

EMEP – 43rd intercomparison of analytical methods - 2025

Laboratory 3, Czech Hydrometeorological Institute, Praha (Czech Republic)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	3.796	3.91	3.908	0.506	-0.22	S
J2		4.529	4.71	4.603	0.426	-0.176	S
J4		9.659	9.12	9.215	0.72	0.615	S
J5		6.139	6.32	6.037	0.54	0.19	S

[¥] Reported values are blank corrected. Corrections are done by subtracting the average blank value when a value was reported or 1/2MDL when MDL was reported.

^{*} Z score is unitless

[¤] EMEP quality norm; letters indicate:

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Laboratory 4, Aarhus University, Department of Environmental Science
(Denmark)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value †	Expected value	Mean value	Standard deviation	Z score *	EMEP quality norm ‡
J1	NH ₃	3.455	3.91	3.908	0.506	-0.895	S
J2		4.215	4.71	4.603	0.426	-0.911	S
J4	µg N/filter	8.955	9.12	9.215	0.72	-0.362	S
J5		5.655	6.32	6.037	0.54	-0.707	S

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Laboratory 5, Finnish Meteorological Institute, Atmospheric Composition, Air Quality (Finland)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value †	Expected value	Mean value	Standard deviation	Z score *	EMEP quality norm ‡
J1	NH ₃	3.955	3.91	3.908	0.506	0.094	S
J2		4.405	4.71	4.603	0.426	-0.465	S
J4	µg N/filter	8.865	9.12	9.215	0.72	-0.487	S
J5		5.765	6.32	6.037	0.54	-0.503	S

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Laboratory 6, SGS France - EHS (France)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	3.232	3.91	3.908	0.506	-1.336	S
J2		4.101	4.71	4.603	0.426	-1.179	S
J4		8.291	9.12	9.215	0.72	-1.284	S
J5		5.084	6.32	6.037	0.54	-1.764	S

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Laboratory 8, Umweltbundesamt, Langen (Germany)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	4.4	3.91	3.908	0.506	0.974	S
J2		5.11	4.71	4.603	0.426	1.189	S
J4		9.58	9.12	9.215	0.72	0.506	S
J5		6.6	6.32	6.037	0.54	1.042	S

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Laboratory 10, Air Quality Reference Centre (Hungary)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	4.426	3.91	3.908	0.506	1.024	S
J2		5.327	4.71	4.603	0.426	1.7	S
J4		10.624	9.12	9.215	0.72	1.956	S
J5		7	6.32	6.037	0.54	1.782	S

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Laboratory 13, C.N.R. Istituto Inquinamento Atmosferico(Italy)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	3.002	3.91	3.908	0.506	-1.791	Q
J2		4.583	4.71	4.603	0.426	-0.048	S
J4		8.693	9.12	9.215	0.72	-0.725	S
J5		5.23	6.32	6.037	0.54	-1.494	S

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Laboratory 15, NILU (Norway)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	3.592	3.91	3.908	0.506	-0.623	S
J2		4.643	4.71	4.603	0.426	0.092	S
J4		9.062	9.12	9.215	0.72	-0.212	S
J5		5.982	6.32	6.037	0.54	-0.101	S

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Laboratory 16, Institute of Meteorology and Water Management, Warsaw (Poland)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value †	Expected value	Mean value	Standard deviation	Z score *	EMEP quality norm ‡
J1	NH ₃	4.29	3.91	3.908	0.506	0.756	S
J2		4.37	4.71	4.603	0.426	-0.548	S
J4	µg N/filter	9.26	9.12	9.215	0.72	0.062	S
J5		6.6	6.32	6.037	0.54	1.042	S

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Laboratory 19, Centro Nacional de Sanidad Ambiental (Spain)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	1.845	3.91	3.908	0.506	-4.079	U
J2		2.039	4.71	4.603	0.426	-6.018	U
J4		6.316	9.12	9.215	0.72	-4.026	Q
J5		3.594	6.32	6.037	0.54	-4.522	U

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Laboratory 31, Slovak Hydrometeorological Institute (Slovakia)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	3.957	3.91	3.908	0.506	0.097	S
J2		4.51	4.71	4.603	0.426	-0.22	S
J4		8.591	9.12	9.215	0.72	-0.868	S
J5		5.535	6.32	6.037	0.54	-0.93	S

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Laboratory 33, Latvian Environment, Geology and Meteorology Centre (Latvia)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	3.95	3.91	3.908	0.506	0.085	S
J2		5.405	4.71	4.603	0.426	1.883	S
J4		9.245	9.12	9.215	0.72	0.042	S
J5		6.005	6.32	6.037	0.54	-0.058	S

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Laboratory 34, Ministry of Environment and Urbanisation (Turkey)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	3.088	3.91	3.908	0.506	-1.621	Q
J2		3.942	4.71	4.603	0.426	-1.552	S
J4		7.547	9.12	9.215	0.72	-2.317	S
J5		5.511	6.32	6.037	0.54	-0.974	S

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Laboratory 35, Meteorological and Hydrological Service of Croatia (Croatia)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	4.411	3.91	3.908	0.506	0.995	S
J2		4.942	4.71	4.603	0.426	0.795	S
J4		9.675	9.12	9.215	0.72	0.638	S
J5		6.447	6.32	6.037	0.54	0.759	S

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Laboratory 38, Estonian Environmental Research Centre, Tallinn (Estonia)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	4.66	3.91	3.908	0.506	1.488	S
J2		4.84	4.71	4.603	0.426	0.555	S
J4		9.88	9.12	9.215	0.72	0.923	S
J5		6.78	6.32	6.037	0.54	1.375	S

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Laboratory 39, Central Environmental Analysis Laboratory - CentLab (Poland)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	4.49	3.91	3.908	0.506	1.152	S
J2		4.03	4.71	4.603	0.426	-1.346	S
J4		10.06	9.12	9.215	0.72	1.173	S
J5		6.16	6.32	6.037	0.54	0.228	S

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Laboratory 158, Asia Center for Air Pollution Research (ACAP) (Japan)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	3.845	3.91	3.908	0.506	-0.124	S
J2		4.765	4.71	4.603	0.426	0.379	S
J4		9.525	9.12	9.215	0.72	0.43	S
J5		6.225	6.32	6.037	0.54	0.348	S

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Laboratory 200, FUB AG (Switzerland)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J1	NH ₃ <i>µg N/filter</i>	3.88	3.91	3.908	0.506	-0.055	S
J2		4.54	4.71	4.603	0.426	-0.149	S
J4		9.15	9.12	9.215	0.72	-0.091	S
J5		5.91	6.32	6.037	0.54	-0.235	S

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