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# Måledata fra langtransportert forurenset luft og nedbør

## Datarapport fra programmene CAMP '06 og AMAP '06 (sporstoffer og organiske komponenter)

Stein Manø og Katrine Aspmo

Vedlegg til Statlig program for  
forurensningsovervåking. Rapport 985/2007.



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## **Måledata fra langtransportert forurenset luft og nedbør Datarapport fra programmene CAMP '06 og AMAP '06 (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 2006. 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  $\alpha$ - og  $\gamma$ -heksaklorsykloheksan (HCH), heksaklorbenzen (HCB)

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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 klordan-isomerer, 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 22/2007 (Statens forurensningstilsyn: Overvåking av langtransportert forurenset luft og nedbør. Atmosfærisk tilførsel, 2006. Statlig program for forurensningsovervåking, rapport nr. 985/2007).

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## **Vedlegg 1**

# **Organiske forbindelser i luft på Birkenes (O-4218)**





## Målerapport nr. O-4218

**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
06/92	Bi 5-6.1.06 0632-0644 160-155	Luft	17.01.06	29.05.06 – 26.11.06
06/108	Bi 12-13.1.06 0635-0645 160-155	Luft	20.01.06	"
06/166	Bi 19-20.1.06 0630-0642 160-155	Luft	30.01.06	"
06/188	Bi 26-27.1.06 0632-0645 160-156	Luft	03.02.06	31.05.05- 26.11.06
06/269	Bi 2-3.2.06 0632-0635 160-155	Luft	13.02.06	"
06/270	Bi 9-10.2.06 0632-0647 160-158	Luft	14.02.06	"
06/291	Bi 16-17.2.06 0633-0642 160-153	Luft	27.02.06	"
06/324	Bi 23-24.2.06 0633-0642 160-154	Luft	07.03.06	"
06/341	Bi 2-3.3.06 0635-0647 160-155	Luft	13.03.06	06.06.06 – 26.11.06
06/344	Bi 9-10.3.06 0635-0643 160-155	Luft	20.03.06	"
06/392	Bi 17-18.3.06 0639-0642 160-152	Luft	27.03.06	"
06/455	Bi 30–31.3.06 0535-0543 160-150	Luft	12.04.06	"
06/456	23-24.3.06 0633-0642 160-154	Luft	03.04.06	"
06/496	Bi 6-7.4.06 0531-0545 160-154	Luft	18.04.06	"
06/502	Bi 13-14.4.06 0533-0610 160-153	Luft	21.04.06	14.08.06 – 26.11.06
06/567	Bi 20-21.4.06 0534-0543 160-155	Luft	03.05.06	"
06/569	Bi 27-28.4.06 0534-0547 160-154	Luft	08.05.06	16.08.06 – 21.11.06
06/575	Bi 4-5.5.06 0533-0520 160-150	Luft	15.05.06	"
06/637	Bi 11-12.5.06 0534-0544 160-155	Luft	18.05.06	"
06/670	Bi 18-19.5.06 0538-0545 160-155	Luft	01.06.06	"
06/697	Bi 25-26.5.06 0535-0545 160-158	Luft	06.06.06	21.08.06 – 21.11.06
06/716	Bi 1-2.6.06 0524-0533 160-157	Luft	09.06.06	"
06/728	Bi 8-9.6.06 0534-0537 160-156	Luft	15.06.06	21.08.06 – 21.11.06
06/763	Bi 15-16.6.06 0535-0539 160-155	Luft	22.06.06	"
06/775	Bi 22-23.6.06 0536-0533 160-158	Luft	28.06.06	28.08.06 – 21.11.06
06/853	Bi 29-30.6.06 0532-0536 160-158	Luft	07.07.06	"
06/855	Bi 6-7.7.06 0533-0533 160-152	Luft	14.07.06	"
06/911	Bi 13-14.7.06 0532-0534 160-160	Luft	31.07.06	30.08.06 – 21.11.06
06/913	Bi 20-21.7.06 0533-0533 160-155	Luft	"	"
06/931	Bi 26-27.7.06 0535-0532 160-149	Luft	07.08.06	"
06/968	Bi 10-11.8.06 0534-0535 160-157	Luft	23.08.06	"
06/1044	Bi 17-18.8.06 0534-0540 160-157	Luft	01.09.06	27.09.06 – 26.11.06
06/1046	Bi 24-25.8.06 0540-0536 160-154	Luft	"	04.10.06 – 16.02.07
06/1096	Bi 31.8-1.9.06 0532-0531 160-156	Luft	12.09.06	04.10.06 – 16.02.07
06/1132	Bi 7-8.9.06 0535-0532 160-159	Luft	18.09.06	"
06/1171	Bi 14-15.9.06 0535-0537 160-153	Luft	22.09.06	"
06/1247	21-22.9.06 0532-0532 160-158	Luft	04.10.06	10.01.07 – 02.05.07
06/1258	28-29.9.06 0535-0535 160-158	Luft	09.10.06	"
06/1274	5-6.10.06 0535-0536 160-155	Luft	16.10.06	"

06/1336	12-13.10.06	0533-0532	160-155	Luft	25.10.06	10.01.07 – 02.05.07
06/1353	19-20.10.06	0533-0529	160-153	Luft	31.10.06	"
06/1382	26-27.10.06	0533-0530	160-150	Luft	08.11.06	24.01.07 – 02.05.07
06/1425	2-3.11.06	0635-0630	160-160	Luft	14.11.06	"
06/1504	9-10.11.06	0634-0629	160-160	Luft	21.11.06	"
06/1569	16-17.11.06	0626-0633	160-153	Luft	28.11.06	"
06/1584	23-24.11.06	0633-0628	160-154	Luft	01.12.06	"
06/1675	30.11-1.12.06	0635-0626	160-155	Luft	12.12.06	29.01.07 – 02.05.07
06/1700	7-8.12.06	0634-0637	160-152	Luft	15.12.06	"
07/48	14-15.12.06	0636-0633	160-159	Luft	05.01.07	"
07/49	21-22.12.06	0631-0630	160-149	Luft	"	"
07/54	28-29.12.06	0632-0630	160-155	Luft	08.01.07	"

**Analyser:**

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: Pga av mistanke om kontaminering rapporteres følgende prøver uten akkreditering : 06/502, 06/567, 06/569, 06/575, 06/637.

Godkjenning: Kjeller, 4. mai 2007

*Ole-Anders Braathen*

Ole-Anders Braathen  
Avd.direktør, Miljøkjemi

Vedlegg: HCH/PCB analyser: 50 sider  
Målerapporten og vedleggene omfatter totalt 52 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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/92  
 Customer: CAMP 06  
 Customers sample ID: Bi 5-6.1.06 0632-0644  
 : 160-155  
 Sample type: Air  
 Sample amount: 575 m3  
 Concentration units: pg/m3  
 Data files: M\_13\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		78,4	69
$\alpha$ -HCH		9,82	54
$\gamma$ -HCH		5,13	73
2,4,4'-TriCB	28	2,24	78
2,2',5,5'-TetCB	52	1,63	88
2,2',4,5,5'-PenCB	101	1,03	88
2,3',4,4',5-PenCB	118	0,39 b	97
2,2',3,4,4',5'-HexCB	138	0,53 b	97
2,2',4,4',5,5'-HexCB	153	0,71 b	99
2,2',3,4,4',5,5'-HepCB	180	0,31 b	103
<b>Sum 7 PCB</b>		<b>6,84</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/108  
 Customer: CAMP 06  
 Customers sample ID: Bi 12-13.1.06 0635-0645  
 : 160-155  
 Sample type: Air  
 Sample amount: 575 m3  
 Concentration units: pg/m3  
 Data files: M\_13\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		54,6	58
$\alpha$ -HCH		7,35	51
$\gamma$ -HCH		4,21	65
2,4,4'-TriCB	28	1,49 b	71
2,2',5,5'-TetCB	52	1,34 b	74
2,2',4,5,5'-PenCB	101	0,72 b	77
2,3',4,4',5-PenCB	118	0,20 b	82
2,2',3,4,4',5'-HexCB	138	0,23 b	83
2,2',4,4',5,5'-HexCB	153	0,38 b	86
2,2',3,4,4',5,5'-HepCB	180	0,09 b	90
<b>Sum 7 PCB</b>		<b>4,45</b>	

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 Analysis 11



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/166  
 Customer: CAMP 06  
 Customers sample ID: BI 19-20.1.06 0630-0642  
 : 160-155  
 Sample type: Air  
 Sample amount: 575 m3  
 Concentration units: pg/m3  
 Data files: M\_13\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		73,8	62
$\alpha$ -HCH		7,51	43
$\gamma$ -HCH		3,55	62
2,4,4'-TriCB	28	2,33	69
2,2',5,5'-TetCB	52	1,66	73
2,2',4,5,5'-PenCB	101	0,91	78
2,3',4,4',5'-PenCB	118	0,31 b	87
2,2',3,4,4',5'-HexCB	138	0,33 b	86
2,2',4,4',5,5'-HexCB	153	0,51 b	87
2,2',3,4,4',5,5'-HepCB	180	0,15 b	92
<b>Sum 7 PCB</b>		<b>6,20</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/188  
 Customer: CAMP 06  
 Customers sample ID: Bi 26-27.1.06 0632-0645  
 : 160-156  
 Sample type: Air  
 Sample amount: 576 m3  
 Concentration units: pg/m3  
 Data files: M\_13\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		37,6	44
$\alpha$ -HCH		3,15	54
$\gamma$ -HCH		1,68 b	67
2,4,4'-TriCB	28	0,68 b	70
2,2',5,5'-TetCB	52	0,57 b	75
2,2',4,5,5'-PenCB	101	0,29 b	83
2,3',4,4',5'-PenCB	118	0,08 b	90
2,2',3,4,4',5'-HexCB	138	0,10 b	92
2,2',4,4',5,5'-HexCB	153	0,16 b	92
2,2',3,4,4',5,5'-HepCB	180	0,05 b	96
<b>Sum 7 PCB</b>		<b>1,93</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/269  
 Customer: CAMP 06  
 Customers sample ID: Bi 2-3.2.06 0632-0635  
 : 160-155  
 Sample type: Air  
 Sample amount: 570 m3  
 Concentration units: pg/m3  
 Data files: M\_16\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		53,7	43
$\alpha$ -HCH		4,60	49
$\gamma$ -HCH		2,69 b	60
2,4,4'-TriCB	28	0,90 b	69
2,2',5,5'-TetCB	52	0,79 b	68
2,2',4,5,5'-PenCB	101	0,42 b	82
2,3',4,4',5'-PenCB	118	0,13 b	88
2,2',3,4,4',5'-HexCB	138	0,15 b	90
2,2',4,4',5,5'-HexCB	153	0,27 b	83
2,2',3,4,4',5,5'-HepCB	180	0,07 b	89
<b>Sum 7 PCB</b>		<b>2,74</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/270  
 Customer: CAMP 06  
 Customers sample ID: Bi 9-10.2.06 0632-0647  
 : 160-158  
 Sample type: Air  
 Sample amount: 582 m3  
 Concentration units: pg/m3  
 Data files: M\_15\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		56,7	35
$\alpha$ -HCH		6,10	43
$\gamma$ -HCH		2,28 b	55
2,4,4'-TriCB	28	1,10 b	58
2,2',5,5'-TetCB	52	0,98 b	61
2,2',4,5,5'-PenCB	101	0,49 b	68
2,3',4,4',5'-PenCB	118	0,13 b	75
2,2',3,4,4',5'-HexCB	138	0,15 b	76
2,2',4,4',5,5'-HexCB	153	0,26 b	64
2,2',3,4,4',5,5'-HepCB	180	0,08 b	77
<b>Sum 7 PCB</b>		<b>3,18</b>	

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 Analysis

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Encl. to measuring report: O-4218  
 NILU-Sample number: 06/291  
 Customer: CAMP 06  
 Customers sample ID: Bi 16-17.2.06 0633-0642  
 : 160-153  
 Sample type: Air  
 Sample amount: 573 m3  
 Concentration units: pg/m3  
 Data files: M\_16\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		77,0	49
$\alpha$ -HCH		6,45	46
$\gamma$ -HCH		5,82	57
2,4,4'-TriCB	28	2,87	68
2,2',5,5'-TetCB	52	2,27	67
2,2',4,5,5'-PenCB	101	1,27	77
2,3',4,4',5-PenCB	118	0,36 b	84
2,2',3,4,4',5'-HexCB	138	0,50 b	85
2,2',4,4',5,5'-HexCB	153	0,82 b	77
2,2',3,4,4',5,5'-HepCB	180	0,30 b	86
<b>Sum 7 PCB</b>		<b>8,38</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/324  
 Customer: CAMP 06  
 Customers sample ID: Bi 23-24.2.06 0633-0642  
 : 160-154  
 Sample type: Air  
 Sample amount: 572 m3  
 Concentration units: pg/m3  
 Data files: M\_15\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		73,1	28
$\alpha$ -HCH		7,84	33
$\gamma$ -HCH		4,39	43
2,4,4'-TriCB	28	1,95 b	47
2,2',5,5'-TetCB	52	1,74	49
2,2',4,5,5'-PenCB	101	1,07	55
2,3',4,4',5-PenCB	118	0,36 b	58
2,2',3,4,4',5'-HexCB	138	0,44 b	59
2,2',4,4',5,5'-HexCB	153	0,66 b	54
2,2',3,4,4',5,5'-HepCB	180	0,16 b	65
<b>Sum 7 PCB</b>		<b>6,37</b>	

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 Analysis

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Encl. to measuring report: O-4218  
 NILU-Sample number: 06/341  
 Customer: CAMP 06  
 Customers sample ID: Bi 2-3.3.06 0635-0647  
 : 160-155  
 Sample type: Air  
 Sample amount: 575 m3  
 Concentration units: pg/m3  
 Data files: M\_16\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		58,2	48
$\alpha$ -HCH		6,54	56
$\gamma$ -HCH		2,46 b	67
2,4,4'-TriCB	28	1,44 b	75
2,2',5,5'-TetCB	52	1,17 b	78
2,2',4,5,5'-PenCB	101	0,57 b	82
2,3',4,4',5-PenCB	118	0,23 b	89
2,2',3,4,4',5'-HexCB	138	0,21 b	89
2,2',4,4',5,5'-HexCB	153	0,29 b	87
2,2',3,4,4',5,5'-HepCB	180	0,09 b	97
<b>Sum 7 PCB</b>		<b>4,00</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/344  
 Customer: CAMP 06  
 Customers sample ID: Bi 9-10.3.06 0635-0643  
 : 160-155  
 Sample type: Air  
 Sample amount: 572 m3  
 Concentration units: pg/m3  
 Data files: M\_16\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		57,7	54
$\alpha$ -HCH		6,44	65
$\gamma$ -HCH		2,58 b	73
2,4,4'-TriCB	28	1,50 b	72
2,2',5,5'-TetCB	52	1,15 b	76
2,2',4,5,5'-PenCB	101	0,53 b	82
2,3',4,4',5'-PenCB	118	0,18 b	86
2,2',3,4,4',5'-HexCB	138	0,21 b	86
2,2',4,4',5,5'-HexCB	153	0,33 b	93
2,2',3,4,4',5,5'-HepCB	180	0,10 b	97
<b>Sum 7 PCB</b>		<b>3,99</b>	

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 Analysis

19



Kjeller, 15.05.2007

Encl. to measuring report: O-4218

NILU-Sample number: 06/392

Customer: CAMP 06

Customers sample ID: Bi 17-18.3.06 0639-0642

: 160-152

Sample type: Air

Sample amount: 564 m3

Concentration units: pg/m3

Data files: M\_16\_11\_06

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		61,3	47
$\alpha$ -HCH		11,4	52
$\gamma$ -HCH		5,37	62
2,4,4'-TriCB	28	2,12 b	70
2,2',5,5'-TetCB	52	1,76	67
2,2',4,5,5'-PenCB	101	0,90	78
2,3',4,4',5'-PenCB	118	0,31 b	82
2,2',3,4,4',5'-HexCB	138	0,25 b	86
2,2',4,4',5,5'-HexCB	153	0,39 b	80
2,2',3,4,4',5,5'-HepCB	180	0,09 b	89
<b>Sum 7 PCB</b>		<b>5,82</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/455  
 Customer: CAMP 06  
 Customers sample ID: Bi 30-31.3.06 0535-0543  
 : 160-150  
 Sample type: Air  
 Sample amount: 563 m3  
 Concentration units: pg/m3  
 Data files: M\_16\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		63,6	46
$\alpha$ -HCH		6,72	51
$\gamma$ -HCH		4,51	60
2,4,4'-TriCB	28	1,73 b	72
2,2',5,5'-TetCB	52	1,52 b	69
2,2',4,5,5'-PenCB	101	0,84 b	83
2,3',4,4',5-PenCB	118	0,27 b	89
2,2',3,4,4',5'-HexCB	138	0,32 b	93
2,2',4,4',5,5'-HexCB	153	0,51 b	84
2,2',3,4,4',5,5'-HepCB	180	0,15 b	93
<b>Sum 7 PCB</b>		<b>5,34</b>	

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 Analysis <sup>21</sup>



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/456  
 Customer: CAMP 2006  
 Customers sample ID: 23-24.3.06 0633-0642  
 : 160-154  
 Sample type: Air  
 Sample amount: 572 m3  
 Concentration units: pg/m3  
 Data files: VB257

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		57,9	34
$\alpha$ -HCH		7,67 b	39
$\gamma$ -HCH		2,58	g
2,4,4'-TriCB	28	1,04 b	54
2,2',5,5'-TetCB	52	1,00 b	51
2,2',4,5,5'-PenCB	101	0,51 b	52
2,3',4,4',5-PenCB	118	0,16 b	77
2,2',3,4,4',5'-HexCB	138	0,16 b	71
2,2',4,4',5,5'-HexCB	153	0,27 b	53
2,2',3,4,4',5,5'-HepCB	180	0,06 b	68
<b>Sum 7 PCB</b>		<b>3,19</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/496  
 Customer: CAMP 06  
 Customers sample ID: Bi 6-7.4.06 0531-0545  
 : 160-154  
 Sample type: Air  
 Sample amount: 572 m3  
 Concentration units: pg/m3  
 Data files: M\_15\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		62,5	51
$\alpha$ -HCH		7,20	59
$\gamma$ -HCH		3,66	69
2,4,4'-TriCB	28	1,42 b	73
2,2',5,5'-TetCB	52	1,25 b	75
2,2',4,5,5'-PenCB	101	0,73 b	80
2,3',4,4',5'-PenCB	118	0,25 b	79
2,2',3,4,4',5'-HexCB	138	0,25 b	87
2,2',4,4',5,5'-HexCB	153	0,41 b	76
2,2',3,4,4',5,5'-HepCB	180	0,10 b	91
<b>Sum 7 PCB</b>		<b>4,41</b>	

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 Analysis

23



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/502  
 Customer: CAMP 06  
 Customers sample ID: Bi 13-14.4.06 0533-0610  
 : 160-153  
 Sample type: Air  
 Sample amount: 581 m3  
 Concentration units: pg/m3  
 Data files: M\_10\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		64,0	46
$\alpha$ -HCH		7,04	43
$\gamma$ -HCH		3,65	62
2,4,4'-TriCB	28	1,46 b	64
2,2',5,5'-TetCB	52	1,22 b	72
2,2',4,5,5'-PenCB	101	0,68 b	75
2,3',4,4',5-PenCB	118	1,32 b	82
2,2',3,4,4',5'-HexCB	138	2,56 b	82
2,2',4,4',5,5'-HexCB	153	5,54 b	82
2,2',3,4,4',5,5'-HepCB	180	3,60	91
<b>Sum 7 PCB</b>		<b>16,4</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/567  
 Customer: CAMP 06  
 Customers sample ID: Bi 20-21.4.06 0534-0543  
 : 160-155  
 Sample type: Air  
 Sample amount: 575 m3  
 Concentration units: pg/m3  
 Data files: M\_10\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		59,5	39
$\alpha$ -HCH		6,29	43
$\gamma$ -HCH		3,13	59
2,4,4'-TriCB	28	1,13 b	58
2,2',5,5'-TetCB	52	0,96 b	64
2,2',4,5,5'-PenCB	101	0,53 b	69
2,3',4,4',5-PenCB	118	3,67	76
2,2',3,4,4',5'-HexCB	138	6,91	77
2,2',4,4',5,5'-HexCB	153	13,8	75
2,2',3,4,4',5,5'-HepCB	180	7,92	86
<b>Sum 7 PCB</b>		<b>34,9</b>	

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 Analysis

25



Kjeller, 15.05.2007

Encl. to measuring report: O-4218  
 NILU-Sample number: 06/569  
 Customer: CAMP 06  
 Customers sample ID: Bi 27-28.4.06 0534-0547  
 : 160-154  
 Sample type: Air  
 Sample amount: 572 m3  
 Concentration units: pg/m3  
 Data files: M\_10\_11\_06

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		66,0	46
$\alpha$ -HCH		8,06	46
$\gamma$ -HCH		3,13	61
2,4,4'-TriCB	28	1,21 b	64
2,2',5,5'-TetCB	52	1,02 b	69
2,2',4,5,5'-PenCB	101	0,55 b	73
2,3',4,4',5-PenCB	118	0,57 b	79
2,2',3,4,4',5'-HexCB	138	0,81 b	79
2,2',4,4',5,5'-HexCB	153	2,21 b	77
2,2',3,4,4',5,5'-HepCB	180	0,38 b	88
<b>Sum 7 PCB</b>		<b>6,73</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/575  
 Customer: CAMP 06  
 Customers sample ID: Bi 4-5.5.06 0533-0520  
 : 160-150  
 Sample type: Air  
 Sample amount: 556 m3  
 Concentration units: pg/m3  
 Data files: M\_10\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		82,0	48
$\alpha$ -HCH		12,4	46
$\gamma$ -HCH		14,9	60
2,4,4'-TriCB	28	2,95	63
2,2',5,5'-TetCB	52	2,33	69
2,2',4,5,5'-PenCB	101	1,46	72
2,3',4,4',5'-PenCB	118	0,45 b	78
2,2',3,4,4',5'-HexCB	138	0,61 b	80
2,2',4,4',5,5'-HexCB	153	1,04 b	78
2,2',3,4,4',5,5'-HepCB	180	0,30 b	90
<b>Sum 7 PCB</b>		<b>9,15</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/637  
 Customer: CAMP 06  
 Customers sample ID: Bi 11-12.5.06 0534-0544  
 : 160-155  
 Sample type: Air  
 Sample amount: 575 m3  
 Concentration units: pg/m3  
 Data files: M\_10\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		63,3	53
$\alpha$ -HCH		14,1	49
$\gamma$ -HCH		9,69	65
2,4,4'-TriCB	28	1,92 b	67
2,2',5,5'-TetCB	52	1,69	74
2,2',4,5,5'-PenCB	101	1,21	74
2,3',4,4',5'-PenCB	118	0,73 b	82
2,2',3,4,4',5'-HexCB	138	1,09 b	82
2,2',4,4',5,5'-HexCB	153	2,09 b	80
2,2',3,4,4',5,5'-HepCB	180	0,75 b	89
<b>Sum 7 PCB</b>		<b>9,48</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/670  
 Customer: CAMP 06  
 Customers sample ID: Bi 18-19.5.06 0538-0545  
 : 160-155  
 Sample type: Air  
 Sample amount: 572 m3  
 Concentration units: pg/m3  
 Data files: M\_10\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		96,1	55
$\alpha$ -HCH		12,0	42
$\gamma$ -HCH		18,6	62
2,4,4'-TriCB	28	2,74	66
2,2',5,5'-TetCB	52	2,56	71
2,2',4,5,5'-PenCB	101	1,58	72
2,3',4,4',5-PenCB	118	0,49 b	79
2,2',3,4,4',5'-HexCB	138	0,63 b	81
2,2',4,4',5,5'-HexCB	153	1,13 b	79
2,2',3,4,4',5,5'-HepCB	180	0,27 b	90
<b>Sum 7 PCB</b>		<b>9,41</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/697  
 Customer: CAMP 06  
 Customers sample ID: Bi 25-26.5.06 0535-0545  
 : 160-158  
 Sample type: Air  
 Sample amount: 580 m3  
 Concentration units: pg/m3  
 Data files: M\_10\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		67,7	49
$\alpha$ -HCH		9,47	46
$\gamma$ -HCH		3,86	56
2,4,4'-TriCB	28	0,87 b	62
2,2',5,5'-TetCB	52	0,73 b	67
2,2',4,5,5'-PenCB	101	0,41 b	71
2,3',4,4',5-PenCB	118	0,27 b	79
2,2',3,4,4',5'-HexCB	138	0,38 b	81
2,2',4,4',5,5'-HexCB	153	0,92 b	79
2,2',3,4,4',5,5'-HepCB	180	0,16 b	91
<b>Sum 7 PCB</b>		<b>3,75</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/716  
 Customer: CAMP 06  
 Customers sample ID: Bi 1-2.6.06 0524-0533  
 : 160-157  
 Sample type: Air  
 Sample amount: 578 m3  
 Concentration units: pg/m3  
 Data files: M\_10\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		64,5	53
$\alpha$ -HCH		9,70	51
$\gamma$ -HCH		4,32	64
2,4,4'-TriCB	28	1,10 b	67
2,2',5,5'-TetCB	52	0,93 b	73
2,2',4,5,5'-PenCB	101	0,57 b	75
2,3',4,4',5'-PenCB	118	0,30 b	82
2,2',3,4,4',5'-HexCB	138	0,35 b	85
2,2',4,4',5,5'-HexCB	153	0,72 b	82
2,2',3,4,4',5,5'-HepCB	180	0,19 b	95
<b>Sum 7 PCB</b>		<b>4,16</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/728  
 Customer: CAMP 06  
 Customers sample ID: Bi 8-9.6.06 0534-0537  
 : 160-156  
 Sample type: Air  
 Sample amount: 574 m3  
 Concentration units: pg/m3  
 Data files: M\_13\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		61,6	48
$\alpha$ -HCH		10,5	47
$\gamma$ -HCH		9,31	65
2,4,4'-TriCB	28	1,55 b	69
2,2',5,5'-TetCB	52	1,44 b	72
2,2',4,5,5'-PenCB	101	1,59	54
2,3',4,4',5'-PenCB	118	0,72 b	81
2,2',3,4,4',5'-HexCB	138	1,25 b	82
2,2',4,4',5,5'-HexCB	153	2,21 b	50
2,2',3,4,4',5,5'-HepCB	180	0,89 b	89
<b>Sum 7 PCB</b>		<b>9,64</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/763  
 Customer: CAMP 06  
 Customers sample ID: Bi 15-16.6.06 0535-0539  
 : 160-155  
 Sample type: Air  
 Sample amount: 572 m3  
 Concentration units: pg/m3  
 Data files: M\_10\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		54,4	55
$\alpha$ -HCH		10,4	44
$\gamma$ -HCH		8,30	61
2,4,4'-TriCB	28	1,61 b	65
2,2',5,5'-TetCB	52	1,45 b	71
2,2',4,5,5'-PenCB	101	1,30	70
2,3',4,4',5'-PenCB	118	0,40 b	78
2,2',3,4,4',5'-HexCB	138	0,79 b	81
2,2',4,4',5,5'-HexCB	153	1,43 b	78
2,2',3,4,4',5,5'-HepCB	180	0,46 b	90
<b>Sum 7 PCB</b>		<b>7,44</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/775  
 Customer: CAMP 06  
 Customers sample ID: Bi 22-23.6.06 0536-0533  
 : 160-158  
 Sample type: Air  
 Sample amount: 572 m3  
 Concentration units: pg/m3  
 Data files: M\_10\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		67,7	47
$\alpha$ -HCH		10,5	47
$\gamma$ -HCH		7,66	59
2,4,4'-TriCB	28	1,37 b	63
2,2',5,5'-TetCB	52	1,18 b	69
2,2',4,5,5'-PenCB	101	0,73 b	74
2,3',4,4',5'-PenCB	118	0,27 b	82
2,2',3,4,4',5'-HexCB	138	0,37 b	85
2,2',4,4',5,5'-HexCB	153	0,65 b	82
2,2',3,4,4',5,5'-HepCB	180	0,22 b	94
<b>Sum 7 PCB</b>		<b>4,80</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/853  
 Customer: CAMP 06  
 Customers sample ID: Bi 29-30.6.06 0532-0536  
 : 160-158  
 Sample type: Air  
 Sample amount: 577 m3  
 Concentration units: pg/m3  
 Data files: M\_10\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		53,5	47
$\alpha$ -HCH		12,3	37
$\gamma$ -HCH		7,62	55
2,4,4'-TriCB	28	1,42 b	59
2,2',5,5'-TetCB	52	1,27 b	65
2,2',4,5,5'-PenCB	101	0,86	69
2,3',4,4',5'-PenCB	118	0,28 b	77
2,2',3,4,4',5'-HexCB	138	0,35 b	80
2,2',4,4',5,5'-HexCB	153	0,59 b	76
2,2',3,4,4',5,5'-HepCB	180	0,14 b	89
<b>Sum 7 PCB</b>		<b>4,93</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/855  
 Customer: CAMP 06  
 Customers sample ID: Bi 6-7.7.06 0533-0533  
 : 160-152  
 Sample type: Air  
 Sample amount: 564 m3  
 Concentration units: pg/m3  
 Data files: M\_10\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		70,8	50
$\alpha$ -HCH		28,2	47
$\gamma$ -HCH		24,1 b	59
2,4,4'-TriCB	28	4,15 b	63
2,2',5,5'-TetCB	52	3,85 b	68
2,2',4,5,5'-PenCB	101	2,45 b	70
2,3',4,4',5-PenCB	118	0,79 b	78
2,2',3,4,4',5'-HexCB	138	1,27 b	81
2,2',4,4',5,5'-HexCB	153	2,24 b	79
2,2',3,4,4',5,5'-HepCB	180	0,76 b	88
<b>Sum 7 PCB</b>		<b>15,5</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/911  
 Customer: CAMP 06  
 Customers sample ID: Bi 13-14.7.06 0532-0534  
 : 160-160  
 Sample type: Air  
 Sample amount: 578 m3  
 Concentration units: pg/m3  
 Data files: M\_13\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		82,8	11
$\alpha$ -HCH		12,3 b	g
$\gamma$ -HCH		4,39 b	24
2,4,4'-TriCB	28	0,84 b	34
2,2',5,5'-TetCB	52	0,83 b	40
2,2',4,5,5'-PenCB	101	0,54 b	53
2,3',4,4',5-PenCB	118	0,27 b	69
2,2',3,4,4',5'-HexCB	138	0,32 b	73
2,2',4,4',5,5'-HexCB	153	0,67 b	62
2,2',3,4,4',5,5'-HepCB	180	0,16 b	84
<b>Sum 7 PCB</b>		<b>3,62</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/913  
 Customer: CAMP 06  
 Customers sample ID: Bi 20-21.7.06 0533-0533  
 : 160-155  
 Sample type: Air  
 Sample amount: 571 m3  
 Concentration units: pg/m3  
 Data files: M\_15\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		46,2	32
$\alpha$ -HCH		13,7 b	30
$\gamma$ -HCH		7,83 b	43
2,4,4'-TriCB	28	1,18 b	59
2,2',5,5'-TetCB	52	1,20 b	66
2,2',4,5,5'-PenCB	101	0,91 b	72
2,3',4,4',5-PenCB	118	0,34 b	83
2,2',3,4,4',5'-HexCB	138	0,45 b	84
2,2',4,4',5,5'-HexCB	153	0,70 b	69
2,2',3,4,4',5,5'-HepCB	180	0,15 bi	94
<b>Sum 7 PCB</b>		<b>4,92</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/931  
 Customer: CAMP 06  
 Customers sample ID: Bi 26-27.7.06 0535-0532  
 : 160-149  
 Sample type: Air  
 Sample amount: 556 m3  
 Concentration units: pg/m3  
 Data files: M\_10\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		49,8	43
$\alpha$ -HCH		13,2 b	43
$\gamma$ -HCH		16,0 b	56
2,4,4'-TriCB	28	1,66 b	59
2,2',5,5'-TetCB	52	1,77 b	64
2,2',4,5,5'-PenCB	101	1,39 b	67
2,3',4,4',5'-PenCB	118	0,47 b	74
2,2',3,4,4',5'-HexCB	138	0,71 b	77
2,2',4,4',5,5'-HexCB	153	1,21 b	73
2,2',3,4,4',5,5'-HepCB	180	0,34 b	87
<b>Sum 7 PCB</b>		<b>7,55</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/968  
 Customer: CAMP 06  
 Customers sample ID: Bi 10-11.8.06 0534-0535  
 : 160-157  
 Sample type: Air  
 Sample amount: 574 m3  
 Concentration units: pg/m3  
 Data files: M\_13\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		66,6	41
$\alpha$ -HCH		13,0 b	48
$\gamma$ -HCH		4,75 b	58
2,4,4'-TriCB	28	0,94 b	60
2,2',5,5'-TetCB	52	0,74 b	66
2,2',4,5,5'-PenCB	101	0,49 b	70
2,3',4,4',5-PenCB	118	0,25 b	78
2,2',3,4,4',5'-HexCB	138	0,36 b	80
2,2',4,4',5,5'-HexCB	153	0,67 b	78
2,2',3,4,4',5,5'-HepCB	180	0,24 b	85
<b>Sum 7 PCB</b>		<b>3,68</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1044  
 Customer: CAMP 06  
 Customers sample ID: Bi 17-18.8.06 0534-0540  
 : 160-157  
 Sample type: Air  
 Sample amount: 576 m3  
 Concentration units: pg/m3  
 Data files: M\_13\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		67,6	51
$\alpha$ -HCH		13,4 b	57
$\gamma$ -HCH		11,0 b	71
2,4,4'-TriCB	28	1,74 b	73
2,2',5,5'-TetCB	52	1,53 b	85
2,2',4,5,5'-PenCB	101	1,03 b	88
2,3',4,4',5-PenCB	118	0,31 b	98
2,2',3,4,4',5'-HexCB	138	0,41 b	100
2,2',4,4',5,5'-HexCB	153	0,65 b	98
2,2',3,4,4',5,5'-HepCB	180	0,15 b	108
<b>Sum 7 PCB</b>		<b>5,82</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1046  
 Customer: CAMP 06  
 Customers sample ID: Bi 24-25.8.06 0540-0536  
 : 160-154  
 Sample type: Air  
 Sample amount: 565 m3  
 Concentration units: pg/m3  
 Data files: M\_19\_01\_07

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		64,9	33
$\alpha$ -HCH		17,7	43
$\gamma$ -HCH		12,7 b	49
2,4,4'-TriCB	28	2,46 b	51
2,2',5,5'-TetCB	52	2,11 b	53
2,2',4,5,5'-PenCB	101	1,35 b	57
2,3',4,4',5-PenCB	118	0,65 b	64
2,2',3,4,4',5'-HexCB	138	1,19 b	65
2,2',4,4',5,5'-HexCB	153	2,19 b	63
2,2',3,4,4',5,5'-HepCB	180	1,79 b	69
<b>Sum 7 PCB</b>		<b>11,7</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1096  
 Customer: CAMP 06  
 Customers sample ID: Bi 31.8-1.9.06 0532-0531  
 : 160-156  
 Sample type: Air  
 Sample amount: 571 m3  
 Concentration units: pg/m3  
 Data files: M\_19\_01\_07

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		64,5	30
$\alpha$ -HCH		13,8 b	41
$\gamma$ -HCH		6,14 b	49
2,4,4'-TriCB	28	1,17 b	48
2,2',5,5'-TetCB	52	1,05 b	51
2,2',4,5,5'-PenCB	101	0,65 b	56
2,3',4,4',5'-PenCB	118	0,21 b	61
2,2',3,4,4',5'-HexCB	138	0,27 b	63
2,2',4,4',5,5'-HexCB	153	0,45 b	62
2,2',3,4,4',5,5'-HepCB	180	0,12 b	67
<b>Sum 7 PCB</b>		<b>3,92</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1132  
 Customer: CAMP 06  
 Customers sample ID: Bi 7-8.9.06 0535-0532  
 : 160-159  
 Sample type: Air  
 Sample amount: 575 m3  
 Concentration units: pg/m3  
 Data files: M\_19\_01\_07

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		66,5	31
$\alpha$ -HCH		13,7 b	42
$\gamma$ -HCH		4,81 b	49
2,4,4'-TriCB	28	0,88 b	46
2,2',5,5'-TetCB	52	0,80 b	49
2,2',4,5,5'-PenCB	101	0,48 b	54
2,3',4,4',5-PenCB	118	0,17 b	59
2,2',3,4,4',5'-HexCB	138	0,21 b	59
2,2',4,4',5,5'-HexCB	153	0,38 b	59
2,2',3,4,4',5,5'-HepCB	180	0,13 b	63
<b>Sum 7 PCB</b>		<b>3,05</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1171  
 Customer: CAMP 06  
 Customers sample ID: Bi 14-15.9.06 0535-0537  
 : 160-153  
 Sample type: Air  
 Sample amount: 566 m3  
 Concentration units: pg/m3  
 Data files: M\_19\_01\_07

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		91,7	27
$\alpha$ -HCH		33,7	36
$\gamma$ -HCH		20,2 b	43
2,4,4'-TriCB	28	4,59 b	42
2,2',5,5'-TetCB	52	3,79 b	45
2,2',4,5,5'-PenCB	101	2,40 b	50
2,3',4,4',5-PenCB	118	0,64 b	55
2,2',3,4,4',5'-HexCB	138	1,15 b	57
2,2',4,4',5,5'-HexCB	153	2,02 b	56
2,2',3,4,4',5,5'-HepCB	180	0,59 b	61
<b>Sum 7 PCB</b>		<b>15,2</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1247  
 Customer: CAMP 2006  
 Customers sample ID: 21-22.9.06 0532-0532  
 : 160-158  
 Sample type: Air  
 Sample amount: 575 m3  
 Concentration units: pg/m3  
 Data files: VB257

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		70,7	41
$\alpha$ -HCH		14,7	45
$\gamma$ -HCH		30,1	58
2,4,4'-TriCB	28	3,93 b	72
2,2',5,5'-TetCB	52	4,88	70
2,2',4,5,5'-PenCB	101	3,26	71
2,3',4,4',5'-PenCB	118	0,98 b	101
2,2',3,4,4',5'-HexCB	138	1,32 b	93
2,2',4,4',5,5'-HexCB	153	2,37 b	71
2,2',3,4,4',5,5'-HepCB	180	0,62	90
<b>Sum 7 PCB</b>		<b>17,4</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1258  
 Customer: CAMP 2006  
 Customers sample ID: 28-29.9.06 0535-0535  
 : 160-158  
 Sample type: Air  
 Sample amount: 575 m3  
 Concentration units: pg/m3  
 Data files: VB257

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		62,0	45
$\alpha$ -HCH		12,9	47
$\gamma$ -HCH		15,6	59
2,4,4'-TriCB	28	2,05 b	76
2,2',5,5'-TetCB	52	2,13 b	73
2,2',4,5,5'-PenCB	101	1,49 b	75
2,3',4,4',5'-PenCB	118	1,08 b	109
2,2',3,4,4',5'-HexCB	138	1,62 b	98
2,2',4,4',5,5'-HexCB	153	3,52 b	77
2,2',3,4,4',5,5'-HepCB	180	1,09	97
<b>Sum 7 PCB</b>		<b>13,0</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1274  
 Customer: CAMP 2006  
 Customers sample ID: 5-6.10.06 0535-0536  
 : 160-155  
 Sample type: Air  
 Sample amount: 570 m3  
 Concentration units: pg/m3  
 Data files: VB257

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		60,8	40
$\alpha$ -HCH		11,0	48
$\gamma$ -HCH		6,10 b	60
2,4,4'-TriCB	28	1,41 b	67
2,2',5,5'-TetCB	52	1,27 b	63
2,2',4,5,5'-PenCB	101	0,69 b	61
2,3',4,4',5-PenCB	118	0,25 b	81
2,2',3,4,4',5'-HexCB	138	0,31 b	74
2,2',4,4',5,5'-HexCB	153	0,64 b	54
2,2',3,4,4',5,5'-HepCB	180	0,16 b	73
<b>Sum 7 PCB</b>		<b>4,73</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1336  
 Customer: CAMP 2006  
 Customers sample ID: 12-13.10.06 0533-0532  
 : 160-155  
 Sample type: Air  
 Sample amount: 570 m3  
 Concentration units: pg/m3  
 Data files: VB257

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		64,7	38
$\alpha$ -HCH		11,3	46
$\gamma$ -HCH		7,05 b	60
2,4,4'-TriCB	28	1,77 b	67
2,2',5,5'-TetCB	52	1,75 b	66
2,2',4,5,5'-PenCB	101	1,15 b	63
2,3',4,4',5'-PenCB	118	0,33 b	82
2,2',3,4,4',5'-HexCB	138	0,46 b	72
2,2',4,4',5,5'-HexCB	153	0,83 b	56
2,2',3,4,4',5,5'-HepCB	180	0,18 b	71
<b>Sum 7 PCB</b>		<b>6,45</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1353  
 Customer: CAMP 2006  
 Customers sample ID: 19-20.10.06 0533-0529  
 : 160-153  
 Sample type: Air  
 Sample amount: 564 m3  
 Concentration units: pg/m3  
 Data files: VB257

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		93,1	43
$\alpha$ -HCH		13,2	49
$\gamma$ -HCH		19,9	62
2,4,4'-TriCB	28	3,35 b	70
2,2',5,5'-TetCB	52	3,74 b	68
2,2',4,5,5'-PenCB	101	2,30	62
2,3',4,4',5'-PenCB	118	0,62 b	79
2,2',3,4,4',5'-HexCB	138	0,87 b	71
2,2',4,4',5,5'-HexCB	153	1,62 b	54
2,2',3,4,4',5,5'-HepCB	180	0,33 b	74
<b>Sum 7 PCB</b>		<b>12,8</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1382  
 Customer: CAMP 2006  
 Customers sample ID: 26-27.10.06 0533-0530  
 : 160-150  
 Sample type: Air  
 Sample amount: 558 m3  
 Concentration units: pg/m3  
 Data files: VB257

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		70,4	33
$\alpha$ -HCH		10,3	39
$\gamma$ -HCH		9,29	49
2,4,4'-TriCB	28	1,57 b	56
2,2',5,5'-TetCB	52	1,65 b	56
2,2',4,5,5'-PenCB	101	1,01 b	59
2,3',4,4',5'-PenCB	118	0,28 b	86
2,2',3,4,4',5'-HexCB	138	0,39 b	79
2,2',4,4',5,5'-HexCB	153	0,66 b	59
2,2',3,4,4',5,5'-HepCB	180	0,14 b	80
<b>Sum 7 PCB</b>		<b>5,70</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1425  
 Customer: CAMP 2006  
 Customers sample ID: 2-3.11.06 0635-0630  
 : 160-160  
 Sample type: Air  
 Sample amount: 576 m3  
 Concentration units: pg/m3  
 Data files: VB257

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		52,2	21
$\alpha$ -HCH		8,16	27
$\gamma$ -HCH		2,05 b	33
2,4,4'-TriCB	28	0,68 b	35
2,2',5,5'-TetCB	52	0,62 b	35
2,2',4,5,5'-PenCB	101	0,35 b	34
2,3',4,4',5-PenCB	118	0,32 b	43
2,2',3,4,4',5'-HexCB	138	0,45 b	44
2,2',4,4',5,5'-HexCB	153	0,90 b	33
2,2',3,4,4',5,5'-HepCB	180	0,28 b	53
<b>Sum 7 PCB</b>		<b>3,61</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1504  
 Customer: CAMP 2006  
 Customers sample ID: 9-10.11.06 0634-0629  
 : 160-160  
 Sample type: Air  
 Sample amount: 576 m3  
 Concentration units: pg/m3  
 Data files: VB257

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		46,4	26
$\alpha$ -HCH		6,40	48
$\gamma$ -HCH		2,24 b	64
2,4,4'-TriCB	28	0,67 b	52
2,2',5,5'-TetCB	52	0,56 b	66
2,2',4,5,5'-PenCB	101	0,28 b	59
2,3',4,4',5-PenCB	118	0,10 b	79
2,2',3,4,4',5'-HexCB	138	0,10 b	72
2,2',4,4',5,5'-HexCB	153	0,20 b	56
2,2',3,4,4',5,5'-HepCB	180	0,04 b	76
<b>Sum 7 PCB</b>		<b>1,93</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1569  
 Customer: CAMP 2006  
 Customers sample ID: 16-17.11.06 0626-0633  
 : 160-153  
 Sample type: Air  
 Sample amount: 569 m3  
 Concentration units: pg/m3  
 Data files: VB257

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		73,8	45
$\alpha$ -HCH		10,5	37
$\gamma$ -HCH		26,5	51
2,4,4'-TriCB	28	3,43 b	67
2,2',5,5'-TetCB	52	4,14 b	68
2,2',4,5,5'-PenCB	101	2,73	76
2,3',4,4',5-PenCB	118	0,75 b	125
2,2',3,4,4',5'-HexCB	138	1,06 b	120
2,2',4,4',5,5'-HexCB	153	1,93 b	87
2,2',3,4,4',5,5'-HepCB	180	0,36	105
<b>Sum 7 PCB</b>		<b>14,4</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1584  
 Customer: CAMP 2006  
 Customers sample ID: 23-24.11.06 0633-0628  
 : 160-154  
 Sample type: Air  
 Sample amount: 565 m3  
 Concentration units: pg/m3  
 Data files: VB257

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		72,0	33
$\alpha$ -HCH		7,69	39
$\gamma$ -HCH		7,27 b	50
2,4,4'-TriCB	28	1,91 b	58
2,2',5,5'-TetCB	52	1,99 b	60
2,2',4,5,5'-PenCB	101	1,14 b	55
2,3',4,4',5-PenCB	118	0,31 b	73
2,2',3,4,4',5'-HexCB	138	0,38 b	66
2,2',4,4',5,5'-HexCB	153	0,74 b	51
2,2',3,4,4',5,5'-HepCB	180	0,13 b	73
<b>Sum 7 PCB</b>		<b>6,60</b>	

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 Analysis



Encl. to measuring report: O-4218  
NILU-Sample number: 06/1675  
Customer: CAMP 2006  
Customers sample ID: 30.11-1.12.06 0635-0626  
: 160-155  
Sample type: Air  
Sample amount: 565 m3  
Concentration units: pg/m3  
Data files: VB257

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		72,0	45
$\alpha$ -HCH		9,25	38
$\gamma$ -HCH		6,23 b	53
2,4,4'-TriCB	28	1,62 b	72
2,2',5,5'-TetCB	52	1,84 b	71
2,2',4,5,5'-PenCB	101	1,70 b	77
2,3',4,4',5-PenCB	118	3,13	124
2,2',3,4,4',5'-HexCB	138	4,37	118
2,2',4,4',5,5'-HexCB	153	9,14	90
2,2',3,4,4',5,5'-HepCB	180	1,20	104
<b>Sum 7 PCB</b>		<b>23,0</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 06/1700  
 Customer: CAMP 2006  
 Customers sample ID: 7-8.12.06 0634-0637  
 : 160-152  
 Sample type: Air  
 Sample amount: 566 m3  
 Concentration units: pg/m3  
 Data files: VB257

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		62,4	49
$\alpha$ -HCH		6,99	54
$\gamma$ -HCH		4,76 b	58
2,4,4'-TriCB	28	1,30 b	69
2,2',5,5'-TetCB	52	1,47 b	67
2,2',4,5,5'-PenCB	101	0,90 b	79
2,3',4,4',5'-PenCB	118	0,28 b	90
2,2',3,4,4',5'-HexCB	138	0,34 b	89
2,2',4,4',5,5'-HexCB	153	0,68 b	85
2,2',3,4,4',5,5'-HepCB	180	0,10 b	69
<b>Sum 7 PCB</b>		<b>5,08</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 07/48  
 Customer: CAMP 2006  
 Customers sample ID: 14-15.12.06 0636-0633  
 : 160-159  
 Sample type: Air  
 Sample amount: 575 m3  
 Concentration units: pg/m3  
 Data files: VB257

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		65,2	38
$\alpha$ -HCH		7,33	47
$\gamma$ -HCH		3,57 b	55
2,4,4'-TriCB	28	0,92 b	67
2,2',5,5'-TetCB	52	0,96 b	66
2,2',4,5,5'-PenCB	101	0,61 b	83
2,3',4,4',5-PenCB	118	0,33 b	99
2,2',3,4,4',5'-HexCB	138	0,37 b	93
2,2',4,4',5,5'-HexCB	153	0,73 b	91
2,2',3,4,4',5,5'-HepCB	180	0,10 b	81
<b>Sum 7 PCB</b>		<b>4,02</b>	

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 Analysis



Encl. to measuring report: O-4218  
 NILU-Sample number: 07/49  
 Customer: CAMP 2006  
 Customers sample ID: 21-22.12.06 0631-0630  
 : 160-149  
 Sample type: Air  
 Sample amount: 558 m3  
 Concentration units: pg/m3  
 Data files: VB258

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCB		55,4	45
$\alpha$ -HCH		5,77	44
$\gamma$ -HCH		2,25 b	56
2,4,4'-TriCB	28	0,69 b	69
2,2',5,5'-TetCB	52	0,71 b	68
2,2',4,5,5'-PenCB	101	0,41 b	70
2,3',4,4',5-PenCB	118	0,36 b	95
2,2',3,4,4',5'-HexCB	138	0,45 b	93
2,2',4,4',5,5'-HexCB	153	0,92 b	75
2,2',3,4,4',5,5'-HepCB	180	0,10 b	93
<b>Sum 7 PCB</b>		<b>3,64</b>	

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 Analysis



Encl. to measuring report: O-4218  
NILU-Sample number: 07/54  
Customer: CAMP 2006  
Customers sample ID: 28-29.12.06 0632-0630  
: 160-155  
Sample type: Air  
Sample amount: 570 m3  
Concentration units: pg/m3  
Data files: VB258

Kjeller, 30.04.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/m3	%
HCb		34,2	46
$\alpha$ -HCH		2,93 b	49
$\gamma$ -HCH		1,73 b	61
2,4,4'-TriCB	28	0,57 b	72
2,2',5,5'-TetCB	52	0,65 b	71
2,2',4,5,5'-PenCB	101	0,72 b	75
2,3',4,4',5'-PenCB	118	0,98 b	98
2,2',3,4,4',5'-HexCB	138	1,22 b	92

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## **Vedlegg 2**

### **Organiske forbindelser i nedbør på Birkenes (O-4217)**

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## Målerapport nr. O-4217

**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
06/110	Bi 2-9.1.06	Nedbør	20.01.06	18.05 – 31.10.06
06/111	Bi 9-16.1.06	Nedbør	"	"
06/160	Bi 16-18.1.06 -1520	Nedbør	30.01.06	"
06/161	Bi 18-20.1.06 1520 – 0700	Nedbør	"	22.05 – 31.10.06
06/167	Bi 20-23.1.06 0700 – 0700	Nedbør	31.01.06	"
06/273	Bi 30.1 – 6.2.06	Nedbør	20.02.06	"
06/274	Bi 6-13.2.06	Nedbør	"	24.05 – 31.10.06
06/289	Bi 13-16.2.06 0700 – 0700	Nedbør	27.02.06	"
06/290	Bi 16-20.2.06	Nedbør	03.03.06	"
06/299	Bi 27.2 – 2.3.06 0700 – 0700	Nedbør	20.03.06	20.03 – 31.10.06
06/490	Bi 2-6.3.06 0700 – 0700	Nedbør	"	"
06/491	Bi 20-27.3.06 0700 – 0700	Nedbør	06.04.06	"
06/492	Bi 27-29.3.06 0700 – 0700	Nedbør	"	"
06/493	Bi 29.3-3.4.06 0700 – 0700	Nedbør	18.04.06	18.04 – 31.10.06
06/494	Bi 3-8.4.06 0700 – 0700	Nedbør	"	"
06/495	Bi 8-10.4.06 0700 – 0700	Nedbør	"	"
06/576	Bi 10-17.4.06 0700 – 0700	Nedbør	08.05.06	08.05 – 31.10.06
06/577	Bi 17-24.4.06 0700 – 0700	Nedbør	"	10.08 – 31.10.06
06/578	Bi 24-30.4.06 0700 – 0700 overfylt	Nedbør	"	"
06/653	Bi 30.4-1.5.06	Nedbør	24.05.06	"
06/654	Bi 15-18.5.06	Nedbør	"	"
06/717	Bi 18-22.5.06 0600 – 0530	Nedbør	29.05.06	27.09 – 26.11.06
06/718	Bi 22-24.5.06 0530 – 0600	Nedbør	16.06.06	"
06/729	Bi 24-29.5.06 0600 – 0600	Nedbør	"	"
06/730	Bi 29.5-5.6.06 0600 – 0600	Nedbør	"	29.09 – 26.11.06
06/783	Bi 19-26.6.06 0600 – 0600	Nedbør	28.06.06	"
06/915	Bi 3-10.7.06 0600 – 0600	Nedbør	31.07.06	"
06/916	10.7-17.7.06	Nedbør	"	25.10.06 – 16.02.07
06/928	Bi 24.7-1.8.06 kl 1800 overfylt, 2 flasker	Nedbør	07.08.06	"
06/929+930	Bi 1-7.8.06 0600 – 0600	Nedbør	"	"
06/973	Bi 7-14.8.06 0600 – 0630	Nedbør	23.08.06	22.11.06 – 02.05.07
06/974	Bi 14-15.8.06 0630 – 0600	Nedbør	"	"
06/1047	Bi 15-21.8.06 0600 – 0600	Nedbør	01.09.06	"

NILU prøvenr.	Kundens prøvemerkning	Prøvetype	Prøven mottatt	Prøven analysert
06/1048	Bi 21-28.8.06 0600 – 0600	Nedbør	06.09.06	24.11.06 – 02.05.07
06/1081	Bi 28.8-2.9.06 0600 – 2300	Nedbør	"	"
06/1185	Bi 2-4.9.06 2300 – 0600	Nedbør	22.09.06	"
06/1186	Bi,4-11.9.06 0600 – 0600	Nedbør	"	18.12.06 – 16.02.07
06/1261+1262+1263+1268	Bi 25.9-2.10.06 0600 – 0600	Nedbør	09.10.06	18.12.06 – 16.02.07
06/1269+1270+1271	Bi 2-9.10.06 0600 – 0600	Nedbør	16.10.06	"
06/1342	Bi 9-16.10.06 0600 – 0600	Nedbør	27.10.06	20.12.06 – 16.02.07
06/1343	Bi 16-23.10.06 0600 – 0600	Nedbør	"	"
06/1368	Bi 23-30.10.06 0600 – 0600	Nedbør	01.11.06	"
06/1506	30.10-31.10.06 + 31.10 – 6.11.06	Nedbør	21.11.06	15.01 – 02.05.07
06/1507	Bi 6-13.11.06	Nedbør	"	"
06/1522+06/1523	Bi 13-20.11.06	Nedbør	22.11.06	"
06/1577 + 06/1586	Bi 20-24.11.06	Nedbør	28.11.06	"
06/1587+1588+1589+1636+1637	Bi 25-27.11.06	Nedbør	01.12.06	12.01 – 02.05.07
06/1638	27-29.11.06+29.11-2.12.06+2-4.12.06 (overfylt)	Nedbør	07.11.06	"
06/1686a	Bi 4-7.12.06 0600 – 1545	Nedbør	14.12.06	17.01 – 02.05.06
06/1686b	Bi 7-11.12.06 1545-0600	Nedbør	"	"
06/1709	Bi 11-18.12.06 0600 – 0600	Nedbør	22.12.06	19.01 – 02.05.07
07/55	Bi 25.12.06 – 1.1.07 0600-0600	Nedbør	8+12.1.07	"

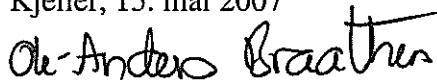
**Analyser:**

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: Pga av mistanke om kontaminering rapporteres følgende prøver uten akkreditering : 06/299, 06/490, 06/491, 06/492, 06/493, 06/494, 06/495, 06/576, 06/577, 06/578, 06/653, 06/654.

Godkjenning: Kjeller, 15. mai 2007



Ole-Anders Braathen  
 Avd.direktør, Miljøkjemi

**Vedlegg:** HCH/PCB-analyser: 52 sider  
Målerapporten og vedleggene omfatter totalt 55 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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/110  
 Customer: CAMP 06  
 Customers sample ID: BI 2-9.1.06

Kjeller, 15.05.2007

:  
 Sample type: Precipitation  
 Sample amount: 0,55 l  
 Concentration units: pg/l  
 Data files: M\_24\_10\_06

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		71,1 b	38
$\alpha$ -HCH		85,2	56
$\gamma$ -HCH		175 b	67
2,4,4'-TriCB	28	25,0 b	62
2,2',5,5'-TetCB	52	30,2 b	64
2,2',4,5,5'-PenCB	101	42,0	75
2,3',4,4',5-PenCB	118	47,2	80
2,2',3,4,4',5'-HexCB	138	62,0	84
2,2',4,4',5,5'-HexCB	153	74,4	84
2,2',3,4,4',5,5'-HepCB	180	42,4	91
<b>Sum 7 PCB</b>		<b>323</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/111  
 Customer: CAMP 06  
 Customers sample ID: Bi 9-16.1.06  
 :  
 Sample type: Precipitation  
 Sample amount: 2,12 l  
 Concentration units: pg/l  
 Data files: M\_24\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		42,0 b	41
$\alpha$ -HCH		208	53
$\gamma$ -HCH		570	64
2,4,4'-TriCB	28	9,57 b	62
2,2',5,5'-TetCB	52	10,8 b	64
2,2',4,5,5'-PenCB	101	13,8	71
2,3',4,4',5-PenCB	118	11,8	80
2,2',3,4,4',5'-HexCB	138	20,5	81
2,2',4,4',5,5'-HexCB	153	23,7	82
2,2',3,4,4',5,5'-HepCB	180	22,9	88
<b>Sum 7 PCB</b>		<b>113</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/160  
 Customer: CAMP 06  
 Customers sample ID: Bi 16-18.1.06  
 : -1520  
 Sample type: Precipitation  
 Sample amount: 2,10 l  
 Concentration units: pg/l  
 Data files: M\_24\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		32,3 b	38
$\alpha$ -HCH		93,0	51
$\gamma$ -HCH		340	63
2,4,4'-TriCB	28	14,0 b	62
2,2',5,5'-TetCB	52	15,2 b	65
2,2',4,5,5'-PenCB	101	23,3	73
2,3',4,4',5'-PenCB	118	14,4	83
2,2',3,4,4',5'-HexCB	138	27,2	85
2,2',4,4',5,5'-HexCB	153	32,1	84
2,2',3,4,4',5,5'-HepCB	180	29,2	92
<b>Sum 7 PCB</b>		<b>155</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/161  
 Customer: CAMP 06  
 Customers sample ID: BI 18-20.1.06  
 : 1520-0700  
 Sample type: Precipitation  
 Sample amount: 2,66 l  
 Concentration units: pg/l  
 Data files: M\_24\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		34,4 b	38
$\alpha$ -HCH		84,5	51
$\gamma$ -HCH		152	64
2,4,4'-TriCB	28	13,8	60
2,2',5,5'-TetCB	52	14,5 b	65
2,2',4,5,5'-PenCB	101	21,3	69
2,3',4,4',5-PenCB	118	13,3	79
2,2',3,4,4',5'-HexCB	138	22,6	80
2,2',4,4',5,5'-HexCB	153	28,8	78
2,2',3,4,4',5,5'-HepCB	180	25,4	87
<b>Sum 7 PCB</b>		<b>140</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/167  
 Customer: CAMP 06  
 Customers sample ID: Bi 20-23.1.06  
 : 0700-0700  
 Sample type: Precipitation  
 Sample amount: 2,35 l  
 Concentration units: pg/l  
 Data files: M\_24\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		25,5 b	40
$\alpha$ -HCH		71,0	54
$\gamma$ -HCH		154	67
2,4,4'-TriCB	28	12,8 b	62
2,2',5,5'-TetCB	52	14,3 b	66
2,2',4,5,5'-PenCB	101	20,2	73
2,3',4,4',5'-PenCB	118	10,5	79
2,2',3,4,4',5'-HexCB	138	14,7	80
2,2',4,4',5,5'-HexCB	153	20,5	81
2,2',3,4,4',5,5'-HepCB	180	10,3 i	87
<b>Sum 7 PCB</b>		<b>103</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/273  
 Customer: CAMP 06  
 Customers sample ID: Bi 30.1-6.2.06  
 :  
 Sample type: Precipitation  
 Sample amount: 0,84 l  
 Concentration units: pg/l  
 Data files: M\_24\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		41,1 b	28
$\alpha$ -HCH		50,3	47
$\gamma$ -HCH		130 b	59
2,4,4'-TriCB	28	27,2 b	54
2,2',5,5'-TetCB	52	29,2 b	57
2,2',4,5,5'-PenCB	101	39,2	67
2,3',4,4',5-PenCB	118	18,1	72
2,2',3,4,4',5'-HexCB	138	25,9	73
2,2',4,4',5,5'-HexCB	153	41,6	77
2,2',3,4,4',5,5'-HepCB	180	15,6	81
<b>Sum 7 PCB</b>		<b>197</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/274  
 Customer: CAMP 06  
 Customers sample ID: Bi 6-13.2.06  
 :  
 Sample type: Precipitation  
 Sample amount: 1,15 l  
 Concentration units: pg/l  
 Data files: M\_24\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		28,5 b	50
$\alpha$ -HCH		119	63
$\gamma$ -HCH		146	72
2,4,4'-TriCB	28	9,11 b	68
2,2',5,5'-TetCB	52	8,28 b	70
2,2',4,5,5'-PenCB	101	10,8	74
2,3',4,4',5-PenCB	118	7,44	75
2,2',3,4,4',5'-HexCB	138	10,2 i	77
2,2',4,4',5,5'-HexCB	153	16,4 b	79
2,2',3,4,4',5,5'-HepCB	180	9,14 i	81
<b>Sum 7 PCB</b>		<b>71,3</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/289  
 Customer: CAMP 06  
 Customers sample ID: Bi 13-16.2.06  
 : 0700-0700  
 Sample type: Precipitation  
 Sample amount: 3,00 l  
 Concentration units: pg/l  
 Data files: M\_24\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		54,3 b	51
$\alpha$ -HCH		80,1	64
$\gamma$ -HCH		248	74
2,4,4'-TriCB	28	8,73 b	72
2,2',5,5'-TetCB	52	8,60 b	73
2,2',4,5,5'-PenCB	101	11,3	75
2,3',4,4',5-PenCB	118	7,17	83
2,2',3,4,4',5'-HexCB	138	16,1	84
2,2',4,4',5,5'-HexCB	153	18,6	83
2,2',3,4,4',5,5'-HepCB	180	19,0	93
<b>Sum 7 PCB</b>		<b>89,6</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/290  
 Customer: CAMP 06  
 Customers sample ID: Bi 16-20.2.06  
 :  
 Sample type: Precipitation  
 Sample amount: 2,98 l  
 Concentration units: pg/l  
 Data files: M\_24\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		78,7	50
$\alpha$ -HCH		117	65
$\gamma$ -HCH		264	77
2,4,4'-TriCB	28	13,6	74
2,2',5,5'-TetCB	52	12,6 b	78
2,2',4,5,5'-PenCB	101	19,3	79
2,3',4,4',5-PenCB	118	13,5	89
2,2',3,4,4',5'-HexCB	138	23,4	89
2,2',4,4',5,5'-HexCB	153	33,1	89
2,2',3,4,4',5,5'-HepCB	180	22,3	97
<b>Sum 7 PCB</b>		<b>138</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/299  
 Customer: CAMP 06  
 Customers sample ID: Bi 27.2-2.3.06  
 : 0700-0700  
 Sample type: Precipitation  
 Sample amount: 1,86 l  
 Concentration units: pg/l  
 Data files: M\_25\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		98,0 b	38
$\alpha$ -HCH		225	45
$\gamma$ -HCH		172	53
2,4,4'-TriCB	28	23,3	53
2,2',5,5'-TetCB	52	18,0 b	61
2,2',4,5,5'-PenCB	101	31,8	66
2,3',4,4',5-PenCB	118	89,2	74
2,2',3,4,4',5'-HexCB	138	160	75
2,2',4,4',5,5'-HexCB	153	345	74
2,2',3,4,4',5,5'-HepCB	180	144	80
<b>Sum 7 PCB</b>		<b>811</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/490  
 Customer: CAMP 06  
 Customers sample ID: Bi 2-6.3.06  
 : 0700-0700  
 Sample type: Precipitation  
 Sample amount: 0,92 l  
 Concentration units: pg/l  
 Data files: M\_25\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		181 b	38
$\alpha$ -HCH		101	45
$\gamma$ -HCH		169	52
2,4,4'-TriCB	28	37,7 b	53
2,2',5,5'-TetCB	52	25,5 b	57
2,2',4,5,5'-PenCB	101	46,4	60
2,3',4,4',5-PenCB	118	724	65
2,2',3,4,4',5'-HexCB	138	1 009	66
2,2',4,4',5,5'-HexCB	153	2 477	64
2,2',3,4,4',5,5'-HepCB	180	1 081	69
<b>Sum 7 PCB</b>		<b>5 401</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/491  
 Customer: CAMP 06  
 Customers sample ID: BI 20-27.3.06  
 : 0700-0700  
 Sample type: Precipitation  
 Sample amount: 0,90 l  
 Concentration units: pg/l  
 Data files: M\_25\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		86,3 b	36
$\alpha$ -HCH		78,5	47
$\gamma$ -HCH		191	55
2,4,4'-TriCB	28	23,8 b	53
2,2',5,5'-TetCB	52	18,1 b	62
2,2',4,5,5'-PenCB	101	25,4	65
2,3',4,4',5-PenCB	118	94,9	71
2,2',3,4,4',5'-HexCB	138	123	73
2,2',4,4',5,5'-HexCB	153	330	73
2,2',3,4,4',5,5'-HepCB	180	85,8	79
<b>Sum 7 PCB</b>		<b>701</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/492  
 Customer: CAMP 06  
 Customers sample ID: Bi 27-29.3.06  
 : 0700-0700  
 Sample type: Precipitation  
 Sample amount: 0,92 l  
 Concentration units: pg/l  
 Data files: M\_25\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		152 b	39
$\alpha$ -HCH		339	46
$\gamma$ -HCH		647	52
2,4,4'-TriCB	28	25,5 b	51
2,2',5,5'-TetCB	52	13,1 b	61
2,2',4,5,5'-PenCB	101	17,2	66
2,3',4,4',5'-PenCB	118	187	71
2,2',3,4,4',5'-HexCB	138	154	73
2,2',4,4',5,5'-HexCB	153	494	74
2,2',3,4,4',5,5'-HepCB	180	75.0	82

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/493  
 Customer: CAMP 06  
 Customers sample ID: BI 29.3-3.4.06  
 : 0700-0700  
 Sample type: Precipitation  
 Sample amount: 1,21 l  
 Concentration units: pg/l  
 Data files: M\_24\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		141 b	36
$\alpha$ -HCH		154	46
$\gamma$ -HCH		231	57
2,4,4'-TriCB	28	49,3	59
2,2',5,5'-TetCB	52	28,6 b	62
2,2',4,5,5'-PenCB	101	36,5	70
2,3',4,4',5'-PenCB	118	351	77
2,2',3,4,4',5'-HexCB	138	406	78
2,2',4,4',5,5'-HexCB	153	1 173	76
2,2',3,4,4',5,5'-HepCB	180	321	85
<b>Sum 7 PCB</b>		<b>2 366</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/494  
 Customer: CAMP 06  
 Customers sample ID: Bi 3-8.4.06  
 : 0700-0700  
 Sample type: Precipitation  
 Sample amount: 0,87 l  
 Concentration units: pg/l  
 Data files: M\_25\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		254	17
$\alpha$ -HCH		216	50
$\gamma$ -HCH		184	60
2,4,4'-TriCB	28	24,3 b	48
2,2',5,5'-TetCB	52	14,2 b	59
2,2',4,5,5'-PenCB	101	16,6	71
2,3',4,4',5'-PenCB	118	156	81
2,2',3,4,4',5'-HexCB	138	174	82
2,2',4,4',5,5'-HexCB	153	478	80
2,2',3,4,4',5,5'-HepCB	180	121	84
<b>Sum 7 PCB</b>		<b>985</b>	

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 Analysis



Kjeller, 15.05.2007

Encl. to measuring report: O-4217  
 NILU-Sample number: 06/495  
 Customer: CAMP 06  
 Customers sample ID: Bi 8-10.4.06  
 : 0700-0700  
 Sample type: Precipitation  
 Sample amount: 1,20 l  
 Concentration units: pg/l  
 Data files: M\_25\_10\_06

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		178	45
$\alpha$ -HCH		132	50
$\gamma$ -HCH		270	60
2,4,4'-TriCB	28	22,8 b	63
2,2',5,5'-TetCB	52	18,2 b	71
2,2',4,5,5'-PenCB	101	34,4	71
2,3',4,4',5'-PenCB	118	1 543	74
2,2',3,4,4',5'-HexCB	138	2 650	70
2,2',4,4',5,5'-HexCB	153	5 864	71
2,2',3,4,4',5,5'-HepCB	180	3 424	65
<b>Sum 7 PCB</b>		<b>13 556</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/576  
 Customer: CAMP 06  
 Customers sample ID: Bi 10-17.4.06  
 : 0700-0700  
 Sample type: Precipitation  
 Sample amount: 1,92 l  
 Concentration units: pg/l  
 Data files: M\_25\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		80,1 b	33
$\alpha$ -HCH		151	45
$\gamma$ -HCH		194	54
2,4,4'-TriCB	28	10,9 b	54
2,2',5,5'-TetCB	52	8,93 b	62
2,2',4,5,5'-PenCB	101	10,9	64
2,3',4,4',5'-PenCB	118	43,2	68
2,2',3,4,4',5'-HexCB	138	47,9	68
2,2',4,4',5,5'-HexCB	153	116	67
2,2',3,4,4',5,5'-HepCB	180	39,2	66
<b>Sum 7 PCB</b>		<b>277</b>	

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 Analysis



Kjeller, 15.05.2007

Encl. to measuring report: O-4217  
 NILU-Sample number: 06/577  
 Customer: CAMP 06  
 Customers sample ID: Bi 17-24.4.06  
 : 0700-0700  
 Sample type: Precipitation  
 Sample amount: 0,60 l  
 Concentration units: pg/l  
 Data files: M\_25\_10\_06

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		1 070	8 g
$\alpha$ -HCH		258	46
$\gamma$ -HCH		433	61
2,4,4'-TriCB	28	82,0	20
2,2',5,5'-TetCB	52	59,0 b	22 g
2,2',4,5,5'-PenCB	101	60,1	31 g
2,3',4,4',5-PenCB	118	60,8	56
2,2',3,4,4',5'-HexCB	138	68,3	66
2,2',4,4',5,5'-HexCB	153	149	57
2,2',3,4,4',5,5'-HepCB	180	48,6	76
<b>Sum 7 PCB</b>		<b>528</b>	

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 Analysis



Kjeller, 15.05.2007

Encl. to measuring report: O-4217  
 NILU-Sample number: 06/578  
 Customer: CAMP 06  
 Customers sample ID: Bi 24-30.4.06  
 : 0700-0700 overfylt  
 Sample type: Precipitation  
 Sample amount: 0,87 l  
 Concentration units: pg/l  
 Data files: M\_25\_10\_06

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		668	12
$\alpha$ -HCH		499	43
$\gamma$ -HCH		696	53
2,4,4'-TriCB	28	59,1	23
2,2',5,5'-TetCB	52	45,0 b	25 g
2,2',4,5,5'-PenCB	101	54,5	29 g
2,3',4,4',5'-PenCB	118	185	48
2,2',3,4,4',5'-HexCB	138	296	56
2,2',4,4',5,5'-HexCB	153	691	48
2,2',3,4,4',5,5'-HepCB	180	284	67
<b>Sum 7 PCB</b>		<b>1 614</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/653  
 Customer: CAMP 06  
 Customers sample ID: Bi 30.4-1.5.06

Kjeller, 15.05.2007

Sample type: Precipitation  
 Sample amount: 0,94 l  
 Concentration units: pg/l  
 Data files: M\_24\_10\_06

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		553	12
$\alpha$ -HCH		507	48
$\gamma$ -HCH		564	57
2,4,4'-TriCB	28	59,2	26
2,2',5,5'-TetCB	52	45,7	26 g
2,2',4,5,5'-PenCB	101	60,6	33 g
2,3',4,4',5'-PenCB	118	72,2	56
2,2',3,4,4',5'-HexCB	138	80,8	65
2,2',4,4',5,5'-HexCB	153	126	57
2,2',3,4,4',5,5'-HepCB	180	50,6	80
<b>Sum 7 PCB</b>		<b>495</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/654  
 Customer: CAMP 06  
 Customers sample ID: Bi 15-18.5.06  
 :  
 Sample type: Precipitation  
 Sample amount: 0,92 l  
 Concentration units: pg/l  
 Data files: M\_24\_10\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		474	10
$\alpha$ -HCH		292	47
$\gamma$ -HCH		508	57
2,4,4'-TriCB	28	43,7	25
2,2',5,5'-TetCB	52	31,2 b	26 g
2,2',4,5,5'-PenCB	101	30,9	32 g
2,3',4,4',5-PenCB	118	247	49
2,2',3,4,4',5'-HexCB	138	474	57
2,2',4,4',5,5'-HexCB	153	1 152	48
2,2',3,4,4',5,5'-HepCB	180	493	74
<b>Sum 7 PCB</b>		<b>2 472</b>	

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 Analysis



Kjeller, 15.05.2007

Encl. to measuring report: O-4217  
 NILU-Sample number: 06/717  
 Customer: CAMP 06  
 Customers sample ID: Bi 18-22.5.06  
 : 0600-0530  
 Sample type: Precipitation  
 Sample amount: 3,17 l  
 Concentration units: pg/l  
 Data files: M\_16\_11\_06

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		225	40
$\alpha$ -HCH		225	55
$\gamma$ -HCH		962	64
2,4,4'-TriCB	28	12,2	62
2,2',5,5'-TetCB	52	8,67 b	61
2,2',4,5,5'-PenCB	101	9,43	75
2,3',4,4',5-PenCB	118	8,11	82
2,2',3,4,4',5'-HexCB	138	8,78	88
2,2',4,4',5,5'-HexCB	153	12,0	76
2,2',3,4,4',5,5'-HepCB	180	5,34	91
<b>Sum 7 PCB</b>		<b>64,5</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/718  
 Customer: CAMP 06  
 Customers sample ID: Bi 22-24.5.06  
 : 0530-0600  
 Sample type: Precipitation  
 Sample amount: 1,85 l  
 Concentration units: pg/l  
 Data files: M\_16\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		492	41
$\alpha$ -HCH		232	58
$\gamma$ -HCH		1 161	66
2,4,4'-TriCB	28	18,1 b	63
2,2',5,5'-TetCB	52	12,8 b	62
2,2',4,5,5'-PenCB	101	12,6	74
2,3',4,4',5'-PenCB	118	20,5	80
2,2',3,4,4',5'-HexCB	138	15,9	85
2,2',4,4',5,5'-HexCB	153	21,8	74
2,2',3,4,4',5,5'-HepCB	180	10,3	89
<b>Sum 7 PCB</b>		<b>112</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/729  
 Customer: CAMP 06  
 Customers sample ID: Bi 24-29.5.06  
 : 0600-0600  
 Sample type: Precipitation  
 Sample amount: 1,00 l  
 Concentration units: pg/l  
 Data files: M\_16\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		224	34
$\alpha$ -HCH		358	44
$\gamma$ -HCH		409	52
2,4,4'-TriCB	28	173	55
2,2',5,5'-TetCB	52	326	55
2,2',4,5,5'-PeñCB	101	383	66
2,3',4,4',5-PenCB	118	206	76
2,2',3,4,4',5'-HexCB	138	260	82
2,2',4,4',5,5'-HexCB	153	384	65
2,2',3,4,4',5,5'-HepCB	180	169	78
<b>Sum 7 PCB</b>		<b>1 901</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/730  
 Customer: CAMP 06  
 Customers sample ID: Bi 29.5-5.6.06  
 : 0600-0600  
 Sample type: Precipitation  
 Sample amount: 0,55 l  
 Concentration units: pg/l  
 Data files: M\_16\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		346 b	31
$\alpha$ -HCH		354	41
$\gamma$ -HCH		324	47
2,4,4'-TriCB	28	54,6 b	52
2,2',5,5'-TetCB	52	65,6 b	51
2,2',4,5,5'-PenCB	101	55,9	66
2,3',4,4',5-PenCB	118	39,5	75
2,2',3,4,4',5'-HexCB	138	53,6	82
2,2',4,4',5,5'-HexCB	153	78,3	66
2,2',3,4,4',5,5'-HepCB	180	37,3	79
<b>Sum 7 PCB</b>		<b>385</b>	

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 Analysis



Kjeller, 15.05.2007

Encl. to measuring report: O-4217  
 NILU-Sample number: 06/783  
 Customer: CAMP 06  
 Customers sample ID: Bi 19-26.6.06  
 : 0600-0600  
 Sample type: Precipitation  
 Sample amount: 2,31 l  
 Concentration units: pg/l  
 Data files: M\_16\_11\_06

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		300	38
$\alpha$ -HCH		199	56
$\gamma$ -HCH		577	65
2,4,4'-TriCB	28	17,0	58
2,2',5,5'-TetCB	52	32,3	60
2,2',4,5,5'-PenCB	101	30,7	61
2,3',4,4',5-PenCB	118	16,0	67
2,2',3,4,4',5'-HexCB	138	20,8	68
2,2',4,4',5,5'-HexCB	153	35,9	67
2,2',3,4,4',5,5'-HepCB	180	17,4	79
<b>Sum 7 PCB</b>		<b>170</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/915  
 Customer: CAMP 06  
 Customers sample ID: Bi 3-10.7.06  
 : 0600-0600  
 Sample type: Precipitation  
 Sample amount: 1,00 l  
 Concentration units: pg/l  
 Data files: M\_16\_11\_06

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		906	45
$\alpha$ -HCH		331	66
$\gamma$ -HCH		743	73
2,4,4'-TriCB	28	37,1	64
2,2',5,5'-TetCB	52	36,7 b	68
2,2',4,5,5'-PenCB	101	39,0	69
2,3',4,4',5-PenCB	118	31,7	78
2,2',3,4,4',5'-HexCB	138	41,3	82
2,2',4,4',5,5'-HexCB	153	64,1	79
2,2',3,4,4',5,5'-HepCB	180	28,3	96
<b>Sum 7 PCB</b>		<b>278</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/916  
 Customer: CAMP 06  
 Customers sample ID: 10.7-17.7.06  
 :  
 Sample type: Precipitation  
 Sample amount: 0,64 l  
 Concentration units: pg/l  
 Data files: M\_19\_01\_07

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		603	29
$\alpha$ -HCH		307	41
$\gamma$ -HCH		338	49
2,4,4'-TriCB	28	24,0 b	44
2,2',5,5'-TetCB	52	22,5 b	47
2,2',4,5,5'-PenCB	101	18,2	54
2,3',4,4',5-PenCB	118	28,6	60
2,2',3,4,4',5'-HexCB	138	23,9	64
2,2',4,4',5,5'-HexCB	153	38,9 b	62
2,2',3,4,4',5,5'-HepCB	180	11,0	68
<b>Sum 7 PCB</b>		<b>167</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/928  
 Customer: CAMP 06  
 Customers sample ID: Bi 24.7-1.8.06  
 : kl 1800 overfylt, 2 flasker  
 Sample type: Precipitation  
 Sample amount: 2,53 l  
 Concentration units: pg/l  
 Data files: M\_19\_01\_07

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		90,3	26
$\alpha$ -HCH		146	36
$\gamma$ -HCH		447	45
2,4,4'-TriCB	28	9,94 b	41
2,2',5,5'-TetCB	52	11,3 b	43
2,2',4,5,5'-PenCB	101	8,58	52
2,3',4,4',5'-PenCB	118	8,77	59
2,2',3,4,4',5'-HexCB	138	9,31	61
2,2',4,4',5,5'-HexCB	153	14,0	60
2,2',3,4,4',5,5'-HepCB	180	6,35	68
<b>Sum 7 PCB</b>		<b>68,3</b>	

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 Analysis



Kjeller, 15.05.2007

Encl. to measuring report: O-4217  
 NILU-Sample number: 06/929+930  
 Customer: CAMP 06  
 Customers sample ID: Bi 1-7.8.06  
 : 0600-0600  
 Sample type: Precipitation  
 Sample amount: 2,13 l  
 Concentration units: pg/l  
 Data files: M\_19\_01\_07

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		1 168	26
$\alpha$ -HCH		400	36
$\gamma$ -HCH		916	46
2,4,4'-TriCB	28	310	42
2,2',5,5'-TetCB	52	378	44
2,2',4,5,5'-PenCB	101	215	50
2,3',4,4',5'-PenCB	118	108	58
2,2',3,4,4',5'-HexCB	138	63,7	58
2,2',4,4',5,5'-HexCB	153	98,4	56
2,2',3,4,4',5,5'-HepCB	180	26,2	61
<b>Sum 7 PCB</b>		<b>1 200</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/973  
 Customer: CAMP 2006  
 Customers sample ID: Bi 7-14.8.06  
 : 0600-0630  
 Sample type: Precipitation  
 Sample amount: 0,49 l  
 Concentration units: pg/l  
 Data files: VB258

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		630	55
$\alpha$ -HCH		428	75
$\gamma$ -HCH		384	82
2,4,4'-TriCB	28	34,3 b	56
2,2',5,5'-TetCB	52	28,7 b	46
2,2',4,5,5'-PenCB	101	25,7	g
2,3',4,4',5'-PenCB	118	28,3	47
2,2',3,4,4',5'-HexCB	138	23,0	42
2,2',4,4',5,5'-HexCB	153	40,2 b	g
2,2',3,4,4',5,5'-HepCB	180	17,5	g
<b>Sum 7 PCB</b>		<b>198</b>	

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 Analysis



Encl. to measuring report: O-4217  
NILU-Sample number: 06/974  
Customer: CAMP 2006  
Customers sample ID: Bi 14-15.8.06  
: 0630-0600  
Sample type: Precipitation  
Sample amount: 2,14 l  
Concentration units: pg/l  
Data files: VB258

Kjeller, 15.05.2007

The following table area is almost entirely obscured by heavy black redaction bars. Only a few faint horizontal lines are visible, suggesting a table structure with multiple rows and columns. No data or headers are legible.

# Results of HCH and 7 PCB Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1047  
 Customer: CAMP 2006  
 Customers sample ID: Bi 15-21.8.06  
 : 0600-0600  
 Sample type: Precipitation  
 Sample amount: 3,06 l  
 Concentration units: pg/l  
 Data files: VB258

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		49,3 b	54
$\alpha$ -HCH		251	65
$\gamma$ -HCH		733	79
2,4,4'-TriCB	28	5,52 b	60
2,2',5,5'-TetCB	52	3,54 bi	54
2,2',4,5,5'-PenCB	101	5,85	46
2,3',4,4',5-PenCB	118	4,93	50
2,2',3,4,4',5'-HexCB	138	7,49	49
2,2',4,4',5,5'-HexCB	153	9,07 b	g
2,2',3,4,4',5,5'-HepCB	180	4,70	46
<b>Sum 7 PCB</b>		<b>41,1</b>	

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 Analysis



Encl. to measuring report: O-4217  
NILU-Sample number: 06/1048  
Customer: CAMP 2006  
Customers sample ID: Bi 21-28.8.06  
: 0600-0600  
Sample type: Precipitation  
Sample amount: 3,10 l  
Concentration units: pg/l  
Data files: VB258

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		32,6 b	53
$\alpha$ -HCH		287	69
$\gamma$ -HCH		415	83
2,4,4'-TriCB	28	4,57 b	66
2,2',5,5'-TetCB	52	5,46 b	61
2,2',4,5,5'-PenCB	101	5,14	55
2,3',4,4',5'-PenCB	118	4,29	64
2,2',3,4,4',5'-HexCB	138	4,37	62
2,2',4,4',5,5'-HexCB	153	8,69 b	50
2,2',3,4,4',5,5'-HepCB	180	3,13	62
<b>Sum 7 PCB</b>		<b>35,7</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1081  
 Customer: CAMP 2006  
 Customers sample ID: Bi 28.8-2.9.06  
 : 0600-2300  
 Sample type: Precipitation  
 Sample amount: 2,17 l  
 Concentration units: pg/l  
 Data files: VB258B

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		22,7 b	46
$\alpha$ -HCH		266	58
$\gamma$ -HCH		288	66
2,4,4'-TriCB	28	4,91 b	61
2,2',5,5'-TetCB	52	5,96 b	55
2,2',4,5,5'-PenCB	101	5,58	52
2,3',4,4',5'-PenCB	118	4,79	63
2,2',3,4,4',5'-HexCB	138	3,80	58
2,2',4,4',5,5'-HexCB	153	7,50 b	51
2,2',3,4,4',5,5'-HepCB	180	2,09	55
<b>Sum 7 PCB</b>		<b>34,6</b>	

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 Analysis



Kjeller, 15.05.2007

Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1185  
 Customer: CAMP 2006  
 Customers sample ID: Bi 2-4.9.06  
 : 2300-0600  
 Sample type: Precipitation  
 Sample amount: 2,13 l  
 Concentration units: pg/l  
 Data files: VB258B

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		97,4	43
$\alpha$ -HCH		272	59
$\gamma$ -HCH		475	70
2,4,4'-TriCB	28	9,20 b	64
2,2',5,5'-TetCB	52	10,6 b	67
2,2',4,5,5'-PenCB	101	10,7	67
2,3',4,4',5-PenCB	118	10,2	72
2,2',3,4,4',5'-HexCB	138	7,48	76
2,2',4,4',5,5'-HexCB	153	11,9 b	66
2,2',3,4,4',5,5'-HepCB	180	4,44	84
<b>Sum 7 PCB</b>		<b>64,5</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1186  
 Customer: CAMP 06  
 Customers sample ID: Bi 4-11.9.06  
 : 0600-0600  
 Sample type: Precipitation  
 Sample amount: 0,80 l  
 Concentration units: pg/l  
 Data files: M\_30\_01\_07

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		326	43
$\alpha$ -HCH		479	62
$\gamma$ -HCH		276	71
2,4,4'-TriCB	28	13,3 b	68
2,2',5,5'-TetCB	52	12,3 b	73
2,2',4,5,5'-PenCB	101	12,4	81
2,3',4,4',5'-PenCB	118	10,7	87
2,2',3,4,4',5'-HexCB	138	10,4	90
2,2',4,4',5,5'-HexCB	153	19,4 b	89
2,2',3,4,4',5,5'-HepCB	180	6,58	93
<b>Sum 7 PCB</b>		<b>85,0</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1261+1262+1263+1268  
 Customer: CAMP 06  
 Customers sample ID: Bi 25.9-2.10.06  
 : 0600-0600  
 Sample type: Precipitation  
 Sample amount: 7,29 l  
 Concentration units: pg/l  
 Data files: M\_19\_01\_07

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		163	45
$\alpha$ -HCH		158	65
$\gamma$ -HCH		665	74
2,4,4'-TriCB	28	6,50	71
2,2',5,5'-TetCB	52	4,97 b	75
2,2',4,5,5'-PenCB	101	4,79	84
2,3',4,4',5-PenCB	118	3,12	91
2,2',3,4,4',5'-HexCB	138	3,90	92
2,2',4,4',5,5'-HexCB	153	5,40	92
2,2',3,4,4',5,5'-HepCB	180	2,62	100
<b>Sum 7 PCB</b>		<b>31,3</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1269+1270+1271  
 Customer: CAMP 06  
 Customers sample ID: Bi 2-9.10.06  
 : 0600-0600  
 Sample type: Precipitation  
 Sample amount: 3,98 l  
 Concentration units: pg/l  
 Data files: M\_30\_01\_07

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		130	40
$\alpha$ -HCH		227	59
$\gamma$ -HCH		319	70
2,4,4'-TriCB	28	5,82 b	64
2,2',5,5'-TetCB	52	4,86 b	69
2,2',4,5,5'-PenCB	101	3,90	80
2,3',4,4',5-PenCB	118	2,87	90
2,2',3,4,4',5'-HexCB	138	3,59	93
2,2',4,4',5,5'-HexCB	153	5,90 b	91
2,2',3,4,4',5,5'-HepCB	180	1,55	98
<b>Sum 7 PCB</b>		<b>28,5</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1342  
 Customer: CAMP 06  
 Customers sample ID: Bi 9-16.10.06  
 : 0600-0600  
 Sample type: Precipitation  
 Sample amount: 0,80 l  
 Concentration units: pg/l  
 Data files: M\_19\_01\_07

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		94,5 b	41
$\alpha$ -HCH		220	55
$\gamma$ -HCH		245	60
2,4,4'-TriCB	28	29,9 b	62
2,2',5,5'-TetCB	52	23,7 b	69
2,2',4,5,5'-PenCB	101	19,7	79
2,3',4,4',5-PenCB	118	15,1	84
2,2',3,4,4',5'-HexCB	138	17,5	90
2,2',4,4',5,5'-HexCB	153	25,8 b	88
2,2',3,4,4',5,5'-HepCB	180	13,7	97
<b>Sum 7 PCB</b>		<b>146</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1343  
 Customer: CAMP 06  
 Customers sample ID: Bi 16-23.10.06  
 : 0600-0600  
 Sample type: Precipitation  
 Sample amount: 3,12 l  
 Concentration units: pg/l  
 Data files: M\_19\_01\_07

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		169	45
$\alpha$ -HCH		233	54
$\gamma$ -HCH		623	60
2,4,4'-TriCB	28	11,9	65
2,2',5,5'-TetCB	52	9,56 b	70
2,2',4,5,5'-PenCB	101	9,82	81
2,3',4,4',5'-PenCB	118	6,31	89
2,2',3,4,4',5'-HexCB	138	8,99	89
2,2',4,4',5,5'-HexCB	153	13,3	89
2,2',3,4,4',5,5'-HepCB	180	4,22 i	92
<b>Sum 7 PCB</b>		<b>64,1</b>	

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 Analysis



Encl. to measuring report: O-4217  
NILU-Sample number: 06/1368  
Customer: CAMP 06  
Customers sample ID: Bi 23-30.10.06  
: 0600-0600  
Sample type: Precipitation  
Sample amount: 4,23 l  
Concentration units: pg/l  
Data files: M\_19\_01\_07

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		76,6	40
$\alpha$ -HCH		240	56

# Results of HCH and 7 PCB Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1506  
 Customer: CAMP 2006  
 Customers sample ID: 30.10-31.10.06 + 31.10-6.11.06

Kjeller, 15.05.2007

Sample type: Precipitation  
 Sample amount: 1,27 l  
 Concentration units: pg/l  
 Data files: VB258B

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		74,6 b	40
$\alpha$ -HCH		247	55
$\gamma$ -HCH		227	69
2,4,4'-TriCB	28	17,5 b	63
2,2',5,5'-TetCB	52	34,0	68
2,2',4,5,5'-PenCB	101	44,7	70
2,3',4,4',5'-PenCB	118	33,7	77
2,2',3,4,4',5'-HexCB	138	23,5	81
2,2',4,4',5,5'-HexCB	153	68,0	69
2,2',3,4,4',5,5'-HepCB	180	6,30	86
<b>Sum 7 PCB</b>		<b>228</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1507  
 Customer: CAMP 2006  
 Customers sample ID: Bi 6-13.11.06

Kjeller, 15.05.2007

:  
 Sample type: Precipitation  
 Sample amount: 0,66 l  
 Concentration units: pg/l  
 Data files: VB258B

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		173 b	45
$\alpha$ -HCH		277	60
$\gamma$ -HCH		376	73
2,4,4'-TriCB	28	28,7 b	69
2,2',5,5'-TetCB	52	47,0 b	71
2,2',4,5,5'-PenCB	101	70,8	72
2,3',4,4',5'-PenCB	118	104	79
2,2',3,4,4',5'-HexCB	138	92,0	84
2,2',4,4',5,5'-HexCB	153	130	71
2,2',3,4,4',5,5'-HepCB	180	27,3	90
<b>Sum 7 PCB</b>		<b>500</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1522 + 06/1523  
 Customer: CAMP 2006  
 Customers sample ID: Bi 13-20.11.06

Kjeller, 15.05.2007

:  
 Sample type: Precipitation  
 Sample amount: 4,65 l  
 Concentration units: pg/l  
 Data files: VB258B

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		27,4 b	36
$\alpha$ -HCH		223	50
$\gamma$ -HCH		821	61
2,4,4'-TriCB	28	14,6	56
2,2',5,5'-TetCB	52	9,51	61
2,2',4,5,5'-PenCB	101	9,84	63
2,3',4,4',5-PenCB	118	5,94	72
2,2',3,4,4',5'-HexCB	138	9,07	77
2,2',4,4',5,5'-HexCB	153	12,8	63
2,2',3,4,4',5,5'-HepCB	180	7,69	90
<b>Sum 7 PCB</b>		<b>69,5</b>	

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 Analysis



Encl. to measuring report: O-4217

Kjeller, 15.05.2007

NILU-Sample number: 06/1577 + 06/1586

Customer: CAMP 2006

Customers sample ID: Bi 20-24.11.06

:

Sample type: Precipitation

Sample amount: 4,24 l

Concentration units: pg/l

Data files: VB258B

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		30,5 b	38
$\alpha$ -HCH		226	53
$\gamma$ -HCH		304	66
2,4,4'-TriCB	28	24,3	62
2,2',5,5'-TetCB	52	18,7	66
2,2',4,5,5'-PenCB	101	21,3	71
2,3',4,4',5'-PenCB	118	17,1	82
2,2',3,4,4',5'-HexCB	138	26,2	84
2,2',4,4',5,5'-HexCB	153	46,4	73
2,2',3,4,4',5,5'-HepCB	180	20,0	101
<b>Sum 7 PCB</b>		<b>174</b>	

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 Analysis



Encl. to measuring report: O-4217

Kjeller, 15.05.2007

NILU-Sample number: 06/1587+1588+1589+1636+1637

Customer: CAMP 2006

Customers sample ID: Bi 25-27.11.06

:

Sample type: Precipitation

Sample amount: 4,60 l

Concentration units: pg/l

Data files: VB258B

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		35,6 b	28
$\alpha$ -HCH		210	40
$\gamma$ -HCH		671	52
2,4,4'-TriCB	28	18,4	55
2,2',5,5'-TetCB	52	27,6	59
2,2',4,5,5'-PenCB	101	54,1	68
2,3',4,4',5-PenCB	118	43,1	82
2,2',3,4,4',5'-HexCB	138	67,6	82
2,2',4,4',5,5'-HexCB	153	119	72
2,2',3,4,4',5,5'-HepCB	180	33,7	100
<b>Sum 7 PCB</b>		<b>364</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1638  
 Customer: CAMP 2006  
 Customers sample ID: 27-29.11.06 + 29.11-2.12.06 +  
 : 2-4.12.06 (overfylt)  
 Sample type: Precipitation  
 Sample amount: 3,14 l  
 Concentration units: pg/l  
 Data files: VB258B

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		33,7 b	34
$\alpha$ -HCH		181	46
$\gamma$ -HCH		642	58
2,4,4'-TriCB	28	8,57 b	56
2,2',5,5'-TetCB	52	12,4 b	61
2,2',4,5,5'-PenCB	101	13,8	68
2,3',4,4',5-PenCB	118	10,7	84
2,2',3,4,4',5'-HexCB	138	17,2	85
2,2',4,4',5,5'-HexCB	153	25,8	72
2,2',3,4,4',5,5'-HepCB	180	12,4	95
<b>Sum 7 PCB</b>		<b>101</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1686 a  
 Customer: CAMP 2006  
 Customers sample ID: Bi 4-7.12.06  
 : 0600-1545  
 Sample type: Precipitation  
 Sample amount: 3,42 l  
 Concentration units: pg/l  
 Data files: VB258B

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		21,7 b	34
$\alpha$ -HCH		188	47
$\gamma$ -HCH		241	62
2,4,4'-TriCB	28	6,71 b	57
2,2',5,5'-TetCB	52	10,2 b	61
2,2',4,5,5'-PenCB	101	9,77	65
2,3',4,4',5-PenCB	118	13,3	75
2,2',3,4,4',5'-HexCB	138	12,5	79
2,2',4,4',5,5'-HexCB	153	27,6	66
2,2',3,4,4',5,5'-HepCB	180	5,94	100
<b>Sum 7 PCB</b>		<b>86,0</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1686 b  
 Customer: CAMP 2006  
 Customers sample ID: Bi 7-11.12.06  
 : 1545-0600  
 Sample type: Precipitation  
 Sample amount: 2,97 l  
 Concentration units: pg/l  
 Data files: VB258B

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCB		44,7 b	74
$\alpha$ -HCH		213	78
$\gamma$ -HCH		252	83
2,4,4'-TriCB	28	13,0	102
2,2',5,5'-TetCB	52	15,8	92
2,2',4,5,5'-PenCB	101	10,8	70
2,3',4,4',5-PenCB	118	6,99	162
2,2',3,4,4',5'-HexCB	138	8,79	153
2,2',4,4',5,5'-HexCB	153	16,5	167
2,2',3,4,4',5,5'-HepCB	180	4,09	261
<b>Sum 7 PCB</b>		<b>76,0</b>	

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 Analysis



Encl. to measuring report: O-4217  
 NILU-Sample number: 06/1709  
 Customer: CAMP 2006  
 Customers sample ID: Bi 11-18.12.06  
 : 0600.0600  
 Sample type: Precipitation  
 Sample amount: 2,26 l  
 Concentration units: pg/l  
 Data files: VB258B

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		43,0 b	14
$\alpha$ -HCH		210	27
$\gamma$ -HCH		205	48
2,4,4'-TriCB	28	16,7	50
2,2',5,5'-TetCB	52	15,8 b	64
2,2',4,5,5'-PenCB	101	18,7	79
2,3',4,4',5'-PenCB	118	61,7	103
2,2',3,4,4',5'-HexCB	138	54,4	105
2,2',4,4',5,5'-HexCB	153	138	89
2,2',3,4,4',5,5'-HepCB	180	25,3	105
<b>Sum 7 PCB</b>		<b>331</b>	

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 Analysis



Encl. to measuring report: O-4217  
NILU-Sample number: 07/55  
Customer: CAMP 2006  
Customers sample ID: Bi 25.12.06 - 1.1.07  
: 0600-0600  
Sample type: Precipitation  
Sample amount: 4,42 l  
Concentration units: pg/l  
Data files: VB258B

Kjeller, 15.05.2007

Compound		Concentration	Recovery
Structure	IUPAC-no.	pg/l	%
HCb		46,1	41
$\alpha$ -HCH		172	55
$\gamma$ -HCH		527	65
2,4,4'-TriCB	28	6,53 b	64
2,2',5,5'-TetCB	52	15,2	63
2,2',4,5,5'-PenCB	101	16,2	63
2,3',4,4',5'-PenCB	118	11,3	76
2,2',3,4,4',5'-HexCB	138	20,4	75
2,2',4,4',5,5'-HexCB	153	29,9	66
2,2',3,4,4',5,5'-HepCB	180	17,4	84
<b>Sum 7 PCB</b>		<b>117</b>	

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

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### **Vedlegg 3**

## **Organiske forbindelser i luft i Ny-Ålesund (O-4100)**

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## Målerapport nr. O-4100

**Oppdragsgiver:** Statens forurensningstilsyn  
Postboks 8100 Dep  
0032 OSLO

**Prosjekt nr.:** O-93062

**Prøvetaking:**

**Sted:** Ny-Ålesund  
**Ansvar:** NILU/Norsk Polarinstitutt  
**Kommentar:**

### Prøveinformasjon:

NILU prøvenr.	Kundens prøvemerkning	Prøvetype	Prøven mottatt	Prøven analysert
06/241	2-4.1.06 0738-1017 160-145	Luft	15.02.06	15.02.06 – 30.03.07
06/242	9-11.1.06 0752-0802 160-158	Luft	"	"
06/243	16-18.1.06 1240-0807 160-158	Luft	"	"
06/244	24-26.1.06 0910-0747 160-156	Luft	"	"
06/245	30.1.06-1.2.06 0906-0957 160-150	Luft	"	22.06.06 – 30.03.07
06/582	6-8.2.06 0820-0813 160-155	Luft	12.05.06	"
06/583	13-15.2.06 0754-0809 160-158	Luft	"	"
06/584	20-22.2.06 0915-0817 160-140 (snø på filter)	Luft	"	"
06/585	27.2-1.3.06 0839-0858 160-158	Luft	"	"
06/586	6-8.3.06 0802-0810 160-150	Luft	"	"
06/587	13-15.3.06 0830-0814 160-158 (snø på filter)	Luft	"	"
06/588	20-22.3.06 0856-0755 160-157	Luft	"	"
06/589	27-29.3.06 0919-0730 160-142	Luft	"	"
06/590	3-6.4.06 0728-0820 160-147	Luft	"	"
06/591	10-12.4.06 0748-0809 160-155	Luft	"	"
06/592	17-19.4.06 1057-0712 160-145	Luft	"	"
06/593	24-26.4.06 0706-0704 160-160	Luft	"	"
06/736	1-3.5.06 1014-0838 160-148	Luft	19.05.06	"
06/737	5-8.5.06 1001-0725 160-153	Luft	"	"
06/738	8-10.5.06 0805-0705 160-155	Luft	"	"
06/784	15-17.5.06 0700-0754 160-156	Luft	28.06.06	28.07.06 – 30.03.07
06/786	22-24.5.06 0850-1058 160-150	Luft	"	"
06/785	29-31.5.06 0750-0800 160-152	Luft	"	"
06/787	5-7.6.06 0800-0748 160-155	Luft	"	"
06/788	12-14.6.06 0835-0718 160-146	Luft	"	04.09.06 – 30.03.07
06/939	19-21.6.06 0820-0832 160-155	Luft	14.08.06	"
06/941	26-28.6.06 0738-0854 160-154	Luft	"	"
06/942	03-05.7.06 0806-0748 160-157	Luft	"	06.09.06 – 30.03.07
06/943	10-12.7.06 0730-0820 160-152	Luft	"	"
06/944	17-19.7.06 0725-0835 160-155	Luft	"	"
06/945	24-26.7.06 0813-0752 160-155	Luft	"	"
06/946	31.7-2.8.06 0657-0700 160-157	Luft	"	25.09.06 – 30.03.07
06/1121	7-9.8.06 0843-0727 160-160	Luft	13.09.06	"
06/1122	14-16.8.06 0802-0720 160-160	Luft	"	27.09.06 – 30.03.07
06/1123	21-23.8.06 0725-0705 160-158	Luft	"	"
06/1124	28-30.8.06 0804-0724 160-160	Luft	"	"

06/1470	4-6.9.06	0817-0730	160-160	Luft	15.11.06	13.12.06 – 30.03.07
06/1471	11-13.9.06	0640-0718	160-158	Luft	"	"
06/1472	18-20.9.06	0759-0723	160-150	Luft	"	"
06/1473	25-27.9.06	0725-0709	160-160	Luft	"	"
06/1474	2-4.10.06	0806-0706	160-158	Luft	"	"
06/1475	9-11.10.06	0738-0717	160-155	Luft	"	18.12.06 – 30.03.07
06/1476	16-18.10.06	0810-0714	160-156	Luft	"	"
06/1477	23-25.10.06	0701-0700	160-160	Luft	"	"
06/1478	30.10-1.11.06	0820-0945	160-155	Luft	"	"
07/100	6-8.11.06	0935-0816	160-150	Luft	10.10.07	05.02 – 30.03.07
07/101	13-15.11.06	0807-0850	160-154	Luft	"	"
07/102	20-22.11.06	0915-0813	160-155	Luft	"	"
07/103	27-29.11.06	0822-0955	160-150	Luft	"	"
07/104	4-6.12.06	0754-0908	160-155	Luft	"	07.02 – 30.03.07
07/105	11-13.12.06	0758-0858	160-155	Luft	"	"
07/448	18-20.12.06	0943-0821	160-141	Luft	14.02.07	22.02. – 30.03.07
07/452	27-29.12.06	0849-1003	160-156	Luft	"	"

**Analyser:**

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: Pga av mistanke om kontaminering rapporteres følgende prøver uten akkreditering : 06/582, 06/738, 06/784, 06/785, 06/786, 06/787

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/241  
 Customer: AMAP 2006  
 Customers sample ID: 2-4.1.06 0738-1017  
 : 160-145  
 Sample type: Air  
 Sample amount: 1 166 m3  
 Concentration units: pg/m3  
 Data files: M\_01\_09\_06\_B

Kjeller, 25.09.2006

Compound	Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB			22,7	25	
HCB			62,0	32	
2,2',5'-TriCB		18	3,92	52	
<b>2,4,4'-TriCB</b>		<b>28</b>	<b>2,34</b>		
2,4',5'-TriCB		31	2,18		
2',3,4'-TriCB		33	1,57		
3,4,4'-TriCB		37	0,19		
<b>Sum-TriCB</b>			<b>15,2</b>		
2,2',4,4'-TetCB		47	0,46	56	
<b>2,2',5,5'-TetCB</b>		<b>52</b>	<b>1,10</b>		
2,3',4,4'-TetCB		66	0,26 b		
2,4,4',5'-TetCB		74	0,17 b		
<b>Sum-TetCB</b>			<b>4,53</b>		
2,2',4,4',5'-PenCB		99	0,18 b	66	
<b>2,2',4,5,5'-PenCB</b>		<b>101</b>	<b>0,43</b> b		
2,3,3',4,4'-PenCB		105	0,04 b		
2,3,4,4',5'-PenCB		114	< 0,01		
<b>2,3',4,4',5'-PenCB</b>		<b>118</b>	<b>0,14</b> b		
2'3,3',4,5'-PenCB		122	< 0,01		
2',3,4,4',5'-PenCB		123	< 0,01		
<b>Sum-PenCB</b>			<b>1,30</b>		
2,2',3,3',4,4'-HexCB		128	0,02 b		74
<b>2,2',3,4,4',5'-HexCB</b>		<b>138</b>	<b>0,12</b> b		
2,2',3,4,5,5'-HexCB		141	0,03 b		
2,2',3,4',5',6'-HexCB		149	0,21 b		
<b>2,2',4,4',5,5'-HexCB</b>		<b>153</b>	<b>0,21</b> 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		
<b>Sum-HexCB</b>			<b>0,93</b>		
2,2',3,3',4,4',5'-HepCB		170	0,01 b	76	
<b>2,2',3,4,4',5,5'-HepCB</b>		<b>180</b>	<b>0,06</b> b		
2,2',3,4,4',5',6'-HepCB		183	0,02 b		
2,2',3,4',5,5',6'-HepCB		187	0,05 b		
2,3,3',4,4',5,5'-HepCB		189	< 0,01		
<b>Sum-HepCB</b>			<b>0,16</b>		
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		
<b>Sum 7 PCB</b>			<b>4,40</b>		
<b>Sum PCB</b>			<b>22,2</b>		<b>0,04</b>

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)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/242  
 Customer: AMAP 2006  
 Customers sample ID: 9-11.1.06 0752-0802  
 : 160-158

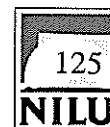
Kjeller, 25.09.2006

Sample type: Air  
 Sample amount: 1 154 m<sup>3</sup>  
 Concentration units: pg/m<sup>3</sup>  
 Data files: M\_01\_09\_06\_B

Compound Structure	IUPAC-no.	Concentration pg/m <sup>3</sup>	Recovery %	TE (WHO) fg/ m <sup>3</sup>
PeCB		15,3	34	
HCB		53,6	45	
2,2',5-TriCB	18	4,27		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>2,59</b>	66	
2,4',5-TriCB	31	2,43		
2',3,4-TriCB	33	1,77		
3,4,4'-TriCB	37	0,24		
<b>Sum-TriCB</b>		<b>16,9</b>		
2,2',4,4'-TetCB	47	0,61		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,26</b>	69	
2,3',4,4'-TetCB	66	0,33 b		
2,4,4',5-TetCB	74	0,21 b		
<b>Sum-TetCB</b>		<b>5,16</b>		
2,2',4,4',5-PenCB	99	0,25		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,61</b> b	80	
2,3,3',4,4'-PenCB	105	0,08 b	83	0,01
2,3,4,4',5-PenCB	114	< 0,01	83	0,01
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,28</b> b	83	0,03
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	83	0,00
<b>Sum-PenCB</b>		<b>2,00</b>		
2,2',3,3',4,4'-HexCB	128	0,04		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,29</b>	81	
2,2',3,4,5,5'-HexCB	141	0,05 b		
2,2',3,4',5',6-HexCB	149	0,33 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,49</b>	81	
2,3,3',4,4',5-HexCB	156	0,02	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	83	0,00
<b>Sum-HexCB</b>		<b>1,88</b>		
2,2',3,3',4,4',5-HepCB	170	0,03 b		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,10</b>	78	
2,2',3,4,4',5',6-HepCB	183	0,03 b		
2,2',3,4',5,5',6-HepCB	187	0,10		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	79	0,00
<b>Sum-HepCB</b>		<b>0,33</b>		
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		
<b>Sum 7 PCB</b>		<b>5,63</b>	80	
<b>Sum PCB</b>		<b>26,3</b>		<b>0,06</b>

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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/243  
 Customer: AMAP 2006  
 Customers sample ID: 16-18.1.06 1240-0807  
 : 160-158

Kjeller, 25.09.2006

Sample type: Air  
 Sample amount: 1 042 m3  
 Concentration units: pg/m3  
 Data files: M\_01\_09\_06\_B

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/ m3
PeCB		16,7	32	
HCB		55,6	41	
2,2',5-TriCB	18	4,04	60	
2,4,4'-TriCB	28	2,45		
2,4',5-TriCB	31	2,31		
2',3,4-TriCB	33	1,71		
3,4,4'-TriCB	37	0,20		
<b>Sum-TriCB</b>		<b>16,0</b>		
2,2',4,4'-TetCB	47	0,50	62	
2,2',5,5'-TetCB	52	1,13		
2,3',4,4'-TetCB	66	0,24 b		
2,4,4',5-TetCB	74	0,16 b		
<b>Sum-TetCB</b>		<b>4,55</b>		
2,2',4,4',5-PenCB	99	0,17 b	70	0,00
2,2',4,5,5'-PenCB	101	0,44 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	0,12 b		
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
<b>Sum-PenCB</b>		<b>1,29</b>		
2,2',3,3',4,4'-HexCB	128	0,02 b		
2,2',3,4,4',5'-HexCB	138	0,14 b		
2,2',3,4,5,5'-HexCB	141	0,04 b		
2,2',3,4',5',6-HexCB	149	0,24 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		
<b>Sum-HexCB</b>		<b>1,06</b>		
2,2',3,3',4,4',5-HepCB	170	0,02 b	75	
2,2',3,4,4',5,5'-HepCB	180	0,07 b		
2,2',3,4,4',5',6-HepCB	183	0,02 b		
2,2',3,4',5,5',6-HepCB	187	0,06 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
<b>Sum-HepCB</b>		<b>0,22</b>		
2,2',3,3',4,4',5,5'-OctCB	194	0,01 b	84	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
<b>Sum 7 PCB</b>		<b>4,57</b>		
<b>Sum PCB</b>		<b>23,1</b>		<b>0,03</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)  
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 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)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/244  
 Customer: AMAP 2006  
 Customers sample ID: 24-26.1.06 0910-0747  
 : 160-156  
 Sample type: Air  
 Sample amount: 1 109 m3  
 Concentration units: pg/m3  
 Data files: M\_01\_09\_06\_B

Kjeller, 25.09.2006

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/ m3
PeCB		20,5	34	
HCB		47,7	45	
2,2',5-TriCB	18	3,26		
2,4,4'-TriCB	28	1,93	68	
2,4',5-TriCB	31	1,80		
2',3,4-TriCB	33	1,32		
3,4,4'-TriCB	37	0,19		
<b>Sum-TriCB</b>		<b>12,7</b>		
2,2',4,4'-TetCB	47	1,05		
2,2',5,5'-TetCB	52	0,89	69	
2,3',4,4'-TetCB	66	0,22 b		
2,4,4',5-TetCB	74	0,14 b		
<b>Sum-TetCB</b>		<b>4,66</b>		
2,2',4,4',5-PenCB	99	0,13 b		
2,2',4,5,5'-PenCB	101	0,33 b	79	
2,3,3',4,4'-PenCB	105	0,03 b	83	0,00
2,3,4,4',5-PenCB	114	< 0,01	81	0,01
2,3',4,4',5-PenCB	118	0,10 b	81	0,01
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	81	0,00
<b>Sum-PenCB</b>		<b>0,96</b>		
2,2',3,3',4,4'-HexCB	128	0,01 b		
2,2',3,4,4',5'-HexCB	138	0,09 b	80	
2,2',3,4,5,5'-HexCB	141	0,02 b		
2,2',3,4',5',6-HexCB	149	0,16 b		
2,2',4,4',5,5'-HexCB	153	0,16 b	80	
2,3,3',4,4',5-HexCB	156	< 0,01	85	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	85	0,00
<b>Sum-HexCB</b>		<b>0,72</b>		
2,2',3,3',4,4',5-HepCB	170	< 0,01		
2,2',3,4,4',5,5'-HepCB	180	0,03 b	83	
2,2',3,4,4',5',6-HepCB	183	0,01 b		
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
<b>Sum-HepCB</b>		<b>0,09</b>		
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 b	85	
<b>Sum 7 PCB</b>		<b>3,52</b>		
<b>Sum PCB</b>		<b>19,1</b>		<b>0,03</b>

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



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/245  
 Customer: AMAP 2006  
 Customers sample ID: 30.1.06-1.2.06 0906-0957  
 : 160-150  
 Sample type: Air  
 Sample amount: 1 142 m3  
 Concentration units: pg/m3  
 Data files: VB130

Kjeller, 21.09.2006

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/m3
PeCB		25,1	28	
HCB		54,8	34	
2,2',5-TriCB	18	3,56	48	
2,4,4'-TriCB	28	2,00		
2,4',5-TriCB	31	1,95		
2',3,4-TriCB	33	1,44		
3,4,4'-TriCB	37	0,18		
<b>Sum-TriCB</b>		<b>13,7</b>		
2,2',4,4'-TetCB	47	0,66	52	
2,2',5,5'-TetCB	52	0,98		
2,3',4,4'-TetCB	66	0,22 b		
2,4,4',5-TetCB	74	0,14 b		
<b>Sum-TetCB</b>		<b>4,30</b>		
2,2',4,4',5-PenCB	99	0,13 b	71	
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	0,09 b		
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
<b>Sum-PenCB</b>		<b>0,97</b>		
2,2',3,3',4,4'-HexCB	128	0,01 b		84
2,2',3,4,4',5'-HexCB	138	0,08 b		
2,2',3,4,5,5'-HexCB	141	0,02 b		
2,2',3,4',5',6-HexCB	149	0,15 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		
<b>Sum-HexCB</b>		<b>0,60</b>		
2,2',3,3',4,4',5-HepCB	170	< 0,01	94	
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		
<b>Sum-HepCB</b>		<b>0,08</b>		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	96	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	0,02 b		
<b>Sum 7 PCB</b>		<b>3,63</b>		
<b>Sum PCB</b>		<b>19,6</b>		<b>0,03</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)  
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 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)

12. versjon 13.03.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/582  
 Customer: AMAP 2006  
 Customers sample ID: 6-8.2.06 0820-0813  
 : 160-155  
 Sample type: Air  
 Sample amount: 1 138 m3  
 Concentration units: pg/m3  
 Data files: DH901

Kjeller, 22.09.2006

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/ m3
PeCB		28,2	31	
HCB		58,9	34	
2,2',5-TriCB	18	3,74		
2,4,4'-TriCB	28	2,24	57	
2,4',5-TriCB	31	2,12		
2',3,4-TriCB	33	1,54		
3,4,4'-TriCB	37	0,20		
<b>Sum-TriCB</b>		<b>15,0</b>		
2,2',4,4'-TetCB	47	0,56		
2,2',5,5'-TetCB	52	1,04	52	
2,3',4,4'-TetCB	66	0,36 b		
2,4,4',5-TetCB	74	0,28		
<b>Sum-TetCB</b>		<b>4,57</b>		
2,2',4,4',5-PenCB	99	0,64		
2,2',4,5,5'-PenCB	101	0,33 b	70	
2,3,3',4,4'-PenCB	105	0,10	72	0,01
2,3,4,4',5-PenCB	114	0,02	64	0,01
2,3',4,4',5-PenCB	118	0,63	70	0,06
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	0,01	71	0,00
<b>Sum-PenCB</b>		<b>2,21</b>		
2,2',3,3',4,4'-HexCB	128	0,05		
2,2',3,4,4',5'-HexCB	138	0,49	71	
2,2',3,4,5,5'-HexCB	141	0,02 b		
2,2',3,4',5',6-HexCB	149	0,15 b		
2,2',4,4',5,5'-HexCB	153	1,77	70	
2,3,3',4,4',5-HexCB	156	0,03	71	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	71	0,01
2,3',4,4',5,5'-HexCB	167	0,02	71	0,00
<b>Sum-HexCB</b>		<b>2,78</b>		
2,2',3,3',4,4',5-HepCB	170	0,03 b		
2,2',3,4,4',5,5'-HepCB	180	0,19	72	
2,2',3,4,4',5',6-HepCB	183	0,07		
2,2',3,4',5,5',6-HepCB	187	0,06 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	68	0,00
<b>Sum-HepCB</b>		<b>0,36</b>		
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	68	
<b>Sum 7 PCB</b>		<b>6,70</b>		
<b>Sum PCB</b>		<b>25,0</b>		<b>0,10</b>

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)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/583  
 Customer: AMAP 2006  
 Customers sample ID: 13-15.2.06 0754-0809  
 : 160-158

Kjeller, 21.09.2006

Sample type: Air  
 Sample amount: 1 157 m3  
 Concentration units: pg/m3  
 Data files: VB130

Compound	Structure	IUPAC-no.	Concentration	Recovery	TE (WHO)
			pg/m3	%	fg/m3
PeCB			31,2	34	
HCB			58,5	45	
2,2',5-TriCB		18	3,84	65	
<b>2,4,4'-TriCB</b>		<b>28</b>	<b>2,30</b>		
2,4',5-TriCB		31	2,18		
2',3,4-TriCB		33	1,63		
3,4,4'-TriCB		37	0,18		
<b>Sum-TriCB</b>			<b>15,1</b>		
2,2',4,4'-TetCB		47	0,52	67	
<b>2,2',5,5'-TetCB</b>		<b>52</b>	<b>1,03</b>		
2,3',4,4'-TetCB		66	0,21 b		
2,4,4',5-TetCB		74	0,14 b		
<b>Sum-TetCB</b>			<b>4,23</b>		
2,2',4,4',5-PenCB		99	0,14 b	75	
<b>2,2',4,5,5'-PenCB</b>		<b>101</b>	<b>0,34</b> b		
2,3,3',4,4'-PenCB		105	0,04 b		
2,3,4,4',5-PenCB		114	< 0,01		
<b>2,3',4,4',5-PenCB</b>		<b>118</b>	<b>0,12</b> b		
2',3,3',4,5-PenCB		122	< 0,01		
2',3,4,4',5-PenCB		123	< 0,01		
<b>Sum-PenCB</b>			<b>1,08</b>		
2,2',3,3',4,4'-HexCB		128	0,02 b	85	
<b>2,2',3,4,4',5'-HexCB</b>		<b>138</b>	<b>0,09</b> b		
2,2',3,4,5,5'-HexCB		141	0,02 b		
2,2',3,4',5',6-HexCB		149	0,13 b		
<b>2,2',4,4',5,5'-HexCB</b>		<b>153</b>	<b>0,13</b> 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		
<b>Sum-HexCB</b>			<b>0,57</b>		
2,2',3,3',4,4',5-HepCB		170	< 0,01	91	
<b>2,2',3,4,4',5,5'-HepCB</b>		<b>180</b>	<b>0,02</b> 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		
<b>Sum-HepCB</b>			<b>0,08</b>		
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		
<b>Sum 7 PCB</b>			<b>4,03</b>		
<b>Sum PCB</b>			<b>21,0</b>		<b>0,03</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)  
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 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)

12. versjon 13.03.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/584  
 Customer: AMAP 2006  
 Customers sample ID: 20-22.2.06 0915-0817  
 : 160-140 (snø på filter)  
 Sample type: Air  
 Sample amount: 1 062 m3  
 Concentration units: pg/m3  
 Data files: VB130

Kjeller, 21.09.2006

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/m3
PeCB		22,4	42	
HCB		64,7	50	
2,2',5-TriCB	18	4,41	69	
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>2,40</b>		
2,4',5-TriCB	31	2,31		
2',3,4-TriCB	33	1,66		
3,4,4'-TriCB	37	0,19		
<b>Sum-TriCB</b>		<b>16,3</b>		
2,2',4,4'-TetCB	47	0,54	70	
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,29</b>		
2,3',4,4'-TetCB	66	0,29 b		
2,4,4',5-TetCB	74	0,18 b		
<b>Sum-TetCB</b>		<b>5,30</b>		
2,2',4,4',5-PenCB	99	0,22 b	82	
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,56</b> b		
2,3,3',4,4'-PenCB	105	0,06 b		
2,3,4,4',5-PenCB	114	< 0,01		
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,18</b> b		
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
<b>Sum-PenCB</b>		<b>1,86</b>		
2,2',3,3',4,4'-HexCB	128	0,03 b	85	
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,19</b> b		
2,2',3,4,5,5'-HexCB	141	0,05 b		
2,2',3,4',5',6-HexCB	149	0,31 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,31</b> 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		
<b>Sum-HexCB</b>		<b>1,42</b>		
2,2',3,3',4,4',5-HepCB	170	0,02 b		90
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,06</b> b		
2,2',3,4,4',5',6-HepCB	183	0,02 b		
2,2',3,4',5,5',6-HepCB	187	0,07 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
<b>Sum-HepCB</b>		<b>0,22</b>		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	94	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
<b>Sum 7 PCB</b>		<b>4,98</b>		
<b>Sum PCB</b>		<b>25,2</b>		<b>0,04</b>

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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/585  
 Customer: AMAP 2006  
 Customers sample ID: 27.2-1.3.06 0839-0858  
 : 160-158

Kjeller, 25.09.2006

Sample type: Air  
 Sample amount: 1 157 m3  
 Concentration units: pg/m3  
 Data files: VB130

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		31,7	34	
HCB		60,4	44	
2,2',5-TriCB	18	3,44		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>1,88</b>	60	
2,4',5-TriCB	31	1,82		
2',3,4-TriCB	33	1,25		
3,4,4'-TriCB	37	0,17		
<b>Sum-TriCB</b>		<b>12,8</b>		
2,2',4,4'-TetCB	47	0,54		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,13</b>	62	
2,3',4,4'-TetCB	66	0,27 b		
2,4,4',5-TetCB	74	0,18 b		
<b>Sum-TetCB</b>		<b>4,80</b>		
2,2',4,4',5-PenCB	99	0,19 b		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,46</b> b	72	
2,3,3',4,4'-PenCB	105	0,05 b	81	0,00
2,3,4,4',5-PenCB	114	< 0,01	78	0,01
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,15</b> b	77	0,02
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	78	0,00
<b>Sum-PenCB</b>		<b>1,49</b>		
2,2',3,3',4,4'-HexCB	128	0,02 b		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,11</b> b	83	
2,2',3,4,5,5'-HexCB	141	0,03 b		
2,2',3,4',5',6-HexCB	149	0,18 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,17</b> b	78	
2,3,3',4,4',5-HexCB	156	< 0,01	89	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	90	0,00
<b>Sum-HexCB</b>		<b>0,70</b>		
2,2',3,3',4,4',5-HepCB	170	0,01 b		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,03</b> b	89	
2,2',3,4,4',5',6-HepCB	183	0,01 b		
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
<b>Sum-HepCB</b>		<b>0,11</b>		
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	96	
<b>Sum 7 PCB</b>		<b>3,94</b>		
<b>Sum PCB</b>		<b>19,9</b>		<b>0,04</b>

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)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/586  
 Customer: AMAP 2006  
 Customers sample ID: 6-8.3.06 0802-0810  
 : 160-150  
 Sample type: Air  
 Sample amount: 1 123 m3  
 Concentration units: pg/m3  
 Data files: DH901

Kjeller, 25.09.2006

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/ m3
PeCB		31,3	31	
HCB		60,6	36	
2,2',5-TriCB	18	4,21		
2,4,4'-TriCB	28	2,69	62	
2,4',5-TriCB	31	2,57		
2',3,4-TriCB	33	1,93		
3,4,4'-TriCB	37	0,23		
<b>Sum-TriCB</b>		<b>17,9</b>		
2,2',4,4'-TetCB	47	0,64		
2,2',5,5'-TetCB	52	1,39	60	
2,3',4,4'-TetCB	66	0,36 b		
2,4,4',5-TetCB	74	0,23 b		
<b>Sum-TetCB</b>		<b>6,08</b>		
2,2',4,4',5-PenCB	99	0,29		
2,2',4,5,5'-PenCB	101	0,56 b	72	
2,3,3',4,4'-PenCB	105	0,08 b	79	0,01
2,3,4,4',5-PenCB	114	< 0,01	70	0,01
2,3',4,4',5-PenCB	118	0,28 b	77	0,03
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	77	0,00
<b>Sum-PenCB</b>		<b>1,96</b>		
2,2',3,3',4,4'-HexCB	128	0,03 b		
2,2',3,4,4',5'-HexCB	138	0,28 b	78	
2,2',3,4,5,5'-HexCB	141	0,03 b		
2,2',3,4',5',6-HexCB	149	0,22 b		
2,2',4,4',5,5'-HexCB	153	0,60	75	
2,3,3',4,4',5-HexCB	156	0,02	84	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	87	0,01
2,3',4,4',5,5'-HexCB	167	0,01	82	0,00
<b>Sum-HexCB</b>		<b>1,47</b>		
2,2',3,3',4,4',5-HepCB	170	0,02 b		
2,2',3,4,4',5,5'-HepCB	180	0,12	86	
2,2',3,4,4',5',6-HepCB	183	0,03 b		
2,2',3,4',5,5',6-HepCB	187	0,04 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	88	0,00
<b>Sum-HepCB</b>		<b>0,21</b>		
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	
<b>Sum 7 PCB</b>		<b>5,92</b>		
<b>Sum PCB</b>		<b>27,6</b>		<b>0,06</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)  
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 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 of PCB Analysis



Encl. to measuring report: O-4100

NILU-Sample number: 06/587

Customer: AMAP 2006

Kjeller, 25.09.2006

Customers sample ID: 13-15.3.06 0830-0814

: 160-158--(snø på filter)

Sample type: Air

Sample amount: 1 142 m3

Concentration units: pg/m3

Data files: DH901

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/ m3
PeCB		22,6	42	
HCB		53,3	47	
2,2',5-TriCB	18	3,22		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>1,98</b>	71	
2,4',5-TriCB	31	1,87		
2',3,4-TriCB	33	1,43		
3,4,4'-TriCB	37	0,19		
<b>Sum-TriCB</b>		<b>13,2</b>		
2,2',4,4'-TetCB	47	0,50		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,03</b>	64	
2,3',4,4'-TetCB	66	0,30 b		
2,4,4',5-TetCB	74	0,20 b		
<b>Sum-TetCB</b>		<b>4,69</b>		
2,2',4,4',5-PenCB	99	0,32		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,45</b> b	76	
2,3,3',4,4'-PenCB	105	0,09 b	77	0,01
2,3,4,4',5-PenCB	114	< 0,01	74	0,01
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,36</b>	77	0,04
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	78	0,00
<b>Sum-PenCB</b>		<b>1,91</b>		
2,2',3,3',4,4'-HexCB	128	0,04		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,33</b>	78	
2,2',3,4,5,5'-HexCB	141	0,04 b		
2,2',3,4',5',6-HexCB	149	0,26 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,81</b>	77	
2,3,3',4,4',5-HexCB	156	0,02	78	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	77	0,01
2,3',4,4',5,5'-HexCB	167	0,01	79	0,00
<b>Sum-HexCB</b>		<b>2,00</b>		
2,2',3,3',4,4',5-HepCB	170	0,02 b		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,11</b>	78	
2,2',3,4,4',5',6-HepCB	183	0,04		
2,2',3,4',5,5',6-HepCB	187	0,07 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	74	0,00
<b>Sum-HepCB</b>		<b>0,28</b>		
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	73	
<b>Sum 7 PCB</b>		<b>5,07</b>		
<b>Sum PCB</b>		<b>22,1</b>		<b>0,07</b>

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)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/588  
 Customer: AMAP 2005  
 Customers sample ID: 20-22.3.06 0856-0755  
 : 160-157

Kjeller, 25.09.2006

Sample type: Air  
 Sample amount: 1 123 m<sup>3</sup>  
 Concentration units: pg/m<sup>3</sup>  
 Data files: DH901

Compound	Structure	IUPAC-no.	Concentration	Recovery	TE (WHO)	
			pg/m <sup>3</sup>	%	fg/ m <sup>3</sup>	
PeCB			38,5	36		
HCb			63,6	47		
2,2',5'-TriCB		18	3,62	75		
2,4,4'-TriCB		28	2,03			
2,4',5'-TriCB		31	1,97			
2',3,4'-TriCB		33	1,44			
3,4,4'-TriCB		37	0,15			
<b>Sum-TriCB</b>			<b>14,1</b>			
2,2',4,4'-TetCB		47	0,45	69		
2,2',5,5'-TetCB		52	1,00			
2,3',4,4'-TetCB		66	0,22 b			
2,4,4',5-TetCB		74	0,15 b			
<b>Sum-TetCB</b>			<b>4,12</b>			
2,2',4,4',5-PenCB		99	0,15 b	89		
2,2',4,5,5'-PenCB		101	0,33 b			
2,3,3',4,4'-PenCB		105	0,04 b		0,00	
2,3,4,4',5-PenCB		114	< 0,01		86	0,01
2,3',4,4',5-PenCB		118	0,13 b		91	0,01
2'3,3',4,5-PenCB		122	< 0,01			
2',3,4,4',5-PenCB		123	< 0,01		91	0,00
<b>Sum-PenCB</b>			<b>1,05</b>			
2,2',3,3',4,4'-HexCB		128	0,02 b	94		
2,2',3,4,4',5'-HexCB		138	0,12 b			
2,2',3,4,5,5'-HexCB		141	0,02 b			
2,2',3,4',5',6-HexCB		149	0,14 b			
2,2',4,4',5,5'-HexCB		153	0,25 b		93	
2,3,3',4,4',5-HexCB		156	< 0,01		95	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		96	0,00
<b>Sum-HexCB</b>			<b>0,69</b>			
2,2',3,3',4,4',5-HepCB		170	0,01 b	99		
2,2',3,4,4',5,5'-HepCB		180	0,05 b			
2,2',3,4,4',5',6-HepCB		183	0,01 b			
2,2',3,4',5,5',6-HepCB		187	0,02 b			
2,3,3',4,4',5,5'-HepCB		189	< 0,01		99	0,00
<b>Sum-HepCB</b>			<b>0,11</b>			
2,2',3,3',4,4',5,5'-OctCB		194	< 0,01	99		
2,2',3,3',4,4',5,5',6-NonCB		206	< 0,01			
DecaCB		209	< 0,01			
<b>Sum 7 PCB</b>			<b>3,91</b>			
<b>Sum PCB</b>			<b>20,1</b>		<b>0,03</b>	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)  
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 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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/589  
 Customer: AMAP 2006  
 Customers sample ID: 27-29.3.06 0919-0730  
 : 160-142  
 Sample type: Air  
 Sample amount: 1 051 m3  
 Concentration units: pg/m3  
 Data files: DH901

Kjeller, 25.09.2006

Compound	Structure	IUPAC-no.	Concentration	Recovery	TE (WHO)
			pg/m3	%	fg/ m3
PeCB			65,8	19	
HCB			95,6	31	
2,2',5-TriCB		18	3,38		
2,4,4'-TriCB		28	2,00	75	
2,4',5-TriCB		31	1,78		
2',3,4-TriCB		33	1,27		
3,4,4'-TriCB		37	0,15		
<b>Sum-TriCB</b>			<b>13,1</b>		
2,2',4,4'-TetCB		47	0,49		
2,2',5,5'-TetCB		52	0,99	64	
2,3',4,4'-TetCB		66	0,29 b		
2,4,4',5-TetCB		74	0,20 b		
<b>Sum-TetCB</b>			<b>4,17</b>		
2,2',4,4',5-PenCB		99	0,26 b		
2,2',4,5,5'-PenCB		101	0,40 b	87	
2,3,3',4,4'-PenCB		105	0,05 b	96	0,01
2,3,4,4',5-PenCB		114	< 0,01	85	0,01
2,3',4,4',5-PenCB		118	0,22 b	92	0,02
2'3,3',4,5-PenCB		122	< 0,01		
2',3,4,4',5-PenCB		123	< 0,01	91	0,00
<b>Sum-PenCB</b>			<b>1,44</b>		
2,2',3,3',4,4'-HexCB		128	0,02 b		
2,2',3,4,4',5'-HexCB		138	0,20 b	93	
2,2',3,4,5,5'-HexCB		141	0,02 bi		
2,2',3,4',5',6-HexCB		149	0,19 b		
2,2',4,4',5,5'-HexCB		153	0,50	89	
2,3,3',4,4',5-HexCB		156	0,01 b	97	0,01
2,3,3',4,4',5'-HexCB		157	< 0,01	100	0,01
2,3',4,4',5,5'-HexCB		167	< 0,01	101	0,00
<b>Sum-HexCB</b>			<b>1,19</b>		
2,2',3,3',4,4',5-HepCB		170	0,02 b		
2,2',3,4,4',5,5'-HepCB		180	0,08 b	99	
2,2',3,4,4',5',6-HepCB		183	0,03 b		
2,2',3,4',5,5',6-HepCB		187	0,04 bi		
2,3,3',4,4',5,5'-HepCB		189	< 0,01	103	0,00
<b>Sum-HepCB</b>			<b>0,16</b>		
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	101	
<b>Sum 7 PCB</b>			<b>4,38</b>		
<b>Sum PCB</b>			<b>20,1</b>		<b>0,05</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
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 This may be due to instrumental noise or/and chemical interference  
 b: Lower than 10 times method blank.  
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 TE (WHO): 2378-TCDD toxicity equivalents of the mono-ortho PCB according to the WHO model  
 (M. Van den Berg et al., 1998)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/590  
 Customer: AMAP 2006  
 Customers sample ID: 3-6.4.06 0728-0820  
 : 160-147  
 Sample type: Air  
 Sample amount: 1 688 m3  
 Concentration units: pg/m3  
 Data files: DH901

Kjeller, 25.09.2006

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		31,7	21	
HCB		81,0	37	
2,2',5-TriCB	18	4,64		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>2,65</b>	82	
2,4',5-TriCB	31	2,47		
2',3,4-TriCB	33	1,79		
3,4,4'-TriCB	37	0,17		
<b>Sum-TriCB</b>		<b>17,9</b>		
2,2',4,4'-TetCB	47	0,50		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,18</b>	71	
2,3',4,4'-TetCB	66	0,28		
2,4,4',5-TetCB	74	0,20		
<b>Sum-TetCB</b>		<b>4,96</b>		
2,2',4,4',5-PenCB	99	0,28		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,43</b> b	95	
2,3,3',4,4'-PenCB	105	0,08	99	0,01
2,3,4,4',5-PenCB	114	< 0,01	99	0,01
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,30</b>	98	0,03
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	99	0,00
<b>Sum-PenCB</b>		<b>1,67</b>		
2,2',3,3',4,4'-HexCB	128	0,03		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,26</b>	98	
2,2',3,4,5,5'-HexCB	141	0,03 b		
2,2',3,4',5',6-HexCB	149	0,21 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,66</b>	94	
2,3,3',4,4',5-HexCB	156	0,02	103	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	100	0,01
2,3',4,4',5,5'-HexCB	167	0,01	103	0,00
<b>Sum-HexCB</b>		<b>1,55</b>		
2,2',3,3',4,4',5-HepCB	170	0,02 b		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,08</b>	100	
2,2',3,4,4',5',6-HepCB	183	0,03		
2,2',3,4',5,5',6-HepCB	187	0,05 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	101	0,00
<b>Sum-HepCB</b>		<b>0,18</b>		
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	101	
<b>Sum 7 PCB</b>		<b>5,56</b>		
<b>Sum PCB</b>		<b>26,3</b>		<b>0,06</b>

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 of PCB Analysis



Encl. to measuring report: O-4100

NILU-Sample number: 06/591

Customer: AMAP 2006

Customers sample ID: 10-12.4.06 0748-0809

: 160-155

Sample type: Air

Sample amount: 1 150 m3

Concentration units: pg/m3

Data files: DH901

Kjeller, 25.09.2006

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3	
PeCB		59,4	13		
HCB		101	27		
2,2',5'-TriCB	18	6,40	60		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>3,79</b>			
2,4',5'-TriCB	31	3,59			
2',3,4'-TriCB	33	2,57			
3,4,4'-TriCB	37	0,25			
<b>Sum-TriCB</b>		<b>25,4</b>			
2,2',4,4'-TetCB	47	0,68	58		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,64</b>			
2,3',4,4'-TetCB	66	0,43			
2,4,4',5'-TetCB	74	0,30			
<b>Sum-TetCB</b>		<b>6,87</b>			
2,2',4,4',5'-PenCB	99	0,46	73		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,62</b>		b	
2,3,3',4,4'-PenCB	105	0,12		77	0,01
2,3,4,4',5'-PenCB	114	0,01		70	0,01
<b>2,3',4,4',5'-PenCB</b>	<b>118</b>	<b>0,46</b>		74	0,05
2',3,3',4,5'-PenCB	122	< 0,01			
2',3,4,4',5'-PenCB	123	0,01		76	0,00
<b>Sum-PenCB</b>		<b>2,55</b>			
2,2',3,3',4,4'-HexCB	128	0,05		80	
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,42</b>			
2,2',3,4,5,5'-HexCB	141	0,04	b		
2,2',3,4',5',6'-HexCB	149	0,30	b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>1,07</b>	72		
2,3,3',4,4',5'-HexCB	156	0,03	80		0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	82		0,01
2,3',4,4',5,5'-HexCB	167	0,02	82		0,00
<b>Sum-HexCB</b>		<b>2,30</b>			
2,2',3,3',4,4',5'-HepCB	170	0,03	82		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,16</b>			
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		82	0,00
<b>Sum-HepCB</b>		<b>0,35</b>			
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	84		
<b>Sum 7 PCB</b>		<b>8,16</b>			
<b>Sum PCB</b>		<b>37,5</b>		<b>0,08</b>	

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 NILU's 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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/592  
 Customer: AMAP 2006  
 Customers sample ID: 17-19.4.06 1057-0712  
 : 160-145

Kjeller, 21.09.2006

Sample type: Air  
 Sample amount: 1 019 m3  
 Concentration units: pg/m3  
 Data files: DH901

Compound	Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/m3
PeCB			104	11	
HCB			150	20	
2,2',5-TriCB		18	7,82	66	
2,4,4'-TriCB		28	4,80		
2,4',5-TriCB		31	4,57		
2',3,4-TriCB		33	3,22		
3,4,4'-TriCB		37	0,35		
<b>Sum-TriCB</b>			<b>31,5</b>		
2,2',4,4'-TetCB		47	1,13	55	
2,2',5,5'-TetCB		52	1,94		
2,3',4,4'-TetCB		66	0,49		
2,4,4',5-TetCB		74	0,37 i		
<b>Sum-TetCB</b>			<b>8,80</b>		
2,2',4,4',5-PenCB		99	0,28	81	
2,2',4,5,5'-PenCB		101	0,69 b		
2,3,3',4,4'-PenCB		105	0,08 b		
2,3,4,4',5-PenCB		114	0,01		
2,3',4,4',5-PenCB		118	0,27 b		
2',3,3',4,5-PenCB		122	< 0,01		
2',3,4,4',5-PenCB		123	< 0,01		
<b>Sum-PenCB</b>			<b>2,23</b>		
2,2',3,3',4,4'-HexCB		128	0,04 b	83	
2,2',3,4,4',5'-HexCB		138	0,25 b		
2,2',3,4,5,5'-HexCB		141	0,04 bi		
2,2',3,4',5',6-HexCB		149	0,30 b		
2,2',4,4',5,5'-HexCB		153	0,46 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 i		
<b>Sum-HexCB</b>			<b>1,56</b>		
2,2',3,3',4,4',5-HepCB		170	0,03 b	84	
2,2',3,4,4',5,5'-HepCB		180	0,11 b		
2,2',3,4,4',5',6-HepCB		183	0,03 b		
2,2',3,4',5,5',6-HepCB		187	0,05 b		
2,3,3',4,4',5,5'-HepCB		189	< 0,01		
<b>Sum-HepCB</b>			<b>0,26</b>		
2,2',3,3',4,4',5,5'-OctCB		194	< 0,01	88	
2,2',3,3',4,4',5,5',6-NonCB		206	< 0,01		
DecaCB		209	< 0,01		
<b>Sum 7 PCB</b>			<b>8,52</b>		
<b>Sum PCB</b>			<b>44,4</b>		<b>0,06</b>

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.

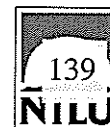
This may be due to instrumental noise or/and chemical interference

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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/593  
 Customer: AMAP 2006  
 Customers sample ID: 24-26.4.06 0706-0704  
 : 160-160

Kjeller, 30.03.2007

Sample type: Air  
 Sample amount: 1 157 m3  
 Concentration units: pg/m3  
 Data files: DH901

Compound	Structure	IUPAC-no.	Concentration	Recovery	TE (WHO)
			pg/m3	%	fg/m3
PeCB			20,2	27	
HCB			77,2	39	
2,2',5-TriCB		18	4,41		
<b>2,4,4'-TriCB</b>		<b>28</b>	<b>2,85</b>	72	
2,4',5-TriCB		31	2,62		
2',3,4-TriCB		33	1,93		
3,4,4'-TriCB		37	0,22		
<b>Sum-TriCB</b>			<b>18,2</b>		
2,2',4,4'-TetCB		47	0,56		
<b>2,2',5,5'-TetCB</b>		<b>52</b>	<b>1,37</b>	59	
2,3',4,4'-TetCB		66	0,30 b		
2,4,4',5-TetCB		74	0,22 b		
<b>Sum-TetCB</b>			<b>5,47</b>		
2,2',4,4',5-PenCB		99	0,32		
<b>2,2',4,5,5'-PenCB</b>		<b>101</b>	<b>0,46</b> b	74	
2,3,3',4,4'-PenCB		105	0,07 b	83	0,01
2,3,4,4',5-PenCB		114	< 0,01	76	0,01
<b>2,3',4,4',5-PenCB</b>		<b>118</b>	<b>0,31</b>	80	0,03
2',3,3',4,5-PenCB		122	< 0,01		
2',3,4,4',5-PenCB		123	< 0,01	81	0,00
<b>Sum-PenCB</b>			<b>1,77</b>		
2,2',3,3',4,4'-HexCB		128	0,04		
<b>2,2',3,4,4',5'-HexCB</b>		<b>138</b>	<b>0,30</b>	84	
2,2',3,4,5,5'-HexCB		141	0,03 b		
2,2',3,4',5',6-HexCB		149	0,24 b		
<b>2,2',4,4',5,5'-HexCB</b>		<b>153</b>	<b>0,79</b>	77	
2,3,3',4,4',5-HexCB		156	0,02	89	0,01
2,3,3',4,4',5'-HexCB		157	< 0,01	87	0,01
2,3',4,4',5,5'-HexCB		167	0,01	90	0,00
<b>Sum-HexCB</b>			<b>1,68</b>		
2,2',3,3',4,4',5-HepCB		170	0,03 bi		
<b>2,2',3,4,4',5,5'-HepCB</b>		<b>180</b>	<b>0,12</b>	86	
2,2',3,4,4',5',6-HepCB		183	0,04		
2,2',3,4',5,5',6-HepCB		187	0,06 b		
2,3,3',4,4',5,5'-HepCB		189	< 0,01	93	0,00
<b>Sum-HepCB</b>			<b>0,24</b>		
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	90	
<b>Sum 7 PCB</b>			<b>6,20</b>		
<b>Sum PCB</b>			<b>27,4</b>		<b>0,06</b>

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)

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# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/736  
 Customer: AMAP 2006  
 Customers sample ID: 1-3.5.06 1014-0838  
 : 160-148  
 Sample type: Air  
 Sample amount: 1 076 m3  
 Concentration units: pg/m3  
 Data files: DH901

Kjeller, 21.09.2006

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/m3
PeCB		28,1	23	
HCB		99,4	33	
2,2',5-TriCB	18	15,9		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>9,96</b>	68	
2,4',5-TriCB	31	9,18		
2',3,4-TriCB	33	6,88		
3,4,4'-TriCB	37	0,75		
<b>Sum-TriCB</b>		<b>64,7</b>		
2,2',4,4'-TetCB	47	1,88		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>4,11</b>	55	
2,3',4,4'-TetCB	66	1,40		
2,4,4',5-TetCB	74	0,91		
<b>Sum-TetCB</b>		<b>19,7</b>		
2,2',4,4',5-PenCB	99	1,13		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>1,92</b>	74	
2,3,3',4,4'-PenCB	105	0,50	81	0,05
2,3,4,4',5-PenCB	114	0,04	82	0,02
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>1,34</b>	80	0,13
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	0,03	79	0,00
<b>Sum-PenCB</b>		<b>8,46</b>		
2,2',3,3',4,4'-HexCB	128	0,18		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>1,10</b>	80	
2,2',3,4,5,5'-HexCB	141	0,18 i		
2,2',3,4',5',6-HexCB	149	0,89		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>1,64</b>	70	
2,3,3',4,4',5-HexCB	156	0,10	89	0,05
2,3,3',4,4',5'-HexCB	157	0,02	87	0,01
2,3',4,4',5,5'-HexCB	167	0,04	90	0,00
<b>Sum-HexCB</b>		<b>5,97</b>		
2,2',3,3',4,4',5-HepCB	170	0,10		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,27</b> i	81	
2,2',3,4,4',5',6-HepCB	183	0,08		
2,2',3,4',5,5',6-HepCB	187	0,17		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	88	0,00
<b>Sum-HepCB</b>		<b>0,82</b>		
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 bi	87	
<b>Sum 7 PCB</b>		<b>20,3</b>		
<b>Sum PCB</b>		<b>99,7</b>		<b>0,27</b>

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

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

&lt;: 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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/737  
 Customer: AMAP 2006  
 Customers sample ID: 5-8.5.06 1001-0725  
 : 160-153

Kjeller, 21.09.2006

Sample type: Air  
 Sample amount: 1 638 m3  
 Concentration units: pg/m3  
 Data files: DH901

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/m3
PeCB		22,4	29	
HCB		73,8	41	
2,2',5-TriCB	18	6,11		
2,4,4'-TriCB	28	3,66	72	
2,4',5-TriCB	31	3,48		
2',3,4-TriCB	33	2,47		
3,4,4'-TriCB	37	0,25		
<b>Sum-TriCB</b>		<b>24,3</b>		
2,2',4,4'-TetCB	47	0,66		
2,2',5,5'-TetCB	52	1,57	59	
2,3',4,4'-TetCB	66	0,37		
2,4,4',5-TetCB	74	0,28		
<b>Sum-TetCB</b>		<b>6,58</b>		
2,2',4,4',5-PenCB	99	0,34		
2,2',4,5,5'-PenCB	101	0,59	80	
2,3,3',4,4'-PenCB	105	0,11	86	0,01
2,3,4,4',5-PenCB	114	0,01	88	0,01
2,3',4,4',5-PenCB	118	0,36	84	0,04
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	83	0,00
<b>Sum-PenCB</b>		<b>2,27</b>		
2,2',3,3',4,4'-HexCB	128	0,07		
2,2',3,4,4',5'-HexCB	138	0,41	85	
2,2',3,4,5,5'-HexCB	141	0,05 b		
2,2',3,4',5',6-HexCB	149	0,34		
2,2',4,4',5,5'-HexCB	153	0,82	78	
2,3,3',4,4',5-HexCB	156	0,03	93	0,02
2,3,3',4,4',5'-HexCB	157	< 0,01	91	0,01
2,3',4,4',5,5'-HexCB	167	0,01	89	0,00
<b>Sum-HexCB</b>		<b>2,41</b>		
2,2',3,3',4,4',5-HepCB	170	0,05 i		
2,2',3,4,4',5,5'-HepCB	180	0,15	87	
2,2',3,4,4',5',6-HepCB	183	0,04		
2,2',3,4',5,5',6-HepCB	187	0,09		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	94	0,00
<b>Sum-HepCB</b>		<b>0,39</b>		
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	90	
<b>Sum 7 PCB</b>		<b>7,55</b>		
<b>Sum PCB</b>		<b>36,0</b>		<b>0,08</b>

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)

12. versjon 13.03.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/738  
 Customer: AMAP 2006  
 Customers sample ID: 8-10.5.06 0805-0705  
 : 160-155

Kjeller, 21.09.2006

Sample type: Air  
 Sample amount: 1 116 m3  
 Concentration units: pg/m3  
 Data files: DH901

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/m3
PeCB		106	8 g	
HCB		137	23	
2,2',5-TriCB	18	4,08		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>2,63</b>	65	
2,4',5-TriCB	31	2,44		
2',3,4-TriCB	33	1,82		
3,4,4'-TriCB	37	0,20		
<b>Sum-TriCB</b>		<b>16,9</b>		
2,2',4,4'-TetCB	47	0,94		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,74</b>	56	
2,3',4,4'-TetCB	66	2,04		
2,4,4',5-TetCB	74	0,78		
<b>Sum-TetCB</b>		<b>10,8</b>		
2,2',4,4',5-PenCB	99	2,17		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>2,46</b>	79	
2,3,3',4,4'-PenCB	105	0,83	82	0,08
2,3,4,4',5-PenCB	114	0,10	88	0,05
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>2,61</b>	82	0,26
2',3,3',4,5-PenCB	122	0,01		
2',3,4,4',5-PenCB	123	0,08	82	0,01
<b>Sum-PenCB</b>		<b>14,3</b>		
2,2',3,3',4,4'-HexCB	128	0,33		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>2,45</b>	81	
2,2',3,4,5,5'-HexCB	141	0,45		
2,2',3,4',5',6-HexCB	149	1,76		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>4,78</b>	75	
2,3,3',4,4',5-HexCB	156	0,11	84	0,06
2,3,3',4,4',5'-HexCB	157	0,02	84	0,01
2,3',4,4',5,5'-HexCB	167	0,07	84	0,00
<b>Sum-HexCB</b>		<b>14,0</b>		
2,2',3,3',4,4',5-HepCB	170	0,18		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,80</b>	80	
2,2',3,4,4',5',6-HepCB	183	0,34		
2,2',3,4',5,5',6-HepCB	187	0,87		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	86	0,00
<b>Sum-HepCB</b>		<b>2,73</b>		
2,2',3,3',4,4',5,5'-OctCB	194	0,03		
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01	85	
<b>Sum 7 PCB</b>		<b>17,5</b>		
<b>Sum PCB</b>		<b>58,8</b>		<b>0,47</b>

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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/784  
 Customer: AMAP 2006  
 Customers sample ID: 15-17.5.06 0700-0754  
 : 160-156

Kjeller, 15.05.2007

Sample type: Air  
 Sample amount: 1 164  
 Concentration units: pg/m3  
 Data files: VB119\_B

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)	
Structure		pg/m3	%	fg/m3	
PeCB		20,6	31		
HCB		67,5	37		
2,2',5'-TriCB	18	3,23	52		
2,4,4'-TriCB	28	2,33			
2,4',5'-TriCB	31	2,10			
2',3,4'-TriCB	33	1,58			
3,4,4'-TriCB	37	0,25			
<b>Sum-TriCB</b>		<b>14,0</b>			
2,2',4,4'-TetCB	47	0,55	50		
2,2',5,5'-TetCB	52	0,85			
2,3',4,4'-TetCB	66	0,87			
2,4,4',5'-TetCB	74	0,59			
<b>Sum-TetCB</b>		<b>4,82</b>			
2,2',4,4',5'-PenCB	99	2,37	59		
2,2',4,5,5'-PenCB	101	0,36 b			
2,3,3',4,4'-PenCB	105	1,31			
2,3,4,4',5'-PenCB	114	0,23			
2,3',4,4',5'-PenCB	118	5,38			
2'3,3',4,5'-PenCB	122	< 0,01			
2',3,4,4',5'-PenCB	123	0,09			
<b>Sum-PenCB</b>		<b>11,0</b>			
2,2',3,3',4,4'-HexCB	128	0,98	64		
2,2',3,4,4',5'-HexCB	138	10,9			
2,2',3,4,5,5'-HexCB	141	0,03 b			
2,2',3,4',5',6'-HexCB	149	0,26 b			
2,2',4,4',5,5'-HexCB	153	21,8			
2,3,3',4,4',5'-HexCB	156	1,47			
2,3,3',4,4',5'-HexCB	157	0,25			
2,3',4,4',5,5'-HexCB	167	0,92			
<b>Sum-HexCB</b>		<b>44,5</b>			
2,2',3,3',4,4',5'-HepCB	170	3,15		67	
2,2',3,4,4',5,5'-HepCB	180	10,8			
2,2',3,4,4',5',6'-HepCB	183	1,82			
2,2',3,4',5,5',6'-HepCB	187	3,45			
2,3,3',4,4',5,5'-HepCB	189	0,25			
<b>Sum-HepCB</b>		<b>21,6</b>			
2,2',3,3',4,4',5,5'-OctCB	194	1,57	70		
2,2',3,3',4,4',5,5',6'-NonCB	206	0,29			
DecaCB	209	0,17			
<b>Sum 7 PCB</b>		<b>52,5</b>	67		
<b>Sum PCB</b>		<b>97,9</b>		1,69	

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)  
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 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)

12. versjon 13.03.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/786  
 Customer: AMAP 2006  
 Customers sample ID: 22-24.5.06 0850-1058  
 : 160-150

Kjeller, 21.09.2006

Sample type: Air  
 Sample amount: 1 170 m3  
 Concentration units: pg/m3  
 Data files: VB130

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/m3
PeCB		16,3	45	
HCB		60,9	55	
2,2',5-TriCB	18	6,41		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>4,62</b>	71	
2,4',5-TriCB	31	4,26		
2',3,4-TriCB	33	3,25		
3,4,4'-TriCB	37	0,46		
<b>Sum-TriCB</b>		<b>28,1</b>		
2,2',4,4'-TetCB	47	0,84		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,42</b>	72	
2,3',4,4'-TetCB	66	0,71		
2,4,4',5-TetCB	74	0,49		
<b>Sum-TetCB</b>		<b>6,99</b>		
2,2',4,4',5-PenCB	99	2,11		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,51</b> b	79	
2,3,3',4,4'-PenCB	105	0,68	88	0,07
2,3,4,4',5-PenCB	114	0,17	84	0,09
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>3,51</b>	85	0,35
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	0,04	84	0,00
<b>Sum-PenCB</b>		<b>8,24</b>		
2,2',3,3',4,4'-HexCB	128	0,82		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>8,83</b>	88	
2,2',3,4,5,5'-HexCB	141	0,03 b		
2,2',3,4',5',6-HexCB	149	0,25 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>16,9</b>	85	
2,3,3',4,4',5-HexCB	156	0,82	96	0,41
2,3,3',4,4',5'-HexCB	157	0,14	97	0,07
2,3',4,4',5,5'-HexCB	167	0,48	96	0,00
<b>Sum-HexCB</b>		<b>33,8</b>		
2,2',3,3',4,4',5-HepCB	170	2,26		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>7,58</b>	94	
2,2',3,4,4',5',6-HepCB	183	1,19		
2,2',3,4',5,5',6-HepCB	187	1,79		
2,3,3',4,4',5,5'-HepCB	189	0,12	101	0,01
<b>Sum-HepCB</b>		<b>14,3</b>		
2,2',3,3',4,4',5,5'-OctCB	194	1,00		
2,2',3,3',4,4',5,5',6-NonCB	206	0,23		
DecaCB	209	0,14		
<b>Sum 7 PCB</b>		<b>43,3</b>	105	
<b>Sum PCB</b>		<b>92,8</b>		1,00

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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/785  
 Customer: AMAP 06  
 Customers sample ID: 29-31.5.06 0750-0800  
 : 160-152

Kjeller, 01.11.2006

Sample type: Air  
 Sample amount: 1 133 m3  
 Concentration units: pg/m3  
 Data files: VB137B

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		14,4	41	
HCB		68,9	49	
2,2',5'-TriCB	18	3,15	65	
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>3,07</b>		
2,4',5'-TriCB	31	2,11		
2',3,4'-TriCB	33	1,60		
3,4,4'-TriCB	37	0,27		
<b>Sum-TriCB</b>		<b>15,0</b>		
2,2',4,4'-TetCB	47	2,34	69	
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>0,97</b>		
2,3',4,4'-TetCB	66	6,11		
2,4,4',5'-TetCB	74	5,13		
<b>Sum-TetCB</b>		<b>16,6</b>		
2,2',4,4',5'-PenCB	99	36,8	82	
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,67</b> b		
2,3,3',4,4'-PenCB	105	12,2		
2,3,4,4',5'-PenCB	114	2,97		
<b>2,3',4,4',5'-PenCB</b>	<b>118</b>	<b>66,1</b>		
2',3,3',4,5'-PenCB	122	< 0,03		
2',3,4,4',5'-PenCB	123	0,80		
<b>Sum-PenCB</b>		<b>131</b>		
2,2',3,3',4,4'-HexCB	128	15,1	94	
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>160</b>		
2,2',3,4,5,5'-HexCB	141	0,16		
2,2',3,4',5',6'-HexCB	149	1,41		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>318</b>		
2,3,3',4,4',5'-HexCB	156	15,6		
2,3,3',4,4',5'-HexCB	157	2,67		
2,3',4,4',5,5'-HexCB	167	9,44		
<b>Sum-HexCB</b>		<b>624</b>		
2,2',3,3',4,4',5'-HepCB	170	41,1	104	
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>150</b>		
2,2',3,4,4',5',6'-HepCB	183	21,2		
2,2',3,4',5,5',6'-HepCB	187	31,8		
2,3,3',4,4',5,5'-HepCB	189	2,32		
<b>Sum-HepCB</b>		<b>270</b>		
2,2',3,3',4,4',5,5'-OctCB	194	18,5	102	
2,2',3,3',4,4',5,5',6'-NonCB	206	4,71		
DecaCB	209	2,62		
<b>Sum 7 PCB</b>		<b>699</b>		
<b>Sum PCB</b>		<b>1 082</b>		<b>18,8</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)  
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 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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/787  
 Customer: AMAP 2006  
 Customers sample ID: 5-7.6.06 0800-0748  
 : 160-155

Kjeller, 21.09.2006

Sample type: Air  
 Sample amount: 1 135 m3  
 Concentration units: pg/m3  
 Data files: VB130

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/m3
PeCB		15,7	45	
HCB		67,3	53	
2,2',5-TriCB	18	8,30		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>4,79</b>	69	
2,4',5-TriCB	31	4,53		
2',3,4-TriCB	33	3,36		
3,4,4'-TriCB	37	0,41		
<b>Sum-TriCB</b>		<b>32,0</b>		
2,2',4,4'-TetCB	47	0,67		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,42</b>	71	
2,3',4,4'-TetCB	66	0,43		
2,4,4',5-TetCB	74	0,27		
<b>Sum-TetCB</b>		<b>6,02</b>		
2,2',4,4',5-PenCB	99	0,37		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,42</b> b	78	
2,3,3',4,4'-PenCB	105	0,12	87	0,01
2,3,4,4',5-PenCB	114	0,02	84	0,01
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,54</b>	85	0,05
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	85	0,00
<b>Sum-PenCB</b>		<b>2,13</b>		
2,2',3,3',4,4'-HexCB	128	0,08		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,92</b>	87	
2,2',3,4,5,5'-HexCB	141	0,02 b		
2,2',3,4',5',6-HexCB	149	0,16 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>1,91</b>	84	
2,3,3',4,4',5-HexCB	156	0,08	95	0,04
2,3,3',4,4',5'-HexCB	157	0,01 i	95	0,01
2,3',4,4',5,5'-HexCB	167	0,06	97	0,00
<b>Sum-HexCB</b>		<b>4,07</b>		
2,2',3,3',4,4',5-HepCB	170	0,19		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,70</b>	94	
2,2',3,4,4',5',6-HepCB	183	0,13		
2,2',3,4',5,5',6-HepCB	187	0,24		
2,3,3',4,4',5,5'-HepCB	189	0,01 i	101	0,00
<b>Sum-HepCB</b>		<b>1,42</b>		
2,2',3,3',4,4',5,5'-OctCB	194	0,09		
2,2',3,3',4,4',5,5',6-NonCB	206	0,02		
DecaCB	209	0,01 b		
<b>Sum 7 PCB</b>		<b>10,7</b>	102	
<b>Sum PCB</b>		<b>45,7</b>		<b>0,13</b>

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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/788  
 Customer: AMAP 2006  
 Customers sample ID: 12-14.6.06 0835-0718  
 : 160-146  
 Sample type: Air  
 Sample amount: 1 076 m3  
 Concentration units: pg/m3  
 Data files: M\_30\_10\_06

Kjeller, 31.10.2006

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		12,8	43	
HCB		61,8	52	
2,2',5'-TriCB	18	4,70	68	
2,4,4'-TriCB	28	2,80		
2,4',5'-TriCB	31	2,63		
2',3,4'-TriCB	33	1,96		
3,4,4'-TriCB	37	0,20		
<b>Sum-TriCB</b>		<b>18,5</b>		
2,2',4,4'-TetCB	47	0,44	78	
2,2',5,5'-TetCB	52	0,95		
2,3',4,4'-TetCB	66	0,23 b		
2,4,4',5'-TetCB	74	0,15 b		
<b>Sum-TetCB</b>		<b>3,92</b>		
2,2',4,4',5'-PenCB	99	0,21 b	102	
2,2',4,5,5'-PenCB	101	0,46 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	0,21 b		
2'3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
<b>Sum-PenCB</b>		<b>1,46</b>		
2,2',3,3',4,4'-HexCB	128	0,03 b	110	
2,2',3,4,4',5'-HexCB	138	0,25 b		
2,2',3,4,5,5'-HexCB	141	0,03 b		
2,2',3,4',5',6'-HexCB	149	0,21 b		
2,2',4,4',5,5'-HexCB	153	0,49 b		
2,3,3',4,4',5'-HexCB	156	0,02 b		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	0,01 b		
<b>Sum-HexCB</b>		<b>1,48</b>		
2,2',3,3',4,4',5'-HepCB	170	0,04 b	127	
2,2',3,4,4',5,5'-HepCB	180	0,14 b		
2,2',3,4,4',5',6'-HepCB	183	0,02 b		
2,2',3,4',5,5',6'-HepCB	187	0,06 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
<b>Sum-HepCB</b>		<b>0,29</b>		
2,2',3,3',4,4',5,5'-OctCB	194	0,01 b	120	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
<b>Sum 7 PCB</b>		<b>5,29</b>		
<b>Sum PCB</b>		<b>25,6</b>		<b>0,05</b>

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)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/939  
 Customer: AMAP 06  
 Customers sample ID: 19-21.6.06 0820-0832  
 : 160-155  
 Sample type: Air  
 Sample amount: 1 145 m3  
 Concentration units: pg/m3  
 Data files: VB137B

Kjeller, 31.10.2006

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		11,6	42	
HCB		67,5	48	
2,2',5'-TriCB	18	5,50		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>3,23</b>	61	
2,4',5'-TriCB	31	3,07		
2',3,4'-TriCB	33	2,36		
3,4,4'-TriCB	37	0,24		
<b>Sum-TriCB</b>		<b>21,7</b>		
2,2',4,4'-TetCB	47	0,39 b		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>0,95</b>	67	
2,3',4,4'-TetCB	66	0,19 b		
2,4,4',5-TetCB	74	0,13 b		
<b>Sum-TetCB</b>		<b>3,75</b>		
2,2',4,4',5-PenCB	99	0,14 b		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,25</b> b	77	
2,3,3',4,4'-PenCB	105	0,03 b	89	0,00
2,3,4,4',5-PenCB	114	< 0,01	89	0,01
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,17</b> b	86	0,02
2'3,3',4,5-PenCB	122	0,02		
2',3,4,4',5-PenCB	123	< 0,01	86	0,00
<b>Sum-PenCB</b>		<b>0,90</b>		
2,2',3,3',4,4'-HexCB	128	0,02 b		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,28</b> b	92	
2,2',3,4,5,5'-HexCB	141	0,01 bi		
2,2',3,4',5',6-HexCB	149	0,10 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,64</b> b	88	
2,3,3',4,4',5-HexCB	156	0,02 b	108	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	114	0,01
2,3',4,4',5,5'-HexCB	167	0,02 b	95	0,00
<b>Sum-HexCB</b>		<b>1,42</b>		
2,2',3,3',4,4',5-HepCB	170	0,05 b		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,25</b> b	113	
2,2',3,4,4',5',6-HepCB	183	0,04 b		
2,2',3,4',5,5',6-HepCB	187	0,07 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	113	0,00
<b>Sum-HepCB</b>		<b>0,42</b>		
2,2',3,3',4,4',5,5'-OctCB	194	0,02 b		
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01	109	
<b>Sum 7 PCB</b>		<b>5,78</b>		
<b>Sum PCB</b>		<b>28,3</b>		<b>0,04</b>

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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/941  
 Customer: AMAP 06  
 Customers sample ID: 26-28.6.06 0738-0854  
 : 160-150  
 Sample type: Air  
 Sample amount: 1 151 m3  
 Concentration units: pg/m3  
 Data files: VB137B

Kjeller, 31.10.2006

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		9,00	44	
HCB		66,3	52	
2,2',5'-TriCB	18	5,08	67	
2,4,4'-TriCB	28	3,26		
2,4',5'-TriCB	31	3,12		
2',3,4'-TriCB	33	2,36		
3,4,4'-TriCB	37	0,27		
<b>Sum-TriCB</b>		<b>21,0</b>		
2,2',4,4'-TetCB	47	0,49	72	
2,2',5,5'-TetCB	52	0,98		
2,3',4,4'-TetCB	66	0,23 b		
2,4,4',5-TetCB	74	0,15 b		
<b>Sum-TetCB</b>		<b>4,06</b>		
2,2',4,4',5-PenCB	99	0,16 b	81	
2,2',4,5,5'-PenCB	101	0,33 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		
<b>Sum-PenCB</b>		<b>1,15</b>		
2,2',3,3',4,4'-HexCB	128	0,05 b		102
2,2',3,4,4',5'-HexCB	138	0,38 b		
2,2',3,4,5,5'-HexCB	141	0,03 b		
2,2',3,4',5',6-HexCB	149	0,15 b		
2,2',4,4',5,5'-HexCB	153	0,71 b		
2,3,3',4,4',5-HexCB	156	0,06 b		
2,3,3',4,4',5'-HexCB	157	0,01		
2,3',4,4',5,5'-HexCB	167	0,04 b		
<b>Sum-HexCB</b>		<b>1,80</b>		
2,2',3,3',4,4',5-HepCB	170	0,18	122	
2,2',3,4,4',5,5'-HepCB	180	0,65		
2,2',3,4,4',5',6-HepCB	183	0,05 b		
2,2',3,4',5,5',6-HepCB	187	0,07 b		
2,3,3',4,4',5,5'-HepCB	189	0,01		
<b>Sum-HepCB</b>		<b>1,05</b>		
2,2',3,3',4,4',5,5'-OctCB	194	0,10	123	
2,2',3,3',4,4',5,5',6-NonCB	206	0,02		
DecaCB	209	0,02		
<b>Sum 7 PCB</b>		<b>6,52</b>		
<b>Sum PCB</b>		<b>29,2</b>		<b>0,07</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)  
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 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)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/942  
 Customer: AMAP 06  
 Customers sample ID: 03-05.7.06 0806-0748  
 : 160-157

Kjeller, 31.10.2006

Sample type: Air  
 Sample amount: 1 140 m3  
 Concentration units: pg/m3  
 Data files: VB137B

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		9,04	35	
HCB		60,0	43	
2,2',5'-TriCB	18	6,84		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>4,15</b>	63	
2,4',5'-TriCB	31	3,94		
2',3,4'-TriCB	33	2,98		
3,4,4'-TriCB	37	0,32		
<b>Sum-TriCB</b>		<b>27,4</b>		
2,2',4,4'-TetCB	47	0,54		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,26</b>	68	
2,3',4,4'-TetCB	66	0,23 b		
2,4,4',5-TetCB	74	0,15 b		
<b>Sum-TetCB</b>		<b>4,76</b>		
2,2',4,4',5-PenCB	99	0,12 b		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,35</b> b	79	
2,3,3',4,4'-PenCB	105	0,02 b	93	0,00
2,3,4,4',5-PenCB	114	< 0,01	91	0,01
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,08</b> b	90	0,01
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	89	0,00
<b>Sum-PenCB</b>		<b>0,94</b>		
2,2',3,3',4,4'-HexCB	128	0,01 b		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,09</b> b	94	
2,2',3,4,5,5'-HexCB	141	0,02 b		
2,2',3,4',5',6-HexCB	149	0,14 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,16</b> b	88	
2,3,3',4,4',5-HexCB	156	< 0,01	110	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	93	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	101	0,00
<b>Sum-HexCB</b>		<b>0,66</b>		
2,2',3,3',4,4',5-HepCB	170	0,01 b		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,05</b> b	111	
2,2',3,4,4',5',6-HepCB	183	0,01 b		
2,2',3,4',5,5',6-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	121	0,00
<b>Sum-HepCB</b>		<b>0,13</b>		
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	110	
<b>Sum 7 PCB</b>		<b>6,14</b>		
<b>Sum PCB</b>		<b>33,9</b>		<b>0,03</b>

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



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/943  
 Customer: AMAP 06  
 Customers sample ID: 10-12.7.06 0730-0820  
 : 160-152

Kjeller, 01.11.2006

Sample type: Air  
 Sample amount: 1 147 m3  
 Concentration units: pg/m3  
 Data files: VB137

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		7,52	38	
HCB		59,1	44	
2,2',5'-TriCB	18	6,44		
2,4,4'-TriCB	28	3,82	62	
2,4',5'-TriCB	31	3,56		
2',3,4'-TriCB	33	2,71		
3,4,4'-TriCB	37	0,28		
<b>Sum-TriCB</b>		<b>25,4</b>		
2,2',4,4'-TetCB	47	0,46		
2,2',5,5'-TetCB	52	1,07	69	
2,3',4,4'-TetCB	66	0,21 b		
2,4,4',5-TetCB	74	0,14 b		
<b>Sum-TetCB</b>		<b>4,18</b>		
2,2',4,4',5-PenCB	99	0,13 b		
2,2',4,5,5'-PenCB	101	0,28 b	82	
2,3,3',4,4'-PenCB	105	0,03 b	94	0,00
2,3,4,4',5-PenCB	114	< 0,01	93	0,01
2,3',4,4',5-PenCB	118	0,14 b	91	0,01
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	92	0,00
<b>Sum-PenCB</b>		<b>0,89</b>		
2,2',3,3',4,4'-HexCB	128	0,02 b		
2,2',3,4,4',5'-HexCB	138	0,21 b	97	
2,2',3,4,5,5'-HexCB	141	0,02 b		
2,2',3,4',5',6-HexCB	149	0,11 b		
2,2',4,4',5,5'-HexCB	153	0,44 b	95	
2,3,3',4,4',5-HexCB	156	0,02 b	111	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	116	0,01
2,3',4,4',5,5'-HexCB	167	0,01 b	100	0,00
<b>Sum-HexCB</b>		<b>1,09</b>		
2,2',3,3',4,4',5-HepCB	170	0,04 b		
2,2',3,4,4',5,5'-HepCB	180	0,16 b	115	
2,2',3,4,4',5',6-HepCB	183	0,03 b		
2,2',3,4',5,5',6-HepCB	187	0,04 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	115	0,00
<b>Sum-HepCB</b>		<b>0,29</b>		
2,2',3,3',4,4',5,5'-OctCB	194	0,01 b		
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01	110	
<b>Sum 7 PCB</b>		<b>6,11</b>		
<b>Sum PCB</b>		<b>31,8</b>		<b>0,04</b>

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 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)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/944  
 Customer: AMAP 06  
 Customers sample ID: 17-19.7.06 0725-0835  
 : 160-155

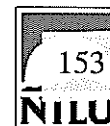
Kjeller, 01.11.2006

Sample type: Air  
 Sample amount: 1 164 m3  
 Concentration units: pg/m3  
 Data files: VB137

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		8,12	29	
HCB		65,6	35	
2,2',5'-TriCB	18	5,64		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>3,62</b>	53	
2,4',5'-TriCB	31	3,42		
2',3,4'-TriCB	33	2,72		
3,4,4'-TriCB	37	0,29		
<b>Sum-TriCB</b>		<b>23,6</b>		
2,2',4,4'-TetCB	47	0,50		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,01</b>	62	
2,3',4,4'-TetCB	66	0,21 b		
2,4,4',5'-TetCB	74	0,13 b		
<b>Sum-TetCB</b>		<b>4,10</b>		
2,2',4,4',5'-PenCB	99	0,09 b		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,27</b> b	74	
2,3,3',4,4'-PenCB	105	0,01 b	87	0,00
2,3,4,4',5'-PenCB	114	< 0,01	85	0,01
<b>2,3',4,4',5'-PenCB</b>	<b>118</b>	<b>0,06</b> b	82	0,01
2'3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	83	0,00
<b>Sum-PenCB</b>		<b>0,71</b>		
2,2',3,3',4,4'-HexCB	128	< 0,01		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,06</b> b	90	
2,2',3,4,5,5'-HexCB	141	0,02 b		
2,2',3,4',5',6'-HexCB	149	0,11 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,11</b> b	85	
2,3,3',4,4',5'-HexCB	156	< 0,01	104	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	112	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	95	0,00
<b>Sum-HexCB</b>		<b>0,45</b>		
2,2',3,3',4,4',5'-HepCB	170	0,01 b		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,03</b> b	111	
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	115	0,00
<b>Sum-HepCB</b>		<b>0,08</b>		
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		
<b>Sum 7 PCB</b>		<b>5,17</b>	108	
<b>Sum PCB</b>		<b>29,0</b>		<b>0,03</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)  
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 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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/945  
 Customer: AMAP 2006  
 Customers sample ID: 24-26.7.06 0813-0752  
 : 160-155  
 Sample type: Air  
 Sample amount: 1 131 m3  
 Concentration units: pg/m3  
 Data files: VB137

Kjeller, 04.10.2006

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/ m3
PeCB		8,44	31	
HCB		69,1	40	
2,2',5-TriCB	18	6,45	61	
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>3,90</b>		
2,4',5-TriCB	31	3,66		
2',3,4-TriCB	33	2,85		
3,4,4'-TriCB	37	0,29		
<b>Sum-TriCB</b>		<b>25,9</b>		
2,2',4,4'-TetCB	47	0,51	65	
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,12</b>		
2,3',4,4'-TetCB	66	0,21 b		
2,4,4',5-TetCB	74	0,14 b		
<b>Sum-TetCB</b>		<b>4,43</b>		
2,2',4,4',5-PenCB	99	0,10 b	88	
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,29</b> b		
2,3,3',4,4'-PenCB	105	0,02 b		
2,3,4,4',5-PenCB	114	< 0,01		
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,08</b> b		
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
<b>Sum-PenCB</b>		<b>0,79</b>		
2,2',3,3',4,4'-HexCB	128	< 0,01	90	
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,08</b> b		
2,2',3,4,5,5'-HexCB	141	0,02 b		
2,2',3,4',5',6-HexCB	149	0,11 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,16</b> 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		
<b>Sum-HexCB</b>		<b>0,59</b>		
2,2',3,3',4,4',5-HepCB	170	0,01 b		115
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,04</b> 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		
<b>Sum-HepCB</b>		<b>0,10</b>		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	115	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
<b>Sum 7 PCB</b>		<b>5,68</b>		
<b>Sum PCB</b>		<b>31,9</b>		<b>0,03</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
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 (M. Van den Berg et al., 1998)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/946  
 Customer: AMAP 06  
 Customers sample ID: 31.7-2.8.06  
 : 0657-0700 160-157

Kjeller, 30.03.2007

Sample type: Air  
 Sample amount: 1 147 m3  
 Concentration units: pg/m3  
 Data files: VB148

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		9,66	34	
HCB		74,9	44	
2,2',5'-TriCB	18	6,28		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>3,85</b>	62	
2,4',5'-TriCB	31	3,67		
2',3,4'-TriCB	33	2,69		
3,4,4'-TriCB	37	0,29		
<b>Sum-TriCB</b>		<b>26,2</b>		
2,2',4,4'-TetCB	47	0,48		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,05</b>	66	
2,3',4,4'-TetCB	66	0,19 b		
2,4,4',5'-TetCB	74	0,13 b		
<b>Sum-TetCB</b>		<b>4,24</b>		
2,2',4,4',5'-PenCB	99	0,07 b		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,25</b> b	75	
2,3,3',4,4'-PenCB	105	0,02 b	81	0,00
2,3,4,4',5'-PenCB	114	< 0,01	82	0,01
<b>2,3',4,4',5'-PenCB</b>	<b>118</b>	<b>0,06</b> b	79	0,01
2'3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	80	0,00
<b>Sum-PenCB</b>		<b>0,64</b>		
2,2',3,3',4,4'-HexCB	128	< 0,01		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,07</b> b	80	
2,2',3,4,5,5'-HexCB	141	0,02 b		
2,2',3,4',5',6'-HexCB	149	0,12 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,13</b> b	81	
2,3,3',4,4',5'-HexCB	156	< 0,01	82	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	85	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	81	0,00
<b>Sum-HexCB</b>		<b>0,55</b>		
2,2',3,3',4,4',5'-HepCB	170	0,01 b		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,05</b> b	80	
2,2',3,4,4',5',6'-HepCB	183	0,01 b		
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
<b>Sum-HepCB</b>		<b>0,12</b>		
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	84	
<b>Sum 7 PCB</b>		<b>5,46</b>		
<b>Sum PCB</b>		<b>31,8</b>		<b>0,02</b>

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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/1121  
 Customer: AMAP 06  
 Customers sample ID: 7-9.8.06 0843-0727  
 : 160-160

Kjeller, 27.10.2006

Sample type: Air  
 Sample amount: 1 125 m3  
 Concentration units: pg/m3  
 Data files: VB148

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		8,96	28	
HCB		75,2	37	
2,2',5-TriCB	18	3,51	60	
2,4,4'-TriCB	28	2,57		
2,4',5-TriCB	31	2,32		
2',3,4-TriCB	33	1,76		
3,4,4'-TriCB	37	0,22		
<b>Sum-TriCB</b>		<b>16,0</b>		
2,2',4,4'-TetCB	47	0,42	58	
2,2',5,5'-TetCB	52	0,95		
2,3',4,4'-TetCB	66	0,22 b		
2,4,4',5-TetCB	74	0,14 b		
<b>Sum-TetCB</b>		<b>3,97</b>		
2,2',4,4',5-PenCB	99	0,14 b	71	
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	0,13 b		
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
<b>Sum-PenCB</b>		<b>1,06</b>		
2,2',3,3',4,4'-HexCB	128	0,02 b	81	
2,2',3,4,4',5'-HexCB	138	0,16 b		
2,2',3,4,5,5'-HexCB	141	0,03 b		
2,2',3,4',5',6-HexCB	149	0,20 b		
2,2',4,4',5,5'-HexCB	153	0,28 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		
<b>Sum-HexCB</b>		<b>1,04</b>		
2,2',3,3',4,4',5-HepCB	170	0,02 b	82	
2,2',3,4,4',5,5'-HepCB	180	0,08 b		
2,2',3,4,4',5',6-HepCB	183	0,02 b		
2,2',3,4',5,5',6-HepCB	187	0,06 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
<b>Sum-HepCB</b>		<b>0,21</b>		
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		
<b>Sum 7 PCB</b>		<b>4,53</b>		
<b>Sum PCB</b>		<b>22,3</b>		<b>0,03</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)  
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 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)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/1122  
 Customer: AMAP 2006  
 Customers sample ID: 14-16.8.06 0802-0720  
 : 160-160  
 Sample type: Air  
 Sample amount: 1 125 m3  
 Concentration units: pg/m3  
 Data files: M\_03\_11\_06

Kjeller, 30.03.2007

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		10,6	39	
HCB		89,3	45	
2,2',5-TriCB	18	3,58	70	
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>2,62</b>		
2,4',5-TriCB	31	2,37		
2',3,4-TriCB	33	1,86		
3,4,4'-TriCB	37	0,25		
<b>Sum-TriCB</b>		<b>15,9</b>		
2,2',4,4'-TetCB	47	0,35 b	74	
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>0,86</b>		
2,3',4,4'-TetCB	66	0,20 b		
2,4,4',5-TetCB	74	0,13 b		
<b>Sum-TetCB</b>		<b>3,53</b>		
2,2',4,4',5-PenCB	99	0,10 b	85	
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,30</b> b		
2,3,3',4,4'-PenCB	105	0,02 b		
2,3,4,4',5-PenCB	114	< 0,01		
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,08</b> b		
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
<b>Sum-PenCB</b>		<b>0,86</b>		
2,2',3,3',4,4'-HexCB	128	0,01 b	88	
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,10</b> b		
2,2',3,4,5,5'-HexCB	141	0,02 b		
2,2',3,4',5',6-HexCB	149	0,17 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,17</b> 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		
<b>Sum-HexCB</b>		<b>0,69</b>		
2,2',3,3',4,4',5-HepCB	170	0,01 b	95	
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,04</b> b		
2,2',3,4,4',5',6-HepCB	183	0,01 b		
2,2',3,4',5,5',6-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
<b>Sum-HepCB</b>		<b>0,12</b>		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	96	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01 b		
<b>Sum 7 PCB</b>		<b>4,17</b>		
<b>Sum PCB</b>		<b>21,1</b>		<b>0,03</b>

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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/1123  
 Customer: AMAP 2006  
 Customers sample ID: 21-23.8.06 0725-0705  
 : 160-158

Kjeller, 11.01.2007

Sample type: Air  
 Sample amount: 1 142 m3  
 Concentration units: pg/m3  
 Data files: M\_03\_11\_06

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		11,9	33	
HCB		82,9	41	
2,2',5-TriCB	18	5,09		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>3,44</b>	59	
2,4',5-TriCB	31	3,15		
2',3,4-TriCB	33	2,41		
3,4,4'-TriCB	37	0,26		
<b>Sum-TriCB</b>		<b>21,5</b>		
2,2',4,4'-TetCB	47	0,36 b		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>0,92</b>	63	
2,3',4,4'-TetCB	66	0,17 b		
2,4,4',5-TetCB	74	0,11 b		
<b>Sum-TetCB</b>		<b>3,53</b>		
2,2',4,4',5-PenCB	99	0,08 b		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,23</b> b	71	
2,3,3',4,4'-PenCB	105	0,01 b	79	0,00
2,3,4,4',5-PenCB	114	< 0,01	75	0,01
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,05</b> b	76	0,01
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	78	0,00
<b>Sum-PenCB</b>		<b>0,64</b>		
2,2',3,3',4,4'-HexCB	128	< 0,01		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,05</b> b	79	
2,2',3,4,5,5'-HexCB	141	0,01 b		
2,2',3,4',5',6-HexCB	149	0,11 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,09</b> b	75	
2,3,3',4,4',5-HexCB	156	< 0,01	86	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	85	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	83	0,00
<b>Sum-HexCB</b>		<b>0,46</b>		
2,2',3,3',4,4',5-HepCB	170	< 0,01		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,02</b> b	85	
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	85	0,00
<b>Sum-HepCB</b>		<b>0,06</b>		
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	
<b>Sum 7 PCB</b>		<b>4,80</b>		
<b>Sum PCB</b>		<b>26,2</b>		<b>0,02</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)  
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 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)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/1124  
 Customer: AMAP 2006  
 Customers sample ID: 28-30.8.06 0804-0724  
 : 160-160  
 Sample type: Air  
 Sample amount: 1 125 m3  
 Concentration units: pg/m3  
 Data files: M\_03\_11\_06

Kjeller, 11.01.2007

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		13,1	36	
HCB		77,8	43	
2,2',5-TriCB	18	3,12		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>2,12</b>	68	
2,4',5-TriCB	31	1,92		
2',3,4-TriCB	33	1,48		
3,4,4'-TriCB	37	0,19		
<b>Sum-TriCB</b>		<b>13,2</b>		
2,2',4,4'-TetCB	47	0,27 b		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>0,74</b>	73	
2,3',4,4'-TetCB	66	0,16 b		
2,4,4',5-TetCB	74	0,10 b		
<b>Sum-TetCB</b>		<b>2,83</b>		
2,2',4,4',5-PenCB	99	0,12 b		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,27</b> b	85	
2,3,3',4,4'-PenCB	105	0,03 b	94	0,00
2,3,4,4',5-PenCB	114	< 0,01	90	0,01
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,11</b> b	92	0,01
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	91	0,00
<b>Sum-PenCB</b>		<b>0,84</b>		
2,2',3,3',4,4'-HexCB	128	0,02 b		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,14</b> b	92	
2,2',3,4,5,5'-HexCB	141	0,02 b		
2,2',3,4',5',6-HexCB	149	0,15 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,27</b> b	89	
2,3,3',4,4',5-HexCB	156	< 0,01	102	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	100	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	97	0,00
<b>Sum-HexCB</b>		<b>0,81</b>		
2,2',3,3',4,4',5-HepCB	170	0,02 b		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,06</b> b	99	
2,2',3,4,4',5',6-HepCB	183	0,02 b		
2,2',3,4',5,5',6-HepCB	187	0,04 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	99	0,00
<b>Sum-HepCB</b>		<b>0,17</b>		
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	104	
<b>Sum 7 PCB</b>		<b>3,70</b>		
<b>Sum PCB</b>		<b>17,9</b>		<b>0,03</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)  
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 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)

14. versjon 22.09.2006 GSK



# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/1470  
 Customer: AMAP 2006  
 Customers sample ID: 4-6.9.06 0817-0730  
 : 160-160

Kjeller, 23.03.2007

Sample type: Air  
 Sample amount: 1 138 m3  
 Concentration units: pg/m3  
 Data files: VB226

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/ m3
PeCB		10,9	39	
HCB		75,1	52	
2,2',5-TriCB	18	3,55	81	
2,4,4'-TriCB	28	2,48		
2,4',5-TriCB	31	2,23		
2',3,4-TriCB	33	1,66		
3,4,4'-TriCB	37	0,20		
<b>Sum-TriCB</b>		<b>15,3</b>		
2,2',4,4'-TetCB	47	0,44	85	
2,2',5,5'-TetCB	52	0,90		
2,3',4,4'-TetCB	66	0,43		
2,4,4',5-TetCB	74	0,36		
<b>Sum-TetCB</b>		<b>4,06</b>		
2,2',4,4',5-PenCB	99	0,53 b	91	
2,2',4,5,5'-PenCB	101	0,42 b		
2,3,3',4,4'-PenCB	105	0,17 b		
2,3,4,4',5-PenCB	114	0,02 b		
2,3',4,4',5-PenCB	118	0,64 b		
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	0,01		
<b>Sum-PenCB</b>		<b>2,38</b>		
2,2',3,3',4,4'-HexCB	128	0,09 b		93
2,2',3,4,4',5'-HexCB	138	0,62 b		
2,2',3,4,5,5'-HexCB	141	0,03 b		
2,2',3,4',5',6-HexCB	149	0,28 b		
2,2',4,4',5,5'-HexCB	153	1,30 b		
2,3,3',4,4',5-HexCB	156	0,04 b		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	0,02 b		
<b>Sum-HexCB</b>		<b>3,00</b>		
2,2',3,3',4,4',5-HepCB	170	0,06 b	99	
2,2',3,4,4',5,5'-HepCB	180	0,25 b		
2,2',3,4,4',5',6-HepCB	183	0,07 b		
2,2',3,4',5,5',6-HepCB	187	0,20 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
<b>Sum-HepCB</b>		<b>0,66</b>		
2,2',3,3',4,4',5,5'-OctCB	194	0,03 b	96	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
<b>Sum 7 PCB</b>		<b>6,61</b>		
<b>Sum PCB</b>		<b>25,5</b>		<b>0,12</b>

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

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/1471  
 Customer: AMAP 2006  
 Customers sample ID: 11-13.9.06 0640-0718  
 : 160-158  
 Sample type: Air  
 Sample amount: 1 164 m3  
 Concentration units: pg/m3  
 Data files: VB226

Kjeller, 23.03.2007

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		11,8	36	
HCB		71,7	47	
2,2',5'-TriCB	18	10,7		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>6,62</b>	70	
2,4',5'-TriCB	31	6,30		
2',3,4'-TriCB	33	4,76		
3,4,4'-TriCB	37	0,49		
<b>Sum-TriCB</b>		<b>44,5</b>		
2,2',4,4'-TetCB	47	0,81		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,64</b>	73	
2,3',4,4'-TetCB	66	0,32 b		
2,4,4',5-TetCB	74	0,21 b		
<b>Sum-TetCB</b>		<b>6,71</b>		
2,2',4,4',5-PenCB	99	0,13 b		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,38</b> b	82	
2,3,3',4,4'-PenCB	105	0,02 b	86	0,00
2,3,4,4',5-PenCB	114	< 0,01	80	0,01
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,08</b> b	86	0,01
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	87	0,00
<b>Sum-PenCB</b>		<b>1,07</b>		
2,2',3,3',4,4'-HexCB	128	0,01 b		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,08</b> b	85	
2,2',3,4,5,5'-HexCB	141	0,02 b		
2,2',3,4',5',6-HexCB	149	0,16 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,12</b> b	82	
2,3,3',4,4',5-HexCB	156	< 0,01	97	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	104	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	91	0,00
<b>Sum-HexCB</b>		<b>0,61</b>		
2,2',3,3',4,4',5-HepCB	170	< 0,01		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,02</b> b	96	
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	109	0,00
<b>Sum-HepCB</b>		<b>0,07</b>		
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 b	102	
<b>Sum 7 PCB</b>		<b>8,93</b>		
<b>Sum PCB</b>		<b>53,0</b>		<b>0,03</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)  
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 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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/1472  
 Customer: AMAP 2006  
 Customers sample ID: 18-20.9.06 0759-0723  
 : 160-150

Kjeller, 23.03.2007

Sample type: Air  
 Sample amount: 1 107 m3  
 Concentration units: pg/m3  
 Data files: VB226

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		17,8	42	
HCB		68,2	50	
2,2',5'-TriCB	18	1,92	70	
2,4,4'-TriCB	28	1,19		
2,4',5'-TriCB	31	1,12		
2',3,4'-TriCB	33	0,84		
3,4,4'-TriCB	37	0,11		
<b>Sum-TriCB</b>		<b>7,86</b>		
2,2',4,4'-TetCB	47	0,21 b	72	
2,2',5,5'-TetCB	52	0,51		
2,3',4,4'-TetCB	66	0,10 b		
2,4,4',5'-TetCB	74	0,07 b		
<b>Sum-TetCB</b>		<b>1,95</b>		
2,2',4,4',5'-PenCB	99	0,07 b	81	
2,2',4,5,5'-PenCB	101	0,17 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		
<b>Sum-PenCB</b>		<b>0,53</b>		
2,2',3,3',4,4'-HexCB	128	< 0,01	89	
2,2',3,4,4',5'-HexCB	138	0,05 b		
2,2',3,4,5,5'-HexCB	141	0,01 b		
2,2',3,4',5',6'-HexCB	149	0,09 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		
<b>Sum-HexCB</b>		<b>0,30</b>		
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	0,02 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
<b>Sum-HepCB</b>		<b>0,05</b>		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	92	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
<b>Sum 7 PCB</b>		<b>2,07</b>		
<b>Sum PCB</b>		<b>10,7</b>		<b>0,02</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
 Sum PCB: Sum of observed PCB (mono- and di-CB are not included)  
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 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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/1473  
 Customer: AMAP 2006  
 Customers sample ID: 25-27.9.06 0725-0709  
 : 160-160

Kjeller, 23.03.2007

Sample type: Air  
 Sample amount: 1 150 m3  
 Concentration units: pg/m3  
 Data files: VB226

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/ m3
PeCB		16,0	36	
HCB		69,7	45	
2,2',5'-TriCB	18	3,42		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>2,21</b>	74	
2,4',5'-TriCB	31	2,08		
2',3,4'-TriCB	33	1,55		
3,4,4'-TriCB	37	0,19		
<b>Sum-TriCB</b>		<b>14,4</b>		
2,2',4,4'-TetCB	47	0,34 b		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>0,83</b>	77	
2,3',4,4'-TetCB	66	0,20 b		
2,4,4',5'-TetCB	74	0,14 b		
<b>Sum-TetCB</b>		<b>3,28</b>		
2,2',4,4',5'-PenCB	99	0,14 b		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,30</b> b	89	
2,3,3',4,4'-PenCB	105	0,04 b	96	0,00
2,3,4,4',5'-PenCB	114	< 0,01	89	0,01
<b>2,3',4,4',5'-PenCB</b>	<b>118</b>	<b>0,13</b> b	96	0,01
2'3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	96	0,00
<b>Sum-PenCB</b>		<b>1,03</b>		
2,2',3,3',4,4'-HexCB	128	0,02 b		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,11</b> b	95	
2,2',3,4,5,5'-HexCB	141	0,02 b		
2,2',3,4',5',6'-HexCB	149	0,15 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,20</b> b	90	
2,3,3',4,4',5'-HexCB	156	< 0,01	99	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	101	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	100	0,00
<b>Sum-HexCB</b>		<b>0,70</b>		
2,2',3,3',4,4',5'-HepCB	170	0,01 b		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,04</b> b	98	
2,2',3,4,4',5',6'-HepCB	183	0,01 b		
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
<b>Sum-HepCB</b>		<b>0,10</b>		
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	
<b>Sum 7 PCB</b>		<b>3,82</b>		
<b>Sum PCB</b>		<b>19,5</b>		<b>0,03</b>

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



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/1474  
 Customer: AMAP 2006  
 Customers sample ID: 2-4.10.06 0806-0706  
 : 160-158

Kjeller, 23.03.2007

Sample type: Air  
 Sample amount: 1 126 m3  
 Concentration units: pg/m3  
 Data files: VB226

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/ m3
PeCB		17,5	42	
HCB		70,6	50	
2,2',5'-TriCB	18	6,09	69	
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>3,08</b>		
2,4',5'-TriCB	31	2,96		
2',3,4'-TriCB	33	2,16		
3,4,4'-TriCB	37	0,21		
<b>Sum-TriCB</b>		<b>22,5</b>		
2,2',4,4'-TetCB	47	0,47	73	
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,07</b>		
2,3',4,4'-TetCB	66	0,24 b		
2,4,4',5-TetCB	74	0,16 b		
<b>Sum-TetCB</b>		<b>4,54</b>		
2,2',4,4',5-PenCB	99	0,21 b	78	0,01
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,38</b> b		
2,3,3',4,4'-PenCB	105	0,07 b		
2,3,4,4',5-PenCB	114	< 0,01		
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,23</b> b		
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
<b>Sum-PenCB</b>		<b>1,45</b>		
2,2',3,3',4,4'-HexCB	128	0,04 b	81	0,01
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,20</b> b		
2,2',3,4,5,5'-HexCB	141	0,03 b		
2,2',3,4',5',6-HexCB	149	0,20 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,39</b> b		
2,3,3',4,4',5-HexCB	156	0,01 b		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
<b>Sum-HexCB</b>		<b>1,20</b>		
2,2',3,3',4,4',5-HepCB	170	0,02 b	85	0,00
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,07</b> b		
2,2',3,4,4',5',6-HepCB	183	0,02 b		
2,2',3,4',5,5',6-HepCB	187	0,05 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
<b>Sum-HepCB</b>		<b>0,20</b>		
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		
<b>Sum 7 PCB</b>		<b>5,43</b>		
<b>Sum PCB</b>		<b>29,9</b>		<b>0,05</b>

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



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/1475  
 Customer: AMAP 2006  
 Customers sample ID: 9-11.10.06 0738-0717  
 : 160-155

Kjeller, 23.03.2007

Sample type: Air  
 Sample amount: 1 131 m<sup>3</sup>  
 Concentration units: pg/m<sup>3</sup>  
 Data files: VB226

Compound Structure	IUPAC-no.	Concentration pg/m <sup>3</sup>	Recovery %	TE (WHO) fg/ m <sup>3</sup>
PeCB		20,9	31	
HCB		71,3	40	
2,2',5'-TriCB	18	3,64	64	
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>2,28</b>		
2,4',5'-TriCB	31	2,18		
2',3,4'-TriCB	33	1,71		
3,4,4'-TriCB	37	0,29		
<b>Sum-TriCB</b>		<b>15,4</b>		
2,2',4,4'-TetCB	47	0,47	68	
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>0,98</b>		
2,3',4,4'-TetCB	66	0,35 b		
2,4,4',5-TetCB	74	0,19 b		
<b>Sum-TetCB</b>		<b>4,50</b>		
2,2',4,4',5-PenCB	99	0,16 b	81	0,00
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,43</b> b		
2,3,3',4,4'-PenCB	105	0,04 b		
2,3,4,4',5-PenCB	114	< 0,01		
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,13</b> b		
2',3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01		
<b>Sum-PenCB</b>		<b>1,40</b>		
2,2',3,3',4,4'-HexCB	128	0,01 b		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,10</b> b		
2,2',3,4,5,5'-HexCB	141	0,03 b		
2,2',3,4',5',6-HexCB	149	0,21 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,15</b> 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		
<b>Sum-HexCB</b>		<b>0,77</b>		
2,2',3,3',4,4',5-HepCB	170	0,01 b	92	0,00
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,03</b> b		
2,2',3,4,4',5',6-HepCB	183	0,01 b		
2,2',3,4',5,5',6-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
<b>Sum-HepCB</b>		<b>0,09</b>		
2,2',3,3',4,4',5,5'-OctCB	194	< 0,01	92	
2,2',3,3',4,4',5,5',6-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
<b>Sum 7 PCB</b>		<b>4,11</b>		
<b>Sum PCB</b>		<b>22,2</b>		<b>0,03</b>

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



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/1476  
 Customer: AMAP 2006  
 Customers sample ID: 16-18.10.06 0810-0714  
 : 160-156

Kjeller, 23.03.2007

Sample type: Air  
 Sample amount: 1 116 m3  
 Concentration units: pg/m3  
 Data files: VB226

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		21,2	32	
HCB		56,4	47	
2,2',5'-TriCB	18	2,81		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>1,84</b>	71	
2,4',5'-TriCB	31	1,72		
2',3,4'-TriCB	33	1,37		
3,4,4'-TriCB	37	0,26		
<b>Sum-TriCB</b>		<b>12,2</b>		
2,2',4,4'-TetCB	47	0,41		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>0,90</b>	73	
2,3',4,4'-TetCB	66	0,36 b		
2,4,4',5'-TetCB	74	0,20 b		
<b>Sum-TetCB</b>		<b>4,44</b>		
2,2',4,4',5'-PenCB	99	0,27 b		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,54</b> b	88	
2,3,3',4,4'-PenCB	105	0,08 b	100	0,01
2,3,4,4',5'-PenCB	114	0,01 b	92	0,01
<b>2,3',4,4',5'-PenCB</b>	<b>118</b>	<b>0,30</b> b	98	0,03
2'3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	99	0,00
<b>Sum-PenCB</b>		<b>2,00</b>		
2,2',3,3',4,4'-HexCB	128	0,05 b		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,36</b> b	100	
2,2',3,4,5,5'-HexCB	141	0,05 b		
2,2',3,4',5',6'-HexCB	149	0,33 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,73</b> b	91	
2,3,3',4,4',5'-HexCB	156	0,03 b	109	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	111	0,01
2,3',4,4',5,5'-HexCB	167	0,01 b	109	0,00
<b>Sum-HexCB</b>		<b>2,18</b>		
2,2',3,3',4,4',5'-HepCB	170	0,05 b		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,18</b> b	105	
2,2',3,4,4',5',6'-HepCB	183	0,04 b		
2,2',3,4',5,5',6'-HepCB	187	0,10 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	103	0,00
<b>Sum-HepCB</b>		<b>0,45</b>		
2,2',3,3',4,4',5,5'-OctCB	194	0,02 b		
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01	106	
<b>Sum 7 PCB</b>		<b>4,84</b>		
<b>Sum PCB</b>		<b>21,3</b>		<b>0,06</b>

Sum 7 PCB: PCB(28+52+101+118+138+153+180)  
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 This may be due to instrumental noise or/and chemical interference  
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 g: Recovery is not according to NILUs quality criteria  
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 (M. Van den Berg et al., 1998)

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/1477  
 Customer: AMAP 2006  
 Customers sample ID: 23-25.10.06 0701-0700  
 : 160-160  
 Sample type: Air  
 Sample amount: 1 157 m3  
 Concentration units: pg/m3  
 Data files: VB226

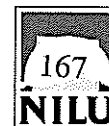
Kjeller, 23.03.2007

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/ m3
PeCB		25,4	33	
HCB		78,3	43	
2,2',5-TriCB	18	3,00		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>2,07</b>	67	
2,4',5-TriCB	31	1,92		
2',3,4-TriCB	33	1,44		
3,4,4'-TriCB	37	0,21		
<b>Sum-TriCB</b>		<b>13,1</b>		
2,2',4,4'-TetCB	47	0,43		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>0,97</b>	71	
2,3',4,4'-TetCB	66	0,27 b		
2,4,4',5-TetCB	74	0,17 b		
<b>Sum-TetCB</b>		<b>4,17</b>		
2,2',4,4',5-PenCB	99	0,20 b		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,44</b> b	83	
2,3,3',4,4'-PenCB	105	0,05 b	93	0,00
2,3,4,4',5-PenCB	114	< 0,01	87	0,01
<b>2,3',4,4',5-PenCB</b>	<b>118</b>	<b>0,17</b> b	92	0,02
2'3,3',4,5-PenCB	122	< 0,01		
2',3,4,4',5-PenCB	123	< 0,01	92	0,00
<b>Sum-PenCB</b>		<b>1,48</b>		
2,2',3,3',4,4'-HexCB	128	0,02 b		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,17</b> b	93	
2,2',3,4,5,5'-HexCB	141	0,03 b		
2,2',3,4',5',6-HexCB	149	0,23 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,32</b> b	87	
2,3,3',4,4',5-HexCB	156	0,01 b	101	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	115	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	101	0,00
<b>Sum-HexCB</b>		<b>1,18</b>		
2,2',3,3',4,4',5-HepCB	170	0,02 b		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,08</b> b	104	
2,2',3,4,4',5',6-HepCB	183	0,02 b		
2,2',3,4',5,5',6-HepCB	187	0,05 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	105	0,00
<b>Sum-HepCB</b>		<b>0,20</b>		
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	100	
<b>Sum 7 PCB</b>		<b>4,22</b>		
<b>Sum PCB</b>		<b>20,2</b>		<b>0,04</b>

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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 06/1478  
 Customer: AMAP 2006  
 Customers sample ID: 30.10-1.11.06 0820-0945  
 : 160-155

Kjeller, 23.03.2007

Sample type: Air  
 Sample amount: 1 173 m3  
 Concentration units: pg/m3  
 Data files: VB226

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/ m3
PeCB		24,5	41	
HCB		68,0	49	
2,2',5'-TriCB	18	2,29		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>1,35</b>	73	
2,4',5'-TriCB	31	1,27		
2',3,4'-TriCB	33	0,88		
3,4,4'-TriCB	37	0,11		
<b>Sum-TriCB</b>		<b>9,00</b>		
2,2',4,4'-TetCB	47	0,27 b		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>0,69</b>	73	
2,3',4,4'-TetCB	66	0,16 b		
2,4,4',5'-TetCB	74	0,11 b		
<b>Sum-TetCB</b>		<b>2,72</b>		
2,2',4,4',5'-PenCB	99	0,15 b		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,31</b> b	84	
2,3,3',4,4'-PenCB	105	0,04 b	96	0,00
2,3,4,4',5'-PenCB	114	< 0,01	90	0,01
<b>2,3',4,4',5'-PenCB</b>	<b>118</b>	<b>0,13</b> b	93	0,01
2'3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	94	0,00
<b>Sum-PenCB</b>		<b>1,05</b>		
2,2',3,3',4,4'-HexCB	128	0,02 b		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,12</b> b	93	
2,2',3,4,5,5'-HexCB	141	0,03 b		
2,2',3,4',5',6'-HexCB	149	0,17 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,21</b> b	87	
2,3,3',4,4',5'-HexCB	156	< 0,01	100	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	114	0,01
2,3',4,4',5,5'-HexCB	167	< 0,01	99	0,00
<b>Sum-HexCB</b>		<b>0,82</b>		
2,2',3,3',4,4',5'-HepCB	170	0,01 b		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,05</b> b	100	
2,2',3,4,4',5',6'-HepCB	183	0,01 b		
2,2',3,4',5,5',6'-HepCB	187	0,04 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	105	0,00
<b>Sum-HepCB</b>		<b>0,14</b>		
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	99	
<b>Sum 7 PCB</b>		<b>2,86</b>		
<b>Sum PCB</b>		<b>13,8</b>		<b>0,03</b>

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)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 07/100  
 Customer: AMAP 2006  
 Customers sample ID: 6-8.11.06 0935-0816  
 : 160-150

Kjeller, 23.03.2007

Sample type: Air  
 Sample amount: 1 090 m3  
 Concentration units: pg/m3  
 Data files: VB226

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		22,0	27	
HCB		65,8	36	
2,2',5'-TriCB	18	3,71	62	
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>2,25</b>		
2,4',5'-TriCB	31	2,10		
2',3,4'-TriCB	33	1,59		
3,4,4'-TriCB	37	0,19		
<b>Sum-TriCB</b>		<b>15,0</b>		
2,2',4,4'-TetCB	47	0,39 b	62	
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>0,96</b>		
2,3',4,4'-TetCB	66	0,22 b		
2,4,4',5'-TetCB	74	0,14 b		
<b>Sum-TetCB</b>		<b>3,87</b>		
2,2',4,4',5'-PenCB	99	0,14 b	72	
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,34</b> b		
2,3,3',4,4'-PenCB	105	0,03 b		
2,3,4,4',5'-PenCB	114	< 0,01		
<b>2,3',4,4',5'-PenCB</b>	<b>118</b>	<b>0,11</b> b		
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
<b>Sum-PenCB</b>		<b>1,07</b>		
2,2',3,3',4,4'-HexCB	128	0,02 b		78
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,10</b> b		
2,2',3,4,5,5'-HexCB	141	0,02 b		
2,2',3,4',5',6'-HexCB	149	0,17 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,15</b> 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		
<b>Sum-HexCB</b>		<b>0,74</b>		
2,2',3,3',4,4',5'-HepCB	170	< 0,01	83	
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,03</b> b		
2,2',3,4,4',5',6'-HepCB	183	0,01 b		
2,2',3,4',5,5',6'-HepCB	187	0,03 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
<b>Sum-HepCB</b>		<b>0,08</b>		
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		
<b>Sum 7 PCB</b>		<b>3,95</b>		
<b>Sum PCB</b>		<b>20,8</b>		<b>0,03</b>

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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 07/101  
 Customer: AMAP 2006  
 Customers sample ID: 13-15.11.06 0807-0850  
 : 160-154  
 Sample type: Air  
 Sample amount: 1 152 m3  
 Concentration units: pg/m3  
 Data files: VB226

Kjeller, 23.03.2007

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		25,2	36	
HCB		65,3	52	
2,2',5'-TriCB	18	2,82		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>1,63</b>	78	
2,4',5'-TriCB	31	1,54		
2',3,4'-TriCB	33	1,09		
3,4,4'-TriCB	37	0,11		
<b>Sum-TriCB</b>		<b>11,0</b>		
2,2',4,4'-TetCB	47	0,37 b		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>0,86</b>	81	
2,3',4,4'-TetCB	66	0,21 b		
2,4,4',5'-TetCB	74	0,15 b		
<b>Sum-TetCB</b>		<b>3,62</b>		
2,2',4,4',5'-PenCB	99	0,22 b		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,38</b> b	94	
2,3,3',4,4'-PenCB	105	0,06 b	100	0,01
2,3,4,4',5'-PenCB	114	< 0,01	96	0,01
<b>2,3',4,4',5'-PenCB</b>	<b>118</b>	<b>0,22</b> b	101	0,02
2'3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	101	0,00
<b>Sum-PenCB</b>		<b>1,41</b>		
2,2',3,3',4,4'-HexCB	128	0,04 b		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,31</b> b	102	
2,2',3,4,5,5'-HexCB	141	0,03 b		
2,2',3,4',5',6'-HexCB	149	0,19 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,58</b> b	97	
2,3,3',4,4',5'-HexCB	156	0,02 b	106	0,01
2,3,3',4,4',5'-HexCB	157	< 0,01	111	0,01
2,3',4,4',5,5'-HexCB	167	0,01 b	109	0,00
<b>Sum-HexCB</b>		<b>1,63</b>		
2,2',3,3',4,4',5'-HepCB	170	0,05 b		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,17</b> b	107	
2,2',3,4,4',5',6'-HepCB	183	0,03 b		
2,2',3,4',5,5',6'-HepCB	187	0,09 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	112	0,00
<b>Sum-HepCB</b>		<b>0,35</b>		
2,2',3,3',4,4',5,5'-OctCB	194	0,02 b		
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01	102	
<b>Sum 7 PCB</b>		<b>4,15</b>		
<b>Sum PCB</b>		<b>18,0</b>		<b>0,05</b>

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)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 07/102  
 Customer: AMAP 2006  
 Customers sample ID: 20-22.11.06 0915-0813  
 : 160-155

Kjeller, 23.03.2007

Sample type: Air  
 Sample amount: 1 116 m3  
 Concentration units: pg/m3  
 Data files: VB226

Compound	IUPAC-no.	Concentration	Recovery	TE (WHO)
Structure		pg/m3	%	fg/ m3
PeCB		16,4	34	
HCB		69,2	43	
2,2',5'-TriCB	18	4,88	68	
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>2,89</b>		
2,4',5'-TriCB	31	2,69		
2',3,4'-TriCB	33	2,03		
3,4,4'-TriCB	37	0,29		
<b>Sum-TriCB</b>		<b>19,5</b>		
2,2',4,4'-TetCB	47	0,53	72	
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,27</b>		
2,3',4,4'-TetCB	66	0,37 b		
2,4,4',5'-TetCB	74	0,22 b		
<b>Sum-TetCB</b>		<b>5,65</b>		
2,2',4,4',5'-PenCB	99	0,26 b	82	
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,57</b> b		
2,3,3',4,4'-PenCB	105	0,08 b		
2,3,4,4',5'-PenCB	114	< 0,01		
<b>2,3',4,4',5'-PenCB</b>	<b>118</b>	<b>0,26</b> b		
2'3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
<b>Sum-PenCB</b>		<b>1,95</b>		
2,2',3,3',4,4'-HexCB	128	0,04 b		87
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,30</b> b		
2,2',3,4,5,5'-HexCB	141	0,05 b		
2,2',3,4',5',6'-HexCB	149	0,31 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>0,50</b> b		
2,3,3',4,4',5'-HexCB	156	0,02 b		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	< 0,01		
<b>Sum-HexCB</b>		<b>1,79</b>		
2,2',3,3',4,4',5'-HepCB	170	0,03 b	90	
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,10</b> b		
2,2',3,4,4',5',6'-HepCB	183	0,03 b		
2,2',3,4',5,5',6'-HepCB	187	0,08 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
<b>Sum-HepCB</b>		<b>0,28</b>		
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		
<b>Sum 7 PCB</b>		<b>5,89</b>		
<b>Sum PCB</b>		<b>29,2</b>		<b>0,05</b>

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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 07/103  
 Customer: AMAP 2006  
 Customers sample ID: 27-29.11.06 0822-0955  
 : 160-150  
 Sample type: Air  
 Sample amount: 1 158 m3  
 Concentration units: pg/m3  
 Data files: VB226

Kjeller, 23.03.2007

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		26,0	26	
HCB		70,7	36	
2,2',5'-TriCB	18	5,72	60	
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>3,33</b>		
2,4',5'-TriCB	31	3,12		
2',3,4'-TriCB	33	2,26		
3,4,4'-TriCB	37	0,25		
<b>Sum-TriCB</b>		<b>22,5</b>		
2,2',4,4'-TetCB	47	0,63	62	
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,44</b>		
2,3',4,4'-TetCB	66	0,42 b		
2,4,4',5'-TetCB	74	0,28		
<b>Sum-TetCB</b>		<b>5,95</b>		
2,2',4,4',5'-PenCB	99	0,47 b	77	0,02
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,64</b> b		
2,3,3',4,4'-PenCB	105	0,16 b		
2,3,4,4',5'-PenCB	114	0,02		
<b>2,3',4,4',5'-PenCB</b>	<b>118</b>	<b>0,60</b> b		
2'3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
<b>Sum-PenCB</b>		<b>2,72</b>		
2,2',3,3',4,4'-HexCB	128	0,13 b		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,91</b> b		
2,2',3,4,5,5'-HexCB	141	0,04 bi		
2,2',3,4',5',6'-HexCB	149	0,32 b		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>1,64</b> b		
2,3,3',4,4',5'-HexCB	156	0,06 b		
2,3,3',4,4',5'-HexCB	157	0,01		
2,3',4,4',5,5'-HexCB	167	0,03 b		
<b>Sum-HexCB</b>		<b>3,99</b>		
2,2',3,3',4,4',5'-HepCB	170	0,13 b	98	0,00
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,44</b> b		
2,2',3,4,4',5',6'-HepCB	183	0,09 b		
2,2',3,4',5,5',6'-HepCB	187	0,22 b		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
<b>Sum-HepCB</b>		<b>1,01</b>		
2,2',3,3',4,4',5,5'-OctCB	194	0,04 b	99	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
<b>Sum 7 PCB</b>		<b>9,01</b>		
<b>Sum PCB</b>		<b>36,3</b>		<b>0,13</b>

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)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 07/104  
 Customer: AMAP 2006  
 Customers sample ID: 4-6.12.06 0754-0908  
 : 160-155

Kjeller, 23.03.2007

Sample type: Air  
 Sample amount: 1 169 m<sup>3</sup>  
 Concentration units: pg/m<sup>3</sup>  
 Data files: VB226

Compound Structure	IUPAC-no.	Concentration pg/m <sup>3</sup>	Recovery %	TE (WHO) fg/ m <sup>3</sup>
PeCB		22,8	31	
HCB		63,6	42	
2,2',5'-TriCB	18	3,93	68	
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>2,15</b>		
2,4',5'-TriCB	31	2,05		
2',3,4'-TriCB	33	1,42		
3,4,4'-TriCB	37	0,16		
<b>Sum-TriCB</b>		<b>14,9</b>		
2,2',4,4'-TetCB	47	0,46	75	
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,28</b>		
2,3',4,4'-TetCB	66	0,33		
2,4,4',5'-TetCB	74	0,26		
<b>Sum-TetCB</b>		<b>5,04</b>		
2,2',4,4',5'-PenCB	99	0,50	89	
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>0,82</b>		
2,3,3',4,4'-PenCB	105	0,13		
2,3,4,4',5'-PenCB	114	0,02		
<b>2,3',4,4',5'-PenCB</b>	<b>118</b>	<b>0,60</b>		
2'3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01		
<b>Sum-PenCB</b>		<b>3,01</b>		
2,2',3,3',4,4'-HexCB	128	0,08		100
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,68</b>		
2,2',3,4,5,5'-HexCB	141	0,06		
2,2',3,4',5',6'-HexCB	149	0,46		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>1,45</b>		
2,3,3',4,4',5'-HexCB	156	0,04		
2,3,3',4,4',5'-HexCB	157	< 0,01		
2,3',4,4',5,5'-HexCB	167	0,03		
<b>Sum-HexCB</b>		<b>3,81</b>		
2,2',3,3',4,4',5'-HepCB	170	0,06	105	
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,26</b>		
2,2',3,4,4',5',6'-HepCB	183	0,07		
2,2',3,4',5,5',6'-HepCB	187	0,18		
2,3,3',4,4',5,5'-HepCB	189	< 0,01		
<b>Sum-HepCB</b>		<b>0,69</b>		
2,2',3,3',4,4',5,5'-OctCB	194	0,02	106	
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01		
<b>Sum 7 PCB</b>		<b>7,25</b>		
<b>Sum PCB</b>		<b>27,5</b>		<b>0,11</b>

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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 07/105  
 Customer: AMAP 2006  
 Customers sample ID: 11-13.12.06 0758-0858  
 : 160-155  
 Sample type: Air  
 Sample amount: 1 164 m3  
 Concentration units: pg/m3  
 Data files: VB226

Kjeller, 23.03.2007

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		19,0	28	
HCb		61,1	41	
2,2',5'-TriCB	18	6,63		
2,4,4'-TriCB	28	3,71	73	
2,4',5'-TriCB	31	3,57		
2',3,4'-TriCB	33	2,64		
3,4,4'-TriCB	37	0,31		
<b>Sum-TriCB</b>		<b>25,9</b>		
2,2',4,4'-TetCB	47	0,73		
2,2',5,5'-TetCB	52	1,91	76	
2,3',4,4'-TetCB	66	0,47		
2,4,4',5'-TetCB	74	0,37		
<b>Sum-TetCB</b>		<b>7,58</b>		
2,2',4,4',5'-PenCB	99	0,59		
2,2',4,5,5'-PenCB	101	1,11	91	
2,3,3',4,4'-PenCB	105	0,14	94	0,01
2,3,4,4',5'-PenCB	114	0,02	89	0,01
2,3',4,4',5'-PenCB	118	0,59	95	0,06
2',3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	96	0,00
<b>Sum-PenCB</b>		<b>3,70</b>		
2,2',3,3',4,4'-HexCB	128	0,08		
2,2',3,4,4',5'-HexCB	138	0,64	93	
2,2',3,4,5,5'-HexCB	141	0,08		
2,2',3,4',5',6'-HexCB	149	0,71		
2,2',4,4',5,5'-HexCB	153	1,19	88	
2,3,3',4,4',5'-HexCB	156	0,03	97	0,02
2,3,3',4,4',5'-HexCB	157	< 0,01	100	0,01
2,3',4,4',5,5'-HexCB	167	0,02	98	0,00
<b>Sum-HexCB</b>		<b>4,00</b>		
2,2',3,3',4,4',5'-HepCB	170	0,06		
2,2',3,4,4',5,5'-HepCB	180	0,22	97	
2,2',3,4,4',5',6'-HepCB	183	0,06		
2,2',3,4',5,5',6'-HepCB	187	0,22		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	100	0,00
<b>Sum-HepCB</b>		<b>0,70</b>		
2,2',3,3',4,4',5,5'-OctCB	194	0,02		
2,2',3,3',4,4',5,5',6'-NonCB	206	< 0,01		
DecaCB	209	< 0,01	96	
<b>Sum 7 PCB</b>		<b>9,38</b>		
<b>Sum PCB</b>		<b>41,9</b>		<b>0,11</b>

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)

14. versjon 22.09.2006 GSK

# Results of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 07/448  
 Customer: AMAP 2006  
 Customers sample ID: 18-20.12.06 0943-0821  
 : 160-141  
 Sample type: Air  
 Sample amount: 1 055 m3  
 Concentration units: pg/m3  
 Data files: DH987

Kjeller, 17.04.2007

Compound Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB		28,6	30	
HCB		75,1	35	
2,2',5'-TriCB	18	5,96		
<b>2,4,4'-TriCB</b>	<b>28</b>	<b>3,59</b>	67	
2,4',5'-TriCB	31	3,36		
2',3,4'-TriCB	33	2,52		
3,4,4'-TriCB	37	0,32		
<b>Sum-TriCB</b>		<b>24,6</b>		
2,2',4,4'-TetCB	47	0,67		
<b>2,2',5,5'-TetCB</b>	<b>52</b>	<b>1,90</b>	61	
2,3',4,4'-TetCB	66	0,43		
2,4,4',5'-TetCB	74	0,36		
<b>Sum-TetCB</b>		<b>7,17</b>		
2,2',4,4',5'-PenCB	99	0,64		
<b>2,2',4,5,5'-PenCB</b>	<b>101</b>	<b>1,04</b>	76	
2,3,3',4,4'-PenCB	105	0,15	83	0,01
2,3,4,4',5'-PenCB	114	0,03	83	0,01
<b>2,3',4,4',5'-PenCB</b>	<b>118</b>	<b>0,73</b>	83	0,07
2'3,3',4,5'-PenCB	122	< 0,01		
2',3,4,4',5'-PenCB	123	< 0,01	81	0,00
<b>Sum-PenCB</b>		<b>3,60</b>		
2,2',3,3',4,4'-HexCB	128	0,08		
<b>2,2',3,4,4',5'-HexCB</b>	<b>138</b>	<b>0,84</b>	86	
2,2',3,4,5,5'-HexCB	141	0,07		
2,2',3,4',5',6'-HexCB	149	0,88		
<b>2,2',4,4',5,5'-HexCB</b>	<b>153</b>	<b>1,56</b>	75	
2,3,3',4,4',5'-HexCB	156	0,05	88	0,02
2,3,3',4,4',5'-HexCB	157	< 0,01	89	0,01
2,3',4,4',5,5'-HexCB	167	0,03	87	0,00
<b>Sum-HexCB</b>		<b>4,71</b>		
2,2',3,3',4,4',5'-HepCB	170	0,08		
<b>2,2',3,4,4',5,5'-HepCB</b>	<b>180</b>	<b>0,40</b>	81	
2,2',3,4,4',5',6'-HepCB	183	0,11		
2,2',3,4',5,5',6'-HepCB	187	0,40		
2,3,3',4,4',5,5'-HepCB	189	< 0,01	77	0,00
<b>Sum-HepCB</b>		<b>1,15</b>		
2,2',3,3',4,4',5,5'-OctCB	194	0,03 i		
2,2',3,3',4,4',5,5',6'-NonCB	206	0,02		
DecaCB	209	0,01	76	
<b>Sum 7 PCB</b>		<b>10,1</b>		
<b>Sum PCB</b>		<b>41,3</b>		<b>0,13</b>

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 of PCB Analysis



Encl. to measuring report: O-4100  
 NILU-Sample number: 07/452  
 Customer: AMAP 2006  
 Customers sample ID: 27-29.12.06 0849-1003  
 : 160-156

Kjeller, 17.04.2007

Sample type: Air  
 Sample amount: 1 171 m3  
 Concentration units: pg/m3  
 Data files: DH987

Compound	Structure	IUPAC-no.	Concentration pg/m3	Recovery %	TE (WHO) fg/ m3
PeCB			32,0	30	
HCB			79,3	37	
2,2',5'-TriCB		18	3,31		
2,4,4'-TriCB		28	2,07	74	
2,4',5'-TriCB		31	1,90		
2',3,4'-TriCB		33	1,34		
3,4,4'-TriCB		37	0,19		
<b>Sum-TriCB</b>			<b>13,6</b>		
2,2',4,4'-TetCB		47	0,50		
2,2',5,5'-TetCB		52	1,41	71	
2,3',4,4'-TetCB		66	0,33		
2,4,4',5'-TetCB		74	0,28		
<b>Sum-TetCB</b>			<b>5,28</b>		
2,2',4,4',5'-PenCB		99	0,51		
2,2',4,5,5'-PenCB		101	0,85	84	
2,3,3',4,4'-PenCB		105	0,10	93	0,01
2,3,4,4',5'-PenCB		114	0,02	90	0,01
2,3',4,4',5'-PenCB		118	0,60	91	0,06
2'3,3',4,5'-PenCB		122	< 0,01		
2',3,4,4',5'-PenCB		123	< 0,01	92	0,00
<b>Sum-PenCB</b>			<b>2,97</b>		
2,2',3,3',4,4'-HexCB		128	0,06		
2,2',3,4,4',5'-HexCB		138	0,73	90	
2,2',3,4,5,5'-HexCB		141	0,06		
2,2',3,4',5',6'-HexCB		149	0,83		
2,2',4,4',5,5'-HexCB		153	1,36	83	
2,3,3',4,4',5'-HexCB		156	0,04	88	0,02
2,3,3',4,4',5'-HexCB		157	< 0,01	91	0,01
2,3',4,4',5,5'-HexCB		167	0,03	88	0,00
<b>Sum-HexCB</b>			<b>4,34</b>		
2,2',3,3',4,4',5'-HepCB		170	0,07		
2,2',3,4,4',5,5'-HepCB		180	0,35	84	
2,2',3,4,4',5',6'-HepCB		183	0,10		
2,2',3,4',5,5',6'-HepCB		187	0,39		
2,3,3',4,4',5,5'-HepCB		189	< 0,01	78	0,00
<b>Sum-HepCB</b>			<b>1,01</b>		
2,2',3,3',4,4',5,5'-OctCB		194	0,02		
2,2',3,3',4,4',5,5',6'-NonCB		206	< 0,01		
DecaCB		209	< 0,01	73	
<b>Sum 7 PCB</b>			<b>7,37</b>		
<b>Sum PCB</b>			<b>27,3</b>		<b>0,11</b>

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)

14. versjon 22.09.2006 GSK

# 176 Results of Pesticid and DDT Analysis



Kjeller, 20.12.2006

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/241  
 Customer : AMAP 2006  
 Customers sample ID : 2-4.1.06 0738-1017  
 : 160-145  
 Sample type : Air  
 Sample amount : 1166 m3  
 Concentration units : pg/m3  
 Data files : VB146 + DH931

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,39	77
cis-Chlordane	0,71	
trans-Nonachlor	0,67	81
cis-Nonachlor	0,04	
$\alpha$ -HCH	8,55	37
$\gamma$ -HCH	1,55	38
o,p'-DDE	0,17	
p,p'-DDE	1,27 b	64
o,p'-DDD	0,03	
p,p'-DDD	< 0,02	
o,p'-DDT	0,28	
p,p'-DDT	0,12	59
Sum DDT	1,89	

< : 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-4100  
NILU-Sample number : 06/242  
Customer : AMAP 2006  
Customers sample ID : 9-11.1.2006 0752-0802  
: 160-158  
Sample type : Air  
Sample amount : 1154 m3  
Concentration units : pg/m3  
Data files : VB146 + DH931

Kjeller, 20.12.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,46	84
cis-Chlordane	1,03 i	
trans-Nonachlor	0,80	97
cis-Nonachlor	0,13	
$\alpha$ -HCH	6,67	47
$\gamma$ -HCH	1,34	53
o,p'-DDE	0,14	
p,p'-DDE	1,83 b	87
o,p'-DDD	0,06	
p,p'-DDD	0,13 b	
o,p'-DDT	0,28	
p,p'-DDT	0,22	79
Sum DDT	2,67	

< : 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

# 178 Results of Pesticid and DDT Analysis



Kjeller, 21.12.2006

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/243  
 Customer : AMAP 2006  
 Customers sample ID : 16-18.1.06 1240-0807  
 : 160-158  
 Sample type : Air  
 Sample amount : 1042 m3  
 Concentration units : pg/m3  
 Data files : VB146 + DH930B

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,39	78
cis-Chlordane	0,65	
trans-Nonachlor	0,57	83
cis-Nonachlor	0,05	
$\alpha$ -HCH	6,62	28
$\gamma$ -HCH	1,68	44
o,p'-DDE	0,13	
p,p'-DDE	0,99 b	86
o,p'-DDD	< 0,02	
p,p'-DDD	< 0,03	
o,p'-DDT	0,24	
p,p'-DDT	0,12 i	74
Sum DDT	1,53	

< : 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



Encl. to measuring report : O-4100  
NILU-Sample number : 06/244  
Customer : AMAP 2006  
Customers sample ID : 24-26.1.06 0910 - 0747  
: 160-156  
Sample type : Air  
Sample amount : 1109 m3  
Concentration units : pg/m3  
Data files : VB146 + DH930B

Kjeller, 21.12.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,39	90
cis-Chlordane	0,70	
trans-Nonachlor	0,49	94
cis-Nonachlor	0,04	
$\alpha$ -HCH	6,97	48
$\gamma$ -HCH	1,13	53
o,p'-DDE	0,12	
p,p'-DDE	0,74 b	87
o,p'-DDD	0,02 i	
p,p'-DDD	< 0,02	
o,p'-DDT	0,19	
p,p'-DDT	0,10 i	90
Sum DDT	1,19	

< : 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

# 180 Results of Pesticid and DDT Analysis



Encl. to measuring report : O-4100  
 NILU-Sample number : 06/245  
 Customer : AMAP 2006  
 Customers sample ID : 30.1.06-1.2.06 0906-0957  
 : 160-150  
 Sample type : Air  
 Sample amount : 1142 m3  
 Concentration units : pg/m3  
 Data files : DH926A + VB146

Kjeller, 31.10.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,35	66
cis-Chlordane	0,60	
trans-Nonachlor	0,48	78
cis-Nonachlor	0,02	
$\alpha$ -HCH	7,59	30
$\gamma$ -HCH	1,23	34
o,p'-DDE	0,11	
p,p'-DDE	0,62 b	66
o,p'-DDD	< 0,01	
p,p'-DDD	< 0,01	
o,p'-DDT	0,16 i	
p,p'-DDT	0,07	69
Sum DDT	0,98	

< : 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-4100  
NILU-Sample number : 06/582  
Customer : AMAP 2006  
Customers sample ID : 6-8.2.06 0820-0813  
: 160-155  
Sample type : Air  
Sample amount : 1138 m3  
Concentration units : pg/m3  
Data files : DH898 + TB\_1988.D

Kjeller, 31.10.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,27	72
cis-Chlordane	0,46	
trans-Nonachlor	0,38	71
cis-Nonachlor	< 0,03	
$\alpha$ -HCH	8,74	30
$\gamma$ -HCH	1,34	36
o,p'-DDE	0,11	
p,p'-DDE	4,40	91
o,p'-DDD	< 0,01	
p,p'-DDD	< 0,02	
o,p'-DDT	0,09	
p,p'-DDT	0,06 i	71
Sum DDT	4,69	

< : 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

# 182 Results of Pesticid and DDT Analysis



Kjeller, 31/10/2006

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/583  
 Customer : AMAP 2006  
 Customers sample ID : 13-15.2.06 0754-0809  
 : 160-158  
 Sample type : Air  
 Sample amount : 1157-m3  
 Concentration units : pg/m<sup>3</sup>  
 Data files : DH926A + VB146

Compound Structure	Concentration pg/m <sup>3</sup>	Recovery %
trans-Chlordane	0,22	79
cis-Chlordane	0,37 i	
trans-Nonachlor	0,30	96
cis-Nonachlor	0,02	
α-HCH	8,20	38
γ-HCH	1,26	48
o,p'-DDE	0,09	
p,p'-DDE	0,39 b	75
o,p'-DDD	0,02 i	
p,p'-DDD	< 0,01	
o,p'-DDT	0,15	
p,p'-DDT	0,06 i	81
Sum DDT	0,73	

< : 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-4100  
NILU-Sample number : 06/584  
Customer : AMAP 2006  
Customers sample ID : 20-22.2.06 0915-0817  
: 160-140 (snø på filter)  
Sample type : Air  
Sample amount : 1062 m3  
Concentration units : pg/m3  
Data files : DH926A + VB146

Kjeller, 31.10.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,72	91
cis-Chlordane	1,07	
trans-Nonachlor	1,07	107
cis-Nonachlor	0,08	
$\alpha$ -HCH	8,71	49
$\gamma$ -HCH	1,69	51
o,p'-DDE	0,19	
p,p'-DDE	1,18	84
o,p'-DDD	0,05	
p,p'-DDD	0,06	
o,p'-DDT	0,31	
p,p'-DDT	0,13	87
Sum DDT	1,91	

< : 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

# 184 Results of Pesticid and DDT Analysis



Kjeller, 31.10.2006

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/585  
 Customer : AMAP 2006  
 Customers sample ID : 27.2-1.3.06 0839-0858  
 : 160-158  
 Sample type : Air  
 Sample amount : 1157 m3  
 Concentration units : pg/m3  
 Data files : DH926A + VB146

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,24	77
cis-Chlordane	0,40	
trans-Nonachlor	0,34	91
cis-Nonachlor	0,02	
$\alpha$ -HCH	9,64	37
$\gamma$ -HCH	1,91	46
o,p'-DDE	0,11	
p,p'-DDE	0,62 b	73
o,p'-DDD	0,02	
p,p'-DDD	< 0,01	
o,p'-DDT	0,18	
p,p'-DDT	0,10	87
Sum DDT	1,03	

< : 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-4100  
NILU-Sample number : 06/586  
Customer : AMAP 2006  
Customers sample ID : 6-8.3.06 0802-0810  
: 160-150  
Sample type : Air  
Sample amount : 1123 m3  
Concentration units : pg/m3  
Data files : DH898 + TB\_1989.D

Kjeller, 31.10.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,35	79
cis-Chlordane	0,59	
trans-Nonachlor	0,48	80
cis-Nonachlor	< 0,02	
$\alpha$ -HCH	8,46	36
$\gamma$ -HCH	1,69	41
o,p'-DDE	0,16	
p,p'-DDE	1,08	100
o,p'-DDD	0,02	
p,p'-DDD	0,03	
o,p'-DDT	0,20	
p,p'-DDT	0,10	90
Sum DDT	1,59	

< : 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

## 186 Results of Pesticid and DDT Analysis



Kjeller, 31.10.2006

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/587  
 Customer : AMAP 2006  
 Customers sample ID : 13-15.3.06 0830-0814  
 : 160-158  
 Sample type : Air  
 Sample amount : 1142 m3  
 Concentration units : pg/m3  
 Data files : DH898 + TB\_1990.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,37	88
cis-Chlordane	0,69	
trans-Nonachlor	0,62	89
cis-Nonachlor	0,04	
$\alpha$ -HCH	6,87	53
$\gamma$ -HCH	1,33	55
o,p'-DDE	0,14	
p,p'-DDE	2,04	105
o,p'-DDD	0,04 i	
p,p'-DDD	0,08	
o,p'-DDT	0,27	
p,p'-DDT	0,11	87
Sum DDT	2,68	

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

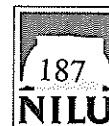
i : Isotope ratio deviates more than 20 % from theoretical value

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-4100  
NILU-Sample number : 06/588  
Customer : AMAP 2006  
Customers sample ID : 20-22.3.06 0856-0755  
: 160-157  
Sample type : Air  
Sample amount : 1123 m3  
Concentration units : pg/m3  
Data files : DH898 + TB\_1991.D

Kjeller, 31.10.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,17	93
cis-Chlordane	0,37	
trans-Nonachlor	0,28	93
cis-Nonachlor	< 0,02	
$\alpha$ -HCH	10,1	50
$\gamma$ -HCH	2,19	59
o,p'-DDE	0,09	
p,p'-DDE	0,44 b	110
o,p'-DDD	0,02 i	
p,p'-DDD	< 0,01	
o,p'-DDT	0,13	
p,p'-DDT	0,06	96
Sum DDT	0,76	

< : 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

## 188 Results of Pesticid and DDT Analysis



Kjeller, 31.10.2006

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/589  
 Customer : AMAP 2006  
 Customers sample ID : 27-29.3.06 0919-0730  
 : 160-142  
 Sample type : Air  
 Sample amount : 1051 m3  
 Concentration units : pg/m3  
 Data files : DH898 + TB\_1994.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,26	98
cis-Chlordane	0,51	
trans-Nonachlor	0,47	98
cis-Nonachlor	< 0,02	
$\alpha$ -HCH	9,42	53
$\gamma$ -HCH	2,36	73
o,p'-DDE	0,10	
p,p'-DDE	1,02	109
o,p'-DDD	< 0,01	
p,p'-DDD	0,04	
o,p'-DDT	0,13	
p,p'-DDT	0,10 i	75
Sum DDT	1,39	

< : 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



Encl. to measuring report : O-4100  
NILU-Sample number : 06/590  
Customer : AMAP 2006  
Customers sample ID : 3-6.4.06 0728-0820  
: 160-147  
Sample type : Air  
Sample amount : 1688 m3  
Concentration units : pg/m3  
Data files : DH898 + TB\_1995.D

Kjeller, 31.10.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,27	102
cis-Chlordane	0,55	
trans-Nonachlor	0,48	102
cis-Nonachlor	< 0,01	
$\alpha$ -HCH	7,63	60
$\gamma$ -HCH	1,68	71
o,p'-DDE	0,08	
p,p'-DDE	1,21	117
o,p'-DDD	0,03	
p,p'-DDD	0,03	
o,p'-DDT	0,22	
p,p'-DDT	0,07	79
Sum DDT	1,64	

< : 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

## 190 Results of Pesticid and DDT Analysis



Kjeller, 31/10/2006

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/591  
 Customer : AMAP 2006  
 Customers sample ID : 10-12.4.06 0748-0809  
 : 160-155  
 Sample type : Air  
 Sample amount : 1150 m<sup>3</sup>  
 Concentration units : pg/m<sup>3</sup>  
 Data files : DH898 + TB\_1996.D

Compound Structure	Concentration pg/m <sup>3</sup>	Recovery %
trans-Chlordane	0,25	79
cis-Chlordane	0,58	
trans-Nonachlor	0,54	78
cis-Nonachlor	0,05	
α-HCH	8,98	47
γ-HCH	2,42	56
o,p'-DDE	0,10	
p,p'-DDE	2,32	89
o,p'-DDD	0,02 i	
p,p'-DDD	0,03 i	
o,p'-DDT	0,21	
p,p'-DDT	0,11	81
Sum DDT	2,80	

< : 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-4100  
NILU-Sample number : 06/592  
Customer : AMAP 2006  
Customers sample ID : 17-19.4.06 1057-0712  
: 160-145  
Sample type : Air  
Sample amount : 1019 m3  
Concentration units : pg/m3  
Data files : DH898 + TB\_1997.D

Kjeller, 31.10.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,20	93
cis-Chlordane	0,49	
trans-Nonachlor	0,46	92
cis-Nonachlor	0,01 i	
$\alpha$ -HCH	9,50	44
$\gamma$ -HCH	2,91	61
o,p'-DDE	0,08	
p,p'-DDE	0,52 b	100
o,p'-DDD	< 0,01	
p,p'-DDD	< 0,02	
o,p'-DDT	0,24	
p,p'-DDT	0,08 i	75
Sum DDT	0,95	

< : 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

192 **Results of Pesticid and DDT Analysis**

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/593  
 Customer : AMAP 2006  
 Customers sample ID : 24-26.4.06 0706-0704  
 : 160 -160  
 Sample type : Air  
 Sample amount : 1157 m3  
 Concentration units : pg/m3  
 Data files : DH899 + TB\_2000.D

Kjeller, 30.03.2007

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,30	92
cis-Chlordane	0,78	
trans-Nonachlor	0,69	90
cis-Nonachlor	0,07	
$\alpha$ -HCH	8,48	61
$\gamma$ -HCH	1,92	65
o,p'-DDE	0,09	
p,p'-DDE	1,54	88
o,p'-DDD	0,03	
p,p'-DDD	0,02	
o,p'-DDT	0,17	
p,p'-DDT	0,11	101
Sum DDT	1,95	

< : 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-4100  
NILU-Sample number : 06/736  
Customer : AMAP 2006  
Customers sample ID : 1-3.5.06 1014-0838  
: 160-148  
Sample type : Air  
Sample amount : 1076 m3  
Concentration units : pg/m3  
Data files : DH899 + TB\_2001.D

Kjeller, 31.10.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,21	94
cis-Chlordane	0,60	
trans-Nonachlor	0,61	92
cis-Nonachlor	0,07	
$\alpha$ -HCH	14,9	69
$\gamma$ -HCH	3,76	69
o,p'-DDE	0,19	
p,p'-DDE	2,37	94
o,p'-DDD	0,09	
p,p'-DDD	0,16	
o,p'-DDT	0,46	
p,p'-DDT	0,44	107
Sum DDT	3,71	

< : 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

## 194 Results of Pesticid and DDT Analysis



Encl. to measuring report : O-4100  
 NILU-Sample number : 06/737  
 Customer : AMAP 2006  
 Customers sample ID : 5-8.5.06 1001-0725  
 : 160-153  
 Sample type : Air  
 Sample amount : 1638 m3  
 Concentration units : pg/m3  
 Data files : DH899 + TB\_2002.D

Kjeller, 31.10.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,22	97
cis-Chlordane	0,62	
trans-Nonachlor	0,57	95
cis-Nonachlor	0,06	
$\alpha$ -HCH	10,1	69
$\gamma$ -HCH	4,02	69
o,p'-DDE	0,10	
p,p'-DDE	1,59	108
o,p'-DDD	0,03	
p,p'-DDD	0,05	
o,p'-DDT	0,27	
p,p'-DDT	0,19	152
Sum DDT	2,23	

< : 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

# Results of Pesticid and DDT Analysis



Encl. to measuring report : O-4100  
NILU-Sample number : 06/738  
Customer : AMAP 2006  
Customers sample ID : 8-10.5.06 0805-0705  
: 160-155  
Sample type : Air  
Sample amount : 1116 m3  
Concentration units : pg/m3  
Data files : DH899 + TB\_2003.D

Kjeller, 31.10.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,30	89
cis-Chlordane	1,22	
trans-Nonachlor	2,20	90
cis-Nonachlor	0,40	
$\alpha$ -HCH	11,3	55
$\gamma$ -HCH	2,32	61
o,p'-DDE	0,14	
p,p'-DDE	15,3	97
o,p'-DDD	0,29	
p,p'-DDD	1,00	
o,p'-DDT	0,09	
p,p'-DDT	0,07	123
Sum DDT	16,9	

< : 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

# 196 Results of Pesticid and DDT Analysis



Kjeller, 31.10.2006

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/784  
 Customer : AMAP 2006  
 Customers sample ID : 15-17.5.06 0700-0754  
 : 160-156  
 Sample type : Air  
 Sample amount : 1164 m3  
 Concentration units : pg/m3  
 Data files : M\_14\_08\_06\_B + DH931

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,15 i	61
cis-Chlordane	0,53	
trans-Nonachlor	0,56	70
cis-Nonachlor	0,10	
$\alpha$ -HCH	11,8	43
$\gamma$ -HCH	1,95	50
o,p'-DDE	0,03	
p,p'-DDE	17,4	61
o,p'-DDD	0,01	
p,p'-DDD	0,04	
o,p'-DDT	0,05	
p,p'-DDT	0,03	79
Sum DDT	17,5	

< : 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



Kjeller, 31.10.2006

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/785  
 Customer : AMAP 2006  
 Customers sample ID : 29-31.5.06 0750-0800  
 : 160-152  
 Sample type : Air  
 Sample amount : 1133 m3  
 Concentration units : pg/m3  
 Data files : DH926A + VB146

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,16	96
cis-Chlordane	0,45	
trans-Nonachlor	0,86	109
cis-Nonachlor	0,14	
$\alpha$ -HCH	11,7	55
$\gamma$ -HCH	1,89	59
o,p'-DDE	0,02	
p,p'-DDE	107 i	80
o,p'-DDD	0,06	
p,p'-DDD	0,24	
o,p'-DDT	0,07 i	
p,p'-DDT	0,08	109
Sum DDT	108	

< : 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

198 **Results of Pesticid and DDT Analysis**

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/786  
 Customer : AMAP 2006  
 Customers sample ID : 22-24.5.06 0850-1058  
 : 160-150  
 Sample type : Air  
 Sample amount : 1170 m3  
 Concentration units : pg/m3  
 Data files : DH926A + VB146

Kjeller, 31.10.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,12	89
cis-Chlordane	0,41	
trans-Nonachlor	0,47	101
cis-Nonachlor	0,06	
$\alpha$ -HCH	10,9	50
$\gamma$ -HCH	1,97	59
o,p'-DDE	0,02 i	
p,p'-DDE	12,8	84
o,p'-DDD	0,01 i	
p,p'-DDD	0,04	
o,p'-DDT	0,06 i	
p,p'-DDT	< 0,02	99
Sum DDT	13,0	

< : 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-4100  
NILU-Sample number : 06/787  
Customer : AMAP 2006  
Customers sample ID : 5-7.6.06 0800-0748  
: 160-155  
Sample type : Air  
Sample amount : 1135 m3  
Concentration units : pg/m3  
Data files : DH926A + VB146

Kjeller, 31.10.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,13	89
cis-Chlordane	0,54	
trans-Nonachlor	0,45	99
cis-Nonachlor	0,07	
$\alpha$ -HCH	9,52	48
$\gamma$ -HCH	1,55	55
o,p'-DDE	0,03	
p,p'-DDE	1,82	82
o,p'-DDD	0,01 i	
p,p'-DDD	< 0,01	
o,p'-DDT	0,07	
p,p'-DDT	0,04 i	102
Sum DDT	1,98	

< : 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

200 **Results of Pesticid and DDT Analysis**

Kjeller, 20.12.2006

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/788  
 Customer : AMAP 2006  
 Customers sample ID : 12-14.6.06 0835 - 0718  
 : 160-146  
 Sample type : Air  
 Sample amount : 1076 m3  
 Concentration units : pg/m3  
 Data files : M\_27\_09\_06 + DH931

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,12	96
cis-Chlordane	0,55	
trans-Nonachlor	0,55	106
cis-Nonachlor	0,10	
$\alpha$ -HCH	8,26	63
$\gamma$ -HCH	1,33	71
o,p'-DDE	0,03	
p,p'-DDE	0,83 b	91
o,p'-DDD	0,03	
p,p'-DDD	0,10 b	
o,p'-DDT	0,09 i	
p,p'-DDT	0,09	98
Sum DDT	1,17	

< : 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

# Results of Pesticid and DDT Analysis



Encl. to measuring report : O-4100  
NILU-Sample number : 06/939  
Customer : AMAP 2006  
Customers sample ID : 19-21.6.06 0820 - 0832  
: 160-155  
Sample type : Air  
Sample amount : 1145 m3  
Concentration units : pg/m3  
Data files : M\_27\_09\_06 + DH931

Kjeller, 20.12.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,13	85
cis-Chlordane	0,49	
trans-Nonachlor	0,40	93
cis-Nonachlor	0,09 b	
$\alpha$ -HCH	9,85	54
$\gamma$ -HCH	1,36	64
o,p'-DDE	0,02	
p,p'-DDE	0,54 b	81
o,p'-DDD	< 0,01	
p,p'-DDD	< 0,01 b	
o,p'-DDT	0,05 i	
p,p'-DDT	0,02	85
Sum DDT	0,66	

< : 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



Kjeller, 21.12.2006

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/941  
 Customer : AMAP 2006  
 Customers sample ID : 26-28.6.06 0738 - 0854  
 : 160-150  
 Sample type : Air  
 Sample amount : 1151 m3  
 Concentration units : pg/m3  
 Data files : M\_27\_09\_06 + DH930B

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,06 i	91
cis-Chlordane	0,44	
trans-Nonachlor	0,36	96
cis-Nonachlor	0,09	
$\alpha$ -HCH	10,7	59
$\gamma$ -HCH	1,52	67
o,p'-DDE	0,01	
p,p'-DDE	0,46 b	86
o,p'-DDD	< 0,01 i	
p,p'-DDD	< 0,01 b	
o,p'-DDT	0,05 i	
p,p'-DDT	0,03	107
Sum DDT	0,58	

< : 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



Kjeller, 21.12.2006

Encl. to measuring report : O-4100  
NILU-Sample number : 06/942  
Customer : AMAP 2006  
Customers sample ID : 03-05.7.06 0806 - 0748  
: 160-157  
Sample type : Air  
Sample amount : 1140 m3  
Concentration units : pg/m3  
Data files : M\_27\_09\_06 + DH930B

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,14	82
cis-Chlordane	0,69	
trans-Nonachlor	0,48	91
cis-Nonachlor	0,08 b	
$\alpha$ -HCH	10,1	53
$\gamma$ -HCH	1,55	61
o,p'-DDE	0,02	
p,p'-DDE	0,19 b	80
o,p'-DDD	0,01 i	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,06 i	
p,p'-DDT	0,03	80
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

## 204 Results of Pesticid and DDT Analysis



Kjeller, 21.12.2006

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/943  
 Customer : AMAP 2006  
 Customers sample ID : 12-12.07.06 0730 - 0820  
 : 160-152  
 Sample type : Air  
 Sample amount : 1147 m3  
 Concentration units : pg/m3  
 Data files : M\_26\_09\_06\_B + DH930B

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,13	88
cis-Chlordane	0,63 i	
trans-Nonachlor	0,47	96
cis-Nonachlor	0,09 b	
$\alpha$ -HCH	9,69	50
$\gamma$ -HCH	1,17	63
o,p'-DDE	0,02	
p,p'-DDE	0,47 b	86
o,p'-DDD	0,01	
p,p'-DDD	0,02 b	
o,p'-DDT	0,06 i	
p,p'-DDT	0,02	82
Sum DDT	0,60	

< : 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-4100  
 NILU-Sample number : 06/944  
 Customer : AMAP 2006  
 Customers sample ID : 17-19.7.06 0725 - 0835  
 : 160-155  
 Sample type : Air  
 Sample amount : 1164 m3  
 Concentration units : pg/m3  
 Data files : M\_26\_09\_06\_B + DH930B

Kjeller, 21.12.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,09	83
cis-Chlordane	0,55	
trans-Nonachlor	0,36	88
cis-Nonachlor	0,07 b	
$\alpha$ -HCH	7,91	38
$\gamma$ -HCH	1,16	56
o,p'-DDE	0,01	
p,p'-DDE	0,13 b	74
o,p'-DDD	< 0,01	
p,p'-DDD	0,02 bi	
o,p'-DDT	0,06 i	
p,p'-DDT	0,02	84
Sum DDT	0,25	

< : 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



Kjeller, 21.12.2006

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/945  
 Customer : AMAP 2006  
 Customers sample ID : 24-26.7.06 0813 - 0752  
 : 160-155  
 Sample type : Air  
 Sample amount : 1131 m3  
 Concentration units : pg/m3  
 Data files : M\_27\_09\_06 + DH930B

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	< 0,05	80
cis-Chlordane	0,56 i	
trans-Nonachlor	0,36 b	91
cis-Nonachlor	0,07 b	
$\alpha$ -HCH	11,0	42
$\gamma$ -HCH	1,21	55
o,p'-DDE	0,02	
p,p'-DDE	0,15 b	78
o,p'-DDD	0,01	
p,p'-DDD	0,03 bi	
o,p'-DDT	0,06 i	
p,p'-DDT	0,03	78
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



# Results of Pesticid and DDT Analysis



Encl. to measuring report : O-4100  
NILU-Sample number : 06/946  
Customer : AMAP 2006  
Customers sample ID : 31.7-2.8.06 06.57 - 07.00  
: 160-157  
Sample type : Air  
Sample amount : 1147 m3  
Concentration units : pg/m3  
Data files : VB146 + DH935B

Kjeller, 30.03.2007

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,11	80
cis-Chlordane	0,67	
trans-Nonachlor	0,46	89
cis-Nonachlor	0,10	
$\alpha$ -HCH	11,8	52
$\gamma$ -HCH	1,48	60
o,p'-DDE	< 0,01	
p,p'-DDE	0,13 b	88
o,p'-DDD	< 0,01	
p,p'-DDD	< 0,01	
o,p'-DDT	< 0,02	
p,p'-DDT	< 0,03	109
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

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Encl. to measuring report : O-4100  
 NILU-Sample number : 06/1121  
 Customer : AMAP 2006  
 Customers sample ID : 7-9.8.06 0843 -0727  
 : 160-160  
 Sample type : Air  
 Sample amount : 1125 m3  
 Concentration units : pg/m3  
 Data files : VB146 + DH935B

Kjeller, 20.12.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,11	103
cis-Chlordane	0,69	
trans-Nonachlor	0,45	111
cis-Nonachlor	0,13	
$\alpha$ -HCH	12,2	51
$\gamma$ -HCH	1,83	60
o,p'-DDE	< 0,01	
p,p'-DDE	0,27 b	89
o,p'-DDD	< 0,01	
p,p'-DDD	0,08 b	
o,p'-DDT	0,09	
p,p'-DDT	< 0,03	99
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



Encl. to measuring report : O-4100  
NILU-Sample number : 06/1122  
Customer : AMAP 2006  
Customers sample ID : 14-16.8.06 0802 - 0720  
: 160-160  
Sample type : Air  
Sample amount : 1125 m3  
Concentration units : pg/m3  
Data files : M\_10\_11\_06 + DH951

Kjeller, 20.12.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,10	92
cis-Chlordane	0,60	
trans-Nonachlor	0,45	92
cis-Nonachlor	0,12	
$\alpha$ -HCH	14,9	57
$\gamma$ -HCH	1,36	70
o,p'-DDE	0,03	
p,p'-DDE	0,38 b	91
o,p'-DDD	0,03	
p,p'-DDD	0,07 b	
o,p'-DDT	0,10	
p,p'-DDT	0,06	93
Sum DDT	0,66	

< : 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



Kjeller, 20.12.2006

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/1123  
 Customer : AMAP 2006  
 Customers sample ID : 21-21.08.06 0725 - 0705  
 : 160-158  
 Sample type : Air  
 Sample amount : 1142 m3  
 Concentration units : pg/m3  
 Data files : M\_10\_11\_06 + DH951

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,08	79
cis-Chlordane	0,60	
trans-Nonachlor	0,43	74
cis-Nonachlor	0,12	
$\alpha$ -HCH	13,9	44
$\gamma$ -HCH	1,40	58
o,p'-DDE	0,01	
p,p'-DDE	0,13 b	79
o,p'-DDD	0,01	
p,p'-DDD	0,03 bi	
o,p'-DDT	0,06	
p,p'-DDT	0,03	83
Sum DDT	0,27	

< : 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-4100  
NILU-Sample number : 06/1124  
Customer : AMAP 2006  
Customers sample ID : 28-30.8.06 0804-0724  
: 160-160  
Sample type : Air  
Sample amount : 1125 m3  
Concentration units : pg/m3  
Data files : M\_10\_11\_06 + DH951

Kjeller, 20.12.2006

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,12	g
cis-Chlordane	0,52	
trans-Nonachlor	0,38	g
cis-Nonachlor	0,11	
$\alpha$ -HCH	10,5	53
$\gamma$ -HCH	1,26	69
o,p'-DDE	0,02	
p,p'-DDE	0,53 b	93
o,p'-DDD	0,02	
p,p'-DDD	0,07 b	
o,p'-DDT	0,07 i	
p,p'-DDT	0,05	93
Sum DDT	0,76	

< : 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

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Kjeller, 11.01.2007

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/1470  
 Customer : AMAP 2006  
 Customers sample ID : 4-6.9.06 0817-0730  
 : 160-160  
 Sample type : Air  
 Sample amount : 1138 m3  
 Concentration units : pg/m3  
 Data files : M\_08\_01\_07 + TB\_2845.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,10	121
cis-Chlordane	0,59	
trans-Nonachlor	0,69	115
cis-Nonachlor	0,16	
$\alpha$ -HCH	14,5	70
$\gamma$ -HCH	1,47	82
o,p'-DDE	< 0,01	
p,p'-DDE	2,60 b	99
o,p'-DDD	0,02	
p,p'-DDD	0,11 b	
o,p'-DDT	0,07	
p,p'-DDT	0,12	109
Sum DDT	2,93	

< : 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



Encl. to measuring report : O-4100  
NILU-Sample number : 06/1471  
Customer : AMAP 2006  
Customers sample ID : 11-13.9.06 0640-0718  
: 160-158  
Sample type : Air  
Sample amount : 1164 m3  
Concentration units : pg/m3  
Data files : TB\_2851.D + M\_08\_01\_07

Kjeller, 11.01.2007

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,12	103
cis-Chlordane	0,52	
trans-Nonachlor	0,39	102
cis-Nonachlor	0,07 b	
$\alpha$ -HCH	14,2	58
$\gamma$ -HCH	1,72	71
o,p'-DDE	0,02	
p,p'-DDE	0,14 b	89
o,p'-DDD	< 0,01	
p,p'-DDD	0,02 b	
o,p'-DDT	0,08	
p,p'-DDT	0,03	98
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



Kjeller, 11.01.2007

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/1472  
 Customer : AMAP 2006  
 Customers sample ID : 18-20.9.06 0759-0723  
 : 160-150  
 Sample type : Air  
 Sample amount : 1107 m3  
 Concentration units : pg/m3  
 Data files : M\_08\_01\_07 + TB\_2852.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,07	103
cis-Chlordane	0,45	
trans-Nonachlor	0,35	98
cis-Nonachlor	0,08 b	
$\alpha$ -HCH	14,8	59
$\gamma$ -HCH	1,64	69
o,p'-DDE	0,02 i	
p,p'-DDE	0,13 bi	91
o,p'-DDD	0,01 i	
p,p'-DDD	0,04 bi	
o,p'-DDT	0,05 i	
p,p'-DDT	0,02	95
Sum DDT	0,27	

< : 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



Kjeller, 11.01.2007

Encl. to measuring report : O-4100  
NILU-Sample number : 06/1473  
Customer : AMAP 2006  
Customers sample ID : 25-27.9.06 0725-0709  
: 160-160  
Sample type : Air  
Sample amount : 1150 m3  
Concentration units : pg/m<sup>3</sup>  
Data files : TB\_2855.D + M\_08\_01\_07

Compound Structure	Concentration pg/m <sup>3</sup>	Recovery %
trans-Chlordane	0,09	105
cis-Chlordane	0,46	
trans-Nonachlor	0,40	103
cis-Nonachlor	0,09	
$\alpha$ -HCH	15,0	60
$\gamma$ -HCH	1,85	75
o,p'-DDE	0,03	
p,p'-DDE	0,31 b	101
o,p'-DDD	0,01	
p,p'-DDD	0,02 b	
o,p'-DDT	0,11	
p,p'-DDT	0,05	103
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



Kjeller, 11.01.2007

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/1474  
 Customer : AMAP 2006  
 Customers sample ID : 2-4.10.06 0806-0706  
 : 160-158  
 Sample type : Air  
 Sample amount : 1126 m3  
 Concentration units : pg/m3  
 Data files : TB\_2856.D + M\_08\_01\_07

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,12	94
cis-Chlordane	0,57	
trans-Nonachlor	0,52	92
cis-Nonachlor	0,10	
$\alpha$ -HCH	14,1	57
$\gamma$ -HCH	2,25	69
o,p'-DDE	0,03	
p,p'-DDE	0,77 b	87
o,p'-DDD	0,01	
p,p'-DDD	0,05 b	
o,p'-DDT	0,14	
p,p'-DDT	0,08	94
Sum DDT	1,08	

< : 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



Kjeller, 11.01.2007

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/1475  
 Customer : AMAP 2006  
 Customers sample ID : 9-11.10.06 0738-0717  
 : 160-155  
 Sample type : Air  
 Sample amount : 1131 m3  
 Concentration units : pg/m3  
 Data files : M\_08\_01\_07 + TB\_2850.D

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,10	104
cis-Chlordane	0,44	
trans-Nonachlor	0,34	101
cis-Nonachlor	0,06 b	
$\alpha$ -HCH	16,2	55
$\gamma$ -HCH	2,11	68
o,p'-DDE	0,04	
p,p'-DDE	0,19 b	85
o,p'-DDD	0,01	
p,p'-DDD	0,03 b	
o,p'-DDT	0,12	
p,p'-DDT	0,06	96
Sum DDT	0,45	

< : 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

218 **Results of Pesticid and DDT Analysis**

Kjeller, 11.01.2007

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/1476  
 Customer : AMAP 2006  
 Customers sample ID : 16-18.10.06 0810-0714  
 : 160-156  
 Sample type : Air  
 Sample amount : 1116 m3  
 Concentration units : pg/m3  
 Data files : TB\_2844.D + M\_08\_01\_07

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,17	99
cis-Chlordane	0,64	
trans-Nonachlor	0,60	109
cis-Nonachlor	0,11	
$\alpha$ -HCH	16,7	60
$\gamma$ -HCH	2,09	71
o,p'-DDE	0,04	
p,p'-DDE	1,39 b	88
o,p'-DDD	0,05	
p,p'-DDD	0,30 b	
o,p'-DDT	0,16	
p,p'-DDT	0,15	94
Sum DDT	2,09	

< : 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-4100  
 NILU-Sample number : 06/1477  
 Customer : AMAP 2006  
 Customers sample ID : 23-25.10.06 0701-0700  
 : 160-160  
 Sample type : Air  
 Sample amount : 1157 m3  
 Concentration units : pg/m3  
 Data files : TB\_2843.D + M\_08\_01\_07

Kjeller, 10.01.2007

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,22	92
cis-Chlordane	0,79	
trans-Nonachlor	0,67	102
cis-Nonachlor	0,06 b	
$\alpha$ -HCH	19,5	54
$\gamma$ -HCH	3,28	66
o,p'-DDE	0,05	
p,p'-DDE	0,51 b	84
o,p'-DDD	0,02	
p,p'-DDD	0,05 b	
o,p'-DDT	0,18	
p,p'-DDT	0,12	90
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



Kjeller, 11.01.2007

Encl. to measuring report : O-4100  
 NILU-Sample number : 06/1478  
 Customer : AMAP 2006  
 Customers sample ID : 30.10-1.11.06 0820-0945  
 : 160-155  
 Sample type : Air  
 Sample amount : 1173 m3  
 Concentration units : pg/m3  
 Data files : TB\_2843.D + M\_08\_01\_07

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,16	112
cis-Chlordane	0,48	
trans-Nonachlor	0,43	109
cis-Nonachlor	0,04 b	
$\alpha$ -HCH	19,0	63
$\gamma$ -HCH	2,41	76
o,p'-DDE	0,04	
p,p'-DDE	0,48 b	93
o,p'-DDD	0,02	
p,p'-DDD	0,08 b	
o,p'-DDT	0,12	
p,p'-DDT	0,08	103
Sum DDT	0,82	

< : 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-4100  
NILU-Sample number : 07/100  
Customer : AMAP 2006  
Customers sample ID : 6-8.11.06 0935-0816  
: 160-150  
Sample type : Air  
Sample amount : 1090 m3  
Concentration units : pg/m3  
Data files : VB218 + M\_06\_03\_07

Kjeller, 08.03.2007

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,22	88
cis-Chlordane	0,58	
trans-Nonachlor	0,46	88
cis-Nonachlor	0,05	
$\alpha$ -HCH	11,2	46
$\gamma$ -HCH	1,79	51
o,p'-DDE	0,06	
p,p'-DDE	0,32 b	80
o,p'-DDD	0,03	
p,p'-DDD	0,02 b	
o,p'-DDT	0,16	
p,p'-DDT	0,07 b	80
Sum DDT	0,65	

< : 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-4100  
 NILU-Sample number : 07/101  
 Customer : AMAP 2006  
 Customers sample ID : 13-15.11.06 0817-0850  
                                   : 160-154  
 Sample type : Air  
 Sample amount : 1152 m3  
 Concentration units : pg/m3  
 Data files : VB218 + M\_06\_03\_07

Kjeller, 08.03.2007

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,19	106
cis-Chlordane	0,57	
trans-Nonachlor	0,48	106
cis-Nonachlor	0,04	
α-HCH	12,6	57
γ-HCH	2,05	66
o,p'-DDE	0,06	
p,p'-DDE	0,92	97
o,p'-DDD	0,03 i	
p,p'-DDD	0,12	
o,p'-DDT	0,14	
p,p'-DDT	0,09	104
Sum DDT	1,37	

< : 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



Kjeller, 08.03.2007

Encl. to measuring report : O-4100  
NILU-Sample number : 07/102  
Customer : AMAP 2006  
Customers sample ID : 20-22.11.06 0915-0813  
: 160-155  
Sample type : Air  
Sample amount : 1116 m3  
Concentration units : pg/m3  
Data files : VB218 + M\_06\_03\_07

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,33	107
cis-Chlordane	0,66	
trans-Nonachlor	0,59	105
cis-Nonachlor	0,06	
$\alpha$ -HCH	9,05	50
$\gamma$ -HCH	2,08	58
o,p'-DDE	0,14	
p,p'-DDE	1,37	85
o,p'-DDD	0,03 i	
p,p'-DDD	0,05 b	
o,p'-DDT	0,25	
p,p'-DDT	0,16	113
Sum DDT	2,00	

< : 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

224 **Results of Pesticid and DDT Analysis**

Encl. to measuring report : O-4100  
 NILU-Sample number : 07/103  
 Customer : AMAP 2006  
 Customers sample ID : 27-29.11.06 0822-0955  
 : 160-150  
 Sample type : Air  
 Sample amount : 1158 m3  
 Concentration units : pg/m3  
 Data files : VB218 + M\_06\_03\_07

Kjeller, 08.03.2007

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,24	91
cis-Chlordane	0,56	
trans-Nonachlor	0,64	90
cis-Nonachlor	0,10	
$\alpha$ -HCH	9,16	42
$\gamma$ -HCH	2,66	50
o,p'-DDE	0,14	
p,p'-DDE	3,20	84
o,p'-DDD	0,04	
p,p'-DDD	0,07 b	
o,p'-DDT	0,27	
p,p'-DDT	0,21	99
Sum DDT	3,93	

< : 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



Encl. to measuring report : O-4100  
NILU-Sample number : 07/104  
Customer : AMAP 2006  
Customers sample ID : 4-6.12.06 0754-0908  
: 160-155  
Sample type : Air  
Sample amount : 1169 m3  
Concentration units : pg/m3  
Data files : VB218 + M\_06\_03\_07

Kjeller, 08.03.2007

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,31	102
cis-Chlordane	0,73	
trans-Nonachlor	1,29	97
cis-Nonachlor	0,21	
$\alpha$ -HCH	6,80	45
$\gamma$ -HCH	1,68	53
o,p'-DDE	0,18	
p,p'-DDE	3,55 b	85
o,p'-DDD	0,10	
p,p'-DDD	0,26 b	
o,p'-DDT	0,39	
p,p'-DDT	0,25	105
Sum DDT	4,74	

< : 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

226 **Results of Pesticid and DDT Analysis**

Encl. to measuring report : PO-4100  
NILU-Sample number : 07/105  
Customer : AMAP 2006  
Customers sample ID : 11-13.12.06 0758-0858  
: 160-155  
Sample type : Air  
Sample amount : 1164 m3  
Concentration units : pg/m3  
Data files : VB218 + M\_06\_03\_07

Kjeller, 08.03.2007

<b>Compound</b> Structure	<b>Concentration</b> pg/m3	<b>Recovery</b> %
trans-Chlordane	0,35	111
cis-Chlordane	0,75	
trans-Nonachlor	1,60	105
cis-Nonachlor	0,28	
$\alpha$ -HCH	6,74	53
$\gamma$ -HCH	1,84	64

# Results of Pesticid and DDT Analysis



Encl. to measuring report : O-4100  
NILU-Sample number : 07/448  
Customer : AMAP 2006  
Customers sample ID : 18-20.12.06 0943-0821  
: 160-141  
Sample type : Air  
Sample amount : 1055 m3  
Concentration units : pg/m3  
Data files : VB219 + M\_07\_03\_07

Kjeller, 09.03.2007

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,45	97
cis-Chlordane	0,98	
trans-Nonachlor	2,10	94
cis-Nonachlor	0,47	
$\alpha$ -HCH	11,3	48
$\gamma$ -HCH	2,35	55
o,p'-DDE	0,32 i	
p,p'-DDE	6,75	90
o,p'-DDD	0,30	
p,p'-DDD	0,79	
o,p'-DDT	1,16	
p,p'-DDT	0,43	91
Sum DDT	9,75	

< : 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



Kjeller, 09.03.2007

Encl. to measuring report : O-4100  
 NILU-Sample number : 07/452  
 Customer : AMAP 2006  
 Customers sample ID : 27-29.12.06 0849-1003  
 : 160-156  
 Sample type : Air  
 Sample amount : 1171 m3  
 Concentration units : pg/m3  
 Data files : VB219 + M\_07\_03\_07

Compound Structure	Concentration pg/m3	Recovery %
trans-Chlordane	0,34	113
cis-Chlordane	0,83	
trans-Nonachlor	1,83	112
cis-Nonachlor	0,45	
$\alpha$ -HCH	11,4	49
$\gamma$ -HCH	2,23	57
o,p'-DDE	0,26	
p,p'-DDE	6,03	105
o,p'-DDD	0,34	
p,p'-DDD	0,85	
o,p'-DDT	1,19	
p,p'-DDT	0,35	96
Sum DDT	9,02	

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

b : Lower than 10 times method blank

g : Recovery is not according to NILUs quality criteria

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 4**

# **Organiske forbindelser i luft i Ny-Ålesund (O-4128)**





## Målerapport nr. O-4128

**Oppdragsgiver:** Statens forurensningstilsyn  
Postboks 8100 Dep  
0032 OSLO

**Prosjekt nr.:** O-93062

**Prøvetaking:**

**Sted:** Ny-Ålesund  
**Ansvar:** NILU/Norsk Polarinstitutt  
**Kommentar:**

**Prøveinformasjon:**

NILU prøvenr.	Kundens prøvemerkning	Prøvetype	Prøven mottatt	Prøven analysert
06/251	2-4.1.06 0738 – 1017 160-145	Luft	15.02.06	04.07.06 – 02.03.07
06/252	9-11.1.06 0752 – 0759 160-150	"	"	"
06/253	16-18.1.06 1240 – 0806 160-157	"	"	"
06/254	23-24.1.06 0815 – 0807 160-160	"	"	"
06/255	30.1.06-1.2.06 0906 – 0957 160-150	"	"	"
06/595	6-8.2.06 0820 – 0813 160-158	"	"	06.07.06 – 02.03.07
06/596	13-15.2.06 0754 – 0809 160-158	"	12.05.06	"
06/598	27.2-1.3.06 0839 – 0858 160-158	"	"	"
06/599	6-8.3.06 0802 – 0810 160-150	"	"	"
06/600	13-15.3.06 0830 – 0814 160-178	"	"	"
06/601	20-22.3.05 0853 – 0755 160-155	"	"	13.07.06 – 02.03.07
06/602	27-29.3.06 0918 – 0730 160-143	"	"	"
06/603	3-6.4.06 0728 – 0820 160-147	"	"	"
06/604	10-12.4.06 0748 – 0809 160-155	"	"	"
06/605	17-19.4.06 1057 – 0712 160-145	"	"	"
06/606	24-26.4.06 0706 – 0704 160-158	"	"	"
06/739	1-3.5.06 1014 – 0838 160-200	"	19.05.06	26.07.06 – 02.03.07
06/741	8-10.5.06 0805 – 0705 160-154	"	"	"
06/789	15-17.5.06 0646 – 0754 160-158	"	28.06.06	"
06/790	22-24.5.06 0850 – 1058 160-146	"	"	"
06/791	29-31.5.06 0750 – 0800 160-152	"	"	"
06/792	5-7.6.06 0800 – 0748 160-155	"	"	"
06/793	12-14.6.06 0835 – 0718 160-150	"	"	"
06/949	19-21.6.06 0820 – 0832 160-160	"	14.08.06	01.11.06 – 02.03.07
06/950	26-28.6.06 0739 – 0852 160-153	"	"	04.12.06 – 02.03.07
06/951	3-5.7.06 0806 – 0748 160-157	"	"	"
06/952	10-12.7.06 0730 – 0820 160-157	"	"	"
06/953	17-19.7.06 0725 – 0835 160-155	"	"	"
06/954	24-26.7.06 0813 – 0752 160-155	"	"	"
06/955	31.7-2.8.06 0657 – 0700 160-159	"	"	"
06/1125	7-9.8.06 0843 – 0727 160-160	"	13.09.06	06.12.06 – 02.03.07
06/1126	14-16.8.06 0802 – 0720 160-155	"	"	"
06/1127	21-23.8.06 0725 – 0705 160-158	"	"	"
06/1128	28-30.8.06 0804 – 0724 160-160	"	"	"
06/1479	4-6.9.06 0817 – 0730 160-155	"	15.11.06	"
06/1480	11-13.9.06 0640 – 0718 160-158	"	"	"
06/1481	18-20.9.06 0759 – 0723 160-150	"	"	11.12.06 – 02.03.07
06/1482	25-27.9.06 0725 – 0704 160-156	"	"	"

NILU prøvenr.	Kundens prøvermerking	Prøvetype	Prøven mottatt	Prøven analysert
06/1483	2-4.10.06 0806 – 0702 160-156	Luft	15.11.06	11.12.06 – 02.03.07
06/1484	9-11.10.06 0738 – 0716 160-155	"	"	"
06/1485	16-18.10.06 0810 – 0714 160-154	"	"	"
06/1486	23-25.10.06 0701 – 0700 160-158	"	"	"
06/1487	30.10-01.11.06 0820 – 0945 160-155	"	"	07.02.07 – 02.03.07
07/118	6-8.11.06 0935 – 0816 160-150	"	10.01.07	"
07/119	13-15.11.06 0807 – 0850 160-155	"	"	09.02.07 – 02.03.07
07/120	20-22.11.06 0915 – 0813 160-155	"	"	"
07/121	27-29.11.06 0822 – 0955 160-152	"	"	"
07/122	4-6.12.06 0754 – 0908 160-157	"	"	"
07/123	11-13.12.06 0758 – 0858 160-155	"	"	"
07/449	18-20.12.06 0943 – 0821 160-140	"	14.02.07	21.02.07 – 02.03.07
07/453	29-31.12.06 1017 – 0815 160-156	"	"	"

**Analysér:**

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

Målemetode: NILU-O-3 ("Bestemmelse av polysykliske aromatiske hydrokarboner")

Kommentarer: Pga av mistanke om kontaminering rapporteres følgende prøver uten akkreditering : 06/790

Godkjenning: Kjeller, 15. mai 2007

*Ole-Anders Braathen*

Ole-Anders Braathen  
Avd.direktør, Miljøkjemi

Vedlegg: PAH analyser : 51 sider  
Målerapporten og vedleggene omfatter totalt 53 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-4128  
 NILU sample number: 06/251  
 Customer: AMAP 2006  
 Customers sample ID: 2-4.1.06 0738-1017  
 : 160-145  
 Sample type: Air  
 Sample amount: 1166 m3  
 Concentration unit: pg/m3  
 Data files: TB\_1941.D

Kjeller, 20.12.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	752 b	
2-Methylnaphtalene	234 b	40
1-Methylnaphtalene	184 b	
Biphenyl	719	
Acenaphthylene *	1,00 b	
Acenaphthene *	6,00 b	53
Dibenzofuran	1 074	
Fluorene *	465	
Dibenzothiophene	17,0	
Phenanthrene *	48,0 b	
Anthracene *	4,00 b	66
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 *	30,0	
Pyrene *	13,0 b	75
Benzo(a)fluorene	1,00 i,b	
Retene	3,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	2,00 i,b	
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	1,00 b	77
Chrysene */Triphenylene	6,00 b	
Benzo(b */j/k *)fluoranthenes	6,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	2,00 b	92
Benzo(a)pyrene *	< 1,00	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	2,00 b	
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	2,00 i,b	81
Anthanthrene	< 1,00	
Coronene	1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>1 889</b>	
<b>Sum 3-7 ring PAH:</b>	<b>1 709</b>	
<b>Sum all:</b>	<b>3 598</b>	
<b>Sum Borneff 6</b>	<b>41,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>1 338</b>	

<: 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-4128  
 NILU sample number: 06/252  
 Customer: AMAP 2006  
 Customers sample ID: 9-11.1.06 0752-0759  
 : 160-150  
 Sample type: Air  
 Sample amount: 1123 m3  
 Concentration unit: pg/m3  
 Data files: TB\_1940.D

Kjeller, 02.02.2007

Component:	Concentration pg/m3	Recovery %
Naphtalene *	386 b	34
2-Methylnaphtalene	201 b	
1-Methylnaphtalene	119 b	
Biphenyl	608	
Acenaphthylene *	< 1,00	45
Acenaphthene *	22,0 b	
Dibenzofuran	1 024	
Fluorene *	493	
Dibenzothiophene	25,0	61
Phenanthrene *	176 b	
Anthracene *	3,00	
3-Methylphenanthrene	16,0	
2-Methylphenanthrene	25,0	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	13,0	
1-Methylphenanthrene	16,0	
Fluoranthene *	58,0	73
Pyrene *	16,0	
Benzo(a)fluorene	2,00 i,b	
Retene	4,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 i,b	71
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	1,00 b	
Chrysene */Triphenylene	4,00 b	
Benzo(b */j/k *)fluoranthenes	2,00 b	95
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	82
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	
<b>Sum bicyclic PAH:</b>	<b>1 314</b>	
<b>Sum 3-7 ring PAH:</b>	<b>1 917</b>	
<b>Sum all:</b>	<b>3 231</b>	
<b>Sum Borneff 6</b>	<b>63,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>1 166</b>	

<: 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-4128  
 NILU sample number: 06/253  
 Customer: AMAP 2006  
 Customers sample ID: 16-18.1.06 1240-0806  
 : 160-157  
 Sample type: Air  
 Sample amount: 1040 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_1939.D

Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	777 b	
2-Methylnaphtalene	417	30
1-Methylnaphtalene	314	
Biphenyl	654	
Acenaphthylene *	1,00 b	
Acenaphthene *	22,0 b	43
Dibenzofuran	859	
Fluorene *	373	
Dibenzothiophene	19,0	
Phenanthrene *	130 b	
Anthracene *	1,00 b	57
3-Methylphenanthrene	11,0 b	
2-Methylphenanthrene	16,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	9,00 b	
1-Methylphenanthrene	11,0 b	
Fluoranthene *	44,0	
Pyrene *	18,0	70
Benzo(a)fluorene	3,00 i,b	
Retene	4,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	3,00 i,b	
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	2,00 b	66
Chrysene */Triphenylene	10,0	
Benzo(b */j/k *)fluoranthenes	11,0	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	4,00 b	83
Benzo(a)pyrene *	1,00 b	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	3,00 b	
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	3,00 i,b	72
Anthanthrene	< 1,00	
Coronene	1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>2 162</b>	
<b>Sum 3-7 ring PAH:</b>	<b>1 569</b>	
<b>Sum all:</b>	<b>3 731</b>	
<b>Sum Borneff 6</b>	<b>62,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>1 397</b>	

<: 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-4128  
 NILU sample number: 06/254  
 Customer: AMAP 2006  
 Customers sample ID: 23-24.1.06 0815-0807  
 : 160-160  
 Sample type: Air  
 Sample amount: 576 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_1938.D

Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	1 405 b	
2-Methylnaphtalene	460	29
1-Methylnaphtalene	403	
Biphenyl	1 828	
Acenaphthylene *	1,00 b	
Acenaphthene *	16,0 b	42
Dibenzofuran	1 627	
Fluorene *	646	
Dibenzothiophene	27,0	
Phenanthrene *	183 b	
Anthracene *	4,00 b	58
3-Methylphenanthrene	18,0 b	
2-Methylphenanthrene	25,0	
2-Methylanthracene	1,00 b	
9-Methylphenanthrene	15,0	
1-Methylphenanthrene	16,0	
Fluoranthene *	69,0	
Pyrene *	25,0	71
Benzo(a)fluorene	3,00 i,b	
Retene	6,00	
Benzo(b)fluorene	2,00 i	
Benzo(ghi)fluoranthene	3,00 i,b	
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	2,00 b	63
Chrysene */Triphenylene	7,00 b	
Benzo(b */j/k *)fluoranthenes	6,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	2,00 b	80
Benzo(a)pyrene *	1,00 i,b	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	2,00 b	
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	3,00 i,b	70
Anthanthrene	< 1,00	
Coronene	1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>4 096</b>	
<b>Sum 3-7 ring PAH:</b>	<b>2 719</b>	
<b>Sum all:</b>	<b>6 815</b>	
<b>Sum Borneff 6</b>	<b>81,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>2 371</b>	

<: 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-4128

NILU sample number: 06/255

Customer: AMAP 2006

Customers sample ID: 30.1.06-1.2.06 0906-0957

: 160-150

Sample type: Air

Sample amount: 1142 m3

Concentration unit: pg/m3

Data files: TB\_1937.D

Kjeller, 20.12.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	1 344 b	
2-Methylnaphtalene	295 b	36
1-Methylnaphtalene	254	
Biphenyl	906	
Acenaphthylene *	< 1,00	
Acenaphthene *	7,00 b	50
Dibenzofuran	829	
Fluorene *	294	
Dibenzothiophene	15,0	
Phenanthrene *	75,0 b	
Anthracene *	1,00 b	68
3-Methylphenanthrene	7,00 b	
2-Methylphenanthrene	11,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	5,00 b	
1-Methylphenanthrene	7,00 b	
Fluoranthene *	29,0	
Pyrene *	14,0	76
Benzo(a)fluorene	2,00 i,b	
Retene	8,00	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	3,00 i,b	
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	5,00	73
Chrysene */Triphenylene	11,0	
Benzo(b */j/k *)fluoranthenes	14,0	
Benzo(a)fluoranthene	1,00 b	
Benzo(e)pyrene	4,00 b	94
Benzo(a)pyrene *	1,00 b	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	3,00 b	
Dibenzo(ac/ah *)anthracene	1,00 i,b	
Benzo(ghi)perylene *	4,00 b	87
Anthanthrene	< 1,00	
Coronene	2,00	
Dibenzo(ae)pyrene	1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>2 799</b>	
<b>Sum 3-7 ring PAH:</b>	<b>1 362</b>	
<b>Sum all:</b>	<b>4 161</b>	
<b>Sum Borneff 6</b>	<b>51,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>1 804</b>	

<: 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-4128  
 NILU sample number: 06/595  
 Customer: AMAP 2006  
 Customers sample ID: 6-8.2.06 0820-0813  
 : 160-158  
 Sample type: Air  
 Sample amount: 1147 m3  
 Concentration unit: pg/m3  
 Data files: TB\_1933.D

Kjeller, 02.02.2007

Component:	Concentration pg/m3	Recovery %
Naphtalene *	15 726	
2-Methylnaphtalene	3 571	2
1-Methylnaphtalene	3 587	
Biphenyl	27 418	
Acenaphthylene *	7,00	
Acenaphthene *	19,0 b	9 g
Dibenzofuran	5 616	
Fluorene *	1 699	
Dibenzothiophene	20,0	
Phenanthrene *	131 b	
Anthracene *	3,00 b	36
3-Methylphenanthrene	7,00 b	
2-Methylphenanthrene	11,0 b	
2-Methylanthracene	1,00 b	
9-Methylphenanthrene	6,00 b	
1-Methylphenanthrene	6,00 b	
Fluoranthene *	48,0	
Pyrene *	27,0	69
Benzo(a)fluorene	3,00 i,b	
Retene	4,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	6,00	
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	4,00	67
Chrysene */Triphenylene	15,0	
Benzo(b */j/k *)fluoranthenes	20,0	
Benzo(a)fluoranthene	1,00 b	
Benzo(e)pyrene	7,00	85
Benzo(a)pyrene *	3,00 b	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	6,00	
Dibenzo(ac/ah *)anthracene	1,00 b	
Benzo(ghi)perylene *	6,00	72
Anthanthrene	< 1,00	
Coronene	3,00	
Dibenzo(ae)pyrene	1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>50 302</b>	
<b>Sum 3-7 ring PAH:</b>	<b>7 687</b>	
<b>Sum all:</b>	<b>57 989</b>	
<b>Sum Borneff 6</b>	<b>83,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>17 715</b>	

<: 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-4128  
 NILU sample number: 06/596  
 Customer: AMAP 2006  
 Customers sample ID: 13-15.2.06 0754-0809  
 : 160-158  
 Sample type: Air  
 Sample amount: 1157 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_1932.D

Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	42 076	
2-Methylnaphtalene	11 040	1
1-Methylnaphtalene	11 413	
Biphenyl	45 754	
Acenaphthylene *	14,0 b	
Acenaphthene *	18,0 b	8 g
Dibenzofuran	6 332	
Fluorene *	1 918	
Dibenzothiophene	34,0	
Phenanthrene *	257 b	
Anthracene *	6,00 b	22
3-Methylphenanthrene	13,0 b	
2-Methylphenanthrene	21,0	
2-Methylanthracene	1,00 b	
9-Methylphenanthrene	10,0 b	
1-Methylphenanthrene	12,0 b	
Fluoranthene *	78,0	
Pyrene *	47,0	60
Benzo(a)fluorene	4,00 i,b	
Retene	4,00 b	
Benzo(b)fluorene	2,00 i	
Benzo(ghi)fluoranthene	12,0	
Cyclopenta(cd)pyrene	2,00	
Benz(a)anthracene *	10,0	62
Chrysene */Triphenylene	33,0	
Benzo(b */j/k *)fluoranthenes	45,0	
Benzo(a)fluoranthene	2,00	
Benzo(e)pyrene	14,0	81
Benzo(a)pyrene *	7,00 b	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	14,0	
Dibenzo(ac/ah *)anthracene	2,00 b	
Benzo(ghi)perylene *	13,0	74
Anthanthrene	1,00 b	
Coronene	6,00	
Dibenzo(ae)pyrene	2,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>110 283</b>	
<b>Sum 3-7 ring PAH:</b>	<b>8 937</b>	
<b>Sum all:</b>	<b>119 220</b>	
<b>Sum Borneff 6</b>	<b>157</b>	
<b>Sum 16 EPA PAH *</b>	<b>44 538</b>	

<: 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-4128  
 NILU sample number: 06/598  
 Customer: AMAP 2006  
 Customers sample ID: 27.2-1.3.06 0839-0858  
 : 160-158  
 Sample type: Air  
 Sample amount: 1157 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_1931.D

Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	18 119	
2-Methylnaphtalene	4 187	3
1-Methylnaphtalene	4 148	
Biphenyl	26 040	
Acenaphthylene *	8,00 b	
Acenaphthene *	16,0 b	14
Dibenzofuran	6 075	
Fluorene *	1 747	
Dibenzothiophene	39,0	
Phenanthrene *	301 b	
Anthracene *	5,00 b	31
3-Methylphenanthrene	14,0 b	
2-Methylphenanthrene	22,0	
2-Methylanthracene	1,00 b	
9-Methylphenanthrene	11,0 b	
1-Methylphenanthrene	13,0 b	
Fluoranthene *	140	
Pyrene *	98,0	64
Benzo(a)fluorene	6,00 i,b	
Retene	4,00 b	
Benzo(b)fluorene	4,00 i	
Benzo(ghi)fluoranthene	19,0 i	
Cyclopenta(cd)pyrene	3,00	
Benz(a)anthracene *	11,0	73
Chrysene */Triphenylene	66,0	
Benzo(b */j/k *)fluoranthenes	83,0	
Benzo(a)fluoranthene	2,00	
Benzo(e)pyrene	25,0	85
Benzo(a)pyrene *	10,0 b	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	24,0	
Dibenzo(ac/ah *)anthracene	2,00 b	
Benzo(ghi)perylene *	22,0	80
Anthanthrene	2,00	
Coronene	10,0	
Dibenzo(ae)pyrene	4,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>52 494</b>	
<b>Sum 3-7 ring PAH:</b>	<b>8 790</b>	
<b>Sum all:</b>	<b>61 284</b>	
<b>Sum Borneff 6</b>	<b>279</b>	
<b>Sum 16 EPA PAH *</b>	<b>20 652</b>	

<: 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-4128  
NILU sample number: 06/599  
Customer: AMAP 2006  
Customers sample ID: 6-8.3.06 0802-0810  
: 160-150  
Sample type: Air  
Sample amount: 1123 m<sup>3</sup>  
Concentration unit: pg/m<sup>3</sup>  
Data files: TB\_1930.D

Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	19 969	1
2-Methylnaphtalene	9 331	
1-Methylnaphtalene	7 421	
Biphenyl	55 378	
Acenaphthylene *	6,00 b	4 g
Acenaphthene *	53,0 b	
Dibenzofuran	18 525	
Fluorene *	5 180	
Dibenzothiophene	55,0	26
Phenanthrene *	260 b	
Anthracene *	7,00 b	
3-Methylphenanthrene	23,0	
2-Methylphenanthrene	36,0	

# Results of PAH Analysis



242

Encl. to measuring report: O-4128  
NILU sample number: 06/600  
Customer: AMAP 2006  
Customers sample ID: 13-15.3.06 0830-0814  
: 160-178  
Sample type: Air  
Sample amount: 1207 m<sup>3</sup>  
Concentration unit: pg/m<sup>3</sup>  
Data files: TB\_1929.D

Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	6 607	0
2-Methylnaphtalene	1 100	0

# Results of PAH Analysis



Encl. to measuring report: O-4128  
 NILU sample number: 06/601  
 Customer: AMAP 2006  
 Customers sample ID: 20-22.3.06 0853-0755  
 : 160-155  
 Sample type: Air  
 Sample amount: 1116 m3  
 Concentration unit: pg/m3  
 Data files: TB\_1928.D

Kjeller, 02.02.2007

Component:	Concentration pg/m3	Recovery %
Naphtalene *	359 b	
2-Methylnaphtalene	58,0 b	18
1-Methylnaphtalene	47,0 b	
Biphenyl	1 222	
Acenaphthylene *	1,00 b	
Acenaphthene *	2,00 b	33
Dibenzofuran	1 136	
Fluorene *	128 b	
Dibenzothiophene	5,00 b	
Phenanthrene *	30,0 b	
Anthracene *	29,0	61
3-Methylphenanthrene	2,00 b	
2-Methylphenanthrene	3,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	2,00 b	
Fluoranthene *	21,0 b	
Pyrene *	12,0 b	76
Benzo(a)fluorene	1,00 i,b	
Retene	1,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	3,00 b	
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	1,00 b	78
Chrysene */Triphenylene	8,00	
Benzo(b */j/k *)fluoranthenes	13,0	
Benzo(a)fluoranthene	1,00 b	
Benzo(e)pyrene	5,00	89
Benzo(a)pyrene *	2,00 b	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	4,00	
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	5,00 b	79
Anthanthrene	< 1,00	
Coronene	3,00	
Dibenzo(ae)pyrene	1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>1 686</b>	
<b>Sum 3-7 ring PAH:</b>	<b>1 429</b>	
<b>Sum all:</b>	<b>3 115</b>	
<b>Sum Borneff 6</b>	<b>45,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>616</b>	

<: 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



244

Encl. to measuring report: O-4128  
 NILU sample number: 06/602  
 Customer: AMAP 2006  
 Customers sample ID: 27-29.3.06 0918-0730  
 : 160-143  
 Sample type: Air  
 Sample amount: 1056 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_1927.D

Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	139 b	31
2-Methylnaphtalene	34,0 b	
1-Methylnaphtalene	21,0 b	
Biphenyl	389	
Acenaphthylene *	1,00 ib	44
Acenaphthene *	1,00 b	
Dibenzofuran	566	
Fluorene *	47,0 b	
Dibenzothiophene	3,00 b	59
Phenanthrene *	34,0 b	
Anthracene *	< 1,00	
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 *	36,0	76
Pyrene *	21,0	
Benzo(a)fluorene	1,00 i,b	
Retene	3,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	4,00 i	79
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	2,00 b	
Chrysene */Triphenylene	13,0	
Benzo(b *i/j/k *)fluoranthenes	21,0	92
Benzo(a)fluoranthene	1,00 b	
Benzo(e)pyrene	8,00	
Benzo(a)pyrene *	4,00 b	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	8,00	79
Dibenzo(ac/ah *)anthracene	1,00 i,b	
Benzo(ghi)perylene *	8,00	
Anthanthrene	< 1,00	
Coronene	4,00	
Dibenzo(ae)pyrene	2,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>583</b>	
<b>Sum 3-7 ring PAH:</b>	<b>811</b>	
<b>Sum all:</b>	<b>1 394</b>	
<b>Sum Borneff 6</b>	<b>77,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>337</b>	

<: 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-4128  
 NILU sample number: 06/603  
 Customer: AMAP 2006  
 Customers sample ID: 3-6.4.06 0728-0820  
 : 160-147  
 Sample type: Air  
 Sample amount: 1688 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_1924.D

Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	116 b	
2-Methylnaphtalene	30,0 b	29
1-Methylnaphtalene	25,0 b	
Biphenyl	231	
Acenaphthylene *	< 1,00	
Acenaphthene *	2,00 b	40
Dibenzofuran	532	
Fluorene *	101 b	
Dibenzothiophene	5,00 b	
Phenanthrene *	46,0 b	
Anthracene *	< 1,00	56
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 *	11,0 b	
Pyrene *	5,00 b	70
Benzo(a)fluorene	< 1,00	
Retene	2,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	1,00 b	
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	68
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	2,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	84
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 i,b	71
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>402</b>	
<b>Sum 3-7 ring PAH:</b>	<b>745</b>	
<b>Sum all:</b>	<b>1 147</b>	
<b>Sum Borneff 6</b>	<b>16,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>291</b>	

<: 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-4128  
 NILU sample number: 06/604  
 Customer: AMAP 2006  
 Customers sample ID: 10-12.4.06 0748-0809  
 : 160-155  
 Sample type: Air  
 Sample amount: 1150 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_1923.D

Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	81,0 b	33
2-Methylnaphtalene	31,0 b	
1-Methylnaphtalene	19,0 b	
Biphenyl	195	
Acenaphthylene *	< 1,00	47
Acenaphthene *	1,00 b	
Dibenzofuran	477	
Fluorene *	75,0 b	
Dibenzothiophene	6,00 b	60
Phenanthrene *	38,0 b	
Anthracene *	1,00 b	
3-Methylphenanthrene	5,00 b	
2-Methylphenanthrene	8,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	5,00 b	
1-Methylphenanthrene	4,00 b	
Fluoranthene *	13,0 b	76
Pyrene *	7,00 b	
Benzo(a)fluorene	< 1,00	
Retene	1,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	1,00 b	77
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 b	
Benzo(b *i/j/k *)fluoranthenes	2,00 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	80
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	
<b>Sum bicyclic PAH:</b>	<b>326</b>	
<b>Sum 3-7 ring PAH:</b>	<b>663</b>	
<b>Sum all:</b>	<b>989</b>	
<b>Sum Borneff 6</b>	<b>18,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>225</b>	

<: 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-4128  
 NILU sample number: 06/605  
 Customer: AMAP 2006  
 Customers sample ID: 17-19.4.06 1057-0712  
 : 160-145  
 Sample type: Air  
 Sample amount: 1019 m3  
 Concentration unit: pg/m3  
 Data files: TB\_1922.D

Kjeller, 20.12.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	176 b	16
2-Methylnaphtalene	75,0 b	
1-Methylnaphtalene	48,0 b	
Biphenyl	278	
Acenaphthylene *	1,00 b	31
Acenaphthene *	2,00 b	
Dibenzofuran	432	
Fluorene *	56,0 b	
Dibenzothiophene	30,0	42
Phenanthrene *	35,0 b	
Anthracene *	< 1,00	
3-Methylphenanthrene	4,00 b	
2-Methylphenanthrene	6,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	4,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	11,0 b	69
Pyrene *	7,00 b	
Benzo(a)fluorene	< 1,00	
Retene	2,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	1,00 i,b	77
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	2,00 b	
Benzo(b */i/k *)fluoranthenes	3,00 b	
Benzo(a)fluoranthene	< 1,00	90
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	1,00 b	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	1,00 b	80
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	
<b>Sum bicyclic PAH:</b>	<b>577</b>	
<b>Sum 3-7 ring PAH:</b>	<b>617</b>	
<b>Sum all:</b>	<b>1 194</b>	
<b>Sum Borneff 6</b>	<b>17,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>299</b>	

<: 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-4128  
 NILU sample number: 06/606  
 Customer: AMAP 2006  
 Customers sample ID: 24-26.4.06 0706-0704  
 : 160-158  
 Sample type: Air  
 Sample amount: 1150 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_1921.D

Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	109 b	16
2-Methylnaphtalene	66,0 b	
1-Methylnaphtalene	32,0 b	
Biphenyl	110	
Acenaphthylene *	< 1,00	34
Acenaphthene *	4,00 b	
Dibenzofuran	261	
Fluorene *	74,0 b	
Dibenzothiophene	17,0	48
Phenanthrene *	68,0 b	
Anthracene *	< 1,00	
3-Methylphenanthrene	10,0 b	
2-Methylphenanthrene	16,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	9,00 b	
1-Methylphenanthrene	11,0 b	
Fluoranthene *	12,0 b	
Pyrene *	7,00 b	
Benzo(a)fluorene	1,00 i,b	
Retene	2,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	< 1,00	79
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 b	
Benzo(b *i/j/k *)fluoranthenes	1,00 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	83
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	
<b>Sum bicyclic PAH:</b>	<b>317</b>	
<b>Sum 3-7 ring PAH:</b>	<b>513</b>	
<b>Sum all:</b>	<b>830</b>	
<b>Sum Borneff 6</b>	<b>16,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>283</b>	

<: 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-4128  
 NILU sample number: 06/739  
 Customer: AMAP 2006  
 Customers sample ID: 1-3.5.06 1014-0838  
 : 160-200  
 Sample type: Air  
 Sample amount: 1255 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_2186.D



Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	107 b	31
2-Methylnaphtalene	43,0 b	
1-Methylnaphtalene	27,0 b	
Biphenyl	164	
Acenaphthylene *	1,00 b	38
Acenaphthene *	2,00 b	
Dibenzofuran	834	
Fluorene *	66,0 b	
Dibenzothiophene	7,00 b	54
Phenanthrene *	81,0 b	
Anthracene *	1,00 b	
3-Methylphenanthrene	6,00 b	
2-Methylphenanthrene	10,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	5,00 b	
1-Methylphenanthrene	6,00 b	
Fluoranthene *	71,0	63
Pyrene *	50,0	
Benzo(a)fluorene	3,00 i,b	
Retene	5,00 b	
Benzo(b)fluorene	2,00 i	
Benzo(ghi)fluoranthene	10,0	69
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	8,00	
Chrysene */Triphenylene	44,0	
Benzo(b */j/k *)fluoranthenes	74,0	72
Benzo(a)fluoranthene	1,00 b	
Benzo(e)pyrene	18,0	
Benzo(a)pyrene *	13,0	
Perylene	2,00 b	
Indeno(1,2,3-cd)pyrene *	19,0	70
Dibenzo(ac/ah *)anthracene	3,00 b	
Benzo(ghi)perylene *	19,0	
Anthanthrene	1,00 b	
Coronene	6,00	
Dibenzo(ae)pyrene	1,00	
Dibenzo(ai)pyrene	1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>341</b>	
<b>Sum 3-7 ring PAH:</b>	<b>1 373</b>	
<b>Sum all:</b>	<b>1 714</b>	
<b>Sum Borneff 6</b>	<b>196</b>	
<b>Sum 16 EPA PAH *</b>	<b>559</b>	

<: 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



250

Encl. to measuring report: O-4128  
 NILU sample number: 06/741  
 Customer: AMAP 2006  
 Customers sample ID: 8-10.5.06 0805-0705  
 : 160-154  
 Sample type: Air  
 Sample amount: 1112 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_2185.D

Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	162 b	31
2-Methylnaphtalene	71,0 b	
1-Methylnaphtalene	41,0 b	
Biphenyl	30,0 b	
Acenaphthylene *	2,00 b	39
Acenaphthene *	4,00 b	
Dibenzofuran	45,0 b	
Fluorene *	16,0 b	
Dibenzothiophene	5,00 b	48
Phenanthrene *	114 b	
Anthracene *	19,0	
3-Methylphenanthrene	19,0	
2-Methylphenanthrene	23,0	
2-Methylanthracene	7,00	
9-Methylphenanthrene	18,0	
1-Methylphenanthrene	16,0	
Fluoranthene *	242	57
Pyrene *	193	
Benzo(a)fluorene	23,0 i	
Retene	13,0	
Benzo(b)fluorene	11,0 i	
Benzo(ghi)fluoranthene	13,0	56
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	64,0	
Chrysene */Triphenylene	85,0	
Benzo(b */j/k *)fluoranthenes	116	71
Benzo(a)fluoranthene	11,0	
Benzo(e)pyrene	52,0	
Benzo(a)pyrene *	52,0	
Perylene	14,0	
Indeno(1,2,3-cd)pyrene *	47,0	67
Dibenzo(ac/ah *)anthracene	10,0	
Benzo(ghi)perylene *	50,0	
Anthanthrene	6,00	
Coronene	7,00	
Dibenzo(ae)pyrene	5,00 i	
Dibenzo(ai)pyrene	5,00 i	
Dibenzo(ah)pyrene	1,00	
<b>Sum bicyclic PAH:</b>	<b>304</b>	
<b>Sum 3-7 ring PAH:</b>	<b>1 309</b>	
<b>Sum all:</b>	<b>1 613</b>	
<b>Sum Borneff 6</b>	<b>507</b>	
<b>Sum 16 EPA PAH *</b>	<b>1 176</b>	

<: 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-4128  
 NILU sample number: 06/789  
 Customer: AMAP 2006  
 Customers sample ID: 15-17.5.06 0646-0754  
 : 160-158  
 Sample type: Air  
 Sample amount: 1176 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_2184.D

Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	55,0 b	40
2-Methylnaphtalene	26,0 b	
1-Methylnaphtalene	16,0 b	
Biphenyl	20,0 b	
Acenaphthylene *	1,00 b	49
Acenaphthene *	8,00 b	
Dibenzofuran	49,0 b	
Fluorene *	23,0 b	
Dibenzothiophene	4,00 b	54
Phenanthrene *	70,0 i,b	
Anthracene *	6,00 b	
3-Methylphenanthrene	7,00 b	
2-Methylphenanthrene	10,0 b	
2-Methylanthracene	1,00 b	
9-Methylphenanthrene	6,00 b	
1-Methylphenanthrene	5,00 b	
Fluoranthene *	20,0 b	60
Pyrene *	14,0	
Benzo(a)fluorene	1,00 i,b	
Retene	4,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	54
Cyclopenta(cd)pyrene	<	
Benz(a)anthracene *	1,00 b	
Chrysene */Triphenylene	2,00 b	
Benzo(b */j/k *)fluoranthenes	5,00 b	74
Benzo(a)fluoranthene	<	
Benzo(e)pyrene	2,00 b	
Benzo(a)pyrene *	1,00 b	
Perylene	<	
Indeno(1,2,3-cd)pyrene *	2,00 b	66
Dibenzo(ac/ah *)anthracene	1,00 b	
Benzo(ghi)perylene *	2,00 b	
Anthanthrene	<	
Coronene	<	
Dibenzo(ae)pyrene	<	
Dibenzo(ai)pyrene	<	
Dibenzo(ah)pyrene	<	
<b>Sum bicyclic PAH:</b>	<b>117</b>	
<b>Sum 3-7 ring PAH:</b>	<b>255</b>	
<b>Sum all:</b>	<b>372</b>	
<b>Sum Borneff 6</b>	<b>30,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>211</b>	

<: 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



252

Encl. to measuring report: O-4128  
 NILU sample number: 06/790  
 Customer: AMAP 2006  
 Customers sample ID: 22-24.5.06 0850-1058  
 : 160-146  
 Sample type: Air  
 Sample amount: 1155 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_2190.D

Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	81,0 b	25
2-Methylnaphtalene	31,0 b	
1-Methylnaphtalene	18,0 b	
Biphenyl	23,0 b	
Acenaphthylene *	2,00 b	34
Acenaphthene *	5,00 b	
Dibenzofuran	61,0 b	
Fluorene *	29,0 b	
Dibenzothiophene	19,0	40
Phenanthrene *	426	
Anthracene *	87,0	
3-Methylphenanthrene	74,0	
2-Methylphenanthrene	90,0	
2-Methylanthracene	36,0	
9-Methylphenanthrene	72,0	
1-Methylphenanthrene	58,0	
Fluoranthene *	781	
Pyrene *	573	
Benzo(a)fluorene	88,0 i	
Retene	49,0	
Benzo(b)fluorene	46,0 i	
Benzo(ghi)fluoranthene	42,0	53
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	214	
Chrysene */Triphenylene	268	
Benzo(b *j/k *)fluoranthenes	422	68
Benzo(a)fluoranthene	46,0	
Benzo(e)pyrene	163	
Benzo(a)pyrene *	201	
Perylene	49,0	
Indeno(1,2,3-cd)pyrene *	160	69
Dibenzo(ac/ah *)anthracene	34,0	
Benzo(ghi)perylene *	145	
Anthanthrene	27,0	
Coronene	27,0	
Dibenzo(ae)pyrene	19,0 i	
Dibenzo(ai)pyrene	20,0	
Dibenzo(ah)pyrene	7,00	
<b>Sum bicyclic PAH:</b>	<b>153</b>	
<b>Sum 3-7 ring PAH:</b>	<b>4 341</b>	
<b>Sum all:</b>	<b>4 494</b>	
<b>Sum Borneff 6</b>	<b>1 709</b>	
<b>Sum 16 EPA PAH *</b>	<b>3 428</b>	

<: 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-4128  
 NILU sample number: 06/791  
 Customer: AMAP 2006  
 Customers sample ID: 29-31.5.06 0750-0800  
 : 160-152  
 Sample type: Air  
 Sample amount: 1133 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_2189.D

Kjeller, 20.12.2006

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	75,0 b	32
2-Methylnaphtalene	31,0 b	
1-Methylnaphtalene	18,0 b	
Biphenyl	15,0 b	
Acenaphthylene *	1,00 b	42
Acenaphthene *	2,00 b	
Dibenzofuran	32,0 b	
Fluorene *	13,0 b	
Dibenzothiophene	2,00 b	58
Phenanthrene *	31,0 b	
Anthracene *	2,00 b	
3-Methylphenanthrene	5,00 b	
2-Methylphenanthrene	7,00 b	
2-Methylanthracene	1,00 b	
9-Methylphenanthrene	4,00 b	
1-Methylphenanthrene	4,00 b	
Fluoranthene *	39,0	
Pyrene *	28,0	
Benzo(a)fluorene	2,00 i,b	
Retene	2,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	76
Cyclopenta(cd)pyrene	<	
Benz(a)anthracene *	2,00 b	
Chrysene */Triphenylene	3,00 b	
Benzo(b */i/k *)fluoranthenes	2,00 b	74
Benzo(a)fluoranthene	<	
Benzo(e)pyrene	<	
Benzo(a)pyrene *	<	
Perylene	<	
Indeno(1,2,3-cd)pyrene *	<	68
Dibenzo(ac/ah *)anthracene	<	
Benzo(ghi)perylene *	<	
Anthanthrene	<	
Coronene	<	
Dibenzo(ae)pyrene	<	
Dibenzo(ai)pyrene	<	
Dibenzo(ah)pyrene	<	
<b>Sum bicyclic PAH:</b>	<b>139</b>	
<b>Sum 3-7 ring PAH:</b>	<b>197</b>	
<b>Sum all:</b>	<b>336</b>	
<b>Sum Borneff 6</b>	<b>44,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>202</b>	

<: 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



254

Encl. to measuring report: O-4128  
 NILU sample number: 06/792  
 Customer: AMAP 2006  
 Customers sample ID: 5-7.6.06 0800-0748  
 : 160-155  
 Sample type: Air  
 Sample amount: 1135 m3  
 Concentration unit: pg/m3  
 Data files: TB\_2188.D

Kjeller, 20.12.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	62,0 b	29
2-Methylnaphtalene	26,0 b	
1-Methylnaphtalene	14,0 b	
Biphenyl	22,0 b	
Acenaphthylene *	1,00 b	39
Acenaphthene *	2,00 b	
Dibenzofuran	73,0 b	
Fluorene *	32,0 b	
Dibenzothiophene	11,0 b	51
Phenanthrene *	53,0 b	
Anthracene *	2,00 b	
3-Methylphenanthrene	7,00 b	
2-Methylphenanthrene	11,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	6,00 b	
1-Methylphenanthrene	8,00 b	
Fluoranthene *	16,0 b	62
Pyrene *	11,0 b	
Benzo(a)fluorene	1,00 i,b	
Retene	3,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	< 1,00	70
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	< 1,00	
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	73
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	64
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	
<b>Sum bicyclic PAH:</b>	<b>124</b>	
<b>Sum 3-7 ring PAH:</b>	<b>256</b>	
<b>Sum all:</b>	<b>380</b>	
<b>Sum Borneff 6</b>	<b>20,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>186</b>	

<: 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-4128  
 NILU sample number: 06/793  
 Customer: AMAP 2006  
 Customers sample ID: 12-14.6.06 0835-0718  
 : 160-150  
 Sample type: Air  
 Sample amount: 1090 m3  
 Concentration unit: pg/m3  
 Data files: TB\_2187.D

Kjeller, 20.12.2006

Component:	Concentration pg/m3	Recovery %
Naphtalene *	96,0 b	24
2-Methylnaphtalene	42,0 b	
1-Methylnaphtalene	24,0 b	
Biphenyl	38,0 b	
Acenaphthylene *	2,00 b	39
Acenaphthene *	2,00 b	
Dibenzofuran	126 b	
Fluorene *	55,0 b	
Dibenzothiophene	18,0	52
Phenanthrene *	59,0 b	
Anthracene *	1,00 b	
3-Methylphenanthrene	8,00 b	
2-Methylphenanthrene	12,0 b	
2-Methylantracene	< 1,00	
9-Methylphenanthrene	6,00 b	
1-Methylphenanthrene	8,00 b	
Fluoranthene *	19,0 b	66
Pyrene *	15,0	
Benzo(a)fluorene	2,00 i,b	
Retene	7,00	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	75
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	1,00 b	
Chrysene */Triphenylene	3,00 b	
Benzo(b */j/k *)fluoranthenes	4,00 b	74
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	64
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	
<b>Sum bicyclic PAH:</b>	<b>200</b>	
<b>Sum 3-7 ring PAH:</b>	<b>364</b>	
<b>Sum all:</b>	<b>564</b>	
<b>Sum Borneff 6</b>	<b>26,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>261</b>	

<: 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-4128  
 NILU sample number: 06/949  
 Customer: AMAP 2006  
 Customers sample ID: 19-21.6.06 0820-0832  
 : 160-160  
 Sample type: Air  
 Sample amount: 1162 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_2879.D

Kjeller, 25.01.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	103 b	
2-Methylnaphtalene	35,0 b	35
1-Methylnaphtalene	19,0 b	
Biphenyl	17,0 b	
Acenaphthylene *	4,00 b	
Acenaphthene *	3,00 b	38
Dibenzofuran	40,0 b	
Fluorene *	18,0 b	
Dibenzothiophene	2,00 b	
Phenanthrene *	30,0 b	
Anthracene *	1,00 b	46
3-Methylphenanthrene	6,00 b	
2-Methylphenanthrene	9,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	5,00 b	
1-Methylphenanthrene	5,00 b	
Fluoranthene *	16,0 b	
Pyrene *	13,0 b	70
Benzo(a)fluorene	2,00 i,b	
Retene	6,00	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	3,00 b	
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	5,00	39
Chrysene */Triphenylene	9,00	
Benzo(b */j/k *)fluoranthenes	6,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	3,00 b	55
Benzo(a)pyrene *	1,00 b	
Perylene	2,00 i,b	
Indeno(1,2,3-cd)pyrene *	2,00 b	
Dibenzo(ac/ah *)anthracene	2,00 b	
Benzo(ghi)perylene *	2,00 i,b	40
Anthanthrene	< 1,00	
Coronene	1,00	
Dibenzo(ae)pyrene	1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>174</b>	
<b>Sum 3-7 ring PAH:</b>	<b>204</b>	
<b>Sum all:</b>	<b>378</b>	
<b>Sum Borneff 6</b>	<b>27,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>215</b>	

<: 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-4128  
 NILU sample number: 06/950  
 Customer: AMAP 2006  
 Customers sample ID: 26-28.6.06 0739-0852  
 : 160-153  
 Sample type: Air  
 Sample amount: 1161 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_2880.D

Kjeller, 25.01.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	74,0 b	37
2-Methylnaphtalene	27,0 b	
1-Methylnaphtalene	15,0 b	
Biphenyl	19,0 b	
Acenaphthylene *	3,00 b	42
Acenaphthene *	2,00 b	
Dibenzofuran	46,0 b	
Fluorene *	20,0 b	
Dibenzothiophene	4,00 b	60
Phenanthrene *	31,0 b	
Anthracene *	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 *	13,0 b	99
Pyrene *	10,0 b	
Benzo(a)fluorene	1,00 b	
Retene	6,00	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	75
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	2,00 b	
Chrysene */Triphenylene	4,00 b	
Benzo(b */j/k *)fluoranthenes	3,00 b	93
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	
Benzo(a)pyrene *	1,00 b	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	1,00 b	83
Dibenzo(ac/ah *)anthracene	1,00 b	
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	
<b>Sum bicyclic PAH:</b>	<b>135</b>	
<b>Sum 3-7 ring PAH:</b>	<b>191</b>	
<b>Sum all:</b>	<b>326</b>	
<b>Sum Borneff 6</b>	<b>19,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>167</b>	

<: 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



258

Encl. to measuring report: O-4128  
 NILU sample number: 06/951  
 Customer: AMAP 2006  
 Customers sample ID: 3-5.7.06 0806-0748  
 : 160-157  
 Sample type: Air  
 Sample amount: 1140 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_3111.D

Kjeller, 26.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	45,0 b	
2-Methylnaphtalene	19,0 b	37
1-Methylnaphtalene	13,0 b	
Biphenyl	17,0 b	
Acenaphthylene *	2,00 b	
Acenaphthene *	2,00 b	46
Dibenzofuran	49,0	
Fluorene *	22,0 b	
Dibenzothiophene	3,00 b	
Phenanthrene *	34,0 b	
Anthracene *	< 1,00	65
3-Methylphenanthrene	6,00 b	
2-Methylphenanthrene	8,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	5,00 b	
1-Methylphenanthrene	5,00 b	
Fluoranthene *	6,00 b	
Pyrene *	4,00 b	113
Benzo(a)fluorene	< 1,00	
Retene	2,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	2,00 b	
Cyclopenta(cd)pyrene	3,00 b	
Benz(a)anthracene *	1,00 b	77
Chrysene */Triphenylene	3,00 b	
Benzo(b */j/k *)fluoranthenes	3,00 i,b	
Benzo(a)fluoranthene	1,00 b	
Benzo(e)pyrene	2,00 i,b	105
Benzo(a)pyrene *	1,00 b	
Perylene	2,00 b	
Indeno(1,2,3-cd)pyrene *	1,00 b	
Dibenzo(ac/ah *)anthracene	1,00 b	
Benzo(ghi)perylene *	3,00 b	82
Anthanthrene	< 1,00	
Coronene	1,00 b	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>94,0</b>	
<b>Sum 3-7 ring PAH:</b>	<b>180</b>	
<b>Sum all:</b>	<b>274</b>	
<b>Sum Borneff 6</b>	<b>14,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>129</b>	

<: 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-4128  
 NILU sample number: 06/952  
 Customer: AMAP 2006  
 Customers sample ID: 10-12.7.06 0730-0820  
 : 160-157  
 Sample type: Air  
 Sample amount: 1166 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_3112.D

Kjeller, 26.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	46,0 b	
2-Methylnaphtalene	17,0 b	42
1-Methylnaphtalene	9,00 b	
Biphenyl	11,0 b	
Acenaphthylene *	2,00 b	
Acenaphthene *	2,00 b	48
Dibenzofuran	36,0	
Fluorene *	17,0 b	
Dibenzothiophene	2,00 b	
Phenanthrene *	29,0 b	
Anthracene *	< 1,00	61
3-Methylphenanthrene	5,00 b	
2-Methylphenanthrene	9,00 b	
2-Methylanthracene	1,00 b	
9-Methylphenanthrene	4,00 b	
1-Methylphenanthrene	4,00 b	
Fluoranthene *	7,00 b	
Pyrene *	5,00 b	106
Benzo(a)fluorene	< 1,00	
Retene	3,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	
Cyclopenta(cd)pyrene	4,00 b	
Benz(a)anthracene *	1,00 b	68
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 i,b	100
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	73
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>83,0</b>	
<b>Sum 3-7 ring PAH:</b>	<b>149</b>	
<b>Sum all:</b>	<b>232</b>	
<b>Sum Borneff 6</b>	<b>11,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>116</b>	

<: 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-4128  
 NILU sample number: 06/953  
 Customer: AMAP 2006  
 Customers sample ID: 17-19.7.06 0725-0835  
 : 160-155  
 Sample type: Air  
 Sample amount: 1159 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_2881.D

Kjeller, 25.01.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	63,0 b	
2-Methylnaphtalene	29,0 b	39
1-Methylnaphtalene	15,0 b	
Biphenyl	18,0 b	
Acenaphthylene *	3,00 b	
Acenaphthene *	18,0 b	49
Dibenzofuran	34,0 b	
Fluorene *	22,0 b	
Dibenzothiophene	3,00 b	
Phenanthrene *	48,0 b	
Anthracene *	2,00 b	64
3-Methylphenanthrene	11,0 b	
2-Methylphenanthrene	16,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	9,00 b	
1-Methylphenanthrene	8,00 b	
Fluoranthene *	12,0 b	
Pyrene *	9,00 b	102
Benzo(a)fluorene	1,00 b	
Retene	6,00	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	3,00 b	60
Chrysene */Triphenylene	6,00 b	
Benzo(b */j/k *)fluoranthenes	4,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	2,00 b	86
Benzo(a)pyrene *	1,00 b	
Perylene	1,00 i,b	
Indeno(1,2,3-cd)pyrene *	1,00 b	
Dibenzo(ac/ah *)anthracene	1,00 b	
Benzo(ghi)perylene *	1,00 i,b	71
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>125</b>	
<b>Sum 3-7 ring PAH:</b>	<b>232</b>	
<b>Sum all:</b>	<b>357</b>	
<b>Sum Borneff 6</b>	<b>19,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>194</b>	

<: 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-4128  
NILU sample number: 06/954  
Customer: AMAP 2006  
Customers sample ID: 24-26.7.06 0813-0752  
: 160-155  
Sample type: Air  
Sample amount: 1131 m<sup>3</sup>  
Concentration unit: pg/m<sup>3</sup>  
Data files: TB\_2882.D

Kjeller, 25.01.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	69,0 b	
2-Methylnaphtalene	27,0 b	39
1-Methylnaphtalene	15,0 b	
Biphenyl	14,0 b	
Acenaphthylene *	4,00 b	
Acenaphthene *	2,00 b	47
Dibenzofuran	59,0 b	
Fluorene *	44,0 b	
Dibenzothiophene	13,0	
Phenanthrene *	95,0 b	
Anthracene *	4,00 b	67

# Results of PAH Analysis



262

Encl. to measuring report: O-4128

NILU sample number: 06/955

Customer: AMAP 2006

Customers sample ID: 31.7-2.8.06 0657 - 0700

: 160-159

Sample type: Air

Sample amount: 1154 m<sup>3</sup>

Concentration unit: pg/m<sup>3</sup>

Data files: TB\_2878.D

Kjeller, 02.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	69,0 b	18
2-Methylnaphtalene	21,0 b	
1-Methylnaphtalene	11,0 b	
Biphenyl	32,0 b	
Acenaphthylene *	2,00 b	21
Acenaphthene *	13,0 b	
Dibenzofuran	38,0 b	
Fluorene *	26,0 b	
Dibenzothiophene	3,00 b	33
Phenanthrene *	41,0 b	
Anthracene *	1,00 b	
3-Methylphenanthrene	13,0 b	
2-Methylphenanthrene	18,0 b	
2-Methylanthracene	1,00 b	
9-Methylphenanthrene	10,0 b	
1-Methylphenanthrene	8,00 b	
Fluoranthene *	15,0 b	63
Pyrene *	10,0 b	
Benzo(a)fluorene	1,00 b	
Retene	2,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	2,00 b	37
Cyclopenta(cd)pyrene	1,00	
Benz(a)anthracene *	6,00	
Chrysene */Triphenylene	10,0	
Benzo(b */j/k *)fluoranthenes	9,00 b	52
Benzo(a)fluoranthene	1,00 b	
Benzo(e)pyrene	5,00	
Benzo(a)pyrene *	2,00 b	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	4,00	29g
Dibenzo(ac/ah *)anthracene	4,00	
Benzo(ghi)perylene *	4,00 b	
Anthanthrene	< 1,00	
Coronene	1,00	
Dibenzo(ae)pyrene	2,00	
Dibenzo(ai)pyrene	1,00	
Dibenzo(ah)pyrene	1,00	
<b>Sum bicyclic PAH:</b>	<b>133</b>	
<b>Sum 3-7 ring PAH:</b>	<b>258</b>	
<b>Sum all:</b>	<b>391</b>	
<b>Sum Borneff 6</b>	<b>34,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>216</b>	

<: 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-4128  
 NILU sample number: 06/1125  
 Customer: AMAP 2006  
 Customers sample ID: 7-9.8.06 0843-0727  
 : 160-160  
 Sample type: Air  
 Sample amount: 1140 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_3113.D

Kjeller, 26.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	73,0 b	
2-Methylnaphtalene	22,0 b	37
1-Methylnaphtalene	11,0 b	
Biphenyl	15,0 b	
Acenaphthylene *	2,00 b	
Acenaphthene *	3,00 b	44
Dibenzofuran	61,0	
Fluorene *	25,0	
Dibenzothiophene	2,00 b	
Phenanthrene *	26,0 b	
Anthracene *	25,0	57
3-Methylphenanthrene	4,00 b	
2-Methylphenanthrene	6,00 b	
2-Methylanthracene	1,00 b	
9-Methylphenanthrene	4,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	4,00 b	
Pyrene *	3,00 b	99
Benzo(a)fluorene	< 1,00	
Retene	2,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	< 1,00	
Cyclopenta(cd)pyrene	5,00 b	
Benz(a)anthracene *	< 1,00	80
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	93
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	86
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>121</b>	
<b>Sum 3-7 ring PAH:</b>	<b>194</b>	
<b>Sum all:</b>	<b>315</b>	
<b>Sum Borneff 6</b>	<b>8,00</b>	
<b>Sum 16 EPA PAH *</b>	<b>168</b>	

<: 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-4128  
 NILU sample number: 06/1126  
 Customer: AMAP 2006  
 Customers sample ID: 14-16.8.06 0802-0720  
 : 160-155  
 Sample type: Air  
 Sample amount: 1123.m3  
 Concentration unit: pg/m3  
 Data files: TB\_3114.D

Kjeller, 26.02.2007

Component:	Concentration pg/m3	Recovery %
Naphtalene *	70,0 b	
2-Methylnaphtalene	21,0 b	35
1-Methylnaphtalene	11,0 b	
Biphenyl	11,0 b	
Acenaphthylene *	2,00 b	
Acenaphthene *	3,00 b	45
Dibenzofuran	26,0 b	
Fluorene *	16,0 b	
Dibenzothiophene	2,00 b	
Phenanthrene *	24,0 b	
Anthracene *	< 1,00	72
3-Methylphenanthrene	6,00 b	
2-Methylphenanthrene	6,00 b	
2-Methylanthracene	2,00 b	
9-Methylphenanthrene	6,00 b	
1-Methylphenanthrene	4,00 b	
Fluoranthene *	5,00 b	
Pyrene *	3,00 b	127
Benzo(a)fluorene	< 1,00	
Retene	6,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	1,00 b	
Cyclopenta(cd)pyrene	2,00 b	
Benz(a)anthracene *	1,00 b	80
Chrysene */Triphenylene	2,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	
Benzo(a)fluoranthene	1,00 b	
Benzo(e)pyrene	2,00 b	102
Benzo(a)pyrene *	1,00 b	
Perylene	< 1,00	
Indeno(1,2,3-cd)pyrene *	1,00 b	
Dibenzo(ac/ah *)anthracene	1,00 b	
Benzo(ghi)perylene *	2,00 i,b	104
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>113</b>	
<b>Sum 3-7 ring PAH:</b>	<b>135</b>	
<b>Sum all:</b>	<b>248</b>	
<b>Sum Borneff 6</b>	<b>10,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>133</b>	

<: 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-4128  
 NILU sample number: 06/1127  
 Customer: AMAP 2006  
 Customers sample ID: 21-23.8.06 0725-0705  
 : 160-158  
 Sample type: Air  
 Sample amount: 1142 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_3115.D

Kjeller, 26.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	70,0 b	
2-Methylnaphtalene	28,0 b	42
1-Methylnaphtalene	15,0 b	
Biphenyl	19,0 b	
Acenaphthylene *	3,00 b	
Acenaphthene *	7,00 b	51
Dibenzofuran	34,0	
Fluorene *	17,0 b	
Dibenzothiophene	2,00 b	
Phenanthrene *	35,0 b	
Anthracene *	1,00 b	64
3-Methylphenanthrene	6,00 b	
2-Methylphenanthrene	8,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	5,00 b	
1-Methylphenanthrene	4,00 b	
Fluoranthene *	7,00 b	
Pyrene *	4,00 b	105
Benzo(a)fluorene	< 1,00	
Retene	2,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	1,00 b	
Cyclopenta(cd)pyrene	3,00 b	
Benz(a)anthracene *	< 1,00	72
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	< 1,00	89
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	79
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>132</b>	
<b>Sum 3-7 ring PAH:</b>	<b>157</b>	
<b>Sum all:</b>	<b>289</b>	
<b>Sum Borneff 6</b>	<b>11,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>151</b>	

<: 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-4128  
 NILU sample number: 06/1128  
 Customer: AMAP 2006  
 Customers sample ID: 28-30.8.06 0804-0724  
 : 160-160  
 Sample type: Air  
 Sample amount: 1140 m3  
 Concentration unit: pg/m3  
 Data files: TB\_2883.D

Kjeller, 25.01.2007

Component:	Concentration pg/m3	Recovery %
Naphtalene *	138 b	
2-Methylnaphtalene	35,0 b	44
1-Methylnaphtalene	17,0 b	
Biphenyl	13,0 b	
Acenaphthylene *	1,00 b	
Acenaphthene *	4,00 b	51
Dibenzofuran	39,0 b	
Fluorene *	18,0 b	
Dibenzothiophene	2,00 b	
Phenanthrene *	22,0 b	
Anthracene *	< 1,00	68
3-Methylphenanthrene	4,00 b	
2-Methylphenanthrene	6,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	3,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	6,00 b	
Pyrene *	4,00 b	109
Benzo(a)fluorene	1,00 b	
Retene	1,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	1,00 b	
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	2,00 b	78
Chrysene */Triphenylene	3,00 b	
Benzo(b *i/j/k *)fluoranthenes	3,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	95
Benzo(a)pyrene *	1,00 b	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	1,00 b	
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	1,00 i,b	86
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>203</b>	
<b>Sum 3-7 ring PAH:</b>	<b>139</b>	

# Results of PAH Analysis



Encl. to measuring report: O-4128  
 NILU sample number: 06/1479  
 Customer: AMAP 2006  
 Customers sample ID: 4-6.9.06 0817-0730  
 : 160-155  
 Sample type: Air  
 Sample amount: 1121 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_2984.D

Kjeller, 07.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	91,0 b	
2-Methylnaphtalene	22,0 b	34
1-Methylnaphtalene	11,0 b	
Biphenyl	13,0 b	
Acenaphthylene *	1,00 b	
Acenaphthene *	3,00 b	40
Dibenzofuran	47,0 b	
Fluorene *	24,0 b	
Dibenzothiophene	2,00 b	
Phenanthrene *	27,0 b	
Anthracene *	< 1,00	56
3-Methylphenanthrene	5,00 b	
2-Methylphenanthrene	7,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	5,00 b	
1-Methylphenanthrene	4,00 b	
Fluoranthene *	3,00 b	
Pyrene *	2,00 b	102
Benzo(a)fluorene	< 1,00	
Retene	1,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	1,00 b	
Cyclopenta(cd)pyrene	3,00 b	
Benz(a)anthracene *	< 1,00	77
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	100
Benzo(a)pyrene *	< 1,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	1,00 b	
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	1,00 i,b	78
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>137</b>	
<b>Sum 3-7 ring PAH:</b>	<b>154</b>	
<b>Sum all:</b>	<b>291</b>	
<b>Sum Borneff 6</b>	<b>7,00</b>	
<b>Sum 16 EPA PAH *</b>	<b>159</b>	

<: 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-4128  
 NILU sample number: 06/1480  
 Customer: AMAP 2006  
 Customers sample ID: 11-13.9.06 0640-0718  
 : 160-158  
 Sample type: Air  
 Sample amount: 1164 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_3116.D

Kjeller, 26.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	27,0 b	45
2-Methylnaphtalene	15,0 b	
1-Methylnaphtalene	8,00 b	
Biphenyl	18,0 b	
Acenaphthylene *	1,00 b	51
Acenaphthene *	2,00 b	
Dibenzofuran	63,0	
Fluorene *	28,0	
Dibenzothiophene	4,00	61
Phenanthrene *	38,0 b	
Anthracene *	< 1,00	
3-Methylphenanthrene	6,00 b	
2-Methylphenanthrene	9,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	5,00 b	
1-Methylphenanthrene	6,00 b	
Fluoranthene *	9,00 b	97
Pyrene *	6,00 b	
Benzo(a)fluorene	1,00 i,b	
Retene	4,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	64
Cyclopenta(cd)pyrene	3,00 b	
Benz(a)anthracene *	1,00 b	
Chrysene */Triphenylene	2,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	84
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	73
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	
<b>Sum bicyclic PAH:</b>	<b>68,0</b>	
<b>Sum 3-7 ring PAH:</b>	<b>205</b>	
<b>Sum all:</b>	<b>273</b>	
<b>Sum Borneff 6</b>	<b>13,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>120</b>	

<: 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-4128  
 NILU sample number: 06/1481  
 Customer: AMAP 2006  
 Customers sample ID: 18-20.9.06 0759-0723  
 : 160-150  
 Sample type: Air  
 Sample amount: 1107 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_2884.D



Kjeller, 02.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	113 b	
2-Methylnaphtalene	31,0 b	33
1-Methylnaphtalene	16,0 b	
Biphenyl	30,0 b	
Acenaphthylene *	1,00 b	
Acenaphthene *	5,00 b	39
Dibenzofuran	50,0 b	
Fluorene *	18,0 b	
Dibenzothiophene	1,00 b	
Phenanthrene *	18,0 b	
Anthracene *	< 1,00	59
3-Methylphenanthrene	3,00 b	
2-Methylphenanthrene	5,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	3,00 b	
1-Methylphenanthrene	2,00 b	
Fluoranthene *	6,00 b	
Pyrene *	4,00 b	96
Benzo(a)fluorene	1,00 b	
Retene	1,00	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	< 1,00	
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	2,00 b	76
Chrysene */Triphenylene	3,00 b	
Benzo(b *i/j/k *)fluoranthenes	2,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	91
Benzo(a)pyrene *	< 1,00	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	1,00 b	
Dibenzo(ac/ah *)anthracene	< 1,00	
Benzo(ghi)perylene *	1,00 i,b	83
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>190</b>	
<b>Sum 3-7 ring PAH:</b>	<b>142</b>	
<b>Sum all:</b>	<b>332</b>	
<b>Sum Borneff 6</b>	<b>11,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>177</b>	

<: 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-4128  
 NILU sample number: 06/1482  
 Customer: AMAP 2006  
 Customers sample ID: 25-27.9.06 0725-0704  
 : 160-156  
 Sample type: Air  
 Sample amount: 1133 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_2887.D

Kjeller, 25.01.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	79,0 b	38
2-Methylnaphtalene	26,0 b	
1-Methylnaphtalene	17,0 b	
Biphenyl	221	
Acenaphthylene *	1,00 b	44
Acenaphthene *	3,00 b	
Dibenzofuran	315	
Fluorene *	53,0 b	
Dibenzothiophene	3,00 b	63
Phenanthrene *	16,0 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 b	
Fluoranthene *	10,0 b	
Pyrene *	7,00 b	
Benzo(a)fluorene	1,00 i,b	
Retene	2,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	2,00 b	65
Cyclopenta(cd)pyrene	< 1,00	
Benz(a)anthracene *	3,00 b	
Chrysene */Triphenylene	8,00	
Benzo(b */j/k *)fluoranthenes	8,00 b	87
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	3,00 b	
Benzo(a)pyrene *	1,00 b	
Perylene	2,00 b	
Indeno(1,2,3-cd)pyrene *	2,00 b	75
Dibenzo(ac/ah *)anthracene	1,00 b	
Benzo(ghi)perylene *	2,00 i,b	
Anthanthrene	< 1,00	
Coronene	1,00	
Dibenzo(ae)pyrene	1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>343</b>	
<b>Sum 3-7 ring PAH:</b>	<b>462</b>	
<b>Sum all:</b>	<b>805</b>	
<b>Sum Borneff 6</b>	<b>23,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>195</b>	

<: 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-4128  
 NILU sample number: 06/1483  
 Customer: AMAP 2006  
 Customers sample ID: 2-4.10.06 0806-0702  
 : 160-156  
 Sample type: Air  
 Sample amount: 1116 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_2985.D

Kjeller, 07.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	56,0 b	
2-Methylnaphtalene	51,0 b	35
1-Methylnaphtalene	33,0 b	
Biphenyl	66,0 b	
Acenaphthylene *	2,00 b	
Acenaphthene *	4,00 b	40
Dibenzofuran	170 b	
Fluorene *	49,0 b	
Dibenzothiophene	9,00 b	
Phenanthrene *	53,0 b	
Anthracene *	< 1,00	51
3-Methylphenanthrene	7,00 b	
2-Methylphenanthrene	12,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	5,00 b	
1-Methylphenanthrene	7,00 b	
Fluoranthene *	8,00 b	
Pyrene *	5,00 b	90
Benzo(a)fluorene	1,00 i,b	
Retene	3,00 b	
Benzo(b)fluorene	1,00 b	
Benzo(ghi)fluoranthene	1,00 b	
Cyclopenta(cd)pyrene	3,00	
Benz(a)anthracene *	1,00 b	69
Chrysene */Triphenylene	2,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	92
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 i,b	76
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>206</b>	
<b>Sum 3-7 ring PAH:</b>	<b>358</b>	
<b>Sum all:</b>	<b>564</b>	
<b>Sum Borneff 6</b>	<b>12,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>186</b>	

<: 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-4128  
 NILU sample number: 06/1484  
 Customer: AMAP 2006  
 Customers sample ID: 9-11.10.06 0738-0716  
 : 160-155  
 Sample type: Air  
 Sample amount: 1126 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_3117.D

Kjeller, 26.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	151 b	
2-Methylnaphtalene	58,0 b	36
1-Methylnaphtalene	36,0 b	
Biphenyl	172	
Acenaphthylene *	4,00 b	
Acenaphthene *	6,00 b	45
Dibenzofuran	225	
Fluorene *	55,0	
Dibenzothiophene	3,00 b	
Phenanthrene *	33,0 b	
Anthracene *	1,00 b	55
3-Methylphenanthrene	9,00 b	
2-Methylphenanthrene	11,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	9,00 b	
1-Methylphenanthrene	7,00 b	
Fluoranthene *	7,00 b	
Pyrene *	6,00 b	94
Benzo(a)fluorene	1,00 i,b	
Retene	6,00 b	
Benzo(b)fluorene	2,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	
Cyclopenta(cd)pyrene	3,00 b	
Benz(a)anthracene *	1,00 b	67
Chrysene */Triphenylene	4,00 b	
Benzo(b */j/k *)fluoranthenes	2,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	1,00 b	85
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 i,b	74
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>417</b>	
<b>Sum 3-7 ring PAH:</b>	<b>409</b>	
<b>Sum all:</b>	<b>826</b>	
<b>Sum Borneff 6</b>	<b>12,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>274</b>	

<: 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-4128

NILU sample number: 06/1485

Customer: AMAP 2006

Customers sample ID: 16-18.10.06 0810-0714

: 160-154

Sample type: Air

Sample amount: 1109 m<sup>3</sup>

Concentration unit: pg/m<sup>3</sup>

Data files: TB\_3118.D

Kjeller, 26.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	173 b	
2-Methylnaphtalene	45,0 b	38
1-Methylnaphtalene	26,0 b	
Biphenyl	135	
Acenaphthylene *	2,00 b	
Acenaphthene *	4,00 b	47
Dibenzofuran	192	
Fluorene *	43,0	
Dibenzothiophene	2,00 b	
Phenanthrene *	21,0 b	
Anthracene *	< 1,00	56
3-Methylphenanthrene	2,00 b	
2-Methylphenanthrene	3,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	2,00 b	
Fluoranthene *	4,00 b	
Pyrene *	2,00 b	89
Benzo(a)fluorene	< 1,00	
Retene	1,00 b	
Benzo(b)fluorene	< 1,00	
Benzo(ghi)fluoranthene	1,00 b	
Cyclopenta(cd)pyrene	4,00 b	
Benz(a)anthracene *	1,00 b	47
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	< 1,00	72
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	60
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>379</b>	
<b>Sum 3-7 ring PAH:</b>	<b>304</b>	
<b>Sum all:</b>	<b>683</b>	
<b>Sum Borneff 6</b>	<b>8,00</b>	
<b>Sum 16 EPA PAH *</b>	<b>257</b>	

<: 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-4128

NILU sample number: 06/1486

Customer: AMAP 2006

Customers sample ID: 23-25.10.06 0701-0700

: 160-158

Sample type: Air

Sample amount: 1150 m<sup>3</sup>

Concentration unit: pg/m<sup>3</sup>

Data files: TB\_2986.D

Kjeller, 07.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	12,8 b	
2-Methylnaphtalene	30,0 b	41
1-Methylnaphtalene	17,0 b	
Biphenyl	53,0 b	
Acenaphthylene *	3,00 b	
Acenaphthene *	4,00 b	47
Dibenzofuran	129 b	
Fluorene *	32,0 b	
Dibenzothiophene	2,00 b	
Phenanthrene *	25,0 b	
Anthracene *	1,00 b	63
3-Methylphenanthrene	4,00 b	
2-Methylphenanthrene	5,00 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	4,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	3,00 b	
Pyrene *	2,00 b	107
Benzo(a)fluorene	< 1,00	
Retene	2,00 b	
Benzo(b)fluorene	1,00 b	
Benzo(ghi)fluoranthene	< 1,00	
Cyclopenta(cd)pyrene	3,00	
Benz(a)anthracene *	< 1,00	88
Chrysene */Triphenylene	1,00 b	
Benzo(b */j/k *)fluoranthenes	1,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	< 1,00	106
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 b	84
Anthanthrene	< 1,00	
Coronene	< 1,00	
Dibenzo(ae)pyrene	< 1,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>113</b>	

# Results of PAH Analysis



Encl. to measuring report: O-4128  
 NILU sample number: 06/1487  
 Customer: AMAP 2006  
 Customers sample ID: 30.10-1.11.06 0820-0945  
 : 160-155  
 Sample type: Air  
 Sample amount: 1173 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_3197.D

Kjeller, 26.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	157 b	
2-Methylnaphtalene	84,0 b	41
1-Methylnaphtalene	64,0 b	
Biphenyl	252	
Acenaphthylene *	10,0 b	
Acenaphthene *	12,0 b	46
Dibenzofuran	314	
Fluorene *	104	
Dibenzothiophene	7,00 b	
Phenanthrene *	80,0 b	
Anthracene *	10,0 b	58
3-Methylphenanthrene	9,00 b	
2-Methylphenanthrene	17,0 b	
2-Methylanthracene	2,00	
9-Methylphenanthrene	6,00 b	
1-Methylphenanthrene	18,0	
Fluoranthene *	15,0 b	
Pyrene *	12,0 b	101
Benzo(a)fluorene	2,00 i,b	
Retene	50,0	
Benzo(b)fluorene	4,00 i	
Benzo(ghi)fluoranthene	3,00 b	
Cyclopenta(cd)pyrene	6,00	
Benz(a)anthracene *	4,00	88
Chrysene */Triphenylene	11,0	
Benzo(b */j/k *)fluoranthenes	12,0	
Benzo(a)fluoranthene	1,00 b	
Benzo(e)pyrene	4,00 b	g
Benzo(a)pyrene *	1,00 b	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	3,00 b	
Dibenzo(ac/ah *)anthracene	4,00	
Benzo(ghi)perylene *	4,00 b	g
Anthanthrene	< 1,00	
Coronene	5,00	
Dibenzo(ae)pyrene	3,00	
Dibenzo(ai)pyrene	3,00	
Dibenzo(ah)pyrene	3,00	
<b>Sum bicyclic PAH:</b>	<b>557</b>	
<b>Sum 3-7 ring PAH:</b>	<b>741</b>	
<b>Sum all:</b>	<b>1 298</b>	
<b>Sum Borneff 6</b>	<b>35,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>439</b>	

<: 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-4128  
 NILU sample number: 07/118  
 Customer: AMAP 2006  
 Customers sample ID: 6-8.11.06 0935-0816  
 : 160-150  
 Sample type: Air  
 Sample amount: 1090 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_3189.D

Kjeller, 26.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	259 b	
2-Methylnaphtalene	51,0 b	42
1-Methylnaphtalene	33,0 b	
Biphenyl	212	
Acenaphthylene *	1,00 b	
Acenaphthene *	6,00 b	46
Dibenzofuran	300	
Fluorene *	94,0 b	
Dibenzothiophene	7,00 b	
Phenanthrene *	27,0 b	
Anthracene *	1,00 b	64
3-Methylphenanthrene	3,00 b	
2-Methylphenanthrene	5,00 b	
2-Methylanthracene	1,00 b	
9-Methylphenanthrene	2,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	7,00 b	
Pyrene *	3,00 b	98
Benzo(a)fluorene	1,00 b	
Retene	1,00 b	
Benzo(b)fluorene	1,00 b	
Benzo(ghi)fluoranthene	3,00 b	
Cyclopenta(cd)pyrene	16,0	
Benz(a)anthracene *	2,00 b	49
Chrysene */Triphenylene	7,00 b	
Benzo(b */j/k *)fluoranthenes	9,00 b	
Benzo(a)fluoranthene	2,00	
Benzo(e)pyrene	3,00 b	98
Benzo(a)pyrene *	1,00 b	
Perylene	3,00 i,b	
Indeno(1,2,3-cd)pyrene *	2,00 b	
Dibenzo(ac/ah *)anthracene	3,00 b	
Benzo(ghi)perylene *	6,00	85
Anthanthrene	2,10	
Coronene	10,0	
Dibenzo(ae)pyrene	3,00	
Dibenzo(ai)pyrene	< 1,00	
Dibenzo(ah)pyrene	< 1,00	
<b>Sum bicyclic PAH:</b>	<b>555</b>	
<b>Sum 3-7 ring PAH:</b>	<b>537</b>	
<b>Sum all:</b>	<b>1 092</b>	
<b>Sum Borneff 6</b>	<b>25,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>428</b>	

<: 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-4128

NILU sample number: 07/119

Customer: AMAP 2006

Customers sample ID: 13-15.11.06 0807-0850

: 160-155

Sample type: Air

Sample amount: 1157 m<sup>3</sup>

Concentration unit: pg/m<sup>3</sup>

Data files: TB\_3196.D

Kjeller, 26.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	311 b	
2-Methylnaphtalene	71,0 b	42
1-Methylnaphtalene	65,0 b	
Biphenyl	490	
Acenaphthylene *	2,00 b	
Acenaphthene *	8,00 b	51
Dibenzofuran	553	
Fluorene *	174 b	
Dibenzothiophene	9,00 b	
Phenanthrene *	31,0 b	
Anthracene *	2,00 b	61
3-Methylphenanthrene	3,00 b	
2-Methylphenanthrene	5,00 b	
2-Methylanthracene	1,00 b	
9-Methylphenanthrene	3,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	8,00 b	
Pyrene *	5,00 b	112
Benzo(a)fluorene	1,00 i,b	
Retene	1,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	2,00 b	
Cyclopenta(cd)pyrene	8,00	
Benz(a)anthracene *	2,00 b	96
Chrysene */Triphenylene	6,00 b	
Benzo(b */j/k *)fluoranthenes	10,0 b	
Benzo(a)fluoranthene	1,00 b	
Benzo(e)pyrene	3,00 b	99
Benzo(a)pyrene *	2,00 b	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	3,00 b	
Dibenzo(ac/ah *)anthracene	5,00	
Benzo(ghi)perylene *	4,00 b	87
Anthanthrene	< 1,00	
Coronene	6,00	
Dibenzo(ae)pyrene	4,00	
Dibenzo(ai)pyrene	4,00	
Dibenzo(ah)pyrene	6,00	
<b>Sum bicyclic PAH:</b>	<b>937</b>	
<b>Sum 3-7 ring PAH:</b>	<b>878</b>	
<b>Sum all:</b>	<b>1 815</b>	
<b>Sum Borneff 6</b>	<b>27,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>573</b>	

<: 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-4128  
 NILU sample number: 07/120  
 Customer: AMAP 2006  
 Customers sample ID: 20-22.11.06 0915-0813  
 : 160-155  
 Sample type: Air  
 Sample amount: 1116 m3  
 Concentration unit: pg/m3  
 Data files: TB\_3192.D

Kjeller, 26.02.2007

Component:	Concentration pg/m3	Recovery %
Naphtalene *	240 b	37
2-Methylnaphtalene	93,0 b	
1-Methylnaphtalene	59,0 b	
Biphenyl	212	
Acenaphthylene *	4,00 b	39
Acenaphthene *	20,0 b	
Dibenzofuran	702	
Fluorene *	339	
Dibenzothiophene	20,0	52
Phenanthrene *	142 b	
Anthracene *	5,00 b	
3-Methylphenanthrene	24,0	
2-Methylphenanthrene	23,0	
2-Methylanthracene	6,00	
9-Methylphenanthrene	16,0	
1-Methylphenanthrene	14,0	
Fluoranthene *	48,0	99
Pyrene *	20,0	
Benzo(a)fluorene	8,00	
Retene	13,0	
Benzo(b)fluorene	6,00 i	
Benzo(ghi)fluoranthene	16,0	53
Cyclopenta(cd)pyrene	18,0	
Benz(a)anthracene *	23,0	
Chrysene */Triphenylene	40,0	
Benzo(b */j/k *)fluoranthenes	43,0	87
Benzo(a)fluoranthene	7,00	
Benzo(e)pyrene	17,0	
Benzo(a)pyrene *	11,0	
Perylene	7,00	
Indeno(1,2,3-cd)pyrene *	18,0	94
Dibenzo(ac/ah *)anthracene	25,0	
Benzo(ghi)perylene *	18,0	
Anthanthrene	7,00	
Coronene	46,0	
Dibenzo(ae)pyrene	40,0	
Dibenzo(ai)pyrene	44,0	
Dibenzo(ah)pyrene	55,0	
<b>Sum bicyclic PAH:</b>	<b>604</b>	
<b>Sum 3-7 ring PAH:</b>	<b>1 845</b>	
<b>Sum all:</b>	<b>2 449</b>	
<b>Sum Borneff 6</b>	<b>138</b>	
<b>Sum 16 EPA PAH *</b>	<b>996</b>	

<: 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-4128

NILU sample number: 07/121

Customer: AMAP 2006

Customers sample ID: 27-29.11.06 0822-0955

: 160-152

Sample type: Air

Sample amount: 1166 m<sup>3</sup>

Concentration unit: pg/m<sup>3</sup>

Data files: TB\_3193.D

Kjeller, 28.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	736 b	
2-Methylnaphtalene	212 b	45
1-Methylnaphtalene	151 b	
Biphenyl	885	
Acenaphthylene *	5,00 b	
Acenaphthene *	23,0 b	52
Dibenzofuran	1 205	
Fluorene *	627	
Dibenzothiophene	22,0	
Phenanthrene *	106 b	
Anthracene *	1,00 b	65
3-Methylphenanthrene	4,00 b	
2-Methylphenanthrene	6,00 b	
2-Methylanthracene	1,00 b	
9-Methylphenanthrene	3,00 b	
1-Methylphenanthrene	3,00 b	
Fluoranthene *	28,0 b	
Pyrene *	7,00 b	119
Benzo(a)fluorene	1,00 i,b	
Retene	2,00 b	
Benzo(b)fluorene	2,00 i	
Benzo(ghi)fluoranthene	4,00	
Cyclopenta(cd)pyrene	14,0	
Benz(a)anthracene *	4,00	84
Chrysene */Triphenylene	10,0	
Benzo(b */i/k *)fluoranthenes	12,0	
Benzo(a)fluoranthene	1,00 b	
Benzo(e)pyrene	4,00 b	108
Benzo(a)pyrene *	2,00 b	
Perylene	2,00 b	
Indeno(1,2,3-cd)pyrene *	5,00 b	
Dibenzo(ac/ah *)anthracene	6,00 b	
Benzo(ghi)perylene *	6,00 b	81
Anthanthrene	1,00 b	
Coronene	19,0	
Dibenzo(ae)pyrene	14,0	
Dibenzo(ai)pyrene	14,0	
Dibenzo(ah)pyrene	20,0	
<b>Sum bicyclic PAH:</b>	<b>1 984</b>	
<b>Sum 3-7 ring PAH:</b>	<b>2 184</b>	
<b>Sum all:</b>	<b>4 168</b>	
<b>Sum Borneff 6</b>	<b>53,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>1 578</b>	

<: 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



280

Encl. to measuring report: O-4128  
 NILU sample number: 07/122  
 Customer: AMAP 2006  
 Customers sample ID: 4-6.12.06 0754-0908  
 : 160-157  
 Sample type: Air  
 Sample amount: 1176 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_3194.D

Kjeller, 28.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	707 b	
2-Methylnaphtalene	294 i,b	41
1-Methylnaphtalene	227 i	
Biphenyl	678	
Acenaphthylene *	6,00 b	
Acenaphthene *	24,0 b	42
Dibenzofuran	1 090	
Fluorene *	586	
Dibenzothiophene	24,0	
Phenanthrene *	70,0	
Anthracene *	6,00 b	56
3-Methylphenanthrene	33,0	
2-Methylphenanthrene	31,0	
2-Methylanthracene	11,0	
9-Methylphenanthrene	25,0	
1-Methylphenanthrene	19,0	
Fluoranthene *	61,0	
Pyrene *	35,0	77
Benzo(a)fluorene	28,0 i	
Retene	31,0	
Benzo(b)fluorene	30,0 i	
Benzo(ghi)fluoranthene	48,0	
Cyclopenta(cd)pyrene	22,0	
Benz(a)anthracene *	54,0	43
Chrysene */Triphenylene	94,0	
Benzo(b */j/k *)fluoranthenes	94,0	
Benzo(a)fluoranthene	13,0	
Benzo(e)pyrene	30,0	58
Benzo(a)pyrene *	15,0	
Perylene	13,0	
Indeno(1,2,3-cd)pyrene *	25,0	
Dibenzo(ac/ah *)anthracene	46,0	
Benzo(ghi)perylene *	22,0	51
Anthanthrene	3,00	
Coronene	45,0	
Dibenzo(ae)pyrene	27,0	
Dibenzo(ai)pyrene	40,0	
Dibenzo(ah)pyrene	39,0	
<b>Sum bicyclic PAH:</b>	<b>1 906</b>	
<b>Sum 3-7 ring PAH:</b>	<b>2 740</b>	
<b>Sum all:</b>	<b>4 646</b>	
<b>Sum Borneff 6</b>	<b>217</b>	
<b>Sum 16 EPA PAH *</b>	<b>1 845</b>	

<: 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-4128

NILU sample number: 07/123

Customer: AMAP 2006

Customers sample ID: 11-13.12.06 0758-0858

: 160-155

Sample type: Air

Sample amount: 1164 m<sup>3</sup>

Concentration unit: pg/m<sup>3</sup>

Data files: TB\_3195.D

Kjeller, 26.02.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	866 b	
2-Methylnaphtalene	320 b	29
1-Methylnaphtalene	237	
Biphenyl	678	
Acenaphthylene *	5,00 b	
Acenaphthene *	23,0 b	36
Dibenzofuran	1 083	
Fluorene *	625	
Dibenzothiophene	28,0	
Phenanthrene *	130 b	
Anthracene *	2,00 b	40
3-Methylphenanthrene	6,00 b	
2-Methylphenanthrene	11,0 b	
2-Methylanthracene	1,00 b	
9-Methylphenanthrene	5,00 b	
1-Methylphenanthrene	6,00 b	
Fluoranthene *	42,0	
Pyrene *	11,0 b	71
Benzo(a)fluorene	2,00 i,b	
Retene	2,00 b	
Benzo(b)fluorene	4,00 i	
Benzo(ghi)fluoranthene	4,00	
Cyclopenta(cd)pyrene	14,0	
Benz(a)anthracene *	5,00	47
Chrysene */Triphenylene	13,0	
Benzo(b */j/k *)fluoranthenes	14,0	
Benzo(a)fluoranthene	1,00 b	
Benzo(e)pyrene	6,00	63
Benzo(a)pyrene *	2,00 b	
Perylene	2,00 b	
Indeno(1,2,3-cd)pyrene *	5,00	
Dibenzo(ac/ah *)anthracene	8,00	
Benzo(ghi)perylene *	7,00	43
Anthanthrene	1,00 b	
Coronene	19,0	
Dibenzo(ae)pyrene	13,0	
Dibenzo(ai)pyrene	15,0	
Dibenzo(ah)pyrene	13,0	
<b>Sum bicyclic PAH:</b>	<b>2 101</b>	
<b>Sum 3-7 ring PAH:</b>	<b>2 128</b>	
<b>Sum all:</b>	<b>4 229</b>	
<b>Sum Borneff 6</b>	<b>70,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>1 758</b>	

<: 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-4128  
 NILU sample number: 07/449  
 Customer: AMAP 2006  
 Customers sample ID: 18-20.12.06 0943-0821  
 : 160-140  
 Sample type: Air  
 Sample amount: 1053 m<sup>3</sup>  
 Concentration unit: pg/m<sup>3</sup>  
 Data files: TB\_3220.D

Kjeller, 02.03.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	742 b	38
2-Methylnaphtalene	246 b	
1-Methylnaphtalene	171 b	
Biphenyl	1 296	
Acenaphthylene *	6,00 b	45
Acenaphthene *	16,0 b	
Dibenzofuran	1 557	
Fluorene *	793	
Dibenzothiophene	36,0	64
Phenanthrene *	80,0 b	
Anthracene *	2,00 b	
3-Methylphenanthrene	9,00 b	
2-Methylphenanthrene	14,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	6,00 b	
1-Methylphenanthrene	8,00 b	
Fluoranthene *	56,0	107
Pyrene *	33,0	
Benzo(a)fluorene	3,00 i,b	
Retene	3,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	8,00	68
Cyclopenta(cd)pyrene	5,00	
Benz(a)anthracene *	7,00	
Chrysene */Triphenylene	38,0	
Benzo(b */j/k *)fluoranthenes	33,0	108
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	10,0	
Benzo(a)pyrene *	1,00 b	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	8,00	87
Dibenzo(ac/ah *)anthracene	4,00	
Benzo(ghi)perylene *	12,0	
Anthanthrene	1,00 b	
Coronene	31,0	
Dibenzo(ae)pyrene	23,0	
Dibenzo(ai)pyrene	24,0	
Dibenzo(ah)pyrene	29,0	
<b>Sum bicyclic PAH:</b>	<b>2 455</b>	
<b>Sum 3-7 ring PAH:</b>	<b>2 860</b>	
<b>Sum all:</b>	<b>5 315</b>	
<b>Sum Borneff 6</b>	<b>110</b>	
<b>Sum 16 EPA PAH *</b>	<b>1 831</b>	

<: 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-4128

NILU sample number: 07/453

Customer: AMAP 2006

Customers sample ID: 29-31.12.06 1017-0815

: 160-156

Sample type: Air

Sample amount: 1095 m<sup>3</sup>

Concentration unit: pg/m<sup>3</sup>

Data files: TB\_3221.D

Kjeller, 02.03.2007

Component:	Concentration pg/m <sup>3</sup>	Recovery %
Naphtalene *	1 000 b	
2-Methylnaphtalene	221 b	35
1-Methylnaphtalene	228	
Biphenyl	843	
Acenaphthylene *	4,00 b	
Acenaphthene *	13,0 b	44
Dibenzofuran	1 062	
Fluorene *	497	
Dibenzothiophene	25,0	
Phenanthrene *	77,0 b	
Anthracene *	1,00 b	58
3-Methylphenanthrene	10,0 b	
2-Methylphenanthrene	14,0 b	
2-Methylanthracene	< 1,00	
9-Methylphenanthrene	8,00 b	
1-Methylphenanthrene	7,00 b	
Fluoranthene *	17,0 b	
Pyrene *	8,00 b	101
Benzo(a)fluorene	1,00 i,b	
Retene	2,00 b	
Benzo(b)fluorene	1,00 i,b	
Benzo(ghi)fluoranthene	1,00 b	
Cyclopenta(cd)pyrene	5,00	
Benz(a)anthracene *	1,00 b	59
Chrysene */Triphenylene	6,00 b	
Benzo(b */j/k *)fluoranthenes	6,00 b	
Benzo(a)fluoranthene	< 1,00	
Benzo(e)pyrene	2,00 b	73
Benzo(a)pyrene *	1,00 b	
Perylene	1,00 b	
Indeno(1,2,3-cd)pyrene *	3,00 b	
Dibenzo(ac/ah *)anthracene	3,00 b	
Benzo(ghi)perylene *	3,00 b	54
Anthanthrene	< 1,00	
Coronene	22,0	
Dibenzo(ae)pyrene	16,0	
Dibenzo(ai)pyrene	20,0	
Dibenzo(ah)pyrene	23,0	
<b>Sum bicyclic PAH:</b>	<b>2 292</b>	
<b>Sum 3-7 ring PAH:</b>	<b>1 863</b>	
<b>Sum all:</b>	<b>4 155</b>	
<b>Sum Borneff 6</b>	<b>30,0</b>	
<b>Sum 16 EPA PAH *</b>	<b>1 640</b>	

<: 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

1.  $\frac{1}{x^2} = x^{-2}$   
 $\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$

2.  $\frac{1}{x^3} = x^{-3}$   
 $\frac{d}{dx} x^{-3} = -3x^{-4} = -\frac{3}{x^4}$

3.  $\frac{1}{x^4} = x^{-4}$   
 $\frac{d}{dx} x^{-4} = -4x^{-5} = -\frac{4}{x^5}$

## **Vedlegg 5**

### **Tungmetaller i luft på Birkenes (U-1478-07)**

1

2

3  
4  
5



## Målerapport nr. U-1478-07

**Oppdragsgiver:** Jozef M. Pacyna  
NILU  
Her  
Kopi : WAa


**Prosjekt nr.:** O-90006

**Prøvetaking:**  
**Sted:** Birkenes  
**Ansvar:** NILU  
**Kommentar:** Prøver for perioden 01.01.2006-31.12.2006.

**Prøveinformasjon:**  
**Prøvetype:** Tungmetaller, PM10, luftprøver (Kleinfiltergeret)  
**Prøven mottatt:**  
**Kommentar:** Resultatene er korrigerede med filterblank, Whatman Qma. Deteksjonsgrensen er basert på 3s for filterblank. Cr bakgrunn på filterblank er i år lavere enn i fjor (1s), dette gjør at vi har basert deteksjonsgrensen på 3s.

**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:** Vi hadde et uhell med vår mikrobølgeovn ved oppslutning av noen av prøvene, dette gjorde at prøver fra følgende datoer gikk tapt:  
20.06.2006, 22.06.2006, 23.06.2006 og 26.06.2006
- Kontaktperson:** Marit Vadset
- Godkjenning:** Kjeller, 9. mars 2007
-   
Marit Vadset  
Ingeniør, Miljøkjemi
- Vedlegg:** Analyseresultater for prøver: 3 sider  
Målerapporten og vedleggene omfatter totalt 5 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*

PRO_NR	stasnr	PROVETY	Provelak	MÅLEPER	FRADATO	ILDATO	aprocavn	UT_ENHET	UTV_VOL	DIL_FKT	LUFTVOL	FILTDEL	Pb	Cd	Cu	Zn	Cr	Ni	Co	V	As	
O-90006	Birkenes	fp-t	1	03.01.2006	04.01.2006	0290aa[11]	ng/m3	1	54.9	10	1	18.52	0.061	4.82	0.061	5.51	*2.485519	*0.219307E	*-0.013795	0.67	*0.1489982	
O-90006	Birkenes	fp-t	1	10.01.2006	11.01.2006	0290aa[12]	ng/m3	1	54.9	10	1	10.28	0.085	4.03	0.085	3.25	*2.885710	*0.442987E	*-0.013795	1.27	*0.1839706	
O-90006	Birkenes	fp-t	1	17.01.2006	18.01.2006	0290aa[13]	ng/m3	1	55.2	10	1	11.53	0.053	8.69	0.154	12.63	*1.997373	0.98	*0.0231884	1.97	0.44	
O-90006	Birkenes	fp-t	1	24.01.2006	25.01.2006	0290aa[14]	ng/m3	1	54.7	10	1	1.99	0.149	4.30	0.149	11.24	*0.812700E	0.78	*0.030347E	2.24	0.46	
O-90006	Birkenes	fp-t	1	31.01.2006	01.02.2006	0290aa[15]	ng/m3	1	55.2	10	1	0.22	0.238315E	0.022	*0.038315E	1.59	*0.1869837	*-0.155904E	*0.037681E	*0.093840E	*0.0557971	
O-90006	Birkenes	fp-t	1	07.02.2006	08.02.2006	0290aa[16]	ng/m3	1	55.1	10	1	1.33	0.16951	0.335208E	*0.0176951	2.73	*0.983212E	0.79	*-0.013745	0.66	*0.124137E	
O-90006	Birkenes	fp-t	1	14.02.2006	15.02.2006	0290aa[17]	ng/m3	1	54.6	10	1	4.45	0.267	6.45	0.267	29.31	*2.341667	2.09	0.07	3.85	0.62	
O-90006	Birkenes	fp-t	1	21.02.2006	22.02.2006	0290aa[18]	ng/m3	1	54.9	10	1	0.65	3.61	0.65	3.61	0.65	4.84	*-0.755684	5.87	*-0.013795	*0.140619E	*0.127140E
O-90006	Birkenes	fp-t	1	28.02.2006	01.03.2006	0290aa[19]	ng/m3	1	55.4	10	1	0.604602E	0.030	*0.604602E	4.63	*-0.755684	0.329465E	*-0.013670	0.79	*0.063898E		
O-90006	Birkenes	fp-t	1	07.03.2006	08.03.2006	0290aa[20]	ng/m3	1	54.7	10	1	1.140311	0.107	*1.140311	6.70	*1.231353	1.21	*0.027422E	1.60	*0.119928E		
O-90006	Birkenes	fp-t	1	14.03.2006	15.03.2006	0290aa[21]	ng/m3	1	55.1	10	1	1.75	0.098	2.15	0.098	13.85	*1.675045	1.24	0.06	1.37	0.38	
O-90006	Birkenes	fp-t	1	21.03.2006	22.03.2006	0290aa[22]	ng/m3	1	55	10	1	1.61	0.047	1.61	0.047	13.60	*3.284636	0.499272E	*0.013818E	*0.1829091	*0.046181E	
O-90006	Birkenes	fp-t	1	28.03.2006	29.03.2006	0290aa[23]	ng/m3	1	55.1	10	1	0.219880E	0.048	*0.219880E	3.77	*1.129129	0.329219E	*0.042893E	0.92	*0.114700E		
O-90006	Birkenes	fp-t	1	04.04.2006	05.04.2006	0290aa[24]	ng/m3	1	54.9	10	1	0.206102E	0.009745	*0.206102E	0.847678	*-0.755684	*-0.156756E	*-0.013795	*-0.032628E	*0.029143E		
O-90006	Birkenes	fp-t	1	11.04.2006	12.04.2006	0290aa[25]	ng/m3	1	54.9	10	1	0.297541	0.022	*0.297541	2.13	*1.434153	0.379963E	*0.020400E	0.92	*0.098725		
O-90006	Birkenes	fp-t	1	18.04.2006	19.04.2006	0310aa[15]	ng/m3	1	55.1	10	1	1.165064	0.005953E	*1.165064	1.315971	*1.587931	0.72	*-0.013745	*0.301633E	*0.119782E		
O-90006	Birkenes	fp-t	1	25.04.2006	26.04.2006	0310aa[16]	ng/m3	1	55.2	10	1	1.30	0.196	5.05	0.196	35.10	*1.841576E	1.31	*0.047463E	3.39	0.75	
O-90006	Birkenes	fp-t	1	02.05.2006	03.05.2006	0310aa[17]	ng/m3	1	54.9	10	1	0.748096E	0.169	*0.748096E	8.79	*1.653825	1.15	*0.020785	3.14	0.60		
O-90006	Birkenes	fp-t	1	09.05.2006	10.05.2006	0310aa[18]	ng/m3	1	54.8	10	1	1.20	0.146	2.95	0.146	9.81	*2.420712	0.67	0.10	1.08	0.53	
O-90006	Birkenes	fp-t	1	16.05.2006	17.05.2006	0310aa[19]	ng/m3	1	55.2	10	1	0.053	0.3836051	0.053	*0.3836051	4.17	*-0.751577	*0.326449E	*-0.013720	0.73	0.39	
O-90006	Birkenes	fp-t	1	23.05.2006	24.05.2006	0401aa[27]	ng/m3	1	55	10	1	0.107181E	0.046	*0.107181E	1.232182	*-0.754930	*-0.156471	*-0.013770	0.53	*0.056363E		
O-90006	Birkenes	fp-t	1	30.05.2006	31.05.2006	0401aa[28]	ng/m3	1	54.9	10	1	0.361192E	0.008570E	*0.361192E	0.898996E	*0.690574E	*-0.162106	*-0.014266	*0.055737E	*0.098360E		
O-90006	Birkenes	fp-t	1	31.05.2006	01.06.2006	0401aa[22]	ng/m3	1	55.4	10	1	4.20	0.013628E	4.20	*1.350433	*-0.748664	*-0.155941	*0.016245E	*0.219130E	*0.117889E		
O-90006	Birkenes	fp-t	1	01.06.2006	02.06.2006	0902aa[24]	ng/m3	1	54.5	10	1	7.34	0.87	0.87	0.87	1.67	*-0.792948	*0.176223E	*-0.051987E	*0.208393E	*0.051987E	
O-90006	Birkenes	fp-t	1	02.06.2006	03.06.2006	0902aa[25]	ng/m3	1	55.3	10	1	0.361192E	0.008570E	*0.361192E	0.898996E	*0.690574E	*-0.162106	*-0.014266	*0.055737E	*0.098360E		
O-90006	Birkenes	fp-t	1	03.06.2006	04.06.2006	0902aa[26]	ng/m3	1	54.6	10	1	0.004890	0.0098741E	*0.004890	0.098741E	*-0.887849	*0.869104E	*0.207570E	*0.017170E	*0.241529E	*0.021567E	
O-90006	Birkenes	fp-t	1	04.06.2006	05.06.2006	0902aa[27]	ng/m3	1	55	10	1	1.54	0.48	0.48	0.48	1.49	*0.989678E	*-0.162990	*0.018560E	*0.184469E	*0.05757E	
O-90006	Birkenes	fp-t	1	05.06.2006	06.06.2006	0902aa[28]	ng/m3	1	55.2	10	1	3.85	0.75	0.75	0.75	2.73	*-0.782693	0.60	0.08	0.59	*0.165092E	
O-90006	Birkenes	fp-t	1	06.06.2006	07.06.2006	0902aa[29]	ng/m3	1	55	10	1	2.20	0.74	0.74	0.74	2.67	*0.999905E	*0.456818E	0.06	1.21	*0.146212E	
O-90006	Birkenes	fp-t	1	07.06.2006	08.06.2006	0902aa[30]	ng/m3	1	55.1	10	1	0.647213E	0.021	*0.647213E	3.45	*1.084298	0.54	0.11	1.94	*0.161448E		
O-90006	Birkenes	fp-t	1	08.06.2006	09.06.2006	0902aa[31]	ng/m3	1	55.3	10	1	3.32	0.035	1.65	0.035	3.65	*1.116919	*0.495027E	0.09	1.11	*0.208333E	
O-90006	Birkenes	fp-t	1	09.06.2006	10.06.2006	0902aa[32]	ng/m3	1	55.2	10	1	2.79	0.023	1.26	0.023	4.32	*-0.782893	0.58	0.09	1.40	*0.203426E	
O-90006	Birkenes	fp-t	1	10.06.2006	11.06.2006	0902aa[33]	ng/m3	1	55.1	10	1	0.693719E	0.022	*0.693719E	2.27	*0.907724E	0.99	0.10	2.33	0.29		
O-90006	Birkenes	fp-t	1	11.06.2006	12.06.2006	0902aa[3]	ng/m3	1	54.7	10	1	2.34	0.054	2.41	0.054	6.72	*1.521081	1.98	0.17	3.72	0.44	
O-90006	Birkenes	fp-t	1	12.06.2006	13.06.2006	0902aa[4]	ng/m3	1	52.1	10	1	3.05	0.106	4.60	0.106	15.47	*2.084433	1.08	0.15	2.45	0.91	
O-90006	Birkenes	fp-t	1	13.06.2006	14.06.2006	0902aa[5]	ng/m3	1	54.5	10	1	1.86	0.066	4.09	0.066	10.06	*1.587443	1.07	0.09	3.08	0.38	
O-90006	Birkenes	fp-t	1	14.06.2006	15.06.2006	0902aa[6]	ng/m3	1	55.2	10	1	1.19	0.004837	1.19	0.004837	2.22	*1.124226	*-0.162400	*0.025286E	*0.195501E	*0.039967E	
O-90006	Birkenes	fp-t	1	15.06.2006	16.06.2006	0902aa[7]	ng/m3	1	55.5	10	1	2.17	1.32	1.32	1.32	3.07	*1.709366	*0.457958	0.06	1.11	*0.121246E	
O-90006	Birkenes	fp-t	1	16.06.2006	17.06.2006	0902aa[8]	ng/m3	1	55.2	10	1	0.023	1.50	1.50	0.023	4.46	*1.204081	1.44	0.17	2.76	0.44	
O-90006	Birkenes	fp-t	1	17.06.2006	18.06.2006	0902aa[9]	ng/m3	1	55	10	1	0.023	1.11	1.11	0.023	2.81	*0.911269	0.73	0.16	1.53	*0.199621E	
O-90006	Birkenes	fp-t	1	18.06.2006	19.06.2006	0902aa[10]	ng/m3	1	54.8	10	1	3.02	0.093	3.92	0.093	5.57	*1.485611	2.66	0.11	6.19	0.41	
O-90006	Birkenes	fp-t	1	19.06.2006	20.06.2006	0902aa[15]	ng/m3	1	55.1	10	1	1.76	0.132	5.46	0.132	11.10	*1.104715	1.76	0.10	5.82	0.73	
O-90006	Birkenes	fp-t	1	21.06.2006	22.06.2006	0902aa[16]	ng/m3	1	55	10	1	2.32	0.018	1.02	0.018	2.95	*1.12359	0.56	*0.037878E	1.76	*0.166393E	
O-90006	Birkenes	fp-t	1	24.06.2006	25.06.2006	0902aa[17]	ng/m3	1	56.2	10	1	1.85	0.039	1.85	0.039	3.97	*0.944953E	0.85	0.06	2.26	0.58	
O-90006	Birkenes	fp-t	1	25.06.2006	26.06.2006	0902aa[18]	ng/m3	1	55	10	1	0.951799E	1.86	1.86	0.951799E	2.89	*-0.785740	0.82	0.06	2.23	*0.215530E	
O-90006	Birkenes	fp-t	1	27.06.2006	28.06.2006	1302aa[10]	ng/m3	1	55	10	1	0.3305871	0.018	*0.3305871	1.99	*0.975284E	*-0.321969E	*0.024242E	0.73	0.36		
O-90006	Birkenes	fp-t	1	28.06.2006	29.06.2006	1302aa[11]	ng/m3	1	54.8	10	1	0.3305871	0.018	*0.3305871	1.51	*-0.786607E	*-0.163585E	*0.020529E	0.43	*0.164993E		
O-90006	Birkenes	fp-t	1	29.06.2006	30.06.2006	1302aa[12]	ng/m3	1	55.3	10	1	6.54	0.71	0.71	0.71	1.85	*4.024544	*0.30327	*0.023357E	1.01	*0.126582E	
O-90006	Birkenes	fp-t	1	30.06.2006	01.07.2006	1302aa[13]	ng/m3	1	54.8	10	1	6.81	1.47	1.47	1.47	3.14	*-0.786607E	*0.490419E	*0.034215E	1.45	*0.187424	
O-90006	Birkenes	fp																				

PROJ_NR	stasjon	PROVETYP	Provetak	MÅLEPER	FRADATO	ILDATO	aprosavn	UT_ENHET	UTV_VOL	DIL_FKT	LUFTVOL	FILTDEL	Pb	Cd	Cu	Zn	Cr	Ni	Co	V	As
O-90006	Birkenes	fp-t	pm10	1	25.07.2006	26.07.2006	r3001a[14]	ng/m3	10	1	54.8	0.5	1.66	0.044	*1.09042	3.54	*4.53385	2.67	0.21	2.46	0.30
O-90006	Birkenes	fp-t	pm10	1	01.08.2006	02.08.2006	s0802a[32]	ng/m3	10	1	55.3	0.5	1.54	0.035	1.79	10.60	*2.13481	1.49	0.06	1.70	0.28
O-90006	Birkenes	fp-t	pm10	1	08.08.2006	09.08.2006	s0802a[9]	ng/m3	10	1	55.1	0.5	*0.3192377	*0.0111615	*0.712432	1.55	*5.906624	3.56	0.15	0.41	0.60
O-90006	Birkenes	fp-t	pm10	1	15.08.2006	16.08.2006	s0802a[10]	ng/m3	10	1	54.8	0.5	1.15	0.042	1.47	4.79	*0.757063	*0.2262774	*0.013820	0.78	0.65
O-90006	Birkenes	fp-t	pm10	1	22.08.2006	23.08.2006	s0802a[11]	ng/m3	10	1	55.4	0.5	*0.5240072	0.028	*0.3053245	1.90	*0.748864	*0.155341	*0.0151621	0.44	0.29
O-90006	Birkenes	fp-t	pm10	1	29.08.2006	30.08.2006	s0802a[12]	ng/m3	10	1	54.8	0.5	*0.1644161	*0.004677	*0.4210767	*0.849225	*0.4613135	*0.013820	*0.1335766	*0.2211675	
O-90006	Birkenes	fp-t	pm10	1	05.09.2006	06.09.2006	s0802a[13]	ng/m3	10	1	55	0.5	*0.0910905	*0.004660	*0.1642727	*0.846137	*0.754310	*0.156471	*0.013770	*0.032569	*0.0316364
O-90006	Birkenes	fp-t	pm10	1	12.09.2006	13.09.2006	s0802a[14]	ng/m3	10	1	55.1	0.5	8.83	0.171	2.77	13.92	*1.115336	1.33	0.13	3.13	2.76
O-90006	Birkenes	fp-t	pm10	1	19.09.2006	20.09.2006	s0802a[15]	ng/m3	10	1	55.2	0.5	2.44	0.064	2.56	4.62	*0.751577	*0.5221014	*0.0398551	1.19	0.37
O-90006	Birkenes	fp-t	pm10	1	26.09.2006	27.09.2006	s0802a[16]	ng/m3	10	1	55.3	0.5	4.85	0.187	1.67	10.33	*1.444394	1.40	0.10	3.61	0.80
O-90006	Birkenes	fp-t	pm10	1	03.10.2006	04.10.2006	s0802a[17]	ng/m3	10	1	55.1	0.5	*0.6095185	0.026	*0.8020871	3.02	*0.752941	*0.2519055	*0.0228672	0.54	0.36
O-90006	Birkenes	fp-t	pm10	1	10.10.2006	11.10.2006	s0802a[18]	ng/m3	10	1	55	0.5	*0.3801815	0.029	*0.3606364	1.80	*0.754310	*0.1636364	*0.0312727	*0.1738182	*0.1130905
O-90006	Birkenes	fp-t	pm10	1	17.10.2006	18.10.2006	s0802a[19]	ng/m3	10	1	55.1	0.5	4.32	0.172	1.77	27.89	*0.752941	0.60	*0.0500907	1.46	0.65
O-90006	Birkenes	fp-t	pm10	1	24.10.2006	25.10.2006	s0802a[20]	ng/m3	10	1	54.2	0.5	*0.2259455	*0.0179885	*0.6959487	3.85	*0.7654444	*0.013973	*0.0878225	*0.1140221	
O-90006	Birkenes	fp-t	pm10	1	31.10.2006	01.11.2006	s0802a[21]	ng/m3	10	1	56	0.5	*0.0755531	*0.004577	*0.7170535	*0.831027	*0.740840	*0.153676	*0.013524	*0.0360714	*0.0528571
O-90006	Birkenes	fp-t	pm10	1	07.11.2006	08.11.2006	s0802a[22]	ng/m3	10	1	55.1	0.5	*0.6985481	*0.004651	*0.3748635	*0.844601	*0.752941	*0.156187	*0.013745	*0.3063521	*0.1179672
O-90006	Birkenes	fp-t	pm10	1	14.11.2006	15.11.2006	s0802a[23]	ng/m3	10	1	55.2	0.5	*0.076626	*0.004643	*0.194837	*0.843071	*0.751577	*0.155904	*0.013720	*0.1137681	*0.0355072
O-90006	Birkenes	fp-t	pm10	1	28.11.2006	29.11.2006	s0802a[24]	ng/m3	10	1	55.2	0.5	5.20	0.156	1.86	11.25	*0.751577	1.07	0.07	2.74	0.45
O-90006	Birkenes	fp-t	pm10	1	05.12.2006	06.12.2006	s0802a[25]	ng/m3	10	1	55.2	0.5	*0.5744565	*0.0129525	*0.7745471	*1.076993	*0.751577	*0.4478261	*0.0492754	*0.240942	*0.0445652
O-90006	Birkenes	fp-t	pm10	1	12.12.2006	13.12.2006	s0802a[26]	ng/m3	10	1	55.4	0.5	*0.35	*0.0060465	*0.408935	*0.840027	*0.748864	*0.1783395	*0.013670	*0.2184115	*0.0202166
O-90006	Birkenes	fp-t	pm10	1	19.12.2006	20.12.2006	s0802a[27]	ng/m3	10	1	55	0.5	*0.076904	*0.004660	*0.1199091	*0.846137	*0.754310	*0.156471	*0.013770	*0.0847277	*0.0389091
O-90006	Birkenes	fp-t	pm10	1	26.12.2006	27.12.2006	r0902a[21]	ng/m3	10	1	54.7	0.5	*0.5277875	*0.0156307	*0.1626145	*0.850777	*0.758447	*0.1714805	*0.016819	0.40	*0.0939671

\* Målingen er utenfor akkreditert område.

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PRO_NR	stasnr	PROVETNY	MÅLEPER	FRADATO	ILDATO	aprocavn	UT_ENHE	UTV_VOL	DIL_FKT	LUFTVOL	FILTDEL	Pb	Cd	Cu	Zn	Cr	Ni	Co	V	As
Provetaker Kleinfilttergeret, filtertype :Whatman Qma																				
O-90006	Birkenes	fp-1	PM10	2	04.01.2006	10.01.2006	o2408a[19]	ng/m3	10	1	331.5	0.5	0.123	4.501	15.598	3.317	1.33	0.04	1.60	0.56
O-90006	Birkenes	fp-1	PM10	2	11.01.2006	17.01.2006	o2408a[20]	ng/m3	10	1	331.9	0.5	0.194	4.906	21.696	4.698	2.00	0.02	2.50	1.11
O-90006	Birkenes	fp-1	PM10	2	18.01.2006	24.01.2006	o2408a[21]	ng/m3	10	1	236	0.5	0.097	0.737	10.393	1.206	0.85	0.02	1.34	0.41
O-90006	Birkenes	fp-1	PM10	2	25.01.2006	31.01.2006	o2408a[22]	ng/m3	10	1	331.6	0.5	0.035	1.205	3.678	-0.125111	0.62	-0.002284	0.09	0.06
O-90006	Birkenes	fp-1	PM10	2	01.02.2006	07.02.2006	o2408a[23]	ng/m3	10	1	331.5	0.5	0.162	1.040	9.088	-0.768793	0.85	0.03	1.46	0.43
O-90006	Birkenes	fp-1	PM10	2	06.02.2006	14.02.2006	o2408a[24]	ng/m3	10	1	332	0.5	0.030	0.404	3.480	-0.4905271	0.59	0.01	1.21	0.20
O-90006	Birkenes	fp-1	PM10	2	15.02.2006	21.02.2006	o2408a[25]	ng/m3	10	1	331.6	0.5	0.184	11.068	23.259	11.451	3.39	0.08	2.34	0.43
O-90006	Birkenes	fp-1	PM10	2	22.02.2006	28.02.2006	o2408a[26]	ng/m3	10	1	331.2	0.5	0.024	1.899	2.894	1.315	0.39	0.03	0.45	0.13
O-90006	Birkenes	fp-1	PM10	2	01.03.2006	07.03.2006	o2408a[27]	ng/m3	10	1	332.3	0.5	0.084	0.483	6.894	-0.739858	0.60	0.02	0.86	0.22
O-90006	Birkenes	fp-1	PM10	2	08.03.2006	14.03.2006	o2408a[28]	ng/m3	10	1	331.2	0.5	0.076	0.807	8.094	-0.800286	1.00	0.04	1.58	0.46
O-90006	Birkenes	fp-1	PM10	2	15.03.2006	21.03.2006	o2408a[29]	ng/m3	10	1	328.5	0.5	0.054	1.431	6.334	1.615	1.06	0.03	0.76	0.17
O-90006	Birkenes	fp-1	PM10	2	22.03.2006	28.03.2006	o2408a[30]	ng/m3	10	1	329.2	0.5	0.035	0.454	8.404	-0.447311	0.33	0.03	0.61	0.13
O-90006	Birkenes	fp-1	PM10	2	29.03.2006	04.04.2006	o2408a[31]	ng/m3	10	1	331.5	0.5	0.063	0.553	3.632	-0.3000151	0.72	0.03	1.28	0.15
O-90006	Birkenes	fp-1	PM10	2	05.04.2006	11.04.2006	o2908a[4]	ng/m3	10	1	331.6	0.5	0.096	1.630	4.300	-0.436042	0.53	0.05	0.92	0.20
O-90006	Birkenes	fp-1	PM10	2	12.04.2006	18.04.2006	o2908a[5]	ng/m3	10	1	329.6	0.5	0.060	0.450	1.646	-0.3132737	0.51	0.03	1.40	0.16
O-90006	Birkenes	fp-1	PM10	2	19.04.2006	25.04.2006	o2908a[6]	ng/m3	10	1	331.2	0.5	0.115	0.761	4.771	-0.669852	0.88	0.05	1.98	0.25
O-90006	Birkenes	fp-1	PM10	2	26.04.2006	02.05.2006	o2908a[7]	ng/m3	10	1	331.8	0.5	0.079	0.793	7.043	-0.436573	0.79	0.09	2.84	0.67
O-90006	Birkenes	fp-1	PM10	2	03.05.2006	09.05.2006	o2908a[8]	ng/m3	10	1	247.5	0.5	0.248	1.617	15.704	-0.976393	1.07	0.09	2.84	0.67
O-90006	Birkenes	fp-1	PM10	2	10.05.2006	16.05.2006	o2908a[9]	ng/m3	10	1	331.8	0.5	0.079	0.761	4.771	-0.669852	0.88	0.05	1.98	0.25
O-90006	Birkenes	fp-1	PM10	2	17.05.2006	23.05.2006	o2908a[10]	ng/m3	10	1	331.8	0.5	0.064	0.625	3.984	-0.424517	0.28	0.05	0.50	0.17
O-90006	Birkenes	fp-1	PM10	2	24.05.2006	30.05.2006	o401a[20]	ng/m3	10	1	331.5	0.5	0.032	0.476	2.475	-0.342247	0.71	0.04	1.99	0.23
O-90006	Birkenes	fp-1	PM10	2	01.07.2006	04.07.2006	s0802a[33]	ng/m3	10	1	331.8	0.5	0.011	-0.161648	0.608	-0.125036	0.10	0.02	0.26	0.14
O-90006	Birkenes	fp-1	PM10	2	05.07.2006	11.07.2006	r0401a[23]	ng/m3	10	1	331.8	0.5	0.080	1.131	5.679	-0.860925	0.91	0.07	2.29	0.38
O-90006	Birkenes	fp-1	PM10	2	12.07.2006	18.07.2006	r0401a[24]	ng/m3	10	1	331.4	0.5	0.013	0.525	1.748	-0.1917	2.23	0.56	0.82	0.21
O-90006	Birkenes	fp-1	PM10	2	19.07.2006	25.07.2006	r0401a[25]	ng/m3	10	1	332.1	0.5	0.036	0.714	3.363	-0.674661	0.62	0.07	1.64	0.21
O-90006	Birkenes	fp-1	PM10	2	26.07.2006	01.08.2006	r3001a[15]	ng/m3	10	1	331.4	0.5	0.027	1.741	3.031	2.001	1.26	0.08	2.52	0.37
O-90006	Birkenes	fp-1	PM10	2	02.08.2006	09.08.2006	r3001a[16]	ng/m3	10	1	301.1	0.5	0.035	0.482	2.600	-0.460494	0.35	0.04	0.50	0.17
O-90006	Birkenes	fp-1	PM10	2	09.08.2006	15.08.2006	r3001a[17]	ng/m3	10	1	332	0.5	0.063	0.482	4.173	-0.547756	0.27	0.02	0.55	0.28
O-90006	Birkenes	fp-1	PM10	2	16.08.2006	22.08.2006	r3001a[18]	ng/m3	10	1	331.7	0.5	0.023	1.253	2.032	-0.143729	0.45	0.07	0.55	0.24
O-90006	Birkenes	fp-1	PM10	2	23.08.2006	29.08.2006	s0802a[3]	ng/m3	10	1	331.2	0.5	0.049	0.935	4.366	-1.166833	0.77	0.04	1.85	0.43
O-90006	Birkenes	fp-1	PM10	2	30.08.2006	05.09.2006	s0802a[4]	ng/m3	10	1	331.7	0.5	0.017	0.944	1.693	-0.240925	0.31	0.04	0.39	0.27
O-90006	Birkenes	fp-1	PM10	2	06.09.2006	12.09.2006	s0802a[5]	ng/m3	10	1	331.8	0.5	0.028	0.650	2.305	-0.197694	0.25	0.02	0.47	0.19
O-90006	Birkenes	fp-1	PM10	2	13.09.2006	19.09.2006	s0802a[6]	ng/m3	10	1	331.4	0.5	0.226	5.225	17.987	3.417	1.38	0.14	2.36	1.12
O-90006	Birkenes	fp-1	PM10	2	20.09.2006	26.09.2006	s0802a[7]	ng/m3	10	1	331.6	0.5	0.236	3.218	21.010	2.095	1.74	0.14	3.44	1.53
O-90006	Birkenes	fp-1	PM10	2	27.09.2006	03.10.2006	s0802a[8]	ng/m3	10	1	325.2	0.5	0.045	3.204	4.067	-0.920218	0.70	0.04	1.32	0.60
O-90006	Birkenes	fp-1	PM10	2	04.10.2006	10.10.2006	r0902a[3]	ng/m3	10	1	331.5	0.5	0.023	1.448	1.980	-0.310874	0.28	0.02	0.57	0.22
O-90006	Birkenes	fp-1	PM10	2	11.10.2006	17.10.2006	r0902a[4]	ng/m3	10	1	331.6	0.5	0.085	0.861	7.282	-1.522	0.56	0.05	1.17	0.54
O-90006	Birkenes	fp-1	PM10	2	18.10.2006	24.10.2006	r0902a[5]	ng/m3	10	1	333.8	0.5	0.018	0.926	1.392	-0.124287	0.10	-0.006890	0.21	0.12
O-90006	Birkenes	fp-1	PM10	2	25.10.2006	31.10.2006	r0902a[6]	ng/m3	10	1	330.3	0.5	0.082	0.887	5.618	-1.499	0.62	0.04	0.94	0.48
O-90006	Birkenes	fp-1	PM10	2	01.11.2006	07.11.2006	r0902a[9]	ng/m3	10	1	330.3	0.5	0.011	0.918	0.865	-0.125604	-0.059945	-0.005328	0.11	0.05
O-90006	Birkenes	fp-1	PM10	2	08.11.2006	14.11.2006	r0902a[10]	ng/m3	10	1	331.6	0.5	0.011	0.337	1.032	-0.125604	0.13	-0.005247	0.14	0.06
O-90006	Birkenes	fp-1	PM10	2	15.11.2006	21.11.2006	r0902a[9]	ng/m3	10	1	331.4	0.5	0.050	0.987	3.984	2.181	0.75	0.04	0.99	0.21
O-90006	Birkenes	fp-1	PM10	2	22.11.2006	28.06.2006	s0802a[20]	ng/m3	10	1	307.2	0.5	0.043	0.667	4.098	-0.450048	0.51	0.03	0.96	0.19
O-90006	Birkenes	fp-1	PM10	2	29.11.2006	05.12.2006	s0802a[31]	ng/m3	10	1	328.3	0.5	0.059	1.411	4.571	-0.3754341	0.70	0.04	1.26	0.26
O-90006	Birkenes	fp-1	PM10	2	06.12.2006	12.12.2006	s0802a[30]	ng/m3	10	1	331.4	0.5	0.015	0.657	3.393	-0.141928	0.91	0.03	0.26	0.08
O-90006	Birkenes	fp-1	PM10	2	13.12.2006	19.12.2006	s0802a[29]	ng/m3	10	1	331.5	0.5	0.013	-0.163819	0.777	-0.125149	-0.054600	-0.007782	0.11	0.06
O-90006	Birkenes	fp-1	PM10	2	20.12.2006	26.12.2006	s0802a[28]	ng/m3	10	1	332.3	0.5	0.016	-0.182410	1.187	-0.124848	0.11	-0.006620	0.12	0.09
O-90006	Birkenes	fp-1	PM10	2	27.12.2006	02.01.2007	r0902a[22]	ng/m3	10	1	331.3	0.5	0.035	0.750	2.208	-0.184832	0.31	0.01	0.50	0.12

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## **Vedlegg 6**

### **Tungmetaller i nedbør på Birkenes (U-1428-07 og U-1458-07)**





## Målerapport nr. U-1428-07

**Oppdragsgiver:**

NILU  
v/Wenche Aas  
Her

**Prosjekt nr.:**

O-8118

**Prøvetaking:**

Sted:

Birkenes, Karasjok, Kårvatn og Hurdal

Ansvar:

NILU

Kommentar:

Prøver for perioden 01.1.2006-31.07.2006

**Prøveinformasjon:**

Prøvetype:

Tungmetaller i nedbør

Prøven mottatt:

Kommentar:

Parallele analyser er utført for følgende prøvedatoer, og samsvarende måleresultat oppnådd:

**Birkenes:** 06/01/23,06/05/15

**Hurdal:** 06/01/23,06/07/24

**Karasjok:** 06/05/08

**Kårvatn** 06/05/15,

**Analyser:**

Utført av

Norsk institutt for luftforskning  
Postboks 100  
N-2007 KJELLER

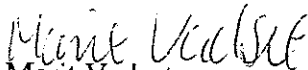
**Målemetode:**

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, 10. januar 2007

  
Marit Vadset  
Ingeniør, Miljøkjemi

**Vedlegg:** Analyseresultater: 4 sider  
Målerapporten og vedleggene omfatter totalt 6 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.*





PROJNR	stasnr	PROVETY	MÁLEPER	FRADATO	ILDATO	aprocavn	UT_ENHE	DIL_FKT	Pb	Cd	Cu	Zn	Cr	Ni	Co	V	As
O-8118	Karasjok	nb-niuttm	2	20.03.2006	27.03.2006	o0409a[18]	ng/ml	1	0.891	*0.033		5.685					
O-8118	Karasjok	nb-niuttm	2	27.03.2006	01.04.2006		ng/ml										
O-8118	Karasjok	nb-niuttm	2	01.04.2006	03.04.2006	o0409a[19]	ng/ml	1	0.559	*0.017		1.689					
O-8118	Karasjok	nb-niuttm	2	03.04.2006	17.04.2006	o0409a[20]	ng/ml	1	0.816	*0.036		2.764					
O-8118	Karasjok	nb-niuttm	2	17.04.2006	24.04.2006	o0409a[21]	ng/ml	1	0.773	*0.074		11.45					
O-8118	Karasjok	nb-niuttm	2	01.05.2006	08.05.2006		ng/ml										
O-8118	Karasjok	nb-niuttm	2	08.05.2006	15.05.2006	o0711a[18]	ng/ml	1	0.567	0.11		4.434					
O-8118	Karasjok	nb-niuttm	2	15.05.2006	22.05.2006	o0409a[23]	ng/ml	1	0.639	*0.091		12.8					
O-8118	Karasjok	nb-niuttm	2	22.05.2006	29.05.2006	o0409a[24]	ng/ml	1	0.843	*0.041		3.269					
O-8118	Karasjok	nb-niuttm	2	01.06.2006	05.06.2006		ng/ml										
O-8118	Karasjok	nb-niuttm	2	05.06.2006	12.06.2006	o0409a[25]	ng/ml	1	0.533	*0.055		7.314					
O-8118	Karasjok	nb-niuttm	2	12.06.2006	19.06.2006	o0409a[26]	ng/ml	1	0.513	*0.008		2.976					
O-8118	Karasjok	nb-niuttm	2	19.06.2006	26.06.2006	o0409a[27]	ng/ml	1	0.221	*0.011		1.026					
O-8118	Karasjok	nb-niuttm	2	01.07.2006	03.07.2006		ng/ml										
O-8118	Karasjok	nb-niuttm	2	03.07.2006	10.07.2006	o0409a[28]	ng/ml	1	0.55	*0.014		1.571					
O-8118	Karasjok	nb-niuttm	2	10.07.2006	17.07.2006	o0409a[29]	ng/ml	1	0.149	*0.005		1.006					
O-8118	Karasjok	nb-niuttm	2	17.07.2006	24.07.2006	o0409a[30]	ng/ml	1	0.363	*0.005		4.035					
O-8118	Karasjok	nb-niuttm	2	24.07.2006	30.07.2006		ng/ml										
O-8118	Kárvátn	nb-niuttm	2	30.07.2006	01.08.2006	o0409a[31]	ng/ml	1	1.227	*0.028		4.258					
O-8118	Kárvátn	nb-niuttm	2	01.01.2006	09.01.2006		ng/ml										
O-8118	Kárvátn	nb-niuttm	2	09.01.2006	16.01.2006	o1506a[18]	ng/ml	1	0.118	*0.016		4.563					
O-8118	Kárvátn	nb-niuttm	2	16.01.2006	23.01.2006		ng/ml										
O-8118	Kárvátn	nb-niuttm	2	23.01.2006	30.01.2006	o1506a[19]	ng/ml	1	0.104	*0.005		0.699					
O-8118	Kárvátn	nb-niuttm	2	30.01.2006	01.02.2006	o1506a[20]	ng/ml	1	1.006	*0.036		2.698					
O-8118	Kárvátn	nb-niuttm	2	01.02.2006	06.02.2006	o1506a[21]	ng/ml	1	0.198	*0.005		*0.315					
O-8118	Kárvátn	nb-niuttm	2	06.02.2006	13.02.2006	o1506a[22]	ng/ml	1	*0.049	*0.009		*0.1					
O-8118	Kárvátn	nb-niuttm	2	13.02.2006	20.02.2006	o1506a[23]	ng/ml	1	0.617	*0.007		1.765					
O-8118	Kárvátn	nb-niuttm	2	20.02.2006	27.02.2006	o1506a[24]	ng/ml	1	0.163	*0.005		1.894					
O-8118	Kárvátn	nb-niuttm	2	27.02.2006	01.03.2006	o1506a[25]	ng/ml	1	0.189	*0.01		*0.496					
O-8118	Kárvátn	nb-niuttm	2	01.03.2006	06.03.2006		ng/ml										
O-8118	Kárvátn	nb-niuttm	2	06.03.2006	13.03.2006	o1506a[26]	ng/ml	1	0.92	*0.029		3.09					
O-8118	Kárvátn	nb-niuttm	2	13.03.2006	20.03.2006	o1506a[27]	ng/ml	1	0.125	*0.005		0.525					
O-8118	Kárvátn	nb-niuttm	2	20.03.2006	27.03.2006	o1506a[28]	ng/ml	1	0.102	*0.005		*0.237					
O-8118	Kárvátn	nb-niuttm	2	27.03.2006	01.04.2006	o1506a[29]	ng/ml	1	0.135	*0.016		*0.349					
O-8118	Kárvátn	nb-niuttm	2	01.04.2006	03.04.2006	o1506a[30]	ng/ml	1	0.249	*0.005		1.031					
O-8118	Kárvátn	nb-niuttm	2	03.04.2006	10.04.2006	o1506a[31]	ng/ml	1	0.226	*0.005		2.146					
O-8118	Kárvátn	nb-niuttm	2	10.04.2006	17.04.2006	o1506a[32]	ng/ml	1	0.134	*0.005		2.28					
O-8118	Kárvátn	nb-niuttm	2	17.04.2006	24.04.2006	o0307a[3]	ng/ml	1	0.231	*0.043		4.512					
O-8118	Kárvátn	nb-niuttm	2	24.04.2006	01.05.2006	o0307a[4]	ng/ml	1	0.21	*0.005		*0.184					
O-8118	Kárvátn	nb-niuttm	2	01.05.2006	08.05.2006		ng/ml										
O-8118	Kárvátn	nb-niuttm	2	08.05.2006	15.05.2006	o0307a[5]	ng/ml	1	0.278	*0.028		*0.1					
O-8118	Kárvátn	nb-niuttm	2	15.05.2006	22.05.2006	o0307a[6]	ng/ml		0.423	*0.005		43.23					

PRO_NR	stasnr	PROVETY MÁLEPER	FRADATO	tILDATO	aprocnvn	UT_ENHE	DIL_FKT	Pb	Cd	Cu	Zn	Cr	Ni	Co	V	As
O-8118	Kárvatn	nb-niutrn	2	22.05.2006	29.05.2006	o0307a[7]	ng/ml	*0.093	*0.011		4.587					
O-8118	Kárvatn	nb-niutrn	2	29.05.2006	01.06.2006	o0307a[8]	ng/ml	0.163	*0.022		3.243					
O-8118	Kárvatn	nb-niutrn	2	01.06.2006	05.06.2006	o0307a[32]	ng/ml	*0.089	*0.006		0.506					
O-8118	Kárvatn	nb-niutrn	2	05.06.2006	12.06.2006	o0307a[33]	ng/ml	0.845	*0.034		g					
O-8118	Kárvatn	nb-niutrn	2	12.06.2006	19.06.2006	o0307a[34]	ng/ml	0.657	*0.019		44.49					
O-8118	Kárvatn	nb-niutrn	2	19.06.2006	26.06.2006	o1109a[17]	ng/ml	0.217	*0.032		3.822					
O-8118	Kárvatn	nb-niutrn	2	01.07.2006	03.07.2006		ng/ml									
O-8118	Kárvatn	nb-niutrn	2	03.07.2006	10.07.2006	o0409a[3]	ng/ml	0.846	*0.027		5.422					
O-8118	Kárvatn	nb-niutrn	2	10.07.2006	17.07.2006	o0409a[4]	ng/ml	0.64	*-0.005		1.462					
O-8118	Kárvatn	nb-niutrn	2	17.07.2006	24.07.2006	o0409a[5]	ng/ml	0.243	*0.017		5.712					
O-8118	Kárvatn	nb-niutrn	2	24.07.2006	31.07.2006	o0409a[6]	ng/ml	0.203	*0.025		1.579					
O-8118	Kárvatn	nb-niutrn	2	31.07.2006	01.08.2006	o0409a[7]	ng/ml	0.262	*-0.005		2.611					

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## Målerapport nr. U-1458-07

**Oppdragsgiver:**

NILU  
v/Wenche Aas  
Her

**Prosjekt nr.:**

O-8118

**Prøvetaking:**

Sted: Birkenes, Karasjok, Kårvatn og Hurdal  
Ansvar: NILU  
Kommentar: Prøver for perioden 01.8.2006-31.12.2006

**Prøveinformasjon:**

Prøvetype: Tungmetaller i nedbør  
Prøven mottatt:  
Kommentar: Parallell analyse er utført for følgende prøvedatoer, og samsvarende måleresultat oppnådd:

**Birkenes:** 06/09/18,06/12/04  
**Hurdal:** 06/09/04,06/09/18,06/10/01,06/11/01  
**Karasjok:**  
**Kårvatn** 06/09/11,

**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.

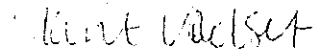
Analysemetoden NILU-U-22 er akkreditert av Norsk Akkreditering i henhold til ISO/IEC-17025.

**Kontaktperson:**

Marit Vadset

**Godkjenning:**

Kjeller, 12. februar 2007

  
Marit Vadset  
Ingeniør, Miljøkjemi**Vedlegg:**

Analyseresultater: 4 sider

Målerapporten og vedleggene omfatter totalt 6 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	MALEPER	FRADATO	ILDDATO	aprocnvn	UT_ENHE	DIL_FKT	Pb	Cd	Cu	Zn	Cr	Ni	Co	V	As
O-8118	Birkenes	nb-niutum		2	01.08.2006	07.08.2006	o609a[8]	ng/ml	1								
O-8118	Birkenes	nb-niutum		2	07.08.2006	14.08.2006	r901a[16]	ng/ml	0.346	*0.01	*0.298	1.857	*-0.2	*-0.2	*-0.01	0.783	0.108
O-8118	Birkenes	nb-niutum		2	14.08.2006	21.08.2006	r901a[17]	ng/ml	1.541	*0.094	1.174	6.999	0.696	*0.306	*0.058	0.673	0.503
O-8118	Birkenes	nb-niutum		2	21.08.2006	28.08.2006	r901a[18]	ng/ml	0.304	*0.011	*0.196	1.495	*-0.2	*-0.2	*-0.01	*0.281	*-0.1
O-8118	Birkenes	nb-niutum		2	28.08.2006	01.09.2006	r901a[19]	ng/ml	0.221	*-0.005	*0.217	0.966	*-0.2	*-0.2	*-0.01	*0.116	*-0.1
O-8118	Birkenes	nb-niutum		2	01.09.2006	04.09.2006	r901a[20]	ng/ml	0.148	*-0.005	*0.104	0.848	*-0.2	*-0.2	*-0.01	*0.126	*-0.1
O-8118	Birkenes	nb-niutum		2	04.09.2006	11.08.2006	r901a[21]	ng/ml	0.113	*-0.005	*0.122	0.722	*-0.2	*-0.2	*-0.01	*0.337	*-0.1
O-8118	Birkenes	nb-niutum		2	11.09.2006	18.09.2006	r901a[22]	ng/ml	0.14	*0.009	*0.218	1.762	*0.212	*0.203	*0.011	*0.153	*-0.1
O-8118	Birkenes	nb-niutum		2	18.09.2006	25.09.2006	r901a[23]	ng/ml	2.755	0.211	4.114	23.1	1.061	1.11	0.342	2.745	0.642
O-8118	Birkenes	nb-niutum		2	25.09.2006	01.10.2006	r901a[24]	ng/ml	2.741	0.103	2.472	11.98	0.94	0.88	0.202	2.003	0.848
O-8118	Birkenes	nb-niutum		2	01.10.2006	02.10.2006	r901a[27]	ng/ml	1.642	*0.056	0.967	4.819	*0.331	*0.281	*0.038	0.748	0.174
O-8118	Birkenes	nb-niutum		2	02.10.2006	09.10.2006	r901a[25]	ng/ml	0.645	*0.025	0.548	3.025	*-0.2	*0.26	*-0.01	0.854	0.103
O-8118	Birkenes	nb-niutum		2	09.10.2006	16.09.2006	r901a[28]	ng/ml	0.123	*-0.005	*-0.1	0.509	*-0.2	*-0.2	*-0.01	*0.343	*-0.1
O-8118	Birkenes	nb-niutum		2	16.10.2006	23.10.2006	s901a[3]	ng/ml	0.902	*0.082	0.555	9.013	*-0.2	*0.328	*0.028	1.142	0.24
O-8118	Birkenes	nb-niutum		2	23.10.2006	30.10.2006	r901a[26]	ng/ml	0.88	*0.035	*0.483	3.231	*-0.2	*-0.2	*0.018	0.782	0.194
O-8118	Birkenes	nb-niutum		2	30.10.2006	01.11.2006	s901a[4]	ng/ml	0.201	*0.006	0.859	0.736	*-0.2	*-0.2	*-0.01	0.512	*-0.1
O-8118	Birkenes	nb-niutum		2	01.11.2006	06.11.2006		ng/ml	*0.093	*-0.005	*0.101	0.919	*-0.2	*-0.2	*-0.01	*0.152	*-0.1
O-8118	Birkenes	nb-niutum		2	06.11.2006	13.11.2006	s901a[5]	ng/ml									
O-8118	Birkenes	nb-niutum		2	13.11.2006	20.11.2006	s901a[6]	ng/ml	0.487	*0.011	0.702	2.823	*-0.2	*-0.2	*0.02	0.905	0.147
O-8118	Birkenes	nb-niutum		2	20.11.2006	27.11.2006	s901a[7]	ng/ml	1.241	*0.032	0.638	4.321	*-0.2	*0.232	*0.016	1.191	0.134
O-8118	Birkenes	nb-niutum		2	27.11.2006	01.12.2006	s901a[8]	ng/ml	0.463	*0.012	*0.302	1.663	*-0.2	*0.234	*0.015	0.906	*-0.1
O-8118	Birkenes	nb-niutum		2	01.12.2006	04.12.2006	s901a[9]	ng/ml	2.457	*0.064	1.303	9.123	*0.243	*0.451	*0.068	1.744	0.219
O-8118	Birkenes	nb-niutum		2	04.12.2006	11.12.2006	s901a[10]	ng/ml	0.91	*0.022	0.508	2.556	*-0.2	*0.219	*0.018	1.237	0.178
O-8118	Birkenes	nb-niutum		2	11.12.2006	18.12.2006	r2401a[3]	ng/ml	0.327	*-0.005	*0.185	0.947	*-0.2	*-0.2	*-0.01	0.908	*-0.1
O-8118	Birkenes	nb-niutum		2	18.12.2006	25.12.2006	r2401a[4]	ng/ml	0.149	*-0.005	*0.19	0.73	*-0.2	*-0.2	*-0.01	0.518	0.124
O-8118	Birkenes	nb-niutum		2	25.12.2006	01.01.2007	r0502a[30]	ng/ml	0.87	*0.02	*0.473	2.209	*-0.2	*-0.2	*-0.01	0.96	0.191
O-8118	Hurdal	nb-niutum		2	01.08.2006	07.08.2006		ng/ml	0.898	*0.027	*0.429	2.241	*-0.2	*-0.2	*-0.01	0.677	0.122
O-8118	Hurdal	nb-niutum		2	07.08.2006	14.08.2006	o0509a[30]	ng/ml	*-0.01	*-0.005		*-0.1					
O-8118	Hurdal	nb-niutum		2	14.08.2006	21.08.2006	o0509a[31]	ng/ml	0.484	*0.08		5.499					
O-8118	Hurdal	nb-niutum		2	21.08.2006	28.08.2006	s901a[33]	ng/ml	0.687	*0.015		2.574					
O-8118	Hurdal	nb-niutum		2	28.08.2006	01.09.2006	s901a[17]	ng/ml	0.438	*0.017		2.664					
O-8118	Hurdal	nb-niutum		2	01.09.2006	04.09.2006	s901a[18]	ng/ml	0.479	*0.055		5.799					
O-8118	Hurdal	nb-niutum		2	04.09.2006	11.09.2006	s901a[19]	ng/ml	0.185	*0.027		4.933					
O-8118	Hurdal	nb-niutum		2	11.09.2006	18.09.2006		ng/ml	14.04	0.113		50.04					
O-8118	Hurdal	nb-niutum		2	18.09.2006	25.09.2006	s901a[20]	ng/ml									
O-8118	Hurdal	nb-niutum		2	25.09.2006	01.10.2006	s901a[21]	ng/ml	3.4	0.244		40					
O-8118	Hurdal	nb-niutum		2	01.10.2006	02.10.2006	s901a[22]	ng/ml	1.287	*0.053		8.872					
O-8118	Hurdal	nb-niutum		2	02.10.2006	09.10.2006	s901a[23]	ng/ml	3.553	1.636		66.36					
O-8118	Hurdal	nb-niutum		2	09.10.2006	16.09.2006	s901a[24]	ng/ml	0.454	*0.053		5.546					
O-8118	Hurdal	nb-niutum		2	16.10.2006	23.10.2006	s901a[25]	ng/ml	0.838	*0.068		6.898					
O-8118	Hurdal	nb-niutum		2	23.10.2006	30.10.2006	s901a[26]	ng/ml	2.026	0.114		8.707					
O-8118	Hurdal	nb-niutum		2	30.10.2006	01.11.2006	s901a[27]	ng/ml	0.361	*0.023		3.864					
O-8118	Hurdal	nb-niutum		2	01.11.2006	06.11.2006	s1801a[3]	ng/ml	0.125	*0.021		3.265					
O-8118	Hurdal	nb-niutum		2	06.11.2006	13.11.2006		ng/ml	0.788	0.148		47.91					



my-O8118NED2006.xls

PRO_NR	stasnr	PROVETY	MÁLEPER	FRADATO	ILDDATO	aprocnvn	UT_ENHE	DIL_FKT	Pb	Cd	Cu	Zn	Cr	Ni	Co	V	As
O-8118	Kárvain	nb-niutlm		2	02.10.2006	09.10.2006	r2201a[10]	1	0.158	*0.008		1.685					
O-8118	Kárvain	nb-niutlm		2	09.10.2006	16.10.2006		1									
O-8118	Kárvain	nb-niutlm		2	16.10.2006	23.10.2006	r2201a[11]	1	0.717	*0.034		6.496					
O-8118	Kárvain	nb-niutlm		2	23.10.2006	30.10.2006	r2201a[12]	1	*0.056	*0.007		*0.415					
O-8118	Kárvain	nb-niutlm		2	30.10.2006	01.11.2006	r2201a[13]	1	0.357	*0.012		5.29					
O-8118	Kárvain	nb-niutlm		2	01.11.2006	06.11.2006	r2201a[14]	1	*0.081	*0.014		2.715					
O-8118	Kárvain	nb-niutlm		2	06.11.2006	13.11.2006	r2201a[15]	1	*0.039	*-0.005		0.601					
O-8118	Kárvain	nb-niutlm		2	13.11.2006	20.11.2006		1									
O-8118	Kárvain	nb-niutlm		2	20.11.2006	27.11.2006		1									
O-8118	Kárvain	nb-niutlm		2	27.11.2006	01.12.2006	r2201a[16]	1	0.178	*0.017		6.125					
O-8118	Kárvain	nb-niutlm		2	01.12.2006	04.12.2006	r2201a[17]	1	0.299	*0.017		3.908					
O-8118	Kárvain	nb-niutlm		2	04.12.2006	11.12.2006	r2201a[18]	1	0.15	*0.011		1.951					
O-8118	Kárvain	nb-niutlm		2	11.12.2006	18.12.2006	r2201a[19]	1	*0.043	*0.007		*0.372					
O-8118	Kárvain	nb-niutlm		2	18.12.2006	25.12.2006	r2201a[20]	1	*0.029	*0.006		*0.351					
O-8118	Kárvain	nb-niutlm		2	25.12.2006	01.01.2007	r2201a[21]	1	0.297	*0.013		1.639					

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PRO_NR	stasjon	PROVETY	MÅLEPER	FRADATO	ILDATO	aprovavn	UT_ENHE	DIL_FKT	Pb	Cd	Cu	Zn	Cr	Ni	Co	V	As
O-8118	Kårvatn	nb-nilutn	2	02.10.2006	09.10.2006	r2201a[10]	ng/ml	1	0.158	*0.008		1.685					
O-8118	Kårvatn	nb-nilutn	2	09.10.2006	16.10.2006		ng/ml	1				6.496					
O-8118	Kårvatn	nb-nilutn	2	16.10.2006	23.10.2006	r2201a[11]	ng/ml	1	0.717	*0.034		*0.415					
O-8118	Kårvatn	nb-nilutn	2	23.10.2006	30.10.2006	r2201a[12]	ng/ml	1	*0.056	*0.007		5.29					
O-8118	Kårvatn	nb-nilutn	2	30.10.2006	01.11.2006	r2201a[13]	ng/ml	1	0.357	*0.012		2.715					
O-8118	Kårvatn	nb-nilutn	2	01.11.2006	06.11.2006	r2201a[14]	ng/ml	1	*0.081	*0.014		0.601					
O-8118	Kårvatn	nb-nilutn	2	06.11.2006	13.11.2006	r2201a[15]	ng/ml	1	*0.039	*-0.005							
O-8118	Kårvatn	nb-nilutn	2	13.11.2006	20.11.2006		ng/ml	1									
O-8118	Kårvatn	nb-nilutn	2	20.11.2006	27.11.2006		ng/ml	1									
O-8118	Kårvatn	nb-nilutn	2	27.11.2006	01.12.2006	r2201a[16]	ng/ml	1	0.178	*0.017		6.125					
O-8118	Kårvatn	nb-nilutn	2	01.12.2006	04.12.2006	r2201a[17]	ng/ml	1	0.299	*0.017		3.908					
O-8118	Kårvatn	nb-nilutn	2	04.12.2006	11.12.2006	r2201a[18]	ng/ml	1	0.15	*0.011		1.951					
O-8118	Kårvatn	nb-nilutn	2	11.12.2006	18.12.2006	r2201a[19]	ng/ml	1	*0.043	*0.007		*0.372					
O-8118	Kårvatn	nb-nilutn	2	18.12.2006	25.12.2006	r2201a[20]	ng/ml	1	*0.029	*0.006		*0.351					
O-8118	Kårvatn	nb-nilutn	2	25.12.2006	01.01.2007	r2201a[21]	ng/ml	1	0.297	*0.013		1.639					

\* Målingen er utenfor akkreditert område.

## **Vedlegg 7**

# **Tungmetaller i luft i Ny-Ålesund (U-1494-07)**



## Målerapport nr. U-1494-07

Oppdragsøiver: NII II

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 04.01.-29.12..2006

**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 papirfilter, med unntak for kobber (Cu), der deteksjonsgrensen er basert på ett standardavvik.

27.12.06, Snø på filteret.

13.12.06 Snø på filter

06.11.06, Renhold før filterskift

02.08.06, Dobbelte filter, bunnfilter, økt luftstrøm manuelt

01.02.06, Masse snø på filter

**Kontaktperson:** Marit Vadset

**Godkjenning:** Kjeller, 30. mars 2007

*Marit Vadset*

Marit Vadset

Ingeniør, Miljøkjemi

**Vedlegg:** Analyseresultater for 51 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.*



PRO_Nr	stiastr	STASKOD	PROVET	MÅLEPER	FRADATO	tILDATO	apromv	IN_ENHE	UT_ENHE	UTV_VOL	DIL_FKT	LUFTVOL	Pb	Cd	Cu	Zn	Cr	Ni	Co	Mn	V	As
O-93062	Zeppelin	801	fp-hivol	6	04.01.2006	06.01.2006	r1403a[6]	ppb	ng/m3	1	3157	0.39	0.011	0.39	3.32	0.16	0.07	0.034	0.16	0.06	0.012	
O-93062	Zeppelin	801	fp-hivol	6	11.01.2006	14.01.2006	r1403a[7]	ppb	ng/m3	50	4870	0.28	0.011	0.47	2.53	0.1466371	0.08	0.019	0.38	0.09	0.017	
O-93062	Zeppelin	801	fp-hivol	6	18.01.2006	20.01.2006	r1403a[8]	ppb	ng/m3	50	3212	1.44	0.024	0.57	2.37	0.19	0.022	2.37	0.29	0.21	0.085	
O-93062	Zeppelin	801	fp-hivol	6	25.01.2006	27.01.2006	r1403a[9]	ppb	ng/m3	50	3213	0.08	0.0018402	-0.053357	0.6979921	-0.0602311	-0.036493	0.003	0.10	0.05	0.013	
O-93062	Zeppelin	801	fp-hivol	6	01.02.2006	03.02.2006	r1403a[15]	ppb	ng/m3	50	3067	3.02	0.072	0.83	4.91	0.43	0.27	0.028	0.70	0.60	0.372	
O-93062	Zeppelin	801	fp-hivol	6	08.02.2006	10.02.2006	r1403a[16]	ppb	ng/m3	50	3200	0.19	0.007	0.40	1.47	-0.045364	-0.036642	0.005	0.14	0.06	0.024	
O-93062	Zeppelin	801	fp-hivol	6	15.02.2006	17.02.2006	r1403a[17]	ppb	ng/m3	50	3143	0.26	0.008	-0.054545	-0.5646351	-0.046186	-0.037306	-0.002927	0.10	0.05	0.032	
O-93062	Zeppelin	801	fp-hivol	6	22.02.2006	24.02.2006	r1403a[18]	ppb	ng/m3	50	3386	0.32	0.009	0.16	1.32	-0.042872	0.05	0.007	0.10	0.12	0.037	
O-93062	Zeppelin	801	fp-hivol	6	01.03.2006	03.03.2006	r1403a[19]	ppb	ng/m3	50	3111	1.11	0.032	0.59	3.10	-0.1108721	0.07	0.018	0.52	0.17	0.158	
O-93062	Zeppelin	801	fp-hivol	6	08.03.2006	10.03.2006	r1403a[20]	ppb	ng/m3	50	3259	0.56	0.020	0.40	2.97	-0.064107	0.08	0.013	0.27	0.12	0.087	
O-93062	Zeppelin	801	fp-hivol	6	15.03.2006	17.03.2006	r1403a[21]	ppb	ng/m3	50	3266	1.80	0.042	0.29	2.86	-0.087056	0.06	0.010	0.47	0.14	0.285	
O-93062	Zeppelin	801	fp-hivol	6	22.03.2006	24.03.2006	r1403a[22]	ppb	ng/m3	50	3107	1.28	0.039	0.27	2.20	0.16	0.11	0.052	3.29	0.34	0.246	
O-93062	Zeppelin	801	fp-hivol	6	29.03.2006	31.03.2006	r1403a[23]	ppb	ng/m3	50	3178	1.87	0.047	0.27	2.89	0.19	0.12	0.062	3.29	0.34	0.246	
O-93062	Zeppelin	801	fp-hivol	6	03.04.2006	06.04.2006	r1403a[12]	ppb	ng/m3	50	4774	0.38	0.011	0.30	1.05	-0.1371851	0.06	0.018	0.68	0.13	0.061	
O-93062	Zeppelin	801	fp-hivol	6	12.04.2006	15.04.2006	r1403a[13]	ppb	ng/m3	50	5710	0.46	0.015	0.30	1.13	-0.113472	0.06	0.010	0.30	0.10	0.061	
O-93062	Zeppelin	801	fp-hivol	6	19.04.2006	20.04.2006	r1403a[10]	ppb	ng/m3	50	1584	0.63	0.018	0.29	0.71	1269	-0.0918711	-0.074024	0.020	0.65	0.14	0.078
O-93062	Zeppelin	801	fp-hivol	6	26.04.2006	28.04.2006	r1403a[11]	ppb	ng/m3	50	3210	1.16	0.064	0.44	3.81	0.16	0.29	0.032	1.01	0.52	0.120	
O-93062	Zeppelin	801	fp-hivol	6	03.05.2006	05.05.2006	r1403a[24]	ppb	ng/m3	50	2888	4.28	0.295	0.90	11.42	0.29	0.21	-0.044	2.67	0.44	0.195	
O-93062	Zeppelin	801	fp-hivol	6	08.05.2006	10.05.2006	r1403a[25]	ppb	ng/m3	50	3143	0.43	0.011	0.80	2.11	-0.1137521	0.05	0.015	0.67	0.12	0.053	
O-93062	Zeppelin	801	fp-hivol	6	17.05.2006	19.05.2006	r1403a[26]	ppb	ng/m3	50	3236	0.09	0.021336	0.53	0.97	-0.044659	-0.036234	0.004	0.13	0.02	0.008	
O-93062	Zeppelin	801	fp-hivol	6	24.05.2006	25.05.2006	r1403a[27]	ppb	ng/m3	50	2894	0.28	0.013	0.10	0.6921097	-0.0566881	0.07	0.009	0.30	0.13	0.039	
O-93062	Zeppelin	801	fp-hivol	6	31.05.2006	02.06.2006	r1403a[28]	ppb	ng/m3	50	3238	0.20	0.010	0.13	0.5431281	-0.060261	-0.036212	0.020	0.36	0.06	0.029	
O-93062	Zeppelin	801	fp-hivol	6	07.06.2006	09.06.2006	r1403a[32]	ppb	ng/m3	50	3267	0.02	0.001523	-0.052475	-0.326603	-0.044433	-0.035890	0.004	0.15	0.03	0.0031627	
O-93062	Zeppelin	801	fp-hivol	6	14.06.2006	16.06.2006	r1403a[30]	ppb	ng/m3	50	3364	0.05	0.0027681	0.13	0.5495391	-0.043152	-0.034855	0.004	0.12	0.03	0.0054994	
O-93062	Zeppelin	801	fp-hivol	6	21.06.2006	23.06.2006	r1403a[31]	ppb	ng/m3	50	3136	0.12	0.001587	0.0888061	1.02	-0.046289	-0.037389	0.004	0.12	0.10	0.018	
O-93062	Zeppelin	801	fp-hivol	6	28.06.2006	29.06.2006	r1403a[32]	ppb	ng/m3	50	6664	0.04	0.000746	0.094421	0.4673841	-0.021783	-0.017595	-0.0023101	0.05	0.03	0.010	
O-93062	Zeppelin	801	fp-hivol	6	05.07.2006	07.07.2006	r1503a[11]	ppb	ng/m3	50	3201	0.06	0.001554	-0.053557	-0.333337	-0.045349	0.04	0.0016821	-0.038428	0.15	0.0056544	
O-93062	Zeppelin	801	fp-hivol	6	12.07.2006	14.07.2006	r1503a[6]	ppb	ng/m3	50	3166	-0.011158	-0.001572	-0.054149	-0.4202931	-0.045851	-0.037035	-0.000847	-0.038653	-0.011397	0.0049581	
O-93062	Zeppelin	801	fp-hivol	6	19.07.2006	21.07.2006	r1503a[7]	ppb	ng/m3	50	3112	0.04	0.001599	0.134	-0.046646	0.06	0.005	0.18	0.13	0.0072301		
O-93062	Zeppelin	801	fp-hivol	6	02.08.2006	04.08.2006	r1403a[33]	ppb	ng/m3	50	3191	-0.011071	-0.001559	-0.053724	-0.334382	-0.045492	-0.036745	-0.000840	-0.038549	-0.011307	-0.002007	
O-93062	Zeppelin	801	fp-hivol	6	09.08.2006	11.08.2006	r1503a[5]	ppb	ng/m3	50	3255	0.02	0.001529	-0.052868	-0.378681	-0.044597	-0.036023	-0.0015971	-0.037791	-0.011085	0.0042704	
O-93062	Zeppelin	801	fp-hivol	6	16.08.2006	18.08.2006	r1503a[8]	ppb	ng/m3	50	3193	-0.011064	-0.001558	-0.053691	-0.334172	-0.045463	-0.036722	-0.000840	-0.038524	-0.011300	0.0030371	
O-93062	Zeppelin	801	fp-hivol	6	23.08.2006	25.08.2006	r1503a[9]	ppb	ng/m3	50	3233	-0.010827	-0.0036221	0.11	0.4654031	-0.0628901	-0.036288	-0.000683	-0.038048	-0.011161	-0.001981	
O-93062	Zeppelin	801	fp-hivol	6	30.08.2006	01.09.2006	r1503a[10]	ppb	ng/m3	50	3189	0.04	0.001560	0.43	2.00	0.0498351	-0.036768	0.003	0.12	0.02	0.009	
O-93062	Zeppelin	801	fp-hivol	6	06.09.2006	08.09.2006	r1503a[12]	ppb	ng/m3	50	3210	0.04	0.001550	0.50	1.33	0.0697581	-0.036528	0.003	0.04	0.1240	0.0060121	
O-93062	Zeppelin	801	fp-hivol	6	13.09.2006	15.09.2006	r1503a[13]	ppb	ng/m3	50	3275	0.04	0.005	0.23	2.77	0.0623881	0.05	0.031	0.16	0.03	0.0077252	
O-93062	Zeppelin	801	fp-hivol	6	20.09.2006	22.09.2006	r1503a[14]	ppb	ng/m3	50	3271	0.04	0.001521	0.22	0.98	0.25	-0.035846	0.007	0.18	0.04	0.0052271	
O-93062	Zeppelin	801	fp-hivol	6	27.09.2006	29.09.2006	r1503a[15]	ppb	ng/m3	50	3190	0.03	0.001560	0.51	1.48	-0.045506	-0.036757	-0.002257	0.05	-0.011311	0.0039812	
O-93062	Zeppelin	801	fp-hivol	6	04.10.2006	06.10.2006	r1503a[16]	ppb	ng/m3	50	3182	0.03	0.001564	0.14	0.92	-0.100102	-0.036849	0.003	-0.038658	-0.011339	0.0033627	
O-93062	Zeppelin	801	fp-hivol	6	11.10.2006	13.10.2006	r1503a[17]	ppb	ng/m3	50	3199	0.11	0.0035981	0.23	0.89	-0.045378	-0.036653	0.005	0.11	0.02	0.026	
O-93062	Zeppelin	801	fp-hivol	6	18.10.2006	20.10.2006	r1503a[18]	ppb	ng/m3	50	3178	0.05	0.0026161	0.27	0.84	-0.045678	-0.036895	0.005	0.15	0.02	0.013	
O-93062	Zeppelin	801	fp-hivol	6	25.10.2006	27.10.2006	r1503a[19]	ppb	ng/m3	50	3221	0.29	0.010	0.34	1.60	0.0748601	-0.036403	0.0029801	0.15	0.02	0.048	
O-93062	Zeppelin	801	fp-hivol	6	01.11.2006	03.11.2006	r1503a[20]	ppb	ng/m3	50	3137	0.12	0.006	-0.054649	0.7684571	-0.046275	-0.037378	0.003	0.09	0.03	0.022	
O-93062	Zeppelin	801	fp-hivol	6	08.11.2006	10.11.2006	r1503a[24]	ppb	ng/m3	50	4058	0.09	0.0027871	0.34	1.04	0.0682411	-0.028894	0.004	0.04	0.03	0.017	
O-93062	Zeppelin	801	fp-hivol	6	15.11.2006	17.11.2006	r1503a[25]	ppb	ng/m3	50	3028	0.15	0.008	0.27	1.18	0.19	0.05	0.040	0.14	0.08	0.017	
O-93062	Zeppelin	801	fp-hivol	6	22.11.2006	24.11.2006	r1503a[26]	ppb	ng/m3	50	3300	0.05	0.001508	0.0680881	0.377721	-0.043689	-0.035531	-0.0012721	0.04	-0.010934	0.0045152	
O-93062	Zeppelin	801	fp-hivol	6	29.11.2006	01.12.2006	r1503a[27]	ppb	ng/m3	50	3087	0.07	0.0032751	-0.055534	-0.3456471	-0.047024	-0.037983	-0.0011011	-0.039847	0.01	0.009	
O-93062	Zeppelin	801	fp-hivol	6	06.12.2006	08.12.2006	r1503a[28]	ppb	ng/m3	50	3112	0.04	0.001599	-0.055088	-0.342870	-0.046646	-0.037678	-0.000862	-0.039527	-0.011594	0.010	
O-93062	Zeppelin	801	fp-hivol	6	13.12.2006	15.12.2006	r1503a[29]	ppb														

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## **Vedlegg 8**

### **Kvikksølv i luft i Ny-Ålesund (U-1519-07)**

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## Målerapport nr. U-1519-07

**Oppdragsgiver:** NILU v/Katrine Aspmo  
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:** Innenfor 5% (Aspмо et al, 2005, Atmospheric Environment, 39, 7607-7619).

**Kontakt person:** Katrine Aspмо



**Godkjenning:** Kjeller, 10. mai 2007

A handwritten signature in black ink that reads 'Katrine Aspmo'.

Katrine Aspmo  
Forsker

**Vedlegg:** Analyseresultater : 3 sider  
Målerapporten og vedleggene omfatter i alt 5 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/m<sup>3</sup>), Zeppelin 2006

Dato	GEM (ng/m <sup>3</sup> )	Dato	GEM (ng/m <sup>3</sup> )	Dato	GEM (ng/m <sup>3</sup> )
02.01.2006		21.02.2006		12.04.2006	1,64
03.01.2006		22.02.2006		13.04.2006	1,65
04.01.2006		23.02.2006		14.04.2006	1,61
05.01.2006		24.02.2006		15.04.2006	1,58
06.01.2006		25.02.2006		16.04.2006	1,57
07.01.2006		26.02.2006		17.04.2006	1,56
08.01.2006		27.02.2006		18.04.2006	1,54
09.01.2006		28.02.2006		19.04.2006	1,51
10.01.2006		01.03.2006		20.04.2006	1,46
11.01.2006		02.03.2006		21.04.2006	1,48
12.01.2006		03.03.2006		22.04.2006	1,48
13.01.2006		04.03.2006		23.04.2006	1,49
14.01.2006		05.03.2006		24.04.2006	1,50
15.01.2006		06.03.2006		25.04.2006	1,53
16.01.2006		07.03.2006		26.04.2006	1,51
17.01.2006		08.03.2006		27.04.2006	1,55
18.01.2006		09.03.2006		28.04.2006	1,61
19.01.2006		10.03.2006		29.04.2006	1,55
20.01.2006		11.03.2006		30.04.2006	1,57
21.01.2006		12.03.2006		01.05.2006	1,80
22.01.2006		13.03.2006		02.05.2006	1,90
23.01.2006		14.03.2006		03.05.2006	1,95
24.01.2006		15.03.2006		04.05.2006	1,68
25.01.2006		16.03.2006		05.05.2006	1,63
26.01.2006		17.03.2006		06.05.2006	1,80
27.01.2006		18.03.2006		07.05.2006	1,68
28.01.2006		19.03.2006		08.05.2006	1,16
29.01.2006		20.03.2006		09.05.2006	1,20
30.01.2006		21.03.2006		10.05.2006	1,52
31.01.2006		22.03.2006		11.05.2006	1,43
01.02.2006		23.03.2006		12.05.2006	1,35
02.02.2006		24.03.2006		13.05.2006	1,42
03.02.2006		25.03.2006		14.05.2006	1,38
04.02.2006		26.03.2006		15.05.2006	0,97
05.02.2006		27.03.2006		16.05.2006	1,17
06.02.2006		28.03.2006		17.05.2006	1,33
07.02.2006		29.03.2006		18.05.2006	1,43
08.02.2006		30.03.2006		19.05.2006	1,97
09.02.2006		31.03.2006		20.05.2006	2,09
10.02.2006		01.04.2006		21.05.2006	2,00
11.02.2006		02.04.2006		22.05.2006	0,92
12.02.2006		03.04.2006		23.05.2006	1,19
13.02.2006		04.04.2006		24.05.2006	1,47
14.02.2006		05.04.2006		25.05.2006	1,64
15.02.2006		06.04.2006		26.05.2006	1,58
16.02.2006		07.04.2006	1,74	27.05.2006	1,39
17.02.2006		08.04.2006	1,75	28.05.2006	1,25
18.02.2006		09.04.2006	1,74	29.05.2006	1,14
19.02.2006		10.04.2006	1,75	30.05.2006	1,15
20.02.2006		11.04.2006	1,66	31.05.2006	0,95

Elementært kvikksølv i gassfase (GEM) (ng/m<sup>3</sup>), Zeppelin 2006

Dato	GEM (ng/m <sup>3</sup> )	Dato	GEM (ng/m <sup>3</sup> )	Dato	GEM (ng/m <sup>3</sup> )
01.06.2006	1,27	21.07.2006	1,72	09.09.2006	1,73
02.06.2006	1,60	22.07.2006	1,53	10.09.2006	1,72
03.06.2006	1,69	23.07.2006	1,53	11.09.2006	1,75
04.06.2006	1,72	24.07.2006	1,50	12.09.2006	1,82
05.06.2006	1,70	25.07.2006	1,49	13.09.2006	1,75
06.06.2006	1,64	26.07.2006	1,44	14.09.2006	1,63
07.06.2006	1,62	27.07.2006	1,42	15.09.2006	1,58
08.06.2006	1,59	28.07.2006	1,42	16.09.2006	1,65
09.06.2006	1,61	29.07.2006	1,44	17.09.2006	1,68
10.06.2006	1,63	30.07.2006	1,37	18.09.2006	1,74
11.06.2006	1,56	31.07.2006	1,39	19.09.2006	1,68
12.06.2006	1,54	01.08.2006	1,41	20.09.2006	1,65
13.06.2006	1,50	02.08.2006	1,83	21.09.2006	1,69
14.06.2006	1,53	03.08.2006	1,76	22.09.2006	1,70
15.06.2006	1,54	04.08.2006	1,58	23.09.2006	1,70
16.06.2006	1,48	05.08.2006	1,54	24.09.2006	1,74
17.06.2006	1,64	06.08.2006	1,63	25.09.2006	1,71
18.06.2006	1,53	07.08.2006	1,59	26.09.2006	1,76
19.06.2006	1,53	08.08.2006	1,61	27.09.2006	1,55
20.06.2006	1,49	09.08.2006	1,62	28.09.2006	1,60
21.06.2006	1,62	10.08.2006	1,67	29.09.2006	1,48
22.06.2006	1,58	11.08.2006	1,80	30.09.2006	1,48
23.06.2006	1,50	12.08.2006	1,80	01.10.2006	1,51
24.06.2006	1,46	13.08.2006	1,72	02.10.2006	1,51
25.06.2006	1,56	14.08.2006	1,71	03.10.2006	1,68
26.06.2006	1,55	15.08.2006	1,69	04.10.2006	1,77
27.06.2006	1,62	16.08.2006	1,63	05.10.2006	1,68
28.06.2006	1,58	17.08.2006	1,63	06.10.2006	1,60
29.06.2006	1,53	18.08.2006	1,68	07.10.2006	1,65
30.06.2006	1,62	19.08.2006	1,81	08.10.2006	1,61
01.07.2006	1,61	20.08.2006	1,76	09.10.2006	1,59
02.07.2006	1,57	21.08.2006	1,72	10.10.2006	1,53
03.07.2006	1,67	22.08.2006	1,48	11.10.2006	1,55
04.07.2006	1,67	23.08.2006	1,70	12.10.2006	1,57
05.07.2006	1,72	24.08.2006	1,63	13.10.2006	1,56
06.07.2006	1,70	25.08.2006	1,60	14.10.2006	1,63
07.07.2006	1,70	26.08.2006	1,59	15.10.2006	1,65
08.07.2006	1,77	27.08.2006	1,60	16.10.2006	1,64
09.07.2006	1,69	28.08.2006	1,58	17.10.2006	1,61
10.07.2006	1,66	29.08.2006	1,68	18.10.2006	1,56
11.07.2006	1,58	30.08.2006	1,71	19.10.2006	1,60
12.07.2006	1,53	31.08.2006	1,68	20.10.2006	1,53
13.07.2006	1,54	01.09.2006	1,54	21.10.2006	1,58
14.07.2006	1,59	02.09.2006	1,70	22.10.2006	1,58
15.07.2006	1,68	03.09.2006	1,73	23.10.2006	1,64
16.07.2006	1,68	04.09.2006	1,73	24.10.2006	1,62
17.07.2006	1,59	05.09.2006	1,69	25.10.2006	1,66
18.07.2006	1,57	06.09.2006	1,61	26.10.2006	1,66
19.07.2006	1,86	07.09.2006	1,64	27.10.2006	1,61
20.07.2006	1,84	08.09.2006	1,69	28.10.2006	1,68



### Elementært kvikksølv i gassfase (GEM) (ng/m<sup>3</sup>), Zeppelin 2006

Dato	GEM (ng/m <sup>3</sup> )	Dato	GEM (ng/m <sup>3</sup> )	Dato	GEM (ng/m <sup>3</sup> )
29.10.2006	1,75	18.12.2006			
30.10.2006	1,73	19.12.2006			
31.10.2006	1,75	20.12.2006			
01.11.2006	1,61	21.12.2006			
02.11.2006	1,64	22.12.2006			
03.11.2006	1,71	23.12.2006			
04.11.2006	1,74	24.12.2006			
05.11.2006	1,82	25.12.2006			
06.11.2006	1,82	26.12.2006			
07.11.2006	1,77	27.12.2006			
08.11.2006	1,73	28.12.2006			
09.11.2006	1,64	29.12.2006			
10.11.2006	1,65	30.12.2006			
11.11.2006	1,64	31.12.2006			
12.11.2006	1,69				
13.11.2006	1,48				
14.11.2006	1,33				
15.11.2006	1,28				
16.11.2006	1,37				
17.11.2006	1,68				
18.11.2006	1,84				
19.11.2006	1,81				
20.11.2006	1,74				
21.11.2006	1,65				
22.11.2006	1,72				
23.11.2006	1,61				
24.11.2006	1,54				
25.11.2006	1,51				
26.11.2006	1,48				
27.11.2006	1,60				
28.11.2006	1,63				
29.11.2006	1,56				
30.11.2006	1,52				
01.12.2006	1,54				
02.12.2006	1,66				
03.12.2006	1,66				
04.12.2006	1,71				
05.12.2006	1,72				
06.12.2006	1,69				
07.12.2006	1,66				
08.12.2006	1,66				
09.12.2006	1,64				
10.12.2006	1,63				
11.12.2006	1,70				
12.12.2006	1,71				
13.12.2006	1,65				
14.12.2006					
15.12.2006					
16.12.2006					
17.12.2006					

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## **Vedlegg 9**

### **Kvikksølv i nedbør på Birkenes (U-1521-07)**

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## Målerapport nr. U-1521-07

**Oppdragsgiver:** NILU v/Katrine Aspmo  
Her

**Prosjekt nr:** O-90006

**Prøvetaking:**  
**Sted:** Birkenes, Nedbør  
**Ansvar:** NILU  
**Kommentar:**

**Prøveinformasjon:**  
**Prøve type:** Kvikksølv

**Prøver mottatt:** Månedlig  
**Antall prøver:** 19  
**Kommentar:**

**Analyser:**  
**Utført av:** Norsk institutt for luftforskning  
Postboks 100  
N-2007 KJELLER

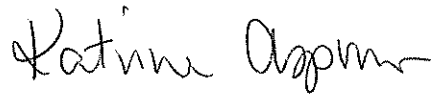
**Målemetode:** Analysene er utført ved NILUs avdeling for Miljøkjemi.  
Følgende metoder er brukt:  
  
NILU-U-60: Forskrift for prøvetaking av Hg i vann.

**Måleusikkerhet:** Analyseusikkerheten ligger innenfor 10% ved det målte nivå.

**Kontakt person:** Katrine Aspmo

**Godkjenning:**

Kjeller, 10. mai 2007



Katrine Aspmo  
Forsker

**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.

### Elementært kvikksølv i gassfase (GEM) (ng/m<sup>3</sup>), Birkenes 2006

<b>Fradato</b>	<b>Tildato</b>	<b>Hg (ng/l)</b>
01.01.2006	23.01.2006	7,0
01.02.2006	19.02.2006	9,5
19.02.2006	01.03.2006	5,9
01.03.2006	01.04.2006	6,3
01.04.2006	01.05.2006	10,5
01.05.2006	23.05.2006	11,9
23.05.2006	01.06.2006	16,0
01.06.2006	01.07.2006	13,8
01.07.2006	01.08.2006	6,3
01.08.2006	15.08.2006	12,3
15.08.2006	28.08.2006	6,0
01.09.2006	01.10.2006	6,8
01.10.2006	15.10.2006	8,1
15.10.2006	01.11.2006	7,5
01.11.2006	20.11.2006	8,8
20.11.2006	25.11.2006	7,4
25.11.2006	01.12.2006	8,8
01.12.2006	08.12.2006	3,7
08.12.2006	01.01.2007	6,6

,

log<sub>2</sub>

1/2



## **Vedlegg 10**

### **Kvikksølv i luft på Birkenes (U-1520-07)**

1

2

3

## Målerapport nr. U-1520-07

**Oppdragsgiver:** NILU v/Katrine Aspmo  
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:** Innenfor 5% (Aspmo et al, 2005, Atmospheric Environment, 39, 7607-7619).

**Kontakt person:** Katrine Aspmo

**Godkjenning:**

Kjeller, 10. mai 2007

A handwritten signature in black ink that reads "Katrine Aspmo".

K  
A  
F  
Katrine Aspmo  
Forsker**Vedlegg:**

Analyseresultater: 3 sider

Målerapporten og vedleggene omfatter i alt 5 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/m<sup>3</sup>), Birkenes 2006

Dato	GEM (ng/m <sup>3</sup> )	Dato	GEM (ng/m <sup>3</sup> )	Dato	GEM (ng/m <sup>3</sup> )
01.01.2006	1,60	20.02.2006	1,87	11.04.2006	
02.01.2006	1,60	21.02.2006	1,59	12.04.2006	
03.01.2006	1,40	22.02.2006	1,59	13.04.2006	
04.01.2006	1,37	23.02.2006	1,58	14.04.2006	1,44
05.01.2006	1,50	24.02.2006	1,44	15.04.2006	1,50
06.01.2006	1,59	25.02.2006	1,55	16.04.2006	
07.01.2006	1,53	26.02.2006	1,40	17.04.2006	
08.01.2006	1,48	27.02.2006	1,58	18.04.2006	1,57
09.01.2006	1,49	28.02.2006	1,56	19.04.2006	1,65
10.01.2006	1,64	01.03.2006	1,43	20.04.2006	1,39
11.01.2006	1,82	02.03.2006	1,50	21.04.2006	
12.01.2006	1,62	03.03.2006	1,38	22.04.2006	
13.01.2006	1,47	04.03.2006	1,48	23.04.2006	
14.01.2006	1,69	05.03.2006	1,45	24.04.2006	1,90
15.01.2006	1,88	06.03.2006	1,38	25.04.2006	1,79
16.01.2006	1,97	07.03.2006	1,59	26.04.2006	1,87
17.01.2006	2,06	08.03.2006	1,57	27.04.2006	1,70
18.01.2006	2,08	09.03.2006	1,58	28.04.2006	1,93
19.01.2006	1,87	10.03.2006	1,56	29.04.2006	1,64
20.01.2006	1,58	11.03.2006	1,51	30.04.2006	1,64
21.01.2006	1,58	12.03.2006	1,51	01.05.2006	1,59
22.01.2006	1,57	13.03.2006	1,87	02.05.2006	1,82
23.01.2006	1,68	14.03.2006	1,69	03.05.2006	1,55
24.01.2006		15.03.2006	1,44	04.05.2006	
25.01.2006		16.03.2006	1,44	05.05.2006	2,40
26.01.2006		17.03.2006	1,44	06.05.2006	
27.01.2006		18.03.2006		07.05.2006	
28.01.2006		19.03.2006		08.05.2006	
29.01.2006		20.03.2006	1,45	09.05.2006	
30.01.2006		21.03.2006	1,41	10.05.2006	
31.01.2006		22.03.2006	1,40	11.05.2006	
01.02.2006		23.03.2006	1,34	12.05.2006	
02.02.2006		24.03.2006	1,38	13.05.2006	
03.02.2006		25.03.2006	1,34	14.05.2006	
04.02.2006		26.03.2006	1,36	15.05.2006	1,68
05.02.2006		27.03.2006	1,50	16.05.2006	1,72
06.02.2006		28.03.2006	1,33	17.05.2006	1,72
07.02.2006		29.03.2006	1,47	18.05.2006	1,86
08.02.2006		30.03.2006	1,49	19.05.2006	2,18
09.02.2006		31.03.2006	1,37	20.05.2006	1,90
10.02.2006		01.04.2006		21.05.2006	1,76
11.02.2006		02.04.2006	1,58	22.05.2006	2,17
12.02.2006		03.04.2006	1,70	23.05.2006	2,25
13.02.2006		04.04.2006	1,27	24.05.2006	1,99
14.02.2006		05.04.2006		25.05.2006	1,75
15.02.2006	2,00	06.04.2006		26.05.2006	1,68
16.02.2006	2,06	07.04.2006	1,27	27.05.2006	1,70
17.02.2006	2,03	08.04.2006		28.05.2006	1,69
18.02.2006	1,77	09.04.2006	1,26	29.05.2006	1,63
19.02.2006	1,76	10.04.2006	1,85	30.05.2006	1,59

Elementært kvikksølv i gassfase (GEM) (ng/m<sup>3</sup>), Birkenes 2006

Dato	GEM (ng/m <sup>3</sup> )	Dato	GEM (ng/m <sup>3</sup> )	Dato	GEM (ng/m <sup>3</sup> )
31.05.2006		20.07.2006	1,94	08.09.2006	1,64
01.06.2006	1,54	21.07.2006	1,84	09.09.2006	1,58
02.06.2006	1,50	22.07.2006	1,85	10.09.2006	1,56
03.06.2006	1,71	23.07.2006	2,36	11.09.2006	1,63
04.06.2006	1,63	24.07.2006	2,09	12.09.2006	
05.06.2006	2,17	25.07.2006	2,03	13.09.2006	1,89
06.06.2006	1,86	26.07.2006	2,13	14.09.2006	1,89
07.06.2006	1,82	27.07.2006	1,85	15.09.2006	2,04
08.06.2006	1,80	28.07.2006	1,71	16.09.2006	1,89
09.06.2006	1,89	29.07.2006	1,87	17.09.2006	1,61
10.06.2006	1,74	30.07.2006	1,80	18.09.2006	1,62
11.06.2006	1,72	31.07.2006	1,70	19.09.2006	1,54
12.06.2006	1,87	01.08.2006	1,77	20.09.2006	1,65
13.06.2006	2,01	02.08.2006	1,77	21.09.2006	1,59
14.06.2006	2,36	03.08.2006	2,51	22.09.2006	2,00
15.06.2006	1,58	04.08.2006	2,20	23.09.2006	2,01
16.06.2006	1,62	05.08.2006	1,86	24.09.2006	2,21
17.06.2006	1,86	06.08.2006	1,83	25.09.2006	1,85
18.06.2006	1,82	07.08.2006	1,83	26.09.2006	1,74
19.06.2006	2,27	08.08.2006	1,87	27.09.2006	1,81
20.06.2006	2,89	09.08.2006	1,83	28.09.2006	1,96
21.06.2006	2,08	10.08.2006	1,58	29.09.2006	1,68
22.06.2006	1,94	11.08.2006	1,57	30.09.2006	1,62
23.06.2006	1,79	12.08.2006	1,58	01.10.2006	2,04
24.06.2006	1,68	13.08.2006	1,66	02.10.2006	1,58
25.06.2006	1,71	14.08.2006	1,94	03.10.2006	1,65
26.06.2006	1,73	15.08.2006	2,11	04.10.2006	1,47
27.06.2006	1,53	16.08.2006	2,07	05.10.2006	1,31
28.06.2006	1,67	17.08.2006	1,68	06.10.2006	1,32
29.06.2006	1,55	18.08.2006	1,77	07.10.2006	1,70
30.06.2006	1,47	19.08.2006	1,75	08.10.2006	2,10
01.07.2006	1,66	20.08.2006	1,70	09.10.2006	1,90
02.07.2006	1,68	21.08.2006	1,49	10.10.2006	2,00
03.07.2006	1,71	22.08.2006	1,70	11.10.2006	1,70
04.07.2006	1,92	23.08.2006	1,68	12.10.2006	1,80
05.07.2006	2,13	24.08.2006		13.10.2006	1,76
06.07.2006	2,10	25.08.2006		14.10.2006	1,63
07.07.2006	2,61	26.08.2006		15.10.2006	1,63
08.07.2006	2,28	27.08.2006		16.10.2006	1,44
09.07.2006	2,00	28.08.2006		17.10.2006	1,73
10.07.2006	2,02	29.08.2006		18.10.2006	1,61
11.07.2006	1,96	30.08.2006		19.10.2006	1,60
12.07.2006	1,77	31.08.2006		20.10.2006	2,08
13.07.2006	1,72	01.09.2006		21.10.2006	2,10
14.07.2006	1,74	02.09.2006		22.10.2006	2,03
15.07.2006	1,55	03.09.2006		23.10.2006	1,89
16.07.2006	1,49	04.09.2006		24.10.2006	1,66
17.07.2006	1,89	05.09.2006		25.10.2006	1,39
18.07.2006	2,07	06.09.2006		26.10.2006	1,41
19.07.2006	2,09	07.09.2006		27.10.2006	1,67

### Elementært kvikksølv i gassfase (GEM) (ng/m<sup>3</sup>), Birkenes 2006

Dato	GEM (ng/m <sup>3</sup> )	Dato	GEM (ng/m <sup>3</sup> )	Dato	GEM (ng/m <sup>3</sup> )
28.10.2006	1,72	17.12.2006			
29.10.2006	1,55	18.12.2006			
30.10.2006		19.12.2006			
31.10.2006	1,87	20.12.2006			
01.11.2006	1,95	21.12.2006			
02.11.2006		22.12.2006			
03.11.2006	1,55	23.12.2006			
04.11.2006		24.12.2006			
05.11.2006	1,69	25.12.2006			
06.11.2006	1,66	26.12.2006			
07.11.2006	1,79	27.12.2006			
08.11.2006		28.12.2006			
09.11.2006		29.12.2006			
10.11.2006		30.12.2006			
11.11.2006		31.12.2006			
12.11.2006		01.01.2007			
13.11.2006					
14.11.2006					
15.11.2006					
16.11.2006					
17.11.2006					
18.11.2006					
19.11.2006					
20.11.2006					
21.11.2006					
22.11.2006					
23.11.2006					
24.11.2006					
25.11.2006					
26.11.2006					
27.11.2006					
28.11.2006					
29.11.2006					
30.11.2006					
01.12.2006					
02.12.2006					
03.12.2006					
04.12.2006					
05.12.2006					
06.12.2006					
07.12.2006					
08.12.2006					
09.12.2006					
10.12.2006					
11.12.2006					
12.12.2006					
13.12.2006					
14.12.2006					
15.12.2006					
16.12.2006					







## Norsk institutt for luftforskning (NILU)

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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