Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20071101.b/lu10sb.d
Lab Smp Id: LU10LCSS1 Client Smp ID: LU10LCSS1
Inj Date : 01-NOV-2007 15:37
Operator : VTS Inst ID: nt4.i
Smp Info : LU10LCSS1
Misc Info : 07-21929
Comment : 1ul Injection
Method : /chem3/nt4.i/20071101.b/SW846.m
Meth Date : 02-Nov-2007 11:40 jeff Quant Type: ISTD
Cal Date : 01-OCT-2007 11:04 Cal File: 0801001.d
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

LJR 11/2/07

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	50.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	4.816	4.748	(0.706)	280168	20.0349	400.7
$	2 Phenol-d5	99	6.493	6.489	(0.952)	377892	24.1430	482.9
	3 Phenol	94	6.509	6.505	(0.955)	333628	17.9476	359.0
$	5 2-Chlorophenol-d4	132	6.525	6.521	(0.957)	273364	23.5446	470.9
	4 Bis(2-Chloroethyl)ether	93	6.531	6.532	(0.958)	234595	16.3767	327.5
	6 2-Chlorophenol	128	6.552	6.548	(0.961)	213923	15.9851	319.7
	7 1,3-Dichlorobenzene	146	6.750	6.746	(0.990)	199260	14.5464	290.9
*	8 1,4-Dichlorobenzene-d4	152	6.819	6.820	(1.000)	165263	20.0000	
	9 1,4-Dichlorobenzene	146	6.840	6.842	(1.003)	202028	14.6336	292.7
$	10 1,2-Dichlorobenzene-d4	152	7.118	7.114	(1.044)	104319	13.9639	279.3
	12 1,2-Dichlorobenzene	146	7.140	7.141	(1.047)	195562	15.1242	302.5
	11 Benzyl alcohol	108	7.161	7.162	(1.050)	281938	33.2376	664.8 (M)
	14 2,2'-oxybis(1-Chloropropane)	45	7.428	7.429	(1.089)	289979	16.6808	333.6
	13 2-Methylphenol	108	7.444	7.445	(1.092)	199664	16.2592	325.2
	17 Hexachloroethane	117	7.626	7.627	(1.118)	92889	14.8176	296.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	16 N-Nitroso-di-n-propylamine	70	7.642	7.643	(1.121)	187323	16.5108	330.2
	15 4-Methylphenol	108	7.695	7.686	(1.128)	451390	36.1127	722.3
$	18 Nitrobenzene-d5	82	7.770	7.771	(0.876)	244180	15.0895	301.8
	19 Nitrobenzene	77	7.802	7.803	(0.880)	275771	15.3795	307.6
	20 Isophorone	82	8.203	8.199	(0.925)	474836	16.7841	335.7
	21 2-Nitrophenol	139	8.320	8.322	(0.938)	109863	16.2204	324.4
	22 2,4-Dimethylphenol	107	8.507	8.509	(0.959)	183733	12.8137	256.3
	23 Bis(2-Chloroethoxy)methane	93	8.635	8.637	(0.974)	268178	15.7946	315.9
	24 Benzoic acid	105	8.822	8.813	(0.995)	560138	54.2174	1084 (M)
	25 2,4-Dichlorophenol	162	8.726	8.722	(0.984)	167241	17.2810	345.6
	26 1,2,4-Trichlorobenzene	180	8.822	8.829	(0.995)	168655	14.7422	294.8
*	27 Naphthalene-d8	136	8.871	8.872	(1.000)	613454	20.0000	
	28 Naphthalene	128	8.897	8.899	(1.003)	592200	15.7243	314.5
	29 4-Chloroaniline	127	9.084	9.086	(1.024)	473963	29.8747	597.5
	30 Hexachlorobutadiene	225	9.244	9.246	(1.042)	94092	14.2061	284.1
	31 4-Chloro-3-methylphenol	107	9.944	9.946	(1.121)	199824	16.7207	334.4
	32 2-Methylnaphthalene	141	10.014	10.015	(1.129)	311261	16.2240	324.5
	33 Hexachlorocyclopentadiene	237	10.404	10.405	(0.890)	219559	37.2499	745.0
	34 2,4,6-Trichlorophenol	196	10.548	10.549	(0.903)	114706	17.5962	351.9
	35 2,4,5-Trichlorophenol	196	10.607	10.608	(0.908)	116426	16.6842	333.7
$	36 2-Fluorobiphenyl	172	10.676	10.677	(0.914)	339950	15.1348	302.7
	37 2-Chloronaphthalene	162	10.772	10.774	(0.922)	340105	15.9993	320.0
	38 2-Nitroaniline	65	11.034	11.035	(0.944)	160992	17.4111	348.2
	39 Dimethylphthalate	163	11.440	11.436	(0.979)	391686	16.9293	338.6
	40 Acenaphthylene	152	11.429	11.431	(0.978)	545934	17.1602	343.2
	41 2,6-Dinitrotoluene	165	11.510	11.511	(0.985)	93332	17.6486	353.0
*	42 Acenaphthene-d10	164	11.686	11.682	(1.000)	325298	20.0000	
	43 3-Nitroaniline	138	11.713	11.709	(1.002)	255452	41.0813	821.6
	44 Acenaphthene	153	11.734	11.730	(1.004)	328983	15.5775	311.5
	45 2,4-Dinitrophenol	184	11.873	11.869	(1.016)	155764	52.8935	1058
	46 Dibenzofuran	168	11.990	11.992	(1.026)	467164	16.9841	339.7
	47 4-Nitrophenol	109	12.086	12.088	(1.034)	72823	16.5778	331.6
	48 2,4-Dinitrotoluene	165	12.119	12.120	(1.037)	120713	17.2671	345.3
	50 Diethylphthalate	149	12.583	12.585	(1.077)	389646	17.1656	343.3
	49 Fluorene	166	12.535	12.537	(1.073)	393885	16.7817	335.6
	51 4-Chlorophenyl-phenylether	204	12.594	12.595	(1.078)	189352	16.4488	329.0
	52 4-Nitroaniline	138	12.679	12.681	(1.085)	86141	13.8724	277.4
	53 4,6-Dinitro-2-methylphenol	198	12.754	12.756	(0.911)	209067	55.0074	1100
	54 N-Nitrosodiphenylamine	169	12.808	12.809	(0.915)	269161	23.4313	468.6
$	55 2,4,6-Tribromophenol	330	12.957	12.953	(1.109)	68201	24.3549	487.1
	56 4-Bromophenyl-phenylether	248	13.353	13.359	(0.954)	97367	16.7787	335.6
	57 Hexachlorobenzene	284	13.540	13.541	(0.967)	98234	16.2829	325.7
	58 Pentachlorophenol	266	13.855	13.856	(0.990)	63768	18.0893	361.8
*	59 Phenanthrene-d10	188	13.999	14.000	(1.000)	467434	20.0000	
	60 Phenanthrene	178	14.031	14.032	(1.002)	571948	17.7045	354.1
	61 Anthracene	178	14.100	14.102	(1.007)	545602	16.7019	334.0
	62 Carbazole	167	14.410	14.412	(1.029)	472553	16.9068	338.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	63 Di-n-butylphthalate	149	15.196	15.197	(1.085)	610351	18.1665	363.3
	64 Fluoranthene	202	15.922	15.923	(1.137)	586456	16.7675	335.4
	65 Pyrene	202	16.259	16.260	(0.892)	587651	19.3631	387.3
$	66 Terphenyl-d14	244	16.633	16.634	(0.913)	317182	18.1037	362.1
	67 Butylbenzylphthalate	149	17.551	17.558	(0.963)	254976	20.0394	400.8
	68 Benzo(a)anthracene	228	18.198	18.199	(0.999)	495143	17.5924	351.8
*	69 Chrysene-d12	240	18.219	18.221	(1.000)	378695	20.0000	
	70 3,3'-Dichlorobenzidine	252	18.257	18.258	(1.002)	337337	33.7535	675.1
	71 Chrysene	228	18.257	18.258	(1.002)	496152	17.9211	358.4
	72 bis(2-Ethylhexyl)phthalate	149	18.577	18.578	(0.953)	339849	20.3562	407.1
*	134 Di-n-octylphthalate-d4	153	19.501	19.503	(1.000)	529884	20.0000	
	73 Di-n-octylphthalate	149	19.512	19.513	(1.001)	584875	19.1617	383.2
	74 Benzo(b)fluoranthene	252	19.811	19.818	(0.975)	517738	19.3909	387.8
	75 Benzo(k)fluoranthene	252	19.849	19.850	(0.977)	483729	17.1502	343.0
	76 Benzo(a)pyrene	252	20.244	20.245	(0.996)	424666	17.8594	357.2
*	77 Perylene-d12	264	20.324	20.325	(1.000)	392157	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	21.654	21.661	(1.065)	551373	21.0962	421.9
	79 Dibenzo(a,h)anthracene	278	21.692	21.693	(1.067)	468902	21.8443	436.9
	80 Benzo(g,h,i)perylene	276	21.932	21.944	(1.079)	327032	13.8916	277.8
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	6.381	6.377	(0.936)	560988	25.3034	506.1
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	141	10.179	10.181	(1.148)	311898	16.0534	321.1
	111 Azobenzene (1,2-DP-Hydrazine)	77	12.840	12.841	(1.099)	593413	18.8461	376.9

QC Flag Legend

M - Compound response manually integrated.

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt4.i
Lab File ID: lu10sb.d
Lab Smp Id: LU10LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt4.i/20071101.b/SW846.m
Misc Info: 07-21929

Calibration Date: 01-NOV-2007
Calibration Time: 14:35
Client Smp ID: LU10LCSS1
Level: LOW
Sample Type: Solid

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	145384	72692	290768	165263	13.67
27 Naphthalene-d8	530525	265262	1061050	613454	15.63
42 Acenaphthene-d10	280701	140350	561402	325298	15.89
59 Phenanthrene-d10	391934	195967	783868	467434	19.26
69 Chrysene-d12	354658	177329	709316	378695	6.78
134 Di-n-octylphthala	506314	253157	1012628	529884	4.66
77 Perylene-d12	400782	200391	801564	392157	-2.15

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	6.82	6.32	7.32	6.82	-0.02
27 Naphthalene-d8	8.87	8.37	9.37	8.87	-0.01
42 Acenaphthene-d10	11.68	11.18	12.18	11.69	0.03
59 Phenanthrene-d10	14.00	13.50	14.50	14.00	-0.01
69 Chrysene-d12	18.22	17.72	18.72	18.22	-0.01
134 Di-n-octylphthala	19.50	19.00	20.00	19.50	-0.01
77 Perylene-d12	20.33	19.83	20.83	20.32	-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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Hart Crowser, Inc. Client SDG: LU10
Sample Matrix: SOLID Fraction: SV
Lab Smp Id: LU10LCSS1 Client Smp ID: LU10LCSS1
Level: LOW Operator: VTS
Data Type: MS DATA SampleType: LCS
SpikeList File: PSDDALCS.spk Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem3/nt4.i/20071101.b/SW846.m
Misc Info: 07-21929

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	359.0	71.79	45-89
4	Bis(2-Chloroethyl)	500.0	327.5	65.51	42-82
6	2-Chlorophenol	500.0	319.7	63.94	46-80
7	1,3-Dichlorobenzen	500.0	290.9	58.19	45-76
9	1,4-Dichlorobenzen	500.0	292.7	58.53	45-76
11	Benzyl alcohol	1000	664.8	66.48	36-79
12	1,2-Dichlorobenzen	500.0	302.5	60.50	44-78
13	2-Methylphenol	500.0	325.2	65.04	47-82
14	2,2'-oxybis(1-Chlo	500.0	333.6	66.72	36-96
15	4-Methylphenol	1000	722.3	72.23	47-86
16	N-Nitroso-di-n-pro	500.0	330.2	66.04	42-84
17	Hexachloroethane	500.0	296.4	59.27	40-77
19	Nitrobenzene	500.0	307.6	61.52	35-94
20	Isophorone	500.0	335.7	67.14	50-86
21	2-Nitrophenol	500.0	324.4	64.88	46-84
22	2,4-Dimethylphenol	500.0	256.3	51.25	30-76
23	Bis(2-Chloroethoxy	500.0	315.9	63.18	48-81
24	Benzoic acid	1500	1084	72.29	39-103
25	2,4-Dichlorophenol	500.0	345.6	69.12	50-85
26	1,2,4-Trichloroben	500.0	294.8	58.97	45-81
28	Naphthalene	500.0	314.5	62.90	46-80
29	4-Chloroaniline	1200	597.5	49.79	15-79
30	Hexachlorobutadien	500.0	284.1	56.82	44-79
31	4-Chloro-3-methylp	500.0	334.4	66.88	50-89
32	2-Methylnaphthalen	500.0	324.5	64.90	49-81
33	Hexachlorocyclopen	1500	745.0	49.67	17-98
34	2,4,6-Trichlorophe	500.0	351.9	70.38	48-89
35	2,4,5-Trichlorophe	500.0	333.7	66.74	47-91
37	2-Chloronaphthalen	500.0	320.0	64.00	50-83
38	2-Nitroaniline	500.0	348.2	69.64	45-96
39	Dimethylphthalate	500.0	338.6	67.72	53-87
40	Acenaphthylene	500.0	343.2	68.64	51-84
41	2,6-Dinitrotoluene	500.0	353.0	70.59	49-95

OK

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
43	3-Nitroaniline	1280	821.6	64.19	36-92
44	Acenaphthene	500.0	311.5	62.31	51-83
45	2,4-Dinitrophenol	1500	1058	70.52	10-191
46	Dibenzofuran	500.0	339.7	67.94	50-86
47	4-Nitrophenol	500.0	331.6	66.31	44-98
48	2,4-Dinitrotoluene	500.0	345.3	69.07	50-98
49	Fluorene	500.0	335.6	67.13	52-86
50	Diethylphthalate	500.0	343.3	68.66	55-89
51	4-Chlorophenyl-phe	500.0	329.0	65.80	51-85
52	4-Nitroaniline	500.0	277.4	55.49	30-87
53	4,6-Dinitro-2-meth	1500	1100	73.34	10-136
54	N-Nitrosodiphenyla	500.0	468.6	93.73	28-158
56	4-Bromophenyl-phen	500.0	335.6	67.11	50-90
57	Hexachlorobenzene	500.0	325.7	65.13	49-91
58	Pentachlorophenol	500.0	361.8	72.36	40-100
60	Phenanthrene	500.0	354.1	70.82	51-91
61	Anthracene	500.0	334.0	66.81	51-86
62	Carbazole	500.0	338.1	67.63	51-89
63	Di-n-butylphthalat	500.0	363.3	72.67	58-95
64	Fluoranthene	500.0	335.4	67.07	54-94
65	Pyrene	500.0	387.3	77.45	46-100
67	Butylbenzylphthala	500.0	400.8	80.16	51-99
68	Benzo(a)anthracene	500.0	351.8	70.37	52-90
70	3,3'-Dichlorobenzi	1280	675.1	52.74	10-86
71	Chrysene	500.0	358.4	71.68	51-93
72	bis(2-Ethylhexyl)p	500.0	407.1	81.42	36-111
73	Di-n-octylphthalat	500.0	383.2	76.65	29-108
74	Benzo(b)fluoranthe	500.0	387.8	77.56	54-102
75	Benzo(k)fluoranthe	500.0	343.0	68.60	45-107
76	Benzo(a)pyrene	500.0	357.2	71.44	52-95
78	Indeno(1,2,3-cd)py	500.0	421.9	84.38	34-105
79	Dibenzo(a,h)anthra	500.0	436.9	87.38	36-112
80	Benzo(g,h,i)peryle	500.0	277.8	55.57	25-116

OK

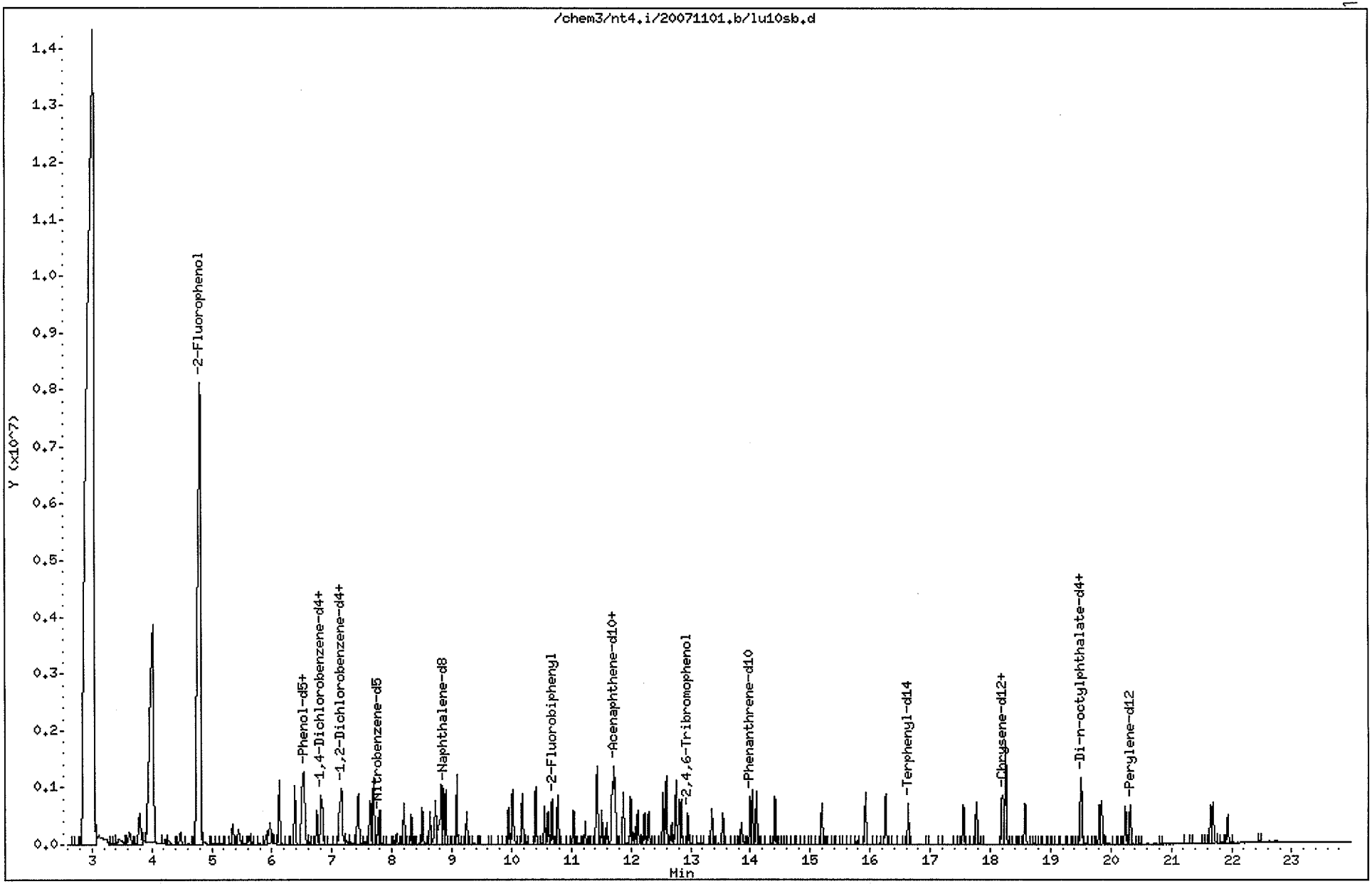
	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	400.7	53.43	11-84
$ 2	Phenol-d5	750.0	482.9	64.38	25-86
$ 5	2-Chlorophenol-d4	750.0	470.9	62.79	23-91
$ 10	1,2-Dichlorobenzen	500.0	279.3	55.86	24-90
$ 18	Nitrobenzene-d5	500.0	301.8	60.36	26-88
$ 36	2-Fluorobiphenyl	500.0	302.7	60.54	34-91
$ 55	2,4,6-Tribromophen	750.0	487.1	64.95	25-107

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 66 Terphenyl-d14	500.0	362.1	72.41	22-100

Data File: /chem3/nt4.i/20071101.b/lu10sb.d
Date : 01-NOV-2007 15:37
Client ID: LU10LCSS1
Sample Info: LU10LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: nt4.i
Operator: VTS
Column diameter: 0.32

1080



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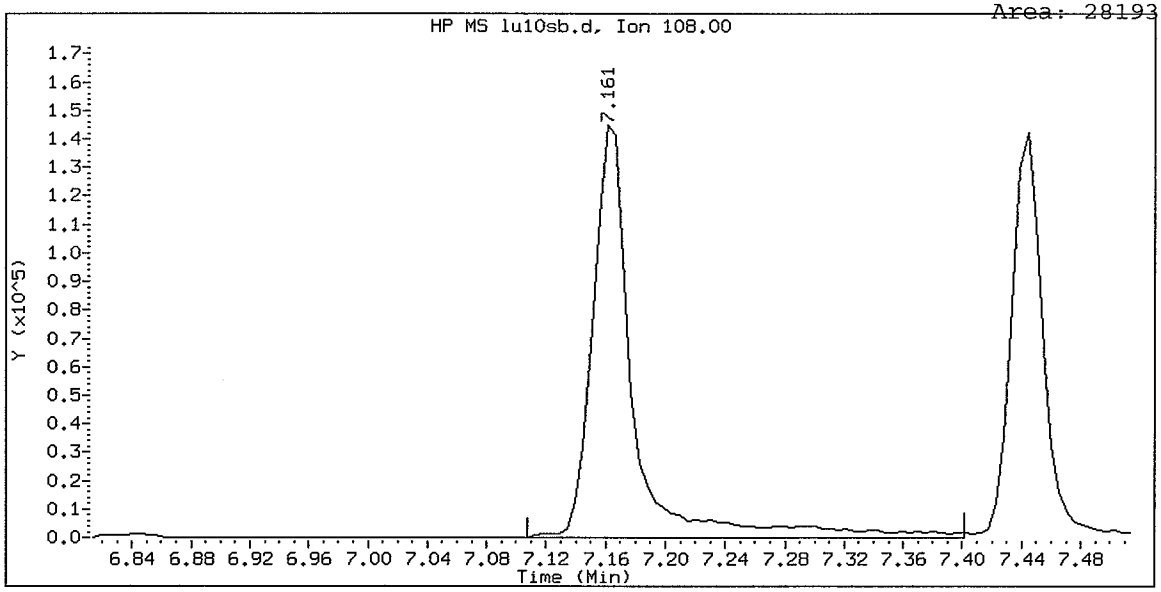
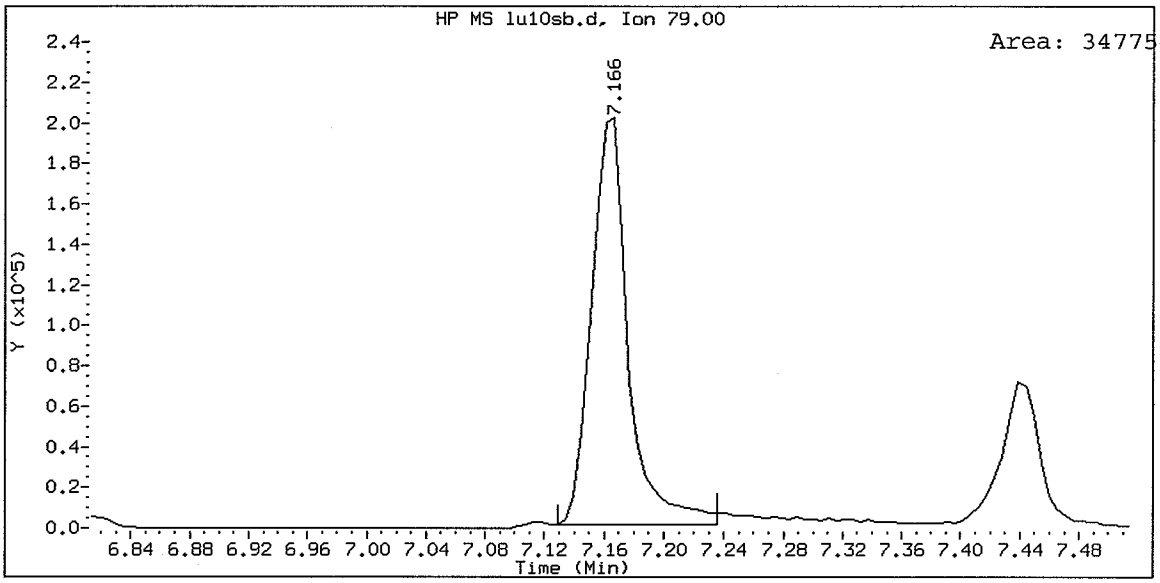
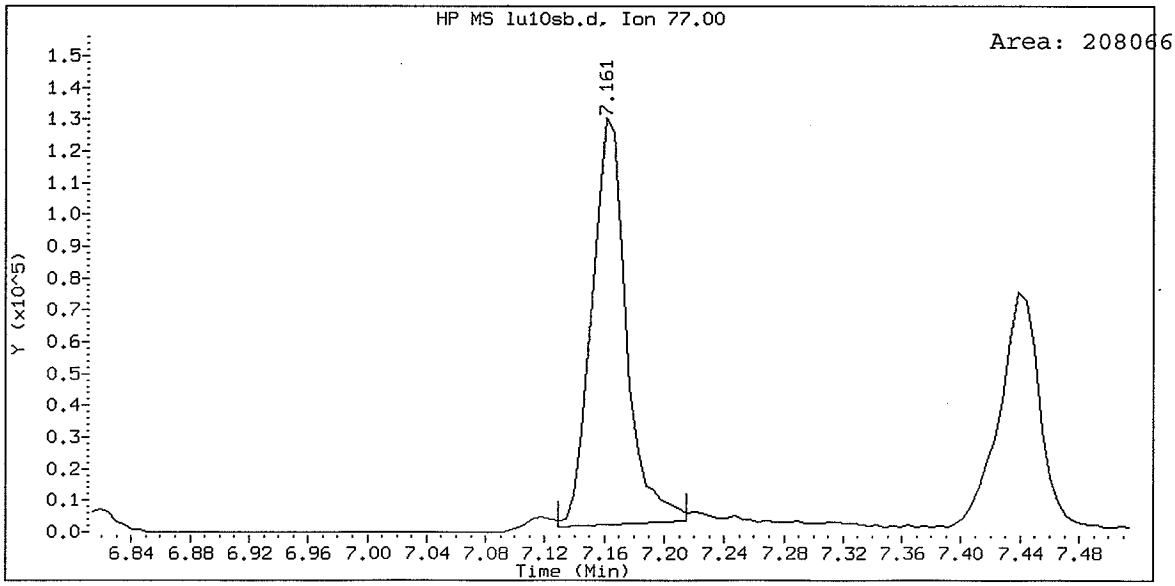
Benzyl alcohol Amount: 33.24







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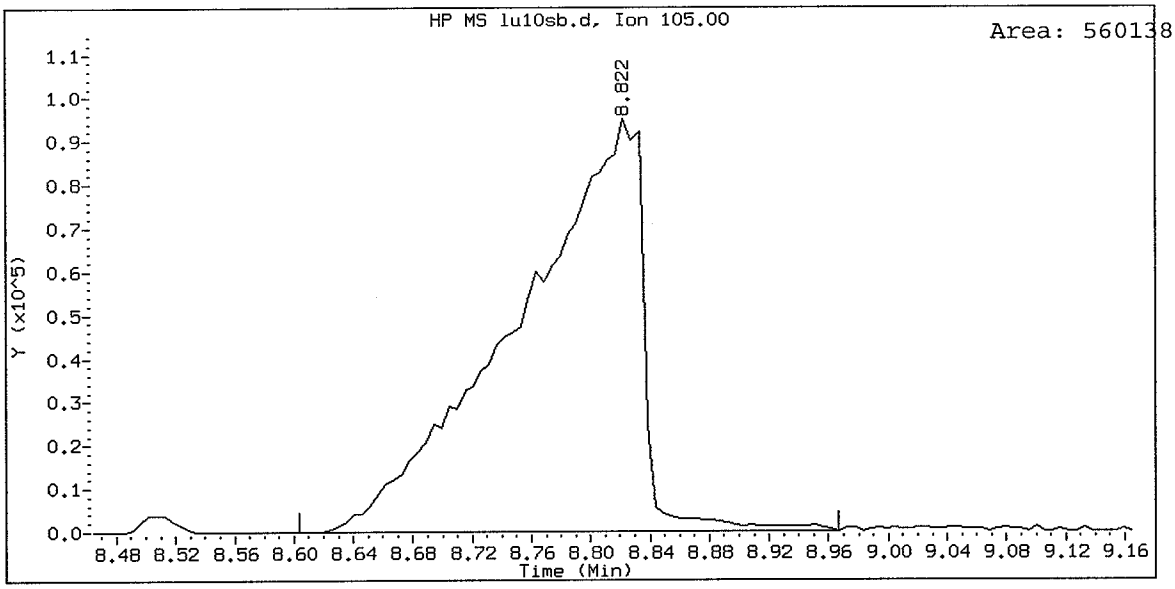
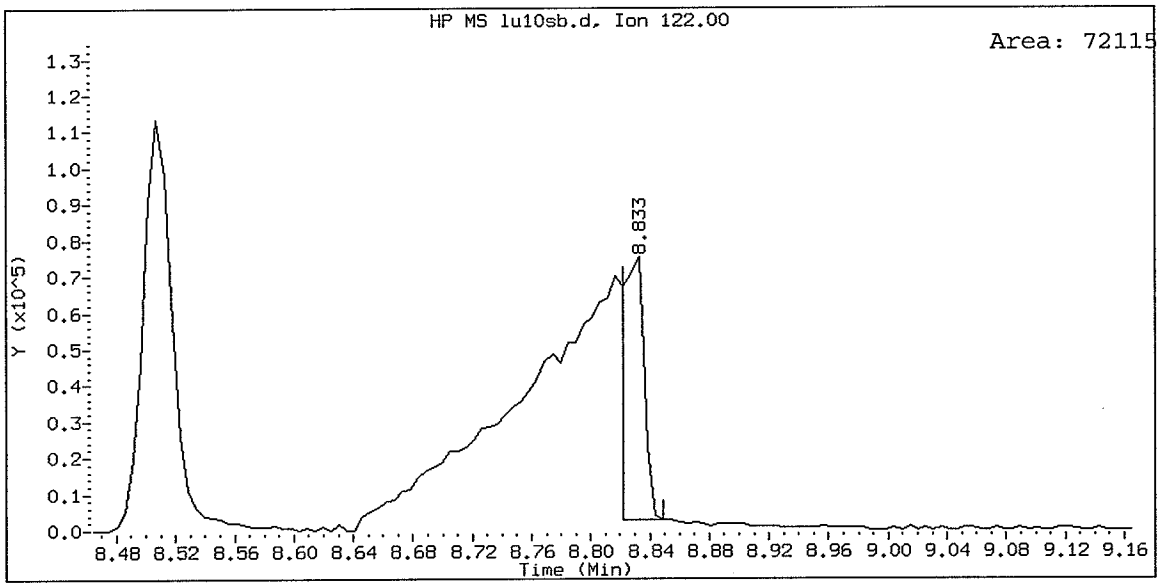
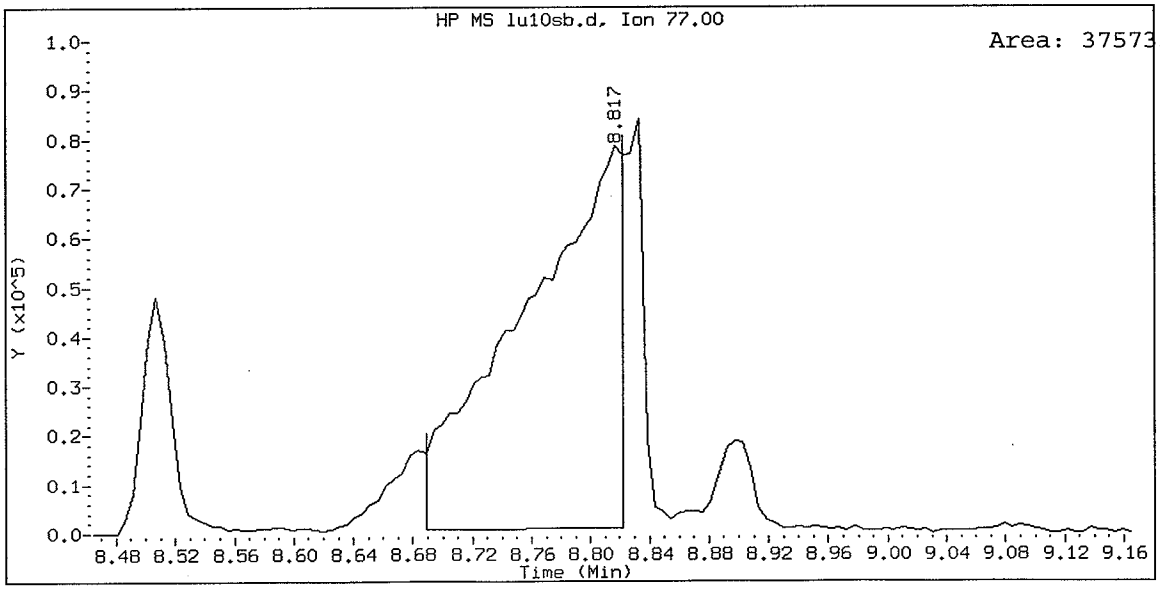
Benzoic acid Amount: 54.22







Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20071101.b/lu10sbd.d
Lab Smp Id: LU10LCSDS1 Client Smp ID: LU10LCSDS1
Inj Date : 01-NOV-2007 16:08
Operator : VTS Inst ID: nt4.i
Smp Info : LU10LCSDS1
Misc Info : 07-21929
Comment : 1ul Injection
Method : /chem3/nt4.i/20071101.b/SW846.m
Meth Date : 02-Nov-2007 11:40 jeff Quant Type: ISTD
Cal Date : 01-OCT-2007 11:04 Cal File: 0801001.d
Als bottle: 5 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

LTR 11/2/07

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	50.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1	2-Fluorophenol	112	4.823	4.748	(0.707)	257126	18.6921	373.8
$ 2	Phenol-d5	99	6.490	6.489	(0.951)	356745	23.1699	463.4
3	Phenol	94	6.511	6.505	(0.955)	314160	17.1806	343.6
$ 5	2-Chlorophenol-d4	132	6.527	6.521	(0.957)	261083	22.8598	457.2
4	Bis(2-Chloroethyl)ether	93	6.533	6.532	(0.958)	220191	15.6261	312.5
6	2-Chlorophenol	128	6.549	6.548	(0.960)	205480	15.6089	312.2
7	1,3-Dichlorobenzene	146	6.746	6.746	(0.989)	189970	14.0982	282.0
* 8	1,4-Dichlorobenzene-d4	152	6.821	6.820	(1.000)	162567	20.0000	
9	1,4-Dichlorobenzene	146	6.842	6.842	(1.003)	193235	14.2289	284.6
$ 10	1,2-Dichlorobenzene-d4	152	7.115	7.114	(1.043)	98069	13.3450	266.9
12	1,2-Dichlorobenzene	146	7.142	7.141	(1.047)	185907	14.6159	292.3
11	Benzyl alcohol	108	7.163	7.162	(1.050)	260707	31.2444	624.9(M)
14	2,2'-oxybis(1-Chloropropane)	45	7.425	7.429	(1.088)	277775	16.2438	324.9
13	2-Methylphenol	108	7.441	7.445	(1.091)	192990	15.9763	319.5
17	Hexachloroethane	117	7.628	7.627	(1.118)	87749	14.2298	284.6

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	16 N-Nitroso-di-n-propylamine	70	7.644	7.643	(1.121)	180863	16.2058	324.1
	15 4-Methylphenol	108	7.692	7.686	(1.128)	428449	34.8458	696.9
$	18 Nitrobenzene-d5	82	7.772	7.771	(0.876)	233406	14.5277	290.6
	19 Nitrobenzene	77	7.799	7.803	(0.880)	260703	14.6440	292.9
	20 Isophorone	82	8.199	8.199	(0.925)	454264	16.1727	323.5
	21 2-Nitrophenol	139	8.322	8.322	(0.939)	106810	15.8833	317.7
	22 2,4-Dimethylphenol	107	8.509	8.509	(0.960)	177180	12.4457	248.9
	23 Bis(2-Chloroethoxy)methane	93	8.632	8.637	(0.973)	260448	15.4499	309.0
	24 Benzoic acid	105	8.824	8.813	(0.995)	531337	51.8003	1036 (M)
	25 2,4-Dichlorophenol	162	8.723	8.722	(0.984)	153906	16.0177	320.4
	26 1,2,4-Trichlorobenzene	180	8.824	8.829	(0.995)	160161	14.1006	282.0
*	27 Naphthalene-d8	136	8.867	8.872	(1.000)	609064	20.0000	
	28 Naphthalene	128	8.899	8.899	(1.004)	561430	15.0147	300.3
	29 4-Chloroaniline	127	9.086	9.086	(1.025)	474844	30.1460	602.9
	30 Hexachlorobutadiene	225	9.246	9.246	(1.043)	90712	13.7945	275.9
	31 4-Chloro-3-methylphenol	107	9.946	9.946	(1.122)	192217	16.2001	324.0
	32 2-Methylnaphthalene	141	10.016	10.015	(1.130)	291249	15.2903	305.8
	33 Hexachlorocyclopentadiene	237	10.406	10.405	(0.891)	208036	35.0754	701.5
	34 2,4,6-Trichlorophenol	196	10.550	10.549	(0.903)	105729	16.1182	322.4
	35 2,4,5-Trichlorophenol	196	10.609	10.608	(0.908)	113025	16.0961	321.9
$	36 2-Fluorobiphenyl	172	10.673	10.677	(0.914)	329994	14.6002	292.0
	37 2-Chloronaphthalene	162	10.774	10.774	(0.922)	325346	15.2098	304.2
	38 2-Nitroaniline	65	11.036	11.035	(0.945)	153572	16.5053	330.1
	39 Dimethylphthalate	163	11.437	11.436	(0.979)	374185	16.0723	321.4
	40 Acenaphthylene	152	11.431	11.431	(0.978)	511754	15.9858	319.7
	41 2,6-Dinitrotoluene	165	11.511	11.511	(0.985)	87719	16.4840	329.7
*	42 Acenaphthene-d10	164	11.682	11.682	(1.000)	327334	20.0000	
	43 3-Nitroaniline	138	11.714	11.709	(1.003)	247817	39.6055	792.1
	44 Acenaphthene	153	11.730	11.730	(1.004)	318088	14.9679	299.4
	45 2,4-Dinitrophenol	184	11.869	11.869	(1.016)	149829	50.5617	1011
	46 Dibenzofuran	168	11.992	11.992	(1.027)	450244	16.2671	325.3
	47 4-Nitrophenol	109	12.083	12.088	(1.034)	69821	15.7956	315.9
	48 2,4-Dinitrotoluene	165	12.120	12.120	(1.037)	115284	16.3880	327.8
	50 Diethylphthalate	149	12.585	12.585	(1.077)	371444	16.2619	325.2
	49 Fluorene	166	12.537	12.537	(1.073)	375303	15.8905	317.8
	51 4-Chlorophenyl-phenylether	204	12.596	12.595	(1.078)	179631	15.5073	310.1
	52 4-Nitroaniline	138	12.681	12.681	(1.085)	83394	13.3465	266.9
	53 4,6-Dinitro-2-methylphenol	198	12.756	12.756	(0.911)	210181	54.8922	1098
	54 N-Nitrosodiphenylamine	169	12.810	12.809	(0.915)	258539	22.3404	446.8
$	55 2,4,6-Tribromophenol	330	12.954	12.953	(1.109)	68013	24.1367	482.7
	56 4-Bromophenyl-phenylether	248	13.354	13.359	(0.954)	92984	15.9051	318.1
	57 Hexachlorobenzene	284	13.536	13.541	(0.967)	96440	15.8675	317.4
	58 Pentachlorophenol	266	13.851	13.856	(0.990)	60213	16.9547	339.1
*	59 Phenanthrene-d10	188	13.996	14.000	(1.000)	470911	20.0000	
	60 Phenanthrene	178	14.033	14.032	(1.003)	547488	16.8222	336.4
	61 Anthracene	178	14.102	14.102	(1.008)	531357	16.1457	322.9
	62 Carbazole	167	14.412	14.412	(1.030)	472596	16.7835	335.7

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	63 Di-n-butylphthalate	149	15.198	15.197	(1.086)	591291	17.4693	349.4
	64 Fluoranthene	202	15.924	15.923	(1.138)	575437	16.3310	326.6
	65 Pyrene	202	16.255	16.260	(0.892)	571736	18.3951	367.9
$	66 Terphenyl-d14	244	16.635	16.634	(0.913)	311891	17.3825	347.7
	67 Butylbenzylphthalate	149	17.553	17.558	(0.963)	248678	19.0843	381.7
	68 Benzo(a)anthracene	228	18.194	18.199	(0.999)	485113	16.8302	336.6
*	69 Chrysene-d12	240	18.221	18.221	(1.000)	387827	20.0000	
	70 3,3'-Dichlorobenzidine	252	18.253	18.258	(1.002)	324173	31.6726	633.5
	71 Chrysene	228	18.253	18.258	(1.002)	486422	17.1560	343.1
	72 bis(2-Ethylhexyl)phthalate	149	18.579	18.578	(0.953)	327388	19.5771	391.5
*	134 Di-n-octylphthalate-d4	153	19.503	19.503	(1.000)	530771	20.0000	
	73 Di-n-octylphthalate	149	19.509	19.513	(1.000)	552127	18.0586	361.2
	74 Benzo(b)fluoranthene	252	19.813	19.818	(0.975)	475317	17.8425	356.8
	75 Benzo(k)fluoranthene	252	19.845	19.850	(0.977)	488685	17.3652	347.3
	76 Benzo(a)pyrene	252	20.241	20.245	(0.996)	413709	17.4380	348.8
*	77 Perylene-d12	264	20.321	20.325	(1.000)	391270	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	21.656	21.661	(1.066)	449068	17.2209	344.4
	79 Dibenzo(a,h)anthracene	278	21.688	21.693	(1.067)	446645	20.8546	417.1
	80 Benzo(g,h,i)perylene	276	21.934	21.944	(1.079)	314073	13.3714	267.4
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	6.383	6.377	(0.936)	543673	24.9291	498.6
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	141	10.176	10.181	(1.148)	295344	15.3109	306.2
	111 Azobenzene (1,2-DP-Hydrazine)	77	12.836	12.841	(1.099)	561498	17.7216	354.4

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/nt4.i/20071101.b/lu10sbd.d
Report Date: 02-Nov-2007 11:40

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt4.i
Lab File ID: lu10sbd.d
Lab Smp Id: LU10LCSDS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt4.i/20071101.b/SW846.m
Misc Info: 07-21929

Calibration Date: 01-NOV-2007
Calibration Time: 14:35
Client Smp ID: LU10LCSDS1
Level: LOW
Sample Type: Solid

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	145384	72692	290768	162567	11.82
27 Naphthalene-d8	530525	265262	1061050	609064	14.80
42 Acenaphthene-d10	280701	140350	561402	327334	16.61
59 Phenanthrene-d10	391934	195967	783868	470911	20.15
69 Chrysene-d12	354658	177329	709316	387827	9.35
134 Di-n-octylphthala	506314	253157	1012628	530771	4.82
77 Perylene-d12	400782	200391	801564	391270	-2.37

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	6.82	6.32	7.32	6.82	0.01
27 Naphthalene-d8	8.87	8.37	9.37	8.87	-0.05
42 Acenaphthene-d10	11.68	11.18	12.18	11.68	0.01
59 Phenanthrene-d10	14.00	13.50	14.50	14.00	-0.03
69 Chrysene-d12	18.22	17.72	18.72	18.22	0.00
134 Di-n-octylphthala	19.50	19.00	20.00	19.50	0.00
77 Perylene-d12	20.33	19.83	20.83	20.32	-0.02

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.

Data File: /chem3/nt4.i/20071101.b/lu10sbd.d
Report Date: 02-Nov-2007 11:40

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Hart Crowser, Inc.
Sample Matrix: SOLID
Lab Smp Id: LU10LCSDS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDALCS.spk
Sublist File: PSDDA.sub
Method File: /chem3/nt4.i/20071101.b/SW846.m
Misc Info: 07-21929

Client SDG: LU10
Fraction: SV
Client Smp ID: LU10LCSDS1
Operator: VTS
SampleType: LCSD
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	343.6	68.72	45-89
4	Bis(2-Chloroethyl)	500.0	312.5	62.50	42-82
6	2-Chlorophenol	500.0	312.2	62.44	46-80
7	1,3-Dichlorobenzen	500.0	282.0	56.39	45-76
9	1,4-Dichlorobenzen	500.0	284.6	56.92	45-76
11	Benzyl alcohol	1000	624.9	62.49	36-79
12	1,2-Dichlorobenzen	500.0	292.3	58.46	44-78
13	2-Methylphenol	500.0	319.5	63.91	47-82
14	2,2'-oxybis(1-Chlo	500.0	324.9	64.98	36-96
15	4-Methylphenol	1000	696.9	69.69	47-86
16	N-Nitroso-di-n-pro	500.0	324.1	64.82	42-84
17	Hexachloroethane	500.0	284.6	56.92	40-77
19	Nitrobenzene	500.0	292.9	58.58	35-94
20	Isophorone	500.0	323.5	64.69	50-86
21	2-Nitrophenol	500.0	317.7	63.53	46-84
22	2,4-Dimethylphenol	500.0	248.9	49.78	30-76
23	Bis(2-Chloroethoxy	500.0	309.0	61.80	48-81
24	Benzoic acid	1500	1036	69.07	39-103
25	2,4-Dichlorophenol	500.0	320.4	64.07	50-85
26	1,2,4-Trichloroben	500.0	282.0	56.40	45-81
28	Naphthalene	500.0	300.3	60.06	46-80
29	4-Chloroaniline	1200	602.9	50.24	15-79
30	Hexachlorobutadien	500.0	275.9	55.18	44-79
31	4-Chloro-3-methylp	500.0	324.0	64.80	50-89
32	2-Methylnaphthalen	500.0	305.8	61.16	49-81
33	Hexachlorocyclopen	1500	701.5	46.77	17-98
34	2,4,6-Trichlorophe	500.0	322.4	64.47	48-89
35	2,4,5-Trichlorophe	500.0	321.9	64.38	47-91
37	2-Chloronaphthalen	500.0	304.2	60.84	50-83
38	2-Nitroaniline	500.0	330.1	66.02	45-96
39	Dimethylphthalate	500.0	321.4	64.29	53-87
40	Acenaphthylene	500.0	319.7	63.94	51-84
41	2,6-Dinitrotoluene	500.0	329.7	65.94	49-95

OK

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
43 3-Nitroaniline	1280	792.1	61.88	36-92
44 Acenaphthene	500.0	299.4	59.87	51-83
45 2,4-Dinitrophenol	1500	1011	67.42	10-191
46 Dibenzofuran	500.0	325.3	65.07	50-86
47 4-Nitrophenol	500.0	315.9	63.18	44-98
48 2,4-Dinitrotoluene	500.0	327.8	65.55	50-98
49 Fluorene	500.0	317.8	63.56	52-86
50 Diethylphthalate	500.0	325.2	65.05	55-89
51 4-Chlorophenyl-phe	500.0	310.1	62.03	51-85
52 4-Nitroaniline	500.0	266.9	53.39	30-87
53 4,6-Dinitro-2-meth	1500	1098	73.19	10-136
54 N-Nitrosodiphenyla	500.0	446.8	89.36	28-158
56 4-Bromophenyl-phen	500.0	318.1	OK 63.62	50-90
57 Hexachlorobenzene	500.0	317.4	63.47	49-91
58 Pentachlorophenol	500.0	339.1	67.82	40-100
60 Phenanthrene	500.0	336.4	67.29	51-91
61 Anthracene	500.0	322.9	64.58	51-86
62 Carbazole	500.0	335.7	67.13	51-89
63 Di-n-butylphthalat	500.0	349.4	69.88	58-95
64 Fluoranthene	500.0	326.6	65.32	54-94
65 Pyrene	500.0	367.9	73.58	46-100
67 Butylbenzylphthala	500.0	381.7	76.34	51-99
68 Benzo(a)anthracene	500.0	336.6	67.32	52-90
70 3,3'-Dichlorobenzi	1280	633.5	49.49	10-86
71 Chrysene	500.0	343.1	68.62	51-93
72 bis(2-Ethylhexyl)p	500.0	391.5	78.31	36-111
73 Di-n-octylphthalat	500.0	361.2	72.23	29-108
74 Benzo(b)fluoranthe	500.0	356.8	71.37	54-102
75 Benzo(k)fluoranthe	500.0	347.3	69.46	45-107
76 Benzo(a)pyrene	500.0	348.8	69.75	52-95
78 Indeno(1,2,3-cd)py	500.0	344.4	68.88	34-105
79 Dibenzo(a,h)anthra	500.0	417.1	83.42	36-112
80 Benzo(g,h,i)peryle	500.0	267.4	53.49	25-116

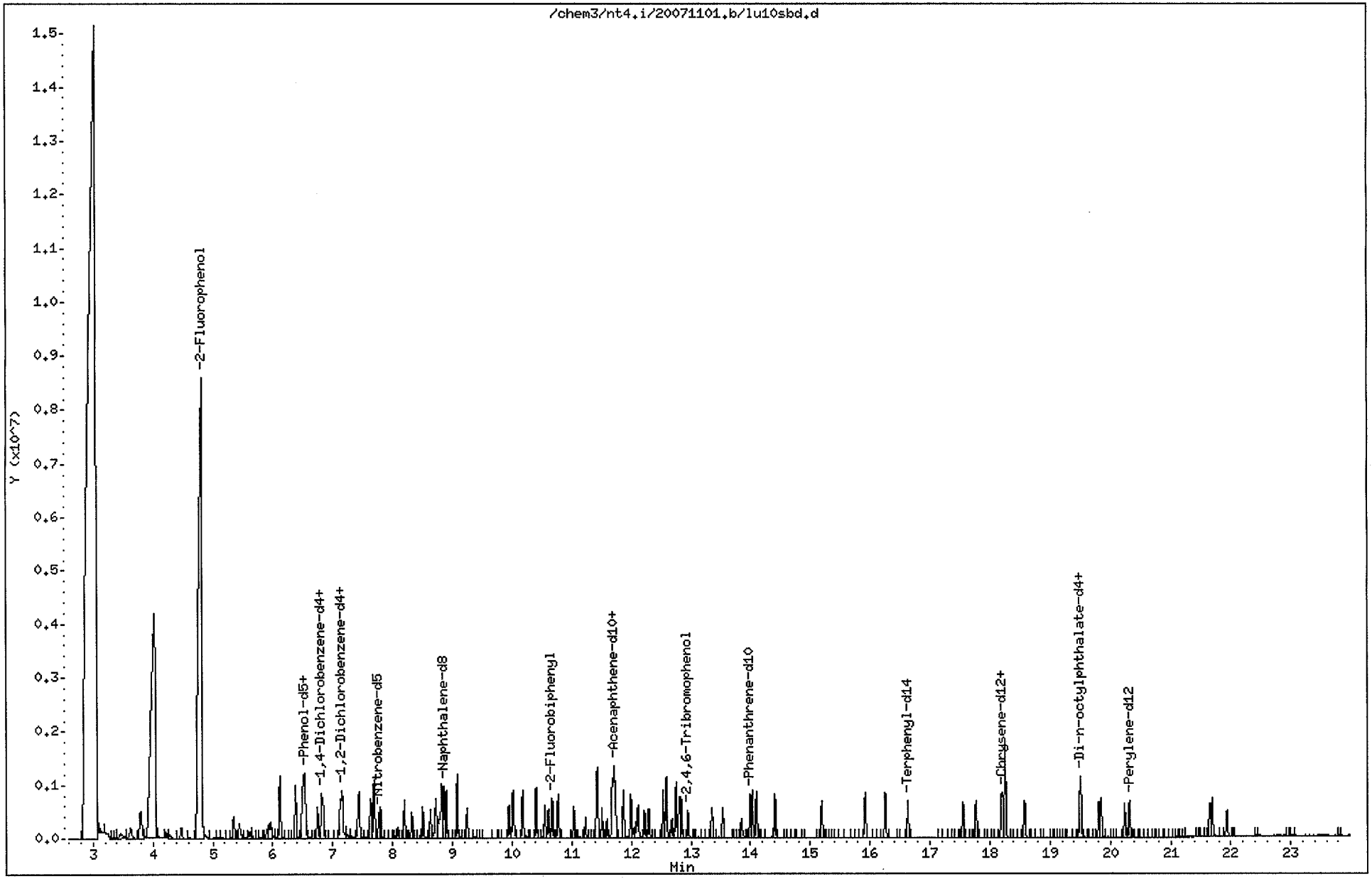
SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	373.8	49.85	11-84
$ 2 Phenol-d5	750.0	463.4	61.79	25-86
$ 5 2-Chlorophenol-d4	750.0	457.2	60.96	23-91
$ 10 1,2-Dichlorobenzen	500.0	266.9	53.38	24-90
$ 18 Nitrobenzene-d5	500.0	290.6	58.11	26-88
$ 36 2-Fluorobiphenyl	500.0	292.0	58.40	34-91
$ 55 2,4,6-Tribromophen	750.0	482.7	64.36	25-107

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 66 Terphenyl-d14	500.0	347.7	69.53	22-100

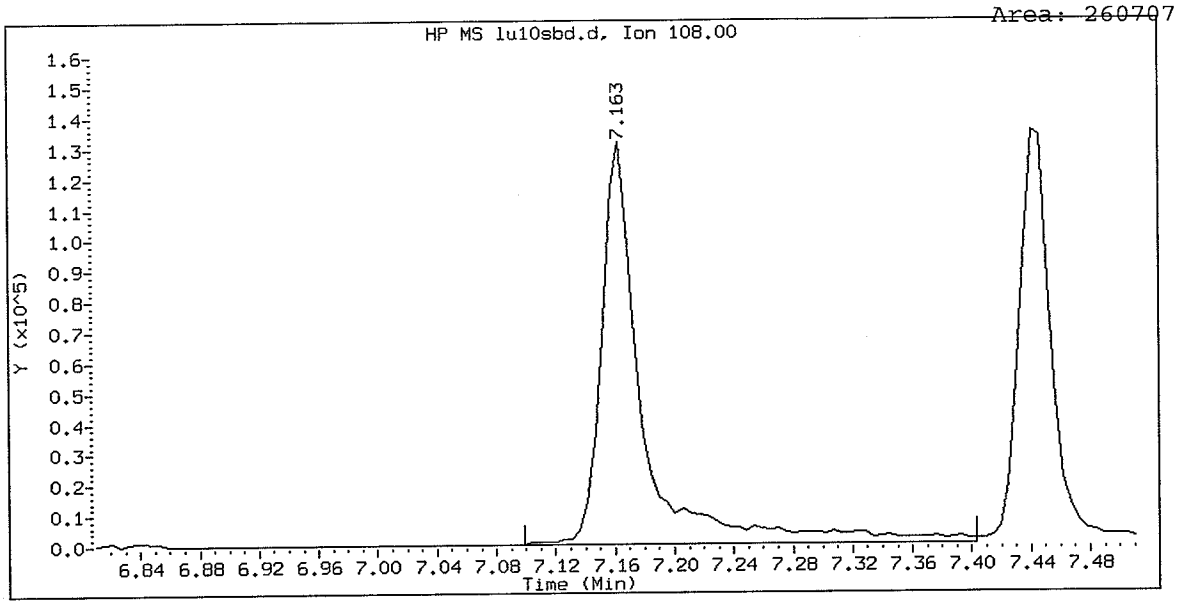
Data File: /chem3/nt4.i/20071101.b/lu10sbd.d
Date : 01-NOV-2007 16:08
Client ID: LU10LCSDS1
Sample Info: LU10LCSDS1
Volume Injected (uL): 1.0
Column phase: ZB-5

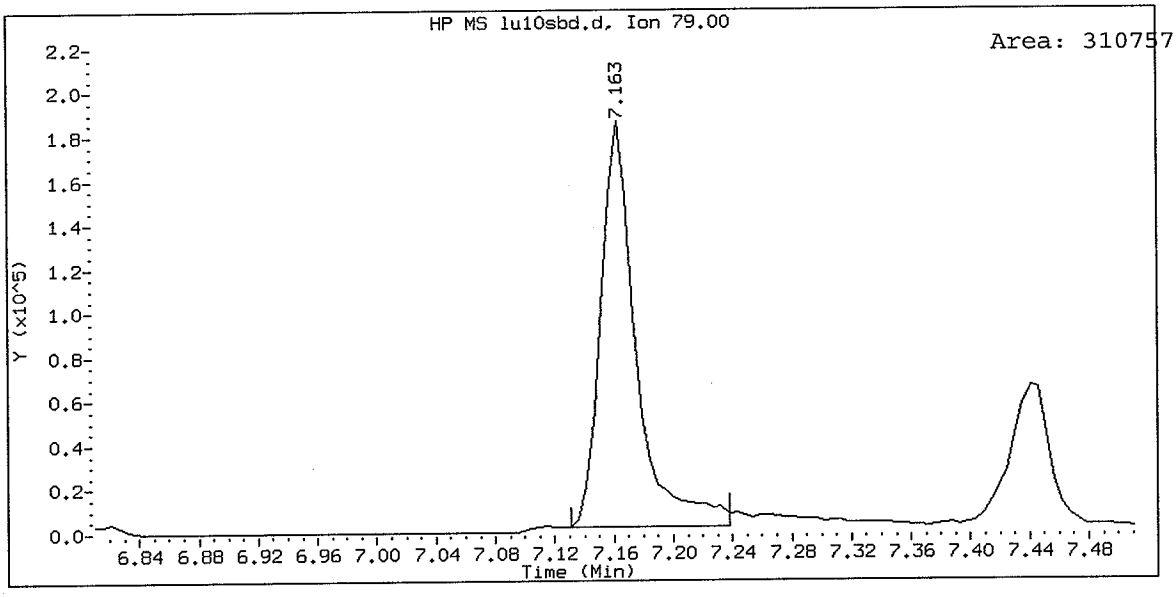
Instrument: nt4.i
Operator: VTS
Column diameter: 0.32

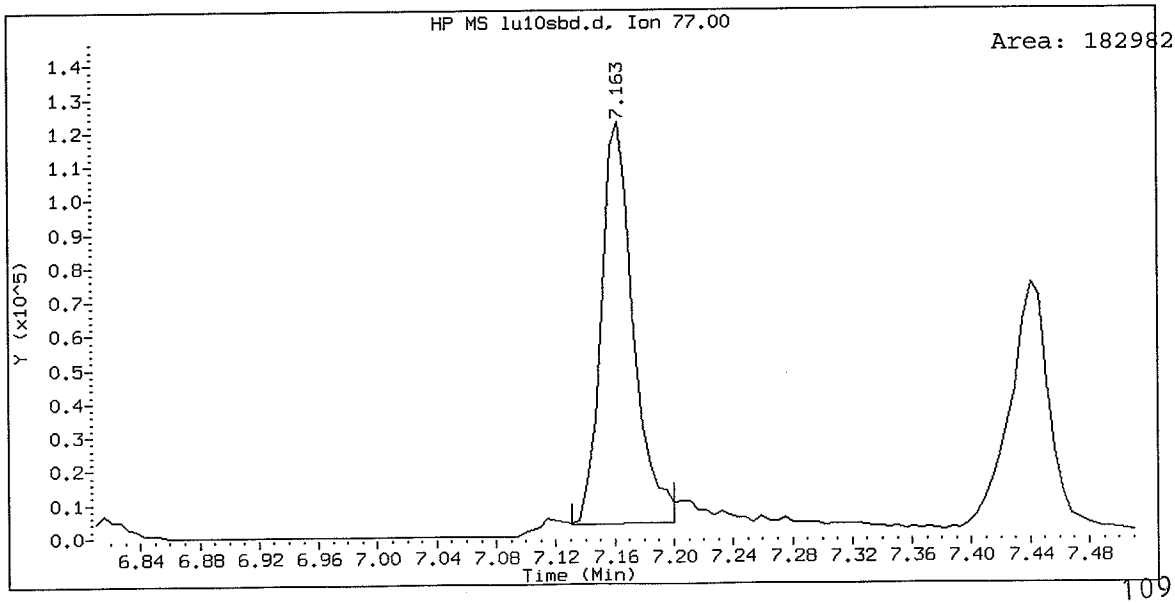
1090



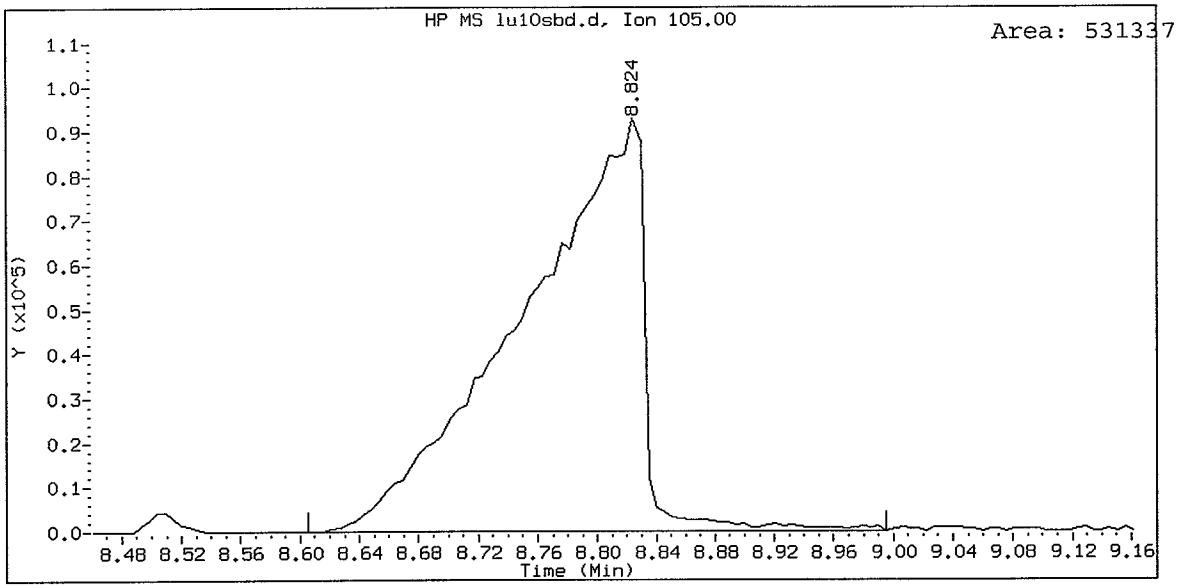
LU10LCSDS1, /chem3/nt4.i/20071101.b/lu10sbd.d
Benzyl alcohol Amount: 31.24

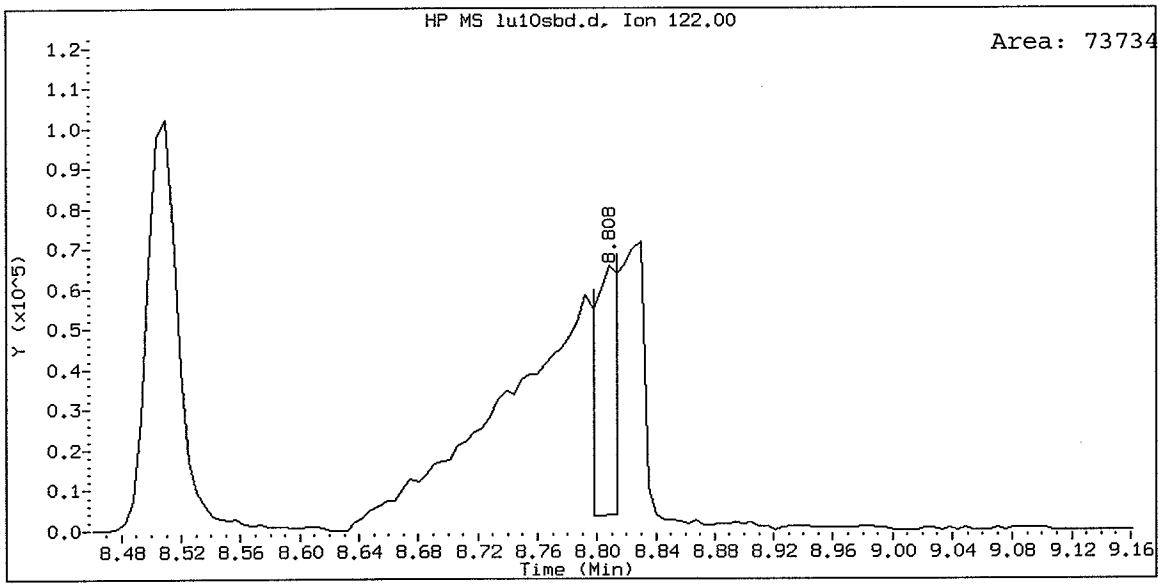


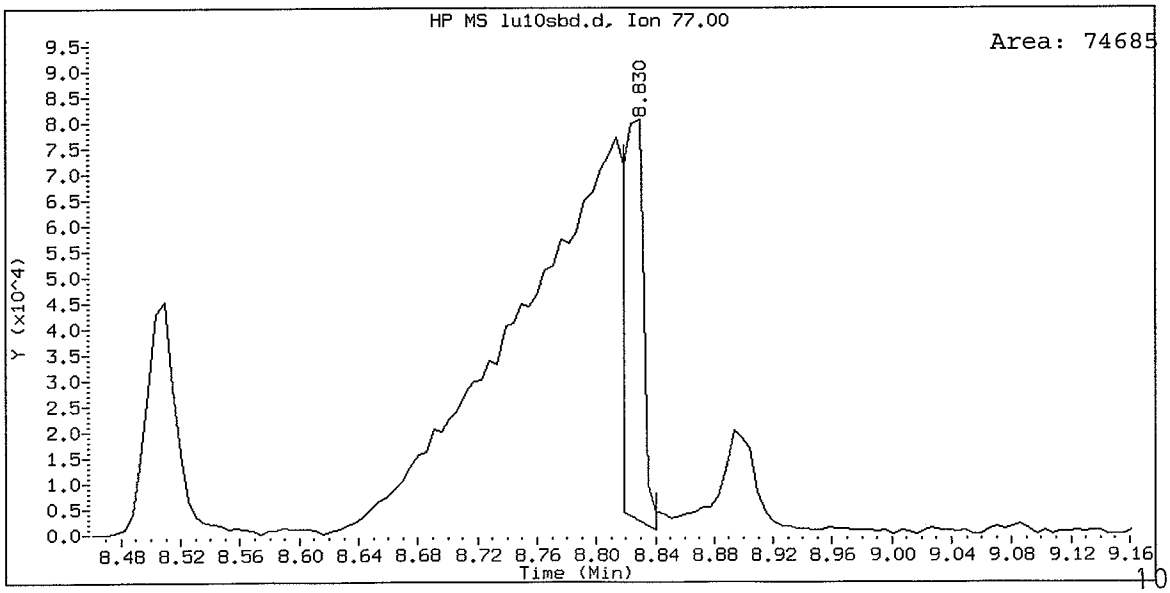




LU10LCSDS1, /chem3/nt4.i/20071101.b/lu10sbd.d
Benzoic acid Amount: 51.80







Semivolatile Organics
Extraction Bench Sheets/Run Logs

prepared
for

ANCHOR ENVIRONMENTAL

Project : KIMBERLY CLARK ANACORTES

ARI JOB NO. LR71

prepared
by

Analytical Resources, Inc.

Analytical Resources,Incorporated
Analytical Chemists and Consultants

GPC 1 Log

Date: 10-12-07 Initial Run Number: _____

Analyst: SP

Loop Number	ARI Lab ID	Aliquot Loaded
1	DCM Rinse	1:1 (1mL)
2	LR71MBS 10/10	1:2 (2mL)
3	A	
4	B	
5	C	
6	D	
7	E	
8	F	
9	H	
10	I	
11	J	
12	K	
13	L	
14	SBS 10/10	
15	EMS	
16	EMSD	
17		
18		
19		
20		
21		
22		
23		

SP 10/12/07

Comments / Program Name

Flow Rate: 7.0 mL/min
(Average of two measurements)

Method	BAN program	PCB Program
Dump	15	
Collect	28	
Wash	30	

Stop Time: 30.15
Analyst: SP

Lab Temp 69.6° (64 - 77°F)

Collection Line Witness: DP Before Run

10/15/07 After Run

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RECOVERY REPORT

Client Name: Client SDG: 20070831
Sample Matrix: SOLID Fraction: SV
Lab Smp Id: GPC1 VER
Level: LOW Operator: LJR/VTS
Data Type: MS DATA SampleType: LCS
SpikeList File: PSDDALCS.spk Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt6.i/20070831.b/SW846.m
Misc Info:

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
3 Phenol	500.0	484.9	96.98*	45-89
4 Bis(2-Chloroethyl	500.0	0.000	*	42-82
6 2-Chlorophenol	500.0	553.8	110.75*	46-80
7 1,3-Dichlorobenze	500.0	0.000	*	45-76
9 1,4-Dichlorobenzen	500.0	327.5	65.49	45-76
11 Benzyl alcohol	1000	0.000	*	36-79
12 1,2-Dichlorobenze	500.0	0.000	*	44-78
13 2-Methylphenol	500.0	0.000	*	47-82
14 2,2'-oxybis(1-Chl	500.0	0.000	*	36-96
15 4-Methylphenol	1000	0.000	*	47-86
16 N-Nitroso-di-n-pro	500.0	367.2	73.43	42-84
17 Hexachloroethane	500.0	0.000	*	40-77
19 Nitrobenzene	500.0	0.000	*	35-94
20 Isophorone	500.0	0.000	*	50-86
21 2-Nitrophenol	500.0	0.000	*	46-84
22 2,4-Dimethylphenol	500.0	0.000	*	30-76
23 Bis(2-Chloroethox	500.0	0.000	*	48-81
24 Benzoic acid	1500	0.000	*	39-103
25 2,4-Dichlorophenol	500.0	0.000	*	50-85
26 1,2,4-Trichloroben	500.0	341.2	68.24	45-81
28 Naphthalene	500.0	0.000	*	46-80
29 4-Chloroaniline	1200	0.000	*	15-79
30 Hexachlorobutadie	500.0	0.000	*	44-79
31 4-Chloro-3-methylp	500.0	565.7	113.14*	50-89
32 2-Methylnaphthale	500.0	0.000	*	49-81
33 Hexachlorocyclope	1500	0.000	*	17-98
34 2,4,6-Trichloroph	500.0	0.000	*	48-89
35 2,4,5-Trichloroph	500.0	0.000	*	47-91
37 2-Chloronaphthale	500.0	0.000	*	50-83
38 2-Nitroaniline	500.0	0.000	*	45-96
39 Dimethylphthalate	500.0	0.000	*	53-87
40 Acenaphthylene	500.0	0.000	*	51-84
41 2,6-Dinitrotoluene	500.0	0.000	*	49-95

Analytical Resources, Incorporated
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SVOA

Organic Extractions Benchsheet
8270 BAN / Skydrol / Phenol – Soil/ Sediment/ Tissue

In-House ☐ | PSDDA ☒ | Macrotip ☒ | Tissuemizer ☐ | KD ☒ | TurboVap ☒

QA LIMs #
EXT LIMs #
Bid # SV1010C-01
ARI Job No(s) LR71

Client Name / Project ID: Anchor Enviromental, LLC

Extraction Requirements	Verify Client ID	Volume Extracted (g)	GPC (Y/N) (Req)	KD	Final Effective Volume	Volume to Lab	Comments
MB LR71 MBS	10-10-07	50.00	1:2		1mL	0.5mL	20mL DI H_2O
SB: SBS	↓	50.00					MB|SB
A	Verified	104.02					
B		101.02					
C		75.00					
d		71.00					
E		65.06					
EMS		65.06					
EMSd		65.04					
F		75.02					
H		79.02					
I		97.06					
J		65.00					
K		86.04					
L	↓	76.00	↓	↓	↓	↓	
Analyst/Date	CJZ 10-10-07 SAL 10-10-07		SP 10/12/07	2nd KD 10/15/07 AR 10/11/07	SP 10/12/07	SP 10/15/07	

Spike	Spike ID	Volume	Conc	Analyst	Witness
Surrogate	A,	250 µL	100/150 µg/mL	CJZ	SAL
LCS	7	250 µL	100 µg/mL	CJZ	
LCS(extra)	12	250 µL	200 µg/mL	CJZ	
	10	250 µL	100/200 µg/mL	CJZ	
MS/MSD		µL	µg/mL		
Extraction Time:					

Solvent / Reagent	ID
Na_2SO_4 ID:	9/26 #6
(DCM) CH_2Cl_2 ID:	I3949
1:1 DCM/ACE ID:	F855
Hexane:	
0.05% HCl/Acetone:	
Neutral Glasswool:	8/13 #3

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Analytical Chemists and Consultants

Organic Extractions Laboratory
Analyst Notes

ARI Job No.: LR71

Client ID: Anchor Environmental LLC

Parameter: BAN PSDDA

Client Project: Kimberly Clark - Anacortes

SOP Number(s): 3745

No Anomalies:

List problems, concerns, corrective actions and any other pertinent information
LR71 A-L - all have sulfur smell. poured out standing H_2O.
LR71I - woodchips and other organics
LR71J - two small live crabs. SAL 10-4-07
Excessive D.I. H_2O was used to de-activate blanks. Blanks required an extra amount of Sodium Sulfate to properly dry. SH 11/11/07

Analyst Initials:		Date:	