11/3/83

CONCENTRATION (PPM) OF CHLORODIBENZOFURANS IN AROCLOR 1254

IDENTIFICATION	CL1	CL2	CL3	CL4	CL5	CL6	CL7	CL8	SUM
AK38 (12/82) ENV SCI	ND<0.05	ND<0.1	0.17	0.77	2.0	2.0	0.54	ND<0.15	5.5
KI02-602 (12/82) ENV SCI	"	"	ND<0.1	0.41	6.6	6.3	1.3	"	15
KI02-602 (12/82) ENV SCI	"	"	0.11	0.61	7.5	7.0	1.6	"	17
KI02-602 (12/82) JHC 9/13/82	"	"	0.11	0.25	6.0	4.3	1.6	"	12
KI03-606 (12/82) JHC 9/13/82	"	"	ND<0.1	0.49	6.6	4.5	1.2	"	13
KI02-602 (3/77) RGK	-	ND<1	ND<1	ND<1	3.4	5.6	1.1	-	10
KI02-603 (3/77) RGK	-	"	"	"	3.8	6.0	1.8	-	12
AK38 (~1976) JPM/DH	-	-	-	0.9	2.6	2.5	0.3	-	6.3

MONS 214384

PPM CHLORODIBENZO FURANS IN AROCLOR 1254

Sample Identt.	PPM CHLORODIBENZO FURANS FOUND				
	Cl_4	Cl_5	Cl_6	Cl_7	TOTAL
AK-38 (average of 4 repetitions)	0.9	2.6	2.5	0.3	6.3
KD-04-611 (4/74)	1.4	15.6	14.9	1.5	33.4
KD-08-623 (8/74)	0.8	9.1	6.9	0.8	17.6
KE-02-605 (2/75)	0.9	10.7	6.4	0.8	18.8
KE-04-615 (4/75)	<0.3	2.4	2.4	0.1	5.0
KE-05-620 (5/75)	0.6	5.8	6.9	0.9	14.1
KE-08-624 (8/75)	0.3	4.2	4.9	0.5	9.9
KE-08-627 (8/75)	0.6	5.6	4.5	0.7	11.4
KE-09-628 (9/75)	<0.3	4.3	3.9	0.3	8.5
KE-10-630 (10/75)	1.1	13.5	7.9	1.3	23.8
" (separate sample)	0.7	11.0	9.8	1.0	22.5
KE-11-622 (11/75)	0.9	12.6	10.9	1.5	25.9
KE-11-632 (11/75)	1.2	9.3	7.8	1.6	19.9
KE-11-633 (11/75)	0.8	11.6	9.4	1.4	23.2
" (separate sample)	0.9	12.0	16.0	1.2	29.0
KE-12-635 (12/75)	0.6	7.2	14.1	3.1	25.0
KH-01-602 (1/76)	1.3	19.6	17.1	2.7	40.7
Anniston					
SN 528 435	0.5	0.7	1.3	—	2.5
SN 528 754	0.5	0.6	1.4	—	2.5

MONS 214385

1/13/83

CONCENTRATION (PPM) OF CHLORODIBENZOFURANS IN AROCLOR 1254

IDENTIFICATION	CL1	CL2	CL3	CL4	CL5	CL6	CL7	CL8	SUM
AK38 (12/82) ENV.SCI	ND<0 05	ND<0 1	0 17	0 77	2 0	2 0	0 56	ND<0 15	5 5
KI02-602 (12/82) ENV.SCI.	"	"	ND<0 1	0 41	6 6	6 3	1 3	"	15
KI02-602 (12/82) ENV.SCI.	"	"	0.11	0 61	7 5	7 0	1 6	"	17
KI02-602 (12/82) JHC 9/13/82	"	"	0 11	0 25	6.0	4.3	1 6	"	12
KI03-606 (12/82) JHC 9/13/82	"	"	ND<0 1	0 49	6.6	4 5	1 2	"	13
KI02-602 (3/77) RGK	-	ND<1	ND<1	ND<1	3 4	5 6	1 1	-	10
KI02-603 (3/77) RGK	-	"	"	"	3 8	6 0	1 8	-	12
AK38 (~1976) JPM/OH	-	-	-	0 9	2 6	2 5	0 3	-	6 3

MONS 214386

PPM CHLORODIBENZO FURANS IN AROCLOR 1254

Sample Identi.	PPM CHLORODIBENZO FURANS FOUND				
	Cl_4	Cl_5	Cl_6	Cl_7	TOTAL
AK-38 (average of 4 replicates)	0.9	2.6	2.5	0.3	6.3
KD-04-611 (4/74)	1.4	15.6	14.9	1.5	33.4
KD-08-623 (8/74)	0.8	9.1	6.9	0.8	17.6
KE-02-605 (2/75)	0.9	10.7	6.4	0.8	18.8
KE-04-615 (4/75)	<0.3	2.4	2.4	0.1	5.0
KE-05-620 (5/75)	0.6	5.8	6.9	0.9	14.1
KE-08-624 (8/75)	0.3	4.2	4.9	0.5	9.9
KE-08-627 (8/75)	0.6	5.6	4.5	0.7	11.4
KE-09-628 (9/75)	<0.3	4.3	3.9	0.3	8.5
KE-10-630 (10/75)	1.1	13.5	7.9	1.3	23.8
" (separate sample)	0.7	11.0	9.8	1.0	22.5
KE-11-622 (11/75)	0.9	12.6	10.9	1.5	25.9
KE-11-632 (11/75)	1.2	9.3	7.8	1.6	19.9
KE-11-633 (11/75)	0.8	11.6	9.4	1.4	23.2
" (separate sample)	0.9	12.0	16.0	1.2	29.0
KE-12-635 (12/75)	0.6	7.2	14.1	3.1	25.0
KH-01-602 (1/76)	1.3	19.6	17.1	2.7	40.7
Anniston					
SN528435	0.5	0.7	1.3	—	2.5
SN528754	0.5	0.6	1.4	—	2.5

MONS 214387

Comparison of clean-up procedures for CDD's & CDF's

for Penta

JPM, OH, RGK, PRM

1. macro column to remove phenols
2. 0.3 ml benzene (equiv. to 0.3g penta) added to 1.0g basic alumina in micro column
3. elute w/ 10 ml 2% CH_2Cl_2 in hexane to remove PCB's & CDPE's
4. elute w/ 10 ml 50% CH_2Cl_2 in hexane to get CDF's & CDD's
5. concentrate to desired volume after adding 0.5 ml benzene or MCB

for MCB

PRM

1. 0.1 ml MCB on 1.0g basic alumina in micro column
2. elute w/ 5 ml 2% CH_2Cl_2 in hexane & discard
3. elute w/ 5 ml 50% CH_2Cl_2 in hexane to get CDF's

for transformer oil (...

Dayton

~~[illegible]~~

1. 0.5g on 40g basic alumina in micro column
2. elute with 15 ml 2% CH in hexane & discard
3. elute with 15 ml 50% CH_2 in hexane
4. concentrate to 1-2 ml & transfer to 2nd 40g basic alumina column
5. elute with 15 mls 10% CH in hexane
6. elute with 15 mls 50% C in hexane
7. add 0.15 ml tetradecan and concentrate

for PCB's

JPM

1. add 0.2 ml of 50% PCB's in hexane to 10g basic alumina column
2. elute with 150 ml 2% CH_2Cl_2 in hexane & discard
3. elute with 40 ml 50% CH_2Cl_2 in hexane
4. concentrate & analyze

MONS 214388

mixed CDF & CDD

3 levels + 1 blank = 20 ~~samples~~ samples

2 Aroclors (1016 & 1260) → 40 samples

40 samples for CDF's & CDD's → ~~320~~ 160 GC runs

15 GC runs/day

~2 days GC

10 days GC

+ 1-2 days mix

3 weeks minimum

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shortened version

CDF's in one Aroclor = 20 samples (3 levels + blank)

3 days (double column) for sample prep

2 days GC/MS