



EMEP – 40th intercomparison of analytical methods - 2022

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>	36.4	36.1	35.7	1.99	0.35	S
J3		23.4	18.8	18.3	1.49	3.395	Q
J5		17.9	14.5	14.5	1.52	2.223	Q
J6		12.7	11.2	11.3	0.76	1.88	S

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

* Z score is unitless

¤ EMEP quality norm; letters indicate:

S – Satisfactory: Your result deviates less than ±20% of the expected value

Q – Questionable: Your result deviates between ±20-40% of the expected value

U – Unsatisfactory: Your result deviates more than ±40% of the expected value

B – Blank: You reported either no value or the detection limit

Please check the EMEP intercalibration website for more statistics, Youden plots, updated expected values ect: <http://www.nilu.no/projects/ccc/intercomparison.html>

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EMEP – 40th intercomparison of analytical methods - 2022

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 [¤]
J2	NH ₃ <i>µg N/filter</i>	34.3	36.1	35.7	1.99	-0.71	S
J3		18.1	18.8	18.3	1.49	-0.159	S
J5		14.7	14.5	14.5	1.52	0.124	S
J6		11.0	11.2	11.3	0.76	-0.37	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 [¤]
J2	NH ₃ <i>µg N/filter</i>	33.4	36.1	35.7	1.99	-1.16	S
J3		17.7	18.8	18.3	1.49	-0.427	S
J5		12.7	14.5	14.5	1.52	-1.189	S
J6		10.8	11.2	11.3	0.76	-0.64	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>	36.1	36.1	35.7	1.99	0.20	S
J3		16.1	18.8	18.3	1.49	-1.5	S
J5		14.8	14.5	14.5	1.52	0.189	S
J6		11.1	11.2	11.3	0.76	-0.24	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>	39.4	36.1	35.7	1.99	1.86	S
J3		19.7	18.8	18.3	1.49	0.914	S
J5		16.1	14.5	14.5	1.52	1.042	S
J6		12.6	11.2	11.3	0.76	1.75	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>	34.9	36.1	35.7	1.99	-0.40	S
J3		17.4	18.8	18.3	1.49	-0.629	S
J5		13.4	14.5	14.5	1.52	-0.73	S
J6		10.0	11.2	11.3	0.76	-1.70	S

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Laboratory 15, Norwegian Institute for Air Research 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>	36.3	36.1	35.7	1.99	0.30	S
J3		19.2	18.8	18.3	1.49	0.578	S
J5		14.4	14.5	14.5	1.52	-0.073	S
J6		11.3	11.2	11.3	0.76	0.02	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>	32.3	36.1	35.7	1.99	-1.71	S
J3		18.2	18.8	18.3	1.49	-0.092	S
J5		12.4	14.5	14.5	1.52	-1.386	S
J6		11.2	11.2	11.3	0.76	-0.11	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>	35.4	36.1	35.7	1.99	-0.15	S
J3		17.8	18.8	18.3	1.49	-0.36	S
J5		14.1	14.5	14.5	1.52	-0.27	S
J6		11.1	11.2	11.3	0.76	-0.24	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>	36.2	36.1	35.7	1.99	0.25	S
J3		15.5	18.8	18.3	1.49	-1.903	S
J5		12.2	14.5	14.5	1.52	-1.517	S
J6		10.4	11.2	11.3	0.76	-1.17	S

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

Ammonia on impregnated filters (J-samples)

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J2	NH ₃ <i>µg N/filter</i>	33.9	36.1	35.7	1.99	-0.91	S
J3		17.9	18.8	18.3	1.49	-0.293	S
J5		14.9	14.5	14.5	1.52	0.255	S
J6		11.2	11.2	11.3	0.76	-0.11	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>	37.6	36.1	35.7	1.99	0.96	S
J3		21.0	18.8	18.3	1.49	1.785	S
J5		14.9	14.5	14.5	1.52	0.255	S
J6		11.6	11.2	11.3	0.76	0.42	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	23.1	36.1	35.7	1.99	-6.35	Q
J3		13.1	18.8	18.3	1.49	-3.512	Q
J5		9.32	14.5	14.5	1.52	-3.407	Q
J6	<i>µg N/filter</i>	-999	11.2	11.3	0.76		B

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

* Z score is unitless

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EMEP – 40th intercomparison of analytical methods - 2022

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>	38.0	36.1	35.7	1.99	1.16	S
J3		20.0	18.8	18.3	1.49	1.115	S
J5		16.5	14.5	14.5	1.52	1.305	S
J6		12.1	11.2	11.3	0.76	1.08	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>	39.0	36.1	35.7	1.99	1.66	S
J3		20.6	18.8	18.3	1.49	1.517	S
J5		16.1	14.5	14.5	1.52	1.042	S
J6		12.3	11.2	11.3	0.76	1.35	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>	35.6	36.1	35.7	1.99	-0.05	S
J3		18.4	18.8	18.3	1.49	0.042	S
J5		14.4	14.5	14.5	1.52	-0.073	S
J6		11.0	11.2	11.3	0.76	-0.37	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 [¤]
J2	NH ₃ <i>µg N/filter</i>	34.2	36.1	35.7	1.99	-0.76	S
J3		18.4	18.8	18.3	1.49	0.042	S
J5		13.4	14.5	14.5	1.52	-0.73	S
J6		10.7	11.2	11.3	0.76	-0.77	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>	33.9	36.1	35.7	1.99	-0.91	S
J3		17.4	18.8	18.3	1.49	-0.629	S
J5		13.8	14.5	14.5	1.52	-0.467	S
J6		10.7	11.2	11.3	0.76	-0.77	S

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