

EMEP – 42nd intercomparison of analytical methods - 2024

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 [¤]
J2	NH ₃ <i>µg N/filter</i>	9.447	9.52	9.002	0.921	0.484	S
J3		8.592	8.72	8.277	0.551	0.574	S
J4		4.611	4.51	4.134	0.351	1.356	S
J5		5.609	5.81	5.336	0.649	0.422	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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Please check the EMEP intercalibration website for more statistics, Youden plots, updated expected values ect: <https://emep-ccc.nilu.no/intercomparison>

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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 ‡
J2	NH ₃	8.605	9.52	9.002	0.921	-0.431	S
J3		7.825	8.72	8.277	0.551	-0.82	S
J4	µg N/filter	4.235	4.51	4.134	0.351	0.287	S
J5		4.875	5.81	5.336	0.649	-0.71	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 [¤]
J2	NH ₃ <i>µg N/filter</i>	9.255	9.52	9.002	0.921	0.275	S
J3		8.405	8.72	8.277	0.551	0.233	S
J4		4.015	4.51	4.134	0.351	-0.339	S
J5		5.405	5.81	5.336	0.649	0.107	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 [¤]
J2	NH ₃ <i>µg N/filter</i>	10.8	9.52	9.002	0.921	1.953	S
J3		9.5	8.72	8.277	0.551	2.222	S
J4		5.4	4.51	4.134	0.351	3.604	S
J5		6.8	5.81	5.336	0.649	2.257	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 [¤]
J2	NH ₃ <i>µg N/filter</i>	9.098	9.52	9.002	0.921	0.104	S
J3		7.752	8.72	8.277	0.551	-0.954	S
J4		3.791	4.51	4.134	0.351	-0.979	S
J5		4.551	5.81	5.336	0.649	-1.208	Q

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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 [¤]
J2	NH ₃ <i>µg N/filter</i>	9.34	9.52	9.002	0.921	0.367	S
J3		8.33	8.72	8.277	0.551	0.097	S
J4		4.49	4.51	4.134	0.351	1.013	S
J5		5.44	5.81	5.336	0.649	0.161	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 ‡
J2	NH ₃ <i>µg N/filter</i>	9.8	9.52	9.002	0.921	0.867	S
J3		8.36	8.72	8.277	0.551	0.151	S
J4		4.49	4.51	4.134	0.351	1.013	S
J5		5.41	5.81	5.336	0.649	0.115	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 [¤]
J2	NH ₃ <i>µg N/filter</i>	8.47	9.52	9.002	0.921	-0.578	S
J3		8.24	8.72	8.277	0.551	-0.067	S
J4		3.71	4.51	4.134	0.351	-1.208	S
J5		4.96	5.81	5.336	0.649	-0.579	S

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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 [¤]
J2	NH ₃ <i>µg N/filter</i>	8.858	9.52	9.002	0.921	-0.156	S
J3		7.846	8.72	8.277	0.551	-0.783	S
J4		4.152	4.51	4.134	0.351	0.049	S
J5		5.271	5.81	5.336	0.649	-0.099	S

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Laboratory 32, Center for Physical Sciences and Technology (Lithuania)

Ammonia on impregnated filters (J-samples)

Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score [*]	EMEP quality norm [¤]
J2	NH ₃ <i>µg N/filter</i>	9.97	9.52	9.002	0.921	1.051	S
J3		8.93	8.72	8.277	0.551	1.187	S
J4		5.45	4.51	4.134	0.351	3.746	Q
J5		6.17	5.81	5.336	0.649	1.286	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 [¤]
J2	NH ₃ <i>µg N/filter</i>	8.085	9.52	9.002	0.921	-0.996	S
J3		7.74	8.72	8.277	0.551	-0.975	S
J4		4.035	4.51	4.134	0.351	-0.283	S
J5		5.4	5.81	5.336	0.649	0.099	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 [¤]
J2	NH ₃ <i>µg N/filter</i>	7.178	9.52	9.002	0.921	-1.981	Q
J3		6.619	8.72	8.277	0.551	-3.011	Q
J4		3.48	4.51	4.134	0.351	-1.863	Q
J5		4.008	5.81	5.336	0.649	-2.046	Q

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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 [¤]
J2	NH ₃ <i>µg N/filter</i>	10.228	9.52	9.002	0.921	1.332	S
J3		9.188	8.72	8.277	0.551	1.655	S
J4		4.776	4.51	4.134	0.351	1.827	S
J5		6.053	5.81	5.336	0.649	1.106	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 [¤]
J2	NH ₃ <i>µg N/filter</i>	8.265	9.52	9.002	0.921	-0.801	S
J3		7.545	8.72	8.277	0.551	-1.329	S
J4		4.005	4.51	4.134	0.351	-0.368	S
J5		5.065	5.81	5.336	0.649	-0.417	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 [¤]
J2	NH ₃ <i>µg N/filter</i>	7.715	9.52	9.002	0.921	-1.398	S
J3		8.055	8.72	8.277	0.551	-0.403	S
J4		4.015	4.51	4.134	0.351	-0.339	S
J5		7.535	5.81	5.336	0.649	3.39	Q

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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 [¤]
J2	NH ₃ <i>µg N/filter</i>	9.09	9.52	9.002	0.921	0.096	S
J3		8.19	8.72	8.277	0.551	-0.158	S
J4		3.96	4.51	4.134	0.351	-0.496	S
J5		5.18	5.81	5.336	0.649	-0.24	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 [¤]
J2	NH ₃ <i>µg N/filter</i>	8.83	9.52	9.002	0.921	-0.187	S
J3		7.93	8.72	8.277	0.551	-0.63	S
J4		4.25	4.51	4.134	0.351	0.33	S
J5		5.17	5.81	5.336	0.649	-0.255	S

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