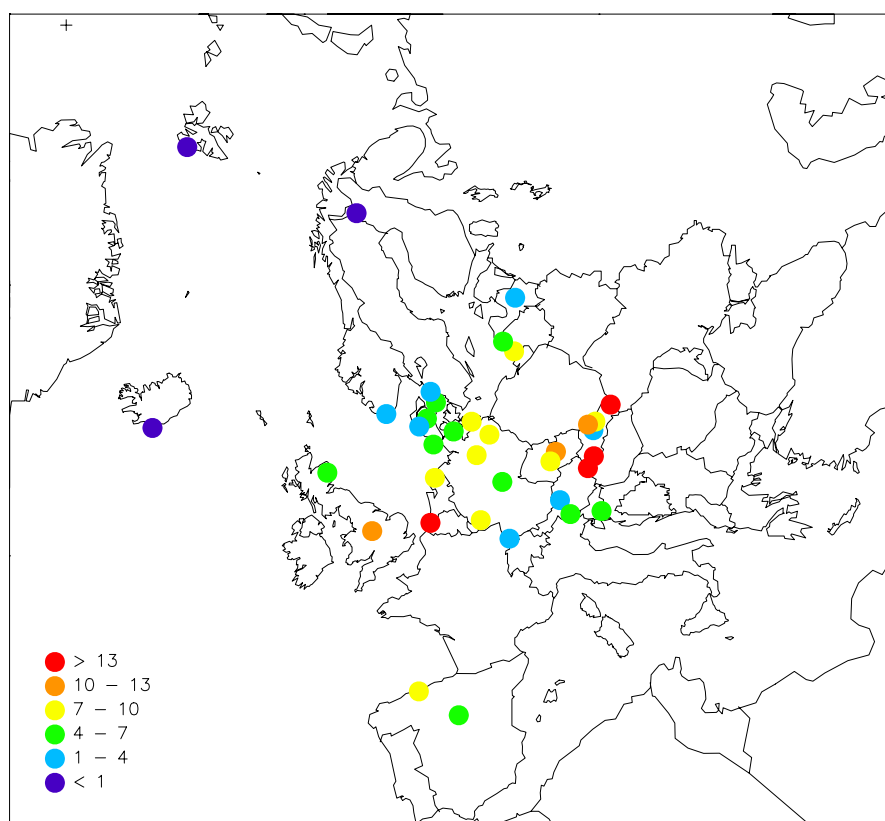


# Heavy metals and POP measurements, 2003

Wenche Aas and Knut Breivik



Pb in aerosols 2003, ng/m<sup>3</sup>





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**EMEP Co-operative Programme for Monitoring and Evaluation  
of the Long-range Transmission of Air Pollutants  
in Europe**

**Heavy metals and POP measurements,  
2003**

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# Heavy metals and POP measurements, 2003

## 1. Introduction

Heavy metals and persistent organic pollutants (POPs) were included in EMEP's monitoring program in 1999. However, earlier data has been available and collected, and the EMEP database thus also includes older data, even back to 1988 for a few sites. A number of countries have been reporting heavy metals and POPs within the EMEP area in connection with different national and international programmes such as HELCOM, AMAP and OSPARCOM.

During the seventh phase of EMEP (EB.AIR/GE.1/1998/8) it was recommended that the future works under the Convention should concentrate on eight priority elements: lead (Pb), mercury (Hg), cadmium (Cd), chromium (Cr), nickel (Ni), zinc (Zn), copper (Cu) and arsenic (As). Particular attention should be paid to the first three elements.

The strategic long-term plans on POPs (EB.AIR/GE.1/1997/8) recommended to take a stepwise approach, and the following compounds or groups of compounds should be included in the first step: polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), HCB, chlordane, lindane,  $\alpha$ -HCH, DDT/DDE.

These recommendations for heavy metals and POPs are implemented in the new EMEP monitoring strategy and measurement program for 2004–2009 (EB.AIR/GE.1/2004/5).

So far, nine reports have been published (EMEP/CCC-Reports 8/96, 9/97, 7/98, 7/99, 2/2000, 9/2001, 9/2002, 1/2003, 7/2004) which present data on heavy metals and POPs from national and international measurement programmes for the period 1987 to 2002. The majority of the data are included in the priority lists for heavy metals and POPs. All these data are also available from the EMEP's homepage, <http://www.nilu.no/projects/ccc/emepdata.html>. In this report data from 2003 are presented.

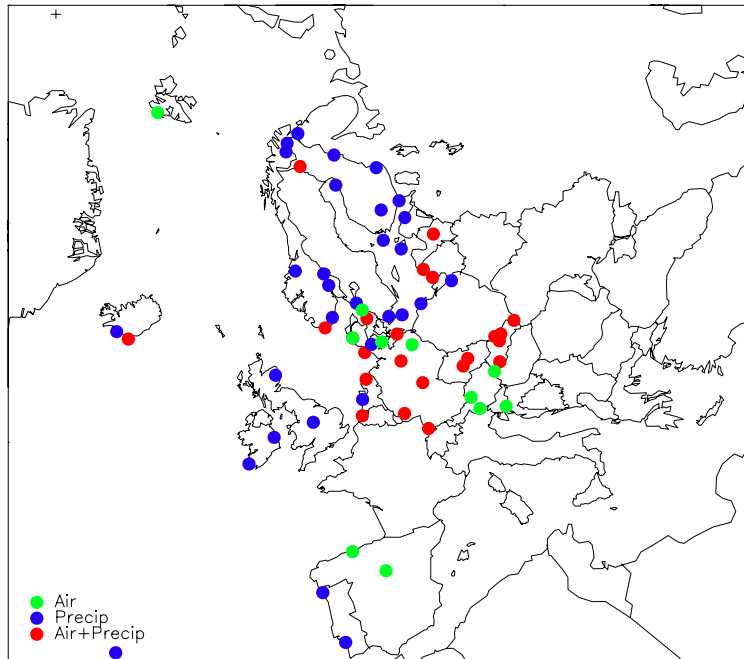
## 2. Measurement programme

The site codes used in this report are the codes used for data submission and storage in the EMEP database, or codes used in the AMAP, OSPARCOM or HELCOM programmes. The codes consist of the two-letter ISO code for the countries, a four-digit number and a letter indicating the type of station, regional (R) or global (G).

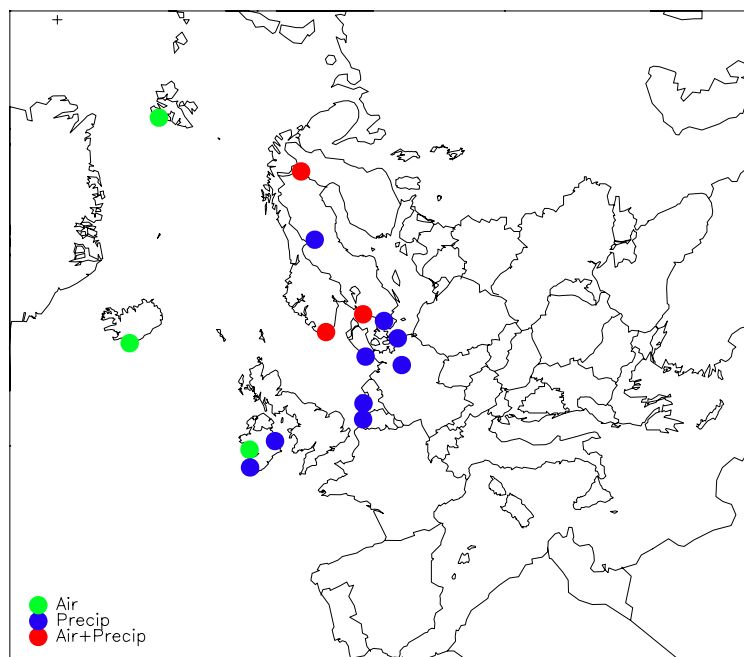
### 2.1 Monitoring sites for heavy metals

The locations of the measurement sites, which have delivered data on heavy metals for 2003, are found in Figure 1 and Table 1. The sites are divided in those measuring both concentrations in air and in precipitation, and those measuring only one of them. In 2003 there were 23 sites measuring heavy metals in both air and precipitation, and altogether there were 65 measurement sites. It was 15 sites

measuring at least one form of mercury (Figure 2). It is apparent that the spatial distribution of monitoring sites in Europe is unsatisfactory. There are hardly any sites that measure heavy metals in east of Europe, and in southern Europe at the Iberian Peninsula only. In addition, it is too few sites measuring both in air and precipitation. In the adopted EMEP monitoring strategy for 2004-2009 (EB.AIR/GE.1/2004/5), it states that all EMEP parties should measure heavy metals; this strategy will expectantly improve the situation.



*Figure 1: Measurement network of heavy metals, 2003.*



*Figure 2: Measurement network of mercury, 2003.*



Table 1: Monitoring stations and the sampling program of heavy metals, 2003.

Country	Code	Station name	Latitude	Longitude	hasI	Metals in air	Metals in precip
Austria	AT0002R	Illmitz	47 46 0 N	16 46 0 E	117	As,Cd, Pb,Ni	
	AT0004R	St. Koloman	47 39 0 N	13 12 0 E	851	Pb	
	AT0005R	Vorhegg	46 40 40 N	12 58 20 E	1020	Cd, Pb	
Belgium	BE0004R	Knokke	51 21 36 N	3 20 0 E	0	Cd, Cu, Pb,Ni, Zn	As, Cd, Cr, Cu, Pb, Hg, Ni, Zn
Czech Republic	CZ0001R	Svratouch	49 44 0 N	16 2 0 E	737	Cd, Pb	Cd, Pb
	CZ0003R	Košetice	49 35 0 N	15 5 0 E	534	Cd, Pb	Cd, Pb
Germany	DE0001R	Westerland	54 55 32 N	8 18 35 E	12	As,Cd,Cu,Fe,Pb, Mn,Ni	As,Cd,Cr,Co,Cu,Fe,Pb,Mn,Hg,Ni,V,Zn
	DE0002R	Langenbrügge	52 48 8 N	10 45 34 E	74	As,Cd,Cu,Fe,Pb,Mn,Ni	As,Cd,Cr,Co,Cu,Fe,Pb,Mn,Hg,Ni,V,Zn
	DE0003R	Schauinsland	47 54 53 N	7 54 31 E	1205	Cu,Pb,Mn,Ni	As,Cd,Cr,Co,Cu,Fe,Pb,Mn,Ni,V,Zn
	DE0004R	Deuselbach	49 45 53 N	7 3 7 E	480	As,Cd,Cu,Fe,Pb,Mn,Ni	As,Cd,Cr,Co,Cu,Fe,Pb,Mn,Ni,V,Zn
	DE0007R	Neuglobsow	53 10 0 N	13 2 0 E	65	Cd,Cu,Fe,Pb,Mn,Ni	
	DE0008R	Schmücke	50 39 0 N	10 46 0 E	937	As,Cd, Cu,Fe,Pb, Mn, Ni	As,Cd,Cr,Co,Cu,Fe,Pb,Mn,Ni,V,Zn
	DE0009R	Zingst	54 26 0 N	12 44 0 E	1	As,Cd,Cu,Fe,Pb,Mn,Ni	As,Cd,Cr,Co,Cu,Fe,Pb,Mn,Hg,Ni,V,Zn
Denmark	DK0003R	Tange	56 21 0 N	9 36 0 E	13	As,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Zn	
	DK0005R	Keldsnor	54 44 0 N	10 44 0 E	10	As,Cd,Cr,Cu,Fe,Pb,Mn,Ni	
	DK0008R	Anholt	56 43 0 N	11 31 0 E	40	As,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Zn	As,Cd,Cr,Cu,Fe,Pb,Ni,Zn
	DK0011G	Nuuk	64 10 48 N	51 39 0 W	320	As,Cr,Cu,Pb,Mn,Ni,Zn,Hg	
	DK0020R	Pedersker	55 1 1 N	14 56 45 E	5		As,Cd,Cr,Cu,Fe,Pb,Ni,Zn
	DK0022R	Sepstrup Sande	55 5 0 N	9 36 0 E	60		As,Cd,Cr,Cu,Pb,Ni,Zn
Estonia	DK0031R	Ulborg	56 17 0 N	8 26 0 E	10	As,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Zn	As,Cd,Cr,Cu,Fe,Pb,Ni,Zn
	EE0009R	Lahemaa	59 30 0 N	25 54 0 E	32		As,Cd,Cu,Pb
	EE0011R	Vilsandy	58 23 0 N	21 49 0 E	6		As,Cd,Cu,Pb,Zn
Spain	ES0008R	Niembro	43 26 32 N	4 51 1 W	134	Pb, Cd, Cu	
	ES0009R	Campisábalos	41 16 52 N	3 8 34 W	1360	Pb, Cd, Cu	
Finland	FI0008R	Kevo	69 45 0 N	27 0 0 E	80		As,Cd,Cr,Cu,Fe,Pb,Mn,Ni,V,Zn
	FI0009R	Utö	59 46 45 N	21 22 38 E	7		As,Cd,Cr,Cu,Fe,Pb,Mn,Ni,V,Zn
	FI0017R	Virolahti II	60 31 36 N	27 41 10 E	8		As,Cd,Cr,Cu,Fe,Pb,Mn,Ni,V,Zn
	FI0022R	Oulanka	66 19 13 N	29 24 6 E	310		As,Cd,Cr,Cu,Fe,Pb,Mn,Ni,V,Zn
	FI0036R	Matarova	68 0 0 N	24 14 23 E	340	As,Cd,Cr,Cu,Fe,Pb,Mn,Ni,V,Zn	As,Cd,Cr,Cu,Fe,Pb,Mn,Ni,V,Zn
	FI0053R	Hailuoto II	65 0 0 N	24 41 39 E	4		As,Cd,Cr,Cu,Fe,Pb,Mn,Ni
	FI0092R	Hietajarvi	63 10 0 N	30 43 0 E	173		As,Cd,Cr,Cu,Fe,Pb,Mn,Ni,V,Zn
	FI0093R	Kotinen	61 13 48 N	25 4 0 E	158		As,Cd,Cr,Cu,Fe,Pb,Mn,Ni,V,Zn
	FI0096R	Pallas	67 58 0 N	24 7 0 E	566	Hg	Hg
Great Britain	GB0017R	Heigham Holmes	54 45 14 N	1 38 22 W	267	As,Cd,Cr,Cu,Pb,Ni,Zn	As,Cd,Cr,Cu,Pb,Ni,Zn
	GB0091R	Banchory	57 5 0 N	2 32 0 W	120	As,Cd,Cr,Cu,Pb,Ni,Zn	As,Cd,Cr,Cu,Pb,Ni,Zn

Table 1, cont.

Country	Code	Station name	Latitude	Longitude	has1	Metals in air	Metals in precip
Ireland	IE0001R	Valentina Obs.	51 56 23 N	10 14 40 W	11		Al,As,Cd,Cr,Cu,Pb,Mn,Hg,Ni,V,Zn
	IE0002R	Turlough Hill	53 2 12 N	6 24 0 W	420		Al,As,Cd,Cr,Cu,Pb,Mn,Hg,Ni,V,Zn
	IE0031R	Mace Head	53 10 0 N	9 30 0 W	15	Hg	
Iceland	IS0090R	Reykjavik	64 8 0 N	21 54 0 W	52		Al,As,Cd,Cr,Cu,Fe,Pb,Mn,Ni,V,Zn
	IS0091R	Storhofdi	63 24 0 N	20 17 0 W	118	Al,As,Cd,Cr,Cu,Fe,Pb,Mn,Hg, Ni,V,Zn	Al,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Zn
Lithuania	LT0015R	Preila	55 21 0 N	21 4 0 E	5	Cd,Cu,Pb,Zn	Cd,Cu,Pb,Zn
Latvia	LV0010R	Rucava	56 13 0 N	21 13 0 E	5	Cd,Pb,Ni,Mn,Zn	As,Cd,Cu,Pb,Mn,Ni,Zn
	LV0016R	Zoseni	57 7 59 N	25 55 0 E	183	Cd,Cu,Pb,Ni,Mn,Zn	As,Cd,Cu,Pb,Mn,Ni,Zn
Netherlands	NL0009R	Kollumerwaard	53 20 2 N	6 16 38 E	1	As,Cd,Pb,Zn	As,Cd,Cr,Cu,Pb,Ni,Zn,
	NL0091R	De Zilk	52 18 0 N	4 30 0 E	4		As,Cd,Cr,Cu,Pb,Hg,Ni,Zn,
Norway	NO0001R	Birkenes	58 23 0 N	8 15 0 E	190		Cd,Pb,Zn
	NO0039R	K�arvatn	62 47 0 N	8 53 0 E	210		Cd,Pb,Zn
	NO0041R	Osen	61 15 0 N	11 47 0 E	440		Cd,Pb,Zn
	NO0042G	Zeppelin	78 54 0 N	11 53 0 E	474	As,Cd,Cr,Co,Cu,Pb,Mn,Hg,Ni,V,Zn	
	NO0047R	Svanvik	69 27 0 N	30 1 59 E	30		As,Cd,Cr,Co,Cu,Pb,Ni,Zn
	NO0055R	Karasjok	69 28 0 N	25 13 0 E	333		Cd,Pb,Zn
	NO0056R	Hurdal	60 22 0 N	11 4 0 E	300		Cd,Pb,Zn
	NO0099R	Lista	58 6 0 N	6 34 0 E	13	As,Cd,Cr,Co,Cu,Pb,Hg,Ni,V,Zn	As,Cd,Cr,Co,Cu,Pb,Mn,Hg,Ni,Zn
Poland	PL0004R	Leba	54 45 0 N	17 32 0 E	2		Cd,Cr,Cu,Pb,Ni,Zn
	PL0005R	Diabla Gora	54 9 0 N	22 4 0 E	157		As,Cd,Cr,Cu,Pb,Ni,Zn
Portugal	PT0003R	Viana do Castelo	41 42 0 N	8 48 0 W	16		Cd,Cu,Pb,Mn,Ni,Zn
	PT0004R	Monte Velho	38 5 0 N	8 48 0 W	43		Cd,Cu,Pb,Mn,Ni,Zn
	PT0010R	Angra do Heroismo	38 40 0 N	27 13 0 W	74		Cd,Cu,Pb,Mn,Ni,Zn
Sweden	SE0005R	Bredk�alen	63 51 0 N	15 19 59 E	404		Hg
	SE0011R	Vavihill	56 1 0 N	13 9 0 E	175		Hg
	SE0014R	R�ao	57 23 0 N	11 53 0 E	10	As,Cd,Hg,Ni,Pb	Hg
	SE0051R	Arup	55 45 0 N	13 40 0 E	157		As,Cd,Cr,Co,Cu,Fe,Pb,Mn,Ni,V,Zn
	SE0097R	G�ardsj�on	58 3 0 N	12 1 0 E	126		As,Cd,Cr,Co,Cu,Fe,Pb,Mn,Ni,V,Zn
Slovenia	SI0008R	Iskrba	45 34 0 N	14 52 0 E	520	As,Cd,Cr,Cu,Pb,Ni	
Slovakia	SK0002R	Chopok	48 56 0 N	19 35 0 E	2008	As,Cd,Cr,Cu,Pb,Mn,Ni,Zn	As,Cd,Cr,Cu,Pb,Mn,Ni
	SK0004R	Star�a Lesn�a	49 9 0 N	20 17 0 E	808	As,Cd,Cr,Cu,Pb,Mn,Ni,Zn	As,Cd,Cr,Cu,Pb,Mn,Ni
	SK0005R	Liesek	49 22 0 N	19 40 59 E	892	As,Cd,Cr,Cu,Pb,Mn,Ni,Zn	As,Cd,Cr,Cu,Pb,Mn,Ni
	SK0006R	Starina	49 3 0 N	22 16 0 E	345	As,Cd,Cr,Cu,Pb,Mn,Ni,Zn	As,Cd,Cr,Cu,Pb,Mn,Ni
	SK0007R	Topolniky	47 57 36 N	17 51 38 E	113	As,Cd,Cr,Cu,Pb,Mn,Ni,Zn	As,Cd,Cr,Cu,Pb,Mn,Ni,Zn

## 2.2 Monitoring sites for POPs

The locations of the measurement sites, which have delivered POPs for 2003, are shown in Figure 3 and Table 2. In 2003 there were 6 sites measuring POPs in both compartments, and altogether there were 12 measurement sites.

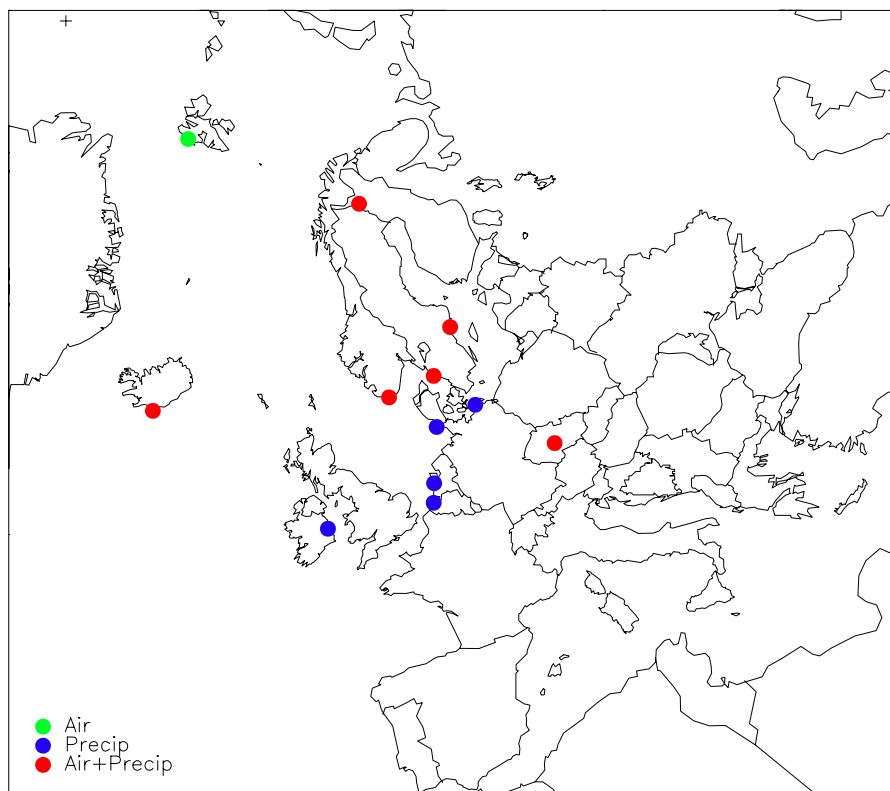


Figure 3: Monitoring network of POPs in EMEP, 2003.

As for heavy metal measurements, the distribution and number of sites measuring POPs are insufficient. The new EMEP monitoring strategy for 2004-2009 aims to improve the current unsatisfactorily site distribution. At the level 2 supersites, POPs in both air and precipitation should be measured at around 20-30 stations distributed over the domain.

## 2.3 Sampling and analytical techniques

A brief summary of the sampling and analytical techniques used for the 2003-data are given in Table 4 and Table 3 for POPs and heavy metals respectively.

Table 2: Monitoring stations and their sampling program of POP, 2003.

Country	Code	Name	Latitude	Longitude	hasl	POPs in air and aerosol	POPs in precipitation
Belgium	BE0004R	Knokke	51 21 36 N	3 20 0 E	0		Pesticides, HCHs
Czech rep.	CZ0003R	Košetice	49 35 0 N	15 5 0 E	534	PAHs, PCBs, pesticides, HCHs	PAHs pesticides
Germany	DE0001R	Westerland	54 55 32 N	8 18 35 E	12		PAHs, PCBs, pesticides, HCB, HCHs
	DE0009R	Zingst	54 26 0 N	12 44 0 E	1		PAHs, PCBs, pesticides, HCB, HCHs
Finland	FI0096R	Pallas	67 58 0 N	24 7 0 E	566	PAHs, PCBs, pesticides, HCHs, HCB	PAHs, PCBs, HCHs
Ireland	IE0002R	Turlough Hill	53 2 12 N	6 24 0 W	420		PCBs, pesticides, HCB, HCHs,
Iceland	IS0091R	Storhofdi	63 24 0 N	20 17 0 W	118	PCBs, pesticides, HCB, HCHs	PCBs, pesticides, HCB, HCHs
Netherlands	NL0091R	De Zilk	52 18 0 N	4 30 0 E	4		$\gamma$ -HCH
Norway	NO0042G	Spitsbergen	78 54 0 N	11 53 0 E	474	PAHs, pesticides, HCHs, HCB, PCBs	
	NO0099R	Lista	58 6 0 N	6 34 0 E	13	HCB, HCHs	HCB, HCHs
Sweden	SE0012R	Aspvreten	58 48 0 N	17 23 0 E	20	PAHs, PCBs, pesticides	PAHs, PCBs
	SE0014R	Råö	57 23 38 N	11 55 50 E	5	PAHs, PCBs, pesticides	PAHs, PCBs

Table 3: Measurement methods for POPs, 2003.

Country	Precipitation		Air and aerosols		Laboratory method
	Sampling method	Frequency	Sampling method	Frequency	
Belgium	Wet only	Monthly			HPLC, GC-ECD
Czech rep.	Wet only	Daily	HV-GRASEBY, PUR-foam 300m <sup>3</sup> /day	1d a week	HPLC, GC-MS
Germany	Wet only	Monthly			HPLC, GC-MS
Finland	Bulk +dry dep	1 w a month	High vol.	1 w a month	HPLC, GC-MS
Ireland	Bulk	Monthly			GC-MS
Iceland	Bulk, (Steel funnel 1m <sup>2</sup> /PUF foam)	Biweekly	PUF-foam 1000m <sup>3</sup> /15days	Biweekly	GC-ECD
Lithuania	Bulk	Monthly		Monthly	TLC
Netherlands	Bulk	4 weekly			GC-MS
Norway	Bulk, funnel and bottle of glass	Weekly	High Vol. Gelman AE filter + 2 PUR foams. 20m <sup>3</sup> /h	NO99: 24h a week NO42: 48h a week	GC-MS
Sweden	Bulk	SE02: Monthly, SE12: 1 w a month	High vol.	SE02: weekly, SE12: 1 w a month	HPLC, GC-MS

HPLC: High Performance Liquid Chromatography  
GC-MS: Gas chromatograph with Mass Spectrometry

GC-ECD: Gas chromatograph with Electron Capture Detector  
TLC: Thin Layer Chromatography

Table 4: Measurement methods for heavy metals, 2003.

Country	Precipitation		Air and aerosols		Laboratory method	Participate in EMEP lab. Intercomp. <sup>1</sup>
	Field method	Frequency	Field method	Frequency		
Austria			High-vol, PM <sub>10</sub>	24h a week	ICP-MS	Yes
Belgium	Wet-only	Weekly	Low volume sampler -Filter- 1 pack PM <sub>10</sub> and TSP (24 hours sampling)		Precipitation (AAS) and air (XRF or AAS) CV-AAS	Yes (precipitation_AAS)
	Hg Wet-only	Weekly				
Czech Republic	Bulk	Weekly	Filter-1pack	Every 2 <sup>nd</sup> day	Ni, Cd, Pb: GF-AAS	Yes
Germany	DE01, DE02, DE03, DE08, DE09: Wet-only DE02, DE04: Bulk	Weekly	High Vol., PM <sub>10</sub>	10 days	ICP-MS	Yes
	Hg Wet-only	Daily at DE02, weekly at DE04 Weekly				
Denmark	Bulk	Monthly	Filter-3pack	Daily at DK05,08,31 and weekly at DK10,11 Hourly	Precip: GF-AAS Aerosols: PIXE	No
	Hg Bulk (Hg)	Monthly	Hg-monitor (Tekran)			
Estonia	Bulk	Monthly			GF-AAS, Zn: F-AAS	Yes
Spain			High-vol, PM <sub>10</sub>	24h a week	GF-AAS	Yes
Finland	Bulk	Monthly	Teflon, Millipore, Fluoropore, 3 µm, 50 l/min, cut off 15 µm Hg: gold traps (TGM) Hg: mini traps (TPM)	Weekly	ICP-MS CV-AFS CV-AFS	Yes
	Hg Bulk (Hg)	Monthly		2 days weekly Weekly		
France	Bulk	Monthly			GF-AAS	Yes
Great Britain	Bulk	Monthly	Filter-1pack	Monthly	ICP-MS	Yes
Ireland	Bulk	Monthly			ICP-MS ICP-MS	No
	Hg Bulk	Monthly				
Iceland	Bulk	Weekly	High vol.	Biweekly	ICP-MS CV-AAS	(Yes) <sup>2</sup>
	Hg					
Lithuania	Bulk	Weekly	Low vol. 0.5-2 m <sup>3</sup> /h	Weekly	GF-AAS	Yes
Latvia	Bulk	Weekly	Filter-1pack	Weekly	Cd, Cu, Pb, Ni, As: GF-AAS, Mn, Zn: F-AAS	Yes

Table 3, cont.

Country	Precipitation		Air and aerosols		Laboratory method	Participate in EMEP lab. Intercomp. <sup>1</sup>
	Field method	Frequency	Field method	Frequency		
Netherlands	Wet-only Hg Wet-only	4 weekly Weekly	Filter-1pack	24h every 2 days	ICP-MS CV-AFS	Yes
Norway	Bulk  Hg Bulk (Hg)	Weekly  Monthly	NO42: High Vol, 20 l/h, W40 NO99: Filter-2-pack (PM <sub>10</sub> & PM <sub>2.5</sub> ), 10 l/min, Zefluor teflon NO42: Tekran monitor NO99: gold traps	48h a week Weekly  5-30 min 24h a week	ICP-MS  CV-AFS	Yes
Poland	Wet-only	Biweekly			GF-AAS; Zn: F-AAS	Yes
Poland PL05	Wet-only Hg <sup>3</sup> Bulk (Hg)	Weekly Weekly	Hg: gold traps (TGM)	24h a week	GF-AAS; Zn: F-AAS AAS-AMA analyzer	Yes
Portugal	PT10: Wet-only, PT01,03,04: bulk	Weekly Daily			GF-AAS, Zn: F-AAS (all stations)	No
Sweden	Bulk Hg Bulk (Hg)	Monthly Monthly	Teflon filter Hg: gold traps (TGM) Hg: mini traps (TPM)	Monthly 2 X 24 h a week 2 X 24 h a week	ICP-MS CV-AFS CV-AFS	(Yes) <sup>2</sup>
Slovenia			Low volume, PM <sub>10</sub> , quartz filters	Weekly, from seven daily filters	ICP-MS	No
Slovakia	Wet-only: SK04, SK05, SK06, SK07. Bulk: SK02	Monthly	Filter-1pack, Nitrocellulose filters Sartorius 47mm, 6-24 m <sup>3</sup> /day, SPM: SK02, SK07, PM <sub>10</sub> /Partisol R&P/: SK04, SK05, SK06	Weekly	Precipitation: GF-AAS; Zn: F-AAS, As: MHS; Air: ICP-MS	Yes

<sup>1</sup> Countries participated in the intercomparison in 2003 (Uggerud et. al., 2005)

<sup>2</sup> Samples shipped to NILU, Norway for analysis

<sup>3</sup> Started in October 2003

AAS: Atomic Absorption Spectroscopy

GF-AAS: Graphite Furnace Atomic Absorption Spectroscopy

F-AAS: Furnace Atomic Absorption Spectroscopy

ICP-MS: Inductively Coupled Plasma - Mass Spectrometry

CV-AAS: Cold Vapour Atomic Fluorescence Spectroscopy

### **3. Presentation of the measurement data**

#### **3.1 Heavy metal concentrations over Europe**

The annual concentrations of heavy metals in air and precipitation are found in Table 5 and Table 6. Maps illustrating the annual averages of Pb, Cd and Hg from the 2003 precipitation and air data are presented in Figure 4–Figure 9. An increasing gradient can in general be seen southeast, but the concentration levels are not evenly distributed, there are some “hotspots” for some elements. The yearly mean concentrations in precipitation have been calculated from daily, weekly or monthly reported values as precipitation-weighted averages. When discussing the regional distribution of the concentration fields, it should be noticed that few countries in Southern- and Eastern Europe have reported data for heavy metals in precipitation or in air.

For heavy metal measurements there are two major problems with the data, firstly the detection limit for the method is not always adequate for the respective sampling site, and the data coverage is also in general much poorer than e.g. for main components. In the EMEP data quality objectives (EMEP/CCC, 1996) it says that the data completeness should be 90%; in addition, 75% of the data should be above the detection limit. As seen in Annex 1 and Annex 2, these two criteria are often not met. However, several countries analyse heavy metals in air on one or two samples weekly from daily aerosol samples. This will give poor data completeness, but the seasonal distribution and data coverage is anyhow satisfactory and the estimate of the annual average is probably quite OK.

In the data plots some of the most uncertain data are omitted. In general, Ireland, Portugal and Belgium have problems with the measuring low concentrations because the sensitivity of their instruments is too low. In Belgium, the precipitation is sampled in two collectors, wet-only and bulk. The results are quite different in these two samplers so these data are therefore very uncertain.

##### ***3.1.1 Lead in precipitation***

Precipitation data from Portugal and Ireland should be looked as upper limits because most of the data are below the detection limits.

The highest concentrations are seen in Slovakia, but elevated levels are also seen in hotspots like e.g. the sites in northern Scandinavia, Lithuania, and in the Benelux countries. The lowest concentrations of Pb during 2003 are found in Scandinavia, Iceland, Ireland and Portugal, where the annual averages are below 1 µg Pb/l (Figure 4). An exception is NO47, which is located close to the large heavy metal emission sources at the Kola Peninsula in Russia.

##### ***3.1.2 Cadmium in precipitation***

The cadmium precipitation measurements in Portugal and Belgium are not included due to very high detection limits.

In Scandinavia the annual mean values of Cd are below 0.05 µg Cd/l (Figure 5), An increasing gradient can be seen southeast. The highest cadmium concentrations in precipitation are seen in Slovakia.

### ***3.1.3 Mercury in precipitation***

Only a few stations are measuring mercury in precipitation in Europe, and most of them are related to the OSPARCOM programme. Belgium and Irish stations are not included in the maps because of too high detection limits. The concentrations of mercury at the different sites are decreasing from north to south, but these differences are quite small.

### ***3.1.4 Lead in aerosols***

Figure 7 presents the annual averages of Pb in air in 2003. The lowest concentrations (below 1 ng Pb/m<sup>3</sup>) can be seen in northern Scandinavia. Concentration maxima are seen in Slovakia with concentrations between 10 and 18 ng Pb/m<sup>3</sup>. There are also other sites in e.g. Belgium, Spain and Austria with high concentrations.

### ***3.1.5 Cadmium in aerosols***

Cadmium in aerosols is presented in Figure 8. The lowest concentrations (below 0.1 ng Cd/m<sup>3</sup>) are reported from the Nordic stations. There are also relatively low concentrations in central Europe (Germany) and in Spain. An increasing gradient can be seen south-eastward. The highest cadmium concentrations are observed in Slovakia as well as in Austria

### ***3.1.6 Mercury in air***

Concentrations of mercury in air are in the range 1.6–1.7 ng/m<sup>3</sup> for all the stations (Figure 9). As for mercury in precipitation, there are only a few stations delivering data on mercury in air, and they are mainly related to the AMAP and the OSPAR programme.



Table 5: Annual average concentration of heavy metals in precipitation in 2003 ( $\mu\text{g/l}$ ).

Code	Pb	Cd	Zn	Hg	Ni	As	Cu	Co	Cr	Mn	V	Fe	mm
BE0004R	2.58	1.265	33.4	11.93	2.33	0.24	2.54	-	1.49	-	-	-	905
CZ0001R	1.59	0.081	-	-	-	-	-	-	-	-	-	-	649
CZ0003R	2.60	0.162	-	-	-	-	-	-	-	-	-	-	466
DE0001R	1.17	0.037	7.2	9.08	0.24	0.14	0.79	0.03	0.14	2.08	0.65	25	590
DE0002R	1.19	0.038	6.8	10.87	0.39	0.13	1.58	0.04	0.25	3.91	0.52	41	420
DE0003R	1.10	0.038	6.6	-	0.29	0.09	0.86	0.03	0.10	1.77	0.35	22	1368
DE0004R	1.77	0.068	17.9	-	0.38	0.10	2.51	0.05	0.23	4.16	0.39	30	644
DE0008R	1.56	0.046	7.9	-	0.45	0.14	1.43	0.03	0.24	2.31	0.40	28	876
DE0009R	1.23	0.052	8.6	9.45	0.28	0.14	2.26	0.03	0.18	2.94	0.55	32	504
DK0008R	1.29	0.098	8.5	-	0.34	0.22	1.20	-	0.22	-	-	-	550
DK0020R	1.75	0.088	13.9	-	0.44	0.20	2.24	-	0.17	-	-	-	404
DK0022R	1.28	0.036	11.0	-	0.31	0.14	2.04	-	0.16	-	-	-	657
DK0031R	1.09	0.047	9.2	-	0.30	0.19	1.68	-	0.18	-	-	-	715
EE0009R	0.62	0.063	-	-	-	0.23	4.43	-	-	-	-	-	723
EE0011R	0.66	0.109	26.0	-	-	0.39	7.27	-	-	-	-	-	410
FI0008R	0.53	0.033	4.2	-	0.70	0.11	2.38	-	0.15	1.26	0.15	18	248
FI0009R	2.37	0.118	8.8	-	0.90	0.24	2.54	-	0.26	4.13	0.74	45	294
FI0017R	1.47	0.073	4.9	-	0.40	0.14	1.30	-	0.23	2.65	0.51	36	540
FI0022R	0.79	0.032	2.6	-	0.38	0.13	1.17	-	0.17	2.09	0.24	19	387
FI0036R	0.59	0.037	3.3	-	0.38	0.08	1.22	-	0.14	1.37	0.16	18	416
FI0053R	1.60	0.073	-	-	0.82	0.14	2.57	-	0.31	4.03	-	64	286
FI0092R	1.06	0.048	3.1	-	0.29	0.09	1.44	-	0.18	1.99	0.30	20	584
FI0093R	1.05	0.051	5.8	-	0.34	0.10	1.20	-	0.10	2.52	0.37	22	628
FI0096G	-	-	-	7.38	-	-	-	-	-	-	-	-	201
GB0017R	1.08	0.026	5.8	-	0.34	0.15	0.97	-	0.10	-	-	-	293
GB0091R	1.18	0.043	8.8	-	0.41	0.55	0.75	-	0.29	-	-	-	393
IE0001R	<i>0.50</i>	<i>0.050</i>	32.5	<i>50.00</i>	<i>0.50</i>	<i>0.50</i>	<i>0.50</i>	-	<i>0.50</i>	<i>13.29</i>	<i>0.50</i>	-	1505
IE0002R	<i>1.05</i>	<i>0.050</i>	9.4	<i>50.00</i>	<i>0.50</i>	<i>0.50</i>	<i>1.15</i>	-	<i>0.50</i>	<i>3.56</i>	<i>0.50</i>	-	1514
IS0090R	0.48	0.012	4.7	-	0.61	0.17	1.84	-	0.34	2.89	1.71	148	1097
IS0091R	0.70	0.023	11.5	-	1.11	-	31.42	-	1.19	3.48	-	324	1770
LT0015R	3.59	0.216	86.6	-	-	-	1.67	-	-	-	-	-	743
LV0010R	1.91	0.161	17.0	-	1.81	0.43	1.97	-	-	7.36	-	-	714
LV0016R	2.03	0.097	15.8	-	1.57	0.43	2.14	-	-	5.89	-	-	639
NL0009R	1.64	0.052	7.1	-	0.32	0.29	1.40	-	0.35	-	-	-	589
NL0091R	2.39	0.057	7.4	8.63	0.31	0.14	2.00	-	0.28	-	-	-	630
NO0001R	1.57	0.043	3.9	-	-	-	-	-	-	-	-	-	1302
NO0039R	0.25	0.009	1.0	-	-	-	-	-	-	-	-	-	1579
NO0041R	0.61	0.031	5.1	-	-	-	-	-	-	-	-	-	701
NO0047R	2.32	0.080	6.2	-	10.55	0.85	11.99	0.34	0.22	-	-	-	345
NO0055R	0.59	0.013	3.4	-	-	-	-	-	-	-	-	-	320
NO0056R	0.97	0.032	3.7	-	-	-	-	-	-	-	-	-	842
NO0099R	1.96	0.064	7.3	8.12	0.48	0.75	1.26	0.04	0.28	2.53	-	-	1098
PL0004R	1.08	0.046	4.5	-	0.26	-	0.95	-	0.18	-	-	-	569
PL0005R	1.32	0.138	7.1	-	1.60	0.43	2.20	-	0.17	-	-	-	571
PT0003R	<i>0.65</i>	<i>0.425</i>	16.1	-	0.93	-	0.97	-	-	1.69	-	-	-
PT0004R	<i>0.65</i>	<i>0.425</i>	10.1	-	1.93	-	0.80	-	-	1.63	-	-	-
PT0010R	2.62	<i>0.425</i>	100.4	-	7.70	-	1.06	-	-	4.18	-	-	-
SE0005R	-	-	-	7.57	-	-	-	-	-	-	-	-	541
SE0011R	-	-	-	11.63	-	-	-	-	-	-	-	-	572
SE0014R	-	-	-	9.04	-	-	-	-	-	-	-	-	512
SE0051R	1.50	0.077	9.9	-	0.20	0.19	2.31	0.04	0.29	-	0.86	-	733
SE0097R	1.13	0.049	5.0	-	0.19	0.16	1.21	0.01	0.20	1.76	1.02	-	753
SK0002R	3.41	0.615	-	-	0.53	0.32	3.03	-	0.23	3.75	-	-	842
SK0004R	2.11	0.510	-	-	0.45	0.21	2.08	-	0.09	4.90	-	-	531
SK0005R	2.16	0.220	-	-	0.99	0.12	1.52	-	0.09	6.26	-	-	636
SK0006R	4.37	0.425	-	-	0.43	0.29	1.62	-	0.39	3.65	-	-	573
SK0007R	1.41	0.145	5.3	-	0.41	0.15	0.89	-	0.14	4.94	-	-	367

Data shown in italic are very uncertain.

Table 6: Annual average concentration of heavy metals in air in 2003 (ng/m<sup>3</sup>).

Code	Pb	Cd	Zn	Hg(g)	Ni	As	Cu	Co	Cr	Mn	V	Fe
AT02 PM1	5.45	0.158	-	-	1.22	0.74	-	-	-	-	-	-
AT02 PM2.5	9.76	0.347	-	-	2.31	0.90	-	-	-	-	-	-
AT02 PM10	14.82	0.558	-	-	2.68	1.28	-	-	-	-	-	-
AT0004R	2.97	-	-	-	-	-	-	-	-	-	-	-
AT0005R	4.64	0.161	-	-	-	-	-	-	-	-	-	-
BE0004R	25.71	1.000	41.2	-	5.34	-	6.89	-	-	-	-	-
CZ0001R	10.63	0.316	-	-	-	-	-	-	-	-	-	-
CZ0003R	9.64	0.271	-	-	-	-	-	-	-	-	-	-
DE0001R	6.14	0.172	-	-	1.32	0.70	2.18	-	-	2.69	-	84
DE0002R	9.61	0.237	-	-	0.97	0.93	2.63	-	-	3.93	-	116
DE0003R	2.84	-	-	-	0.66	-	1.46	-	-	2.32	-	88
DE0004R	9.01	0.196	-	-	0.52	0.53	2.77	-	-	4.31	-	96
DE0007R	8.62	0.262	-	-	0.93	-	2.49	-	-	3.18	-	64
DE0008R	4.97	0.146	-	-	0.78	0.46	1.61	-	-	2.67	-	84
DE0009R	7.16	0.233	-	-	1.44	0.67	1.83	-	-	2.52	-	79
DK0003R	6.51	0.141	16.1	-	1.39	0.94	2.39	-	0.42	5.19	-	137
DK0005R	6.90	0.181	-	-	2.59	0.60	-	-	-	2.90	-	93
DK0008R	4.26	0.102	9.9	-	1.71	0.46	1.04	-	0.32	1.96	-	51
DK0011G	0.43	-	2.5	1.36	0.22	0.04	0.56	-	0.14	0.82	-	-
DK0031R	3.07	0.066	8.3	-	0.95	0.28	0.90	-	0.28	1.99	-	62
ES0008R	8.88	0.123	-	-	-	-	24.35	-	-	-	-	-
ES0009R	4.06	0.057	-	-	-	-	39.50	-	-	-	-	-
FI0036R	0.90	0.033	2.3	-	0.36	0.17	0.55	-	0.20	0.68	0.39	29
FI0096G	-	-	-	1.48	-	-	-	-	-	-	-	-
GB0017R	10.25	0.179	29.6	-	2.02	1.28	2.82	-	2.17	-	-	-
GB0091R	4.01	0.047	19.4	-	1.04	0.45	1.80	-	1.43	-	-	-
IE0031R	-	-	-	1.67	-	-	-	-	-	-	-	-
IS0091R	0.50	0.019	5.7	-	3.66	0.15	0.64	-	5.62	6.56	2.12	399
LT0015R	7.09	0.199	26.4	-	-	-	1.24	-	-	-	-	-
LV0010R	5.07	0.324	26.4	-	1.05	-	-	-	-	4.61	-	-
LV0016R	2.98	0.167	10.7	-	0.58	-	0.69	-	-	8.82	-	-
NL0009R	8.32	0.198	22.6	-	-	0.71	-	-	-	-	-	-
NO0042G	0.69	0.021	1.3	1.60	0.10	0.12	0.23	0.01	0.09	0.34	0.14	-
NO99 fine	2.47	0.073	7.5	1.77	0.94	0.40	0.48	0.02	0.28	-	1.98	-
NO99 course	0.48	0.009	1.9	-	0.18	0.10	0.37	0.02	0.47	-	0.58	-
SE0014R	3.06	0.091	-	1.78	1.41	0.51	-	-	-	-	-	-
SI0008R	4.51	0.229	-	-	2.54	0.40	3.83	-	3.60	-	-	-
SK0002R	3.22	0.130	4.6	-	0.77	0.17	1.13	-	1.22	2.40	-	-
SK0004R	9.83	0.311	19.8	-	0.64	1.06	1.59	-	0.91	4.44	-	-
SK0005R	12.85	0.471	33.4	-	0.58	2.33	1.78	-	0.78	14.13	-	-
SK0006R	15.91	0.548	18.1	-	0.92	0.94	1.84	-	1.11	5.42	-	-
SK0007R	17.57	0.481	35.9	-	1.87	2.08	3.89	-	3.52	11.12	-	-

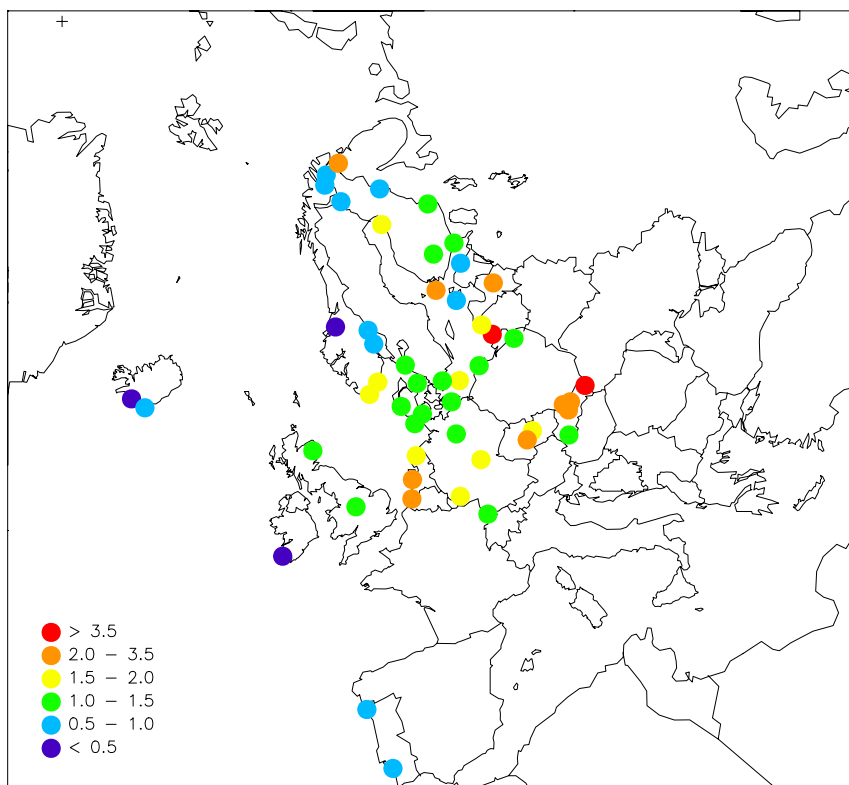


Figure 4: Lead in precipitation, 2003 ( $\mu\text{g/l}$ ).

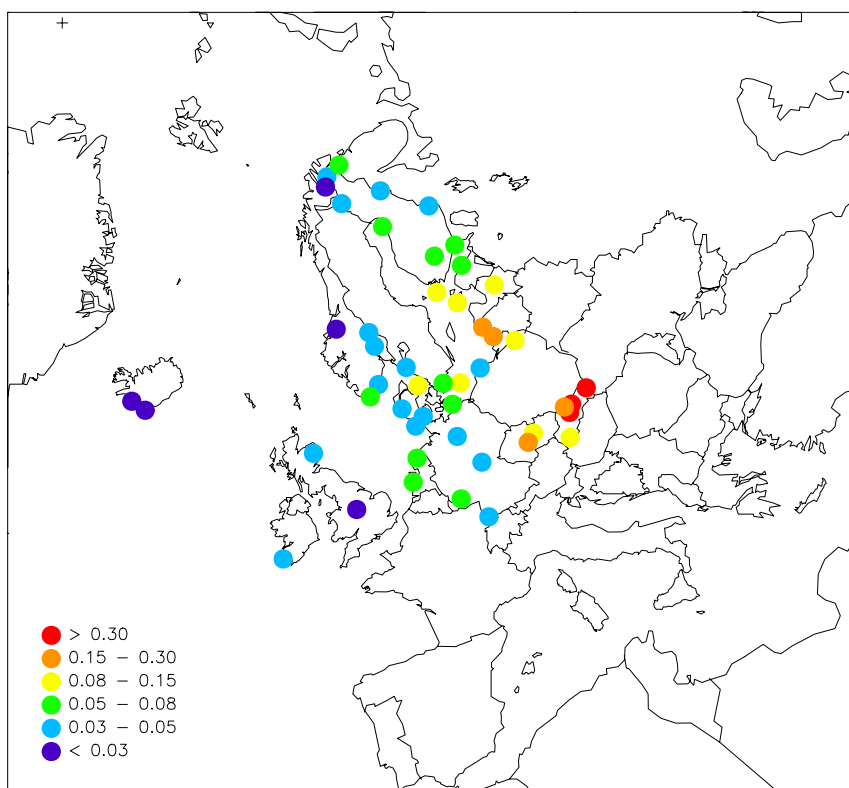


Figure 5: Cadmium in precipitation, 2003 ( $\mu\text{g/l}$ ).

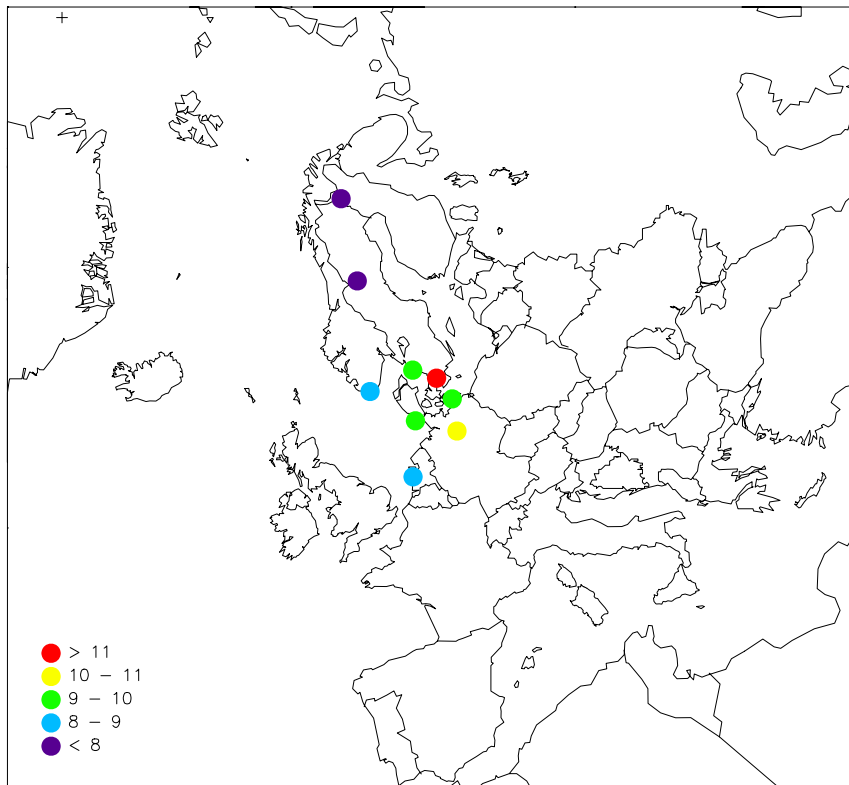


Figure 6: Mercury in precipitation, 2003 (ng/l).

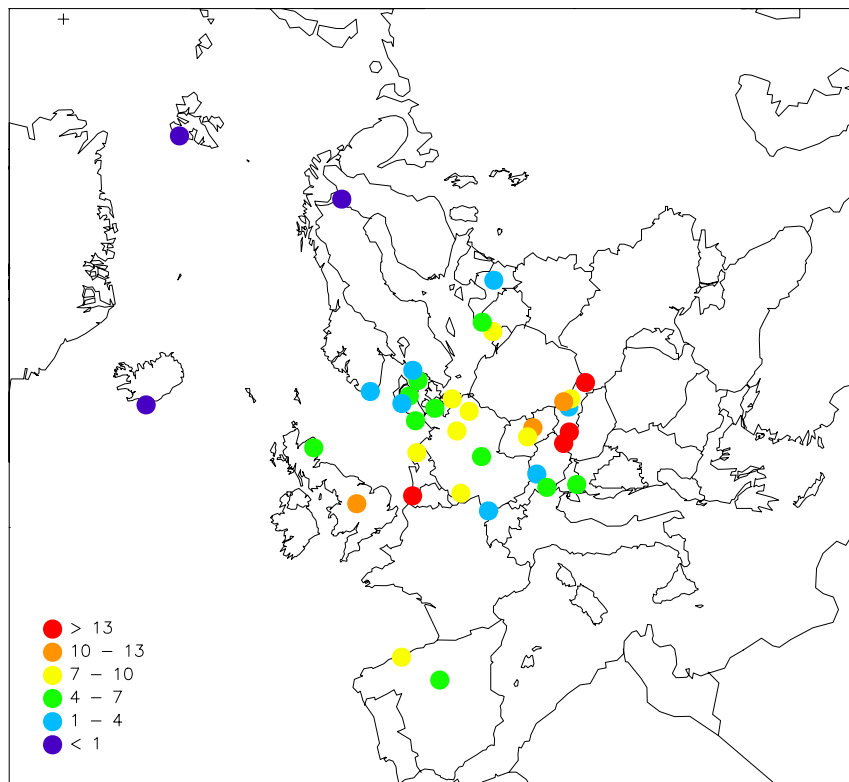


Figure 7: Lead in aerosols, 2003 (ng/m<sup>3</sup>).

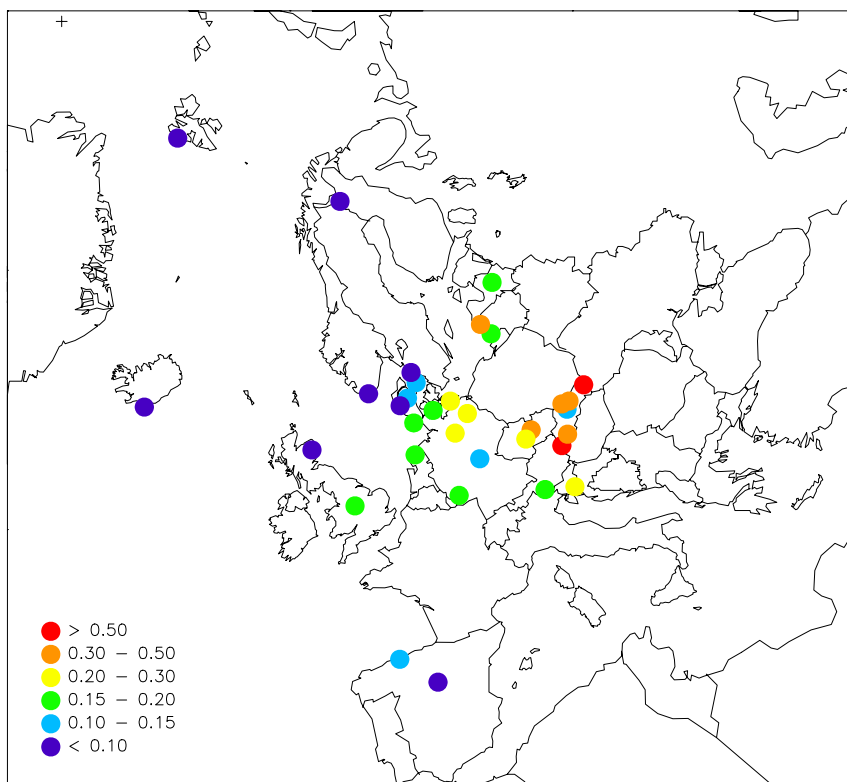


Figure 8: Cadmium in aerosols, 2003 ( $\text{ng}/\text{m}^3$ ).

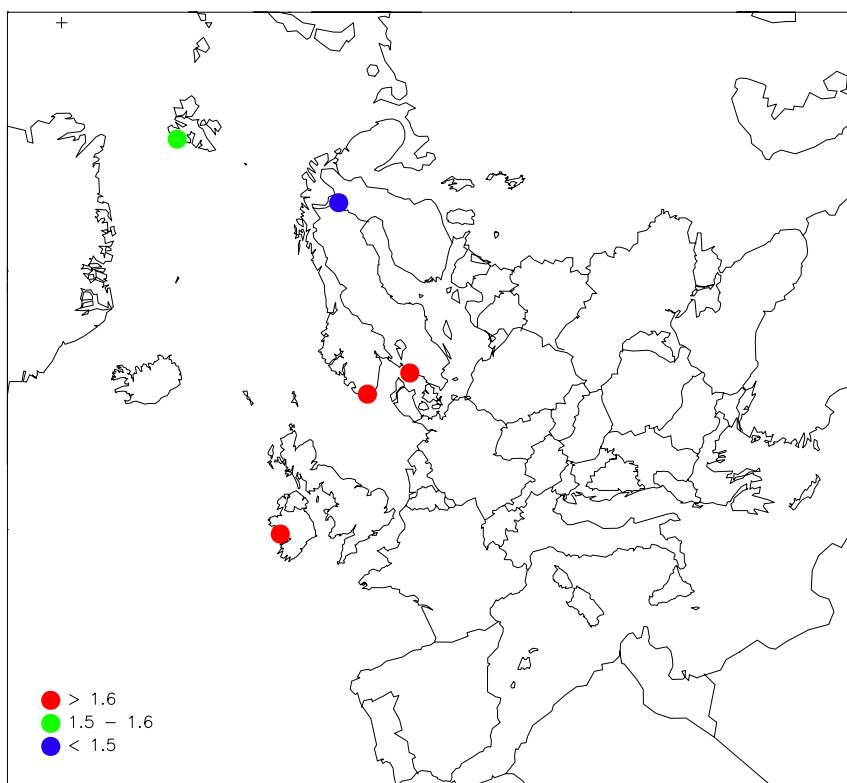


Figure 9: Mercury in air, 2003 ( $\text{ng}/\text{m}^3$ ).

### 3.2 Concentrations of POPs

It is generally difficult to give full credit to the information content in the POP data. Different sampling and analysis techniques make it difficult to compare data, especially for precipitation. For example, SE02, SE12 and FI96 have a precipitation sampler with 1 m<sup>2</sup> collection area and these results are given as deposition rates, ng/m<sup>2</sup> day. The rationale is that this includes both wet deposition and some dry deposition on the exposed collector surface. To compare the spatial pattern in Europe, air concentrations are used. High detection limit can also be a problem. Much of the data from Ireland and Belgium, and to some extent from Iceland, are mainly below the detection limits and here one can only say something about the upper concentration limits. Germany has two dataset for precipitation. One set with precipitation measurements only, and one that includes rinsing solution from the wet-only funnel. This latter will then include particle bound POPs in precipitation that is retained on the funnel surface. Both datasets are given in Annex 3, otherwise only the precipitation measurements are given.

In Figure 10–Figure 21 it is shown maps with annual averaged air concentrations of some of the main PAH, PCBs and pesticides. In general the concentrations decrease from south to north, except for  $\alpha$ -HCH where the highest concentration is seen in Svalbard. The concentration in the Czech Republic is much higher than those observed in the Nordic countries for all the different POPs. For PCB it is explained by the high historical usage of in central Europe (Breivik et al., 2002). It is also known that former Czechoslovakia were among the European countries where PCBs were produced in significant amounts until 1984 (Taniyasu et al., 2003). Large differences in atmospheric PCB levels across Europe were also noted by Jaward et al. (2004). They carried out a campaign during the summer of 2002, deploying 71 passive air samplers throughout Europe, and found that the atmospheric levels of PCBs were found to vary by as much as two orders of magnitude. Elevated levels were found in urban areas, suggesting that densely populated regions tend to be key contemporary source regions of PCBs to the atmosphere.

The presence of HCH in environments far away from the sources is due to long-range atmospheric transport. The relatively high concentrations of  $\alpha$ -HCH measured at higher latitudes have also been observed in seawater. Preferential deposition and accumulation in polar latitudes of  $\alpha$ -HCH are expected according to the hypothesis of global fractionation and cold condensation (Wania and Mackay, 1996). Iceland is influenced by westerly air masses, which explain the lower concentrations seen at IS0091.

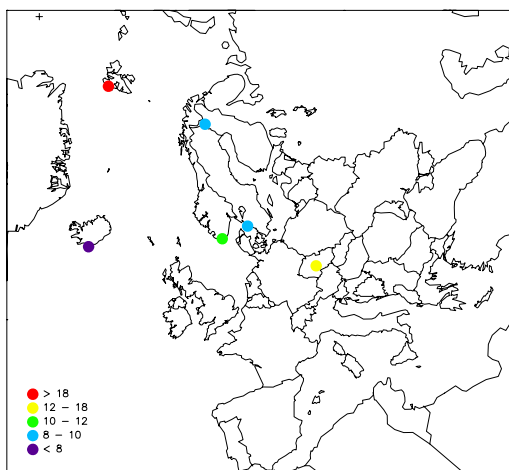


Figure 10:  $\alpha$ -HCH in air, 2003 ( $\text{pg}/\text{m}^3$ ).

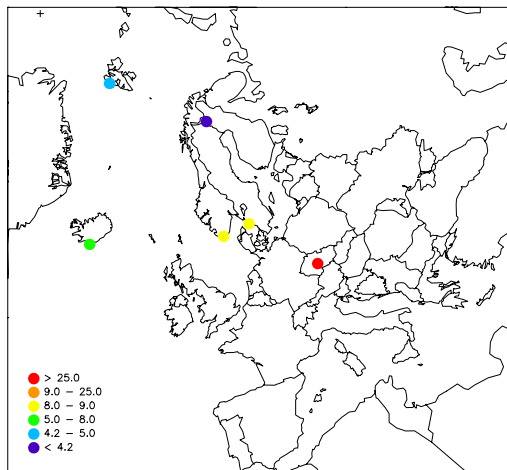


Figure 11:  $\gamma$ -HCH in air, 2003 ( $\text{pg}/\text{m}^3$ ).

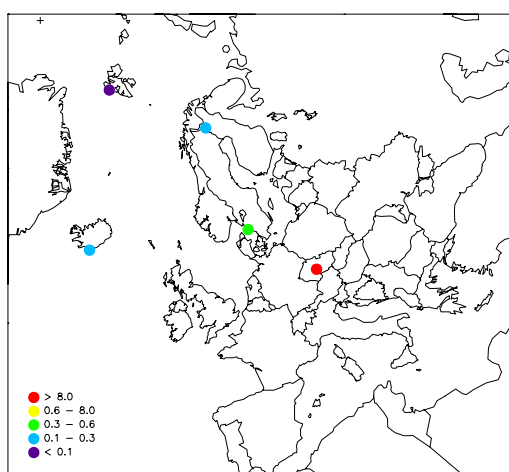


Figure 12: pp-DDD in air, 2003 ( $\text{pg}/\text{m}^3$ ).

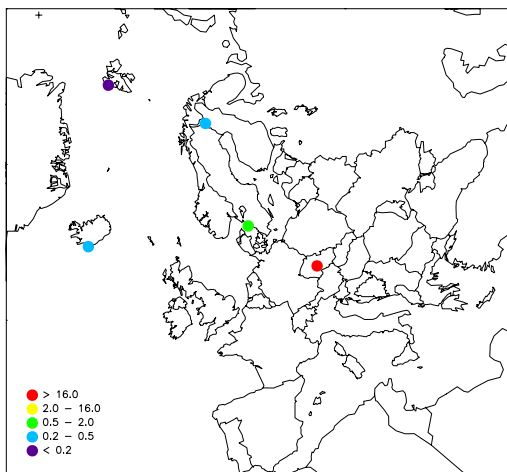


Figure 13: pp-DDT in air, 2003 ( $\text{pg}/\text{m}^3$ ).

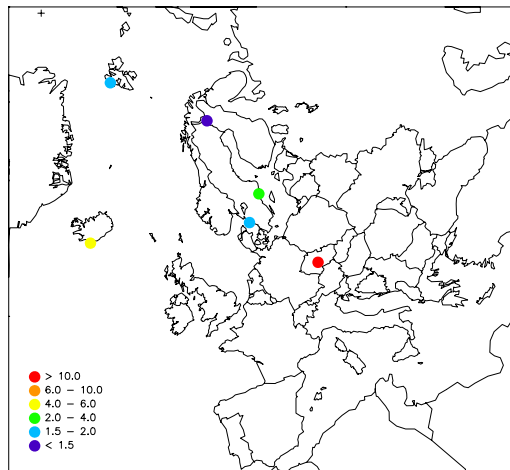


Figure 14: PCB-28 in air, 2003 ( $\text{pg}/\text{m}^3$ ).

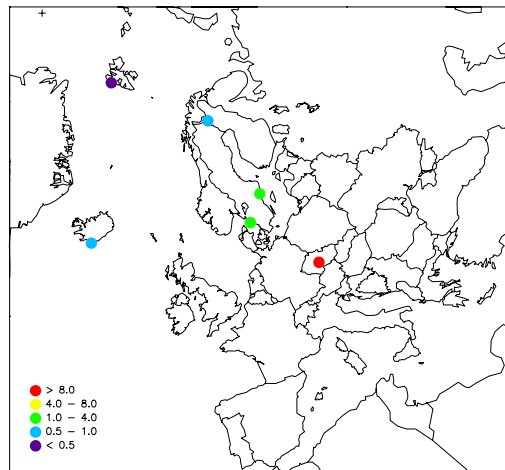


Figure 15: PCB-101 in air, 2003 ( $\text{pg}/\text{m}^3$ ).

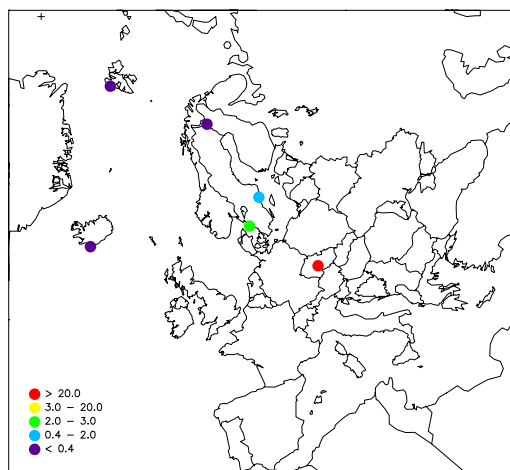


Figure 16: PCB-153 in air, 2003 ( $\text{pg}/\text{m}^3$ ).

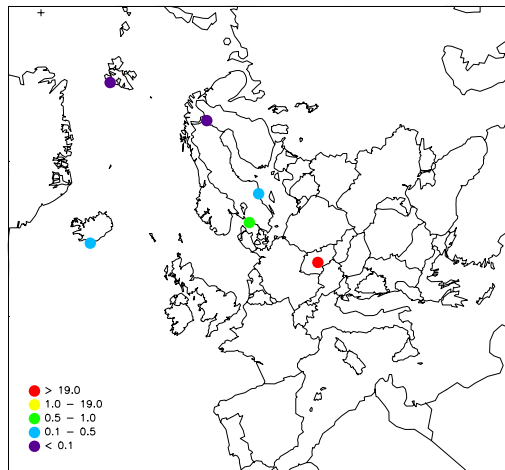


Figure 17: PCB-180 in air, 2003 ( $\text{pg}/\text{m}^3$ ).



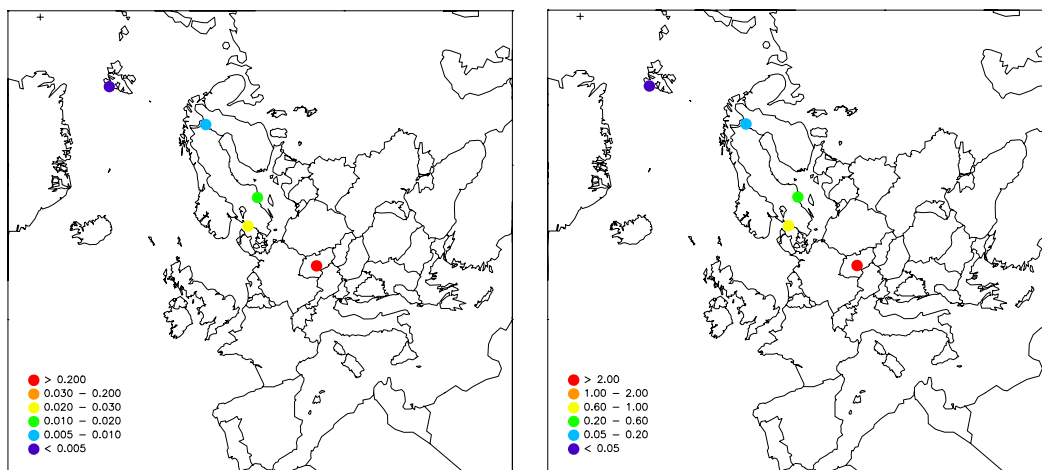


Figure 18: Anthracene in air, 2003 ( $\text{pg}/\text{m}^3$ ). Figure 19: Fluorantene in air, 2003 ( $\text{pg}/\text{m}^3$ ).

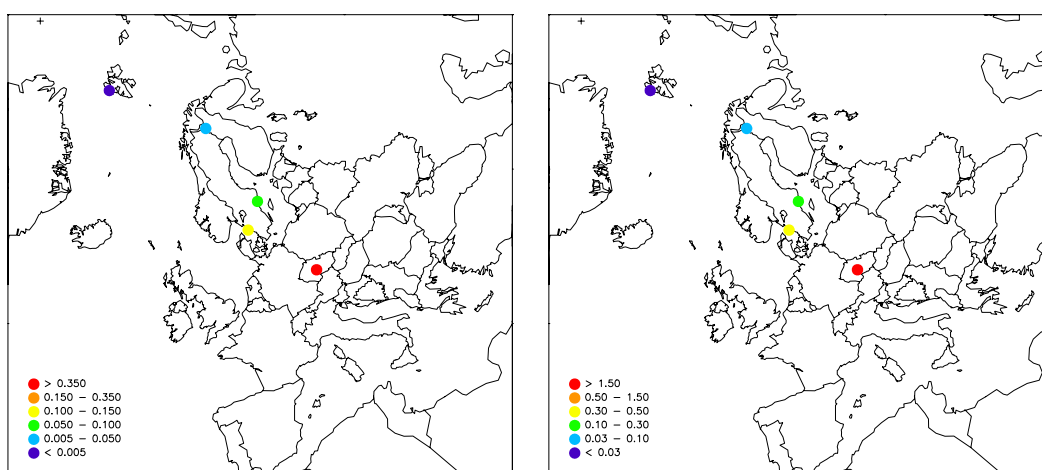


Figure 20: Benzo-a-pyrene (BaP) in air, 2003 ( $\text{ng}/\text{m}^3$ ).

Figure 21: Inden-123cd-pyrene in air, 2003 ( $\text{ng}/\text{m}^3$ ).

### 3.3 Annual summaries

Annual summaries of heavy metals in precipitation and air are given in Annex 1 and Annex 2, respectively. Annual summaries for POP data are seen in Annex 3 and Annex 4. The precipitation component summaries contain:

- the precipitation weighted arithmetic mean value,
- the minimum and maximum daily concentrations,
- the number of data below the detection limit,
- the number of samples for a specified component

The wet depositions have been obtained by multiplying the weighted mean concentration by the total amount of precipitation in the period. The concentrations for days with missing precipitation data have consequently been assumed to be equal to the weighted average of the period.

For air components the arithmetic mean and the geometric mean have been computed together with their standard deviations. The definitions are given on the next three pages. The geometric standard deviation is a dimensionless factor. As a measure of the completeness of the dataset, the number of samples analysed in the period has been printed.

In the computations of mean values and other statistics, the concentrations below the detection limit have been set equal to one half of the actual limit. An overview of the statistics and definitions is given below.

W.mean             $\hat{c}$  is the precipitation weighted arithmetic mean concentration used for precipitation components:

$$\hat{c} = \frac{I}{\sum_i p_i} \cdot \sum_i c_i \cdot p_i$$

where  $p_i$  is precipitation amount day  $i$  with the measured concentration  $c_i$  of a specific component.

Dep                is the wet deposition of a specific precipitation component. The deposition is the product of the total precipitation amount measured and the weighted arithmetic mean of a component measured at a site.

Arit mean         $\bar{c}_a$  is the arithmetic mean value used for air components only, and  $N$  is number of days with data:

$$\bar{c}_a = \frac{I}{N} \sum_i c_i$$

Arit sd             $sd_a$  is the arithmetic standard deviation from the arithmetic mean value. It is computed for air components only:

$$sd_a = \left( \frac{\sum_i (c_i - \bar{c}_a)^2}{N - 1} \right)^{\frac{1}{2}}$$

Geom mean         $\bar{c}_g$  is the geometric mean value used for air components only, and it is computed from the arithmetic mean of  $\ln c$ :

$$\overline{\ln c} = \frac{1}{N} \cdot \sum_i \ln c_i$$

$$\bar{c}_g = \exp(\overline{\ln c})$$

Geom sd  $sd_g$  is the geometric standard deviation from the geometric mean value. It is computed for air components only, and it is based on the standard deviation of  $\ln c$ :

$$sd_g = \exp (sdlnc)$$

Min is the minimum value reported for a specific component, and it is printed both for precipitation and air components. Some countries report negative values and even though these are not “real” values, it is statistically correct to include these.

5%, 50%, 95% is the 5, 50 and 95 percentile, defined as above and computed for air data only.

Max is the maximum value reported for a specific component, and it is given for precipitation and air components.

Num bel is the number of data below the detection limit (not used for precipitation amount).

Num samples is the number of samples for a specific component.

The units used for the results in this report are given in Table 7.

Table 7: Units used for the measured components.

Components	Units for W. mean, Min Max	Units for depositions
Amount precipitation	mm	mm
Heavy metals in precipitation	$\mu\text{g/l}$	$\mu\text{g/m}^2$
Mercury in precipitation	$\text{ng/l}$	$\text{ng/m}^2$
Heavy metals in air	$\text{ng/m}^3$	
Mercury in air	$\text{ng/m}^3$	
POPs in precipitation	$\text{ng/l}$	$\text{ng/m}^2$
PAHs in air	$\text{ng/m}^3$	
Pesticides, HCB and PCBs in air	$\text{pg/m}^3$	

### 3.4 Monthly summaries

Monthly averages of heavy metals are given in Annexes 5-8. The monthly mean values of precipitation data are precipitation weighted arithmetic averages. Average air concentrations are arithmetic averages of the reported values.

Data, which do not have monthly resolution, but have parts of the sample in one month and parts in the following, have estimated monthly means. The precipitation data have been treated like this: If e.g. a weekly sample has 5 days in one month and 2 days in the next, 5/7 parts of the precipitation will be assigned to the first month and 2/7 parts to the next month, while the concentrations are

assumed to be equal. The precipitation weighted monthly averages are then calculated as the estimated monthly deposition divided by the monthly precipitation amount.

For air samples starting and ending in different months weighted averages are calculated in a similar way. All values are multiplied with the number of days within a given month. The average is obtained by dividing the sum of these values with the number of days with measurements in that month.

### 3.5 Update

**The data compiled in this report represent the best data available at present. If any further errors are detected, the data will be corrected in the database.**

It is important that the users make certain that they have access to the most recent version of the database. For the data presented here the latest alteration is 1 June 2004. Scientific use of the EMEP data should be based on fresh copies of the data. Copies can be requested from the CCC (e-mail: [wenche.aas@nilu.no](mailto:wenche.aas@nilu.no) or [annehj@nilu.no](mailto:annehj@nilu.no)). The newest updates will be downloadable from EMEP's homepage as well, <http://www.nilu.no/projects/ccc/emepdata.html>. Information about the EMEP measurement network can be found at CCC's internet pages at <http://www.nilu.no/projects/ccc/index.html>.

## 4. Conclusions and recommendations

The lowest concentrations of Pb and Cd are generally observed in northern Scandinavia, Greenland, Iceland, and the westernmost part of Europe. Increasing gradients can be seen south and eastward.

There is a general need for more measurement sites with high quality data. Few stations in central parts of Europe, the Mediterranean region and the most eastern part of Europe have reported data for heavy metals in precipitation. The site density is also low for heavy metals in air in Scandinavia, the Mediterranean region and Eastern Europe. Data for POPs have been reported only from countries around the North and Baltic Seas, in the Arctic and from the Czech Republic.

It is important that all the countries deliver data on schedule every year so they can be included in the data report. Data delivered after the deadline will be included in the database only, which reduce the availability of the data. CCC will still appreciate receiving old data for the database. These data will be quality checked and transferred to the database in the same way as newer data. It is important that the participants give information on sampling, analytical methods and quality control.

## 5. Acknowledgements

A large number of anonymous co-workers in participating countries have been involved in this work. A list of participating institutes, which have provided data for 2003, can be seen below. The staff at CCC wishes to express their gratitude and appreciation for continued good co-operation and efforts. The email address to the data reporter/contact persons can be accessed by contacting CCC.

Country	Institute	Data reporter
Austria	Umweltbundesamt, Wien	Marina Fröhlich
Belgium	Flemish Environmental Agency	Jasmine Dumollin
Czech Republic	Czech Hydrometeorological Institute	Jaroslav Pekarek
Denmark	National Environmental Research Institute	Kåre Kemp
Estonia	Estonian Environmental Research Centre	Toivo Truuts
Finland	Finnish Meteorological Institute	Sirkka Leppanen
Germany	Umweltbundesamt, Berlin	Elke Bieber
Iceland	The Icelandic Meteorological Office	Johanna Thorlacius
Ireland	Environmental Protection Agency (EPA)	Ciaran O'Donnell
Latvia	Latvian Hydrometeorological Agency	Iraida Lyulko
Lithuania	Institute of Physics	Darius Valiulis
Netherlands	National Institute for Public Health and Environmental Protection (RIVM)	Arien Stolk
Norway	Norwegian Institute for Air Research (NILU)	Torunn Berg/Stein Manø
Poland	Institute of Meteorology and Water Management PL05: Institute of Environmental Protection	Gabriela Przybylska Anna Degorska
Portugal	Ministerio do Ambiente, Instituto de Meteorologia	Renato Carvalho
Slovakia	Slovakian Hydrometeorological Institute	Marta Mitosinkova
Slovenia	Environmental Agency of the Republic of Slovenia	Tanja Bolte
Spain	Dirección General de Calidad y Evaluación Ambiental	Gonzalez Ortiz, Alberto
Sweden	Swedish Water and Air Pollution Research Institute (IVL)	Karin Sjöberg
United Kingdom	AEA Technology and CEH	Peter Coleman and Alan Mc Donald

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## **Annex 1**

### **Annual statistics for heavy metals in precipitation**





BE0004R		Knokke		Belgium		bulk	
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.24	0.24	0.24	217.3	100.0	12	12
Cd	1.26	0.27	5.81	1145.5	100.0	7	12
Cu	2.54	2.09	4.50	2301.2	100.0	10	12
Pb	2.58	1.19	6.25	2333.2	100.0	0	12
Precip	-	42.0	147.0	905.2	98.4	0	12
Zn	33.39	7.46	116.64	30222.3	100.0	0	12

BE0004R		Knokke		Belgium		wet only	
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.24	0.24	0.24	79.8	100.0	9	9
Cd	1.25	0.67	3.50	417.0	100.0	0	9
Cr	1.49	0.40	6.17	496.6	100.0	3	9
Cu	3.37	2.09	16.17	1120.6	100.0	7	9
Hg	0.01	0.01	0.04	4.0	100.0	7	9
Ni	2.33	0.67	6.59	775.3	100.0	0	9
Pb	9.40	3.86	43.13	3126.8	100.0	0	9
Precip	-	0.0	66.6	332.6	88.2	3	12
Zn	132.25	55.35	319.27	43986.7	100.0	0	9

CZ0001R		Svratouch		Czech Republic			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Cd	0.08	0.02	0.71	52.6	86.2	0	37
Pb	1.59	0.26	9.21	1032.7	87.3	8	38
Precip	-	0.0	68.4	649.1	100.0	7	53

CZ0003R		Kosetice		Czech Republic			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Cd	0.16	0.05	0.53	75.2	97.6	0	41
Pb	2.60	0.07	12.63	1212.4	97.6	3	41
Precip	-	0.0	44.4	465.5	100.0	5	53

DE0001R		Westerland		Germany			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.14	0.05	0.45	86.4	99.3	0	38
Cd	0.04	0.01	0.11	23.1	99.3	0	38
Co	0.03	0.01	0.09	16.8	99.3	0	38
Cr	0.14	0.07	0.40	87.2	99.3	0	38
Cu	0.79	0.25	2.01	493.1	99.3	0	38
Fe	24.68	5.80	97.80	15362.7	99.3	0	38
Hg	9.08	1.90	49.30	5351.4	99.8	0	41
Mn	2.08	0.51	6.78	1295.1	99.3	0	38
Ni	0.24	0.06	1.32	150.5	99.3	0	38
Pb	1.17	0.29	3.66	729.7	99.3	0	38
Precip	-	0.0	46.4	622.4	99.5	10	52
V	0.65	0.29	1.25	406.2	99.3	0	38
Zn	7.19	2.40	34.90	4474.8	99.3	0	38

DE0002R		Langenbrugge		Germany		wet only	
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.13	0.04	1.05	55.8	96.5	0	36
Cd	0.04	0.01	0.50	16.7	96.5	0	36
Co	0.04	0.01	0.33	19.4	96.5	0	36
Cu	1.58	0.47	7.21	689.1	96.1	0	35
Fe	41.11	4.40	455.70	17946.7	94.3	0	35
Hg	10.87	3.00	38.60	4565.5	99.7	0	44
Mn	3.91	0.25	41.82	1706.0	96.5	0	36
Ni	0.39	0.12	1.89	171.7	95.6	0	35
Pb	1.19	0.27	9.34	521.2	96.5	0	36
Precip	-	0.0	73.1	436.6	99.5	7	52
V	0.52	0.10	4.72	226.0	96.5	0	36
Zn	6.75	2.90	29.90	2948.6	96.5	0	36

DE0002R		Langenbrugge		Germany		bulk	
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.19	0.03	1.42	74.1	96.1	0	105
Cd	0.12	0.01	1.46	46.6	95.8	0	104
Co	0.08	0.00	1.43	31.5	96.1	0	105
Cr	0.25	0.00	1.22	95.8	96.1	0	105
Cu	2.87	0.39	19.16	1109.5	94.2	0	99
Fe	64.39	6.50	713.20	24870.1	96.1	0	105
Mn	7.71	0.24	1000.00	2977.9	96.1	0	106
Ni	1.00	0.00	9.03	386.0	95.7	0	103
Pb	1.54	0.26	10.63	594.7	96.1	0	105
Precip	-	0.0	31.2	386.3	99.9	231	365
V	0.60	0.06	4.38	233.0	96.1	0	105
Zn	21.79	3.96	1000.00	8414.8	96.1	0	106

DE0003R		Schauinsland		Germany			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.09	0.03	0.26	121.3	99.6	0	42
Cd	0.04	0.01	0.09	51.4	99.6	0	42
Co	0.03	0.01	0.20	37.2	99.6	0	42
Cr	0.10	0.03	0.42	143.0	99.6	0	42
Cu	0.86	0.26	5.45	1183.5	93.2	0	41
Fe	22.12	4.40	179.90	30253.6	99.6	0	42
Mn	1.77	0.23	11.98	2423.7	99.6	0	42
Ni	0.29	0.09	1.53	401.7	99.6	0	42
Pb	1.10	0.19	3.37	1506.7	99.6	0	42
Precip	-	0.0	112.6	1367.7	99.5	6	52
V	0.35	0.06	1.25	479.2	99.6	0	42
Zn	6.57	2.40	18.70	8986.7	99.6	0	42

DE0004R		Deuselbach		Germany			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.10	0.04	0.35	66.4	100.0	0	34
Cd	0.07	0.02	0.28	43.6	100.0	0	34
Co	0.05	0.01	0.19	30.7	100.0	0	34
Cr	0.23	0.06	0.57	148.1	100.0	0	34
Cu	2.51	0.70	5.67	1616.5	96.9	0	33
Fe	30.34	2.10	149.30	19539.4	100.0	0	34
Mn	4.16	0.83	16.27	2678.2	100.0	0	34
Ni	0.38	0.04	1.54	241.5	100.0	0	34
Pb	1.77	0.50	5.04	1141.1	100.0	0	34
Precip	-	0.0	63.9	644.1	99.5	25	52
V	0.39	0.14	1.39	249.0	100.0	0	34
Zn	17.89	5.40	51.90	11525.0	98.0	0	33

DE0008R		Schmucke		Germany			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.14	0.05	0.51	118.0	99.1	0	39
Cd	0.05	0.02	0.15	40.3	94.7	0	38
Co	0.03	0.01	0.20	24.0	99.1	0	39
Cr	0.24	0.07	0.73	210.7	99.1	0	39
Cu	1.43	0.49	5.46	1253.5	99.1	0	39
Fe	28.21	7.60	206.10	24717.7	99.1	0	39
Mn	2.31	0.39	15.29	2024.2	99.1	0	39
Ni	0.45	0.15	2.02	391.4	99.1	0	39
Pb	1.56	0.59	7.46	1366.7	96.0	0	38
Precip	-	0.0	77.0	876.1	99.5	6	52
V	0.40	0.14	1.13	349.5	99.1	0	39
Zn	7.93	2.90	23.60	6943.7	99.1	0	39

DE0009R		Zingst		Germany			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.14	0.03	0.58	71.2	96.3	0	38
Cd	0.05	0.01	0.23	27.1	95.9	0	37
Co	0.03	0.01	0.16	17.8	96.3	0	38
Cr	0.18	0.07	0.56	94.6	96.3	0	38
Cu	2.26	0.34	13.47	1183.1	91.9	0	36
Fe	32.10	7.10	200.60	16812.5	96.3	0	38
Hg	9.45	3.60	36.40	4756.3	100.0	0	41
Mn	2.94	0.53	16.06	1539.4	96.3	0	38
Ni	0.28	0.03	2.00	145.2	95.9	0	37
Pb	1.23	0.30	3.15	641.4	96.3	0	38
Precip	-	0.0	65.0	523.8	99.5	14	52
V	0.55	0.19	1.26	289.7	96.3	0	38
Zn	8.59	2.80	22.20	4501.5	96.3	0	38

DK0008R		Anholt		Denmark			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.22	0.14	0.58	119.9	100.0	0	12
Cd	0.10	0.03	0.59	54.0	100.0	0	12
Cr	0.22	0.09	0.70	118.5	100.0	0	12
Cu	1.20	0.61	3.17	662.2	100.0	0	12
Ni	0.34	0.19	0.90	184.1	100.0	0	12
Pb	1.29	0.09	4.49	707.2	100.0	0	12
Precip	-	7.9	80.5	549.8	99.8	0	12
Zn	8.50	4.61	30.10	4673.9	100.0	0	12

DK0020R		Pedersker, Bornholm		Denmark			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.20	0.08	0.96	81.4	100.0	0	12
Cd	0.09	0.04	0.33	35.4	100.0	0	12
Cr	0.17	0.06	0.52	67.7	100.0	0	12
Cu	2.24	0.55	12.47	903.4	100.0	0	12
Ni	0.44	0.21	0.99	178.5	100.0	0	12
Pb	1.75	1.17	3.49	705.6	100.0	0	12
Precip	-	11.3	82.4	403.9	91.6	0	12
Zn	13.92	6.49	91.66	5621.5	100.0	0	12

DK0022R Sepstrup Sande Denmark

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.14	0.08	0.35	92.3	100.0	0	12
Cd	0.04	0.02	0.07	23.7	100.0	0	12
Cr	0.16	0.06	0.42	107.6	100.0	0	12
Cu	2.04	0.47	6.37	1342.3	100.0	0	12
Ni	0.31	0.19	0.63	201.1	100.0	0	12
Pb	1.28	0.59	2.79	842.8	100.0	0	12
Precip	-	13.5	94.0	656.7	99.8	0	12
Zn	10.96	4.48	31.04	7201.2	100.0	0	12

DK0031R Ulborg Denmark

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.19	0.11	0.47	135.3	100.0	0	12
Cd	0.05	0.02	0.11	33.7	100.0	0	12
Cr	0.18	0.07	0.58	130.4	100.0	0	12
Cu	1.68	0.41	4.74	1200.4	100.0	0	12
Ni	0.30	0.17	0.86	216.8	100.0	0	12
Pb	1.09	0.41	3.37	779.4	100.0	0	12
Precip	-	19.1	119.4	714.7	99.8	0	12
Zn	9.21	5.34	63.14	6579.1	100.0	0	12

EE0009R Lahemaa Estonia

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.23	0.10	0.60	165.9	100.0	7	12
Cd	0.06	0.01	0.18	45.5	100.0	1	12
Cu	4.43	0.50	27.80	3206.5	100.0	3	12
Pb	0.62	0.50	1.60	451.0	100.0	9	12
Precip	-	9.6	103.2	723.3	99.9	0	12

EE0011R Vilsandi Estonia

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.39	0.10	0.70	159.6	100.0	7	12
Cd	0.11	0.03	0.24	44.6	100.0	0	12
Cu	7.27	1.80	34.50	2982.0	100.0	0	12
Pb	0.66	0.50	2.70	270.6	100.0	9	12
Precip	-	4.7	84.4	410.3	99.9	0	12
Zn	25.96	5.00	48.00	10653.1	100.0	3	12

FI0008R Kevo Finland

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.11	0.02	0.58	26.3	100.0	0	12
Cd	0.03	0.01	0.83	8.2	100.0	0	12
Cr	0.15	0.06	2.23	37.7	100.0	0	12
Cu	2.38	1.16	14.07	590.2	100.0	0	12
Fe	17.59	10.71	131.89	4362.4	100.0	0	12
Mn	1.26	0.46	9.42	311.6	100.0	0	12
Ni	0.70	0.10	4.26	174.5	100.0	0	12
Pb	0.53	0.19	1.55	131.3	100.0	0	12
Precip	-	0.5	43.8	247.9	99.9	0	12
V	0.15	0.04	0.58	37.4	100.0	0	12
Zn	4.16	0.96	15.16	1030.9	100.0	0	12

FI0009R		Uto		Finland			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.24	0.07	1.07	71.4	99.9	0	10
Cd	0.12	0.02	0.52	34.7	99.9	0	10
Cr	0.26	0.11	0.92	76.1	99.9	0	10
Cu	2.54	0.82	7.96	748.2	99.9	0	10
Fe	45.16	16.14	153.02	13299.4	97.0	0	9
Mn	4.13	1.04	37.58	1215.2	99.9	0	10
Ni	0.90	0.24	8.49	264.0	99.9	0	10
Pb	2.37	0.44	9.80	698.3	99.9	0	10
Precip	-	0.0	54.4	294.5	99.9	1	12
V	0.74	0.32	2.36	216.8	99.9	0	10
Zn	8.80	2.52	25.69	2591.0	99.9	0	10

FI0017R		Virolahti II		Finland			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.14	0.05	0.29	73.0	100.0	0	11
Cd	0.07	0.02	0.19	39.6	100.0	0	11
Cr	0.23	0.03	0.46	122.6	100.0	0	11
Cu	1.30	0.78	3.13	702.4	100.0	0	11
Fe	36.28	11.60	114.26	19574.6	100.0	0	11
Mn	2.65	0.82	5.65	1430.4	100.0	0	11
Ni	0.40	0.15	1.14	215.8	100.0	0	11
Pb	1.47	0.40	3.12	795.5	100.0	0	11
Precip	-	0.0	134.6	539.5	99.9	1	12
V	0.51	0.19	1.45	275.6	100.0	0	11
Zn	4.86	1.86	10.98	2622.0	100.0	0	11

FI0022R		Oulanka		Finland			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.13	0.01	0.71	50.2	100.0	0	12
Cd	0.03	0.01	0.13	12.5	100.0	0	12
Cr	0.17	0.01	0.92	66.5	100.0	1	12
Cu	1.17	0.37	2.61	454.3	100.0	0	12
Fe	19.20	7.27	50.54	7430.6	100.0	0	12
Mn	2.09	0.25	8.45	807.2	100.0	0	12
Ni	0.38	0.12	1.10	147.7	100.0	0	12
Pb	0.79	0.21	3.36	305.0	100.0	0	12
Precip	-	5.1	55.6	386.9	99.9	0	12
V	0.24	0.09	1.08	92.1	100.0	0	12
Zn	2.57	0.75	11.39	993.0	100.0	0	12

FI0036R		Matorova		Finland			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.08	0.02	0.87	32.2	100.0	0	12
Cd	0.04	0.01	0.31	15.5	100.0	0	12
Cr	0.14	0.01	1.20	59.9	100.0	1	12
Cu	1.22	0.39	11.66	509.5	100.0	0	12
Fe	18.14	0.75	169.01	7549.3	100.0	1	12
Mn	1.37	0.26	12.72	570.2	100.0	0	12
Ni	0.38	0.08	3.03	158.7	100.0	0	12
Pb	0.59	0.15	8.08	246.3	100.0	0	12
Precip	-	2.3	85.5	416.1	99.9	0	12
V	0.16	0.07	1.96	67.6	100.0	0	12
Zn	3.35	1.07	35.70	1391.8	100.0	0	12

FI0053R Hailuoto Finland

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.14	0.05	1.01	39.2	100.0	0	12
Cd	0.07	0.03	0.31	20.8	100.0	0	12
Cr	0.31	0.04	1.34	87.5	100.0	0	12
Cu	2.57	0.74	7.05	734.3	100.0	0	12
Fe	63.59	13.36	765.50	18168.8	100.0	0	12
Mn	4.03	1.44	27.50	1152.0	100.0	0	12
Ni	0.82	0.20	3.49	234.6	100.0	0	12
Pb	1.60	0.51	8.93	456.1	100.0	0	12
Precip	-	2.0	46.7	285.7	99.9	0	12

FI0092R Hietajarvi Finland

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.09	0.02	0.26	50.4	100.0	0	12
Cd	0.05	0.02	0.12	28.1	100.0	0	12
Cr	0.18	0.05	0.57	102.7	100.0	0	12
Cu	1.44	0.42	3.59	842.0	100.0	0	12
Fe	20.49	8.00	87.99	11961.6	100.0	0	12
Mn	1.99	0.53	7.74	1161.6	100.0	0	12
Ni	0.29	0.11	1.33	171.4	100.0	0	12
Pb	1.06	0.30	3.06	622.0	100.0	0	12
Precip	-	9.6	120.1	583.8	99.9	0	12
V	0.30	0.10	1.16	175.3	100.0	0	12
Zn	3.11	1.41	9.79	1813.3	100.0	0	12

FI0093R Kotinen Finland

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.10	0.03	2.56	62.4	100.0	0	12
Cd	0.05	0.01	0.87	31.9	100.0	0	12
Cr	0.10	0.01	2.28	63.6	100.0	1	12
Cu	1.20	0.55	30.72	755.4	100.0	0	12
Fe	21.64	1.66	330.30	13591.0	100.0	0	12
Mn	2.52	0.37	50.10	1582.6	100.0	0	12
Ni	0.34	0.12	6.34	214.6	100.0	0	12
Pb	1.05	0.29	16.81	658.6	100.0	0	12
Precip	-	1.9	138.0	627.9	99.9	0	12
V	0.37	0.13	8.94	231.7	100.0	0	12
Zn	5.77	1.64	60.77	3625.7	100.0	0	12

FI0096G Pallas Finland

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Hg	7.38	3.50	26.30	1481.6	100.0	0	11
Precip	-	1.5	56.6	200.7	96.7	1	12

GB0017R

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.15	0.11	0.19	42.9	100.0	0	4
Cd	0.03	0.02	0.05	7.6	100.0	0	4
Cr	0.10	0.03	0.24	30.8	100.0	0	4
Cu	0.97	0.58	1.85	285.3	100.0	0	4
Ni	0.34	0.19	0.54	97.9	100.0	0	4
Pb	1.08	0.79	1.63	315.0	100.0	0	4
Precip	-	57.9	105.9	292.7	34.0	0	4
Zn	5.80	4.36	8.71	1699.3	100.0	0	4

GB0091R Banchory United Kingdom

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.55	0.04	11.59	216.4	96.9	0	33
Cd	0.04	0.01	0.26	16.9	96.9	1	33
Cr	0.29	0.01	1.86	114.6	96.9	0	33
Cu	0.75	0.11	3.77	293.9	96.9	0	33
Ni	0.41	0.02	7.73	162.2	96.9	0	33
Pb	1.18	0.12	7.24	462.0	96.9	0	33
Precip	-	0.0	41.8	393.3	79.7	4	41
Zn	8.82	3.00	71.17	3467.6	96.9	0	33

IE0001R Valentia Obs. Ireland

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Al	17.53	10.00	36.00	26386.0	100.0	0	12
As	0.50	0.50	0.50	752.7	100.0	12	12
Cd	0.05	0.05	0.05	75.3	100.0	12	12
Cr	0.50	0.50	0.50	752.7	100.0	12	12
Cu	0.50	0.50	0.50	752.7	100.0	12	12
Hg	50.00	50.00	50.00	75267.7	100.0	12	12
Mn	13.29	3.00	53.00	20003.1	100.0	0	12
Ni	0.50	0.50	0.50	752.7	100.0	12	12
Pb	0.50	0.50	0.50	752.7	100.0	12	12
Precip	-	25.0	293.0	1505.4	99.9	0	12
V	0.50	0.50	0.50	752.7	100.0	12	12
Zn	32.47	12.00	69.00	48879.8	100.0	0	12

IE0002R Turlough Hill Ireland

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Al	20.25	12.00	59.00	30668.4	58.9	0	8
As	0.50	0.50	0.50	757.2	58.9	8	8
Cd	0.05	0.05	0.05	75.7	58.9	8	8
Cr	0.50	0.50	0.50	757.2	58.9	8	8
Cu	1.15	0.50	2.00	1746.2	58.9	4	8
Hg	50.00	50.00	50.00	75724.8	58.9	8	8
Mn	3.56	0.50	12.00	5394.2	58.9	1	8
Ni	0.50	0.50	0.50	757.2	58.9	8	8
Pb	1.05	0.50	3.00	1590.0	58.9	6	8
Precip	-	12.6	217.0	1514.5	99.9	0	12
V	0.50	0.50	0.50	757.2	58.9	8	8
Zn	9.38	0.50	22.00	14207.4	58.9	1	8

IS0090R Reykjavik Iceland

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Al	173.09	12.70	2302.00	189892.4	99.9	0	48
As	0.17	0.03	1.13	185.7	99.9	11	48
Cd	0.01	0.01	0.08	13.6	99.9	29	48
Cr	0.34	0.05	5.60	377.0	99.9	5	48
Cu	1.84	0.30	12.95	2023.7	99.9	0	48
Fe	148.24	5.00	2657.00	162633.1	99.9	3	48
Mn	2.89	0.40	45.10	3170.7	99.9	0	48
Ni	0.61	0.05	4.42	668.9	99.9	1	48
Pb	0.48	0.14	2.70	532.6	99.9	0	48
Precip	-	0.0	84.5	1097.1	100.0	1	58
V	1.71	0.23	8.82	1875.7	99.9	0	48
Zn	4.68	0.50	52.00	5138.8	99.9	0	48

IS0091R		Storhofdi		Iceland			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Al	130.68	12.20	4312.00	231353.6	100.0	0	55
Cd	0.02	0.01	0.37	41.3	100.0	13	55
Cr	1.19	0.05	13.10	2108.4	100.0	3	55
Cu	31.42	0.32	582.30	55629.8	100.0	0	55
Fe	324.05	31.50	5853.00	573709.2	100.0	0	55
Mn	3.48	0.50	239.70	6160.0	100.0	0	55
Ni	1.11	0.05	173.80	1969.1	100.0	2	55
Pb	0.70	0.07	6.08	1234.4	100.0	0	55
Precip	-	0.0	93.4	1770.4	100.0	2	59
Zn	11.51	1.90	56.10	20375.3	100.0	0	55

LT0015R		Preila		Lithuania			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Cd	0.22	0.01	1.36	160.3	100.0	0	46
Cu	1.67	0.30	13.50	1242.0	100.0	0	46
Pb	3.59	0.50	19.80	2668.1	81.9	0	42
Precip	-	0.0	81.3	743.2	97.9	6	52
Zn	86.59	7.00	398.00	64349.6	100.0	0	46

LV0010R		Rucava		Latvia			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.43	0.07	1.45	307.8	99.0	27	37
Cd	0.16	0.05	0.81	115.2	99.0	0	37
Cu	1.97	0.50	26.40	1402.3	99.0	0	37
Mn	7.36	1.11	27.86	5254.2	99.0	28	37
Ni	1.81	0.17	8.76	1294.1	99.0	17	37
Pb	1.91	0.22	5.10	1363.8	99.0	1	37
Precip	-	0.0	54.9	713.6	100.0	10	49
Zn	16.99	3.43	72.20	12125.2	99.0	20	37

LV0016R		Zoseni		Latvia			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.43	0.04	2.05	274.8	99.9	33	46
Cd	0.10	0.01	0.84	62.1	99.9	4	46
Cu	2.14	0.40	26.00	1369.4	99.9	0	46
Mn	5.89	0.20	37.55	3761.3	99.9	28	46
Ni	1.57	0.05	11.05	1000.2	99.9	15	46
Pb	2.03	0.10	10.20	1298.3	99.9	5	46
Precip	-	0.0	40.6	638.8	100.0	2	49
Zn	15.79	0.83	95.09	10089.4	99.9	28	46

NL0009R		Kollumerwaard		Netherlands			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.29	0.07	1.73	168.4	100.0	3	11
Cd	0.05	0.02	0.34	30.4	100.0	2	11
Cr	0.35	0.26	2.10	204.2	100.0	8	11
Cu	1.40	0.54	12.35	825.0	100.0	0	11
Ni	0.32	0.20	2.55	188.2	100.0	6	11
Pb	1.64	0.49	8.61	965.9	100.0	0	11
Precip	-	1.9	132.8	588.8	76.7	0	11
Zn	7.13	4.71	34.80	4197.1	100.0	0	11



NL0091R		De Zilk		Netherlands			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.14	0.07	1.72	76.0	100.0	4	11
Cd	0.06	0.02	0.67	31.2	100.0	1	11
Cr	0.28	0.26	1.39	150.7	100.0	9	11
Cu	2.00	0.75	51.26	1096.5	100.0	0	11
Hg	8.63	0.00	25.40	5443.6	99.5	0	37
Ni	0.31	0.20	7.27	168.5	100.0	6	11
Pb	2.39	1.60	61.38	1308.5	100.0	0	11
Precip	-	0.3	132.4	630.5	92.1	4	48
Zn	7.41	4.40	109.80	4057.7	100.0	0	11

NO0001R		Birkenes		Norway			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Cd	0.04	0.00	0.22	55.4	99.9	21	48
Pb	1.57	0.16	8.16	2047.9	99.9	0	48
Precip	-	0.0	98.4	1301.9	100.0	5	62
Zn	3.93	0.27	29.23	5116.6	99.9	0	48

NO0039R		Kaarvatn		Norway			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Cd	0.01	0.00	0.06	14.3	99.2	30	51
Pb	0.25	0.02	2.07	398.0	99.2	5	51
Precip	-	0.0	201.4	1578.7	98.1	4	63
Zn	1.02	0.12	11.84	1604.6	99.2	10	51

NO0041R		Osen		Norway			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Cd	0.03	0.00	0.33	21.6	97.8	17	45
Pb	0.61	0.16	5.94	425.5	97.8	0	45
Precip	-	0.0	75.7	700.6	99.2	6	59
Zn	5.09	0.96	46.46	3569.5	97.8	0	45

NO0055R		Karasjok		Norway			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Cd	0.01	0.00	0.27	4.3	99.0	28	43
Pb	0.59	0.01	16.21	188.4	99.0	4	43
Precip	-	0.0	41.1	319.5	100.0	6	62
Zn	3.41	0.55	59.97	1088.2	99.0	0	43

NO0056R		Hurdal		Norway			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Cd	0.03	0.01	0.48	26.9	98.3	17	52
Pb	0.97	0.16	11.33	820.5	98.3	0	52
Precip	-	0.1	61.1	842.4	99.9	0	61
Zn	3.66	0.49	141.60	3084.0	98.3	0	52

NO0099R		Lista		Norway			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.75	0.05	7.50	826.4	97.8	1	52
Cd	0.06	0.00	0.47	70.4	97.8	22	52
Co	0.04	0.01	0.40	44.5	97.8	26	52
Cr	0.28	0.10	6.75	305.3	97.8	25	52
Cu	1.26	0.31	13.76	1390.6	97.8	0	52
Hg	8.12	4.80	11.10	8916.5	71.1	0	9
Mn	2.53	0.25	53.02	2785.9	97.8	3	52
Ni	0.48	0.10	12.08	525.7	97.8	9	52
Pb	1.96	0.34	24.13	2154.8	94.0	0	50
Precip	-	37.4	170.6	1101.2	100.0	1	58
Zn	7.31	1.33	79.77	8048.3	94.0	0	50

PL0004R		Leba		Poland			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Cd	0.05	0.03	0.08	26.4	100.0	0	12
Cr	0.18	0.10	0.59	101.9	100.0	0	12
Cu	0.95	0.42	2.42	540.0	100.0	0	12
Ni	0.26	0.11	0.61	146.9	100.0	0	12
Pb	1.08	0.55	1.95	616.0	100.0	0	12
Precip	-	6.1	98.2	569.2	99.9	0	12
Zn	4.55	3.05	11.40	2588.3	100.0	0	12

PL0005R		Diabla Gora		Poland			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.43	0.05	1.15	244.5	95.5	0	46
Cd	0.14	0.01	1.30	78.5	95.5	2	46
Cr	0.17	0.02	1.80	98.0	95.5	0	46
Cu	2.20	0.31	10.70	1253.8	95.4	0	45
Ni	1.60	0.01	9.90	913.4	95.5	2	46
Pb	1.32	0.06	8.60	751.5	95.5	0	46
Precip	-	0.0	61.4	570.8	99.7	4	52
Zn	7.13	1.50	150.00	4070.7	95.5	0	46

PT0003R		V. Do Castelo		Portugal			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Cd	0.42	0.42	0.42	668.0	92.5	96	96
Cu	0.97	0.33	29.14	1522.3	92.5	57	96
Mn	1.69	1.07	17.69	2648.2	92.5	81	96
Ni	0.93	0.78	3.32	1458.2	92.5	79	96
Pb	0.65	0.65	1.64	1019.5	92.5	95	96
Precip off	-	0.00	60.60	1571.9	99.9	213	365
Zn	16.09	1.00	82.00	25293.4	92.5	0	96

PT0004R		Monte Velho		Portugal			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Cd	0.42	0.42	0.42	244.6	91.3	36	36
Cu	0.80	0.33	3.29	459.2	91.3	23	36
Mn	1.63	1.07	7.07	938.2	91.3	30	36
Ni	1.93	0.78	9.85	1108.9	91.3	20	36
Pb	0.65	0.65	0.65	371.2	91.3	36	36
Precip off	-	0.00	45.70	575.5	99.9	310	365
Zn	10.09	1.00	28.00	5807.7	91.3	0	36

PT0010R Angro do Heroismo Portugal							
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Cd	0.42	0.42	0.42	474.9	97.3	32	32
Cu	1.06	0.33	6.21	1190.1	97.3	20	32
Mn	4.18	1.07	26.46	4671.3	97.3	20	32
Ni	7.70	0.78	30.73	8601.7	97.3	5	32
Pb	2.62	0.65	10.67	2924.1	97.3	24	32
Precip off	-	0.00	162.10	1117.5	99.7	9	52
Zn	100.42	4.00	448.00	112216.1	97.3	0	32

SE0005R Bredkalen Sweden							
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Hg	7.57	2.70	28.00	4091.6	100.0	0	12
Precip	-	1.0	104.0	540.6	96.7	0	12

SE0011R Vavihill Sweden							
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Hg	11.63	7.40	36.00	6652.2	100.0	0	12
Precip	-	3.7	107.8	571.8	96.7	0	12

SE0014R Råö Sweden							
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Hg	9.04	5.20	24.00	4625.5	100.0	0	12
Precip	-	2.4	108.2	511.6	96.7	0	12

SE0051R Arup Sweden							
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.19	0.11	0.44	137.5	100.0	0	12
Cd	0.08	0.03	0.28	56.7	100.0	0	12
Co	0.04	0.00	0.09	27.4	100.0	1	12
Cr	0.29	0.03	0.88	213.4	100.0	5	12
Cu	2.31	0.71	5.72	1695.6	100.0	0	12
Ni	0.20	0.01	0.70	147.1	100.0	2	12
Pb	1.50	0.95	6.31	1097.4	100.0	0	12
Precip	-	13.0	218.0	733.5	99.9	0	12
V	0.86	0.46	2.13	632.6	100.0	0	12
Zn	9.94	5.37	31.74	7292.0	100.0	0	12

SE0097R Gårdsjon Sweden							
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.16	0.03	0.34	123.5	100.0	5	13
Cd	0.05	0.02	0.10	36.8	100.0	0	13
Co	0.01	0.00	0.04	3.6	100.0	7	13
Cr	0.20	0.03	1.16	153.6	100.0	9	13
Cu	1.21	0.20	4.53	910.4	100.0	0	13
Mn	1.76	0.30	4.30	1323.5	97.3	0	12
Ni	0.19	0.01	0.60	142.2	100.0	1	13
Pb	1.13	0.31	2.36	850.5	100.0	0	13
Precip	-	20.0	121.0	752.8	98.9	0	13
V	1.02	0.33	2.39	770.5	100.0	0	13
Zn	5.01	0.40	16.45	3768.7	100.0	0	13

SK0002R		Chopok		Slovakia			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.32	0.02	1.13	269.9	100.0	1	12
Cd	0.61	0.18	1.47	518.7	95.8	0	11
Cr	0.23	0.08	0.68	193.7	100.0	0	12
Cu	3.03	1.45	8.70	2556.3	100.0	0	12
Mn	3.75	1.46	7.11	3164.3	85.8	0	10
Ni	0.53	0.05	1.22	446.5	100.0	0	12
Pb	3.41	1.55	8.01	2878.9	95.0	0	11
Precip	-	35.4	149.5	842.4	99.9	0	12

SK0004R		Stara Lesna		Slovakia			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.21	0.02	0.37	112.5	100.0	2	12
Cd	0.51	0.13	1.46	271.1	100.0	0	12
Cr	0.09	0.02	0.30	48.9	100.0	1	12
Cu	2.08	0.80	4.72	1106.0	100.0	0	12
Mn	4.90	2.04	9.33	2607.3	100.0	0	12
Ni	0.45	0.06	1.10	239.1	100.0	0	12
Pb	2.11	0.86	5.40	1121.2	96.2	0	11
Precip	-	5.4	110.3	531.5	99.9	0	12

SK0005R		Liesek		Slovakia			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.12	0.04	0.32	77.7	100.0	0	12
Cd	0.22	0.02	0.67	139.7	100.0	0	12
Cr	0.09	0.01	0.28	56.6	100.0	0	12
Cu	1.52	0.60	6.92	964.5	100.0	0	12
Mn	6.26	1.81	9.66	3982.4	100.0	0	12
Ni	0.99	0.37	3.31	631.8	96.5	0	11
Pb	2.16	1.35	5.16	1372.2	100.0	0	12
Precip	-	14.3	147.7	635.8	99.9	0	12

SK0006R		Starina		Slovakia			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.29	0.02	1.48	167.3	100.0	1	12
Cd	0.42	0.05	1.16	243.6	100.0	0	12
Cr	0.39	0.03	1.20	224.2	90.3	0	11
Cu	1.62	0.42	3.78	931.4	100.0	0	12
Mn	3.65	1.03	8.03	2093.1	100.0	0	12
Ni	0.43	0.05	0.89	247.4	100.0	2	12
Pb	4.37	1.16	13.88	2503.7	100.0	0	12
Precip	-	13.6	115.5	573.0	99.9	0	12

SK0007R		Topoliniky		Slovakia			
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
As	0.15	0.01	0.48	54.3	100.0	2	11
Cd	0.14	0.01	0.38	53.1	100.0	1	11
Cr	0.14	0.07	0.47	50.9	100.0	0	11
Cu	0.89	0.38	2.25	326.7	100.0	0	11
Mn	4.94	2.42	9.95	1813.6	94.7	0	10
Ni	0.41	0.17	1.03	151.3	100.0	0	11
Pb	1.41	0.30	4.40	516.9	100.0	0	11
Precip	-	5.7	66.1	367.1	91.5	0	11
Zn	5.28	0.85	17.00	1937.6	100.0	3	11

## **Annex 2**

### **Annual statistics for heavy metals in air**



AT0002R Illmitz Austria PM1  
January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.74	0.76	0.57	1.86	0.40	0.40	0.40	3.23	3.70	12.1	31	44
Cd	0.16	0.17	0.11	2.19	0.05	0.05	0.10	0.40	1.00	12.1	15	44
Ni	1.22	0.86	1.05	1.65	0.80	0.80	0.80	3.18	4.68	12.1	33	44
Pb	5.45	4.69	4.12	2.15	0.40	1.27	4.20	19.23	23.40	12.1	1	44

AT0002R Illmitz Austria PM2.5  
January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.90	1.00	0.64	2.05	0.40	0.40	0.40	4.24	4.70	12.9	30	47
Cd	0.35	0.69	0.19	2.60	0.05	0.05	0.20	1.32	4.60	12.9	6	47
Ni	2.31	4.28	1.48	2.13	0.80	0.80	1.72	7.23	29.44	12.9	23	47
Pb	9.76	10.61	7.01	2.20	0.90	1.88	6.60	30.68	66.00	12.9	0	47

AT0002R Illmitz Austria (PM10)  
January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Cd	0.56	1.16	0.26	2.94	0.05	0.05	0.20	2.81	7.70	16.4	4	60
Ni	2.68	4.05	1.93	2.00	0.80	0.80	1.97	5.42	31.55	16.4	15	60
Pb	14.82	19.47	9.13	2.55	1.10	2.23	8.50	52.35	104.60	16.4	0	60

AT0004R St. Koloman Austria  
January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Pb	2.97	2.02	2.37	1.98	0.80	0.80	2.60	6.80	9.80	16.2	0	59

AT0005R Vorhegg Austria  
January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Cd	0.16	0.16	0.11	2.25	0.05	0.05	0.10	0.54	0.80	14.2	21	52
Pb	4.64	4.27	2.90	2.97	0.40	0.40	4.15	14.24	20.20	14.2	7	52

BE0004R Knokke Belgium  
January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Cd	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.0	12	12
Cu	6.89	1.56	6.78	1.22	6.00	6.00	6.00	11.00	11.00	100.0	8	12
Ni	5.34	1.30	5.20	1.27	4.00	4.00	5.00	8.00	8.00	100.0	4	12
Pb	25.71	7.21	24.92	1.32	16.00	16.00	25.50	39.00	39.00	100.0	0	12
Zn	41.17	17.29	38.38	1.51	20.00	20.00	41.50	78.00	78.00	100.0	0	12

CZ0001R Svratouch Czech Republic  
January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Cd	0.32	0.33	0.23	2.55	0.00	0.00	0.21	0.99	1.77	22.1	0	81
Pb	10.63	9.62	7.90	2.14	1.85	2.19	8.26	36.41	50.68	21.8	0	80

CZ0003R Kosetice Czech Republic  
January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Cd	0.27	0.30	0.18	2.56	0.01	0.03	0.16	0.81	1.69	18.6	0	68
Pb	9.64	7.67	7.36	2.10	1.55	2.20	7.30	25.58	39.21	18.6	0	68

DE0001R		Westerland		Germany								
January 2003 - December 2003												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.70	0.78	0.51	2.28	0.14	0.16	0.44	2.42	4.16	100.0	0	37
Cd	0.17	0.17	0.12	2.32	0.04	0.04	0.11	0.60	0.84	97.3	0	36
Cu	2.18	1.56	1.69	2.12	0.42	0.42	1.94	5.88	6.82	100.0	0	37
Fe	83.78	57.83	60.00	2.51	9.00	9.00	81.00	193.80	219.00	100.0	0	37
Mn	2.69	1.67	2.09	2.21	0.36	0.36	2.50	6.25	6.51	100.0	0	37
Ni	1.32	0.81	1.07	1.98	0.23	0.25	1.14	3.25	3.39	100.0	0	37
Pb	6.14	6.12	4.44	2.35	0.84	0.97	4.18	21.55	31.58	100.0	0	37

DE0002R		Langenbrugge		Germany								
January 2003 - December 2003												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.93	0.81	0.70	2.05	0.23	0.27	0.56	2.81	3.71	97.5	0	35
Cd	0.24	0.21	0.18	2.15	0.05	0.05	0.19	0.85	0.95	99.7	0	36
Cu	2.63	1.13	2.42	1.54	0.76	1.15	2.15	4.75	5.11	99.7	0	36
Fe	116.34	60.31	104.45	1.60	39.00	46.65	97.00	271.30	290.00	99.7	0	36
Mn	3.93	2.01	3.53	1.61	1.29	1.55	3.23	8.91	9.35	99.7	0	36
Ni	0.97	0.37	0.90	1.47	0.42	0.44	0.87	1.75	1.98	97.0	0	35
Pb	9.61	9.30	7.28	2.11	2.43	2.50	6.67	39.18	44.30	99.7	0	36

DE0003R		Schauinsland		Germany								
January 2003 - December 2003												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Cu	1.46	1.06	1.02	2.43	0.25	0.25	1.23	3.54	3.80	100.0	0	37
Fe	87.93	86.42	53.52	2.83	10.00	10.85	65.50	310.95	322.00	99.7	0	36
Mn	2.32	1.73	1.61	2.61	0.10	0.14	1.67	5.54	7.45	100.0	0	37
Ni	0.66	0.61	0.42	2.85	0.08	0.08	0.54	2.37	2.97	91.2	0	33
Pb	2.84	1.99	2.21	2.02	0.69	0.77	2.17	6.67	9.16	100.0	0	37

DE0004R		Deuselbach		Germany								
January 2003 - December 2003												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.53	0.41	0.43	1.98	0.06	0.12	0.41	1.50	2.24	100.0	0	37
Cd	0.20	0.10	0.17	1.67	0.06	0.07	0.18	0.38	0.42	97.3	0	36
Cu	2.77	1.02	2.59	1.45	1.04	1.32	2.54	4.71	6.00	100.0	0	37
Fe	96.36	77.80	68.54	2.51	9.00	9.00	85.50	296.90	370.00	99.7	0	36
Mn	4.31	2.49	3.57	1.96	0.36	0.91	3.75	9.73	12.57	100.0	0	37
Ni	0.52	0.31	0.37	2.70	0.03	0.04	0.56	0.97	1.02	100.0	0	37
Pb	9.01	3.49	8.30	1.52	2.47	3.20	7.90	15.39	19.25	100.0	0	37

DE0007R		Neuglobsow		Germany								
January 2003 - December 2003												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Cd	0.26	0.22	0.19	2.53	0.01	0.04	0.24	0.87	0.98	100.0	0	37
Cu	2.49	1.65	2.04	1.92	0.41	0.55	1.98	5.89	8.34	97.0	0	35
Fe	64.42	55.48	42.94	2.71	8.00	8.00	51.00	166.70	263.00	100.0	0	37
Mn	3.18	1.97	2.47	2.21	0.35	0.35	2.84	6.45	7.91	100.0	0	37
Ni	0.93	0.52	0.76	1.98	0.20	0.20	0.80	1.91	2.00	97.3	0	36
Pb	8.62	7.43	6.16	2.68	0.31	0.61	7.12	25.12	36.74	100.0	0	37

DE0008R		Schmucke		Germany								
January 2003 - December 2003												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.46	0.27	0.40	1.86	0.07	0.10	0.43	1.19	1.23	100.0	0	37
Cd	0.15	0.09	0.11	2.25	0.01	0.01	0.12	0.31	0.34	100.0	0	37
Cu	1.61	1.02	1.30	1.86	0.31	0.31	1.33	4.19	5.62	100.0	0	37
Fe	83.59	79.64	43.75	3.44	6.10	7.81	52.00	251.50	319.00	100.0	0	37
Mn	2.67	1.87	1.88	2.53	0.33	0.36	2.52	6.78	7.75	100.0	0	37
Ni	0.78	0.44	0.63	1.99	0.10	0.13	0.70	1.85	1.99	100.0	0	37
Pb	4.97	2.33	4.39	1.67	1.25	1.60	4.57	10.29	10.40	100.0	0	37



DE0009R Zingst Germany												
January 2003 - December 2003												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.67	0.61	0.49	2.56	0.04	0.09	0.47	1.82	3.02	100.0	0	37
Cd	0.23	0.19	0.17	2.34	0.02	0.03	0.21	0.63	0.91	100.0	0	37
Cu	1.83	1.11	1.51	2.00	0.37	0.41	1.68	4.11	5.24	100.0	0	37
Fe	78.69	46.83	60.97	2.40	8.00	8.90	84.00	168.10	169.00	100.0	0	37
Mn	2.52	1.51	1.93	2.39	0.32	0.35	2.57	5.77	5.85	100.0	0	37
Ni	1.44	1.01	1.14	2.05	0.31	0.36	1.17	3.51	4.52	100.0	0	37
Pb	7.16	6.78	4.83	2.92	0.31	0.38	6.02	21.22	34.90	100.0	0	37

DK0003R Tange Denmark												
January 2003 - December 2003												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.94	1.31	0.54	3.01	0.00	0.11	0.52	3.31	14.44	97.5	12	356
Cd	0.14	1.04	0.19	3.16	-18.36	-0.21	0.13	0.75	2.67	97.5	297	356
Cr	0.42	3.15	0.42	2.96	-53.76	-0.32	0.35	1.72	10.71	97.2	200	355
Cu	2.39	15.05	1.23	2.60	-0.28	0.24	1.29	5.08	281.39	97.5	18	356
Fe	137.27	200.47	77.86	2.87	2.57	16.17	76.26	443.93	2366.62	97.5	2	356
Mn	5.19	6.26	3.30	2.55	0.28	0.82	3.10	16.10	62.05	97.5	7	356
Ni	1.39	1.51	0.98	2.48	-0.14	0.18	1.07	3.25	19.38	97.2	19	355
Pb	6.51	16.53	3.45	3.08	-13.23	0.41	3.48	22.21	278.59	97.5	4	356
Zn	16.11	17.91	10.64	2.53	-3.26	2.22	10.81	52.94	147.22	97.5	6	356

DK0005R Keldsnor Denmark												
January 2003 - December 2003												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.60	0.96	0.33	3.11	-0.06	0.04	0.33	1.94	8.50	98.0	43	358
Cd	0.18	0.34	0.23	2.69	-0.50	-0.25	0.13	0.76	2.21	98.0	294	358
Fe	92.90	103.97	58.43	2.75	-2.13	9.15	60.05	296.43	978.33	98.0	3	358
Mn	2.90	3.10	1.95	2.62	-1.29	0.29	2.05	8.63	31.31	98.0	27	358
Ni	2.59	2.53	1.68	2.81	-0.26	0.22	1.88	7.29	18.64	98.0	11	358
Pb	6.90	9.10	3.52	3.48	-0.07	0.39	3.62	29.94	63.27	98.0	6	358

DK0008R Anholt Denmark												
January 2003 - December 2003												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.46	0.80	0.27	2.73	-0.04	0.06	0.26	1.51	8.90	99.9	36	365
Cd	0.10	0.30	0.17	2.84	-0.52	-0.30	0.07	0.62	2.44	99.9	327	365
Cr	0.32	0.44	0.30	2.92	-1.61	-0.22	0.26	1.10	2.28	99.9	239	365
Cu	1.04	1.24	0.66	2.82	-0.07	0.10	0.63	3.01	13.70	99.9	38	365
Fe	50.52	49.42	33.58	2.56	2.11	6.13	33.82	156.63	320.52	99.9	0	365
Mn	1.96	1.58	1.44	2.43	-0.07	0.33	1.48	5.09	10.44	99.9	26	365
Ni	1.71	1.43	1.22	2.48	-0.00	0.24	1.44	4.58	10.06	99.6	13	364
Pb	4.26	6.12	2.04	3.56	-0.28	0.27	2.12	17.46	43.79	99.9	14	365
Zn	9.90	10.84	6.04	2.81	-0.20	0.98	5.93	30.13	71.00	99.9	15	365

DK0011G Nuuk, Greenland Denmark												
January 2003 - December 2003												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.04	0.03	0.03	2.05	-0.00	0.00	0.04	0.13	0.15	41.4	3	25
Cr	0.14	0.13	0.09	3.35	0.00	0.01	0.10	0.47	0.53	41.4	5	25
Cu	0.56	0.98	0.27	3.10	0.05	0.05	0.25	3.90	4.79	41.4	0	25
Hg	1.36	0.31	1.32	1.31	0.00	0.75	1.41	1.78	2.83	39.5	6	3463
Mn	0.82	0.77	0.54	2.59	0.15	0.15	0.43	2.77	2.93	41.4	0	25
Ni	0.22	0.38	0.14	2.70	-0.14	-0.10	0.13	1.50	1.94	41.4	2	25
Pb	0.43	0.28	0.35	1.95	0.07	0.08	0.36	1.19	1.35	41.4	0	25
Zn	2.48	3.50	1.58	2.43	0.35	0.35	1.49	14.75	17.61	41.4	0	25

DK0031R		Ulborg		Denmark									
January 2003 - December 2003													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
As	0.28	0.32	0.19	2.99	-0.08	-0.01	0.19	0.86	2.58	83.8	62	306	
Cd	0.07	0.21	0.12	2.83	-0.47	-0.27	0.06	0.47	0.86	83.8	287	306	
Cr	0.28	0.46	0.25	3.29	-1.54	-0.28	0.19	1.10	2.52	83.5	211	305	
Cu	0.90	1.48	0.52	3.31	-0.26	0.01	0.56	2.70	18.73	83.8	61	306	
Fe	61.54	135.71	28.03	3.43	-1.78	3.20	28.56	161.80	1760.99	83.8	4	306	
Mn	1.99	3.26	1.20	2.83	-0.24	0.09	1.20	5.09	42.49	83.8	34	306	
Ni	0.95	0.80	0.67	2.77	-0.33	0.07	0.76	2.16	5.62	83.8	30	306	
Pb	3.07	3.48	1.72	3.69	-0.10	0.06	1.95	11.32	17.80	83.8	22	306	
Zn	8.32	8.19	5.25	2.98	-2.46	0.71	5.77	26.42	49.94	83.8	24	306	

ES0008R		Niembro		Spain									
January 2003 - December 2003													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
Cd	0.12	0.12	0.07	3.31	0.01	0.01	0.10	0.45	0.50	98.4	7	43	
Cu	24.35	27.74	18.30	2.11	3.70	4.08	18.50	58.14	183.30	98.4	0	43	
Pb	8.88	7.65	6.56	2.25	0.99	1.43	6.19	26.95	36.29	98.4	0	43	

ES0009R		Campisabalos		Spain									
January 2003 - December 2003													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
Cd	0.06	0.05	0.04	2.58	0.01	0.01	0.04	0.16	0.27	98.4	11	43	
Cu	39.50	47.82	26.68	2.53	1.90	4.08	31.10	134.38	295.30	98.4	0	43	
Pb	4.06	2.19	2.99	2.39	0.40	0.40	3.95	7.70	9.09	98.4	4	43	

FI0036R		Matorova		Finland									
January 2003 - December 2003													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
As	0.17	0.15	0.12	2.74	0.01	0.02	0.13	0.52	0.59	77.0	1	42	
Cd	0.03	0.05	0.02	2.64	0.00	0.00	0.02	0.08	0.31	77.0	0	42	
Cr	0.20	0.22	0.11	4.38	0.00	0.00	0.17	0.52	1.23	77.0	4	42	
Cu	0.55	0.47	0.38	2.49	0.04	0.09	0.41	1.75	1.78	73.2	0	40	
Fe	29.43	20.81	23.05	2.17	1.47	6.21	24.21	71.86	109.59	77.0	0	42	
Mn	0.68	0.53	0.53	2.07	0.16	0.17	0.49	1.90	2.26	77.0	0	42	
Ni	0.36	0.31	0.24	2.77	0.02	0.03	0.29	1.20	1.25	77.0	0	42	
Pb	0.90	0.78	0.64	2.51	0.05	0.09	0.65	2.95	3.61	77.0	0	42	
V	0.39	0.46	0.24	2.74	0.01	0.03	0.25	0.98	2.79	77.0	0	42	
Zn	2.27	2.06	1.64	2.35	0.21	0.29	1.69	7.31	10.73	77.0	0	42	

FI0096G		Pallas		Finland									
January 2003 - December 2003													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
Hg (amalg_tube)	1.48	0.20	1.47	1.14	1.10	1.20	1.50	1.80	2.30	20.8	0	76	
Hg (tub_denuder)	1.87	1.12	1.55	1.92	0.20	0.35	1.65	4.28	6.00	64.1	0	34	

GB0017R		Heigham Holmes		United Kingdom									
January 2003 - December 2003													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
As	1.28	1.55	0.84	2.54	0.20	0.20	0.70	5.70	5.70	25.2	0	11	
Cd	0.18	0.18	0.19	2.07	0.00	0.00	0.10	0.50	0.50	25.2	0	11	
Cr	2.17	2.39	1.44	2.83	0.22	0.22	1.31	7.00	7.00	25.2	0	11	
Cu	2.82	1.77	2.21	2.05	0.60	0.60	2.10	6.30	6.30	25.2	0	11	
Ni	2.02	1.42	1.60	2.01	0.52	0.52	1.51	5.01	5.01	25.2	0	11	
Pb	10.25	7.77	7.57	2.29	2.10	2.10	7.80	27.30	27.30	25.2	0	11	
Zn	29.58	18.26	25.51	1.63	16.90	16.90	20.20	75.10	75.10	25.2	0	11	

## GB0091R Banchory United Kingdom

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.45	0.31	0.36	2.00	0.10	0.10	0.40	1.20	1.30	77.8	0	41
Cd	0.05	0.08	0.15	1.51	0.00	0.00	0.00	0.20	0.30	77.8	0	41
Cr	1.43	2.43	0.83	4.45	0.01	0.01	1.05	6.13	14.56	77.8	0	41
Cu	1.80	3.84	1.03	2.36	0.20	0.22	0.90	3.98	25.10	77.8	0	41
Ni	1.04	1.22	0.68	2.62	0.03	0.11	0.84	2.60	7.74	77.8	0	41
Pb	4.01	4.38	2.42	2.73	0.10	0.61	2.10	14.53	18.70	77.8	0	41
Zn	19.44	19.02	16.12	1.77	4.50	7.02	16.70	34.22	128.80	77.8	0	41

## IE0031R Mace Head Ireland

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Hg	1.67	0.20	1.66	1.12	0.88	1.38	1.66	2.02	2.85	81.8	0	7170

## IS0091R Storhofdi Iceland

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Al	252.32	270.36	135.30	3.30	19.30	21.95	131.60	974.25	1036.90	99.8	0	24
As	0.15	0.06	0.14	1.51	0.06	0.06	0.13	0.27	0.27	99.8	0	24
Cd	0.02	0.01	0.02	1.84	0.01	0.01	0.02	0.06	0.06	99.8	0	24
Cr	5.62	6.04	2.52	4.27	0.25	0.28	3.82	19.50	19.57	99.8	0	24
Cu	0.64	0.49	0.50	2.00	0.16	0.17	0.43	2.06	2.27	99.8	0	24
Fe	399.15	429.25	213.76	3.23	29.70	33.65	149.50	1417.53	1486.00	99.8	0	24
Hg	0.80	0.48	0.72	1.53	0.40	0.40	0.75	2.42	2.80	99.8	0	24
Mn	6.56	6.98	3.61	3.12	0.59	0.64	2.47	23.39	24.67	99.8	0	24
Ni	3.66	3.55	1.99	3.42	0.18	0.24	2.58	11.72	11.77	99.8	0	24
Pb	0.50	0.43	0.38	2.02	0.12	0.13	0.36	1.79	1.98	99.8	0	24
V	2.12	1.33	1.76	1.88	0.50	0.55	1.55	4.76	4.83	99.8	0	24
Zn	5.75	8.92	3.46	2.43	0.80	0.88	3.08	36.78	45.13	99.8	0	24

## LT0015R Preila Lithuania

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Cd	0.20	0.13	0.16	2.07	0.04	0.04	0.18	0.52	0.60	99.8	0	53
Cu	1.24	0.48	1.16	1.50	0.50	0.57	1.10	2.00	2.30	99.8	0	53
Pb	7.09	4.28	5.82	2.02	1.30	1.61	6.40	14.23	17.80	99.7	0	53
Zn	26.41	37.86	17.39	2.55	3.00	4.70	15.00	130.30	184.00	99.8	0	53

## LV0010R Rucava Latvia

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Cd	0.32	0.32	0.17	3.90	0.00	0.01	0.20	1.09	1.30	96.2	1	51
Mn	4.61	5.12	2.46	3.38	0.12	0.24	2.35	14.84	27.42	100.0	2	53
Ni	1.05	1.47	0.67	2.52	0.04	0.15	0.77	2.59	10.52	100.0	5	53
Pb	5.07	5.11	2.90	3.15	0.20	0.31	3.15	17.29	22.23	100.0	0	53
Zn	26.38	28.54	13.98	3.50	0.41	1.59	15.85	102.86	109.72	100.0	1	53

## LV0016R Zoseni Latvia

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Cd	0.17	0.11	0.12	2.68	0.00	0.02	0.16	0.38	0.39	100.0	1	53
Cu	0.69	0.43	0.54	2.57	0.01	0.07	0.64	1.51	2.81	100.0	3	53
Mn	8.82	10.70	4.89	3.25	0.05	0.87	4.69	35.72	49.69	100.0	1	53
Ni	0.58	0.46	0.44	2.42	0.01	0.06	0.50	1.71	2.56	100.0	10	53
Pb	2.98	2.76	2.04	2.72	0.05	0.32	2.06	9.31	14.03	100.0	1	53
Zn	10.68	9.45	7.98	2.40	0.16	2.17	8.82	26.26	62.42	100.0	1	53

NL0009R		Kollumerwaard		Netherlands								
January 2003 - December 2003												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.71	0.92	0.46	2.51	0.09	0.09	0.46	2.31	7.56	49.3	21	180
Cd	0.20	0.23	0.11	3.10	0.02	0.02	0.12	0.68	1.55	49.3	35	180
Pb	8.32	8.28	5.28	2.81	0.22	0.74	5.40	25.84	51.78	49.3	0	180
Zn	22.62	18.55	17.27	2.06	7.70	7.70	17.83	59.35	129.10	49.3	62	180

NO0042G		Zeppelin, Spitsbergen		Norway								
January 2003 - December 2003												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.12	0.18	0.03	5.36	0.00	0.00	0.03	0.64	0.72	27.9	13	52
Cd	0.02	0.03	0.01	7.23	0.00	0.00	0.01	0.09	0.09	27.9	23	52
Co	0.01	0.01	0.01	3.24	0.00	0.00	0.01	0.04	0.05	27.9	16	52
Cr	0.09	0.07	0.07	2.13	0.02	0.02	0.07	0.22	0.32	27.9	44	52
Cu	0.23	0.22	0.13	3.30	0.01	0.01	0.17	0.73	1.05	27.9	18	52
Mn	0.34	0.42	0.17	3.49	0.03	0.03	0.15	1.25	2.15	27.9	12	52
Ni	0.10	0.09	0.06	3.03	0.01	0.01	0.06	0.30	0.36	27.9	18	52
Pb	0.69	0.97	0.19	6.12	0.00	0.01	0.19	3.12	3.18	27.9	3	52
V	0.14	0.16	0.07	3.20	0.01	0.01	0.06	0.44	0.81	27.9	0	52
Zn	1.32	1.44	0.68	3.27	0.08	0.10	0.67	4.31	5.79	27.9	28	52
Hg (Hg_mon)	1.61	0.29	1.56	1.41	0.00	1.05	1.65	1.97	2.59	38.8	0	3402
Hg (high_vol_sampler)	2.20	2.86	1.20	3.13	0.10	0.24	1.30	10.46	14.00	85.2	0	47
RGM reactive_gaseous_mercury (Apr-May)	42.39	58.49	19.53	4.74	0.27	0.99	19.07	198.36	223.00	7.4	0	83
Hg (mini_trap) (Apr-May)	11.86	62.99	15.35	3.94	0.70	1.66	14.90	146.69	350.00	5.2	0	53

NO0099R		Lista		Norway									fine fraction (PM 2.5)	
January 2003 - December 2003														
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl		
As	0.40	0.46	0.27	2.43	0.04	0.06	0.27	1.65	2.51	94.8	6	48		
Cd	0.07	0.07	0.05	3.04	0.00	0.01	0.06	0.23	0.25	92.9	7	47		
Co	0.02	0.03	0.01	3.34	0.00	0.00	0.01	0.04	0.19	96.2	29	49		
Cr	0.28	0.41	0.16	2.72	0.05	0.05	0.12	1.19	2.36	96.2	30	49		
Cu	0.48	0.55	0.35	2.43	0.04	0.06	0.40	1.78	3.07	96.2	12	49		
Ni	0.94	2.16	0.50	2.77	0.04	0.05	0.55	1.96	15.47	96.2	14	49		
Pb	2.47	2.09	1.79	2.51	0.14	0.33	2.29	8.23	8.68	94.3	0	48		
V	1.98	2.39	1.41	2.15	0.19	0.37	1.49	4.68	16.76	96.2	9	49		
Zn	7.47	10.35	4.77	2.67	0.51	0.84	5.05	19.26	68.94	94.3	8	48		

NO0099R		Lista		Norway									course fraction (PM10-PM2.5)	
January 2003 - December 2003														
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl		
As	0.10	0.09	0.08	2.05	0.02	0.03	0.07	0.33	0.46	93.4	16	48		
Cd	0.01	0.01	0.01	3.11	0.00	0.00	0.01	0.04	0.06	93.4	26	48		
Co	0.02	0.02	0.01	2.16	0.00	0.00	0.01	0.05	0.10	94.9	25	49		
Cr	0.47	0.47	0.38	1.92	0.15	0.15	0.51	1.03	3.28	94.9	39	49		
Cu	0.37	0.29	0.30	1.89	0.05	0.09	0.32	0.86	1.91	94.9	15	49		
Ni	0.18	0.20	0.12	2.65	0.01	0.02	0.14	0.80	1.03	94.9	24	49		
Pb	0.47	0.41	0.32	2.54	0.03	0.06	0.35	1.53	1.79	94.9	13	49		
V	0.58	0.49	0.45	2.07	0.07	0.12	0.42	1.38	3.14	94.9	1	49		
Zn	1.88	1.92	1.41	2.08	0.24	0.43	1.57	6.29	11.51	94.9	22	49		

SE0014R		Råö		Sweden								
January 2003 - December 2003												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.51	0.39	0.38	2.62	0.00	0.16	0.38	1.60	1.93	97.3	1	51
Cd	0.09	0.07	0.07	2.68	0.00	0.02	0.07	0.26	0.33	97.3	1	51
Ni	1.41	0.85	1.12	2.40	0.01	0.41	1.28	3.36	4.12	97.3	1	51
Pb	3.06	2.41	2.27	2.30	0.12	0.57	2.28	10.08	10.40	97.3	0	51
Hg (tub_denuder)	9.61	9.77	6.94	2.14	1.50	2.50	6.30	30.50	60.90	27.1	0	99
Hg (amalg_tube)	1.78	0.28	1.76	1.16	1.30	1.40	1.70	2.20	2.70	27.4	0	100

SI0008R Iskrba Slovenia

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.40	0.61	0.21	2.97	0.08	0.08	0.08	2.17	3.25	55.6	15	29
Cd	0.23	0.27	0.13	2.78	0.04	0.04	0.11	0.96	1.15	55.6	10	29
Cr	3.60	4.29	2.27	2.63	0.32	0.41	2.04	17.27	21.02	55.6	0	29
Cu	3.83	3.22	2.77	2.50	0.12	0.35	2.65	12.82	14.95	55.6	1	29
Ni	2.54	1.61	2.02	2.10	0.49	0.49	2.53	6.12	6.74	55.6	0	29
Pb	4.51	3.74	3.57	1.92	1.50	1.50	3.35	14.55	14.60	53.7	12	28

SK0002R Chopok Slovakia

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.17	0.22	0.09	2.85	0.02	0.03	0.06	0.70	0.96	79.5	19	49
Cd	0.13	0.15	0.07	3.51	0.01	0.01	0.06	0.43	0.73	79.5	4	49
Cr	1.22	1.43	0.58	3.76	0.07	0.09	0.94	5.13	6.02	71.2	0	44
Cu	1.13	1.89	0.61	3.35	0.04	0.04	0.76	2.43	13.21	77.8	4	48
Mn	2.40	2.00	1.53	2.81	0.14	0.23	1.76	7.67	8.13	77.8	0	48
Ni	0.77	1.27	0.32	3.71	0.02	0.04	0.35	4.24	6.13	77.8	9	48
Pb	3.22	2.81	2.10	2.67	0.31	0.39	2.52	10.43	11.28	74.5	0	46
Zn	4.60	4.01	3.19	2.33	0.77	1.18	1.67	13.20	16.43	77.8	24	48

SK0004R Stara Lesna Slovakia

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	1.06	1.15	0.81	1.97	0.23	0.27	0.74	4.71	6.17	75.1	0	50
Cd	0.31	0.27	0.20	3.12	0.00	0.02	0.22	1.04	1.10	75.1	2	50
Cr	0.91	0.81	0.56	3.19	0.03	0.04	0.68	2.71	3.85	72.3	1	48
Cu	1.59	0.91	1.38	1.70	0.39	0.59	1.46	3.58	4.92	75.1	0	50
Mn	4.44	2.36	3.94	1.70	1.33	1.61	4.33	10.48	10.80	73.7	0	49
Ni	0.64	0.62	0.47	2.41	0.03	0.08	0.48	2.10	3.43	75.1	1	50
Pb	9.83	6.30	8.42	1.77	1.84	3.54	7.69	20.86	37.16	73.4	0	49
Zn	19.80	14.50	16.07	2.17	0.60	3.94	16.74	55.91	78.23	73.4	1	49

SK0005R Liesek Slovakia

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	2.33	1.94	1.79	2.19	0.32	0.51	1.48	7.14	7.39	79.5	0	51
Cd	0.47	0.26	0.43	1.73	0.10	0.19	0.45	1.05	1.09	78.1	0	50
Cr	0.78	0.47	0.61	2.45	0.03	0.05	0.73	1.63	2.73	79.5	2	51
Cu	1.78	0.83	1.66	1.67	0.33	0.56	1.85	3.54	4.48	79.5	0	51
Mn	14.13	8.56	12.17	1.83	2.54	3.62	12.21	33.94	43.70	77.8	0	50
Ni	0.58	0.28	0.55	1.61	0.12	0.25	0.60	1.17	1.47	79.5	0	51
Pb	12.85	6.11	12.34	1.54	4.97	6.26	12.89	28.07	34.51	74.5	0	48
Zn	33.45	15.34	31.62	1.54	12.35	15.75	32.05	63.98	79.99	72.9	0	47

SK0006R Starina Slovakia

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	0.94	0.75	0.61	2.23	0.09	0.13	0.58	2.37	3.91	83.8	0	42
Cd	0.55	0.48	0.36	2.27	0.07	0.12	0.32	1.91	2.12	78.6	0	39
Cr	1.11	0.71	0.47	3.08	0.01	0.03	0.57	2.09	2.66	83.8	1	42
Cu	1.84	0.81	1.42	1.75	0.26	0.36	1.53	3.48	3.72	83.8	0	42
Mn	5.42	2.73	4.02	1.78	0.56	1.76	3.99	11.45	13.28	82.2	0	41
Ni	0.92	0.47	0.61	1.93	0.07	0.12	0.63	1.67	2.05	83.8	0	42
Pb	15.91	9.00	11.69	1.91	2.60	4.09	11.18	33.13	33.36	78.6	0	39
Zn	18.06	11.27	14.67	1.95	1.80	5.47	16.33	47.39	48.83	83.8	0	42

SK0007R Topoliniky Slovakia

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
As	2.08	1.72	1.53	2.20	0.25	0.42	1.37	6.29	7.32	84.1	0	52
Cd	0.48	0.45	0.33	2.59	0.02	0.07	0.33	1.56	1.72	84.1	0	52
Cr	3.52	2.51	2.73	2.07	0.54	0.71	2.40	8.35	12.07	84.1	0	52
Cu	3.89	1.74	3.50	1.58	1.39	1.43	3.62	7.79	8.07	82.5	0	51
Mn	11.12	6.58	9.28	1.82	2.66	3.31	9.80	25.91	31.70	82.5	0	51
Ni	1.87	1.04	1.63	1.67	0.45	0.77	1.58	4.22	4.92	84.1	0	52
Pb	17.57	10.66	14.94	1.79	4.77	5.68	14.96	40.56	41.27	80.8	0	50
Zn	35.90	19.53	30.79	1.73	11.22	13.75	32.11	74.84	88.64	80.8	0	50

## **Annex 3**

### **Annual statistics for POPs in precipitation**





BE0004R Knokke Belgium							
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Precip	-	0.0	66.6	332.6	88.2	3	12
alpha_HCH	0.50	0.50	0.50	166.3	97.5	8	8
dieldrin	1.00	1.00	1.00	332.6	97.5	8	8
endrin	1.50	1.50	1.50	498.9	97.5	8	8
gamma_HCH	7.02	1.00	19.00	2335.2	97.5	3	8
heptachlor	1.00	1.00	1.00	332.6	97.5	8	8
pp_DDD	0.50	0.50	0.50	166.3	97.5	8	8
pp_DDE	1.00	1.00	1.00	332.6	97.5	8	8
pp_DDT	0.50	0.50	0.50	166.3	97.5	8	8

CZ0003R Kosetice Czech Republic							
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Precip	-	0.0	33.8	471.9	99.9	230	365
benzo_a_pyrene	3.080	0.100	62.00	1453.2	85.7	0	63
fluoranthene	20.93	0.60	208.80	9875.5	85.7	0	63
fluorene	2.73	0.10	20.30	1287.1	85.7	0	63
phenanthrene	16.70	0.50	139.60	7879.5	85.7	0	63
pp_DDE	0.39	0.05	5.00	184.2	85.7	24	63
pp_DDT	0.44	0.05	5.80	207.4	85.7	29	63
pyrene	13.46	0.40	150.20	6349.9	85.7	0	63

DE0001R Westerland Germany							
January 2003 - December 2003							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
HCB	0.09	0.03	0.21	50.6	100.0	0	12
PCB_101	0.275	0.040	0.980	161.0	100.0	0	12
PCB_118	0.090	0.030	0.250	52.7	100.0	0	12
PCB_138	0.436	0.070	2.010	255.1	100.0	0	12
PCB_153	0.235	0.040	0.790	137.3	100.0	0	12
PCB_180	0.172	0.030	0.930	100.8	100.0	0	12
PCB_28	0.030	0.010	0.080	17.6	100.0	0	12
PCB_52	0.053	0.020	0.140	30.9	100.0	0	12
Precip	-	12.0	78.0	584.8	99.9	0	12
alpha_HCH	0.24	0.05	0.52	141.4	100.0	0	12
anthracene	0.24	0.10	0.67	143.1	100.0	0	12
benz_a_anthracene	1.47	0.50	7.80	857.2	100.0	0	12
benzo_a_pyrene	1.84	0.500	8.90	1076.2	100.0	0	12
benzo_b_fluoranthene	4.34	1.10	21.50	2536.6	100.0	0	12
benzo_ghi_perylen	2.37	0.50	12.30	1386.7	100.0	0	12
benzo_k_fluoranthene	1.67	0.40	8.70	977.9	100.0	0	12
chrysene	4.37	1.70	20.00	2553.7	100.0	0	12
dibenzo_ah_anthracene	0.24	0.06	1.38	143.4	100.0	0	12
dieldrin	0.13	0.02	0.34	77.6	100.0	0	12
endrin	0.01	0.01	0.04	7.3	100.0	0	12
fluoranthene	11.71	1.80	50.30	6847.7	100.0	0	12
gamma_HCH	1.74	0.15	4.94	1019.8	100.0	0	12
heptachlor	0.00	0.00	0.02	2.5	100.0	0	12
inden_123cd_pyrene	2.54	0.30	14.80	1487.6	100.0	0	12
op_DDD	0.01	0.01	0.04	6.7	100.0	0	12
op_DDE	0.00	0.00	0.02	2.5	100.0	0	12
op_DDT	0.01	0.01	0.04	6.7	100.0	0	12
phenanthrene	10.46	5.30	35.10	6120.0	100.0	0	12
pp_DDD	0.01	0.01	0.04	6.7	100.0	0	12
pp_DDE	0.06	0.00	0.32	36.2	100.0	0	12
pp_DDT	0.06	0.01	0.25	32.2	100.0	0	12
pyrene	8.17	3.00	34.40	4779.5	100.0	0	12

DE0009R Zingst Germany

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
HCB	0.08	0.03	0.28	40.4	100.0	0	12
PCB_101	0.153	0.02	0.990	73.4	100.0	0	12
PCB_118	0.083	0.03	0.580	40.0	100.0	0	12
PCB_138	0.412	0.06	4.670	197.6	100.0	0	12
PCB_153	0.205	0.03	2.490	98.3	100.0	0	12
PCB_180	0.170	0.02	2.120	81.4	100.0	0	12
PCB_28	0.024	0.01	0.080	11.7	100.0	0	12
PCB_52	0.031	0.01	0.170	14.9	100.0	0	12
Precip	-	5.9	87.6	479.5	99.5	0	12
alpha_HCH	0.26	0.17	0.51	123.5	100.0	0	12
anthracene	0.91	0.10	4.60	434.0	100.0	0	12
benz_a_anthracene	2.87	0.40	16.00	1377.2	100.0	0	12
benzo_a_pyrene	3.466	0.20	45.90	1662.0	100.0	0	12
benzo_b_fluoranthene	6.73	1.40	33.60	3225.4	100.0	0	12
benzo_ghi_perylene	3.33	0.70	16.00	1597.9	100.0	0	12
benzo_k_fluoranthene	2.70	0.56	13.51	1295.2	100.0	0	12
chrysene	7.14	1.70	34.70	3422.5	100.0	0	12
dibenzo_ah_anthracene	1.05	0.10	16.90	502.4	100.0	0	12
dieldrin	0.08	0.02	0.58	39.4	100.0	0	12
endrin	0.01	0.01	0.08	6.8	100.0	0	12
fluoranthene	17.75	4.20	86.50	8510.1	100.0	0	12
gamma_HCH	1.39	0.19	3.31	665.1	100.0	0	12
heptachlor	0.01	0.00	0.03	2.4	100.0	0	12
inden_123cd_pyrene	3.79	0.30	20.80	1818.5	100.0	0	12
op_DDD	0.04	0.01	0.76	18.5	100.0	0	12
op_DDE	0.01	0.00	0.03	2.4	100.0	0	12
op_DDT	0.01	0.01	0.08	11894.4	100.0	0	12
phenanthrene	13.43	3.10	68.80	6440.2	100.0	0	12
pp_DDD	0.05	0.01	1.38	22.7	100.0	0	12
pp_DDE	0.14	0.00	1.41	64.5	100.0	0	12
pp_DDT	0.26	0.02	1.83	12010.1	100.0	0	12
pyrene	13.25	3.50	61.40	6352.8	100.0	0	12

DE0001R Westerland Germany

January 2003 - December 2003 precip tot (precip + funnel rinsing solution)

Component	W. mean	Min	Max	% anal	Num bel	Num sampl
HCB	0.49	0.15	1.87	99.9	0	12
PCB_101	1.982	0.570	8.300	99.9	0	12
PCB_118	0.308	0.100	0.600	99.9	0	12
PCB_138	1.173	0.320	2.200	99.9	0	12
PCB_153	0.660	0.170	1.270	99.9	0	12
PCB_180	0.404	0.080	0.970	99.9	0	12
PCB_28	0.634	0.140	1.470	91.4	0	11
PCB_52	0.317	0.100	0.770	91.4	0	11
Precip	-	12.0	78.0	99.9	0	12
alpha_HCH	0.43	0.12	1.03	99.9	0	12
anthracene	0.62	0.21	1.50	99.9	0	12
benz_a_anthracene	2.79	0.64	8.28	99.9	0	12
benzo_a_pyrene	4.251	0.680	9.550	99.9	0	12
benzo_b_fluoranthene	8.18	1.84	25.10	99.9	0	12
benzo_ghi_perylene	4.40	0.64	13.13	99.9	0	12
benzo_k_fluoranthene	3.10	0.52	9.21	99.9	0	12
chrysene	8.44	2.71	25.02	99.9	0	12
dibenzo_ah_anthracene	0.50	0.12	1.54	99.9	0	12
dieldrin	0.25	0.04	0.98	99.9	0	12
endrin	0.03	0.01	0.08	99.9	0	12
fluoranthene	26.00	5.43	72.20	99.9	0	12
gamma_HCH	3.26	0.79	7.46	99.9	0	12
heptachlor	0.01	0.01	0.03	99.9	0	12
inden_123cd_pyrene	4.78	0.59	15.67	99.9	0	12
op_DDD	0.03	0.01	0.08	99.9	0	12
op_DDE	0.01	0.01	0.03	99.9	0	12
op_DDT	0.03	0.01	0.08	99.9	0	12
phenanthrene	56.26	13.71	154.58	99.9	0	12
pp_DDD	0.12	0.01	1.09	99.9	0	12
pp_DDE	1.88	0.01	6.93	99.9	0	12
pp_DDT	0.29	0.03	0.62	99.9	0	12
pyrene	18.30	6.11	51.04	99.9	0	12

DE0009R		Zingst		Germany		
January 2003 - December 2003		precip tot (precip + funnel rinsing solution)				
Component	W. mean	Min	Max	% anal	Num bel	Num sampl
HCB	1.17	0.21	3.69	91.4	0	11
PCB_101	3.684	1.270	8.340	91.4	0	11
PCB_118	0.868	0.210	2.310	91.4	0	11
PCB_138	1.966	0.330	6.620	91.4	0	11
PCB_153	1.233	0.240	3.870	91.4	0	11
PCB_180	0.692	0.070	2.590	91.4	0	11
PCB_28	0.623	0.190	2.070	82.9	0	10
PCB_52	0.812	0.290	1.930	82.9	0	10
Precip	-	5.9	87.6	99.9	0	12
alpha_HCH	0.53	0.23	1.15	91.4	0	11
anthracene	7.78	0.14	65.88	99.9	0	12
benz_a_anthracene	9.69	0.50	29.86	99.9	0	12
benzo_a_pyrene	15.528	0.700	66.720	99.9	0	12
benzo_b_fluoranthene	23.57	2.36	53.99	99.9	0	12
benzo_ghi_perylen	18.69	1.20	78.89	99.9	0	12
benzo_k_fluoranthene	9.85	0.99	24.81	99.9	0	12
chrysene	23.96	2.71	58.73	99.9	0	12
dibenzo_ah_anthracene	4.83	0.14	20.50	99.9	0	12
dieldrin	0.14	0.04	0.66	91.4	0	11
endrin	0.05	0.01	0.17	91.4	0	11
fluoranthene	49.22	7.27	141.07	99.9	0	12
gamma_HCH	14.00	4.49	34.61	91.4	0	11
heptachlor	0.02	0.00	0.07	91.4	0	11
inden_123cd_pyrene	16.69	0.58	37.08	99.9	0	12
op_DDD	0.12	0.01	0.80	91.4	0	11
op_DDE	0.32	0.01	1.15	91.4	0	11
op_DDT	0.89	0.01	4.64	83.2	0	10
phenanthrene	102.92	15.95	256.79	99.9	0	12
pp_DDD	0.42	0.01	2.75	91.4	0	11
pp_DDE	9.23	2.23	37.73	91.4	0	11
pp_DDT	3.85	0.96	9.36	83.2	0	10
pyrene	44.08	5.95	122.90	99.9	0	12

FI0096R		Pallas		Finland		
January 2003 - December 2003		(precip + dry dep) (ng/m <sup>2</sup> /day)				
Component	W. mean	Min	Max	% anal	Num bel	Num sampl
PCB_101	0.043	0.005	0.070	22.7	2	12
PCB_118	0.035	0.005	0.090	22.7	1	12
PCB_138	0.023	0.005	0.050	22.7	5	12
PCB_153	0.063	0.005	0.100	22.7	1	12
PCB_180	0.030	0.005	0.070	22.7	1	12
PCB_28	0.005	0.005	0.005	22.7	12	12
PCB_52	0.005	0.005	0.005	22.7	12	12
alpha_HCH	0.12	0.01	1.00	22.7	0	12
anthracene	1.43	0.00	15.00	22.7	0	12
benz_a_anthracene	3.95	0.00	20.00	22.7	0	12
benzo_a_pyrene	2.337	1.00	7.00	22.7	0	12
benzo_b_flouranthene	5.08	0.00	17.00	22.7	0	12
benzo_ghi_perylen	3.40	1.00	5.00	22.7	0	12
benzo_k_fluoranthene	1.75	0.00	7.00	22.7	0	12
fluoranthene	18.95	2.00	99.00	22.7	0	12
gamma_HCH	0.19	0.01	1.30	22.7	0	12
phenanthrene	15.57	3.00	51.00	22.7	0	12
pyrene	13.24	3.00	68.00	22.7	0	12

IE0002R Turlough Hill Ireland

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
PCB_101	0.184	0.050	0.55	278.9	52.9	7	7
PCB_118	0.095	0.050	0.25	144.2	52.9	7	7
PCB_138	0.184	0.050	0.55	278.9	52.9	7	7
PCB_153	0.184	0.050	0.55	278.9	52.9	7	7
PCB_180	0.468	0.150	1.35	708.1	52.9	7	7
PCB_52	0.184	0.050	0.55	278.9	52.9	7	7
Precip	-	12.6	217.0	1514.5	99.9	0	12
alpha_HCH	0.47	0.15	1.35	708.1	52.9	7	7
dieldrin	0.43	0.05	1.35	656.0	52.9	7	7
endrin	0.54	0.35	1.35	812.2	52.9	7	7
gamma_HCH	0.47	0.15	1.35	708.1	52.9	7	7
heptachlor	0.10	0.05	0.25	144.2	52.9	7	7
pp_DDE	0.10	0.05	0.25	144.2	52.9	7	7

IS0091R Storhofdi Iceland

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
HCB	0.01	0.01	0.06	8.8	100.0	1	24
PCB_101	0.006	0.003	0.078	4.5	100.0	23	24
PCB_105	0.00	0.00	0.06	3.1	100.0	20	24
PCB_118	0.006	0.002	0.103	4.1	100.0	23	24
PCB_138	0.009	0.003	0.185	6.8	100.0	20	24
PCB_153	0.009	0.003	0.154	6.8	100.0	20	24
PCB_156	0.00	0.00	0.02	2.4	100.0	24	24
PCB_180	0.005	0.002	0.112	3.6	100.0	22	24
PCB_28	0.089	0.023	0.365	65.8	100.0	22	24
PCB_31	0.083	0.023	0.330	60.8	100.0	22	24
PCB_52	0.027	0.009	0.100	20.1	100.0	22	24
Precip	-	6.5	59.0	737.2	99.6	0	24
alpha_HCH	0.14	0.04	0.55	101.7	100.0	0	24
beta_HCH	0.01	0.00	0.03	4.2	100.0	24	24
cis_CD	0.00	0.00	0.01	2.1	100.0	16	24
dieldrin	0.03	0.00	0.07	20.1	100.0	2	24
gamma_HCH	0.07	0.03	0.41	52.4	100.0	0	24
op_DDT	0.01	0.00	0.07	11.2	54.8	3	14
pp_DDD	0.01	0.00	0.03	4.2	100.0	20	24
pp_DDE	0.01	0.00	0.01	4.9	100.0	14	24
pp_DDT	0.01	0.00	0.03	7.5	51.0	10	12
trans_CD	0.00	0.00	0.01	2.4	100.0	20	24
trans_NO	0.00	0.00	0.01	2.6	100.0	18	24

NL0091R De Zilk Netherlands

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Precip	-	2.4	95.6	678.3	92.1	0	12
gamma_HCH	7.58	5.00	20.0	5140.5	100.0	8	12

NO0099R Lista Norway

January 2003 - December 2003

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
HCB	0.39	0.01	2.67	382.7	100.0	1	45
Precip	-	0.0	78.5	974.6	78.2	1	45
alpha_HCH	0.39	0.22	0.70	376.0	100.0	0	45
gamma_HCH	0.91	0.12	3.75	881.8	100.0	0	45

SE0012R		Aspvreten		Sweden		
January 2003 - December 2003		(precip + dry dep)		(ng/m <sup>2</sup> /day)		
Component	W. mean	Min	Max	% anal	Num bel	Num sampl
PCB_101	0.065	0.030	0.27	23.0	0	12
PCB_118	0.061	0.005	0.44	23.0	1	12
PCB_138	0.102	0.030	0.54	23.0	0	12
PCB_153	0.072	0.030	0.35	23.0	0	12
PCB_180	0.050	0.020	0.28	23.0	0	12
PCB_28	0.088	0.020	0.32	23.0	0	12
PCB_52	0.039	0.005	0.11	23.0	2	12
anthracene	1.08	0.00	6.00	23.0	2	12
benz_a_anthracene	1.83	0.00	18.00	23.0	5	12
benzo_a_pyrene	5.833	0.000	32.00	23.0	3	12
benzo_ghi_perylen	9.50	0.00	56.00	23.0	0	12
fluoranthene	21.67	0.00	140.00	23.0	0	12
phenanthrene	16.08	3.00	70.00	23.0	0	12
pyrene	13.08	2.00	69.00	23.0	0	12

SE0014R		Råö		Sweden		
January 2003 - December 2003		(precip + dry dep)		(ng/m <sup>2</sup> /day)		
Component	W. mean	Min	Max	% anal	Num bel	Num sampl
PCB_101	0.148	0.070	0.350	92.1	0	11
PCB_118	0.115	0.060	0.210	92.1	0	11
PCB_138	0.326	0.160	0.610	92.1	0	11
PCB_153	0.297	0.190	0.480	92.1	0	11
PCB_180	0.225	0.120	0.410	92.1	0	11
PCB_28	0.005	0.005	0.005	92.1	11	11
PCB_52	0.005	0.005	0.005	92.1	11	11
alpha_HCH	0.31	0.05	0.59	92.1	0	11
anthracene	0.91	0.00	2.00	80.8	0	10
benz_a_anthracene	4.59	0.00	14.00	92.1	0	11
benzo_a_pyrene	6.884	1.000	22.000	92.1	0	11
benzo_b_flouranthene	13.60	2.00	36.00	92.1	0	11
benzo_b_fluoranthene	13.60	2.00	36.00	92.1	0	11
benzo_ghi_perylen	7.55	2.00	26.00	92.1	0	11
benzo_k_fluoranthene	5.63	1.00	15.00	92.1	0	11
fluoranthene	27.34	4.00	73.00	92.1	0	11
gamma_HCH	1.06	0.11	2.10	92.1	0	11
phenanthrene	23.16	4.00	52.00	80.8	0	10
pyrene	18.08	3.00	55.00	92.1	0	11



**Annex 4**

**Annual statistics for POPs in air**





CZ0003R Kosetice Czech Republic

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
PCB_101	8.876	6.613	6.783	2.242	0.500	1.725	7.000	28.075	31.000	14.5	2	53
PCB_118	3.481	3.736	2.083	2.885	0.500	0.500	2.250	11.575	19.250	14.5	14	53
PCB_138	20.763	21.210	14.497	2.321	1.250	4.700	15.000	66.600	116.000	14.5	0	53
PCB_153	21.062	21.903	14.405	2.417	1.250	3.475	15.000	65.700	126.000	14.5	0	53
PCB_180	19.517	28.709	11.047	2.721	1.250	2.250	10.250	89.600	169.000	14.5	0	53
PCB_28	10.350	5.396	8.406	2.200	0.500	1.725	10.250	19.550	23.250	14.5	2	53
PCB_52	18.540	17.023	10.067	3.754	0.500	1.025	16.250	53.800	77.000	14.5	2	53
alpha_HCH	13.10	8.18	10.68	2.06	0.50	3.25	11.25	31.45	46.25	14.5	1	53
anthracene	0.22	0.33	0.05	9.96	0.00	0.00	0.11	0.99	1.74	14.5	19	53
benz_a_anthracene	0.38	0.79	0.05	10.24	0.00	0.00	0.07	1.97	4.80	14.5	12	53
benzo_a_pyrene	0.383	0.696	0.066	10.479	0.002	0.002	0.130	1.571	4.227	14.5	13	53
fluoranthene	2.31	3.38	1.04	3.67	0.14	0.16	0.88	9.03	19.33	14.5	0	53
fluorene	2.97	3.98	1.24	4.60	0.01	0.10	1.26	13.94	16.55	14.5	0	53
gamma_HCH	27.12	25.64	17.75	2.70	0.50	4.17	17.25	94.30	104.00	14.5	1	53
inden_123cd_pyrene	0.32	0.66	0.05	10.32	0.00	0.00	0.06	1.47	4.08	14.5	14	53
naphtalene	2.70	5.87	0.82	4.60	0.04	0.11	1.00	15.75	35.42	14.5	0	53
phenanthrene	5.87	7.24	3.05	3.28	0.35	0.40	2.56	24.84	29.81	14.5	0	53
pp_DDD	8.06	10.86	3.19	4.24	0.50	0.50	2.25	30.88	53.25	14.5	12	53
pp_DDE	24.97	14.50	20.88	1.90	2.00	9.00	21.00	55.30	71.00	14.5	0	53
pp_DDT	16.39	15.25	10.18	3.27	0.50	0.50	13.00	42.90	86.00	14.5	4	53
pyrene	1.55	2.44	0.63	4.06	0.08	0.10	0.58	6.57	14.22	14.5	0	53

FI0096R Pallas Finland

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
PCB_101	0.785	0.599	0.679	1.761	0.300	0.300	0.620	2.500	2.500	22.7	0	12
PCB_118	0.194	0.143	0.169	1.714	0.100	0.100	0.140	0.590	0.590	22.7	0	12
PCB_138	0.237	0.229	0.195	1.872	0.100	0.100	0.185	0.930	0.930	22.7	0	12
PCB_153	0.357	0.369	0.293	1.852	0.150	0.150	0.255	1.500	1.500	22.7	0	12
PCB_180	0.071	0.062	0.061	1.785	0.024	0.024	0.059	0.260	0.260	22.7	0	12
PCB_28	1.470	1.021	1.268	1.772	0.700	0.700	1.025	4.000	4.000	22.7	0	12
PCB_52	1.690	1.300	1.415	1.879	0.660	0.660	1.300	5.100	5.100	22.7	0	12
alpha_HCH	9.86	3.85	9.20	1.51	5.00	5.00	10.00	15.00	15.00	22.7	0	12
anthracene	0.01	0.01	0.00	2.51	0.00	0.00	0.00	0.02	0.02	22.7	0	12
benz_a_anthracene	0.03	0.08	0.01	4.25	0.00	0.00	0.01	0.28	0.28	22.7	0	12
benzo_a_pyrene	0.023	0.042	0.010	3.416	0.003	0.003	0.005	0.150	0.150	22.7	0	12
benzo_b_fluoranthene	0.03	0.03	0.02	2.64	0.01	0.01	0.01	0.10	0.10	22.7	0	12
benzo_ghi_perylene	0.02	0.02	0.01	2.45	0.00	0.00	0.01	0.05	0.05	22.7	0	12
benzo_k_fluoranthene	0.03	0.03	0.02	2.64	0.01	0.01	0.01	0.10	0.10	22.7	0	12
chrysene_triphenylene	0.05	0.07	0.03	3.46	0.01	0.01	0.02	0.25	0.25	22.7	0	12
fluoranthene	0.13	0.12	0.09	2.22	0.04	0.04	0.07	0.34	0.34	22.7	0	12
gamma_HCH	4.06	3.10	3.53	1.73	2.00	2.00	3.00	13.00	13.00	22.7	0	12
inden_123cd_pyrene	0.03	0.02	0.02	1.87	0.01	0.01	0.02	0.06	0.06	22.7	0	12
phenanthrene	0.36	0.26	0.29	1.87	0.15	0.15	0.24	0.92	0.92	22.7	0	12
pp_DDD	0.16	0.20	0.11	2.19	0.06	0.06	0.08	0.76	0.76	22.7	0	12
pp_DDE	0.47	0.25	0.40	1.86	0.15	0.15	0.51	0.78	0.78	22.7	0	12
pp_DDT	0.21	0.15	0.19	1.67	0.11	0.11	0.18	0.66	0.66	22.7	0	12
pyrene	0.07	0.07	0.05	2.31	0.02	0.02	0.04	0.22	0.22	22.7	0	12

IS0091R Storhofdi Iceland

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HCB	4.34	1.01	4.19	1.35	1.34	1.73	4.25	5.82	5.84	99.6	0	24
PCB_101	0.597	0.513	0.449	2.130	0.205	0.207	0.320	1.823	1.830	99.6	15	24
PCB_105	0.15	0.02	0.15	1.18	0.10	0.10	0.16	0.18	0.18	99.6	24	24
PCB_118	0.257	0.184	0.231	1.558	0.145	0.146	0.212	0.884	1.060	99.6	23	24
PCB_138	0.299	0.071	0.293	1.251	0.215	0.218	0.273	0.434	0.440	99.6	24	24
PCB_153	0.326	0.154	0.310	1.391	0.215	0.218	0.275	0.838	0.970	99.6	23	24
PCB_156	0.15	0.07	0.13	1.64	0.07	0.07	0.12	0.26	0.27	99.6	24	24
PCB_180	0.188	0.037	0.185	1.204	0.145	0.146	0.178	0.261	0.265	99.6	24	24
PCB_28	4.379	3.662	3.440	2.032	1.315	1.341	3.760	15.556	18.520	99.6	23	24
PCB_31	3.956	2.862	3.250	1.908	1.315	1.341	3.510	12.299	14.390	99.6	23	24
PCB_52	1.321	0.841	1.167	1.649	0.555	0.566	1.202	3.966	4.680	99.6	23	24
alpha_HCH	7.40	1.71	7.18	1.28	3.90	4.13	7.20	11.24	11.58	99.6	0	24
beta_HCH	0.57	0.35	0.47	1.93	0.20	0.21	0.41	1.15	1.16	99.6	12	24
cis_CD	0.67	0.19	0.65	1.32	0.41	0.41	0.62	1.02	1.04	99.6	0	24
dieldrin	0.82	0.25	0.79	1.33	0.52	0.52	0.77	1.44	1.49	99.6	0	24
gamma_HCH	7.53	1.70	7.32	1.30	3.06	3.48	7.66	10.09	10.16	99.6	0	24
op_DDT	0.17	0.21	0.12	2.10	0.05	0.05	0.09	0.88	0.93	95.7	21	23
pp_DDD	0.16	0.06	0.16	1.30	0.10	0.10	0.16	0.36	0.40	95.7	22	23
pp_DDE	0.36	0.16	0.34	1.48	0.17	0.17	0.33	0.83	0.89	95.7	9	23
pp_DDT	0.45	0.49	0.38	1.65	0.22	0.22	0.36	2.42	2.52	83.1	19	20
trans_CD	0.34	0.10	0.32	1.35	0.18	0.18	0.34	0.58	0.62	99.6	0	24
trans_NO	0.30	0.09	0.29	1.46	0.07	0.10	0.32	0.44	0.44	99.6	1	24

NO0042G Zeppelin, Spitsbergen Norway

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
PCB_101	0.496	0.213	0.460	1.466	0.246	0.263	0.459	1.060	1.129	30.0	0	54
PCB_105	0.06	0.07	0.04	2.44	0.01	0.01	0.04	0.18	0.40	30.0	11	54
PCB_114	0.01	0.00	0.01	1.21	0.01	0.01	0.01	0.01	0.04	30.0	54	54
PCB_118	0.228	0.157	0.198	1.684	0.091	0.099	0.216	0.550	0.958	30.0	0	54
PCB_122	0.01	0.00	0.01	1.25	0.01	0.01	0.01	0.02	0.04	30.0	52	54
PCB_123	0.01	0.00	0.01	1.25	0.01	0.01	0.01	0.02	0.04	30.0	53	54
PCB_128	0.03	0.04	0.03	1.98	0.01	0.01	0.02	0.11	0.21	30.0	15	54
PCB_138	0.231	0.169	0.193	1.785	0.081	0.091	0.192	0.696	0.768	30.0	0	54
PCB_141	0.04	0.04	0.03	2.04	0.01	0.01	0.03	0.12	0.24	30.0	12	54
PCB_149	0.254	0.104	0.237	1.461	0.119	0.134	0.205	0.482	0.590	30.0	0	54
PCB_153	0.358	0.303	0.287	1.896	0.117	0.125	0.236	1.111	1.678	30.0	0	54
PCB_156	0.02	0.03	0.02	1.86	0.01	0.01	0.01	0.08	0.16	30.0	24	54
PCB_157	0.01	0.01	0.01	1.28	0.01	0.01	0.01	0.02	0.04	30.0	53	54
PCB_167	0.01	0.01	0.01	1.46	0.01	0.01	0.01	0.03	0.06	30.0	46	54
PCB_170	0.02	0.02	0.02	1.91	0.01	0.01	0.02	0.07	0.08	30.0	20	54
PCB_18	2.570	0.983	2.429	1.401	1.166	1.451	2.396	4.660	6.577	30.0	0	54
PCB_180	0.078	0.092	0.051	2.566	0.010	0.010	0.051	0.259	0.548	30.0	11	54
PCB_183	0.03	0.03	0.02	2.00	0.01	0.01	0.02	0.11	0.21	30.0	17	54
PCB_187	0.06	0.08	0.04	2.41	0.01	0.01	0.04	0.23	0.51	30.0	9	54
PCB_189	0.01	0.01	0.01	1.28	0.01	0.01	0.01	0.02	0.04	30.0	54	54
PCB_194	0.01	0.01	0.01	1.63	0.01	0.01	0.01	0.06	0.09	30.0	48	54
PCB_206	0.01	0.01	0.01	1.57	0.01	0.01	0.01	0.07	0.07	30.0	50	54
PCB_209	0.01	0.01	0.01	1.42	0.01	0.01	0.01	0.02	0.08	30.0	51	54
PCB_28	1.909	0.925	1.767	1.464	0.872	1.071	1.618	3.993	6.311	30.0	0	54
PCB_31	1.819	0.906	1.673	1.486	0.826	0.936	1.528	3.880	6.050	30.0	0	54
PCB_33	1.50	0.87	1.34	1.56	0.63	0.66	1.27	3.25	5.89	30.0	0	54
PCB_37	0.23	0.13	0.20	1.65	0.09	0.10	0.20	0.49	0.76	30.0	0	54
PCB_47	0.52	0.21	0.49	1.40	0.27	0.28	0.48	0.86	1.53	30.0	0	54
PCB_52	1.035	0.297	1.001	1.311	0.602	0.675	0.992	1.611	2.010	30.0	0	54
PCB_60	0.07	0.05	0.06	2.42	0.01	0.01	0.07	0.18	0.20	15.3	5	27
PCB_66	0.36	0.18	0.33	1.55	0.13	0.16	0.30	0.75	1.05	30.0	0	54
PCB_74	0.18	0.06	0.18	1.37	0.10	0.11	0.17	0.30	0.33	30.0	0	54
PCB_99	0.18	0.07	0.17	1.45	0.09	0.09	0.16	0.28	0.41	30.0	0	54
alpha_HCH	18.95	5.00	18.24	1.33	6.12	12.89	18.12	28.07	28.24	30.0	0	54
anthanthrene	0.00	0.00	0.00	1.53	0.00	0.00	0.00	0.00	0.01	29.0	40	53
anthracene	0.00	0.01	0.00	2.73	0.00	0.00	0.00	0.02	0.03	29.0	14	53
benz_a_anthracene	0.01	0.01	0.00	3.10	0.00	0.00	0.00	0.02	0.06	29.0	26	53
benzo_a_pyrene	0.003	0.007	0.002	2.612	0.001	0.001	0.001	0.018	0.046	29.0	26	53
benzo_e_pyrene	0.01	0.01	0.00	3.52	0.00	0.00	0.00	0.03	0.07	29.0	20	53
benzo_ghi_perylene	0.01	0.01	0.00	3.29	0.00	0.00	0.00	0.03	0.07	29.0	26	53
beta_HCH	0.12	0.11	0.08	2.69	0.01	0.01	0.10	0.40	0.59	30.0	8	54
biphenyl	0.59	0.75	0.17	6.50	0.01	0.01	0.23	2.06	3.44	29.0	0	53
chrysene_triphenylene	0.01	0.03	0.00	4.87	0.00	0.00	0.00	0.07	0.15	29.0	8	53
cis_CD	0.68	0.20	0.66	1.33	0.29	0.40	0.67	1.21	1.37	30.0	0	54
cis_NO	0.08	0.04	0.06	1.90	0.01	0.02	0.08	0.14	0.15	30.0	0	54
coronene	0.00	0.00	0.00	2.04	0.00	0.00	0.00	0.01	0.02	29.0	36	53
cyclopenta_cd_pyrene	0.00	0.00	0.00	1.87	0.00	0.00	0.00	0.01	0.01	29.0	36	53
dibenzo_ac_ah_anthracenes	0.00	0.00	0.00	1.31	0.00	0.00	0.00	0.00	0.01	29.0	43	53
dibenzofuran	0.72	0.82	0.29	4.62	0.03	0.03	0.32	2.27	3.76	29.0	0	53
dibenzothiophene	0.01	0.01	0.01	3.44	0.00	0.00	0.00	0.04	0.06	29.0	1	53
fluoranthene	0.04	0.06	0.02	3.30	0.00	0.00	0.01	0.16	0.34	29.0	0	53
fluorene	0.26	0.36	0.10	4.68	0.01	0.01	0.10	1.04	1.74	29.0	0	53
gamma_HCH	4.29	1.39	4.03	1.39	1.95	2.27	3.87	7.27	7.72	30.0	0	54
inden_123cd_pyrene	0.01	0.01	0.00	3.14	0.00	0.00	0.00	0.03	0.07	29.0	30	53
naphtalene	0.69	1.40	0.17	5.35	0.02	0.02	0.12	3.27	8.48	29.0	0	53
op_DDD	0.03	0.02	0.02	1.84	0.01	0.01	0.02	0.06	0.08	30.0	11	54
op_DDE	0.12	0.09	0.08	2.61	0.02	0.02	0.10	0.29	0.37	30.0	0	54
op_DDT	0.22	0.14	0.18	2.03	0.05	0.05	0.20	0.49	0.70	30.0	0	54
perylene	0.00	0.00	0.00	1.77	0.00	0.00	0.00	0.01	0.01	29.0	36	53
phenanthrene	0.08	0.09	0.06	2.44	0.01	0.01	0.05	0.23	0.50	29.0	0	53
pp_DDD	0.07	0.09	0.04	2.84	0.01	0.01	0.04	0.26	0.40	30.0	7	54
pp_DDE	0.88	0.80	0.61	2.51	0.12	0.13	0.63	2.94	3.28	30.0	0	54
pp_DDT	0.14	0.11	0.11	2.28	0.01	0.03	0.11	0.43	0.45	30.0	1	54
pyrene	0.03	0.04	0.01	3.52	0.00	0.00	0.01	0.10	0.26	29.0	0	53
trans_CD	0.26	0.14	0.23	1.70	0.09	0.10	0.23	0.46	0.81	30.0	0	54
trans_NO	0.66	0.25	0.62	1.47	0.21	0.27	0.63	1.19	1.55	30.0	0	54

NO0099R Lista Norway

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
alpha_HCH	11.88	4.96	11.03	1.46	5.58	6.71	9.72	23.30	27.40	13.4	0	49
gamma_HCH	8.85	7.46	6.75	2.04	1.56	2.62	5.49	27.75	32.10	13.4	0	49

SE0012R Aspvreten Sweden

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
PCB_101	3.711	4.875	2.241	2.677	0.640	0.640	2.220	18.330	18.330	23.0	0	12
PCB_118	1.202	1.569	0.763	2.516	0.190	0.190	0.770	5.990	5.990	23.0	0	12
PCB_138	1.157	1.120	0.870	2.120	0.270	0.270	0.920	4.490	4.490	23.0	0	12
PCB_153	1.368	1.288	1.032	2.116	0.340	0.340	1.065	5.140	5.140	23.0	0	12
PCB_180	0.342	0.247	0.288	1.803	0.110	0.110	0.295	1.060	1.060	23.0	0	12
PCB_28	2.358	1.954	1.924	1.847	0.830	0.830	1.745	8.100	8.100	23.0	0	12
PCB_52	2.509	2.252	1.997	1.913	0.810	0.810	1.935	9.260	9.260	23.0	0	12
anthracene	0.01	0.04	0.00	4.98	0.00	0.00	0.00	0.13	0.13	23.0	11	12
benz_a_anthracene	0.04	0.10	0.00	8.76	0.00	0.00	0.00	0.33	0.33	23.0	3	12
benzo_a_pyrene	0.053	0.140	0.009	5.809	0.001	0.001	0.007	0.493	0.493	23.0	1	12
benzo_ghi_perylene	0.08	0.15	0.03	4.00	0.00	0.00	0.02	0.55	0.55	23.0	0	12
fluoranthene	0.54	0.88	0.32	2.68	0.00	0.00	0.23	3.13	3.13	23.0	0	12
inden_123cd_pyrene	0.08	0.17	0.02	5.96	0.00	0.00	0.02	0.60	0.60	23.0	0	12
phenanthrene	0.91	0.92	0.70	1.94	0.36	0.36	0.64	3.50	3.50	23.0	0	12
pp_DDE	2.72	1.68	2.31	1.84	0.66	0.66	2.19	6.81	6.81	23.0	0	12
pyrene	0.27	0.53	0.12	2.87	0.04	0.04	0.10	1.94	1.94	23.0	0	12

SE0014R Råö Sweden

January 2003 - December 2003

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
PCB_101	3.105	2.227	2.594	1.825	1.100	1.100	2.300	7.560	12.000	94.8	0	50
PCB_118	1.004	0.694	0.852	1.761	0.350	0.411	0.790	2.290	4.100	94.8	0	50
PCB_138	2.165	1.684	1.767	1.843	0.700	0.756	1.750	6.115	9.900	94.8	0	50
PCB_153	2.490	1.863	2.068	1.786	0.870	0.946	2.000	6.950	11.000	94.8	0	50
PCB_180	0.856	0.682	0.705	1.803	0.240	0.283	0.705	2.460	4.200	94.8	0	50
PCB_28	1.797	1.176	1.662	1.538	0.610	0.900	1.600	4.525	7.200	94.8	0	50
PCB_52	3.445	3.031	2.937	1.755	1.300	1.465	2.600	12.250	17.000	94.8	0	50
alpha_HCH	8.34	1.98	8.13	1.27	5.00	5.55	8.00	12.00	13.00	94.8	0	50
anthracene	0.03	0.03	0.01	3.51	0.00	0.00	0.01	0.09	0.12	94.8	0	50
benz_a_anthracene	0.12	0.13	0.05	4.32	0.00	0.00	0.05	0.41	0.50	94.8	0	50
benzo_a_pyrene	0.126	0.158	0.055	4.330	0.000	0.004	0.054	0.519	0.590	94.8	0	50
benzo_b_fluoranthene	0.21	0.28	0.08	4.46	0.01	0.01	0.08	0.93	1.00	94.8	0	50
benzo_ghi_perylene	0.14	0.18	0.05	4.30	0.01	0.01	0.05	0.56	0.65	94.8	0	50
benzo_k_fluoranthene	0.21	0.28	0.08	4.46	0.01	0.01	0.08	0.93	1.00	94.8	0	50
chrysene_triphenylene	0.22	0.24	0.12	3.40	0.01	0.01	0.12	0.82	0.92	94.8	0	50
fluoranthene	0.68	0.72	0.37	3.06	0.08	0.09	0.37	2.30	2.60	94.8	0	50
gamma_HCH	8.02	4.09	7.06	1.65	3.00	3.00	7.00	16.90	20.00	94.8	0	50
inden_123cd_pyrene	0.13	0.18	0.05	3.77	0.01	0.01	0.04	0.64	0.73	94.8	0	50
phenanthrene	1.56	1.36	1.06	2.45	0.29	0.33	1.10	4.60	4.80	94.8	0	50
pp_DDD	0.54	0.50	0.39	2.25	0.09	0.11	0.41	1.60	2.60	94.8	0	50
pp_DDE	2.79	1.68	2.36	1.79	0.59	0.72	2.45	7.07	8.10	94.8	0	50
pp_DDT	1.36	0.72	1.16	1.79	0.31	0.36	1.30	2.86	3.50	94.8	0	50
pyrene	0.43	0.49	0.21	3.50	0.03	0.04	0.23	1.49	1.70	94.8	0	50



## **Annex 5**

### **Monthly and annual mean values for heavy metals in precipitation**



Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
IE0001R	aluminium	precip	14	11	36	28	24	13	18	21	23	26	10	14	18
IE0002R	aluminium	precip	23	26	15	22	16	12	27	59	-	-	-	-	20
IS0090R	aluminium	precip	443	82	128	142	545	506	96	79	52	134	249	89	173
IS0091R	aluminium	precip	129	119	119	324	540	243	46	29	66	77	295	52	131
BE0004R	arsenic	wetonly	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	-	-	0.24	0.24
BE0004R	arsenic	bulk	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
DE0001R	arsenic	precip	0.16	0.23	0.35	0.12	0.09	0.15	0.18	0.09	0.15	0.11	0.13	0.13	0.14
DE0002R	arsenic	wetonly	0.07	0.09	0.28	0.37	0.22	0.21	0.10	0.13	0.08	0.09	0.08	0.06	0.13
DE0002R	arsenic	bulk	0.10	0.09	0.43	0.31	0.54	0.26	0.13	0.22	0.14	0.13	0.13	0.12	0.19
DE0003R	arsenic	precip	0.07	0.14	0.08	0.10	0.08	0.11	0.07	0.12	0.06	0.09	0.06	0.07	0.09
DE0004R	arsenic	precip	0.07	0.07	0.25	0.15	0.12	0.15	0.11	0.07	0.10	0.07	0.07	0.09	0.10
DE0008R	arsenic	precip	0.14	0.14	0.20	0.30	0.13	0.15	0.10	0.08	0.10	0.20	0.14	0.06	0.14
DE0009R	arsenic	precip	0.15	0.11	0.19	0.22	0.18	0.18	0.08	0.11	0.15	0.11	0.13	0.07	0.14
DK0008R	arsenic	precip	0.29	0.41	0.51	0.24	0.14	0.16	0.15	0.20	0.37	0.34	0.19	0.14	0.22
DK0020R	arsenic	precip	0.25	0.22	0.96	0.30	0.23	0.27	0.09	0.21	0.16	0.13	0.12	-	0.20
DK0022R	arsenic	precip	0.13	0.13	0.34	0.24	0.14	0.08	0.08	0.11	0.27	0.10	0.14	0.11	0.14
DK0031R	arsenic	precip	0.16	0.15	0.33	0.46	0.16	0.16	0.31	0.17	0.15	0.12	0.15	0.11	0.19
EE0009R	arsenic	precip	0.10	0.10	0.50	0.10	0.40	0.30	0.60	0.10	0.10	0.10	0.20	0.10	0.23
EE0011R	arsenic	precip	0.10	0.10	0.50	0.30	0.10	0.10	0.10	0.50	0.10	0.10	0.70	0.60	0.39
FI0008R	arsenic	precip	0.04	0.11	0.33	0.17	0.16	0.58	0.15	0.13	0.02	0.10	0.36	0.03	0.11
FI0009R	arsenic	precip	1.08	-	-	0.20	0.13	0.26	0.25	0.08	0.36	0.65	0.29	0.19	0.24
FI0017R	arsenic	precip	0.29	0.20	-	0.22	0.09	0.08	0.10	0.05	0.23	0.09	0.29	0.22	0.14
FI0022R	arsenic	precip	0.01	0.05	0.71	0.43	0.12	0.17	0.09	0.21	0.09	0.19	0.06	0.07	0.13
FI0036R	arsenic	precip	0.02	0.25	0.87	0.32	0.11	0.12	0.09	0.07	0.02	0.05	0.09	0.02	0.08
FI0053R	arsenic	precip	0.13	0.38	0.60	1.01	0.11	0.20	0.06	0.05	0.17	0.09	0.14	0.26	0.14
FI0092R	arsenic	precip	0.13	0.12	0.26	0.25	0.15	0.02	0.07	0.03	0.07	0.08	0.06	0.11	0.09
FI0093R	arsenic	precip	0.19	0.23	2.56	0.33	0.05	0.11	0.04	0.03	0.23	0.04	0.22	0.15	0.10
GB0017R	arsenic	precip	-	-	-	-	-	-	-	0.19	0.19	0.17	0.11	0.13	0.15
GB0091R	arsenic	precip	-	-	2.58	2.38	0.30	0.35	0.27	0.17	0.12	0.16	0.24	0.13	0.55
IE0001R	arsenic	precip	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
IE0002R	arsenic	precip	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-	-	-	0.50
IS0090R	arsenic	precip	0.10	0.11	0.28	0.20	0.10	0.04	0.04	0.07	0.08	0.29	0.41	0.26	0.17
IS0091R	arsenic	precip	-	-	-	-	-	-	-	-	-	-	-	-	-
LV0010R	arsenic	precip	0.76	0.43	0.41	0.42	0.64	0.14	0.21	0.31	0.33	0.59	0.45	0.57	0.43
LV0016R	arsenic	precip	0.49	0.18	1.12	0.50	0.46	0.32	0.09	0.26	0.54	0.43	0.74	0.56	0.43
NL0009R	arsenic	precip	0.20	0.08	0.08	0.20	0.20	0.16	0.31	0.50	0.40	0.43	0.37	0.08	0.29
NL0091R	arsenic	precip	0.08	0.10	0.17	0.16	0.21	0.23	0.23	0.10	0.08	0.08	-	-	0.14
NO0047R	arsenic	precip	0.66	1.76	0.56	3.91	0.85	2.04	1.35	0.57	0.43	0.18	2.38	1.31	0.85
NO0099R	arsenic	precip	3.91	0.87	0.52	0.91	0.28	0.27	0.23	0.46	0.34	0.37	0.29	0.73	0.75
PL0005R	arsenic	precip	0.64	0.77	0.51	0.55	0.93	0.43	0.55	0.25	0.23	0.27	0.35	0.39	0.43
SE0051R	arsenic	precip	0.23	0.33	0.44	0.15	0.14	0.27	0.31	0.11	0.16	0.18	0.16	0.18	0.19
SE0097R	arsenic	precip	0.31	0.27	0.33	0.21	0.08	0.03	0.03	0.03	0.20	0.03	0.26	0.13	0.16
SK0002R	arsenic	precip	0.02	1.13	0.61	0.43	0.21	0.20	0.36	0.35	0.29	0.18	0.20	0.20	0.32
SK0004R	arsenic	precip	0.02	0.02	0.28	0.37	0.29	0.22	0.08	0.36	0.27	0.07	0.20	0.28	0.21
SK0005R	arsenic	precip	0.05	0.05	0.21	0.18	0.12	0.04	0.07	0.32	0.10	0.17	0.16	0.22	0.12
SK0006R	arsenic	precip	0.04	0.03	0.87	0.42	0.30	0.06	0.02	0.36	0.34	0.04	1.48	0.46	0.29
SK0007R	arsenic	precip	0.01	0.08	-	0.35	0.11	0.02	0.02	0.34	0.10	0.13	0.48	0.33	0.15

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
BE0004R	cadmium	wetonly	0.740	0.861	1.133	1.211	0.856	1.404	1.953	0.670	0.670	-	-	3.500	1.254
BE0004R	cadmium	bulk	0.270	0.270	0.869	1.504	0.453	0.270	0.558	1.814	5.393	2.491	0.270	0.270	1.265
CZ0001R	cadmium	precip	0.077	0.124	0.176	0.128	0.041	0.174	0.084	0.037	0.099	0.043	0.347	0.490	0.081
CZ0003R	cadmium	precip	0.144	0.412	0.210	0.234	0.225	0.211	0.132	0.108	0.224	0.077	0.174	0.095	0.162
DE0001R	cadmium	precip	0.036	0.042	0.082	0.035	0.022	0.045	0.061	0.012	0.044	0.027	0.035	0.026	0.037
DE0002R	cadmium	wetonly	0.026	0.025	0.074	0.130	0.078	0.059	0.027	0.027	0.014	0.040	0.037	0.023	0.038
DE0002R	cadmium	bulk	0.101	0.085	0.141	0.227	0.260	0.147	0.101	0.081	0.058	0.095	0.085	0.145	0.121
DE0003R	cadmium	precip	0.028	0.045	0.037	0.054	0.034	0.029	0.022	0.033	0.034	0.054	0.038	0.042	0.038
DE0004R	cadmium	precip	0.063	0.075	0.185	0.099	0.078	0.049	0.034	0.046	0.069	0.038	0.043	0.075	0.068
DE0008R	cadmium	precip	0.040	0.058	0.070	0.104	0.039	0.047	0.040	0.030	0.031	0.069	0.043	0.031	0.046
DE0009R	cadmium	precip	0.084	0.035	0.050	0.073	0.044	0.048	0.030	0.027	0.098	0.050	0.040	0.034	0.052
DK0008R	cadmium	precip	0.055	0.086	0.118	0.062	0.046	0.037	0.029	0.062	0.576	0.050	0.036	0.031	0.098
DK0020R	cadmium	precip	0.073	0.057	0.328	0.118	0.059	0.080	0.042	0.067	0.125	0.075	0.099	-	0.088
DK0022R	cadmium	precip	0.028	0.044	0.073	0.054	0.044	0.025	0.025	0.026	0.062	0.021	0.035	0.032	0.036
DK0031R	cadmium	precip	0.058	0.046	0.102	0.068	0.046	0.036	0.112	0.043	0.034	0.021	0.031	0.030	0.047
EE0009R	cadmium	precip	0.030	0.060	0.050	0.110	0.040	0.070	0.030	0.010	0.110	0.040	0.070	0.180	0.063
EE0011R	cadmium	precip	0.180	0.120	0.240	0.140	0.040	0.130	0.070	0.130	0.090	0.100	0.210	0.030	0.109
FI0008R	cadmium	precip	0.009	0.044	0.048	0.019	0.088	0.829	0.038	0.032	0.010	0.023	0.040	0.016	0.033
FI0009R	cadmium	precip	0.521	-	-	0.097	0.128	0.056	0.154	0.017	0.145	0.190	0.188	0.072	0.118
FI0017R	cadmium	precip	0.106	0.133	-	0.103	0.079	0.038	0.066	0.017	0.192	0.038	0.141	0.095	0.073
FI0022R	cadmium	precip	0.008	0.020	0.104	0.128	0.041	0.046	0.037	0.020	0.030	0.039	0.019	0.040	0.032
FI0036R	cadmium	precip	0.028	0.117	0.306	0.069	0.063	0.053	0.065	0.021	0.010	0.018	0.041	0.006	0.037
FI0053R	cadmium	precip	0.043	0.146	0.230	0.307	0.064	0.164	0.056	0.025	0.085	0.048	0.081	0.286	0.073
FI0092R	cadmium	precip	0.056	0.043	0.108	0.116	0.081	0.048	0.063	0.017	0.032	0.048	0.031	0.064	0.048
FI0093R	cadmium	precip	0.080	0.097	0.866	0.110	0.030	0.053	0.034	0.019	0.088	0.015	0.172	0.073	0.051
GB0017R	cadmium	precip	-	-	-	-	-	-	-	0.020	0.020	0.043	0.020	0.020	0.026
GB0091R	cadmium	precip	-	-	0.022	0.063	0.016	0.094	0.119	0.099	0.033	0.026	0.047	0.021	0.043
IE0001R	cadmium	precip	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
IE0002R	cadmium	precip	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	-	-	-	-	0.050
IS0090R	cadmium	precip	0.010	0.016	0.018	0.027	0.011	0.008	0.005	0.006	0.006	0.005	0.012	0.006	0.012
IS0091R	cadmium	precip	0.023	0.027	0.017	0.038	0.021	0.025	0.020	0.060	0.016	0.011	0.025	0.014	0.023
LT0015R	cadmium	precip	0.109	0.056	0.075	0.510	0.209	0.276	0.132	0.052	0.213	0.275	0.530	0.237	0.216
LV0010R	cadmium	precip	0.160	0.661	0.271	0.385	0.255	0.105	0.142	0.086	0.115	0.110	0.127	0.203	0.161
LV0016R	cadmium	precip	0.136	0.093	0.254	0.205	0.140	0.069	0.073	0.083	0.075	0.063	0.056	0.078	0.097
NL0009R	cadmium	precip	0.090	0.060	0.038	0.060	0.060	0.079	0.086	0.040	0.017	0.031	0.064	0.039	0.052
NL0091R	cadmium	precip	0.054	0.062	0.058	0.078	0.069	0.067	0.093	0.051	0.036	0.017	-	-	0.057
NO0001R	cadmium	precip	0.019	0.033	0.097	0.030	0.033	0.038	0.014	0.013	0.094	0.047	0.039	0.065	0.043
NO0039R	cadmium	precip	0.003	0.003	0.029	0.026	0.007	0.012	0.019	0.010	0.003	0.003	0.005	0.006	0.009
NO0041R	cadmium	precip	0.020	0.020	0.044	0.043	0.028	0.069	0.034	0.019	0.030	0.007	0.019	0.015	0.031
NO0047R	cadmium	precip	0.063	0.176	0.086	0.235	0.130	0.165	0.068	0.098	0.051	0.024	0.275	0.068	0.080
NO0055R	cadmium	precip	0.034	0.011	0.005	0.031	0.016	0.022	0.022	0.002	0.004	0.023	0.023	0.008	0.013
NO0056R	cadmium	precip	0.011	0.029	0.117	0.044	0.027	0.021	0.036	0.018	0.040	0.022	0.026	0.025	0.032
NO0099R	cadmium	precip	0.063	0.079	0.053	0.124	0.133	0.025	0.235	0.009	0.038	0.025	0.049	0.011	0.064
PL0004R	cadmium	precip	0.060	0.040	0.080	0.070	0.040	0.040	0.030	0.030	0.080	0.040	0.070	0.040	0.046
PL0005R	cadmium	precip	0.385	0.264	0.493	0.334	0.112	0.040	0.038	0.054	0.267	0.065	0.092	0.082	0.138
PT0003R	cadmium	precip	0.425	0.425	0.425	0.425	0.425	0.425	0.425	0.425	0.425	0.425	0.425	0.425	0.425
PT0004R	cadmium	precip	0.425	0.425	0.425	0.425	-	-	-	-	0.425	0.425	0.425	0.425	0.425
PT0010R	cadmium	precip	0.425	0.425	0.425	0.425	0.425	0.425	0.425	0.425	0.425	0.425	0.425	0.425	0.425



Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
SE0051R	cadmium	precip	0.040	0.250	0.110	0.060	0.030	0.050	0.040	0.212	0.280	0.250	0.040	0.060	0.077
SE0097R	cadmium	precip	0.060	0.060	0.087	0.056	0.037	0.037	0.030	0.030	0.091	0.021	0.076	0.030	0.049
SK0002R	cadmium	precip	0.180	0.460	0.370	0.700	0.260	0.880	0.890	-	1.470	0.710	0.590	0.290	0.615
SK0004R	cadmium	precip	0.900	0.390	0.750	0.340	0.190	0.480	0.190	0.130	0.760	1.460	0.860	0.330	0.510
SK0005R	cadmium	precip	0.110	0.130	0.130	0.190	0.160	0.130	0.120	0.020	0.340	0.630	0.670	0.180	0.220
SK0006R	cadmium	precip	0.360	0.080	0.640	0.550	0.190	0.240	0.050	0.060	0.870	0.220	1.160	0.750	0.425
SK0007R	cadmium	precip	0.180	0.190	-	0.030	0.050	0.060	0.020	0.015	0.240	0.380	0.220	0.230	0.145
BE0004R	chromium	wetonly	2.18	1.58	2.89	4.12	1.46	0.85	1.72	0.40	0.40	-	-	0.40	1.49
DE0001R	chromium	precip	0.19	0.22	0.25	0.19	0.13	0.12	0.12	0.18	0.13	0.11	0.12	0.14	0.14
DE0002R	chromium	bulk	0.19	0.16	0.26	0.39	0.55	0.34	0.26	0.32	0.19	0.19	0.18	0.13	0.25
DE0003R	chromium	precip	0.10	0.12	0.14	0.13	0.11	0.16	0.15	0.13	0.06	0.08	0.05	0.07	0.11
DE0004R	chromium	precip	0.29	0.29	0.51	0.26	0.21	0.27	0.23	0.16	0.19	0.10	0.12	0.20	0.23
DE0008R	chromium	precip	0.27	0.30	0.31	0.42	0.31	0.34	0.27	0.29	0.21	0.12	0.11	0.12	0.24
DE0009R	chromium	precip	0.20	0.20	0.16	0.38	0.19	0.25	0.12	0.20	0.16	0.14	0.17	0.14	0.18
DK0008R	chromium	precip	0.20	0.30	0.65	0.45	0.15	0.17	0.12	0.27	0.38	0.23	0.09	0.11	0.22
DK0020R	chromium	precip	0.11	0.07	0.52	0.48	0.21	0.22	0.15	0.20	0.18	0.07	0.09	-	0.17
DK0022R	chromium	precip	0.12	0.08	0.35	0.41	0.21	0.11	0.09	0.18	0.28	0.11	0.09	0.09	0.16
DK0031R	chromium	precip	0.16	0.15	0.47	0.56	0.15	0.16	0.30	0.18	0.13	0.07	0.08	0.07	0.18
FI0008R	chromium	precip	0.22	0.29	0.73	0.07	0.26	2.23	0.14	0.12	0.07	0.06	0.26	0.09	0.15
FI0009R	chromium	precip	0.92	-	-	0.21	0.35	0.24	0.39	0.23	0.34	0.37	0.11	0.16	0.26
FI0017R	chromium	precip	0.20	0.46	-	0.28	0.41	0.42	0.34	0.18	0.27	0.03	0.14	0.08	0.23
FI0022R	chromium	precip	0.13	0.12	0.92	0.37	0.24	0.37	0.12	0.26	0.06	0.01	0.12	0.17	0.17
FI0036R	chromium	precip	0.22	0.81	1.20	0.11	0.15	0.28	0.23	0.15	0.02	0.01	0.12	0.14	0.14
FI0053R	chromium	precip	0.36	0.66	1.33	1.05	0.38	1.34	0.36	0.11	0.24	0.04	0.23	0.48	0.31
FI0092R	chromium	precip	0.24	0.30	0.57	0.16	0.23	0.38	0.25	0.11	0.13	0.07	0.05	0.17	0.18
FI0093R	chromium	precip	0.27	0.43	2.28	0.22	0.10	0.14	0.05	0.03	0.20	0.01	0.19	0.12	0.10
GB0017R	chromium	precip	-	-	-	-	-	-	-	0.24	0.24	0.08	0.04	0.12	0.11
GB0091R	chromium	precip	-	-	1.53	0.49	0.24	0.40	0.25	0.23	0.21	0.25	0.20	0.10	0.29
IE0001R	chromium	precip	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
IE0002R	chromium	precip	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-	-	-	0.50
IS0090R	chromium	precip	0.28	0.19	0.11	0.31	0.72	0.95	0.22	0.36	0.29	0.33	0.42	0.29	0.34
IS0091R	chromium	precip	0.42	1.07	0.62	0.27	1.46	2.39	2.90	1.78	1.46	1.05	0.83	0.62	1.19
NL0009R	chromium	precip	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.39	0.30	0.60	0.54	0.26	0.35
NL0091R	chromium	precip	0.26	0.26	0.53	0.31	0.26	0.26	0.26	0.28	0.26	0.26	-	-	0.28
NO0047R	chromium	precip	0.10	0.28	0.53	0.31	0.17	0.55	0.37	0.40	0.12	0.10	0.22	0.10	0.22
NO0099R	chromium	precip	0.72	0.22	0.16	0.47	0.43	0.27	0.55	0.48	0.16	0.10	0.10	0.10	0.28
PL0004R	chromium	precip	0.16	0.59	0.57	0.38	0.35	0.14	0.14	0.19	0.10	0.11	0.17	0.13	0.18
PL0005R	chromium	precip	0.49	0.23	0.86	0.32	0.25	0.23	0.17	0.07	0.18	0.08	0.06	0.08	0.17
SE0051R	chromium	precip	0.39	0.87	0.88	0.39	0.53	0.03	0.11	0.03	0.03	0.03	0.03	0.14	0.29
SE0097R	chromium	precip	0.81	1.16	0.30	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.20
SK0002R	chromium	precip	0.26	0.55	0.34	0.12	0.11	0.15	0.08	0.25	0.30	0.30	0.68	0.26	0.23
SK0004R	chromium	precip	0.08	0.14	0.30	0.02	0.12	0.09	0.04	0.06	0.12	0.17	0.08	0.07	0.09
SK0005R	chromium	precip	0.28	0.13	0.08	0.01	0.07	0.08	0.04	0.13	0.15	0.11	0.11	0.14	0.09
SK0006R	chromium	precip	0.13	0.45	0.17	0.03	0.11	0.08	0.06	0.24	0.28	1.20	0.14	-	0.39
SK0007R	chromium	precip	0.17	0.34	-	0.26	0.10	0.07	0.08	0.17	0.47	0.09	0.09	0.12	0.14

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
DE0001R	cobalt	precip	0.023	0.023	0.064	0.042	0.025	0.039	0.026	0.026	0.023	0.018	0.018	0.019	0.027
DE0002R	cobalt	wetonly	0.016	0.021	0.056	0.150	0.128	0.067	0.032	0.068	0.024	0.028	0.018	0.018	0.044
DE0002R	cobalt	bulk	0.068	0.037	0.130	0.179	0.352	0.078	0.051	0.102	0.037	0.037	0.045	0.023	0.082
DE0003R	cobalt	precip	0.014	0.021	0.038	0.033	0.030	0.041	0.056	0.048	0.016	0.021	0.013	0.016	0.027
DE0004R	cobalt	precip	0.016	0.023	0.149	0.078	0.057	0.076	0.060	0.046	0.055	0.019	0.022	0.025	0.048
DE0008R	cobalt	precip	0.013	0.017	0.030	0.073	0.038	0.052	0.035	0.028	0.019	0.022	0.023	0.014	0.027
DE0009R	cobalt	precip	0.018	0.030	0.018	0.100	0.050	0.047	0.019	0.037	0.022	0.016	0.052	0.026	0.034
NO0047R	cobalt	precip	0.132	0.448	0.177	0.869	0.247	0.923	0.741	0.415	0.141	0.030	0.915	0.381	0.336
NO0099R	cobalt	precip	0.049	0.019	0.032	0.062	0.155	0.030	0.059	0.055	0.022	0.025	0.011	0.016	0.040
SE0051R	cobalt	precip	-	0.060	0.070	0.020	0.020	0.020	0.040	0.070	0.060	0.050	0.030	0.090	0.037
SE0097R	cobalt	precip	0.001	-	-	0.009	0.003	0.002	0.010	0.010	0.036	-	0.001	0.010	0.005
BE0004R	copper	wetonly	9.03	6.48	8.17	3.03	2.09	2.09	2.09	2.09	2.09	-	-	2.09	3.37
BE0004R	copper	bulk	2.09	2.09	2.09	3.87	2.39	2.09	2.09	2.09	4.22	3.06	2.09	2.09	2.54
DE0001R	copper	precip	0.64	0.77	1.68	0.89	0.60	1.32	0.85	0.73	0.87	0.67	1.47	0.38	0.79
DE0002R	copper	wetonly	1.42	0.76	1.33	3.32	2.86	2.29	2.21	1.21	1.05	1.18	0.78	0.72	1.58
DE0002R	copper	bulk	1.38	2.31	3.13	4.49	10.59	3.45	3.27	2.04	2.22	2.37	2.98	1.38	2.87
DE0003R	copper	precip	0.51	0.59	0.96	1.03	0.96	1.47	1.46	1.35	0.69	0.60	0.45	0.47	0.87
DE0004R	copper	precip	1.97	1.80	5.03	4.17	2.85	3.72	1.35	1.44	2.02	2.73	2.62	2.60	2.51
DE0008R	copper	precip	0.69	0.94	1.37	1.69	1.93	2.62	1.39	1.33	1.64	1.26	1.36	1.25	1.43
DE0009R	copper	precip	3.63	7.69	1.07	3.76	1.13	2.24	0.83	1.04	1.25	2.37	10.52	1.51	2.26
DK0008R	copper	precip	0.91	3.16	2.76	1.45	0.90	1.37	0.72	1.58	1.88	0.97	0.63	1.44	1.20
DK0020R	copper	precip	0.57	1.53	12.47	8.84	1.68	1.91	1.12	1.42	4.06	0.98	0.74	-	2.24
DK0022R	copper	precip	0.49	3.07	1.76	1.79	2.04	1.22	0.76	1.44	2.94	6.19	2.37	2.12	2.04
DK0031R	copper	precip	0.78	1.69	2.67	3.14	3.27	1.45	4.65	1.40	0.89	0.54	0.42	0.41	1.68
EE0009R	copper	precip	19.00	3.70	27.80	5.80	5.30	0.50	3.40	0.50	4.00	0.50	4.70	6.60	4.43
EE0011R	copper	precip	27.70	9.90	34.50	18.70	8.70	3.80	18.40	5.30	6.80	4.60	8.10	1.80	7.27
FI0008R	copper	precip	1.49	4.21	4.20	3.59	1.76	14.07	1.16	1.28	4.79	2.39	4.03	1.26	2.38
FI0009R	copper	precip	2.73	-	-	3.69	1.44	7.96	2.93	1.08	5.04	5.52	0.82	2.10	2.54
FI0017R	copper	precip	1.50	1.52	-	2.37	1.01	3.13	1.04	1.05	1.69	0.91	0.83	0.78	1.30
FI0022R	copper	precip	0.37	1.24	1.79	2.61	1.23	1.26	1.10	2.55	1.27	0.64	0.62	1.30	1.17
FI0036R	copper	precip	0.58	8.78	11.66	3.57	1.39	3.50	1.44	1.48	0.53	0.52	0.66	0.39	1.22
FI0053R	copper	precip	1.14	7.05	5.28	4.70	6.65	5.29	1.08	2.16	2.12	1.17	0.74	3.62	2.57
FI0092R	copper	precip	1.05	1.52	3.59	2.98	2.62	1.09	2.06	0.94	1.22	2.15	0.75	0.42	1.44
FI0093R	copper	precip	1.42	3.18	30.72	2.03	0.55	3.29	0.84	0.67	3.20	0.71	0.94	1.09	1.20
GB0017R	copper	precip	-	-	-	-	-	-	-	1.85	1.85	1.10	0.63	0.58	0.98
GB0091R	copper	precip	-	-	2.30	0.82	0.42	1.38	1.50	1.14	0.40	0.38	0.92	0.41	0.75
IE0001R	copper	precip	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
IE0002R	copper	precip	0.50	2.00	0.50	0.50	0.50	2.00	2.00	2.00	-	-	-	-	1.15
IS0090R	copper	precip	4.66	1.25	1.33	1.43	2.98	3.14	1.60	1.84	1.61	2.11	2.00	1.57	1.85
IS0091R	copper	precip	1.26	7.19	246.77	50.88	2.77	3.70	6.40	3.88	2.72	15.88	9.38	1.29	31.42
LT0015R	copper	precip	1.44	1.28	2.66	2.51	2.65	1.81	1.25	0.80	1.57	1.65	3.02	0.96	1.67
LV0010R	copper	precip	0.90	1.72	1.78	8.75	2.52	1.67	1.50	1.43	2.48	1.60	1.21	1.39	1.97
LV0016R	copper	precip	4.38	2.17	3.68	1.71	2.89	0.84	2.80	1.40	1.89	1.48	3.34	1.38	2.14
NL0009R	copper	precip	0.83	0.84	0.76	1.76	1.76	1.74	3.59	1.95	1.26	1.71	1.08	0.54	1.40
NL0091R	copper	precip	0.99	1.44	2.44	1.79	1.73	3.88	5.39	2.30	1.34	0.96	-	-	2.00
NO0047R	copper	precip	7.68	23.35	10.19	48.50	10.53	24.38	21.59	13.55	3.62	1.55	33.78	14.56	11.99
NO0099R	copper	precip	1.83	2.02	0.70	1.48	2.97	0.90	1.63	1.48	1.14	0.99	0.72	0.64	1.26

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
PL0004R	copper	precip	0.67	0.52	2.42	1.61	1.13	1.74	0.42	1.10	0.79	0.90	0.55	1.03	0.95
PL0005R	copper	precip	0.52	0.72	1.08	5.29	3.52	1.86	3.42	0.84	1.77	2.88	1.45	1.06	2.20
PT0003R	copper	precip	0.60	2.43	0.74	0.59	2.60	0.65	1.85	4.81	2.64	0.62	0.51	1.05	0.97
PT0004R	copper	precip	0.46	0.38	0.93	0.45	-	-	-	-	2.21	1.05	1.40	0.69	0.80
PT0010R	copper	precip	3.73	0.33	1.74	0.33	0.65	0.33	0.52	0.44	0.66	2.76	0.89	0.39	1.07
SE0051R	copper	precip	4.00	3.80	5.72	1.57	1.45	1.97	4.52	3.31	5.38	3.28	0.71	1.69	2.31
SE0097R	copper	precip	0.62	1.08	4.22	1.21	0.74	0.85	0.60	1.68	1.55	0.21	3.14	0.22	1.21
SK0002R	copper	precip	2.06	8.70	6.53	6.32	1.48	3.45	1.61	1.90	1.45	2.69	3.03	1.59	3.03
SK0004R	copper	precip	4.59	2.11	4.72	1.32	3.61	1.68	1.64	0.94	1.91	2.07	1.15	0.80	2.08
SK0005R	copper	precip	6.92	6.22	3.21	1.24	0.85	1.33	0.68	1.45	0.60	1.46	1.65	1.78	1.52
SK0006R	copper	precip	2.38	3.78	3.74	1.55	1.81	2.29	1.94	2.11	1.19	0.42	1.28	1.78	1.62
SK0007R	copper	precip	0.72	1.87		0.51	0.48	0.51	1.06	0.99	2.25	1.00	0.38	1.70	0.89
DE0001R	iron	precip	15	20	73	54	27	39	27	28	21	8	8	10	25
DE0002R	iron	wetonly	12	19	60	224	92	74	33	35	26	17	9	9	41
DE0002R	iron	bulk	20	36	63	181	147	84	51	103	75	43	56	18	64
DE0003R	iron	precip	6	8	45	36	32	33	48	44	11	13	7	11	22
DE0004R	iron	precip	15	20	112	40	27	42	49	31	34	11	12	12	30
DE0008R	iron	precip	12	15	34	87	46	47	32	31	20	20	15	12	28
DE0009R	iron	precip	12	23	20	115	45	61	23	34	20	12	33	14	32
FI0008R	iron	precip	11	21	72	20	18	132	22	14	16	11	20	16	18
FI0009R	iron	precip	92	-	-	31	43	62	-	60	153	45	16	19	45
FI0017R	iron	precip	38	56	-	34	50	40	23	12	114	22	28	44	36
FI0022R	iron	precip	12	15	51	50	29	36	24	16	20	11	7	21	19
FI0036R	iron	precip	22	117	169	27	16	31	23	25	1	4	13	26	18
FI0053R	iron	precip	32	96	153	178	47	191	59	33	41	13	23	766	64
FI0092R	iron	precip	22	24	88	27	41	28	19	13	22	10	8	15	20
FI0093R	iron	precip	29	85	330	67	20	32	15	12	70	2	26	38	22
IS0090R	iron	precip	282	49	72	66	527	531	108	90	29	109	262	91	148
IS0091R	iron	precip	175	277	347	462	971	426	328	84	381	358	470	189	324
BE0004R	lead	wetonly	7.69	7.63	22.90	17.82	5.52	6.92	7.61	4.02	4.02	-	-	20.56	9.40
BE0004R	lead	bulk	1.42	2.53	3.82	5.87	2.25	3.02	2.43	2.64	3.80	3.27	1.71	1.22	2.58
CZ0001R	lead	precip	2.94	5.13	5.99	1.76	0.90	4.67	0.88	1.80	0.80	0.52	2.80	2.97	1.59
CZ0003R	lead	precip	2.71	9.65	5.35	5.03	3.57	2.36	3.33	3.01	1.17	0.36	2.75	0.64	2.60
DE0001R	lead	precip	1.15	1.07	2.74	1.18	0.92	1.47	1.14	0.49	1.39	1.17	0.96	0.93	1.17
DE0002R	lead	wetonly	0.87	0.55	1.59	3.17	2.36	1.86	1.21	0.98	0.62	0.99	0.85	0.75	1.19
DE0002R	lead	bulk	1.07	1.04	1.83	2.25	3.02	2.01	1.48	1.64	1.06	1.15	1.68	1.29	1.54
DE0003R	lead	precip	1.02	1.63	1.00	1.30	0.95	1.26	0.85	1.15	0.86	1.34	0.85	0.85	1.10
DE0004R	lead	precip	1.37	1.71	4.46	1.59	2.06	2.26	1.51	1.66	1.66	1.13	1.26	1.62	1.77
DE0008R	lead	precip	1.80	2.08	2.35	2.64	1.69	1.77	1.34	0.73	1.15	1.42	1.76	1.03	1.56
DE0009R	lead	precip	1.50	1.24	1.01	1.94	1.33	1.45	0.77	0.80	1.84	0.99	1.32	0.66	1.23
DK0008R	lead	precip	2.40	4.49	3.97	1.94	0.98	1.44	1.02	1.32	0.70	1.58	1.21	0.09	1.29
DK0020R	lead	precip	1.76	1.90	3.49	2.33	1.91	1.66	1.18	1.31	1.59	1.69	2.04	-	1.75
DK0022R	lead	precip	1.13	1.91	2.72	1.67	1.42	0.87	0.60	0.87	1.93	0.92	1.35	1.39	1.28
DK0031R	lead	precip	0.80	1.09	3.27	2.16	1.10	0.95	2.19	0.49	0.93	0.67	0.75	0.41	1.09
EE0009R	lead	precip	0.50	1.10	0.50	1.30	0.50	0.50	0.50	0.50	0.50	0.50	1.60	0.50	0.62
EE0011R	lead	precip	0.50	0.50	2.70	1.20	0.50	0.50	0.50	0.50	2.10	0.50	0.50	0.50	0.66

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
FI0008R	lead	precip	0.41	1.06	1.35	0.56	0.85	1.55	0.60	0.55	0.19	0.66	0.90	0.25	0.53
FI0009R	lead	precip	9.80	-	-	2.11	1.90	1.73	1.62	0.44	4.25	5.32	3.55	1.59	2.37
FI0017R	lead	precip	3.01	2.25	-	1.85	1.08	0.86	0.92	0.40	2.75	1.26	3.12	2.54	1.47
FI0022R	lead	precip	0.21	0.46	3.36	3.30	0.95	0.98	0.40	0.46	0.56	1.42	0.51	0.58	0.79
FI0036R	lead	precip	0.46	2.79	8.08	2.53	0.66	0.51	0.62	0.35	0.21	0.43	1.12	0.15	0.59
FI0053R	lead	precip	1.34	3.58	7.03	8.93	1.37	0.80	0.58	0.51	2.27	0.96	1.92	4.09	1.60
FI0092R	lead	precip	1.49	1.39	2.90	3.06	1.92	0.30	0.66	0.44	0.68	1.13	0.80	1.30	1.07
FI0093R	lead	precip	2.35	1.89	16.81	3.33	0.55	1.16	0.29	0.36	1.73	0.50	2.45	1.69	1.05
GB0017R	lead	precip	-	-	-	-	-	-	-	1.63	1.63	1.22	0.83	0.79	1.08
GB0091R	lead	precip	-	-	0.89	1.81	0.62	1.67	1.19	0.62	0.33	0.36	2.50	0.61	1.18
IE0001R	lead	precip	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
IE0002R	lead	precip	0.50	3.00	0.50	2.00	0.50	0.50	0.50	0.50	-	-	-	-	1.05
IS0090R	lead	precip	1.14	0.50	0.39	0.79	0.62	0.48	0.47	0.34	0.34	0.47	0.44	0.23	0.49
IS0091R	lead	precip	2.68	0.79	1.02	0.88	0.68	0.30	0.37	0.32	0.23	0.59	0.46	0.17	0.70
LT0015R	lead	precip	3.51	2.22	1.56	4.87	4.01	9.00	8.50	1.47	2.60	1.70	3.71	1.65	3.59
LV0010R	lead	precip	1.27	3.19	1.90	2.82	3.11	1.84	2.05	1.73	1.68	1.77	2.32	1.53	1.91
LV0016R	lead	precip	0.83	0.79	2.26	1.67	1.35	1.66	1.32	0.88	0.60	0.83	7.10	4.55	2.03
NL0009R	lead	precip	1.53	1.02	0.49	2.22	2.22	2.04	2.02	2.01	1.54	1.90	1.68	0.62	1.64
NL0091R	lead	precip	2.15	3.07	2.28	2.17	2.36	2.52	3.84	3.03	1.98	1.96	-	-	2.39
NO0001R	lead	precip	1.75	2.01	4.50	1.28	0.99	0.65	0.64	0.73	2.58	1.46	1.33	1.76	1.57
NO0039R	lead	precip	0.15	1.05	1.19	0.32	0.62	0.28	0.39	0.11	0.11	0.30	0.51	0.12	0.25
NO0041R	lead	precip	0.61	0.62	1.58	1.47	0.48	0.48	0.48	0.33	0.75	0.39	0.51	0.38	0.61
NO0047R	lead	precip	1.01	1.38	1.67	4.52	2.47	3.65	2.23	6.25	1.00	1.02	2.01	0.87	2.32
NO0055R	lead	precip	3.07	0.88	0.75	1.09	0.54	0.74	0.78	0.27	0.19	0.57	0.45	0.13	0.59
NO0056R	lead	precip	0.47	1.00	4.07	0.90	1.08	0.62	0.50	0.46	1.42	0.97	0.97	0.54	0.97
NO0099R	lead	precip	1.47	3.82	2.27	3.00	2.57	1.36	1.92	4.97	2.21	1.46	1.39	0.67	1.96
PL0004R	lead	precip	1.15	1.66	1.95	1.27	1.48	0.61	0.55	1.10	1.48	1.12	1.66	0.93	1.08
PL0005R	lead	precip	0.63	0.41	0.12	4.36	2.43	0.70	1.42	0.44	1.05	0.84	1.41	1.19	1.32
PT0003R	lead	precip	0.65	0.65	0.65	0.65	1.12	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
PT0004R	lead	precip	0.65	0.65	0.65	0.65	-	-	-	-	0.65	0.65	0.65	0.65	0.65
PT0010R	lead	precip	0.65	0.65	0.65	1.04	3.65	0.65	5.68	0.65	7.30	4.67	3.56	0.65	2.62
SE0051R	lead	precip	1.81	6.31	2.75	1.10	1.42	1.82	1.53	0.96	1.38	1.08	0.97	1.39	1.50
SE0097R	lead	precip	1.46	2.27	2.35	1.32	0.99	0.81	0.83	0.48	1.67	0.33	1.41	0.60	1.13
SK0002R	lead	precip	3.48	-	8.01	3.19	3.05	3.90	2.39	4.24	4.75	3.27	1.55	2.19	3.41
SK0004R	lead	precip	5.40	3.92	-	2.21	1.62	2.49	0.93	0.86	1.83	3.59	3.06	3.03	2.11
SK0005R	lead	precip	3.07	5.16	3.26	2.39	1.35	1.85	1.85	1.46	1.40	3.40	3.58	2.36	2.16
SK0006R	lead	precip	5.58	4.45	13.88	5.97	1.16	1.85	2.41	2.88	2.52	2.40	11.62	9.15	4.37
SK0007R	lead	precip	1.20	3.03	-	0.60	0.30	0.57	1.24	1.35	4.40	1.92	1.61	2.88	1.41
DE0001R	manganese	precip	1.19	1.46	3.47	4.41	1.86	3.24	2.56	3.19	2.17	0.77	1.04	0.75	2.08
DE0002R	manganese	wetonly	0.63	0.85	3.21	20.24	11.72	5.75	2.95	3.13	2.32	1.86	0.89	0.99	3.91
DE0002R	manganese	bulk	1.30	1.53	13.21	17.50	29.77	10.29	5.03	9.49	7.65	5.85	4.04	2.60	7.71
DE0003R	manganese	precip	0.45	1.23	2.47	2.63	2.54	3.26	3.49	3.73	0.88	0.97	0.48	0.80	1.77
DE0004R	manganese	precip	1.39	1.85	11.99	6.05	4.80	8.21	6.06	3.09	4.60	2.18	1.95	2.11	4.16
DE0008R	manganese	precip	0.72	1.17	2.57	9.06	3.05	4.13	2.40	2.35	2.35	1.87	1.16	1.06	2.31
DE0009R	manganese	precip	1.20	1.52	1.53	9.73	5.54	5.27	1.74	2.83	1.50	0.79	3.38	1.74	2.94
FI0008R	manganese	precip	0.46	8.20	9.42	1.73	1.04	7.57	1.80	0.55	0.57	0.64	1.36	0.63	1.26
FI0009R	manganese	precip	4.14	-	-	3.55	3.18	5.29	7.50	1.69	10.18	37.58	1.40	1.04	4.13

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
FI0017R	manganese	precip	1.95	2.61	-	5.65	5.05	3.50	2.79	1.80	5.35	0.82	1.63	1.34	2.65
FI0022R	manganese	precip	0.25	0.68	8.04	8.45	2.83	3.20	2.66	1.16	4.55	0.86	1.86	0.84	2.09
FI0036R	manganese	precip	0.26	3.25	12.72	2.36	0.96	5.42	3.50	1.41	0.88	0.50	0.40	0.47	1.37
FI0053R	manganese	precip	2.44	7.59	11.51	17.02	3.45	27.50	2.58	3.44	4.93	1.44	2.20	18.61	4.03
FI0092R	manganese	precip	0.91	0.74	4.18	2.99	7.74	3.98	1.53	0.83	2.12	0.65	0.53	0.68	1.99
FI0093R	manganese	precip	1.40	5.65	50.10	11.56	2.67	5.52	1.53	1.09	10.52	0.37	6.30	1.52	2.52
IE0001R	manganese	precip	27.00	7.00	19.00	12.00	6.00	12.00	15.00	53.00	29.00	23.00	9.00	3.00	13.29
IE0002R	manganese	precip	0.50	3.00	4.00	5.00	2.00	4.00	8.00	12.00	-	-	-	-	3.56
IS0090R	manganese	precip	5.16	1.24	1.79	2.06	9.37	9.23	1.61	1.52	1.27	2.60	4.69	1.40	2.89
IS0091R	manganese	precip	2.37	3.42	3.71	7.07	19.79	7.20	2.40	1.74	1.82	2.15	5.03	1.42	3.48
LV0010R	manganese	precip	5.00	13.96	6.54	3.78	7.03	10.02	5.33	4.13	13.93	7.25	3.13	11.62	7.36
LV0016R	manganese	precip	3.92	6.19	12.46	6.24	6.51	4.61	4.54	6.09	4.79	6.47	4.15	8.26	5.89
NO0099R	manganese	precip	4.28	1.85	4.00	6.25	2.73	1.97	2.45	3.20	2.77	1.36	0.82	1.03	2.53
PT0003R	manganese	precip	1.08	1.08	3.21	1.57	8.93	1.21	2.69	3.48	7.11	1.36	1.13	1.22	1.69
PT0004R	manganese	precip	1.08	1.08	7.07	2.11	-	-	-	-	5.83	1.08	2.06	1.38	1.63
PT0010R	manganese	precip	2.32	1.84	7.54	1.59	1.08	2.89	6.77	14.09	4.57	2.67	1.08	5.16	4.18
SE0051R	manganese	precip	-	-	-	-	-	-	-	-	-	-	-	-	-
SE0097R	manganese	precip	2.21	0.90	3.45	1.72	1.93	3.58	1.93	2.70	2.70	0.30	0.71	0.80	1.76
SK0002R	manganese	precip	1.46	7.11	3.29	-	6.33	4.33	2.57	-	2.85	2.30	3.75	4.26	3.75
SK0004R	manganese	precip	5.25	5.07	7.26	7.80	9.33	7.47	2.04	5.96	3.10	3.17	3.30	3.08	4.90
SK0005R	manganese	precip	9.55	9.65	5.29	9.66	7.14	6.88	3.30	1.81	6.67	5.60	8.17	5.30	6.26
SK0006R	manganese	precip	2.61	2.83	4.93	8.03	7.33	7.98	2.41	4.22	4.60	1.03	1.95	1.17	3.65
SK0007R	manganese	precip	6.31	6.86	-	4.60	2.67	9.95	7.62	4.83	-	2.42	3.64	3.01	4.94
BE0004R	mercury	wetonly	5.0	5.0	5.0	37.7	9.8	5.0	5.0	5.0	5.0	-	-	30.0	11.9
DE0001R	mercury	precip	5.4	15.7	17.9	8.0	9.6	13.3	14.9	9.7	7.1	3.7	7.3	6.3	9.1
DE0002R	mercury	wetonly	4.0	5.7	8.0	23.9	23.6	14.3	16.8	12.0	6.9	8.0	8.0	6.8	10.9
DE0009R	mercury	precip	8.7	12.7	10.4	16.6	13.8	11.6	8.4	8.8	8.6	6.2	9.1	5.3	9.4
FI0096G	mercury	precip	3.6	26.3	16.4	9.3	4.9	15.0	13.2	7.6	3.5	5.3	12.8	-	7.4
IE0001R	mercury	precip	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
IE0002R	mercury	precip	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	-	-	-	-	50.0
NL0091R	mercury	precip	5.6	6.8	10.0	12.6	11.8	12.9	18.1	12.6	9.8	3.9	5.6	4.7	8.6
NO0099R	mercury	precip	-	11.1	6.0	4.8	8.8	9.6	10.5	-	-	8.9	7.5	7.5	8.1
SE0005R	mercury	precip	2.7	28.0	13.3	3.0	10.8	6.3	21.5	4.0	3.3	3.0	5.0	3.7	7.6
SE0011R	mercury	precip	9.6	35.5	36.0	9.7	15.5	17.0	7.9	9.7	11.5	7.4	7.8	13.0	11.6
SE0014R	mercury	precip	11.5	22.0	24.0	7.4	7.2	24.0	7.1	9.7	13.0	8.3	6.6	5.2	9.0
BE0004R	nickel	wetonly	6.59	4.91	3.23	2.87	0.95	1.18	2.82	1.64	1.64	-	-	0.98	2.33
DE0001R	nickel	precip	0.26	0.48	0.40	0.23	0.20	0.25	0.28	0.20	0.24	0.20	0.28	0.20	0.24
DE0002R	nickel	wetonly	0.41	0.33	0.38	0.76	0.63	0.46	0.41	0.39	0.29	0.39	0.35	0.22	0.39
DE0002R	nickel	bulk	0.47	0.49	0.47	0.86	1.55	1.03	2.07	0.58	0.36	0.67	3.80	0.32	1.00
DE0003R	nickel	precip	0.31	0.37	0.27	0.31	0.32	0.26	0.40	0.31	0.21	0.27	0.19	0.31	0.29
DE0004R	nickel	precip	0.28	0.30	0.58	1.09	0.54	0.31	0.32	0.13	0.29	0.31	0.23	0.28	0.38
DE0008R	nickel	precip	0.30	0.64	0.65	0.72	0.54	0.43	0.36	0.50	0.42	0.36	0.47	0.41	0.45
DE0009R	nickel	precip	0.70	0.72	0.19	0.44	0.18	0.39	0.16	0.24	0.26	0.24	0.31	0.19	0.28
DK0008R	nickel	precip	0.25	0.62	0.82	0.49	0.24	0.35	0.26	0.43	0.52	0.32	0.19	0.25	0.34
DK0020R	nickel	precip	0.30	0.40	0.99	0.90	0.40	0.59	0.41	0.33	0.69	0.32	0.22	-	0.44

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
DK0022R	nickel	precip	0.19	0.36	0.62	0.46	0.32	0.22	0.22	0.28	0.39	0.25	0.27	0.34	0.31
DK0031R	nickel	precip	0.26	0.36	0.84	0.60	0.33	0.29	0.36	0.21	0.30	0.17	0.17	0.19	0.30
FI0008R	nickel	precip	0.10	0.51	4.26	0.96	0.43	2.41	2.61	0.37	0.10	0.61	0.57	0.16	0.70
FI0009R	nickel	precip	1.25	-	-	0.91	0.24	2.11	8.49	0.31	1.32	1.52	0.30	0.49	0.90
FI0017R	nickel	precip	0.57	0.61	-	0.48	0.15	1.14	0.20	0.21	0.34	0.17	0.33	0.88	0.40
FI0022R	nickel	precip	0.12	0.17	0.77	0.60	0.13	0.50	1.10	0.50	0.33	0.65	0.13	0.23	0.38
FI0036R	nickel	precip	0.11	0.65	3.03	0.65	0.20	2.24	0.43	0.94	0.08	0.14	0.16	0.11	0.38
FI0053R	nickel	precip	0.38	1.12	2.70	3.49	1.60	1.26	0.20	1.14	0.37	0.80	0.31	1.24	0.82
FI0092R	nickel	precip	0.44	0.24	1.33	0.70	0.45	0.24	0.35	0.11	0.24	0.32	0.20	0.20	0.29
FI0093R	nickel	precip	0.36	0.62	6.34	0.99	0.38	0.82	0.20	0.28	0.49	0.12	0.32	0.29	0.34
GB0017R	nickel	precip	-	-	-	-	-	-	-	0.52	0.52	0.46	0.19	0.23	0.34
GB0091R	nickel	precip	-	-	0.16	0.23	0.15	1.28	0.63	2.10	0.44	0.20	0.50	0.09	0.41
IE0001R	nickel	precip	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
IE0002R	nickel	precip	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-	-	-	0.50
IS0090R	nickel	precip	0.77	0.44	0.44	0.64	0.91	0.96	0.29	0.34	0.82	0.74	1.16	0.43	0.61
IS0091R	nickel	precip	1.08	1.22	2.20	0.84	4.28	0.97	0.64	0.77	1.02	1.94	0.54	0.26	1.11
LV0010R	nickel	precip	0.36	1.85	0.65	0.70	1.07	0.81	1.83	3.90	4.54	0.47	2.81	1.43	1.81
LV0016R	nickel	precip	0.43	0.63	1.35	1.41	0.92	0.62	2.89	3.48	1.57	0.63	1.32	0.94	1.57
NL0009R	nickel	precip	0.21	0.21	0.21	0.52	0.52	0.21	0.48	0.37	0.24	0.50	0.44	0.21	0.32
NL0091R	nickel	precip	0.21	0.29	0.58	0.25	0.21	0.46	0.83	0.33	0.21	0.21	-	-	0.31
NO0047R	nickel	precip	4.21	15.27	7.32	30.74	7.82	25.93	23.32	11.59	4.52	1.01	19.67	14.58	10.55
NO0099R	nickel	precip	0.87	0.24	0.31	0.43	0.85	0.39	1.13	0.41	0.33	0.47	0.29	0.19	0.48
PL0004R	nickel	precip	0.41	0.35	0.56	0.33	0.61	0.46	0.26	0.17	0.21	0.11	0.20	0.17	0.26
PL0005R	nickel	precip	0.20	0.33	2.28	1.97	5.54	2.22	1.39	0.69	1.20	1.34	0.51	1.08	1.60
PT0003R	nickel	precip	0.78	0.78	0.78	0.96	1.94	0.78	0.78	2.23	2.32	0.82	0.78	1.50	0.93
PT0004R	nickel	precip	0.78	0.78	0.78	1.77	-	-	-	-	2.50	3.40	2.04	1.24	1.93
PT0010R	nickel	precip	14.94	2.76	1.91	8.55	2.63	3.02	6.68	2.83	3.27	6.00	3.69	23.29	7.70
SE0051R	nickel	precip	0.70	0.18	0.62	0.02	0.02	0.24	0.25	0.22	0.27	0.16	0.19	0.19	0.20
SE0097R	nickel	precip	0.02	0.09	0.55	0.20	0.18	0.20	0.15	0.26	0.36	0.13	0.21	0.21	0.19
SK0002R	nickel	precip	0.37	0.85	0.92	0.92	0.69	0.31	0.19	0.57	0.05	0.12	0.33	1.22	0.53
SK0004R	nickel	precip	0.47	0.17	0.65	0.06	0.43	0.44	0.60	0.36	0.19	1.10	0.49	0.33	0.45
SK0005R	nickel	precip	-	3.31	2.12	0.77	0.75	1.27	0.45	0.54	0.80	1.21	0.37	1.86	0.99
SK0006R	nickel	precip	0.65	0.05	0.68	0.35	0.61	0.61	0.36	0.89	0.52	0.05	0.28	0.51	0.43
SK0007R	nickel	precip	0.18	0.70	-	0.17	0.41	0.41	0.37	0.45	0.71	0.50	0.28	1.03	0.41
DE0001R	vanadium	precip	0.75	0.92	0.74	0.62	0.75	0.76	0.66	0.42	0.72	0.41	0.61	0.64	0.65
DE0002R	vanadium	wetonly	0.25	0.27	0.47	2.12	1.06	0.63	0.47	0.59	0.35	0.35	0.27	0.26	0.52
DE0002R	vanadium	bulk	0.32	0.36	0.56	1.16	1.18	0.70	0.55	1.18	0.51	0.46	0.51	0.39	0.60
DE0003R	vanadium	precip	0.26	0.44	0.35	0.34	0.31	0.36	0.49	0.57	0.27	0.34	0.26	0.40	0.35
DE0004R	vanadium	precip	0.29	0.26	0.77	0.57	0.44	0.56	0.45	0.29	0.40	0.31	0.19	0.28	0.39
DE0008R	vanadium	precip	0.34	0.49	0.53	0.83	0.34	0.42	0.37	0.34	0.37	0.59	0.41	0.20	0.40
DE0009R	vanadium	precip	0.66	0.85	0.53	0.96	0.44	0.48	0.47	0.50	0.64	0.68	0.55	0.35	0.55
FI0008R	vanadium	precip	0.06	0.53	0.58	0.25	0.23	0.44	0.17	0.12	0.04	0.20	0.30	0.06	0.15
FI0009R	vanadium	precip	2.20	-	-	0.71	0.50	0.67	0.76	0.32	1.04	2.36	0.71	0.74	0.74
FI0017R	vanadium	precip	1.29	1.45	-	1.14	0.39	0.37	0.19	0.24	0.56	0.40	0.87	0.78	0.51
FI0022R	vanadium	precip	0.09	0.31	1.08	0.88	0.28	0.35	0.13	0.14	0.30	0.19	0.22	0.16	0.24
FI0036R	vanadium	precip	0.08	1.45	1.96	0.56	0.18	0.13	0.13	0.09	0.08	0.19	0.28	0.07	0.16

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
FI0092R	vanadium	precip	0.47	0.58	1.16	0.59	0.47	0.11	0.19	0.10	0.34	0.21	0.29	0.33	0.30
FI0093R	vanadium	precip	0.62	1.04	8.94	1.30	0.23	0.43	0.13	0.24	0.64	0.17	0.82	0.37	0.37
IE0001R	vanadium	precip	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
IE0002R	vanadium	precip	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-	-	-	0.50
IS0090R	vanadium	precip	1.97	1.73	2.16	1.59	1.85	1.68	0.40	0.51	0.82	2.53	3.13	2.41	1.71
SE0051R	vanadium	precip	1.13	1.68	2.13	0.89	0.74	0.65	0.46	0.89	0.77	0.74	0.64	0.95	0.86
SE0097R	vanadium	precip	2.33	1.29	1.46	0.49	0.56	0.52	0.45	1.07	1.48	0.70	0.73	0.91	1.02
BE0004R	zinc	wetonly	196.0	194.4	246.8	138.2	73.4	123.0	237.2	122.1	122.1	-	-	55.4	132.2
BE0004R	zinc	bulk	9.8	8.2	20.2	28.0	27.6	22.2	23.4	46.6	109.4	65.3	16.5	10.2	33.4
DE0001R	zinc	precip	8.1	10.5	11.1	6.8	6.7	8.2	7.6	8.1	8.8	6.0	5.8	4.0	7.2
DE0002R	zinc	wetonly	4.1	5.1	9.8	14.3	11.5	8.9	7.4	7.3	4.3	6.5	6.8	4.6	6.8
DE0002R	zinc	bulk	17.0	15.8	63.3	18.8	43.6	36.5	20.4	10.7	9.3	15.2	20.6	12.2	21.8
DE0003R	zinc	precip	5.5	7.9	4.7	5.9	5.1	6.5	4.7	8.6	7.2	9.1	6.1	7.0	6.6
DE0004R	zinc	precip	11.6	12.8	36.7	40.7	19.7	14.4	17.0	10.9	13.2	9.5	7.1	32.4	17.9
DE0008R	zinc	precip	5.5	9.7	11.6	15.9	7.4	9.3	8.8	5.5	5.9	10.6	8.6	5.5	7.9
DE0009R	zinc	precip	13.1	11.0	6.1	11.3	9.9	10.4	9.0	6.5	6.9	7.6	9.9	6.8	8.6
DK0008R	zinc	precip	8.2	20.5	25.8	8.6	4.9	9.4	6.7	10.2	14.4	12.2	4.6	5.6	8.5
DK0020R	zinc	precip	7.0	18.4	91.7	29.7	11.1	12.4	9.2	10.3	17.8	8.6	8.1	-	13.9
DK0022R	zinc	precip	4.6	14.7	17.6	30.3	11.1	6.7	5.9	9.2	12.0	11.7	7.2	9.8	11.0
DK0031R	zinc	precip	10.2	10.0	58.8	14.6	9.8	6.2	10.6	6.2	5.8	5.4	5.3	5.5	9.2
EE0011R	zinc	precip	14.0	11.0	24.0	14.0	5.0	5.0	5.0	17.0	34.0	18.0	45.0	48.0	26.0
FI0008R	zinc	precip	3.1	13.4	14.0	1.8	2.9	15.2	2.2	1.3	9.8	4.2	5.6	1.0	4.2
FI0009R	zinc	precip	25.7	-	-	5.6	16.8	7.7	9.9	2.5	10.6	19.2	7.1	4.9	8.8
FI0017R	zinc	precip	6.8	7.1	-	11.0	4.4	5.9	3.7	1.9	7.7	2.9	7.6	7.3	4.9
FI0022R	zinc	precip	0.8	1.7	11.0	11.4	3.6	2.6	1.9	2.2	3.0	2.7	1.5	1.5	2.6
FI0036R	zinc	precip	1.3	11.8	35.7	4.7	3.3	12.5	5.0	1.5	1.1	2.0	4.1	2.9	3.3
FI0092R	zinc	precip	4.0	4.7	9.8	6.5	4.7	2.8	2.2	1.4	2.4	2.9	2.6	3.4	3.1
FI0093R	zinc	precip	5.4	7.5	60.8	11.4	13.1	6.2	1.9	4.2	11.7	1.6	11.7	3.9	5.8
GB0017R	zinc	precip	-	-	-	-	-	-	-	8.7	8.7	5.6	4.5	5.5	5.8
GB0091R	zinc	precip	-	-	7.3	10.3	4.9	17.1	24.1	12.2	6.0	6.0	9.4	6.7	8.8
IE0001R	zinc	precip	56.0	25.0	59.0	21.0	24.0	12.0	21.0	69.0	30.0	55.0	41.0	22.0	32.5
IE0002R	zinc	precip	2.0	12.0	9.0	22.0	0.5	13.0	12.0	12.0	-	-	-	-	9.4
IS0090R	zinc	precip	9.7	2.5	3.3	4.1	9.2	8.1	7.4	4.4	4.0	7.6	4.1	2.2	4.7
IS0091R	zinc	precip	16.3	13.8	14.1	14.1	12.6	7.6	10.4	8.7	7.8	9.2	11.3	10.2	11.5
LT0015R	zinc	precip	51.9	57.3	51.6	130.0	98.5	185.4	72.0	31.0	33.8	97.3	171.3	91.9	86.6
LV0010R	zinc	precip	16.4	62.3	24.7	20.1	16.7	14.0	19.8	10.8	8.3	11.7	23.8	23.7	17.0
LV0016R	zinc	precip	26.0	16.5	57.6	10.0	9.7	2.6	8.7	14.1	22.3	13.0	29.3	17.6	15.8
NL0009R	zinc	precip	6.5	5.5	5.0	7.7	7.7	7.6	10.7	9.2	7.1	6.9	7.8	4.7	7.1
NL0091R	zinc	precip	4.8	6.5	9.1	8.4	9.9	7.8	15.2	7.1	5.1	4.5	-	-	7.4
NO0001R	zinc	precip	3.3	3.5	9.8	2.8	2.5	5.3	2.9	2.6	5.5	4.9	2.8	5.5	3.9
NO0039R	zinc	precip	0.6	7.9	2.4	1.7	1.1	2.3	1.8	0.9	0.4	0.9	1.2	0.6	1.0
NO0041R	zinc	precip	4.6	3.7	3.8	12.1	3.0	3.9	6.6	2.0	5.4	2.6	3.7	13.2	5.1
NO0047R	zinc	precip	3.2	16.8	11.4	10.1	8.6	12.0	10.1	11.7	3.1	1.6	4.6	2.2	6.2
NO0055R	zinc	precip	9.4	2.3	3.9	8.2	4.2	5.0	3.0	1.2	1.6	8.4	8.5	1.4	3.4
NO0056R	zinc	precip	2.5	3.4	12.5	4.1	2.4	4.3	2.6	4.0	4.8	3.0	2.8	1.8	3.7
NO0099R	zinc	precip	10.9	7.3	5.5	7.9	13.9	4.2	11.5	4.2	10.9	6.0	4.0	3.1	7.3

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
PL0004R	zinc	precip	5.4	6.1	11.4	5.1	8.6	6.5	3.1	3.8	4.7	4.2	3.9	3.1	4.5
PL0005R	zinc	precip	13.1	11.3	80.8	17.0	11.3	5.1	5.4	3.3	4.7	4.8	2.8	5.6	7.1
PT0003R	zinc	precip	4.7	15.2	21.0	15.8	43.5	21.3	25.3	30.4	20.0	17.5	17.0	17.8	16.1
PT0004R	zinc	precip	6.4	2.6	9.0	5.1	-	-	-	-	18.0	14.0	15.0	14.7	10.1
PT0010R	zinc	precip	42.3	15.6	54.3	13.3	29.0	46.0	63.4	93.0	300.4	91.2	11.3	80.3	100.4
SE0051R	zinc	precip	9.3	9.1	12.8	7.9	9.3	7.9	11.6	9.6	31.7	29.3	5.4	6.2	9.9
SE0097R	zinc	precip	6.9	6.7	15.6	5.5	3.9	4.5	1.6	2.3	8.8	0.5	5.3	2.6	5.0
SK0007R	zinc	precip	16.0	17.0	-	7.0	7.0	0.9	0.9	3.0	0.9	5.0	3.0	6.0	5.3
BE0004R	mm	wetonly	25	30	14	36	67	40	21	12	55	-	-	33	333
BE0004R	mm	bulk	88	69	47	46	80	47	46	45	101	91	106	139	905
DE0002R	mm	wetonly	56	15	15	20	33	48	48	24	98	25	17	38	437
DE0002R	mm	wetonly	53	13	15	19	31	45	46	25	96	24	16	36	420
DE0002R	mm	bulk	59	12	20	25	24	41	42	25	46	23	26	44	386
CZ0001R	mm	precip	55	22	21	33	137	18	106	33	62	83	14	67	649
CZ0003R	mm	precip	44	10	11	12	92	40	69	38	27	63	12	47	466
DE0001R	mm	precip	35	12	13	42	66	78	61	31	88	68	40	55	590
DE0002R	mm	precip	53	13	15	19	31	45	46	25	96	24	16	36	420
DE0003R	mm	precip	199	100	64	91	147	124	87	101	85	178	119	74	1368
DE0004R	mm	precip	111	19	35	36	95	41	61	43	53	51	43	56	644
DE0008R	mm	precip	120	42	26	38	153	43	76	32	99	100	48	99	876
DE0009R	mm	precip	29	4	12	17	66	47	57	83	79	54	34	43	524
DE0009R	mm	precip (Hg)	27	5	11	17	66	44	56	80	79	50	31	38	504
DK0008R	mm	precip	30	9	10	58	67	52	79	28	55	34	72	55	550
DK0020R	mm	precip	32	11	11	23	29	42	35	43	46	81	51	0	404
DK0022R	mm	precip	63	14	30	59	71	66	66	42	31	52	70	91	657
DK0031R	mm	precip	47	23	20	55	76	117	55	48	71	58	81	62	715
EE0009R	mm	precip	42	12	10	41	86	54	97	102	52	103	45	82	723
EE0011R	mm	precip	5	8	5	19	43	25	17	84	26	33	65	81	410
FI0008R	mm	precip	18	7	5	10	29	1	32	43	44	20	7	33	248
FI0009R	mm	precip	12	0	0	20	49	28	9	54	13	10	49	52	294
FI0017R	mm	precip	15	15	0	17	60	52	36	135	44	65	52	49	540
FI0022R	mm	precip	53	17	11	5	45	20	23	47	47	56	33	33	387
FI0036R	mm	precip	40	2	3	11	86	20	39	43	64	37	27	45	416
FI0053R	mm	precip	34	4	6	4	47	2	42	35	41	36	28	8	286
FI0092R	mm	precip	48	25	12	10	66	40	32	120	38	82	50	62	584
FI0093R	mm	precip	45	6	2	10	83	52	60	106	12	138	43	71	628
FI0096G	mm	precip	6	2	5	7	57	11	24	25	42	14	9	0	201
GB0017R	mm	precip	-	-	-	-	-	-	-	15	41	76	98	62	293
GB0091R	mm	precip			10	45	107	37	25	10	26	20	65	48	393
IE0001R	mm	precip	132	163	82	138	142	147	126	25	64	59	293	136	1505
IE0002R	mm	precip	144	132	91	108	162	155	90	13	72	186	217	149	1514
IS0090R	mm	precip	33	152	114	153	51	87	72	93	87	52	68	135	1097
IS0091R	mm	precip	134	308	168	105	29	83	179	95	182	147	147	193	1770
LT0015R	mm	precip	56	49	52	50	33	62	39	98	49	160	35	59	743
LV0010R	mm	precip	51	9	16	38	39	73	69	118	47	100	49	104	714
LV0016R	mm	precip	32	17	18	43	75	56	62	104	41	74	64	53	639



Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
NL0009R	mm	precip	74	30	9	27	21	66	29	25	130	75	57	44	589
NL0091R	mm	precip	99	31	21	51	85	60	42	16	90	53	-	-	547
NL0091R	mm	precip (Hg)	66	12	28	42	80	45	38	15	72	81	66	86	630
NO0001R	mm	precip	111	72	81	94	176	64	154	47	141	74	231	56	1302
NO0039R	mm	precip	213	5	74	69	90	95	83	382	134	144	13	279	1579
NO0041R	mm	precip	45	31	17	41	76	83	61	84	130	23	71	39	701
NO0047R	mm	precip	20	5	6	7	24	6	50	58	52	72	14	33	345
NO0055R	mm	precip	14	8	13	3	30	6	70	70	45	22	16	24	320
NO0056R	mm	precip	61	44	35	68	103	92	95	48	94	44	107	52	842
NO0099R	mm	precip	99	39	114	38	85	74	81	47	171	81	135	138	1101
NO0099R	mm	precip (Hg)	99	37	123	40	93	78	81	47	171	81	135	114	1098
PL0004R	mm	precip	46	6	13	34	25	38	97	79	48	98	33	53	569
PL0005R	mm	precip	33	12	9	40	55	42	28	63	72	104	52	61	571
SE0005R	mm	precip	47	1	2	15	48	83	87	104	56	45	28	25	541
SE0011R	mm	precip	28	4	6	49	108	53	80	69	35	58	40	43	572
SE0014R	mm	precip	32	2	6	29	106	34	108	40	21	33	41	60	512
SE0051R	mm	precip	59	13	34	34	218	53	27	61	23	27	109	76	733
SE0097R	mm	precip	118	22	53	56	78	69	59	19	22	77	85	96	753
SK0002R	mm	precip	75	42	53	84	120	55	150	35	58	63	39	70	842
SK0004R	mm	precip	28	5	20	52	62	39	110	40	82	46	19	29	531
SK0005R	mm	precip	22	24	30	50	148	44	126	14	70	56	16	38	636
SK0006R	mm	precip	50	14	20	34	53	36	51	38	78	116	30	56	573
SK0007R	mm	precip	40	6	0	21	57	25	64	33	19	66	28	10	367



## **Annex 6**

### **Monthly and annual mean values for heavy metals in air**



Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
IS0091R	aluminium	aerosol	314	46	178	418	722	327	208	99	218	235	209	41	252
AT0002R	arsenic	pm1	-	-	-	0.50	0.40	0.50	0.40	1.20	0.90	0.72	0.86	1.20	0.74
AT0002R	arsenic	pm10	1.64	2.28	1.63	0.81	0.49	0.56	0.40	1.79	1.08	1.12	1.96	1.74	1.28
AT0002R	arsenic	pm25	-	-	0.40	0.66	0.40	0.54	0.40	1.58	0.82	0.94	1.58	1.58	0.90
DE0001R	arsenic	aerosol	0.69	2.54	1.37	0.56	0.26	0.25	0.33	0.23	0.45	0.44	1.00	0.45	0.70
DE0002R	arsenic	aerosol	0.88	2.15	1.90	0.79	0.47	0.43	0.54	0.37	0.52	0.62	1.79	1.07	0.93
DE0004R	arsenic	aerosol	0.57	1.33	0.47	0.39	0.29	0.26	0.63	0.48	0.49	0.31	0.75	0.48	0.53
DE0008R	arsenic	aerosol	0.78	0.71	0.53	0.49	0.39	0.44	0.37	0.58	0.35	0.35	0.37	0.23	0.46
DE0009R	arsenic	aerosol	1.05	1.59	1.18	0.37	0.43	0.17	0.23	0.18	0.51	0.45	1.12	0.82	0.67
DK0003R	arsenic	aerosol	0.76	2.69	1.54	0.89	0.66	0.48	0.48	0.34	0.66	1.20	0.80	0.87	0.94
DK0005R	arsenic	aerosol	0.66	1.85	0.94	0.49	0.35	0.34	0.22	0.21	0.48	0.36	0.82	0.61	0.60
DK0008R	arsenic	aerosol	0.65	1.12	0.67	0.31	0.30	0.21	0.29	0.18	0.29	0.32	0.65	0.59	0.46
DK0011G	arsenic	aerosol	0.03	0.02	0.07	0.06	0.05	0.02	-	-	-	-	-	-	0.04
DK0031R	arsenic	aerosol	0.31	0.30	-	0.51	0.18	0.18	0.20	0.11	0.28	0.25	0.46	0.32	0.28
FI0036R	arsenic	aerosol	0.32	0.17	0.13	0.14	0.22	0.23	0.16	0.16	0.08	0.31	-	0.07	0.17
GB0017R	arsenic	aerosol	-	-	-	-	-	-	-	0.26	0.83	0.83	2.59	-	1.28
GB0091R	arsenic	aerosol	-	-	0.88	0.59	0.24	0.25	0.29	0.22	0.39	0.40	0.89	0.62	0.45
IS0091R	arsenic	aerosol	0.19	0.23	0.21	0.16	0.12	0.11	0.08	0.08	0.14	0.13	0.20	0.13	0.15
NL0009R	arsenic	aerosol	0.65	1.98	0.68	0.64	0.35	0.44	0.44	0.44	0.77	0.49	1.01	0.78	0.71
NO0042G	arsenic	aerosol	0.26	0.12	0.42	0.10	0.04	0.01	0.01	0.01	0.01	0.01	0.03	0.37	0.12
NO0099R	arsenic	pm10_pm25	0.07	0.23	0.16	0.15	0.11	0.08	0.11	0.04	0.05	0.05	0.12	0.10	0.10
NO0099R	arsenic	pm25	0.24	1.00	0.65	0.35	0.26	0.22	0.61	0.16	0.38	0.27	0.48	0.27	0.40
SE0014R	arsenic	aerosol	0.43	0.78	0.55	0.49	0.36	0.31	0.30	0.23	0.36	0.47	0.98	0.85	0.51
SI0008R	arsenic	pm10	0.15	0.23	0.19	0.28	0.33	0.45	1.22	-	-	-	-	-	0.40
SK0002R	arsenic	aerosol	0.04	0.04	0.22	0.10	0.09	0.24	0.34	0.28	0.50	0.06	0.04	0.04	0.17
SK0004R	arsenic	aerosol	3.25	1.35	1.20	0.63	0.36	0.59	0.63	0.70	0.94	0.71	1.10	1.19	1.06
SK0005R	arsenic	aerosol	4.72	5.62	2.99	1.08	0.58	1.11	1.03	1.02	2.01	1.74	2.91	3.68	2.33
SK0006R	arsenic	aerosol	1.73	1.27	1.01	0.50	0.36	0.41	0.34	0.44	0.97	1.35	1.36	1.28	0.94
SK0007R	arsenic	aerosol	3.56	5.66	3.90	1.15	0.77	1.00	1.56	1.83	1.38	0.98	1.74	1.88	2.08
AT0002R	cadmium	pm1	-	-	-	0.260	0.110	0.090	0.060	0.110	0.100	0.110	0.350	0.220	0.158
AT0002R	cadmium	pm10	0.320	1.675	0.475	0.400	0.200	0.160	0.080	0.180	0.860	0.190	2.000	0.400	0.558
AT0002R	cadmium	pm25	-	-	0.200	0.380	0.150	0.100	0.070	0.175	0.540	0.170	1.270	0.320	0.347
AT0005R	cadmium	pm10	0.075	0.313	0.258	0.250	0.225	0.250	0.063	0.110	0.160	0.080	0.060	0.050	0.161
BE0004R	cadmium	pm10	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
CZ0001R	cadmium	aerosol	0.488	0.656	0.294	0.278	0.106	0.165	0.267	0.245	0.401	0.283	0.309	0.475	0.316
CZ0003R	cadmium	aerosol	0.117	0.230	0.227	0.538	0.181	0.216	0.210	0.162	0.289	0.164	0.410	0.429	0.271
DE0001R	cadmium	aerosol	0.138	0.461	0.360	0.196	0.061	0.052	0.052	0.085	0.110	0.102	0.259	0.232	0.172
DE0002R	cadmium	aerosol	0.215	0.523	0.457	0.234	0.117	0.134	0.121	0.073	0.119	0.202	0.393	0.279	0.237
DE0004R	cadmium	aerosol	0.211	0.291	0.224	0.199	0.115	0.096	0.238	0.217	0.190	0.124	0.230	0.233	0.196
DE0007R	cadmium	aerosol	0.307	0.451	0.424	0.211	0.150	0.117	0.135	0.050	0.224	0.188	0.416	0.487	0.262
DE0008R	cadmium	aerosol	0.318	0.197	0.193	0.210	0.079	0.115	0.120	0.103	0.129	0.086	0.152	0.056	0.146
DE0009R	cadmium	aerosol	0.202	0.442	0.450	0.273	0.131	0.086	0.060	0.071	0.176	0.168	0.396	0.354	0.233
DK0003R	cadmium	aerosol	0.134	0.469	0.323	0.114	0.087	0.085	0.092	0.047	-0.454	0.218	0.252	0.353	0.141
DK0005R	cadmium	aerosol	0.165	0.424	0.390	0.176	0.097	0.013	0.094	0.133	0.159	0.042	0.303	0.215	0.181
DK0008R	cadmium	aerosol	0.095	0.237	0.181	0.057	-0.005	-0.018	0.142	0.045	0.121	-0.021	0.254	0.148	0.102
DK0031R	cadmium	aerosol	0.153	0.032	-	0.140	-0.013	0.007	0.024	-0.027	0.029	0.021	0.178	0.158	0.066
ES0008R	cadmium	pm10	0.029	0.153	0.362	0.280	0.092	0.082	0.036	0.069	0.108	0.138	0.050	0.060	0.123
ES0009R	cadmium	pm10	0.021	0.113	0.111	0.044	0.038	0.059	0.095	0.021	0.035	0.060	0.061	0.022	0.057
FI0036R	cadmium	aerosol	0.032	0.090	0.024	0.033	0.032	0.021	0.028	0.022	0.022	0.077	-	0.015	0.033

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
GB0017R	cadmium	aerosol	-	-	-	-	-	-	-	0.000	0.157	0.150	0.304	-	0.179
GB0091R	cadmium	aerosol	-	-	0.139	0.163	0.029	0.003	0.000	0.000	0.023	0.006	0.087	0.064	0.047
IS0091R	cadmium	aerosol	0.013	0.029	0.020	0.023	0.014	0.012	0.013	0.019	0.036	0.013	0.034	0.009	0.019
LT0015R	cadmium	aerosol	0.218	0.275	0.299	0.232	0.089	0.121	0.122	0.087	0.157	0.140	0.371	0.294	0.199
LV0010R	cadmium	aerosol	0.254	0.820	0.424	0.147	0.203	0.171	0.405	0.571	0.216	0.199	0.275	0.216	0.324
LV0016R	cadmium	aerosol	0.220	0.236	0.280	0.170	0.148	0.070	0.148	0.078	0.121	0.184	0.200	0.154	0.167
NL0009R	cadmium	aerosol	0.233	0.449	0.161	0.270	0.091	0.102	0.101	0.086	0.201	0.177	0.255	0.275	0.198
NO0042G	cadmium	aerosol	0.048	0.022	0.072	0.023	0.015	0.001	0.001	0.000	0.009	0.002	0.004	0.047	0.021
NO0099R	cadmium	pm10_pm25	0.009	0.009	0.008	0.017	0.006	0.004	0.003	0.005	0.008	0.004	0.022	0.011	0.009
NO0099R	cadmium	pm25	0.042	0.152	0.116	0.079	0.069	0.025	0.072	0.027	0.089	0.046	0.113	0.072	0.073
SE0014R	cadmium	aerosol	0.069	0.139	0.089	0.117	0.062	0.059	0.062	0.026	0.097	0.056	0.216	0.105	0.091
SI0008R	cadmium	pm10	0.058	0.289	0.105	0.361	0.096	0.233	0.474	-	-	-	-	-	0.229
SK0002R	cadmium	aerosol	0.147	0.022	0.167	0.251	0.178	0.110	0.070	0.115	0.392	0.044	0.028	0.030	0.130
SK0004R	cadmium	aerosol	0.190	0.264	0.397	0.439	0.189	0.176	0.134	0.133	0.580	0.191	0.462	0.501	0.311
SK0005R	cadmium	aerosol	0.515	0.665	0.657	0.448	0.350	0.335	0.297	0.376	0.657	0.332	0.524	0.677	0.471
SK0006R	cadmium	aerosol	0.524	0.226	0.574	0.549	0.237	0.160	0.229	0.361	0.963	0.732	0.732	1.391	0.548
SK0007R	cadmium	aerosol	0.398	0.817	0.831	0.657	0.335	0.198	0.173	0.205	0.284	0.222	0.644	1.022	0.481
DK0003R	chromium	aerosol	0.07	0.54	0.63	0.51	0.29	0.29	0.40	0.39	<DL	1.81	0.47	1.15	0.42
DK0008R	chromium	aerosol	0.30	0.37	0.52	0.34	0.26	0.26	0.27	0.15	0.37	0.35	0.34	0.28	0.32
DK0011G	chromium	aerosol	0.07	0.09	0.06	0.12	0.18	0.33	-	-	-	-	-	-	0.14
DK0031R	chromium	aerosol	0.13	0.32	0.06	0.83	0.23	0.28	0.27	0.13	0.17	0.21	0.11	0.43	0.28
FI0036R	chromium	aerosol	0.00	0.17	0.46	0.42	0.11	0.11	0.31	0.17	0.09	0.04	-	0.11	0.20
GB0017R	chromium	aerosol	-	-	-	-	-	-	-	1.02	1.62	1.29	4.02	-	2.17
GB0091R	chromium	aerosol	-	-	1.59	3.12	0.89	1.10	1.08	1.12	1.08	0.07	2.13	2.63	1.43
IS0091R	chromium	aerosol	6.73	14.93	10.87	3.55	0.64	3.81	0.44	0.72	6.79	4.12	10.62	5.57	5.63
NO0042G	chromium	aerosol	0.07	0.04	0.17	0.05	0.06	0.10	0.06	0.06	0.14	0.10	0.10	0.11	0.09
NO0099R	chromium	pm10_pm25	0.21	0.16	0.27	0.50	0.40	0.39	1.02	0.31	0.52	0.76	0.55	0.54	0.47
NO0099R	chromium	pm25	0.11	0.08	0.18	0.35	0.36	0.17	0.30	0.07	0.24	0.22	0.65	0.63	0.28
SI0008R	chromium	pm10	1.37	2.52	1.15	1.90	4.09	8.15	5.99	-	-	-	-	-	3.61
SK0002R	chromium	aerosol	2.36	1.41	4.13	2.90	1.56	0.49	0.17	0.15	0.13	0.42	0.72	1.37	1.22
SK0004R	chromium	aerosol	0.50	0.07	0.84	1.51	1.09	1.53	0.30	0.91	0.54	0.81	1.82	0.75	0.91
SK0005R	chromium	aerosol	0.84	0.71	0.87	0.85	1.12	0.98	0.62	1.01	0.64	0.10	0.53	1.14	0.78
SK0006R	chromium	aerosol	0.34	0.29	0.61	1.07	1.10	0.45	0.70	1.07	1.86	2.66	2.25	0.46	1.11
SK0007R	chromium	aerosol	2.69	2.06	3.36	5.19	5.78	2.07	5.78	1.75	2.59	1.10	6.02	3.40	3.52
NO0042G	cobalt	aerosol	0.012	0.008	0.019	0.015	0.007	0.002	0.003	0.002	0.018	0.006	0.003	0.015	0.009
NO0099R	cobalt	pm10_pm25	0.011	0.022	0.02	0.039	0.01	0.015	0.023	0.012	0.007	0.011	0.012	0.012	0.016
NO0099R	cobalt	pm25	0.007	0.014	0.017	0.012	0.013	0.013	0.05	0.018	0.017	0.01	0.024	0.019	0.018
BE0004R	copper	pm10	6.00	11.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	8.00	8.00	8.00	6.89
DE0001R	copper	aerosol	2.61	3.61	4.04	1.74	1.08	0.82	1.14	1.85	2.32	4.21	1.54	1.23	2.18
DE0002R	copper	aerosol	2.85	3.08	2.97	1.62	2.03	1.92	1.80	2.44	3.09	2.36	4.04	3.35	2.63
DE0003R	copper	aerosol	0.51	1.52	1.47	0.40	0.87	1.96	1.54	2.93	2.59	2.15	0.97	0.69	1.46
DE0004R	copper	aerosol	2.30	3.15	2.58	2.96	2.68	3.22	2.64	2.60	1.81	2.09	4.30	2.94	2.77
DE0007R	copper	aerosol	4.60	3.68	3.34	1.68	2.48	2.26	1.36	0.74	1.60	3.71	2.77	1.61	2.49
DE0008R	copper	aerosol	1.60	0.78	2.39	1.40	1.18	1.66	1.48	3.48	1.49	1.31	1.47	1.04	1.61
DE0009R	copper	aerosol	3.08	2.19	2.81	0.86	0.92	0.64	1.17	1.75	2.03	1.40	2.83	2.26	1.83
DK0003R	copper	aerosol	2.59	3.10	2.57	1.93	0.95	1.14	1.39	1.04	1.88	2.10	1.81	10.69	2.39
DK0008R	copper	aerosol	1.44	1.80	1.27	0.99	0.83	0.76	0.89	0.57	1.10	0.76	1.33	0.90	1.05

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
DK0011G	copper	aerosol	0.40	0.09	0.36	1.96	0.26	0.26	-	-	-	-	-	-	0.56
DK0031R	copper	aerosol	1.00	0.19	-	1.60	0.50	0.66	0.84	0.41	0.96	0.79	1.08	1.46	0.90
ES0008R	copper	pm10	9.52	27.38	24.52	23.38	29.23	20.48	14.03	26.17	23.90	44.92	21.13	24.72	24.35
ES0009R	copper	pm10	45.15	25.20	29.20	46.81	27.27	41.61	35.60	91.30	48.21	19.08	24.84	39.57	39.50
FI0036R	copper	aerosol	0.56	0.66	1.36	0.41	0.47	0.33	0.58	0.60	0.26	0.68	-	0.17	0.55
GB0017R	copper	aerosol	-	-	-	-	-	-	-	0.79	2.80	2.40	4.03	-	2.82
GB0091R	copper	aerosol	-	-	2.01	1.50	0.61	1.00	1.55	1.07	1.35	0.67	1.75	8.45	1.80
IS0091R	copper	aerosol	0.84	0.56	0.66	0.85	1.53	0.62	0.37	0.22	0.56	0.51	0.65	0.35	0.64
LT0015R	copper	aerosol	1.68	1.85	1.48	1.34	1.00	1.08	0.99	0.85	1.22	0.93	1.40	1.14	1.24
LV0016R	copper	aerosol	0.805	0.630	0.850	0.722	0.475	0.630	1.155	0.509	0.631	0.350	0.594	0.895	0.688
NO0042G	copper	aerosol	0.35	0.29	0.46	0.30	0.19	0.12	0.08	0.07	0.33	0.08	0.17	0.34	0.23
NO0099R	copper	pm10_pm25	0.27	0.43	0.45	0.52	0.35	0.42	0.62	0.27	0.23	0.20	0.45	0.28	0.37
NO0099R	copper	pm25	0.29	0.58	0.61	0.57	0.46	0.31	0.82	0.28	0.52	0.22	0.58	0.61	0.48
SI0008R	copper	pm10	2.32	6.66	1.96	5.43	3.38	4.28	2.75	-	-	-	-	-	3.83
SK0002R	copper	aerosol	0.25	0.59	1.23	4.60	0.96	1.44	0.80	0.75	1.90	0.78	0.08	0.53	1.13
SK0004R	copper	aerosol	1.84	1.29	2.02	1.59	1.19	1.28	0.80	1.33	1.58	1.18	1.74	2.91	1.59
SK0005R	copper	aerosol	2.02	2.26	2.84	2.07	1.85	1.96	1.81	2.30	1.73	0.97	1.36	0.93	1.78
SK0006R	copper	aerosol	1.82	1.66	2.22	2.13	1.37	1.25	1.30	1.06	1.91	2.76	2.55	1.49	1.84
SK0007R	copper	aerosol	3.30	4.88	6.91	4.51	4.35	4.95	4.42	3.00	3.56	2.45	3.44	1.65	3.89
DE0001R	iron	aerosol	77	104	145	150	43	39	51	108	93	128	51	18	84
DE0002R	iron	aerosol	71	93	120	213	104	96	78	158	125	68	158	112	116
DE0003R	iron	aerosol	24	11	147	58	118	77	87	277	45	107	68	23	88
DE0004R	iron	aerosol	32	103	176	60	51	41	59	111	58	107	249	111	96
DE0007R	iron	aerosol	39	66	112	155	103	73	14	46	11	28	81	46	64
DE0008R	iron	aerosol	9	16	125	138	105	111	56	249	90	27	59	15	84
DE0009R	iron	aerosol	58	94	38	91	25	35	84	126	138	53	110	94	79
DK0003R	iron	aerosol	39	111	198	353	83	132	249	164	118	111	62	72	137
DK0005R	iron	aerosol	51	94	141	189	75	71	54	102	125	54	93	74	93
DK0008R	iron	aerosol	31	61	70	91	43	49	48	48	61	28	45	32	51
DK0031R	iron	aerosol	24	14	-	276	32	42	55	47	49	33	36	38	62
FI0036R	iron	aerosol	21	33	37	59	22	21	39	19	22	14	11	11	29
IS0091R	iron	aerosol	591	112	313	648	1081	601	241	80	327	352	360	70	399
AT0002R	lead	pm1	-	-	-	8.22	3.82	3.62	2.24	4.50	3.88	4.38	9.66	8.38	5.45
AT0002R	lead	pm10	11.14	42.78	17.20	12.98	9.10	5.78	3.16	7.02	18.92	6.70	31.54	16.66	14.82
AT0002R	lead	pm25	-	-	6.20	10.82	6.86	5.26	4.10	6.65	13.72	6.12	22.54	13.32	9.76
AT0004R	lead	pm10	2.30	4.83	4.12	4.80	2.46	3.74	1.96	4.04	3.18	2.04	1.68	0.96	2.97
AT0005R	lead	pm10	2.60	8.38	8.53	5.36	6.23	5.23	1.90	4.54	5.94	2.94	0.88	1.18	4.64
BE0004R	lead	pm10	22.00	39.00	26.00	25.00	16.00	20.00	19.00	18.00	28.00	30.00	35.00	32.00	25.71
CZ0001R	lead	aerosol	15.65	19.18	12.26	7.12	5.30	8.68	13.64	7.92	9.78	9.89	7.55	15.47	10.63
CZ0003R	lead	aerosol	5.12	15.43	10.28	14.74	9.69	8.58	9.60	5.27	8.68	9.27	9.99	11.06	9.64
DE0001R	lead	aerosol	7.14	17.72	13.00	4.84	2.72	1.88	2.47	2.04	4.73	3.90	8.52	5.62	6.15
DE0002R	lead	aerosol	11.61	24.19	19.58	8.39	4.26	4.27	3.34	3.48	5.14	6.95	14.18	10.96	9.61
DE0003R	lead	aerosol	1.41	5.36	2.90	1.61	1.39	4.91	2.89	4.20	4.90	1.95	1.61	1.25	2.84
DE0004R	lead	aerosol	10.79	12.98	10.70	6.28	5.96	5.59	10.79	10.02	9.83	7.11	9.73	8.60	9.01
DE0007R	lead	aerosol	11.23	17.28	14.65	5.98	5.51	4.71	2.30	1.09	6.33	7.55	14.88	12.47	8.62
DE0008R	lead	aerosol	7.79	6.23	7.14	6.23	3.66	4.64	3.93	5.23	4.66	4.27	3.80	2.19	4.97
DE0009R	lead	aerosol	9.64	17.31	13.50	4.21	3.33	1.64	1.98	1.83	6.05	4.83	11.93	10.24	7.16
DK0003R	lead	aerosol	6.38	14.44	10.73	4.77	2.62	2.93	3.06	1.57	3.94	7.26	7.90	15.28	6.51
DK0005R	lead	aerosol	7.45	18.56	13.75	5.68	3.45	3.63	2.96	1.70	4.85	3.74	9.59	9.01	6.90

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DK0008R	lead	aerosol	5.82	11.05	6.95	3.23	2.14	2.15	2.32	1.12	3.39	2.59	6.83	4.16	4.26
DK0011G	lead	aerosol	0.24	0.22	0.65	0.53	0.45	0.46	-	-	-	-	-	-	0.43
DK0031R	lead	aerosol	3.79	2.31	-	4.34	1.84	2.11	2.45	0.79	3.36	2.96	4.93	4.57	3.07
ES0008R	lead	pm10	5.95	7.38	14.74	15.81	8.02	8.61	5.59	6.97	11.29	16.25	3.28	2.09	8.88
ES0009R	lead	pm10	5.26	4.92	4.36	4.42	5.18	6.05	7.59	2.61	1.99	2.62	2.40	1.60	4.06
FI0036R	lead	aerosol	0.91	1.33	1.09	1.30	0.86	0.59	0.87	0.58	0.63	1.83	-	0.43	0.90
GB0017R	lead	aerosol	-	-	-	-	-	-	-	2.10	9.56	7.98	16.36	-	10.25
GB0091R	lead	aerosol	-	-	9.15	7.50	1.87	1.78	2.08	2.75	2.29	1.64	7.71	6.22	4.01
IS0091R	lead	aerosol	0.28	0.63	0.59	0.76	0.31	0.22	0.32	0.44	0.56	0.40	1.11	0.47	0.50
LT0015R	lead	aerosol	11.51	11.72	9.39	7.22	3.84	5.13	5.16	3.20	4.92	4.22	10.14	9.09	7.09
LV0010R	lead	aerosol	5.029	10.929	8.054	2.243	2.596	4.671	7.647	4.701	3.615	3.057	2.702	5.920	5.069
LV0016R	lead	aerosol	3.223	3.895	6.389	2.593	1.285	1.475	3.598	0.943	2.208	3.495	2.690	3.919	2.977
NL0009R	lead	aerosol	12.65	16.14	7.31	8.90	4.32	5.24	4.66	3.76	9.34	6.14	10.74	11.88	8.32
NO0042G	lead	aerosol	1.54	0.69	2.58	0.65	0.35	0.05	0.04	0.02	0.15	0.07	0.23	1.58	0.69
NO0099R	lead	pm10_pm25	0.71	0.67	0.60	0.75	0.31	0.28	0.46	0.19	0.37	0.18	0.78	0.40	0.47
NO0099R	lead	pm25	1.73	4.76	4.49	2.16	1.71	1.36	2.78	0.82	3.33	1.45	3.28	2.67	2.47
SE0014R	lead	aerosol	2.67	5.18	4.00	3.26	2.24	1.97	2.25	0.98	3.19	1.54	6.11	3.56	3.06
SI0008R	lead	pm10	1.72	7.84	3.08	8.09	3.93	3.70	2.49	-	-	-	-	-	4.51
SK0002R	lead	aerosol	0.49	1.24	2.56	3.91	4.26	5.12	3.09	5.14	7.54	1.37	0.57	2.55	3.22
SK0004R	lead	aerosol	12.22	11.77	13.21	12.06	7.74	7.62	5.19	5.88	15.34	5.96	11.08	9.48	9.83
SK0005R	lead	aerosol	17.82	14.48	17.00	12.47	11.02	12.45	10.38	12.65	13.29	9.72	11.19	15.66	12.85
SK0006R	lead	aerosol	18.40	9.54	17.92	14.69	9.69	6.65	6.87	9.76	21.92	22.97	22.97	29.48	15.92
SK0007R	lead	aerosol	27.02	29.81	28.16	20.35	14.37	11.05	8.15	10.69	11.82	11.73	19.84	25.07	17.57
DE0001R	manganese	aerosol	2.176	3.449	4.372	4.943	1.604	1.283	2.382	4.022	2.517	2.771	1.657	1.103	2.685
DE0002R	manganese	aerosol	2.468	4.121	4.679	7.247	3.628	2.887	2.598	5.176	3.987	2.16	4.547	3.688	3.927
DE0003R	manganese	aerosol	1.207	3.174	3.45	1.607	2.816	3.35	1.924	4.738	2.503	0.777	1.74	0.608	2.32
DE0004R	manganese	aerosol	3.609	4.435	5.623	2.853	2.14	1.723	4.321	4.969	3.667	4.321	8.973	5.112	4.307
DE0007R	manganese	aerosol	3.537	2.991	3.928	5.137	5.12	3.287	1.342	2.995	1.69	0.969	3.633	3.588	3.181
DE0008R	manganese	aerosol	2.76	1.613	3.493	4	2.665	3.2	2.893	6.344	2.583	0.769	1.223	0.349	2.668
DE0009R	manganese	aerosol	2.29	3.716	4.253	3.15	1.234	1.123	1.162	2.475	3.437	1.228	3.69	2.639	2.522
DK0003R	manganese	aerosol	2.117	5.107	7.029	10.382	3.341	5.171	9.363	6.174	4.57	3.656	2.556	4.014	5.187
DK0005R	manganese	aerosol	1.786	3.475	4.114	5.568	2.429	2.484	1.962	3.241	3.349	1.835	2.532	2.255	2.902
DK0008R	manganese	aerosol	1.359	2.724	2.659	2.833	1.984	1.9	2.019	1.929	2.138	1.272	1.581	1.248	1.963
DK0011G	manganese	aerosol	0.268	0.217	0.38	1.27	1.11	1.641	-	-	-	-	-	-	0.824
DK0031R	manganese	aerosol	1.142	0.628	-	7.167	1.31	1.587	1.967	1.607	1.58	1.313	1.338	1.271	1.987
FI0036R	manganese	aerosol	0.335	0.683	0.675	1.015	0.511	0.622	1.251	0.533	0.57	0.347	0.234	0.675	0.675
IS0091R	manganese	aerosol	9.458	1.89	5.073	10.444	17.682	9.849	4.011	1.385	5.31	5.838	6.295	1.265	6.56
LV0010R	manganese	aerosol	1.455	3.741	4.802	1.522	5.781	7.411	6.256	12.346	7.256	1.114	2.185	1.412	4.614
LV0016R	manganese	aerosol	2.756	2.217	3.634	6.653	10.435	21.526	15.288	23.414	8.495	3.273	3.852	3.821	8.819
NO0042G	manganese	aerosol	0.501	0.36	0.898	0.41	0.256	0.039	0.07	0.059	0.714	0.268	0.099	0.331	0.336
SK0002R	manganese	aerosol	1.121	0.812	3.141	2.8	3.929	3.388	1.916	3.911	3.985	0.683	1.305	0.927	2.398
SK0004R	manganese	aerosol	3.88	3.163	5.799	5.436	5.965	4.652	2.632	5.45	5.88	2.417	4.207	3.847	4.437
SK0005R	manganese	aerosol	22.571	10.562	11.267	14.773	13.536	12.355	9.078	16.613	14.58	9.777	14.157	19.811	14.129
SK0006R	manganese	aerosol	2.858	3.833	7.732	5.512	6.904	3.578	3.392	5.506	6.255	8.15	7.542	3.015	5.425
SK0007R	manganese	aerosol	6.769	11.016	18.156	18.688	14.624	11.008	9.811	17.81	11.384	4.355	6.353	4.889	11.12
DK0011G	mercury	air	1.50	1.50	1.48	1.36	1.00	1.45	-	-	-	-	-	-	1.36
FI0096G	mercury	air+aerosol	1.44	1.53	1.61	1.48	1.66	1.47	1.58	1.41	1.37	1.34	1.50	1.26	1.48
IE0031R	mercury	air+aerosol	1.66	1.72	1.88	1.65	1.48	1.64	1.67	1.72	1.54	1.64	1.79	1.79	1.67
NO0042G	mercury	air	1.55	1.66	1.66	1.48	1.64	1.63	1.70	1.64	1.55	1.47	1.59	1.53	1.60



Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
NO0099R	mercury	air	-	-	1.10	1.45	1.20	-	2.40	1.55	-	-	2.20	-	1.77
SE0014R	mercury	air+aerosol	1.79	2.01	1.88	1.86	1.95	1.81	1.59	1.66	1.60	1.55	1.78	1.85	1.78
FI0096G	mercury	aerosol	2.38	3.97	1.74	2.58	2.06	1.43	2.90	1.19	1.79	1.21	0.94	1.25	1.87
IS0091R	mercury	aerosol	0.85	0.95	0.80	0.71	1.77	0.77	0.75	0.45	0.50	0.86	0.71	0.50	0.80
NO0042G	mercury	aerosol	1.76	0.76	6.91	5.44	2.02	-	2.49	1.85	0.27	0.44	0.47	1.14	2.20
NO0099R	mercury	aerosol	3.94	10.76	11.62	3.88	1.95	2.23	0.80	-	-	-	-	-	5.19
SE0014R	mercury	aerosol	12.34	20.41	11.31	8.33	7.31	7.13	7.45	4.51	5.54	5.43	13.46	10.60	9.61
NO0042G	reactive_gaseous_mercury	air	-	-	-	41.88	45.06	-	-	-	-	-	-	-	-
AT0002R	nickel	pm1				1.58	0.80	0.97	1.40	2.01	2.00	0.80	0.80	0.80	1.22
AT0002R	nickel	pm10	2.83	2.16	2.00	1.26	1.86	2.26	2.64	3.13	9.64	1.24	1.32	1.84	2.68
AT0002R	nickel	pm25	-	-	1.16	1.46	1.29	2.52	1.92	2.16	9.09	0.80	0.98	1.20	2.31
BE0004R	nickel	pm10	4.00	5.00	8.00	5.00	6.00	7.00	6.00	6.00	5.00	4.00	4.00	4.00	5.34
DE0001R	nickel	aerosol	1.36	1.77	2.46	1.84	1.95	1.18	1.29	0.61	1.15	0.78	0.92	0.50	1.32
DE0002R	nickel	aerosol	1.24	1.08	1.21	0.78	0.69	0.67	1.02	1.16	0.87	0.86	1.01	0.95	0.97
DE0003R	nickel	aerosol	0.74	0.25	1.41	0.33	1.45	0.52	0.60	-	0.60	1.09	0.08	0.09	0.66
DE0004R	nickel	aerosol	0.41	0.69	0.91	0.10	0.47	0.33	0.42	0.51	0.31	0.53	0.85	0.73	0.52
DE0007R	nickel	aerosol	1.64	0.96	1.64	1.00	1.38	0.91	0.55	0.85	0.52	0.68	0.50	0.37	0.93
DE0008R	nickel	aerosol	0.13	0.45	1.12	1.33	0.86	1.09	0.57	1.20	0.84	0.61	0.68	0.48	0.78
DE0009R	nickel	aerosol	1.37	1.60	3.15	1.53	1.39	1.06	2.24	1.87	1.35	0.39	0.59	0.66	1.44
DK0003R	nickel	aerosol	1.08	2.26	2.14	1.43	1.00	1.14	1.21	0.76	1.99	1.19	1.24	1.30	1.39
DK0005R	nickel	aerosol	1.74	2.89	4.55	3.83	3.29	3.69	2.67	2.14	2.10	0.99	2.03	1.57	2.59
DK0008R	nickel	aerosol	1.60	2.20	2.89	2.02	1.92	1.96	1.94	1.14	1.48	0.76	1.70	1.01	1.71
DK0011G	nickel	aerosol	0.64	0.04	0.21	0.07	0.11	0.26	-	-	-	-	-	-	0.22
DK0031R	nickel	aerosol	0.88	0.17	-	1.45	1.10	1.07	1.23	0.62	0.96	0.47	1.04	0.85	0.95
FI0036R	nickel	aerosol	0.54	0.43	0.16	0.32	0.43	0.35	0.47	0.40	0.19	0.67	0.19	0.19	0.36
GB0017R	nickel	aerosol	-	-	-	-	-	-	-	0.76	2.68	1.81	1.99	-	2.02
GB0091R	nickel	aerosol	-	-	1.37	1.60	0.58	0.97	1.05	0.92	0.49	0.30	0.97	2.78	1.04
IS0091R	nickel	aerosol	5.16	8.85	6.93	2.38	0.64	3.04	0.53	0.70	4.05	2.55	6.49	3.31	3.66
LV0010R	nickel	aerosol	1.058	3.677	1.033	0.383	0.935	1.015	0.603	1.205	0.790	0.287	1.227	0.567	1.046
LV0016R	nickel	aerosol	1.128	1.214	0.792	0.560	0.391	0.569	0.375	0.304	0.473	0.405	0.341	0.449	0.579
NO0042G	nickel	aerosol	0.21	0.11	0.22	0.12	0.06	0.03	0.04	0.05	0.12	0.03	0.04	0.12	0.10
NO0099R	nickel	pm10_pm25	0.08	0.15	0.26	0.49	0.18	0.16	0.26	0.10	0.06	0.24	0.16	0.16	0.18
NO0099R	nickel	pm25	0.29	0.49	1.12	0.60	1.04	1.00	3.54	0.63	0.63	0.21	0.87	0.62	0.94
SE0014R	nickel	aerosol	0.76	0.68	2.14	1.58	2.26	1.46	1.48	1.39	1.52	0.77	1.49	1.11	1.41
SI0008R	nickel	pm10	1.93	3.38	1.67	4.43	1.90	2.08	2.42	-	-	-	-	-	2.54
SK0002R	nickel	aerosol	2.17	0.94	1.57	0.46	0.26	0.18	0.09	0.55	0.38	0.54	0.42	1.71	0.77
SK0004R	nickel	aerosol	0.67	0.67	1.38	0.75	0.65	0.69	0.22	0.53	0.24	0.42	0.88	0.59	0.64
SK0005R	nickel	aerosol	0.81	0.81	0.68	0.82	0.61	0.57	0.40	0.65	0.43	0.35	0.42	0.58	0.58
SK0006R	nickel	aerosol	1.15	0.85	0.72	0.92	0.83	0.41	0.55	0.45	1.08	1.69	1.43	0.51	0.92
SK0007R	nickel	aerosol	2.99	2.24	2.55	2.88	1.85	1.37	1.49	1.22	1.44	0.98	2.26	1.38	1.87
FI0036R	vanadium	aerosol	0.47	0.92	0.33	0.55	0.28	0.13	0.38	0.18	0.30	0.72	-	0.22	0.39
IS0091R	vanadium	aerosol	2.97	1.84	2.49	2.74	3.70	2.52	1.29	0.79	1.80	1.84	2.30	1.22	2.12
NO0042G	vanadium	aerosol	0.39	0.17	0.36	0.18	0.06	0.02	0.06	0.12	0.09	0.05	0.04	0.13	0.14
NO0099R	vanadium	pm10_pm25	0.83	0.51	0.67	0.79	0.84	0.58	0.82	0.29	0.27	0.23	0.54	0.63	0.58
NO0099R	vanadium	pm25	0.87	1.45	2.96	1.55	2.98	2.03	4.94	1.85	1.81	0.52	1.47	1.14	1.98

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
BE0004R	zinc	pm10	29.0	78.0	45.0	42.0	23.0	30.0	27.0	20.0	41.0	46.0	63.0	54.0	41.2
DK0003R	zinc	aerosol	13.5	31.9	25.1	14.1	7.0	8.7	9.5	6.4	15.5	21.6	19.0	23.0	16.1
DK0008R	zinc	aerosol	10.4	23.0	14.5	10.8	5.2	6.7	6.2	3.9	9.1	7.5	14.0	8.8	9.9
DK0011G	zinc	aerosol	5.0	1.0	1.8	3.8	1.2	2.2	-	-	-	-	-	-	2.5
DK0031R	zinc	aerosol	8.6	5.7	-	13.9	5.3	6.5	6.5	3.3	9.2	9.3	11.8	9.6	8.3
FI0036R	zinc	aerosol	2.1	5.9	3.0	1.7	1.7	1.1	2.4	1.3	1.7	2.5	-	1.6	2.3
GB0017R	zinc	aerosol	-	-	-	-	-	-	-	18.4	29.3	20.1	42.8	-	29.6
GB0091R	zinc	aerosol	-	-	21.3	20.6	8.8	11.6	22.4	17.1	17.5	9.2	23.3	53.2	19.4
IS0091R	zinc	aerosol	4.6	3.1	3.0	2.9	3.6	2.2	6.1	5.2	4.4	2.5	24.4	7.3	5.7
LT0015R	zinc	aerosol	122.3	44.4	24.2	20.6	9.6	15.3	12.8	8.9	12.2	11.1	17.7	16.0	26.4
LV0010R	zinc	aerosol	29.640	66.271	34.905	11.429	19.871	23.651	31.231	35.382	20.995	15.626	15.294	15.042	26.381
LV0016R	zinc	aerosol	11.450	13.937	31.962	8.273	6.747	6.436	6.532	4.883	8.141	10.282	10.483	9.085	10.683
NL0009R	zinc	aerosol	24.4	43.9	18.9	24.1	11.5	16.9	14.5	14.4	27.7	18.0	27.2	32.6	22.6
NO0042G	zinc	aerosol	2.3	1.6	3.7	1.6	0.8	0.3	0.2	0.2	1.9	0.3	0.6	2.1	1.3
NO0099R	zinc	pm10_pm25	1.3	2.0	2.7	2.2	1.5	1.6	2.3	0.7	3.5	1.1	2.3	1.3	1.9
NO0099R	zinc	pm25	4.9	10.3	10.5	6.0	4.8	4.4	15.5	3.3	10.0	5.0	8.3	7.7	7.5
SK0002R	zinc	aerosol	3.8	2.7	7.1	1.7	7.6	4.7	2.5	4.2	12.5	3.6	1.7	1.5	4.6
SK0004R	zinc	aerosol	38.1	25.5	23.3	23.9	20.2	17.5	7.3	11.8	17.4	9.4	21.1	22.0	19.8
SK0005R	zinc	aerosol	46.5	45.4	50.2	31.4	27.3	30.7	18.9	27.7	30.4	25.9	29.3	47.4	33.4
SK0006R	zinc	aerosol	24.1	23.6	32.5	14.0	10.9	12.3	8.5	14.8	13.9	19.7	19.6	21.4	18.1
SK0007R	zinc	aerosol	55.7	64.0	64.0	43.3	47.1	29.0	18.9	24.5	22.4	24.4	23.8	28.5	35.9

## **Annex 7**

### **Monthly mean values for POPs in precipitation**



Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
BE0004R	alpha_HCH	precip	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-	0.50	0.50
DE0001R	alpha_HCH	precip	0.18	0.28	0.45	0.31	0.18	0.25	0.52	0.05	0.24	0.31	0.24	0.23	0.24
DE0009R	alpha_HCH	precip	0.23	0.42	0.38	0.35	0.20	0.17	0.21	0.28	0.27	0.32	0.31	0.35	0.26
FI0096R	alpha_HCH	precip+dry_dep	0.02	0.04	0.02	0.03	0.02	0.06	0.16	-	0.51	0.06	0.05	0.01	0.13
IE0002R	alpha_HCH	precip	0.15	0.15	-	0.50	0.85	0.55	0.45	1.35	-	-	-	-	0.47
IS0091R	alpha_HCH	precip	0.18	0.13	0.12	0.07	0.23	0.12	0.09	0.16	0.16	0.24	0.19	0.10	0.14
SE0014R	alpha_HCH	precip+dry_dep	0.05	0.07	0.26	0.50	0.36	0.42	0.54	0.20	0.21	0.27	0.30	0.27	0.31
DE0001R	anthracene	precip	0.330	0.310	0.670	0.210	0.120	0.100	0.220	0.420	0.140	0.140	0.150	0.520	0.245
DE0009R	anthracene	precip	3.700	2.105	2.925	3.635	0.600	0.789	0.624	0.100	0.590	1.000	0.398	0.300	0.905
FI0096R	anthracene	precip+dry_dep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	15.0	2.0	1.4
SE0012R	anthracene	precip+dry_dep	6.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0	1.0	0.0	1.1
SE0014R	anthracene	precip+dry_dep	1.0	1.0	1.0	1.0	-	0.0	0.0	0.2	1.0	1.0	1.9	2.0	0.9
DE0001R	benz_a_anthracene	precip	4	2.6	7.8	1.8	0.5	0.7	1.1	1	0.7	1.4	1.5	2.1	1.466
DE0009R	benz_a_anthracene	precip	16	7.887	9.924	6.763	1.3	0.733	0.45	0.8	2.028	5.6	2.074	2.627	2.872
FI0096R	benz_a_anthracene	precip+dry_dep	2	1.222	1	1	1	0	1	-	1.5	13	20	4	3.952
SE0012R	benz_a_anthracene	precip+dry_dep	18	0	0	0	0	0	0	0	1	0	3	0	1.833
SE0014R	benz_a_anthracene	precip+dry_dep	4	4	4	3.1	1	1.933	1	0.774	2.7	9	9.933	14	4.592
CZ0003R	benzo_a_pyrene	precip	9.29	10	11.174	16.074	0.941	0.841	0.748	0.463	0.133	1.002	4.174	12.561	3.08
DE0001R	benzo_a_pyrene	precip	4.8	2.6	8.9	2.3	0.6	1.2	2	1.5	0.5	1.5	1.9	2.7	1.84
DE0009R	benzo_a_pyrene	precip	15.9	36.702	13.87	0.869	1.4	0.928	0.263	0.7	2.613	6.7	2.572	3.027	3.466
FI0096R	benzo_a_pyrene	precip+dry_dep	3	1.444	1	1	1.636	1	2	-	3	2	7	2	2.337
SE0012R	benzo_a_pyrene	precip+dry_dep	32	2	0	0	4	2	0	9	3	0	13	5	5.833
SE0014R	benzo_a_pyrene	precip+dry_dep	6	6	5.742	4.1	2	3.867	1.871	1.452	5.4	11	13.8	22	6.884
FI0096R	benzo_b_fluoranthene	precip+dry_dep	5	1.889	1	3	4.273	2	5	-	3.5	3	17	12	5.084
SE0014R	benzo_b_fluoranthene	precip+dry_dep	14	13.464	10.226	6.5	3	5.833	3.742	2.452	10.3	25	35.267	36	13.598
DE0001R	benzo_b_fluoranthene	precip	14.7	6.6	21.5	4.8	1.1	2	3.7	2.1	2	5	4.5	6.7	4.337
DE0009R	benzo_b_fluoranthene	precip	33.6	21.466	24.012	14.465	2.4	1.456	1.413	1.5	6.08	13.5	5.416	7.574	6.727
SE0014R	benzo_b_fluoranthene	precip+dry_dep	14	13.464	10.226	6.5	3	5.833	3.742	2.452	10.3	25	35.267	36	13.598
DE0001R	benzo_ghi_ptylene	precip	8.3	3.6	12.3	2	0.5	1.3	2.3	1.3	0.9	2.3	2.5	3.9	2.371
DE0009R	benzo_ghi_ptylene	precip	16	11.632	11.797	6.815	1.2	0.822	0.7	0.7	3.084	6.7	2.744	3.978	3.332
FI0096R	benzo_ghi_ptylene	precip+dry_dep	4	3.222	4	1	3.545	3	5	-	4	2	3	3	3.398
SE0012R	benzo_ghi_ptylene	precip+dry_dep	56	2	2	0	6	5	0	2	3	2	26	10	9.5
SE0014R	benzo_ghi_ptylene	precip+dry_dep	8	7.464	5	4.1	2	3.9	2.871	2.226	5.4	11	14.733	26	7.551
DE0001R	benzo_k_fluoranthene	precip	5.5	2.5	8.7	1.9	0.4	0.8	1.5	1	0.7	1.9	1.7	2.4	1.672
DE0009R	benzo_k_fluoranthene	precip	13.51	8.081	9.989	6.337	1.01	0.632	0.569	0.63	2.466	5.16	2.03	2.797	2.701
FI0096R	benzo_k_fluoranthene	precip+dry_dep	2	0.444	0	1	1.636	0	2	1.5	1	7	3	1.747	
SE0014R	benzo_k_fluoranthene	precip+dry_dep	5	5	4.742	3.1	1	2.9	1.871	1.226	4.4	10	13.733	15	5.634
SE0014R	benzo_k_fluoranthene	precip+dry_dep	5	5	4.742	3.1	1	2.9	1.871	1.226	4.4	10	13.733	15	5.634
IS0091R	beta_HCH	precip	0.007	0.005	0.006	0.007	0.018	0.007	0.005	0.007	0.005	0.008	0.004	0.003	0.006
DE0001R	chrysene	precip	13.2	7	20	5.4	1.7	2.5	3.3	1.8	2.5	4.3	4.7	6.6	4.367
DE0009R	chrysene	precip	34.7	22.011	26.791	17.058	3.4	1.795	1.725	1.9	5.693	12.3	6.108	8.48	7.138
IS0091R	cis_CD	precip	0.005	0.004	0.003	0.004	0.005	0.003	0.002	0.002	0.002	0.003	0.001	0.002	0.003
DE0001R	dibenzo_ah_anthracene	precip	1.38	0.31	0.67	0.21	0.06	0.1	0.22	0.11	0.14	0.14	0.15	0.55	0.245
DE0009R	dibenzo_ah_anthracene	precip	2.9	9.765	2.79	12.848	0.1	0.1	0.187	0.1	0.493	0.9	0.384	0.3	1.048

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
BE0004R	dieldrin	precip	1	1	1	1	1	1	1	1	1	-	-	1	1
DE0001R	dieldrin	precip	0.02	0.11	0.25	0.17	0.12	0.04	0.21	0.05	0.08	0.15	0.15	0.34	0.133
DE0009R	dieldrin	precip	0.02	0.408	0.065	0.062	0.13	0.073	0.109	0.03	0.069	0.1	0.031	0.18	0.082
IE0002R	dieldrin	precip	0.05	0.05	-	0.5	0.85	0.55	0.45	1.35	-	-	-	-	0.433
IS0091R	dieldrin	precip	0.034	0.03	0.036	0.027	0.033	0.021	0.01	0.01	0.029	0.03	0.045	0.021	0.027
BE0004R	endrin	precip	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	-	-	1.5	1.5
DE0001R	endrin	precip	0.02	0.02	0.04	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.012
DE0009R	endrin	precip	0.02	0.062	0.042	0.033	0.01	0.01	0.01	0.01	0.01	0.01	0.019	0.029	0.014
IE0002R	endrin	precip	0.35	0.35	-	0.5	0.85	0.55	0.45	1.35	-	-	-	-	0.536
CZ0003R	fluoranthene	precip	56.524	68.4	77.723	106.312	8.067	4.348	6.056	2.664	0.786	11.897	25.649	80.88	20.928
DE0001R	fluoranthene	precip	28.3	18	50.3	15.5	6.2	9.1	11.5	1.8	8.8	11.8	12	16.3	11.709
DE0009R	fluoranthene	precip	86.5	39.211	61.103	46.936	11.5	4.607	5.462	5.2	12.478	29.4	16.759	17.141	17.748
FI0096R	fluoranthene	precip+dry_dep	13	5.222	2	5	7.545	4	9	-	10	24	99	38	18.952
SE0012R	fluoranthene	precip+dry_dep	140	0	10	0	10	10	0	10	10	0	40	30	21.667
SE0014R	fluoranthene	precip+dry_dep	34	33.286	30.774	24.3	4	12.567	8.355	5.129	19.5	44	49.6	73	27.336
CZ0003R	fluorene	precip	8.144	6.8	7.053	9.138	1.404	0.915	1.075	0.451	0.205	2.116	4.578	6.629	2.728
BE0004R	gamma_HCH	precip	1	2.889	6	19	11.228	6.689	1.297	6	6	-	-	1	7.021
DE0001R	gamma_HCH	precip	0.9	1.16	2.18	4.94	2.29	2.68	2.62	0.15	1.75	0.51	1.4	1.22	1.744
DE0009R	gamma_HCH	precip	0.98	1.146	0.238	2.483	3.31	1.271	1.112	0.78	0.726	1.35	1.625	1.914	1.387
FI0096R	gamma_HCH	precip+dry_dep	0.04	0.079	0.01	0.02	0.033	0.08	0.41	-	0.74	0.06	0.07	0.02	0.191
IE0002R	gamma_HCH	precip	0.15	0.15	-	0.5	0.85	0.55	0.45	1.35	-	-	-	-	0.468
IS0091R	gamma_HCH	precip	0.059	0.06	0.07	0.068	0.183	0.192	0.047	0.054	0.049	0.08	0.065	0.029	0.071
NL0091R	gamma_HCH	precip	5	5	5	17.997	11.672	10	5.282	6.732	5	5	5	5	7.579
SE0012R	gamma_HCH	precip+dry_dep	-	-	-	-	-	-	-	-	-	-	-	-	-
SE0014R	gamma_HCH	precip+dry_dep	0.11	0.231	1.128	2.01	1.8	1.78	1.085	0.319	0.458	0.71	1.447	0.81	1.062
DE0001R	HCB	precip	0.18	0.04	0.17	0.07	0.15	0.08	0.06	0.03	0.04	0.21	0.07	0.03	0.086
DE0009R	HCB	precip	0.08	0.142	0.084	0.07	0.04	0.031	0.109	0.03	0.266	0.04	0.04	0.068	0.084
IS0091R	HCB	precip	0.038	0.01	0.009	0.01	0.02	0.007	0.007	0.009	0.008	0.009	0.012	0.01	0.012
BE0004R	heptachlor	precip	1	1	1	1	1	1	1	1	1	-	-	1	1
DE0001R	heptachlor	precip	0.008	0.008	0.017	0.005	0.003	0.003	0.006	0.003	0.003	0.004	0.004	0.003	0.004
DE0009R	heptachlor	precip	0.008	0.026	0.017	0.014	0.003	0.003	0.004	0.002	0.003	0.004	0.007	0.014	0.005
IE0002R	heptachlor	precip	0.05	0.05	-	0.1	0.15	0.1	0.1	0.25	-	-	-	-	0.095
DE0001R	inden_123cd_pyrene	precip	10.7	3.7	14.8	2.1	0.3	1.3	2.9	1.6	0.3	2.6	2.4	3.9	2.544
DE0009R	inden_123cd_pyrene	precip	20.8	14.074	13.674	7.726	1.2	0.35	0.45	0.8	3.867	7.9	3.428	1.479	3.792
DE0001R	op_DDD	precip	0.02	0.02	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.011
DE0009R	op_DDD	precip	0.02	0.062	0.042	0.579	0.01	0.01	0.062	0.01	0.01	0.01	0.019	0.029	0.038
IE0002R	op_DDD	precip	-	-	-	-	-	-	-	-	-	-	-	-	-
DE0001R	op_DDE	precip	0.008	0.008	0.017	0.005	0.003	0.003	0.006	0.003	0.003	0.004	0.004	0.003	0.004
DE0009R	op_DDE	precip	0.008	0.026	0.017	0.014	0.003	0.003	0.004	0.002	0.003	0.004	0.007	0.014	0.005
DE0001R	op_DDT	precip	0.02	0.02	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.011
DE0009R	op_DDT	precip	0.02	0.062	0.042	758.034	0.01	0.01	0.01	0.01	0.01	0.01	0.019	0.029	24.806
IE0002R	op_DDT	precip	-	-	-	-	-	-	-	-	-	-	-	-	-
IS0091R	op_DDT	precip	-	-	-	-	0.007	0.002	0.012	0.012	0.023	0.056	0.007	0.008	0.015

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
DE0001R	PCB_101	precip	0.38	0.52	0.2	0.13	0.24	0.98	0.08	0.13	0.04	0.23	0.13	0.06	0.275
DE0009R	PCB_101	precip	0.1	0.551	0.979	0.753	0.1	0.176	0.221	0.02	0.04	0.07	0.087	0.071	0.153
FI0096R	PCB_101	precip+dry_dep	0.04	0.056	0.04	0.05	0.056	0.05	0.005	-	0.035	0.07	0.005	0.06	0.043
IE0002R	PCB_101	precip	0.05	0.05	-	0.2	0.35	0.2	0.2	0.55	-	-	-	-	0.184
IS0091R	PCB_101	precip	0.007	0.005	0.006	0.007	0.031	0.007	0.005	0.007	0.005	0.008	0.004	0.003	0.006
SE0012R	PCB_101	precip+dry_dep	0.05	0.05	0.08	0.03	0.04	0.06	0.05	0.03	0.03	0.05	0.04	0.27	0.065
SE0014R	PCB_101	precip+dry_dep	0.11	0.147	0.328	0.278	0.11	0.138	0.096	0.079	0.116	0.13	0.102	0.11	0.148
IS0091R	PCB_105	precip	0.007	0.004	0.003	0.003	0.02	0.005	0.003	0.005	0.003	0.005	0.003	0.002	0.004
DE0001R	PCB_118	precip	0.17	0.25	0.08	0.08	0.1	0.2	0.07	0.04	0.03	0.07	0.05	0.03	0.09
DE0009R	PCB_118	precip	0.08	0.427	0.504	0.369	0.05	0.059	0.117	0.03	0.03	0.04	0.04	0.068	0.083
FI0096R	PCB_118	precip+dry_dep	0.02	0.028	0.04	0.005	0.021	0.02	0.09	-	0.025	0.05	0.04	0.05	0.035
IE0002R	PCB_118	precip	0.05	0.05	-	0.1	0.15	0.1	0.1	0.25	-	-	-	-	0.095
IS0091R	PCB_118	precip	0.007	0.005	0.006	0.007	0.038	0.007	0.003	0.005	0.003	0.005	0.003	0.002	0.006
SE0012R	PCB_118	precip+dry_dep	0.04	0.005	0.05	0.02	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.44	0.061
SE0014R	PCB_118	precip+dry_dep	0.07	0.093	0.203	0.177	0.1	0.137	0.086	0.071	0.101	0.08	0.099	0.13	0.115
DE0001R	PCB_138	precip	0.99	2.01	0.28	0.66	0.53	0.71	0.17	0.16	0.07	0.39	0.2	0.07	0.436
DE0009R	PCB_138	precip	0.18	1.116	4.523	3.045	0.2	0.351	0.333	0.08	0.061	0.07	0.165	0.152	0.412
FI0096R	PCB_138	precip+dry_dep	0.03	0.022	0.005	0.04	0.018	0.03	0.005	-	0.005	0.04	0.04	0.05	0.023
IE0002R	PCB_138	precip	0.05	0.05	-	0.2	0.35	0.2	0.2	0.55	-	-	-	-	0.184
IS0091R	PCB_138	precip	0.009	0.013	0.007	0.008	0.062	0.013	0.007	0.007	0.005	0.008	0.004	0.003	0.009
SE0012R	PCB_138	precip+dry_dep	0.08	0.09	0.09	0.03	0.08	0.07	0.06	0.05	0.04	0.05	0.04	0.54	0.102
SE0014R	PCB_138	precip+dry_dep	0.23	0.266	0.476	0.511	0.28	0.447	0.247	0.198	0.279	0.16	0.365	0.38	0.326
DE0001R	PCB_153	precip	0.41	0.79	0.17	0.23	0.25	0.63	0.09	0.08	0.04	0.18	0.11	0.04	0.235
DE0009R	PCB_153	precip	0.1	0.523	1.825	1.914	0.1	0.176	0.17	0.03	0.03	0.04	0.074	0.071	0.205
FI0096R	PCB_153	precip+dry_dep	0.05	0.058	0.08	0.07	0.057	0.08	0.005	-	0.05	0.1	0.06	0.09	0.063
IE0002R	PCB_153	precip	0.05	0.05	-	0.2	0.35	0.2	0.2	0.55	-	-	-	-	0.184
IS0091R	PCB_153	precip	0.009	0.015	0.007	0.008	0.054	0.014	0.007	0.007	0.005	0.008	0.004	0.003	0.009
SE0012R	PCB_153	precip+dry_dep	0.05	0.04	0.06	0.03	0.07	0.05	0.05	0.04	0.04	0.05	0.03	0.35	0.072
SE0014R	PCB_153	precip+dry_dep	0.26	0.287	0.428	0.402	0.22	0.425	0.216	0.204	0.247	0.24	0.296	0.32	0.297
IS0091R	PCB_156	precip	0.005	0.003	0.004	0.005	0.013	0.005	0.002	0.002	0.002	0.003	0.001	0.001	0.003
DE0001R	PCB_180	precip	0.6	0.93	0.25	0.32	0.17	0.12	0.06	0.07	0.03	0.21	0.06	0.03	0.172
DE0009R	PCB_180	precip	0.08	0.399	2.046	1.117	0.07	0.183	0.091	0.03	0.02	0.02	0.123	0.074	0.17
FI0096R	PCB_180	precip+dry_dep	0.03	0.011	0.03	0.03	0.03	0.03	0.07	-	0.025	0.03	0.03	0.03	0.03
IE0002R	PCB_180	precip	0.15	0.15	-	0.5	0.85	0.55	0.45	1.35	-	-	-	-	0.468
IS0091R	PCB_180	precip	0.005	0.007	0.003	0.003	0.038	0.005	0.003	0.005	0.003	0.005	0.003	0.002	0.005
SE0012R	PCB_180	precip+dry_dep	0.05	0.02	0.05	0.02	0.04	0.03	0.02	0.02	0.02	0.02	0.03	0.28	0.05
SE0014R	PCB_180	precip+dry_dep	0.18	0.205	0.343	0.332	0.15	0.291	0.172	0.147	0.204	0.12	0.288	0.24	0.225
DE0001R	PCB_28	precip	0.04	0.04	0.08	0.03	0.03	0.05	0.03	0.01	0.02	0.04	0.02	0.02	0.03
DE0009R	PCB_28	precip	0.04	0.068	0.08	0.063	0.01	0.019	0.019	0.01	0.02	0.02	0.037	0.068	0.024
FI0096R	PCB_28	precip+dry_dep	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	0.005	0.005	0.005	0.005	0.005
IS0091R	PCB_28	precip	0.137	0.045	0.037	0.042	0.116	0.043	0.117	0.17	0.117	0.194	0.097	0.071	0.089
SE0012R	PCB_28	precip+dry_dep	0.05	0.1	0.32	0.02	0.02	0.16	0.06	0.04	0.03	0.12	0.04	0.1	0.088
SE0014R	PCB_28	precip+dry_dep	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
IS0091R	PCB_31	precip	0.124	0.045	0.037	0.042	0.116	0.043	0.106	0.154	0.106	0.175	0.087	0.064	0.083

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
DE0001R	PCB_52	precip	0.11	0.04	0.08	0.03	0.06	0.14	0.03	0.03	0.02	0.06	0.02	0.02	0.053
DE0009R	PCB_52	precip	0.04	0.13	0.084	0.066	0.02	0.02	0.054	0.01	0.02	0.02	0.037	0.068	0.031
FI0096R	PCB_52	precip+dry_dep	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	0.005	0.005	0.005	0.005	0.005
IE0002R	PCB_52	precip	0.05	0.05	-	0.2	0.35	0.2	0.2	0.55	-	-	-	-	0.184
IS0091R	PCB_52	precip	0.036	0.019	0.015	0.018	0.049	0.018	0.032	0.047	0.032	0.053	0.027	0.02	0.027
SE0012R	PCB_52	precip+dry_dep	0.05	0.02	0.11	0.005	0.005	0.08	0.02	0.02	0.01	0.03	0.05	0.07	0.039
SE0014R	PCB_52	precip+dry_dep	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
CZ0003R	phenanthrene	precip	51.305	47.8	56.152	70.619	7.374	3.693	5.513	2.281	0.876	10.958	22.279	48.621	16.698
DE0001R	phenanthrene	precip	21.4	16	35.1	9.7	5.3	7.6	12.5	5.6	7.3	9.9	12	15.6	10.464
DE0009R	phenanthrene	precip	68.8	32.05	40.776	23.524	8.5	3.401	11.851	3.2	7.949	18.9	14.17	11.616	13.431
FI0096R	phenanthrene	precip+dry_dep	15	8	5	5	7.545	6	10	-	6.5	24	51	42	15.566
SE0012R	phenanthrene	precip+dry_dep	70	3	6	3	13	11	4	13	10	8	25	27	16.083
SE0014R	phenanthrene	precip+dry_dep	30	28.75	24.29	28	-	9.966	8.355	4.677	13.3	28	37.333	52	23.159
BE0004R	pp_DDD	precip	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-	0.5	0.5
DE0001R	pp_DDD	precip	0.02	0.02	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.011
DE0009R	pp_DDD	precip	0.02	0.062	0.042	1.05	0.01	0.01	0.01	0.01	0.01	0.01	0.019	0.029	0.047
IE0002R	pp_DDD	precip	-	-	-	-	-	-	-	-	-	-	-	-	-
IS0091R	pp_DDD	precip	0.007	0.005	0.006	0.007	0.018	0.007	0.003	0.005	0.003	0.005	0.008	0.004	0.006
BE0004R	pp_DDE	precip	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	-	-	1.000	1.000
CZ0003R	pp_DDE	precip	0.229	0.050	0.318	0.827	0.323	0.351	0.557	0.740	0.050	0.446	0.304	0.142	0.390
DE0001R	pp_DDE	precip	0.192	0.315	0.017	0.005	0.126	0.074	0.006	0.003	0.048	0.089	0.004	0.003	0.062
DE0009R	pp_DDE	precip	0.200	0.769	0.658	1.096	0.110	0.101	0.156	0.060	0.002	-	0.009	0.010	0.135
IE0002R	pp_DDE	precip	0.050	0.050	-	0.100	0.150	0.100	0.100	0.250	-	-	-	-	0.095
IS0091R	pp_DDE	precip	0.011	0.009	0.005	0.006	0.014	0.006	0.005	0.011	0.008	0.008	0.004	0.003	0.007
BE0004R	pp_DDT	precip	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-	0.50	0.50
CZ0003R	pp_DDT	precip	0.34	0.05	0.05	1.69	0.33	0.39	0.76	0.28	0.08	0.49	0.60	0.29	0.44
DE0001R	pp_DDT	precip	0.10	0.25	0.08	0.15	0.08	0.01	0.03	0.01	0.02	0.09	0.02	0.02	0.06
DE0009R	pp_DDT	precip	0.02	1.28	1.32	758.10	0.27	0.33	0.28	0.18	0.26	0.08	0.08	0.07	25.05
IS0091R	pp_DDT	precip	-	-	-	-	-	-	0.008	0.012	0.015	0.013	0.012	0.005	0.01
CZ0003R	pyrene	precip	35.75	44.70	52.58	60.82	4.74	2.56	3.20	1.87	0.46	6.86	18.04	59.22	13.46
DE0001R	pyrene	precip	19.50	12.00	34.40	10.60	4.20	7.20	7.90	3.00	5.30	8.20	7.90	10.30	8.17
DE0009R	pyrene	precip	61.40	36.99	44.22	34.48	8.30	3.77	4.26	4.00	9.76	23.10	10.80	12.18	13.25
FI0096R	pyrene	precip+dry_dep	10.00	5.33	3.00	4.00	6.55	4.00	7.00	-	7.00	14.00	68.00	22.00	13.24
SE0012R	pyrene	precip+dry_dep	69.00	2.00	3.00	2.00	10.00	7.00	2.00	7.00	5.00	3.00	28.00	19.00	13.08
SE0014R	pyrene	precip+dry_dep	19.00	18.82	18.00	13.80	4.00	8.73	5.61	3.45	12.20	29.00	33.67	55.00	18.08
IS0091R	trans_CD	precip	0.004	0.005	0.003	0.002	0.005	0.002	0.003	0.005	0.003	0.005	0.003	0.002	0.003
IS0091R	trans_NO	precip	0.006	0.003	0.003	0.003	0.009	0.007	0.002	0.002	0.003	0.003	0.003	0.002	0.003
BE0004R	mm	precip	25	30	14	36	67	40	21	12	55	-	-	33	333
CZ0003R	mm	precip	47	6	12	13	87	43	69	38	22	66	16	54	472
DE0001R	mm	precip	24	26	12	39	68	78	36	73	58	56	52	63	585
DE0009R	mm	precip	24	8	14	16	59	68	60	78	68	43	29	15	480
IE0002R	mm	precip	144	132	91	108	162	155	90	13	72	186	217	149	1514
IS0091R	mm	precip	59	86	70	63	23	58	63	43	61	37	78	97	737
NL0091R	mm	precip	23	27	28	61	87	66	47	19	99	91	85	45	678



## **Annex 8**

### **Monthly mean values on data for POPs in air**



Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
CZ0003R	alpha_HCH	air+aerosol	8.45	10.375	15.25	12.85	11	29.25	18.25	15.25	10.25	10.45	8.812	8.6	13.103
FI0096R	alpha_HCH	air+aerosol	5	5.778	7	9	11.545	14	15		13.5	11	6	6	9.855
IS0091R	alpha_HCH	air+aerosol	7.199	5.365	7.77	8.104	8.509	8.849	6.831	7.348	10.9	6.548	6.455	4.851	7.399
NO0001R	alpha_HCH	air+aerosol	-	-	-	-	-	-	-	-	-	6.22	12.17	7.36	9.48
NO0042G	alpha_HCH	air+aerosol	18.1	13.116	15.477	18.055	20.847	19.206	19.819	26.114	25.844	16.754	16.604	15.082	18.953
NO0099R	alpha_HCH	air+aerosol	7.976	8.202	7.62	11.722	10.96	13.725	21.95	16.7	15.382	12.862	10.345	8.445	11.877
SE0014R	alpha_HCH	air+aerosol	6.36	6.857	6.968	8.833	9.032	9.296	9.452	9.806	10.7	8.387	7	6.333	8.335
NO0042G	anthanthrene	air+aerosol	0.003	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001
CZ0003R	anthracene	air+aerosol	0.848	0.271	0.257	0.127	0.002	0.002	0.016	0.105	0.144	0.11	0.156	0.481	0.218
FI0096R	anthracene	air+aerosol	0.02	0.006	0.002	0.003	0.002	0.002	0.002	-	0.003	0.015	0.008	0.016	0.007
NO0042G	anthracene	air+aerosol	0.005	0.004	0.002	0.001	0.012	0.008	0.001	0.001	0.004	0.001	0.001	0.003	0.004
SE0012R	anthracene	air+aerosol	0.13	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.011
SE0014R	anthracene	aerosol	0.063	0.065	0.024	0.014	0.003	0.006	0.003	0.005	0.005	0.046	0.058	0.023	0.026
SE0014R	anthracene	air+aerosol	0.063	0.065	0.024	0.014	0.003	0.006	0.003	0.005	0.005	0.046	0.058	0.023	0.026
CZ0003R	benz_a_anthracene	air+aerosol	2.027	0.155	0.374	0.327	0.011	0.002	0.003	0.002	0.032	0.193	0.287	0.778	0.377
FI0096R	benz_a_anthracene	air+aerosol	0.031	0.01	0.003	0.002	0.005	0.002	0.005	-	0.005	0.28	0.023	0.024	0.033
NO0042G	benz_a_anthracene	air+aerosol	0.021	0.008	0.004	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.003	0.014	0.005
SE0012R	benz_a_anthracene	air+aerosol	0.114	0.329	0.001	0.006	0.001	0.001	0.001	0.001	0.001	0.006	0.001	0.001	0.038
SE0014R	benz_a_anthracene	aerosol	0.229	0.321	0.103	0.038	0.03	0.106	0.005	0.033	0.019	0.225	0.215	0.097	0.116
SE0014R	benz_a_anthracene	air+aerosol	0.229	0.321	0.103	0.038	0.03	0.106	0.005	0.033	0.019	0.225	0.215	0.097	0.116
CZ0003R	benzo_a_pyrene	air+aerosol	1.84	0.205	0.429	0.322	0.024	0.004	0.002	0.002	0.023	0.302	0.479	0.677	0.383
FI0096R	benzo_a_pyrene	air+aerosol	0.037	0.011	0.004	0.006	0.007	0.005	0.004	-	0.004	0.15	0.025	0.028	0.023
NO0042G	benzo_a_pyrene	air+aerosol	0.016	0.006	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.008	0.003
SE0012R	benzo_a_pyrene	air+aerosol	0.059	0.493	0.013	0.026	0.006	0.001	0.003	0.002	0.009	0.015	0.005	0.004	0.053
SE0014R	benzo_a_pyrene	air+aerosol	0.25	0.4	0.144	0.053	0.019	0.046	0.005	0.02	0.027	0.21	0.264	0.116	0.126
FI0096R	benzo_b_fluoranthene	air+aerosol	0.068	0.024	0.009	0.014	0.015	0.007	0.005	-	0.01	0.016	0.1	0.062	0.028
SE0014R	benzo_b_fluoranthene	air+aerosol	0.446	0.726	0.269	0.087	0.022	0.018	0.012	0.014	0.043	0.272	0.463	0.211	0.209
NO0042G	benzo_e_pyrene	air+aerosol	0.026	0.012	0.007	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.004	0.019	0.007
FI0096R	benzo_ghi_ptylene	air+aerosol	0.053	0.019	0.005	0.008	0.006	0.008	0.012	-	0.006	0.009	0.043	0.041	0.017
NO0042G	benzo_ghi_ptylene	air+aerosol	0.024	0.011	0.009	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.004	0.013	0.006
SE0012R	benzo_ghi_ptylene	air+aerosol	0.109	0.552	0.04	0.069	0.025	0.005	0.007	0.004	0.021	0.049	0.018	0.018	0.076
SE0014R	benzo_ghi_ptylene	air+aerosol	0.263	0.402	0.167	0.06	0.017	0.012	0.007	0.013	0.031	0.194	0.358	0.152	0.136
FI0096R	benzo_k_fluoranthene	air+aerosol	0.068	0.024	0.009	0.014	0.015	0.007	0.005	-	0.01	0.016	0.1	0.062	0.028
SE0014R	benzo_k_fluoranthene	air+aerosol	0.446	0.726	0.269	0.087	0.022	0.018	0.012	0.014	0.043	0.272	0.463	0.211	0.209
IS0091R	beta_HCH	air+aerosol	0.212	0.24	0.388	0.345	0.842	0.945	1.054	1.064	0.67	0.525	0.261	0.237	0.569
NO0042G	beta_HCH	air+aerosol	0.179	0.269	0.11	0.119	0.13	0.058	0.033	0.034	0.032	0.16	0.234	0.096	0.119
NO0042G	biphenyl	air+aerosol	1.877	1.475	0.987	0.183	0.044	0.02	0.017	0.016	0.267	0.386	0.554	1.223	0.588
FI0096R	chrysene_triphenylene	air+aerosol	0.076	0.029	0.011	0.019	0.057	0.007	0.005		0.01	0.25	0.077	0.074	0.053
NO0042G	chrysene_triphenylene	air+aerosol	0.057	0.027	0.021	0.002	0.001	0.001	0.001	0.001	0.004	0.002	0.011	0.041	0.014
SE0014R	chrysene_triphenylene	air+aerosol	0.469	0.659	0.256	0.105	0.039	0.1	0.016	0.052	0.052	0.37	0.34	0.208	0.217
IS0091R	cis_CD	air+aerosol	0.461	0.685	0.562	0.595	0.645	0.633	0.879	0.898	0.68	0.625	0.536	0.827	0.67
NO0042G	cis_CD	air+aerosol	0.41	0.622	0.593	0.637	0.816	0.615	0.61	0.658	0.632	0.947	0.995	0.714	0.682
NO0042G	cis_NO	air+aerosol	0.022	0.042	0.035	0.055	0.092	0.095	0.11	0.12	0.112	0.094	0.093	0.041	0.076

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
NO0042G	coronene	air+aerosol	0.007	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.002
NO0042G	cyclopenta_cd_pyrene	air+aerosol	0.005	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.004	0.002
NO0042G	dibenzo_ac_ah_anthracenes	air+aerosol	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
NO0042G	dibenzofuran	air+aerosol	1.983	1.812	1.416	0.365	0.08	0.043	0.05	0.046	0.297	0.482	0.793	1.322	0.721
NO0042G	dibenzothiophene	air+aerosol	0.033	0.026	0.012	0.002	0.003	0.002	0.003	0.002	0.003	0.005	0.014	0.023	0.01
IS0091R	dieldrin	air+aerosol	0.671	0.68	0.651	0.83	1.152	1.275	0.821	0.77	0.855	0.784	0.788	0.52	0.817
CZ0003R	fluoranthene	air+aerosol	9.578	3.116	3.142	1.653	0.317	0.319	0.267	0.328	0.493	1.355	1.521	4.423	2.31
FI0096R	fluoranthene	air+aerosol	0.34	0.13	0.04	0.06	0.066	0.05	0.07	-	0.05	0.1	0.32	0.3	0.127
NO0042G	fluoranthene	air+aerosol	0.14	0.089	0.06	0.012	0.013	0.011	0.012	0.007	0.014	0.008	0.033	0.097	0.042
SE0012R	fluoranthene	air+aerosol	3.13	1.27	0.28	0.3	0.21	0	0.14	0.1	0.22	0.31	0.25	0.21	0.535
SE0014R	fluoranthene	air+aerosol	1.395	2.017	0.871	0.376	0.142	0.125	0.126	0.104	0.169	0.827	1.406	0.763	0.675
CZ0003R	fluorene	air+aerosol	11.583	6.074	4.028	1.901	0.206	0.46	0.407	0.478	0.742	2.459	2.013	4.239	2.973
NO0042G	fluorene	air+aerosol	0.844	0.735	0.301	0.028	0.05	0.03	0.023	0.017	0.079	0.113	0.283	0.624	0.262
CZ0003R	gamma_HCH	air+aerosol	9.6	8.75	27.5	29.6	31.25	70.75	41.6	45.5	12.938	12.1	27	15.1	27.123
FI0096R	gamma_HCH	air+aerosol	2	2.778	2	4	5.909	4	13		3.5	3	3	2	4.06
IS0091R	gamma_HCH	air+aerosol	3.967	6.955	7.024	9.095	7.277	7.548	8.771	8.162	7.865	8.396	8.89	6.28	7.53
NO0001R	gamma_HCH	air+aerosol	-	-	-	-	-	-	-	-	-	2.54	15.545	5.94	9.893
NO0042G	gamma_HCH	air+aerosol	3.971	3.33	4.83	5.314	6.563	3.924	3.266	3.336	5.236	3.577	4.25	3.164	4.288
NO0099R	gamma_HCH	air+aerosol	3.094	4.86	9.09	6.377	11.39	11.57	21.6	11.34	11.345	5.59	8.953	3.847	8.849
SE0014R	gamma_HCH	air+aerosol	4.12	3.929	6.065	7.4	12.871	10.111	14.452	9.323	8.5	4.806	7.067	6	8.017
IS0091R	HCB	air+aerosol	4.574	2.675	4.088	5.183	4.99	4.803	3.497	3.963	5.325	4.62	4.875	3.509	4.345
NO0001R	HCB	air+aerosol	-	-	-	-	-	-	-	-	-	40.6	82.2	55	65
NO0042G	HCB	air+aerosol	46.31	43.496	44.325	42.45	50.646	51.974	61.278	60.537	66.73	58.599	63.685	60.578	53.937
NO0099R	HCB	air+aerosol	53.5	58.3	60.6	64.95	60.46	52.4	50.25	55.15	58.275	61.6	67.6	58.625	58.614
CZ0003R	inden_123cd_pyrene	air+aerosol	1.725	0.056	0.292	0.246	0.017	0.003	0.002	0.002	0.014	0.311	0.465	0.489	0.324
FI0096R	inden_123cd_pyrene	air+aerosol	0.062	0.026	0.01	0.019	0.013	0.02	0.031	-	0.015	0.031	0.063	0.018	0.026
NO0042G	inden_123cd_pyrene	air+aerosol	0.024	0.008	0.006	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.015	0.005
SE0012R	inden_123cd_pyrene	air+aerosol	0.116	0.599	0.04	0.062	0.013	0.003	0.001	0.002	0.02	0.038	0.014	0.015	0.077
SE0014R	inden_123cd_pyrene	air+aerosol	0.278	0.477	0.206	0.07	0.023	0.017	0.014	0.017	0.021	0.163	0.167	0.118	0.127
NO0042G	N1methylphenanthrene	air+aerosol	0.012	0.008	0.006	0.003	0.011	0.008	0.005	0.004	0.019	0.002	0.003	0.008	0.008
NO0042G	N2methylanthracene	air+aerosol	0.001	0.001	0.001	0.001	0.006	0.003	0.001	0.001	0.001	0.001	0.001	0.001	0.002
NO0042G	N2methylphenanthrene	air+aerosol	0.016	0.012	0.008	0.004	0.025	0.017	0.01	0.007	0.014	0.004	0.005	0.012	0.012
CZ0003R	naphtalene	air+aerosol	13.569	6.235	3.208	1.679	0.584	0.138	0.215	0.25	0.536	1.236	1.234	2.155	2.7
NO0042G	naphtalene	air+aerosol	3.37	1.741	0.675	0.091	0.061	0.051	0.03	0.023	0.062	0.168	0.394	1.575	0.693
NO0042G	op_DDD	air+aerosol	0.028	0.041	0.035	0.024	0.017	0.01	0.018	0.017	0.015	0.019	0.044	0.039	0.025
NO0042G	op_DDE	air+aerosol	0.205	0.242	0.185	0.125	0.065	0.022	0.028	0.024	0.029	0.078	0.258	0.161	0.117
IS0091R	op_DDT	air+aerosol	0.052	0.06	0.067	0.08	0.082	0.08	0.166	0.165	0.54	0.145	0.416	0.157	0.168
NO0042G	op_DDT	air+aerosol	0.258	0.351	0.288	0.221	0.153	0.056	0.067	0.1	0.116	0.259	0.529	0.31	0.222

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
CZ0003R	PCB_101	air+aerosol	10.2	7.25	6.375	7.05	8.188	12.625	14	12	7.688	6.45	11.5	3.65	8.876
FI0096R	PCB_101	air+aerosol	0.47	0.602	0.51	0.73	1.093	0.99	2.5	-	0.615	0.3	0.6	0.4	0.785
IS0091R	PCB_101	air+aerosol	0.212	0.24	0.267	0.322	0.489	0.32	1.092	1.111	1.028	0.629	1.177	0.237	0.597
NO0042G	PCB_101	air+aerosol	0.643	0.718	0.551	0.459	0.621	0.327	0.377	0.371	0.337	0.57	0.632	0.382	0.496
SE0012R	PCB_101	air+aerosol	1.51	0.92	1.41	2.93	5.28	4.6	18.33	3.08	4.05	0.64	0.81	0.97	3.711
SE0014R	PCB_101	air+aerosol	1.464	1.346	1.561	2.32	2.484	6.115	6.784	5.081	3.533	2.361	2.123	1.4	3.105
IS0091R	PCB_105	air+aerosol	0.105	0.12	0.134	0.16	0.162	0.157	0.169	0.165	0.168	0.154	0.174	0.157	0.152
NO0042G	PCB_105	air+aerosol	0.046	0.073	0.01	0.061	0.059	0.03	0.051	0.066	0.054	0.128	0.115	0.06	0.063
NO0042G	PCB_114	air+aerosol	0.018	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.011
CZ0003R	PCB_118	air+aerosol	2.35	2.25	4.812	5.8	1.938	3	6.45	10	2.312	0.5	0.5	1.8	3.481
FI0096R	PCB_118	air+aerosol	0.13	0.138	0.11	0.21	0.299	0.23	0.59	-	0.145	0.1	0.13	0.1	0.194
IS0091R	PCB_118	air+aerosol	0.212	0.24	0.267	0.322	0.325	0.32	0.174	0.165	0.168	0.154	0.584	0.157	0.257
NO0042G	PCB_118	air+aerosol	0.303	0.321	0.216	0.167	0.232	0.107	0.149	0.206	0.183	0.343	0.349	0.185	0.228
SE0012R	PCB_118	air+aerosol	0.62	0.33	0.44	1	1.55	1.36	5.99	0.91	1.13	0.19	0.28	0.63	1.202
SE0014R	PCB_118	air+aerosol	0.496	0.483	0.515	0.749	0.747	1.736	2.229	1.703	1.123	0.875	0.695	0.45	1.004
NO0042G	PCB_122	air+aerosol	0.019	0.01	0.01	0.01	0.01	0.01	0.01	0.012	0.01	0.01	0.01	0.01	0.011
NO0042G	PCB_123	air+aerosol	0.02	0.01	0.01	0.011	0.01	0.01	0.012	0.01	0.01	0.01	0.01	0.01	0.011
NO0042G	PCB_128	air+aerosol	0.07	0.024	0.013	0.016	0.043	0.022	0.03	0.044	0.031	0.055	0.032	0.024	0.034
CZ0003R	PCB_138	air+aerosol	25.6	15.062	12	7.1	17.25	17.25	42.4	23	19.75	20.05	40	8.85	20.763
FI0096R	PCB_138	air+aerosol	0.11	0.188	0.14	0.2	0.308	0.23	0.93	-	0.185	0.1	0.17	0.11	0.237
IS0091R	PCB_138	air+aerosol	0.264	0.3	0.334	0.4	0.407	0.4	0.259	0.25	0.25	0.231	0.261	0.237	0.299
NO0042G	PCB_138	air+aerosol	0.384	0.319	0.192	0.148	0.303	0.13	0.146	0.252	0.222	0.265	0.273	0.14	0.231
SE0012R	PCB_138	air+aerosol	0.84	0.52	0.6	1	1.38	1.2	4.49	1.16	1.44	0.27	0.32	0.67	1.157
SE0014R	PCB_138	air+aerosol	1.091	1.111	0.939	1.547	1.398	3.785	5.142	3.668	2.227	1.881	1.71	0.967	2.165
NO0042G	PCB_141	air+aerosol	0.091	0.054	0.012	0.018	0.04	0.021	0.031	0.038	0.041	0.049	0.042	0.03	0.039
NO0042G	PCB_149	air+aerosol	0.354	0.341	0.246	0.235	0.328	0.162	0.183	0.191	0.225	0.285	0.3	0.2	0.254
CZ0003R	PCB_153	air+aerosol	20.4	15.562	11.75	8.9	20.5	17.312	40.4	20.75	21.5	24.6	44.75	6.5	21.062
FI0096R	PCB_153	air+aerosol	0.18	0.273	0.22	0.28	0.42	0.36	1.5	-	0.265	0.2	0.23	0.15	0.357
IS0091R	PCB_153	air+aerosol	0.264	0.3	0.334	0.4	0.407	0.4	0.259	0.25	0.25	0.231	0.587	0.237	0.326
NO0042G	PCB_153	air+aerosol	0.755	0.542	0.262	0.223	0.401	0.152	0.21	0.403	0.4	0.307	0.408	0.207	0.358
SE0012R	PCB_153	air+aerosol	0.99	0.63	0.76	1.14	1.7	1.48	5.14	1.44	1.81	0.34	0.4	0.59	1.368
SE0014R	PCB_153	air+aerosol	1.29	1.32	1.167	1.824	1.742	4.189	5.8	4.168	2.643	2.006	2.003	1.133	2.49
IS0091R	PCB_156	air+aerosol	0.157	0.18	0.203	0.24	0.245	0.237	0.09	0.082	0.083	0.077	0.087	0.08	0.146
NO0042G	PCB_156	air+aerosol	0.024	0.014	0.012	0.011	0.018	0.011	0.019	0.027	0.017	0.045	0.046	0.017	0.021
NO0042G	PCB_157	air+aerosol	0.022	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.011	0.01	0.01	0.011
NO0042G	PCB_167	air+aerosol	0.03	0.011	0.011	0.01	0.01	0.01	0.01	0.013	0.014	0.014	0.01	0.01	0.013
NO0042G	PCB_170	air+aerosol	0.048	0.016	0.011	0.012	0.032	0.025	0.033	0.04	0.02	0.021	0.02	0.013	0.024
CZ0003R	PCB_180	air+aerosol	17.8	12.25	6.75	5.3	11.812	9.812	36.8	14.5	19.875	50.6	37.5	5.65	19.517
FI0096R	PCB_180	air+aerosol	0.04	0.069	0.046	0.054	0.079	0.057	0.26	-	0.043	0.063	0.068	0.039	0.071
IS0091R	PCB_180	air+aerosol	0.157	0.18	0.203	0.24	0.245	0.237	0.172	0.165	0.168	0.154	0.174	0.157	0.188

Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
NO0042G	PCB_180	air+aerosol	0.198	0.129	0.011	0.026	0.079	0.054	0.07	0.093	0.076	0.062	0.095	0.05	0.078
SE0012R	PCB_180	air+aerosol	0.46	0.25	0.22	0.28	0.35	0.26	1.06	0.31	0.37	0.12	0.11	0.31	0.342
SE0014R	PCB_180	air+aerosol	0.633	0.681	0.458	0.585	0.478	1.364	1.932	1.229	0.767	0.754	0.848	0.387	0.856
NO0042G	PCB_183	air+aerosol	0.096	0.02	0.01	0.014	0.03	0.015	0.014	0.022	0.025	0.016	0.023	0.014	0.026
NO0042G	PCB_187	air+aerosol	0.211	0.095	0.01	0.025	0.084	0.037	0.037	0.054	0.07	0.039	0.062	0.034	0.064
NO0042G	PCB_189	air+aerosol	0.022	0.01	0.011	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.011
NO0042G	PCB_194	air+aerosol	0.05	0.01	0.01	0.01	0.011	0.01	0.013	0.015	0.013	0.011	0.017	0.014	0.015
NO0042G	PCB_206	air+aerosol	0.048	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.014
NO0042G	PCB_209	air+aerosol	0.032	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.012	0.012
NO0042G	PCB_18	air+aerosol	3.33	2.633	3.131	2.628	3.71	2.292	2.174	1.796	2.359	2.081	2.257	2.392	2.57
CZ0003R	PCB_28	air+aerosol	7.5	8	11.625	15.25	7.812	17	14.25	12.938	10	3.45	6.062	10.65	10.35
FI0096R	PCB_28	air+aerosol	0.93	1.062	0.95	1.4	2.291	2.2	4	-	1.19	0.7	0.79	0.75	1.47
IS0091R	PCB_28	air+aerosol	1.364	1.558	1.738	2.089	2.107	2.066	6.045	6.026	6.077	5.617	11.889	5.805	4.379
NO0042G	PCB_28	air+aerosol	1.643	1.524	1.681	1.724	3.208	1.962	2.585	2.035	1.972	1.758	1.621	1.244	1.909
SE0012R	PCB_28	air+aerosol	2.41	1.53	1.77	3.12	3.02	1.72	8.1	1.33	2.27	0.83	1.01	1.19	2.358
SE0014R	PCB_28	air+aerosol	1.432	1.257	1.503	1.793	1.771	3.841	2.019	1.706	1.582	1.248	1.813	1.7	1.797
IS0091R	PCB_31	air+aerosol	1.364	1.558	1.738	2.089	2.107	2.066	5.472	5.447	5.495	5.078	9.65	5.248	3.956
NO0042G	PCB_31	air+aerosol	1.569	1.436	1.582	1.65	3.088	1.932	2.495	1.943	1.894	1.632	1.479	1.156	1.819
NO0042G	PCB_33	air+aerosol	1.281	1.138	1.241	1.408	2.903	1.793	2.014	1.56	1.495	1.262	1.081	0.79	1.497
NO0042G	PCB_37	air+aerosol	0.197	0.194	0.147	0.172	0.373	0.25	0.376	0.304	0.209	0.213	0.168	0.112	0.225
NO0042G	PCB_47	air+aerosol	0.426	0.547	0.632	0.513	0.854	0.486	0.573	0.5	0.446	0.439	0.464	0.364	0.518
CZ0003R	PCB_52	air+aerosol	31.6	49	21.875	1.65	4.938	4.5	25.45	23.25	13	15.65	19.562	13.3	18.54
FI0096R	PCB_52	air+aerosol	0.93	1.296	1.2	1.5	2.391	2.8	5.1	-	1.36	0.83	0.66	0.73	1.69
IS0091R	PCB_52	air+aerosol	0.576	0.66	0.734	0.884	0.894	0.874	1.667	1.651	1.665	1.539	3.074	1.589	1.321
NO0042G	PCB_52	air+aerosol	1.01	1.216	1.263				1.048	0.87	0.851	0.999	1.107	0.947	1.035
SE0012R	PCB_52	air+aerosol	1.98	1.36	1.72	2.73	3.1	2.32	9.26	1.89	2.8	0.81	0.9	1.24	2.509
SE0014R	PCB_52	air+aerosol	1.904	1.875	2.165	2.713	3.048	8.726	6.126	4.506	3.697	2.342	2.19	1.633	3.445
NO0042G	PCB_60	air+aerosol	0.087	0.088	0.079	0.059	0.084	0.053	-	-	-	-	-	-	0.074
NO0042G	PCB_66	air+aerosol	0.509	0.484	0.637	0.359	0.451	0.274	0.341	0.296	0.206	0.27	0.283	0.226	0.359
NO0042G	PCB_74	air+aerosol	0.208	0.212	0.223	0.163	0.215	0.13	0.212	0.185	0.14	0.183	0.201	0.166	0.185
NO0042G	PCB_99	air+aerosol	0.226	0.28	0.177	0.188	0.22	0.103	0.135	0.151	0.134	0.181	0.193	0.166	0.18
NO0042G	perylene	air+aerosol	0.004	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.003	0.002
CZ0003R	phenanthrene	air+aerosol	21.666	11.128	7.754	3.818	0.871	1.368	1.172	1.192	1.637	3.999	4.218	9.611	5.871
FI0096R	phenanthrene	air+aerosol	0.92	0.352	0.15	0.18	0.263	0.21	0.26	-	0.185	0.29	0.67	0.71	0.356
NO0042G	phenanthrene	air+aerosol	0.215	0.142	0.102	0.024	0.084	0.062	0.036	0.029	0.085	0.035	0.053	0.107	0.083
SE0012R	phenanthrene	air+aerosol	3.5	1.95	0.68	0.63	0.65	0.39	0.49	0.36	0.49	0.66	0.68	0.47	0.913

SE0014R	phenanthrene	air+aerosol	2.88	3.925	1.853	0.994	0.527	0.466	0.442	0.429	0.482	2.019	3.33	1.767	1.558
Site	Components	Matrix	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
CZ0003R	pp_DDD	air+aerosol	31.3	20.25	6.875	1.65	1.625	1.75	8.4	8.75	5.062	5.65	2.188	0.85	8.059
FI0096R	pp_DDD	air+aerosol	0.07	0.07	0.76	0.06	0.066	0.06	0.23	-	0.08	0.1	0.12	0.28	0.164
IS0091R	pp_DDD	air+aerosol	0.105	0.12	0.134	0.16	0.162	0.157	0.169	0.165	0.168	0.145	0.277	0.157	0.161
NO0042G	pp_DDD	air+aerosol	0.055	0.173	0.021	0.085	0.037	0.014	0.049	0.069	0.043	0.071	0.126	0.117	0.071
SE0014R	pp_DDD	air+aerosol	0.15	0.208	0.175	0.28	0.333	0.492	1.553	0.605	0.683	0.918	0.479	0.457	0.54
CZ0003R	pp_DDE	air+aerosol	15.2	17	28.75	31.2	23.75	35.375	24.1	36.25	38.25	19.4	21	14	24.967
FI0096R	pp_DDE	air+aerosol	0.58	0.728	0.56	0.19	0.362	0.2	0.68	-	0.18	0.32	0.78	0.74	0.467
IS0091R	pp_DDE	air+aerosol	0.385	0.35	0.333	0.377	0.295	0.481	0.261	0.376	0.557	0.216	0.419	0.237	0.362
NO0042G	pp_DDE	air+aerosol	1.531	2.023	0.642	0.543	0.41	0.153	0.439	0.724	0.713	0.622	1.852	1.07	0.877
SE0012R	pp_DDE	air+aerosol	6.81	1.46	1.96	2.43	4.07	1.93	3.35	2.48	4.24	0.66	1.71	1.54	2.72
SE0014R	pp_DDE	air+aerosol	3.084	2.489	2.397	2.1	2.984	2.689	2.358	1.274	2.747	2.002	5.353	4.667	2.789
CZ0003R	pp_DDT	air+aerosol	13	10.25	18.75	11.8	15.062	24	17.9	37.75	9.875	6.65	8.125	26.5	16.389
FI0096R	pp_DDT	air+aerosol	0.11	0.164	0.14	0.11	0.263	0.2	0.66	-	0.175	0.19	0.21	0.13	0.214
IS0091R	pp_DDT	air+aerosol	0.22	0.24	0.267	0.322	0.319	0.315	0.423	0.412	0.415	0.356	1.398	0.4	0.448
NO0042G	pp_DDT	air+aerosol	0.173	0.23	0.11	0.091	0.068	0.027	0.083	0.131	0.127	0.156	0.342	0.206	0.142
SE0014R	pp_DDT	air+aerosol	1.099	1.369	1.322	0.985	1.377	1.476	2.397	1.173	1.683	0.725	1.574	1.073	1.365
CZ0003R	pyrene	air+aerosol	6.765	1.749	1.947	1.103	0.175	0.139	0.133	0.159	0.362	0.911	1.081	3.197	1.555
FI0096R	pyrene	air+aerosol	0.22	0.08	0.03	0.03	0.03	0.03	0.02	-	0.035	0.07	0.15	0.2	0.075
NO0042G	pyrene	air+aerosol	0.095	0.048	0.037	0.009	0.011	0.008	0.009	0.005	0.009	0.003	0.017	0.063	0.027
SE0012R	pyrene	air+aerosol	1.94	0.29	0.1	0.15	0.09	0.04	0.04	0.05	0.08	0.19	0.11	0.11	0.266
SE0014R	pyrene	air+aerosol	0.973	1.262	0.503	0.243	0.072	0.062	0.055	0.051	0.105	0.606	0.96	0.443	0.433
IS0091R	trans_CD	air+aerosol	0.264	0.375	0.362	0.397	0.39	0.411	0.286	0.316	0.28	0.394	0.259	0.279	0.335
NO0042G	trans_CD	air+aerosol	0.23	0.382	0.34	0.32	0.253	0.13	0.127	0.138	0.12	0.269	0.485	0.402	0.264
IS0091R	trans_NO	air+aerosol	0.376	0.3	0.329	0.366	0.365	0.388	0.274	0.291	0.148	0.3	0.258	0.214	0.301
NO0042G	trans_NO	air+aerosol	0.306	0.515	0.503	0.602	0.759	0.54	0.648	0.662	0.616	0.966	1.142	0.751	0.661