

## Summary statistics EMEP laboratory intercalibration Round 43 - 2025

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

Sample	Component	Unit	N	Expected value	Mean value	Median	Standard deviation	RSD (%)
B2	SO2	ug S/filter	15	14.0	12.5	12.4	2.22	17.8
B3	SO2	ug S/filter	15	15.2	15.0	14.8	1.89	12.6
B5	SO2	ug S/filter	15	19.2	18.4	18.0	2.17	11.8
B6	SO2	ug S/filter	16	21.2	19.2	19.2	3.17	16.5
B2	HNO3	ug N/filter	15	11.5	10.1	10.2	0.574	5.7
B3	HNO3	ug N/filter	15	12.4	11.9	11.9	0.562	4.7
B5	HNO3	ug N/filter	15	15.7	15.6	15.8	1.12	7.2
B6	HNO3	ug N/filter	16	17.3	17.0	17.1	1.07	6.3

### Nitrogen dioxide in absorbing solution (C-samples)

Sample	Component	Unit	N	Expected value	Mean value	Median	Standard deviation	RSD (%)
C1	NO2	ug N/ml	23	0.107	0.104	0.107	0.012	11.5
C2	NO2	ug N/ml	23	0.115	0.111	0.117	0.019	17.3
C3	NO2	ug N/ml	23	0.147	0.142	0.150	0.027	19.4
C4	NO2	ug N/ml	23	0.187	0.186	0.189	0.021	11.1

### Ammonia on impregnated filters (J-samples)

Sample	Component	Unit	N	Expected value	Mean value	Median	Standard deviation	RSD (%)
J1	NH3	ug N/filter	17	3.91	3.91	3.95	0.506	12.9
J2	NH3	ug N/filter	17	4.71	4.603	4.54	0.426	9.3
J4	NH3	ug N/filter	17	9.12	9.22	9.245	0.72	7.8
J5	NH3	ug N/filter	17	6.32	6.04	6.01	0.54	8.9

## Precipitation (G-samples)

Sample	Component	Unit	N	Expected value	Mean value	Median	Standard deviation	RSD (%)
G1	SO4	mg S/l	48	0.320	0.313	0.312	0.012	3.7
G2	SO4	mg S/l	48	0.337	0.326	0.327	0.013	4.1
G3	SO4	mg S/l	48	0.343	0.334	0.336	0.013	3.8
G4	SO4	mg S/l	48	0.305	0.298	0.298	0.012	4.0
G1	NH4	mg N/l	46	0.086	0.086	0.087	0.009	10.1
G2	NH4	mg N/l	46	0.086	0.086	0.087	0.011	12.9
G3	NH4	mg N/l	46	0.112	0.107	0.107	0.013	12.6
G4	NH4	mg N/l	46	0.147	0.144	0.143	0.014	9.9
G1	NO3	mg N/l	49	0.194	0.187	0.189	0.010	5.6
G2	NO3	mg N/l	48	0.313	0.300	0.303	0.013	4.4
G3	NO3	mg N/l	47	0.255	0.247	0.25	0.010	3.9
G4	NO3	mg N/l	49	0.334	0.326	0.328	0.022	6.8
G1	Na	mg/l	51	0.891	0.855	0.867	0.049	5.7
G2	Na	mg/l	52	0.966	0.933	0.948	0.058	6.2
G3	Na	mg/l	52	1.40	1.35	1.38	0.096	7.1
G4	Na	mg/l	51	1.37	1.31	1.34	0.080	6.1
G1	Mg	mg/l	47	0.108	0.107	0.108	0.005	4.9
G2	Mg	mg/l	47	0.113	0.111	0.112	0.007	5.8
G3	Mg	mg/l	49	0.100	0.100	0.100	0.007	6.6
G4	Mg	mg/l	49	0.091	0.091	0.091	0.006	6.7
G1	Cl	mg/l	49	1.20	1.18	1.18	0.052	4.4
G2	Cl	mg/l	49	1.12	1.10	1.10	0.055	5.0
G3	Cl	mg/l	49	1.93	1.90	1.91	0.064	3.4
G4	Cl	mg/l	48	1.81	1.78	1.79	0.054	3.0
G1	Ca	mg/l	47	0.134	0.137	0.131	0.022	16.1
G2	Ca	mg/l	48	0.139	0.139	0.136	0.019	13.5
G3	Ca	mg/l	47	0.124	0.124	0.119	0.017	13.5
G4	Ca	mg/l	46	0.112	0.112	0.109	0.013	11.6
G1	K	mg/l	50	0.109	0.107	0.104	0.013	11.9
G2	K	mg/l	51	0.227	0.219	0.219	0.018	8.2
G3	K	mg/l	51	0.143	0.140	0.139	0.015	10.5
G4	K	mg/l	52	0.187	0.182	0.181	0.015	8.2
G1	pH	pH units	44	5.28	5.31	5.28	0.126	2.4
G2	pH	pH units	46	5.26	5.26	5.26	0.127	2.4
G3	pH	pH units	46	5.14	5.15	5.14	0.154	3.0

G4	pH	pH units	46	5.17	5.17	5.17	0.136	2.6
G1	Cond	uS/cm	45	10.1	10.4	10.5	0.492	4.7
G2	Cond	uS/cm	45	11.2	11.4	11.5	0.537	4.7
G3	Cond	uS/cm	46	14.3	14.3	14.4	0.894	6.3
G4	Cond	uS/cm	46	14.0	14.3	14.3	1.13	7.9

### Heavy metals in precipitation (H-samples)

Sample	Component	Unit	N	Expected value	Mean value	Median	Standard deviation	RSD (%)
H1	As	ug/l	32	0.267	0.273	0.273	0.029	10.5
H2	As	ug/l	32	0.412	0.41	0.413	0.037	9.1
H3	As	ug/l	32	0.243	0.25	0.25	0.027	10.6
H4	As	ug/l	33	0.328	0.33	0.334	0.044	13.3
H1	Cd	ug/l	37	0.034	0.037	0.035	0.013	36.5
H2	Cd	ug/l	36	0.024	0.029	0.025	0.014	50.4
H3	Cd	ug/l	37	0.029	0.032	0.029	0.013	40.6
H4	Cd	ug/l	37	0.033	0.036	0.033	0.013	35.1
H1	Cr	ug/l	34	0.291	0.279	0.284	0.069	24.7
H2	Cr	ug/l	35	0.364	0.351	0.358	0.081	23.0
H3	Cr	ug/l	33	0.243	0.238	0.236	0.065	27.5
H4	Cr	ug/l	35	0.328	0.321	0.324	0.071	22.2
H1	Cu	ug/l	34	0.315	0.295	0.309	0.089	30.0
H2	Cu	ug/l	35	0.437	0.397	0.419	0.098	24.8
H3	Cu	ug/l	35	0.364	0.335	0.349	0.087	25.8
H4	Cu	ug/l	35	0.459	0.436	0.45	0.106	24.4
H1	Pb	ug/l	39	1.21	1.12	1.19	0.215	19.3
H2	Pb	ug/l	40	1.07	1.12	1.05	0.904	80.8
H3	Pb	ug/l	40	1.12	1.09	1.09	0.386	35.5
H4	Pb	ug/l	40	1.51	1.54	1.49	0.709	46.2
H1	Ni	ug/l	36	0.34	0.357	0.339	0.121	33.9
H2	Ni	ug/l	36	0.364	0.367	0.356	0.138	37.6
H3	Ni	ug/l	36	0.388	0.395	0.38	0.136	34.3
H4	Ni	ug/l	36	0.655	0.662	0.65	0.164	24.8
H1	Zn	ug/l	31	4.85	5.18	5.07	0.463	8.9
H2	Zn	ug/l	32	5.09	5.29	5.30	0.851	16.1
H3	Zn	ug/l	31	5.34	5.56	5.48	0.442	7.9

H4	Zn	ug/l	31	6.22	6.54	6.38	0.614	9.4
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