

Data Report 2001

Acidifying and eutrophying compounds

Anne-Gunn Hjellbrekke

0.07	0.41	0.06	0.05	0.06	0.12	0.10	0.15	0.11	0.12	0.30	0.20
1.71	1.38	0.77	0.34	0.32	0.36	0.22	0.22	0.61	0.88	1.26	0.74
0.44	1.13	0.38	0.30	0.26	0.07	0.10	0.10	0.14	0.32	0.87	0.34
1.02	0.57	1.00	0.55	0.60	0.18	0.40	0.54	0.93	0.64	0.68	0.43
0.86	3.24	0.66	0.68	0.55	0.48	0.42	0.24	0.57	0.59	1.17	0.44
0.91	0.83	1.07	0.38	0.61	0.51	0.41	0.20	1.20	1.03	0.78	0.62
0.66	0.52	0.64	0.44	0.52	0.26	0.25	1.37	0.75	0.36	0.44	0.18
0.93	0.61	0.95	0.77	0.77	0.59	-	0.45	1.22	0.68	0.80	0.51
0.83	0.41	0.92	0.90	0.67	0.43	0.70	0.60	1.02	0.49	0.66	0.39
2.11	2.06	2.23	1.11	0.34	0.65	0.27	0.27	0.33	0.28	0.57	1.36
1.06	0.75	1.18	0.34	0.37	0.33	0.29	0.23	0.22	0.20	1.24	0.93
0.48	1.02	1.63	0.25	0.42	2.77	0.92	0.46	0.40	0.56	0.70	2.31
0.70	1.76	1.64	0.27	0.38	1.17	0.50	0.42	1.06	1.02	0.78	2.04
0.38	1.63	0.79	0.75	0.60	4.15	1.89	0.90	1.02	0.43	1.14	1.91
-	-	-	0.25	0.60	2.27	1.78	0.55	1.31	1.22	1.14	2.04
0.27	1.69	0.43	0.38	0.43	0.82	0.39	0.71	0.52	0.41	1.34	1.51
1.12	5.29	2.15	0.51	0.61	1.24	0.94	0.91	0.51	0.96	1.83	3.77
0.68	2.08	0.68	0.79	0.58	1.54	0.67	0.50	1.28	0.82	1.78	1.76
0.27	2.04	2.08	0.28	0.55	0.66	1.28	0.58	1.10	0.69	2.93	1.68
-	-	1.40	0.28	0.72	0.76	1.54	0.60	0.45	0.77	2.44	1.65
0.26	1.62	0.71	0.25	0.27	0.30	0.52	1.71	0.35	0.64	1.40	1.13
1.14	0.86	0.98	0.36	0.49	0.45	0.34	0.31	0.37	0.34	0.51	0.57
1.14	2.76	1.92	0.70	0.48	0.55	0.37	0.25	0.45	0.33	0.92	0.91
1.17	1.05	0.73	0.39	0.40	0.13	0.09	0.08	0.17	0.03	0.44	0.90
0.88	1.11	1.05	0.28	0.15	0.13	0.09	0.12	0.21	0.11	0.27	0.51
0.70	0.81	0.89	0.35	0.38	0.29	1.18	0.47	0.80	0.64	0.75	0.84
0.78	1.11	2.00	0.70	1.07	0.94	1.16	0.82	0.84	1.03	1.11	0.88
0.36	1.07	0.38	0.39	0.50	0.28	0.45	0.36	0.57	0.41	1.15	0.64
0.89	-	-	0.74	0.81	0.66	0.55	0.65	0.74	0.84	1.14	1.42
1.74	2.51	0.54	0.88	0.42	0.34	0.39	0.39	0.38	0.56	1.21	0.53
0.86	2.07	1.74	0.87	0.32	0.27	0.82	0.55	0.44	0.63	0.59	0.37
0.41	0.99	1.43	0.34	0.39	0.34	0.76	0.66	0.44	0.69	0.54	0.97
0.34	0.55	1.29	0.23	0.33	0.31	0.33	0.31	0.40	0.31	0.91	0.60
0.43	0.40	0.44	0.43	0.48	0.52	0.43	0.64	0.64	0.42	0.51	0.43
1.39	2.68	1.84	1.43	1.16	1.06	1.37	1.26	1.13	1.32	1.48	1.24
0.31	0.20	0.27	0.31	0.33	0.27	0.31	0.34	0.20	0.37	0.23	0.20
0.75	1.18	1.07	0.76	0.84	0.84	0.92	0.68	0.95	0.95	1.18	1.18
0.54	0.47	0.43	0.54	0.61	0.62	0.59	0.51	0.50	0.73	0.97	0.34
0.36	0.50	0.31	0.42	0.32	0.77	0.82	0.84	1.87	1.08	1.52	2.27
0.23	0.24	0.28	0.49	0.35	0.43	0.39	0.53	0.45	0.27	0.30	0.24
0.35	0.24	0.53	0.49	0.49	0.31	0.30	0.43	0.62	0.28	0.34	0.28
0.54	0.53	0.92	1.43	0.54	0.47	0.27	0.64	0.22	0.91	0.94	0.89

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

**Data Report 2001
Acidifying and eutrophying compounds**

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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 all main components in precipitation and ozone and nitrogen compounds in air. A few sites also measure VOC, POPs and heavy metals.

The EMEP data from 2001 for 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 the web at <http://www.nilu.no/projects/ccc/> under 'Measurement data'.

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 for acidifying and eutrophying components are given in Table 1 and Figure 1. In addition to the network presented here, there are additionally sites with other types of measurements.

In total, precipitation data from 90 stations and air data from 104 stations are presented in this report. The total number of measurement sites in this report is 112.

In some parts of Europe, the site density is low and highly unsatisfactory. There is a need for more sites especially in the Mediterranean region and in the eastern parts of Europe.

For detailed information on sites and their surroundings please see descriptions at <http://www.nilu.no/NILUwebhtmlsider/ilab/EMEP/>.

Table 1: List of EMEP monitoring stations in operation in 2001.

Country	Station codes	Station name	Location		Height above sea (m)
			Lat.	Long.	
Austria	AT0002R	Illmitz	47°46'E	16°46'E	117
	AT0004R	St. Koloman	47°39'N	13°12'E	851
	AT0005R	Vorhegg	46°40'N	12°58'E	1020
	AT0030R	Pillersdorf bei Retz	48°43'N	15°56'E	315
Belgium	BE0001R	Offagne	49°52'N	5°12'E	430
	BE0032R	Eupen	50°37'N	6°00'E	295
	BE0035R	Vezin	50°30'N	4°59'E	160
Croatia	HR0002R	Puntijarka	45°54'N	15°58'E	988
	HR0004R	Zavizan	44°49'N	14°59'E	1594
Czech Rep.	CZ0001R	Svratouch	49°44'N	16°02'E	737
	CZ0003R	Košetice	49°35'N	15°05'E	534
Denmark	DK0003R	Tange	56°21'N	9°36'E	13
	DK0005R	Keldsnor	54°44'N	10°44'E	9
	DK0008R	Anholt	56°43'N	11°31'E	40
	DK0022R	Sepstrup Sande	55°05'N	9°36'E	60
Estonia	EE0009R	Lahemaa	59°30'N	25°54'E	32
	EE0011R	Vilsandi	58°23'N	21°49'E	6
Finland	FI0004R	Ähtari	62°33'N	24°13'E	162
	FI0009R	Utö	59°47'N	21°23'E	7
	FI0017R	Virolahti II	60°31'N	27°41'E	4
	FI0022R	Oulanka	66°19'N	29°24'E	310
	FI0037R	Ähtari II	62°35'N	24°11'E	180
France	FR0003R	La Crouzille	45°50'N	1°16'E	497
	FR0005R	La Hague	49°37'N	1°50'W	133
	FR0008R	Donon	48°30'N	7°08'E	775
	FR0009R	Revin	49°54'N	4°38'E	390
	FR0010R	Morvan	47°16'N	4°05'E	620
	FR0012R	Iraty	43°02'N	1°05'W	1300
	FR0013R	Peyrusse Vielle	47°22'N	0°06'E	236
	FR0014R	Montandon	47°11'N	6°30'E	746
Germany	DE0001R	Westerland	54°55'N	8°18'E	12
	DE0002R	Langenbrügge	52°48'N	10°45'E	74
	DE0003R	Schauinsland	47°55'N	7°54'E	1205
	DE0004R	Deuselbach	49°46'N	7°03'E	480
	DE0005R	Brotjacklriegel	48°49'N	13°13'E	1016
	DE0007R	Neuglobsow	53°09'N	13°02'E	62
	DE0008R	Schmücke	50°39'N	10°46'E	937
	DE0009R	Zingst	54°26'N	12°44'E	1
Greece	GR0001R	Aliartos	38°22'N	23°05'E	110
Hungary	HU0002R	K-pusztá	46°58'N	19°35'E	125
Iceland	IS0002R	Irafoss	64°05'N	21°01'W	61
Ireland	IE0001R	Valentina Observatory	51°56'N	10°14'W	9
	IE0002R	Turlough Hill	53°02'N	6°24'W	420
	IE0003R	The Burren	53°00'N	7°27'W	90
	IE0004R	Ridge of Capard	53°07'N	7°27'W	340
Italy	IT0001R	Montelibretti	42°06'N	12°38'E	48
	IT0004R	Ispra	45°48'N	8°38'E	209
Latvia	LV0010R	Rucava	56°13'N	21°13'E	18
	LV0016R	Zoseni	57°08'N	25°55'E	183
Lithuania	LT0015R	Preila	55°21'N	21°04'E	5
Netherlands	NL0009R	Kollumerwaard	53°20'N	6°17'E	0
	NL0010R	Vreedepeel	51°32'N	5°51'E	28
Norway	NO0001R	Birkenes	58°23'N	8°15'E	190
	NO0008R	Skreådalen	58°49'N	6°43'E	475
	NO0015R	Tustervatn	65°50'N	13°55'E	439
	NO0039R	Kårvatn	62°47'N	8°53'E	210
	NO0041R	Osen	61°15'N	11°47'E	440
	NO0042G	Spitsbergen, Zeppelinfjell	78°54'N	11°53'E	474
	NO0055R	Karasjok	69°28'N	25°13'E	333
	NO0099R	Lista	58°06'N	6°34'E	13

Table 1 cont.:

Country	Station codes	Station name	Location		Height above sea (m)
			Lat.	Long.	
Poland	PL0002R	Jarczew	51°49'N	21°59'E	180
	PL0003R	Sniezka	50°44'N	15°44'E	1604
	PL0004R	Leba	54°45'N	17°32'E	2
	PL0005R	Diabla Gora	54°09'N	22°04'E	157
Portugal	PT0001R	Braganca	41°49'N	6°46'W	691
	PT0003R	Viana do Castelo	41°42'N	8°48'W	16
	PT0004R	Monte Velho	38°05'N	8°48'W	43
Russian Federation	RU0001R	Janiskoski	68°56'N	28°51'E	118
	RU0013R	Pinega	64°42'N	43°24'E	28
	RU0016R	Shepeljovo	59°58'N	29°07'E	4
	RU0018R	Danki	54°54'N	37°48'E	150
Serbia and Montenegro	YU0005R	Kamenicki vis	43°24'N	21°57'E	813
	YU0008R	Zabljak	43°09'N	19°08'E	1450
Slovenia	SI0008R	Iskrba	45°34'N	14°52'E	520
Slovakia	SK0002R	Chopok	48°56'N	19°35'E	2008
	SK0004R	Stará Lesná	49°09'N	20°17'E	808
	SK0005R	Liesek	49°22'N	19°41'E	892
	SK0006R	Starina	49°03'N	22°16'E	345
	SK0007R	Topolniky	47°57'N	17°51'E	113
Spain	ES0007R	Viznar	37°14'N	3°32'W	1265
	ES0008R	Niembro	43°27'N	4°51'W	134
	ES0009R	Campisabolas	41°17'N	3°9'W	1360
	ES0010R	Cabo de Creus	42°19'N	3°19'E	23
	ES0011R	Barcarola	38°29'N	6°55'W	393
	ES0012R	Zarra	39°5'N	1°6'W	885
	ES0013R	Penausende	41°17'N	5°52'W	985
	ES0014R	Els Torms	41°24'N	0°43'E	470
	ES0015R	Risco Llamo	39°31'N	4°21'W	1241
	ES0016R	O Saviñao	43°13'N	7°41'W	506
Sweden	SE0002R	Rörvik	57°25'N	11°56'E	10
	SE0005R	Bredkälen	63°51'N	15°20'E	404
	SE0008R	Hoburgen	56°55'N	18°09'E	58
	SE0011R	Vavihill	56°01'N	13°09'E	172
Switzerland	CH0001G	Jungfrauoch	46°33'N	7°59'E	3573
	CH0002R	Payerne	46°48'N	6°57'E	510
	CH0003R	Tänikon	47°29'N	8°54'E	540
	CH0004R	Chaumont	47°03'N	6°59'E	1130
	CH0005R	Rigi	47°04'N	8°28'E	1030
Turkey	TR0001R	Cubuk II	40°30'N	33°00'E	1169
United Kingdom	GB0002R	Eskdalemuir	55°19'N	3°12'W	243
	GB0004R	Stoke Ferry	52°34'N	0°30'E	15
	GB0006R	Lough Navar	54°26'N	7°54'W	126
	GB0007R	Barcombe Mills	50°52'N	0°02'W	8
	GB0013R	Yarner Wood	50°36'N	3°43'W	119
	GB0014R	High Muffles	54°20'N	0°48'W	267
	GB0015R	Strath Vaich Dam	57°44'N	4°46'W	270
	GB0016R	Glen Dye	56°58'N	2°25'W	85
	GB0036R	Harwell	51°34'N	1°18'W	137
	GB0037R	Ladybower Res.	53°23'N	1°45'W	420
	GB0038R	Lullington Heath	50°47'N	0°10'W	120
	GB0043R	Narberth	51°14'N	4°42'W	160
	GB0045R	Wicken Fen	52°18'N	0°18'W	5

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.

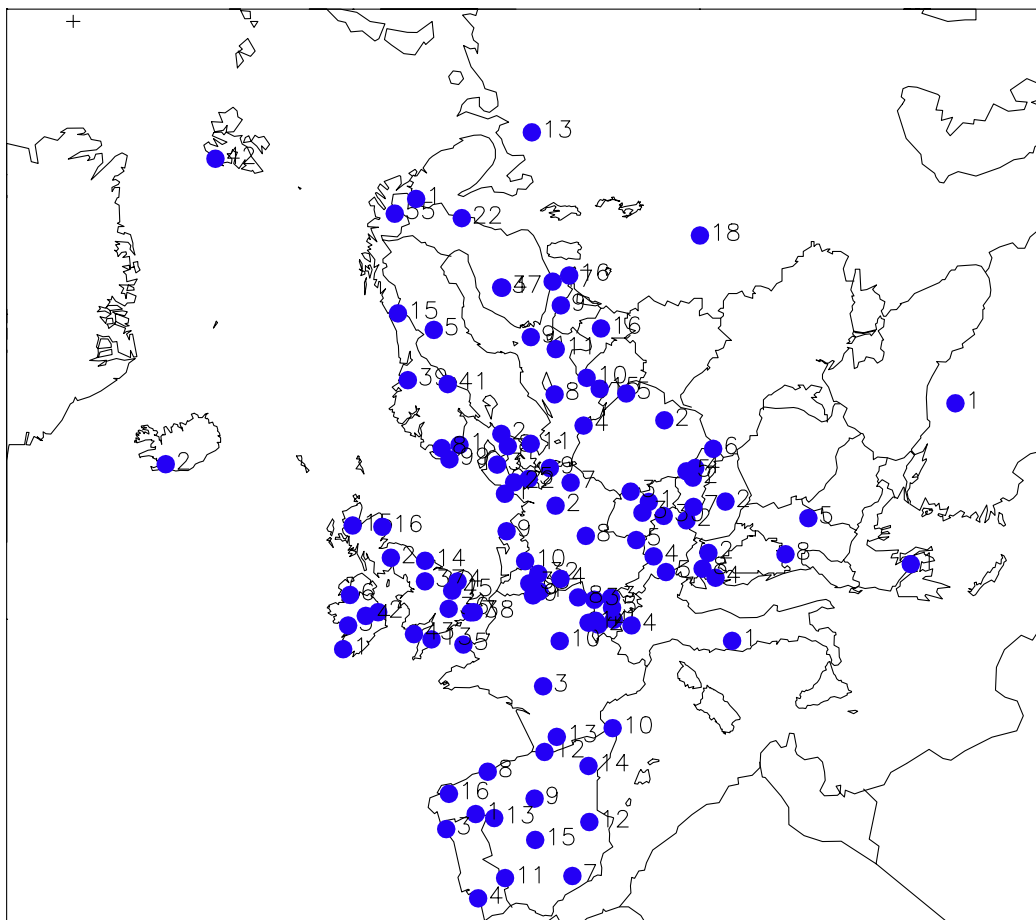


Figure 1: Location of the EMEP monitoring stations in operation in 2001. Sites with ozone/VOC measurements only are not included.

4. The measurement programme during 2000

EMEP's measurement programme during 2001 is presented in Table 2. A few sites have a less extensive measurement programme, as can be seen from the data tables in this report. Most sites measure air as well as precipitation components. However, some sites perform either the one or the other type of measurements.

Table 2: EMEP's measurement programme 2001.

	Components	Measurement period	Measurement frequency
Gas	SO ₂ , NO ₂	24 hours	Daily
	O ₃	hourly means stored	continuously
	Light hydrocarbons C ₂ -C ₇	10-15 mins	twice weekly
	Ketones and aldehydes (VOC)	8 hours	twice weekly
	Hg	24 hours	weekly
Particles	SO ₄ ²⁻	24 hours	daily
	Cd, Pb (first priority), Cu, Zn, As, Cr, Ni (second priority)	weekly	weekly
Gas + particles	HNO ₃ (g)+NO ₃ ⁻ (p), NH ₃ (g)+NH ₄ ⁺ (p)	24 hours	daily
	POPs (PAH, PCB, HCB, chlordane, lindane, α-HCH, DDT/DDE)	to be decided	to be decided
Precipitation	Amount, SO ₄ ²⁻ , NO ₃ ⁻ , Cl ⁻ , pH, NH ₄ ⁺ , Na ⁺ , Mg ²⁺ , Ca ²⁺ , K ⁺ , 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)	to be decided	to be decided

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

An evaluation of the VOC measurement programme within EMEP has been published earlier (Solberg et al., 1995). The VOC data from 2001 have been reported separately by Solberg et al. (2003), while ozone data from 2001 have been reported by Hjellbrekke and Solberg (2003). Heavy metals and POPs were reported by Aas and Hjellbrekke (2003).

A list of data reports from EMEP/CCC can be found in Annex 5. The most recent data reports are also available on the web in pdf, word and text format at <http://www.nilu.no/projects/ccc/reports.html>

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. The manual has been updated and sent out in 1996 (EMEP, 1996). A version is also available on the web at <http://www.nilu.no/projects/ccc/manual/>. 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

During 2001 the 19th laboratory intercomparison of analytical methods was carried out. As usual most of the laboratories report acceptable data, but there are still some outliers. The intercomparison results are presented in Uggerud et al. (2002).

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.

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.

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 been adopted by the WMO GAW. A series of EMEP's sites will also report data to WMO, and common routines will necessarily fill the data bases with identical data. This is consequently a step in a harmonisation process between EMEP and WMO GAW.

Excess sulphate data as calculated with the old routine are available from the CCC as a continuation of the data series upon request.

8. Annual summaries of the data

8.1 Maps over Europe

Geographical distributions based on annual means of SO_2 , NO_2 and SO_4^{--} in air and pH, NH_4^+ , NO_3^- , Ca and excess SO_4^{--} in precipitation of 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 are 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 and Table 8.

Table 3: Annual averages of main components in precipitation.

Code	mm	mm off	pH	SO ₄	XSO4	NH ₄	NO ₃	Na	Mg	Cl	Ca	K	cond
AT0002R	448.1	-	4.69	0.84	0.83	0.61	0.52	0.10	0.097	0.21	0.62	0.07	21
AT0004R	1216.2	-	4.90	0.32	0.31	0.44	0.44	0.08	0.036	0.14	0.25	0.03	13
AT0005R	938.8	-	5.08	0.35	0.34	0.26	0.33	0.10	0.124	0.16	0.75	0.02	13
CH0002R	1041.7	-	5.31	0.27	0.26	0.39	0.24	0.07	0.023	0.13	0.24	0.04	9
CH0004R	1241.9	-	5.13	0.23	0.22	0.22	0.21	0.08	0.020	0.13	0.16	0.02	8
CH0005R	1527.7	-	5.09	0.26	0.25	0.37	0.28	0.06	0.017	0.09	0.18	0.03	10
CZ0001R	850.5	-	4.86	0.80	0.77	0.58	0.50	0.37	0.137	0.52	0.59	0.22	21
CZ0003R	728.6	-	4.80	0.52	0.53	0.64	0.47	0.13	0.046	0.23	0.26	0.10	17
DE0001R	640.7	-	4.76	0.81	0.43	0.44	0.44	4.52	0.573	7.82	0.30	0.17	39
DE0002R	668.1	-	4.79	0.45	0.41	0.57	0.49	0.40	0.064	0.70	0.20	0.07	18
DE0003R	2217.9	-	4.99	0.30	0.29	0.26	0.23	0.17	0.029	0.22	0.17	0.04	8
DE0004R	822.9	-	4.95	0.40	0.38	0.36	0.36	0.26	0.060	0.45	0.34	0.06	13
DE0005R	1118.8	-	5.00	0.40	0.39	0.52	0.44	0.13	0.038	0.18	0.28	0.06	11
DE0008R	1411.0	-	4.70	0.46	0.45	0.49	0.47	0.22	0.033	0.34	0.18	0.05	14
DE0009R	668.8	-	4.81	0.60	0.53	0.62	0.56	0.87	0.136	1.50	0.34	0.08	18
DK0005R	542.7	-	5.00	0.64	0.52	0.64	0.57	1.50	0.167	2.58	0.31	0.36	24
DK0008R	590.6	-	4.68	0.65	0.46	0.46	0.49	2.28	0.247	3.77	0.18	0.11	30
DK0022R	724.0	-	4.79	0.48	0.37	0.46	0.44	1.29	0.128	2.15	0.10	0.07	20
EE0009R	747.6	-	4.76	0.38	0.35	0.13	0.17	0.21	0.038	0.53	0.19	0.09	12
EE0011R	551.9	-	4.78	0.64	0.57	0.42	0.39	0.51	0.127	1.10	0.31	0.47	19
ES0007R	589.4	-	6.28	0.64	0.58	0.14	0.32	0.45	0.197	1.00	1.02	0.15	14
ES0008R	525.6	-	4.82	1.88	1.25	0.46	1.09	7.79	0.922	12.40	1.02	0.42	75
ES0009R	407.2	-	6.23	0.51	0.46	0.20	0.33	0.36	0.080	1.00	0.74	0.09	12
ES0010R	119.8	-	6.56	8.93	3.82	0.14	2.71	60.28	7.666	118.41	9.52	2.75	358
ES0011R	711.6	-	6.65	0.61	0.52	0.09	0.28	0.93	0.749	1.57	1.58	0.18	21
ES0012R	388.6	-	6.16	1.15	1.05	0.32	0.88	1.02	0.309	1.64	4.34	0.23	36
ES0013R	346.0	-	6.11	0.53	0.48	0.18	0.29	0.46	0.085	0.98	0.64	0.18	11
ES0014R	224.8	-	7.11	1.41	1.32	0.63	0.70	1.48	0.522	1.73	6.86	1.40	58
ES0015R	648.2	-	6.37	0.73	0.64	0.42	0.36	0.91	0.153	1.60	0.77	0.15	17
ES0016R	539.0	-	6.28	0.52	0.44	0.41	0.36	0.64	0.127	1.27	0.60	0.30	16
FI0004R	670.3	744.6	4.81	0.25	0.24	0.15	0.19	0.10	0.020	0.16	0.10	0.04	10
FI0009R	359.9	611.2	4.63	0.42	0.34	0.26	0.34	0.97	0.120	1.68	0.15	0.08	21
FI0017R	612.6	730.6	4.74	0.46	0.44	0.31	0.28	0.19	0.041	0.35	0.22	0.08	14
FI0022R	415.1	493.0	4.75	0.23	0.22	0.09	0.14	0.09	0.016	0.15	0.08	0.04	10
FR0003R	1077.7	-	5.11	0.55	0.49	0.76	0.32	0.65	0.119	1.11	0.41	0.12	17
FR0005R	1003.8	-	4.99	0.57	0.27	0.30	0.25	3.55	0.461	6.18	0.27	0.14	33
FR0008R	1932.2	-	4.88	0.30	0.28	0.33	0.29	0.18	0.029	0.32	0.13	0.03	11
FR0009R	1533.2	-	4.96	0.40	0.36	0.43	0.32	0.47	0.070	0.77	0.22	0.04	14
FR0010R	1358.6	-	5.12	0.31	0.28	0.30	0.26	0.27	0.052	0.46	0.34	0.10	10
FR0012R	1085.3	-	5.15	0.42	0.38	0.34	0.26	0.46	0.091	0.74	0.38	0.05	12
FR0013R	677.4	-	4.84	0.55	0.49	0.36	0.31	0.72	0.113	1.21	0.39	0.11	17
FR0014R	1522.9	-	5.01	0.25	0.24	0.25	0.23	0.12	0.025	0.21	0.18	0.03	9
GB0002R	1180.0	-	4.72	0.51	0.37	0.72	0.29	1.78	0.173	3.14	0.13	0.22	28
GB0006R	983.2	-	5.08	0.38	0.21	0.14	0.12	2.26	0.255	4.20	0.22	0.10	23
GB0013R	1025.3	-	4.65	0.49	0.31	0.27	0.28	2.11	0.248	3.86	0.16	0.10	27
GB0014R	867.2	-	4.43	0.79	0.65	0.57	0.53	1.70	0.215	3.20	0.27	0.10	35
GB0015R	996.3	-	4.93	0.30	0.12	0.07	0.10	2.16	0.241	4.01	0.11	0.10	21
HR0002R	1336.2	-	5.06	0.63	0.58	0.48	0.43	0.44	0.284	0.71	0.90	0.40	15
HR0004R	2149.7	-	4.91	0.60	0.52	0.35	0.47	0.83	0.251	1.34	1.41	0.20	18
HU0002R	296.7	508.7	5.94	0.97	0.93	0.43	0.41	0.50	0.284	0.73	0.98	0.19	20
IE0001R	-	1235.0	5.36	0.61	0.14	0.20	0.08	5.69	0.696	10.19	0.33	0.63	46
IE0002R	352.5	-	5.39	0.37	0.28	0.66	0.20	0.79	0.139	3.12	0.23	0.37	14
IE0003R	273.5	-	5.42	0.83	0.31	0.26	0.15	6.57	0.718	11.65	0.33	0.31	41
IE0004R	287.6	-	5.77	0.33	0.24	0.43	0.15	1.11	0.127	1.81	0.35	0.28	15
IS0002R	2847.8	742.6	5.56	0.76	0.19	-	-	6.84	-	-	-	-	-
IT0001R	319.5	-	5.45	0.67	0.51	0.23	0.43	1.62	0.284	2.83	1.98	0.44	28
IT0004R	1146.1	-	4.69	0.85	0.82	1.11	0.85	0.23	0.059	0.40	0.57	0.05	22
LT0015R	599.4	-	4.84	0.77	0.59	0.38	0.47	2.10	-	3.16	0.93	0.19	27
LV0010R	879.5	-	4.54	0.57	0.51	0.36	0.42	0.58	0.119	1.32	0.22	0.11	17
LV0016R	783.0	-	4.86	0.48	0.44	0.25	0.34	0.45	0.131	0.95	0.41	0.15	14
NL0009R	852.2	-	5.35	0.61	0.40	0.62	0.38	2.40	0.299	4.34	0.27	0.16	27

Table 3 cont.:

Code	mm	mm off	pH	SO ₄	XSO ₄	NH ₄	NO ₃	Na	Mg	Cl	Ca	K	cond
NO0001R	1604.7	-	4.63	0.50	0.42	0.39	0.42	0.86	0.101	1.45	0.08	0.07	22
NO0008R	1887.6	-	5.10	0.32	0.23	0.33	0.23	1.11	0.110	1.85	0.12	0.18	16
NO0015R	1448.9	-	5.37	0.22	0.07	0.15	0.07	1.72	0.193	3.03	0.10	0.12	15
NO0039R	1522.8	-	5.31	0.22	0.07	0.07	0.05	1.83	0.210	3.17	0.07	0.08	16
NO0041R	768.3	-	4.95	0.20	0.20	0.20	0.20	0.09	0.014	0.17	0.07	0.06	9
NO0055R	365.9	-	5.22	0.27	0.24	0.23	0.13	0.39	0.042	0.63	0.12	0.20	10
NO0099R	1428.5	-	4.77	1.59	0.45	0.55	0.59	13.81	1.557	24.30	0.64	0.61	107
PL0002R	675.2	-	4.73	0.75	0.73	0.64	0.44	0.15	0.044	0.39	0.31	0.14	20
PL0003R	1258.2	-	4.56	0.70	0.66	0.52	0.80	0.48	0.100	0.67	0.42	0.18	25
PL0004R	786.6	-	4.71	0.53	0.46	0.43	0.43	0.74	0.102	1.33	0.19	0.10	20
PL0005R	756.9	756.3	4.71	0.64	0.62	0.56	0.41	0.17	0.057	0.50	0.24	0.13	19
PT0001R	-	898.5	5.92	0.34	0.29	0.12	0.08	0.34	0.126	1.05	2.61	0.11	17
PT0003R	-	1849.9	5.35	0.58	0.30	0.09	0.12	3.40	0.458	5.62	0.41	0.13	29
PT0004R	-	501.1	5.49	0.77	0.39	0.16	0.15	4.56	0.588	7.34	0.70	0.25	35
RU0001R	507.1	-	4.96	0.30	0.25	0.12	0.07	0.90	0.035	1.40	0.19	0.48	17
RU0013R	405.4	-	5.06	0.39	0.36	0.21	0.11	0.38	0.087	0.62	0.37	0.40	15
RU0016R	648.4	-	4.95	0.86	0.70	0.36	0.29	2.28	0.251	4.68	0.53	0.43	38
RU0018R	614.0	-	4.93	0.48	0.46	0.37	0.30	0.23	0.045	0.35	0.31	0.24	16
SE0002R	610.2	-	4.62	0.52	0.40	0.48	0.50	1.54	0.183	2.68	0.26	0.09	26
SE0005R	663.2	-	4.93	0.20	0.19	0.19	0.14	0.15	0.019	0.27	0.04	0.06	10
SE0011R	417.6	-	4.69	0.48	0.43	0.52	0.47	0.58	0.062	0.98	0.09	0.06	19
SK0002R	1316.0	-	4.49	1.02	1.00	0.56	0.41	0.22	0.070	0.36	0.44	0.18	23
SK0004R	902.9	-	4.56	0.85	0.83	0.41	0.35	0.18	0.064	0.27	0.43	0.17	20
SK0005R	980.7	-	4.49	0.84	0.81	0.40	0.38	0.27	0.073	0.38	0.44	0.23	21
SK0006R	952.5	-	4.20	0.80	0.77	0.30	0.38	0.34	0.063	0.36	0.39	0.18	20
SK0007R	501.1	-	4.59	0.81	0.79	0.45	0.45	0.22	0.081	0.32	0.62	0.19	20
TR0001R	282.9	-	5.89	1.09	1.04	0.41	0.35	0.58	0.148	0.69	1.75	0.27	21
YU0005R	696.6	-	5.11	2.24	2.16	0.47	0.86	1.07	0.295	1.39	2.69	0.58	38
YU0008R	1384.3	-	6.17	0.72	0.66	0.41	0.43	0.73	0.237	1.33	2.73	0.31	23

Table 4: Annual averages of main components in air.

Code	SO ₂	NO ₂	SO ₄	XSO ₄	SNO ₃	NO ₃	HNO ₃	SNH ₄	NH ₄	NH ₃
AT0002R	1.89	2.58	1.13	-	0.76	-	-	2.82	-	-
AT0004R	0.33	2.07	-	-	-	-	-	-	-	-
AT0005R	0.29	1.00	-	-	-	-	-	-	-	-
AT0030R	1.49	-	-	-	-	-	-	-	-	-
BE0001R	-	4.28	-	-	-	-	-	-	-	-
BE0032R	-	5.75	-	-	-	-	-	-	-	-
BE0035R	-	6.29	-	-	-	-	-	-	-	-
CH0001G	0.08	0.11	0.11	-	-	-	-	-	-	-
CH0002R	0.46	4.16	0.72	-	-	-	-	-	-	-
CH0003R	-	3.97	-	-	-	-	-	-	-	-
CH0004R	0.53	2.26	-	-	-	-	-	-	-	-
CH0005R	0.35	2.84	0.58	-	0.74	-	-	1.65	-	-
CZ0001R	1.65	1.16	1.26	-	0.78	-	-	3.06	-	-
CZ0003R	1.23	1.67	1.14	-	0.86	-	-	3.21	-	-
DE0001R	0.56	2.02	0.95	-	0.95	-	-	2.30	-	-
DE0002R	0.48	2.34	-	-	-	-	-	-	-	-
DE0003R	0.38	-	0.62	-	0.56	-	-	1.06	-	-
DE0004R	1.00	2.14	0.91	-	0.93	-	-	2.13	-	-
DE0005R	0.79	-	-	-	-	-	-	-	-	-
DE0007R	0.74	1.87	1.04	-	0.81	-	-	1.82	-	-
DE0008R	0.52	1.64	-	-	-	-	-	-	-	-
DE0009R	0.90	1.84	1.07	-	1.03	-	-	2.16	-	-
DK0003R	0.36	-	0.77	0.68	0.84	-	-	2.38	-	-
DK0005R	0.61	-	0.84	0.72	1.04	-	-	2.52	-	-
DK0008R	0.55	1.48	0.81	0.69	0.74	-	-	1.15	-	-
EE0009R	0.66	0.37	-	-	-	-	-	-	-	-
EE0011R	0.35	0.83	-	-	-	-	-	-	-	-
ES0007R	0.58	2.31	1.07	-	0.42	-	-	0.88	-	-
ES0008R	1.66	1.93	1.38	-	0.32	-	-	0.49	-	-
ES0009R	0.50	0.90	0.66	-	0.14	-	-	0.11	-	-
ES0010R	0.37	1.61	1.31	-	0.09	-	-	1.57	-	-
ES0011R	0.72	1.24	0.94	-	0.27	-	-	0.60	-	-
ES0012R	0.73	0.97	0.94	-	0.34	-	-	1.91	-	-
ES0013R	0.75	1.13	0.72	-	0.10	-	-	0.92	-	-
ES0014R	0.64	2.47	1.06	-	0.56	-	-	1.09	-	-
ES0015R	0.65	0.94	0.70	-	0.35	-	-	0.84	-	-
ES0016R	1.21	1.51	1.27	-	0.26	-	-	0.87	-	-
FI0009R	0.49	1.01	0.62	-	0.37	-	-	0.45	-	-
FI0017R	0.94	1.40	0.73	-	0.29	-	-	0.77	-	-
FI0022R	0.56	0.29	0.39	-	0.06	-	-	0.13	-	-
FI0037R	0.37	0.95	0.48	-	0.15	-	-	0.34	-	-
FR0003R	0.50	-	0.61	-	-	-	-	-	-	-
FR0005R	0.89	-	0.68	-	-	-	-	-	-	-
FR0008R	0.50	-	0.46	-	-	-	-	-	-	-
FR0009R	0.74	-	0.73	-	-	-	-	-	-	-
FR0010R	0.44	-	0.49	-	-	-	-	-	-	-
FR0012R	0.55	-	0.61	-	-	-	-	-	-	-
FR0013R	0.62	-	0.57	-	-	-	-	-	-	-
FR0014R	0.26	-	0.39	-	-	-	-	-	-	-
GB0002R	0.25	-	0.47	-	-	-	-	-	-	-
GB0004R	0.90	-	0.72	-	-	-	-	-	-	-
GB0006R	0.33	-	0.43	-	-	-	-	-	-	-
GB0007R	0.73	-	0.79	-	-	-	-	-	-	-
GB0013R	0.41	-	0.68	-	-	-	-	-	-	-
GB0014R	1.27	-	0.62	-	-	-	-	-	-	-

Table 4 cont.

Code	SO ₂	NO ₂	SO ₄	XSO ₄	SNO ₃	NO ₃	HNO ₃	SNH ₄	NH ₄	NH ₃
GB0015R	0.21	-	0.32	-	-	-	-	-	-	-
GB0016R	0.31	-	0.46	-	-	-	-	-	-	-
GB0036R	-	5.23	-	-	-	-	-	-	-	-
GB0037R	-	3.70	-	-	-	-	-	-	-	-
GB0038R	-	3.87	-	-	-	-	-	-	-	-
GB0043R	-	2.25	-	-	-	-	-	-	-	-
GB0045R	-	4.19	-	-	-	-	-	-	-	-
GR0001R	2.29	4.27	-	-	-	-	-	-	-	-
HU0002R	2.64	1.74	1.59	-	-	0.61	0.22	-	1.50	1.31
IE0001R	0.32	0.70	0.55	-	-	-	-	-	-	-
IE0002R	0.07	-	0.30	-	-	-	-	-	-	-
IE0003R	-	-	0.24	-	-	-	-	-	-	-
IE0004R	-	-	0.12	-	-	-	-	-	-	-
IS0002R	-	-	0.18	-	-	-	-	-	-	-
IT0001R	0.73	4.81	1.00	-	-	0.71	0.12	-	1.46	1.40
IT0004R	0.64	6.57	1.21	-	-	1.25	-	-	2.19	-
LT0015R	0.83	1.19	-	-	0.60	-	-	1.20	-	-
LV0010R	0.41	0.75	0.36	-	0.37	0.21	-	1.14	0.82	-
LV0016R	0.29	0.67	0.20	-	0.29	0.14	-	0.83	0.55	-
NL0009R	0.57	3.12	0.72	-	-	0.74	-	-	1.24	-
NL0010R	1.30	6.72	0.98	-	-	1.02	-	-	1.76	15.63
NO0001R	0.16	0.47	0.43	0.41	0.21	0.14	-	0.55	0.33	-
NO0008R	0.12	0.29	0.34	0.31	0.23	0.18	-	1.38	0.33	-
NO0015R	0.14	0.15	0.20	0.18	0.08	0.06	-	0.94	0.12	-
NO0039R	0.06	0.19	0.16	0.15	0.08	0.05	-	0.47	0.11	-
NO0041R	0.08	0.33	0.24	0.24	0.11	0.07	-	0.43	0.18	-
NO0042G	0.14	-	0.18	0.15	0.06	0.03	-	0.17	0.04	-
NO0055R	0.40	0.20	0.29	0.28	0.06	0.04	-	0.65	0.14	-
PL0002R	2.29	2.79	1.48	-	0.78	0.64	-	2.83	1.65	-
PL0003R	1.11	1.14	0.69	-	0.29	0.23	-	0.82	0.57	-
PL0004R	1.49	1.36	1.58	-	0.61	0.53	-	1.42	1.15	-
PL0005R	0.63	0.68	0.87	-	0.53	-	-	1.37	-	-
RU0001R	0.90	-	0.42	-	-	0.05	-	-	0.28	-
RU0016R	0.69	-	0.38	-	-	0.15	-	-	0.41	-
RU0018R	0.28	-	0.56	-	-	0.18	-	-	0.66	-
SE0002R	0.46	1.48	0.78	-	0.76	-	-	0.97	-	-
SE0005R	0.11	0.14	0.18	-	0.10	-	-	0.20	-	-
SE0008R	0.59	0.92	0.68	-	-	-	-	-	-	-
SE0011R	0.42	1.37	0.74	-	0.71	-	-	1.23	-	-
SI0008R	0.68	-	0.84	-	0.23	-	-	0.90	-	-
SK0002R	0.90	1.30	0.48	-	-	0.19	0.10	-	-	-
SK0004R	1.12	1.85	0.99	-	-	0.26	0.08	-	-	-
SK0005R	2.25	1.98	1.23	-	-	0.45	0.13	-	-	-
SK0006R	1.51	1.45	0.99	-	-	0.20	0.24	-	-	-
SK0007R	2.80	2.81	1.56	-	-	1.09	0.13	-	-	-
TR0001R	1.52	1.02	0.68	-	0.32	0.23	0.09	-	0.59	0.24
YU0005R	4.73	3.60	-	-	-	-	-	-	-	-
YU0008R	1.51	3.87	-	-	-	-	-	-	-	-

Table 5: Annual averages of base cations and sodium and chloride in aerosols.

Code	Na	Ca	Mg	K	Cl
DK0003R	0.96	-	-	-	-
DK0005R	1.44	-	-	-	-
DK0008R	1.40	-	-	-	-
NL0009R	-	0.07	-	-	-
NO0001R	0.33	0.03	0.04	0.05	0.31
NO0008R	0.32	0.04	0.04	0.04	0.38
NO0015R	0.26	0.02	0.03	0.03	0.38
NO0039R	0.16	0.02	0.02	0.02	0.19
NO0041R	0.09	0.02	0.01	0.03	0.08
NO0042G	0.30	0.02	0.03	0.02	0.42
NO0055R	0.23	0.02	0.02	0.03	0.29

Table 6: Annual averages of particulate matter.

Code	PM ₁₀	PM ₁₀ -PM _{2.5}	PM _{2.5}	PM ₁	SPM
AT0002R	26.16	-	19.50	-	-
AT0004R	11.41	-	-	-	-
AT0005R	10.57	-	-	-	-
CH0001G	-	-	-	-	3.19
CH0002R	19.32	-	14.79	-	-
CH0003R	18.06	-	-	-	-
CH0004R	11.06	-	8.11	-	-
CH0005R	11.60	-	-	-	-
DE0001R	20.09	-	-	-	-
DE0002R	16.29	-	12.46	-	-
DE0003R	9.90	-	7.91	-	-
DE0004R	15.20	-	11.71	-	-
DE0005R	10.07	-	-	-	-
DE0007R	15.60	-	-	-	-
DE0008R	10.26	-	-	-	-
DE0009R	16.83	-	-	-	-
ES0007R	24.12	-	12.44	-	40.58
ES0008R	19.72	-	11.14	-	25.93
ES0009R	14.30	-	9.08	-	21.93
ES0010R	20.46	-	12.07	-	39.54
ES0011R	19.25	-	11.36	-	27.77
ES0012R	16.17	-	8.88	-	22.63
ES0013R	14.86	-	9.76	-	19.37
ES0014R	19.47	-	12.39	-	31.93
ES0015R	14.82	-	8.46	-	23.18
ES0016R	15.76	-	12.07	-	22.25
IT0004R	39.06	-	32.01	-	47.80
NO0001R	-	2.02	4.04	-	-
NO0099R	-	9.20	5.74	-	-
SE0002R	-	-	-	-	1.78
SE0005R	-	-	-	-	0.42
SE0008R	-	-	-	-	1.62
SE0011R	-	-	-	-	1.82

Table 7: Units used for precipitation components.

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

Table 8: Units used for air components.

Air components	Units for arithmetic and geometric mean values, arithmetic standard deviations, Min., Max, percentiles.
SO ₂	µg S/m ³
NO ₂	µg N/m ³
HNO ₃	µg N/m ³
NH ₃	µg N/m ³
SO ₄ ²⁻	µg S/m ³
NO ₃ ⁻	µg N/m ³
NH ₄ ⁺	µg N/m ³
H ⁺	Ne H ⁺ /m ³
SPM, PM	µg/m ³
HNO ₃ + NO ₃ ⁻	µg N/m ³
NH ₃ + NH ₄ ⁺	µg N/m ³
Ca ⁺⁺	µg/m ³
Cl ⁻	µg/m ³
Mg ⁺⁺	µg/m ³
K ⁺	µg/m ³
Na ⁺	µg/m ³

9. Update

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

It is important that users make certain that they have access to the most recent version of the database. For the data presented here the latest alteration was 17 July, 2003.

Scientific use of the EMEP data should be based on fresh copies of the data. Copies can be requested from the CCC (e-mail: anne-gunn.hjellbrekke@nilu.no) or downloaded from the internet at <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 anonymous co-workers in participating countries have been involved in the many steps of collection of EMEP's air and precipitation 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, and of equal significance to the presentation of our work, the secretarial work, and far beyond, has been performed by Ms. Kristine Aasarød. Rita Larsen has been very helpful with data flow and data base maintenance.

12. List of participating institutions

Austria	Umweltbundesamt
Belgium	CELINE - IRCEL
Commission of the European Communities	Joint Research Center. Ispra Establishment
Croatia	Meteorological and Hydrological Service of Croatia
Czech Republic	Czech Hydrometeorological Institute
Denmark	National Environmental Research Institute
Finland	Finnish Meteorological Institute
France	I' Ecole des Mines de Douai Laboratories Wolff
Germany	Umweltbundesamt
Greece	Ministry of Environmental Physical Planning and Public Works
Hungary	Institute for Atmospheric Physics, Dep. for Air Chemistry
Iceland	The Icelandic Meteorological Office
Ireland	Meteorological Service H.Q. Electricity Supply Board (ESB)
Italy	C.N.R. Istituto Inquinamento Atmosferico
Latvia	Latvian Hydrometeorological Agency
Lithuania	Institute of Physics
Netherlands	National Institute for Public Health and Environmental Protection (RIVM)
Norway	Norwegian Institute for Air Research (NILU)
Poland	Institute of Meteorology and Water Management Institute of Environmental Protection
Portugal	Ministério do ambiente e recursos naturais
Russian Federation	Institute of Global Climate and Ecology
Serbia and Montenegro	Federal Hydrometeorological Institute
Slovakia	Slovak Hydrometeorological Institute
Slovenia	Hydrometeorological Institute of Slovenia
Spain	Dirección General de Calidad y Evaluación Ambiental
Sweden	Swedish Environmental Research Institute (IVL)
Switzerland	Swiss Federal Laboratory of Testing Materials and Research (EMPA)
Turkey	Refik Saydam Centre of Hygiene
United Kingdom	AEA Technology

Annex 1

Maps over Europe

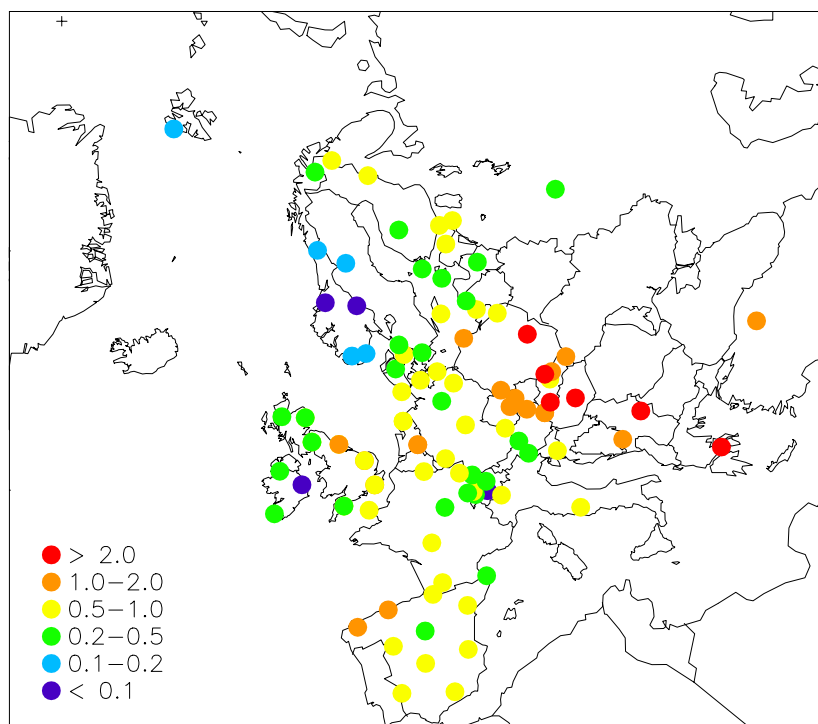


Figure 1.1: Geographical distribution of sulphur dioxide 2001. Unit: $\mu\text{g S/m}^3$.

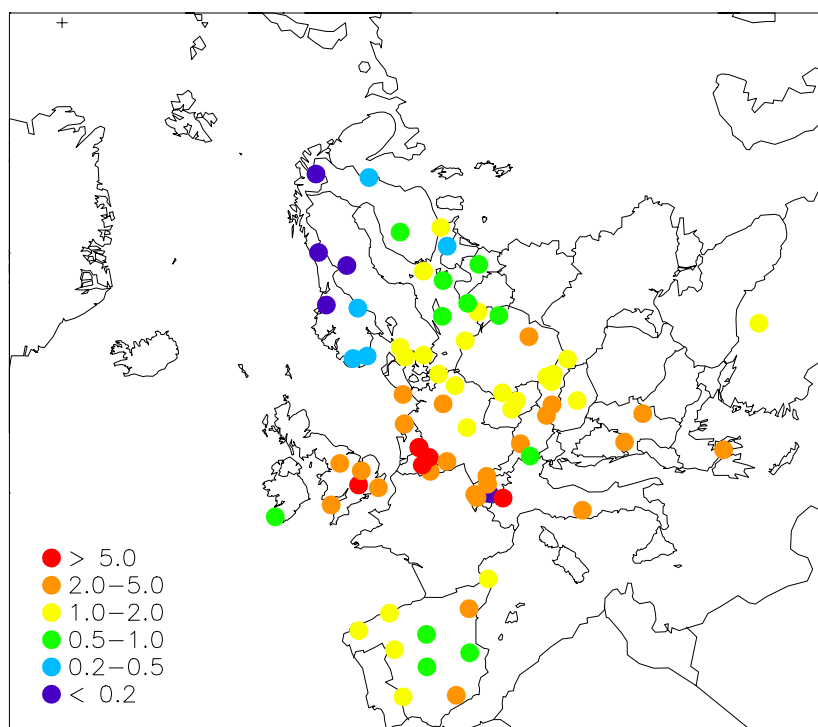


Figure 1.2: Geographical distribution of nitrogen dioxide 2001. Unit: $\mu\text{g N/m}^3$.

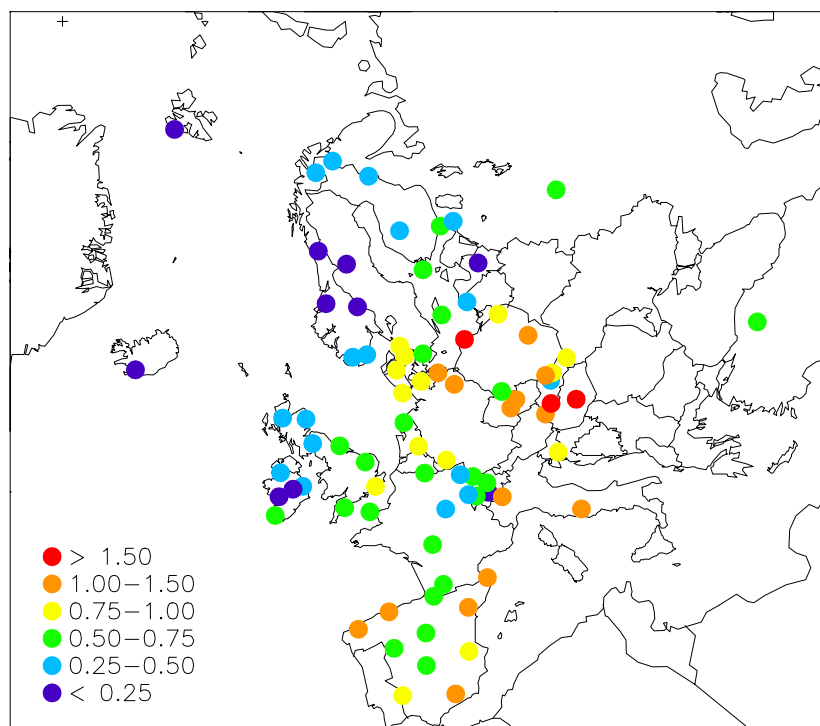


Figure 1.3: Geographical distribution of sulphate in aerosols 2001.
Unit: $\mu\text{g S/m}^3$.

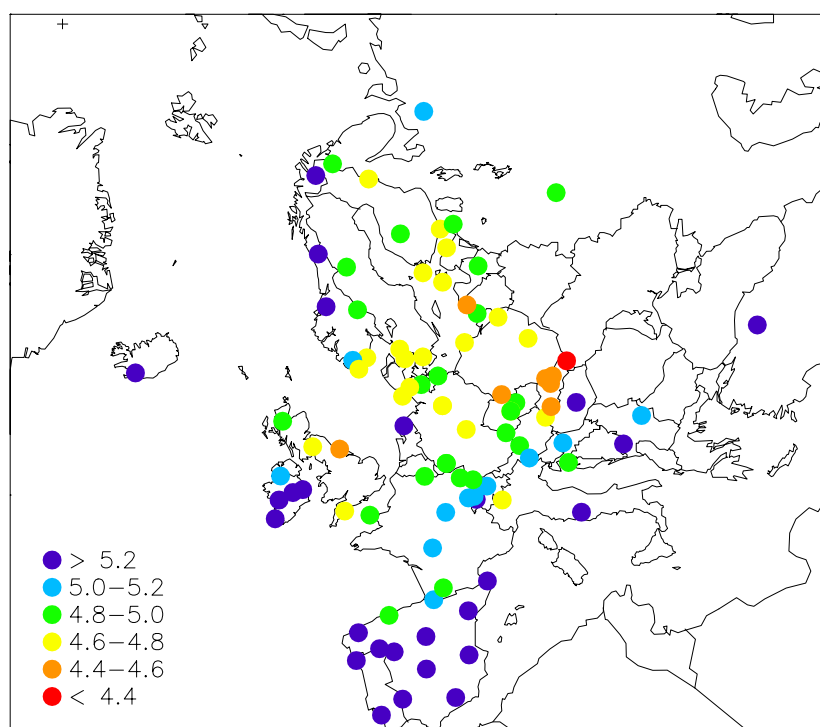
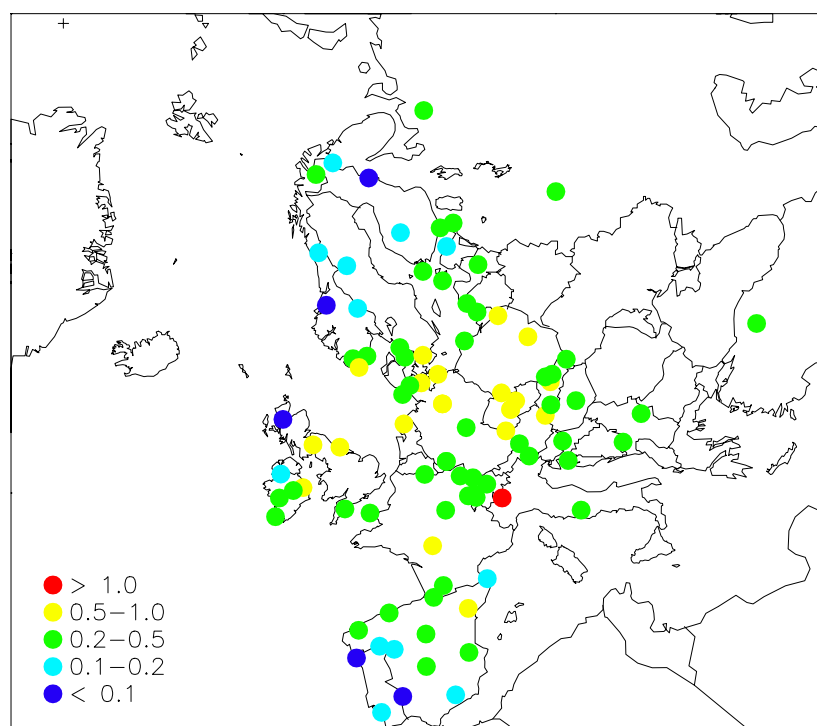
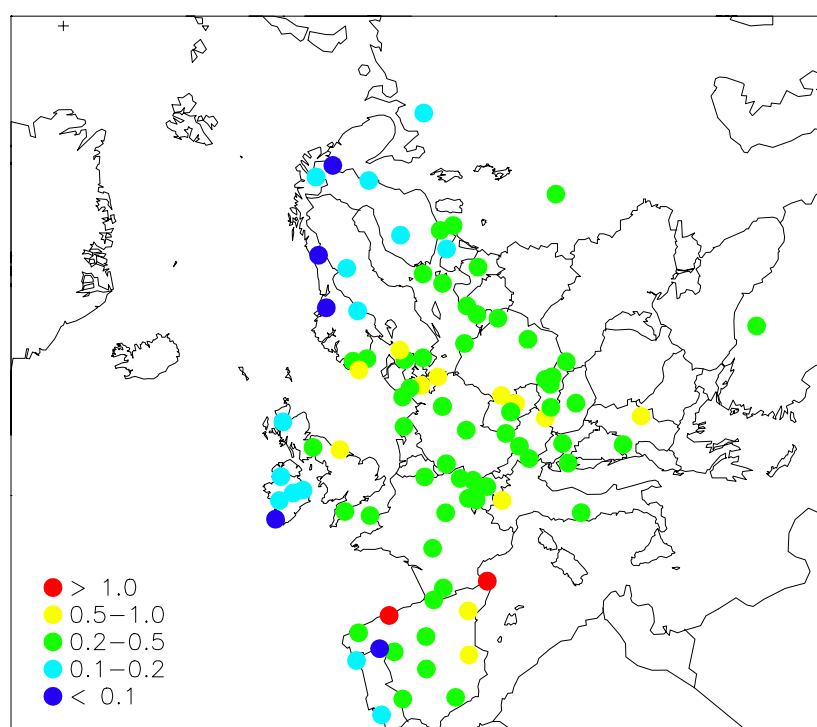


Figure 1.4: Geographical distribution of pH in precipitation 2001.
Unit: pH units.



*Figure 1.5: Geographical distribution of ammonium in precipitation 2001.
Unit: mg N/l.*



*Figure 1.6: Geographical distribution of nitrate in precipitation 2001.
Unit: mg N/l.*

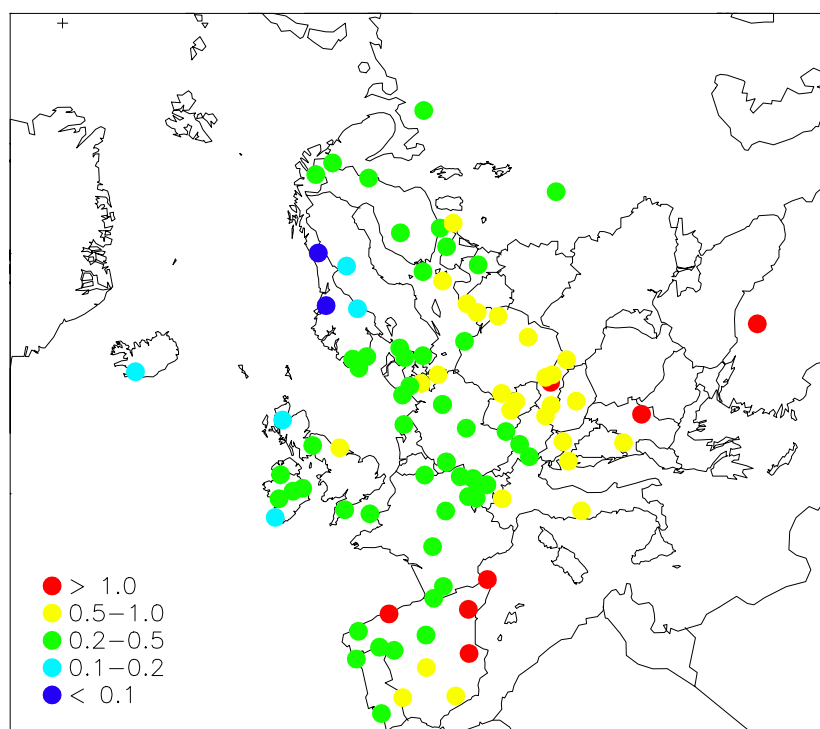


Figure 1.7: Geographical distribution of sulphate in precipitation 2001 (corrected for sea spray). Unit: mg S/l.

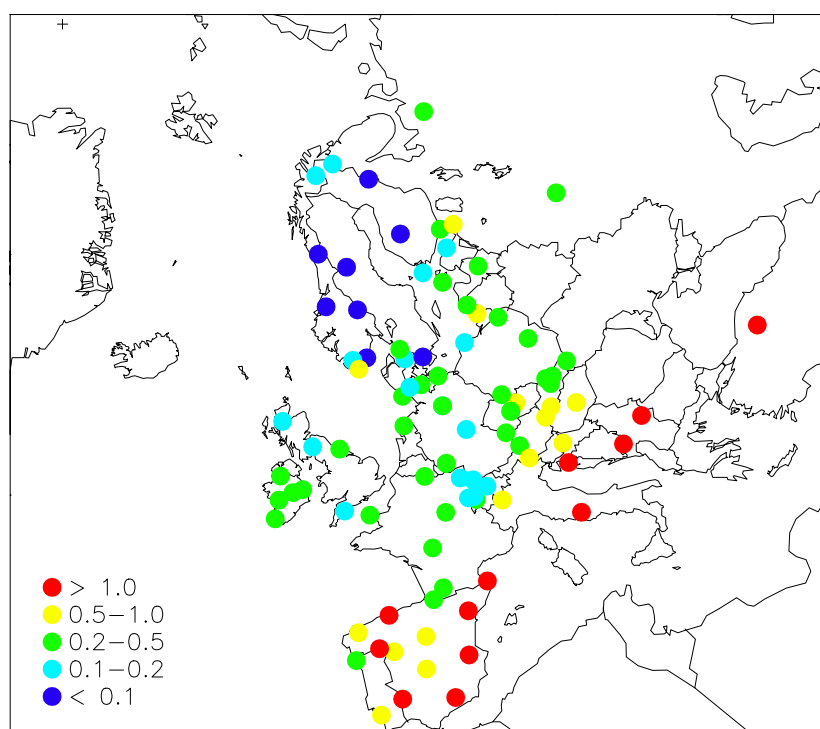


Figure 1.8: Geographical distribution of calcium in precipitation 2001. Unit: mg/l.

Annex 2

Annual statistics on precipitation data

AT0002R Illmitz Austria

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.62	0.00	5.50	279.6	99.6	0	77
Cl-	0.21	0.00	3.30	92.1	99.8	0	78
K+	0.07	0.01	1.69	33.1	96.1	13	77
Mg++	0.097	0.009	2.378	43.4	99.8	0	78
NH4+	0.61	0.01	21.96	273.6	99.8	0	78
NO3-	0.52	0.14	10.26	232.9	99.8	0	78
Na+	0.10	0.01	1.63	46.0	99.8	2	78
Precip	-	0.0	56.9	448.1	100.0	277	365
S04--	0.84	0.10	18.36	375.8	99.8	0	78
S04-- corr	0.83	0.10	18.33	370.7	99.8	0	78
cond	21.09	6.00	279.00	9451.5	99.8	0	80
pH	4.69	3.64	7.63	9156.4	99.9	0	84

AT0004R St. Koloman Austria

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.25	0.00	3.40	304.0	99.8	0	179
Cl-	0.14	0.00	3.70	171.2	99.8	0	179
K+	0.03	0.01	3.46	39.2	99.8	57	179
Mg++	0.036	0.005	0.531	43.4	99.8	17	179
NH4+	0.44	0.01	4.40	531.0	99.8	1	179
NO3-	0.44	0.03	5.16	534.7	99.8	0	179
Na+	0.08	0.01	7.10	101.4	99.8	10	179
Precip	-	0.0	34.2	1216.2	100.0	174	365
S04--	0.32	0.03	2.48	390.2	99.8	0	179
S04-- corr	0.31	0.02	2.43	379.1	99.8	0	179
cond	13.07	3.00	103.00	15896.9	99.8	0	183
pH	4.90	3.81	7.09	15198.2	99.9	0	186

AT0005R Vorhegg Austria

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.75	0.00	5.30	703.4	91.7	1	103
Cl-	0.16	0.00	1.50	146.6	91.7	2	103
K+	0.02	0.01	1.62	18.3	90.4	43	103
Mg++	0.124	0.005	6.977	116.0	91.8	4	104
NH4+	0.26	0.01	2.01	240.2	91.8	7	104
NO3-	0.33	0.04	2.69	306.8	91.7	1	103
Na+	0.10	0.01	1.12	97.1	91.8	10	104
Precip	-	0.0	34.3	938.8	100.0	248	365
S04--	0.35	0.03	3.80	332.4	91.7	1	103
S04-- corr	0.34	-0.07	3.75	318.5	91.7	1	103
cond	12.93	3.00	122.00	12139.7	91.8	1	105
pH	5.08	4.00	7.99	7845.6	91.8	1	108

CH0002R Payerne Switzerland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.24	0.03	3.48	247.5	94.3	30	122
Cl-	0.13	0.00	1.62	132.6	94.3	0	122
K+	0.04	0.01	0.46	36.2	94.3	46	122
Mg++	0.023	0.002	0.209	24.2	94.3	19	122
NH4+	0.39	0.05	2.67	408.7	94.3	0	122
NO3-	0.24	0.03	2.12	255.3	94.3	0	122
Na+	0.07	0.00	0.92	75.1	94.3	0	122
Precip	-	0.0	40.3	1041.7	100.0	203	365
S04--	0.27	0.01	1.62	282.6	94.3	0	122
S04-- corr	0.26	0.01	1.59	275.5	94.3	0	122
cond	8.61	1.59	76.64	8973.6	99.6	0	149
pH	5.31	4.07	6.78	5154.7	99.8	0	150

CH0004R Chaumont Switzerland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.16	0.03	2.72	200.4	100.0	7	51
Cl-	0.13	0.03	1.30	163.9	100.0	0	51
K+	0.02	0.01	0.15	28.4	100.0	22	51
Mg++	0.020	0.002	0.204	25.2	100.0	4	51
NH4+	0.22	0.03	1.46	268.6	100.0	0	51
NO3-	0.21	0.06	1.45	255.5	100.0	0	51
Na+	0.08	0.02	0.72	94.6	100.0	0	51
Precip	-	0.0	70.5	1241.9	99.7	1	52
SO4--	0.23	0.03	1.04	283.4	100.0	0	51
SO4-- corr	0.22	0.03	1.02	274.6	100.0	0	51
cond	7.51	2.64	30.80	9330.2	100.0	0	51
pH	5.13	4.53	6.29	9302.0	100.0	0	51

CH0005R Rigi Switzerland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.18	0.03	6.02	280.8	98.0	36	143
Cl-	0.09	0.00	2.54	140.6	98.0	0	143
K+	0.03	0.01	1.66	44.9	98.0	66	143
Mg++	0.017	0.002	0.435	26.6	98.0	22	143
NH4+	0.37	0.01	2.52	565.7	98.0	0	143
NO3-	0.28	0.04	2.52	425.3	98.0	0	143
Na+	0.06	0.00	1.59	88.2	98.0	0	143
Precip	-	0.0	66.5	1527.7	100.0	183	365
SO4--	0.26	0.01	1.94	391.0	98.0	0	143
SO4-- corr	0.25	0.01	1.91	383.2	98.0	0	143
cond	9.60	1.94	97.26	14667.2	99.6	0	164
pH	5.09	3.97	7.33	12286.9	99.8	0	166

CZ0001R Svatouch Czech Republic

Weekly sampling

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.59	0.04	5.36	505.5	99.8	0	48
Cl-	0.52	0.04	6.51	440.8	99.6	0	47
K+	0.22	0.04	1.60	183.8	91.3	0	47
Mg++	0.137	0.000	1.650	116.6	91.3	0	47
NH4+	0.58	0.08	3.21	495.8	99.8	0	48
NO3-	0.50	0.22	1.32	428.1	99.6	0	47
Na+	0.37	0.04	4.87	316.8	91.3	0	47
Precip	-	0.1	72.2	850.5	99.7	0	52
SO4--	0.80	0.09	3.78	676.0	99.6	0	47
SO4-- corr	0.77	0.09	3.48	651.9	99.6	0	47
cond	20.57	8.60	112.50	17494.4	99.8	0	48
pH	4.86	3.90	6.96	11709.3	99.9	0	49

CZ0003R Kosetice Czech Republic

Weekly sampling

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.29	0.02	2.04	213.4	99.2	0	47
Cl-	0.25	0.04	2.25	184.2	96.9	0	45
K+	0.10	0.01	3.60	72.4	99.2	0	47
Mg++	0.053	0.010	0.490	38.4	99.2	0	47
NH4+	0.75	0.13	4.59	547.1	99.8	0	49
NO3-	0.46	0.20	2.62	336.3	96.9	0	45
Na+	0.13	0.02	0.80	94.4	99.2	0	47
Precip	-	0.0	50.6	728.1	99.7	2	52
SO4--	0.54	0.09	3.73	391.4	96.9	0	45
SO4-- corr	0.53	0.05	3.72	383.0	96.9	0	45
cond	17.24	8.80	39.60	12551.7	98.9	0	46
pH	4.74	4.12	7.45	13396.3	99.7	0	48

CZ0003R Kosetice Czech Republic

Daily sampling

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.26	0.01	3.36	186.3	97.8	0	170
Cl-	0.23	0.01	3.38	165.1	97.0	2	162
K+	0.14	0.01	15.79	98.9	96.7	0	163
Mg++	0.046	0.001	1.345	33.4	97.8	2	170
NH4+	0.64	0.02	12.01	468.3	97.9	0	174
NO3-	0.47	0.01	2.64	343.6	97.0	0	162
Na+	0.14	0.00	8.68	104.6	97.8	0	170
Precip	-	0.0	32.8	728.6	100.0	161	365
S04--	0.52	0.04	5.63	380.1	97.0	0	162
S04-- corr	0.51	0.04	5.57	369.9	97.0	0	162
pH	4.80	3.86	7.85	11420.4	97.5	0	170

DE0001R Westerland Germany

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.30	0.10	1.50	191.5	99.4	0	44
Cl-	7.82	0.40	52.20	5008.9	99.4	0	44
K+	0.17	0.03	1.13	112.3	99.4	0	44
Mg++	0.573	0.047	3.648	367.0	99.4	0	44
NH4+	0.44	0.05	2.63	281.5	99.4	0	44
NO3-	0.44	0.07	2.00	280.9	99.4	0	44
Na+	4.52	0.24	31.74	2894.5	99.4	0	44
Precip	-	0.0	47.5	640.7	99.7	4	52
S04--	0.81	0.38	2.86	519.3	99.4	0	44
S04-- corr	0.43	0.08	1.55	278.4	99.4	0	44
cond	38.58	15.00	178.00	24714.9	99.4	0	44
pH	4.76	4.30	6.20	11149.2	99.4	0	44

DE0002R Langenbrugge Germany

Weekly sampling

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.18	0.00	0.90	128.8	99.3	0	47
Cl-	0.76	0.10	11.90	544.2	99.3	0	47
K+	0.04	0.01	0.24	32.1	99.3	0	47
Mg++	0.070	0.010	0.865	50.1	99.3	0	47
NH4+	0.59	0.22	2.16	428.4	99.3	0	47
NO3-	0.47	0.04	1.97	339.5	99.3	0	47
Na+	0.43	0.03	6.60	306.7	99.3	0	47
Precip	-	0.6	55.2	719.6	99.7	0	52
S04--	0.48	0.22	1.67	346.9	99.3	0	47
S04-- corr	0.44	0.19	1.65	319.4	99.3	0	47
cond	15.56	7.00	49.00	11193.8	99.3	0	47
pH	4.78	4.15	5.95	12018.6	99.3	0	47

DE0002R Langenbrugge Germany

Daily sampling

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.20	0.00	1.70	137.0	95.7	0	152
Cl-	0.70	0.00	17.40	470.2	95.7	0	152
K+	0.07	0.01	0.84	47.6	95.7	0	152
Mg++	0.064	0.008	1.161	42.9	95.7	0	152
NH4+	0.57	0.05	5.46	382.9	95.7	0	152
NO3-	0.49	0.02	5.44	330.9	95.7	0	152
Na+	0.40	0.01	9.76	266.9	95.7	0	152
Precip	-	0.0	37.5	668.1	100.0	202	365
S04--	0.45	0.11	5.79	299.1	95.7	0	152
S04-- corr	0.41	0.07	5.64	274.3	95.7	0	152
cond	18.02	7.00	143.00	12037.7	96.5	0	156
pH	4.79	3.79	6.90	10819.2	96.5	0	157

DE0003R Schauinsland Germany

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.17	0.00	4.50	381.5	99.8	0	44
Cl-	0.22	0.00	1.50	494.6	99.8	0	44
K+	0.04	0.01	0.16	85.7	99.8	0	44
Mg++	0.029	0.007	0.408	63.3	99.8	0	44
NH4+	0.26	0.07	0.71	582.7	99.8	0	44
NO3-	0.23	0.10	0.69	505.2	99.8	0	44
Na+	0.17	0.02	0.89	368.5	99.8	0	44
Precip	-	0.0	140.0	2217.9	95.9	2	50
SO4--	0.30	0.10	0.86	675.4	99.8	0	44
SO4-- corr	0.29	0.09	0.81	648.0	99.8	0	44
cond	8.25	4.00	25.00	18298.1	99.8	0	44
pH	4.99	4.35	6.43	22665.9	99.8	0	44

DE0004R Deuselbach Germany

Weekly sampling

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.35	0.00	9.10	295.6	99.4	0	43
Cl-	0.44	0.10	3.50	368.1	99.4	0	43
K+	0.05	0.01	0.16	40.3	99.4	0	43
Mg++	0.055	0.010	0.359	46.0	99.4	0	43
NH4+	0.38	0.12	1.07	323.3	99.4	0	43
NO3-	0.33	0.14	1.31	281.3	99.4	0	43
Na+	0.26	0.05	2.10	216.4	99.4	0	43
Precip	-	0.0	58.3	842.8	99.7	4	52
SO4--	0.42	0.16	1.24	354.8	99.4	0	43
SO4-- corr	0.40	0.15	1.18	336.3	99.4	0	43
cond	11.92	7.00	40.00	10046.6	99.4	0	43
pH	4.88	4.16	6.77	11119.7	99.4	0	43

DE0004R Deuselbach Germany

Daily sampling

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.34	0.00	6.30	282.1	99.3	0	172
Cl-	0.45	0.00	7.00	374.0	99.3	0	176
K+	0.06	0.01	0.46	45.9	99.3	0	172
Mg++	0.060	0.011	0.560	49.2	99.3	0	172
NH4+	0.36	0.01	5.48	298.7	99.3	0	172
NO3-	0.36	0.06	8.46	300.1	99.3	0	176
Na+	0.26	0.01	4.13	210.2	99.3	0	172
Precip	-	0.1	27.4	822.9	100.0	189	365
SO4--	0.40	0.03	8.18	328.8	99.3	0	176
SO4-- corr	0.38	0.03	8.12	308.8	99.3	0	176
cond	13.31	4.00	62.00	10952.9	98.7	0	156
pH	4.95	4.01	6.90	9187.8	98.7	0	154

DE0005R Brotjacklriegel Germany

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.28	0.10	1.10	307.5	99.7	0	45
Cl-	0.18	0.00	2.20	200.7	99.7	0	45
K+	0.06	0.01	0.24	61.2	99.7	0	45
Mg++	0.038	0.010	0.242	42.2	99.7	0	45
NH4+	0.52	0.09	2.40	584.6	99.7	0	45
NO3-	0.44	0.15	1.75	491.6	99.7	0	45
Na+	0.13	0.02	1.38	146.6	99.7	0	45
Precip	-	0.0	99.2	1118.8	99.7	4	52
SO4--	0.40	0.18	1.36	447.5	99.7	0	45
SO4-- corr	0.39	0.17	1.30	433.3	99.7	0	45
cond	10.96	5.00	36.00	12257.2	99.7	0	45
pH	5.00	4.32	6.54	11305.9	99.7	0	45

DE0008R Schmucke Germany

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.18	0.00	1.20	247.9	99.8	0	48
Cl-	0.34	0.10	3.00	477.3	99.8	0	48
K+	0.05	0.01	0.24	67.9	99.8	0	48
Mg++	0.033	0.006	0.242	46.6	99.8	0	48
NH4+	0.49	0.16	1.94	695.3	99.8	0	48
NO3-	0.47	0.20	1.69	664.0	99.8	0	48
Na+	0.22	0.04	1.80	309.2	99.8	0	48
Precip	-	0.0	99.6	1411.0	99.7	1	52
S04--	0.46	0.19	1.59	654.3	99.8	0	48
S04-- corr	0.45	0.18	1.55	628.5	99.8	0	48
cond	14.33	6.00	35.00	20220.3	99.8	0	48
pH	4.70	4.38	5.90	27976.2	99.8	0	48

DE0009R Zingst Germany

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.34	0.00	1.50	228.6	81.2	0	39
Cl-	1.50	0.20	6.40	1001.9	81.2	0	39
K+	0.08	0.01	0.44	54.2	81.2	0	39
Mg++	0.136	0.028	0.472	90.9	81.2	0	39
NH4+	0.62	0.13	2.63	416.3	81.2	0	39
NO3-	0.56	0.26	2.30	372.6	81.2	0	39
Na+	0.87	0.12	3.54	584.3	81.2	0	39
Precip	-	0.0	76.3	668.8	99.7	7	52
S04--	0.60	0.21	1.49	402.5	81.2	0	39
S04-- corr	0.53	0.18	1.38	353.2	81.2	0	39
cond	18.50	9.00	58.00	12372.1	81.0	0	37
pH	4.81	4.02	6.12	10465.7	81.2	0	39

DK0005R Keldsnor Denmark

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.31	0.14	0.69	167.5	97.1	0	23
Cl-	2.58	0.00	12.43	1400.9	100.0	0	24
K+	0.36	0.06	2.50	196.0	100.0	0	24
Mg++	0.167	0.038	0.818	90.7	100.0	0	24
NH4+	0.64	0.08	1.32	348.1	100.0	0	24
NO3-	0.57	0.22	2.33	311.8	100.0	0	24
Na+	1.50	0.25	7.02	813.6	100.0	0	24
Precip	-	3.2	70.1	542.7	99.7	0	24
S04--	0.64	0.36	2.73	346.9	100.0	0	24
S04-- corr	0.52	0.14	2.55	280.9	100.0	0	24
cond	23.62	13.40	74.00	12817.4	100.0	0	24
pH	5.00	4.34	6.61	5450.7	100.0	0	24

DK0008R Anholt Denmark

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.18	0.07	1.45	106.0	99.1	0	22
Cl-	3.77	0.00	12.84	2226.6	100.0	0	23
K+	0.11	0.04	0.26	65.6	100.0	0	23
Mg++	0.247	0.041	0.831	146.0	100.0	0	23
NH4+	0.46	0.11	1.50	270.4	100.0	0	23
NO3-	0.49	0.19	1.15	290.2	100.0	0	23
Na+	2.28	0.33	7.26	1348.9	100.0	0	23
Precip	-	0.0	60.0	590.6	99.7	1	24
S04--	0.65	0.38	1.83	381.2	100.0	0	23
S04-- corr	0.46	0.14	1.49	269.1	100.0	0	23
cond	29.70	14.00	71.40	17540.0	100.0	0	23
pH	4.68	4.11	5.72	12305.8	100.0	0	23

DK0022R Sepstrup Sande Denmark

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.10	0.03	0.54	74.7	95.3	0	22
Cl-	2.15	0.29	8.96	1556.6	100.0	0	23
K+	0.07	0.02	0.21	48.7	100.0	0	23
Mg++	0.128	0.013	0.513	92.6	100.0	0	23
NH4+	0.46	0.18	2.03	334.5	100.0	0	23
NO3-	0.44	0.16	1.25	317.4	100.0	0	23
Na+	1.29	0.21	5.24	934.2	100.0	0	23
Precip	-	0.0	91.1	724.0	99.7	1	24
SO4--	0.48	0.29	1.74	347.2	100.0	0	23
SO4-- corr	0.37	0.11	1.70	270.4	100.0	0	23
cond	20.47	11.84	41.10	14823.5	100.0	0	23
pH	4.79	4.45	5.38	11659.9	100.0	0	23

EE0009R Lahemaa Estonia

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.19	0.00	1.10	139.6	99.7	0	43
Cl-	0.53	0.10	1.50	396.7	99.7	0	43
K+	0.09	0.05	0.61	69.8	99.7	16	43
Mg++	0.038	0.005	0.196	28.2	99.7	1	43
NH4+	0.13	0.01	0.59	100.1	99.2	7	41
NO3-	0.17	0.01	0.73	130.9	99.7	5	43
Na+	0.21	0.05	0.89	158.8	99.7	12	43
Precip	-	0.4	118.2	747.6	100.0	6	53
SO4--	0.38	0.11	1.23	280.3	99.7	0	43
SO4-- corr	0.35	0.10	1.21	263.2	99.7	0	43
cond	11.94	3.00	77.00	8927.4	100.0	0	47
pH	4.76	4.12	6.33	12852.7	100.0	0	47

EE0011R Vilsandi Estonia

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.31	0.00	4.70	172.3	100.0	0	25
Cl-	1.10	0.20	3.10	608.2	100.0	0	25
K+	0.47	0.05	4.63	258.3	100.0	5	25
Mg++	0.127	0.020	0.550	70.1	100.0	0	25
NH4+	0.42	0.03	5.00	233.3	100.0	0	25
NO3-	0.39	0.03	1.10	213.5	100.0	0	25
Na+	0.51	0.05	2.04	283.8	100.0	0	25
Precip	-	0.0	69.0	551.9	100.0	28	53
SO4--	0.64	0.27	1.73	353.9	100.0	0	25
SO4-- corr	0.57	0.26	1.60	315.2	100.0	0	25
cond	18.91	6.00	65.00	10437.6	100.0	0	25
pH	4.78	4.36	6.55	9156.6	100.0	0	25

ES0007R Viznar Spain

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	1.02	0.23	16.60	603.2	95.3	0	53
Cl-	1.00	0.43	6.27	591.4	96.9	0	63
K+	0.15	0.05	1.40	87.8	95.3	0	53
Mg++	0.197	0.060	1.900	116.1	95.3	0	53
NH4+	0.14	0.04	1.74	85.6	96.5	34	58
NO3-	0.32	0.09	4.22	190.8	96.9	0	63
Na+	0.45	0.05	5.40	266.8	95.3	2	53
Precip	-	0.0	32.6	589.4	100.0	278	365
SO4--	0.64	0.22	5.40	377.4	96.9	0	63
SO4-- corr	0.58	0.16	5.19	340.6	96.9	0	63
cond	13.98	5.00	115.50	8240.8	98.0	0	71
pH	6.28	5.33	7.90	307.5	98.0	0	71

ES0008R Niembro Spain

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	1.02	0.19	9.10	538.5	94.6	0	116
Cl-	12.40	1.14	164.00	6517.1	98.8	0	125
K+	0.42	0.10	4.10	220.7	94.6	0	116
Mg++	0.922	0.090	12.000	484.4	94.6	0	116
NH4+	0.46	0.04	11.25	241.6	94.8	13	121
NO3-	1.09	0.19	7.97	573.1	98.8	0	125
Na+	7.79	0.63	97.00	4096.6	94.6	0	116
Precip	-	0.0	21.6	525.6	100.0	226	365
S04--	1.88	0.48	15.37	989.7	98.8	0	125
S04-- corr	1.25	0.16	10.50	656.7	98.8	0	125
cond	74.60	11.30	543.00	39208.9	99.0	0	128
pH	4.82	3.70	7.20	7999.8	99.0	0	128

ES0009R Campisabalos Spain

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.74	0.05	8.00	302.2	89.8	0	67
Cl-	1.00	0.52	21.30	405.5	92.7	0	82
K+	0.09	0.03	0.68	36.5	89.8	11	67
Mg++	0.080	0.010	0.600	32.5	89.8	1	67
NH4+	0.20	0.04	1.56	83.0	90.9	23	73
NO3-	0.33	0.12	4.13	134.7	92.7	0	82
Na+	0.36	0.05	2.36	146.3	89.8	1	67
Precip	-	0.0	22.4	407.2	100.0	252	365
S04--	0.51	0.21	4.77	207.0	92.7	0	82
S04-- corr	0.46	0.20	4.55	188.7	92.7	0	82
cond	11.75	2.50	144.90	4786.3	93.5	2	86
pH	6.23	5.12	7.66	239.5	93.5	0	86

ES0010R Cabo de Creus Spain

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	9.52	0.39	51.00	1140.4	69.6	0	27
Cl-	118.41	0.00	1111.00	14185.6	72.0	0	30
K+	2.75	0.33	35.00	330.1	69.6	0	27
Mg++	7.666	0.900	68.000	918.4	69.6	0	27
NH4+	0.14	0.04	0.96	16.2	71.6	7	28
NO3-	2.71	0.24	26.67	324.2	72.0	0	30
Na+	60.28	4.90	548.00	7221.4	69.6	0	27
Precip	-	0.0	21.4	119.8	100.0	321	365
S04--	8.93	0.97	166.00	1069.5	72.0	0	30
S04-- corr	3.82	0.34	166.00	458.0	72.0	0	30
cond	357.76	59.20	3500.00	42859.5	72.0	0	30
pH	6.56	5.97	7.91	33.3	72.0	0	30

ES0011R Barcarrola Spain

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	1.58	0.26	16.30	1128.2	97.5	0	71
Cl-	1.57	0.44	16.41	1119.2	97.8	0	74
K+	0.18	0.03	2.00	128.6	97.5	1	71
Mg++	0.749	0.110	9.000	532.8	97.5	0	71
NH4+	0.09	0.04	1.59	61.9	97.8	40	74
NO3-	0.28	0.09	7.57	202.8	97.8	0	74
Na+	0.93	0.05	7.20	659.5	97.5	1	71
Precip	-	0.0	75.0	711.6	100.0	262	365
S04--	0.61	0.33	10.27	435.7	97.8	0	74
S04-- corr	0.52	0.27	9.51	367.2	97.8	0	74
cond	21.30	6.40	473.00	15159.3	97.8	0	74
pH	6.65	6.12	7.41	157.7	97.8	0	74

ES0012R Zarra Spain

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	4.34	0.12	29.50	1686.0	98.7	0	64
Cl-	1.64	0.40	10.38	637.9	98.9	0	66
K+	0.23	0.03	1.12	90.3	98.7	2	64
Mg++	0.309	0.020	2.100	120.1	98.7	0	64
NH4+	0.32	0.04	1.70	124.3	98.8	18	65
NO3-	0.88	0.04	4.94	342.4	98.9	1	66
Na+	1.02	0.05	7.50	397.1	98.7	1	64
Precip	-	0.0	29.2	388.6	100.0	285	365
S04--	1.15	0.18	7.65	448.3	98.9	0	66
S04-- corr	1.05	0.15	7.26	407.5	98.9	0	66
cond	35.65	0.00	179.10	13854.8	98.9	0	66
pH	6.16	5.05	7.81	268.2	98.9	0	66

ES0013R Penausende Spain

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.64	0.02	9.30	221.1	95.4	1	73
Cl-	0.98	0.51	7.65	338.6	96.2	0	82
K+	0.18	0.03	9.90	62.9	95.4	13	73
Mg++	0.085	0.010	1.700	29.3	95.4	2	73
NH4+	0.18	0.04	4.24	63.8	96.0	23	78
NO3-	0.29	0.12	3.18	100.4	96.2	0	82
Na+	0.46	0.11	7.00	159.2	95.4	0	73
Precip	-	0.0	24.6	346.0	100.0	263	365
S04--	0.53	0.24	7.77	182.5	96.2	0	82
S04-- corr	0.48	0.08	7.61	167.0	96.2	0	82
cond	10.91	2.60	165.10	3774.1	97.3	0	88
pH	6.11	5.74	7.30	269.1	97.3	0	88

ES0014R Els Torms Spain

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	6.86	2.83	25.40	1541.5	74.0	0	30
Cl-	1.73	0.47	31.30	387.7	77.7	0	41
K+	1.40	0.12	58.00	313.7	74.0	0	30
Mg++	0.522	0.160	1.800	117.4	74.0	0	30
NH4+	0.63	0.04	2.71	142.3	75.7	1	34
NO3-	0.70	0.09	7.39	158.0	77.7	0	41
Na+	1.48	0.17	51.00	333.7	74.0	0	30
Precip	-	0.0	19.8	224.8	100.0	302	365
S04--	1.41	0.31	14.50	316.5	77.7	0	41
S04-- corr	1.32	0.29	14.01	297.0	77.7	0	41
cond	58.30	21.50	373.00	13106.5	77.9	0	44
pH	7.11	5.96	7.98	17.3	77.9	0	44

ES0015R Risco Llano Spain

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.77	0.10	10.00	501.3	79.5	0	54
Cl-	1.60	0.41	37.88	1034.6	91.2	0	64
K+	0.15	0.03	4.25	98.3	79.5	3	54
Mg++	0.153	0.020	3.250	99.3	79.5	0	54
NH4+	0.42	0.04	3.27	274.4	84.6	2	58
NO3-	0.36	0.16	5.22	234.7	91.2	0	64
Na+	0.91	0.05	22.25	589.4	79.5	3	54
Precip	-	0.0	36.6	648.2	100.0	266	365
S04--	0.73	0.28	10.54	471.2	91.2	0	64
S04-- corr	0.64	0.27	8.68	417.6	91.2	0	64
cond	17.32	4.90	216.00	11229.3	91.2	0	64
pH	6.37	5.71	7.25	278.9	91.2	0	64

ES0016R O Savinao Spain

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.60	0.18	2.50	322.9	94.2	0	71
Cl-	1.27	0.56	11.39	685.6	97.4	0	79
K+	0.30	0.05	3.10	159.5	94.2	0	71
Mg++	0.127	0.030	0.800	68.5	94.2	0	71
NH4+	0.41	0.04	3.47	218.1	97.0	20	75
NO3-	0.36	0.09	4.13	193.7	97.4	0	79
Na+	0.64	0.05	7.30	344.7	94.2	1	71
Precip	-	0.0	41.4	539.0	100.0	260	365
S04--	0.52	0.24	4.92	277.7	97.4	0	79
S04-- corr	0.44	0.18	4.80	237.3	97.4	0	79
cond	16.43	2.50	174.10	8856.1	97.7	1	84
pH	6.28	5.82	8.00	285.6	97.7	0	84

FI0004R Ahtari Finland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.10	0.01	1.71	65.2	99.5	0	56
Cl-	0.16	0.04	6.01	110.0	99.5	0	56
K+	0.04	0.01	0.23	24.4	99.5	0	56
Mg++	0.020	0.002	0.404	13.2	99.5	2	56
NH4+	0.15	0.02	0.67	102.2	99.5	0	56
NO3-	0.19	0.04	1.14	125.4	99.5	0	56
Na+	0.10	0.01	3.88	64.3	99.5	0	56
Precip	-	0.0	83.5	670.3	100.0	4	63
Precip off	-	0.00	33.00	744.6	100.0	156	365
S04--	0.25	0.03	1.49	169.3	99.5	0	56
S04-- corr	0.24	0.03	1.48	163.4	99.5	0	56
cond	9.65	3.00	54.00	6466.1	99.5	0	56
pH	4.81	4.00	6.17	10321.0	99.5	0	56

FI0009R Uto Finland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.15	0.02	2.13	52.9	99.4	0	86
Cl-	1.68	0.13	52.16	603.9	99.4	0	86
K+	0.08	0.01	1.60	30.2	99.4	0	86
Mg++	0.120	0.012	3.471	43.3	99.4	0	86
NH4+	0.26	0.04	2.61	94.6	97.8	0	81
NO3-	0.34	0.06	3.71	121.6	99.4	0	86
Na+	0.97	0.07	29.10	349.7	99.4	0	86
Precip	-	0.0	32.0	359.9	99.7	263	364
Precip off	-	0.00	48.00	611.2	100.0	215	365
S04--	0.42	0.12	2.91	152.5	99.4	0	86
S04-- corr	0.34	-0.03	1.71	123.6	99.4	0	86
cond	21.03	4.00	207.00	7567.5	99.6	0	89
pH	4.63	3.84	6.61	8498.2	99.6	0	89

FI0017R Virolahti II Finland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.22	0.01	4.59	134.7	99.4	0	144
Cl-	0.35	0.01	4.88	217.7	99.4	2	144
K+	0.08	0.01	1.50	47.1	99.4	0	144
Mg++	0.041	0.002	0.469	25.4	99.4	3	144
NH4+	0.31	0.02	3.94	190.1	99.4	0	144
NO3-	0.28	0.05	1.94	173.5	99.4	0	144
Na+	0.19	0.00	2.78	118.4	99.4	1	144
Precip	-	0.0	26.1	612.6	100.0	198	365
Precip off	-	0.00	28.20	730.6	100.0	177	365
S04--	0.46	0.04	5.11	281.4	99.4	0	144
S04-- corr	0.44	0.04	4.99	269.9	99.4	0	144
cond	14.38	4.00	86.00	8809.6	99.6	0	150
pH	4.74	3.91	7.07	11153.9	99.6	0	150

FI0022R Oulanka Finland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.08	0.01	0.91	33.7	98.8	0	170
Cl-	0.15	0.01	5.11	64.3	98.8	1	170
K+	0.04	0.00	1.34	14.4	98.8	12	170
Mg++	0.016	0.002	0.352	6.7	98.8	20	170
NH4+	0.09	0.00	0.80	38.0	98.8	3	170
NO3-	0.14	0.02	0.85	57.4	98.8	0	170
Na+	0.09	0.00	2.98	35.3	98.8	0	170
Precip	-	0.0	13.8	415.1	100.0	166	365
Precip off	-	0.00	15.30	493.0	100.0	146	365
SO4--	0.23	0.01	1.91	94.3	98.8	1	170
SO4-- corr	0.22	0.00	1.90	91.3	98.8	1	170
cond	9.84	3.00	80.00	4083.4	99.7	0	187
pH	4.75	3.83	6.00	7339.7	99.7	0	187

FR0003R La Crouzille France

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.41	0.01	3.88	440.9	87.9	1	96
Cl-	1.11	0.03	10.38	1192.5	87.9	2	96
K+	0.12	0.01	2.42	132.8	87.9	29	96
Mg++	0.119	0.010	0.770	128.8	87.9	10	96
NH4+	0.76	0.01	14.64	819.9	88.0	8	98
NO3-	0.32	0.01	2.19	342.8	87.9	3	96
Na+	0.65	0.02	5.49	695.6	87.9	0	96
Precip	-	0.2	49.0	1077.7	100.0	220	365
SO4--	0.55	0.02	4.03	591.4	87.9	0	96
SO4-- corr	0.49	0.02	3.91	530.6	87.9	0	96
cond	17.36	2.20	118.60	18705.8	89.7	0	105
pH	5.11	4.29	7.41	8353.5	89.7	0	105

FR0005R La Hague France

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.27	0.02	1.66	272.0	91.9	0	115
Cl-	6.18	0.24	35.34	6200.8	91.9	0	115
K+	0.14	0.01	0.77	137.1	91.9	11	115
Mg++	0.461	0.020	2.590	462.4	91.9	0	115
NH4+	0.30	0.04	2.48	299.0	92.1	0	117
NO3-	0.25	0.03	4.39	251.2	91.9	0	115
Na+	3.55	0.18	21.04	3561.3	91.9	0	115
Precip	-	0.2	48.5	1003.8	100.0	191	365
SO4--	0.57	0.10	2.97	570.6	91.9	0	115
SO4-- corr	0.27	0.03	2.57	272.6	91.9	0	115
cond	33.05	6.00	160.50	33175.4	93.7	0	127
pH	4.99	3.65	6.61	10244.9	93.7	0	127

FR0008R Donon France

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.13	0.01	2.73	255.6	97.6	15	180
Cl-	0.32	0.03	4.52	622.9	97.6	8	180
K+	0.03	0.01	0.57	55.8	97.6	67	180
Mg++	0.029	0.010	0.360	55.6	97.6	69	180
NH4+	0.33	0.01	3.62	628.4	97.6	2	181
NO3-	0.29	0.03	2.82	557.9	97.6	0	180
Na+	0.18	0.01	2.84	356.4	97.6	15	180
Precip	-	0.2	48.5	1932.2	100.0	170	365
SO4--	0.30	0.02	2.39	574.2	97.6	0	180
SO4-- corr	0.28	0.02	2.33	543.5	97.6	0	180
cond	11.08	2.20	71.20	21410.9	97.7	0	182
pH	4.88	3.95	6.48	25602.5	97.7	0	182

FR0009R	Revin	France					
January 2001 - December 2001							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.22	0.01	3.15	335.8	94.5	3	156
Cl-	0.77	0.03	6.97	1177.1	94.5	1	156
K+	0.04	0.01	0.86	68.9	94.5	38	156
Mg++	0.070	0.010	0.540	107.7	94.5	19	156
NH4+	0.43	0.01	5.06	656.8	95.3	1	158
NO3-	0.32	0.06	3.83	488.0	94.5	0	156
Na+	0.47	0.01	4.09	718.7	94.5	3	156
Precip	-	0.1	46.0	1533.2	100.0	176	365
S04--	0.40	0.08	4.29	619.3	94.5	0	156
S04-- corr	0.36	0.07	4.24	559.1	94.5	0	156
cond	13.65	3.50	113.00	20921.1	96.5	0	163
pH	4.96	3.93	6.42	16714.9	96.5	0	163

FR0010R	Morvan		France				
January 2001 - December 2001							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.34	0.01	3.67	467.5	92.3	2	126
Cl-	0.46	0.03	6.36	620.8	92.3	4	126
K+	0.10	0.01	2.71	139.0	92.3	21	126
Mg++	0.052	0.010	0.500	71.1	92.3	23	126
NH4+	0.30	0.01	2.81	405.4	92.7	2	129
NO3-	0.26	0.01	2.00	351.7	92.3	1	126
Na+	0.27	0.01	3.77	370.5	92.3	5	126
Precip	-	0.1	67.6	1358.6	100.0	199	365
S04--	0.31	0.02	1.71	418.3	92.3	0	126
S04-- corr	0.28	0.02	1.68	385.8	92.3	0	126
cond	10.25	2.40	51.80	13924.2	93.2	0	132
pH	5.12	4.06	6.92	10382.2	93.2	0	132

FR0012R	Iraty		France				
January 2001 - December 2001							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.38	0.01	10.89	416.3	92.0	2	121
Cl-	0.74	0.03	10.90	799.2	92.0	1	121
K+	0.05	0.01	1.11	53.9	92.0	30	121
Mg++	0.091	0.010	1.660	98.3	92.0	6	121
NH4+	0.34	0.01	2.12	370.2	92.4	4	128
NO3-	0.26	0.02	2.34	280.8	92.0	0	121
Na+	0.46	0.01	6.95	493.7	92.0	1	121
Precip	-	0.1	42.0	1085.3	100.0	194	365
S04--	0.42	0.05	5.89	454.6	92.0	0	121
S04-- corr	0.38	0.03	5.67	412.9	92.0	0	121
cond	12.03	2.70	93.40	13057.5	93.6	0	133
pH	5.15	4.26	6.96	7652.3	93.6	0	133

FR0013R	Peyrusse Vieille		France				
January 2001 - December 2001							
Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.39	0.01	7.53	263.3	96.0	1	117
Cl-	1.21	0.03	7.97	817.2	96.0	1	117
K+	0.11	0.01	1.89	71.7	96.0	16	117
Mg++	0.113	0.010	0.670	76.2	96.0	13	117
NH4+	0.36	0.01	8.15	241.5	97.1	9	121
NO3-	0.31	0.01	5.30	211.6	96.0	1	117
Na+	0.72	0.01	4.31	487.2	96.0	2	117
Precip	-	0.1	33.2	677.4	100.0	212	365
S04--	0.55	0.08	7.05	373.9	96.0	0	117
S04-- corr	0.49	0.07	6.78	332.7	96.0	0	117
cond	16.84	3.30	132.40	11403.0	97.9	0	131
pH	4.84	3.40	6.80	9695.0	97.9	0	131

FR0014R Montandon France

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.18	0.01	5.57	267.6	94.3	8	156
Cl-	0.21	0.03	7.83	318.1	95.6	18	157
K+	0.03	0.01	0.83	45.5	95.6	78	157
Mg++	0.025	0.010	0.600	38.1	95.6	71	157
NH4+	0.25	0.01	2.59	380.1	95.9	2	160
NO3-	0.23	0.01	2.36	348.1	95.6	1	157
Na+	0.12	0.01	4.44	178.3	95.6	23	157
Precip	-	0.1	51.2	1522.9	100.0	162	365
SO4--	0.25	0.01	1.88	380.4	95.6	1	157
SO4-- corr	0.24	0.00	1.83	363.0	95.6	1	157
cond	8.95	1.70	64.20	13631.6	96.7	0	166
pH	5.01	4.00	6.88	15001.1	96.7	0	166

GB0002R Eskdalemuir United Kingdom

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.13	0.02	0.61	149.6	100.0	0	45
Cl-	3.14	0.40	14.60	3701.9	100.0	0	45
K+	0.22	0.01	4.94	264.7	100.0	1	45
Mg++	0.173	0.030	0.720	203.8	100.0	0	45
NH4+	0.72	0.08	18.11	855.7	100.0	0	45
NO3-	0.29	0.05	1.11	341.6	100.0	0	45
Na+	1.78	0.25	9.09	2100.6	100.0	0	45
Precip	-	0.0	105.9	1180.0	99.7	2	48
SO4--	0.51	0.13	2.91	604.9	100.0	0	45
SO4-- corr	0.37	-0.44	2.78	432.5	100.0	0	45
cond	27.98	5.00	185.00	33019.2	100.0	2	45
pH	4.72	3.88	49.99	22585.2	99.1	1	45

GB0006R Lough Navar United Kingdom

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.22	0.08	3.09	216.3	99.1	0	39
Cl-	4.20	0.40	15.60	4127.4	99.1	0	39
K+	0.10	0.01	0.35	94.9	99.1	1	39
Mg++	0.255	0.030	1.000	250.7	99.1	0	39
NH4+	0.14	0.01	2.31	139.8	99.1	3	39
NO3-	0.12	0.03	1.99	120.4	99.1	0	39
Na+	2.26	0.20	8.43	2226.3	99.1	0	39
Precip	-	0.0	108.0	983.2	100.0	3	48
SO4--	0.38	0.12	1.77	376.4	99.1	0	39
SO4-- corr	0.21	0.07	1.74	202.6	99.1	0	39
cond	22.51	5.00	63.00	22132.1	98.9	2	38
pH	5.08	4.52	6.70	8089.7	99.1	0	39

GB0013R Yarner Wood United Kingdom

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.16	0.07	1.12	162.3	99.8	0	40
Cl-	3.86	0.40	18.20	3954.8	99.8	0	40
K+	0.10	0.01	0.43	103.9	99.8	1	40
Mg++	0.248	0.020	1.160	254.7	99.8	0	40
NH4+	0.27	0.04	1.74	280.5	99.8	0	40
NO3-	0.28	0.05	2.44	289.6	99.8	0	40
Na+	2.11	0.27	9.96	2165.5	99.8	0	40
Precip	-	0.0	65.0	1025.3	99.7	5	48
SO4--	0.49	0.21	1.69	498.6	99.8	0	40
SO4-- corr	0.31	0.09	1.43	321.6	99.8	0	40
cond	26.85	5.00	75.00	27531.8	99.6	1	39
pH	4.65	4.15	6.15	23138.4	99.8	0	40

GB0014R High Muffles United Kingdom

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.27	0.03	3.42	233.1	98.5	0	43
Cl-	3.20	0.30	15.50	2770.0	98.5	0	43
K+	0.10	0.01	0.41	87.5	98.5	1	43
Mg++	0.215	0.005	0.980	185.8	98.5	1	43
NH4+	0.57	0.07	3.59	494.9	99.3	0	44
NO3-	0.53	0.07	2.54	459.2	99.3	0	44
Na+	1.70	0.12	8.20	1470.3	98.5	0	43
Precip	-	0.0	69.8	867.2	100.0	2	49
S04--	0.79	0.25	3.71	686.8	98.5	0	43
S04-- corr	0.65	0.19	3.30	562.1	98.5	0	43
cond	34.94	8.00	114.00	30251.6	98.5	0	43
pH	4.43	3.57	7.00	31940.5	98.5	0	43

GB0015R Strathvaich Dam United Kingdom

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.11	0.01	0.52	109.9	99.9	1	38
Cl-	4.01	0.10	20.30	3993.4	99.9	0	38
K+	0.10	0.02	0.47	94.3	99.9	5	38
Mg++	0.241	0.020	1.310	240.5	99.9	0	38
NH4+	0.07	0.00	0.99	69.3	99.9	7	38
NO3-	0.10	0.01	0.89	103.6	99.9	1	38
Na+	2.16	0.07	10.58	2151.5	99.9	0	38
Precip	-	0.0	110.6	996.3	99.7	4	43
S04--	0.30	0.09	1.06	297.3	99.9	0	38
S04-- corr	0.12	0.01	0.89	124.0	99.9	0	38
cond	20.53	5.00	46.00	20449.6	99.0	6	37
pH	4.93	4.09	5.82	11664.4	99.9	0	38

HR0002R Puntijarka Croatia

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.90	0.01	12.28	1208.0	95.9	0	105
Cl-	0.71	0.08	6.54	951.6	96.9	0	112
H+	8.70	0.02	154.88	11629.2	97.8	0	126
K+	0.40	0.03	6.59	529.0	95.9	0	105
Mg++	0.284	0.040	1.610	379.8	95.9	0	105
NH4+	0.48	0.03	10.86	640.8	96.0	0	106
NO3-	0.43	0.00	4.25	575.7	97.3	0	114
Na+	0.44	0.06	9.11	588.1	95.9	0	105
Precip	-	0.0	54.4	1336.2	100.0	213	365
S04--	0.63	0.05	11.23	840.4	97.3	0	114
S04-- corr	0.58	0.03	10.47	780.1	96.9	0	112
cond	15.32	4.00	163.00	20468.7	97.8	0	126
pH	5.06	3.81	7.80	11630.2	97.8	0	126

HR0004R Zavizan Croatia

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	1.41	0.15	13.84	3033.7	98.1	0	142
Cl-	1.34	0.07	14.33	2886.4	99.0	0	145
H+	12.23	0.02	154.88	26300.2	99.2	0	153
K+	0.20	0.00	2.33	436.0	98.7	0	143
Mg++	0.251	0.020	1.390	539.6	98.7	0	143
NH4+	0.35	0.01	3.81	763.8	98.9	0	143
NO3-	0.47	0.03	4.28	1011.8	99.0	0	145
Na+	0.83	0.02	7.87	1784.2	98.7	0	143
Precip	-	0.0	86.7	2149.7	100.0	200	365
S04--	0.60	0.00	3.89	1282.0	99.0	0	145
S04-- corr	0.52	-0.05	3.82	1123.1	99.0	0	145
cond	17.57	4.00	187.00	37766.3	99.2	0	153
pH	4.91	3.81	7.63	26300.6	99.2	0	153

HU0002R K-Pusztta Hungary

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.98	0.29	11.70	291.7	100.0	0	61
Cl-	0.73	0.18	18.10	215.4	100.0	0	61
K+	0.19	0.03	1.17	56.6	100.0	1	61
Mg++	0.284	0.090	2.340	84.2	100.0	0	61
NH4+	0.43	0.03	2.60	127.7	98.7	2	60
NO3-	0.41	0.01	2.40	122.6	98.7	1	60
Na+	0.50	0.21	3.67	149.6	100.0	0	61
Precip	-	0.0	16.3	296.7	100.0	304	365
Precip off	-	0.00	31.50	508.7	100.0	304	365
SO4--	0.97	0.37	5.81	288.4	98.7	0	60
SO4-- corr	0.93	0.30	5.50	274.6	98.7	0	60
cond	20.35	8.80	115.30	6039.0	100.0	0	61
pH	5.94	5.12	7.60	342.0	100.0	0	61

IE0001R Valentia Obs. Ireland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.33	0.05	2.30	401.9	95.1	6	172
Cl-	10.19	0.30	94.50	12588.6	95.1	0	172
K+	0.63	0.03	18.81	773.8	95.1	16	172
Mg++	0.696	0.025	6.649	859.9	95.1	11	172
NH4+	0.20	0.03	22.63	251.1	95.1	53	172
NO3-	0.08	0.01	1.10	94.2	95.1	7	172
Na+	5.69	0.17	51.58	7025.2	95.1	0	172
Precip off	-	0.00	35.60	1235.0	100.0	117	365
SO4--	0.61	0.06	4.49	755.9	95.1	0	172
SO4-- corr	0.14	-0.06	1.98	173.9	95.1	0	172
cond	45.75	4.20	360.00	56505.6	95.1	0	172
pH	5.36	4.15	7.76	5373.0	95.1	0	172

IE0002R Turlough Hill Ireland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.23	0.00	1.20	82.0	100.0	0	57
Cl-	3.12	0.30	16.60	1099.2	100.0	0	57
K+	0.37	0.00	1.39	131.0	100.0	0	57
Mg++	0.139	0.000	100.000	48.9	100.0	0	333
NH4+	0.66	0.02	4.42	231.3	100.0	0	57
NO3-	0.20	0.00	4.95	70.1	100.0	0	57
Na+	0.79	0.10	6.91	277.0	100.0	0	57
Precip	-	0.6	22.6	352.5	23.0	32	84
SO4--	0.37	0.00	3.30	130.9	100.0	0	57
SO4-- corr	0.28	-0.16	2.72	99.2	100.0	0	57
cond	13.87	3.00	58.00	4890.6	97.0	0	51
pH	5.39	4.30	6.10	1430.8	97.0	0	51

IE0003R The Burren Ireland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.33	0.00	3.71	89.0	100.0	0	84
Cl-	11.65	0.01	79.20	3186.3	100.0	0	84
K+	0.31	0.00	2.13	86.0	100.0	0	84
Mg++	0.718	0.004	4.601	196.4	100.0	0	84
NH4+	0.26	0.00	2.92	71.6	100.0	0	84
NO3-	0.15	0.00	1.66	39.9	100.0	0	84
Na+	6.57	0.83	42.39	1796.3	100.0	0	84
Precip	-	0.1	12.3	273.5	83.3	220	304
SO4--	0.83	0.00	6.22	227.5	100.0	0	84
SO4-- corr	0.31	-0.68	3.02	86.0	100.0	0	84
cond	40.98	6.00	187.00	11207.3	99.5	0	79
pH	5.42	4.20	6.40	1043.1	99.5	0	79

IE0004R Ridge Of Capard Ireland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.35	0.06	2.16	101.4	100.0	0	56
Cl-	1.81	0.00	18.70	519.9	100.0	0	56
K+	0.28	0.02	3.37	80.2	100.0	0	56
Mg++	0.127	0.007	1.542	36.7	100.0	0	56
NH4+	0.43	0.00	2.01	122.4	100.0	0	56
NO3-	0.15	0.04	1.69	43.8	100.0	0	56
Na+	1.11	0.09	11.27	320.0	100.0	0	56
Precip	-	0.6	32.3	287.6	100.0	309	365
S04--	0.33	0.12	3.65	94.9	100.0	0	56
S04-- corr	0.24	0.03	2.71	69.7	100.0	0	56
cond	14.56	5.00	120.00	4187.3	100.0	0	56
pH	5.77	5.00	6.90	486.8	100.0	0	56

IS0002R Irafoss Iceland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Na+	6.84	0.05	225.00	19469.0	100.0	1	176
Precip	-	0.0	93.6	2847.8	100.0	189	365
Precip off	-	0.00	88.00	742.6	40.5	5	24
S04--	0.76	0.05	19.00	2161.4	100.0	7	176
S04-- corr	0.19	-0.47	6.34	532.4	100.0	7	176
pH	5.56	4.30	7.40	7879.1	100.0	0	176

IT0001R Montelibretti Italy

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	1.98	0.00	24.80	631.0	100.0	0	39
Cl-	2.83	0.35	35.62	905.6	100.0	0	39
K+	0.44	0.08	5.21	141.1	100.0	0	39
Mg++	0.284	0.050	10.000	90.7	100.0	0	39
NH4+	0.23	0.00	6.60	74.0	100.0	0	39
NO3-	0.43	0.00	4.20	136.4	100.0	0	39
Na+	1.62	0.17	20.10	516.6	100.0	0	39
Precip	-	0.0	45.7	319.5	100.0	326	365
S04--	0.67	0.01	2.87	213.7	100.0	0	39
S04-- corr	0.51	-0.05	2.71	163.5	100.0	0	39
cond	28.44	8.11	194.00	9087.8	100.0	0	39
pH	5.45	4.19	7.54	1133.6	100.0	0	39

IT0004R Ispra Italy

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.57	0.00	3.07	652.1	100.0	0	83
Cl-	0.40	0.03	3.84	457.5	100.0	0	83
K+	0.05	0.00	0.89	59.4	100.0	0	83
Mg++	0.059	0.000	0.520	67.4	100.0	0	83
NH4+	1.11	0.10	5.42	1270.2	100.0	0	83
NO3-	0.85	0.11	3.42	972.7	100.0	0	83
Na+	0.23	0.00	2.85	263.1	100.0	0	83
Precip	-	0.0	80.6	1146.1	100.0	282	365
S04--	0.85	0.16	3.26	969.7	100.0	0	83
S04-- corr	0.82	0.15	3.02	943.1	100.0	0	83
cond	21.74	7.67	64.56	24920.3	100.0	0	83
pH	4.69	3.93	6.85	23358.7	100.0	0	83

LT0015R Preila Lithuania

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.93	0.30	13.00	558.8	99.7	0	125
Cl-	3.16	0.29	105.00	1892.3	99.2	0	125
H+	13.70	0.29	109.65	8213.9	47.2	0	63
K+	0.19	0.01	4.10	116.5	99.7	0	125
NH4+	0.38	0.01	9.32	224.7	99.2	0	124
NO3-	0.47	0.11	4.89	280.2	98.4	0	124
Na+	2.10	0.25	75.00	1257.2	99.7	0	125
Precip	-	0.0	38.3	599.4	100.0	231	365
SO4--	0.77	0.18	8.63	461.1	99.8	0	126
SO4-- corr	0.59	-0.67	6.72	356.0	99.8	0	126
cond	26.86	7.25	455.00	16096.5	98.9	0	111
pH	4.84	3.78	6.54	8661.8	99.6	0	120

LV0010R Rucava Latvia

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.22	0.04	2.03	191.0	99.4	0	118
Cl-	1.32	0.06	18.20	1162.2	98.3	0	117
K+	0.11	0.03	1.18	93.3	95.4	0	112
Mg++	0.119	0.015	2.915	104.2	99.4	0	118
NH4+	0.36	0.05	2.36	318.2	99.5	0	120
NO3-	0.42	0.06	3.90	367.7	98.7	0	118
Na+	0.58	0.03	11.67	514.2	99.0	0	118
Precip	-	0.0	46.4	879.5	100.0	241	365
SO4--	0.57	0.11	3.50	501.3	98.7	0	118
SO4-- corr	0.51	-0.43	3.46	444.1	98.7	0	118
cond	17.33	4.81	106.00	15245.2	99.1	0	120
pH	4.54	3.48	6.03	25320.4	99.6	0	122

LV0016R Zoseni Latvia

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.41	0.03	7.28	320.2	88.3	2	129
Cl-	0.95	0.10	9.84	742.0	97.1	0	142
K+	0.15	0.01	3.20	114.4	85.8	2	124
Mg++	0.131	0.010	1.756	102.5	88.4	0	129
NH4+	0.25	0.01	1.82	198.6	98.3	0	154
NO3-	0.34	0.03	2.10	262.6	97.1	0	142
Na+	0.45	0.01	6.82	349.9	90.8	0	136
Precip	-	0.0	66.8	783.0	100.0	172	365
SO4--	0.48	0.06	2.30	372.8	96.9	0	141
SO4-- corr	0.44	0.03	2.22	342.0	96.9	0	141
cond	13.89	3.60	175.00	10873.8	99.0	0	173
pH	4.86	3.48	7.04	10748.2	99.3	0	177

NL0009R Kollumerwaard Netherlands

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.27	0.00	2.30	229.3	91.6	0	101
Cl-	4.34	0.10	77.60	3703.0	94.8	0	134
H+	-4.33	-356.00	106.00	-3687.0	95.4	41	147
K+	0.16	0.00	1.05	135.8	91.6	7	101
Mg++	0.299	0.012	3.092	255.0	91.6	13	101
NH4+	0.62	0.01	4.31	531.1	93.7	0	119
NO3-	0.38	0.04	3.34	325.7	94.8	0	134
Na+	2.40	0.10	25.36	2049.7	91.6	0	101
Precip	-	0.0	22.1	852.2	100.0	172	365
SO4--	0.61	0.15	4.17	519.1	94.8	0	134
SO4-- corr	0.40	0.07	2.46	341.6	94.8	0	134
cond	27.08	5.00	181.00	23074.9	91.6	0	101
pH	5.35	3.98	7.20	3834.3	95.4	0	147

N00001R Birkenes Norway

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.08	0.01	2.52	124.4	98.6	7	140
Cl-	1.45	0.03	19.80	2332.0	98.6	0	140
K+	0.07	0.01	0.87	106.2	98.6	2	140
Mg++	0.101	0.005	1.296	162.8	98.6	8	140
NH4+	0.39	0.01	2.28	628.5	98.6	10	140
NO3-	0.42	0.01	3.29	680.3	98.6	5	140
Na+	0.86	0.03	13.21	1384.7	98.6	0	140
Precip	-	0.0	77.5	1604.7	100.0	154	365
S04--	0.50	0.02	3.73	796.2	98.6	0	140
S04-- corr	0.42	0.01	3.62	682.8	98.6	0	140
cond	22.25	3.00	193.00	35709.9	99.5	0	163
pH	4.63	3.54	6.28	37706.5	99.5	0	163

N00008R Skreaadalen Norway

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.12	0.01	1.20	218.6	98.5	0	164
Cl-	1.85	0.16	25.14	3494.6	99.0	0	167
K+	0.18	0.01	1.41	346.4	97.6	2	161
Mg++	0.110	0.005	1.505	208.0	99.0	4	167
NH4+	0.33	0.01	2.80	619.3	97.7	1	162
NO3-	0.23	0.01	2.36	435.2	99.0	3	167
Na+	1.11	0.10	14.02	2100.3	99.0	0	167
Precip	-	0.0	57.6	1887.6	100.0	151	365
S04--	0.32	0.03	2.85	599.7	99.0	0	167
S04-- corr	0.23	-0.06	2.37	428.2	99.0	0	167
cond	15.61	4.00	138.00	29469.3	99.5	0	183
pH	5.10	3.76	6.57	15080.9	97.7	0	175

N00015R Tustervatn Norway

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.10	0.01	0.86	139.2	96.3	3	180
Cl-	3.03	0.04	32.72	4390.6	98.1	0	190
K+	0.12	0.01	0.99	179.9	95.0	7	176
Mg++	0.193	0.005	2.136	279.8	98.2	24	191
NH4+	0.15	0.01	1.18	223.7	95.1	6	177
NO3-	0.07	0.01	0.71	94.1	98.1	26	190
Na+	1.72	0.01	18.78	2485.4	98.2	1	191
Precip	-	0.0	83.5	1448.9	100.0	110	365
S04--	0.22	0.01	1.54	312.8	98.1	1	190
S04-- corr	0.07	-0.17	1.52	108.6	98.1	1	190
cond	15.21	2.00	115.00	22043.0	98.8	0	205
pH	5.37	4.18	7.02	6258.4	95.4	0	188

N00039R Kaarvatn Norway

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.07	0.01	1.11	111.5	99.1	7	155
Cl-	3.17	0.02	50.86	4833.4	99.2	0	156
K+	0.08	0.01	1.04	126.3	98.9	21	153
Mg++	0.210	0.005	3.430	319.8	99.1	15	155
NH4+	0.07	0.01	1.14	111.8	98.9	16	153
NO3-	0.05	0.01	1.15	71.3	99.2	27	156
Na+	1.83	0.02	28.79	2793.9	99.2	0	156
Precip	-	0.0	64.5	1522.8	99.7	189	364
S04--	0.22	0.01	2.38	335.4	99.2	1	156
S04-- corr	0.07	-0.21	1.84	103.9	99.2	1	156
cond	15.73	2.00	194.00	23950.4	99.7	0	169
pH	5.31	4.00	6.40	7443.6	99.4	0	166

N00041R Osen Norway

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.07	0.01	0.96	54.5	99.7	11	108
Cl-	0.17	0.01	1.82	133.6	99.7	5	108
K+	0.06	0.01	0.64	47.1	99.5	11	107
Mg++	0.014	0.005	0.118	10.6	99.7	44	108
NH4+	0.20	0.01	1.31	153.0	99.5	0	107
NO3-	0.20	0.01	1.03	152.7	99.7	9	108
Na+	0.09	0.01	1.05	71.0	99.7	3	108
Precip	-	0.0	23.6	768.3	100.0	253	365
SO4--	0.20	0.01	0.86	156.2	99.7	1	108
SO4-- corr	0.20	0.00	0.85	150.1	99.7	1	108
cond	9.10	2.00	195.00	6990.0	97.8	0	109
pH	4.95	4.13	7.28	8546.5	97.7	0	109

N00055R Karasjok Norway

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.12	0.01	2.74	42.1	93.7	0	83
Cl-	0.63	0.07	8.38	229.6	94.0	0	84
K+	0.20	0.02	2.41	71.8	92.1	0	80
Mg++	0.042	0.005	0.460	15.4	94.0	8	84
NH4+	0.23	0.01	5.02	83.5	92.3	1	81
NO3-	0.13	0.02	1.15	48.5	94.0	0	84
Na+	0.39	0.04	4.68	141.7	94.0	0	84
Precip	-	0.0	36.4	365.9	100.0	219	365
SO4--	0.27	0.04	3.21	98.9	94.0	0	84
SO4-- corr	0.24	-0.01	3.12	87.4	94.0	0	84
cond	10.11	3.00	59.00	3700.0	97.7	0	110
pH	5.22	4.43	7.40	2190.2	95.5	0	104

N00099R Lista Norway

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.64	0.03	24.62	908.0	99.0	0	139
Cl-	24.30	1.38	1008.00	34707.1	99.0	0	139
K+	0.61	0.05	24.81	873.2	99.0	0	139
Mg++	1.557	0.005	61.740	2224.3	99.0	1	139
NH4+	0.55	0.01	6.03	788.0	99.0	13	139
NO3-	0.59	0.01	6.53	847.5	99.0	2	139
Na+	13.81	0.82	508.00	19729.3	99.0	0	139
Precip	-	0.0	73.2	1428.5	100.0	192	365
SO4--	1.59	0.21	44.33	2276.6	99.0	0	139
SO4-- corr	0.45	-0.83	7.84	645.9	99.0	0	139
cond	107.06	1.00	7670.00	152930.0	99.4	0	147
pH	4.77	3.38	6.48	24063.9	99.4	0	147

PL0002R Jarczew Poland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.31	0.00	3.10	207.2	96.8	0	158
Cl-	0.39	0.10	18.00	265.8	97.6	0	170
K+	0.14	0.01	2.20	91.5	96.8	0	158
Mg++	0.044	0.010	1.060	29.4	96.8	0	158
NH4+	0.64	0.03	6.01	431.2	97.2	0	168
NO3-	0.44	0.03	3.66	295.9	97.6	0	170
Na+	0.15	0.01	8.38	98.6	96.8	0	158
Precip	-	0.0	46.8	675.2	100.0	163	365
SO4--	0.75	0.05	6.05	504.9	97.6	0	170
SO4-- corr	0.73	0.01	6.01	491.9	97.6	0	170
cond	19.51	0.00	112.00	13173.1	97.7	0	173
pH	4.73	3.71	7.70	12640.6	97.7	0	172

PL0003R Sniezka Poland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.42	0.10	8.30	530.3	96.7	0	231
Cl-	0.67	0.10	7.10	840.5	96.7	0	231
K+	0.18	0.01	6.98	224.6	96.7	0	231
Mg++	0.100	0.000	2.470	126.3	96.7	0	231
NH4+	0.52	0.05	5.92	659.2	96.7	0	232
NO3-	0.80	0.12	7.16	1001.1	96.7	0	231
Na+	0.48	0.06	8.70	599.3	96.7	0	231
Precip	-	0.0	52.6	1258.2	100.0	88	365
S04--	0.70	0.13	5.96	884.9	96.7	0	231
S04-- corr	0.66	0.12	5.46	832.1	96.7	0	231
cond	24.51	4.00	150.00	30833.9	96.7	0	231
pH	4.56	3.66	7.07	34954.1	95.8	0	221

PL0004R Leba Poland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.19	0.00	4.10	148.4	98.4	0	147
Cl-	1.33	0.10	31.00	1047.5	98.7	0	148
K+	0.10	0.02	2.43	79.0	98.4	0	147
Mg++	0.102	0.010	1.800	79.9	98.4	0	147
NH4+	0.43	0.02	4.59	340.8	98.7	0	148
NO3-	0.43	0.05	4.75	340.4	98.7	0	148
Na+	0.74	0.02	16.41	584.0	98.4	0	147
Precip	-	0.0	40.4	786.6	100.0	174	365
S04--	0.53	0.05	4.80	414.1	98.7	0	148
S04-- corr	0.46	0.04	4.73	364.4	98.7	0	148
cond	20.24	4.00	182.00	15921.4	98.7	0	148
pH	4.71	3.57	6.56	15449.8	98.7	0	148

PL0005R Diabla Gora Poland

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.24	0.00	2.40	181.3	90.6	0	134
Cl-	0.50	0.10	4.80	379.1	96.2	0	161
K+	0.13	0.02	1.74	100.0	94.4	0	139
Mg++	0.057	0.003	1.778	43.3	95.4	0	143
NH4+	0.56	0.02	5.12	422.3	94.2	0	155
NO3-	0.41	0.01	3.09	312.7	96.3	5	163
Na+	0.17	0.01	2.47	132.5	94.3	1	140
Precip	-	0.0	52.7	756.9	100.0	182	365
Precip off	-	0.00	57.60	756.3	99.7	182	364
S04--	0.64	0.01	3.58	485.6	96.3	4	163
S04-- corr	0.62	-0.00	3.45	466.1	96.3	4	162
cond	19.28	4.00	76.00	14595.3	91.2	0	131
pH	4.71	3.81	7.28	14927.1	99.4	0	173

PT0001R Braganca Portugal

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	2.61	0.05	20.60	2342.3	89.7	8	47
Cl-	1.05	0.10	5.40	947.1	89.7	0	47
K+	0.11	0.04	1.15	96.3	89.7	23	47
Mg++	0.126	0.015	2.370	113.6	89.7	12	47
NH4+	0.12	0.01	1.11	105.4	89.7	16	47
NO3-	0.08	0.01	0.72	73.0	89.7	6	47
Na+	0.34	0.01	2.76	302.4	89.7	10	47
Precip off	-	0.00	64.10	898.5	100.0	255	365
S04--	0.34	0.02	2.31	302.7	89.7	2	47
S04-- corr	0.29	-0.02	2.23	263.2	89.7	2	47
cond	16.50	2.00	121.00	14826.2	89.7	0	47
pH	5.92	5.07	7.81	1087.2	89.7	0	47

PT0003R V. Do Castelo Portugal

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.41	0.05	3.60	766.1	94.9	7	96
Cl-	5.62	0.50	57.60	10400.4	94.9	0	96
K+	0.13	0.04	1.73	237.3	94.9	36	96
Mg++	0.458	0.015	4.070	847.8	94.9	2	96
NH4+	0.09	0.01	1.28	164.1	94.9	23	96
NO3-	0.12	0.01	1.05	220.2	94.9	1	96
Na+	3.40	0.12	35.29	6289.1	94.9	0	96
Precip off	-	0.00	119.50	1849.9	100.0	214	365
SO4--	0.58	0.15	2.79	1076.3	94.9	0	96
SO4-- corr	0.30	-0.16	1.93	553.2	94.9	0	96
cond	28.93	7.00	200.00	53526.1	94.9	0	96
pH	5.35	4.55	8.94	8233.1	94.9	0	96

PT0004R Monte Velho Portugal

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.70	0.10	6.20	350.2	88.1	0	37
Cl-	7.34	0.50	23.50	3678.2	88.1	0	37
K+	0.25	0.04	1.06	123.6	88.1	6	37
Mg++	0.588	0.140	1.750	294.8	88.1	0	37
NH4+	0.16	0.01	0.79	80.3	88.1	8	37
NO3-	0.15	0.01	1.32	77.8	88.1	2	37
Na+	4.56	0.44	14.61	2287.2	88.1	0	37
Precip off	-	0.00	49.90	501.1	100.0	302	365
SO4--	0.77	0.31	1.74	386.5	88.1	0	37
SO4-- corr	0.39	-0.23	1.35	192.7	88.1	0	37
cond	35.40	8.00	167.00	17737.8	88.1	0	37
pH	5.49	4.60	7.37	1609.1	88.1	0	37

RU0001R Janiskoski Russian Federation

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.19	0.01	1.50	98.3	95.5	0	111
Cl-	1.40	0.23	12.99	711.4	100.0	0	115
K+	0.48	0.07	3.91	241.4	100.0	0	115
Mg++	0.035	0.001	0.552	17.8	95.5	0	111
NH4+	0.12	0.01	2.30	58.9	100.0	0	115
NO3-	0.07	0.01	0.77	37.4	100.0	0	115
Na+	0.90	0.14	6.21	458.3	100.0	0	115
Precip	-	0.0	34.6	507.1	100.0	251	365
SO4--	0.30	0.01	2.10	153.7	100.0	0	115
SO4-- corr	0.25	-0.01	1.85	126.0	100.0	0	115
cond	16.98	5.10	105.80	8608.5	100.0	0	115
pH	4.96	4.17	7.25	5558.6	100.0	0	115

RU0013R Pinega Russian Federation

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.37	0.01	3.81	149.2	93.2	0	131
Cl-	0.62	0.02	14.59	250.1	100.0	0	133
K+	0.40	0.04	5.94	162.2	100.0	0	133
Mg++	0.087	0.001	1.438	35.2	93.2	0	131
NH4+	0.21	0.01	12.12	85.5	100.0	0	133
NO3-	0.11	0.01	2.86	44.7	100.0	0	133
Na+	0.38	0.06	7.69	155.6	100.0	0	133
Precip	-	0.0	21.2	405.4	100.0	232	365
SO4--	0.39	0.07	10.33	158.7	100.0	0	133
SO4-- corr	0.36	0.01	10.18	146.4	100.0	0	133
cond	14.94	5.50	206.20	6056.2	100.0	0	133
pH	5.06	4.26	7.81	3525.0	99.8	0	132

RU0016R Shepeljovo Russian Federation

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.53	0.02	4.98	343.6	100.0	0	124
Cl-	4.68	0.13	223.76	3032.3	100.0	0	124
K+	0.43	0.11	7.08	280.3	100.0	0	124
Mg++	0.251	0.017	4.415	162.7	100.0	0	124
NH4+	0.36	0.02	6.01	231.9	100.0	0	124
NO3-	0.29	0.01	2.36	187.1	100.0	0	124
Na+	2.28	0.11	135.80	1480.3	100.0	0	124
Precip	-	0.0	33.0	648.4	100.0	241	365
S04--	0.86	0.16	13.24	557.0	100.0	0	124
S04-- corr	0.70	0.07	9.26	451.9	100.0	0	124
cond	37.81	9.00	992.00	24513.9	100.0	0	124
pH	4.95	4.36	7.43	7270.9	99.9	0	123

RU0018R Danki Russian Federation

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.31	0.01	8.12	193.1	76.9	0	119
Cl-	0.35	0.02	5.24	217.5	100.0	0	132
K+	0.24	0.03	2.70	148.2	100.0	0	132
Mg++	0.045	0.001	0.870	27.4	76.8	0	118
NH4+	0.37	0.01	11.70	225.5	100.0	0	132
NO3-	0.30	0.01	4.44	186.1	100.0	0	132
Na+	0.23	0.04	8.15	142.0	100.0	0	132
Precip	-	0.0	48.4	614.0	100.0	234	365
S04--	0.48	0.05	11.90	293.0	100.0	0	132
S04-- corr	0.46	0.05	11.29	280.6	100.0	0	132
cond	16.49	4.50	161.60	10124.6	100.0	0	132
pH	4.93	3.97	6.86	7251.7	99.1	0	131

SE0002R Rorvik Sweden

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.26	0.02	20.89	156.5	99.5	0	140
Cl-	2.68	0.01	83.49	1636.6	98.4	0	141
K+	0.09	0.00	2.25	55.6	99.5	0	140
Mg++	0.183	0.010	5.710	111.9	99.5	0	140
NH4+	0.48	0.01	5.20	293.6	99.3	0	135
NO3-	0.50	0.02	3.58	307.8	98.4	0	142
Na+	1.54	0.02	45.66	937.0	99.5	0	139
Precip	-	0.0	26.9	610.2	100.0	204	365
S04--	0.52	0.02	4.33	319.4	98.4	0	142
S04-- corr	0.40	0.02	3.59	240.9	98.4	0	142
cond	26.42	3.00	353.00	16122.7	96.5	0	112
pH	4.62	3.84	7.29	14721.5	99.9	0	158

SE0005R Bredkalen Sweden

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.04	0.01	0.81	25.2	99.8	0	47
Cl-	0.27	0.03	5.16	180.2	99.8	0	47
K+	0.06	0.00	0.82	39.5	99.8	0	47
Mg++	0.019	0.000	0.230	12.3	99.8	0	47
NH4+	0.19	0.00	1.40	124.5	99.8	0	47
NO3-	0.14	0.01	0.93	95.4	99.8	0	47
Na+	0.15	0.00	2.83	96.6	99.8	0	47
Precip	-	0.0	52.8	663.2	99.7	6	58
S04--	0.20	0.02	1.23	131.1	99.8	0	47
S04-- corr	0.19	0.02	1.22	124.9	99.8	0	47
cond	10.14	4.00	27.00	6724.3	99.5	0	44
pH	4.93	4.03	6.97	7794.9	100.0	0	51

SE0011R Vavihill Sweden

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.09	0.02	0.84	38.8	100.0	0	47
Cl-	0.98	0.07	12.46	408.1	100.0	0	47
K+	0.06	0.00	0.46	24.3	100.0	0	47
Mg++	0.062	0.000	0.630	25.9	100.0	0	47
NH4+	0.52	0.13	4.22	218.4	100.0	0	47
NO3-	0.47	0.05	2.90	194.7	100.0	0	47
Na+	0.58	0.02	7.25	243.5	100.0	0	47
Precip	-	0.0	32.0	417.6	99.7	15	62
SO4--	0.48	0.21	3.48	200.8	100.0	0	47
SO4-- corr	0.43	0.11	3.29	179.8	100.0	0	47
cond	19.42	8.00	109.00	8110.7	99.3	0	43
pH	4.69	3.97	5.82	8518.2	100.0	0	47

SK0002R Chopok Slovakia

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.44	0.04	5.92	576.8	93.4	0	194
Cl-	0.36	0.00	3.55	469.0	93.9	0	194
K+	0.18	0.01	3.30	240.4	93.4	0	194
Mg++	0.070	0.000	1.012	92.5	93.6	0	195
NH4+	0.56	0.02	4.43	733.2	92.3	0	191
NO3-	0.41	0.01	2.87	536.0	93.9	1	193
Na+	0.22	0.02	3.32	286.2	93.6	0	195
Precip	-	0.1	45.6	1316.0	100.0	134	365
SO4--	1.02	0.13	5.82	1346.2	93.6	0	192
SO4-- corr	1.00	0.13	5.78	1318.8	93.6	0	192
cond	23.28	4.40	112.40	30632.2	94.0	0	195
pH	4.49	3.62	6.81	42752.5	94.0	0	195

SK0004R Stara Lesna Slovakia

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.43	0.01	5.44	390.8	97.1	0	135
Cl-	0.27	0.01	3.36	243.3	96.4	0	133
K+	0.17	0.00	2.79	150.2	97.1	1	136
Mg++	0.064	0.002	0.583	58.1	97.1	0	135
NH4+	0.41	0.00	4.01	369.5	95.6	5	134
NO3-	0.35	0.01	3.10	317.8	96.4	1	133
Na+	0.18	0.01	2.29	161.9	97.1	0	136
Precip	-	0.1	60.8	902.9	100.0	182	365
SO4--	0.85	0.12	4.69	765.1	96.4	0	133
SO4-- corr	0.83	0.12	4.67	747.5	96.4	0	133
cond	19.70	4.40	97.70	17791.7	97.1	0	135
pH	4.56	3.90	6.79	24918.2	96.4	0	131

SK0005R Liesek Slovakia

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.44	0.00	4.12	431.6	94.6	0	143
Cl-	0.38	0.04	5.34	374.5	93.9	0	145
K+	0.23	0.02	3.09	221.5	95.2	0	150
Mg++	0.073	0.000	0.605	72.0	95.2	0	150
NH4+	0.40	0.01	2.63	393.5	94.7	6	148
NO3-	0.38	0.01	2.55	375.2	94.5	1	147
Na+	0.27	0.01	3.90	263.4	95.2	0	150
Precip	-	0.1	38.7	980.7	100.0	150	365
SO4--	0.84	0.08	5.90	821.3	94.5	0	147
SO4-- corr	0.81	0.06	5.86	796.3	94.3	0	145
cond	21.36	6.00	86.00	20945.5	95.1	0	146
pH	4.49	3.48	6.80	31592.0	95.0	0	144

SK0006R Starina Slovakia

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.39	0.00	3.21	370.8	95.9	0	152
Cl-	0.36	0.01	18.34	342.4	92.4	0	146
K+	0.18	0.01	3.64	171.2	95.9	0	152
Mg++	0.063	0.005	1.400	60.4	95.9	1	152
NH4+	0.30	0.00	2.81	287.4	95.9	21	152
NO3-	0.38	0.01	3.19	365.7	92.1	1	145
Na+	0.34	0.02	27.04	326.1	95.9	0	152
Precip	-	0.1	57.0	952.5	100.0	181	365
S04--	0.80	0.13	5.76	758.4	92.4	1	146
S04-- corr	0.77	0.12	4.79	732.6	92.4	1	146
cond	19.99	4.40	115.50	19038.1	98.3	0	152
pH	4.20	2.05	6.66	59973.1	98.3	1	152

SK0007R Topoliniky Slovakia

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	0.62	0.04	2.95	308.9	98.6	0	97
Cl-	0.32	0.05	2.08	160.1	98.4	0	96
K+	0.19	0.01	1.90	95.0	98.6	0	97
Mg++	0.081	0.000	0.738	40.6	98.6	0	97
NH4+	0.45	0.00	2.17	223.1	98.2	1	96
NO3-	0.45	0.02	2.95	223.8	98.4	0	96
Na+	0.22	0.00	1.98	110.2	98.6	0	97
Precip	-	0.1	41.2	501.1	100.0	254	365
S04--	0.81	0.25	5.33	407.3	98.4	0	96
S04-- corr	0.79	0.24	5.31	397.0	98.4	0	96
cond	19.72	7.40	88.80	9879.8	98.6	0	97
pH	4.59	3.87	6.86	12773.4	98.4	0	96

TR0001R Cubuk II Turkey

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	1.75	0.28	11.76	493.6	98.5	0	61
Cl-	0.69	0.15	5.46	194.1	99.8	0	65
K+	0.27	0.07	1.14	76.3	98.2	0	59
Mg++	0.148	0.040	0.650	41.8	98.6	0	62
NH4+	0.41	0.01	1.82	116.2	98.1	0	60
NO3-	0.35	0.00	2.16	100.3	99.8	0	65
Na+	0.58	0.09	5.21	165.6	98.5	0	61
Precip	-	0.1	22.5	282.9	91.8	267	335
S04--	1.09	0.20	5.37	308.9	99.8	0	65
S04-- corr	1.04	0.17	5.18	293.8	99.8	0	65
cond	20.98	5.58	65.10	5935.0	97.6	0	52
pH	5.89	5.09	7.33	364.0	97.6	0	52

YU0005R Kamenicki Vis Serbia and Montenegro

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	2.69	0.12	23.17	1875.6	96.2	0	83
Cl-	1.39	0.04	34.20	970.0	98.8	0	95
K+	0.58	0.06	7.96	405.0	96.2	0	83
Mg++	0.295	0.030	2.910	205.4	96.2	0	83
NH4+	0.47	0.03	2.09	325.3	100.0	0	103
NO3-	0.86	0.02	15.83	600.7	100.0	0	103
Na+	1.07	0.04	44.96	748.7	96.2	0	83
Precip	-	0.0	50.4	696.6	100.0	262	365
S04--	2.24	0.08	19.20	1562.5	100.0	0	103
S04-- corr	2.16	0.05	19.13	1502.5	98.9	0	96
cond	38.30	8.00	380.00	26682.1	100.0	0	103
pH	5.11	3.03	7.64	5470.8	100.0	0	103

YU0008R Zabljak Serbia and Montenegro

January 2001 - December 2001

Component	W. mean	Min	Max	Dep	% anal	Num bel	Num sampl
Ca++	2.73	0.04	18.49	3782.3	96.7	0	101
Cl-	1.33	0.05	16.52	1847.3	99.0	0	106
K+	0.31	0.05	2.44	427.7	83.3	0	85
Mg++	0.237	0.020	1.260	327.9	95.2	0	101
NH4+	0.41	0.03	1.94	565.0	99.8	0	111
NO3-	0.43	0.04	11.72	600.4	98.1	0	110
Na+	0.73	0.06	3.80	1006.2	96.7	0	101
Precip	-	0.0	67.6	1384.3	100.0	253	365
S04--	0.72	0.05	10.08	995.0	100.0	0	112
S04-- corr	0.66	-0.35	9.53	908.5	99.4	0	109
cond	22.95	4.00	190.00	31776.3	100.0	0	112
pH	6.17	5.27	7.32	943.6	100.0	0	112

Annex 3

Annual statistics on gases and aerosol data

AT0002R	Illmitz			Austria									
January 2001 - December 2001													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
HN03+N03-NH3+NH4+N02	0.76	0.38	0.67	1.64	0.12	0.30	0.70	1.43	2.91	98.1	0	358	
PM10	2.82	1.83	2.47	1.64	0.58	1.11	2.45	5.17	16.86	98.1	0	358	
PM25	2.58	1.67	2.16	1.83	0.22	0.83	2.19	5.51	11.79	99.2	0	362	
S02 monitor	26.16	15.88	22.06	1.81	4.43	8.21	23.09	59.16	82.43	98.6	0	360	
S02 f3p	19.50	12.38	16.34	1.84	0.00	6.13	16.15	43.35	73.39	87.9	0	321	
S04--	1.50	1.86	0.96	2.45	0.11	0.25	0.87	4.53	16.06	98.9	0	361	
	1.89	2.23	1.25	2.32	0.22	0.42	1.09	6.17	14.24	98.1	0	358	
	1.13	0.77	0.91	1.96	0.00	0.31	0.94	2.59	5.95	97.5	0	356	
AT0004R	St. Koloman			Austria									
January 2001 - December 2001													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
N02	2.07	1.45	1.65	2.01	0.15	0.53	1.65	4.79	8.96	98.4	0	359	
PM10	11.41	8.26	8.90	2.11	0.00	2.54	9.13	26.42	52.32	98.4	0	359	
S02	0.33	0.34	0.23	2.69	0.00	0.01	0.27	0.82	3.30	98.4	6	359	
AT0005R	Vorhegg			Austria									
January 2001 - December 2001													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
N02	1.00	0.64	0.86	1.71	0.21	0.39	0.79	2.36	5.69	99.7	0	364	
PM10	10.57	7.47	8.24	2.10	0.55	2.40	8.55	25.95	42.26	98.9	0	361	
S02	0.29	0.37	0.18	3.11	0.00	0.00	0.17	1.00	2.48	99.5	21	363	
AT0030R	Pillersdorf			Austria									
January 2001 - December 2001													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
S02	1.49	2.24	0.81	3.06	0.00	0.10	0.75	5.36	26.85	95.3	0	8345	
BE0001R	Offagne			Belgium									
January 2001 - December 2001													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
N02	4.28	2.91	3.54	1.83	0.90	1.50	3.40	10.40	24.10	76.9	0	6734	
BE0032R	Eupen			Belgium									
January 2001 - December 2001													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
N02	5.75	4.98	4.26	2.12	1.80	1.80	4.00	15.20	51.50	90.2	0	7899	
BE0035R	Vezin			Belgium									
January 2001 - December 2001													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
N02	6.29	3.90	5.24	1.85	0.90	1.80	5.20	14.60	25.00	91.0	0	7968	
CH0001G	Jungfrauoch			Switzerland									
January 2001 - December 2001													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
N02	0.11	0.17	0.07	2.36	0.01	0.02	0.06	0.38	1.79	71.0	0	259	
S02	0.08	0.09	0.05	2.46	0.01	0.01	0.05	0.29	0.61	80.8	32	295	
S04--	0.11	0.13	0.06	2.97	0.01	0.01	0.06	0.36	0.84	100.0	42	365	
SPM	3.19	4.15	1.96	2.55	0.50	0.50	1.90	11.80	30.50	92.3	62	337	

CH0002R Payerne Switzerland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
NO2	4.16	2.34	3.56	1.76	0.66	1.42	3.57	9.02	11.74	99.2	0	362
PM10	19.32	11.72	16.20	1.83	3.60	5.60	16.50	42.50	68.20	99.5	0	363
PM25	14.79	9.70	12.10	1.91	2.10	4.30	12.20	36.38	50.10	100.0	0	365
SO2	0.46	0.36	0.35	2.12	0.06	0.10	0.35	1.19	2.44	98.1	0	358
SO4--	0.72	0.47	0.58	2.01	0.08	0.16	0.61	1.57	2.71	97.5	0	356

CH0003R Tanikon Switzerland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
NO2	3.97	2.29	3.41	1.75	0.48	1.42	3.40	8.89	13.60	98.9	0	361
PM10	18.06	11.24	15.24	1.79	3.60	6.20	14.70	39.60	72.50	100.0	0	365

CH0004R Chaumont Switzerland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
NO2	2.26	1.27	1.98	1.66	0.38	0.92	1.99	4.64	9.18	100.0	0	365
PM10	11.06	7.15	8.99	1.95	0.50	3.12	9.10	24.98	40.30	99.5	0	363
PM25	8.11	5.29	6.51	2.01	0.50	1.94	6.70	18.18	31.10	99.7	0	364
SO2	0.53	0.45	0.40	2.15	0.07	0.12	0.41	1.38	3.77	100.0	0	365

CH0005R Rigi Switzerland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-NH3+NH4+	0.74	0.68	0.50	2.61	0.01	0.09	0.54	2.10	3.91	99.7	0	364
NO2	1.65	1.25	1.16	2.54	0.04	0.23	1.33	3.95	5.83	99.7	0	364
PM10	2.84	1.64	2.50	1.61	0.86	1.24	2.42	6.38	10.80	97.3	0	355
PM25	11.60	8.44	8.92	2.12	1.00	2.50	9.60	29.62	41.80	100.0	0	365
SO2	0.35	0.23	0.30	1.75	0.07	0.12	0.29	0.79	1.79	97.5	0	356
SO4--	0.58	0.41	0.44	2.25	0.04	0.10	0.48	1.40	1.97	99.5	0	363

CZ0001R Svratouch Czech Republic

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-NH3+NH4+	0.78	0.60	0.60	2.12	0.03	0.17	0.68	1.81	4.47	99.7	0	364
NO2	3.06	1.03	2.90	1.37	1.28	1.79	2.77	4.96	8.03	100.0	0	365
PM10	1.16	1.12	0.79	2.59	0.10	0.10	0.90	2.80	12.10	99.5	0	363
SO2	1.65	2.02	0.96	2.95	0.10	0.10	1.10	5.42	12.50	99.5	0	363
SO4--	1.26	0.81	1.07	1.76	0.44	0.47	0.99	3.08	4.16	16.4	0	60

CZ0003R Kosetice Czech Republic

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-NH3+NH4+	0.86	0.48	0.73	1.83	0.04	0.24	0.80	1.67	3.55	99.7	0	364
NO2	3.21	1.69	2.95	1.47	1.10	1.72	2.88	5.58	23.83	98.9	0	361
PM10	1.67	1.26	1.33	1.99	0.20	0.40	1.30	3.90	9.20	95.3	0	348
SO2	1.23	1.35	0.79	2.61	0.10	0.10	0.80	3.77	9.60	100.0	0	365
SO4--	1.14	0.70	0.98	1.71	0.36	0.41	0.98	2.56	4.11	16.7	0	61

DE0001R Westerland Germany

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-NH3+NH4+	0.95	0.90	0.64	2.54	0.04	0.12	0.72	2.74	5.55	48.5	3	177
NO2	2.30	1.59	1.78	2.12	0.20	0.46	1.77	5.43	7.57	48.5	1	177
PM10	2.02	1.44	1.65	1.87	0.51	0.66	1.59	5.09	10.62	97.8	0	357
PM25	20.09	12.16	17.37	1.69	5.00	8.00	17.00	43.90	81.00	93.4	0	341
SO2	0.56	0.36	0.46	1.92	0.09	0.16	0.47	1.24	2.28	48.5	0	177
SO4--	0.95	0.80	0.74	1.99	0.17	0.25	0.72	2.65	5.04	48.5	0	177

DE0002R Langenbrugge Germany

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
N02	2.34	1.23	2.07	1.63	0.81	0.99	2.01	4.84	6.39	48.8	0	178
PM10	16.29	11.91	13.74	1.75	3.00	6.00	13.00	36.20	113.00	95.3	0	348
PM25	12.46	11.34	9.67	1.99	1.00	3.20	9.00	33.23	104.00	95.1	0	347
S02	0.48	0.41	0.33	2.58	0.05	0.05	0.40	1.36	2.20	58.9	16	215

DE0003R Schauinsland Germany

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-NH3+NH4+	0.56	0.41	0.42	2.26	0.02	0.10	0.44	1.42	2.36	95.9	5	350
N02	1.06	0.90	0.69	2.86	0.04	0.08	0.81	2.92	4.13	96.2	3	351
PM10	9.90	8.25	6.87	2.62	0.10	1.30	7.45	24.79	65.60	93.4	3	341
PM25	7.91	6.32	5.68	2.42	0.30	1.20	6.20	19.50	41.60	80.5	0	294
S02	0.38	0.37	0.26	2.67	0.01	0.05	0.29	0.96	4.27	96.4	6	352
S04--	0.62	0.45	0.46	2.45	0.01	0.12	0.48	1.57	2.37	96.4	4	352

DE0004R Deuselbach Germany

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-NH3+NH4+	0.93	0.58	0.78	1.84	0.14	0.27	0.83	1.97	3.98	50.1	0	183
N02	2.13	1.02	1.87	1.72	0.36	0.73	1.95	3.96	4.76	50.1	0	183
PM10	2.14	1.20	1.93	1.52	0.84	1.08	1.80	4.46	9.69	99.7	0	364
PM25	15.20	8.04	13.20	1.74	2.00	5.00	14.00	31.05	54.00	98.4	0	359
S02	11.71	7.12	9.82	1.84	1.50	3.55	10.00	24.00	46.00	97.3	0	355
S04--	1.00	0.78	0.78	2.05	0.05	0.25	0.78	2.65	4.81	50.1	0	183
	0.91	0.62	0.83	1.80	0.00	0.00	0.77	2.19	2.86	54.5	0	199

DE0005R Brotjacklriegel Germany

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
PM10	10.07	7.63	7.59	2.24	1.00	2.00	8.50	23.00	68.00	99.5	0	363
S02	0.79	0.72	0.56	2.36	0.05	0.15	0.57	2.00	4.65	48.5	5	177

DE0007R Neuglobsow Germany

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-NH3+NH4+	0.81	0.56	0.65	1.94	0.11	0.24	0.61	2.02	3.24	96.7	0	353
N02	1.82	1.05	1.53	1.86	0.19	0.50	1.65	3.80	6.35	98.4	1	359
PM10	1.87	1.04	1.67	1.57	0.78	0.96	1.50	4.16	7.02	91.5	0	334
S02	15.60	12.29	12.46	1.92	2.00	4.00	12.00	38.00	88.00	97.8	0	357
S04--	0.74	1.19	0.37	3.02	0.02	0.07	0.32	2.96	9.70	96.7	0	353
	1.04	0.94	0.78	2.16	0.06	0.21	0.76	3.00	6.09	98.9	0	361

DE0008R Schmucke Germany

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
N02	1.64	0.79	1.50	1.49	0.54	0.87	1.38	3.18	6.81	99.5	0	363
PM10	10.26	8.60	7.46	2.33	1.00	2.00	8.00	25.00	81.00	97.8	0	357
S02	0.52	0.56	0.29	3.21	0.05	0.05	0.35	1.50	3.30	72.1	27	263

DE0009R Zingst Germany

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-NH3+NH4+	1.03	0.71	0.82	2.01	0.10	0.24	0.82	2.47	4.29	99.5	1	363
N02	2.16	1.50	1.65	2.22	0.06	0.39	1.95	5.18	9.40	97.0	0	354
PM10	1.84	0.89	1.67	1.55	0.54	0.87	1.57	3.66	5.67	96.7	0	353
S02	16.83	12.52	13.90	1.81	3.00	6.00	13.00	38.60	96.00	99.7	0	364
S04--	0.90	1.34	0.58	2.39	0.01	0.20	0.54	2.67	12.29	99.7	1	364
	1.07	0.93	0.83	1.99	0.11	0.28	0.82	2.51	7.28	99.5	0	363

DK0003R Tange Denmark

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-NH3+NH4+	0.84	0.77	0.57	2.50	0.06	0.12	0.58	2.37	4.86	75.6	0	276
Na+	2.38	1.46	2.01	1.77	0.53	0.84	1.92	5.42	9.62	81.4	0	297
S02	0.96	0.92	0.64	2.53	0.04	0.14	0.62	2.88	5.26	81.1	1	296
S04--	0.36	0.57	0.22	2.52	0.01	0.05	0.20	1.11	4.84	81.9	2	299
S04-- corr	0.77	0.60	0.59	2.04	0.06	0.18	0.59	1.97	3.47	81.4	1	297
	0.68	0.62	0.45	2.77	0.00	0.08	0.51	1.95	3.44	80.8	1	295

DK0005R Keldsnor Denmark

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-NH3+NH4+	1.04	0.78	0.78	2.23	0.00	0.17	0.85	2.54	4.13	92.6	0	338
Na+	2.52	1.55	2.10	1.86	0.29	0.72	2.17	5.42	12.20	93.4	0	341
S02	1.44	0.84	1.17	2.06	0.02	0.32	1.30	3.08	4.06	93.4	0	341
S04--	0.61	0.65	0.41	2.56	0.03	0.08	0.45	1.63	6.20	93.7	0	342
S04-- corr	0.84	0.59	0.68	1.94	0.09	0.21	0.70	1.93	4.04	93.2	1	340
	0.72	0.59	0.52	2.49	-0.10	0.09	0.58	1.88	3.77	92.9	1	339

DK0008R Anholt Denmark

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-NH3+NH4+	0.74	0.67	0.51	2.48	0.04	0.11	0.53	2.07	4.22	94.8	0	346
NO2	1.15	1.01	0.80	2.41	0.07	0.18	0.79	3.15	5.68	95.9	0	350
Na+	1.48	1.08	1.17	1.97	0.25	0.37	1.18	3.90	6.79	98.1	0	358
S02	1.40	1.06	1.05	2.20	0.08	0.29	1.15	3.43	6.81	94.8	0	346
S04--	0.55	0.61	0.36	2.49	0.03	0.08	0.37	1.60	5.24	96.4	0	352
S04-- corr	0.81	0.57	0.65	1.93	0.04	0.24	0.62	2.02	3.75	94.5	1	345
	0.69	0.60	0.49	2.51	-0.25	0.06	0.49	1.98	3.70	94.5	1	345

EE0009R Lahemaa Estonia

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
NO2	0.37	0.22	0.31	1.88	0.01	0.11	0.28	0.82	1.27	97.5	2	356
S02	0.66	0.85	0.41	2.60	0.04	0.08	0.40	2.14	7.28	95.3	15	348

EE0011R Vilsandi Estonia

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
NO2	0.83	0.49	0.69	1.86	0.06	0.24	0.70	1.80	2.74	94.2	0	344
S02	0.35	0.46	0.21	2.73	0.03	0.05	0.20	1.27	3.45	96.4	13	352

ES0007R Viznar Spain

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-NH3+NH4+	0.42	0.27	0.33	2.15	0.01	0.10	0.36	0.98	1.36	95.1	5	347
NO2	0.88	0.69	0.52	3.59	0.02	0.04	0.76	2.13	2.97	95.6	11	349
PM10	2.31	2.28	1.69	2.17	0.06	0.50	1.58	6.54	27.67	97.4	0	8534
PM25	24.12	15.02	20.10	1.89	3.00	6.00	22.00	47.00	120.00	78.4	0	286
S02	12.44	6.17	10.96	1.70	2.00	4.00	12.00	23.00	48.00	77.0	0	281
S04--	0.58	0.95	0.35	2.54	0.08	0.10	0.31	1.80	25.25	97.9	0	8574
SPM	1.07	0.73	0.87	1.89	0.13	0.31	0.90	2.52	5.09	96.4	0	352
	40.58	29.75	31.46	2.12	5.00	7.05	36.00	85.95	232.00	93.4	0	341

ES0008R		Niembro			Spain							
January 2001 - December 2001												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+NO3-	0.32	0.24	0.24	2.08	0.01	0.08	0.24	0.81	1.55	96.2	3	351
NH3+NH4+	0.49	0.67	0.30	2.66	0.02	0.05	0.27	1.57	5.70	94.2	8	344
NO2	1.93	1.65	1.42	2.24	0.03	0.38	1.42	5.17	17.96	97.9	0	8578
PM10	19.72	9.77	17.61	1.61	3.00	8.75	17.00	41.00	53.00	69.9	0	255
PM25	11.14	7.17	9.33	1.80	2.00	4.00	9.00	27.00	42.00	70.1	0	256
SO2	1.66	2.12	0.94	2.91	0.09	0.17	0.95	5.45	30.60	98.1	0	8591
SO4--	1.38	1.26	1.06	1.97	0.20	0.42	0.96	3.96	9.60	93.7	0	342
SPM	25.93	12.54	23.13	1.64	4.00	10.00	24.00	48.00	80.00	89.0	0	325

ES0009R		Campisabalos			Spain							
January 2001 - December 2001												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HNO3+NO3-	0.14	0.09	0.10	2.77	0.01	0.01	0.12	0.31	0.49	99.2	52	362
NH3+NH4+	0.11	0.08	0.09	2.00	0.01	0.02	0.10	0.24	0.69	98.9	19	361
NO2	0.90	0.69	0.73	1.91	0.03	0.25	0.74	2.05	12.27	96.8	0	8479
PM10	14.30	10.52	11.20	2.02	2.00	4.00	11.00	37.80	57.00	77.3	0	282
PM25	9.08	5.16	7.68	1.84	1.00	3.00	8.00	19.00	28.00	70.1	0	256
SO2	0.50	0.70	0.33	2.29	0.08	0.10	0.32	1.36	14.80	97.5	0	8542
SO4--	0.66	0.46	0.54	1.93	0.11	0.17	0.50	1.57	2.88	97.0	0	354
SPM	21.93	21.06	14.41	2.56	2.00	3.00	13.00	68.00	133.00	87.7	0	320

ES0010R		Cabo de Creus			Spain								
January 2001 - December 2001													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
HNO3+NO3-	0.09	0.13	0.05	3.07	0.01	0.01	0.08	0.20	1.10	95.6	99	349	
NH3+NH4+	1.57	0.89	1.23	2.42	0.01	0.24	1.48	3.02	5.27	94.2	1	344	
NO2	1.61	1.21	1.28	1.98	0.04	0.42	1.26	3.96	13.21	96.6	0	8462	
PM10	20.46	6.17	19.45	1.40	7.00	10.00	20.00	31.00	40.00	70.7	0	258	
PM25	12.07	5.14	11.03	1.54	3.00	5.00	11.00	21.00	36.00	70.7	0	258	
SO2	0.37	0.36	0.28	2.02	0.08	0.11	0.24	1.06	5.55	97.1	0	8508	
SO4--	1.31	0.65	1.17	1.64	0.35	0.47	1.19	2.48	3.93	95.6	0	349	
SPM	39.54	21.07	35.14	1.61	9.00	16.00	34.00	81.80	127.00	93.7	0	342	

ES0011R		Barcarrola		Spain								
January 2001 - December 2001												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HNO3+NO3-	0.27	0.36	0.16	2.94	0.01	0.01	0.16	0.90	3.39	99.2	27	362
NH3+NH4+	0.60	0.62	0.34	3.20	0.02	0.03	0.39	1.81	4.36	97.0	12	354
NO2	1.24	1.02	0.95	2.13	0.03	0.26	1.00	2.99	14.43	97.2	0	8515
PM10	19.25	10.99	16.58	1.73	2.00	8.00	16.00	42.00	56.00	76.7	0	280
PM25	11.36	7.29	9.50	1.81	2.00	4.00	9.00	26.30	37.00	75.1	0	274
SO2	0.72	1.15	0.39	2.78	0.08	0.10	0.33	2.45	18.50	97.6	0	8554
SO4--	0.94	0.82	0.72	2.00	0.15	0.27	0.61	2.75	5.28	97.5	0	356
SPM	27.77	18.96	22.11	2.01	2.00	7.00	22.00	64.00	131.00	90.7	0	331

ES0012R		Zarra			Spain								
January 2001 - December 2001													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
HNO3+NO3-	0.34	0.19	0.29	1.87	0.01	0.09	0.32	0.66	1.25	97.0	1	354	
NH3+NH4+	1.91	0.97	1.65	1.80	0.17	0.51	1.76	3.65	6.44	98.6	0	360	
NO2	0.97	0.66	0.80	1.88	0.03	0.27	0.81	2.24	8.46	98.2	0	8599	
PM10	16.17	7.78	14.18	1.72	2.00	5.00	15.00	30.00	44.00	79.7	0	291	
PM25	8.88	3.90	7.96	1.64	1.00	3.00	9.00	15.00	22.00	77.8	0	284	
SO2	0.73	0.91	0.55	2.11	0.08	0.14	0.59	1.59	51.50	98.5	0	8633	
SO4--	0.94	0.62	0.76	1.96	0.08	0.26	0.76	2.10	3.28	98.4	0	359	
SPM	22.63	14.41	18.10	2.03	3.00	5.00	20.00	50.00	71.00	95.3	0	348	

ES0013R Penausende Spain

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-	0.10	0.08	0.07	2.81	0.01	0.01	0.09	0.23	0.56	97.5	74	356
NH3+NH4+	0.92	0.54	0.74	2.18	0.01	0.23	0.87	1.89	3.35	98.1	3	358
NO2	1.13	1.03	0.82	2.24	0.03	0.23	0.82	3.04	12.48	96.7	0	8473
PM10	14.86	9.84	12.63	1.75	3.00	5.00	13.00	33.40	90.00	74.5	0	272
PM25	9.76	5.78	8.28	1.79	2.00	3.00	9.00	22.15	37.00	70.4	0	257
SO2	0.75	1.19	0.46	2.38	0.09	0.16	0.41	2.51	25.20	97.8	0	8569
SO4--	0.72	0.51	0.58	1.95	0.12	0.19	0.60	1.70	3.19	92.6	0	338
SPM	19.37	15.39	14.83	2.14	1.00	4.00	16.50	46.00	140.00	89.6	0	327

ES0014R Els Torms Spain

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-	0.56	0.47	0.43	2.23	0.01	0.11	0.45	1.59	3.12	97.3	4	355
NH3+NH4+	1.09	0.84	0.81	2.31	0.05	0.15	0.92	2.61	6.41	96.7	0	353
NO2	2.47	1.79	2.01	1.89	0.15	0.71	1.99	5.90	18.11	97.1	0	8509
PM10	19.47	7.92	18.02	1.49	3.00	9.80	18.00	31.00	57.00	75.6	0	276
PM25	12.39	5.26	11.39	1.51	3.00	6.00	11.00	21.00	43.00	75.1	0	274
SO2	0.64	0.75	0.45	2.24	0.08	0.13	0.44	1.73	11.50	98.0	0	8589
SO4--	1.06	0.61	0.90	1.79	0.19	0.33	0.91	2.21	4.33	94.0	0	343
SPM	31.93	13.63	29.34	1.52	5.00	15.00	29.00	59.00	103.00	93.4	0	341

ES0015R Risco Llano Spain

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-	0.35	0.22	0.27	2.25	0.01	0.08	0.31	0.76	1.26	88.2	6	322
NH3+NH4+	0.84	0.66	0.56	2.94	0.01	0.07	0.65	2.05	3.62	86.0	6	314
NO2	0.94	1.11	0.55	3.02	0.03	0.07	0.63	2.97	13.63	93.3	0	8174
PM10	14.82	9.75	12.21	1.89	1.00	4.00	13.00	34.75	68.00	67.1	0	245
PM25	8.46	4.53	7.33	1.73	2.00	3.00	8.00	17.00	23.00	66.0	0	241
SO2	0.65	1.02	0.40	2.45	0.08	0.12	0.37	1.98	28.60	95.3	0	8350
SO4--	0.70	0.49	0.57	1.87	0.11	0.21	0.56	1.75	3.22	78.4	0	286
SPM	23.18	16.17	17.89	2.15	3.00	4.00	20.00	54.80	80.00	75.1	0	274

ES0016R O Saviñao Spain

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-	0.26	0.22	0.17	3.08	0.01	0.01	0.21	0.60	1.69	81.1	28	296
NH3+NH4+	0.87	0.84	0.53	3.09	0.01	0.06	0.61	2.63	4.38	75.3	5	275
NO2	1.51	1.31	1.14	2.15	0.03	0.33	1.16	4.14	10.96	78.4	0	6871
PM10	15.76	9.13	13.60	1.72	3.00	6.00	13.00	33.35	60.00	74.8	0	273
PM25	12.07	7.98	9.76	1.96	1.00	4.00	9.50	28.00	39.00	66.0	0	241
SO2	1.21	2.75	0.49	3.41	0.08	0.10	0.43	4.59	70.00	80.8	0	7078
SO4--	1.27	1.17	0.91	2.28	0.14	0.22	0.91	3.65	7.63	76.4	0	279
SPM	22.25	13.32	18.90	1.78	3.00	7.00	19.00	47.00	98.00	68.2	0	249

FI0009R Uto Finland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-	0.37	0.27	0.28	2.22	0.00	0.07	0.29	0.91	1.48	99.5	0	363
NH3+NH4+	0.45	0.41	0.32	2.43	0.01	0.07	0.34	1.20	3.96	99.7	0	364
NO2	1.01	0.95	0.75	2.28	-0.10	0.17	0.79	2.42	15.80	92.6	0	8110
SO2	0.49	0.52	0.35	2.25	0.01	0.10	0.34	1.60	3.55	99.5	0	363
SO4--	0.62	0.44	0.47	2.27	0.01	0.11	0.54	1.47	3.01	99.5	0	363

FI0017R Virolahti II Finland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HNO3+NO3-	0.29	0.21	0.22	2.16	0.02	0.06	0.24	0.67	1.21	76.2	0	278
NH3+NH4+	0.77	0.68	0.53	2.56	0.04	0.09	0.59	2.02	4.71	75.9	0	277
NO2	1.40	1.41	0.90	2.79	-0.07	0.15	0.98	4.08	15.27	75.5	0	6610
S02	0.94	1.15	0.52	3.17	0.02	0.08	0.52	3.53	8.21	76.2	0	278
S04--	0.73	0.60	0.53	2.37	0.01	0.12	0.58	1.80	4.97	76.2	0	278

FI0022R Oulanka Finland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HNO3+NO3-	0.06	0.05	0.04	2.21	0.00	0.01	0.05	0.15	0.44	85.2	0	311
NH3+NH4+	0.13	0.14	0.07	3.37	0.00	0.01	0.08	0.41	0.85	99.7	0	364
NO2	0.29	0.27	0.20	2.48	-0.03	0.04	0.21	0.79	2.61	97.3	0	8523
S02	0.56	1.17	0.14	5.37	0.00	0.01	0.11	3.06	7.92	85.2	0	311
S04--	0.39	0.30	0.28	2.44	0.00	0.06	0.32	0.96	1.60	85.2	0	311

FI0037R Ahtari II Finland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HNO3+NO3-	0.15	0.12	0.12	2.07	0.02	0.03	0.12	0.36	0.97	98.6	0	360
NH3+NH4+	0.34	0.24	0.27	2.05	0.02	0.08	0.26	0.80	1.54	99.5	0	363
NO2	0.95	0.82	0.75	1.95	0.02	0.28	0.70	2.38	8.59	97.0	0	8495
S02	0.37	0.60	0.18	3.11	0.01	0.04	0.16	1.54	4.70	98.6	0	360
S04--	0.48	0.36	0.36	2.23	0.04	0.09	0.39	1.10	2.01	98.9	0	361

FR0003R La Crouzille France

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
S02	0.50	0.52	0.37	2.10	0.13	0.16	0.38	1.37	4.46	73.2	126	267
S04--	0.61	0.41	0.51	1.80	0.12	0.20	0.48	1.51	3.12	74.2	0	271

FR0005R La Hague France

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
S02	0.89	0.79	0.65	2.26	0.15	0.18	0.68	2.44	5.71	99.7	81	364
S04--	0.68	0.44	0.57	1.74	0.14	0.26	0.56	1.49	3.76	97.8	0	357

FR0008R Donon France

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
S02	0.50	0.40	0.38	2.09	0.14	0.15	0.44	1.12	3.50	98.1	140	358
S04--	0.46	0.27	0.39	1.85	0.04	0.13	0.42	1.03	1.64	97.3	2	355

FR0009R Revin France

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
S02	0.74	0.61	0.56	2.13	0.15	0.19	0.60	1.91	4.10	99.2	94	362
S04--	0.73	0.40	0.64	1.71	0.05	0.27	0.61	1.57	2.16	95.1	1	347

FR0010R Morvan France

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
S02	0.44	0.34	0.36	1.85	0.16	0.18	0.28	0.98	2.43	99.7	188	364
S04--	0.49	0.30	0.41	1.81	0.05	0.15	0.43	1.05	2.31	99.2	3	362

FR0012R Iraty France

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
S02	0.55	0.50	0.41	2.05	0.18	0.19	0.42	1.51	4.12	92.3	160	337
S04--	0.61	0.40	0.51	1.86	0.05	0.20	0.49	1.41	2.42	91.8	3	335

FR0013R Peyrusse Vieille France

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
S02	0.62	0.55	0.47	2.11	0.15	0.16	0.46	1.66	4.78	94.0	82	343
S04--	0.57	0.64	0.42	2.03	0.08	0.13	0.41	1.53	8.16	94.2	0	344

FR0014R Montandon France

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
S02	0.26	0.17	0.23	1.62	0.13	0.15	0.17	0.56	1.29	100.0	250	365
S04--	0.39	0.23	0.33	1.85	0.04	0.12	0.33	0.85	1.34	98.9	5	361

GB0002R Eskdalemuir United Kingdom

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
S02 f2p	0.25	0.19	0.20	1.82	0.10	0.10	0.17	0.54	0.81	61.1	0	16
S02 abs	0.75	0.78	0.53	2.26	0.11	0.12	0.48	2.30	4.46	38.9	12	142
S04--	0.47	0.40	0.35	2.11	0.02	0.12	0.33	1.33	2.49	99.5	1	363

GB0004R Stoke Ferry United Kingdom

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
S02 f2p	0.90	0.32	0.82	1.52	0.30	0.30	0.88	1.32	1.54	64.9	0	16
S02 abs	1.12	0.98	0.88	1.97	0.14	0.32	0.91	3.18	6.40	35.1	2	128
S04--	0.72	0.55	0.56	2.08	0.03	0.18	0.55	1.69	3.16	83.0	0	303

GB0006R Lough Navar United Kingdom

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
S02 abs	0.33	0.38	0.23	2.11	0.06	0.07	0.20	1.13	2.77	80.5	26	294
S04--	0.43	0.45	0.30	2.23	0.04	0.10	0.25	1.47	3.29	98.1	0	358

GB0007R Barcomb Mills United Kingdom

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
S02 f2p	0.73	0.29	0.67	1.53	0.30	0.30	0.68	1.13	1.34	64.9	0	17
S02 abs	1.09	0.93	0.87	1.89	0.27	0.34	0.81	2.43	6.23	35.3	0	129
S04--	0.79	0.53	0.64	1.96	0.05	0.22	0.62	1.94	2.62	81.4	0	297

GB0013R Yarner Wood United Kingdom

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
S02 f2p	0.41	0.37	0.27	2.71	0.06	0.06	0.25	1.06	1.20	42.7	0	11
S02 abs	0.83	0.92	0.54	2.44	0.09	0.18	0.42	2.67	5.03	53.2	1	194
S04--	0.68	0.57	0.50	2.17	0.03	0.16	0.47	1.81	3.68	98.6	0	360

GB0014R		High Muffles			United Kingdom								
January 2001 - December 2001													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
S02 f2p	1.27	0.55	1.12	1.80	0.27	0.27	1.46	1.94	1.98	57.5	0	15	
S02 abs	0.83	0.92	0.54	2.44	0.09	0.18	0.42	2.67	5.03	53.2	1	194	
S04--	0.62	0.48	0.48	2.05	0.07	0.15	0.46	1.52	3.25	97.0	0	354	
GB0015R		Strathvaich Dam			United Kingdom								
January 2001 - December 2001													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
S02 abs	0.21	0.20	0.16	1.88	0.05	0.06	0.15	0.54	2.21	82.5	37	301	
S04--	0.32	0.36	0.21	2.40	0.01	0.07	0.18	1.16	1.96	80.5	1	294	
GB0016R		Glen Dye			United Kingdom								
January 2001 - December 2001													
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
S02 f2p	0.31	0.38	0.19	3.25	0.03	0.03	0.22	1.08	1.25	53.4	0	14	
S02 abs	0.85	1.36	0.44	2.84	0.09	0.10	0.33	3.59	7.95	30.1	14	110	
S04--	0.46	0.47	0.30	2.52	0.04	0.08	0.28	1.40	3.93	66.6	0	243	
GB0036R		Harwell			United Kingdom								
January 2001 - December 2001													
Component N02	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
	5.23	4.85	3.54	2.47	0.00	0.58	3.49	16.30	41.32	84.0	0	7357	
GB0037R		Ladybower			United Kingdom								
January 2001 - December 2001													
Component N02	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
	3.70	3.58	2.64	2.40	0.00	0.58	2.33	11.06	33.17	88.4	0	7744	
GB0038R		Lullington Heath			United Kingdom								
January 2001 - December 2001													
Component N02	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
	3.87	3.59	2.79	2.37	0.00	0.58	2.91	11.64	25.61	93.5	0	8193	
GB0043R		Narberth			United Kingdom								
January 2001 - December 2001													
Component N02	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
	2.25	2.83	1.54	2.29	0.00	0.58	1.16	7.89	19.79	64.0	0	5609	
GB0045R		Wicken Fen			United Kingdom								
January 2001 - December 2001													
Component N02	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
	4.19	3.49	3.08	2.26	0.00	0.58	2.91	11.64	23.86	87.5	0	7667	
GR0001R		Aliartos			Greece								
January 2001 - December 2001													
Component N02	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl	
	4.27	3.48	2.98	2.45	0.30	0.90	3.40	11.00	23.80	88.7	0	7772	
S02	2.29	2.81	1.75	1.89	1.00	1.00	1.50	5.50	64.60	90.1	0	7891	

HU0002R K-Pusztá Hungary

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03	0.22	0.17	0.16	2.26	0.01	0.04	0.18	0.46	1.61	95.3	3	348
NH3	1.31	0.80	1.03	2.19	0.02	0.23	1.18	2.78	4.38	95.3	1	348
NH4+	1.50	1.19	1.14	2.15	0.06	0.35	1.18	3.93	7.04	95.3	0	348
NO2	1.74	1.23	1.43	1.92	0.01	0.58	1.37	3.90	8.69	98.1	1	358
NO3-	0.61	0.62	0.41	2.38	0.05	0.13	0.36	1.88	4.53	95.3	0	348
SO2	2.64	2.95	1.70	2.67	0.01	0.34	1.75	8.73	25.38	95.1	2	347
SO4--	1.59	1.09	1.29	1.94	0.04	0.49	1.27	3.70	6.31	95.3	0	348

IE0001R Valentia Obs. Ireland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
NO2	0.70	0.81	0.40	3.01	0.05	0.05	0.40	2.48	4.80	100.0	25	365
SO2	0.32	0.43	0.19	2.65	0.02	0.05	0.15	1.14	3.12	99.7	2	364
SO4--	0.55	0.40	0.43	2.02	0.03	0.17	0.42	1.32	3.22	99.7	4	364

IE0002R Turlough Hill Ireland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
SO2	0.07	0.14	0.03	2.81	0.00	0.01	0.02	0.28	1.26	92.1	0	336
SO4--	0.30	0.39	0.18	2.82	0.00	0.03	0.20	0.91	4.39	91.2	0	333

IE0003R The Burren Ireland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
SO4--	0.24	0.27	0.16	2.75	0.00	0.02	0.15	0.70	2.17	57.8	0	211

IE0004R Ridge Of Capard Ireland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
SO4--	0.12	0.11	0.10	2.02	0.00	0.00	0.09	0.29	0.95	49.6	0	181

IS0002R Irafoss Iceland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
SO4--	0.18	0.16	0.14	2.11	0.02	0.04	0.14	0.45	1.33	97.5	0	356

IT0001R Montelibretti Italy

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03	0.12	0.10	0.08	2.50	0.01	0.02	0.08	0.34	0.52	94.8	0	346
NH3	1.40	0.70	1.22	1.76	0.21	0.41	1.32	2.77	4.31	94.8	0	346
NH4+	1.46	0.75	1.28	1.68	0.23	0.54	1.30	2.82	5.71	94.8	0	346
NO2	4.81	2.53	4.18	1.72	0.72	1.57	4.25	9.58	13.64	95.6	0	349
NO3-	0.71	0.38	0.62	1.72	0.07	0.27	0.62	1.46	2.46	94.8	0	346
SO2	0.73	0.46	0.61	1.82	0.10	0.21	0.65	1.41	3.65	94.8	0	346
SO4--	1.00	0.53	0.87	1.76	0.07	0.38	0.87	2.00	2.81	94.8	0	346

IT0004R		Ispra			Italy							
January 2001 - December 2001												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
H+	9.15	8.43	5.07	4.05	-0.04	0.14	7.07	24.30	50.89	61.6	0	225
NH4+	2.19	2.64	1.17	3.72	0.00	0.08	1.40	6.05	21.17	61.4	0	224
NO2	6.57	3.73	5.62	1.76	0.93	2.50	5.12	13.98	18.38	98.1	0	358
NO3-	1.25	1.43	0.60	3.86	0.04	0.06	0.78	3.90	7.03	62.2	0	227
PM10	39.06	27.95	30.17	2.16	0.74	7.96	31.27	93.22	178.90	62.2	0	227
PM25	32.01	24.16	23.49	2.37	1.11	4.97	25.14	79.57	135.58	62.2	0	227
S02	0.64	0.52	0.46	2.29	0.13	0.13	0.40	1.73	3.06	100.0	0	365
S04--	1.21	0.88	0.91	2.24	0.08	0.19	1.04	2.88	5.56	62.2	0	227
SPM	47.80	29.99	39.85	1.85	7.53	12.80	40.06	101.58	190.50	61.4	0	224

LT0015R	Preila			Lithuania								
January 2001 - December 2001												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HNO3+NO3-NH3+NH4+	0.60	0.47	0.46	2.14	0.03	0.12	0.46	1.50	2.90	98.4	0	359
NO2	1.20	0.89	0.90	2.29	0.01	0.26	0.97	2.98	5.57	98.9	0	361
S02	1.19	0.79	0.99	1.81	0.14	0.39	0.99	2.83	4.65	99.2	0	362
	0.83	0.90	0.54	2.56	0.02	0.12	0.53	2.56	5.94	98.6	0	360

LV0010R	Rucava			Latvia								
January 2001 - December 2001												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HNO3+N03-	0.37	1.13	0.19	2.42	0.02	0.05	0.18	0.63	12.36	99.7	0	364
NH3+NH4+	1.14	0.59	1.00	1.69	0.15	0.38	1.02	2.23	3.68	98.9	0	361
NH4+	0.82	0.62	0.65	2.12	0.01	0.16	0.70	1.81	7.33	98.9	15	361
NO2	0.75	0.36	0.68	1.58	0.10	0.30	0.70	1.50	2.10	99.7	0	364
NO3-	0.21	0.16	0.15	2.24	0.01	0.04	0.16	0.52	0.90	99.7	1	364
S02	0.41	0.42	0.27	2.57	0.01	0.06	0.29	1.46	2.70	96.4	69	352
S04--	0.36	0.78	0.16	3.19	0.01	0.03	0.16	1.27	6.16	99.7	151	364

LV0016R	Zoseni			Latvia								
January 2001 - December 2001												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HNO3+NO3-	0.29	0.76	0.16	2.38	0.02	0.05	0.14	0.82	8.61	90.7	0	331
NH3+NH4+	0.83	0.44	0.71	1.81	0.08	0.25	0.74	1.63	2.45	92.3	0	337
NH4+	0.55	0.34	0.43	2.19	0.02	0.09	0.49	1.18	1.89	92.3	29	337
NO2	0.67	0.35	0.59	1.62	0.10	0.30	0.60	1.40	2.40	92.3	0	337
NO3-	0.14	0.11	0.12	1.92	0.02	0.04	0.12	0.32	1.05	92.3	0	337
S02	0.29	0.27	0.19	2.90	0.01	0.01	0.20	0.82	2.26	88.8	31	324
S04--	0.20	0.23	0.13	2.56	0.01	0.03	0.13	0.56	2.58	92.3	112	337

NL0009R	Kollumerwaard				Netherlands							
January 2001 - December 2001												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Ca++	0.07	0.07	0.06	2.18	-0.05	-0.02	0.05	0.18	0.41	45.2	5	165
NH4+	1.24	0.95	0.95	2.10	0.10	0.28	0.97	3.17	5.81	89.6	0	327
NO2	3.12	2.70	2.23	2.46	-0.30	0.30	2.44	8.83	15.22	86.9	0	7610
NO3-	0.74	0.62	0.50	2.71	-0.01	0.06	0.57	1.88	3.75	89.6	24	327
S02	0.57	0.76	0.75	1.72	-0.50	-0.50	0.50	2.00	13.01	99.0	0	8668
S04--	0.72	0.52	0.57	2.09	0.00	0.13	0.55	1.67	3.31	89.6	4	327

NL0010R	Vreedepeel		Netherlands									
January 2001 - December 2001												
Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
NH3	15.63	10.99	12.32	2.07	0.96	3.62	13.04	34.19	86.57	56.7	0	207
NH4+	1.76	1.14	1.43	1.96	-0.10	0.40	1.50	3.98	7.00	94.0	0	343
NO2	6.72	4.05	5.57	1.89	0.30	1.83	5.78	14.61	25.57	89.3	0	7819
NO3-	1.02	0.65	0.83	1.98	0.00	0.20	0.90	2.30	4.10	94.0	1	343
S02	1.30	1.55	1.11	2.18	-0.50	0.00	1.00	4.50	16.52	97.4	0	8536
S04--	0.98	0.62	0.80	1.94	0.10	0.30	0.80	2.29	4.10	94.0	0	343

N00001R Birkenes Norway

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Ca++	0.03	0.04	0.01	2.96	0.01	0.01	0.01	0.09	0.55	98.1	144	358
Cl-	0.31	0.64	0.08	5.57	0.01	0.01	0.07	1.56	7.09	94.2	95	344
HNO3+N03-	0.21	0.24	0.13	2.62	0.02	0.03	0.12	0.67	1.77	69.9	0	255
K+	0.05	0.06	0.03	2.76	0.01	0.01	0.04	0.13	0.83	97.8	48	357
Mg++	0.037	0.051	0.020	3.079	0.005	0.005	0.020	0.140	0.510	98.1	100	358
NH3+NH4+	0.55	0.53	0.37	2.51	0.03	0.08	0.36	1.66	2.98	73.4	0	268
NH4+	0.33	0.41	0.12	5.62	0.01	0.01	0.17	1.09	2.78	73.7	68	269
NO2	0.47	0.48	0.27	3.36	0.01	0.01	0.32	1.49	2.65	99.7	29	364
NO3-	0.14	0.20	0.08	3.16	0.01	0.01	0.08	0.50	1.57	71.0	14	259
Na+	0.33	0.43	0.16	3.69	0.01	0.01	0.19	1.23	4.11	97.8	13	357
PM10-PM25	2.02	1.89	1.25	3.12	0.00	0.12	1.57	5.40	15.41	100.0	47	365
PM25	4.04	3.80	2.45	3.30	0.12	0.12	2.91	11.18	28.49	99.5	28	363
S02	0.16	0.23	0.10	2.64	0.01	0.03	0.09	0.61	2.40	98.1	14	358
S04--	0.43	0.45	0.26	2.92	0.01	0.04	0.28	1.40	2.42	98.9	2	361
S04-- corr	0.41	0.45	0.23	3.25	0.00	0.03	0.24	1.37	2.40	98.9	2	361

N00008R Skreaddalen Norway

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Ca++	0.04	0.08	0.02	3.31	0.01	0.01	0.01	0.14	0.82	98.4	139	359
Cl-	0.38	0.73	0.08	6.24	0.01	0.01	0.07	1.95	5.97	97.5	104	356
HNO3+N03-	0.23	0.32	0.13	2.73	0.02	0.03	0.12	0.80	2.15	70.1	0	256
K+	0.04	0.03	0.03	2.34	0.01	0.01	0.03	0.09	0.25	98.1	37	358
Mg++	0.036	0.052	0.017	3.387	0.005	0.005	0.020	0.140	0.410	98.6	153	360
NH3+NH4+	1.38	0.77	1.17	1.84	0.08	0.44	1.19	2.92	3.94	71.2	0	260
NH4+	0.33	0.41	0.13	4.81	0.01	0.01	0.15	1.32	1.84	73.4	49	268
NO2	0.29	0.31	0.21	2.30	0.01	0.06	0.20	0.85	2.43	100.0	9	365
NO3-	0.18	0.27	0.09	3.25	0.01	0.01	0.09	0.57	1.90	70.1	17	256
Na+	0.32	0.45	0.13	4.35	0.01	0.01	0.15	1.25	3.32	98.6	20	360
S02	0.12	0.19	0.07	2.62	0.01	0.01	0.06	0.36	1.82	98.6	32	360
S04--	0.34	0.36	0.21	2.72	0.01	0.04	0.21	1.19	2.22	96.7	2	353
S04-- corr	0.31	0.36	0.18	3.17	0.00	0.03	0.19	1.17	2.16	96.7	2	353

N00015R Tustervatn Norway

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Ca++	0.02	0.06	0.01	2.65	0.01	0.01	0.01	0.07	0.95	100.0	192	365
Cl-	0.38	0.73	0.08	6.54	0.01	0.01	0.06	1.71	5.71	95.9	118	350
HNO3+N03-	0.08	0.13	0.05	2.15	0.01	0.02	0.05	0.29	1.17	69.3	0	253
K+	0.03	0.03	0.02	2.49	0.01	0.01	0.02	0.06	0.27	99.7	95	364
Mg++	0.029	0.048	0.013	3.149	0.005	0.005	0.010	0.120	0.380	100.0	174	365
NH3+NH4+	0.94	0.78	0.68	2.29	0.06	0.17	0.68	2.40	6.12	74.8	0	273
NH4+	0.12	0.17	0.05	4.30	0.01	0.01	0.07	0.46	1.28	74.8	81	273
NO2	0.15	0.16	0.08	3.44	0.01	0.01	0.10	0.47	0.83	98.4	98	359
NO3-	0.06	0.11	0.03	2.69	0.01	0.01	0.03	0.20	0.98	69.3	33	253
Na+	0.26	0.41	0.10	4.51	0.01	0.01	0.10	1.05	3.15	100.0	31	365
S02	0.14	0.34	0.06	2.93	0.01	0.01	0.05	0.52	2.96	100.0	38	365
S04--	0.20	0.21	0.13	2.75	0.01	0.02	0.13	0.62	1.38	99.5	3	363
S04-- corr	0.18	0.22	0.09	3.56	0.00	0.01	0.11	0.61	1.38	99.5	3	363

N00039R Kaarvatn Norway

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Ca++	0.02	0.03	0.01	2.54	0.01	0.01	0.01	0.05	0.33	96.7	227	353
Cl-	0.19	0.40	0.05	5.05	0.01	0.01	0.03	0.99	2.64	94.2	134	344
HNO3+N03-	0.08	0.12	0.05	2.41	0.01	0.01	0.04	0.28	1.00	71.0	0	259
K+	0.02	0.02	0.01	2.43	0.01	0.01	0.02	0.06	0.16	96.4	103	352
Mg++	0.017	0.027	0.009	2.536	0.005	0.005	0.005	0.070	0.180	96.7	217	353
NH3+NH4+	0.47	0.41	0.34	2.32	0.02	0.10	0.33	1.33	2.27	72.9	0	266
NH4+	0.11	0.16	0.05	4.26	0.01	0.01	0.05	0.39	1.04	72.9	82	266
NO2	0.19	0.17	0.12	2.95	0.01	0.01	0.15	0.55	0.94	100.0	51	365
NO3-	0.05	0.09	0.03	2.86	0.01	0.01	0.03	0.21	0.99	71.0	46	259
Na+	0.16	0.24	0.07	3.75	0.01	0.01	0.07	0.62	1.56	96.7	25	353
S02	0.06	0.08	0.04	2.28	0.01	0.01	0.04	0.20	0.67	97.8	51	357
S04--	0.16	0.16	0.10	2.82	0.01	0.02	0.12	0.46	1.08	97.5	12	356
S04-- corr	0.15	0.16	0.09	3.47	-0.03	0.01	0.10	0.46	1.07	97.5	12	356

N00041R Osen Norway

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Ca++	0.02	0.07	0.01	2.62	0.01	0.01	0.01	0.06	0.93	95.9	212	350
Cl-	0.08	0.16	0.03	3.85	0.01	0.01	0.01	0.38	1.18	86.0	183	314
HN03+N03-K+	0.11	0.18	0.06	2.41	0.02	0.02	0.06	0.32	1.76	69.9	0	255
Mg++	0.03	0.03	0.02	2.56	0.01	0.01	0.02	0.08	0.33	95.9	75	350
NH3+NH4+	0.011	0.015	0.007	2.039	0.005	0.005	0.005	0.040	0.170	95.9	256	350
NH4+	0.43	0.39	0.30	2.26	0.03	0.08	0.28	1.25	2.08	69.9	0	255
N02	0.18	0.25	0.07	4.55	0.01	0.01	0.09	0.65	1.65	73.2	68	267
N03-	0.33	0.29	0.21	2.92	0.01	0.01	0.26	0.92	1.63	99.2	27	362
Na+	0.07	0.14	0.03	2.86	0.01	0.01	0.03	0.19	1.47	70.1	26	256
S02	0.09	0.12	0.05	3.41	0.01	0.01	0.05	0.35	1.03	95.9	39	350
S04--	0.08	0.13	0.05	2.52	0.01	0.01	0.04	0.29	1.12	96.2	44	351
S04-- corr	0.24	0.28	0.14	3.05	0.01	0.02	0.14	0.89	2.01	95.3	2	348
	0.24	0.28	0.13	3.33	0.00	0.02	0.13	0.87	1.98	95.3	2	348

N00042G Zeppelin, Spitsbergen Norway

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Ca++	0.02	0.02	0.01	2.62	0.01	0.01	0.01	0.06	0.16	99.7	181	364
Cl-	0.42	0.78	0.15	5.10	0.01	0.01	0.20	1.34	8.48	94.2	60	344
HN03+N03-K+	0.06	0.12	0.03	2.00	0.02	0.02	0.03	0.10	1.03	66.3	0	242
Mg++	0.02	0.05	0.01	2.58	0.01	0.01	0.01	0.05	0.75	98.9	167	361
NH3+NH4+	0.032	0.047	0.017	3.009	0.005	0.005	0.020	0.100	0.560	99.7	125	364
NH4+	0.17	0.14	0.14	1.79	0.03	0.05	0.15	0.31	1.44	74.8	0	273
N03-	0.04	0.09	0.02	3.60	0.01	0.01	0.01	0.11	1.04	74.8	181	273
Na+	0.03	0.09	0.01	2.95	0.01	0.01	0.01	0.08	0.73	66.3	116	242
S02	0.30	0.49	0.14	3.93	0.01	0.01	0.16	0.81	4.65	99.7	20	364
S04--	0.14	0.23	0.09	2.40	0.01	0.03	0.07	0.50	2.13	100.0	13	365
S04-- corr	0.18	0.18	0.11	2.87	0.01	0.02	0.12	0.43	1.36	98.9	9	361
	0.15	0.17	0.09	3.63	-0.04	0.00	0.10	0.41	1.32	98.9	9	361

N00055R Karasjok Norway

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
Ca++	0.02	0.02	0.01	2.47	0.01	0.01	0.01	0.05	0.26	99.5	193	363
Cl-	0.29	0.48	0.08	5.87	0.01	0.01	0.09	1.22	3.08	95.6	116	349
HN03+N03-K+	0.06	0.10	0.05	1.83	0.02	0.02	0.04	0.12	1.49	67.9	0	248
Mg++	0.03	0.02	0.02	2.44	0.01	0.01	0.02	0.06	0.14	99.2	86	362
NH3+NH4+	0.024	0.033	0.012	2.905	0.005	0.005	0.010	0.090	0.230	99.5	176	363
NH4+	0.65	0.72	0.41	2.52	0.02	0.11	0.38	2.29	4.95	71.5	0	261
N02	0.14	0.17	0.06	4.84	0.01	0.01	0.09	0.45	1.09	74.2	76	271
N03-	0.20	0.21	0.10	3.54	0.01	0.01	0.13	0.65	1.33	99.7	81	364
Na+	0.04	0.08	0.03	2.39	0.01	0.01	0.03	0.09	1.17	67.9	32	248
S02	0.23	0.29	0.11	3.71	0.01	0.01	0.12	0.80	1.93	99.5	15	363
S04--	0.40	1.15	0.11	3.96	0.01	0.02	0.07	1.93	11.13	99.5	15	363
S04-- corr	0.29	0.31	0.17	3.04	0.01	0.03	0.20	0.86	2.40	98.9	5	361
	0.28	0.31	0.14	3.90	0.00	0.01	0.16	0.84	2.39	98.9	5	361

N00099R Lista Norway

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
PM10-PM25	9.20	6.67	7.28	2.07	0.45	2.27	7.30	22.11	36.76	88.4	0	47
PM25	5.74	2.94	5.17	1.52	2.50	2.70	4.64	11.15	18.50	96.1	0	51

PL0002R Jarczew Poland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-NH3+NH4+	0.78	0.53	0.62	1.97	0.03	0.21	0.62	1.83	3.00	94.8	0	346
NH4+	2.83	1.31	2.54	1.62	0.42	1.05	2.52	5.37	7.47	88.5	0	323
N02	1.65	0.95	1.41	1.79	0.17	0.53	1.42	3.57	6.54	88.5	0	323
N03-	2.79	1.41	2.52	1.55	0.80	1.23	2.50	5.28	10.30	78.1	0	285
S02	0.64	0.48	0.50	2.10	0.01	0.16	0.48	1.64	2.87	95.1	1	347
S04--	2.29	1.96	1.66	2.28	0.20	0.40	1.60	5.96	16.10	95.1	0	347
	1.48	0.80	1.25	1.87	0.10	0.41	1.35	2.94	5.61	95.1	4	347

PL0003R Sniezka Poland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-	0.29	0.17	0.25	1.79	0.04	0.09	0.25	0.60	0.95	100.0	0	365
NH3+NH4+	0.82	0.47	0.68	1.90	0.06	0.21	0.74	1.65	2.50	100.0	0	365
NH4+	0.57	0.34	0.47	1.99	0.03	0.13	0.53	1.18	1.81	100.0	2	365
N02	1.14	0.55	1.01	1.66	0.20	0.40	1.10	2.20	3.00	100.0	0	365
N03-	0.23	0.13	0.20	1.85	0.02	0.06	0.21	0.49	0.72	100.0	0	365
S02	1.11	0.56	0.97	1.74	0.20	0.30	1.00	2.17	3.20	100.0	0	365
S04--	0.69	0.34	0.59	1.86	0.10	0.10	0.67	1.34	1.77	100.0	17	365

PL0004R Leba Poland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-	0.61	0.46	0.47	2.19	0.04	0.12	0.50	1.58	2.69	99.7	0	364
NH3+NH4+	1.42	0.97	1.06	2.40	0.03	0.20	1.21	3.38	4.50	100.0	2	365
NH4+	1.15	0.90	0.74	3.12	0.03	0.04	0.91	2.87	4.48	100.0	18	365
N02	1.36	0.89	1.13	1.85	0.20	0.40	1.10	3.27	5.80	100.0	0	365
N03-	0.53	0.44	0.38	2.38	0.03	0.08	0.39	1.53	2.67	100.0	0	365
S02	1.49	1.32	1.10	2.22	0.10	0.30	1.10	4.17	9.20	100.0	6	365
S04--	1.58	0.72	1.40	1.72	0.10	0.53	1.49	2.77	4.61	100.0	2	365

PL0005R Diabla Gora Poland

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-	0.53	0.40	0.42	1.97	0.05	0.14	0.39	1.35	2.44	99.2	0	362
NH3+NH4+	1.37	0.72	1.19	1.76	0.16	0.46	1.27	2.66	5.04	99.5	0	363
N02	0.68	0.55	0.51	2.34	0.01	0.19	0.52	1.62	4.32	98.4	6	359
S02	0.63	0.81	0.32	3.32	0.01	0.06	0.32	2.35	4.77	96.4	0	352
S04--	0.87	0.59	0.67	2.17	0.07	0.17	0.74	2.06	3.35	98.9	0	361

RU0001R Janiskoski Russian Federation

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
NH4+	0.28	0.21	0.20	2.43	0.01	0.04	0.21	0.68	1.10	89.9	0	328
N03-	0.05	0.06	0.04	2.31	0.01	0.01	0.04	0.13	0.56	89.9	0	328
S02	0.90	2.12	0.22	4.57	0.06	0.06	0.12	4.11	19.10	87.4	0	319
S04--	0.42	0.51	0.24	2.94	0.03	0.03	0.23	1.36	4.29	89.9	0	328

RU0016R Shepeljovo Russian Federation

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
NH4+	0.41	0.31	0.30	2.40	0.01	0.07	0.31	1.01	1.88	93.2	0	340
N03-	0.15	0.11	0.11	2.13	0.01	0.03	0.13	0.35	0.83	93.2	0	340
S02	0.69	0.74	0.44	2.67	0.06	0.07	0.44	2.12	6.22	92.6	0	338
S04--	0.38	0.29	0.28	2.42	0.03	0.04	0.29	0.93	1.83	93.2	0	340

RU0018R Danki Russian Federation

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
NH4+	0.66	0.43	0.55	1.85	0.13	0.20	0.55	1.52	2.68	81.4	0	297
N03-	0.18	0.20	0.12	2.43	0.01	0.03	0.10	0.67	1.52	81.4	0	297
S02	0.28	0.43	0.15	2.69	0.06	0.06	0.12	1.06	4.09	81.4	0	297
S04--	0.56	0.52	0.42	2.17	0.04	0.12	0.41	1.50	4.57	81.4	0	297

SE0002R Rorvik Sweden

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-	0.76	0.98	0.42	3.44	0.01	0.04	0.46	2.16	8.79	97.5	32	356
NH3+NH4+	0.97	0.95	0.60	3.05	0.01	0.08	0.64	2.85	5.77	98.6	50	360
N02	1.48	1.10	1.19	1.93	0.05	0.42	1.17	3.67	7.51	99.5	1	363
S02	0.46	0.39	0.33	2.45	0.01	0.08	0.36	1.11	2.71	99.7	8	364
S04--	0.78	0.68	0.56	2.34	0.01	0.13	0.56	2.08	5.27	99.7	0	364
SPM	1.78	2.80	0.78	3.24	0.35	0.35	0.35	7.88	21.56	100.0	240	365

SE0005R Bredkalen Sweden

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-	0.10	0.28	0.04	3.36	0.01	0.01	0.04	0.34	4.12	98.4	145	359
NH3+NH4+	0.20	0.41	0.08	3.73	0.01	0.01	0.08	0.73	4.31	99.7	209	364
N02	0.14	0.12	0.10	2.50	0.01	0.01	0.11	0.37	0.97	99.7	50	364
S02	0.11	0.31	0.03	3.85	0.01	0.01	0.01	0.47	2.07	99.7	249	364
S04--	0.18	0.23	0.10	3.19	0.00	0.01	0.10	0.60	1.61	98.1	16	358
SPM	0.42	0.39	0.38	1.43	0.35	0.35	0.35	0.35	3.43	100.0	351	365

SE0008R Hoburg Sweden

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
N02	0.92	0.70	0.74	1.93	0.04	0.28	0.69	2.22	6.14	99.2	1	362
S02	0.59	0.72	0.32	3.68	0.01	0.01	0.40	1.50	7.14	100.0	28	365
S04--	0.68	0.51	0.49	2.38	0.01	0.10	0.56	1.68	2.45	98.4	0	359
SPM	1.62	2.73	0.70	3.11	0.35	0.35	0.35	7.28	17.42	97.8	251	357

SE0011R Vavihill Sweden

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-	0.71	0.82	0.39	3.76	0.01	0.03	0.46	1.98	7.26	97.5	47	356
NH3+NH4+	1.23	1.01	0.78	3.33	0.01	0.08	0.95	3.08	6.61	96.7	52	353
N02	1.37	0.91	1.13	1.87	0.03	0.44	1.07	3.32	5.31	99.2	1	362
S02	0.42	0.70	0.19	4.07	0.01	0.01	0.21	1.36	6.18	97.3	42	355
S04--	0.74	0.62	0.56	2.25	0.00	0.12	0.54	2.09	3.98	99.5	6	363
SPM	1.82	3.13	0.80	3.20	0.35	0.35	0.35	7.28	26.84	99.2	230	362

SI0008R Iskrba Slovenia

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03+N03-	0.23	0.21	0.16	2.55	0.01	0.03	0.17	0.63	1.37	98.6	2	360
NH3+NH4+	0.90	0.63	0.69	2.23	0.02	0.15	0.77	2.21	4.18	98.9	0	361
S02	0.68	0.88	0.36	3.46	0.00	0.02	0.37	2.49	7.60	98.6	0	360
S04--	0.84	0.70	0.58	2.63	0.01	0.10	0.65	2.35	4.45	98.9	1	361

SK0002R Chopok Slovakia

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03	0.10	0.09	0.08	1.84	0.01	0.03	0.08	0.18	1.18	99.2	0	362
N02	1.30	1.14	1.06	1.87	0.00	0.40	1.10	2.50	12.80	98.1	0	358
N03-	0.19	0.16	0.13	2.53	0.01	0.04	0.14	0.48	0.88	99.2	68	362
S02	0.90	0.85	0.65	2.21	0.10	0.20	0.60	2.79	6.30	99.2	0	362
S04--	0.48	0.47	0.34	2.34	0.04	0.08	0.33	1.33	4.64	99.2	0	362

SK0004R Stara Lesna Slovakia

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03	0.08	0.05	0.07	1.59	0.01	0.04	0.07	0.16	0.51	98.6	0	360
N02	1.85	0.95	1.68	1.56	0.30	0.90	1.60	3.60	9.50	99.7	0	364
N03-	0.26	0.14	0.22	1.79	0.00	0.07	0.23	0.57	0.95	99.7	16	364
S02	1.12	1.36	0.77	2.35	0.00	0.20	0.80	2.90	15.60	98.6	0	360
S04--	0.99	0.58	0.84	1.81	0.05	0.33	0.84	2.06	3.97	99.7	0	364

SK0005R Liesek Slovakia

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03	0.13	0.20	0.10	1.75	0.03	0.05	0.10	0.28	3.21	98.1	0	358
N02	1.98	0.89	1.80	1.60	0.10	1.00	1.80	3.70	6.50	99.5	0	363
N03-	0.45	0.27	0.38	1.84	0.04	0.15	0.38	0.94	1.66	99.5	8	363
S02	2.25	2.45	1.42	2.59	0.10	0.40	1.30	7.40	22.00	98.1	0	358
S04--	1.23	0.68	1.08	1.65	0.09	0.53	1.05	2.57	5.12	99.5	0	363

SK0006R Starina Slovakia

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03	0.24	0.19	0.20	1.85	0.00	0.08	0.19	0.58	1.44	93.4	0	341
N02	1.45	1.43	1.24	1.61	0.30	0.60	1.20	2.40	18.20	97.5	0	356
N03-	0.20	0.16	0.15	2.15	0.00	0.04	0.18	0.42	1.27	98.4	52	359
S02	1.51	1.45	1.03	2.39	0.10	0.20	0.90	4.80	8.90	93.4	0	341
S04--	0.99	0.70	0.78	2.10	0.05	0.19	0.85	2.25	6.17	98.1	0	358

SK0007R Topoliniky Slovakia

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03	0.13	0.08	0.11	1.76	0.03	0.04	0.12	0.25	0.72	98.1	0	358
N02	2.81	1.68	2.47	1.64	0.50	1.20	2.40	5.60	18.60	99.5	0	363
N03-	1.09	0.62	0.94	1.76	0.04	0.39	0.94	2.19	4.59	99.5	1	363
S02	2.80	3.78	1.70	2.61	0.10	0.40	1.50	9.31	34.50	98.1	0	358
S04--	1.56	1.07	1.30	1.81	0.32	0.51	1.25	3.77	6.62	99.5	0	363

TR0001R Cubuk II Turkey

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
HN03	0.09	0.10	0.07	2.31	-0.16	0.01	0.07	0.25	0.86	71.5	53	261
HN03+N03-	0.32	0.49	0.19	2.74	-0.04	0.03	0.18	0.91	5.41	71.5	4	261
NH3	0.24	0.25	0.16	3.35	-0.23	-0.02	0.19	0.72	1.72	68.5	38	250
NH4+	0.59	0.46	0.43	2.73	-0.01	0.04	0.49	1.40	3.95	71.2	11	260
N02	1.02	1.29	0.64	2.44	0.10	0.19	0.52	3.38	9.27	69.9	0	255
N03-	0.23	0.45	0.10	3.75	-0.03	0.00	0.09	0.83	5.07	71.5	38	261
S02	1.52	2.36	0.64	3.96	-0.04	0.06	0.60	6.40	14.44	71.5	9	261
S04--	0.68	0.51	0.49	2.65	-0.01	0.08	0.55	1.56	3.44	71.5	9	261

YU0005R Kamenicki Vis Serbia and Montenegro

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
N02	3.60	2.07	3.21	1.59	1.10	1.42	3.40	6.28	18.70	88.8	0	324
S02	4.73	3.49	3.52	2.23	1.25	1.25	3.90	11.75	14.60	90.4	104	330

YU0008R Zabljak Serbia and Montenegro

January 2001 - December 2001

Component	Arit mean	Arit sd	Geom mean	Geom sd	Min	5%	50%	95%	Max	% anal	Num bel	Num sampl
N02	3.87	1.73	3.52	1.55	1.00	1.80	3.60	7.00	12.90	83.8	0	306
S02	1.51	0.83	1.40	1.40	1.25	1.25	1.25	3.20	6.20	93.4	303	341

Annex 4

Overview of sampling and analytical methods 2001

Country: Austria		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All	Wet-only	Daily		
Precipitation amount, official gauge					
Sulphate	All	Wet-only	Daily	Ion chromatography	
Nitrate	All	Wet-only	Daily	Ion chromatography	
Ammonium	All	Wet-only	Daily	Ion chromatography	
Magnesium	All	Wet-only	Daily	Ion chromatography	
Sodium	All	Wet-only	Daily	Ion chromatography	
Chloride	All	Wet-only	Daily	Ion chromatography	
Calcium	All	Wet-only	Daily	Ion chromatography	
Potassium	All	Wet-only	Daily	Ion chromatography	
Conductivity	All	Wet-only	Daily	Conductivity meter	
pH	All	Wet-only	Daily	pH meter	
Acidity					
Air					
Sulphur dioxide	All	Instrumental: UV-fluorescence	Daily	UV-fluorescence	
Sulphur dioxide	AT02	KOH-impregnated Whatman 40 filters, 21.6 m³/day	Daily	Ion chromatography	
Nitrogen dioxide	All	Instrumental: Chemiluminescence	Daily		
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	AT02	Teflon filter, PALL Gelman Zefluor 2 µm, 47 mm diameter, 21.6 m³/day	Daily	Ion chromatography	
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀	All	High Volume Sampler, glass fibre filters with organic binder, 720 m³/day, EN 12341	Daily	Micro balance	
PM _{2.5}	AT02	High Volume Sampler, glass fibre filters with organic binder, 720 m³/day, EN 12341	Daily	Micro balance	
Suspended particulate matter					
Sum of nitric acid and nitrate	AT02	Aerosol as for sulphate, KOH impregnated Whatman 40 filters, 21.6 m³/day	Daily	Ion chromatography	
Sum of ammonia and ammonium	AT02	Aerosol as for sulphate, citric acid impregnated Whatman 40 filters, 21.6 m³/day	Daily	Ion chromatography	
Acidity					

Country: Croatia		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
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	
Acidity					
Air					
Sulphur dioxide	All	Absorbing solution TCM, 1.6–2.5 m³/day	Daily	Pararosanilin method	
Nitrogen dioxide	All	Absorbing solution Trietanolamin, 1.6–2.5 m³/day	Daily	Spectrophotometric, Griess method	
Nitric acid					
Ammonia					
Ozone					
Sulphate					
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					
Acidity					

Country: Czech Republic		Main components and ozone - EMEP	Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method
Precipitation				
Precipitation amount	All	Bulk (daily) at CZ03, wet-only (weekly) at both CZ01, CZ03	Daily / Weekly	
Precipitation amount, official gauge				
Sulphate	All	Bulk (daily) at CZ03, wet-only (weekly) at both CZ01, CZ03	Daily / Weekly	Ion chromatography
Nitrate	All	Bulk (daily) at CZ03, wet-only (weekly) at both CZ01, CZ03	Daily / Weekly	Ion chromatography
Ammonium	All	Bulk (daily) at CZ03, wet-only (weekly) at both CZ01, CZ03	Daily / Weekly	Spectrophotometric, Flow injection analysis
Magnesium	All	Bulk (daily) at CZ03, wet-only (weekly) at both CZ01, CZ03	Daily / Weekly	Atomic absorption method, addition of lanthanum, caesium and 8-Chynolynol
Sodium	All	Bulk (daily) at CZ03, wet-only (weekly) at both CZ01, CZ03	Daily / Weekly	Atomic emission method, addition of lanthanum, caesium and 8-Chynolynol
Chloride	All	Bulk (daily) at CZ03, wet-only (weekly) at both CZ01, CZ03	Daily / Weekly	Ion chromatography
Calcium	All	Bulk (daily) at CZ03, wet-only (weekly) at both CZ01, CZ03	Daily / Weekly	Atomic absorption method, addition of lanthanum, caesium and 8-Chynolynol
Potassium	All	Bulk (daily) at CZ03, wet-only (weekly) at both CZ01, CZ03	Daily / Weekly	Atomic emission method, addition of lanthanum, caesium and 8-Chynolynol
Conductivity	All	Bulk (daily) at CZ03, wet-only (weekly) at both CZ01, CZ03	Daily / Weekly	Conductivity meter
pH	All	Bulk (daily) at CZ03, wet-only (weekly) at both CZ01, CZ03	Daily / Weekly	pH meter
Acidity				
Air				
Sulphur dioxide	All	KOH-impregnated Whatman 41 filter, 6-8 m ³ /day	Daily	Thorin
Nitrogen dioxide	All	Absorbing solution NaOH and guajacol, 0.72 m ³ /day	Daily	Spectrophotometric, Griess method
Nitric acid	All	NaCl-impregnated Whatman 41 filter, 0.72 m ³ /day	Daily	Spectrophotometric, Griess after hydrazine reduction
Ammonia	All	Oxalic acid impregnated Whatman 41 filter, 5 m ³ /day	Daily	Spectrophotometric, Indophenol method
Ozone	All	UV-monitor	Hourly	UV-absorption
Sulphate	All	Teflon filter Gelman, pore size 1 µm, 40 m ³ /day	One daily sample each week	X-ray fluorescence
Nitrate	All	Schleicher and Schüll TE 36, 0.45 µm, 5 m ³ /day	Daily	Spectrophotometric, Griess after hydrazine reduction
Ammonium	All	Schleicher and Schüll TE 36, 0.45 µm, 5 m ³ /day	Daily	Spectrophotometric, Indophenol method
Sodium				
Calcium				
Magnesium				
Potassium				
Chloride				
PM ₁₀				
PM _{2.5}				
Suspended particulate matter				
Sum of nitric acid and nitrate	All	NaCl-impregnated Whatman 41 filter, 0.72 m ³ /day + Schleicher and Schüll TE 36, 0.45 µm, 5 m ³ /day	Daily	Spectrophotometric, Griess after hydrazine reduction
Sum of ammonia and ammonium	All	Oxalic acid impregnated Whatman 41 filter, 5 m ³ /day + Schleicher and Schüll TE 36, 0.45 µm, 5 m ³ /day	Daily	Spectrophotometric, Indophenol method
Acidity				

Country: Denmark		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	DK05, DK08, DK22	Wet-only	Two-weekly		
Precipitation amount, official gauge					
Sulphate	DK05, DK08, DK22	Wet-only	Two-weekly	Ion chromatography	
Nitrate	DK05, DK08, DK22	Wet-only	Two-weekly	Ion chromatography	
Ammonium	DK05, DK08, DK22	Wet-only	Two-weekly	ISO 11732 CFA (continuously flow analysis) and spectrophotometric detection	
Magnesium	DK05, DK08, DK22	Wet-only	Two-weekly	Atomic absorption method	
Sodium	DK05, DK08, DK22	Wet-only	Two-weekly	Atomic emission method	
Chloride	DK05, DK08, DK22	Wet-only	Two-weekly	Ion chromatography	
Calcium	DK05, DK08, DK22	Wet-only	Two-weekly	Atomic absorption method	
Potassium	DK05, DK08, DK22	Wet-only	Two-weekly	Atomic emission method	
Conductivity	DK05, DK08, DK22	Wet-only	Two-weekly	Conductivity meter	
pH	DK05, DK08, DK22	Wet-only	Two-weekly	pH meter	
Acidity					
Air					
Sulphur dioxide	DK03, DK05, DK08	NaF- + KOH-impregnated Whatman 41 filters, 58 m³/day	Daily	Ion chromatography	
Nitrogen dioxide	DK08	KI-method (glass sinter), 0.7 m³/day	Daily	Spectrophotometric, EMEP manual (4.11)	
Nitric acid					
Ammonia					
Ozone	DK05, DK31,DK41	UV-monitor	Hourly	UV-absorption	
Sulphate	DK03, DK05, DK08	Millipore RAWP 1.2 µm, 58 m³/day	Daily	Proton Induced X-ray Emission (PIXE)	
Nitrate					
Ammonium					
Sodium	DK03, DK05, DK08	Millipore RAWP 1.2 µm, 58 m³/day	Daily	Atomic absorption method	
Heavy metals (Cr, Mn, Fe, Ni, Cu, Zn, As, Cd, Pb)	DK03, DK05, DK08	Millipore RAWP 1.2 µm, 58 m³/day	Daily	Proton Induced X-ray Emission (PIXE)	
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate	DK03, DK05, DK08	Aerosol filter as for sulphate + NaF-impregnated Whatman 41, 58 m³/day	Daily	Spectrophotometric, Griess after hydrazine reduction	
Sum of ammonia and ammonium	DK03, DK05, DK08	Aerosol filter as for sulphate + Oxalic acid impregnated Whatman 41, 58 m³/day	Daily	ISO 11732 CFA (continuously flow analysis) and spectrophotometric detection	
Acidity					

DK03: Tange; DK05: Keldsnor; DK08: Anholt; DK22: Sepstrup Sande; DK31: Ulborg; DK41: Lille Valby

Country: Estonia		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
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	
Acidity					
Air					
Sulphur dioxide	EE09	NaOH-impregnated Whatman 40 filters, 4-5 m³/day	Daily	Ion chromatography	
Sulphur dioxide	EE11	Instrumental: UV-fluorescence	Daily	UV-fluorescence	
Nitrogen dioxide	EE09	Absorbing tubes KI solution, 0.3 m³/day	Daily	Spectrophotometric, Griess method	
Nitrogen dioxide	EE11	Instrumental: Chemiluminescence	Daily	Chemiluminescence	
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	EE09	Whatman 40 filter, 4-5 m³/day	Daily	Ion chromatography	
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					
Acidity					

Country: Finland		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All except FI37	Bulk	Daily		
Precipitation amount, official gauge	All except FI37	Bulk	Daily		
Sulphate	All except FI37	Bulk	Daily	Ion chromatography	
Nitrate	All except FI37	Bulk	Daily	Ion chromatography	
Ammonium	All except FI37	Bulk	Daily	Ion chromatography	
Magnesium	All except FI37	Bulk	Daily	Ion chromatography	
Sodium	All except FI37	Bulk	Daily	Ion chromatography	
Chloride	All except FI37	Bulk	Daily	Ion chromatography	
Calcium	All except FI37	Bulk	Daily	Ion chromatography	
Potassium	All except FI37	Bulk	Daily	Ion chromatography	
Conductivity	All except FI37	Bulk	Daily	Conductivity meter	
pH	All except FI37	Bulk	Daily	pH meter	
Acidity					
Air					
Sulphur dioxide	All except FI04	NaOH-impregnated Whatman 40 filters, 24 m³/day	Daily	Ion chromatography	
Nitrogen dioxide	All except FI04	Instrumental: Chemiluminescence	Hourly	Chemiluminescence	
Nitric acid					
Ammonia					
Ozone	All except FI04	UV-monitor	Hourly	UV-absorption	
Sulphate	All except FI04	Whatman 40 filter, 24 m³/day	Daily	Ion chromatography	
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate	All except FI04	Whatman 40 + NaOH impregnated Whatman 40 filter, 24 m³/day	Daily	Ion chromatography	
Sum of ammonia and ammonium	All except FI04	Oxalic acid impregnated Whatman 40 filter, 24 m³/day	Daily	Ion chromatography	
Acidity					

Country: France		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All	Wet-only	Daily		
Precipitation amount, official gauge					
Sulphate	All	Wet-only	Daily	Ion chromatography	
Nitrate	All	Wet-only	Daily	Ion chromatography	
Ammonium	All	Wet-only	Daily	Spectrophotometric, Flow injection analysis	
Magnesium	All	Wet-only	Daily	Ion chromatography	
Sodium	All	Wet-only	Daily	Ion chromatography	
Chloride	All	Wet-only	Daily	Ion chromatography	
Calcium	All	Wet-only	Daily	Ion chromatography	
Potassium	All	Wet-only	Daily	Ion chromatography	
Conductivity	All	Wet-only	Daily	Conductivity meter	
pH	All	Wet-only	Daily	pH meter	
Acidity					
Air					
Sulphur dioxide	All	Absorbing solution H ₂ O ₂ , 2.5 m ³ /day	Daily	Ion chromatography	
Nitrogen dioxide					
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	All	Whatman 40 filter, 2.5 m ³ /day	Daily	Ion chromatography	
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					
Acidity					

Country: Germany		Main components and ozone - EMEP	Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method
Precipitation				
Precipitation amount	All	Bulk (daily) at DE02/DE04, wet-only (weekly) at all	Daily / weekly	
Precipitation amount, official gauge				
Sulphate	All	Bulk (daily) at DE02/DE04, wet-only (weekly) at all	Daily / weekly	Ion chromatography
Nitrate	All	Bulk (daily) at DE02/DE04, wet-only (weekly) at all	Daily / weekly	Ion chromatography
Ammonium	All	Bulk (daily) at DE02/DE04, wet-only (weekly) at all	Daily / weekly	Spectrophotometric, Flow injection analysis
Magnesium	All	Bulk (daily) at DE02/DE04, wet-only (weekly) at all	Daily / weekly	Atomic absorption method, addition of lanthanum
Sodium	All	Bulk (daily) at DE02/DE04, wet-only (weekly) at all	Daily / weekly	Atomic absorption method, addition of caesium
Chloride	All	Bulk (daily) at DE02/DE04, wet-only (weekly) at all	Daily / weekly	Ion chromatography
Calcium	All	Bulk (daily) at DE02/DE04, wet-only (weekly) at all	Daily / weekly	Atomic absorption method, addition of lanthanum
Potassium	All	Bulk (daily) at DE02/DE04, wet-only (weekly) at all	Daily / weekly	Atomic absorption method, addition of caesium
Conductivity	All	Bulk (daily) at DE02/DE04, wet-only (weekly) at all	Daily / weekly	Conductivity meter
pH	All	Bulk (daily) at DE02/DE04, wet-only (weekly) at all	Daily / weekly	pH meter
Acidity				
Air				
Sulphur dioxide	All	Absorbing solution TCM, 1.0 m ³ /day	Daily	Pararosanilin method
Nitrogen dioxide	All	Absorbing solution Saltzman, 1 m ³ /day	Daily	Saltzman
Nitric acid				
Ammonia				
Ozone	All	UV-monitor	Hourly	UV-absorption
Sulphate	DE02, DE04	Schleicher & Schüll 589/2L filter, 1.0 m ³ /day	Daily	X-ray fluorescence (XRF)
Nitrate				
Ammonium				
Sodium				
Calcium				
Magnesium				
Potassium				
Chloride				
PM ₁₀	All		Daily	
PM _{2.5}				
Suspended particulate matter				
Sum of nitric acid and nitrate				
Sum of ammonia and ammonium				
Acidity				

Country: Greece		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount					
Precipitation amount, official gauge					
Sulphate					
Nitrate					
Ammonium					
Magnesium					
Sodium					
Chloride					
Calcium					
Potassium					
Conductivity					
pH					
Acidity					
Air					
Sulphur dioxide	GR01	Absorbing solution H ₂ O ₂ , 1.1 m ³ /day	Daily	Ion chromatography	
Nitrogen dioxide	GR01	Absorbing solution TGS, 1.1 m ³ /day	Daily	Spectrophotometric, Griess method	
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	GR01	Whatman 41 filter, 1.1 m ³ /day	Daily	Ion chromatography	
Nitrate	GR01	Whatman 41 filter, 1.1 m ³ /day	Daily	Ion chromatography	
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					
Acidity					

Country: Hungary		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All	Wet-only	Daily		
Precipitation amount, official gauge					
Sulphate	All	Wet-only	Daily	Ion chromatography	
Nitrate	All	Wet-only	Daily	Ion chromatography	
Ammonium	All	Wet-only	Daily	Spectrophotometric, Indophenol method	
Magnesium	All	Wet-only	Daily	Atomic absorption method	
Sodium	All	Wet-only	Daily	Atomic absorption method	
Chloride	All	Wet-only	Daily	Ion chromatography	
Calcium	All	Wet-only	Daily	Atomic absorption method	
Potassium	All	Wet-only	Daily	Atomic absorption method	
Conductivity	All	Wet-only	Daily	Conductivity meter	
pH	All	Wet-only	Daily	pH meter	
Acidity					
Air					
Sulphur dioxide	All	KOH-impregnated Whatman 40 filter, 25 m³/day	Daily	Ion chromatography	
Nitrogen dioxide	All	Iodide method (impregnated glass sinter), 0.7 m³/day	Daily	Spectrophotometric, Griess method	
Nitric acid	All	Teflon filter, Schleicher & Schüll, 1 µm, 25 m³/day	Daily	Ion chromatography	
Ammonia	All	Alkaline impregnated Whatman 40 filter, 25 m³/day	Daily	Spectrophotometric, Indophenol method	
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	All	Teflon filter, Schleicher & Schüll, 1 µm, 25 m³/day	Daily	Ion chromatography	
Nitrate	All	Teflon filter, Schleicher & Schüll, 1 µm, 25 m³/day	Daily	Ion chromatography	
Ammonium	All	Teflon filter, Schleicher & Schüll, 1 µm, 25 m³/day	Daily	Spectrophotometric, Indophenol method	
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate	All	Teflon filter, Schleicher & Schüll, 1 µm, 25 m³/day	Daily	Ion chromatography	
Sum of ammonia and ammonium	All	Alkaline impregnated Whatman 40 filter, 25 m³/day + Teflon filter, Schleicher & Schüll, 1 µm, 25 m³/day	Daily	Spectrophotometric, Indophenol method	
Acidity					

Country: Iceland		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All	Bulk	Daily		
Precipitation amount, official gauge					
Sulphate	All	Bulk	Daily	ICP-AES	
Nitrate					
Ammonium					
Magnesium					
Sodium	All	Bulk	Daily	ICP-AES	
Chloride					
Calcium					
Potassium					
Conductivity	All	Bulk	Daily	Conductivity meter	
pH	All	Bulk	Daily	pH meter	
Acidity					
Air					
Sulphur dioxide					
Nitrogen dioxide					
Nitric acid					
Ammonia					
Ozone					
Sulphate	All	Whatman 40 filter, 30 m³/day	Daily	ICP-AES	
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					
Acidity					

Country: Ireland: IE01 (lab.: Met Eireann)		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	IE01	Bulk	Daily		
Precipitation amount, official gauge					
Sulphate	IE01	Bulk	Daily	Ion chromatography	
Nitrate	IE01	Bulk	Daily	Ion chromatography	
Ammonium	IE01	Bulk	Daily	Ion chromatography	
Magnesium	IE01	Bulk	Daily	Ion chromatography	
Sodium	IE01	Bulk	Daily	Ion chromatography	
Chloride	IE01	Bulk	Daily	Ion chromatography	
Calcium	IE01	Bulk	Daily	Ion chromatography	
Potassium	IE01	Bulk	Daily	Ion chromatography	
Conductivity	IE01	Bulk	Daily	Conductivity meter	
pH	IE01	Bulk	Daily	pH meter	
Acidity					
Air					
Sulphur dioxide	IE01	KOH-impregnated Whatman 40 filter, 20-25 m³/day	Daily	Ion chromatography	
Nitrogen dioxide	IE01	Absorbing solution TGS, 1.5-1.6 m³/day	Daily	Spectrophotometric, Griess method	
Nitric acid					
Ammonia					
Ozone					
Sulphate	IE01	Whatman 40 filter, 20-25 m³/day	Daily	Ion chromatography	
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					
Acidity					

Country: Ireland: IE02, IE03, IE04 (lab.: ESB)		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All	Wet-only	Daily		
Precipitation amount, official gauge					
Sulphate	All	Wet-only	Daily	Ion chromatography	
Nitrate	All	Wet-only	Daily	Ion chromatography	
Ammonium	All	Wet-only	Daily	Ion chromatography	
Magnesium	All	Wet-only	Daily	Ion chromatography	
Sodium	All	Wet-only	Daily	Ion chromatography	
Chloride	All	Wet-only	Daily	Ion chromatography	
Calcium	All	Wet-only	Daily	Ion chromatography	
Potassium	All	Wet-only	Daily	Ion chromatography	
Conductivity	All	Wet-only	Daily	Conductivity meter	
pH	All	Wet-only	Daily	pH meter	
Acidity					
Air					
Sulphur dioxide					
Nitrogen dioxide					
Nitric acid					
Ammonia					
Ozone					
Sulphate	All	Gelman GN-6 MetriceI filter, 20 m³/day	Daily	Ion chromatography	
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					
Acidity					

Country: Italy: IT01 (lab.: CNR)	Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method
Precipitation				
Precipitation amount	IT01	Wet-only	Daily	
Precipitation amount, official gauge				
Sulphate	IT01	Wet-only	Daily	Ion chromatography
Nitrate	IT01	Wet-only	Daily	Ion chromatography
Ammonium	IT01	Wet-only	Daily	Ion chromatography
Magnesium	IT01	Wet-only	Daily	Ion chromatography
Sodium	IT01	Wet-only	Daily	Ion chromatography
Chloride	IT01	Wet-only	Daily	Ion chromatography
Calcium	IT01	Wet-only	Daily	Ion chromatography
Potassium	IT01	Wet-only	Daily	Ion chromatography
Conductivity	IT01	Wet-only	Daily	Conductivity meter
pH	IT01	Wet-only	Daily	pH meter
Acidity				
Air				
Sulphur dioxide	IT01	Diffusion tubes NaCl and Na2CO3 + glycerine, 17 m³/day	Daily	Ion chromatography
Nitrogen dioxide	IT01	Instrumental: Chemiluminescence	Daily	Chemiluminescence
Nitric acid	IT01	Diffusion tubes NaCl, 17 m³/day	Daily	Ion chromatography
Ammonia	IT01	Diffusion tubes coated with phosphorous acid, 17 m³/day	Daily	Ion chromatography
Ozone	IT01	UV-monitor	Hourly	UV-absorption
Sulphate	IT01	Teflon filter Gelman Zeflour 1 µm, 17 m³/day	Daily	Ion chromatography
Nitrate	IT01	Teflon filter Gelman Zeflour 1 µm, 17 m³/day + Nylasorb filter	Daily	Ion chromatography
Ammonium	IT01	Teflon filter Gelman Zeflour 1 µm, 17 m³/day + phosphorous acid impregnated filter	Daily	Ion chromatography
Sodium				
Calcium				
Magnesium				
Potassium				
Chloride				
PM ₁₀				
PM _{2.5}				
Suspended particulate matter				
Sum of nitric acid and nitrate				
Sum of ammonia and ammonium				
Acidity				

Country: Italy, IT04 (lab.: JRC)	Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method
Precipitation				
Precipitation amount	IT04	Wet-only	Daily	
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				
Sodium				
Chloride				
Calcium				
Potassium				
Conductivity				
pH	IT04	Wet-only	Daily	pH meter
Acidity				
Air				
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	Whatman quartz fibre filter QFF, 55 m³/day	Daily	Ion chromatography
Nitrate	IT04	Whatman quartz fibre filter QFF, 55 m³/day	Daily	Ion chromatography
Ammonium	IT04	Whatman quartz fibre filter QFF, 55 m³/day	Daily	Ion chromatography
Sodium				
Calcium				
Magnesium				
Potassium				
Chloride				
PM ₁₀		Whatman quartz fibre filter QFF, 55 m³/day	Daily	Weighing at 50% RH
PM _{2.5}		Whatman quartz fibre filter QFF, 55 m³/day	Daily	Weighing at 50% RH
Suspended particulate matter				
Sum of nitric acid and nitrate				
Sum of ammonia and ammonium				
Acidity	IT04	Whatman quartz fibre filter QFF, 55 m³/day	Daily	pH meter

Country: Latvia		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All	LV16: Bulk, LV10: Wet-only	Daily		
Precipitation amount, official gauge					
Sulphate	All	LV16: Bulk, LV10: Wet-only	Daily	Ion chromatography	
Nitrate	All	LV16: Bulk, LV10: Wet-only	Daily	Ion chromatography	
Ammonium	All	LV16: Bulk, LV10: Wet-only	Daily	Spectrophotometric, Indophenol method	
Magnesium	All	LV16: Bulk, LV10: Wet-only	Daily	Atomic absorption method	
Sodium	All	LV16: Bulk, LV10: Wet-only	Daily	Atomic emission method	
Chloride	All	LV16: Bulk, LV10: Wet-only	Daily	Spectrophotometric, mercury thiocyanate/iron method	
Calcium	All	LV16: Bulk, LV10: Wet-only	Daily	Atomic emission method	
Potassium	All	LV16: Bulk, LV10: Wet-only	Daily	Atomic emission method	
Conductivity	All	LV16: Bulk, LV10: Wet-only	Daily	Conductivity meter	
pH	All	LV16: Bulk, LV10: Wet-only	Daily	pH meter	
Acidity					
Air					
Sulphur dioxide	All	KOH-impregnated Whatman 41 filter, 14-20 m³/day	Daily	Thorin	
Nitrogen dioxide	All	Absorbing KI solution in absorbing tubes with glass granules, 0.2-0.4 m³/day	Daily	Spectrophotometric, Griess method	
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	All	Whatman 41 filter, 14-20 m³/day	Daily	Thorin	
Nitrate	All	Whatman 41 filter, 14-20 m³/day	Daily	Spectrophotometric, Griess after Cd reduction	
Ammonium	All	Whatman 41 filter, 14-20 m³/day	Daily	Spectrophotometric, Indophenol method	
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate	All	KOH-impregnated Whatman 41 filter, 14-20 m³/day	Daily	Spectrophotometric, Griess after Cd reduction	
Sum of ammonia and ammonium	All	Oxalic acid impregnated Whatman 41 filter, 14-20 m³/day	Daily	Spectrophotometric, Indophenol method	
Acidity					

Country: Lithuania		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All	Wet-only	Daily		
Precipitation amount, official gauge					
Sulphate	All	Wet-only	Daily	Ion chromatography	
Nitrate	All	Wet-only	Daily	Ion chromatography	
Ammonium	All	Wet-only	Daily	Spectrophotometric, Indophenol method	
Magnesium					
Sodium	All	Wet-only	Daily	Atomic emission method	
Chloride	All	Wet-only	Daily	Ion chromatography	
Calcium	All	Wet-only	Daily	Atomic absorption method	
Potassium	All	Wet-only	Daily	Atomic emission method	
Conductivity	All	Wet-only	Daily	Conductivity meter	
pH	All	Wet-only	Daily	pH meter	
Acidity					
Air					
Sulphur dioxide	All	KOH-impregnated Whatman 40 filter, 24 m³/day	Daily	Ion chromatography	
Nitrogen dioxide	All	KI-method (glass sinter), 0.4-0.7 m³/day	Daily	Spectrophotometric, Griess method	
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	All	Whatman 40 filter, 24 m³/day	Daily	Ion chromatography	
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate	All	KOH impregnated Whatman 40 filter, 16-17 m³/day	Daily	Ion chromatography	
Sum of ammonia and ammonium	All	Oxalic acid impregnated Whatman 40 filter, 16-17 m³/day	Daily	Spectrophotometric, Indophenol method	
Acidity					

Country: The Netherlands		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All	Wet-only	Daily		
Precipitation amount, official gauge					
Sulphate	All	Wet-only	Daily	Ion chromatography	
Nitrate	All	Wet-only	Daily	Ion chromatography	
Ammonium	All	Wet-only	Daily	Spectrophotometric, Indophenol method, using sodium salicylate instead of phenol	
Magnesium	All	Wet-only	Daily	Plasma emission spectrometry	
Sodium	All	Wet-only	Daily	Plasma emission spectrometry	
Chloride	All	Wet-only	Daily	Ion chromatography	
Calcium	All	Wet-only	Daily	Plasma emission spectrometry	
Potassium	All	Wet-only	Daily	Plasma emission spectrometry	
Conductivity	All	Wet-only	Daily	Conductivity meter	
pH	All	Wet-only	Daily	pH meter	
Acidity					
Air					
Sulphur dioxide	All	Instrumental: UV-fluorescence	Daily	UV-fluorescence	
Nitrogen dioxide	All	Instrumental: Chemiluminescence	Daily	Chemiluminescence	
Nitric acid					
Ammonia	NL10	Absorption in NaHSO ₄ , membrane separation, conductivity measurement	Daily	Spectrophotometric, Indophenol method	
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	All	Whatman 42 filter, 2.5 m ³ /day, filter mounted behind denuder	Daily	Ion chromatography	
Nitrate	All	Whatman 42 filter, 2.5 m ³ /day, filter mounted behind denuder	Daily	Ion chromatography	
Ammonium	All	Whatman 42 filter, 2.5 m ³ /day, filter mounted behind denuder	Daily	Spectrophotometric, Indophenol method	
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					
Acidity					

Country: Norway		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
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	
Acidity					
Air					
Sulphur dioxide	All	KOH-impregnated Whatman 40 filter 25 m³/day	Daily	Ion chromatography	
Nitrogen dioxide	All	NaI-impregnated glass sinters, 0.7 m³/day	Daily	Spectrophotometric, Griess method	
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	All	Teflon filter, Gelman Zefluor 2 µm, 25 m³/day	Daily	Ion chromatography	
Nitrate					
Ammonium					
Sodium	All	Teflon filter, Gelman Zefluor 2 µm, 25 m³/day	Daily	Ion chromatography	
Calcium	All	Teflon filter, Gelman Zefluor 2 µm, 25 m³/day	Daily	Ion chromatography	
Magnesium	All	Teflon filter, Gelman Zefluor 2 µm, 25 m³/day	Daily	Ion chromatography	
Potassium	All	Teflon filter, Gelman Zefluor 2 µm, 25 m³/day	Daily	Ion chromatography	
Chloride	All	Teflon filter, Gelman Zefluor 2 µm, 25 m³/day	Daily	Ion chromatography	
PM ₁₀	NO01	Dichotomous sampler	Daily	by weight	
PM _{2.5}	NO01	Dichotomous sampler	Daily	by weight	
Suspended particulate matter					
Sum of nitric acid and nitrate	All	Aerosol filter as for sulphate + KOH impregnated filter as for SO ₂ , 25 m³/day	Daily	Ion chromatography	
Sum of ammonia and ammonium	All	Aerosol filter as for sulphate + oxalic acid impregnated filter, 25 m³/day	Daily	Spectrophotometric, Indophenol method and IC	
Acidity					

Country: Poland: PL02, PL03, PL04 (lab. IMGW)		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
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	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	
Acidity					
Air					
Sulphur dioxide	All	KOH-impregnated Whatman 40 filter, 3.5-4 m³/day	Daily	Thorin	
Nitrogen dioxide	All	Absorbing solution TGS, 0.7 m³/day	Daily	Spectrophotometric, Griess method	
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	All	Whatman 40 filter, 3.5-4 m³/day	Daily	Thorin	
Nitrate	All	Whatman 40 filter, 3.5-4 m³/day	Daily	Spectrophotometric, Griess after hydrazine reduction	
Ammonium	All	Whatman 40 filter, 3.5-4 m³/day	Daily	Spectrophotometric, Chloramin T	
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate	All	NaF impregnated Whatman 40 filter, 4 m³/day	Daily	Spectrophotometric, Griess after hydrazine reduction	
Sum of ammonia and ammonium	All	Oxalic acid impregnated Whatman 40 filter, 4 m³/day	Daily	Spectrophotometric, Chloramin T	
Acidity					

Country: Poland: PL05 (lab. IEP)		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	PL05	Bulk	Daily		
Precipitation amount, official gauge	PL05	Bulk	Daily		
Sulphate	PL05	Bulk	Daily	Capillary Electrophoresis	
Nitrate	PL05	Bulk	Daily	Capillary Electrophoresis	
Ammonium	PL05	Bulk	Daily	Spectrophotometric, Indophenol method	
Magnesium	PL05	Bulk	Daily	Plasma emission spectrometry	
Sodium	PL05	Bulk	Daily	Plasma emission spectrometry	
Chloride	PL05	Bulk	Daily	Capillary Electrophoresis	
Calcium	PL05	Bulk	Daily	Plasma emission spectrometry	
Potassium	PL05	Bulk	Daily	Atomic emission method	
Conductivity	PL05	Bulk	Daily	Conductivity meter	
pH	PL05	Bulk	Daily	pH meter	
Acidity					
Air					
Sulphur dioxide	PL05	KOH-impregnated Whatman 40 filter, 16 m³/day	Daily	Capillary Electrophoresis	
Nitrogen dioxide	PL05	Iodide method (impregnated glass sinter), 0.7 m³/day	Daily	Spectrophotometric, Griess method	
Nitric acid					
Ammonia					
Ozone	PL05	UV-monitor	Hourly	UV-absorption	
Sulphate	PL05	Teflon filter Gelman Zefluor 2 µm, 16 m³/day	Daily	Capillary Electrophoresis	
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate	PL05	Aerosol Teflon filter (as for sulphate) + NaOH impregnated Whatman 40 filter, 16 m³/day	Daily	Capillary Electrophoresis	
Sum of ammonia and ammonium	PL05	Aerosol Teflon filter (as for sulphate) + Oxalic acid impregnated Whatman 40 filter, 16 m³/day	Daily	Spectrophotometric, Indophenol method	
Acidity					

Country: Portugal		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount					
Precipitation amount, official gauge	All	Bulk			
Sulphate	All	Bulk	Daily	Ion chromatography	
Nitrate	All	Bulk	Daily	Ion chromatography	
Ammonium	All	Bulk	Daily	Spectrophotometric, Indophenol method	
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	
Acidity					
Air					
Sulphur dioxide					
Sulphur dioxide					
Nitrogen dioxide					
Nitric acid					
Ammonia					
Ozone	PT04	UV-monitor	Hourly	UV-absorption	
Sulphate					
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					
Acidity					

Country: Russian Federation		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
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	Atomic absorption method	
Sodium	All	Bulk	Daily	Ion chromatography	
Chloride	All	Bulk	Daily	Ion chromatography	
Calcium	All	Bulk	Daily	Atomic absorption method + addition of lanthanum	
Potassium	All	Bulk	Daily	Ion chromatography	
Conductivity	All	Bulk	Daily	Conductivity meter	
pH	All	Bulk	Daily	pH meter	
Acidity					
Air					
Sulphur dioxide	RU01	NaOH-impregnated Whatman 40 filter, 10-15 m³/day	Daily	UV-fluorescence	
Sulphur dioxide	RU16, RU18	NaOH-impregnated Whatman 40 filter, 10-15 m³/day	Daily	Ion chromatography	
Nitrogen dioxide					
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	All	Whatman 40 filter, 10-15 m³/day	Daily	Ion chromatography	
Nitrate	All	Whatman 40 filter, 10-15 m³/day	Daily	Ion chromatography	
Ammonium	All	Whatman 40 filter, 10-15 m³/day	Daily	Ion chromatography	
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					
Acidity					

Country: Slovakia		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All	SK02: Bulk, SK04, SK05, SK06: Wet-only	Daily		
Precipitation amount, official gauge					
Sulphate	All	SK02: Bulk, SK04, SK05, SK06: Wet-only	Daily	Ion chromatography	
Nitrate	All	SK02: Bulk, SK04, SK05, SK06: Wet-only	Daily	Ion chromatography	
Ammonium	All	SK02: Bulk, SK04, SK05, SK06: Wet-only	Daily	Ion chromatography	
Magnesium	All	SK02: Bulk, SK04, SK05, SK06: Wet-only	Daily	Ion chromatography	
Sodium	All	SK02: Bulk, SK04, SK05, SK06: Wet-only	Daily	Ion chromatography	
Chloride	All	SK02: Bulk, SK04, SK05, SK06: Wet-only	Daily	Ion chromatography	
Calcium	All	SK02: Bulk, SK04, SK05, SK06: Wet-only	Daily	Ion chromatography	
Potassium	All	SK02: Bulk, SK04, SK05, SK06: Wet-only	Daily	Ion chromatography	
Conductivity	All	SK02: Bulk, SK04, SK05, SK06: Wet-only	Daily	Conductivity meter	
pH	All	SK02: Bulk, SK04, SK05, SK06: Wet-only	Daily	pH meter	
Acidity					
Air					
Sulphur dioxide	All	KOH-impregnated Whatman 41 filter, 6-8 m³/day	Daily	Ion chromatography	
Nitrogen dioxide	All	Absorbing solution NaOH and guajacol, 0.5 m³/day	Daily	Spectrophotometric, Griess method	
Nitric acid	All	KOH-impregnated Whatman 41 filter, 6-8 m³/day	Daily	Ion chromatography / Capillary electrophoresis	
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	All	Whatman 40 filter, 6-8 m³/day	Daily	Capillary electrophoresis	
Nitrate	All	Whatman 40 filter, 6-8 m³/day	Daily	Ion chromatography / Capillary electrophoresis	
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate	All	KOH-impregnated Whatman 41 filter, 6-8 m³/day	Daily	Ion chromatography / Capillary electrophoresis	
Sum of ammonia and ammonium					
Acidity					

Country: Slovenia		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount					
Precipitation amount, official gauge					
Sulphate					
Nitrate					
Ammonium					
Magnesium					
Sodium					
Chloride					
Calcium					
Potassium					
Conductivity					
pH					
Acidity					
Air					
Sulphur dioxide	All	KOH-impregnated Whatman 40 filter, 18-24 m³/day	Daily	Ion chromatography	
Nitrogen dioxide					
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	All	Teflon filter, Gelman Zefluor 2 µm, 18-24 m³/day	Daily	Ion chromatography	
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate	All	Aerosol filter as for sulphate + KOH impregnated Whatman 40 filter, 18-24 m³/day	Daily	Ion chromatography	
Sum of ammonia and ammonium	All	Aerosol filter as for sulphate + oxalic acid impregnated Whatman 40 filter, 18-24 m³/day	Daily	Ion chromatography	
Acidity					

Country: Spain		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All	Wet-only	Daily		
Precipitation amount, official gauge					
Sulphate	All	Wet-only	Daily	Ion chromatography	
Nitrate	All	Wet-only	Daily	Ion chromatography	
Ammonium	All	Wet-only	Daily	Spectrophotometric, Indophenol method	
Magnesium	All	Wet-only	Daily	Atomic absorption method + addition of lanthanum	
Sodium	All	Wet-only	Daily	Atomic emission method + addition of caesium	
Chloride	All	Wet-only	Daily	Ion chromatography	
Calcium	All	Wet-only	Daily	Atomic absorption method + addition of lanthanum	
Potassium	All	Wet-only	Daily	Atomic emission method + addition of caesium	
Conductivity	All	Wet-only	Daily	Conductivity meter	
pH	All	Wet-only	Daily	pH meter	
Acidity	All	Wet-only	Daily	Calculated from pH	
Air					
Sulphur dioxide	All	Instrumental: UV-fluorescence	Hourly		
Nitrogen dioxide	All	Instrumental: Chemiluminescence	Hourly		
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	All	Whatman GF/A filter, 770 m³/day	Daily	Ion chromatography	
Nitrate					
Ammonium		Till 31/12/2001			
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀	All	From 03/2001	Daily	Gravimetric method	
PM _{2.5}	All	From 03/2001	Daily	Gravimetric method	
Suspended particulate matter	All	Still being measured	Daily	Gravimetric method	
Sum of nitric acid and nitrate	All	NaOH impregnated Whatman 40 filter, 35 m³/day	Daily	Ion chromatography	
Sum of ammonia and ammonium	All	Oxalic acid impregnated Whatman 40 filter, 35 m³/day	Daily	Spectrophotometric, Indophenol method	
Acidity		Till 31/12/2001			

Country: Sweden		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All	Wet-only	Weekly except SE02; daily at SE02		
Precipitation amount, official gauge					
Sulphate	All	Wet-only	Weekly except SE02; daily at SE02	Ion chromatography	
Nitrate	All	Wet-only	Weekly except SE02; daily at SE02	Ion chromatography	
Ammonium	All	Wet-only	Weekly except SE02; daily at SE02	Spectrophotometric, Flow injection analysis	
Magnesium	All	Wet-only	Weekly except SE02; daily at SE02	Ion chromatography	
Sodium	All	Wet-only	Weekly except SE02; daily at SE02	Ion chromatography	
Chloride	All	Wet-only	Weekly except SE02; daily at SE02	Ion chromatography	
Calcium	All	Wet-only	Weekly except SE02; daily at SE02	Ion chromatography	
Potassium	All	Wet-only	Weekly except SE02; daily at SE02	Ion chromatography	
Conductivity	All	Wet-only	Weekly except SE02; daily at SE02	Conductivity meter	
pH	All	Wet-only	Weekly except SE02; daily at SE02	pH meter	
Acidity					
Air					
Sulphur dioxide	All	KOH-impregnated Whatman 40 filter, 20 m³/day	Daily	Ion chromatography	
Nitrogen dioxide	All	Nal-impregnated glass sinters, ~0.7 m³/day	Daily	Spectrophotometric, Flow Injection Analysis	
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	All	Teflon filter, Gelman Zefluor 2 µm, 20 m³/day	Daily	Ion chromatography	
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀		TEOM (Tapered Element Oscillating Microbalance	Hourly	TEOM	
PM _{2.5}		TEOM (Tapered Element Oscillating Microbalance	Hourly	TEOM	
Suspended particulate matter	All	Black smoke on Whatman-filter	Daily	Reflectance	
Sum of nitric acid and nitrate	All except SE08	Aerosol filter as for sulphate + KOH-impregnated Whatman 40 filter, 20 m³/day	Daily	Ion chromatography	
Sum of ammonia and ammonium	All except SE08	Aerosol filter as for sulphate + Oxalic acid impregnated Whatman 40 filter, 20 m³/day	Daily	Flow injection analysis	
Acidity					

Country: Switzerland		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All	Wet-only	Daily at CH02, CH05; weekly at CH04		
Precipitation amount, official gauge					
Sulphate	All	Wet-only	Daily at CH02, CH05; weekly at CH04	Ion chromatography	
Nitrate	All	Wet-only	Daily at CH02, CH05; weekly at CH04	Ion chromatography	
Ammonium	All	Wet-only	Daily at CH02, CH05; weekly at CH04	Ion chromatography	
Magnesium	All	Wet-only	Daily at CH02, CH05; weekly at CH04	Ion chromatography	
Sodium	All	Wet-only	Daily at CH02, CH05; weekly at CH04	Ion chromatography	
Chloride	All	Wet-only	Daily at CH02, CH05; weekly at CH04	Ion chromatography	
Calcium	All	Wet-only	Daily at CH02, CH05; weekly at CH04	Ion chromatography	
Potassium	All	Wet-only	Daily at CH02, CH05; weekly at CH04	Ion chromatography	
Conductivity	All	Wet-only	Daily at CH02, CH05; weekly at CH04	Conductivity meter	
pH	All	Wet-only	Daily at CH02, CH05; weekly at CH04	pH meter	
Acidity					
Air					
Sulphur dioxide	CH01	Absorbing solution H ₂ O ₂ , 4.1 m ³ /day	Daily	Ion chromatography	
Sulphur dioxide	CH02, CH04, CH05	Instrumental: UV-fluorescence	Daily	UV-fluorescence	
Nitrogen dioxide	CH01	Chemiluminescence (Cranox)	Daily	Chemiluminescence (Cranox)	
Nitrogen dioxide	CH02, CH03, CH04, CH05	Chemiluminescence	Daily	Chemiluminescence	
Nitric acid					
Ammonia					
Ozone	All	UV-monitor	Hourly	UV-absorption	
Sulphate	CH02, CH05	Schleicher & Schüll filter 589/4, 3.6 m ³ /day (regularly checked against IC)	Daily	X-ray fluorescence (XRF)	
Sulphate	CH01	Schleicher & Schüll filter 589/4, 4.1 m ³ /day (regularly checked against IC)	Daily	X-ray fluorescence (XRF)	
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀	All		Daily		
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate	CH05	NaOH impregnated Schleicher & Schüll 589/4 filter, 18 m ³ /day	Daily	Ion chromatography	
Sum of ammonia and ammonium	CH05	Citric acid impregnated Schleicher & Schüll 589/4 filter, 18 m ³ /day	Daily	Ion chromatography	
Acidity					

Country: Turkey		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All	Wet-only	Daily		
Precipitation amount, official gauge					
Sulphate	All	Wet-only	Daily	Ion chromatography	
Nitrate	All	Wet-only	Daily	Ion chromatography	
Ammonium	All	Wet-only	Daily	Spectrophotometric, Indophenol method	
Magnesium	All	Wet-only	Daily	Atomic absorption method	
Sodium	All	Wet-only	Daily	Atomic absorption method	
Chloride	All	Wet-only	Daily	Ion chromatography	
Calcium	All	Wet-only	Daily	Atomic absorption method	
Potassium	All	Wet-only	Daily	Atomic absorption method	
Conductivity	All	Wet-only	Daily	Conductivity meter	
pH	All	Wet-only	Daily	pH meter	
Acidity					
Air					
Sulphur dioxide	All	KOH-impregnated Whatman 40 filter, 27 m ³ /day	Daily	Ion chromatography	
Nitrogen dioxide	All	NaI-impregnated glass sinters, 0.72 m ³ /day	Daily	Spectrophotometric, Griess method	
Nitric acid					
Ammonia					
Ozone					
Sulphate	All	Teflon filter, Gelman Zefluor 2 µm, 27 m ³ /day	Daily	Ion chromatography	
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate	All	KOH-impregnated Whatman 40 filter, Teflon filter, Gelman Zeflour 2 µm, 27 m ³ /day	Daily	Ion chromatography	
Sum of ammonia and ammonium	All	Citric acid impregnated Whatman 40 filter, Teflon filter, Gelman Zeflour 2 µm, 27 m ³ /day	Daily	Spectrophotometric, Indophenol method	
Acidity					

Country: United Kingdom		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount		Bulk collector	Weekly then fortnightly		
Precipitation amount, official gauge					
Sulphate		Bulk collector	Weekly then fortnightly	Ion chromatography	
Nitrate		Bulk collector	Weekly then fortnightly	Ion chromatography	
Ammonium		Bulk collector	Weekly then fortnightly	Ion chromatography	
Magnesium		Bulk collector	Weekly then fortnightly	Ion chromatography	
Sodium		Bulk collector	Weekly then fortnightly	Ion chromatography	
Chloride		Bulk collector	Weekly then fortnightly	Ion chromatography	
Calcium		Bulk collector	Weekly then fortnightly	Ion chromatography	
Potassium		Bulk collector	Weekly then fortnightly	Ion chromatography	
Conductivity		Bulk collector	Weekly then fortnightly	Conductivity meter	
pH		Bulk collector	Weekly then fortnightly	pH meter	
Acidity					
Air					
Sulphur dioxide		Filter pack	Fortnightly	Ion chromatography	
Nitrogen dioxide		Automatic monitor	Hourly	Chemiluminescence	
Nitric acid		Note 1			
Ammonia		Note 1			
Ozone		UV-monitor	Hourly	UV-absorption	
Sulphate		Whatman 41 filter, 1.1 m ³ /day	Daily	Ion chromatography	
Nitrate		Note 1	Monthly		
Ammonium		Note 1	Monthly		
Sodium		Note 1	Monthly		
Calcium		Note 1	Monthly		
Magnesium		Note 1	Monthly		
Potassium		Note 1	Monthly		
Chloride		Note 1	Monthly		
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate	GB02	Note 2			
Sum of ammonia and ammonium	GB02	Note 2			
Acidity					

Note 1 These constituents of aerosol and gaseous species are made a number of sites in the UK. The concentrations have not yet been reported. Should the UK report them this year?

Note 2 The TIN TIA measurements were discontinued before 2001

Country: Serbia and Montenegro		Main components and ozone - EMEP		Year: 2001	
	Station	Sampling	Sampling frequency	Analysis method	
Precipitation					
Precipitation amount	All	Bulk	Daily		
Precipitation amount, official gauge					
Sulphate	All	Bulk	Daily	Thorin	
Nitrate	All	Bulk	Daily	Spectrophotometric, Griess method, Cd reduction	
Ammonium	All	Bulk	Daily	Spectrophotometric, Indophenol method	
Magnesium	All	Bulk	Daily	Atomic absorption method	
Sodium	All	Bulk	Daily	Atomic absorption method	
Chloride	All	Bulk	Daily	Spectrophotometric, mercury thiocyanate/iron method	
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	
Acidity					
Air					
Sulphur dioxide	All	Absorbing solution TCM, 1.6-2.5 m³/day	Daily	Pararosanilin method	
Nitrogen dioxide	All	Absorbing solution TGS, 1.6-2.5 m³/day	Daily	Spectrophotometric, Griess method	
Nitric acid					
Ammonia					
Ozone					
Sulphate					
Nitrate					
Ammonium					
Sodium					
Calcium					
Magnesium					
Potassium					
Chloride					
PM ₁₀					
PM _{2.5}					
Suspended particulate matter					
Sum of nitric acid and nitrate					
Sum of ammonia and ammonium					
Acidity					

Annex 5

List of data reports

Data Report October 1977-September 1978.
EMEP/CCC-Report 3/80 by J. Schaug, H. Dovland, J.E. Skjelmoen.
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Data Report October 1978-September 1979.
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EMEP/CCC-Report 5/84 by J.E. Skjelmoen, J. Schaug.
Lillestrøm, Norwegian Institute for Air Research, 1984.

Data Report October 1980-September 1981.
EMEP/CCC-Report 6/84 by J.E. Skjelmoen, J. Schaug.
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EMEP/CCC-Report 2/85 by K. Nodop, J.E. Skjelmoen, J. Schaug.
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Lillestrøm, Norwegian Institute for Air Research, 1986.

Data Report January 1983-December 1983.
EMEP/CCC-Report 5/86 by J. Schaug, A. Harstad, T. Krognnes, J.E. Skjelmoen.
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Data Report January 1984-June 1984.
EMEP/CCC-Report 1/87 by J. Schaug, J. Pacyna, A. Harstad, T. Krognnes,
J.E. Skjelmoen.
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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

$$\overline{c_a} - 2sd_a \text{ and } \overline{c_a} + 2sd_a$$

and between

$$\frac{\overline{c_g}}{sd_g^2} \text{ and } \overline{c_g} \cdot sd_g^2$$

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 $\overline{c_a}$ is the arithmetic mean value used for air components only, and N is number of days with data:

$$\overline{c_a} = \frac{I}{N} \sum_i c_i$$

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

$$sd_a = \left(\frac{\sum_i (c_i - \overline{c_a})^2}{N - 1} \right)^{\frac{1}{2}}$$

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

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

$$\overline{c_g} = \exp(\overline{\ln c})$$

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% is the 5 percentile computed from the histogram of the daily results. The data have been divided into 30 classes of equal size with the addition of two extreme classes. The 5 percentile has been computed by linear interpolation of the two closest class marks. The percentile has been computed for air components only.

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

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

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

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,

0.05 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 accuracy in the laboratory, for the very lowest concentrations of the main components in precipitation follow the WMO GAW (1992) recommendations for regional stations:

	Accuracy	
SO ₄ ²⁻	0.032 mg S/l	(1 µmol/l)
NO ₃ ⁻	0.014 mg N/l	(1 µmol/l)
NH ₄ ⁺	0.028 mg N/l	(2 µmol/l)
Cl ⁻	0.107 mg Cl/l	(3 µmol/l)
Ca ²⁺	0.012 mg Ca/l	(0.3 µmol/l)
K ⁺	0.012 mg K/l	(0.3 µmol/l)
Mg ²⁺	0.007 mg Mg/l	(0.3 µmol/l)
Na ⁺	0.007 mg Na/l	(0.3 µmol/l)

The targets for the wet analysis of components extracted from air filters are the same as for precipitation. For SO₂ the limit above for sulphate is valid for the medium volume method with impregnated filter. For NO₂ determined as NO₂⁻ in solution the accuracy for the lowest concentrations is 0.01 mg N/l.

The aim for data completeness is valid for the current definition used by the CCC. This definition will, however, be harmonised with the WMO GAW definition and modified.

It is understood that there is a need to investigate additional uncertainty caused by local influence on the measurements at the sites (not representative siting).

It may be necessary to reconsider the DQO for volatile organic components (VOC), persistent organic pollutants (POP), and trace metals (HM).