NJBP XI3/C/5

Recovery of Chlorodibenzofurans

PPM CDF Added to A1254 Lot KI02-602

Sample	Cl4	Cl5	Cl6	Cl6	Cl7	Cl8	Cl8	Cl8
A	1.11	1.97	2.2	1.43	3.1	5.24	1.13	3.72
B	0.111	0.197	0.22	0.143	0.31	0.524	0.113	0.372
C	0.056	0.099	0.11	0.072	0.16	0.26	0.057	0.19

CDF in Transformer Oil A1254 Lot KI02-602 (5 samples below)

	Cl4	Cl5	Cl6	Cl6	Cl7	Cl8	Cl8	Cl8
ave PPM	1		0.115	0.972	7.93	8.32	4.48	1.65
RSD			31%	19%	20%	35%	40%	10%

ND = none detected (as equal)
F = PPM Found
%R = % Recovery

Sample	Cl4 F	Cl4 %R	Cl5 F	Cl5 %R	Cl6 F	Cl6 %R	Cl6 F	Cl6 %R	Cl7 F	Cl7 %R	Cl8 F	Cl8 %R	Cl8 F	Cl8 %R	Cl8 F	Cl8 %R
A6	0.635	54.9	1.11	54.9	1.23	50.5	1.06	34.1	5.44	19.7	7.93	—	2.23	54.0	2.06	50.9
A7	0.488	38.0	1.07	52.9	1.38	65.5	1.76	81.7	4.20	135	11.6	62.6	2.83	107	3.62	92.9
A8	sample not analyzed															
A9																
A10																
B6	0.039	18.9	0.046	19.3	0.138	5.91	0.593		6.66		6.06		1.90		0.281	31.2
B7	0.024	5.9	0.079	23.9	0.057	12.7	0.638		8.41		7.61		1.77		0.390	60.5
B8	SAMPLE LOST															
B9	sample not analyzed															
B10																
C6	sample not analyzed															
C7																
C8																
C9																
C10																
D6	ND (0.01)		ND (0.02)		0.070		0.099		6.62		6.38		1.30		ND (0.05)	
D7	ND (0.01)		ND (0.04)		0.043		0.614		7.86		6.99		1.60		ND (0.11)	
D8	sample not analyzed															
D9																
D10																
A11	0.369	31.6	1.29	64.1	1.33	55.1	1.61	71.2	7.85	0.6	15.2	131.3	1.79	28.3	3.19	81.3
A12	0.369	31.6	1.35	67.1	1.96	61.0	1.13	86.6	9.96	55.6	15.1	142.7	2.59	85.8	3.01	76.5
A13	—		1.17	58.0	—		1.90	56.5	—		11.4	58.8	—		2.20	58.7
B11	0.097	71.2	0.176	75.1	0.302	83.6	0.896		6.88		12.8		ND (1.91)		0.697	193
B12	0.43	85.6	0.195	77.7	0.371	115	0.707		5.86		8.91		2.05		0.979	81.1
B13	0.090	64.9	0.172	96.7	0.367	113	0.572		6.16		7.96		ND (1.57)		0.921	63.8
C11	0.065	83.9	0.101	73.7	0.233	105	0.641		7.99		11.4		ND (1.15)		0.388	116
C12	0.088	46.0	0.075	50.5	0.209	92.7	0.761		7.19		12.6		1.52		0.999	176
C13	—		0.059	38.6	—		0.627		—		7.02		—		0.216	26.9
C14	—		0.117	89.9	—		0.622		—		9.18		—		0.229	33.7
C15	0.023	9.9	0.074	46.5	0.146	255	0.599		5.55		6.76		ND (1.27)		0.157	—
D11	0.030		0.039		0.165		0.668		10.2		13.2		1.96		0.337	
D12	ND (0.01)		ND (0.02)		0.102		0.696		9.67		9.83		1.31		ND (0.08)	
D13	ND		0.025		0.191		0.535		6.39		6.24		ND (1.01)		0.192	

MONS 220191

NBP 2431015

Standard	Anthracene 178	Cl_1 262	Cl_2 276	Cl_3 338	Cl_4 404
54 ppm Last 3/3	63482	–	–	110638	6120
"	10271	–	–	10748	935
1:10	63113	91327	88013	27852	1836
"	34230	50312	48100	10768	575
1:100	63832	10894	10552	3781	–
"	38371	5830	5918	2091	–
1:200	48655	4459	4580	1763	–
"	43856	2641	1995	842	–
Samples					
A11	11807	5873	9909	11323	340
A12	16698	8309	15439	19493	642
A13	1376	injection volume too small →			
B11	6806	~~1300~~ 890	1300	5723	– (200)
B12	11204	1715	2627	12123	341
B13	9177	1114	2132	6908	– (200)
C11	11687	1027	1719	11388	– (200)
C12	13942	821	1842	12241	274
C13	454	injection volume too small →			
C14	–	" " " " →			
C15	10628	327	979	7212	– (200)
D11	12190	491	1274	15188	354
D12	11947	– (250)	773	12363	232
D13	6972	~~622~~ (250)	~~5439~~ 622	5439	– (200)
SB1	10728	–	–	–	
SB2	17205	–	–	–	

MONS 220192

NBP243015

TEST

#	CMPD	ION	LIMIT(PPB)	RF	RSD
1	CL1DBF	202	10	1.48166	15.0097
2	CL3DBF	270	10	3.16239	27.6772
3	CL5DBF	338	10	16.37	43.6389
4	CL7DBF	406	10	134.681	31.1075

ANY CHANGES (Y/N)? N

not yet determined

MONS 220193

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ENVIRONMENTAL ANALYSIS REPORT

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ANALYST : P R MICHAEL
NBP : 2431015
SAMPLE TYPE : AROCLOR

COMPOUND : CL1DRF ION : 202

SAMPLE NAME	LOC #	CONC(PPB)	COMMENTS
A11	NA	369	
A12	NA	369	
B11	NA	96.9	
B12	NA	113	
B13	NA	89.9	
C11	NA	65.1	
C12	NA	43.6	
C15	NA	22.8	
D11	NA	29.8	
D12	NA	ND,< 10	
D13	NA	ND,< 10	
SB1	NA	ND,< 10	
SB2	NA	ND,< 10	

ND = NONE DETECTED
NM = NOT MEASURED IN THIS SAMPLE

REVIEWED BY : DATE :

MONS 220194

****

ENVIRONMENTAL ANALYSIS REPORT

****

ANALYST : P R MICHAEL
NBP : 2431015
SAMPLE TYPE : AROCLOR

COMPOUND : CL3DBF ION : 270

SAMPLE NAME	LOG #	CONC(PPB)	COMMENTS
A11	NA	1330	
A12	NA	1460	
B11	NA	302	
B12	NA	371	
B13	NA	367	
C11	NA	233	
C12	NA	209	
C15	NA	146	
D11	NA	165	
D12	NA	102	
D13	NA	141	
SB1	NA	ND,< 10	
SB2	NA	ND,< 10	

ND = NONE DETECTED
NM = NOT MEASURED IN THIS SAMPLE

REVIEWED BY : DATE :

MONS 220195

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ENVIRONMENTAL ANALYSIS REPORT

****

ANALYST : P R MICHAEL
NBP : 2431015
SAMPLE TYPE : AROCLOR

COMPOUND : CL5DBF ION : 338

SAMPLE NAME	LOC #	CONC(PPB)	COMMENTS
A11	NA	7850	
A12	NA	9560	
B11	NA	6880	
B12	NA	8860	
B13	NA	6160	
C11	NA	7980	
C12	NA	7190	
C15	NA	5550	
D11	NA	10200	
D12	NA	8470	
D13	NA	6390	
SB1	NA	ND,< 10	
SB2	NA	ND,< 10	

ND = NONE DETECTED
NM = NOT MEASURED IN THIS SAMPLE

REVIEWED BY : DATE :

MONS Z20196

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ENVIRONMENTAL ANALYSIS REPORT

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ANALYST : P R MICHAEL
NBP : 2431015
SAMPLE TYPE : AROCLOR

COMPOUND : CL7DBF ION : 486

SAMPLE NAME	LOG #	CONC(PPB)	COMMENTS
A11	NA	1940	
A12	NA	2590	
B11	NA	ND,< 10	
B12	NA	2050	
B13	NA	ND,< 10	
C11	NA	ND,< 10	
C12	NA	1320	
C15	NA	ND,< 10	
D11	NA	1960	
D12	NA	1310	
D13	NA	ND,< 10	
SB1	NA	ND,< 10	
SB2	NA	ND,< 10	

ND = NONE DETECTED
NM = NOT MEASURED IN THIS SAMPLE

REVIEWED BY : DATE :

MONS 220107