

NILU : OR 35/2006
REFERANSE : O-90006/O-93062
DATO : MAI 2006
ISBN : 82-425-1758-4

Måledata fra langtransportert forurenset luft og nedbør

Datarapport fra programmene CAMP '05 og AMAP '05 (sporstoffer og organiske komponenter)

Stein Manø og Torunn Berg

**Vedlegg til Statlig program for
forurensningsovervåking. Rapport 955/2006.**



Måledata fra langtransportert forurenset luft og nedbør Datarapport fra programmene CAMP '05 og AMAP '05 (sporstoffer og organiske komponenter)

Måledataene i denne rapporten er innsamlet i forbindelse med Statlig program for forurensningsovervåking ved Statens forurensningstilsyn. Målingene er utført på prøver som er innsamlet under programmene Comprehensive Atmospheric Monitoring Programme (CAMP) og Arctic Monitoring and Assessment Programme (AMAP) i 2005. CAMP er en av aktivitetene innen Oslo- og Paris-kommisjonens (OSPAR) studier for transport av landbasert forurensning til Nordsjøen. Rapporten inneholder ukentlige måledata for tungmetaller og de organiske stoffene α - og γ -heksaklorsykløheksan (HCH), heksaklorbenzen (HCB) og 7 PCB i luft og nedbør samlet på Birkenes.

Videre inneholder rapporten ukentlige måledata fra luftprøver samlet på Zeppelin-fjellet ved Ny-Ålesund som et ledd i AMAP. Resultatene omfatter 10 sporstoffer, to HCH-isomerer, HCB, seks isomerer tilhørende DDT-gruppen, fire klordanisomerer, 32 enkeltkongenerer fra gruppen polyklorerte bifenyler (PCB) og sum av alle PCB med fra tre til ti kloratomer i molekylet, samt 38 forbindelser av typen polyaromatiske hydrokarboner (PAH).

En sammenfatning av resultatene finnes i NILU OR 36/2006 (Statens forurensningstilsyn: Overvåking av langtransportert forurenset luft og nedbør. Atmosfærisk tilførsel, 2005. Statlig program for forurensningsovervåking, rapport nr. 955/2006).

Analyseresultater

	Side
Vedlegg 1 Organiske forbindelser i luft på Birkenes (O-3480)	5
Vedlegg 2 Organiske forbindelser i nedbør på Birkenes (O-3479).....	61
Vedlegg 3 Organiske forbindelser i luft i Ny-Ålesund (O-3518).....	121
Vedlegg 4 Organiske forbindelser i luft i Ny-Ålesund (O-3575).....	229
Vedlegg 5 Tungmetaller i luft på Birkenes (U-1272-06)	285
Vedlegg 6 Tungmetaller i nedbør på Birkenes (U-1261-06).....	291
Vedlegg 7 Tungmetaller i luft i Ny-Ålesund (U-1274-06).....	301
Vedlegg 8 Kvikksølv i luft i Ny-Ålesund (U-1296-06).....	307
Vedlegg 9 Kvikksølv i nedbør på Birkenes (U-1297-06).....	319
Vedlegg 10 Kvikksølv i luft på Birkenes (U-1310-06).....	325
Vedlegg 11 Elementært kvikksølv i luft på Birkenes (U-1323-06).....	331

Vedlegg 1

Organiske forbindelser i luft på Birkenes (O-3480)

Målerapport nr. O-3480

Oppdragsgiver: Statens forurensningstilsyn (SFT)
Postboks 8100 DEP
0032 OSLO

Prosjekt nr.: O-90006

Prøvetaking:

Sted: Birkenes
Ansvar: NILU

Kommentar:

Prøveinformasjon:

NILU prøvenr.	Kundens prøvemerking			Prøvetype	Prøven mottatt	Prøven analysert
05/86	6-7.1.05	0635-0648	160-150	Luft	18.01.05	07.06.05 – 27.06.05
05/130	13-14.1.05	0635-0647	160-160	Luft	26.01.05	07.06.05 – 27.06.05
05/175	20-21.1.05	0635-0645	160-156	Luft	03.02.05	07.06.05 – 27.06.05
05/190	27-28.1.05	0635-0645	160-149	Luft	07.02.05	07.06.05 – 27.06.05
05/277	3-4.2.05	0632-0640	160-149	Luft	14.02.05	07.06.05 – 27.06.05
05/306	10-11.2.05	0635-0645	160-156	Luft	21.02.05	09.06.05 – 27.06.05
05/371	17-18.2.05	0632-0645	160-150	Luft	02.03.05	09.06.05 – 27.06.05
05/428	24-25.2.05	0631-0640	160-155	Luft	10.03.05	09.06.05 – 27.06.05
05/439	3-4.3.05	0632-0637	160-146	Luft	11.03.05	09.06.05 – 27.06.05
05/473	10-11.3.05	0635-0645	160-148	Luft	21.03.05	09.06.05 – 27.06.05
05/506	17-18.3.05	0634-0645	160-160	Luft	31.03.05	09.06.05 – 27.06.05
05/518	24-25.3.05	0633-0644	160-154	Luft	06.04.05	13.06.05 – 27.06.05
05/530	31.3-1.4.05	0632-0644	160-155	Luft	08.04.05	13.06.05 – 27.06.05
05/569	7-8.4.05	0637-0645	160-155	Luft	15.04.05	13.05.05 – 27.06.05
05/584	14-15.4.05	0635-0655	160-152	Luft	22.04.05	13.06.05 – 27.06.05
05/598	21-22.4.05	0635-0644	160-152	Luft	02.05.05	13.06.05 – 27.06.05
05/606	28-29.4.05	0634-0642	160-150	Luft	10.05.05	13.06.05 – 27.06.05
05/656	5-6.5.05	0638-0643	160-153	Luft	18.05.05	15.06.05 – 27.06.05
05/694	12-13.5.05	0633-0643	160-154	Luft	20.05.05	15.06.05 – 27.06.05
05/769	19-20.5.05	0537-0541	160-151	Luft	01.06.05	15.06.05 – 27.06.05
05/798	26-27.5.05	0545-0545	160-152	Luft	08.06.05	15.06.05 – 27.06.05
05/802	2-3.6.05	0537-0541	160-154	Luft	14.06.05	20.09.05 – 21.11.05
05/811	9-10.6.05	0534-0545	160-153	Luft	20.06.05	20.09.05 – 21.11.05
05/831	16-17.6.05	0532-0547	160-153	Luft	24.06.05	20.09.05 – 21.11.05
05/853	23-24.6.05	0534-0545	160-153	Luft	04.07.05	20.09.05 – 21.11.05
05/866	30.6-1.7.05	0533-0540	160-154	Luft	11.07.05	20.09.05 – 21.11.05
05/889	7-8.7.05	0834-0547	160-155	Luft	25.07.05	20.09.05 – 21.11.05
05/890	14-15.7.05	0535-0546	160-152	Luft	25.07.05	27.09.05 – 21.11.05
05/917	21-22.7.05	0530-0546	160-155	Luft	02.08.05	27.09.05 – 21.11.05
05/921	28-29.7.05	0532-0547	160-155	Luft	08.08.05	27.09.05 – 22.11.05
05/996	4-5.8.05	0833-0540	160-154	Luft	15.08.05	27.09.05 – 21.11.05
05/1028	11-12.8.05	0530-0546	160-154	Luft	24.08.05	27.09.05 – 21.11.05
05/1047	18-19.8.05	0831-0541	160-150	Luft	31.08.05	27.09.05 – 21.11.05
05/1059	25-26.8.05	0530-0543	160-156	Luft	06.09.05	19.01.06 – 09.03.06
05/1121	1-2.9.05	0527-0547	160-152	Luft	14.09.05	19.01.06 – 09.03.06
05/1137	8-9.9.05	0535-0549	160-160	Luft	22.09.06	19.01.06 – 09.03.06
05/1161	15-16.9.05	0530-0547	160-159	Luft	05.09.06	19.01.06 – 09.03.06
05/1162	22-23.9.05	0536-0549	160-150	Luft	05.09.05	23.01.06 – 09.03.06
05/1174	29-30.9.05	0533-0546	160-158	Luft	07.10.05	23.01.06 – 09.03.06

05/1242	6-7.10.05	0532-0550	160-152	Luft	18.10.05	23.01.06 – 09.03.06
05/1263	13-14.10.05	0533-0548	160-151	Luft	27.10.05	23.01.06 – 09.03.06
05/1335	20-21.10.05	0533-0547	160-154	Luft	01.11.05	23.01.06 – 09.03.06
05/1383	27-28.10.05	0535-0548	160-152	Luft	09.11.05	25.01.06 – 09.03.06
05/1448	3-4.11.05	0630-0646	160-154	Luft	15.11.05	25.01.06 – 09.03.06
05/1449	10-11.11.05	0635-0644	160-175	Luft	17.11.05	25.01.06 – 09.03.06
05/1543	17-18.11.05	0640-0652	160-156	Luft	28.11.05	25.01.06 – 09.03.06
05/1622	24-25.11.05	0634-0647	160-152	Luft	06.12.05	25.01.06 – 09.03.06
05/1623	1-2.12.05	0632-0637	160-155	Luft	07.12.05	25.01.06 – 09.03.06
05/1736	8-9.12.05	0633-0648	160-158	Luft	21.12.05	30.01.06 – 09.03.06
06/16	15-16.12.05	0640-0642	160-155	Luft	03.01.06	30.01.06 – 09.03.06
06/17	22-23.12.05	0634-0644	160-157	Luft	03.01.06	30.01.06 – 09.03.06
06/63	29-30.12.05	0634-0645	160-153	Luft	09.01.06	30.01.06 – 09.03.06

Analysér:

Utført av: Norsk institutt for luftforskning
Postboks 100
N-2027 KJELLER

Målemetode: NILU-O-2 ("Bestemmelse av tungflyktige persistente organiske forbindelser – pesticider og PCB'er")

Kommentarer:

Godkjenning: Kjeller, 17. mars 2006



Ole-Anders Braathen
Avd.direktør, Miljøkjemi

Vedlegg: HCH/PCB analyser: 52 sider
Målerapporten og vedleggene omfatter totalt 54 sider

Måleresultatene gjelder bare de prøvene som er analysert. Denne rapporten skal ikke gjengis i utdrag, uten skriftlig godkjenning fra laboratoriet.

Results of HCH and 7 PCB

9



Kjeller, 03.05.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/86
 Customer: Camp 05
 Customers sample ID: 6-7.1.05 0635-0648
 : 160-150
 Sample type: Air
 Sample amount: 565 m3
 Concentration units: pg/m3
 Data files: VB085B

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		57,5	47
α -HCH		7,74	58
γ -HCH		3,48 b	63
2,4,4'-TriCB	28	1,02 b	69
2,2',5,5'-TetCB	52	1,00 b	71
2,2',4,5,5'-PenCB	101	0,55 b	77
2,3',4,4',5-PenCB	118	0,18 b	84
2,2',3,4,4',5'-HexCB	138	0,22 b	84
2,2',4,4',5,5'-HexCB	153	0,36 b	81
2,2',3,4,4',5,5'-HepCB	180	0,08	96
Sum 7 PCB		3,39	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 05/130
 Customer: Camp 05
 Customers sample ID: 13-14.1.05 0635-0647
 : 160-160
 Sample type: Air
 Sample amount: 583 m3
 Concentration units: pg/m3
 Data files: VB085B

Kjeller, 03.05.2006

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		53,8	43
α -HCH		5,84	59
γ -HCH		1,88 b	65
2,4,4'-TriCB	28	0,75 b	68
2,2',5,5'-TetCB	52	0,79 b	72
2,2',4,5,5'-PenCB	101	0,37 b	83
2,3',4,4',5-PenCB	118	0,13 b	88
2,2',3,4,4',5'-HexCB	138	0,16 b	88
2,2',4,4',5,5'-HexCB	153	0,25 b	86
2,2',3,4,4',5,5'-HepCB	180	0,05	95
Sum 7 PCB		2,50	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

11



Kjeller, 03.05.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/175
 Customer: Camp 05
 Customers sample ID: 20-21.1.05 0635-0645
 : 160-156
 Sample type: Air
 Sample amount: 576 m3
 Concentration units: pg/m3
 Data files: VB085B

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		51,1	42
α-HCH		5,37	55
γ-HCH		2,31 b	60
2,4,4'-TriCB	28	0,82 b	65
2,2',5,5'-TetCB	52	0,82 b	66
2,2',4,5,5'-PenCB	101	0,44 b	72
2,3',4,4',5-PenCB	118	0,15 b	75
2,2',3,4,4',5'-HexCB	138	0,18 b	73
2,2',4,4',5,5'-HexCB	153	0,32 b	71
2,2',3,4,4',5,5'-HepCB	180	0,06	78
Sum 7 PCB		2,79	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 05/190
 Customer: Camp 05
 Customers sample ID: 27-28.1.05 0635-0645
 : 160-149
 Sample type: Air
 Sample amount: 563 m3
 Concentration units: pg/m3
 Data files: VB085B

Kjeller, 03.05.2006

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		48,1	46
α-HCH		5,15	56
γ-HCH		2,27 b	63
2,4,4'-TriCB	28	0,75 b	64
2,2',5,5'-TetCB	52	0,74 b	63
2,2',4,5,5'-PenCB	101	0,32 b	62
2,3',4,4',5-PenCB	118	0,09 b	64
2,2',3,4,4',5'-HexCB	138	0,11 b	62
2,2',4,4',5,5'-HexCB	153	0,17 b	58
2,2',3,4,4',5,5'-HepCB	180	0,05	66
Sum 7 PCB		2,23	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

13



Encl. to measuring report: O-3480
NILU-Sample number: 05/277
Customer: Camp 05
Customers sample ID: 3-4.2.05 0632-0640
: 160-149
Sample type: Air
Sample amount: 560 m3
Concentration units: pg/m3
Data files: VB085B

Kjeller, 03.05.2006

Compound Structure IUPAC-no.	Concentration pg/m3	Recovery %
HCB	54,7	49
α -HCH	6,15	63
γ -HCH	2,49 b	69
2,4,4'-TriCB 28	0,85 b	70
2,2',5,5'-TetCB 52	0,83 b	69
2,2',4,5,5'-PenCB 101	0,41 b	71
2,3',4,4',5-PenCB 118	0,13 b	72
2,2',3,4,4',5'-HexCB 138	0,16 b	69
2,2',4,4',5,5'-HexCB 153	0,26 b	66
2,2',3,4,4',5,5'-HepCB 180	0,06	71
Sum 7 PCB	2,70	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 05/306
 Customer: Camp 05
 Customers sample ID: 10-11.2.05 0635-0645
 : 160-156
 Sample type: Air
 Sample amount: 576 m3
 Concentration units: pg/m3
 Data files: VB085

Kjeller, 03.05.2006

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		58,4	45
α -HCH		6,43	63
γ -HCH		2,51 b	68
2,4,4'-TriCB	28	0,83 b	69
2,2',5,5'-TetCB	52	0,85 b	69
2,2',4,5,5'-PenCB	101	0,45 b	73
2,3',4,4',5-PenCB	118	0,18 b	77
2,2',3,4,4',5'-HexCB	138	0,23 b	75
2,2',4,4',5,5'-HexCB	153	0,38 b	73
2,2',3,4,4',5,5'-HepCB	180	0,07	79
Sum 7 PCB		2,99	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

15



Kjeller, 03.05.2006

Encl. to measuring report: O-3480
NILU-Sample number: 05/371
Customer: Camp 05
Customers sample ID: 17-18.2.05 0632-0645
: 160-150
Sample type: Air
Sample amount: 565 m3
Concentration units: pg/m3
Data files: VB085

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		67,2	41
α -HCH		7,58	63
γ -HCH		3,15 b	68
2,4,4'-TriCB	28	1,15 b	71
2,2',5,5'-TetCB	52	1,10 b	70
2,2',4,5,5'-PenCB	101	0,61 b	73
2,3',4,4',5-PenCB	118	0,23 b	76
2,2',3,4,4',5'-HexCB	138	0,29 b	74
2,2',4,4',5,5'-HexCB	153	0,51 b	69
2,2',3,4,4',5,5'-HepCB	180	0,10	77
Sum 7 PCB		3,98	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 05/428
 Customer: Camp 05
 Customers sample ID: 24-25.2.05 0631-0640
 : 160-155
 Sample type: Air
 Sample amount: 575 m3
 Concentration units: pg/m3
 Data files: VB085B

Kjeller, 03.05.2006

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		61,6	42
α -HCH		12,9	58
γ -HCH		4,31 b	67
2,4,4'-TriCB	28	1,73 b	65
2,2',5,5'-TetCB	52	2,37 b	62
2,2',4,5,5'-PenCB	101	5,36	62
2,3',4,4',5-PenCB	118	6,67	60
2,2',3,4,4',5'-HexCB	138	7,40	57
2,2',4,4',5,5'-HexCB	153	12,2	54
2,2',3,4,4',5,5'-HepCB	180	2,00	55
Sum 7 PCB		37,8	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

17



Kjeller, 03.05.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/439
 Customer: Camp 05
 Customers sample ID: 3-4.3.05 0632-0637
 : 160-146
 Sample type: Air
 Sample amount: 556 m3
 Concentration units: pg/m3
 Data files: VB085B

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		53,8	53
α -HCH		5,51	78
γ -HCH		1,92 b	83
2,4,4'-TriCB	28	0,87 b	70
2,2',5,5'-TetCB	52	1,07 b	59
2,2',4,5,5'-PenCB	101	3,13	54
2,3',4,4',5-PenCB	118	5,98	55
2,2',3,4,4',5'-HexCB	138	9,62	50
2,2',4,4',5,5'-HexCB	153	18,4	47
2,2',3,4,4',5,5'-HepCB	180	3,36	48
Sum 7 PCB		42,5	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 05/473
 Customer: Camp 05
 Customers sample ID: 10-11.3.05 0635-0645
 : 160-148
 Sample type: Air
 Sample amount: 561 m3
 Concentration units: pg/m3
 Data files: VB085B

Kjeller, 03.05.2006

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		65,0	44
α -HCH		7,05	67
γ -HCH		2,36 b	73
2,4,4'-TriCB	28	0,92 b	68
2,2',5,5'-TetCB	52	1,08 b	61
2,2',4,5,5'-PenCB	101	1,22 b	56
2,3',4,4',5'-PenCB	118	1,15 b	53
2,2',3,4,4',5'-HexCB	138	1,33 b	49
2,2',4,4',5,5'-HexCB	153	2,20 b	48
2,2',3,4,4',5,5'-HepCB	180	0,33	48
Sum 7 PCB		8,23	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

19



Encl. to measuring report: O-3480
 NILU-Sample number: 05/506
 Customer: Camp 05
 Customers sample ID: 17-18.3.05 0634-0645
 : 160-160
 Sample type: Air
 Sample amount: 583 m3
 Concentration units: pg/m3
 Data files: VB085B

Kjeller, 03.05.2006

Compound Structure IUPAC-no.	Concentration pg/m3	Recovery %
HCB	61,1	53
α-HCH	7,20	64
γ-HCH	3,99 b	71
2,4,4'-TriCB 28	1,27 b	67
2,2',5,5'-TetCB 52	1,29 b	65
2,2',4,5,5'-PenCB 101	0,98 b	62
2,3',4,4',5-PenCB 118	0,87 b	59
2,2',3,4,4',5'-HexCB 138	1,33 b	56
2,2',4,4',5,5'-HexCB 153	2,37 b	57
2,2',3,4,4',5,5'-HepCB 180	0,41	56
Sum 7 PCB	8,53	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Kjeller, 06.09.2005

Encl. to measuring report: O-3480
 NILU-Sample number: 05/518
 Customer: Camp 05
 Customers sample ID: 24-25.3.05 0633-0644
 : 160-154
 Sample type: Air
 Sample amount: 572 m3
 Concentration units: pg/m3
 Data files: VA970B

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
	HCB	60,3	53
	α -HCH	10,2	61
	γ -HCH	6,04 b	70
2,4,4'	TriCB 28	1,30 b	67
2,2',5,5'	TetCB 52	1,26 b	64
2,2',4,5,5'	PenCB 101	0,79 b	74
2,3',4,4',5'	PenCB 118	0,31 b	87
2,2',3,4,4',5'	HexCB 138	0,50 b	91
2,2',4,4',5,5'	HexCB 153	0,86 b	87
2,2',3,4,4',5,5'	HepCB 180	0,92 b	94
Sum 7 PCB		5,94	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

21



Kjeller, 03.05.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/530
 Customer: Camp 05
 Customers sample ID: 31.3-1.4.05 0632-0644
 : 160-155
 Sample type: Air
 Sample amount: 575 m3
 Concentration units: pg/m3
 Data files: VB085B

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		45,2	57
α -HCH		5,30	67
γ -HCH		3,45 b	72
2,4,4'-TriCB	28	0,80 b	67
2,2',5,5'-TetCB	52	0,84 b	65
2,2',4,5,5'-PenCB	101	0,47 b	67
2,3',4,4',5'-PenCB	118	0,14 b	68
2,2',3,4,4',5'-HexCB	138	0,24 b	70
2,2',4,4',5,5'-HexCB	153	0,36 b	68
2,2',3,4,4',5,5'-HepCB	180	0,13	76
Sum 7 PCB		2,97	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 05/569
 Customer: Camp 05
 Customers sample ID: 7-8.4.05 0637-0645
 : 160-155
 Sample type: Air
 Sample amount: 572 m3
 Concentration units: pg/m3
 Data files: DH873

Kjeller, 03.05.2006

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		61,5	86
α -HCH		6,68	g
γ -HCH		5,95	g
2,4,4'-TriCB	28	1,19 b	69
2,2',5,5'-TetCB	52	1,12 b	46
2,2',4,5,5'-PenCB	101	0,69 b	g
2,3',4,4',5-PenCB	118	0,22 b	g
2,2',3,4,4',5'-HexCB	138	0,18 b	g
2,2',4,4',5,5'-HexCB	153	0,38 b	g
2,2',3,4,4',5,5'-HepCB	180	0,19	g
Sum 7 PCB		3,97	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

23



Kjeller, 03.05.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/584
 Customer: Camp 05
 Customers sample ID: 14-15.4.05 0635-0655
 : 160-152
 Sample type: Air
 Sample amount: 571 m3
 Concentration units: pg/m3
 Data files: DH873

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		55,2	63
α -HCH		6,90	102
γ -HCH		3,74 b	100
2,4,4'-TriCB	28	0,78 b	77
2,2',5,5'-TetCB	52	0,74 b	58
2,2',4,5,5'-PenCB	101	0,46 b	43
2,3',4,4',5-PenCB	118	0,15 b	41
2,2',3,4,4',5'-HexCB	138	0,20 b	g
2,2',4,4',5,5'-HexCB	153	0,31 b	g
2,2',3,4,4',5,5'-HepCB	180	0,09 i	g
Sum 7 PCB		2,73	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 03.05.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/598
 Customer: Camp 05
 Customers sample ID: 21-22.4.05 0635-0644
 : 160-152
 Sample type: Air
 Sample amount: 569 m3
 Concentration units: pg/m3
 Data files: DH783

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		69,0	72
α -HCH		8,95	128
γ -HCH		6,03	111
2,4,4'-TriCB	28	1,28 b	62
2,2',5,5'-TetCB	52	1,28 b	44
2,2',4,5,5'-PenCB	101	0,85 b	g
2,3',4,4',5-PenCB	118	0,28 b	g
2,2',3,4,4',5'-HexCB	138	0,38 b	g
2,2',4,4',5,5'-HexCB	153	0,72 b	g
2,2',3,4,4',5,5'-HepCB	180	0,37	g
Sum 7 PCB		5,16	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

25



Kjeller, 03.05.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/606
 Customer: Camp 05
 Customers sample ID: 28-29.4.05 0634-0642
 : 160-150
 Sample type: Air
 Sample amount: 563 m3
 Concentration units: pg/m3
 Data files: DH783

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		69,7	123
α-HCH		11,5	g
γ-HCH		6,05	g
2,4,4'-TriCB	28	2,15 b	70
2,2',5,5'-TetCB	52	1,72 b	g
2,2',4,5,5'-PenCB	101	0,99 b	g
2,3',4,4',5'-PenCB	118	0,42 b	g
2,2',3,4,4',5'-HexCB	138	0,44 b	g
2,2',4,4',5,5'-HexCB	153	0,62 b	g
2,2',3,4,4',5,5'-HepCB	180	0,25	g
Sum 7 PCB		6,59	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 05/656
 Customer: Camp 05
 Customers sample ID: 5-6.5.05 0638-0643
 : 160-153
 Sample type: Air
 Sample amount: 569 m3
 Concentration units: pg/m3
 Data files: DH783

Kjeller, 03.05.2006

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		60,2	88
α -HCH		7,98	g
γ -HCH		5,13 b	g
2,4,4'-TriCB	28	0,87 b	70
2,2',5,5'-TetCB	52	0,89 b	45
2,2',4,5,5'-PenCB	101	0,48 b	g
2,3',4,4',5'-PenCB	118	0,16 bi	g
2,2',3,4,4',5'-HexCB	138	0,16 b	g
2,2',4,4',5,5'-HexCB	153	0,27 b	g
2,2',3,4,4',5,5'-HepCB	180	< 0,03	g
Sum 7 PCB		2,87	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

27



Encl. to measuring report: O-3480
NILU-Sample number: 05/694
Customer: Camp 05
Customers sample ID: 12-13.5.05 0633-0643
: 160-154
Sample type: Air
Sample amount: 572 m3
Concentration units: pg/m3
Data files: DH783

Kjeller, 03.05.2006

Compound Structure IUPAC-no.	Concentration pg/m3	Recovery %
HCb	60,3	66
α -HCH	9,38	118
γ -HCH	4,35	106
2,4,4'-TriCB 28	0,90	64
2,2',5,5'-TetCB 52	0,96	g
2,2',4,5,5'-PenCB 101	0,53	g
2,3',4,4',5'-PenCB 118	0,15 i	g
2,2',3,4,4',5'-HexCB 138	0,17	g
2,2',4,4',5,5'-HexCB 153	0,29	g
2,2',3,4,4',5,5'-HepCB 180	0,09	g
Sum 7 PCB	3,09	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 05/769
 Customer: Camp 05
 Customers sample ID: 19-20.5.05 0537-0541
 : 160-151
 Sample type: Air
 Sample amount: 565 m3
 Concentration units: pg/m3
 Data files: VB085B

Kjeller, 03.05.2006

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		65,9	82
α -HCH		9,80	106
γ -HCH		9,81	104
2,4,4'-TriCB	28	1,73 b	73
2,2',5,5'-TetCB	52	1,91 b	75
2,2',4,5,5'-PenCB	101	1,35 b	78
2,3',4,4',5'-PenCB	118	1,02 b	72
2,2',3,4,4',5'-HexCB	138	1,30 b	70
2,2',4,4',5,5'-HexCB	153	1,85 b	75
2,2',3,4,4',5,5'-HepCB	180	0,45	72
Sum 7 PCB		9,61	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

29



Kjeller, 06.09.2005

Encl. to measuring report: O-3480
NILU-Sample number: 05/798
Customer: Camp 05
Customers sample ID: 26-27.5.05 0545-0545
: 160-152
Sample type: Air
Sample amount: 564 m3
Concentration units: pg/m3
Data files: VA970B

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		69,1	45
α -HCH		14,8	55
γ -HCH		43,4	66
2,4,4'-TriCB	28	2,80 b	62
2,2',5,5'-TetCB	52	2,98 b	61
2,2',4,5,5'-PenCB	101	1,92 b	74
2,3',4,4',5-PenCB	118	0,82 b	88
2,2',3,4,4',5'-HexCB	138	1,11 b	90
2,2',4,4',5,5'-HexCB	153	1,64 b	87
2,2',3,4,4',5,5'-HepCB	180	0,58 b	94
Sum 7 PCB		11,8	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 05/802
 Customer: Camp 05
 Customers sample ID: 2-3.6.05 0537-0541
 : 160-154
 Sample type: Air
 Sample amount: 570 m3
 Concentration units: pg/m3
 Data files: M_031105

Kjeller, 08.12.2005

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		78,6	42
α -HCH		18,7	48
γ -HCH		11,8	53
2,4,4'-TriCB	28	0,92 b	58
2,2',5,5'-TetCB	52	0,89 b	60
2,2',4,5,5'-PenCB	101	0,63 b	69
2,3',4,4',5'-PenCB	118	0,23 b	73
2,2',3,4,4',5'-HexCB	138	0,35 b	73
2,2',4,4',5,5'-HexCB	153	0,61 b	74
2,2',3,4,4',5,5'-HepCB	180	0,08 b	77
Sum 7 PCB		3,70	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

31



Kjeller, 08.12.2005

Encl. to measuring report: O-3480
 NILU-Sample number: 05/811
 Customer: Camp 05
 Customers sample ID: 9-10.6.05 0534-0545
 : 160-153
 Sample type: Air
 Sample amount: 571 m3
 Concentration units: pg/m3
 Data files: M_031105

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		57,0	44
α-HCH		13,6	49
γ-HCH		7,19	55
2,4,4'-TriCB	28	0,90 b	63
2,2',5,5'-TetCB	52	0,79 b	64
2,2',4,5,5'-PenCB	101	0,66 b	72
2,3',4,4',5-PenCB	118	0,30 b	77
2,2',3,4,4',5'-HexCB	138	0,52 b	70
2,2',4,4',5,5'-HexCB	153	0,90 b	78
2,2',3,4,4',5,5'-HepCB	180	0,14 b	81
Sum 7 PCB		4,21	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 05/831
 Customer: Camp 05
 Customers sample ID: 16-17.6.05 0532-0547
 : 160-153
 Sample type: Air
 Sample amount: 573 m3
 Concentration units: pg/m3
 Data files: M_031105

Kjeller, 08.12.2005

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		57,8	38
α -HCH		16,1	46
γ -HCH		17,0	52
2,4,4'-TriCB	28	1,74 b	56
2,2',5,5'-TetCB	52	1,73 b	58
2,2',4,5,5'-PenCB	101	1,11 b	70
2,3',4,4',5-PenCB	118	0,31 b	77
2,2',3,4,4',5'-HexCB	138	0,42 b	71
2,2',4,4',5,5'-HexCB	153	0,67 b	77
2,2',3,4,4',5,5'-HepCB	180	0,17 b	80
Sum 7 PCB		6,14	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

33



Kjeller, 08.12.2005

Encl. to measuring report: O-3480
 NILU-Sample number: 05/853
 Customer: Camp 05
 Customers sample ID: 23-24.6.05 0534-0545
 : 160-153
 Sample type: Air
 Sample amount: 571 m3
 Concentration units: pg/m3
 Data files: M_031105

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
	HCb	79,6	43
	α -HCH	19,1	49
	γ -HCH	25,8	54
2,4,4'-TriCB	28	2,54 b	61
2,2',5,5'-TetCB	52	2,89 b	62
2,2',4,5,5'-PenCB	101	1,89 b	72
2,3',4,4',5-PenCB	118	0,56 b	77
2,2',3,4,4',5'-HexCB	138	0,73 b	74
2,2',4,4',5,5'-HexCB	153	1,22 b	77
2,2',3,4,4',5,5'-HepCB	180	0,26 b	78
Sum 7 PCB		10,1	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 05/866
 Customer: Camp 05
 Customers sample ID: 30.6-1.7.05 0533-0540
 : 160-154
 Sample type: Air
 Sample amount: 570 m3
 Concentration units: pg/m3
 Data files: M_031105

Kjeller, 08.12.2005

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		50,8	39
α -HCH		16,1	42
γ -HCH		9,00	48
2,4,4'-TriCB	28	1,33 b	54
2,2',5,5'-TetCB	52	1,35 b	54
2,2',4,5,5'-PenCB	101	0,99 b	61
2,3',4,4',5-PenCB	118	0,28 b	67
2,2',3,4,4',5'-HexCB	138	0,41 b	61
2,2',4,4',5,5'-HexCB	153	0,65 b	67
2,2',3,4,4',5,5'-HepCB	180	0,16 b	69
Sum 7 PCB		5,16	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

35



Kjeller, 08.12.2005

Encl. to measuring report: O-3480
 NILU-Sample number: 05/889
 Customer: Camp 05
 Customers sample ID: 7-8.7.05 0834-0547
 : 160-155
 Sample type: Air
 Sample amount: 575 m3
 Concentration units: pg/m3
 Data files: M_031105

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
	HCB	58,7	48
	α-HCH	28,6	53
	γ-HCH	17,0	58
2,4,4'-TriCB	28	2,74 b	68
2,2',5,5'-TetCB	52	2,37 b	68
2,2',4,5,5'-PenCB	101	1,66 b	74
2,3',4,4',5'-PenCB	118	0,47 b	79
2,2',3,4,4',5'-HexCB	138	0,62 b	62
2,2',4,4',5,5'-HexCB	153	1,06 b	79
2,2',3,4,4',5,5'-HepCB	180	0,24 b	82
Sum 7 PCB		9,15	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 05/890
 Customer: Camp 05
 Customers sample ID: 14-15.7.05 0535-0546
 : 160-152
 Sample type: Air
 Sample amount: 569 m3
 Concentration units: pg/m3
 Data files: M_031105

Kjeller, 08.12.2005

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
	HCB	65,0	38
	α -HCH	23,5	43
	γ -HCH	9,58	47
2,4,4'-TriCB	28	1,59 b	57
2,2',5,5'-TetCB	52	1,34 b	57
2,2',4,5,5'-PenCB	101	0,87 b	68
2,3',4,4',5-PenCB	118	0,35 b	73
2,2',3,4,4',5'-HexCB	138	0,46 b	69
2,2',4,4',5,5'-HexCB	153	0,78 b	72
2,2',3,4,4',5,5'-HepCB	180	0,12 b	75
Sum 7 PCB		5,52	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

37



Kjeller, 08.12.2005

Encl. to measuring report: O-3480
 NILU-Sample number: 05/917
 Customer: Camp 05
 Customers sample ID: 21-22.7.05 0530-0546
 : 160-155
 Sample type: Air
 Sample amount: 577 m3
 Concentration units: pg/m3
 Data files: M_031105

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		64,5	36
α -HCH		30,1	43
γ -HCH		14,9	48
2,4,4'-TriCB	28	1,70 b	54
2,2',5,5'-TetCB	52	1,64 b	56
2,2',4,5,5'-PenCB	101	1,11 b	66
2,3',4,4',5-PenCB	118	0,31 b	70
2,2',3,4,4',5'-HexCB	138	0,39 b	67
2,2',4,4',5,5'-HexCB	153	0,64 b	70
2,2',3,4,4',5,5'-HepCB	180	0,15 b	70
Sum 7 PCB		5,93	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 09.12.2005

Encl. to measuring report: O-3479
 NILU-Sample number: 05/921
 Customer: Camp 05
 Customers sample ID: 28-29.7.05 0532-0547
 : 160-155
 Sample type: Air
 Sample amount: 577 m3
 Concentration units: pg/m3
 Data files: M_041105

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
	HCB	64,7	37
	α-HCH	17,6	43
	γ-HCH	7,35	47
2,4,4'-TriCB	28	1,17 b	55
2,2',5,5'-TetCB	52	1,16 b	53
2,2',4,5,5'-PenCB	101	0,79 b	64
2,3',4,4',5-PenCB	118	0,25 b	70
2,2',3,4,4',5'-HexCB	138	0,31 b	67
2,2',4,4',5,5'-HexCB	153	0,51 b	68
2,2',3,4,4',5,5'-HepCB	180	0,10 b	72
Sum 7 PCB		4,27	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

39



Kjeller, 08.12.2005

Encl. to measuring report: O-3480
 NILU-Sample number: 05/996
 Customer: Camp 05
 Customers sample ID: 4-5.8.05 0833-0540
 : 160-154
 Sample type: Air
 Sample amount: 570 m3
 Concentration units: pg/m3
 Data files: M_031105

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
	HCB	68,4	32
	α-HCH	21,0	38
	γ-HCH	5,33 b	43
2,4,4'-TriCB	28	0,83 b	48
2,2',5,5'-TetCB	52	0,75 b	50
2,2',4,5,5'-PenCB	101	0,47 b	58
2,3',4,4',5-PenCB	118	0,15 b	64
2,2',3,4,4',5'-HexCB	138	0,16 b	64
2,2',4,4',5,5'-HexCB	153	0,26 b	64
2,2',3,4,4',5,5'-HepCB	180	0,06 b	68
Sum 7 PCB		2,67	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 02.01.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/1028
 Customer: Camp 05
 Customers sample ID: 11-12.8.05 0530-0546
 : 160-154
 Sample type: Air
 Sample amount: 575 m3
 Concentration units: pg/m3
 Data files: M_031105

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
	HCB	82,7	13
	α -HCH	41,7	14 g
	γ -HCH	15,5	16 g
2,4,4'-TriCB	28	2,52 b	23
2,2',5,5'-TetCB	52	2,22 b	25 g
2,2',4,5,5'-PenCB	101	1,37 b	37 g
2,3',4,4',5-PenCB	118	0,40 b	45
2,2',3,4,4',5'-HexCB	138	0,46 b	52
2,2',4,4',5,5'-HexCB	153	0,69 b	48
2,2',3,4,4',5,5'-HepCB	180	0,14 b	57
Sum 7 PCB		7,81	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

41



Kjeller, 02.01.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/1047
 Customer: Camp 05
 Customers sample ID: 18-19.8.05 0831-0541
 : 160-150
 Sample type: Air
 Sample amount: 565 m3
 Concentration units: pg/m3
 Data files: M_031105

Compound Structure IUPAC-no.	Concentration pg/m3	Recovery %
HCB	81,3	25
α -HCH	21,7	29
γ -HCH	9,76	33
2,4,4'-TriCB 28	1,33 b	37
2,2',5,5'-TetCB 52	1,22 b	38 g
2,2',4,5,5'-PenCB 101	0,73 b	48
2,3',4,4',5-PenCB 118	0,22 b	55
2,2',3,4,4',5'-HexCB 138	0,27 b	59
2,2',4,4',5,5'-HexCB 153	0,43 b	56
2,2',3,4,4',5,5'-HepCB 180	0,10 b	64
Sum 7 PCB	4,30	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/1059
 Customer: Camp 05
 Customers sample ID: 25-26.8.05 0530-0543
 : 160-156
 Sample type: Air
 Sample amount: 576 m3
 Concentration units: pg/m3
 Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
	HCB	68,3	48
	α -HCH	15,5	55
	γ -HCH	7,74	60
2,4,4'-TriCB	28	1,35 b	67
2,2',5,5'-TetCB	52	1,26 b	67
2,2',4,5,5'-PenCB	101	0,77 b	76
2,3',4,4',5-PenCB	118	0,24 b	83
2,2',3,4,4',5'-HexCB	138	0,26 b	89
2,2',4,4',5,5'-HexCB	153	0,44 b	80
2,2',3,4,4',5,5'-HepCB	180	0,08 b	86
Sum 7 PCB		4,41	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

43



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/1121
 Customer: Camp 05
 Customers sample ID: 1-2.9.05 0527-0547
 : 160-152
 Sample type: Air
 Sample amount: 571 m3
 Concentration units: pg/m3
 Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		81,2	49
α -HCH		20,2	57
γ -HCH		15,3	63
2,4,4'-TriCB	28	3,48 b	70
2,2',5,5'-TetCB	52	3,46 b	70
2,2',4,5,5'-PenCB	101	2,04 b	79
2,3',4,4',5-PenCB	118	0,49 b	88
2,2',3,4,4',5'-HexCB	138	0,71 b	92
2,2',4,4',5,5'-HexCB	153	1,19 b	84
2,2',3,4,4',5,5'-HepCB	180	0,24 b	89
Sum 7 PCB		11,6	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/1137
 Customer: Camp 05
 Customers sample ID: 8-9.9.05 0535-0549
 : 160-160
 Sample type: Air
 Sample amount: 583 m3
 Concentration units: pg/m3
 Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		58,5	45
α -HCH		13,6	57
γ -HCH		9,67	65
2,4,4'-TriCB	28	1,85 b	69
2,2',5,5'-TetCB	52	1,63 b	71
2,2',4,5,5'-PenCB	101	1,15 b	80
2,3',4,4',5'-PenCB	118	0,41 b	86
2,2',3,4,4',5'-HexCB	138	0,43 b	94
2,2',4,4',5,5'-HexCB	153	0,70 b	89
2,2',3,4,4',5,5'-HepCB	180	0,14 b	89
Sum 7 PCB		6,31	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

45



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
NILU-Sample number: 05/1161
Customer: Camp 05
Customers sample ID: 15-16.9.05 0530-0547
: 160-159
Sample type: Air
Sample amount: 584 m3
Concentration units: pg/m3
Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
	HCb	56,5	50
	α -HCH	11,0	62
	γ -HCH	4,12 b	71
2,4,4'-TriCB	28	1,14 b	75
2,2',5,5'-TetCB	52	0,96 b	77
2,2',4,5,5'-PenCB	101	0,80 b	87
2,3',4,4',5-PenCB	118	0,29 b	93
2,2',3,4,4',5'-HexCB	138	0,23 b	102
2,2',4,4',5,5'-HexCB	153	0,47 b	97
2,2',3,4,4',5,5'-HepCB	180	0,08 b	95
Sum 7 PCB		3,98	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 05/1162
 Customer: Camp 05
 Customers sample ID: 22-23.9.05 0536-0549
 : 160-150
 Sample type: Air
 Sample amount: 565 m3
 Concentration units: pg/m3
 Data files: M_210206

Kjeller, 09.03.2006

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		101	46
α -HCH		15,0	56
γ -HCH		14,1	64
2,4,4'-TriCB	28	2,51 b	69
2,2',5,5'-TetCB	52	2,45 b	70
2,2',4,5,5'-PenCB	101	1,62 b	80
2,3',4,4',5-PenCB	118	0,46 b	87
2,2',3,4,4',5'-HexCB	138	0,62 b	94
2,2',4,4',5,5'-HexCB	153	1,05 b	91
2,2',3,4,4',5,5'-HepCB	180	0,22 b	93
Sum 7 PCB		8,94	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

47



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/1174
 Customer: Camp 05
 Customers sample ID: 29-30.9.05 0533-0546
 : 160-158
 Sample type: Air
 Sample amount: 580 m3
 Concentration units: pg/m3
 Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
	HCB	67,2	36
	α-HCH	11,6	42
	γ-HCH	4,91 b	48
	2,4,4'-TriCB 28	1,20 b	56
	2,2',5,5'-TetCB 52	1,11 b	58
	2,2',4,5,5'-PenCB 101	0,59 b	71
	2,3',4,4',5-PenCB 118	0,17 b	79
	2,2',3,4,4',5'-HexCB 138	0,19 b	84
	2,2',4,4',5,5'-HexCB 153	0,32 b	83
	2,2',3,4,4',5,5'-HepCB 180	0,06 b	86
Sum 7 PCB		3,64	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/1242
 Customer: Camp 05
 Customers sample ID: 6-7.10.05 0532-0550
 : 160-152
 Sample type: Air
 Sample amount: 571 m3
 Concentration units: pg/m3
 Data files: M_210206

Compound Structure IUPAC-no.	Concentration pg/m3	Recovery %
HCB	67,9	51
α -HCH	12,7	61
γ -HCH	6,27 b	69
2,4,4'-TriCB 28	1,62 b	75
2,2',5,5'-TetCB 52	1,76 b	77
2,2',4,5,5'-PenCB 101	1,86 b	90
2,3',4,4',5'-PenCB 118	0,88 b	97
2,2',3,4,4',5'-HexCB 138	0,87 b	102
2,2',4,4',5,5'-HexCB 153	1,61 b	94
2,2',3,4,4',5,5'-HepCB 180	0,31 b	98
Sum 7 PCB	8,90	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

49



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/1263
 Customer: Camp 05
 Customers sample ID: 13-14.10.05 0533-0548
 : 160-151
 Sample type: Air
 Sample amount: 570 m3
 Concentration units: pg/m3
 Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
	HCB	114	39
	α-HCH	28,0	45
	γ-HCH	54,1	50
2,4,4'-TriCB	28	5,09	58
2,2',5,5'-TetCB	52	3,51 b	58
2,2',4,5,5'-PenCB	101	2,01 b	69
2,3',4,4',5-PenCB	118	0,53 b	78
2,2',3,4,4',5'-HexCB	138	0,75 b	79
2,2',4,4',5,5'-HexCB	153	1,32 b	78
2,2',3,4,4',5,5'-HepCB	180	0,37 b	85
Sum 7 PCB		13,6	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 05/1335
 Customer: Camp 05
 Customers sample ID: 20-21.10.05 0533-0547
 : 160-154
 Sample type: Air
 Sample amount: 572 m3
 Concentration units: pg/m3
 Data files: M_210206

Kjeller, 09.03.2006

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		75,3	45
α -HCH		13,8	53
γ -HCH		13,8	60
2,4,4'-TriCB	28	2,34 b	68
2,2',5,5'-TetCB	52	2,05 b	69
2,2',4,5,5'-PenCB	101	1,37 b	81
2,3',4,4',5-PenCB	118	0,79 b	90
2,2',3,4,4',5'-HexCB	138	1,08 b	94
2,2',4,4',5,5'-HexCB	153	1,73 b	90
2,2',3,4,4',5,5'-HepCB	180	0,45 b	94
Sum 7 PCB		9,81	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

51



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
NILU-Sample number: 05/1383
Customer: Camp 05
Customers sample ID: 27-28.10.05 0535-0548
: 160-152
Sample type: Air
Sample amount: 569 m3
Concentration units: pg/m3
Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		69,5	39
α -HCH		12,3	48
γ -HCH		6,84	59
2,4,4'-TriCB	28	1,57 b	63
2,2',5,5'-TetCB	52	1,33 b	67
2,2',4,5,5'-PenCB	101	0,73 b	81
2,3',4,4',5-PenCB	118	0,25 b	89
2,2',3,4,4',5'-HexCB	138	0,30 b	94
2,2',4,4',5,5'-HexCB	153	0,49 b	95
2,2',3,4,4',5,5'-HepCB	180	0,11 b	94
Sum 7 PCB		4,78	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/1448
 Customer: Camp 05
 Customers sample ID: 3-4.11.05 0630-0646
 : 160-154
 Sample type: Air
 Sample amount: 575 m3
 Concentration units: pg/m3
 Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		77,1	47
α -HCH		18,0	54
γ -HCH		25,9	61
2,4,4'-TriCB	28	4,27	69
2,2',5,5'-TetCB	52	4,55	71
2,2',4,5,5'-PenCB	101	3,19	80
2,3',4,4',5-PenCB	118	0,84 b	87
2,2',3,4,4',5'-HexCB	138	1,06 b	92
2,2',4,4',5,5'-HexCB	153	1,84 b	89
2,2',3,4,4',5,5'-HepCB	180	0,31 b	92
Sum 7 PCB		16,1	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

53



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
NILU-Sample number: 05/1449
Customer: Camp 05
Customers sample ID: 10-11.11.05 0635-0644
: 160-175
Sample type: Air
Sample amount: 612 m3
Concentration units: pg/m3
Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
	HCB	64,9	39
	α -HCH	11,2	49
	γ -HCH	6,09	57
2,4,4'-TriCB	28	1,32 b	61
2,2',5,5'-TetCB	52	1,20 b	65
2,2',4,5,5'-PenCB	101	0,71 b	76
2,3',4,4',5-PenCB	118	0,21 b	81
2,2',3,4,4',5'-HexCB	138	0,24 b	85
2,2',4,4',5,5'-HexCB	153	0,42 b	86
2,2',3,4,4',5,5'-HepCB	180	0,08 b	86
Sum 7 PCB		4,18	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/1543
 Customer: Camp 05
 Customers sample ID: 17-18.11.05 0640-0652
 : 160-156
 Sample type: Air
 Sample amount: 576 m3
 Concentration units: pg/m3
 Data files: M:_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		32,8	49
α -HCH		3,52 b	55
γ -HCH		2,05 b	60
2,4,4'-TriCB	28	0,62 b	68
2,2',5,5'-TetCB	52	0,50 b	68
2,2',4,5,5'-PenCB	101	0,22 b	80
2,3',4,4',5-PenCB	118	0,06 b	87
2,2',3,4,4',5'-HexCB	138	0,07 b	90
2,2',4,4',5,5'-HexCB	153	0,11 b	91
2,2',3,4,4',5,5'-HepCB	180	0,05 b	94
Sum 7 PCB		1,63	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

55



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/1622
 Customer: Camp 05
 Customers sample ID: 24-25.11.05 0634-0647
 : 160-152
 Sample type: Air
 Sample amount: 569 m3
 Concentration units: pg/m3
 Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		59,5	48
α -HCH		7,04	58
γ -HCH		4,69 b	66
2,4,4'-TriCB	28	1,22 b	73
2,2',5,5'-TetCB	52	1,14 b	75
2,2',4,5,5'-PenCB	101	0,65 b	86
2,3',4,4',5-PenCB	118	0,20 b	92
2,2',3,4,4',5'-HexCB	138	0,23 b	96
2,2',4,4',5,5'-HexCB	153	0,41 b	95
2,2',3,4,4',5,5'-HepCB	180	0,08 b	95
Sum 7 PCB		3,94	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/1623
 Customer: Camp 05
 Customers sample ID: 1-2.12.05 0632-0637
 : 160-155
 Sample type: Air
 Sample amount: 572 m3
 Concentration units: pg/m3
 Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		62,2	41
α -HCH		7,17	46
γ -HCH		4,40 b	52
2,4,4'-TriCB	28	1,22 b	58
2,2',5,5'-TetCB	52	1,09 b	61
2,2',4,5,5'-PenCB	101	0,59 b	74
2,3',4,4',5-PenCB	118	0,16 b	82
2,2',3,4,4',5'-HexCB	138	0,21 b	88
2,2',4,4',5,5'-HexCB	153	0,34 b	85
2,2',3,4,4',5,5'-HepCB	180	0,11 b	91
Sum 7 PCB		3,73	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

57



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/1736
 Customer: Camp 05
 Customers sample ID: 8-9.12.05 0633-0648
 : 160-158
 Sample type: Air
 Sample amount: 582 m3
 Concentration units: pg/m3
 Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		61,0	48
α -HCH		8,32	58
γ -HCH		4,64 b	67
2,4,4'-TriCB	28	1,81 b	73
2,2',5,5'-TetCB	52	1,54 b	75
2,2',4,5,5'-PenCB	101	0,76 b	88
2,3',4,4',5-PenCB	118	0,27 b	92
2,2',3,4,4',5'-HexCB	138	0,23 b	94
2,2',4,4',5,5'-HexCB	153	0,38 b	95
2,2',3,4,4',5,5'-HepCB	180	0,08 b	93
Sum 7 PCB		5,06	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 06/16
 Customer: Camp 05
 Customers sample ID: 15-16.12.05 0640-0642
 : 160-155
 Sample type: Air
 Sample amount: 570 m3
 Concentration units: pg/m3
 Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		53,0	53
α -HCH		7,24	60
γ -HCH		1,72 b	68
2,4,4'-TriCB	28	0,81 b	74
2,2',5,5'-TetCB	52	0,75 b	76
2,2',4,5,5'-PenCB	101	0,35 b	86
2,3',4,4',5-PenCB	118	0,10 b	94
2,2',3,4,4',5'-HexCB	138	0,10 b	99
2,2',4,4',5,5'-HexCB	153	0,17 b	96
2,2',3,4,4',5,5'-HepCB	180	0,04 b	99
Sum 7 PCB		2,33	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

59



Kjeller, 15.03.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 06/17
 Customer: Camp 05
 Customers sample ID: 22-23.12.05 0634-0644
 : 160-157
 Sample type: Air
 Sample amount: 758 m³
 Concentration units: pg/m³
 Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m ³	%
HCB		46,3	55
α-HCH		5,81	64
γ-HCH		2,12 b	73
2,4,4'-TriCB	28	0,77 b	79
2,2',5,5'-TetCB	52	0,74 b	80
2,2',4,5,5'-PenCB	101	0,45 b	90
2,3',4,4',5-PenCB	118	0,22 b	99
2,2',3,4,4',5'-HexCB	138	0,22 b	101
2,2',4,4',5,5'-HexCB	153	0,39 b	100
2,2',3,4,4',5,5'-HepCB	180	0,07 b	103
Sum 7 PCB		2,87	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3480
 NILU-Sample number: 06/63
 Customer: Camp 05
 Customers sample ID: 29-30.12.05 0634-0645
 : 160-153
 Sample type: Air
 Sample amount: 571 m3
 Concentration units: pg/m3
 Data files: M_210206

Kjeller, 09.03.2006

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		63,3	49
α -HCH		9,66	57
γ -HCH		3,90 b	65
2,4,4'-TriCB	28	2,09 b	72
2,2',5,5'-TetCB	52	1,54 b	73
2,2',4,5,5'-PenCB	101	0,73 b	83
2,3',4,4',5'-PenCB	118	0,27 b	91
2,2',3,4,4',5'-HexCB	138	0,22 b	96
2,2',4,4',5,5'-HexCB	153	0,35 b	92
2,2',3,4,4',5,5'-HepCB	180	0,07 b	95
Sum 7 PCB		5,27	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Vedlegg 2

Organiske forbindelser i nedbør på Birkenes (O-3479)

Målerapport nr. O-3479

Oppdragsgiver: Statens forurensningstilsyn (SFT)
Postboks 8100 DEP
0032 OSLO

Prosjekt nr.: O-90006

Prøvetaking:

Sted: Birkenes
Ansvar: NILU

Kommentar:

Prøveinformasjon:

NILU prøvenr.	Kundens prøvemerkning	Prøvetype	Prøven mottatt	Prøven analysert
05/58a	3-8.1.05 0700 – 0700	Nedbør	13.01.05	25.05.05 – 11.10.05
05/58b	8-10.1.05 0700 – 0700	Nedbør	13.01.05	25.05.05 – 11.10.05
05/134a	10-12.1.05 0700 – 0700	Nedbør	26.01.05	01.06.05 – 11.10.05
05/134b	12-17.1.05 0700 – 0700	Nedbør	26.01.05	25.05.05 – 11.10.05
05/135	17-24.1.05 0700 – 0700	Nedbør	26.01.05	24.05.05 – 11.10.05
05/304	7-9.2.05 0700 – 1800	Nedbør	16.02.05	01.06.05 – 11.10.05
05/435	9-10.2.05 1800 – 0700	Nedbør	08.03.05	01.06.05 – 11.10.05
05/436	10-14.2.05 0700 – 0700	Nedbør	08.03.05	26.05.05 – 11.10.05
05/507	28.2-7.3.05 0700 – 0700	Nedbør	31.03.05	02.06.05 – 11.10.05
05/508	7-14.3.05 0700 – 0700	Nedbør	31.03.05	26.05.05 – 11.10.05
05/509	14-21.3.05 0700 – 0700	Nedbør	31.03.05	24.05.05 – 11.10.05
05/570	4-11.4.05 0600 – 0600	Nedbør	14.04.05	03.06.05 – 11.10.05
05/603	25.4-2.5.05 0600 – 0600	Nedbør	09.05.05	24.05.05 – 11.10.05
05/695	2-9.5.05 0600 – 0600	Nedbør	20.05.05	26.05.05 – 11.10.05
05/696	9-16.5.05 0600 – 0600	Nedbør	20.05.05	02.06.05 – 11.10.05
05/766	16-20.5.05 0600 – 0600	Nedbør	26.05.05	02.06.05 – 11.10.05
05/767	20.5.05 0600 – 2030	Nedbør	26.05.05	03.06.05 – 11.10.05
05/780	20-23.5.05 2030 – 0600	Nedbør	03.06.05	06.06.05 – 11.10.05
05/781	23-26.5.05 0600 – 0600	Nedbør	03.06.05	06.06.05 – 11.10.05
05/782	26-28.5.05 0600 – 0800 +28-30.5.05 0800 – 0600	Nedbør	03.06.05	19.09.05 – 22.11.05
05/814	30.5-3.6.05 0600 – 1700	Nedbør	20.06.05	19.09.05 – 22.11.05
05/815	3-6.6.05 1700 – 0600	Nedbør	20.06.05	19.09.05 – 22.11.05
05/816	6-13.6.05 0600 – 0600	Nedbør	20.06.05	19.09.05 – 22.11.05
05/849	13-14.6.05 0600 – 0600	Nedbør	04.07.05	19.09.05 – 22.11.05
05/850	14.6.05 0600 – 1600	Nedbør	04.07.05	19.09.05 – 22.11.05
05/851	14-20.6.05 1600 – 0600	Nedbør	04.07.05	19.09.05 – 22.11.05
05/852 + 05/898	20-27.6.05 0600 – 0600 +27.6-4.7.05 0600 – 0600	Nedbør	04.07.05 +28.07.05	19.9.05 – 22.11.05
05/899	4-11.7.05 0600 – 0600	Nedbør	28.07.05	13.10.05 – 22.11.05
05/900	18-25.7.05 0600 – 0600	Nedbør	28.07.05	13.10.05 – 22.11.05
05/997	25-31.7.05 0600 – 0600	Nedbør	15.08.05	14.10.05 – 22.11.05
05/998	31.7.05 0600 – 0930 +31.7-1.8.05 0930 – 0600	Nedbør	15.08.05	14.10.05 – 22.11.05
05/999	1-8.8.05 0600 – 0600	Nedbør	15.08.05	13.10.05 – 22.11.05
05/1052	8-9.8.05 0600 – 0600 +9-15.8.05 0600 – 0600	Nedbør	31.08.05	14.10.05 – 22.11.05
05/1053+05/1122 +05/1123	22-25.8.05 0600-0600 (2 flasker) +25-29.8.05 0600-0600	Nedbør	31.08.05 +14.09.05	14.10.05 – 05.01.06

05/1124+05/1125	29.8-2.9.05 0600 – 0600 +2-5.9.05 0600 – 0600		Nedbør	14.09.05	20.10.05 – 05.01.06
05/1167	5-12.9.05 0600 – 0600		Nedbør	07.10.05	13.10.05 – 05.01.06
05/1168	12-19.9.05 0600 – 0600		Nedbør	07.10.05	20.10.05 – 05.01.06
05/1169	19-26.9.05 0600 – 0600		Nedbør	07.10.05	23.11.05 – 09.03.06
05/1170	26-29.9.05 0600 – 0600		Nedbør	07.10.05	20.10.05 – 05.01.06
05/1171	29-30.9.05 0600 – 0600		Nedbør	07.10.05	20.10.05 – 05.01.06
05/1172+05/1173	30.9-3.10.05 0600 – 0600		Nedbør	07.10.05	23.11.05 – 09.03.06
05/1289+05/1290a	17-21.10.05 0600 – 1730		Nedbør	28.10.05	23.11.05 – 09.03.06
05/1290b	21-24.10.05 1730 – 0600		Nedbør	01.11.05	25.11.05 – 09.03.06
05/1336	24-25.10.05 0600 – 2230		Nedbør	01.11.05	25.11.05 – 09.03.06
05/1379+05/1380	25-31.10.05 2230 – 0700		Nedbør	09.11.05	25.11.05 – 09.03.06
05/1381+05/1382	31.10-3.11.05 0700 – 0630		Nedbør	09.11.05	02.12.05 – 09.03.06
05/1453	3-6.11.05 0630 – 0700		Nedbør	16.11.05	02.12.05 – 09.03.06
05/1454	6-7.11.05 0700 – 0700		Nedbør	16.11.05	02.12.05 – 09.03.06
05/1455	7-14.11.05 0700 – 0700		Nedbør	16.11.05	06.02.06 – 09.03.06
05/1627	14-21.11.05 0700 – 0700		Nedbør	07.12.05	06.02.06 – 09.03.06
05/1628	21-28.11.05 0700 – 0700		Nedbør	07.12.05	06.02.06 – 09.03.06
05/1670	28.11-5.12.05 0700 – 0700		Nedbør	09.12.05	13.02.06 – 09.03.06
06/18	5-12.12.05 0700 – 0700		Nedbør	03.01.06	13.02.06 – 09.03.06
06/19	19-26.12.05 0700 – 0700		Nedbør	03.01.06	15.02.06 – 09.03.06
06/109	26.12.-2.1.06		Nedbør	20.01.06	15.02.06 – 09.03.06

Analysér:

Utført av: Norsk institutt for luftforskning
Postboks 100
N-2027 KJELLER

Målemetode: NILU-O-2 ("Bestemmelse av tungflyktige persistente organiske forbindelser – pesticider og PCB'er")

Kommentarer:

Godkjenning: Kjeller, 17. mars 2006

Ole-Anders Braathen

Ole-Anders Braathen
Avd.direktør, Miljøkjemi

Vedlegg: HCH/PCB-analyser: 55 sider
Målerapporten og vedleggene omfatter totalt 57 sider

Måleresultatene gjelder bare de prøvene som er analysert. Denne rapporten skal ikke gjengis i utdrag, uten skriftlig godkjenning fra laboratoriet.

Results of HCH and 7 PCB

65



Encl. to measuring report: O-3479
NILU-Sample number: 05/58a
Customer: Camp 05
Customers sample ID: 3-8.1.05
: 0700-0700
Sample type: Precipitation
Sample amount: 1,12 l
Concentration units: pg/l
Data files: VB084

Kjeller, 02.05.2006

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCb	27,7 b	73
α -HCH	191 b	72
γ -HCH	227 b	76
2,4,4'-TriCB 28	9,45 b	70
2,2',5,5'-TetCB 52	17,9 b	74
2,2',4,5,5'-PenCB 101	25,2 b	82
2,3',4,4',5-PenCB 118	13,0 b	83
2,2',3,4,4',5'-HexCB 138	23,3	88
2,2',4,4',5,5'-HexCB 153	29,1 b	86
2,2',3,4,4',5,5'-HepCB 180	10,1	92
Sum 7 PCB	128	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Encl. to measuring report: O-3479
 NILU-Sample number: 05/58b
 Customer: Camp 05
 Customers sample ID: 8-10.1.05
 : 0700-0700
 Sample type: Precipitation
 Sample amount: 2,22 l
 Concentration units: pg/l
 Data files: VB084

Kjeller, 02.05.2006

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
	HCB	23,7	b	61
	α -HCH	160	b	70
	γ -HCH	309		75
2,4,4'-TriCB	28	8,20	b	65
2,2',5,5'-TetCB	52	10,1	b	67
2,2',4,5,5'-PenCB	101	20,3	b	75
2,3',4,4',5-PenCB	118	10,1	b	82
2,2',3,4,4',5'-HexCB	138	17,9		90
2,2',4,4',5,5'-HexCB	153	24,2		85
2,2',3,4,4',5,5'-HepCB	180	8,55		96
Sum 7 PCB		99,3		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

67



Kjeller, 02.05.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/134a
 Customer: Camp 05
 Customers sample ID: 10-12.1.05
 : 0700-0700
 Sample type: Precipitation
 Sample amount: 0,99 l
 Concentration units: pg/l
 Data files: VB084

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
HCB		112	b	59
α -HCH		188	b	72
γ -HCH		626	b	81
2,4,4'-TriCB	28	17,0	b	68
2,2',5,5'-TetCB	52	47,3	b	72
2,2',4,5,5'-PenCB	101	74,4	b	81
2,3',4,4',5-PenCB	118	56,7		84
2,2',3,4,4',5'-HexCB	138	64,7		94
2,2',4,4',5,5'-HexCB	153	104		88
2,2',3,4,4',5,5'-HepCB	180	17,2		98
Sum 7 PCB		382		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3479
 NILU-Sample number: 05/134 b
 Customer: Camp 05
 Customers sample ID: 12-17.1.05
 : 0700-0700
 Sample type: Precipitation
 Sample amount: 1,38 l
 Concentration units: pg/l
 Data files: VB084

Kjeller, 02.05.2006

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
HCb		44,7	b	57
α -HCH		220	b	62
γ -HCH		267	b	69
2,4,4'-TriCB	28	12,1	b	63
2,2',5,5'-TetCB	52	21,7	b	67
2,2',4,5,5'-PenCB	101	45,7	b	80
2,3',4,4',5-PenCB	118	20,3	b	89
2,2',3,4,4',5'-HexCB	138	37,2		99
2,2',4,4',5,5'-HexCB	153	48,8		91
2,2',3,4,4',5,5'-HepCB	180	22,5		107
Sum 7 PCB		208		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

69



Kjeller, 02.05.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/135
 Customer: Camp 05
 Customers sample ID: 17-24.1.05
 : 0700-0700
 Sample type: Precipitation
 Sample amount: 1,31 l
 Concentration units: pg/l
 Data files: VB084

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCb	27,3 b	66
α -HCH	124 b	73
γ -HCH	203 b	83
2,4,4'-TriCB 28	15,0 b	74
2,2',5,5'-TetCB 52	33,0 b	76
2,2',4,5,5'-PenCB 101	85,3	90
2,3',4,4',5'-PenCB 118	79,8	94
2,2',3,4,4',5'-HexCB 138	91,4	103
2,2',4,4',5,5'-HexCB 153	187	94
2,2',3,4,4',5,5'-HepCB 180	23,9	109
Sum 7 PCB	516	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3479
 NILU-Sample number: 05/304
 Customer: Camp 05
 Customers sample ID: 7-9.2.05
 : 0700-1800
 Sample type: Precipitation
 Sample amount: 1,02 l
 Concentration units: pg/l
 Data files: VB084

Kjeller, 02.05.2006

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
	HCB	77,9	b	54
	α -HCH	174	b	70
	γ -HCH	650		74
2,4,4'-TriCB	28	16,6	b	60
2,2',5,5'-TetCB	52	28,1	b	56
2,2',4,5,5'-PenCB	101	50,9	b	59
2,3',4,4',5-PenCB	118	43,5		64
2,2',3,4,4',5'-HexCB	138	116		66
2,2',4,4',5,5'-HexCB	153	113		61
2,2',3,4,4',5,5'-HepCB	180	139		67
Sum 7 PCB		507		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

71



Encl. to measuring report: O-3479
NILU-Sample number: 05/435
Customer: Camp 05
Customers sample ID: 9-10.2.05
: 1800-0700
Sample type: Precipitation
Sample amount: 1,08 l
Concentration units: pg/l
Data files: VB084

Kjeller, 02.05.2006

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCB	66,7 b	55
α -HCH	189 b	72
γ -HCH	497 b	78
2,4,4'-TriCB 28	24,9 b	69
2,2',5,5'-TetCB 52	27,9 b	73
2,2',4,5,5'-PenCB 101	52,7 b	83
2,3',4,4',5-PenCB 118	38,0 b	86
2,2',3,4,4',5'-HexCB 138	56,4	92
2,2',4,4',5,5'-HexCB 153	89,6	89
2,2',3,4,4',5,5'-HepCB 180	31,6	99
Sum 7 PCB	321	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Encl. to measuring report: O-3479
 NILU-Sample number: 05/436
 Customer: Camp 05
 Customers sample ID: 10-14.2.05
 : 0700-0700
 Sample type: Precipitation
 Sample amount: 0,91 l
 Concentration units: pg/l
 Data files: VB084

Kjeller, 02.05.2006

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
	HCB	39,5	b	45
	α -HCH	58,9	b	66
	γ -HCH	84,9	b	71
2,4,4'-TriCB	28	14,3	b	64
2,2',5,5'-TetCB	52	11,6	b	66
2,2',4,5,5'-PenCB	101	21,6	b	83
2,3',4,4',5-PenCB	118	12,4	b	92
2,2',3,4,4',5'-HexCB	138	27,2		98
2,2',4,4',5,5'-HexCB	153	34,9	b	93
2,2',3,4,4',5,5'-HepCB	180	13,4		108
Sum 7 PCB		135		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

73



Encl. to measuring report: O-3479
 NILU-Sample number: 05/507
 Customer: Camp 05
 Customers sample ID: 28.2-7.3.05
 : 0700-0700
 Sample type: Precipitation
 Sample amount: 0,95 l
 Concentration units: pg/l
 Data files: VB084

Kjeller, 02.05.2006

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCB	52,8 b	56
α -HCH	55,1 b	77
γ -HCH	114 b	85
2,4,4'-TriCB 28	23,3 bi	69
2,2',5,5'-TetCB 52	20,0 b	71
2,2',4,5,5'-PenCB 101	25,8 b	81
2,3',4,4',5-PenCB 118	14,1 b	76
2,2',3,4,4',5'-HexCB 138	23,4 b	78
2,2',4,4',5,5'-HexCB 153	31,2 b	74
2,2',3,4,4',5,5'-HepCB 180	13,6	82
Sum 7 PCB	151	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3479
 NILU-Sample number: 05/508
 Customer: Camp 05
 Customers sample ID: 7-14.3.05
 : 0700-0700
 Sample type: Precipitation
 Sample amount: 0,64 l
 Concentration units: pg/l
 Data files: VB084

Kjeller, 02.05.2006

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
	HCb	75,8	b	25
	α -HCH	107	b	56
	γ -HCH	107	b	65
2,4,4'-TriCB	28	21,5	b	54
2,2',5,5'-TetCB	52	20,7	b	59
2,2',4,5,5'-PenCB	101	37,1	b	72
2,3',4,4',5-PenCB	118	19,9	b	80
2,2',3,4,4',5'-HexCB	138	36,6		85
2,2',4,4',5,5'-HexCB	153	48,9	b	77
2,2',3,4,4',5,5'-HepCB	180	22,7		94
Sum 7 PCB		207		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

75



Kjeller, 02.05.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/509
 Customer: Camp 05
 Customers sample ID: 14-21.3.05
 : 0700-0700
 Sample type: Precipitation
 Sample amount: 1,29 l
 Concentration units: pg/l
 Data files: VB084

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCB	26,6 b	52
α -HCH	89,5 b	78
γ -HCH	143 b	85
2,4,4'-TriCB 28	12,9 b	77
2,2',5,5'-TetCB 52	25,0 b	80
2,2',4,5,5'-PenCB 101	72,1	89
2,3',4,4',5-PenCB 118	61,2	93
2,2',3,4,4',5'-HexCB 138	76,5	94
2,2',4,4',5,5'-HexCB 153	156	89
2,2',3,4,4',5,5'-HepCB 180	19,3	101
Sum 7 PCB	423	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3479
 NILU-Sample number: 05/570
 Customer: Camp 05
 Customers sample ID: 4-11.4.05
 : 0600-0600
 Sample type: Precipitation
 Sample amount: 2,44 l
 Concentration units: pg/l
 Data files: VB084

Kjeller, 02.05.2006

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		40,8 b	42
α -HCH		217	72
γ -HCH		858	81
2,4,4'-TriCB	28	10,5 b	65
2,2',5,5'-TetCB	52	10,2 b	64
2,2',4,5,5'-PenCB	101	16,3 b	63
2,3',4,4',5-PenCB	118	8,27 b	66
2,2',3,4,4',5'-HexCB	138	14,3	65
2,2',4,4',5,5'-HexCB	153	19,6	63
2,2',3,4,4',5,5'-HepCB	180	9,90	65
Sum 7 PCB		89,0	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

77



Kjeller, 03.05.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/603
 Customer: Camp 05
 Customers sample ID: 25.4-2.5.05
 : 0600-0600
 Sample type: Precipitation
 Sample amount: 1,45 l
 Concentration units: pg/l
 Data files: VB085B

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCB	94,3 b	47
α-HCH	265 b	89
γ-HCH	2 430	95
2,4,4'-TriCB 28	25,3 b	63
2,2',5,5'-TetCB 52	63,8	53
2,2',4,5,5'-PenCB 101	109	41
2,3',4,4',5-PenCB 118	59,8	42
2,2',3,4,4',5'-HexCB 138	71,0	41
2,2',4,4',5,5'-HexCB 153	130	g
2,2',3,4,4',5,5'-HepCB 180	39,1	g
Sum 7 PCB	498	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3479
 NILU-Sample number: 05/695
 Customer: Camp 05
 Customers sample ID: 2-9.5.05
 : 0600-0600
 Sample type: Precipitation
 Sample amount: 0,51 l
 Concentration units: pg/l
 Data files: VB084

Kjeller, 02.05.2006

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		115 b	25
α -HCH		399 b	49
γ -HCH		397 b	56
2,4,4'-TriCB	28	22,1 b	50
2,2',5,5'-TetCB	52	21,4 b	56
2,2',4,5,5'-PenCB	101	43,2 b	66
2,3',4,4',5-PenCB	118	22,8 b	73
2,2',3,4,4',5'-HexCB	138	41,4 b	77
2,2',4,4',5,5'-HexCB	153	54,9 b	71
2,2',3,4,4',5,5'-HepCB	180	18,3	82
Sum 7 PCB		224	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

79



Kjeller, 02.05.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/696
 Customer: Camp 05
 Customers sample ID: 9-16.5.05
 : 0600-0600
 Sample type: Precipitation
 Sample amount: 1,3 l
 Concentration units: pg/l
 Data files: Vb084

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		44,2 b	36
α -HCH		326	61
γ -HCH		435 b	66
2,4,4'-TriCB	28	8,00 b	59
2,2',5,5'-TetCB	52	10,0 b	58
2,2',4,5,5'-PenCB	101	15,6 b	56
2,3',4,4',5-PenCB	118	6,97 b	61
2,2',3,4,4',5'-HexCB	138	15,7 b	61
2,2',4,4',5,5'-HexCB	153	22,8 b	54
2,2',3,4,4',5,5'-HepCB	180	11,6	60
Sum 7 PCB		90,6	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 02.05.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/766
 Customer: Camp 05
 Customers sample ID: 16-20.5.05
 : 0600-0600
 Sample type: Precipitation
 Sample amount: 2,18 l
 Concentration units: pg/l
 Data files: VB084

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		36,2 b	35
α -HCH		280	57
γ -HCH		879	65
2,4,4'-TriCB	28	10,6 b	57
2,2',5,5'-TetCB	52	9,08 b	62
2,2',4,5,5'-PenCB	101	17,0 b	65
2,3',4,4',5-PenCB	118	7,53 b	66
2,2',3,4,4',5'-HexCB	138	14,3	68
2,2',4,4',5,5'-HexCB	153	21,6	64
2,2',3,4,4',5,5'-HepCB	180	9,82	71
Sum 7 PCB		89,9	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

81



Kjeller, 02.05.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/767
 Customer: Camp 05
 Customers sample ID: 20.5.05
 : 0600-2030
 Sample type: Precipitation
 Sample amount: 2,13 l
 Concentration units: pg/l
 Data files: VB084

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		536	36
α -HCH		312	63
γ -HCH		2 106	74
2,4,4'-TriCB	28	17,5 b	63
2,2',5,5'-TetCB	52	24,9 b	72
2,2',4,5,5'-PenCB	101	58,2	77
2,3',4,4',5'-PenCB	118	55,2	81
2,2',3,4,4',5'-HexCB	138	90,6	83
2,2',4,4',5,5'-HexCB	153	136	82
2,2',3,4,4',5,5'-HepCB	180	24,5	90
Sum 7 PCB		407	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3479
 NILU-Sample number: 05/780
 Customer: Camp 05
 Customers sample ID: 20-23.5.05
 : 2030-0600
 Sample type: Precipitation
 Sample amount: 1,37 l
 Concentration units: pg/l
 Data files: VB084

Kjeller, 02.05.2006

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCb	38,3 b	43
α -HCH	222 b	61
γ -HCH	2 823	70
2,4,4'-TriCB 28	10,5 b	61
2,2',5,5'-TetCB 52	24,4 b	68
2,2',4,5,5'-PenCB 101	79,4	76
2,3',4,4',5-PenCB 118	73,6	79
2,2',3,4,4',5'-HexCB 138	81,3	81
2,2',4,4',5,5'-HexCB 153	189	79
2,2',3,4,4',5,5'-HepCB 180	19,4	89
Sum 7 PCB	477	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

83



Kjeller, 02.05.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/781
 Customer: Camp 05
 Customers sample ID: 23-26.5.05
 : 0600-0600
 Sample type: Precipitation
 Sample amount: 0,94 l
 Concentration units: pg/l
 Data files: VB084

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		74,5 b	43
α -HCH		218 b	60
γ -HCH		1 632	74
2,4,4'-TriCB	28	29,6 b	61
2,2',5,5'-TetCB	52	111	70
2,2',4,5,5'-PenCB	101	118	76
2,3',4,4',5'-PenCB	118	81,7	78
2,2',3,4,4',5'-HexCB	138	79,8	80
2,2',4,4',5,5'-HexCB	153	146	76
2,2',3,4,4',5,5'-HepCB	180	21,6	85
Sum 7 PCB		588	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Kjeller, 02.01.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/782
 Customer: Camp 05
 Customers sample ID: 26-28.5.05 0600-0800
 : +28-30.5.05 0800-0600
 Sample type: Precipitation
 Sample amount: 1,09 l
 Concentration units: pg/l
 Data files: M_041105

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCB	116 b	22
α -HCH	414 b	30
γ -HCH	3 797	35
2,4,4'-TriCB 28	9,39 b	34
2,2',5,5'-TetCB 52	10,2 b	36 g
2,2',4,5,5'-PenCB 101	22,9 b	43
2,3',4,4',5-PenCB 118	40,1 b	47
2,2',3,4,4',5'-HexCB 138	39,7 b	54
2,2',4,4',5,5'-HexCB 153	41,8 b	49
2,2',3,4,4',5,5'-HepCB 180	24,9 b	54
Sum 7 PCB	189	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

85



Kjeller, 09.12.2005

Encl. to measuring report: O-3479
 NILU-Sample number: 05/814
 Customer: Camp 05
 Customers sample ID: 30.5-3.6.05 0600-1700
 :
 Sample type: Precipitation
 Sample amount: 1,085 l
 Concentration units: pg/l
 Data files: M_041105

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
		39,6	b	23
		338	b	28
		634	b	32
2,4,4'-TriCB	28	10,5	b	35
2,2',5,5'-TetCB	52	14,0	b	36
2,2',4,5,5'-PenCB	101	31,7	b	45
2,3',4,4',5-PenCB	118	44,3	b	51
2,2',3,4,4',5'-HexCB	138	42,6	b	53
2,2',4,4',5,5'-HexCB	153	44,1	b	52
2,2',3,4,4',5,5'-HepCB	180	19,5	b	57
Sum 7 PCB		207		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3479
 NILU-Sample number: 05/815
 Customer: Camp 05
 Customers sample ID: 3-6.6.05 1700-0600

Kjeller, 02.01.2006

:
 Sample type: Precipitation
 Sample amount: 0,58 l
 Concentration units: pg/l
 Data files: M_041105

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
		130	b	5 g
		583	b	24
		767	b	28
2,4,4'-TriCB	28	24,0	b	19 g
2,2',5,5'-TetCB	52	26,4	bi	21 g
2,2',4,5,5'-PenCB	101	42,0	b	32 g
2,3',4,4',5-PenCB	118	42,4	b	38 g
2,2',3,4,4',5'-HexCB	138	43,7	b	43
2,2',4,4',5,5'-HexCB	153	51,4	b	39
2,2',3,4,4',5,5'-HepCB	180	17,4	b	43
Sum 7 PCB		247		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

87



Kjeller, 02.01.2006

Encl. to measuring report: O-3479

NILU-Sample number: 05/816

Customer: Camp 05

Customers sample ID: 6-13.6.05 0600-0600

:

Sample type: Precipitation

Sample amount: 0,68 l

Concentration units: pg/l

Data files: M_041105

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCB	73,5 b	14
α -HCH	348 b	20
γ -HCH	353 b	23
2,4,4'-TriCB 28	< 5,40	24
2,2',5,5'-TetCB 52	14,2 b	24 g
2,2',4,5,5'-PenCB 101	22,2 b	29 g
2,3',4,4',5-PenCB 118	24,6 b	33 g
2,2',3,4,4',5'-HexCB 138	29,9 b	30 g
2,2',4,4',5,5'-HexCB 153	38,2 b	34 g
2,2',3,4,4',5,5'-HepCB 180	17,6 b	38 g
Sum 7 PCB	152	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 02.01.2006

Encl. to measuring report: O-3479

NILU-Sample number: 05/849

Customer: Camp 05

Customers sample ID: 13-14.6.05 0600-0600

:

Sample type: Precipitation

Sample amount: 0,98 l

Concentration units: pg/l

Data files: M_041105

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		34,4 b	17
α -HCH		358 b	29
γ -HCH		523 b	35
2,4,4'-TriCB	28	7,95 b	33
2,2',5,5'-TetCB	52	7,39 b	35 g
2,2',4,5,5'-PenCB	101	13,3 b	44
2,3',4,4',5-PenCB	118	7,88 b	50
2,2',3,4,4',5'-HexCB	138	12,3 b	57
2,2',4,4',5,5'-HexCB	153	16,0 b	51
2,2',3,4,4',5,5'-HepCB	180	7,43 b	59
Sum 7 PCB		72,2	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

89



Encl. to measuring report: O-3479
 NILU-Sample number: 05/850
 Customer: Camp 05
 Customers sample ID: 14.6.05 0600-1600

Kjeller, 02.01.2006

:
 Sample type: Precipitation
 Sample amount: 1,086 l
 Concentration units: pg/l
 Data files: M_041105

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCB	66,0 b	18
α -HCH	321 b	30
γ -HCH	623 b	34
2,4,4'-TriCB 28	9,71 b	34
2,2',5,5'-TetCB 52	11,3 b	35 g
2,2',4,5,5'-PenCB 101	16,9 b	43
2,3',4,4',5-PenCB 118	9,54 b	47
2,2',3,4,4',5'-HexCB 138	17,3 b	52
2,2',4,4',5,5'-HexCB 153	20,9 b	50
2,2',3,4,4',5,5'-HepCB 180	13,1 b	53
Sum 7 PCB	98,8	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 02.01.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/851
 Customer: Camp 05
 Customers sample ID: 14-20.6.05 1600-0600
 :
 Sample type: Precipitation
 Sample amount: 0,71 l
 Concentration units: pg/l
 Data files: M_041105

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCB	236 b	5
α -HCH	260 b	27
γ -HCH	628 b	34
2,4,4'-TriCB 28	21,5 b	21
2,2',5,5'-TetCB 52	24,6 b	24 g
2,2',4,5,5'-PenCB 101	24,2 b	37 g
2,3',4,4',5-PenCB 118	17,4 b	45
2,2',3,4,4',5'-HexCB 138	27,3 b	50
2,2',4,4',5,5'-HexCB 153	38,1 b	45
2,2',3,4,4',5,5'-HepCB 180	28,2 b	52
Sum 7 PCB	181	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

91



Kjeller, 09.12.2005

Encl. to measuring report: O-3479
NILU-Sample number: 05/852 + 05/898
Customer: Camp 05
Customers sample ID: 20-27.6.05 0600-0600
 : 27.6-4.7.05 0600-0600
Sample type: Precipitation
Sample amount: 0,825 l
Concentration units: pg/l
Data files: M_041105

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
	HCb	54,3 b	17
	α -HCH	253 b	33
	γ -HCH	1 136	39
	2,4,4'-TriCB 28	6,93 b	39
	2,2',5,5'-TetCB 52	8,68 b	40
	2,2',4,5,5'-PenCB 101	15,3 b	49
	2,3',4,4',5'-PenCB 118	14,9 b	54
	2,2',3,4,4',5'-HexCB 138	19,6 b	46
	2,2',4,4',5,5'-HexCB 153	35,9 b	52
	2,2',3,4,4',5,5'-HepCB 180	16,4 b	57
Sum 7 PCB		118	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 09.12.2005

Encl. to measuring report: O-3479
 NILU-Sample number: 05/899
 Customer: Camp 05
 Customers sample ID: 4-11.7.05 0600-0600
 :
 Sample type: Precipitation
 Sample amount: 0,66 l
 Concentration units: pg/l
 Data files: M_041105

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
	HCb	481	b	11
	α -HCH	320	b	44
	γ -HCH	495	b	50
	2,4,4'-TriCB	28	27,8 b	40
	2,2',5,5'-TetCB	52	16,3 b	43
	2,2',4,5,5'-PenCB	101	12,4 b	56
	2,3',4,4',5-PenCB	118	12,6 b	65
	2,2',3,4,4',5'-HexCB	138	15,8 b	55
	2,2',4,4',5,5'-HexCB	153	24,0 b	61
	2,2',3,4,4',5,5'-HepCB	180	23,8 b	64
Sum 7 PCB		133		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

93



Kjeller, 09.12.2005

Encl. to measuring report: O-3479
 NILU-Sample number: 05/900
 Customer: Camp 05
 Customers sample ID: 18-25.7.05 0600-0600

:
 Sample type: Precipitation
 Sample amount: 0,88 l
 Concentration units: pg/l
 Data files: M_041105

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
HCB		213	b	15
α -HCH		256	b	50
γ -HCH		797	b	56
2,4,4'-TriCB	28	13,2	b	45
2,2',5,5'-TetCB	52	10,2	b	49
2,2',4,5,5'-PenCB	101	8,10	b	64
2,3',4,4',5-PenCB	118	7,10	b	74
2,2',3,4,4',5'-HexCB	138	12,1	b	76
2,2',4,4',5,5'-HexCB	153	13,9	b	73
2,2',3,4,4',5,5'-HepCB	180	19,6	b	79
Sum 7 PCB		84,1		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Kjeller, 09.12.2005

Encl. to measuring report: O-3479
 NILU-Sample number: 05/997
 Customer: Camp 05
 Customers sample ID: 25-31.7.05 0600-0600
 :
 Sample type: Precipitation
 Sample amount: 1,09 l
 Concentration units: pg/l
 Data files: M_041105

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
		62,5 b	37
		269 b	46
		465 b	53
2,4,4'-TriCB	28	11,7 b	54
2,2',5,5'-TetCB	52	10,7 b	55
2,2',4,5,5'-PenCB	101	13,5 b	66
2,3',4,4',5'-PenCB	118	10,8 b	74
2,2',3,4,4',5'-HexCB	138	15,0 b	79
2,2',4,4',5,5'-HexCB	153	21,0 b	75
2,2',3,4,4',5,5'-HepCB	180	35,9 b	79
Sum 7 PCB		119	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

95



Kjeller, 09.12.2005

Encl. to measuring report: O-3479
 NILU-Sample number: 05/998
 Customer: Camp 05
 Customers sample ID: 31.7.05 0600-0930
 : 31.7-1.8.05 0930-0600
 Sample type: Precipitation
 Sample amount: 1,17 l
 Concentration units: pg/l
 Data files: M_041105

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCB	38,1 b	39
α-HCH	270 b	52
γ-HCH	547 b	60
2,4,4'-TriCB 28	9,62 b	60
2,2',5,5'-TetCB 52	14,8 b	61
2,2',4,5,5'-PenCB 101	24,8 b	74
2,3',4,4',5-PenCB 118	29,9 b	82
2,2',3,4,4',5'-HexCB 138	40,7 b	90
2,2',4,4',5,5'-HexCB 153	60,4 b	82
2,2',3,4,4',5,5'-HepCB 180	16,6 b	90
Sum 7 PCB	197	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 09.12.2005

Encl. to measuring report: O-3479
 NILU-Sample number: 05/999
 Customer: Camp 05
 Customers sample ID: 1-8.8.05 0600-0600

:
 Sample type: Precipitation
 Sample amount: 0,82 l
 Concentration units: pg/l
 Data files: M_041105

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
		177 b	10
		337 b	39
		313 b	45
2,4,4'-TriCB	28	15,4 b	32
2,2',5,5'-TetCB	52	11,4 b	34
2,2',4,5,5'-PenCB	101	13,4 b	51
2,3',4,4',5'-PenCB	118	10,2 b	61
2,2',3,4,4',5'-HexCB	138	12,6 b	69
2,2',4,4',5,5'-HexCB	153	18,6 b	62
2,2',3,4,4',5,5'-HepCB	180	26,3 b	68
Sum 7 PCB		108	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

97



Kjeller, 09.12.2005

Encl. to measuring report: O-3479
 NILU-Sample number: 05/1052
 Customer: Camp 05
 Customers sample ID: 8-9.8.05 0600-0600
 : +9-15.8.05 0600-0600
 Sample type: Precipitation
 Sample amount: 1,42 l
 Concentration units: pg/l
 Data files: M_041105

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		33,0 b	38
α -HCH		330 b	50
γ -HCH		251 b	58
2,4,4'-TriCB	28	6,70 b	58
2,2',5,5'-TetCB	52	8,77 b	59
2,2',4,5,5'-PenCB	101	14,5 b	69
2,3',4,4',5-PenCB	118	21,2 b	76
2,2',3,4,4',5'-HexCB	138	26,4 b	84
2,2',4,4',5,5'-HexCB	153	41,2 b	75
2,2',3,4,4',5,5'-HepCB	180	11,1 b	81
Sum 7 PCB		130	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 31.01.2006

Encl. to measuring report: O-3497

NILU-Sample number: 05/1053 + 05/1122 + 05/1123

Customer: Camp 2005

Customers sample ID: Bi 22-25.8.05 0600-0600 (2 flasker)

: Bi 25-29.8.05 0600-0600

Sample type: Precipitation

Sample amount: 2,61 l

Concentration units: pg/l

Data files: DH839

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		49,5 b	40
α -HCH		371	44
γ -HCH		507	51
2,4,4'-TriCB	28	15,8 b	55
2,2',5,5'-TetCB	52	24,5 b	56
2,2',4,5,5'-PenCB	101	28,4 b	73
2,3',4,4',5-PenCB	118	19,6 b	75
2,2',3,4,4',5'-HexCB	138	27,9 b	75
2,2',4,4',5,5'-HexCB	153	46,5 b	74
2,2',3,4,4',5,5'-HepCB	180	13,0 b	94
Sum 7 PCB		176	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

99



Kjeller, 31.01.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/1124 + 05/1125
 Customer: Camp 2005
 Customers sample ID: Bi 29.8-2.9.05 0600-0600
 : Bi 2-5.9.05 0600-0600
 Sample type: Precipitation
 Sample amount: 1,27 l
 Concentration units: pg/l
 Data files: DH839

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		157 b	34
α -HCH		525	46
γ -HCH		2 017	53
2,4,4'-TriCB	28	12,9 b	47
2,2',5,5'-TetCB	52	21,5 b	54
2,2',4,5,5'-PenCB	101	34,0 b	61
2,3',4,4',5-PenCB	118	28,9 b	66
2,2',3,4,4',5'-HexCB	138	25,7 b	76
2,2',4,4',5,5'-HexCB	153	38,1 b	70
2,2',3,4,4',5,5'-HepCB	180	14,7 b	79
Sum 7 PCB		176	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3479
 NILU-Sample number: 05/1167
 Customer: Camp 2005
 Customers sample ID: Bi 5-12.9.05 0600-0600

Kjeller, 31.01.2006

:
 Sample type: Precipitation
 Sample amount: 0,39 l
 Concentration units: pg/l
 Data files: DH839

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
HCB		175	b	17
α -HCH		364	b	53
γ -HCH		834	b	59
2,4,4'-TriCB	28	24,7	b	43
2,2',5,5'-TetCB	52	35,6	b	50
2,2',4,5,5'-PenCB	101	52,4	b	62
2,3',4,4',5-PenCB	118	108	b	79
2,2',3,4,4',5'-HexCB	138	95,3	b	80
2,2',4,4',5,5'-HexCB	153	125	b	74
2,2',3,4,4',5,5'-HepCB	180	54,1	b	80
Sum 7 PCB		495		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

101



Kjeller, 31.01.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/1168
 Customer: Camp 2005
 Customers sample ID: Bi 12-19.9.05 0600-0600
 :
 Sample type: Precipitation
 Sample amount: 1,1 l
 Concentration units: pg/l
 Data files: DH839

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCB	35,6 b	25
α-HCH	376 b	44
γ-HCH	569 b	52
2,4,4'-TriCB 28	7,15 b	46
2,2',5,5'-TetCB 52	11,9 b	49
2,2',4,5,5'-PenCB 101	23,2 b	58
2,3',4,4',5-PenCB 118	24,7 b	61
2,2',3,4,4',5'-HexCB 138	24,6 b	67
2,2',4,4',5,5'-HexCB 153	36,5 b	63
2,2',3,4,4',5,5'-HepCB 180	11,1 b	70
Sum 7 PCB	139	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 09.03.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/1169
 Customer: Camp 05
 Customers sample ID: 19-26.9.05 0600-0600
 :
 Sample type: Precipitation
 Sample amount: 0,485 l
 Concentration units: pg/l
 Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		209 b	41
α -HCH		276 b	55
γ -HCH		621 b	60
2,4,4'-TriCB	28	33,2 b	65
2,2',5,5'-TetCB	52	72,2 b	70
2,2',4,5,5'-PenCB	101	92,1 b	81
2,3',4,4',5-PenCB	118	73,7 b	85
2,2',3,4,4',5'-HexCB	138	79,1 b	102
2,2',4,4',5,5'-HexCB	153	110 b	102
2,2',3,4,4',5,5'-HepCB	180	38,4 b	94
Sum 7 PCB		498	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

103



Kjeller, 31.01.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/1170
 Customer: Camp 2005
 Customers sample ID: Bi 26-29.9.05 0600-0600
 :
 Sample type: Precipitation
 Sample amount: 1,08 l
 Concentration units: pg/l
 Data files: DH839

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		48,6 b	27
α -HCH		374 b	47
γ -HCH		477 b	55
2,4,4'-TriCB	28	12,9 b	51
2,2',5,5'-TetCB	52	17,6 b	51
2,2',4,5,5'-PenCB	101	24,5 b	62
2,3',4,4',5-PenCB	118	22,4 b	67
2,2',3,4,4',5'-HexCB	138	17,6 b	70
2,2',4,4',5,5'-HexCB	153	30,8 b	66
2,2',3,4,4',5,5'-HepCB	180	16,1 b	82
Sum 7 PCB		142	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Kjeller, 31.01.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/1171
 Customer: Camp 2005
 Customers sample ID: Bi 29-30.9.05 0600-0600

:
 Sample type: Precipitation
 Sample amount: 0,98 l
 Concentration units: pg/l
 Data files: DH839

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
HCB		53,2	b	34
α -HCH		479	b	54
γ -HCH		336	b	61
2,4,4'-TriCB	28	14,8	b	57
2,2',5,5'-TetCB	52	38,9	b	55
2,2',4,5,5'-PenCB	101	79,4	b	65
2,3',4,4',5-PenCB	118	47,8	b	69
2,2',3,4,4',5'-HexCB	138	39,8	b	71
2,2',4,4',5,5'-HexCB	153	75,7	b	66
2,2',3,4,4',5,5'-HepCB	180	12,8	b	80
Sum 7 PCB		309		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

105



Kjeller, 09.03.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/1172 + 1173
 Customer: Camp 05
 Customers sample ID: 30.9-3.10.05 0600-0600
 :
 Sample type: Precipitation
 Sample amount: 2,32 l
 Concentration units: pg/l
 Data files: M_210206

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCb	40,6 b	42
α-HCH	205 b	57
γ-HCH	596	62
2,4,4'-TriCB 28	9,77 b	64
2,2',5,5'-TetCB 52	19,4 b	68
2,2',4,5,5'-PenCB 101	24,3 b	79
2,3',4,4',5-PenCB 118	19,6 b	87
2,2',3,4,4',5'-HexCB 138	18,3 b	97
2,2',4,4',5,5'-HexCB 153	27,7 b	98
2,2',3,4,4',5,5'-HepCB 180	8,29 b	94
Sum 7 PCB	127	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Kjeller, 09.03.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/1289 + 1290a
 Customer: Camp 05
 Customers sample ID: 17-21.10.05 0600-1730
 :
 Sample type: Precipitation
 Sample amount: 2,03 l
 Concentration units: pg/l
 Data files: M_210206

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCB	63,2 b	43
α -HCH	301 b	55
γ -HCH	900	60
2,4,4'-TriCB 28	9,66 b	67
2,2',5,5'-TetCB 52	18,6 b	68
2,2',4,5,5'-PenCB 101	35,9 b	79
2,3',4,4',5-PenCB 118	47,5 b	86
2,2',3,4,4',5'-HexCB 138	48,5 b	100
2,2',4,4',5,5'-HexCB 153	91,1 b	87
2,2',3,4,4',5,5'-HepCB 180	25,2 b	98
Sum 7 PCB	276	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

107



Kjeller, 03.05.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/1290 b
 Customer: Camp 05
 Customers sample ID: 21-24.10.05 1730-0600
 :
 Sample type: Precipitation
 Sample amount: 1,08 l
 Concentration units: pg/l
 Data files: M_210206B

Compound		Concentration		Recovery
Structure IUPAC-no.		pg/l		%
HCB		60,5	b	39
α-HCH		299	b	53
γ-HCH		489	b	60
2,4,4'-TriCB	28	11,4	b	60
2,2',5,5'-TetCB	52	23,0	b	62
2,2',4,5,5'-PenCB	101	31,0	b	75
2,3',4,4',5-PenCB	118	25,4	b	83
2,2',3,4,4',5'-HexCB	138	24,3	b	91
2,2',4,4',5,5'-HexCB	153	43,0	b	93
2,2',3,4,4',5,5'-HepCB	180	11,8	b	91
Sum 7 PCB		170		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

1. versjon 10.09.2004 GSK

Results of HCH and 7 PCB



Kjeller, 09.03.2006

Encl. to measuring report: O-3479

NILU-Sample number: 05/1336

Customer: Camp 05

Customers sample ID: 24-25.10.05 0600-2230

:

Sample type: Precipitation

Sample amount: 2,04 l

Concentration units: pg/l

Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		64,9 b	39
α -HCH		330	50
γ -HCH		359 b	55
2,4,4'-TriCB	28	12,9 b	60
2,2',5,5'-TetCB	52	41,6 b	63
2,2',4,5,5'-PenCB	101	78,4 b	76
2,3',4,4',5-PenCB	118	87,1 b	83
2,2',3,4,4',5'-HexCB	138	145 b	96
2,2',4,4',5,5'-HexCB	153	203 b	89
2,2',3,4,4',5,5'-HepCB	180	74,0 b	90
Sum 7 PCB		642	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

109



Kjeller, 09.03.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/1379 + 1380
 Customer: Camp 05
 Customers sample ID: 25-31.10.05 2230-0700
 :
 Sample type: Precipitation
 Sample amount: 2,25 l
 Concentration units: pg/l
 Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
	HCB	35,9 b	36
	α-HCH	228 b	48
	γ-HCH	872	53
2,4,4'-TriCB	28	7,41 b	56
2,2',5,5'-TetCB	52	17,2 b	59
2,2',4,5,5'-PenCB	101	20,5 b	71
2,3',4,4',5-PenCB	118	13,1 b	78
2,2',3,4,4',5'-HexCB	138	16,1 b	92
2,2',4,4',5,5'-HexCB	153	22,6 b	80
2,2',3,4,4',5,5'-HepCB	180	10,8 b	91
Sum 7 PCB		108	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 09.03.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/1381+1382
 Customer: Camp 05
 Customers sample ID: 31.10-3.11.05 0700-0630
 :
 Sample type: Precipitation
 Sample amount: 3,25 l
 Concentration units: pg/l
 Data files: M_210206

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		70,9 b	42
α -HCH		237	56
γ -HCH		1 352	61
2,4,4'-TriCB	28	10,7 b	63
2,2',5,5'-TetCB	52	21,2 b	67
2,2',4,5,5'-PenCB	101	51,1 b	81
2,3',4,4',5-PenCB	118	30,5 b	88
2,2',3,4,4',5'-HexCB	138	47,3 b	98
2,2',4,4',5,5'-HexCB	153	74,6 b	99
2,2',3,4,4',5,5'-HepCB	180	21,3 b	97
Sum 7 PCB		257	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

111



Kjeller, 09.03.2006

Encl. to measuring report: O-3480
 NILU-Sample number: 05/1453
 Customer: Camp 05
 Customers sample ID: 3-6.11.05 0630-0700
 :
 Sample type: Precipitation
 Sample amount: 3,16 l
 Concentration units: pg/l
 Data files: M_210206

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCb	81,2 b	45
α -HCH	241	63
γ -HCH	745	70
2,4,4'-TriCB 28	5,31 b	69
2,2',5,5'-TetCB 52	12,4 b	72
2,2',4,5,5'-PenCB 101	16,6 b	86
2,3',4,4',5-PenCB 118	13,0 b	95
2,2',3,4,4',5'-HexCB 138	21,3 b	106
2,2',4,4',5,5'-HexCB 153	30,2 b	103
2,2',3,4,4',5,5'-HepCB 180	11,7 b	104
Sum 7 PCB	111	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3479
 NILU-Sample number: 05/1454
 Customer: Camp 05
 Customers sample ID: 6-7.11.05 0700-0700
 :
 Sample type: Precipitation
 Sample amount: 2,17 l
 Concentration units: pg/l
 Data files: M_210206

Kjeller, 09.03.2006

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
	HCB	36,5 b	50
	α-HCH	180 b	63
	γ-HCH	679	68
2,4,4'-TriCB	28	8,90 b	70
2,2',5,5'-TetCB	52	17,8 b	73
2,2',4,5,5'-PenCB	101	28,8 b	86
2,3',4,4',5-PenCB	118	17,8 b	95
2,2',3,4,4',5'-HexCB	138	17,1 b	104
2,2',4,4',5,5'-HexCB	153	31,0 b	107
2,2',3,4,4',5,5'-HepCB	180	6,17 b	103
Sum 7 PCB		128	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

113



Kjeller, 09.03.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/1455
 Customer: Camp 05
 Customers sample ID: 7-14.11.05 0700-0700
 :
 Sample type: Precipitation
 Sample amount: 2,14 l
 Concentration units: pg/l
 Data files: DH856

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
HCB		101	b	35
α -HCH		265	b	53
γ -HCH		408		59
2,4,4'-TriCB	28	6,78	b	59
2,2',5,5'-TetCB	52	9,36	b	71
2,2',4,5,5'-PenCB	101	13,7	b	77
2,3',4,4',5-PenCB	118	13,0	b	84
2,2',3,4,4',5'-HexCB	138	11,3	b	95
2,2',4,4',5,5'-HexCB	153	15,8	b	93
2,2',3,4,4',5,5'-HepCB	180	< 3,37	b	112
Sum 7 PCB		73,3		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Kjeller, 09.03.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/1627
 Customer: Camp 05
 Customers sample ID: 14-21.11.05 0700-0700

:
 Sample type: Precipitation
 Sample amount: 0,42 l
 Concentration units: pg/l
 Data files: DH856

Compound		Concentration			Recovery
Structure	IUPAC-no.	pg/l			%
	HCb	1 621	b		46
	α-HCH	605	b		54
	γ-HCH	332	b		61
2,4,4'-TriCB	28	55,3	b		61
2,2',5,5'-TetCB	52	< 16,4	b		60
2,2',4,5,5'-PenCB	101	< 28,4	b		71
2,3',4,4',5-PenCB	118	< 24,8	b		75
2,2',3,4,4',5'-HexCB	138	< 14,9	b		84
2,2',4,4',5,5'-HexCB	153	45,7	b		72
2,2',3,4,4',5,5'-HepCB	180	< 23,3	b		76
Sum 7 PCB		209			

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

115



Kjeller, 09.03.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 05/1628
 Customer: Camp 05
 Customers sample ID: 21-28.11.05 0700-0700
 :
 Sample type: Precipitation
 Sample amount: 2,94 l
 Concentration units: pg/l
 Data files: DH856

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
	HCB	473	36
	α-HCH	384	46
	γ-HCH	436	52
2,4,4'-TriCB	28	40,5 b	61
2,2',5,5'-TetCB	52	32,2 b	58
2,2',4,5,5'-PenCB	101	27,4 b	82
2,3',4,4',5-PenCB	118	25,9 b	96
2,2',3,4,4',5'-HexCB	138	31,2 b	102
2,2',4,4',5,5'-HexCB	153	39,3 b	84
2,2',3,4,4',5,5'-HepCB	180	30,4 b	97
Sum 7 PCB		227	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

- <: Lower than detection limit at signal-to-noise 3 to 1
- i: Isotope ratio deviates more than 20 % from theoretical value.
This may be due to instrumental noise or/and chemical interference
- b: Lower than 10 times method blank.
- g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3479
 NILU-Sample number: 05/1670
 Customer: Camp 05
 Customers sample ID: 28.11-5.12.05 0700-0700
 :
 Sample type: Precipitation
 Sample amount: 2,43 l
 Concentration units: pg/l
 Data files: DH856

Kjeller, 09.03.2006

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
HCB		241	b	37
α-HCH		302		47
γ-HCH		339	b	53
2,4,4'-TriCB	28	18,7	b	63
2,2',5,5'-TetCB	52	15,6	bi	58
2,2',4,5,5'-PenCB	101	14,5	b	78
2,3',4,4',5-PenCB	118	17,9	b	91
2,2',3,4,4',5'-HexCB	138	27,1	b	97
2,2',4,4',5,5'-HexCB	153	31,2	b	80
2,2',3,4,4',5,5'-HepCB	180	31,3	b	94
Sum 7 PCB		156		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

117



Encl. to measuring report: O-3479
 NILU-Sample number: 06/18
 Customer: Camp 05
 Customers sample ID: 5-12.12.05 0700-0700
 :
 Sample type: Precipitation
 Sample amount: 1,65 l
 Concentration units: pg/l
 Data files: DH856

Kjeller, 09.03.2006

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
HCB		238	b	29
α -HCH		286	b	50
γ -HCH		321	b	57
2,4,4'-TriCB	28	18,0	b	63
2,2',5,5'-TetCB	52	16,0	b	58
2,2',4,5,5'-PenCB	101	11,5	b	73
2,3',4,4',5-PenCB	118	< 3,74	b	82
2,2',3,4,4',5'-HexCB	138	11,1	b	90
2,2',4,4',5,5'-HexCB	153	16,0	b	72
2,2',3,4,4',5,5'-HepCB	180	< 3,92	b	88
Sum 7 PCB		80,2		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB



Encl. to measuring report: O-3479
 NILU-Sample number: 06/19
 Customer: Camp 05
 Customers sample ID: 19-26.12.05 0700-0700
 :
 Sample type: Precipitation
 Sample amount: 0,65 l
 Concentration units: pg/l
 Data files: DH856

Kjeller, 09.03.2006

Compound		Concentration		Recovery
Structure	IUPAC-no.	pg/l		%
HCB		755	b	38
α -HCH		254	b	66
γ -HCH		185	b	76
2,4,4'-TriCB	28	40,1	b	67
2,2',5,5'-TetCB	52	31,8	b	82
2,2',4,5,5'-PenCB	101	46,3	b	83
2,3',4,4',5-PenCB	118	86,0	b	91
2,2',3,4,4',5'-HexCB	138	74,8	b	109
2,2',4,4',5,5'-HexCB	153	93,9	b	100
2,2',3,4,4',5,5'-HepCB	180	20,1	bi	109
Sum 7 PCB		393		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Results of HCH and 7 PCB

119



Kjeller, 09.03.2006

Encl. to measuring report: O-3479
 NILU-Sample number: 06/109
 Customer: Camp 05
 Customers sample ID: 26.12-2.1.06

:
 Sample type: Precipitation
 Sample amount: 0,78 l
 Concentration units: pg/l
 Data files: DH856

Compound Structure IUPAC-no.	Concentration pg/l	Recovery %
HCb	192 b	35
α-HCH	150 b	60
γ-HCH	222 b	70
2,4,4'-TriCB 28	31,3 b	67
2,2',5,5'-TetCB 52	32,5 b	75
2,2',4,5,5'-PenCB 101	81,8 b	80
2,3',4,4',5-PenCB 118	100 b	88
2,2',3,4,4',5'-HexCB 138	84,5 b	102
2,2',4,4',5,5'-HexCB 153	98,0 b	96
2,2',3,4,4',5,5'-HepCB 180	27,3 b	110
Sum 7 PCB	455	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

Vedlegg 3

Organiske forbindelser i luft i Ny-Ålesund (O-3518)

Målerapport nr. O-3518

Oppdragsgiver: Statens forurensningstilsyn
Postboks 8100 Dep
0032 OSLO

Prosjekt nr.: O-93062

Prøvetaking:

Sted: Ny-Ålesund
Ansvar: NILU/Norsk Polarinstitut
Kommentar:

Prøveinformasjon:

NILU prøvenr.	Kundens prøvermerking			Prøvetype	Prøven mottatt	Prøven analysert
05/285	3-5.1.05	1305-0745	160-147	Luft	14.02.05	16.08.05 – 18.10.05
05/289	12-14.1.05	0812-0807	160-155	Luft	14.02.05	16.08.05 – 18.10.05
05/292	19-21.1.05	0802-0924	160-157	Luft	14.02.05	16.08.05 – 18.10.05
05/294	26-28.1.05	0943-0755	160-156	Luft	14.02.05	16.08.05 – 18.10.05
05/296	31.1-2.2.05	0728-0803	160-153	Luft	14.02.05	16.08.05 – 18.10.05
05/533	7-9.2.05	0724-0756	160-142	Luft	01.04.05	18.08.05 – 18.10.05
05/537	16-18.2.05	0852-0759	160-155	Luft	01.04.05	18.08.05 – 18.10.05
05/539	21-23.2.05	0904-0836	160-164	Luft	01.04.05	18.08.05 – 18.10.05
05/542	28.2-2.3.05	0808-0916	160-152	Luft	01.04.05	18.08.05 – 18.10.05
05/546	9-11.3.05	1015-0856	160-159	Luft	01.04.05	18.08.05 – 18.10.05
05/548	14-16.3.05	0903-0802	160-155	Luft	01.04.05	18.08.05 – 18.10.05
05/680	21-23.3.05	0810-0817	160-138	Luft	19.05.05	22.08.05 – 18.10.05
05/682	28-30.3.05	1234-0745	160-150	Luft	19.05.05	22.08.05 – 18.10.05
05/684	4-6.4.04	0702-0805	160-148	Luft	19.05.05	22.08.05 – 18.10.05
05/687	13-15.4.05	0741-0725	160-157	Luft	19.05.05	22.08.05 – 18.10.05
05/689	18-20.4.05	0707-0730	160-160	Luft	19.05.05	22.08.05 – 18.10.05
05/691	25-27.4.05	0703-0651	160-154	Luft	19.05.05	22.08.05 – 18.10.05
05/972	2-4.5.05	0742-0732	160-160	Luft	11.08.05	24.08.05 – 18.10.05
05/973	9-11.5.05	0741-1131	160-144	Luft	11.08.05	24.08.05 – 18.10.05
05/974	16-18.5.05	0923-0711	160-157	Luft	11.08.05	24.08.05 – 18.10.05
05/975	23-25.5.05	0800-0736	160-152	Luft	11.08.05	24.08.05 – 18.10.05
05/976	30.5-1.6.05	0710-0737	160-154	Luft	11.08.05	26.08.05 – 18.10.05
05/977	6-8.6.05	0740-0730	160-152	Luft	11.08.05	26.08.05 – 18.10.05
05/978	13-15.6.05	0700-0738	160-154	Luft	11.08.05	26.08.05 – 18.10.05
05/979	20-22.6.05	0740-0701	160-147	Luft	11.08.05	26.08.05 – 18.10.05
05/980	27-29.6.05	0702-0732	160-156	Luft	11.08.05	26.08.05 – 18.10.05
05/981	4-6.7.05	1315-0900	160-150	Luft	11.08.05	30.08.05 – 18.10.05
05/982	11-13.7.05	1430-1418	160-158	Luft	11.08.05	30.08.05 – 18.10.05
05/983	18-20.7.05	0731-0900	160-157	Luft	11.08.05	26.08.05 – 18.10.05
05/1178	25-27.7.05	0811-0914	160-155	Luft	11.10.05	27.10.05 – 15.12.05
05/1179	1-3.8.05	0830-0715	160-158	Luft	11.10.05	27.10.05 – 15.12.05
05/1180	8-10.8.05	0718-0657	160-150	Luft	11.10.05	27.10.05 – 15.12.05
05/1181	15-17.8.05	0718-0657	160-154	Luft	11.10.05	27.10.05 – 15.12.05
05/1181	22-24.8.05	0810-0741	160-155	Luft	11.10.05	27.10.05 – 15.12.05
05/1183	29-31.8.05	0723-0744	160-156	Luft	11.10.05	04.01.06 – 20.02.06
05/1184	5-7.9.05	0725-0705	160-156	Luft	11.10.05	04.01.06 – 20.02.06
05/1185	12-14.9.05	0743-0707	160-154	Luft	11.10.05	04.01.06 – 20.02.06

05/1186	19-21.9.05	0707-0710	160-156	Luft	11.10.05	13.01.06 – 17.02.06
05/1187	26-28.9.05	0718-0903	160-156	Luft	11.10.05	13.01.06 – 17.02.06
05/1653	3-5.10.05	0720-0718	160-156	Luft	07.12.05	17.01.06 – 06.02.06
05/1654	10-12.10.05	0744-1334	160-154	Luft	07.12.05	17.01.06 – 06.02.06
05/1655	17-19.10.05	0814-0811	160-160	Luft	07.12.05	17.01.06 – 20.02.06
05/1656	24-26.10.05	0743-0746	160-154	Luft	07.12.05	17.01.06 – 20.02.06
05/1657	31.10-2.11.05	0854-0814	160-146	Luft	07.12.05	17.01.06 – 20.02.06
05/1658	7-9.11.05	0809-0835	160-140	Luft	07.12.05	17.01.06 – 20.02.06
05/1659	14-16.11.05	0736-0829	160-164	Luft	07.12.05	19.01.06 – 17.02.06
05/1660	21-23.11.05	0906-0817	160-155	Luft	07.12.05	19.01.06 – 21.02.06
06/236	28-30.11.05	0836-0858	160-156	Luft	15.02.06	21.02.06 – 07.03.06
06/237	5-7.12.05	0734-0902	160-151	Luft	15.02.06	21.02.06 – 07.03.06
06/238	12-14.12.05	0753-0633	160-160	Luft	15.02.06	21.02.06 – 07.03.06
06/239	19-21.12.05	0850-0810	160-156	Luft	15.02.06	21.02.06 – 07.03.06
06/240	26-28.12.05	0830-0615	160-158	Luft	15.02.06	21.02.06 – 07.03.06

Analysér:

Utført av: Norsk institutt for luftforskning
 Postboks 100
 N-2027 KJELLER

Målemetode: NILU-O-2 ("Bestemmelse av tungflyktige persistente organiske forbindelser – pesticider og PCB'er")

Kommentarer:

Godkjenning: Kjeller, 20. mars 2006



Ole-Anders Braathen
 Avd. direktør, Miljøkjemi

Vedlegg: Pesticid/DDT og PCB analyser : 104 sider
 Målerapporten og vedleggene omfatter totalt 106 sider

Måleresultatene gjelder bare de prøvene som er analysert. Denne rapporten skal ikke gjengis i utdrag, uten skriftlig godkjenning fra laboratoriet.

Results of Pesticid and DDT Analysis

125



Kjeller, 30.09.2005

Encl. to measuring report : O-3518
NILU-Sample number : 05/285
Customer : Amap 05
Customers sample ID : 3-5.1.05 1305-0745
: 160-147
Sample type : Air
Sample amount : 989 m3
Concentration units : pg/m3
Data files : M_02-09-05 + TB_0106.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,32	93
cis-Chlordane	0,51	
trans-Nonachlor	0,45	88
cis-Nonachlor	0,03	
α -HCH	17,3	41
γ -HCH	3,28	48
o,p'-DDE	0,22	
p,p'-DDE	1,61 b	76
o,p'-DDD	0,03 b	
p,p'-DDD	0,03 b	
o,p'-DDT	0,36 b	
p,p'-DDT	0,22 b	75
Sum DDT	2,48	

< : Lower than detection limit at signal-to-noise 3 to 1
i : Isotope ratio deviates more than 20 % from theoretical value
This may be due to instrumental noise or/and chemical interference
b : Lower than 10 times method blank
g : Recovery is not according to NILUs quality criteria

126 **Results of Pesticid and DDT Analysis**

Kjeller, 30.09.2005

Encl. to measuring report : O-3518
 NILU-Sample number : 05/289
 Customer : Amap 05
 Customers sample ID : 12-14.1.05 0812-0807
 : 160-155
 Sample type : Air
 Sample amount : 1138 m3
 Concentration units : pg/m3
 Data files : M_02-09-05

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,33	89
cis-Chlordane	0,53	
trans-Nonachlor	0,45	86
cis-Nonachlor	0,03	
α-HCH	20,7	37
γ-HCH	3,94	40
o,p'-DDE	0,33	
p,p'-DDE	3,01	79
o,p'-DDD	0,06	
p,p'-DDD	0,06 b	
o,p'-DDT	0,64	
p,p'-DDT	0,40	80
Sum DDT	4,50	

< : Lower than detection limit at signal-to-noise 3 to 1

i : Isotope ratio deviates more than 20 % from theoretical value

This may be due to instrumental noise or/and chemical interference

b : Lower than 10 times method blank

g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

127



Kjeller, 30.09.2005

Encl. to measuring report : O-3518
NILU-Sample number : 05/292
Customer : Amap 05
Customers sample ID : 19-21.1.05 0802-0924
: 160-157
Sample type : Air
Sample amount : 1181 m3
Concentration units : pg/m3
Data files : M_02-09-05 + TB_0108.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,38	85
cis-Chlordane	0,58	
trans-Nonachlor	0,56	80
cis-Nonachlor	0,04	
α -HCH	12,5	38
γ -HCH	2,75	46
o,p'-DDE	0,21	
p,p'-DDE	1,64	72
o,p'-DDD	0,04 b	
p,p'-DDD	0,03 b	
o,p'-DDT	0,40	
p,p'-DDT	0,21 b	84
Sum DDT	2,54	

< : Lower than detection limit at signal-to-noise 3 to 1
i : Isotope ratio deviates more than 20 % from theoretical value
This may be due to instrumental noise or/and chemical interference
b : Lower than 10 times method blank
g : Recovery is not according to NILUs quality criteria

128 **Results of Pesticid and DDT Analysis**

Kjeller, 30.09.2005

Encl. to measuring report : O-3518
NILU-Sample number : 05/294
Customer : Amap 05
Customers sample ID : 26-28.1.05 0943-0755
: 160-156
Sample type : Air
Sample amount : 1100 m3
Concentration units : pg/m3
Data files : M-02-09-05 + TB_0111.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,49	94
cis-Chlordane	0,73	
trans-Nonachlor	0,63	93
cis-Nonachlor	0,05	
α -HCH	15,7	38
γ -HCH	2,65	51
o,p'-DDE	0,24	
p,p'-DDE	1,26 b	73
o,p'-DDD	0,04 b	
p,p'-DDD	0,02 b	
o,p'-DDT	0,44	
p,p'-DDT	0,18 b	81
Sum DDT	2,18	

< : Lower than detection limit at signal-to-noise 3 to 1
i : Isotope ratio deviates more than 20 % from theoretical value
This may be due to instrumental noise or/and chemical interference
b : Lower than 10 times method blank
g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

129



Kjeller, 30.09.2005

Encl. to measuring report : O-3518
NILU-Sample number : 05/296
Customer : Amap 05
Customers sample ID : 31.1-2.2.05 0728-0803
: 160-153
Sample type : Air
Sample amount : 1147 m3
Concentration units : pg/m3
Data files : M_02-09-05 + TB_0112.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,25	89
cis-Chlordane	0,39	
trans-Nonachlor	0,34	86
cis-Nonachlor	0,02	
α -HCH	13,8	39
γ -HCH	2,77	41
o,p'-DDE	0,22	
p,p'-DDE	1,89	69
o,p'-DDD	0,03 bi	
p,p'-DDD	0,04 b	
o,p'-DDT	0,39	
p,p'-DDT	0,22 b	73
Sum DDT	2,79	

< : Lower than detection limit at signal-to-noise 3 to 1

i : Isotope ratio deviates more than 20 % from theoretical value

This may be due to instrumental noise or/and chemical interference

b : Lower than 10 times method blank

g : Recovery is not according to NILUs quality criteria

130 Results of Pesticid and DDT Analysis



Kjeller, 30.09.2005

Encl. to measuring report : O-3518
 NILU-Sample number : 05/533
 Customer : Amap 05
 Customers sample ID : 7-9.2.05 0724-0756
 : 160-142
 Sample type : Air
 Sample amount : 1103 m3
 Concentration units : pg/m3
 Data files : M_02-09-05 + TB_0113.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,55	91
cis-Chlordane	0,82	
trans-Nonachlor	0,78	85
cis-Nonachlor	0,06	
α -HCH	13,1	38
γ -HCH	3,46	45
o,p'-DDE	0,22	
p,p'-DDE	1,35 b	72
o,p'-DDD	0,05 b	
p,p'-DDD	0,04 b	
o,p'-DDT	0,50	
p,p'-DDT	0,23 b	89
Sum DDT	2,39	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

131



Kjeller, 30.09.2005

Encl. to measuring report : O-3518
NILU-Sample number : 05/537
Customer : Amap 05
Customers sample ID : 16-18.2.05 0852-0759
: 160-155
Sample type : Air
Sample amount : 1119 m3
Concentration units : pg/m3
Data files : M_02-09-05 + TB_0114.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,38	89
cis-Chlordane	0,58	
trans-Nonachlor	0,56	83
cis-Nonachlor	0,06	
α -HCH	8,13	44
γ -HCH	1,07 b	52
o,p'-DDE	0,16	
p,p'-DDE	0,76 b	71
o,p'-DDD	0,03 b	
p,p'-DDD	0,03 b	
o,p'-DDT	0,25 b	
p,p'-DDT	0,09 b	90
Sum DDT	1,32	

< : Lower than detection limit at signal-to-noise 3 to 1
i : Isotope ratio deviates more than 20 % from theoretical value
This may be due to instrumental noise or/and chemical interference
b : Lower than 10 times method blank
g : Recovery is not according to NILUs quality criteria

132 Results of Pesticid and DDT Analysis



Kjeller, 30.09.2005

Encl. to measuring report : O-3518
 NILU-Sample number : 05/539
 Customer : Amap 05
 Customers sample ID : 21-23.2.05 0904-0836
 : 160-164
 Sample type : Air
 Sample amount : 1159 m3
 Concentration units : pg/m3
 Data files : M_02-09-05 + TB_0116.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,44	96
cis-Chlordane	0,62	
trans-Nonachlor	0,60	91
cis-Nonachlor	0,06	
α -HCH	12,6	45
γ -HCH	1,59 b	53
o,p'-DDE	0,14	
p,p'-DDE	0,61 b	75
o,p'-DDD	0,03 b	
p,p'-DDD	0,07 b	
o,p'-DDT	0,28 b	
p,p'-DDT	0,10 b	82
Sum DDT	1,24	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

133



Kjeller, 30.09.2005

Encl. to measuring report : O-3518
 NILU-Sample number : 05/542
 Customer : Amap 05
 Customers sample ID : 28.2-2.3.05 0808-0916
 : 160-152
 Sample type : Air
 Sample amount : 1154 m3
 Concentration units : pg/m3
 Data files : M_02-09-05 + RTB_0117.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,34	92
cis-Chlordane	0,54	
trans-Nonachlor	0,49	92
cis-Nonachlor	0,03	
α-HCH	13,4	47
γ-HCH	1,67 b	54
o,p'-DDE	0,12 b	
p,p'-DDE	0,76 b	73
o,p'-DDD	0,04 b	
p,p'-DDD	0,15 b	
o,p'-DDT	0,26 b	
p,p'-DDT	0,25	88
Sum DDT	1,57	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

134 Results of Pesticid and DDT Analysis



Kjeller, 30.09.2005

Encl. to measuring report : O-3518
 NILU-Sample number : 05/546
 Customer : Amap 05
 Customers sample ID : 9-11.3.05 1015-0856
 : 160-159
 Sample type : Air
 Sample amount : 1123 m3
 Concentration units : pg/m3
 Data files : M_02-09-05 + TB_0118.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,42	90
cis-Chlordane	0,61	
trans-Nonachlor	0,64	85
cis-Nonachlor	0,03	
α -HCH	14,4	41
γ -HCH	2,00 b	50
o,p'-DDE	0,13	
p,p'-DDE	0,42 b	72
o,p'-DDD	0,02 b	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,26 b	
p,p'-DDT	0,08 b	85
Sum DDT	0,93	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

135



Kjeller, 30.09.2005

Encl. to measuring report : O-3518
 NILU-Sample number : 05/548
 Customer : Amap 05
 Customers sample ID : 14-16.3.05 0903-0802
 : 160-155
 Sample type : Air
 Sample amount : 1116 m3
 Concentration units : pg/m3
 Data files : M_02-09-05 + TB_0119.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,39	85
cis-Chlordane	0,63	
trans-Nonachlor	0,52	85
cis-Nonachlor	0,02	
α -HCH	17,6	45
γ -HCH	2,81	51
o,p'-DDE	0,15	
p,p'-DDE	0,54 b	69
o,p'-DDD	0,01 b	
p,p'-DDD	0,02 b	
o,p'-DDT	0,30 b	
p,p'-DDT	0,10 b	84
Sum DDT	1,13	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

136 Results of Pesticid and DDT Analysis



Kjeller, 04.10.2005

Encl. to measuring report : O-3518
 NILU-Sample number : 05/680
 Customer : Amap 05
 Customers sample ID : 21-23.3.05 0810-0817
 : 160-138
 Sample type : Air
 Sample amount : 1080 m3
 Concentration units : pg/m3
 Data files : M_14-09-05 + TB_0192.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,49	86
cis-Chlordane	0,83	
trans-Nonachlor	0,77	88
cis-Nonachlor	0,05	
α -HCH	14,9	42
γ -HCH	2,04 b	54
o,p'-DDE	0,12 b	
p,p'-DDE	0,42 b	73
o,p'-DDD	0,02 b	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,30 b	
p,p'-DDT	0,08 b	84
Sum DDT	0,96	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

137



Kjeller, 04.10.2005

Encl. to measuring report : O-3518
NILU-Sample number : 05/682
Customer : Amap 05
Customers sample ID : 28-30.3.05 1234-0745
 : 160-150
Sample type : Air
Sample amount : 1009 m3
Concentration units : pg/m3
Data files : M_14-09-05 + TB_0193.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,50	86
cis-Chlordane	0,85	
trans-Nonachlor	0,79	87
cis-Nonachlor	0,07 i	
α -HCH	13,1	38
γ -HCH	2,28 b	57
o,p'-DDE	0,12 b	
p,p'-DDE	0,43 b	70
o,p'-DDD	0,02 b	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,24 b	
p,p'-DDT	0,09 b	84
Sum DDT	0,93	

< : Lower than detection limit at signal-to-noise 3 to 1
i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
b : Lower than 10 times method blank
g : Recovery is not according to NILUs quality criteria

138 **Results of Pesticid and DDT Analysis**

Encl. to measuring report : O-3518
 NILU-Sample number : 05/684
 Customer : Amap 05
 Customers sample ID : 4-6.4.05 0702-0805
 : 160-148
 Sample type : Air
 Sample amount : 1139 m3
 Concentration units : pg/m3
 Data files : M_14-09-05 + TB_0194.D

Kjeller, 29.09.2005

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,23	84
cis-Chlordane	0,43	
trans-Nonachlor	0,40	85
cis-Nonachlor	< 0,03	
α -HCH	17,0	47
γ -HCH	2,71	54
o,p'-DDE	0,07 b	
p,p'-DDE	0,25 b	72
o,p'-DDD	0,01 b	
p,p'-DDD	0,02 b	
o,p'-DDT	0,15 bi	
p,p'-DDT	0,06 b	78
Sum DDT	0,56	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

139



Kjeller, 04.10.2005

Encl. to measuring report : O-3518
NILU-Sample number : 05/687
Customer : Amap 05
Customers sample ID : 13-15.4.05 0741-0725
: 160-157
Sample type : Air
Sample amount : 1140 m3
Concentration units : pg/m3
Data files : M_14-09-05 + TB_0195.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,23	94
cis-Chlordane	0,51	
trans-Nonachlor	0,49	96
cis-Nonachlor	< 0,02	
α -HCH	19,1	45
γ -HCH	3,64	54
o,p'-DDE	0,08 b	
p,p'-DDE	0,26 b	76
o,p'-DDD	0,01 b	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,18 b	
p,p'-DDT	0,07 b	92
Sum DDT	0,63	

< : Lower than detection limit at signal-to-noise 3 to 1
i : Isotope ratio deviates more than 20 % from theoretical value
This may be due to instrumental noise or/and chemical interference
b : Lower than 10 times method blank
g : Recovery is not according to NILUs quality criteria

140 Results of Pesticid and DDT Analysis



Encl. to measuring report : O-3518
 NILU-Sample number : 05/689
 Customer : Amap 05
 Customers sample ID : 18-20.4.05 0707-0730
 : 160-160
 Sample type : Air
 Sample amount : 1166 m3
 Concentration units : pg/m3
 Data files : M_14-09-05 + TB_0197.D

Kjeller, 04.10.2005

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,44	86
cis-Chlordane	0,90	
trans-Nonachlor	0,88	85
cis-Nonachlor	0,07	
α -HCH	13,3	34
γ -HCH	2,71	52
o,p'-DDE	0,11 b	
p,p'-DDE	0,47 b	74
o,p'-DDD	0,03 b	
p,p'-DDD	0,03 bi	
o,p'-DDT	0,25 b	
p,p'-DDT	0,09 b	83
Sum DDT	0,96	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

141



Kjeller, 29.09.2005

Encl. to measuring report : O-3518
NILU-Sample number : 05/691
Customer : Amap 05
Customers sample ID : 25-27.4.05 0703-0651
: 160-154
Sample type : Air
Sample amount : 1130 m3
Concentration units : pg/m3
Data files : M_14-09-05 + TB_0198.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,23	82
cis-Chlordane	0,57	
trans-Nonachlor	0,54	83
cis-Nonachlor	< 0,02	
α -HCH	21,2	46
γ -HCH	3,68	53
o,p'-DDE	0,03 b	
p,p'-DDE	0,06 b	74
o,p'-DDD	< 0,01	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,11 bi	
p,p'-DDT	0,02 b	84
Sum DDT	0,26	

< : Lower than detection limit at signal-to-noise 3 to 1

i : Isotope ratio deviates more than 20 % from theoretical value

This may be due to instrumental noise or/and chemical interference

b : Lower than 10 times method blank

g : Recovery is not according to NILUs quality criteria

142 **Results of Pesticid and DDT Analysis**

Kjeller, 29.09.2005

Encl. to measuring report : O-3518
 NILU-Sample number : 05/972
 Customer : Amap 05
 Customers sample ID : 2-4.5.05 0742-0732
 : 160-160
 Sample type : Air
 Sample amount : 1152 m3
 Concentration units : pg/m3
 Data files : M_14-09-05 + TB_0199.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,27	94
cis-Chlordane	0,72	
trans-Nonachlor	0,70	95
cis-Nonachlor	0,05	
α -HCH	17,0	32
γ -HCH	4,26	49
o,p'-DDE	0,05 b	
p,p'-DDE	0,27 b	75
o,p'-DDD	0,01 b	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,12 b	
p,p'-DDT	0,06 b	101
Sum DDT	0,53	

< : Lower than detection limit at signal-to-noise 3 to 1

i : Isotope ratio deviates more than 20 % from theoretical value

This may be due to instrumental noise or/and chemical interference

b : Lower than 10 times method blank

g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

143



Kjeller, 29.09.2005

Encl. to measuring report : O-3518
NILU-Sample number : 05/973
Customer : Amap 05
Customers sample ID : 9-11.5.05 0741-1131
: 160-144
Sample type : Air
Sample amount : 1186 m3
Concentration units : pg/m3
Data files : M_14-09-05 + TB_0200.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,14	83
cis-Chlordane	0,49	
trans-Nonachlor	0,48	86
cis-Nonachlor	0,03	
α -HCH	18,8	36
γ -HCH	3,85	51
o,p'-DDE	0,03 b	
p,p'-DDE	0,08 b	69
o,p'-DDD	< 0,01	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,09 bi	
p,p'-DDT	0,02 b	85
Sum DDT	0,24	

< : Lower than detection limit at signal-to-noise 3 to 1

i : Isotope ratio deviates more than 20 % from theoretical value

This may be due to instrumental noise or/and chemical interference

b : Lower than 10 times method blank

g : Recovery is not according to NILUs quality criteria

144 Results of Pesticid and DDT Analysis



Encl. to measuring report : O-3518
 NILU-Sample number : 05/974
 Customer : Amap 05
 Customers sample ID : 16-18.5.05 0923-0711
 : 160-157
 Sample type : Air
 Sample amount : 1095 m3
 Concentration units : pg/m3
 Data files : M_14-09-05 + TB_0201.D

Kjeller, 29.09.2005

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,19	88
cis-Chlordane	0,65	
trans-Nonachlor	0,63	93
cis-Nonachlor	0,07	
α -HCH	18,4	41
γ -HCH	3,35	54
o,p'-DDE	0,03 b	
p,p'-DDE	0,17 b	77
o,p'-DDD	< 0,01	
p,p'-DDD	0,01 bi	
o,p'-DDT	0,09 bi	
p,p'-DDT	0,04 b	95
Sum DDT	0,35	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

145



Kjeller, 29.09.2005

Encl. to measuring report : O-3518
NILU-Sample number : 05/975
Customer : Amap 05
Customers sample ID : 23-25.5.05 0800-0736
: 160-152
Sample type : Air
Sample amount : 1119 m3
Concentration units : pg/m3
Data files : M_14-09-05 + TB_0202.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,15	80
cis-Chlordane	0,60	
trans-Nonachlor	0,57	83
cis-Nonachlor	0,05	
α -HCH	16,8	36
γ -HCH	2,91	50
o,p'-DDE	0,02 b	
p,p'-DDE	0,08 b	71
o,p'-DDD	< 0,01	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,07 bi	
p,p'-DDT	0,02 bi	86
Sum DDT	0,22	

< : Lower than detection limit at signal-to-noise 3 to 1

i : Isotope ratio deviates more than 20 % from theoretical value

This may be due to instrumental noise or/and chemical interference

b : Lower than 10 times method blank

g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis



Encl. to measuring report : O-3518
 NILU-Sample number : 05/976
 Customer : Amap 05
 Customers sample ID : 30.5-1.6.05 0710-0737
 : 160-154
 Sample type : Air
 Sample amount : 1147 m3
 Concentration units : pg/m3
 Data files : M_14-09-05 + TB_0203.D

Kjeller, 29.09.2005

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,15	90
cis-Chlordane	0,61	
trans-Nonachlor	0,58	93
cis-Nonachlor	0,09	
α -HCH	20,2	51
γ -HCH	2,86	59
o,p'-DDE	0,01 b	
p,p'-DDE	0,05 b	77
o,p'-DDD	< 0,01	
p,p'-DDD	0,01 bi	
o,p'-DDT	0,05 bi	
p,p'-DDT	0,02 b	100
Sum DDT	0,16	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

147



Kjeller, 29.09.2005

Encl. to measuring report : O-3518
 NILU-Sample number : 05/977
 Customer : Amap 05
 Customers sample ID : 6-8.6.05 0740-0730
 : 160-152
 Sample type : Air
 Sample amount : 1123 m3
 Concentration units : pg/m3
 Data files : M_14-09-05 + TB_0206.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,13	87
cis-Chlordane	0,63	
trans-Nonachlor	0,58	89
cis-Nonachlor	0,10	
α -HCH	19,3	48
γ -HCH	3,31	57
o,p'-DDE	0,03 b	
p,p'-DDE	0,13 b	74
o,p'-DDD	< 0,01	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,11 bi	
p,p'-DDT	0,06 b	102
Sum DDT	0,36	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

148 **Results of Pesticid and DDT Analysis**

Encl. to measuring report : O-3518
 NILU-Sample number : 05/978
 Customer : Amap 05
 Customers sample ID : 13-15.6.05 0700-0738
 : 160-154
 Sample type : Air
 Sample amount : 1149 m3
 Concentration units : pg/m3
 Data files : M_14-09-05 + TB_0207.D

Kjeller, 29.09.2005

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,12	87
cis-Chlordane	0,52	
trans-Nonachlor	0,41	93
cis-Nonachlor	0,06	
α -HCH	15,8	33
γ -HCH	1,73 b	56
o,p'-DDE	0,02 b	
p,p'-DDE	0,08 b	78
o,p'-DDD	< 0,01	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,05 bi	
p,p'-DDT	0,02 b	90
Sum DDT	0,21	

< : Lower than detection limit at signal-to-noise 3 to 1

i : Isotope ratio deviates more than 20 % from theoretical value

This may be due to instrumental noise or/and chemical interference

b : Lower than 10 times method blank

g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

149



Kjeller, 29.09.2005

Encl. to measuring report : O-3518
 NILU-Sample number : 05/979
 Customer : Amap 05
 Customers sample ID : 20-22.6.05 0740-0701
 : 160-147
 Sample type : Air
 Sample amount : 1095 m3
 Concentration units : pg/m3
 Data files : M_14-09-05 + TB_0208.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,10	81
cis-Chlordane	0,54	
trans-Nonachlor	0,45	82
cis-Nonachlor	0,07	
α -HCH	15,9	35
γ -HCH	1,98 b	51
o,p'-DDE	0,02 b	
p,p'-DDE	0,15 b	68
o,p'-DDD	< 0,01	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,06 bi	
p,p'-DDT	0,03 b	81
Sum DDT	0,29	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

150 **Results of Pesticid and DDT Analysis**

Encl. to measuring report : O-3518
 NILU-Sample number : 05/980
 Customer : Amap 05
 Customers sample ID : 27-29.6.05 0702-0732
 : 160-156
 Sample type : Air
 Sample amount : 1154 m3
 Concentration units : pg/m3
 Data files : M_14-09-05 + TB_0209.D

Kjeller, 29.09.2005

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,11	81
cis-Chlordane	0,49	
trans-Nonachlor	0,44	83
cis-Nonachlor	< 0,02	
α -HCH	19,8	43
γ -HCH	2,55	50
o,p'-DDE	0,01 bi	
p,p'-DDE	0,09 b	67
o,p'-DDD	< 0,01	
p,p'-DDD	0,04 bi	
o,p'-DDT	0,06 bi	
p,p'-DDT	0,03 b	76
Sum DDT	0,24	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

151



Kjeller, 29.09.2005

Encl. to measuring report : O-3518
NILU-Sample number : 05/981
Customer : Amap 05
Customers sample ID : 4-6.7.05 1315-0900
: 160-150
Sample type : Air
Sample amount : 1034 m3
Concentration units : pg/g
Data files : M_14-09-05 + TB_0210.D

Compound Structure	Concentration pg/g	Recovery %
trans-Chlordane	0,12	88
cis-Chlordane	0,57	
trans-Nonachlor	0,44	91
cis-Nonachlor	0,07	
α -HCH	15,9	42
γ -HCH	1,94 b	56
o,p'-DDE	0,02 b	
p,p'-DDE	0,08 b	74
o,p'-DDD	< 0,01	
p,p'-DDD	0,04 bi	
o,p'-DDT	0,06 bi	
p,p'-DDT	0,03 b	97
Sum DDT	0,23	

< : Lower than detection limit at signal-to-noise 3 to 1
i : Isotope ratio deviates more than 20 % from theoretical value
This may be due to instrumental noise or/and chemical interference
b : Lower than 10 times method blank
g : Recovery is not according to NILUs quality criteria

152 Results of Pesticid and DDT Analysis



Kjeller, 29.09.2005

Encl. to measuring report : O-3518
 NILU-Sample number : 05/982
 Customer : Amap 05
 Customers sample ID : 11-13.7.05 1430-1418
 : 160-158
 Sample type : Air
 Sample amount : 1145 m3
 Concentration units : pg/m3
 Data files : M_14-09-05 + TB_0211.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,19	85
cis-Chlordane	0,60	
trans-Nonachlor	0,50	89
cis-Nonachlor	0,08	
α -HCH	15,5	45
γ -HCH	1,62 b	57
o,p'-DDE	0,02 b	
p,p'-DDE	0,11 b	75
o,p'-DDD	< 0,01	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,06 bi	
p,p'-DDT	0,03 bi	94
Sum DDT	0,24	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

153



Kjeller, 29.09.2005

Encl. to measuring report : O-3518
 NILU-Sample number : 05/983
 Customer : Amap 05
 Customers sample ID : 18-20.7.05 0731-0900
 : 160-157
 Sample type : Air
 Sample amount : 1183 m3
 Concentration units : pg/m3
 Data files : M_14-09-05 + TB_0212.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,13	84
cis-Chlordane	0,51	
trans-Nonachlor	0,44	86
cis-Nonachlor	0,08	
α -HCH	14,2	42
γ -HCH	1,38 b	52
o,p'-DDE	0,01 bi	
p,p'-DDE	0,07 b	79
o,p'-DDD	< 0,01	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,05 bi	
p,p'-DDT	0,02 bi	94
Sum DDT	0,17	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

154 **Results of Pesticid and DDT Analysis**

Encl. to measuring report : O-3518
 NILU-Sample number : 05/1178
 Customer : AMAP 05
 Customers sample ID : 25-27.7.05 0811-0914
 : 160-155
 Sample type : Air
 Sample amount : 1166 m3
 Concentration units : pg/m3
 Data files : M_14-12-05 + TB_0743.D

Kjeller, 17.02.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,13	106
cis-Chlordane	0,54	
trans-Nonachlor	0,55	104
cis-Nonachlor	0,11	
α -HCH	19,0	62
γ -HCH	1,82 b	67
o,p'-DDE	0,02 b	
p,p'-DDE	0,31 b	74
o,p'-DDD	0,01 b	
p,p'-DDD	0,02 b	
o,p'-DDT	0,08 bi	
p,p'-DDT	0,05 b	91
Sum DDT	0,50	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

155



Kjeller, 17.02.2006

Encl. to measuring report : O-3518
NILU-Sample number : 05/1179
Customer : Amap 05
Customers sample ID : 1-3.8.05 0830-0715
: 160-158
Sample type : Air
Sample amount : 1118 m3
Concentration units : pg/m3
Data files : M_14-12-05 + TB_0744.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,09	99
cis-Chlordane	0,45	
trans-Nonachlor	0,41	96
cis-Nonachlor	0,09	
α -HCH	19,4	55
γ -HCH	2,03 b	61
o,p'-DDE	0,02 b	
p,p'-DDE	0,21 b	68
o,p'-DDD	0,01 bi	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,08 bi	
p,p'-DDT	0,04 b	86
Sum DDT	0,38	

< : Lower than detection limit at signal-to-noise 3 to 1
i : Isotope ratio deviates more than 20 % from theoretical value
This may be due to instrumental noise or/and chemical interference
b : Lower than 10 times method blank
g : Recovery is not according to NILUs quality criteria

156 Results of Pesticid and DDT Analysis



Kjeller, 17.02.2006

Encl. to measuring report : O-3518
 NILU-Sample number : 05/1180
 Customer : Amap 05
 Customers sample ID : 8-10.8.05 0718-0657
 : 160-150
 Sample type : Air
 Sample amount : 1111 m3
 Concentration units : pg/m3
 Data files : M_14-12-05 + TB_0747.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,09	103
cis-Chlordane	0,49	
trans-Nonachlor	0,42	102
cis-Nonachlor	0,09	
α -HCH	19,3	55
γ -HCH	1,55 b	61
o,p'-DDE	0,02 b	
p,p'-DDE	0,35 b	73
o,p'-DDD	0,01 b	
p,p'-DDD	0,03 bi	
o,p'-DDT	0,08 bi	
p,p'-DDT	0,04 b	86
Sum DDT	0,52	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

157



Kjeller, 17.02.2006

Encl. to measuring report : O-3518
NILU-Sample number : 05/1181
Customer : Amap 05
Customers sample ID : 15-17.8.05 0718-0657
: 160-154
Sample type : Air
Sample amount : 1126 m3
Concentration units : pg/m3
Data files : M_14-12-05 + TB_0748.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,10	53
cis-Chlordane	0,43	
trans-Nonachlor	0,45	52
cis-Nonachlor	0,08	
α -HCH	21,2	26
γ -HCH	2,35 b	30
o,p'-DDE	0,02 bi	
p,p'-DDE	0,63 b	38
o,p'-DDD	0,02 b	
p,p'-DDD	0,05 bi	
o,p'-DDT	0,14 b	
p,p'-DDT	0,08 b	42
Sum DDT	0,94	

< : Lower than detection limit at signal-to-noise 3 to 1

i : Isotope ratio deviates more than 20 % from theoretical value

This may be due to instrumental noise or/and chemical interference

b : Lower than 10 times method blank

g : Recovery is not according to NILUs quality criteria

158 **Results of Pesticid and DDT Analysis**

Encl. to measuring report : O-3518
 NILU-Sample number : 05/1182
 Customer : Amap 05
 Customers sample ID : 22-24.8.05 0810-0741
 : 160-155
 Sample type : Air
 Sample amount : 1131 m3
 Concentration units : pg/m3
 Data files : M_14-12-05 + TB_0749.D

Kjeller, 17.02.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,12	74
cis-Chlordane	0,51	
trans-Nonachlor	0,43	75
cis-Nonachlor	0,09	
α -HCH	18,2	28
γ -HCH	1,81 b	30
o,p'-DDE	0,02 b	
p,p'-DDE	0,28 b	56
o,p'-DDD	0,03 b	
p,p'-DDD	0,04 bi	
o,p'-DDT	0,10 bi	
p,p'-DDT	0,06 b	49
Sum DDT	0,52	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

159



Kjeller, 15.03.2006

Encl. to measuring report : O-3518
NILU-Sample number : 05/1183
Customer : AMAP 05
Customers sample ID : 29-31.8.05 0723-0744
: 160-156
Sample type : Air
Sample amount : 1152 m3
Concentration units : pg/m3
Data files : DH849 + TB_0952.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,13	67
cis-Chlordane	0,70	
trans-Nonachlor	0,57	62
cis-Nonachlor	0,11	
α -HCH	14,6	65
γ -HCH	1,86	75
o,p'-DDE	0,02	
p,p'-DDE	0,11 b	95
o,p'-DDD	< 0,01	
p,p'-DDD	< 0,01	
o,p'-DDT	0,08	
p,p'-DDT	0,04	101
Sum DDT	0,26	

< : Lower than detection limit at signal-to-noise 3 to 1
i : Isotope ratio deviates more than 20 % from theoretical value
This may be due to instrumental noise or/and chemical interference
b : Lower than 10 times method blank
g : Recovery is not according to NILUs quality criteria

160 **Results of Pesticid and DDT Analysis**

Kjeller, 21.02.2006

Encl. to measuring report : O-3518
 NILU-Sample number : 05/1184
 Customer : AMAP 05
 Customers sample ID : 5-7.9.05 0725-0705
 : 160-156
 Sample type : air
 Sample amount : 1135 m3
 Concentration units : pg/m3
 Data files : DH849 + TB_0953.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,11	67
cis-Chlordane	0,61	
trans-Nonachlor	0,49	63
cis-Nonachlor	0,03	
α -HCH	13,3	54
γ -HCH	1,53	66
o,p'-DDE	0,02	
p,p'-DDE	0,09 b	89
o,p'-DDD	< 0,01	
p,p'-DDD	< 0,01	
o,p'-DDT	0,05	
p,p'-DDT	0,02	99
Sum DDT	0,20	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

161



Kjeller, 21.02.2006

Encl. to measuring report : O-3518
NILU-Sample number : 05/1185
Customer : AMAP 05
Customers sample ID : 12-14.9.05 0743-0707
: 160-154
Sample type : Air
Sample amount : 1121 m3
Concentration units : pg/m3
Data files : DH849 + TB_0954.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,09	72
cis-Chlordane	0,42	
trans-Nonachlor	0,39	66
cis-Nonachlor	0,09	
α -HCH	11,3	61
γ -HCH	1,57	69
o,p'-DDE	0,02	
p,p'-DDE	0,29	90
o,p'-DDD	0,01	
p,p'-DDD	0,05	
o,p'-DDT	0,06	
p,p'-DDT	0,04	105
Sum DDT	0,46	

< : Lower than detection limit at signal-to-noise 3 to 1
i : Isotope ratio deviates more than 20 % from theoretical value
This may be due to instrumental noise or/and chemical interference
b : Lower than 10 times method blank
g : Recovery is not according to NILUs quality criteria

162 **Results of Pesticid and DDT Analysis**

Encl. to measuring report : O-3518
 NILU-Sample number : 05/1186
 Customer : AMAP 05
 Customers sample ID : 19-21.9.05 0707-0710
 : 160-156
 Sample type : Air
 Sample amount : 1145 m3
 Concentration units : pg/m3
 Data files : DH847 + TB_0915.D

Kjeller, 16.02.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,11	87
cis-Chlordane	0,47	
trans-Nonachlor	0,41	86
cis-Nonachlor	0,07	
α -HCH	11,4	50
γ -HCH	1,63 b	60
o,p'-DDE	0,03 b	
p,p'-DDE	0,62 b	86
o,p'-DDD	0,02 b	
p,p'-DDD	0,05 b	
o,p'-DDT	0,07 b	
p,p'-DDT	0,09 b	105
Sum DDT	0,88	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

163



Kjeller, 16.02.2006

Encl. to measuring report : O-3518
 NILU-Sample number : 05/1187
 Customer : AMAP 05
 Customers sample ID : 26-28.9.05 0718-0903
 : 160-156
 Sample type : Air
 Sample amount : 1183 m3
 Concentration units : pg/m3
 Data files : DH847 + TB_0916.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,08	84
cis-Chlordane	0,60	
trans-Nonachlor	0,44	82
cis-Nonachlor	0,07	
α -HCH	19,1	48
γ -HCH	2,36 b	63
o,p'-DDE	0,02 b	
p,p'-DDE	0,11 b	82
o,p'-DDD	< 0,01	
p,p'-DDD	< 0,01	
o,p'-DDT	0,10 b	
p,p'-DDT	0,05 b	94
Sum DDT	0,30	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

164 **Results of Pesticid and DDT Analysis**

Kjeller, 16.02.2006

Encl. to measuring report : O-3518
 NILU-Sample number : 05/1653
 Customer : AMAP 05
 Customers sample ID : 3-5.10.05 0720-0718
 : 160-156
 Sample type : Air
 Sample amount : 1142 m3
 Concentration units : pg/m3
 Data files : DH847 + TB_0887.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,19	100
cis-Chlordane	0,65	
trans-Nonachlor	0,56	99
cis-Nonachlor	0,12	
α -HCH	11,8	39
γ -HCH	1,76 b	64
o,p'-DDE	0,05 b	
p,p'-DDE	0,26 b	80
o,p'-DDD	0,02 b	
p,p'-DDD	0,01 b	
o,p'-DDT	0,10 b	
p,p'-DDT	0,06 b	90
Sum DDT	0,49	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

165



Kjeller, 16.02.2006

Encl. to measuring report : O-3518
 NILU-Sample number : 05/1654
 Customer : AMAP 05
 Customers sample ID : 10-12.10.05 0744-1334
 : 160-154
 Sample type : Air
 Sample amount : 1272 m3
 Concentration units : pg/m3
 Data files : DH847 + TB_0888.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,12	101
cis-Chlordane	0,51	
trans-Nonachlor	0,43	98
cis-Nonachlor	0,07	
α -HCH	16,2	44
γ -HCH	2,13 b	60
o,p'-DDE	0,03 b	
p,p'-DDE	0,15 b	78
o,p'-DDD	< 0,01	
p,p'-DDD	< 0,01	
o,p'-DDT	0,09 b	
p,p'-DDT	0,05 b	87
Sum DDT	0,34	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

166 Results of Pesticid and DDT Analysis



Kjeller, 21.02.2006

Encl. to measuring report : O-3518
 NILU-Sample number : 05/1655
 Customer : AMAP 05
 Customers sample ID : 17-19.10.05 0814-0811
 : 160-160
 Sample type : Air
 Sample amount : 1154 m3
 Concentration units : pg/m3
 Data files : DH849 + TB_056.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,18	63
cis-Chlordane	0,78	
trans-Nonachlor	0,65	59
cis-Nonachlor	0,06	
α -HCH	20,5	51
γ -HCH	2,71	63
o,p'-DDE	0,04	
p,p'-DDE	0,19	86
o,p'-DDD	< 0,01	
p,p'-DDD	0,01	
o,p'-DDT	0,13	
p,p'-DDT	0,06	98
Sum DDT	0,44	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

167



Kjeller, 21.02.2006

Encl. to measuring report : O-3518
 NILU-Sample number : 05/1656
 Customer : AMAP 05
 Customers sample ID : 24-26.10.05 0743-0746
 : 160-154
 Sample type : Air
 Sample amount : 1138 m3
 Concentration units : pg/m3
 Data files : DH849 + TB_0957.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,24	61
cis-Chlordane	0,83	
trans-Nonachlor	0,74	56
cis-Nonachlor	0,05	
α -HCH	18,9	51
γ -HCH	2,53	62
o,p'-DDE	0,05	
p,p'-DDE	0,21	86
o,p'-DDD	<	0,01
p,p'-DDD	<	0,01
o,p'-DDT	0,14	
p,p'-DDT	0,06	99
Sum DDT	0,48	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

168 **Results of Pesticid and DDT Analysis**

Kjeller, 16.02.2006

Encl. to measuring report : O-3518
 NILU-Sample number : 05/1657
 Customer : AMAP 05
 Customers sample ID : 31.10-2.11.05 0854-0814
 : 160-146
 Sample type : Air
 Sample amount : 1090 m3
 Concentration units : pg/m3
 Data files : DH847 + TB_0923.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,25	117
cis-Chlordane	0,82	
trans-Nonachlor	0,70	115
cis-Nonachlor	0,04	
α -HCH	16,1	42
γ -HCH	2,56	54
o,p'-DDE	0,07	
p,p'-DDE	0,57	85
o,p'-DDD	0,04	
p,p'-DDD	0,06	
o,p'-DDT	0,17	
p,p'-DDT	0,11	61
Sum DDT	1,02	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

169



Kjeller, 16.02.2006

Encl. to measuring report : O-3518
NILU-Sample number : 05/1658
Customer : AMAP 05
Customers sample ID : 7-9.11.05 0809-0835
: 160-140
Sample type : Air
Sample amount : 1094 m³
Concentration units : pg/m³
Data files : DH847 + TB_0924.D

Compound Structure	Concentration pg/m ³	Recovery %
trans-Chlordane	0,27	102
cis-Chlordane	0,71	
trans-Nonachlor	0,62	100
cis-Nonachlor	0,05	
α -HCH	11,2	40
γ -HCH	2,23	49
o,p'-DDE	0,08	
p,p'-DDE	0,53	72
o,p'-DDD	0,03	
p,p'-DDD	0,03	
o,p'-DDT	0,14	
p,p'-DDT	0,10	68
Sum DDT	0,91	

< : Lower than detection limit at signal-to-noise 3 to 1

i : Isotope ratio deviates more than 20 % from theoretical value

This may be due to instrumental noise or/and chemical interference

b : Lower than 10 times method blank

g : Recovery is not according to NILUs quality criteria

170 **Results of Pesticid and DDT Analysis**

Kjeller, 16.02.2006

Encl. to measuring report : O-3518
 NILU-Sample number : 05/1659
 Customer : AMAP 05
 Customers sample ID : 14-16.11.05 0736-0829
 : 160-164
 Sample type : Air
 Sample amount : 1169 m3
 Concentration units : pg/m3
 Data files : DH847 + TB_0918.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,28	95
cis-Chlordane	0,67	
trans-Nonachlor	0,57	94
cis-Nonachlor	0,04	
α -HCH	14,0	43
γ -HCH	3,55	55
o,p'-DDE	0,09 b	
p,p'-DDE	0,83 b	76
o,p'-DDD	0,02 b	
p,p'-DDD	0,01 b	
o,p'-DDT	0,16 b	
p,p'-DDT	0,11 b	79
Sum DDT	1,24	

< : Lower than detection limit at signal-to-noise 3 to 1

i : Isotope ratio deviates more than 20 % from theoretical value

This may be due to instrumental noise or/and chemical interference

b : Lower than 10 times method blank

g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

171



Kjeller, 16.02.2006

Encl. to measuring report : O-3518
NILU-Sample number : 05/1660
Customer : AMAP 05
Customers sample ID : 21-23.11.05 0906-0817
: 160-155
Sample type : Air
Sample amount : 1112 m3
Concentration units : pg/m3
Data files : DH847 + TB_0922.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,45	113
cis-Chlordane	0,85	
trans-Nonachlor	0,81	110
cis-Nonachlor	0,05 i	
α -HCH	12,6	44
γ -HCH	2,06	49
o,p'-DDE	0,10	
p,p'-DDE	0,58	80
o,p'-DDD	0,03	
p,p'-DDD	0,02	
o,p'-DDT	0,18	
p,p'-DDT	0,09	70
Sum DDT	1,00	

< : Lower than detection limit at signal-to-noise 3 to 1

i : Isotope ratio deviates more than 20 % from theoretical value

This may be due to instrumental noise or/and chemical interference

b : Lower than 10 times method blank

g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

173



Kjeller, 09.03.2006

Encl. to measuring report : O-3518
NILU-Sample number : 06/237
Customer : AMAP 05
Customers sample ID : 5-7.12.05 0734-0902
 : 160-151
Sample type : Air
Sample amount : 1161 m3
Concentration units : pg/m3
Data files : M_06-03-06 + TB_1108.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,35	103
cis-Chlordane	0,62	
trans-Nonachlor	0,57	103
cis-Nonachlor	0,04	
α -HCH	7,73	53
γ -HCH	2,29	60
o,p'-DDE	0,16	
p,p'-DDE	1,56	74
o,p'-DDD	0,04 i	
p,p'-DDD	0,03 i	
o,p'-DDT	0,33	
p,p'-DDT	0,19	82
Sum DDT	2,30	

< : Lower than detection limit at signal-to-noise 3 to 1
i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
b : Lower than 10 times method blank
g : Recovery is not according to NILUs quality criteria

174 Results of Pesticid and DDT Analysis



Kjeller, 09.03.2006

Encl. to measuring report : O-3518
 NILU-Sample number : 06/238
 Customer : AMAP 05
 Customers sample ID : 12-14.12.05 0753-0633
 : 160-160
 Sample type : Air
 Sample amount : 1125 m3
 Concentration units : pg/m3
 Data files : M_06-03-06 + TB_1109.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,33	87
cis-Chlordane	0,60	
trans-Nonachlor	0,53	87
cis-Nonachlor	< 0,02	
α -HCH	9,84	46
γ -HCH	2,37	54
o,p'-DDE	0,19	
p,p'-DDE	1,91	68
o,p'-DDD	0,04	
p,p'-DDD	0,03	
o,p'-DDT	0,35	
p,p'-DDT	0,18	74
Sum DDT	2,70	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results of Pesticid and DDT Analysis

175



Kjeller, 09.03.2006

Encl. to measuring report : O-3518
 NILU-Sample number : 06/239
 Customer : AMAP 05
 Customers sample ID : 19-21.12.05 0850-0810
 : 160-156
 Sample type : Air
 Sample amount : 1126 m3
 Concentration units : pg/m3
 Data files : M_06-03-06 + TB_1110.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,38	93
cis-Chlordane	0,69	
trans-Nonachlor	0,64	92
cis-Nonachlor	< 0,02	
α -HCH	8,88	51
γ -HCH	2,65	57
o,p'-DDE	0,25	
p,p'-DDE	2,40	74
o,p'-DDD	0,03	
p,p'-DDD	0,02	
o,p'-DDT	0,46	
p,p'-DDT	0,19 i	74
Sum DDT	3,35	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

176 Results of Pesticid and DDT Analysis



Kjeller, 09.03.2006

Encl. to measuring report : O-3518
 NILU-Sample number : 06/240
 Customer : AMAP 05
 Customers sample ID : 26-28.12.05 0830-0615
 : 160-158
 Sample type : Air
 Sample amount : 1095 m3
 Concentration units : pg/m3
 Data files : M_06-03-06 + TB_111.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,38	93
cis-Chlordane	0,67	
trans-Nonachlor	0,57	90
cis-Nonachlor	< 0,03	
α -HCH	9,46	54
γ -HCH	1,65	60
o,p'-DDE	0,14	
p,p'-DDE	0,80	70
o,p'-DDD	0,03	
p,p'-DDD	0,06 i	
o,p'-DDT	0,22	
p,p'-DDT	0,09	78
Sum DDT	1,33	

< : Lower than detection limit at signal-to-noise 3 to 1
 i : Isotope ratio deviates more than 20 % from theoretical value
 This may be due to instrumental noise or/and chemical interference
 b : Lower than 10 times method blank
 g : Recovery is not according to NILUs quality criteria

Results, PCB

177



Encl. to measuring report: O-3518
 NILU-Sample number: 05/285
 Customer: Amap 05
 Customers sample ID: 3-5.1.05 1305-0745
 : 160-147
 Sample type: Air
 Sample amount: 989 m3
 Concentration units: pg/m3
 Data files: VA983

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		30,7	41	
HCB		65,4	44	
2,2',5'-TriCB	18	2,69	60	
2,4,4'-TriCB	28	1,52 b		
2,4',5'-TriCB	31	1,46 b		
2',3,4'-TriCB	33	1,08 b		
3,4,4'-TriCB	37	0,14 b		
Sum-TriCB		10,5		
2,2',4,4'-TetCB	47	0,39 b	60	
2,2',5,5'-TetCB	52	0,95 b		
2,3',4,4'-TetCB	66	0,25 b		
2,4,4',5-TetCB	74	0,18 b		
Sum-TetCB		4,44		
2,2',4,4',5-PenCB	99	0,18 b	67	0,00
2,2',4,5,5'-PenCB	101	0,45 b		
2,3,3',4,4'-PenCB	105	0,05 b		
2,3,4,4',5-PenCB	114	< 0,01		
2,3',4,4',5-PenCB	118	0,17 b		
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
Sum-PenCB		1,44		
2,2',3,3',4,4'-HexCB	128	0,02	74	0,01
2,2',3,4,4',5'-HexCB	138	0,12 b		
2,2',3,4,5,5'-HexCB	141	0,03		
2,2',3,4',5',6-HexCB	149	0,20 b		
2,2',4,4',5,5'-HexCB	153	0,20 b		
2,3,3',4,4',5-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,77		
2,2',3,3',4,4',5-HepCB	170	0,01	83	0,00
2,2',3,4,4',5,5'-HepCB	180	0,05 b		
2,2',3,4,4',5',6-HepCB	183	0,01		
2,2',3,4',5,5',6-HepCB	187	0,04 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,11		
2,2',3,3',4,4',5,5'-OctCB	194	0,01	84	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		3,46		
Sum PCB		17,3		0,04

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/289
 Customer: Amap 05
 Customers sample ID: 12-14.1.05 0812-0807
 : 160-155
 Sample type: Air
 Sample amount: 1138 m3
 Concentration units: pg/m3
 Data files: VA983

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		30,7	35	
HCb		65,1	41	
2,2',5-TriCB	18	3,04	55	
2,4,4'-TriCB	28	1,75		
2,4',5-TriCB	31	1,64		
2',3,4-TriCB	33	1,38		
3,4,4'-TriCB	37	0,17 b		
Sum-TriCB		12,1		
2,2',4,4'-TetCB	47	0,45 b	56	
2,2',5,5'-TetCB	52	1,10 b		
2,3',4,4'-TetCB	66	0,32 b		
2,4,4',5-TetCB	74	0,22 b		
Sum-TetCB		4,97		
2,2',4,4',5-PenCB	99	0,25 b	66	0,01
2,2',4,5,5'-PenCB	101	0,54 b		
2,3,3',4,4'-PenCB	105	0,06 b		
2,3,4,4',5-PenCB	114	< 0,01		
2,3',4,4',5-PenCB	118	0,21 b		
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
Sum-PenCB		1,87		
2,2',3,3',4,4',5-HexCB	128	0,03	73	0,01
2,2',3,4,4',5'-HexCB	138	0,15 b		
2,2',3,4,5,5'-HexCB	141	0,04		
2,2',3,4',5',6-HexCB	149	0,25 b		
2,2',4,4',5,5'-HexCB	153	0,23 b		
2,3,3',4,4',5-HexCB	156	0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		1,10		
2,2',3,3',4,4',5-HepCB	170	0,02 i	86	0,00
2,2',3,4,4',5,5'-HepCB	180	0,05 b		
2,2',3,4,4',5',6-HepCB	183	0,02		
2,2',3,4',5,5',6-HepCB	187	0,04 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,15		
2,2',3,3',4,4',5,5'-OctCB	194	0,01 i	92	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	0,01		
Sum 7 PCB		4,03		
Sum PCB		20,3		0,04

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

Results, PCB

179



Encl. to measuring report: O-3518
 NILU-Sample number: 05/292
 Customer: Amap 05
 Customers sample ID: 19-21.1.05 0802-0924
 : 160-157
 Sample type: Air
 Sample amount: 1181 m3
 Concentration units: pg/m3
 Data files: VA983

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		26,4	33	
HCb		60,7	40	
2,2',5'-TriCB	18	3,32	55	
2,4,4'-TriCB	28	1,99		
2,4',5'-TriCB	31	1,87		
2',3,4'-TriCB	33	1,50		
3,4,4'-TriCB	37	0,20 b		
Sum-TriCB		13,4		
2,2',4,4'-TetCB	47	0,58 b	53	
2,2',5,5'-TetCB	52	1,23		
2,3',4,4'-TetCB	66	0,33 b		
2,4,4',5'-TetCB	74	0,25 b		
Sum-TetCB		5,85		
2,2',4,4',5'-PenCB	99	0,27 b	61	0,01
2,2',4,5,5'-PenCB	101	0,60 b		
2,3,3',4,4'-PenCB	105	0,06 b		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,20 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		1,81		
2,2',3,3',4,4'-HexCB	128	0,03	66	0,01
2,2',3,4,4',5'-HexCB	138	0,16 b		
2,2',3,4,5,5'-HexCB	141	0,04		
2,2',3,4',5',6'-HexCB	149	0,30 b		
2,2',4,4',5,5'-HexCB	153	0,26 b		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		1,19		
2,2',3,3',4,4',5'-HepCB	170	0,02	73	
2,2',3,4,4',5,5'-HepCB	180	0,05 b		
2,2',3,4,4',5',6'-HepCB	183	0,02		
2,2',3,4',5,5',6'-HepCB	187	0,05 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,13		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	86	0,00
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		4,50		
Sum PCB		22,4		0,04

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. version 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/294
 Customer: Amap 05
 Customers sample ID: 26-28.1.05 0943-0755
 : 160-156
 Sample type: Air
 Sample amount: 1100 m3
 Concentration units: pg/m3
 Data files: VA983

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		24,9	35	
HCB		59,8	39	
2,2',5'-TriCB	18	2,29		
2,4,4'-TriCB	28	1,57 b	57	
2,4',5'-TriCB	31	1,48 b		
2',3,4'-TriCB	33	1,21		
3,4,4'-TriCB	37	0,17 b		
Sum-TriCB		10,0		
2,2',4,4'-TetCB	47	0,44 b		
2,2',5,5'-TetCB	52	0,97 b	57	
2,3',4,4'-TetCB	66	0,28 b		
2,4,4',5'-TetCB	74	0,19 b		
Sum-TetCB		4,66		
2,2',4,4',5'-PenCB	99	0,20 b		
2,2',4,5,5'-PenCB	101	0,47 b	65	
2,3,3',4,4'-PenCB	105	0,04 b	75	0,00
2,3,4,4',5'-PenCB	114	< 0,01	74	0,01
2,3',4,4',5'-PenCB	118	0,15 b	70	0,01
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	70	0,00
Sum-PenCB		1,45		
2,2',3,3',4,4',5'-HexCB	128	0,02		
2,2',3,4,4',5'-HexCB	138	0,12 b	77	
2,2',3,4,5,5'-HexCB	141	0,03		
2,2',3,4',5',6'-HexCB	149	0,22 b		
2,2',4,4',5,5'-HexCB	153	0,19 b	69	
2,3,3',4,4',5'-HexCB	156	< 0,01	89	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	84	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	80	0,00
Sum-HexCB		0,92		
2,2',3,3',4,4',5'-HepCB	170	0,02		
2,2',3,4,4',5,5'-HepCB	180	0,05 b	80	
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,04 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	98	0,00
Sum-HepCB		0,14		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01		
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01	92	
Sum 7 PCB		3,51		
Sum PCB		17,2		0,04

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

Results, PCB

181



Encl. to measuring report: O-3518
 NILU-Sample number: 05/296
 Customer: Amap 05
 Customers sample ID: 31.1-2.2.05 0728-0803
 : 160-153
 Sample type: Air
 Sample amount: 1147 m3
 Concentration units: pg/m3
 Data files: VA983

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		28,2	31	
HCB		58,1	36	
2,2',5'-TriCB	18	3,35	52	
2,4,4'-TriCB	28	2,12		
2,4',5'-TriCB	31	2,02		
2',3,4'-TriCB	33	1,75		
3,4,4'-TriCB	37	0,26		
Sum-TriCB		14,3		
2,2',4,4'-TetCB	47	0,55 b	54	
2,2',5,5'-TetCB	52	1,15 b		
2,3',4,4'-TetCB	66	0,40 b		
2,4,4',5'-TetCB	74	0,27 b		
Sum-TetCB		5,75		
2,2',4,4',5'-PenCB	99	0,23 b	65	0,01
2,2',4,5,5'-PenCB	101	0,52 b		
2,3,3',4,4'-PenCB	105	0,07 b		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,21 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		1,74		
2,2',3,3',4,4',5'-HexCB	128	0,03	70	0,01
2,2',3,4,4',5'-HexCB	138	0,16 b		
2,2',3,4,5,5'-HexCB	141	0,04		
2,2',3,4',5',6'-HexCB	149	0,22 b		
2,2',4,4',5,5'-HexCB	153	0,22 b		
2,3,3',4,4',5'-HexCB	156	0,02		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		1,08		
2,2',3,3',4,4',5'-HepCB	170	0,02	83	0,00
2,2',3,4,4',5,5'-HepCB	180	0,06 b		
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,04 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,15		
2,2',3,3',4,4',5,5'-OctCB	194	0,01 i	92	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	0,02		
Sum 7 PCB		4,44		
Sum PCB		23,1		0,05

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/533
 Customer: Amap 05
 Customers sample ID: 7-9.2.05 0724-0756
 : 160-142
 Sample type: Air
 Sample amount: 1103 m3
 Concentration units: pg/m3
 Data files: VA983

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		25,8	34	
HCB		59,6	42	
2,2',5-TriCB	18	4,85		
2,4,4'-TriCB	28	5,23	61	
2,4',5-TriCB	31	5,00		
2',3,4-TriCB	33	4,70		
3,4,4'-TriCB	37	0,70		
Sum-TriCB		30,2		
2,2',4,4'-TetCB	47	1,36		
2,2',5,5'-TetCB	52	2,02	57	
2,3',4,4'-TetCB	66	0,63		
2,4,4',5-TetCB	74	0,42		
Sum-TetCB		11,1		
2,2',4,4',5-PenCB	99	0,27 b		
2,2',4,5,5'-PenCB	101	0,78	64	
2,3,3',4,4'-PenCB	105	0,06 b	68	0,01
2,3,4,4',5-PenCB	114	< 0,01	65	0,01
2,3',4,4',5-PenCB	118	0,21 b	65	0,02
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	64	0,00
Sum-PenCB		2,39		
2,2',3,3',4,4',5-HexCB	128	0,04		
2,2',3,4,4',5'-HexCB	138	0,24 b	65	
2,2',3,4,5,5'-HexCB	141	0,07		
2,2',3,4',5',6-HexCB	149	0,46		
2,2',4,4',5,5'-HexCB	153	0,42 b	62	
2,3,3',4,4',5-HexCB	156	0,02	76	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	74	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	70	0,00
Sum-HexCB		2,03		
2,2',3,3',4,4',5-HepCB	170	0,04		
2,2',3,4,4',5,5'-HepCB	180	0,11 b	71	
2,2',3,4,4',5',6-HepCB	183	0,04		
2,2',3,4',5,5',6-HepCB	187	0,09 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	94	0,00
Sum-HepCB		0,33		
2,2',3,3',4,4',5,5'-OctCB	194	0,01		
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01	77	
Sum 7 PCB		9,01		
Sum PCB		46,1		0,05

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

183



Encl. to measuring report: O-3518
 NILU-Sample number: 05/537
 Customer: Amap 05
 Customers sample ID: 16-18.2.05 0852-0759
 : 160-155
 Sample type: Air
 Sample amount: 1119 m3
 Concentration units: pg/m3
 Data files: VA983

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		17,1	35	
HCB		47,5	40	
2,2',5'-TriCB	18	1,90	57	
2,4,4'-TriCB	28	1,68 b		
2,4',5'-TriCB	31	1,64		
2',3,4'-TriCB	33	1,39		
3,4,4'-TriCB	37	0,21 b		
Sum-TriCB		9,97		
2,2',4,4'-TetCB	47	0,45 b	57	
2,2',5,5'-TetCB	52	0,89 b		
2,3',4,4'-TetCB	66	0,25 b		
2,4,4',5-TetCB	74	0,17 b		
Sum-TetCB		4,36		
2,2',4,4',5-PenCB	99	0,14 b	64	0,00
2,2',4,5,5'-PenCB	101	0,38 b		
2,3,3',4,4'-PenCB	105	0,03 b		
2,3,4,4',5-PenCB	114	< 0,01		
2,3',4,4',5-PenCB	118	0,11 b		
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
Sum-PenCB		1,14		
2,2',3,3',4,4'-HexCB	128	0,02	71	0,01
2,2',3,4,4',5'-HexCB	138	0,11 b		
2,2',3,4,5,5'-HexCB	141	< 0,01		
2,2',3,4',5',6-HexCB	149	0,20 b		
2,2',4,4',5,5'-HexCB	153	0,18 b		
2,3,3',4,4',5-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,82		
2,2',3,3',4,4',5-HepCB	170	< 0,01	76	0,00
2,2',3,4,4',5,5'-HepCB	180	0,04 b		
2,2',3,4,4',5',6-HepCB	183	0,01		
2,2',3,4',5,5',6-HepCB	187	0,04 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,07		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	81	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		3,38		
Sum PCB		16,4		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. version 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/539
 Customer: Amap 05
 Customers sample ID: 21-23.2.05 0904-0836
 : 160-164
 Sample type: Air
 Sample amount: 1159 m3
 Concentration units: pg/m3
 Data files: VA983

Kjeller, 29.09.2005

Compound		Concentration pg/m3	Recovery %	TE (WHO) fg/g
Structure	IUPAC-no.			
PeCB		23,6	37	
HCB		57,5	42	
2,2',5'-TriCB	18	1,79	59	
2,4,4'-TriCB	28	1,58 b		
2,4',5'-TriCB	31	1,51 b		
2',3,4'-TriCB	33	1,32		
3,4,4'-TriCB	37	0,19 b		
Sum-TriCB		9,34		
2,2',4,4'-TetCB	47	0,48 b	59	
2,2',5,5'-TetCB	52	0,85 b		
2,3',4,4'-TetCB	66	0,23 b		
2,4,4',5'-TetCB	74	0,16 b		
Sum-TetCB		4,22		
2,2',4,4',5'-PenCB	99	0,13 b	72	
2,2',4,5,5'-PenCB	101	0,36 b		
2,3,3',4,4'-PenCB	105	0,03 b		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,10 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		1,04		
2,2',3,3',4,4',5'-HexCB	128	0,01	75	
2,2',3,4,4',5'-HexCB	138	0,09 b		
2,2',3,4,5,5'-HexCB	141	0,03		
2,2',3,4',5',6'-HexCB	149	0,17 b		
2,2',4,4',5,5'-HexCB	153	0,16 b		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,69		
2,2',3,3',4,4',5'-HepCB	170	0,02	80	
2,2',3,4,4',5,5'-HepCB	180	0,04 b		
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,12		
2,2',3,3',4,4',5,5'-OctCB	194	0,01	100	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		3,18	91	
Sum PCB		15,4		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

Results, PCB

185



Encl. to measuring report: O-3518
 NILU-Sample number: 05/542
 Customer: Amap 05
 Customers sample ID: 28.2-2.3.05 0808-0916
 : 160-152
 Sample type: Air
 Sample amount: 1154 m3
 Concentration units: pg/m3
 Data files: VA983

Kjeller, 29.09.2005

Compound		IUPAC-no.	Concentration		Recovery	TE (WHO)
Structure			pg/m3			
PeCB			28,6		34	
HCB			59,7		39	
2,2',5'-TriCB	18		1,36	b	56	
2,4,4'-TriCB	28		0,84	b		
2,4',5'-TriCB	31		0,85	b		
2',3,4'-TriCB	33		0,62	b		
3,4,4'-TriCB	37		0,09	b		
Sum-TriCB			5,58			
2,2',4,4'-TetCB	47		0,40	b	58	
2,2',5,5'-TetCB	52		0,66	b		
2,3',4,4'-TetCB	66		0,18	b		
2,4,4',5'-TetCB	74		0,13	b		
Sum-TetCB			3,13			
2,2',4,4',5'-PenCB	99		0,15	b	75	
2,2',4,5,5'-PenCB	101		0,33	b		
2,3,3',4,4'-PenCB	105		0,05	b		
2,3,4,4',5'-PenCB	114	<	0,01	b		
2,3',4,4',5'-PenCB	118		0,18	b		
2',3,3',4,5'-PenCB	122	<	0,01	b		
2',3,4,4',5'-PenCB	123	<	0,01	b		
Sum-PenCB			1,16			
2,2',3,3',4,4',5'-HexCB	128		0,03		79	
2,2',3,4,4',5'-HexCB	138		0,21	b		
2,2',3,4,5,5'-HexCB	141		0,04			
2,2',3,4',5',6'-HexCB	149		0,19	b		
2,2',4,4',5,5'-HexCB	153		0,35	b		
2,3,3',4,4',5'-HexCB	156		0,02			
2,3,3',4,4',5'-HexCB	157	<	0,01			
2,3',4,4',5,5'-HexCB	167	<	0,01			
Sum-HexCB			1,20			
2,2',3,3',4,4',5'-HepCB	170		0,03	i		87
2,2',3,4,4',5,5'-HepCB	180		0,10	b		
2,2',3,4,4',5',6'-HepCB	183		0,02			
2,2',3,4',5,5',6'-HepCB	187		0,06	b		
2,3,3',4,4',5,5'-HepCB	189	<	0,01			
Sum-HepCB			0,24			
2,2',3,3',4,4',5,5'-OctCB	194		0,01		102	
2,2',3,3',4,4',5,5',6'-NonCB	206	<	0,01			
DecaCB	209	<	0,01			
Sum 7 PCB			2,68			
Sum PCB			11,3			0,04

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/546
 Customer: Amap 05
 Customers sample ID: 9-11.3.05 1015-0856
 : 160-159
 Sample type: Air
 Sample amount: 1123 m3
 Concentration units: pg/m3
 Data files: VA983

Kjeller, 29.09.2005

Compound		IUPAC-no.	Concentration		Recovery %	TE (WHO) fg/g
Structure			pg/m3			
PeCB			29,0		34	
HCB			61,5		38	
2,2',5'-TriCB	18		2,23		55	
2,4,4'-TriCB	28		1,32 b			
2,4',5'-TriCB	31		1,26 b			
2',3,4'-TriCB	33		1,01 b			
3,4,4'-TriCB	37		0,10 b			
Sum-TriCB			8,94			
2,2',4,4'-TetCB	47		0,32 b	56		
2,2',5,5'-TetCB	52		0,75 b			
2,3',4,4'-TetCB	66		0,17 b			
2,4,4',5'-TetCB	74		0,12 b			
Sum-TetCB			3,18			
2,2',4,4',5'-PenCB	99		0,11 b	66		
2,2',4,5,5'-PenCB	101		0,28 b			
2,3,3',4,4'-PenCB	105		0,03 b		75	0,00
2,3,4,4',5'-PenCB	114	<	0,01		72	0,01
2,3',4,4',5'-PenCB	118		0,09 b		72	0,01
2',3,3',4,5'-PenCB	122	<	0,01			
2',3,4,4',5'-PenCB	123	<	0,01		70	0,00
Sum-PenCB			0,87			
2,2',3,3',4,4',5'-HexCB	128		0,01 i	72		
2,2',3,4,4',5'-HexCB	138		0,08 b			
2,2',3,4,5,5'-HexCB	141		0,02			
2,2',3,4',5',6'-HexCB	149		0,15 b			
2,2',4,4',5,5'-HexCB	153		0,13 b		68	
2,3,3',4,4',5'-HexCB	156	<	0,01		84	0,01
2,3,3',4,4',5'-HexCB	157	<	0,01		81	0,01
2,3',4,4',5,5'-HexCB	167	<	0,01		77	0,00
Sum-HexCB			0,56			
2,2',3,3',4,4',5'-HepCB	170	<	0,01	79		
2,2',3,4,4',5,5'-HepCB	180		0,03 b			
2,2',3,4,4',5',6'-HepCB	183		0,01			
2,2',3,4',5,5',6'-HepCB	187		0,03 b			
2,3,3',4,4',5,5'-HepCB	189	<	0,01		97	0,00
Sum-HepCB			0,09			
2,2',3,3',4,4',5,5'-OctCB	194	<	0,01	91		
2,2',3,3',4,4',5,5',6'-NonCB	206	<	0,01			
DecaCB	209	<	0,01			
Sum 7 PCB			2,68			
Sum PCB			13,7		0,03	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

187



Encl. to measuring report: O-3518
 NILU-Sample number: 05/548
 Customer: Amap 05
 Customers sample ID: 14-16.3.05 0903-0802
 : 160-155
 Sample type: Air
 Sample amount: 1116 m3
 Concentration units: pg/m3
 Data files: VA983

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		29,4	37	
HCB		61,9	43	
2,2',5'-TriCB	18	1,71		
2,4,4'-TriCB	28	1,09 b	54	
2,4',5'-TriCB	31	1,03 b		
2',3,4'-TriCB	33	0,76 b		
3,4,4'-TriCB	37	0,10 b		
Sum-TriCB		6,93		
2,2',4,4'-TetCB	47	0,43 b		
2,2',5,5'-TetCB	52	0,82 b	54	
2,3',4,4'-TetCB	66	0,21 b		
2,4,4',5-TetCB	74	0,15 b		
Sum-TetCB		3,94		
2,2',4,4',5-PenCB	99	0,15 b		
2,2',4,5,5'-PenCB	101	0,37 b	65	
2,3,3',4,4'-PenCB	105	0,03 b	73	0,00
2,3,4,4',5-PenCB	114	< 0,01	70	0,01
2,3',4,4',5-PenCB	118	0,12 b	68	0,01
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	67	0,00
Sum-PenCB		1,17		
2,2',3,3',4,4'-HexCB	128	0,02		
2,2',3,4,4',5'-HexCB	138	0,09 b	71	
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6-HexCB	149	0,19 b		
2,2',4,4',5,5'-HexCB	153	0,16 b	67	
2,3,3',4,4',5-HexCB	156	< 0,01	82	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	81	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	73	0,00
Sum-HexCB		0,75		
2,2',3,3',4,4',5-HepCB	170	0,01		
2,2',3,4,4',5,5'-HepCB	180	0,04 b	76	
2,2',3,4,4',5',6-HepCB	183	0,01		
2,2',3,4',5,5',6-HepCB	187	0,03 bi		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	96	0,00
Sum-HepCB		0,09		
2,2',3,3',4,4',5,5'-OctCB	194	0,01 i		
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01	92	
Sum 7 PCB		2,68		
Sum PCB		12,9		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/680
 Customer: Amap 05
 Customers sample ID: 21-23.3.05 0810-0817
 : 160-138
 Sample type: Air
 Sample amount: 1080 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 28.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		27,8	43	
HCB		59,8	48	
2,2',5'-TriCB	18	3,24	64	
2,4,4'-TriCB	28	1,80		
2,4',5'-TriCB	31	1,79		
2',3,4'-TriCB	33	1,31		
3,4,4'-TriCB	37	0,12 b		
Sum-TriCB		12,5		
2,2',4,4'-TetCB	47	0,35 b	65	
2,2',5,5'-TetCB	52	0,82 b		
2,3',4,4'-TetCB	66	0,18 b		
2,4,4',5'-TetCB	74	0,12 b		
Sum-TetCB		3,48		
2,2',4,4',5'-PenCB	99	0,13 b	74	0,00
2,2',4,5,5'-PenCB	101	0,31 b		
2,3,3',4,4'-PenCB	105	0,02 b		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,09 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		0,97		
2,2',3,3',4,4'-HexCB	128	0,02	76	0,01
2,2',3,4,4',5'-HexCB	138	0,09 b		
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6'-HexCB	149	0,18 b		
2,2',4,4',5,5'-HexCB	153	0,14 b		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5',6'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,74		
2,2',3,3',4,4',5'-HepCB	170	0,01	77	
2,2',3,4,4',5,5'-HepCB	180	0,03 b		
2,2',3,4,4',5',6'-HepCB	183	0,01 i		
2,2',3,4',5,5',6'-HepCB	187	0,04 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,10		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	76	0,00
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		3,28		
Sum PCB		17,8		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
(M. Van den Berg et al., 1998)

Results, PCB

189



Encl. to measuring report: O-3518
 NILU-Sample number: 05/682
 Customer: Amap 05
 Customers sample ID: 28-30.3.05 1234-0745
 : 160-150
 Sample type: Air
 Sample amount: 1009 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		24,9	38	
HCB		60,4	44	
2,2',5'-TriCB	18	1,42 b	62	
2,4,4'-TriCB	28	1,14 b		
2,4',5'-TriCB	31	1,10 b		
2',3,4'-TriCB	33	0,85 b		
3,4,4'-TriCB	37	0,15 b		
Sum-TriCB		6,74		
2,2',4,4'-TetCB	47	0,34 b	63	
2,2',5,5'-TetCB	52	0,76 b		
2,3',4,4'-TetCB	66	0,22 b		
2,4,4',5'-TetCB	74	0,15 b		
Sum-TetCB		3,42		
2,2',4,4',5'-PenCB	99	0,14 b	72	
2,2',4,5,5'-PenCB	101	0,37 b		
2,3,3',4,4'-PenCB	105	0,04 bi		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,11 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		1,13		
2,2',3,3',4,4'-HexCB	128	0,02	79	
2,2',3,4,4',5'-HexCB	138	0,11 b		
2,2',3,4,5,5'-HexCB	141	0,03		
2,2',3,4',5',6'-HexCB	149	0,20 b		
2,2',4,4',5,5'-HexCB	153	0,16 b		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,83		
2,2',3,3',4,4',5'-HepCB	170	0,01 i	79	
2,2',3,4,4',5,5'-HepCB	180	0,04 b		
2,2',3,4,4',5',6'-HepCB	183	0,01 i		
2,2',3,4',5,5',6'-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,11		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	83	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		2,68		
Sum PCB		12,3		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/684
 Customer: Amap 05
 Customers sample ID: 4-6.4.05 0702-0805
 : 160-148
 Sample type: Air
 Sample amount: 1139 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		31,6	36	
HCB		68,5	42	
2,2',5'-TriCB	18	1,99		
2,4,4'-TriCB	28	1,19 b	59	
2,4',5'-TriCB	31	1,15 b		
2',3,4'-TriCB	33	0,79 b		
3,4,4'-TriCB	37	0,09 b		
Sum-TriCB		7,77		
2,2',4,4'-TetCB	47	0,34 b		
2,2',5,5'-TetCB	52	0,85 b	59	
2,3',4,4'-TetCB	66	0,21 b		
2,4,4',5'-TetCB	74	0,15 b		
Sum-TetCB		3,53		
2,2',4,4',5'-PenCB	99	0,18 b		
2,2',4,5,5'-PenCB	101	0,39 b	69	
2,3,3',4,4'-PenCB	105	0,05 b	76	0,00
2,3,4,4',5'-PenCB	114	< 0,01	69	0,01
2,3',4,4',5'-PenCB	118	0,15 b	74	0,01
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	74	0,00
Sum-PenCB		1,29		
2,2',3,3',4,4',5'-HexCB	128	0,02		
2,2',3,4,4',5'-HexCB	138	0,12 b	76	
2,2',3,4,5,5'-HexCB	141	0,03		
2,2',3,4',5',6'-HexCB	149	0,17 b		
2,2',4,4',5,5'-HexCB	153	0,17 b	72	
2,3,3',4,4',5'-HexCB	156	< 0,01	83	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	80	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	81	0,00
Sum-HexCB		0,77		
2,2',3,3',4,4',5'-HepCB	170	0,01		
2,2',3,4,4',5,5'-HepCB	180	0,04 b	79	
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	90	0,00
Sum-HepCB		0,10		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01		
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	0,02	83	
Sum 7 PCB		2,91		
Sum PCB		13,5		0,04

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB

191



Encl. to measuring report: O-3518
 NILU-Sample number: 05/687
 Customer: Amap 05
 Customers sample ID: 13-15.4.05 0741-0725
 : 160-157
 Sample type: Air
 Sample amount: 1140 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 29.09.2005

Compound Structure IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/g
PeCB	31,6	35	
HCB	71,1	44	
2,2',5'-TriCB 18	2,75	62	
2,4,4'-TriCB 28	2,22		
2,4',5'-TriCB 31	2,10		
2',3,4'-TriCB 33	1,61		
3,4,4'-TriCB 37	0,20 b		
Sum-TriCB	13,1		
2,2',4,4'-TetCB 47	0,69	63	
2,2',5,5'-TetCB 52	1,20 b		
2,3',4,4'-TetCB 66	0,34 b		
2,4,4',5'-TetCB 74	0,27 b		
Sum-TetCB	5,78		
2,2',4,4',5'-PenCB 99	0,23 b	73	
2,2',4,5,5'-PenCB 101	0,54 b		
2,3,3',4,4'-PenCB 105	0,05 b		
2,3,4,4',5'-PenCB 114	< 0,01		
2,3',4,4',5'-PenCB 118	0,17 b		
2',3,3',4,5'-PenCB 122	< 0,01		
2',3,4,4',5'-PenCB 123	< 0,01		
Sum-PenCB	1,73		
2,2',3,3',4,4'-HexCB 128	0,02	82	
2,2',3,4,4',5'-HexCB 138	0,12 b		
2,2',3,4,5,5'-HexCB 141	0,03		
2,2',3,4',5',6'-HexCB 149	0,23 b		
2,2',4,4',5,5'-HexCB 153	0,19 b		
2,3,3',4,4',5'-HexCB 156	< 0,01		
2,3,3',4,4',5'-HexCB 157	< 0,01		
2,3',4,4',5,5'-HexCB 167	< 0,01		
Sum-HexCB	0,96		
2,2',3,3',4,4',5'-HepCB 170	< 0,01	80	
2,2',3,4,4',5,5'-HepCB 180	0,03 b		
2,2',3,4,4',5',6'-HepCB 183	0,01 i		
2,2',3,4',5,5',6'-HepCB 187	0,03 b		
2,3,3',4,4',5,5'-HepCB 189	< 0,01		
Sum-HepCB	0,09		
2,2',3,3',4,4',5,5'-OctCB 194	< 0,01	85	
2,2',3,3',4,4',5,5',6'-NonCB 206	< 0,01		
DecaCB 209	< 0,01		
Sum 7 PCB	4,47		
Sum PCB	21,7		0,04

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. version 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/689
 Customer: Amap 05
 Customers sample ID: 18-20.4.05 0707-0730
 : 160-160
 Sample type: Air
 Sample amount: 1166 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		24,0	33	
HCB		64,9	42	
2,2',5'-TriCB	18	2,00	62	
2,4,4'-TriCB	28	1,87		
2,4',5'-TriCB	31	1,81		
2',3,4'-TriCB	33	1,43		
3,4,4'-TriCB	37	0,22		
Sum-TriCB		10,6		
2,2',4,4'-TetCB	47	0,56 b	60	
2,2',5,5'-TetCB	52	1,04 b		
2,3',4,4'-TetCB	66	0,30 b		
2,4,4',5'-TetCB	74	0,22 b		
Sum-TetCB		4,99		
2,2',4,4',5'-PenCB	99	0,20 b	70	
2,2',4,5,5'-PenCB	101	0,52 b		
2,3,3',4,4'-PenCB	105	0,05 b		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,15 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		1,62		
2,2',3,3',4,4'-HexCB	128	0,02	77	
2,2',3,4,4',5'-HexCB	138	0,15 b		
2,2',3,4,5,5'-HexCB	141	0,03 i		
2,2',3,4',5',6'-HexCB	149	0,28 b		
2,2',4,4',5,5'-HexCB	153	0,22 b		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		1,15		
2,2',3,3',4,4',5'-HepCB	170	0,02	76	
2,2',3,4,4',5,5'-HepCB	180	0,05 b		
2,2',3,4,4',5',6'-HepCB	183	0,02		
2,2',3,4',5,5',6'-HepCB	187	0,05 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,13		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	81	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		4,00		
Sum PCB		18,5		0,04

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

193



Encl. to measuring report: O-3518
 NILU-Sample number: 05/691
 Customer: Amap 05
 Customers sample ID: 25-27.4.05 0703-0651
 : 160-154
 Sample type: Air
 Sample amount: 1130 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		30,8	32	
HCB		66,6	43	
2,2',5-TriCB	18	1,68	58	
2,4,4'-TriCB	28	1,24 b		
2,4',5-TriCB	31	1,22 b		
2',3,4-TriCB	33	0,91 b		
3,4,4'-TriCB	37	0,12 b		
Sum-TriCB		7,52		
2,2',4,4'-TetCB	47	0,40 b	60	
2,2',5,5'-TetCB	52	0,79 b		
2,3',4,4'-TetCB	66	0,20 b		
2,4,4',5-TetCB	74	0,15 b		
Sum-TetCB		3,57		
2,2',4,4',5-PenCB	99	0,14 b	72	
2,2',4,5,5'-PenCB	101	0,35 b		
2,3,3',4,4'-PenCB	105	0,03 b		
2,3,4,4',5-PenCB	114	< 0,01		
2,3',4,4',5-PenCB	118	0,10 b		
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
Sum-PenCB		1,08		
2,2',3,3',4,4'-HexCB	128	< 0,01	79	
2,2',3,4,4',5'-HexCB	138	0,08 b		
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6-HexCB	149	0,17 b		
2,2',4,4',5,5'-HexCB	153	0,13 b		
2,3,3',4,4',5-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,57		
2,2',3,3',4,4',5-HepCB	170	< 0,01	82	
2,2',3,4,4',5,5'-HepCB	180	0,02 b		
2,2',3,4,4',5',6-HepCB	183	0,01		
2,2',3,4',5,5',6-HepCB	187	0,02 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,07		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	86	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		2,70		
Sum PCB		12,8		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/972
 Customer: Amap 05
 Customers sample ID: 2-4.5.05 0742-0732
 : 160-160
 Sample type: Air
 Sample amount: 1152 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		22,6	35	
HCB		71,9	42	
2,2',5-TriCB	18	8,73	60	
2,4,4'-TriCB	28	5,37		
2,4',5-TriCB	31	5,12		
2',3,4-TriCB	33	3,92		
3,4,4'-TriCB	37	0,48		
Sum-TriCB		36,0		
2,2',4,4'-TetCB	47	0,87	59	
2,2',5,5'-TetCB	52	1,57		
2,3',4,4'-TetCB	66	0,43 b		
2,4,4',5-TetCB	74	0,28 b		
Sum-TetCB		7,49		
2,2',4,4',5-PenCB	99	0,19 b	72	0,00
2,2',4,5,5'-PenCB	101	0,52 b		
2,3,3',4,4'-PenCB	105	0,04 b		
2,3,4,4',5-PenCB	114	< 0,01		
2,3',4,4',5-PenCB	118	0,14 b		
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
Sum-PenCB		1,60		
2,2',3,3',4,4',5-HexCB	128	0,02 i	87	0,01
2,2',3,4,4',5'-HexCB	138	0,14 b		
2,2',3,4,5,5'-HexCB	141	0,03		
2,2',3,4',5',6-HexCB	149	0,28 b		
2,2',4,4',5,5'-HexCB	153	0,23 b		
2,3,3',4,4',5-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		1,05		
2,2',3,3',4,4',5-HepCB	170	0,02	78	0,00
2,2',3,4,4',5,5'-HepCB	180	0,04 b		
2,2',3,4,4',5',6-HepCB	183	0,02		
2,2',3,4',5,5',6-HepCB	187	0,05 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,12		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	85	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		8,01		
Sum PCB		46,3		0,04

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

195



Encl. to measuring report: O-3518
 NILU-Sample number: 05/973
 Customer: Amap 05
 Customers sample ID: 9-11.5.05 0741-1131
 : 160-144
 Sample type: Air
 Sample amount: 1186 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		23,4	34	
HCb		71,9	41	
2,2',5'-TriCB	18	5,78	57	
2,4,4'-TriCB	28	3,53		
2,4',5'-TriCB	31	3,48		
2',3,4'-TriCB	33	2,58		
3,4,4'-TriCB	37	0,27		
Sum-TriCB		23,7		
2,2',4,4'-TetCB	47	0,59 b	57	
2,2',5,5'-TetCB	52	1,10 b		
2,3',4,4'-TetCB	66	0,24 b		
2,4,4',5'-TetCB	74	0,18 b		
Sum-TetCB		5,01		
2,2',4,4',5'-PenCB	99	0,14 b	67	0,00
2,2',4,5,5'-PenCB	101	0,35 b		
2,3,3',4,4'-PenCB	105	0,02 bi		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,08 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		1,05		
2,2',3,3',4,4'-HexCB	128	0,01	77	0,01
2,2',3,4,4',5'-HexCB	138	0,08 b		
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6'-HexCB	149	0,18 b		
2,2',4,4',5,5'-HexCB	153	0,12 b		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,56		
2,2',3,3',4,4',5'-HepCB	170	< 0,01	81	0,00
2,2',3,4,4',5,5'-HepCB	180	0,02 b		
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,02 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,07		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	85	0,00
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		5,29	86	0,03
Sum PCB		30,4		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. version 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/974
 Customer: Amap 05
 Customers sample ID: 16-18.5.05 0923-0711
 : 160-157

Kjeller, 29.09.2005

Sample type: Air
 Sample amount: 1095 m3
 Concentration units: pg/m3
 Data files: VA986

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		24,2	35	
HCb		71,5	45	
2,2',5'-TriCB	18	4,78	64	
2,4,4'-TriCB	28	2,73		
2,4',5'-TriCB	31	2,70		
2',3,4'-TriCB	33	1,99		
3,4,4'-TriCB	37	0,20 b		
Sum-TriCB		18,9		
2,2',4,4'-TetCB	47	0,44 b	64	
2,2',5,5'-TetCB	52	0,90 b		
2,3',4,4'-TetCB	66	0,18 b		
2,4,4',5-TetCB	74	0,13 b		
Sum-TetCB		3,84		
2,2',4,4',5-PenCB	99	0,11 b	78	0,00
2,2',4,5,5'-PenCB	101	0,29 b		
2,3,3',4,4'-PenCB	105	0,02 b		
2,3,4,4',5-PenCB	114	< 0,01		
2,3',4,4',5-PenCB	118	0,07 b		
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
Sum-PenCB		0,87		
2,2',3,3',4,4',5-HexCB	128	0,01 i	88	0,01
2,2',3,4,4',5'-HexCB	138	0,07 b		
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6-HexCB	149	0,16 b		
2,2',4,4',5,5'-HexCB	153	0,13 b		
2,3,3',4,4',5-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,61		
2,2',3,3',4,4',5-HepCB	170	< 0,01	84	0,00
2,2',3,4,4',5,5'-HepCB	180	0,03 b		
2,2',3,4,4',5',6-HepCB	183	0,01		
2,2',3,4',5,5',6-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,08		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	90	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		4,22		
Sum PCB		24,3		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

197



Encl. to measuring report: O-3518
 NILU-Sample number: 05/975
 Customer: Amap 05
 Customers sample ID: 23-25.5.05 0800-0736
 : 160-152
 Sample type: Air
 Sample amount: 1119 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		20,3	32	
HCb		72,3	42	
2,2',5-TriCB	18	6,14	57	
2,4,4'-TriCB	28	3,45		
2,4',5-TriCB	31	3,32		
2',3,4-TriCB	33	2,51		
3,4,4'-TriCB	37	0,24		
Sum-TriCB		23,8		
2,2',4,4'-TetCB	47	0,53 b	56	
2,2',5,5'-TetCB	52	1,08 b		
2,3',4,4'-TetCB	66	0,21 b		
2,4,4',5-TetCB	74	0,15 b		
Sum-TetCB		4,56		
2,2',4,4',5-PenCB	99	0,11 b	66	0,00
2,2',4,5,5'-PenCB	101	0,32 b		
2,3,3',4,4'-PenCB	105	0,02 b		
2,3,4,4',5-PenCB	114	< 0,01		
2,3',4,4',5-PenCB	118	0,07 b		
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
Sum-PenCB		0,88		
2,2',3,3',4,4'-HexCB	128	0,01	76	0,01
2,2',3,4,4',5'-HexCB	138	0,07 b		
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6-HexCB	149	0,16 b		
2,2',4,4',5,5'-HexCB	153	0,10 b		
2,3,3',4,4',5-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,55		
2,2',3,3',4,4',5-HepCB	170	< 0,01	76	0,00
2,2',3,4,4',5,5'-HepCB	180	0,02 b		
2,2',3,4,4',5',6-HepCB	183	0,01		
2,2',3,4',5,5',6-HepCB	187	0,02 bi		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,07		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	79	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		5,11		
Sum PCB		29,9		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/976
 Customer: Amap 05
 Customers sample ID: 30.5-1.6.05 0710-0737
 : 160-154
 Sample type: Air
 Sample amount: 1147 m³
 Concentration units: pg/m³
 Data files: VA986

Kjeller, 29.09.2005

Compound		Concentration pg/m ³	Recovery %	TE (WHO) fg/g
Structure	IUPAC-no.			
PeCB		16,8	39	
HCb		74,9	48	
2,2',5'-TriCB	18	6,41	65	
2,4,4'-TriCB	28	3,67		
2,4',5'-TriCB	31	3,56		
2',3,4'-TriCB	33	2,73		
3,4,4'-TriCB	37	0,24		
Sum-TriCB		25,4		
2,2',4,4'-TetCB	47	0,50 b	66	
2,2',5,5'-TetCB	52	0,94 b		
2,3',4,4'-TetCB	66	0,16 b		
2,4,4',5'-TetCB	74	0,11 b		
Sum-TetCB		3,91		
2,2',4,4',5'-PenCB	99	0,07 b	75	
2,2',4,5,5'-PenCB	101	0,21 b		
2,3,3',4,4'-PenCB	105	0,01 b		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,04 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		0,58		
2,2',3,3',4,4'-HexCB	128	< 0,01	79	
2,2',3,4,4',5'-HexCB	138	0,05 b		
2,2',3,4,5,5'-HexCB	141	0,01 i		
2,2',3,4',5',6'-HexCB	149	0,10 b		
2,2',4,4',5,5'-HexCB	153	0,07 b		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,30		
2,2',3,3',4,4',5'-HepCB	170	< 0,01	86	
2,2',3,4,4',5,5'-HepCB	180	0,02 b		
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,02 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,05		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	84	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		5,00		
Sum PCB		30,2		0,02

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

199



Encl. to measuring report: O-3518
 NILU-Sample number: 05/977
 Customer: Amap 05
 Customers sample ID: 6-8.6.05 0740-0730
 : 160-152
 Sample type: Air
 Sample amount: 1123 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	tg/g
PeCB		9,59	34	
HCB		72,8	44	
2,2',5'-TriCB	18	6,75	61	
2,4,4'-TriCB	28	4,32		
2,4',5'-TriCB	31	4,10		
2',3,4'-TriCB	33	3,11		
3,4,4'-TriCB	37	0,33		
Sum-TriCB		28,2		
2,2',4,4'-TetCB	47	0,60 b	61	
2,2',5,5'-TetCB	52	1,36		
2,3',4,4'-TetCB	66	0,30 b		
2,4,4',5'-TetCB	74	0,21 b		
Sum-TetCB		5,71		
2,2',4,4',5'-PenCB	99	0,19 b	72	0,00
2,2',4,5,5'-PenCB	101	0,47 b		
2,3,3',4,4'-PenCB	105	0,04 b		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,13 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		1,46		
2,2',3,3',4,4',5'-HexCB	128	0,02	80	0,01
2,2',3,4,4',5'-HexCB	138	0,11 b		
2,2',3,4,5,5'-HexCB	141	0,03		
2,2',3,4',5',6'-HexCB	149	0,22 b		
2,2',4,4',5,5'-HexCB	153	0,17 b		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,86		
2,2',3,3',4,4',5'-HepCB	170	< 0,01	81	0,00
2,2',3,4,4',5,5'-HepCB	180	0,03 b		
2,2',3,4,4',5',6'-HepCB	183	0,01 i		
2,2',3,4',5,5',6'-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,09		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	90	0,00
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01	86	
Sum 7 PCB		6,58		
Sum PCB		36,4		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/978
 Customer: Amap 05
 Customers sample ID: 13-15.6.05 0700-0738
 : 160-154
 Sample type: Air
 Sample amount: 1149 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		16,0	35	
HCB		72,7	44	
2,2',5'-TriCB	18	4,50	63	
2,4,4'-TriCB	28	2,99		
2,4',5'-TriCB	31	2,85		
2',3,4'-TriCB	33	2,15		
3,4,4'-TriCB	37	0,23		
Sum-TriCB		19,2		
2,2',4,4'-TetCB	47	0,44 b	61	
2,2',5,5'-TetCB	52	0,89 b		
2,3',4,4'-TetCB	66	0,18 b		
2,4,4',5-TetCB	74	0,13 b		
Sum-TetCB		3,69		
2,2',4,4',5-PenCB	99	0,07 b	73	0,00
2,2',4,5,5'-PenCB	101	0,23 b		
2,3,3',4,4'-PenCB	105	0,01 b		
2,3,4,4',5-PenCB	114	< 0,01		
2,3',4,4',5-PenCB	118	0,05 b		
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
Sum-PenCB		0,61		
2,2',3,3',4,4'-HexCB	128	< 0,01	77	0,01
2,2',3,4,4',5'-HexCB	138	0,05 b		
2,2',3,4,5,5'-HexCB	141	0,01		
2,2',3,4',5',6-HexCB	149	0,11 b		
2,2',4,4',5,5'-HexCB	153	0,07 b		
2,3,3',4,4',5-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,33		
2,2',3,3',4,4',5-HepCB	170	< 0,01	81	0,00
2,2',3,4,4',5,5'-HepCB	180	0,02 b		
2,2',3,4,4',5',6-HepCB	183	0,01		
2,2',3,4',5,5',6-HepCB	187	0,01 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,04		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	85	0,00
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		4,29	86	0,02
Sum PCB		23,9		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

Results, PCB

201



Encl. to measuring report: O-3518
 NILU-Sample number: 05/979
 Customer: Amap 05
 Customers sample ID: 20-22.6.05 0740-0701
 : 160-147
 Sample type: Air
 Sample amount: 1095 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 29.09.2005

Compound		Concentration pg/m3	Recovery %	TE (WHO) fg/g
Structure	IUPAC-no.			
PeCB		13,6	31	
HCb		73,2	41	
2,2',5'-TriCB	18	5,58	59	
2,4,4'-TriCB	28	3,59		
2,4',5'-TriCB	31	3,40		
2',3,4'-TriCB	33	2,58		
3,4,4'-TriCB	37	0,27		
Sum-TriCB		23,4		
2,2',4,4'-TetCB	47	0,51 b	57	
2,2',5,5'-TetCB	52	1,05 b		
2,3',4,4'-TetCB	66	0,22 b		
2,4,4',5-TetCB	74	0,15 b		
Sum-TetCB		4,43		
2,2',4,4',5-PenCB	99	0,11 b	68	0,00
2,2',4,5,5'-PenCB	101	0,31 b		
2,3,3',4,4'-PenCB	105	0,02 b		
2,3,4,4',5-PenCB	114	< 0,01		
2,3',4,4',5-PenCB	118	0,07 b		
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
Sum-PenCB		0,88		
2,2',3,3',4,4'-HexCB	128	0,01	69	0,01
2,2',3,4,4',5'-HexCB	138	0,07 b		
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6-HexCB	149	0,14 b		
2,2',4,4',5,5'-HexCB	153	0,13 b		
2,3,3',4,4',5-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,56		
2,2',3,3',4,4',5-HepCB	170	< 0,01	79	0,00
2,2',3,4,4',5,5'-HepCB	180	0,03 b		
2,2',3,4,4',5',6-HepCB	183	0,01		
2,2',3,4',5,5',6-HepCB	187	0,02 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,08		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	81	0,00
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01	82	
Sum 7 PCB		5,26		
Sum PCB		29,4		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/980
 Customer: Amap 05
 Customers sample ID: 27-29.6.05 0702-0732
 : 160-156

Kjeller, 29.09.2005

Sample type: Air
 Sample amount: 1154 m³
 Concentration units: pg/m³
 Data files: VA986

Compound		Concentration pg/m ³	Recovery %	TE (WHO) fg/g
Structure	IUPAC-no.			
PeCB		8,18 b	31	
HCB		64,8	41	
2,2',5'-TriCB	18	8,31	59	
2,4,4'-TriCB	28	5,84		
2,4',5'-TriCB	31	5,66		
2',3,4'-TriCB	33	4,45		
3,4,4'-TriCB	37	0,48		
Sum-TriCB		37,3		
2,2',4,4'-TetCB	47	0,77	57	
2,2',5,5'-TetCB	52	1,61		
2,3',4,4'-TetCB	66	0,33 b		
2,4,4',5'-TetCB	74	0,23 b		
Sum-TetCB		6,80		
2,2',4,4',5'-PenCB	99	0,13 b	76	
2,2',4,5,5'-PenCB	101	0,40 b		
2,3,3',4,4'-PenCB	105	0,02 b		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,08 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		1,09		
2,2',3,3',4,4'-HexCB	128	0,01	83	
2,2',3,4,4',5'-HexCB	138	0,07 b		
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6'-HexCB	149	0,17 b		
2,2',4,4',5,5'-HexCB	153	0,12 b		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,65		
2,2',3,3',4,4',5'-HepCB	170	< 0,01	91	
2,2',3,4,4',5,5'-HepCB	180	0,02 b		
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,02 bi		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,07		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	87	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		8,14		
Sum PCB		46,0		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

203



Encl. to measuring report: O-3518
 NILU-Sample number: 05/981
 Customer: Amap 05
 Customers sample ID: 4-6.7.05 1315-0900
 : 160-150
 Sample type: Air
 Sample amount: 1034 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		10,5	33	
HCB		68,9	43	
2,2',5'-TriCB	18	4,47	63	
2,4,4'-TriCB	28	3,16		
2,4',5'-TriCB	31	2,96		
2',3,4'-TriCB	33	2,31		
3,4,4'-TriCB	37	0,27		
Sum-TriCB		19,7		
2,2',4,4'-TetCB	47	0,56 b	60	
2,2',5,5'-TetCB	52	1,05 b		
2,3',4,4'-TetCB	66	0,22 b		
2,4,4',5'-TetCB	74	0,15 b		
Sum-TetCB		4,32		
2,2',4,4',5'-PenCB	99	0,09 b	73	0,00
2,2',4,5,5'-PenCB	101	0,31 b		
2,3,3',4,4'-PenCB	105	0,01 b		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,06 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		0,79		
2,2',3,3',4,4'-HexCB	128	< 0,01	85	0,01
2,2',3,4,4',5'-HexCB	138	0,05 b		
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6'-HexCB	149	0,16 b		
2,2',4,4',5,5'-HexCB	153	0,10 b		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,57		
2,2',3,3',4,4',5'-HepCB	170	< 0,01	82	0,00
2,2',3,4,4',5,5'-HepCB	180	0,02 b		
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,02 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,07		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	86	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		4,75		
Sum PCB		25,5		0,02

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. version 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/982
 Customer: Amap 05
 Customers sample ID: 11-13.7.05 1430-1418
 : 160-158
 Sample type: Air
 Sample amount: 1145 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 29.09.2005

Compound		Concentration pg/m3	Recovery %	TE (WHO) fg/g
Structure	IUPAC-no.			
PeCB		14,3	32	
HCb		70,6	42	
2,2',5'-TriCB	18	4,64	64	
2,4,4'-TriCB	28	3,05		
2,4',5'-TriCB	31	2,93		
2',3,4'-TriCB	33	2,20		
3,4,4'-TriCB	37	0,23		
Sum-TriCB		19,6		
2,2',4,4'-TetCB	47	0,45 b	62	
2,2',5,5'-TetCB	52	0,95 b		
2,3',4,4'-TetCB	66	0,19 b		
2,4,4',5'-TetCB	74	0,13 b		
Sum-TetCB		3,90		
2,2',4,4',5'-PenCB	99	0,08 b	74	
2,2',4,5,5'-PenCB	101	0,25 b		
2,3,3',4,4'-PenCB	105	0,01 bi		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,05 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		0,64		
2,2',3,3',4,4',5'-HexCB	128	< 0,01	83	
2,2',3,4,4',5'-HexCB	138	0,04 b		
2,2',3,4,5,5'-HexCB	141	0,01 i		
2,2',3,4',5',6'-HexCB	149	0,11 b		
2,2',4,4',5,5'-HexCB	153	0,08 b		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,34		
2,2',3,3',4,4',5'-HepCB	170	< 0,01	80	
2,2',3,4,4',5,5'-HepCB	180	0,02 bi		
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,02 bi		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,05		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	84	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		4,44		
Sum PCB		24,6		0,02

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

Results, PCB

205



Encl. to measuring report: O-3518
 NILU-Sample number: 05/983
 Customer: Amap 05
 Customers sample ID: 18-20.7.05 0731-0900
 : 160-157
 Sample type: Air
 Sample amount: 1183 m3
 Concentration units: pg/m3
 Data files: VA986

Kjeller, 29.09.2005

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		13,7	30	
HCB		73,2	43	
2,2',5'-TriCB	18	6,18		
2,4,4'-TriCB	28	3,79	62	
2,4',5'-TriCB	31	3,60		
2',3,4'-TriCB	33	2,65		
3,4,4'-TriCB	37	0,27		
Sum-TriCB		24,9		
2,2',4,4'-TetCB	47	0,47 b		
2,2',5,5'-TetCB	52	0,93 b	59	
2,3',4,4'-TetCB	66	0,19 b		
2,4,4',5'-TetCB	74	0,13 b		
Sum-TetCB		4,05		
2,2',4,4',5'-PenCB	99	0,06 b		
2,2',4,5,5'-PenCB	101	0,20 b	73	
2,3,3',4,4'-PenCB	105	< 0,01	81	0,00
2,3,4,4',5'-PenCB	114	< 0,01	74	0,01
2,3',4,4',5'-PenCB	118	0,04 b	80	0,00
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	79	0,00
Sum-PenCB		0,51		
2,2',3,3',4,4',5'-HexCB	128	< 0,01		
2,2',3,4,4',5'-HexCB	138	0,04 b	84	
2,2',3,4,5,5'-HexCB	141	< 0,01		
2,2',3,4',5',6'-HexCB	149	0,09 b		
2,2',4,4',5,5'-HexCB	153	0,06 b	72	
2,3,3',4,4',5'-HexCB	156	< 0,01	83	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	84	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	88	0,00
Sum-HexCB		0,31		
2,2',3,3',4,4',5'-HepCB	170	< 0,01		
2,2',3,4,4',5,5'-HepCB	180	0,01 b	76	
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,01 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	88	0,00
Sum-HepCB		0,04		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01		
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01	86	
Sum 7 PCB		5,07		
Sum PCB		29,9		0,02

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. version 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1178
 Customer: Amap 05
 Customers sample ID: 25-27.7.05 0811-0914
 : 160-155
 Sample type: Air
 Sample amount: 1166 m3
 Concentration units: pg/m3
 Data files: DH834

Kjeller, 31.01.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		10,0	38	
HCb		77,5	44	
2,2',5-TriCB	18	4,78	65	
2,4,4'-TriCB	28	3,17		
2,4',5-TriCB	31	3,03		
2',3,4-TriCB	33	2,27		
3,4,4'-TriCB	37	0,27		
Sum-TriCB		20,6		
2,2',4,4'-TetCB	47	0,46 b	60	
2,2',5,5'-TetCB	52	1,01 b		
2,3',4,4'-TetCB	66	0,24 b		
2,4,4',5-TetCB	74	0,16 b		
Sum-TetCB		4,24		
2,2',4,4',5-PenCB	99	0,15 b	73	0,00
2,2',4,5,5'-PenCB	101	0,37 b		
2,3,3',4,4'-PenCB	105	0,03 b		
2,3,4,4',5-PenCB	114	< 0,01		
2,3',4,4',5-PenCB	118	0,12 b		
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
Sum-PenCB		1,10		
2,2',3,3',4,4'-HexCB	128	< 0,01	84	0,01
2,2',3,4,4',5'-HexCB	138	0,09 b		
2,2',3,4,5,5'-HexCB	141	0,02 i		
2,2',3,4',5',6-HexCB	149	0,16 b		
2,2',4,4',5,5'-HexCB	153	0,16 b		
2,3,3',4,4',5-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01 i		
Sum-HexCB		0,61		
2,2',3,3',4,4',5-HepCB	170	< 0,01		
2,2',3,4,4',5,5'-HepCB	180	0,02 b		
2,2',3,4,4',5',6-HepCB	183	0,01		
2,2',3,4',5,5',6-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,07		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	90	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		4,95		
Sum PCB		26,6		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

207



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1179
 Customer: Amap 05
 Customers sample ID: 1-3.8.05 0830-0715
 : 160-158
 Sample type: Air
 Sample amount: 1118 m3
 Concentration units: pg/m3
 Data files: DH834

Kjeller, 31.01.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		9,06	34	
HCB		73,8	39	
2,2',5'-TriCB	18	7,11		
2,4,4'-TriCB	28	4,74	63	
2,4',5'-TriCB	31	4,46		
2',3,4'-TriCB	33	3,43		
3,4,4'-TriCB	37	0,37		
Sum-TriCB		30,7		
2,2',4,4'-TetCB	47	0,65 b		
2,2',5,5'-TetCB	52	1,26	60	
2,3',4,4'-TetCB	66	0,28 b		
2,4,4',5'-TetCB	74	0,18 b		
Sum-TetCB		5,67		
2,2',4,4',5'-PenCB	99	0,12 b		
2,2',4,5,5'-PenCB	101	0,36 b	72	
2,3,3',4,4'-PenCB	105	0,03 b	81	0,00
2,3,4,4',5'-PenCB	114	< 0,01	77	0,01
2,3',4,4',5'-PenCB	118	0,09 b	80	0,01
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	78	0,00
Sum-PenCB		1,00		
2,2',3,3',4,4'-HexCB	128	< 0,01		
2,2',3,4,4',5'-HexCB	138	0,08 b	80	
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6'-HexCB	149	0,14 b		
2,2',4,4',5,5'-HexCB	153	0,12 b	74	
2,3,3',4,4',5'-HexCB	156	< 0,01	88	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	89	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	86	0,00
Sum-HexCB		0,51		
2,2',3,3',4,4',5'-HepCB	170	< 0,01		
2,2',3,4,4',5,5'-HepCB	180	0,02 b	76	
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	83	0,00
Sum-HepCB		0,06		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01		
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01	76	
Sum 7 PCB		6,67		
Sum PCB		37,9		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1180
 Customer: Amap 05
 Customers sample ID: 8-10.8.05 0718-0657
 : 160-150
 Sample type: Air
 Sample amount: 1111 m3
 Concentration units: pg/m3
 Data files: DH834

Kjeller, 31.01.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		8,03 b	36	
HCb		77,3	40	
2,2',5'-TriCB	18	5,57		
2,4,4'-TriCB	28	3,47	62	
2,4',5'-TriCB	31	3,32		
2',3,4'-TriCB	33	2,56		
3,4,4'-TriCB	37	0,27		
Sum-TriCB		23,3		
2,2',4,4'-TetCB	47	0,46 b		
2,2',5,5'-TetCB	52	0,94 b	59	
2,3',4,4'-TetCB	66	0,20 b		
2,4,4',5'-TetCB	74	0,14 b		
Sum-TetCB		4,16		
2,2',4,4',5'-PenCB	99	0,10 b		
2,2',4,5,5'-PenCB	101	0,29 b	70	
2,3,3',4,4'-PenCB	105	0,02 bi	78	0,00
2,3,4,4',5'-PenCB	114	< 0,01	74	0,01
2,3',4,4',5'-PenCB	118	0,08 b	74	0,01
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	74	0,00
Sum-PenCB		0,80		
2,2',3,3',4,4'-HexCB	128	< 0,01		
2,2',3,4,4',5'-HexCB	138	0,06 b	77	
2,2',3,4,5,5'-HexCB	141	0,02 i		
2,2',3,4',5',6'-HexCB	149	0,13 b		
2,2',4,4',5,5'-HexCB	153	0,10 b	69	
2,3,3',4,4',5'-HexCB	156	< 0,01	81	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	81	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	80	0,00
Sum-HexCB		0,47		
2,2',3,3',4,4',5'-HepCB	170	< 0,01		
2,2',3,4,4',5,5'-HepCB	180	0,01 b	73	
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,02 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	72	0,00
Sum-HepCB		0,04		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01		
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01	70	
Sum 7 PCB		4,95		
Sum PCB		28,8		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

209



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1181
 Customer: Amap 05
 Customers sample ID: 15-17.8.05 0718-0657
 : 160-154
 Sample type: air
 Sample amount: 1126 m3
 Concentration units: pg/m3
 Data files: DH834

Kjeller, 27.02.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		9,06	18	
HCB		78,5	21	
2,2',5'-TriCB	18	5,99	30	
2,4,4'-TriCB	28	3,36		
2,4',5'-TriCB	31	3,21		
2',3,4'-TriCB	33	2,50		
3,4,4'-TriCB	37	0,26		
Sum-TriCB		23,4		
2,2',4,4'-TetCB	47	0,43 b	g	
2,2',5,5'-TetCB	52	1,05 b		
2,3',4,4'-TetCB	66	0,21 b		
2,4,4',5-TetCB	74	0,15 b		
Sum-TetCB		4,30		
2,2',4,4',5-PenCB	99	0,16 b	g	
2,2',4,5,5'-PenCB	101	0,34 b		
2,3,3',4,4'-PenCB	105	0,04 b		
2,3,4,4',5-PenCB	114	< 0,01		
2,3',4,4',5-PenCB	118	0,13 b		
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
Sum-PenCB		1,09		
2,2',3,3',4,4'-HexCB	128	0,02	g	
2,2',3,4,4',5'-HexCB	138	0,11 b		
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6-HexCB	149	0,19 b		
2,2',4,4',5,5'-HexCB	153	0,20 b		
2,3,3',4,4',5-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,78		
2,2',3,3',4,4',5-HepCB	170	< 0,01	g	
2,2',3,4,4',5,5'-HepCB	180	0,03 b		
2,2',3,4,4',5',6-HepCB	183	0,01 i		
2,2',3,4',5,5',6-HepCB	187	0,04 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,08		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	g	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		5,21		
Sum PCB		29,7		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1182
 Customer: Amap 05
 Customers sample ID: 22-24.8.05 0810-0741
 : 160-155
 Sample type: Air
 Sample amount: 1131 m3
 Concentration units: pg/m3
 Data files: DH834

Kjeller, 31.01.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		9,35	18	
HCB		69,5	23	
2,2',5'-TriCB	18	6,26	39	
2,4,4'-TriCB	28	3,61		
2,4',5'-TriCB	31	3,59		
2',3,4'-TriCB	33	2,69		
3,4,4'-TriCB	37	0,29		
Sum-TriCB		25,2		
2,2',4,4'-TetCB	47	0,49 b	38	
2,2',5,5'-TetCB	52	1,07 b		
2,3',4,4'-TetCB	66	0,22 b		
2,4,4',5'-TetCB	74	0,15 b		
Sum-TetCB		4,74		
2,2',4,4',5'-PenCB	99	0,12 b	51	
2,2',4,5,5'-PenCB	101	0,32 b		
2,3,3',4,4'-PenCB	105	0,03 b		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,08 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		0,88		
2,2',3,3',4,4'-HexCB	128	< 0,01	60	
2,2',3,4,4',5'-HexCB	138	0,07 b		
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6'-HexCB	149	0,14 b		
2,2',4,4',5,5'-HexCB	153	0,12 b		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,47		
2,2',3,3',4,4',5'-HepCB	170	< 0,01	58	
2,2',3,4,4',5,5'-HepCB	180	0,02 b		
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,05		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	63	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		5,29		
Sum PCB		31,4		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

211



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1183
 Customer: AMAP 05
 Customers sample ID: 29-31.8.05 0723-0744
 : 160-156

Kjeller, 02.03.2006

Sample type: Air
 Sample amount: 1152 m3
 Concentration units: pg/m3
 Data files: M_17-02-06

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		6,40 b	46	
HCb		63,4	55	
2,2',5'-TriCB	18	8,76	80	
2,4,4'-TriCB	28	4,85		
2,4',5'-TriCB	31	4,59		
2',3,4'-TriCB	33	3,43		
3,4,4'-TriCB	37	0,33		
Sum-TriCB		33,0		
2,2',4,4'-TetCB	47	0,56 b	83	
2,2',5,5'-TetCB	52	1,36		
2,3',4,4'-TetCB	66	0,23 b		
2,4,4',5'-TetCB	74	0,15 b		
Sum-TetCB		5,25		
2,2',4,4',5'-PenCB	99	0,10 b	92	
2,2',4,5,5'-PenCB	101	0,33 b		
2,3,3',4,4'-PenCB	105	0,02 b		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,06 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		0,88		
2,2',3,3',4,4'-HexCB	128	0,01	101	
2,2',3,4,4',5'-HexCB	138	0,05 b		
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6'-HexCB	149	0,14 b		
2,2',4,4',5,5'-HexCB	153	0,10 b		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,66		
2,2',3,3',4,4',5'-HepCB	170	< 0,01	79	
2,2',3,4,4',5,5'-HepCB	180	0,02 b		
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,07		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	107	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		6,77		
Sum PCB		39,9		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1184
 Customer: AMAP 05
 Customers sample ID: 5-7.9.05 0725-0705
 : 160-156
 Sample type: Air
 Sample amount: 1135 m3
 Concentration units: pg/m3
 Data files: M_17-02-06

Kjeller, 02.03.2006

Compound		IUPAC-no.	Concentration		Recovery	TE (WHO)	
Structure			pg/m3	%			
PeCB			11,7		45		
HCB			73,0		55		
2,2',5'-TriCB	18		6,15		76		
2,4,4'-TriCB	28		3,50				
2,4',5'-TriCB	31		3,29				
2',3,4'-TriCB	33		2,46				
3,4,4'-TriCB	37		0,25				
Sum-TriCB			23,4				
2,2',4,4'-TetCB	47		0,43 b		81		
2,2',5,5'-TetCB	52		1,06 b				
2,3',4,4'-TetCB	66		0,19 b				
2,4,4',5'-TetCB	74		0,13 b				
Sum-TetCB			4,08				
2,2',4,4',5'-PenCB	99		0,09 b		91		
2,2',4,5,5'-PenCB	101		0,30 b				
2,3,3',4,4'-PenCB	105		0,02 b			96	0,00
2,3,4,4',5'-PenCB	114	<	0,01			94	0,01
2,3',4,4',5'-PenCB	118		0,06 b			95	0,01
2',3,3',4,5'-PenCB	122	<	0,01				
2',3,4,4',5'-PenCB	123	<	0,01			94	0,00
Sum-PenCB			0,81				
2,2',3,3',4,4'-HexCB	128	<	0,01		99		
2,2',3,4,4',5'-HexCB	138		0,05 b				
2,2',3,4,5,5'-HexCB	141		0,01				
2,2',3,4',5',6'-HexCB	149		0,13 b			96	
2,2',4,4',5,5'-HexCB	153		0,09 b			100	0,01
2,3,3',4,4',5'-HexCB	156	<	0,01			98	0,01
2,3,3',4,4',5'-HexCB	157	<	0,01			97	0,01
2,3',4,4',5,5'-HexCB	167	<	0,01				0,00
Sum-HexCB			0,47				
2,2',3,3',4,4',5'-HepCB	170	<	0,01		98		
2,2',3,4,4',5,5'-HepCB	180		0,01 b				
2,2',3,4,4',5',6'-HepCB	183		0,01				
2,2',3,4',5,5',6'-HepCB	187		0,02 b				
2,3,3',4,4',5,5'-HepCB	189	<	0,01			92	0,00
Sum-HepCB			0,07				
2,2',3,3',4,4',5,5'-OctCB	194	<	0,01		108		
2,2',3,3',4,4',5,5',6'-NonCB	206	<	0,01				
DecaCB	209	<	0,01				
Sum 7 PCB			5,07				
Sum PCB			28,9			0,03	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

213



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1185
 Customer: AMAP 05
 Customers sample ID: 12-14.9.05 0743-0707
 : 160-154
 Sample type: Air
 Sample amount: 1121 m3
 Concentration units: pg/m3
 Data files: M_17-02-06

Kjeller, 02.03.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		13,3	44	
HCB		65,4	54	
2,2',5'-TriCB	18	3,77		
2,4,4'-TriCB	28	2,32	78	
2,4',5'-TriCB	31	2,16		
2',3,4'-TriCB	33	1,65		
3,4,4'-TriCB	37	0,19 b		
Sum-TriCB		15,1		
2,2',4,4'-TetCB	47	0,36 b		
2,2',5,5'-TetCB	52	0,87 b	84	
2,3',4,4'-TetCB	66	0,19 b		
2,4,4',5'-TetCB	74	0,12 b		
Sum-TetCB		3,43		
2,2',4,4',5'-PenCB	99	0,13 b		
2,2',4,5,5'-PenCB	101	0,32 b	93	
2,3,3',4,4'-PenCB	105	0,03 b	96	0,00
2,3,4,4',5'-PenCB	114	< 0,01	95	0,01
2,3',4,4',5'-PenCB	118	0,11 b	95	0,01
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	94	0,00
Sum-PenCB		0,98		
2,2',3,3',4,4',5'-HexCB	128	0,02		
2,2',3,4,4',5'-HexCB	138	0,10 b	103	
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6'-HexCB	149	0,13 b		
2,2',4,4',5,5'-HexCB	153	0,15 b	96	
2,3,3',4,4',5'-HexCB	156	< 0,01	102	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	102	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	99	0,00
Sum-HexCB		0,63		
2,2',3,3',4,4',5'-HepCB	170	0,01		
2,2',3,4,4',5,5'-HepCB	180	0,03 b	101	
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	107	0,00
Sum-HepCB		0,09		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01		
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		3,89	124	
Sum PCB		20,2		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1186
 Customer: AMAP 05
 Customers sample ID: 19-21.9.05 0707-0710
 : 160-156
 Sample type: Air
 Sample amount: 1145 m3
 Concentration units: pg/m3
 Data files: M_10-02-06

Kjeller, 03.03.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		13,6	28	
HCB		68,8	38	
2,2',5'-TriCB	18	4,48		
2,4,4'-TriCB	28	2,55	55	
2,4',5'-TriCB	31	2,42		
2',3,4'-TriCB	33	1,77		
3,4,4'-TriCB	37	0,20		
Sum-TriCB		17,0		
2,2',4,4'-TetCB	47	0,41		
2,2',5,5'-TetCB	52	0,95	59	
2,3',4,4'-TetCB	66	0,23		
2,4,4',5-TetCB	74	0,15		
Sum-TetCB		3,78		
2,2',4,4',5-PenCB	99	0,17		
2,2',4,5,5'-PenCB	101	0,43	69	
2,3,3',4,4'-PenCB	105	0,05	72	0,01
2,3,4,4',5-PenCB	114	< 0,01	72	0,01
2,3',4,4',5-PenCB	118	0,18	72	0,02
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	71	0,00
Sum-PenCB		1,38		
2,2',3,3',4,4'-HexCB	128	0,03		
2,2',3,4,4',5'-HexCB	138	0,18	73	
2,2',3,4,5,5'-HexCB	141	0,04		
2,2',3,4',5',6-HexCB	149	0,19		
2,2',4,4',5,5'-HexCB	153	0,31	73	
2,3,3',4,4',5-HexCB	156	0,02	77	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	76	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	74	0,00
Sum-HexCB		1,10		
2,2',3,3',4,4',5-HepCB	170	0,03		
2,2',3,4,4',5,5'-HepCB	180	0,07	75	
2,2',3,4,4',5',6-HepCB	183	0,02		
2,2',3,4',5,5',6-HepCB	187	0,05		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	80	0,00
Sum-HepCB		0,23		
2,2',3,3',4,4',5,5'-OctCB	194	0,01		
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01	79	
Sum 7 PCB		4,67		
Sum PCB		23,5		0,04

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

215



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1187
 Customer: AMAP 05
 Customers sample ID: 26-28.9.05 0718-0903
 : 160-156
 Sample type: Air
 Sample amount: 1183 m3
 Concentration units: pg/m3
 Data files: M_10-02-06

Kjeller, 03.03.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		23,9	33	
HCb		78,8	42	
2,2',5'-TriCB	18	3,44	59	
2,4,4'-TriCB	28	2,13		
2,4',5'-TriCB	31	2,00		
2',3,4'-TriCB	33	1,45		
3,4,4'-TriCB	37	0,17		
Sum-TriCB		13,6		
2,2',4,4'-TetCB	47	0,33	61	
2,2',5,5'-TetCB	52	0,81		
2,3',4,4'-TetCB	66	0,17		
2,4,4',5-TetCB	74	0,12		
Sum-TetCB		3,27		
2,2',4,4',5-PenCB	99	0,13	72	
2,2',4,5,5'-PenCB	101	0,32		
2,3,3',4,4'-PenCB	105	0,03		
2,3,4,4',5-PenCB	114	< 0,01		
2,3',4,4',5-PenCB	118	0,09		
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
Sum-PenCB		1,01		
2,2',3,3',4,4'-HexCB	128	0,01	76	
2,2',3,4,4',5'-HexCB	138	0,07		
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6-HexCB	149	0,17		
2,2',4,4',5,5'-HexCB	153	0,13		
2,3,3',4,4',5-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,65		
2,2',3,3',4,4',5-HepCB	170	< 0,01	85	
2,2',3,4,4',5,5'-HepCB	180	0,02		
2,2',3,4,4',5',6-HepCB	183	0,01		
2,2',3,4',5,5',6-HepCB	187	0,03		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,07		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	81	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		3,57		
Sum PCB		18,6		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1653
 Customer: Amap 2005
 Customers sample ID: 3-5.10.05 0720-0718
 : 160-156
 Sample type: Air
 Sample amount: 1142 m3
 Concentration units: pg/m3
 Data files: DH846

Kjeller, 06.02.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		15,9	41	
HCB		72,7	48	
2,2',5'-TriCB	18	7,15		
2,4,4'-TriCB	28	4,65	74	
2,4',5'-TriCB	31	4,39		
2',3,4'-TriCB	33	3,37		
3,4,4'-TriCB	37	0,41		
Sum-TriCB		29,7		
2,2',4,4'-TetCB	47	0,77		
2,2',5,5'-TetCB	52	1,37	73	
2,3',4,4'-TetCB	66	0,34 b		
2,4,4',5'-TetCB	74	0,22 b		
Sum-TetCB		6,45		
2,2',4,4',5'-PenCB	99	0,14 b		
2,2',4,5,5'-PenCB	101	0,40 b	85	
2,3,3',4,4'-PenCB	105	0,03 b	88	0,00
2,3,4,4',5'-PenCB	114	< 0,01	85	0,01
2,3',4,4',5'-PenCB	118	0,10 b	88	0,01
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	87	0,00
Sum-PenCB		1,25		
2,2',3,3',4,4'-HexCB	128	0,01		
2,2',3,4,4',5'-HexCB	138	0,09 b	87	
2,2',3,4,5,5'-HexCB	141	0,03		
2,2',3,4',5',6'-HexCB	149	0,19 b		
2,2',4,4',5,5'-HexCB	153	0,15 b	83	
2,3,3',4,4',5'-HexCB	156	< 0,01	91	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	91	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	90	0,00
Sum-HexCB		0,74		
2,2',3,3',4,4',5'-HepCB	170	< 0,01		
2,2',3,4,4',5,5'-HepCB	180	0,03 b	89	
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	104	0,00
Sum-HepCB		0,11		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01		
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		6,79	92	
Sum PCB		38,3		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

217



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1654
 Customer: Amap 2005
 Customers sample ID: 10-12.10.05 0744-1334
 : 160-154
 Sample type: Air
 Sample amount: 1272 m3
 Concentration units: pg/m3
 Data files: DH846

Kjeller, 06.02.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		19,6	40	
HCB		69,0	46	
2,2',5'-TriCB	18	2,47		
2,4,4'-TriCB	28	1,35 b	71	
2,4',5'-TriCB	31	1,26 b		
2',3,4'-TriCB	33	0,91 b		
3,4,4'-TriCB	37	0,10 b		
Sum-TriCB		9,11		
2,2',4,4'-TetCB	47	0,29 b		
2,2',5,5'-TetCB	52	0,67 b	71	
2,3',4,4'-TetCB	66	0,15 b		
2,4,4',5'-TetCB	74	0,10 b		
Sum-TetCB		2,81		
2,2',4,4',5'-PenCB	99	0,11 b		
2,2',4,5,5'-PenCB	101	0,28 b	82	
2,3,3',4,4'-PenCB	105	0,02 b	85	0,00
2,3,4,4',5'-PenCB	114	< 0,01	82	0,01
2,3',4,4',5'-PenCB	118	0,08 b	84	0,01
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	83	0,00
Sum-PenCB		0,95		
2,2',3,3',4,4'-HexCB	128	< 0,01		
2,2',3,4,4',5'-HexCB	138	0,07 b	85	
2,2',3,4,5,5'-HexCB	141	0,02 i		
2,2',3,4',5',6'-HexCB	149	0,13 b		
2,2',4,4',5,5'-HexCB	153	0,10 b	84	
2,3,3',4,4',5'-HexCB	156	< 0,01	92	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	90	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	88	0,00
Sum-HexCB		0,52		
2,2',3,3',4,4',5'-HepCB	170	< 0,01		
2,2',3,4,4',5,5'-HepCB	180	0,02 b	89	
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,02 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	93	0,00
Sum-HepCB		0,08		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01		
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01	88	
Sum 7 PCB		2,58		
Sum PCB		13,5		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1655
 Customer: AMAP 05
 Customers sample ID: 17-19.10.05 0814-0811
 : 160-160
 Sample type: Air
 Sample amount: 1154 m3
 Concentration units: pg/m3
 Data files: M_17-02-06

Kjeller, 02.03.2006

Compound		Concentration pg/m3	Recovery %	TE (WHO) fg/g
Structure	IUPAC-no.			
PeCB		24,5	41	
HCB		83,0	51	
2,2',5'-TriCB	18	3,22	74	
2,4,4'-TriCB	28	1,81		
2,4',5'-TriCB	31	1,70		
2',3,4'-TriCB	33	1,17		
3,4,4'-TriCB	37	0,12 b		
Sum-TriCB		11,9		
2,2',4,4'-TetCB	47	0,39 b	80	
2,2',5,5'-TetCB	52	0,84 b		
2,3',4,4'-TetCB	66	0,18 b		
2,4,4',5'-TetCB	74	0,12 b		
Sum-TetCB		3,39		
2,2',4,4',5'-PenCB	99	0,14 b	90	
2,2',4,5,5'-PenCB	101	0,35 b		
2,3,3',4,4'-PenCB	105	0,03 b		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,10 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		1,09		
2,2',3,3',4,4'-HexCB	128	0,01	98	
2,2',3,4,4',5'-HexCB	138	0,10 b		
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6'-HexCB	149	0,18 b		
2,2',4,4',5,5'-HexCB	153	0,15 b		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,70		
2,2',3,3',4,4',5'-HepCB	170	< 0,01	96	
2,2',3,4,4',5,5'-HepCB	180	0,03 b		
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,11		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	119	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		3,37		
Sum PCB		17,2		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

219



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1656
 Customer: AMAP 05
 Customers sample ID: 24-26.10.05 0743-0746
 : 160-154
 Sample type: Air
 Sample amount: 1138 m3
 Concentration units: pg/m3
 Data files: M_17-02-06

Kjeller, 02.03.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		21,5	40	
HCB		72,5	50	
2,2',5-TriCB	18	6,58		
2,4,4'-TriCB	28	3,87	73	
2,4',5-TriCB	31	3,71		
2',3,4-TriCB	33	2,75		
3,4,4'-TriCB	37	0,26		
Sum-TriCB		25,7		
2,2',4,4'-TetCB	47	0,58 b		
2,2',5,5'-TetCB	52	1,22	79	
2,3',4,4'-TetCB	66	0,23 b		
2,4,4',5-TetCB	74	0,15 b		
Sum-TetCB		4,98		
2,2',4,4',5-PenCB	99	0,12 b		
2,2',4,5,5'-PenCB	101	0,34 b	88	
2,3,3',4,4'-PenCB	105	0,02 b	92	0,00
2,3,4,4',5-PenCB	114	< 0,01	90	0,01
2,3',4,4',5-PenCB	118	0,08 b	91	0,01
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	90	0,00
Sum-PenCB		1,00		
2,2',3,3',4,4'-HexCB	128	0,01		
2,2',3,4,4',5'-HexCB	138	0,07 b	97	
2,2',3,4,5,5'-HexCB	141	0,02		
2,2',3,4',5',6-HexCB	149	0,16 b		
2,2',4,4',5,5'-HexCB	153	0,11 b	92	
2,3,3',4,4',5-HexCB	156	< 0,01	99	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	99	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	95	0,00
Sum-HexCB		0,62		
2,2',3,3',4,4',5-HepCB	170	< 0,01		
2,2',3,4,4',5,5'-HepCB	180	0,02 b	97	
2,2',3,4,4',5',6-HepCB	183	0,01		
2,2',3,4',5,5',6-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	96	0,00
Sum-HepCB		0,09		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01		
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01	86	
Sum 7 PCB		5,71		
Sum PCB		32,4		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1657
 Customer: AMAP 05
 Customers sample ID: 31.10-2.11.05 0854-0814
 : 160-146
 Sample type: Air
 Sample amount: 1090 m3
 Concentration units: pg/m3
 Data files: M_10-02-06

Kjeller, 03.03.2006

Compound Structure IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/g	
PeCB	25,7	31		
HCB	75,9	41		
2,2',5'-TriCB 18	4,94	58		
2,4,4'-TriCB 28	2,74			
2,4',5'-TriCB 31	2,64			
2',3,4'-TriCB 33	1,91			
3,4,4'-TriCB 37	0,20			
Sum-TriCB	18,6			
2,2',4,4'-TetCB 47	0,54	62		
2,2',5,5'-TetCB 52	1,11			
2,3',4,4'-TetCB 66	0,32			
2,4,4',5-TetCB 74	0,20			
Sum-TetCB	4,65			
2,2',4,4',5-PenCB 99	0,33	72		
2,2',4,5,5'-PenCB 101	0,53			
2,3,3',4,4'-PenCB 105	0,12		0,01	
2,3,4,4',5-PenCB 114	< 0,01		0,01	
2,3',4,4',5-PenCB 118	0,35		0,03	
2'3,3',4,5-PenCB 122	0,01			
2',3,4,4',5-PenCB 123	< 0,01		0,00	
Sum-PenCB	2,06			
2,2',3,3',4,4'-HexCB 128	0,08	77		
2,2',3,4,4',5'-HexCB 138	0,45			
2,2',3,4,5,5'-HexCB 141	0,04			
2,2',3,4',5',6-HexCB 149	0,23			
2,2',4,4',5,5'-HexCB 153	0,70		77	
2,3,3',4,4',5-HexCB 156	0,03		81	0,01
2,3,3',4,4',5'-HexCB 157	< 0,01		80	0,01
2,3',4,4',5,5'-HexCB 167	0,02		78	0,00
Sum-HexCB	2,09			
2,2',3,3',4,4',5-HepCB 170	0,06	80		
2,2',3,4,4',5,5'-HepCB 180	0,17			
2,2',3,4,4',5',6-HepCB 183	0,05			
2,2',3,4',5,5',6-HepCB 187	0,07			
2,3,3',4,4',5,5'-HepCB 189	< 0,01		84	0,00
Sum-HepCB	0,43			
2,2',3,3',4,4',5,5'-OctCB 194	0,02	84		
2,2',3,3',4,4',5,5',6-NonCB 206	0,01			
DecaCB 209	< 0,01			
Sum 7 PCB	6,05			
Sum PCB	27,9		0,07	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

Results, PCB

221



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1658
 Customer: AMAP 05
 Customers sample ID: 7-9.11.05 0809-0835
 : 160-140
 Sample type: Air
 Sample amount: 1094 m3
 Concentration units: pg/m3
 Data files: M_20-02-06

Kjeller, 02.03.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		12,9	40	
HCB		63,6	48	
2,2',5'-TriCB	18	6,43	70	
2,4,4'-TriCB	28	3,76		
2,4',5'-TriCB	31	3,55		
2',3,4'-TriCB	33	2,58		
3,4,4'-TriCB	37	0,27		
Sum-TriCB		25,0		
2,2',4,4'-TetCB	47	0,56 b	71	
2,2',5,5'-TetCB	52	1,23 b		
2,3',4,4'-TetCB	66	0,27 b		
2,4,4',5'-TetCB	74	0,17 b		
Sum-TetCB		5,00		
2,2',4,4',5'-PenCB	99	0,19 b	80	0,01
2,2',4,5,5'-PenCB	101	0,40 b		
2,3,3',4,4'-PenCB	105	0,07 b		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,20 b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		1,41		
2,2',3,3',4,4'-HexCB	128	0,04	100	
2,2',3,4,4',5'-HexCB	138	0,22 b		
2,2',3,4,5,5'-HexCB	141	0,03		
2,2',3,4',5',6'-HexCB	149	0,17 b		
2,2',4,4',5,5'-HexCB	153	0,30 b		
2,3,3',4,4',5'-HexCB	156	0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		1,13		
2,2',3,3',4,4',5'-HepCB	170	0,03	96	
2,2',3,4,4',5,5'-HepCB	180	0,08 b		
2,2',3,4,4',5',6'-HepCB	183	0,02		
2,2',3,4',5,5',6'-HepCB	187	0,04 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,20		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	86	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		6,20		
Sum PCB		32,8		0,05

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1659
 Customer: AMAP 05
 Customers sample ID: 14-16.11.05 0736-0829
 : 160-164
 Sample type: Air
 Sample amount: 1169 m3
 Concentration units: pg/m3
 Data files: M_10-02-06

Kjeller, 03.03.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		30,5	30	
HCB		76,7	40	
2,2',5'-TriCB	18	5,87	58	
2,4,4'-TriCB	28	3,29		
2,4',5'-TriCB	31	3,15		
2',3,4'-TriCB	33	2,22		
3,4,4'-TriCB	37	0,22		
Sum-TriCB		22,0		
2,2',4,4'-TetCB	47	0,55	60	
2,2',5,5'-TetCB	52	1,32		
2,3',4,4'-TetCB	66	0,27		
2,4,4',5'-TetCB	74	0,18		
Sum-TetCB		5,24		
2,2',4,4',5'-PenCB	99	0,18	68	
2,2',4,5,5'-PenCB	101	0,46		
2,3,3',4,4'-PenCB	105	0,04		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,13		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		1,36		
2,2',3,3',4,4'-HexCB	128	0,02	75	
2,2',3,4,4',5'-HexCB	138	0,11		
2,2',3,4,5,5'-HexCB	141	0,03		
2,2',3,4',5',6'-HexCB	149	0,21		
2,2',4,4',5,5'-HexCB	153	0,17		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,84		
2,2',3,3',4,4',5'-HepCB	170	< 0,01	76	
2,2',3,4,4',5,5'-HepCB	180	0,02		
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,04		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,12		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	81	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		5,50		
Sum PCB		29,6		0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

223



Encl. to measuring report: O-3518
 NILU-Sample number: 05/1660
 Customer: AMAP 05
 Customers sample ID: 21-23.11.05 0906-0817
 : 160-155
 Sample type: Air
 Sample amount: 1112 m3
 Concentration units: pg/m3
 Data files: M_20-02-06

Kjeller, 02.03.2006

Compound		IUPAC-no.	Concentration		Recovery	TE (WHO)
Structure			pg/m3			
PeCB			15,3		38	
HCB			65,9		48	
2,2',5'-TriCB	18		4,58		71	
2,4,4'-TriCB	28		2,73			
2,4',5'-TriCB	31		2,57			
2',3,4'-TriCB	33		1,85			
3,4,4'-TriCB	37		0,20 b			
Sum-TriCB			17,9			
2,2',4,4'-TetCB	47		0,45 b		74	
2,2',5,5'-TetCB	52		1,09 b			
2,3',4,4'-TetCB	66		0,21 b			
2,4,4',5'-TetCB	74		0,14 b			
Sum-TetCB			4,29			
2,2',4,4',5'-PenCB	99		0,13 b		86	
2,2',4,5,5'-PenCB	101		0,38 b			
2,3,3',4,4'-PenCB	105		0,03 b			
2,3,4,4',5'-PenCB	114	<	0,01			
2,3',4,4',5'-PenCB	118		0,10 b			
2',3,3',4,5'-PenCB	122	<	0,01			
2',3,4,4',5'-PenCB	123		0,01			
Sum-PenCB			1,11			
2,2',3,3',4,4'-HexCB	128		0,01		101	
2,2',3,4,4',5'-HexCB	138		0,09 b			
2,2',3,4,5,5'-HexCB	141		0,02			
2,2',3,4',5',6'-HexCB	149		0,17 b			
2,2',4,4',5,5'-HexCB	153		0,14 b			
2,3,3',4,4',5'-HexCB	156	<	0,01			
2,3,3',4,4',5'-HexCB	157	<	0,01			
2,3',4,4',5,5'-HexCB	167	<	0,01			
Sum-HexCB			0,73			
2,2',3,3',4,4',5'-HepCB	170	<	0,01		96	
2,2',3,4,4',5,5'-HepCB	180		0,02 b			
2,2',3,4,4',5',6'-HepCB	183		0,01			
2,2',3,4',5,5',6'-HepCB	187		0,03 b			
2,3,3',4,4',5,5'-HepCB	189	<	0,01			
Sum-HepCB			0,11			
2,2',3,3',4,4',5,5'-OctCB	194	<	0,01		84	
2,2',3,3',4,4',5,5',6'-NonCB	206	<	0,01			
DecaCB	209	<	0,01			
Sum 7 PCB			4,56			
Sum PCB			24,2			0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. version 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 06/236
 Customer: AMAP 05
 Customers sample ID: 28-30.11.05 0836-0858
 : 160-156
 Sample type: Air
 Sample amount: 1152 m3
 Concentration units: pg/m3
 Data files: VB063

Kjeller, 08.03.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		16,4	53	
HCB		55,6	63	
2,2',5'-TriCB	18	4,22	73	
2,4,4'-TriCB	28	2,09		
2,4',5'-TriCB	31	1,99		
2',3,4'-TriCB	33	1,57		
3,4,4'-TriCB	37	0,16		
Sum-TriCB		15,7		
2,2',4,4'-TetCB	47	0,46	72	
2,2',5,5'-TetCB	52	1,02		
2,3',4,4'-TetCB	66	0,23		
2,4,4',5'-TetCB	74	0,17		
Sum-TetCB		4,50		
2,2',4,4',5'-PenCB	99	0,18	80	0,00
2,2',4,5,5'-PenCB	101	0,43		
2,3,3',4,4'-PenCB	105	0,05		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,14		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		1,44		
2,2',3,3',4,4'-HexCB	128	0,02	76	0,01
2,2',3,4,4',5'-HexCB	138	0,12		
2,2',3,4,5,5'-HexCB	141	0,03		
2,2',3,4',5',6'-HexCB	149	0,19		
2,2',4,4',5,5'-HexCB	153	0,16		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		0,86		
2,2',3,3',4,4',5'-HepCB	170	< 0,01	82	0,00
2,2',3,4,4',5,5'-HepCB	180	0,03		
2,2',3,4,4',5',6'-HepCB	183	0,01		
2,2',3,4',5,5',6'-HepCB	187	0,03		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,10		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	84	0,00
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		4,00	87	0,04
Sum PCB		22,6		

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

Results, PCB

225



Encl. to measuring report: O-3518
 NILU-Sample number: 06/237
 Customer: AMAP 05
 Customers sample ID: 5-7.12.05 0734-0902
 : 160-151
 Sample type: Air
 Sample amount: 1161 m3
 Concentration units: pg/m3
 Data files: VB063

Kjeller, 08.03.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		15,9	47	
HCB		55,9	60	
2,2',5'-TriCB	18	5,05	73	
2,4,4'-TriCB	28	2,72		
2,4',5'-TriCB	31	2,56		
2',3,4'-TriCB	33	2,01		
3,4,4'-TriCB	37	0,21		
Sum-TriCB		19,4		
2,2',4,4'-TetCB	47	0,59	71	
2,2',5,5'-TetCB	52	1,23		
2,3',4,4'-TetCB	66	0,29		
2,4,4',5'-TetCB	74	0,21		
Sum-TetCB		5,47		
2,2',4,4',5'-PenCB	99	0,20	79	
2,2',4,5,5'-PenCB	101	0,52		
2,3,3',4,4'-PenCB	105	0,05		
2,3,4,4',5'-PenCB	114	< 0,01		
2,3',4,4',5'-PenCB	118	0,15		
2'3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
Sum-PenCB		1,66		
2,2',3,3',4,4'-HexCB	128	0,02	75	
2,2',3,4,4',5'-HexCB	138	0,15		
2,2',3,4,5,5'-HexCB	141	0,04		
2,2',3,4',5',6'-HexCB	149	0,28		
2,2',4,4',5,5'-HexCB	153	0,23		
2,3,3',4,4',5'-HexCB	156	< 0,01		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
Sum-HexCB		1,22		
2,2',3,3',4,4',5'-HepCB	170	0,01	77	
2,2',3,4,4',5,5'-HepCB	180	0,05		
2,2',3,4,4',5',6'-HepCB	183	0,02		
2,2',3,4',5,5',6'-HepCB	187	0,05		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
Sum-HepCB		0,19		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	79	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
Sum 7 PCB		5,04		
Sum PCB		28,0		0,04

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. versjon 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 06/238
 Customer: AMAP 05
 Customers sample ID: 12-14.12.05 0753-0633
 : 160-160
 Sample type: Air
 Sample amount: 1125 m3
 Concentration units: pg/m3
 Data files: VB063

Kjeller, 08.03.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		23,8	42	
HCB		61,7	53	
2,2',5'-TriCB	18	6,58		
2,4,4'-TriCB	28	3,60	68	
2,4',5'-TriCB	31	3,41		
2',3,4'-TriCB	33	2,72		
3,4,4'-TriCB	37	0,25		
Sum-TriCB		25,7		
2,2',4,4'-TetCB	47	0,64		
2,2',5,5'-TetCB	52	1,34	64	
2,3',4,4'-TetCB	66	0,30		
2,4,4',5'-TetCB	74	0,24		
Sum-TetCB		5,93		
2,2',4,4',5'-PenCB	99	0,21		
2,2',4,5,5'-PenCB	101	0,51	70	
2,3,3',4,4'-PenCB	105	0,06	70	0,01
2,3,4,4',5'-PenCB	114	< 0,01	69	0,01
2,3',4,4',5'-PenCB	118	0,18	70	0,02
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	70	0,00
Sum-PenCB		1,70		
2,2',3,3',4,4',5'-HexCB	128	0,02		
2,2',3,4,4',5'-HexCB	138	0,13	68	
2,2',3,4,5,5'-HexCB	141	0,03		
2,2',3,4',5',6'-HexCB	149	0,24		
2,2',4,4',5,5'-HexCB	153	0,20	68	
2,3,3',4,4',5'-HexCB	156	< 0,01	75	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	70	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	76	0,00
Sum-HexCB		1,07		
2,2',3,3',4,4',5'-HepCB	170	0,01		
2,2',3,4,4',5,5'-HepCB	180	0,04	70	
2,2',3,4,4',5',6'-HepCB	183	0,02		
2,2',3,4',5,5',6'-HepCB	187	0,04		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	73	0,00
Sum-HepCB		0,14		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01		
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01	75	
Sum 7 PCB		6,01		
Sum PCB		34,6		0,04

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Results, PCB

227



Encl. to measuring report: O-3518
 NILU-Sample number: 06/239
 Customer: AMAP 05
 Customers sample ID: 19-21.12.05 0850-0810
 : 160-156
 Sample type: Air
 Sample amount: 1126 m3
 Concentration units: pg/m3
 Data files: VB063

Kjeller, 08.03.2006

Compound		Concentration	Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3	%	fg/g
PeCB		23,0	54	
HCB		61,7	63	
2,2',5'-TriCB	18	7,12		
2,4,4'-TriCB	28	3,53	73	
2,4',5'-TriCB	31	3,38		
2',3,4'-TriCB	33	2,69		
3,4,4'-TriCB	37	0,25		
Sum-TriCB		26,5		
2,2',4,4'-TetCB	47	0,66		
2,2',5,5'-TetCB	52	1,49	73	
2,3',4,4'-TetCB	66	0,35		
2,4,4',5-TetCB	74	0,27		
Sum-TetCB		6,61		
2,2',4,4',5-PenCB	99	0,28		
2,2',4,5,5'-PenCB	101	0,62	77	
2,3,3',4,4'-PenCB	105	0,08	75	0,01
2,3,4,4',5-PenCB	114	< 0,01	74	0,01
2,3',4,4',5-PenCB	118	0,23	74	0,02
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	75	0,00
Sum-PenCB		2,16		
2,2',3,3',4,4'-HexCB	128	0,03		
2,2',3,4,4',5,5'-HexCB	138	0,17	74	
2,2',3,4,5,5'-HexCB	141	0,04		
2,2',3,4',5',6-HexCB	149	0,28		
2,2',4,4',5,5'-HexCB	153	0,26	75	
2,3,3',4,4',5-HexCB	156	0,01	83	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	79	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	84	0,00
Sum-HexCB		1,29		
2,2',3,3',4,4',5-HepCB	170	0,01		
2,2',3,4,4',5,5'-HepCB	180	0,04	80	
2,2',3,4,4',5',6-HepCB	183	0,02		
2,2',3,4',5,5',6-HepCB	187	0,05		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	83	0,00
Sum-HepCB		0,17		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01		
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01	88	
Sum 7 PCB		6,34		
Sum PCB		36,7		0,05

Sum 7 PCB: PCB(28+52+101+118+138+153+180)
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)
 <: Lower than detection limit at signal-to-noise 3 to 1
 i: Isotope ratio deviates more than 20 % from theoretical value.
 This may be due to instrumental noise or/and chemical interference
 b: Lower than 10 times method blank.
 g: Recovery is not according to NILUs quality criteria
 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model
 (M. Van den Berg et al., 1998)

10. version 21.12.2004 GSK

Results, PCB



Encl. to measuring report: O-3518
 NILU-Sample number: 06/240
 Customer: AMAP 05
 Customers sample ID: 26-28.12.05 0830-0615
 : 160-158
 Sample type: Air
 Sample amount: 1095 m3
 Concentration units: pg/m3
 Data files: VB063

Kjeller, 08.03.2006

Compound		Concentration		Recovery	TE (WHO)
Structure	IUPAC-no.	pg/m3		%	fg/g
PeCB		22,6		44	
HCB		56,5		56	
2,2',5-TriCB	18	3,90		70	
2,4,4'-TriCB	28	2,06			
2,4',5-TriCB	31	2,00			
2',3,4-TriCB	33	1,66			
3,4,4'-TriCB	37	0,18			
Sum-TriCB		15,2			
2,2',4,4'-TetCB	47	0,50		72	
2,2',5,5'-TetCB	52	0,99			
2,3',4,4'-TetCB	66	0,22			
2,4,4',5-TetCB	74	0,15			
Sum-TetCB		4,36			
2,2',4,4',5-PenCB	99	0,16		76	
2,2',4,5,5'-PenCB	101	0,39			
2,3,3',4,4'-PenCB	105		0,04	73	0,00
2,3,4,4',5-PenCB	114	<	0,01	73	0,01
2,3',4,4',5-PenCB	118		0,13	73	0,01
2',3,3',4,5-PenCB	122	<	0,01	72	0,00
2',3,4,4',5-PenCB	123	<	0,01		
Sum-PenCB		1,28			
2,2',3,3',4,4'-HexCB	128		0,02	74	
2,2',3,4,4',5'-HexCB	138	0,10			
2,2',3,4,5,5'-HexCB	141		0,02	82	0,01
2,2',3,4',5',6-HexCB	149		0,18		
2,2',4,4',5,5'-HexCB	153		0,16		
2,3,3',4,4',5-HexCB	156	<	0,01		
2,3,3',4,4',5'-HexCB	157	<	0,01		
2,3',4,4',5,5'-HexCB	167	<	0,01		
Sum-HexCB		0,80			
2,2',3,3',4,4',5-HepCB	170	<	0,01	78	
2,2',3,4,4',5,5'-HepCB	180	0,03			
2,2',3,4,4',5',6-HepCB	183		0,01	81	0,00
2,2',3,4',5,5',6-HepCB	187		0,03		
2,3,3',4,4',5,5'-HepCB	189	<	0,01		
Sum-HepCB		0,10			
2,2',3,3',4,4',5,5'-OctCB	194	<	0,01	89	
2,2',3,3',4,4',5,5',6-NonCB	206	<	0,01		
DecaCB	209	<	0,01		
Sum 7 PCB		3,86			
Sum PCB		21,7			0,03

Sum 7 PCB: PCB(28+52+101+118+138+153+180)

Sum PCB: Sum of observed PCB (mono- and di-CB are not included)

<: Lower than detection limit at signal-to-noise 3 to 1

i: Isotope ratio deviates more than 20 % from theoretical value.

This may be due to instrumental noise or/and chemical interference

b: Lower than 10 times method blank.

g: Recovery is not according to NILUs quality criteria

TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model (M. Van den Berg et al., 1998)

Vedlegg 4

Organiske forbindelser i luft i Ny-Ålesund (O-3575)

Målerapport nr. O-3575

Oppdragsgiver: Statens forurensningstilsyn (SFT)
Postboks 8100 DEP
0032 OSLO

Prosjekt nr.: O-93062

Prøvetaking:

Sted: Ny-Ålesund
Ansvar: NILU/Norsk Polarinstitut
Kommentar:

Prøveinformasjon:

NILU prøvenr.	Kundens prøvemerkning			Prøvetype	Prøven mottatt	Prøven analysert
05/286	5-7.1.05	0754-0813	160-152	Luft	14.02.05	30.08.05 – 12.10.05
05/290	14-16.1.05	0817-1159	160-155	Luft	14.02.05	30.08.05 – 12.10.05
05/293	21-23.1.05	0938-1238	160-160	Luft	14.02.05	30.08.05 – 12.10.05
05/295	28-30.1.05	0802-0640	160-159	Luft	14.02.05	01.09.05 – 12.10.05
05/531	2-4.2.05	0812-0835	160-156	Luft	01.04.05	01.09.05 – 12.10.05
05/534	9-11.2.05	0800-0728	160-155	Luft	01.04.05	01.09.05 – 12.10.05
05/538	18-20.2.05	0808-0755	160-162	Luft	01.04.05	01.09.05 – 13.10.05
05/540	23-25.2.05	0841-0752	160-165	Luft	01.04.05	01.09.05 – 13.10.05
05/543	2-4.3.05	0925-1210	160-153	Luft	01.04.05	01.09.05 – 13.10.05
05/547	9-11.3.05	0938-0856	160-159	Luft	01.04.05	05.09.05 – 13.10.05
05/549	14-16.3.05	0903-0802	160-155	Luft	01.04.05	05.09.05 – 13.10.05
05/677	16-18.3.05	0835-0755	160-158	Luft	19.05.05	05.09.05 – 13.10.05
05/679	21-23.3.05	0810-0813	160-140	Luft	19.05.05	05.09.05 – 13.10.05
05/681	28-30.3.05	1239-0747	160-147	Luft	19.05.05	05.09.05 – 13.10.05
05/683	4-6.4.05	0702-0805	160-148	Luft	19.05.05	07.09.05 – 13.10.05
05/686	11-13.4.05	0715-0730	160-162	Luft	19.05.05	07.09.05 – 14.10.05
05/690	25-27.4.05	0703-0651	160-154	Luft	19.05.05	07.09.05 – 14.10.05
05/984	2-4.5.05	0740-0727	160-160	Luft	11.08.05	07.09.05 – 14.10.05
05/985	9-11.5.05	0736-1131	160-148	Luft	11.08.05	03.02.06 – 03.03.06
05/986	16-18.5.05	0923-0711	160-156	Luft	11.08.05	03.02.06 – 03.03.06
05/987	23-25.5.05	0757-0731	160-154	Luft	11.08.05	03.02.06 – 14.03.06
05/988	30.5-1.6.05	0707-0733	160-155	Luft	11.08.05	06.02.06 – 03.03.06
05/989	6-8.6.05	0740-0730	160-154	Luft	11.08.05	06.02.06 – 03.03.06
05/990	13-15.6.05	0700-0733	160-156	Luft	11.08.05	06.02.06 – 03.03.06
05/991	20-22.6.05	0740-0701	160-148	Luft	11.08.05	06.02.06 – 03.03.06
05/992	27-29.6.05	0702-0732	160-157	Luft	11.08.05	07.02.06 – 03.03.06
05/993	4-6.7.05	1315-0900	160-152	Luft	11.08.05	07.02.06 – 03.03.06
05/994	11-13.7.05	1422-1410	160-157	Luft	11.08.05	07.02.06 – 03.03.06
05/995	18-20.7.05	0731-0900	160-158	Luft	11.08.05	07.02.06 – 03.03.06
05/1188	25-27.7.05	0811-0913	160-156	Luft	11.10.05	08.02.06 – 03.03.06
05/1189	1-3.8.05	0813-0715	160-158	Luft	11.10.05	08.02.06 – 03.03.06
05/1190	8-10.8.05	0718-0657	160-160	Luft	11.10.05	08.02.06 – 03.03.06
05/1191	15-17.8.05	0718-0657	160-155	Luft	11.10.05	08.02.06 – 03.03.06
05/1192	22-24.8.05	0810-0741	160-155	Luft	11.10.05	08.02.06 – 03.03.06
05/1193	29-31.8.05	0723-0744	160-156	Luft	11.10.05	09.02.06 – 03.03.06
05/1194	5-7.9.05	0725-0705	160-157	Luft	11.10.05	09.02.06 – 14.03.06
05/1195	12-14.9.05	0743-0707	160-155	Luft	11.10.05	09.02.06 – 14.03.06
05/1196	19-21.9.05	0707-0710	160-156	Luft	11.10.05	09.02.06 – 14.03.06
05/1197	26-28.9.05	0718-0903	160-156	Luft	11.10.05	13.02.06 – 14.03.06

05/1662	3-5.10.05	0720-0718	160-156	Luft	07.12.05	13.02.06 – 14.03.06
05/1663	10-12.10.05	0744-1334	160-154	Luft	07.12.05	13.02.06 – 14.03.06
05/1664	17-19.10.05	0813-0811	160-160	Luft	07.12.05	13.02.06 – 14.03.06
05/1665	24-26.10.05	0743-0746	160-154	Luft	07.12.05	15.02.06 – 03.03.06
05/1666	31.10-2.11.05	0854-0814	160-145	Luft	07.12.05	15.02.06 – 03.03.06
05/1667	7-9.11.05	0807-0835	160-154	Luft	07.12.05	15.02.06 – 03.03.06
05/1668	14-16.11.05	0736-0829	160-161	Luft	07.12.05	15.02.06 – 03.03.06
05/1669	21-23.11.05	0906-0817	160-160	Luft	07.12.05	15.02.06 – 03.03.06
06/246	28-30.11.05	0836-0858	160-148	Luft	15.02.06	17.02.06 – 14.03.06
06/247	5-7.12.05	0734-0902	160-151	Luft	15.02.06	17.02.06 – 03.03.06
06/248	12-14.12.05	0753-0633	160-160	Luft	15.02.06	17.02.06 – 03.03.06
06/249	19-21.12.05	0850-0810	160-156	Luft	15.02.06	17.02.06 – 03.03.06
06/250	26-28.12.05	0830-0615	160-159	Luft	15.02.06	17.02.06 – 03.03.06

Analyser:

Utført av: Norsk institutt for luftforskning
 Postboks 100
 N-2027 KJELLER

Målemetode: NILU-O-3: ("Determination of polycyclic aromatic hydrocarbons")

Kommentarer:

Godkjenning: Kjeller, 17. mars 2006

Ole-Anders Braathen

Ole-Anders Braathen
 Avd.direktør, Miljøkjemi

Vedlegg: PAH analyser: 52 sider
 Målerapporten og vedleggene omfatter totalt 54 sider

Måleresultatene gjelder bare de prøvene som er analysert. Denne rapporten skal ikke gjengis i utdrag, uten skriftlig godkjenning fra laboratoriet.

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/286
 Customer: Amap 05
 Customers sample ID: 5-7.1.05 0754-0813
 : 160-152
 Sample type: Air
 Sample amount: 1135 m3
 Concentration unit: pg/m3
 Data files: TB_0161.D

233



Kjeller, 06.02.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	1 112	
2-Methylnaphtalene	473	33
1-Methylnaphtalene	378	
Biphenyl	1 269	
Acenaphthylene *	1,00 i	
Acenaphtene *	22,0 b	41
Dibenzofuran	1 439	
Fluorene *	720	
Dibenzothiophene	25,0	
Phenanthrene *	158	
Antrachene *	< 1,00	47
3-Methylphenanthrene	4,00 b	
2-Methylphenanthrene	7,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	63,0	
Pyrene *	18,0 b	67
Benzo(a)fluorene	30,0 b	
Retene	2,00 b	
Benzo(b)fluorene	3,00	
Benzo(ghi)fluoranthene	4,00 i	
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	4,00 b	69
Chrysene */Triphenylene	14,0	
Benzo(b */j/k *)fluoranthenes	23,0	
Benzo(a)fluoranthene	1,00	
Benzo(e)pyrene	7,00	90
Benzo(a)pyrene *	3,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	4,00 b	
Dibenzo(ac/ah *)anthracene	1,00	
Benzo(ghi)perylene *	7,00 b	75
Anthanthrene	< 1,00	
Coronene	3,00	
Dibenzo(ae)pyrene	1,00	
Dibenzo(ai)pyrene	1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	3 232	
Sum 3-7 ring PAH:	2 576	
Sum all:	5 808	
Sum Borneff 6	100	
Sum 16 EPA PAH *	2 151	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



234

Encl. to measuring report: O-3575
 NILU sample number: 05/290
 Customer: Amap 05
 Customers sample ID: 14-16.1.05 0817-1159
 : 160-155
 Sample type: Air
 Sample amount: 1228 m3
 Concentration unit: pg/m3
 Data files: TB_0162.D

Kjeller, 07.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	1 054	
2-Methylnaphtalene	331	32
1-Methylnaphtalene	272	
Biphenyl	1 774	
Acenaphthylene *	6,00 b	
Acenaphtene *	19,0 b	38
Dibenzofuran	2 548	
Fluorene *	1 187	
Dibenzothiophene	57,0	
Phenanthrene *	195	
Antrachene *	2,00 b	44
3-Methylphenanthrene	10,0 b	
2-Methylphenanthrene	14,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	7,00 b	
1-Methylphenanthrene	10,0 b	
Fluoranthene *	162	
Pyrene *	92,0	56
Benzo(a)fluorene	21,0 i,b	
Retene	8,00 b	
Benzo(b)fluorene	15,0 i	
Benzo(ghi)fluoranthene	19,0 i	
Cyclopenta(cd)pyrene	6,00	
Benz(a)anthracene *	24,0	56
Chrysene */Triphenylene	68,0	
Benzo(b */l/k *)fluoranthenes	158	
Benzo(a)fluoranthene	9,00	
Benzo(e)pyrene	34,0	75
Benzo(a)pyrene *	21,0	
Perylene	3,00	
Indeno(1,2,3-cd)pyrene *	45,0	
Dibenzo(ac/ah *)anthracene	2,00	
Benzo(ghi)perylene *	34,0	69
Anthanthrene	1,00	
Coronene	22,0	
Dibenzo(ae)pyrene	7,00	
Dibenzo(ai)pyrene	5,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	3 431	
Sum 3-7 ring PAH:	4 813	
Sum all:	8 244	
Sum Borneff 6	420	
Sum 16 EPA PAH *	3 069	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Version 03.06.2004 GSK

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/293
 Customer: Amap 05
 Customers sample ID: 21-23.1.05 0938-1238
 : 160-160
 Sample type: Air
 Sample amount: 1229 m3
 Concentration unit: pg/m3
 Data files: TB_0163.D

235



Kjeller, 07.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	3 814	
2-Methylnaphtalene	1 211	29
1-Methylnaphtalene	1 048	
Biphenyl	2 839	
Acenaphthylene *	3,00 b	
Acenaphtene *	36,0 b	35
Dibenzofuran	3 054	
Fluorene *	1 614	
Dibenzothiophene	52,0	
Phenanthrene *	278	
Antrachene *	2,00 b	42
3-Methylphenanthrene	10,0 b	
2-Methylphenanthrene	17,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	6,00 b	
1-Methylphenanthrene	9,00 b	
Fluoranthene *	166	
Pyrene *	87,0	57
Benzo(a)fluorene	14,0 i,b	
Retene	7,00 b	
Benzo(b)fluorene	14,0 i	
Benzo(ghi)fluoranthene	16,0	
Cyclopenta(cd)pyrene	3,00	
Benz(a)anthracene *	19,0	57
Chrysene */Triphenylene	66,0	
Benzo(b */j/k *)fluoranthenes	110	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	34,0	75
Benzo(a)pyrene *	15,0	
Perylene	3,00	
Indeno(1,2,3-cd)pyrene *	36,0	
Dibenzo(ac/ah *)anthracene	3,00	
Benzo(ghi)perylene *	31,0	71
Anthanthrene	< 1,00	
Coronene	20,0	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	8 912	
Sum 3-7 ring PAH:	5 731	
Sum all:	14 643	
Sum Borneff 6	358	
Sum 16 EPA PAH *	6 280	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



236

Encl. to measuring report: O-3575
 NILU sample number: 05/295
 Customer: Amap 05
 Customers sample ID: 28-30.1.05 0802-0640
 : 160-159
 Sample type: Air
 Sample amount: 1121 m3
 Concentration unit: pg/m3
 Data files: TB_0164.D

Kjeller, 07.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	1 007	
2-Methylnaphtalene	284	33
1-Methylnaphtalene	246	
Biphenyl	805	
Acenaphthylene *	1,00 b	
Acenaphtene *	10,0 b	43
Dibenzofuran	868	
Fluorene *	339	
Dibenzothiophene	12,0	
Phenanthrene *	73,0 b	
Antrachene *	< 1,00	51
3-Methylphenanthrene	4,00 b	
2-Methylphenanthrene	8,00 b	
2-Methylanthracene	10,0	
9-Methylphenanthrene	3,00 b	
1-Methylphenanthrene	4,00 b	
Fluoranthene *	40,0 b	
Pyrene *	19,0 b	65
Benzo(a)fluorene	2,00 b	
Retene	3,00 b	
Benzo(b)fluorene	3,00 i	
Benzo(ghi)fluoranthene	3,00 i	
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	3,00 b	72
Chrysene */Triphenylene	9,00	
Benzo(b */j/k *)fluoranthenes	19,0	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	5,00	78
Benzo(a)pyrene *	3,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	5,00	
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	7,00 b	73
Anthanthrene	< 1,00	
Coronene	3,00	
Dibenzo(ae)pyrene	1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	2 342	
Sum 3-7 ring PAH:	1 465	
Sum all:	3 807	
Sum Borneff 6	74,0	
Sum 16 EPA PAH *	1 537	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/531
 Customer: Amap 05
 Customers sample ID: 2-4.2.05 0812-0835
 : 160-156
 Sample type: Air
 Sample amount: 1152 m3
 Concentration unit: pg/m3
 Data files: TB_0165.D

237



Kjeller, 07.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	1 649	
2-Methylnaphtalene	385	30
1-Methylnaphtalene	317	
Biphenyl	1 120	
Acenaphthylene *	2,00 b	
Acenaphtene *	16,0 b	38
Dibenzofuran	1 495	
Fluorene *	616	
Dibenzothiophene	20,0	
Phenanthrene *	222	
Antrachene *	< 1,00	42
3-Methylphenanthrene	7,00	
2-Methylphenanthrene	13,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	5,00 b	
1-Methylphenanthrene	7,00 b	
Fluoranthene *	128	
Pyrene *	61,0	53
Benzo(a)fluorene	7,00 i,b	
Retene	5,00 b	
Benzo(b)fluorene	7,00 i	
Benzo(ghi)fluoranthene	10,0 i	
Cyclopenta(cd)pyrene	2,00	
Benz(a)anthracene *	10,0	57
Chrysene */Triphenylene	34,0	
Benzo(b */i/k *)fluoranthenes	60,0	
Benzo(a)fluoranthene	1,00	
Benzo(e)pyrene	19,0	66
Benzo(a)pyrene *	10,0	
Perylene	2,00	
Indeno(1,2,3-cd)pyrene *	17,0	
Dibenzo(ac/ah *)anthracene	2,00	
Benzo(ghi)perylene *	20,0 b	61
Anthanthrene	< 1,00	
Coronene	9,00	
Dibenzo(ae)pyrene	2,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	3 471	
Sum 3-7 ring PAH:	2 814	
Sum all:	6 285	
Sum Borneff 6	235	
Sum 16 EPA PAH *	2 848	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



238

Encl. to measuring report: O-3575
 NILU sample number: 05/534
 Customer: Amap 05
 Customers sample ID: 9-11.2.05 0800-0728
 : 160-155
 Sample type: Air
 Sample amount: 1128 m3
 Concentration unit: pg/m3
 Data files: TB_0167.D

Kjeller, 07.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	631	
2-Methylnaphtalene	163	35
1-Methylnaphtalene	140	
Biphenyl	611	
Acenaphthylene *	1,00 b	
Acenaphtene *	6,00 b	44
Dibenzofuran	910	
Fluorene *	348	
Dibenzothiophene	18,0	
Phenanthrene *	125	
Antrachene *	< 1,00	50
3-Methylphenanthrene	7,00 b	
2-Methylphenanthrene	13,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	5,00 b	
1-Methylphenanthrene	6,00 b	
Fluoranthene *	70,0	
Pyrene *	23,0 b	65
Benzo(a)fluorene	2,00 i,b	
Retene	2,00 b	
Benzo(b)fluorene	3,00 i	
Benzo(ghi)fluoranthene	4,00 i	
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	4,00 b	59
Chrysene */Triphenylene	15,0	
Benzo(b */j/k *)fluoranthenes	19,0	
Benzo(a)fluoranthene	2,00	
Benzo(e)pyrene	6,00	76
Benzo(a)pyrene *	3,00	
Perylene	2,00	
Indeno(1,2,3-cd)pyrene *	7,00	
Dibenzo(ac/ah *)anthracene	2,00	
Benzo(ghi)perylene *	7,00 b	66
Anthanthrene	< 1,00	
Coronene	6,00	
Dibenzo(ae)pyrene	3,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	1 545	
Sum 3-7 ring PAH:	1 625	
Sum all:	3 170	
Sum Borneff 6	106	
Sum 16 EPA PAH *	1 262	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/538
 Customer: Amap 05
 Customers sample ID: 18-20.2.05 0808-0755
 : 160-162
 Sample type: Air
 Sample amount: 1157 m3
 Concentration unit: pg/m3
 Data files: TB_0168.D

239



Kjeller, 07.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	1 316	
2-Methylnaphtalene	241	26
1-Methylnaphtalene	215	
Biphenyl	1 357	
Acenaphthylene *	1,00 b	
Acenaphtene *	8,00 b	38
Dibenzofuran	1 842	
Fluorene *	712	
Dibenzothiophene	20,0	
Phenanthrene *	139	
Antrachene *	< 1,00	44
3-Methylphenanthrene	5,00 b	
2-Methylphenanthrene	9,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	3,00 b	
1-Methylphenanthrene	5,00 b	
Fluoranthene *	86,0	
Pyrene *	38,9 b	56
Benzo(a)fluorene	4,00 i,b	
Retene	3,00 b	
Benzo(b)fluorene	4,00 i	
Benzo(ghi)fluoranthene	9,00	
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	4,00 b	54
Chrysene */Triphenylene	37,0	
Benzo(b */j/k *)fluoranthenes	57,0	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	16,0	72
Benzo(a)pyrene *	4,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	15,0	
Dibenzo(ac/ah *)anthracene	1,00	
Benzo(ghi)perylene *	16,0 b	65
Anthanthrene	< 1,00	
Coronene	8,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	3 129	
Sum 3-7 ring PAH:	3 056	
Sum all:	6 185	
Sum Borneff 6	178	
Sum 16 EPA PAH *	2 436	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



240

Encl. to measuring report: O-3575
 NILU sample number: 05/540
 Customer: Amap 05
 Customers sample ID: 23-25.2.05 0841-0752
 : 160-165
 Sample type: Air
 Sample amount: 1156 m3
 Concentration unit: pg/m3
 Data files: TB_0169.D

Kjeller, 07.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	1 675	
2-Methylnaphtalene	254	37
1-Methylnaphtalene	268	
Biphenyl	1 153	
Acenaphthylene *	1,00 b	
Acenaphtene *	6,00 b	44
Dibenzofuran	1 143	
Fluorene *	304	
Dibenzothiophene	10,0	
Phenanthrene *	72,0 b	
Antrachene *	< 1,00	53
3-Methylphenanthrene	3,00 b	
2-Methylphenanthrene	5,00	
2-Methylanthracene	< 1,00 b	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	33,0 b	
Pyrene *	21,0 b	68
Benzo(a)fluorene	2,00 i,b	
Retene	3,00 b	
Benzo(b)fluorene	2,00 i	
Benzo(ghi)fluoranthene	3,00	
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	3,00 b	57
Chrysene */Triphenylene	14,0	
Benzo(b */j/k *)fluoranthenes	19,0	
Benzo(a)fluoranthene	20,0	
Benzo(e)pyrene	6,00	85
Benzo(a)pyrene *	2,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	3,00 b	
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	7,00 b	75
Anthanthrene	< 1,00	
Coronene	3,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	3 350	
Sum 3-7 ring PAH:	1 699	
Sum all:	5 049	
Sum Borneff 6	64,0	
Sum 16 EPA PAH *	2 162	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/543
 Customer: Amap 05
 Customers sample ID: 2-4.3.05 0925-1210
 : 160-153
 Sample type: Air
 Sample amount: 1199 m3
 Concentration unit: pg/m3
 Data files: TB_0170.D

241



Kjeller, 07.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	440 b	
2-Methylnaphtalene	89,0 b	32
1-Methylnaphtalene	96,0	
Biphenyl	912	
Acenaphthylene *	1,00 b	
Acenaphtene *	6,00 b	39
Dibenzofuran	1 103	
Fluorene *	289	
Dibenzothiophene	11,0	
Phenanthrene *	93,0 b	
Antrachene *	< 1,00	41
3-Methylphenanthrene	2,00 b	
2-Methylphenanthrene	4,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	1,00 b	
1-Methylphenanthrene	1,00 b	
Fluoranthene *	49,0 b	
Pyrene *	25,0 b	53
Benzo(a)fluorene	3,00 i,b	
Retene	1,00 b	
Benzo(b)fluorene	2,00 i	
Benzo(ghi)fluoranthene	5,00 i	
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	4,00 b	45
Chrysene */Triphenylene	24,0	
Benzo(b */j/k *)fluoranthenes	35,0	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	10,0	62
Benzo(a)pyrene *	3,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	5,00	
Dibenzo(ac/ah *)anthracene	1,00	
Benzo(ghi)perylene *	8,00 b	57
Anthanthrene	< 1,00	
Coronene	5,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	1 537	
Sum 3-7 ring PAH:	1 700	
Sum all:	3 237	
Sum Borneff 6	100	
Sum 16 EPA PAH *	984	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



242

Encl. to measuring report: O-3575
 NILU sample number: 05/547
 Customer: Amap 05
 Customers sample ID: 9-11.3.05 0938-0856
 : 160-159
 Sample type: Air
 Sample amount: 1138 m3
 Concentration unit: pg/m3
 Data files: TB_0171.D

Kjeller, 07.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	718	
2-Methylnaphtalene	108 b	37
1-Methylnaphtalene	93,0	
Biphenyl	807	
Acenaphthylene *	2,00 b	
Acenaphtene *	5,00 b	46
Dibenzofuran	999	
Fluorene *	195	
Dibenzothiophene	10,0	
Phenanthrene *	75,0 b	
Antrachene *	< 1,00	47
3-Methylphenanthrene	3,00 b	
2-Methylphenanthrene	5,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	51,0	
Pyrene *	30,0 b	58
Benzo(a)fluorene	3,00 i,b	
Retene	1,00 b	
Benzo(b)fluorene	3,00 i	
Benzo(ghi)fluoranthene	4,00 i	
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	4,00 b	62
Chrysene */Triphenylene	19,0	
Benzo(b */j/k *)fluoranthenes	37,0	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	11,0	70
Benzo(a)pyrene *	7,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	10,0	
Dibenzo(ac/ah *)anthracene	1,00	
Benzo(ghi)perylene *	10,0 b	73
Anthanthrene	< 1,00	
Coronene	4,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	1 726	
Sum 3-7 ring PAH:	1 503	
Sum all:	3 229	
Sum Borneff 6	115	
Sum 16 EPA PAH *	1 165	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/549
 Customer: Amap 05
 Customers sample ID: 14-16.3.05 0903-0802
 : 160-155
 Sample type: Air
 Sample amount: 1116 m3
 Concentration unit: pg/m3
 Data files: TB_0172.D

243



Kjeller, 07.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	301 b	36
2-Methylnaphtalene	46,0 b	
1-Methylnaphtalene	44,0 b	
Biphenyl	605	
Acenaphthylene *	1,00 b	47
Acenaphtene *	4,00 b	
Dibenzofuran	890	
Fluorene *	159	
Dibenzothiophene	7,00	52
Phenanthrene *	63,0 b	
Antrachene *	< 1,00	
3-Methylphenanthrene	4,00 b	
2-Methylphenanthrene	7,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	4,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	33,0 b	65
Pyrene *	20,0 b	
Benzo(a)fluorene	1,00 i,b	
Retene	1,00 b	
Benzo(b)fluorene	2,00 i	
Benzo(ghi)fluoranthene	5,00 i	73
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	2,00 b	
Chrysene */Triphenylene	13,0	
Benzo(b */j/k *)fluoranthenes	22,0	83
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	7,00	
Benzo(a)pyrene *	4,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	5,00	80
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	7,00 b	
Anthanthrene	< 1,00	
Coronene	2,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	996	
Sum 3-7 ring PAH:	1 276	
Sum all:	2 272	
Sum Borneff 6	71,0	
Sum 16 EPA PAH *	636	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



Encl. to measuring report: O-3575
 NILU sample number: 05/677
 Customer: Amap 05
 Customers sample ID: 16-18.3.05 0835-0755
 : 160-158
 Sample type: Air
 Sample amount: 1133 m3
 Concentration unit: pg/m3
 Data files: TB_0173.D

Kjeller, 06.02.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	381 b	45
2-Methylnaphtalene	70,0 b	
1-Methylnaphtalene	54,0 b	
Biphenyl	658	
Acenaphthylene *	1,00 b	53
Acenaphtene *	6,00 b	
Dibenzofuran	866	
Fluorene *	155	
Dibenzothiophene	9,00	52
Phenanthrene *	64,0 b	
Antrachene *	1,00 b	
3-Methylphenanthrene	7,00 b	
2-Methylphenanthrene	10,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	6,00 b	
1-Methylphenanthrene	6,00 b	
Fluoranthene *	29,0 b	62
Pyrene *	18,0 b	
Benzo(a)fluorene	4,00 b	
Retene	3,00 b	
Benzo(b)fluorene	2,00 i	
Benzo(ghi)fluoranthene	3,00	52
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	2,00 b	
Chrysene */Triphenylene	13,0	
Benzo(b */j/k *)fluoranthenes	15,0	78
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	4,00 b	
Benzo(a)pyrene *	3,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	3,00 b	65
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	5,00 b	
Anthanthrene	< 1,00	
Coronene	3,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	1 163	
Sum 3-7 ring PAH:	1 247	
Sum all:	2 410	
Sum Borneff 6	55,0	
Sum 16 EPA PAH *	697	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/679
 Customer: Amap 05
 Customers sample ID: 21-23.3.05 0810-0813
 : 160-140
 Sample type: Air
 Sample amount: 1087 m3
 Concentration unit: pg/m3
 Data files: TB_0174.D

245



Kjeller, 07.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	104 b	31
2-Methylnaphtalene	30,0 b	
1-Methylnaphtalene	22,0 b	
Biphenyl	248	
Acenaphthylene *	1,00 b	40
Acenaphthene *	3,00 b	
Dibenzofuran	413	
Fluorene *	42,0	
Dibenzothiophene	3,00	41
Phenanthrene *	13,0 i,b	
Antrachene *	< 1,00	
3-Methylphenanthrene	2,00 b	
2-Methylphenanthrene	3,00 b	
2-Methylantracene	< 1,00	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	12,0 b	
Pyrene *	9,00 b	
Benzo(a)fluorene	3,00 b	
Retene	3,00 b	
Benzo(b)fluorene	2,00 i	
Benzo(ghi)fluoranthene	1,00 i,b	47
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	1,00 b	
Chrysene */Triphenylene	3,00 b	
Benzo(b */l/k *)fluoranthenes	2,00 b	61
Benzo(a)fluoranthene	3,00	
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	< 1,00	52
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	2,00 b	
Anthanthrene	< 1,00	
Coronene	1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	404	
Sum 3-7 ring PAH:	539	
Sum all:	943	
Sum Borneff 6	18,0	
Sum 16 EPA PAH *	196	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



246

Encl. to measuring report: O-3575
 NILU sample number: 05/681
 Customer: Amap 05
 Customers sample ID: 28-30.3.05 1239-0747
 : 160-147
 Sample type: Air
 Sample amount: 998 m3
 Concentration unit: pg/m3
 Data files: TB_0175.D

Kjeller, 07.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	84,0 b	32
2-Methylnaphtalene	29,0 b	
1-Methylnaphtalene	20,0 b	
Biphenyl	134	
Acenaphthylene *	1,00 b	45
Acenaphtene *	4,00 b	
Dibenzofuran	215	
Fluorene *	33,0	
Dibenzothiophene	4,00	47
Phenanthrene *	61,0 b	
Antrachene *	< 1,00	
3-Methylphenanthrene	9,00 b	
2-Methylphenanthrene	12,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	8,00 b	
1-Methylphenanthrene	8,00 b	
Fluoranthene *	17,0 b	59
Pyrene *	11,0 b	
Benzo(a)fluorene	5,00 b	
Retene	4,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	< 1,00	52
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	1,00 b	
Chrysene */Triphenylene	3,00 b	
Benzo(b */j/k *)fluoranthenes	3,00 b	68
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	< 1,00	61
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	1,00 b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	267	
Sum 3-7 ring PAH:	416	
Sum all:	683	
Sum Borneff 6	23,0	
Sum 16 EPA PAH *	223	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/683
 Customer: Amap 05
 Customers sample ID: 4-6.4.05 0702-0805
 : 160-148
 Sample type: Air
 Sample amount: 1139 m3
 Concentration unit: pg/m3
 Data files: TB_0176.D

247



Kjeller, 08.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	206 b	34
2-Methylnaphtalene	60,0 b	
1-Methylnaphtalene	39,0 b	
Biphenyl	485	
Acenaphthylene *	1,00 b	42
Acenaphtene *	5,00 b	
Dibenzofuran	781	
Fluorene *	66,0	
Dibenzothiophene	6,00	47
Phenanthrene *	42,0 b	
Antrachene *	< 1,00	
3-Methylphenanthrene	5,00 b	
2-Methylphenanthrene	7,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	4,00 b	
1-Methylphenanthrene	5,00 b	
Fluoranthene *	30,0 b	59
Pyrene *	20,0 b	
Benzo(a)fluorene	2,00 i,b	
Retene	4,00 b	
Benzo(b)fluorene	2,00 i	
Benzo(ghi)fluoranthene	4,00 i	68
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	2,00 b	
Chrysene */Triphenylene	10,0	
Benzo(b */j/k *)fluoranthenes	16,0	77
Benzo(a)fluoranthene	1,00	
Benzo(e)pyrene	5,00	
Benzo(a)pyrene *	3,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	3,00 b	76
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	5,00 b	
Anthanthrene	< 1,00	
Coronene	2,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	790	
Sum 3-7 ring PAH:	1 040	
Sum all:	1 830	
Sum Borneff 6	57,0	
Sum 16 EPA PAH *	411	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



248

Encl. to measuring report: O-3575
 NILU sample number: 05/686
 Customer: Amap 05
 Customers sample ID: 11-13.4.05 0715-0730
 : 160-162
 Sample type: Air
 Sample amount: 1169 m3
 Concentration unit: pg/m3
 Data files: TB_0328.D

Kjeller, 08.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	86,0 b	36
2-Methylnaphtalene	28,0 b	
1-Methylnaphtalene	21,0 b	
Biphenyl	207	
Acenaphthylene *	1,00 b	46
Acenaphthene *	3,00 b	
Dibenzofuran	574	
Fluorene *	101	
Dibenzothiophene	6,00	46
Phenanthrene *	38,0 b	
Antrachene *	1,00 b	
3-Methylphenanthrene	4,00 b	
2-Methylphenanthrene	6,00 b	
2-Methylantracene	< 1,00	
9-Methylphenanthrene	4,00 b	
1-Methylphenanthrene	4,00 b	
Fluoranthene *	12,0 b	59
Pyrene *	7,00 b	
Benzo(a)fluorene	< 1,00	
Retene	3,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	1,00 b	60
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	1,00 b	
Chrysene */Triphenylene	3,00 b	
Benzo(b */j/k *)fluoranthenes	5,00 b	74
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	2,00 b	
Benzo(a)pyrene *	1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	2,00 b	67
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	2,00 b	
Anthanthrene	< 1,00	
Coronene	1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	342	
Sum 3-7 ring PAH:	793	
Sum all:	1 135	
Sum Borneff 6	22,0	
Sum 16 EPA PAH *	264	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/690
 Customer: Amap 05
 Customers sample ID: 25-27.4.05 0703-0651
 : 160-154
 Sample type: Air
 Sample amount: 1130 m3
 Concentration unit: pg/m3
 Data files: TB_0327.D

249



Kjeller, 06.02.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	69,0 b	42
2-Methylnaphtalene	71,0 b	
1-Methylnaphtalene	38,0 b	
Biphenyl	63,0	
Acenaphthylene *	1,00 b	52
Acenaphtene *	4,00 b	
Dibenzofuran	119	
Fluorene *	15,0	
Dibenzothiophene	3,00	46
Phenanthrene *	45,0 b	
Antrachene *	1,00 b	
3-Methylphenanthrene	8,00 b	
2-Methylphenanthrene	12,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	8,00 b	
1-Methylphenanthrene	7,00 b	
Fluoranthene *	8,00 b	61
Pyrene *	6,00 b	
Benzo(a)fluorene	< 1,00	
Retene	3,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	1,00 b	59
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	3,00 b	
Benzo(a)fluoranthene	< 1,00	87
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	1,00 b	77
Dibenzo(ac/ah *)anthracene	1,00	
Benzo(ghi)perylene *	1,00 b	
Anthanthrene	< 1,00	
Coronene	1,00	
Dibenzo(ae)pyrene	1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	241	
Sum 3-7 ring PAH:	262	
Sum all:	503	
Sum Borneff 6	14,0	
Sum 16 EPA PAH *	158	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



250

Encl. to measuring report: O-3575
 NILU sample number: 05/984
 Customer: Amap 05
 Customers sample ID: 2-4.5.05 0740-0727
 : 160-160
 Sample type: Air
 Sample amount: 1152 m3
 Concentration unit: pg/m3
 Data files: TB_0326.D

Kjeller, 08.12.2005

Component:	Concentration pg/m3	Recovery %
Naphtalene *	70,0 b	7
2-Methylnaphtalene	35,0 b	
1-Methylnaphtalene	24,0 b	
Biphenyl	51,0	
Acenaphthylene *	1,00 b	10
Acenaphtene *	3,00 b	
Dibenzofuran	127	
Fluorene *	39,0	
Dibenzothiophene	2,00 b	12 g
Phenanthrene *	33,0 b	
Antrachene *	1,00 b	
3-Methylphenanthrene	7,00 b	
2-Methylphenanthrene	10,0 b	
2-Methylanthracene	1,00	
9-Methylphenanthrene	7,00 b	
1-Methylphenanthrene	6,00 b	
Fluoranthene *	18,0 b	13 g
Pyrene *	16,0 b	
Benzo(a)fluorene	1,00 i,b	
Retene	6,00 b	
Benzo(b)fluorene	2,00 i	
Benzo(ghi)fluoranthene	2,00	13 g
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	2,00 i,b	
Chrysene */Triphenylene	4,00 b	
Benzo(b */j/k *)fluoranthenes	17,0	17 g
Benzo(a)fluoranthene	41,0 i	
Benzo(e)pyrene	12,0 i	
Benzo(a)pyrene *	4,00	
Perylene	3,00 i	
Indeno(1,2,3-cd)pyrene *	7,00	17 g
Dibenzo(ac/ah *)anthracene	5,00	
Benzo(ghi)perylene *	6,00 b	
Anthanthrene	3,00	
Coronene	8,00 i	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	180	
Sum 3-7 ring PAH:	398	
Sum all:	578	
Sum Borneff 6	52,0	
Sum 16 EPA PAH *	226	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

251



Encl. to measuring report: O-3575
 NILU sample number: 05/985
 Customer: AMAP 05
 Customers sample ID: 9-11.5.05 0736-1131
 : 160-148
 Sample type: Air
 Sample amount: 1204 m3
 Concentration unit: pg/m3
 Data files: TB_1007.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	47,0 b	45
2-Methylnaphtalene	21,0 b	
1-Methylnaphtalene	10,0 b	
Biphenyl	20,0 b	
Acenaphthylene *	1,00 b	53
Acenaphthene *	1,00 b	
Dibenzofuran	54,0	
Fluorene *	10,0 b	
Dibenzothiophene	< 1,00	96
Phenanthrene *	11,0 b	
Anthracene *	3,00 b	
3-Methylphenanthrene	1,00 b	
2-Methylphenanthrene	2,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	1,00 b	
1-Methylphenanthrene	2,00 i,b	
Fluoranthene *	11,0 b	69
Pyrene *	8,00 b	
Benzo(a)fluorene	1,00 b	
Retene	3,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	83
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	1,00 b	
Chrysene */Triphenylene	2,00 b	
Benzo(b */l/k *)fluoranthenes	3,00 b	123
Benzo(a)fluoranthene	1,00	
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	1,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	1,00 b	113
Dibenzo(ac/ah *)anthracene	1,00	
Benzo(ghi)perylene *	1,00 i,b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	98,0	
Sum 3-7 ring PAH:	132	
Sum all:	230	
Sum Borneff 6	17,0	
Sum 16 EPA PAH *	102	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



252

Encl. to measuring report: O-3575
 NILU sample number: 05/986
 Customer: AMAP 05
 Customers sample ID: 16.-18.5.05 0923-0711
 : 160-156
 Sample type: Air
 Sample amount: 1090 m3
 Concentration unit: pg/m3
 Data files: TB_1008.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	62,0 b	40
2-Methylnaphtalene	26,0 b	
1-Methylnaphtalene	13,0 b	
Biphenyl	19,0 b	
Acenaphthylene *	1,00 b	46
Acenaphthene *	2,00 b	
Dibenzofuran	28,0 b	
Fluorene *	11,0 b	
Dibenzothiophene	< 1,00	80
Phenanthrene *	10,0 b	
Anthracene *	3,00 b	
3-Methylphenanthrene	1,00 b	
2-Methylphenanthrene	2,00 b	
2-Methylantracene	< 1,00	
9-Methylphenanthrene	1,00 b	
1-Methylphenanthrene	2,00 i,b	
Fluoranthene *	6,00 b	65
Pyrene *	5,00 b	
Benzo(a)fluorene	< 1,00 b	
Retene	2,00 b	
Benzo(b)fluorene	1,00 i	
Benzo(ghi)fluoranthene	1,00 b	74
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 b	
Benzo(b */f/k *)fluoranthenes	2,00 b	
Benzo(a)fluoranthene	< 1,00	124
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	1,00 b	108
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	1,00 i,b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	120	
Sum 3-7 ring PAH:	96,0	
Sum all:	216	
Sum Borneff 6	11,0	
Sum 16 EPA PAH *	108	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/987
 Customer: AMAP 05
 Customers sample ID: 23.-25.5.05 0757-0731
 : 160-154
 Sample type: Air
 Sample amount: 1126 m3
 Concentration unit: pg/m3
 Data files: TB_1009.D

253



Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	54,0 b	55
2-Methylnaphtalene	17,0 b	
1-Methylnaphtalene	11,0 b	
Biphenyl	15,0 b	
Acenaphthylene *	1,00 b	60
Acenaphthene *	1,00 b	
Dibenzofuran	29,0 b	
Fluorene *	10,0 b	
Dibenzothiophene	< 1,00	100
Phenanthrene *	12,0 b	
Anthracene *	1,00 b	
3-Methylphenanthrene	2,00 b	
2-Methylphenanthrene	3,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	2,00 i,b	
Fluoranthene *	12,0 b	71
Pyrene *	9,00 b	
Benzo(a)fluorene	< 1,00	
Retene	4,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	83
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	1,00 b	
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	g
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	< 1,00	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	< 1,00	122
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	1,00 i,b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	97,0	
Sum 3-7 ring PAH:	109	
Sum all:	206	
Sum Borneff 6	16,0	
Sum 16 EPA PAH *	107	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



254

Encl. to measuring report: O-3575
 NILU sample number: 05/988
 Customer: AMAP 05
 Customers sample ID: 30.05-01.06.05 0707-0733
 : 160-155
 Sample type: Air
 Sample amount: 1150 m3
 Concentration unit: pg/m3
 Data files: TB_1010.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	64,0 b	33
2-Methylnaphtalene	22,0 b	
1-Methylnaphtalene	14,0 b	
Biphenyl	14,0 b	
Acenaphthylene *	1,00 b	39
Acenaphthene *	2,00 b	
Dibenzofuran	20,0 b	
Fluorene *	9,00 b	
Dibenzothiophene	1,00 b	66
Phenanthrene *	13,0 b	
Anthracene *	2,00 b	
3-Methylphenanthrene	2,00 b	
2-Methylphenanthrene	2,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	2,00 i,b	
Fluoranthene *	10,0 b	49
Pyrene *	7,00 b	
Benzo(a)fluorene	< 1,00	
Retene	3,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	< 1,00	59
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	
Benzo(a)fluoranthene	< 1,00	107
Benzo(e)pyrene	< 1,00	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	< 1,00	
Dibenzo(ac/ah *)anthracene	< 1,00	101
Benzo(ghi)perylene *	< 1,00	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	114	
Sum 3-7 ring PAH:	96,0	
Sum all:	210	
Sum Borneff 6	14,0	
Sum 16 EPA PAH *	115	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

255



Encl. to measuring report: O-3575
 NILU sample number: 05/989
 Customer: AMAP 05
 Customers sample ID: 6-8.6.05 0740-0730
 : 160-154
 Sample type: Air
 Sample amount: 1130 m3
 Concentration unit: pg/m3
 Data files: TB_1011.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	63,0 b	39
2-Methylnaphtalene	24,0 b	
1-Methylnaphtalene	15,0	
Biphenyl	25,0 b	
Acenaphthylene *	2,00 b	43
Acenaphthene *	2,00 b	
Dibenzofuran	76,0	
Fluorene *	16,0	
Dibenzothiophene	1,00 b	69
Phenanthrene *	14,0 b	
Anthracene *	2,00 b	
3-Methylphenanthrene	2,00 b	
2-Methylphenanthrene	3,00 b	
2-Methylantracene	< 1,00	
9-Methylphenanthrene	1,00 b	
1-Methylphenanthrene	2,00 i,b	
Fluoranthene *	10,0 b	49
Pyrene *	8,00 b	
Benzo(a)fluorene	< 1,00	
Retene	4,00 b	
Benzo(b)fluorene	1,00 b	
Benzo(ghi)fluoranthene	1,00 b	57
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	2,00 b	102
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	< 1,00	97
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	1,00 i,b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	127	
Sum 3-7 ring PAH:	164	
Sum all:	291	
Sum Borneff 6	15,0	
Sum 16 EPA PAH *	125	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



256

Encl. to measuring report: O-3575
 NILU sample number: 05/990
 Customer: AMAP 05
 Customers sample ID: 13-15.6.05 0700-0733
 : 160-156
 Sample type: Air
 Sample amount: 1157 m3
 Concentration unit: pg/m3
 Data files: TB_1012.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	72,0 b	42
2-Methylnaphtalene	24,0 b	
1-Methylnaphtalene	15,0 b	
Biphenyl	19,0 b	
Acenaphthylene *	1,00 b	47
Acenaphthene *	2,00 b	
Dibenzofuran	35,0 b	
Fluorene *	17,0	
Dibenzothiophene	1,00 b	74
Phenanthrene *	23,0 b	
Anthracene *	2,00 b	
3-Methylphenanthrene	3,00 b	
2-Methylphenanthrene	5,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	3,00 b	
1-Methylphenanthrene	3,00 i,b	
Fluoranthene *	16,0 b	
Pyrene *	12,0 b	
Benzo(a)fluorene	< 1,00	
Retene	5,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	61
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 i	
Benzo(b */j/k *)fluoranthenes	2,00 b	101
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	< 1,00	
Benzo(a)pyrene *	< 1,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	< 1,00	95
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	< 1,00	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	130	
Sum 3-7 ring PAH:	149	
Sum all:	279	
Sum Borneff 6	21,0	
Sum 16 EPA PAH *	153	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Version 03.06.2004 GSK

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/991
 Customer: AMAP 05
 Customers sample ID: 20-22.6.05 0740-0701
 : 160-148
 Sample type: Air
 Sample amount: 1097 m3
 Concentration unit: pg/m3
 Data files: TB_1013.D

257



Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %	
Naphtalene *	94,0 b	50	
2-Methylnaphtalene	37,0 b		
1-Methylnaphtalene	22,0 b		
Biphenyl	31,0 b		
Acenaphthylene *	1,00 b	53	
Acenaphthene *	2,00 b		
Dibenzofuran	43,0 b		
Fluorene *	18,0		
Dibenzothiophene	2,00 b	77	
Phenanthrene *	26,0 b		
Anthracene *	< 1,00		
3-Methylphenanthrene	3,00 b		
2-Methylphenanthrene	4,00 b		
2-Methylanthracene	< 1,00 b		
9-Methylphenanthrene	3,00 b		
1-Methylphenanthrene	2,00 b		
Fluoranthene *	9,00 b		52
Pyrene *	6,00 b		
Benzo(a)fluorene	< 1,00		
Retene	3,00 b		
Benzo(b)fluorene	1,00 b		
Benzo(ghi)fluoranthene	1,00 b	61	
Cyclopenta(cd)pyrene	< 1,00		
Benz(a)anthracene *	< 1,00		
Chrysene */Triphenylene	1,00 b		
Benzo(b */j/k *)fluoranthenes	1,00 b	105	
Benzo(a)fluoranthene	< 1,00		
Benzo(e)pyrene	< 1,00		
Benzo(a)pyrene *	< 1,00		
Perylene	1,00 b		
Indeno(1,2,3-cd)pyrene *	< 1,00	100	
Dibenzo(ac/ah *)anthracene	< 1,00		
Benzo(ghi)perylene *	< 1,00		
Anthanthrene	< 1,00		
Coronene	< 1,00		
Dibenzo(ae)pyrene	< 1,00		
Dibenzo(ai)pyrene	< 1,00		
Dibenzo(ah)pyrene	< 1,00		
Sum bicyclic PAH:	184		
Sum 3-7 ring PAH:	143		
Sum all:	327		
Sum Borneff 6	13,0		
Sum 16 EPA PAH *	164		

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Version 03.06.2004 GSK

Results of PAH Analysis



258

Encl. to measuring report: O-3575
 NILU sample number: 05/992
 Customer: AMAP 05
 Customers sample ID: 27-29.6.05 0702-0732
 : 160-157
 Sample type: Air
 Sample amount: 1159 m3
 Concentration unit: pg/m3
 Data files: TB_1014.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	98,0 b	29
2-Methylnaphtalene	58,0 b	
1-Methylnaphtalene	33,0 b	
Biphenyl	35,0 b	
Acenaphthylene *	2,00 b	33
Acenaphthene *	3,00 b	
Dibenzofuran	72,0	
Fluorene *	49,0	
Dibenzothiophene	13,0	50
Phenanthrene *	74,0 b	
Anthracene *	5,00 b	
3-Methylphenanthrene	13,0 b	
2-Methylphenanthrene	18,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	11,0 b	
1-Methylphenanthrene	11,0 b	
Fluoranthene *	15,0 b	38
Pyrene *	10,0 b	
Benzo(a)fluorene	< 1,00	
Retene	5,00 b	
Benzo(b)fluorene	2,00 i	
Benzo(ghi)fluoranthene	2,00 b	34
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	3,00 b	
Benzo(b */j/k *)fluoranthenes	2,00 b	81
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	< 1,00	73
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	1,00 i,b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	224	
Sum 3-7 ring PAH:	326	
Sum all:	550	
Sum Borneff 6	20,0	
Sum 16 EPA PAH *	266	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Version 03.06.2004 GSK

Results of PAH Analysis

259



Encl. to measuring report: O-3575
 NILU sample number: 05/993
 Customer: AMAP 05
 Customers sample ID: 4-6.7.05 1315-0900
 : 160-152
 Sample type: Air
 Sample amount: 1041 m3
 Concentration unit: pg/m3
 Data files: TB_1015.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	70,0 b	38
2-Methylnaphtalene	28,0 b	
1-Methylnaphtalene	17,0 b	
Biphenyl	14,0 b	
Acenaphthylene *	1,00 b	43
Acenaphthene *	2,00 b	
Dibenzofuran	27,0 b	
Fluorene *	13,0 b	
Dibenzothiophene	1,00 b	72
Phenanthrene *	17,0 b	
Anthracene *	1,00 b	
3-Methylphenanthrene	2,00 b	
2-Methylphenanthrene	4,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	3,00 i,b	
Fluoranthene *	11,0 b	54
Pyrene *	9,00 b	
Benzo(a)fluorene	< 1,00	
Retene	4,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	64
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 i,b	
Benzo(b */j/k *)fluoranthenes	2,00 b	104
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	< 1,00	
Benzo(a)pyrene *	< 1,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	< 1,00	96
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	< 1,00	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	129	
Sum 3-7 ring PAH:	118	
Sum all:	247	
Sum Borneff 6	16,0	
Sum 16 EPA PAH *	132	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



260

Encl. to measuring report: O-3575
 NILU sample number: 05/994
 Customer: AMAP 05
 Customers sample ID: 11-13.7.05 1422-1410
 : 160-157
 Sample type: Air
 Sample amount: 1142 m3
 Concentration unit: pg/m3
 Data files: TB_1016.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	74,0 b	38
2-Methylnaphtalene	29,0 b	
1-Methylnaphtalene	17,0 b	
Biphenyl	17,0 b	
Acenaphthylene *	1,00 b	43
Acenaphthene *	2,00 b	
Dibenzofuran	41,0 b	
Fluorene *	23,0	
Dibenzothiophene	2,00 b	74
Phenanthrene *	23,0 b	
Anthracene *	3,00 b	
3-Methylphenanthrene	4,00 b	
2-Methylphenanthrene	6,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	4,00 b	
1-Methylphenanthrene	4,00 b	
Fluoranthene *	13,0 b	56
Pyrene *	10,0 b	
Benzo(a)fluorene	< 1,00	
Retene	4,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	66
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	2,00 b	104
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	< 1,00	
Benzo(a)pyrene *	< 1,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	< 1,00	97
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	< 1,00	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	137	
Sum 3-7 ring PAH:	161	
Sum all:	298	
Sum Borneff 6	18,0	
Sum 16 EPA PAH *	157	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

261



Encl. to measuring report: O-3575
 NILU sample number: 05/995
 Customer: AMAP 05
 Customers sample ID: 18-20.7.05 0731-0900
 : 160-158
 Sample type: Air
 Sample amount: 1186 m3
 Concentration unit: pg/m3
 Data files: TB_1037.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	77,0 b	41
2-Methylnaphtalene	26,0 b	
1-Methylnaphtalene	15,0 b	
Biphenyl	14,0 b	
Acenaphthylene *	1,00 b	44
Acenaphthene *	2,00 b	
Dibenzofuran	28,0 b	
Fluorene *	18,0	
Dibenzothiophene	1,00 b	74
Phenanthrene *	18,0 b	
Anthracene *	3,00 b	
3-Methylphenanthrene	3,00 b	
2-Methylphenanthrene	4,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	3,00 b	
1-Methylphenanthrene	3,00 i,b	
Fluoranthene *	7,00 b	
Pyrene *	4,00 b	
Benzo(a)fluorene	< 1,00	
Retene	2,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	1,00 b	64
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	< 1,00	
Benzo(b */j/k *)fluoranthenes	1,00 b	
Benzo(a)fluoranthene	< 1,00	95
Benzo(e)pyrene	< 1,00	
Benzo(a)pyrene *	< 1,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	< 1,00	
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	< 1,00	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	132	
Sum 3-7 ring PAH:	117	
Sum all:	249	
Sum Borneff 6	11,0	
Sum 16 EPA PAH *	137	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Version 03.06.2004 GSK

Results of PAH Analysis



262

Encl. to measuring report: O-3575
 NILU sample number: 05/1188
 Customer: AMAP 05
 Customers sample ID: 25-27.7.05 0811-0913
 : 160-156
 Sample type: Air
 Sample amount: 1166 m3
 Concentration unit: pg/m3
 Data files: TB_1025.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	52,0 b	35
2-Methylnaphtalene	25,0 b	
1-Methylnaphtalene	15,0 b	
Biphenyl	22,0 b	
Acenaphthylene *	1,00 b	38
Acenaphthene *	2,00 b	
Dibenzofuran	55,0	
Fluorene *	30,0	
Dibenzothiophene	3,00	59
Phenanthrene *	43,0 b	
Anthracene *	5,00 b	
3-Methylphenanthrene	7,00 b	
2-Methylphenanthrene	10,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	8,00 b	
1-Methylphenanthrene	8,00 b	
Fluoranthene *	12,0 b	47
Pyrene *	9,00 b	
Benzo(a)fluorene	< 1,00	
Retene	6,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	35
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	2,00 b	
Benzo(b */i/k *)fluoranthenes	1,00 b	92
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	< 1,00	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	< 1,00	69
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	< 1,00	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclíc PAH:	114	
Sum 3-7 ring PAH:	220	
Sum all:	334	
Sum Borneff 6	16,0	
Sum 16 EPA PAH *	162	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

263



Encl. to measuring report: O-3575
 NILU sample number: 05/1189
 Customer: AMAP 05
 Customers sample ID: 1-3.8.05 0813-0715
 : 160-158
 Sample type: Air
 Sample amount: 1126 m3
 Concentration unit: pg/m3
 Data files: TB_1026.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	77,0 b	33
2-Methylnaphtalene	28,0 b	
1-Methylnaphtalene	17,0 b	
Biphenyl	22,0 b	
Acenaphthylene *	1,00 i,b	38
Acenaphthene *	2,00 b	
Dibenzofuran	53,0	
Fluorene *	24,0	
Dibenzothiophene	2,00 b	60
Phenanthrene *	30,0 b	
Anthracene *	3,00 b	
3-Methylphenanthrene	4,00 b	
2-Methylphenanthrene	7,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	5,00 b	
1-Methylphenanthrene	5,00 b	
Fluoranthene *	13,0 b	41
Pyrene *	9,00 b	
Benzo(a)fluorene	< 1,00	
Retene	4,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	43
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	2,00 b	
Benzo(b */j/k *)fluoranthenes	2,00 b	75
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	< 1,00	74
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	< 1,00	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	144	
Sum 3-7 ring PAH:	184	
Sum all:	328	
Sum Borneff 6	18,0	
Sum 16 EPA PAH *	168	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



264

Encl. to measuring report: O-3575
 NILU sample number: 05/1190
 Customer: AMAP 05
 Customers sample ID: 8-10.8.05 0718-0657
 : 160-160
 Sample type: Air
 Sample amount: 1147 m3
 Concentration unit: pg/m3
 Data files: TB_1027.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	54,0 b	40
2-Methylnaphtalene	19,0 b	
1-Methylnaphtalene	11,0 b	
Biphenyl	10,0 b	
Acenaphthylene *	< 1,00	45
Acenaphthene *	1,00 b	
Dibenzofuran	27,0 b	
Fluorene *	15,0	
Dibenzothiophene	1,00 b	73
Phenanthrene *	23,0 b	
Anthracene *	< 1,00	
3-Methylphenanthrene	4,00 b	
2-Methylphenanthrene	6,00 b	
2-Methylantracene	< 1,00	
9-Methylphenanthrene	4,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	7,00 b	51
Pyrene *	4,00 b	
Benzo(a)fluorene	< 1,00	
Retene	2,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	< 1,00	59
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	< 1,00	
Benzo(b */f/k *)fluoranthenes	1,00 b	
Benzo(a)fluoranthene	< 1,00	92
Benzo(e)pyrene	< 1,00	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	< 1,00	
Dibenzo(ac/ah *)anthracene	< 1,00	86
Benzo(ghi)perylene *	< 1,00	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	94,0	
Sum 3-7 ring PAH:	119	
Sum all:	213	
Sum Borneff 6	11,0	
Sum 16 EPA PAH *	113	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/1191
 Customer: AMAP 05
 Customers sample ID: 15-17.8.05 0718-0657
 : 160-155
 Sample type: Air
 Sample amount: 1131 m3
 Concentration unit: pg/m3
 Data files: TB_1028.D

265



Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	78,0 b	38
2-Methylnaphtalene	47,0 b	
1-Methylnaphtalene	26,0 b	
Biphenyl	84,0	
Acenaphthylene *	1,00 b	45
Acenaphthene *	4,00 b	
Dibenzofuran	184	
Fluorene *	64,0	
Dibenzothiophene	5,00	74
Phenanthrene *	51,0 b	
Anthracene *	1,00 b	
3-Methylphenanthrene	11,0 b	
2-Methylphenanthrene	14,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	9,00 b	
1-Methylphenanthrene	8,00 b	
Fluoranthene *	13,0 b	
Pyrene *	10,0 b	
Benzo(a)fluorene	< 1,00	
Retene	4,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	59
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	2,00 b	
Benzo(b */j/k *)fluoranthenes	2,00 b	89
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	< 1,00	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	< 1,00	82
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	< 1,00	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	235	
Sum 3-7 ring PAH:	401	
Sum all:	636	
Sum Borneff 6	18,0	
Sum 16 EPA PAH *	231	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



266

Encl. to measuring report: O-3575
 NILU sample number: 05/1192
 Customer: AMAP 05
 Customers sample ID: 22-24.8.05 0810-0741
 : 160-155
 Sample type: Air
 Sample amount: 1128 m3
 Concentration unit: pg/m3
 Data files: TB_1031.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	85,0 b	35
2-Methylnaphtalene	26,0 b	
1-Methylnaphtalene	15,0 b	
Biphenyl	19,0 b	
Acenaphthylene *	< 1,00	40
Acenaphthene *	2,00 b	
Dibenzofuran	49,0 b	
Fluorene *	23,0	
Dibenzothiophene	2,00 b	64
Phenanthrene *	25,0 b	
Anthracene *	3,00 b	
3-Methylphenanthrene	4,00 b	
2-Methylphenanthrene	6,00 b	
2-Methylantracene	< 1,00	
9-Methylphenanthrene	4,00 b	
1-Methylphenanthrene	4,00 b	
Fluoranthene *	1,20 b	
Pyrene *	8,00 b	
Benzo(a)fluorene	< 1,00	
Retene	4,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	54
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 b	
Benzo(b */i/k *)fluoranthenes	2,00 b	
Benzo(a)fluoranthene	< 1,00	83
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	1,00 b	
Dibenzo(ac/ah *)anthracene	1,00 b	79
Benzo(ghi)perylene *	1,00 i,b	
Anthanthrene	< 1,00	
Coronene	1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	145	
Sum 3-7 ring PAH:	157	
Sum all:	302	
Sum Borneff 6	6,20	
Sum 16 EPA PAH *	156	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/1193
 Customer: AMAP 05
 Customers sample ID: 29-31.8.05 0723-0744
 : 160-156
 Sample type: Air
 Sample amount: 1152 m3
 Concentration unit: pg/m3
 Data files: TB_1032.D

267



Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	80,0 b	
2-Methylnaphtalene	24,0 b	47
1-Methylnaphtalene	14,0 b	
Biphenyl	12,0 b	
Acenaphthylene *	< 1,00	
Acenaphthene *	1,00 b	53
Dibenzofuran	39,0 b	
Fluorene *	15,0	
Dibenzothiophene	2,00 b	
Phenanthrene *	22,0 b	
Anthracene *	< 1,00	76
3-Methylphenanthrene	3,00 b	
2-Methylphenanthrene	5,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	3,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	10,0 b	
Pyrene *	7,00 b	53
Benzo(a)fluorene	< 1,00	
Retene	2,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	55
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	99
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	< 1,00	
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	1,00 i,b	90
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	130	
Sum 3-7 ring PAH:	134	
Sum all:	264	
Sum Borneff 6	14,0	
Sum 16 EPA PAH *	144	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



268

Encl. to measuring report: O-3575
 NILU sample number: 05/1194
 Customer: AMAP 05
 Customers sample ID: 5-7.9.05 0725-0705
 : 160-157
 Sample type: Air
 Sample amount: 1140 m3
 Concentration unit: pg/m3
 Data files: TB_1121.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	73,0 b	36
2-Methylnaphtalene	22,0 b	
1-Methylnaphtalene	13,0 b	
Biphenyl	27,0 b	
Acenaphthylene *	1,00 b	36
Acenaphthene *	1,00 b	
Dibenzofuran	65,0	
Fluorene *	14,0 b	
Dibenzothiophene	2,00 b	49
Phenanthrene *	28,0 b	
Anthracene *	4,00 b	
3-Methylphenanthrene	6,00 b	
2-Methylphenanthrene	8,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	7,00 b	
1-Methylphenanthrene	7,00 b	
Fluoranthene *	6,00 b	
Pyrene *	5,00 b	
Benzo(a)fluorene	< 1,00	
Retene	2,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	< 1,00	59
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	< 1,00	
Benzo(a)fluoranthene	< 1,00	104
Benzo(e)pyrene	< 1,00	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	< 1,00	
Dibenzo(ac/ah *)anthracene	1,00 b	
Benzo(ghi)perylene *	3,00 b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	135	
Sum 3-7 ring PAH:	178	
Sum all:	313	
Sum Borneff 6	12,0	
Sum 16 EPA PAH *	141	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/1195
 Customer: AMAP 05
 Customers sample ID: 12-14.9.05 0743-0707
 : 160-155
 Sample type: Air
 Sample amount: 1126 m3
 Concentration unit: pg/m3
 Data files: TB_1122.D

269



Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %	
Naphtalene *	86,0 b	45	
2-Methylnaphtalene	35,0 b		
1-Methylnaphtalene	22,0 b		
Biphenyl	66,0 b		
Acenaphthylene *	1,00 b	45	
Acenaphthene *	2,00 b		
Dibenzofuran	96,0		
Fluorene *	33,0 b		
Dibenzothiophene	1,00 b	60	
Phenanthrene *	31,0 b		
Anthracene *	1,00 b		
3-Methylphenanthrene	5,00 b		
2-Methylphenanthrene	8,00 b		
2-Methylanthracene	< 1,00		
9-Methylphenanthrene	6,00 b		
1-Methylphenanthrene	4,00 b		
Fluoranthene *	8,00 b	65	
Pyrene *	5,00 b		
Benzo(a)fluorene	< 1,00		
Retene	3,00 b		
Benzo(b)fluorene	< 1,00	62	
Benzo(ghi)fluoranthene	< 1,00		
Cyclopenta(cd)pyrene	< 1,00		
Benz(a)anthracene *	< 1,00		
Chrysene */Triphenylene	1,00 b		
Benzo(b */f/k *)fluoranthenes	< 1,00		
Benzo(a)fluoranthene	< 1,00	108	
Benzo(e)pyrene	< 1,00		
Benzo(a)pyrene *	< 1,00		
Perylene	< 1,00		
Indeno(1,2,3-cd)pyrene *	< 1,00	91	
Dibenzo(ac/ah *)anthracene	1,00 b		
Benzo(ghi)perylene *	3,00 b		
Anthanthrene	< 1,00		
Coronene	< 1,00		
Dibenzo(ae)pyrene	< 1,00		
Dibenzo(ai)pyrene	< 1,00		
Dibenzo(ah)pyrene	< 1,00		
Sum bicyclic PAH:	209		
Sum 3-7 ring PAH:	226		
Sum all:	435		
Sum Borneff 6	14,0		
Sum 16 EPA PAH *	176		

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



270

Encl. to measuring report: O-3575
 NILU sample number: 05/1196
 Customer: AMAP 05
 Customers sample ID: 19-21.9.05 0707-0710
 : 160-156
 Sample type: Air
 Sample amount: 1145 m3
 Concentration unit: pg/m3
 Data files: TB_1125.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	89,0 b	35
2-Methylnaphtalene	29,0 b	
1-Methylnaphtalene	18,0 b	
Biphenyl	62,0 b	
Acenaphthylene *	1,00 b	33
Acenaphthene *	2,00 b	
Dibenzofuran	127	
Fluorene *	39,0 b	
Dibenzothiophene	< 1,00	48
Phenanthrene *	42,0 b	
Anthracene *	5,00 b	
3-Methylphenanthrene	7,00 b	
2-Methylphenanthrene	10,0 b	
2-Methylantracene	< 1,00	
9-Methylphenanthrene	8,00 b	
1-Methylphenanthrene	8,00 b	
Fluoranthene *	19,0 b	59
Pyrene *	12,0 b	
Benzo(a)fluorene	1,00 i,b	
Retene	5,00 b	
Benzo(b)fluorene	2,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	56
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	1,00 b	
Chrysene */Triphenylene	2,00 b	
Benzo(b */j/k *)fluoranthenes	2,00 b	93
Benzo(a)fluoranthene	1,00	
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	1,00	
Indeno(1,2,3-cd)pyrene *	1,00 b	76
Dibenzo(ac/ah *)anthracene	1,00 b	
Benzo(ghi)perylene *	5,00 b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	198	
Sum 3-7 ring PAH:	313	
Sum all:	511	
Sum Borneff 6	28,0	
Sum 16 EPA PAH *	222	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/1197
 Customer: AMAP 05
 Customers sample ID: 26-28.9.05 0718-0903
 : 160-156
 Sample type: Air
 Sample amount: 1183 m3
 Concentration unit: pg/m3
 Data files: TB_1126.D

271



Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	123 b	30
2-Methylnaphtalene	33,0 b	
1-Methylnaphtalene	19,0 b	
Biphenyl	64,0 b	
Acenaphthylene *	1,00 b	29
Acenaphthene *	2,00 b	
Dibenzofuran	105	
Fluorene *	20,0 b	
Dibenzothiophene	2,00 b	39
Phenanthrene *	23,0 b	
Anthracene *	1,00 b	
3-Methylphenanthrene	2,00 b	
2-Methylphenanthrene	4,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	3,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	6,00 b	50
Pyrene *	4,00 b	
Benzo(a)fluorene	< 1,00	
Retene	3,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	1,00 b	45
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 b	
Benzo(b */i/k *)fluoranthenes	1,00 b	92
Benzo(a)fluoranthene	1,00	
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	1,00 b	70
Dibenzo(ac/ah *)anthracene	1,00 b	
Benzo(ghi)perylene *	4,00 b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	239	
Sum 3-7 ring PAH:	202	
Sum all:	441	
Sum Borneff 6	13,0	
Sum 16 EPA PAH *	190	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



272

Encl. to measuring report: O-3575
 NILU sample number: 05/1662
 Customer: AMAP 05
 Customers sample ID: 3-5.10.05 0720-0718
 : 160-156
 Sample type: Air
 Sample amount: 1142 m3
 Concentration unit: pg/m3
 Data files: TB_1127.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	136 b	28
2-Methylnaphtalene	47,0 b	
1-Methylnaphtalene	29,0 b	
Biphenyl	53,0 b	
Acenaphthylene *	1,00 b	27
Acenaphthene *	2,00 b	
Dibenzofuran	104	
Fluorene *	40,0 b	
Dibenzothiophene	3,00 b	35
Phenanthrene *	34,0 b	
Anthracene *	5,00 b	
3-Methylphenanthrene	6,00 b	
2-Methylphenanthrene	9,00 b	
2-Methylantracene	< 1,00	
9-Methylphenanthrene	6,00 b	
1-Methylphenanthrene	7,00 b	
Fluoranthene *	8,00 b	
Pyrene *	5,00 b	
Benzo(a)fluorene	< 1,00	
Retene	3,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	< 1,00	37
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	71
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	1,00 b	58
Dibenzo(ac/ah *)anthracene	1,00 b	
Benzo(ghi)perylene *	4,00 b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	265	
Sum 3-7 ring PAH:	256	
Sum all:	521	
Sum Borneff 6	15,0	
Sum 16 EPA PAH *	241	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

Encl. to measuring report: O-3575
 NILU sample number: 05/1663
 Customer: AMAP 05
 Customers sample ID: 10-12.10.05 0744-1334
 : 160-154
 Sample type: Air
 Sample amount: 1272 m3
 Concentration unit: pg/m3
 Data files: TB_1128.D

273



Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %	
Naphtalene *	75,0 b	35	
2-Methylnaphtalene	20,0 b		
1-Methylnaphtalene	16,0 b		
Biphenyl	112		
Acenaphthylene *	< 1,00	33	
Acenaphthene *	1,00 b		
Dibenzofuran	160		
Fluorene *	32,0 b		
Dibenzothiophene	2,00 b	44	
Phenanthrene *	23,0 b		
Anthracene *	3,00 b		
3-Methylphenanthrene	2,00 b		
2-Methylphenanthrene	4,00 b		
2-Methylantracene	< 1,00		
9-Methylphenanthrene	2,00 b		
1-Methylphenanthrene	4,00 b		
Fluoranthene *	6,00 b		57
Pyrene *	3,00 b		
Benzo(a)fluorene	< 1,00		
Retene	3,00 b		
Benzo(b)fluorene	< 1,00		
Benzo(ghi)fluoranthene	1,00 b	43	
Cyclopenta(cd)pyrene	< 1,00		
Benz(a)anthracene *	< 1,00		
Chrysene */Triphenylene	1,00 b		
Benzo(b */j/k *)fluoranthenes	1,00		
Benzo(a)fluoranthene	1,00	90	
Benzo(e)pyrene	< 1,00		
Benzo(a)pyrene *	< 1,00		
Perylene	< 1,00		
Indeno(1,2,3-cd)pyrene *	1,00 b	70	
Dibenzo(ac/ah *)anthracene	1,00 b		
Benzo(ghi)perylene *	3,00 b		
Anthanthrene	< 1,00		
Coronene	< 1,00		
Dibenzo(ae)pyrene	< 1,00		
Dibenzo(ai)pyrene	< 1,00		
Dibenzo(ah)pyrene	< 1,00		
Sum bicyclic PAH:	223		
Sum 3-7 ring PAH:	268		
Sum all:	491		
Sum Borneff 6	12,0		
Sum 16 EPA PAH *	153		

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



274

Encl. to measuring report: O-3575
 NILU sample number: 05/1664
 Customer: AMAP 05
 Customers sample ID: 17-19.10.05 0813-0811
 : 160-160
 Sample type: Air
 Sample amount: 1157 m3
 Concentration unit: pg/m3
 Data files: TB_1129.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	112 b	35
2-Methylnaphtalene	34,0 b	
1-Methylnaphtalene	19,0 b	
Biphenyl	128	
Acenaphthylene *	1,00 b	35
Acenaphthene *	2,00 b	
Dibenzofuran	184	
Fluorene *	30,0 b	
Dibenzothiophene	2,00 b	48
Phenanthrene *	21,0 b	
Anthracene *	4,00 b	
3-Methylphenanthrene	3,00 b	
2-Methylphenanthrene	4,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	3,00 b	
1-Methylphenanthrene	4,00 b	
Fluoranthene *	7,00 b	
Pyrene *	5,00 b	
Benzo(a)fluorene	< 1,00	
Retene	3,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	52
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	1,00 b	
Chrysene */Triphenylene	2,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	
Benzo(a)fluoranthene	1,00	100
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	< 1,00	
Dibenzo(ac/ah *)anthracene	1,00 b	
Benzo(ghi)perylene *	3,00 b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	293	
Sum 3-7 ring PAH:	296	
Sum all:	589	
Sum Borneff 6	13,0	
Sum 16 EPA PAH *	192	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Version 03.06.2004 GSK

Results of PAH Analysis

275



Encl. to measuring report: O-3575
 NILU sample number: 05/1665
 Customer: AMAP 05
 Customers sample ID: 24-26.10.05 0743-0746
 : 160-154
 Sample type: Air
 Sample amount: 1138 m3
 Concentration unit: pg/m3
 Data files: TB_1020.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	88,0 b	62
2-Methylnaphtalene	23,0 b	
1-Methylnaphtalene	15,0 b	
Biphenyl	107	
Acenaphthylene *	< 1,00	66
Acenaphthene *	2,00 b	
Dibenzofuran	179	
Fluorene *	29,0	
Dibenzothiophene	1,00 b	88
Phenanthrene *	13,0 b	
Anthracene *	2,00 b	
3-Methylphenanthrene	2,00 b	
2-Methylphenanthrene	3,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	2,00 i,b	
Fluoranthene *	9,00 b	60
Pyrene *	6,00 b	
Benzo(a)fluorene	< 1,00	
Retene	3,00 b	
Benzo(b)fluorene	1,00 i,b	65
Benzo(ghi)fluoranthene	1,00 b	
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 b	112
Benzo(b */j/k *)fluoranthenes	1,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	< 1,00	101
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	1,00 i,b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	233	
Sum 3-7 ring PAH:	274	
Sum all:	507	
Sum Borneff 6	13,0	
Sum 16 EPA PAH *	157	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



276

Encl. to measuring report: O-3575
 NILU sample number: 05/1666
 Customer: AMAP 05
 Customers sample ID: 31.10-2.11.05 0854-0814
 : 160-145
 Sample type: Air
 Sample amount: 1088 m3
 Concentration unit: pg/m3
 Data files: TB_1021.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	135 b	62
2-Methylnaphtalene	40,0 b	
1-Methylnaphtalene	31,0 b	
Biphenyl	301	
Acenaphthylene *	< 1,00	65
Acenaphthene *	2,00 b	
Dibenzofuran	400	
Fluorene *	84,0	
Dibenzothiophene	4,00	85
Phenanthrene *	22,0 b	
Anthracene *	2,00 b	
3-Methylphenanthrene	2,00 b	
2-Methylphenanthrene	3,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	2,00 i,b	
Fluoranthene *	11,0 b	54
Pyrene *	5,00 b	
Benzo(a)fluorene	< 1,00	
Retene	3,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	1,00 b	54
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	2,00 b	
Benzo(b */l/k *)fluoranthenes	2,00 b	105
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	< 1,00	92
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	1,00 i,b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	507	
Sum 3-7 ring PAH:	565	
Sum all:	1 072	
Sum Borneff 6	16,0	
Sum 16 EPA PAH *	271	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Version 03.06.2004 GSK

Results of PAH Analysis

277



Encl. to measuring report: O-3575
 NILU sample number: 05/1667
 Customer: AMAP 05
 Customers sample ID: 7-9.11.05 0807-0835
 : 160-154
 Sample type: Air
 Sample amount: 1147 m3
 Concentration unit: pg/m3
 Data files: TB_1022.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	195 b	44
2-Methylnaphtalene	66,0 b	
1-Methylnaphtalene	49,0 b	
Biphenyl	209	
Acenaphthylene *	< 1,00	48
Acenaphthene *	4,00 b	
Dibenzofuran	339	
Fluorene *	92,0	
Dibenzothiophene	5,00	63
Phenanthrene *	34,0 b	
Anthracene *	3,00 b	
3-Methylphenanthrene	3,00 b	
2-Methylphenanthrene	5,00 b	
2-Methylantracene	< 1,00	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	3,00 i,b	
Fluoranthene *	21,0 b	48
Pyrene *	8,00 b	
Benzo(a)fluorene	< 1,00	
Retene	5,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	43
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	2,00 b	
Benzo(b */j/k *)fluoranthenes	2,00 b	90
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	< 1,00	74
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	1,00 i,b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	519	
Sum 3-7 ring PAH:	547	
Sum all:	1 066	
Sum Borneff 6	26,0	
Sum 16 EPA PAH *	367	

<: Lower than detection limit at signal:noise 3:1
 (i): Possible interference
 (s): Saturated signal
 (b): Lower than 10 times method blank
 (g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



278

Encl. to measuring report: O-3575
 NILU sample number: 05/1668
 Customer: AMAP 05
 Customers sample ID: 14-16.11.05 0736-0829
 : 160-161
 Sample type: Air
 Sample amount: 1181 m3
 Concentration unit: pg/m3
 Data files: TB_1023.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	389 b	39
2-Methylnaphtalene	108 b	
1-Methylnaphtalene	97,0	
Biphenyl	748	
Acenaphthylene *	1,00 b	44
Acenaphthene *	5,00 b	
Dibenzofuran	1 002	
Fluorene *	357	
Dibenzothiophene	7,00	73
Phenanthrene *	51,0 b	
Anthracene *	< 1,00	
3-Methylphenanthrene	3,00 b	
2-Methylphenanthrene	4,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	47,0 b	54
Pyrene *	28,0 b	
Benzo(a)fluorene	2,00 i,b	
Retene	3,00 b	
Benzo(b)fluorene	3,00 i	
Benzo(ghi)fluoranthene	4,00	56
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	4,00	
Chrysene */Triphenylene	21,0	
Benzo(b */j/k *)fluoranthenes	25,0	94
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	9,00	
Benzo(a)pyrene *	3,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	4,00	82
Dibenzo(ac/ah *)anthracene	1,00	
Benzo(ghi)perylene *	7,00 i	
Anthanthrene	< 1,00	
Coronene	2,00	
Dibenzo(ae)pyrene	1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	1 342	
Sum 3-7 ring PAH:	1 607	
Sum all:	2 949	
Sum Borneff 6	86,0	
Sum 16 EPA PAH *	944	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

279



Encl. to measuring report: O-3575
 NILU sample number: 05/1669
 Customer: AMAP 05
 Customers sample ID: 21-23.11.05 0906-0817
 : 160-160
 Sample type: Air
 Sample amount: 1128 m3
 Concentration unit: pg/m3
 Data files: TB_1024.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %	
Naphtalene *	178 b	37	
2-Methylnaphtalene	57,0 b		
1-Methylnaphtalene	40,0 b		
Biphenyl	262		
Acenaphthylene *	< 1,00	40	
Acenaphthene *	2,00 b		
Dibenzofuran	394		
Fluorene *	89,0		
Dibenzothiophene	4,00	61	
Phenanthrene *	21,0 b		
Anthracene *	2,00 b		
3-Methylphenanthrene	2,00 b		
2-Methylphenanthrene	4,00 b		
2-Methylanthracene	< 1,00		
9-Methylphenanthrene	2,00 b		
1-Methylphenanthrene	3,00 i,b		
Fluoranthene *	14,0 b		48
Pyrene *	7,00 b		
Benzo(a)fluorene	< 1,00		
Retene	3,00 b		
Benzo(b)fluorene	1,00 i,b		
Benzo(ghi)fluoranthene	1,00 b	44	
Cyclopenta(cd)pyrene	< 1,00		
Benz(a)anthracene *	< 1,00		
Chrysene */Triphenylene	2,00 b		
Benzo(b */j/k *)fluoranthenes	2,00 b		
Benzo(a)fluoranthene	< 1,00	84	
Benzo(e)pyrene	1,00 b		
Benzo(a)pyrene *	< 1,00		
Perylene	< 1,00		
Indeno(1,2,3-cd)pyrene *	< 1,00		69
Dibenzo(ac/ah *)anthracene	< 1,00		
Benzo(ghi)perylene *	1,00 i,b		
Anthanthrene	< 1,00		
Coronene	< 1,00		
Dibenzo(ae)pyrene	< 1,00		
Dibenzo(ai)pyrene	< 1,00		
Dibenzo(ah)pyrene	< 1,00		
Sum bicyclic PAH:	537		
Sum 3-7 ring PAH:	570		
Sum all:	1 107		
Sum Borneff 6	19,0		
Sum 16 EPA PAH *	323		

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Version 03.06.2004 GSK

Results of PAH Analysis



Encl. to measuring report: O-3575

NILU sample number: 06/246

Customer: AMAP 05

Customers sample ID: 28-30.11.05 0836-0858

: 160-148

Sample type: Air

Sample amount: 1123 m3

Concentration unit: pg/m3

Data files: TB_1132.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	906 b	34
2-Methylnaphtalene	328 b	
1-Methylnaphtalene	277	
Biphenyl	761	
Acenaphthylene *	1,00 b	33
Acenaphthene *	19,0 b	
Dibenzofuran	1 116	
Fluorene *	511	
Dibenzothiophene	10,0	56
Phenanthrene *	101 b	
Anthracene *	3,00 b	
3-Methylphenanthrene	5,00 b	
2-Methylphenanthrene	8,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	4,00 b	
1-Methylphenanthrene	5,00 b	
Fluoranthene *	41,0	68
Pyrene *	11,0 b	
Benzo(a)fluorene	2,00	
Retene	4,00 b	
Benzo(b)fluorene	1,00 b	
Benzo(ghi)fluoranthene	1,00 b	74
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	1,00 b	
Chrysene */Triphenylene	4,00 b	
Benzo(b */i/k *)fluoranthenes	4,00 b	114
Benzo(a)fluoranthene	1,00	
Benzo(e)pyrene	2,00 b	
Benzo(a)pyrene *	1,00 b	
Perylene	1,00	
Indeno(1,2,3-cd)pyrene *	1,00 b	105
Dibenzo(ac/ah *)anthracene	1,00 b	
Benzo(ghi)perylene *	3,00 b	
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	2 272	
Sum 3-7 ring PAH:	1 869	
Sum all:	4 141	
Sum Borneff 6	50,0	
Sum 16 EPA PAH *	1 608	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

Results of PAH Analysis

281



Encl. to measuring report: O-3575
 NILU sample number: 06/247
 Customer: AMAP 05
 Customers sample ID: 5-7.12.05 0734-0902
 : 160-151
 Sample type: Air
 Sample amount: 1161 m3
 Concentration unit: pg/m3
 Data files: TB_1033.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	402 b	32
2-Methylnaphtalene	127	
1-Methylnaphtalene	104	
Biphenyl	554	
Acenaphthylene *	1,00 b	37
Acenaphthene *	5,00 b	
Dibenzofuran	1 280	
Fluorene *	607	
Dibenzothiophene	8,00	65
Phenanthrene *	48,0	
Anthracene *	1,00 b	
3-Methylphenanthrene	3,00 b	
2-Methylphenanthrene	5,00 b	
2-Methylantracene	< 1,00	
9-Methylphenanthrene	3,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	47,0 b	
Pyrene *	17,0 b	
Benzo(a)fluorene	1,00 i,b	
Retene	3,00 b	
Benzo(b)fluorene	3,00 i	
Benzo(ghi)fluoranthene	3,00	53
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	2,00	
Chrysene */Triphenylene	10,0	
Benzo(b */j/k *)fluoranthenes	8,00	98
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	3,00 b	
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	1,00 b	88
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	3,00 b	
Anthanthrene	< 1,00	
Coronene	1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	1 187	
Sum 3-7 ring PAH:	2 076	
Sum all:	3 263	
Sum Borneff 6	60,0	
Sum 16 EPA PAH *	1 154	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



282

Encl. to measuring report: O-3575
 NILU sample number: 06/248
 Customer: AMAP 05
 Customers sample ID: 12-14.12.05 0753-0633
 : 160-160
 Sample type: Air
 Sample amount: 1125 m3
 Concentration unit: pg/m3
 Data files: TB_1034.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	1 320	
2-Methylnaphtalene	405	35
1-Methylnaphtalene	333	
Biphenyl	914	
Acenaphthylene *	1,00 b	
Acenaphthene *	9,00 b	39
Dibenzofuran	1 021	
Fluorene *	448	
Dibenzothiophene	11,0	
Phenanthrene *	48,0	
Anthracene *	< 1,00	67
3-Methylphenanthrene	3,00 b	
2-Methylphenanthrene	5,00 b	
2-Methylantracene	< 1,00	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	38,0 b	
Pyrene *	10,0 b	52
Benzo(a)fluorene	< 1,00	
Retene	4,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	1,00 b	56
Chrysene */Triphenylene	5,00 b	
Benzo(b */j/k *)fluoranthenes	4,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	2,00 b	98
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	1,00 b	
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	1,00 b	90
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	2 972	
Sum 3-7 ring PAH:	1 632	
Sum all:	4 604	
Sum Borneff 6	45,0	
Sum 16 EPA PAH *	1 889	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis

283



Encl. to measuring report: O-3575
 NILU sample number: 06/249
 Customer: AMAP 05
 Customers sample ID: 19-21.12.05 0850-0810
 : 160-156
 Sample type: Air
 Sample amount: 1126 m3
 Concentration unit: pg/m3
 Data files: TB_1035.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	1 051	
2-Methylnaphtalene	299	33
1-Methylnaphtalene	259	
Biphenyl	1 198	
Acenaphthylene *	3,00 b	
Acenaphthene *	11,0 b	38
Dibenzofuran	1 817	
Fluorene *	856	
Dibenzothiophene	20,0	
Phenanthrene *	102 b	
Anthracene *	3,00 b	68
3-Methylphenanthrene	6,00 b	
2-Methylphenanthrene	10,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	5,00 b	
1-Methylphenanthrene	7,00 b	
Fluoranthene *	146	
Pyrene *	76,0	52
Benzo(a)fluorene	8,00 i,b	
Retene	7,00	
Benzo(b)fluorene	12,0 i	
Benzo(ghi)fluoranthene	12,0	
Cyclopenta(cd)pyrene	4,00	
Benz(a)anthracene *	11,0	57
Chrysene */Triphenylene	47,0	
Benzo(b */j/k *)fluoranthenes	60,0	
Benzo(a)fluoranthene	3,00	
Benzo(e)pyrene	22,0	95
Benzo(a)pyrene *	10,0	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	14,0	
Dibenzo(ac/ah *)anthracene	2,00	
Benzo(ghi)perylene *	19,0 b	92
Anthanthrene	1,00	
Coronene	7,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	2 807	
Sum 3-7 ring PAH:	3 306	
Sum all:	6 113	
Sum Borneff 6	249	
Sum 16 EPA PAH *	2 411	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Results of PAH Analysis



284

Encl. to measuring report: O-3575
 NILU sample number: 06/250
 Customer: AMAP 05
 Customers sample ID: 26-28.12.05 0830-0615
 : 160-159
 Sample type: Air
 Sample amount: 1099 m3
 Concentration unit: pg/m3
 Data files: TB_1036.D

Kjeller, 14.03.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	1 947	
2-Methylnaphtalene	393	32
1-Methylnaphtalene	381	
Biphenyl	834	
Acenaphthylene *	1,00 b	
Acenaphthene *	7,00 b	36
Dibenzofuran	787	
Fluorene *	323	
Dibenzothiophene	7,00	
Phenanthrene *	46,0 b	
Anthracene *	1,00 b	63
3-Methylphenanthrene	4,00 b	
2-Methylphenanthrene	6,00 b	
2-Methylantracene	< 1,00	
9-Methylphenanthrene	3,00 b	
1-Methylphenanthrene	4,00 b	
Fluoranthene *	48,0 b	
Pyrene *	28,0 b	49
Benzo(a)fluorene	2,00 i,b	
Retene	5,00 b	
Benzo(b)fluorene	3,00 i	
Benzo(ghi)fluoranthene	6,00	
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	3,00 b	48
Chrysene */Triphenylene	19,0	
Benzo(b *fj/k *)fluoranthenes	20,0	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	7,00	88
Benzo(a)pyrene *	1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	5,00	
Dibenzo(ac/ah *)anthracene	1,00	
Benzo(ghi)perylene *	6,00 b	79
Anthanthrene	< 1,00	
Coronene	3,00	
Dibenzo(ae)pyrene	1,00 i	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
Sum bicyclic PAH:	3 555	
Sum 3-7 ring PAH:	1 354	
Sum all:	4 909	
Sum Borneff 6	80,0	
Sum 16 EPA PAH *	2 456	

<: Lower than detection limit at signal:noise 3:1

(i): Possible interference

(s): Saturated signal

(b): Lower than 10 times method blank

(g): Recovery is not according to NILUs quality criteria

3. Versjon 03.06.2004 GSK

Vedlegg 5

Tungmetaller i luft på Birkenes
(U-1272-06)

Målerapport nr. U-1272-06

Oppdragsgiver: Jozef M. Pacyna
NILU
Her
Kopi : WAa

Prosjekt nr.: O-90006

Prøvetaking:
Sted: Birkenes
Ansvar: NILU
Kommentar: Prøver for perioden 01.01.2005-31.12.2005

Prøveinformasjon:
Prøvetype: Tungmetaller, luftprøver (KleinfILTERgeret)
Prøven mottatt:
Kommentar: Resultatene er korrigerte med filterblank, Whatman Qma.
Deteksjonsgrensen er basert på 1 standardavvik av filterblank for elementene Cu og Cr.

Analyser:
Utført av Norsk institutt for luftforskning
Postboks 100
N-2027 KJELLER

Målemetode: NILU-U-47: Forskrift for måling av masse svevestøv, hovedkomponenter og tungmetaller i svevestøv i luft med sierra dichotomous eller NILUs to-filterprøvetaker.

Analysemetoden NILU-U-47 er akkreditert av Norsk Akkreditering i henhold til ISO/IEC-17025.

NILU-U-116: Forskrift for bruk av mikrobølgeovn.

Kommentar:

Kontaktperson: Marit Vadset

Godkjenning:

Kjeller, 27. mars 2006

Marit Vadset

Marit Vadset
Ingeniør, Miljøkjemi

Vedlegg:

Analyseresultater for prøver: 2 sider
Målerapporten og vedleggene omfatter totalt 4 sider

Måleresultatene gjelder bare de prøvene som er analysert. Denne rapporten skal ikke gjengis i utdrag, uten skriftlig godkjenning fra laboratoriet.

Analyseresultatene for ICPMS følger som et eget vedlegg med overskrift "NILU ICPMS RAPPORT".

Oppdragsgivers prøveidentifikasjon er angitt i målerapporten for hver enkelt prøve. Analyseresultatene i rapportvedlegget er gitt med varierende antall gjeldende siffer. Med metodens beregnede usikkerhet som grunnlag, anbefales det å ikke benytte mer enn 3 gjeldende siffer ved vurdering eller i presentasjon av resultatene.

Usikkerheten i resultatene kan fås ved henvendelse til NILUs laboratorium

PROVETVA PROVETA MÅLEPER FRADATO IILDATO aprocnvn UT_ENHE UTV_VOL DIL_FKT LUFTVOL FILTDEL Pb Cd Cu Zn Cr Ni Co V As

Table with columns: PRO_NR, stasnr, Birkenes, fp-1, Uke, Prøvetaker, Kleinfiltregeret, filtertype, Whatman, Qma, LUFTVOL, FILTDEL, Pb, Cd, Cu, Zn, Cr, Ni, Co, V, As. The table contains multiple rows of data for various sampling events and locations.

PRO_NR	stasnr	PROVETY	MALEPER	FRADATO	ILLDATO	aprocsmn	UT_ENHE	UTV_VOL	DIL_FKT	LUFTVOL	FILTDEL	Pb	Cd	Cu	Zn	Cr	Ni	Co	V	As		
O-90006	Birkenes	fp-1	Dagn	1	04.01.2005	05.01.2005	o0303a14	ng/m3	10	1	54.9	0.5	*0.236065*	-0.020822	1.22	4.95	9.47	5.22	0.11	*0.309532*	*0.0716454	
O-90006	Birkenes	fp-1	pm10	1	11.01.2005	12.01.2005	o0303a15	ng/m3	10	1	55	0.5	1.65	0.028	2.35	6.49	*0.553937*	2.69	0.07	0.56	*0.334661*	*0.141183F
O-90006	Birkenes	fp-1	pm10	1	18.01.2005	19.01.2005	o0303a16	ng/m3	10	1	55.2	0.5	*0.280434*	-0.020709	2.10	6.29	45.81	20.94	0.56	0.36	2.98	3.51
O-90006	Birkenes	fp-1	pm10	1	08.02.2005	09.02.2005	o0303a13	ng/m3	10	1	55.2	0.5	37.12	1.047	7.06	67.20	10.19	8.96	0.36	0.08	2.29	0.81
O-90006	Birkenes	fp-1	pm10	1	15.02.2005	16.02.2005	o0303a18	ng/m3	10	1	54.8	0.5	2.12	0.125	18.95	13.88	*1.880777*	2.29	0.08	0.10	1.67	1.26
O-90006	Birkenes	fp-1	pm10	1	22.02.2005	23.02.2005	o0303a19	ng/m3	10	1	55.2	0.5	6.39	0.201	*1.12077*	11.44	*3.787438*	3.21	0.10	0.10	0.87	0.24
O-90006	Birkenes	fp-1	pm10	1	01.03.2005	02.03.2005	o0303a30	ng/m3	10	1	55.6	0.5	1.07	*0.5946004*	4.45	*1.609111*	4.37	0.10	0.10	0.49	0.57	
O-90006	Birkenes	fp-1	pm10	1	08.03.2005	09.03.2005	o0303a20	ng/m3	10	1	55.1	0.5	*0.498818*	-0.020746	*0.468723*	6.48	*0.344986*	0.89	*0.064755*	0.49	0.57	
O-90006	Birkenes	fp-1	pm10	1	15.03.2005	16.03.2005	o0303a31	ng/m3	10	1	55.1	0.5	1.74	*0.079	*0.693768*	10.59	*1.166363*	2.85	0.08	0.08	1.38	0.57
O-90006	Birkenes	fp-1	pm10	1	22.03.2005	23.03.2005	o0303a21	ng/m3	10	1	55.1	0.5	7.60	0.226	2.89	19.54	*0.505745*	2.83	0.09	0.09	3.96	1.98
O-90006	Birkenes	fp-1	pm10	1	29.03.2005	30.03.2005	o0303a29	ng/m3	10	1	55.1	0.5	2.52	0.132	8.99	13.18	24.45	8.37	0.20	0.20	1.74	0.95
O-90006	Birkenes	fp-1	pm10	1	05.04.2005	06.04.2005	o0303a28	ng/m3	10	1	55.2	0.5	*0.591666*	-0.020709	*0.1570004*	2.01	*0.642510*	1.88	*0.064638*	0.53	*0.127776*	
O-90006	Birkenes	fp-1	pm10	1	12.04.2005	13.04.2005	o0303a27	ng/m3	10	1	55.2	0.5	*0.544655*	-0.020709	4.71	1.48	*0.344361*	0.97	*0.064638*	0.58	*0.1045894	
O-90006	Birkenes	fp-1	pm10	1	19.04.2005	20.04.2005	o0303a26	ng/m3	10	1	55.2	0.5	4.20	0.179	5.54	13.31	*6.228065*	7.47	0.38	0.38	2.92	0.97
O-90006	Birkenes	fp-1	pm10	1	03.05.2005	04.05.2005	o0303a24	ng/m3	10	1	55.2	0.5	3.39	0.072	2.01	8.12	*2.080917*	5.13	0.20	0.20	5.06	0.97
O-90006	Birkenes	fp-1	pm10	1	10.05.2005	11.05.2005	o0303a23	ng/m3	10	1	55.2	0.5	2.27	0.048	2.49	5.28	*0.344361*	3.40	0.11	0.11	3.55	0.35
O-90006	Birkenes	fp-1	pm10	1	17.05.2005	18.05.2005	o0303a22	ng/m3	10	1	55.2	0.5	0.72	*0.020709	-0.096223	6.76	*0.344361*	*0.213949*	*0.064638*	*0.279227*	*0.0890097	
O-90006	Birkenes	fp-1	PM10	1	24.05.2005	25.05.2005	o0703a28	ng/m3	10	1	55.1	0.5	*0.612704*	-0.020746	3.79	*1.210163*	*0.344986*	1.26	*0.064755*	*0.169389	0.41	
O-90006	Birkenes	fp-1	PM10	1	31.05.2005	01.06.2005	o0703a29	ng/m3	10	1	55	0.5	2.75	0.083	1.47	7.24	*0.345613*	2.66	*0.064873*	6.14	0.48	
O-90006	Birkenes	fp-1	PM10	1	14.06.2005	15.06.2005	o0303a32	ng/m3	10	1	55.1	0.5	1.32	0.038	*0.1612121*	1.87	*0.345613*	1.93	0.07	0.07	0.97	*0.203151E
O-90006	Birkenes	fp-1	PM10	1	21.06.2005	22.06.2005	o0703a18	ng/m3	10	1	55.1	0.5	1.40	*0.020784	5.16	3.08	*0.344986*	*0.326134*	*0.064755*	0.67	*0.2361767*	
O-90006	Birkenes	fp-1	PM10	1	28.06.2005	29.06.2005	o0703a19	ng/m3	10	1	55.1	0.5	1.10	0.027	*0.278886*	1.57	*0.344986*	0.515245	0.07	0.82	*0.1519661*	
O-90006	Birkenes	fp-1	PM10	1	05.07.2005	06.07.2005	o0703a20	ng/m3	10	1	55.1	0.5	1.76	0.025	*0.499576*	2.65	*0.345613*	*0.292181*	*0.064873*	1.10	*0.155878E	
O-90006	Birkenes	fp-1	PM10	1	12.07.2005	13.07.2005	o0703a21	ng/m3	10	1	55	0.5	*0.613090*	-0.020784	-0.096572	1.79	*0.345613*	*0.265727*	*0.064873*	0.68	*0.2329697	
O-90006	Birkenes	fp-1	PM10	1	19.07.2005	20.07.2005	o0703a22	ng/m3	10	1	55.2	0.5	*0.593840*	-0.020709	*0.541787*	2.13	*1.475844*	2.51	0.07	0.35	*0.1371981*	
O-90006	Birkenes	fp-1	PM10	1	02.08.2005	03.08.2005	o0703a24	ng/m3	10	1	55.1	0.5	*0.177132*	-0.020746	*0.179794*	*0.473441*	*0.344986*	*0.100868*	*0.064755*	*0.143617*	*0.0358137*	
O-90006	Birkenes	fp-1	PM10	1	09.08.2005	10.08.2005	o0703a25	ng/m3	10	1	55.2	0.5	2.19	0.047	*0.670773*	4.86	*0.344361*	0.77	*0.064638*	1.38	0.36	
O-90006	Birkenes	fp-1	PM10	1	23.08.2005	24.08.2005	o0703a27	ng/m3	10	1	55.2	0.5	5.047101	0.029	-0.096223	*1.382971*	*0.344361*	*0.100868*	*0.064638*	*0.227053*	*0.075986E	
O-90006	Birkenes	fp-1	PM10	1	30.08.2005	31.08.2005	o0703a33	ng/m3	10	1	55.2	0.5	6.64	0.217	1.58	14.74	*0.344361*	1.21	0.07	0.349	1.07	
O-90006	Birkenes	fp-1	PM10	1	06.09.2005	07.09.2005	o0703a32	ng/m3	10	1	55.2	0.5	2.24	0.038	*0.795410*	5.09	*0.344361*	0.77	*0.064638*	1.67	0.27	
O-90006	Birkenes	fp-1	pm10	1	13.09.2005	14.09.2005	o0803a16	ng/m3	10	1	55.2	0.5	1.98	0.055	*1.149759*	4.23	*0.344361*	*0.505253*	*0.064638*	0.73	0.27	
O-90006	Birkenes	fp-1	pm10	1	20.09.2005	21.09.2005	o0803a17	ng/m3	10	1	55.6	0.5	1.25	0.025	3.02	3.68	*0.341884*	0.89	*0.064173*	1.37	0.25	
O-90006	Birkenes	fp-1	pm10	1	27.09.2005	28.09.2005	o0803a18	ng/m3	10	1	54.8	0.5	*0.4788321*	0.026	*0.210340*	2.41	*0.346875*	*0.282293*	*0.065111*	0.41	*0.174330E	
O-90006	Birkenes	fp-1	pm10	1	04.10.2005	05.10.2005	o0803a19	ng/m3	10	1	55.1	0.5	19.77	0.624	4.82	25.40	*0.344986*	1.88	0.09	3.06	1.85	
O-90006	Birkenes	fp-1	pm10	1	11.10.2005	12.10.2005	o0703a31	ng/m3	10	1	110.1	0.5	*0.552225*	0.028	*0.187899*	2.40	*0.17265*	*0.330517*	*0.032407*	0.71	0.24	
O-90006	Birkenes	fp-1	pm10	1	18.10.2005	19.10.2005	o0803a10	ng/m3	10	1	55	0.5	2.81	0.090	*1.100121*	7.22	*0.345613*	1.04	*0.064873*	2.79	0.32	
O-90006	Birkenes	fp-1	pm10	1	01.11.2005	02.11.2005	o0803a11	ng/m3	10	1	55.1	0.5	4.96	0.382	2.76	28.71	*0.344986*	1.29	*0.064755*	2.65	0.34	
O-90006	Birkenes	fp-1	pm10	1	08.11.2005	09.11.2005	o0803a12	ng/m3	10	1	55.2	0.5	*0.098507*	-0.020709	*0.096223*	*0.472583*	*0.344361*	*0.100868*	*0.064638*	*0.020893*	*0.0125604	
O-90006	Birkenes	fp-1	pm10	1	15.11.2005	16.11.2005	o0803a13	ng/m3	10	1	55.1	0.5	*0.5898367*	0.033	*0.384876*	3.69	*0.344986*	*0.122504*	*0.064755*	*0.129098*	0.25	
O-90006	Birkenes	fp-1	pm10	1	22.11.2005	23.11.2005	o0803a14	ng/m3	10	1	55.1	0.5	*0.2145191*	-0.020748	*0.096397*	1.91	*0.344986*	*0.100868*	*0.064755*	*0.11312*	*0.041258E	
O-90006	Birkenes	fp-1	pm10	1	29.11.2005	30.11.2005	o0803a15	ng/m3	10	1	55	0.5	*0.515638*	-0.020784	4.83	2.80	*0.345613*	*0.101051*	*0.064873*	*0.010707*	*0.005155	
O-90006	Birkenes	fp-1	pm10	1	06.12.2005	07.12.2005	o0803a16	ng/m3	10	1	55.2	0.5	*0.928260*	-0.020709	4.46	3.48	*0.344361*	*0.252717*	*0.064638*	*0.014372*	*0.0040459	
O-90006	Birkenes	fp-1	pm10	1	13.12.2005	14.12.2005	o0803a17	ng/m3	10	1	55.1	0.5	4.62	0.023	26.44	1.45	*0.344986*	*0.138838*	*0.064755*	*0.069207*	*0.042710E	
O-90006	Birkenes	fp-1	pm10	1	20.12.2005	21.12.2005	o0803a18	ng/m3	10	1	55.1	0.5	5.23	0.095	10.12	7.05	*0.344986*	*0.127949*	*0.064755*	0.92	*0.124379E	
O-90006	Birkenes	fp-1	pm10	1	27.12.2005	28.12.2005	o0803a19	ng/m3	10	1	55.1	0.5	5.23	0.095	10.12	7.05	*0.344986*	*0.127949*	*0.064755*	0.92	*0.124379E	

Provelaker Kleinfiltergeret, fillertype: Whatman Qma

Vedlegg 6

Tungmetaller i nedbør på Birkenes (U-1261-06)

Målerapport nr. U-1261-06

Oppdragsgiver: NILU
v/Wenche Aas
Her

Prosjekt nr.: O-8118

Prøvetaking:
Sted: Birkenes, Karasjok, Kårvatn og Hurdal
Ansvar: NILU
Kommentar: Prøver for perioden 01.1.2005-31.12.2005

Prøveinformasjon:
Prøvetype: Tungmetaller i nedbør
Prøven mottatt:
Kommentar: Parallell analyse er utført for følgende prøvedatoer, og samsvarende måleresultat oppnådd:

Birkenes: 05/02/01,05/02/07,05/04/25,05/05/01,05/05/16,05/08/22,05/09/19,05/09/26,05/10/03,05/10/10

Hurdal: 05/05/01,05/05/02,05/07/01,05/07/11,05/07/25,05/08/29,05/09/01,05/09/05,05/09/12,05/09/19,05/09/26,05/10/01

Karasjok: 05/04/25,05/09/01,05/10/01,
Kårvatn 05/03/01,05/05/01,05/08/01,05/08/08,05/08/15,05/08/22,05/08/29,05/09/01,

Analyser:
Utført av Norsk institutt for luftforskning
Postboks 100
N-2007 KJELLER

Målemetode:

Analysene er utført ved NILUs avdeling for Uorganisk analyse med teknikken ICPMS i henhold til metoden:

NILU-U-22: Forskrift for behandling av nedbørsprøver for analyse av hovedkomponenter og tungmetaller.

Analysemetoden NILU-U-22 er akkreditert av Norsk Akkreditering i henhold til ISO/IEC-17025.

Kontaktperson:

Marit Vadset

Godkjenning:

Kjeller, 13. mars 2006

Marit Vadset

Marit Vadset

Ingeniør, Miljøkjemi

Vedlegg:

233 analyseresultater: 10 sider

Målerapporten og vedleggene omfatter totalt 12 sider.

Måleresultatene gjelder bare de prøvene som er analysert. Denne rapporten skal ikke gjengis i utdrag, uten skriftlig godkjenning fra laboratoriet.

Oppdragsgivers prøveidentifikasjon er angitt i målerapporten for hver enkelt prøve.

Analyseresultatene i rapportvedlegget er gitt med varierende antall gjeldende siffer. Siden det vanligvis er vanskelig å spesifisere total måleusikkerhet bedre enn 10%, anbefales det å ikke benytte mer enn 3 gjeldende siffer ved vurdering eller i presentasjon av resultatene.

Usikkerheten i resultatene kan fås ved henvendelse til NILUs laboratorium.

Et minus "-" foran måleresultatet, betyr at det er mindre enn deteksjonsgrensen for analysemetoden. Er måleresultatet oppgitt som f.eks. "-0.01", betyr det at deteksjonsgrensen for metoden er 0.01.

PRO_NR	stasnr	PROVETY MÁLEPER FRADATO	tíL DATO	aprocavn	UT_ENHE DIL_FKT	Pb	Cd	Cu	Zn	Cr	Ni	Co	V	As
O-8118	Birkenes	nb-niutlm	2	01.01.2005	03.01.2005	11410[a]9	ng/ml	0.816	2.321	*-0.2	0.874	*-0.01	1.016	0.171
O-8118	Birkenes	nb-niutlm	2	03.01.2005	10.01.2005	11410[a]10	ng/ml	0.551	2.036	*0.225	0.989	*-0.01	1.288	0.229
O-8118	Birkenes	nb-niutlm	2	10.01.2005	17.01.2005	11410[a]11	ng/ml	0.776	5.981	*-0.2	*0.279	*-0.01	4.577	0.579
O-8118	Birkenes	nb-niutlm	2	17.01.2005	24.01.2005	11410[a]12	ng/ml	*0.226	1.597	*-0.2	*-0.2	*-0.01	0.692	0.111
O-8118	Birkenes	nb-niutlm	2	31.01.2005	01.02.2005		ng/ml							
O-8118	Birkenes	nb-niutlm	2	01.02.2005	07.02.2005	11410[a]13	ng/ml	4.549	23.06	0.751	2.778	*0.06	4.324	0.72
O-8118	Birkenes	nb-niutlm	2	07.02.2005	14.02.2005	o1201a[20]	ng/ml	0.943	8.394	*-0.2	*0.472	*0.016	1.772	0.34
O-8118	Birkenes	nb-niutlm	2	14.02.2005	21.02.2005	11410[a]15	ng/ml	9.36	36.62	1.144	3.373	*0.062	1.326	0.296
O-8118	Birkenes	nb-niutlm	2	21.02.2005	28.02.2005	p0702a[17]	ng/ml	2.613	19.2	0.585	1.676	0.125	1.475	0.746
O-8118	Birkenes	nb-niutlm	2	28.02.2005	01.03.2005	11410[a]17	ng/ml	1.039	6.594	*0.258	*0.392	*-0.01	*0.264	0.218
O-8118	Birkenes	nb-niutlm	2	01.03.2005	07.03.2005	11410[a]21	ng/ml	*0.028	10.98	*-0.2	*0.401	*-0.01	1.742	0.271
O-8118	Birkenes	nb-niutlm	2	07.03.2005	14.03.2005	11410[a]22	ng/ml	*0.007	4.293	*0.387	*0.334	*-0.01	0.722	0.274
O-8118	Birkenes	nb-niutlm	2	14.03.2005	21.03.2005	11410[a]23	ng/ml	*0.433	2.84	3.669	4.272	*0.08	0.568	0.107
O-8118	Birkenes	nb-niutlm	2	21.03.2005	28.03.2005	11410[a]16	ng/ml	2.366	16.4	*0.444	1.264	*0.014	1.248	0.826
O-8118	Birkenes	nb-niutlm	2	28.03.2005	01.04.2005	p0702a[18]	ng/ml	52.46	241	10.99	21.37	1.111	2.429	0.682
O-8118	Birkenes	nb-niutlm	2	01.04.2005	04.04.2005	11410[a]18	ng/ml	36.28	435.7	79	149.2	5.067	0.976	0.346
O-8118	Birkenes	nb-niutlm	2	04.04.2005	11.04.2005	11410[a]19	ng/ml	1.304	11.42	1.962	2.268	*0.028	1.807	0.24
O-8118	Birkenes	nb-niutlm	2	11.04.2005	18.04.2005	11410[a]20	ng/ml	4.124	32.01	1.13	3.059	*0.061	1.024	0.297
O-8118	Birkenes	nb-niutlm	2	18.04.2005	25.04.2005		ng/ml							
O-8118	Birkenes	nb-niutlm	2	25.04.2005	01.05.2005	11410[a]24	ng/ml	2.437	15.59	*0.357	0.694	*-0.01	1.477	0.404
O-8118	Birkenes	nb-niutlm	2	01.05.2005	02.05.2005	o1201a[22]	ng/ml	1.765	10.73	*0.328	0.812	0.113	1.815	0.382
O-8118	Birkenes	nb-niutlm	2	02.05.2005	09.05.2005	11410[a]26	ng/ml	0.91	8.25	*0.305	0.654	*-0.01	0.646	0.214
O-8118	Birkenes	nb-niutlm	2	09.05.2005	16.05.2005	11410[a]27	ng/ml	*0.377	2.663	*-0.2	*-0.2	*-0.01	*0.273	0.119
O-8118	Birkenes	nb-niutlm	2	16.05.2005	23.05.2005	117111a[7]	ng/ml	0.612	6.295	*-0.2	*-0.2	*-0.01	0.542	0.162
O-8118	Birkenes	nb-niutlm	2	23.05.2005	30.05.2005	12111a[8]	ng/ml	1.234	6.552	*-0.2	*0.434	*0.038	1.327	*-0.1
O-8118	Birkenes	nb-niutlm	2	30.05.2005	01.06.2005	117111a[9]	ng/ml	0.426	3.868	*0.236	*0.208	*0.025	*0.388	0.112
O-8118	Birkenes	nb-niutlm	2	01.06.2005	06.06.2005	11410[a]28	ng/ml	*0.058	0.716	*-0.2	*0.217	*-0.01	*0.292	0.147
O-8118	Birkenes	nb-niutlm	2	06.06.2005	13.06.2005	11410[a]29	ng/ml	*0.005	2.734	*-0.2	*0.217	*-0.01	*0.422	0.23
O-8118	Birkenes	nb-niutlm	2	13.06.2005	20.05.2005	117111a[11]	ng/ml	0.827	5.31	*0.27	*0.289	*-0.01	*0.422	*-0.1
O-8118	Birkenes	nb-niutlm	2	20.06.2005	27.06.2005	117111a[11]	ng/ml	*0.404	2.576	*-0.2	*-0.2	*-0.01	0.849	*-0.1
O-8118	Birkenes	nb-niutlm	2	27.06.2005	01.07.2005		ng/ml	2.39	16.29	0.829	1.604	0.115	0.512	1.789
O-8118	Birkenes	nb-niutlm	2	01.07.2005	04.07.2005	117111a[11]	ng/ml	1.036	34.23	*-0.2	0.837	*-0.01	1.018	0.129
O-8118	Birkenes	nb-niutlm	2	04.07.2005	11.07.2005	117111a[11]	ng/ml	1.503	17.93	*0.263	0.627	*0.028	0.735	0.316
O-8118	Birkenes	nb-niutlm	2	11.07.2005	18.07.2005	117111a[11]	ng/ml	1.744	12.69	0.561	0.627	*0.044	0.843	0.263
O-8118	Birkenes	nb-niutlm	2	18.07.2005	25.07.2005	117111a[11]	ng/ml	*0.043	6.894	*0.437	*0.437	*0.016	0.935	0.169
O-8118	Birkenes	nb-niutlm	2	25.07.2005	01.08.2005	117111a[11]	ng/ml	*0.073	2.262	*-0.2	*-0.2	*-0.01	*0.321	*-0.1
O-8118	Birkenes	nb-niutlm	2	01.08.2005	08.08.2005	117111a[11]	ng/ml	*0.473	3.227	*0.256	*-0.2	*0.017	*0.311	0.108
O-8118	Birkenes	nb-niutlm	2	08.08.2005	15.08.2005	117111a[11]	ng/ml	*0.005	0.574	*-0.2	*-0.2	*-0.01	*0.197	*-0.1
O-8118	Birkenes	nb-niutlm	2	15.08.2005	22.08.2005		ng/ml	*0.011	1.637	*-0.2	*-0.2	*-0.01		
O-8118	Birkenes	nb-niutlm	2	22.08.2005	29.08.2005	12111a[11]	ng/ml	*0.32	2.475	*-0.2	*0.28	*0.018	1.128	14.92
O-8118	Birkenes	nb-niutlm	2	29.08.2005	01.09.2005	12111a[3]	ng/ml	3.726	27.14	0.629	1.136	*0.049	1.051	0.286
O-8118	Birkenes	nb-niutlm	2	01.09.2005	05.09.2005	12111a[4]	ng/ml	1.723	8.6	*0.239	*0.36	*0.056	0.731	0.244

PRO_NR	stasnr	PROVETY MÁLEPER FRADATO	ILDATO	aprocavn	UT_ENHE DIL_FKT	Pb	Cd	Cu	Zn	Cr	Ni	Co	V	As
O-8118	Birkenes	nb-niutlm	2	05.09.2005	12.09.2005	12111a[5]	ng/ml	2.614	12.73	0.527	0.834	*0.083	1.323	0.238
O-8118	Birkenes	nb-niutlm	2	12.09.2005	19.09.2005	12111a[6]	ng/ml	1.065	4.378	*0.364	*0.211	*0.028	0.644	0.158
O-8118	Birkenes	nb-niutlm	2	19.09.2005	26.09.2005	o1201a[23]	ng/ml	5.044	19.53	0.711	1.286	0.112	2.497	0.729
O-8118	Birkenes	nb-niutlm	2	26.09.2005	01.10.2005	12111a[10]	ng/ml	*0.248	1.409	*-0.2	*-0.2	*-0.01	0.989	1.03
O-8118	Birkenes	nb-niutlm	2	01.10.2005	03.10.2005	12111a[9]	ng/ml	6.642	21.43	*0.398	0.545	*0.037	*-0.1	*-0.1
O-8118	Birkenes	nb-niutlm	2	03.10.2005	10.10.2005	o1201a[24]	ng/ml	13.12	35.17	1.238	2.263	0.206	2.441	1.397
O-8118	Birkenes	nb-niutlm	2	10.10.2005	17.10.2005	o1201a[25]	ng/ml	9.483	27.11	1.652	1.918	0.127	1.599	0.677
O-8118	Birkenes	nb-niutlm	2	17.10.2005	24.10.2005	12811a[11]	ng/ml	0.547	3.113	*-0.2	*-0.2	*-0.01	0.691	0.154
O-8118	Birkenes	nb-niutlm	2	24.10.2005	31.10.2005	12811a[12]	ng/ml	0.938	6.283	*0.265	*0.252	*0.015	0.881	0.276
O-8118	Birkenes	nb-niutlm	2	31.10.2005	01.11.2005	12811a[13]	ng/ml	*0.408	2.178	*-0.2	*-0.2	*-0.01	0.506	0.276
O-8118	Birkenes	nb-niutlm	2	01.11.2005	07.11.2005	12911a[3]	ng/ml	*0.424	2.229	*-0.2	*-0.2	*-0.01	0.948	*-0.1
O-8118	Birkenes	nb-niutlm	2	07.11.2005	14.11.2005	12911a[4]	ng/ml	*0.024	5.762	*0.294	*0.203	*-0.01	2.491	0.351
O-8118	Birkenes	nb-niutlm	2	14.11.2005	21.11.2005	o0702a[10]	ng/ml	0.919	1.923	*0.235	*-0.2	*0.018	0.724	0.187
O-8118	Birkenes	nb-niutlm	2	21.11.2005	28.11.2005	o0702a[11]	ng/ml	0.517	6.393	*-0.2	*-0.2	*0.017	0.918	0.504
O-8118	Birkenes	nb-niutlm	2	28.11.2005	01.12.2005	o0702a[12]	ng/ml	*0.302	1.701	*-0.2	*0.239	*-0.01	1.031	*-0.1
O-8118	Birkenes	nb-niutlm	2	01.12.2005	05.12.2005	o0702a[13]	ng/ml	0.782	8.12	*-0.2	*-0.2	*0.019	1.861	0.332
O-8118	Birkenes	nb-niutlm	2	05.12.2005	12.12.2005	o0702a[15]	ng/ml	*0.109	0.668	*-0.2	*-0.2	*-0.01	*0.259	*-0.1
O-8118	Birkenes	nb-niutlm	2	12.12.2005	19.12.2005	o0702a[16]	ng/ml	*0.289	1.907	*-0.2	*-0.2	*-0.01	0.668	*-0.1
O-8118	Birkenes	nb-niutlm	2	19.12.2005	26.12.2005	o0702a[14]	ng/ml	*0.301	1.92	*-0.2	*0.253	*0.013	0.534	0.148
O-8118	Hurdal	nb-niutlm	2	01.01.2005	03.01.2005	11509a[3]	ng/ml	2.814	2.814					
O-8118	Hurdal	nb-niutlm	2	03.01.2005	10.01.2005	11509a[4]	ng/ml	3.74	3.74					
O-8118	Hurdal	nb-niutlm	2	10.01.2005	17.01.2005	11509a[5]	ng/ml	10.44	10.44					
O-8118	Hurdal	nb-niutlm	2	17.01.2005	24.01.2005	11509a[6]	ng/ml	6.348	6.348					
O-8118	Hurdal	nb-niutlm	2	24.01.2005	31.01.2005	11509a[7]	ng/ml	36.16	36.16					
O-8118	Hurdal	nb-niutlm	2	31.01.2005	01.02.2005		ng/ml							
O-8118	Hurdal	nb-niutlm	2	01.02.2005	07.02.2005	11509a[8]	ng/ml	19.66	19.66					
O-8118	Hurdal	nb-niutlm	2	07.02.2005	14.02.2005	11509a[9]	ng/ml	11.92	11.92					
O-8118	Hurdal	nb-niutlm	2	14.02.2005	21.02.2005	11509a[10]	ng/ml	20.29	20.29					
O-8118	Hurdal	nb-niutlm	2	21.02.2005	28.02.2005		ng/ml							
O-8118	Hurdal	nb-niutlm	2	28.02.2005	01.03.2005	11509a[11]	ng/ml	20.55	20.55					
O-8118	Hurdal	nb-niutlm	2	01.03.2005	07.03.2005		ng/ml							
O-8118	Hurdal	nb-niutlm	2	07.03.2005	14.03.2005	11509a[13]	ng/ml	5.24	5.24					
O-8118	Hurdal	nb-niutlm	2	14.03.2005	21.03.2005	11509a[14]	ng/ml	0.162	0.162					
O-8118	Hurdal	nb-niutlm	2	21.03.2005	28.03.2005		ng/ml							
O-8118	Hurdal	nb-niutlm	2	28.03.2005	01.04.2005		ng/ml							
O-8118	Hurdal	nb-niutlm	2	01.04.2005	04.04.2005		ng/ml							
O-8118	Hurdal	nb-niutlm	2	04.04.2005	11.04.2005	11509a[15]	ng/ml	14.61	14.61					
O-8118	Hurdal	nb-niutlm	2	11.04.2005	18.04.2005	11509a[16]	ng/ml	37.96	37.96					
O-8118	Hurdal	nb-niutlm	2	18.04.2005	25.04.2005	11509a[17]	ng/ml	10.73	10.73					
O-8118	Hurdal	nb-niutlm	2	25.04.2005	02.05.2005	o1201a[26]	ng/ml	0.068	0.068					
O-8118	Hurdal	nb-niutlm	2	02.05.2005	09.05.2005	o1201a[27]	ng/ml	0.133	0.133					
O-8118	Hurdal	nb-niutlm	2	09.05.2005	16.05.2005	11509a[19]	ng/ml	32.42	32.42					
O-8118	Hurdal	nb-niutlm	2	16.05.2005	23.05.2005	11509a[20]	ng/ml	15.92	15.92					
O-8118	Hurdal	nb-niutlm	2	23.05.2005	30.05.2005	12209a[7]	ng/ml	6.302	6.302					
O-8118	Hurdal	nb-niutlm	2	30.05.2005	01.06.2005		ng/ml	5.883	5.883					

PROVETY MÁLEPER	stasnr	PROVETY MÁLEPER	FRADATO	hILDATO	aprocinv	UT_ENHE DIL_FKT	Pb	Cd	Cu	Zn	Cr	Ni	Co	V	As
O-8118	Karasjok	nb-niutlm	2	21.02.2005	28.02.2005	11909la[9]	1	1.468	*0.037	12.42					
O-8118	Karasjok	nb-niutlm	2	28.02.2005	01.03.2005	ng/ml				6.756					
O-8118	Karasjok	nb-niutlm	2	01.03.2005	07.03.2005	11909la[10]	1	0.653	*0.028						
O-8118	Karasjok	nb-niutlm	2	07.03.2005	14.03.2005	ng/ml				8.68					
O-8118	Karasjok	nb-niutlm	2	14.03.2005	21.03.2005	11909la[11]	1	2.876	*0.085	3.201					
O-8118	Karasjok	nb-niutlm	2	21.03.2005	28.03.2005	11909la[12]	1	0.293	*0.009	15.32					
O-8118	Karasjok	nb-niutlm	2	28.03.2005	01.04.2005	11909la[13]	1	2.16	*0.04	5.739					
O-8118	Karasjok	nb-niutlm	2	01.04.2005	04.04.2005	11909la[14]	1	0.547	*0.017	4.398					
O-8118	Karasjok	nb-niutlm	2	04.04.2005	11.04.2005	11909la[15]	1	0.777	*0.01	2.831					
O-8118	Karasjok	nb-niutlm	2	11.04.2005	18.04.2005	11909la[16]	1	0.588	*0.025	1.593					
O-8118	Karasjok	nb-niutlm	2	18.04.2005	25.04.2005	11909la[17]	1	0.712	*0.005	8.89					
O-8118	Karasjok	nb-niutlm	2	25.04.2005	01.05.2005	o1201a[31]	1	3.396	*0.099	5.897					
O-8118	Karasjok	nb-niutlm	2	02.05.2005	09.05.2005	11909la[19]	1	1.17	*0.067	4.914					
O-8118	Karasjok	nb-niutlm	2	09.05.2005	16.05.2005	11909la[20]	1	0.371	*0.012	3.921					
O-8118	Karasjok	nb-niutlm	2	16.05.2005	23.05.2005	12109la[24]	1	0.745	*0.005	1.942					
O-8118	Karasjok	nb-niutlm	2	23.05.2005	30.05.2005	p2202a[4]	1	0.218	*0.005	5.502					
O-8118	Karasjok	nb-niutlm	2	30.05.2005	01.06.2006	ng/ml				2.486					
O-8118	Karasjok	nb-niutlm	2	01.06.2005	06.06.2005	12109la[23]	1	0.291	*0.005	4.109					
O-8118	Karasjok	nb-niutlm	2	06.06.2005	13.06.2005	12109la[17]	1	0.101	*0.005	8.958					
O-8118	Karasjok	nb-niutlm	2	13.06.2005	20.06.2005	12109la[18]	1	0.664	*0.013	5.986					
O-8118	Karasjok	nb-niutlm	2	20.06.2005	27.06.2005	12109la[19]	1	0.773	*0.032						
O-8118	Karasjok	nb-niutlm	2	27.06.2005	01.07.2005	12109la[20]	1	0.172	*0.005						
O-8118	Karasjok	nb-niutlm	2	01.07.2005	04.07.2005	ng/ml				8.331					
O-8118	Karasjok	nb-niutlm	2	04.07.2005	11.07.2005	12109la[21]	1	0.318	*0.009	5.867					
O-8118	Karasjok	nb-niutlm	2	11.07.2005	18.07.2005	12109la[22]	1	0.216	*0.005	2.289					
O-8118	Karasjok	nb-niutlm	2	18.07.2005	25.07.2005	11909la[21]	1	0.325	*0.018	1.748					
O-8118	Karasjok	nb-niutlm	2	25.07.2005	01.08.2005	11909la[22]	1	*0.098	*0.009	1.417					
O-8118	Karasjok	nb-niutlm	2	01.08.2005	08.08.2005	11909la[23]	1	0.186	*0.005	2.794					
O-8118	Karasjok	nb-niutlm	2	08.08.2005	15.08.2005	11909la[24]	1	0.836	*0.057	4.136					
O-8118	Karasjok	nb-niutlm	2	15.08.2005	22.08.2005	11909la[25]	1	0.434	*0.005	1.909					
O-8118	Karasjok	nb-niutlm	2	22.08.2005	29.08.2005	o1201a[4]	1	0.486	*0.024	2.857					
O-8118	Karasjok	nb-niutlm	2	29.08.2005	01.09.2005	p0702a[16]	1	0.172	*0.006	1.012					
O-8118	Karasjok	nb-niutlm	2	01.09.2005	05.09.2005	o1402a[6]	1	0.17	*0.021	1.993					
O-8118	Karasjok	nb-niutlm	2	05.09.2005	12.09.2005	o1201a[6]	1	0.15	*0.011	*0.471					
O-8118	Karasjok	nb-niutlm	2	12.09.2005	19.09.2005	o1201a[7]	1	0.11	*0.006	4.457					
O-8118	Karasjok	nb-niutlm	2	19.09.2005	26.09.2005	o1201a[8]	1	0.463	*0.019	7.776					
O-8118	Karasjok	nb-niutlm	2	26.09.2005	01.10.2005	o1201a[9]	1	1.164	*0.075	33.03					
O-8118	Karasjok	nb-niutlm	2	01.10.2005	03.10.2005	o1201a[10]	1	14.68	0.229	33.45					
O-8118	Karasjok	nb-niutlm	2	03.10.2005	10.10.2005	o1201a[11]	1	2.133	*0.077	7.853					
O-8118	Karasjok	nb-niutlm	2	10.10.2005	17.10.2005	o1201a[12]	1	0.959	*0.084	5.563					
O-8118	Karasjok	nb-niutlm	2	17.10.2005	24.10.2005	o1201a[13]	1	0.246	*0.014	2.65					
O-8118	Karasjok	nb-niutlm	2	24.10.2005	31.10.2005	o1201a[14]	1	0.639	*0.011						
O-8118	Karasjok	nb-niutlm	2	31.10.2005	01.11.2005	ng/ml				8.819					
O-8118	Karasjok	nb-niutlm	2	01.11.2005	07.11.2005	o1201a[15]	1	0.993	*0.056	7.833					
O-8118	Karasjok	nb-niutlm	2	07.11.2005	14.11.2005	o1201a[16]	1	0.22	*0.014						

PRO_NR	stasnr	PROVETY MÁLEPER FRADATO	tILDATO	aprocavn	UT_ENHE	DIL_FKT	Pb	Cd	Cu	Zn	Cr	Ni	Co	V	As
O-8118	Karasjok	nb-niuttm	2	14.11.2005	21.11.2005	o1201a[17]	ng/ml	1	0.325	*-0.005	2.415				
O-8118	Karasjok	nb-niuttm	2	21.11.2005	28.11.2005	o1201a[18]	ng/ml	1	0.189	*0.016	4.621				
O-8118	Karasjok	nb-niuttm	2	28.11.2005	01.12.2005	o0702a[29]	ng/ml	1	0.178	*0.009	0.79				
O-8118	Karasjok	nb-niuttm	2	01.12.2005	05.12.2005		ng/ml								
O-8118	Karasjok	nb-niuttm	2	05.12.2005	12.12.2005	o0702a[30]	ng/ml	1	0.807	*0.021	4.061				
O-8118	Karasjok	nb-niuttm	2	12.12.2005	19.12.2005	o0702a[31]	ng/ml	1	0.348	*-0.005	4.982				
O-8118	Karasjok	nb-niuttm	2	19.12.2005	26.12.2005	o0702a[32]	ng/ml	1	0.338	*0.009	3.896				
O-8118	Kárvatin	nb-niuttm	2	01.01.2005	03.01.2005	i2109a[3]	ng/ml	1	*0.097	*-0.005	0.676				
O-8118	Kárvatin	nb-niuttm	2	03.01.2005	10.01.2005	i2109a[4]	ng/ml	1	*0.084	*-0.005	1.195				
O-8118	Kárvatin	nb-niuttm	2	10.01.2005	17.01.2005	i2109a[5]	ng/ml	1	0.153	*-0.005	*0.473				
O-8118	Kárvatin	nb-niuttm	2	17.01.2005	24.01.2005	i2109a[6]	ng/ml	1	*0.081	*-0.005	*0.314				
O-8118	Kárvatin	nb-niuttm	2	24.01.2005	31.01.2005	i2109a[7]	ng/ml	1	*0.083	*-0.005	0.559				
O-8118	Kárvatin	nb-niuttm	2	31.01.2005	01.02.2005	i2109a[8]	ng/ml	1	*0.109	*-0.005	0.602				
O-8118	Kárvatin	nb-niuttm	2	01.02.2005	07.02.2005	i2109a[9]	ng/ml	1	*0.038	*-0.005	*0.275				
O-8118	Kárvatin	nb-niuttm	2	07.02.2005	14.02.2005	i2109a[10]	ng/ml	1	0.101	*-0.005	0.726				
O-8118	Kárvatin	nb-niuttm	2	14.02.2005	21.02.2005	i2109a[11]	ng/ml	1	*0.082	*-0.005	*0.277				
O-8118	Kárvatin	nb-niuttm	2	21.02.2005	28.02.2005	i2109a[12]	ng/ml	1	0.182	*-0.005	0.643				
O-8118	Kárvatin	nb-niuttm	2	28.02.2005	01.03.2005	i2109a[13]	ng/ml	1	0.346	*-0.005	1.255				
O-8118	Kárvatin	nb-niuttm	2	01.03.2005	07.03.2005	i2109a[14]	ng/ml	1	0.224	*-0.005	12.49				
O-8118	Kárvatin	nb-niuttm	2	07.03.2005	14.03.2005	i2109a[15]	ng/ml	1	*0.067	*0.007	6.02				
O-8118	Kárvatin	nb-niuttm	2	14.03.2005	21.03.2005	i2109a[16]	ng/ml	1	0.314	*0.009	1.651				
O-8118	Kárvatin	nb-niuttm	2	21.03.2005	28.03.2005		ng/ml								
O-8118	Kárvatin	nb-niuttm	2	28.03.2005	01.04.2005		ng/ml								
O-8118	Kárvatin	nb-niuttm	2	01.04.2005	03.04.2005		ng/ml								
O-8118	Kárvatin	nb-niuttm	2	03.04.2005	11.04.2005	i2209a[13]	ng/ml	1	0.141	*-0.005	0.988				
O-8118	Kárvatin	nb-niuttm	2	11.04.2005	18.11.2005	i2209a[14]	ng/ml	1	0.302	*-0.005	0.565				
O-8118	Kárvatin	nb-niuttm	2	18.04.2005	25.04.2005	i2209a[29]	ng/ml	1	0.394	*-0.005	3.767				
O-8118	Kárvatin	nb-niuttm	2	25.04.2005	01.05.2005		ng/ml								
O-8118	Kárvatin	nb-niuttm	2	01.05.2005	02.05.2005	i2209a[15]	ng/ml	1	1.159	*0.017	7.942				
O-8118	Kárvatin	nb-niuttm	2	02.05.2005	09.05.2005	i2209a[16]	ng/ml	1	0.117	*-0.005	0.521				
O-8118	Kárvatin	nb-niuttm	2	09.05.2005	16.05.2005	i2209a[17]	ng/ml	1	0.187	*-0.005	0.608				
O-8118	Kárvatin	nb-niuttm	2	16.05.2005	23.05.2005	i2209a[18]	ng/ml	1	*0.061	*-0.005	1.712				
O-8118	Kárvatin	nb-niuttm	2	23.05.2005	30.05.2005	i2209a[19]	ng/ml	1	0.165	*-0.005	1.907				
O-8118	Kárvatin	nb-niuttm	2	30.05.2005	01.06.2005	i2209a[20]	ng/ml	1	0.403	*0.027	6.068				
O-8118	Kárvatin	nb-niuttm	2	01.06.2005	06.06.2005	i2209a[21]	ng/ml	1	0.184	*-0.005	2.253				
O-8118	Kárvatin	nb-niuttm	2	06.06.2005	13.06.2005	i2209a[22]	ng/ml	1	0.101	*-0.005	0.624				
O-8118	Kárvatin	nb-niuttm	2	13.06.2005	20.06.2005	i2209a[23]	ng/ml	1	0.302	*-0.005	2.163				
O-8118	Kárvatin	nb-niuttm	2	20.06.2005	27.06.2005	i2209a[24]	ng/ml	1	0.268	*-0.005	1.729				
O-8118	Kárvatin	nb-niuttm	2	27.06.2005	01.07.2005	i2209a[25]	ng/ml	1	0.137	0.107	5.188				
O-8118	Kárvatin	nb-niuttm	2	01.07.2005	04.07.2005		ng/ml								
O-8118	Kárvatin	nb-niuttm	2	04.07.2005	11.07.2005		ng/ml								
O-8118	Kárvatin	nb-niuttm	2	11.07.2005	18.07.2005	i2209a[26]	ng/ml	1	*0.094	*0.017	2.428				
O-8118	Kárvatin	nb-niuttm	2	18.07.2005	25.07.2005	i2209a[27]	ng/ml	1	0.226	*0.011	1.781				
O-8118	Kárvatin	nb-niuttm	2	25.07.2005	01.08.2005	i2209a[28]	ng/ml	1	0.198	*-0.005	1.212				
O-8118	Kárvatin	nb-niuttm	2	01.08.2005	08.08.2005	i2311a[5]	ng/ml	1	*0.077	*-0.005	*0.38				

PRO_NR	stasnr	PROVETY	MÅLEPER	FRADATO	ILLDATO	aprocavn	UT_ENHE	DIL_FKT	Pb	Cd	Cu	Zn	Cr	Ni	Co	V	As
O-8118	Kårvatn	nb-niuttm	2	08.08.2005	15.08.2005	l1410la[4]	ng/ml	1	0.419	*-0.005		0.954					
O-8118	Kårvatn	nb-niuttm	2	15.08.2005	22.08.2005	l2311la[7]	ng/ml	1	0.275	*-0.005		0.663					
O-8118	Kårvatn	nb-niuttm	2	22.08.2005	29.08.2005	l2311la[8]	ng/ml	1	0.131	*0.007		*0.446					
O-8118	Kårvatn	nb-niuttm	2	29.08.2005	01.09.2005	l2311la[9]	ng/ml	1	*0.059	*-0.005		0.556					
O-8118	Kårvatn	nb-niuttm	2	01.09.2005	05.09.2005	l2311la[10]	ng/ml	1	0.123	*-0.005		0.638					
O-8118	Kårvatn	nb-niuttm	2	05.09.2005	12.09.2005	l2311la[11]	ng/ml	1	0.144	*-0.005		0.794					
O-8118	Kårvatn	nb-niuttm	2	12.09.2005	19.09.2005	l2311la[12]	ng/ml	1	*0.049	*-0.005		58.13					
O-8118	Kårvatn	nb-niuttm	2	19.09.2005	26.09.2005	l2311la[13]	ng/ml	1	*0.099	*-0.005		*0.312					
O-8118	Kårvatn	nb-niuttm	2	26.09.2005	01.10.2005	l2311la[14]	ng/ml	1	0.152	*-0.005		1.056					
O-8118	Kårvatn	nb-niuttm	2	01.10.2005	03.10.2005	l2311la[15]	ng/ml	1	0.209	*0.014		6.567					
O-8118	Kårvatn	nb-niuttm	2	03.10.2005	10.10.2005	l2811la[3]	ng/ml	1	0.488	*0.02		2.016					
O-8118	Kårvatn	nb-niuttm	2	10.10.2005	17.10.2005	l2811la[4]	ng/ml	1	0.368	*0.009		0.81					
O-8118	Kårvatn	nb-niuttm	2	17.10.2005	24.10.2005		ng/ml	1									
O-8118	Kårvatn	nb-niuttm	2	24.10.2005	31.10.2005	l2811la[5]	ng/ml	1	0.314	*-0.005		6.08					
O-8118	Kårvatn	nb-niuttm	2	31.10.2005	01.11.2005		ng/ml	1									
O-8118	Kårvatn	nb-niuttm	2	01.11.2005	07.11.2005	l2811la[6]	ng/ml	1	0.435	*-0.005		4.193					
O-8118	Kårvatn	nb-niuttm	2	07.11.2005	14.11.2005	l2811la[8]	ng/ml	1	*0.071	*-0.005		*0.367					
O-8118	Kårvatn	nb-niuttm	2	14.11.2005	21.11.2005	o0702a[3]	ng/ml	1	*0.023	*-0.005		*-0.1					
O-8118	Kårvatn	nb-niuttm	2	21.11.2005	28.11.2005	o0702a[4]	ng/ml	1	0.103	*0.022		4.099					
O-8118	Kårvatn	nb-niuttm	2	28.11.2005	01.12.2005	o0702a[5]	ng/ml	1	*0.026	*-0.005		*-0.1					
O-8118	Kårvatn	nb-niuttm	2	01.12.2005	05.12.2005	o0702a[6]	ng/ml	1	0.15	*0.007		2.112					
O-8118	Kårvatn	nb-niuttm	2	05.12.2005	12.12.2005	o0702a[7]	ng/ml	1	*0.037	*-0.005		*-0.1					
O-8118	Kårvatn	nb-niuttm	2	12.12.2005	19.12.2005	o0702a[8]	ng/ml	1	*0.065	*0.007		0.781					
O-8118	Kårvatn	nb-niuttm	2	19.12.2005	26.12.2005	o0702a[9]	ng/ml	1	*0.048	*0.008		0.544					
O-8118	Kårvatn	nb-niuttm	2	26.12.2005	01.01.2006		ng/ml	1									

* Målingen er utenfor akkreditert område.

Vedlegg 7

Tungmetaller i luft i Ny-Ålesund (U-1274-06)

Målerapport nr. U-1274-06


Oppdragsgiver:	NILU v/Stein Manø Her
Prosjekt nr.:	O-93062
Prøvetaking:	
Sted:	Zeppelinfjellet, Ny-Ålesund
Ansvar:	NILU
Kommentar:	
Prøveinformasjon:	
Prøvetype:	Luftprøver, fp-hivol
Prøven mottatt:	
Kommentar:	Tungmetaller i perioden 05.01.-30.12..2005
Analyser:	
Utført av	Norsk institutt for luftforskning Postboks 100 N-2027 KJELLER
Målemetode:	NILU-U-49: Forskrift for måling av svevestøv, hovedkomponenter og tungmetaller i svevestøv med Anderson Highvolum prøvetaker. NILU-U-116: Forskrift for bruk av mikrobølgeovn. NILU-U-100: Forskrift for bruk av Induktivt Koplet Plasma Masse Spektrometer (ICP-MS). Analysemetoden NILU-U-49 er akkreditert av Norsk Akkreditering i henhold til ISO/IEC-17025.
Kommentar:	For luftprøver beregnes måleresultatet i rapporten på basis av luftvolum. I slike tilfeller vil deteksjongrensen som rapporteres kunne variere fra prøve til prøve dersom luftvolumet varierer. I de tilfellene der NILU ikke har hatt ansvar for prøvetakingen, kan vi ikke tallfeste dette bidraget til usikkerheten.

Deteksjonsgrensen er basert på tre standardavvik for 8 blankfilter, Kvalitet: Whatman 41, med unntak for krom (Cr) og kobber (Cu), der deteksjonsgrensen er basert på ett standardavvik.

Filter merket Zeppelin 19-21.01.05, Snø på filteret.
 Filter merket Zeppelin 09-11.02.05, deksel over spaltefilter var montert feil vei. Dreid 180 grader..
 Filter merket Zeppelin 01.-03.06.05, ueksponert prøve.
 Filter merket Zeppelin 02-04.11.05, snø på filter.
 Filter merket Zeppelin 07.-09.12.05, snø på filter

Kontaktperson: Marit Vadset

Godkjenning: Kjeller, 30. mars 2006



Marit Vadset
 Ingeniør, Miljøkjemi

Vedlegg: Analyseresultater for 50 prøver: 1 side
 Målerapporten og vedleggene omfatter totalt 3 sider

Måleresultatene gjelder bare de prøvene som er analysert. Denne rapporten skal ikke gjengis i utdrag, uten skriftlig godkjenning fra laboratoriet.

Analyseresultatene for ICPMS følger som et eget vedlegg med overskrift "NILU ICPMS RAPPORT".

Oppdragsgivers prøveidentifikasjon er angitt i målerapporten for hver enkelt prøve. Analyseresultatene i rapportvedlegget er gitt med varierende antall gjeldende siffer. Med metodens beregnede usikkerhet som grunnlag, anbefales det å ikke benytte mer enn 3 gjeldende siffer ved vurdering eller i presentasjon av resultatene.

Usikkerheten i resultatene kan fås ved henvendelse til NILUs laboratorium.

Et minus "-" foran måleresultatet, betyr at det er mindre enn deteksjonsgrensen for analysemetoden. Er måleresultatet oppgitt som f.eks. "-0.01", betyr det at deteksjonsgrensen for metoden er 0.01.

Vedlegg 8

Kvikksølv i luft i Ny-Ålesund (U-1296-06)

Målerapport nr. U-1296-06

Oppdragsgiver: NILU v/Torunn Berg
Her

Prosjekt nr: O-99137/O-100103

Prøvetaking:
Sted: Zeppelin
Ansvar: NILU
Kommentar:

Prøveinformasjon:
Prøve type: Elementært kvikksølv i gassfase (GEM)

Prøver mottatt:
Antall prøver:
Kommentar:

Analyser:
Utført av: Norsk institutt for luftforskning
Postboks 100
N-2007 KJELLER

Målemetode: Analysene er utført ved NILUs avdeling for Miljøkjemi.
Følgende metoder er brukt:

GEM: Tekran Hg-monitor

Måleusikkerhet:

Kontakt person: Torunn Berg



Godkjenning: Kjeller, 3. mai 2003

A handwritten signature in black ink that reads 'Torunn Berg'.

Torunn Berg
Seniorforsker

Vedlegg: 8 sider
Målerapporten og vedleggene omfatter i alt 10 sider

Måleresultatene gjelder bare de prøvene som er analysert. Denne rapporten skal ikke gjengis i utdrag, uten skriftlig godkjenning fra laboratoriet.

Elementært kvikksølv i gassfase (GEM) (ng/m³), Ny-Ålesund, 2005

Dato	Hg (ng/m³)
01.01.2005	1,54
02.01.2005	1,56
03.01.2005	1,45
04.01.2005	1,33
05.01.2005	1,25
06.01.2005	1,49
07.01.2005	
08.01.2005	
09.01.2005	
10.01.2005	
11.01.2005	
12.01.2005	
13.01.2005	1,68
14.01.2005	1,66
15.01.2005	1,62
16.01.2005	1,61
17.01.2005	1,61
18.01.2005	1,61
19.01.2005	1,57
20.01.2005	1,62
21.01.2005	1,54
22.01.2005	1,52
23.01.2005	1,55
24.01.2005	1,56
25.01.2005	1,57
26.01.2005	1,54
27.01.2005	1,55
28.01.2005	1,56
29.01.2005	1,54
30.01.2005	1,62
31.01.2005	1,60
01.02.2005	1,64
02.02.2005	1,62
03.02.2005	1,58
04.02.2005	1,44
05.02.2005	1,36
06.02.2005	1,45
07.02.2005	1,47
08.02.2005	1,75
09.02.2005	1,65
10.02.2005	1,58
11.02.2005	1,64
12.02.2005	1,54
13.02.2005	1,40
14.02.2005	1,38
15.02.2005	1,60
16.02.2005	1,68
17.02.2005	1,50
18.02.2005	1,52
19.02.2005	1,50
20.02.2005	1,47
21.02.2005	1,51

Elementært kvikksølv i gassfase (GEM) (ng/m³), Ny-Ålesund, 2005

Dato	Hg (ng/m ³)
22.02.2005	1,54
23.02.2005	
24.02.2005	
25.02.2005	
26.02.2005	
27.02.2005	
28.02.2005	
01.03.2005	
02.03.2005	1,66
03.03.2005	1,65
04.03.2005	1,64
05.03.2005	1,56
06.03.2005	1,55
07.03.2005	1,56
08.03.2005	1,48
09.03.2005	1,73
10.03.2005	1,70
11.03.2005	1,53
12.03.2005	1,61
13.03.2005	1,56
14.03.2005	1,68
15.03.2005	1,77
16.03.2005	1,70
17.03.2005	1,69
18.03.2005	1,72
19.03.2005	1,73
20.03.2005	1,52
21.03.2005	1,64
22.03.2005	1,72
23.03.2005	1,65
24.03.2005	1,64
25.03.2005	1,55
26.03.2005	1,67
27.03.2005	1,52
28.03.2005	1,59
29.03.2005	1,75
30.03.2005	1,72
31.03.2005	1,45
01.04.2005	1,58
02.04.2005	1,19
03.04.2005	1,47
04.04.2005	1,60
05.04.2005	1,46
06.04.2005	1,78
07.04.2005	1,75
08.04.2005	1,82
09.04.2005	1,71
10.04.2005	1,78
11.04.2005	1,78
12.04.2005	1,72
13.04.2005	1,66
14.04.2005	1,73

Elementært kvikksølv i gassfase (GEM) (ng/m³), Ny-Ålesund, 2005

Dato	Hg (ng/m³)
15.04.2005	1,77
16.04.2005	1,77
17.04.2005	1,80
18.04.2005	1,79
19.04.2005	1,78
20.04.2005	1,65
21.04.2005	1,73
22.04.2005	1,65
23.04.2005	1,63
24.04.2005	1,17
25.04.2005	0,10
26.04.2005	0,13
27.04.2005	0,95
28.04.2005	1,15
29.04.2005	1,09
30.04.2005	1,34
01.05.2005	1,65
02.05.2005	1,67
03.05.2005	1,60
04.05.2005	1,48
05.05.2005	1,51
06.05.2005	1,59
07.05.2005	
08.05.2005	1,57
09.05.2005	1,60
10.05.2005	1,61
11.05.2005	1,57
12.05.2005	1,50
13.05.2005	1,69
14.05.2005	1,66
15.05.2005	1,57
16.05.2005	1,10
17.05.2005	1,29
18.05.2005	0,62
19.05.2005	0,67
20.05.2005	0,58
21.05.2005	
22.05.2005	
23.05.2005	1,17
24.05.2005	1,24
25.05.2005	1,44
26.05.2005	1,29
27.05.2005	1,58
28.05.2005	2,19
29.05.2005	2,05
30.05.2005	1,40
31.05.2005	1,89
01.06.2005	1,68
02.06.2005	1,67
03.06.2005	1,69
04.06.2005	1,61
05.06.2005	1,67

Elementært kvikksølv i gassfase (GEM) (ng/m³), Ny-Ålesund, 2005

Dato	Hg (ng/m³)
06.06.2005	1,65
07.06.2005	1,66
08.06.2005	1,68
09.06.2005	1,77
10.06.2005	1,83
11.06.2005	1,81
12.06.2005	1,82
13.06.2005	1,79
14.06.2005	1,78
15.06.2005	1,78
16.06.2005	1,79
17.06.2005	1,77
18.06.2005	1,77
19.06.2005	1,77
20.06.2005	1,78
21.06.2005	1,74
22.06.2005	1,74
23.06.2005	1,67
24.06.2005	1,65
25.06.2005	1,72
26.06.2005	1,70
27.06.2005	1,58
28.06.2005	1,65
29.06.2005	1,74
30.06.2005	1,73
01.07.2005	1,94
02.07.2005	1,96
03.07.2005	1,86
04.07.2005	1,85
05.07.2005	1,81
06.07.2005	1,74
07.07.2005	1,43
08.07.2005	1,85
09.07.2005	1,72
10.07.2005	1,85
11.07.2005	1,85
12.07.2005	1,95
13.07.2005	2,12
14.07.2005	1,99
15.07.2005	2,25
16.07.2005	2,20
17.07.2005	2,02
18.07.2005	1,92
19.07.2005	2,06
20.07.2005	2,00
21.07.2005	1,87
22.07.2005	1,88
23.07.2005	1,85
24.07.2005	1,86
25.07.2005	1,93
26.07.2005	1,97
27.07.2005	1,98

Elementært kvikksølv i gassfase (GEM) (ng/m³), Ny-Ålesund, 2005

Dato	Hg (ng/m ³)
28.07.2005	1,87
29.07.2005	1,83
30.07.2005	1,81
31.07.2005	1,69
01.08.2005	1,77
02.08.2005	1,83
03.08.2005	1,88
04.08.2005	1,75
05.08.2005	
06.08.2005	
07.08.2005	
08.08.2005	
09.08.2005	1,69
10.08.2005	1,66
11.08.2005	1,62
12.08.2005	1,64
13.08.2005	1,65
14.08.2005	1,63
15.08.2005	1,63
16.08.2005	1,64
17.08.2005	1,61
18.08.2005	1,62
19.08.2005	1,62
20.08.2005	1,59
21.08.2005	1,61
22.08.2005	1,65
23.08.2005	1,61
24.08.2005	1,61
25.08.2005	1,56
26.08.2005	1,53
27.08.2005	1,53
28.08.2005	1,61
29.08.2005	1,57
30.08.2005	1,54
31.08.2005	1,60
01.09.2005	1,56
02.09.2005	1,56
03.09.2005	1,57
04.09.2005	1,60
05.09.2005	1,59
06.09.2005	1,62
07.09.2005	1,63
08.09.2005	1,62
09.09.2005	1,58
10.09.2005	1,60
11.09.2005	1,61
12.09.2005	1,62
13.09.2005	1,61
14.09.2005	1,59
15.09.2005	1,55
16.09.2005	1,53
17.09.2005	1,52

Elementært kvikksølv i gassfase (GEM) (ng/m³), Ny-Ålesund, 2005

Dato	Hg (ng/m³)
18.09.2005	1,58
19.09.2005	1,56
20.09.2005	1,51
21.09.2005	1,49
22.09.2005	1,49
23.09.2005	1,46
24.09.2005	1,47
25.09.2005	1,47
26.09.2005	1,47
27.09.2005	1,47
28.09.2005	1,45
29.09.2005	1,42
30.09.2005	1,47
01.10.2005	1,50
02.10.2005	1,51
03.10.2005	1,55
04.10.2005	1,47
05.10.2005	1,44
06.10.2005	1,44
07.10.2005	1,46
08.10.2005	1,48
09.10.2005	1,46
10.10.2005	1,40
11.10.2005	1,41
12.10.2005	1,41
13.10.2005	1,48
14.10.2005	1,52
15.10.2005	1,55
16.10.2005	1,52
17.10.2005	1,53
18.10.2005	1,51
19.10.2005	1,47
20.10.2005	1,46
21.10.2005	1,39
22.10.2005	1,40
23.10.2005	1,42
24.10.2005	1,43
25.10.2005	1,46
26.10.2005	1,45
27.10.2005	1,39
28.10.2005	1,43
29.10.2005	1,40
30.10.2005	
31.10.2005	
01.11.2005	
02.11.2005	
03.11.2005	
04.11.2005	
05.11.2005	
06.11.2005	
07.11.2005	1,45
08.11.2005	1,44

Elementært kvikksølv i gassfase (GEM) (ng/m³), Ny-Ålesund, 2005

Dato	Hg (ng/m³)
09.11.2005	1,48
10.11.2005	1,47
11.11.2005	1,47
12.11.2005	1,40
13.11.2005	1,41
14.11.2005	1,44
15.11.2005	1,42
16.11.2005	1,45
17.11.2005	1,44
18.11.2005	1,43
19.11.2005	1,49
20.11.2005	1,57
21.11.2005	1,54
22.11.2005	1,54
23.11.2005	1,53
24.11.2005	1,47
25.11.2005	1,47
26.11.2005	1,47
27.11.2005	1,41
28.11.2005	1,47
29.11.2005	1,45
30.11.2005	1,53
01.12.2005	1,59
02.12.2005	
03.12.2005	
04.12.2005	
05.12.2005	
06.12.2005	
07.12.2005	
08.12.2005	
09.12.2005	1,31
10.12.2005	1,32
11.12.2005	1,43
12.12.2005	1,48
13.12.2005	1,41
14.12.2005	1,45
15.12.2005	1,51
16.12.2005	1,52
17.12.2005	1,42
18.12.2005	1,46
19.12.2005	1,45
20.12.2005	1,49
21.12.2005	1,51
22.12.2005	1,50
23.12.2005	1,52
24.12.2005	1,52
25.12.2005	1,51
26.12.2005	1,52
27.12.2005	1,50
28.12.2005	1,51
29.12.2005	1,51
30.12.2005	1,52

Elementært kvikksølv i gassfase (GEM) (ng/m³), Ny-Ålesund, 2005

Dato	Hg (ng/m³)
31.12.2005	1,47

Vedlegg 9

Kvikksølv i nedbør på Birkenes (U-1297-06)

Målerapport nr. U-1297-06

Oppdragsgiver: NILU v/Torunn Berg
Her

Prosjekt nr: O-90006

Prøvetaking:
Sted: Birkenes, Nedbør
Ansvar: NILU
Kommentar:

Prøveinformasjon:
Prøve type: Kvikksølv

Prøver mottatt: Månedlig
Antall prøver: 15
Kommentar:

Analyser:
Utført av: Norsk institutt for luftforskning
Postboks 100
N-2007 KJELLER

Målemetode: Analysene er utført ved NILUs avdeling for Miljøkjemi.
Følgende metoder er brukt:

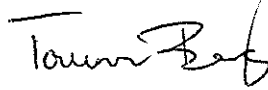
NILU-U-60: Forskrift for prøvetaking av Hg i vann.

Måleusikkerhet: Analyseusikkerheten ligger innenfor 20% ved det målte nivå.

Kontakt person: Torunn Berg

Godkjenning:

Kjeller, 3. mai 2006

Torunn Berg
Seniorforsker**Vedlegg:**

Analyseresultater : 1 side

Målerapporten og vedleggene omfatter i alt 3 sider

Måleresultatene gjelder bare de prøvene som er analysert. Denne rapporten skal ikke gjengis i utdrag, uten skriftlig godkjenning fra laboratoriet.

Totalt kvikksølv i nedbør, Birkenes, 2005

Fradato	Tildato	Hg (ng/l)
01.01.2005	13.01.2005	3,7
13.01.2005	01.02.2005	9,1
01.02.2005	01.03.2005	13,5
01.03.2005	01.04.2005	11,1
01.04.2005	01.05.2005	12,6
01.05.2005	20.05.2005	12,0
20.05.2005	01.06.2005	11,4
01.06.2005	01.07.2005	9,9
01.07.2005	01.08.2005	3,5
01.08.2005	01.09.2005	7,2
01.09.2005	01.10.2005	16,9
01.10.2005	01.11.2005	10,8
01.11.2005	06.11.2005	3,0
06.11.2005	01.12.2005	5,6
01.12.2005	01.01.2006	6,5

Vedlegg 10

Kvikksølv i luft på Birkenes (U-1310-06)



Målerapport nr. U-1310-06

Oppdragsgiver: NILU v/Torunn Berg
Her

Prosjekt nr: O-90006

Prøvetaking:
Sted: Birkenes
Ansvar: NILU
Kommentar:

Prøveinformasjon:
Prøve type: Kvikksølv i gassfase

Prøver mottatt: Fortløpende
Antall prøver: 24
Kommentar:

Analyser:
Utført av: Norsk institutt for luftforskning
Postboks 100
N-2007 KJELLER

Målemetode: Analysene er utført ved NILUs avdeling for Miljøkjemi.
Følgende metoder er brukt:

Gullfeller (NILU-U-53)

Måleusikkerhet:

Kontakt person: Torunn Berg

**Godkjenning:**

Kjeller, 12. mai 2006

A handwritten signature in black ink, appearing to read 'Torunn Berg', with a long, sweeping flourish extending upwards and to the right.

Torunn Berg
Seniorforsker**Vedlegg:**

Analyseresultater : 1 side

Målerapporten og vedleggene omfatter i alt 3 sider

Måleresultatene gjelder bare de prøvene som er analysert. Denne rapporten skal ikke gjengis i utdrag, uten skriftlig godkjenning fra laboratoriet.

Kvikksølv i gassfase, Birkenes, 2005 (manuelle prøver)

329

Dato	Kons	Enhet
03.01.2005	2.5	ng/m ³
10.01.2005	2.4	ng/m ³
17.01.2005	1.6	ng/m ³
24.01.2005	2.4	ng/m ³
31.01.2005	1.8	ng/m ³
07.02.2005	2.2	ng/m ³
28.02.2005	2.4	ng/m ³
07.03.2005	2.0	ng/m ³
14.03.2005	1.9	ng/m ³
21.03.2005	2.4	ng/m ³
04.04.2005	2.0	ng/m ³
11.04.2005	1.9	ng/m ³
18.04.2005	2.1	ng/m ³
25.04.2005	1.9	ng/m ³
02.05.2005	1.7	ng/m ³
16.05.2005	1.2	ng/m ³
23.05.2005	1.2	ng/m ³
30.05.2005	1.2	ng/m ³
06.06.2005	1.3	ng/m ³
20.06.2005	1.2	ng/m ³
27.06.2005	1.8	ng/m ³
04.07.2005	2.1	ng/m ³
18.07.2005	2.4	ng/m ³
25.07.2005	1.6	ng/m ³

Vedlegg 11

Elementært kvikksølv i luft på Birkenes (U-1323-06)



Målerapport nr. U-1323-06

Oppdragsgiver: NILU v/Torunn Berg
Her

Prosjekt nr: O-90006

Prøvetaking:
Sted: Birkenes
Ansvar: NILU
Kommentar:

Prøveinformasjon:
Prøve type: Elementært kvikksølv i gassfase (GEM)

Prøver mottatt:
Antall prøver:
Kommentar:

Analyser:
Utført av: Norsk institutt for luftforskning
Postboks 100
N-2007 KJELLER

Målemetode: Analysene er utført ved NILUs avdeling for Miljøkjemi.
Følgende metoder er brukt:
GEM: Tekran Hg-monitor

Måleusikkerhet: Datene er justert til nivå oppnådd med annen monitor

Kontakt person: Torunn Berg



Godkjenning: Kjeller, 25. mai 2003

A handwritten signature in black ink that reads 'Torunn Berg'.

Torunn Berg
Seniorforsker

Vedlegg: 4 sider
Målerapporten og vedleggene omfatter i alt 6 sider

Måleresultatene gjelder bare de prøvene som er analysert. Denne rapporten skal ikke gjengis i utdrag, uten skriftlig godkjenning fra laboratoriet.

Kvikksølv i gassfase, Birkenes, automatiske målinger

Dato	Kons (ng/m3)
30.06.2005	1.58
01.07.2005	1.65
02.07.2005	1.56
03.07.2005	
04.07.2005	
05.07.2005	
06.07.2005	
07.07.2005	
08.07.2005	1.79
09.07.2005	1.95
10.07.2005	1.77
11.07.2005	1.80
12.07.2005	1.80
13.07.2005	1.68
14.07.2005	1.63
15.07.2005	1.71
16.07.2005	1.74
17.07.2005	1.68
18.07.2005	
19.07.2005	
20.07.2005	
21.07.2005	
22.07.2005	
23.07.2005	
24.07.2005	
25.07.2005	
26.07.2005	
27.07.2005	
28.07.2005	
29.07.2005	
30.07.2005	
31.07.2005	
01.08.2005	
02.08.2005	
03.08.2005	
04.08.2005	
05.08.2005	1.38
06.08.2005	1.78
07.08.2005	1.72
08.08.2005	1.77
09.08.2005	1.83
10.08.2005	1.61
11.08.2005	1.77
12.08.2005	
13.08.2005	
14.08.2005	1.83
15.08.2005	1.72
16.08.2005	1.95
17.08.2005	1.79
18.08.2005	1.84
19.08.2005	1.79
20.08.2005	1.66
21.08.2005	1.58

Dato	Kons (ng/m3)
22.08.2005	1.59
23.08.2005	1.66
24.08.2005	1.54
25.08.2005	1.62
26.08.2005	1.54
27.08.2005	1.48
28.08.2005	1.53
29.08.2005	1.60
30.08.2005	1.59
31.08.2005	1.41
01.09.2005	1.49
02.09.2005	1.73
03.09.2005	1.41
04.09.2005	1.31
05.09.2005	1.40
06.09.2005	1.65
07.09.2005	1.72
08.09.2005	1.47
09.09.2005	1.37
10.09.2005	2.17
11.09.2005	2.43
12.09.2005	2.25
13.09.2005	2.27
14.09.2005	2.29
15.09.2005	1.92
16.09.2005	1.81
17.09.2005	1.76
18.09.2005	1.88
19.09.2005	2.01
20.09.2005	1.90
21.09.2005	1.59
22.09.2005	1.81
23.09.2005	2.03
24.09.2005	1.64
25.09.2005	1.43
26.09.2005	1.84
27.09.2005	1.67
28.09.2005	1.47
29.09.2005	1.40
30.09.2005	1.52
01.10.2005	1.66
02.10.2005	1.41
03.10.2005	1.93
04.10.2005	1.66
05.10.2005	1.69
06.10.2005	1.63
07.10.2005	1.84
08.10.2005	2.26
09.10.2005	2.02
10.10.2005	1.77
11.10.2005	2.78
12.10.2005	2.48
13.10.2005	2.46
14.10.2005	1.49
15.10.2005	1.34

Dato	Kons (ng/m3)
16.10.2005	1.45
17.10.2005	1.46
18.10.2005	1.33
19.10.2005	1.49
20.10.2005	2.09
21.10.2005	1.90
22.10.2005	1.63
23.10.2005	1.48
24.10.2005	1.47
25.10.2005	1.78
26.10.2005	1.83
27.10.2005	1.65
28.10.2005	2.55
29.10.2005	2.25
30.10.2005	3.11
31.10.2005	2.99
01.11.2005	2.69
02.11.2005	2.04
03.11.2005	2.32
04.11.2005	1.87
05.11.2005	1.61
06.11.2005	1.89
07.11.2005	2.00
08.11.2005	2.11
09.11.2005	2.16
10.11.2005	1.63
11.11.2005	1.57
12.11.2005	1.61
13.11.2005	1.76
14.11.2005	1.92
15.11.2005	1.96
16.11.2005	1.77
17.11.2005	1.54
18.11.2005	1.57
19.11.2005	1.57
20.11.2005	1.40
21.11.2005	1.34
22.11.2005	0.95
23.11.2005	1.15
24.11.2005	1.76
25.11.2005	2.39
26.11.2005	1.94
27.11.2005	1.83
28.11.2005	1.71
29.11.2005	1.77
30.11.2005	1.86
01.12.2005	1.72
02.12.2005	2.32
03.12.2005	2.13
04.12.2005	2.22
05.12.2005	2.16
06.12.2005	2.16
07.12.2005	2.11
08.12.2005	1.97
09.12.2005	1.65

Dato	Kons (ng/m3)
10.12.2005	2.02
11.12.2005	1.80
12.12.2005	1.88
13.12.2005	1.89
14.12.2005	1.69
15.12.2005	1.16
16.12.2005	1.46
17.12.2005	1.78
18.12.2005	1.69
19.12.2005	1.64
20.12.2005	1.40
21.12.2005	1.54
22.12.2005	1.63
23.12.2005	1.46
24.12.2005	1.50
25.12.2005	1.60
26.12.2005	1.72
27.12.2005	1.76
28.12.2005	1.69
29.12.2005	1.71
30.12.2005	1.82
31.12.2005	1.87



Norsk institutt for luftforskning (NILU)

Postboks 100, N-2027 Kjeller

RAPPORTTYPE OPPDRAGSRAPPORT	RAPPORT NR. OR 35/2006	ISBN 82-425-1758-4 ISSN 0807-7207	
DATO 30.05.06	ANSV. SIGN. <i>Stein Manø</i>	ANT. SIDER 338	PRIS NOK 150,-
TITTEL Måledata fra langtransportert forurenset luft og nedbør Datarapport fra programmene CAMP '05 og AMAP '05 (sporstoffer og organiske komponenter)		PROSJEKTLEDER Stein Manø	
		NILU PROSJEKT NR. O-90006/O-93062	
FORFATTER(E) Stein Manø og Torunn Berg		TILGJENGELIGHET * A	
		OPPDRAGSGIVERS REF.	
OPPDRAGSGIVER Statens forurensningstilsyn Postboks 8100 Dep. 0032 OSLO			
STIKKORD Sporelementer	POP	Luft	
REFERAT Overvåkningsdata (POP og sporstoffer) fra prosjektene AMAP og CAMP i år 2005.			
TITLE Data from long range transported polluted air and deposition			
ABSTRACT			

* Kategorier:
A Åpen - kan bestilles fra NILU
B Begrenset distribusjon
C Kan ikke utleveres