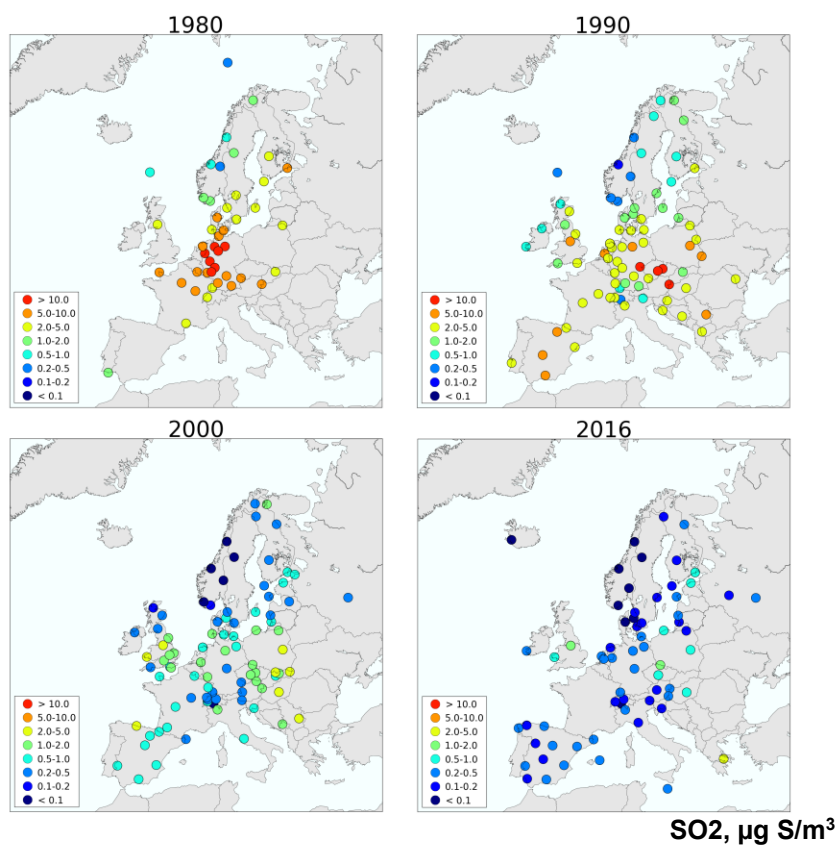


# Data Report 2017

## Particulate matter, carbonaceous and inorganic compounds

Anne-Gunn Hjellbrekke





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

**Data Report 2017  
Particulate matter, carbonaceous and  
inorganic compounds**

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# Data Report 2017

## Particulate matter, carbonaceous and inorganic compounds

### 1. Introduction

Measurements of air quality in Europe have been carried out under the "Co-operative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe" (EMEP) since 1 October 1977. From the start, priority was given to sulphur dioxide and sulphate in air, and pH and sulphate in precipitation, gradually increasing to include all main components in precipitation and ozone and nitrogen compounds in air. Furthermore, VOC, POPs, heavy metals and particulate matter are included in the monitoring programme (ECE/EB.AIR/GE.1/2009/15).

The EMEP data from 2017 for particulate matter, organic and elemental carbon, acidifying and eutrophying components in air and precipitation are presented in this report, which aims to give a short overview of the measurement data available. A complete set of data, including raw data, annual statistics and monthly means, can be downloaded from <http://ebas.nilu.no> and <http://www.nilu.no/projects/ccc/>.

The air and precipitation samples were analysed at the laboratories in the participating countries and the results have been forwarded to the Chemical Co-ordinating Centre (CCC) at the Norwegian Institute for Air Research (NILU).

### 2. The measurement network

The locations of the measurement sites are given in Table 1 and Figure 3.1. In addition to the network presented here, there are additional EMEP sites with other types of measurements.

In total, precipitation data from 90 stations and air data from 124 stations are presented in this report. The total number of measurement sites in this report is 140.

For detailed information on sites and their surroundings, please see descriptions at <http://www.nilu.no/projects/ccc/sitedescriptions/>.

Table 1: List of EMEP monitoring stations in operation in 2017.

Country	Station codes	Station name	Location		Height above sea (m)
			Lat.	Long.	
<b>Armenia</b>	AM0001R	Amberd	40°23'04"N	044°15'38"E	2080
<b>Austria</b>	AT0002R	Illmitz	47°46'00"N	016°46'00"E	117
	AT0005R	Vorhegg	46°40'40"N	012°58'20"E	1020
	AT0034G	Sonnblick	47°03'15"N	012°57'29"E	3106
	AT0048R	Zoebelboden	47°50'19"N	014°26'29"E	899
	BY0004R	Vysokoe	52°20'00"N	023°26'00"E	163
<b>Belarus</b>	BE0001R	Offagne	49°52'40"N	005°12'13"E	430
	BE0011R	Moerkerke	51°15'16"N	003°21'45"E	3
	BE0013R	Houtem	51°00'59"N	002°34'56"E	2
	BE0014R	Koksijde	51°07'15"N	002°39'31"E	4
	BE0032R	Eupen	50°37'46"N	006°00'04"E	295
	BE0035R	Vezin	50°30'12"N	004°59'22"E	160
<b>Croatia</b>	HR0002R	Puntijarka	45°54'00"N	015°58'00"E	988
	HR0004R	Zavizan	44°49'00"N	014°59'00"E	1594
<b>Cyprus</b>	CY0002R	Agia Marina Xyliatou	35°02'21"N	033°03'29"E	532
<b>Czech Rep.</b>	CZ0003R	Košetice (NOAK)	49°35'00"N	015°05'00"E	534
	CZ0005R	Churanov	49°04'00"N	013°36'00"E	1118
<b>Denmark</b>	DK0003R	Tange	56°21'00"N	009°36'00"E	13
	DK0005R	Keldsnor	54°44'00"N	010°44'00"E	10
	DK0008R	Anholt	56°43'00"N	011°31'00"E	40
	DK0010G	Nord, Greenland	81°36'00"N	016°40'12"W	20
	DK0012R	Risoe	55°41'37"N	012°05'09"E	3
	DK0022R	Sepstrup Sande	55°05'00"N	009°36'00"E	60
	DK0031R	Ulborg	56°17'26"N	008°25'39"E	10
<b>Estonia</b>	EE0009R	Lahemaa	59°30'00"N	025°54'00"E	32
	EE0011R	Vilsandi	58°23'00"N	021°49'00"E	6
<b>Finland</b>	FI0004R	Ähtäri	62°32'00"N	024°13'18"E	162
	FI0008R	Kevo	69°45'00"N	027°00'00"E	80
	FI0009R	Utö	59°46'45"N	021°22'38"E	7
	FI0018R	Virolahti III	60°31'48"N	027°40'03"E	4
	FI0022R	Oulanka	66°19'13"N	029°24'06"E	310
	FI0036R	Pallas (Matorova)	68°00'00"N	024°14'23"E	340
	FI0050R	Hyttälä	61°51'00"N	024°17'00"E	181
	FI0096G	Pallas (Sammaltunturi)	67°58'24"N	024°06'58"E	565
<b>France</b>	FR0008R	Donon	48°30'00"N	007°08'00"E	775
	FR0009R	Revin	49°54'00"N	004°38'00"E	390
	FR0010R	Morvan	47°16'00"N	004°05'00"E	620
	FR0013R	Peyrusse Vieille	43°37'00"N	000°11'00"E	200
	FR0014R	Montandon	47°18'00"N	006°50'00"E	836
	FR0015R	La Tardière	46°39'00"N	000°45'00"W	133
	FR0016R	Le Casset	45°00'00"N	006°28'00"E	1750
	FR0017R	Montfranc	45°48'00"N	002°04'00"E	810
	FR0018R	La Coulonche	48°38'00"N	000°27'00"W	309
	FR0019R	Pic du Midi	42°56'12"N	000°08'31"E	2877
	FR0023R	Saint-Nazaire-le-Desert	44°34'18"N	005°16'44"E	605
	FR0024R	Guipry	47°49'55"N	001°58'11"W	29
	FR0025R	Verneuil	46°48'53"N	002°36'36"E	182
FR0030R	Puy de Dôme	45°46'00"N	002°57'00"E	1465	
<b>Georgia</b>	GE0001R	Abastumani	41°45'18"N	042°49'31"E	1650
<b>Germany</b>	DE0001R	Westerland	54°55'32"N	008°18'35"E	12
	DE0002R	Waldhof	52°48'08"N	010°45'34"E	74
	DE0003R	Schauinsland	47°54'53"N	007°54'31"E	1205
	DE0007R	Neuglobsow	53°10'00"N	013°02'00"E	62
	DE0008R	Schmücke	50°39'00"N	010°46'00"E	937
	DE0009R	Zingst	54°26'00"N	012°44'00"E	1
	DE0044R	Melpitz	51°31'48"N	012°55'48"E	86
	<b>Greece</b>	GR0001R	Aliartos	38°22'00"N	023°05'00"E
<b>Hungary</b>	HU0002R	K-pusztá	46°58'00"N	019°35'00"E	125
	HU0003R	Farkasfa	46°54'36"N	016°19'12"E	312
<b>Iceland</b>	IS0002R	Irafoss	64°05'00"N	021°01'00"W	66
	IS0091R	Storhofdi	63°24'00"N	020°17'00"W	118
<b>Ireland</b>	IE0001R	Valentia Observatory	51°56'23"N	010°14'40"W	11
	IE0005R	Oak Park	52°52'07"N	006°55'29"W	59
	IE0006R	Malin Head	55°22'30"N	007°20'34"W	20
	IE0008R	Carnsore Point	52°11'06"N	006°22'06"W	9
	IE0009R	Johnstown Castle	52°17'56"N	006°30'39"W	62



Table 1, cont.

Country	Station codes	Station name	Location		Height above sea (m)
			Lat.	Long.	
<b>Italy</b>	IT0004R	Ispra	45°48'00"N	008°38'00"E	209
	IT0009R	Mt Cimone	44°11'00"N	010°42'00"E	2165
	IT0019R	Monte Martano	42°48'20"N	012°33'56"E	1090
<b>Latvia</b>	LV0010R	Rucava	56°09'43"N	021°10'23"E	18
<b>Lithuania</b>	LT0015R	Preila	55°21'00"N	021°04'00"E	5
<b>Macedonia</b>	MK0007R	Lazaropole	41°32'10"N	020°41'38"E	1332
<b>Malta</b>	MT0001R	Giordan Lighthouse	36°04'20"N	014°13'06"E	167
<b>Moldova</b>	MD0013R	Leova II	46°29'18"N	028°17'01"E	166
<b>Montenegro</b>	ME0008R	Zabljak	43°09'00"N	019°08'00"E	1450
<b>The Netherlands</b>	NL0007R	Eibergen	52°05'00"N	006°34'00"E	20
	NL0008R	Bilthoven	52°07'00"N	005°12'00"E	5
	NL0009R	Kollumerwaard	53°20'02"N	006°16'38"E	1
	NL0010R	Vredepeel	51°32'28"N	005°51'13"E	28
	NL0091R	De Zilk	52°18'00"N	004°30'00"E	4
	NL0644R	Cabauw Wielsekade	51°58'28"N	004°55'25"E	1
<b>Norway</b>	NO0001R	Birkenes	58°23'00"N	008°15'00"E	190
	NO0002R	Birkenes II	58°23'19"N	008°15'07"E	219
	NO0015R	Tustervatn	65°50'00"N	013°55'00"E	439
	NO0039R	Kárvatn	62°47'00"N	008°53'00"E	210
	NO0042G	Zeppelin mountain (Ny-Ålesund)	78°54'24"N	011°53'18"E	474
	NO0056R	Hurdal	60°22'21"N	011°04'41"E	300
<b>Poland</b>	PL0002R	Jarczew	51°49'00"N	021°59'00"E	180
	PL0003R	Sniezka	50°44'00"N	015°44'00"E	1603
	PL0004R	Leba	54°45'00"N	017°32'00"E	2
	PL0005R	Diabla Gora	54°09'00"N	022°04'00"E	157
	PL0009R	Zielonka	53°39'44"N	017°56'02"E	121
<b>Romania</b>	RO0003R	Semenic	45°07'00"N	025°58'00"E	1432
	RO0008R	Poiana Stampei	47°19'29"N	025°08'05"E	908
<b>Russian Federation</b>	RU0001R	Janiskoski	68°56'00"N	028°51'00"E	118
	RU0013R	Pinega	64°42'00"N	043°24'00"E	28
	RU0018R	Danki	54°54'00"N	037°48'00"E	150
	RU0020R	Lesnoy	56°31'48"N	032°56'24"E	340
<b>Serbia</b>	RS0005R	Kamenicki vis	43°24'00"N	021°57'00"E	813
<b>Slovakia</b>	SK0002R	Chopok	48°56'00"N	019°35'00"E	2008
	SK0004R	Stará Lesná	49°09'00"N	020°17'00"E	808
	SK0006R	Starina	49°03'00"N	022°16'00"E	345
	SK0007R	Topolníky	47°57'36"N	017°51'38"E	113
<b>Slovenia</b>	SI0008R	Iskrba	45°34'00"N	014°52'00"E	520
	SI0032R	Krvavec	46°17'58"N	014°32'19"E	1740
<b>Spain</b>	ES0001R	San Pablo de los Montes	39°32'52"N	004°20'55"W	917
	ES0005R	Noya	42°43'41"N	008°55'25"W	683
	ES0006R	Mahón	39°52'00"N	004°19'00"E	78
	ES0007R	Víznar	37°14'00"N	003°32'00"W	1265
	ES0008R	Niembro	43°26'32"N	004°51'01"W	134
	ES0009R	Campisábalos	41°16'52"N	003°08'34"W	1360
	ES0010R	Cabo de Creus	42°19'10"N	003°19'01"E	23
	ES0011R	Barcarrota	38°28'33"N	006°55'22"W	393
	ES0012R	Zarra	39°05'10"N	001°06'07"W	885
	ES0013R	Penausende	41°17'00"N	005°52'00"W	985
	ES0014R	Els Torms	41°24'00"N	000°43'00"E	470
	ES0016R	O Saviñao	43°13'52"N	007°41'59"W	506
	ES0017R	Doñana	37°01'50"N	006°19'55"W	5
	ES1778R	Montseny	41°46'00"N	002°21'00"E	700
	<b>Sweden</b>	SE0005R	Bredkälen	63°51'00"N	015°20'00"E
SE0011R		Vavihill	56°01'00"N	013°09'00"E	175
SE0012R		Aspvreten	58°48'00"N	017°23'00"E	20
SE0014R		Råö	57°23'38"N	011°54'50"E	5
SE0020R		Hallahus	56°02'34"N	013°08'53"E	190
<b>Switzerland</b>	CH0001G	Jungfrauoch	46°32'51"N	007°59'06"E	3578
	CH0002R	Payerne	46°48'47"N	006°56'41"E	489
	CH0003R	Tänikon	47°28'47"N	008°54'17"E	539
	CH0004R	Chaumont	47°02'59"N	006°58'46"E	1137
	CH0005R	Rigi	47°04'03"N	008°27'50"E	1031
	CH0053R	Beromünster	47°11'23"N	008°10'32"E	797
<b>United Kingdom</b>	GB0002R	Eskdalemuir	55°18'47"N	003°12'15"W	243
	GB0006R	Lough Navar	54°26'35"N	007°52'12"W	126
	GB0013R	Yarner Wood	50°35'47"N	003°42'47"W	119

Table 1, cont.

Country	Station codes	Station name	Location		Height above sea (m)
			Lat.	Long.	
United Kingdom (cont.)	GB0014R	High Muffles	54°20'04"N	000°48'27"W	267
	GB0015R	Strath Vaich Dam	57°44'04"N	004°46'28"W	270
	GB0031R	Aston Hill	52°30'14"N	003°01'59"W	370
	GB0033R	Bush	55°51'31"N	003°12'18"W	180
	GB0037R	Ladybower Res.	53°23'56"N	001°45'12"W	420
	GB0038R	Lullington Heath	50°47'34"N	000°10'46"E	120
	GB0043R	Narberth	51°14'00"N	004°42'00"W	160
	GB0045R	Wicken Fen	52°17'54"N	000°17'34"W	5
	GB0048R	Auchencorth Moss	55°47'32"N	003°14'34"W	260
	GB0050R	St. Osyth	51°46'41"N	001°04'56"E	8
	GB0051R	Market Harborough	52°33'16"N	000°46'20"W	145
	GB0053R	Charlton Mackrell	51°03'23"N	002°41'00"W	54
	GB1055R	Chilbolton Observatory	51°08'59"N	001°26'18"W	78

### 3. Site codes

The site codes used in this report are the codes used for data submission and storage in the EMEP database. 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). The station numbers have been retained from previous codes used.

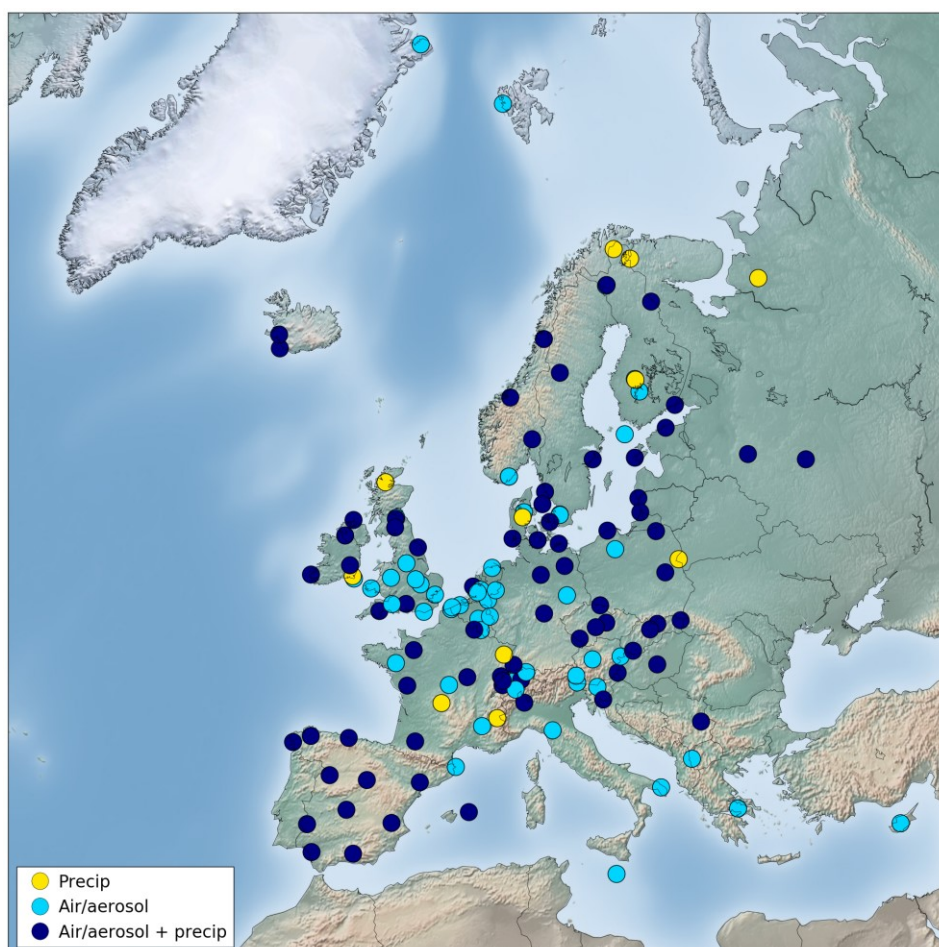


Figure 3.1: Location of the EMEP monitoring stations in operation in 2017. Sites with ozone/heavy metals/VOC measurements only are not included.

#### 4. The measurement programme during 2017

The monitoring obligations in EMEP are presented in table 2 and described in more detail in the Monitoring Strategy for 2010-2019 (UNECE, 2009). The compliance with the monitoring strategy varies between Parties and further discussion of this is found in the Status Report (Fagerli et al., 2019). In this report, inorganic data in air and precipitation, aerosol mass, inorganic and carbonaceous matter in air are presented. Ozone (Hjellbrekke and Solberg, 2019), heavy metals and POPs (Aas and Nizzetto, 2019) and VOC (Solberg et al. 2019) are reported separately.

A list of data reports from EMEP/CCC can be found in Annex 5. All data reports are also available in pdf-format at <http://www.nilu.no/projects/ccc/reports.html>.

Table 2: EMEP's measurement programme 2017.

	Components	Measurement period	Measurement frequency
Gas	SO <sub>2</sub> , NO <sub>2</sub>	24 hours	daily
	O <sub>3</sub>	hourly means stored	continuously
	Light hydrocarbons C <sub>2</sub> -C <sub>7</sub>	10-15 mins	twice weekly
	Ketones and aldehydes (VOC)	8 hours	twice weekly
	Hg	24 hours	weekly
Particles	SO <sub>4</sub> <sup>2-</sup> , NH <sub>4</sub> <sup>+</sup> , NO <sub>3</sub> <sup>-</sup> , Ca <sup>2+</sup> , Mg <sup>2+</sup> , Na <sup>+</sup> , K <sup>+</sup> , Cl <sup>-</sup>	24 hours	daily
	Cd, Pb (first priority), Cu, Zn, As, Cr, Ni (second priority)	weekly	weekly
	PM mass (PM <sub>10</sub> + PM <sub>2.5</sub> )	24 hours	daily
	EC, OC and mineral dust in PM <sub>10</sub>	daily/weekly	daily/weekly
Gas + particles	HNO <sub>3</sub> (g)+NO <sub>3</sub> <sup>-</sup> (p), NH <sub>3</sub> (g)+NH <sub>4</sub> <sup>+</sup> (p)	24 hours	daily
	POPs (PAH, PCB, HCB, chlordane, lindane, α-HCH, DDT/DDE)	daily/weekly	once weekly
Precipitation	Amount, SO <sub>4</sub> <sup>2-</sup> , NO <sub>3</sub> <sup>-</sup> , Cl <sup>-</sup> , pH, NH <sub>4</sub> <sup>+</sup> , Na <sup>+</sup> , Mg <sup>2+</sup> , Ca <sup>2+</sup> , K <sup>+</sup> , conductivity	24 hours/weekly	daily/weekly
	Hg, Cd, Pb (first priority), Cu, Zn, As, Cr, Ni (second priority)	weekly	weekly
	POPs (PAH, PCB, HCB, chlordane, lindane, α-HCH, DDT/DDE)	weekly	weekly

Measurements of VOC, heavy metals and POPs are made at a small number of sites only.

## 5. Sampling and analytical methods

The recommended procedures for sampling and analysis of precipitation and air are described in the EMEP Manual for sampling and chemical analysis (EMEP/CCC, 2014) in addition to guidelines and standard operation procedures developed in co-operating networks and institutions. A list of these is found at the data submission web page: <https://ebas-submit.nilu.no/Standard-Operating-Procedures>. The methods used by the participating countries are given in Annex 4.

Generally, concentrations of gaseous nitric acid and ammonia, and of nitrate and ammonium in aerosol particles are determined by filter pack sampling. However, sampling artefacts due to the volatile nature of ammonium nitrate, and the possible interaction with strong acids, e.g. sulphuric acid, make separation of gases and particles by simple aerosol filters unreliable. Therefore, only the sums of nitric acid and nitrate, and of ammonium and ammonia are unbiased.

## 6. Laboratory intercomparison

The 35<sup>th</sup> laboratory intercomparison is representative for the 2017 data. Results are presented at <http://www.nilu.no/projects/ccc/intercomparison/>.

## 7. Calculation of excess sulphate in precipitation

The sulphate in precipitation is stored in the database as reported, i.e. total sulphate, and as corrected, non-marine sulphate, i.e. total sulphate minus sulphate originating from sea-salt particles.

CCC has since 1994 used a routine worked out by the Canadian Air and Precipitation Monitoring Network (CAPMoN) for calculation of the marine contribution to sulphate in precipitation. The routine has further been adopted by the WMO GAW.

When the sulphate concentrations originating from sea-salt are larger than the total sulphate, and the corrected sulphate concentrations consequently become less than zero, negative concentrations have been stored in the database and have been used to calculate averages in the report in order to avoid bias in the aggregates. Negative concentrations are mainly caused by random errors in the data and occur when non sea-salt sulphate concentrations are low compared to total sulphate.

## 8. Annual summaries of the data

### 8.1 Maps over Europe

Geographical distributions based on annual means of OC, EC, SO<sub>2</sub>, NO<sub>2</sub>, SO<sub>4</sub><sup>-</sup>, PM<sub>10</sub> and PM<sub>2.5</sub> in air and pH, NH<sub>4</sub><sup>+</sup>, NO<sub>3</sub><sup>-</sup>, Ca and excess SO<sub>4</sub><sup>-</sup> in precipitation are shown in Annex 1.

### 8.2 Annual summaries in tables

Annual statistics of the precipitation data are given in Annex 2 and of the air data in Annex 3. The precipitation component summaries contain:

- the precipitation weighted arithmetic mean value,
- the minimum and maximum daily concentrations,
- the wet deposition,
- percent of total precipitation amount analysed for a specific component (completeness for precipitation data),
- the number of data below the detection limit.

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.

Concentrations less than zero may exist in the database for sulphate in precipitation corrected for sea-salt. This occurs whenever the sea-salt contribution is larger than the total sulphate concentration, and it is caused by random errors in the results. The negative values have been included in the estimation of the weighted arithmetic mean values.

For air components the statistical summaries in Annex 3 contain:

- arithmetic mean and standard deviation,
- geometric mean and standard deviation,
- minimum and maximum daily concentrations,
- 5-percentile, median and 95-percentile,
- data capture,
- the number of data below the detection limit and total number of samples.

A description of the calculation procedures is given in Annex 6.

In addition to the statistical summaries in Annex 2 and Annex 3 annual averages are summarized in Tables 3-6. The units used for the results in this report are given in Table 7.

Table 3: Annual averages of main components with data capture > 50% in precipitation 2017.

Code	mm	mm off	pH	SO <sub>4</sub>	XSO <sub>4</sub>	NH <sub>4</sub>	NO <sub>3</sub>	Na	Mg	Cl	Ca	K	cond
AM0001R	-	227.4	6.14	1.01	0.98	0.82	0.60	0.39	0.503	0.69	3.11	0.32	28
BE0014R	724.1	764.8	5.24	-	-	0.57	0.30	2.93	0.377	-	0.48	0.11	32
BY0004R	707.7	-	6.09	1.15	-	-	0.79	-	-	-	-	-	33
CH0002R	693.4	-	5.87	0.11	0.10	0.37	0.21	0.11	0.024	0.19	0.22	0.04	7
CH0004R	917.3	-	5.62	0.10	0.09	0.24	0.17	0.10	0.024	0.17	0.21	0.04	6
CH0005R	1348.0	-	5.67	0.12	0.11	0.41	0.23	0.06	0.015	0.09	0.15	0.02	6
CZ0003R	739.9	-	5.15	0.27	0.25	0.48	0.35	0.12	0.029	0.21	0.21	0.05	10
CZ0005R	965.5	-	5.12	0.18	0.17	0.36	0.30	0.10	0.023	0.19	0.09	0.06	9
DE0001R	912.0	-	5.49	0.70	0.15	0.50	0.34	6.48	0.782	11.34	0.37	0.26	51
DE0002R	863.5	-	5.32	0.22	0.19	0.57	0.33	0.33	0.051	0.59	0.10	0.06	11
DE0003R	1623.7	-	5.35	0.12	0.11	0.22	0.20	0.17	0.029	0.28	0.10	0.03	7
DE0007R	810.6	-	5.29	0.25	0.22	0.53	0.35	0.33	0.055	0.57	0.17	0.09	11
DE0008R	1268.8	-	5.16	0.21	0.19	0.38	0.35	0.30	0.040	0.41	0.12	0.05	10
DE0009R	639.7	-	5.45	0.30	0.22	0.58	0.40	0.97	0.130	1.71	0.24	0.13	16
DK0005R	572.0	-	-	0.29	0.19	0.58	0.36	-	0.150	2.16	0.22	0.15	-
DK0008R	632.8	-	-	0.29	0.16	0.35	0.32	-	0.226	3.03	0.14	0.09	-
DK0012R	641.6	-	-	0.24	0.17	0.52	0.34	-	0.114	1.46	0.22	0.23	-
DK0022R	882.6	-	-	0.30	0.15	0.42	0.30	-	0.231	10.62	0.13	0.09	-
EE0009R	777.8	-	5.18	0.17	0.15	0.11	0.17	0.27	0.045	0.37	0.26	0.05	7
EE0011R	686.2	-	5.18	0.20	0.14	0.24	0.24	0.68	0.121	1.21	0.24	0.17	13
ES0001R	408.1	-	5.80	0.27	0.23	0.26	0.22	0.49	0.108	0.75	0.95	0.16	12
ES0005R	1320.4	-	5.20	0.45	0.22	0.33	0.17	2.76	0.360	4.75	0.35	0.24	28
ES0006R	442.3	-	6.16	2.13	0.43	0.20	0.37	20.01	2.773	37.18	4.30	0.99	161
ES0007R	363.2	-	6.49	0.44	0.40	0.41	0.29	0.42	0.292	0.76	2.35	0.34	22
ES0008R	1246.8	-	4.78	0.53	0.25	0.19	0.40	3.34	0.470	5.94	0.60	0.21	35
ES0009R	336.7	-	6.28	0.26	0.24	0.37	0.33	0.24	0.121	0.40	1.60	0.10	15
ES0011R	369.9	-	5.75	0.22	0.17	0.12	0.15	0.62	0.129	1.09	0.74	0.13	11
ES0012R	297.3	-	6.09	0.45	0.41	0.39	0.38	0.49	0.194	0.83	2.36	0.12	21
ES0013R	304.9	-	5.85	0.23	0.20	0.46	0.22	0.41	0.121	0.77	0.65	0.24	13
ES0014R	325.5	-	6.29	0.34	0.31	0.48	0.32	0.33	0.109	0.51	1.18	0.08	14
ES0016R	1221.2	-	5.56	0.33	0.24	0.42	0.22	1.07	0.176	1.96	0.41	0.25	16
ES0017R	407.7	-	5.42	0.31	0.18	0.08	0.10	1.55	0.220	2.75	0.67	0.10	17
FI0004R	-	-	4.79	0.23	0.22	0.21	0.24	0.14	0.031	0.24	0.08	0.12	11
FI0008R	499.7	-	5.14	0.14	0.12	0.08	0.06	0.35	0.054	0.58	0.06	0.07	7
FI0018R	845.9	-	4.81	0.25	0.24	0.19	0.23	0.20	0.039	0.36	0.12	0.05	11
FI0022R	604.2	-	4.90	0.11	0.11	0.04	0.08	0.07	0.013	0.13	0.02	0.03	6
FI0036R	640.4	-	4.96	0.09	0.08	0.03	0.07	0.07	0.011	0.13	0.02	0.02	6
FI0050R	630.8	-	4.89	0.13	0.12	0.12	0.17	0.11	0.019	0.18	0.05	0.04	8
FR0008R	1607.6	-	5.42	0.12	0.10	0.28	0.23	0.25	0.036	0.42	0.14	0.04	-
FR0009R	1043.9	-	5.51	0.21	0.16	0.42	0.32	0.60	0.076	1.01	0.20	0.07	-
FR0010R	1096.7	-	5.59	0.13	0.10	0.27	0.20	0.39	0.047	0.66	0.15	0.08	-
FR0013R	662.8	-	5.74	0.28	0.16	0.27	0.22	1.41	0.187	2.39	0.47	0.19	-
FR0014R	1061.4	-	5.60	0.13	0.11	0.30	0.22	0.19	0.027	0.28	0.24	0.03	-
FR0015R	751.3	-	5.99	0.28	0.12	0.38	0.14	1.92	0.248	3.44	0.22	0.10	-
FR0016R	676.9	-	5.91	0.13	0.13	0.26	0.17	0.09	0.038	0.14	0.53	0.07	-
FR0017R	1166.4	-	5.58	0.15	0.08	0.19	0.13	0.84	0.098	1.32	0.16	0.05	-
FR0018R	868.6	-	5.85	0.19	0.10	0.37	0.20	1.04	0.136	1.84	0.15	0.06	-
GB0002R	1575.9	-	5.67	0.20	0.08	0.30	0.15	1.40	0.147	2.44	0.10	0.07	14
GB0006R	1514.1	-	5.71	0.28	0.06	0.12	0.06	2.54	0.273	4.56	0.22	0.12	21
GB0013R	926.5	-	5.61	0.36	0.11	0.20	0.16	3.06	0.316	5.48	0.20	0.14	26
GB0014R	890.2	-	5.32	0.33	0.21	0.47	0.32	1.44	0.159	2.48	0.17	0.08	18
GB0015R	1195.8	-	5.43	0.31	0.03	0.06	0.05	3.38	0.372	5.98	0.17	0.13	26
GB0048R	765.9	-	5.59	0.14	0.08	0.23	0.11	0.65	0.081	1.17	0.10	0.07	9
GB1055R	612.3	-	5.76	0.24	0.15	0.47	0.24	1.08	0.118	1.94	0.18	0.08	14
HU0002R	661.8	656.8	6.05	0.57	0.49	0.52	0.41	1.20	0.111	0.99	0.49	0.18	16
HU0003R	-	733.5	6.15	0.39	0.32	0.40	0.37	1.48	0.107	1.27	0.48	0.22	16
IE0001R	1960.5	1598.6	5.35	0.64	0.09	0.11	0.07	6.51	0.821	11.47	0.32	0.30	49
IE0005R	593.2	754.9	5.74	0.16	0.06	0.19	0.06	1.21	0.157	2.13	0.21	0.06	12
IE0006R	1127.0	1149.7	5.52	0.91	0.13	0.21	0.04	9.29	1.180	16.78	0.50	0.44	69
IE0009R	675.1	963.0	5.61	0.25	0.10	0.23	0.11	1.84	0.218	3.33	0.15	0.08	17
IS0002R	-	-	5.73	0.28	0.05	-	0.03	2.73	0.346	3.93	0.16	0.22	18
IS0091R	1374.9	1668.0	4.99	4.98	-0.06	0.50	0.11	40.59	6.959	106.43	2.24	2.30	361

Table 3, cont.

Code	mm	mm off	pH	SO <sub>4</sub>	XSO <sub>4</sub>	NH <sub>4</sub>	NO <sub>3</sub>	Na	Mg	Cl	Ca	K	cond
IT0004R	-	1070.5	5.43	0.45	0.43	1.00	0.68	0.32	0.064	0.44	0.52	0.07	18
LT0015R	814.4	-	4.93	0.47	0.26	0.40	0.42	2.40	0.272	4.74	0.30	0.13	29
LV0010R	-	1019.4	5.07	0.19	0.13	0.26	0.24	0.67	0.097	1.19	0.06	0.13	14
MD0013R	504.3	-	5.65	0.45	0.43	0.35	0.61	0.27	0.939	0.72	2.01	0.54	23
ME0008R	1504.2	-	6.15	1.47	1.41	0.58	0.20	0.68	0.233	0.71	1.40	0.94	18
NL0091R	809.1	-	5.23	0.43	0.17	0.39	0.29	3.06	0.375	5.49	0.24	0.14	29
NO0001R	2087.8	-	4.95	0.29	0.20	0.29	0.31	1.17	0.145	2.02	0.17	0.10	16
NO0015R	1317.8	-	5.34	0.16	0.04	0.10	0.05	1.44	0.163	2.51	0.10	0.11	12
NO0039R	1758.4	-	5.26	0.13	0.05	0.06	0.04	0.99	0.115	1.77	0.09	0.08	9
NO0056R	955.9	-	5.23	0.14	0.12	0.24	0.19	0.23	0.029	0.37	0.12	0.13	7
PL0002R	703.8	716.4	5.13	0.41	0.40	0.54	0.41	0.14	0.041	0.29	0.23	0.09	12
PL0003R	779.1	1254.7	4.47	1.06	1.01	0.50	1.08	0.76	0.175	0.68	0.72	0.41	32
PL0004R	856.5	822.6	5.12	0.25	0.17	0.30	0.33	0.92	0.114	1.61	0.14	0.12	14
PL0005R	794.0	939.6	5.23	0.24	0.23	0.42	0.31	0.19	0.037	0.54	0.12	0.05	10
RS0005R	-	410.1	5.55	0.60	0.58	0.56	0.23	0.24	0.118	0.23	0.73	0.20	27
RU0001R	840.7	-	5.38	0.51	0.40	-	0.08	-	-	2.81	-	-	19
RU0013R	583.5	-	5.68	0.60	0.56	-	0.13	-	-	0.91	-	-	11
RU0018R	572.2	-	5.37	0.73	0.70	-	0.29	-	-	0.50	-	-	11
RU0020R	950.5	-	5.22	0.58	0.56	-	0.26	-	-	0.47	-	-	12
SE0005R	530.8	-	5.32	0.06	0.06	0.08	0.06	0.06	0.013	0.20	0.03	0.02	4
SE0012R	626.6	-	5.33	0.13	0.11	0.18	0.14	0.31	0.047	0.59	0.12	0.05	7
SE0014R	586.2	-	5.16	0.34	0.14	0.30	0.28	2.45	0.320	4.81	0.20	0.13	26
SE0020R	915.7	-	5.20	0.24	0.16	0.38	0.32	0.93	0.123	1.78	0.11	0.05	15
SI0008R	-	1641.8	5.15	0.19	0.17	0.22	0.22	0.26	0.044	0.42	0.19	0.05	8
SK0002R	1413.0	-	5.63	0.37	0.36	0.34	0.24	0.41	0.028	0.22	0.16	0.05	10
SK0004R	865.9	-	5.43	0.45	0.44	0.41	0.30	0.38	0.032	0.18	6.68	0.06	13
SK0006R	-	-	5.10	0.47	0.45	0.37	0.38	0.41	0.041	0.22	0.31	0.11	15
SK0007R	462.1	-	5.69	0.29	0.28	0.39	0.33	0.26	0.044	0.16	0.33	0.05	13

Table 4: Annual averages of main components in air 2017.

Code	Matrix	SO <sub>2</sub>	NO <sub>2</sub>	SO <sub>4</sub>	XSO <sub>4</sub>	SNO <sub>3</sub>	NO <sub>3</sub>	HNO <sub>3</sub>	SNH <sub>4</sub>	NH <sub>4</sub>	NH <sub>3</sub>
AM0001R	air/aerosol	0.29	0.30	0.53	0.52	0.32	0.23	0.09	2.77	1.07	1.66
AT0002R	air/aerosol	0.64	2.54	-	-	-	-	-	-	-	-
AT0005R	air/aerosol	0.12	0.76	-	-	-	-	-	-	-	-
AT0034G	air/aerosol	-	0.21	-	-	-	-	-	-	-	-
AT0048R	air/aerosol	0.21	0.97	-	-	-	-	-	-	-	-
BE0001R	air/aerosol	-	1.90	-	-	-	-	-	-	-	-
BE0011R	air/aerosol	-	4.48	-	-	-	-	-	-	-	-
BE0013R	air/aerosol	-	3.53	-	-	-	-	-	-	-	-
BE0014R	air/aerosol	-	-	-	-	-	-	-	-	-	2.66
BE0032R	air/aerosol	-	2.99	-	-	-	-	-	-	-	-
BE0035R	air/aerosol	-	3.74	-	-	-	-	-	-	-	-
CH0001G	air/aerosol	0.03	0.06	0.08	-	-	-	-	-	-	-
CH0002R	air/aerosol	0.23	3.53	0.37	0.35	0.83	0.68	0.23	3.31	0.83	2.20
CH0003R	air/aerosol	-	3.45	-	-	-	-	-	-	-	-
CH0004R	air/aerosol	-	1.54	-	-	-	-	-	-	-	-
CH0005R	air/aerosol	0.14	1.06	0.25	0.23	0.54	0.40	0.15	1.65	0.52	0.96
CH0053R	air/aerosol	-	2.42	-	-	-	0.54	0.28	-	0.64	4.54
CY0002R	air/aerosol	0.60	0.89	-	-	-	-	-	-	-	-
CY0002R	pm10	-	-	1.23	1.22	-	0.05	-	-	0.90	-
CZ0003R	air/aerosol	1.09	2.93	0.59	-	0.74	-	-	2.28	-	-
CZ0005R	air/aerosol	0.45	-	0.34	-	0.44	-	-	1.19	-	-
DE0001R	air/aerosol	0.17	2.89	-	-	-	-	-	-	-	1.00
DE0001R	pm25	-	-	-	-	-	0.31	-	-	0.57	-
DE0002R	air/aerosol	0.27	3.59	0.55	0.54	0.80	0.54	0.26	-	-	1.45
DE0002R	pm25	-	-	0.54	0.53	-	0.50	-	-	0.93	-
DE0003R	air/aerosol	0.19	0.63	0.29	0.28	0.50	0.25	0.25	-	-	0.80
DE0003R	pm25	-	-	0.23	0.23	-	0.15	-	-	0.35	-
DE0007R	air/aerosol	0.21	2.26	0.55	0.55	0.62	0.45	0.17	-	-	0.63
DE0007R	pm25	-	-	0.52	0.52	-	0.28	-	-	0.71	-
DE0008R	air/aerosol	0.28	2.10	-	-	-	-	-	-	-	0.36
DE0008R	pm25	-	-	0.30	0.29	-	0.24	-	-	0.48	-
DE0009R	air/aerosol	0.40	2.79	-	-	-	-	-	-	-	0.60
DE0009R	pm25	-	-	0.35	0.35	-	0.34	-	-	0.62	-
DK0003R	air/aerosol	0.08	-	0.50	0.41	0.54	-	-	-	0.70	0.91
DK0005R	air/aerosol	-	2.15	-	-	-	-	-	-	-	-
DK0008R	air/aerosol	0.08	1.25	0.57	0.43	0.51	-	-	-	0.59	0.17
DK0010G	air/aerosol	0.04	-	0.09	0.07	-	0.01	0.01	-	-	0.03
DK0012R	air/aerosol	0.12	2.08	0.58	0.51	0.70	-	-	-	0.88	0.63
DK0031R	air/aerosol	-	1.10	-	-	-	-	-	-	-	-
EE0009R	air/aerosol	0.35	1.83	0.17	0.16	-	0.14	-	-	1.17	-
EE0011R	air/aerosol	0.22	1.62	-	-	-	-	-	-	-	-
ES0001R	air/aerosol	0.15	0.44	-	-	0.35	-	-	1.76	-	1.97
ES0001R	pm10	-	-	0.33	0.30	-	0.17	-	-	0.28	-
ES0001R	pm25	-	-	0.28	0.28	-	0.06	-	-	0.17	-
ES0005R	air/aerosol	0.62	0.83	-	-	0.22	-	-	0.57	-	-
ES0005R	pm10	-	-	0.42	-	-	0.17	-	-	-	-
ES0006R	air/aerosol	0.23	1.02	-	-	0.49	-	-	1.28	-	-
ES0006R	pm10	-	-	0.73	-	-	0.42	-	-	-	-
ES0007R	air/aerosol	0.37	1.24	-	-	-	-	-	1.49	-	1.59
ES0007R	pm10	-	-	0.35	0.31	-	0.21	-	-	0.42	-
ES0007R	pm25	-	-	0.38	0.37	-	0.14	-	-	0.17	-
ES0008R	air/aerosol	0.34	0.78	-	-	0.49	-	-	1.09	-	0.70
ES0008R	pm10	-	-	0.67	0.54	-	0.27	-	-	0.31	-
ES0008R	pm25	-	-	0.42	0.39	-	0.09	-	-	0.16	-
ES0009R	air/aerosol	0.28	0.76	-	-	0.30	-	-	0.94	-	0.82
ES0009R	pm10	-	-	0.25	0.22	-	0.10	-	-	0.20	-
ES0009R	pm25	-	-	0.19	0.19	-	0.05	-	-	0.13	-
ES0010R	air/aerosol	0.20	1.09	-	-	0.64	-	-	1.12	-	-
ES0010R	pm10	-	-	0.57	-	-	0.39	-	-	-	-
ES0011R	air/aerosol	0.12	0.74	-	-	0.32	-	-	1.20	-	-
ES0011R	pm10	-	-	0.42	-	-	0.25	-	-	-	-
ES0012R	air/aerosol	0.31	0.78	-	-	0.52	-	-	1.46	-	-
ES0012R	pm10	-	-	0.49	-	-	0.33	-	-	-	-
ES0013R	air/aerosol	0.33	0.24	-	-	0.30	-	-	1.19	-	-
ES0013R	pm10	-	-	0.29	-	-	0.21	-	-	-	-



Table 4 cont.

Code	Matrix	SO <sub>2</sub>	NO <sub>2</sub>	SO <sub>4</sub>	XSO <sub>4</sub>	SNO <sub>3</sub>	NO <sub>3</sub>	HNO <sub>3</sub>	SNH <sub>4</sub>	NH <sub>4</sub>	NH <sub>3</sub>
ES0014R	air/aerosol	0.34	1.03	-	-	0.47	-	-	3.04	-	3.70
ES0014R	pm10	-	-	0.44	0.41	-	0.22	-	-	0.58	-
ES0014R	pm25	-	-	0.46	0.45	-	0.17	-	-	0.42	-
ES0016R	air/aerosol	0.21	1.19	-	-	0.30	-	-	1.45	-	-
ES0016R	pm10	-	-	0.44	-	-	0.18	-	-	-	-
ES0017R	air/aerosol	0.26	1.33	-	-	0.56	-	-	1.46	-	-
ES0017R	pm10	-	-	0.73	-	-	0.44	-	-	-	-
FI0009R	air/aerosol	0.11	-	0.29	0.24	0.25	0.16	0.09	0.28	0.20	0.08
FI0018R	air/aerosol	0.16	-	0.23	0.22	0.14	0.09	0.06	0.23	0.16	0.08
FI0022R	air/aerosol	0.15	-	0.20	0.19	0.03	0.01	0.02	0.08	0.06	0.02
FI0036R	air/aerosol	0.12	-	0.16	0.14	0.03	0.02	0.01	0.06	0.05	0.01
FI0050R	air/aerosol	0.19	-	0.12	0.11	0.11	0.09	0.04	0.06	0.17	0.06
FI0096G	air/aerosol	-	0.28	-	-	-	-	-	-	-	-
FR0009R	pm25	-	-	0.40	0.39	-	0.29	-	-	0.17	-
FR0013R	pm25	-	-	0.29	0.29	-	0.04	-	-	0.07	-
FR0023R	pm25	-	-	0.31	0.30	-	0.08	-	-	0.09	-
FR0024R	pm25	-	-	0.33	0.32	-	0.36	-	-	0.19	-
FR0025R	pm25	-	-	0.28	0.27	-	0.15	-	-	0.10	-
FR0030R	air/aerosol	0.17	-	-	-	-	-	-	-	-	-
GB0002R	air/aerosol	-	0.61	-	-	-	-	-	-	-	-
GB0013R	air/aerosol	-	0.98	-	-	-	-	-	-	-	-
GB0014R	air/aerosol	-	1.57	-	-	-	-	-	-	-	-
GB0031R	air/aerosol	-	0.90	-	-	-	-	-	-	-	-
GB0033R	air/aerosol	-	1.43	-	-	-	-	-	-	-	-
GB0037R	air/aerosol	1.23	1.94	-	-	-	-	-	-	-	-
GB0038R	air/aerosol	0.53	2.35	-	-	-	-	-	-	-	-
GB0043R	air/aerosol	0.68	0.91	-	-	-	-	-	-	-	-
GB0045R	air/aerosol	0.53	2.70	-	-	-	-	-	-	-	-
GB0048R	air/aerosol	0.05	-	-	-	-	-	0.02	-	-	1.09
GB0048R	pm10	-	-	0.29	0.24	-	0.27	-	-	0.44	-
GB0048R	pm25	-	-	0.26	0.23	-	0.23	-	-	0.42	-
GB0050R	air/aerosol	-	4.60	-	-	-	-	-	-	-	-
GB0051R	air/aerosol	-	2.86	-	-	-	-	-	-	-	-
GB0053R	air/aerosol	-	1.76	-	-	-	-	-	-	-	-
GB1055R	air/aerosol	0.07	-	-	-	-	-	0.04	-	-	5.12
GB1055R	pm10	-	-	0.54	0.48	-	0.76	-	-	0.91	-
GB1055R	pm25	-	-	0.46	0.44	-	0.63	-	-	0.81	-
GE0001R	air/aerosol	0.14	-	0.11	0.01	0.42	0.18	0.24	0.60	-	0.45
GR0001R	air/aerosol	5.05	3.75	-	-	-	-	-	-	-	-
HU0002R	air/aerosol	0.72	1.18	0.98	-	-	0.57	0.24	-	0.84	1.60
HU0003R	air/aerosol	0.41	0.96	0.82	-	-	0.31	0.27	-	0.58	0.75
IE0001R	air/aerosol	0.19	1.79	0.53	0.18	0.23	-	-	0.77	-	-
IE0005R	air/aerosol	-	-	0.26	0.20	-	0.25	-	-	0.47	-
IE0006R	air/aerosol	-	-	0.33	0.17	-	0.12	-	-	0.29	-
IE0008R	air/aerosol	-	-	0.46	0.22	-	0.27	-	-	0.44	-
IS0002R	air/aerosol	0.08	-	0.22	0.14	-	-	-	-	-	-
IS0091R	air/aerosol	-	-	0.53	0.50	-	0.03	-	-	-	-
IT0004R	air/aerosol	0.43	6.46	-	-	-	-	-	-	-	-
IT0004R	pm25	-	-	0.57	0.57	-	0.79	-	-	1.16	-
IT0009R	air/aerosol	0.07	-	-	-	-	-	-	-	-	-
IT0019R	air/aerosol	-	0.62	-	-	-	-	-	-	-	-
IT0019R	pm10	-	-	0.28	0.27	-	0.13	-	-	0.17	-
LT0015R	air/aerosol	0.17	0.93	0.51	0.39	0.53	0.49	-	0.75	0.59	-
LV0010R	air/aerosol	0.17	0.65	0.27	-	0.39	0.06	0.33	0.82	0.61	0.21
LV0010R	pm25	-	-	0.26	0.25	-	0.06	-	-	0.26	-
MD0013R	air/aerosol	0.39	0.27	0.22	0.20	0.29	0.12	0.18	1.04	0.22	0.83
ME0008R	air/aerosol	1.45	1.80	-	-	-	-	-	-	-	-
MK0007R	air/aerosol	0.52	-	-	-	-	-	-	-	-	-
NL0007R	air/aerosol	0.31	4.00	-	-	-	-	-	-	-	-
NL0009R	air/aerosol	0.18	2.53	-	-	-	-	-	-	-	-
NL0010R	air/aerosol	-	5.64	-	-	-	-	-	-	-	-
NL0010R	pm10	-	-	0.69	0.69	-	1.11	-	-	1.26	-
NL0091R	air/aerosol	0.49	4.36	-	-	-	-	-	-	-	-
NL0091R	pm10	-	-	0.58	0.57	-	0.83	-	-	0.77	-
NL0644R	air/aerosol	0.19	5.29	-	-	-	-	-	-	-	-

Table 4 cont.

Code	Matrix	SO <sub>2</sub>	NO <sub>2</sub>	SO <sub>4</sub>	XSO <sub>4</sub>	SNO <sub>3</sub>	NO <sub>3</sub>	HNO <sub>3</sub>	SNH <sub>4</sub>	NH <sub>4</sub>	NH <sub>3</sub>
NO0002R	air/aerosol	0.06	0.27	0.22	0.19	0.15	0.12	0.03	0.27	0.13	0.14
NO0015R	air/aerosol	0.04	0.11	0.12	0.10	0.04	0.02	0.01	0.27	0.03	0.23
NO0039R	air/aerosol	0.06	0.17	0.09	0.08	0.04	0.02	0.01	0.36	0.03	0.32
NO0042G	air/aerosol	0.12	-	0.14	0.12	0.04	0.02	0.02	0.16	0.03	0.13
NO0056R	air/aerosol	0.04	0.64	0.14	0.14	0.09	0.07	0.02	0.20	0.09	0.11
PL0002R	air/aerosol	0.97	2.16	1.20	1.11	0.67	0.57	-	2.44	0.96	-
PL0003R	air/aerosol	1.13	1.17	1.01	0.93	0.75	0.59	-	0.94	0.71	-
PL0004R	air/aerosol	0.70	1.29	1.08	1.00	0.50	0.42	-	1.29	0.75	-
PL0005R	air/aerosol	-	1.51	0.54	-	0.64	0.47	0.15	1.59	0.68	0.91
PL0005R	pm25	-	-	1.33	1.33	-	1.51	-	-	0.60	-
PL0009R	pm25	-	-	1.67	1.66	-	1.38	-	-	1.07	-
RS0005R	air/aerosol	6.17	1.97	-	-	-	-	-	-	-	-
RU0018R	air/aerosol	0.25	-	0.53	-	-	0.36	-	-	0.44	-
SE0005R	air/aerosol	0.04	0.14	0.07	0.06	0.03	0.02	0.01	0.10	0.05	0.05
SE0012R	air/aerosol	0.12	0.42	0.22	0.20	0.19	0.11	0.08	0.30	0.16	0.14
SE0014R	air/aerosol	0.12	0.89	0.36	0.22	0.40	0.30	0.09	0.53	0.28	0.25
SE0020R	air/aerosol	0.15	0.92	0.30	0.25	0.42	0.30	0.12	0.73	0.33	0.40
SI0008R	air/aerosol	0.21	0.54	0.56	0.54	0.23	0.15	0.08	0.76	0.47	0.37
SI0008R	pm25	-	-	0.64	0.63	-	0.05	-	-	0.60	-
SK0002R	air/aerosol	0.29	0.76	0.20	0.12	0.18	0.11	0.07	-	-	-
SK0006R	air/aerosol	0.87	1.69	1.02	0.99	0.65	0.52	0.13	1.05	0.27	0.78

Table 5: Annual averages and data capture of base cations and chloride in aerosols in 2017.

Code	Matrix	Na	capture	Ca	capture	Mg	capture	K	capture	Cl	capture
AM0001R	aerosol	0.07	73	-	-	0.04	76	0.09	71	0.07	72
CH0002R	aerosol	0.18	100	0.37	100	0.04	100	0.18	100	-	-
CH0005R	aerosol	0.11	98	0.24	98	0.03	98	0.07	98	-	-
CY0002R	pm10	0.19	89	0.24	89	0.04	89	0.11	89	0.04	89
CZ0003R	pm10	0.13	99	0.03	97	0.01	99	0.04	88	-	-
DE0002R	aerosol	-	-	-	-	-	-	-	-	0.39	100
DE0002R	pm25	0.13	17	0.03	17	0.01	17	0.07	17	0.10	17
DE0003R	aerosol	-	-	-	-	-	-	-	-	0.10	96
DE0003R	pm25	0.04	17	0.01	17	0.00	17	0.03	17	0.02	17
DE0007R	aerosol	-	-	-	-	-	-	-	-	0.40	100
DE0007R	pm25	0.11	17	0.02	17	0.01	17	0.05	17	0.06	17
DE0008R	pm25	0.07	17	0.01	17	0.00	17	0.04	17	0.04	17
DE0009R	pm25	0.13	17	0.02	17	0.01	17	0.05	17	0.12	17
DK0003R	aerosol	1.06	97	0.10	97	-	-	0.10	96	1.70	98
DK0008R	aerosol	1.82	95	0.14	94	-	-	0.10	95	3.01	96
DK0010G	aerosol	0.11	88	-	-	-	-	-	-	0.15	88
DK0012R	aerosol	0.87	90	0.13	90	-	-	0.10	90	1.31	96
EE0009R	aerosol	0.14	100	0.23	100	0.04	100	0.10	100	0.22	100
ES0001R	pm10	0.27	99	0.33	99	0.05	99	0.11	99	0.19	16
ES0001R	pm25	0.06	16	0.08	16	0.01	16	0.08	16	0.08	16
ES0007R	pm10	0.27	96	0.43	96	0.05	96	0.12	96	0.18	16
ES0007R	pm25	0.16	16	0.45	16	0.05	16	0.14	16	0.08	16
ES0008R	pm10	1.49	97	0.34	97	0.19	97	0.15	97	1.48	16
ES0008R	pm25	0.40	16	0.13	16	0.05	16	0.07	16	0.15	16
ES0009R	pm10	0.19	99	0.39	99	0.04	99	0.05	99	0.11	16
ES0009R	pm25	0.07	16	0.09	16	0.01	16	0.03	16	0.07	16
ES0014R	pm10	0.32	96	0.36	96	0.05	96	0.10	96	0.16	16
ES0014R	pm25	0.11	16	0.18	16	0.02	16	0.08	16	0.07	16
FI0009R	aerosol	0.55	99	0.06	99	0.07	99	0.04	99	0.56	99
FI0018R	aerosol	0.17	99	0.05	99	0.02	99	0.04	99	0.10	99
FI0022R	aerosol	0.12	95	0.01	95	0.02	95	0.02	95	0.05	95
FI0036R	aerosol	0.16	91	0.01	91	0.02	91	0.01	91	0.18	91
FI0050R	aerosol	0.04	94	0.02	94	0.02	94	0.05	94	0.05	94
FR0009R	pm25	0.09	16	0.03	16	0.01	16	0.05	16	0.03	16
FR0013R	pm25	0.07	14	0.02	14	0.01	14	0.04	14	0.03	14
FR0023R	pm25	0.05	16	0.06	16	0.01	16	0.05	16	0.01	16
FR0024R	pm25	0.12	15	0.01	15	0.01	15	0.05	15	0.16	15
FR0025R	pm25	0.07	16	0.02	16	0.01	16	0.05	16	0.04	16
GB0048R	pm10	0.58	54	0.02	54	0.05	54	0.05	54	1.14	72
GB0048R	pm25	0.34	52	0.01	55	0.02	55	0.03	53	0.62	74
GB1055R	pm10	0.66	80	0.53	80	0.35	80	0.07	80	1.36	77
GB1055R	pm25	0.28	81	0.14	81	0.20	81	0.05	81	0.62	77
GE0001R	aerosol	-	-	-	-	-	-	-	-	0.25	23
IE0001R	aerosol	4.12	83	0.30	82	0.44	82	0.19	83	7.57	82
IE0005R	aerosol	0.72	100	0.07	100	0.08	100	0.06	100	1.41	100
IE0006R	aerosol	1.97	98	0.11	98	0.22	98	0.09	98	3.63	98
IE0008R	aerosol	2.89	100	0.16	100	0.34	100	0.14	100	5.13	100
IS0002R	aerosol	1.03	96	0.17	96	0.16	96	0.51	95	1.85	96
IS0091R	aerosol	-	-	-	-	-	-	-	-	9.53	88
IT0004R	pm25	0.07	97	0.02	96	0.00	97	0.26	97	0.08	97
IT0019R	pm10	0.12	41	0.13	41	0.01	39	0.05	41	0.14	41
LT0015R	aerosol	1.39	96	0.17	96	-	-	0.36	96	2.59	96
LV0010R	pm25	0.07	96	0.07	96	0.01	96	0.06	96	0.02	96
MD0013R	aerosol	0.17	59	0.73	58	0.07	59	0.12	59	0.22	59
NL0008R	pm10	0.89	44	0.20	44	0.12	44	-	-	-	-
NL0010R	pm10	-	-	-	-	-	-	-	-	0.74	47
NL0091R	pm10	-	-	-	-	-	-	-	-	1.47	49
NL0644R	pm25	0.27	23	0.07	23	0.03	23	-	-	-	-
NO0002R	aerosol	0.40	94	0.03	94	0.05	94	0.05	94	0.51	94
NO0015R	aerosol	0.26	92	0.02	92	0.03	92	0.02	91	0.39	92
NO0039R	aerosol	0.14	98	0.02	98	0.02	98	0.02	98	0.19	98

Table 5 cont.

Code	Matrix	Na	capture	Ca	capture	Mg	capture	K	capture	Cl	capture
NO0042G	aerosol	0.26	99	0.05	99	0.04	99	0.05	99	0.38	99
NO0056R	aerosol	0.11	97	0.02	97	0.01	97	0.05	96	0.10	98
PL0002R	aerosol	-	-	-	-	-	-	-	-	0.67	98
PL0003R	aerosol	-	-	-	-	-	-	-	-	0.56	100
PL0004R	aerosol	-	-	-	-	-	-	-	-	0.82	99
PL0005R	pm25	0.12	85	0.04	85	0.01	85	0.07	85	0.13	85
PL0009R	pm25	0.09	82	0.18	82	0.01	82	0.08	82	0.12	82
SE0005R	aerosol	0.11	99	0.02	99	0.02	99	0.02	99	0.14	99
SE0012R	aerosol	0.28	98	0.05	97	0.04	98	0.04	98	0.24	98
SE0014R	aerosol	1.73	99	0.10	99	0.22	99	0.11	99	2.73	99
SE0020R	aerosol	0.58	99	0.08	98	0.08	99	0.07	98	0.68	98
SI0008R	aerosol	0.11	99	0.13	99	0.04	99	0.11	99	0.06	99
SI0008R	pm25	0.04	48	0.02	48	0.01	48	0.11	48	0.01	48
SK0002R	aerosol	-	-	-	-	-	-	-	-	0.17	98
SK0006R	aerosol	0.19	98	0.37	99	0.11	98	0.02	98	1.54	99

Table 6: Annual averages and data capture of particulate matter in 2017.

Code	PM <sub>10</sub> capture		PM <sub>10</sub> -PM <sub>2.5</sub> capture		PM <sub>2.5</sub> capture		PM <sub>1</sub> capture	
	PM <sub>10</sub>	capture	PM <sub>10</sub> -PM <sub>2.5</sub>	capture	PM <sub>2.5</sub>	capture	PM <sub>1</sub>	capture
AT0002R	17.62	98	-	-	13.46	93	9.92	32
AT0005R	6.36	33	-	-	-	-	-	-
AT0048R	6.26	31	-	-	-	-	-	-
CH0001G	2.72	100	-	-	-	-	-	-
CH0002R	11.79	100	-	-	8.37	31	-	-
CH0003R	11.31	100	-	-	-	-	-	-
CH0004R	6.38	100	-	-	-	-	-	-
CH0005R	6.59	100	-	-	4.68	24	-	-
CH0053R	9.79	98	-	-	-	-	-	-
CY0002R	22.29	97	-	-	10.39	93	-	-
CZ0003R	16.42	93	-	-	13.30	50	-	-
CZ0005R	7.16	100	-	-	-	-	-	-
DE0001R	15.61	91	-	-	-	-	-	-
DE0002R	13.17	100	-	-	10.14	100	6.16	100
DE0003R	8.38	96	-	-	6.25	93	-	-
DE0007R	13.67	100	-	-	9.67	100	-	-
DE0008R	9.72	100	-	-	7.14	100	-	-
DE0009R	13.47	100	-	-	-	-	-	-
EE0009R	5.12	96	-	-	4.03	98	-	-
EE0011R	-	-	-	-	3.63	94	-	-
ES0001R	12.36	99	-	-	5.60	92	-	-
ES0005R	8.55	73	-	-	-	-	-	-
ES0006R	16.11	90	-	-	6.08	92	-	-
ES0007R	14.19	96	-	-	10.37	39	-	-
ES0008R	15.01	97	-	-	6.71	96	-	-
ES0009R	9.06	98	-	-	3.76	94	-	-
ES0010R	15.82	95	-	-	7.55	85	-	-
ES0011R	17.21	92	-	-	7.10	88	-	-
ES0012R	14.74	92	-	-	5.49	95	-	-
ES0013R	9.90	94	-	-	5.10	89	-	-
ES0014R	12.02	96	-	-	7.09	94	-	-
ES0016R	9.63	84	-	-	9.67	79	-	-
ES0017R	18.41	92	-	-	-	-	-	-
FR0009R	10.50	98	-	-	6.16	98	-	-
FR0010R	9.46	99	-	-	7.35	98	-	-
FR0013R	16.73	24	-	-	10.59	86	-	-
FR0014R	13.04	96	-	-	-	-	-	-
FR0015R	13.90	95	-	-	9.18	86	-	-
FR0018R	11.65	92	-	-	7.42	88	-	-
FR0023R	8.51	99	-	-	5.62	98	-	-
FR0024R	14.38	90	-	-	8.79	91	-	-
FR0025R	-	-	-	-	7.04	97	-	-
GB0006R	0.46	94	-	-	-	-	-	-
GB0043R	2.90	95	-	-	-	-	-	-
GB0048R	1.22	97	-	-	1.58	94	-	-
GB1055R	3.03	98	-	-	1.73	98	-	-
GR0001R	31.19	67	-	-	14.71	67	-	-
HU0002R	15.46	67	-	-	13.93	87	-	-
HU0003R	16.80	71	-	-	15.96	79	-	-
IT0019R	11.35	75	-	-	7.30	72	-	-
LV0010R	11.08	91	-	-	7.82	88	-	-
MK0007R	9.66	91	-	-	-	-	-	-
NL0007R	18.19	97	-	-	-	-	-	-
NL0009R	15.98	98	-	-	8.70	95	-	-
NL0010R	19.48	98	-	-	10.24	96	-	-
NL0091R	16.23	99	-	-	9.79	97	-	-
NL0644R	15.35	97	-	-	9.87	91	-	-
NO0002R	3.92	58	1.74	90	1.99	94	-	-
NO0039R	2.14	94	0.73	94	1.45	98	-	-
NO0056R	3.87	90	1.56	85	2.36	92	-	-

*Table 6 cont.*

Code	PM <sub>10</sub>	capture	PM <sub>10</sub> - PM <sub>2.5</sub>	capture	PM <sub>2.5</sub>	capture	PM <sub>1</sub>	capture
PL0005R	15.59	97	-	-	11.78	96	-	-
PL0009R	16.03	87	-	-	11.72	92	-	-
RS0005R	14.31	69	-	-	-	-	-	-
SE0005R	2.71	98	-	-	1.33	92	-	-
SE0011R	12.43	72	-	-	6.15	67	-	-
SE0012R	7.40	93	-	-	3.79	92	-	-
SE0014R	11.87	94	-	-	3.29	97	-	-
SI0008R	12.24	97	-	-	10.00	98	-	-

Table 7: Annual averages and data capture for carbonaceous compounds in 2017.

Code	Matrix	OC capture		EC capture		TC capture	
CH0002R	pm25	1.58	10	0.39	10	1.98	10
CH0005R	pm25	0.93	8	0.25	8	1.18	8
CY0002R	pm10	1.47	89	0.24	89	1.71	89
CZ0003R	pm25	2.93	52	0.57	51	3.50	52
DE0002R	pm25	2.24	17	0.25	17	2.49	17
DE0003R	pm25	1.08	17	0.10	17	1.19	17
DE0007R	pm25	2.42	17	0.27	17	2.68	17
DE0008R	pm25	1.48	17	0.17	17	1.65	17
DE0009R	pm25	1.83	17	0.22	17	2.05	17
DE0044R	pm10	3.34	100	0.42	100	3.76	100
DE0044R	pm25	2.90	100	0.37	100	3.27	100
ES0001R	pm25	2.14	17	0.15	17	-	-
ES0007R	pm25	2.93	17	0.31	17	-	-
ES0009R	pm25	1.79	17	0.13	17	-	-
ES0012R	pm25	2.12	17	0.17	17	-	-
ES0014R	pm25	1.91	16	0.14	16	-	-
ES1778R	pm1	1.52	27	0.16	27	1.67	27
ES1778R	pm10	1.73	28	0.18	28	1.91	28
ES1778R	pm25	1.42	21	0.17	21	1.59	21
FR0009R	pm25	1.89	16	0.17	16	2.06	16
FR0013R	pm25	1.70	15	0.13	15	1.83	15
FR0019R	aerosol	0.48	64	0.03	64	0.51	64
FR0023R	pm25	2.01	17	0.15	17	2.16	17
FR0024R	pm25	2.08	15	0.32	15	2.40	15
FR0025R	pm25	1.95	16	0.16	16	2.11	16
IT0004R	pm25	5.53	95	1.11	95	6.64	95
NL0644R	pm10	2.42	24	0.44	24	2.86	24
NO0002R	pm10	0.72	94	0.05	94	0.78	94
NO0002R	pm10_pm25	0.25	79	-	-	0.26	78
NO0002R	pm25	0.52	94	0.05	94	0.58	94
NO0039R	pm10	0.66	98	0.03	98	0.69	98
NO0039R	pm10_pm25	0.21	77	-	-	0.21	77
NO0039R	pm25	0.50	98	0.04	98	0.53	98
NO0042G	pm10	0.12	73	0.01	73	0.13	73
NO0056R	pm10	1.15	94	0.10	94	1.25	94
NO0056R	pm10_pm25	0.50	79	-	-	0.51	79
NO0056R	pm25	0.73	94	0.09	94	0.83	94
PL0005R	pm25	2.94	97	0.40	97	3.35	97
PL0009R	pm25	3.95	47	0.44	47	4.38	47
SI0008R	pm25	2.66	48	0.16	48	-	-

Table 8: Units used for precipitation components.

Precipitation components	Units for W. mean, Min., Max.	Units for depositions
Amount	mm	mm
SO <sub>4</sub> <sup>-</sup>	mg S/l	mg S/m <sup>2</sup>
NO <sub>3</sub> <sup>-</sup>	mg N/l	mg N/m <sup>2</sup>
Cl <sup>-</sup>	mg Cl/l	mg Cl/m <sup>2</sup>
NH <sub>4</sub> <sup>+</sup>	mg N/l	mg N/m <sup>2</sup>
H <sup>+</sup>	µe H <sup>+</sup> /l	µe H <sup>+</sup> /m <sup>2</sup>
pH	pH-units	µe H <sup>+</sup> /m <sup>2</sup>
Na <sup>+</sup>	mg Na/l	mg Na/m <sup>2</sup>
Mg <sup>2+</sup>	mg Mg/l	mg Mg/m <sup>2</sup>
K <sup>+</sup>	mg K/l	mg K/m <sup>2</sup>
Ca <sup>2+</sup>	mg Ca/l	mg Ca/m <sup>2</sup>

Table 9: Units used for air components.

Air components	Units for arithmetic and geometric mean values, arithmetic standard deviations, Min., Max, percentiles.
SO <sub>2</sub>	µg S/m <sup>3</sup>
NO <sub>2</sub> , NO	µg N/m <sup>3</sup>
CO	ppb
HNO <sub>3</sub>	µg N/m <sup>3</sup>
NH <sub>3</sub>	µg N/m <sup>3</sup>
SO <sub>4</sub> <sup>2-</sup>	µg S/m <sup>3</sup>
NO <sub>3</sub> <sup>-</sup>	µg N/m <sup>3</sup>
NH <sub>4</sub> <sup>+</sup>	µg N/m <sup>3</sup>
H <sup>+</sup>	Ne H <sup>+</sup> /m <sup>3</sup>
SPM, PM	µg/m <sup>3</sup>
HNO <sub>3</sub> + NO <sub>3</sub> <sup>-</sup>	µg N/m <sup>3</sup>
NH <sub>3</sub> + NH <sub>4</sub> <sup>+</sup>	µg N/m <sup>3</sup>
Ca <sup>++</sup>	µg/m <sup>3</sup>
Cl <sup>-</sup>	µg/m <sup>3</sup>
Mg <sup>++</sup>	µg/m <sup>3</sup>
K <sup>+</sup>	µg/m <sup>3</sup>
Na <sup>+</sup>	µg/m <sup>3</sup>
OC	µg C/m <sup>3</sup>
EC	µg C/m <sup>3</sup>

## 9. Update

The data compiled in this report represent the best data available at present. If further errors are detected, the data will be corrected in the database. It is important that users make sure that they have access to the most recent version of the database. For the data presented here the latest alteration was in August 2019.

Scientific use of the EMEP data should be based on fresh copies of the data. Copies can be requested from the CCC (e-mail: [annehj@nilu.no](mailto:annehj@nilu.no)) or downloaded from the internet at <http://ebas.nilu.no> and <http://www.nilu.no/projects/ccc/>. Information about the EMEP network and measurement data can also be found at <http://www.emep.int>.



## 10. References

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## 11. Acknowledgements

A large number of co-workers in participating countries have been involved in the many steps of collection of EMEP's measurement data. A list of participating institutes can be seen below. The staff at CCC wishes to express their gratitude and appreciation for continued good co-operation and efforts.

Closer at home the secretarial work, and far beyond, has been performed by Berit Modalen. Rita Larsen Våler, Ann Mari Fjæraa and Mona Waagsbø have been very helpful with data flow and database maintenance.

## 12. List of participating institutions

Armenia	Environmental Impact Monitoring Center
Austria	Umweltbundesamt
Belarus	Institute for Problems of Natural Resources and Ecology
Belgium	CELINE - IRCEL
Commission of the European Communities	Joint Research Center. Ispra Establishment
Croatia	Meteorological and Hydrological Service of Croatia
Cyprus	Ministry of Labour and Social Insurance
Czech Republic	Czech Hydrometeorological Institute
Denmark	Department of Environmental Science, Aarhus University
Estonia	Estonian Environmental Research Laboratory Ltd.
Finland	Finnish Meteorological Institute (FMI)
France	I' Ecole des Mines de Douai
Georgia	National Environmental Agency
Germany	Umweltbundesamt Leibniz Institute for Tropospheric Research
Greece	Ministry of Environmental Physical Planning and Public Works University of Crete
Hungary	Meteorological Service, Institute for Atmospheric Physics, Dep. for Air Chemistry
Iceland	The Icelandic Meteorological Office
Ireland	Meteorological Service H.Q. Environmental Protection Agency (EPA)
Italy	CNR – ISAC Arpa Umbria
Kazakhstan	Hydrometeorological Monitoring
Latvia	Latvian Environment, Geology and Meteorology Agency
Lithuania	Center for Physical Sciences and Technology
Macedonia	Ministry of Environment and Physical Planning
Malta	Department of Geoscience, University of Malta
Moldova	State Hydrometeorological Service
Montenegro	Hydrometeorological Institute of Montenegro
The Netherlands	National Institute for Public Health and Environmental Protection (RIVM)
Norway	NILU - Norwegian Institute for Air Research
Poland	Institute of Meteorology and Water Management Institute of Environmental Protection
Portugal	Instituto de Meteorologica
Romania	National Environmental Protection Agency
Russian Federation	Institute of Global Climate and Ecology
Serbia	Federal Hydrometeorological Institute
Slovakia	Slovak Hydrometeorological Institute
Slovenia	Slovenian Environment Agency
Spain	Dirección General de Calidad y Evaluación Ambiental
Sweden	Swedish Environmental Research Institute (IVL)
Switzerland	Swiss Federal Laboratory of Testing Materials and Research (EMPA)
United Kingdom	Ricardo-AEA

# **Annex 1**

## **Maps over Europe**



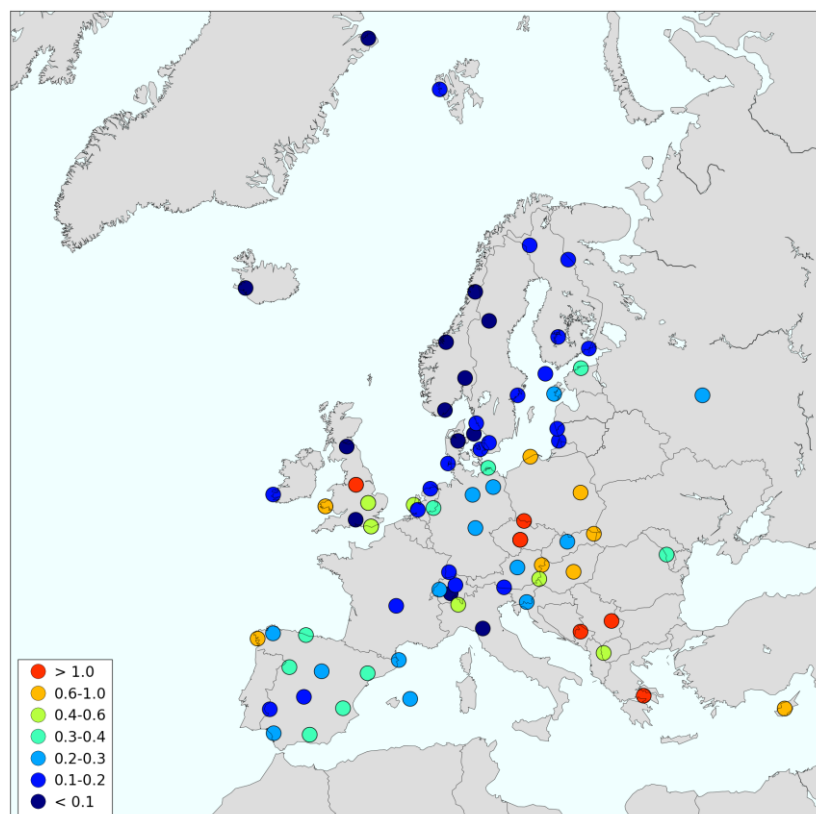


Figure 1.1: Geographical distribution of sulphur dioxide 2017. Unit:  $\mu\text{g S/m}^3$ .

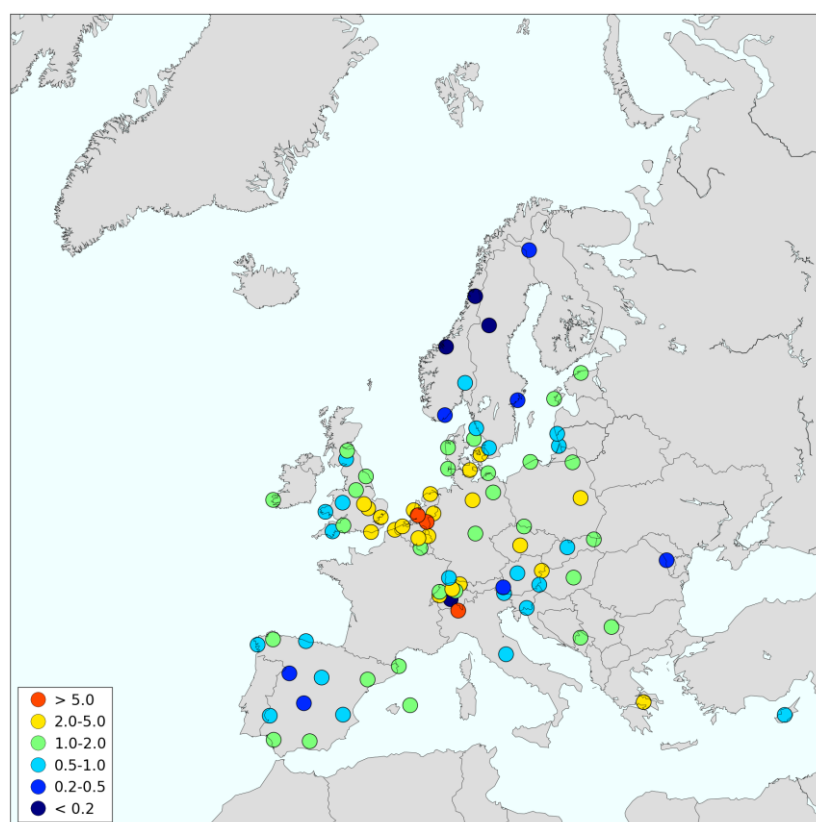


Figure 1.2: Geographical distribution of nitrogen dioxide 2017. Unit:  $\mu\text{g N/m}^3$ .

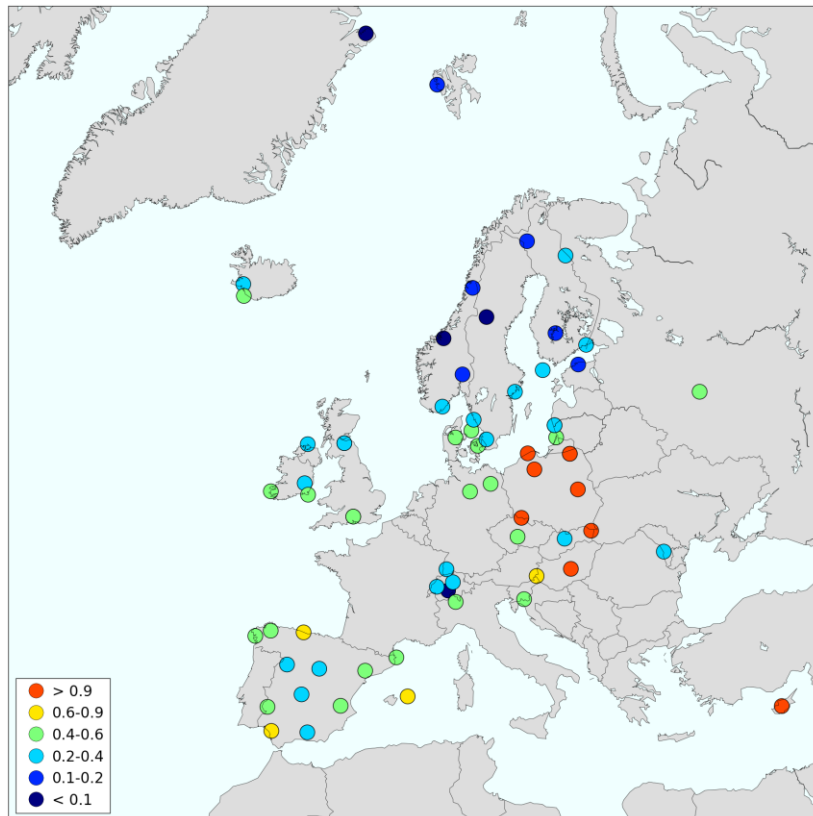


Figure 1.3: Geographical distribution of sulphate in aerosols 2017. Unit:  $\mu\text{g S/m}^3$ .

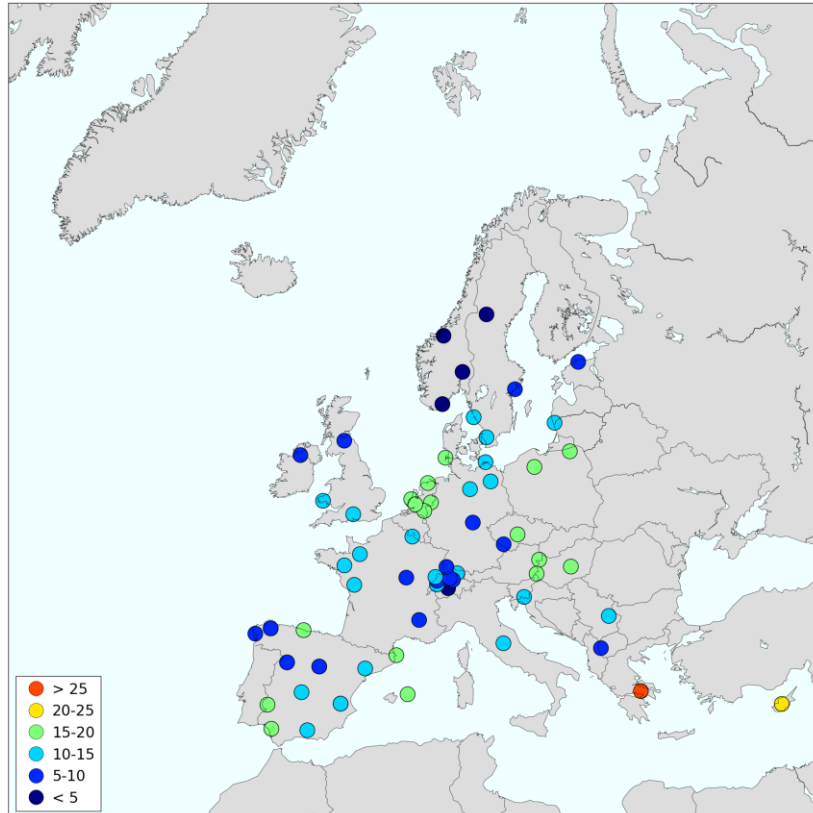


Figure 1.4: Geographical distribution of  $\text{PM}_{10}$  2017. Unit:  $\mu\text{g/m}^3$ .

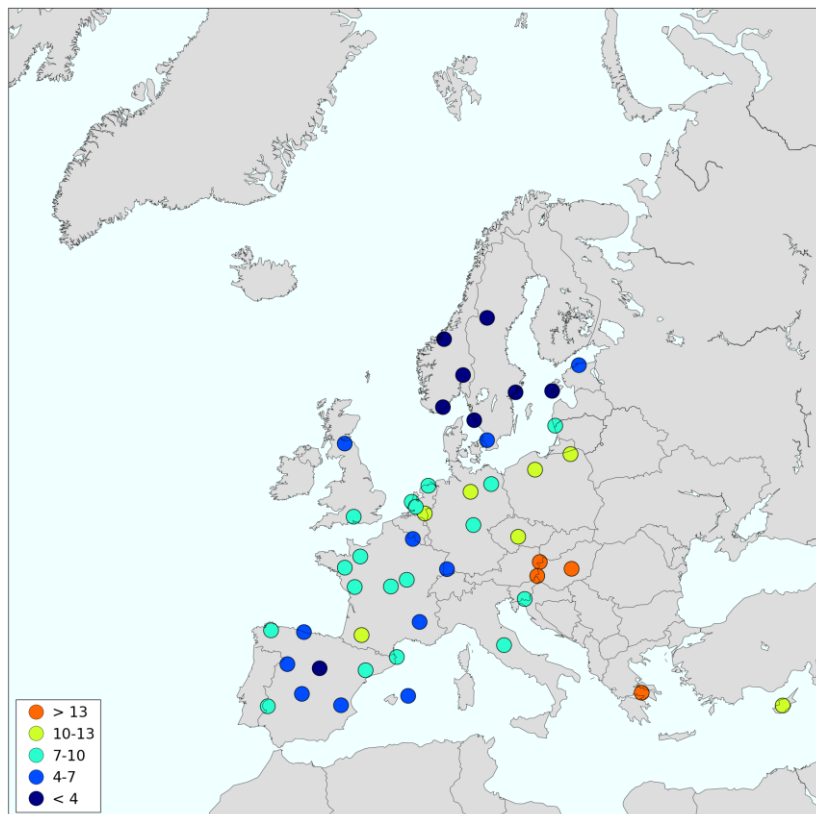


Figure 1.5: Geographical distribution of  $PM_{2.5}$  2017. Unit:  $\mu\text{g}/\text{m}^3$ .

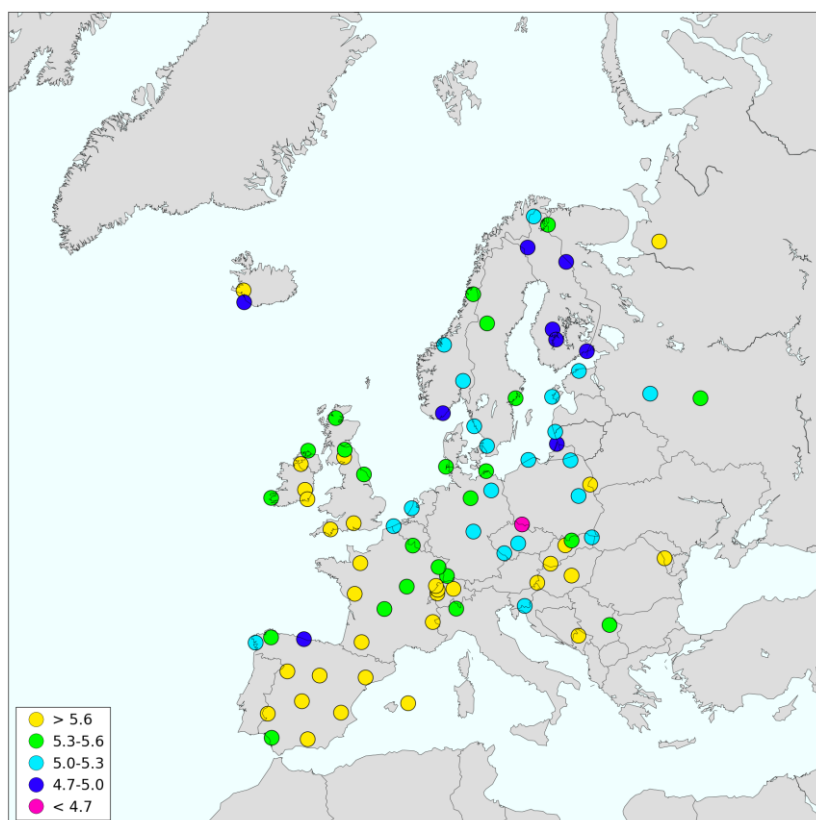


Figure 1.6: Geographical distribution of pH in precipitation 2017. Unit: pH units.

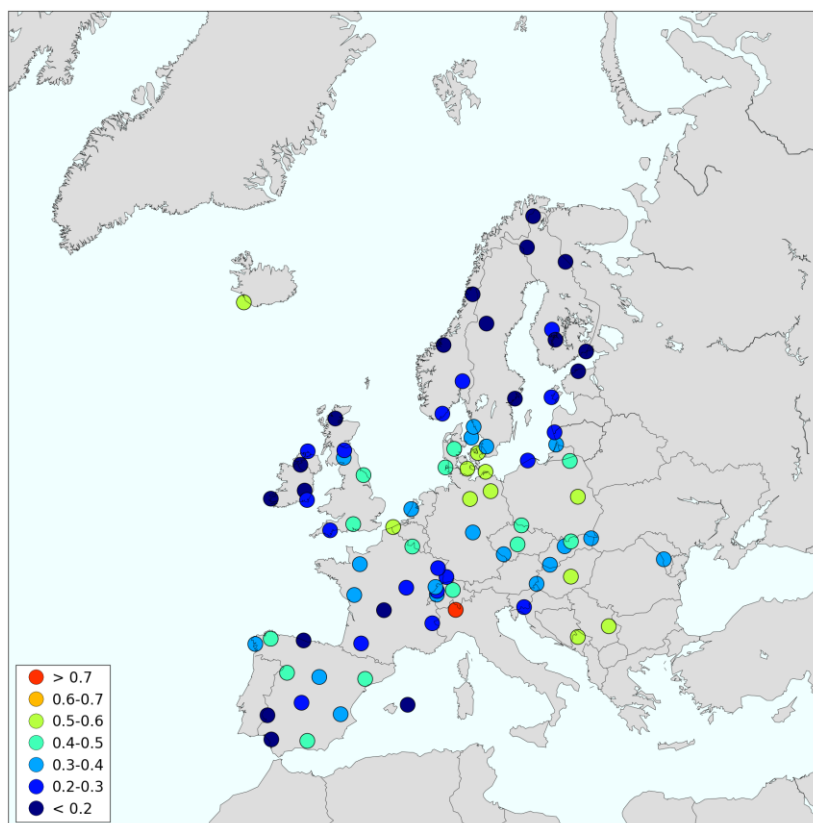


Figure 1.7: Geographical distribution of ammonium in precipitation 2017.  
Unit: mg N/l.

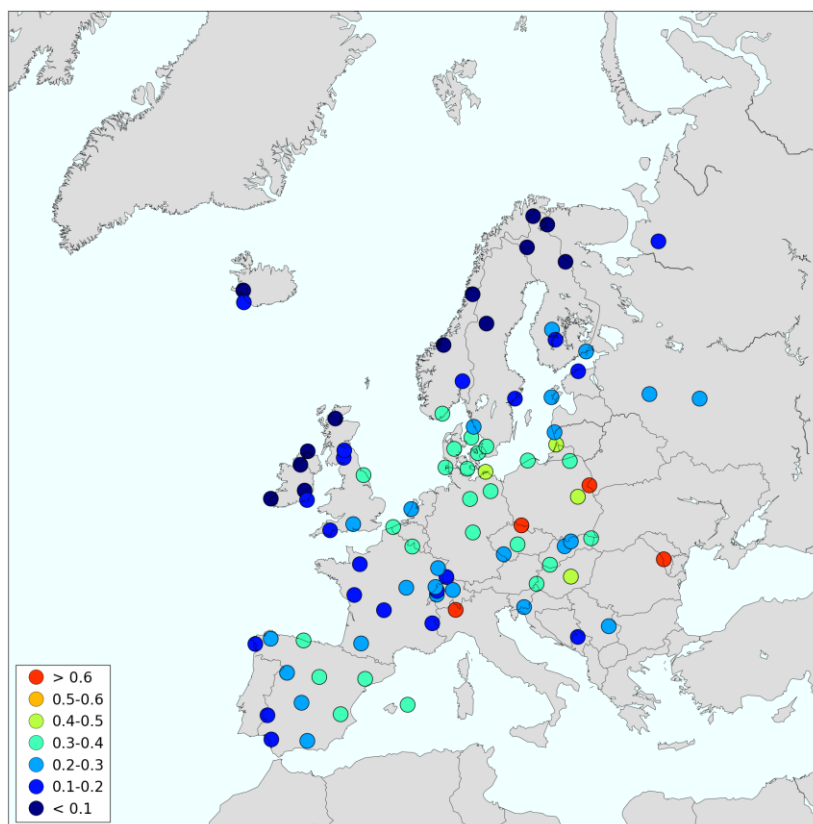


Figure 1.8: Geographical distribution of nitrate in precipitation 2017.  
Unit: mg N/l.



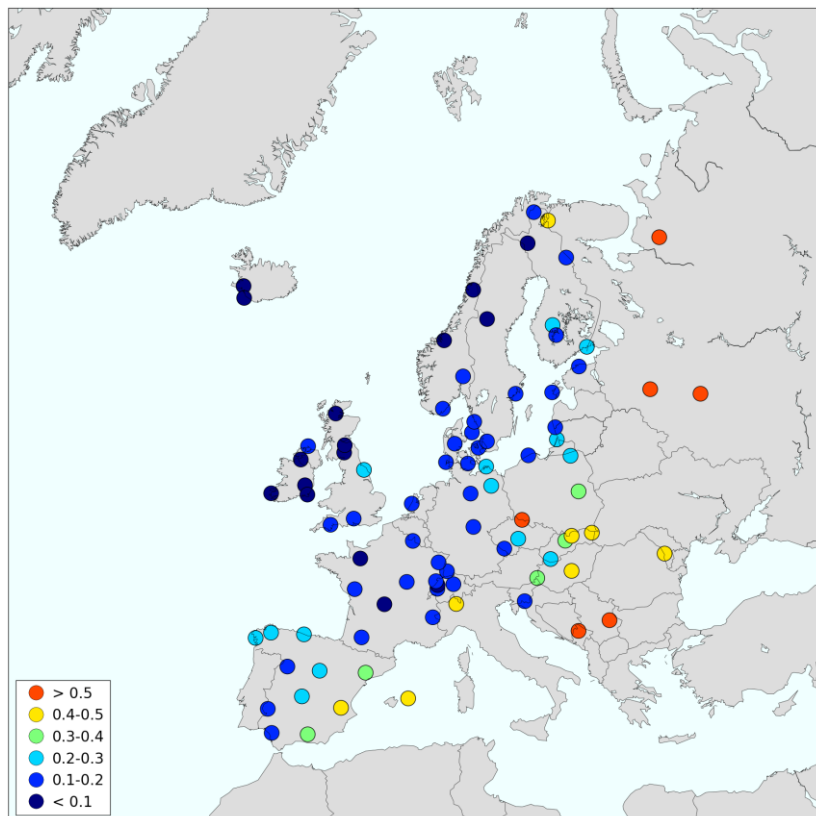


Figure 1.9: Geographical distribution of sulphate in precipitation 2017 (corrected for sea spray). Unit: mg S/l.

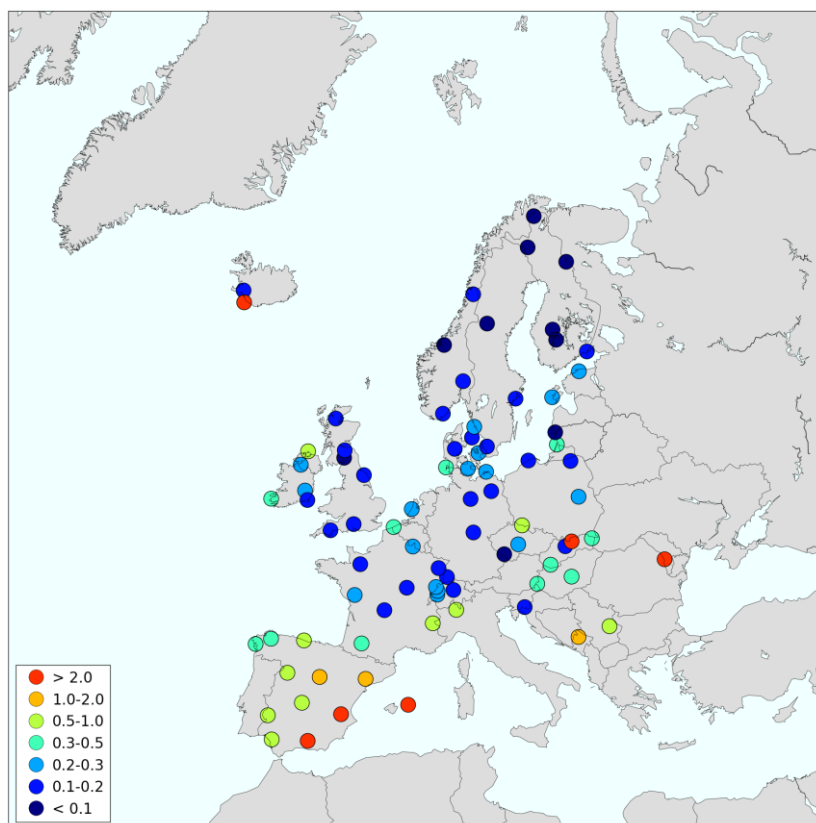


Figure 1.10: Geographical distribution of calcium in precipitation 2017. Unit: mg/l.

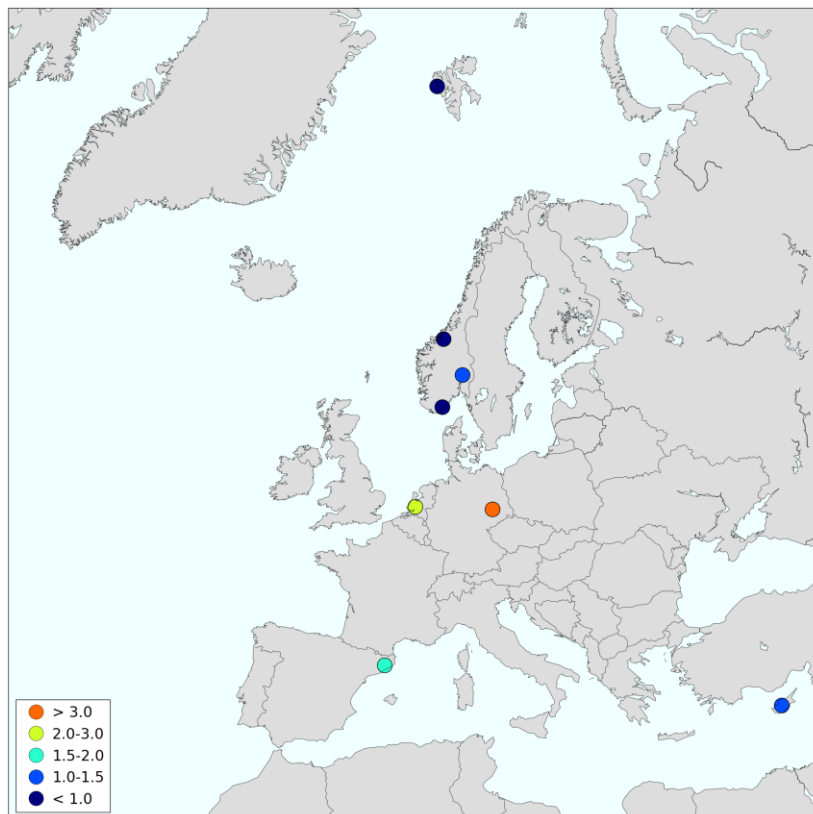


Figure 1.11: Geographical distribution of OC in PM<sub>10</sub> 2017. Unit:  $\mu\text{g}/\text{m}^3$ .

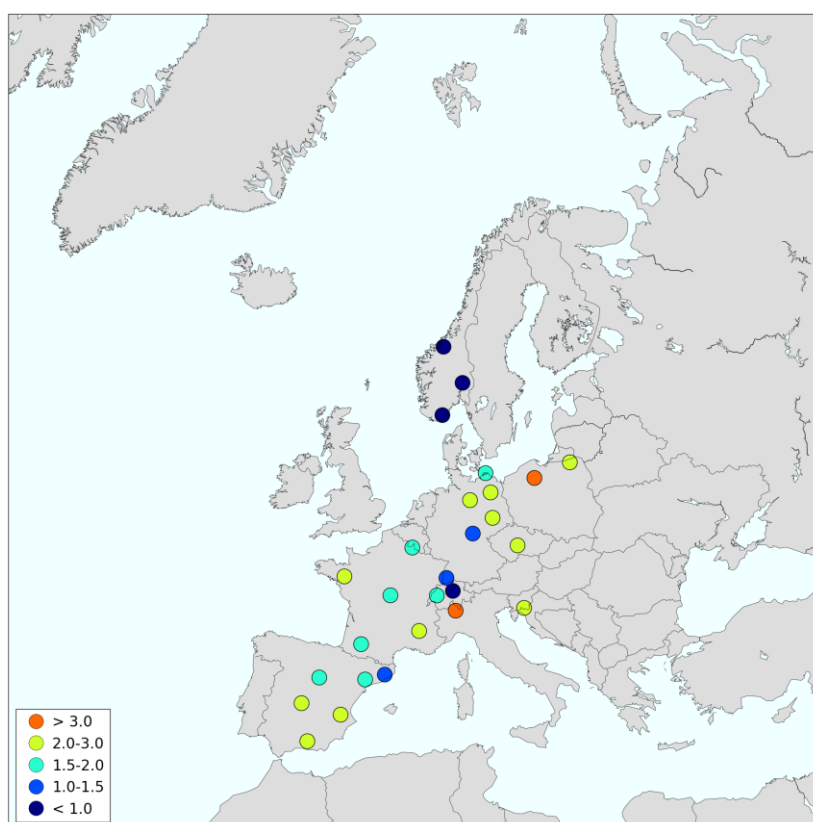


Figure 1.12: Geographical distribution of OC in PM<sub>2.5</sub> 2017. Unit:  $\mu\text{g}/\text{m}^3$ .

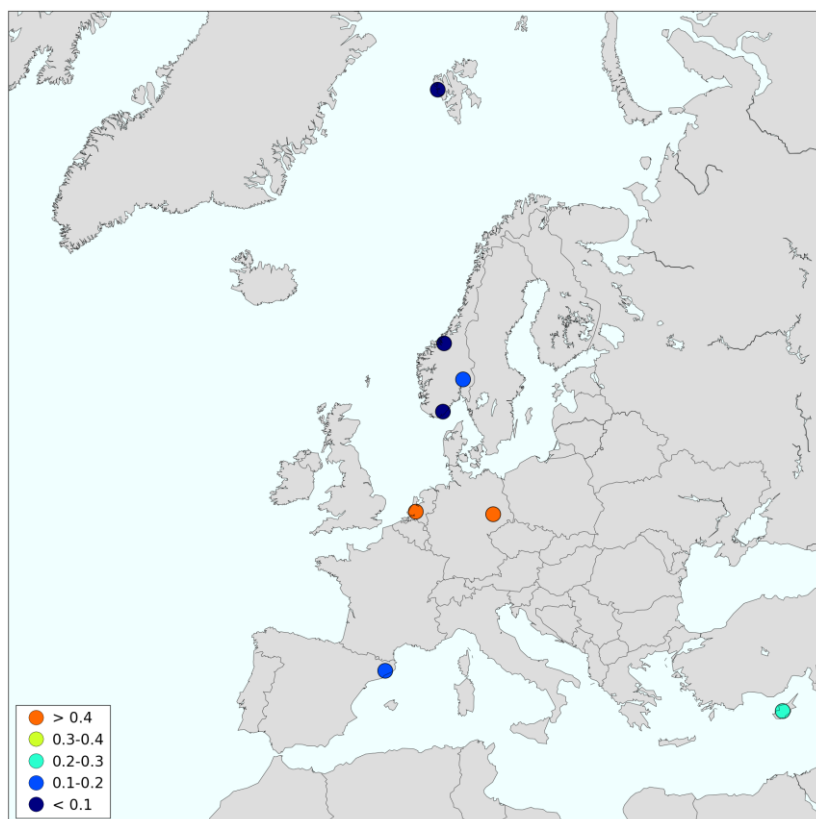


Figure 1.13: Geographical distribution of EC in  $PM_{10}$  2017. Unit:  $\mu\text{g}/\text{m}^3$ .

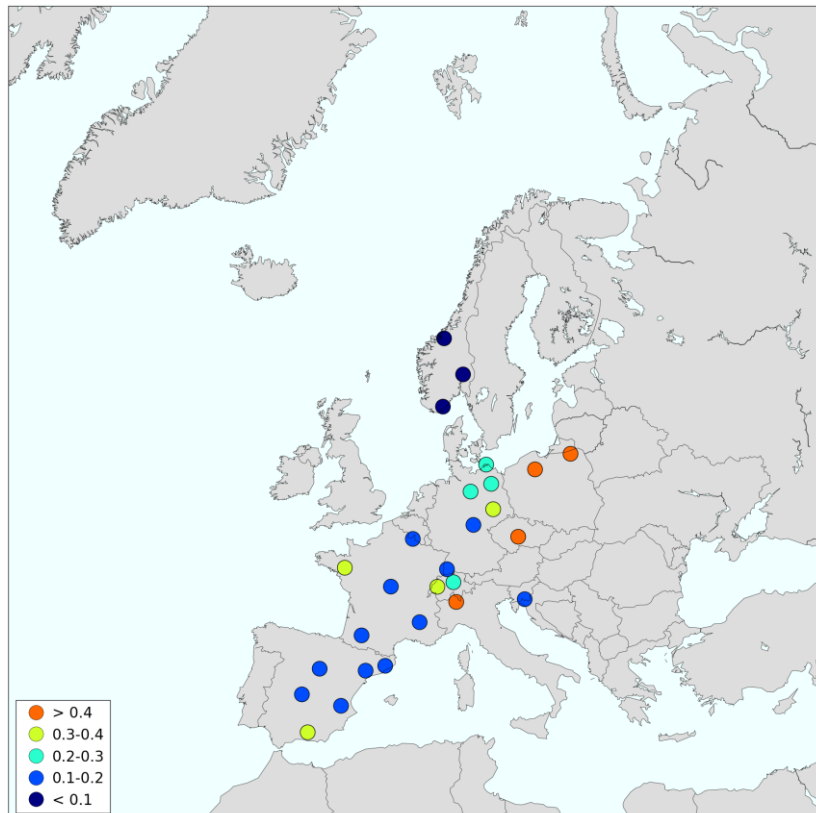


Figure 1.14: Geographical distribution of EC in  $PM_{2.5}$  2017. Unit:  $\mu\text{g}/\text{m}^3$ .



## **Annex 2**

### **Annual statistics on precipitation data**



**AM0001R Amberd**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	3.11	0.26	24.57	706.7	100.0	0	40
Cl-	precip	0.69	0.07	5.16	156.3	100.0	0	40
K+	precip	0.32	0.01	1.77	73.0	97.8	0	39
Mg++	precip	0.50	0.02	23.00	114.5	100.0	0	40
NH4+	precip	0.82	0.01	2.78	187.5	99.0	0	39
NO3-	precip	0.60	0.07	3.22	137.3	100.0	0	40
Na+	precip	0.39	0.04	1.88	88.0	97.2	0	39
Precip off	precip	-	0.00	18.50	227.4	76.2	0	78
SO4--	precip	1.01	0.08	6.11	230.4	100.0	0	40
SO4-- corr	precip	0.98	0.07	6.02	223.3	100.0	0	40
cond	precip	28.41	5.50	153.40	6459.9	100.0	0	40
pH	precip	6.14	5.27	7.47	165.4	100.0	0	40

**BE0014R Koksijde**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.48	0.16	1.53	348.5	99.8	0	24
Cl-	precip	-	-	-	-	0.0	0	0
K+	precip	0.11	-0.05	0.33	82.6	99.8	0	24
Mg++	precip	0.38	0.11	1.06	273.3	99.8	0	24
NH4+	precip	0.57	0.14	1.43	411.8	99.8	0	24
NO3-	precip	0.30	0.16	0.87	219.4	99.8	0	24
Na+	precip	2.93	0.40	8.47	2119.4	99.8	0	24
Precip	precip	-	0.43	104.37	724.1	98.4	0	26
Precip off	precip	-	0.40	104.80	764.8	100.0	0	27
SO4--	precip	-	-	-	-	0.0	0	0
SO4-- corr	precip	-	-	-	-	0.0	0	0
cond	precip	31.83	13.00	67.00	23046.3	98.6	0	22
pH	precip	5.24	4.40	7.80	4199.9	98.6	0	22

**BY0004R Vysokoe**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	1.04	0.42	3.45	737.3	37.6	0	41
Cl-	precip	0.91	0.48	2.27	640.6	12.8	0	13
K+	precip	0.37	0.09	1.22	260.4	37.6	0	41
Mg++	precip	0.50	0.24	1.42	351.6	37.6	0	41
NH4+	precip	0.69	0.11	2.52	489.4	44.3	0	50
NO3-	precip	0.79	0.00	4.28	560.3	60.2	0	69
Na+	precip	0.65	0.15	2.20	461.9	37.6	0	41
Precip	precip	-	0.00	31.10	707.7	99.5	0	364
SO4--	precip	1.15	0.00	6.42	815.5	58.7	0	66
SO4-- corr	precip	1.14	-0.09	6.38	808.0	33.8	0	35
cond	precip	32.94	7.00	71.00	23314.6	62.4	0	70
pH	precip	6.09	5.10	7.00	572.0	68.3	0	80

**CH0002R Payerne**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.22	0.03	1.57	152.4	99.6	0	39
Cl-	precip	0.19	0.04	1.76	128.9	99.6	0	39
K+	precip	0.04	0.01	0.60	27.3	99.6	0	39
Mg++	precip	0.02	0.01	0.14	16.8	99.6	0	39
NH4+	precip	0.37	0.10	1.10	258.6	99.6	0	39
NO3-	precip	0.21	0.06	0.76	144.7	99.6	0	39
Na+	precip	0.11	0.02	1.11	78.3	99.6	0	39
Precip	precip	-	0.00	88.80	693.4	100.0	0	53
SO4--	precip	0.11	0.03	0.41	79.1	99.6	0	39
SO4-- corr	precip	0.10	0.03	0.39	72.5	99.6	0	39
cond	precip	6.54	3.00	34.34	4537.3	99.8	0	41
pH	precip	5.87	5.30	7.14	941.5	99.8	0	41

**CH0004R Chaumont**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.21	0.03	2.57	193.4	98.6	0	41
Cl-	precip	0.17	0.03	1.34	152.8	98.6	0	41
K+	precip	0.04	0.01	0.42	37.3	98.6	0	41
Mg++	precip	0.02	0.01	0.16	21.6	98.6	0	41
NH4+	precip	0.24	0.05	0.94	217.2	98.6	0	41
NO3-	precip	0.17	0.07	0.61	159.7	98.6	0	41
Na+	precip	0.10	0.01	0.78	91.0	98.6	0	41
Precip	precip	-	0.00	69.20	917.3	100.0	0	53
SO4--	precip	0.10	0.03	0.44	91.5	98.6	0	41
SO4-- corr	precip	0.09	0.02	0.42	83.9	98.6	0	41
cond	precip	5.58	2.86	159.60	5114.0	98.7	0	42
pH	precip	5.62	5.17	8.11	2196.8	98.7	0	42

**CH0005R Rigi**  
 January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.15	0.03	0.83	201.7	99.9	0	47
Cl-	precip	0.09	0.02	0.70	124.2	99.9	0	47
K+	precip	0.02	0.00	0.24	31.6	99.9	0	47
Mg++	precip	0.01	0.00	0.07	20.2	99.9	0	47
NH4+	precip	0.41	0.04	1.08	546.1	99.9	0	47
NO3-	precip	0.23	0.06	0.63	304.2	99.9	0	47
Na+	precip	0.06	0.01	0.40	76.3	99.9	0	47
Precip	precip	-	0.00	119.60	1348.0	100.0	0	53
SO4--	precip	0.12	0.02	0.31	159.4	99.9	0	47
SO4-- corr	precip	0.11	0.02	0.30	153.0	99.9	0	47
cond	precip	6.25	2.51	14.91	8419.6	99.9	0	47
pH	precip	5.67	4.86	6.64	2900.5	99.9	0	47

**CZ0003R Kosetice (NOAK)**  
 January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.21	0.01	1.41	154.6	80.7	5	66
Cl-	precip	0.21	0.00	2.53	152.2	80.7	4	66
K+	precip	0.05	0.00	2.64	38.5	80.7	6	66
Mg++	precip	0.03	0.00	0.17	21.7	80.7	0	66
NH4+	precip	0.48	0.01	4.95	358.3	80.7	1	66
NO3-	precip	0.35	0.00	1.31	260.9	80.7	2	66
Na+	precip	0.12	0.01	1.35	86.0	80.7	1	66
Precip	precip	-	0.00	41.90	739.9	100.0	0	366
SO4--	precip	0.27	0.01	0.92	196.6	80.7	2	66
SO4-- corr	precip	0.25	0.01	0.91	188.6	80.7	2	66
cond	precip	9.90	3.11	52.30	7323.9	80.7	0	66
pH	precip	5.15	4.44	6.58	5274.8	80.7	0	66

**CZ0005R Churanov**  
 January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.09	0.01	0.51	90.0	86.9	3	37
Cl-	precip	0.19	0.03	1.21	187.5	86.9	0	37
K+	precip	0.06	0.00	0.31	58.9	86.9	1	37
Mg++	precip	0.02	0.01	0.10	21.9	86.9	0	37
NH4+	precip	0.36	0.07	1.04	349.6	86.9	0	37
NO3-	precip	0.30	0.01	0.70	288.8	86.9	0	37
Na+	precip	0.10	0.01	0.65	101.3	86.9	0	37
Precip	precip	-	0.10	76.30	965.5	100.0	0	53
SO4--	precip	0.18	0.01	0.49	169.9	86.9	1	37
SO4-- corr	precip	0.17	0.00	0.49	160.9	86.9	1	37
cond	precip	8.65	4.51	20.95	8347.2	86.9	0	37
pH	precip	5.12	4.58	6.16	7243.6	86.9	0	37

**DE0001R Westerland**  
 January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.37	0.08	2.10	338.8	99.6	0	46
Cl-	precip	11.34	0.52	65.20	10343.7	99.6	0	46
K+	precip	0.26	0.04	1.34	237.8	99.6	0	46
Mg++	precip	0.78	0.04	4.45	712.9	99.6	0	46
NH4+	precip	0.50	0.10	2.72	452.1	99.6	0	46
NO3-	precip	0.34	0.10	1.50	310.0	99.6	0	46
Na+	precip	6.48	0.24	37.18	5905.9	99.6	0	46
Precip	precip	-	0.00	72.30	912.0	100.0	0	53
SO4--	precip	0.70	0.23	3.21	634.1	99.6	0	46
SO4-- corr	precip	0.15	-0.01	0.61	139.9	99.6	0	46
cond	precip	50.87	9.70	258.40	46394.1	99.6	0	46
pH	precip	5.49	4.63	6.69	2924.6	99.6	0	46

**DE0002R Waldhof**  
 January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.10	0.03	1.04	90.7	98.5	0	144
Cl-	precip	0.59	0.02	24.97	511.4	98.5	0	144
K+	precip	0.06	0.02	0.50	52.6	98.5	0	144
Mg++	precip	0.05	0.00	1.55	44.5	98.5	0	144
NH4+	precip	0.57	0.08	2.28	492.2	98.5	0	144
NO3-	precip	0.33	0.06	1.70	284.3	98.5	0	144
Na+	precip	0.33	0.01	13.49	286.5	98.5	0	144
Precip	precip	-	0.00	44.30	863.5	100.0	0	366
SO4--	precip	0.22	0.03	1.23	191.8	98.5	0	144
SO4-- corr	precip	0.19	0.03	1.09	167.8	98.5	0	144
cond	precip	10.94	2.90	97.85	9444.1	98.5	0	144
pH	precip	5.32	4.12	6.66	4168.0	98.5	0	144



**DE0003R Schauinsland**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.10	0.02	1.37	163.2	99.5	0	157
Cl-	precip	0.28	0.02	8.24	449.1	99.5	0	157
K+	precip	0.03	0.00	0.37	49.4	99.5	0	157
Mg++	precip	0.03	0.00	0.53	47.3	99.5	0	157
NH4+	precip	0.22	-0.15	2.61	351.6	99.5	0	157
NO3-	precip	0.20	0.03	2.35	316.7	99.5	0	157
Na+	precip	0.17	0.01	4.72	268.2	99.5	0	157
Precip	precip	-	0.00	77.60	1623.7	97.1	0	355
SO4--	precip	0.12	0.01	0.96	197.8	99.5	0	157
SO4-- corr	precip	0.11	0.01	0.91	175.4	99.5	0	157
cond	precip	6.57	2.05	47.40	10675.2	99.5	0	157
pH	precip	5.35	4.37	6.63	7200.4	99.5	0	157

**DE0007R Neuglobsow**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.17	0.04	1.82	140.2	98.4	0	147
Cl-	precip	0.57	0.03	17.89	463.1	98.4	0	147
K+	precip	0.09	0.00	0.84	70.8	98.4	0	147
Mg++	precip	0.05	0.00	1.16	44.5	98.4	0	147
NH4+	precip	0.53	0.05	5.81	428.8	98.4	0	147
NO3-	precip	0.35	0.03	2.39	282.3	98.4	0	147
Na+	precip	0.33	0.01	9.68	263.5	98.4	0	147
Precip	precip	-	0.00	60.40	810.6	100.0	0	366
SO4--	precip	0.25	0.04	1.29	201.8	98.4	0	147
SO4-- corr	precip	0.22	0.04	1.27	179.8	98.4	0	147
cond	precip	11.31	4.05	73.15	9168.4	98.4	0	147
pH	precip	5.29	4.37	6.79	4166.3	98.4	0	147

**DE0008R Schmücke**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.12	0.03	1.13	153.5	100.0	0	50
Cl-	precip	0.41	0.03	1.48	523.5	100.0	0	50
K+	precip	0.05	0.02	0.19	58.6	100.0	0	49
Mg++	precip	0.04	0.01	0.11	50.3	100.0	0	50
NH4+	precip	0.38	0.04	1.97	476.4	100.0	0	50
NO3-	precip	0.35	0.11	1.43	438.0	100.0	0	50
Na+	precip	0.30	0.02	0.92	376.3	100.0	0	50
Precip	precip	-	0.00	78.90	1268.8	98.1	0	52
SO4--	precip	0.21	0.06	0.93	272.3	100.0	0	50
SO4-- corr	precip	0.19	0.06	0.89	244.0	100.0	0	50
cond	precip	10.02	3.70	27.00	12719.3	100.0	0	50
pH	precip	5.16	4.51	6.57	8760.0	100.0	0	50

**DE0009R Zingst**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.24	0.07	1.16	150.5	99.8	0	48
Cl-	precip	1.71	0.18	10.80	1093.2	99.8	0	48
K+	precip	0.13	0.03	1.37	84.5	99.8	0	48
Mg++	precip	0.13	0.03	0.77	83.2	99.8	0	48
NH4+	precip	0.58	0.08	2.76	372.7	99.8	0	48
NO3-	precip	0.40	0.11	1.61	256.0	99.8	0	48
Na+	precip	0.97	0.09	5.72	619.5	99.8	0	48
Precip	precip	-	0.00	51.20	639.7	100.0	0	53
SO4--	precip	0.30	0.11	1.19	189.6	99.8	0	48
SO4-- corr	precip	0.22	0.05	0.95	137.7	99.8	0	48
cond	precip	16.04	8.00	49.20	10261.3	99.7	0	47
pH	precip	5.45	4.35	7.06	2272.9	99.7	0	47

**DK0005R Keldsnor**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.22	0.06	0.68	126.0	98.4	0	20
Cl-	precip	2.16	0.25	12.09	1236.5	93.9	0	18
K+	precip	0.15	0.05	0.95	84.6	94.9	0	18
Mg++	precip	0.15	0.04	0.80	85.7	98.4	1	20
NH4+	precip	0.58	0.14	1.52	333.4	88.9	0	17
NO3-	precip	0.36	0.15	0.97	208.7	93.1	0	19
Precip	precip	-	5.03	66.44	572.0	86.8	0	21
SO4--	precip	0.29	0.13	0.79	165.3	98.4	0	20
SO4-- corr	precip	0.19	0.07	0.75	107.6	98.4	0	20

**DK0008R Anholt**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.14	0.04	0.63	90.6	100.0	1	23
Cl-	precip	3.03	0.78	24.70	1918.9	95.0	0	22
K+	precip	0.09	0.04	0.54	57.9	100.0	1	23
Mg++	precip	0.23	0.06	1.54	142.8	100.0	0	23
NH4+	precip	0.35	0.14	1.28	218.7	100.0	0	23
NO3-	precip	0.32	0.10	1.30	200.1	100.0	3	23
Precip	precip	-	2.31	120.60	632.8	95.3	0	23
SO4--	precip	0.29	0.14	1.28	183.3	100.0	0	23
SO4-- corr	precip	0.16	0.04	0.86	99.0	100.0	0	23

**DK0012R Risoe**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.22	0.07	0.99	142.1	99.7	0	22
Cl-	precip	1.46	0.22	5.23	934.7	99.7	0	22
K+	precip	0.23	0.06	0.78	146.3	95.9	2	21
Mg++	precip	0.11	0.04	0.34	73.2	95.3	0	20
NH4+	precip	0.52	0.14	2.69	335.7	99.7	0	22
NO3-	precip	0.34	0.17	1.34	221.3	99.7	0	22
Precip	precip	-	0.01	93.50	641.6	99.5	0	24
SO4--	precip	0.24	0.07	1.02	154.3	99.7	0	22
SO4-- corr	precip	0.17	0.05	1.01	110.8	99.7	0	22

**DK0022R Sepstrup Sande**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.13	0.05	0.31	117.0	100.0	2	24
Cl-	precip	10.62	0.24	86.83	9374.7	98.9	0	23
K+	precip	0.09	0.03	0.20	77.2	100.0	1	24
Mg++	precip	0.23	0.03	0.59	204.1	100.0	2	24
NH4+	precip	0.42	0.22	1.07	372.6	98.5	0	23
NO3-	precip	0.30	0.14	1.11	266.4	100.0	0	24
Precip	precip	-	3.10	83.22	882.6	99.5	0	24
SO4--	precip	0.30	0.11	0.71	261.0	100.0	0	24
SO4-- corr	precip	0.15	0.04	0.68	128.9	100.0	0	24

**EE0009R Lahemaa**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.26	0.02	3.70	204.7	100.0	1	150
Cl-	precip	0.37	0.03	4.90	288.0	100.0	1	150
K+	precip	0.05	0.01	2.50	41.1	100.0	43	150
Mg++	precip	0.04	0.01	0.42	34.7	100.0	24	150
NH4+	precip	0.11	0.01	3.80	89.3	100.0	38	150
NO3-	precip	0.17	0.01	3.10	131.8	100.0	15	150
Na+	precip	0.27	0.01	6.20	210.0	100.0	3	150
Precip	precip	-	0.00	47.77	777.8	99.9	215	365
SO4--	precip	0.17	0.01	2.10	129.0	100.0	2	150
SO4-- corr	precip	0.15	0.01	2.05	114.0	100.0	2	150
cond	precip	7.32	3.00	60.10	5695.4	100.0	0	149
pH	precip	5.18	4.30	6.80	5192.0	99.7	0	146

**EE0011R Vilsandi**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.24	0.10	1.10	165.1	100.0	0	22
Cl-	precip	1.21	0.45	4.30	833.5	100.0	0	22
K+	precip	0.17	0.04	1.10	114.6	100.0	0	22
Mg++	precip	0.12	0.05	0.44	83.0	100.0	0	22
NH4+	precip	0.24	0.01	1.50	165.4	100.0	1	22
NO3-	precip	0.24	0.03	1.90	164.6	100.0	0	22
Na+	precip	0.68	0.21	2.70	463.9	100.0	0	22
Precip	precip	-	0.00	90.50	686.2	99.5	30	53
SO4--	precip	0.20	0.08	1.34	135.1	100.0	0	22
SO4-- corr	precip	0.14	0.04	1.11	96.1	100.0	0	22
cond	precip	12.73	6.00	60.00	8735.0	100.0	0	22
pH	precip	5.18	4.37	6.20	4576.8	100.0	0	22

**ES0001R San Pablo de los Montes**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.95	0.12	23.30	388.5	97.8	0	47
Cl-	precip	0.75	0.16	17.14	306.9	99.0	8	52
K+	precip	0.16	0.03	5.80	66.3	97.8	6	47
Mg++	precip	0.11	0.03	1.90	44.0	97.8	0	47
NH4+	precip	0.26	0.02	1.19	107.1	99.0	6	52
NO3-	precip	0.22	0.04	3.34	91.8	99.0	7	52
Na+	precip	0.49	0.06	12.90	199.4	97.8	3	47
Precip	precip	-	0.00	22.96	408.1	100.0	0	366
SO4--	precip	0.27	0.04	4.92	109.1	99.0	8	52
SO4-- corr	precip	0.23	0.01	4.29	94.0	99.0	8	52
cond	precip	12.27	3.20	169.00	5008.7	100.0	0	61
pH	precip	5.80	4.96	7.67	650.1	100.0	0	61

**ES0005R Noia**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.35	0.02	3.83	457.3	99.0	5	102
Cl-	precip	4.75	0.16	60.84	6274.8	99.8	1	112
K+	precip	0.24	0.03	5.00	317.9	99.0	9	102
Mg++	precip	0.36	0.02	2.30	474.8	99.0	0	102
NH4+	precip	0.33	0.02	9.25	440.0	99.6	34	108
NO3-	precip	0.17	0.04	3.60	228.2	99.8	23	112
Na+	precip	2.76	0.06	18.90	3638.5	99.0	1	102
Precip	precip	-	0.00	45.60	1320.4	100.0	0	366
SO4--	precip	0.45	0.04	3.55	597.6	99.8	1	112
SO4-- corr	precip	0.22	-0.01	3.27	288.7	99.8	1	112
cond	precip	27.71	5.03	573.00	36583.3	100.0	0	116
pH	precip	5.20	4.48	7.94	8357.0	100.0	0	116

**ES0006R Mahón**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	4.30	0.85	22.40	1902.1	98.9	0	52
Cl-	precip	37.18	9.60	546.16	16442.5	99.9	0	56
K+	precip	0.99	0.28	11.50	437.8	98.9	0	52
Mg++	precip	2.77	0.90	34.00	1226.6	98.9	0	52
NH4+	precip	0.20	0.02	0.94	87.8	99.9	15	56
NO3-	precip	0.37	0.11	3.20	165.6	99.9	0	56
Na+	precip	20.01	5.81	264.00	8848.7	98.9	0	52
Precip	precip	-	0.00	62.20	442.3	100.0	0	366
SO4--	precip	2.13	0.72	25.89	939.9	99.9	0	56
SO4-- corr	precip	0.43	-0.10	7.31	189.1	99.9	0	56
cond	precip	161.12	46.70	1829.50	71261.4	99.7	0	56
pH	precip	6.16	4.88	7.47	306.1	100.0	0	57

**ES0007R Viznar**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	2.35	0.67	34.30	853.1	98.5	0	32
Cl-	precip	0.76	0.16	9.23	277.3	99.7	4	37
K+	precip	0.34	0.05	8.33	122.9	98.5	0	32
Mg++	precip	0.29	0.14	3.00	106.0	98.5	0	32
NH4+	precip	0.41	0.07	3.51	150.5	99.0	0	34
NO3-	precip	0.29	0.07	4.29	103.5	99.7	0	37
Na+	precip	0.42	0.06	6.20	152.5	98.5	3	32
Precip	precip	-	0.00	60.20	363.2	100.0	0	366
SO4--	precip	0.44	0.04	7.39	158.3	99.7	1	37
SO4-- corr	precip	0.40	0.03	7.08	144.8	99.7	1	37
cond	precip	22.37	7.10	379.00	8124.1	100.0	0	40
pH	precip	6.49	6.23	7.65	118.8	100.0	0	40

**ES0008R Niembro**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.60	0.19	5.80	750.9	99.9	0	144
Cl-	precip	5.94	0.16	49.81	7407.0	100.0	1	148
K+	precip	0.21	0.03	2.61	262.1	99.9	4	144
Mg++	precip	0.47	0.06	3.30	586.4	99.9	0	144
NH4+	precip	0.19	0.02	3.57	242.2	100.0	19	147
NO3-	precip	0.40	0.04	15.38	493.3	99.1	2	147
Na+	precip	3.34	0.14	26.00	4166.2	99.9	0	144
Precip	precip	-	0.00	54.51	1246.8	100.0	0	366
SO4--	precip	0.53	0.15	3.26	662.0	100.0	0	148
SO4-- corr	precip	0.25	-0.33	3.05	312.3	100.0	0	148
cond	precip	35.42	5.20	385.00	44155.0	99.1	0	147
pH	precip	4.78	3.06	6.98	20652.1	99.1	0	147

**ES0009R Campisabalos**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	1.60	0.20	11.70	538.5	99.4	0	58
Cl-	precip	0.40	0.16	3.94	133.1	99.8	10	62
K+	precip	0.10	0.03	0.41	32.4	99.4	12	58
Mg++	precip	0.12	0.02	0.68	40.9	99.4	0	58
NH4+	precip	0.37	0.09	1.47	126.0	99.5	0	59
NO3-	precip	0.33	0.07	1.90	109.5	99.8	0	62
Na+	precip	0.24	0.06	1.55	82.4	99.4	5	58
Precip	precip	-	0.00	30.70	336.7	100.0	0	366
SO4--	precip	0.26	0.04	2.39	88.1	99.8	8	62
SO4-- corr	precip	0.24	0.02	2.26	80.6	99.8	8	62
cond	precip	14.62	3.90	95.50	4923.5	100.0	0	65
pH	precip	6.28	5.64	7.51	177.8	100.0	0	65

**ES0011R Barcarrota**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.74	0.11	3.98	274.5	100.0	0	43
Cl-	precip	1.09	0.31	5.67	402.5	100.0	0	43
K+	precip	0.13	0.03	1.10	47.9	100.0	2	43
Mg++	precip	0.13	0.04	0.80	47.7	100.0	0	43
NH4+	precip	0.12	0.02	2.61	45.1	100.0	8	43
NO3-	precip	0.15	0.04	1.97	55.1	100.0	5	43
Na+	precip	0.62	0.16	3.60	228.0	100.0	0	43
Precip	precip	-	0.00	42.51	369.9	100.0	0	366
SO4--	precip	0.22	0.04	1.11	80.3	100.0	2	43
SO4-- corr	precip	0.17	0.02	0.99	61.3	100.0	2	43
cond	precip	11.02	3.40	53.20	4076.3	100.0	0	43
pH	precip	5.75	5.34	7.11	655.1	100.0	0	43

**ES0012R Zarra**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	2.36	0.22	26.00	700.4	98.7	0	38
Cl-	precip	0.83	0.16	11.83	247.4	99.7	2	46
K+	precip	0.12	0.03	1.01	35.3	98.7	5	38
Mg++	precip	0.19	0.03	1.50	57.7	98.7	0	38
NH4+	precip	0.39	0.07	3.98	117.0	99.0	0	40
NO3-	precip	0.38	0.07	7.66	111.9	99.7	0	46
Na+	precip	0.49	0.06	6.10	145.5	98.7	1	38
Precip	precip	-	0.00	46.14	297.3	100.0	0	366
SO4--	precip	0.45	0.10	8.83	133.7	99.7	0	46
SO4-- corr	precip	0.41	0.09	8.28	120.7	99.7	0	46
cond	precip	20.73	4.10	287.70	6161.4	100.0	0	50
pH	precip	6.09	5.55	7.77	243.3	100.0	0	50

**ES0013R Penausende**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.65	0.10	7.90	199.5	98.2	0	60
Cl-	precip	0.77	0.16	3.47	234.7	99.8	5	71
K+	precip	0.24	0.03	9.10	73.6	98.2	5	60
Mg++	precip	0.12	0.03	1.07	37.0	98.2	0	60
NH4+	precip	0.46	0.02	8.79	139.9	99.3	1	67
NO3-	precip	0.22	0.04	2.85	66.5	99.8	16	71
Na+	precip	0.41	0.10	1.98	124.6	98.2	0	60
Precip	precip	-	0.00	29.77	304.9	100.0	0	366
SO4--	precip	0.23	0.04	2.91	70.5	99.8	10	71
SO4-- corr	precip	0.20	-0.02	2.75	59.5	99.8	10	71
cond	precip	13.05	3.90	213.40	3978.3	100.0	0	74
pH	precip	5.85	5.29	7.68	433.1	100.0	0	74

**ES0014R Els Torns**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	1.18	0.30	8.20	383.9	99.6	0	38
Cl-	precip	0.51	0.16	3.04	166.5	100.0	4	40
K+	precip	0.08	0.03	0.33	26.7	99.6	1	38
Mg++	precip	0.11	0.04	0.60	35.5	99.6	0	38
NH4+	precip	0.48	0.20	2.74	156.1	100.0	0	40
NO3-	precip	0.32	0.04	1.84	104.3	100.0	1	40
Na+	precip	0.33	0.06	1.29	107.9	99.6	1	38
Precip	precip	-	0.00	43.26	325.5	100.0	0	366
SO4--	precip	0.34	0.12	2.33	109.4	100.0	0	40
SO4-- corr	precip	0.31	0.10	2.19	100.1	100.0	0	40
cond	precip	14.30	6.00	92.40	4655.4	100.0	0	40
pH	precip	6.29	6.08	7.54	166.1	100.0	0	40

**ES0016R O Saviaño**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.41	0.02	2.91	506.0	98.9	3	90
Cl-	precip	1.96	0.16	18.78	2387.5	99.6	1	100
K+	precip	0.25	0.03	9.70	301.9	98.9	8	90
Mg++	precip	0.18	0.04	1.30	214.6	98.9	0	90
NH4+	precip	0.42	0.02	5.63	514.7	99.4	5	97
NO3-	precip	0.22	0.04	5.65	263.2	99.6	15	100
Na+	precip	1.07	0.12	10.60	1302.2	98.9	0	90
Precip	precip	-	0.00	92.60	1221.2	100.0	0	366
SO4--	precip	0.33	0.04	6.11	405.6	99.6	3	100
SO4-- corr	precip	0.24	0.02	5.91	294.1	99.6	3	100
cond	precip	16.38	3.70	178.00	20005.7	100.0	0	111
pH	precip	5.56	4.69	6.95	3340.2	100.0	0	111

**ES0017R Doñana**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.67	0.10	15.00	274.7	98.3	0	31
Cl-	precip	2.75	0.41	15.64	1122.6	98.6	0	32
K+	precip	0.10	0.03	0.47	38.8	98.3	3	31
Mg++	precip	0.22	0.04	0.95	89.7	98.3	0	31
NH4+	precip	0.08	0.02	0.81	34.0	98.6	5	32
NO3-	precip	0.10	0.04	0.84	42.7	98.6	10	32
Na+	precip	1.55	0.25	8.44	631.5	98.3	0	31
Precip	precip	-	0.00	47.40	407.7	100.0	0	366
SO4--	precip	0.31	0.04	5.15	125.1	98.6	1	32
SO4-- corr	precip	0.18	0.01	4.94	71.7	98.6	1	32
cond	precip	17.13	4.30	103.40	6984.5	100.0	0	44
pH	precip	5.42	4.64	7.73	1550.5	100.0	0	44

**FI0004R Ähtäri**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.08	0.00	0.27	11.8	100.0	0	23
Cl-	precip	0.24	0.09	5.21	35.7	100.0	0	23
K+	precip	0.12	0.02	0.89	17.2	100.0	0	23
Mg++	precip	0.03	0.00	0.18	4.6	100.0	0	23
NH4+	precip	0.21	0.03	1.02	30.0	100.0	0	23
NO3-	precip	0.24	0.08	0.70	35.5	100.0	0	23
Na+	precip	0.14	0.04	3.64	20.2	100.0	0	23
Precip	precip	-	0.00	22.90	145.8	44.5	0	24
SO4--	precip	0.23	0.04	1.57	33.1	100.0	0	23
SO4-- corr	precip	0.22	0.00	1.55	31.4	100.0	0	23
cond	precip	10.79	3.96	45.40	1573.5	100.0	0	23
pH	precip	4.79	4.10	5.94	2384.9	100.0	0	23

**FI0008R Kevo**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.06	0.02	0.15	29.1	100.0	0	13
Cl-	precip	0.58	0.08	2.23	287.9	95.6	0	12
K+	precip	0.07	0.03	0.15	34.0	95.6	0	12
Mg++	precip	0.05	0.01	0.23	27.1	100.0	0	13
NH4+	precip	0.08	0.00	0.41	40.2	100.0	0	13
NO3-	precip	0.06	0.01	0.11	27.8	100.0	0	13
Na+	precip	0.35	0.04	1.43	172.9	95.6	0	12
Precip	precip	-	7.50	157.90	499.7	100.0	0	13
SO4--	precip	0.14	0.06	0.50	69.4	100.0	0	13
SO4-- corr	precip	0.12	0.02	0.38	57.5	100.0	0	13
cond	precip	6.85	4.33	20.60	3421.4	95.6	0	12
pH	precip	5.14	4.64	6.04	3613.5	100.0	0	13

**FI0018R Virolahti III**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.12	0.02	1.03	101.4	100.0	0	49
Cl-	precip	0.36	0.07	2.99	301.1	100.0	0	49
K+	precip	0.05	0.01	0.63	39.9	100.0	0	49
Mg++	precip	0.04	0.01	0.23	33.0	100.0	0	49
NH4+	precip	0.19	0.00	2.43	164.0	100.0	0	49
NO3-	precip	0.23	0.03	1.97	198.3	100.0	0	49
Na+	precip	0.20	0.02	1.87	172.7	100.0	0	49
Precip	precip	-	0.00	68.20	845.9	98.1	0	52
SO4--	precip	0.25	0.08	1.67	215.4	100.0	0	49
SO4-- corr	precip	0.24	0.06	1.63	201.0	100.0	0	49
cond	precip	10.79	4.33	58.60	9123.4	100.0	0	49
pH	precip	4.81	4.05	5.93	13137.3	100.0	0	49

**FI0022R Oulanka**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.02	0.00	0.24	15.1	100.0	0	49
Cl-	precip	0.13	0.03	1.19	75.8	100.0	0	49
K+	precip	0.03	0.00	1.16	17.0	100.0	0	49
Mg++	precip	0.01	0.00	0.20	7.7	100.0	0	49
NH4+	precip	0.04	0.00	0.39	24.7	100.0	0	49
NO3-	precip	0.08	0.01	0.36	47.1	100.0	0	49
Na+	precip	0.07	0.01	0.85	44.2	100.0	0	49
Precip	precip	-	0.00	65.80	604.2	98.7	0	52
SO4--	precip	0.11	0.03	0.88	68.3	100.0	0	49
SO4-- corr	precip	0.11	0.03	0.85	64.5	100.0	0	49
cond	precip	6.29	2.80	25.90	3800.7	100.0	0	49
pH	precip	4.90	4.27	5.25	7573.6	100.0	0	49

**FI0036R Pallas (Matorova)**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.02	0.01	0.27	12.4	99.5	0	47
Cl-	precip	0.13	0.02	2.54	81.3	99.5	0	47
K+	precip	0.02	0.00	0.12	15.5	99.5	0	47
Mg++	precip	0.01	0.00	0.21	7.0	99.5	0	47
NH4+	precip	0.03	0.00	0.21	20.6	99.5	0	47
NO3-	precip	0.07	0.01	0.26	45.1	99.5	0	47
Na+	precip	0.07	0.01	1.86	46.9	99.5	0	47
Precip	precip	-	0.00	76.80	640.4	96.7	0	51
SO4--	precip	0.09	0.01	1.51	57.7	99.5	0	47
SO4-- corr	precip	0.08	0.01	1.41	53.8	99.5	0	47
cond	precip	5.57	2.38	42.60	3567.4	99.5	0	47
pH	precip	4.96	4.07	5.30	7034.5	99.5	0	47

**FI0050R Hyytiälä**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.05	0.02	0.32	31.5	100.0	0	48
Cl-	precip	0.18	0.04	1.39	111.7	100.0	0	48
K+	precip	0.04	0.01	0.22	22.2	100.0	0	48
Mg++	precip	0.02	0.00	0.10	11.9	100.0	0	48
NH4+	precip	0.12	0.00	1.13	72.6	100.0	0	48
NO3-	precip	0.17	0.03	1.47	110.4	100.0	0	48
Na+	precip	0.11	0.01	1.14	66.8	100.0	0	48
Precip	precip	-	0.00	43.00	630.8	99.6	0	52
SO4--	precip	0.13	0.04	2.07	83.6	100.0	0	48
SO4-- corr	precip	0.12	0.02	2.06	78.0	100.0	0	48
cond	precip	7.67	3.27	61.80	4836.0	100.0	0	48
pH	precip	4.89	3.96	5.34	8087.6	100.0	0	48

**FR0008R Donon**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.14	0.01	4.65	227.3	98.8	7	175
Cl-	precip	0.42	0.03	10.33	671.2	98.8	18	175
K+	precip	0.04	0.01	0.44	68.3	98.8	31	175
Mg++	precip	0.04	0.01	0.74	58.6	98.8	78	175
NH4+	precip	0.28	0.01	5.49	442.2	98.8	6	175
NO3-	precip	0.23	0.01	3.18	367.3	98.8	1	175
Na+	precip	0.25	0.01	6.24	406.7	98.8	12	175
Precip	precip	-	0.00	48.80	1607.6	100.0	1	366
SO4--	precip	0.12	0.01	1.62	200.2	98.8	5	175
SO4-- corr	precip	0.10	0.01	1.55	166.4	98.8	5	175
pH	precip	5.42	4.29	6.79	6176.3	98.9	0	180

**FR0009R Revin**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.20	0.01	4.34	212.8	92.9	1	162
Cl-	precip	1.01	0.03	16.30	1050.4	92.9	3	162
K+	precip	0.07	0.01	1.09	72.5	92.9	16	162
Mg++	precip	0.08	0.01	1.12	79.3	92.9	21	162
NH4+	precip	0.42	0.05	3.83	435.2	92.9	0	162
NO3-	precip	0.32	0.06	4.02	330.5	92.9	0	162
Na+	precip	0.60	0.01	8.72	625.2	92.9	1	162
Precip	precip	-	0.00	48.20	1043.9	100.0	4	366
SO4--	precip	0.21	0.04	2.67	218.3	92.9	0	162
SO4-- corr	precip	0.16	-0.59	2.13	166.1	92.9	0	162
pH	precip	5.51	4.18	7.05	3244.1	94.3	0	172

**FR0010R Morvan**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.15	0.01	4.77	163.9	94.0	2	153
Cl-	precip	0.66	0.03	13.09	724.7	94.0	4	153
K+	precip	0.08	0.01	4.58	89.9	94.0	25	153
Mg++	precip	0.05	0.01	0.86	51.4	94.0	37	153
NH4+	precip	0.27	0.01	8.09	300.9	94.0	2	153
NO3-	precip	0.20	0.01	11.51	223.1	94.0	3	153
Na+	precip	0.39	0.02	6.62	429.6	94.0	0	153
Precip	precip	-	0.00	28.60	1096.7	100.0	3	366
SO4--	precip	0.13	0.02	7.32	147.3	94.0	0	153
SO4-- corr	precip	0.10	-0.24	6.77	111.2	94.0	0	153
pH	precip	5.59	4.38	7.28	2844.8	95.1	0	162

**FR0013R Peyrusse Vieille**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.47	0.04	7.40	311.2	87.9	0	83
Cl-	precip	2.39	0.03	92.68	1587.3	87.9	1	82
K+	precip	0.19	0.01	2.44	123.0	87.9	1	82
Mg++	precip	0.19	0.01	6.16	124.0	87.9	6	82
NH4+	precip	0.27	0.01	2.98	178.2	87.9	2	82
NO3-	precip	0.22	0.03	2.69	143.6	87.9	0	82
Na+	precip	1.41	0.07	50.42	934.4	87.9	0	82
Precip	precip	-	0.00	33.80	662.8	100.0	5	366
SO4--	precip	0.28	0.04	4.52	182.9	87.9	0	82
SO4-- corr	precip	0.16	-0.01	2.19	107.7	87.9	0	82
pH	precip	5.74	5.13	7.20	1213.7	89.5	0	91

**FR0014R Montandon**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.24	0.01	3.55	253.3	95.2	1	154
Cl-	precip	0.28	0.03	4.51	296.8	95.2	21	153
K+	precip	0.03	0.01	0.38	34.4	96.3	55	154
Mg++	precip	0.03	0.01	0.26	29.0	95.2	79	153
NH4+	precip	0.30	0.03	3.35	322.5	95.2	0	153
NO3-	precip	0.22	0.01	3.15	230.8	95.2	1	153
Na+	precip	0.19	0.01	2.59	205.5	95.2	9	153
Precip	precip	-	0.00	29.20	1061.4	100.0	10	366
SO4--	precip	0.13	0.01	1.35	139.0	95.2	5	153
SO4-- corr	precip	0.11	-0.01	1.29	121.8	95.2	5	153
pH	precip	5.60	4.51	6.85	2647.6	95.6	0	156

**FR0015R La Tardière**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.22	0.05	4.42	167.6	98.5	0	144
Cl-	precip	3.44	0.10	30.02	2582.5	98.5	0	144
K+	precip	0.10	0.01	3.90	78.4	98.5	11	144
Mg++	precip	0.25	0.01	2.37	186.5	98.5	4	144
NH4+	precip	0.38	0.10	2.98	285.2	98.5	0	144
NO3-	precip	0.14	0.03	1.47	103.6	98.5	0	144
Na+	precip	1.92	0.05	19.19	1444.0	98.5	0	144
Precip	precip	-	0.00	25.60	751.3	100.0	10	366
SO4--	precip	0.28	0.03	1.73	209.0	98.5	0	144
SO4-- corr	precip	0.12	-0.97	1.14	88.2	98.5	0	144
pH	precip	5.99	4.44	7.18	766.9	98.8	0	157

**FR0016R Le Casset**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.53	0.02	7.20	359.3	98.5	0	98
Cl-	precip	0.14	0.03	1.83	93.0	98.5	27	98
K+	precip	0.07	0.01	0.60	47.4	98.5	21	98
Mg++	precip	0.04	0.01	0.43	26.0	98.5	35	98
NH4+	precip	0.26	0.01	3.35	174.5	98.5	16	98
NO3-	precip	0.17	0.01	0.96	111.9	98.5	4	98
Na+	precip	0.09	0.01	1.39	63.7	98.5	16	98
Precip	precip	-	0.00	47.00	676.9	100.0	6	366
SO4--	precip	0.13	0.01	1.08	90.1	98.5	10	98
SO4-- corr	precip	0.13	0.01	0.96	85.0	98.5	10	98
pH	precip	5.91	4.91	7.25	841.3	98.7	0	105

**FR0017R Montfranc**  
 January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.16	0.01	2.18	182.4	95.2	3	139
Cl-	precip	1.32	0.03	27.58	1545.4	95.2	6	139
K+	precip	0.05	0.01	0.53	55.4	95.2	29	139
Mg++	precip	0.10	0.01	2.01	113.9	95.2	33	139
NH4+	precip	0.19	0.01	1.77	216.3	95.2	7	139
NO3-	precip	0.13	0.01	1.22	152.8	95.2	2	139
Na+	precip	0.84	0.01	30.11	983.9	95.2	5	139
Precip	precip	-	0.00	51.20	1166.4	100.0	7	366
SO4--	precip	0.15	0.01	1.31	169.2	95.2	2	139
SO4-- corr	precip	0.08	-0.09	0.77	94.3	95.2	2	139
pH	precip	5.58	4.64	6.86	3039.3	95.4	0	144

**FR0018R La Coulonche**  
 January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.15	0.01	5.12	128.2	94.8	2	154
Cl-	precip	1.84	0.05	20.56	1597.9	94.8	0	154
K+	precip	0.06	0.01	0.82	52.3	94.8	24	154
Mg++	precip	0.14	0.01	1.34	117.8	94.8	13	154
NH4+	precip	0.37	0.04	2.72	320.2	94.8	0	154
NO3-	precip	0.20	0.01	2.73	170.4	94.8	1	154
Na+	precip	1.04	0.03	10.69	903.1	94.8	0	154
Precip	precip	-	0.00	35.00	868.6	100.0	4	366
SO4--	precip	0.19	0.02	1.76	162.5	94.8	0	154
SO4-- corr	precip	0.10	0.00	1.44	86.4	94.8	0	154
pH	precip	5.85	4.11	7.06	1213.6	95.2	0	162

**GB0002R Eskdalemuir**  
 January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.10	0.02	0.27	153.4	73.4	0	19
Cl-	precip	2.44	0.29	8.18	3851.4	73.4	0	19
K+	precip	0.07	0.01	0.18	103.7	73.4	4	19
Mg++	precip	0.15	0.02	0.52	232.2	73.4	0	19
NH4+	precip	0.30	0.06	0.89	473.2	73.4	0	19
NO3-	precip	0.15	0.06	0.39	235.6	73.4	0	19
Na+	precip	1.40	0.22	4.83	2207.6	73.4	0	19
Precip	precip	-	6.21	116.18	1575.9	100.0	0	27
SO4--	precip	0.20	0.07	0.47	314.1	73.4	0	19
SO4-- corr	precip	0.08	0.01	0.21	130.3	73.4	0	19
cond	precip	14.13	5.86	36.00	22263.6	73.4	0	19
pH	precip	5.67	4.86	7.11	3407.6	73.4	0	19

**GB0006R Lough Navar**  
 January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.22	0.01	1.46	340.5	100.0	1	25
Cl-	precip	4.56	0.76	33.30	6897.8	100.0	0	25
K+	precip	0.12	0.05	0.66	178.7	100.0	0	25
Mg++	precip	0.27	0.03	2.09	412.6	100.0	0	25
NH4+	precip	0.12	0.00	0.79	188.0	100.0	2	25
NO3-	precip	0.06	0.01	0.35	93.1	100.0	0	25
Na+	precip	2.54	0.36	18.40	3840.6	100.0	0	25
Precip	precip	-	5.78	135.72	1514.1	100.0	0	25
SO4--	precip	0.28	0.13	1.47	416.6	100.0	0	25
SO4-- corr	precip	0.06	-0.07	0.21	95.1	100.0	0	25
cond	precip	21.08	5.10	129.60	31919.4	100.0	0	25
pH	precip	5.71	5.21	6.61	2919.6	100.0	0	25

**GB0013R Yarner Wood**  
 January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.20	0.01	0.79	181.5	91.5	1	21
Cl-	precip	5.48	0.46	11.90	5075.8	91.5	0	21
K+	precip	0.14	0.06	0.33	129.5	91.5	0	21
Mg++	precip	0.32	0.04	0.70	292.8	91.5	0	21
NH4+	precip	0.20	0.01	1.96	189.5	91.5	0	21
NO3-	precip	0.16	0.02	1.07	144.9	91.5	0	21
Na+	precip	3.06	0.26	6.42	2832.7	91.5	0	21
Precip	precip	-	0.00	114.80	926.5	100.0	0	27
SO4--	precip	0.36	0.07	0.87	334.8	91.5	0	21
SO4-- corr	precip	0.11	0.01	0.64	97.8	91.5	0	21
cond	precip	25.52	4.69	48.10	23647.6	91.5	0	21
pH	precip	5.61	5.06	7.24	2265.9	91.5	0	21



**GB0014R High Muffles**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.17	0.01	0.53	148.9	100.0	1	26
Cl-	precip	2.48	0.15	11.80	2209.3	100.0	0	26
K+	precip	0.08	0.01	0.21	74.6	100.0	1	26
Mg++	precip	0.16	0.03	0.73	141.5	100.0	0	26
NH4+	precip	0.47	0.09	1.25	415.7	100.0	0	26
NO3-	precip	0.32	0.11	0.87	281.0	100.0	0	26
Na+	precip	1.44	0.12	6.79	1284.0	100.0	0	26
Precip	precip	-	0.00	86.10	890.2	100.0	0	27
SO4--	precip	0.33	0.14	1.20	290.3	100.0	0	26
SO4-- corr	precip	0.21	0.03	0.81	185.8	100.0	0	26
cond	precip	18.16	6.05	57.70	16166.9	100.0	0	26
pH	precip	5.32	4.32	7.65	4234.1	100.0	0	26

**GB0015R Strath Vaich Dam**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.17	0.03	0.56	206.1	100.0	0	23
Cl-	precip	5.98	0.60	16.40	7152.5	100.0	0	23
K+	precip	0.13	0.01	0.33	160.0	100.0	1	23
Mg++	precip	0.37	0.03	0.95	445.0	100.0	0	23
NH4+	precip	0.06	0.00	1.07	75.1	100.0	10	23
NO3-	precip	0.05	0.00	0.73	59.6	100.0	2	23
Na+	precip	3.38	0.30	9.90	4047.0	100.0	0	23
Precip	precip	-	1.50	161.48	1195.8	96.2	0	23
SO4--	precip	0.31	0.09	0.73	372.4	100.0	0	23
SO4-- corr	precip	0.03	-0.09	0.47	33.0	100.0	0	23
cond	precip	26.29	5.28	66.40	31442.2	100.0	0	23
pH	precip	5.43	4.60	7.20	4454.1	100.0	0	23

**GB0048R Auchencorth Moss**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.10	0.01	10.30	78.8	99.3	11	219
Cl-	precip	1.17	0.00	97.20	899.0	99.3	8	219
K+	precip	0.07	0.01	9.11	53.2	99.3	28	219
Mg++	precip	0.08	0.00	5.88	62.1	99.3	19	219
NH4+	precip	0.23	0.00	5.89	174.2	99.3	4	219
NO3-	precip	0.11	0.00	3.49	81.2	99.3	1	219
Na+	precip	0.65	0.00	55.20	500.4	99.3	4	219
Precip	precip	-	0.00	22.76	765.9	100.0	0	365
SO4--	precip	0.14	0.00	11.70	104.1	99.3	4	219
SO4-- corr	precip	0.08	-0.63	9.76	61.8	99.3	4	219
cond	precip	9.00	1.92	154.10	6892.8	98.3	0	183
pH	precip	5.59	4.64	7.50	1965.7	99.1	0	216

**GB1055R Chilbolton Observatory**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.18	0.01	6.56	113.1	100.0	3	162
Cl-	precip	1.94	0.08	107.00	1189.2	100.0	0	162
K+	precip	0.08	0.01	1.68	49.4	100.0	19	162
Mg++	precip	0.12	0.00	7.33	72.1	100.0	4	162
NH4+	precip	0.47	0.03	4.61	287.0	100.0	0	162
NO3-	precip	0.24	0.00	4.10	145.8	100.0	1	162
Na+	precip	1.08	0.00	60.10	664.1	100.0	1	162
Precip	precip	-	0.00	22.87	612.3	100.0	0	365
SO4--	precip	0.24	0.02	4.82	146.0	100.0	0	162
SO4-- corr	precip	0.15	-0.21	2.60	89.9	100.0	0	162
cond	precip	13.70	1.99	87.50	8390.0	99.5	0	137
pH	precip	5.76	4.67	7.68	1063.9	100.0	0	160

**HU0002R K-pusza**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.49	0.10	5.98	326.3	99.2	0	73
Cl-	precip	0.99	0.49	6.63	656.8	99.3	0	75
K+	precip	0.18	0.06	3.11	118.4	99.2	0	73
Mg++	precip	0.11	0.04	0.88	73.6	99.2	0	73
NH4+	precip	0.52	0.05	3.16	343.3	99.4	0	75
NO3-	precip	0.41	0.12	2.97	273.9	99.2	0	73
Na+	precip	1.20	0.82	6.70	796.2	99.2	0	73
Precip	precip	-	0.00	39.50	661.8	99.4	3	363
Precip off	precip	-	0.00	36.40	656.8	99.6	0	364
SO4--	precip	0.57	0.16	3.25	379.2	99.2	0	74
SO4-- corr	precip	0.49	0.12	3.04	326.7	99.2	0	74
cond	precip	15.93	7.00	84.00	10540.1	97.8	0	71
pH	precip	6.05	5.41	7.13	584.3	97.8	0	71

**HU0003R Farkasfa**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.48	0.15	7.95	353.6	95.2	0	95
Cl-	precip	1.27	0.57	9.49	928.2	92.1	0	103
K+	precip	0.22	0.08	2.39	164.7	95.2	0	95
Mg++	precip	0.11	0.04	0.69	78.6	95.2	0	95
NH4+	precip	0.40	0.04	3.87	291.8	94.9	0	98
NO3-	precip	0.37	0.04	5.85	269.3	92.1	0	103
Na+	precip	1.48	0.55	10.69	1088.2	95.2	0	95
Precip off	precip	-	0.00	40.30	733.5	99.9	0	365
SO4--	precip	0.39	0.12	9.98	287.1	92.1	0	103
SO4-- corr	precip	0.32	0.08	9.86	233.4	92.1	0	103
cond	precip	16.00	7.40	94.00	11739.0	95.0	0	88
pH	precip	6.15	5.44	7.62	516.6	95.0	0	88

**IE0001R Valentia Observatory**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.32	0.03	3.58	622.1	97.9	4	199
Cl-	precip	11.47	0.35	92.50	22490.2	97.9	0	199
K+	precip	0.30	0.03	2.23	580.2	97.9	19	199
Mg++	precip	0.82	0.03	7.19	1609.5	97.9	6	199
NH4+	precip	0.11	0.02	5.02	217.1	97.9	100	199
NO3-	precip	0.07	0.01	1.28	145.9	97.9	24	199
Na+	precip	6.51	0.18	57.72	12761.8	97.9	0	199
Precip	precip	-	0.00	93.60	1960.5	90.1	0	330
Precip off	precip	-	0.00	43.80	1598.6	100.0	0	366
SO4--	precip	0.64	0.05	4.83	1246.9	97.9	0	199
SO4-- corr	precip	0.09	-0.14	1.09	178.1	97.9	0	199
cond	precip	48.76	4.90	386.00	95594.2	97.9	0	199
pH	precip	5.35	4.48	7.08	8853.9	97.9	0	199

**IE0005R Oak Park**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.21	0.03	5.97	123.8	97.4	17	132
Cl-	precip	2.13	0.03	120.32	1261.6	97.4	1	132
K+	precip	0.06	0.03	2.35	33.6	97.4	84	132
Mg++	precip	0.16	0.03	10.28	92.9	97.4	35	132
NH4+	precip	0.19	0.02	2.86	110.4	97.4	31	132
NO3-	precip	0.06	0.01	1.70	35.1	97.4	27	132
Na+	precip	1.21	0.03	79.86	716.3	97.4	6	132
Precip	precip	-	0.00	21.80	593.2	91.0	0	332
Precip off	precip	-	0.00	28.20	754.9	99.7	0	364
SO4--	precip	0.16	0.01	7.79	94.8	97.4	4	132
SO4-- corr	precip	0.06	-0.03	1.11	34.5	97.4	4	132
cond	precip	12.07	2.00	555.00	7157.7	97.4	0	132
pH	precip	5.74	4.74	6.91	1089.2	97.4	0	132

**IE0006R Malin Head**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.50	0.03	6.24	566.7	98.2	1	218
Cl-	precip	16.78	0.49	233.18	18912.9	98.2	0	218
K+	precip	0.44	0.03	6.59	490.9	98.2	7	218
Mg++	precip	1.18	0.03	20.14	1330.2	98.2	1	218
NH4+	precip	0.21	0.02	17.89	232.8	98.2	70	218
NO3-	precip	0.04	0.01	1.91	45.3	98.2	108	218
Na+	precip	9.29	0.26	151.67	10470.2	98.2	0	218
Precip	precip	-	0.00	83.70	1127.0	98.9	0	362
Precip off	precip	-	0.00	73.00	1149.7	100.0	0	366
SO4--	precip	0.91	0.05	13.41	1023.6	98.2	0	218
SO4-- corr	precip	0.13	-0.24	2.12	148.5	98.2	0	218
cond	precip	68.54	4.50	1031.00	77246.4	98.2	0	218
pH	precip	5.52	5.04	7.49	3395.6	98.2	0	218

**IE0009R Johnstown Castle**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.15	0.03	2.88	100.5	98.7	20	123
Cl-	precip	3.33	0.19	42.23	2249.5	98.7	0	123
K+	precip	0.08	0.03	1.25	52.2	98.7	48	124
Mg++	precip	0.22	0.03	2.91	147.0	98.7	18	123
NH4+	precip	0.23	0.02	2.34	157.6	98.7	18	123
NO3-	precip	0.11	0.01	1.24	73.6	98.7	3	123
Na+	precip	1.84	0.09	23.38	1243.9	98.7	0	123
Precip	precip	-	0.00	29.30	675.1	85.2	0	311
Precip off	precip	-	0.00	34.30	963.0	100.0	0	365
SO4--	precip	0.25	0.04	2.74	170.4	98.7	0	123
SO4-- corr	precip	0.10	-0.02	1.10	65.9	98.7	0	123
cond	precip	17.22	3.50	177.60	11626.7	98.7	0	123
pH	precip	5.61	4.92	6.70	1653.7	98.7	0	123

**IS0002R Irafoss**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.16	0.01	3.01	312.5	97.9	0	168
Cl-	precip	3.93	0.05	62.79	7813.9	97.9	10	168
K+	precip	0.22	0.01	4.70	444.7	97.7	0	167
Mg++	precip	0.35	0.01	6.88	686.4	97.9	0	168
NO3-	precip	0.03	0.00	0.27	50.1	96.4	3	166
Na+	precip	2.73	0.09	52.43	5424.6	97.9	0	168
Precip	precip	-	0.20	74.80	1986.3	47.0	0	172
SO4--	precip	0.28	0.02	4.05	554.5	97.9	0	168
SO4-- corr	precip	0.05	-3.52	3.63	100.3	97.9	0	168
cond	precip	18.21	2.20	149.10	36178.3	96.5	0	144
pH	precip	5.73	5.10	7.20	3705.8	97.2	0	150

**IS0091R Storhofdi**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	2.24	0.61	4.74	3075.1	100.0	0	13
Cl-	precip	106.43	35.45	236.29	146330.2	100.0	0	13
K+	precip	2.30	0.72	4.92	3164.0	100.0	0	13
Mg++	precip	6.96	2.26	15.16	9567.6	100.0	0	13
NH4+	precip	0.50	0.11	0.96	689.9	100.0	0	13
NO3-	precip	0.11	0.03	0.26	152.6	100.0	0	13
Na+	precip	40.59	1.38	108.62	55802.3	100.0	0	13
Precip	precip	-	50.50	216.50	1374.9	98.6	0	13
Precip off	precip	-	51.70	251.40	1668.0	98.6	0	13
SO4--	precip	4.98	1.68	11.69	6843.9	100.0	0	13
SO4-- corr	precip	-0.06	-1.19	1.15	-84.0	100.0	0	13
cond	precip	360.55	127.20	773.40	495727.6	100.0	0	13
pH	precip	4.99	4.47	6.22	14036.6	100.0	0	13

**IT0004R Ispra**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.52	0.06	3.67	552.9	95.4	0	82
Cl-	precip	0.44	0.10	5.26	466.6	95.4	0	82
K+	precip	0.07	0.01	0.71	73.9	93.8	0	81
Mg++	precip	0.06	0.01	0.81	68.1	95.4	0	82
NH4+	precip	1.00	0.07	7.32	1066.6	95.4	0	82
NO3-	precip	0.68	0.09	5.93	723.2	95.4	0	82
Na+	precip	0.32	0.04	3.99	341.5	95.4	0	82
Precip off	precip	-	0.00	90.31	1070.5	99.9	0	365
SO4--	precip	0.45	0.03	3.54	486.9	95.4	0	82
SO4-- corr	precip	0.43	0.03	3.51	459.5	95.4	0	82
cond	precip	17.73	3.01	79.60	18983.3	94.2	0	69
pH	precip	5.43	3.82	7.12	3958.2	95.1	0	75

**LT0015R Preila**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.30	0.02	2.66	247.3	99.7	0	122
Cl-	precip	4.74	0.15	85.48	3863.2	99.7	0	122
K+	precip	0.13	0.02	1.92	105.0	99.7	0	122
Mg++	precip	0.27	0.01	2.91	221.2	99.7	0	122
NH4+	precip	0.40	0.04	8.64	324.7	99.7	0	122
NO3-	precip	0.42	0.03	8.93	345.0	99.7	0	122
Na+	precip	2.40	0.08	45.30	1958.4	99.7	0	122
Precip	precip	-	0.00	43.40	814.4	100.0	0	366
SO4--	precip	0.47	0.05	5.03	379.2	99.7	0	122
SO4-- corr	precip	0.26	-0.20	3.01	212.7	99.7	0	122
cond	precip	29.11	2.28	387.00	23712.0	99.7	0	122
pH	precip	4.93	4.10	7.28	9537.8	99.7	0	122

**LV0010R Rucava**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.06	0.01	0.27	60.9	90.4	27	118
Cl-	precip	1.19	0.04	9.13	1203.4	88.5	15	99
K+	precip	0.13	0.02	2.40	127.6	93.4	62	120
Mg++	precip	0.10	0.02	0.60	98.1	93.7	83	121
NH4+	precip	0.26	0.02	2.35	258.6	97.4	51	156
NO3-	precip	0.24	0.03	1.51	243.8	87.2	0	97
Na+	precip	0.67	0.04	5.00	681.9	93.7	63	121
Precip off	precip	-	0.00	30.10	1014.4	99.9	0	365
SO4--	precip	0.19	0.03	1.24	190.8	88.5	0	99
SO4-- corr	precip	0.13	-0.02	1.09	133.0	88.5	0	99
cond	precip	14.07	3.17	55.50	14273.1	97.3	0	158
pH	precip	5.07	4.13	7.12	8652.0	98.0	0	158

**MD0013R Leova II**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	2.01	0.05	4.85	1014.5	99.5	0	54
Cl-	precip	0.72	0.17	3.94	360.9	99.5	0	54
K+	precip	0.54	0.07	3.72	274.4	99.5	0	54
Mg++	precip	0.94	0.07	3.04	473.3	99.5	0	54
NH4+	precip	0.35	0.01	3.92	178.6	99.5	0	54
NO3-	precip	0.61	0.08	2.51	305.4	99.5	0	54
Na+	precip	0.27	0.05	2.27	134.6	99.5	0	54
Precip	precip	-	0.00	64.30	504.3	99.9	0	365
SO4--	precip	0.45	0.05	4.22	228.9	99.5	0	54
SO4-- corr	precip	0.43	0.01	4.08	216.3	99.5	0	54
cond	precip	23.32	7.00	150.30	11760.3	99.5	0	54
pH	precip	5.65	4.51	7.77	1141.9	99.5	0	54

**ME0008R Zabljak**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	1.40	0.13	6.42	2111.9	83.0	0	53
Cl-	precip	0.71	0.24	3.73	1067.7	97.1	0	91
K+	precip	0.94	0.02	9.36	1421.3	100.0	0	116
Mg++	precip	0.23	0.02	0.66	350.0	78.4	0	50
NH4+	precip	0.58	0.00	5.70	873.8	100.0	0	116
NO3-	precip	0.20	0.00	3.26	296.4	100.0	0	116
Na+	precip	0.68	0.15	13.27	1030.0	100.0	0	116
Precip	precip	-	0.00	74.80	1504.2	100.0	0	365
SO4--	precip	1.47	0.13	36.24	2207.9	100.0	0	116
SO4-- corr	precip	1.41	0.09	36.00	2117.4	100.0	0	116
cond	precip	18.07	2.80	285.00	27182.5	100.0	0	116
pH	precip	6.15	4.63	7.80	1060.0	100.0	0	116

**NL0091R De Zilk**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.24	0.02	1.02	197.3	92.2	8	121
Cl-	precip	5.49	0.16	33.00	4441.4	95.6	1	154
K+	precip	0.14	0.02	0.76	114.5	92.2	9	121
Mg++	precip	0.38	0.01	2.21	303.6	92.2	3	121
NH4+	precip	0.39	0.01	2.44	313.5	94.6	3	141
NO3-	precip	0.29	0.03	2.33	236.2	95.6	2	154
Na+	precip	3.06	0.10	18.30	2479.7	92.2	0	121
Precip	precip	-	0.00	22.26	809.1	100.0	169	366
SO4--	precip	0.43	0.05	1.77	348.3	95.6	2	154
SO4-- corr	precip	0.17	0.00	0.98	138.7	95.6	2	154
cond	precip	29.40	5.00	131.00	23784.7	89.1	61	104
pH	precip	5.23	4.36	6.79	4718.9	96.3	0	167

**NO0001R Birkenes**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.17	0.02	2.64	353.4	93.0	0	165
Cl-	precip	2.02	0.05	27.50	4223.9	93.0	0	165
K+	precip	0.10	0.01	1.32	214.6	93.0	2	165
Mg++	precip	0.14	0.01	1.88	302.2	93.0	2	165
NH4+	precip	0.29	0.01	5.99	610.6	93.0	6	165
NO3-	precip	0.31	0.01	4.88	648.4	93.0	4	165
Na+	precip	1.17	0.03	15.92	2440.0	93.0	0	165
Precip	precip	-	0.00	95.50	2087.8	99.7	0	365
SO4--	precip	0.29	0.03	5.40	613.4	93.0	0	165
SO4-- corr	precip	0.20	-0.06	4.85	408.2	93.0	0	165
cond	precip	15.88	4.00	119.00	33156.6	92.1	0	139
pH	precip	4.95	3.76	6.25	23219.9	92.1	0	139

**NO0015R Tustervatn**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.10	0.01	2.27	137.0	95.4	2	185
Cl-	precip	2.51	0.01	52.67	3305.3	95.5	1	187
K+	precip	0.11	0.01	3.59	147.5	95.4	5	185
Mg++	precip	0.16	0.01	3.62	214.3	95.4	12	185
NH4+	precip	0.10	0.01	2.36	125.2	95.4	7	185
NO3-	precip	0.05	0.01	0.56	71.7	95.5	15	187
Na+	precip	1.44	0.01	29.91	1891.6	95.5	1	187
Precip	precip	-	0.00	35.50	1317.8	99.7	0	365
SO4--	precip	0.16	0.01	2.46	207.6	95.5	2	187
SO4-- corr	precip	0.04	-0.12	1.12	49.6	95.5	2	187
cond	precip	12.36	2.00	196.00	16284.1	94.3	0	160
pH	precip	5.34	4.45	6.42	5982.1	94.2	0	159

**NO0039R Kárvatn**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.09	0.01	0.55	155.3	94.8	0	161
Cl-	precip	1.77	0.05	12.84	3104.5	95.5	0	164
K+	precip	0.08	0.01	1.28	148.6	94.8	3	161
Mg++	precip	0.11	0.01	0.84	201.7	94.8	8	161
NH4+	precip	0.06	0.01	0.74	110.8	94.8	11	161
NO3-	precip	0.04	0.01	0.63	75.0	95.5	21	164
Na+	precip	0.99	0.02	7.39	1735.6	95.5	0	164
Precip	precip	-	0.00	42.20	1758.4	98.1	0	359
SO4--	precip	0.13	0.01	0.64	232.3	95.5	1	164
SO4-- corr	precip	0.05	-0.10	0.40	87.6	95.5	1	164
cond	precip	9.46	2.00	38.00	16633.3	95.1	0	155
pH	precip	5.26	4.54	6.22	9610.9	94.4	0	152

**NO0056R Hurdal**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.12	0.01	2.87	117.7	97.2	1	112
Cl-	precip	0.37	0.04	8.13	351.7	97.2	0	112
K+	precip	0.13	0.01	3.21	119.7	97.2	0	112
Mg++	precip	0.03	0.01	0.37	27.5	97.2	16	112
NH4+	precip	0.24	0.01	4.10	228.5	97.2	1	112
NO3-	precip	0.19	0.04	3.11	181.2	97.2	0	112
Na+	precip	0.23	0.01	5.86	220.7	97.2	0	112
Precip	precip	-	0.00	33.30	955.9	100.0	0	366
SO4--	precip	0.14	0.02	6.22	132.2	97.2	0	112
SO4-- corr	precip	0.12	-0.01	6.07	114.5	97.2	0	112
cond	precip	7.21	3.00	34.00	6892.0	96.6	0	98
pH	precip	5.23	4.33	6.48	5610.0	96.6	0	98

**PL0002R Jarczew**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.23	0.02	4.96	161.6	99.5	0	136
Cl-	precip	0.29	0.04	5.68	202.3	99.5	0	136
K+	precip	0.09	0.01	2.18	66.3	99.5	0	136
Mg++	precip	0.04	0.00	0.84	28.9	99.5	0	136
NH4+	precip	0.54	0.12	8.02	380.2	99.5	0	136
NO3-	precip	0.41	0.09	4.59	285.8	99.5	0	136
Na+	precip	0.14	0.01	3.17	96.9	99.5	0	136
Precip	precip	-	0.00	41.90	703.8	96.0	0	351
Precip off	precip	-	0.00	42.40	716.4	96.0	0	351
SO4--	precip	0.41	0.03	4.49	286.0	99.5	0	136
SO4-- corr	precip	0.40	0.03	4.45	278.0	99.5	0	136
cond	precip	12.41	5.00	132.00	8731.2	99.5	0	136
pH	precip	5.13	3.82	7.50	5268.1	99.5	0	136

**PL0003R Sniezka**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.72	0.04	3.95	562.5	93.1	0	190
Cl-	precip	0.68	0.09	2.20	530.0	100.0	0	197
K+	precip	0.41	0.02	1.21	322.5	100.0	0	197
Mg++	precip	0.17	0.01	0.75	136.4	100.0	0	197
NH4+	precip	0.50	0.05	1.23	386.1	100.0	0	197
NO3-	precip	1.08	0.15	3.72	838.2	93.1	0	190
Na+	precip	0.76	0.04	2.69	595.1	100.0	0	197
Precip	precip	-	0.00	21.30	779.1	99.7	0	365
Precip off	precip	-	0.00	33.50	1254.7	99.7	0	365
SO4--	precip	1.06	0.29	2.21	829.0	100.0	0	197
SO4-- corr	precip	1.01	0.28	2.12	787.7	100.0	0	197
cond	precip	31.88	14.00	65.00	24841.7	93.1	0	190
pH	precip	4.47	4.17	4.72	26527.6	100.0	0	197

**PL0004R Leba**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.14	0.02	6.47	122.4	99.7	0	174
Cl-	precip	1.61	0.09	86.11	1375.0	99.7	0	174
K+	precip	0.12	0.01	5.31	98.5	99.7	0	174
Mg++	precip	0.11	0.01	5.16	97.7	99.7	0	174
NH4+	precip	0.30	0.04	3.73	256.1	99.7	0	174
NO3-	precip	0.33	0.07	4.30	283.3	99.7	0	174
Na+	precip	0.92	0.02	47.30	789.3	99.7	0	174
Precip	precip	-	0.00	28.00	856.5	97.8	0	358
Precip off	precip	-	0.00	27.40	822.6	97.8	0	358
SO4--	precip	0.25	0.07	4.05	214.1	99.7	0	174
SO4-- corr	precip	0.17	0.02	3.18	147.8	99.7	0	174
cond	precip	14.48	4.00	331.00	12398.5	99.7	0	174
pH	precip	5.12	3.76	7.07	6437.7	99.7	0	174

**PL0005R Diabla Gora**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.12	0.02	0.97	97.8	95.3	0	123
Cl-	precip	0.54	0.08	5.20	426.6	99.9	0	155
K+	precip	0.05	0.00	0.62	42.7	95.3	1	123
Mg++	precip	0.04	0.01	0.25	29.6	95.3	0	123
NH4+	precip	0.42	0.03	3.21	336.9	97.9	8	146
NO3-	precip	0.31	0.03	3.37	246.6	99.9	0	155
Na+	precip	0.19	0.01	2.21	151.0	95.3	0	123
Precip	precip	-	0.00	22.30	794.0	99.9	0	365
Precip off	precip	-	0.00	24.40	939.6	99.9	0	365
SO4--	precip	0.24	0.03	4.26	194.5	99.9	0	155
SO4-- corr	precip	0.23	0.02	4.21	179.0	99.9	0	155
cond	precip	9.57	2.70	36.60	7597.1	96.2	0	122
pH	precip	5.23	3.78	6.68	4682.3	100.0	0	156

**RS0005R Kamenicki vis**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.73	0.20	3.94	297.6	99.9	0	72
Cl-	precip	0.23	0.06	0.73	92.6	99.9	0	72
K+	precip	0.20	0.05	0.94	83.5	99.9	0	72
Mg++	precip	0.12	0.06	0.42	48.4	99.9	0	72
NH4+	precip	0.56	0.04	2.90	230.6	99.9	0	72
NO3-	precip	0.23	0.05	1.00	94.2	99.9	0	72
Na+	precip	0.24	0.07	1.46	97.4	99.9	0	72
Precip off	precip	-	0.00	50.80	410.1	100.0	0	365
SO4--	precip	0.60	0.17	2.69	244.9	99.9	0	72
SO4-- corr	precip	0.58	0.16	2.57	236.2	99.9	0	72
cond	precip	27.21	14.90	60.10	11159.5	99.9	0	72
pH	precip	5.55	4.36	9.52	1168.1	99.9	0	72

**RU0001R Janiskoski**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.51	0.07	2.08	427.7	22.5	0	59
Cl-	precip	2.81	0.09	96.85	2359.3	100.0	0	161
K+	precip	0.74	0.01	7.09	619.1	22.5	1	59
Mg++	precip	0.11	0.00	0.94	93.0	22.5	0	59
NH4+	precip	0.59	0.01	9.27	494.3	22.5	11	59
NO3-	precip	0.08	0.01	1.00	68.7	100.0	31	161
Na+	precip	2.40	0.29	24.61	2021.7	22.5	0	59
Precip	precip	-	0.00	38.10	840.7	100.0	0	366
SO4--	precip	0.51	0.01	7.12	428.5	100.0	2	161
SO4-- corr	precip	0.40	-3.26	6.71	338.6	100.0	2	161
cond	precip	18.74	3.30	217.10	15752.4	95.4	0	124
pH	precip	5.38	4.59	7.07	3521.2	97.2	0	142

**RU0013R Pinega**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.80	0.18	10.26	465.0	19.8	0	62
Cl-	precip	0.91	0.14	28.76	528.1	99.9	0	162
K+	precip	0.29	0.04	5.57	170.1	19.8	0	62
Mg++	precip	0.10	0.01	0.65	57.1	19.8	0	62
NH4+	precip	0.50	0.01	11.00	292.6	19.8	3	62
NO3-	precip	0.13	0.01	3.44	75.1	100.0	12	163
Na+	precip	0.61	0.07	6.90	354.7	19.8	0	62
Precip	precip	-	0.00	40.50	583.5	100.0	0	366
SO4--	precip	0.60	0.01	13.90	352.5	100.0	3	163
SO4-- corr	precip	0.56	-0.23	13.37	329.1	100.0	3	163
cond	precip	11.12	3.90	70.40	6489.8	94.8	0	115
pH	precip	5.68	5.04	7.12	1226.0	97.5	0	137

**RU0018R Danki**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.47	0.15	2.42	271.3	24.3	0	46
Cl-	precip	0.50	0.06	5.73	285.6	100.0	0	163
K+	precip	0.15	0.01	1.27	85.2	24.3	6	46
Mg++	precip	0.05	0.01	0.38	30.1	24.3	0	46
NH4+	precip	0.27	0.01	2.18	155.3	24.3	3	46
NO3-	precip	0.29	0.01	2.44	164.8	100.0	2	163
Na+	precip	0.31	0.01	4.51	177.4	24.3	2	46
Precip	precip	-	0.00	33.40	572.2	100.0	0	366
SO4--	precip	0.73	0.09	6.95	416.2	100.0	0	163
SO4-- corr	precip	0.70	-0.01	6.68	402.9	100.0	0	163
cond	precip	11.13	3.70	69.00	6369.3	97.6	0	139
pH	precip	5.37	4.35	6.67	2451.5	98.8	0	150

**RU0020R Lesnoy**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.51	0.07	3.12	486.2	21.9	0	60
Cl-	precip	0.47	0.01	20.55	443.3	100.0	2	207
K+	precip	0.11	0.01	1.02	103.9	21.9	13	60
Mg++	precip	0.04	0.00	0.36	39.0	21.9	0	60
NH4+	precip	0.19	0.01	2.14	180.9	21.9	6	60
NO3-	precip	0.26	0.01	9.21	243.7	100.0	13	207
Na+	precip	0.31	0.01	2.57	291.7	21.9	1	60
Precip	precip	-	0.00	33.60	950.5	100.0	0	366
SO4--	precip	0.58	0.01	13.54	549.7	100.0	2	207
SO4-- corr	precip	0.56	-0.23	12.77	529.8	100.0	2	207
cond	precip	11.54	3.00	223.10	10969.5	95.6	0	167
pH	precip	5.22	4.47	6.90	5721.1	96.0	0	176

**SE0005R Bredkålen**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.03	0.01	0.45	16.2	98.5	50	116
Cl-	precip	0.20	0.01	7.81	103.9	98.6	15	117
K+	precip	0.02	0.01	0.31	10.3	98.5	90	116
Mg++	precip	0.01	0.01	0.40	6.9	98.5	96	116
NH4+	precip	0.08	0.01	0.80	40.5	98.5	23	116
NO3-	precip	0.06	0.00	1.02	33.9	98.6	5	117
Na+	precip	0.06	0.01	3.77	30.4	98.5	55	116
Precip	precip	-	0.00	21.10	530.8	100.0	0	366
SO4--	precip	0.06	0.01	0.50	34.1	98.6	9	117
SO4-- corr	precip	0.06	0.00	0.49	31.4	98.6	9	117
cond	precip	3.98	0.50	35.00	2113.9	99.5	2	138
pH	precip	5.32	4.62	6.36	2547.8	99.5	0	138

**SE0012R Aspvreten**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.12	0.08	0.22	74.1	100.0	0	12
Cl-	precip	0.59	0.13	2.76	369.4	100.0	0	12
K+	precip	0.05	0.01	0.24	29.9	100.0	6	12
Mg++	precip	0.05	0.01	0.18	29.3	100.0	1	12
NH4+	precip	0.18	0.08	0.69	109.9	100.0	0	12
NO3-	precip	0.14	0.04	0.38	90.2	100.0	0	12
Na+	precip	0.31	0.06	1.30	191.4	100.0	0	12
Precip	precip	-	11.80	137.50	626.6	98.4	0	12
SO4--	precip	0.13	0.07	0.35	83.6	100.0	0	12
SO4-- corr	precip	0.11	0.05	0.33	66.5	100.0	0	12
cond	precip	7.38	5.00	18.00	4624.1	100.0	0	12
pH	precip	5.33	5.01	5.98	2940.6	100.0	0	12

**SE0014R Råö**  
**January 2017 - December 2017**

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.20	0.01	3.40	117.8	98.9	5	162
Cl-	precip	4.81	0.20	139.60	2821.4	99.0	0	164
K+	precip	0.13	0.01	3.44	74.4	98.9	31	162
Mg++	precip	0.32	0.01	9.51	187.6	98.9	5	162
NH4+	precip	0.30	0.01	3.17	177.2	99.0	3	164
NO3-	precip	0.28	0.01	2.85	166.6	99.0	0	164
Na+	precip	2.45	0.11	74.64	1437.5	98.9	0	162
Precip	precip	-	0.00	18.90	586.2	100.0	0	366
SO4--	precip	0.34	0.02	7.06	202.0	99.0	0	164
SO4-- corr	precip	0.14	0.00	1.44	80.5	99.0	0	164
cond	precip	26.44	3.00	513.00	15500.1	99.4	0	174
pH	precip	5.16	4.33	6.60	4075.0	99.4	0	174

**SE0020R Hallahus**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.11	0.06	0.23	102.4	94.3	0	13
Cl-	precip	1.78	0.41	5.72	1633.8	94.3	0	13
K+	precip	0.05	0.01	0.16	50.0	94.3	2	13
Mg++	precip	0.12	0.04	0.43	112.3	94.3	0	13
NH4+	precip	0.38	0.20	1.02	346.0	94.3	0	13
NO3-	precip	0.32	0.15	0.92	294.8	94.3	0	13
Na+	precip	0.93	0.22	3.24	850.7	94.3	0	13
Precip	precip	-	21.80	152.00	915.7	98.1	0	14
SO4--	precip	0.24	0.15	0.48	218.5	94.3	0	13
SO4-- corr	precip	0.16	0.10	0.33	141.9	94.2	0	12
cond	precip	15.28	7.00	38.00	13995.1	94.3	0	13
pH	precip	5.20	4.66	6.16	5808.8	94.3	0	13

**SI0008R Iskrba**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.19	0.01	6.25	315.9	97.7	0	110
Cl-	precip	0.42	0.01	7.98	696.8	97.7	0	110
K+	precip	0.05	0.01	1.99	79.5	97.7	0	110
Mg++	precip	0.04	0.01	0.82	72.3	97.7	0	110
NH4+	precip	0.22	0.01	5.61	354.6	97.7	0	110
NO3-	precip	0.22	0.03	6.73	367.1	97.7	0	110
Na+	precip	0.26	0.01	5.51	431.4	97.7	0	110
Precip off	precip	-	0.00	89.10	1641.8	99.1	0	362
SO4--	precip	0.19	0.01	9.83	316.5	97.7	0	110
SO4-- corr	precip	0.17	0.00	9.79	281.4	97.7	0	110
cond	precip	8.09	2.00	40.00	13285.7	96.0	0	87
pH	precip	5.15	4.11	6.56	11560.5	96.0	0	87

**SK0002R Chopok**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.16	0.01	1.26	229.5	96.2	0	129
Cl-	precip	0.22	0.02	1.94	305.5	96.2	0	129
K+	precip	0.05	0.00	0.71	64.0	96.2	0	129
Mg++	precip	0.03	0.00	0.21	39.6	96.2	0	129
NH4+	precip	0.34	0.01	2.79	477.9	92.1	0	125
NO3-	precip	0.24	0.04	1.80	341.0	96.2	0	129
Na+	precip	0.41	0.01	8.03	581.8	96.2	0	129
Precip	precip	-	0.00	48.40	1413.0	99.9	0	365
SO4--	precip	0.37	0.07	1.79	526.0	96.2	0	129
SO4-- corr	precip	0.36	0.07	1.75	504.8	96.2	0	129
cond	precip	10.41	3.22	32.50	14710.7	83.9	0	94
pH	precip	5.63	4.75	6.48	3318.1	83.9	0	94

**SK0004R Stará Lesná**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	6.68	0.02	52.55	5783.6	97.7	0	42
Cl-	precip	0.18	0.06	0.85	154.7	97.6	0	41
K+	precip	0.06	0.01	1.74	53.8	97.7	0	42
Mg++	precip	0.03	0.01	0.10	28.0	97.6	0	41
NH4+	precip	0.41	0.03	2.89	351.1	96.5	0	41
NO3-	precip	0.30	0.10	1.01	257.5	97.7	0	42
Na+	precip	0.38	0.04	6.33	327.6	97.6	0	41
Precip	precip	-	0.00	102.00	865.9	86.6	0	46
SO4--	precip	0.45	0.15	1.46	393.4	97.7	0	42
SO4-- corr	precip	0.44	0.14	1.43	379.5	97.7	0	42
cond	precip	13.44	5.00	35.40	11633.7	92.0	0	36
pH	precip	5.43	4.54	7.02	3185.4	92.0	0	36

**SK0006R Starina**  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.31	0.03	2.22	251.6	89.0	0	99
Cl-	precip	0.22	0.04	2.05	180.1	89.0	0	99
K+	precip	0.11	0.00	0.92	88.1	89.0	0	99
Mg++	precip	0.04	0.01	0.20	33.7	89.0	0	99
NH4+	precip	0.37	0.01	2.40	306.0	74.8	0	88
NO3-	precip	0.38	0.00	2.01	313.6	89.0	0	99
Na+	precip	0.41	0.02	3.39	337.9	89.0	0	99
Precip	precip	-	0.00	32.00	820.9	42.1	0	154
SO4--	precip	0.47	0.09	1.48	383.0	89.0	0	99
SO4-- corr	precip	0.45	0.08	1.42	367.9	89.0	0	99
cond	precip	15.39	4.51	45.10	12632.5	79.7	0	72
pH	precip	5.10	4.22	6.34	6455.2	79.7	0	72



SK0007R Topolniky  
January 2017 - December 2017

Component	matrix	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	precip	0.33	0.04	1.26	152.7	100.0	0	41
Cl-	precip	0.16	0.03	1.51	74.6	100.0	0	41
K+	precip	0.05	0.00	0.26	22.7	100.0	0	41
Mg++	precip	0.04	0.01	0.15	20.2	100.0	0	41
NH4+	precip	0.39	0.05	1.87	179.3	95.7	0	39
NO3-	precip	0.33	0.07	1.20	153.3	100.0	0	41
Na+	precip	0.26	0.02	2.40	118.5	100.0	0	41
Precip	precip	-	0.00	53.80	462.1	94.0	0	41
SO4--	precip	0.29	0.08	1.20	134.4	100.0	0	41
SO4-- corr	precip	0.28	0.07	1.16	127.5	100.0	0	41
cond	precip	12.99	3.87	37.80	6001.9	91.7	0	31
pH	precip	5.69	4.51	6.55	953.4	91.7	0	31



## **Annex 3**

### **Annual statistics on gases and aerosol data**



**AM0001R Amberd**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Cl-	aerosol	0.07	0.12	0.03	3.75	0.00	0.00	0.03	0.24	1.21	71	0	261
HNO3	air	0.09	0.05	0.07	2.00	0.01	0.02	0.08	0.18	0.26	73	0	269
HNO3+NO3-	air+aerosol	0.32	0.22	0.25	2.08	0.01	0.06	0.27	0.71	1.40	73	0	268
K+	aerosol	0.09	0.08	0.06	3.10	0.00	0.01	0.07	0.26	0.38	70	0	259
Mg++	aerosol	0.04	0.04	0.02	3.54	0.00	0.00	0.02	0.12	0.25	75	0	276
NH3	air	1.66	1.45	1.09	2.77	0.04	0.19	1.24	4.15	11.58	75	0	276
NH3+NH4+	air+aerosol	2.77	2.43	2.05	2.18	0.12	0.54	2.04	7.74	13.26	69	0	252
NH4+	aerosol	1.07	1.67	0.58	2.94	0.00	0.08	0.60	4.75	9.89	69	0	255
NO2	air	0.30	0.17	0.24	2.16	0.01	0.05	0.28	0.63	0.68	47	0	174
NO3-	aerosol	0.23	0.22	0.15	2.84	0.01	0.02	0.16	0.66	1.34	75	0	276
Na+	aerosol	0.07	0.08	0.04	3.28	0.00	0.00	0.04	0.22	0.57	73	0	267
SO2	air	0.29	0.24	0.20	2.71	0.00	0.03	0.22	0.74	1.36	73	0	270
SO4--	aerosol	0.53	0.39	0.36	3.10	0.00	0.05	0.45	1.23	2.16	75	0	277
SO4-- corr	aerosol	0.52	0.39	0.37	2.71	-0.05	0.05	0.45	1.22	2.11	75	0	276

**AT0002R Illmitz**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO2	air	2.54	1.63	2.16	1.73	0.61	1.06	1.98	5.91	10.55	89	0	325
PM1 mass	pm1	9.92	8.77	7.58	2.03	1.20	2.40	7.50	30.37	52.70	32	0	118
PM10 mass	pm10	17.62	16.07	13.56	1.97	3.30	4.90	12.80	53.90	106.20	98	0	359
PM25 mass	pm25	13.46	14.02	9.71	2.13	1.50	3.30	9.00	42.38	97.30	93	0	340
SO2	air	0.64	1.23	0.36	2.38	0.06	0.13	0.29	2.40	19.58	95	0	8324

**AT0005R Vorhegg**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO2	air	0.76	0.46	0.68	1.55	0.27	0.36	0.64	1.65	4.10	96	0	353
PM10 mass	pm10	6.36	4.63	4.77	2.27	0.20	1.10	5.10	15.50	22.40	32	0	119
SO2	air	0.12	0.11	0.10	1.93	0.00	0.03	0.09	0.29	1.33	94	0	8272

**AT0034G Sonnblick**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.04	0.06	0.03	2.12	0.00	0.01	0.03	0.11	2.10	92	0	8091
NO2	air	0.21	0.18	0.17	1.89	0.02	0.07	0.16	0.60	2.17	92	0	8083

**AT0048R Zoebelboden**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO2	air	0.97	0.66	0.82	1.73	0.18	0.40	0.79	2.31	4.86	98	0	358
PM10 mass	pm10	6.26	4.61	4.64	2.37	0.20	1.10	5.70	14.82	24.80	31	0	114
SO2	air	0.21	0.18	0.16	2.07	0.01	0.05	0.15	0.58	3.27	91	0	8022

**BE0001R Offagne**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO2	air	1.90	1.92	1.31	2.44	0.00	0.30	1.40	5.60	20.20	97	0	8527

**BE0011R Moerkerke**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	1.06	2.94	0.92	3.26	-0.50	0.00	0.00	5.60	35.90	97	6241	8505
NO2	air	4.48	3.61	3.24	2.32	0.30	0.80	3.30	12.20	20.90	97	107	8505

**BE0013R Houtem**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.76	2.35	0.84	3.01	-0.50	0.00	0.00	3.50	36.20	84	5707	7362
NO2	air	3.53	3.14	2.42	2.51	0.00	0.50	2.60	10.20	20.10	84	438	7362

**BE0014R Koksijde**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NH3	air	2.66	1.15	2.29	2.00	0.31	0.31	2.64	4.86	4.86	98	0	13

**BE0032R Eupen**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	%	Num bel	Num sampl
NO2	air	2.99	2.56	2.24	2.12	0.30	0.60	2.10	8.10	20.90	97	0	8524

**BE0035R Vezin**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	%	Num bel	Num sampl
NO2	air	3.74	3.00	2.82	2.16	0.20	0.80	2.90	9.64	35.30	96	0	8495

**CH0001G Jungfrauojch**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	%	Num bel	Num sampl
CO	air	107.75	18.85	106.13	1.19	58.55	80.62	106.76	139.24	205.00	87	0	7684
NO	air	0.01	0.04	0.01	3.09	-0.00	0.00	0.01	0.05	0.89	75	0	6623
NO2	air	0.06	0.09	0.03	2.77	0.00	0.01	0.03	0.19	1.58	72	0	6381
PM10 mass	pm10	2.72	3.59	1.67	2.45	0.30	0.50	1.50	10.55	23.40	100	0	365
SO2	air	0.03	0.26	0.02	2.21	-0.04	-0.01	0.01	0.06	9.88	97	0	8517
SO4--	aerosol	0.08	0.09	0.05	2.81	0.00	0.01	0.05	0.28	0.54	100	0	365

**CH0002R Payerne**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	%	Num bel	Num sampl
Ca++	aerosol	0.37	0.36	0.23	2.78	0.01	0.04	0.25	1.05	2.78	100	0	365
HNO3	air	0.23	0.07	0.21	1.39	0.12	0.12	0.20	0.36	0.36	96	0	26
HNO3+NO3-	air+aerosol	0.83	0.90	0.54	2.46	0.06	0.13	0.51	2.78	6.16	100	0	365
K+	aerosol	0.18	0.19	0.13	2.10	0.02	0.05	0.13	0.53	1.64	100	0	365
Mg++	aerosol	0.04	0.03	0.03	2.27	0.00	0.01	0.03	0.09	0.21	100	0	365
NH3	air	2.20	0.88	1.98	1.63	0.61	0.67	2.33	3.56	3.69	100	0	27
NH3+NH4+	air+aerosol	3.31	1.66	2.84	1.82	0.36	0.90	3.28	5.78	11.23	100	0	365
NH4+	aerosol	0.83	0.81	0.66	1.97	0.23	0.25	0.59	3.36	4.19	100	0	27
NO	air	0.70	1.91	0.12	6.30	-0.02	0.01	0.09	3.73	25.90	95	0	8338
NO2	air	2.93	2.45	2.13	2.29	0.18	0.52	2.21	8.23	16.04	54	0	4745
NO2	air	3.53	3.12	2.41	2.51	0.11	0.49	2.53	10.12	18.02	42	0	3695
NO3-	aerosol	0.68	0.62	0.53	2.07	0.18	0.19	0.55	2.62	3.13	96	0	26
Na+	aerosol	0.18	0.20	0.11	2.61	0.01	0.03	0.11	0.53	1.73	100	0	365
PM10 mass	pm10	11.79	9.06	9.31	2.00	1.40	3.00	9.90	28.24	65.40	100	0	365
PM25 mass	pm25	8.37	7.25	6.16	2.20	1.30	1.40	6.45	22.91	48.40	30	0	112
SO2	air	0.23	0.19	0.17	2.23	-0.03	0.04	0.18	0.55	3.26	95	0	8349
SO4--	aerosol	0.37	0.32	0.29	2.10	0.03	0.08	0.31	0.96	2.83	100	0	365
SO4-- corr	aerosol	0.35	0.32	0.26	2.24	0.02	0.07	0.28	0.94	2.82	100	0	365
EC	pm25	0.39	0.17	0.36	1.51	0.14	0.20	0.33	0.77	0.80	9	0	36
OC	pm25	1.58	1.10	1.29	1.90	0.38	0.47	1.18	3.88	5.66	9	0	36
TC	pm25	1.98	1.23	1.68	1.77	0.64	0.69	1.48	4.54	6.46	9	0	36

**CH0003R Tänikon**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	%	Num bel	Num sampl
NO2	air	3.45	2.98	2.55	2.17	0.21	0.73	2.50	9.49	24.22	95	0	8337
PM10 mass	pm10	11.31	8.89	8.94	1.98	1.20	3.03	9.10	29.86	67.90	100	0	365

**CH0004R Chaumont**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	%	Num bel	Num sampl
NO2	air	1.54	1.14	1.28	1.81	0.17	0.53	1.22	3.54	14.10	93	0	8233
PM10 mass	pm10	6.38	4.72	4.79	2.27	0.00	1.10	5.10	15.40	30.50	100	0	365

**CH0005R Rigi**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	%	Num bel	Num sampl
Ca++	aerosol	0.24	0.31	0.12	3.66	-0.01	0.01	0.12	0.87	2.44	98	0	359
HNO3	air	0.15	0.05	0.14	1.46	0.06	0.07	0.14	0.25	0.27	100	0	27
HNO3+NO3-	air+aerosol	0.54	0.52	0.37	2.42	0.04	0.07	0.40	1.65	3.14	98	0	360
K+	aerosol	0.07	0.07	0.05	1.95	0.00	0.02	0.05	0.14	0.88	98	0	359
Mg++	aerosol	0.03	0.03	0.02	2.14	0.00	0.00	0.02	0.08	0.15	98	0	359
NH3	air	0.96	0.66	0.66	2.71	0.08	0.08	0.86	2.22	2.28	100	0	27
NH3+NH4+	air+aerosol	1.65	1.22	1.22	2.35	0.10	0.24	1.40	3.68	9.62	98	0	359
NH4+	aerosol	0.52	0.34	0.43	1.78	0.13	0.13	0.39	1.40	1.44	100	0	27
NO	air	0.14	0.41	0.03	4.36	0.00	0.01	0.02	0.63	6.72	94	0	8283
NO2	air	1.06	1.35	0.69	2.38	0.03	0.19	0.64	3.33	14.76	94	0	8270
NO3-	aerosol	0.40	0.27	0.34	1.76	0.12	0.12	0.29	1.11	1.15	100	0	27
Na+	aerosol	0.11	0.14	0.07	2.80	-0.02	0.01	0.07	0.36	1.04	98	0	359
PM10 mass	pm10	6.59	5.41	4.74	2.37	0.30	1.20	5.10	16.44	41.30	100	0	365
PM25 mass	pm25	4.68	3.41	3.70	2.01	0.70	1.20	3.65	12.13	20.00	24	0	88
SO2	air	0.14	0.10	0.11	1.91	-0.01	0.04	0.11	0.32	2.14	94	0	8293
SO4--	aerosol	0.25	0.19	0.19	2.34	0.01	0.04	0.21	0.66	1.43	95	0	348
SO4-- corr	aerosol	0.23	0.18	0.17	2.47	0.01	0.03	0.19	0.62	1.36	95	0	348
EC	pm25	0.25	0.10	0.23	1.51	0.08	0.10	0.24	0.48	0.51	7	0	29
OC	pm25	0.93	0.82	0.61	2.75	0.06	0.08	0.67	2.84	3.17	7	0	29
TC	pm25	1.18	0.86	0.92	2.09	0.22	0.24	0.95	3.15	3.37	7	0	29

**CH0053R Beromünster**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num sampl
HNO3	air	0.28	0.32	0.22	1.89	0.08	0.08	0.22	1.50	1.63	80	0 21
NH3	air	4.54	1.37	4.31	1.40	1.94	1.98	4.58	7.07	7.13	80	0 21
NH4+	aerosol	0.64	0.29	0.59	1.51	0.26	0.26	0.54	1.47	1.47	71	0 19
NO	air	0.27	0.59	0.12	3.44	-0.12	0.01	0.10	1.11	8.92	95	0 8358
NO2	air	2.42	2.04	1.91	1.93	0.34	0.72	1.78	6.27	21.23	95	0 8358
NO3-	aerosol	0.54	0.29	0.48	1.62	0.25	0.25	0.41	1.23	1.24	80	0 21
PM10 mass	pm10	9.79	6.57	7.91	1.96	1.10	2.50	8.40	22.10	47.20	98	0 359

**CY0002R Agia Marina Xyliatou / Cyprus Atmosph...**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num sampl
Ca++	pm10	0.24	0.68	0.09	3.14	0.01	0.02	0.09	0.74	6.91	89	0 325
Cl-	pm10	0.04	0.16	0.02	2.10	0.01	0.01	0.01	0.08	1.73	89	0 325
K+	pm10	0.11	0.06	0.09	1.83	0.01	0.03	0.09	0.21	0.36	89	0 325
Mg++	pm10	0.04	0.04	0.03	1.63	0.02	0.02	0.03	0.08	0.38	89	0 325
NH4+	pm10	0.90	0.57	0.69	2.36	0.01	0.17	0.80	2.04	2.88	89	0 325
NO2	air	0.89	0.41	0.82	1.46	0.22	0.49	0.79	1.64	5.50	94	0 8299
NO3-	pm10	0.05	0.06	0.03	2.35	0.01	0.01	0.03	0.13	0.50	89	0 325
Na+	pm10	0.19	0.14	0.15	2.11	0.02	0.04	0.16	0.43	1.08	89	0 325
PM10 mass	pm10	22.29	22.04	18.28	1.76	3.00	7.94	18.00	51.92	268.90	97	0 355
PM25 mass	pm25	10.39	6.16	9.05	1.71	0.90	3.30	9.40	19.20	71.00	93	0 340
SO2	air	0.60	0.46	0.48	1.98	0.04	0.16	0.48	1.47	4.91	94	0 8289
SO4--	pm10	1.23	0.71	1.04	1.86	0.08	0.35	1.09	2.67	3.74	89	0 325
SO4-- corr	pm10	1.22	0.70	1.02	1.88	0.07	0.33	1.07	2.64	3.70	89	0 325
EC	pm10	0.24	0.23	0.19	1.84	0.05	0.08	0.18	0.61	2.39	89	0 325
OC	pm10	1.47	1.76	1.18	1.80	0.35	0.38	1.23	2.64	21.13	89	0 325
TC	pm10	1.71	1.83	1.39	1.79	0.35	0.48	1.43	3.40	21.57	89	0 325

**CZ0003R Koscice (NOAK)**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num sampl
Ca++	pm10	0.03	0.02	0.02	1.92	0.01	0.01	0.03	0.06	0.08	97	8 51
HNO3+NO3-	air+aerosol	0.74	0.50	0.60	1.93	0.07	0.20	0.60	1.73	3.70	99	0 364
K+	pm10	0.04	0.03	0.03	2.22	0.01	0.01	0.04	0.10	0.12	87	0 46
Mg++	pm10	0.01	0.01	0.01	1.67	0.01	0.01	0.01	0.02	0.03	99	29 52
NH3+NH4+	air+aerosol	2.28	0.95	2.07	1.57	0.19	0.96	2.17	3.95	5.87	99	0 365
NO	air	0.57	0.55	0.33	3.14	0.06	0.06	0.46	1.51	6.80	77	1773 6772
NO2	air	2.93	1.63	2.47	2.04	0.06	1.21	2.58	5.86	16.10	79	155 6927
Na+	pm10	0.13	0.11	0.08	2.73	0.03	0.03	0.07	0.35	0.38	99	19 52
PM10 mass	pm10	15.75	8.69	13.82	1.66	4.10	5.80	13.70	34.52	50.70	49	0 182
PM10 mass	pm10	16.42	17.21	10.11	2.84	1.00	1.00	11.00	50.00	153.00	93	483 8169
PM25 mass	pm25	11.04	10.90	7.43	2.51	1.00	1.00	8.00	31.00	101.00	97	509 8555
PM25 mass	pm25	13.30	7.92	11.59	1.66	3.90	5.32	10.60	31.66	48.10	49	0 181
SO2	air	0.73	0.85	0.46	2.69	0.08	0.08	0.50	2.41	7.01	99	0 364
SO2	air	1.09	0.77	0.79	2.57	0.12	0.12	1.05	2.25	9.71	89	1578 7819
SO2	air	1.09	0.77	0.79	2.57	0.12	0.12	1.05	2.25	9.71	89	1578 7819
SO4--	aerosol	0.59	0.73	0.38	2.44	0.04	0.09	0.36	1.95	5.54	99	0 365
EC	pm25	0.57	0.49	0.43	2.09	-0.27	0.17	0.39	1.64	3.55	51	20 1224
OC	pm25	2.93	2.43	2.28	1.99	0.26	0.80	2.23	8.27	16.43	51	0 1241
OC,Fraction=OC1	pm25	0.64	0.60	0.48	2.11	-0.74	0.15	0.49	1.65	7.57	56	20 1356
OC,Fraction=OC2	pm25	0.47	0.67	0.36	2.09	-0.78	0.11	0.36	1.14	15.23	56	35 1356
OC,Fraction=OC3	pm25	0.56	0.81	0.47	1.73	-1.43	0.18	0.48	1.02	17.99	56	10 1356
OC,Fraction=OC4	pm25	0.74	0.76	0.63	1.72	-0.06	0.25	0.66	1.31	17.26	56	2 1356
OC,Fraction=OCFyr	pm25	0.67	1.55	0.15	8.22	-0.00	0.00	0.23	3.44	31.13	56	260 1356
TC	pm25	3.50	2.88	2.75	1.94	0.43	1.03	2.64	9.86	19.73	51	0 1241

**CZ0005R Churanov**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num sampl
HNO3+NO3-	air+aerosol	0.44	0.36	0.35	1.96	0.07	0.12	0.34	1.04	2.37	16	0 60
NH3+NH4+	air+aerosol	1.19	0.57	1.06	1.61	0.33	0.48	1.10	2.18	3.14	16	0 60
PM10 mass	pm10	7.16	4.76	5.50	2.20	1.00	1.00	6.00	16.70	28.00	99	32 365
SO2	air	0.45	0.44	0.29	2.57	0.08	0.08	0.32	1.51	1.93	16	0 60
SO4--	aerosol	0.34	0.31	0.24	2.30	0.03	0.06	0.25	0.89	1.56	16	0 60

**DE0001R Westerland**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num sampl
NH3	air	1.00	0.48	0.88	1.61	0.34	0.43	0.79	1.91	2.31	100	0 53
NH4+	pm25	0.57	0.83	0.26	3.66	0.02	0.03	0.29	3.40	3.79	16	0 60
NO	air	0.86	1.22	0.48	3.34	0.01	0.07	0.79	2.29	24.96	75	0 6633
NO2	air	1.56	2.21	0.54	5.88	0.00	0.02	0.74	6.01	19.77	75	0 6632
NO2	air	2.89	2.22	2.18	2.19	0.33	0.57	2.34	6.68	11.97	22	0 81
NO3-	pm25	0.31	0.51	0.12	4.04	0.01	0.02	0.09	1.84	2.31	16	0 60
PM10 mass	pm10	15.61	8.90	13.61	1.69	1.96	5.90	13.41	33.81	75.34	90	0 332
SO2	air	0.17	0.08	0.16	1.49	0.04	0.07	0.18	0.25	1.58	92	0 8124

**DE0002R Waldhof**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	pm25	0.03	0.03	0.01	6.14	0.00	0.00	0.02	0.08	0.09	16	0	61
Cl-	aerosol	0.39	0.63	0.12	5.60	0.01	0.01	0.15	1.77	4.37	99	0	365
Cl-	pm25	0.10	0.15	0.04	4.38	0.00	0.00	0.04	0.53	0.84	16	0	61
HNO3	air	0.26	0.23	0.18	2.25	0.02	0.05	0.18	0.77	1.48	99	0	365
HNO3+NO3-	air+aerosol	0.80	0.56	0.64	1.94	0.03	0.24	0.63	1.95	3.69	99	0	365
K+	pm25	0.07	0.07	0.04	2.45	0.01	0.01	0.04	0.25	0.39	16	0	61
Mg++	pm25	0.01	0.02	0.00	4.40	0.00	0.00	0.00	0.03	0.10	16	0	61
NH3	air	0.84	0.63	0.62	2.08	0.12	0.21	0.59	2.13	3.37	100	0	52
NH3	air	1.45	1.08	1.11	2.18	0.02	0.29	1.19	3.99	5.85	99	0	365
NH4+	pm25	0.93	0.97	0.60	2.64	0.04	0.09	0.54	3.14	4.97	16	0	61
NO2	air	2.02	1.93	1.42	2.33	0.09	0.33	1.44	5.73	15.65	94	0	8304
NO2	air	3.59	2.23	3.05	1.77	1.00	1.22	3.04	8.56	11.24	24	0	89
NO3-	aerosol	0.54	0.57	0.34	2.75	0.01	0.07	0.31	1.81	3.21	99	0	365
NO3-	pm25	0.50	0.64	0.19	4.56	0.01	0.02	0.23	2.19	2.47	16	0	61
Na+	pm25	0.13	0.15	0.09	2.43	0.03	0.03	0.09	0.36	0.86	16	0	61
PM1 mass	pm1	6.16	4.46	4.99	1.90	0.86	1.71	4.87	14.78	29.65	99	0	365
PM10 mass	pm10	13.17	9.39	10.92	1.81	2.14	4.41	10.77	33.76	56.69	99	0	365
PM25 mass	pm25	10.14	8.75	7.90	1.95	1.95	3.09	7.44	29.98	53.04	99	0	365
SO2	air	0.27	0.31	0.19	2.30	0.01	0.04	0.19	0.74	3.15	99	0	365
SO4--	aerosol	0.55	0.40	0.45	1.85	0.01	0.20	0.44	1.47	2.79	99	0	365
SO4--	pm25	0.54	0.48	0.41	2.03	0.05	0.12	0.39	1.71	3.03	16	0	61
SO4-- corr	aerosol	0.54	0.40	0.45	1.86	-0.01	0.19	0.43	1.43	2.76	99	0	365
SO4-- corr	pm25	0.53	0.48	0.39	2.22	0.02	0.10	0.38	1.70	3.02	16	0	61
EC	pm25	0.25	0.23	0.19	1.95	0.03	0.08	0.17	0.94	1.15	16	0	61
OC	pm25	2.24	2.16	1.69	2.00	0.53	0.67	1.55	8.30	12.33	16	0	61
TC	pm25	2.49	2.36	1.91	1.96	0.55	0.82	1.68	9.14	13.48	16	0	61

**DE0003R Schauinsland**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	pm25	0.01	0.02	0.00	4.32	0.00	0.00	0.00	0.05	0.08	16	0	61
Cl-	aerosol	0.10	0.25	0.02	5.01	0.01	0.01	0.02	0.52	2.54	96	0	352
Cl-	pm25	0.02	0.04	0.01	2.13	0.01	0.01	0.01	0.18	0.24	16	0	61
HNO3	air	0.25	0.19	0.19	2.13	0.00	0.06	0.20	0.60	1.34	95	0	347
HNO3+NO3-	air+aerosol	0.50	0.38	0.39	2.09	0.01	0.12	0.40	1.22	2.95	94	0	346
K+	pm25	0.03	0.02	0.02	2.34	0.01	0.01	0.02	0.07	0.11	16	0	61
Mg++	pm25	0.00	0.00	0.00	1.80	0.00	0.00	0.00	0.01	0.01	16	0	61
NH3	air	0.56	0.38	0.44	2.02	0.11	0.14	0.46	1.32	1.58	100	0	53
NH3	air	0.80	0.58	0.60	2.23	0.06	0.14	0.65	1.92	3.71	95	0	347
NH4+	pm25	0.35	0.38	0.23	2.58	0.02	0.04	0.26	1.37	2.16	16	0	61
NO2	air	0.63	0.75	0.44	2.28	0.00	0.13	0.42	1.79	14.06	92	0	8091
NO3-	aerosol	0.25	0.34	0.13	3.37	0.01	0.01	0.13	0.91	2.62	94	0	346
NO3-	pm25	0.15	0.29	0.06	3.48	0.01	0.01	0.05	0.99	1.51	16	0	61
Na+	pm25	0.04	0.04	0.03	1.55	0.03	0.03	0.03	0.10	0.27	16	0	61
PM10 mass	pm10	8.38	6.27	6.13	2.35	0.46	1.37	6.77	21.57	30.77	95	0	350
PM25 mass	pm25	6.25	4.50	4.75	2.23	0.21	1.13	4.97	15.53	25.05	93	0	340
SO2	air	0.19	0.18	0.14	2.17	0.01	0.04	0.13	0.53	1.53	95	0	347
SO4--	aerosol	0.29	0.22	0.19	2.89	0.00	0.02	0.25	0.72	1.28	94	0	346
SO4--	pm25	0.23	0.17	0.16	2.81	0.01	0.01	0.18	0.59	0.72	16	0	61
SO4-- corr	aerosol	0.28	0.23	0.20	2.88	-0.08	0.01	0.24	0.72	1.28	94	0	346
SO4-- corr	pm25	0.23	0.17	0.15	2.84	0.01	0.01	0.18	0.59	0.72	16	0	61
EC	pm25	0.10	0.06	0.09	2.05	0.01	0.02	0.10	0.24	0.31	16	0	62
OC	pm25	1.08	0.80	0.84	2.07	0.19	0.26	0.84	2.85	3.80	16	0	62
TC	pm25	1.19	0.85	0.93	2.04	0.20	0.27	0.95	3.02	3.95	16	0	62

**DE0007R Neuglobsow**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	pm25	0.02	0.02	0.01	5.18	0.00	0.00	0.02	0.06	0.08	16	0	61
Cl-	aerosol	0.40	0.58	0.13	5.57	0.01	0.01	0.17	1.67	3.27	99	0	364
Cl-	pm25	0.06	0.12	0.03	3.13	0.01	0.01	0.02	0.27	0.87	16	0	61
HNO3	air	0.17	0.18	0.11	2.50	0.00	0.02	0.12	0.50	1.61	99	0	364
HNO3+NO3-	air+aerosol	0.62	0.50	0.48	2.05	0.03	0.16	0.44	1.68	4.12	99	0	364
K+	pm25	0.05	0.07	0.03	2.55	0.01	0.01	0.03	0.25	0.39	16	0	61
Mg++	pm25	0.01	0.02	0.00	4.16	0.00	0.00	0.00	0.03	0.10	16	0	61
NH3	air	0.52	0.39	0.41	2.03	0.08	0.11	0.46	1.71	1.97	100	0	53
NH3	air	0.63	0.57	0.42	2.76	0.02	0.06	0.53	1.65	4.42	99	0	364
NH4+	pm25	0.71	0.77	0.45	2.65	0.04	0.08	0.40	2.44	3.65	16	0	61
NO2	air	1.29	1.23	0.90	2.38	0.02	0.20	0.91	3.75	11.81	93	0	8210
NO2	air	2.26	1.30	1.96	1.68	0.69	0.93	1.83	5.20	6.22	24	0	88
NO3-	aerosol	0.45	0.48	0.29	2.72	0.01	0.07	0.27	1.49	4.00	99	0	364
NO3-	pm25	0.28	0.41	0.10	4.81	0.01	0.01	0.08	1.25	1.95	16	0	61
Na+	pm25	0.11	0.13	0.07	2.48	0.03	0.03	0.07	0.35	0.87	16	0	61
PM10 mass	pm10	13.67	9.56	11.38	1.79	2.43	4.90	10.92	36.73	53.04	99	0	365
PM25 mass	pm25	9.67	8.40	7.42	2.01	0.68	2.94	6.82	28.20	53.49	99	0	364
SO2	air	0.21	0.35	0.11	3.01	0.00	0.02	0.11	0.68	3.96	99	0	364
SO4--	aerosol	0.55	0.53	0.42	2.14	0.01	0.15	0.40	1.58	3.90	99	0	364
SO4--	pm25	0.52	0.66	0.36	2.25	0.04	0.11	0.38	1.69	3.77	16	0	61
SO4-- corr	aerosol	0.55	0.53	0.41	2.21	0.01	0.13	0.40	1.54	3.85	99	0	364
SO4-- corr	pm25	0.52	0.67	0.35	2.37	0.02	0.09	0.37	1.68	3.77	16	0	61
EC	pm25	0.27	0.26	0.20	2.09	0.04	0.07	0.19	1.06	1.30	16	0	62
OC	pm25	2.42	2.63	1.73	2.13	0.39	0.59	1.70	10.50	13.05	16	0	62
TC	pm25	2.68	2.87	1.95	2.10	0.43	0.66	1.92	11.56	14.34	16	0	62



**DE0008R Schmücke**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	pm25	0.01	0.02	0.00	5.50	0.00	0.00	0.00	0.05	0.08	16	0	61
Cl-	pm25	0.04	0.08	0.01	4.28	0.00	0.00	0.01	0.22	0.48	16	0	61
K+	pm25	0.04	0.03	0.03	2.59	0.00	0.00	0.03	0.12	0.12	16	0	61
Mg++	pm25	0.00	0.01	0.00	2.36	0.00	0.00	0.00	0.00	0.08	16	0	61
NH3	air	0.36	0.25	0.29	1.96	0.08	0.09	0.32	0.83	1.49	100	0	53
NH4+	pm25	0.48	0.53	0.25	3.76	0.01	0.02	0.32	1.69	2.66	16	0	61
NO2	air	1.34	1.30	0.95	2.27	0.00	0.26	0.91	3.90	12.08	94	0	8306
NO2	air	2.10	1.20	1.85	1.63	0.70	0.93	1.78	4.52	7.43	24	0	90
NO3-	pm25	0.24	0.42	0.08	4.92	0.00	0.01	0.09	1.26	2.17	16	0	61
Na+	pm25	0.07	0.09	0.04	2.50	0.00	0.00	0.04	0.22	0.67	16	0	61
PM10 mass	pm10	9.72	6.91	7.36	2.24	0.54	1.50	8.50	23.29	41.27	99	0	365
PM25 mass	pm25	7.14	5.63	5.27	2.28	0.54	1.11	5.94	18.14	35.28	99	0	365
SO2	air	0.28	0.30	0.21	1.98	0.04	0.09	0.19	0.80	4.94	94	0	8301
SO4--	pm25	0.30	0.24	0.18	3.47	0.01	0.01	0.25	0.74	1.15	16	0	61
SO4-- corr	pm25	0.29	0.24	0.18	3.51	0.01	0.01	0.22	0.73	1.15	16	0	61
EC	pm25	0.17	0.12	0.14	1.86	0.01	0.06	0.14	0.48	0.59	16	0	61
OC	pm25	1.48	1.17	1.12	2.14	0.24	0.32	1.12	4.57	5.69	16	0	61
TC	pm25	1.65	1.27	1.28	2.06	0.25	0.39	1.37	5.13	6.27	16	0	61

**DE0009R Zingst**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	pm25	0.02	0.02	0.00	6.57	0.00	0.00	0.00	0.05	0.08	16	0	61
Cl-	pm25	0.12	0.21	0.04	4.09	0.01	0.01	0.04	0.64	1.34	16	0	61
K+	pm25	0.05	0.05	0.03	2.64	0.01	0.01	0.03	0.18	0.29	16	0	61
Mg++	pm25	0.01	0.02	0.00	4.79	0.00	0.00	0.00	0.05	0.13	16	0	61
NH3	air	0.60	0.47	0.47	1.96	0.11	0.17	0.51	1.40	2.91	100	0	53
NH4+	pm25	0.62	0.73	0.22	6.32	0.01	0.01	0.36	2.73	2.95	16	0	61
NO	air	0.34	0.62	0.18	2.72	0.03	0.06	0.12	1.15	15.75	95	0	8349
NO2	air	1.58	1.45	1.15	2.23	0.06	0.30	1.15	4.24	18.79	95	0	8349
NO2	air	2.79	1.50	2.43	1.70	0.74	0.97	2.48	5.33	8.10	24	0	90
NO3-	pm25	0.34	0.45	0.08	10.28	0.00	0.00	0.13	1.26	2.09	16	0	61
Na+	pm25	0.13	0.18	0.07	2.91	0.03	0.03	0.03	0.54	1.11	16	0	61
PM10 mass	pm10	13.47	10.48	11.21	1.76	3.22	5.02	10.45	32.87	85.98	99	0	365
SO2	air	0.40	0.46	0.31	1.88	0.00	0.13	0.29	0.88	12.47	94	0	8264
SO4--	pm25	0.35	0.47	0.12	7.69	0.00	0.00	0.25	1.33	2.78	16	0	61
SO4-- corr	pm25	0.35	0.47	0.11	8.60	0.00	0.00	0.25	1.33	2.77	16	0	61
EC	pm25	0.22	0.28	0.15	2.28	0.03	0.04	0.15	0.92	1.68	17	0	63
OC	pm25	1.83	2.38	1.22	2.27	0.36	0.39	1.14	7.83	14.85	17	0	63
TC	pm25	2.05	2.65	1.38	2.24	0.41	0.46	1.32	8.95	16.54	17	0	63

**DE0044R Melpitz**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
EC	pm10	0.42	0.43	0.31	2.01	0.02	0.12	0.27	1.05	3.25	99	0	364
OC	pm10	3.34	3.14	2.54	2.03	0.47	0.85	2.56	8.71	24.68	99	0	364
TC	pm10	3.76	3.52	2.90	1.98	0.63	1.01	2.91	10.07	27.33	99	0	364
OC, Fraction=OC1	pm10	0.45	0.30	0.39	1.68	0.13	0.18	0.39	0.93	2.27	99	0	364
OC, Fraction=OC2	pm10	0.56	0.37	0.47	1.79	0.14	0.19	0.47	1.20	2.55	99	0	364
OC, Fraction=OC3	pm10	0.59	0.35	0.50	1.79	0.13	0.20	0.51	1.21	2.07	99	0	364
OC, Fraction=OC4	pm10	0.35	0.16	0.32	1.49	0.12	0.17	0.32	0.61	1.28	99	0	364
OC, Fraction=OCPyr	pm10	1.61	2.12	1.04	2.39	0.17	0.27	1.02	5.88	16.78	99	0	364
EC	pm25	0.37	0.39	0.27	2.04	0.06	0.11	0.24	1.01	2.79	100	0	365
OC	pm25	2.90	3.10	2.12	2.10	0.41	0.73	2.09	8.42	23.20	100	0	365
TC	pm25	3.27	3.45	2.43	2.03	0.52	0.89	2.35	9.46	25.80	100	0	365
OC, Fraction=OC1	pm25	0.45	0.32	0.39	1.70	0.15	0.18	0.37	0.97	2.52	100	0	365
OC, Fraction=OC2	pm25	0.52	0.41	0.42	1.82	0.13	0.18	0.41	1.21	3.11	100	0	365
OC, Fraction=OC3	pm25	0.45	0.35	0.36	1.88	0.10	0.14	0.36	1.03	2.62	100	0	365
OC, Fraction=OC4	pm25	0.30	0.17	0.26	1.58	0.09	0.14	0.26	0.59	1.33	100	0	365
OC, Fraction=OCPyr	pm25	1.40	1.91	0.89	2.39	0.12	0.23	0.85	5.11	14.70	100	0	365

**DR0003R Tange**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	aerosol	0.10	0.07	0.08	2.08	0.00	0.03	0.08	0.26	0.53	96	133	355
Cl-	aerosol	1.70	1.52	1.12	2.65	0.09	0.21	1.13	4.57	9.04	97	0	357
HNO3+NO3-	air+aerosol	0.54	0.57	0.35	2.54	0.03	0.09	0.33	1.76	3.76	97	25	357
K+	aerosol	0.10	0.07	0.09	1.67	0.01	0.04	0.08	0.24	0.64	96	13	353
NH3	air	0.91	0.75	0.63	2.97	0.00	0.13	0.69	2.36	5.41	97	6	356
NH4+	aerosol	0.70	0.75	0.44	2.77	0.03	0.07	0.44	2.35	5.25	97	0	357
Na+	aerosol	1.06	0.87	0.73	2.56	0.04	0.14	0.77	2.72	5.22	96	0	355
SO2	air	0.08	0.11	0.04	2.88	0.01	0.01	0.04	0.30	0.79	97	208	358
SO4--	aerosol	0.50	0.43	0.40	1.89	0.07	0.15	0.40	1.16	3.69	97	3	357
SO4-- corr	aerosol	0.41	0.44	0.27	2.48	0.03	0.06	0.29	1.11	3.67	97	3	357

**DR0005R Keldsnoor**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.34	0.73	0.18	3.00	-0.16	0.01	0.15	1.21	18.54	87	3607	7664
NO2	air	2.15	2.33	1.33	2.75	-0.24	0.24	1.34	6.73	25.87	87	2599	7664

**DK0008R Anholt**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	aerosol	0.14	0.12	0.10	2.23	0.01	0.03	0.10	0.38	0.92	93	95	344
Cl-	aerosol	3.01	2.50	1.98	2.79	0.07	0.31	2.18	8.05	11.92	96	1	352
HNO3+NO3-	air+aerosol	0.51	0.56	0.33	2.46	0.03	0.08	0.33	1.71	3.97	96	29	352
K+	aerosol	0.10	0.06	0.09	1.72	0.01	0.03	0.09	0.20	0.44	94	28	347
NH3	air	0.17	0.19	0.09	4.31	-0.01	0.00	0.12	0.53	1.69	96	59	353
NH4+	aerosol	0.59	0.70	0.36	2.72	0.03	0.06	0.36	2.04	5.72	95	0	349
NO	air	0.23	0.31	0.17	2.13	-0.23	0.04	0.18	0.56	8.51	89	2853	7813
NO2	air	1.25	1.47	0.80	2.57	-0.05	0.17	0.79	3.85	19.55	89	4306	7813
Na+	aerosol	1.82	1.33	1.34	2.36	0.10	0.24	1.47	4.48	6.79	94	0	347
SO2	air	0.08	0.12	0.05	2.38	0.01	0.01	0.05	0.21	1.24	96	164	352
SO4--	aerosol	0.57	0.50	0.48	1.71	0.09	0.21	0.49	1.14	5.20	96	1	352
SO4-- corr	aerosol	0.43	0.52	0.29	2.31	0.04	0.07	0.30	1.00	5.20	96	1	352

**DK0010G Villum Research Station, Station Nord**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Cl-	aerosol	0.15	0.22	0.07	4.62	0.00	0.00	0.05	0.48	1.25	88	17	47
HNO3	air	0.01	0.01	0.01	2.51	0.00	0.00	0.01	0.04	0.04	87	33	46
NH3	air	0.03	0.02	0.03	1.91	0.01	0.01	0.03	0.08	0.09	87	16	46
NO3-	aerosol	0.01	0.01	0.01	1.66	0.00	0.00	0.01	0.03	0.03	87	21	46
Na+	aerosol	0.11	0.13	0.07	3.60	0.00	0.00	0.09	0.35	0.70	88	17	47
SO2	air	0.04	0.09	0.01	5.18	0.00	0.00	0.01	0.28	0.43	88	31	47
SO4--	aerosol	0.09	0.07	0.07	2.25	0.02	0.02	0.06	0.24	0.25	88	0	47
SO4-- corr	aerosol	0.07	0.13	0.06	2.27	-0.65	0.02	0.05	0.23	0.24	88	0	47

**DK0012R Risoe**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	aerosol	0.13	0.13	0.09	2.33	-0.01	0.02	0.09	0.39	1.06	90	118	331
Cl-	aerosol	1.31	1.29	0.81	2.86	0.05	0.15	0.81	3.98	7.45	96	2	352
HNO3+NO3-	air+aerosol	0.70	0.64	0.50	2.29	0.04	0.12	0.51	2.17	3.71	95	10	351
K+	aerosol	0.10	0.13	0.09	1.77	0.02	0.04	0.08	0.25	2.07	90	18	331
NH3	air	0.63	0.60	0.40	3.15	0.00	0.05	0.49	1.59	4.86	96	13	353
NH4+	aerosol	0.88	0.83	0.60	2.45	0.06	0.13	0.61	2.51	5.55	96	0	352
NO	air	0.36	1.24	0.19	2.62	-0.57	0.02	0.18	0.86	40.72	89	2932	7811
NO2	air	2.08	2.30	1.35	2.55	-0.04	0.30	1.35	6.04	22.43	89	2608	7811
Na+	aerosol	0.87	0.74	0.60	2.52	0.04	0.12	0.64	2.33	4.19	90	1	331
SO2	air	0.12	0.21	0.07	2.56	0.00	0.02	0.07	0.32	1.67	96	129	354
SO4--	aerosol	0.58	0.62	0.45	1.88	0.13	0.18	0.44	1.37	5.63	96	0	352
SO4-- corr	aerosol	0.51	0.64	0.35	2.32	0.03	0.08	0.36	1.36	5.62	96	0	352

**DK0031R Ulborg**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.28	0.25	0.23	2.00	-0.27	0.06	0.25	0.54	2.62	91	1478	8040
NO2	air	1.10	1.15	0.79	2.23	-0.20	0.25	0.73	3.06	16.35	91	4672	8040

**EE0009R Lahemaa**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
CO	air	139.75	30.65	136.75	1.23	77.00	98.00	137.00	191.00	658.00	99	0	8753
Ca++	aerosol	0.23	0.28	0.09	4.23	0.02	0.02	0.10	0.79	2.03	100	152	366
Cl-	aerosol	0.22	0.26	0.12	2.86	0.05	0.05	0.05	0.73	1.43	100	202	366
K+	aerosol	0.10	0.20	0.04	3.86	0.01	0.01	0.03	0.39	2.63	100	158	366
Mg++	aerosol	0.04	0.05	0.02	2.73	0.01	0.01	0.01	0.13	0.33	100	188	366
NH4+	aerosol	1.17	1.02	0.71	3.74	0.01	0.01	0.90	3.50	5.75	100	21	366
NO2	air	1.83	1.15	1.54	1.80	0.21	0.57	1.54	4.07	9.74	100	0	365
NO3-	aerosol	0.14	0.19	0.09	2.34	0.05	0.05	0.05	0.44	2.33	100	225	366
Na+	aerosol	0.14	0.24	0.05	4.79	0.01	0.01	0.03	0.57	2.75	100	166	366
PM10 mass	pm10	5.12	2.42	4.66	1.53	1.94	2.34	4.45	10.97	11.76	95	0	50
PM25 mass	pm25	4.03	3.03	3.13	2.05	1.00	1.00	3.34	9.51	19.27	98	38	358
SO2	air	0.35	0.80	0.19	2.52	0.08	0.08	0.17	1.19	12.61	98	125	360
SO4--	aerosol	0.17	0.16	0.12	2.48	0.05	0.05	0.05	0.50	0.73	99	188	365
SO4-- corr	aerosol	0.16	0.15	0.10	2.71	-0.01	0.03	0.05	0.48	0.67	99	188	365

**EE0011R Vilsandi**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO2	air	1.62	1.22	1.28	1.99	0.21	0.43	1.25	3.92	8.48	98	0	359
PM25 mass	pm25	3.63	3.86	2.49	2.27	1.00	1.00	2.34	12.11	25.89	93	84	343
SO2	air	0.22	0.32	0.13	2.51	0.04	0.04	0.13	0.60	3.40	98	62	359







**ES1778R Montseny**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
EC	pm10	0.18	0.10	0.16	1.64	-0.00	0.06	0.16	0.36	0.72	27	1	102
OC	pm10	1.73	0.68	1.59	1.54	0.58	0.68	1.77	2.96	3.87	27	0	102
TC	pm10	1.91	0.71	1.76	1.51	0.66	0.76	1.95	3.15	4.05	27	0	102
OC,Fraction=OC1	pm10	0.26	0.13	0.23	1.80	0.02	0.09	0.24	0.51	0.68	27	0	102
OC,Fraction=OC2	pm10	0.32	0.15	0.29	1.63	0.10	0.12	0.31	0.58	0.80	27	0	102
OC,Fraction=OC3	pm10	0.40	0.16	0.37	1.53	0.13	0.17	0.40	0.70	0.84	27	0	102
OC,Fraction=OC4	pm10	0.29	0.08	0.28	1.34	0.13	0.15	0.29	0.44	0.52	27	0	102
OC,Fraction=OCPyr	pm10	0.46	0.22	0.40	1.77	0.06	0.13	0.45	0.82	1.21	27	0	102
EC	pm25	0.17	0.09	0.16	1.71	-0.04	0.05	0.16	0.34	0.44	20	1	75
OC	pm25	1.42	0.61	1.29	1.59	0.38	0.61	1.41	2.32	3.27	20	0	75
TC	pm25	1.59	0.65	1.45	1.57	0.42	0.71	1.54	2.49	3.51	20	0	75
OC,Fraction=OC1	pm25	0.24	0.13	0.20	1.81	0.02	0.07	0.21	0.54	0.76	20	0	75
OC,Fraction=OC2	pm25	0.28	0.14	0.25	1.66	0.08	0.10	0.27	0.53	0.73	20	0	75
OC,Fraction=OC3	pm25	0.25	0.12	0.23	1.63	0.08	0.10	0.24	0.47	0.64	20	0	75
OC,Fraction=OC4	pm25	0.21	0.08	0.19	1.44	0.09	0.11	0.20	0.35	0.48	20	0	75
OC,Fraction=OCPyr	pm25	0.44	0.23	0.38	1.89	0.06	0.13	0.44	0.84	1.04	20	0	75
EC	pm1	0.16	0.08	0.14	1.79	0.01	0.06	0.14	0.32	0.37	27	1	99
OC	pm1	1.52	0.69	1.37	1.61	0.33	0.62	1.51	2.90	4.60	27	0	99
TC	pm1	1.67	0.72	1.52	1.57	0.37	0.71	1.68	3.04	4.90	27	0	99
OC,Fraction=OC1	pm1	0.34	0.18	0.29	1.85	-0.00	0.10	0.29	0.65	1.15	27	0	99
OC,Fraction=OC2	pm1	0.33	0.17	0.29	1.69	0.08	0.11	0.30	0.66	1.06	27	0	99
OC,Fraction=OC3	pm1	0.22	0.12	0.19	1.71	0.05	0.07	0.20	0.42	0.80	27	0	99
OC,Fraction=OC4	pm1	0.19	0.07	0.18	1.46	0.08	0.08	0.18	0.32	0.46	27	0	99
OC,Fraction=OCPyr	pm1	0.45	0.24	0.38	1.88	0.04	0.12	0.42	0.94	1.12	27	0	99

**FI009R Utö**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Ca++	aerosol	0.06	0.09	0.04	2.54	0.00	0.01	0.04	0.21	0.63	99	4	364
Cl-	aerosol	0.56	0.65	0.24	5.31	0.00	0.01	0.35	1.97	3.86	99	17	364
HNO3	air	0.09	0.10	0.05	3.13	0.00	0.01	0.05	0.29	0.77	99	6	364
HNO3+NO3-	air+aerosol	0.25	0.25	0.16	2.60	0.00	0.04	0.17	0.63	1.74	98	6	363
K+	aerosol	0.04	0.04	0.03	2.24	0.00	0.01	0.03	0.12	0.24	99	4	364
Mg++	aerosol	0.07	0.05	0.05	2.52	0.00	0.01	0.05	0.17	0.28	99	4	364
NH3	air	0.08	0.10	0.05	3.04	0.00	0.00	0.05	0.25	1.23	98	30	363
NH3+NH4+	air+aerosol	0.28	0.32	0.18	2.77	0.01	0.03	0.18	0.90	2.18	98	0	363
NH4+	aerosol	0.20	0.28	0.12	3.17	0.00	0.01	0.12	0.69	2.10	99	17	364
NO3-	aerosol	0.16	0.19	0.10	2.88	0.00	0.02	0.10	0.49	1.42	99	7	364
Na+	aerosol	0.55	0.47	0.37	2.80	0.00	0.06	0.40	1.54	2.34	99	3	364
SO2	air	0.11	0.11	0.07	2.75	0.01	0.01	0.08	0.33	1.04	99	17	364
SO4--	aerosol	0.29	0.31	0.20	2.47	0.00	0.05	0.21	0.78	2.85	99	4	364
SO4-- corr	aerosol	0.24	0.31	0.13	3.21	-0.01	0.01	0.17	0.75	2.83	99	4	364

**FI0018R Virolahti III**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Ca++	aerosol	0.05	0.08	0.03	2.93	0.00	0.01	0.03	0.18	0.72	99	6	363
Cl-	aerosol	0.10	0.18	0.03	5.68	0.00	0.00	0.03	0.45	1.54	99	70	363
HNO3	air	0.06	0.05	0.04	2.51	0.00	0.01	0.04	0.16	0.32	99	3	363
HNO3+NO3-	air+aerosol	0.14	0.13	0.10	2.56	0.00	0.02	0.11	0.41	1.03	98	9	362
K+	aerosol	0.04	0.03	0.03	2.02	0.00	0.01	0.03	0.08	0.28	99	0	363
Mg++	aerosol	0.02	0.02	0.02	2.83	0.00	0.00	0.02	0.07	0.17	99	6	363
NH3	air	0.08	0.08	0.04	3.57	0.00	0.00	0.05	0.25	0.60	99	52	364
NH3+NH4+	air+aerosol	0.23	0.19	0.16	2.11	0.02	0.05	0.17	0.60	1.37	99	0	363
NH4+	aerosol	0.16	0.16	0.11	2.53	0.00	0.02	0.11	0.49	1.01	99	1	363
NO3-	aerosol	0.09	0.10	0.05	3.25	0.00	0.01	0.05	0.29	0.96	99	9	363
Na+	aerosol	0.17	0.19	0.09	3.36	0.00	0.01	0.10	0.52	1.48	99	1	363
SO2	air	0.16	0.16	0.10	2.61	0.01	0.02	0.11	0.47	1.10	99	3	363
SO4--	aerosol	0.23	0.19	0.18	2.14	0.03	0.04	0.19	0.60	1.38	99	0	363
SO4-- corr	aerosol	0.22	0.18	0.16	2.30	0.01	0.04	0.17	0.59	1.37	99	0	363

**FI0022R Oulanka**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Ca++	aerosol	0.01	0.01	0.01	1.86	0.00	0.00	0.01	0.03	0.04	94	0	51
Cl-	aerosol	0.05	0.10	0.01	7.75	0.00	0.00	0.01	0.34	0.40	94	11	51
HNO3	air	0.02	0.01	0.02	1.85	0.00	0.01	0.02	0.05	0.07	96	0	52
HNO3+NO3-	air+aerosol	0.03	0.02	0.03	1.69	0.01	0.01	0.03	0.07	0.09	94	5	51
K+	aerosol	0.02	0.02	0.02	1.88	0.01	0.01	0.01	0.05	0.08	94	0	51
Mg++	aerosol	0.02	0.01	0.01	2.21	0.00	0.00	0.01	0.04	0.04	94	0	51
NH3	air	0.02	0.02	0.01	3.42	0.00	0.00	0.01	0.06	0.09	94	7	51
NH3+NH4+	air+aerosol	0.08	0.05	0.07	1.77	0.02	0.03	0.07	0.15	0.27	92	0	50
NH4+	aerosol	0.06	0.04	0.05	1.84	0.01	0.02	0.06	0.13	0.27	94	0	51
NO3-	aerosol	0.01	0.01	0.01	3.06	0.00	0.00	0.01	0.03	0.07	94	5	51
Na+	aerosol	0.12	0.09	0.08	2.95	0.00	0.01	0.10	0.33	0.39	94	0	51
SO2	air	0.15	0.15	0.10	2.56	0.01	0.02	0.09	0.48	0.79	96	0	52
SO4--	aerosol	0.20	0.11	0.17	1.79	0.03	0.05	0.17	0.48	0.55	94	0	51
SO4-- corr	aerosol	0.19	0.11	0.16	1.85	0.03	0.04	0.17	0.46	0.54	94	0	51

**FI0036R Pallas (Matorova)**  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	aerosol	0.01	0.01	0.01	3.04	0.00	0.00	0.01	0.03	0.11	90	58	339
Cl-	aerosol	0.18	0.28	0.04	7.80	0.00	0.00	0.05	0.78	1.90	90	76	339
HNO3	air	0.01	0.01	0.01	2.66	0.00	0.00	0.01	0.03	0.16	90	98	340
HNO3+NO3-	air+aerosol	0.03	0.02	0.02	2.22	0.00	0.00	0.02	0.07	0.17	90	79	339
K+	aerosol	0.01	0.01	0.01	2.47	0.00	0.00	0.01	0.03	0.08	90	28	339
Mg++	aerosol	0.02	0.02	0.01	3.51	0.00	0.00	0.01	0.06	0.14	90	31	339
NH3	air	0.01	0.02	0.01	2.23	0.00	0.00	0.00	0.04	0.16	90	213	338
NH3+NH4+	air+aerosol	0.06	0.06	0.04	2.42	0.00	0.01	0.04	0.17	0.59	89	0	336
NH4+	aerosol	0.05	0.06	0.04	2.58	0.00	0.00	0.04	0.15	0.59	90	13	339
NO3-	aerosol	0.02	0.02	0.01	2.76	0.00	0.00	0.01	0.04	0.17	90	79	339
Na+	aerosol	0.16	0.20	0.08	4.22	0.00	0.00	0.08	0.55	1.28	90	20	339
SO2	air	0.12	0.32	0.03	4.64	0.01	0.01	0.02	0.72	3.37	90	111	340
SO4--	aerosol	0.16	0.17	0.10	2.90	0.00	0.02	0.10	0.50	1.25	90	9	339
SO4-- corr	aerosol	0.14	0.17	0.08	3.42	0.00	0.01	0.09	0.48	1.24	90	9	339

**FI0050R Hyytiälä**  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	aerosol	0.02	0.02	0.02	1.97	0.00	0.01	0.02	0.08	0.13	94	1	50
Cl-	aerosol	0.05	0.08	0.02	5.71	0.00	0.00	0.02	0.22	0.35	94	6	50
HNO3	air	0.04	0.04	0.03	2.62	0.00	0.00	0.03	0.10	0.19	94	1	50
HNO3+NO3-	air+aerosol	0.11	0.08	0.09	1.96	0.00	0.02	0.09	0.33	0.42	94	1	50
K+	aerosol	0.05	0.03	0.03	2.87	0.00	0.00	0.04	0.12	0.14	94	2	50
Mg++	aerosol	0.02	0.01	0.01	1.70	0.00	0.01	0.01	0.04	0.04	94	1	50
NH3	air	0.06	0.05	0.04	3.02	0.00	0.01	0.04	0.18	0.20	94	2	50
NH3+NH4+	air+aerosol	0.06	0.05	0.04	3.15	0.00	0.00	0.05	0.15	0.29	94	3	50
NH4+	aerosol	0.17	0.09	0.14	1.91	0.01	0.04	0.15	0.35	0.43	94	0	50
NO3-	aerosol	0.09	0.05	0.07	1.91	0.01	0.02	0.07	0.19	0.19	94	1	50
Na+	aerosol	0.04	0.02	0.04	1.61	0.01	0.01	0.04	0.08	0.09	94	0	50
SO2	air	0.19	0.11	0.17	1.68	0.04	0.08	0.17	0.41	0.61	94	2	50
SO4--	aerosol	0.12	0.09	0.09	2.26	0.00	0.01	0.10	0.33	0.41	94	1	50
SO4-- corr	aerosol	0.11	0.09	0.08	2.51	0.00	0.01	0.10	0.32	0.40	94	1	50

**FI0096G Pallas (Sammaltunturi)**  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.03	0.01	0.03	1.49	-0.01	0.02	0.03	0.05	0.38	98	0	8641
NO2	air	0.28	0.13	0.25	1.52	0.09	0.13	0.25	0.52	1.61	98	0	8641

**FR0009R Revin**  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	pm25	0.03	0.03	0.02	2.42	0.00	0.01	0.03	0.08	0.20	16	6	59
Cl-	pm25	0.03	0.06	0.02	2.64	0.00	0.01	0.01	0.13	0.41	16	33	59
K+	pm25	0.05	0.06	0.03	2.35	0.01	0.01	0.03	0.24	0.35	16	10	59
Mg++	pm25	0.01	0.01	0.01	3.07	0.00	0.00	0.01	0.03	0.06	16	4	59
NH4+	pm25	0.17	0.15	0.12	2.46	0.01	0.02	0.11	0.55	0.66	16	0	59
NO3-	pm25	0.29	0.37	0.13	3.88	0.01	0.02	0.13	1.17	1.58	16	0	59
Na+	pm25	0.09	0.10	0.05	3.23	0.00	0.00	0.06	0.33	0.56	16	2	59
PM10 mass	pm10	10.50	7.76	8.57	2.03	-3.00	2.00	9.00	25.00	69.00	97	0	8581
PM25 mass	pm25	6.16	6.62	4.87	2.30	-3.00	0.00	5.00	18.00	60.00	98	0	8606
SO4--	pm25	0.40	0.25	0.34	1.77	0.07	0.13	0.30	1.03	1.35	16	0	59
SO4-- corr	pm25	0.39	0.25	0.33	1.80	0.07	0.11	0.30	1.03	1.35	16	0	59
EC	pm25	0.17	0.10	0.15	1.65	0.04	0.07	0.15	0.45	0.58	16	0	59
OC	pm25	1.89	1.13	1.65	1.66	0.52	0.80	1.56	4.89	5.71	16	0	59
OC, Fraction=OC1	pm25	0.22	0.14	0.18	1.93	0.03	0.05	0.20	0.56	0.70	16	0	59
OC, Fraction=OC2	pm25	0.53	0.32	0.46	1.72	0.17	0.20	0.49	1.38	1.59	16	0	59
OC, Fraction=OC3	pm25	0.35	0.19	0.31	1.59	0.09	0.16	0.31	0.87	1.01	16	1	59
OC, Fraction=OC4	pm25	0.57	0.51	0.46	1.83	0.15	0.19	0.43	2.02	2.89	16	0	59
OC, Fraction=OCPyr	pm25	0.22	0.20	0.14	3.11	0.01	0.01	0.18	0.72	0.99	16	9	59
TC	pm25	2.06	1.20	1.82	1.63	0.62	0.97	1.64	5.04	6.29	16	0	59

**FR0010R Morvan**  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
PM10 mass	pm10	9.46	6.81	7.82	1.96	-3.00	2.00	8.00	22.00	62.00	98	0	8651
PM25 mass	pm25	7.35	5.31	6.22	1.84	-3.00	2.00	6.00	16.00	51.00	97	0	8550

**FR0013R Peyrusse Vieille**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num
Ca++	pm25	0.02	0.01	0.01	2.19	0.00	0.00	0.01	0.04	0.06	13	6	51
Cl-	pm25	0.03	0.07	0.01	2.71	0.00	0.00	0.01	0.11	0.48	13	35	51
K+	pm25	0.04	0.04	0.03	2.45	0.01	0.01	0.03	0.13	0.20	13	15	51
Mg++	pm25	0.01	0.01	0.01	2.40	0.00	0.00	0.01	0.02	0.05	13	1	51
NH4+	pm25	0.07	0.06	0.05	2.56	0.00	0.01	0.06	0.22	0.25	13	2	51
NO3-	pm25	0.04	0.06	0.02	3.29	0.00	0.00	0.02	0.18	0.38	13	2	51
Na+	pm25	0.07	0.08	0.04	2.93	0.00	0.00	0.05	0.23	0.48	13	3	51
PM10 mass	pm10	16.73	7.88	15.04	1.60	2.00	7.00	15.00	33.60	50.00	24	0	2127
PM25 mass	pm25	10.59	4.91	9.64	1.54	-1.00	5.00	9.00	20.00	41.00	85	0	7503
SO4--	pm25	0.29	0.21	0.24	1.95	0.07	0.08	0.24	0.79	0.99	13	0	51
SO4-- corr	pm25	0.29	0.21	0.23	1.98	0.07	0.07	0.23	0.79	0.99	13	0	51
EC	pm25	0.13	0.10	0.10	2.00	0.02	0.02	0.09	0.39	0.41	14	3	54
OC	pm25	1.70	0.91	1.48	1.69	0.61	0.61	1.47	3.65	4.40	14	0	54
TC	pm25	1.83	0.98	1.60	1.69	0.66	0.66	1.57	4.05	4.65	14	0	54
OC,Fraction=OC1	pm25	0.16	0.10	0.14	1.90	0.03	0.03	0.15	0.37	0.48	14	0	54
OC,Fraction=OC2	pm25	0.49	0.25	0.43	1.65	0.16	0.18	0.44	1.03	1.27	14	0	54
OC,Fraction=OC3	pm25	0.39	0.21	0.34	1.66	0.12	0.15	0.32	0.89	0.99	14	0	54
OC,Fraction=OC4	pm25	0.45	0.31	0.38	1.84	0.14	0.14	0.33	1.20	1.48	14	0	54
OC,Fraction=OCPyr	pm25	0.20	0.17	0.12	3.11	0.01	0.01	0.17	0.53	0.78	14	8	54

**FR0014R Montandon**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num
PM10 mass	pm10	13.04	8.38	10.91	1.97	-3.00	2.00	12.00	29.00	72.00	96	0	8442

**FR0015R La Tardière**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num
PM10 mass	pm10	13.90	8.61	11.78	1.83	-2.00	4.00	12.00	29.00	91.00	94	0	8295
PM25 mass	pm25	9.18	8.44	6.86	2.21	-2.00	2.00	7.00	24.00	79.00	86	0	7536

**FR0018R La Coulonche**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num
PM10 mass	pm10	11.65	8.23	9.11	2.11	1.00	2.00	10.00	27.00	64.00	91	0	8035
PM25 mass	pm25	7.42	7.49	5.61	2.28	-2.00	0.00	5.00	22.00	57.00	88	0	7746

**FR0019R Pic du Midi**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num
CO	air	117.96	30.36	115.79	1.19	67.52	89.97	115.34	144.44	1050.98	69	0	6117
EC	aerosol	0.03	0.02	0.03	1.88	0.00	0.01	0.02	0.08	0.09	64	0	34
OC	aerosol	0.48	0.21	0.41	1.98	0.02	0.16	0.44	0.85	0.85	64	0	34
TC	aerosol	0.51	0.23	0.44	2.00	0.02	0.18	0.47	0.90	0.92	64	0	34
OC,Fraction=OC1	aerosol	0.16	0.06	0.15	1.77	0.01	0.06	0.16	0.28	0.28	64	0	34
OC,Fraction=OC2	aerosol	0.08	0.03	0.08	1.72	0.01	0.04	0.08	0.15	0.16	64	0	34
OC,Fraction=OC3	aerosol	0.10	0.05	0.08	2.11	0.00	0.03	0.09	0.18	0.20	64	0	34
OC,Fraction=OC4	aerosol	0.11	0.06	0.10	1.77	0.00	0.03	0.10	0.22	0.23	64	0	34
OC,Fraction=OCPyr	aerosol	0.03	0.03	0.02	3.10	0.00	0.00	0.01	0.08	0.08	64	0	34

**FR0023R Saint-Nazaire-le-Désert**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num
Ca++	pm25	0.06	0.07	0.03	3.58	0.00	0.01	0.04	0.17	0.32	16	7	60
Cl-	pm25	0.01	0.01	0.01	2.16	0.00	0.00	0.01	0.03	0.05	16	47	60
K+	pm25	0.05	0.04	0.04	2.13	0.01	0.01	0.04	0.16	0.17	16	7	60
Mg++	pm25	0.01	0.01	0.00	3.20	0.00	0.00	0.00	0.03	0.03	16	7	60
NH4+	pm25	0.09	0.07	0.07	2.24	0.01	0.01	0.08	0.25	0.38	16	0	60
NO3-	pm25	0.08	0.16	0.03	4.42	0.00	0.00	0.03	0.32	1.08	16	3	60
Na+	pm25	0.05	0.05	0.03	2.78	0.00	0.00	0.04	0.14	0.28	16	4	60
PM10 mass	pm10	8.51	7.06	6.20	2.31	0.00	1.00	7.00	22.00	68.00	98	0	8629
PM25 mass	pm25	5.62	5.24	3.99	2.35	0.00	1.00	4.00	15.00	65.00	98	0	8610
SO4--	pm25	0.31	0.20	0.25	2.06	0.04	0.06	0.27	0.69	1.00	16	0	60
SO4-- corr	pm25	0.30	0.20	0.24	2.08	0.04	0.05	0.27	0.69	0.99	16	0	60
EC	pm25	0.15	0.09	0.13	1.67	0.05	0.06	0.13	0.37	0.43	16	0	61
OC	pm25	2.01	0.92	1.81	1.59	0.63	0.81	1.95	3.93	4.60	16	0	61
TC	pm25	2.16	0.98	1.96	1.57	0.68	0.89	2.15	4.07	4.88	16	0	61
OC,Fraction=OC1	pm25	0.22	0.12	0.18	1.94	0.03	0.05	0.21	0.45	0.61	16	0	61
OC,Fraction=OC2	pm25	0.60	0.31	0.53	1.65	0.20	0.24	0.52	1.32	1.51	16	0	61
OC,Fraction=OC3	pm25	0.43	0.20	0.39	1.52	0.16	0.22	0.38	0.83	1.18	16	0	61
OC,Fraction=OC4	pm25	0.52	0.28	0.46	1.69	0.15	0.18	0.46	1.23	1.37	16	0	61
OC,Fraction=OCPyr	pm25	0.23	0.15	0.18	2.13	0.03	0.03	0.23	0.52	0.68	16	2	61



**FR0024R Guipry**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	pm25	0.01	0.01	0.01	1.78	0.00	0.00	0.01	0.03	0.04	15	3	55
Cl-	pm25	0.16	0.21	0.08	3.42	0.01	0.01	0.10	0.54	1.30	15	11	55
K+	pm25	0.05	0.10	0.03	2.72	0.01	0.01	0.03	0.28	0.67	15	18	55
Mg++	pm25	0.01	0.01	0.01	2.67	0.00	0.00	0.01	0.04	0.09	15	2	55
NH4+	pm25	0.19	0.28	0.10	2.83	0.01	0.01	0.10	0.62	1.83	15	0	55
NO3-	pm25	0.36	0.70	0.14	3.83	0.01	0.01	0.13	1.53	4.53	15	0	55
Na+	pm25	0.12	0.14	0.08	2.43	0.01	0.02	0.07	0.38	0.88	15	0	55
PM10 mass	pm10	14.38	9.05	12.05	1.84	-1.00	4.00	12.00	32.00	74.00	90	0	7913
PM25 mass	pm25	8.79	8.66	6.41	2.29	-3.00	1.00	6.00	26.00	73.00	91	0	8010
SO4--	pm25	0.33	0.24	0.27	1.95	0.03	0.08	0.30	1.05	1.22	15	0	55
SO4-- corr	pm25	0.32	0.25	0.25	2.04	0.03	0.06	0.29	1.04	1.22	15	0	55
EC	pm25	0.32	0.23	0.27	1.79	0.08	0.11	0.24	0.82	1.30	15	0	55
OC	pm25	2.08	2.49	1.54	2.00	0.44	0.55	1.48	6.53	15.87	15	0	55
TC	pm25	2.40	2.69	1.82	1.95	0.55	0.71	1.72	7.31	16.97	15	0	55
OC,Fraction=OC1	pm25	0.18	0.16	0.13	2.20	0.01	0.04	0.14	0.46	1.03	15	1	55
OC,Fraction=OC2	pm25	0.59	0.72	0.44	1.98	0.12	0.17	0.43	1.87	4.53	15	0	55
OC,Fraction=OC3	pm25	0.42	0.43	0.32	1.99	0.10	0.12	0.29	1.38	2.31	15	0	55
OC,Fraction=OC4	pm25	0.65	0.79	0.46	2.13	0.13	0.14	0.44	2.30	4.64	15	0	55
OC,Fraction=OCPyr	pm25	0.24	0.53	0.11	3.44	0.01	0.01	0.14	0.67	3.93	15	10	55

**FR0025R Verneuil**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	pm25	0.02	0.02	0.01	2.28	0.00	0.00	0.02	0.09	0.14	16	7	59
Cl-	pm25	0.04	0.09	0.02	3.12	0.00	0.00	0.01	0.18	0.60	16	42	59
K+	pm25	0.05	0.07	0.03	2.49	0.01	0.01	0.04	0.12	0.53	16	14	59
Mg++	pm25	0.01	0.01	0.01	2.67	0.00	0.00	0.01	0.03	0.05	16	2	59
NH4+	pm25	0.10	0.15	0.06	2.72	0.00	0.01	0.07	0.26	1.14	16	2	59
NO3-	pm25	0.15	0.40	0.04	4.88	0.00	0.00	0.03	0.67	2.96	16	0	59
Na+	pm25	0.07	0.10	0.04	2.84	0.00	0.01	0.04	0.30	0.48	16	2	59
PM25 mass	pm25	7.04	8.60	5.21	2.32	-3.00	0.00	5.00	22.00	77.00	96	0	8476
SO4--	pm25	0.28	0.17	0.23	1.83	0.05	0.06	0.23	0.70	0.85	16	0	59
SO4-- corr	pm25	0.27	0.17	0.22	1.90	0.04	0.06	0.23	0.70	0.85	16	0	59
EC	pm25	0.16	0.12	0.13	1.95	0.02	0.04	0.12	0.39	0.79	16	2	60
OC	pm25	1.95	1.48	1.65	1.74	0.51	0.57	1.66	4.01	10.87	16	0	60
TC	pm25	2.11	1.59	1.78	1.73	0.55	0.61	1.87	4.40	11.66	16	0	60
OC,Fraction=OC1	pm25	0.17	0.10	0.14	1.81	0.05	0.05	0.15	0.36	0.50	16	0	60
OC,Fraction=OC2	pm25	0.56	0.43	0.48	1.72	0.14	0.20	0.47	1.03	3.08	16	0	60
OC,Fraction=OC3	pm25	0.42	0.27	0.36	1.69	0.09	0.15	0.36	0.89	1.87	16	1	60
OC,Fraction=OC4	pm25	0.56	0.52	0.44	1.93	0.10	0.14	0.47	1.30	3.62	16	0	60
OC,Fraction=OCPyr	pm25	0.24	0.27	0.16	2.60	0.01	0.03	0.18	0.49	2.05	16	4	60

**FR0030R Puy de Dôme**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
CO	air	117.88	23.33	115.75	1.21	62.35	84.45	117.45	153.95	345.78	96	0	8495
SO2	air	0.17	0.12	0.14	1.64	0.03	0.07	0.13	0.34	2.31	88	0	7777

**GB0002R Eskdalemuir**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.23	0.11	0.21	1.44	0.00	0.12	0.21	0.37	3.68	92	8069	8124
NO2	air	0.61	0.77	0.41	2.37	-0.07	0.11	0.39	1.73	13.18	92	6111	8124

**GB0006R Lough Navar**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
PM10 mass	pm10	5.63	6.26	4.20	2.73	-4.00	-0.90	4.20	16.60	57.10	94	4713	8251

**GB0013R Yarner Wood**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.23	0.36	0.18	1.89	-0.04	0.07	0.17	0.53	13.00	89	7541	7804
NO2	air	0.98	1.23	0.61	2.78	-0.50	0.10	0.59	3.18	15.68	89	4492	7797

**GB0014R High Muffles**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.33	0.53	0.24	2.04	-0.11	0.08	0.25	0.68	10.61	78	6594	6911
NO2	air	1.57	2.09	0.85	3.15	-0.08	0.13	0.84	5.68	18.78	78	2982	6911

**GB0031R Aston Hill**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.12	0.17	0.09	2.07	-0.14	0.02	0.09	0.29	3.99	97	8435	8522
NO2	air	0.90	1.18	0.60	2.27	-0.02	0.19	0.55	2.83	18.55	97	5340	8522

**GB0033R Bush**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.46	0.80	0.35	1.82	0.06	0.17	0.31	1.12	25.82	97	7602	8568
NO2	air	1.43	1.80	0.81	3.11	-0.16	0.10	0.83	4.73	17.67	97	3762	8568

**GB0037R Ladybower Res.**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.48	0.34	0.42	1.60	0.09	0.22	0.40	0.98	5.85	98	7626	8667
NO2	air	1.94	1.89	1.31	2.63	-0.16	0.24	1.42	5.37	18.04	98	1977	8667
SO2	air	1.23	0.85	1.04	1.82	0.00	0.36	1.10	2.46	24.60	95	7412	8347
SO2	air	1.23	0.92	1.02	1.93	-0.41	0.27	1.08	2.55	38.32	9328471	32739	

**GB0038R Lullington Heath**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.36	0.53	0.26	2.16	-0.04	0.08	0.25	0.98	12.24	98	7827	8619
NO2	air	2.35	2.35	1.60	2.49	-0.08	0.34	1.65	6.71	21.44	98	1521	8607
SO2	air	0.53	0.41	0.41	2.10	0.00	0.10	0.44	1.21	8.83	84	7355	7414
SO2	air	0.53	0.43	0.44	1.98	0.00	0.13	0.41	1.22	15.62	8429195	29440	

**GB0043R Narberth**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.33	0.44	0.27	1.82	-0.14	0.11	0.27	0.65	13.92	97	8178	8528
NO2	air	0.91	1.38	0.53	2.89	-0.09	0.10	0.51	2.81	15.56	97	5382	8528
PM10 mass	pm10	11.05	8.33	8.64	2.17	-3.50	2.00	9.10	27.30	61.20	94	1681	8299
SO2	air	0.67	0.48	0.55	1.89	0.00	0.19	0.56	1.48	5.99	86	7450	7601
SO2	air	0.68	0.50	0.56	1.89	0.00	0.13	0.56	1.52	7.48	8429168	29782	

**GB0045R Wicken Fen**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.54	1.62	0.21	3.19	-0.05	0.03	0.18	1.69	26.24	97	7446	8521
NO2	air	2.70	2.61	1.88	2.40	0.01	0.48	1.89	8.06	19.85	97	974	8520
SO2	air	0.53	0.33	0.45	1.84	-0.03	0.16	0.47	1.09	4.19	81	7102	7138
SO2	air	0.53	0.35	0.46	1.81	-0.27	0.13	0.51	1.15	5.50	7927806	27981	

**GB0048R Auchencorth Moss**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	pm10	0.02	0.03	0.01	4.45	0.00	0.00	0.01	0.08	0.33	54	979	4753
Ca++	pm25	0.01	0.02	0.00	3.91	0.00	0.00	0.01	0.04	0.44	55	1836	4824
Cl-	pm10	1.14	1.48	0.55	3.72	0.00	0.06	0.63	3.91	12.06	72	8	6322
Cl-	pm25	0.62	0.84	0.32	3.38	0.00	0.04	0.34	2.02	9.19	73	15	6459
HNO3	air	0.02	0.02	0.01	2.65	0.00	0.00	0.01	0.06	0.39	74	116	6505
K+	pm10	0.05	0.04	0.03	3.82	0.00	0.00	0.04	0.11	0.65	54	537	4753
K+	pm25	0.03	0.03	0.01	4.69	0.00	0.00	0.02	0.07	0.60	53	1150	4668
Mg++	pm10	0.05	0.08	0.02	4.72	0.00	0.00	0.03	0.17	1.04	54	534	4753
Mg++	pm25	0.02	0.04	0.01	5.35	0.00	0.00	0.01	0.09	0.46	55	850	4824
NH3	air	1.09	1.20	0.73	2.38	0.01	0.19	0.70	3.17	18.66	70	5	6211
NH4+	pm10	0.44	0.72	0.17	5.14	0.00	0.00	0.21	1.66	7.40	52	305	4620
NH4+	pm25	0.42	0.69	0.18	4.42	0.00	0.02	0.19	1.62	7.57	52	206	4592
NO3-	pm10	0.27	0.50	0.11	3.73	0.00	0.02	0.10	1.09	4.63	72	19	6324
NO3-	pm25	0.23	0.46	0.09	3.73	0.00	0.01	0.08	0.97	4.52	73	22	6459
Na+	pm10	0.58	0.88	0.25	4.93	0.00	0.02	0.34	1.87	13.85	53	111	4717
Na+	pm25	0.34	0.48	0.15	4.71	0.00	0.01	0.20	1.08	5.46	52	138	4586
PM10 mass	pm10	6.42	6.36	4.75	2.56	-4.00	0.00	5.10	18.60	81.10	97	4253	8514
PM25 mass	pm25	4.53	4.97	3.33	2.44	-4.00	0.10	3.40	13.70	64.60	93	5929	8230
SO2	air	0.05	0.07	0.04	2.10	0.00	0.01	0.03	0.15	1.22	74	6	6505
SO4--	pm10	0.29	0.29	0.21	2.25	0.00	0.06	0.20	0.81	3.33	72	1	6324
SO4--	pm25	0.26	0.27	0.18	2.28	0.00	0.05	0.17	0.77	3.44	73	3	6459
SO4-- corr	pm10	0.24	0.28	0.16	2.50	-0.04	0.04	0.15	0.75	3.33	72	1	6324
SO4-- corr	pm25	0.23	0.27	0.15	2.51	-0.02	0.04	0.15	0.75	3.44	73	3	6459

**GB0050R St. Osyth**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	1.38	3.58	0.63	3.28	-0.06	0.07	0.61	4.40	64.61	97	3175	8515
NO2	air	4.60	3.39	3.64	1.99	0.26	1.18	3.59	11.75	23.31	96	13	8424

**GB0051R Market Harborough**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.45	1.65	0.20	3.05	-0.10	0.04	0.16	1.57	79.21	93	6299	8203
NO2	air	2.86	2.65	2.08	2.19	0.15	0.62	2.00	8.62	21.70	93	99	8203

**GB0053R Charlton Mackrell**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	0.46	0.91	0.31	2.07	-0.04	0.12	0.28	1.05	23.18	96	7663	8489
NO2	air	1.76	1.90	1.18	2.50	-0.07	0.26	1.21	5.43	17.93	96	2257	8488

**GB1055R Chilbolton Observatory**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	pm10	0.53	0.53	0.31	3.30	0.00	0.01	0.38	1.48	10.32	80	399	7025
Ca++	pm25	0.14	0.13	0.07	4.32	0.00	0.00	0.11	0.37	2.34	81	1295	7125
Cl-	pm10	1.36	1.74	0.47	6.65	0.01	0.01	0.78	4.72	17.97	76	980	6726
Cl-	pm25	0.62	0.83	0.27	3.90	0.01	0.05	0.33	2.22	8.83	76	1540	6739
HNO3	air	0.04	0.03	0.02	3.31	0.00	0.00	0.03	0.10	1.00	79	525	6922
K+	pm10	0.07	0.14	0.13	1.77	0.00	0.00	0.00	0.24	4.75	80	3721	7031
K+	pm25	0.05	0.12	0.11	1.93	0.00	0.00	0.00	0.20	3.84	81	4906	7134
Mg++	pm10	0.35	0.34	0.17	5.54	0.00	0.00	0.26	0.99	2.96	80	487	7031
Mg++	pm25	0.20	0.21	0.08	5.80	0.00	0.00	0.13	0.61	1.92	81	1014	7132
NH3	air	5.12	6.34	3.12	2.71	0.02	0.65	3.01	16.46	77.61	81	2	7162
NH4+	pm10	0.91	1.25	0.37	5.61	0.00	0.00	0.47	3.45	16.80	79	420	6970
NH4+	pm25	0.81	1.16	0.36	4.34	0.01	0.01	0.41	3.24	17.56	80	360	7095
NO3-	pm10	0.76	0.94	0.43	3.08	0.00	0.07	0.43	2.77	8.12	78	5	6833
NO3-	pm25	0.63	0.83	0.33	3.25	0.00	0.05	0.31	2.48	6.56	78	11	6864
Na+	pm10	0.66	0.87	0.42	3.28	0.00	0.00	0.36	2.35	8.63	80	1018	7030
Na+	pm25	0.28	0.40	0.21	2.88	0.00	0.00	0.14	1.09	4.25	81	1586	7127
PM10 mass	pm10	13.33	9.18	11.01	1.90	-3.80	3.80	11.20	30.30	242.40	97	863	8558
PM25 mass	pm25	7.38	8.06	5.10	2.60	-4.00	0.40	5.05	22.90	186.80	97	4282	8564
SO2	air	0.07	0.07	0.05	2.03	0.00	0.01	0.05	0.16	2.13	78	77	6843
SO4--	pm10	0.54	0.45	0.42	2.01	0.00	0.13	0.41	1.44	5.28	76	2	6677
SO4--	pm25	0.46	0.41	0.35	2.10	0.00	0.11	0.33	1.31	4.49	77	3	6771
SO4-- corr	pm10	0.48	0.45	0.35	2.16	-0.10	0.11	0.34	1.42	5.26	76	2	6677
SO4-- corr	pm25	0.44	0.42	0.32	2.22	-0.09	0.09	0.30	1.31	4.49	77	3	6771

**GE0001R Abastumani**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Cl-	aerosol	0.25	0.12	0.22	1.86	0.05	0.06	0.27	0.44	0.58	23	0	84
HNO3	air	0.24	0.33	0.15	2.99	0.00	0.03	0.15	1.11	1.97	23	0	84
HNO3+NO3-	air+aerosol	0.42	0.38	0.34	1.83	0.10	0.13	0.31	1.48	2.04	23	0	84
NH3	air	0.45	0.31	0.28	3.42	0.00	0.03	0.53	0.97	1.04	23	0	84
NH3+NH4+	air+aerosol	0.60	0.40	0.39	3.06	0.01	0.05	0.66	1.38	1.63	23	0	84
NO3-	aerosol	0.18	0.15	0.15	1.87	0.03	0.07	0.14	0.52	0.99	23	0	84
SO2	air	0.14	0.60	0.05	3.28	0.00	0.01	0.04	0.39	5.49	23	0	84
SO4--	aerosol	0.11	0.14	0.05	4.49	0.00	0.00	0.08	0.30	0.90	23	0	84
SO4-- corr	aerosol	0.01	0.16	0.06	3.26	-0.30	-0.17	0.00	0.26	0.85	23	0	84

**GR0001R Aliartos**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
NO	air	1.96	3.28	1.06	2.63	0.50	0.50	0.50	8.00	36.00	52	0	4622
NO2	air	3.75	3.41	2.47	2.61	0.30	0.60	2.40	11.00	20.80	54	0	4781
PM10 mass	pm10	31.19	25.07	24.75	1.98	1.00	8.00	25.00	74.90	319.00	67	0	5881
PM25 mass	pm25	14.71	13.86	11.06	2.16	0.00	3.00	11.00	41.00	158.00	67	0	5889
SO2	air	5.05	4.54	3.31	2.65	1.00	1.00	5.00	12.00	59.10	74	0	6566

**HU0002R K-puszt**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
HNO3	air	0.24	0.16	0.20	1.86	0.01	0.07	0.21	0.48	1.28	97	0	356
NH3	air	1.60	0.97	1.19	2.66	0.03	0.16	1.46	3.39	4.48	94	10	347
NH4+	aerosol	0.84	1.11	0.41	4.02	0.00	0.02	0.47	3.08	9.23	97	9	355
NO2	air	1.18	0.75	1.02	1.66	0.24	0.47	0.96	2.72	6.38	99	0	365
NO3-	aerosol	0.57	0.68	0.33	2.86	0.03	0.07	0.29	1.96	5.87	97	0	357
PM10 mass	pm10	15.46	9.17	12.82	1.92	1.08	3.76	13.90	31.82	99.63	67	0	5879
PM25 mass	pm25	13.93	14.43	9.87	2.26	0.95	2.76	9.35	43.13	130.77	87	0	320
SO2	air	0.72	0.88	0.40	3.14	0.02	0.05	0.40	2.63	5.99	95	12	348
SO4--	aerosol	0.98	1.02	0.72	2.09	0.11	0.24	0.65	3.11	7.62	97	0	357

HU0003R Farkasfa  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
HNO3	air	0.27	0.29	0.19	2.13	0.03	0.06	0.19	0.66	2.81	85	0	314
NH3	air	0.75	0.49	0.56	2.44	0.03	0.08	0.65	1.68	2.80	85	12	313
NH4+	aerosol	0.58	0.92	0.19	5.37	0.01	0.01	0.23	2.75	5.71	85	27	314
NO2	air	0.96	0.68	0.78	1.94	0.10	0.27	0.76	2.32	4.05	100	0	366
NO3-	aerosol	0.31	0.44	0.15	3.20	0.01	0.03	0.14	1.21	2.35	85	2	314
PM10 mass	pm10	16.80	16.40	11.57	2.40	1.00	2.56	12.05	54.87	131.83	70	0	6186
PM2.5 mass	pm25	15.96	20.20	10.13	2.51	1.03	2.30	9.84	54.93	226.70	78	0	6901
SO2	air	0.41	0.93	0.16	3.40	0.02	0.02	0.15	1.93	9.40	85	25	314
SO4--	aerosol	0.82	1.31	0.45	3.00	0.01	0.09	0.46	3.10	11.77	85	6	314

IE0001R Valentia Observatory  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	aerosol	0.30	0.49	0.16	2.79	0.03	0.03	0.14	1.41	3.92	82	27	301
Cl-	aerosol	7.57	13.62	4.93	2.22	0.62	1.48	4.97	14.99	143.93	82	0	301
HNO3+NO3-	air+aerosol	0.23	0.28	0.17	2.06	0.05	0.07	0.14	0.91	2.36	82	0	301
K+	aerosol	0.19	0.39	0.12	2.23	0.03	0.03	0.12	0.39	3.80	82	25	303
Mg++	aerosol	0.44	1.06	0.23	2.85	0.03	0.03	0.25	0.94	11.37	82	20	301
NH3+NH4+	air+aerosol	0.77	0.53	0.65	1.68	0.22	0.34	0.59	1.99	3.56	80	0	295
NO2	air	1.79	2.16	1.11	2.65	0.05	0.20	1.10	5.80	18.30	90	2	331
Na+	aerosol	4.12	8.55	2.40	2.59	0.10	0.42	2.58	8.05	91.64	82	24	302
SO2	air	0.19	0.24	0.14	2.00	0.01	0.05	0.14	0.47	3.15	82	0	302
SO4--	aerosol	0.53	0.62	0.42	1.83	0.01	0.18	0.41	1.02	7.83	82	1	301
SO4-- corr	aerosol	0.18	0.45	0.13	2.82	-6.75	0.01	0.13	0.66	0.93	82	1	301

IE0005R Oak Park  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	aerosol	0.07	0.06	0.05	2.11	0.01	0.02	0.05	0.20	0.53	99	26	364
Cl-	aerosol	1.41	0.99	1.10	2.07	0.16	0.32	1.23	3.41	6.90	99	0	364
K+	aerosol	0.06	0.04	0.05	1.76	0.01	0.02	0.05	0.13	0.29	99	4	364
Mg++	aerosol	0.08	0.06	0.06	2.19	0.01	0.02	0.06	0.20	0.46	99	22	364
NH4+	aerosol	0.47	0.50	0.36	1.93	0.12	0.16	0.30	1.52	3.77	99	0	364
NO3-	aerosol	0.25	0.40	0.13	2.89	0.02	0.03	0.11	1.02	3.45	99	0	364
Na+	aerosol	0.72	0.55	0.52	2.41	0.03	0.10	0.61	1.82	3.87	99	0	364
SO4--	aerosol	0.26	0.19	0.22	1.78	0.05	0.10	0.20	0.66	1.52	99	0	364
SO4-- corr	aerosol	0.20	0.18	0.14	2.30	0.01	0.04	0.13	0.60	1.39	99	0	364

IE0006R Malin Head  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	aerosol	0.11	0.07	0.09	1.96	0.01	0.03	0.09	0.26	0.45	98	2	358
Cl-	aerosol	3.63	2.46	2.92	1.97	0.40	0.89	3.00	8.99	14.03	98	0	358
K+	aerosol	0.09	0.06	0.08	1.76	0.02	0.03	0.08	0.20	0.61	98	0	358
Mg++	aerosol	0.22	0.17	0.17	2.19	0.01	0.04	0.18	0.60	0.95	98	2	359
NH4+	aerosol	0.29	0.27	0.24	1.73	0.08	0.12	0.21	0.66	2.94	93	0	342
NO3-	aerosol	0.12	0.24	0.05	3.18	0.01	0.01	0.05	0.50	2.68	94	3	345
Na+	aerosol	1.97	1.38	1.56	2.03	0.16	0.43	1.67	4.95	9.16	98	0	358
SO4--	aerosol	0.33	0.20	0.29	1.60	0.10	0.15	0.28	0.67	1.89	97	0	357
SO4-- corr	aerosol	0.17	0.20	0.10	2.81	-0.02	0.01	0.11	0.58	1.72	97	0	357

IE0008R Carnsore Point  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	aerosol	0.16	0.13	0.13	2.08	0.02	0.03	0.13	0.42	0.78	99	2	364
Cl-	aerosol	5.13	3.88	3.83	2.25	0.39	0.91	4.07	13.07	24.09	99	0	364
K+	aerosol	0.14	0.09	0.11	1.92	0.01	0.04	0.11	0.30	0.61	99	0	364
Mg++	aerosol	0.34	0.27	0.25	2.42	0.01	0.06	0.27	0.87	1.71	99	2	364
NH4+	aerosol	0.44	0.47	0.34	1.90	0.13	0.16	0.28	1.45	3.34	99	0	364
NO3-	aerosol	0.27	0.40	0.14	2.78	0.01	0.04	0.11	1.19	2.38	99	0	364
Na+	aerosol	2.89	2.19	2.14	2.29	0.14	0.50	2.33	7.07	13.85	99	0	364
SO4--	aerosol	0.46	0.28	0.40	1.74	0.10	0.15	0.41	0.91	2.12	99	0	364
SO4-- corr	aerosol	0.22	0.23	0.15	2.48	-0.16	0.03	0.15	0.68	1.78	99	0	364

IS0002R Irafoss  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	aerosol	0.17	0.29	0.08	3.02	0.01	0.01	0.07	0.76	2.04	95	138	349
Cl-	aerosol	1.85	1.99	1.04	3.16	0.04	0.20	1.12	6.34	10.04	95	24	349
K+	aerosol	0.51	8.21	0.04	3.32	0.01	0.01	0.03	0.24	153.00	94	172	347
Mg++	aerosol	0.16	0.18	0.10	3.08	0.00	0.01	0.11	0.52	1.44	95	9	349
Na+	aerosol	1.03	1.09	0.60	3.10	0.01	0.09	0.60	3.37	6.21	95	5	349
SO2	air	0.08	0.11	0.04	2.93	0.01	0.01	0.04	0.26	0.97	95	75	350
SO4--	aerosol	0.22	0.33	0.14	2.56	0.01	0.03	0.15	0.76	3.81	95	1	349
SO4-- corr	aerosol	0.14	0.30	0.06	3.18	0.00	0.01	0.05	0.56	3.53	95	1	349

IS0091R Storhofdi  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Cl-	aerosol	9.53	5.94	8.36	1.86	2.00	2.06	8.15	25.70	26.70	88	0	22
NO3-	aerosol	0.03	0.04	0.02	4.71	0.00	0.00	0.02	0.19	0.21	88	2	22
SO4--	aerosol	0.53	0.29	0.47	1.79	0.10	0.11	0.45	1.28	1.32	88	0	22
SO4-- corr	aerosol	0.50	0.28	0.44	1.78	0.10	0.11	0.42	1.18	1.21	88	0	22



**MD0013R Leova II**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num
Ca++	aerosol	0.73	0.53	0.59	1.90	0.06	0.23	0.57	1.71	3.84	58	0	213
Cl-	aerosol	0.22	0.12	0.20	1.74	0.01	0.11	0.20	0.42	1.31	58	2	214
HNO3	air	0.18	0.08	0.17	1.53	0.06	0.08	0.16	0.35	0.58	58	0	213
HNO3+NO3-	air+aerosol	0.29	0.17	0.25	1.74	0.01	0.11	0.26	0.55	1.40	58	0	213
K+	aerosol	0.12	0.12	0.08	2.20	0.01	0.03	0.08	0.35	0.88	58	4	214
Mg++	aerosol	0.07	0.05	0.06	2.14	0.01	0.01	0.06	0.19	0.37	58	14	214
NH3	air	0.83	0.63	0.63	2.20	0.03	0.18	0.63	2.08	3.57	58	0	214
NH3+NH4+	air+aerosol	1.04	0.78	0.78	2.23	0.11	0.20	0.76	2.65	3.73	58	0	214
NH4+	aerosol	0.22	0.31	0.07	5.65	0.01	0.01	0.09	0.79	1.89	53	37	194
NO2	air	0.27	0.15	0.23	1.81	0.05	0.08	0.24	0.57	0.91	98	0	360
NO3-	aerosol	0.12	0.15	0.06	3.92	0.01	0.01	0.08	0.32	1.24	51	31	189
Na+	aerosol	0.17	0.13	0.13	2.03	0.01	0.05	0.14	0.44	0.89	58	3	214
SO2	air	0.39	0.40	0.27	2.22	0.04	0.10	0.23	1.28	2.41	58	0	213
SO4--	aerosol	0.22	0.22	0.13	3.08	0.01	0.01	0.15	0.68	1.32	58	11	213
SO4-- corr	aerosol	0.20	0.21	0.12	3.42	-0.01	0.01	0.13	0.66	1.24	58	11	213

**ME0008R Zabljak**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num
NO2	air	1.80	1.36	1.45	1.88	0.80	0.80	1.80	4.81	7.90	100	0	365
SO2	air	1.45	0.52	1.39	1.27	1.30	1.30	1.30	3.00	3.50	78	0	287

**MK0007R Lazaropole**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num
PM10 mass	pm10	9.66	10.94	5.70	3.48	0.01	0.78	6.81	27.95	201.40	91	0	7975
SO2	air	0.52	0.34	0.44	1.81	0.03	0.16	0.48	1.06	8.09	82	0	7184

**MF0001R Giordan Lighthouse**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num
CO	air	107.88	17.33	106.63	1.16	37.02	87.40	105.48	136.70	355.17	40	0	3584

**NL0007R Eibergen**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num
NO	air	0.68	1.91	0.33	3.59	-0.80	-0.16	0.24	2.79	32.57	86	0	7611
NO2	air	4.00	2.79	3.18	2.04	-1.36	0.93	3.32	9.76	20.78	86	0	7586
PM10 mass	pm10	18.19	13.99	14.80	2.13	-18.61	1.87	15.95	42.83	133.71	97	0	8532
SO2	air	0.31	0.79	0.29	3.47	-1.50	-0.72	0.14	1.59	10.47	97	0	8561

**NL0008R Bilthoven**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num
Ca++	pm10	0.20	0.09	0.18	1.56	0.05	0.08	0.19	0.36	0.56	43	0	160
Mg++	pm10	0.12	0.10	0.09	2.23	0.01	0.03	0.08	0.30	0.66	43	3	160
Na+	pm10	0.89	0.89	0.57	2.68	0.05	0.11	0.56	2.48	5.49	43	0	160

**NL0009R Kollumerwaard**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num
NO	air	0.44	1.18	0.21	3.64	-0.47	-0.10	0.14	1.84	16.61	94	0	8235
NO2	air	2.53	2.36	1.72	2.50	-0.03	0.37	1.81	7.60	16.15	94	0	8235
PM10 mass	pm10	15.98	14.82	12.85	2.40	-19.89	-1.97	13.39	44.11	149.07	97	0	8582
PM25 mass	pm25	8.70	10.12	5.60	2.93	-3.96	0.05	5.50	28.07	99.87	94	0	8303
SO2	air	0.18	0.43	0.27	2.89	-1.18	-0.47	0.15	0.90	4.74	97	0	8520

**NL0010R Vredepeel**  
 January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num
Cl-	pm10	0.74	0.95	0.39	3.14	0.06	0.08	0.40	2.93	6.18	46	17	170
NH4+	pm10	1.26	1.30	0.81	2.73	0.05	0.15	0.91	3.41	8.43	46	0	170
NO	air	1.61	3.57	0.74	3.76	-1.71	-0.13	0.58	7.03	93.05	95	0	8374
NO2	air	5.64	3.75	4.51	2.02	-1.49	1.35	4.73	13.11	25.65	95	0	8363
NO3-	pm10	1.11	0.79	0.88	2.00	0.19	0.28	0.94	2.65	4.80	46	0	170
PM10 mass	pm10	19.48	16.18	15.52	2.34	-19.89	0.59	15.95	49.23	229.71	98	0	8593
PM25 mass	pm25	10.24	9.32	7.39	2.74	-4.74	0.01	7.83	27.92	63.65	96	0	8433
SO4--	pm10	0.69	0.57	0.58	1.72	0.18	0.27	0.56	1.60	4.16	46	0	170
SO4-- corr	pm10	0.69	0.57	0.58	1.72	0.18	0.27	0.56	1.60	4.16	46	0	170

NL0091R De Zilk  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Cl-	pm10	1.47	1.49	0.76	3.61	0.06	0.09	0.85	4.62	6.14	48	11	178
NH4+	pm10	0.77	1.12	0.28	4.58	0.02	0.03	0.30	3.21	6.28	48	7	178
NO	air	1.28	4.29	0.36	4.89	-0.38	-0.12	0.22	6.04	103.95	99	0	8687
NO2	air	4.36	4.00	2.73	2.91	-0.27	0.41	3.08	12.81	25.18	99	0	8682
NO3-	pm10	0.83	0.79	0.57	2.36	0.09	0.15	0.55	2.30	5.17	48	0	178
PM10 mass	pm10	16.23	13.98	13.43	2.34	-19.89	-1.97	14.67	38.99	309.07	99	0	8681
PM25 mass	pm25	9.79	10.65	6.92	2.58	-4.76	0.32	6.86	30.64	203.97	97	0	8518
SO2	air	0.49	0.67	0.41	2.90	-1.40	-0.30	0.35	1.76	6.37	90	0	7958
SO4--	pm10	0.58	0.47	0.48	1.70	0.17	0.25	0.45	1.52	3.52	48	0	178
SO4-- corr	pm10	0.57	0.47	0.48	1.71	0.17	0.24	0.44	1.52	3.44	48	0	178

NL0644R Cabauw Wielsekade  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
CO	air	185.12	76.66	172.57	1.44	60.14	101.39	165.90	340.44	635.92	98	0	8636
Ca++	pm25	0.07	0.03	0.06	1.58	0.03	0.03	0.06	0.13	0.17	22	29	84
Mg++	pm25	0.03	0.04	0.02	2.21	0.00	0.01	0.02	0.11	0.29	22	34	84
NO	air	1.71	4.17	0.56	4.18	-0.55	0.01	0.42	8.34	55.48	97	0	8562
NO2	air	5.29	3.71	4.12	2.08	0.28	1.18	4.20	12.95	21.95	97	0	8529
Na+	pm25	0.27	0.32	0.18	2.40	0.02	0.04	0.17	0.88	2.36	22	5	84
PM10 mass	pm10	15.35	12.16	12.76	2.25	-19.89	-0.69	13.39	37.71	114.51	96	0	8460
PM25 mass	pm25	9.87	10.34	7.13	2.76	-4.92	-0.90	7.07	30.37	80.07	91	0	7975
SO2	air	0.19	0.59	0.33	3.00	-1.50	-0.62	0.12	1.22	5.51	98	0	8643
EC	pm10	0.44	0.28	0.37	1.73	0.11	0.15	0.36	1.08	1.73	23	0	86
OC	pm10	2.42	1.65	2.15	1.56	0.79	1.13	1.99	4.59	13.41	23	0	86
TC	pm10	2.86	1.87	2.54	1.56	0.90	1.36	2.54	5.41	14.68	23	0	86
OC,Fraction=OC1	pm10	0.59	0.21	0.55	1.49	0.17	0.25	0.58	0.95	1.02	23	0	86
OC,Fraction=OC2	pm10	0.57	0.33	0.51	1.50	0.23	0.28	0.49	1.06	2.44	23	0	86
OC,Fraction=OC3	pm10	0.34	0.19	0.30	1.56	0.14	0.15	0.30	0.70	1.43	23	0	86
OC,Fraction=OC4	pm10	0.34	0.14	0.32	1.47	0.14	0.16	0.33	0.57	0.99	23	0	86
OC,Fraction=OCPyr	pm10	0.58	1.00	0.31	2.96	0.03	0.04	0.35	2.13	7.95	23	0	86

NO0002R Birkenes II  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	aerosol	0.03	0.03	0.02	2.65	0.01	0.01	0.02	0.09	0.28	93	75	343
Cl-	aerosol	0.51	0.72	0.19	4.98	0.01	0.01	0.21	1.98	4.84	94	39	345
HNO3	air	0.03	0.06	0.02	2.42	0.01	0.01	0.01	0.12	0.54	94	265	345
HNO3+NO3-	air+aerosol	0.15	0.24	0.07	3.03	0.01	0.02	0.07	0.58	2.58	94	0	345
K+	aerosol	0.05	0.10	0.02	2.99	0.01	0.01	0.03	0.13	1.64	93	73	343
Mg++	aerosol	0.05	0.06	0.03	3.22	0.01	0.01	0.03	0.17	0.36	93	71	343
NH3	air	0.14	0.34	0.08	2.72	0.02	0.02	0.08	0.51	5.45	93	102	344
NH3+NH4+	air+aerosol	0.27	0.48	0.14	3.10	0.02	0.03	0.12	0.93	5.52	93	0	343
NH4+	aerosol	0.13	0.30	0.03	5.59	0.01	0.01	0.03	0.56	2.99	93	126	343
NO2	air	0.27	0.22	0.23	1.81	0.02	0.10	0.22	0.70	2.08	95	3	351
NO3-	aerosol	0.12	0.21	0.04	4.47	0.01	0.01	0.05	0.46	2.44	94	81	345
Na+	aerosol	0.40	0.47	0.20	4.15	0.01	0.01	0.23	1.32	3.24	93	15	343
PM10 mass	pm10	3.77	2.27	3.19	1.87	0.62	0.87	3.29	8.23	12.91	90	0	48
PM10 mass	pm10	3.92	4.11	3.00	2.66	-5.99	-0.60	3.10	11.39	33.28	58	0	5103
PM10-PM25	pm10_pm25	1.74	1.62	1.53	2.18	-1.74	-0.71	1.49	5.33	6.64	90	0	48
PM25 mass	pm25	1.99	1.41	1.67	1.78	0.57	0.65	1.65	5.12	8.53	94	0	50
SO2	air	0.06	0.10	0.03	3.03	0.01	0.01	0.02	0.24	0.85	94	165	345
SO4--	aerosol	0.22	0.32	0.12	3.16	0.01	0.01	0.14	0.66	4.06	94	13	345
SO4-- corr	aerosol	0.19	0.31	0.10	3.30	0.00	0.01	0.10	0.63	4.06	94	13	345
EC	pm10	0.05	0.05	0.04	1.93	0.01	0.02	0.04	0.15	0.27	94	0	50
OC	pm10	0.72	0.47	0.60	1.85	0.16	0.22	0.58	1.68	2.11	94	0	50
TC	pm10	0.78	0.49	0.65	1.82	0.18	0.24	0.63	1.86	2.22	94	0	50
OC,Fraction=OC1	pm10	0.03	0.03	0.02	2.11	0.00	0.00	0.02	0.09	0.12	94	0	50
OC,Fraction=OC2	pm10	0.17	0.12	0.13	1.91	0.05	0.05	0.12	0.46	0.52	94	0	50
OC,Fraction=OC3	pm10	0.22	0.14	0.18	1.86	0.05	0.07	0.15	0.52	0.64	94	0	50
OC,Fraction=OC4	pm10	0.11	0.03	0.11	1.35	0.05	0.07	0.10	0.19	0.20	94	0	50
OC,Fraction=OCPyr	pm10	0.20	0.20	0.13	2.56	0.01	0.03	0.14	0.77	0.92	94	0	50
EC	pm25	0.05	0.03	0.05	1.63	0.02	0.03	0.04	0.12	0.19	94	0	50
OC	pm25	0.52	0.29	0.46	1.63	0.21	0.21	0.41	1.23	1.44	94	0	50
TC	pm25	0.58	0.31	0.51	1.61	0.23	0.23	0.47	1.34	1.63	94	0	50
OC,Fraction=OC1	pm25	0.03	0.02	0.02	2.03	0.00	0.01	0.02	0.07	0.12	94	0	50
OC,Fraction=OC2	pm25	0.14	0.09	0.12	1.74	0.05	0.06	0.10	0.34	0.40	94	0	50
OC,Fraction=OC3	pm25	0.13	0.06	0.12	1.50	0.06	0.06	0.12	0.26	0.30	94	0	50
OC,Fraction=OC4	pm25	0.09	0.02	0.09	1.26	0.06	0.06	0.09	0.14	0.15	94	0	50
OC,Fraction=OCPyr	pm25	0.14	0.15	0.09	2.67	0.01	0.01	0.09	0.51	0.80	94	0	50
OC	pm10_pm25	0.25	0.25	0.16	2.85	0.00	0.02	0.17	0.99	1.08	78	0	42
TC	pm10_pm25	0.26	0.27	0.16	2.78	0.02	0.03	0.18	1.05	1.24	78	0	41





**NO0056R Hurdal**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	aerosol	0.02	0.03	0.01	2.39	0.01	0.01	0.02	0.06	0.23	97	103	356
Cl-	aerosol	0.10	0.18	0.04	3.86	0.01	0.01	0.03	0.43	1.55	98	144	359
HNO3	air	0.02	0.03	0.01	1.99	0.01	0.01	0.01	0.07	0.36	98	281	359
HNO3+NO3-	air+aerosol	0.09	0.11	0.06	2.51	0.01	0.02	0.06	0.30	1.06	98	0	359
K+	aerosol	0.05	0.12	0.02	3.14	0.01	0.01	0.03	0.15	2.03	96	79	353
Mg++	aerosol	0.01	0.02	0.01	2.28	0.01	0.01	0.01	0.06	0.14	97	228	356
NH3	air	0.11	0.09	0.08	2.32	0.02	0.02	0.09	0.29	0.59	98	83	359
NH3+NH4+	air+aerosol	0.20	0.21	0.14	2.39	0.02	0.03	0.14	0.54	2.42	97	0	356
NH4+	aerosol	0.09	0.18	0.02	5.06	0.01	0.01	0.02	0.36	2.40	97	153	356
NO2	air	0.64	0.92	0.38	2.48	0.06	0.12	0.32	2.31	8.06	97	0	358
NO3-	aerosol	0.07	0.09	0.03	3.66	0.01	0.01	0.04	0.27	0.70	98	79	359
Na+	aerosol	0.11	0.16	0.05	4.03	0.01	0.01	0.05	0.46	0.99	97	56	356
PM10 mass	pm10	3.87	2.00	3.51	1.54	1.28	1.70	3.67	8.97	12.21	90	0	48
PM10-PM25	pm10_pm25	1.56	1.12	1.17	2.49	0.02	0.31	1.37	4.42	5.39	84	0	45
PM25 mass	pm25	2.36	1.56	2.03	1.70	0.61	0.83	1.96	6.45	9.07	92	0	49
SO2	air	0.04	0.06	0.02	2.67	0.01	0.01	0.01	0.15	0.41	98	196	359
SO4--	aerosol	0.14	0.20	0.08	2.95	0.01	0.01	0.09	0.46	2.49	98	14	359
SO4-- corr	aerosol	0.14	0.20	0.08	2.92	0.00	0.01	0.08	0.45	2.49	98	14	359
EC	pm10	0.10	0.07	0.08	1.87	0.03	0.03	0.07	0.25	0.34	93	0	50
OC	pm10	1.15	0.70	0.96	1.77	0.33	0.44	0.92	2.60	3.56	93	0	50
TC	pm10	1.25	0.71	1.07	1.70	0.37	0.51	1.05	2.71	3.79	93	0	50
OC,Fraction=OC1	pm10	0.03	0.03	0.03	2.04	0.00	0.01	0.03	0.09	0.12	93	0	50
OC,Fraction=OC2	pm10	0.24	0.12	0.21	1.69	0.08	0.08	0.22	0.44	0.65	93	0	50
OC,Fraction=OC3	pm10	0.40	0.37	0.28	2.20	0.09	0.10	0.22	1.26	1.69	93	0	50
OC,Fraction=OC4	pm10	0.13	0.05	0.12	1.38	0.08	0.08	0.11	0.21	0.30	93	0	50
OC,Fraction=OCPyr	pm10	0.34	0.25	0.28	1.88	0.06	0.10	0.28	0.93	1.39	93	0	50
EC	pm25	0.09	0.07	0.08	1.83	0.03	0.04	0.07	0.25	0.32	93	0	50
OC	pm25	0.73	0.36	0.67	1.52	0.32	0.35	0.68	1.60	2.17	93	0	50
TC	pm25	0.83	0.40	0.75	1.51	0.37	0.40	0.74	1.85	2.44	93	0	50
OC,Fraction=OC1	pm25	0.03	0.03	0.03	1.99	0.00	0.01	0.02	0.10	0.13	93	0	50
OC,Fraction=OC2	pm25	0.20	0.09	0.18	1.56	0.08	0.09	0.18	0.37	0.51	93	0	50
OC,Fraction=OC3	pm25	0.18	0.06	0.17	1.46	0.06	0.09	0.18	0.32	0.35	93	0	50
OC,Fraction=OC4	pm25	0.10	0.02	0.10	1.22	0.07	0.07	0.10	0.15	0.18	93	0	50
OC,Fraction=OCPyr	pm25	0.23	0.21	0.17	2.02	0.05	0.06	0.17	0.72	1.23	93	0	50
OC	pm10_pm25	0.50	0.58	0.24	3.82	0.01	0.01	0.27	1.84	2.37	78	0	42
TC	pm10_pm25	0.51	0.58	0.25	3.68	0.01	0.02	0.28	1.84	2.38	78	0	42

**PL0002R Jarczew**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Cl-	aerosol	0.67	0.50	0.55	1.89	0.05	0.20	0.51	1.72	3.77	98	1	360
HNO3+NO3-	air+aerosol	0.67	0.65	0.48	2.23	0.05	0.15	0.43	2.02	4.28	98	0	360
NH3+NH4+	air+aerosol	2.44	1.49	2.09	1.75	0.40	0.86	2.10	5.62	12.89	98	0	360
NH4+	aerosol	0.96	0.89	0.71	2.17	0.03	0.22	0.68	2.67	6.14	98	2	360
NO2	air	2.16	1.04	1.94	1.61	0.20	0.90	1.90	4.29	7.10	98	0	360
NO3-	aerosol	0.57	0.58	0.39	2.37	0.04	0.11	0.34	1.64	4.16	98	0	360
SO2	air	0.97	0.76	0.75	2.12	0.10	0.20	0.70	2.60	4.60	98	4	360
SO4--	aerosol	1.20	0.60	1.04	1.80	0.10	0.26	1.14	2.30	4.10	98	2	360
SO4-- corr	aerosol	1.11	0.58	0.94	1.93	0.05	0.22	1.07	2.04	3.88	98	2	360

**PL0003R Sniezka**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Cl-	aerosol	0.56	0.25	0.51	1.64	0.05	0.20	0.54	0.96	1.80	100	1	366
HNO3+NO3-	air+aerosol	0.75	0.24	0.71	1.41	0.27	0.36	0.73	1.18	1.86	100	0	366
NH3+NH4+	air+aerosol	0.94	0.38	0.87	1.51	0.16	0.45	0.91	1.54	2.88	100	0	366
NH4+	aerosol	0.71	0.29	0.66	1.53	0.15	0.32	0.69	1.19	2.05	100	0	366
NO2	air	1.17	0.37	1.11	1.37	0.30	0.70	1.10	1.80	3.40	100	0	366
NO3-	aerosol	0.59	0.18	0.56	1.39	0.20	0.30	0.58	0.90	1.43	100	0	366
SO2	air	1.13	0.37	1.07	1.37	0.40	0.60	1.10	1.70	3.40	100	0	366
SO4--	aerosol	1.01	0.39	0.94	1.51	0.21	0.46	0.98	1.70	3.05	100	0	366
SO4-- corr	aerosol	0.93	0.40	0.84	1.62	-0.07	0.35	0.90	1.61	2.87	100	0	366

**PL0004R Leba**  
**January 2017 - December 2017**

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Cl-	aerosol	0.82	0.61	0.66	1.93	0.05	0.26	0.64	2.08	4.36	99	1	364
HNO3+NO3-	air+aerosol	0.50	0.52	0.34	2.39	0.03	0.08	0.31	1.56	3.60	99	0	364
NH3+NH4+	air+aerosol	1.29	0.98	1.03	1.95	0.12	0.31	1.03	3.16	6.93	99	0	364
NH4+	aerosol	0.75	0.74	0.55	2.16	0.03	0.15	0.56	2.11	6.47	99	1	364
NO2	air	1.29	0.97	1.04	1.94	0.10	0.40	1.10	2.88	7.70	99	1	364
NO3-	aerosol	0.42	0.51	0.26	2.70	0.01	0.05	0.23	1.47	3.54	99	4	364
SO2	air	0.70	0.60	0.54	2.05	0.10	0.10	0.60	1.60	5.70	99	19	364
SO4--	aerosol	1.08	0.58	0.93	1.83	0.10	0.31	1.03	2.09	3.72	99	5	364
SO4-- corr	aerosol	1.00	0.56	0.82	2.06	0.02	0.20	0.96	1.94	3.59	99	5	364





SI0032R Krvavec  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
CO	air	149.95	30.65	147.33	1.20	94.80	112.10	146.60	198.30	642.20	95	0	8343

SK0002R Chopok  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Cl-	aerosol	0.17	0.15	0.13	2.32	0.00	0.03	0.15	0.33	1.40	98	0	360
HNO3	air	0.07	0.05	0.05	1.96	0.01	0.02	0.06	0.16	0.34	98	1	362
HNO3+NO3-	air+aerosol	0.18	0.12	0.14	2.11	0.02	0.04	0.14	0.41	0.74	98	0	359
NO2	air	0.76	0.40	0.54	3.33	0.01	0.01	0.75	1.37	2.44	96	18	353
NO3-	aerosol	0.11	0.09	0.07	2.72	0.00	0.01	0.07	0.30	0.51	98	0	360
SO2	air	0.29	0.35	0.19	2.48	0.01	0.04	0.18	0.86	4.11	98	0	361
SO4--	aerosol	0.20	0.26	0.10	3.75	0.00	0.01	0.11	0.76	1.99	98	0	359
SO4-- corr	aerosol	0.12	0.25	0.11	4.03	-0.39	-0.13	0.04	0.66	1.89	98	0	359

SK0006R Starina  
January 2017 - December 2017

Component	matrix	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max anal	% bel	Num	Num sampl
Ca++	aerosol	0.37	0.25	0.29	2.39	0.00	0.05	0.32	0.84	1.96	98	1	362
Cl-	aerosol	1.54	1.89	0.94	2.64	0.10	0.22	0.87	4.68	16.17	98	0	362
HNO3	air	0.13	0.17	0.09	2.20	0.01	0.03	0.08	0.39	1.62	98	0	360
HNO3+NO3-	air+aerosol	0.65	0.58	0.48	2.20	0.04	0.13	0.49	1.79	4.35	98	0	359
K+	aerosol	0.02	0.02	0.02	2.28	0.00	0.00	0.02	0.06	0.34	97	21	358
Mg++	aerosol	0.11	0.10	0.08	2.21	0.00	0.02	0.08	0.27	0.97	97	1	358
NH3	air	0.78	0.67	0.60	2.13	0.01	0.16	0.61	1.86	7.09	97	0	358
NH3+NH4+	air+aerosol	1.05	0.77	0.85	1.93	0.12	0.27	0.88	2.20	8.12	96	0	354
NH4+	aerosol	0.27	0.21	0.20	2.30	0.00	0.06	0.21	0.65	1.67	97	0	357
NO2	air	1.69	0.98	1.39	2.14	0.01	0.55	1.45	3.63	5.98	98	3	361
NO3-	aerosol	0.52	0.48	0.36	2.68	0.00	0.06	0.40	1.42	3.82	98	0	361
Na+	aerosol	0.19	0.20	0.14	2.22	0.00	0.04	0.14	0.49	2.12	98	1	360
SO2	air	0.87	0.97	0.53	2.72	0.02	0.11	0.48	3.19	5.21	98	0	359
SO4--	aerosol	1.02	0.84	0.70	2.74	0.00	0.08	0.78	2.81	5.09	98	0	360
SO4-- corr	aerosol	0.99	0.84	0.67	2.86	-0.09	0.05	0.75	2.77	5.04	98	0	359

## **Annex 4**

### **Overview of sampling and analytical methods 2017**



Country: Armenia		Main components- EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount					
Precipitation amount, official gauge	AM0001R	Meteorological station	every event	By volume	
Sulphate	AM0001R	Wet-only	every event	Ion chromatography	
Nitrate	AM0001R	Wet-only	every event	Ion chromatography	
Ammonium	AM0001R	Wet-only	every event	Spectrophotometric, by Nessler reagent	
Magnesium	AM0001R	Wet-only	every event	ICP-MS	
Sodium	AM0001R	Wet-only	every event	ICP-MS	
Chloride	AM0001R	Wet-only	every event	Ion chromatography	
Calcium	AM0001R	Wet-only	every event	ICP-MS	
Potassium	AM0001R	Wet-only	every event	ICP-MS	
Conductivity	AM0001R	Wet-only	every event	Conductivity meter	
pH	AM0001R	Wet-only	every event	pH meter	
<b>Air</b>					
Sulphur dioxide	AM0001R	KOH-impregnated Whatman 40 filter 20–25 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography	
Nitrogen dioxide	AM0001R	Nal-impregnated glass sinters, 0.6 m <sup>3</sup> /day	Daily	Spectrophotometric, Griess method	
Nitric acid	AM0001R	KOH-impregnated Whatman 40 filter 20–25 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography	
Ammonia	AM0001R	Oxalic acid-impregnated Whatman 40 filter, 20–25 m <sup>3</sup> /day (Filterpack)	Daily	Spectrophotometric, Nessler method	
Ozone	AM0001R				
Sulphate	AM0001R	Teflon filter, Pall Zefluor 2 µm, 47 mm diameter, 20–25 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography	
Nitrate	AM0001R	Teflon filter, Pall Zefluor 2 µm, 47 mm diameter, 20–25 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography	
Ammonium	AM0001R	Teflon filter, Pall Zefluor 2 µm, 47 mm diameter, 20–25 m <sup>3</sup> /day (Filterpack)	Daily	Spectrophotometric, Nessler method	
Sodium	AM0001R	Teflon filter, Pall Zefluor 2 µm, 47 mm diameter, 20–25 m <sup>3</sup> /day (Filterpack)	Daily	ICP-MS	
Calcium	AM0001R	Teflon filter, Pall Zefluor 2 µm, 47 mm diameter, 20–25 m <sup>3</sup> /day (Filterpack)	Daily	ICP-MS	
Magnesium	AM0001R	Teflon filter, Pall Zefluor 2 µm, 47 mm diameter, 20–25 m <sup>3</sup> /day (Filterpack)	Daily	ICP-MS	
Potassium	AM0001R	Teflon filter, Pall Zefluor 2 µm, 47 mm diameter, 20–25 m <sup>3</sup> /day (Filterpack)	Daily	ICP-MS	
Chloride	AM0001R	Teflon filter, Pall Zefluor 2 µm, 47 mm diameter, 20–25 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography	
PM <sub>10</sub>					
PM <sub>2.5</sub>					
PM <sub>1</sub>					
Sum of nitric acid and nitrate	AM0001R	KOH-impregnated Whatman 40 filter + Teflon filter, 20–25 m <sup>3</sup> /day	Daily	Ion chromatography	
Sum of ammonia and ammonium	AM0001R	Oxalic acid-impregnated Whatman 40 filter + Teflon filter, 20–25 m <sup>3</sup> /day	Daily	Spectrophotometric, Nessler method	

Country: Austria		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount					
Precipitation amount, official gauge					
Sulphate					
Nitrate					
Ammonium					
Magnesium					
Sodium					
Chloride					
Calcium					
Potassium					
Conductivity					
pH					
<b>Air</b>					
Sulphur dioxide	All	Instrumental: UV-fluorescence	Hourly	UV-fluorescence	
Sulphur dioxide					
Nitrogen dioxide	All	Instrumental: Chemiluminescence	Daily		
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate					
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM <sub>10</sub>	AT02 AT05, AT48	High Volume Sampler, glass fibre filters with organic binder, 720 m <sup>3</sup> /day, EN 12341	Daily Every 3 <sup>rd</sup> day	Micro balance	
PM <sub>2.5</sub>	AT02	High Volume Sampler, glass fibre filters with organic binder, 720 m <sup>3</sup> /day, EN 14907	Daily	Micro balance	
PM <sub>1</sub>	AT02	High Volume Sampler, glass fibre filters with organic binder, 720 m <sup>3</sup> /day, weighing acc. EN 12341	Every 3 <sup>rd</sup> day	Micro balance	
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					



Country: Belarus		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount		Bulk			
Precipitation amount, official gauge					
Sulphate		Bulk	Daily	Turbidimetry	
Nitrate		Bulk	Daily	Photometry	
Ammonium		Bulk	Daily	Photometry with Nessler reactive	
Magnesium		Bulk	Daily	AAS	
Sodium		Bulk	Daily	AAS	
Chloride		Bulk	Daily	Mercurimetric	
Calcium		Bulk	Daily	AAS	
Potassium		Bulk	Daily	AAS	
Conductivity		Bulk	Daily	Conductivity meter	
pH		Bulk	Daily	pH meter	
<b>Air</b>					
Sulphur dioxide					
Sulphur dioxide					
Nitrogen dioxide					
Nitric acid					
Ammonia					
Ozone					
Sulphate					
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM <sub>10</sub>					
PM <sub>2.5</sub>					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					

Country: Belgium		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	BE0014R	Wet-only sampler	2 weeks		
Precipitation amount, official gauge	BE0014R	precipitation gauge			
Sulphate	BE0014R	Wet-only sampler	2 weeks	discrete analyser - spectrophotometry	
Nitrate	BE0014R	Wet-only sampler	2 weeks	discrete analyser - spectrophotometry	
Ammonium	BE0014R	Wet-only sampler	2 weeks	discrete analyser - spectrophotometry	
Magnesium	BE0014R	Wet-only sampler	2 weeks	ICP-AES	
Sodium	BE0014R	Wet-only sampler	2 weeks	ICP-AES	
Chloride	BE0014R	Wet-only sampler	2 weeks	discrete analyser - spectrophotometry	
Calcium	BE0014R	Wet-only sampler	2 weeks	ICP-AES	
Potassium	BE0014R	Wet-only sampler	2 weeks	ICP-AES	
Conductivity	BE0014R	Wet-only sampler	2 weeks	Conductivity probe	
pH	BE0014R	Wet-only sampler	2 weeks	Combined glass electrode	
Acidity					
<b>Air</b>					
Sulphur dioxide		Instrumental: UV-fluorescence	Half hourly	UV-fluorescence	
Nitrogen dioxide	BE0013R, BE0011R	Instrumental: Chemiluminescence	Half hourly	Chemiluminescence	
Nitric acid					
Ammonia	BE0014R	Passive sampler	4 weeks	spectrophotometric	
Ozone		Instrumental: UV monitor	Half hourly	UV absorption	
Sulphate					
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM <sub>10</sub>					
PM <sub>2.5</sub>					
PM <sub>1</sub>					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					

Country: Croatia		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	All				
Precipitation amount, official gauge		Rain gauge	Daily		
Sulphate	All	Bulk	Daily	Ion chromatography	
Nitrate	All	Bulk	Daily	Ion chromatography	
Ammonium	All	Bulk	Daily	Ion chromatography	
Magnesium	All	Bulk	Daily	Ion chromatography	
Sodium	All	Bulk	Daily	Ion chromatography	
Chloride	All	Bulk	Daily	Ion chromatography	
Calcium	All	Bulk	Daily	Ion chromatography	
Potassium	All	Bulk	Daily	Ion chromatography	
Conductivity	All	Bulk	Daily	Conductivity meter	
pH	All	Bulk	Daily	pH meter	
<b>Air</b>					
Sulphur dioxide					
Nitrogen dioxide					
Nitric acid					
Ammonia					
Ozone					
Sulphate					
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM <sub>10</sub>					
PM <sub>2.5</sub>					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					

Country: Cyprus		Main components and ozone - EMEP		Year: 2017
	Station	Sampling	Sampling frequency	Analysis method
<b>Precipitation</b>				
Precipitation amount				
Precipitation amount, official gauge				
Sulphate				
Nitrate				
Ammonium				
Magnesium				
Sodium				
Chloride				
Calcium				
Potassium				
Conductivity				
pH				
<b>Air</b>				
Sulphur dioxide	CY02	Instrumental: UV-fluorescence	Hourly	UV-fluorescence
Nitrogen dioxide	CY02	Instrumental: Chemiluminescence	Hourly	Chemiluminescence
Nitric acid				
Ammonia				
Carbon Monoxide	CY02	Non – Dispersive Infrared Spectroscopy (NDIR)	Hourly	NDIR
Ozone	CY02	Instrumental: Ultra Violet (UV) photometry	Hourly	UV absorption
Sulphate PM <sub>2.5</sub>	CY02	Low volume sampler	Daily	Ion Chromatography
Nitrate PM <sub>2.5</sub>	CY02	Low volume sampler	Daily	Ion Chromatography
Ammonium PM <sub>2.5</sub>	CY02	Low volume sampler	Daily	Ion Chromatography
Sodium PM <sub>2.5</sub>	CY02	Low volume sampler	Daily	Ion Chromatography
Calcium PM <sub>2.5</sub>	CY02	Low volume sampler	Daily	Ion Chromatography
Magnesium PM <sub>2.5</sub>	CY02	Low volume sampler	Daily	Ion Chromatography
Potassium PM <sub>2.5</sub>	CY02	Low volume sampler	Daily	Ion Chromatography
Chloride PM <sub>2.5</sub>	CY02	Low volume sampler	Daily	Ion Chromatography
PM <sub>10</sub>	CY02	High volume sampler	Daily	Gravimetric
PM <sub>2.5</sub>	CY02	Low volume sampler	Daily	Gravimetric
PM <sub>1</sub>				
OC/EC in PM <sub>2.5</sub>	CY02	Low volume sampler	Daily	OC EC Lab Instrument, Model 5 Sunset Laboratory Inc. EUSAAR 2 temperature program

THE LABORATORY PERFORMING THE ANALYSES ON PM<sub>2.5</sub> IS: Facility for Chemical Analyses (FCA). Energy, Environment and Water Research Center (EEWRC). The Cyprus Institute.

Country: <b>Czech Republic</b>		Main components and ozone - EMEP		Year: <b>2017</b>	
	<b>Station</b>	<b>Sampling</b>	<b>Sampling frequency</b>	<b>Analysis method</b>	
<b>Precipitation</b>					
Precipitation amount, official gauge	All	Meteorological Station	Daily	Automatically gauge	
Fluoride	All	Wet-only (daily) at CZ03, (weekly) at CZ05	Daily, weekly	Ion Chromatography	
Sulphate	All	Wet-only (daily) at CZ03, (weekly) at CZ05	Daily, weekly	Ion chromatography	
Nitrate	All	Wet-only (daily) at CZ03, (weekly) at CZ05	Daily, weekly	Ion chromatography	
Ammonium	All	Wet-only (daily) at CZ03, (weekly) at CZ05	Daily, weekly	Spectrophotometric, Indophenol method, FIA-Berth	
Magnesium	All	Wet-only (daily) at CZ03, (weekly) at CZ05	Daily, weekly	F-AAS	
Sodium	All	Wet-only (daily) at CZ03, (weekly) at CZ05	Daily, weekly	F-AAS	
Chloride	All	Wet-only (daily) at CZ03, (weekly) at CZ05	Daily, weekly	Ion chromatography	
Calcium	All	Wet-only (daily) at CZ03, (weekly) at CZ05	Daily, weekly	F-AAS	
Potassium	All	Wet-only (daily) at CZ03, (weekly) at CZ05	Daily, weekly	F-AAS	
Conductivity	All	Wet-only (daily) at CZ03, (weekly) at CZ05	Daily, weekly	Conductivity electrode	
pH	All	Wet-only (daily) at CZ03, (weekly) at CZ05	Daily, weekly	pH electrode	
<b>Air</b>					
Sulphur dioxide	CZ3,CZ5	KOH-impregnated Whatman 40 filter 47 mm, 20 m <sup>3</sup> /day	Daily, CZ5 indicative(6days)	Ion chromatography	
Sulphur dioxide	CZ3	UV-fluorescence - monitor	Hourly	UV-fluorescence	
Carbon monoxide	CZ3	IR corel. absorption spectrometry	Hourly	IRABS, corel. absorption spectrometry	
Nitrogen dioxide	CZ3	Chemiluminescence - monitor	Hourly	Chemiluminescence	
Nitrogen monoxide	CZ3	Chemiluminescence - monitor	Hourly	Chemiluminescence	
Sum of nitric acid and nitrate	CZ3,CZ5	Whatman filter + KOH-impregnated Whatman 40 filter 47 mm, 20 m <sup>3</sup> /day	Daily, CZ5 indicative(6days)	Ion Chromatography	
Sum of ammonia and ammonium	CZ3,CZ5	Whatman filter + Citric acid impregnated Whatman 40 filter 47 mm, 20 m <sup>3</sup> /day	Daily, CZ5 indicative(6days)	Spectrophotometric, Indophenol method, FIA-Berth	
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	CZ3,CZ5	Whatman 40, filter 47 mm, 20 m <sup>3</sup> /day	Daily, CZ5 indicative(6days)	Ion chromatography	
Sodium	CZ3	Filter 47 mm, 55 m <sup>3</sup> /day	Weekly	Ion chromatography	
Calcium	CZ3	Filter 47 mm, 55 m <sup>3</sup> /day	Weekly	Ion chromatography	
Magnesium	CZ3	Filter 47 mm, 55 m <sup>3</sup> /day	Weekly	Ion chromatography	
Potassium	CZ3	Filter 47 mm, 55 m <sup>3</sup> /day	Weekly	Ion chromatography	
PM <sub>10</sub>	CZ3,CZ5	Filter 47 mm, 55 m <sup>3</sup> /day	Every 2 <sup>nd</sup> day	Gravimetry	
PM <sub>10</sub>	CZ3	Beta absorption - monitor	Hourly	Radiometry – beta absorption	
PM <sub>2.5</sub>	CZ3	Beta absorption - monitor	Hourly	Radiometry – beta absorption	
PM <sub>2.5</sub>	CZ3	Filter 47 mm, 55 m <sup>3</sup> /day	Every 2 <sup>nd</sup> day	Gravimetry	
OC, EC in PM <sub>2.5</sub>	CZ3	Filter 47 mm, 24 m <sup>3</sup> /day	Every 6 <sup>th</sup> day	HD-FID (Thermal-optical method)	

Country: Denmark		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	DK05, DK08, DK22, DK31	Wet-only	Two-weekly		
Precipitation amount, official gauge					
Sulphate	DK05, DK08, DK22, DK31	Wet-only	Two-weekly	Ion chromatography	
Nitrate	DK05, DK08, DK22, DK31	Wet-only	Two-weekly	Ion chromatography	
Ammonium	DK05, DK08, DK22, DK31	Wet-only	Two-weekly	ISO 11732 CFA (continuously flow analysis) and spectrophotometric detection	
Magnesium	DK05, DK08, DK22, DK31	Wet-only	Two-weekly	Atomic absorption method	
Sodium	DK05, DK08, DK22, DK31	Wet-only	Two-weekly	Atomic emission method	
Chloride	DK05, DK08, DK22, DK31	Wet-only	Two-weekly	Ion chromatography	
Calcium	DK05, DK08, DK22, DK31	Wet-only	Two-weekly	Atomic absorption method	
Potassium	DK05, DK08, DK22, DK31	Wet-only	Two-weekly	Atomic emission method	
Conductivity	DK05, DK08, DK22, DK31	Wet-only	Two-weekly	Conductivity meter	
pH	DK05, DK08, DK22, DK31	Wet-only	Two-weekly	pH meter	
<b>Air</b>					
Sulphur dioxide	DK05, DK08, DK22, DK31	KOH-impregnated Whatman 41 filters, 58 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrogen dioxide	DK05	Monitor	Hourly	Chemiluminescence	
Nitrogen oxide	DK08	Monitor	Hourly	Chemiluminescence	
Nitric acid					
Ammonia	DK03, DK05, DK08, DK31	Oxalic acid impregnated Whatman 41, 58 m <sup>3</sup> /day	Daily	ISO 11732 CFA (continuously flow analysis) and spectrophotometric detection	
Ozone	DK05, DK31, DK41	UV-monitor	Hourly	UV-absorption	
Sulphate	DK03, DK05, DK08, DK31	Millipore RAWP 1.2 µm, 58 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrate					
Ammonium	DK03, DK05, DK08, DK31	Millipore RAWP 1.2 µm, 58 m <sup>3</sup> /day	Daily	ISO 11732 CFA (continuously flow analysis) and spectrophotometric detection	
Sodium	DK03, DK05, DK08, DK31	Millipore RAWP 1.2 µm, 58 m <sup>3</sup> /day	Daily	Atomic absorption method	
Calcium					
Magnesium					
Potassium					
Chloride	DK03, DK05, DK08, DK31	Millipore RAWP 1.2 µm, 58 m <sup>3</sup> /day		Atomic absorption method	
PM <sub>10</sub>	DK05	SM200	Daily	Beta absorption	
PM <sub>2.5</sub>					
Sum of nitric acid and nitrate	DK03, DK05, DK08, DK31	Aerosol filter as for sulphate + KOH-impregnated Whatman 41, 58 m <sup>3</sup> /day	Daily	Ion chromatography	
Sum of ammonia and ammonium				Replaced by separate measurements of ammonia and ammonium	

Country: Estonia		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	All	Bulk	Weekly		
Precipitation amount, official gauge					
Sulphate	All	Bulk	Weekly	Ion chromatography	
Nitrate	All	Bulk	Weekly	Ion chromatography	
Ammonium	All	Bulk	Weekly	Spectrophotometric, Indophenol method	
Magnesium	All	Bulk	Weekly	Atomic absorption method	
Sodium	All	Bulk	Weekly	Atomic emission method, addition of caesium	
Chloride	All	Bulk	Weekly	Ion chromatography	
Calcium	All	Bulk	Weekly	Atomic absorption method, addition of lanthanum	
Potassium	All	Bulk	Weekly	Atomic emission method, addition of caesium	
Conductivity	All	Bulk	Weekly	Conductivity meter	
pH	All	Bulk	Weekly	pH meter	
<b>Air</b>					
Sulphur dioxide	All	Instrumental: UV fluorescence	Daily/Hourly	UV fluorescence	
Nitrogen dioxide	All	Instrumental: Chemiluminescence	Daily/Hourly	Chemiluminescence	
Nitric acid					
Ammonia					
Ozone	All	UV monitor	Daily/Hourly	UV absorption	
Sulphate					
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM <sub>10</sub>	EE09	High Volume Sampler	Weekly	Gravimetric	
PM <sub>2.5</sub>					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					

Country: Finland		Main components and ozone - EMEP		Year: 2017
	Station	Sampling	Sampling frequency	Analysis method
<b>Precipitation</b>				
Precipitation amount	All	NILU bulk sampler	Weekly	
Precipitation amount, official gauge				
Sulphate	All	NILU bulk sampler	Weekly	Ion chromatography
Nitrate	All	NILU bulk sampler	Weekly	Ion chromatography
Ammonium	All	NILU bulk sampler	Weekly	Ion chromatography
Magnesium	All	NILU bulk sampler	Weekly	Ion chromatography
Sodium	All	NILU bulk sampler	Weekly	Ion chromatography
Chloride	All	NILU bulk sampler	Weekly	Ion chromatography
Calcium	All	NILU bulk sampler	Weekly	Ion chromatography
Potassium	All	NILU bulk sampler	Weekly	Ion chromatography
Conductivity	All	NILU bulk sampler	Weekly	Conductivity meter
pH	All	NILU bulk sampler	Weekly	pH meter
<b>Air</b>				
Sulphur dioxide	All	NaOH-impregnated Whatman 40 filters, 24 m <sup>3</sup> /day	Daily/Weekly <sup>1)</sup>	Ion chromatography
Sulphur dioxide	F118	UV-fluorescence - monitor	Hourly	UV-fluorescence
Nitrogen dioxide	All	Instrumental: Chemiluminescence	Hourly	Chemiluminescence
Nitric acid	All	NaOH-impregnated Whatman 40 filters, 24 m <sup>3</sup> /day	Daily/Weekly <sup>1)</sup>	Ion chromatography
Ammonia	All	Oxalic acid-impregnated Whatman 40 filters, 24 m <sup>3</sup> /day	Daily/Weekly <sup>1)</sup>	Ion chromatography
Ozone	All	UV-monitor	Hourly	UV-absorption
Sulphate	All	Teflon filter, Millipore Fluoropore 3 µm, 24 m <sup>3</sup> /day	Daily/Weekly <sup>1)</sup>	Ion chromatography
Nitrate	All	Teflon filter, Millipore Fluoropore 3 µm, 24 m <sup>3</sup> /day	Daily/Weekly <sup>1)</sup>	Ion chromatography
Ammonium	All	Teflon filter, Millipore Fluoropore 3 µm, 24 m <sup>3</sup> /day	Daily/Weekly <sup>1)</sup>	Ion chromatography
Sodium	All	Teflon filter, Millipore Fluoropore 3 µm, 24 m <sup>3</sup> /day	Daily/Weekly <sup>1)</sup>	Ion chromatography
Calcium	All	Teflon filter, Millipore Fluoropore 3 µm, 24 m <sup>3</sup> /day	Daily/Weekly <sup>1)</sup>	Ion chromatography
Magnesium	All	Teflon filter, Millipore Fluoropore 3 µm, 24 m <sup>3</sup> /day	Daily/Weekly <sup>1)</sup>	Ion chromatography
Potassium	All	Teflon filter, Millipore Fluoropore 3 µm, 24 m <sup>3</sup> /day	Daily/Weekly <sup>1)</sup>	Ion chromatography
Chloride	All	Teflon filter, Millipore Fluoropore 3 µm, 24 m <sup>3</sup> /day	Daily/Weekly <sup>1)</sup>	Ion chromatography
PM <sub>10</sub>	All	Instrumental: beta-ray attenuation	Hourly	Beta-ray attenuation monitor
PM <sub>2.5</sub>	All	Instrumental: beta-ray attenuation	Hourly	Beta-ray attenuation monitor
Sum of nitric acid and nitrate	All	Aerosol filter as for sulphate + NaOH impregnated Whatman 40 filter, 24 m <sup>3</sup> /day	Daily/Weekly <sup>1)</sup>	Ion chromatography
Sum of ammonia and ammonium	All	Aerosol filter as for sulphate + oxalic acid impregnated Whatman 40 filter, 24 m <sup>3</sup> /day	Daily/Weekly <sup>1)</sup>	Ion chromatography

1) Daily: F109 and F117 and F136; Weekly: F122 and F137



Country: France		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	FR08, FR09, FR10, FR13, FR14, FR15, FR16, FR17, FR18	Wet-only	Daily		
Precipitation amount, official gauge	FR08, FR09, FR10, FR13, FR14, FR15, FR16, FR17, FR18	Tipping bucket rain gauge	Daily		
Sulphate	FR08, FR09, FR10, FR13, FR14, FR15, FR16, FR17, FR18	Wet-only	Daily	Ion chromatography	
Nitrate	FR08, FR09, FR10, FR13, FR14, FR15, FR16, FR17, FR18	Wet-only	Daily	Ion chromatography	
Ammonium	FR08, FR09, FR10, FR13, FR14, FR15, FR16, FR17, FR18	Wet-only	Daily	Ion chromatography	
Magnesium	FR08, FR09, FR10, FR13, FR14, FR15, FR16, FR17, FR18	Wet-only	Daily	Ion chromatography	
Sodium	FR08, FR09, FR10, FR13, FR14, FR15, FR16, FR17, FR18	Wet-only	Daily	Ion chromatography	
Chloride	FR08, FR09, FR10, FR13, FR14, FR15, FR16, FR17, FR18	Wet-only	Daily	Ion chromatography	
Calcium	FR08, FR09, FR10, FR13, FR14, FR15, FR16, FR17, FR18	Wet-only	Daily	Ion chromatography	
Potassium	FR08, FR09, FR10, FR13, FR14, FR15, FR16, FR17, FR18	Wet-only	Daily	Ion chromatography	
Conductivity	FR08, FR09, FR10, FR13, FR14, FR15, FR16, FR17, FR18	Wet-only	Daily	Conductivity meter	
pH	FR08, FR09, FR10, FR13, FR14, FR15, FR16, FR17, FR18	Wet-only	Daily	pH meter	
<b>Air</b>					
Nitrogen dioxide NO <sub>2</sub> /NO/NO <sub>x</sub>	FR09, FR13, FR15, FR30	Instrumental: Chemiluminescence, trace level	Hourly	Chemiluminescence	
Ozone	FR08, FR09, FR10, FR13, FR14, FR15, FR16, FR17, FR18, FR19, FR30, FR23, FR25	UV-monitor	Hourly	UV-absorption	
Sulphate	FR09, FR13, FR23, FR24, FR25	TISSUQUARTZ 2500QAT-UP, PM2.5, 720m3/day	24h Every 6 days	Ion chromatography	
Nitrate	FR09, FR13, FR23, FR24, FR25	TISSUQUARTZ 2500QAT-UP, PM2.5, 720m3/day	24h Every 6 days	Ion chromatography	
Ammonium	FR09, FR13, FR23, FR24, FR25	TISSUQUARTZ 2500QAT-UP, PM2.5, 720m3/day	24h Every 6 days	Ion chromatography	
Sodium	FR09, FR13, FR23, FR24, FR25	TISSUQUARTZ 2500QAT-UP, PM2.5, 720m3/day	24h Every 6 days	Ion chromatography	
Calcium	FR09, FR13, FR23, FR24, FR25	TISSUQUARTZ 2500QAT-UP, PM2.5, 720m3/day	24h Every 6 days	Ion chromatography	
Magnesium	FR09, FR13, FR23, FR24, FR25	TISSUQUARTZ 2500QAT-UP, PM2.5, 720m3/day	24h Every 6 days	Ion chromatography	
Potassium	FR09, FR13, FR23, FR24, FR25	TISSUQUARTZ 2500QAT-UP, PM2.5, 720m3/day	24h Every 6 days	Ion chromatography	
Chloride	FR09, FR13, FR23, FR24, FR25	TISSUQUARTZ 2500QAT-UP, PM2.5, 720m3/day	24h Every 6 days	Ion chromatography	
PM <sub>10</sub>	FR09, FR10, FR13, FR14, FR15, FR18, FR23, FR24	TEOM FDMS, MP101M	Hourly	TEOM FDMS	
PM <sub>2.5</sub>	FR09, FR13, FR15, FR18, FR23, FR24, FR25	TEOM FDMS, MP101M	Hourly	TEOM FDMS	
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					
EC/OC	FR09, FR13, FR23, FR24, FR25	TISSUQUARTZ 2500QAT-UP, PM2.5, 720m3/day	24h every 6 days	Thermo optical, EUSAAR 2 protocol	

Country: Georgia		Main components and ozone - EMEP		Year: 2017
	Station	Sampling	Sampling frequency	Analysis method
<b>Precipitation</b>				
Precipitation amount				
Precipitation amount, official gauge				
Sulphate				
Nitrate				
Ammonium				
Magnesium				
Sodium				
Chloride				
Calcium				
Potassium				
Conductivity				
pH				
<b>Air</b>				
Sulphur dioxide	GE01		24h every 3 days	
Nitrogen dioxide				
Nitric acid				
Ammonia	GE01		24h every 3 days	
Ozone				
Sulphate	GE01		24h every 3 days	IC
Nitrate	GE01		24h every 3 days	IC
Ammonium	GE01		24h every 3 days	Spectrophotometry
Sodium				
Calcium				
Magnesium				
Potassium				
Chloride	GE01		24h every 3 days	IC
PM <sub>10</sub>				
PM <sub>2.5</sub>				
PM <sub>1</sub>				
Sum of nitric acid and nitrate	GE01		24h every 3 days	
Sum of ammonia and ammonium	GE01		24h every 3 days	

Country: Germany		Main components and ozone - EMEP		Year: 2017
	Station	Sampling	Sampling frequency	Analysis method
<b>Precipitation</b>				
Precipitation amount	DE01, DE02, DE03, DE07, DE08, DE09	Daily wet only at DE02, DE03 and DE07, weekly wet-only at the other sites	Daily / weekly	Gravimetric by weight
Precipitation amount, official gauge				
Sulphate	DE01, DE02, DE03, DE07, DE08, DE09	Daily wet only at DE02, DE03 and DE07, weekly wet-only at the other sites	Daily / weekly	Ion chromatography
Nitrate	DE01, DE02, DE03, DE07, DE08, DE09	Daily wet only at DE02, DE03 and DE07, weekly wet-only at the other sites	Daily / weekly	Ion chromatography
Ammonium	DE01, DE02, DE03, DE07, DE08, DE09	Daily wet only at DE02, DE03 and DE07, weekly wet-only at the other sites	Daily / weekly	Ion chromatography
Magnesium	DE01, DE02, DE03, DE07, DE08, DE09	Daily wet only at DE02, DE03 and DE07, weekly wet-only at the other sites	Daily / weekly	Ion chromatography
Sodium	DE01, DE02, DE03, DE07, DE08, DE09	Daily wet only at DE02, DE03 and DE07, weekly wet-only at the other sites	Daily / weekly	Ion chromatography
Chloride	DE01, DE02, DE03, DE07, DE08, DE09	Daily wet only at DE02, DE03 and DE07, weekly wet-only at the other sites	Daily / weekly	Ion chromatography
Calcium	DE01, DE02, DE03, DE07, DE08, DE09	Daily wet only at DE02, DE03 and DE07, weekly wet-only at the other sites	Daily / weekly	Ion chromatography
Potassium	DE01, DE02, DE03, DE07, DE08, DE09	Daily wet only at DE02, DE03 and DE07, weekly wet-only at the other sites	Daily / weekly	Ion chromatography
Conductivity	DE01, DE02, DE03, DE07, DE08, DE09	Daily wet only at DE02, DE03 and DE07, weekly wet-only at the other sites	Daily / weekly	Conductivity meter
pH	DE01, DE02, DE03, DE07, DE08, DE09	Daily wet only at DE02, DE03 and DE07, weekly wet-only at the other sites	Daily / weekly	pH meter
<b>Air</b>				
Sulphur dioxide	DE01, DE02, DE03, DE07, DE08, DE09	Monitor (trace level instrument)	Half hourly	UV fluorescence
Nitrogen dioxide	DE01, DE02, DE03, DE07, DE08, DE09	Monitor	Daily	chemiluminescence_ photolytic
Nitric acid	DE02, DE03, DE07	KOH-impregnated Whatman 40 filter, 22 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography
Ammonia	DE02, DE03, DE07	Oxalic acid-impregnated Whatman 40 filter, 22 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography
Ammonia	DE01, DE02, DE03, DE07, DE08, DE09	Low volume denuder	Weekly	Spectrophotometry/F IA
Ozone	DE01, DE02, DE03, DE07, DE08, DE09	UV-monitor	Half hourly	UV-absorption
Sulphate	DE02, DE03, DE07	Teflon filter, 22 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography
Nitrate	DE02, DE03, DE07	Teflon filter, 22 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography
Ammonium	DE02, DE03, DE07	Teflon filter, 22 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography
Sodium	DE02, DE03, DE07	Teflon filter, 22 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography
Calcium	DE02, DE03, DE07	Teflon filter, 22 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography
Magnesium	DE02, DE03, DE07	Teflon filter, 22 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography
Potassium	DE02, DE03, DE07	Teflon filter, 22 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography
Chloride	DE02, DE03, DE07	Teflon filter, 22 m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography
PM <sub>10</sub>	DE01, DE02, DE03, DE07, DE08, DE09	Digitel High Volume Sampler DHA 80, glass fibre filters ø15 cm, Machery Nagel MN 85/90	Daily	Gravimetric by weight
PM <sub>2.5</sub>	DE02, DE03, DE07, DE08	Digitel High Volume Sampler DHA 80, glass fibre filters ø15 cm, Machery Nagel MN 85/90	Daily	Gravimetric by weight

Country: Germany		Main components and ozone - EMEP		Year: 2017
	Station	Sampling	Sampling frequency	Analysis method
PM <sub>1</sub>	DE02	Digitel High Volume Sampler DHA 80, glass fibre filters ø15 cm, Machery Nagel MN 85/90	Daily	Gravimetric by weight
Sum of nitric acid and nitrate	DE02, DE03, DE07	Filter pack method	Daily	Ion chromatography
Sum of ammonia and ammonium	DE02, DE03, DE07	Filter pack method	Daily	Ion chromatography
Sulphate in PM <sub>2.5</sub>	DE01, DE02, DE03, DE07, DE08, DE09	Leckel Low Volume Sampler, 2.3 m <sup>3</sup> /day	Every 6 <sup>th</sup> day	Ion chromatography
Nitrate in PM <sub>2.5</sub>	DE01, DE02, DE03, DE07, DE08, DE09	Leckel Low Volume Sampler, 2.3 m <sup>3</sup> /day	Every 6 <sup>th</sup> day	Ion chromatography
Ammonium in PM <sub>2.5</sub>	DE01, DE02, DE03, DE07, DE08, DE09	Leckel Low Volume Sampler, 2.3 m <sup>3</sup> /day	Every 6 <sup>th</sup> day	Ion chromatography
Sodium in PM <sub>2.5</sub>	DE01, DE02, DE03, DE07, DE08, DE09	Leckel Low Volume Sampler, 2.3 m <sup>3</sup> /day	Every 6 <sup>th</sup> day	Ion chromatography
Calcium in PM <sub>2.5</sub>	DE01, DE02, DE03, DE07, DE08, DE09	Leckel Low Volume Sampler, 2.3 m <sup>3</sup> /day	Every 6 <sup>th</sup> day	Ion chromatography
Magnesium in PM <sub>2.5</sub>	DE01, DE02, DE03, DE07, DE08, DE09	Leckel Low Volume Sampler, 2.3 m <sup>3</sup> /day	Every 6 <sup>th</sup> day	Ion chromatography
Potassium in PM <sub>2.5</sub>	DE01, DE02, DE03, DE07, DE08, DE09	Leckel Low Volume Sampler, 2.3 m <sup>3</sup> /day	Every 6 <sup>th</sup> day	Ion chromatography
Chloride in PM <sub>2.5</sub>	DE01, DE02, DE03, DE07, DE08, DE09	Leckel Low Volume Sampler, 2.3 m <sup>3</sup> /day	Every 6 <sup>th</sup> day	Ion chromatography

Country: Greece		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount					
Precipitation amount, official gauge					
Sulphate					
Nitrate					
Ammonium					
Magnesium					
Sodium					
Chloride					
Calcium					
Potassium					
Conductivity					
pH					
<b>Air</b>					
Sulphur dioxide	GR01	Instrumental: UV-fluorescence	Hourly	UV-fluorescence	
Nitrogen dioxide	GR01	Instrumental: Chemiluminescence	Hourly	Chemiluminescence	
Nitric acid					
Ammonia					
Ozone	GR01	Instrumental: UV-monitor	Hourly	UV-absorption	
Sulphate					
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM <sub>10</sub>	GR01	Instrumental: beta gauge	Hourly	Beta radiation attenuation	
PM <sub>2.5</sub>	GR01	Instrumental: beta gauge	Hourly	Beta radiation attenuation	
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					

Country: Hungary		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	HU02	Wet-only	Daily		
Precipitation amount, official gauge	HU02	Wet-only	Daily		
Sulphate	HU02	Wet-only	Daily	Ion chromatography	
Nitrate	HU02	Wet-only	Daily	Ion chromatography	
Ammonium	HU02	Wet-only	Daily	Spectrophotometric, Indophenol method	
Magnesium	HU02	Wet-only	Daily	Atomic absorption method (flame)	
Sodium	HU02	Wet-only	Daily	Atomic absorption method (flame)	
Chloride	HU02	Wet-only	Daily	Ion chromatography	
Calcium	HU02	Wet-only	Daily	Atomic absorption method (flame)	
Potassium	HU02	Wet-only	Daily	Atomic absorption method (flame)	
Conductivity	HU02	Wet-only	Daily	Conductivity meter	
pH	HU02	Wet-only	Daily	pH meter	
<b>Air</b>					
Sulphur dioxide	HU02	KOH-impregnated Whatman 40 filter, ~21 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrogen dioxide	HU02	Iodide method (impregnated glass sinter), ~0.8 m <sup>3</sup> /day	Daily	Spectrophotometric, Griess method	
Nitric acid	HU02	KOH-impregnated Whatman 40 filter, ~21 m <sup>3</sup> /day	Daily	Ion chromatography	
Ammonia	HU02	Citric-acid impregnated Whatman 40 filter, ~21 m <sup>3</sup> /day	Daily	Spectrophotometric, Indophenol method	
Ozone	HU02	UV-monitor	Hourly	UV-absorption	
Sulphate	HU02	Teflon filter, Millipore Fluoropore, 1 µm, ~21 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrate	HU02	Teflon filter, Millipore Fluoropore, 1 µm, ~21 m <sup>3</sup> /day	Daily	Ion chromatography	
Ammonium	HU02	Teflon filter, Millipore Fluoropore, 1 µm, ~21 m <sup>3</sup> /day	Daily	Spectrophotometric, Indophenol method	
Sodium	HU02	Teflon filter, Millipore Fluoropore, 1 µm, ~21 m <sup>3</sup> /day	Daily	Atomic absorption method (flame)	
Calcium	HU02	Teflon filter, Millipore Fluoropore, 1 µm, ~21 m <sup>3</sup> /day	Daily	Atomic absorption method (flame)	
Magnesium	HU02	Teflon filter, Millipore Fluoropore, 1 µm, ~21 m <sup>3</sup> /day	Daily	Atomic absorption method (flame)	
Potassium	HU02	Teflon filter, Millipore Fluoropore, 1 µm, ~21 m <sup>3</sup> /day	Daily	Atomic absorption method (flame)	
Chloride					
PM <sub>10</sub> mass	HU02	PM <sub>10</sub> -monitor	Hourly	Beta-ray-absorption	
PM <sub>2.5</sub> mass	HU02	DHA-80 high volume sampler	Daily	Gravimetry	
PM <sub>1</sub>					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					

Country: Iceland		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	IS02	NILU bulk sampler	Daily	By volume	
Precipitation amount, official gauge					
Sulphate	IS02	NILU bulk sampler	Daily	ICP-OES	
Nitrate	IS02	NILU bulk sampler	Daily	Spectrophotometry by FIA	
Ammonium					
Magnesium	IS02	NILU bulk sampler	Daily	ICP-OES	
Sodium	IS02	NILU bulk sampler	Daily	ICP-OES	
Chloride	IS02	NILU bulk sampler	Daily	ICP-OES	
Calcium	IS02	NILU bulk sampler	Daily	ICP-OES	
Potassium	IS02	NILU bulk sampler	Daily	ICP-OES	
Conductivity	IS02	NILU bulk sampler	Daily	Conductivity meter	
pH	IS02	NILU bulk sampler	Daily	pH meter	
<b>Air</b>					
Sulphur dioxide	IS02	KOH impregnated Whatman 40 filter, 30 m <sup>3</sup> /day	Daily	ICP-OES	
Nitrogen dioxide					
Nitric acid					
Ammonia					
Ozone					
Sulphate	IS02	Whatman 40 filter, 30 m <sup>3</sup> /day, prefilter for aerosol	Daily	ICP-OES	
Nitrate					
Ammonium					
Sodium	IS02	Whatman 40 filter, 30 m <sup>3</sup> /day, prefilter for aerosol	Daily	ICP-OES	
Calcium	IS02	Whatman 40 filter, 30 m <sup>3</sup> /day, prefilter for aerosol	Daily	ICP-OES	
Magnesium	IS02	Whatman 40 filter, 30 m <sup>3</sup> /day, prefilter for aerosol	Daily	ICP-OES	
Potassium	IS02	Whatman 40 filter, 30 m <sup>3</sup> /day, prefilter for aerosol	Daily	ICP-OES	
Chloride	IS02	Whatman 40 filter, 30 m <sup>3</sup> /day, prefilter for aerosol	Daily	ICP-OES	
PM <sub>10</sub>					
PM <sub>2.5</sub>					
PM <sub>1</sub>					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					

Country: Ireland: IE01 (lab.: Met Éireann)		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	IE01	Wet-only	Daily		
Precipitation amount, official gauge	IE01	Rain gauge	Daily		
Sulphate	IE01	Wet-only	Daily	Ion chromatography	
Nitrate	IE01	Wet-only	Daily	Ion chromatography	
Ammonium	IE01	Wet-only	Daily	Ion chromatography	
Magnesium	IE01	Wet-only	Daily	Ion chromatography	
Sodium	IE01	Wet-only	Daily	Ion chromatography	
Chloride	IE01	Wet-only	Daily	Ion chromatography	
Calcium	IE01	Wet-only	Daily	Ion chromatography	
Potassium	IE01	Wet-only	Daily	Ion chromatography	
Conductivity	IE01	Wet-only	Daily	Conductivity meter	
pH	IE01	Wet-only	Daily	pH meter	
<b>Air</b>					
Sulphur dioxide	IE01	KOH-impregnated Whatman 40 filter, 20-25 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrogen dioxide	IE01	Nal method (glass sinter) 0.7 m <sup>3</sup> /day	Daily	Spectrophotometric, EMEP Manual 4.11	
Nitric acid					
Ammonia					
Ozone					
Sulphate	IE01	Whatman 40 filter, 47 mm diameter, 20-25 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrate					
Ammonium					
Sodium	IE01	Whatman 40 filter, 47 mm diameter, 20-25 m <sup>3</sup> /day	Daily	Ion chromatography	
Calcium	IE01	Whatman 40 filter, 47 mm diameter, 20-25 m <sup>3</sup> /day	Daily	Ion chromatography	
Magnesium	IE01	Whatman 40 filter, 47 mm diameter, 20-25 m <sup>3</sup> /day	Daily	Ion chromatography	
Potassium	IE01	Whatman 40 filter, 47 mm diameter, 20-25 m <sup>3</sup> /day	Daily	Ion chromatography	
Chloride					
PM <sub>10</sub>					
PM <sub>2.5</sub>					
Sum of nitric acid and nitrate	IE01	Aerosol filter as for sulphate + KOH impregnated filter as for SO <sub>2</sub> , 20-25 m <sup>3</sup> /day	Daily	Ion chromatography	
Sum of ammonia and ammonium	IE01	Aerosol filter as for sulphate + citric acid impregnated filter, 20-25 m <sup>3</sup> /day	Daily	Ion chromatography	



Country: Italy, IT04 (lab.: JRC)		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	IT04	Wet-only	Daily	Sampler gauge	
Precipitation amount, official gauge					
Sulphate	IT04	Wet-only	Daily	Ion chromatography	
Nitrate	IT04	Wet-only	Daily	Ion chromatography	
Ammonium	IT04	Wet-only	Daily	Ion chromatography	
Magnesium	IT04	Wet-only	Daily	Ion chromatography	
Sodium	IT04	Wet-only	Daily	Ion chromatography	
Chloride	IT04	Wet-only	Daily	Ion chromatography	
Calcium	IT04	Wet-only	Daily	Ion chromatography	
Potassium	IT04	Wet-only	Daily	Ion chromatography	
Conductivity	IT04	Wet-only	Daily	Conductivity meter	
pH	IT04	Wet-only	Daily	pH meter	
<b>Air</b>					
Sulphur dioxide	IT04	Instrumental: UV-fluorescence	Daily	UV-fluorescence	
Nitrogen dioxide	IT04	Instrumental: Chemiluminescence	Daily	Chemiluminescence	
Nitric acid					
Ammonia					
Ozone	IT04	UV-monitor	Hourly	UV-absorption	
Sulphate	IT04	PALL Life Sciences QFF (type TISSUEQUARTZ 2500QAT-UP), 24 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrate	IT04	PALL Life Sciences QFF (type TISSUEQUARTZ 2500QAT-UP), 24 m <sup>3</sup> /day	Daily	Ion chromatography	
Ammonium	IT04	PALL Life Sciences QFF (type TISSUEQUARTZ 2500QAT-UP), 24 m <sup>3</sup> /day	Daily	Ion chromatography	
Sodium	IT04	PALL Life Sciences QFF (type TISSUEQUARTZ 2500QAT-UP), 24 m <sup>3</sup> /day	Daily	Ion chromatography	
Calcium	IT04	PALL Life Sciences QFF (type TISSUEQUARTZ 2500QAT-UP), 24 m <sup>3</sup> /day	Daily	Ion chromatography	
Magnesium	IT04	PALL Life Sciences QFF (type TISSUEQUARTZ 2500QAT-UP), 24 m <sup>3</sup> /day	Daily	Ion chromatography	
Potassium	IT04	PALL Life Sciences QFF (type TISSUEQUARTZ 2500QAT-UP), 24 m <sup>3</sup> /day	Daily	Ion chromatography	
Chloride	IT04	PALL Life Sciences QFF (type TISSUEQUARTZ 2500QAT-UP), 24 m <sup>3</sup> /day	Daily	Ion chromatography	
PM <sub>10</sub>					
PM <sub>2.5</sub>	IT04	PALL Life Sciences QFF (type TISSUEQUARTZ 2500QAT-UP), 24 m <sup>3</sup> /day	Daily	Weighing at 20% RH	
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					
EC/OC	IT04	AirMonitors Denuder, PALL Life Sciences QFF (type TISSUEQUARTZ 2500QAT-UP), 24 m <sup>3</sup> /day	Daily	Thermo optical, EUSAAR 2 protocol	

Country: Italy, IT09/IT14 (lab: National Research Council of Italy, CNR, Institute for Atmospheric Science and Climate)		Main components and ozone - EMEP	Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method
<b>Precipitation</b>				
Precipitation amount				
Precipitation amount, official gauge				
Sulphate				
Nitrate				
Ammonium				
Magnesium				
Sodium				
Chloride				
Calcium				
Potassium				
Conductivity				
pH				
Acidity				
<b>Air</b>				
Sulphur dioxide	IT0009R	Instrumental: UV-fluorescence	Hourly	UV-fluorescence
Nitrogen dioxide				
Nitric acid				
Ammonia				
Ozone	all	UV-monitor	Hourly	UV-absorption
Sulphate				
Nitrate				
Ammonium				
Sodium				
Calcium				
Magnesium				
Potassium				
Chloride				
PM <sub>10</sub>				
PM <sub>2.5</sub>				
PM <sub>1</sub>				
Sum of nitric acid and nitrate				
Sum of ammonia and ammonium				

Country: Italy, IT19 (lab: Arpa Umbria)		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount					
Precipitation amount, official gauge					
Sulphate					
Nitrate					
Ammonium					
Magnesium					
Sodium					
Chloride					
Calcium					
Potassium					
Conductivity					
pH					
Acidity					
<b>Air</b>					
Sulphur dioxide					
Nitrogen dioxide	IT0019R	Instrumental: Chemiluminescence	Hourly	Chemiluminescence	
Nitric acid					
Ammonia					
Ozone	IT0019R	Instrumental: UV-monitor	Hourly	UV-absorption	
Sulphate	IT0019R	Low volume sampler Quartz Filter	Daily	Ion chromatography	
Nitrate	IT0019R	Low volume sampler Quartz Filter	Daily	Ion chromatography	
Ammonium	IT0019R	Low volume sampler Quartz Filter	Daily	Ion chromatography	
Sodium	IT0019R	Low volume sampler Quartz Filter	Daily	Ion chromatography	
Calcium	IT0019R	Low volume sampler Quartz Filter	Daily	Ion chromatography	
Magnesium	IT0019R	Low volume sampler Quartz Filter	Daily	Ion chromatography	
Potassium	IT0019R	Low volume sampler Quartz Filter	Daily	Ion chromatography	
Chloride	IT0019R	Low volume sampler Quartz Filter	Daily	Ion chromatography	
PM <sub>10</sub>	IT0019R	Low volume sampler Quartz Filter	Daily	Beta radiation attenuation	
PM <sub>2.5</sub>	IT0019R	Low volume sampler Quartz Filter	Daily	Beta radiation attenuation	
PM <sub>1</sub>					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					
EC/OC PM <sub>10</sub>	IT0019R	Low volume sampler Quartz Filter	Daily	Thermal-optical, EUSAAR 2 protocol	

Country: Kazakhstan		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount					
Precipitation amount, official gauge					
Sulphate					
Nitrate					
Ammonium					
Magnesium					
Sodium					
Chloride					
Calcium					
Potassium					
Conductivity					
pH					
<b>Air</b>					
Sulphur dioxide					
Nitrogen dioxide					
Nitric acid					
Ammonia					
Ozone					
Sulphate PM <sub>10</sub>	KZ01		Daily	IC	
Nitrate PM <sub>10</sub>	KZ01		Daily	IC	
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride PM <sub>10</sub>	KZ01		Daily	IC	
PM <sub>10</sub>					
PM <sub>2.5</sub>					
PM <sub>1</sub>					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					

Country: Latvia		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	LV10	Wet-only	Daily	Gravimetric	
Precipitation amount, official gauge	LV10	Meteorological station	Daily	Gauge, Tretjakov type	
Sulphate	LV10	Wet-only	Daily	Ion chromatography	
Nitrate	LV10	Wet-only	Daily	Ion chromatography	
Ammonium	LV10	Wet-only	Daily	Spectrophotometric, Indophenol method	
Magnesium	LV10	Wet-only	Daily	ICP-AES	
Sodium	LV10	Wet-only	Daily	ICP-AES	
Chloride	LV10	Wet-only	Daily	Ion chromatography	
Calcium	LV10	Wet-only	Daily	ICP-AES	
Potassium	LV10	Wet-only	Daily	ICP-AES	
Conductivity	LV10	Wet-only	Daily	Conductivity meter	
pH	LV10	Wet-only	Daily	pH meter	
<b>Air</b>					
Sulphur dioxide	LV10	KOH-impregnated Whatman 47 filter, 16-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrogen dioxide	LV10	Nal-impregnated glass sinters, 03-0.7 m <sup>3</sup> /day	Daily	Spectrophotometric, Griess method	
Nitric acid	LV10	KOH-impregnated Whatman 47 filter, 16-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Ammonia	LV10	Oxalic acid impregnated filter, 16-23 m <sup>3</sup> /day	Daily	Spectrophotometric, Indophenol method	
Sulphate	LV10	Whatman 47 filter, 16-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrate	LV10	Whatman 47 filter, 16-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Ammonium	LV10	Whatman 47 filter, 16-23 m <sup>3</sup> /day	Daily	Spectrophotometric, Indophenol method	
Sulphate PM <sub>2.5</sub>	LV10	Teflon filter, 386.4 m <sup>3</sup> /weekly	Weekly	Ion chromatography	
Nitrate PM <sub>2.5</sub>	LV10	Teflon filter, 386.4 m <sup>3</sup> /weekly	Weekly	Ion chromatography	
Ammonium PM <sub>2.5</sub>	LV10	Teflon filter, 386.4 m <sup>3</sup> /weekly	Weekly	Ion chromatography	
Sodium PM <sub>2.5</sub>	LV10	Teflon filter, 386.4 m <sup>3</sup> /weekly	Weekly	Ion chromatography	
Calcium PM <sub>2.5</sub>	LV10	Teflon filter, 386.4 m <sup>3</sup> /weekly	Weekly	Ion chromatography	
Magnesium PM <sub>2.5</sub>	LV10	Teflon filter, 386.4 m <sup>3</sup> /weekly	Weekly	Ion chromatography	
Potassium PM <sub>2.5</sub>	LV10	Teflon filter, 386.4 m <sup>3</sup> /weekly	Weekly	Ion chromatography	
Chloride PM <sub>2.5</sub>	LV10	Teflon filter, 386.4 m <sup>3</sup> /weekly	Weekly	Ion chromatography	
PM <sub>10</sub>	LV10	Low volume sampler, 2.3 m <sup>3</sup> /h, Teflon filter, 47 mm	Daily	Beta absorption	
PM <sub>2.5</sub>	LV10	Low volume sampler, 2.3 m <sup>3</sup> /h, Teflon filter, 47 mm	Daily	Beta absorption	
PM <sub>1</sub>					
Sum of nitric acid and nitrate	LV10	KOH-impregnated Whatman 47 filter + Whatman 47 filter, 16-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Sum of ammonia and ammonium	LV10	Oxalic acid impregnated filter + Whatman 47 filter, 16-23 m <sup>3</sup> /day	Daily	Spectrophotometric, Indophenol method	

Country: Lithuania		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	LT15	Wet-only	Daily	By weight	
Precipitation amount, official gauge					
Sulphate	LT15	Wet-only	Daily	Ion chromatography	
Nitrate	LT15	Wet-only	Daily	Ion chromatography	
Ammonium	LT15	Wet-only	Daily	Spectrophotometric, Indophenol method	
Magnesium					
Sodium	LT15	Wet-only	Daily	Atomic emission method	
Chloride	LT15	Wet-only	Daily	Ion chromatography	
Calcium	LT15	Wet-only	Daily	Atomic absorption method	
Potassium	LT15	Wet-only	Daily	Atomic emission method	
Conductivity	LT15	Wet-only	Daily	Conductivity meter	
pH	LT15	Wet-only	Daily	pH meter	
<b>Air</b>					
Sulphur dioxide	LT15	KOH-impregnated Whatman 40 filter, 20 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrogen dioxide	LT15	Nal-impregnated glass sinters, 0.7 m <sup>3</sup> /day	Daily	Spectrophotometric, Griess method	
Nitric acid					
Ammonia					
Ozone	LT15	UV-monitor	Hourly	UV-absorption	
Sulphate	LT15	Teflon filter, Pall Zefluor 2 µm, 47 mm diameter, 20m <sup>3</sup> /day (Filterpack)	Daily	Ion chromatography	
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM <sub>10</sub>					
PM <sub>2.5</sub>					
PM <sub>1</sub>					
Sum of nitric acid and nitrate	LT15	Aerosol filter as for sulphate + KOH impregnated Whatman 40 filter as for SO <sub>2</sub> , 20 m <sup>3</sup> /day	Daily	Ion chromatography	
Sum of ammonia and ammonium	LT15	Aerosol filter as for sulphate + oxalic acid impregnated Whatman 40 filter, 20 m <sup>3</sup> /day	Daily	Spectrophotometric, Indophenol method	

Country: Macedonia		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount					
Precipitation amount, official gauge					
Sulphate					
Nitrate					
Ammonium					
Magnesium					
Sodium					
Chloride					
Calcium					
Potassium					
Conductivity					
pH					
<b>Air</b>					
Sulphur dioxide	MK07	Instrumental: UV-fluorescence	Hourly	UV-fluorescence	
Nitrogen dioxide	MK07	Instrumental: Chemiluminescence	Hourly	Chemiluminescence	
Nitric acid					
Ammonia					
Ozone	MK07	Instrumental: UV-Monitor	Hourly	UV-absorption	
Sulphate					
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM <sub>10</sub>	MK07	Instrumental: beta absorption	Hourly	Beta absorption	
PM <sub>2.5</sub>					
PM <sub>1</sub>					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					

Country: Malta		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount					
Precipitation amount, official gauge					
Sulphate					
Nitrate					
Ammonium					
Magnesium					
Sodium					
Chloride					
Calcium					
Potassium					
Conductivity					
pH					
<b>Air</b>					
Sulphur dioxide	MT0001R	Instrumental: UV-fluorescence monitor	Hourly	UV-fluorescence	
Nitrogen dioxide	MT0001R	Instrumental: Chemiluminescence monitor	Hourly	Chemiluminescence (molybdenum converter)	
Nitrogen monoxide	MT0001R	Instrumental: Chemiluminescence monitor	Hourly	Chemiluminescence (molybdenum converter)	
Nitric acid					
Ammonia					
Ozone					
Sulphate					
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM <sub>10</sub>					
PM <sub>2.5</sub>					
PM <sub>1</sub>					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					



Country: Moldova		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	MD13	NILU bulk sampler	Daily	By volume	
Precipitation amount, official gauge					
Sulphate	MD13	NILU bulk sampler	Daily	Ion chromatography	
Nitrate	MD13	NILU bulk sampler	Daily	Ion chromatography	
Ammonium	MD13	NILU bulk sampler	Daily	Ion chromatography	
Magnesium	MD13	NILU bulk sampler	Daily	Ion chromatography	
Sodium	MD13	NILU bulk sampler	Daily	Ion chromatography	
Chloride	MD13	NILU bulk sampler	Daily	Ion chromatography	
Calcium	MD13	NILU bulk sampler	Daily	Ion chromatography	
Potassium	MD13	NILU bulk sampler	Daily	Ion chromatography	
Conductivity	MD13	NILU bulk sampler	Daily	Conductivity meter	
pH	MD13	NILU bulk sampler	Daily	pH meter; potentiometric, glass electrode	
<b>Air</b>					
Sulphur dioxide	MD13	KOH-impregnated Whatman 40 filter 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrogen dioxide					
Nitric acid					
Ammonia					
Ozone					
Sulphate	MD13	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrate	MD13	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Ammonium	MD13	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Sodium	MD13	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Calcium	MD13	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Magnesium	MD13	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Potassium	MD13	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Chloride	MD13	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
PM <sub>10</sub>	MD13	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
PM <sub>2.5</sub>					
PM <sub>1</sub>					
Sum of nitric acid and nitrate	MD13	Aerosol filter as for sulphate + KOH impregnated filter as for SO <sub>2</sub> , 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Sum of ammonia and ammonium	MD13	Aerosol filter as for sulphate + oxalic acid impregnated filter, 25 m <sup>3</sup> /day	Daily	Spectrophotometric, Indophenol method and IC	
EC/OC					

Country: Montenegro		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	ME08	Wet-only	daily		
Precipitation amount, official gauge	ME08	Meteorological station	daily		
Sulphate	ME08	Wet-only	daily	Spectrophotometry	
Nitrate	ME08	Wet-only	daily	Spectrophotometry	
Ammonium	ME08	Wet-only	daily	Spectrophotometry	
Magnesium	ME08	Wet-only	daily	By calculation	
Sodium	ME08	Wet-only	daily	Flame photometry	
Chloride	ME08	Wet-only	daily	Titrimetric method	
Calcium	ME08	Wet-only	daily	Titrimetric method	
Potassium	ME08	Wet-only	daily	Flame photometry	
Conductivity	ME08	Wet-only	daily	Conductivity meter	
pH	ME08	Wet-only	daily	pH meter, glass electrode	
<b>Air</b>					
Sulphur dioxide	ME08	Absorbing solution	Daily	Spectrophotometry	
Nitrogen dioxide	ME08	Absorbing solution	Daily	Spectrophotometry	
Nitric acid					
Ammonia					
Ozone					
Sulphate					
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM <sub>10</sub>					
PM <sub>2,5</sub>					
PM <sub>1</sub>					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					

Country: The Netherlands		Main components and ozone - EMEP		Year: 2017
	Station	Sampling	Sampling frequency	Analysis method
<b>Precipitation</b>				
Precipitation amount	NL091	Wet-only	Daily/4-weekly	
Precipitation amount, official gauge				
Sulphate	NL091	Wet-only	Daily/4-weekly	Ion chromatography
Nitrate	NL091	Wet-only	Daily/4-weekly	Ion chromatography
Ammonium	NL091	Wet-only	Daily/4-weekly	CFA
Magnesium	NL091	Wet-only	Daily/4-weekly	HR-ICP/MS
Sodium	NL091	Wet-only	Daily/4-weekly	HR-ICP/MS
Chloride	NL091	Wet-only	Daily/4-weekly	Ion chromatography
Calcium	NL091	Wet-only	Daily/4-weekly	HR-ICP/MS
Potassium	NL091	Wet-only	Daily/4-weekly	HR-ICP/MS
Conductivity	NL091	Wet-only	Daily/4-weekly	Conductivity meter
pH	NL091	Wet-only	Daily/4-weekly	pH meter
<b>Air</b>				
Sulphur dioxide	NL07,NL09,,NL91,NL644R	Instrumental: UV-fluorescence	Hourly	UV-fluorescence
Nitrogen dioxide	NL07,NL09,NL10,NL91,NL644R	Instrumental: Chemiluminescence	Hourly	Chemiluminescence
Nitric acid				
Ammonia	NL91	miniDOAS: open path UV differential absorption, fingerprint 205-230 nm	Hourly	DOAS
Ozone	NL07,NL09,NL10, NL91,NL644R	UV-monitor	Hourly	UV-absorption
Sulphate	NL10,NL91	Whatman QMA filter 47 mm, 55.2 m <sup>3</sup> /day	Daily	Ion chromatography
Nitrate	NL10,NL91	Whatman QMA filter 47 mm, 55.2 m <sup>3</sup> /day	Daily	Ion chromatography
Ammonium	NL10,NL91	Whatman QMA filter 47 mm, 55.2 m <sup>3</sup> /day	Daily	CFA <sup>2</sup>
Chloride	NL10,NL91	Whatman QMA filter 47 mm, 55.2 m <sup>3</sup> /day	Daily	Ion chromatography
Sodium	NL08, NL644R	Teflon filter, Pall Zefluor 2 µm, 47 mm diameter, 55.2 m <sup>3</sup> /day	NL08L(Every other day), NL644R( every 4 day)	HR-ICP/MS
Calcium	NL08, NL644R	Teflon filter, Pall Zefluor 2 µm, 47 mm diameter, 55.2 m <sup>3</sup> /day	NL08L(Every other day), NL644R( every 4th day)	HR-ICP/MS
Magnesium	NL08, NL644R	Teflon filter, Pall Zefluor 2 µm, 47 mm diameter, 55.2 m <sup>3</sup> /day	NL08L(Every other day), NL644R( every 4th day)	HR-ICP/MS
Potassium	NL091	Wet-only	Daily/4-weekly	HR-ICP/MS
PM <sub>10</sub>	NL07,NL09,NL10,NL91,NL644R	Instrumental: beta absorption	Hourly	Beta absorption
PM <sub>2.5</sub>	NL09,NL10,,NL91.NL644R	Instrumental: beta absorption	Hourly	Beta absorption
Sum of nitric acid and nitrate				
Sum of ammonia and ammonium				

Country: Norway		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	All	NILU bulk sampler	Daily	By volume	
Precipitation amount, official gauge					
Sulphate	All	NILU bulk sampler	Daily	Ion chromatography	
Nitrate	All	NILU bulk sampler	Daily	Ion chromatography	
Ammonium	All	NILU bulk sampler	Daily	Ion chromatography	
Magnesium	All	NILU bulk sampler	Daily	Ion chromatography	
Sodium	All	NILU bulk sampler	Daily	Ion chromatography	
Chloride	All	NILU bulk sampler	Daily	Ion chromatography	
Calcium	All	NILU bulk sampler	Daily	Ion chromatography	
Potassium	All	NILU bulk sampler	Daily	Ion chromatography	
Conductivity	All	NILU bulk sampler	Daily	Conductivity meter	
pH	All	NILU bulk sampler	Daily	pH meter; potentiometric, glass electrode	
<b>Air</b>					
Sulphur dioxide	All	KOH-impregnated Whatman 40 filter 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrogen dioxide	All	Nal-impregnated glass sinters, 0.7 m <sup>3</sup> /day	Daily	Spectrophotometric, Griess method	
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	All	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrate	All	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Ammonium	All	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Sodium	All	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Calcium	All	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Magnesium	All	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Potassium	All	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Chloride	All	Teflon filter, Gelman Zefluor 2 µm, 25 m <sup>3</sup> /day	Daily	Ion chromatography	
PM <sub>10</sub>	NO01	KleinfILTERGERÄT Whatman QM-A 47 mm	6+1	by weight, RH 50%	
PM <sub>2.5</sub>	NO01	KleinfILTERGERÄT Whatman QM-A 47 mm	6+1	by weight, RH 50%	
PM <sub>1</sub>	NO01	KleinfILTERGERÄT Whatman QM-A 47 mm	6+1	by weight, RH 50%	
Sum of nitric acid and nitrate	All	Aerosol filter as for sulphate + KOH impregnated filter as for SO <sub>2</sub> , 25 m <sup>3</sup> /day	Daily	Ion chromatography	
Sum of ammonia and ammonium	All	Aerosol filter as for sulphate + oxalic acid impregnated filter, 25 m <sup>3</sup> /day	Daily	Spectrophotometric, Indophenol method and IC	
EC/OC	NO01	KleinfILTERGERÄT Whatman QM-A 47 mm, 55 m <sup>3</sup> /day	6+1	Thermal optical transmission	

Country: Poland: PL02, PL03, PL04 (lab. IMWM-NRI)		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	All	Bulk	Daily	By_weight	
Precipitation amount, official gauge	All	Total	Daily	PL02,PL03 Hellman, standard gauge PL04 SEBA_Hydrometrie, automatic gauge	
Sulphate	All	Bulk	Daily	Ion chromatography	
Nitrate	All	Bulk	Daily	Ion chromatography	
Ammonium	All	Bulk	Daily	Spectrophotometric, Chloramin T	
Magnesium	All	Bulk	Daily	Atomic absorption method	
Sodium	All	Bulk	Daily	Atomic absorption method	
Chloride	All	Bulk	Daily	Ion chromatography	
Calcium	All	Bulk	Daily	Atomic absorption method	
Potassium	All	Bulk	Daily	Atomic absorption method	
Conductivity	All	Bulk	Daily	Conductivity meter	
pH	All	Bulk	Daily	pH meter	
<b>Air</b>					
Sulphur dioxide	All	KOH-impregnated Whatman 40 filter, 3.5-4.2 m <sup>3</sup> /day	Daily	Spectrophotometric,Thorin	
Nitrogen dioxide	All	Absorbing solution TGS, 0.7 m <sup>3</sup> /day	Daily	Spectrophotometric, Griess method	
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	All	Whatman 40 filter, 3.5-4.2 m <sup>3</sup> /day	Daily	Spectrophotometric,Thorin	
Nitrate	All	Whatman 40 filter, 3.5-4.2 m <sup>3</sup> /day	Daily	Spectrophotometric, Griess after hydrazine reduction	
Ammonium	All	Whatman 40 filter, 3.5-4.2 m <sup>3</sup> /day	Daily	Spectrophotometric, Chloramin T	
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM <sub>10</sub>					
PM <sub>2.5</sub>					
Sum of nitric acid and nitrate	All	NaF impregnated Whatman 40 filter, 3.5-4.2 m <sup>3</sup> /day	Daily	Spectrophotometric, Griess after hydrazine reduction	
Sum of ammonia and ammonium	All	Oxalic acid impregnated Whatman 40 filter, 3.5-4.2 m <sup>3</sup> /day	Daily	Spectrophotometric, Chloramin T	

Country: Poland: PL05 (lab. IEP-NRI)		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	PL05	Wet-only	Daily	By weight	
Precipitation amount, official gauge	PL05	Total	Daily	Standard rain gauge	
Sulphate	PL05	Wet-only	Daily	Ion chromatography	
Nitrate	PL05	Wet-only	Daily	Ion chromatography	
Ammonium	PL05	Wet-only	Daily	Spectrophotometric, Indophenol method	
Magnesium	PL05	Wet-only	Daily	Plasma emission spectrometry	
Sodium	PL05	Wet-only	Daily	Plasma emission spectrometry	
Chloride	PL05	Wet-only	Daily	Ion chromatography	
Calcium	PL05	Wet-only	Daily	Plasma emission spectrometry	
Potassium	PL05	Wet-only	Daily	Plasma emission spectrometry	
Conductivity	PL05	Wet-only	Daily	Conductivity meter	
pH	PL05	Wet-only	Daily	pH meter	
<b>Air</b>					
Sulphur dioxide	PL05	KOH-impregnated Whatman 40 filter, 16 m <sup>3</sup> /day	Daily	Capillary Electrophoresis	
Nitrogen dioxide	PL05	Iodide method (impregnated glass sinter), 0.7 m <sup>3</sup> /day	Daily	Spectrophotometric, Griess method	
Nitric acid					
Ammonia					
Ozone	PL05	UV-monitor	Hourly	UV-absorption	
Sulphate	PL05	Teflon filter Millipore Fluoropore 3 µm, 16 m <sup>3</sup> /day	Daily	Capillary Electrophoresis	
Sulphate	PL05	QMA Whatman filter, 750 m <sup>3</sup> /day (PM <sub>2,5</sub> )	Daily/Weekly (anal.)	Ion chromatography	
Nitrate	PL05	QMA Whatman filter, 750 m <sup>3</sup> /day (PM <sub>2,5</sub> )	Daily/Weekly (anal.)	Ion chromatography	
Ammonium	PL05	QMA Whatman filter, 750 m <sup>3</sup> /day (PM <sub>2,5</sub> )	Daily/Weekly (anal.)	Ion chromatography	
Sodium	PL05	QMA Whatman filter, 750 m <sup>3</sup> /day (PM <sub>2,5</sub> )	Daily/Weekly (anal.)	Plasma emission spectrometry	
Calcium	PL05	QMA Whatman filter, 750 m <sup>3</sup> /day (PM <sub>2,5</sub> )	Daily/Weekly (anal.)	Plasma emission spectrometry	
Magnesium	PL05	QMA Whatman filter, 750 m <sup>3</sup> /day (PM <sub>2,5</sub> )	Daily/Weekly (anal.)	Plasma emission spectrometry	
Potassium	PL05	QMA Whatman filter, 750 m <sup>3</sup> /day (PM <sub>2,5</sub> )	Daily/Weekly (anal.)	Plasma emission spectrometry	
Chloride	PL05	QMA Whatman filter, 750 m <sup>3</sup> /day (PM <sub>2,5</sub> )	Daily/Weekly (anal.)	Ion chromatography	
EC/OC	PL05	QMA Whatman filter, 750 m <sup>3</sup> /day (PM <sub>2,5</sub> )	Daily	Thermo optical	
PM <sub>10</sub>	PL05	High Volume Sampler (750 m <sup>3</sup> /day)	Daily	By weight	
PM <sub>2,5</sub>	PL05	High Volume Sampler (750 m <sup>3</sup> /day)	Daily	By weight	
Sum of nitric acid and nitrate	PL05	Aerosol Teflon filter Millipore Fluoropore 3 µm+ KOH impregnated Whatman 40 filter, 16 m <sup>3</sup> /day	Daily	Capillary Electrophoresis	
Sum of ammonia and ammonium	PL05	Aerosol Teflon filter Millipore Fluoropore 3 µm + Oxalic acid impregnated Whatman 40 filter, 16 m <sup>3</sup> /day	Daily	Spectrophotometric, Indophenol method	

Country: Romania		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount					
Precipitation amount, official gauge					
Sulphate					
Nitrate					
Ammonium					
Magnesium					
Sodium					
Chloride					
Calcium					
Potassium					
Conductivity					
pH					
<b>Air</b>					
Sulphur dioxide	EM-3 RO0008R	Instrumental: UV-fluorescence monitor	Hourly	UV-fluorescence	
Nitrogen dioxide	EM-3 RO0008R	Instrumental: Chemiluminescence monitor	Hourly	Chemiluminescence	
Nitric acid					
Ammonia					
Ozone	EM-3 RO0008R	Instrumental:UV-monitor	Hourly	UV-absorption	
Sulphate					
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM <sub>10</sub>	EM-3 RO0008R	Low volume sampler 2,3m <sup>3</sup> /hour	Daily	Gravimetric	
PM <sub>2,5</sub>					
PM <sub>1</sub>					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					

Country: Russian Federation		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	All	Bulk	Daily		
Precipitation amount, official gauge					
Sulphate	All	Bulk	Daily	Ion chromatography	
Nitrate	All	Bulk	Daily	Ion chromatography	
Ammonium	All	Bulk	Daily	Ion chromatography	
Magnesium	All	Bulk	Daily	Ion chromatography	
Sodium	All	Bulk	Daily	Ion chromatography	
Chloride	All	Bulk	Daily	Ion chromatography	
Calcium	All	Bulk	Daily	Ion chromatography	
Potassium	All	Bulk	Daily	Ion chromatography	
Conductivity	All	Bulk	Daily	Conductivity meter	
pH	All	Bulk	Daily	pH meter	
<b>Air</b>					
Sulphur dioxide	RU18	NaOH-impregnated Whatman 40 filter, 20-25 m <sup>3</sup> /day	Daily	Ion chromatography	
Sulphur dioxide	RU20	NaOH-impregnated Whatman 40 filter, 20-25 m <sup>3</sup> /day	Weekly	Ion chromatography	
Nitrogen dioxide					
Nitric acid					
Ammonia					
Ozone					
Sulphate	RU18	Whatman 40 filter, 20-25 m <sup>3</sup> /day	Daily	Ion chromatography	
Sulphate	RU20	Whatman 40 filter, 20-25 m <sup>3</sup> /day	Weekly	Ion chromatography	
Nitrate	RU18	Whatman 40 filter, 20-25 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrate	RU20	Whatman 40 filter, 20-25 m <sup>3</sup> /day	Weekly	Ion chromatography	
Ammonium	RU18	Whatman 40 filter, 20-25 m <sup>3</sup> /day	Daily	Ion chromatography	
Ammonium	RU20	Whatman 40 filter, 20-25 m <sup>3</sup> /day	Weekly	Ion chromatography	
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM <sub>10</sub>					
PM <sub>2.5</sub>					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					



Country: Serbia		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount					
Precipitation amount, official gauge	RS05	Meteorological rain gauge	Daily		
Sulphate	RS05	Bulk	Daily	Ion chromatography	
Nitrate	RS05	Bulk	Daily	Ion chromatography	
Ammonium	RS05	Bulk	Daily	Ion chromatography	
Magnesium	RS05	Bulk	Daily	Ion chromatography	
Sodium	RS05	Bulk	Daily	Ion chromatography	
Chloride	RS05	Bulk	Daily	Ion chromatography	
Calcium	RS05	Bulk	Daily	Ion chromatography	
Potassium	RS05	Bulk	Daily	Ion chromatography	
Conductivity	RS05	Bulk	Daily	Conductivity meter	
pH	RS05	Bulk	Daily	pH meter	
<b>Air</b>					
Sulphur dioxide	RS05	Absorbing solution H <sub>2</sub> O <sub>2</sub> , 1.5-2.5 m <sup>3</sup> /day	Daily	Thorin Spectrophotometric method	
Nitrogen dioxide	RS05	Absorbing solution NaOH, 1.5-2.5 m <sup>3</sup> /day	Daily	Modified Griess Saltzman method	
Nitric acid					
Ammonia					
Ozone	RS05	UV monitor	Hourly	UV-absorption	
Sulphate					
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM <sub>10</sub>	RS05	Low Volume Sampler, 2.3 m <sup>3</sup> /day	Daily	Gravimetric method	
PM <sub>2.5</sub>					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					

Country: Slovakia SK02,SK04, SK06, SK07		Main components and ozone – EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	All	Bulk: SK02: Wet-only: SK04, SK06, SK07	Daily SK02, SK06 Weekly SK04, SK 07		
Precipitation amount, official gauge	All	Reported from professional meteorological rain-gauges	Daily		
Sulphate	All	Bulk: SK02 Wet-only: SK04, SK06, SK07	Daily: SK02, SK06 Weekly: SK04, SK07	Ion chromatography – Dionex	
Nitrate	All	Bulk: SK02 Wet-only: SK04, SK06, SK07	Daily: SK02, SK06 Weekly: SK04, SK07	Ion chromatography – Dionex	
Ammonium	All	Bulk: SK02 Wet-only: SK04, SK06, SK07	Daily: SK02, SK06 Weekly: SK04, SK07	Ion chromatography – Dionex	
Magnesium	All	Bulk: SK02 Wet-only: SK04, SK06, SK07	Daily: SK02, SK06 Weekly: SK4,SK07	Ion chromatography – Dionex	
Sodium	All	Bulk: SK02 Wet-only: SK04, SK06, SK07	Daily: SK02, SK06 Weekly: SK04, SK07	Ion chromatography – Dionex	
Chloride	All	Bulk: SK02 Wet-only: SK04, SK06, SK07	Daily: SK02, SK06 Weekly: SK04,SK07	Ion chromatography – Dionex	
Calcium	All	Bulk: SK02 Wet-only: SK04, SK06, SK07	Daily: SK02, SK06 Weekly SK04,SK07	Ion chromatography – Dionex	
Potassium	All	Bulk: SK02 Wet-only: SK04, SK06, SK07	Daily: SK02, SK06 Weekly: SK04, SK07	Ion chromatography – Dionex	
Conductivity	All	Bulk: SK02 Wet-only: SK04, SK06, SK07	Daily: SK02, SK06 Weekly: SK04,SK07	Conductivity meter	
pH	All	Bulk: SK02 Wet-only: SK04, SK06, SK07	Daily: SK02, SK06 Weekly: SK04,SK07	pH meter	
Heavy metals (As, Cd, Cr, Cu, Ni, Pb, Zn)	All	Bulk: SK02 Wet-only: SK04, SK06, SK07	Weekly: SK 06 Monthly: SK02, SK04,SK07	ICP-MS	
<b>Air</b>					
Sulphur dioxide	SK02,SK06	KOH-impregnated Whatman 40 filter, 26-30 m <sup>3</sup> /day	Daily	Ion chromatography – Dionex	
Nitrogen dioxide	SK02,SK06	Absorbing solution NaOH and guajacol, 0.5-0.6 m <sup>3</sup> /day	Daily	Spectrophotometric, Modified Salzman method	
Nitric acid	SK02,SK06	KOH-impregnated Whatman 40 filter, 26-30 m <sup>3</sup> /day	Daily	Ion chromatography – Dionex	
Ammonia	SK06	Citric acid-impregnated Whatman 40 filter, 26-30 m <sup>3</sup> /day	Daily	Ion chromatography – Dionex	
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	SK02,SK06	Whatman 40 filter, 26-30 m <sup>3</sup> /day	Daily	Ion chromatography – Dionex	
Nitrate	SK02,SK06	Whatman 40 filter, 26-30 m <sup>3</sup> /day	Daily	Ion chromatography – Dionex I	
Ammonium	SK06	Whatman 40 filter, 26-30 m <sup>3</sup> /day	Daily	Ion chromatography – Dionex	
Sodium	SK06	Whatman 40 filter, 26-30 m <sup>3</sup> /day	Daily	Ion chromatography – Dionex	
Calcium	SK06	Whatman 40 filter, 26-30 m <sup>3</sup> /day	Daily	Ion chromatography – Dionex	
Magnesium	SK06	Whatman 40 filter, 26-30 m <sup>3</sup> /day	Daily	Ion chromatography – Dionex	
Potassium	SK06	Whatman 40 filter, 26-30 m <sup>3</sup> /day	Daily	Ion chromatography – Dionex	
Chloride	SK02,SK06	Whatman 40 filter, 26-30 m <sup>3</sup> /day	Daily	Ion chromatography – Dionex	
PM <sub>10</sub>	SK04, SK06, SK07	Low volume sampler (MicroPNS), Sartorius nitrocellulose filter, 24 m <sup>3</sup> /day	Weekly	Gravimetric method	

Country: Slovenia		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	SI08	Wet-only	Daily	By weight	
Precipitation amount, official gauge	SI08	Bulk	Daily		
Sulphate	SI08	Wet-only	Daily	Ion chromatography	
Nitrate	SI08	Wet-only	Daily	Ion chromatography	
Ammonium	SI08	Wet-only	Daily	Ion chromatography	
Magnesium	SI08	Wet-only	Daily	Ion chromatography	
Sodium	SI08	Wet-only	Daily	Ion chromatography	
Chloride	SI08	Wet-only	Daily	Ion chromatography	
Calcium	SI08	Wet-only	Daily	Ion chromatography	
Potassium	SI08	Wet-only	Daily	Ion chromatography	
Conductivity	SI08	Wet-only	Daily	Conductivity meter	
pH	SI08	Wet-only	Daily	pH meter	
<b>Air</b>					
Sulphur dioxide	SI08	KOH-impregnated Whatman 40 filter, 17-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrogen dioxide	SI08	Continuous measurements: Teledyne API Model T500U CAPS Analyser	Hourly	Cavity-Attenuated Phase-Shift spectroscopy	
Nitric acid	SI08	KOH-impregnated Whatman 40 filter, 17-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Ammonia	SI08	Oxalic acid impregnated Whatman 40 filter, 17-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Carbon monoxide	SI32	Trace level analyzer	Hourly	ndir	
Sulphate	SI08	Teflon filter, Pall Zefluor 2 µm, 17-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrate	SI08	Teflon filter, Pall Zefluor 2 µm, 17-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Ammonium	SI08	Teflon filter, Pall Zefluor 2 µm, 17-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Sodium	SI08	Teflon filter, Pall Zefluor 2 µm, 17-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Calcium	SI08	Teflon filter, Pall Zefluor 2 µm, 17-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Magnesium	SI08	Teflon filter, Pall Zefluor 2 µm, 17-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Potassium	SI08	Teflon filter, Pall Zefluor 2 µm, 17-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Chloride	SI08	Teflon filter, Pall Zefluor 2 µm, 17-23 m <sup>3</sup> /day	Daily	Ion chromatography	
PM10	SI08	Low volume sampler, 2.3 m <sup>3</sup> /h, Quartz filter, 47 mm	Daily	Gravimetric method	
PM2.5	SI08	Low volume sampler, 2.3 m <sup>3</sup> /h, Quartz filter, 47 mm	Daily	Gravimetric method	
Sum of nitric acid and nitrate	SI08	Teflon filter, Pall Zefluor 2 µm + KOH impregnated Whatman 40 filter, 17-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Sum of ammonia and ammonium	SI08	Teflon filter, Pall Zefluor 2 µm + oxalic acid impregnated Whatman 40 filter, 17-23 m <sup>3</sup> /day	Daily	Ion chromatography	
Ozone	SI08	Instrumental: Ultra Violet (UV) photometry	Hourly	UV absorption	
Sulphate PM <sub>2.5</sub>	SI08	Leckel - Low volume sampler	Daily	Ion chromatography	
Nitrate PM <sub>2.5</sub>	SI08	Leckel - Low volume sampler	Daily	Ion chromatography	
Ammonium PM <sub>2.5</sub>	SI08	Leckel - Low volume sampler	Daily	Ion chromatography	
Sodium PM <sub>2.5</sub>	SI08	Leckel - Low volume sampler	Daily	Ion chromatography	
Calcium PM <sub>2.5</sub>	SI08	Leckel - Low volume sampler	Daily	Ion chromatography	
Magnesium PM <sub>2.5</sub>	SI08	Leckel - Low volume sampler	Daily	Ion chromatography	

Country: Spain		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	All	Wet-only	Daily		
Sulphate	All	Wet-only	Daily	Ion chromatography	
Nitrate	All	Wet-only	Daily	Ion chromatography	
Ammonium	All	Wet-only	Daily	Visible spectrophotometry, Indophenol method	
Magnesium	All	Wet-only	Daily	Atomic absorption spectroscopy	
Sodium	All	Wet-only	Daily	Atomic absorption spectroscopy	
Chloride	All	Wet-only	Daily	Ion chromatography	
Calcium	All	Wet-only	Daily	Atomic absorption spectroscopy	
Potassium	All	Wet-only	Daily	Atomic absorption spectroscopy	
Conductivity	All	Wet-only	Daily	Conductivity meter	
pH	All	Wet-only	Daily	pH meter	
<b>Air</b>					
Sulphur dioxide	All	Instrumental: UV-fluorescence	Hourly	Pulsed UV-Fluorescence	
Nitrogen dioxide/NO/NOx	All	Instrumental: Chemiluminescence	Hourly	Chemiluminescence	
Ozone	All	UV-monitor	Hourly	UV-absorption	
PM <sub>10</sub>	ES09, ES12, ES13, ES16	Monitor de partículas en suspensión TEOM	Hourly	Tapered Element Oscillating Microbalance	
Ammonia	ES01, ES07, ES08, ES09, ES14	Passive sampler	Weekly ES07 (Biweekly)	Visible spectrophotometry, Indophenol method	
PM <sub>10</sub>	All	High volume sampler	Daily	Gravimetric method	
PM <sub>2.5</sub>	ES01, ES06 (started in 2012), ES07, ES08, ES09, ES10, ES11, ES12, ES13, ES14, ES16	High volume sampler	Daily	Gravimetric method	
Sulphate PM <sub>10</sub>	All	Whatman GF/A filter, 720 m <sup>3</sup> /day (ES07, ES08, ES10, ES11, ES12, S13, ES14, ES16) / 1632 m <sup>3</sup> /day (ES01, ES05, ES06, ES09, ES17)	Daily	Ion chromatography	
Nitrate PM <sub>10</sub>	All	Whatman GF/A filter, 720 m <sup>3</sup> /day (ES07, ES08, ES10, ES11, ES12, S13, ES14, ES16) / 1632 m <sup>3</sup> /day (ES01, ES05, ES06, ES09, ES17)	Daily	Ion chromatography	
Sum of nitric acid and nitrate	All	NaOH impregnated Whatman 40 filter, 35 m <sup>3</sup> /day	Daily	Ion chromatography	
Sum of ammonia and ammonium	All	Oxalic acid impregnated Whatman 40 filter, 35 m <sup>3</sup> /day	Daily	Visible spectrophotometry, Indophenol method	
Ammonium PM <sub>10</sub>	ES01, ES07, ES08, ES09, ES14	High volume sampler	24 hour, once a week	Visible spectrophotometry, Indophenol method	
Sodium PM <sub>10</sub>	ES01, ES07, ES08, ES09, ES14	High volume sampler	Daily	Atomic absorption spectroscopy	
Calcium PM <sub>10</sub>	ES01, ES07, ES08, ES09, ES14	High volume sampler	Daily	Atomic absorption spectroscopy	
Magnesium PM <sub>10</sub>	ES01, ES07, ES08, ES09, ES14	High volume sampler	Daily	Atomic absorption spectroscopy	

Country: Spain		Main components and ozone - EMEP	Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method
Potassium PM <sub>10</sub>	ES01, ES07, ES08, ES09, ES14	High volume sampler	Daily	Atomic absorption spectroscopy
Chloride PM <sub>10</sub>	ES01, ES07, ES08, ES09, ES14	High volume sampler	24 hour, once a week	Ion chromatography
Sulphate PM <sub>2.5</sub>	ES01, ES07, ES08, ES09, ES14	High volume sampler	24 hour, once a week	Ion chromatography
Nitrate PM <sub>2.5</sub>	ES01, ES07, ES08, ES09, ES14	High volume sampler	24 hour, once a week	Ion chromatography
Sodium PM <sub>2.5</sub>	ES01, ES07, ES08, ES09, ES14	High volume sampler	24 hour, once a week	Atomic absorption spectroscopy
Calcium PM <sub>2.5</sub>	ES01, ES07, ES08, ES09, ES14	High volume sampler	24 hour, once a week	Atomic absorption spectroscopy
Magnesium PM <sub>2.5</sub>	ES01, ES07, ES08, ES09, ES14	High volume sampler	24 hour, once a week	Atomic absorption spectroscopy
Potassium PM <sub>2.5</sub>	ES01, ES07, ES08, ES09, ES14	High volume sampler	24 hour, once a week	Atomic absorption spectroscopy
Ammonium PM <sub>2.5</sub>	ES01, ES07, ES08, ES09, ES14	High volume sampler	24 hour, once a week	Visible spectrophotometry, Indophenol method
Chloride PM <sub>2.5</sub>	ES01, ES07, ES08, ES09, ES14	High volume sampler	24 hour, once a week	Ion chromatography
EC/OC PM <sub>2.5</sub>	ES01, ES07, ES09, ES12, ES14	PM2.5 low volume sampler (55 m <sup>3</sup> /day)	24 hour, once every 6 days (60 samples per year)	Thermal optical

Country: Sweden		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	SE05, SE11, SE12, SE14	Wet-only	Daily: SE05, SE14; monthly: SE11, SE12		
Precipitation amount, official gauge					
Sulphate	SE05, SE11, SE12, SE14	Wet-only	Daily: SE05, SE14; monthly: SE11, SE12	Ion chromatography	
Nitrate	SE05, SE11, SE12, SE14	Wet-only	Daily: SE05, SE14; monthly: SE11, SE12	Ion chromatography	
Ammonium	SE05, SE11, SE12, SE14	Wet-only	Daily: SE05, SE14; monthly: SE11, SE12	Spectrophotometric, Flow injection analysis	
Magnesium	SE05, SE11, SE12, SE14	Wet-only	Daily: SE05, SE14; monthly: SE11, SE12	Ion chromatography	
Sodium	SE05, SE11, SE12, SE14	Wet-only	Daily: SE05, SE14; monthly: SE11, SE12	Ion chromatography	
Chloride	SE05, SE11, SE12, SE14	Wet-only	Daily: SE05, SE14; monthly: SE11, SE12	Ion chromatography	
Calcium	SE05, SE11, SE12, SE14	Wet-only	Daily: SE05, SE14; monthly: SE11, SE12	Ion chromatography	
Potassium	SE05, SE11, SE12, SE14	Wet-only	Daily: SE05, SE14; monthly: SE11, SE12	Ion chromatography	
Conductivity	SE05, SE11, SE12, SE14	Wet-only	Daily: SE05, SE14; monthly: SE11, SE12	Conductivity meter	
pH	SE05, SE11, SE12, SE14	Wet-only	Daily: SE05, SE14; monthly: SE11, SE12	pH meter	
<b>Air</b>					
Sulphur dioxide	SE05, SE11, SE12, SE14	KOH-impregnated Whatman 40 filter, 20 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrogen dioxide	SE05, SE11, SE12, SE14	Nal-impregnated glass sinters, ~0.7 m <sup>3</sup> /day	Daily	Spectrophotometric, Flow Injection Analysis	
Nitric acid					
Ammonia					
Ozone	SE05, SE11, SE12, SE13, SE14, SE32, SE35, SE39	UV-monitor	Hourly	UV-absorption	
Sulphate	SE05, SE11, SE12, SE14	Teflon filter, Mitex membrane, 20 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrate					
Ammonium					
Sodium	SE05, SE11, SE12, SE14	Teflon filter, Mitex membrane, 20 m <sup>3</sup> /day	Daily	Ion chromatography	
Calcium	SE05, SE11, SE12, SE14	Teflon filter, Mitex membrane, 20 m <sup>3</sup> /day	Daily	Ion chromatography	
Magnesium	SE05, SE11, SE12, SE14	Teflon filter, Mitex membrane, 20 m <sup>3</sup> /day	Daily	Ion chromatography	
Potassium	SE05, SE11, SE12, SE14	Teflon filter, Mitex membrane, 20 m <sup>3</sup> /day	Daily	Ion chromatography	
Chloride	SE05, SE11, SE12, SE14	Teflon filter, Mitex membrane, 20 m <sup>3</sup> /day	Daily	Ion chromatography	
PM <sub>10</sub>	SE11, SE12	TEOM (Tapered Element Oscillating Microbalance	Hourly	TEOM	
PM <sub>2.5</sub>	SE11, SE12	TEOM (Tapered Element Oscillating Microbalance	Hourly	TEOM	
PM <sub>10</sub>	SE05, SE14	IVL Sampler PModel S10	Daily	Gravimetric	
PM <sub>2.5</sub>	SE05, SE14	IVL Sampler PModel S10	Daily	Gravimetric	
Sum of nitric acid and nitrate	SE05, SE11, SE12, SE14	Aerosol filter as for sulphate + KOH-impregnated Whatman 40 filter, 20 m <sup>3</sup> /day	Daily	Ion chromatography	
Sum of ammonia and ammonium	SE05, SE11, SE12, SE14	Aerosol filter as for sulphate + Oxalic acid impregnated Whatman 40 filter, 20 m <sup>3</sup> /day	Daily	Spectrophotometric, Flow injection analysis	

Country: Switzerland		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	CH02, CH04, CH05	Wet-only	Weekly		
Precipitation amount, official gauge					
Sulphate	CH02, CH04, CH05	Wet-only	Weekly	Ion chromatography	
Nitrate	CH02, CH04, CH05	Wet-only	Weekly	Ion chromatography	
Ammonium	CH02, CH04, CH05	Wet-only	Weekly	Ion chromatography	
Magnesium	CH02, CH04, CH05	Wet-only	Weekly	Ion chromatography	
Sodium	CH02, CH04, CH05	Wet-only	Weekly	Ion chromatography	
Chloride	CH02, CH04, CH05	Wet-only	Weekly	Ion chromatography	
Calcium	CH02, CH04, CH05	Wet-only	Weekly	Ion chromatography	
Potassium	CH02, CH04, CH05	Wet-only	Weekly	Ion chromatography	
Conductivity	CH02, CH04, CH05	Wet-only	Weekly	Conductivity meter	
pH	CH02, CH04, CH05	Wet-only	Weekly	pH meter	
<b>Air</b>					
Sulphur dioxide	CH01, CH02, CH05	Instrumental: UV-fluorescence	Daily	UV-fluorescence	
Nitrogen dioxide	CH01, CH02, CH05	Instrumental: Chemiluminescence-monitor	Daily	Chemiluminescence (photolytic converter)	
Nitrogen dioxide	CH03, CH04	Instrumental: Chemiluminescence-monitor	Daily	Chemiluminescence (molybdenum converter)	
Nitric acid	CH02, CH05	KOH impregnated Mini-Denuder / modified CEH DELTA-System, 0.5 m <sup>3</sup> /day	Biweekly	Ion chromatography	
Ammonia	CH02, CH05	Citric acid impregnated Mini-Denuder / modified CEH DELTA-System, 0.5 m <sup>3</sup> /day	Biweekly	Ion chromatography	
Ozone	All	Instrumental: UV-monitor	Hourly	UV-absorption	
Sulphate	CH02, CH05	High Volume Samplers, Pallflex XP56 Tissuequartz 2500 QAT-UP, 720 m <sup>3</sup> /day	Daily	Ion chromatography	
Sulphate	CH01	High Volume Samplers, Pallflex XP56 Tissuequartz 2500 QAT-UP, 1075 m <sup>3</sup> /day	Daily	Ion chromatography	
Nitrate	CH02, CH05	KOH impregnated Whatman 1 filter, Delrin filterholder / modified CEH DELTA-System, 0.5 m <sup>3</sup> /day	Biweekly	Ion chromatography	
Ammonium	CH02, CH05	Citric acid impregnated Sartorius 11306 filter, Delrin filterholder / modified CEH DELTA-System, 0.5 m <sup>3</sup> /day	Biweekly	Ion chromatography	
Sodium	CH02, CH05	Citric acid impregnated Whatman 40 filter / NILU filterholder, 18 m <sup>3</sup> /day			
Calcium	CH02, CH05	Citric acid impregnated Whatman 40 filter / NILU filterholder, 18 m <sup>3</sup> /day			
Magnesium	CH02, CH05	Citric acid impregnated Whatman 40 filter / NILU filterholder, 18 m <sup>3</sup> /day			
Potassium	CH02, CH05	Citric acid impregnated Whatman 40 filter / NILU filterholder, 18 m <sup>3</sup> /day			
Chloride					
PM <sub>10</sub>	CH01	High Volume Samplers, Pallflex XP56 Tissuequartz 2500 QAT-UP, 1075 m <sup>3</sup> /day	Daily	Gravimetry	
PM <sub>10</sub>	CH02, CH03, CH04, CH05	High Volume Samplers, Pallflex XP56 Tissuequartz 2500 QAT-UP, 720 m <sup>3</sup> /day	Daily	Gravimetry	
PM <sub>2.5</sub>	CH02, CH05	High Volume Samplers, Pallflex XP56 Tissuequartz 2500 QAT-UP, 720 m <sup>3</sup> /day	Daily	Gravimetry	
Sum of nitric acid and nitrate	CH02, CH05	NaOH impregnated Whatman 40 filter / NILU filterholder, 18 m <sup>3</sup> /day	Daily	Ion chromatography	
Sum of ammonia and ammonium	CH02, CH05	Citric acid impregnated Whatman 40 filter / NILU filterholder, 18 m <sup>3</sup> /day	Daily	Ion chromatography	

Country: United Kingdom		Main components and ozone - EMEP		Year: 2017	
	Station	Sampling	Sampling frequency	Analysis method	
<b>Precipitation</b>					
Precipitation amount	GB02, GB06, GB13, GB14, GB15	Bulk collector	Fortnightly	Mass of water collected	
Precipitation amount, official gauge					
Sulphate	GB02, GB06, GB13, GB14, GB15	Bulk collector	Fortnightly	Ion chromatography	
Nitrate	GB02, GB06, GB13, GB14, GB15	Bulk collector	Fortnightly	Ion chromatography	
Ammonium	GB02, GB06, GB13, GB14, GB15	Bulk collector	Fortnightly	Ion chromatography	
Magnesium	GB02, GB06, GB13, GB14, GB15	Bulk collector	Fortnightly	Ion chromatography	
Sodium	GB02, GB06, GB13, GB14, GB15	Bulk collector	Fortnightly	Ion chromatography	
Chloride	GB02, GB06, GB13, GB14, GB15	Bulk collector	Fortnightly	Ion chromatography	
Calcium	GB02, GB06, GB13, GB14, GB15	Bulk collector	Fortnightly	Ion chromatography	
Potassium	GB02, GB06, GB13, GB14, GB15	Bulk collector	Fortnightly	Ion chromatography	
Conductivity	GB02, GB06, GB13, GB14, GB15	Bulk collector	Fortnightly	Conductivity meter	
pH	GB02, GB06, GB13, GB14, GB15	Bulk collector	Fortnightly	pH meter	
<b>Air</b>					
Sulphur dioxide	GB36, GB37, GB38, GB43, GB45	Instrumental	Hourly	UV fluorescence	
Sulphur dioxide	GB48	Instrumental	Hourly	Online IC	
Nitrogen dioxide	14 sites	Instrumental	Hourly	Chemiluminescence	
Nitrogen monoxide	14 sites	Instrumental	Hourly	Chemiluminescence	
Nitric acid	GB06, GB13, GB14, GB54	Delta sampler (low volume denuder and filter pack)	Monthly	Ion chromatography	
Nitric Acid	GB48	Instrumental	Hourly	Online IC	
Ammonia	GB06, GB13, GB14, GB54	Delta sampler (low volume denuder and filter pack)	Monthly	Florria	
Ammonia	GB48	Instrumental	Hourly	Online IC	
Ozone	20 sites	UV-monitor	Hourly	UV-absorption	
Sulphate	GB06, GB13, GB14, GB54	Delta sampler (low volume denuder and filter pack)	Monthly	Ion chromatography	
Nitrate	GB06, GB13, GB14, GB54	Delta sampler (low volume denuder and filter pack)	Monthly	Ion chromatography	
Ammonium	GB06, GB13, GB14, GB54	Delta sampler (low volume denuder and filter pack)	Monthly		
Sodium	GB06, GB13, GB14, GB54	Delta sampler (low volume denuder and filter pack)	Monthly		
Calcium	GB06, GB13, GB14, GB54	Delta sampler (low volume denuder and filter pack)	Monthly		
Magnesium	GB06, GB13, GB14, GB54	Delta sampler (low volume denuder and filter pack)	Monthly		
Potassium	GB06, GB13, GB14, GB54	Delta sampler (low volume denuder and filter pack)	Monthly		
Chloride	GB06, GB13, GB14, GB54	Delta sampler (low volume denuder and filter pack)	Monthly		
PM <sub>10</sub>	GB06, GB36, GB43, GB48	FDMS, Partisol and volatile correction model to TEOM data	Daily/hourly		
PM <sub>2.5</sub>	GB36, GB48	FDMS and Partisol	Daily/hourly		
Ammonium PM <sub>10</sub> , PM <sub>2.5</sub>	GB36, GB48	Instrumental	Hourly	Online IC	
Calcium PM <sub>10</sub> , PM <sub>2.5</sub>	GB36, GB48	Instrumental	Hourly	Online IC	
Chloride PM <sub>10</sub> , PM <sub>2.5</sub>	GB36, GB48	Instrumental	Hourly	Online IC	
Magnesium PM <sub>10</sub> , PM <sub>2.5</sub>	GB36, GB48	Instrumental	Hourly	Online IC	
Nitrate PM <sub>10</sub> , PM <sub>2.5</sub>	GB36, GB48	Instrumental	Hourly	Online IC	
Potassium PM <sub>10</sub> , PM <sub>2.5</sub>	GB36, GB48	Instrumental	Hourly	Online IC	
Sodium PM <sub>10</sub> , PM <sub>2.5</sub>	GB36, GB48	Instrumental	Hourly	Online IC	
Sulphate PM <sub>10</sub> , PM <sub>2.5</sub>	GB36, GB48	Instrumental	Hourly	Online IC	
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					





**Annex 5**  
**List of data reports**



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An Atlas of monthly and seasonal maps of precipitation amount, non-marine sulphate, nitrate, ammonium and hydrogen ion concentrations and depositions based on the EMEP precipitation network: October 1977 to September 1982. EMEP/CCC-Report 5/88 by R.J. Barthelmie, T.D. Davies, G. Farmer, J. Schaug. Norwich/Lillestrøm, Climatic Research Unit, University of East Anglia/Norwegian Institute for Air Research, 1988.

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## **Annex 6**

### **Description of statistical calculation procedures**





The geometric standard deviation is a dimensionless factor. If the data come from a random sample of independent data in a normal distribution, about 95% of the data will lie between

$$\bar{c}_a - 2sd_a \text{ and } \bar{c}_a + 2sd_a$$

and between

$$\frac{\bar{c}_g}{sd_g^2} \text{ and } \bar{c}_g \cdot sd_g^2$$

if the data come from a lognormal distribution.

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.

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:

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

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  $\ln c$ :

$$sdlnc = \left( \frac{\sum_i (\ln c_i - \overline{\ln c})^2}{N - 1} \right)^{\frac{1}{2}}$$

$$sd_g = \exp(sdlnc)$$

Min is the minimum value reported for a specific component, and it is printed both for precipitation and air components.

5%, 50%, 95% is the 5, 50 and 95 percentile, computed for air data only using the method of nearest rank:

$$n = \frac{P}{100} \cdot N + \frac{1}{2}$$

is the P-th percentile  $0 \leq P \leq 100$  of N ordered values, rounding n to the nearest integer and then taking the value corresponding to that rank.

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

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.

% anal for precipitation components this is the percent of the total precipitation reported analysed for a specific component, and for air components based on the number of days with data.

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

Num day is the number of days with measurements for a specific component.

## **Annex 7**

### **EMEP Data Quality Objectives (DQO)**



- 10% accuracy or better for oxidized sulphur and oxidized nitrogen in single analysis in the laboratory,
- 15% accuracy or better for other components in the laboratory,
- 0.1 units for pH,
- 15–25% uncertainty for the combined sampling and chemical analysis (components to be specified later),
- 90% data completeness of the daily values.
- The targets, with respect to precision and detection limit follow the DQO of the WMO GAW precipitation programme (WMO, 2004):

Measurement parameter	Detection limits	Precision	
		Overall	Laboratory
pH (pH units)		± 0.1 pH unit at pH > 5 ± 0.03 pH unit at pH < 5	± 0.04 pH unit at pH > 5 ± 0.02 pH unit at pH < 5
SO <sub>4</sub> <sup>2-</sup> (mg S L <sup>-1</sup> )	0.02	0.02	0.01
NO <sub>3</sub> <sup>-</sup> (mg N L <sup>-1</sup> )	0.02	0.01	0.01
Cl <sup>-</sup> (mg L <sup>-1</sup> )	0.04	0.02	0.02
NH <sub>4</sub> <sup>+</sup> (mg N L <sup>-1</sup> )	0.02	0.02	0.01
Ca <sup>++</sup> (mg L <sup>-1</sup> )	0.02	0.02	0.01
Mg <sup>++</sup> (mg L <sup>-1</sup> )	0.01	0.01	0.01
Na <sup>+</sup> (mg L <sup>-1</sup> )	0.02	0.01	0.01
K <sup>+</sup> (mg L <sup>-1</sup> )	0.02	0.01	0.01
Standard Gauge Precipitation Depth (mm)	0.02	0.2 daily 0.3 weekly	n/a n/a
Sample Depth (mm)	0.2	0.1 daily 0.3 weekly	n/a n/a

n/a: Not applicable

The targets for the wet analysis of components extracted from air filters are the same as for precipitation. For SO<sub>2</sub> the limit above for sulphate is valid for the medium volume method with impregnated filter. For NO<sub>2</sub> determined as NO<sub>2</sub><sup>-</sup> in solution the accuracy for the lowest concentrations is 0.01 mg N/l.