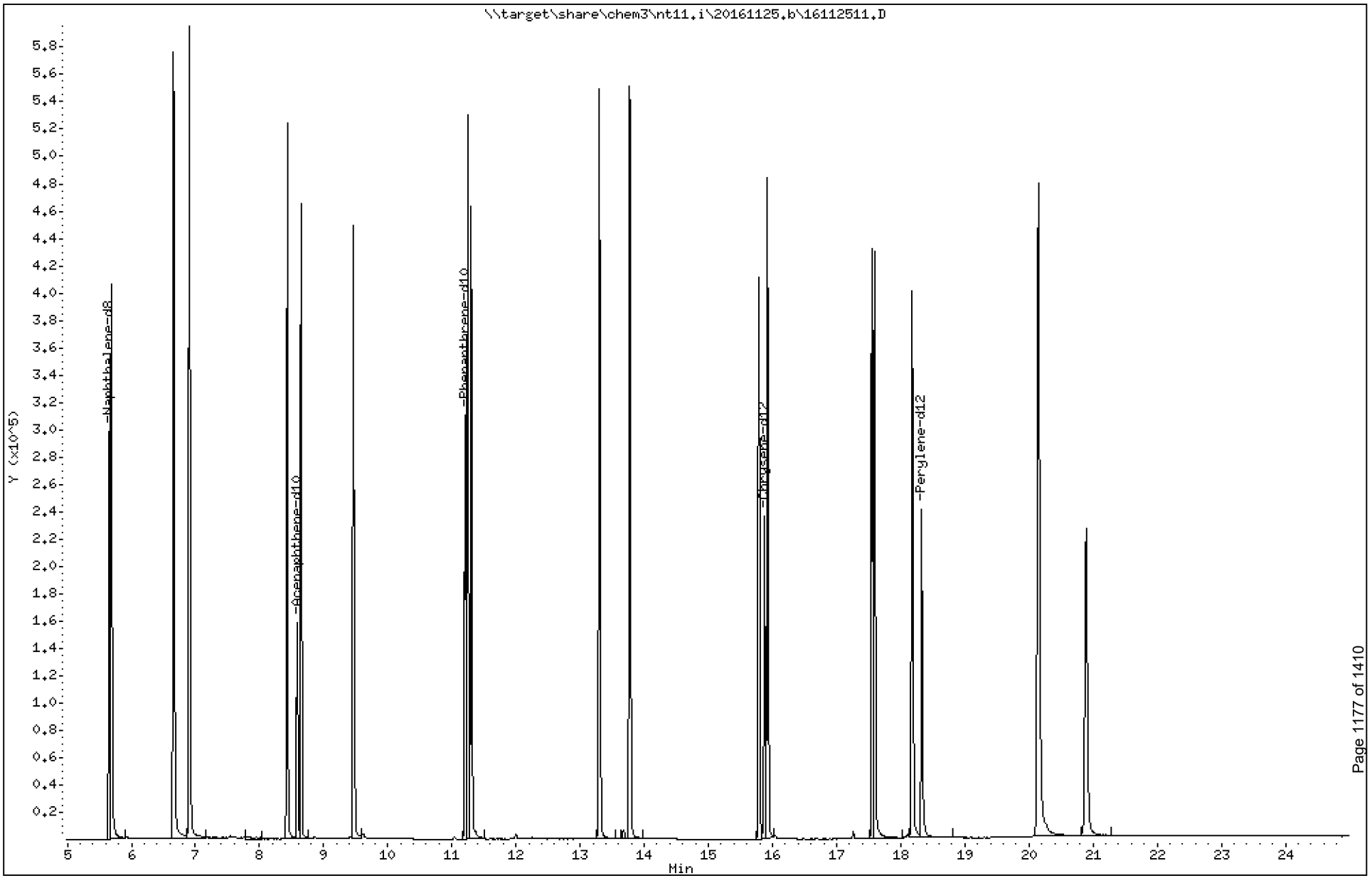
Sample Info: SEK0335-SCV1

Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW

Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

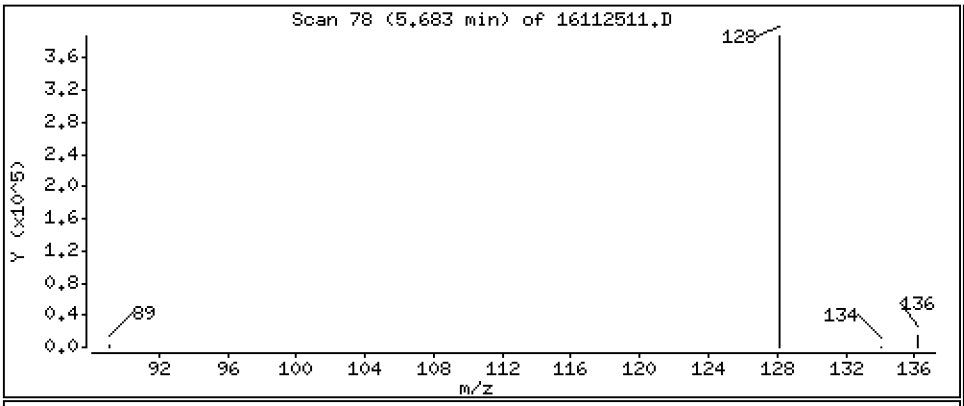
Operator: JW

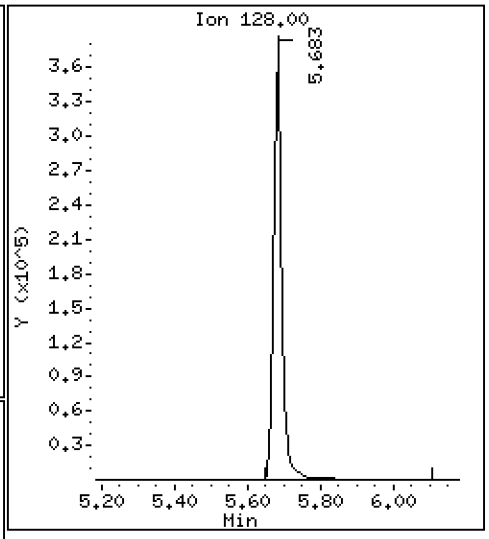
Column phase: Rxi-17Sil MS

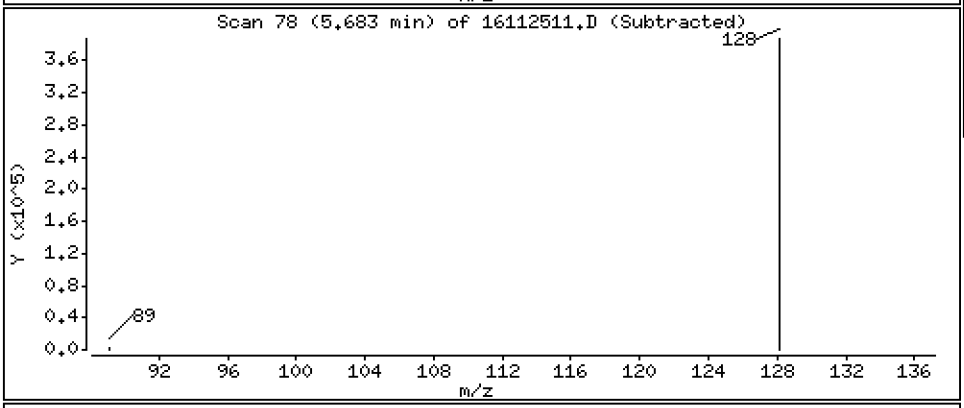
Column diameter: 0.25

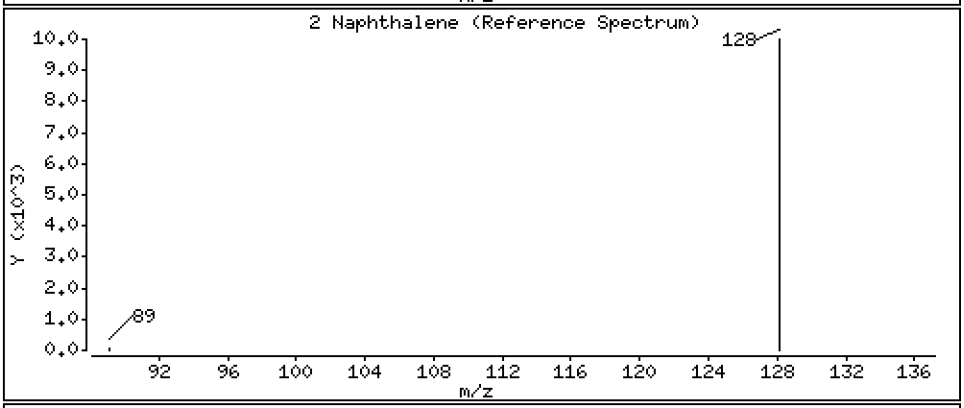
2 Naphthalene

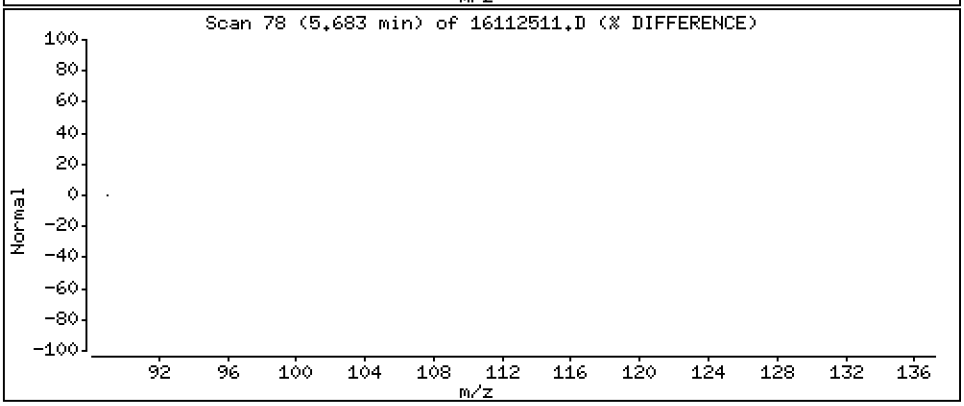
Concentration: 260 ng/mL











Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

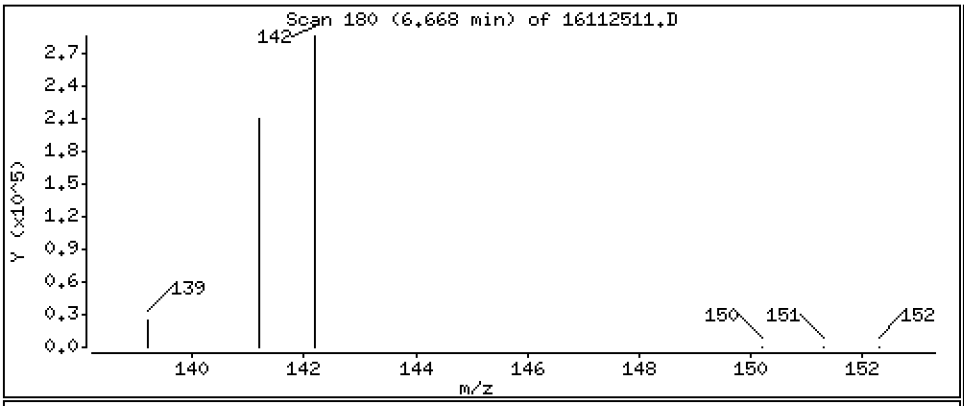
Operator: JW

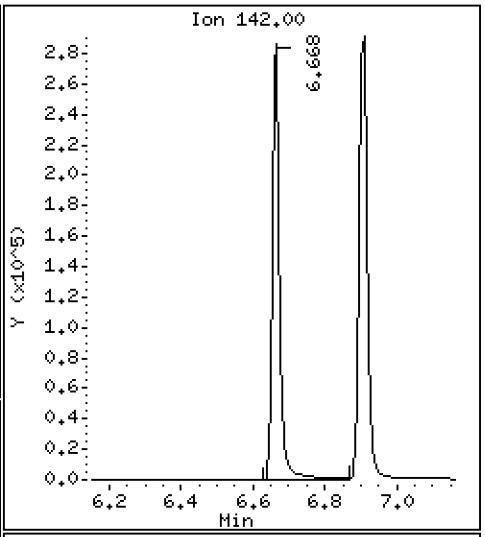
Column phase: Rxi-17Sil MS

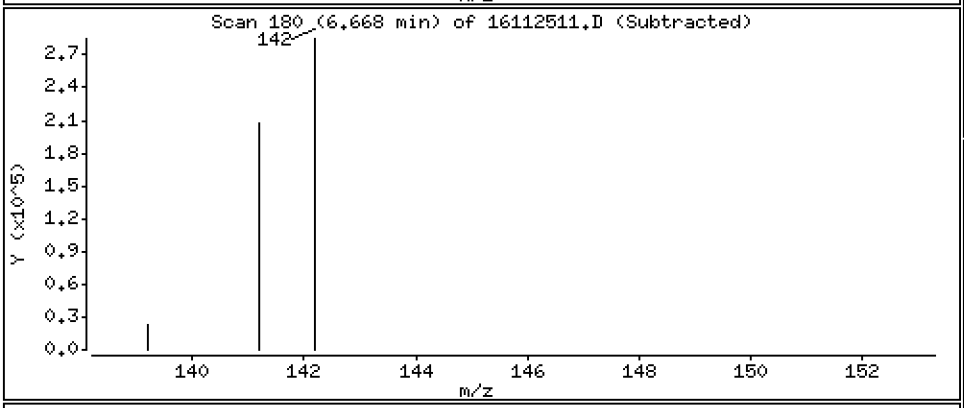
Column diameter: 0.25

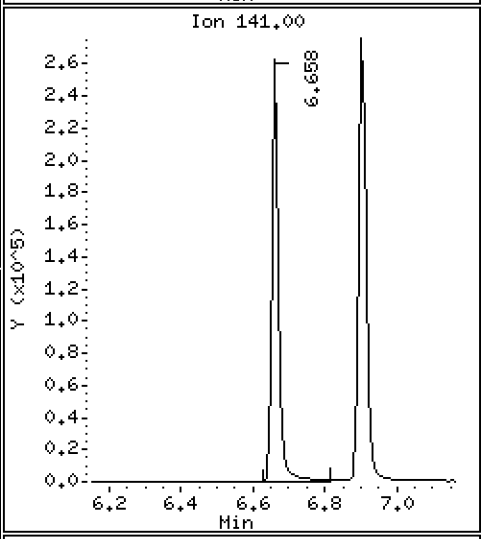
5 2-Methylnaphthalene

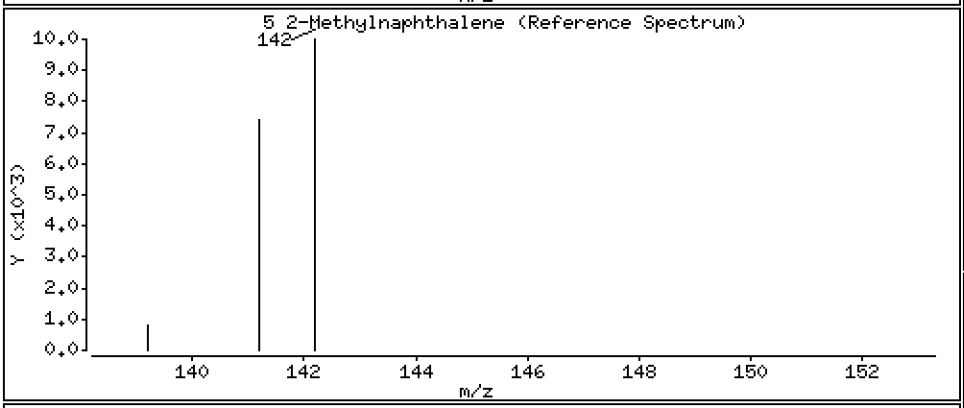
Concentration: 248 ng/mL

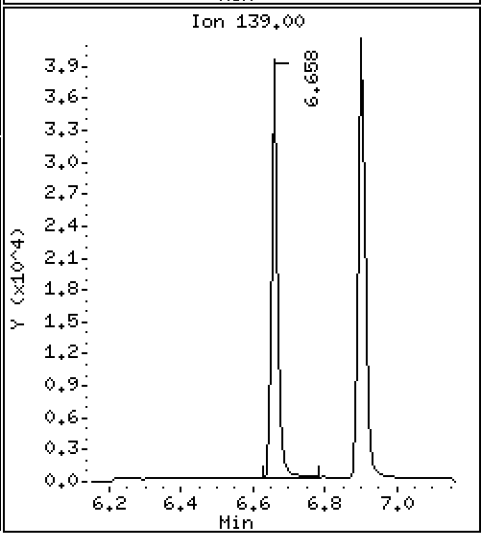


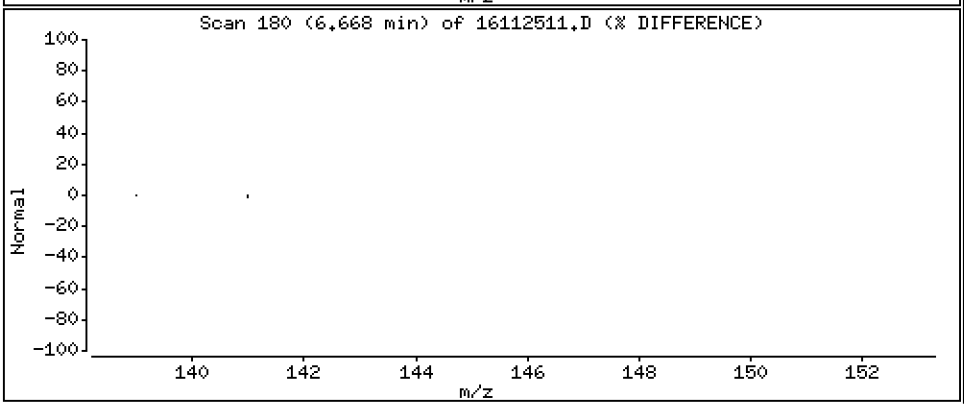












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

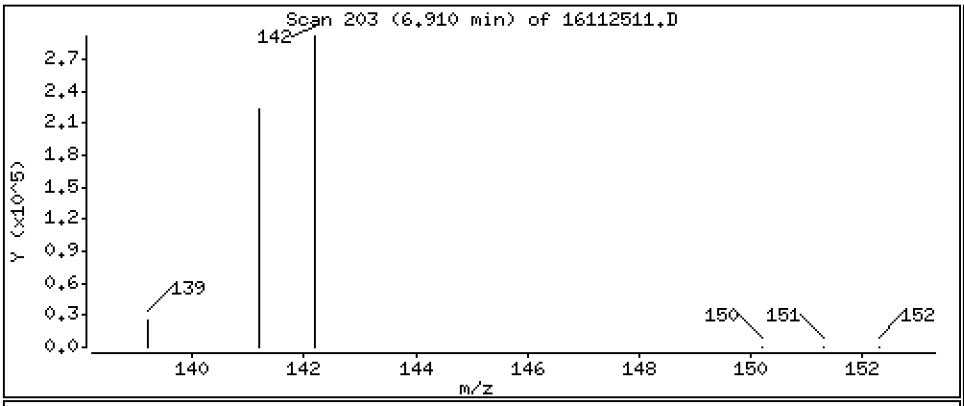
Operator: JW

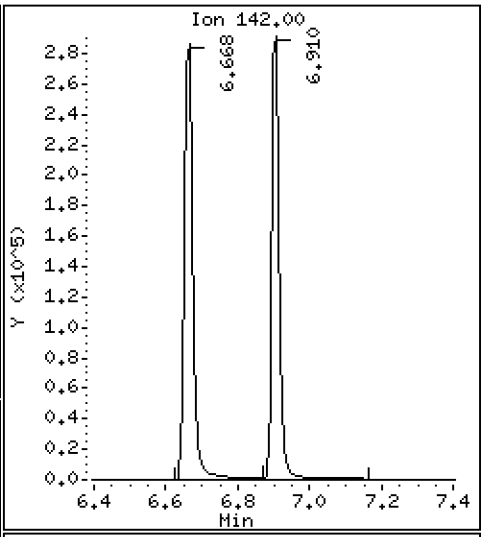
Column phase: Rxi-17Sil MS

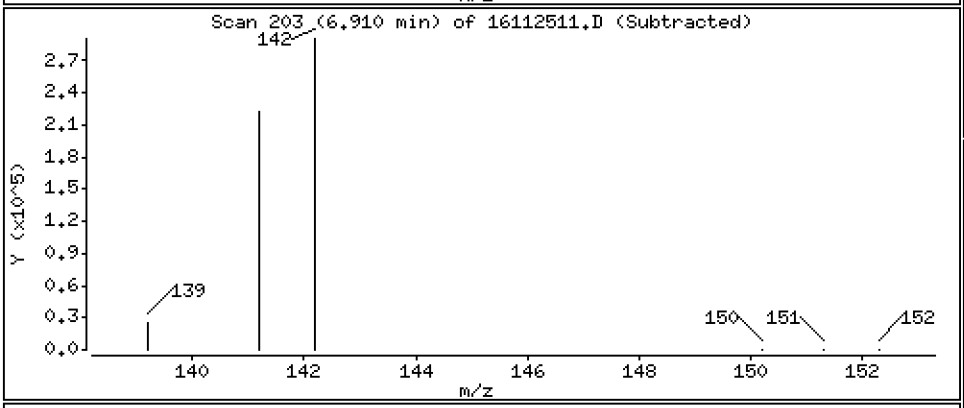
Column diameter: 0.25

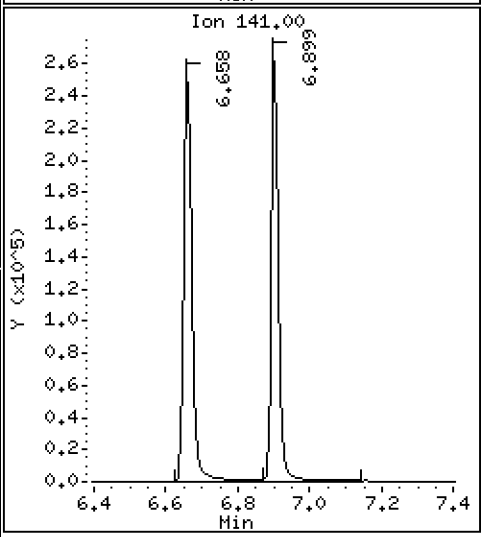
6 1-Methylnaphthalene

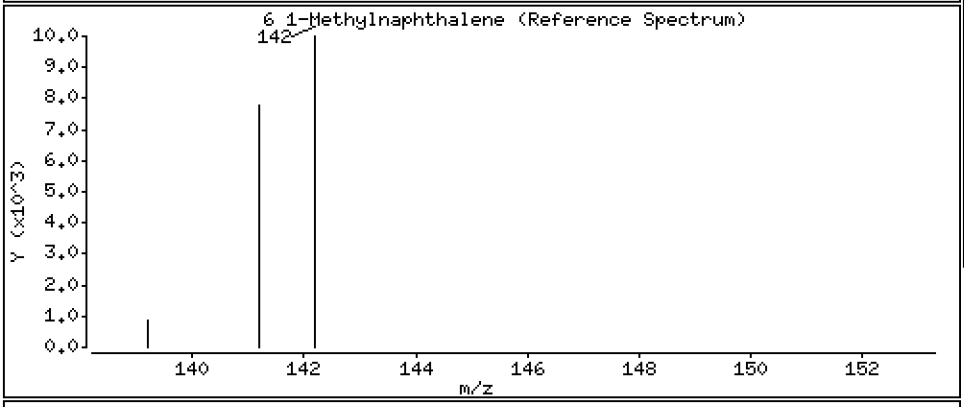
Concentration: 255 ng/mL

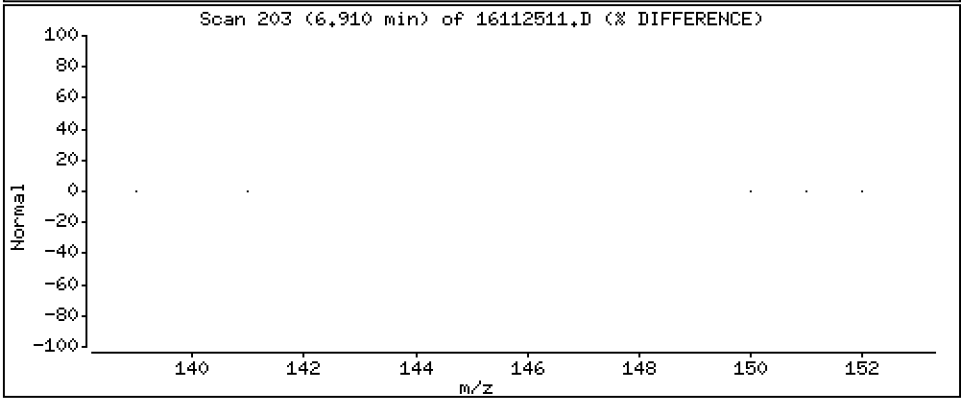












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

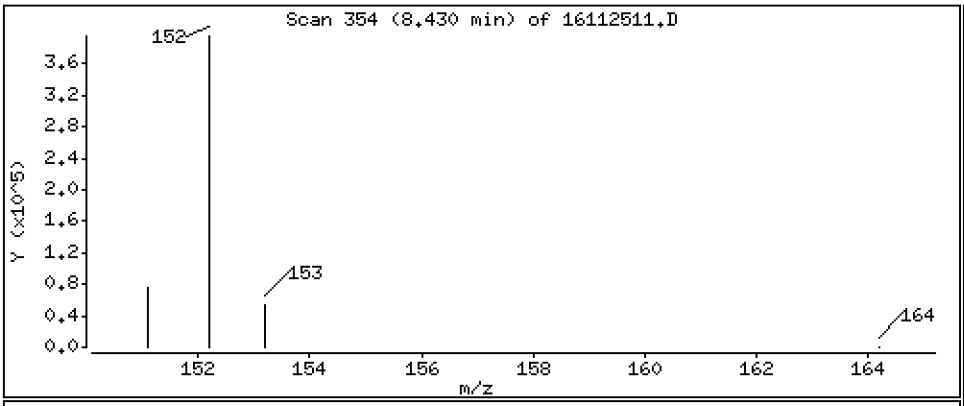
Operator: JW

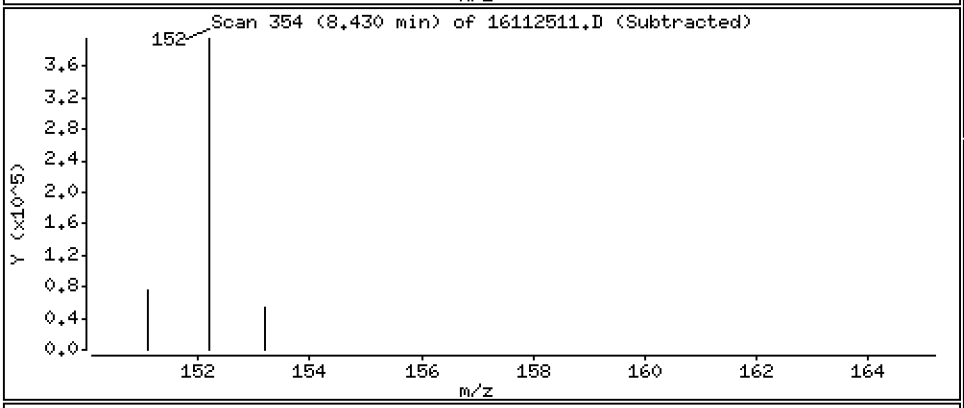
Column phase: Rxi-17Sil MS

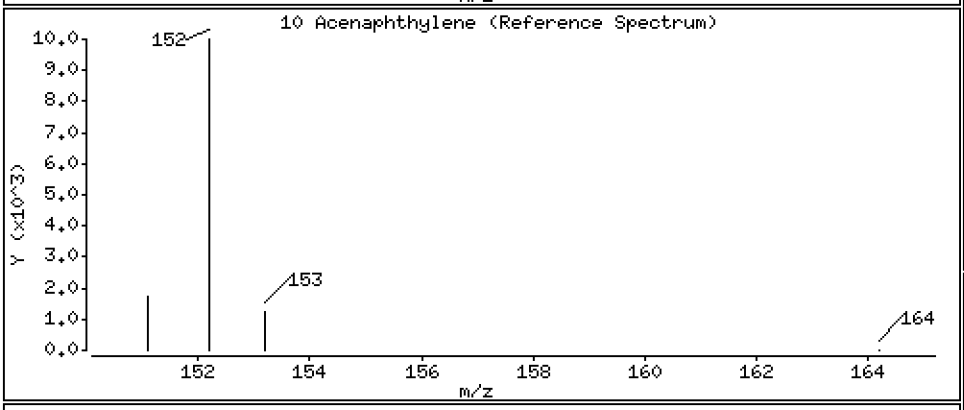
Column diameter: 0.25

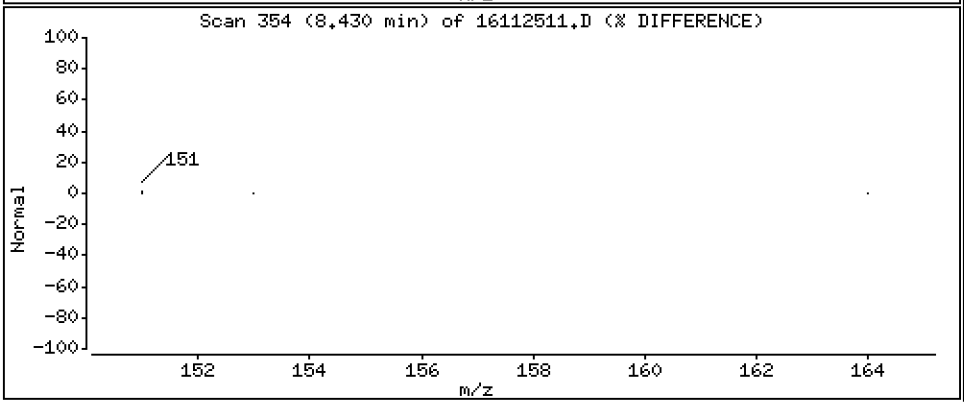
10 Acenaphthylene

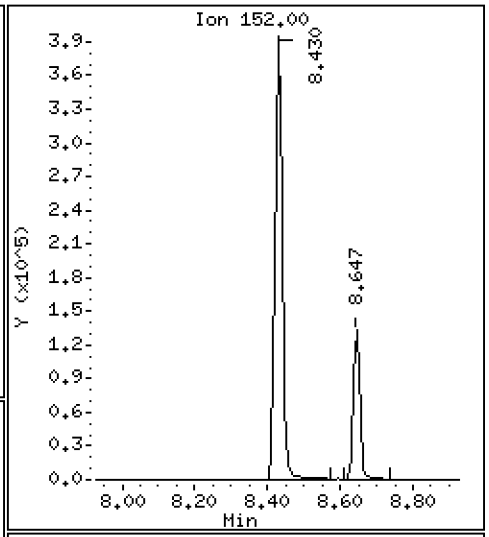
Concentration: 254 ng/mL

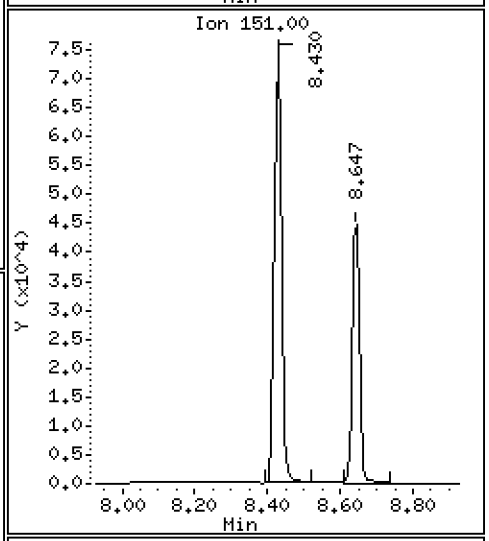


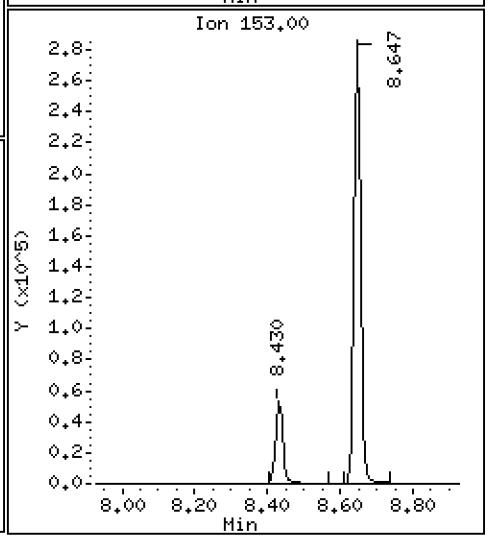












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

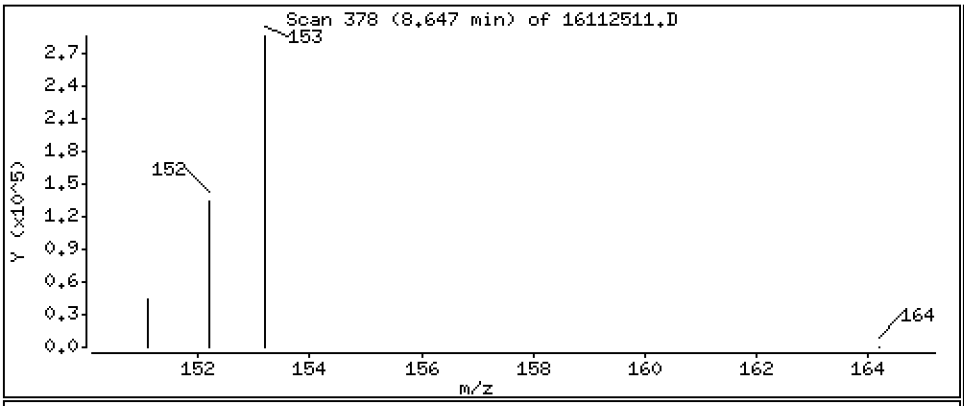
Operator: JW

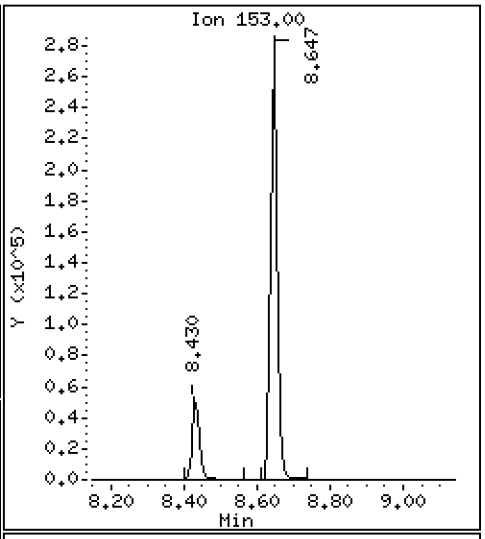
Column phase: Rxi-17Sil MS

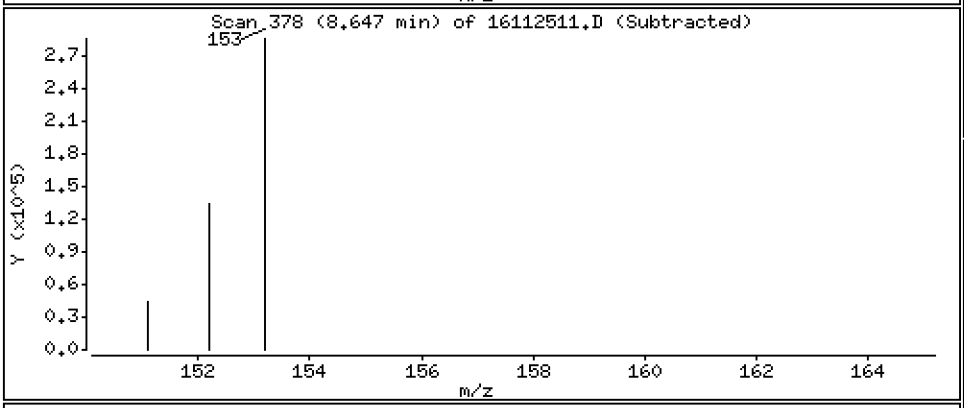
Column diameter: 0.25

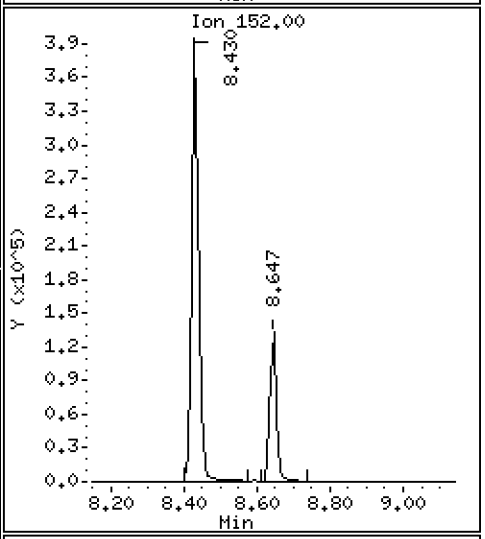
12 Acenaphthene

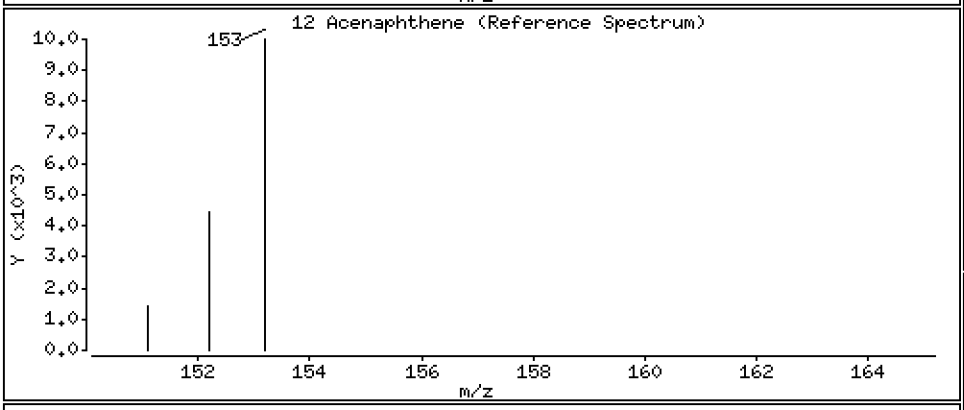
Concentration: 265 ng/mL

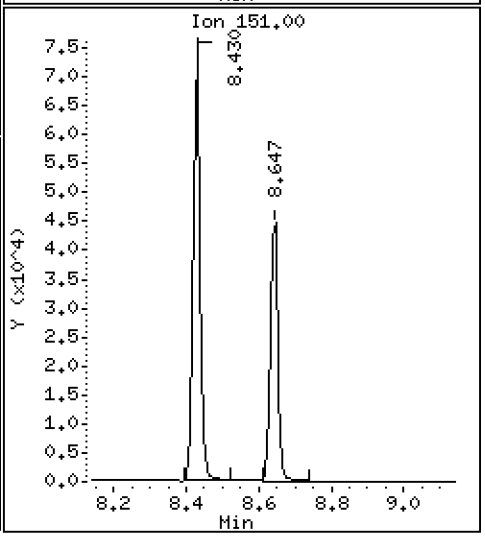


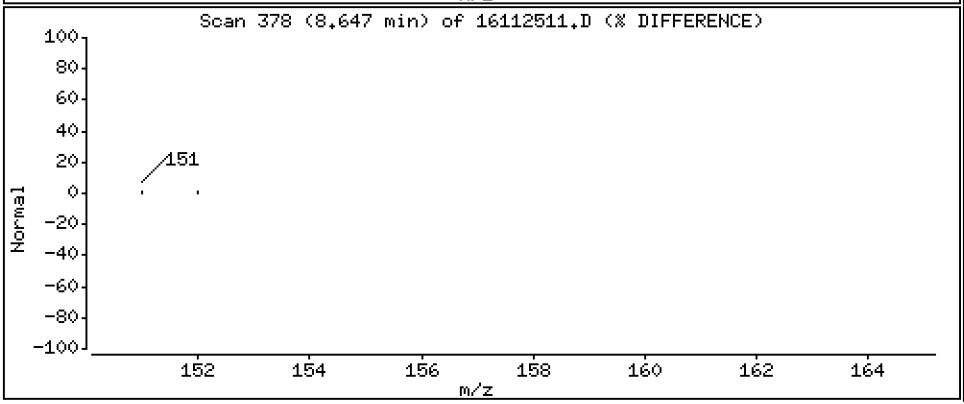












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

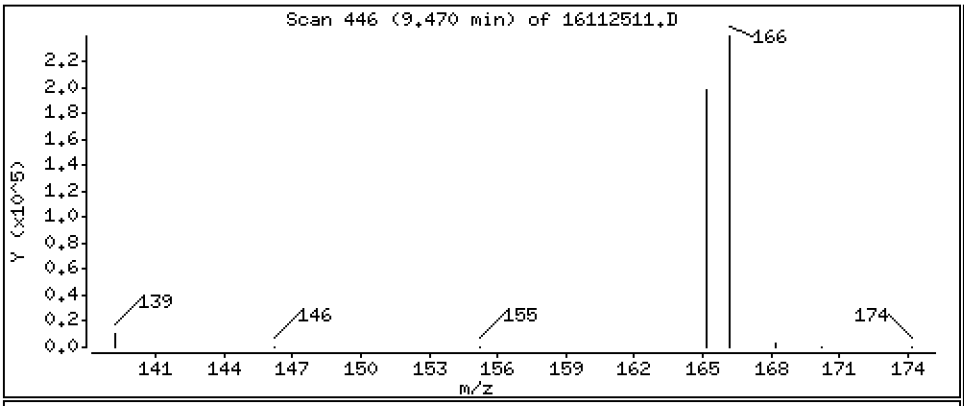
Operator: JW

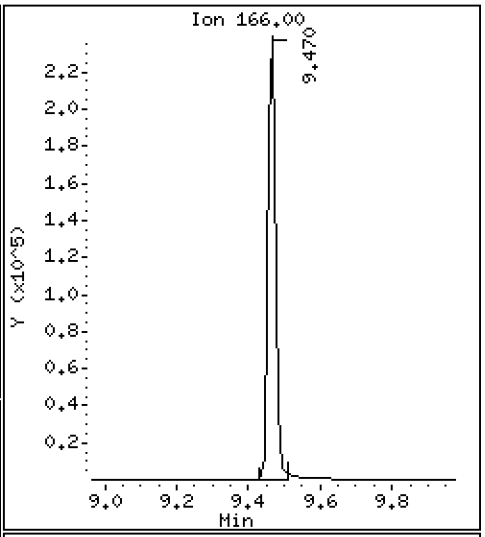
Column phase: Rxi-17Sil MS

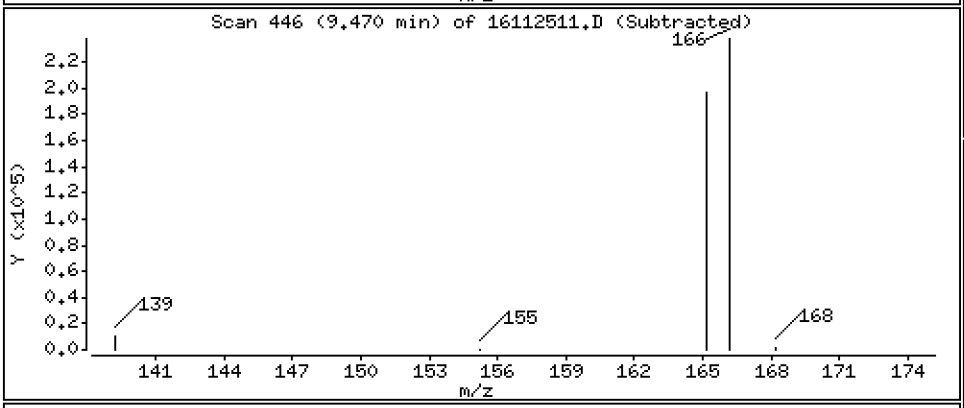
Column diameter: 0.25

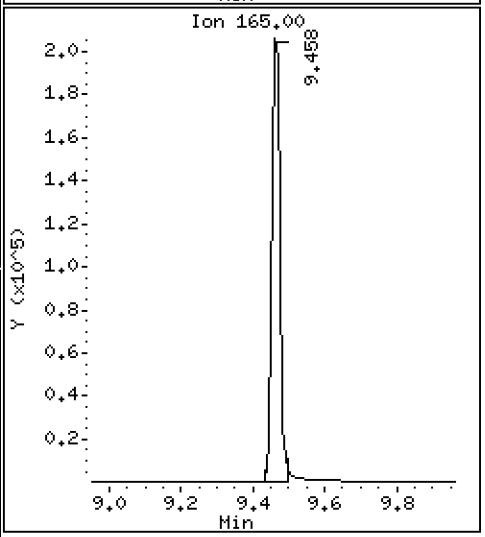
16 Fluorene

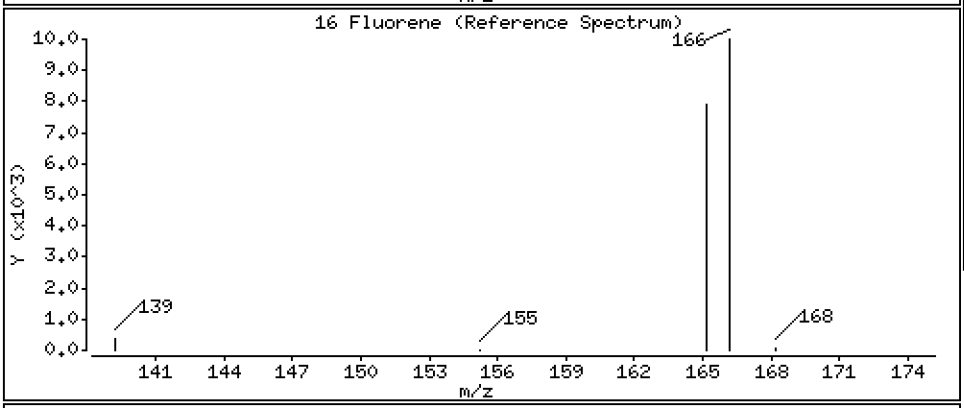
Concentration: 241 ng/mL

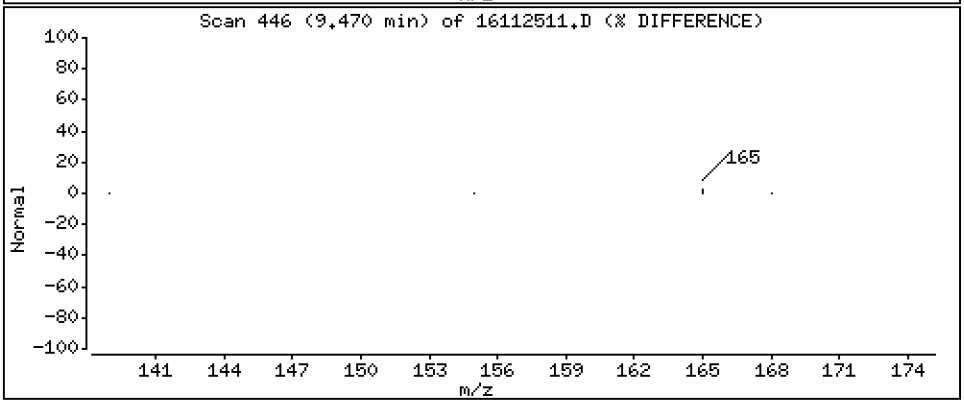












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

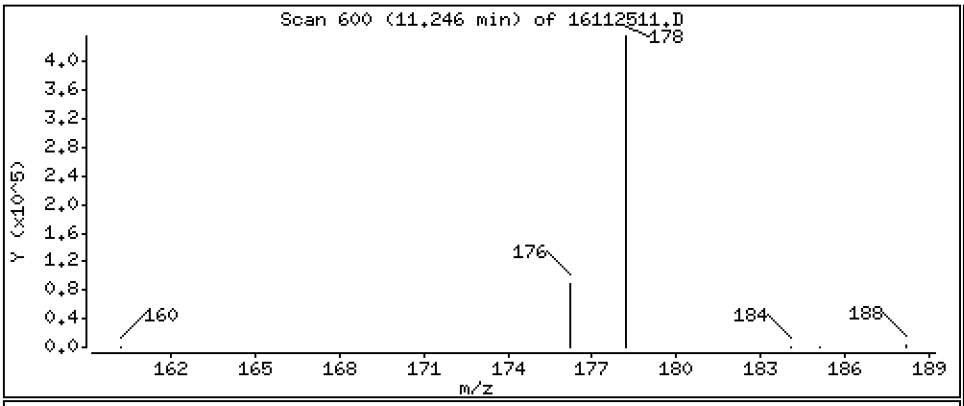
Operator: JW

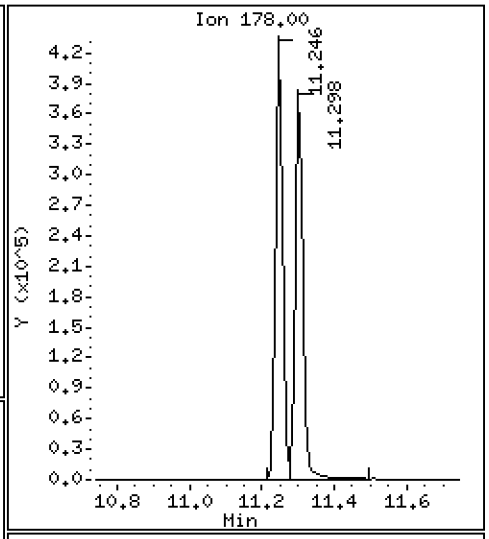
Column phase: Rxi-17Sil MS

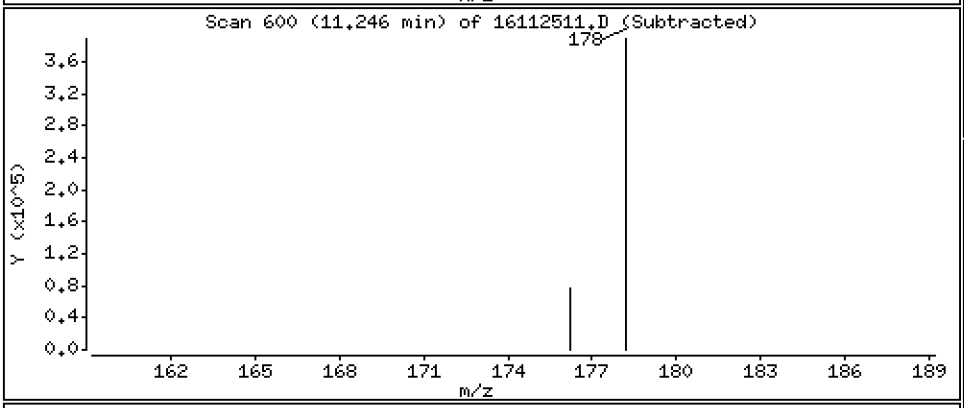
Column diameter: 0.25

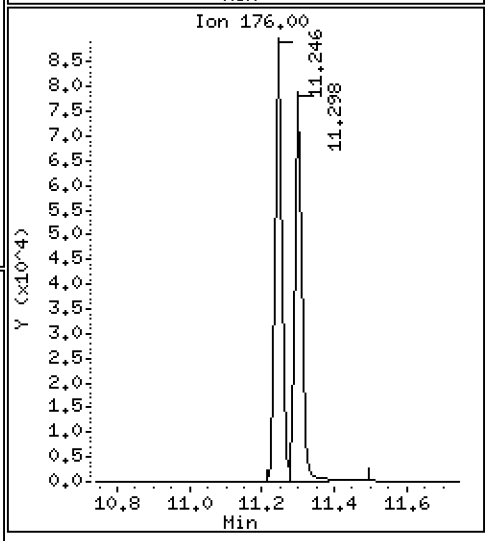
19 Phenanthrene

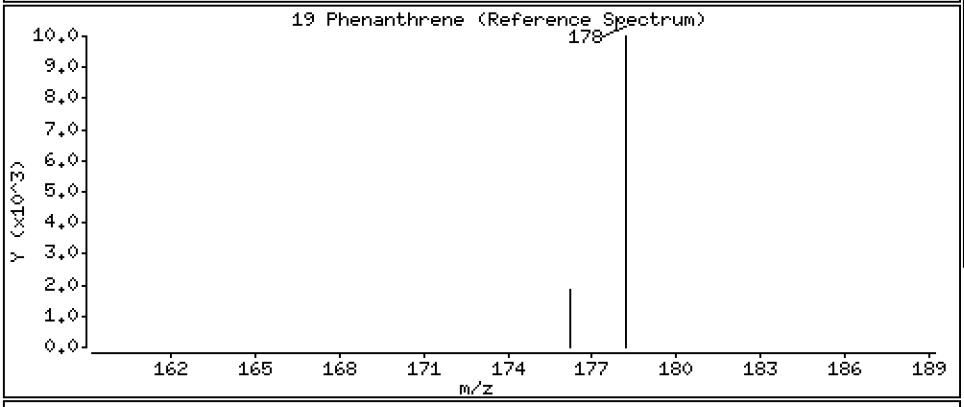
Concentration: 258 ng/mL

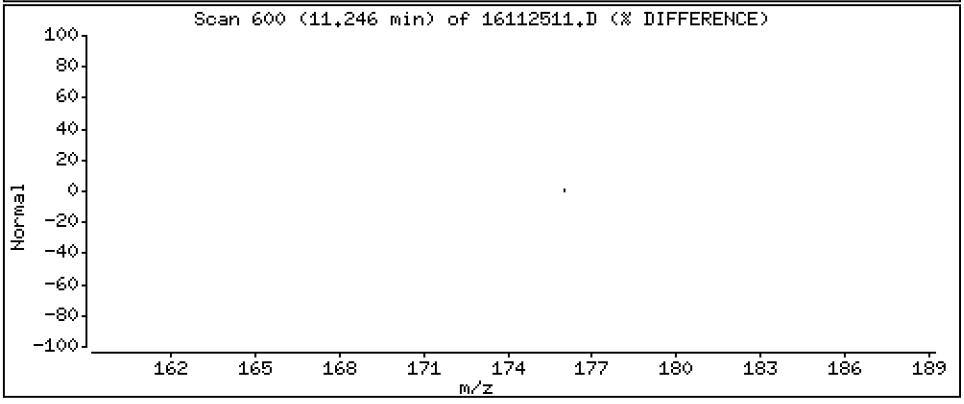












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

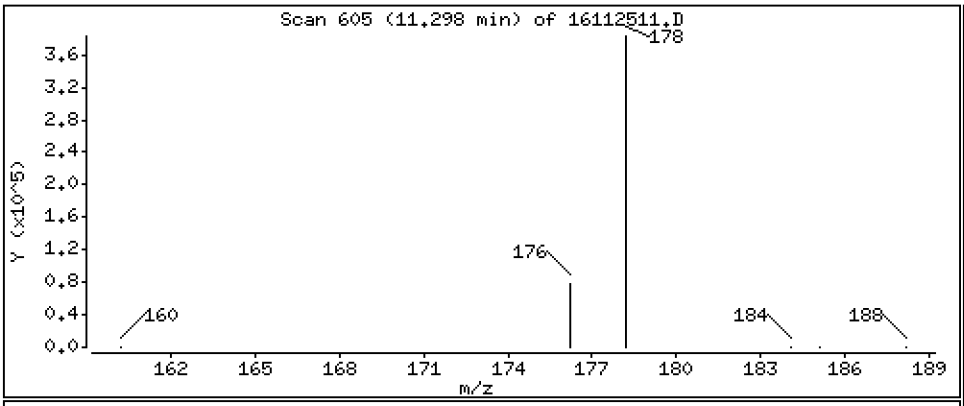
Operator: JW

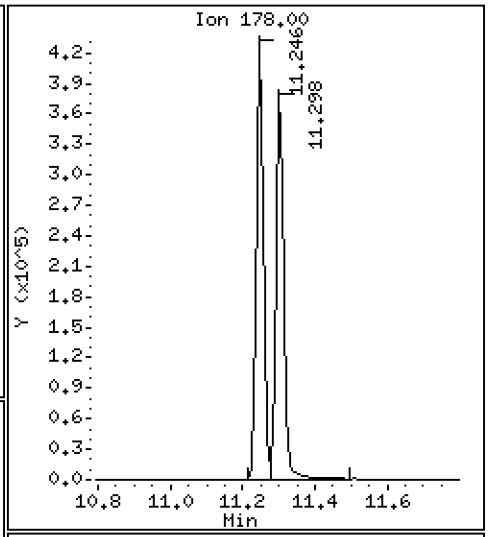
Column phase: Rxi-17Sil MS

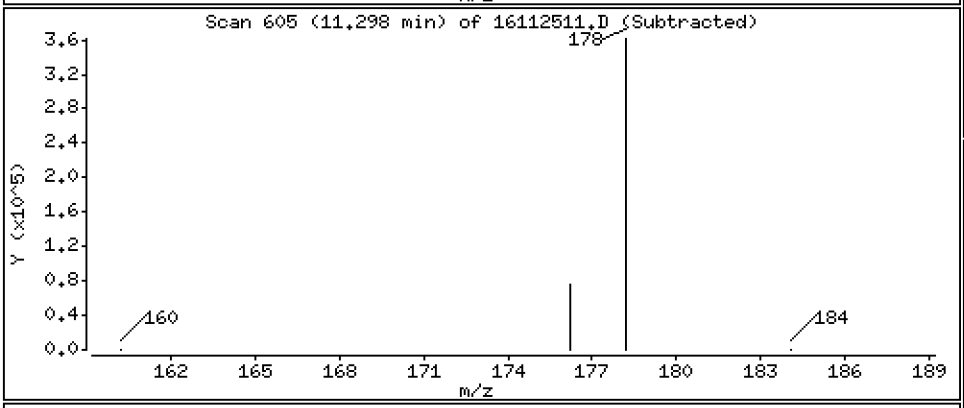
Column diameter: 0.25

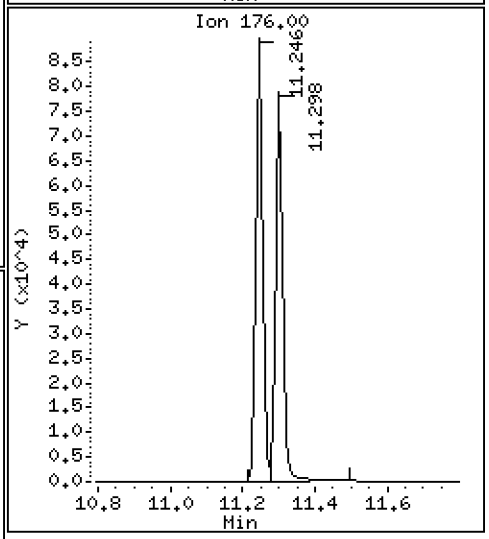
21 Anthracene

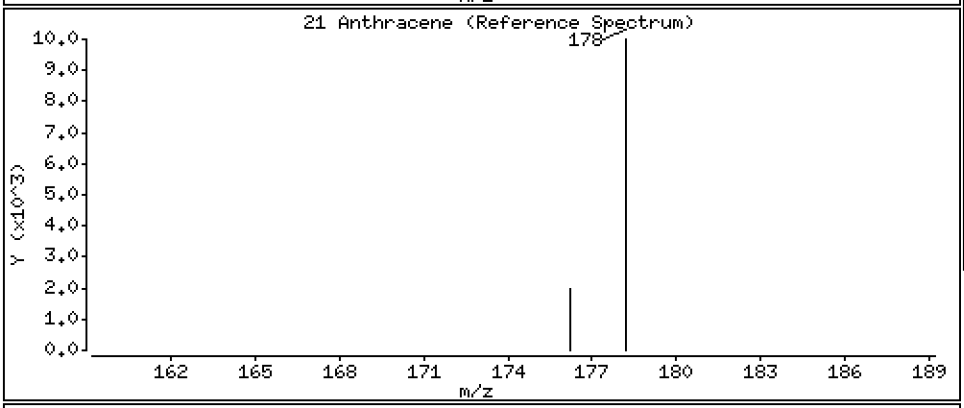
Concentration: 264 ng/mL

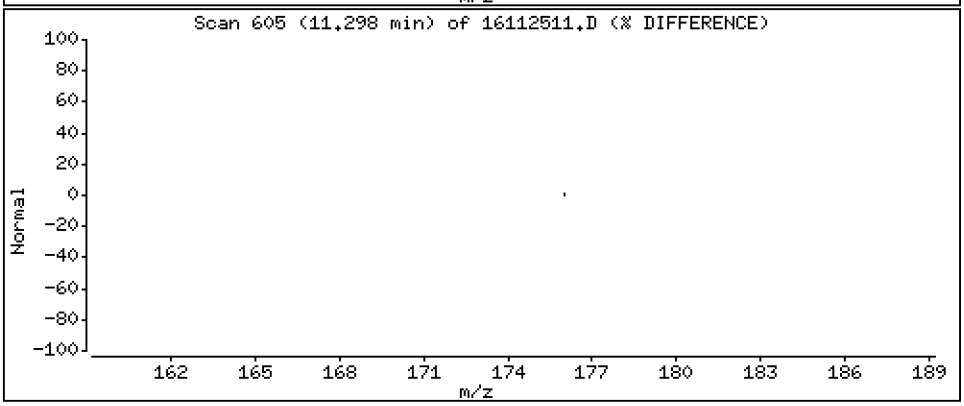












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

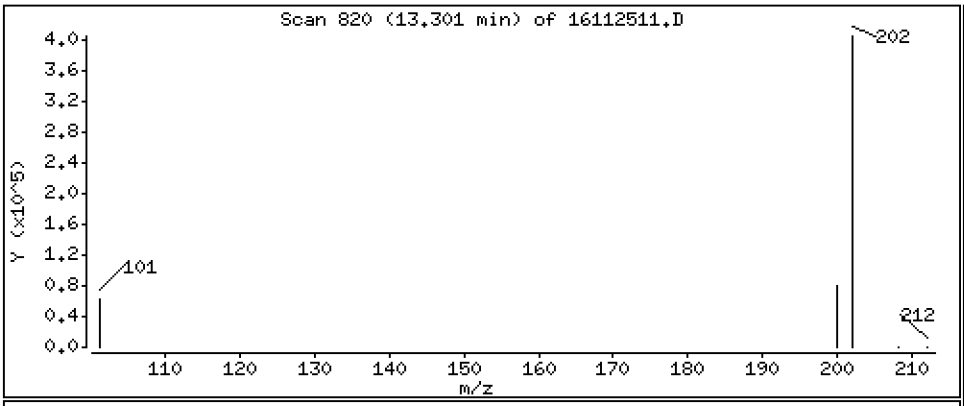
Operator: JW

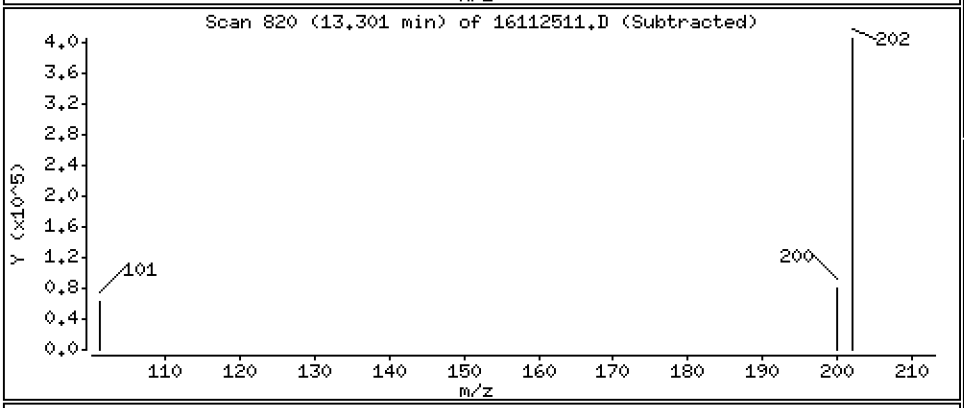
Column phase: Rxi-17Sil MS

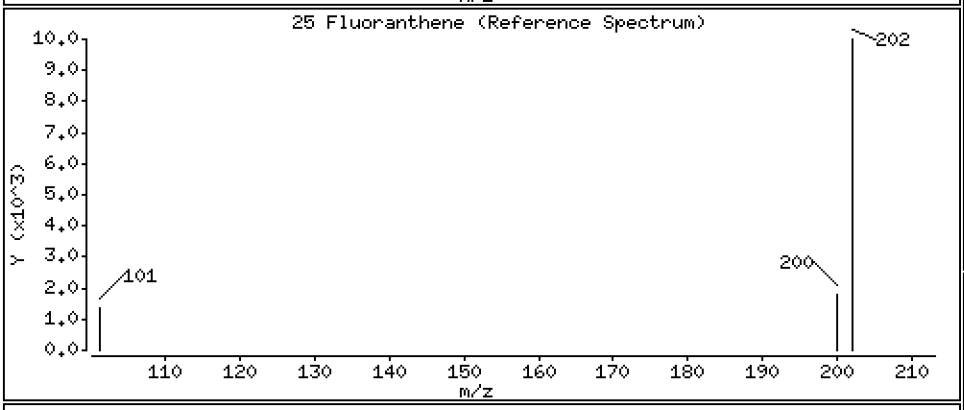
Column diameter: 0.25

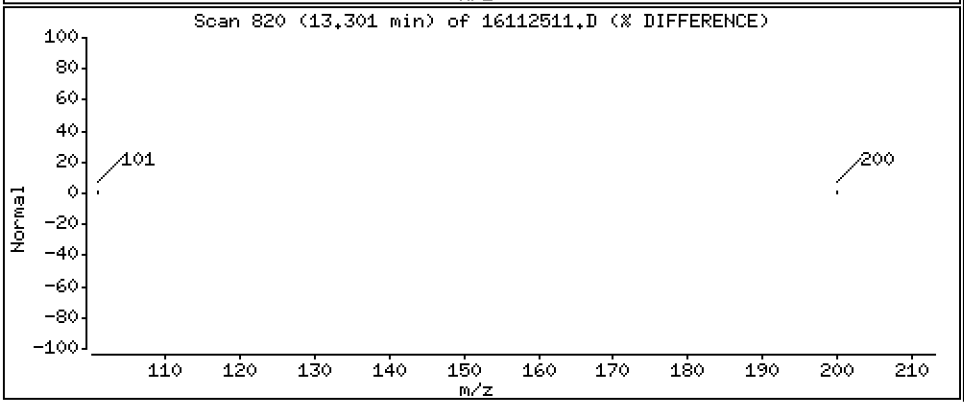
25 Fluoranthene

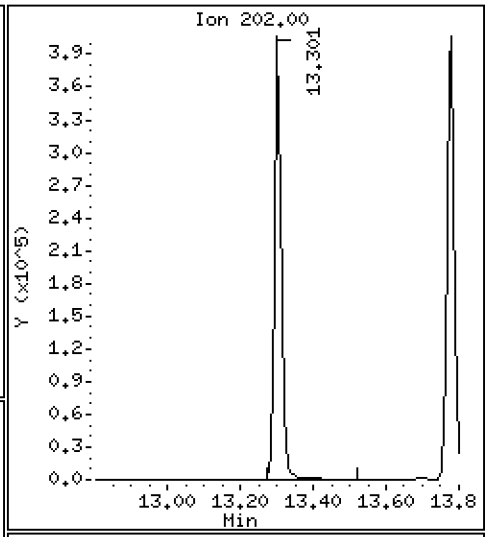
Concentration: 253 ng/mL

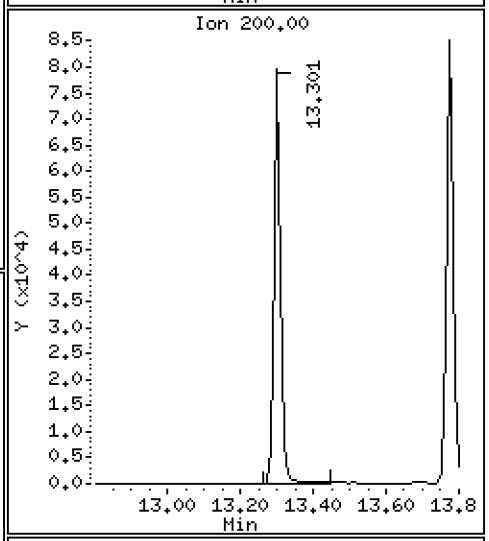


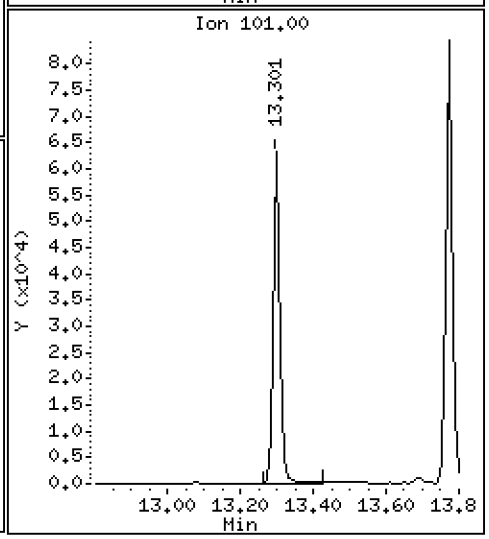












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

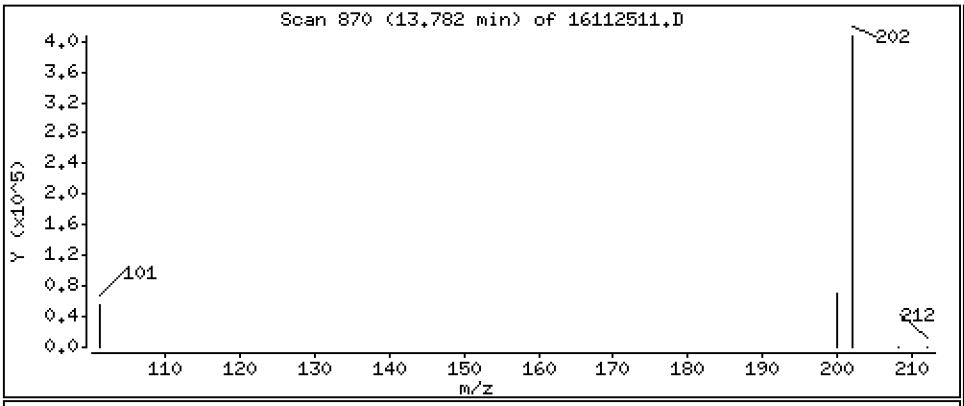
Operator: JW

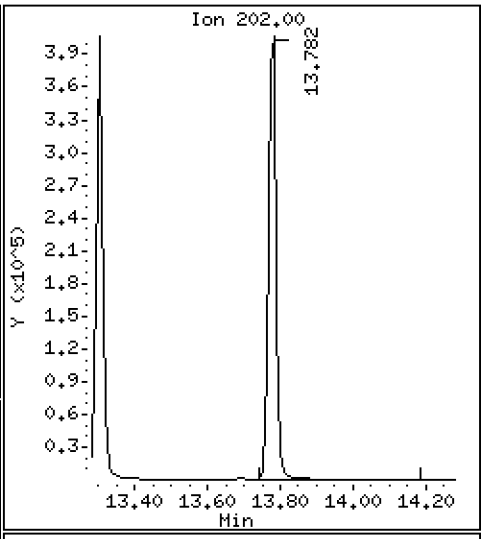
Column phase: Rxi-17Sil MS

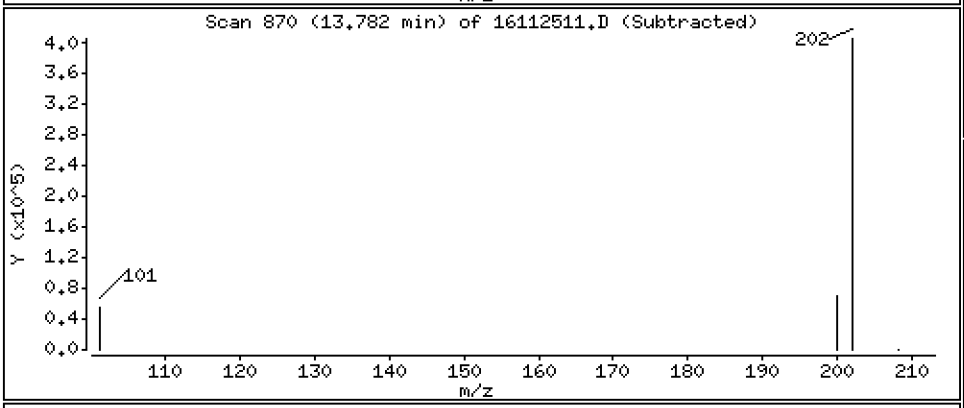
Column diameter: 0.25

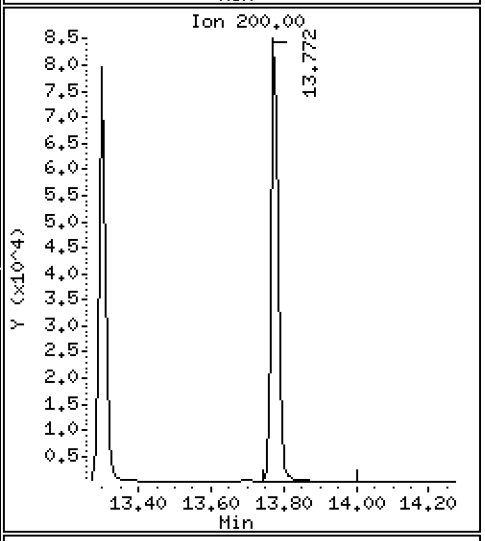
26 Pyrene

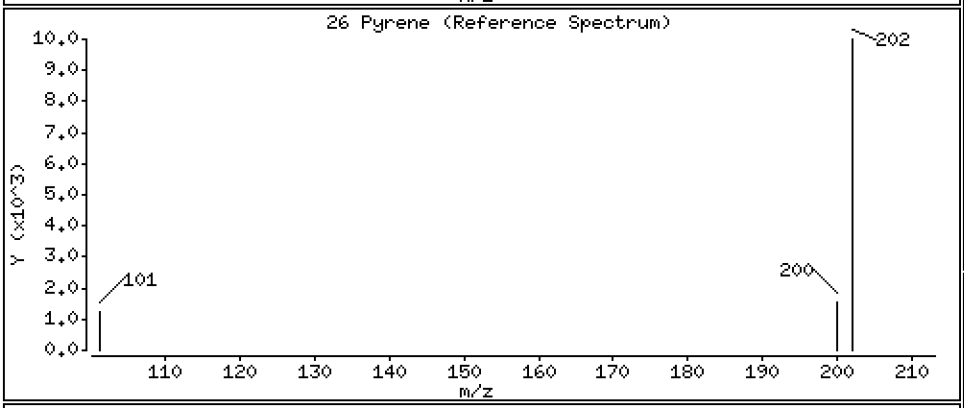
Concentration: 269 ng/mL

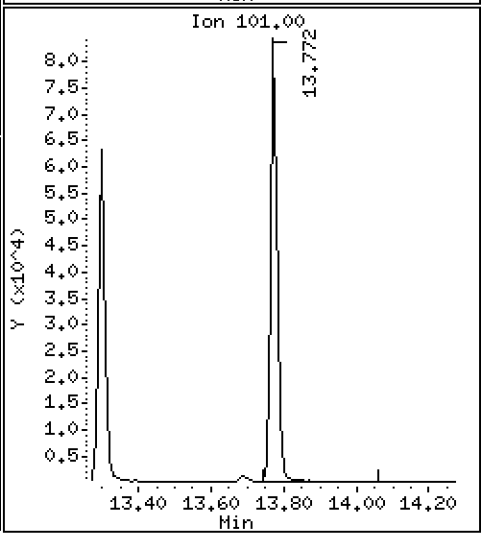


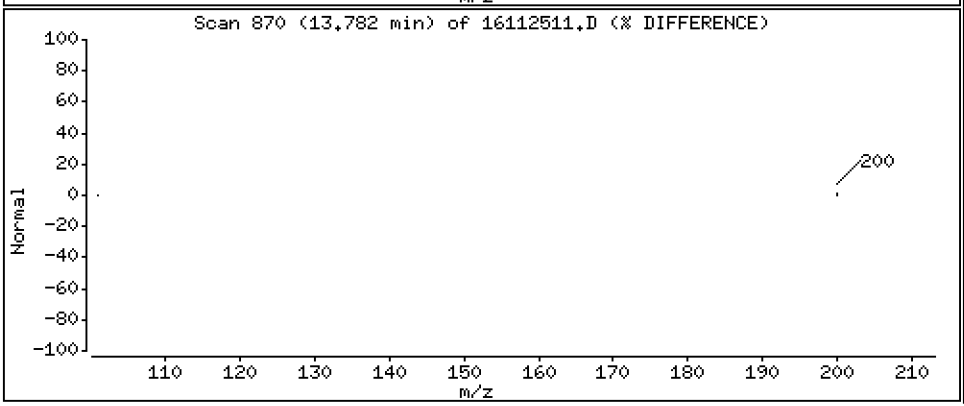












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

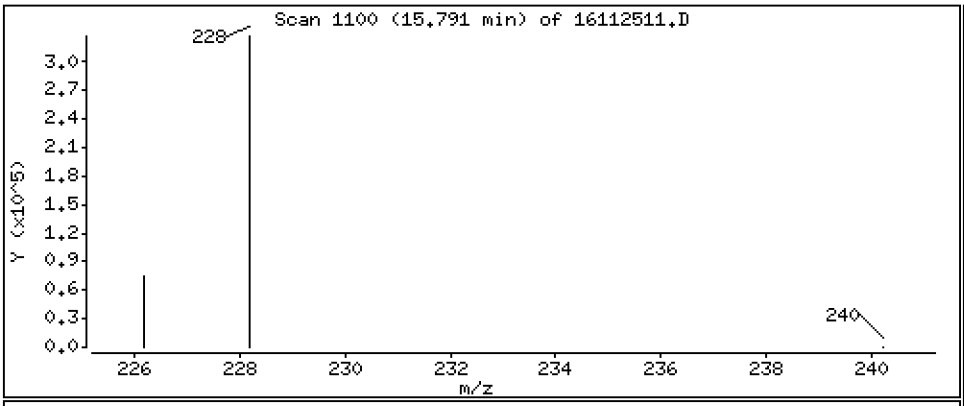
Operator: JW

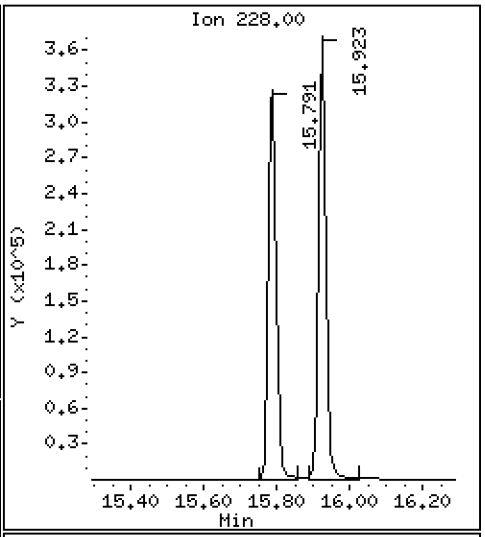
Column phase: Rxi-17Sil MS

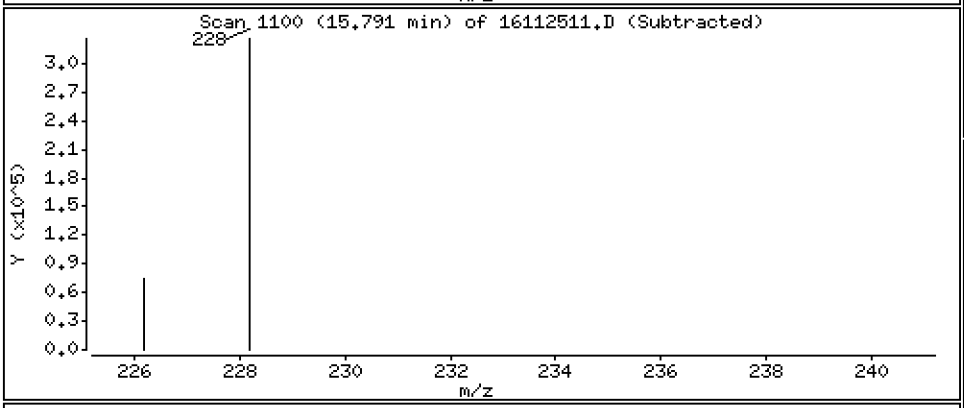
Column diameter: 0.25

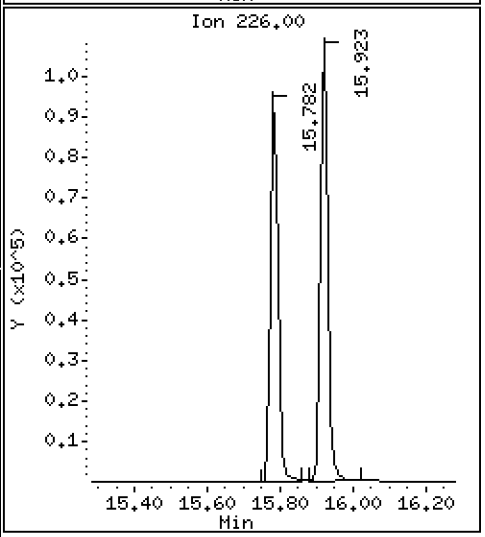
27 Benzo(a)anthracene

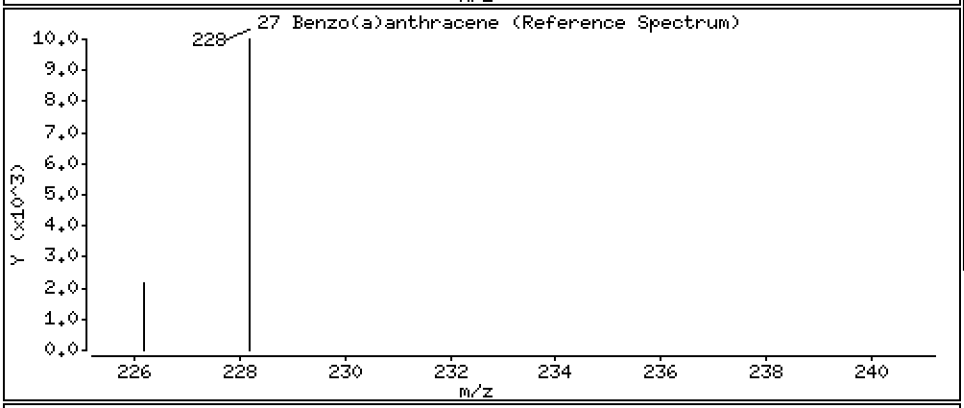
Concentration: 249 ng/mL

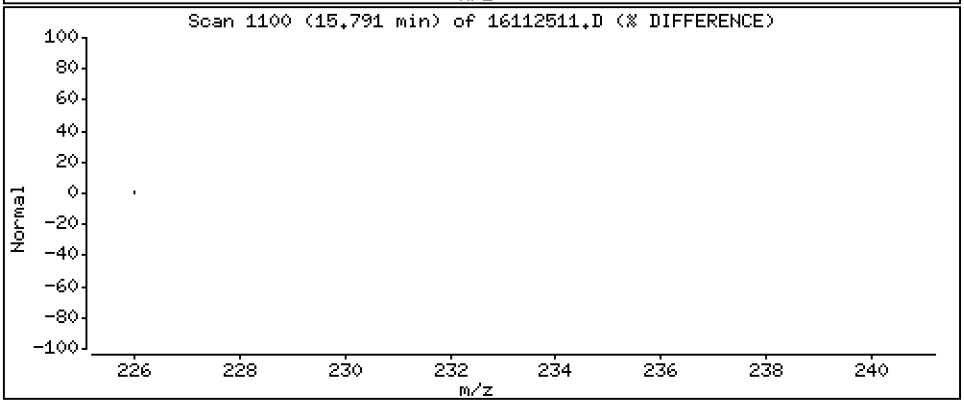












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

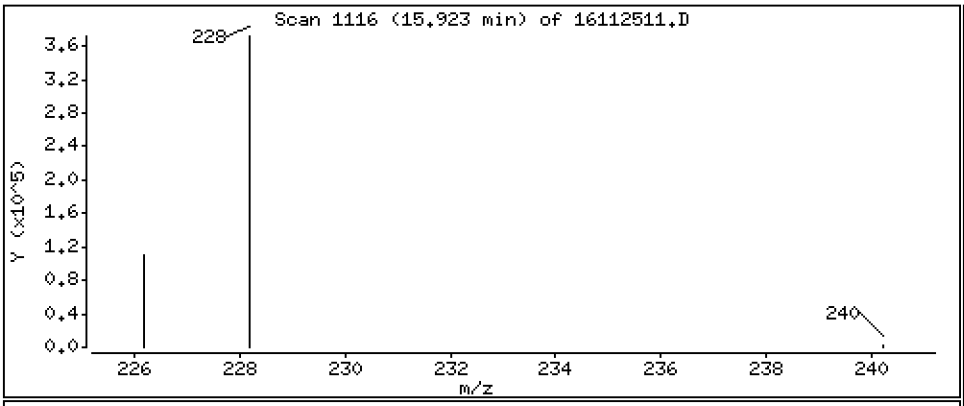
Operator: JW

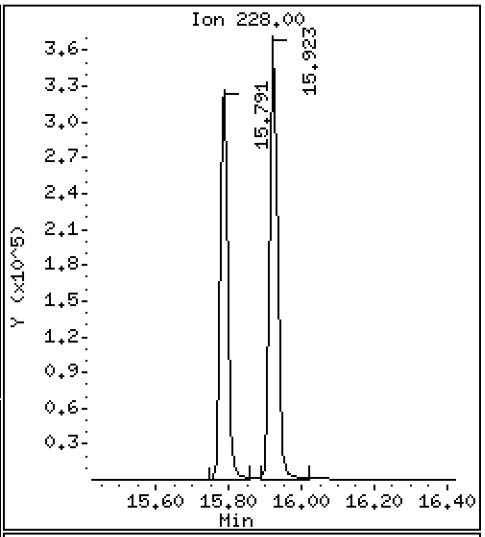
Column phase: Rxi-17Sil MS

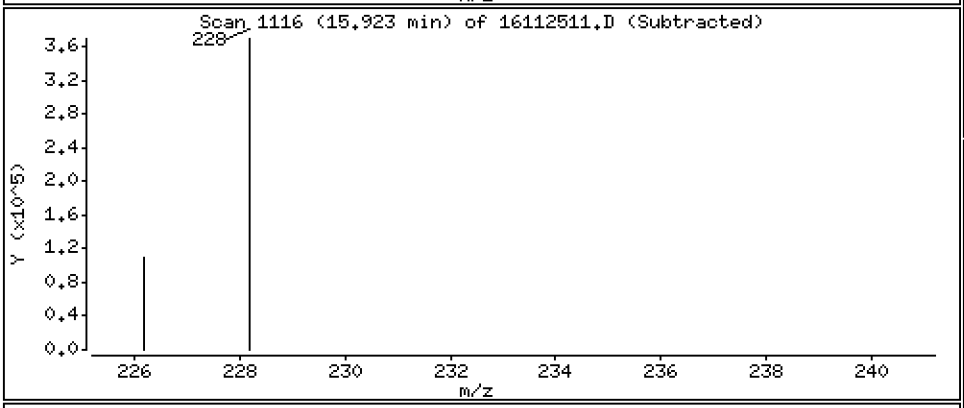
Column diameter: 0.25

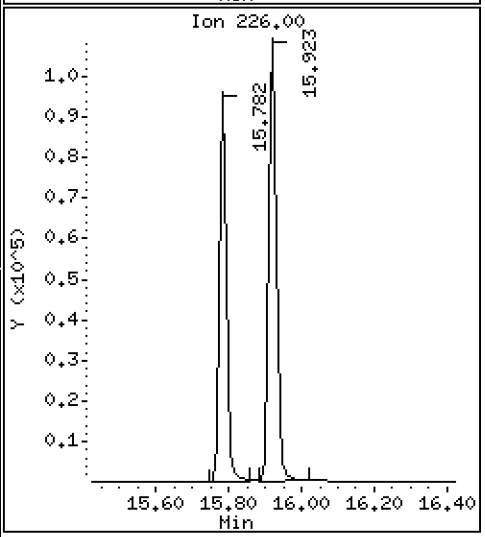
29 Chrysene

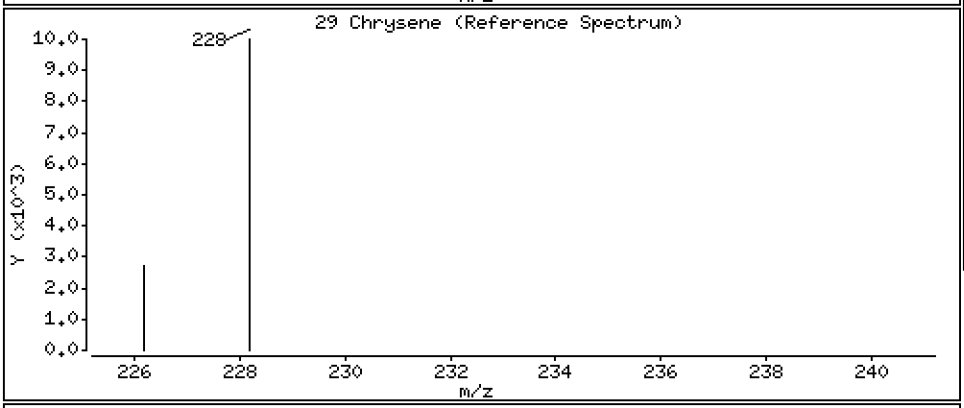
Concentration: 244 ng/mL

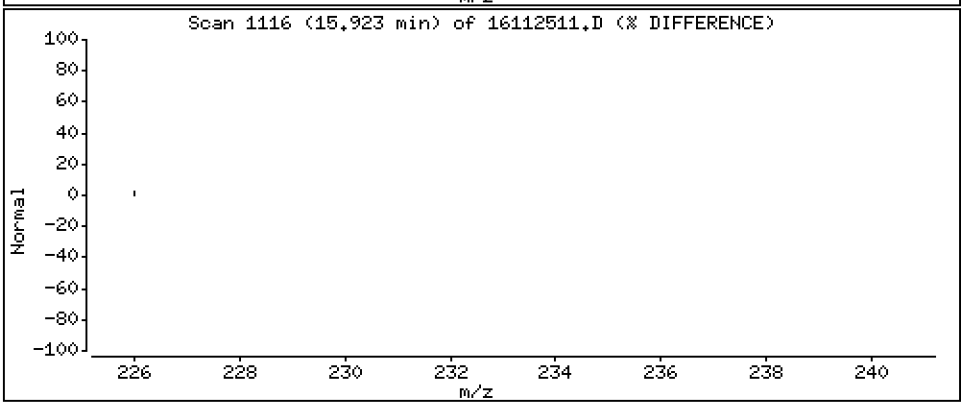












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

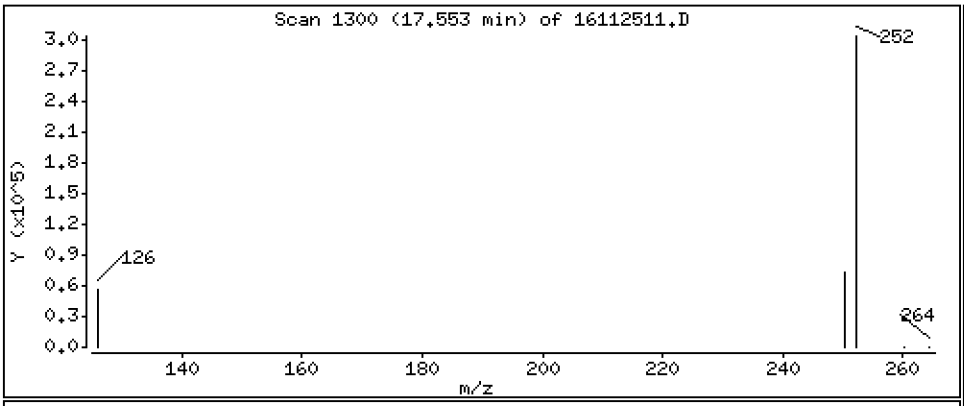
Operator: JW

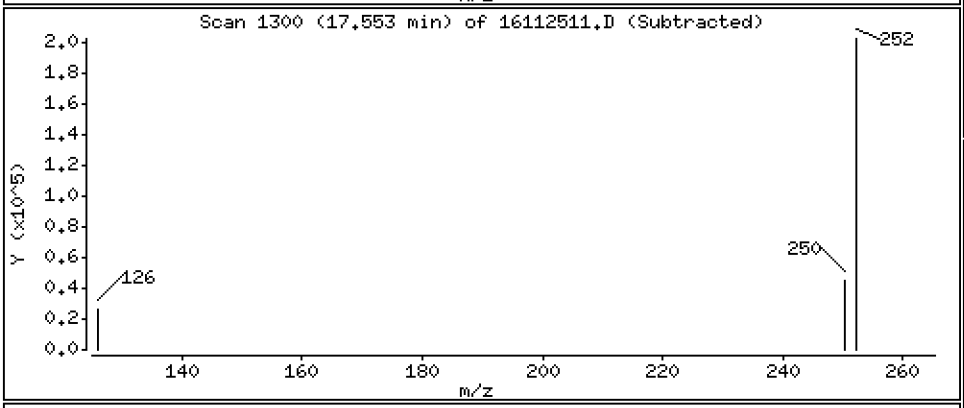
Column phase: Rxi-17Sil MS

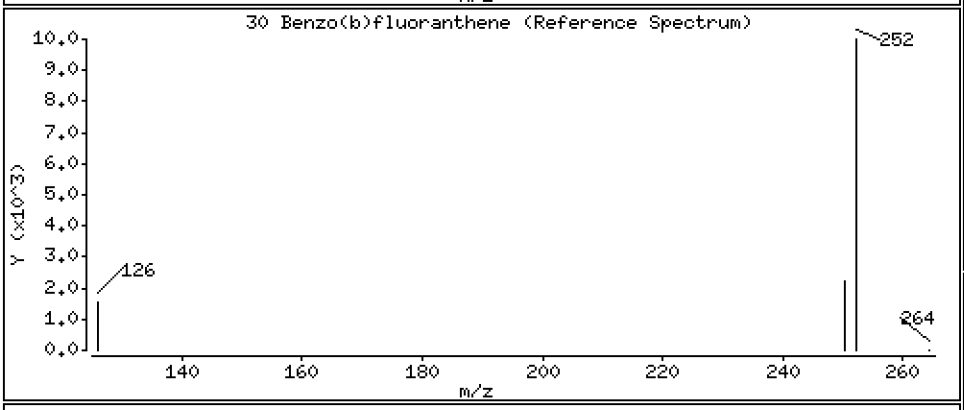
Column diameter: 0.25

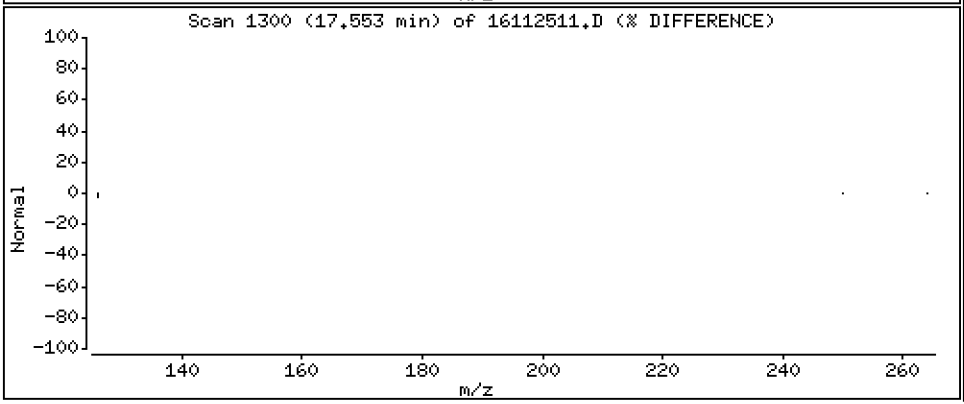
30 Benzo(b)fluoranthene

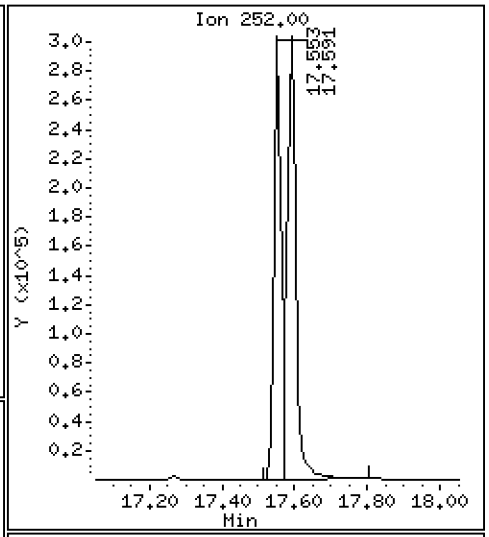
Concentration: 231 ng/mL

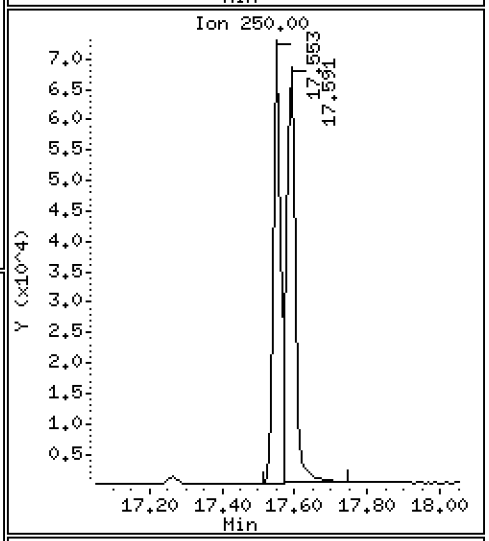


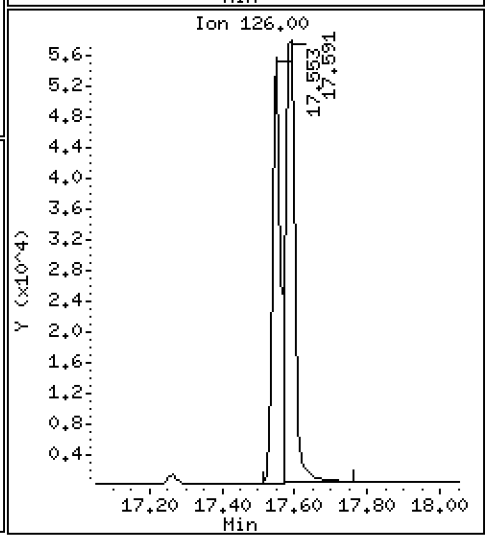












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

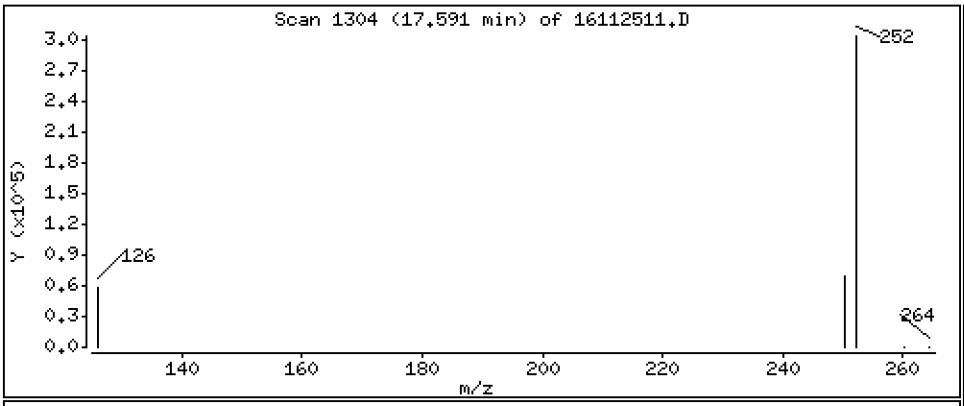
Operator: JW

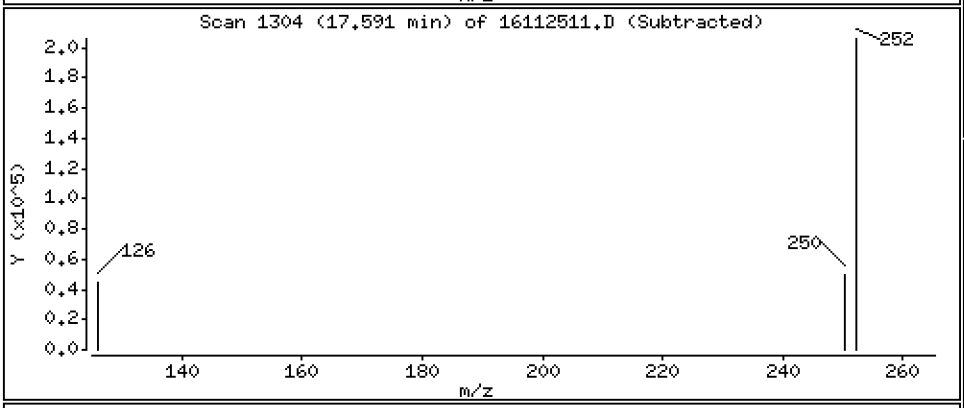
Column phase: Rxi-17Sil MS

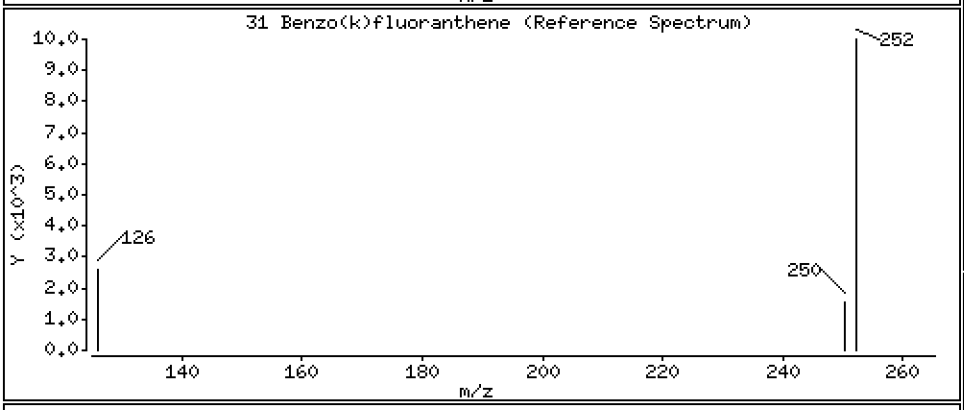
Column diameter: 0.25

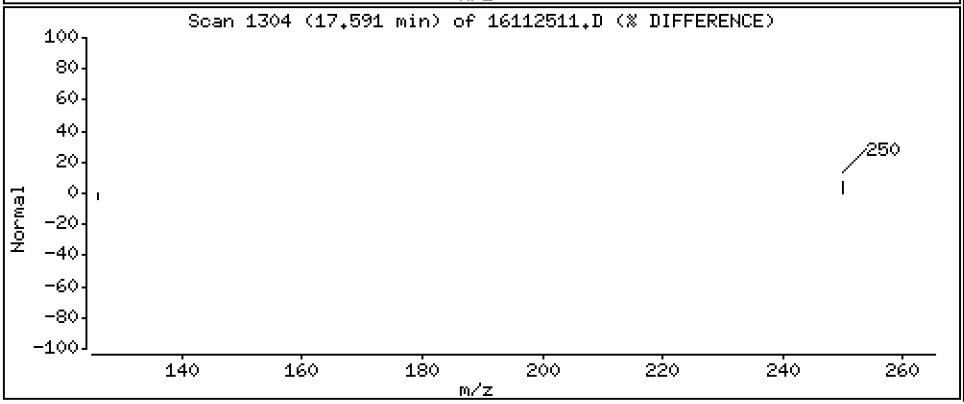
31 Benzo(k)fluoranthene

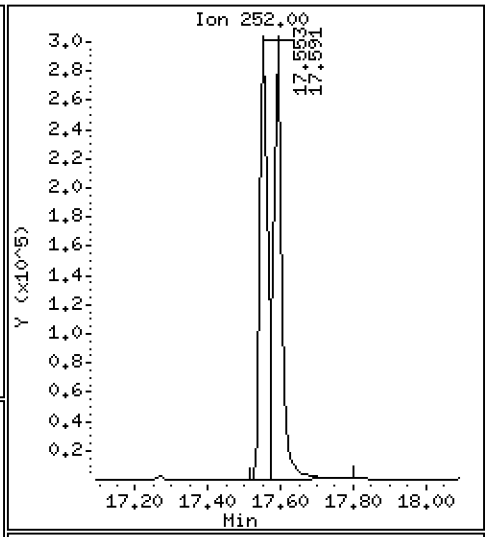
Concentration: 243 ng/mL

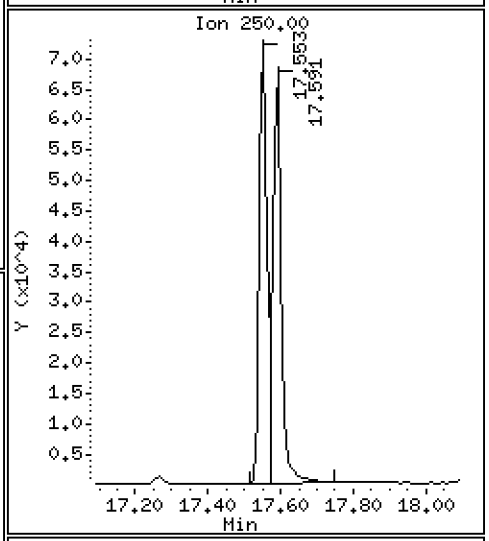


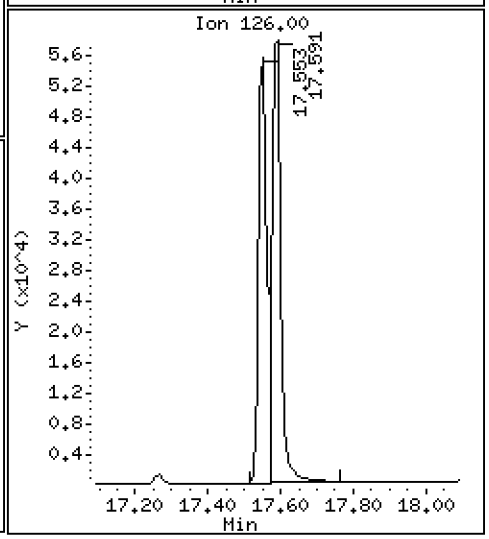












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

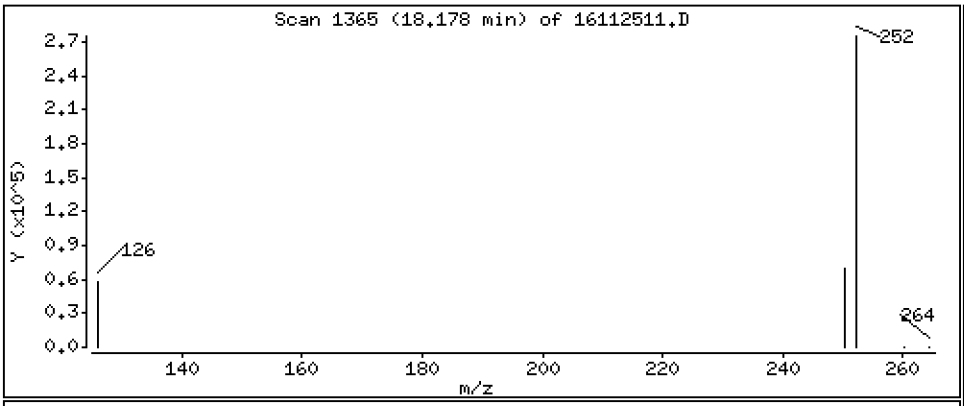
Operator: JW

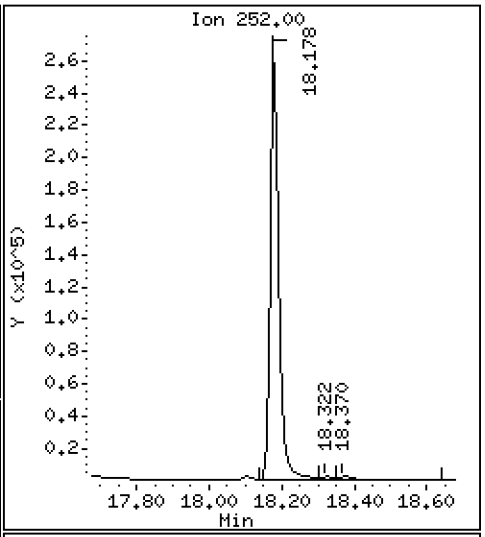
Column phase: Rxi-17Sil MS

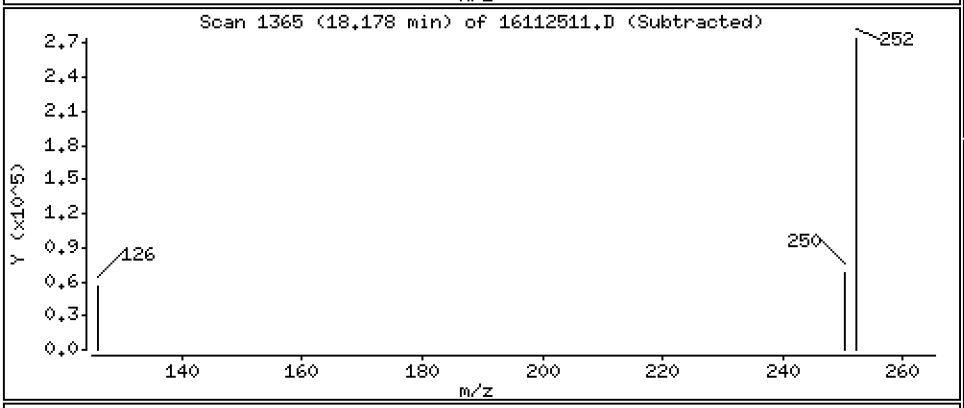
Column diameter: 0.25

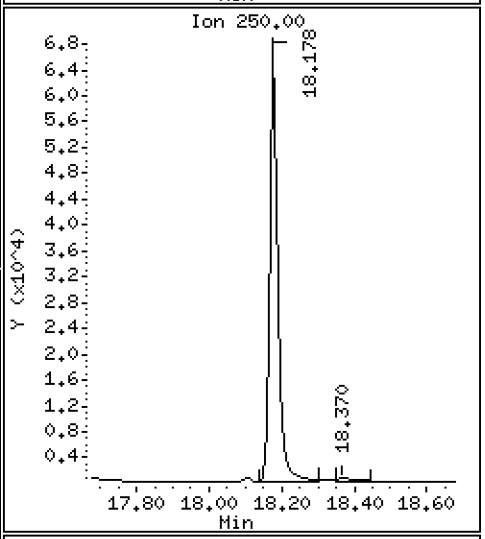
35 Benzo(a)pyrene

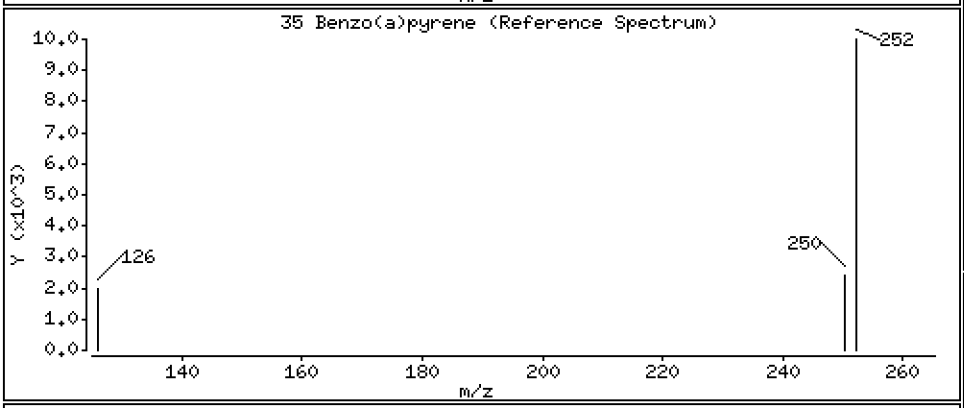
Concentration: 250 ng/mL

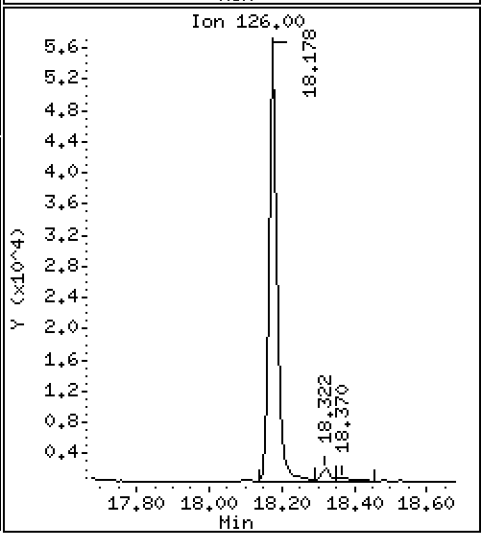


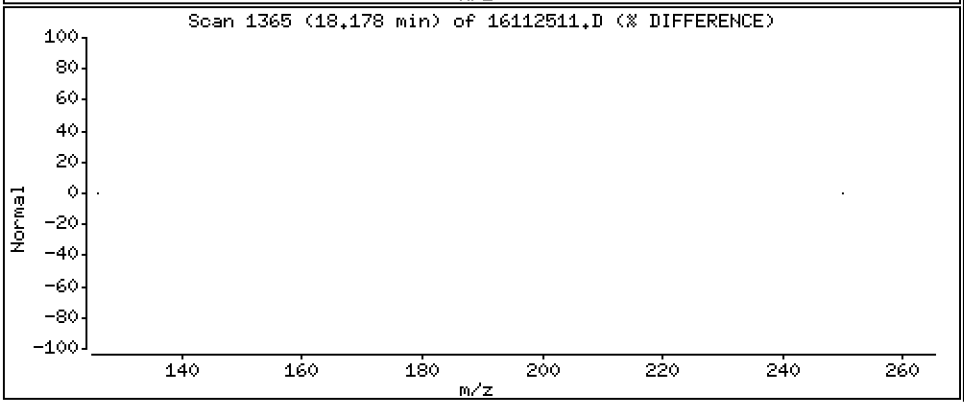












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

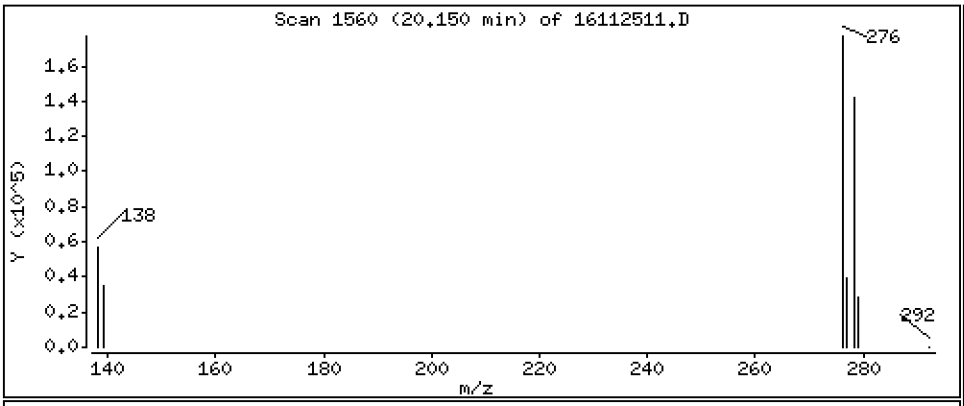
Operator: JW

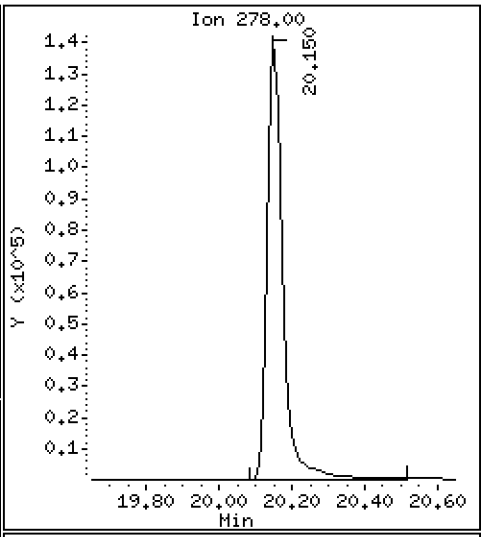
Column phase: Rxi-17Sil MS

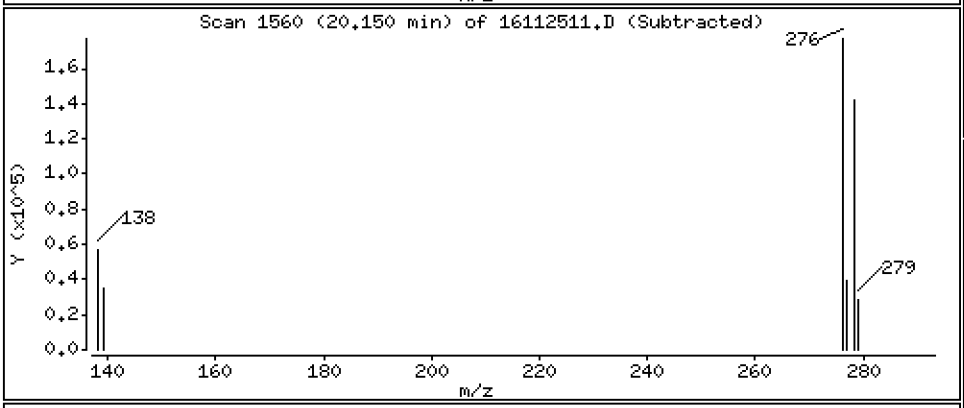
Column diameter: 0.25

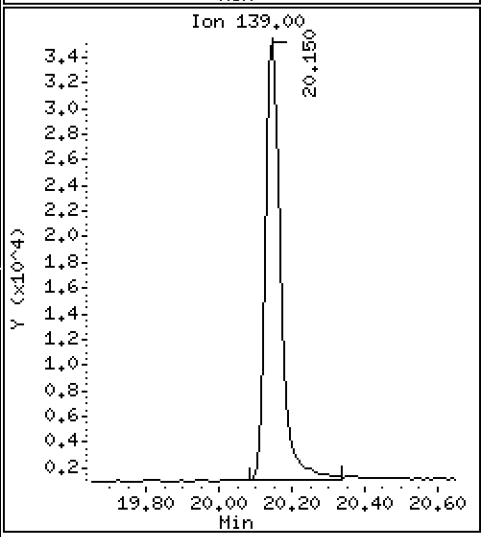
39 Dibenzo(a,h)anthracene

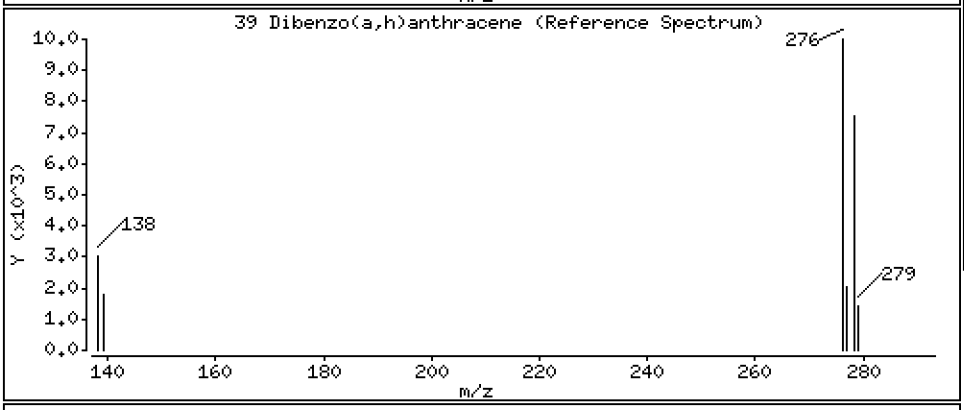
Concentration: 244 ng/mL

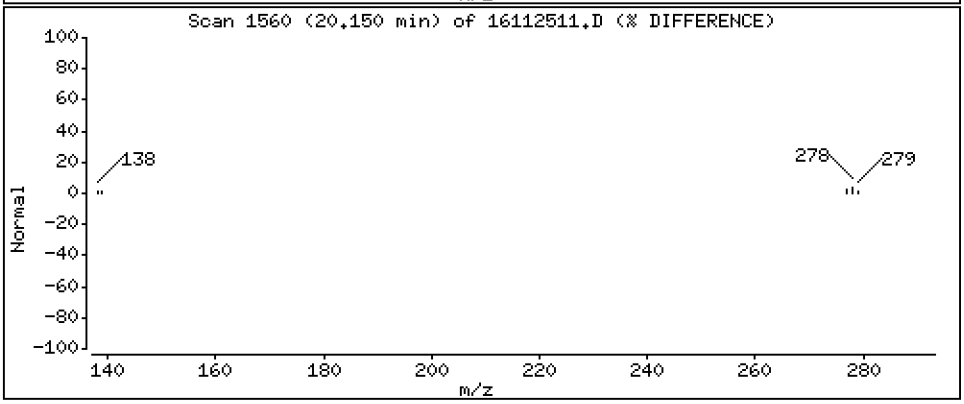












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

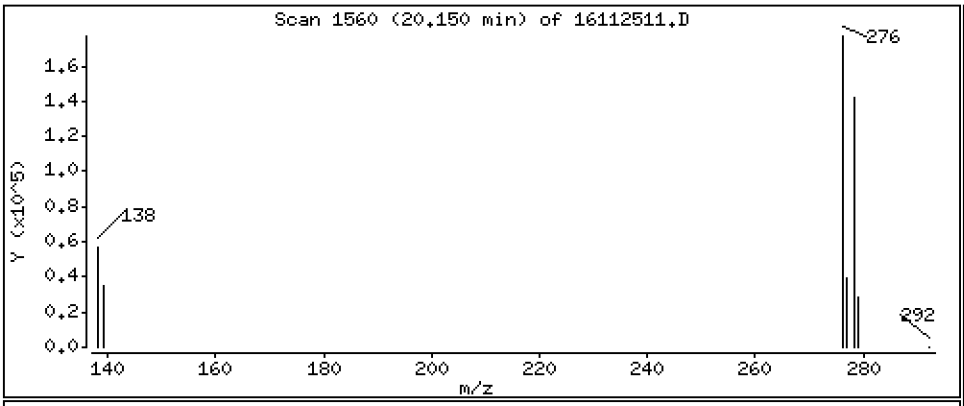
Operator: JW

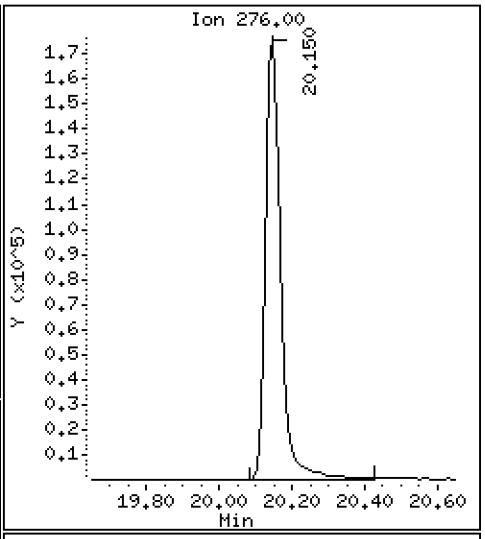
Column phase: Rxi-17Sil MS

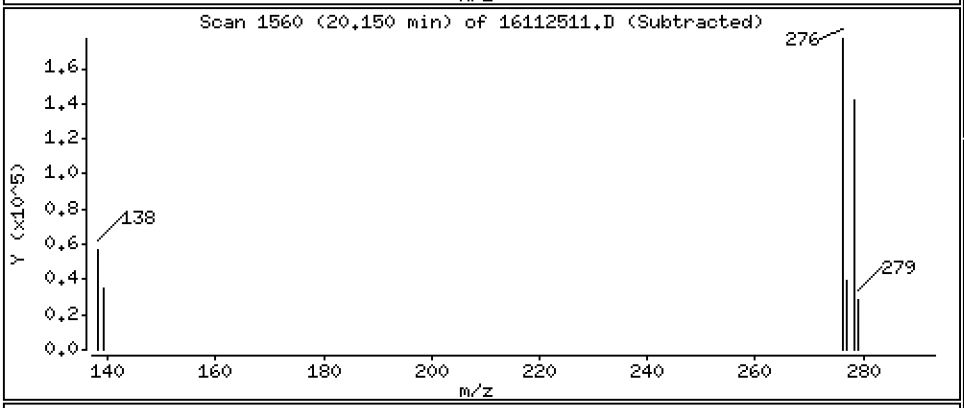
Column diameter: 0.25

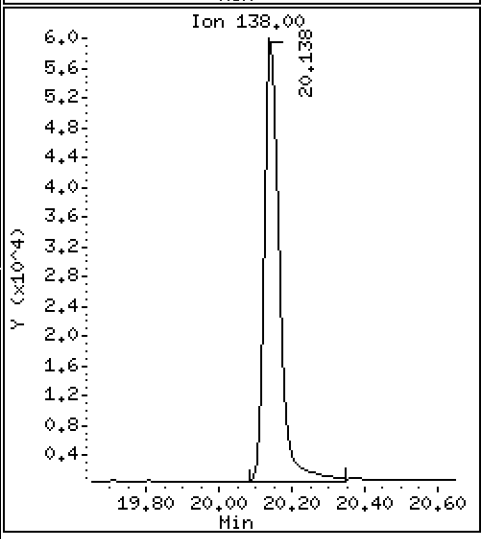
40 Indeno(1,2,3-cd)pyrene

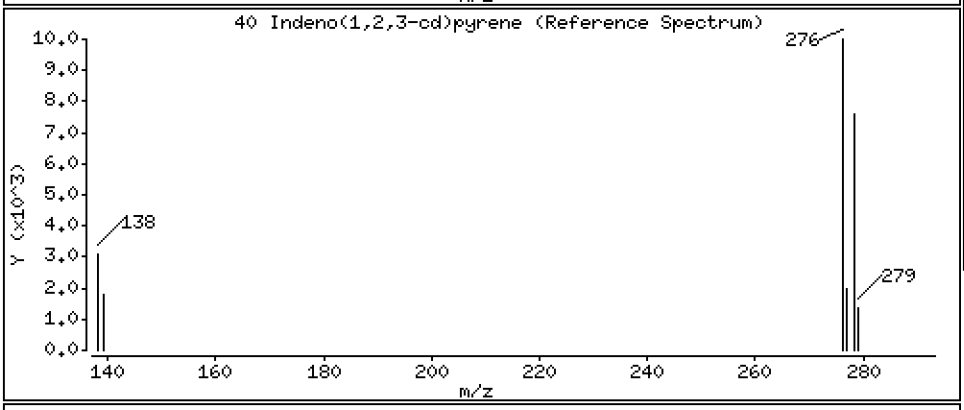
Concentration: 242 ng/mL

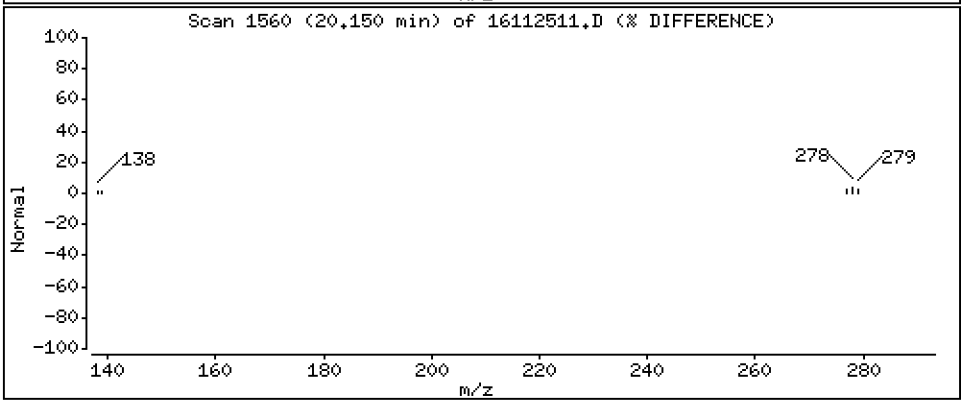












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

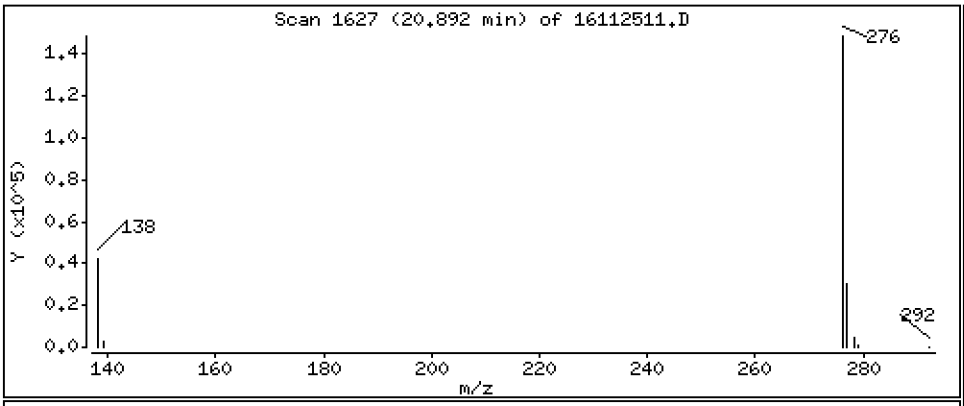
Operator: JW

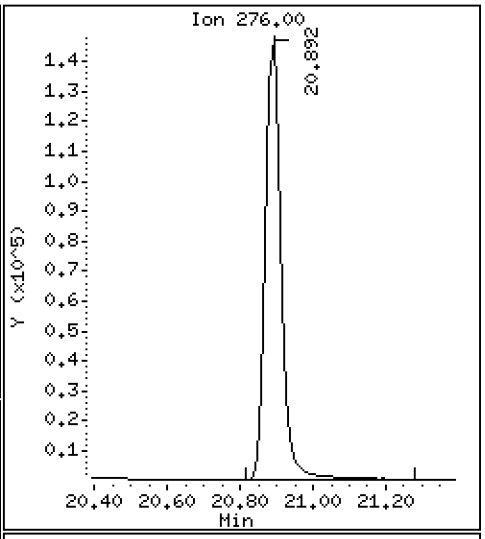
Column phase: Rxi-17Sil MS

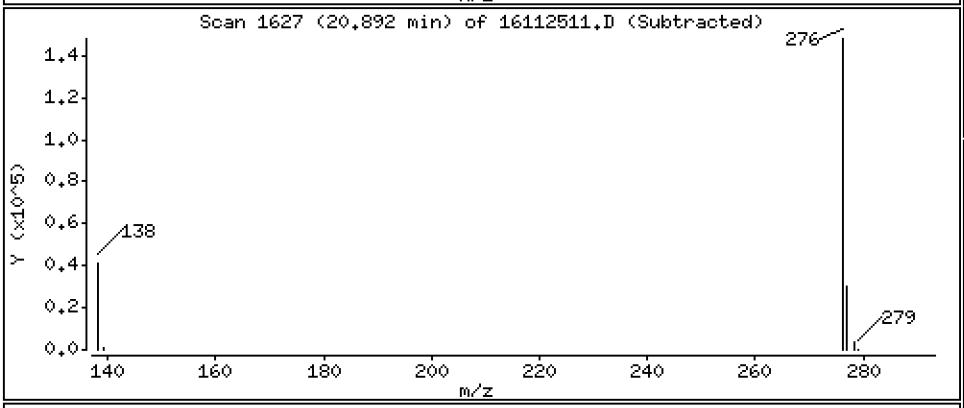
Column diameter: 0.25

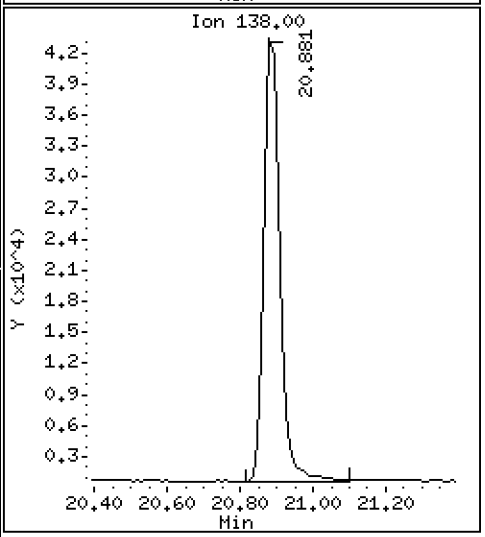
41 Benzo(g,h,i)perylene

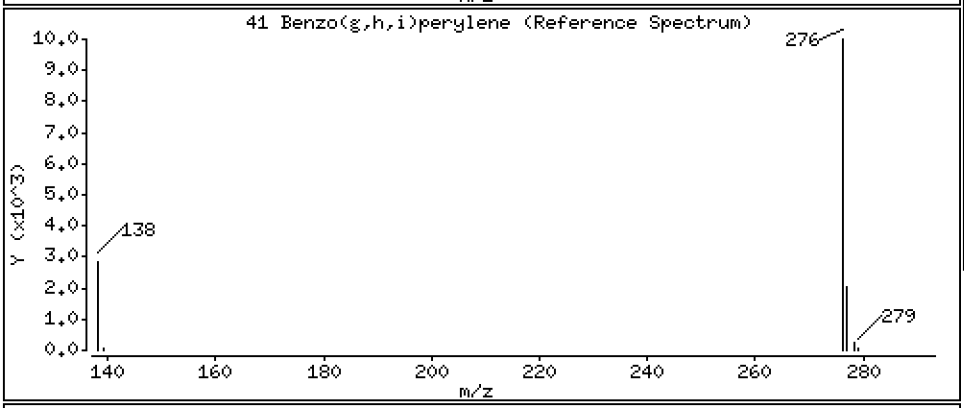
Concentration: 245 ng/mL

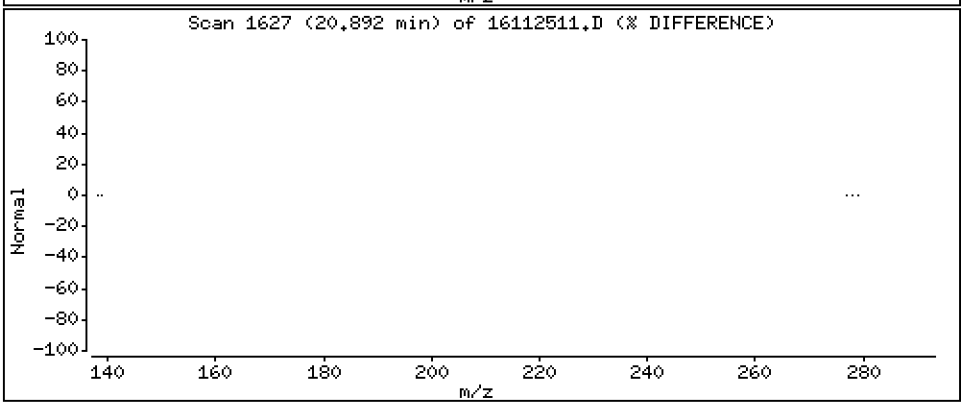












ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161125.b\16112511.D
Lab Smp Id: SEK0335-SCV1
Inj Date : 25-NOV-2016 10:50 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : SEK0335-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Meth Date : 30-Nov-2016 07:48 jonathonw Quant Type: ISTD
Cal Date : 25-NOV-2016 09:50 Cal File: 16112509.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1 Naphthalene-d8	136	5.656	5.646	(1.000)	443736	200.000	
	2 Naphthalene	128	5.683	5.683	(1.005)	594052	260.384	260
	3 Benzo(b)thiophene	134	Compound Not Detected.					
$	4 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	5 2-Methylnaphthalene	142	6.668	6.657	(1.179)	475379	248.180	248
	6 1-Methylnaphthalene	142	6.909	6.899	(1.222)	478188	254.536	255
	7 2-Chloronaphthalene	162	Compound Not Detected.					
	8 Biphenyl	154	Compound Not Detected.					
	9 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	10 Acenaphthylene	152	8.429	8.429	(0.982)	516928	254.458	254
*	11 Acenaphthene-d10	164	8.583	8.583	(1.000)	219883	200.000	
	12 Acenaphthene	153	8.646	8.646	(1.007)	369656	265.221	265
	13 Dibenzofuran	168	Compound Not Detected.					
	14 2,3,5-Trimethylnaphthalene	170	Compound Not Detected.					
$	15 Fluorene-d10	174	Compound Not Detected.					
	16 Fluorene	166	9.470	9.470	(1.103)	368785	240.997	241
	17 Dibenzothiophene	184	Compound Not Detected.					
*	18 Phenanthrene-d10	188	11.214	11.214	(1.000)	374597	200.000	
	19 Phenanthrene	178	11.245	11.245	(1.003)	581158	258.279	258
$	20 Anthracene-d10	188	Compound Not Detected.					
	21 Anthracene	178	11.298	11.298	(1.007)	559319	264.160	264
	22 Carbazole	167	Compound Not Detected.					
	23 1-Methylphenanthrene	192	Compound Not Detected.					
$	24 Fluoranthene-d10	212	Compound Not Detected.					
	25 Fluoranthene	202	13.301	13.301	(1.186)	552443	253.029	253
	26 Pyrene	202	13.781	13.781	(0.868)	625741	268.750	269
	27 Benzo(a)anthracene	228	15.790	15.790	(0.995)	502188	249.252	249
*	28 Chrysene-d12	240	15.873	15.873	(1.000)	357859	200.000	
	29 Chrysene	228	15.923	15.923	(1.003)	546302	244.468	244
	30 Benzo(b)fluoranthene	252	17.552	17.552	(0.958)	462371	231.180	231
	31 Benzo(k)fluoranthene	252	17.591	17.591	(0.960)	528068	242.997	243
	32 Benzo(j)fluoranthene	252	Compound Not Detected.					
$	33 Benzo(e)pyrene-d12	264	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
34	Benzo(e)pyrene	252	Compound Not Detected.					
35	Benzo(a)pyrene	252	18.177	18.177	(0.992)	456908	249.511	250
* 36	Perylene-d12	264	18.331	18.331	(1.000)	351854	200.000	
37	Perylene	252	Compound Not Detected.					
$ 38	Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
39	Dibenzo(a,h)anthracene	278	20.149	20.149	(1.099)	402829	243.904	244
40	Indeno(1,2,3-cd)pyrene	276	20.149	20.149	(1.099)	491258	241.683	242
41	Benzo(g,h,i)perylene	276	20.891	20.891	(1.140)	429481	244.571	245

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16112511.D
Lab Smp Id: SEK0335-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Misc Info:

Calibration Date: 25-NOV-2016
Calibration Time: 12:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	443736	-10.09
11 Acenaphthene-d10	240770	120385	481540	219883	-8.68
18 Phenanthrene-d10	429271	214636	858542	374597	-12.74
28 Chrysene-d12	387691	193846	775382	357859	-7.69
36 Perylene-d12	386259	193130	772518	351854	-8.91

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.65	5.15	6.15	5.66	0.16
11 Acenaphthene-d10	8.58	8.08	9.08	8.58	0.00
18 Phenanthrene-d10	11.21	10.71	11.71	11.21	0.00
28 Chrysene-d12	15.87	15.37	16.37	15.87	0.00
36 Perylene-d12	18.33	17.83	18.83	18.33	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16112511.D

Lab ID: SEK0335-SCV1
nt11.i, 20161125.b\lowsim.m,   25-NOV-2016 10:50

RT	CO-ELUTION COMPOUNDS
20.150	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.150	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161125.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Analytical Resources, Incorporated

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Calibration: ZL00052
Laboratory ID: SEL0249-SCV1
Sequence: SEL0249
Sequence Name: SIMPNA SCV
Standard ID: E007699

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Naphthalene	250.00	255	1.9	20.00
2-Methylnaphthalene	250.00	252	1.0	20.00
Acenaphthylene	250.00	257	2.8	20.00
Acenaphthene	250.00	280	12.1	20.00
Fluorene	250.00	270	7.9	20.00
Phenanthrene	250.00	254	1.8	20.00
Anthracene	250.00	259	3.7	20.00
Fluoranthene	250.00	262	4.7	20.00
Pyrene	250.00	250	-0.03	20.00
Benzo(a)anthracene	250.00	259	3.7	20.00
Chrysene	250.00	247	-1.4	20.00
Benzo(b)fluoranthene	250.00	259	3.7	20.00
Benzo(k)fluoranthene	250.00	272	8.7	20.00
Benzo(a)pyrene	250.00	262	4.9	20.00
Indeno(1,2,3-cd)pyrene	250.00	267	7.0	20.00
Dibenzo(a,h)anthracene	250.00	265	6.1	20.00
Benzo(g,h,i)perylene	250.00	264	5.8	20.00

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

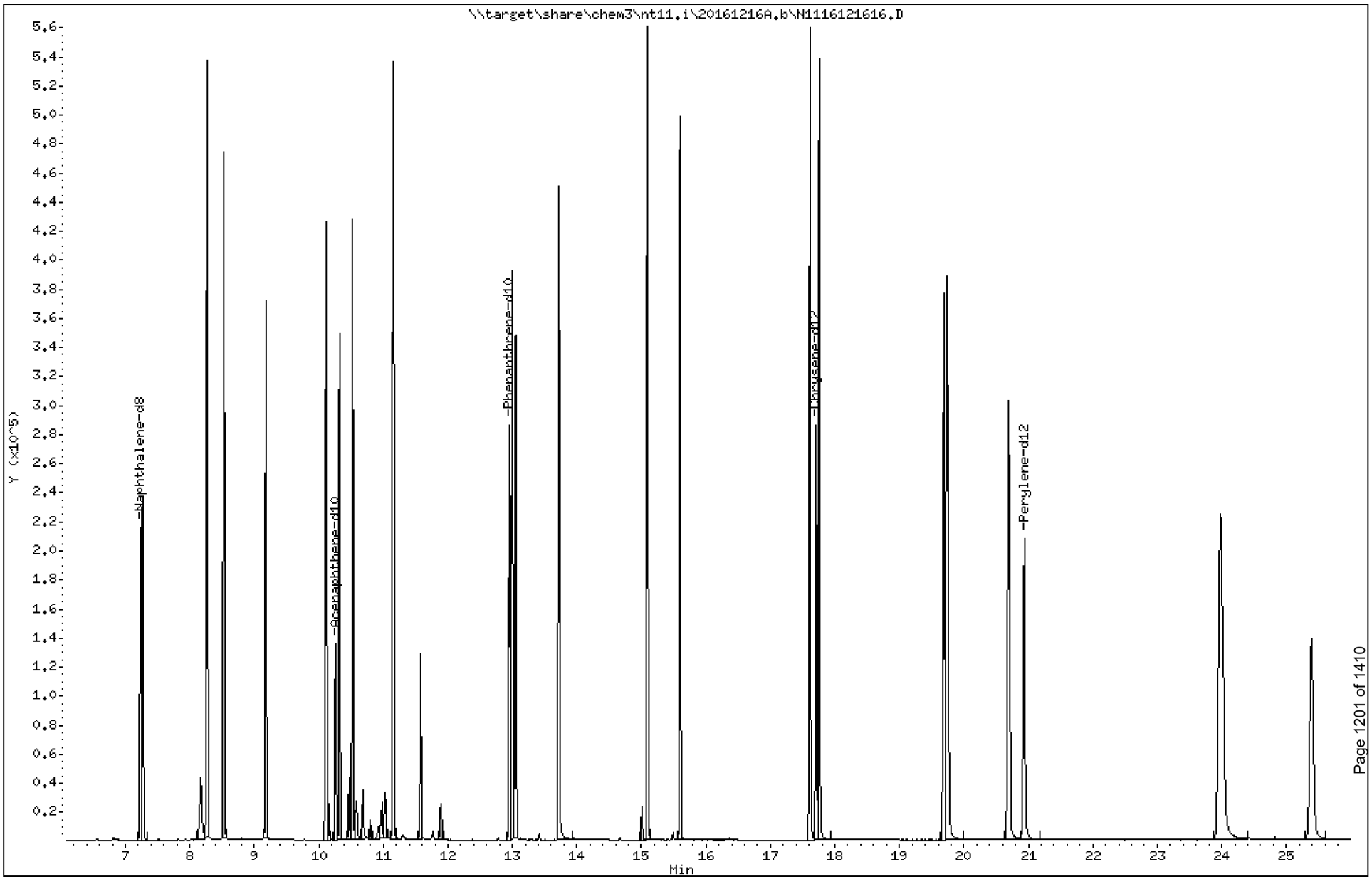
Instrument: nt11.i

Sample Info: SEL0249-SCV1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

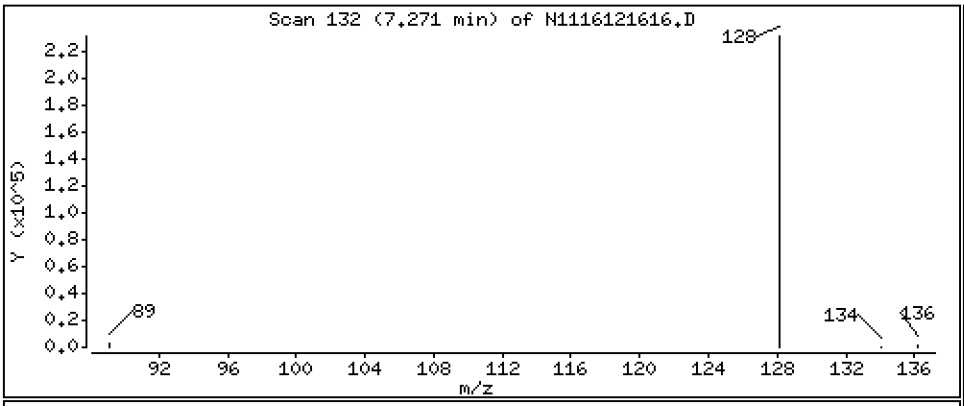
Operator: VTS

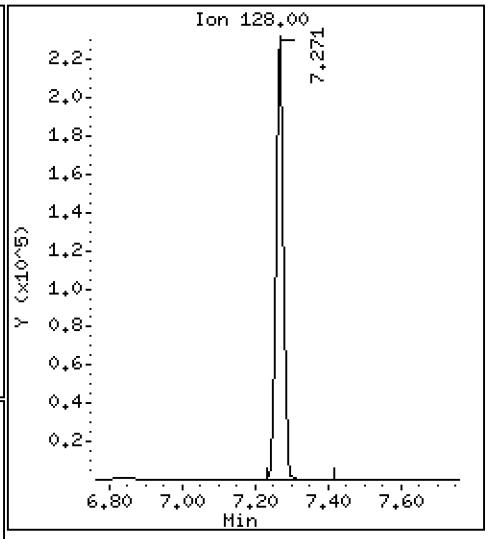
Column phase: Rxi-17Sil MS

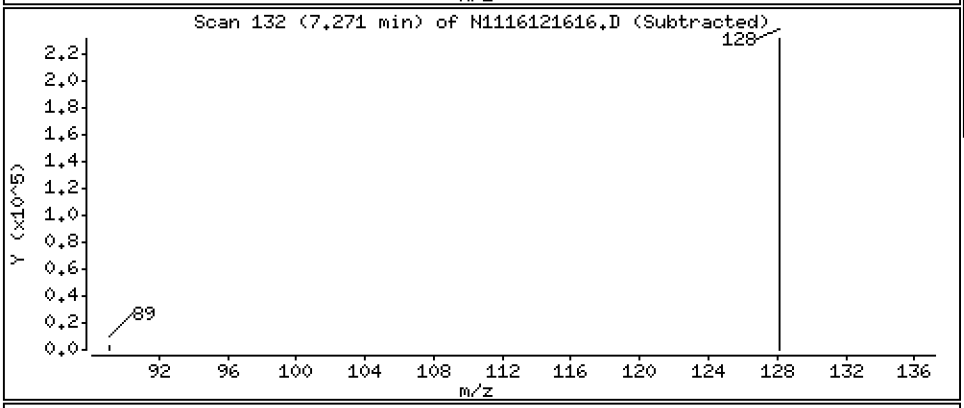
Column diameter: 0.25

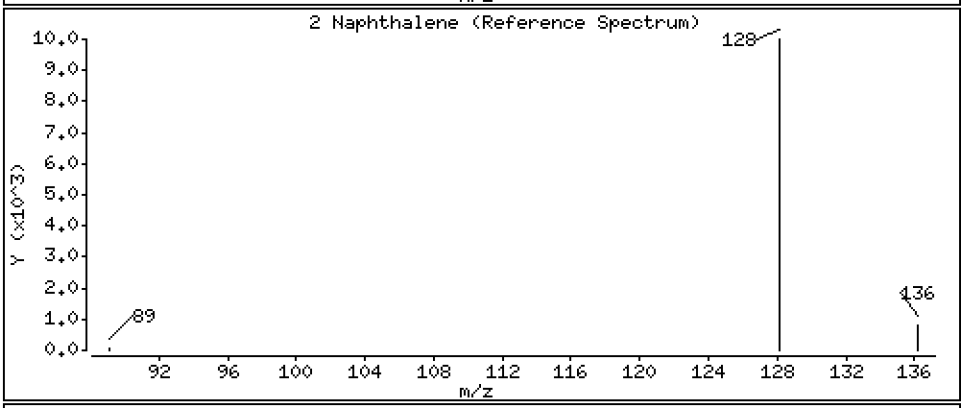
2 Naphthalene

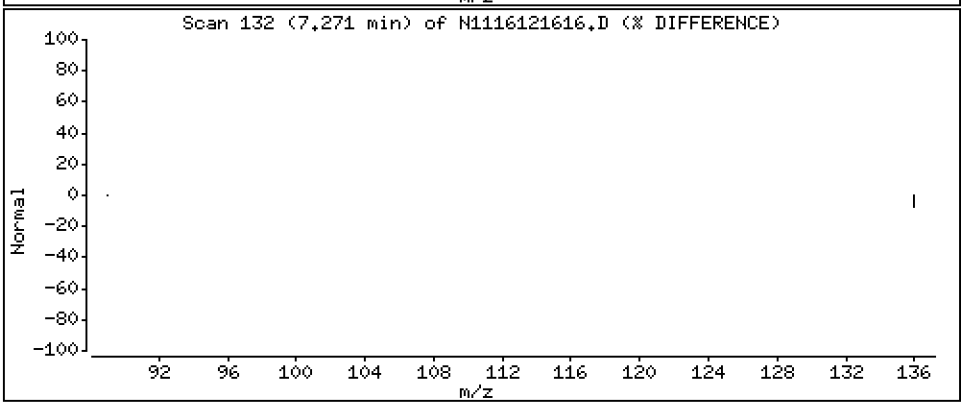
Concentration: 255 ng/mL











Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

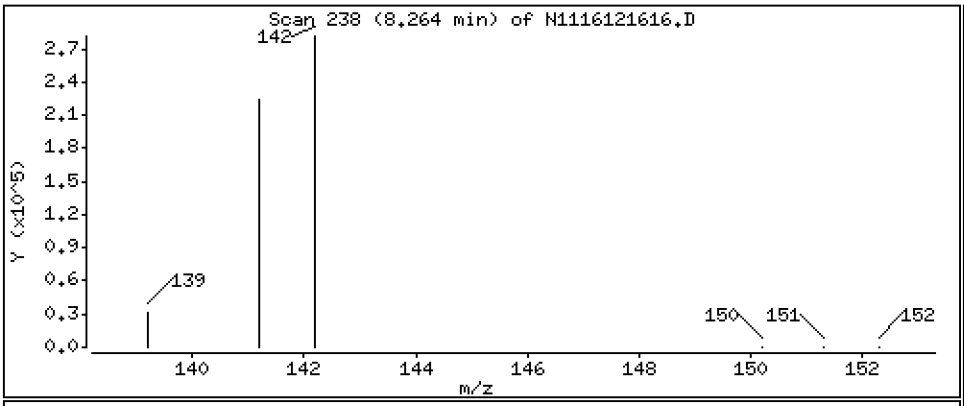
Operator: VTS

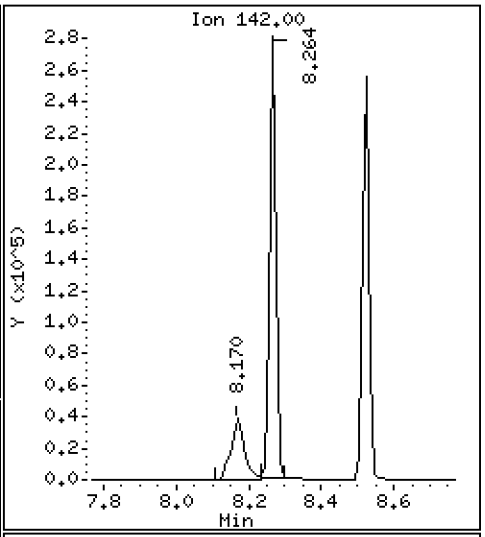
Column phase: Rxi-17Sil MS

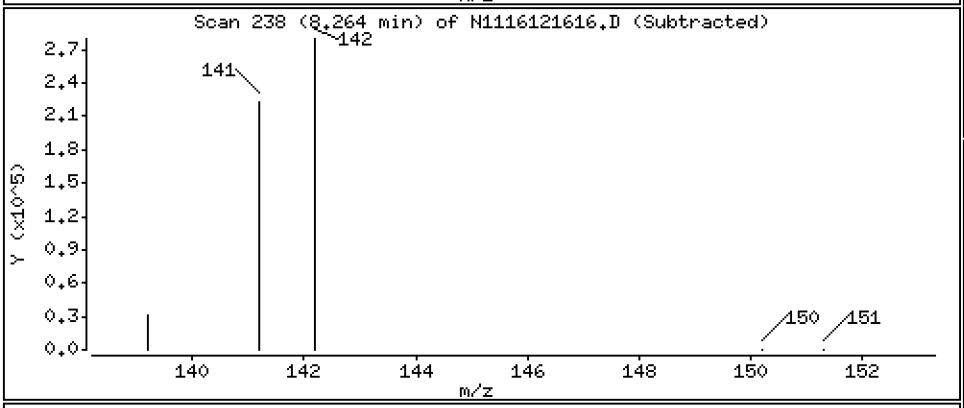
Column diameter: 0.25

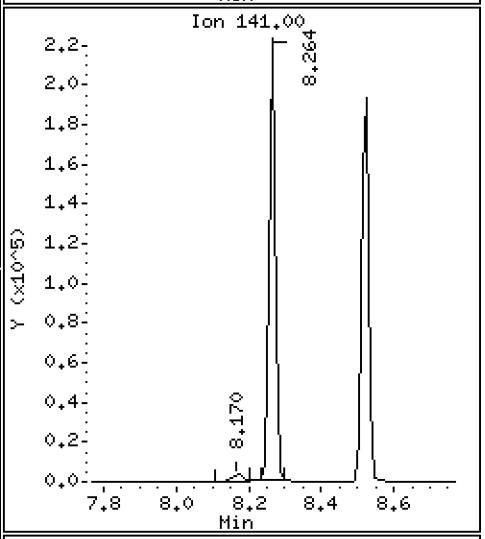
5 2-Methylnaphthalene

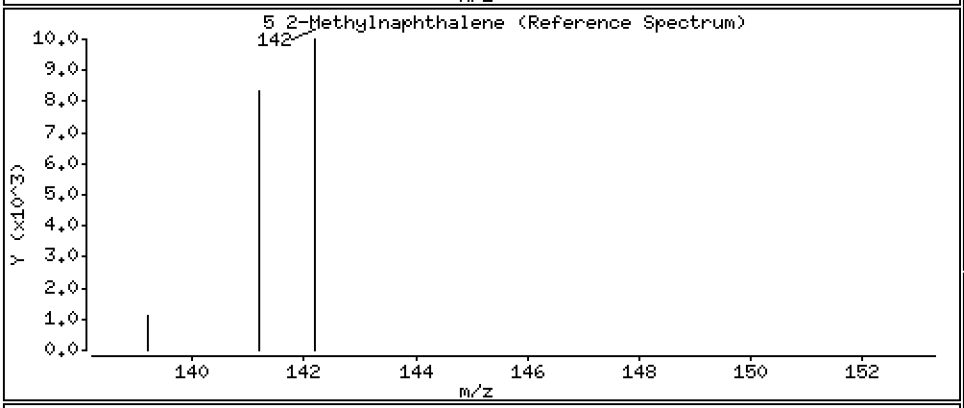
Concentration: 252 ng/mL

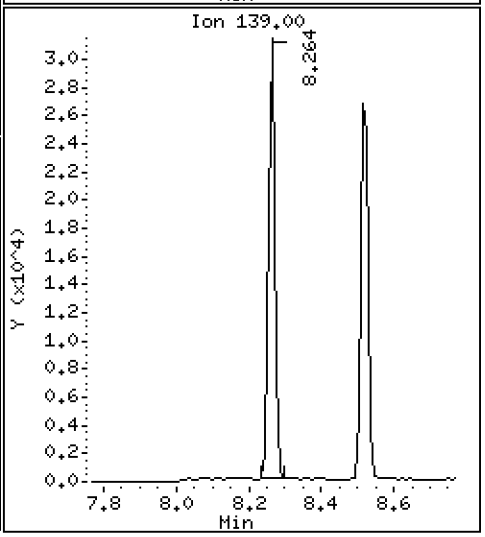


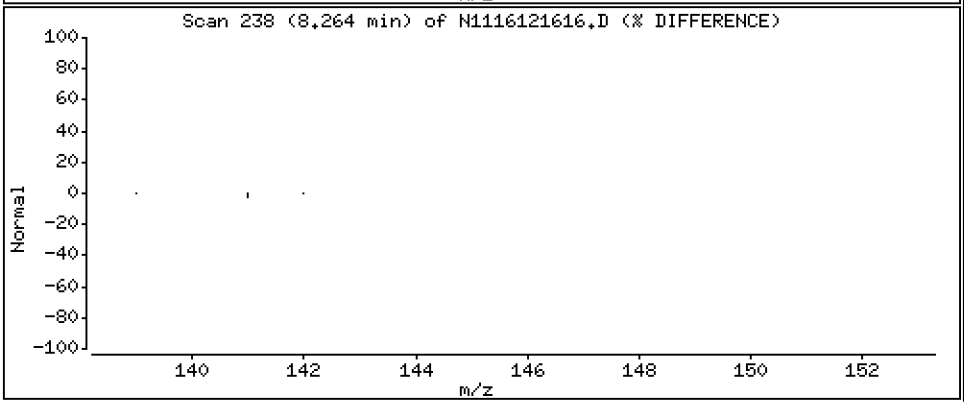












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

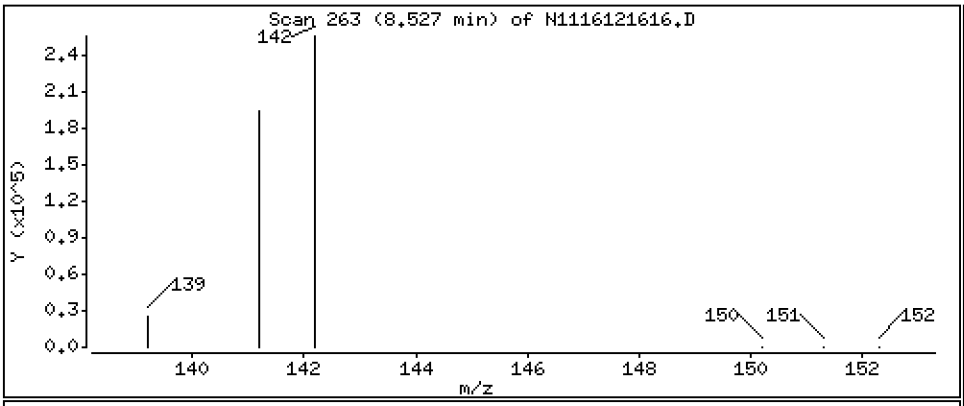
Operator: VTS

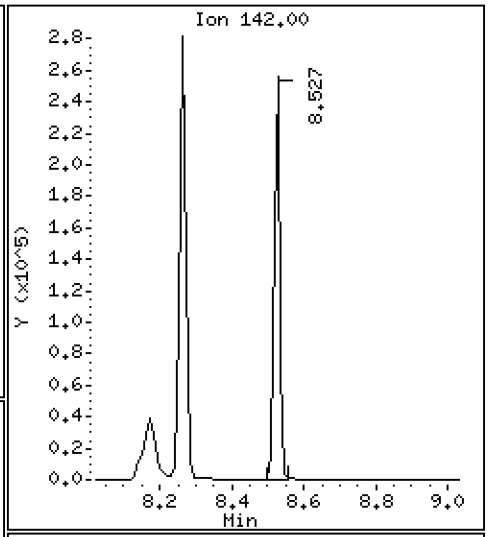
Column phase: Rxi-17Sil MS

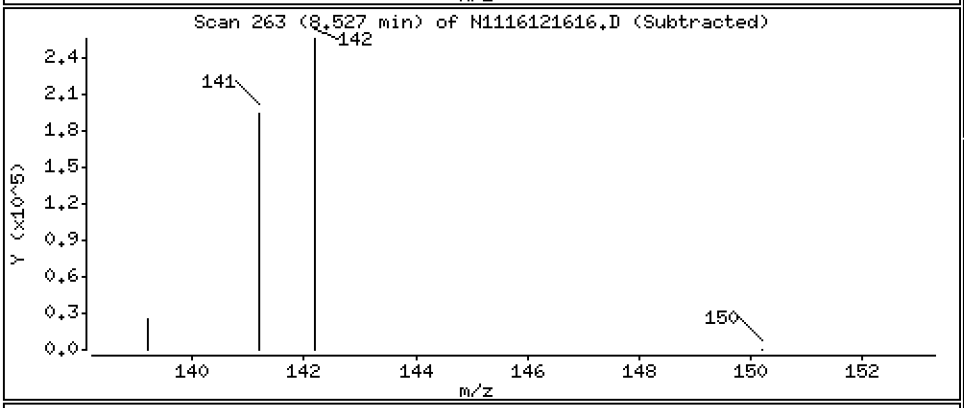
Column diameter: 0.25

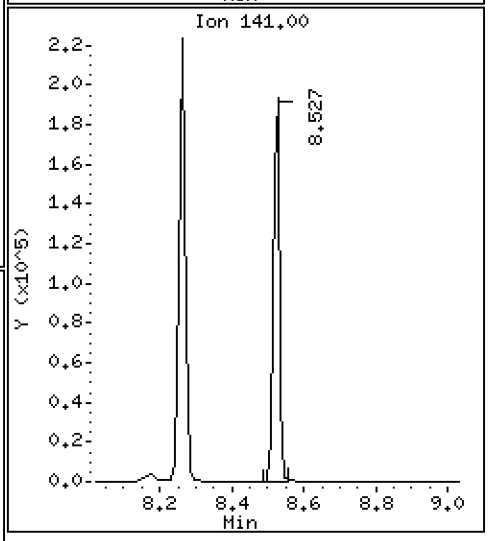
6 1-Methylnaphthalene

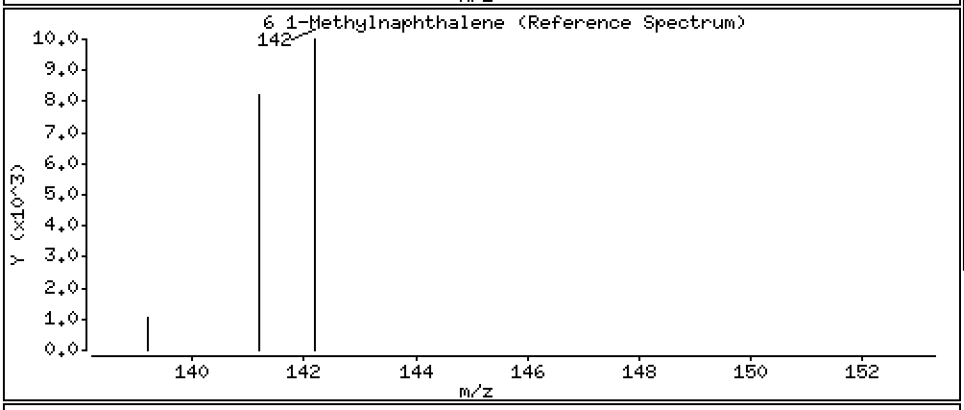
Concentration: 246 ng/mL

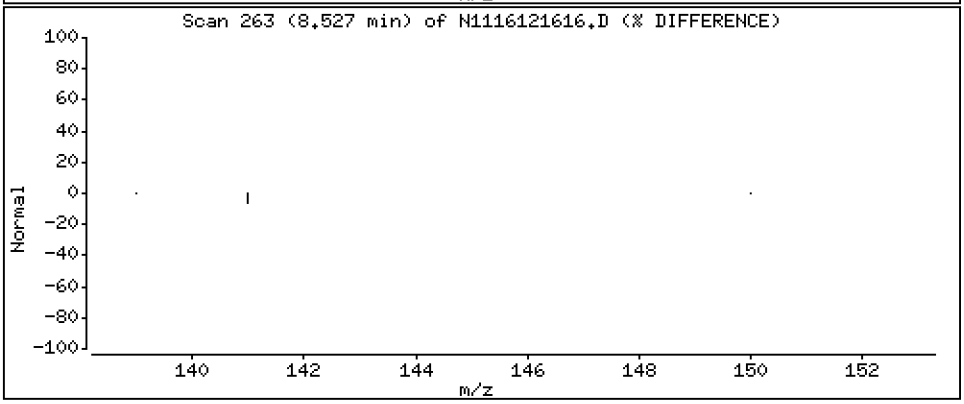












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

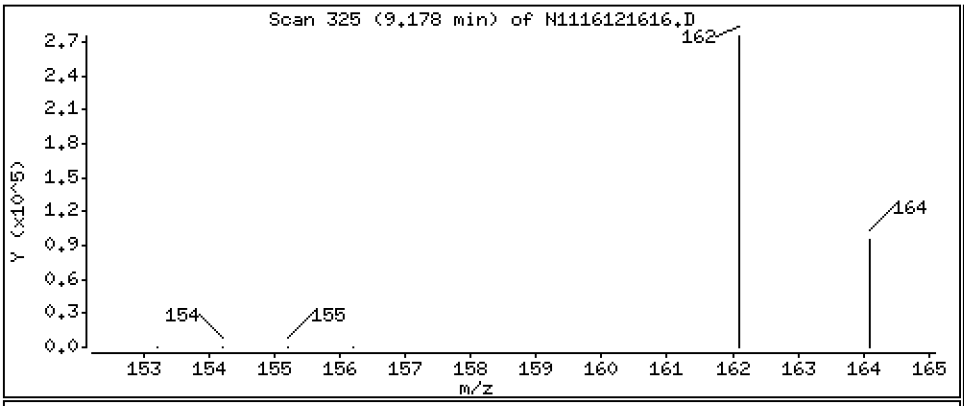
Operator: VTS

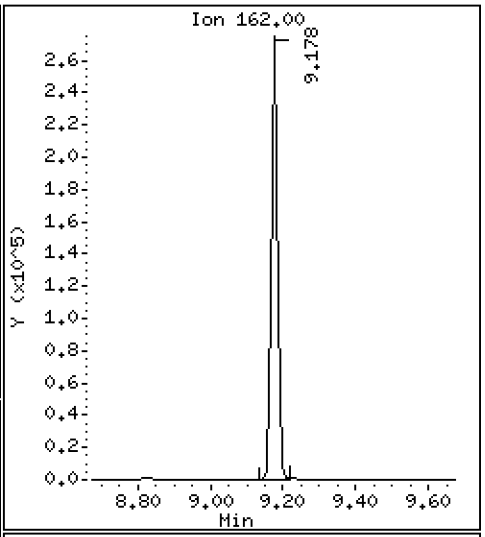
Column phase: Rxi-17Sil MS

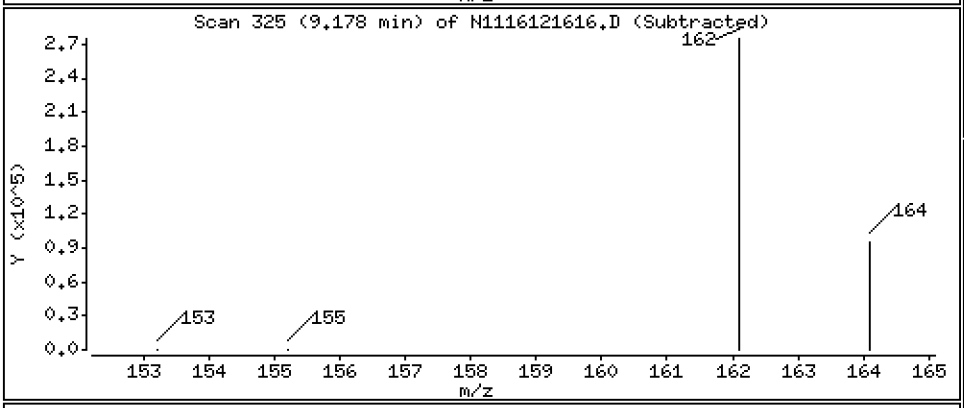
Column diameter: 0.25

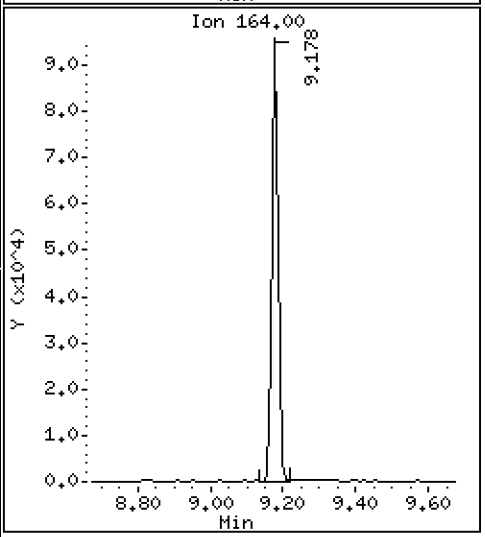
7 2-Chloronaphthalene

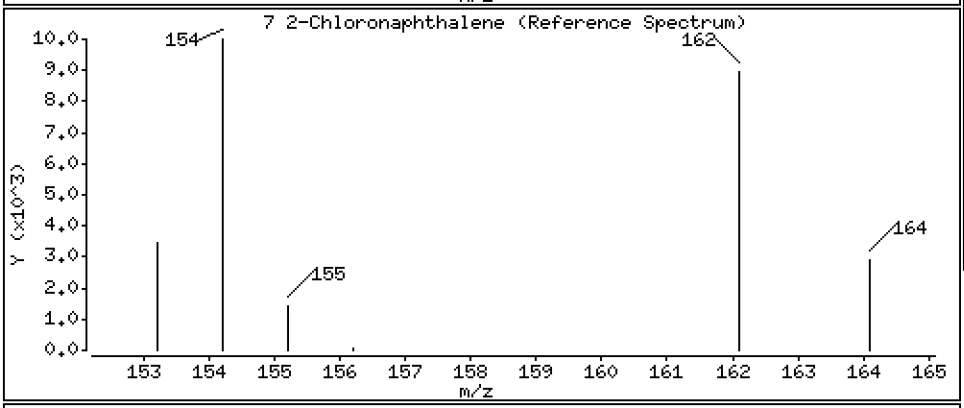
Concentration: 250 ng/mL

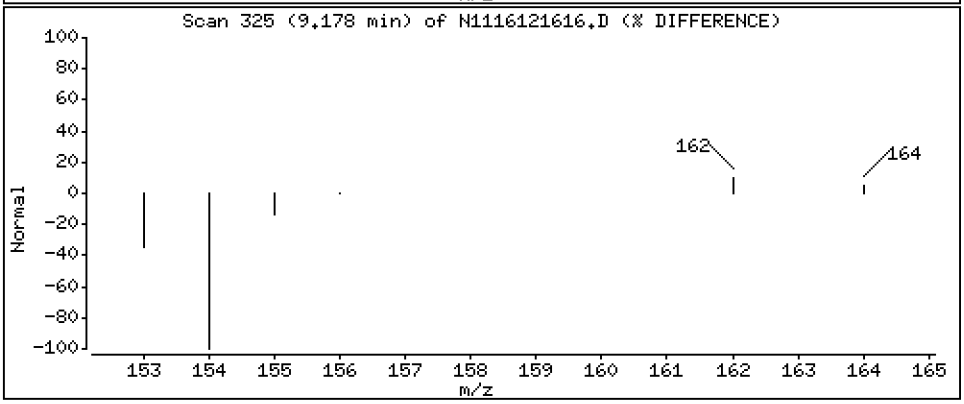












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

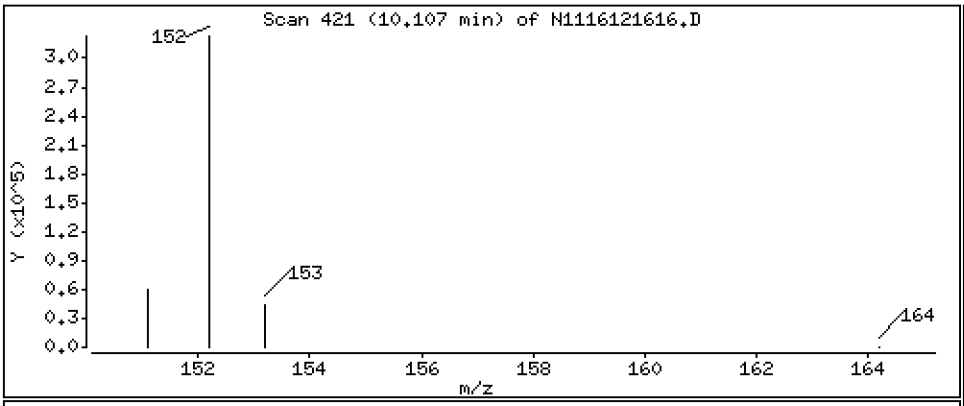
Operator: VTS

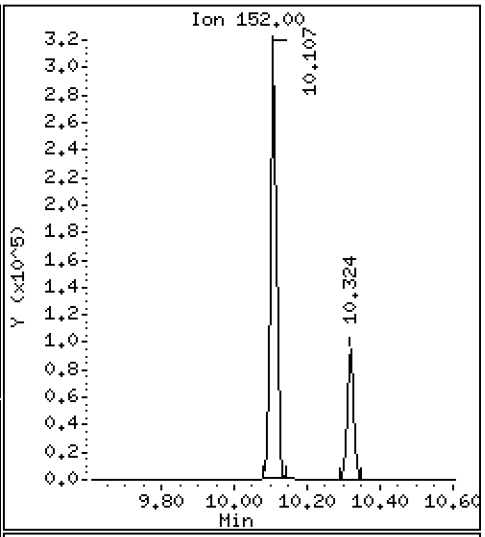
Column phase: Rxi-17Sil MS

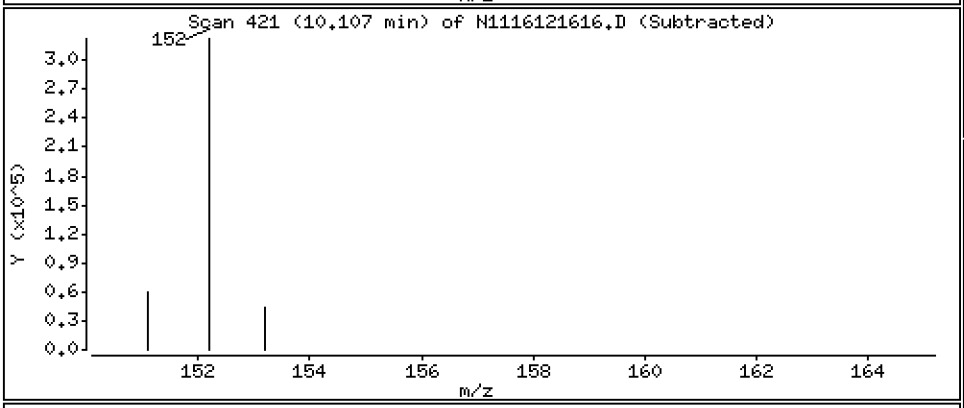
Column diameter: 0.25

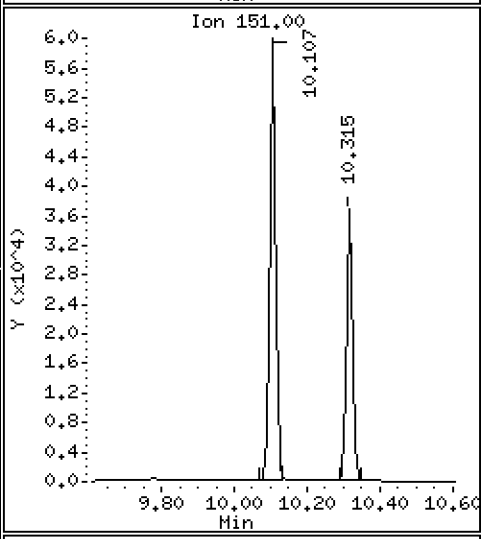
10 Acenaphthylene

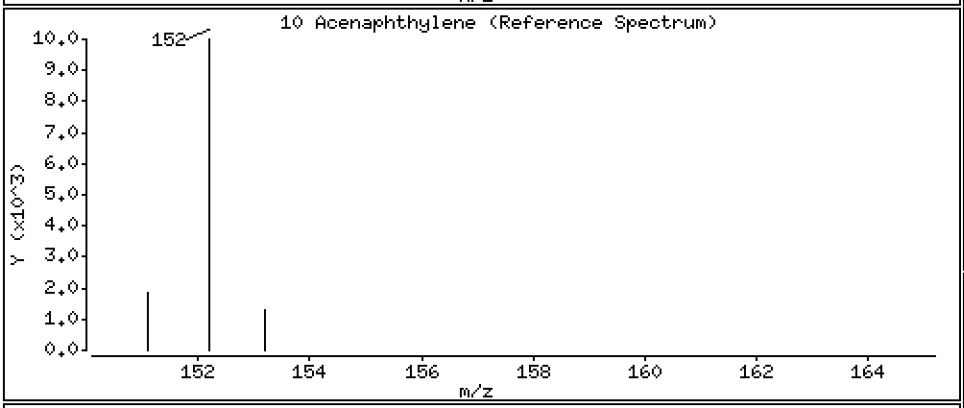
Concentration: 257 ng/mL

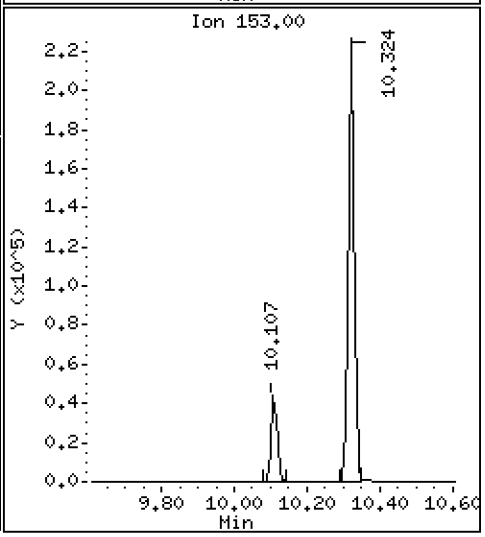


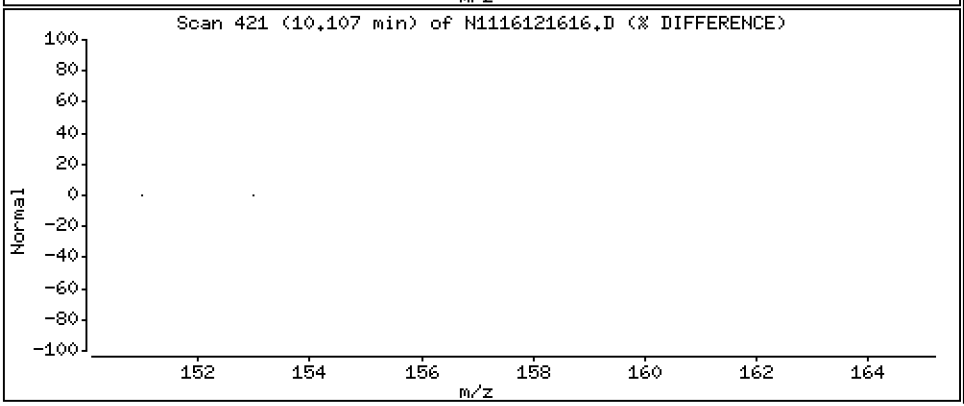












Date : 16-DEC-2016 17:04

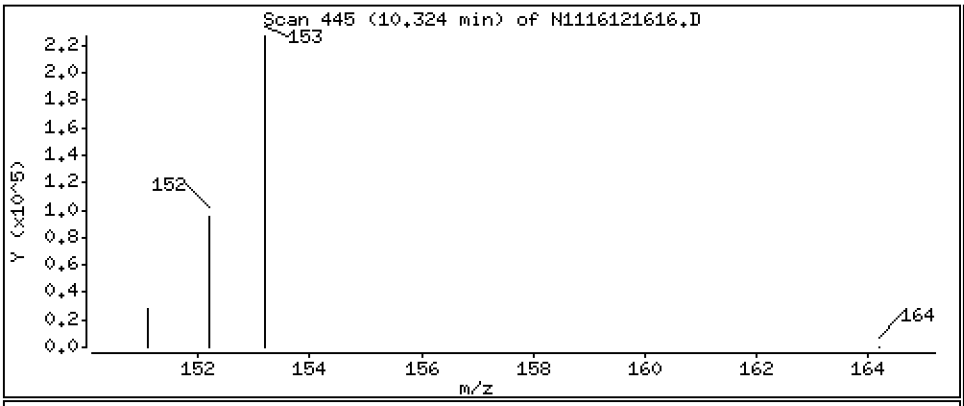
Client ID: Instrument: nt11.i

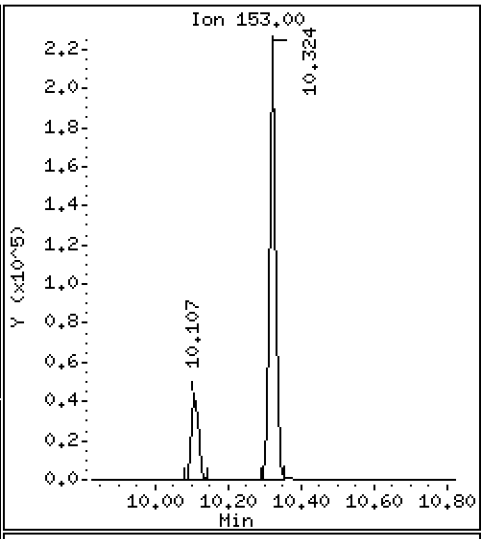
Sample Info: SEL0249-SCV1

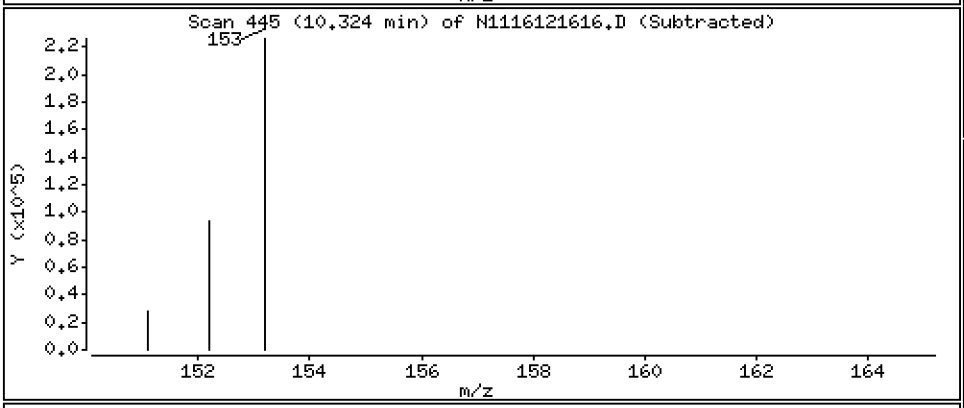
Operator: VTS

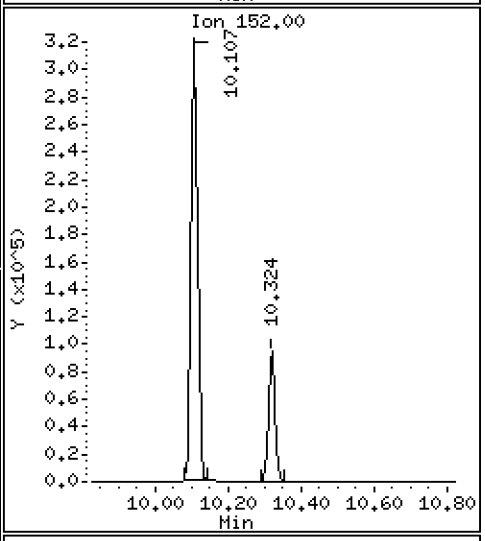
Column phase: Rxi-17Sil MS Column diameter: 0.25

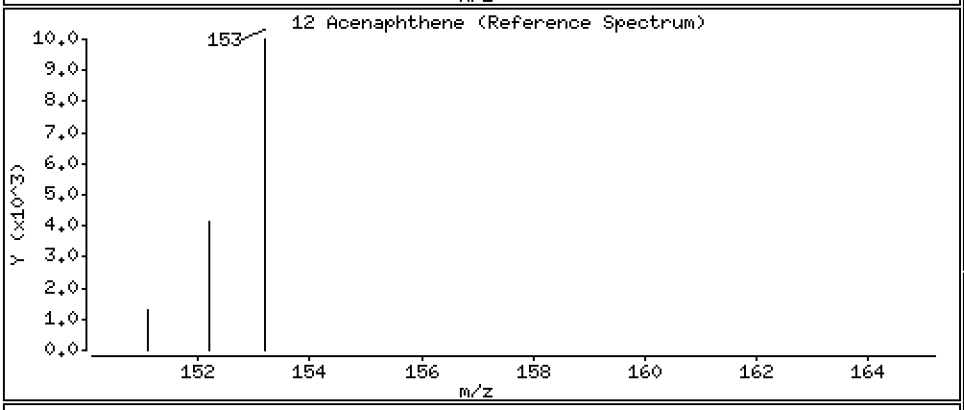
12 Acenaphthene Concentration: 280 ng/mL

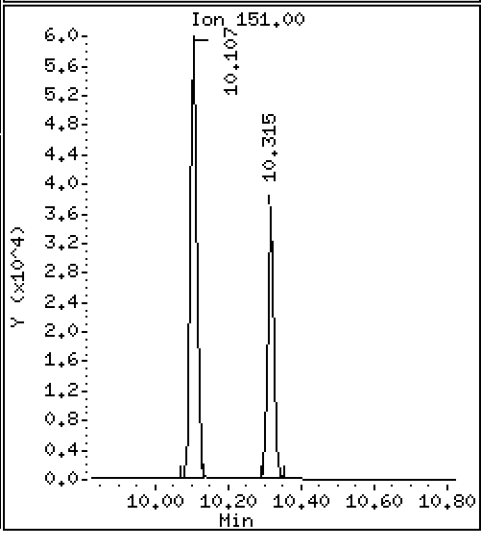


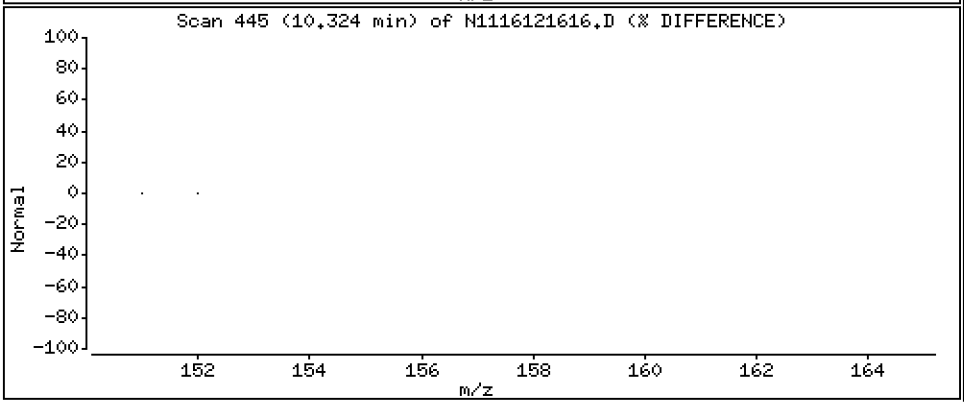












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

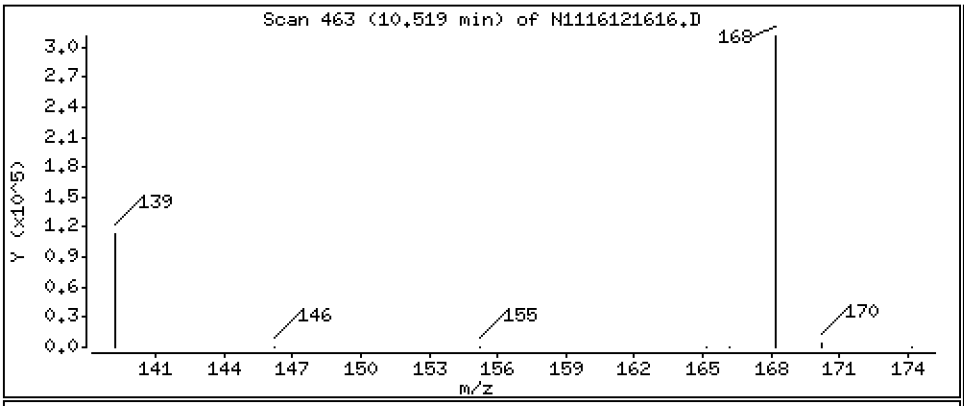
Operator: VTS

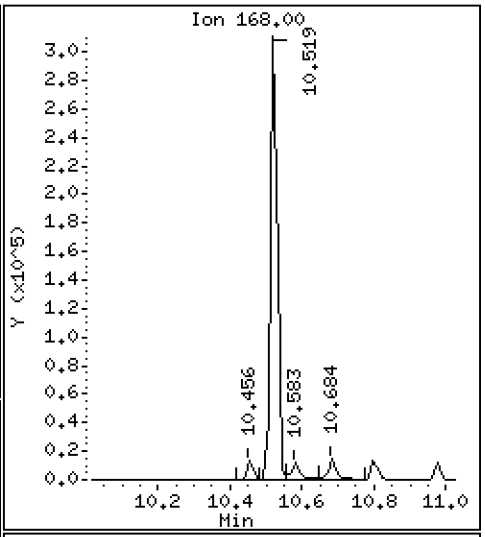
Column phase: Rxi-17Sil MS

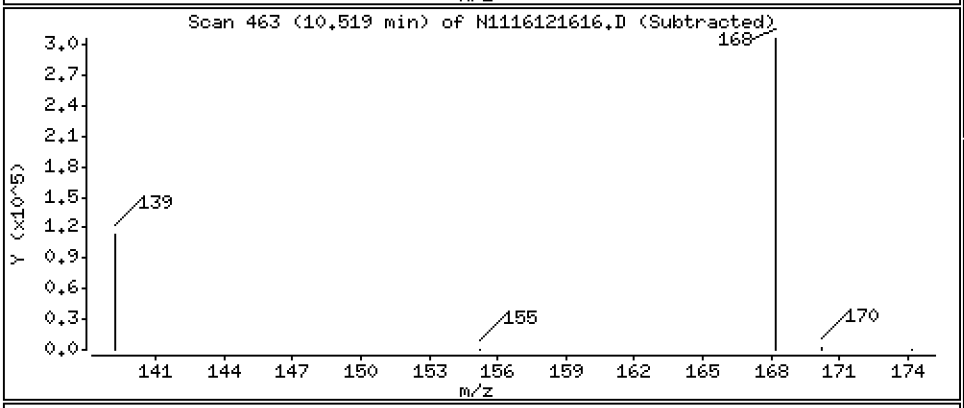
Column diameter: 0.25

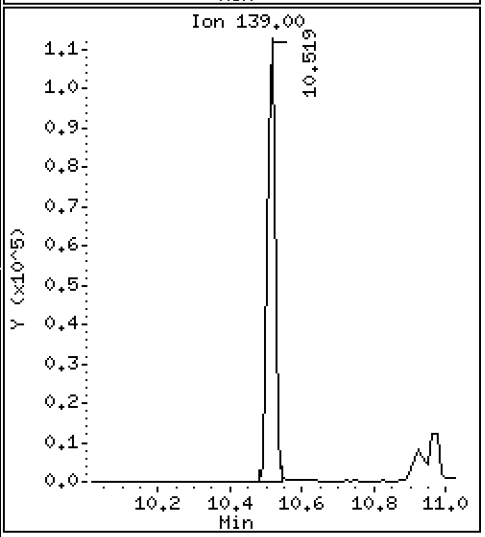
13 Dibenzofuran

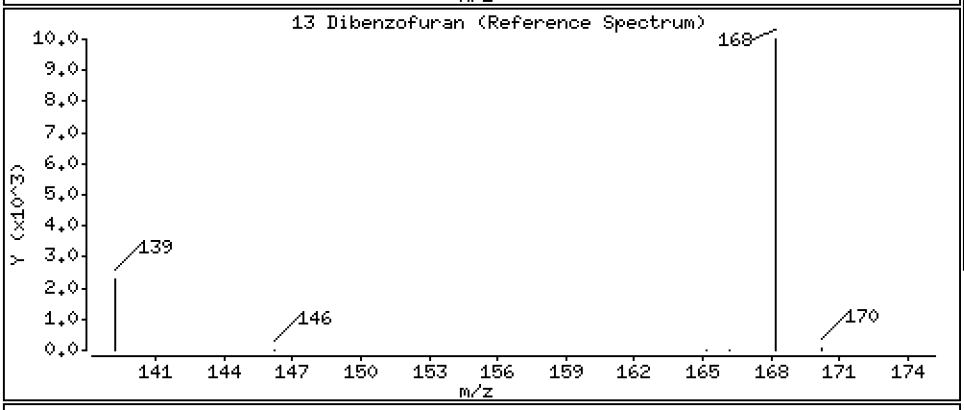
Concentration: 277 ng/mL

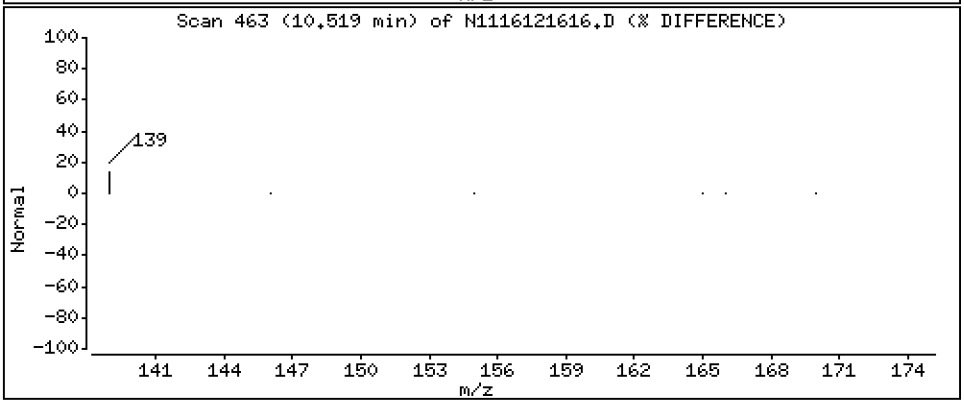












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

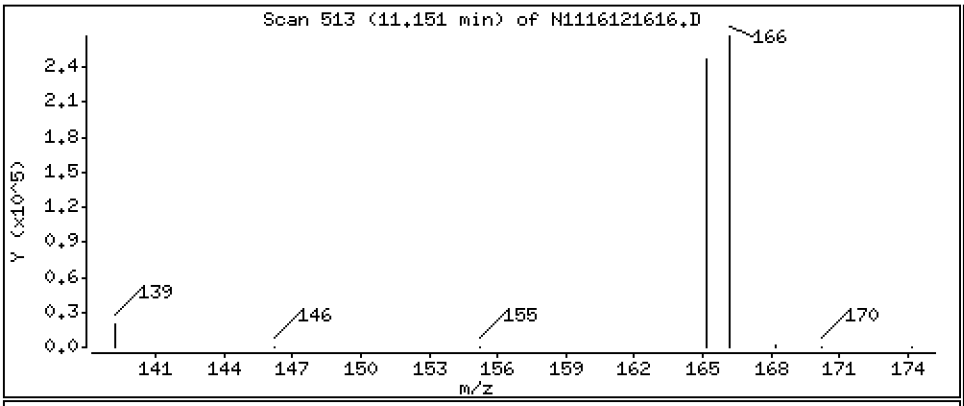
Operator: VTS

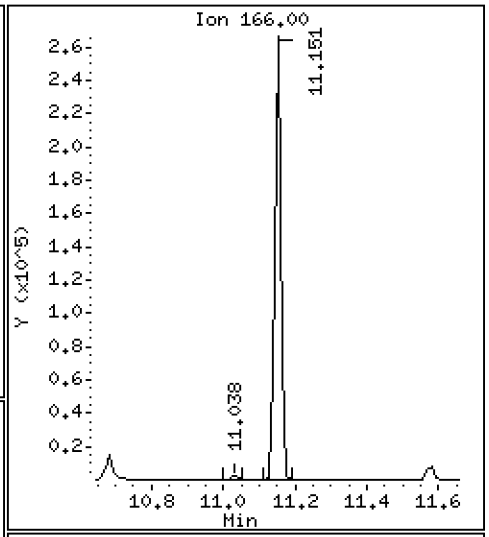
Column phase: Rxi-17Sil MS

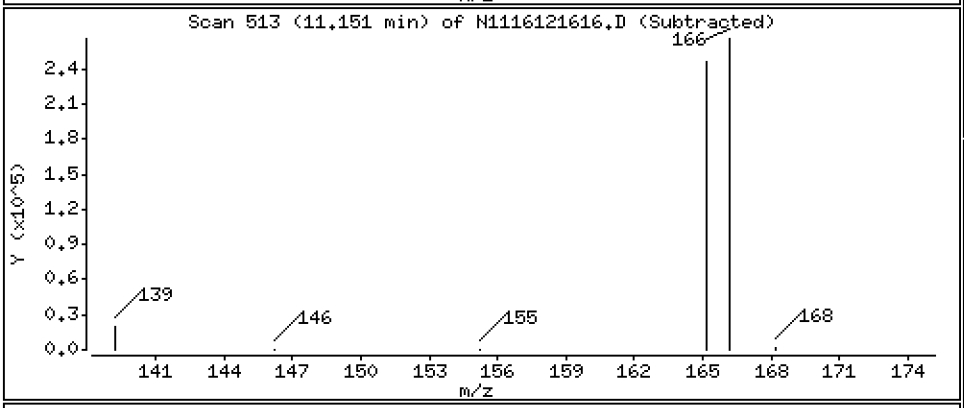
Column diameter: 0.25

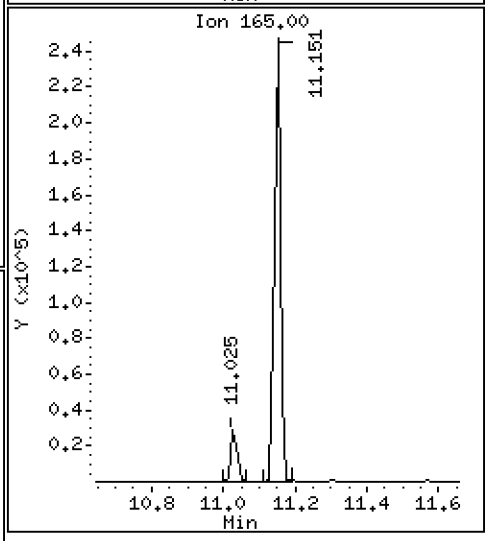
16 Fluorene

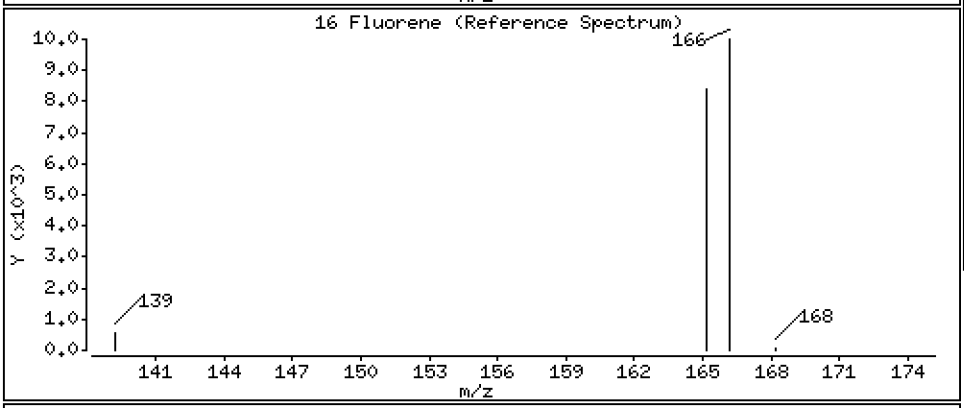
Concentration: 270 ng/mL

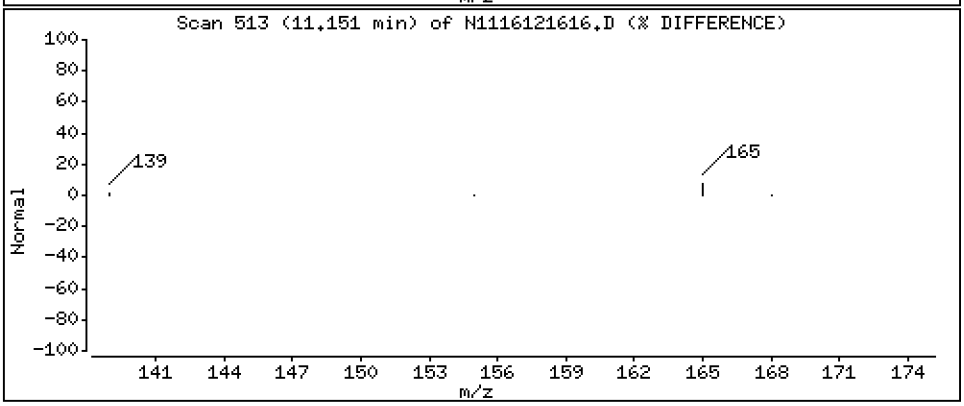












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

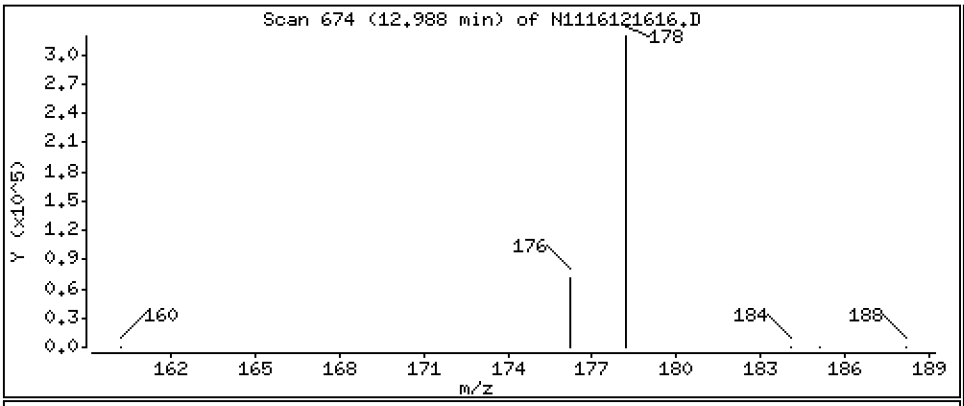
Operator: VTS

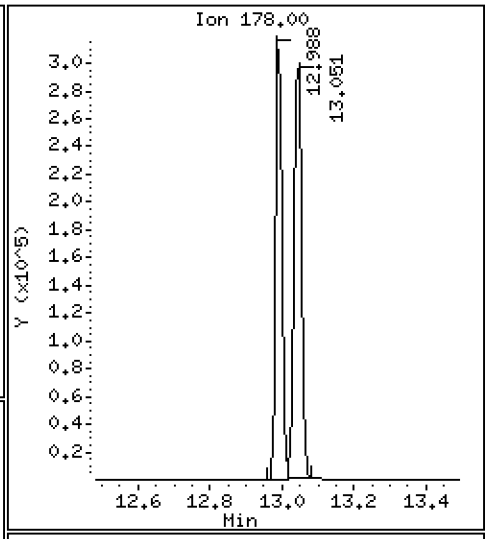
Column phase: Rxi-17Sil MS

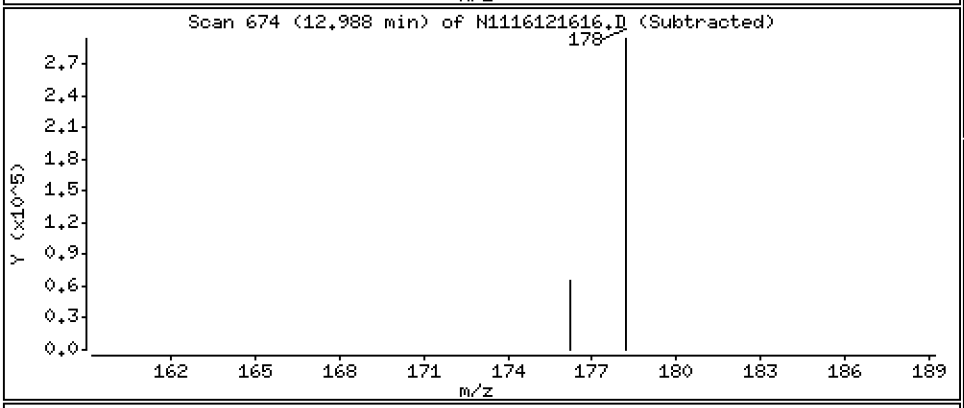
Column diameter: 0.25

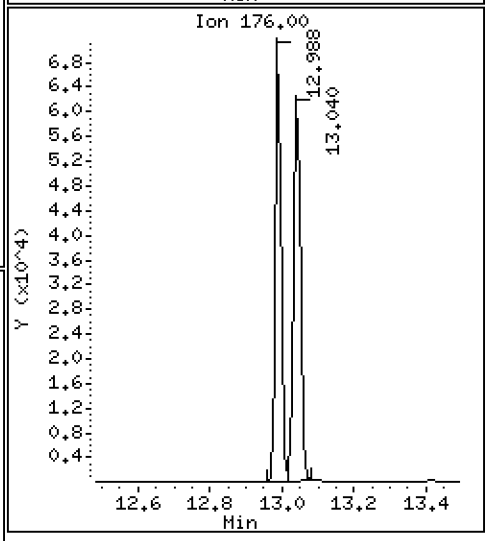
19 Phenanthrene

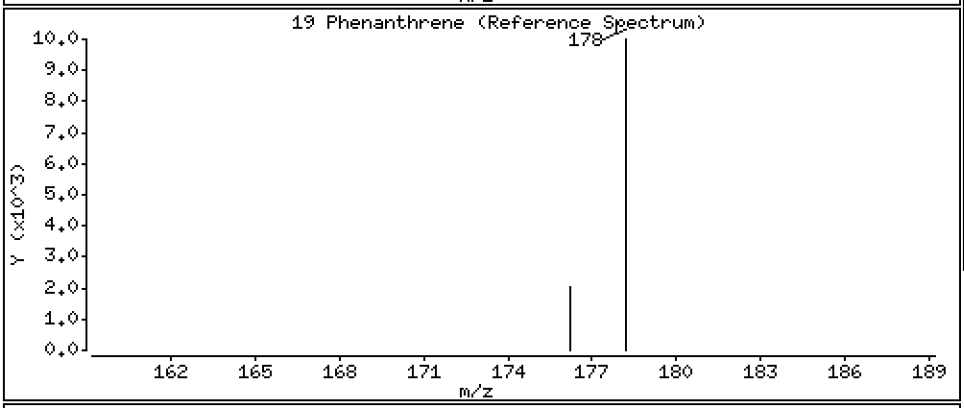
Concentration: 254 ng/mL

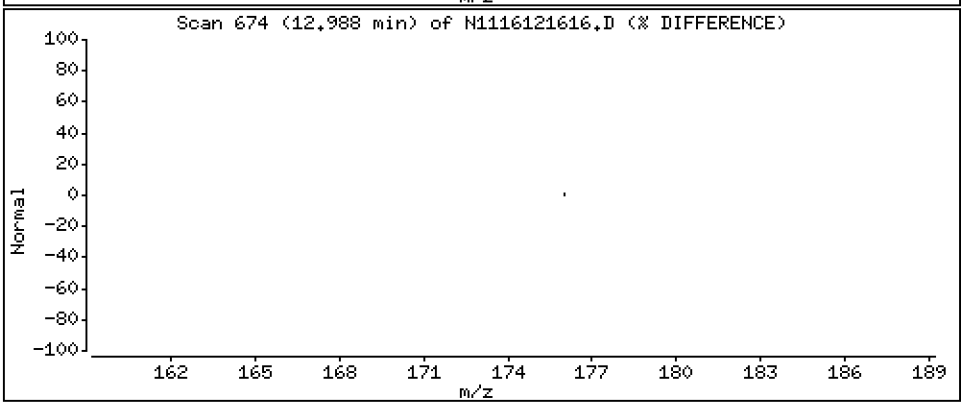












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

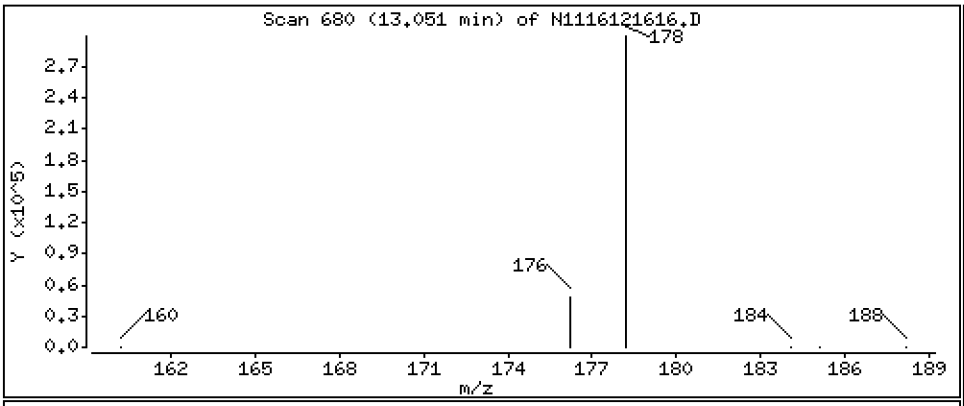
Operator: VTS

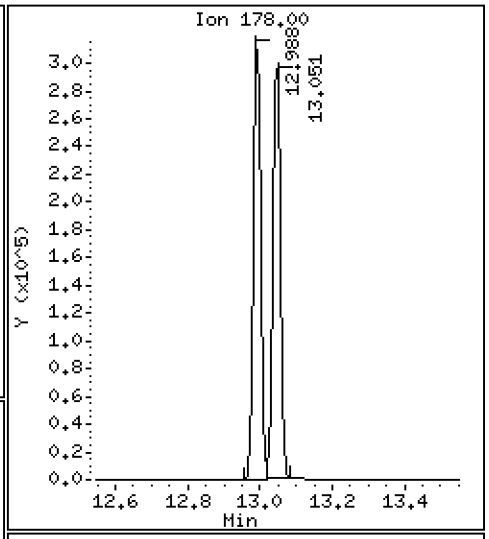
Column phase: Rxi-17Sil MS

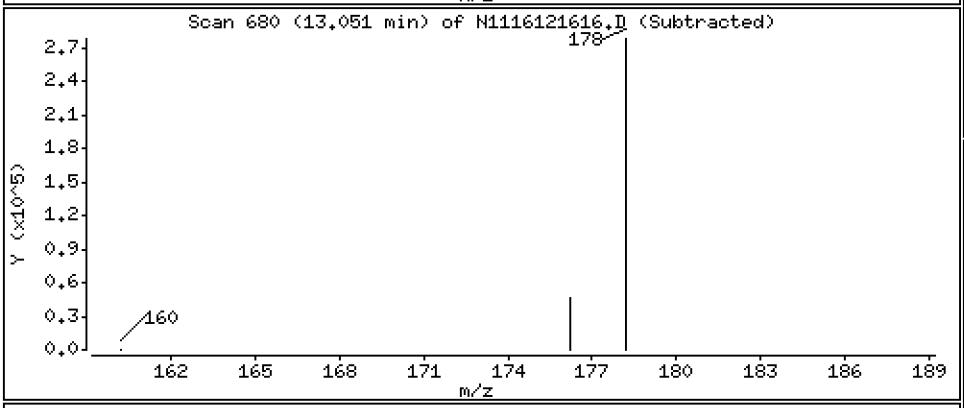
Column diameter: 0.25

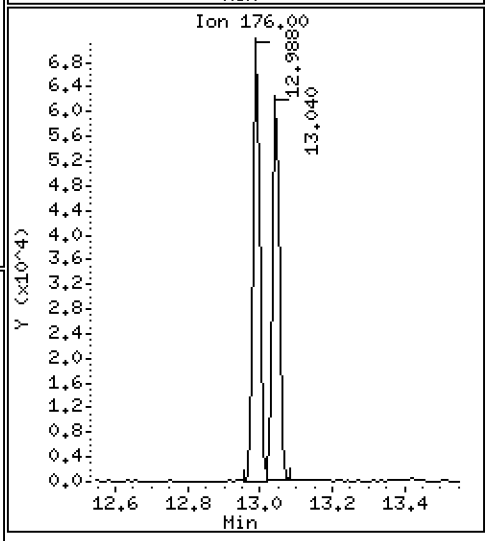
21 Anthracene

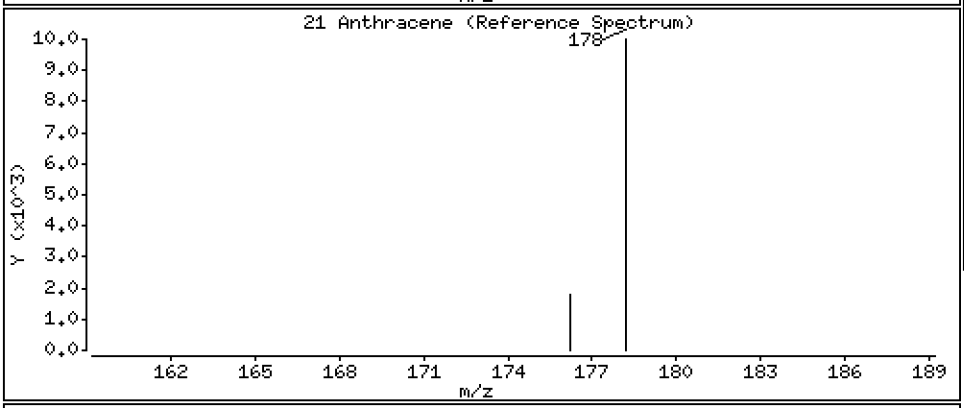
Concentration: 259 ng/mL

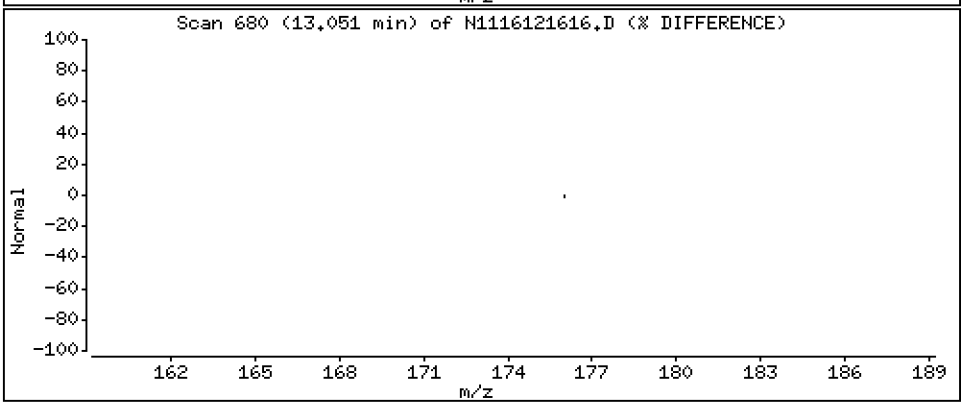












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

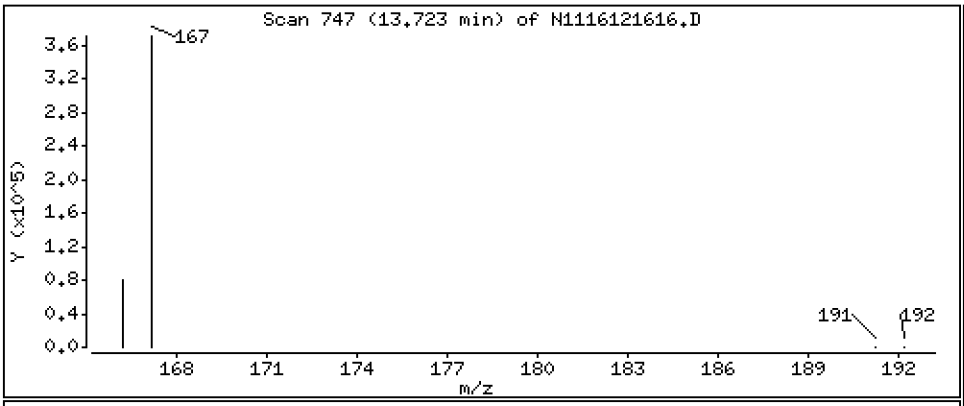
Operator: VTS

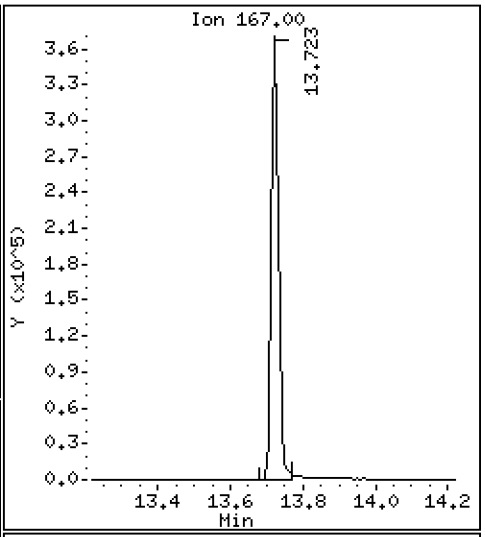
Column phase: Rxi-17Sil MS

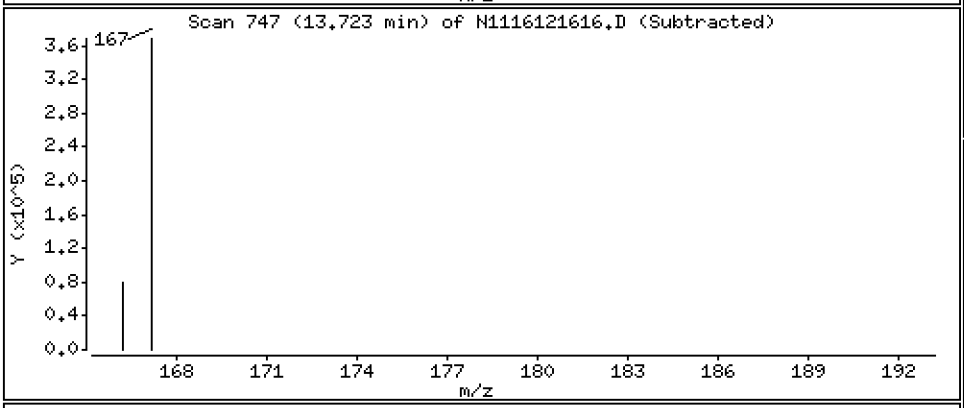
Column diameter: 0.25

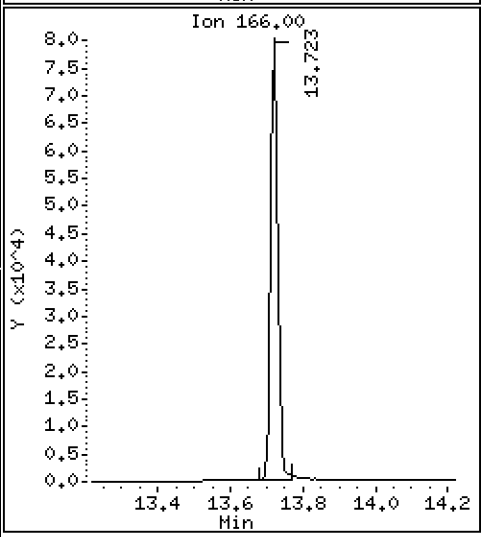
22 Carbazole

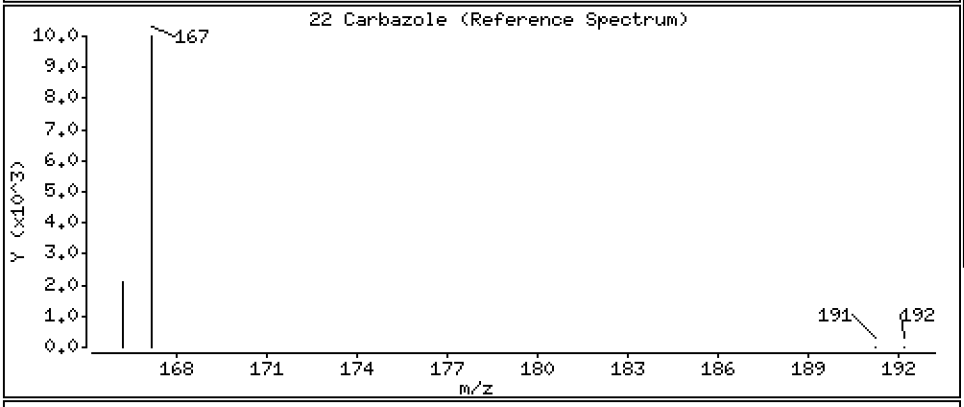
Concentration: 272 ng/mL

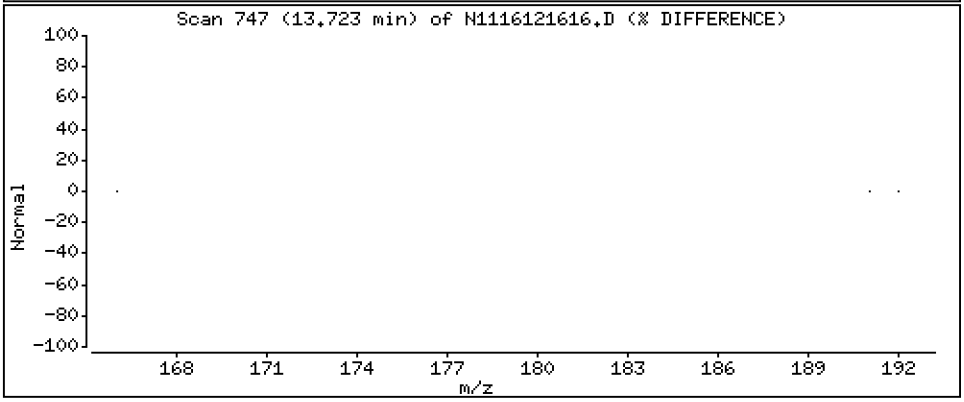












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

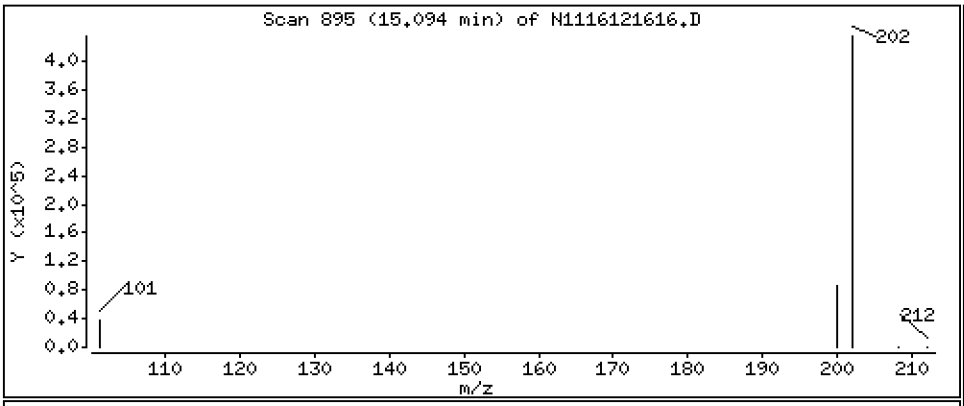
Operator: VTS

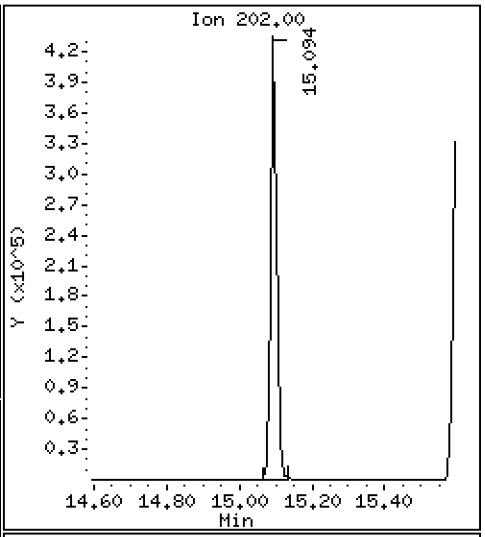
Column phase: Rxi-17Sil MS

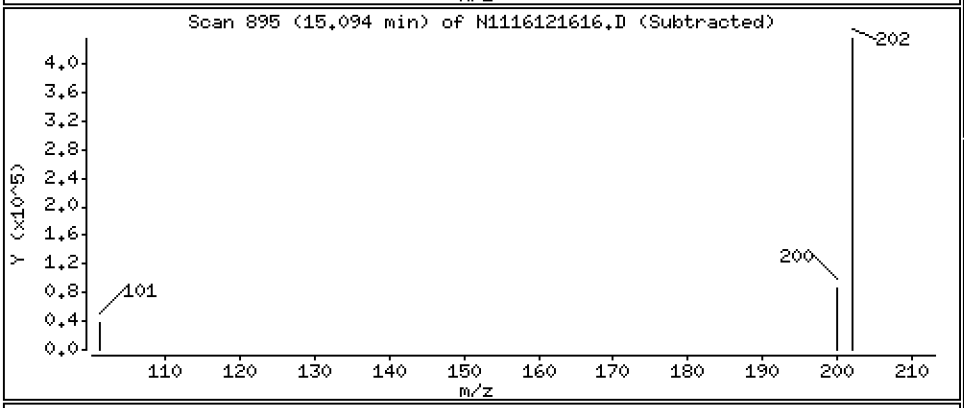
Column diameter: 0.25

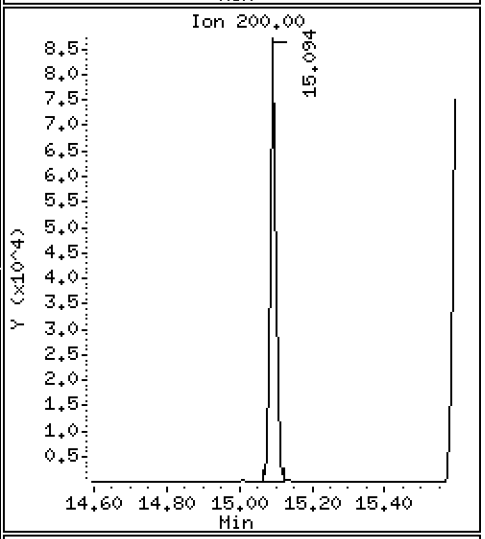
25 Fluoranthene

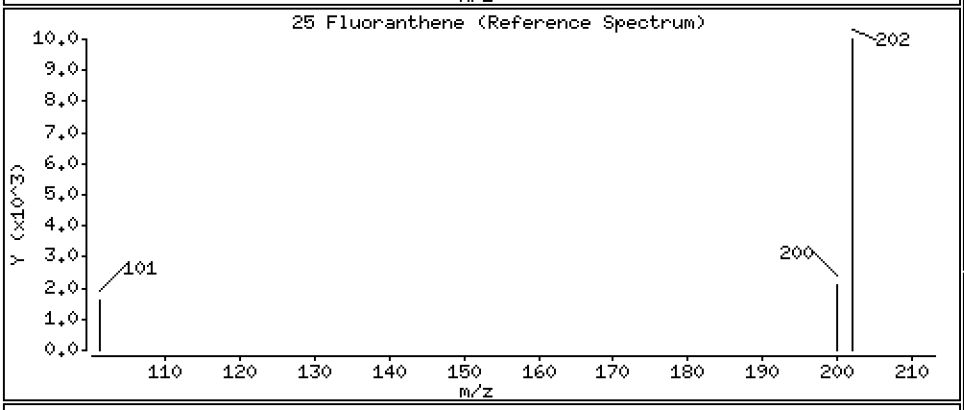
Concentration: 262 ng/mL

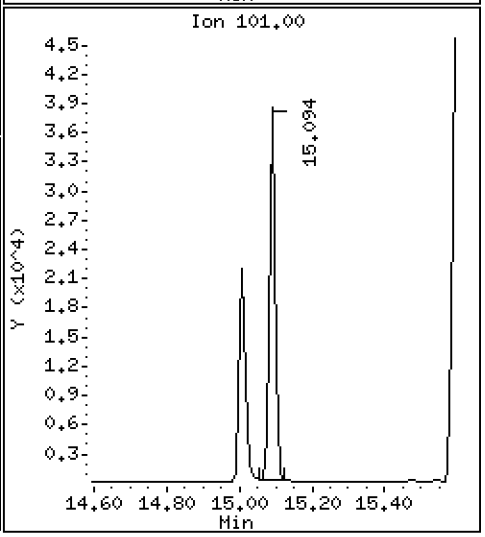


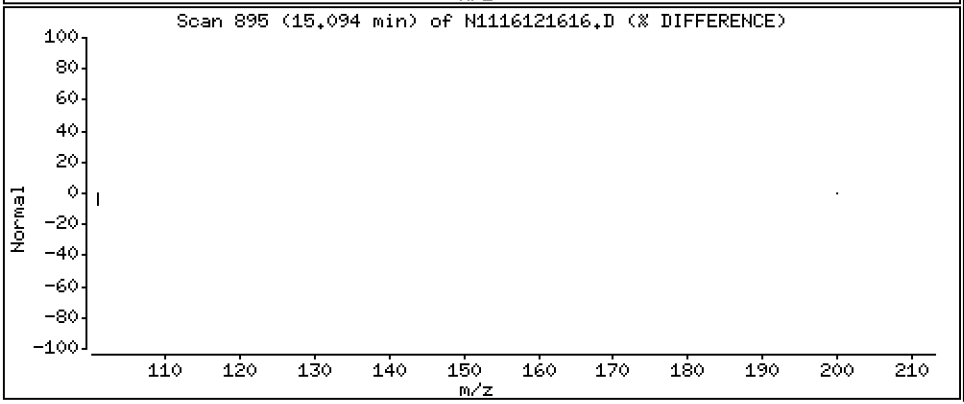












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

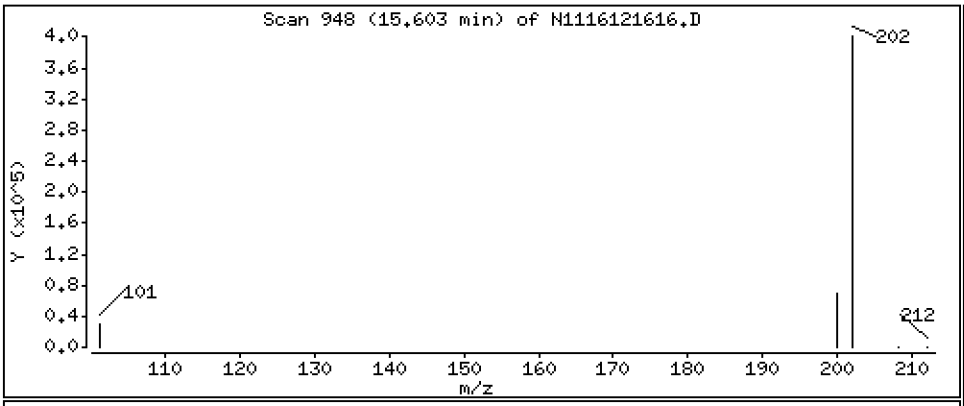
Operator: VTS

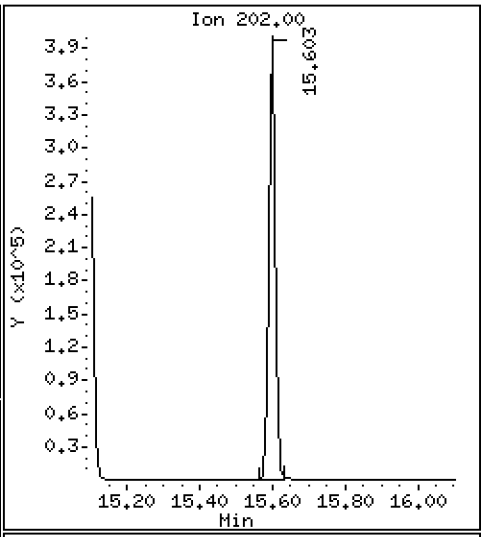
Column phase: Rxi-17Sil MS

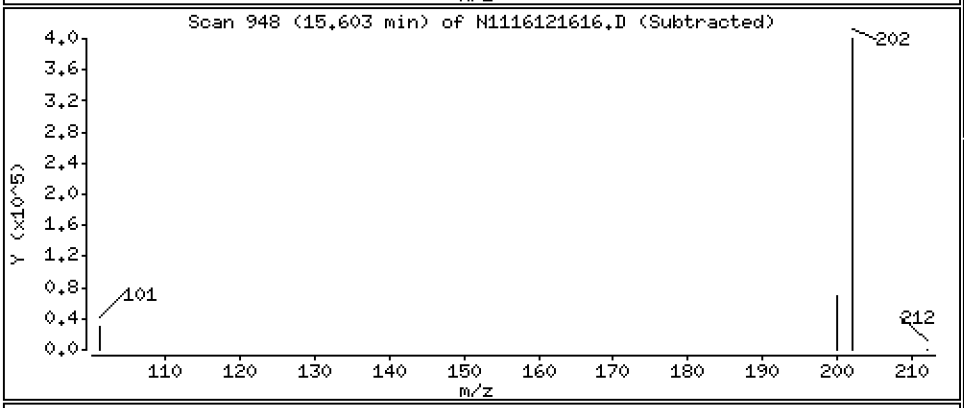
Column diameter: 0.25

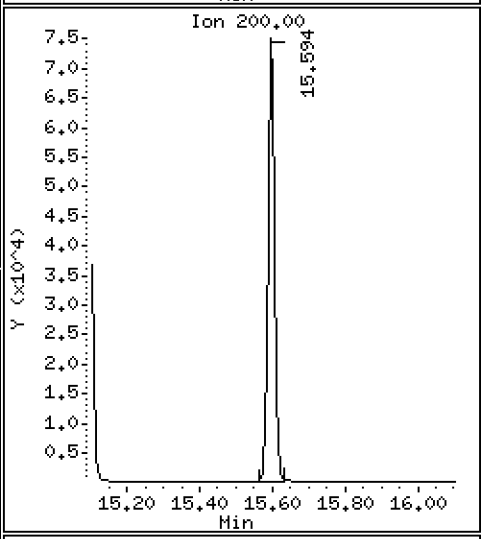
26 Pyrene

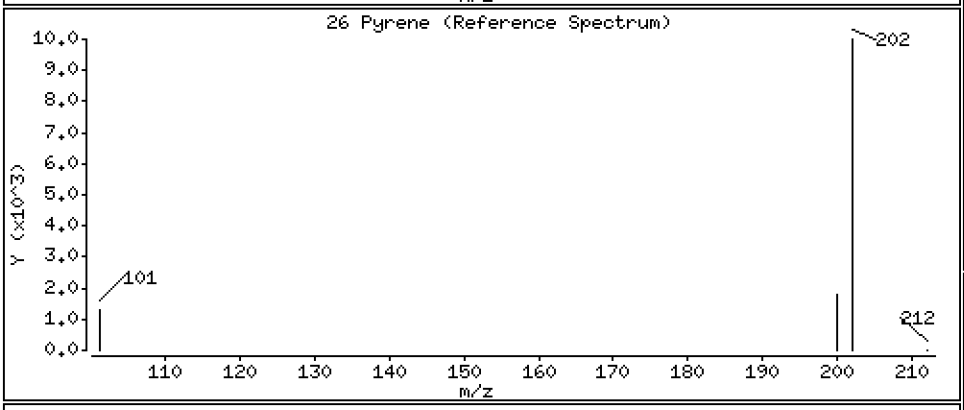
Concentration: 250 ng/mL

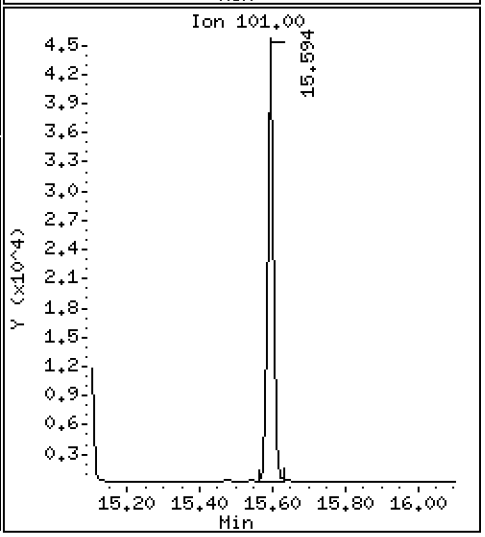


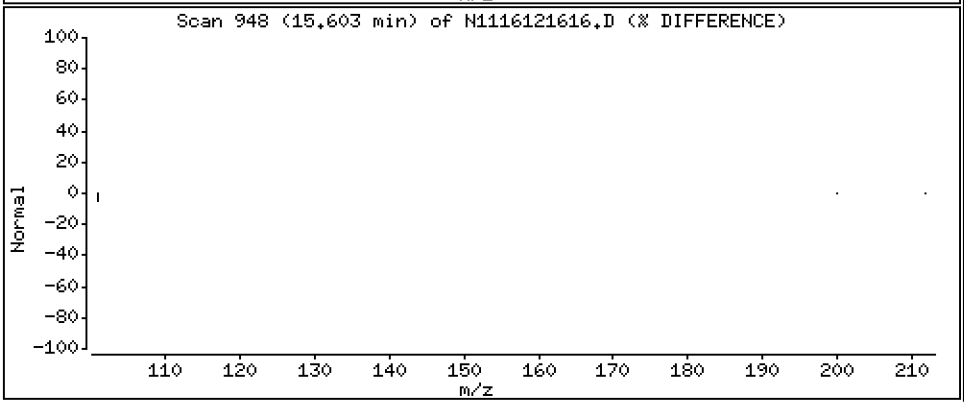












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

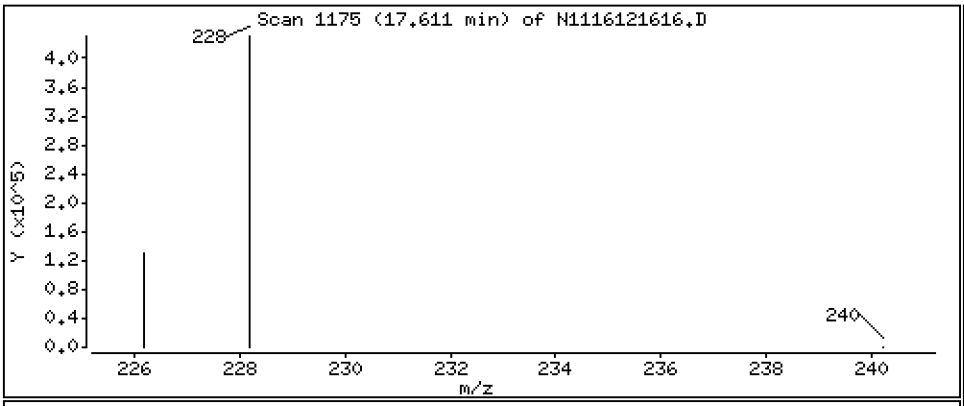
Operator: VTS

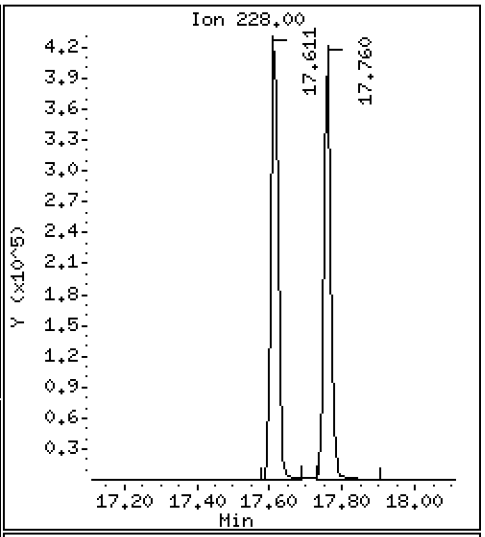
Column phase: Rxi-17Sil MS

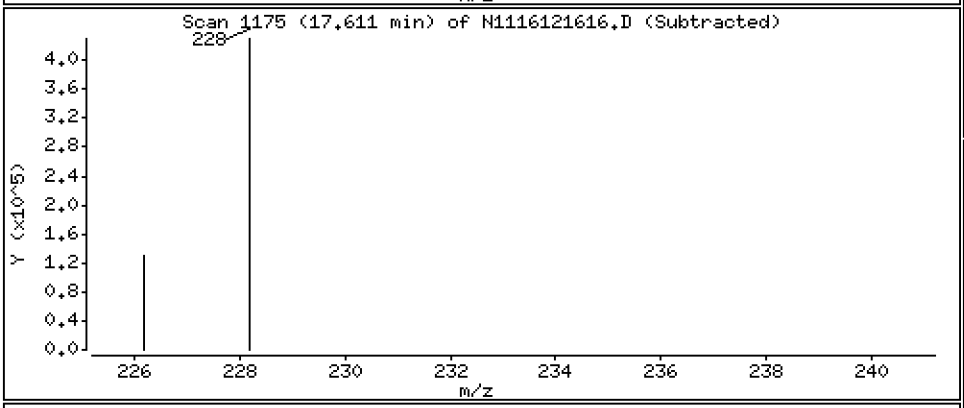
Column diameter: 0.25

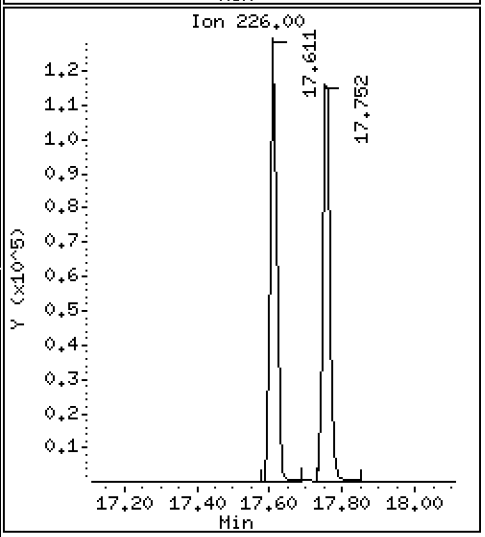
27 Benzo(a)anthracene

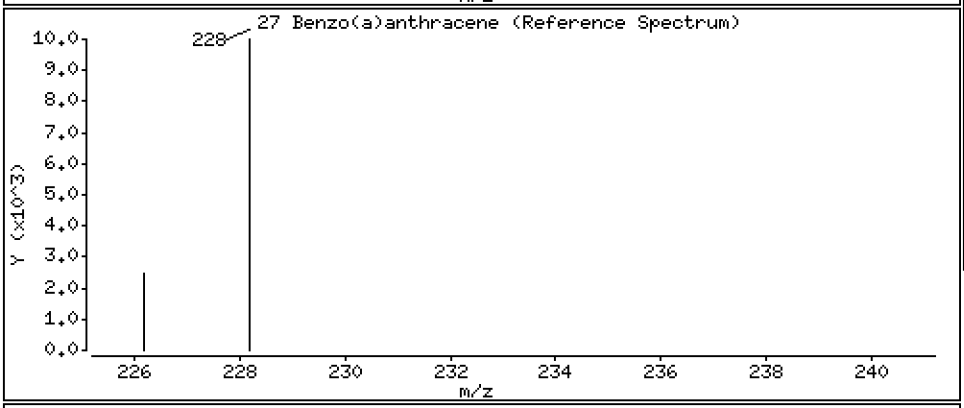
Concentration: 259 ng/mL

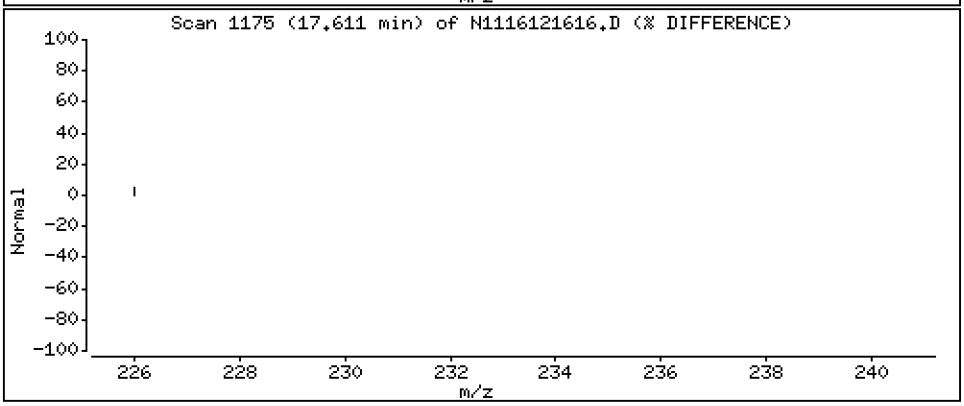












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

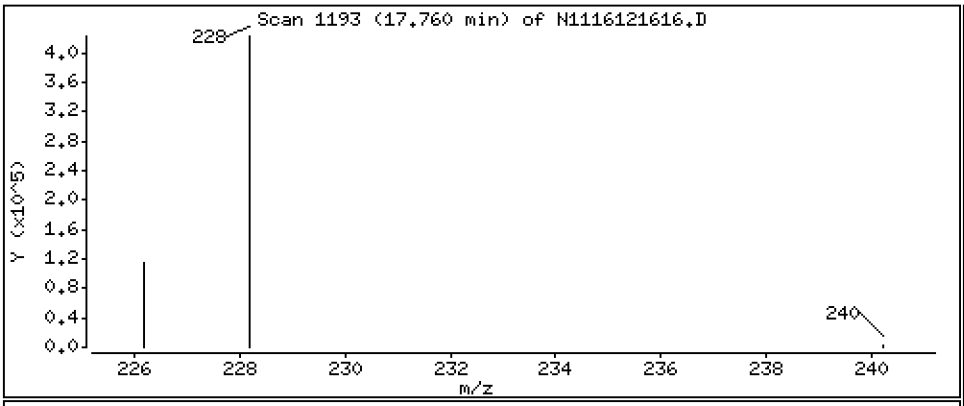
Operator: VTS

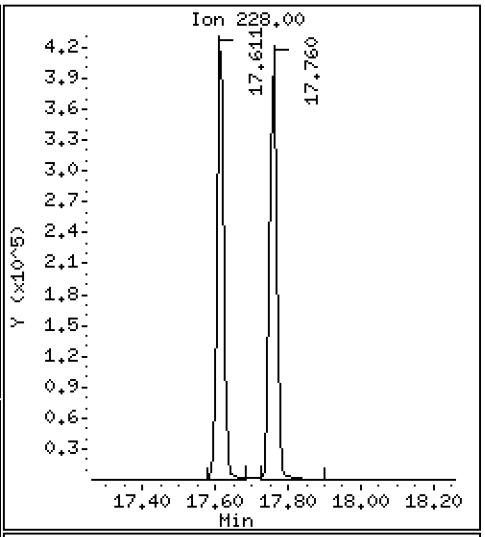
Column phase: Rxi-17Sil MS

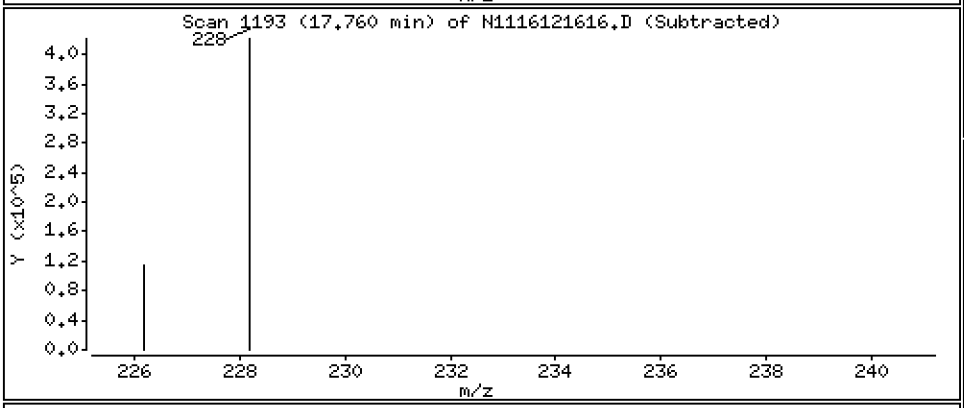
Column diameter: 0.25

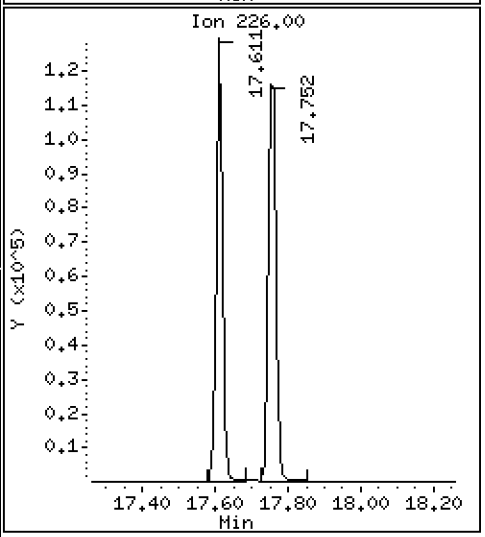
29 Chrysene

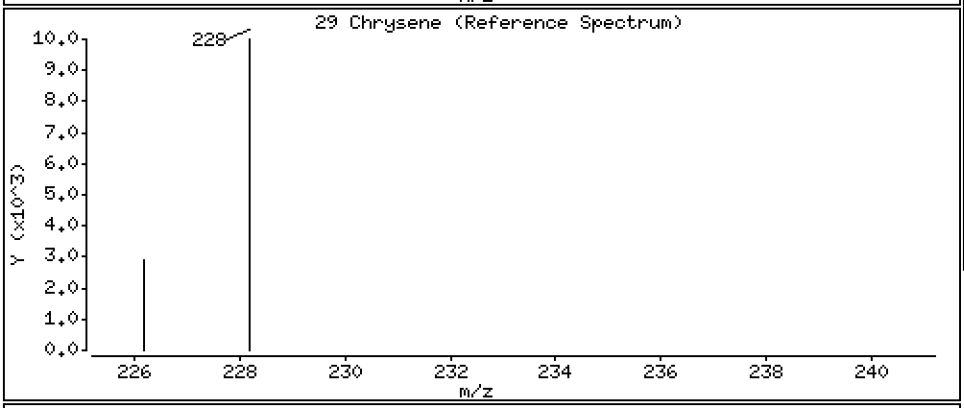
Concentration: 247 ng/mL

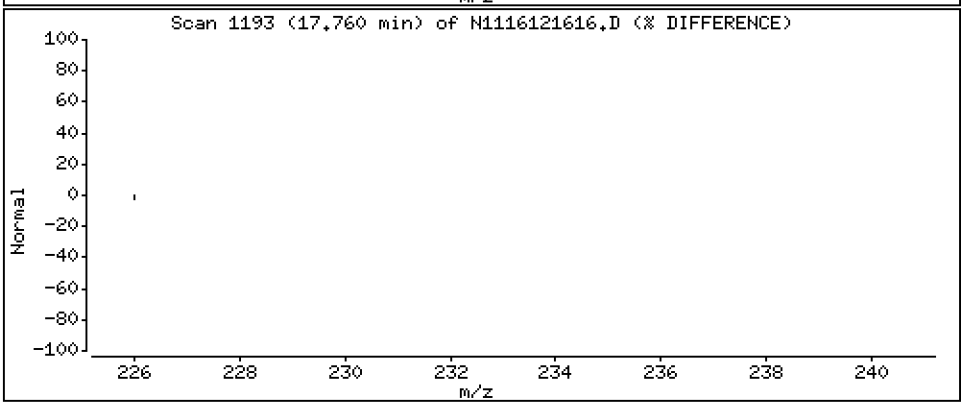












Date : 16-DEC-2016 17:04

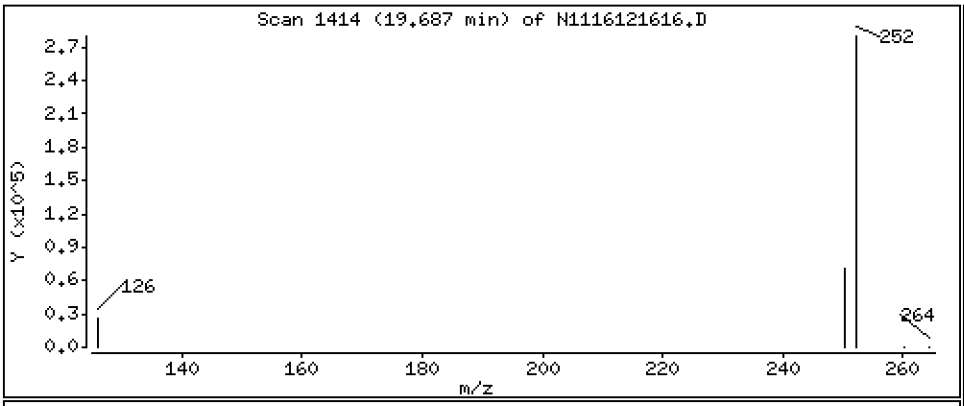
Client ID: Instrument: nt11.i

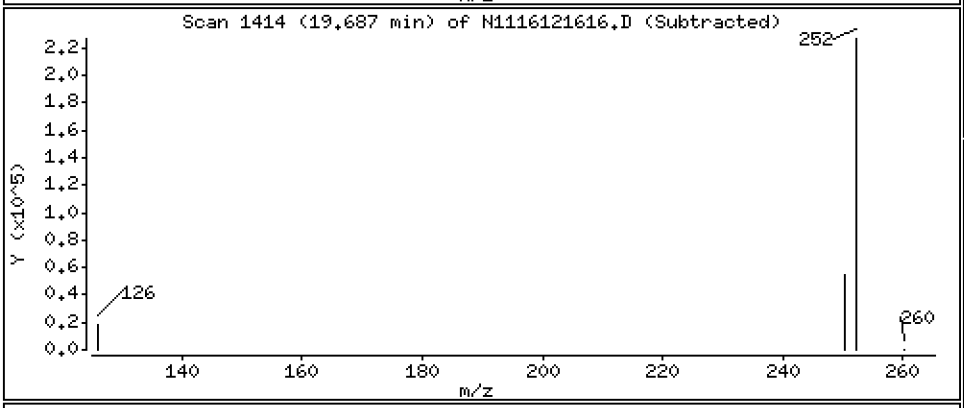
Sample Info: SEL0249-SCV1

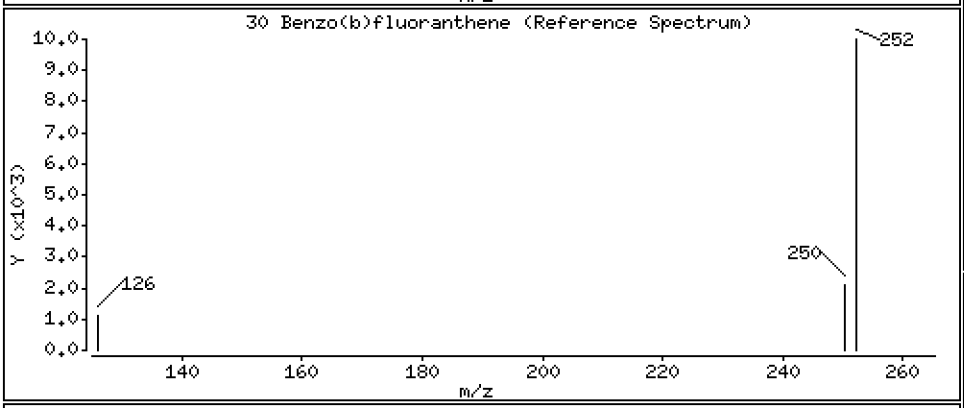
Operator: VTS

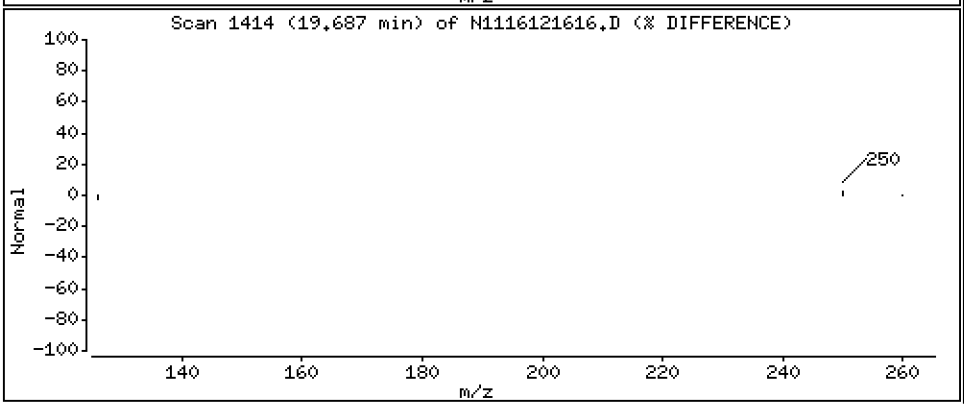
Column phase: Rxi-17Sil MS Column diameter: 0.25

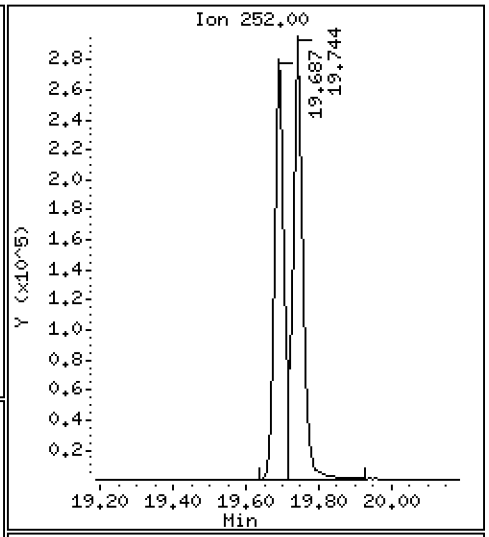
30 Benzo(b)fluoranthene Concentration: 259 ng/mL

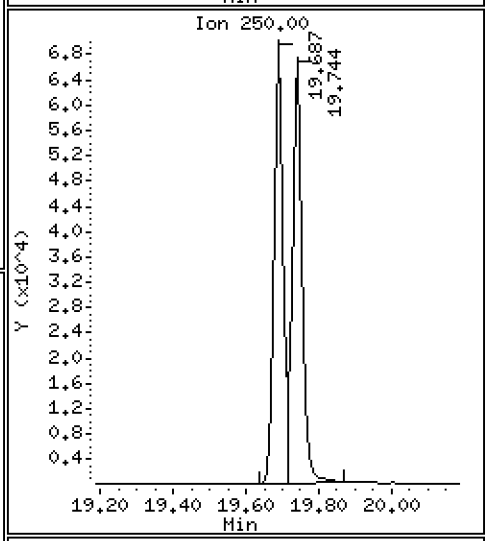


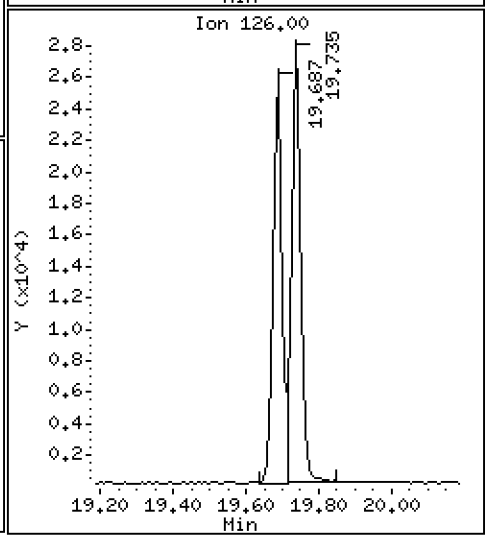












Date : 16-DEC-2016 17:04

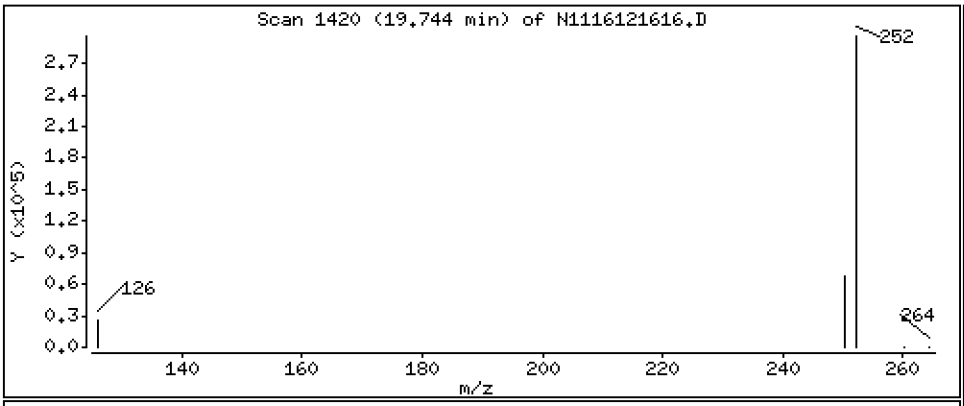
Client ID: Instrument: nt11.i

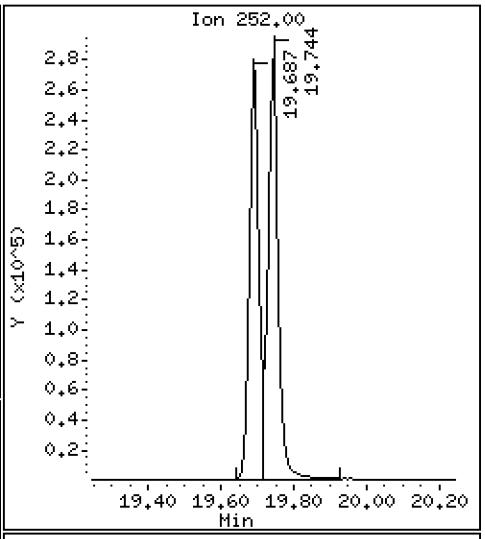
Sample Info: SEL0249-SCV1

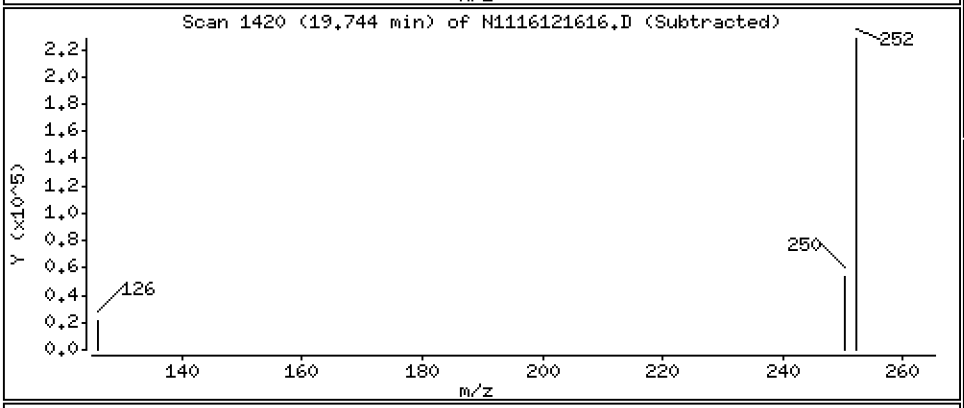
Operator: VTS

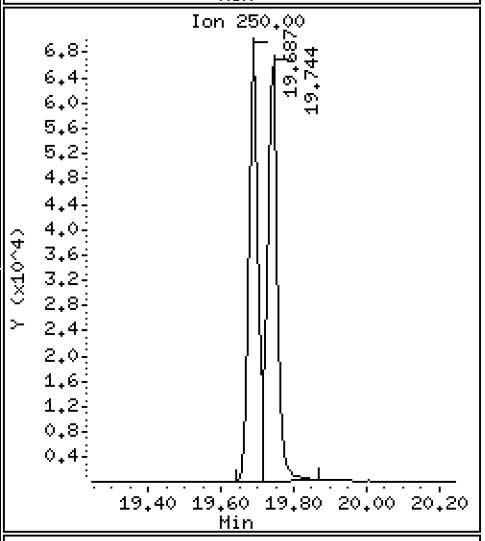
Column phase: Rxi-17Sil MS Column diameter: 0.25

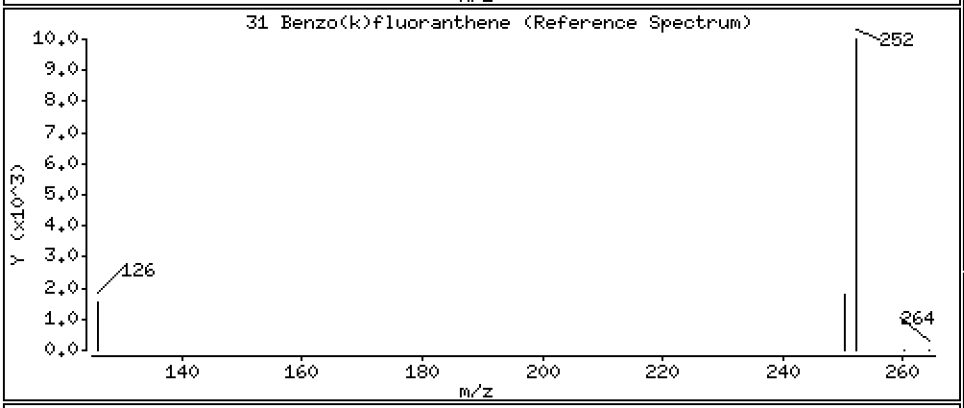
31 Benzo(k)fluoranthene Concentration: 272 ng/mL

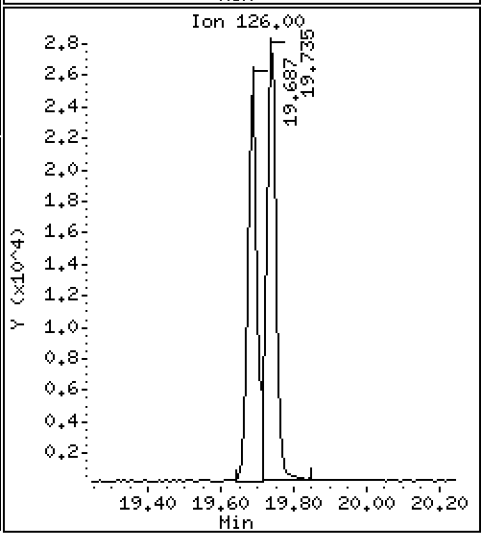


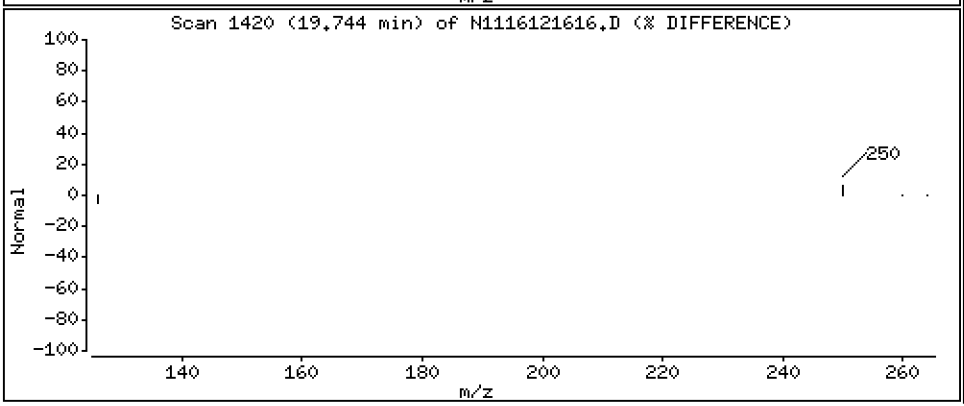












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

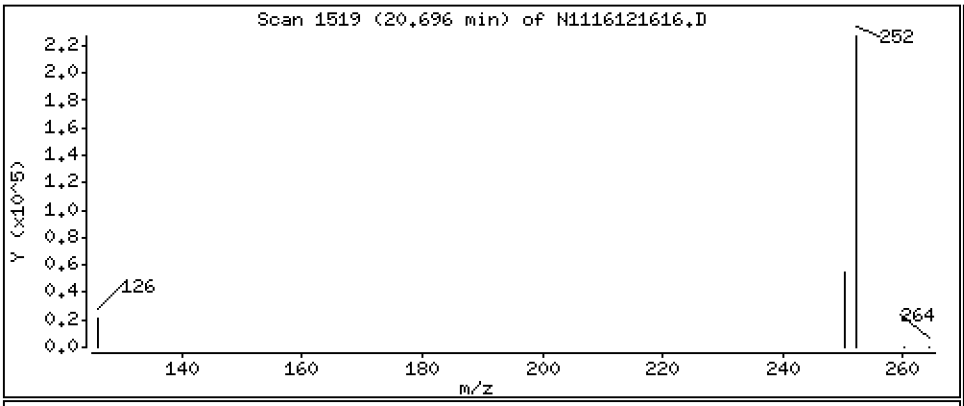
Operator: VTS

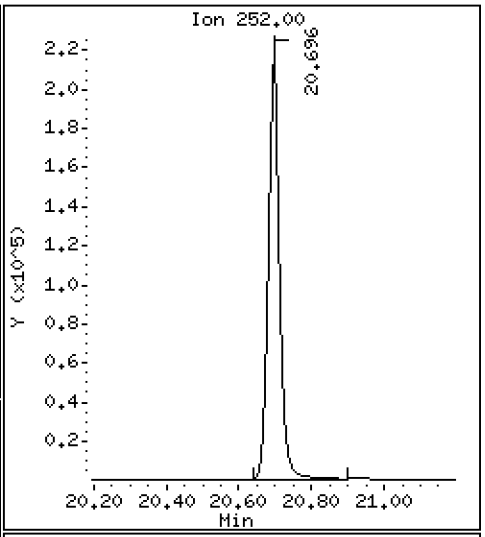
Column phase: Rxi-17Sil MS

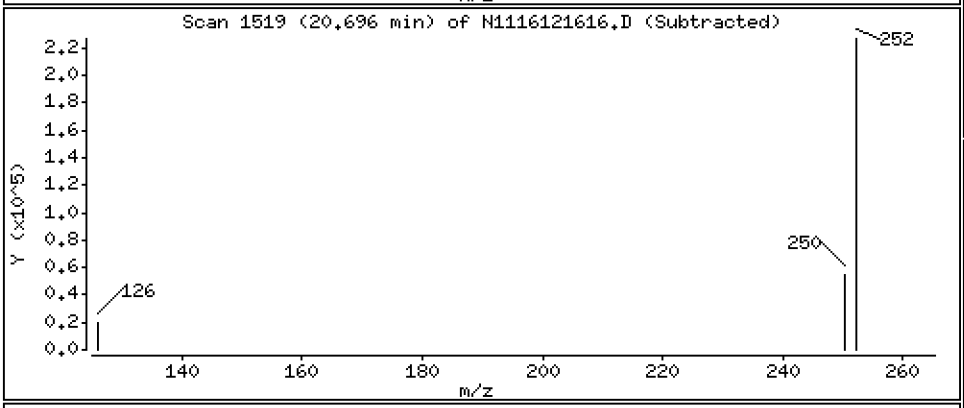
Column diameter: 0.25

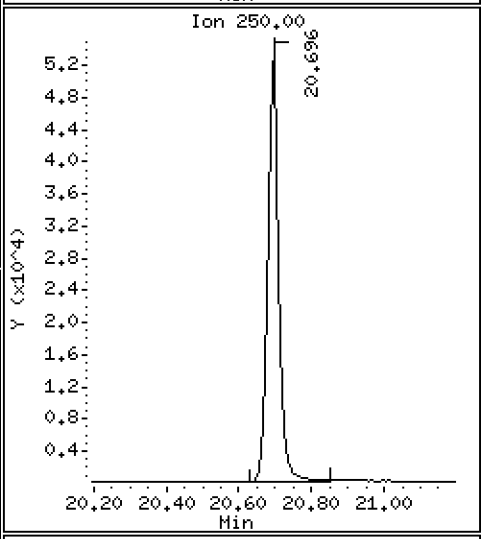
35 Benzo(a)pyrene

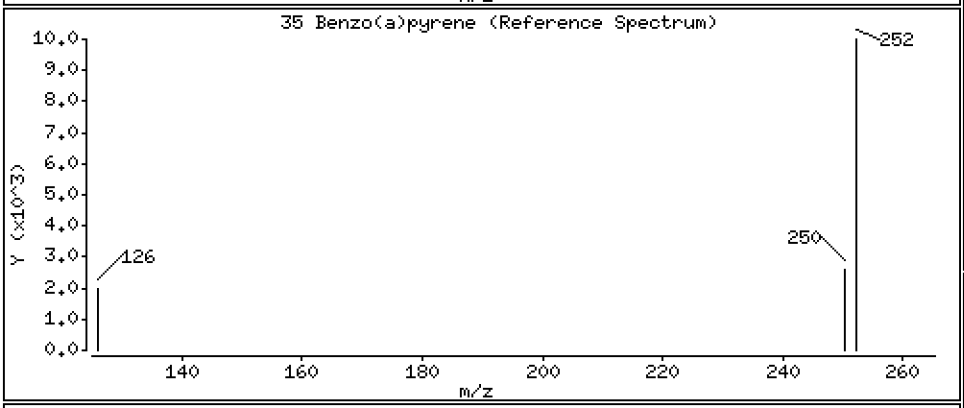
Concentration: 262 ng/mL

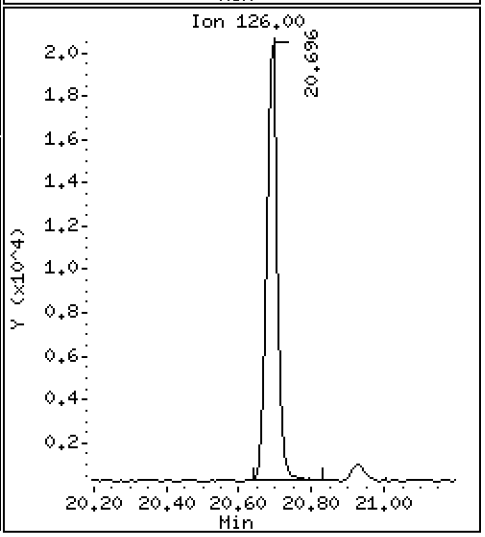


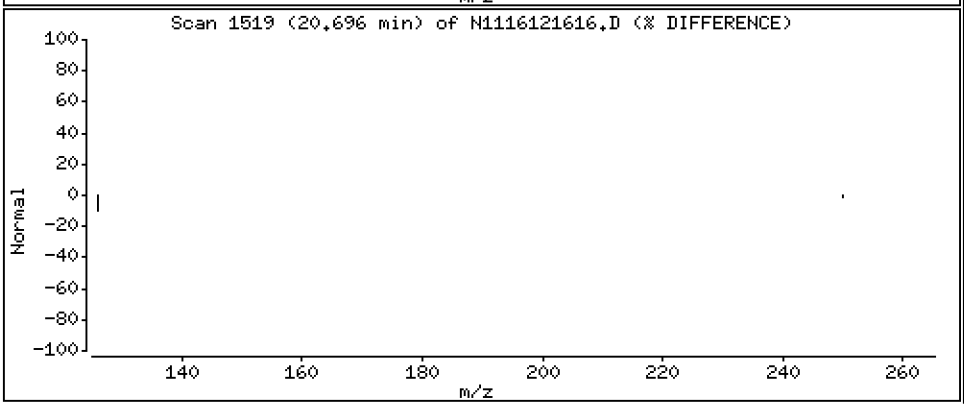












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

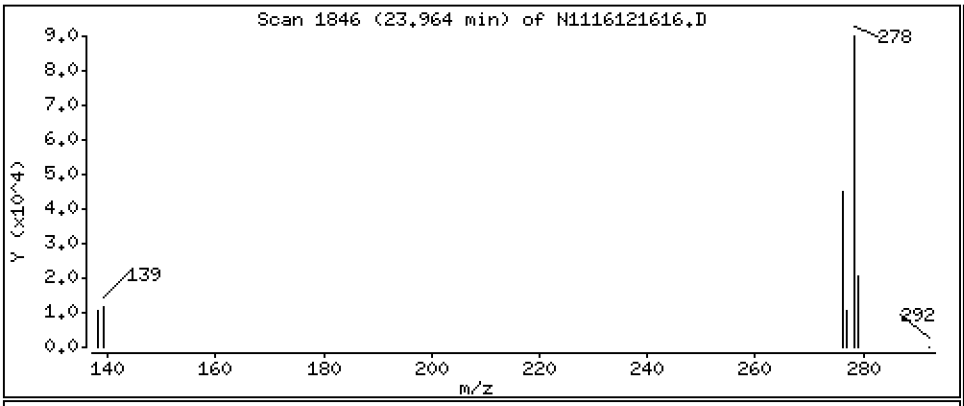
Operator: VTS

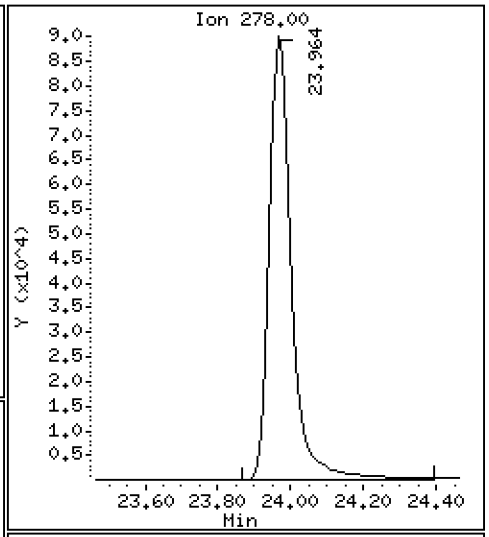
Column phase: Rxi-17Sil MS

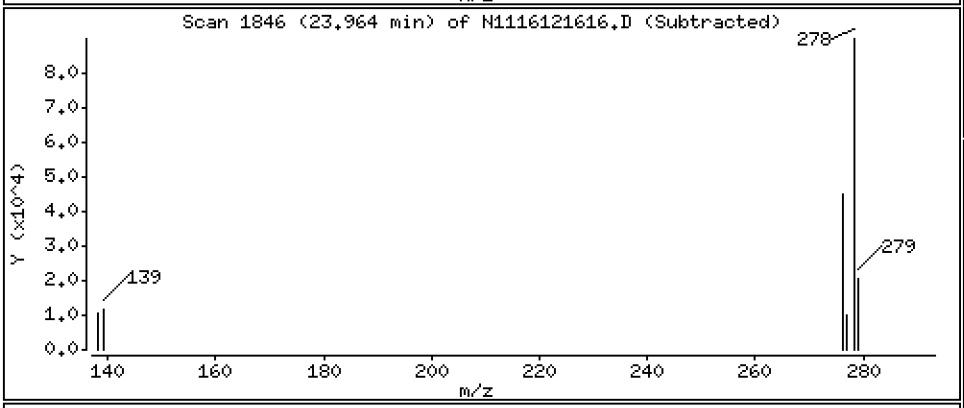
Column diameter: 0.25

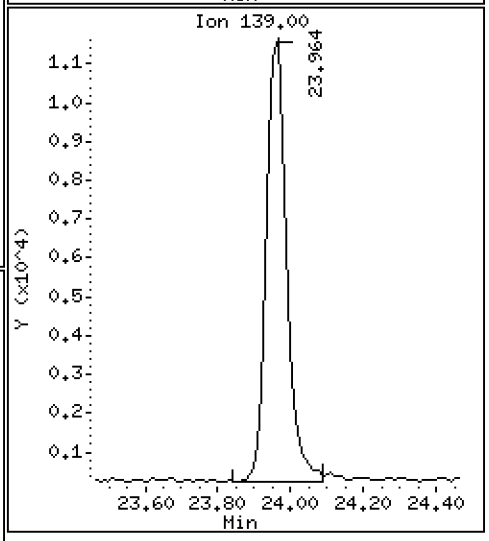
39 Dibenzo(a,h)anthracene

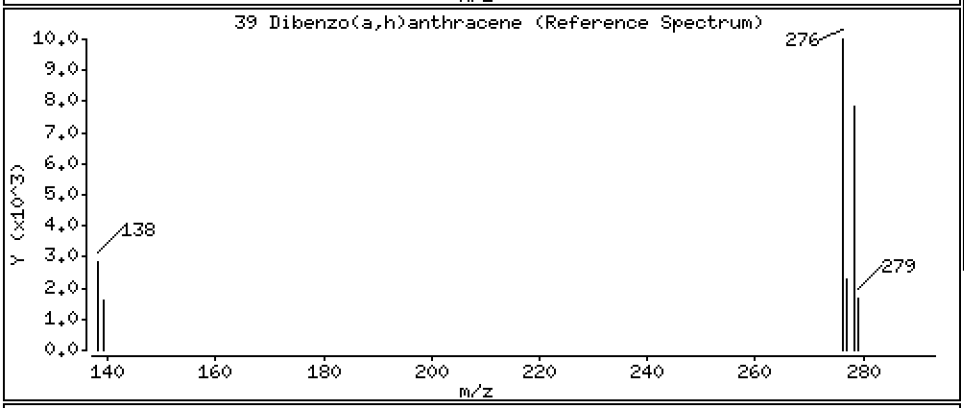
Concentration: 265 ng/mL

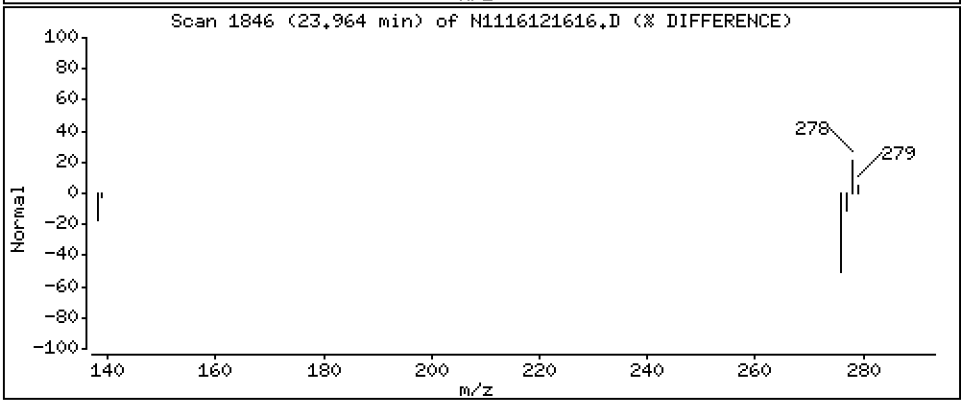












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

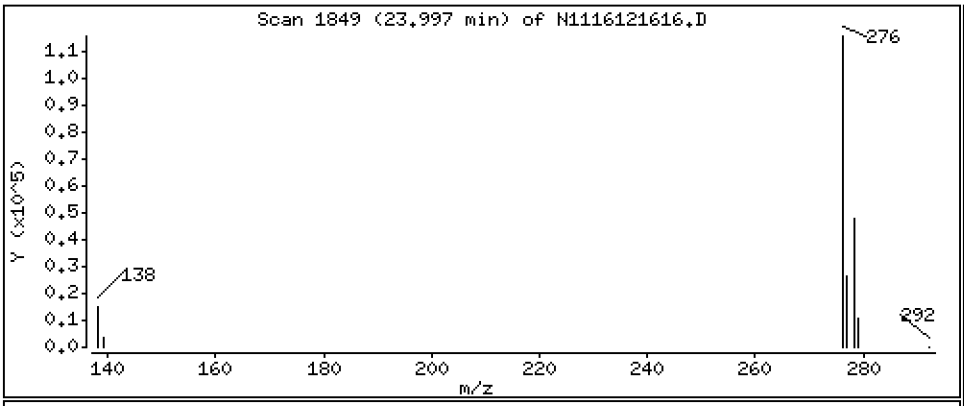
Operator: VTS

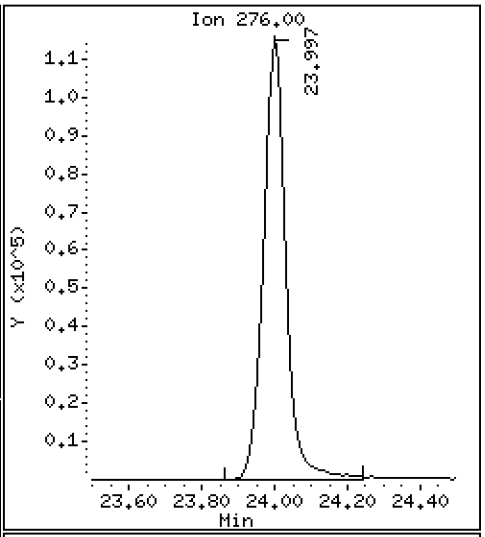
Column phase: Rxi-17Sil MS

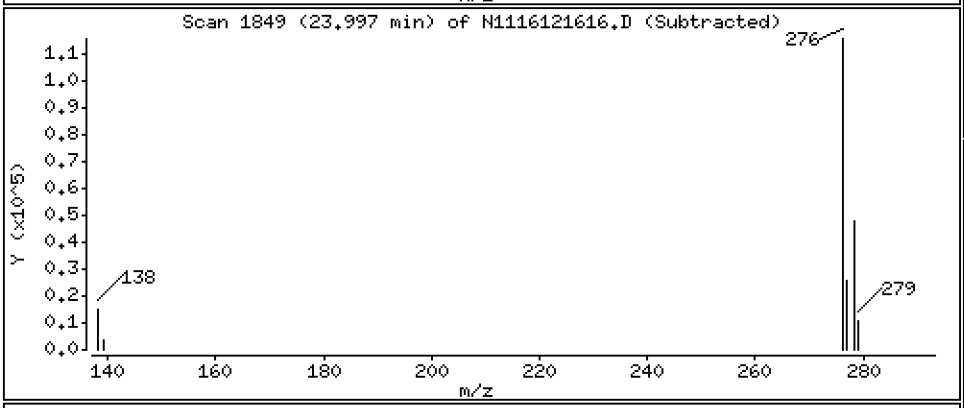
Column diameter: 0.25

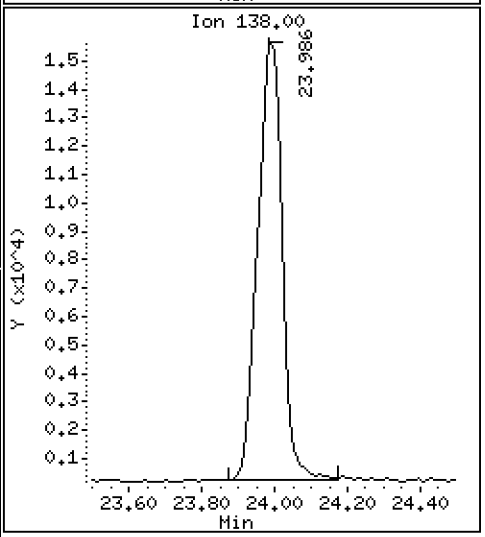
40 Indeno(1,2,3-cd)pyrene

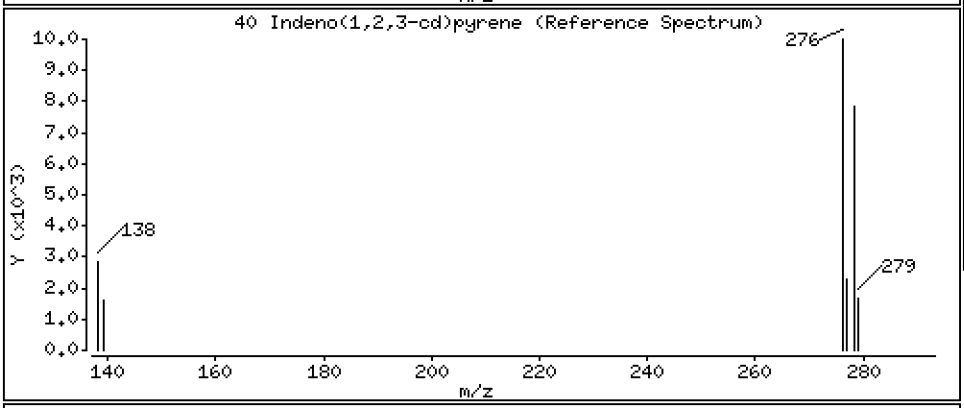
Concentration: 267 ng/mL

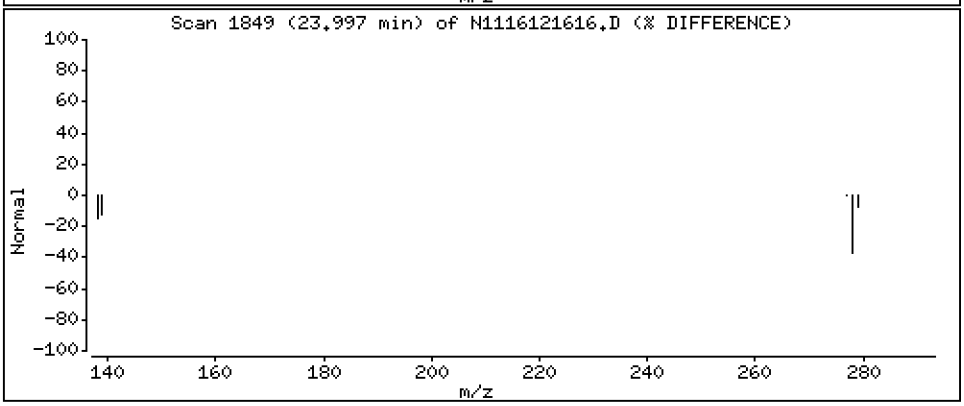












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

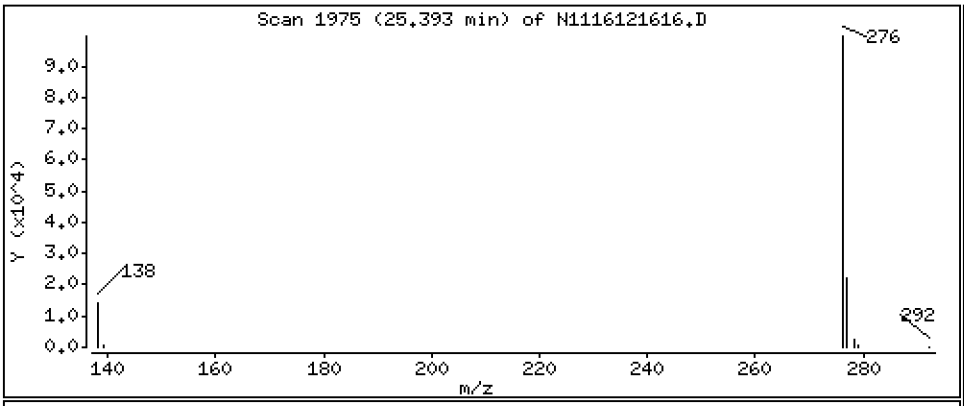
Operator: VTS

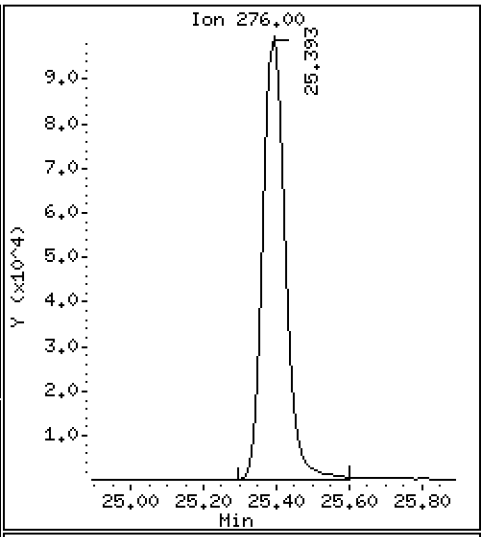
Column phase: Rxi-17Sil MS

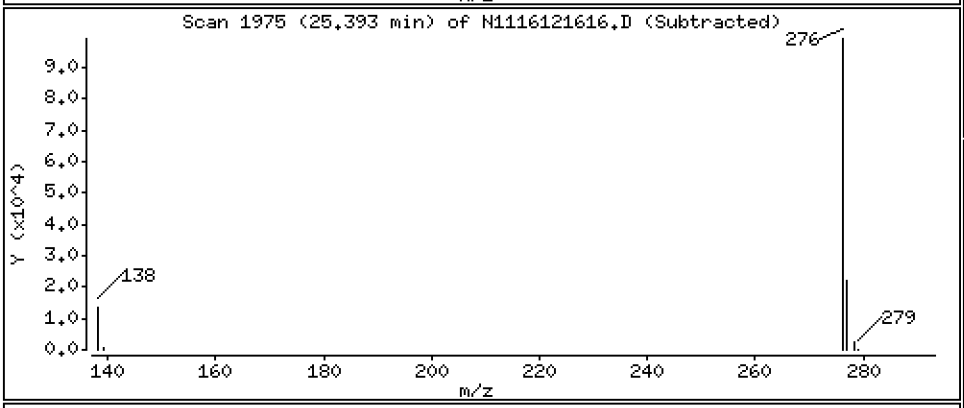
Column diameter: 0.25

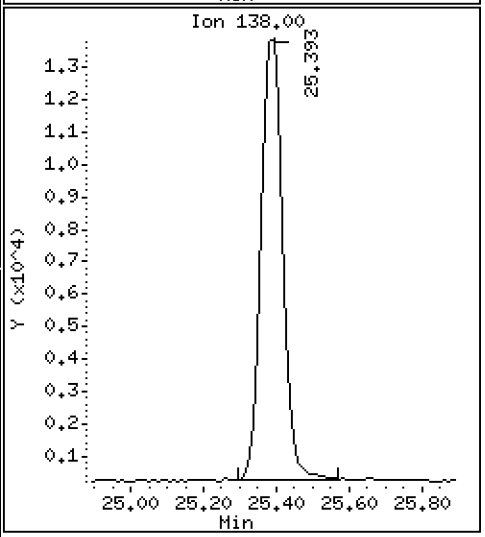
41 Benzo(g,h,i)perylene

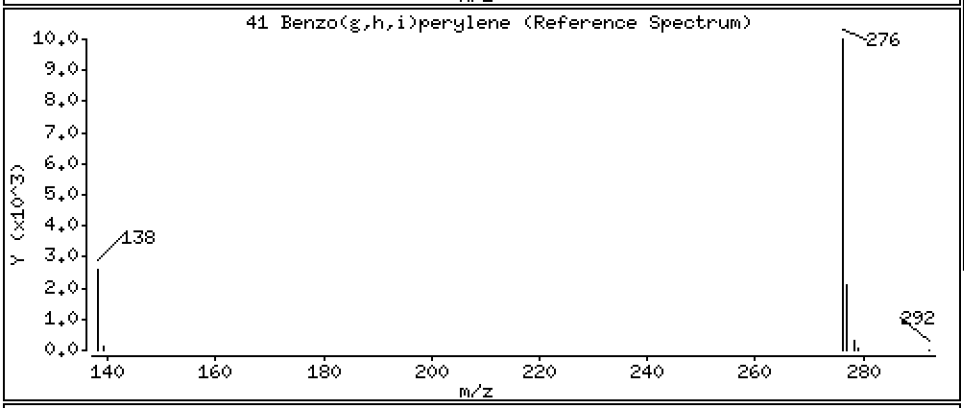
Concentration: 264 ng/mL

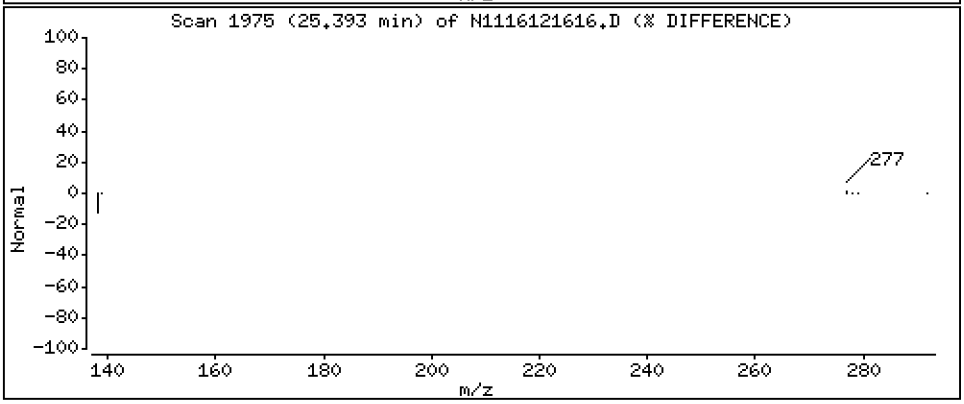












ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D
Lab Smp Id: SEL0249-SCV1
Inj Date : 16-DEC-2016 17:04 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : SEL0249-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Meth Date : 17-Dec-2016 08:19 van Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1 Naphthalene-d8	136	7.235	7.234	(1.000)	270210	200.000	
	2 Naphthalene	128	7.271	7.262	(1.005)	341030	254.634	255
	3 Benzo(b)thiophene	134	Compound Not Detected.					
$	4 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	5 2-Methylnaphthalene	142	8.264	8.264	(1.142)	332105	252.440	252
	6 1-Methylnaphthalene	142	8.526	8.526	(1.179)	317520	245.660	246
	7 2-Chloronaphthalene	162	9.178	9.178	(0.894)	317244	249.528	250
	8 Biphenyl	154	Compound Not Detected.					
	9 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	10 Acenaphthylene	152	10.107	10.107	(0.985)	373828	257.034	257
*	11 Acenaphthene-d10	164	10.261	10.261	(1.000)	162809	200.000	
	12 Acenaphthene	153	10.324	10.324	(1.006)	266766	280.343	280
	13 Dibenzofuran	168	10.519	10.519	(1.025)	390311	276.512	277
	14 2,3,5-Trimethylnaphthalene	170	Compound Not Detected.					
$	15 Fluorene-d10	174	Compound Not Detected.					
	16 Fluorene	166	11.151	11.151	(1.087)	305233	269.796	270
	17 Dibenzothiophene	184	Compound Not Detected.					
*	18 Phenanthrene-d10	188	12.945	12.945	(1.000)	315262	200.000	
	19 Phenanthrene	178	12.987	12.987	(1.003)	448527	254.489	254
$	20 Anthracene-d10	188	Compound Not Detected.					
	21 Anthracene	178	13.050	13.050	(1.008)	435839	259.273	259
	22 Carbazole	167	13.722	13.722	(1.060)	482620	272.093	272
	23 1-Methylphenanthrene	192	Compound Not Detected.					
$	24 Fluoranthene-d10	212	Compound Not Detected.					
	25 Fluoranthene	202	15.094	15.094	(1.166)	531729	261.828	262
	26 Pyrene	202	15.603	15.603	(0.881)	541966	249.918	250
	27 Benzo(a)anthracene	228	17.610	17.610	(0.994)	572198	259.210	259
*	28 Chrysene-d12	240	17.710	17.710	(1.000)	378953	200.000	
	29 Chrysene	228	17.760	17.760	(1.003)	555847	246.520	247
	30 Benzo(b)fluoranthene	252	19.686	19.686	(0.940)	540310	259.312	259
	31 Benzo(k)fluoranthene	252	19.744	19.744	(0.943)	590842	271.687	272
	32 Benzo(j)fluoranthene	252	Compound Not Detected.					
$	33 Benzo(e)pyrene-d12	264	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
34	Benzo(e)pyrene	252	Compound Not Detected.					
35	Benzo(a)pyrene	252	20.695	20.695	(0.989)	484854	262.242	262
* 36	Perylene-d12	264	20.935	20.935	(1.000)	372273	200.000	
37	Perylene	252	Compound Not Detected.					
$ 38	Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
39	Dibenzo(a,h)anthracene	278	23.963	23.963	(1.145)	374624	265.238	265
40	Indeno(1,2,3-cd)pyrene	276	23.996	23.996	(1.146)	482901	267.421	267
41	Benzo(g,h,i)perylene	276	25.392	25.392	(1.213)	419896	264.408	264

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121616.D
Lab Smp Id: SEL0249-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Misc Info:

Calibration Date: 16-DEC-2016
Calibration Time: 13:50
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	270210	-20.91
11 Acenaphthene-d10	209310	104655	418620	162809	-22.22
18 Phenanthrene-d10	404977	202489	809954	315262	-22.15
28 Chrysene-d12	465046	232523	930092	378953	-18.51
36 Perylene-d12	454694	227347	909388	372273	-18.13

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.24	0.00
11 Acenaphthene-d10	10.26	9.76	10.76	10.26	0.00
18 Phenanthrene-d10	12.96	12.46	13.46	12.95	-0.08
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.94	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121616.D

Lab ID: SEL0249-SCV1
nt11.i, 20161216A.b\lowsim.m,   16-DEC-2016 17:04

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161216A.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Analytical Resources, Incorporated

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Calibration: ZK00080
Laboratory ID: SEK0335-SCV1
Sequence: SEK0335
Standard ID: D004766

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Naphthalene	250.00	260	4.2	20.00
2-Methylnaphthalene	250.00	248	-0.7	20.00
Acenaphthylene	250.00	254	1.8	20.00
Acenaphthene	250.00	265	6.1	20.00
Fluorene	250.00	241	-3.6	20.00
Phenanthrene	250.00	258	3.3	20.00
Anthracene	250.00	264	5.7	20.00
Fluoranthene	250.00	253	1.2	20.00
Pyrene	250.00	269	7.5	20.00
Benzo(a)anthracene	250.00	249	-0.3	20.00
Chrysene	250.00	244	-2.2	20.00
Benzo(b)fluoranthene	250.00	231	-7.5	20.00
Benzo(k)fluoranthene	250.00	243	-2.8	20.00
Benzo(a)pyrene	250.00	250	-0.2	20.00
Indeno(1,2,3-cd)pyrene	250.00	242	-3.3	20.00
Dibenzo(a,h)anthracene	250.00	244	-2.4	20.00
Benzo(g,h,i)perylene	250.00	245	-2.2	20.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

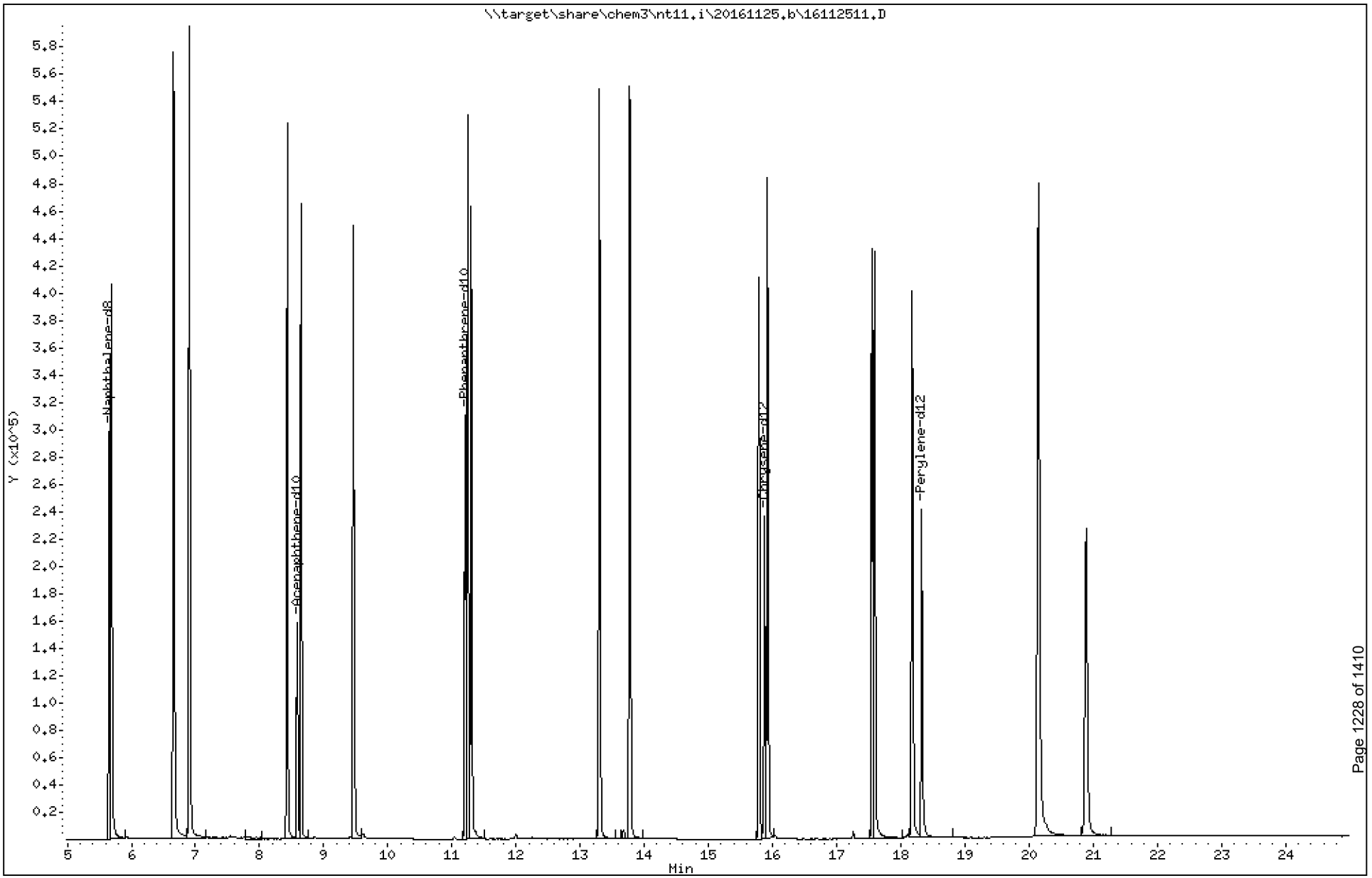
Instrument: nt11.i

Sample Info: SEK0335-SCV1

Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

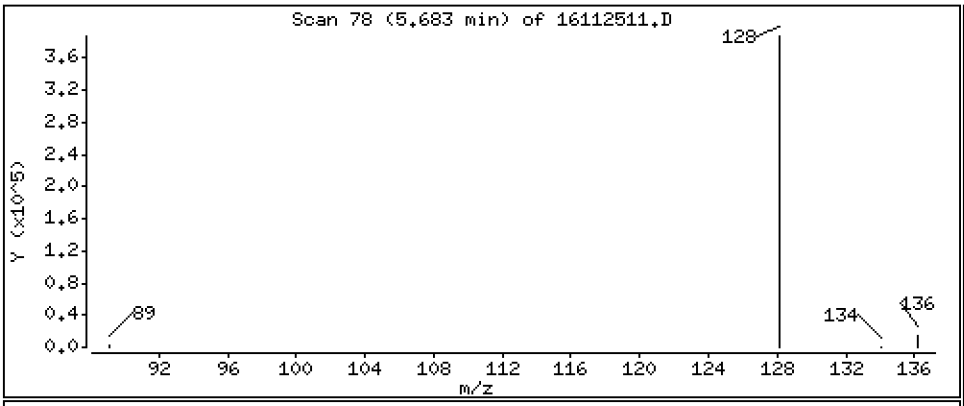
Operator: JW

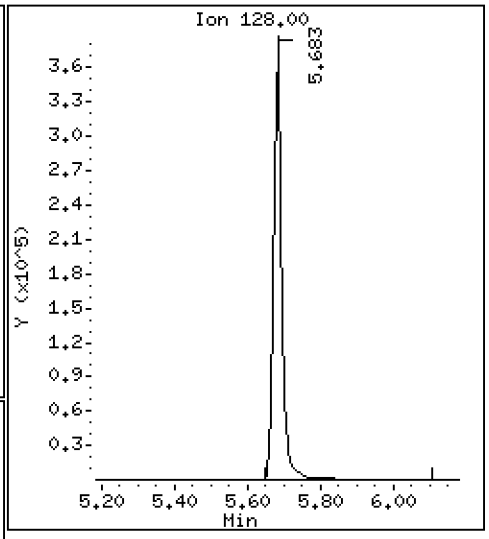
Column phase: Rxi-17Sil MS

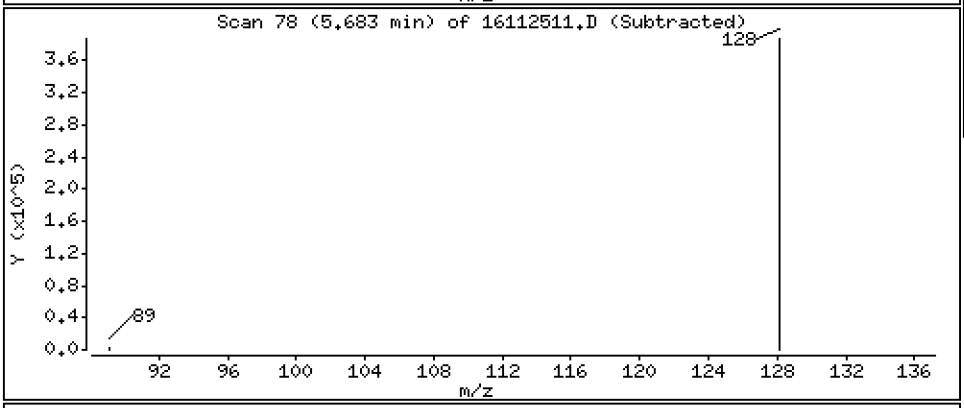
Column diameter: 0.25

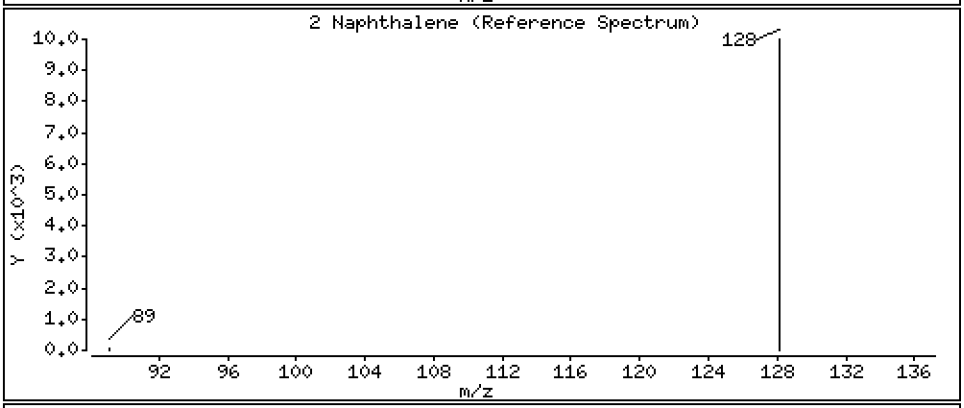
2 Naphthalene

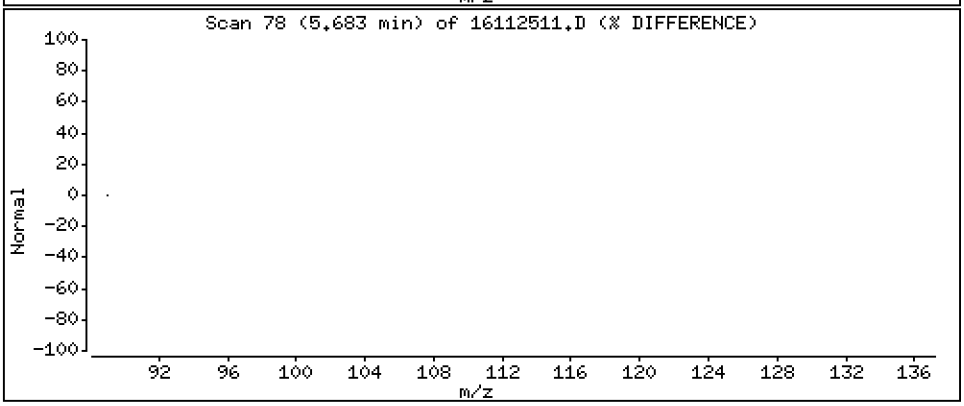
Concentration: 260 ng/mL











Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

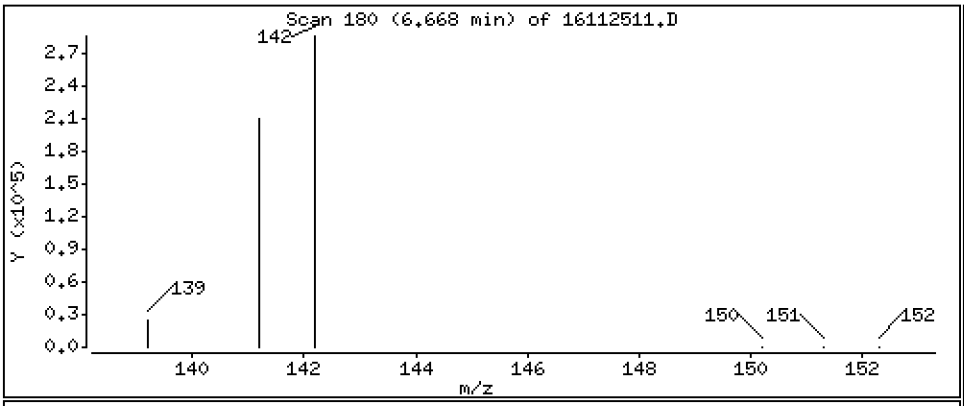
Operator: JW

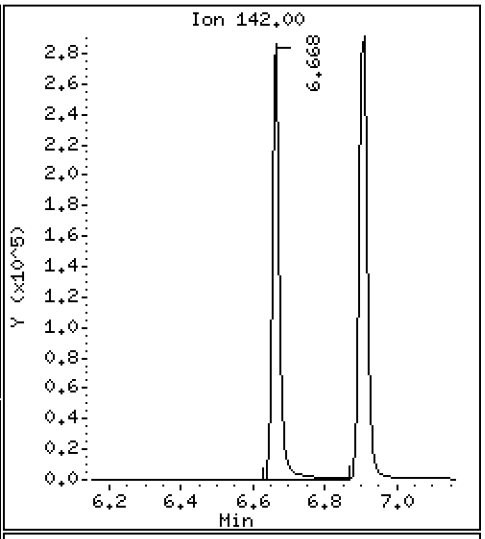
Column phase: Rxi-17Sil MS

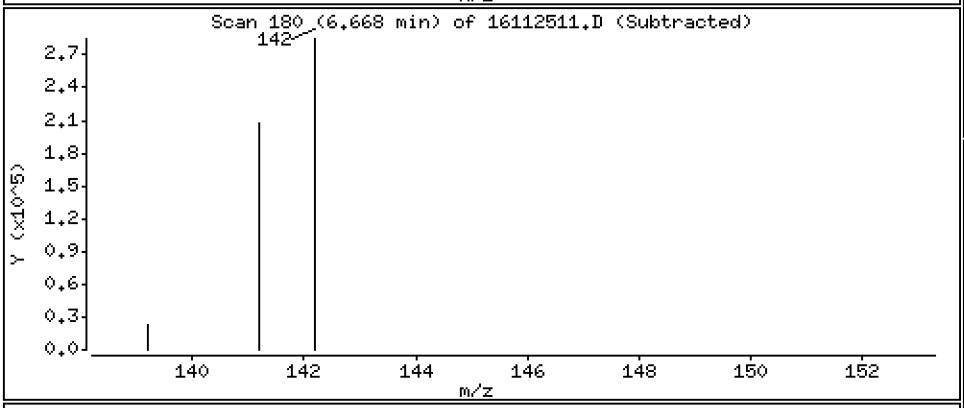
Column diameter: 0.25

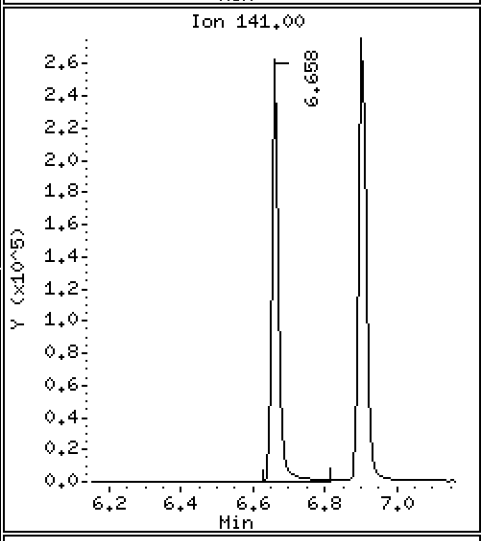
5 2-Methylnaphthalene

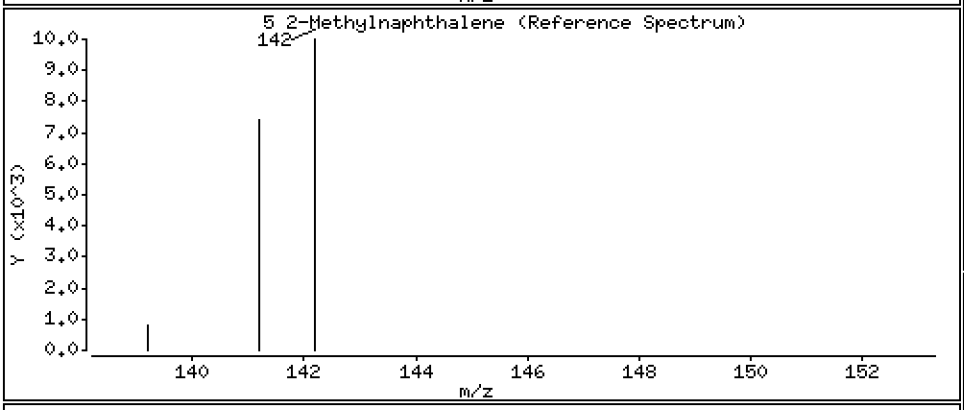
Concentration: 248 ng/mL

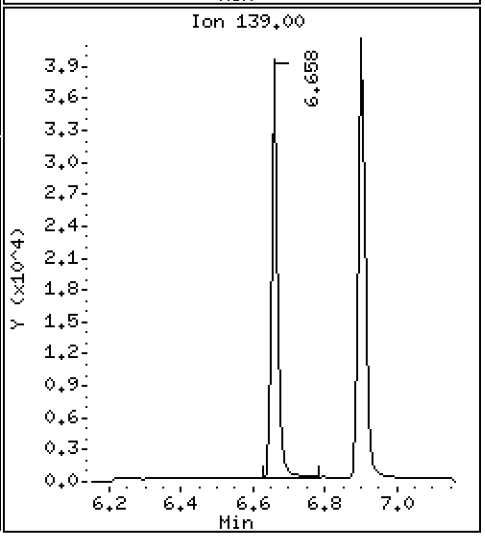


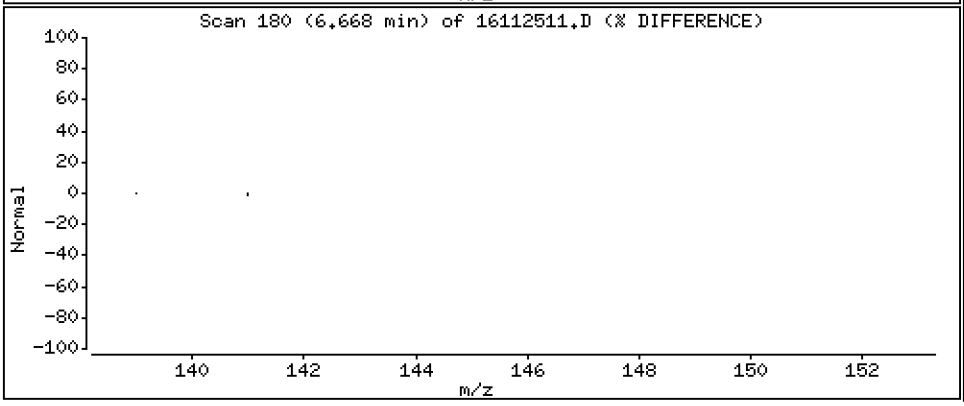












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

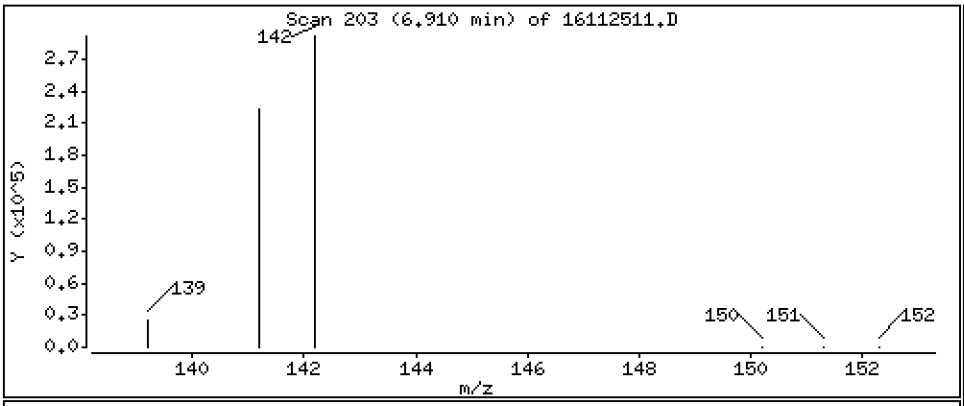
Operator: JW

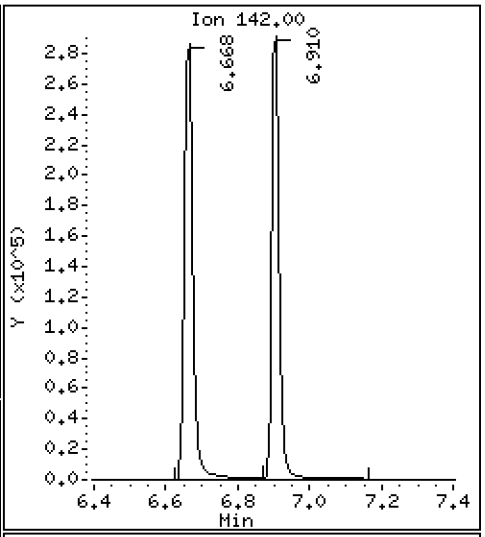
Column phase: Rxi-17Sil MS

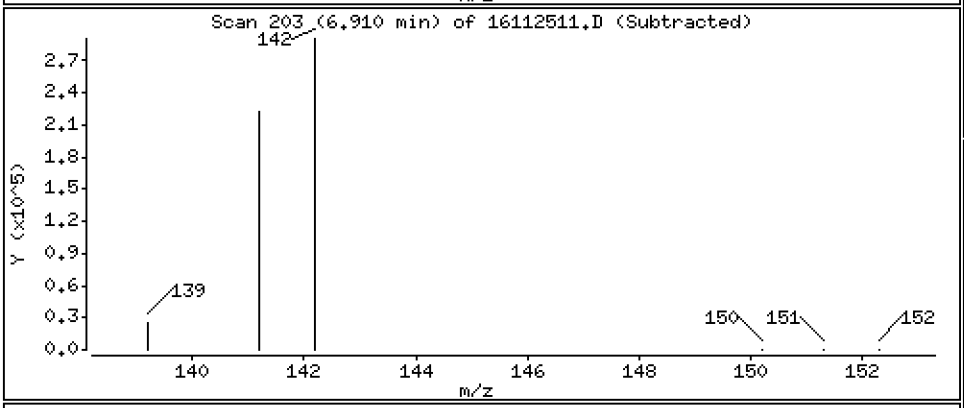
Column diameter: 0.25

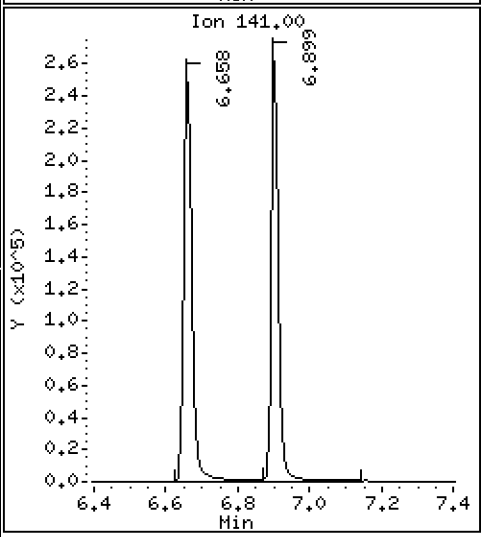
6 1-Methylnaphthalene

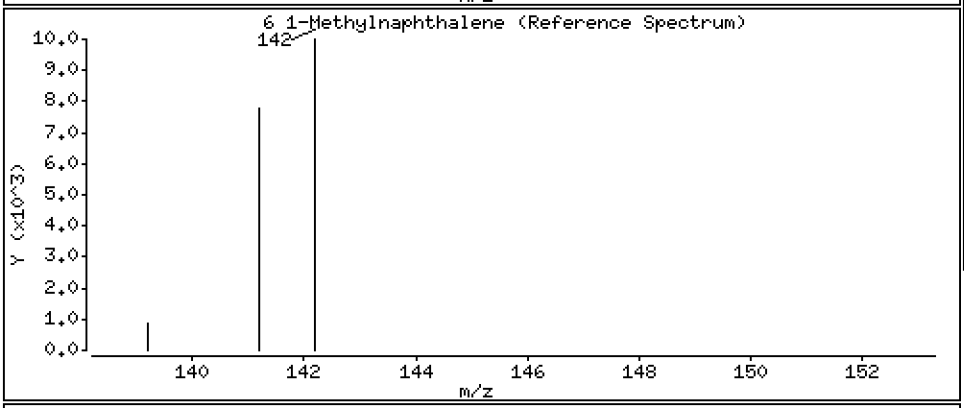
Concentration: 255 ng/mL

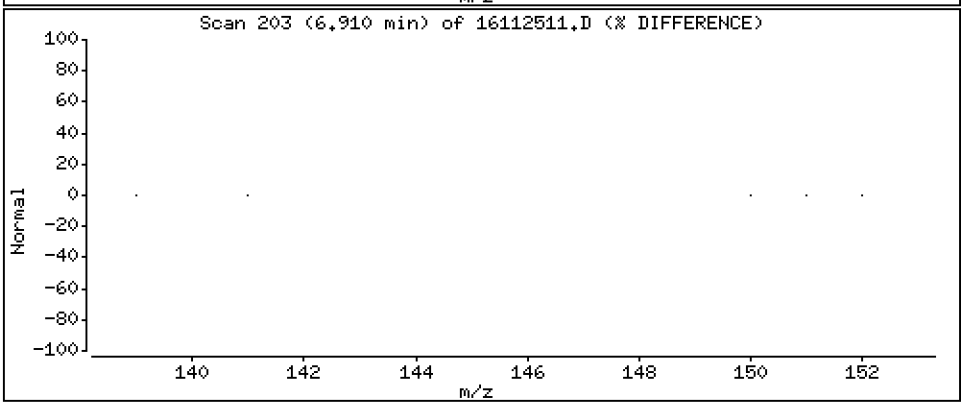












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

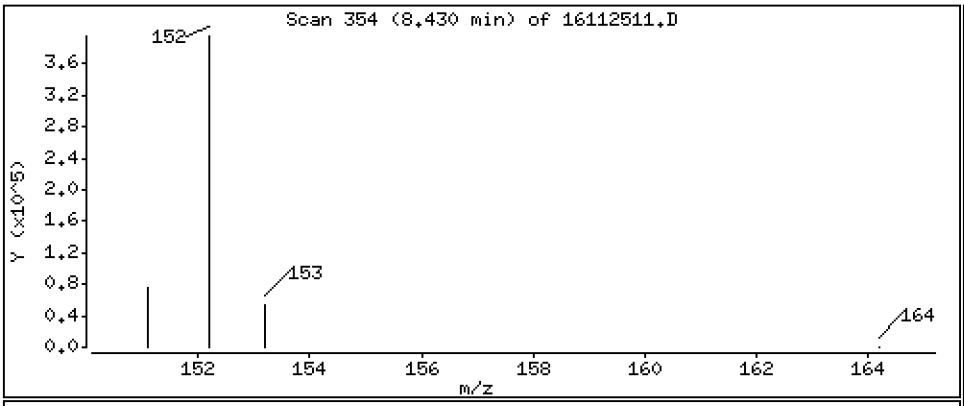
Operator: JW

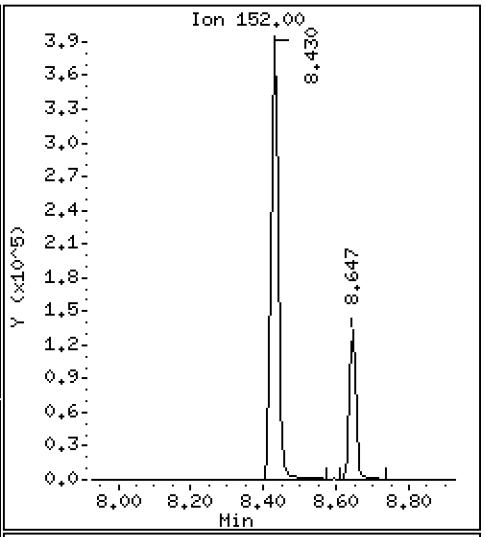
Column phase: Rxi-17Sil MS

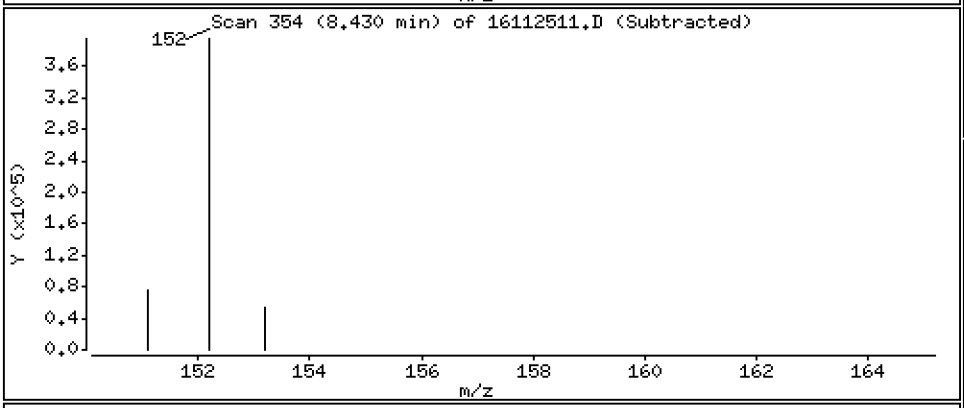
Column diameter: 0.25

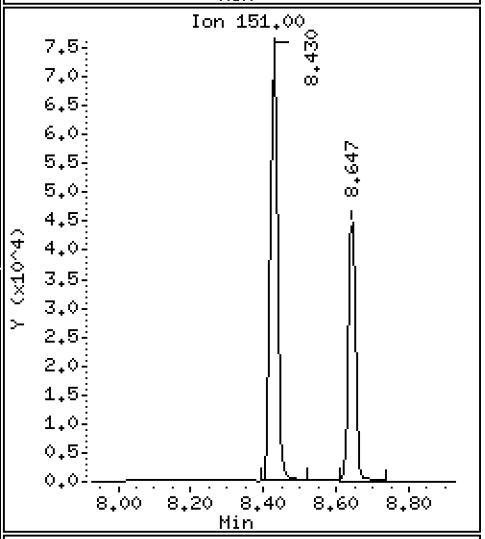
10 Acenaphthylene

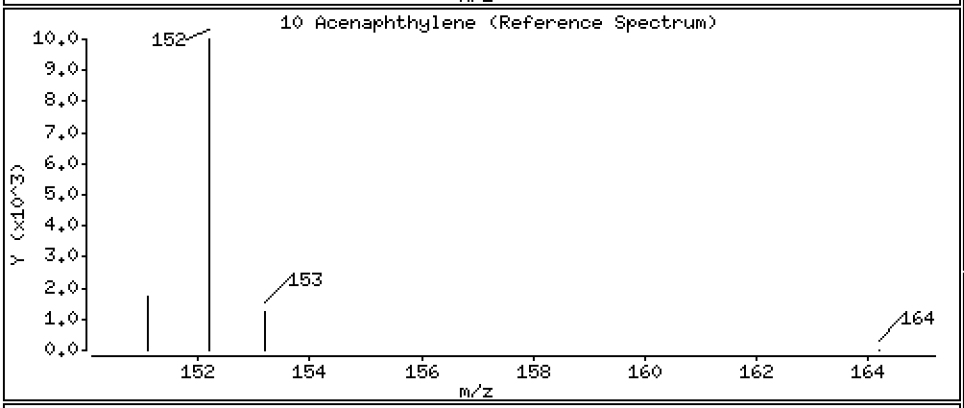
Concentration: 254 ng/mL

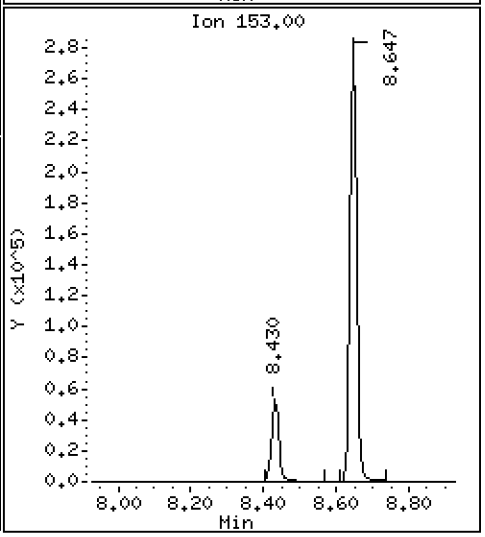


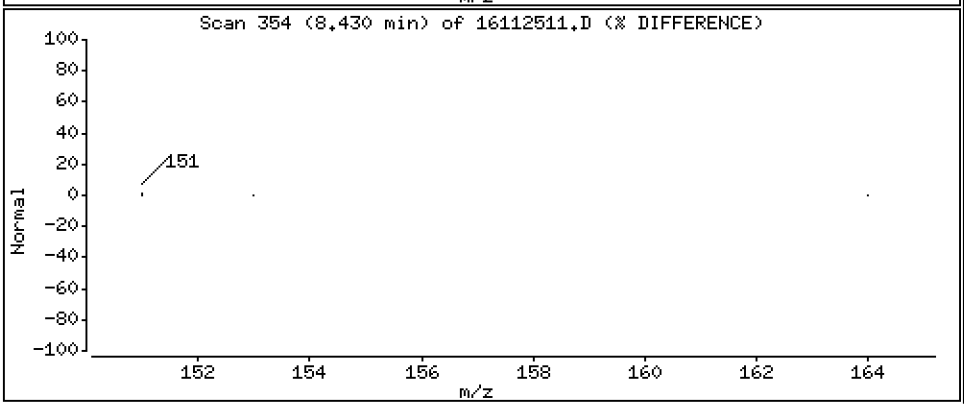












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

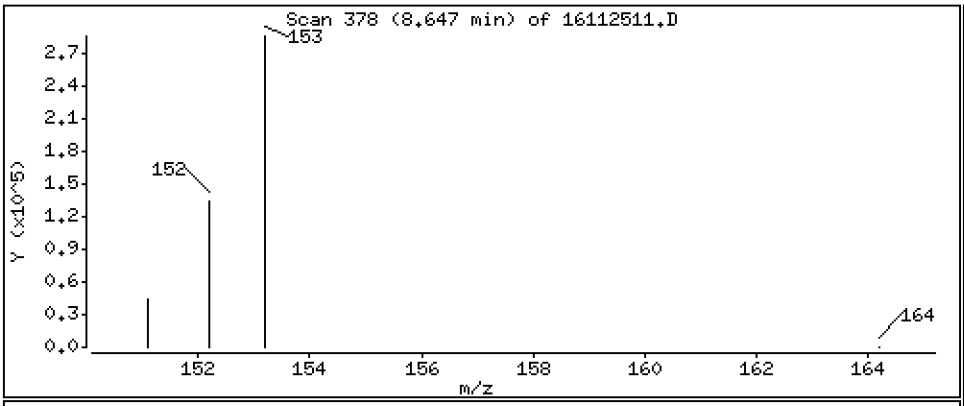
Operator: JW

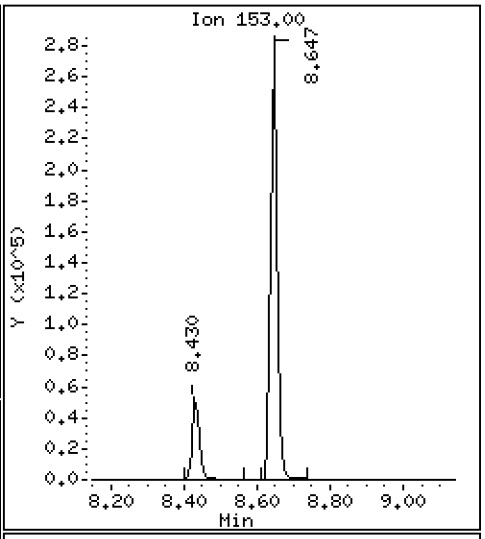
Column phase: Rxi-17Sil MS

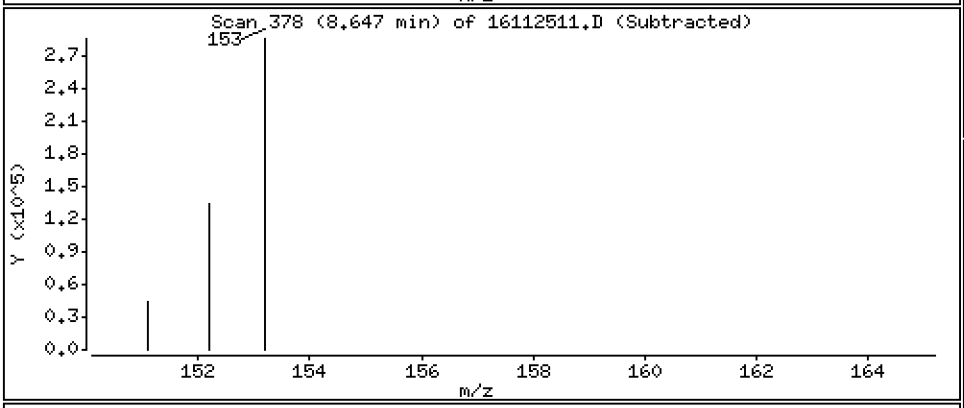
Column diameter: 0.25

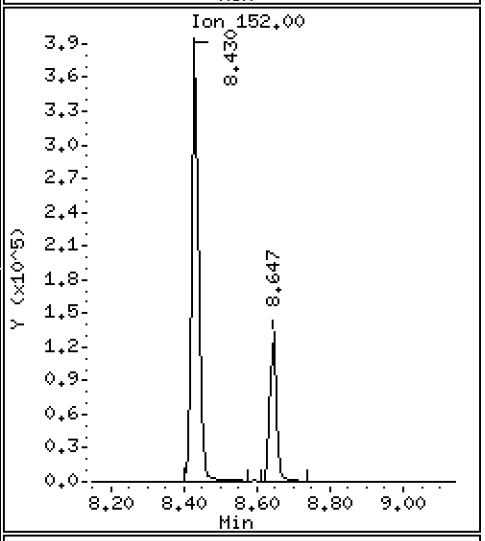
12 Acenaphthene

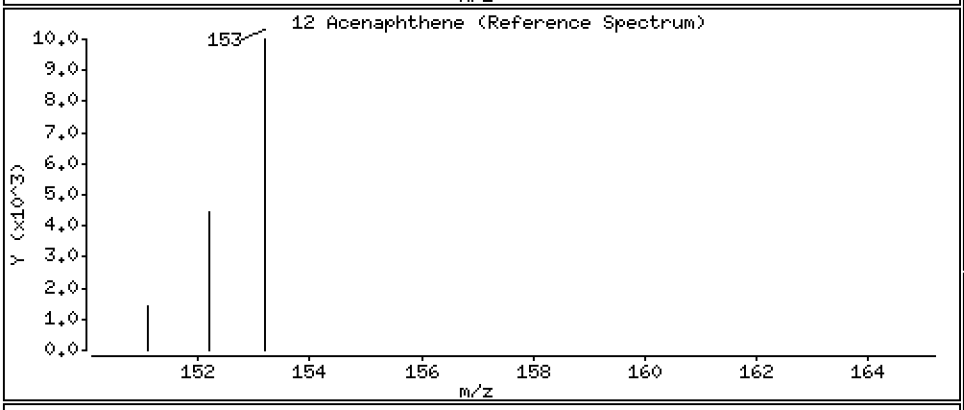
Concentration: 265 ng/mL

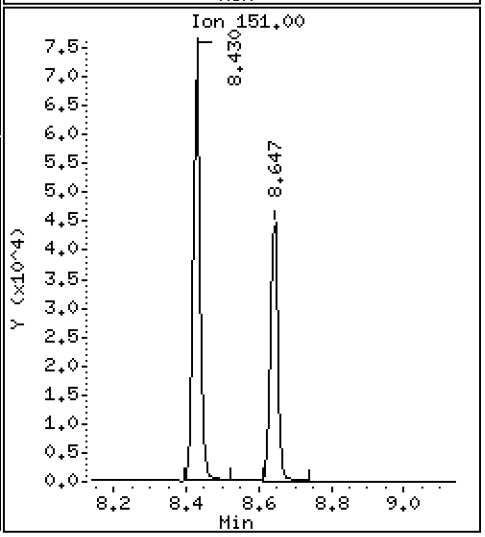


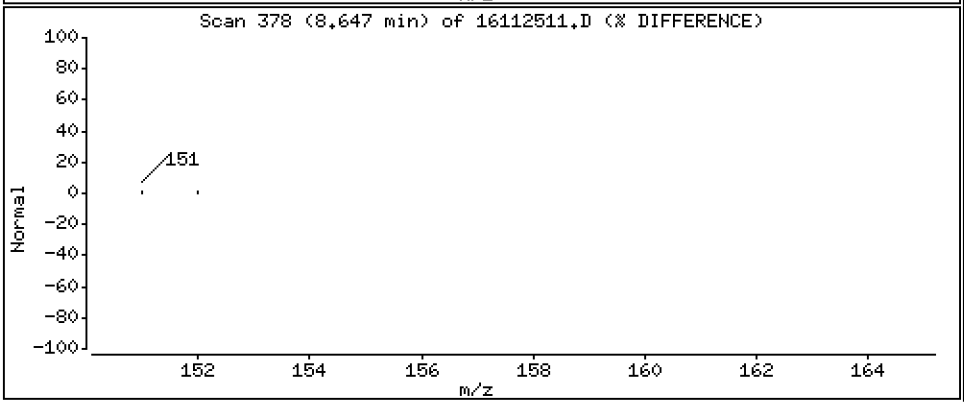












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

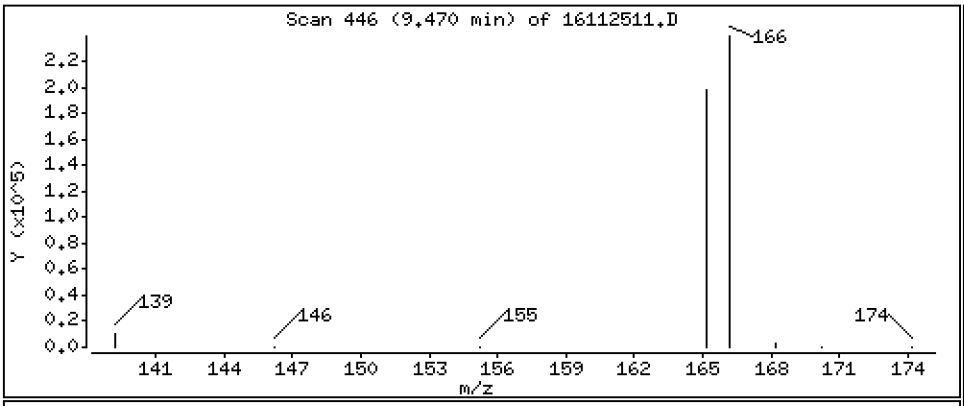
Operator: JW

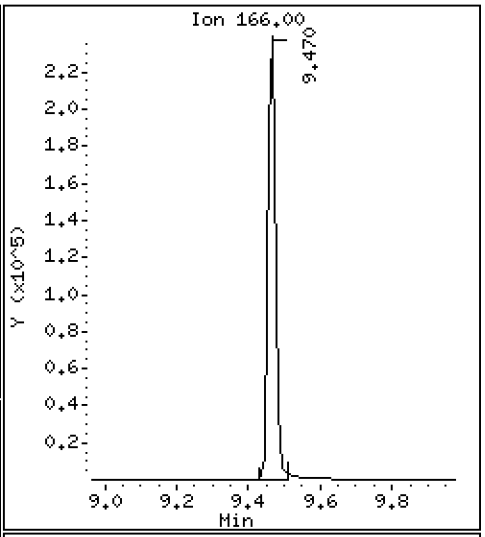
Column phase: Rxi-17Sil MS

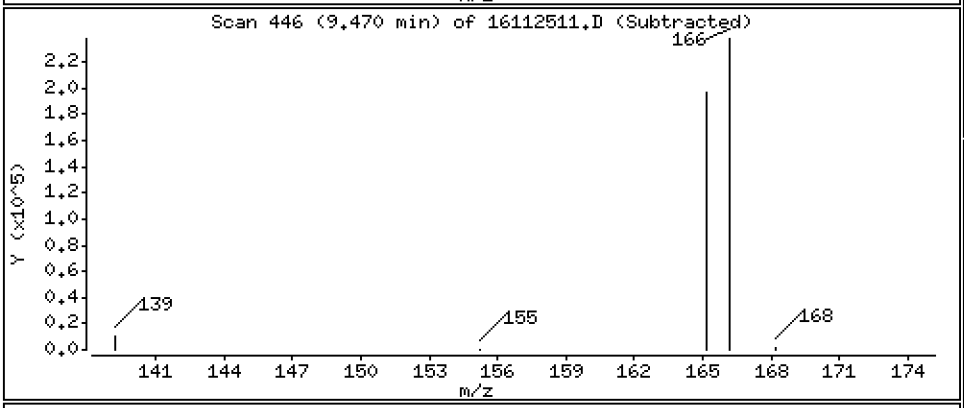
Column diameter: 0.25

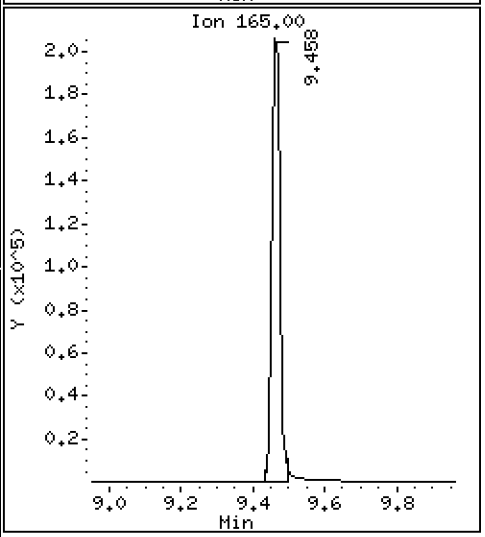
16 Fluorene

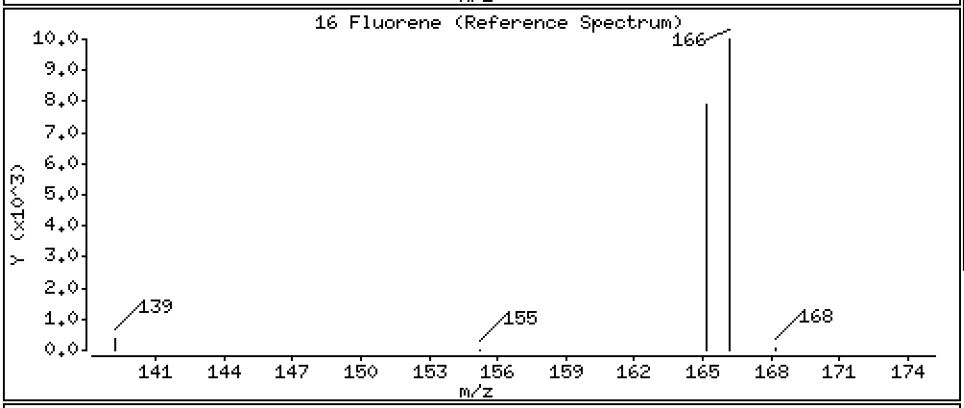
Concentration: 241 ng/mL

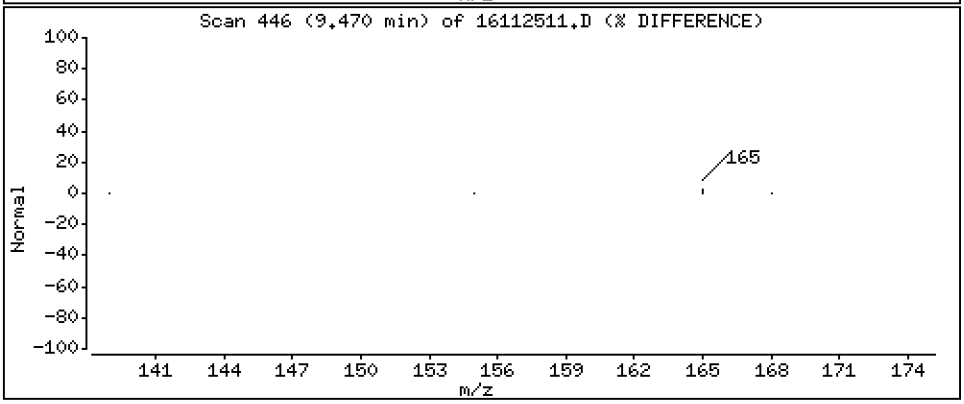












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

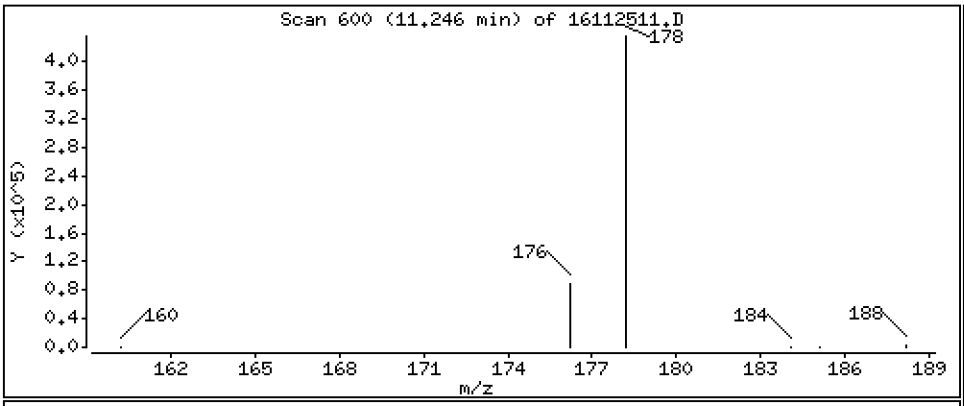
Operator: JW

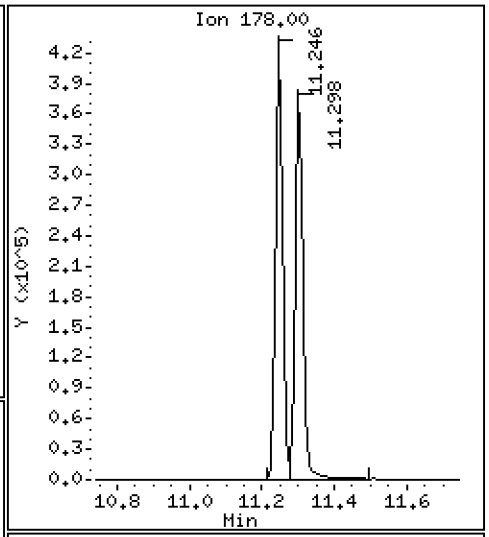
Column phase: Rxi-17Sil MS

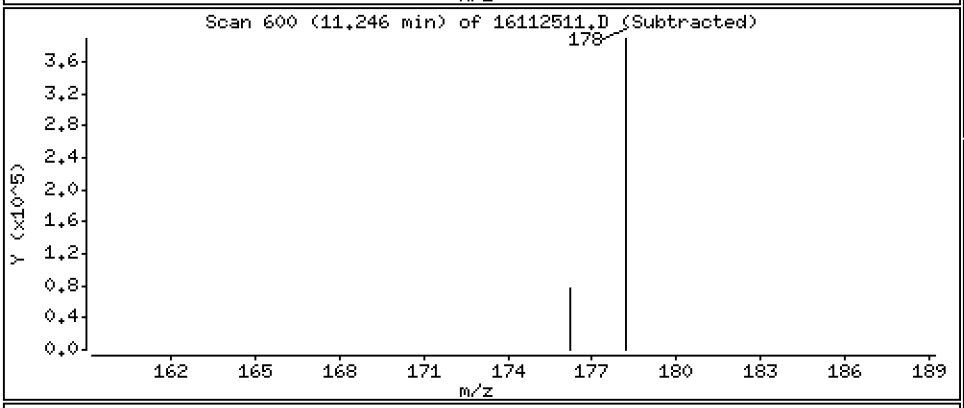
Column diameter: 0.25

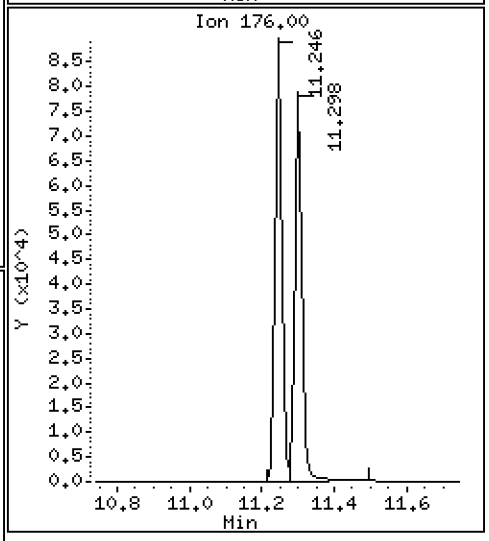
19 Phenanthrene

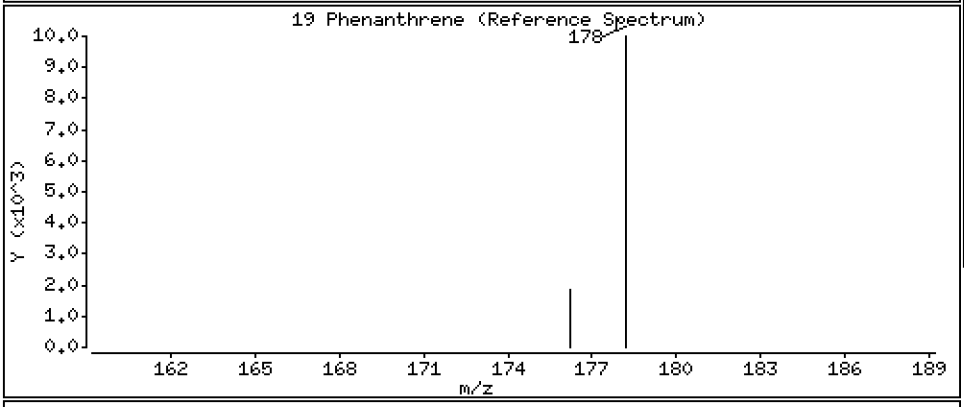
Concentration: 258 ng/mL

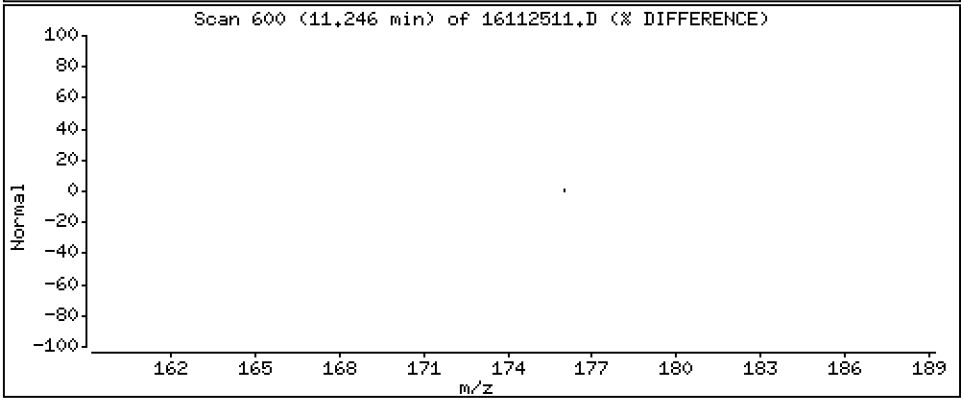












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

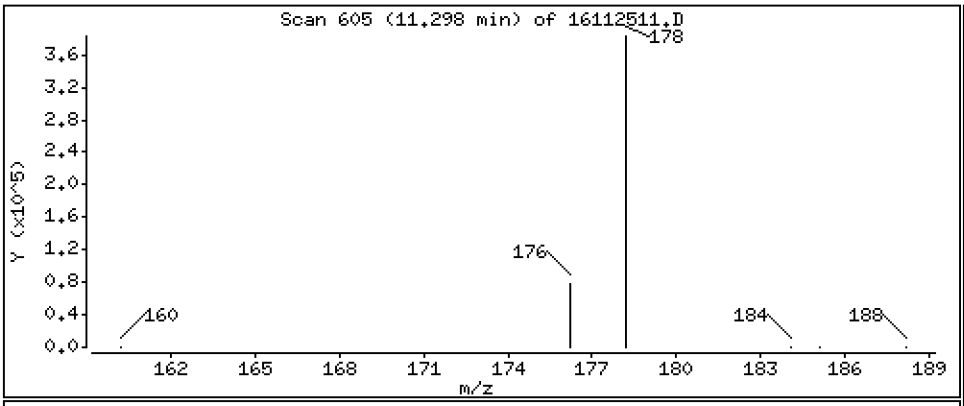
Operator: JW

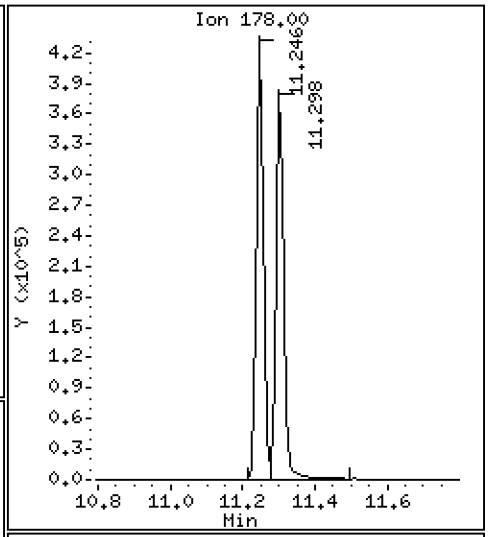
Column phase: Rxi-17Sil MS

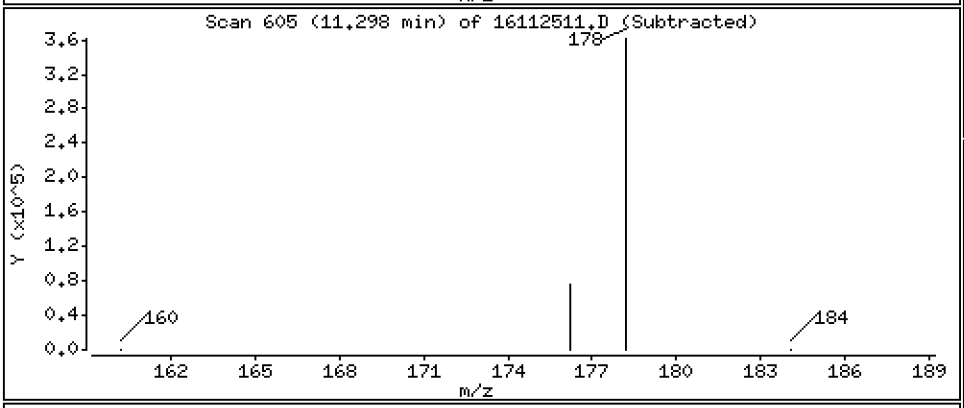
Column diameter: 0.25

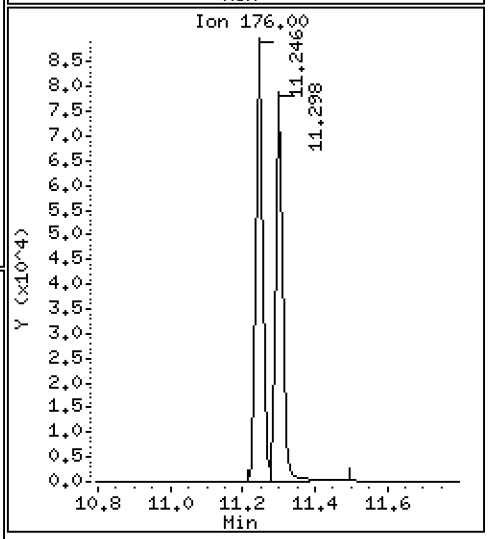
21 Anthracene

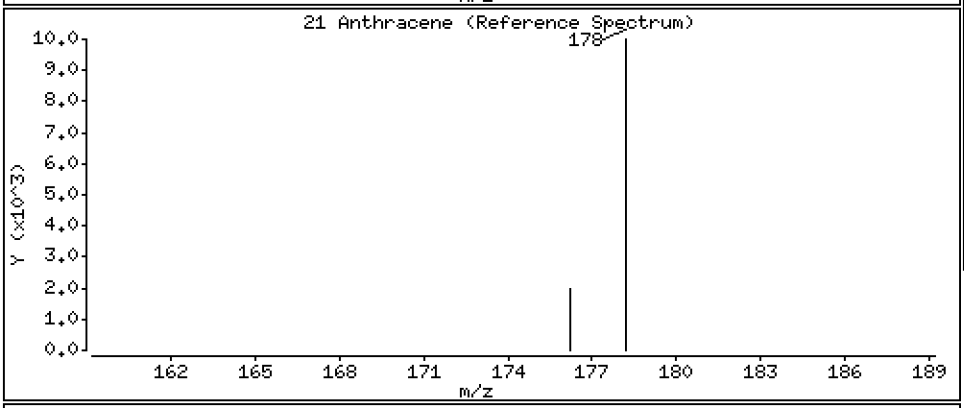
Concentration: 264 ng/mL

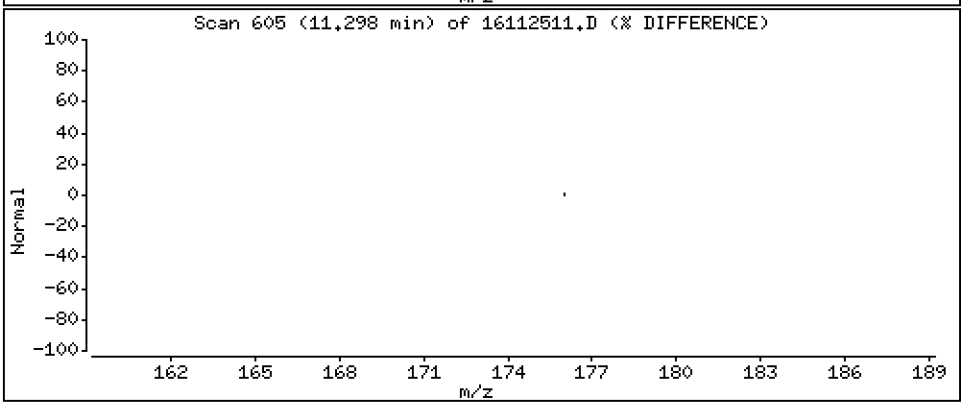












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

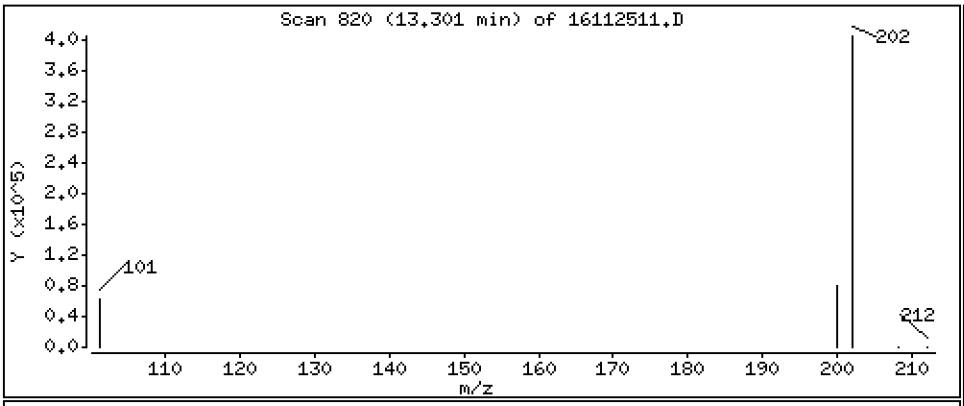
Operator: JW

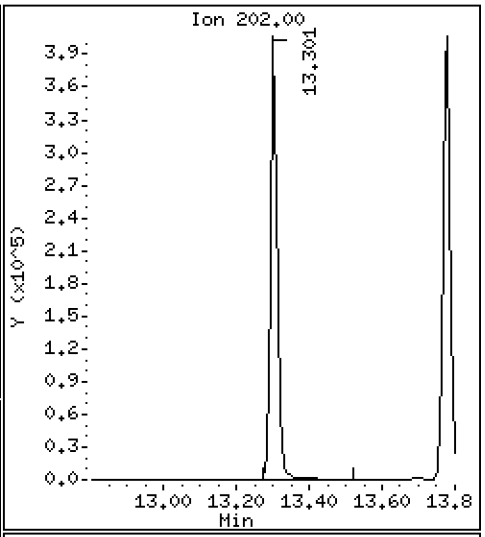
Column phase: Rxi-17Sil MS

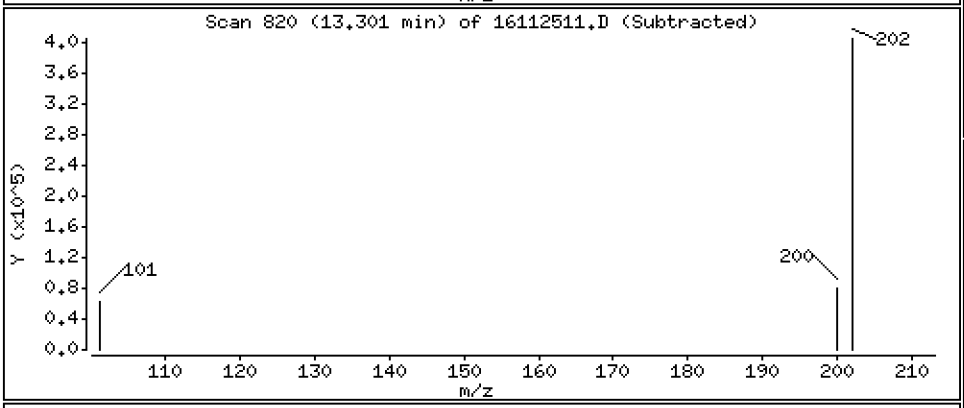
Column diameter: 0.25

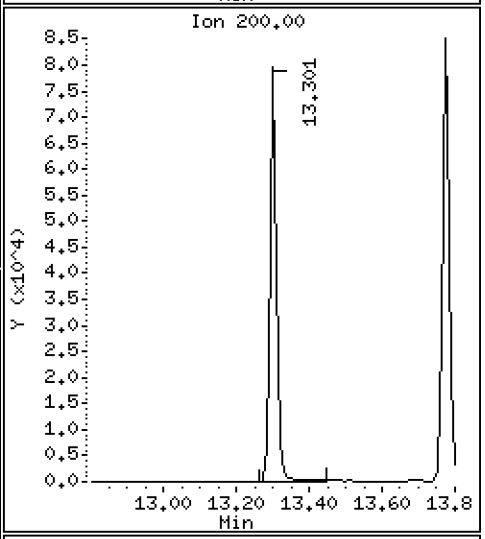
25 Fluoranthene

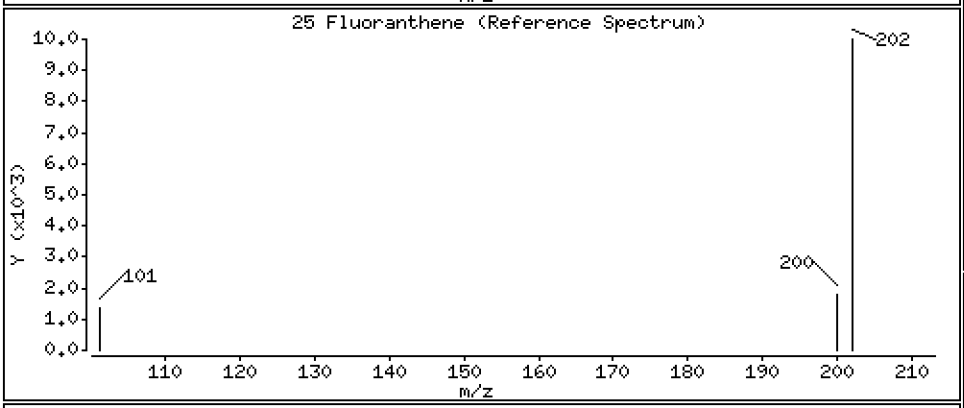
Concentration: 253 ng/mL

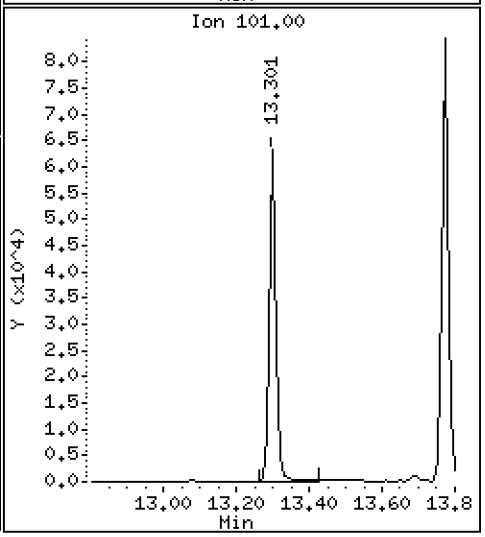


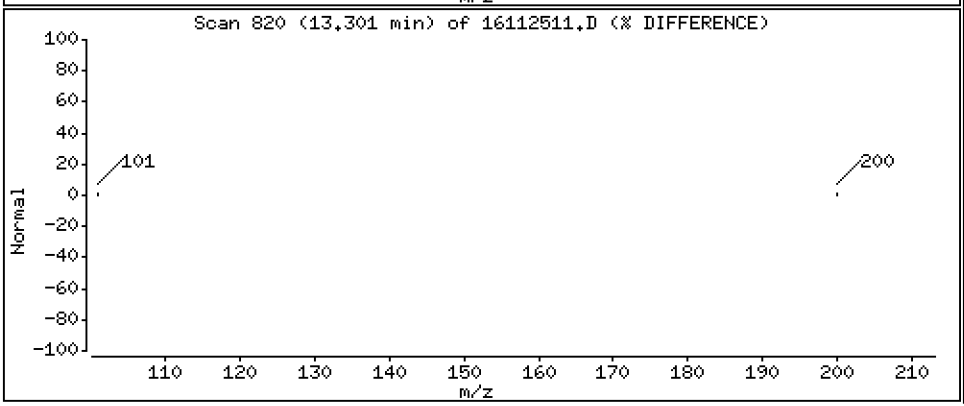












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

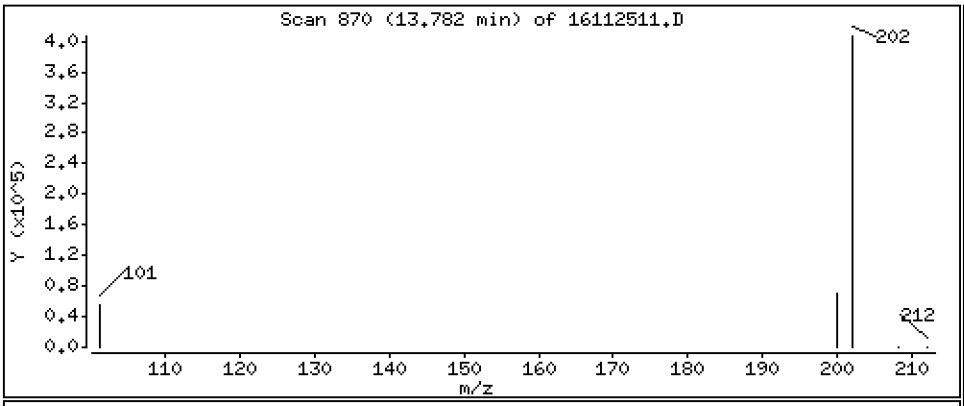
Operator: JW

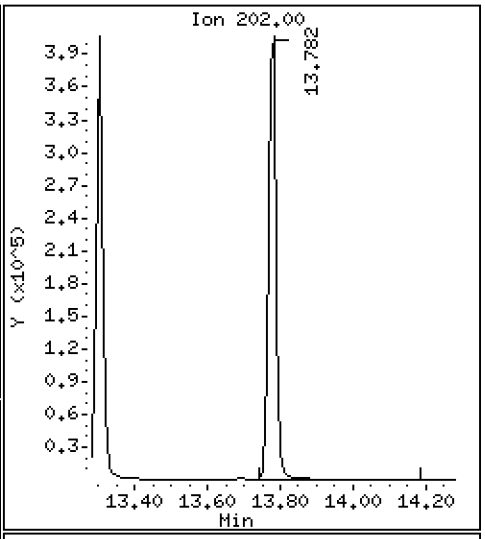
Column phase: Rxi-17Sil MS

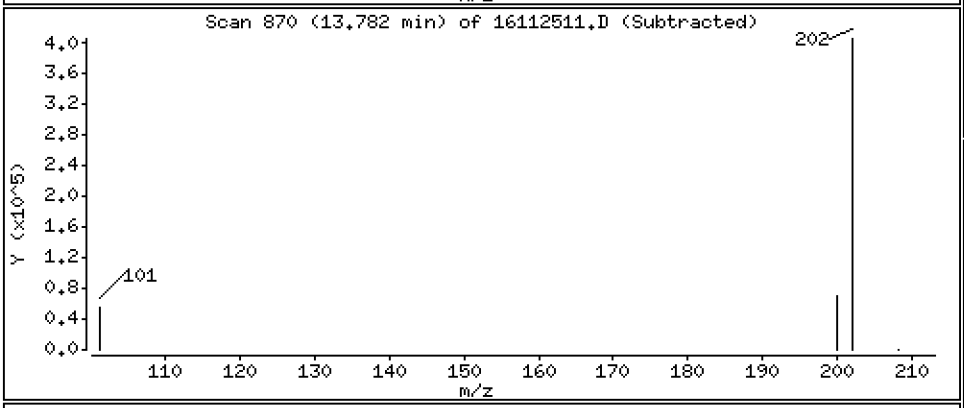
Column diameter: 0.25

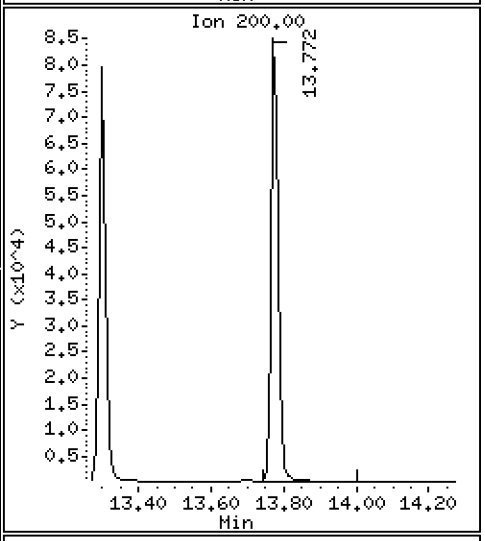
26 Pyrene

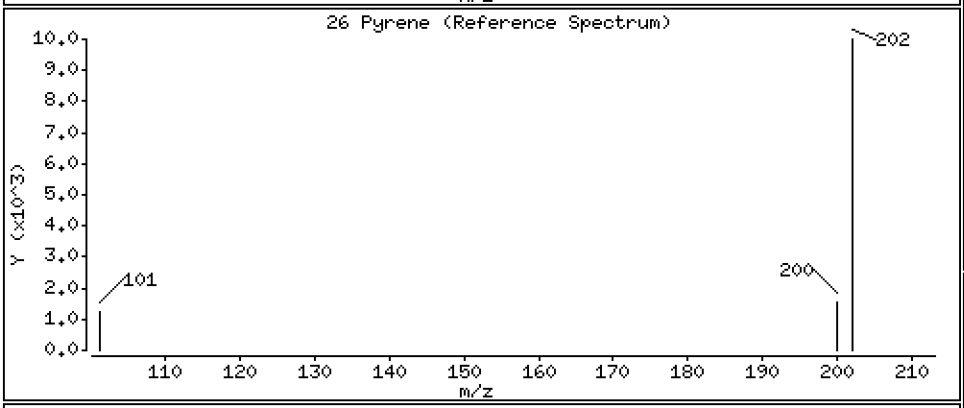
Concentration: 269 ng/mL

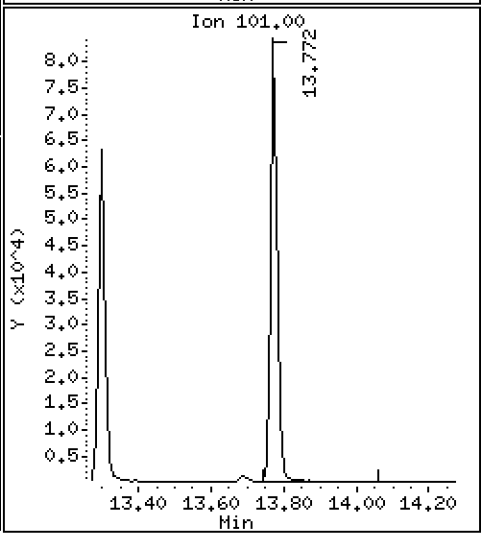


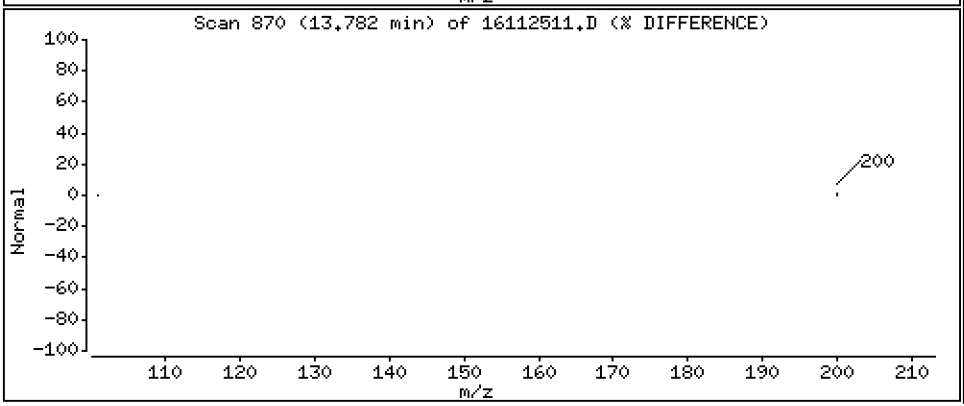












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

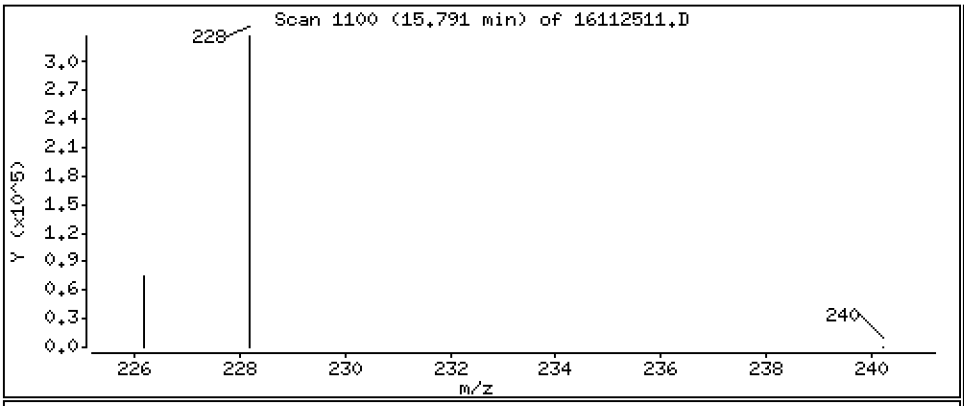
Operator: JW

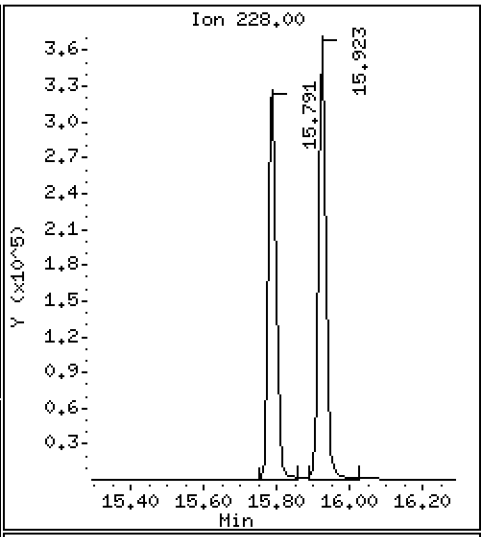
Column phase: Rxi-17Sil MS

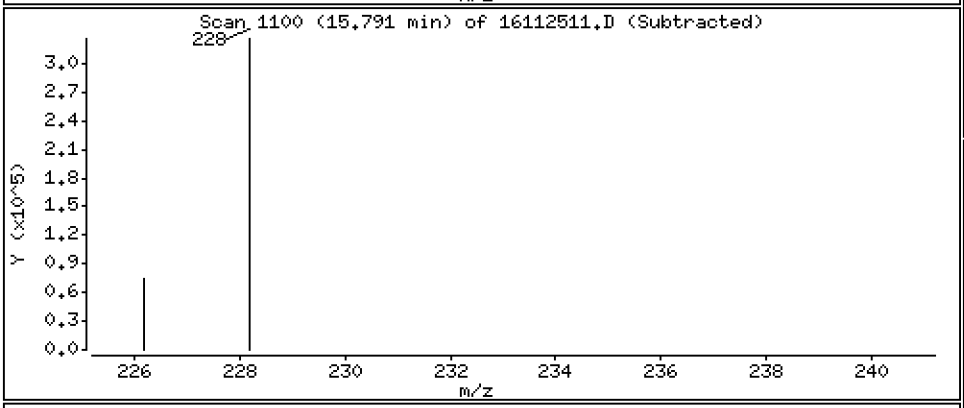
Column diameter: 0.25

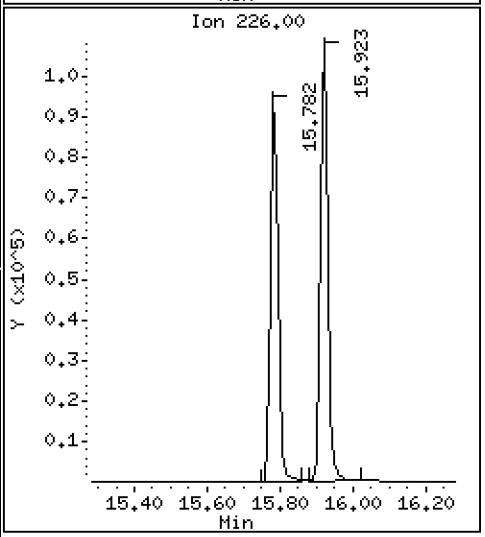
27 Benzo(a)anthracene

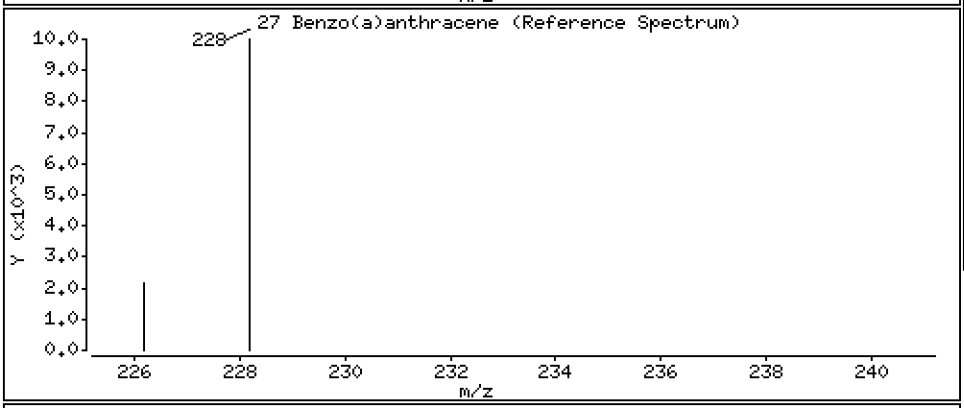
Concentration: 249 ng/mL

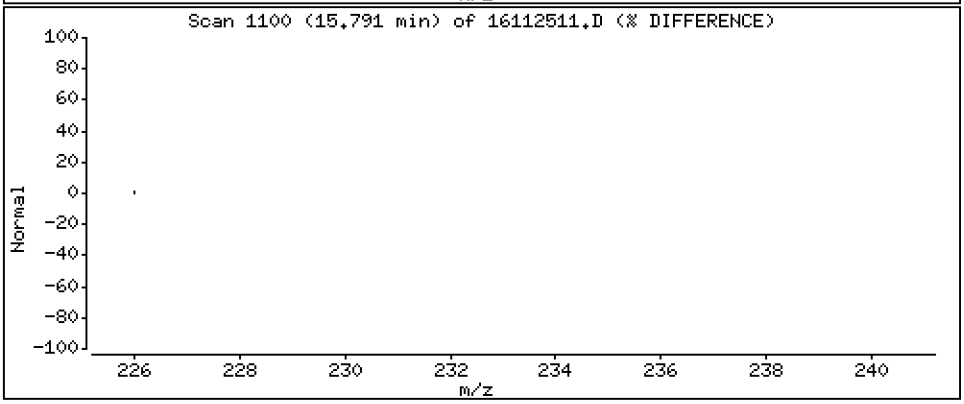












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

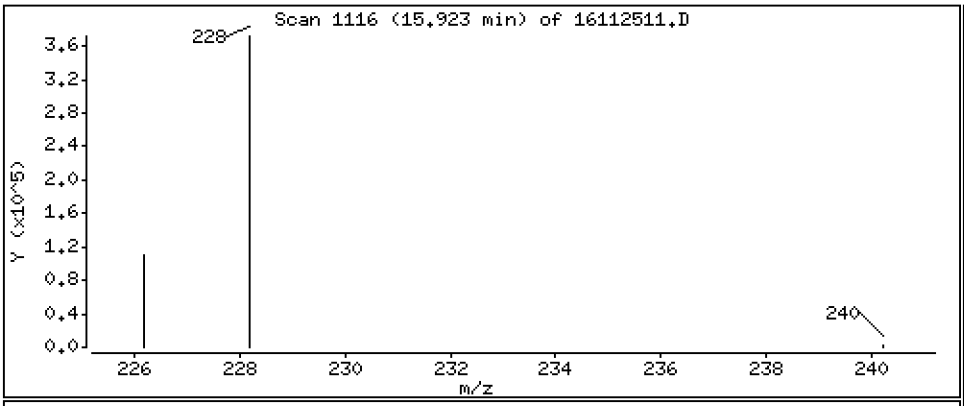
Operator: JW

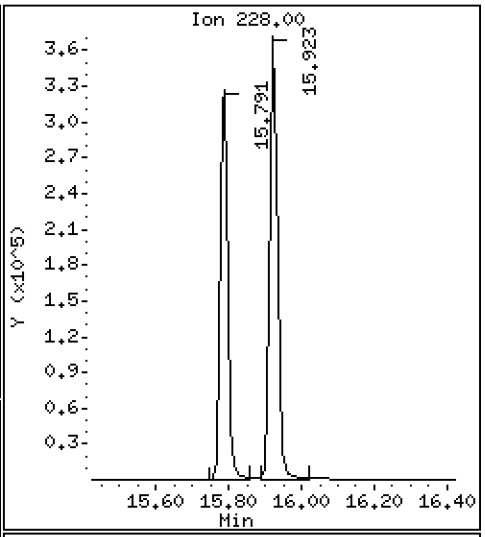
Column phase: Rxi-17Sil MS

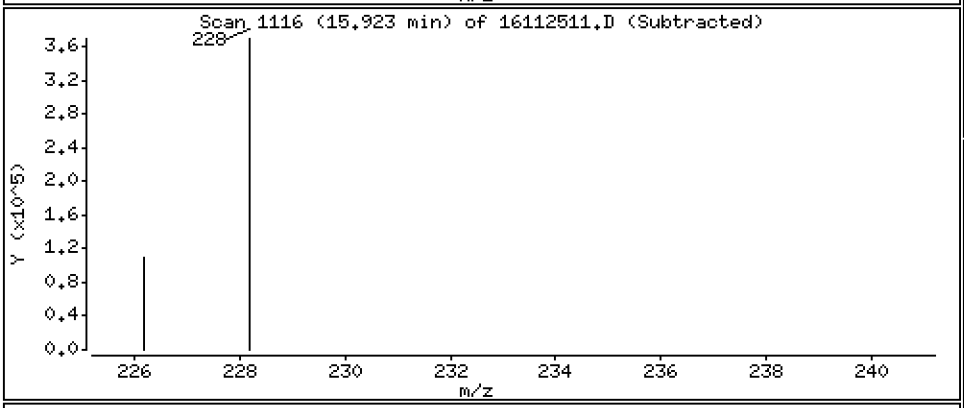
Column diameter: 0.25

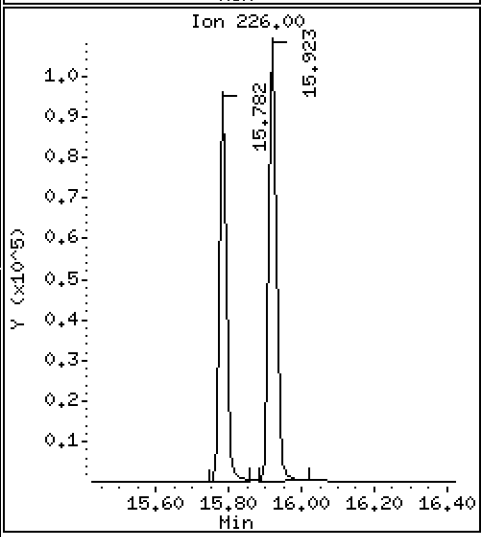
29 Chrysene

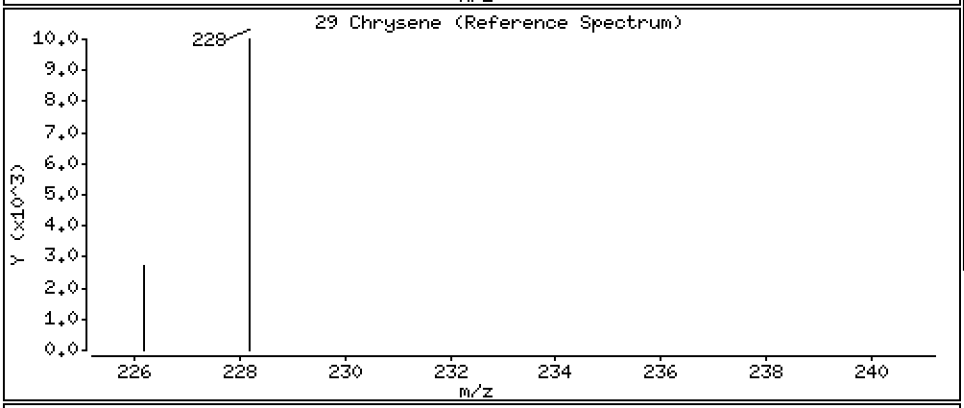
Concentration: 244 ng/mL

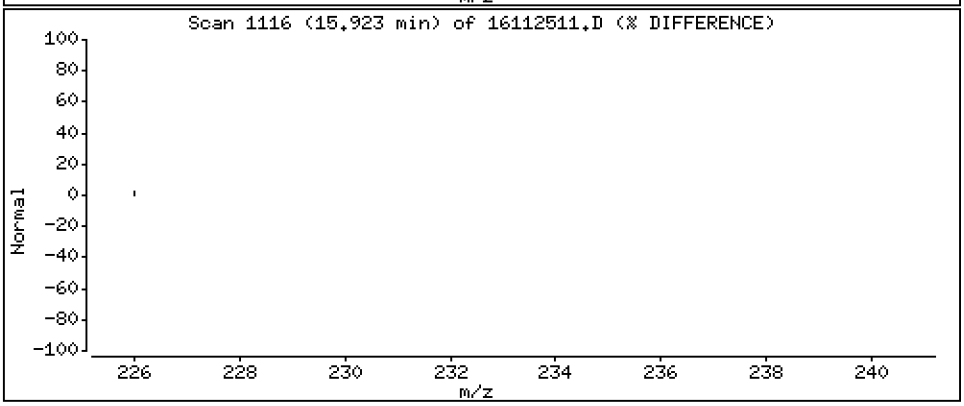












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

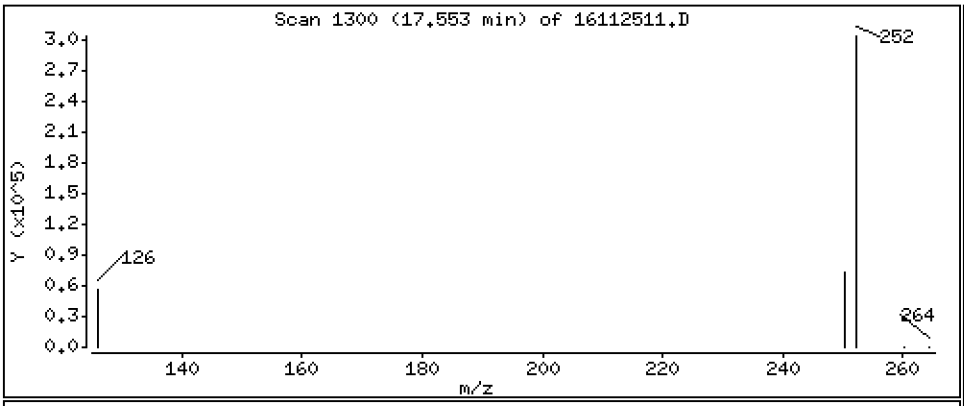
Operator: JW

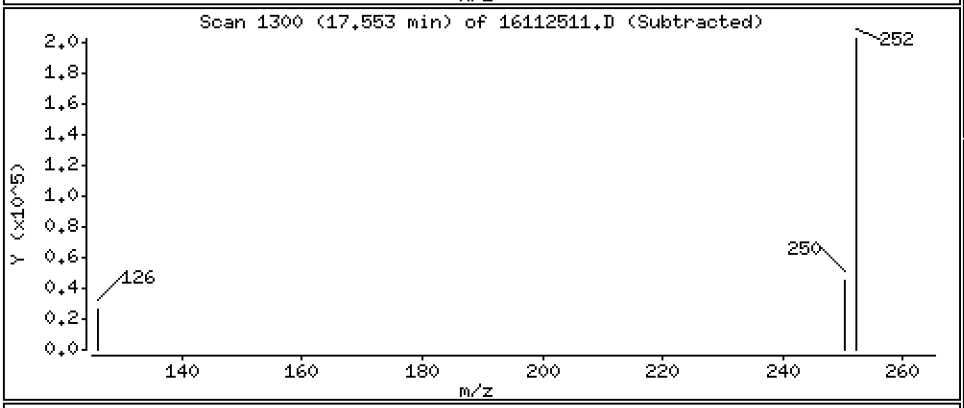
Column phase: Rxi-17Sil MS

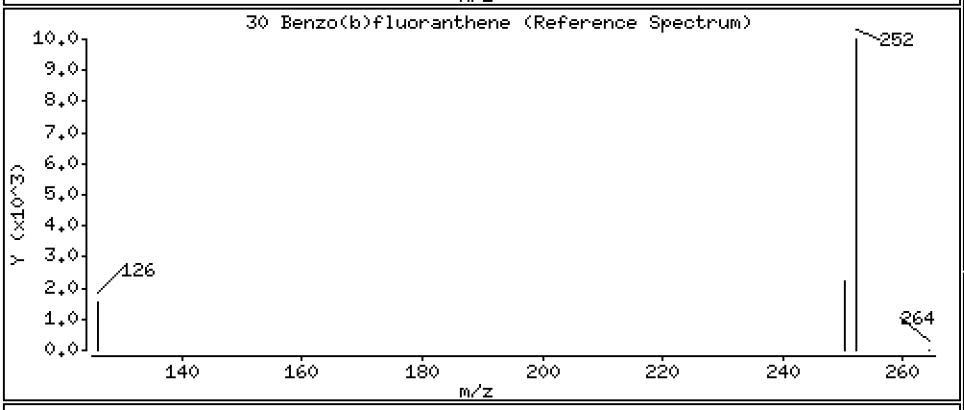
Column diameter: 0.25

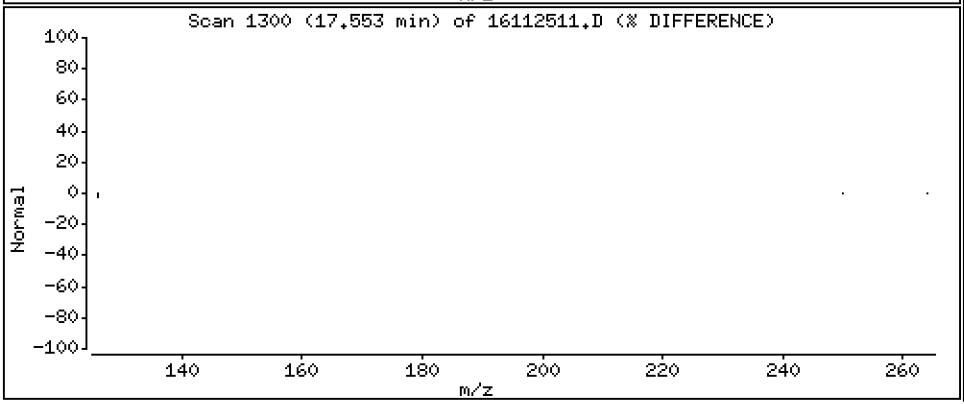
30 Benzo(b)fluoranthene

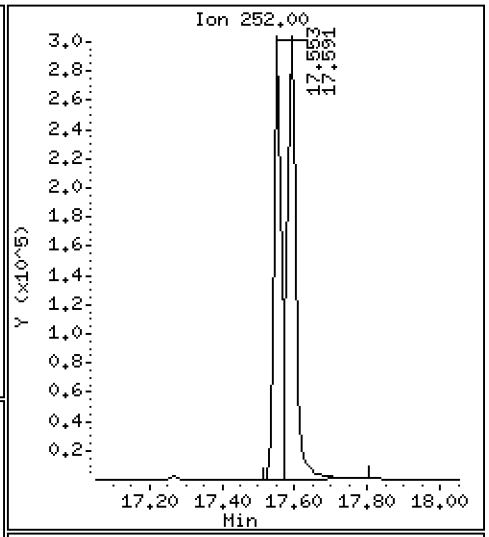
Concentration: 231 ng/mL

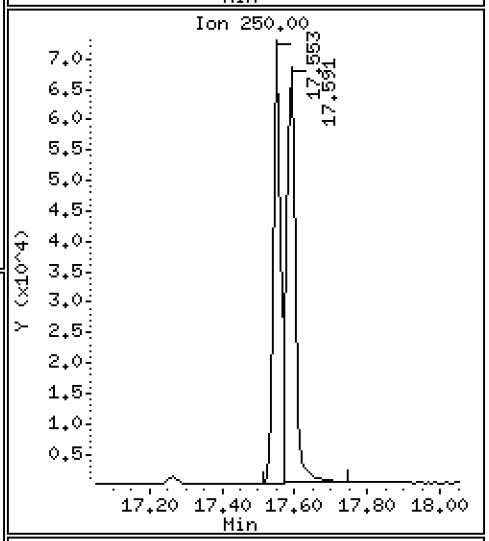


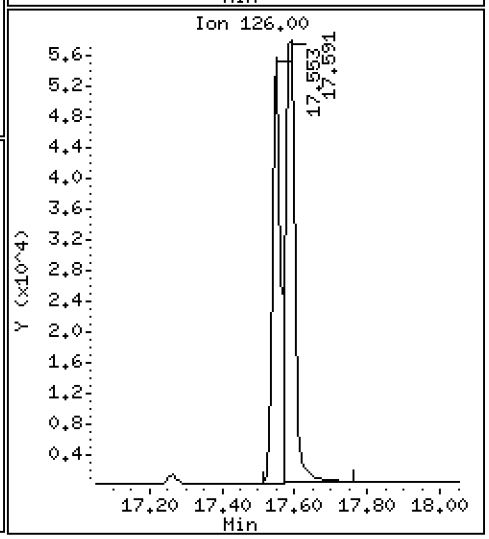












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

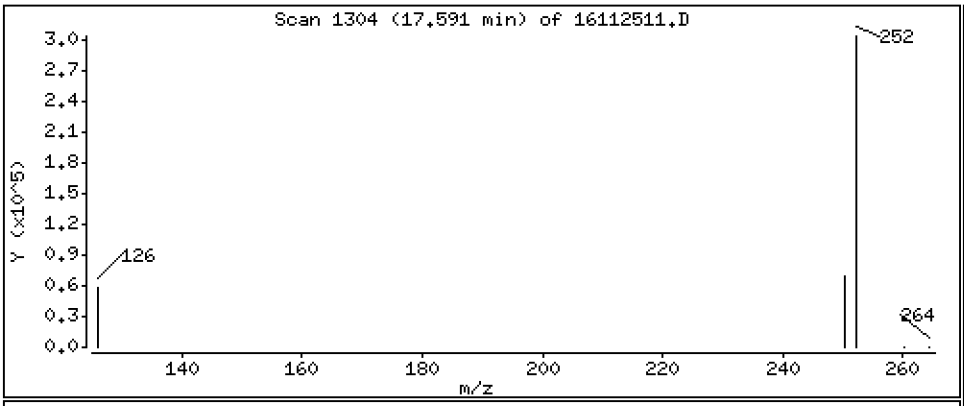
Operator: JW

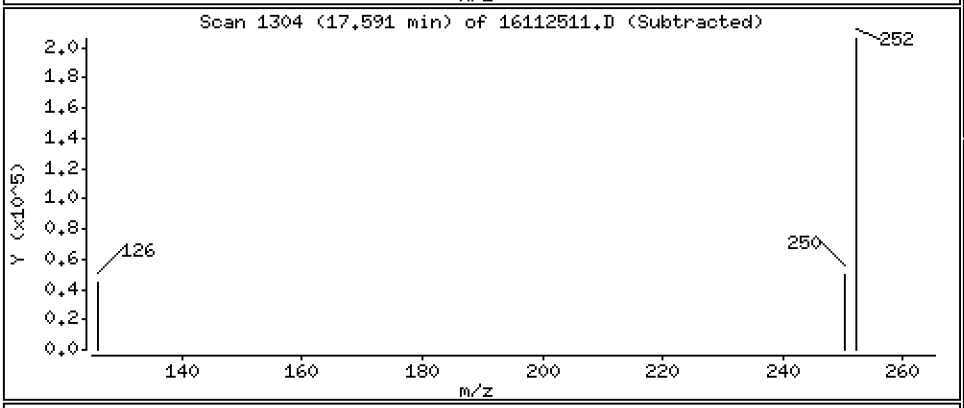
Column phase: Rxi-17Sil MS

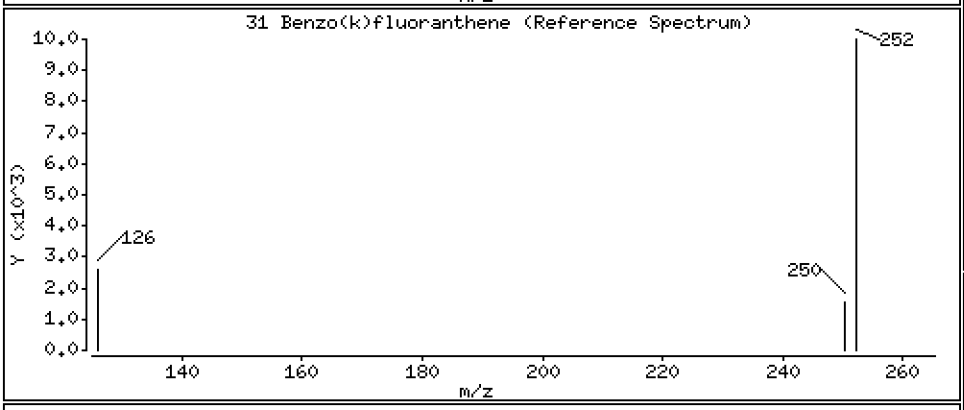
Column diameter: 0.25

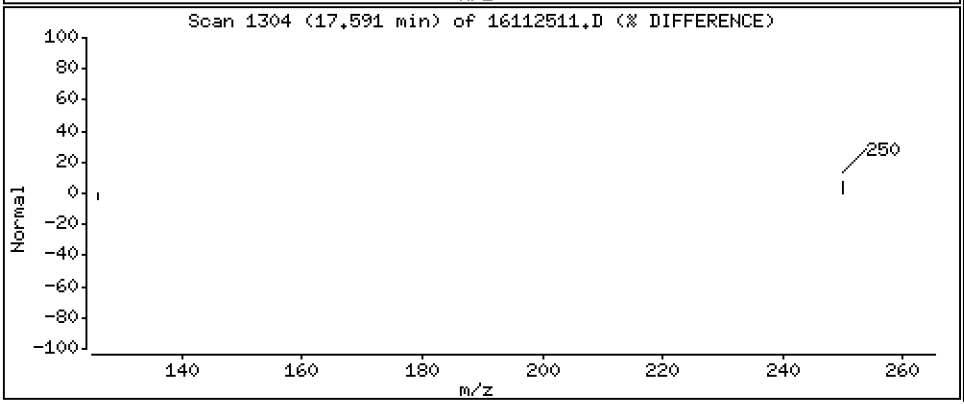
31 Benzo(k)fluoranthene

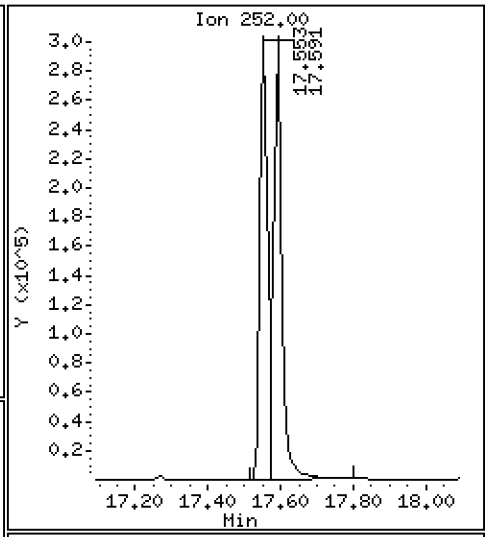
Concentration: 243 ng/mL

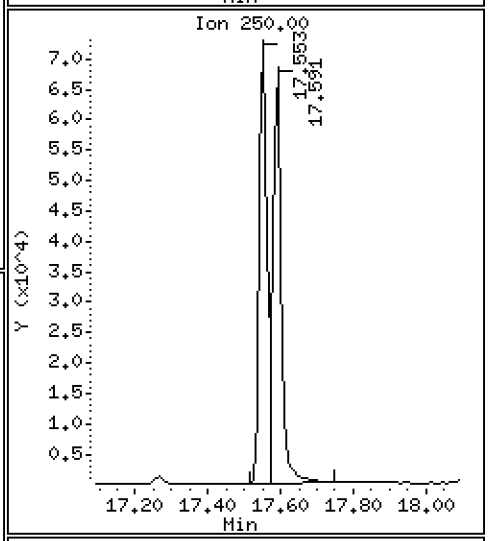


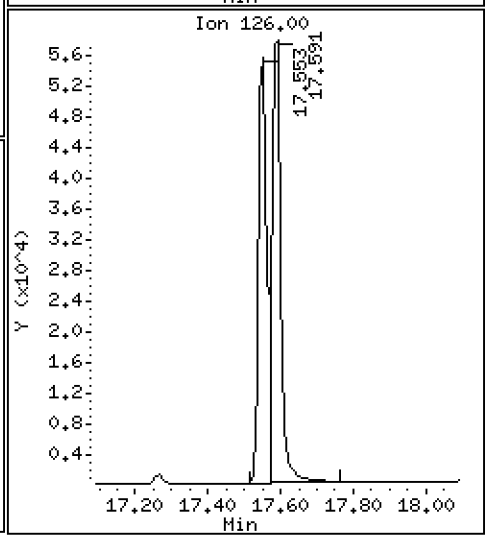












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

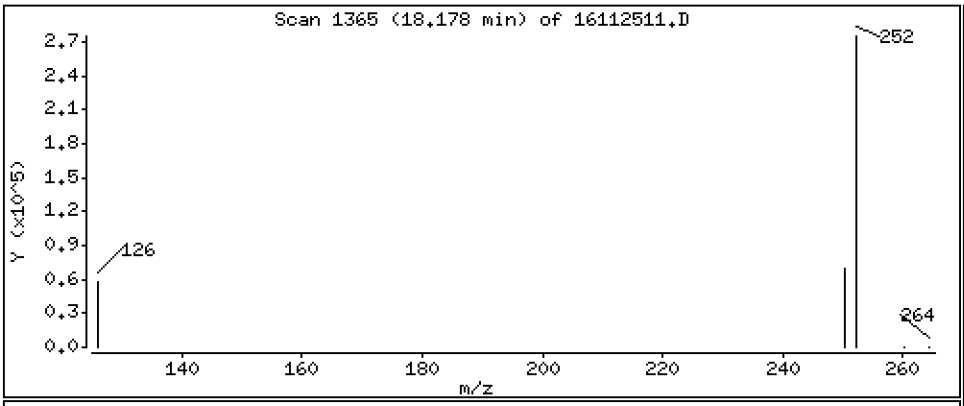
Operator: JW

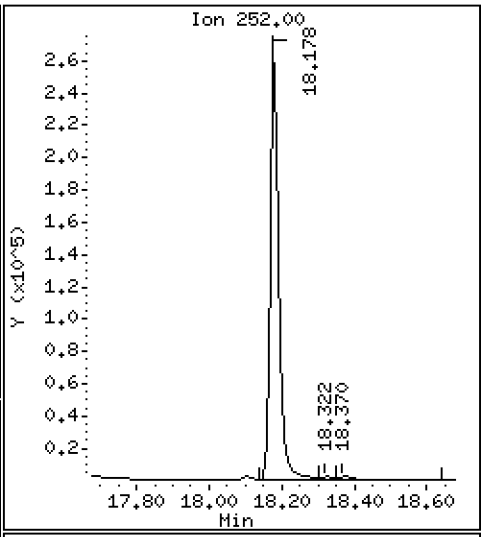
Column phase: Rxi-17Sil MS

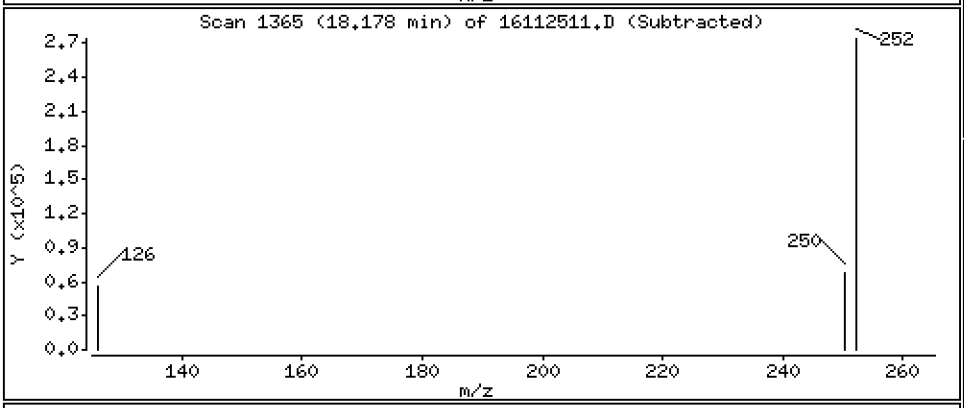
Column diameter: 0.25

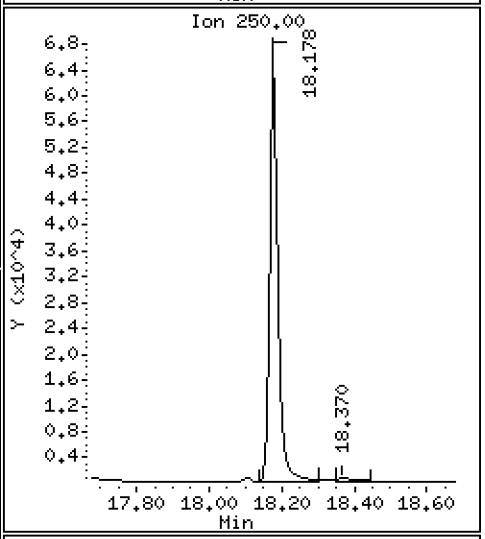
35 Benzo(a)pyrene

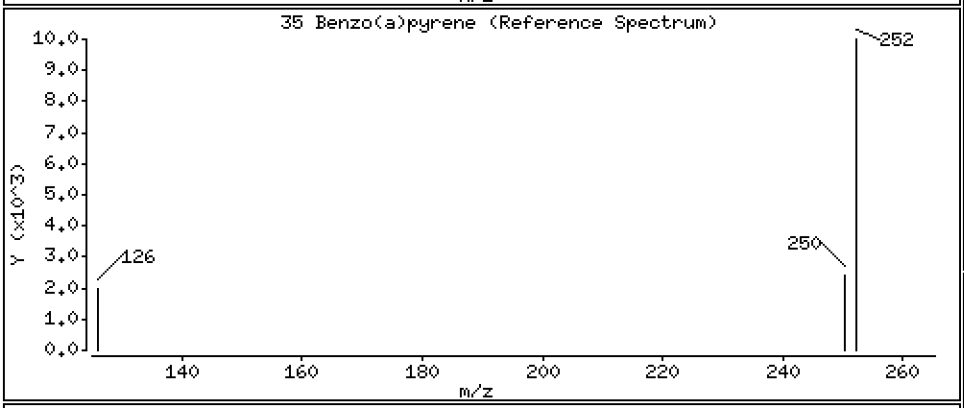
Concentration: 250 ng/mL

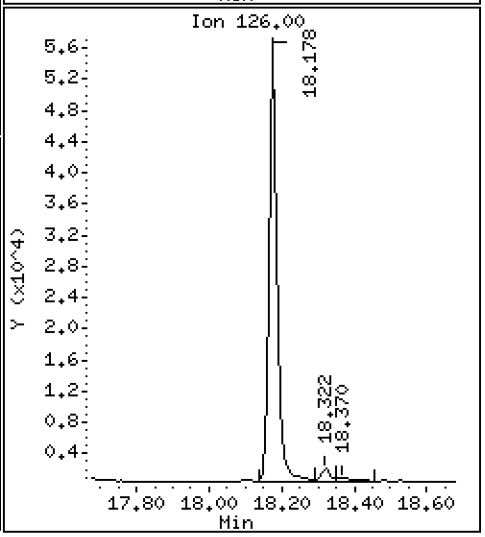


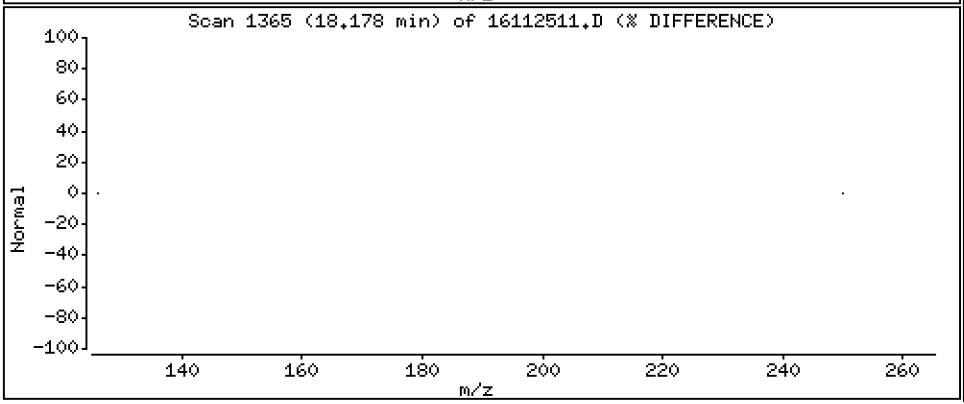












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

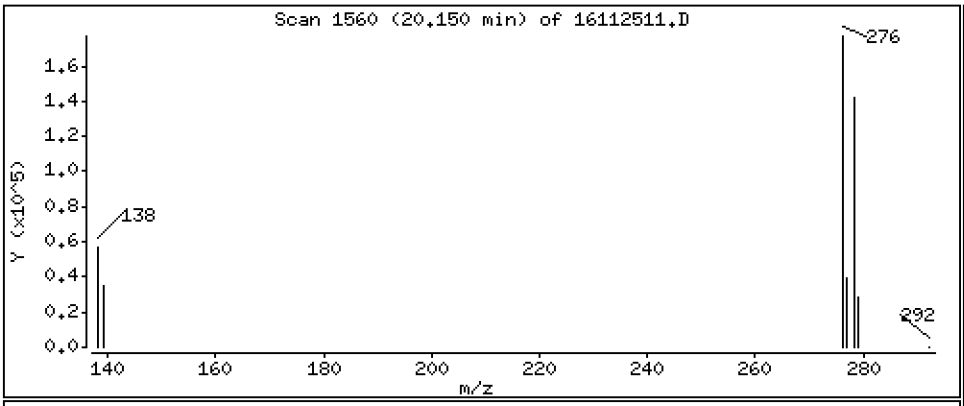
Operator: JW

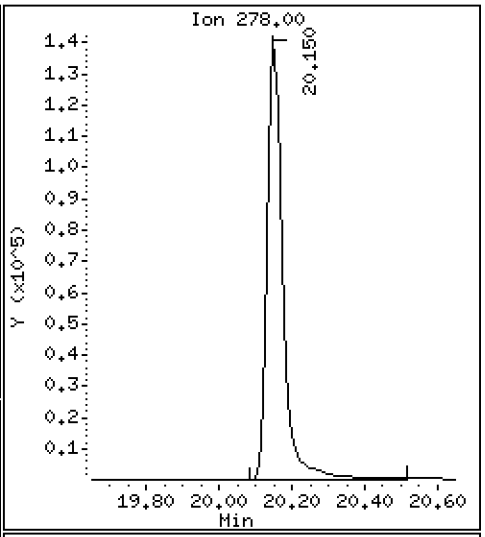
Column phase: Rxi-17Sil MS

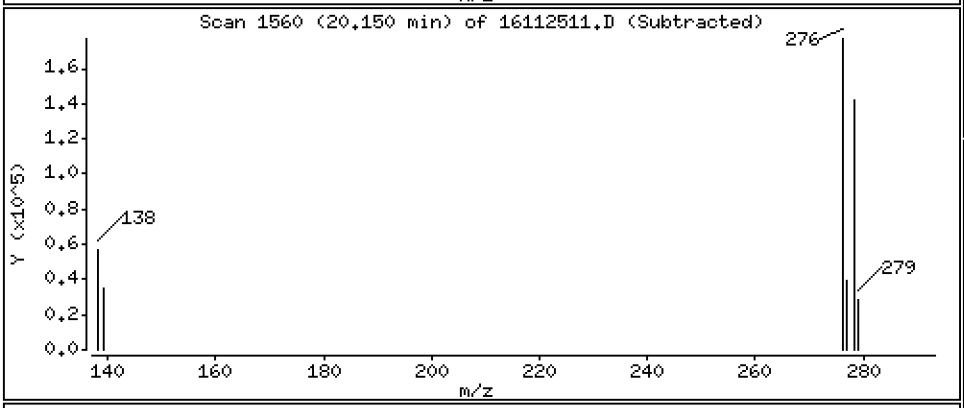
Column diameter: 0.25

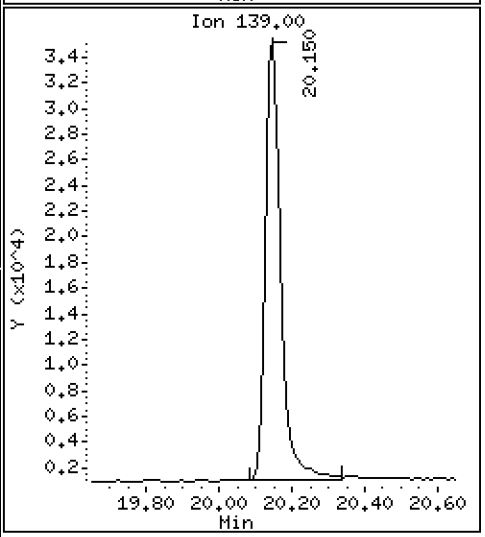
39 Dibenzo(a,h)anthracene

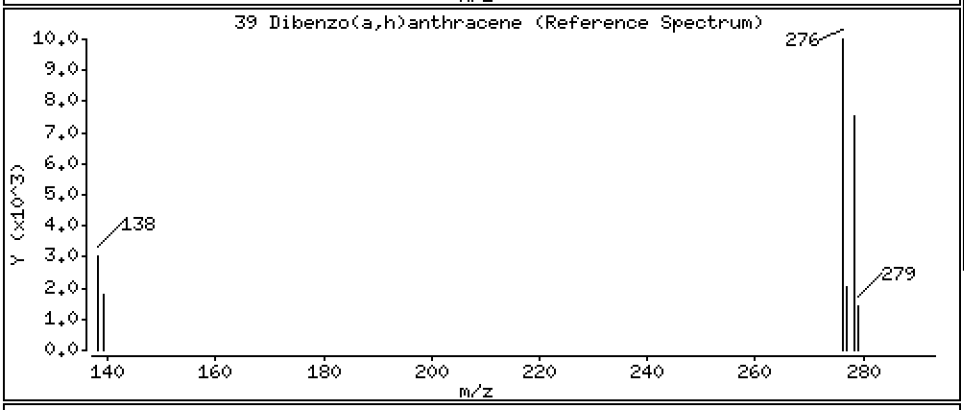
Concentration: 244 ng/mL

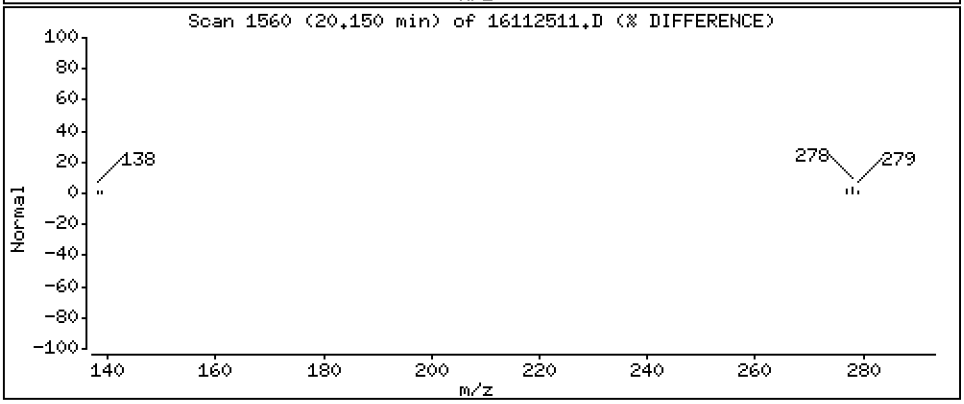












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

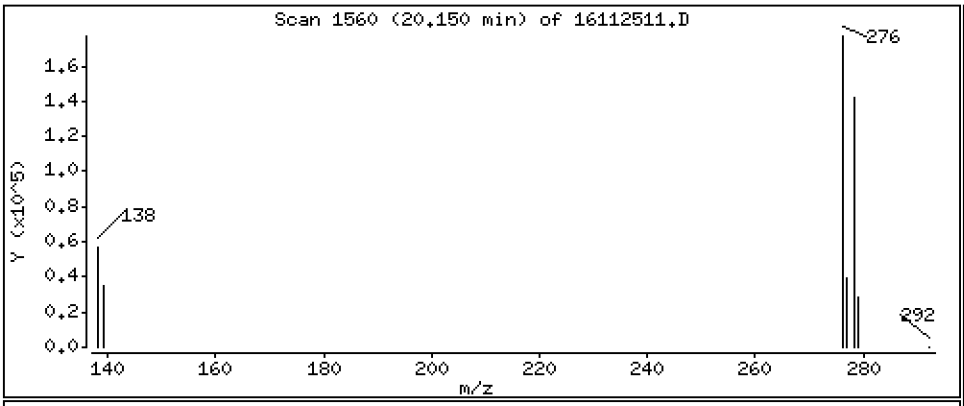
Operator: JW

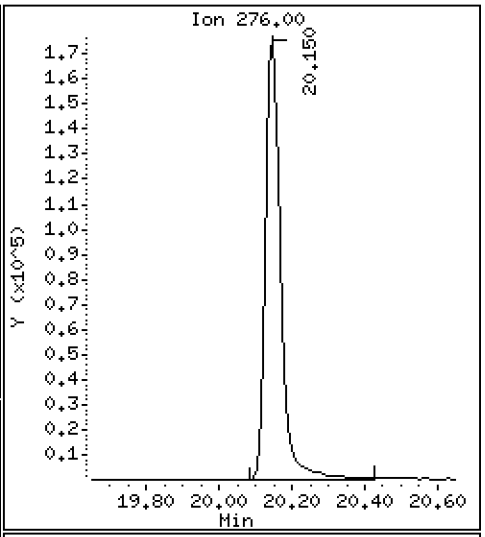
Column phase: Rxi-17Sil MS

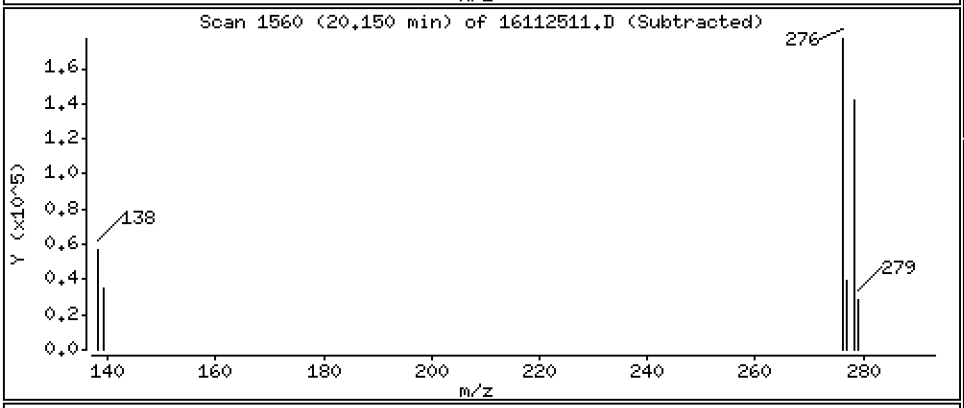
Column diameter: 0.25

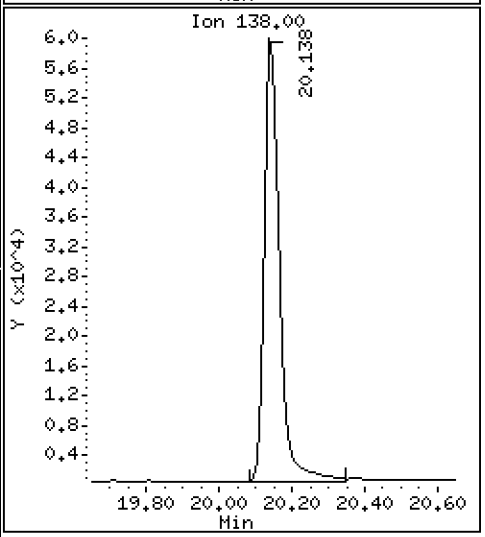
40 Indeno(1,2,3-cd)pyrene

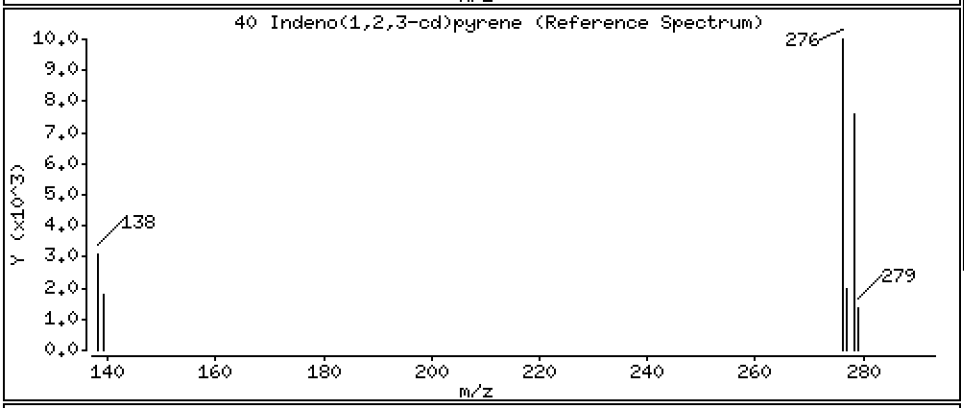
Concentration: 242 ng/mL

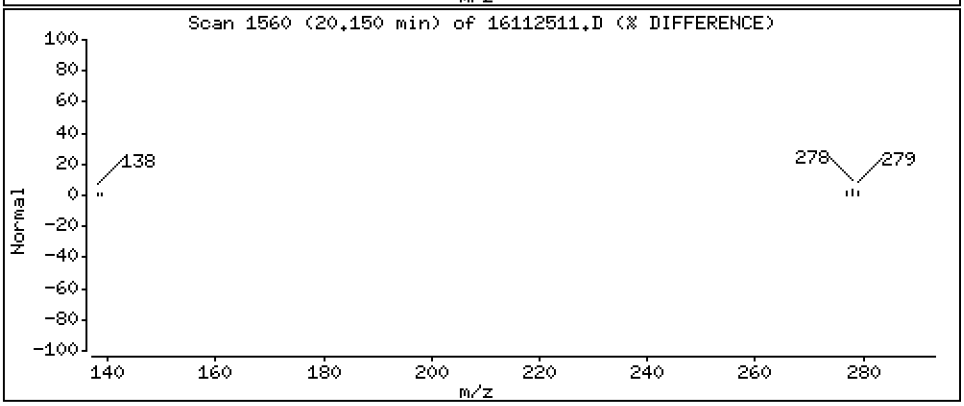












Data File: \\target\share\chem3\nt11.i\20161125.b\16112511.D

Date : 25-NOV-2016 10:50

Client ID:

Instrument: nt11.i

Sample Info: SEK0335-SCV1

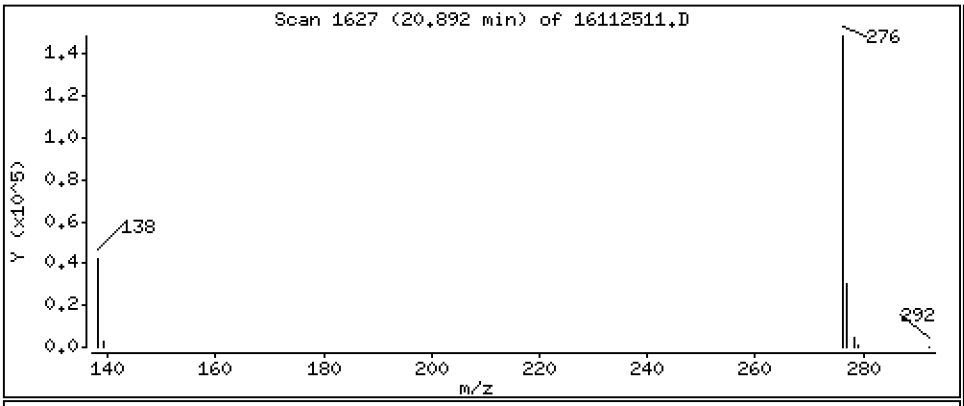
Operator: JW

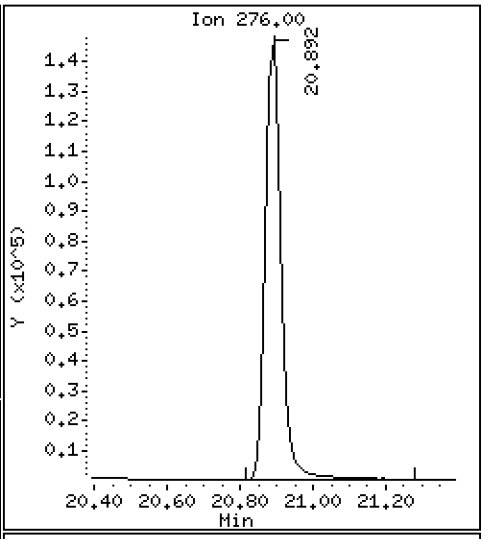
Column phase: Rxi-17Sil MS

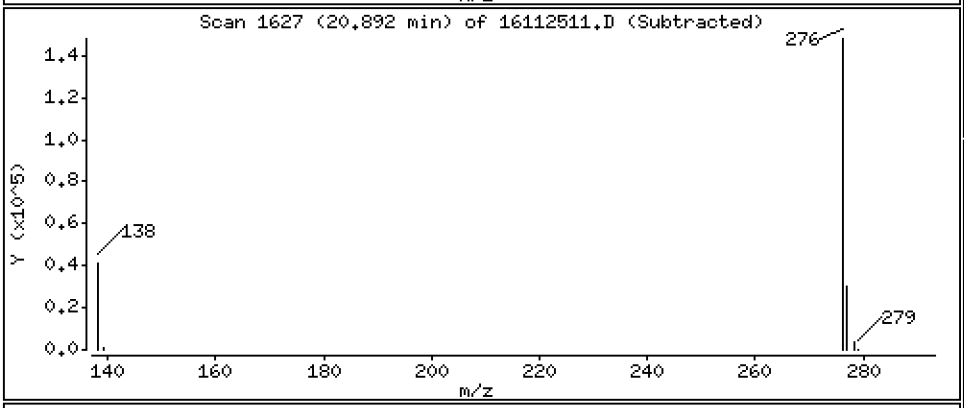
Column diameter: 0.25

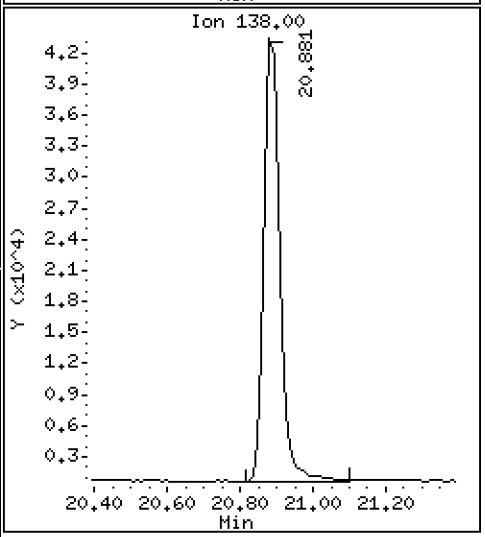
41 Benzo(g,h,i)perylene

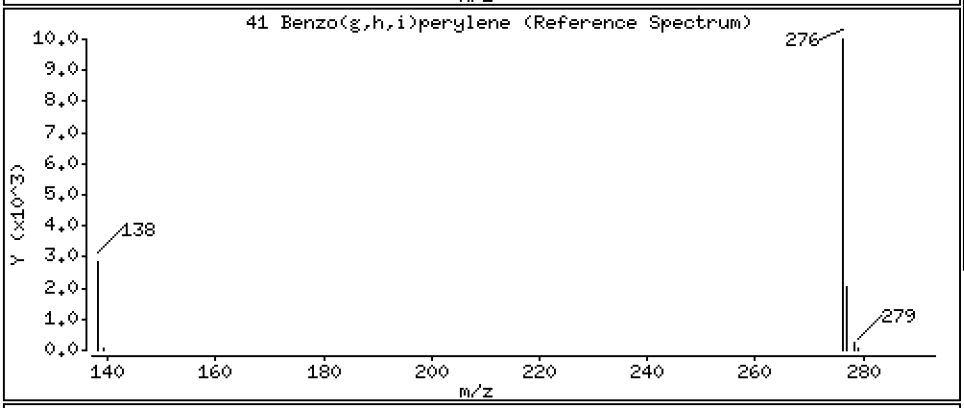
Concentration: 245 ng/mL

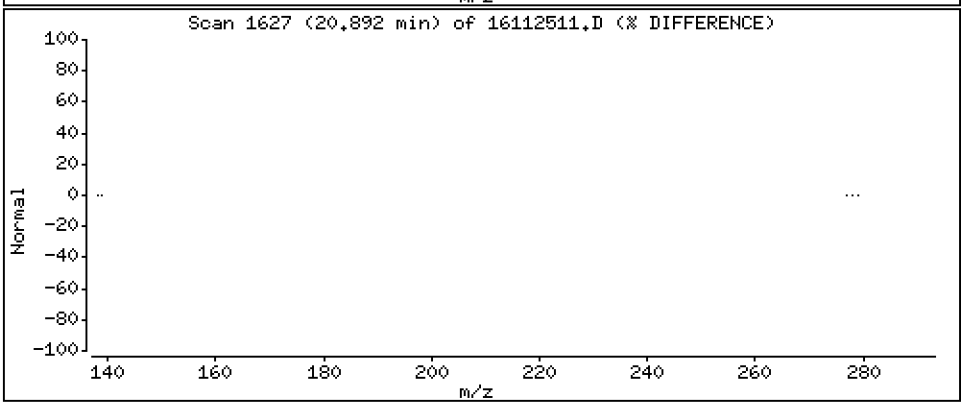












ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161125.b\16112511.D
Lab Smp Id: SEK0335-SCV1
Inj Date : 25-NOV-2016 10:50 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : SEK0335-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Meth Date : 30-Nov-2016 07:48 jonathonw Quant Type: ISTD
Cal Date : 25-NOV-2016 09:50 Cal File: 16112509.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1 Naphthalene-d8	136	5.656	5.646	(1.000)	443736	200.000	
	2 Naphthalene	128	5.683	5.683	(1.005)	594052	260.384	260
	3 Benzo(b)thiophene	134	Compound Not Detected.					
$	4 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	5 2-Methylnaphthalene	142	6.668	6.657	(1.179)	475379	248.180	248
	6 1-Methylnaphthalene	142	6.909	6.899	(1.222)	478188	254.536	255
	7 2-Chloronaphthalene	162	Compound Not Detected.					
	8 Biphenyl	154	Compound Not Detected.					
	9 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	10 Acenaphthylene	152	8.429	8.429	(0.982)	516928	254.458	254
*	11 Acenaphthene-d10	164	8.583	8.583	(1.000)	219883	200.000	
	12 Acenaphthene	153	8.646	8.646	(1.007)	369656	265.221	265
	13 Dibenzofuran	168	Compound Not Detected.					
	14 2,3,5-Trimethylnaphthalene	170	Compound Not Detected.					
$	15 Fluorene-d10	174	Compound Not Detected.					
	16 Fluorene	166	9.470	9.470	(1.103)	368785	240.997	241
	17 Dibenzothiophene	184	Compound Not Detected.					
*	18 Phenanthrene-d10	188	11.214	11.214	(1.000)	374597	200.000	
	19 Phenanthrene	178	11.245	11.245	(1.003)	581158	258.279	258
$	20 Anthracene-d10	188	Compound Not Detected.					
	21 Anthracene	178	11.298	11.298	(1.007)	559319	264.160	264
	22 Carbazole	167	Compound Not Detected.					
	23 1-Methylphenanthrene	192	Compound Not Detected.					
$	24 Fluoranthene-d10	212	Compound Not Detected.					
	25 Fluoranthene	202	13.301	13.301	(1.186)	552443	253.029	253
	26 Pyrene	202	13.781	13.781	(0.868)	625741	268.750	269
	27 Benzo(a)anthracene	228	15.790	15.790	(0.995)	502188	249.252	249
*	28 Chrysene-d12	240	15.873	15.873	(1.000)	357859	200.000	
	29 Chrysene	228	15.923	15.923	(1.003)	546302	244.468	244
	30 Benzo(b)fluoranthene	252	17.552	17.552	(0.958)	462371	231.180	231
	31 Benzo(k)fluoranthene	252	17.591	17.591	(0.960)	528068	242.997	243
	32 Benzo(j)fluoranthene	252	Compound Not Detected.					
$	33 Benzo(e)pyrene-d12	264	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
34	Benzo(e)pyrene	252	Compound Not Detected.					
35	Benzo(a)pyrene	252	18.177	18.177	(0.992)	456908	249.511	250
* 36	Perylene-d12	264	18.331	18.331	(1.000)	351854	200.000	
37	Perylene	252	Compound Not Detected.					
$ 38	Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
39	Dibenzo(a,h)anthracene	278	20.149	20.149	(1.099)	402829	243.904	244
40	Indeno(1,2,3-cd)pyrene	276	20.149	20.149	(1.099)	491258	241.683	242
41	Benzo(g,h,i)perylene	276	20.891	20.891	(1.140)	429481	244.571	245

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16112511.D
Lab Smp Id: SEK0335-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161125.b\lowsim.m
Misc Info:

Calibration Date: 25-NOV-2016
Calibration Time: 12:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	443736	-10.09
11 Acenaphthene-d10	240770	120385	481540	219883	-8.68
18 Phenanthrene-d10	429271	214636	858542	374597	-12.74
28 Chrysene-d12	387691	193846	775382	357859	-7.69
36 Perylene-d12	386259	193130	772518	351854	-8.91

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.65	5.15	6.15	5.66	0.16
11 Acenaphthene-d10	8.58	8.08	9.08	8.58	0.00
18 Phenanthrene-d10	11.21	10.71	11.71	11.21	0.00
28 Chrysene-d12	15.87	15.37	16.37	15.87	0.00
36 Perylene-d12	18.33	17.83	18.83	18.33	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16112511.D

Lab ID: SEK0335-SCV1
nt11.i, 20161125.b\lowsim.m,   25-NOV-2016 10:50

RT	CO-ELUTION COMPOUNDS
20.150	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.150	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161125.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Analytical Resources, Incorporated

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Calibration: ZL00052
Laboratory ID: SEL0249-SCV1
Sequence: SEL0249
Standard ID: E007699

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Naphthalene	250.00	255	1.9	20.00
2-Methylnaphthalene	250.00	252	1.0	20.00
Acenaphthylene	250.00	257	2.8	20.00
Acenaphthene	250.00	280	12.1	20.00
Fluorene	250.00	270	7.9	20.00
Phenanthrene	250.00	254	1.8	20.00
Anthracene	250.00	259	3.7	20.00
Fluoranthene	250.00	262	4.7	20.00
Pyrene	250.00	250	-0.03	20.00
Benzo(a)anthracene	250.00	259	3.7	20.00
Chrysene	250.00	247	-1.4	20.00
Benzo(b)fluoranthene	250.00	259	3.7	20.00
Benzo(k)fluoranthene	250.00	272	8.7	20.00
Benzo(a)pyrene	250.00	262	4.9	20.00
Indeno(1,2,3-cd)pyrene	250.00	267	7.0	20.00
Dibenzo(a,h)anthracene	250.00	265	6.1	20.00
Benzo(g,h,i)perylene	250.00	264	5.8	20.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

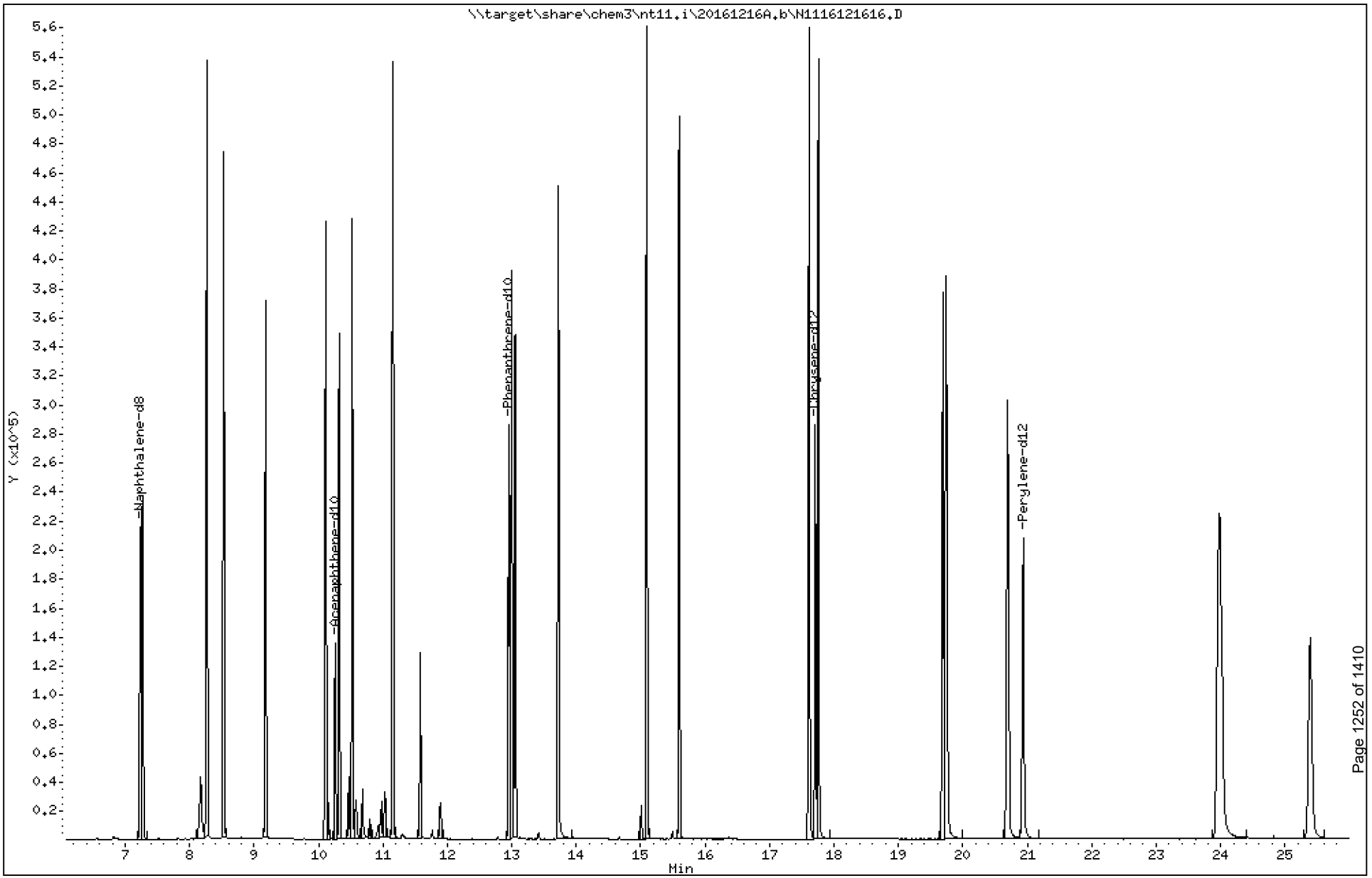
Instrument: nt11.i

Sample Info: SEL0249-SCV1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

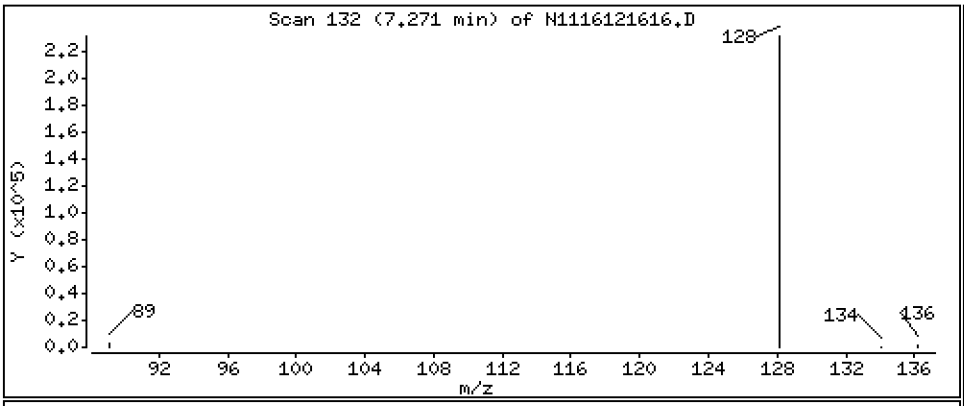
Operator: VTS

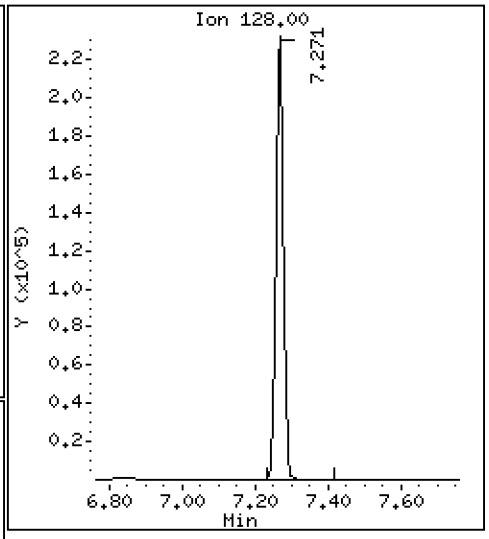
Column phase: Rxi-17Sil MS

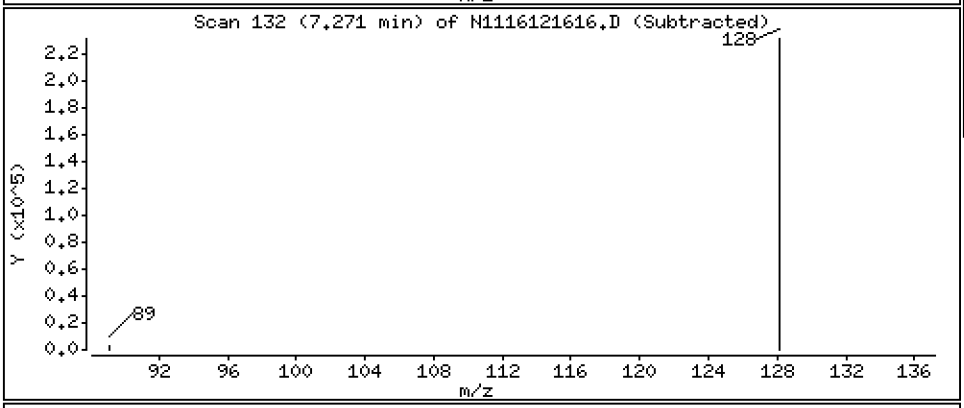
Column diameter: 0.25

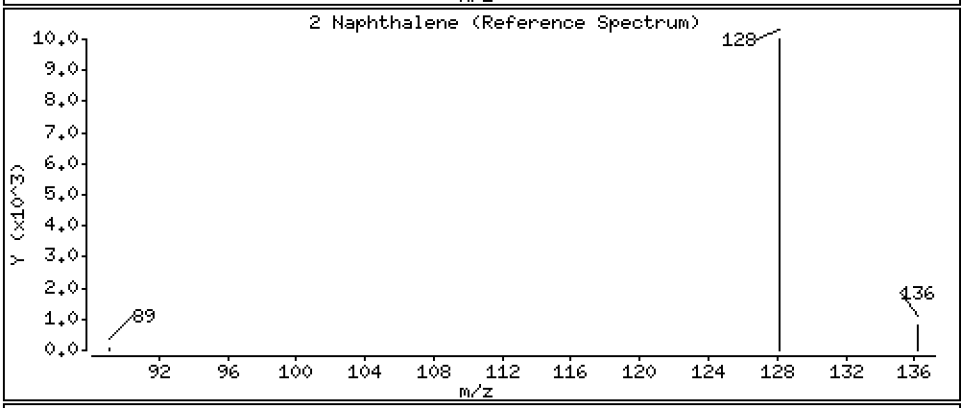
2 Naphthalene

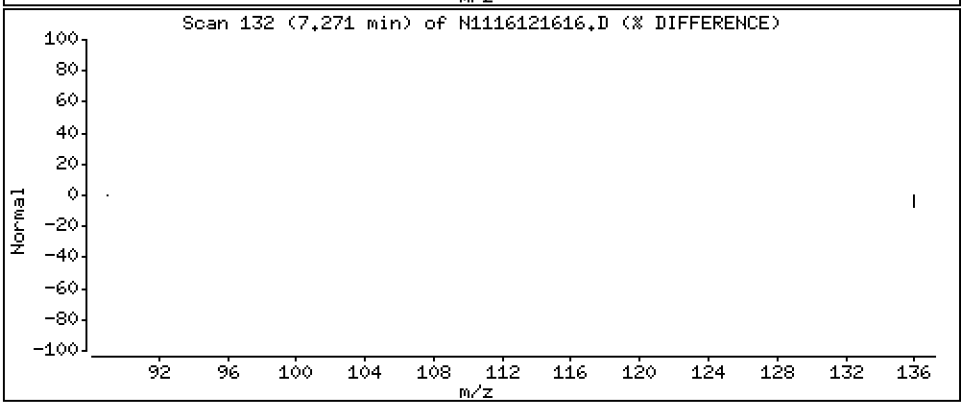
Concentration: 255 ng/mL











Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

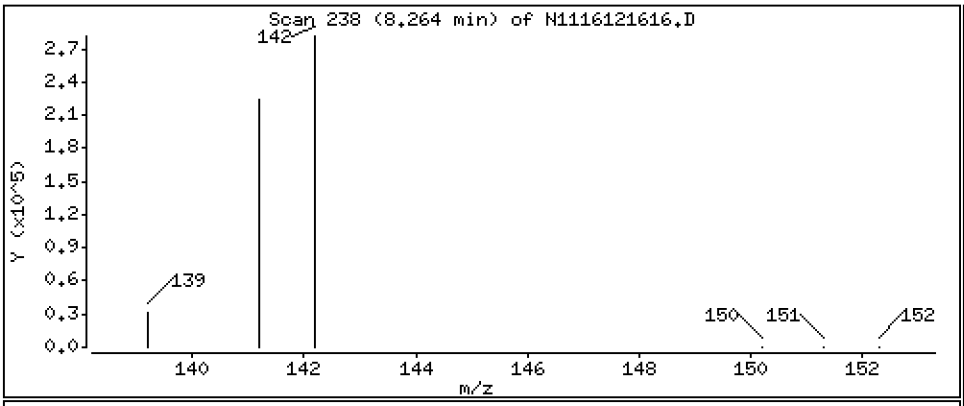
Operator: VTS

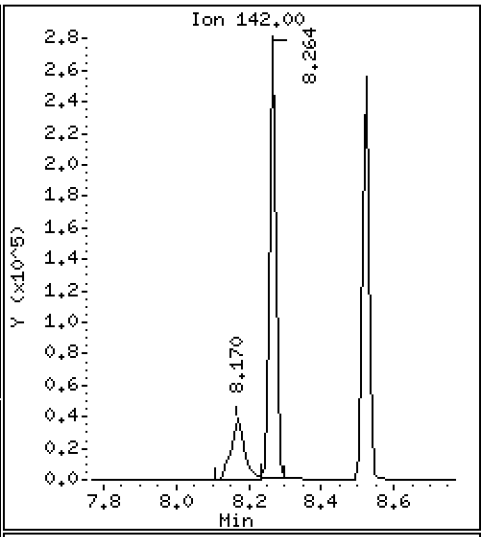
Column phase: Rxi-17Sil MS

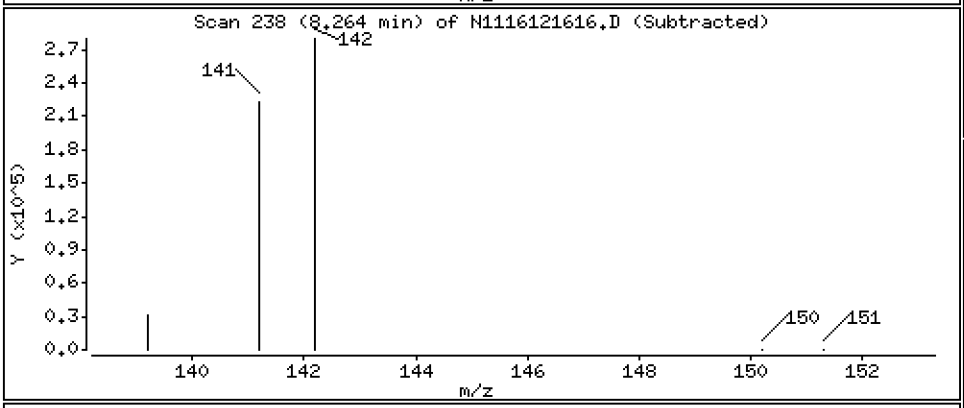
Column diameter: 0.25

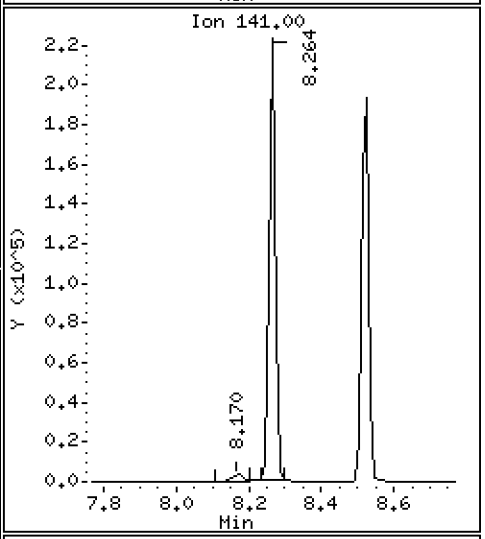
5 2-Methylnaphthalene

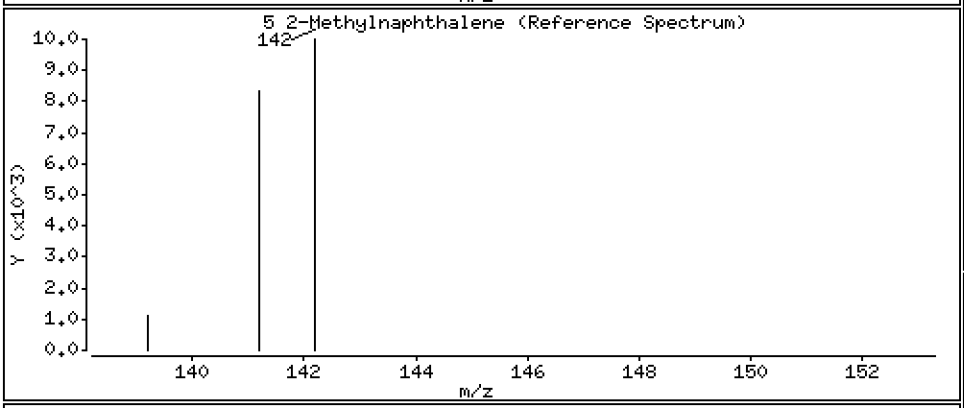
Concentration: 252 ng/mL

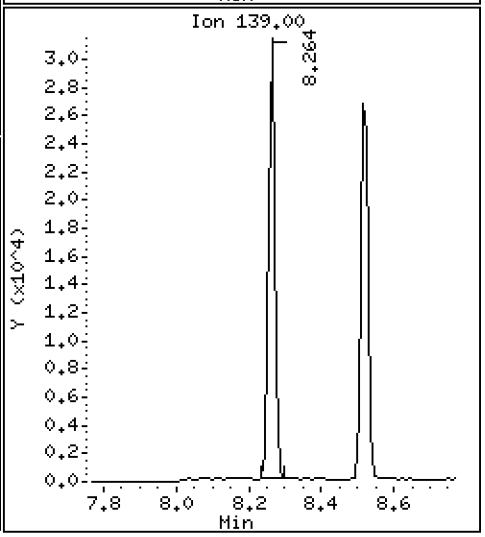


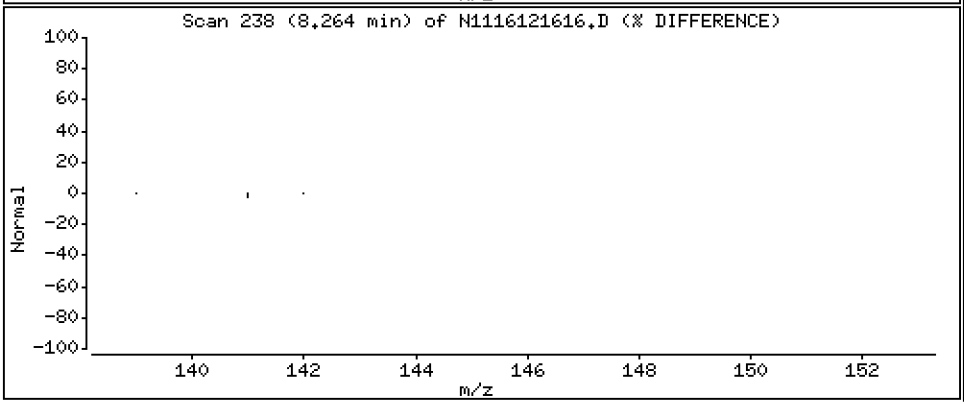












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

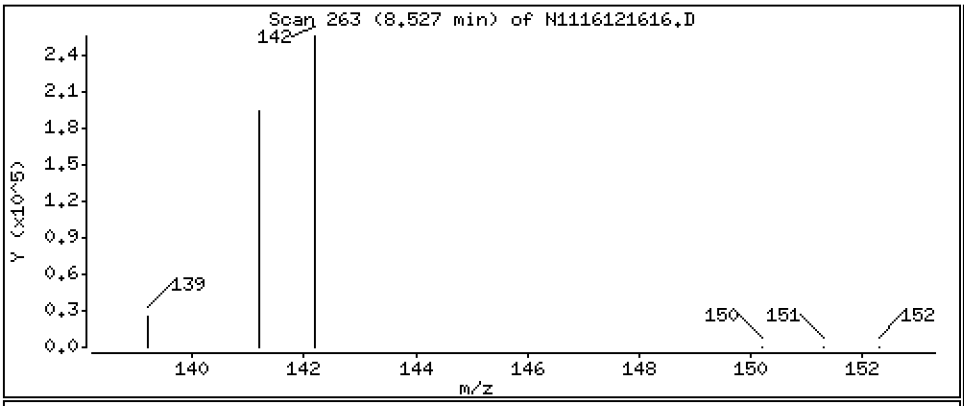
Operator: VTS

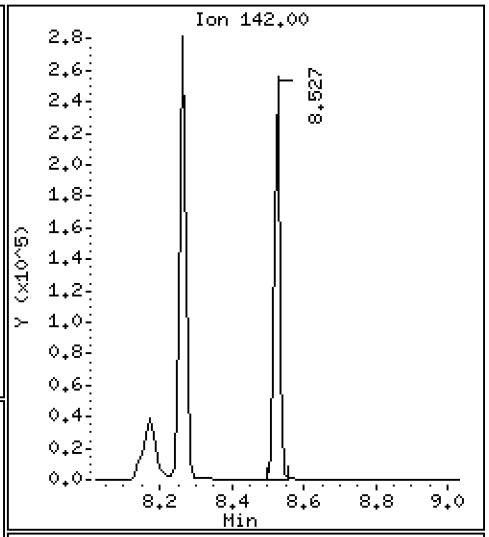
Column phase: Rxi-17Sil MS

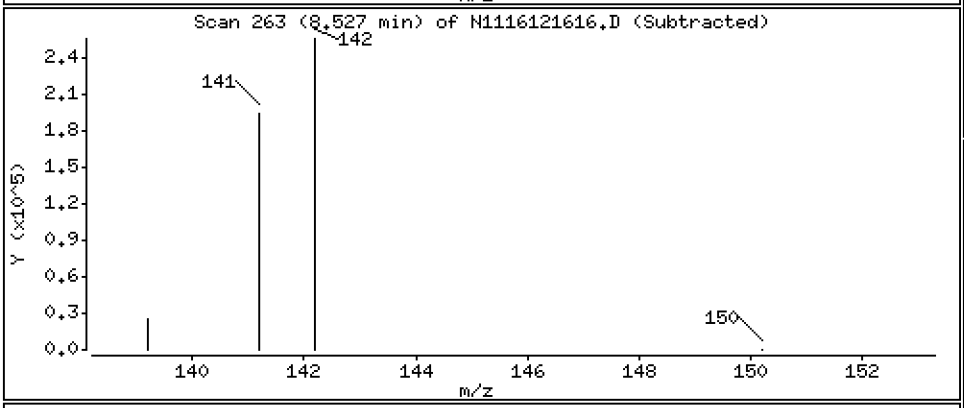
Column diameter: 0.25

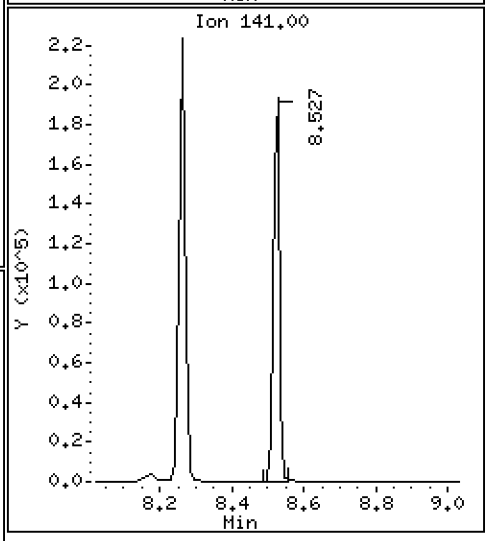
6 1-Methylnaphthalene

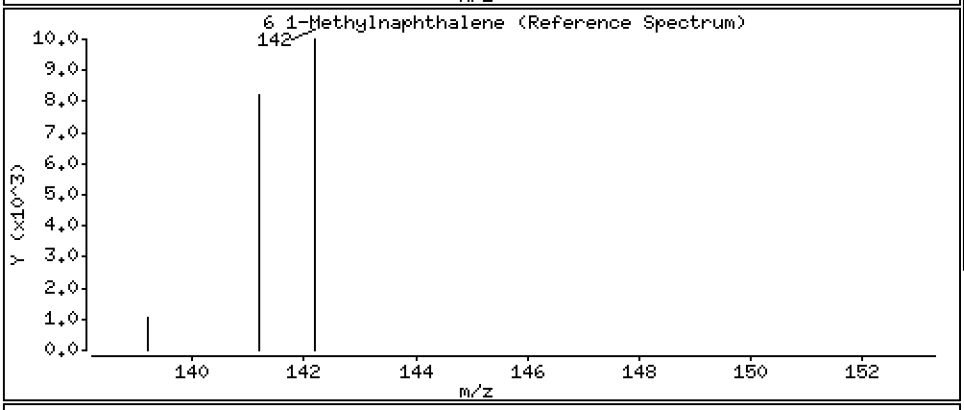
Concentration: 246 ng/mL

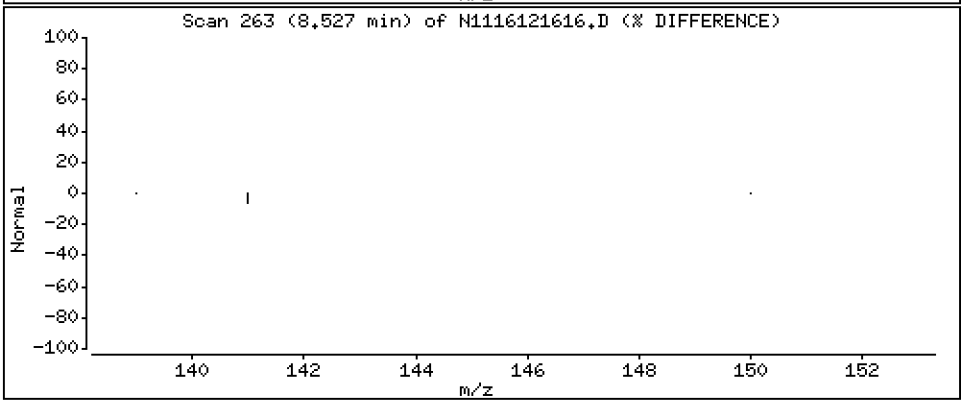












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

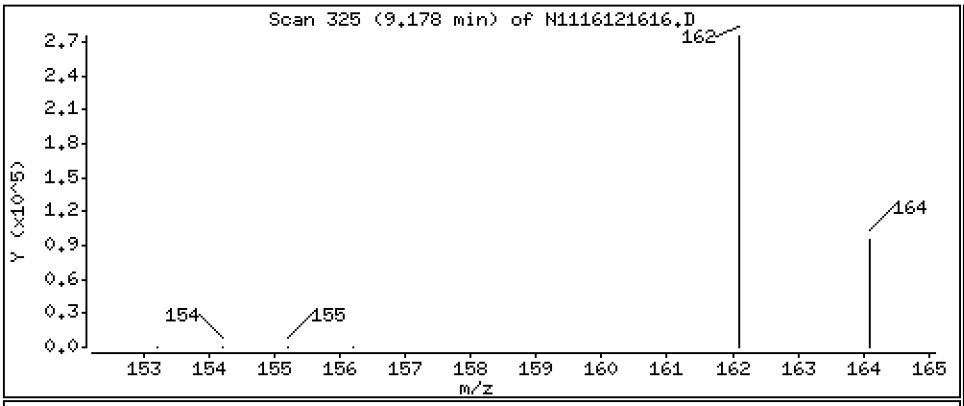
Operator: VTS

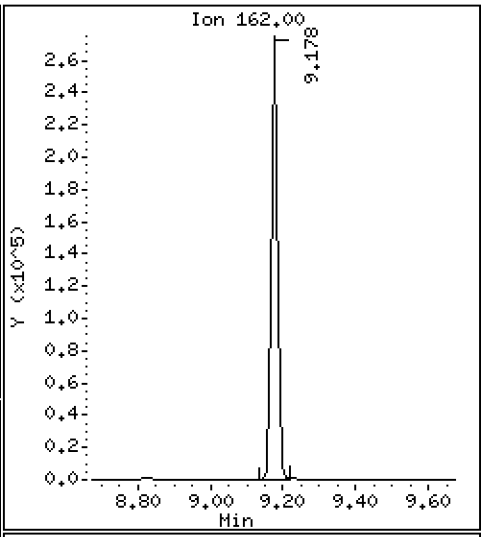
Column phase: Rxi-17Sil MS

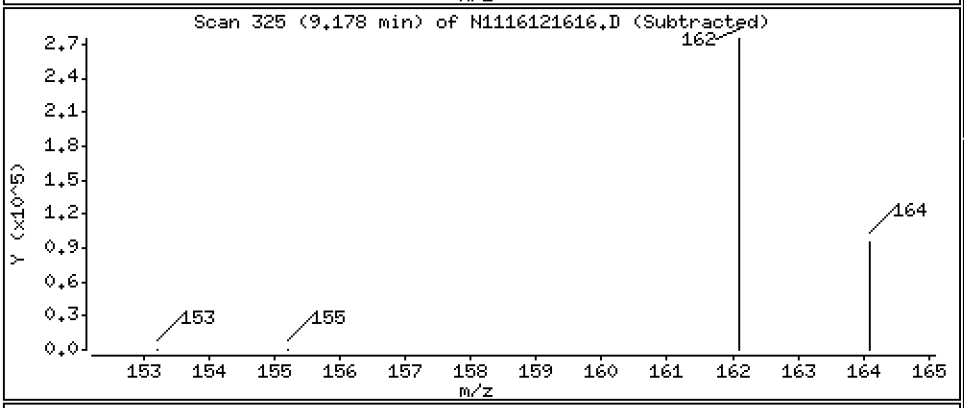
Column diameter: 0.25

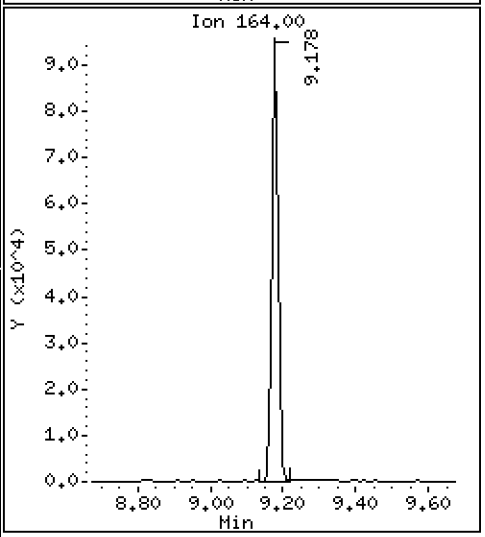
7 2-Chloronaphthalene

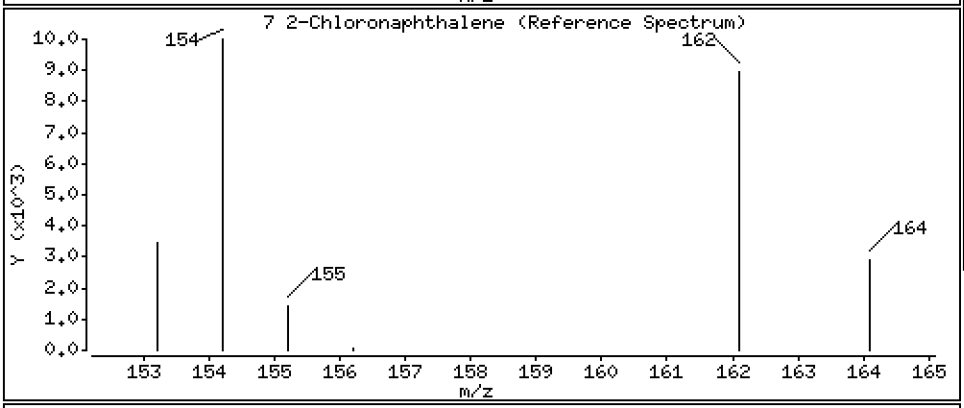
Concentration: 250 ng/mL

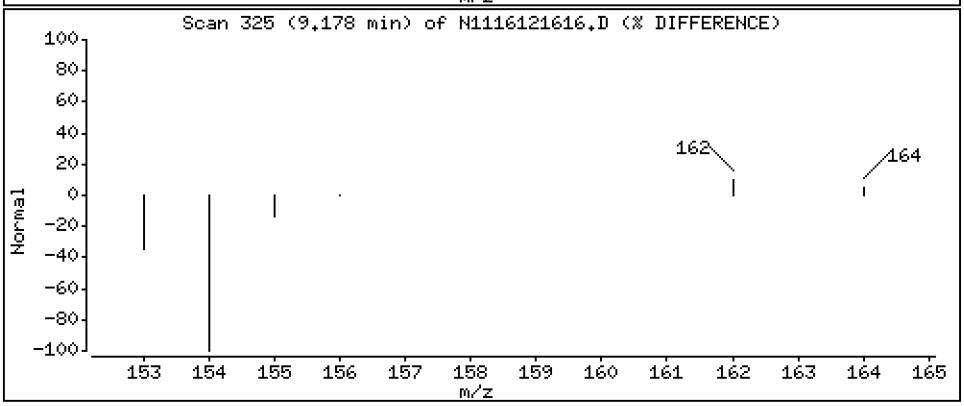












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

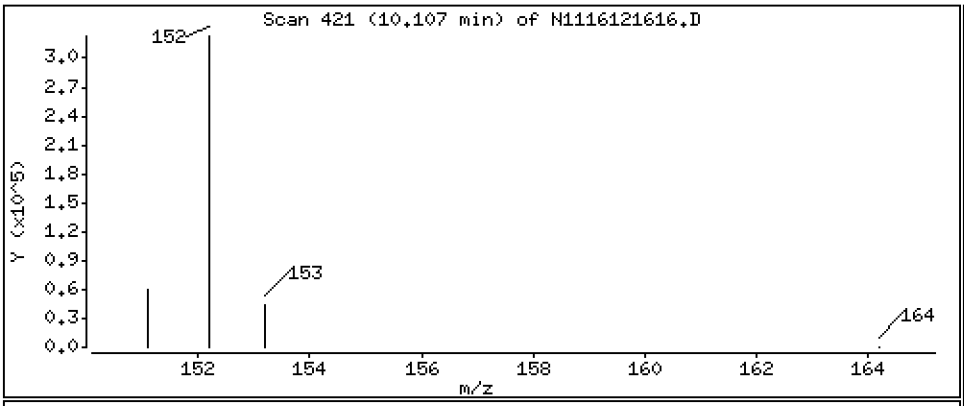
Operator: VTS

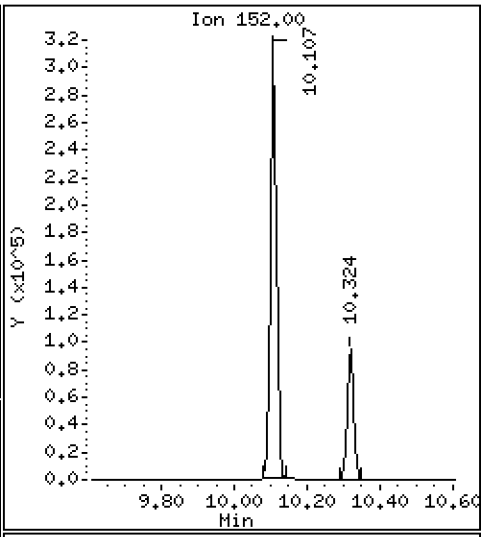
Column phase: Rxi-17Sil MS

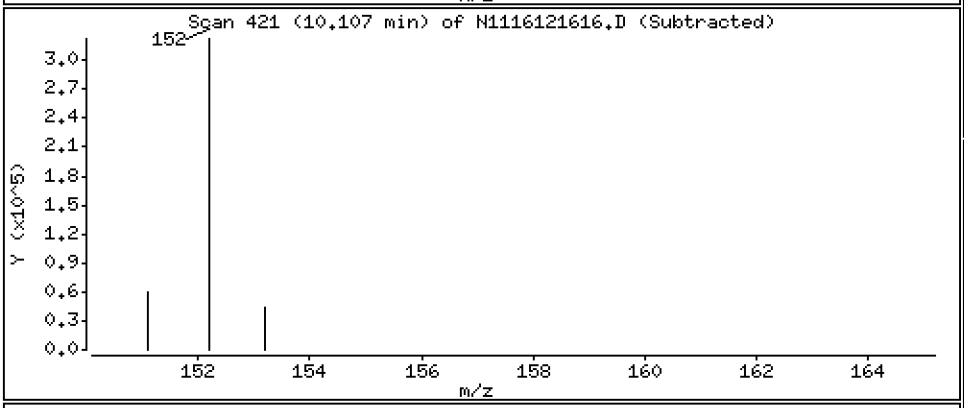
Column diameter: 0.25

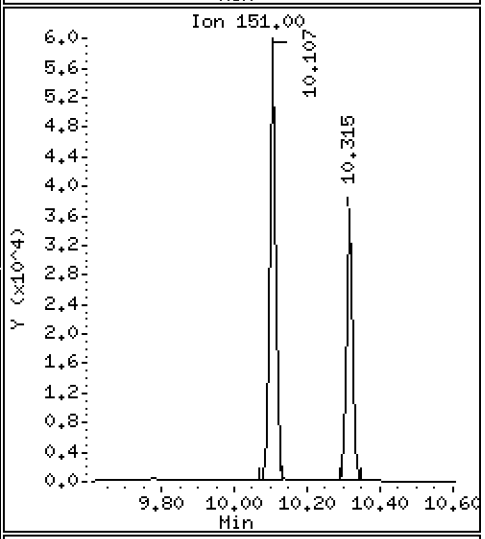
10 Acenaphthylene

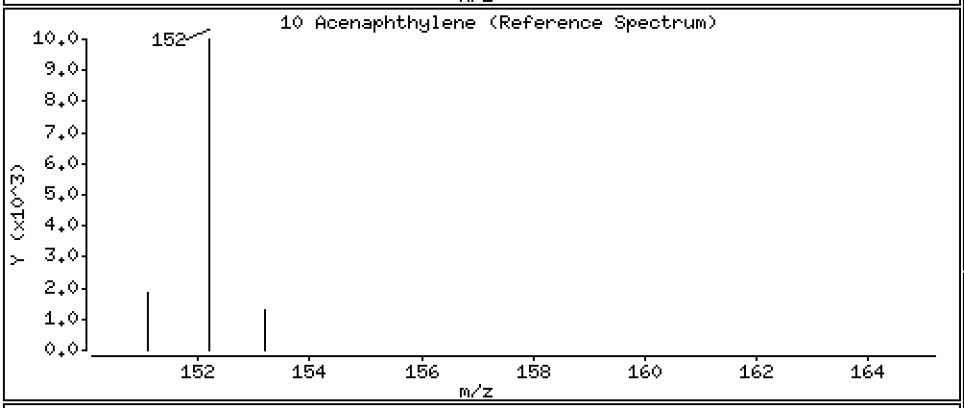
Concentration: 257 ng/mL

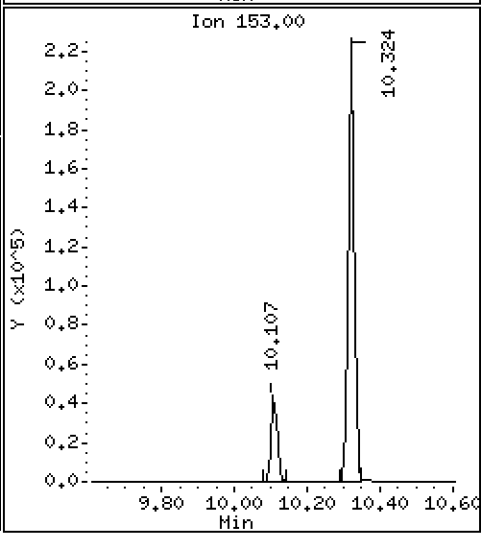


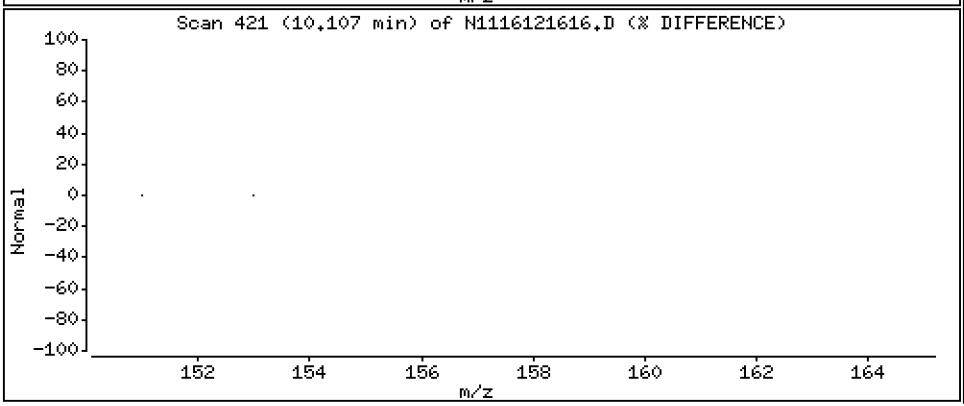












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

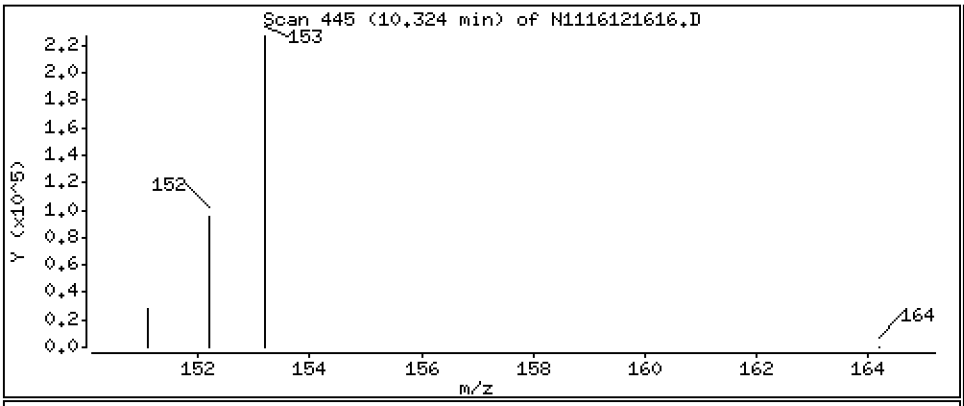
Operator: VTS

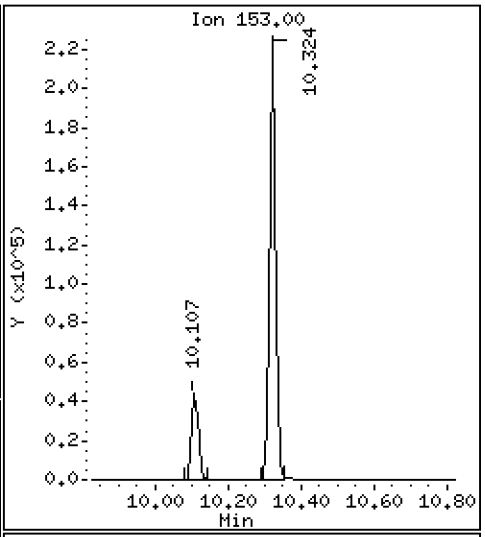
Column phase: Rxi-17Sil MS

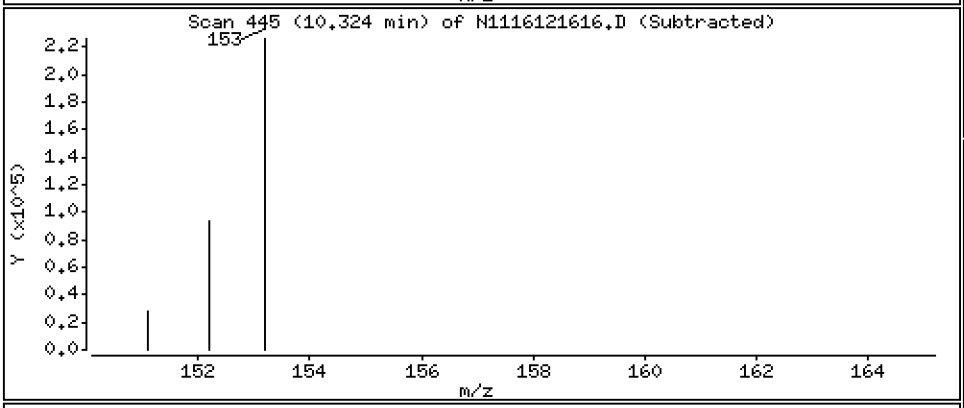
Column diameter: 0.25

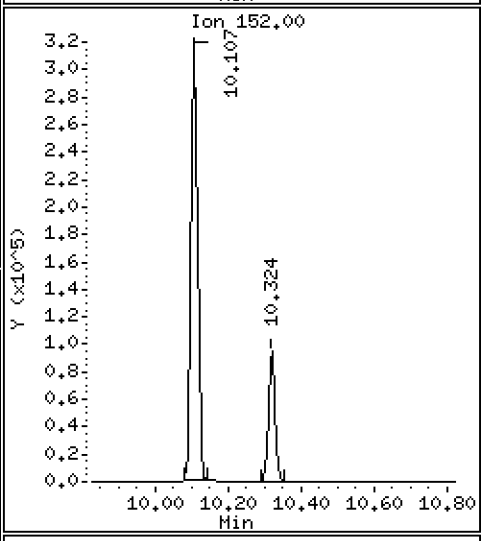
12 Acenaphthene

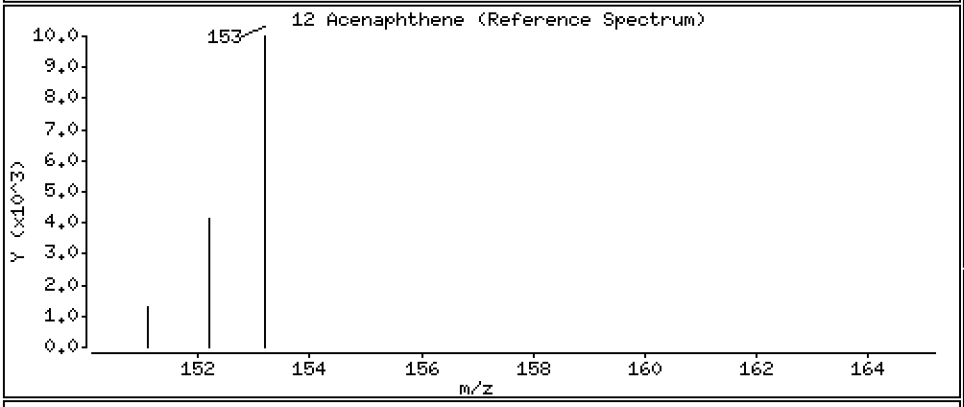
Concentration: 280 ng/mL

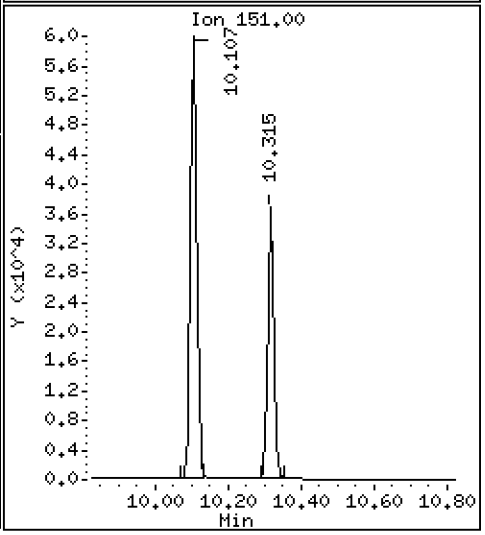


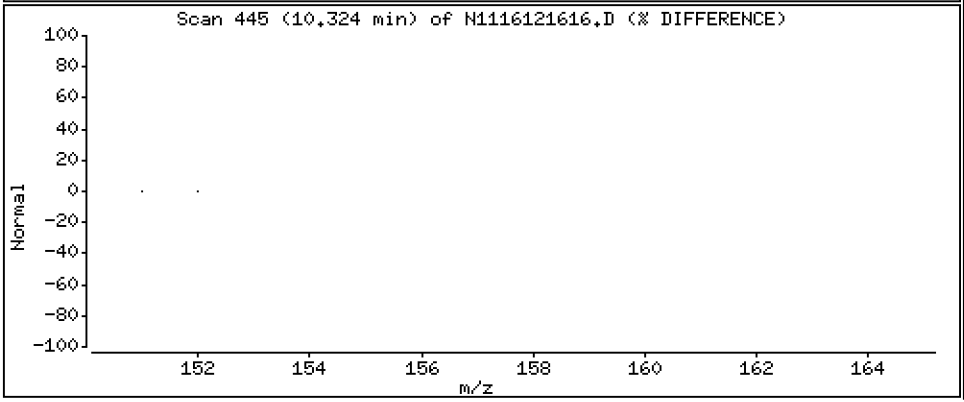












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

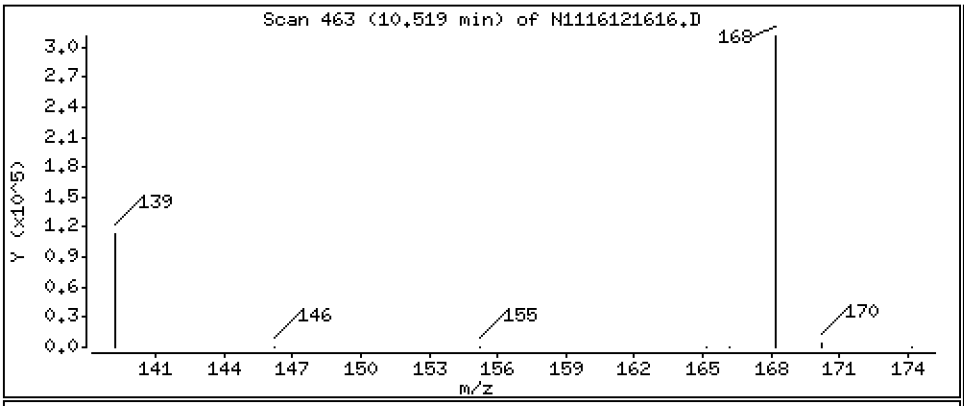
Operator: VTS

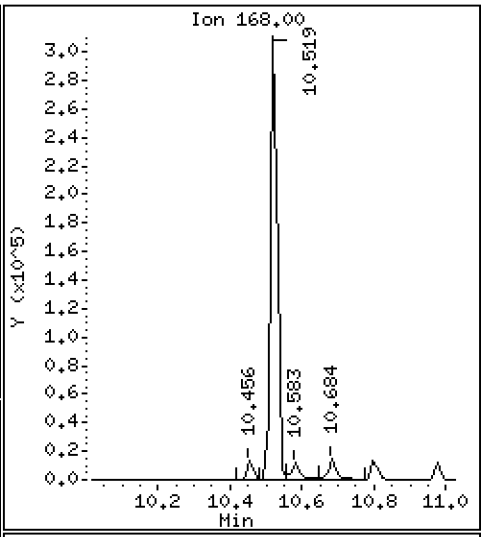
Column phase: Rxi-17Sil MS

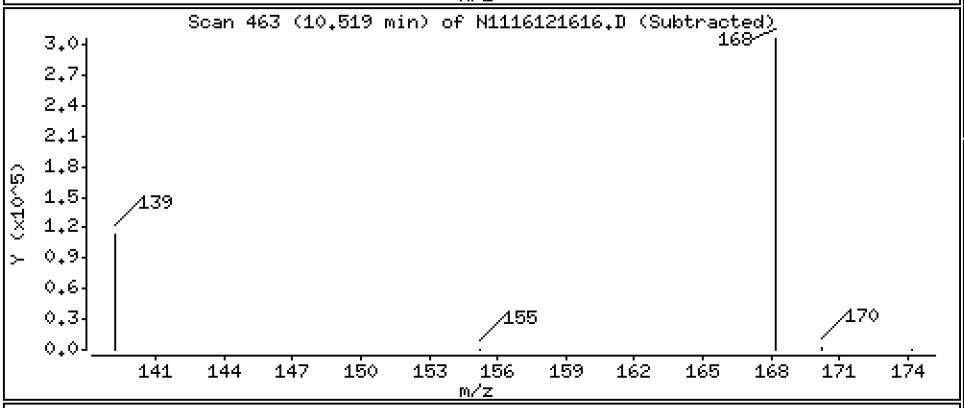
Column diameter: 0.25

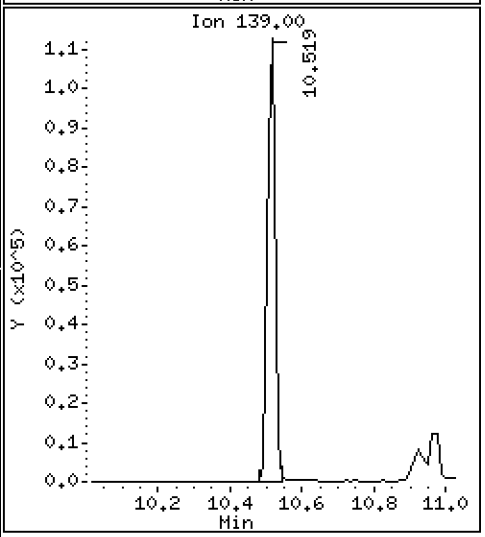
13 Dibenzofuran

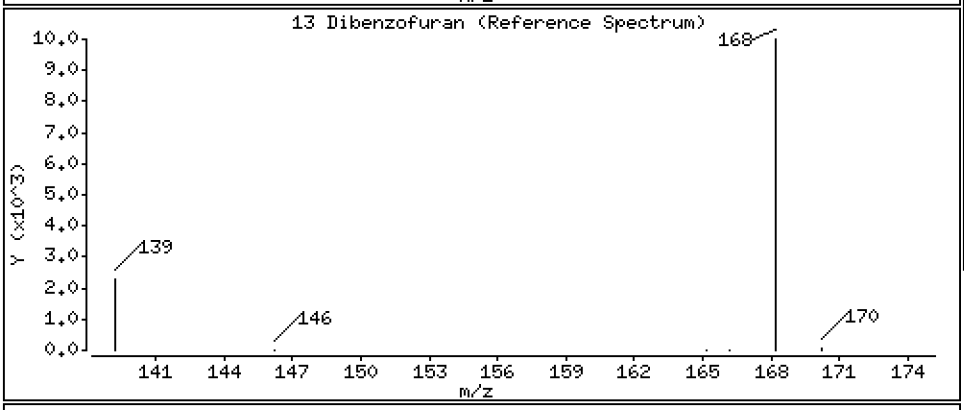
Concentration: 277 ng/mL

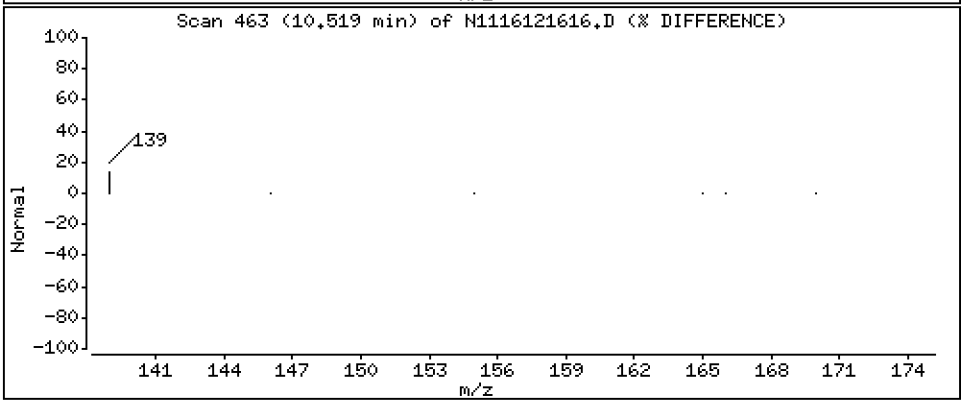












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

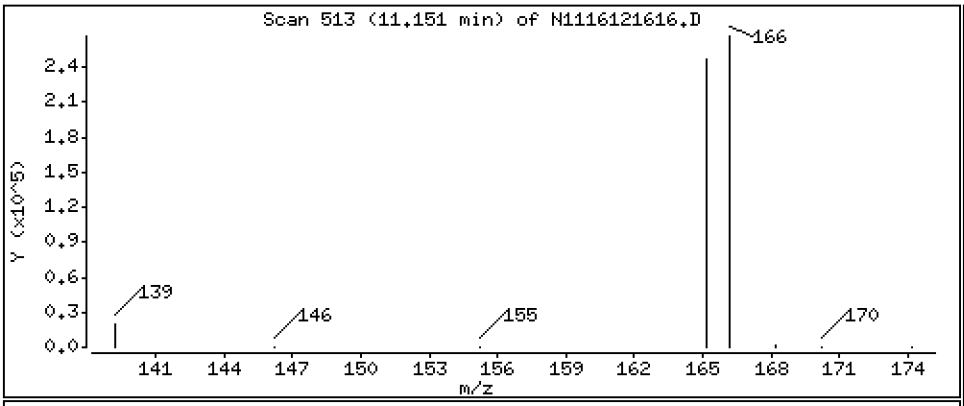
Operator: VTS

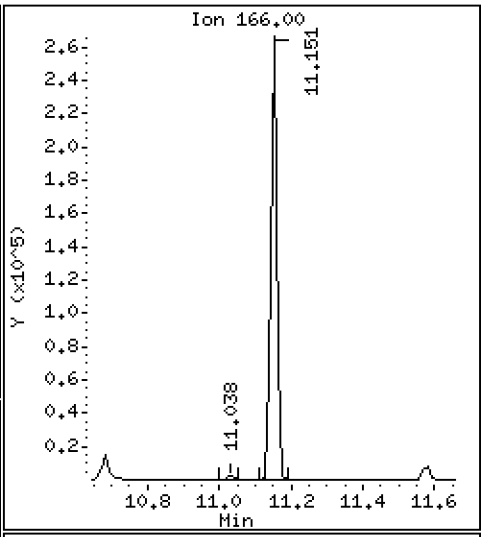
Column phase: Rxi-17Sil MS

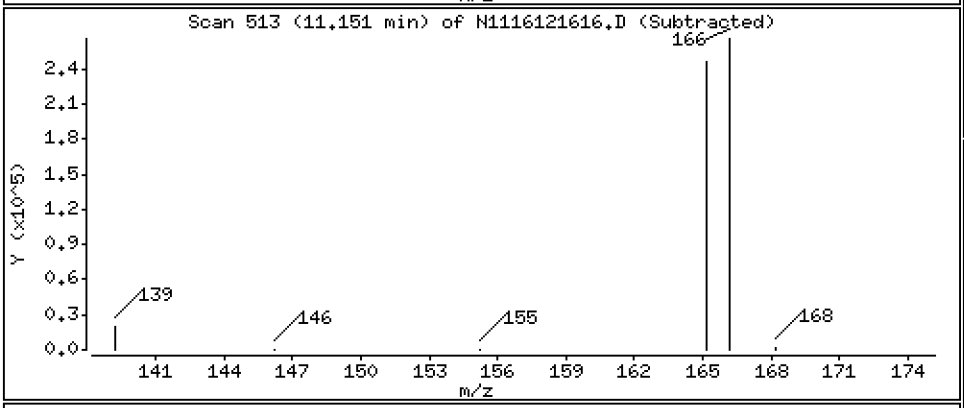
Column diameter: 0.25

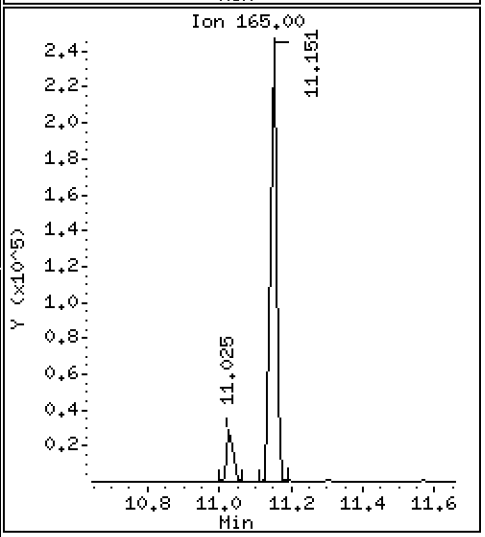
16 Fluorene

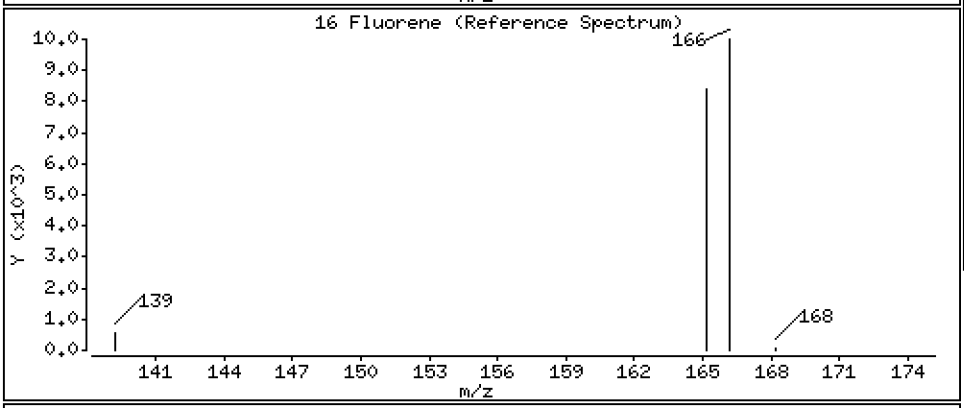
Concentration: 270 ng/mL

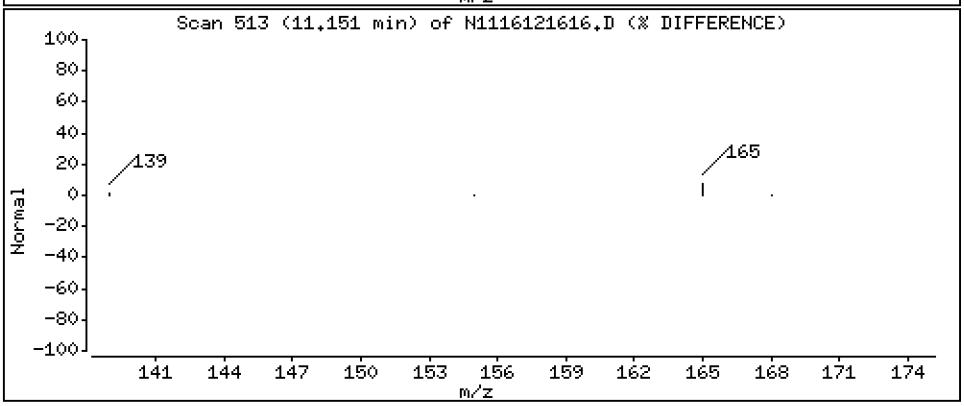












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

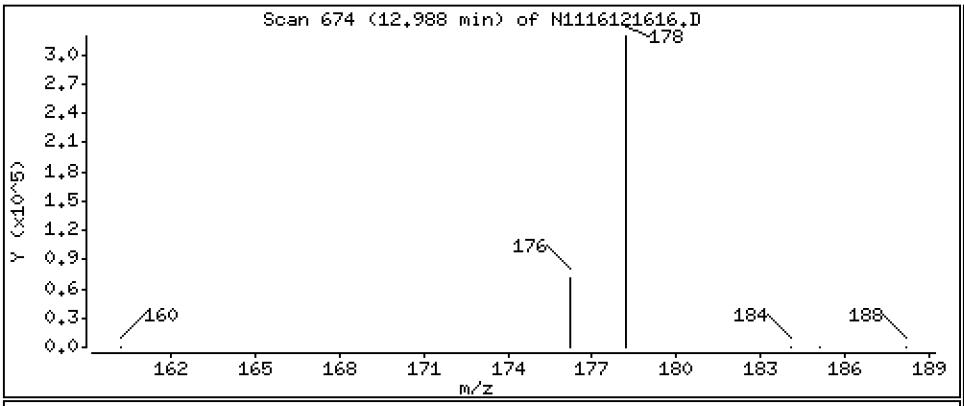
Operator: VTS

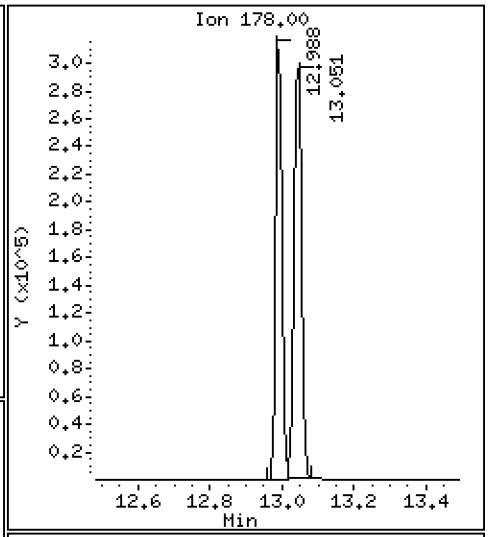
Column phase: Rxi-17Sil MS

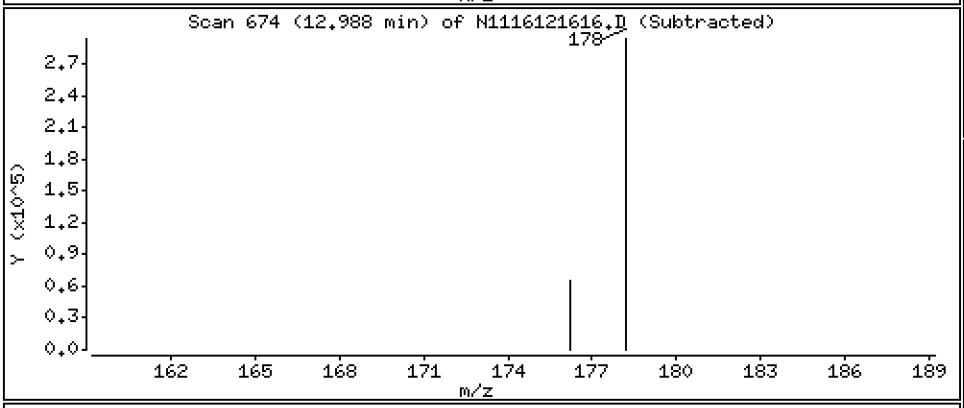
Column diameter: 0.25

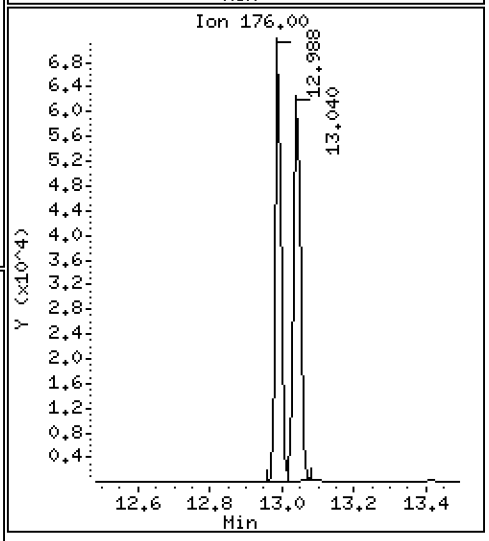
19 Phenanthrene

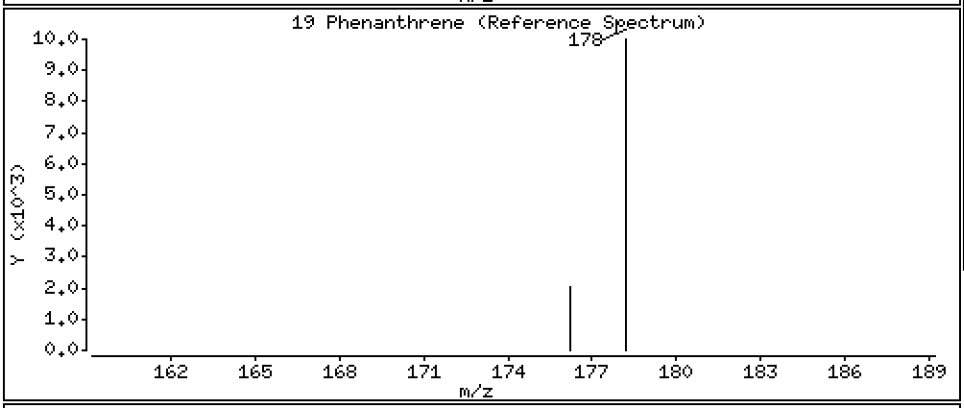
Concentration: 254 ng/mL

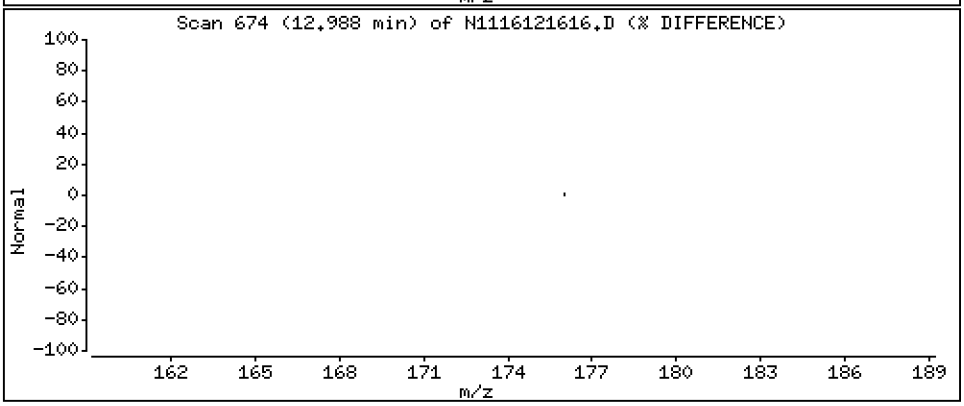












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

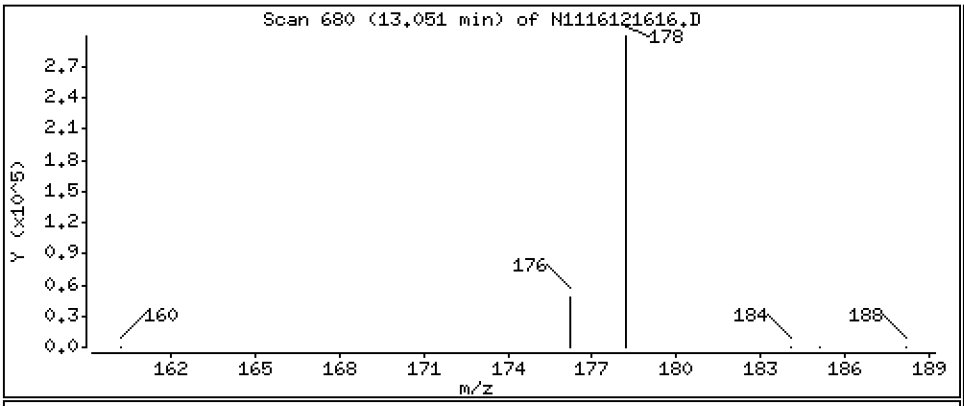
Operator: VTS

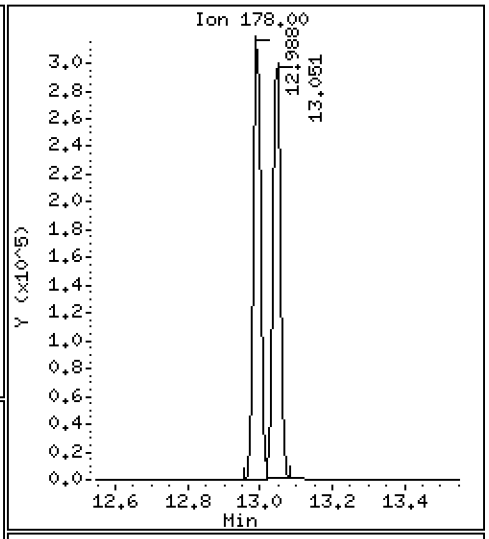
Column phase: Rxi-17Sil MS

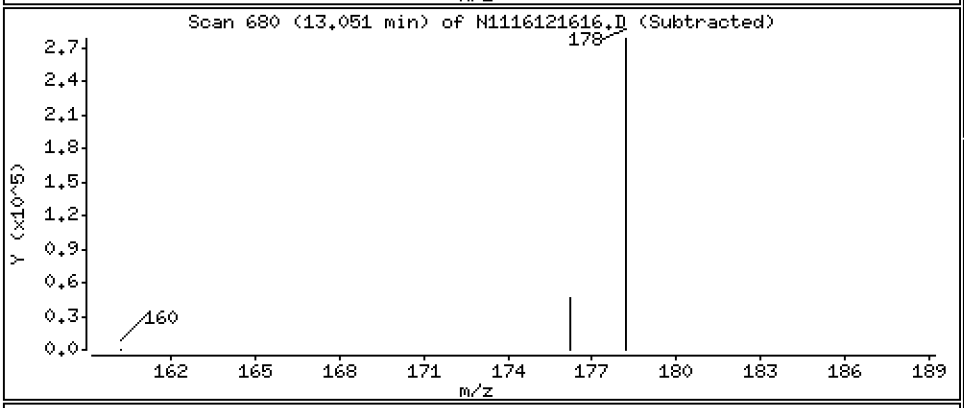
Column diameter: 0.25

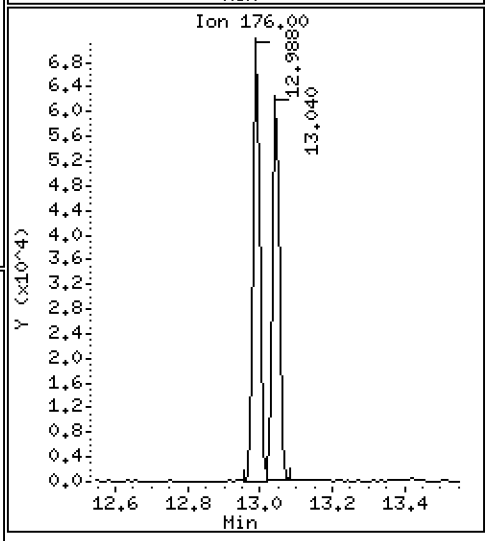
21 Anthracene

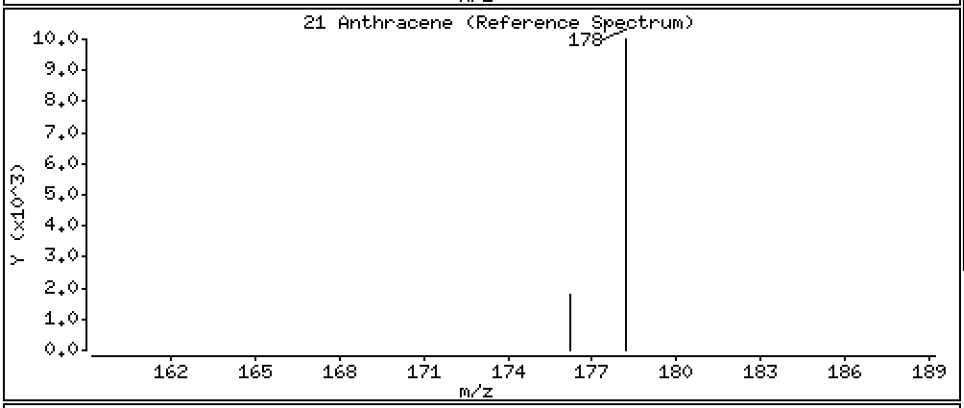
Concentration: 259 ng/mL

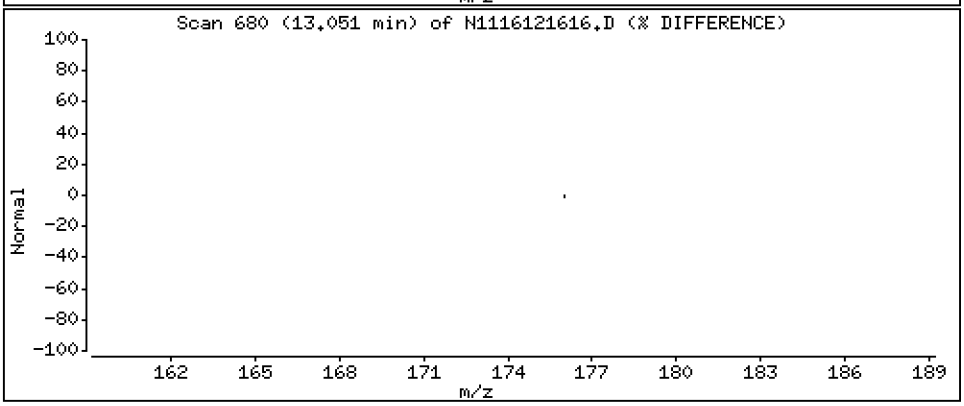












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

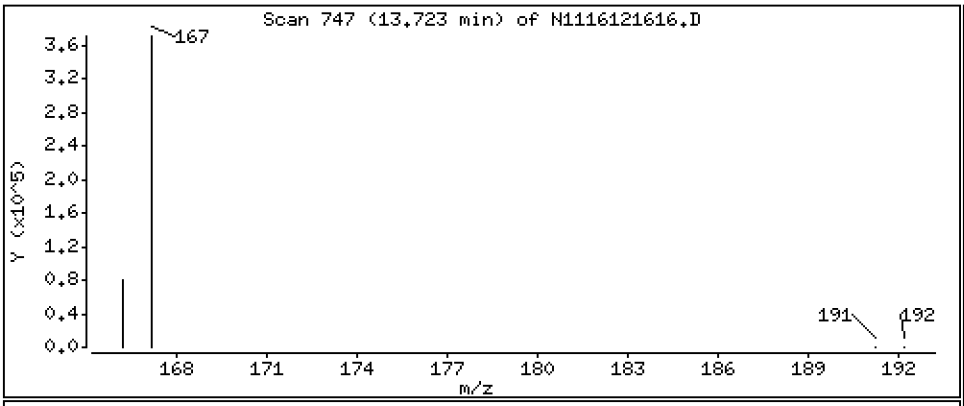
Operator: VTS

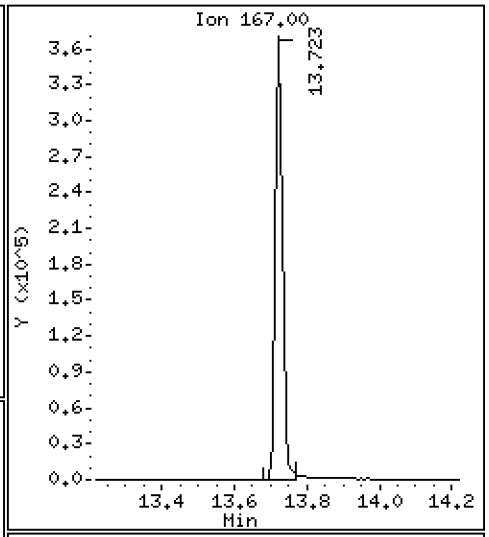
Column phase: Rxi-17Sil MS

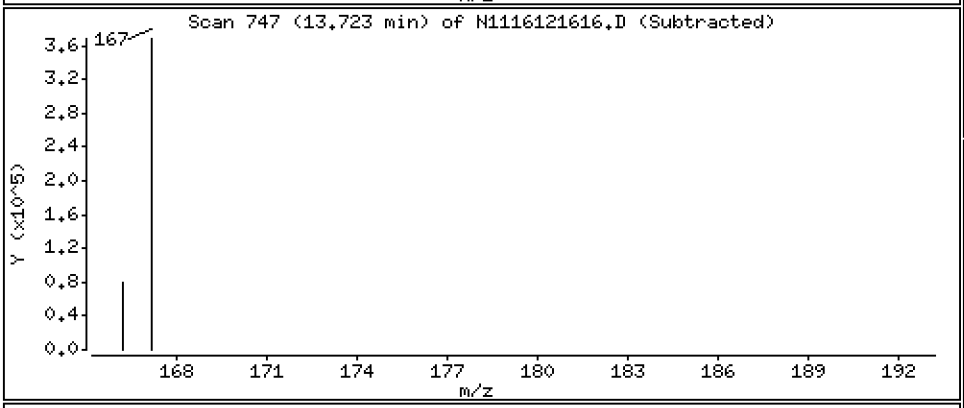
Column diameter: 0.25

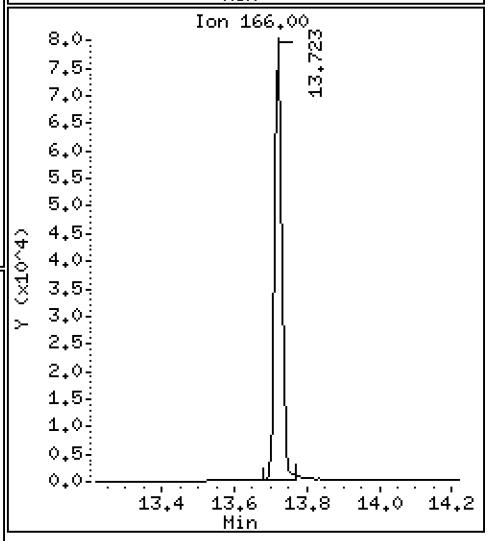
22 Carbazole

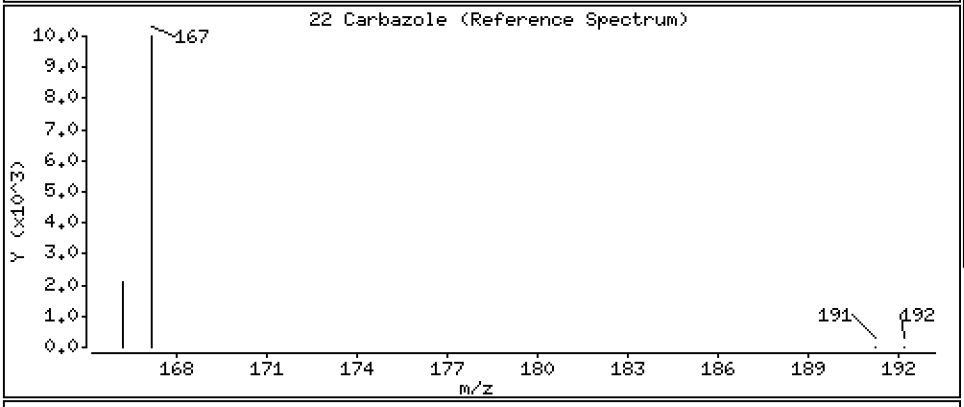
Concentration: 272 ng/mL

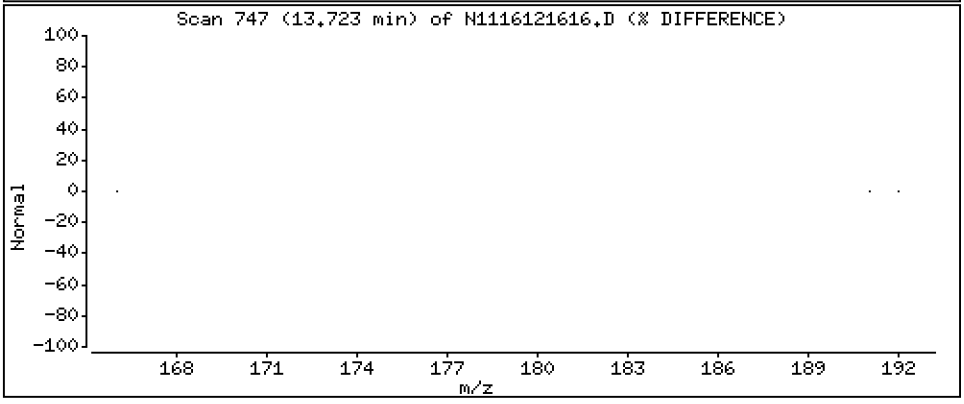












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

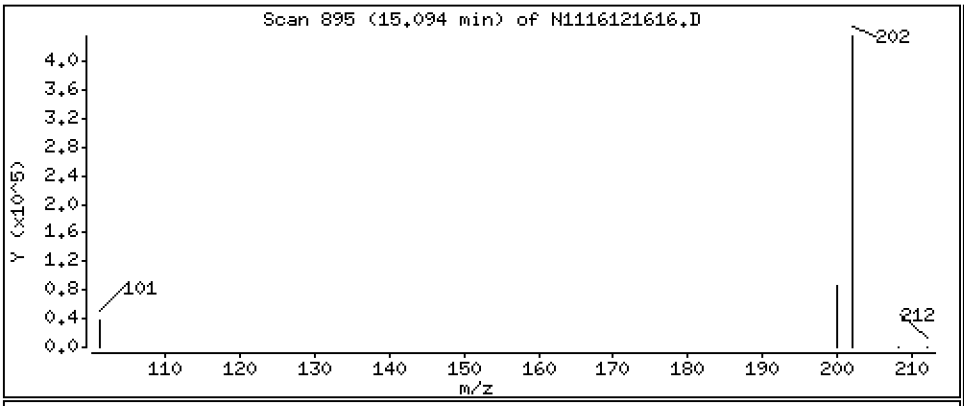
Operator: VTS

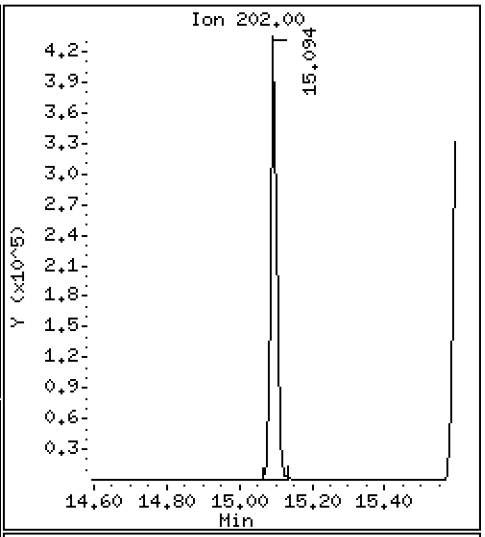
Column phase: Rxi-17Sil MS

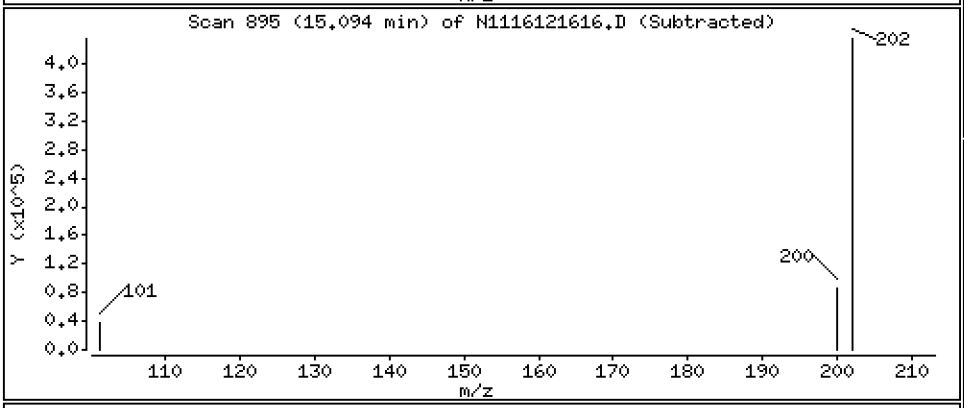
Column diameter: 0.25

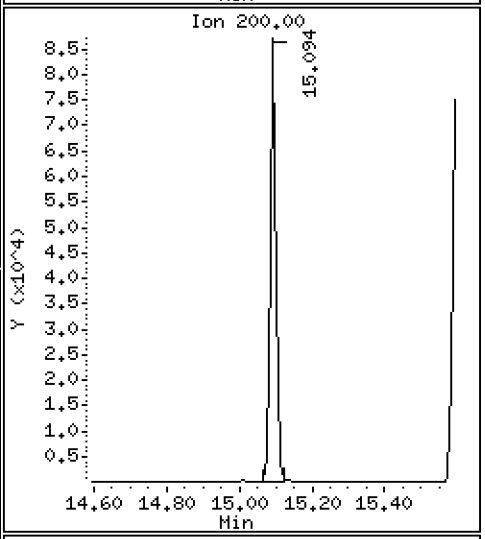
25 Fluoranthene

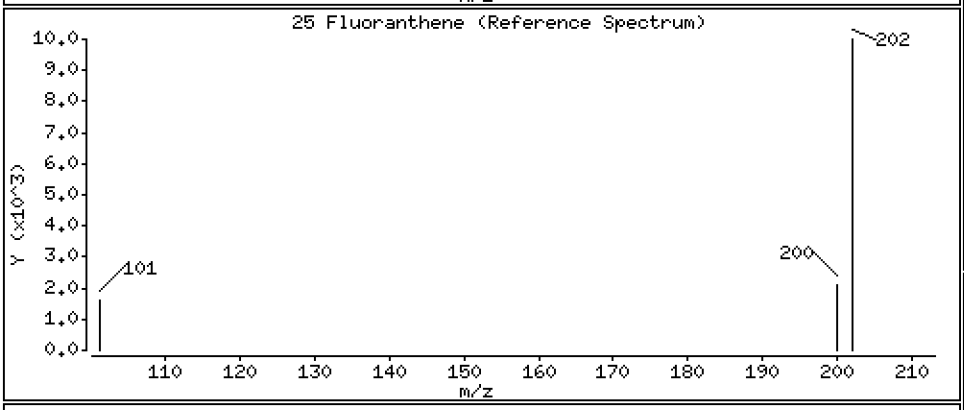
Concentration: 262 ng/mL

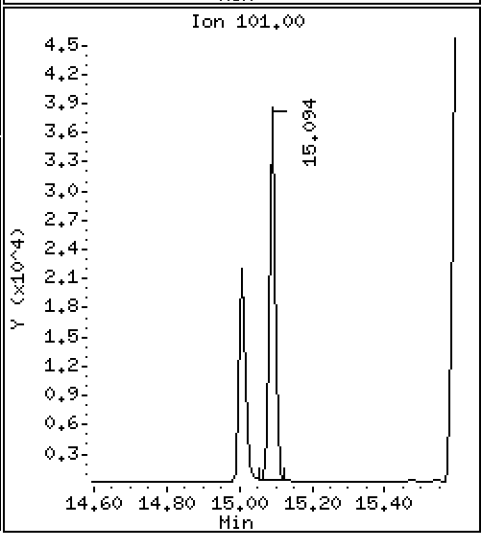


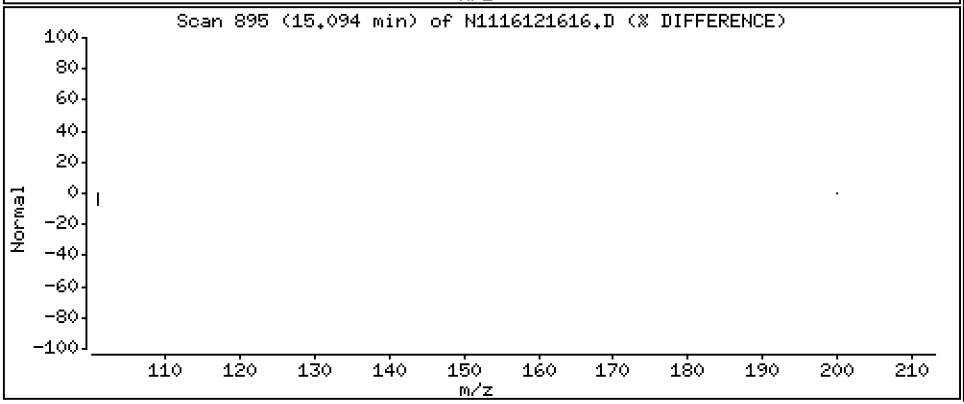












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

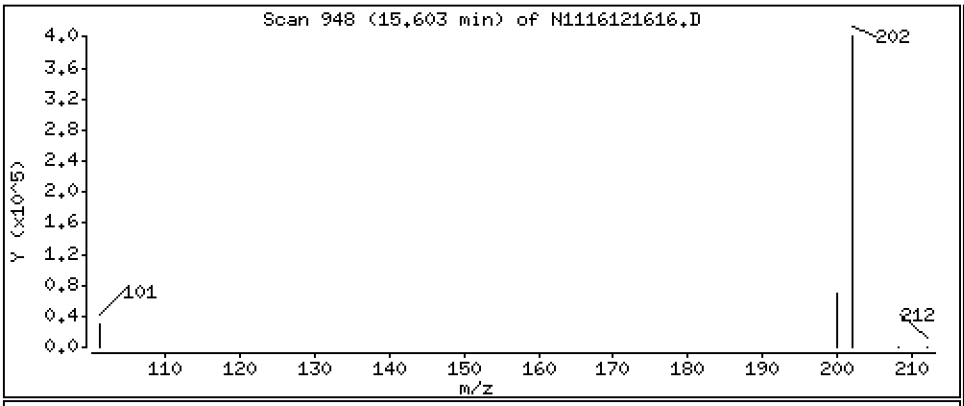
Operator: VTS

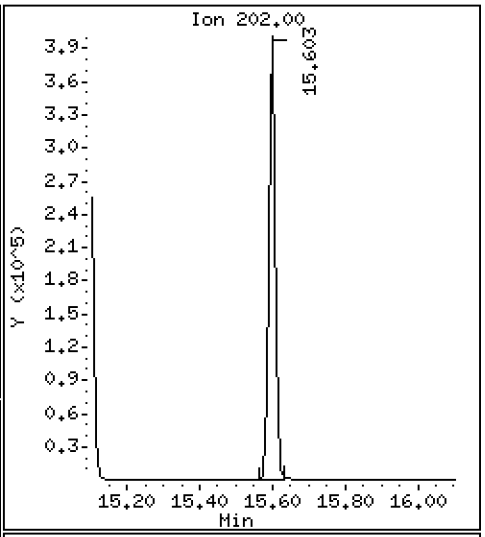
Column phase: Rxi-17Sil MS

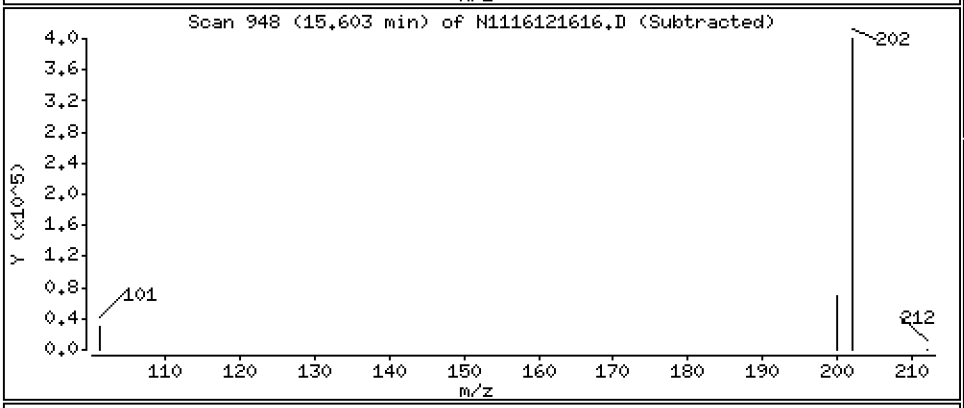
Column diameter: 0.25

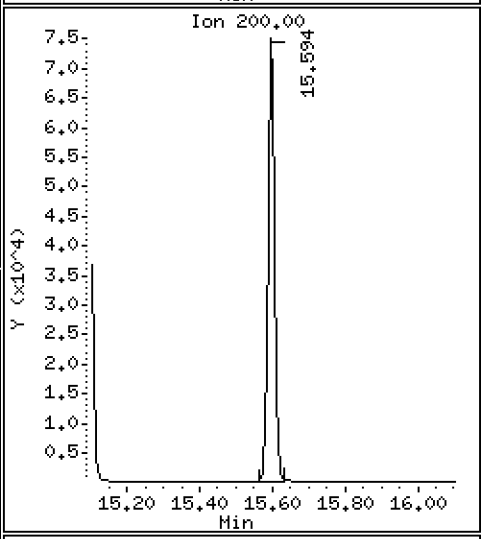
26 Pyrene

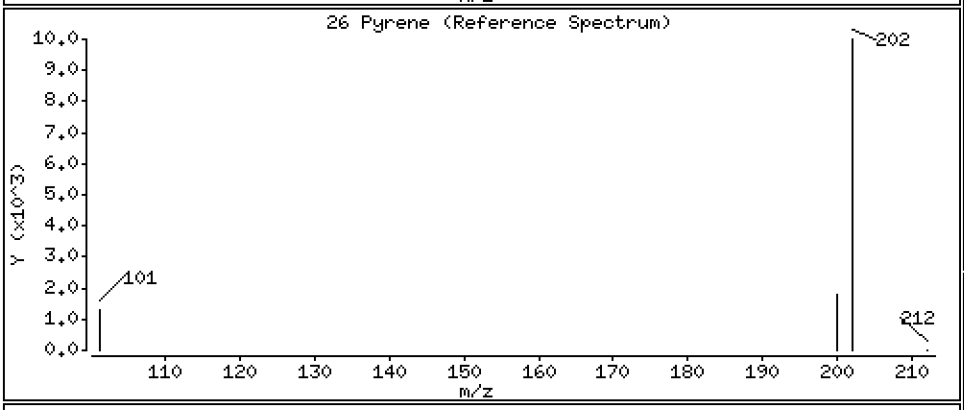
Concentration: 250 ng/mL

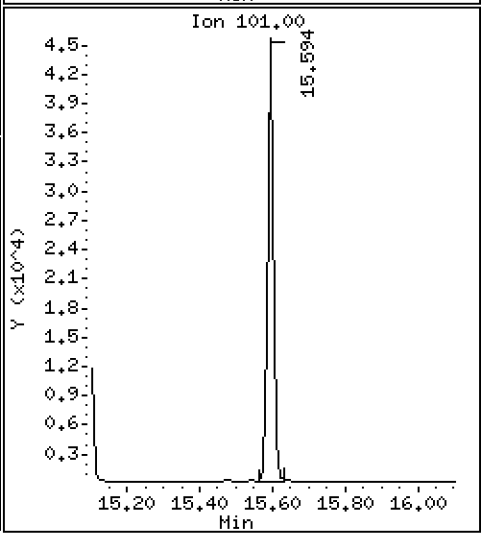


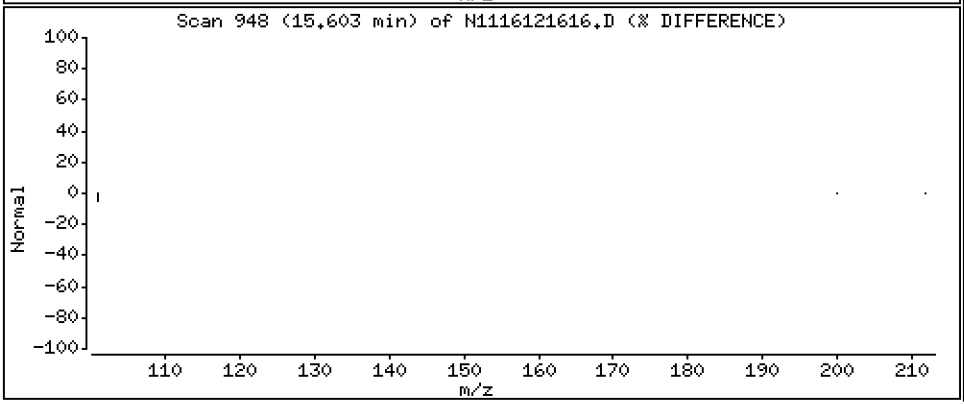












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

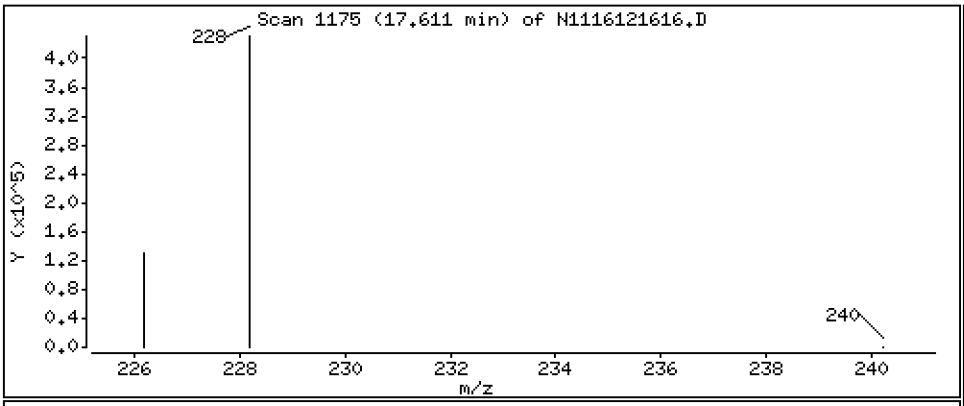
Operator: VTS

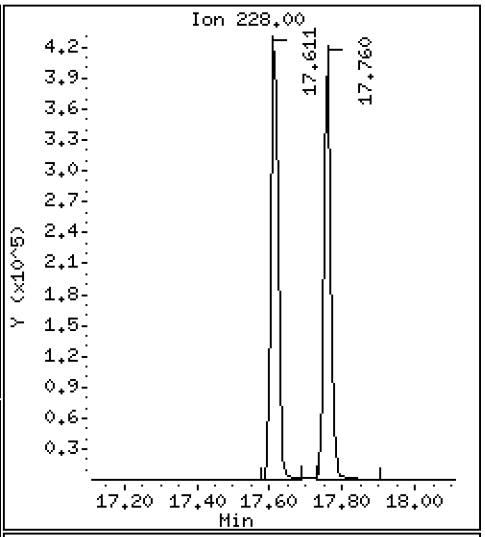
Column phase: Rxi-17Sil MS

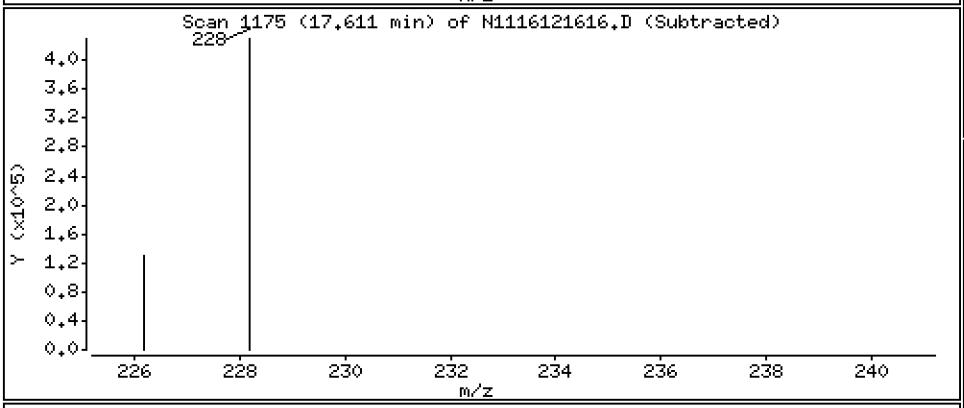
Column diameter: 0.25

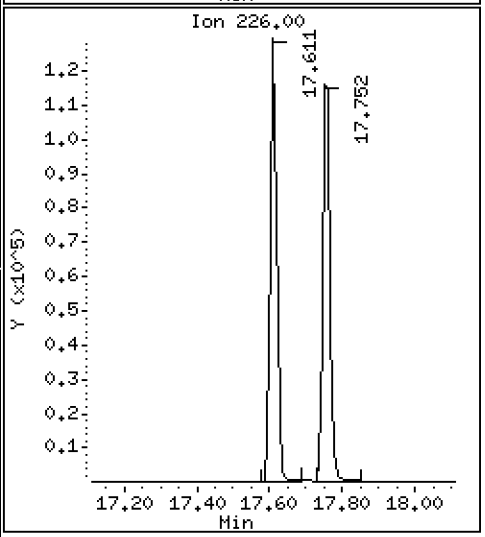
27 Benzo(a)anthracene

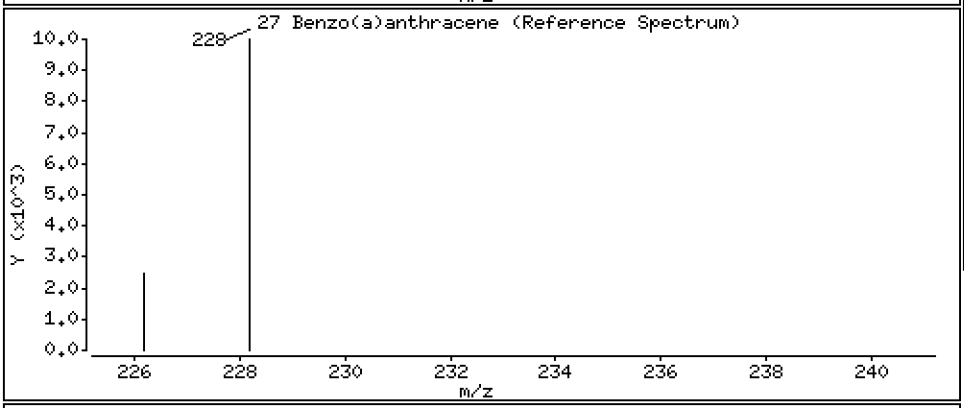
Concentration: 259 ng/mL

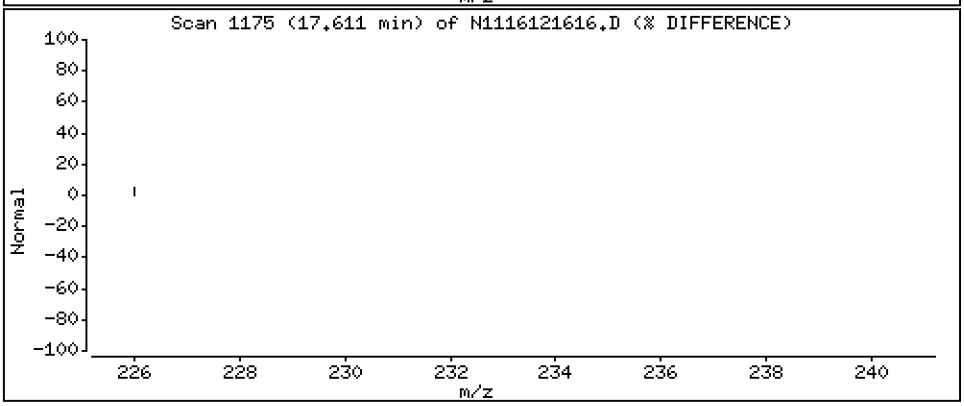












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

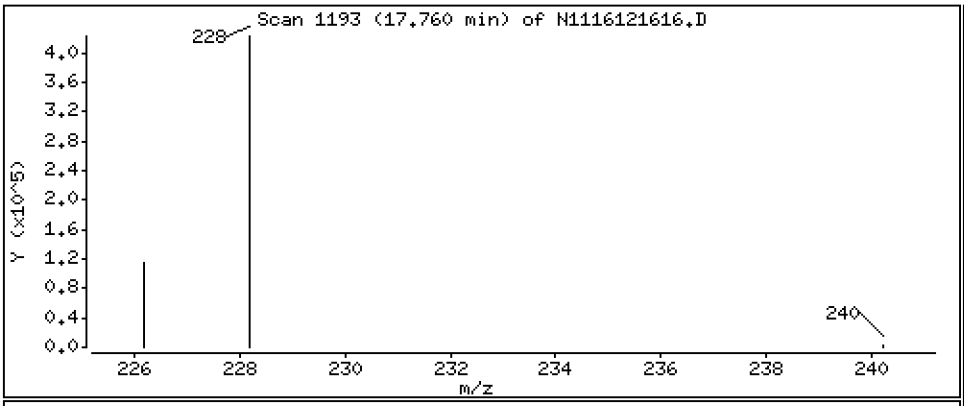
Operator: VTS

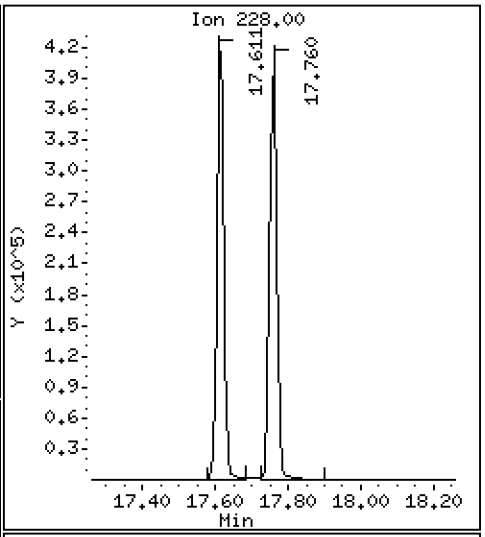
Column phase: Rxi-17Sil MS

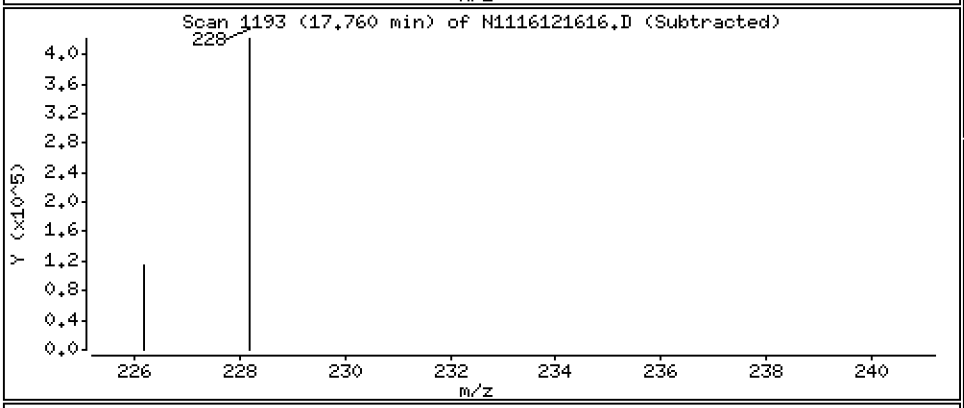
Column diameter: 0.25

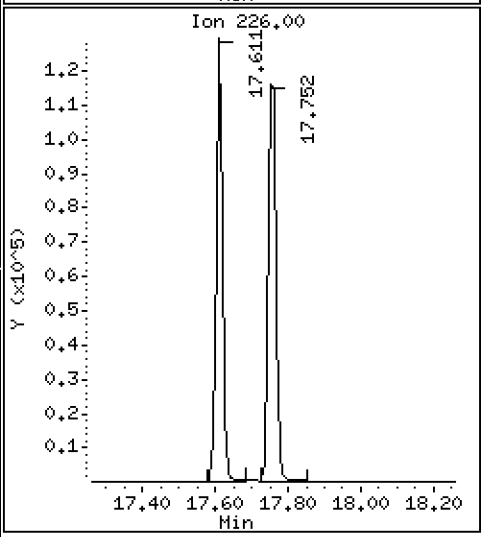
29 Chrysene

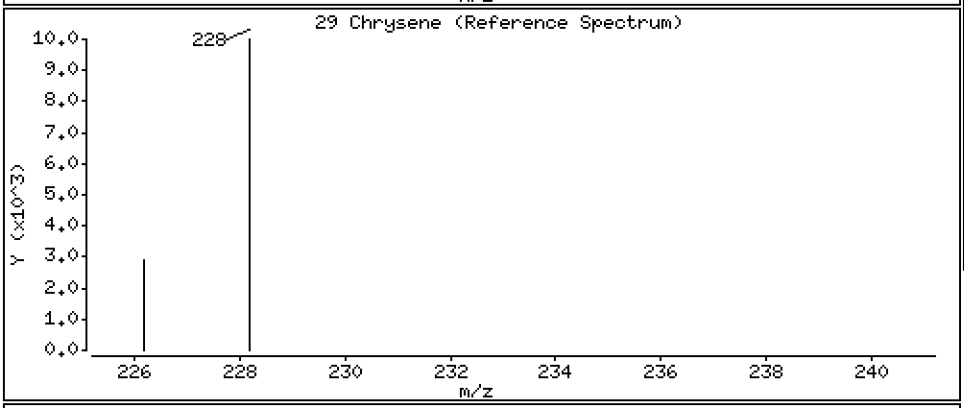
Concentration: 247 ng/mL

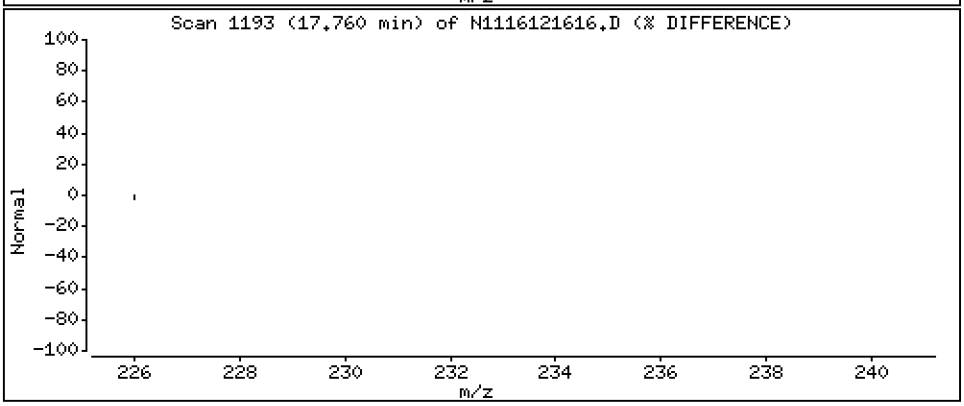












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

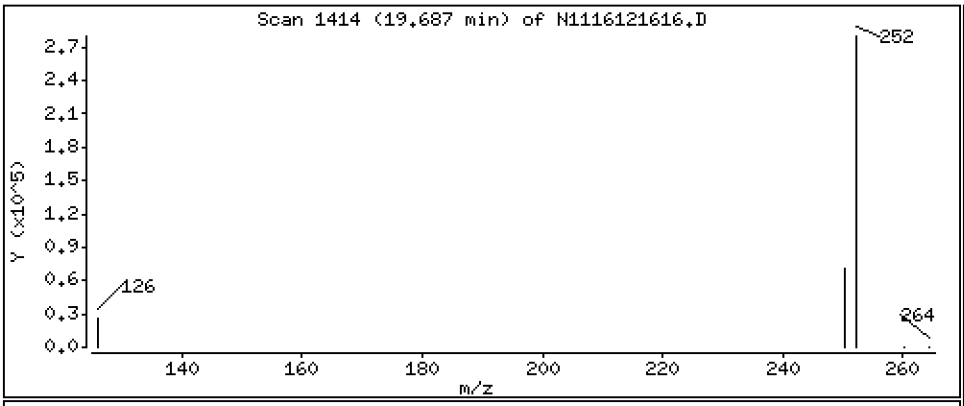
Operator: VTS

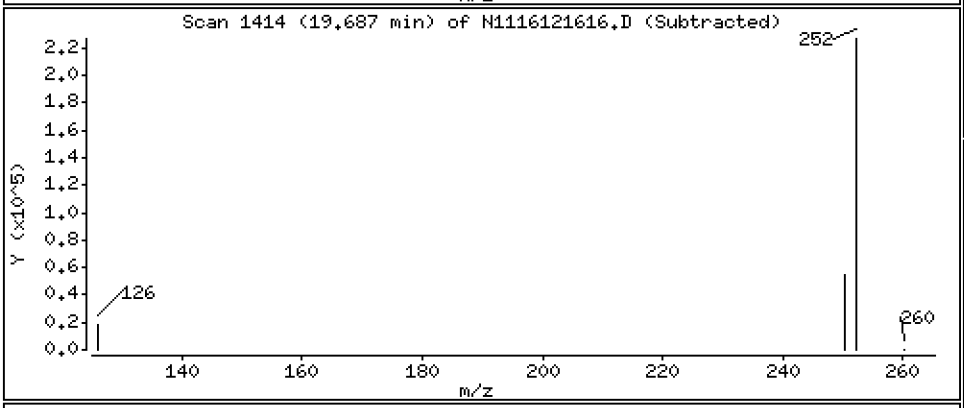
Column phase: Rxi-17Sil MS

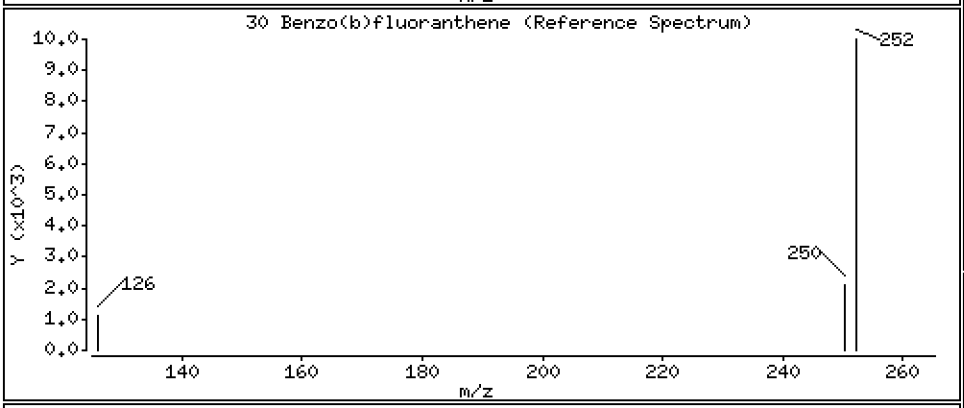
Column diameter: 0.25

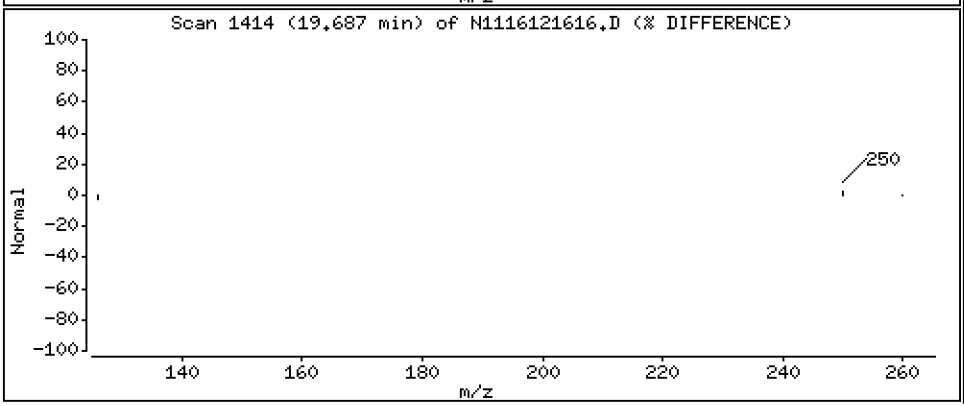
30 Benzo(b)fluoranthene

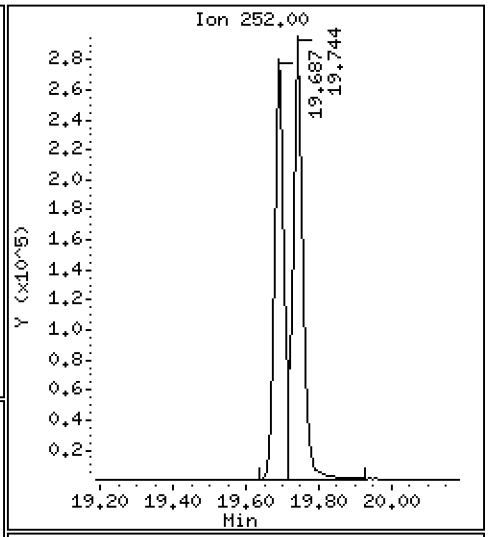
Concentration: 259 ng/mL

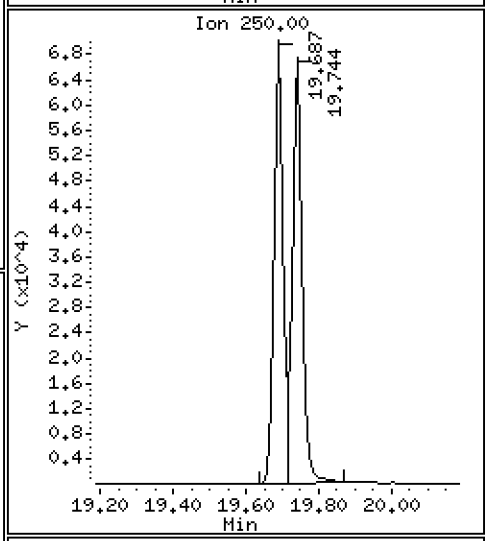


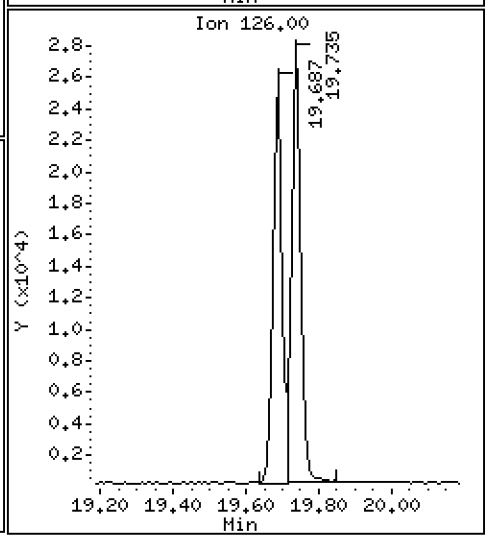












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

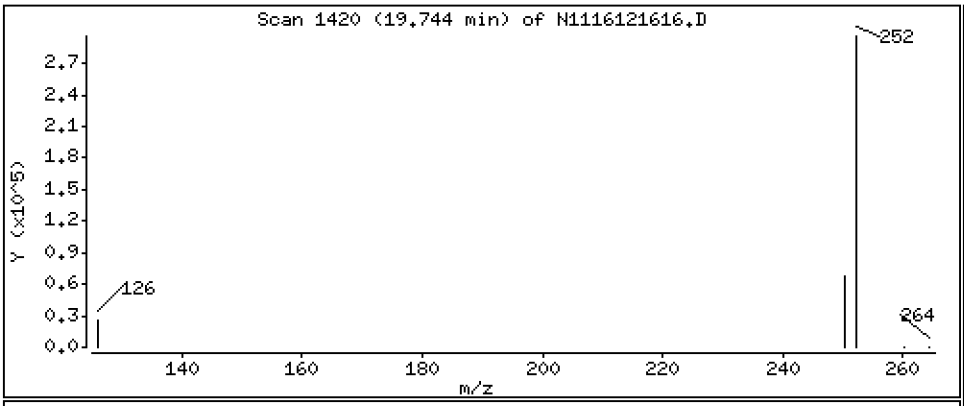
Operator: VTS

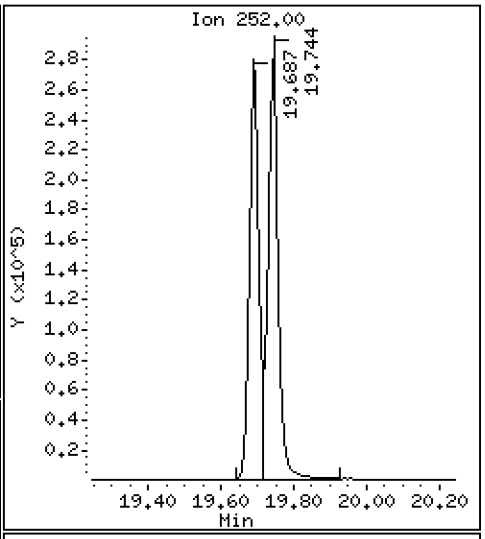
Column phase: Rxi-17Sil MS

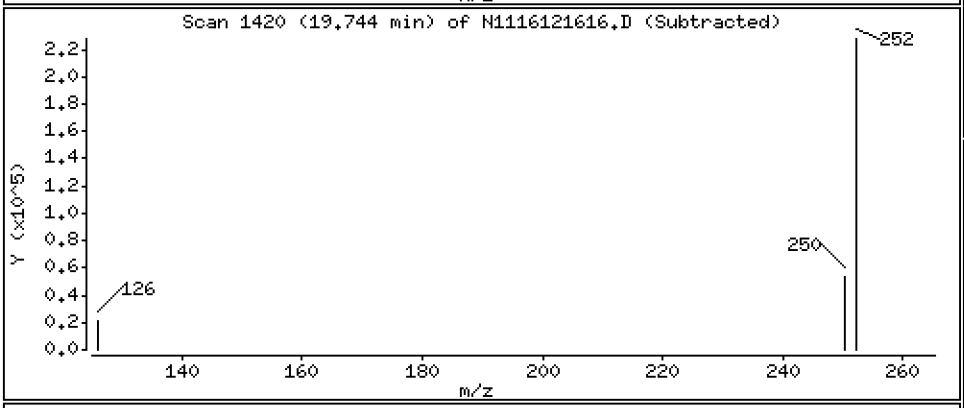
Column diameter: 0.25

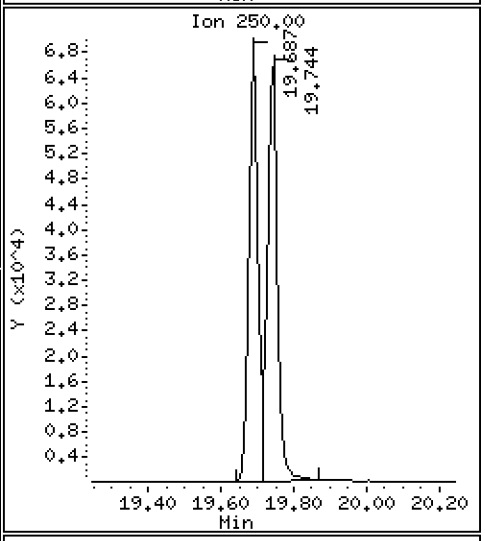
31 Benzo(k)fluoranthene

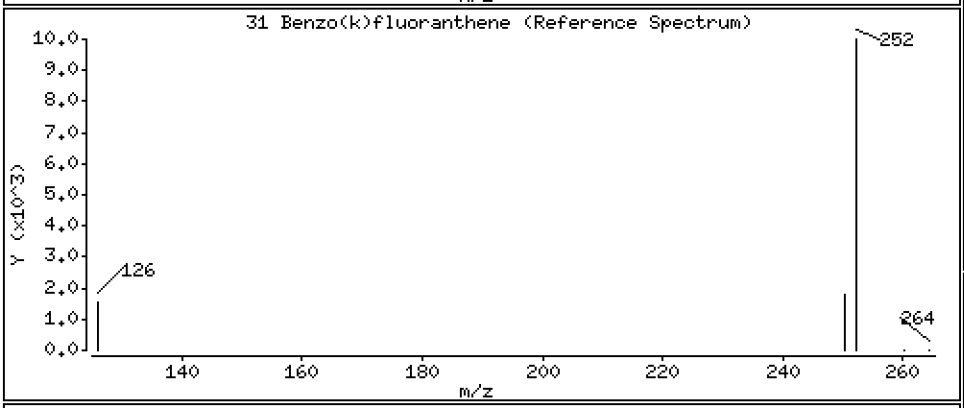
Concentration: 272 ng/mL

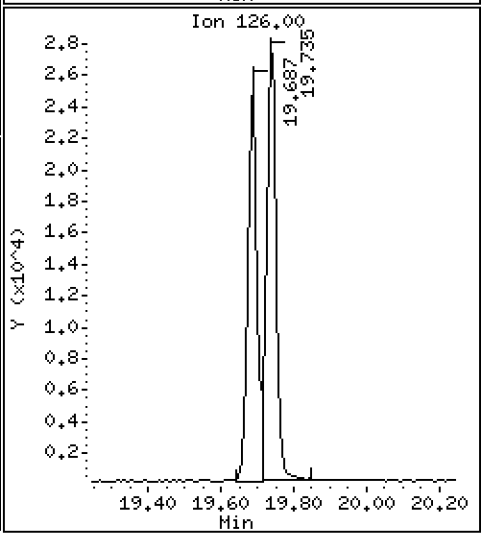


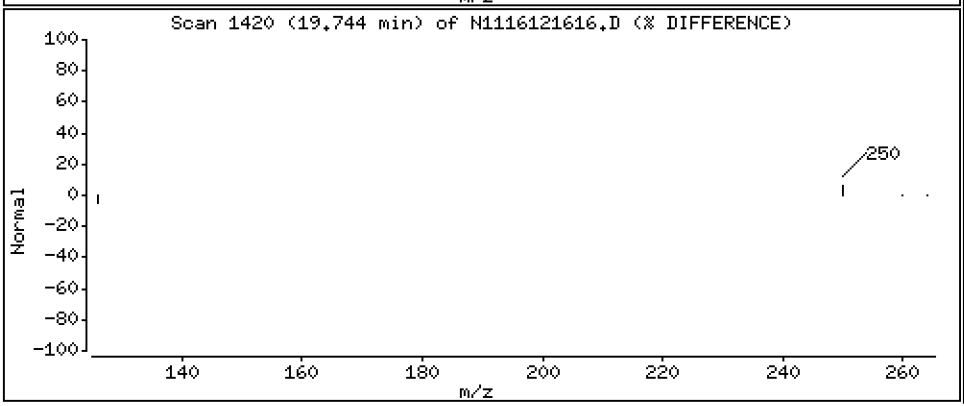












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

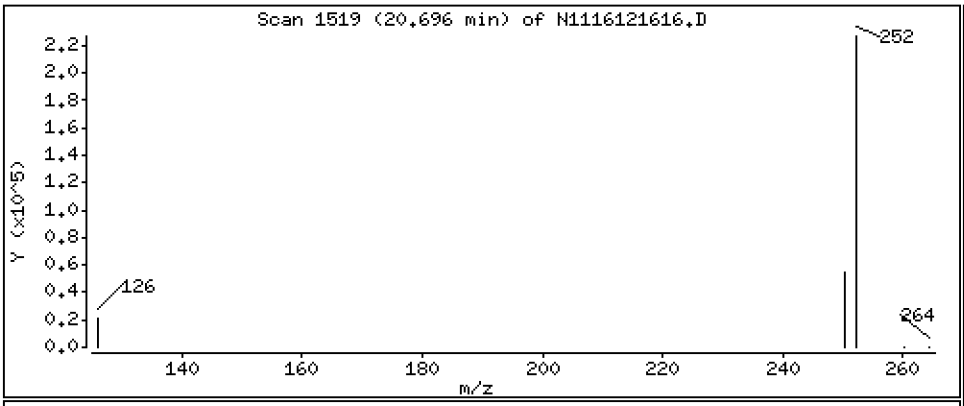
Operator: VTS

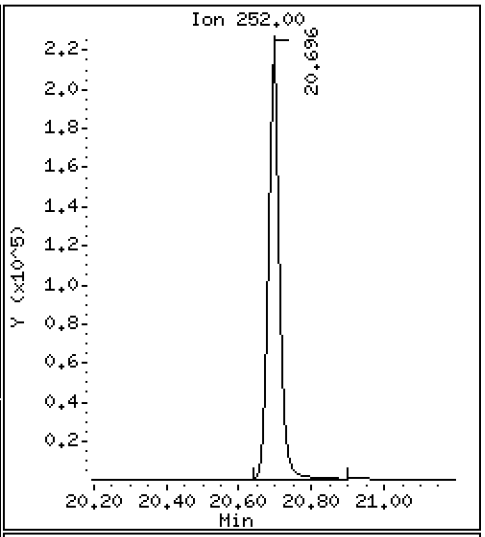
Column phase: Rxi-17Sil MS

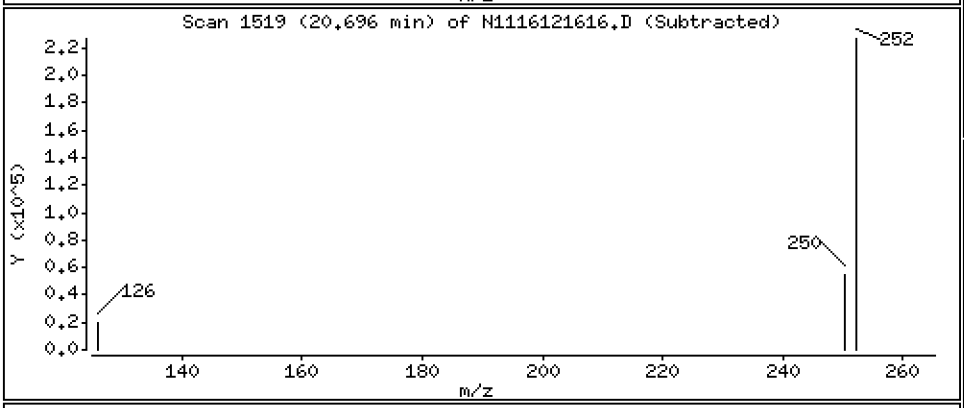
Column diameter: 0.25

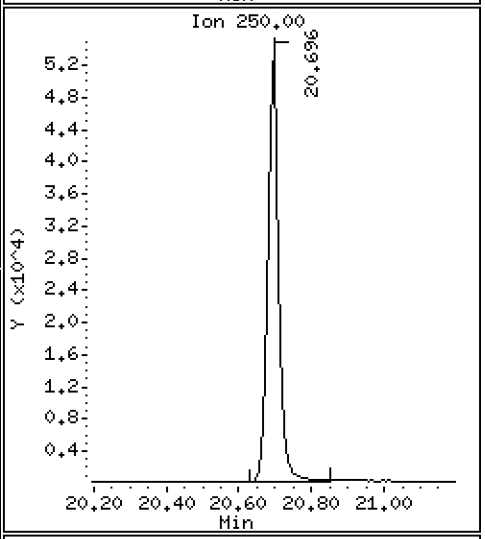
35 Benzo(a)pyrene

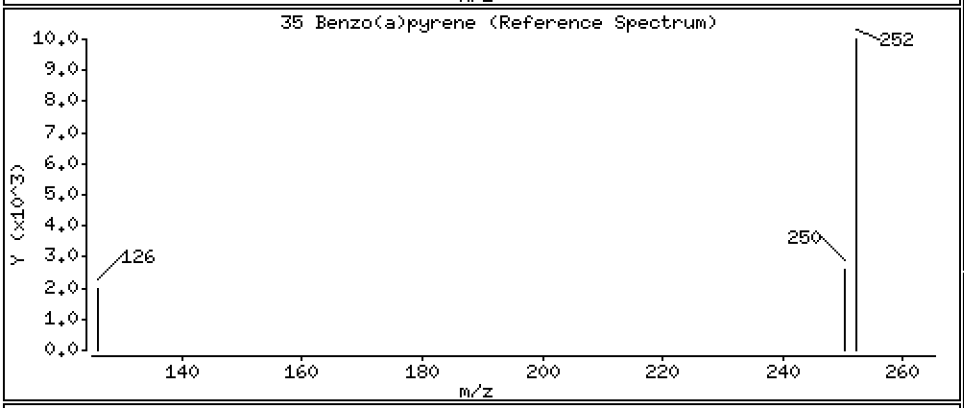
Concentration: 262 ng/mL

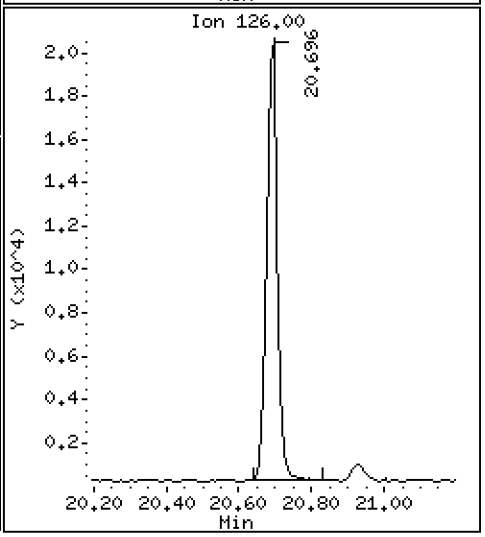


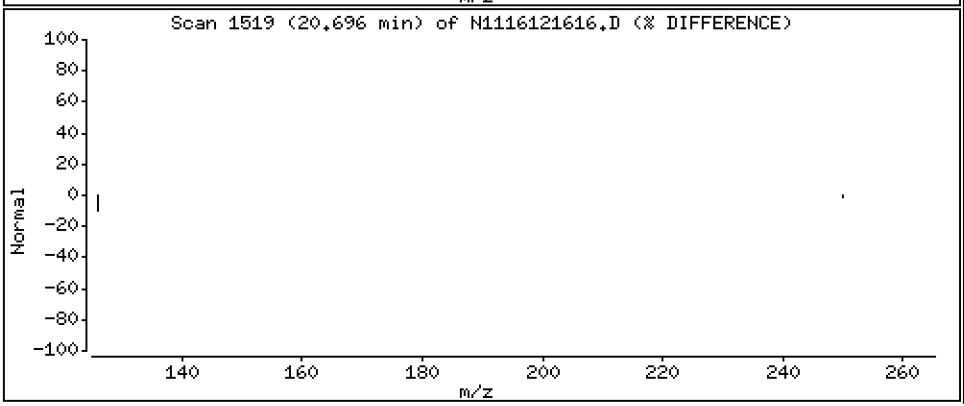












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

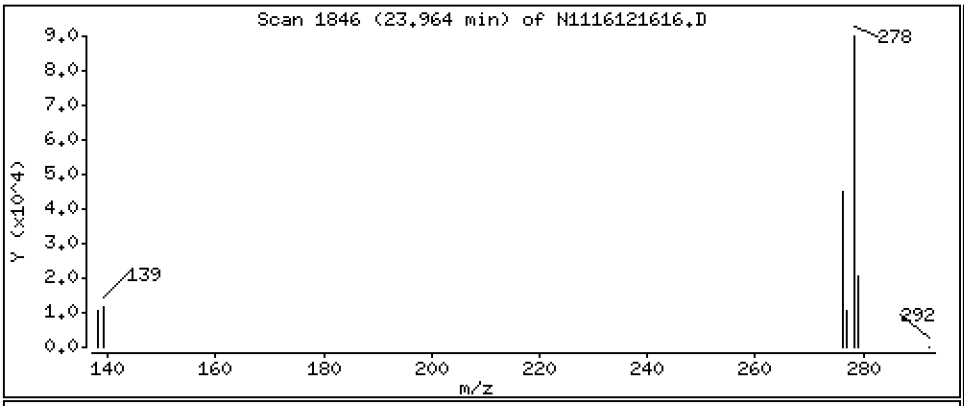
Operator: VTS

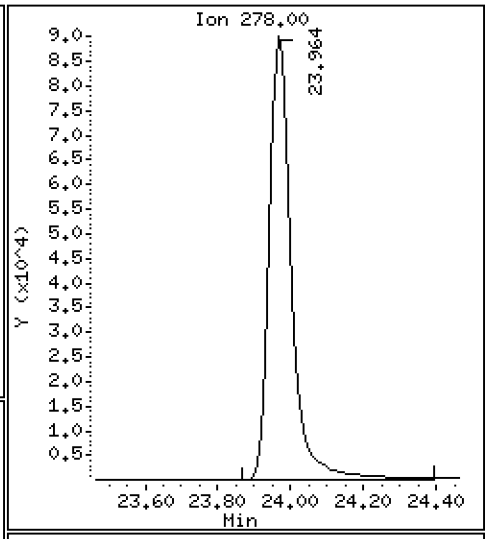
Column phase: Rxi-17Sil MS

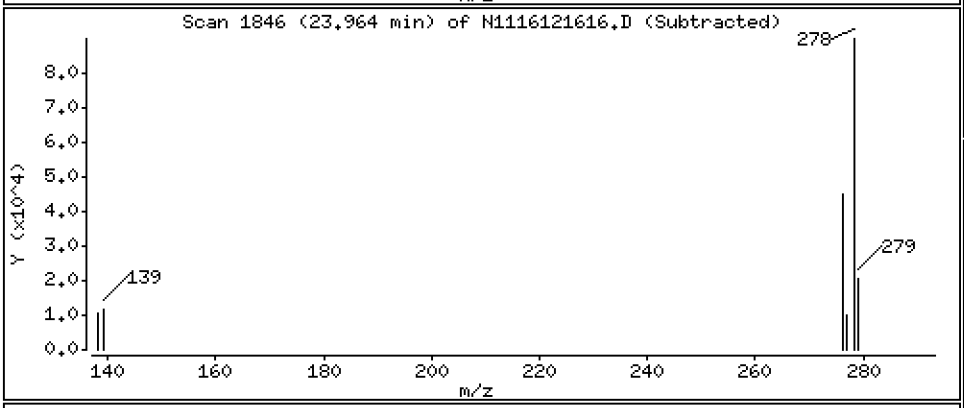
Column diameter: 0.25

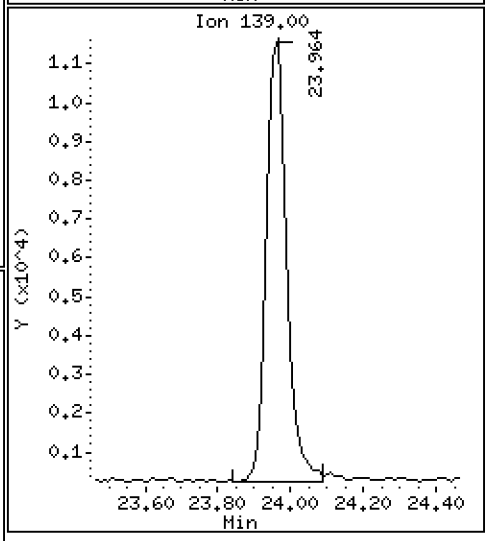
39 Dibenzo(a,h)anthracene

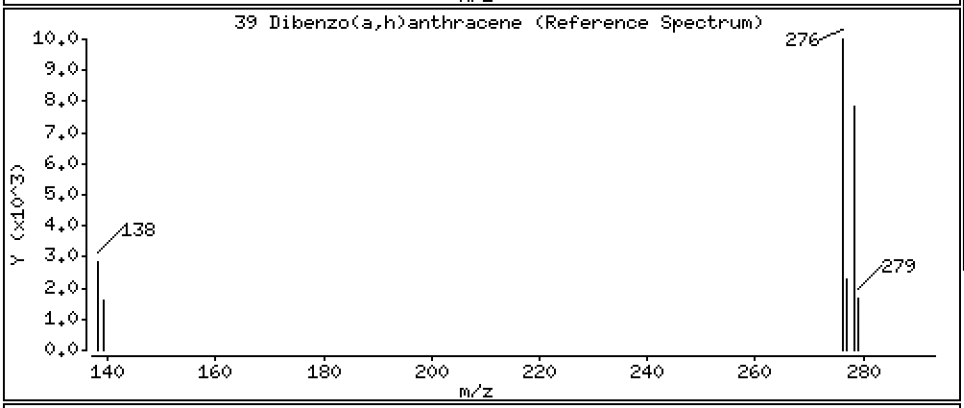
Concentration: 265 ng/mL

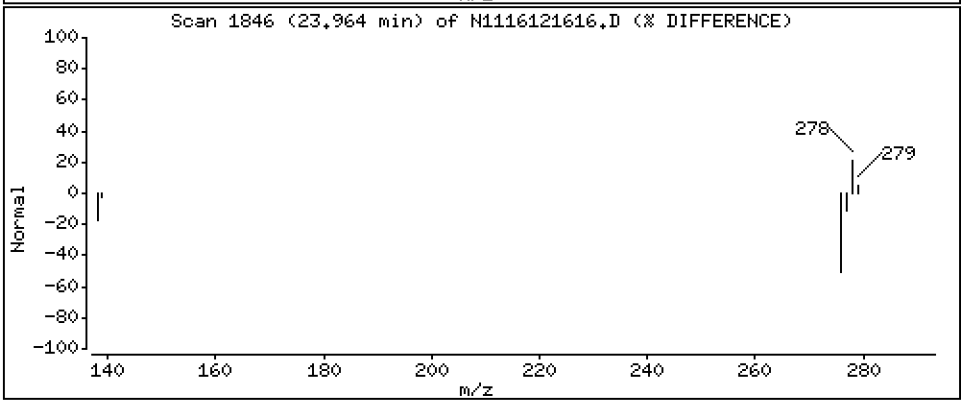












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

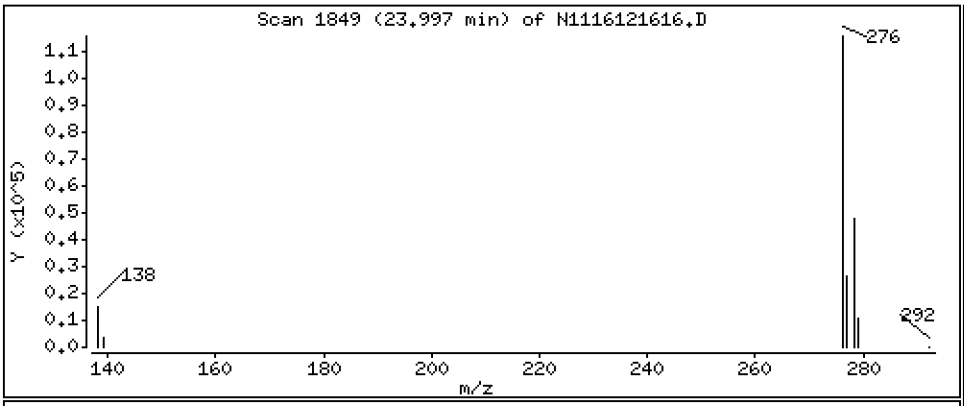
Operator: VTS

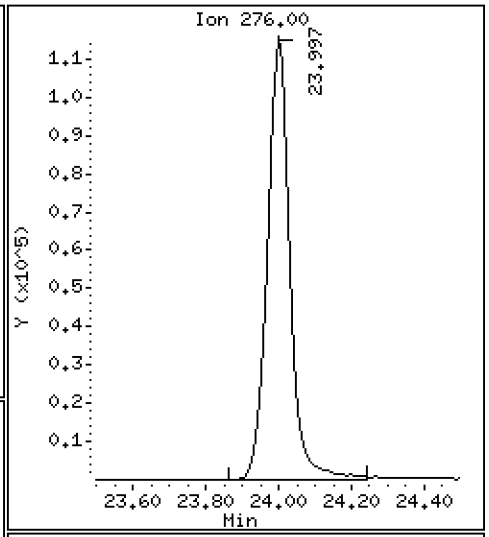
Column phase: Rxi-17Sil MS

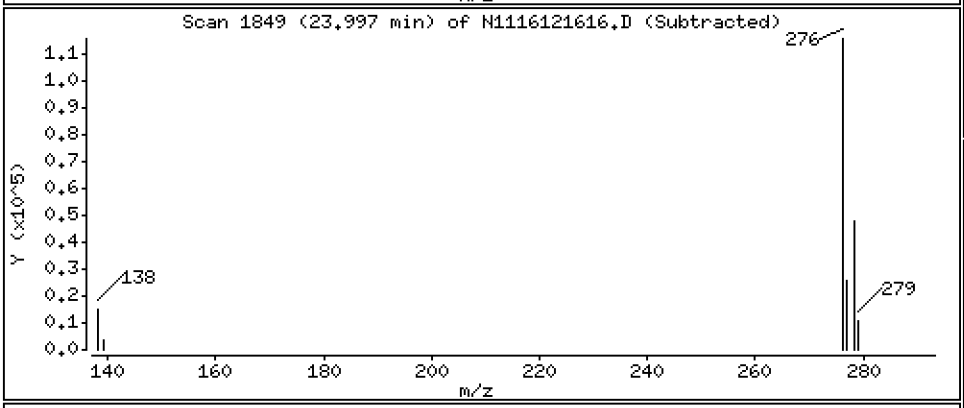
Column diameter: 0.25

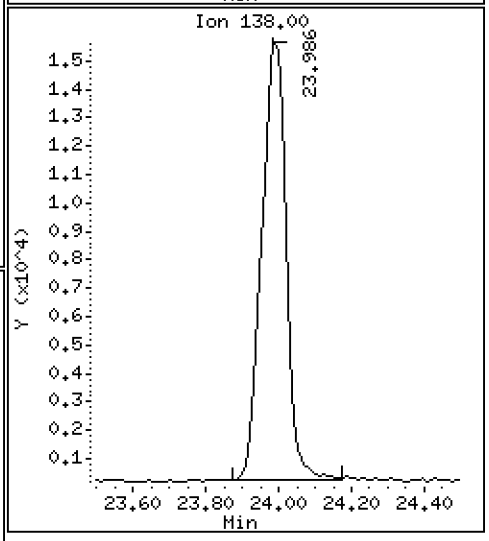
40 Indeno(1,2,3-cd)pyrene

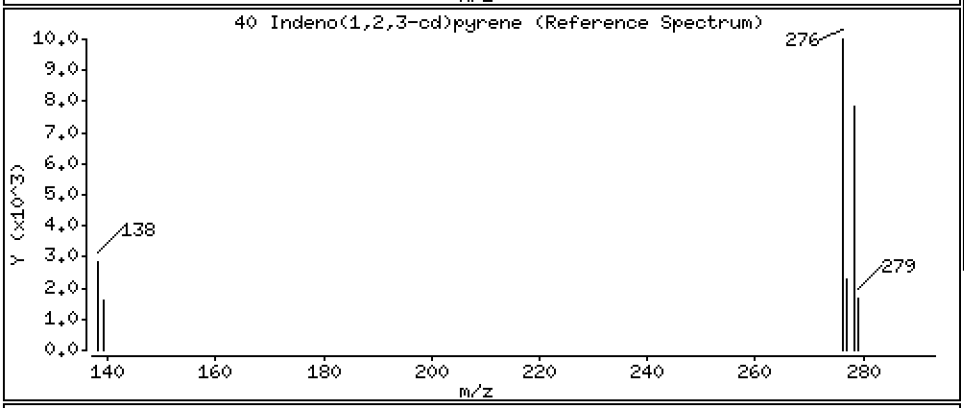
Concentration: 267 ng/mL

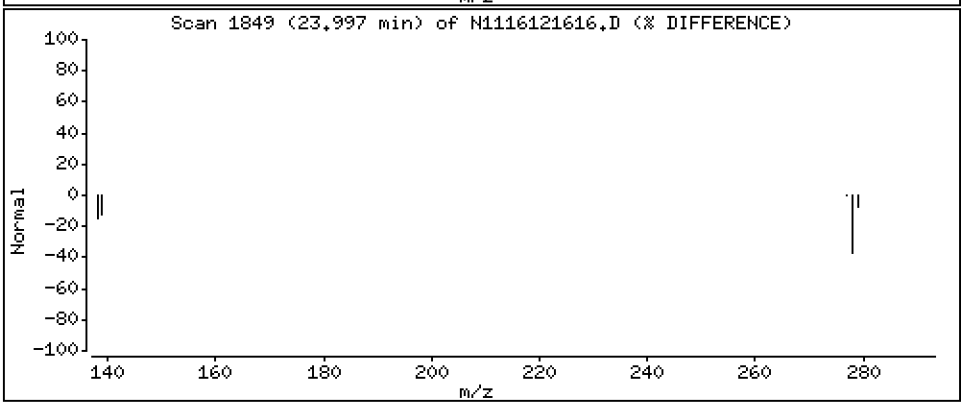












Data File: \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D

Date : 16-DEC-2016 17:04

Client ID:

Instrument: nt11.i

Sample Info: SEL0249-SCV1

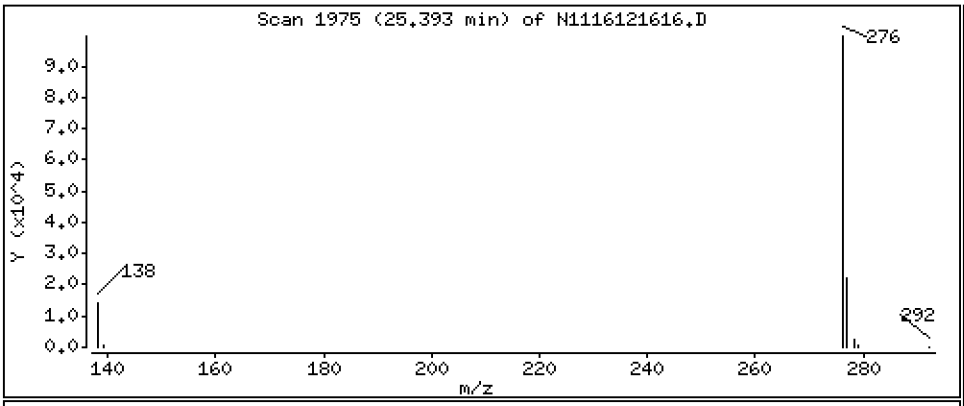
Operator: VTS

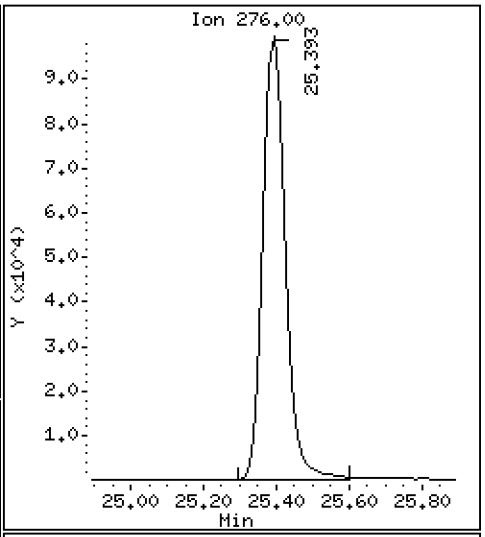
Column phase: Rxi-17Sil MS

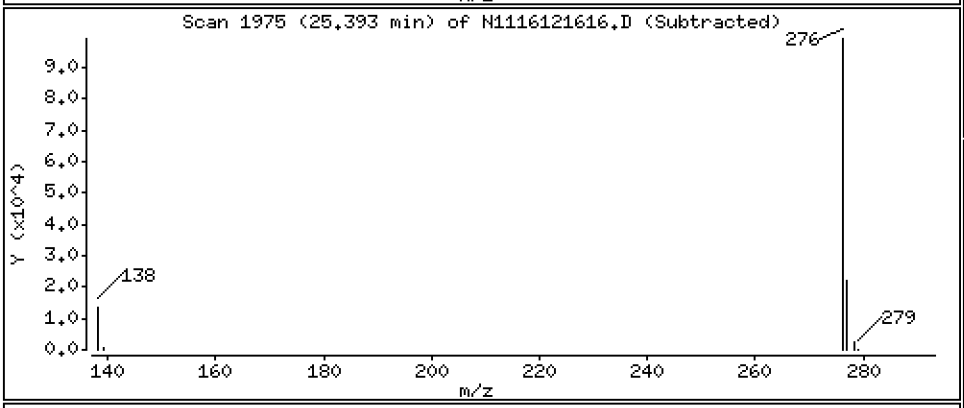
Column diameter: 0.25

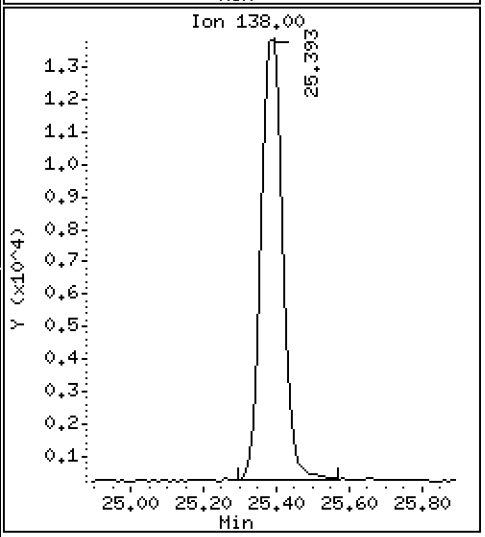
41 Benzo(g,h,i)perylene

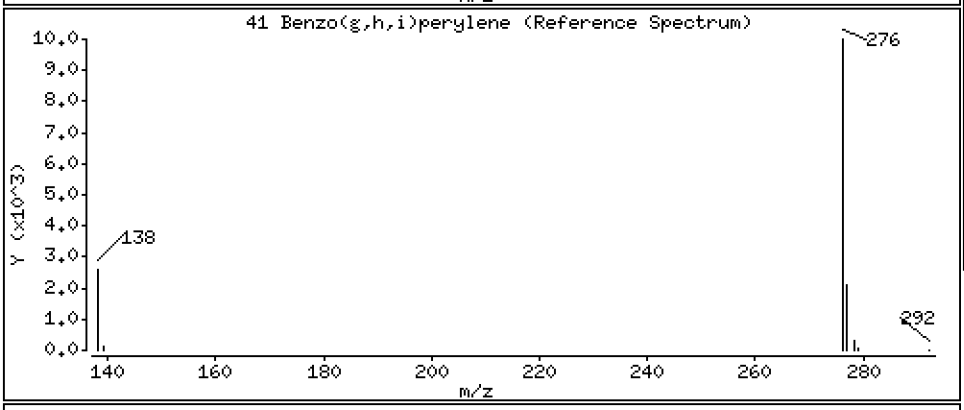
Concentration: 264 ng/mL

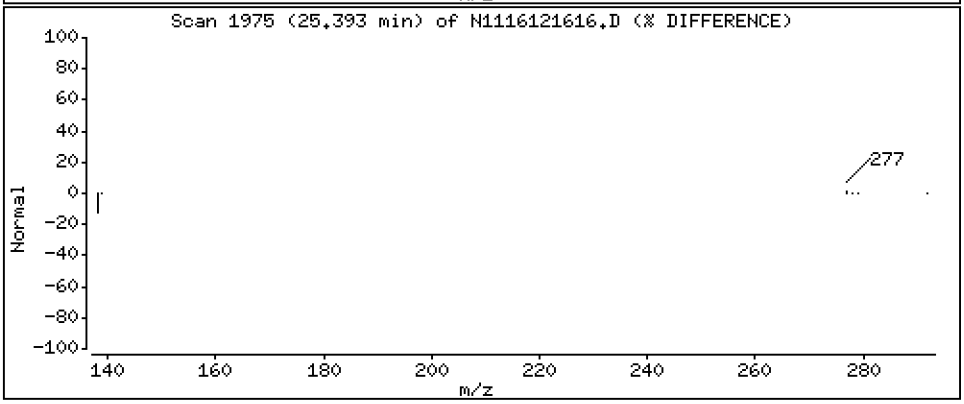












ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161216A.b\N1116121616.D
Lab Smp Id: SEL0249-SCV1
Inj Date : 16-DEC-2016 17:04 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : SEL0249-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Meth Date : 17-Dec-2016 08:19 van Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	1 Naphthalene-d8	136	7.235	7.234	(1.000)	270210	200.000	
	2 Naphthalene	128	7.271	7.262	(1.005)	341030	254.634	255
	3 Benzo(b)thiophene	134	Compound Not Detected.					
$	4 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	5 2-Methylnaphthalene	142	8.264	8.264	(1.142)	332105	252.440	252
	6 1-Methylnaphthalene	142	8.526	8.526	(1.179)	317520	245.660	246
	7 2-Chloronaphthalene	162	9.178	9.178	(0.894)	317244	249.528	250
	8 Biphenyl	154	Compound Not Detected.					
	9 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	10 Acenaphthylene	152	10.107	10.107	(0.985)	373828	257.034	257
*	11 Acenaphthene-d10	164	10.261	10.261	(1.000)	162809	200.000	
	12 Acenaphthene	153	10.324	10.324	(1.006)	266766	280.343	280
	13 Dibenzofuran	168	10.519	10.519	(1.025)	390311	276.512	277
	14 2,3,5-Trimethylnaphthalene	170	Compound Not Detected.					
$	15 Fluorene-d10	174	Compound Not Detected.					
	16 Fluorene	166	11.151	11.151	(1.087)	305233	269.796	270
	17 Dibenzothiophene	184	Compound Not Detected.					
*	18 Phenanthrene-d10	188	12.945	12.945	(1.000)	315262	200.000	
	19 Phenanthrene	178	12.987	12.987	(1.003)	448527	254.489	254
$	20 Anthracene-d10	188	Compound Not Detected.					
	21 Anthracene	178	13.050	13.050	(1.008)	435839	259.273	259
	22 Carbazole	167	13.722	13.722	(1.060)	482620	272.093	272
	23 1-Methylphenanthrene	192	Compound Not Detected.					
$	24 Fluoranthene-d10	212	Compound Not Detected.					
	25 Fluoranthene	202	15.094	15.094	(1.166)	531729	261.828	262
	26 Pyrene	202	15.603	15.603	(0.881)	541966	249.918	250
	27 Benzo(a)anthracene	228	17.610	17.610	(0.994)	572198	259.210	259
*	28 Chrysene-d12	240	17.710	17.710	(1.000)	378953	200.000	
	29 Chrysene	228	17.760	17.760	(1.003)	555847	246.520	247
	30 Benzo(b)fluoranthene	252	19.686	19.686	(0.940)	540310	259.312	259
	31 Benzo(k)fluoranthene	252	19.744	19.744	(0.943)	590842	271.687	272
	32 Benzo(j)fluoranthene	252	Compound Not Detected.					
$	33 Benzo(e)pyrene-d12	264	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
34	Benzo(e)pyrene	252	Compound Not Detected.					
35	Benzo(a)pyrene	252	20.695	20.695	(0.989)	484854	262.242	262
* 36	Perylene-d12	264	20.935	20.935	(1.000)	372273	200.000	
37	Perylene	252	Compound Not Detected.					
$ 38	Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
39	Dibenzo(a,h)anthracene	278	23.963	23.963	(1.145)	374624	265.238	265
40	Indeno(1,2,3-cd)pyrene	276	23.996	23.996	(1.146)	482901	267.421	267
41	Benzo(g,h,i)perylene	276	25.392	25.392	(1.213)	419896	264.408	264

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121616.D
Lab Smp Id: SEL0249-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161216A.b\lowsim.m
Misc Info:

Calibration Date: 16-DEC-2016
Calibration Time: 13:50
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	270210	-20.91
11 Acenaphthene-d10	209310	104655	418620	162809	-22.22
18 Phenanthrene-d10	404977	202489	809954	315262	-22.15
28 Chrysene-d12	465046	232523	930092	378953	-18.51
36 Perylene-d12	454694	227347	909388	372273	-18.13

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.24	0.00
11 Acenaphthene-d10	10.26	9.76	10.76	10.26	0.00
18 Phenanthrene-d10	12.96	12.46	13.46	12.95	-0.08
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.94	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121616.D

Lab ID: SEL0249-SCV1
nt11.i, 20161216A.b\lowsim.m,   16-DEC-2016 17:04

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i, 20161216A.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

INITIAL CALIBRATION CHECK

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Instrument ID:	NT11	Calibration:	ZL00052
Lab File ID:	N1116121702.D	Calibration Date:	12/16/16 00:00
Sequence:	SEL0255	Injection Date:	12/17/16
Lab Sample ID:	SEL0255-ICV1	Injection Time:	12:40
Sequence Name:	SIM PAH 250		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Naphthalene	A	250.00	254	0.9912991	1.0088680		1.6	20
2-Methylnaphthalene	A	250.00	256	0.9737454	0.9983607		2.4	20
1-Methylnaphthalene	A	250.00	252	0.9566768	0.9642841		0.8	20
2-Chloronaphthalene	A	250.00	265	1.5617990	1.6560070		6.0	20
Acenaphthylene	A	250.00	260	1.7866210	1.8604360		4.0	20
Acenaphthene	A	250.00	259	1.1689420	1.2111320		3.6	20
Dibenzofuran	A	250.00	264	1.7339990	1.8305100		5.6	20
Fluorene	A	250.00	265	1.3897830	1.4721410		6.0	20
Phenanthrene	A	250.00	255	1.1180940	1.1415040		2.0	20
Anthracene	A	250.00	260	1.0664180	1.1100960		4.0	20
Carbazole	A	250.00	255	1.1252440	1.1497140		2.0	20
Fluoranthene	A	250.00	258	1.2883450	1.3276920		3.2	20
Pyrene	A	250.00	247	1.1445070	1.1329220		-1.2	20
Benzo(a)anthracene	A	250.00	249	1.1650360	1.1602290		-0.4	20
Chrysene	A	250.00	256	1.1900020	1.2194120		2.4	20
Benzo(b)fluoranthene	A	250.00	241	1.1194090	1.0806140		-3.6	20
Benzo(k)fluoranthene	A	250.00	270	1.1683460	1.2625650		8.0	20
Benzo(j)fluoranthene	A	250.00	273	1.0665470	1.1653420		9.2	20
Benzo(a)pyrene	A	250.00	257	0.9932942	1.0191670		2.8	20
Perylene	A	250.00	254	1.0571220	1.0722620		1.6	20
Indeno(1,2,3-cd)pyrene	A	250.00	256	0.9701319	0.9933952		2.4	20
Dibenzo(a,h)anthracene	A	250.00	259	0.7588030	0.7854569		3.6	20
Benzo(g,h,i)perylene	A	250.00	253	0.8531711	0.8645691		1.2	20
2-Methylnaphthalene-d10	A	250.00	250	0.8727519	0.8740222		0.0	20
Dibenzo[a,h]anthracene-d14	A	250.00	243	0.5896822	0.5732757		-2.8	20
Fluoranthene-d10	A	250.00	256	1.0653080	1.0899120		2.4	20

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161217.b\N1116121702.D

Date : 17-DEC-2016 12:40

Client ID:

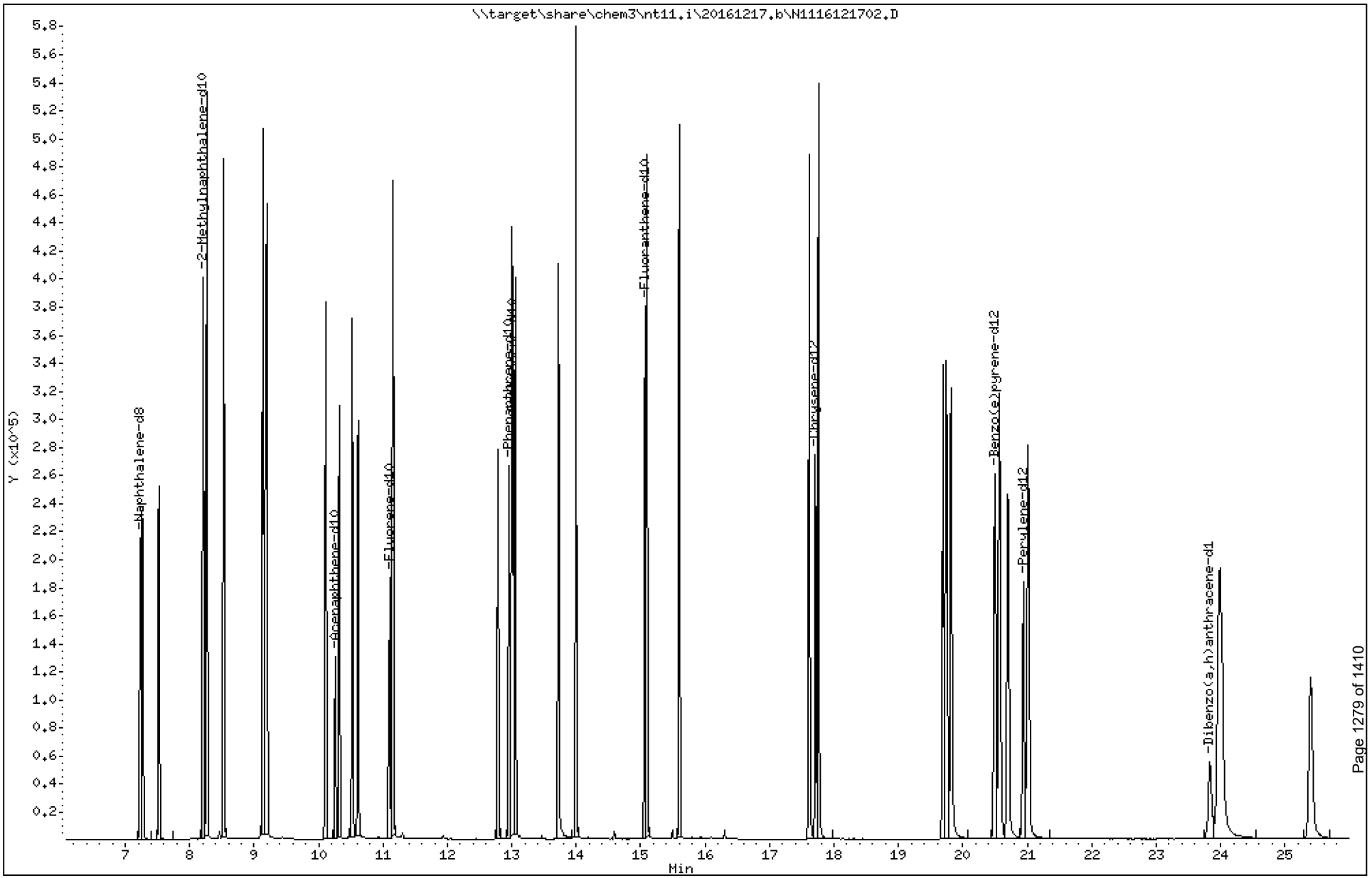
Instrument: nt11.i

Sample Info: SEL0255-ICV1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161217.b\N1116121702.D
Lab Smp Id: SEL0255-ICV1
Inj Date : 17-DEC-2016 12:40 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : SEL0255-ICV1
Misc Info :
Comment   :
Method   : \\target\share\chem3\nt11.i\20161217.b\lowsim.m
Meth Date : 17-Dec-2016 13:14 van Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	1	Naphthalene-d8	136	7.234	7.234	(1.000)	268525	200.000	
	2	Naphthalene	128	7.261	7.261	(1.004)	338633	250.000	254
	3	Benzo(b)thiophene	134	7.523	7.523	(1.040)	280258	250.000	253
$	4	2-Methylnaphthalene-d10	152	8.211	8.211	(1.135)	293371	250.000	250
	5	2-Methylnaphthalene	142	8.264	8.264	(1.142)	335106	250.000	256
	6	1-Methylnaphthalene	142	8.526	8.526	(1.179)	323668	250.000	252
	7	2-Chloronaphthalene	162	9.178	9.178	(0.894)	320518	250.000	265
	8	Biphenyl	154	9.136	9.136	(0.890)	427500	250.000	263
	9	2,6-Dimethylnaphthalene	156	9.199	9.199	(0.897)	328173	250.000	264
	10	Acenaphthylene	152	10.107	10.107	(0.985)	360085	250.000	260
*	11	Acenaphthene-d10	164	10.260	10.260	(1.000)	154839	200.000	
	12	Acenaphthene	153	10.324	10.324	(1.006)	234413	250.000	259
	13	Dibenzofuran	168	10.519	10.519	(1.025)	354293	250.000	264
	14	2,3,5-Trimethylnaphthalene	170	10.620	10.620	(1.035)	227841	250.000	261
$	15	Fluorene-d10	174	11.100	11.100	(1.082)	191383	250.000	257
	16	Fluorene	166	11.151	11.151	(1.087)	284931	250.000	265
	17	Dibenzothiophene	184	12.777	12.777	(0.986)	352302	250.000	258
*	18	Phenanthrene-d10	188	12.956	12.956	(1.000)	304285	200.000	
	19	Phenanthrene	178	12.998	12.998	(1.003)	434178	250.000	255
$	20	Anthracene-d10	188	13.019	13.019	(1.005)	361856	250.000	240
	21	Anthracene	178	13.050	13.050	(1.007)	422232	250.000	260
	22	Carbazole	167	13.722	13.722	(1.059)	437301	250.000	255
	23	1-Methylphenanthrene	192	13.993	13.993	(1.080)	446429	250.000	259
$	24	Fluoranthene-d10	212	15.065	15.065	(1.163)	414555	250.000	256
	25	Fluoranthene	202	15.093	15.093	(1.165)	504996	250.000	258
	26	Pyrene	202	15.603	15.603	(0.881)	509557	250.000	247
	27	Benzo(a)anthracene	228	17.618	17.618	(0.995)	521839	250.000	249
*	28	Chrysene-d12	240	17.710	17.710	(1.000)	359818	200.000	
	29	Chrysene	228	17.760	17.760	(1.003)	548458	250.000	256
	30	Benzo(b)fluoranthene	252	19.696	19.696	(0.941)	467598	250.000	241
	31	Benzo(k)fluoranthene	252	19.744	19.744	(0.943)	546331	250.000	270
	32	Benzo(j)fluoranthene	252	19.820	19.820	(0.947)	504261	250.000	273
$	33	Benzo(e)pyrene-d12	264	20.493	20.493	(0.979)	444195	250.000	258

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	20.570	20.570	(0.983)	487942	250.000	261
	35 Benzo(a)pyrene	252	20.704	20.704	(0.989)	441009	250.000	257
*	36 Perylene-d12	264	20.935	20.935	(1.000)	346172	200.000	
	37 Perylene	252	21.012	21.012	(1.004)	463984	250.000	254
$	38 Dibenzo(a,h)anthracene-d14	292	23.830	23.830	(1.138)	248065	250.000	243
	39 Dibenzo(a,h)anthracene	278	23.974	23.974	(1.145)	339879	250.000	259
	40 Indeno(1,2,3-cd)pyrene	276	24.007	24.007	(1.147)	429857	250.000	256
	41 Benzo(g,h,i)perylene	276	25.403	25.403	(1.213)	374112	250.000	253

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121702.D
Lab Smp Id: SEL0255-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161217.b\lowsim.m
Misc Info:

Calibration Date: 16-DEC-2016
Calibration Time: 13:50
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	268525	-21.40
11 Acenaphthene-d10	209310	104655	418620	154839	-26.02
18 Phenanthrene-d10	404977	202489	809954	304285	-24.86
28 Chrysene-d12	465046	232523	930092	359818	-22.63
36 Perylene-d12	454694	227347	909388	346172	-23.87

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.23	0.00
11 Acenaphthene-d10	10.26	9.76	10.76	10.26	0.00
18 Phenanthrene-d10	12.96	12.46	13.46	12.96	0.00
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.94	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121702.D

Lab ID: SEL0255-ICV1
nt11.i, 20161217.b\lowsim.m,   17-DEC-2016 12:40

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

On Column LOD for nt11.i, 20161217.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161217.b

Instrument: nt11.i Date: 17-DEC-2016 Method: 20161217.b\lowsim.m

INITIAL CAL: 16-DEC-2016

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: N1116121702.D 17-DEC-2016 12:40

Compound	%D
NO Q-FLAGS	

INITIAL CALIBRATION CHECK

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Instrument ID:	NT11	Calibration:	ZL00052
Lab File ID:	N1116122002.D	Calibration Date:	12/16/16 00:00
Sequence:	SEL0277	Injection Date:	12/20/16
Lab Sample ID:	SEL0277-ICV1	Injection Time:	09:45
Sequence Name:	SIM PAH 250		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Naphthalene	A	250.00	238	0.9912991	0.9441905		-4.8	20
2-Methylnaphthalene	A	250.00	247	0.9737454	0.9609040		-1.2	20
Acenaphthylene	A	250.00	240	1.7866210	1.7178970		-4.0	20
Acenaphthene	A	250.00	244	1.1689420	1.1420620		-2.4	20
Fluorene	A	250.00	248	1.3897830	1.3807010		-0.8	20
Phenanthrene	A	250.00	240	1.1180940	1.0737770		-4.0	20
Anthracene	A	250.00	244	1.0664180	1.0405420		-2.4	20
Fluoranthene	A	250.00	247	1.2883450	1.2709490		-1.2	20
Pyrene	A	250.00	243	1.1445070	1.1147030		-2.8	20
Benzo(a)anthracene	A	250.00	236	1.1650360	1.0995620		-5.6	20
Chrysene	A	250.00	239	1.1900020	1.1369350		-4.4	20
Benzo(b)fluoranthene	A	250.00	229	1.1194090	1.0266040		-8.4	20
Benzo(k)fluoranthene	A	250.00	257	1.1683460	1.2001450		2.8	20
Benzo(e)pyrene	A	250.00	247	1.0789600	1.0679850		-1.2	20
Benzo(a)pyrene	A	250.00	245	0.9932942	0.9714473		-2.0	20
Indeno(1,2,3-cd)pyrene	A	250.00	211	0.9701319	0.8187101		-15.6	20
Dibenzo(a,h)anthracene	A	250.00	214	0.7588030	0.6492951		-14.4	20
Benzo(g,h,i)perylene	A	250.00	201	0.8531711	0.6867274		-19.6	20
Perylene	A	250.00	242	1.0571220	1.0224430		-3.2	20
2-Methylnaphthalene-d10	A	250.00	242	0.8727519	0.8445926		-3.2	20
Dibenzo[a,h]anthracene-d14	A	250.00	207	0.5896822	0.4887842		-17.2	20
Fluoranthene-d10	A	250.00	245	1.0653080	1.0420200		-2.0	20
Fluorene-d10	A	250.00	242	0.9606991	0.9299051		-3.2	20
Anthracene-d10	A	250.00	227	0.9906229	0.8980575		-9.2	20
Benzo(e)pyrene-d12	A	250.00	249	0.9955788	0.9901815		-0.4	20

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161220.b\N1116122002.D

Date : 20-DEC-2016 09:45

Client ID:

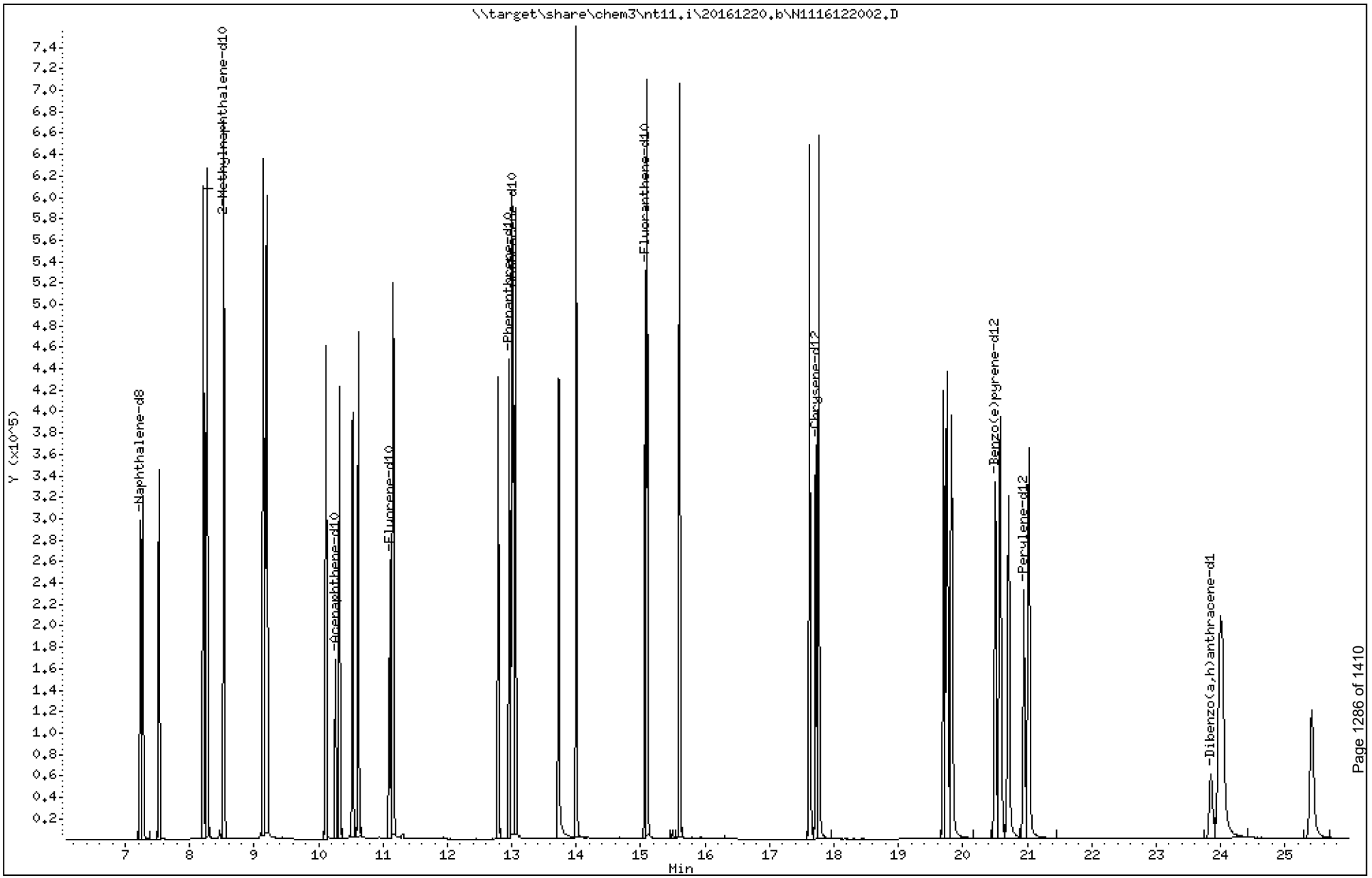
Sample Info: SEL0277-ICV1

Instrument: nt11.i

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161220.b\N1116122002.D
Lab Smp Id: SEL0277-ICV1
Inj Date : 20-DEC-2016 09:45 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : SEL0277-ICV1
Misc Info :
Comment   :
Method   : \\target\share\chem3\nt11.i\20161220.b\lowsim.m
Meth Date : 20-Dec-2016 12:21 nt11.i Quant Type: ISTD
Cal Date : 16-DEC-2016 16:32 Cal File: N1116121615.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	1	Naphthalene-d8	136	7.234	7.234	(1.000)	366554	200.000	
	2	Naphthalene	128	7.271	7.271	(1.005)	432621	250.000	238
	3	Benzo(b)thiophene	134	7.524	7.524	(1.040)	360266	250.000	238
$	4	2-Methylnaphthalene-d10	152	8.211	8.211	(1.135)	386986	250.000	242
	5	2-Methylnaphthalene	142	8.264	8.264	(1.142)	440279	250.000	247
	6	1-Methylnaphthalene	142	8.526	8.526	(1.179)	425664	250.000	243
	7	2-Chloronaphthalene	162	9.178	9.178	(0.894)	430586	250.000	253
	8	Biphenyl	154	9.146	9.146	(0.891)	557750	250.000	243
	9	2,6-Dimethylnaphthalene	156	9.199	9.199	(0.897)	436099	250.000	249
	10	Acenaphthylene	152	10.116	10.116	(0.986)	468535	250.000	240
*	11	Acenaphthene-d10	164	10.260	10.260	(1.000)	218190	200.000	
	12	Acenaphthene	153	10.324	10.324	(1.006)	311483	250.000	244
	13	Dibenzofuran	168	10.531	10.531	(1.026)	472143	250.000	250
	14	2,3,5-Trimethylnaphthalene	170	10.620	10.620	(1.035)	301054	250.000	245
$	15	Fluorene-d10	174	11.100	11.100	(1.082)	253620	250.000	242
	16	Fluorene	166	11.151	11.151	(1.087)	376569	250.000	248
	17	Dibenzothiophene	184	12.788	12.788	(0.987)	474377	250.000	240
*	18	Phenanthrene-d10	188	12.956	12.956	(1.000)	440615	200.000	
	19	Phenanthrene	178	12.998	12.998	(1.003)	591403	250.000	240
$	20	Anthracene-d10	188	13.019	13.019	(1.005)	494622	250.000	227
	21	Anthracene	178	13.050	13.050	(1.007)	573098	250.000	244
	22	Carbazole	167	13.731	13.731	(1.060)	544702	250.000	220
	23	1-Methylphenanthrene	192	14.002	14.002	(1.081)	621413	250.000	249
$	24	Fluoranthene-d10	212	15.065	15.065	(1.163)	573912	250.000	245
	25	Fluoranthene	202	15.103	15.103	(1.166)	699999	250.000	247
	26	Pyrene	202	15.603	15.603	(0.881)	708406	250.000	243
	27	Benzo(a)anthracene	228	17.619	17.619	(0.994)	698784	250.000	236
*	28	Chrysene-d12	240	17.718	17.718	(1.000)	508409	200.000	
	29	Chrysene	228	17.768	17.768	(1.003)	722535	250.000	239
	30	Benzo(b)fluoranthene	252	19.705	19.705	(0.941)	597577	250.000	229
	31	Benzo(k)fluoranthene	252	19.753	19.753	(0.943)	698594	250.000	257
	32	Benzo(j)fluoranthene	252	19.830	19.830	(0.947)	644696	250.000	260
$	33	Benzo(e)pyrene-d12	264	20.503	20.503	(0.979)	576376	250.000	249

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	20.580	20.580	(0.983)	621665	250.000	247
	35 Benzo(a)pyrene	252	20.705	20.705	(0.989)	565471	250.000	245
*	36 Perylene-d12	264	20.945	20.945	(1.000)	465673	200.000	
	37 Perylene	252	21.022	21.022	(1.004)	595155	250.000	242
$	38 Dibenzo(a,h)anthracene-d14	292	23.852	23.852	(1.139)	284517	250.000	207
	39 Dibenzo(a,h)anthracene	278	23.985	23.985	(1.145)	377949	250.000	214
	40 Indeno(1,2,3-cd)pyrene	276	24.018	24.018	(1.147)	476564	250.000	211
	41 Benzo(g,h,i)perylene	276	25.414	25.414	(1.213)	399738	250.000	201

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116122002.D
Lab Smp Id: SEL0277-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161220.b\lowsim.m
Misc Info:

Calibration Date: 17-DEC-2016
Calibration Time: 12:40
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	341640	170820	683280	366554	7.29
11 Acenaphthene-d10	209310	104655	418620	218190	4.24
18 Phenanthrene-d10	404977	202489	809954	440615	8.80
28 Chrysene-d12	465046	232523	930092	508409	9.32
36 Perylene-d12	454694	227347	909388	465673	2.41

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.23	0.00
11 Acenaphthene-d10	10.26	9.76	10.76	10.26	0.00
18 Phenanthrene-d10	12.96	12.46	13.46	12.96	0.00
28 Chrysene-d12	17.72	17.22	18.22	17.72	0.00
36 Perylene-d12	20.95	20.45	21.45	20.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116122002.D

Lab ID: SEL0277-ICV1
nt11.i, 20161220.b\lowsim.m,   20-DEC-2016 09:45

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

On Column LOD for nt11.i, 20161220.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161220.b

Instrument: nt11.i Date: 20-DEC-2016 Method: 20161220.b\lowsim.m

INITIAL CAL: 16-DEC-2016

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: N1116122002.D 20-DEC-2016 09:45

Compound	%D
NO Q-FLAGS	

INITIAL CALIBRATION CHECK

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Instrument ID:	NT11	Calibration:	ZK00080
Lab File ID:	N111612102.D	Calibration Date:	11/25/16 06:30
Sequence:	SEL0145	Injection Date:	12/10/16
Lab Sample ID:	SEL0145-ICV1	Injection Time:	09:37
Sequence Name:	Initial Cal Check		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Naphthalene	A	250.00	249	2.1044350	2.1000600		-0.4	20
1-Methylnaphthalene	A	250.00	257	0.8467477	0.8706151		2.8	20
2-Methylnaphthalene	A	250.00	254	0.8633327	0.8762291		1.6	20
Acenaphthylene	A	250.00	236	1.8477870	1.7442630		-5.6	20
Acenaphthene	A	250.00	249	1.2677340	1.2651880		-0.4	20
Dibenzofuran	A	250.00	250	1.8015860	1.8046520		0.0	20
Fluorene	A	250.00	256	1.3918730	1.4227020		2.4	20
Phenanthrene	A	250.00	264	1.2013530	1.2662320		5.6	20
Anthracene	A	250.00	280	1.1304690	1.2663960		12.0	20
Fluoranthene	A	250.00	275	1.1656920	1.2828780		10.0	20
Pyrene	A	250.00	260	1.3012590	1.3512480		4.0	20
Benzo(a)anthracene	A	250.00	249	1.1260180	1.1219480		-0.4	20
Chrysene	A	250.00	256	1.2489040	1.2799270		2.4	20
Benzo(b)fluoranthene	A	250.00	252	1.1368650	1.1463360		0.8	20
Benzo(k)fluoranthene	A	250.00	246	1.2352540	1.2147140		-1.6	20
Benzo(j)fluoranthene	A	250.00	283	1.1450490	1.2976860		13.2	20
Benzo(a)pyrene	A	250.00	258	1.0408950	1.0753590		3.2	20
Indeno(1,2,3-cd)pyrene	A	250.00	255	1.1553980	1.1779210		2.0	20
Dibenzo(a,h)anthracene	A	250.00	256	0.9387918	0.9618399		2.4	20
Benzo(g,h,i)perylene	A	250.00	255	0.9981765	1.0169340		2.0	20
2-Methylnaphthalene-d10	A	250.00	246	0.7540158	0.7417305		-1.6	20
Dibenzo[a,h]anthracene-d14	A	250.00	262	0.6699214	0.7008397		4.8	20
Fluoranthene-d10	A	250.00	268	0.8927591	0.9582882		7.2	20

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161210.b\N111612102.D

Date : 10-DEC-2016 09:37

Client ID:

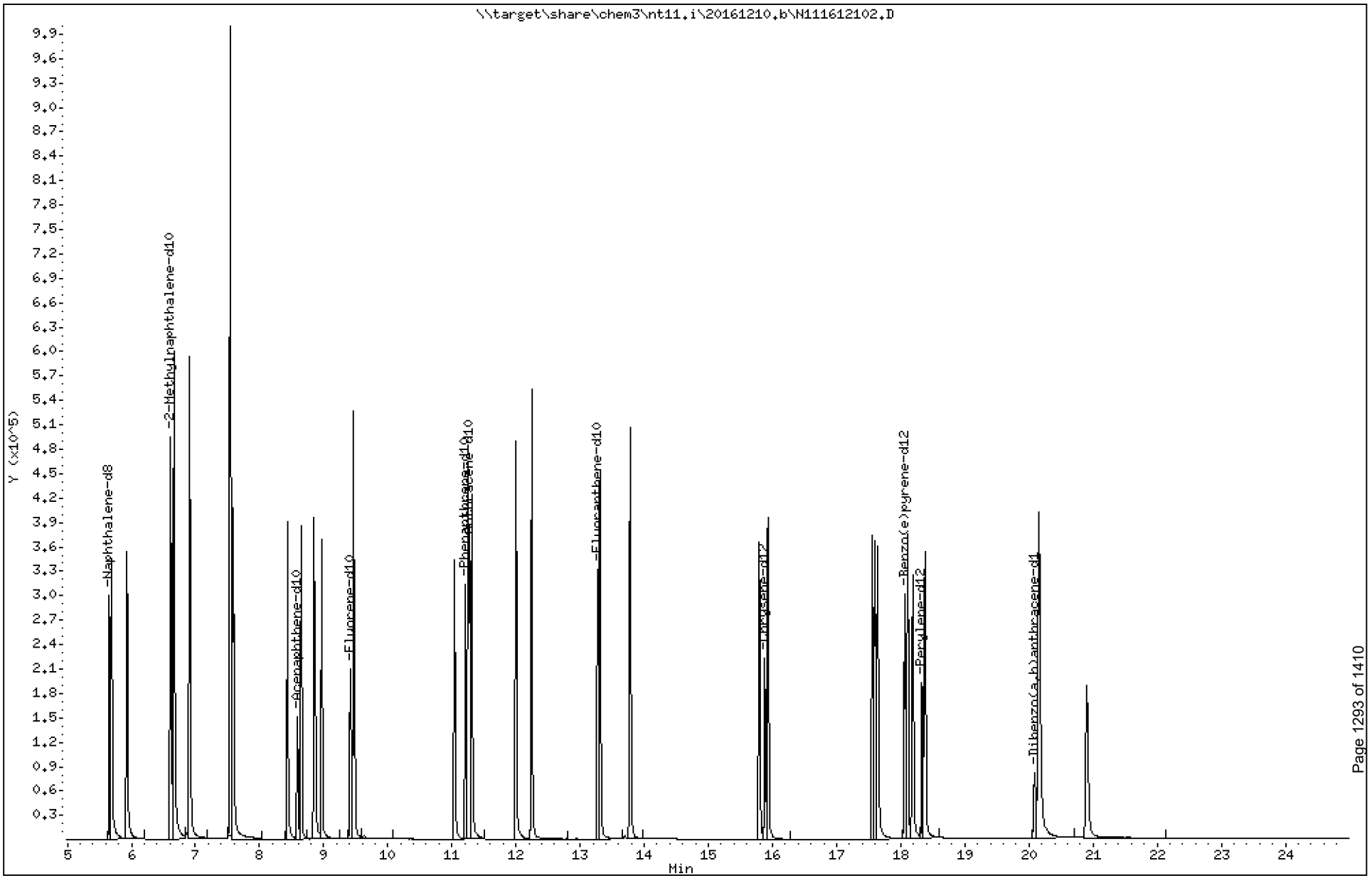
Instrument: nt11.i

Sample Info: SEL0145-ICV1

Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161210.b\N111612102.D
Lab Smp Id: SEL0145-ICV1
Inj Date : 10-DEC-2016 09:37 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : SEL0145-ICV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161210.b\lowsim.m
Meth Date : 12-Dec-2016 07:55 nt11.i Quant Type: ISTD
Cal Date : 25-NOV-2016 10:20 Cal File: 16112510.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	1 Naphthalene-d8	136	5.655	5.655	(1.000)	409408	200.000	
	2 Naphthalene	128	5.682	5.682	(1.005)	524595	250.000	249
	3 Benzo(b)thiophene	134	5.926	5.926	(1.048)	454498	250.000	261
$	4 2-Methylnaphthalene-d10	152	6.615	6.615	(1.170)	379588	250.000	246
	5 2-Methylnaphthalene	142	6.667	6.667	(1.179)	448419	250.000	254
	6 1-Methylnaphthalene	142	6.909	6.909	(1.222)	445546	250.000	257
	7 2-Chloronaphthalene	162	7.550	7.550	(0.879)	421808	250.000	260(M)
	8 Biphenyl	154	7.539	7.539	(0.878)	559934	250.000	251
	9 2,6-Dimethylnaphthalene	156	7.592	7.592	(0.884)	405972	250.000	253
	10 Acenaphthylene	152	8.438	8.438	(0.982)	435717	250.000	236
*	11 Acenaphthene-d10	164	8.592	8.592	(1.000)	199840	200.000	
	12 Acenaphthene	153	8.646	8.646	(1.006)	316044	250.000	249
	13 Dibenzofuran	168	8.850	8.850	(1.030)	450802	250.000	250
	14 2,3,5-Trimethylnaphthalene	170	8.977	8.977	(1.045)	281188	250.000	251
$	15 Fluorene-d10	174	9.419	9.419	(1.096)	236779	250.000	243
	16 Fluorene	166	9.470	9.470	(1.102)	355391	250.000	256
	17 Dibenzothiophene	184	11.046	11.046	(0.985)	429938	250.000	266
*	18 Phenanthrene-d10	188	11.214	11.214	(1.000)	326670	200.000	
	19 Phenanthrene	178	11.256	11.256	(1.004)	517050	250.000	264
$	20 Anthracene-d10	188	11.277	11.277	(1.006)	380404	250.000	257
	21 Anthracene	178	11.308	11.308	(1.008)	517117	250.000	280
	22 Carbazole	167	11.997	11.997	(1.070)	579711	250.000	271
	23 1-Methylphenanthrene	192	12.241	12.241	(1.092)	458573	250.000	265
$	24 Fluoranthene-d10	212	13.272	13.272	(1.184)	391305	250.000	268
	25 Fluoranthene	202	13.310	13.310	(1.187)	523847	250.000	275
	26 Pyrene	202	13.781	13.781	(0.868)	514800	250.000	260
	27 Benzo(a)anthracene	228	15.790	15.790	(0.994)	427441	250.000	249
*	28 Chrysene-d12	240	15.881	15.881	(1.000)	304785	200.000	
	29 Chrysene	228	15.931	15.931	(1.003)	487628	250.000	256
	30 Benzo(b)fluoranthene	252	17.562	17.562	(0.958)	418430	250.000	252
	31 Benzo(k)fluoranthene	252	17.600	17.600	(0.960)	443389	250.000	246
	32 Benzo(j)fluoranthene	252	17.639	17.639	(0.962)	473675	250.000	283
$	33 Benzo(e)pyrene-d12	264	18.062	18.062	(0.985)	382463	250.000	272

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	18.110	18.110	(0.988)	427479	250.000	265
	35 Benzo(a)pyrene	252	18.186	18.186	(0.992)	392522	250.000	258
*	36 Perylene-d12	264	18.331	18.331	(1.000)	292012	200.000	
	37 Perylene	252	18.379	18.379	(1.003)	418557	250.000	265
$	38 Dibenzo(a,h)anthracene-d14	292	20.082	20.082	(1.096)	255817	250.000	262
	39 Dibenzo(a,h)anthracene	278	20.160	20.160	(1.100)	351086	250.000	256
	40 Indeno(1,2,3-cd)pyrene	276	20.160	20.160	(1.100)	429959	250.000	255
	41 Benzo(g,h,i)perylene	276	20.902	20.902	(1.140)	371196	250.000	255

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N111612102.D
Lab Smp Id: SEL0145-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161210.b\lowsim.m
Misc Info:

Calibration Date: 10-DEC-2016
Calibration Time: 15:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	409408	-17.05
11 Acenaphthene-d10	240770	120385	481540	199840	-17.00
18 Phenanthrene-d10	429271	214636	858542	326670	-23.90
28 Chrysene-d12	387691	193846	775382	304785	-21.38
36 Perylene-d12	386259	193130	772518	292012	-24.40

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.66	5.16	6.16	5.66	0.00
11 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
18 Phenanthrene-d10	11.21	10.71	11.71	11.21	0.00
28 Chrysene-d12	15.88	15.38	16.38	15.88	0.00
36 Perylene-d12	18.33	17.83	18.83	18.33	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N111612102.D

Lab ID: SEL0145-ICV1
nt11.i, 20161210.b\lowsim.m,   10-DEC-2016 09:37

RT	CO-ELUTION COMPOUNDS
20.160	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.160	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

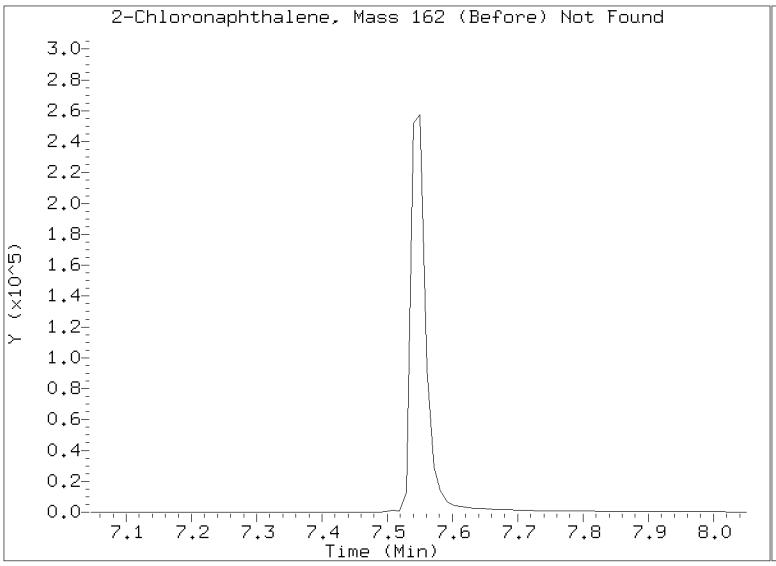
Quant Method: ICAL

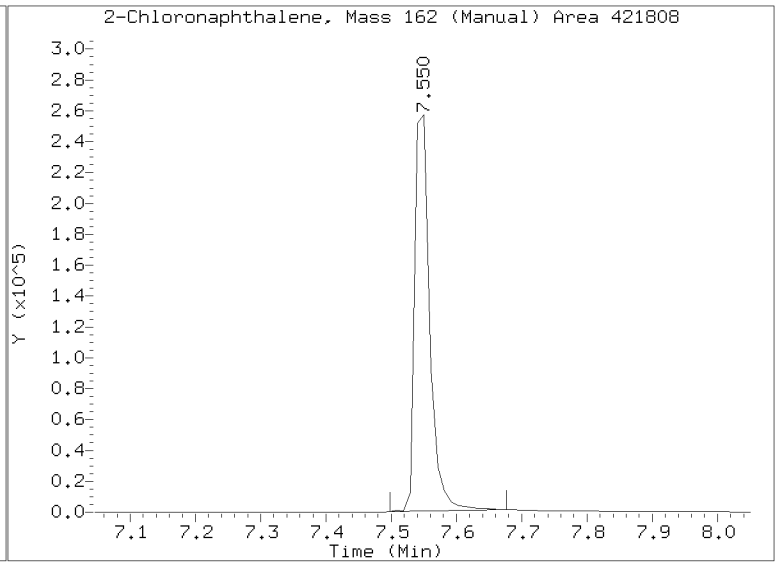
On Column LOD for nt11.i, 20161210.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20161210.b/N111612102.D
Injection Date: 10-DEC-2016 09:37
Lab ID:SEL0145-ICV1 Client ID:
Report Date: 12/12/2016 07:55





Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161210.b

Instrument: nt11.i Date: 10-DEC-2016 Method: 20161210.b\lowsim.m

INITIAL CAL: 25-NOV-2016

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: N111612102.D 10-DEC-2016 09:37

Compound	%D
NO Q-FLAGS	

INITIAL CALIBRATION CHECK

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Instrument ID:	NT11	Calibration:	ZK00080
Lab File ID:	N1116121307.D	Calibration Date:	11/25/16 06:30
Sequence:	SEL0164	Injection Date:	12/13/16
Lab Sample ID:	SEL0164-ICV1	Injection Time:	15:08
Sequence Name:	SIM PAH 250		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Naphthalene	A	250.00	262	2.1044350	1.8728240		4.8	20	
2-Methylnaphthalene	A	250.00	263	0.8633327	0.9092632		5.2	20	
Acenaphthylene	A	250.00	261	1.8477870	1.9311510		4.4	20	
Acenaphthene	A	250.00	245	1.2677340	1.2443730		-2.0	20	
Fluorene	A	250.00	249	1.3918730	1.3855920		-0.4	20	
Phenanthrene	A	250.00	261	1.2013530	1.2525800		4.4	20	
Anthracene	A	250.00	315	1.1304690	1.4262440		26.0	20	*
Fluoranthene	A	250.00	286	1.1656920	1.3319110		14.4	20	
Pyrene	A	250.00	271	1.3012590	1.4119800		8.4	20	
Benzo(a)anthracene	A	250.00	262	1.1260180	1.1801780		4.8	20	
Chrysene	A	250.00	241	1.2489040	1.2045080		-3.6	20	
Benzo(b)fluoranthene	A	250.00	239	1.1368650	1.0878790		-4.4	20	
Benzo(k)fluoranthene	A	250.00	243	1.2352540	1.2021500		-2.8	20	
Benzo(e)pyrene	A	250.00	247	1.1047360	1.0924590		-1.2	20	
Benzo(a)pyrene	A	250.00	257	1.0408950	1.0706280		2.8	20	
Indeno(1,2,3-cd)pyrene	A	250.00	259	1.1553980	1.1970790		3.6	20	
Dibenzo(a,h)anthracene	A	250.00	264	0.9387918	0.9908375		5.6	20	
Benzo(g,h,i)perylene	A	250.00	256	0.9981765	1.0224070		2.4	20	
Perylene	A	250.00	255	1.0806650	1.1026550		2.0	20	
2-Methylnaphthalene-d10	A	250.00	260	0.7540158	0.7833911		4.0	20	
Dibenzo[a,h]anthracene-d14	A	250.00	276	0.6699214	0.7399906		10.4	20	
Fluoranthene-d10	A	250.00	291	0.8927591	1.0400140		16.4	20	
Fluorene-d10	A	250.00	238	0.9766548	0.9280840		-4.8	20	
Anthracene-d10	A	250.00	317	0.9061191	1.1501950		26.8	20	*
Benzo(e)pyrene-d12	A	250.00	257	0.9638081	0.9898822		2.8	20	

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161213.b\N1116121307.D

Date : 13-DEC-2016 15:08

Client ID:

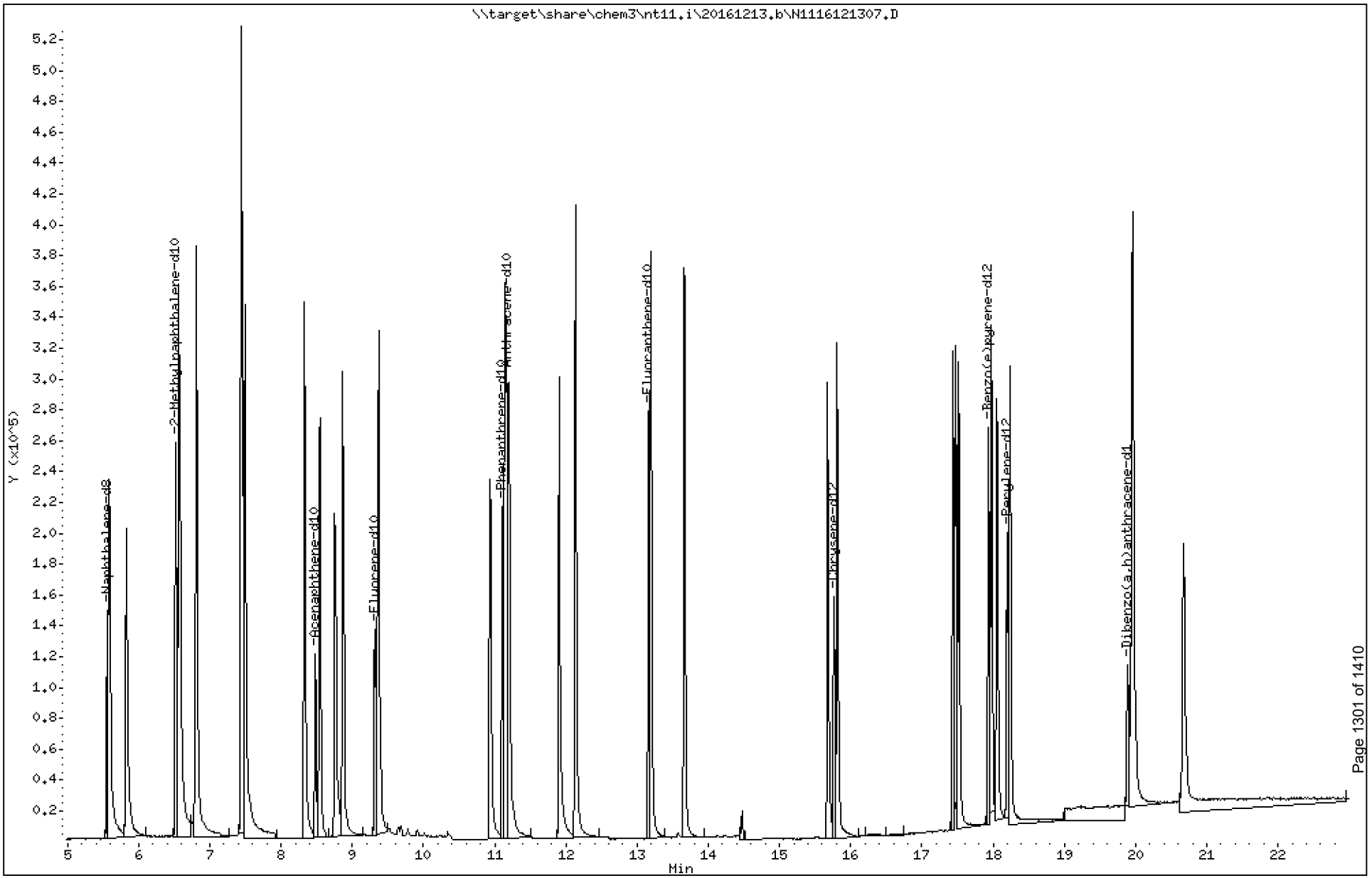
Instrument: nt11.i

Sample Info: SEL0164-ICV1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161213.b\N1116121307.D
Lab Smp Id: SEL0164-ICV1
Inj Date : 13-DEC-2016 15:08 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : SEL0164-ICV1
Misc Info :
Comment   :
Method   : \\target\share\chem3\nt11.i\20161213.b\lowsim.m
Meth Date : 16-Dec-2016 07:49 nt11.i Quant Type: ISTD
Cal Date : 25-NOV-2016 10:20 Cal File: 16112510.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	1 Naphthalene-d8	136	5.556	5.556	(1.000)	310099	200.000	
	2 Naphthalene	128	5.583	5.583	(1.005)	417483	250.000	262
	3 Benzo(b)thiophene	134	5.827	5.827	(1.049)	356498	250.000	270
$	4 2-Methylnaphthalene-d10	152	6.516	6.516	(1.173)	303661	250.000	260
	5 2-Methylnaphthalene	142	6.568	6.568	(1.182)	352452	250.000	263
	6 1-Methylnaphthalene	142	6.810	6.810	(1.226)	377776	250.000	288
	7 2-Chloronaphthalene	162	7.451	7.451	(0.878)	351628	250.000	243(M)
	8 Biphenyl	154	7.440	7.440	(0.877)	461879	250.000	232(M)
	9 2,6-Dimethylnaphthalene	156	7.493	7.493	(0.883)	350673	250.000	245
	10 Acenaphthylene	152	8.330	8.330	(0.982)	430485	250.000	261
*	11 Acenaphthene-d10	164	8.483	8.483	(1.000)	178333	200.000	
	12 Acenaphthene	153	8.547	8.547	(1.007)	277391	250.000	245
	13 Dibenzofuran	168	8.763	8.763	(1.033)	394303	250.000	245
	14 2,3,5-Trimethylnaphthalene	170	8.877	8.877	(1.046)	243904	250.000	244
$	15 Fluorene-d10	174	9.320	9.320	(1.099)	206885	250.000	238(M)
	16 Fluorene	166	9.370	9.370	(1.105)	308871	250.000	249
	17 Dibenzothiophene	184	10.932	10.932	(0.984)	388544	250.000	283
*	18 Phenanthrene-d10	188	11.110	11.110	(1.000)	277290	200.000	
	19 Phenanthrene	178	11.142	11.142	(1.003)	434160	250.000	261
$	20 Anthracene-d10	188	11.173	11.173	(1.006)	398672	250.000	317
	21 Anthracene	178	11.205	11.205	(1.009)	494354	250.000	315
	22 Carbazole	167	11.900	11.900	(1.071)	496315	250.000	273(M)
	23 1-Methylphenanthrene	192	12.135	12.135	(1.092)	424724	250.000	289
$	24 Fluoranthene-d10	212	13.161	13.161	(1.185)	360482	250.000	291
	25 Fluoranthene	202	13.190	13.190	(1.187)	461657	250.000	286
	26 Pyrene	202	13.670	13.670	(0.867)	471889	250.000	271
	27 Benzo(a)anthracene	228	15.677	15.677	(0.994)	394420	250.000	262
*	28 Chrysene-d12	240	15.768	15.768	(1.000)	267363	200.000	
	29 Chrysene	228	15.810	15.810	(1.003)	402551	250.000	241
	30 Benzo(b)fluoranthene	252	17.439	17.439	(0.958)	358690	250.000	239
	31 Benzo(k)fluoranthene	252	17.478	17.478	(0.960)	396367	250.000	243
	32 Benzo(j)fluoranthene	252	17.516	17.516	(0.963)	407080	250.000	270
$	33 Benzo(e)pyrene-d12	264	17.939	17.939	(0.986)	326379	250.000	257

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	17.977	17.977	(0.988)	360200	250.000	247
	35 Benzo(a)pyrene	252	18.054	18.054	(0.992)	353002	250.000	257
*	36 Perylene-d12	264	18.198	18.198	(1.000)	263772	200.000	
	37 Perylene	252	18.237	18.237	(1.002)	363562	250.000	255
$	38 Dibenzo(a,h)anthracene-d14	292	19.891	19.891	(1.093)	243986	250.000	276
	39 Dibenzo(a,h)anthracene	278	19.958	19.958	(1.097)	326694	250.000	264
	40 Indeno(1,2,3-cd)pyrene	276	19.958	19.958	(1.097)	394695	250.000	259
	41 Benzo(g,h,i)perylene	276	20.678	20.678	(1.136)	337103	250.000	256

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121307.D
Lab Smp Id: SEL0164-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161213.b\lowsim.m
Misc Info:

Calibration Date: 13-DEC-2016
Calibration Time: 15:08
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	310099	-37.17
11 Acenaphthene-d10	240770	120385	481540	178333	-25.93
18 Phenanthrene-d10	429271	214636	858542	277290	-35.40
28 Chrysene-d12	387691	193846	775382	267363	-31.04
36 Perylene-d12	386259	193130	772518	263772	-31.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.56	5.06	6.06	5.56	0.00
11 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
18 Phenanthrene-d10	11.11	10.61	11.61	11.11	0.00
28 Chrysene-d12	15.77	15.27	16.27	15.77	0.00
36 Perylene-d12	18.20	17.70	18.70	18.20	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121307.D

Lab ID: SEL0164-ICV1
nt11.i, 20161213.b\lowsim.m,   13-DEC-2016 15:08

RT	CO-ELUTION COMPOUNDS
19.958	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
19.958	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

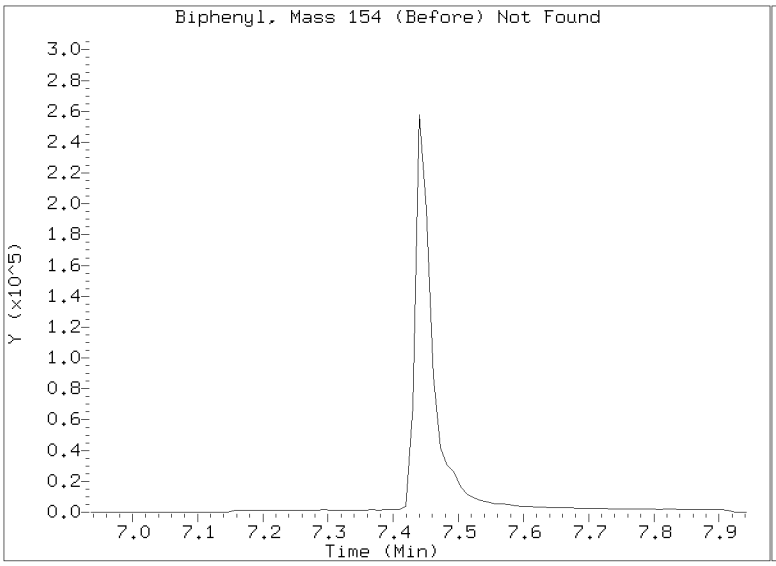
Quant Method: ICAL

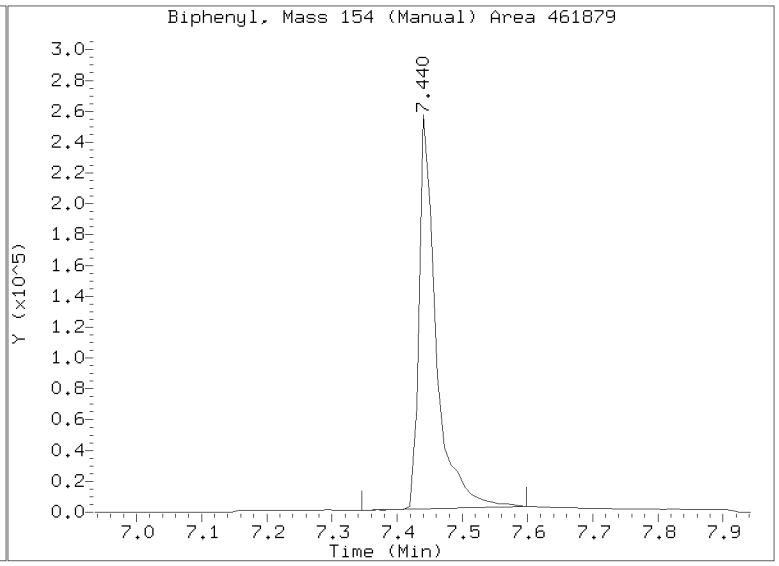
On Column LOD for nt11.i, 20161213.b\lowsim.m, allpna.sub = 3.0000

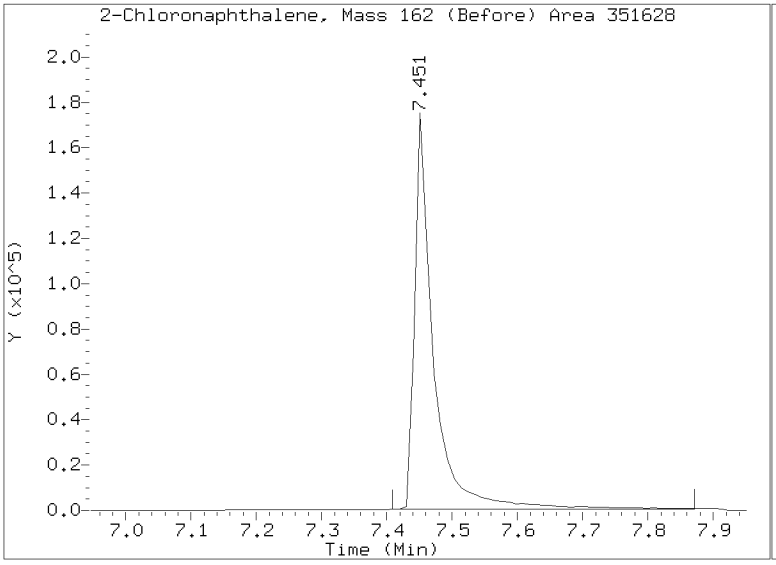
Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

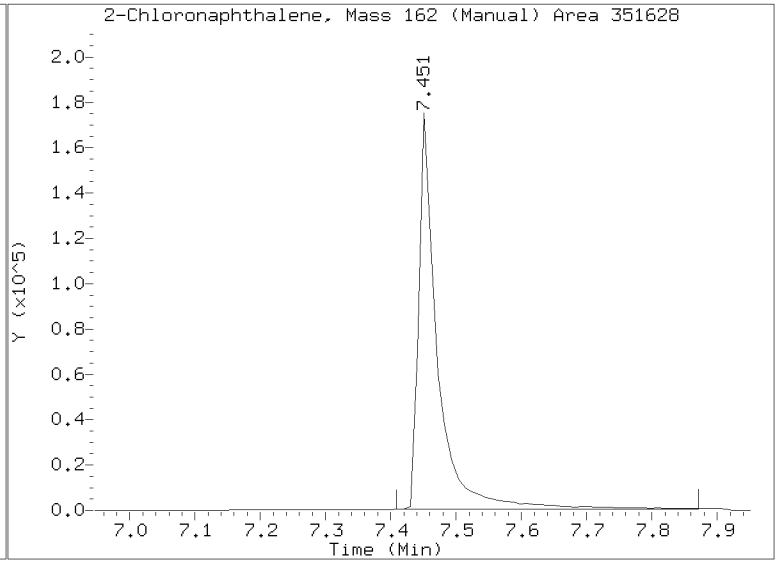
Quant Ion Manual Peak Adjustment Report

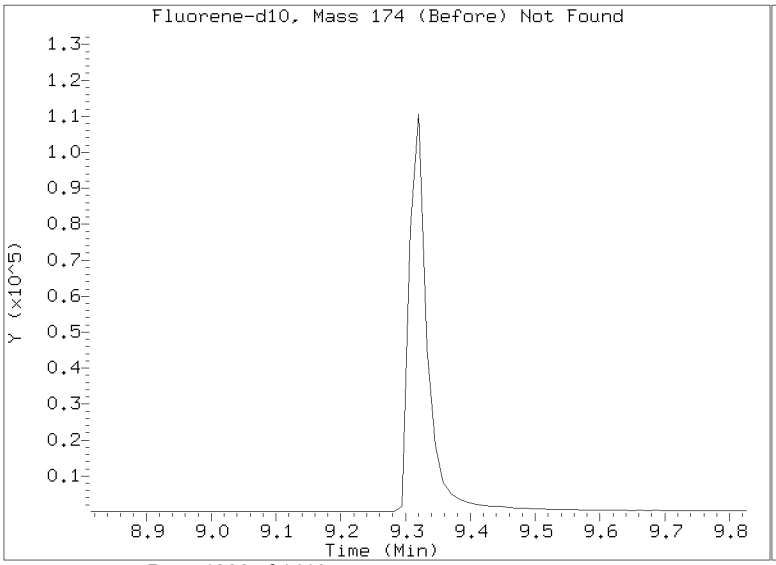
Datafile: //target/share/chem3/nt11.i/20161213.b/N1116121307.D
Injection Date: 13-DEC-2016 15:08
Lab ID:SEL0164-ICV1 Client ID:
Report Date: 12/16/2016 07:49

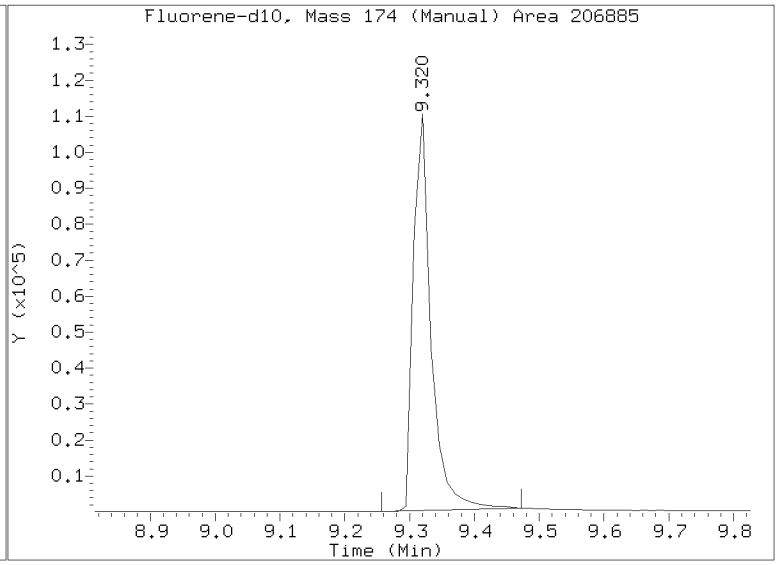






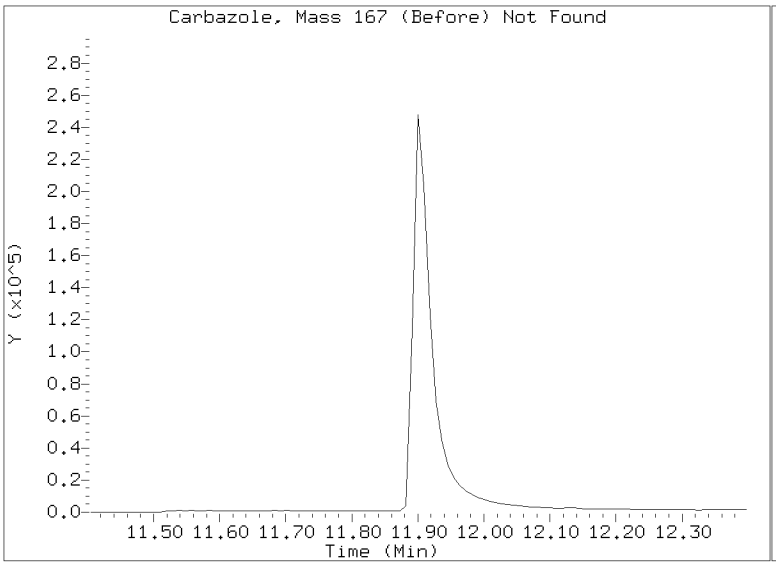


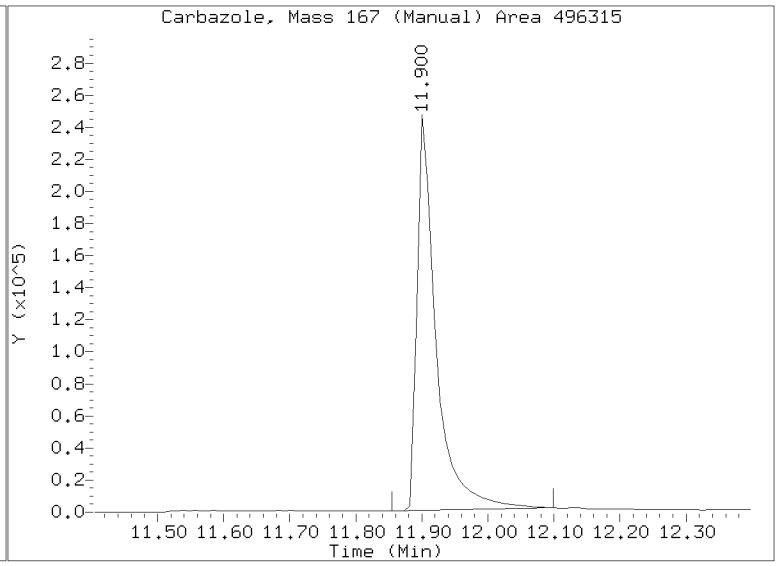




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20161213.b/N1116121307.D
Injection Date: 13-DEC-2016 15:08
Lab ID:SEL0164-ICV1 Client ID:
Report Date: 12/16/2016 07:49





Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161213.b

Instrument: nt11.i Date: 13-DEC-2016 Method: 20161213.b\lowsim.m

INITIAL CAL: 25-NOV-2016

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: N1116121307.D 13-DEC-2016 15:08

Compound	%D
Anthracene	26.2
Anthracene-d10	26.9

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Instrument ID:	NT11	Calibration:	ZK00080
Lab File ID:	N1116121204.D	Calibration Date:	11/25/16 06:30
Sequence:	SEL0155	Injection Date:	12/12/16
Lab Sample ID:	SEL0155-ICV1	Injection Time:	09:14
Sequence Name:	Initial Cal Check		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Naphthalene	A	250.00	256	2.1044350	2.0328260		2.4	20
2-Methylnaphthalene	A	250.00	265	0.8633327	0.9135916		6.0	20
Acenaphthylene	A	250.00	265	1.8477870	1.9604750		6.0	20
Acenaphthene	A	250.00	250	1.2677340	1.2679510		0.0	20
Fluorene	A	250.00	262	1.3918730	1.4600790		4.8	20
Phenanthrene	A	250.00	263	1.2013530	1.2631750		5.2	20
Anthracene	A	250.00	284	1.1304690	1.2851070		13.6	20
Fluoranthene	A	250.00	272	1.1656920	1.2695930		8.8	20
Pyrene	A	250.00	276	1.3012590	1.4380140		10.4	20
Benzo(a)anthracene	A	250.00	269	1.1260180	1.2111370		7.6	20
Chrysene	A	250.00	254	1.2489040	1.2678460		1.6	20
Benzo(b)fluoranthene	A	250.00	242	1.1368650	1.0996380		-3.2	20
Benzo(k)fluoranthene	A	250.00	247	1.2352540	1.2222430		-1.2	20
Benzo(e)pyrene	A	250.00	252	1.1047360	1.1134440		0.8	20
Benzo(a)pyrene	A	250.00	258	1.0408950	1.0736990		3.2	20
Indeno(1,2,3-cd)pyrene	A	250.00	252	1.1553980	1.1658620		0.8	20
Dibenzo(a,h)anthracene	A	250.00	256	0.9387918	0.9605907		2.4	20
Benzo(g,h,i)perylene	A	250.00	244	0.9981765	0.9759888		-2.4	20
Perylene	A	250.00	256	1.0806650	1.1050150		2.4	20
2-Methylnaphthalene-d10	A	250.00	257	0.7540158	0.7739982		2.8	20
Dibenzo[a,h]anthracene-d14	A	250.00	261	0.6699214	0.6994885		4.4	20
Fluoranthene-d10	A	250.00	275	0.8927591	0.9829513		10.0	20
Fluorene-d10	A	250.00	250	0.9766548	0.9753411		0.0	20
Anthracene-d10	A	250.00	279	0.9061191	1.0094950		11.6	20
Benzo(e)pyrene-d12	A	250.00	260	0.9638081	1.0027590		4.0	20

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161212.b\N1116121204.D

Date : 12-DEC-2016 09:14

Client ID:

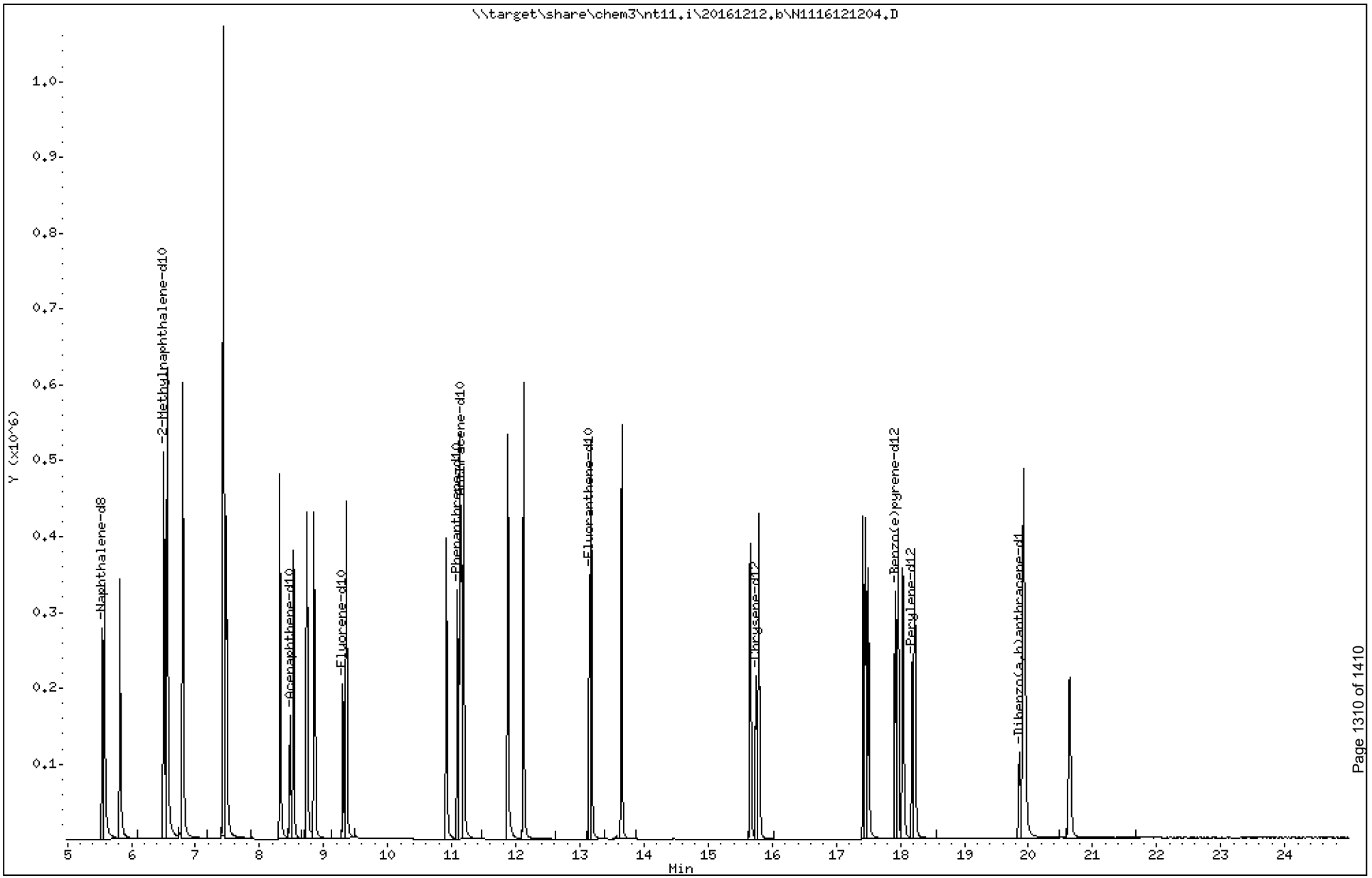
Instrument: nt11.i

Sample Info: SEL0144-ICV1

Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161212.b\N1116121204.D
Lab Smp Id: SEL0144-ICV1
Inj Date : 12-DEC-2016 09:14 MS Autotune Date: 15-JAN-2015 15:59
Operator : JW Inst ID: nt11.i
Smp Info : SEL0144-ICV1
Misc Info :
Comment   :
Method   : \\target\share\chem3\nt11.i\20161212.b\lowsim.m
Meth Date : 15-Dec-2016 09:33 nt11.i Quant Type: ISTD
Cal Date : 25-NOV-2016 10:20 Cal File: 16112510.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	1	Naphthalene-d8	136	5.547	5.547	(1.000)	408833	200.000	
	2	Naphthalene	128	5.574	5.574	(1.005)	538277	250.000	256
	3	Benzo(b)thiophene	134	5.818	5.818	(1.049)	464783	250.000	267
$	4	2-Methylnaphthalene-d10	152	6.505	6.505	(1.173)	395545	250.000	257
	5	2-Methylnaphthalene	142	6.557	6.557	(1.182)	466883	250.000	265
	6	1-Methylnaphthalene	142	6.799	6.799	(1.226)	456500	250.000	264
	7	2-Chloronaphthalene	162	7.429	7.429	(0.877)	429131	250.000	249
	8	Biphenyl	154	7.429	7.429	(0.877)	599353	250.000	254
	9	2,6-Dimethylnaphthalene	156	7.482	7.482	(0.883)	423297	250.000	249
	10	Acenaphthylene	152	8.321	8.321	(0.982)	519119	250.000	265
*	11	Acenaphthene-d10	164	8.474	8.474	(1.000)	211834	200.000	
	12	Acenaphthene	153	8.538	8.538	(1.007)	335744	250.000	250
	13	Dibenzofuran	168	8.738	8.738	(1.031)	460088	250.000	241
	14	2,3,5-Trimethylnaphthalene	170	8.852	8.852	(1.045)	302662	250.000	255
$	15	Fluorene-d10	174	9.294	9.294	(1.097)	258263	250.000	250
	16	Fluorene	166	9.357	9.357	(1.104)	386618	250.000	262
	17	Dibenzothiophene	184	10.921	10.921	(0.985)	457275	250.000	258
*	18	Phenanthrene-d10	188	11.089	11.089	(1.000)	358959	200.000	
	19	Phenanthrene	178	11.131	11.131	(1.004)	566785	250.000	263
$	20	Anthracene-d10	188	11.152	11.152	(1.006)	452959	250.000	279
	21	Anthracene	178	11.184	11.184	(1.009)	576626	250.000	284
	22	Carbazole	167	11.872	11.872	(1.071)	630320	250.000	268
	23	1-Methylphenanthrene	192	12.116	12.116	(1.093)	509335	250.000	268
$	24	Fluoranthene-d10	212	13.142	13.142	(1.185)	441049	250.000	275
	25	Fluoranthene	202	13.180	13.180	(1.189)	569665	250.000	272
	26	Pyrene	202	13.651	13.651	(0.867)	572069	250.000	276
	27	Benzo(a)anthracene	228	15.660	15.660	(0.995)	481813	250.000	269
*	28	Chrysene-d12	240	15.743	15.743	(1.000)	318255	200.000	
	29	Chrysene	228	15.793	15.793	(1.003)	504373	250.000	254
	30	Benzo(b)fluoranthene	252	17.420	17.420	(0.958)	433766	250.000	242
	31	Benzo(k)fluoranthene	252	17.458	17.458	(0.960)	482129	250.000	247
	32	Benzo(j)fluoranthene	252	17.506	17.506	(0.963)	486508	250.000	269
$	33	Benzo(e)pyrene-d12	264	17.919	17.919	(0.986)	395551	250.000	260

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	17.958	17.958	(0.988)	439212	250.000	252
	35 Benzo(a)pyrene	252	18.044	18.044	(0.993)	423534	250.000	258
*	36 Perylene-d12	264	18.179	18.179	(1.000)	315570	200.000	
	37 Perylene	252	18.227	18.227	(1.003)	435887	250.000	256
$	38 Dibenzo(a,h)anthracene-d14	292	19.858	19.858	(1.092)	275922	250.000	261
	39 Dibenzo(a,h)anthracene	278	19.925	19.925	(1.096)	378917	250.000	256
	40 Indeno(1,2,3-cd)pyrene	276	19.925	19.925	(1.096)	459889	250.000	252
	41 Benzo(g,h,i)perylene	276	20.644	20.644	(1.136)	384991	250.000	244

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121204.D
Lab Smp Id: SEL0144-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20161212.b\lowsim.m
Misc Info:

Calibration Date: 12-DEC-2016
Calibration Time: 17:59
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	408833	-17.17
11 Acenaphthene-d10	240770	120385	481540	211834	-12.02
18 Phenanthrene-d10	429271	214636	858542	358959	-16.38
28 Chrysene-d12	387691	193846	775382	318255	-17.91
36 Perylene-d12	386259	193130	772518	315570	-18.30

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	5.55	5.05	6.05	5.55	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	11.09	10.59	11.59	11.09	0.00
28 Chrysene-d12	15.74	15.24	16.24	15.74	0.00
36 Perylene-d12	18.18	17.68	18.68	18.18	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121204.D

Lab ID: SEL0144-ICV1
nt11.i, 20161212.b\lowsim.m,   12-DEC-2016 09:14

RT	CO-ELUTION COMPOUNDS
19.925	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
19.925	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

On Column LOD for nt11.i, 20161212.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161212.b

Instrument: nt11.i Date: 12-DEC-2016 Method: 20161212.b\lowsim.m

INITIAL CAL: 25-NOV-2016

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: N1116121204.D 12-DEC-2016 09:14

Compound	%D
NO Q-FLAGS	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Instrument ID:	NT11	Calibration:	ZK00080
Lab File ID:	N1116121602.D	Calibration Date:	11/25/16 06:30
Sequence:	SEL0234	Injection Date:	12/16/16
Lab Sample ID:	SEL0234-ICV1	Injection Time:	09:46
Sequence Name:	SIM PAH 250		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Naphthalene	A	250.00	244	2.1044350	1.6534250		-2.4	20	
2-Methylnaphthalene	A	250.00	294	0.8633327	1.0166110		17.6	20	
Acenaphthylene	A	250.00	248	1.8477870	1.8357320		-0.8	20	
Acenaphthene	A	250.00	238	1.2677340	1.2085370		-4.8	20	
Fluorene	A	250.00	258	1.3918730	1.4365950		3.2	20	
Phenanthrene	A	250.00	237	1.2013530	1.1372680		-5.2	20	
Anthracene	A	250.00	246	1.1304690	1.1132570		-1.6	20	
Fluoranthene	A	250.00	290	1.1656920	1.3511060		16.0	20	
Pyrene	A	250.00	229	1.3012590	1.1903630		-8.4	20	
Benzo(a)anthracene	A	250.00	263	1.1260180	1.1861400		5.2	20	
Chrysene	A	250.00	239	1.2489040	1.1937680		-4.4	20	
Benzo(b)fluoranthene	A	250.00	265	1.1368650	1.2071540		6.0	20	
Benzo(k)fluoranthene	A	250.00	236	1.2352540	1.1640880		-5.6	20	
Benzo(e)pyrene	A	250.00	254	1.1047360	1.1209050		1.6	20	
Benzo(a)pyrene	A	250.00	244	1.0408950	1.0145920		-2.4	20	
Indeno(1,2,3-cd)pyrene	A	250.00	164	1.1553980	0.7599660		-34.4	20	*
Dibenzo(a,h)anthracene	A	250.00	157	0.9387918	0.5888442		-37.2	20	*
Benzo(g,h,i)perylene	A	250.00	170	0.9981765	0.6793883		-32.0	20	*
Perylene	A	250.00	245	1.0806650	1.0605750		-2.0	20	
2-Methylnaphthalene-d10	A	250.00	299	0.7540158	0.9005698		19.6	20	
Dibenzo[a,h]anthracene-d14	A	250.00	162	0.6699214	0.4346211		-35.2	20	*
Fluoranthene-d10	A	250.00	313	0.8927591	1.1182290		25.2	20	*
Fluorene-d10	A	250.00	257	0.9766548	1.0041630		2.8	20	
Anthracene-d10	A	250.00	267	0.9061191	0.9682361		6.8	20	
Benzo(e)pyrene-d12	A	250.00	267	0.9638081	1.0301560		6.8	20	

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161216.b\N1116121602.D

Date : 16-DEC-2016 09:46

Client ID:

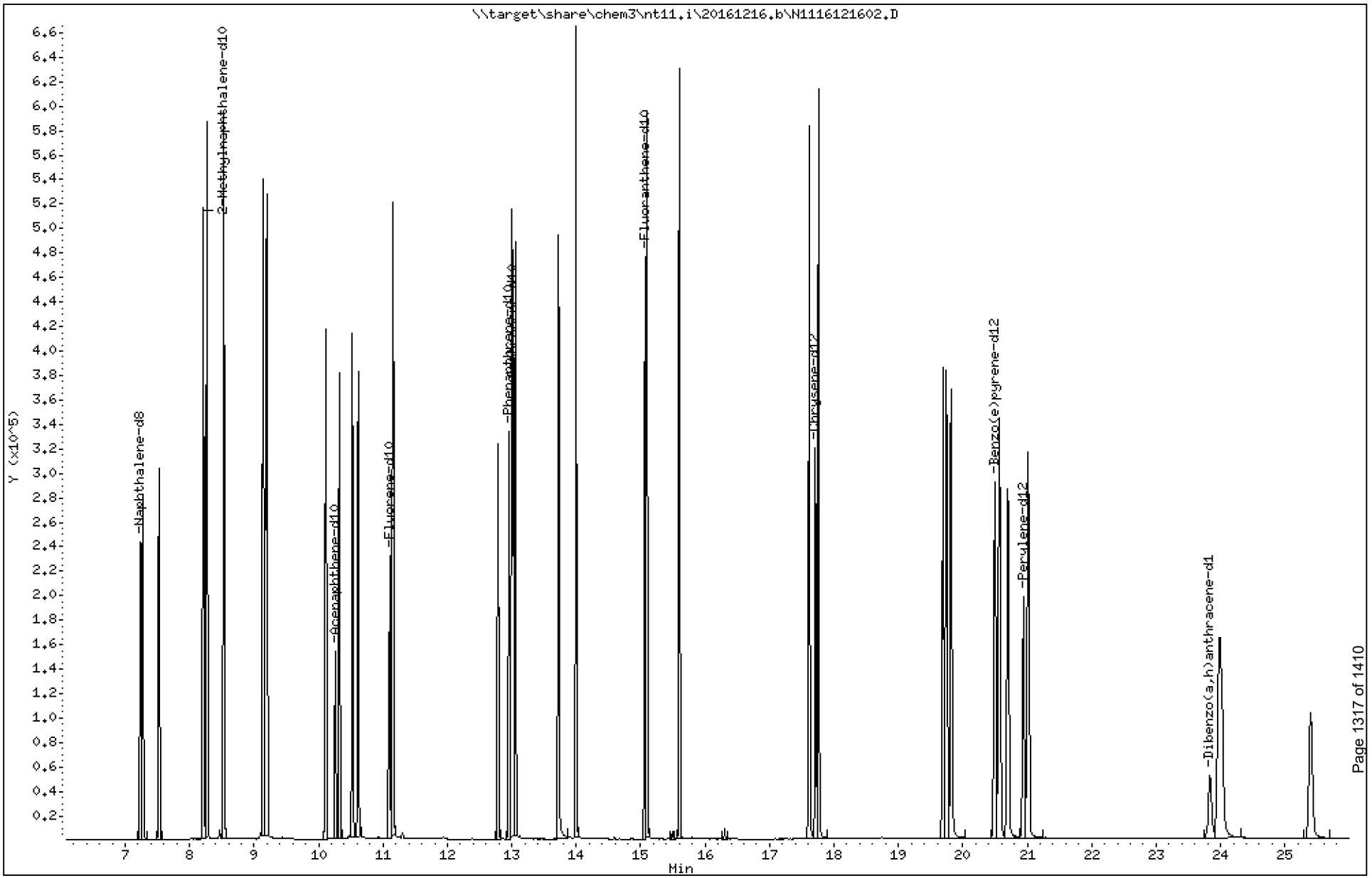
Instrument: nt11.i

Sample Info: SEL0234-ICV1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161216.b\N1116121602.D
Lab Smp Id: SEL0234-ICV1
Inj Date : 16-DEC-2016 09:46 MS Autotune Date: 15-JAN-2015 15:59
Operator : VTS Inst ID: nt11.i
Smp Info : SEL0234-ICV1
Misc Info :
Comment   :
Method   : \\target\share\chem3\nt11.i\20161216.b\lowsim.m
Meth Date : 17-Dec-2016 10:59 nt11.i Quant Type: ISTD
Cal Date : 25-NOV-2016 10:20 Cal File: 16112510.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allpna.sub
Target Version: 4.14
Processing Host: VANS

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	1	Naphthalene-d8	136	7.234	7.234	(1.000)	298197	200.000	
	2	Naphthalene	128	7.271	7.271	(1.005)	374478	250.000	244
	3	Benzo(b)thiophene	134	7.524	7.524	(1.040)	314581	250.000	248
$	4	2-Methylnaphthalene-d10	152	8.211	8.211	(1.135)	335684	250.000	299
	5	2-Methylnaphthalene	142	8.264	8.264	(1.142)	378938	250.000	294
	6	1-Methylnaphthalene	142	8.526	8.526	(1.179)	369611	250.000	293
	7	2-Chloronaphthalene	162	9.178	9.178	(0.894)	367338	250.000	249
	8	Biphenyl	154	9.136	9.136	(0.890)	483426	250.000	239
	9	2,6-Dimethylnaphthalene	156	9.199	9.199	(0.897)	374159	250.000	258
	10	Acenaphthylene	152	10.107	10.107	(0.985)	415768	250.000	248
*	11	Acenaphthene-d10	164	10.261	10.261	(1.000)	181189	200.000	
	12	Acenaphthene	153	10.324	10.324	(1.006)	273717	250.000	238
	13	Dibenzofuran	168	10.519	10.519	(1.025)	408554	250.000	250
	14	2,3,5-Trimethylnaphthalene	170	10.620	10.620	(1.035)	269408	250.000	266
$	15	Fluorene-d10	174	11.100	11.100	(1.082)	227429	250.000	257
	16	Fluorene	166	11.151	11.151	(1.087)	325369	250.000	258
	17	Dibenzothiophene	184	12.788	12.788	(0.987)	413471	250.000	234
*	18	Phenanthrene-d10	188	12.956	12.956	(1.000)	356946	200.000	
	19	Phenanthrene	178	12.998	12.998	(1.003)	507429	250.000	237
$	20	Anthracene-d10	188	13.019	13.019	(1.005)	432010	250.000	267
	21	Anthracene	178	13.050	13.050	(1.007)	496716	250.000	246
	22	Carbazole	167	13.722	13.722	(1.059)	539935	250.000	231
	23	1-Methylphenanthrene	192	13.993	13.993	(1.080)	532617	250.000	282
$	24	Fluoranthene-d10	212	15.065	15.065	(1.163)	498934	250.000	313
	25	Fluoranthene	202	15.094	15.094	(1.165)	602840	250.000	290
	26	Pyrene	202	15.603	15.603	(0.881)	606566	250.000	229
	27	Benzo(a)anthracene	228	17.619	17.619	(0.995)	604414	250.000	263
*	28	Chrysene-d12	240	17.710	17.710	(1.000)	407651	200.000	
	29	Chrysene	228	17.760	17.760	(1.003)	608301	250.000	239
	30	Benzo(b)fluoranthene	252	19.696	19.696	(0.941)	558980	250.000	265
	31	Benzo(k)fluoranthene	252	19.744	19.744	(0.943)	539038	250.000	236
	32	Benzo(j)fluoranthene	252	19.821	19.821	(0.947)	524355	250.000	247
$	33	Benzo(e)pyrene-d12	264	20.493	20.493	(0.979)	477020	250.000	267

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	34 Benzo(e)pyrene	252	20.570	20.570	(0.983)	519042	250.000	254
	35 Benzo(a)pyrene	252	20.695	20.695	(0.989)	469813	250.000	244
*	36 Perylene-d12	264	20.935	20.935	(1.000)	370445	200.000	
	37 Perylene	252	21.012	21.012	(1.004)	491106	250.000	245
$	38 Dibenzo(a,h)anthracene-d14	292	23.830	23.830	(1.138)	201254	250.000	162
	39 Dibenzo(a,h)anthracene	278	23.974	23.974	(1.145)	272668	250.000	157
	40 Indeno(1,2,3-cd)pyrene	276	24.008	24.008	(1.147)	351907	250.000	164
	41 Benzo(g,h,i)perylene	276	25.403	25.403	(1.213)	314595	250.000	170

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: N1116121602.D
Lab Smp Id: SEL0234-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt11.i\20161216.b\lowsim.m
Misc Info:

Calibration Date: 16-DEC-2016
Calibration Time: 13:50
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	493555	246778	987110	298197	-39.58
11 Acenaphthene-d10	240770	120385	481540	181189	-24.75
18 Phenanthrene-d10	429271	214636	858542	356946	-16.85
28 Chrysene-d12	387691	193846	775382	407651	5.15
36 Perylene-d12	386259	193130	772518	370445	-4.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	7.23	6.73	7.73	7.23	0.00
11 Acenaphthene-d10	10.26	9.76	10.76	10.26	0.00
18 Phenanthrene-d10	12.96	12.46	13.46	12.96	0.00
28 Chrysene-d12	17.71	17.21	18.21	17.71	0.00
36 Perylene-d12	20.94	20.44	21.44	20.94	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - N1116121602.D

Lab ID: SEL0234-ICV1
nt11.i, 20161216.b\lowsim.m,   16-DEC-2016 09:46

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

On Column LOD for nt11.i, 20161216.b\lowsim.m, allpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: Benzo(b)thiophene 2.0000
Exception: 2-Chloronaphthalene 2.0000
Exception: 2,6-Dimethylnaphthalene 2.0000
Exception: 2,3,5-Trimethylnaphthalene 2.0000
Exception: 1-Methylphenanthrene 2.0000
Exception: Dibenzothiophene 2.0000
Exception: Carbazole 2.0000
Exception: Biphenyl 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000
Exception: Anthracene-d10 (Surr) 0.1000
Exception: Benzo(e)pyrene-d12 (Surr) 0.1000
Exception: Fluorene-d10 (Surr) 0.1000

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161216.b

Instrument: nt11.i Date: 16-DEC-2016 Method: 20161216.b\lowsim.m

INITIAL CAL: 25-NOV-2016

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: N1116121602.D 16-DEC-2016 09:46

Compound	%D
Indeno(1,2,3-cd)pyrene	-34.2
Dibenzo(a,h)anthracene	-37.3
Benzo(g,h,i)perylene	-31.9
Dibenzo(a,h)anthracene-d14	-35.1
Fluoranthene-d10	25.3

Analytical Resources, Incorporated

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEK0335	Instrument:	NT11
		Calibration:	ZK00080

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Tune 10	SEK0335-TUN1	16112504.D	Tissue	11/25/16 07:31
SIMPNA 250 ppb	SEK0335-CAL4	16112505.D	Tissue	11/25/16 07:49
SIMPNA 10 ppb	SEK0335-CAL1	16112506.D	Tissue	11/25/16 08:19
SIMPNA 500 ppb	SEK0335-CAL5	16112507.D	Tissue	11/25/16 08:49
SIMPNA 50 ppb	SEK0335-CAL2	16112508.D	Tissue	11/25/16 09:20
SIMPNA 100 ppb	SEK0335-CAL3	16112509.D	Tissue	11/25/16 09:50
SIMPNA 1000 ppb	SEK0335-CAL6	16112510.D	Tissue	11/25/16 10:20
SIMPNA SCV	SEK0335-SCV1	16112511.D	Tissue	11/25/16 10:50
ZZZZZ	BEK0480-BLK1	16112512.D	Water	11/25/16 11:20
ZZZZZ	BEK0480-BS1	16112513.D	Water	11/25/16 11:50
ZZZZZ	16K0221-01	16112514.D	Water	11/25/16 12:21
SIM PAH 250	SEK0335-CCV1	16112515.D	Tissue	11/25/16 12:51

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 11/30/2016 9:36:34AM

ANALYSIS SEQUENCE

SEK0335

Instrument: NT11 Element Column ID: D005437
Calibration ID: ZK00080 Tune File: 160805.U
EM Voltage: 2224

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SEK0335-TUN1	Tune 10	QC		1	E000099		
SEK0335-CAL4	SIMPNA 250 ppb	QC		2	E006577	E002870	
SEK0335-CAL1	SIMPNA 10 ppb	QC		3	E006574	E002870	
SEK0335-CAL5	SIMPNA 500 ppb	QC		4	E006578	E002870	
SEK0335-CAL2	SIMPNA 50 ppb	QC		5	E006575	E002870	
SEK0335-CAL3	SIMPNA 100 ppb	QC		6	E006576	E002870	
SEK0335-CAL6	SIMPNA 1000 ppb	QC		7	E006579	E002870	
SEK0335-SCV1	SIMPNA SCV	QC		8	D004766	E002870	
BEK0480-BLK1	Blank	QC		9		E002870	
BEK0480-BS1	LCS	QC		10		E002870	
16K0221-01	RMW-7-111416	SIM PAH Low (0.01 ug/L - 0.	A 01	11		E002870	
SEK0335-CCV1	SIM PAH 250	QC		12	E006577	E002870	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161125.b

	Time	Filename	LabID	ClientId	DF									
1	0547	16112501.D	RT		1	5.65	312724	8.59	167525	11.20	313058	15.87	286393	18.33	270461
2	0627	16112502.D	SEK0335-TUN1		1	NO ISTDS FOUND									
3	0719	16112503.D	RINSE		1	NO ISTDS FOUND									
4	0731	16112504.D	SEK0335-TUN1		1	NO ISTDS FOUND									
5	0749	16112505.D	SEK0335-CAL4		1	5.66	493555	8.59	240770	11.21	429271	15.88	387691	18.33	386259
6	0819	16112506.D	SEK0335-CAL1		1	5.65	460503	8.58	219301	11.20	392400	15.87	349599	18.33	346399
7	0849	16112507.D	SEK0335-CAL5		1	5.66	482225	8.59	238489	11.20	423343	15.87	383318	18.33	378099
8	0920	16112508.D	SEK0335-CAL2		1	5.65	464735	8.58	225863	11.20	391319	15.87	349398	18.33	348510
9	0950	16112509.D	SEK0335-CAL3		1	5.65	461632	8.58	226505	11.20	397446	15.87	362603	18.33	361091
10	1020	16112510.D	SEK0335-CAL6		1	5.65	475772	8.58	238024	11.20	418191	15.87	386429	18.33	381102
11	1050	16112511.D	SEK0335-SCV1		1	5.66	443736	8.58	219883	11.21	374597	15.87	357859	18.33	351854
12	1120	16112512.D	BEK0480-BLK1		1	5.66	448581	8.59	210964	11.21	374350	15.87	333237	18.33	323481
13	1150	16112513.D	BEK0480-BS1		1	5.66	445435	8.58	220895	11.21	381687	15.87	352142	18.33	336447
14	1221	16112514.D	16K0221-01		1	5.65	452522	8.58	213028	11.21	389669	15.87	342780	18.33	328563
15	1251	16112515.D	SEK0335-CCV1		1	5.65	459619	8.58	226734	11.21	399049	15.87	367657	18.33	368104
16	1321	16112516.D	E006715		1	5.65	447668	8.58	207221	11.21	369089	15.87	330663	18.33	313815
17	1351	16112517.D	E006964		1	5.64	466511	8.58	219315	11.20	392739	15.87	345411	18.33	292229

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161125.b

AR Job No.: SEK0 Method: DFTPP.m Instrument: nt11.i Date: 25-NOV-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0731	16112504.D	SEK0335-TUN1		1	NO MANUAL INTEGRATION
0749	16112505.D	SEK0335-CAL4		1	NO MANUAL INTEGRATION
0819	16112506.D	SEK0335-CAL1		1	Biphenyl,
0849	16112507.D	SEK0335-CAL5		1	NO MANUAL INTEGRATION
0920	16112508.D	SEK0335-CAL2		1	Biphenyl,
0950	16112509.D	SEK0335-CAL3		1	Biphenyl,
1020	16112510.D	SEK0335-CAL6		1	NO MANUAL INTEGRATION
1050	16112511.D	SEK0335-SCV1		1	NO MANUAL INTEGRATION
1120	16112512.D	BEK0480-BLK1		1	NO MANUAL INTEGRATION
1150	16112513.D	BEK0480-BS1		1	NO MANUAL INTEGRATION
1221	16112514.D	16K0221-01		1	NO MANUAL INTEGRATION
1251	16112515.D	SEK0335-CCV1		1	NO MANUAL INTEGRATION

Analytical Resources, Incorporated

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0145	Instrument:	NT11
		Calibration:	ZK00080

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Tune 10	SEL0145-TUN1	N111612101.D	Solid	12/10/16 09:22
Initial Cal Check	SEL0145-ICV1	N111612102.D	Solid	12/10/16 09:37
ZZZZZ	BEL0014-BLK1	N111612104.D	Solid	12/10/16 10:50
ZZZZZ	BEL0014-BS1	N111612105.D	Solid	12/10/16 11:20
ZZZZZ	BEL0014-SRM1	N111612106.D	Solid	12/10/16 11:50
ZZZZZ	16K0356-01	N111612107.D	Solid	12/10/16 12:21
ZZZZZ	16K0356-02	N111612108.D	Solid	12/10/16 12:51
ZZZZZ	16K0356-03	N111612111.D	Solid	12/10/16 14:21
Blank	BEK0657-BLK2	N111612112.D	Tissue	12/10/16 14:51
LCS	BEK0657-BS2	N111612113.D	Tissue	12/10/16 15:21
SIM PAH 250	SEL0145-CCV1	N111612114.D	Solid	12/10/16 15:51

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response		Analyst Initials	Date
1	DFTPP abundance and time criteria met	YES		JLW	12/12/2016
2	DDT Breakdown <20% and Peak Tailing <=2	NO		JLW	12/12/2016
	Comments: *PCP TF @ 2.17*				
3	ICV/CCV Meets %D	YES		JLW	12/12/2016
4	ICAL/ICV/CCV Q Flag - NONE required	YES		JLW	12/12/2016
5	Internal Standard areas within 50-200%	YES		JLW	12/12/2016
6	Retention times within windows and Coelution summary checked	YES		JLW	12/12/2016
7	Manual integrations include summary and before/after pictures	YES		JLW	12/12/2016
8	Project specific requirements have been met	NA		BB	12/12/2016
9	Sample dilution factors have been correctly applied	NA		JLW	12/12/2016
10	AUTOCHECK: Blank checked for exceedence of criteria	YES	*	JLW	12/12/2016
11	AUTOCHECK: Check blank spike recovery	YES	*	JLW	12/12/2016
12	AUTOCHECK: Check blank spike/blank spike duplicate RPD. If exceeded include outliers in exception report.	NA	*	JLW	12/12/2016
13	AUTOCHECK: Compounds in method designated as blank spike compounds are present	YES	*	JLW	12/12/2016
14	AUTOCHECK: Check %RPD between sample and sample duplicate	NA	*	JLW	12/12/2016
15	AUTOCHECK: Matrix spike recoveries within limits	NO	*	JLW	12/12/2016

Comments:
Due to level of hits in samples recoveries off, appears sample homogenity is an issue

Matrix Spike Recovery for Benzo(a)anthracene (23.3%) was outside acceptance limits (30-160) in BEL0014-MS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Matrix Spike Recovery for Benzo(b)fluoranthene (-37.3%) was outside acceptance limits (30-160) in BEL0014-MS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Matrix Spike Recovery for Benzo(j)fluoranthene (26.5%) was outside acceptance limits (30-160) in BEL0014-MS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Matrix Spike Recovery for Chrysene (-163%) was outside acceptance limits (30-160) in BEL0014-MS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

* = Indicates Automated Response from Element DataSyst

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response		Analyst Initials	Date

Matrix Spike Recovery for Fluoranthene (-446%) was outside acceptance limits (30-160) in BEL0014-MS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Matrix Spike Recovery for Phenanthrene (-9.39%) was outside acceptance limits (30-160) in BEL0014-MS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Matrix Spike Recovery for Pyrene (-333%) was outside acceptance limits (30-160) in BEL0014-MS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Matrix Spike Recovery for Benzo(b)fluoranthene (-2.30%) was outside acceptance limits (30-160) in BEL0014-MSD1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Matrix Spike Recovery for Chrysene (-38.9%) was outside acceptance limits (30-160) in BEL0014-MSD1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Matrix Spike Recovery for Fluoranthene (-461%) was outside acceptance limits (30-160) in BEL0014-MSD1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Matrix Spike Recovery for Phenanthrene (-31.4%) was outside acceptance limits (30-160) in BEL0014-MSD1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Matrix Spike Recovery for Pyrene (-336%) was outside acceptance limits (30-160) in BEL0014-MSD1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

16	AUTOCHECK: Matrix spike/matrix spike duplicate RPD within limits	NO	*	JLW	12/12/2016

Comments:
Matrix Spike Duplicate RPD for Chrysene (44.7%) was above the acceptance limit (30) in BEL0014-MSD1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

17	AUTOCHECK: List of compounds listed as spiked are present	YES	*	JLW	12/12/2016
18	AUTOCHECK: Check SRM limits for exceedance	NO	*	JLW	12/12/2016

Comments:
SRM failures flagged

Reference Material Recovery for Benzo(b)fluoranthene (165%) was outside acceptance limits (52.7-148) in BEL0014-SRM1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

* = Indicates Automated Response from Element DataSyst

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response		Analyst Initials	Date
	Reference Material Recovery for Benzo(k)fluoranthene (178%) was outside acceptance limits (40.4-159) in BEL0014-SRM1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) *- Flagged value is not within established control limits.*				
	Reference Material Recovery for Chrysene (155%) was outside acceptance limits (55-145) in BEL0014-SRM1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) *- Flagged value is not within established control limits.*				
	Reference Material Recovery for Dibenzo(a,h)anthracene (159%) was outside acceptance limits (64.4-136) in BEL0014-SRM1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) *- Flagged value is not within established control limits.*				
	Reference Material Recovery for Fluoranthene (152%) was outside acceptance limits (57.3-143) in BEL0014-SRM1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) *- Flagged value is not within established control limits.*				
	Reference Material Recovery for Fluorene (25.2%) was outside acceptance limits (44.1-155) in BEL0014-SRM1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) *- Flagged value is not within established control limits.*				
	Reference Material Recovery for Indeno(1,2,3-cd)pyrene (179%) was outside acceptance limits (46.9-153) in BEL0014-SRM1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) *- Flagged value is not within established control limits.*				
	Reference Material Recovery for Phenanthrene (143%) was outside acceptance limits (85.1-115) in BEL0014-SRM1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) *- Flagged value is not within established control limits.*				
19	AUTOCHECK: Check Surrogate recoveries	YES	*	JLW	12/12/2016
20	AUTOCHECK: Checks Surrogate spike list against Analysis	YES	*	JLW	12/12/2016
21	Analyst checklist completed (PEER)	YES		BB	12/12/2016
22	Data is locked and Status is Analyzed (PEER)	YES		BB	12/12/2016
23	Data file, Calibration, Sequence, Batch, and Cleanup PDF's are attached (PEER)	YES		BB	12/12/2016
24	Color warnings have been addressed and (or) qualified (PEER)	YES		BB	12/12/2016
25	Qualifers have been correctly added (PEER)	YES		BB	12/12/2016
26	Checklist completed and status is peer reviewed (REVIEWER)	YES		BB	12/12/2016
27	Dilutions are linear (50-200%) and appropriate (REVIEWER)	NA		BB	12/12/2016
28	All requested samples have been reported (REVIEWER)	YES		BB	12/12/2016

* = Indicates Automated Response from Element DataSyst

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
29	Color warnings have been addressed, narrated and (or) qualified (REVIEWER)	YES	BB	12/12/2016
30	List of samples in this sequence that will require additional runs-verify reshot created (ANALYST) Comments: *16K0356-01 and 02 need dilutions on seq SEL0155*	YES	JLW	12/12/2016
31	List of samples in this sequence that are re-analysis or dilutions of samples (ANALYST)	NA	JLW	12/12/2016
32	Additional Notes (ANALYST, PEER, and REVIEWER)	NA	JLW	12/12/2016

* = Indicates Automated Response from Element DataSyst

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/12/2016 12:46:49PM

ANALYSIS SEQUENCE

SEL0145

Instrument: NT11 Element Column ID: D005437
Calibration ID: ZK00080 Tune File: 160805.U
EM Voltage: 2224

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SEL0145-TUN1	Tune 10	QC		1	E007446		
SEL0145-ICV1	Initial Cal Check	QC		2	E006577	E002870	
BEL0014-BLK1	Blank	QC		3		E002870	
BEL0014-BS1	LCS	QC		4		E002870	
BEL0014-SRM1	Reference	QC		5		E002870	
16K0356-01	Herron Island	SIM PAH Low (0.01 ug/L - 0.	F 03	6		E002870	
16K0356-02	Lakeboy	SIM PAH Low (0.01 ug/L - 0.	F 03	7		E002870	
BEL0014-MS1	Matrix Spike	QC		8		E002870	
BEL0014-MSD1	Matrix Spike Dup	QC		9		E002870	
16K0356-03	Marina	SIM PAH Low (0.01 ug/L - 0.	F 03	10		E002870	
SEL0145-CCV1	SIM PAH 250	QC		11	E006577	E002870	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161210.b

	Time	Filename	LabID	ClientId	DF											
1	0922	N111612101.D	SEL0145-TUN1		1	NO ISTDS FOUND										
2	0937	N111612102.D	SEL0145-ICV1		1	5.66	409408	8.59	199840	11.21	326670	15.88	304785	18.33	292012	
3	1020	N111612103.D	E007245		1	5.66	425922	8.59	198683	11.21	341265	15.88	303585	18.34	250419	
4	1050	N111612104.D	BEL0014-BLK1		1	5.65	440934	8.58	207749	11.21	362037	15.88	314248	18.33	302090	
5	1120	N111612105.D	BEL0014-BS1		1	5.65	424401	8.58	209041	11.21	368016	15.88	324807	18.33	314799	
6	1150	N111612106.D	BEL0014-SRM1		1	5.65	434934	8.58	211504	11.21	366178	15.88	335744	18.33	318630	
7	1221	N111612107.D	16K0356-01		1	5.65	412843	8.58	203839	11.21	344289	15.88	327864	18.33	357259	
8	1251	N111612108.D	16K0356-02		1	5.65	416731	8.58	208485	11.20	357152	15.88	331965	18.33	334625	
9	1321	N111612109.D	BEL0014-MS1		1	5.64	422512	8.58	217992	11.20	371104	15.88	336653	18.33	344178	
10	1351	N111612110.D	BEL0014-MSD1		1	5.65	412119	8.58	213885	11.21	361414	15.88	338478	18.33	343115	
11	1421	N111612111.D	16K0356-03		1	5.65	407078	8.58	201160	11.21	348131	15.88	322420	18.33	333654	
12	1451	N111612112.D	PEMD-BLK1		1	5.64	303813	8.58	151511	11.20	279463	15.88	253981	18.34	280517	
13	1521	N111612113.D	PEMD-BS1		1	5.64	471964	8.57	251045	11.20	482057	15.88	480519	18.33	555286	
14	1551	N111612114.D	SEL0145-CCV1		1	5.66	366935	8.59	204050	11.21	338712	15.88	328773	18.33	322089	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161210.b

ARJ Job No.: SEL0 Method: DFTPP.m Instrument: nt11.i Date: 10-DEC-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0922	N111612101.D	SEL0145-TUN1		1	NO MANUAL INTEGRATION
0937	N111612102.D	SEL0145-ICV1		1	2-Chloronaphthalene,
1020	N111612103.D	E007245		1	NO MANUAL INTEGRATION
1050	N111612104.D	BEL0014-BLK1		1	NO MANUAL INTEGRATION
1120	N111612105.D	BEL0014-BS1		1	NO MANUAL INTEGRATION
1150	N111612106.D	BEL0014-SRM1		1	NO MANUAL INTEGRATION
1221	N111612107.D	16K0356-01		1	2,3,5-Trimethylnaphthalene, 1-Methylphenanthrene,
1251	N111612108.D	16K0356-02		1	2,3,5-Trimethylnaphthalene, 1-Methylphenanthrene,
1321	N111612109.D	BEL0014-MS1		1	NO MANUAL INTEGRATION
1351	N111612110.D	BEL0014-MSD1		1	NO MANUAL INTEGRATION
1421	N111612111.D	16K0356-03		1	Anthracene, 1-Methylphenanthrene,
1451	N111612112.D	PEMD-BLK1		1	Acenaphthene, Pyrene, 1-Methylnaphthalene,
1521	N111612113.D	PEMD-BS1		1	NO MANUAL INTEGRATION
1551	N111612114.D	SEL0145-CCV1		1	2-Chloronaphthalene, Biphenyl,

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/22/2016 8:18:58AM

ANALYSIS SEQUENCE

SEL0145

Instrument: NT11
Calibration ID: ZK00080
EM Voltage: 2224
Element Column ID: D005437
Tune File: 160805.U

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SEL0145-TUN1	Tune 10	QC		1	E007446		
SEL0145-ICV1	Initial Cal Check	QC		2	E006577	E002870	
BEL0014-BLK1	Blank	QC		3		E002870	
BEL0014-BS1	LCS	QC		4		E002870	
BEL0014-SRM1	Reference	QC		5		E002870	
16K0356-01	Herron Island	SIM PAH Low (0.01 ug/L - 0.	F 03	6		E002870	
16K0356-02	Lakebay	SIM PAH Low (0.01 ug/L - 0.	F 03	7		E002870	
BEL0014-MS1	Matrix Spike	QC		8		E002870	
BEL0014-MSD1	Matrix Spike Dup	QC		9		E002870	
16K0356-03	Marina	SIM PAH Low (0.01 ug/L - 0.	F 03	10		E002870	
SEL0145-CCV1	SIM PAH 250	QC		11	E006577	E002870	
BEK0657-BLK2	Day zero Blank	QC		12		E002870	
BEK0657-BS2	Day zero LCS	QC		13		E002870	

Analytical Resources, Incorporated

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0155	Instrument:	NT11
		Calibration:	ZK00080

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Tune 10	SEL0155-TUN1	N1116121203.D	Tissue	12/12/16 08:59
Initial Cal Check	SEL0155-ICV1	N1116121204.D	Tissue	12/12/16 09:14
ZZZZZ	16K0356-01RE1	N1116121205.D	Solid	12/12/16 10:27
ZZZZZ	16K0356-02RE1	N1116121206.D	Solid	12/12/16 10:57
Blank	BEK0657-BLK1	N1116121207.D	Tissue	12/12/16 11:28
LCS	BEK0657-BS1	N1116121208.D	Tissue	12/12/16 11:58
PG-SMA1-1-PEMD-161122-A	16K0321-01	N1116121209.D	Tissue	12/12/16 12:28
PG-SMA1-2-PEMD-161122-A	16K0321-03	N1116121210.D	Tissue	12/12/16 12:58
PG-SMA1-3-PEMD-161122-A	16K0321-05	N1116121211.D	Tissue	12/12/16 13:28
PG-SMA1-103-PEMD-161122-A	16K0321-06	N1116121212.D	Tissue	12/12/16 13:58
PG-SMA2-1-PEMD-161122-A	16K0321-07	N1116121213.D	Tissue	12/12/16 14:28
PG-SMA2-2-PEMD-161122-A	16K0321-09	N1116121214.D	Tissue	12/12/16 14:59
PG-SMA2-102-PEMD-161122-A	16K0321-10	N1116121215.D	Tissue	12/12/16 15:29
PG-SMA2-3-PEMD-161122-A	16K0321-11	N1116121216.D	Tissue	12/12/16 15:59
PG-SMA2-4-PEMD-161122-A	16K0321-13	N1116121217.D	Tissue	12/12/16 16:29
PG-SMA2-5-PEMD-161122-A	16K0321-15	N1116121218.D	Tissue	12/12/16 16:59
PG-PJ-1-PEMD-161122-A	16K0321-17	N1116121219.D	Tissue	12/12/16 17:29
SIM PAH 250	SEL0155-CCV1	N1116121220.D	Tissue	12/12/16 17:59

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response		Analyst Initials	Date
1	DFTPP abundance and time criteria met	YES		VTS	12/15/2016
2	DDT Breakdown <20% and Peak Tailing <=2	YES		VTS	12/15/2016
3	ICV/CCV Meets %D	YES		VTS	12/15/2016
4	ICAL/ICV/CCV Q Flag - NONE required	YES		VTS	12/15/2016
5	Internal Standard areas within 50-200%	NA		VTS	12/15/2016
	Comments: *CCV showed <50% recovery for internal standard area. Recoveries for BEK0657-BLK1 are within control-not flagged*				
6	Retention times within windows and Coelution summary checked	YES		VTS	12/15/2016
7	Manual integrations include summary and before/after pictures	YES		VTS	12/15/2016
8	Project specific requirements have been met	YES		VTS	12/15/2016
9	Sample dilution factors have been correctly applied	YES		VTS	12/15/2016
10	AUTOCHECK: Blank checked for exceedence of criteria	YES	*	VTS	12/15/2016
11	AUTOCHECK: Check blank spike recovery	NO	*	VTS	12/15/2016
	Comments: *LCS Recovery for Perylene (28.2%) was outside acceptance limits (30-160) in BEK0657-BS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)*				
12	AUTOCHECK: Check blank spike/blank spike duplicate RPD. If exceeded include outliers in exception report.	NA	*	VTS	12/15/2016
13	AUTOCHECK: Compounds in method designated as blank spike compounds are present	YES	*	VTS	12/15/2016
14	AUTOCHECK: Check %RPD between sample and sample duplicate	NA	*	VTS	12/15/2016
15	AUTOCHECK: Matrix spike recoveries within limits	NO	*	VTS	12/15/2016

Comments:

Matrix Spike Recovery for Benzo(b)fluoranthene (-10.8%) was outside acceptance limits (30-160) in BEL0014-MS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Matrix Spike Recovery for Benzo(j)fluoranthene (10.3%) was outside acceptance limits (30-160) in BEL0014-MS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Matrix Spike Recovery for Chrysene (-192%) was outside acceptance limits (30-160) in BEL0014-MS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Matrix Spike Recovery for Fluoranthene (-597%) was outside acceptance limits (30-160) in BEL0014-MS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

* = Indicates Automated Response from Element DataSyst

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response		Analyst Initials	Date
	Matrix Spike Recovery for Phenanthrene (1.30%) was outside acceptance limits (30-160) in BEL0014-MS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) *- Flagged value is not within established control limits.* *Matrix Spike Recovery for Pyrene (-463%) was outside acceptance limits (30-160) in BEL0014-MS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)* *- Flagged value is not within established control limits.*				
16	AUTOCHECK: Matrix spike/matrix spike duplicate RPD within limits	NA	*	VTS	12/15/2016
17	AUTOCHECK: List of compounds listed as spiked are present	YES	*	VTS	12/15/2016
18	AUTOCHECK: Check SRM limits for exceedance	NA	*	VTS	12/15/2016
19	AUTOCHECK: Check Surrogate recoveries	NO	*	VTS	12/15/2016

Comments:

Surrogate Recovery for Anthracene-d10 (4.35%) was outside acceptance limits (30-160) in 16K0321-10 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Surrogate Recovery for Fluorene-d10 (8.82%) was outside acceptance limits (30-160) in 16K0321-10 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Surrogate Recovery for Anthracene-d10 (8.39%) was outside acceptance limits (30-160) in 16K0321-11 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Surrogate Recovery for Anthracene-d10 (9.43%) was outside acceptance limits (30-160) in 16K0321-13 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Surrogate Recovery for Anthracene-d10 (25.6%) was outside acceptance limits (30-160) in 16K0321-15 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Surrogate Recovery for Anthracene-d10 (12.0%) was outside acceptance limits (30-160) in 16K0321-17 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Surrogate Recovery for 2-Methylnaphthalene-d10 (23.3%) was outside acceptance limits (30-160) in BEK0657-BLK1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Surrogate Recovery for Dibenzo[a,h]anthracene-d14 (27.4%) was outside acceptance limits (30-160) in BEK0657-BLK1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

* = Indicates Automated Response from Element DataSyst

Port Gamble Shellfish Monitoring (PEMD)
16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
20	AUTOCHECK: Checks Surrogate spike list against Analysis	YES *	VTS	12/15/2016
21	Analyst checklist completed (PEER)			12/30/1899
22	Data is locked and Status is Analyzed (PEER)			12/30/1899
23	Data file, Calibration, Sequence, Batch, and Cleanup PDF's are attached (PEER)			12/30/1899
24	Color warnings have been addressed and (or) qualified (PEER)			12/30/1899
25	Qualifers have been correctly added (PEER)			12/30/1899
26	Checklist completed and status is peer reviewed (REVIEWER)			12/30/1899
27	Dilutions are linear (50-200%) and appropriate (REVIEWER)			12/30/1899
28	All requested samples have been reported (REVIEWER)			12/30/1899
29	Color warnings have been addressed, narrated and (or) qualified (REVIEWER)			12/30/1899
30	List of samples in this sequence that will require additional runs-verify reshot created (ANALYST)	YES	VTS	12/15/2016
	Comments: *Work Order 16K0321 will require dilutions for all samples*			
31	List of samples in this sequence that are re-analysis or dilutions of samples (ANALYST)	YES	VTS	12/15/2016
	Comments: *Dilutions for Work Order 16K0356-01 and -02 run at 20x and 30x*			
32	Additional Notes (ANALYST, PEER, and REVIEWER)	YES	VTS	12/15/2016
	Comments: *Work Order 16K0321 is the PEMD strips.*			

* = Indicates Automated Response from Element DataSyst

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/15/2016 11:19:59AM

ANALYSIS SEQUENCE

SEL0155

Instrument: NT11 Element Column ID: D005437
Calibration ID: ZK00080 Tune File: 160805.U
EM Voltage: 2224

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SEL0155-TUN1	Tune 10	QC		1	E007446		
SEL0155-ICV1	Initial Cal Check	QC		2	E006577	E002870	
16K0356-01RE1	Herron Island	SIM PAH Low (0.01 ug/L - 0.	F 03	3		E002870	Added 12/12/2016 by JLW
16K0356-02RE1	Lakebay	SIM PAH Low (0.01 ug/L - 0.	F 03	4		E002870	Added 12/12/2016 by JLW
BEK0657-BLK1	Blank	QC		5		E002870	
BEK0657-BS1	LCS	QC		6		E002870	
16K0321-01	PG-SMA1-1-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	7		E002870	
16K0321-03	PG-SMA1-2-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	8		E002870	
16K0321-05	PG-SMA1-3-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	9		E002870	
16K0321-06	PG-SMA1-103-PEMD-161122-	SIM PAH Low (0.01 ug/L - 0.	A 01	10		E002870	
16K0321-07	PG-SMA2-1-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	11		E002870	
16K0321-09	PG-SMA2-2-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	12		E002870	
16K0321-10	PG-SMA2-102-PEMD-161122-	SIM PAH Low (0.01 ug/L - 0.	A 01	13		E002870	
16K0321-11	PG-SMA2-3-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	14		E002870	
16K0321-13	PG-SMA2-4-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	15		E002870	
16K0321-15	PG-SMA2-5-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	16		E002870	
16K0321-17	PG-PJ-1-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	17		E002870	
SEL0155-CCV1	SIM PAH 250	QC		18	E006577	E002870	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161212.b

	Time	Filename	LabID	ClientId	DF								
1	0755	N1116121201.D	SEL0-TUN1		1	NO ISTDS FOUND							
2	0810	N1116121202.D	SEL0-ICV1		1	5.55	399063	8.48	209121	11.09	358220	15.75	310404	18.19	314246
3	0859	N1116121203.D	SEL0-TUN1		1	NO ISTDS FOUND							
4	0914	N1116121204.D	SEL0-ICV1		1	5.55	408833	8.47	211834	11.09	358959	15.74	318255	18.18	315570
5	1027	N1116121205.D	16K0356-01RE1		20	5.56	397904	8.47	201687	11.10	356466	15.75	310953	18.19	305599
6	1057	N1116121206.D	16K0356-02RE1		30	5.55	389138	8.47	194342	11.09	343346	15.74	289214	18.18	285795
7	1128	N1116121207.D	BEK0657-BLK1		1	5.53	891712	8.46	469612	11.08	820573	15.74	724709	18.18	747250
8	1158	N1116121208.D	BEK0657-BS1		1	5.53	452591	8.46	246096	11.08	426508	15.74	395351	18.18	402537
9	1228	N1116121209.D			1	5.53	476179	8.46	266531	11.08	462877	15.74	416008	18.18	413732
10	1258	N1116121210.D			1	5.53	464434	8.46	253304	11.08	446982	15.75	395473	18.19	422113
11	1328	N1116121211.D			1	5.53	555673	8.46	321629	11.08	577822	15.74	564273	18.18	589006
12	1358	N1116121212.D			1	5.53	394012	8.47	216444	11.08	380739	15.74	347901	18.18	361438
13	1428	N1116121213.D			1	5.53	460120	8.47	265443	11.08	467186	15.74	446613	18.18	469399
14	1459	N1116121214.D			1	5.53	404827	8.47	236727	11.09	410459	15.75	360765	18.19	361433
15	1529	N1116121215.D			1	5.53	474132	8.47	275326	11.09	477659	15.75	399692	18.19	388339
16	1559	N1116121216.D			1	5.53	316869	8.47	200672	11.09	351860	15.75	308432	18.19	278637
17	1629	N1116121217.D			1	5.53	303642	8.47	171370	11.09	306185	15.75	261108	18.19	249195
18	1659	N1116121218.D			1	5.54	295522	8.47	158246	11.09	282800	15.75	249618	18.19	240556
19	1729	N1116121219.D			1	5.53	346201	8.47	178528	11.09	324290	15.75	286906	18.19	274467
20	1759	N1116121220.D			1	5.56	133836	8.48	78375	11.10	126130	15.75	123944	18.19	124098

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161212.b

ARI Job No.: SEL0 Method: DFTPP.m Instrument: nt11.i Date: 12-DEC-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0859	N1116121203.D	SEL0155-TUN1		1	NO MANUAL INTEGRATION
0914	N1116121204.D	SEL0144-ICV1		1	NO MANUAL INTEGRATION
1027	N1116121205.D	16K0356-01RE1		20	NO MANUAL INTEGRATION
1057	N1116121206.D	16K0356-02RE1		30	NO MANUAL INTEGRATION
1128	N1116121207.D	BEK0657-BLK1		1	NO MANUAL INTEGRATION
1158	N1116121208.D	BEK0657-BS1		1	NO MANUAL INTEGRATION
1228	N1116121209.D	16K0321-01		1	2,3,5-Trimethylnaphthalene, 1-Methylphenanthrene,
1258	N1116121210.D	16K0321-03		1	2,3,5-Trimethylnaphthalene, 1-Methylphenanthrene,
1328	N1116121211.D	16K0321-05		1	2,3,5-Trimethylnaphthalene, 1-Methylphenanthrene,
1358	N1116121212.D	16K0321-06		1	2-Chloronaphthalene, 2,3,5-Trimethylnaphthalene,
1428	N1116121213.D	16K0321-07		1	2,3,5-Trimethylnaphthalene,
1459	N1116121214.D	16K0321-09		1	2,3,5-Trimethylnaphthalene,
1529	N1116121215.D	16K0321-10		1	2,3,5-Trimethylnaphthalene,
1559	N1116121216.D	16K0321-11		1	2-Chloronaphthalene, 2,3,5-Trimethylnaphthalene, Anthracene-d10,

Analytical Resources, Incorporated

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0164	Instrument:	NT11
		Calibration:	ZK00080

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
DFTPP	SEL0164-TUN1	N1116121306.D	Tissue	12/13/16 14:53
SIM PAH 250	SEL0164-ICV1	N1116121307.D	Tissue	12/13/16 15:08
PG-SMA1-2-PEMD-161122-A	16K0321-03RE1	N1116121319.D	Tissue	12/13/16 21:04
PG-SMA1-103-PEMD-161122-A	16K0321-06RE1	N1116121321.D	Tissue	12/13/16 22:00
PG-SMA2-1-PEMD-161122-A	16K0321-07RE1	N1116121322.D	Tissue	12/13/16 22:28
PG-SMA2-2-PEMD-161122-A	16K0321-09RE1	N1116121323.D	Tissue	12/13/16 22:56
PG-SMA2-102-PEMD-161122-A	16K0321-10RE1	N1116121324.D	Tissue	12/13/16 23:24
PG-PJ-1-PEMD-161122-A	16K0321-17RE1	N1116121328.D	Tissue	12/14/16 01:17
SIM PAH 250	SEL0164-CCV1	N1116121329.D	Tissue	12/14/16 01:45

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response		Analyst Initials	Date
1	DFTPP abundance and time criteria met	YES		VTS	12/16/2016
2	DDT Breakdown <20% and Peak Tailing <=2	NO		VTS	12/16/2016
	Comments: *PCP at 2.12 tailing. Dilutions run only. Does not affect data*				
3	ICV/CCV Meets %D	YES		VTS	12/16/2016
4	ICAL/ICV/CCV Q Flag - NONE required	YES		VTS	12/16/2016
5	Internal Standard areas within 50-200%	YES		VTS	12/16/2016
6	Retention times within windows and Coelution summary checked	YES		VTS	12/16/2016
7	Manual integrations include summary and before/after pictures	YES		VTS	12/16/2016
8	Project specific requirements have been met	YES		VTS	12/16/2016
9	Sample dilution factors have been correctly applied	YES		VTS	12/16/2016
10	AUTOCHECK: Blank checked for exceedence of criteria	NA	*	VTS	12/16/2016
	Comments: *No blanks were analyzed.*				
11	AUTOCHECK: Check blank spike recovery	NA	*	VTS	12/16/2016
	Comments: *NO blank spike in this sequence*				
12	AUTOCHECK: Check blank spike/blank spike duplicate RPD. If exceeded include outliers in exception report.	NA	*	VTS	12/16/2016
13	AUTOCHECK: Compounds in method designated as blank spike compounds are present	YES	*	VTS	12/16/2016
14	AUTOCHECK: Check %RPD between sample and sample duplicate	NA	*	VTS	12/16/2016
15	AUTOCHECK: Matrix spike recoveries within limits	NA	*	VTS	12/16/2016
16	AUTOCHECK: Matrix spike/matrix spike duplicate RPD within limits	NA	*	VTS	12/16/2016
17	AUTOCHECK: List of compounds listed as spiked are present	NA	*	VTS	12/16/2016
18	AUTOCHECK: Check SRM limits for exceedance	NA	*	VTS	12/16/2016
19	AUTOCHECK: Check Surrogate recoveries	NO	*	VTS	12/16/2016

Comments:
Surrogate Recovery for Benzo(e)pyrene-d12 (27.5%) was outside acceptance limits (30-160) in 16K0321-06RE1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Surrogate Recovery for 2-Methylnaphthalene-d10 (27.7%) was outside acceptance limits (30-160) in 16K0321-17RE1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

* = Indicates Automated Response from Element DataSyst

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
	Surrogate Recovery for Anthracene-d10 (127%) was outside acceptance limits (80-120) in SEL0164-ICV1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) *- Flagged value is not within established control limits.*			
20	AUTOCHECK: Checks Surrogate spike list against Analysis	NO *	VTS	12/16/2016
	Comments: *Anthracene-d10 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0657-BS1* *Benzo(e)pyrene-d12 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0657-BS1* *Fluorene-d10 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0657-BS1*			
21	Analyst checklist completed (PEER)	YES	BB	12/16/2016
22	Data is locked and Status is Analyzed (PEER)	YES	BB	12/16/2016
23	Data file, Calibration, Sequence, Batch, and Cleanup PDF's are attached (PEER)	YES	BB	12/16/2016
24	Color warnings have been addressed and (or) qualified (PEER)	YES	BB	12/16/2016
25	Qualifers have been correctly added (PEER)	YES	BB	12/16/2016
26	Checklist completed and status is peer reviewed (REVIEWER)	YES	BB	12/16/2016
27	Dilutions are linear (50-200%) and appropriate (REVIEWER)	NA	BB	12/16/2016
28	All requested samples have been reported (REVIEWER)	YES	BB	12/16/2016
29	Color warnings have been addressed, narrated and (or) qualified (REVIEWER)	YES	BB	12/16/2016
30	List of samples in this sequence that will require additional runs-verify reshot created (ANALYST)	YES	VTS	12/16/2016
	Comments: *Dilutions for samples -01, -05, -11, -13, -15 are being rerun due to internal standards <50% area.*			
31	List of samples in this sequence that are re-analysis or dilutions of samples (ANALYST)	YES	VTS	12/16/2016
	Comments: *All repoted runs are dilutions.*			
32	Additional Notes (ANALYST, PEER, and REVIEWER)	YES	VTS	12/16/2016
	Comments: *Additional field surrogate reported. No corrective action for recoveries. FIELD SURROGATES HAD LOW TO NO % RECOVERY.*			

* = Indicates Automated Response from Element DataSyst

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/16/2016 7:56:57AM

ANALYSIS SEQUENCE

SEL0164

Instrument: NT11
Element Column ID: D005437
Calibration ID: ZK00080
Tune File: 160805.U
EM Voltage: 2400

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SEL0164-TUN1	DFTPP	QC		1	E007446		
SEL0164-ICV1	SIM PAH 250	QC		2	E006577	E002870	
16K0321-03RE1	PG-SMA1-2-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	3		E002870	Added 12/15/2016 by VTS
16K0321-06RE1	PG-SMA1-103-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	4		E002870	Added 12/15/2016 by VTS
16K0321-07RE1	PG-SMA2-1-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	5		E002870	Added 12/15/2016 by VTS
16K0321-09RE1	PG-SMA2-2-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	6		E002870	Added 12/15/2016 by VTS
16K0321-10RE1	PG-SMA2-102-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	7		E002870	Added 12/15/2016 by VTS
16K0321-17RE1	PG-PJ-1-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	8		E002870	Added 12/15/2016 by VTS
SEL0164-CCV1	SIM PAH 250	QC		9	E006577	E002870	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161213.b

	Time	Filename	LabID	ClientId	DF									
1	1453	N1116121306.D	SEL0164-TUN1		1	NO ISTDS FOUND								
2	1508	N1116121307.D	SEL0164-ICV1		1	5.56	310099	8.48	178333	11.11	277290	15.77	267363	18.20	263772
3	1555	N1116121308.D	BEK0709-BLK1		1	5.56	428993	8.48	223621	11.11	409387	15.77	352623	18.21	346413
4	1623	N1116121309.D	16K0255-01		1	5.56	340595	8.48	188553	11.11	322477	15.76	294713	18.20	285630
5	1652	N1116121310.D	16K0255-02		1	5.56	350229	8.48	190111	11.11	333720	15.76	291846	18.20	291199
6	1720	N1116121311.D	16K0255-03		1	5.56	344588	8.48	187216	11.11	312801	15.77	283480	18.20	278763
7	1748	N1116121312.D	16K0255-04		1	5.56	300249	8.48	168595	11.11	289305	15.77	257863	18.20	257729
8	1816	N1116121313.D	16K0255-05		1	5.57	263222	8.48	149507	11.11	257802	15.77	233408	18.20	230115
9	1844	N1116121314.D	16K0255-06		1	5.56	435478	8.48	238689	11.11	405046	15.76	369124	18.20	360644
10	1912	N1116121315.D	16K0255-07		1	5.56	365690	8.48	207042	11.11	359351	15.77	323100	18.20	316996
11	1940	N1116121316.D	16K0255-08		1	5.57	240221	8.48	130249	11.11	230272	15.77	205912	18.20	205809
12	2008	N1116121317.D	16K0255-09		1	5.56	295835	8.48	167095	11.11	283924	15.77	256060	18.20	253124
13	2036	N1116121318.D	16K0321-01		10	5.57	220197	8.48	121604	11.12	226890	15.77	199689	18.20	194629
14	2104	N1116121319.D	16K0321-03		5	5.57	283110	8.48	160729	11.11	277818	15.77	243818	18.20	248568
15	2132	N1116121320.D	16K0321-05		5	5.57	243285	8.48	139173	11.12	244193	15.77	217834	18.20	215846
16	2200	N1116121321.D	16K0321-06		10	5.57	293444	8.48	165196	11.12	282288	15.77	254313	18.20	255954
17	2228	N1116121322.D	16K0321-07		5	5.57	248596	8.48	141683	11.12	241556	15.77	220092	18.20	214775
18	2256	N1116121323.D	16K0321-09		20	5.57	347730	8.48	204854	11.11	368963	15.77	321417	18.20	320879
19	2324	N1116121324.D	16K0321-10		20	5.57	260614	8.48	160498	11.12	289110	15.77	246954	18.20	243107
20	2352	N1116121325.D	16K0321-11		20	5.57	219548	8.48	127669	11.12	232947	15.78	204347	18.20	200263

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161213.b

	Time	Filename	LabID	ClientId	DF									
21	0020	N1116121326.D	16K0321-13		20	5.57	192865	8.48	124857	11.12	222474	15.78	197954	18.20	193176
22	0049	N1116121327.D	16K0321-15		50	5.57	167280	8.48	110737	11.13	192520	15.78	181734	18.20	173875
23	0117	N1116121328.D	16K0321-17		5	5.57	278895	8.48	155994	11.12	280070	15.77	240343	18.20	243079
24	0145	N1116121329.D			1	5.57	260941	8.48	174190	11.12	262567	15.77	276818	18.20	269601

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161213.b

ARI Job No.: SEL0 Method: DFTPP.m Instrument: nt11.i Date: 13-DEC-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1453	N1116121306.D	SEL0164-TUN1		1	NO MANUAL INTEGRATION
1508	N1116121307.D	SEL0164-ICV1		1	2-Chloronaphthalene, Carbazole, Biphenyl, Fluorene-d10,
1555	N1116121308.D	BEK0709-BLK1		1	Fluoranthene-d10,
1623	N1116121309.D	16K0255-01		1	Benzo(e)pyrene, Benzo(b)thiophene, 2-Chloronaphthalene, 2,6-Dimethylnaphthalene, 2,3,5-Trimethylnaphthalene, 1-Methylphenanthre Dibenzothiophene, Carbazole,
1652	N1116121310.D	16K0255-02		1	Benzo(b)thiophene, 2-Chloronaphthalene, 2,3,5-Trimethylnaphthalene, Dibenzothiophene, Carbazole,
1720	N1116121311.D	16K0255-03		1	Acenaphthylene, Benzo(b)thiophene, 2-Chloronaphthalene, 2,6-Dimethylnaphthalene, 2,3,5-Trimethylnaphthalene, 1-Methylphenanthre Dibenzothiophene, Carbazole,
1748	N1116121312.D	16K0255-04		1	Benzo(b)thiophene, 2-Chloronaphthalene, 2,6-Dimethylnaphthalene, 2,3,5-Trimethylnaphthalene, Dibenzothiophene, Carbazole,
1816	N1116121313.D	16K0255-05		1	Acenaphthene, Dibenzo(a,h)anthracene, Benzo(e)pyrene, Benzo(b)thiophene, 2-Chloronaphthalene, 2,6-Dimethylnaphthalene, 2,3,5-Trimethylnaphthalene, Dibenzothiophene, Carbazole, Biphenyl, Fluoranthene-d10,
1844	N1116121314.D	16K0255-06		1	Acenaphthene, Carbazole,
1912	N1116121315.D	16K0255-07		1	Acenaphthylene, Acenaphthene, Benzo(b)thiophene, 2-Chloronaphthalene, 2,6-Dimethylnaphthalene, 2,3,5-Trimethylnaphthalene, Dibenzothiophene, Carbazole, Fluoranthene-d10,
1940	N1116121316.D	16K0255-08		1	Acenaphthene, Benzo(e)pyrene, Benzo(b)thiophene, 2-Chloronaphthalene, 2,6-Dimethylnaphthalene, 2,3,5-Trimethylnaphthalene, 1-Methylphenanthrene, Dibenzothiophene, Carbazole, Biphenyl, Fluoranthene-d10,
2008	N1116121317.D	16K0255-09		1	Acenaphthylene, Dibenzofuran, Benzo(k)fluoranthene, Benzo(e)pyrene, Benzo(b)thiophene, 2-Chloronaphthalene, 2,6-Dimethylnaphthalene, 2,3,5-Trimethylnaphthalene, 1-Methylphenanthrene, Dibenzothiophene, Biphenyl,
2036	N1116121318.D	16K0321-01		10	Chrysene, Benzo(k)fluoranthene, Benzo(e)pyrene, 2,3,5-Trimethylnaphthalene,
2104	N1116121319.D	16K0321-03		5	Benzo(k)fluoranthene, Benzo(e)pyrene, 2,3,5-Trimethylnaphthalene,
2132	N1116121320.D	16K0321-05		5	Chrysene, Benzo(k)fluoranthene, Benzo(e)pyrene, 2,3,5-Trimethylnaphthalene,
2200	N1116121321.D	16K0321-06		10	2-Methylnaphthalene, Phenanthrene, Anthracene, Chrysene, Benzo(k)fluoranthene, 2,3,5-Trimethylnaphthalene,

			Benzo(e)pyrene-d12,
2228	N1116121322.D	16K0321-07	5 Anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(e)pyrene, 2,3,5-Trimethylnaphthalene, Dibenzothiophene,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161213.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2256	N1116121323.D	16K0321-09		20	Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, 2,3,5-Trimethylnaphthalene,
2324	N1116121324.D	16K0321-10		20	Anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(e)pyrene, 2,3,5-Trimethylnaphthalene,
2352	N1116121325.D	16K0321-11		20	Phenanthrene, Anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(j)fluoranthene, 2,3,5-Trimethylnaphthalene, Dibenzothiophene,
0020	N1116121326.D	16K0321-13		20	Phenanthrene, Anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(j)fluoranthene, 2,6-Dimethylnaphthalene,
0049	N1116121327.D	16K0321-15		50	Phenanthrene, Anthracene, Chrysene,
0117	N1116121328.D	16K0321-17		5	Phenanthrene, Anthracene, Chrysene, 1-Methylnaphthalene, 2,3,5-Trimethylnaphthalene, 1-Methylphenanthrene,
0145	N1116121329.D			1	2-Chloronaphthalene, 1-Methylphenanthrene, Carbazole, Biphenyl, Fluorene-d10,

Analytical Resources, Incorporated

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0234	Instrument:	NT11
		Calibration:	ZK00080

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
DFTPP	SEL0234-TUN1	N1116121601.D	Tissue	12/16/16 09:31
SIM PAH 250	SEL0234-ICV1	N1116121602.D	Tissue	12/16/16 09:46
Low Cal Check	SEL0234-LCV1	N1116121603.D	Tissue	12/16/16 10:32
PG-SMA1-1-PEMD-161122-A	16K0321-01RE1	N1116121604.D	Tissue	12/16/16 11:03
PG-SMA1-3-PEMD-161122-A	16K0321-05RE1	N1116121605.D	Tissue	12/16/16 11:34
PG-SMA2-3-PEMD-161122-A	16K0321-11RE1	N1116121606.D	Tissue	12/16/16 12:06
PG-SMA2-4-PEMD-161122-A	16K0321-13RE1	N1116121607.D	Tissue	12/16/16 12:37
PG-SMA2-5-PEMD-161122-A	16K0321-15RE1	N1116121608.D	Tissue	12/16/16 13:08
SIM PAH 250	SEL0234-CCV1	N1116121610X.D	Tissue	12/16/16 13:50

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response		Analyst Initials	Date
1	DFTPP abundance and time criteria met	YES		VTS	12/17/2016
2	DDT Breakdown <20% and Peak Tailing <=2	YES		VTS	12/17/2016
3	ICV/CCV Meets %D	YES		VTS	12/17/2016
4	ICAL/ICV/CCV Q Flag - NONE required	YES		VTS	12/17/2016
5	Internal Standard areas within 50-200%	YES		VTS	12/17/2016
6	Retention times within windows and Coelution summary checked	YES		VTS	12/17/2016
7	Manual integrations include summary and before/after pictures	YES		VTS	12/17/2016
8	Project specific requirements have been met	YES		VTS	12/17/2016
9	Sample dilution factors have been correctly applied	YES		VTS	12/17/2016
10	AUTOCHECK: Blank checked for exceedence of criteria	NR	*	VTS	12/17/2016
	Comments: *No blanks were analyzed.*				
11	AUTOCHECK: Check blank spike recovery	NO	*	VTS	12/17/2016
	Comments: *LCS Recovery for Perylene (28.2%) was outside acceptance limits (30-160) in BEK0657-BS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)*				
12	AUTOCHECK: Check blank spike/blank spike duplicate RPD. If exceeded include outliers in exception report.	NA	*	VTS	12/17/2016
13	AUTOCHECK: Compounds in method designated as blank spike compounds are present	YES	*	VTS	12/17/2016
14	AUTOCHECK: Check %RPD between sample and sample duplicate	NA	*	VTS	12/17/2016
15	AUTOCHECK: Matrix spike recoveries within limits	NA	*	VTS	12/17/2016
16	AUTOCHECK: Matrix spike/matrix spike duplicate RPD within limits	NA	*	VTS	12/17/2016
17	AUTOCHECK: List of compounds listed as spiked are present	NA	*	VTS	12/17/2016
18	AUTOCHECK: Check SRM limits for exceedance	NA	*	VTS	12/17/2016
19	AUTOCHECK: Check Surrogate recoveries	NO	*	VTS	12/17/2016

Comments:
Surrogate Recovery for Dibenzo[a,h]anthracene-d14 (23.2%) was outside acceptance limits (30-160) in 16K0321-01RE1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.
- Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)

Surrogate Recovery for Anthracene-d10 (2360%) was outside acceptance limits (30-160) in 16K0321-13RE1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)

* = Indicates Automated Response from Element DataSyst

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response		Analyst Initials	Date
	- This surrogate not reported due to chromatographic interference				
	Surrogate Recovery for Anthracene-d10 (5900%) was outside acceptance limits (30-160) in 16K0321-15RE1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) *- This surrogate not reported due to chromatographic interference*				
	Surrogate Recovery for Dibenzo[a,h]anthracene-d14 (23.6%) was outside acceptance limits (30-160) in 16K0321-15RE1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) *- This surrogate not reported due to chromatographic interference*				
	Surrogate Recovery for Dibenzo[a,h]anthracene-d14 (64.8%) was outside acceptance limits (80-120) in SEL0234-ICV1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) *- Flagged value is not within established control limits.*				
	Surrogate Recovery for Fluoranthene-d10 (125%) was outside acceptance limits (80-120) in SEL0234-ICV1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) *- Flagged value is not within established control limits.*				
20	AUTOCHECK: Checks Surrogate spike list against Analysis	NO	*	VTS	12/17/2016
	Comments: *Anthracene-d10 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0657-BS1*				
	Benzo(e)pyrene-d12 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0657-BS1				
	Fluorene-d10 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0657-BS1				
21	Analyst checklist completed (PEER)				12/30/1899
22	Data is locked and Status is Analyzed (PEER)				12/30/1899
23	Data file, Calibration, Sequence, Batch, and Cleanup PDF's are attached (PEER)				12/30/1899
24	Color warnings have been addressed and (or) qualified (PEER)				12/30/1899
25	Qualifers have been correctly added (PEER)				12/30/1899
26	Checklist completed and status is peer reviewed (REVIEWER)				12/30/1899
27	Dilutions are linear (50-200%) and appropriate (REVIEWER)				12/30/1899
28	All requested samples have been reported (REVIEWER)				12/30/1899
29	Color warnings have been addressed, narrated and (or) qualified (REVIEWER)				12/30/1899
30	List of samples in this sequence that will require additional runs-verify reshot created (ANALYST)	NA		VTS	12/17/2016

* = Indicates Automated Response from Element DataSyst

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
31	List of samples in this sequence that are re-analysis or dilutions of samples (ANALYST) Comments: *Samples -01, -05, -11, -13, and -15 are all dilutions.*	YES	VTS	12/17/2016
32	Additional Notes (ANALYST, PEER, and REVIEWER) Comments: *CCV is also being used for a initial calibration for the next queue. (file was renamed(*	YES	VTS	12/17/2016

* = Indicates Automated Response from Element DataSyst

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/16/2016 2:53:52PM

ANALYSIS SEQUENCE

SEL0234

Instrument: NT11
Calibration ID: ZK00080
EM Voltage: 2400
Element Column ID: E006480
Tune File: 161216.U

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SEL0234-TUN1	DFTPP	QC		1	E007446		
SEL0234-ICV1	SIM PAH 250	QC		2	E006577	E002870	
SEL0234-LCV1	Low Cal Check	QC		3	E004259	E002870	
16K0321-01RE1	PG-SMA1-1-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	4		E002870	Added 12/15/2016 by VTS
16K0321-05RE1	PG-SMA1-3-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	5		E002870	Added 12/15/2016 by VTS
16K0321-11RE1	PG-SMA2-3-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	6		E002870	Added 12/15/2016 by VTS
16K0321-13RE1	PG-SMA2-4-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	7		E002870	Added 12/15/2016 by VTS
16K0321-15RE1	PG-SMA2-5-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	8		E002870	Added 12/15/2016 by VTS
SEL0234-CCV1	SIM PAH 250	QC		9	E006577	E002870	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161216.b

	Time	Filename	LabID	ClientId	DF	
1	0931	N1116121601.D	SELXXXX-TUN1		1	|NO ISTDS FOUND||
2	0946	N1116121602.D	SELXXXX-ICV1		1	| 7.23 298197||10.26 181189||12.96 356946||17.71 407651||20.94 370445|
3	1032	N1116121603.D	SELXXXX-LCV1		1	| 7.24 279654||10.26 169743||12.96 340908||17.71 376384||20.95 287131|
4	1103	N1116121604.D			1	| 7.23 273849||10.26 166043||12.96 305534||17.71 324188||20.94 309708|
5	1134	N1116121605.D			1	| 7.23 304081||10.26 181564||12.96 340274||17.71 360048||20.94 358361|
6	1206	N1116121606.D			1	| 7.23 305217||10.26 193760||12.96 361741||17.71 399507||20.94 375409|
7	1237	N1116121607.D			1	| 7.24 312941||10.26 196390||12.96 364428||17.71 393138||20.94 378976|
8	1308	N1116121608.D			1	| 7.23 296784||10.26 180957||12.96 360222||17.71 402474||20.94 379871|
9	1334	N1116121609.D	SELXXXX-TUN1		1	|NO ISTDS FOUND||
10	1350	N1116121610.D	SEL0234-CCV1		1	| 7.23 341640||10.26 209310||12.96 404977||17.71 465046||20.94 454694|

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161216.b

ARI Job No.: SELX Method: DFTPP.m Instrument: nt11.i Date: 16-DEC-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0931	N1116121601.D	SELXXXX-TUN1		1	dftpp,
0946	N1116121602.D	SELXXXX-ICV1		1	NO MANUAL INTEGRATION
1032	N1116121603.D	SELXXXX-LCV1		1	2,3,5-Trimethylnaphthalene, Fluorene-d10,
1103	N1116121604.D			1	Benzo(e)pyrene,
1134	N1116121605.D			1	NO MANUAL INTEGRATION
1206	N1116121606.D			1	2,3,5-Trimethylnaphthalene,
1237	N1116121607.D			1	NO MANUAL INTEGRATION
1308	N1116121608.D			1	NO MANUAL INTEGRATION
1334	N1116121609.D	SELXXXX-TUN1		1	NO MANUAL INTEGRATION
1350	N1116121610.D	SEL0234-CCV1		1	NO MANUAL INTEGRATION

Analytical Resources, Incorporated

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0249	Instrument:	NT11
		Calibration:	ZL00052

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
DFTPP	SEL0249-TUN1	N1116121609.D	Tissue	12/16/16 13:34
Cal Standard	SEL0249-CAL4	N1116121610.D	Tissue	12/16/16 13:50
Cal Standard	SEL0249-CAL6	N1116121611.D	Tissue	12/16/16 14:28
Cal Standard	SEL0249-CAL1	N1116121612.D	Tissue	12/16/16 14:59
Cal Standard	SEL0249-CAL5	N1116121613.D	Tissue	12/16/16 15:30
Cal Standard	SEL0249-CAL2	N1116121614.D	Tissue	12/16/16 16:01
Cal Standard	SEL0249-CAL3	N1116121615.D	Tissue	12/16/16 16:32
SIMPNA SCV	SEL0249-SCV1	N1116121616.D	Tissue	12/16/16 17:04
ZZZZZ	BEL0032-BLK1	N1116121617.D	Water	12/16/16 17:35
ZZZZZ	BEL0032-BS1	N1116121618.D	Water	12/16/16 18:06
ZZZZZ	BEL0032-BSD1	N1116121619.D	Water	12/16/16 18:36
ZZZZZ	16K0376-01	N1116121620.D	Water	12/16/16 19:08
ZZZZZ	16K0376-02	N1116121621.D	Water	12/16/16 19:38
ZZZZZ	16K0376-03	N1116121622.D	Water	12/16/16 20:09
ZZZZZ	16K0376-04	N1116121623.D	Water	12/16/16 20:40
ZZZZZ	16K0376-05	N1116121624.D	Water	12/16/16 21:11
ZZZZZ	16K0376-06	N1116121625.D	Water	12/16/16 21:42
ZZZZZ	16K0376-07	N1116121626.D	Water	12/16/16 22:13
ZZZZZ	16K0376-22	N1116121627.D	Water	12/16/16 22:44
ZZZZZ	16K0376-23	N1116121628.D	Water	12/16/16 23:15
ZZZZZ	16K0376-24	N1116121629.D	Water	12/16/16 23:46
ZZZZZ	16K0376-25	N1116121630.D	Water	12/17/16 00:17
ZZZZZ	16K0376-26	N1116121631.D	Water	12/17/16 00:47
ZZZZZ	16K0376-27	N1116121632.D	Water	12/17/16 01:18
SIM PAH 250	SEL0249-CCV1	N1116121634.D	Tissue	12/17/16 02:20

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/17/2016 9:15:12AM

ANALYSIS SEQUENCE

SEL0249

Instrument: NT11 Element Column ID: E006480
Calibration ID: ZL00052 Tune File: 161216.U
EM Voltage: 2400

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SEL0249-TUN1	DFTPP	QC		1	E007446		
SEL0249-CAL1	Cal Standard	QC		2	E006574	E002870	
SEL0249-CAL2	Cal Standard	QC		3	E006575	E002870	
SEL0249-CAL3	Cal Standard	QC		4	E006576	E002870	
SEL0249-CAL4	Cal Standard	QC		5	E006577	E002870	
SEL0249-CAL5	Cal Standard	QC		6	E006578	E002870	
SEL0249-CAL6	Cal Standard	QC		7	E006579	E002870	
SEL0249-SCV1	SIMPNA SCV	QC		8	E007699	E002870	
BEL0032-BLK1	Blank	QC		9		E002870	
BEL0032-BS1	LCS	QC		10		E002870	
BEL0032-BSD1	LCS Dup	QC		11		E002870	
16K0376-01	MW-44	SIM PAH Low (0.01 ug/L - 0.	N 01	12		E002870	
16K0376-02	MW-51	SIM PAH Low (0.01 ug/L - 0.	N 01	13		E002870	
16K0376-03	MW-101	SIM PAH Low (0.01 ug/L - 0.	BD 01	14		E002870	
16K0376-04	MW-102	SIM PAH Low (0.01 ug/L - 0.	O 01	15		E002870	
16K0376-05	MW-103	SIM PAH Low (0.01 ug/L - 0.	M 01	16		E002870	
16K0376-06	MW-50	SIM PAH Low (0.01 ug/L - 0.	N 01	17		E002870	
16K0376-07	MW-43	SIM PAH Low (0.01 ug/L - 0.	N 01	18		E002870	
16K0376-22	MW-44 Centrifuge Sample	SIM PAH Low (0.01 ug/L - 0.	B 01	19		E002870	
16K0376-23	MW-51 Centrifuge Sample	SIM PAH Low (0.01 ug/L - 0.	B 01	20		E002870	
16K0376-24	MW-101 Centrifuge Sample	SIM PAH Low (0.01 ug/L - 0.	M 01	21		E002870	
16K0376-25	MW-102 Centrifuge Sample	SIM PAH Low (0.01 ug/L - 0.	B 01	22		E002870	

ANALYSIS SEQUENCE

SEL0249

Instrument: NT11
Calibration ID: ZL00052
EM Voltage: 2400
Element Column ID: E006480
Tune File: 161216.U

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
16K0376-26	MW-103 Centrifuge Sample	SIM PAH Low (0.01 ug/L - 0.	B 01	23		E002870	
16K0376-27	MW-50 Centrifuge Sample	SIM PAH Low (0.01 ug/L - 0.	B 01	24		E002870	
SEL0249-CCV1	SIM PAH 250	QC		25	E006577	E002870	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161216A.b

	Time	Filename	LabID	ClientId	DF									
1	1334	N1116121609.D	SEL0249-TUN1		1	|NO ISTDS FOUND||								
2	1350	N1116121610.D	SEL0249-CAL4		1	| 7.23	341640||10.26	209310||12.96	404977||17.71	465046||20.94	454694|			
3	1428	N1116121611.D	SEL0249-CAL6		1	| 7.23	315917||10.26	194669||12.96	382205||17.71	422654||20.94	413016|			
4	1459	N1116121612.D	SEL0249-CAL1		1	| 7.24	291601||10.26	174671||12.96	338463||17.71	394222||20.94	367447|			
5	1530	N1116121613.D	SEL0249-CAL5		1	| 7.23	291734||10.26	178820||12.96	346945||17.71	404017||20.94	398693|			
6	1601	N1116121614.D	SEL0249-CAL2		1	| 7.23	289768||10.26	169981||12.96	340720||17.71	397265||20.94	375114|			
7	1632	N1116121615.D	SEL0249-CAL3		1	| 7.23	292257||10.26	172375||12.95	340613||17.71	388404||20.94	374038|			
8	1704	N1116121616.D	SEL0249-SCV1		1	| 7.24	270210||10.26	162809||12.95	315262||17.71	378953||20.94	372273|			
9	1735	N1116121617.D	BEL0032-BLK1		1	| 7.23	278753||10.26	161646||12.96	321298||17.71	379848||20.94	346710|			
10	1806	N1116121618.D	BEL0032-BS1		1	| 7.23	263734||10.26	158152||12.95	311199||17.71	368104||20.94	362071|			
11	1836	N1116121619.D	BEL0032-BSD1		1	| 7.23	275877||10.26	162948||12.95	322052||17.71	385689||20.94	366124|			
12	1908	N1116121620.D	16K0376-01		1	| 7.23	290059||10.26	173304||12.95	349577||17.71	384009||20.94	356017|			
13	1938	N1116121621.D	16K0376-02		1	| 7.23	298082||10.26	173428||12.95	343177||17.71	373582||20.94	362960|			
14	2009	N1116121622.D	16K0376-03		1	| 7.24	315204||10.26	189626||12.95	367713||17.71	406387||20.94	385640|			
15	2040	N1116121623.D	16K0376-04		1	| 7.23	306015||10.26	187765||12.95	350677||17.71	403924||20.94	401740|			
16	2111	N1116121624.D	16K0376-05		1	| 7.23	294336||10.26	173111||12.96	333340||17.71	380438||20.94	364911|			
17	2142	N1116121625.D	16K0376-06		1	| 7.23	286258||10.26	167442||12.95	335265||17.71	389170||20.94	359301|			
18	2213	N1116121626.D	16K0376-07		1	| 7.23	286719||10.26	165414||12.96	326757||17.71	359967||20.94	365244|			
19	2244	N1116121627.D	16K0376-22		1	| 7.23	309701||10.26	182948||12.95	369864||17.71	411700||20.94	381521|			
20	2315	N1116121628.D	16K0376-23		1	| 7.23	353703||10.26	208191||12.95	419812||17.71	435467||20.94	406070|			

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161216A.b

	Time	Filename	LabID	ClientId	DF									
21	2346	N1116121629.D	16K0376-24		1	7.23	313823	10.26	182529	12.96	362154	17.71	407691	20.94	377544
22	0017	N1116121630.D	16K0376-25		1	7.24	309304	10.26	183420	12.95	346568	17.71	388207	20.94	394258
23	0047	N1116121631.D	16K0376-26		1	7.23	271068	10.26	157386	12.95	302682	17.71	366478	20.94	350268
24	0118	N1116121632.D	16K0376-27		1	7.23	316237	10.26	182670	12.96	365865	17.71	407267	20.94	369878
25	0149	N1116121633.D	16K0376-28		1	7.23	325010	10.26	190831	12.96	379346	17.71	418189	20.94	387629
26	0220	N1116121634.D	SEL0249-CCV1		1	7.24	338686	10.26	200862	12.96	393816	17.71	467492	20.94	442748

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161216A.b

ARI Job No.: SEL0 Method: DFTPP.m Instrument: nt11.i Date: 16-DEC-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1334	N1116121609.D	SEL0249-TUN1		1	NO MANUAL INTEGRATION
1350	N1116121610.D	SEL0249-CAL4		1	NO MANUAL INTEGRATION
1428	N1116121611.D	SEL0249-CAL6		1	NO MANUAL INTEGRATION
1459	N1116121612.D	SEL0249-CAL1		1	2,3,5-Trimethylnaphthalene, Fluorene-d10,
1530	N1116121613.D	SEL0249-CAL5		1	NO MANUAL INTEGRATION
1601	N1116121614.D	SEL0249-CAL2		1	NO MANUAL INTEGRATION
1632	N1116121615.D	SEL0249-CAL3		1	NO MANUAL INTEGRATION
1704	N1116121616.D	SEL0249-SCV1		1	NO MANUAL INTEGRATION
1735	N1116121617.D	BEL0032-BLK1		1	NO MANUAL INTEGRATION
1806	N1116121618.D	BEL0032-BS1		1	NO MANUAL INTEGRATION
1836	N1116121619.D	BEL0032-BSD1		1	NO MANUAL INTEGRATION
1908	N1116121620.D	16K0376-01		1	NO MANUAL INTEGRATION
1938	N1116121621.D	16K0376-02		1	NO MANUAL INTEGRATION
2009	N1116121622.D	16K0376-03		1	NO MANUAL INTEGRATION
2040	N1116121623.D	16K0376-04		1	Naphthalene,
2111	N1116121624.D	16K0376-05		1	NO MANUAL INTEGRATION
2142	N1116121625.D	16K0376-06		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161216A.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2213	N1116121626.D	16K0376-07		1	NO MANUAL INTEGRATION
2244	N1116121627.D	16K0376-22		1	NO MANUAL INTEGRATION
2315	N1116121628.D	16K0376-23		1	NO MANUAL INTEGRATION
2346	N1116121629.D	16K0376-24		1	NO MANUAL INTEGRATION
0017	N1116121630.D	16K0376-25		1	Naphthalene,
0047	N1116121631.D	16K0376-26		1	NO MANUAL INTEGRATION
0118	N1116121632.D	16K0376-27		1	NO MANUAL INTEGRATION
0149	N1116121633.D	16K0376-28		1	NO MANUAL INTEGRATION
0220	N1116121634.D	SEL0249-CCV1		1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161216A.b

Instrument: nt11.i Date: 16-DEC-2016 Method: 20161216A.b\lowsim.m

INITIAL CAL: 16-DEC-2016

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: N1116121610.D 16-DEC-2016 13:50

Compound	%D
NO Q-FLAGS	

Analytical Resources, Incorporated

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0255	Instrument:	NT11
		Calibration:	ZL00052

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
DFTPP	SEL0255-TUN1	N1116121701.D	Water	12/17/16 12:24
SIM PAH 250	SEL0255-ICV1	N1116121702.D	Water	12/17/16 12:40
ZZZZZ	16K0376-28	N1116121703.D	Water	12/17/16 13:11
Blank	BEK0658-BLK1	N1116121704.D	Tissue	12/17/16 13:42
LCS	BEK0658-BS1	N1116121705.D	Tissue	12/17/16 14:13
PG-GP-1-PEMD-161122-A	16K0321-19	N1116121706.D	Tissue	12/17/16 14:44
PG-WS-1-PEMD-161122-A	16K0321-21	N1116121707.D	Tissue	12/17/16 15:15
PG-FB-SMA1-PEMD-161122	16K0321-23	N1116121708.D	Tissue	12/17/16 15:46
PG-FB-SMA2-PEMD-161122	16K0321-24	N1116121709.D	Tissue	12/17/16 16:17
PG-TB-PEMD-161122	16K0321-25	N1116121710.D	Tissue	12/17/16 16:48
ZZZZZ	BEK0709-BLK1	N1116121711.D	Solid	12/17/16 17:19
ZZZZZ	BEK0709-BS1	BEK0709-BS1.D	Solid	12/17/16 17:49
ZZZZZ	16K0255-01	N1116121712.D	Solid	12/17/16 17:49
ZZZZZ	16K0255-02	N1116121713.D	Solid	12/17/16 18:20
ZZZZZ	16K0255-03	N1116121714.D	Solid	12/17/16 18:51
ZZZZZ	16K0255-04	N1116121715.D	Solid	12/17/16 19:22
ZZZZZ	16K0255-05	N1116121716.D	Solid	12/17/16 19:53
ZZZZZ	16K0255-06	N1116121717.D	Solid	12/17/16 20:24
ZZZZZ	16K0255-07	N1116121718.D	Solid	12/17/16 20:55
ZZZZZ	16K0255-08	N1116121719.D	Solid	12/17/16 21:25
ZZZZZ	BEK0709-BS2	BEK0709-BS2.D	Solid	12/17/16 21:56
ZZZZZ	16K0255-09	N1116121720.D	Solid	12/17/16 21:56
SIM PAH 250	SEL0255-CCV1	N1116121721.D	Water	12/17/16 22:27

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response		Analyst Initials	Date
1	DFTPP abundance and time criteria met	YES		VTS	12/17/2016
2	DDT Breakdown <20% and Peak Tailing <=2	NO		VTS	12/17/2016
	Comments: *Benzidine tailing at 2.83. Does not affect data*				
3	ICV/CCV Meets %D	YES		VTS	12/17/2016
4	ICAL/ICV/CCV Q Flag - NONE required	YES		VTS	12/17/2016
5	Internal Standard areas within 50-200%	YES		VTS	12/17/2016
6	Retention times within windows and Coelution summary checked	YES		VTS	12/17/2016
7	Manual integrations include summary and before/after pictures	YES		VTS	12/17/2016
8	Project specific requirements have been met	YES		VTS	12/17/2016
9	Sample dilution factors have been correctly applied	YES		VTS	12/17/2016
10	AUTOCHECK: Blank checked for exceedence of criteria	NO	*	BB	12/20/2016
	Comments: *QC Sample BEK0658-BLK1 failed criteria for Naphthalene in 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg).* *MDL = 1.13 ug/kg* *MRL = 1.35 ug/kg* *Result = 1.64 ug/kg* *Criterion = 1 x MRL*				
11	AUTOCHECK: Check blank spike recovery	NO	*	BB	12/20/2016
	Comments: *LCS Recovery for Perylene (25.6%) was outside acceptance limits (30-160) in BEK0658-BS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)* *LCS Recovery for Carbazole (18.8%) was outside acceptance limits (30-160) in BEK0709-BS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)* *LCS Recovery for Naphthalene (177%) was outside acceptance limits (30-160) in BEK0709-BS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)* *LCS Recovery for Carbazole (5.63%) was outside acceptance limits (30-160) in BEK0709-BS2 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)*				
12	AUTOCHECK: Check blank spike/blank spike duplicate RPD. If exceeded include outliers in exception report.	NA	*	BB	12/20/2016
13	AUTOCHECK: Compounds in method designated as blank spike compounds are present	YES	*	BB	12/20/2016
14	AUTOCHECK: Check %RPD between sample and sample duplicate	NA	*	BB	12/20/2016
15	AUTOCHECK: Matrix spike recoveries within limits	NA	*	BB	12/20/2016

* = Indicates Automated Response from Element DataSyst

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response		Analyst Initials	Date
16	AUTOCHECK: Matrix spike/matrix spike duplicate RPD within limits	NA	*	BB	12/20/2016
17	AUTOCHECK: List of compounds listed as spiked are present	NA	*	BB	12/20/2016
18	AUTOCHECK: Check SRM limits for exceedance	NA	*	BB	12/20/2016
19	AUTOCHECK: Check Surrogate recoveries	NO	*	BB	12/20/2016

Comments:
Surrogate Recovery for Anthracene-d10 (13.2%) was outside acceptance limits (30-160) in 16K0321-19 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Surrogate Recovery for Anthracene-d10 (14.1%) was outside acceptance limits (30-160) in 16K0321-21 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

20	AUTOCHECK: Checks Surrogate spike list against Analysis	NO	*	BB	12/20/2016

Comments:
Anthracene-d10 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0658-BLK1
- Flagged value is not within established control limits.

Benzo(e)pyrene-d12 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0658-BLK1
- Flagged value is not within established control limits.

Fluorene-d10 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0658-BLK1
- Flagged value is not within established control limits.

Anthracene-d10 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0658-BS1

Benzo(e)pyrene-d12 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0658-BS1

Fluorene-d10 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0658-BS1

21	Analyst checklist completed (PEER)	YES		BB	12/20/2016
22	Data is locked and Status is Analyzed (PEER)	YES		BB	12/20/2016
23	Data file, Calibration, Sequence, Batch, and Cleanup PDF's are attached (PEER)	YES		BB	12/20/2016
24	Color warnings have been addressed and (or) qualified (PEER)	YES		BB	12/20/2016
25	Qualifers have been correctly added (PEER)	YES		BB	12/20/2016

* = Indicates Automated Response from Element DataSyst

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
26	Checklist completed and status is peer reviewed (REVIEWER)	YES	BB	12/20/2016
27	Dilutions are linear (50-200%) and appropriate (REVIEWER)	NA	BB	12/20/2016
28	All requested samples have been reported (REVIEWER)	YES	BB	12/20/2016
29	Color warnings have been addressed, narrated and (or) qualified (REVIEWER)	YES	BB	12/20/2016
30	List of samples in this sequence that will require additional runs-verify reshot created (ANALYST)	YES	VTS	12/20/2016
	Comments: *Samples 16K0321-19 and -21 will require a dilution.*			
31	List of samples in this sequence that are re-analysis or dilutions of samples (ANALYST)	NA	VTS	12/20/2016
32	Additional Notes (ANALYST, PEER, and REVIEWER)	YES	VTS	12/17/2016

Comments:
Partial upload to complete workorder 16K0376. Sequence is in progress 12/17. Sample -28 was extracted out of holding. Sent PM an E-mail 12/17.
Added total solids to MDL study (100). Set Carbazole and 2-chloronaphthalene to reportable for MDL study.BEK0709 BS1 and BS2 replicates of MDL1 and MDL9 used to populate the spiking basis (No PDF for this data BS1 and BS2)

* = Indicates Automated Response from Element DataSyst

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/20/2016 8:45:45AM

ANALYSIS SEQUENCE

SEL0255

Instrument: NT11 Element Column ID: E006480
Calibration ID: ZL00052 Tune File: 161216.U
EM Voltage: 2400

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SEL0255-TUN1	DFTPP	QC		1	E007446		
SEL0255-ICV1	SIM PAH 250	QC		2	E006577	E002870	
16K0376-28	MW-43 Centrifuge Sample	SIM PAH Low (0.01 ug/L - 0.	B 01	3		E002870	
BEK0658-BLK1	Blank	QC		4		E002870	
BEK0658-BS1	LCS	QC		5		E002870	
16K0321-19	PG-GP-1-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	6		E002870	
16K0321-21	PG-WS-1-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	7		E002870	
16K0321-23	PG-FB-SMA1-PEMD-161122	SIM PAH Low (0.01 ug/L - 0.	A 01	8		E002870	
16K0321-24	PG-FB-SMA2-PEMD-161122	SIM PAH Low (0.01 ug/L - 0.	A 01	9		E002870	
16K0321-25	PG-TB-PEMD-161122	SIM PAH Low (0.01 ug/L - 0.	A 01	10		E002870	
BEK0709-BLK1	Blank	QC		11		E002870	
BEK0709-BS1	LCS	QC		12		E002870	
BEK0709-BS2	LCS	QC		13		E002870	
16K0255-01	Sample 1	SIM PAH Low (0.01 ug/L - 0.	A 01	14		E002870	
16K0255-02	Sample 2	SIM PAH Low (0.01 ug/L - 0.	A 01	15		E002870	
16K0255-03	Sample 3	SIM PAH Low (0.01 ug/L - 0.	A 01	16		E002870	
16K0255-04	Sample 4	SIM PAH Low (0.01 ug/L - 0.	A 01	17		E002870	
16K0255-05	Sample 5	SIM PAH Low (0.01 ug/L - 0.	A 01	18		E002870	
16K0255-06	Sample 6	SIM PAH Low (0.01 ug/L - 0.	A 01	19		E002870	
16K0255-07	Sample 7	SIM PAH Low (0.01 ug/L - 0.	A 01	20		E002870	
16K0255-08	Sample 8	SIM PAH Low (0.01 ug/L - 0.	A 01	21		E002870	
16K0255-09	Verification	SIM PAH Low (0.01 ug/L - 0.	A 01	22		E002870	

Printed: 12/20/2016 8:45:45AM

ANALYSIS SEQUENCE

SEL0255

Instrument: NT11
Element Column ID: E006480
Calibration ID: ZL00052
Tune File: 161216.U
EM Voltage: 2400

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SEL0255-CCV1	SIM PAH 250	QC		23	E006577	E002870	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161217.b

	Time	Filename	LabID	ClientId	DF									
1	1224	N1116121701.D	SEL0255-TUN1		1	NO ISTDS FOUND								
2	1240	N1116121702.D	SEL0255-ICV1		1	7.23	268525	10.26	154839	12.96	304285	17.71	359818	20.94	346172
3	1311	N1116121703.D			1	7.23	253776	10.26	144007	12.96	284155	17.71	333732	20.94	307153
4	1342	N1116121704.D	BEK0658-BLK1		1	7.21	510932	10.24	280556	12.95	544758	17.71	556252	20.95	546798
5	1413	N1116121705.D	BEK0658-BS1		1	7.21	478888	10.24	297598	12.95	577524	17.71	559121	20.94	556541
6	1444	N1116121706.D	16K0321-19		1	7.21	478786	10.24	290067	12.95	594912	17.71	550024	20.95	545617
7	1515	N1116121707.D	16K0321-21		1	7.22	437732	10.25	271251	12.95	531000	17.71	501826	20.95	495091
8	1546	N1116121708.D	16K0321-23		1	7.21	353447	10.25	217745	12.95	468182	17.71	425443	20.95	406802
9	1617	N1116121709.D	16K0321-24		1	7.21	373113	10.25	224239	12.95	481831	17.71	421388	20.95	402590
10	1648	N1116121710.D	16K0321-25		1	7.21	374048	10.25	227260	12.95	486646	17.71	429059	20.95	394062
11	1719	N1116121711.D	BEK0709-BLK1		1	7.23	378934	10.26	246915	12.96	499669	17.71	486266	20.94	435344
12	1749	N1116121712.D	16K0255-01		1	7.23	343778	10.26	218189	12.96	448244	17.71	445469	20.95	413811
13	1820	N1116121713.D	16K0255-02		1	7.23	361328	10.26	235540	12.96	494407	17.71	509181	20.94	480784
14	1851	N1116121714.D	16K0255-03		1	7.23	366421	10.26	224987	12.96	461283	17.71	480282	20.95	452671
15	1922	N1116121715.D	16K0255-04		1	7.23	359811	10.26	220906	12.96	450454	17.71	456318	20.95	432347
16	1953	N1116121716.D	16K0255-05		1	7.23	361922	10.26	222263	12.96	461637	17.71	481430	20.94	442420
17	2024	N1116121717.D	16K0255-06		1	7.23	364055	10.26	223880	12.96	449209	17.71	466872	20.95	434227
18	2055	N1116121718.D	16K0255-07		1	7.23	376976	10.26	231851	12.96	460707	17.71	478870	20.95	449200
19	2125	N1116121719.D	16K0255-08		1	7.23	380701	10.26	231005	12.96	471445	17.71	480252	20.95	440078
20	2156	N1116121720.D	16K0255-09		1	7.23	374148	10.26	228465	12.96	459286	17.71	470537	20.95	441702

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161217.b

	Time	Filename	LabID	ClientId	DF									
21	2227	N1116121721.D	SEL0255-CCV1		1	7.24	309277	10.26	189031	12.96	388779	17.71	445498	20.95	389673

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161217.b

ARI Job No.: SEL0 Method: DFTPP.m Instrument: nt11.i Date: 17-DEC-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1224	N1116121701.D	SEL0255-TUN1		1	NO MANUAL INTEGRATION
1240	N1116121702.D	SEL0255-ICV1		1	NO MANUAL INTEGRATION
1311	N1116121703.D			1	NO MANUAL INTEGRATION
1342	N1116121704.D	BEK0658-BLK1		1	NO MANUAL INTEGRATION
1413	N1116121705.D	BEK0658-BS1		1	NO MANUAL INTEGRATION
1444	N1116121706.D	16K0321-19		1	2,3,5-Trimethylnaphthalene,
1515	N1116121707.D	16K0321-21		1	Acenaphthylene,
1546	N1116121708.D	16K0321-23		1	Acenaphthene, Anthracene,
1617	N1116121709.D	16K0321-24		1	Acenaphthylene, Acenaphthene,
1648	N1116121710.D	16K0321-25		1	Acenaphthene,
1719	N1116121711.D	BEK0709-BLK1		1	NO MANUAL INTEGRATION
1749	N1116121712.D	16K0255-01		1	Benzo(b)thiophene, 2,3,5-Trimethylnaphthalene, Carbazole,
1820	N1116121713.D	16K0255-02		1	Benzo(b)thiophene, 2,3,5-Trimethylnaphthalene, Carbazole,
1851	N1116121714.D	16K0255-03		1	Benzo(b)thiophene, 2,3,5-Trimethylnaphthalene, Carbazole,
1922	N1116121715.D	16K0255-04		1	Benzo(b)thiophene, 2,3,5-Trimethylnaphthalene, Carbazole,
1953	N1116121716.D	16K0255-05		1	Benzo(b)thiophene, 2-Chloronaphthalene, 2,3,5-Trimethylnaphthalene, Dibenzothiophene, Carbazole,
2024	N1116121717.D	16K0255-06		1	Carbazole,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161217.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2055	N1116121718.D	16K0255-07		1	2,3,5-Trimethylnaphthalene, Carbazole,
2125	N1116121719.D	16K0255-08		1	Benzo(b)thiophene, 2,3,5-Trimethylnaphthalene, Carbazole,
2156	N1116121720.D	16K0255-09		1	Benzo(e)pyrene, Benzo(b)thiophene, 2-Chloronaphthalene, 2,6-Dimethylnaphthalene, 2,3,5-Trimethylnaphthalene, 1-Methylphenanthre Dibenzothiophene, Carbazole, Biphenyl,
2227	N1116121721.D	SEL0255-CCV1		1	NO MANUAL INTEGRATION

Analytical Resources, Incorporated

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0277	Instrument:	NT11
		Calibration:	ZL00052

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
DFTPP	SEL0277-TUN1	N1116122001.D	Tissue	12/20/16 09:29
SIM PAH 250	SEL0277-ICV1	N1116122002.D	Tissue	12/20/16 09:45
PG-GP-1-PEMD-161122-A	16K0321-19RE1	N1116122003.D	Tissue	12/20/16 10:16
PG-WS-1-PEMD-161122-A	16K0321-21RE1	N1116122004.D	Tissue	12/20/16 10:47
SIM PAH 250	SEL0277-CCV1	N1116122005.D	Tissue	12/20/16 11:18

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response		Analyst Initials	Date
1	DFTPP abundance and time criteria met	YES		VTS	12/20/2016
2	DDT Breakdown <20% and Peak Tailing <=2	NA		VTS	12/20/2016
	Comments: *Benzidine tailing at 2.57 and DDT braekdown at 35%. Two dilutions only run this day.*				
3	ICV/CCV Meets %D	YES		VTS	12/20/2016
4	ICAL/ICV/CCV Q Flag - NONE required	YES		VTS	12/20/2016
5	Internal Standard areas within 50-200%	YES		VTS	12/20/2016
6	Retention times within windows and Coelution summary checked	YES		VTS	12/20/2016
7	Manual integrations include summary and before/after pictures	YES		VTS	12/20/2016
8	Project specific requirements have been met	YES		VTS	12/20/2016
9	Sample dilution factors have been correctly applied	YES		VTS	12/20/2016
10	AUTOCHECK: Blank checked for exceedence of criteria	NR	*	VTS	12/20/2016
	Comments: *No blanks were analyzed.*				
11	AUTOCHECK: Check blank spike recovery	NO	*	VTS	12/20/2016
	Comments: *LCS Recovery for Perylene (25.6%) was outside acceptance limits (30-160) in BEK0658-BS1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)*				
12	AUTOCHECK: Check blank spike/blank spike duplicate RPD. If exceeded include outliers in exception report.	NA	*	VTS	12/20/2016
13	AUTOCHECK: Compounds in method designated as blank spike compounds are present	YES	*	VTS	12/20/2016
14	AUTOCHECK: Check %RPD between sample and sample duplicate	NA	*	VTS	12/20/2016
15	AUTOCHECK: Matrix spike recoveries within limits	NA	*	VTS	12/20/2016
16	AUTOCHECK: Matrix spike/matrix spike duplicate RPD within limits	NA	*	VTS	12/20/2016
17	AUTOCHECK: List of compounds listed as spiked are present	NA	*	VTS	12/20/2016
18	AUTOCHECK: Check SRM limits for exceedance	NA	*	VTS	12/20/2016
19	AUTOCHECK: Check Surrogate recoveries	NO	*	VTS	12/20/2016

Comments:
Surrogate Recovery for Dibenzo[a,h]anthracene-d14 (22.0%) was outside acceptance limits (30-160) in 16K0321-19RE1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)
- Flagged value is not within established control limits.

Surrogate Recovery for Dibenzo[a,h]anthracene-d14 (27.0%) was outside acceptance limits (30-160) in 16K0321-21RE1 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)

* = Indicates Automated Response from Element DataSyst

Port Gamble Shellfish Monitoring (PEMD)

16K0321

Analysis	Matrix	Method
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Water	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
	- Flagged value is not within established control limits.			
20	AUTOCHECK: Checks Surrogate spike list against Analysis	NO *	BB	12/20/2016
	Comments: *Anthracene-d10 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0658-BS1* *Benzo(e)pyrene-d12 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0658-BS1* *Fluorene-d10 is listed as a surrogate for method 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) but it was not spiked into sample BEK0658-BS1*			
21	Analyst checklist completed (PEER)	YES	BB	12/20/2016
22	Data is locked and Status is Analyzed (PEER)	YES	BB	12/20/2016
23	Data file, Calibration, Sequence, Batch, and Cleanup PDF's are attached (PEER)	YES	BB	12/20/2016
24	Color warnings have been addressed and (or) qualified (PEER)	YES	BB	12/20/2016
25	Qualifers have been correctly added (PEER)	YES	BB	12/20/2016
26	Checklist completed and status is peer reviewed (REVIEWER)	YES	BB	12/20/2016
27	Dilutions are linear (50-200%) and appropriate (REVIEWER)	NA	BB	12/20/2016
28	All requested samples have been reported (REVIEWER)	YES	BB	12/20/2016
29	Color warnings have been addressed, narrated and (or) qualified (REVIEWER)	YES	BB	12/20/2016
30	List of samples in this sequence that will require additional runs-verify reshot created (ANALYST)	NA	VTS	12/20/2016
31	List of samples in this sequence that are re-analysis or dilutions of samples (ANALYST)	YES	VTS	12/20/2016
	Comments: *Samples 16K0321-19 and -21 run at 10x*			
32	Additional Notes (ANALYST, PEER, and REVIEWER)	YES	VTS	12/20/2016
	Comments: *DDT breakdown at 35%. Two dilutions run only. Does not affect data.*			

* = Indicates Automated Response from Element DataSyst

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/20/2016 12:10:58PM

ANALYSIS SEQUENCE

SEL0277

Instrument: NT11
Calibration ID: ZL00052
EM Voltage: 2400
Element Column ID: E006480
Tune File: 161216.U

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SEL0277-TUN1	DFTPP	QC		1	E007446		
SEL0277-ICV1	SIM PAH 250	QC		2	E006577	E002870	
16K0321-19RE1	PG-GP-1-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	3		E002870	Added 12/20/2016 by VTS
16K0321-21RE1	PG-WS-1-PEMD-161122-A	SIM PAH Low (0.01 ug/L - 0.	A 01	4		E002870	Added 12/20/2016 by VTS
SEL0277-CCV1	SIM PAH 250	QC		5	E006577	E002870	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161220.b

	Time	Filename	LabID	ClientId	DF								
1	0929	N1116122001.D	SEL0277-TUN1		1	NO ISTDS FOUND							
2	0945	N1116122002.D	SEL0277-ICV1		1	7.23	366554	10.26	218190	12.96	440615	17.72	508409	20.95	465673
3	1016	N1116122003.D			1	7.23	357097	10.26	204920	12.96	388019	17.72	425462	20.95	395534
4	1047	N1116122004.D			1	7.23	371019	10.26	212373	12.96	403612	17.71	434416	20.95	402124
5	1118	N1116122005.D			1	7.24	337348	10.26	204419	12.96	415266	17.72	499429	20.95	458511

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161220.b

ARI Job No.: SEL0 Method: DFTPP.m Instrument: nt11.i Date: 20-DEC-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0929	N1116122001.D	SEL0277-TUN1		1	NO MANUAL INTEGRATION
0945	N1116122002.D	SEL0277-ICV1		1	NO MANUAL INTEGRATION
1016	N1116122003.D			1	NO MANUAL INTEGRATION
1047	N1116122004.D			1	NO MANUAL INTEGRATION
1118	N1116122005.D			1	NO MANUAL INTEGRATION

SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG/WO: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Sequence: SEL0145
Instrument: NT11
Calibration: ZK00080
Calibration Date: 11/25/2016

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SEL0145-ICV1 (Solid)				Lab File ID: N111612102.D			Analyzed: 12/10/16 09:37	
2-Methylnaphthalene-d10	250.00	98.4	80 - 120	6.615	6.607667	0.0073	N/A	
Dibenzo[a,h]anthracene-d14	250.00	105	80 - 120	20.082	20.07283	0.0092	N/A	
Fluoranthene-d10	250.00	107	80 - 120	13.272	13.272	0.0000	N/A	
BEK0657-BLK2 (Tissue)				Lab File ID: N111612112.D			Analyzed: 12/10/16 14:51	
2-Methylnaphthalene-d10	33.860	42.3	30 - 160	6.604	6.607667	-0.0037	N/A	
Dibenzo[a,h]anthracene-d14	33.860	83.9	30 - 160	20.092	20.07283	0.0192	N/A	
Fluoranthene-d10	33.860	82.9	30 - 160	13.272	13.272	0.0000	N/A	
Fluorene-d10			30 - 160	9.406	9.408167	-0.0022	N/A	
Anthracene-d10			30 - 160	11.277	11.26783	0.0092	N/A	
Benzo(e)pyrene-d12			30 - 160	18.06	18.06167	-0.0017	N/A	
BEK0657-BS2 (Tissue)				Lab File ID: N111612113.D			Analyzed: 12/10/16 15:21	
2-Methylnaphthalene-d10	33.860	42.9	30 - 160	6.594	6.607667	-0.0137	N/A	
Dibenzo[a,h]anthracene-d14	33.860	60.5	30 - 160	20.082	20.07283	0.0092	N/A	
Fluoranthene-d10	33.860	69.2	30 - 160	13.272	13.272	0.0000	N/A	
Fluorene-d10			30 - 160	9.406	9.408167	-0.0022	N/A	
Anthracene-d10			30 - 160	11.266	11.26783	-0.0018	N/A	
Benzo(e)pyrene-d12			30 - 160	18.062	18.06167	0.0003	N/A	

SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0155	Instrument:	NT11
Calibration:	ZK00080	Calibration Date:	11/25/2016

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SEL0155-ICV1 (Tissue)			Lab File ID: N1116121204.D			Analyzed: 12/12/16 09:14		
2-Methylnaphthalene-d10	250.00	103	80 - 120	6.505	6.607667	-0.1027	N/A	
Dibenzo[a,h]anthracene-d14	250.00	104	80 - 120	19.858	20.07283	-0.2148	N/A	
Fluoranthene-d10	250.00	110	80 - 120	13.142	13.272	-0.1300	N/A	
Fluorene-d10	250.00	100	80 - 120	9.294	9.408167	-0.1142	N/A	
Anthracene-d10	250.00	112	80 - 120	11.152	11.26783	-0.1158	N/A	
Benzo(e)pyrene-d12	250.00	104	80 - 120	17.919	18.06167	-0.1427	N/A	
BEK0657-BLK1 (Tissue)			Lab File ID: N1116121207.D			Analyzed: 12/12/16 11:28		
2-Methylnaphthalene-d10	33.860	23.3	30 - 160	6.484	6.607667	-0.1237	N/A	*
Dibenzo[a,h]anthracene-d14	33.860	27.4	30 - 160	19.858	20.07283	-0.2148	N/A	*
Fluoranthene-d10	33.860	30.0	30 - 160	13.142	13.272	-0.1300	N/A	
Fluorene-d10			30 - 160		9.408167	-9.4082	N/A	
Anthracene-d10			30 - 160	11.079	11.26783	-0.1888	N/A	
Benzo(e)pyrene-d12			30 - 160		18.06167	-18.0617	N/A	
BEK0657-BS1 (Tissue)			Lab File ID: N1116121208.D			Analyzed: 12/12/16 11:58		
2-Methylnaphthalene-d10	33.860	40.9	30 - 160	6.495	6.607667	-0.1127	N/A	
Dibenzo[a,h]anthracene-d14	33.860	50.1	30 - 160	19.858	20.07283	-0.2148	N/A	
Fluoranthene-d10	33.860	54.3	30 - 160	13.142	13.272	-0.1300	N/A	
Fluorene-d10			30 - 160		9.408167	-9.4082	N/A	
Anthracene-d10			30 - 160		11.26783	-11.2678	N/A	
Benzo(e)pyrene-d12			30 - 160		18.06167	-18.0617	N/A	
16K0321-01 (Tissue)			Lab File ID: N1116121209.D			Analyzed: 12/12/16 12:28		
2-Methylnaphthalene-d10	33.860	48.0	30 - 160	6.494	6.607667	-0.1137	N/A	
Dibenzo[a,h]anthracene-d14	33.860	53.7	30 - 160	19.858	20.07283	-0.2148	N/A	
Fluoranthene-d10	33.860	61.6	30 - 160	13.142	13.272	-0.1300	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	*
Benzo(e)pyrene-d12	21.163	52.1	30 - 160	17.919	18.06167	-0.1427	N/A	

SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0155	Instrument:	NT11
Calibration:	ZK00080	Calibration Date:	11/25/2016

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
16K0321-03 (Tissue)			Lab File ID: N1116121210.D			Analyzed: 12/12/16 12:58		
2-Methylnaphthalene-d10	33.860	43.3	30 - 160	6.484	6.607667	-0.1237	N/A	
Dibenzo[a,h]anthracene-d14	33.860	49.2	30 - 160	19.869	20.07283	-0.2038	N/A	
Fluoranthene-d10	33.860	55.8	30 - 160	13.142	13.272	-0.1300	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	*
Benzo(e)pyrene-d12	21.163	54.2	30 - 160	17.92	18.06167	-0.1417	N/A	
16K0321-05 (Tissue)			Lab File ID: N1116121211.D			Analyzed: 12/12/16 13:28		
2-Methylnaphthalene-d10	33.860	40.3	30 - 160	6.495	6.607667	-0.1127	N/A	
Dibenzo[a,h]anthracene-d14	33.860	38.7	30 - 160	19.858	20.07283	-0.2148	N/A	
Fluoranthene-d10	33.860	49.6	30 - 160	13.142	13.272	-0.1300	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	*
Benzo(e)pyrene-d12	21.163	36.0	30 - 160	17.92	18.06167	-0.1417	N/A	
16K0321-06 (Tissue)			Lab File ID: N1116121212.D			Analyzed: 12/12/16 13:58		
2-Methylnaphthalene-d10	33.860	62.1	30 - 160	6.495	6.607667	-0.1127	N/A	
Dibenzo[a,h]anthracene-d14	33.860	70.9	30 - 160	19.858	20.07283	-0.2148	N/A	
Fluoranthene-d10	33.860	85.8	30 - 160	13.142	13.272	-0.1300	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	*
Benzo(e)pyrene-d12	21.163	39.6	30 - 160	17.929	18.06167	-0.1327	N/A	
16K0321-07 (Tissue)			Lab File ID: N1116121213.D			Analyzed: 12/12/16 14:28		
2-Methylnaphthalene-d10	33.860	42.7	30 - 160	6.495	6.607667	-0.1127	N/A	
Dibenzo[a,h]anthracene-d14	33.860	43.0	30 - 160	19.869	20.07283	-0.2038	N/A	
Fluoranthene-d10	33.860	56.9	30 - 160	13.142	13.272	-0.1300	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	*
Benzo(e)pyrene-d12	21.163	53.3	30 - 160	17.92	18.06167	-0.1417	N/A	

SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0155	Instrument:	NT11
Calibration:	ZK00080	Calibration Date:	11/25/2016

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
16K0321-09 (Tissue)			Lab File ID: N1116121214.D			Analyzed: 12/12/16 14:59		
2-Methylnaphthalene-d10	33.860	54.1	30 - 160	6.494	6.607667	-0.1137	N/A	
Dibenzo[a,h]anthracene-d14	33.860	62.9	30 - 160	19.869	20.07283	-0.2038	N/A	
Fluoranthene-d10	33.860	74.5	30 - 160	13.142	13.272	-0.1300	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	*
Benzo(e)pyrene-d12	21.163	55.5	30 - 160	17.929	18.06167	-0.1327	N/A	
16K0321-10 (Tissue)			Lab File ID: N1116121215.D			Analyzed: 12/12/16 15:29		
2-Methylnaphthalene-d10	33.860	53.1	30 - 160	6.484	6.607667	-0.1237	N/A	
Dibenzo[a,h]anthracene-d14	33.860	70.2	30 - 160	19.869	20.07283	-0.2038	N/A	
Fluoranthene-d10	33.860	76.8	30 - 160	13.142	13.272	-0.1300	N/A	
Fluorene-d10	21.163	8.82	30 - 160	9.383	9.408167	-0.0252	N/A	*
Anthracene-d10	21.163	4.35	30 - 160	11.153	11.26783	-0.1148	N/A	*
Benzo(e)pyrene-d12	21.163	81.5	30 - 160	17.92	18.06167	-0.1417	N/A	
16K0321-11 (Tissue)			Lab File ID: N1116121216.D			Analyzed: 12/12/16 15:59		
2-Methylnaphthalene-d10	33.860	59.1	30 - 160	6.494	6.607667	-0.1137	N/A	
Dibenzo[a,h]anthracene-d14	33.860	77.8	30 - 160	19.869	20.07283	-0.2038	N/A	
Fluoranthene-d10	33.860	82.5	30 - 160	13.142	13.272	-0.1300	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163	8.39	30 - 160	11.152	11.26783	-0.1158	N/A	*
Benzo(e)pyrene-d12	21.163	34.6	30 - 160	17.929	18.06167	-0.1327	N/A	
16K0321-13 (Tissue)			Lab File ID: N1116121217.D			Analyzed: 12/12/16 16:29		
2-Methylnaphthalene-d10	33.860	61.6	30 - 160	6.494	6.607667	-0.1137	N/A	
Dibenzo[a,h]anthracene-d14	33.860	78.0	30 - 160	19.869	20.07283	-0.2038	N/A	
Fluoranthene-d10	33.860	86.3	30 - 160	13.142	13.272	-0.1300	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163	9.43	30 - 160	11.142	11.26783	-0.1258	N/A	*
Benzo(e)pyrene-d12	21.163	55.2	30 - 160	17.929	18.06167	-0.1327	N/A	

SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0155	Instrument:	NT11
Calibration:	ZK00080	Calibration Date:	11/25/2016

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
16K0321-15 (Tissue)			Lab File ID: N1116121218.D				Analyzed: 12/12/16 16:59	
2-Methylnaphthalene-d10	33.860	57.0	30 - 160	6.494	6.607667	-0.1137	N/A	
Dibenzo[a,h]anthracene-d14	33.860	73.1	30 - 160	19.869	20.07283	-0.2038	N/A	
Fluoranthene-d10	33.860	84.6	30 - 160	13.142	13.272	-0.1300	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163	25.6	30 - 160	11.152	11.26783	-0.1158	N/A	*
Benzo(e)pyrene-d12	21.163	88.6	30 - 160	17.929	18.06167	-0.1327	N/A	
16K0321-17 (Tissue)			Lab File ID: N1116121219.D				Analyzed: 12/12/16 17:29	
2-Methylnaphthalene-d10	33.860	59.0	30 - 160	6.495	6.607667	-0.1127	N/A	
Dibenzo[a,h]anthracene-d14	33.860	68.6	30 - 160	19.869	20.07283	-0.2038	N/A	
Fluoranthene-d10	33.860	82.9	30 - 160	13.152	13.272	-0.1200	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163	12.0	30 - 160	11.142	11.26783	-0.1258	N/A	*
Benzo(e)pyrene-d12	21.163	63.7	30 - 160	17.929	18.06167	-0.1327	N/A	

SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0164	Instrument:	NT11
Calibration:	ZK00080	Calibration Date:	11/25/2016

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SEL0164-ICV1 (Tissue)				Lab File ID: N1116121307.D			Analyzed: 12/13/16 15:08	
2-Methylnaphthalene-d10	250.00	104	80 - 120	6.516	6.607667	-0.0917	N/A	
Dibenzo[a,h]anthracene-d14	250.00	110	80 - 120	19.891	20.07283	-0.1818	N/A	
Fluoranthene-d10	250.00	116	80 - 120	13.161	13.272	-0.1110	N/A	
Fluorene-d10	250.00	95.2	80 - 120	9.32	9.408167	-0.0882	N/A	
Anthracene-d10	250.00	127	80 - 120	11.173	11.26783	-0.0948	N/A	*
Benzo(e)pyrene-d12	250.00	103	80 - 120	17.939	18.06167	-0.1227	N/A	
16K0321-03RE1 (Tissue)				Lab File ID: N1116121319.D			Analyzed: 12/13/16 21:04	
2-Methylnaphthalene-d10	33.860	34.8	30 - 160	6.547	6.607667	-0.0607	N/A	
Dibenzo[a,h]anthracene-d14	33.860	54.2	30 - 160	19.914	20.07283	-0.1588	N/A	
Fluoranthene-d10	33.860	58.2	30 - 160	13.171	13.272	-0.1010	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	*
Benzo(e)pyrene-d12	21.163	66.8	30 - 160	17.948	18.06167	-0.1137	N/A	
16K0321-06RE1 (Tissue)				Lab File ID: N1116121321.D			Analyzed: 12/13/16 22:00	
2-Methylnaphthalene-d10	33.860	36.9	30 - 160	6.568	6.607667	-0.0397	N/A	
Dibenzo[a,h]anthracene-d14	33.860	55.3	30 - 160	19.936	20.07283	-0.1368	N/A	
Fluoranthene-d10	33.860	71.5	30 - 160	13.181	13.272	-0.0910	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	*
Benzo(e)pyrene-d12	21.163	27.5	30 - 160	17.948	18.06167	-0.1137	N/A	*
16K0321-07RE1 (Tissue)				Lab File ID: N1116121322.D			Analyzed: 12/13/16 22:28	
2-Methylnaphthalene-d10	33.860	32.5	30 - 160	6.557	6.607667	-0.0507	N/A	
Dibenzo[a,h]anthracene-d14	33.860	50.2	30 - 160	19.924	20.07283	-0.1488	N/A	
Fluoranthene-d10	33.860	61.4	30 - 160	13.18	13.272	-0.0920	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	*
Benzo(e)pyrene-d12	21.163	67.8	30 - 160	17.948	18.06167	-0.1137	N/A	

SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0164	Instrument:	NT11
Calibration:	ZK00080	Calibration Date:	11/25/2016

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
16K0321-09RE1 (Tissue)			Lab File ID: N1116121323.D				Analyzed: 12/13/16 22:56	
2-Methylnaphthalene-d10	33.860		30 - 160		6.607667	-6.6077	N/A	NRS
Dibenzo[a,h]anthracene-d14	33.860		30 - 160		20.07283	-20.0728	N/A	NRS
Fluoranthene-d10	33.860		30 - 160		13.272	-13.2720	N/A	NRS
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	NRS
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	NRS
Benzo(e)pyrene-d12	21.163		30 - 160		18.06167	-18.0617	N/A	NRS
16K0321-10RE1 (Tissue)			Lab File ID: N1116121324.D				Analyzed: 12/13/16 23:24	
2-Methylnaphthalene-d10	33.860		30 - 160		6.607667	-6.6077	N/A	NRS
Dibenzo[a,h]anthracene-d14	33.860		30 - 160		20.07283	-20.0728	N/A	NRS
Fluoranthene-d10	33.860		30 - 160		13.272	-13.2720	N/A	NRS
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	NRS
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	NRS
Benzo(e)pyrene-d12	21.163		30 - 160		18.06167	-18.0617	N/A	NRS
16K0321-17RE1 (Tissue)			Lab File ID: N1116121328.D				Analyzed: 12/14/16 01:17	
2-Methylnaphthalene-d10	33.860	27.7	30 - 160	6.579	6.607667	-0.0287	N/A	*
Dibenzo[a,h]anthracene-d14	33.860	47.9	30 - 160	19.925	20.07283	-0.1478	N/A	
Fluoranthene-d10	33.860	62.9	30 - 160	13.18	13.272	-0.0920	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	*
Benzo(e)pyrene-d12	21.163	45.6	30 - 160	17.948	18.06167	-0.1137	N/A	

SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0234	Instrument:	NT11
Calibration:	ZK00080	Calibration Date:	11/25/2016

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SEL0234-ICV1 (Tissue)			Lab File ID: N1116121602.D			Analyzed: 12/16/16 09:46		
2-Methylnaphthalene-d10	250.00	120	80 - 120	8.211	6.607667	1.6033	N/A	
Dibenzo[a,h]anthracene-d14	250.00	64.8	80 - 120	23.83	20.07283	3.7572	N/A	*
Fluoranthene-d10	250.00	125	80 - 120	15.065	13.272	1.7930	N/A	*
Fluorene-d10	250.00	103	80 - 120	11.1	9.408167	1.6918	N/A	
Anthracene-d10	250.00	107	80 - 120	13.019	11.26783	1.7512	N/A	
Benzo(e)pyrene-d12	250.00	107	80 - 120	20.493	18.06167	2.4313	N/A	
SEL0234-LCV1 (Tissue)			Lab File ID: N1116121603.D			Analyzed: 12/16/16 10:32		
2-Methylnaphthalene-d10	10.000	109	0 - 200	8.211	6.607667	1.6033	N/A	
Dibenzo[a,h]anthracene-d14	10.000	16.1	0 - 200	23.83	20.07283	3.7572	N/A	
Fluoranthene-d10	10.000	114	0 - 200	15.065	13.272	1.7930	N/A	
Fluorene-d10	10.000	96.1	0 - 200	11.1	9.408167	1.6918	N/A	
Anthracene-d10	10.000	106	0 - 200	13.019	11.26783	1.7512	N/A	
Benzo(e)pyrene-d12	10.000	104	0 - 200	20.493	18.06167	2.4313	N/A	
16K0321-01RE1 (Tissue)			Lab File ID: N1116121604.D			Analyzed: 12/16/16 11:03		
2-Methylnaphthalene-d10	33.860	57.5	30 - 160	8.211	6.607667	1.6033	N/A	
Dibenzo[a,h]anthracene-d14	33.860	23.2	30 - 160	23.819	20.07283	3.7462	N/A	*
Fluoranthene-d10	33.860	74.6	30 - 160	15.065	13.272	1.7930	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	*
Benzo(e)pyrene-d12	21.163	60.1	30 - 160	20.493	18.06167	2.4313	N/A	
16K0321-05RE1 (Tissue)			Lab File ID: N1116121605.D			Analyzed: 12/16/16 11:34		
2-Methylnaphthalene-d10	33.860	62.0	30 - 160	8.211	6.607667	1.6033	N/A	
Dibenzo[a,h]anthracene-d14	33.860	43.9	30 - 160	23.819	20.07283	3.7462	N/A	
Fluoranthene-d10	33.860	80.1	30 - 160	15.065	13.272	1.7930	N/A	
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	*
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	*
Benzo(e)pyrene-d12	21.163	63.2	30 - 160	20.493	18.06167	2.4313	N/A	

SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0234	Instrument:	NT11
Calibration:	ZK00080	Calibration Date:	11/25/2016

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
16K0321-11RE1 (Tissue)			Lab File ID: N1116121606.D				Analyzed: 12/16/16 12:06	
2-Methylnaphthalene-d10	33.860		30 - 160		6.607667	-6.6077	N/A	NRS
Dibenzo[a,h]anthracene-d14	33.860		30 - 160		20.07283	-20.0728	N/A	NRS
Fluoranthene-d10	33.860		30 - 160		13.272	-13.2720	N/A	NRS
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	NRS
Anthracene-d10	21.163		30 - 160		11.26783	-11.2678	N/A	NRS
Benzo(e)pyrene-d12	21.163		30 - 160		18.06167	-18.0617	N/A	NRS
16K0321-13RE1 (Tissue)			Lab File ID: N1116121607.D				Analyzed: 12/16/16 12:37	
2-Methylnaphthalene-d10	33.860	53.6	30 - 160	8.211	6.607667	1.6033	N/A	NRS
Dibenzo[a,h]anthracene-d14	33.860	33.5	30 - 160	23.819	20.07283	3.7462	N/A	NRS
Fluoranthene-d10	33.860	73.0	30 - 160	15.065	13.272	1.7930	N/A	NRS
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	NRS
Anthracene-d10	21.163	2360	30 - 160	12.956	11.26783	1.6882	N/A	NRS
Benzo(e)pyrene-d12	21.163		30 - 160		18.06167	-18.0617	N/A	NRS
16K0321-15RE1 (Tissue)			Lab File ID: N1116121608.D				Analyzed: 12/16/16 13:08	
2-Methylnaphthalene-d10	33.860	43.9	30 - 160	8.211	6.607667	1.6033	N/A	NRS
Dibenzo[a,h]anthracene-d14	33.860	23.6	30 - 160	23.819	20.07283	3.7462	N/A	NRS
Fluoranthene-d10	33.860	63.8	30 - 160	15.065	13.272	1.7930	N/A	NRS
Fluorene-d10	21.163		30 - 160		9.408167	-9.4082	N/A	NRS
Anthracene-d10	21.163	5900	30 - 160	12.956	11.26783	1.6882	N/A	NRS
Benzo(e)pyrene-d12	21.163		30 - 160		18.06167	-18.0617	N/A	NRS

SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0255	Instrument:	NT11
Calibration:	ZL00052	Calibration Date:	12/16/2016

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SEL0255-ICV1 (Water)			Lab File ID: N1116121702.D			Analyzed: 12/17/16 12:40		
2-Methylnaphthalene-d10	250.00	100	80 - 120	8.211	8.211	0.0000	N/A	
Dibenzo[a,h]anthracene-d14	250.00	97.2	80 - 120	23.83	23.8234	0.0066	N/A	
Fluoranthene-d10	250.00	102	80 - 120	15.065	15.06333	0.0017	N/A	
BEK0658-BLK1 (Tissue)			Lab File ID: N1116121704.D			Analyzed: 12/17/16 13:42		
2-Methylnaphthalene-d10	33.860	44.3	30 - 160	8.19	8.211	-0.0210	N/A	
Dibenzo[a,h]anthracene-d14	33.860	54.0	30 - 160	23.841	23.8234	0.0176	N/A	
Fluoranthene-d10	33.860	58.1	30 - 160	15.055	15.06333	-0.0083	N/A	
Fluorene-d10			30 - 160		11.1	-11.1000	N/A	*
Anthracene-d10			30 - 160		13.00983	-13.0098	N/A	*
Benzo(e)pyrene-d12			30 - 160		20.493	-20.4930	N/A	*
BEK0658-BS1 (Tissue)			Lab File ID: N1116121705.D			Analyzed: 12/17/16 14:13		
2-Methylnaphthalene-d10	33.860	46.8	30 - 160	8.19	8.211	-0.0210	N/A	
Dibenzo[a,h]anthracene-d14	33.860	57.4	30 - 160	23.83	23.8234	0.0066	N/A	
Fluoranthene-d10	33.860	55.3	30 - 160	15.055	15.06333	-0.0083	N/A	
Fluorene-d10			30 - 160		11.1	-11.1000	N/A	
Anthracene-d10			30 - 160		13.00983	-13.0098	N/A	
Benzo(e)pyrene-d12			30 - 160		20.493	-20.4930	N/A	
16K0321-19 (Tissue)			Lab File ID: N1116121706.D			Analyzed: 12/17/16 14:44		
2-Methylnaphthalene-d10	33.860	50.3	30 - 160	8.19	8.211	-0.0210	N/A	
Dibenzo[a,h]anthracene-d14	33.860	58.9	30 - 160	23.83	23.8234	0.0066	N/A	
Fluoranthene-d10	33.860	60.0	30 - 160	15.065	15.06333	0.0017	N/A	
Fluorene-d10	21.163		30 - 160		11.1	-11.1000	N/A	*
Anthracene-d10	21.163	13.2	30 - 160	13.008	13.00983	-0.0018	N/A	*
Benzo(e)pyrene-d12	21.163	64.2	30 - 160	20.493	20.493	0.0000	N/A	
16K0321-21 (Tissue)			Lab File ID: N1116121707.D			Analyzed: 12/17/16 15:15		
2-Methylnaphthalene-d10	33.860	48.7	30 - 160	8.19	8.211	-0.0210	N/A	
Dibenzo[a,h]anthracene-d14	33.860	57.9	30 - 160	23.83	23.8234	0.0066	N/A	
Fluoranthene-d10	33.860	62.6	30 - 160	15.065	15.06333	0.0017	N/A	
Fluorene-d10	21.163		30 - 160		11.1	-11.1000	N/A	*
Anthracene-d10	21.163	14.1	30 - 160	13.008	13.00983	-0.0018	N/A	*
Benzo(e)pyrene-d12	21.163	72.9	30 - 160	20.493	20.493	0.0000	N/A	

SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0255	Instrument:	NT11
Calibration:	ZL00052	Calibration Date:	12/16/2016

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
16K0321-23 (Tissue)			Lab File ID: N1116121708.D				Analyzed: 12/17/16 15:46	
2-Methylnaphthalene-d10	33.860	55.7	30 - 160	8.19	8.211	-0.0210	N/A	
Dibenzo[a,h]anthracene-d14	33.860	53.1	30 - 160	23.83	23.8234	0.0066	N/A	
Fluoranthene-d10	33.860	61.1	30 - 160	15.065	15.06333	0.0017	N/A	
Fluorene-d10	21.163	50.5	30 - 160	11.088	11.1	-0.0120	N/A	
Anthracene-d10	21.163	45.6	30 - 160	13.008	13.00983	-0.0018	N/A	
Benzo(e)pyrene-d12	21.163	43.7	30 - 160	20.503	20.493	0.0100	N/A	
16K0321-24 (Tissue)			Lab File ID: N1116121709.D				Analyzed: 12/17/16 16:17	
2-Methylnaphthalene-d10	33.860	56.0	30 - 160	8.19	8.211	-0.0210	N/A	
Dibenzo[a,h]anthracene-d14	33.860	58.3	30 - 160	23.841	23.8234	0.0176	N/A	
Fluoranthene-d10	33.860	64.8	30 - 160	15.065	15.06333	0.0017	N/A	
Fluorene-d10	21.163	64.1	30 - 160	11.088	11.1	-0.0120	N/A	
Anthracene-d10	21.163	53.9	30 - 160	13.008	13.00983	-0.0018	N/A	
Benzo(e)pyrene-d12	21.163	64.6	30 - 160	20.503	20.493	0.0100	N/A	
16K0321-25 (Tissue)			Lab File ID: N1116121710.D				Analyzed: 12/17/16 16:48	
2-Methylnaphthalene-d10	33.860	58.7	30 - 160	8.19	8.211	-0.0210	N/A	
Dibenzo[a,h]anthracene-d14	33.860	62.7	30 - 160	23.83	23.8234	0.0066	N/A	
Fluoranthene-d10	33.860	69.6	30 - 160	15.065	15.06333	0.0017	N/A	
Fluorene-d10	21.163	65.9	30 - 160	11.087	11.1	-0.0130	N/A	
Anthracene-d10	21.163	54.7	30 - 160	13.008	13.00983	-0.0018	N/A	
Benzo(e)pyrene-d12	21.163	75.9	30 - 160	20.493	20.493	0.0000	N/A	

SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0277	Instrument:	NT11
Calibration:	ZL00052	Calibration Date:	12/16/2016

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SEL0277-ICV1 (Tissue)			Lab File ID: N1116122002.D				Analyzed: 12/20/16 09:45	
2-Methylnaphthalene-d10	250.00	96.8	80 - 120	8.211	8.211	0.0000	N/A	
Dibenzo[a,h]anthracene-d14	250.00	82.8	80 - 120	23.852	23.8234	0.0286	N/A	
Fluoranthene-d10	250.00	98.0	80 - 120	15.065	15.06333	0.0017	N/A	
Fluorene-d10	250.00	96.8	80 - 120	11.1	11.1	0.0000	N/A	
Anthracene-d10	250.00	90.8	80 - 120	13.019	13.00983	0.0092	N/A	
Benzo(e)pyrene-d12	250.00	99.6	80 - 120	20.503	20.493	0.0100	N/A	
16K0321-19RE1 (Tissue)			Lab File ID: N1116122003.D				Analyzed: 12/20/16 10:16	
2-Methylnaphthalene-d10	33.860	40.7	30 - 160	8.211	8.211	0.0000	N/A	
Dibenzo[a,h]anthracene-d14	33.860	22.0	30 - 160	23.841	23.8234	0.0176	N/A	*
Fluoranthene-d10	33.860	56.4	30 - 160	15.065	15.06333	0.0017	N/A	
Fluorene-d10	21.163		30 - 160		11.1	-11.1000	N/A	*
Anthracene-d10	21.163		30 - 160		13.00983	-13.0098	N/A	*
Benzo(e)pyrene-d12	21.163	57.3	30 - 160	20.503	20.493	0.0100	N/A	
16K0321-21RE1 (Tissue)			Lab File ID: N1116122004.D				Analyzed: 12/20/16 10:47	
2-Methylnaphthalene-d10	33.860	40.0	30 - 160	8.211	8.211	0.0000	N/A	
Dibenzo[a,h]anthracene-d14	33.860	27.0	30 - 160	23.841	23.8234	0.0176	N/A	*
Fluoranthene-d10	33.860	58.2	30 - 160	15.065	15.06333	0.0017	N/A	
Fluorene-d10	21.163		30 - 160		11.1	-11.1000	N/A	*
Anthracene-d10	21.163		30 - 160		13.00983	-13.0098	N/A	*
Benzo(e)pyrene-d12	21.163	67.4	30 - 160	20.503	20.493	0.0100	N/A	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEK0335	Instrument:	NT11
		Calibration:	ZK00080

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SEK0335-SCV1)		(Tissue)		Lab File ID: 16112511.D				Analyzed: 11/25/16 10:50	
Naphthalene-d8	443736	5.656	461632	5.646	96	50 - 200	-0.0100	+/-0.50	
Acenaphthene-d10	219883	8.583	226505	8.583	97	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	374597	11.214	397446	11.203	94	50 - 200	-0.0110	+/-0.50	
Chrysene-d12	357859	15.873	362603	15.873	99	50 - 200	0.0000	+/-0.50	
Perylene-d12	351854	18.331	361091	18.331	97	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Sequence: SEL0145
Instrument: NT11
Calibration: ZK00080

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SEL0145-ICV1)		(Solid)		Lab File ID: N111612102.D				Analyzed: 12/10/16 09:37	
Naphthalene-d8	409408	5.655	461632	5.646	89	50 - 200	-0.0090	+/-0.50	
Acenaphthene-d10	199840	8.592	226505	8.583	88	50 - 200	-0.0090	+/-0.50	
Phenanthrene-d10	326670	11.214	397446	11.203	82	50 - 200	-0.0110	+/-0.50	
Chrysene-d12	304785	15.881	362603	15.873	84	50 - 200	-0.0080	+/-0.50	
Perylene-d12	292012	18.331	361091	18.331	81	50 - 200	0.0000	+/-0.50	
Blank (BEK0657-BLK2)		(Tissue)		Lab File ID: N111612112.D				Analyzed: 12/10/16 14:51	
Naphthalene-d8	303813	5.637	461632	5.646	66	50 - 200	0.0090	+/-0.50	
Acenaphthene-d10	151511	8.583	226505	8.583	67	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	279463	11.203	397446	11.203	70	50 - 200	0.0000	+/-0.50	
Chrysene-d12	253981	15.881	362603	15.873	70	50 - 200	-0.0080	+/-0.50	
Perylene-d12	280517	18.339	361091	18.331	78	50 - 200	-0.0080	+/-0.50	
LCS (BEK0657-BS2)		(Tissue)		Lab File ID: N111612113.D				Analyzed: 12/10/16 15:21	
Naphthalene-d8	471964	5.637	461632	5.646	102	50 - 200	0.0090	+/-0.50	
Acenaphthene-d10	251045	8.574	226505	8.583	111	50 - 200	0.0090	+/-0.50	
Phenanthrene-d10	482057	11.203	397446	11.203	121	50 - 200	0.0000	+/-0.50	
Chrysene-d12	480519	15.881	362603	15.873	133	50 - 200	-0.0080	+/-0.50	
Perylene-d12	555286	18.331	361091	18.331	154	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Sequence: SEL0155
Instrument: NT11
Calibration: ZK00080

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SEL0155-ICV1)		(Tissue)		Lab File ID: N1116121204.D				Analyzed: 12/12/16 09:14	
Naphthalene-d8	408833	5.547	461632	5.646	89	50 - 200	0.0990	+/-0.50	
Acenaphthene-d10	211834	8.474	226505	8.583	94	50 - 200	0.1090	+/-0.50	
Phenanthrene-d10	358959	11.089	397446	11.203	90	50 - 200	0.1140	+/-0.50	
Chrysene-d12	318255	15.743	362603	15.873	88	50 - 200	0.1300	+/-0.50	
Perylene-d12	315570	18.179	361091	18.331	87	50 - 200	0.1520	+/-0.50	
Blank (BEK0657-BLK1)		(Tissue)		Lab File ID: N1116121207.D				Analyzed: 12/12/16 11:28	
Naphthalene-d8	891712	5.529	461632	5.646	193	50 - 200	0.1170	+/-0.50	
Acenaphthene-d10	469612	8.456	226505	8.583	207	50 - 200	0.1270	+/-0.50	*
Phenanthrene-d10	820573	11.079	397446	11.203	206	50 - 200	0.1240	+/-0.50	*
Chrysene-d12	724709	15.744	362603	15.873	200	50 - 200	0.1290	+/-0.50	
Perylene-d12	747250	18.179	361091	18.331	207	50 - 200	0.1520	+/-0.50	*
LCS (BEK0657-BS1)		(Tissue)		Lab File ID: N1116121208.D				Analyzed: 12/12/16 11:58	
Naphthalene-d8	452591	5.529	461632	5.646	98	50 - 200	0.1170	+/-0.50	
Acenaphthene-d10	246096	8.457	226505	8.583	109	50 - 200	0.1260	+/-0.50	
Phenanthrene-d10	426508	11.079	397446	11.203	107	50 - 200	0.1240	+/-0.50	
Chrysene-d12	395351	15.744	362603	15.873	109	50 - 200	0.1290	+/-0.50	
Perylene-d12	402537	18.179	361091	18.331	111	50 - 200	0.1520	+/-0.50	
PG-SMA1-1-PEMD-161122-A (16K0321-01)		(Tissue)		Lab File ID: N1116121209.D				Analyzed: 12/12/16 12:28	
Naphthalene-d8	476179	5.529	461632	5.646	103	50 - 200	0.1170	+/-0.50	
Acenaphthene-d10	266531	8.456	226505	8.583	118	50 - 200	0.1270	+/-0.50	
Phenanthrene-d10	462877	11.079	397446	11.203	116	50 - 200	0.1240	+/-0.50	
Chrysene-d12	416008	15.743	362603	15.873	115	50 - 200	0.1300	+/-0.50	
Perylene-d12	413732	18.179	361091	18.331	115	50 - 200	0.1520	+/-0.50	
PG-SMA1-2-PEMD-161122-A (16K0321-03)		(Tissue)		Lab File ID: N1116121210.D				Analyzed: 12/12/16 12:58	
Naphthalene-d8	464434	5.529	461632	5.646	101	50 - 200	0.1170	+/-0.50	
Acenaphthene-d10	253304	8.456	226505	8.583	112	50 - 200	0.1270	+/-0.50	
Phenanthrene-d10	446982	11.079	397446	11.203	112	50 - 200	0.1240	+/-0.50	
Chrysene-d12	395473	15.752	362603	15.873	109	50 - 200	0.1210	+/-0.50	
Perylene-d12	422113	18.189	361091	18.331	117	50 - 200	0.1420	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Sequence: SEL0155
Instrument: NT11
Calibration: ZK00080

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
PG-SMA1-3-PEMD-161122-A (16K0321-05)	(Tissue)		Lab File ID: N1116121211.D				Analyzed: 12/12/16 13:28		
Naphthalene-d8	555673	5.529	461632	5.646	120	50 - 200	0.1170	+/-0.50	
Acenaphthene-d10	321629	8.456	226505	8.583	142	50 - 200	0.1270	+/-0.50	
Phenanthrene-d10	577822	11.079	397446	11.203	145	50 - 200	0.1240	+/-0.50	
Chrysene-d12	564273	15.743	362603	15.873	156	50 - 200	0.1300	+/-0.50	
Perylene-d12	589006	18.179	361091	18.331	163	50 - 200	0.1520	+/-0.50	
PG-SMA1-103-PEMD-161122-A (16K0321-06)	(Tissue)		Lab File ID: N1116121212.D				Analyzed: 12/12/16 13:58		
Naphthalene-d8	394012	5.529	461632	5.646	85	50 - 200	0.1170	+/-0.50	
Acenaphthene-d10	216444	8.466	226505	8.583	96	50 - 200	0.1170	+/-0.50	
Phenanthrene-d10	380739	11.079	397446	11.203	96	50 - 200	0.1240	+/-0.50	
Chrysene-d12	347901	15.744	362603	15.873	96	50 - 200	0.1290	+/-0.50	
Perylene-d12	361438	18.179	361091	18.331	100	50 - 200	0.1520	+/-0.50	
PG-SMA2-1-PEMD-161122-A (16K0321-07)	(Tissue)		Lab File ID: N1116121213.D				Analyzed: 12/12/16 14:28		
Naphthalene-d8	460120	5.529	461632	5.646	100	50 - 200	0.1170	+/-0.50	
Acenaphthene-d10	265443	8.465	226505	8.583	117	50 - 200	0.1180	+/-0.50	
Phenanthrene-d10	467186	11.079	397446	11.203	118	50 - 200	0.1240	+/-0.50	
Chrysene-d12	446613	15.744	362603	15.873	123	50 - 200	0.1290	+/-0.50	
Perylene-d12	469399	18.179	361091	18.331	130	50 - 200	0.1520	+/-0.50	
PG-SMA2-2-PEMD-161122-A (16K0321-09)	(Tissue)		Lab File ID: N1116121214.D				Analyzed: 12/12/16 14:59		
Naphthalene-d8	404827	5.529	461632	5.646	88	50 - 200	0.1170	+/-0.50	
Acenaphthene-d10	236727	8.465	226505	8.583	105	50 - 200	0.1180	+/-0.50	
Phenanthrene-d10	410459	11.089	397446	11.203	103	50 - 200	0.1140	+/-0.50	
Chrysene-d12	360765	15.752	362603	15.873	99	50 - 200	0.1210	+/-0.50	
Perylene-d12	361433	18.188	361091	18.331	100	50 - 200	0.1430	+/-0.50	
PG-SMA2-102-PEMD-161122-A (16K0321-10)	(Tissue)		Lab File ID: N1116121215.D				Analyzed: 12/12/16 15:29		
Naphthalene-d8	474132	5.529	461632	5.646	103	50 - 200	0.1170	+/-0.50	
Acenaphthene-d10	275326	8.466	226505	8.583	122	50 - 200	0.1170	+/-0.50	
Phenanthrene-d10	477659	11.09	397446	11.203	120	50 - 200	0.1130	+/-0.50	
Chrysene-d12	399692	15.752	362603	15.873	110	50 - 200	0.1210	+/-0.50	
Perylene-d12	388339	18.189	361091	18.331	108	50 - 200	0.1420	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Sequence: SEL0155
Instrument: NT11
Calibration: ZK00080

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
PG-SMA2-3-PEMD-161122-A (16K0321-11)	(Tissue)		Lab File ID: N1116121216.D					Analyzed: 12/12/16 15:59	
Naphthalene-d8	316869	5.529	461632	5.646	69	50 - 200	0.1170	+/-0.50	
Acenaphthene-d10	200672	8.465	226505	8.583	89	50 - 200	0.1180	+/-0.50	
Phenanthrene-d10	351860	11.089	397446	11.203	89	50 - 200	0.1140	+/-0.50	
Chrysene-d12	308432	15.752	362603	15.873	85	50 - 200	0.1210	+/-0.50	
Perylene-d12	278637	18.189	361091	18.331	77	50 - 200	0.1420	+/-0.50	
PG-SMA2-4-PEMD-161122-A (16K0321-13)	(Tissue)		Lab File ID: N1116121217.D					Analyzed: 12/12/16 16:29	
Naphthalene-d8	303642	5.529	461632	5.646	66	50 - 200	0.1170	+/-0.50	
Acenaphthene-d10	171370	8.465	226505	8.583	76	50 - 200	0.1180	+/-0.50	
Phenanthrene-d10	306185	11.089	397446	11.203	77	50 - 200	0.1140	+/-0.50	
Chrysene-d12	261108	15.752	362603	15.873	72	50 - 200	0.1210	+/-0.50	
Perylene-d12	249195	18.188	361091	18.331	69	50 - 200	0.1430	+/-0.50	
PG-SMA2-5-PEMD-161122-A (16K0321-15)	(Tissue)		Lab File ID: N1116121218.D					Analyzed: 12/12/16 16:59	
Naphthalene-d8	295522	5.538	461632	5.646	64	50 - 200	0.1080	+/-0.50	
Acenaphthene-d10	158246	8.465	226505	8.583	70	50 - 200	0.1180	+/-0.50	
Phenanthrene-d10	282800	11.089	397446	11.203	71	50 - 200	0.1140	+/-0.50	
Chrysene-d12	249618	15.752	362603	15.873	69	50 - 200	0.1210	+/-0.50	
Perylene-d12	240556	18.188	361091	18.331	67	50 - 200	0.1430	+/-0.50	
PG-PJ-1-PEMD-161122-A (16K0321-17)	(Tissue)		Lab File ID: N1116121219.D					Analyzed: 12/12/16 17:29	
Naphthalene-d8	346201	5.529	461632	5.646	75	50 - 200	0.1170	+/-0.50	
Acenaphthene-d10	178528	8.465	226505	8.583	79	50 - 200	0.1180	+/-0.50	
Phenanthrene-d10	324290	11.089	397446	11.203	82	50 - 200	0.1140	+/-0.50	
Chrysene-d12	286906	15.752	362603	15.873	79	50 - 200	0.1210	+/-0.50	
Perylene-d12	274467	18.189	361091	18.331	76	50 - 200	0.1420	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Sequence: SEL0164
Instrument: NT11
Calibration: ZK00080

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SEL0164-ICV1)		(Tissue)		Lab File ID: N1116121307.D				Analyzed: 12/13/16 15:08	
Naphthalene-d8	310099	5.556	461632	5.646	67	50 - 200	0.0900	+/-0.50	
Acenaphthene-d10	178333	8.483	226505	8.583	79	50 - 200	0.1000	+/-0.50	
Phenanthrene-d10	277290	11.11	397446	11.203	70	50 - 200	0.0930	+/-0.50	
Chrysene-d12	267363	15.768	362603	15.873	74	50 - 200	0.1050	+/-0.50	
Perylene-d12	263772	18.198	361091	18.331	73	50 - 200	0.1330	+/-0.50	
PG-SMA1-2-PEMD-161122-A (16K0321-03RE1)		(Tissue)		Lab File ID: N1116121319.D				Analyzed: 12/13/16 21:04	
Naphthalene-d8	283110	5.565	461632	5.646	61	50 - 200	0.0810	+/-0.50	
Acenaphthene-d10	160729	8.484	226505	8.583	71	50 - 200	0.0990	+/-0.50	
Phenanthrene-d10	277818	11.111	397446	11.203	70	50 - 200	0.0920	+/-0.50	
Chrysene-d12	243818	15.768	362603	15.873	67	50 - 200	0.1050	+/-0.50	
Perylene-d12	248568	18.198	361091	18.331	69	50 - 200	0.1330	+/-0.50	
PG-SMA1-103-PEMD-161122-A (16K0321-06RE1		(Tissue)		Lab File ID: N1116121321.D				Analyzed: 12/13/16 22:00	
Naphthalene-d8	293444	5.565	461632	5.646	64	50 - 200	0.0810	+/-0.50	
Acenaphthene-d10	165196	8.484	226505	8.583	73	50 - 200	0.0990	+/-0.50	
Phenanthrene-d10	282288	11.121	397446	11.203	71	50 - 200	0.0820	+/-0.50	
Chrysene-d12	254313	15.768	362603	15.873	70	50 - 200	0.1050	+/-0.50	
Perylene-d12	255954	18.198	361091	18.331	71	50 - 200	0.1330	+/-0.50	
PG-SMA2-1-PEMD-161122-A (16K0321-07RE1)		(Tissue)		Lab File ID: N1116121322.D				Analyzed: 12/13/16 22:28	
Naphthalene-d8	248596	5.565	461632	5.646	54	50 - 200	0.0810	+/-0.50	
Acenaphthene-d10	141683	8.483	226505	8.583	63	50 - 200	0.1000	+/-0.50	
Phenanthrene-d10	241556	11.121	397446	11.203	61	50 - 200	0.0820	+/-0.50	
Chrysene-d12	220092	15.768	362603	15.873	61	50 - 200	0.1050	+/-0.50	
Perylene-d12	214775	18.198	361091	18.331	59	50 - 200	0.1330	+/-0.50	
PG-SMA2-2-PEMD-161122-A (16K0321-09RE1)		(Tissue)		Lab File ID: N1116121323.D				Analyzed: 12/13/16 22:56	
Naphthalene-d8	347730	5.565	461632	5.646	75	50 - 200	0.0810	+/-0.50	
Acenaphthene-d10	204854	8.483	226505	8.583	90	50 - 200	0.1000	+/-0.50	
Phenanthrene-d10	368963	11.11	397446	11.203	93	50 - 200	0.0930	+/-0.50	
Chrysene-d12	321417	15.768	362603	15.873	89	50 - 200	0.1050	+/-0.50	
Perylene-d12	320879	18.198	361091	18.331	89	50 - 200	0.1330	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0164	Instrument:	NT11
		Calibration:	ZK00080

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
PG-SMA2-102-PEMD-161122-A (16K0321-10RE1	(Tissue)		Lab File ID: N1116121324.D					Analyzed: 12/13/16 23:24	
Naphthalene-d8	260614	5.574	461632	5.646	56	50 - 200	0.0720	+/-0.50	
Acenaphthene-d10	160498	8.484	226505	8.583	71	50 - 200	0.0990	+/-0.50	
Phenanthrene-d10	289110	11.121	397446	11.203	73	50 - 200	0.0820	+/-0.50	
Chrysene-d12	246954	15.768	362603	15.873	68	50 - 200	0.1050	+/-0.50	
Perylene-d12	243107	18.198	361091	18.331	67	50 - 200	0.1330	+/-0.50	
PG-PJ-1-PEMD-161122-A (16K0321-17RE1)	(Tissue)		Lab File ID: N1116121328.D					Analyzed: 12/14/16 01:17	
Naphthalene-d8	278895	5.565	461632	5.646	60	50 - 200	0.0810	+/-0.50	
Acenaphthene-d10	155994	8.483	226505	8.583	69	50 - 200	0.1000	+/-0.50	
Phenanthrene-d10	280070	11.121	397446	11.203	70	50 - 200	0.0820	+/-0.50	
Chrysene-d12	240343	15.768	362603	15.873	66	50 - 200	0.1050	+/-0.50	
Perylene-d12	243079	18.198	361091	18.331	67	50 - 200	0.1330	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Sequence: SEL0234
Instrument: NT11
Calibration: ZK00080

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SEL0234-ICV1)		(Tissue)		Lab File ID: N1116121602.D				Analyzed: 12/16/16 09:46	
Naphthalene-d8	298197	7.234	461632	5.646	65	50 - 200	-1.5880	+/-0.50	
Acenaphthene-d10	181189	10.261	226505	8.583	80	50 - 200	-1.6780	+/-0.50	
Phenanthrene-d10	356946	12.956	397446	11.203	90	50 - 200	-1.7530	+/-0.50	
Chrysene-d12	407651	17.71	362603	15.873	112	50 - 200	-1.8370	+/-0.50	
Perylene-d12	370445	20.935	361091	18.331	103	50 - 200	-2.6040	+/-0.50	
Low Cal Check (SEL0234-LCV1)		(Tissue)		Lab File ID: N1116121603.D				Analyzed: 12/16/16 10:32	
Naphthalene-d8	279654	7.235	461632	5.646	61	50 - 200	-1.5890	+/-0.50	
Acenaphthene-d10	169743	10.261	226505	8.583	75	50 - 200	-1.6780	+/-0.50	
Phenanthrene-d10	340908	12.956	397446	11.203	86	50 - 200	-1.7530	+/-0.50	
Chrysene-d12	376384	17.71	362603	15.873	104	50 - 200	-1.8370	+/-0.50	
Perylene-d12	287131	20.945	361091	18.331	80	50 - 200	-2.6140	+/-0.50	
PG-SMA1-1-PEMD-161122-A (16K0321-01RE1)		(Tissue)		Lab File ID: N1116121604.D				Analyzed: 12/16/16 11:03	
Naphthalene-d8	273849	7.234	461632	5.646	59	50 - 200	-1.5880	+/-0.50	
Acenaphthene-d10	166043	10.26	226505	8.583	73	50 - 200	-1.6770	+/-0.50	
Phenanthrene-d10	305534	12.956	397446	11.203	77	50 - 200	-1.7530	+/-0.50	
Chrysene-d12	324188	17.71	362603	15.873	89	50 - 200	-1.8370	+/-0.50	
Perylene-d12	309708	20.935	361091	18.331	86	50 - 200	-2.6040	+/-0.50	
PG-SMA1-3-PEMD-161122-A (16K0321-05RE1)		(Tissue)		Lab File ID: N1116121605.D				Analyzed: 12/16/16 11:34	
Naphthalene-d8	304081	7.234	461632	5.646	66	50 - 200	-1.5880	+/-0.50	
Acenaphthene-d10	181564	10.26	226505	8.583	80	50 - 200	-1.6770	+/-0.50	
Phenanthrene-d10	340274	12.956	397446	11.203	86	50 - 200	-1.7530	+/-0.50	
Chrysene-d12	360048	17.71	362603	15.873	99	50 - 200	-1.8370	+/-0.50	
Perylene-d12	358361	20.935	361091	18.331	99	50 - 200	-2.6040	+/-0.50	
PG-SMA2-3-PEMD-161122-A (16K0321-11RE1)		(Tissue)		Lab File ID: N1116121606.D				Analyzed: 12/16/16 12:06	
Naphthalene-d8	305217	7.234	461632	5.646	66	50 - 200	-1.5880	+/-0.50	
Acenaphthene-d10	193760	10.26	226505	8.583	86	50 - 200	-1.6770	+/-0.50	
Phenanthrene-d10	361741	12.956	397446	11.203	91	50 - 200	-1.7530	+/-0.50	
Chrysene-d12	399507	17.71	362603	15.873	110	50 - 200	-1.8370	+/-0.50	
Perylene-d12	375409	20.935	361091	18.331	104	50 - 200	-2.6040	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Sequence: SEL0234
Instrument: NT11
Calibration: ZK00080

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
PG-SMA2-4-PEMD-161122-A (16K0321-13RE1)	(Tissue)		Lab File ID: N1116121607.D					Analyzed: 12/16/16 12:37	
Naphthalene-d8	312941	7.235	461632	5.646	68	50 - 200	-1.5890	+/-0.50	
Acenaphthene-d10	196390	10.261	226505	8.583	87	50 - 200	-1.6780	+/-0.50	
Phenanthrene-d10	364428	12.956	397446	11.203	92	50 - 200	-1.7530	+/-0.50	
Chrysene-d12	393138	17.71	362603	15.873	108	50 - 200	-1.8370	+/-0.50	
Perylene-d12	378976	20.935	361091	18.331	105	50 - 200	-2.6040	+/-0.50	
PG-SMA2-5-PEMD-161122-A (16K0321-15RE1)	(Tissue)		Lab File ID: N1116121608.D					Analyzed: 12/16/16 13:08	
Naphthalene-d8	296784	7.234	461632	5.646	64	50 - 200	-1.5880	+/-0.50	
Acenaphthene-d10	180957	10.261	226505	8.583	80	50 - 200	-1.6780	+/-0.50	
Phenanthrene-d10	360222	12.956	397446	11.203	91	50 - 200	-1.7530	+/-0.50	
Chrysene-d12	402474	17.71	362603	15.873	111	50 - 200	-1.8370	+/-0.50	
Perylene-d12	379871	20.935	361091	18.331	105	50 - 200	-2.6040	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16K0321
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Sequence:	SEL0249	Instrument:	NT11
		Calibration:	ZL00052

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SEL0249-SCV1)		(Tissue)		Lab File ID: N1116121616.D				Analyzed: 12/16/16 17:04	
Naphthalene-d8	270210	7.235	341640	7.234	79	50 - 200	-0.0010	+/-0.50	
Acenaphthene-d10	162809	10.261	209310	10.26	78	50 - 200	-0.0010	+/-0.50	
Phenanthrene-d10	315262	12.945	404977	12.956	78	50 - 200	0.0110	+/-0.50	
Chrysene-d12	378953	17.71	465046	17.71	81	50 - 200	0.0000	+/-0.50	
Perylene-d12	372273	20.935	454694	20.935	82	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Sequence: SEL0255
Instrument: NT11
Calibration: ZL00052

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SEL0255-ICV1)		(Water)		Lab File ID: N1116121702.D				Analyzed: 12/17/16 12:40	
Naphthalene-d8	268525	7.234	341640	7.234	79	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	154839	10.26	209310	10.26	74	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	304285	12.956	404977	12.956	75	50 - 200	0.0000	+/-0.50	
Chrysene-d12	359818	17.71	465046	17.71	77	50 - 200	0.0000	+/-0.50	
Perylene-d12	346172	20.935	454694	20.935	76	50 - 200	0.0000	+/-0.50	
Blank (BEK0658-BLK1)		(Tissue)		Lab File ID: N1116121704.D				Analyzed: 12/17/16 13:42	
Naphthalene-d8	510932	7.207	341640	7.234	150	50 - 200	0.0270	+/-0.50	
Acenaphthene-d10	280556	10.242	209310	10.26	134	50 - 200	0.0180	+/-0.50	
Phenanthrene-d10	544758	12.945	404977	12.956	135	50 - 200	0.0110	+/-0.50	
Chrysene-d12	556252	17.71	465046	17.71	120	50 - 200	0.0000	+/-0.50	
Perylene-d12	546798	20.945	454694	20.935	120	50 - 200	-0.0100	+/-0.50	
LCS (BEK0658-BS1)		(Tissue)		Lab File ID: N1116121705.D				Analyzed: 12/17/16 14:13	
Naphthalene-d8	478888	7.207	341640	7.234	140	50 - 200	0.0270	+/-0.50	
Acenaphthene-d10	297598	10.242	209310	10.26	142	50 - 200	0.0180	+/-0.50	
Phenanthrene-d10	577524	12.945	404977	12.956	143	50 - 200	0.0110	+/-0.50	
Chrysene-d12	559121	17.71	465046	17.71	120	50 - 200	0.0000	+/-0.50	
Perylene-d12	556541	20.935	454694	20.935	122	50 - 200	0.0000	+/-0.50	
PG-GP-1-PEMD-161122-A (16K0321-19)		(Tissue)		Lab File ID: N1116121706.D				Analyzed: 12/17/16 14:44	
Naphthalene-d8	478786	7.207	341640	7.234	140	50 - 200	0.0270	+/-0.50	
Acenaphthene-d10	290067	10.242	209310	10.26	139	50 - 200	0.0180	+/-0.50	
Phenanthrene-d10	594912	12.945	404977	12.956	147	50 - 200	0.0110	+/-0.50	
Chrysene-d12	550024	17.71	465046	17.71	118	50 - 200	0.0000	+/-0.50	
Perylene-d12	545617	20.945	454694	20.935	120	50 - 200	-0.0100	+/-0.50	
PG-WS-1-PEMD-161122-A (16K0321-21)		(Tissue)		Lab File ID: N1116121707.D				Analyzed: 12/17/16 15:15	
Naphthalene-d8	437732	7.216	341640	7.234	128	50 - 200	0.0180	+/-0.50	
Acenaphthene-d10	271251	10.251	209310	10.26	130	50 - 200	0.0090	+/-0.50	
Phenanthrene-d10	531000	12.945	404977	12.956	131	50 - 200	0.0110	+/-0.50	
Chrysene-d12	501826	17.71	465046	17.71	108	50 - 200	0.0000	+/-0.50	
Perylene-d12	495091	20.945	454694	20.935	109	50 - 200	-0.0100	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Sequence: SEL0255
Instrument: NT11
Calibration: ZL00052

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
PG-FB-SMA1-PEMD-161122 (16K0321-23)		(Tissue)		Lab File ID: N1116121708.D				Analyzed: 12/17/16 15:46	
Naphthalene-d8	353447	7.207	341640	7.234	103	50 - 200	0.0270	+/-0.50	
Acenaphthene-d10	217745	10.252	209310	10.26	104	50 - 200	0.0080	+/-0.50	
Phenanthrene-d10	468182	12.945	404977	12.956	116	50 - 200	0.0110	+/-0.50	
Chrysene-d12	425443	17.71	465046	17.71	91	50 - 200	0.0000	+/-0.50	
Perylene-d12	406802	20.945	454694	20.935	89	50 - 200	-0.0100	+/-0.50	
PG-FB-SMA2-PEMD-161122 (16K0321-24)		(Tissue)		Lab File ID: N1116121709.D				Analyzed: 12/17/16 16:17	
Naphthalene-d8	373113	7.207	341640	7.234	109	50 - 200	0.0270	+/-0.50	
Acenaphthene-d10	224239	10.252	209310	10.26	107	50 - 200	0.0080	+/-0.50	
Phenanthrene-d10	481831	12.945	404977	12.956	119	50 - 200	0.0110	+/-0.50	
Chrysene-d12	421388	17.71	465046	17.71	91	50 - 200	0.0000	+/-0.50	
Perylene-d12	402590	20.945	454694	20.935	89	50 - 200	-0.0100	+/-0.50	
PG-TB-PEMD-161122 (16K0321-25)		(Tissue)		Lab File ID: N1116121710.D				Analyzed: 12/17/16 16:48	
Naphthalene-d8	374048	7.207	341640	7.234	109	50 - 200	0.0270	+/-0.50	
Acenaphthene-d10	227260	10.251	209310	10.26	109	50 - 200	0.0090	+/-0.50	
Phenanthrene-d10	486646	12.945	404977	12.956	120	50 - 200	0.0110	+/-0.50	
Chrysene-d12	429059	17.71	465046	17.71	92	50 - 200	0.0000	+/-0.50	
Perylene-d12	394062	20.945	454694	20.935	87	50 - 200	-0.0100	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMD)
Sequence: SEL0277
Instrument: NT11
Calibration: ZL00052

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SEL0277-ICV1)		(Tissue)		Lab File ID: N1116122002.D				Analyzed: 12/20/16 09:45	
Naphthalene-d8	366554	7.234	341640	7.234	107	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	218190	10.26	209310	10.26	104	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	440615	12.956	404977	12.956	109	50 - 200	0.0000	+/-0.50	
Chrysene-d12	508409	17.718	465046	17.71	109	50 - 200	-0.0080	+/-0.50	
Perylene-d12	465673	20.945	454694	20.935	102	50 - 200	-0.0100	+/-0.50	
PG-GP-1-PEMD-161122-A (16K0321-19RE1)		(Tissue)		Lab File ID: N1116122003.D				Analyzed: 12/20/16 10:16	
Naphthalene-d8	357097	7.234	341640	7.234	105	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	204920	10.261	209310	10.26	98	50 - 200	-0.0010	+/-0.50	
Phenanthrene-d10	388019	12.956	404977	12.956	96	50 - 200	0.0000	+/-0.50	
Chrysene-d12	425462	17.718	465046	17.71	91	50 - 200	-0.0080	+/-0.50	
Perylene-d12	395534	20.945	454694	20.935	87	50 - 200	-0.0100	+/-0.50	
PG-WS-1-PEMD-161122-A (16K0321-21RE1)		(Tissue)		Lab File ID: N1116122004.D				Analyzed: 12/20/16 10:47	
Naphthalene-d8	371019	7.234	341640	7.234	109	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	212373	10.26	209310	10.26	101	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	403612	12.956	404977	12.956	100	50 - 200	0.0000	+/-0.50	
Chrysene-d12	434416	17.71	465046	17.71	93	50 - 200	0.0000	+/-0.50	
Perylene-d12	402124	20.945	454694	20.935	88	50 - 200	-0.0100	+/-0.50	

Analytical Resources, Incorporated

HOLDING TIME SUMMARY

Analysis: EPA 8270D-SIM

Laboratory: Analytical Resources, Inc. SDG: 16K0321

Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring (PEMD)

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
PG-SMA1-1-PEMD-161122-A 16K0321-01	11/22/16 11:31	11/22/16 17:56	11/24/16 08:25	1	14	12/12/16 12:28	18	40	
PG-SMA1-1-PEMD-161122-A 16K0321-01RE1	11/22/16 11:31	11/22/16 17:56	11/24/16 08:25	1	14	12/16/16 11:03	22	40	
PG-SMA1-2-PEMD-161122-A 16K0321-03	11/22/16 11:47	11/22/16 17:56	11/24/16 08:25	1	14	12/12/16 12:58	18	40	
PG-SMA1-2-PEMD-161122-A 16K0321-03RE1	11/22/16 11:47	11/22/16 17:56	11/24/16 08:25	1	14	12/13/16 21:04	20	40	
PG-SMA1-3-PEMD-161122-A 16K0321-05	11/22/16 12:10	11/22/16 17:56	11/24/16 08:25	1	14	12/12/16 13:28	18	40	
PG-SMA1-3-PEMD-161122-A 16K0321-05RE1	11/22/16 12:10	11/22/16 17:56	11/24/16 08:25	1	14	12/16/16 11:34	22	40	
PG-SMA1-103-PEMD-161122-A 16K0321-06	11/22/16 12:10	11/22/16 17:56	11/24/16 08:25	1	14	12/12/16 13:58	18	40	
PG-SMA1-103-PEMD-161122-A 16K0321-06RE1	11/22/16 12:10	11/22/16 17:56	11/24/16 08:25	1	14	12/13/16 22:00	20	40	
PG-SMA2-1-PEMD-161122-A 16K0321-07	11/22/16 10:53	11/22/16 17:56	11/24/16 08:25	1	14	12/12/16 14:28	18	40	
PG-SMA2-1-PEMD-161122-A 16K0321-07RE1	11/22/16 10:53	11/22/16 17:56	11/24/16 08:25	1	14	12/13/16 22:28	20	40	
PG-SMA2-2-PEMD-161122-A 16K0321-09	11/22/16 10:26	11/22/16 17:56	11/24/16 08:25	1	14	12/12/16 14:59	18	40	
PG-SMA2-2-PEMD-161122-A 16K0321-09RE1	11/22/16 10:26	11/22/16 17:56	11/24/16 08:25	1	14	12/13/16 22:56	20	40	
PG-SMA2-102-PEMD-161122-A 16K0321-10	11/22/16 10:26	11/22/16 17:56	11/24/16 08:25	1	14	12/12/16 15:29	18	40	
PG-SMA2-102-PEMD-161122-A 16K0321-10RE1	11/22/16 10:26	11/22/16 17:56	11/24/16 08:25	1	14	12/13/16 23:24	20	40	
PG-SMA2-3-PEMD-161122-A 16K0321-11	11/22/16 09:45	11/22/16 17:56	11/24/16 08:25	1	14	12/12/16 15:59	18	40	
PG-SMA2-3-PEMD-161122-A 16K0321-11RE1	11/22/16 09:45	11/22/16 17:56	11/24/16 08:25	1	14	12/16/16 12:06	22	40	
PG-SMA2-4-PEMD-161122-A 16K0321-13	11/22/16 09:20	11/22/16 17:56	11/24/16 08:25	1	14	12/12/16 16:29	18	40	
PG-SMA2-4-PEMD-161122-A 16K0321-13RE1	11/22/16 09:20	11/22/16 17:56	11/24/16 08:25	1	14	12/16/16 12:37	22	40	
PG-SMA2-5-PEMD-161122-A 16K0321-15	11/22/16 08:57	11/22/16 17:56	11/24/16 08:25	1	14	12/12/16 16:59	18	40	
PG-SMA2-5-PEMD-161122-A 16K0321-15RE1	11/22/16 08:57	11/22/16 17:56	11/24/16 08:25	1	14	12/16/16 13:08	22	40	
PG-PJ-1-PEMD-161122-A 16K0321-17	11/22/16 12:35	11/22/16 17:56	11/24/16 08:25	1	14	12/12/16 17:29	18	40	
PG-PJ-1-PEMD-161122-A 16K0321-17RE1	11/22/16 12:35	11/22/16 17:56	11/24/16 08:25	1	14	12/14/16 01:17	20	40	
PG-GP-1-PEMD-161122-A 16K0321-19	11/22/16 12:53	11/22/16 17:56	11/24/16 08:25	1	14	12/17/16 14:44	23	40	
PG-GP-1-PEMD-161122-A 16K0321-19RE1	11/22/16 12:53	11/22/16 17:56	11/24/16 08:25	1	14	12/20/16 10:16	26	40	

Analytical Resources, Incorporated

HOLDING TIME SUMMARY

Analysis: EPA 8270D-SIM

Laboratory: Analytical Resources, Inc. SDG: 16K0321

Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring (PEMD)

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
PG-WS-1-PEMD-161122-A 16K0321-21	11/22/16 13:16	11/22/16 17:56	11/24/16 08:25	1	14	12/17/16 15:15	23	40	
PG-WS-1-PEMD-161122-A 16K0321-21RE1	11/22/16 13:16	11/22/16 17:56	11/24/16 08:25	1	14	12/20/16 10:47	26	40	
PG-FB-SMA1-PEMD-161122 16K0321-23	11/22/16 12:10	11/22/16 17:56	11/24/16 08:25	1	14	12/17/16 15:46	23	40	
PG-FB-SMA2-PEMD-161122 16K0321-24	11/22/16 09:50	11/22/16 17:56	11/24/16 08:25	1	14	12/17/16 16:17	23	40	
PG-TB-PEMD-161122 16K0321-25	11/22/16 13:20	11/22/16 17:56	11/24/16 08:25	1	14	12/17/16 16:48	23	40	

* Indicates hold time exceedance.

Analytical Resources, Incorporated

METHOD DETECTION AND REPORTING LIMITS

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
SDG: 16K0321
Client: Anchor QEA, LLC
Project: Port Gamble Shellfish Monitoring (PEMI
Matrix: Tissue
Instrument: NT11

Analyte	MDL	RL	Units
Naphthalene	0.50	0.60	ug/kg
2-Methylnaphthalene	0.50	0.50	ug/kg
Acenaphthylene	0.50	0.50	ug/kg
Acenaphthene	0.50	0.50	ug/kg
Fluorene	0.50	0.50	ug/kg
Phenanthrene	0.50	0.50	ug/kg
Anthracene	0.50	0.50	ug/kg
Fluoranthene	0.50	0.50	ug/kg
Pyrene	0.50	0.50	ug/kg
Benzo(a)anthracene	0.50	0.50	ug/kg
Chrysene	0.50	0.50	ug/kg
Benzo(b)fluoranthene	0.50	0.50	ug/kg
Benzo(k)fluoranthene	0.50	0.50	ug/kg
Benzo(e)pyrene	0.50	0.50	ug/kg
Benzo(a)pyrene	0.50	0.50	ug/kg
Indeno(1,2,3-cd)pyrene	0.50	0.50	ug/kg
Dibenzo(a,h)anthracene	0.50	0.50	ug/kg
Benzo(g,h,i)perylene	0.50	0.50	ug/kg
Perylene	0.50	0.50	ug/kg

Analytical Resources, Incorporated
Analytical Chemists and Consultants

06 March 2017

Nathan Soccorsy
Anchor QEA, LLC
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Port Gamble Shellfish Monitoring

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)
17A0053	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 reqirements 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 For Cheronne Oreiro, 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

PJLA Testing
Accreditation # 66169

Anchor QEA, LLC	Project: Port Gamble Shellfish Monitoring	
720 Olive Way, Suite 1900	Project Number: [none]	**Reported:**
Seattle, WA 98101	Project Manager: Nathan Soccorsy	06-Mar-2017 14:33

Case Narrative

Sample Receipt

Eleven tissue samples were received January 6, 2017 under ARI workorder 17A0053. For details regarding sample receipt, please refer to the Cooler Receipt Form. The samples were prepped in the lab on January 30, 2017. Samples PG-SMA1-2-MUS-170105 and PG-SMA1-3-MUS-170105 were composited in the lab to make sample PG-SMA1-2-3-MUS-170105, which was used for analysis.

Dioxin/Furans - EPA Method 1613

Due to low matrix recovery for the samples, all samples except PG-WS-1-MUS-170105, and PG-SMA1-2-3-MUS-170105 were re-extracted. Samples PG-WS-1-MUS-170105 and PG-SMA1-2-3-MUS-170105 were reported as is per the client.

The samples were extracted and analyzed within the recommended holding times. Analysis was performed using an application specific column recently developed by Restek. The RTX-DIoxin2 column has unique isomer separation for the 2378-TCDF, eliminating the need for confirmation analysis.

Initial and continuing calibrations were within method requirements.

Labeled internal standard areas were within limits.

The all cleanup surrogate percent recoveries were out of control low for samples PG-GP-1-MUS-170105, and PG-SMA1-2-3-MUS-170105. Except 13C12-2,3,4,7,8-PeCDF for sample PG-GP-1-MUS-170105,and 37C14-2,3,7,8-TCDD for both samples. These samples were not re-extracted due to limited sample volume. Sample PG-SMA2-4-MUS-1-170105 has low surrogate percent recoveries for 13C12-1,2,3,4,6,7,8-HpCFD, 13C12-1,2,3,4,7,8-HxCDD, and 13C12-3,4,6,7,8-HxCDF. All other re-extract sample surrogate recoveries were within control limits. No further actions were taken.

The method blank BFA0657 has various analyte contamination. All of these analytes have been flagged with an “J” qualifier on the method blank, all associated samples that contain these anlaytes have been flagged with an “B” qualifier. Method blank BFB0538 also has various analyte contamination. All of these analytes have been flagged with “J” qualifiers on the blank, and all associated samples that contain the analytes have been flagged with an “B” qualifier. No further actions were taken.

Anchor QEA, LLC	Project: Port Gamble Shellfish Monitoring	
720 Olive Way, Suite 1900	Project Number: [none]	**Reported:**
Seattle, WA 98101	Project Manager: Nathan Soccorsy	06-Mar-2017 14:33

The OPR (Ongoing Precision and Recovery) standard percent recoveries were within control limits.

Polynuclear Aromatic Hydrocarbons (PAH) - EPA Method SW8270D-SIM

The sample 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.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

A matrix spike and matrix spike duplicate were prepared in conjunction with sample PG-SMA2-1-MUS-170105.The matrix spike BFA0647 has low percent recoveries for Naphthalene, Fluoranthene, and benzo(a)thiophene. The matrix spike duplicate has high RPD's for all analytes. This indicates an overall loss while processing extracts. All percent recoveries and RPDs are advisory for a tissue matrix. No further actions were taken.

Total Cadmium - EPA Method 6010C

Sample PG-GP-1-MUS-1701105 was consumed before the metals analysis was reached.

The samples were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank BFA0668 has Cadmium contamination below the reporting limit. The Cadmium has been flagged with an "J" qualifier on the method blank. No further actions were taken.

Anchor QEA, LLC	Project: Port Gamble Shellfish Monitoring	
720 Olive Way, Suite 1900	Project Number: [none]	**Reported:**
Seattle, WA 98101	Project Manager: Nathan Soccorsy	06-Mar-2017 14:33

The LCS percent recoveries were within control limits.

A matrix spike, and a matrix duplicate were prepared in conjunction with sample PG-SMA2-2-MUS-170105. The matrix spike percent recovery and matrix duplicate RPD were within control limits.

Percent Lipids

The sample were prepared and analyzed within the recommended holding times.

The method blank was free of contaminates.

A matrix duplicate was prepared in conjunction with sample PG-SMA2-2-MUS-170105. The matrix duplicate RPD was within control limits.

17A0053

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number:

Date: January 05, 2017
Project Name: Port Gamble Bay Shellfish Monitoring
Project Number: 160388-01.01
Project Manager: Nathan Soccorsy
Phone Number: 206.287.9130
Shipment Method:

ANCHOR QEA

Line	Field Sample ID	Collection Date/Time	Matrix	Containers	Lipids	PAHs	Dioxin/Furans	Cadmium	PCB Congeners	Comments/Preservation
1	PG-SMA1-1-MUS-170105	01/05/17 1015	Tissue	1	x	x	x	x	x	
2	PG-SMA1-2-MUS-170105	01/05/17 1045	Tissue	1	x	x	x	x	x	
3	PG-SMA1-3-MUS-170105	01/05/17 1115	Tissue	1	x	x	x	x	x	
4	PG-SMA2-1-MUS-170105	01/05/17 1302	Tissue	1	x	x	x	x	x	
5	PG-SMA2-2-MUS-170105	01/05/17 1250	Tissue	1	x	x	x	x	x	
6	PG-SMA2-3-MUS-170105	01/05/17 1240	Tissue	1	x	x	x	x	x	
7	PG-SMA2-4-MUS-170105	01/05/17 1230	Tissue	1	x	x	x	x	x	
8	PG-SMA2-5-MUS-170105	01/05/17 1220	Tissue	1	x	x	x	x	x	
9	PG-PJ-1-MUS-170105	01/05/17 1453	Tissue	1	x	x	x	x	x	
10	PG-GP-1-MUS-170105	01/05/17 1443	Tissue	1	x	x	x	x	x	
11	PG-WS-1-MUS-170105	01/05/17 1435	Tissue	1	x	x	x	x	x	
12	PG-SMA1-10 -MUS-170105	01/05/17	Tissue	1	x	x	x	x	x	
13										
14										
15										

Notes:

Relinquished By: Alexandra Kapoff — Company: Anchor QEA, LLC — 1/6/17 1603
Signature/Printed Name — Date/Time

Received By: — Company:
Signature/Printed Name — Date/Time

Relinquished By: Paul Mark — Company: ARI — 1/6/17 1603
Signature/Printed Name — Date/Time

Received By: — Company:
Signature/Printed Name — Date/Time

5

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor QEA

Project Name: Port Gamble Bay Shellfish Monitoring

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: _____

Assigned ARI Job No: 17A0053

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to 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) 1.3

Time: _____

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: D005276

Cooler Accepted by: PM Date: 01/06/2017 Time: 16:11

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
Were all bottles sealed in individual plastic bags?		YES	(NO)
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?	PM	(YES)	(NO)
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

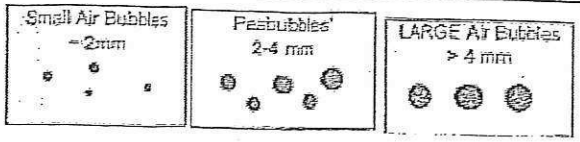
Samples Logged by: PM Date: 01/06/2017 Time: 16:15

*** 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:



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Analytical Resources, Incorporated

Internal Chain of Custody

Client:	Anchor QEA, LLC	Received:	06-Jan-2017 16:03
Project:	Port Gamble Shellfish Monitoring	Received By:	Paul Mork
Number:	[none]	Temp (°C):	1.30

17A0053-01 (PG-SMA1-1-MUS-170105) Sampled 01/05/2017 10:15

Current Status	*Out*	*Location*	*In*
17A0053-01 A [Glass WM, Clear, 16 oz]			*Hazard Info:*
Sample Receiving	01/06/2017 16:25 by PAM	***START***	01/06/2017 16:25 by PAM
	01/06/2017 16:25 by PAM	***START***	01/06/2017 16:25 by PAM
	01/06/2017 16:25 by PAM	***START***	01/06/2017 16:25 by PAM
	01/06/2017 16:25 by PAM	***START***	01/06/2017 16:25 by PAM
Extractions	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
Organics	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
Sample Receiving	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
Extractions	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
Sample Receiving	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
17A0053-01 B [Glass WM, Clear, 4 oz]			*Hazard Info:*
Sample Receiving	01/31/2017 09:00 by PAM	***START***	01/31/2017 09:00 by PAM

17A0053-02 (PG-SMA1-2-MUS-170105) Sampled 01/05/2017 10:45

Current Status	*Out*	*Location*	*In*
17A0053-02 A [Ziploc Bag, Gallon]			*Hazard Info:*
Sample Receiving	01/06/2017 16:26 by PAM	***START***	01/06/2017 16:26 by PAM
Extractions	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
Organics	01/31/2017 14:40 by JLW	Consumed	by

17A0053-03 (PG-SMA1-3-MUS-170105) Sampled 01/05/2017 11:15

Current Status	*Out*	*Location*	*In*
17A0053-03 A [Ziploc Bag, Gallon]			*Hazard Info:*
Sample Receiving	01/06/2017 16:26 by PAM	***START***	01/06/2017 16:26 by PAM
Extractions	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
Organics	01/31/2017 14:40 by JLW	Consumed	by

Analytical Resources, Incorporated

Internal Chain of Custody

Client:	Anchor QEA, LLC	Received:	06-Jan-2017 16:03
Project:	Port Gamble Shellfish Monitoring	Received By:	Paul Mork
Number:	[none]	Temp (°C):	1.30

17A0053-04 (PG-SMA2-1-MUS-170105) Sampled 01/05/2017 13:02

Current Status	*Out*	*Location*	*In*
17A0053-04 A [Glass WM, Clear, 16 oz]			*Hazard Info:*
Sample Receiving	01/06/2017 16:26 by PAM	***START***	01/06/2017 16:26 by PAM
	01/06/2017 16:26 by PAM	***START***	01/06/2017 16:26 by PAM
	01/06/2017 16:26 by PAM	***START***	01/06/2017 16:26 by PAM
	01/06/2017 16:26 by PAM	***START***	01/06/2017 16:26 by PAM
Extractions	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
Organics	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
Sample Receiving	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
Extractions	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
Sample Receiving	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
17A0053-04 B [Glass WM, Clear, 4 oz]			*Hazard Info:*
Sample Receiving	01/31/2017 09:00 by PAM	***START***	01/31/2017 09:00 by PAM

17A0053-05 (PG-SMA2-2-MUS-170105) Sampled 01/05/2017 12:50

Current Status	*Out*	*Location*	*In*
17A0053-05 A [Glass WM, Clear, 16 oz]			*Hazard Info:*
Sample Receiving	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
Extractions	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
Organics	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL

Analytical Resources, Incorporated

Internal Chain of Custody

Client:	Anchor QEA, LLC	Received:	06-Jan-2017 16:03
Project:	Port Gamble Shellfish Monitoring	Received By:	Paul Mork
Number:	[none]	Temp (°C):	1.30

17A0053-05 (PG-SMA2-2-MUS-170105) Sampled 01/05/2017 12:50

Current Status	*Out*	*Location*	*In*
17A0053-05 A [Glass WM, Clear, 16 oz]			*Hazard Info:*
Organics	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
Sample Receiving	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
Extractions	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
Sample Receiving	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
17A0053-05 B [Glass WM, Clear, 4 oz]			*Hazard Info:*
Sample Receiving	01/31/2017 09:00 by PAM	***START***	01/31/2017 09:00 by PAM

17A0053-06 (PG-SMA2-3-MUS-170105) Sampled 01/05/2017 12:40

Current Status	*Out*	*Location*	*In*
17A0053-06 A [Glass WM, Clear, 16 oz]			*Hazard Info:Percent Lipids [1.216601%]*
Sample Receiving	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
Extractions	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
Organics	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
Sample Receiving	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM

Analytical Resources, Incorporated

Internal Chain of Custody

Client:	Anchor QEA, LLC	Received:	06-Jan-2017 16:03
Project:	Port Gamble Shellfish Monitoring	Received By:	Paul Mork
Number:	[none]	Temp (°C):	1.30

17A0053-06 (PG-SMA2-3-MUS-170105) Sampled 01/05/2017 12:40

Current Status	*Out*	*Location*	*In*
17A0053-06 A [Glass WM, Clear, 16 oz]			*Hazard Info:Percent Lipids [1.216601%]*
Extractions	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
Sample Receiving	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
17A0053-06 B [Glass WM, Clear, 4 oz]			*Hazard Info:Percent Lipids [1.216601%]*
Sample Receiving	01/31/2017 09:00 by PAM	***START***	01/31/2017 09:00 by PAM

17A0053-07 (PG-SMA2-4-MUS-170105) Sampled 01/05/2017 12:30

Current Status	*Out*	*Location*	*In*
17A0053-07 A [Glass WM, Clear, 16 oz]			*Hazard Info:Percent Lipids [1.059825%]*
Sample Receiving	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
Extractions	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
Organics	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
Sample Receiving	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
	02/17/2017 09:56 by PAM	F-51 E5-5	02/17/2017 09:56 by PAM
Extractions	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
Sample Receiving	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
	02/22/2017 10:02 by PAM	Dioxin Lab	02/22/2017 10:02 by PAM
17A0053-07 B [Glass WM, Clear, 4 oz]			*Hazard Info:Percent Lipids [1.059825%]*
Sample Receiving	01/31/2017 09:00 by PAM	***START***	01/31/2017 09:00 by PAM

Analytical Resources, Incorporated

Internal Chain of Custody

Client:	Anchor QEA, LLC	Received:	06-Jan-2017 16:03
Project:	Port Gamble Shellfish Monitoring	Received By:	Paul Mork
Number:	[none]	Temp (°C):	1.30

17A0053-08 (PG-SMA2-5-MUS-170105) Sampled 01/05/2017 12:20

Current Status	*Out*	*Location*	*In*
17A0053-08 A [Glass WM, Clear, 16 oz]			*Hazard Info:Percent Lipids [1.287649%]*
Sample Receiving	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
	01/06/2017 16:27 by PAM	***START***	01/06/2017 16:27 by PAM
Extractions	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
Organics	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
Sample Receiving	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/17/2017 09:57 by PAM	F-51 E5-5	02/17/2017 09:57 by PAM
	02/17/2017 09:57 by PAM	F-51 E5-5	02/17/2017 09:57 by PAM
	02/17/2017 09:57 by PAM	F-51 E5-5	02/17/2017 09:57 by PAM
	02/17/2017 09:57 by PAM	F-51 E5-5	02/17/2017 09:57 by PAM
Extractions	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
Sample Receiving	02/22/2017 10:03 by PAM	Dioxin Lab	02/22/2017 10:03 by PAM
	02/22/2017 10:03 by PAM	Dioxin Lab	02/22/2017 10:03 by PAM
	02/22/2017 10:03 by PAM	Dioxin Lab	02/22/2017 10:03 by PAM
	02/22/2017 10:03 by PAM	Dioxin Lab	02/22/2017 10:03 by PAM
17A0053-08 B [Glass WM, Clear, 4 oz]			*Hazard Info:Percent Lipids [1.287649%]*
Sample Receiving	01/31/2017 09:00 by PAM	***START***	01/31/2017 09:00 by PAM

17A0053-09 (PG-PJ-1-MUS-170105) Sampled 01/05/2017 14:53

Current Status	*Out*	*Location*	*In*
17A0053-09 A [Glass WM, Clear, 16 oz]			*Hazard Info:Percent Lipids [1.231213%]*
Sample Receiving	01/06/2017 16:28 by PAM	***START***	01/06/2017 16:28 by PAM
	01/06/2017 16:28 by PAM	***START***	01/06/2017 16:28 by PAM
	01/06/2017 16:28 by PAM	***START***	01/06/2017 16:28 by PAM
	01/06/2017 16:28 by PAM	***START***	01/06/2017 16:28 by PAM
Extractions	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
Organics	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL

Analytical Resources, Incorporated

Internal Chain of Custody

Client:	Anchor QEA, LLC	Received:	06-Jan-2017 16:03
Project:	Port Gamble Shellfish Monitoring	Received By:	Paul Mork
Number:	[none]	Temp (°C):	1.30

17A0053-09 (PG-PJ-1-MUS-170105) Sampled 01/05/2017 14:53

Current Status	*Out*	*Location*	*In*
17A0053-09 A [Glass WM, Clear, 16 oz]			*Hazard Info:Percent Lipids [1.231213%]*
Organics	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
Sample Receiving	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/17/2017 09:58 by PAM	F-51 E5-5	02/17/2017 09:58 by PAM
	02/17/2017 09:58 by PAM	F-51 E5-5	02/17/2017 09:58 by PAM
	02/17/2017 09:58 by PAM	F-51 E5-5	02/17/2017 09:58 by PAM
	02/17/2017 09:58 by PAM	F-51 E5-5	02/17/2017 09:58 by PAM
Extractions	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
Sample Receiving	02/22/2017 10:03 by PAM	Dioxin Lab	02/22/2017 10:03 by PAM
	02/22/2017 10:03 by PAM	Dioxin Lab	02/22/2017 10:03 by PAM
	02/22/2017 10:03 by PAM	Dioxin Lab	02/22/2017 10:03 by PAM
	02/22/2017 10:03 by PAM	Dioxin Lab	02/22/2017 10:03 by PAM
17A0053-09 B [Glass WM, Clear, 4 oz]			*Hazard Info:Percent Lipids [1.231213%]*
Sample Receiving	01/31/2017 09:01 by PAM	***START***	01/31/2017 09:01 by PAM

17A0053-10 (PG-GP-1-MUS-170105) Sampled 01/05/2017 14:43

Current Status	*Out*	*Location*	*In*
17A0053-10 A [Glass WM, Clear, 16 oz]			*Hazard Info:Percent Lipids [1.193726%]*
Sample Receiving	01/06/2017 16:28 by PAM	***START***	01/06/2017 16:28 by PAM
	01/06/2017 16:28 by PAM	***START***	01/06/2017 16:28 by PAM
	01/06/2017 16:28 by PAM	***START***	01/06/2017 16:28 by PAM
	01/06/2017 16:28 by PAM	***START***	01/06/2017 16:28 by PAM
	01/06/2017 16:28 by PAM	***START***	01/06/2017 16:28 by PAM
Extractions	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
Organics	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/31/2017 14:40 by JLW	Consumed	by
	01/31/2017 14:40 by JLW	Consumed	by
	01/31/2017 14:40 by JLW	Consumed	by
	01/31/2017 14:40 by JLW	Consumed	by
	01/31/2017 14:40 by JLW	Consumed	by

Analytical Resources, Incorporated

Internal Chain of Custody

Client:	Anchor QEA, LLC	Received:	06-Jan-2017 16:03
Project:	Port Gamble Shellfish Monitoring	Received By:	Paul Mork
Number:	[none]	Temp (°C):	1.30

17A0053-11 (PG-WS-1-MUS-170105) Sampled 01/05/2017 14:35

Current Status	*Out*	*Location*	*In*
17A0053-11 A [Glass WM, Clear, 16 oz]			*Hazard Info:Percent Lipids [1.250973%]*
Sample Receiving	01/06/2017 16:29 by PAM	***START***	01/06/2017 16:29 by PAM
	01/06/2017 16:29 by PAM	***START***	01/06/2017 16:29 by PAM
	01/06/2017 16:29 by PAM	***START***	01/06/2017 16:29 by PAM
	01/06/2017 16:29 by PAM	***START***	01/06/2017 16:29 by PAM
Extractions	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
	01/09/2017 18:25 by WPW	Organic Extractions	01/10/2017 16:34 by WPW
Organics	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
	01/30/2017 16:01 by JLW	R-05 M05 Ext	01/31/2017 12:59 by YQL
Sample Receiving	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/01/2017 10:00 by PAM	F-05	02/01/2017 10:00 by PAM
	02/17/2017 09:58 by PAM	F-51 E5-5	02/17/2017 09:58 by PAM
	02/17/2017 09:58 by PAM	F-51 E5-5	02/17/2017 09:58 by PAM
	02/17/2017 09:58 by PAM	F-51 E5-5	02/17/2017 09:58 by PAM
	02/17/2017 09:58 by PAM	F-51 E5-5	02/17/2017 09:58 by PAM
Extractions	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
	02/22/2017 06:32 by NPL	Dioxin Lab	by
Sample Receiving	02/22/2017 10:03 by PAM	Dioxin Lab	02/22/2017 10:03 by PAM
	02/22/2017 10:03 by PAM	Dioxin Lab	02/22/2017 10:03 by PAM
	02/22/2017 10:03 by PAM	Dioxin Lab	02/22/2017 10:03 by PAM
	02/22/2017 10:03 by PAM	Dioxin Lab	02/22/2017 10:03 by PAM
17A0053-11 B [Glass WM, Clear, 4 oz]			*Hazard Info:Percent Lipids [1.250973%]*
Sample Receiving	01/31/2017 09:01 by PAM	***START***	01/31/2017 09:01 by PAM

17A0053-12 (PG-SMA1-2-3-MUS-170105) Sampled 01/05/2017 00:00

Current Status	*Out*	*Location*	*In*
17A0053-12 A [Glass WM, Clear, 16 oz]			*Hazard Info:Percent Lipids [1.265217%]*
Sample Receiving	01/31/2017 08:59 by PAM	***START***	01/31/2017 08:59 by PAM
	01/31/2017 08:59 by PAM	***START***	01/31/2017 08:59 by PAM
	01/31/2017 08:59 by PAM	***START***	01/31/2017 08:59 by PAM
Organics	01/31/2017 14:40 by JLW	Consumed	by
	01/31/2017 14:40 by JLW	Consumed	by
	01/31/2017 14:40 by JLW	Consumed	by
17A0053-12 B [Glass WM, Clear, 4 oz]			*Hazard Info:Percent Lipids [1.265217%]*
Sample Receiving	01/31/2017 09:01 by PAM	***START***	01/31/2017 09:01 by PAM

QUALIFIERS AND NOTES

Qualifier	Definition
U	This analyte is not detected above the applicable reporting or detection limit.
J	Estimated concentration value detected below the reporting limit.
EMPC	Estimated Maximum Possible Concentration qualifier for HRGCMS Dioxin
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
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

PG-SMA1-1-MUS-170105

Form I
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	17A0053
Client:	Anchor QEA, LLC			Project:	Port Gamble Shellfish Monitoring
Matrix:	Tissue	Laboratory ID:	17A0053-01RE1	File ID:	17022407
Sampled:	01/05/17 10:15	Prepared:	02/22/17 12:00	Analyzed:	02/24/17 18:32
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	10.03 g / 20 uL
Result Basis:	Dry	Sequence:	SFB0342	Calibration:	AA00071
Batch:	BFB0538	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.660	0.655-0.886		0.997	0.153	ng/kg	J
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.106	0.997	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	0.088	4.99	ND	ng/kg	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.084	4.99	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.094	4.99	ND	ng/kg	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.000	1.054-1.426	0.066	4.99	ND	ng/kg	U
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.066	4.99	ND	ng/kg	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.065	4.99	ND	ng/kg	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	0.748	1.054-1.426		4.99	0.074	ng/kg	EMPC, J, B
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.112	4.99	ND	ng/kg	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.111	4.99	ND	ng/kg	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	0.000	1.054-1.426	0.116	4.99	ND	ng/kg	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.803	0.893-1.208		4.99	0.137	ng/kg	EMPC, J, B
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	0.050	4.99	ND	ng/kg	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	0.917	0.893-1.208		4.99	0.649	ng/kg	J, B
39001-02-0	OCDF	1	0.946	0.757-1.024		9.97	0.424	ng/kg	J, B
3268-87-9	OCDD	1	0.780	0.757-1.024		9.97	4.90	ng/kg	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			0.997	0.400	ng/kg
41903-57-5	Total TCDD	1	0.000			0.997	0.153	ng/kg
30402-15-4	Total PeCDF	1	0.000			0.997	ND	ng/kg
36088-22-9	Total PeCDD	1	0.000			0.997	ND	ng/kg
55684-94-1	Total HxCDF	1	0.000			0.997	0.074	ng/kg
34465-46-8	Total HxCDD	1	0.000			0.997	ND	ng/kg
38998-75-3	Total HpCDF	1	0.000			0.997	0.344	ng/kg
37871-00-4	Total HpCDD	1	0.000			0.997	2.08	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.032
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.032

PG-SMA1-1-MUS-170105

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	17A0053
Client:	Anchor QEA, LLC			Project:	Port Gamble Shellfish Monitoring
Matrix:	Tissue	Laboratory ID:	17A0053-01RE1	File ID:	17022407
Sampled:	01/05/17 10:15	Prepared:	02/22/17 12:00	Analyzed:	02/24/17 18:32
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	10.03 g / 20 uL
Result Basis:	Dry	Sequence:	SFB0342	Calibration:	AA00071
Batch:	BFB0538	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.769	0.655-0.886		59.1	24 - 169 %	
13C12-2,3,7,8-TCDD		0.791	0.655-0.886		62.1	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.565	1.318-1.783		59.1	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.577	1.318-1.783		63.0	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.555	1.318-1.783		63.8	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.520	0.434-0.587		50.6	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.521	0.434-0.587		50.7	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.517	0.434-0.587		53.1	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.532	0.434-0.587		58.8	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.269	1.054-1.426		54.8	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.240	1.054-1.426		56.9	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.445	0.374-0.506		52.7	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.450	0.374-0.506		64.3	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.052	0.893-1.208		59.1	23 - 140 %	
13C12-OCDD		0.889	0.757-1.024		55.4	17 - 157 %	
37C14-2,3,7,8-TCDD		328.000			102	35 - 197 %	

* Values outside of QC limits

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:00 Pacific Standard Time

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin170224.mdb 27 Feb 2017 09:30:36
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\170124ICAL.cdb 25 Jan 2017 09:33:34

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
2378-TCDF	25.540	1.001	4.66e2	7.06e2	0.924	0.660	0.770	1267	1873	7.28e3	1.17e4	5.7	NO	0.077
12378-PeCDF					0.954		1.550	1319	1639					
23478-PeCDF					0.966		1.550	1319	1639					
123478-HxCDF					1.141		1.240	1165	965					
234678-HxCDF					1.181		1.240	1165	965					
123678-HxCDF					1.089		1.240	1165	965					
123789-HxCDF	36.921	1.000	1.81e2	2.42e2	1.110	0.748	1.240	1165	965	3.58e3	6.50e3	3.1	YES	0.037
1234678-HpCDF	38.993	1.000	5.39e2	2.99e2	1.267	1.803	1.050	465	611	7.60e3	4.25e3	16.3	YES	0.069
1234789-HpCDF					1.295		1.050	465	611					
OCDF	46.713	1.006	6.31e2	6.67e2	1.067	0.946	0.890	1216	1074	8.39e3	9.85e3	6.9	NO	0.213
2378-TCDD					1.150		0.770	1914	1051					
12378-PeCDD					1.017		1.550	1414	683					
123478-HxCDD					1.017		1.240	1196	1455					
123678-HxCDD					0.964		1.240	1196	1455					
123789-HxCDD					0.948		1.240	1196	1455					
1234678-HpCDD	40.746	1.000	1.33e3	1.45e3	1.051	0.917	1.050	773	680	2.24e4	2.18e4	28.9	NO	0.325
OCDD	46.453	1.001	6.34e3	8.12e3	1.030	0.780	0.890	1090	600	7.03e4	9.09e4	64.5	NO	2.456
13C-2378-TCDF	25.525	1.007	7.17e5	9.33e5	1.515	0.769	0.770	10182	5362	1.08e7	1.39e7	1056.7	NO	59.147
13C-12378-PeCDF	29.654	1.170	8.48e5	5.42e5	1.276	1.565	1.550	3247	5544	1.28e7	8.07e6	3939.7	NO	59.134
13C-23478-PeCDF	31.003	1.223	8.92e5	5.66e5	1.257	1.577	1.550	3247	5544	1.34e7	8.39e6	4115.4	NO	62.958
13C-123478-HxCDF	34.674	0.951	3.90e5	7.51e5	1.431	0.520	0.510	2892	4607	5.78e6	1.12e7	2000.4	NO	50.614
13C-123678-HxCDF	34.817	0.955	4.24e5	8.14e5	1.552	0.521	0.510	2892	4607	6.11e6	1.18e7	2113.5	NO	50.686
13C-234678-HxCDF	35.771	0.981	3.85e5	7.44e5	1.349	0.517	0.510	2892	4607	5.66e6	1.10e7	1957.9	NO	53.139
13C-123789-HxCDF	36.910	1.012	3.58e5	6.72e5	1.111	0.532	0.510	2892	4607	4.95e6	9.51e6	1710.2	NO	58.839
13C-1234678-HpCDF	38.982	1.069	2.96e5	6.65e5	1.160	0.445	0.440	1962	2899	4.27e6	9.65e6	2178.7	NO	52.651
13C-1234789-HpCDF	41.590	1.141	2.38e5	5.29e5	0.758	0.450	0.440	1962	2899	3.09e6	6.85e6	1575.4	NO	64.322
13C-1234-TCDD	25.346	0.000	8.16e5	1.03e6	1.000	0.795	0.770	4013	2326	1.23e7	1.55e7	3060.9	NO	100.000
13C-2378-TCDD	26.153	1.032	4.41e5	5.57e5	0.872	0.791	0.770	4013	2326	6.45e6	8.18e6	1607.6	NO	62.128
13C-12378-PeCDD	31.255	1.233	5.40e5	3.47e5	0.754	1.555	1.550	1832	2113	7.94e6	5.04e6	4335.6	NO	63.845
13C-123478-HxCDD	35.913	0.985	5.34e5	4.21e5	1.106	1.269	1.240	3137	2696	7.78e6	6.23e6	2481.2	NO	54.816
13C-123678-HxCDD	36.034	0.988	5.78e5	4.66e5	1.165	1.240	1.240	3137	2696	8.23e6	6.59e6	2624.7	NO	56.898
13C-1234678-HpCDD	40.736	1.117	4.16e5	3.96e5	0.872	1.052	1.050	2897	2435	5.75e6	5.41e6	1986.5	NO	59.075
13C-OCDD	46.426	1.273	5.38e5	6.05e5	0.655	0.889	0.890	2176	1633	5.57e6	6.20e6	2558.9	NO	110.736
13C-123789-HxCDD	36.461	0.000	8.81e5	6.94e5	1.000	1.268	1.240	3137	2696	1.26e7	9.98e6	4024.5	NO	100.000
Total-tetrafurans			1.36e3		0.924			1267		1.90e4				0.201

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:00 Pacific Standard Time

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
Total-penta1			0.00e0					639		0.00e0				
Total-pentafurans			0.00e0		0.960			1319		0.00e0				
Total-hexafurans			1.81e2		1.130			1165		3.58e3				0.037
Total-heptafurans			1.14e3		1.281			465		1.75e4				0.172
Total-Furans			3.32e3		1.100			1267		4.84e4				0.623
Total-tetradioxins			3.62e2		1.150			1914		6.86e3				0.077
Total-pentadioxins			0.00e0		1.017			1414		0.00e0				
Total-hexadioxins			0.00e0		0.977			1196		0.00e0				
Total-heptadioxins			4.61e3		1.051			773		6.74e4				1.042
Total-Dioxins			1.14e4		1.025			1914		1.47e5				3.597
Total-TEQ			1.47e4					1914		1.95e5				4.219
37CL-2378-TCDD	26.183	1.033	8.05e5		1.073			1295		1.17e7		9064.8		40.715
FUNCTION1 PFK			1.62e8					691689		1.16e9				
FUNCTION2 PFK			2.56e5					239547		6.69e6				0.000
FUNCTION3 PFK			1.46e6					623993		2.64e6				0.000
FUNCTION4 PFK			4.22e5					508858		1.22e7				
FUNCTION5 PFK			9.88e6					379680		1.46e8				
FUNCTION1 HXCD...			4.66e3					615		6.28e4				0.000
FUNCTION1 HPCD...			2.50e3					1369		4.01e4				0.000
FUNCTION2 HPCD...			3.08e2					1260		7.90e3				0.000
FUNCTION3 OCDPE			0.00e0					528		0.00e0				
FUNCTION4 NCDPE			4.28e2					668		1.15e4				0.000
FUNCTION5 DCDPE			0.00e0					396		0.00e0				

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin170224.mdb 27 Feb 2017 09:30:36
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\170124ICAL.cdb 25 Jan 2017 09:33:34

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

TF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	35	Total-tetrafurans	303.9016	24.45	794.591	0.924		0.052		1.09	0.77	YES	4.2
2	35	Total-tetrafurans	303.9016	22.90	1092.002	0.924		0.072		0.79	0.77	NO	5.0
3	1	2378-TCDF	303.9016	25.54	1172.499	0.924		0.077	0.077	0.66	0.77	NO	5.7

PP

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1													

PF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1													

HF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	7	123789-HxCDF	373.8208	36.92	422.180	1.110		0.037	0.029	0.75	1.24	YES	3.1

HPF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	39	Total-heptafurans	407.7818	39.77	1146.055	1.281		0.103		1.12	1.05	NO	21.3
2	8	1234678-HpCDF	407.7818	38.99	838.142	1.267		0.069	0.050	1.80	1.05	YES	16.3

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	35	Total-tetrafurans	303.9016	24.45	794.591	0.924		0.052		1.09	0.77	YES	4.2
2	35	Total-tetrafurans	303.9016	22.90	1092.002	0.924		0.072		0.79	0.77	NO	5.0
3	1	2378-TCDF	303.9016	25.54	1172.499	0.924		0.077	0.077	0.66	0.77	NO	5.7
4	7	123789-HxCDF	373.8208	36.92	422.180	1.110		0.037	0.029	0.75	1.24	YES	3.1
5	39	Total-heptafurans	407.7818	39.77	1146.055	1.281		0.103		1.12	1.05	NO	21.3
6	8	1234678-HpCDF	407.7818	38.99	838.142	1.267		0.069	0.050	1.80	1.05	YES	16.3
7	10	OCDF	441.7428	46.71	1297.352	1.067		0.213	0.213	0.95	0.89	NO	6.9

TD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	41	Total-tetradioxins	319.8965	23.34	882.623	1.150		0.077		0.69	0.77	NO	3.6

PD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1													

HD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1													

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:00 Pacific Standard Time

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

HPD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	16	1234678-HpCDD	423.7766	40.75	2774.801	1.051		0.325	0.325	0.92	1.05	NO	28.9
2	44	Total-heptadioxins	423.7766	39.53	6111.189	1.051		0.717		1.16	1.05	NO	58.2

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	45	Total-Dioxins	319.8965	22.37	218.355	1.025		0.021		1.22	0.77	YES	1.3
2	41	Total-tetradioxins	319.8965	23.34	882.623	1.150		0.077		0.69	0.77	NO	3.6
3	16	1234678-HpCDD	423.7766	40.75	2774.801	1.051		0.325	0.325	0.92	1.05	NO	28.9
4	44	Total-heptadioxins	423.7766	39.53	6111.189	1.051		0.717		1.16	1.05	NO	58.2
5	17	OCDD	457.7377	46.45	14457.401	1.030		2.456	2.456	0.78	0.89	NO	64.5

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	35	Total-tetrafurans	303.9016	24.45	794.591	0.924		0.052		1.09	0.77	YES	4.2
2	35	Total-tetrafurans	303.9016	22.90	1092.002	0.924		0.072		0.79	0.77	NO	5.0
3	1	2378-TCDF	303.9016	25.54	1172.499	0.924		0.077	0.077	0.66	0.77	NO	5.7
4	7	123789-HxCDF	373.8208	36.92	422.180	1.110		0.037	0.029	0.75	1.24	YES	3.1
5	39	Total-heptafurans	407.7818	39.77	1146.055	1.281		0.103		1.12	1.05	NO	21.3
6	8	1234678-HpCDF	407.7818	38.99	838.142	1.267		0.069	0.050	1.80	1.05	YES	16.3
7	10	OCDF	441.7428	46.71	1297.352	1.067		0.213	0.213	0.95	0.89	NO	6.9
8	45	Total-Dioxins	319.8965	22.37	218.355	1.025		0.021		1.22	0.77	YES	1.3
9	41	Total-tetradioxins	319.8965	23.34	882.623	1.150		0.077		0.69	0.77	NO	3.6
10	16	1234678-HpCDD	423.7766	40.75	2774.801	1.051		0.325	0.325	0.92	1.05	NO	28.9
11	44	Total-heptadioxins	423.7766	39.53	6111.189	1.051		0.717		1.16	1.05	NO	58.2
12	17	OCDD	457.7377	46.45	14457.401	1.030		2.456	2.456	0.78	0.89	NO	64.5

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:00 Pacific Standard Time

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	48	FUNCTION1 PFK	330.9792	23.27	0.000							52.8
2	48	FUNCTION1 PFK	330.9792	23.06	0.000							58.9
3	48	FUNCTION1 PFK	330.9792	22.88	0.000							63.3
4	48	FUNCTION1 PFK	330.9792	22.78	0.000							66.7
5	48	FUNCTION1 PFK	330.9792	22.64	0.000							70.4
6	48	FUNCTION1 PFK	330.9792	22.49	0.000							73.4
7	48	FUNCTION1 PFK	330.9792	22.39	0.000							76.6
8	48	FUNCTION1 PFK	330.9792	22.21	0.000							82.1
9	48	FUNCTION1 PFK	330.9792	22.07	0.000							85.9
10	48	FUNCTION1 PFK	330.9792	21.97	0.000							88.6
11	48	FUNCTION1 PFK	330.9792	21.89	0.000							90.7
12	48	FUNCTION1 PFK	330.9792	21.81	0.000							93.5
13	48	FUNCTION1 PFK	330.9792	21.51	0.000							100.4
14	48	FUNCTION1 PFK	330.9792	21.40	0.000							103.2
15	48	FUNCTION1 PFK	330.9792	21.24	0.000							108.3
16	48	FUNCTION1 PFK	330.9792	21.13	0.000							110.8
17	48	FUNCTION1 PFK	330.9792	25.45	0.000							1.6
18	48	FUNCTION1 PFK	330.9792	25.35	0.000							1.5
19	48	FUNCTION1 PFK	330.9792	25.30	0.000							1.7
20	48	FUNCTION1 PFK	330.9792	25.24	0.000							0.8
21	48	FUNCTION1 PFK	330.9792	25.21	0.000							0.6
22	48	FUNCTION1 PFK	330.9792	24.96	0.000							5.8
23	48	FUNCTION1 PFK	330.9792	24.84	0.000							9.0
24	48	FUNCTION1 PFK	330.9792	24.66	0.000							13.2
25	48	FUNCTION1 PFK	330.9792	24.54	0.000							17.3
26	48	FUNCTION1 PFK	330.9792	24.21	0.000							26.5
27	48	FUNCTION1 PFK	330.9792	24.11	0.000							29.2
28	48	FUNCTION1 PFK	330.9792	24.05	0.000							30.2
29	48	FUNCTION1 PFK	330.9792	23.82	0.000							38.1
30	48	FUNCTION1 PFK	330.9792	23.69	0.000							41.2
31	48	FUNCTION1 PFK	330.9792	23.60	0.000							43.2
32	48	FUNCTION1 PFK	330.9792	23.51	0.000							46.7
33	48	FUNCTION1 PFK	330.9792	27.12	0.000							1.4
34	48	FUNCTION1 PFK	330.9792	27.08	0.000							2.0
35	48	FUNCTION1 PFK	330.9792	26.99	0.000							2.4
36	48	FUNCTION1 PFK	330.9792	26.75	0.000							3.5
37	48	FUNCTION1 PFK	330.9792	26.68	0.000							3.2
38	48	FUNCTION1 PFK	330.9792	26.56	0.000							2.6
39	48	FUNCTION1 PFK	330.9792	26.44	0.000							3.0
40	48	FUNCTION1 PFK	330.9792	26.32	0.000							2.7
41	48	FUNCTION1 PFK	330.9792	26.21	0.000							2.5
42	48	FUNCTION1 PFK	330.9792	26.14	0.000							2.0
43	48	FUNCTION1 PFK	330.9792	26.02	0.000							2.4
44	48	FUNCTION1 PFK	330.9792	25.93	0.000							1.3
45	48	FUNCTION1 PFK	330.9792	25.85	0.000							3.0
46	48	FUNCTION1 PFK	330.9792	25.78	0.000							2.1
47	48	FUNCTION1 PFK	330.9792	25.69	0.000							2.2
48	48	FUNCTION1 PFK	330.9792	25.60	0.000							2.7
49	48	FUNCTION1 PFK	330.9792	27.80	0.000							1.6
50	48	FUNCTION1 PFK	330.9792	27.62	0.000							0.8
51	48	FUNCTION1 PFK	330.9792	27.54	0.000							0.9

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
52	48	FUNCTION1 PFK	330.9792	27.48	0.000							2.0
53	48	FUNCTION1 PFK	330.9792	27.38	0.000							0.8

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	49	FUNCTION2 PFK	366.9792	29.35	0.000		0.000					1.1
2	49	FUNCTION2 PFK	366.9792	29.25	0.000		0.000					1.6
3	49	FUNCTION2 PFK	366.9792	29.14	0.000		0.000					1.8
4	49	FUNCTION2 PFK	366.9792	29.10	0.000		0.000					1.0
5	49	FUNCTION2 PFK	366.9792	29.05	0.000		0.000					1.4
6	49	FUNCTION2 PFK	366.9792	28.35	0.000		0.000					0.6
7	49	FUNCTION2 PFK	366.9792	28.24	0.000		0.000					0.9
8	49	FUNCTION2 PFK	366.9792	28.16	0.000		0.000					1.1
9	49	FUNCTION2 PFK	366.9792	28.12	0.000		0.000					1.4
10	49	FUNCTION2 PFK	366.9792	28.00	0.000		0.000					1.4
11	49	FUNCTION2 PFK	366.9792	32.30	0.000		0.000					1.5
12	49	FUNCTION2 PFK	366.9792	31.96	0.000		0.000					0.4
13	49	FUNCTION2 PFK	366.9792	31.88	0.000		0.000					1.7
14	49	FUNCTION2 PFK	366.9792	31.59	0.000		0.000					1.5
15	49	FUNCTION2 PFK	366.9792	31.52	0.000		0.000					0.7
16	49	FUNCTION2 PFK	366.9792	31.29	0.000		0.000					0.9
17	49	FUNCTION2 PFK	366.9792	31.24	0.000		0.000					1.3
18	49	FUNCTION2 PFK	366.9792	31.01	0.000		0.000					0.8
19	49	FUNCTION2 PFK	366.9792	30.86	0.000		0.000					0.6
20	49	FUNCTION2 PFK	366.9792	30.82	0.000		0.000					0.6
21	49	FUNCTION2 PFK	366.9792	30.75	0.000		0.000					1.0
22	49	FUNCTION2 PFK	366.9792	30.19	0.000		0.000					1.8
23	49	FUNCTION2 PFK	366.9792	30.15	0.000		0.000					1.1
24	49	FUNCTION2 PFK	366.9792	29.59	0.000		0.000					1.2
25	49	FUNCTION2 PFK	366.9792	29.46	0.000		0.000					0.8

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	50	FUNCTION3 PFK	380.9760	34.81	0.000		0.000					4.2

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:00 Pacific Standard Time

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	51	FUNCTION4 PFK	430.9728	42.50	0.000							0.6
2	51	FUNCTION4 PFK	430.9728	41.54	0.000							1.1
3	51	FUNCTION4 PFK	430.9728	41.04	0.000							0.5
4	51	FUNCTION4 PFK	430.9728	40.97	0.000							1.4
5	51	FUNCTION4 PFK	430.9728	40.87	0.000							0.6
6	51	FUNCTION4 PFK	430.9728	40.70	0.000							1.8
7	51	FUNCTION4 PFK	430.9728	40.23	0.000							1.0
8	51	FUNCTION4 PFK	430.9728	39.81	0.000							1.7
9	51	FUNCTION4 PFK	430.9728	39.32	0.000							0.6
10	51	FUNCTION4 PFK	430.9728	39.27	0.000							1.1
11	51	FUNCTION4 PFK	430.9728	39.17	0.000							1.4
12	51	FUNCTION4 PFK	430.9728	38.84	0.000							0.5
13	51	FUNCTION4 PFK	430.9728	38.52	0.000							0.8
14	51	FUNCTION4 PFK	430.9728	38.27	0.000							2.7
15	51	FUNCTION4 PFK	430.9728	44.20	0.000							1.0
16	51	FUNCTION4 PFK	430.9728	44.08	0.000							0.8
17	51	FUNCTION4 PFK	430.9728	43.95	0.000							0.7
18	51	FUNCTION4 PFK	430.9728	43.70	0.000							0.4
19	51	FUNCTION4 PFK	430.9728	43.43	0.000							1.3
20	51	FUNCTION4 PFK	430.9728	43.15	0.000							1.0
21	51	FUNCTION4 PFK	430.9728	43.06	0.000							0.7
22	51	FUNCTION4 PFK	430.9728	42.62	0.000							1.4
23	51	FUNCTION4 PFK	430.9728	42.54	0.000							1.1

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:00 Pacific Standard Time

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	52	FUNCTION5 PFK	480.9696	44.89	0.000							30.7
2	52	FUNCTION5 PFK	480.9696	44.85	0.000							33.2
3	52	FUNCTION5 PFK	480.9696	44.74	0.000							38.6
4	52	FUNCTION5 PFK	480.9696	44.69	0.000							40.2
5	52	FUNCTION5 PFK	480.9696	44.66	0.000							41.6
6	52	FUNCTION5 PFK	480.9696	44.56	0.000							46.1
7	52	FUNCTION5 PFK	480.9696	46.23	0.000							0.9
8	52	FUNCTION5 PFK	480.9696	46.14	0.000							1.2
9	52	FUNCTION5 PFK	480.9696	46.11	0.000							1.9
10	52	FUNCTION5 PFK	480.9696	46.07	0.000							1.9
11	52	FUNCTION5 PFK	480.9696	45.90	0.000							0.8
12	52	FUNCTION5 PFK	480.9696	45.86	0.000							1.4
13	52	FUNCTION5 PFK	480.9696	45.83	0.000							1.4
14	52	FUNCTION5 PFK	480.9696	45.80	0.000							1.2
15	52	FUNCTION5 PFK	480.9696	45.68	0.000							1.3
16	52	FUNCTION5 PFK	480.9696	45.62	0.000							0.5
17	52	FUNCTION5 PFK	480.9696	45.40	0.000							7.8
18	52	FUNCTION5 PFK	480.9696	45.37	0.000							9.3
19	52	FUNCTION5 PFK	480.9696	45.32	0.000							11.7
20	52	FUNCTION5 PFK	480.9696	45.22	0.000							16.5
21	52	FUNCTION5 PFK	480.9696	45.09	0.000							21.6
22	52	FUNCTION5 PFK	480.9696	44.97	0.000							27.5
23	52	FUNCTION5 PFK	480.9696	47.56	0.000							2.6
24	52	FUNCTION5 PFK	480.9696	47.53	0.000							3.2
25	52	FUNCTION5 PFK	480.9696	47.49	0.000							3.6
26	52	FUNCTION5 PFK	480.9696	47.43	0.000							2.5
27	52	FUNCTION5 PFK	480.9696	47.37	0.000							1.2
28	52	FUNCTION5 PFK	480.9696	47.31	0.000							2.0
29	52	FUNCTION5 PFK	480.9696	47.21	0.000							1.8
30	52	FUNCTION5 PFK	480.9696	47.13	0.000							1.3
31	52	FUNCTION5 PFK	480.9696	47.05	0.000							1.3
32	52	FUNCTION5 PFK	480.9696	47.02	0.000							1.9
33	52	FUNCTION5 PFK	480.9696	46.93	0.000							1.2
34	52	FUNCTION5 PFK	480.9696	46.78	0.000							0.6
35	52	FUNCTION5 PFK	480.9696	46.73	0.000							0.3
36	52	FUNCTION5 PFK	480.9696	46.61	0.000							1.3
37	52	FUNCTION5 PFK	480.9696	46.50	0.000							1.1
38	52	FUNCTION5 PFK	480.9696	46.43	0.000							1.1
39	52	FUNCTION5 PFK	480.9696	49.32	0.000							1.1
40	52	FUNCTION5 PFK	480.9696	49.21	0.000							0.8
41	52	FUNCTION5 PFK	480.9696	49.17	0.000							1.4
42	52	FUNCTION5 PFK	480.9696	49.14	0.000							1.8
43	52	FUNCTION5 PFK	480.9696	49.05	0.000							2.1
44	52	FUNCTION5 PFK	480.9696	49.01	0.000							1.3
45	52	FUNCTION5 PFK	480.9696	48.93	0.000							0.6
46	52	FUNCTION5 PFK	480.9696	48.64	0.000							0.9
47	52	FUNCTION5 PFK	480.9696	48.40	0.000							0.9
48	52	FUNCTION5 PFK	480.9696	48.36	0.000							1.4
49	52	FUNCTION5 PFK	480.9696	48.30	0.000							1.1
50	52	FUNCTION5 PFK	480.9696	48.26	0.000							1.4
51	52	FUNCTION5 PFK	480.9696	48.10	0.000							0.8

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
52	52	FUNCTION5 PFK	480.9696	47.89	0.000							0.5
53	52	FUNCTION5 PFK	480.9696	47.85	0.000							0.8
54	52	FUNCTION5 PFK	480.9696	47.60	0.000							1.8
55	52	FUNCTION5 PFK	480.9696	49.41	0.000							1.3

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	53	FUNCTION1 HXCD...	375.8364	25.61	0.000		0.000					68.2
2	53	FUNCTION1 HXCD...	375.8364	25.33	0.000		0.000					24.8
3	53	FUNCTION1 HXCD...	375.8364	24.60	0.000		0.000					2.6
4	53	FUNCTION1 HXCD...	375.8364	23.51	0.000		0.000					3.9
5	53	FUNCTION1 HXCD...	375.8364	21.91	0.000		0.000					2.7

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	54	FUNCTION1 HPCD...	409.7974	26.60	0.000		0.000					1.9
2	54	FUNCTION1 HPCD...	409.7974	26.21	0.000		0.000					1.5
3	54	FUNCTION1 HPCD...	409.7974	22.63	0.000		0.000					2.5
4	54	FUNCTION1 HPCD...	409.7974	22.48	0.000		0.000					2.1
5	54	FUNCTION1 HPCD...	409.7974	21.86	0.000		0.000					21.3

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	55	FUNCTION2 HPCD...	409.7974	31.13	0.000		0.000					3.0
2	55	FUNCTION2 HPCD...	409.7974	29.67	0.000		0.000					3.2

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	57	FUNCTION4 NCDPE	479.7165	38.65	0.000		0.000					5.9
2	57	FUNCTION4 NCDPE	479.7165	38.62	0.000		0.000					11.4

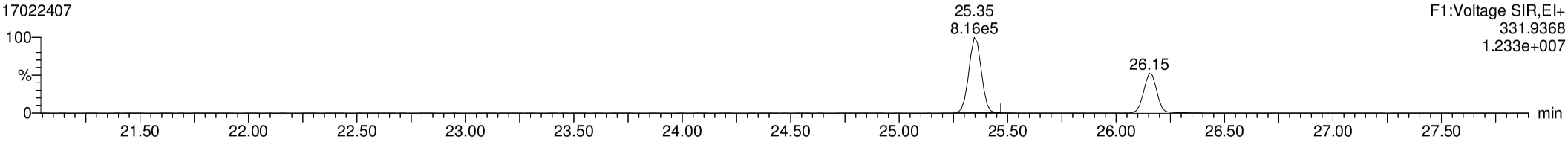
ETHERS6

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

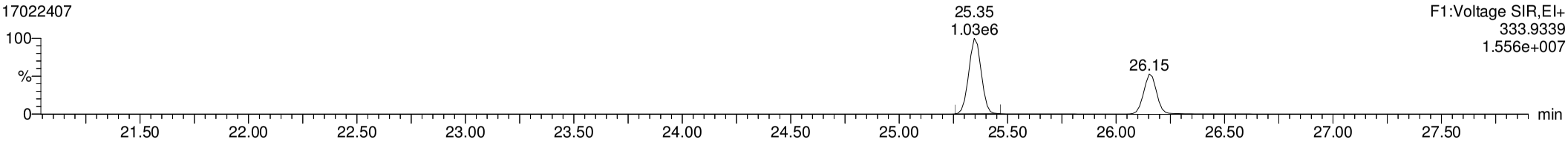
Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin170224.mdb 27 Feb 2017 09:30:36
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\170124ICAL.cdb 25 Jan 2017 09:33:34

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

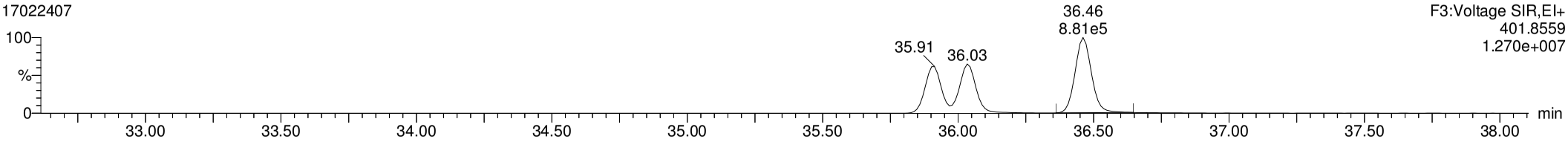
13C-1234-TCDD



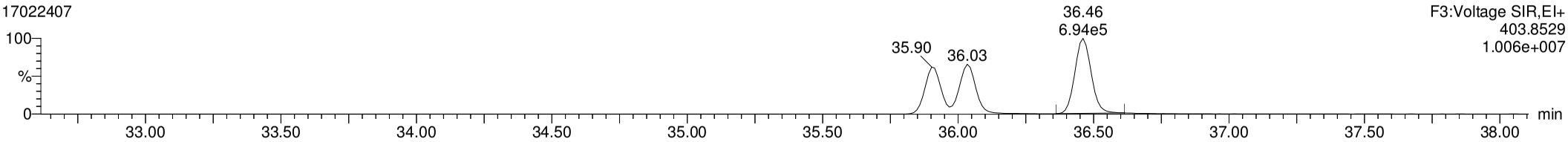
13C-1234-TCDD



13C-123789-HxCDD



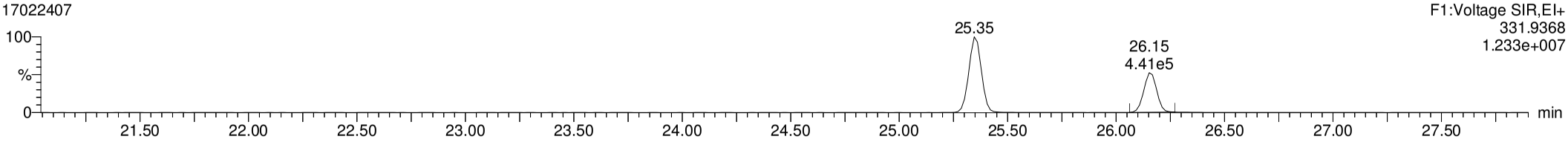
13C-123789-HxCDD



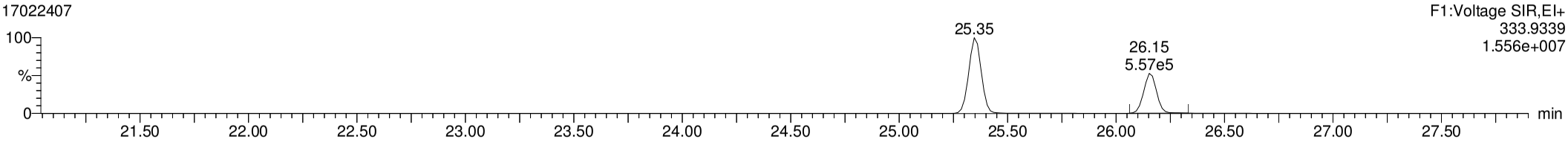
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:00 Pacific Standard Time

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

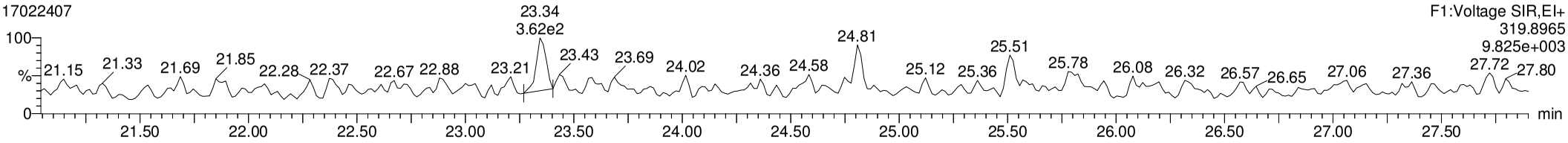
13C-2378-TCDD



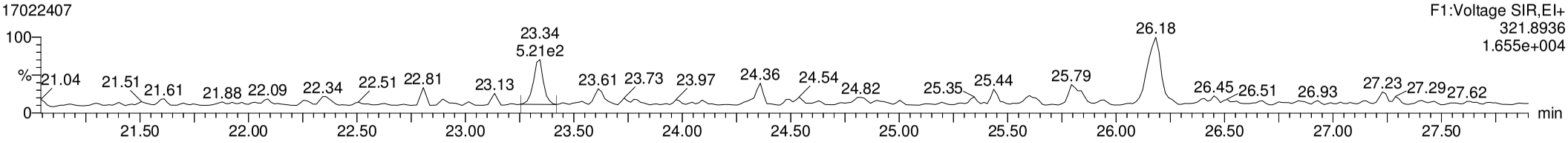
13C-2378-TCDD



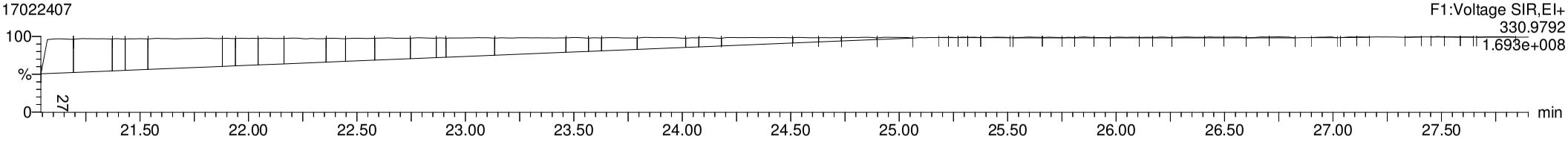
Total-tetradioxins



Total-tetradioxins



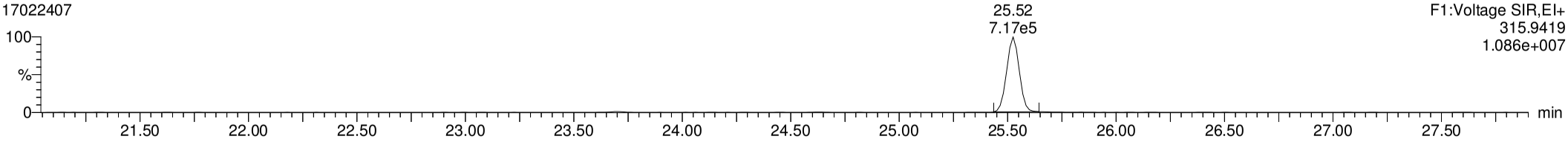
FUNCTION1 PFK



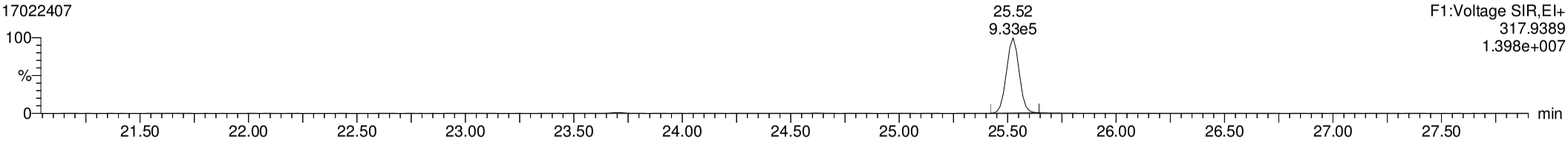
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:00 Pacific Standard Time

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

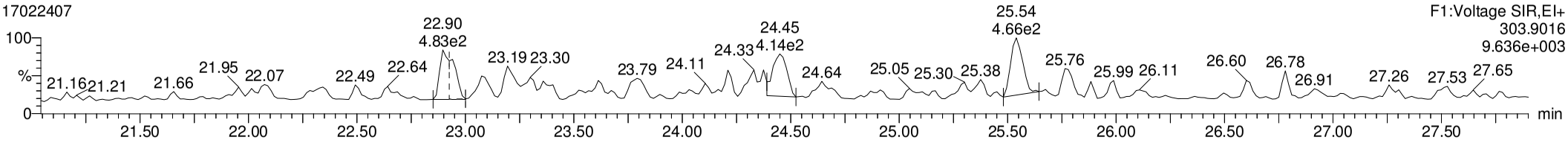
13C-2378-TCDF



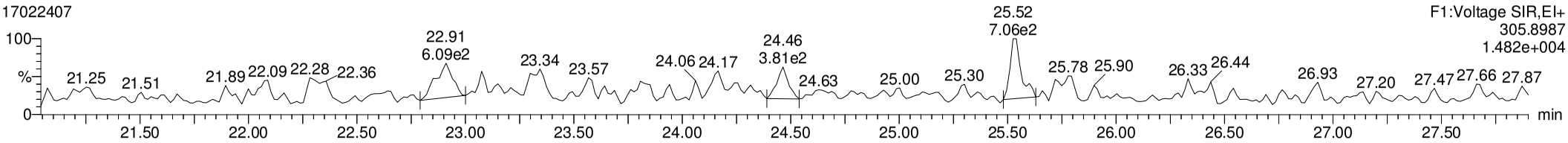
13C-2378-TCDF



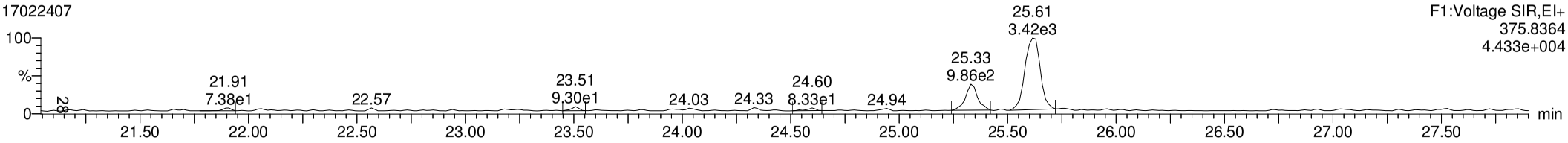
Total-tetrafurans



Total-tetrafurans



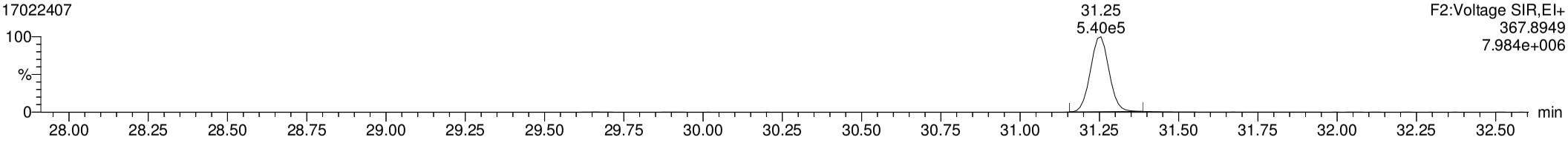
FUNCTION1 HXCDPE



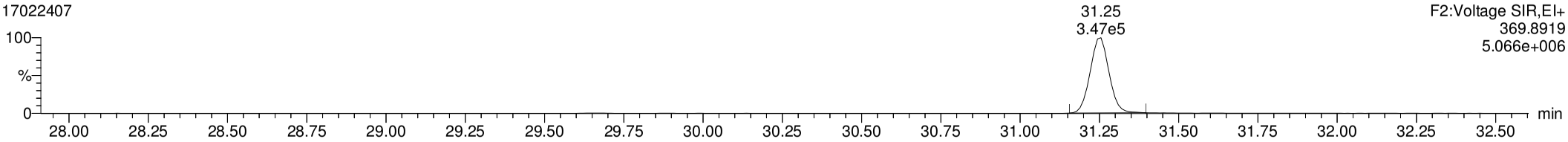
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:00 Pacific Standard Time

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

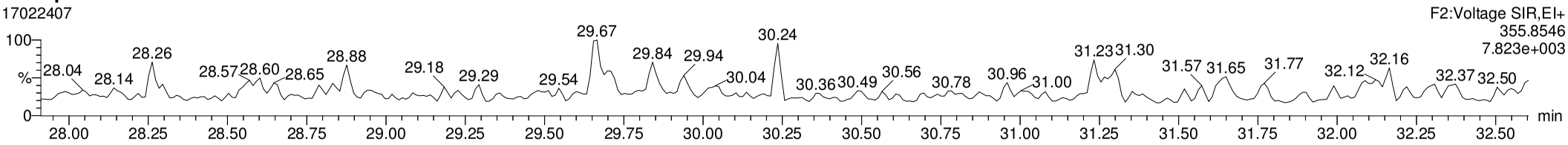
13C-12378-PeCDD



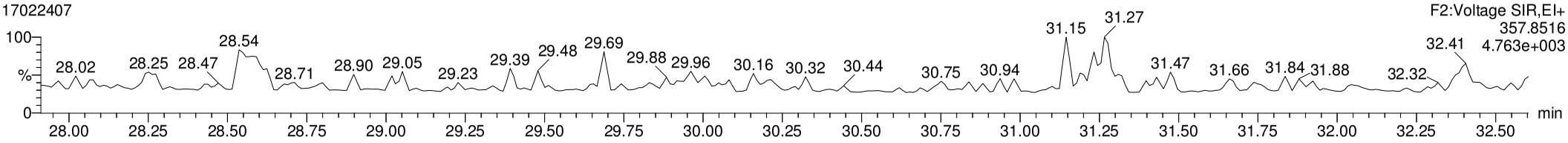
13C-12378-PeCDD



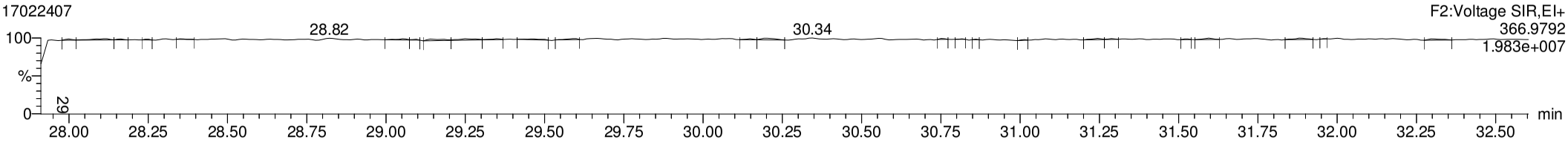
Total-pentadioxins



Total-pentadioxins



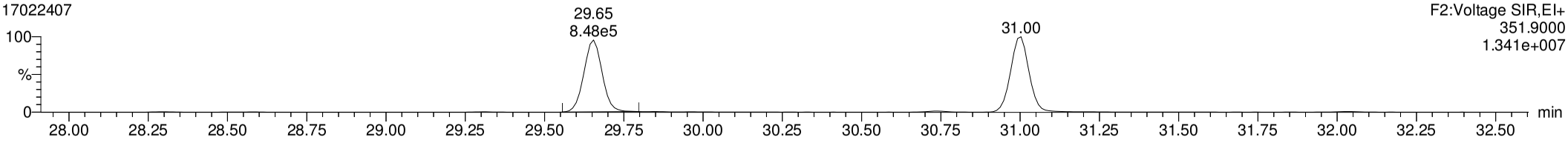
FUNCTION2 PFK



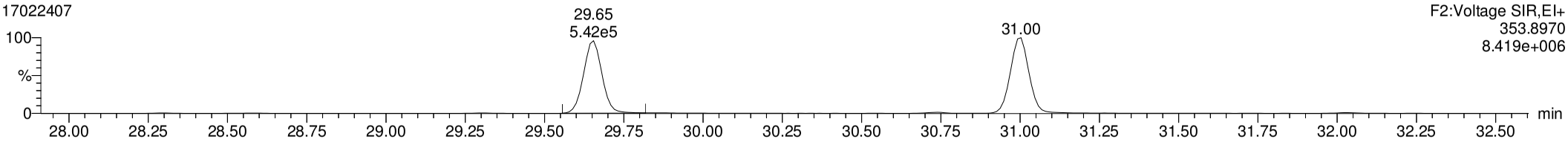
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:00 Pacific Standard Time

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

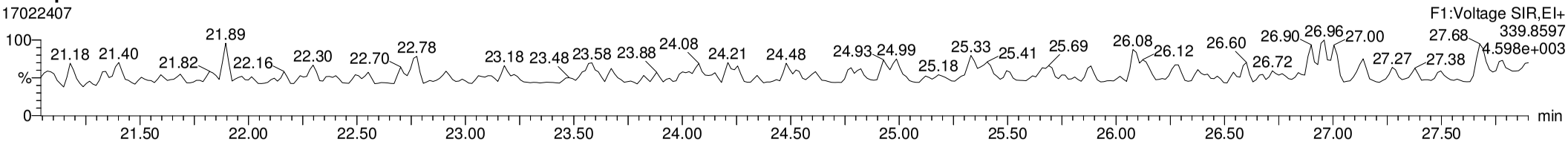
13C-12378-PeCDF



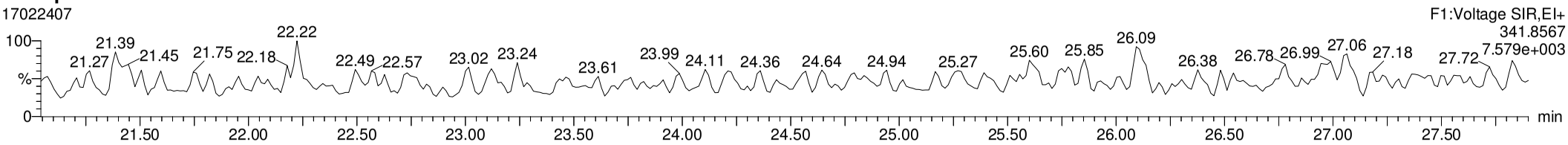
13C-12378-PeCDF



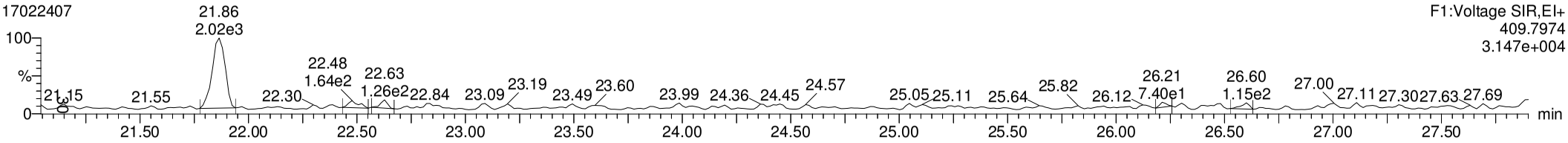
Total-penta1



Total-penta1

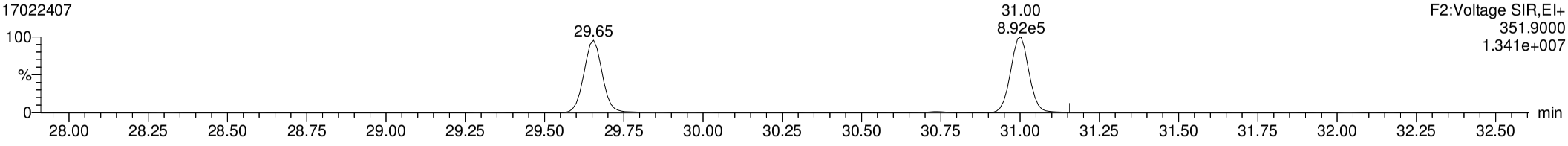


FUNCTION1 HPCDPE

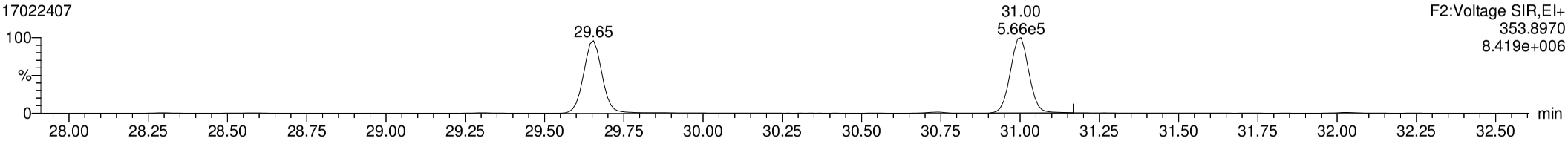


ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

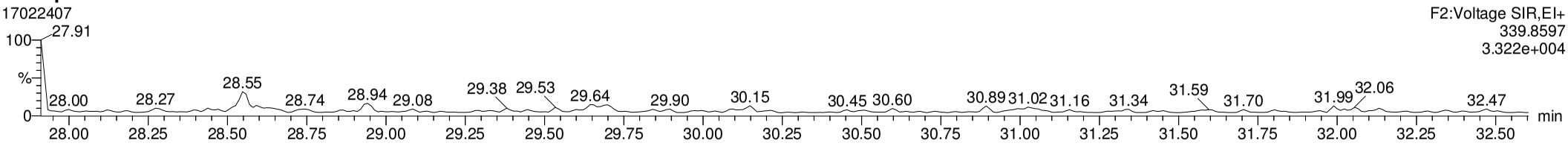
13C-23478-PeCDF



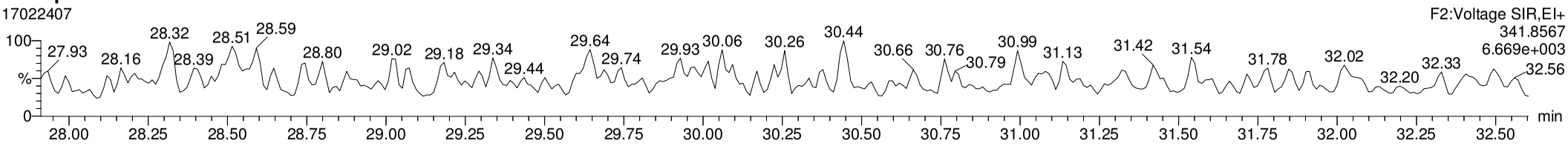
13C-23478-PeCDF



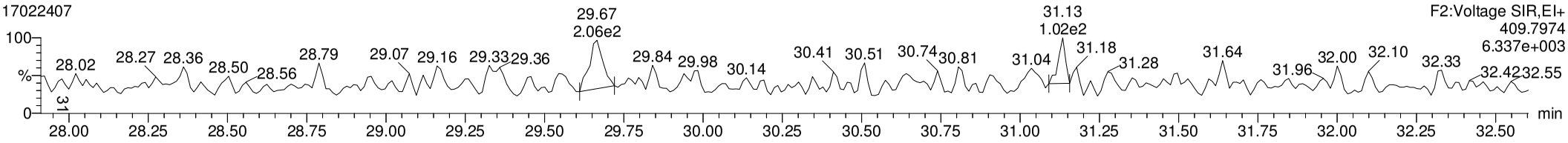
Total-pentafurans



Total-pentafurans



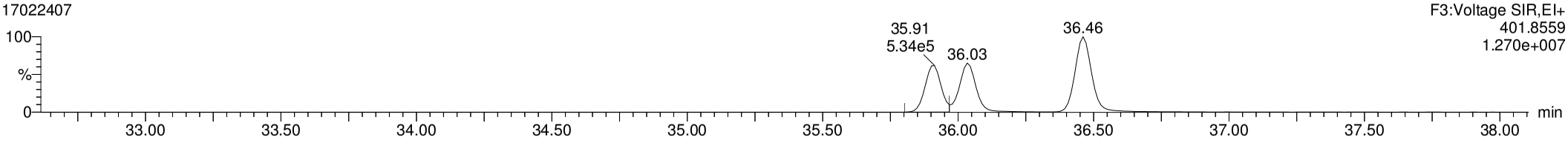
FUNCTION2 HPCDPE



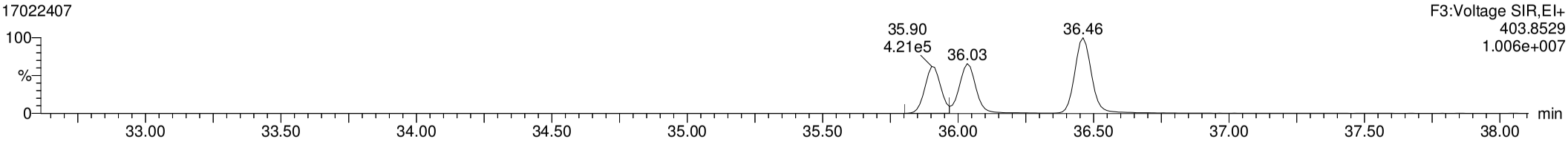
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:00 Pacific Standard Time

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

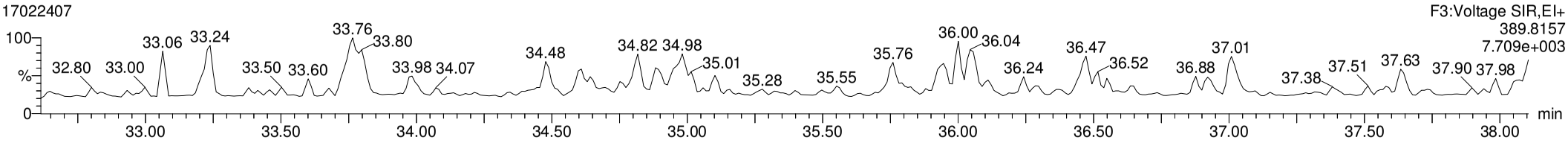
13C-123478-HxCDD



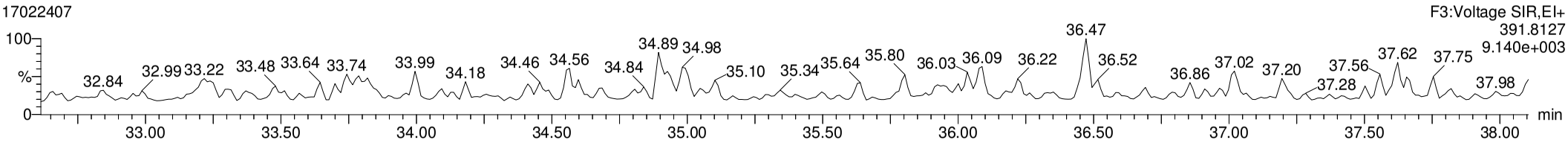
13C-123478-HxCDD



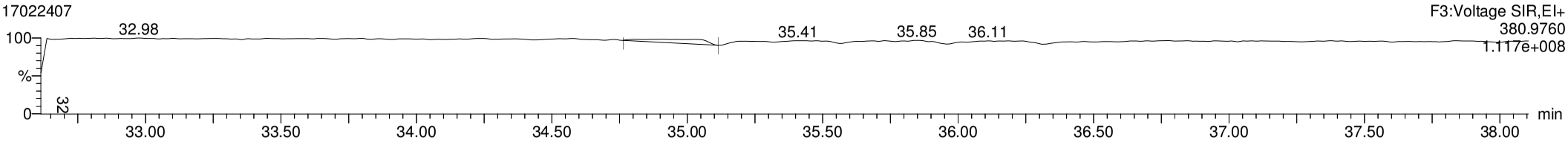
Total-hexadioxins



Total-hexadioxins



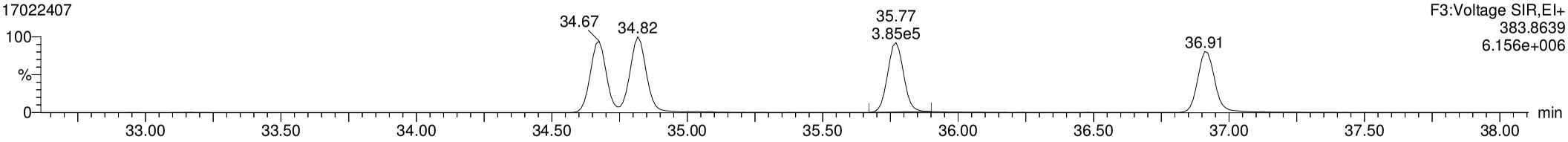
FUNCTION3 PFK



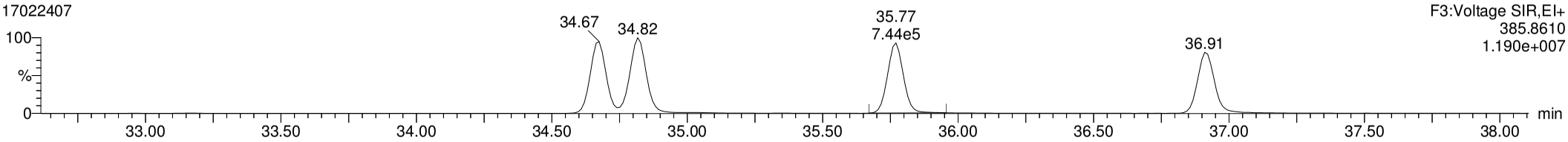
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:00 Pacific Standard Time

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

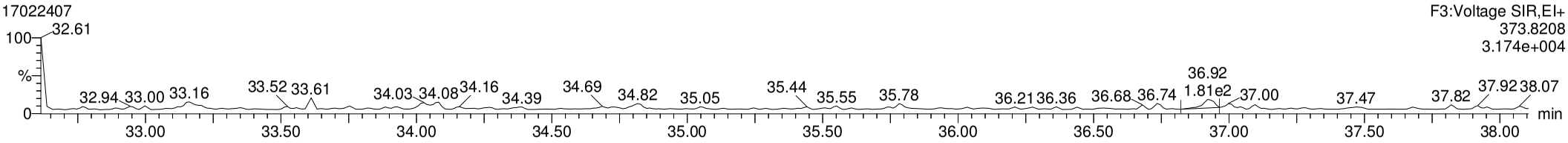
13C-234678-HxCDF



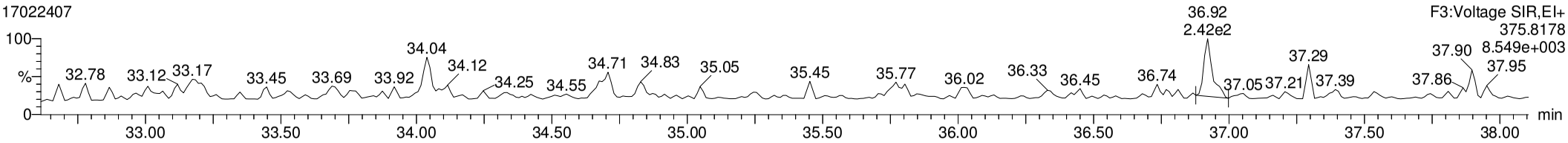
13C-234678-HxCDF



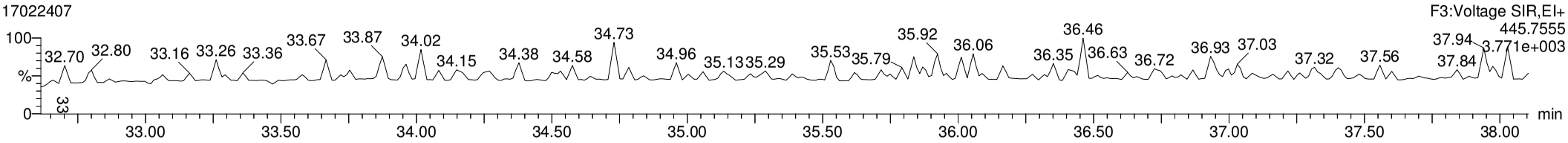
Total-hexafurans



Total-hexafurans



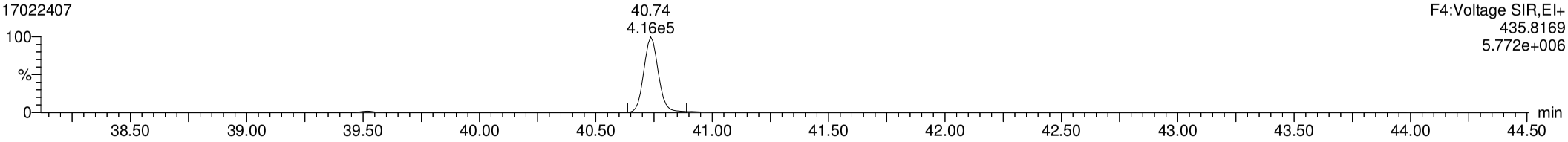
FUNCTION3 OCDPE



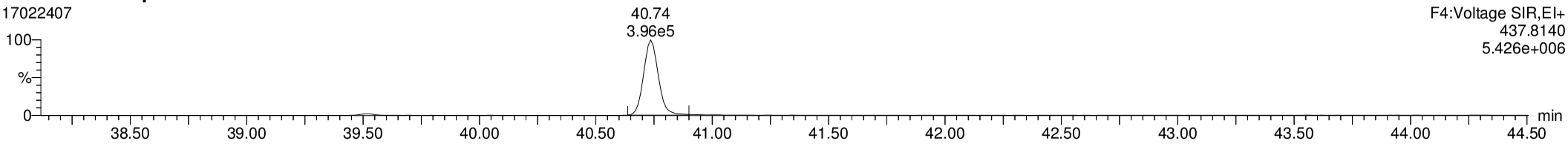
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:00 Pacific Standard Time

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

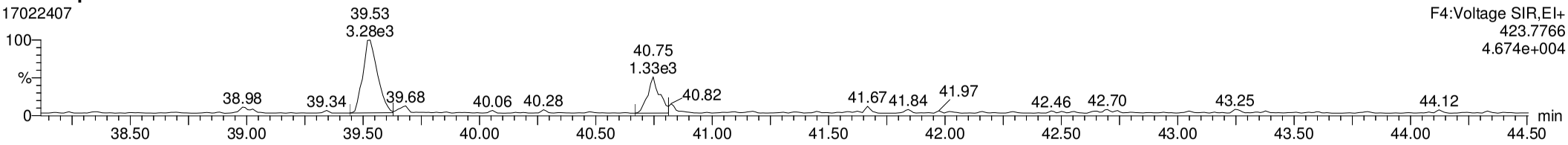
13C-1234678-HpCDD



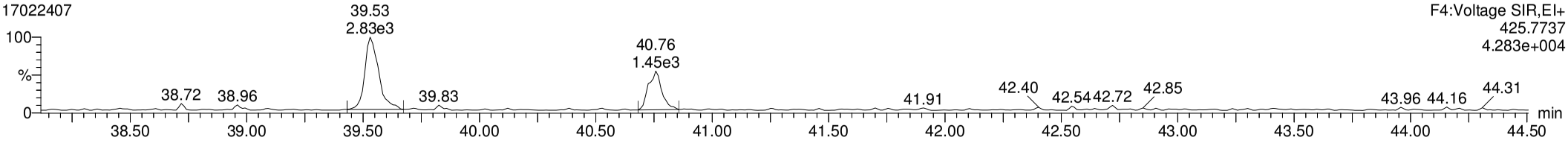
13C-1234678-HpCDD



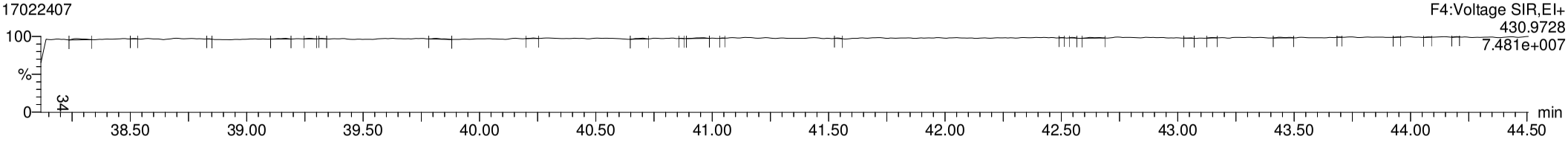
Total-heptadioxins



Total-heptadioxins

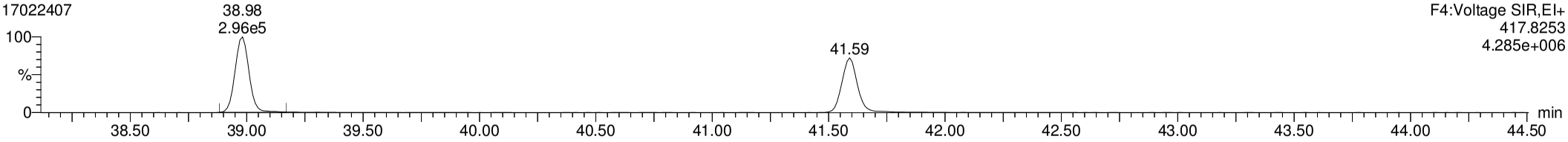


FUNCTION4 PFK

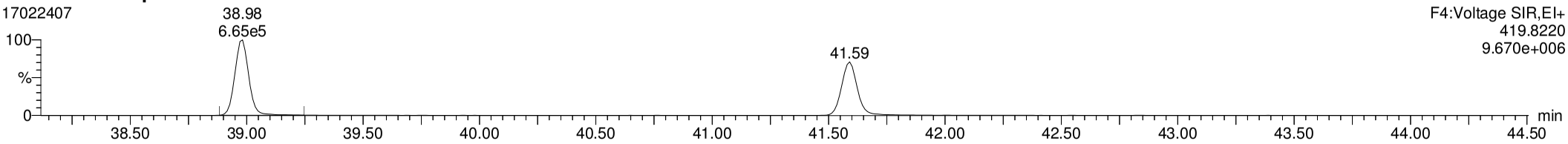


ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

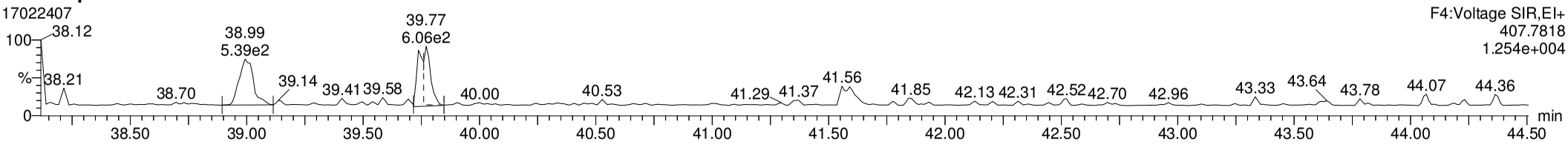
13C-1234678-HpCDF



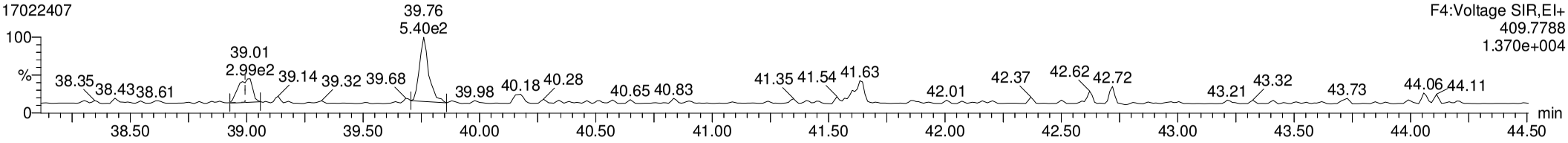
13C-1234678-HpCDF



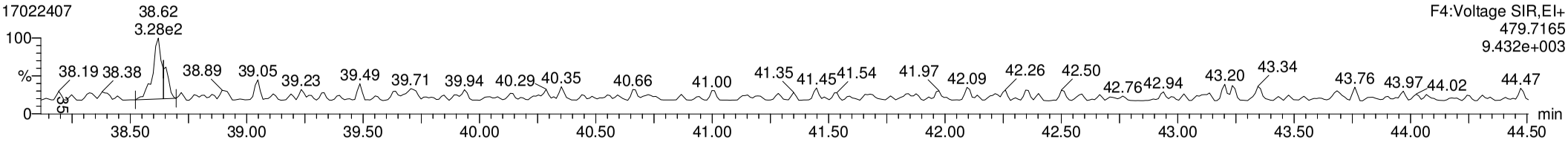
Total-heptafurans



Total-heptafurans



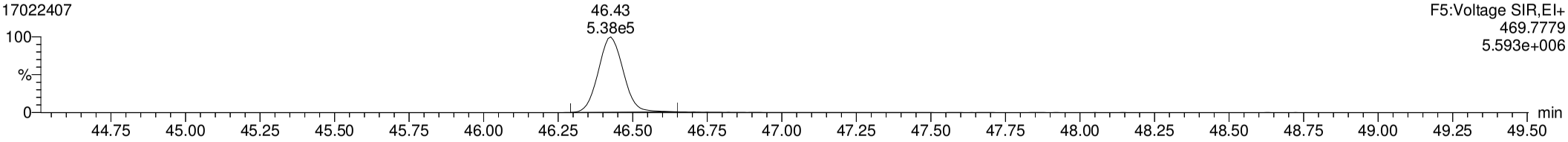
FUNCTION4 NCDPE



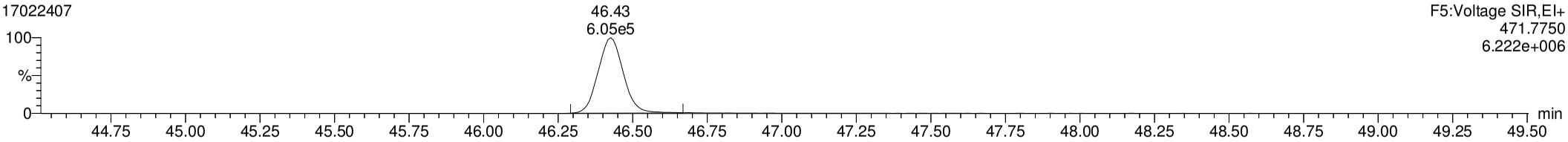
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:00 Pacific Standard Time

ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

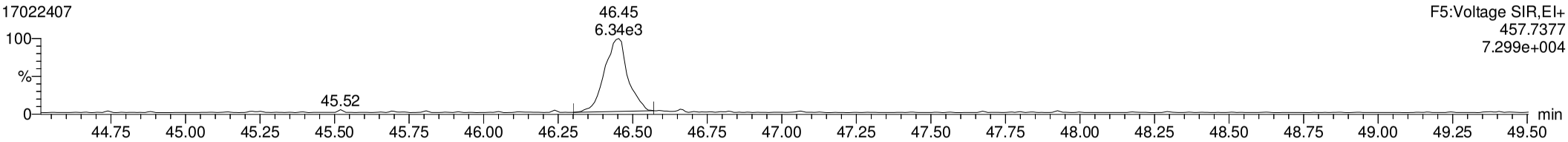
13C-OCDD



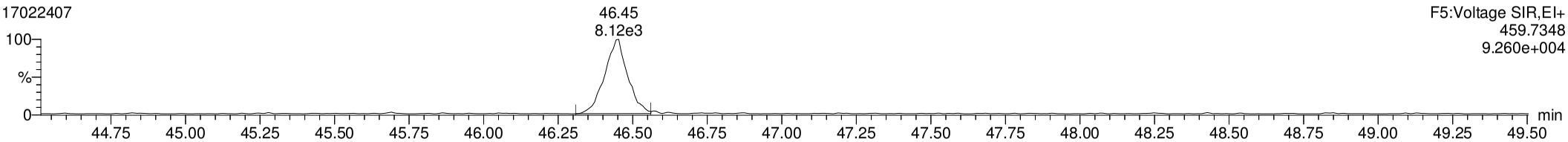
13C-OCDD



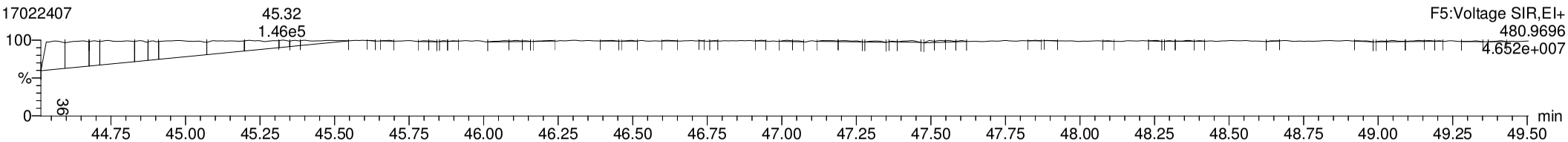
OCDD



OCDD

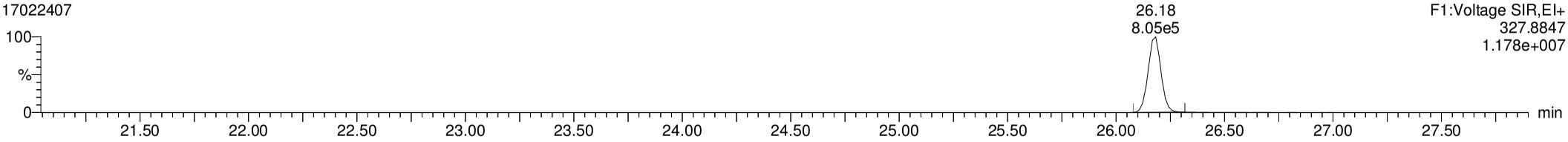


FUNCTION5 PFK

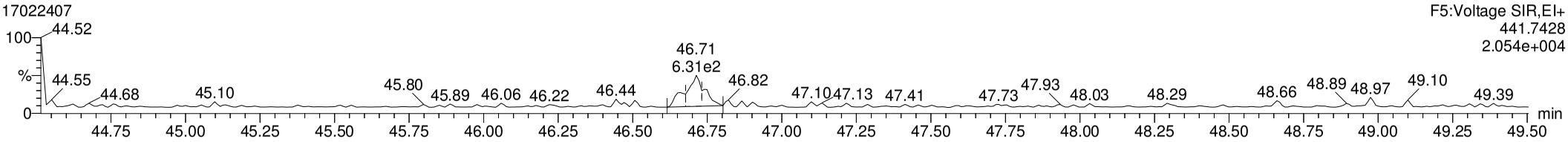


ID: 16K0053-01RE1, Name: 17022407, Date: 24-Feb-2017, Time: 18:32:28, Conditions: AUTOSPEC01, User: PK

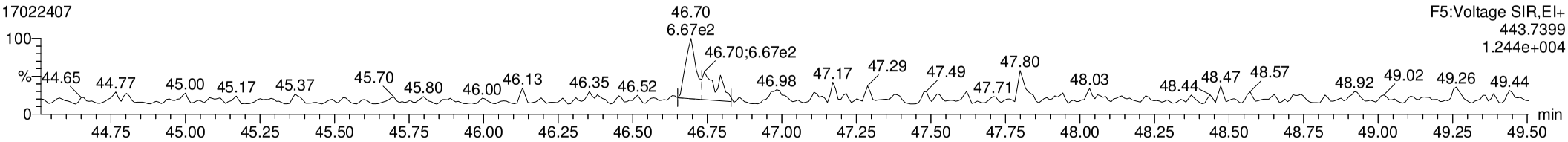
37CL-2378-TCDD



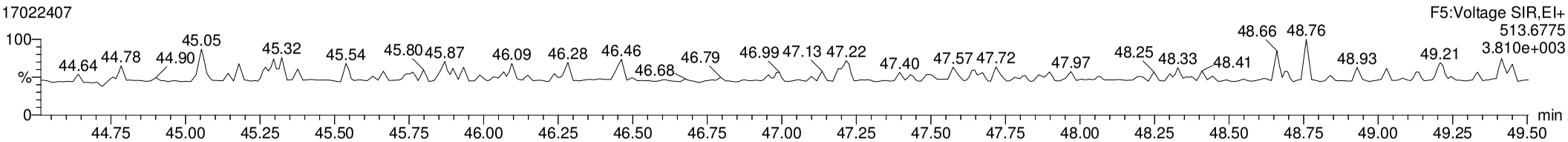
OCDF



OCDF



FUNCTION5 DCDPE



PG-SMA2-1-MUS-170105

Form I
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	17A0053
Client:	Anchor QEA, LLC			Project:	Port Gamble Shellfish Monitoring
Matrix:	Tissue	Laboratory ID:	17A0053-04RE1	File ID:	17022408
Sampled:	01/05/17 13:02	Prepared:	02/22/17 12:00	Analyzed:	02/24/17 19:25
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	10.05 g / 20 uL
Result Basis:	Dry	Sequence:	SFB0342	Calibration:	AA00071
Batch:	BFB0538	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.695	0.655-0.886		0.995	0.184	ng/kg	J
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.068	0.995	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	1.582	1.318-1.783		4.98	0.136	ng/kg	J
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.066	4.98	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	1.609	1.318-1.783		4.98	0.120	ng/kg	J
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.398	1.054-1.426		4.98	0.037	ng/kg	EMPC, J, B
57117-44-9	1,2,3,6,7,8-HxCDF	1	1.677	1.054-1.426		4.98	0.108	ng/kg	EMPC, J, B
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.563	1.054-1.426		4.98	0.079	ng/kg	EMPC, J, B
72918-21-9	1,2,3,7,8,9-HxCDF	1	0.623	1.054-1.426		4.98	0.135	ng/kg	EMPC, J, B
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.964	1.054-1.426		4.98	0.066	ng/kg	EMPC, J
57653-85-7	1,2,3,6,7,8-HxCDD	1	1.584	1.054-1.426		4.98	0.164	ng/kg	EMPC, J
19408-74-3	1,2,3,7,8,9-HxCDD	1	1.030	1.054-1.426		4.98	0.309	ng/kg	EMPC, J, B
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	0.795	0.893-1.208		4.98	0.331	ng/kg	EMPC, J, B
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	1.167	0.893-1.208		4.98	0.160	ng/kg	J, B
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.197	0.893-1.208		4.98	1.01	ng/kg	J, B
39001-02-0	OCDF	1	0.792	0.757-1.024		9.95	0.677	ng/kg	J, B
3268-87-9	OCDD	1	0.853	0.757-1.024		9.95	7.09	ng/kg	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			0.995	0.635	ng/kg	
41903-57-5	Total TCDD	1	0.000			0.995	0.178	ng/kg	
30402-15-4	Total PeCDF	1	0.000			0.995	0.237	ng/kg	
36088-22-9	Total PeCDD	1	0.000			0.995	0.120	ng/kg	
55684-94-1	Total HxCDF	1	0.000			0.995	0.583	ng/kg	
34465-46-8	Total HxCDD	1	0.000			0.995	0.993	ng/kg	
38998-75-3	Total HpCDF	1	0.000			0.995	0.794	ng/kg	
37871-00-4	Total HpCDD	1	0.000			0.995	2.57	ng/kg	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.250
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.250

PG-SMA2-1-MUS-170105

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	17A0053
Client:	Anchor QEA, LLC			Project:	Port Gamble Shellfish Monitoring
Matrix:	Tissue	Laboratory ID:	17A0053-04RE1	File ID:	17022408
Sampled:	01/05/17 13:02	Prepared:	02/22/17 12:00	Analyzed:	02/24/17 19:25
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	10.05 g / 20 uL
Result Basis:	Dry	Sequence:	SFB0342	Calibration:	AA00071
Batch:	BFB0538	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.782	0.655-0.886		64.9	24 - 169 %	
13C12-2,3,7,8-TCDD		0.786	0.655-0.886		67.4	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.600	1.318-1.783		64.7	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.579	1.318-1.783		69.6	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.581	1.318-1.783		69.3	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.516	0.434-0.587		56.6	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.523	0.434-0.587		57.2	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.515	0.434-0.587		57.8	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.538	0.434-0.587		63.8	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.279	1.054-1.426		58.7	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.262	1.054-1.426		60.2	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.446	0.374-0.506		54.8	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.433	0.374-0.506		67.5	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.059	0.893-1.208		62.9	23 - 140 %	
13C12-OCDD		0.900	0.757-1.024		59.7	17 - 157 %	
37C14-2,3,7,8-TCDD		328.000			103	35 - 197 %	

* Values outside of QC limits

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin170224.mdb 27 Feb 2017 09:30:36
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\170124ICAL.cdb 25 Jan 2017 09:33:34

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
2378-TCDF	25.540	1.000	7.07e2	1.02e3	0.924	0.695	0.770	994	2225	1.12e4	1.01e4	11.3	NO	0.092
12378-PeCDF	29.688	1.001	6.74e2	4.26e2	0.954	1.582	1.550	910	1904	1.11e4	6.22e3	12.2	NO	0.068
23478-PeCDF					0.966		1.550	910	1904					
123478-HxCDF	34.664	0.999	8.29e1	2.08e2	1.141	0.398	1.240	1052	1055	3.16e3	5.84e3	3.0	YES	0.019
234678-HxCDF	35.804	1.001	2.23e2	3.96e2	1.181	0.563	1.240	1052	1055	3.98e3	7.16e3	3.8	YES	0.040
123678-HxCDF	34.850	1.001	5.53e2	3.29e2	1.089	1.677	1.240	1052	1055	1.46e4	4.47e3	13.9	YES	0.054
123789-HxCDF	36.955	1.001	3.44e2	5.52e2	1.110	0.623	1.240	1052	1055	6.68e3	7.54e3	6.3	YES	0.068
1234678-HpCDF	39.027	1.001	9.98e2	1.26e3	1.267	0.795	1.050	707	482	1.36e4	2.29e4	19.2	YES	0.166
1234789-HpCDF	41.614	1.000	4.84e2	4.14e2	1.295	1.167	1.050	707	482	9.14e3	7.66e3	12.9	NO	0.080
OCDF	46.679	1.005	1.06e3	1.34e3	1.067	0.792	0.890	738	1041	1.14e4	1.93e4	15.5	NO	0.340
2378-TCDD					1.150		0.770	1584	722					
12378-PeCDD	31.288	1.001	4.04e2	2.51e2	1.017	1.609	1.550	1227	668	6.72e3	3.32e3	5.5	NO	0.060
123478-HxCDD	35.936	1.000	1.82e2	1.89e2	1.017	0.964	1.240	1268	1149	4.19e3	4.79e3	3.3	YES	0.033
123678-HxCDD	36.056	1.000	5.76e2	3.64e2	0.964	1.584	1.240	1268	1149	1.36e4	6.99e3	10.7	YES	0.083
123789-HxCDD	36.484	1.012	8.49e2	8.24e2	0.948	1.030	1.240	1268	1149	9.91e3	1.62e4	7.8	YES	0.155
1234678-HpCDD	40.770	1.000	2.69e3	2.25e3	1.051	1.197	1.050	796	849	3.36e4	3.20e4	42.2	NO	0.509
OCDD	46.455	1.001	1.11e4	1.30e4	1.030	0.853	0.890	1575	690	1.24e5	1.39e5	78.5	NO	3.561
13C-2378-TCDF	25.540	1.007	8.84e5	1.13e6	1.515	0.782	0.770	9604	5035	1.28e7	1.63e7	1335.7	NO	64.912
13C-12378-PeCDF	29.666	1.170	1.04e6	6.51e5	1.276	1.600	1.550	3060	3160	1.51e7	9.50e6	4921.5	NO	64.697
13C-23478-PeCDF	31.014	1.223	1.10e6	6.95e5	1.257	1.579	1.550	3060	3160	1.62e7	1.03e7	5294.6	NO	69.567
13C-123478-HxCDF	34.686	0.951	4.64e5	9.00e5	1.431	0.516	0.510	3076	5040	6.67e6	1.29e7	2169.9	NO	56.609
13C-123678-HxCDF	34.828	0.955	5.13e5	9.81e5	1.552	0.523	0.510	3076	5040	7.27e6	1.40e7	2363.6	NO	57.164
13C-234678-HxCDF	35.782	0.981	4.46e5	8.66e5	1.349	0.515	0.510	3076	5040	6.43e6	1.26e7	2090.0	NO	57.764
13C-123789-HxCDF	36.933	1.013	4.18e5	7.77e5	1.111	0.538	0.510	3076	5040	5.72e6	1.06e7	1860.2	NO	63.803
13C-1234678-HpCDF	38.994	1.069	3.30e5	7.40e5	1.160	0.446	0.440	2574	3458	4.82e6	1.08e7	1870.5	NO	54.795
13C-1234789-HpCDF	41.603	1.141	2.60e5	6.01e5	0.758	0.433	0.440	2574	3458	3.41e6	7.63e6	1323.7	NO	67.508
13C-1234-TCDD	25.361	0.000	9.11e5	1.14e6	1.000	0.800	0.770	4237	2351	1.36e7	1.70e7	3200.1	NO	100.000
13C-2378-TCDD	26.168	1.032	5.30e5	6.74e5	0.872	0.786	0.770	4237	2351	7.71e6	9.93e6	1820.7	NO	67.354
13C-12378-PeCDD	31.266	1.233	6.56e5	4.15e5	0.754	1.581	1.550	1842	1848	9.79e6	6.13e6	5314.3	NO	69.273
13C-123478-HxCDD	35.925	0.985	6.14e5	4.80e5	1.106	1.279	1.240	2878	2748	9.15e6	7.06e6	3178.5	NO	58.727
13C-123678-HxCDD	36.045	0.988	6.59e5	5.22e5	1.165	1.262	1.240	2878	2748	9.16e6	7.35e6	3184.7	NO	60.225
13C-1234678-HpCDD	40.748	1.117	4.75e5	4.49e5	0.872	1.059	1.050	2431	2119	6.37e6	5.92e6	2621.2	NO	62.895
13C-OCDD	46.428	1.273	6.24e5	6.94e5	0.655	0.900	0.890	2657	2304	6.43e6	7.31e6	2418.4	NO	119.402
13C-123789-HxCDD	36.473	0.000	9.41e5	7.44e5	1.000	1.265	1.240	2878	2748	1.33e7	1.05e7	4610.6	NO	100.000
Total-tetrafurans			2.65e3		0.924			994		4.31e4				0.319

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
Total-penta1			0.00e0					817		0.00e0				
Total-pentafurans			1.11e3		0.960			910		2.19e4				0.119
Total-hexafurans			2.18e3		1.130			1052		4.63e4				0.293
Total-heptafurans			2.41e3		1.281			707		3.79e4				0.399
Total-Furans			9.41e3		1.100			994		1.61e5				1.471
Total-tetradioxins			8.06e2		1.150			1584		1.10e4				0.089
Total-pentadioxins			4.04e2		1.017			1227		6.72e3				0.060
Total-hexadioxins			2.94e3		0.977			1268		5.64e4				0.499
Total-heptadioxins			6.96e3		1.051			796		1.02e5				1.291
Total-Dioxins			2.22e4		1.025			1584		3.00e5				5.500
Total-TEQ			3.17e4					1584		4.61e5				6.971
37CL-2378-TCDD	26.183	1.032	9.06e5		1.073			2132		1.30e7		6114.8		41.181
FUNCTION1 PFK			2.33e6					743889		4.48e7				
FUNCTION2 PFK			1.76e6					218121		1.56e7				0.000
FUNCTION3 PFK			4.76e6					579195		3.52e7				0.000
FUNCTION4 PFK			0.00e0					353485		0.00e0				
FUNCTION5 PFK			5.77e5					360702		2.03e7				
FUNCTION1 HXCD...			5.97e3					541		7.96e4				0.000
FUNCTION1 HPCD...			3.16e3					1430		5.48e4				0.000
FUNCTION2 HPCD...			1.55e3					1497		3.92e4				0.000
FUNCTION3 OCDPE			0.00e0					494		0.00e0				
FUNCTION4 NCDPE			4.92e2					792		1.07e4				0.000
FUNCTION5 DCDPE			0.00e0					373		0.00e0				

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin170224.mdb 27 Feb 2017 09:30:36
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\170124ICAL.cdb 25 Jan 2017 09:33:34

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

TF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	35	Total-tetrafurans	303.9016	25.76	698.618	0.924		0.037		0.49	0.77	YES	3.3
2	1	2378-TCDF	303.9016	25.54	1723.101	0.924		0.092	0.092	0.69	0.77	NO	11.3
3	35	Total-tetrafurans	303.9016	24.48	914.221	0.924		0.049		1.66	0.77	YES	12.2
4	35	Total-tetrafurans	303.9016	23.84	974.408	0.924		0.052		1.00	0.77	YES	6.0
5	35	Total-tetrafurans	303.9016	22.93	998.134	0.924		0.054		0.67	0.77	NO	6.9
6	35	Total-tetrafurans	303.9016	26.93	396.579	0.924		0.021		0.85	0.77	NO	2.6
7	35	Total-tetrafurans	303.9016	26.80	239.132	0.924		0.013		0.46	0.77	YES	1.1

PP

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1													

PF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	2	12378-PeCDF	339.8597	29.69	1100.710	0.954		0.068	0.068	1.58	1.55	NO	12.2
2	37	Total-pentafurans	339.8597	28.53	517.632	0.960		0.031		1.27	1.55	YES	4.9
3	37	Total-pentafurans	339.8597	28.27	333.893	0.960		0.020		0.80	1.55	YES	6.9

HF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	5	234678-HxCDF	373.8208	35.80	618.367	1.181		0.040	0.026	0.56	1.24	YES	3.8
2	6	123678-HxCDF	373.8208	34.85	882.093	1.089		0.054	0.045	1.68	1.24	YES	13.9
3	38	Total-hexafurans	373.8208	34.73	601.565	1.130		0.040		1.80	1.24	YES	6.7
4	4	123478-HxCDF	373.8208	34.66	291.276	1.141		0.019	0.010	0.40	1.24	YES	3.0
5	38	Total-hexafurans	373.8208	34.07	586.636	1.130		0.039		1.03	1.24	YES	6.1
6	38	Total-hexafurans	373.8208	33.21	518.410	1.130		0.034		1.27	1.24	NO	4.2
7	7	123789-HxCDF	373.8208	36.96	896.520	1.110		0.068	0.047	0.62	1.24	YES	6.3

HPF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	9	1234789-HpCDF	407.7818	41.61	898.203	1.295		0.080	0.080	1.17	1.05	NO	12.9
2	39	Total-heptafurans	407.7818	39.78	1886.623	1.281		0.152		0.98	1.05	NO	21.4
3	8	1234678-HpCDF	407.7818	39.03	2253.337	1.267		0.166	0.144	0.80	1.05	YES	19.2

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	35	Total-tetrafurans	303.9016	25.76	698.618	0.924		0.037		0.49	0.77	YES	3.3
2	1	2378-TCDF	303.9016	25.54	1723.101	0.924		0.092	0.092	0.69	0.77	NO	11.3
3	35	Total-tetrafurans	303.9016	24.48	914.221	0.924		0.049		1.66	0.77	YES	12.2
4	35	Total-tetrafurans	303.9016	23.84	974.408	0.924		0.052		1.00	0.77	YES	6.0
5	35	Total-tetrafurans	303.9016	22.93	998.134	0.924		0.054		0.67	0.77	NO	6.9
6	35	Total-tetrafurans	303.9016	26.93	396.579	0.924		0.021		0.85	0.77	NO	2.6
7	35	Total-tetrafurans	303.9016	26.80	239.132	0.924		0.013		0.46	0.77	YES	1.1
8	2	12378-PeCDF	339.8597	29.69	1100.710	0.954		0.068	0.068	1.58	1.55	NO	12.2
9	37	Total-pentafurans	339.8597	28.53	517.632	0.960		0.031		1.27	1.55	YES	4.9
10	37	Total-pentafurans	339.8597	28.27	333.893	0.960		0.020		0.80	1.55	YES	6.9
11	5	234678-HxCDF	373.8208	35.80	618.367	1.181		0.040	0.026	0.56	1.24	YES	3.8
12	6	123678-HxCDF	373.8208	34.85	882.093	1.089		0.054	0.045	1.68	1.24	YES	13.9
13	38	Total-hexafurans	373.8208	34.73	601.565	1.130		0.040		1.80	1.24	YES	6.7
14	4	123478-HxCDF	373.8208	34.66	291.276	1.141		0.019	0.010	0.40	1.24	YES	3.0
15	38	Total-hexafurans	373.8208	34.07	586.636	1.130		0.039		1.03	1.24	YES	6.1
16	38	Total-hexafurans	373.8208	33.21	518.410	1.130		0.034		1.27	1.24	NO	4.2
17	10	OCDF	441.7428	46.68	2394.129	1.067		0.340	0.340	0.79	0.89	NO	15.5
18	9	1234789-HpCDF	407.7818	41.61	898.203	1.295		0.080	0.080	1.17	1.05	NO	12.9
19	39	Total-heptafurans	407.7818	39.78	1886.623	1.281		0.152		0.98	1.05	NO	21.4
20	8	1234678-HpCDF	407.7818	39.03	2253.337	1.267		0.166	0.144	0.80	1.05	YES	19.2
21	7	123789-HxCDF	373.8208	36.96	896.520	1.110		0.068	0.047	0.62	1.24	YES	6.3

TD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	41	Total-tetradioxins	319.8965	23.34	1237.299	1.150		0.089		1.87	0.77	YES	6.9

PD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	12	12378-PeCDD	355.8546	31.29	655.214	1.017		0.060	0.060	1.61	1.55	NO	5.5

HD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	43	Total-hexadioxins	389.8157	33.78	1320.648	0.977		0.119		1.52	1.24	YES	11.6
2	15	123789-HxCDD	389.8157	36.48	1672.846	0.948		0.155	0.142	1.03	1.24	YES	7.8
3	14	123678-HxCDD	389.8157	36.06	940.278	0.964		0.083	0.072	1.58	1.24	YES	10.7
4	43	Total-hexadioxins	389.8157	35.97	376.692	0.977		0.034		0.77	1.24	YES	3.6
5	13	123478-HxCDD	389.8157	35.94	370.887	1.017		0.033	0.030	0.96	1.24	YES	3.3
6	43	Total-hexadioxins	389.8157	34.97	490.938	0.977		0.044		0.96	1.24	YES	3.8
7	43	Total-hexadioxins	389.8157	34.95	345.641	0.977		0.031		0.64	1.24	YES	3.6

HPD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	16	1234678-HpCDD	423.7766	40.77	4944.617	1.051		0.509	0.509	1.20	1.05	NO	42.2
2	44	Total-heptadioxins	423.7766	39.54	7593.571	1.051		0.782		1.29	1.05	YES	86.4

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	41	Total-tetradioxins	319.8965	23.34	1237.299	1.150	0.089		1.87	0.77	YES	6.9
2	43	Total-hexadioxins	389.8157	33.78	1320.648	0.977	0.119		1.52	1.24	YES	11.6
3	12	12378-PeCDD	355.8546	31.29	655.214	1.017	0.060	0.060	1.61	1.55	NO	5.5
4	15	123789-HxCDD	389.8157	36.48	1672.846	0.948	0.155	0.142	1.03	1.24	YES	7.8
5	14	123678-HxCDD	389.8157	36.06	940.278	0.964	0.083	0.072	1.58	1.24	YES	10.7
6	43	Total-hexadioxins	389.8157	35.97	376.692	0.977	0.034		0.77	1.24	YES	3.6
7	13	123478-HxCDD	389.8157	35.94	370.887	1.017	0.033	0.030	0.96	1.24	YES	3.3
8	43	Total-hexadioxins	389.8157	34.97	490.938	0.977	0.044		0.96	1.24	YES	3.8
9	43	Total-hexadioxins	389.8157	34.95	345.641	0.977	0.031		0.64	1.24	YES	3.6
10	16	1234678-HpCDD	423.7766	40.77	4944.617	1.051	0.509	0.509	1.20	1.05	NO	42.2
11	44	Total-heptadioxins	423.7766	39.54	7593.571	1.051	0.782		1.29	1.05	YES	86.4
12	17	OCDD	457.7377	46.45	24163.273	1.030	3.561	3.561	0.85	0.89	NO	78.5

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	35	Total-tetrafurans	303.9016	25.76	698.618	0.924	0.037		0.49	0.77	YES	3.3
2	1	2378-TCDF	303.9016	25.54	1723.101	0.924	0.092	0.092	0.69	0.77	NO	11.3
3	35	Total-tetrafurans	303.9016	24.48	914.221	0.924	0.049		1.66	0.77	YES	12.2
4	35	Total-tetrafurans	303.9016	23.84	974.408	0.924	0.052		1.00	0.77	YES	6.0
5	35	Total-tetrafurans	303.9016	22.93	998.134	0.924	0.054		0.67	0.77	NO	6.9
6	35	Total-tetrafurans	303.9016	26.93	396.579	0.924	0.021		0.85	0.77	NO	2.6
7	35	Total-tetrafurans	303.9016	26.80	239.132	0.924	0.013		0.46	0.77	YES	1.1
8	2	12378-PeCDF	339.8597	29.69	1100.710	0.954	0.068	0.068	1.58	1.55	NO	12.2
9	37	Total-pentafurans	339.8597	28.53	517.632	0.960	0.031		1.27	1.55	YES	4.9
10	37	Total-pentafurans	339.8597	28.27	333.893	0.960	0.020		0.80	1.55	YES	6.9
11	5	234678-HxCDF	373.8208	35.80	618.367	1.181	0.040	0.026	0.56	1.24	YES	3.8
12	6	123678-HxCDF	373.8208	34.85	882.093	1.089	0.054	0.045	1.68	1.24	YES	13.9
13	38	Total-hexafurans	373.8208	34.73	601.565	1.130	0.040		1.80	1.24	YES	6.7
14	4	123478-HxCDF	373.8208	34.66	291.276	1.141	0.019	0.010	0.40	1.24	YES	3.0
15	38	Total-hexafurans	373.8208	34.07	586.636	1.130	0.039		1.03	1.24	YES	6.1
16	38	Total-hexafurans	373.8208	33.21	518.410	1.130	0.034		1.27	1.24	NO	4.2
17	10	OCDF	441.7428	46.68	2394.129	1.067	0.340	0.340	0.79	0.89	NO	15.5
18	9	1234789-HpCDF	407.7818	41.61	898.203	1.295	0.080	0.080	1.17	1.05	NO	12.9
19	39	Total-heptafurans	407.7818	39.78	1886.623	1.281	0.152		0.98	1.05	NO	21.4
20	8	1234678-HpCDF	407.7818	39.03	2253.337	1.267	0.166	0.144	0.80	1.05	YES	19.2
21	7	123789-HxCDF	373.8208	36.96	896.520	1.110	0.068	0.047	0.62	1.24	YES	6.3
22	41	Total-tetradioxins	319.8965	23.34	1237.299	1.150	0.089		1.87	0.77	YES	6.9
23	43	Total-hexadioxins	389.8157	33.78	1320.648	0.977	0.119		1.52	1.24	YES	11.6
24	12	12378-PeCDD	355.8546	31.29	655.214	1.017	0.060	0.060	1.61	1.55	NO	5.5
25	15	123789-HxCDD	389.8157	36.48	1672.846	0.948	0.155	0.142	1.03	1.24	YES	7.8
26	14	123678-HxCDD	389.8157	36.06	940.278	0.964	0.083	0.072	1.58	1.24	YES	10.7
27	43	Total-hexadioxins	389.8157	35.97	376.692	0.977	0.034		0.77	1.24	YES	3.6
28	13	123478-HxCDD	389.8157	35.94	370.887	1.017	0.033	0.030	0.96	1.24	YES	3.3
29	43	Total-hexadioxins	389.8157	34.97	490.938	0.977	0.044		0.96	1.24	YES	3.8
30	43	Total-hexadioxins	389.8157	34.95	345.641	0.977	0.031		0.64	1.24	YES	3.6
31	16	1234678-HpCDD	423.7766	40.77	4944.617	1.051	0.509	0.509	1.20	1.05	NO	42.2
32	44	Total-heptadioxins	423.7766	39.54	7593.571	1.051	0.782		1.29	1.05	YES	86.4
33	17	OCDD	457.7377	46.45	24163.273	1.030	3.561	3.561	0.85	0.89	NO	78.5

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	48	FUNCTION1 PFK	330.9792	22.90	0.000							1.4
2	48	FUNCTION1 PFK	330.9792	22.73	0.000							1.2
3	48	FUNCTION1 PFK	330.9792	22.67	0.000							1.3
4	48	FUNCTION1 PFK	330.9792	22.55	0.000							1.3
5	48	FUNCTION1 PFK	330.9792	22.28	0.000							1.5
6	48	FUNCTION1 PFK	330.9792	22.09	0.000							0.7
7	48	FUNCTION1 PFK	330.9792	21.61	0.000							2.0
8	48	FUNCTION1 PFK	330.9792	21.45	0.000							1.0
9	48	FUNCTION1 PFK	330.9792	21.13	0.000							1.7
10	48	FUNCTION1 PFK	330.9792	25.50	0.000							1.1
11	48	FUNCTION1 PFK	330.9792	25.11	0.000							1.0
12	48	FUNCTION1 PFK	330.9792	25.02	0.000							0.8
13	48	FUNCTION1 PFK	330.9792	24.94	0.000							1.4
14	48	FUNCTION1 PFK	330.9792	24.72	0.000							1.5
15	48	FUNCTION1 PFK	330.9792	24.66	0.000							1.6
16	48	FUNCTION1 PFK	330.9792	24.60	0.000							2.0
17	48	FUNCTION1 PFK	330.9792	24.51	0.000							2.2
18	48	FUNCTION1 PFK	330.9792	24.45	0.000							2.1
19	48	FUNCTION1 PFK	330.9792	24.39	0.000							1.8
20	48	FUNCTION1 PFK	330.9792	24.09	0.000							1.6
21	48	FUNCTION1 PFK	330.9792	24.02	0.000							0.4
22	48	FUNCTION1 PFK	330.9792	23.82	0.000							1.4
23	48	FUNCTION1 PFK	330.9792	23.72	0.000							0.7
24	48	FUNCTION1 PFK	330.9792	23.64	0.000							1.3
25	48	FUNCTION1 PFK	330.9792	23.28	0.000							0.9
26	48	FUNCTION1 PFK	330.9792	27.56	0.000							1.8
27	48	FUNCTION1 PFK	330.9792	27.38	0.000							1.9
28	48	FUNCTION1 PFK	330.9792	27.33	0.000							1.8
29	48	FUNCTION1 PFK	330.9792	27.24	0.000							1.1
30	48	FUNCTION1 PFK	330.9792	27.17	0.000							0.5
31	48	FUNCTION1 PFK	330.9792	27.09	0.000							1.5
32	48	FUNCTION1 PFK	330.9792	26.97	0.000							2.3
33	48	FUNCTION1 PFK	330.9792	26.81	0.000							2.5
34	48	FUNCTION1 PFK	330.9792	26.71	0.000							1.4
35	48	FUNCTION1 PFK	330.9792	26.65	0.000							1.8
36	48	FUNCTION1 PFK	330.9792	26.54	0.000							1.7
37	48	FUNCTION1 PFK	330.9792	26.50	0.000							1.4
38	48	FUNCTION1 PFK	330.9792	26.17	0.000							1.3
39	48	FUNCTION1 PFK	330.9792	26.12	0.000							1.8
40	48	FUNCTION1 PFK	330.9792	26.03	0.000							1.5
41	48	FUNCTION1 PFK	330.9792	25.99	0.000							1.0
42	48	FUNCTION1 PFK	330.9792	27.81	0.000							1.2

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	49	FUNCTION2 PFK	366.9792	31.05	0.000		0.000					1.6
2	49	FUNCTION2 PFK	366.9792	30.72	0.000		0.000					0.9
3	49	FUNCTION2 PFK	366.9792	30.67	0.000		0.000					1.0
4	49	FUNCTION2 PFK	366.9792	30.50	0.000		0.000					0.6
5	49	FUNCTION2 PFK	366.9792	30.37	0.000		0.000					1.9
6	49	FUNCTION2 PFK	366.9792	30.24	0.000		0.000					1.5
7	49	FUNCTION2 PFK	366.9792	30.09	0.000		0.000					1.2
8	49	FUNCTION2 PFK	366.9792	29.69	0.000		0.000					2.1
9	49	FUNCTION2 PFK	366.9792	29.08	0.000		0.000					1.6
10	49	FUNCTION2 PFK	366.9792	28.85	0.000		0.000					2.4
11	49	FUNCTION2 PFK	366.9792	28.69	0.000		0.000					0.8
12	49	FUNCTION2 PFK	366.9792	28.31	0.000		0.000					10.4
13	49	FUNCTION2 PFK	366.9792	28.02	0.000		0.000					19.8
14	49	FUNCTION2 PFK	366.9792	27.98	0.000		0.000					20.8
15	49	FUNCTION2 PFK	366.9792	31.83	0.000		0.000					1.4
16	49	FUNCTION2 PFK	366.9792	31.39	0.000		0.000					2.3
17	49	FUNCTION2 PFK	366.9792	31.18	0.000		0.000					1.3

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	50	FUNCTION3 PFK	380.9760	37.42	0.000		0.000					2.0
2	50	FUNCTION3 PFK	380.9760	36.25	0.000		0.000					12.1
3	50	FUNCTION3 PFK	380.9760	36.11	0.000		0.000					11.8
4	50	FUNCTION3 PFK	380.9760	35.75	0.000		0.000					5.5
5	50	FUNCTION3 PFK	380.9760	35.24	0.000		0.000					9.5
6	50	FUNCTION3 PFK	380.9760	34.99	0.000		0.000					14.6
7	50	FUNCTION3 PFK	380.9760	34.83	0.000		0.000					5.3

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	52	FUNCTION5 PFK	480.9696	44.70	0.000							1.8
2	52	FUNCTION5 PFK	480.9696	44.66	0.000							1.5
3	52	FUNCTION5 PFK	480.9696	44.59	0.000							0.6
4	52	FUNCTION5 PFK	480.9696	46.35	0.000							0.4
5	52	FUNCTION5 PFK	480.9696	46.27	0.000							1.3
6	52	FUNCTION5 PFK	480.9696	46.17	0.000							1.4
7	52	FUNCTION5 PFK	480.9696	46.09	0.000							0.9
8	52	FUNCTION5 PFK	480.9696	45.95	0.000							1.2
9	52	FUNCTION5 PFK	480.9696	45.91	0.000							1.2
10	52	FUNCTION5 PFK	480.9696	45.84	0.000							1.6
11	52	FUNCTION5 PFK	480.9696	45.74	0.000							1.1
12	52	FUNCTION5 PFK	480.9696	45.36	0.000							0.9
13	52	FUNCTION5 PFK	480.9696	45.30	0.000							1.8
14	52	FUNCTION5 PFK	480.9696	45.23	0.000							2.5
15	52	FUNCTION5 PFK	480.9696	45.19	0.000							1.7
16	52	FUNCTION5 PFK	480.9696	45.03	0.000							1.0
17	52	FUNCTION5 PFK	480.9696	44.97	0.000							0.5
18	52	FUNCTION5 PFK	480.9696	44.90	0.000							1.1
19	52	FUNCTION5 PFK	480.9696	44.87	0.000							0.9
20	52	FUNCTION5 PFK	480.9696	47.74	0.000							1.7
21	52	FUNCTION5 PFK	480.9696	47.69	0.000							0.6
22	52	FUNCTION5 PFK	480.9696	47.46	0.000							1.1
23	52	FUNCTION5 PFK	480.9696	47.31	0.000							0.9
24	52	FUNCTION5 PFK	480.9696	47.25	0.000							0.8
25	52	FUNCTION5 PFK	480.9696	47.22	0.000							0.5
26	52	FUNCTION5 PFK	480.9696	47.02	0.000							1.3
27	52	FUNCTION5 PFK	480.9696	46.98	0.000							1.8
28	52	FUNCTION5 PFK	480.9696	46.95	0.000							1.1
29	52	FUNCTION5 PFK	480.9696	46.90	0.000							3.0
30	52	FUNCTION5 PFK	480.9696	46.87	0.000							1.3
31	52	FUNCTION5 PFK	480.9696	46.84	0.000							2.1
32	52	FUNCTION5 PFK	480.9696	46.73	0.000							0.7
33	52	FUNCTION5 PFK	480.9696	46.67	0.000							1.6
34	52	FUNCTION5 PFK	480.9696	46.63	0.000							0.7
35	52	FUNCTION5 PFK	480.9696	46.45	0.000							0.4
36	52	FUNCTION5 PFK	480.9696	49.37	0.000							1.0
37	52	FUNCTION5 PFK	480.9696	49.33	0.000							0.4
38	52	FUNCTION5 PFK	480.9696	49.25	0.000							0.4
39	52	FUNCTION5 PFK	480.9696	49.22	0.000							0.7
40	52	FUNCTION5 PFK	480.9696	49.18	0.000							1.7
41	52	FUNCTION5 PFK	480.9696	49.05	0.000							0.3
42	52	FUNCTION5 PFK	480.9696	48.86	0.000							1.0
43	52	FUNCTION5 PFK	480.9696	48.73	0.000							1.2
44	52	FUNCTION5 PFK	480.9696	48.36	0.000							0.7
45	52	FUNCTION5 PFK	480.9696	48.32	0.000							1.1
46	52	FUNCTION5 PFK	480.9696	48.21	0.000							0.8
47	52	FUNCTION5 PFK	480.9696	48.13	0.000							0.8
48	52	FUNCTION5 PFK	480.9696	48.04	0.000							0.4
49	52	FUNCTION5 PFK	480.9696	47.93	0.000							0.4
50	52	FUNCTION5 PFK	480.9696	47.89	0.000							0.5
51	52	FUNCTION5 PFK	480.9696	47.81	0.000							1.3

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
52	52	FUNCTION5 PFK	480.9696	49.42	0.000							0.4

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	53	FUNCTION1 HXCD...	375.8364	25.63	0.000		0.000					108.8
2	53	FUNCTION1 HXCD...	375.8364	25.35	0.000		0.000					26.6
3	53	FUNCTION1 HXCD...	375.8364	24.78	0.000		0.000					3.5
4	53	FUNCTION1 HXCD...	375.8364	23.25	0.000		0.000					4.9
5	53	FUNCTION1 HXCD...	375.8364	21.82	0.000		0.000					3.3

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	54	FUNCTION1 HPCD...	409.7974	26.87	0.000		0.000					2.4
2	54	FUNCTION1 HPCD...	409.7974	26.65	0.000		0.000					2.1
3	54	FUNCTION1 HPCD...	409.7974	23.40	0.000		0.000					1.8
4	54	FUNCTION1 HPCD...	409.7974	22.84	0.000		0.000					2.6
5	54	FUNCTION1 HPCD...	409.7974	21.88	0.000		0.000					29.4

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	55	FUNCTION2 HPCD...	409.7974	28.48	0.000		0.000					2.2
2	55	FUNCTION2 HPCD...	409.7974	28.37	0.000		0.000					2.7
3	55	FUNCTION2 HPCD...	409.7974	32.03	0.000		0.000					2.4
4	55	FUNCTION2 HPCD...	409.7974	31.41	0.000		0.000					4.1
5	55	FUNCTION2 HPCD...	409.7974	31.31	0.000		0.000					2.0
6	55	FUNCTION2 HPCD...	409.7974	31.02	0.000		0.000					2.1
7	55	FUNCTION2 HPCD...	409.7974	30.84	0.000		0.000					1.0
8	55	FUNCTION2 HPCD...	409.7974	29.68	0.000		0.000					1.9
9	55	FUNCTION2 HPCD...	409.7974	29.34	0.000		0.000					3.1
10	55	FUNCTION2 HPCD...	409.7974	28.84	0.000		0.000					3.4
11	55	FUNCTION2 HPCD...	409.7974	28.76	0.000		0.000					1.4

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	57	FUNCTION4 NCDPE	479.7165	43.99	0.000		0.000					3.3
2	57	FUNCTION4 NCDPE	479.7165	39.04	0.000		0.000					2.4
3	57	FUNCTION4 NCDPE	479.7165	38.62	0.000		0.000					7.8

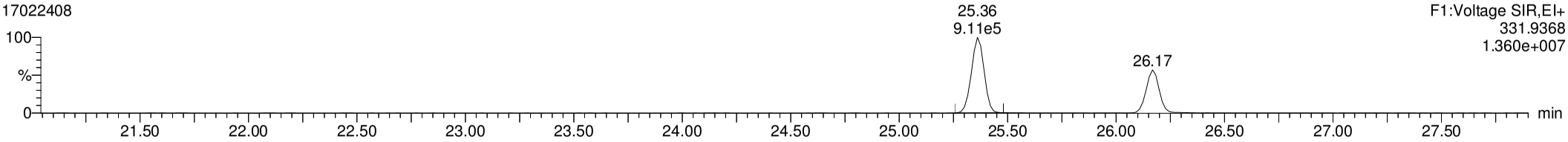
ETHERS6

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

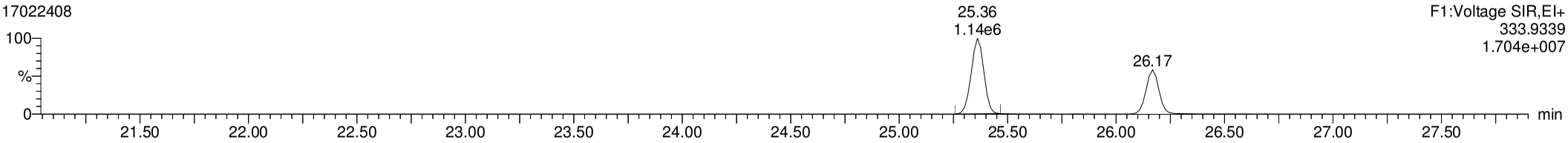
Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin170224.mdb 27 Feb 2017 09:30:36
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\170124ICAL.cdb 25 Jan 2017 09:33:34

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

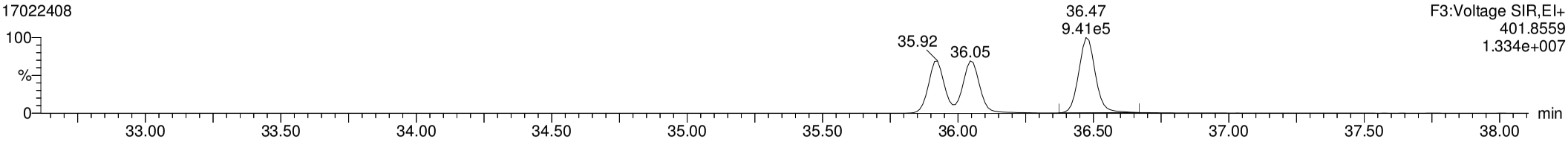
13C-1234-TCDD



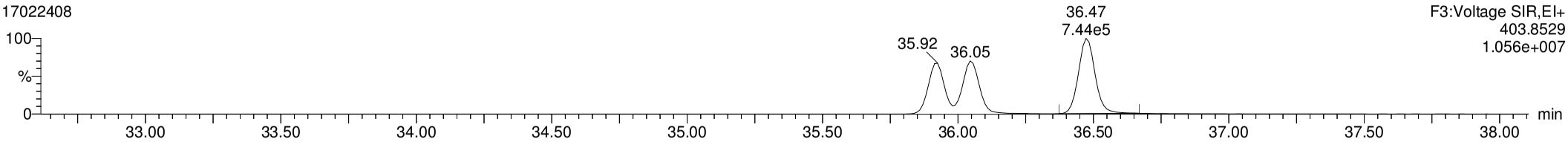
13C-1234-TCDD



13C-123789-HxCDD



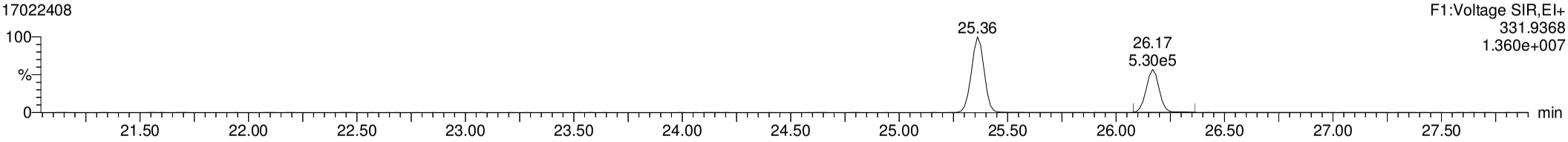
13C-123789-HxCDD



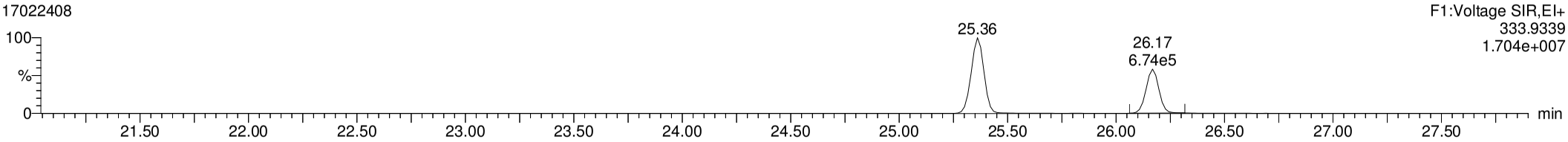
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

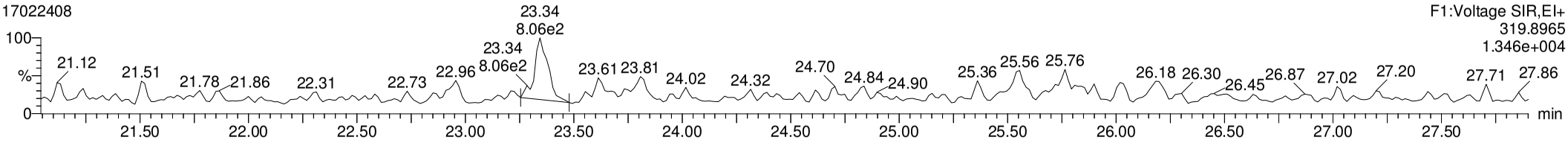
13C-2378-TCDD



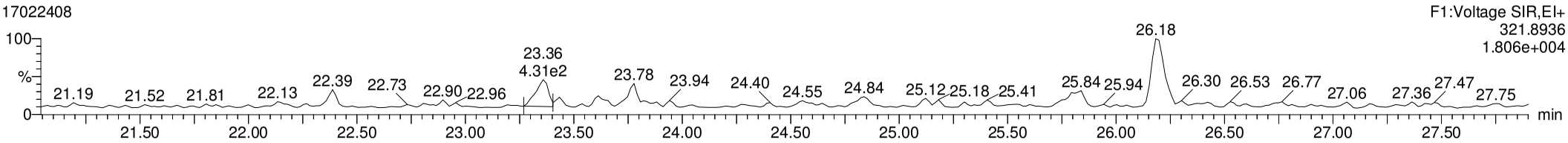
13C-2378-TCDD



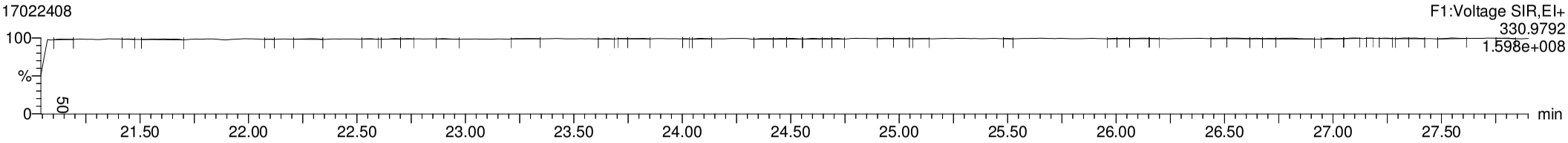
Total-tetradioxins



Total-tetradioxins



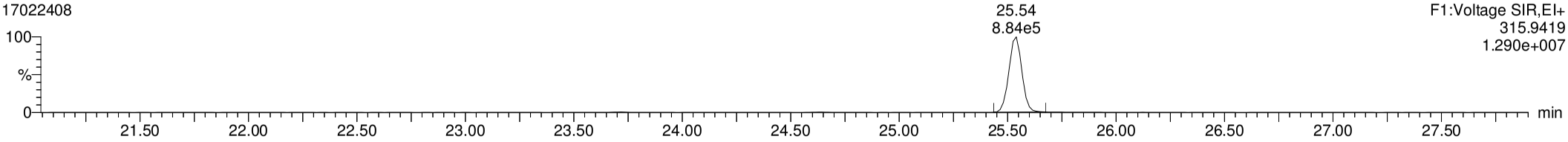
FUNCTION1 PFK



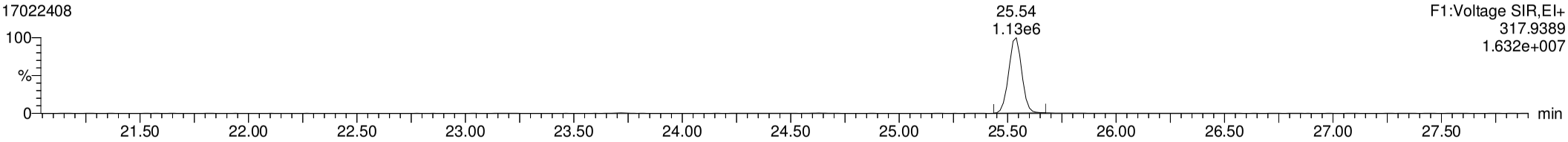
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

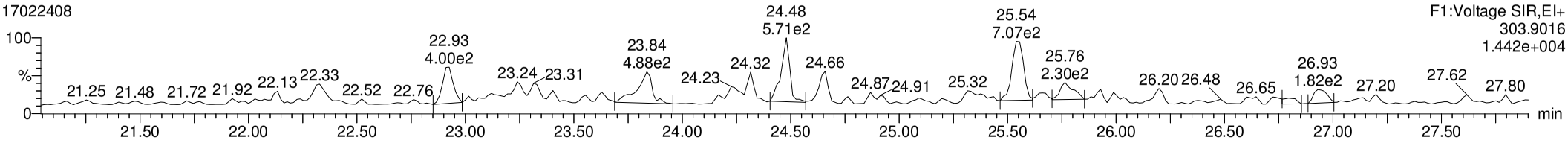
13C-2378-TCDF



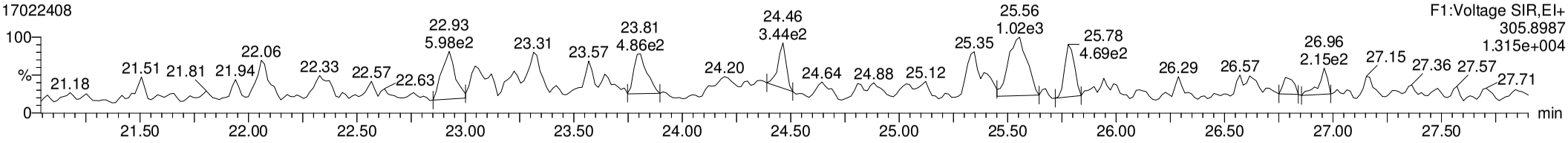
13C-2378-TCDF



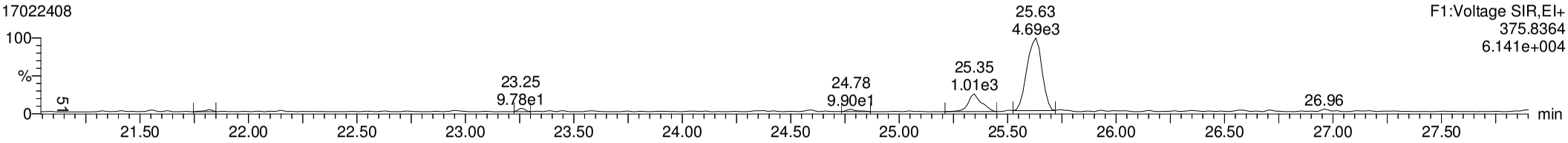
Total-tetrafurans



Total-tetrafurans



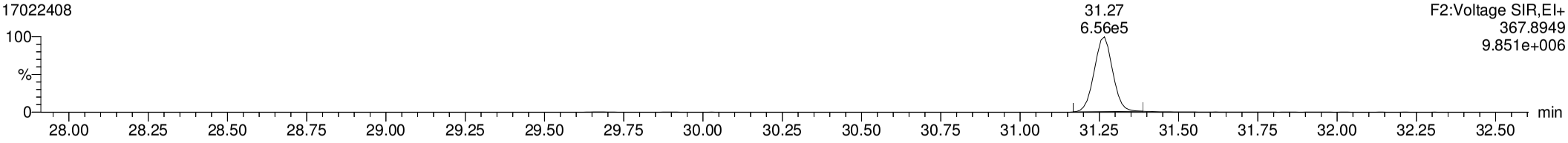
FUNCTION1 HXCDPE



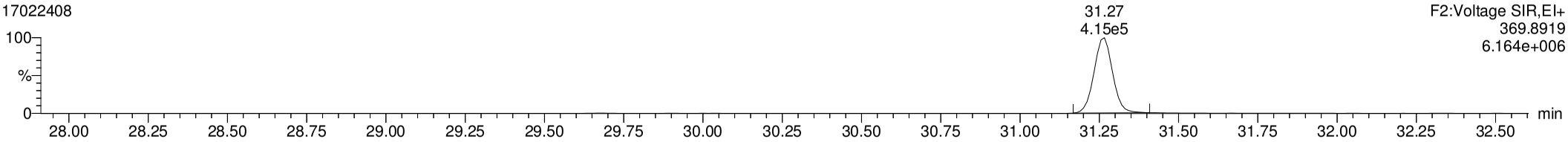
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

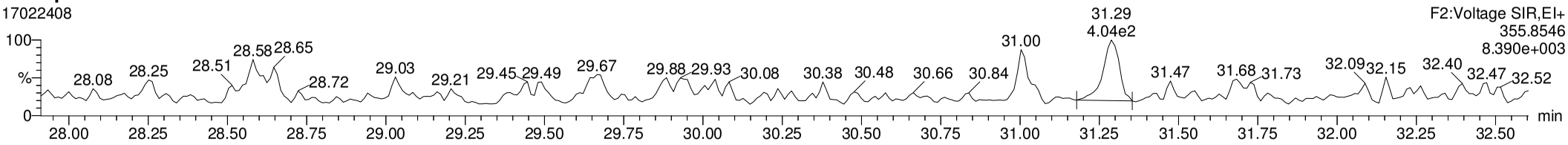
13C-12378-PeCDD



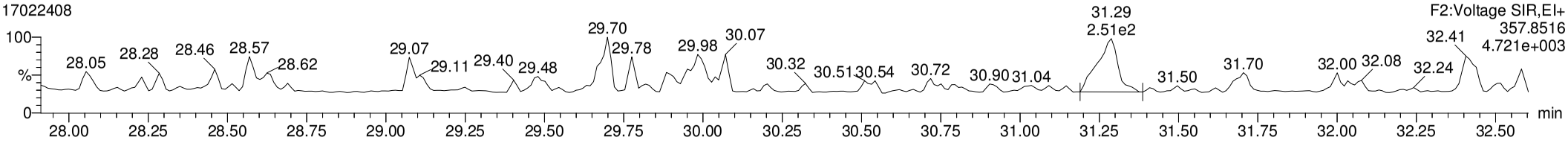
13C-12378-PeCDD



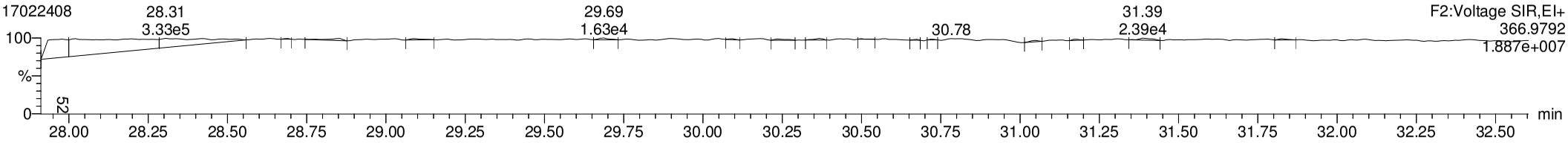
Total-pentadioxins



Total-pentadioxins



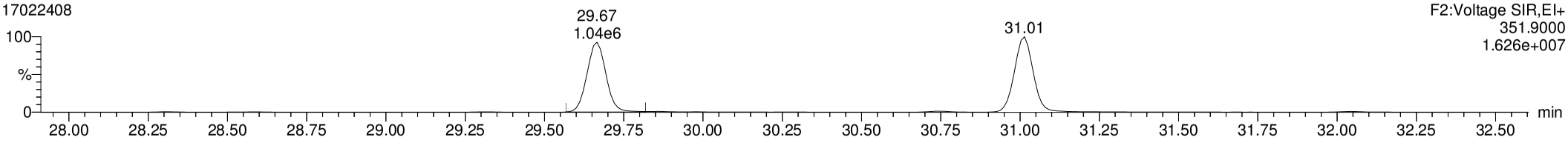
FUNCTION2 PFK



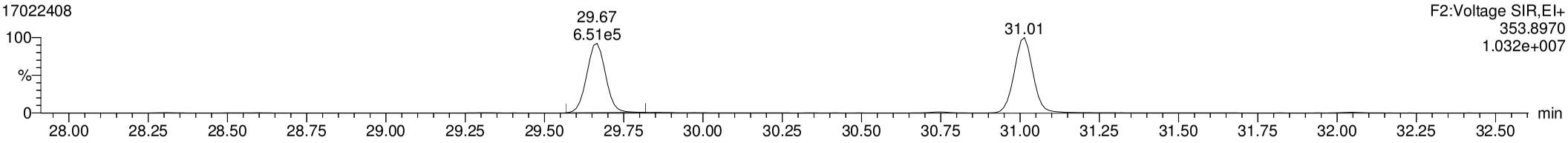
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

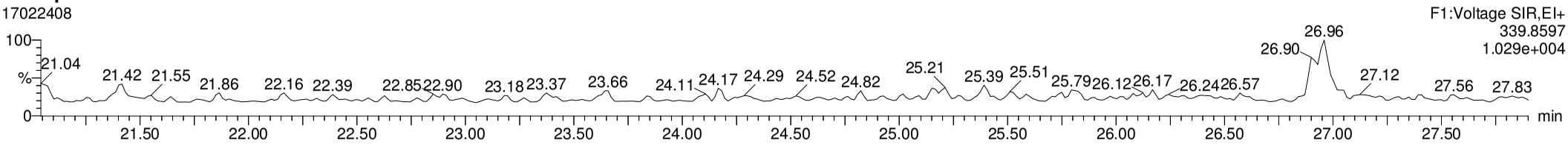
13C-12378-PeCDF



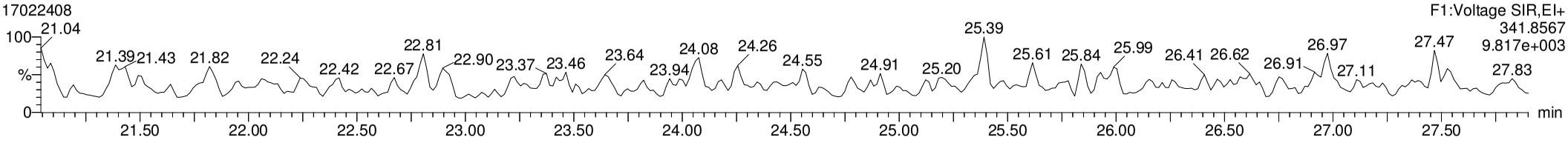
13C-12378-PeCDF



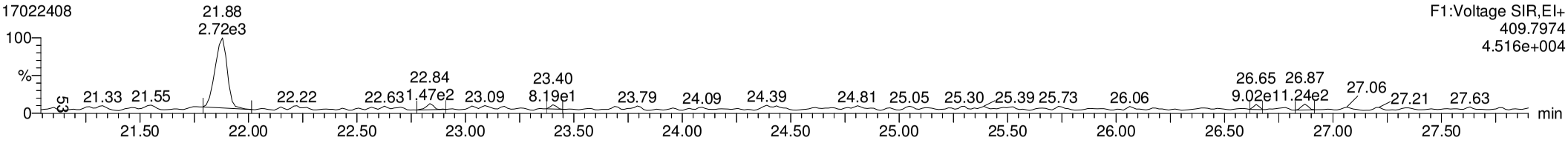
Total-penta1



Total-penta1



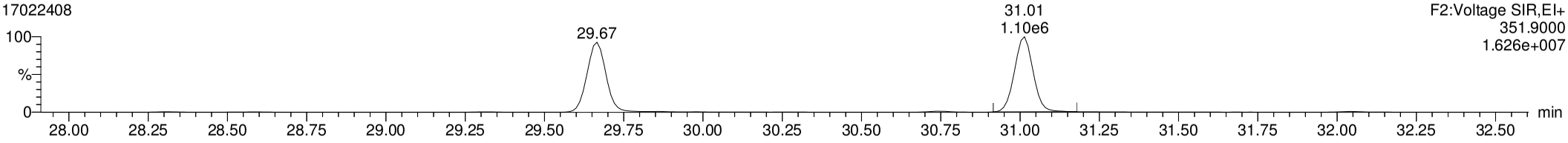
FUNCTION1 HPCDPE



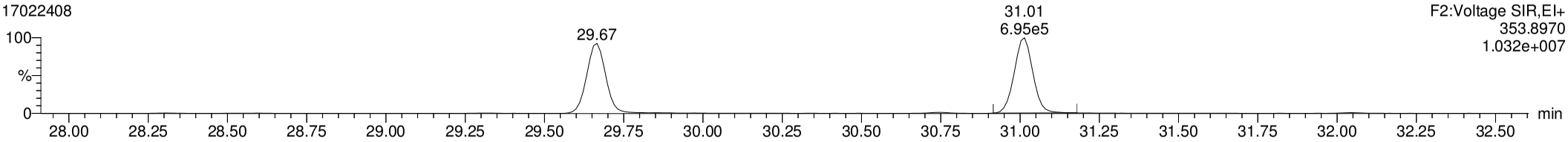
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

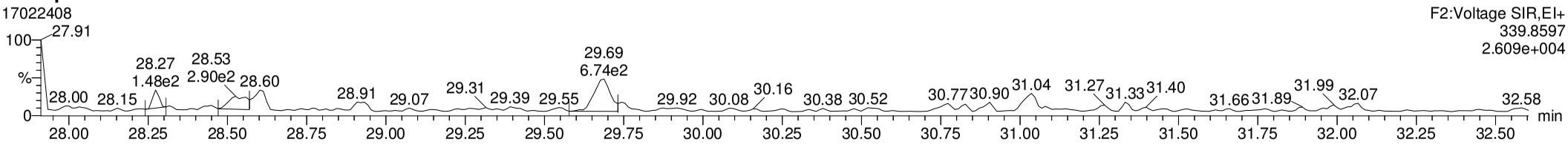
13C-23478-PeCDF



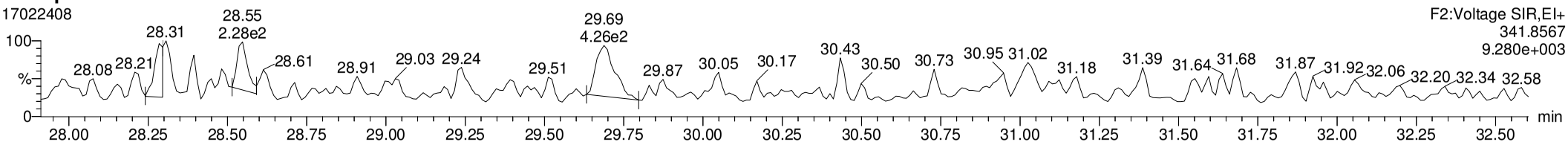
13C-23478-PeCDF



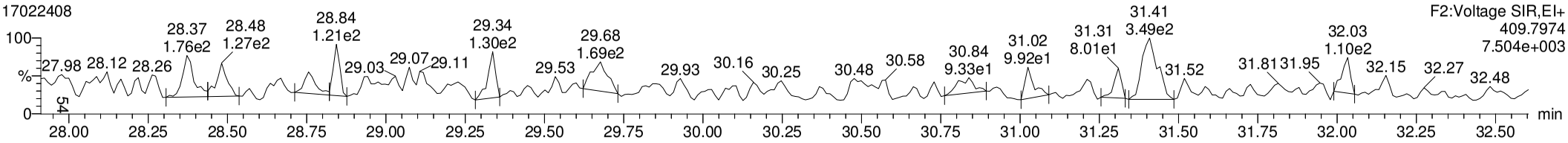
Total-pentafurans



Total-pentafurans



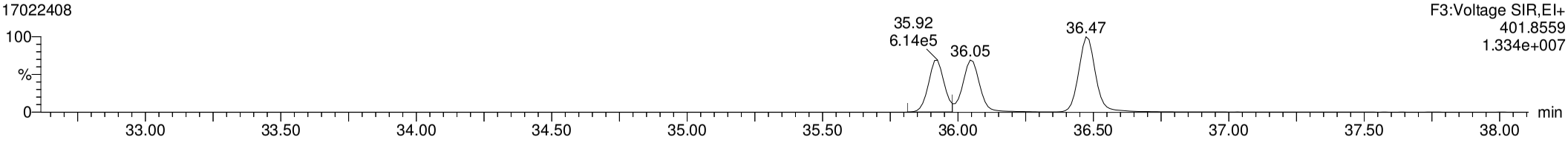
FUNCTION2 HPCDPE



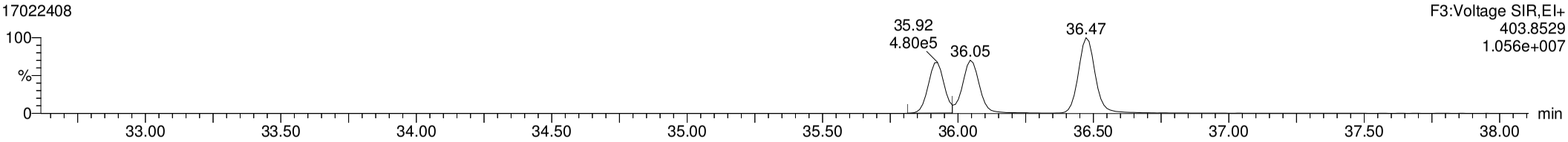
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

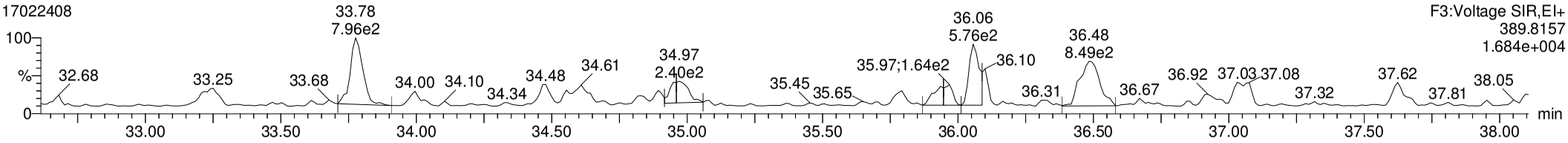
13C-123478-HxCDD



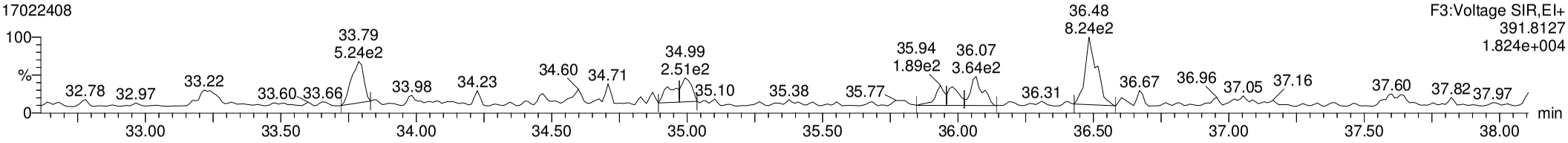
13C-123478-HxCDD



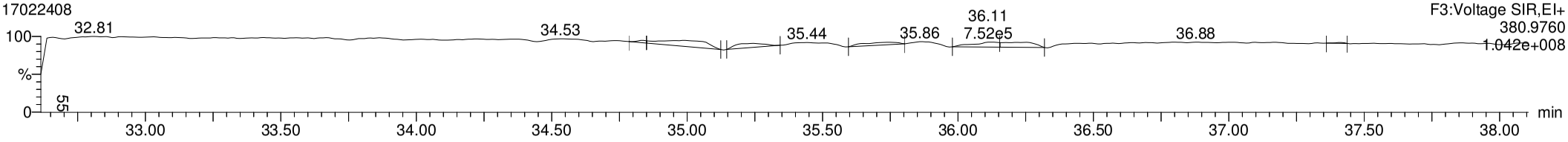
Total-hexadioxins



Total-hexadioxins



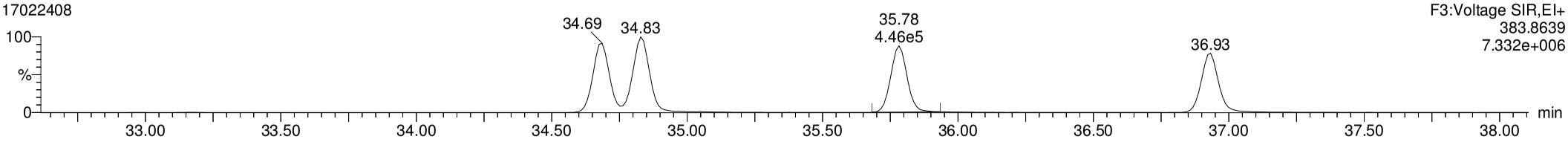
FUNCTION3 PFK



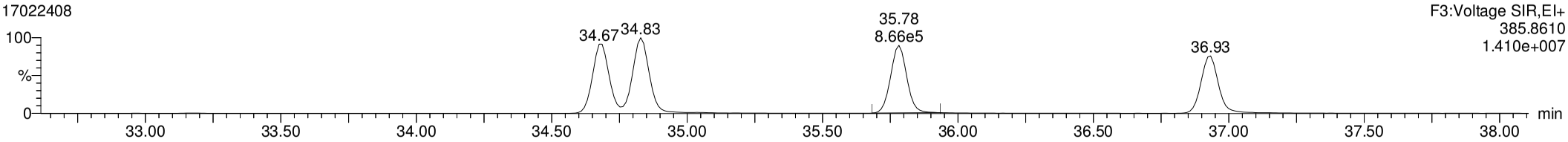
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

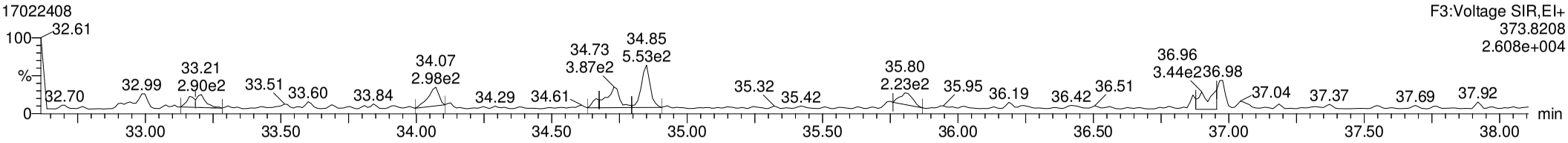
13C-234678-HxCDF



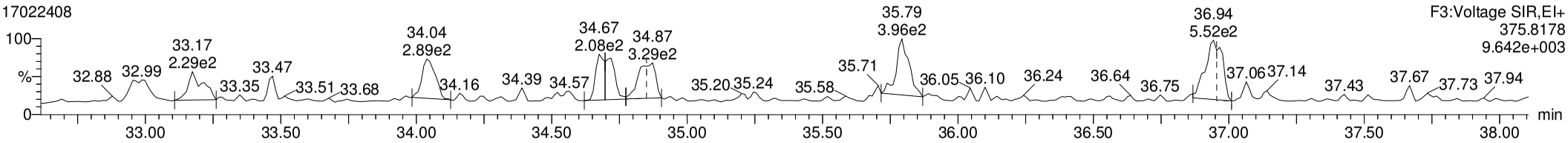
13C-234678-HxCDF



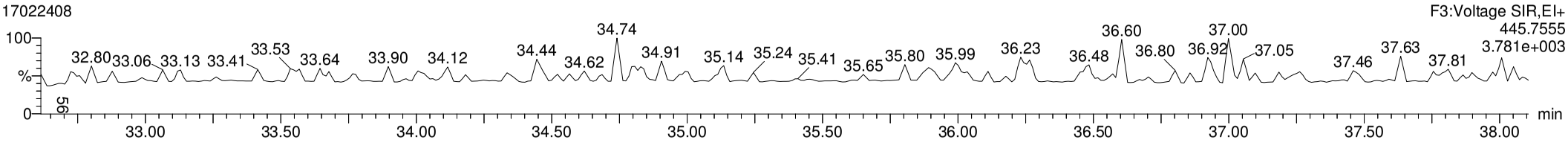
Total-hexafurans



Total-hexafurans



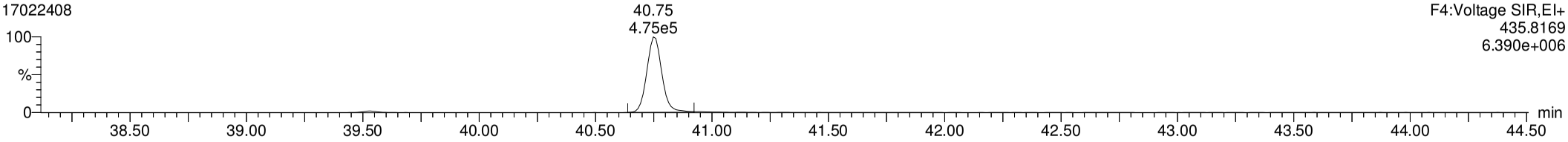
FUNCTION3 OCDPE



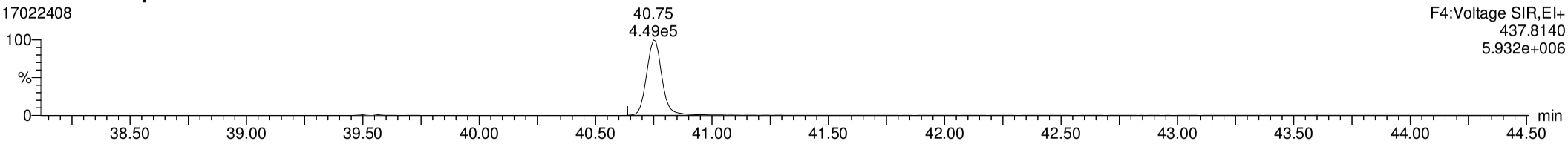
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

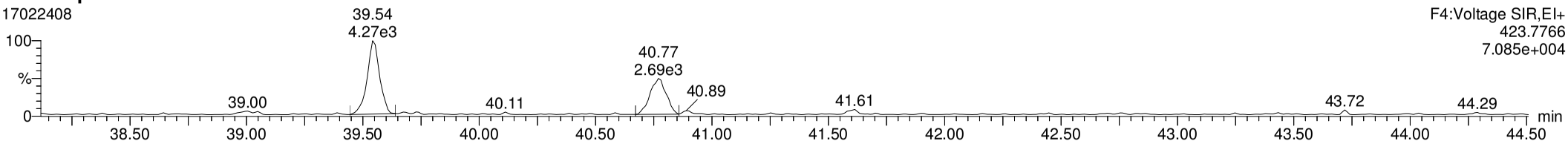
13C-1234678-HpCDD



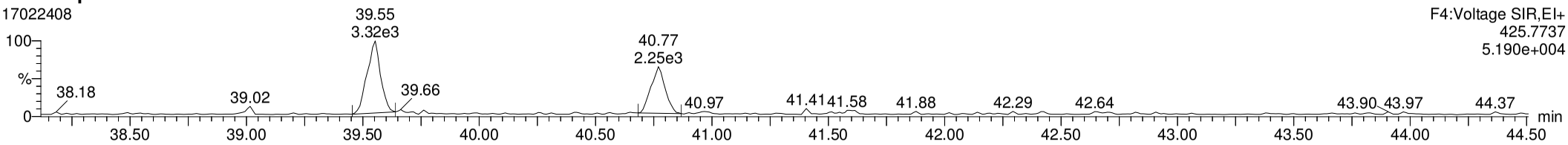
13C-1234678-HpCDD



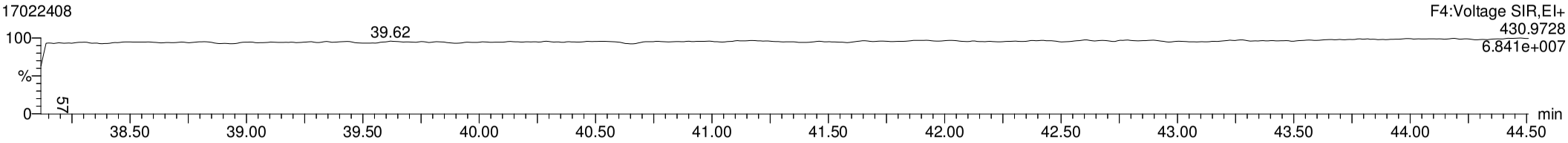
Total-heptadioxins



Total-heptadioxins



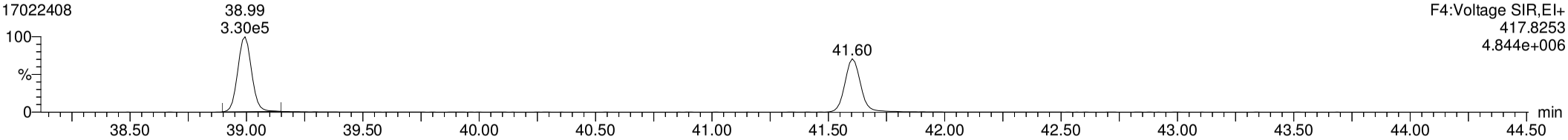
FUNCTION4 PFK



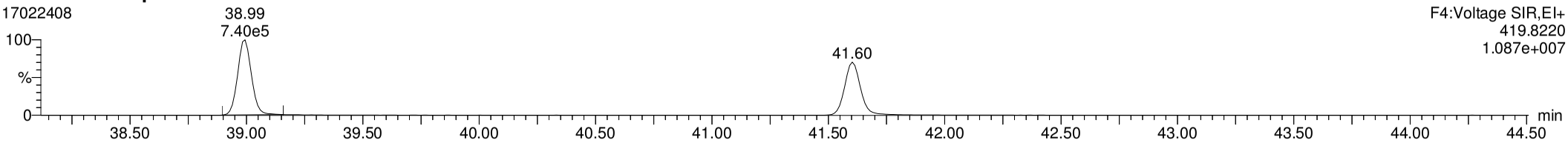
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

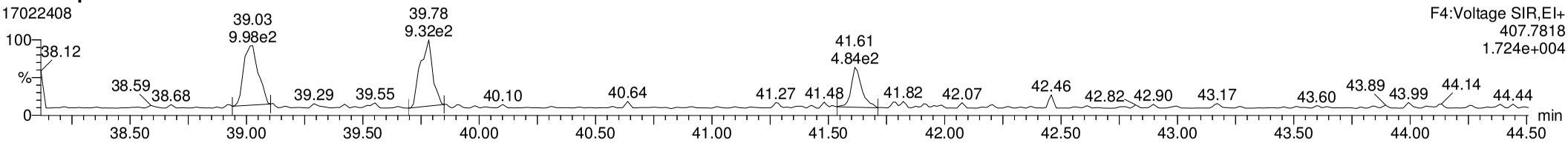
13C-1234678-HpCDF



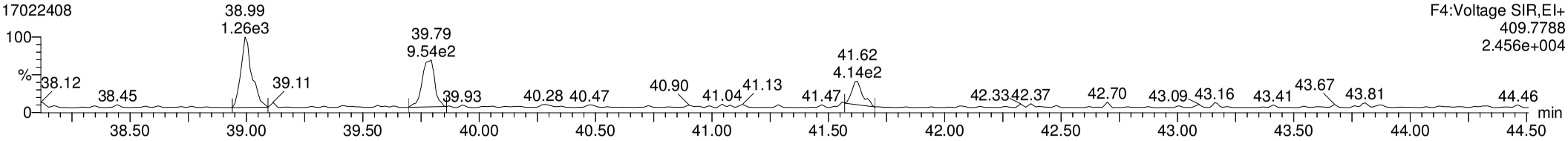
13C-1234678-HpCDF



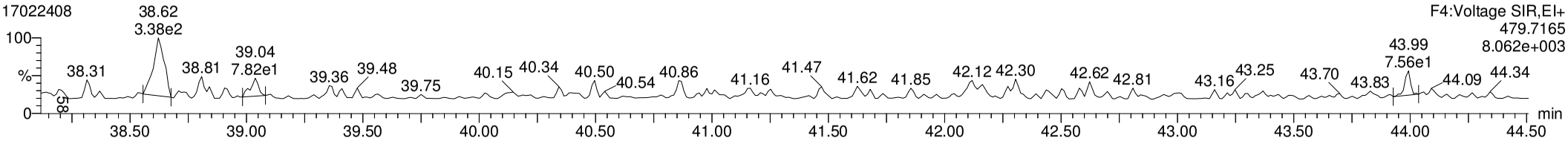
Total-heptafurans



Total-heptafurans



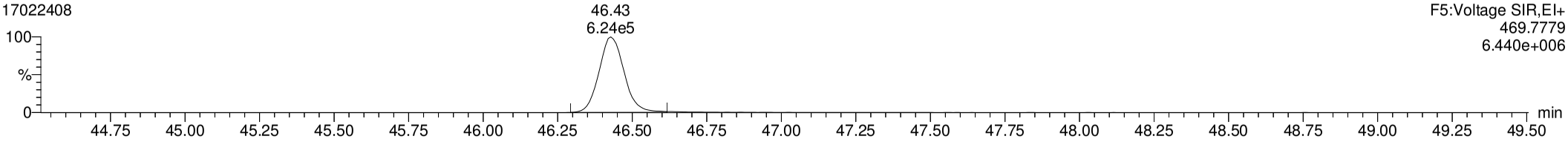
FUNCTION4 NCDPE



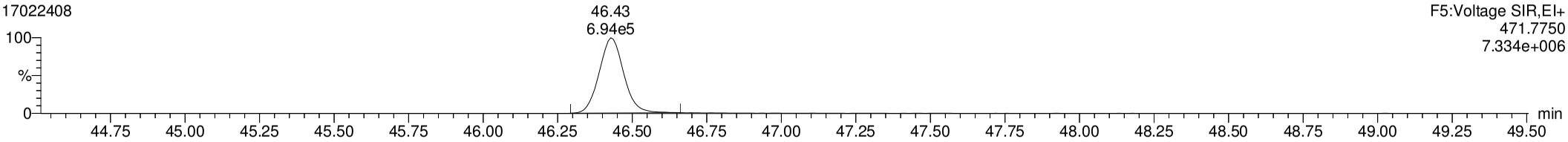
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:05 Pacific Standard Time

ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

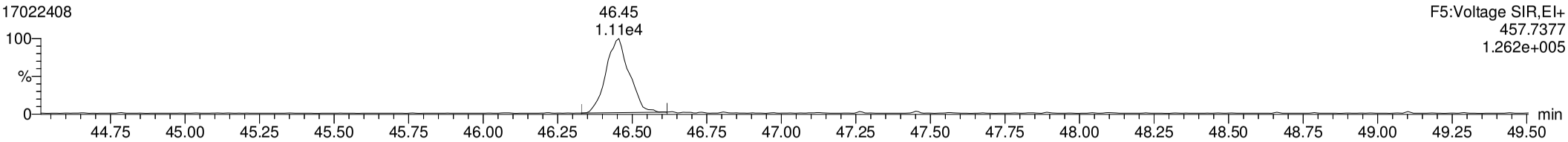
13C-OCDD



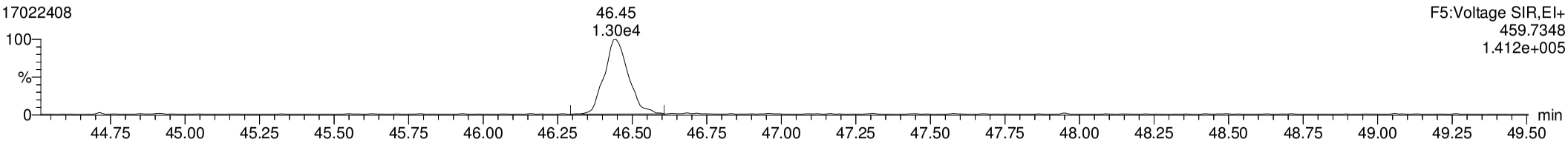
13C-OCDD



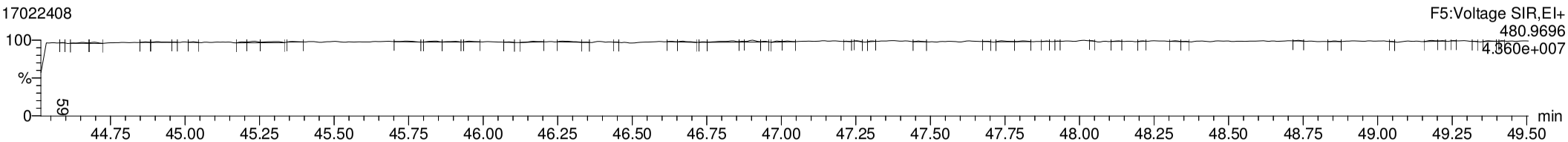
OCDD



OCDD

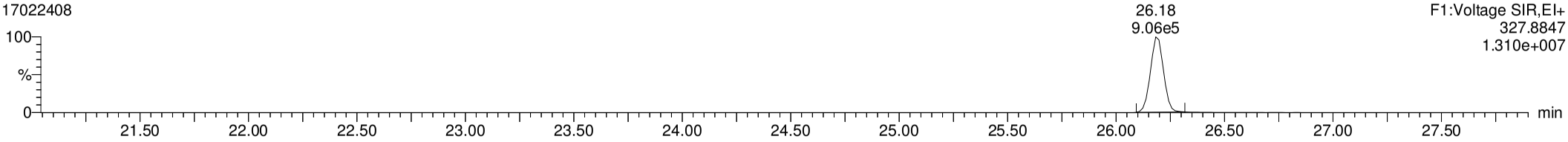


FUNCTION5 PFK

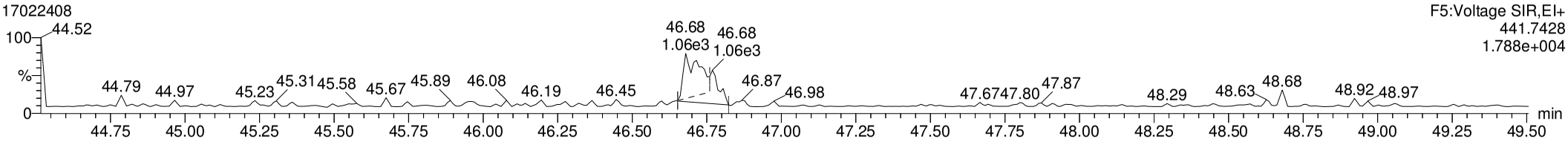


ID: 16K0053-04RE1, Name: 17022408, Date: 24-Feb-2017, Time: 19:25:39, Conditions: AUTOSPEC01, User: PK

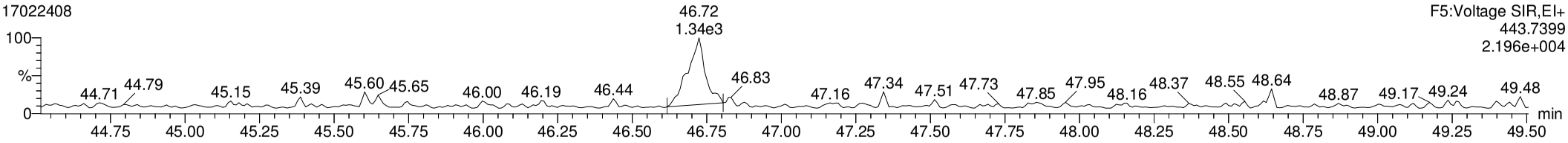
37CL-2378-TCDD



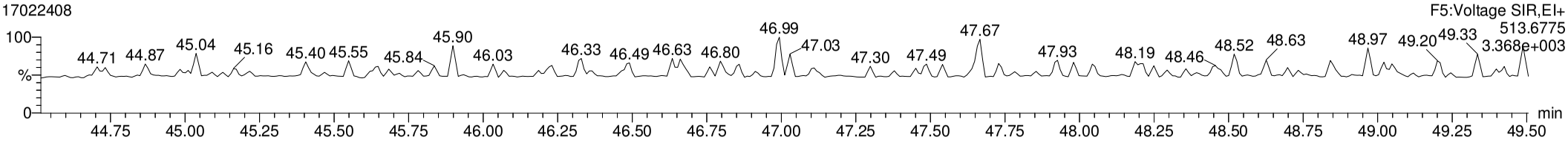
OCDF



OCDF



FUNCTION5 DCDPE



PG-SMA2-2-MUS-170105

Form I
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	17A0053
Client:	Anchor QEA, LLC			Project:	Port Gamble Shellfish Monitoring
Matrix:	Tissue	Laboratory ID:	17A0053-05RE1	File ID:	17022409
Sampled:	01/05/17 12:50	Prepared:	02/22/17 12:00	Analyzed:	02/24/17 20:18
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	10.03 g / 20 uL
Result Basis:	Dry	Sequence:	SFB0342	Calibration:	AA00071
Batch:	BFB0538	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.000	0.655-0.886	0.123	0.997	ND	ng/kg	U
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.140	0.997	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	0.128	4.99	ND	ng/kg	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.120	4.99	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.127	4.99	ND	ng/kg	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.000	1.054-1.426	0.094	4.99	ND	ng/kg	U
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.096	4.99	ND	ng/kg	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.102	4.99	ND	ng/kg	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	0.000	1.054-1.426	0.118	4.99	ND	ng/kg	U
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.246	4.99	ND	ng/kg	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.244	4.99	ND	ng/kg	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	0.000	1.054-1.426	0.256	4.99	ND	ng/kg	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.830	0.893-1.208		4.99	0.220	ng/kg	EMPC, J, B
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	0.099	4.99	ND	ng/kg	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.173	0.893-1.208		4.99	0.753	ng/kg	J, B
39001-02-0	OCDF	1	0.739	0.757-1.024		9.97	0.538	ng/kg	EMPC, J, B
3268-87-9	OCDD	1	0.840	0.757-1.024		9.97	5.92	ng/kg	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			0.997	ND	ng/kg
41903-57-5	Total TCDD	1	0.000			0.997	ND	ng/kg
30402-15-4	Total PeCDF	1	0.000			0.997	ND	ng/kg
36088-22-9	Total PeCDD	1	0.000			0.997	ND	ng/kg
55684-94-1	Total HxCDF	1	0.000			0.997	ND	ng/kg
34465-46-8	Total HxCDD	1	0.000			0.997	ND	ng/kg
38998-75-3	Total HpCDF	1	0.000			0.997	0.410	ng/kg
37871-00-4	Total HpCDD	1	0.000			0.997	2.41	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.012
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.012

PG-SMA2-2-MUS-170105

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	17A0053
Client:	Anchor QEA, LLC			Project:	Port Gamble Shellfish Monitoring
Matrix:	Tissue	Laboratory ID:	17A0053-05RE1	File ID:	17022409
Sampled:	01/05/17 12:50	Prepared:	02/22/17 12:00	Analyzed:	02/24/17 20:18
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	10.03 g / 20 uL
Result Basis:	Dry	Sequence:	SFB0342	Calibration:	AA00071
Batch:	BFB0538	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.760	0.655-0.886		40.7	24 - 169 %	
13C12-2,3,7,8-TCDD		0.795	0.655-0.886		42.2	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.600	1.318-1.783		37.8	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.567	1.318-1.783		39.4	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.574	1.318-1.783		40.2	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.520	0.434-0.587		37.5	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.521	0.434-0.587		37.9	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.526	0.434-0.587		37.5	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.503	0.434-0.587		40.9	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.284	1.054-1.426		39.5	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.251	1.054-1.426		39.8	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.450	0.374-0.506		35.4	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.442	0.374-0.506		41.4	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.076	0.893-1.208		38.8	23 - 140 %	
13C12-OCDD		0.881	0.757-1.024		33.5	17 - 157 %	
37C14-2,3,7,8-TCDD		328.000			95.8	35 - 197 %	

* Values outside of QC limits

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin170224.mdb 27 Feb 2017 09:30:36
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\170124ICAL.cdb 25 Jan 2017 09:33:34

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
2378-TCDF					0.924		0.770	1254	1712					
12378-PeCDF					0.954		1.550	1037	1453					
23478-PeCDF					0.966		1.550	1037	1453					
123478-HxCDF					1.141		1.240	853	869					
234678-HxCDF					1.181		1.240	853	869					
123678-HxCDF					1.089		1.240	853	869					
123789-HxCDF					1.110		1.240	853	869					
1234678-HpCDF	38.983	1.000	4.50e2	2.46e2	1.267	1.830	1.050	445	674	8.60e3	5.10e3	19.3	YES	0.110
1234789-HpCDF					1.295		1.050	445	674					
OCDF	46.688	1.006	3.26e2	4.41e2	1.067	0.739	0.890	559	1014	7.43e3	6.01e3	13.3	YES	0.270
2378-TCDD					1.150		0.770	1584	915					
12378-PeCDD					1.017		1.550	1085	625					
123478-HxCDD					1.017		1.240	1101	2051					
123678-HxCDD					0.964		1.240	1101	2051					
123789-HxCDD					0.948		1.240	1101	2051					
1234678-HpCDD	40.758	1.000	8.80e2	7.50e2	1.051	1.173	1.050	622	745	9.70e3	1.28e4	15.6	NO	0.378
OCDD	46.436	1.000	3.71e3	4.42e3	1.030	0.840	0.890	493	1018	4.35e4	5.29e4	88.2	NO	2.966
13C-2378-TCDF	25.540	1.007	4.69e5	6.16e5	1.515	0.760	0.770	9236	3926	6.75e6	8.77e6	730.7	NO	40.683
13C-12378-PeCDF	29.666	1.170	5.23e5	3.27e5	1.276	1.600	1.550	2692	3007	7.53e6	4.79e6	2798.2	NO	37.811
13C-23478-PeCDF	31.014	1.223	5.33e5	3.40e5	1.257	1.567	1.550	2692	3007	7.83e6	5.05e6	2909.9	NO	39.437
13C-123478-HxCDF	34.675	0.951	2.23e5	4.29e5	1.431	0.520	0.510	3359	4264	3.30e6	6.40e6	981.3	NO	37.542
13C-123678-HxCDF	34.828	0.955	2.44e5	4.69e5	1.552	0.521	0.510	3359	4264	3.39e6	6.58e6	1008.7	NO	37.898
13C-234678-HxCDF	35.782	0.981	2.12e5	4.02e5	1.349	0.526	0.510	3359	4264	2.94e6	5.82e6	876.6	NO	37.529
13C-123789-HxCDF	36.922	1.012	1.84e5	3.67e5	1.111	0.503	0.510	3359	4264	2.63e6	5.08e6	782.0	NO	40.902
13C-1234678-HpCDF	38.983	1.069	1.55e5	3.43e5	1.160	0.450	0.440	1709	2133	2.29e6	5.02e6	1337.6	NO	35.406
13C-1234789-HpCDF	41.591	1.140	1.17e5	2.64e5	0.758	0.442	0.440	1709	2133	1.60e6	3.38e6	935.7	NO	41.388
13C-1234-TCDD	25.361	0.000	7.87e5	9.73e5	1.000	0.809	0.770	3510	1873	1.18e7	1.46e7	3356.5	NO	100.000
13C-2378-TCDD	26.168	1.032	2.87e5	3.61e5	0.872	0.795	0.770	3510	1873	4.12e6	5.23e6	1175.3	NO	42.152
13C-12378-PeCDD	31.266	1.233	3.26e5	2.07e5	0.754	1.574	1.550	1675	1050	4.86e6	3.02e6	2900.4	NO	40.165
13C-123478-HxCDD	35.913	0.985	2.98e5	2.32e5	1.106	1.284	1.240	1694	2090	4.24e6	3.36e6	2504.5	NO	39.544
13C-123678-HxCDD	36.045	0.988	3.13e5	2.50e5	1.165	1.251	1.240	1694	2090	4.45e6	3.52e6	2628.1	NO	39.824
13C-1234678-HpCDD	40.748	1.117	2.13e5	1.98e5	0.872	1.076	1.050	2208	1667	2.77e6	2.61e6	1252.6	NO	38.819
13C-OCDD	46.427	1.273	2.50e5	2.83e5	0.655	0.881	0.890	1332	1677	2.61e6	2.94e6	1963.7	NO	67.014
13C-123789-HxCDD	36.472	0.000	6.78e5	5.35e5	1.000	1.266	1.240	1694	2090	9.54e6	7.57e6	5631.2	NO	100.000
Total-tetrafurans			0.00e0		0.924			1254		0.00e0				

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
Total-penta1			0.00e0					1086		0.00e0				
Total-pentafurans			0.00e0		0.960			1037		0.00e0				
Total-hexafurans			0.00e0		1.130			853		0.00e0				
Total-heptafurans			7.39e2		1.281			445		1.29e4				0.206
Total-Furans			1.06e3		1.100			1254		2.03e4				0.475
Total-tetradioxins			0.00e0		1.150			1584		0.00e0				
Total-pentadioxins			0.00e0		1.017			1085		0.00e0				
Total-hexadioxins			0.00e0		0.977			1101		0.00e0				
Total-heptadioxins			2.64e3		1.051			622		3.65e4				1.209
Total-Dioxins			6.46e3		1.025			1584		8.23e4				4.207
Total-TEQ			7.52e3					1584		1.03e5				4.682
37CL-2378-TCDD	26.183	1.032	7.24e5		1.073			1564		1.04e7		6667.5		38.316
FUNCTION1 PFK			8.91e5					776396		1.84e7				
FUNCTION2 PFK			5.45e3					206289		2.84e5				0.000
FUNCTION3 PFK			0.00e0					580837		0.00e0				
FUNCTION4 PFK			1.43e6					420594		3.56e7				
FUNCTION5 PFK			4.97e5					402375		1.87e7				
FUNCTION1 HXCD...			3.66e3					567		4.79e4				0.000
FUNCTION1 HPCD...			2.49e3					953		4.36e4				0.000
FUNCTION2 HPCD...			8.44e2					1165		2.16e4				0.000
FUNCTION3 OCDPE			0.00e0					508		0.00e0				
FUNCTION4 NCDPE			4.23e2					680		7.09e3				0.000
FUNCTION5 DCDPE			0.00e0					373		0.00e0				

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin170224.mdb 27 Feb 2017 09:30:36
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\170124ICAL.cdb 25 Jan 2017 09:33:34

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

PF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	39	Total-heptafurans	407.7818	39.80	537.436	1.281	0.096		1.16	1.05	NO	9.6
2	8	1234678-HpCDF	407.7818	38.98	695.821	1.267	0.110	0.080	1.83	1.05	YES	19.3

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	10	OCDF	441.7428	46.69	766.648	1.067	0.270	0.243	0.74	0.89	YES	13.3
2	39	Total-heptafurans	407.7818	39.80	537.436	1.281	0.096		1.16	1.05	NO	9.6
3	8	1234678-HpCDF	407.7818	38.98	695.821	1.267	0.110	0.080	1.83	1.05	YES	19.3

TD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	16	1234678-HpCDD	423.7766	40.76	1629.865	1.051	0.378	0.378	1.17	1.05	NO	15.6
2	44	Total-heptadioxins	423.7766	39.53	3589.404	1.051	0.832		0.96	1.05	NO	43.2

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	45	Total-Dioxins	319.8965	22.21	208.488	1.025	0.031		1.09	0.77	YES	1.4
2	17	OCDD	457.7377	46.44	8138.588	1.030	2.966	2.966	0.84	0.89	NO	88.2
3	16	1234678-HpCDD	423.7766	40.76	1629.865	1.051	0.378	0.378	1.17	1.05	NO	15.6
4	44	Total-heptadioxins	423.7766	39.53	3589.404	1.051	0.832		0.96	1.05	NO	43.2

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	10	OCDF	441.7428	46.69	766.648	1.067	0.270	0.243	0.74	0.89	YES	13.3
2	39	Total-heptafurans	407.7818	39.80	537.436	1.281	0.096		1.16	1.05	NO	9.6
3	8	1234678-HpCDF	407.7818	38.98	695.821	1.267	0.110	0.080	1.83	1.05	YES	19.3
4	45	Total-Dioxins	319.8965	22.21	208.488	1.025	0.031		1.09	0.77	YES	1.4
5	17	OCDD	457.7377	46.44	8138.588	1.030	2.966	2.966	0.84	0.89	NO	88.2
6	16	1234678-HpCDD	423.7766	40.76	1629.865	1.051	0.378	0.378	1.17	1.05	NO	15.6
7	44	Total-heptadioxins	423.7766	39.53	3589.404	1.051	0.832		0.96	1.05	NO	43.2

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	48	FUNCTION1 PFK	330.9792	21.15	0.000							1.5
2	48	FUNCTION1 PFK	330.9792	26.65	0.000							0.9
3	48	FUNCTION1 PFK	330.9792	26.21	0.000							2.0
4	48	FUNCTION1 PFK	330.9792	26.15	0.000							1.7
5	48	FUNCTION1 PFK	330.9792	25.99	0.000							0.7
6	48	FUNCTION1 PFK	330.9792	25.09	0.000							1.5
7	48	FUNCTION1 PFK	330.9792	24.76	0.000							1.7
8	48	FUNCTION1 PFK	330.9792	24.67	0.000							1.4
9	48	FUNCTION1 PFK	330.9792	24.43	0.000							0.9
10	48	FUNCTION1 PFK	330.9792	24.15	0.000							1.0
11	48	FUNCTION1 PFK	330.9792	23.63	0.000							0.9
12	48	FUNCTION1 PFK	330.9792	23.15	0.000							1.4
13	48	FUNCTION1 PFK	330.9792	22.73	0.000							2.1
14	48	FUNCTION1 PFK	330.9792	22.46	0.000							0.7
15	48	FUNCTION1 PFK	330.9792	22.19	0.000							1.5
16	48	FUNCTION1 PFK	330.9792	21.88	0.000							1.7
17	48	FUNCTION1 PFK	330.9792	21.28	0.000							1.3
18	48	FUNCTION1 PFK	330.9792	26.71	0.000							0.8

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	49	FUNCTION2 PFK	366.9792	32.43	0.000		0.000					1.4

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	51	FUNCTION4 PFK	430.9728	39.71	0.000							1.8
2	51	FUNCTION4 PFK	430.9728	39.46	0.000							0.7
3	51	FUNCTION4 PFK	430.9728	39.25	0.000							0.8
4	51	FUNCTION4 PFK	430.9728	39.13	0.000							1.4
5	51	FUNCTION4 PFK	430.9728	38.97	0.000							1.0
6	51	FUNCTION4 PFK	430.9728	38.93	0.000							1.0
7	51	FUNCTION4 PFK	430.9728	38.86	0.000							1.1
8	51	FUNCTION4 PFK	430.9728	38.79	0.000							0.9
9	51	FUNCTION4 PFK	430.9728	38.64	0.000							0.7
10	51	FUNCTION4 PFK	430.9728	38.28	0.000							1.2
11	51	FUNCTION4 PFK	430.9728	38.25	0.000							1.5
12	51	FUNCTION4 PFK	430.9728	41.47	0.000							1.2
13	51	FUNCTION4 PFK	430.9728	41.42	0.000							0.8
14	51	FUNCTION4 PFK	430.9728	41.35	0.000							0.7
15	51	FUNCTION4 PFK	430.9728	41.26	0.000							0.9
16	51	FUNCTION4 PFK	430.9728	41.16	0.000							0.3
17	51	FUNCTION4 PFK	430.9728	41.09	0.000							1.2
18	51	FUNCTION4 PFK	430.9728	40.86	0.000							0.5
19	51	FUNCTION4 PFK	430.9728	40.68	0.000							1.3
20	51	FUNCTION4 PFK	430.9728	40.51	0.000							1.2
21	51	FUNCTION4 PFK	430.9728	40.37	0.000							0.8
22	51	FUNCTION4 PFK	430.9728	40.22	0.000							0.3
23	51	FUNCTION4 PFK	430.9728	40.09	0.000							1.1
24	51	FUNCTION4 PFK	430.9728	40.00	0.000							0.8
25	51	FUNCTION4 PFK	430.9728	39.95	0.000							1.0
26	51	FUNCTION4 PFK	430.9728	39.79	0.000							2.7
27	51	FUNCTION4 PFK	430.9728	39.75	0.000							2.4
28	51	FUNCTION4 PFK	430.9728	42.75	0.000							1.9
29	51	FUNCTION4 PFK	430.9728	42.68	0.000							2.4
30	51	FUNCTION4 PFK	430.9728	42.60	0.000							1.5
31	51	FUNCTION4 PFK	430.9728	42.51	0.000							0.9
32	51	FUNCTION4 PFK	430.9728	42.33	0.000							1.3
33	51	FUNCTION4 PFK	430.9728	42.29	0.000							1.6
34	51	FUNCTION4 PFK	430.9728	42.19	0.000							1.1
35	51	FUNCTION4 PFK	430.9728	42.06	0.000							1.4
36	51	FUNCTION4 PFK	430.9728	42.03	0.000							1.4
37	51	FUNCTION4 PFK	430.9728	41.96	0.000							1.9
38	51	FUNCTION4 PFK	430.9728	41.92	0.000							2.2
39	51	FUNCTION4 PFK	430.9728	41.87	0.000							2.0
40	51	FUNCTION4 PFK	430.9728	41.83	0.000							1.3
41	51	FUNCTION4 PFK	430.9728	41.76	0.000							1.1
42	51	FUNCTION4 PFK	430.9728	41.61	0.000							1.8
43	51	FUNCTION4 PFK	430.9728	41.53	0.000							1.7
44	51	FUNCTION4 PFK	430.9728	44.38	0.000							1.2
45	51	FUNCTION4 PFK	430.9728	44.29	0.000							1.4
46	51	FUNCTION4 PFK	430.9728	44.17	0.000							0.4
47	51	FUNCTION4 PFK	430.9728	44.01	0.000							1.1
48	51	FUNCTION4 PFK	430.9728	43.92	0.000							2.7
49	51	FUNCTION4 PFK	430.9728	43.87	0.000							2.7
50	51	FUNCTION4 PFK	430.9728	43.81	0.000							2.4
51	51	FUNCTION4 PFK	430.9728	43.73	0.000							1.7

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
52	51	FUNCTION4 PFK	430.9728	43.69	0.000							2.7
53	51	FUNCTION4 PFK	430.9728	43.62	0.000							3.0
54	51	FUNCTION4 PFK	430.9728	43.51	0.000							2.6
55	51	FUNCTION4 PFK	430.9728	43.16	0.000							0.7
56	51	FUNCTION4 PFK	430.9728	43.05	0.000							0.7
57	51	FUNCTION4 PFK	430.9728	42.98	0.000							1.9
58	51	FUNCTION4 PFK	430.9728	42.90	0.000							2.7
59	51	FUNCTION4 PFK	430.9728	42.85	0.000							2.0

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	52	FUNCTION5 PFK	480.9696	46.37	0.000							0.5
2	52	FUNCTION5 PFK	480.9696	46.27	0.000							1.2
3	52	FUNCTION5 PFK	480.9696	46.05	0.000							1.8
4	52	FUNCTION5 PFK	480.9696	46.01	0.000							1.1
5	52	FUNCTION5 PFK	480.9696	45.96	0.000							1.9
6	52	FUNCTION5 PFK	480.9696	45.76	0.000							0.4
7	52	FUNCTION5 PFK	480.9696	45.57	0.000							1.4
8	52	FUNCTION5 PFK	480.9696	45.52	0.000							1.2
9	52	FUNCTION5 PFK	480.9696	45.39	0.000							1.4
10	52	FUNCTION5 PFK	480.9696	45.30	0.000							0.7
11	52	FUNCTION5 PFK	480.9696	45.23	0.000							0.5
12	52	FUNCTION5 PFK	480.9696	44.93	0.000							0.5
13	52	FUNCTION5 PFK	480.9696	44.88	0.000							1.1
14	52	FUNCTION5 PFK	480.9696	44.72	0.000							1.4
15	52	FUNCTION5 PFK	480.9696	44.59	0.000							0.9
16	52	FUNCTION5 PFK	480.9696	47.49	0.000							0.8
17	52	FUNCTION5 PFK	480.9696	47.45	0.000							0.5
18	52	FUNCTION5 PFK	480.9696	47.41	0.000							0.8
19	52	FUNCTION5 PFK	480.9696	47.33	0.000							1.2
20	52	FUNCTION5 PFK	480.9696	47.30	0.000							1.7
21	52	FUNCTION5 PFK	480.9696	47.17	0.000							1.0
22	52	FUNCTION5 PFK	480.9696	47.13	0.000							1.2
23	52	FUNCTION5 PFK	480.9696	47.10	0.000							1.7
24	52	FUNCTION5 PFK	480.9696	47.06	0.000							0.5
25	52	FUNCTION5 PFK	480.9696	46.93	0.000							0.9
26	52	FUNCTION5 PFK	480.9696	46.88	0.000							1.3
27	52	FUNCTION5 PFK	480.9696	46.84	0.000							1.6
28	52	FUNCTION5 PFK	480.9696	46.65	0.000							1.3
29	52	FUNCTION5 PFK	480.9696	46.62	0.000							2.0
30	52	FUNCTION5 PFK	480.9696	46.56	0.000							0.6
31	52	FUNCTION5 PFK	480.9696	46.48	0.000							0.9
32	52	FUNCTION5 PFK	480.9696	49.49	0.000							0.8
33	52	FUNCTION5 PFK	480.9696	49.29	0.000							0.4
34	52	FUNCTION5 PFK	480.9696	49.15	0.000							0.7
35	52	FUNCTION5 PFK	480.9696	48.88	0.000							0.5
36	52	FUNCTION5 PFK	480.9696	48.82	0.000							2.1
37	52	FUNCTION5 PFK	480.9696	48.76	0.000							0.7
38	52	FUNCTION5 PFK	480.9696	48.72	0.000							0.9
39	52	FUNCTION5 PFK	480.9696	48.47	0.000							1.7
40	52	FUNCTION5 PFK	480.9696	48.29	0.000							0.8
41	52	FUNCTION5 PFK	480.9696	48.11	0.000							1.4
42	52	FUNCTION5 PFK	480.9696	47.98	0.000							1.0
43	52	FUNCTION5 PFK	480.9696	47.93	0.000							0.9
44	52	FUNCTION5 PFK	480.9696	47.65	0.000							0.6

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	53	FUNCTION1 HXCD...	375.8364	25.61	0.000		0.000					62.1
2	53	FUNCTION1 HXCD...	375.8364	25.33	0.000		0.000					13.3
3	53	FUNCTION1 HXCD...	375.8364	27.12	0.000		0.000					5.2
4	53	FUNCTION1 HXCD...	375.8364	25.76	0.000		0.000					3.8

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	54	FUNCTION1 HPCD...	409.7974	27.18	0.000		0.000					1.7
2	54	FUNCTION1 HPCD...	409.7974	27.09	0.000		0.000					1.7
3	54	FUNCTION1 HPCD...	409.7974	26.83	0.000		0.000					2.1
4	54	FUNCTION1 HPCD...	409.7974	26.27	0.000		0.000					1.8
5	54	FUNCTION1 HPCD...	409.7974	26.02	0.000		0.000					5.6
6	54	FUNCTION1 HPCD...	409.7974	25.14	0.000		0.000					1.9
7	54	FUNCTION1 HPCD...	409.7974	24.73	0.000		0.000					2.4
8	54	FUNCTION1 HPCD...	409.7974	23.15	0.000		0.000					2.9
9	54	FUNCTION1 HPCD...	409.7974	22.87	0.000		0.000					1.7
10	54	FUNCTION1 HPCD...	409.7974	22.55	0.000		0.000					3.3
11	54	FUNCTION1 HPCD...	409.7974	21.88	0.000		0.000					20.7

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	55	FUNCTION2 HPCD...	409.7974	28.25	0.000		0.000					1.5
2	55	FUNCTION2 HPCD...	409.7974	32.24	0.000		0.000					2.3
3	55	FUNCTION2 HPCD...	409.7974	32.09	0.000		0.000					1.7
4	55	FUNCTION2 HPCD...	409.7974	31.91	0.000		0.000					3.1
5	55	FUNCTION2 HPCD...	409.7974	31.67	0.000		0.000					1.8
6	55	FUNCTION2 HPCD...	409.7974	31.18	0.000		0.000					2.0
7	55	FUNCTION2 HPCD...	409.7974	31.00	0.000		0.000					2.2
8	55	FUNCTION2 HPCD...	409.7974	29.49	0.000		0.000					2.9
9	55	FUNCTION2 HPCD...	409.7974	29.25	0.000		0.000					1.0

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	57	FUNCTION4 NCDPE	479.7165	43.70	0.000		0.000					3.4
2	57	FUNCTION4 NCDPE	479.7165	38.64	0.000		0.000					7.0

ETHERS6

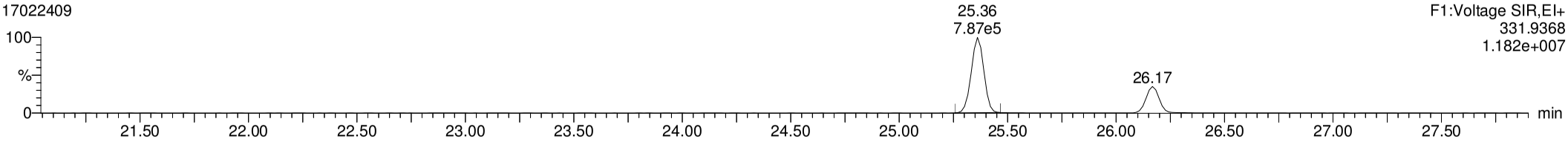
	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1												

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

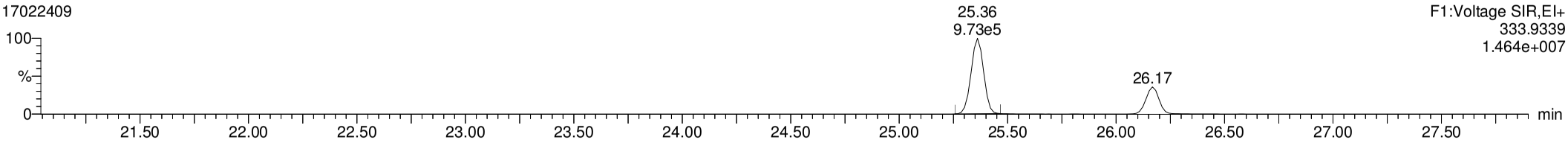
Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin170224.mdb 27 Feb 2017 09:30:36
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\170124ICAL.cdb 25 Jan 2017 09:33:34

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

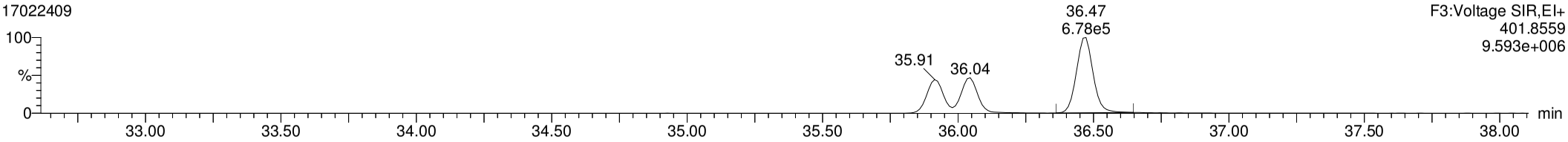
13C-1234-TCDD



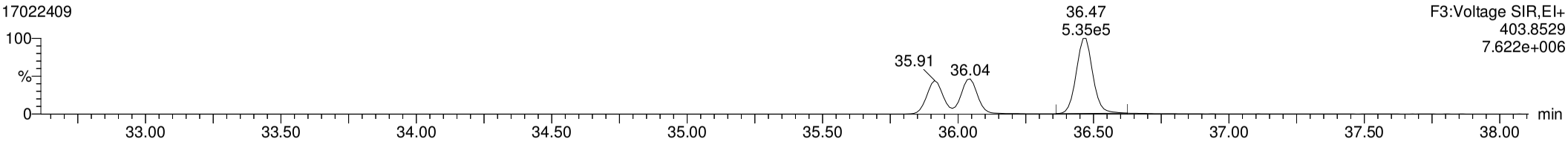
13C-1234-TCDD



13C-123789-HxCDD



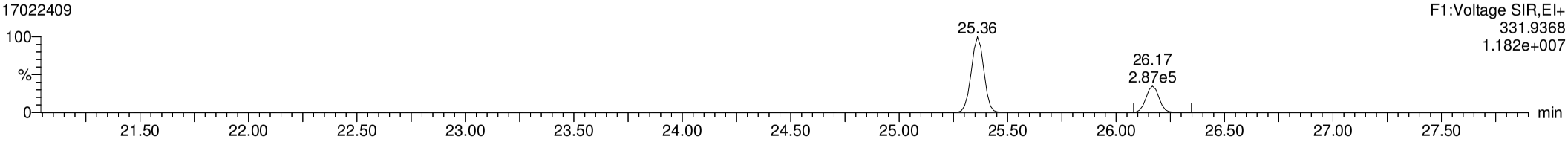
13C-123789-HxCDD



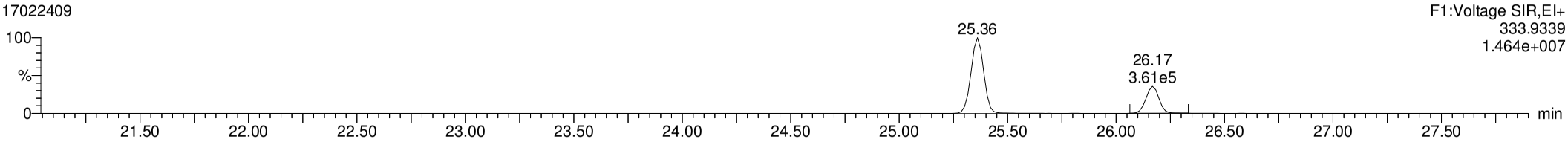
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

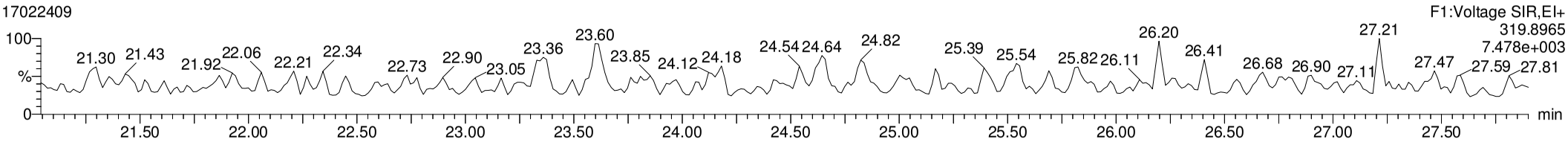
13C-2378-TCDD



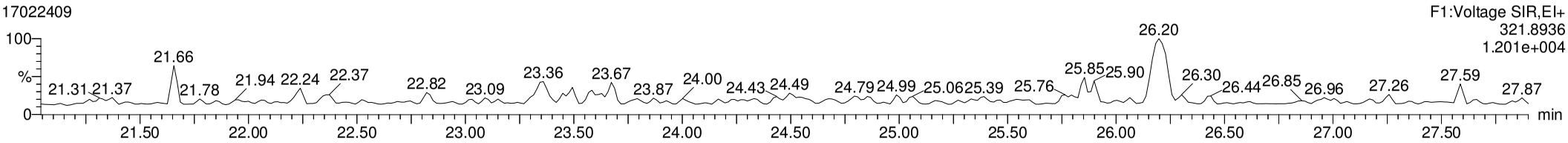
13C-2378-TCDD



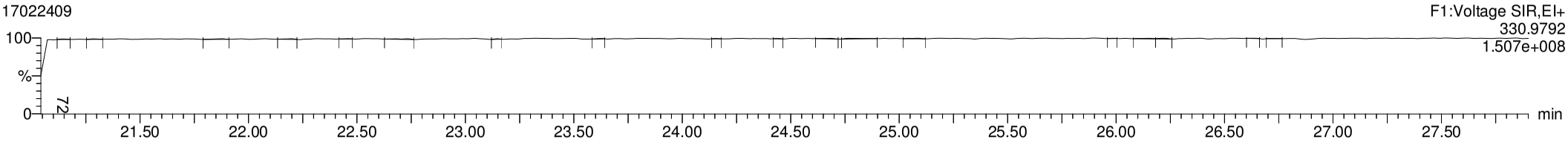
Total-tetradioxins



Total-tetradioxins



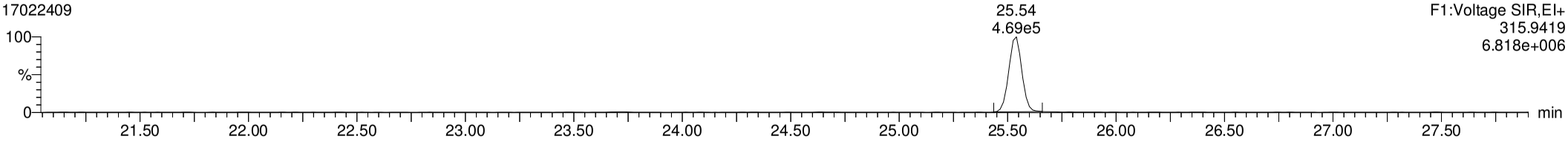
FUNCTION1 PFK



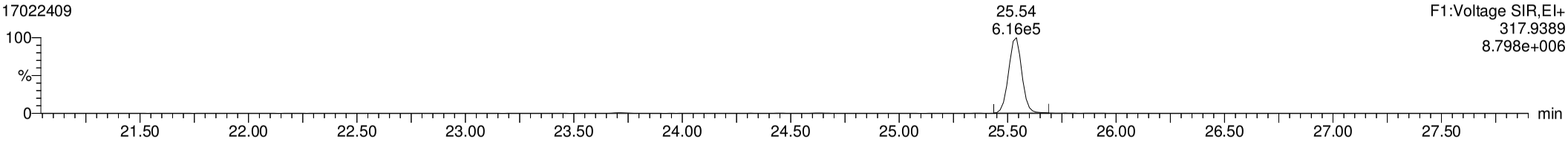
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

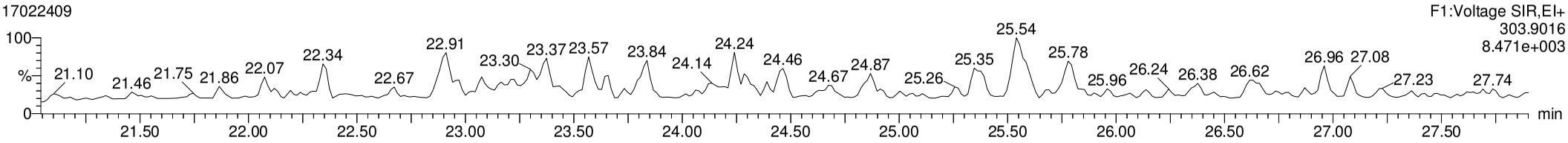
13C-2378-TCDF



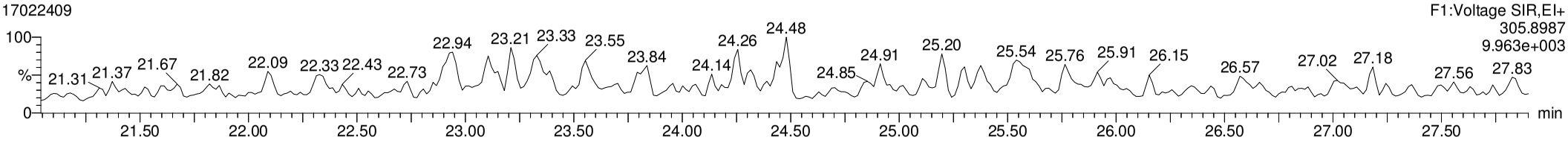
13C-2378-TCDF



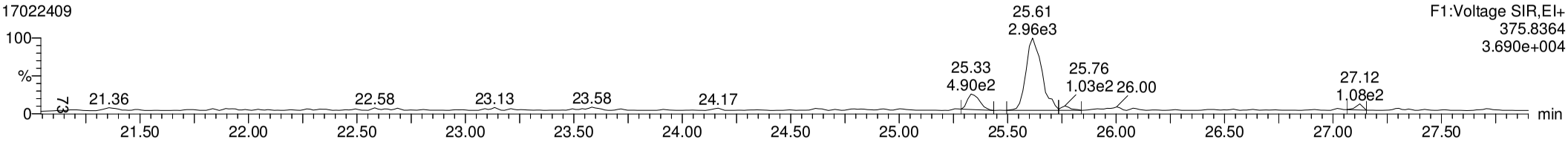
Total-tetrafurans



Total-tetrafurans



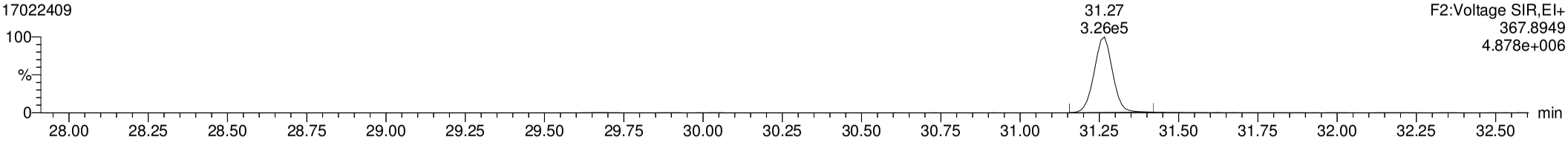
FUNCTION1 HXCDPE



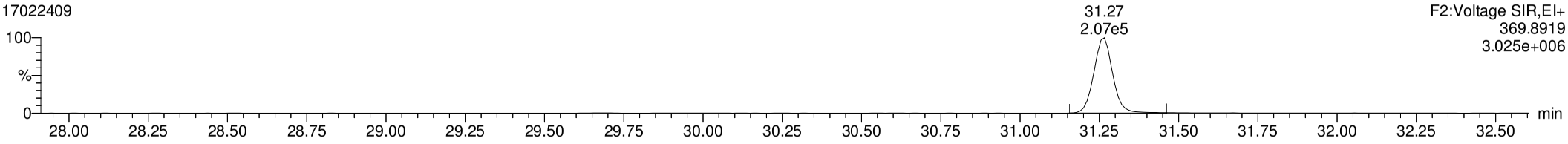
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

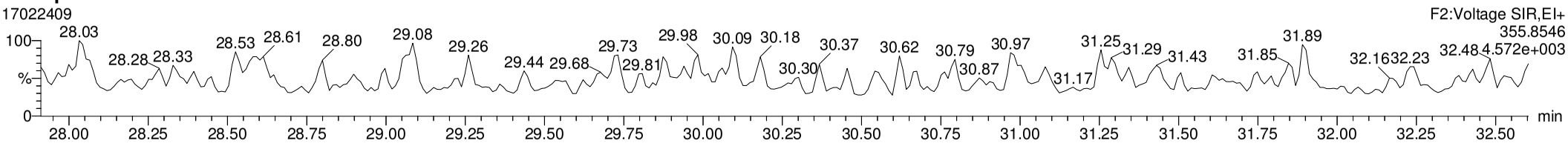
13C-12378-PeCDD



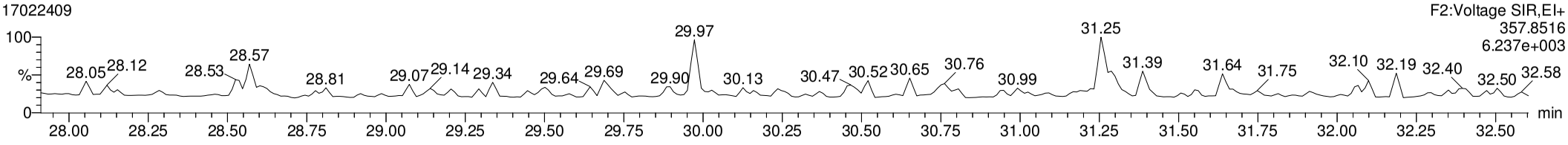
13C-12378-PeCDD



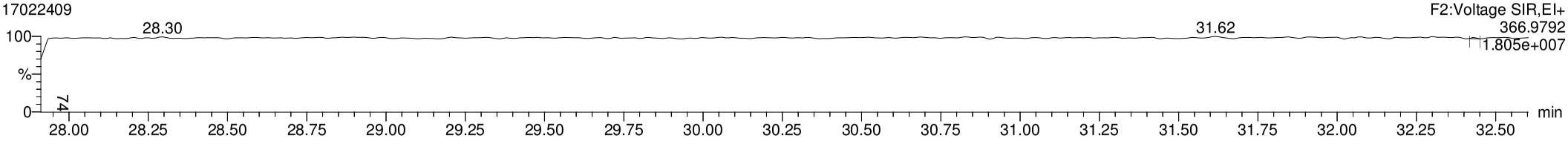
Total-pentadioxins



Total-pentadioxins



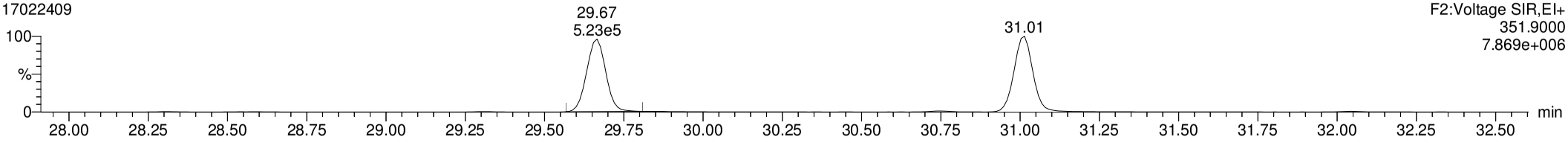
FUNCTION2 PFK



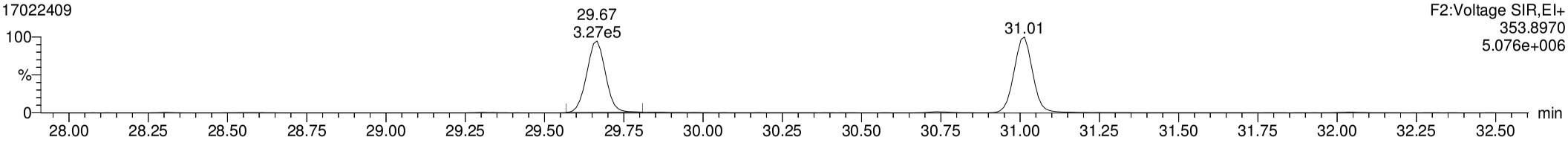
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

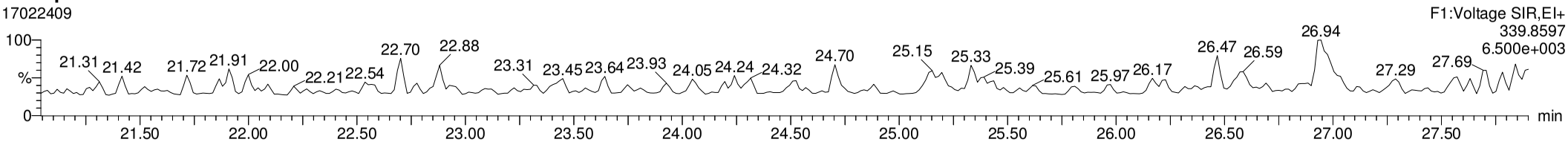
13C-12378-PeCDF



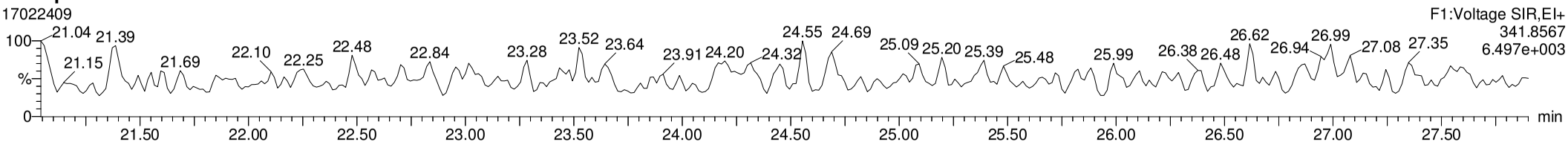
13C-12378-PeCDF



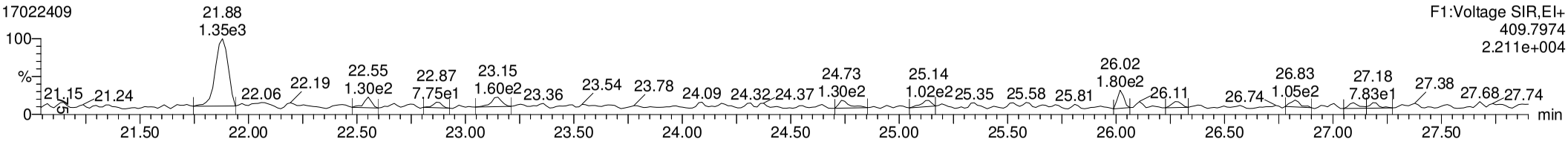
Total-penta1



Total-penta1



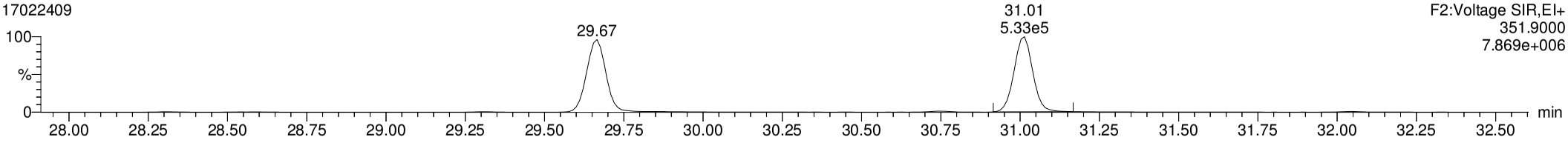
FUNCTION1 HPCDPE



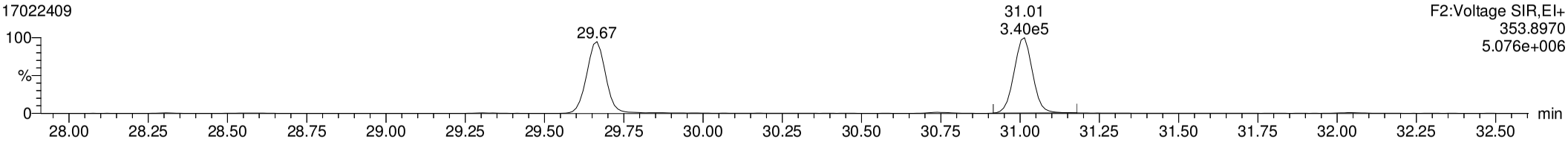
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

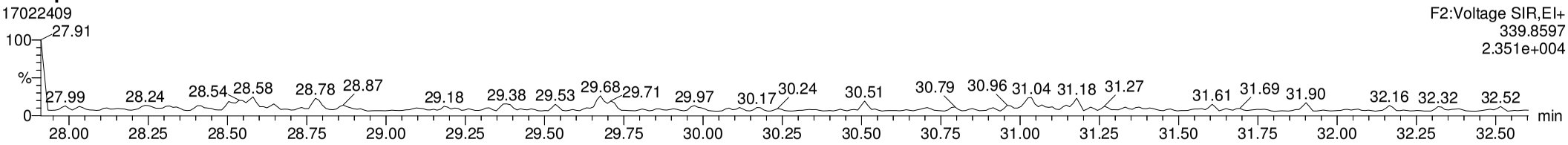
13C-23478-PeCDF



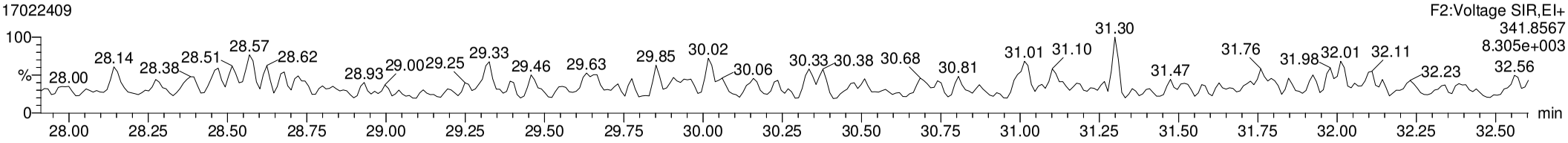
13C-23478-PeCDF



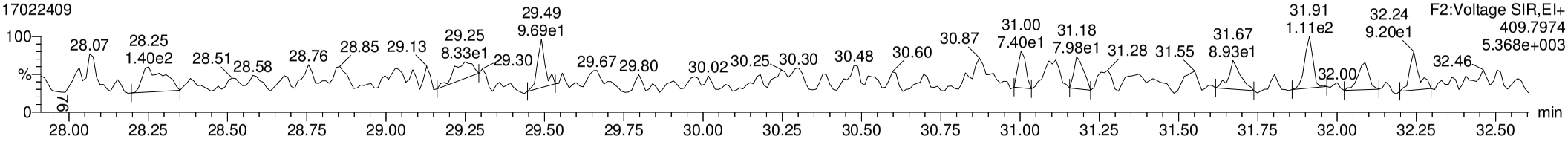
Total-pentafurans



Total-pentafurans



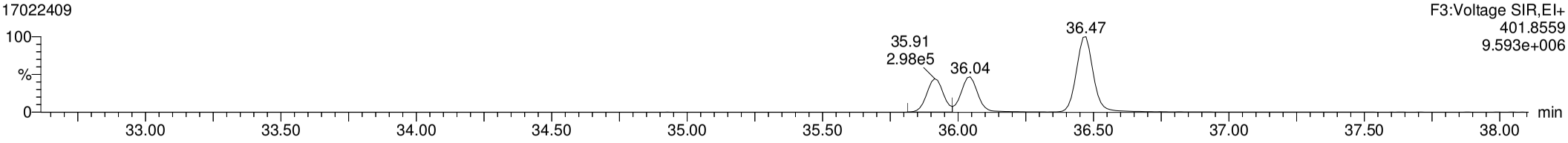
FUNCTION2 HPCDPE



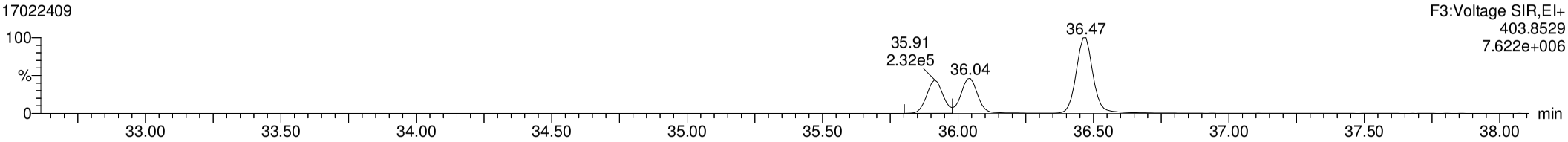
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

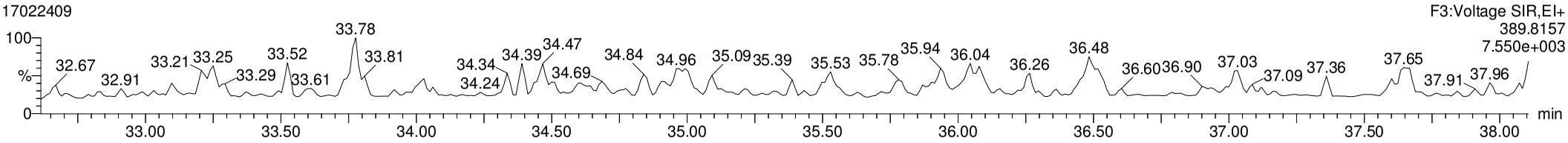
13C-123478-HxCDD



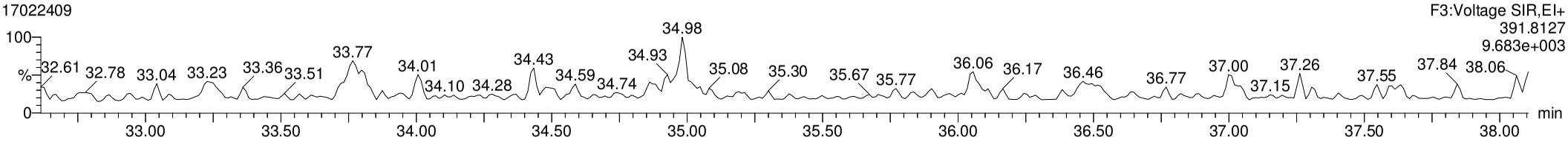
13C-123478-HxCDD



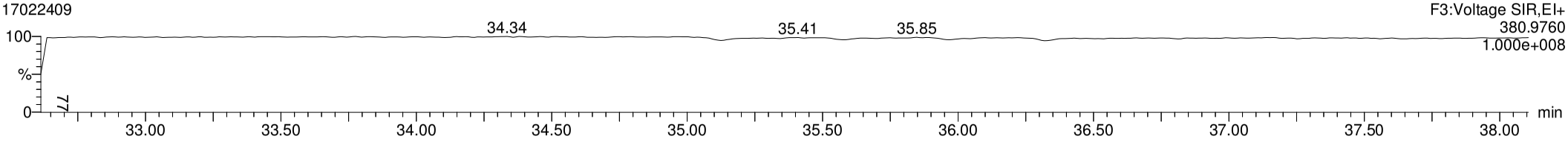
Total-hexadioxins



Total-hexadioxins



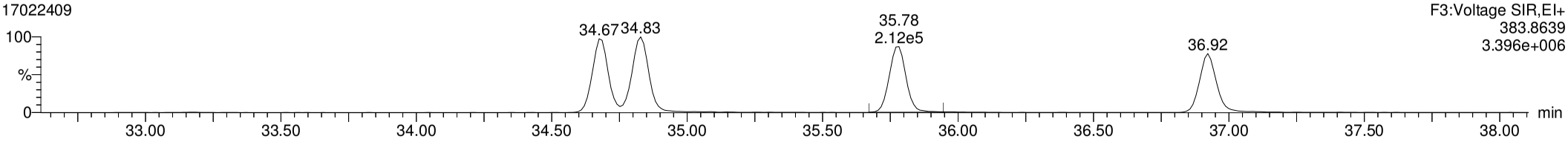
FUNCTION3 PFK



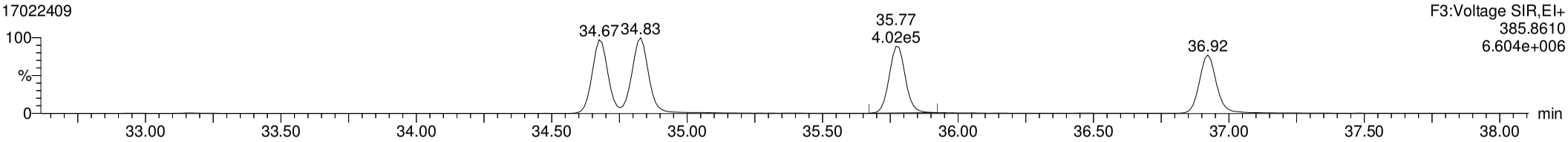
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

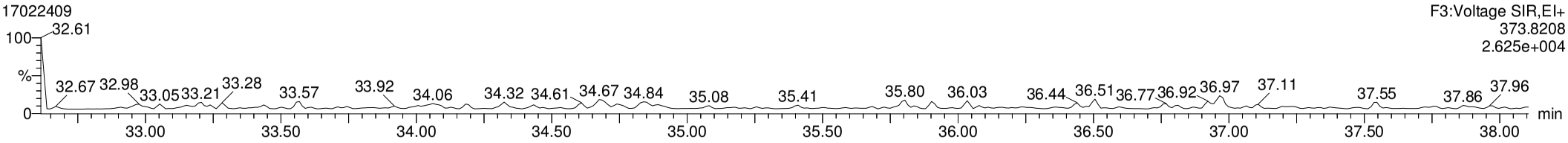
13C-234678-HxCDF



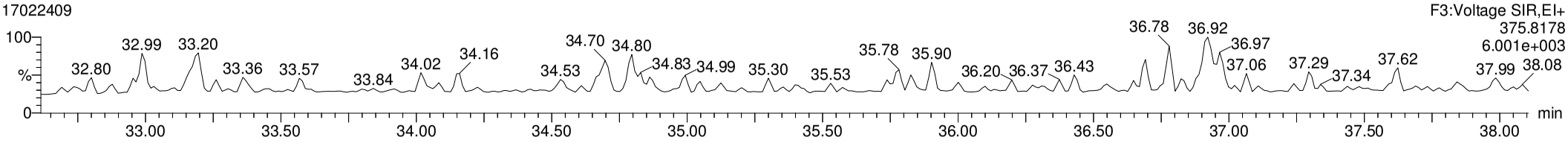
13C-234678-HxCDF



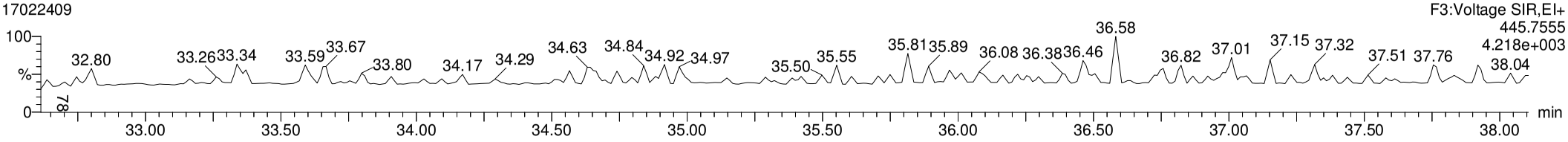
Total-hexafurans



Total-hexafurans



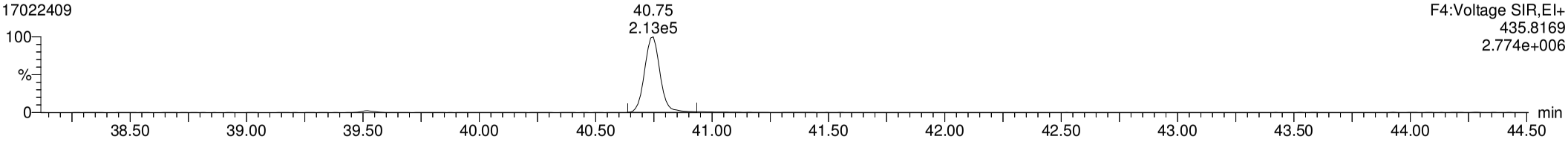
FUNCTION3 OCDPE



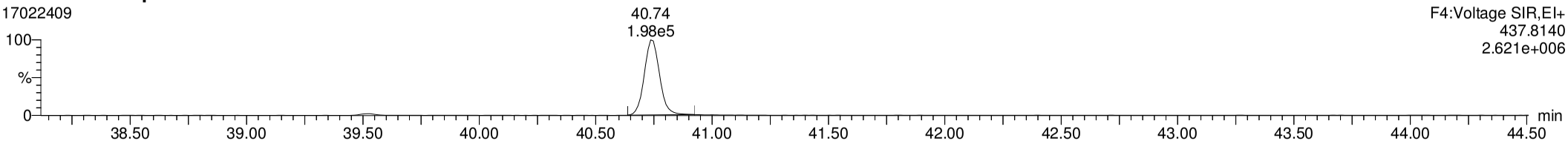
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

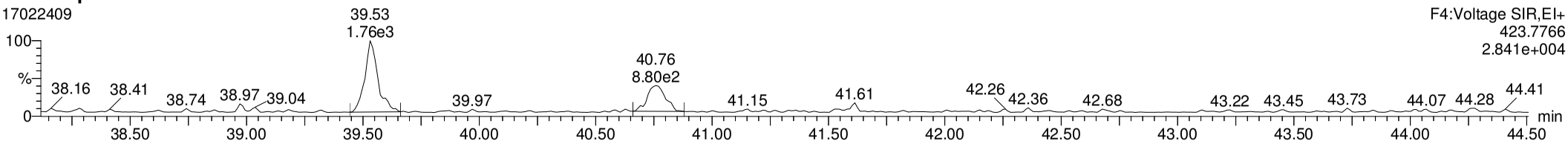
13C-1234678-HpCDD



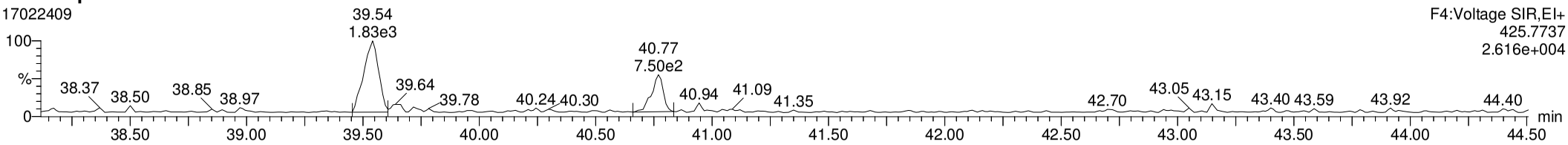
13C-1234678-HpCDD



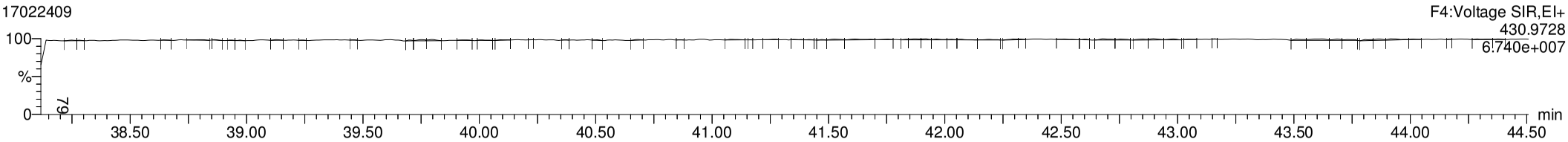
Total-heptadioxins



Total-heptadioxins



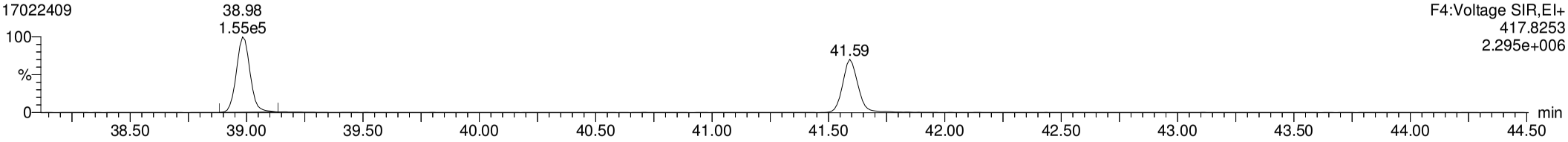
FUNCTION4 PFK



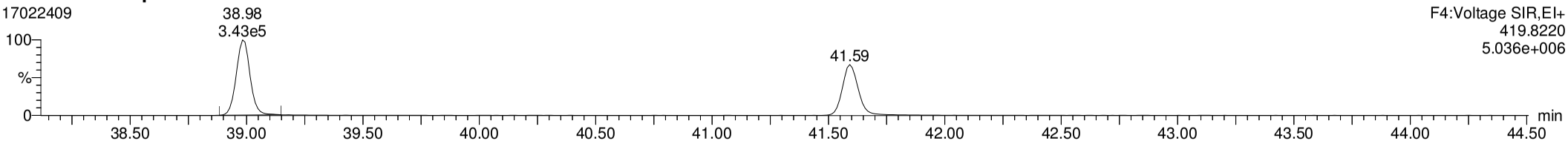
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

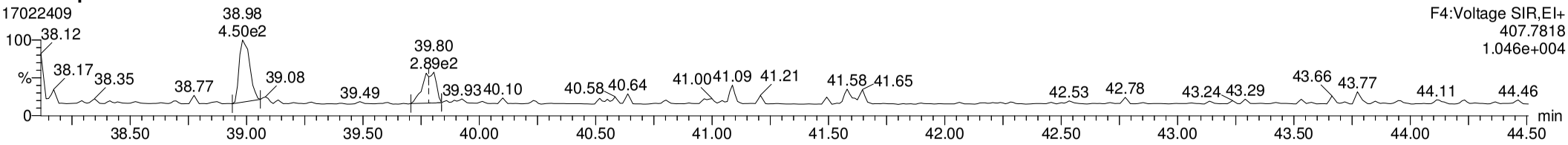
13C-1234678-HpCDF



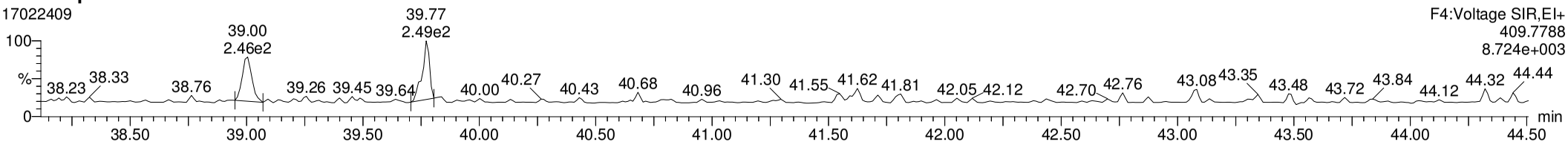
13C-1234678-HpCDF



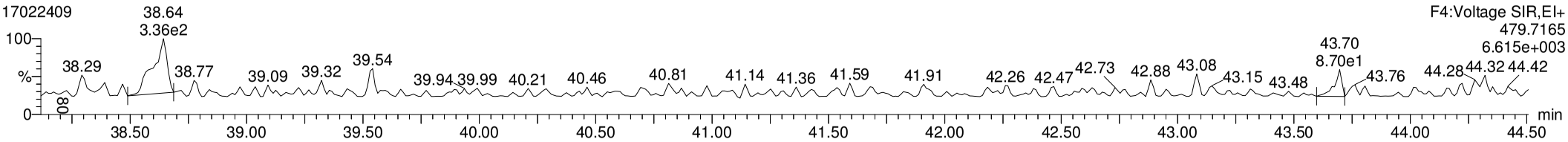
Total-heptafurans



Total-heptafurans



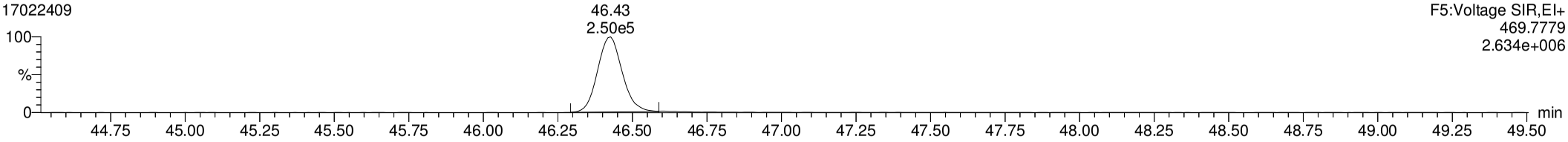
FUNCTION4 NCDPE



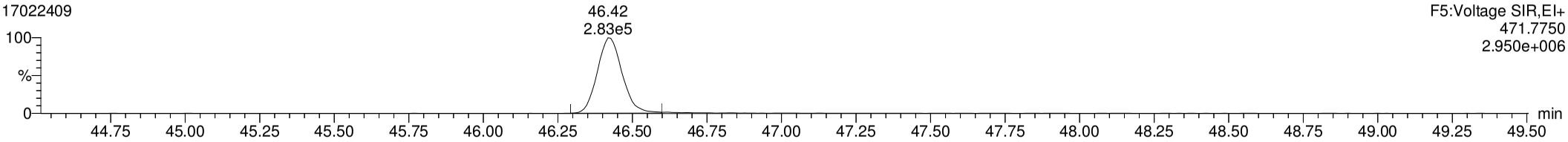
Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:10 Pacific Standard Time

ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

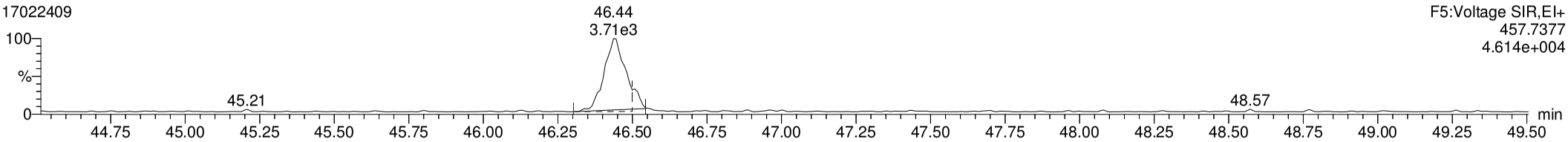
13C-OCDD



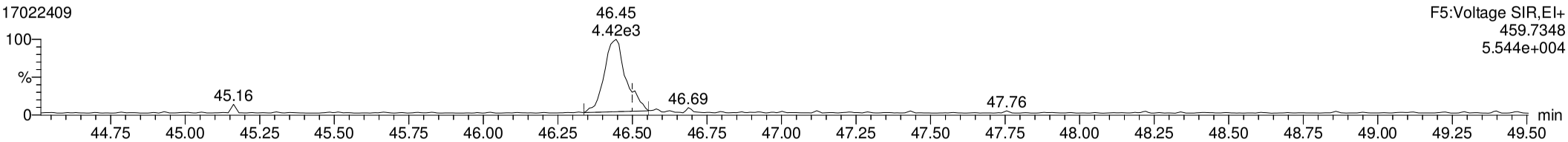
13C-OCDD



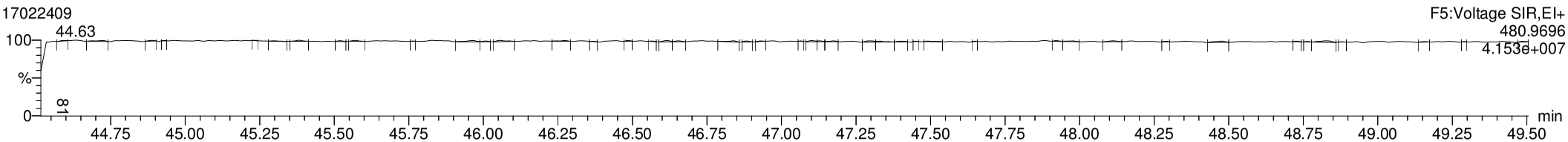
OCDD



OCDD

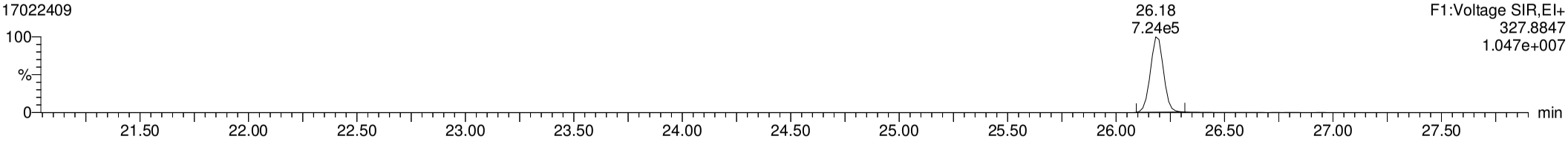


FUNCTION5 PFK

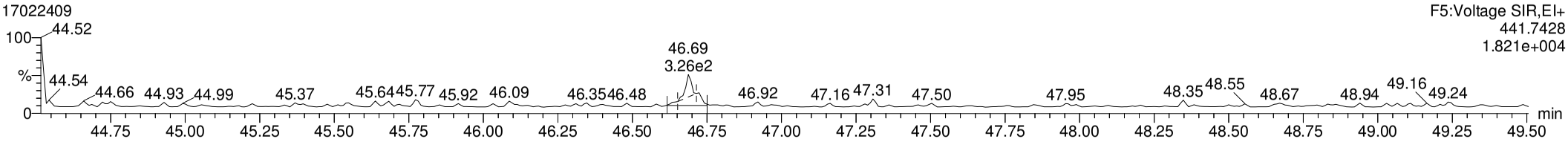


ID: 16K0053-05RE1, Name: 17022409, Date: 24-Feb-2017, Time: 20:18:54, Conditions: AUTOSPEC01, User: PK

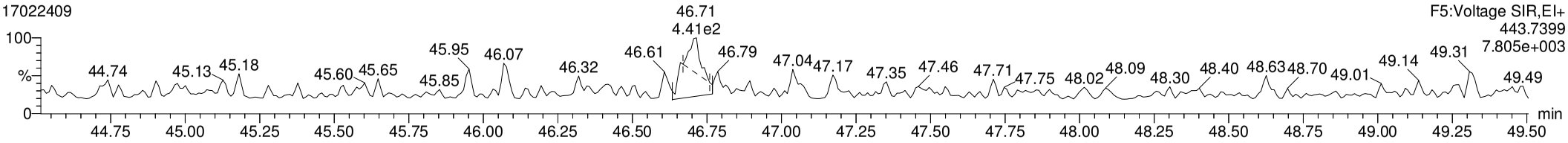
37CL-2378-TCDD



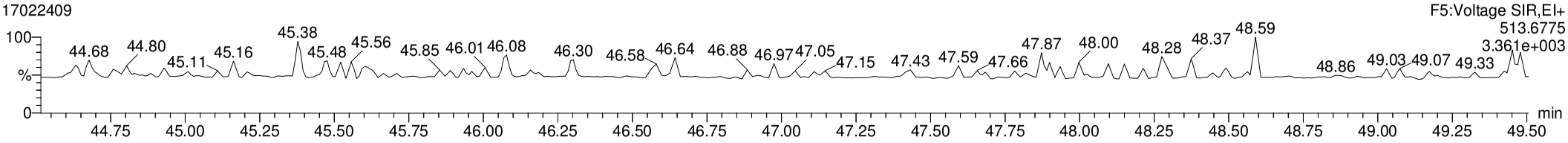
OCDF



OCDF



FUNCTION5 DCDPE



PG-SMA2-3-MUS-170105

Form I
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	17A0053
Client:	Anchor QEA, LLC			Project:	Port Gamble Shellfish Monitoring
Matrix:	Tissue	Laboratory ID:	17A0053-06RE1	File ID:	17022410
Sampled:	01/05/17 12:40	Prepared:	02/22/17 12:00	Analyzed:	02/24/17 21:11
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	10.02 g / 20 uL
Result Basis:	Dry	Sequence:	SFB0342	Calibration:	AA00071
Batch:	BFB0538	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.568	0.655-0.886		0.998	0.170	ng/kg	EMPC, J
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.152	0.998	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	0.149	4.99	ND	ng/kg	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.145	4.99	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.134	4.99	ND	ng/kg	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.000	1.054-1.426	0.082	4.99	ND	ng/kg	U
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.083	4.99	ND	ng/kg	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.083	4.99	ND	ng/kg	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	0.000	1.054-1.426	0.106	4.99	ND	ng/kg	U
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.147	4.99	ND	ng/kg	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.150	4.99	ND	ng/kg	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	0.000	1.054-1.426	0.155	4.99	ND	ng/kg	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.219	0.893-1.208		4.99	0.109	ng/kg	EMPC, J, B
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	0.069	4.99	ND	ng/kg	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	0.910	0.893-1.208		4.99	2.02	ng/kg	J, B
39001-02-0	OCDF	1	0.734	0.757-1.024		9.98	1.16	ng/kg	EMPC, J, B
3268-87-9	OCDD	1	0.903	0.757-1.024		9.98	17.6	ng/kg	B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			0.998	0.394	ng/kg
41903-57-5	Total TCDD	1	0.000			0.998	ND	ng/kg
30402-15-4	Total PeCDF	1	0.000			0.998	ND	ng/kg
36088-22-9	Total PeCDD	1	0.000			0.998	ND	ng/kg
55684-94-1	Total HxCDF	1	0.000			0.998	0.203	ng/kg
34465-46-8	Total HxCDD	1	0.000			0.998	0.852	ng/kg
38998-75-3	Total HpCDF	1	0.000			0.998	0.583	ng/kg
37871-00-4	Total HpCDD	1	0.000			0.998	10.8	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.044
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.044

PG-SMA2-3-MUS-170105

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	17A0053
Client:	Anchor QEA, LLC			Project:	Port Gamble Shellfish Monitoring
Matrix:	Tissue	Laboratory ID:	17A0053-06RE1	File ID:	17022410
Sampled:	01/05/17 12:40	Prepared:	02/22/17 12:00	Analyzed:	02/24/17 21:11
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	10.02 g / 20 uL
Result Basis:	Dry	Sequence:	SFB0342	Calibration:	AA00071
Batch:	BFB0538	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.781	0.655-0.886		40.2	24 - 169 %	
13C12-2,3,7,8-TCDD		0.780	0.655-0.886		41.6	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.582	1.318-1.783		38.9	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.592	1.318-1.783		40.3	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.573	1.318-1.783		41.3	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.513	0.434-0.587		37.5	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.519	0.434-0.587		38.2	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.503	0.434-0.587		37.6	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.530	0.434-0.587		40.0	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.282	1.054-1.426		39.6	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.268	1.054-1.426		39.0	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.456	0.374-0.506		36.5	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.459	0.374-0.506		40.6	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.078	0.893-1.208		38.9	23 - 140 %	
13C12-OCDD		0.903	0.757-1.024		32.6	17 - 157 %	
37C14-2,3,7,8-TCDD		328.000			98.6	35 - 197 %	

* Values outside of QC limits

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:14 Pacific Standard Time

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin170224.mdb 27 Feb 2017 09:30:36
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\170124ICAL.cdb 25 Jan 2017 09:33:34

ID: 16K0053-06RE1, Name: 17022410, Date: 24-Feb-2017, Time: 21:11:58, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
2378-TCDF	25.555	1.001	3.00e2	5.28e2	0.924	0.568	0.770	1171	1433	4.60e3	7.66e3	3.9	YES	0.085
12378-PeCDF					0.954		1.550	1293	1678					
23478-PeCDF					0.966		1.550	1293	1678					
123478-HxCDF					1.141		1.240	535	1006					
234678-HxCDF					1.181		1.240	535	1006					
123678-HxCDF					1.089		1.240	535	1006					
123789-HxCDF					1.110		1.240	535	1006					
1234678-HpCDF	38.982	1.000	2.01e2	1.65e2	1.267	1.219	1.050	266	468	5.75e3	4.81e3	21.6	YES	0.054
1234789-HpCDF					1.295		1.050	266	468					
OCDF	46.687	1.006	7.06e2	9.63e2	1.067	0.734	0.890	530	1329	8.97e3	1.20e4	16.9	YES	0.583
2378-TCDD					1.150		0.770	1753	931					
12378-PeCDD					1.017		1.550	1216	542					
123478-HxCDD					1.017		1.240	1095	894					
123678-HxCDD					0.964		1.240	1095	894					
123789-HxCDD					0.948		1.240	1095	894					
1234678-HpCDD	40.736	1.000	2.16e3	2.37e3	1.051	0.910	1.050	652	781	2.92e4	3.22e4	44.8	NO	1.013
OCDD	46.427	1.000	1.15e4	1.28e4	1.030	0.903	0.890	502	1079	1.22e5	1.30e5	243.6	NO	8.808
13C-2378-TCDF	25.525	1.007	4.61e5	5.91e5	1.515	0.781	0.770	7479	4819	6.72e6	8.77e6	899.0	NO	40.190
13C-12378-PeCDF	29.654	1.170	5.26e5	3.32e5	1.276	1.582	1.550	2446	2972	7.66e6	4.80e6	3132.1	NO	38.904
13C-23478-PeCDF	30.992	1.223	5.37e5	3.37e5	1.257	1.592	1.550	2446	2972	7.78e6	5.03e6	3182.0	NO	40.274
13C-123478-HxCDF	34.664	0.951	2.28e5	4.44e5	1.431	0.513	0.510	3720	3605	3.35e6	6.52e6	901.8	NO	37.459
13C-123678-HxCDF	34.817	0.955	2.54e5	4.90e5	1.552	0.519	0.510	3720	3605	3.50e6	6.61e6	940.3	NO	38.205
13C-234678-HxCDF	35.760	0.981	2.13e5	4.23e5	1.349	0.503	0.510	3720	3605	3.14e6	6.15e6	843.5	NO	37.574
13C-123789-HxCDF	36.910	1.013	1.93e5	3.65e5	1.111	0.530	0.510	3720	3605	2.71e6	5.01e6	729.0	NO	40.006
13C-1234678-HpCDF	38.971	1.069	1.66e5	3.64e5	1.160	0.456	0.440	1927	2585	2.39e6	5.26e6	1241.4	NO	36.463
13C-1234789-HpCDF	41.580	1.141	1.21e5	2.65e5	0.758	0.459	0.440	1927	2585	1.55e6	3.35e6	803.0	NO	40.638
13C-1234-TCDD	25.346	0.000	7.67e5	9.61e5	1.000	0.797	0.770	3102	1462	1.15e7	1.45e7	3704.0	NO	100.000
13C-2378-TCDD	26.153	1.032	2.74e5	3.52e5	0.872	0.780	0.770	3102	1462	4.03e6	5.19e6	1299.6	NO	41.550
13C-12378-PeCDD	31.244	1.233	3.29e5	2.09e5	0.754	1.573	1.550	1558	1744	4.71e6	3.08e6	3026.6	NO	41.322
13C-123478-HxCDD	35.902	0.985	3.09e5	2.41e5	1.106	1.282	1.240	2771	2179	4.46e6	3.56e6	1610.9	NO	39.579
13C-123678-HxCDD	36.023	0.988	3.18e5	2.51e5	1.165	1.268	1.240	2771	2179	4.60e6	3.58e6	1659.9	NO	38.952
13C-1234678-HpCDD	40.725	1.117	2.21e5	2.05e5	0.872	1.078	1.050	2183	2130	2.92e6	2.70e6	1339.2	NO	38.880
13C-OCDD	46.409	1.273	2.54e5	2.82e5	0.655	0.903	0.890	1642	1021	2.59e6	2.85e6	1575.2	NO	65.204
13C-123789-HxCDD	36.450	0.000	7.06e5	5.49e5	1.000	1.287	1.240	2771	2179	1.01e7	7.92e6	3651.8	NO	100.000
Total-tetrafurans			7.95e2		0.924			1171		1.25e4				0.198

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:14 Pacific Standard Time

ID: 16K0053-06RE1, Name: 17022410, Date: 24-Feb-2017, Time: 21:11:58, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
Total-penta1			0.00e0					757		0.00e0				
Total-pentafurans			0.00e0		0.960			1293		0.00e0				
Total-hexafurans			3.97e2		1.130			535		8.78e3				0.102
Total-heptafurans			8.15e2		1.281			266		1.70e4				0.292
Total-Furans			2.71e3		1.100			1171		4.73e4				1.175
Total-tetradioxins			0.00e0		1.150			1753		0.00e0				
Total-pentadioxins			0.00e0		1.017			1216		0.00e0				
Total-hexadioxins			1.31e3		0.977			1095		2.28e4				0.427
Total-heptadioxins			1.21e4		1.051			652		1.81e5				5.423
Total-Dioxins			2.50e4		1.025			1753		3.27e5				14.657
Total-TEQ			2.77e4					1753		3.74e5				15.832
37CL-2378-TCDD	26.168	1.032	7.31e5		1.073			1610		1.02e7		6327.5		39.433
FUNCTION1 PFK			1.16e8					733138		5.51e8				
FUNCTION2 PFK			1.49e5					198572		4.91e6				0.000
FUNCTION3 PFK			0.00e0					528205		0.00e0				
FUNCTION4 PFK			2.04e4					395412		8.25e5				
FUNCTION5 PFK			2.18e4					314299		1.14e6				
FUNCTION1 HXCD...			4.23e3					490		5.46e4				0.000
FUNCTION1 HPCD...			3.13e3					1487		5.65e4				0.000
FUNCTION2 HPCD...			9.66e2					958		2.29e4				0.000
FUNCTION3 OCDPE			0.00e0					418		0.00e0				
FUNCTION4 NCDPE			2.55e2					642		7.69e3				0.000
FUNCTION5 DCDPE			0.00e0					497		0.00e0				

Dataset: C:\MassLynx\Dioxin.pro\170224D.qld
Last Altered: Monday, February 27, 2017 10:34:48 Pacific Standard Time
Printed: Monday, February 27, 2017 12:18:14 Pacific Standard Time

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin170224.mdb 27 Feb 2017 09:30:36
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\170124ICAL.cdb 25 Jan 2017 09:33:34

ID: 16K0053-06RE1, Name: 17022410, Date: 24-Feb-2017, Time: 21:11:58, Conditions: AUTOSPEC01, User: PK

TF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	1	2378-TCDF	303.9016	25.56	827.638	0.924		0.085	0.071	0.57	0.77	YES	3.9
2	35	Total-tetrafurans	303.9016	22.90	587.248	0.924		0.060		0.87	0.77	NO	4.4
3	35	Total-tetrafurans	303.9016	22.07	505.697	0.924		0.052		0.78	0.77	NO	2.3

PP

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1													

PF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1													

HF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	38	Total-hexafurans	373.8208	34.03	530.362	1.130		0.072		0.97	1.24	YES	8.1
2	38	Total-hexafurans	373.8208	32.96	219.405	1.130		0.030		1.63	1.24	YES	8.3

HPF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	39	Total-heptafurans	407.7818	39.76	1057.839	1.281		0.180		0.66	1.05	YES	21.5
2	39	Total-heptafurans	407.7818	39.00	338.727	1.281		0.058		1.30	1.05	YES	21.0
3	8	1234678-HpCDF	407.7818	38.98	366.254	1.267		0.054	0.050	1.22	1.05	YES	21.6

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	1	2378-TCDF	303.9016	25.56	827.638	0.924		0.085	0.071	0.57	0.77	YES	3.9
2	35	Total-tetrafurans	303.9016	22.90	587.248	0.924		0.060		0.87	0.77	NO	4.4
3	35	Total-tetrafurans	303.9016	22.07	505.697	0.924		0.052		0.78	0.77	NO	2.3
4	38	Total-hexafurans	373.8208	34.03	530.362	1.130		0.072		0.97	1.24	YES	8.1
5	38	Total-hexafurans	373.8208	32.96	219.405	1.130		0.030		1.63	1.24	YES	8.3
6	39	Total-heptafurans	407.7818	39.76	1057.839	1.281		0.180		0.66	1.05	YES	21.5
7	39	Total-heptafurans	407.7818	39.00	338.727	1.281		0.058		1.30	1.05	YES	21.0
8	8	1234678-HpCDF	407.7818	38.98	366.254	1.267		0.054	0.050	1.22	1.05	YES	21.6
9	10	OCDF	441.7428	46.69	1669.177	1.067		0.583	0.524	0.73	0.89	YES	16.9

TD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1													

PD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1													

ID: 16K0053-06RE1, Name: 17022410, Date: 24-Feb-2017, Time: 21:11:58, Conditions: AUTOSPEC01, User: PK

HD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	43	Total-hexadioxins	389.8157	34.99	474.534	0.977		0.087		1.57	1.24	YES	3.2
2	43	Total-hexadioxins	389.8157	34.90	450.968	0.977		0.083		0.88	1.24	YES	3.5
3	43	Total-hexadioxins	389.8157	34.58	346.967	0.977		0.064		1.75	1.24	YES	5.1
4	43	Total-hexadioxins	389.8157	33.75	1057.966	0.977		0.194		1.27	1.24	NO	9.1

HPD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	16	1234678-HpCDD	423.7766	40.74	4530.089	1.051		1.013	1.013	0.91	1.05	NO	44.8
2	44	Total-heptadioxins	423.7766	39.53	19716.689	1.051		4.410		1.02	1.05	NO	233.5

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	43	Total-hexadioxins	389.8157	34.99	474.534	0.977		0.087		1.57	1.24	YES	3.2
2	43	Total-hexadioxins	389.8157	34.90	450.968	0.977		0.083		0.88	1.24	YES	3.5
3	43	Total-hexadioxins	389.8157	34.58	346.967	0.977		0.064		1.75	1.24	YES	5.1
4	43	Total-hexadioxins	389.8157	33.75	1057.966	0.977		0.194		1.27	1.24	NO	9.1
5	16	1234678-HpCDD	423.7766	40.74	4530.089	1.051		1.013	1.013	0.91	1.05	NO	44.8
6	44	Total-heptadioxins	423.7766	39.53	19716.689	1.051		4.410		1.02	1.05	NO	233.5
7	17	OCDD	457.7377	46.43	24315.555	1.030		8.808	8.808	0.90	0.89	NO	243.6

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1º Rati...	1º Rati...	1º R...	S/N
1	1	2378-TCDF	303.9016	25.56	827.638	0.924		0.085	0.071	0.57	0.77	YES	3.9
2	35	Total-tetrafurans	303.9016	22.90	587.248	0.924		0.060		0.87	0.77	NO	4.4
3	35	Total-tetrafurans	303.9016	22.07	505.697	0.924		0.052		0.78	0.77	NO	2.3
4	38	Total-hexafurans	373.8208	34.03	530.362	1.130		0.072		0.97	1.24	YES	8.1
5	38	Total-hexafurans	373.8208	32.96	219.405	1.130		0.030		1.63	1.24	YES	8.3
6	39	Total-heptafurans	407.7818	39.76	1057.839	1.281		0.180		0.66	1.05	YES	21.5
7	39	Total-heptafurans	407.7818	39.00	338.727	1.281		0.058		1.30	1.05	YES	21.0
8	8	1234678-HpCDF	407.7818	38.98	366.254	1.267		0.054	0.050	1.22	1.05	YES	21.6
9	10	OCDF	441.7428	46.69	1669.177	1.067		0.583	0.524	0.73	0.89	YES	16.9
10	43	Total-hexadioxins	389.8157	34.99	474.534	0.977		0.087		1.57	1.24	YES	3.2
11	43	Total-hexadioxins	389.8157	34.90	450.968	0.977		0.083		0.88	1.24	YES	3.5
12	43	Total-hexadioxins	389.8157	34.58	346.967	0.977		0.064		1.75	1.24	YES	5.1
13	43	Total-hexadioxins	389.8157	33.75	1057.966	0.977		0.194		1.27	1.24	NO	9.1
14	16	1234678-HpCDD	423.7766	40.74	4530.089	1.051		1.013	1.013	0.91	1.05	NO	44.8
15	44	Total-heptadioxins	423.7766	39.53	19716.689	1.051		4.410		1.02	1.05	NO	233.5
16	17	OCDD	457.7377	46.43	24315.555	1.030		8.808	8.808	0.90	0.89	NO	243.6