Summary statistics EMEP laboratory intercalibration Round 37

Sulphur dioxide and nitric acid on impregnated filters (B-samples)

Sample	Component	Unit	N	Expected value	Mean value	Median	Standard deviation	RSD (%)
B1	SO2	ug S/filter	16	8.42	7.4	8.09	2.61	35.4
B2	SO2	ug S/filter	16	10.4	8.60	10.06	3.64	42.3
B3	SO2	ug S/filter	16	20.4	17.24	19.31	6.09	35.4
B4	SO2	ug S/filter	16	16.4	14.23	16.01	5.03	35.3
B1	HNO3	ug N/filter	15	7.53	7.48	7.61	0.51	6.8
B2	HNO3	ug N/filter	15	6.87	6.31	6.73	1.41	22.4
B3	HNO3	ug N/filter	15	15.71	15.08	15.38	0.64	4.3
B4	HNO3	ug N/filter	15	12.76	12.41	12.50	0.55	4.4

Nitrogen dioxide in absorbing solution (C-samples)

Sample	Component	Unit	N	Expected value	Mean value	Median	Standard deviation	RSD (%)
C1	NO2	ug N/ml	26	0.288	0.294	0.293	0.008	2.7
C2	NO2	ug N/ml	26	0.272	0.271	0.271	0.007	2.8
C3	NO2	ug N/ml	27	0.1	0.1	0.1	0.003	3.3
C4	NO2	ug N/ml	26	0.092	0.092	0.092	0.004	4.3

Ammonia on impregnated filters (J-samples)

Sample	Component	Unit	N	Expected value	Mean value	Median	Standard deviation	RSD (%)
J2	NH3	ug N/filter	16	19.6	19.482	19.5	1.581	8.1
J4	NH3	ug N/filter	16	21.3	20.923	20.758	1.383	6.6
J5	NH3	ug N/filter	16	23.3	22.667	22.559	1.473	6.5
J6	NH3	ug N/filter	16	18.8	18.196	18.325	1.912	10.5

Precipitation (G-samples)

Sample	Component	Unit	N	Expected value	Mean value	Median	Standard deviation	RSD (%)
G1	SO4	mg S/l	48	0.209	0.206	0.206	0.021	10.2
G2	SO4	mg S/l	47	0.22	0.214	0.215	0.014	6.5
G3	SO4	mg S/l	49	0.419	0.413	0.419	0.04	9.7
G4	SO4	mg S/l	49	0.422	0.419	0.422	0.038	9.2
G1	NH4	mg N/l	46	0.08	0.082	0.081	0.01	12.4
G2	NH4	mg N/l	48	0.16	0.164	0.162	0.015	8.9
G3	NH4	mg N/l	47	0.401	0.412	0.41	0.022	5.3
G4	NH4	mg N/l	48	0.454	0.464	0.462	0.024	5.2
G1	NO3	mg N/l	47	0.149	0.149	0.149	0.009	5.8
G2	NO3	mg N/l	47	0.267	0.253	0.263	0.051	20.2
G3	NO3	mg N/l	48	0.547	0.538	0.548	0.077	14.3
G4	NO3	mg N/l	48	0.635	0.625	0.635	0.091	14.5
G1	Na	mg/l	49	0.268	0.262	0.263	0.014	5.4
G2	Na	mg/l	50	0.39	0.379	0.379	0.017	4.5
G3	Na	mg/l	48	0.891	0.867	0.871	0.033	3.8
G4	Na	mg/l	48	1.06	1.03	1.033	0.039	3.8
G1	Mg	mg/l	45	0.083	0.081	0.083	0.008	10.0
G2	Mg	mg/l	46	0.062	0.059	0.061	0.007	11.2
G3	Mg	mg/l	48	0.206	0.205	0.206	0.014	6.7
G4	Mg	mg/l	47	0.175	0.175	0.178	0.011	6.2
G1	Cl	mg/l	46	0.347	0.336	0.34	0.022	6.6
G2	Cl	mg/l	48	0.502	0.484	0.494	0.036	7.5
G3	Cl	mg/l	48	1.24	1.19	1.2	0.049	4.1
G4	Cl	mg/l	47	1.47	1.422	1.424	0.054	3.8
G1	Ca	mg/l	48	0.115	0.115	0.114	0.019	16.1
G2	Ca	mg/l	49	0.153	0.148	0.148	0.023	15.5
G3	Ca	mg/l	49	0.153	0.155	0.152	0.027	17.7
G4	Ca	mg/l	49	0.204	0.201	0.203	0.025	12.3
G1	K	mg/l	46	0.119	0.112	0.114	0.01	8.9
G2	K	mg/l	48	0.187	0.178	0.18	0.012	6.6
G3	K	mg/l	48	0.255	0.251	0.253	0.013	5.2
G4	K	mg/l	49	0.323	0.315	0.318	0.02	6.4
G1	pH	pH-unit	47	5.49	5.488	5.49	0.15	2.7
G2	pH	pH-unit	47	5.48	5.486	5.48	0.142	2.6
G3	pH	pH-unit	47	5.45	5.43	5.44	0.12	2.2
G4	pH	pH-unit	44	5.43	5.41	5.41	0.088	1.6
G1	Cond.	µS/cm	47	5.96	6.058	5.96	0.77	12.7
G2	Cond.	µS/cm	47	7.8	7.951	7.8	1.189	15.0
G3	Cond.	µS/cm	47	14.47	14.818	14.87	0.703	4.7
G4	Cond.	µS/cm	46	16.4	16.524	16.595	0.684	4.1

Heavy metals in precipitation (H-samples)

Sample	Component	Unit	N	Expected value	Mean value	Median	Standard deviation	RSD (%)
H1	Arsenic	µg/l	24	0.1	0.105	0.102	0.025	24.2
H2	Arsenic	µg/l	25	0.15	0.159	0.155	0.028	17.6
H3	Arsenic	µg/l	30	0.2	0.199	0.201	0.05	24.9
H4	Arsenic	µg/l	31	0.3	0.304	0.309	0.059	19.3
H1	Cadmium	µg/l	30	0.035	0.035	0.035	0.005	14.8
H2	Cadmium	µg/l	33	0.045	0.045	0.045	0.006	14.5
H3	Cadmium	µg/l	35	0.06	0.059	0.06	0.007	11.8
H4	Cadmium	µg/l	35	0.07	0.071	0.071	0.009	12.5
H1	Chromium	µg/l	22	0.1	0.107	0.101	0.026	24.7
H2	Chromium	µg/l	22	0.15	0.157	0.15	0.023	14.5
H3	Chromium	µg/l	25	0.3	0.296	0.3	0.036	12.3
H4	Chromium	µg/l	27	0.4	0.405	0.4	0.028	7.0
H1	Copper	µg/l	33	0.7	0.694	0.703	0.056	8.1
H2	Copper	µg/l	34	0.9	0.883	0.892	0.1	11.3
H3	Copper	µg/l	35	1.1	1.103	1.11	0.106	9.6
H4	Copper	µg/l	37	1.2	1.164	1.205	0.26	22.3
H1	Lead	µg/l	35	0.45	0.425	0.446	0.082	19.3
H2	Lead	µg/l	35	0.55	0.519	0.541	0.09	17.3
H3	Lead	µg/l	35	0.8	0.792	0.79	0.09	11.4
H4	Lead	µg/l	36	0.9	0.869	0.887	0.118	13.6
H1	Nickel	µg/l	29	0.4	0.383	0.395	0.064	16.6
H2	Nickel	µg/l	30	0.5	0.485	0.493	0.049	10.2
H3	Nickel	µg/l	31	0.7	0.687	0.7	0.074	10.7
H4	Nickel	µg/l	30	0.8	0.807	0.811	0.059	7.4
H1	Zinc	µg/l	36	6	6.029	6.01	0.759	12.6
H2	Zinc	µg/l	36	7	7.121	7	0.852	12.0
H3	Zinc	µg/l	36	8	8.333	8.078	1.015	12.2
H4	Zinc	µg/l	36	9	9.25	9.117	0.981	10.6