

EMEP – 35th intercomparison of analytical methods

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 µg N/filter	47.865	54.14	51.498	2.363	-1.537	S
J4		26.035	28.07	27.099	1.761	-0.604	S
J5		29.725	30.08	30.823	3.055	-0.36	S
J6		50.315	56.14	54.322	2.012	-1.991	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; the letters in the column indicates:

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

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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 – 35th intercomparison of analytical methods

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 µg N/filter	51.29	54.14	51.498	2.363	-0.088	S
J4		27.37	28.07	27.099	1.761	0.154	S
J5		30.69	30.08	30.823	3.055	-0.044	S
J6		54.05	56.14	54.322	2.012	-0.135	S

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Laboratory 5, Finnish Meteorological Institute. Air Quality Department (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 µg N/filter	51.556	54.14	51.498	2.363	0.024	S
J4		27.475	28.07	27.099	1.761	0.214	S
J5		30.367	30.08	30.823	3.055	-0.149	S
J6		54.885	56.14	54.322	2.012	0.28	S

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Laboratory 6, SGS Multilab (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 µg N/filter	56.24	54.14	51.498	2.363	2.006	S
J4		25.332	28.07	27.099	1.761	-1.004	S
J5		27.006	30.08	30.823	3.055	-1.25	S
J6		57.732	56.14	54.322	2.012	1.694	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 µg N/filter	52.7	54.14	51.498	2.363	0.509	S
J4		28.6	28.07	27.099	1.761	0.853	S
J5		31.8	30.08	30.823	3.055	0.32	S
J6		55.4	56.14	54.322	2.012	0.536	S

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Laboratory 10, Institute for Atmospheric Physics (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 µg N/filter	54.296	54.14	51.498	2.363	1.184	S
J4		27.337	28.07	27.099	1.761	0.135	S
J5		30.101	30.08	30.823	3.055	-0.236	S
J6		55.694	56.14	54.322	2.012	0.682	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 [¤]
J1	NH ₃ µg N/filter	50.693	54.14	51.498	2.363	-0.341	S
J4		27.093	28.07	27.099	1.761	-0.004	S
J5		30.992	30.08	30.823	3.055	0.055	S
J6		53.892	56.14	54.322	2.012	-0.213	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 µg N/filter	45.91	54.14	51.498	2.363	-2.364	S
J4		24.48	28.07	27.099	1.761	-1.487	S
J5		26.87	30.08	30.823	3.055	-1.294	S
J6		49.1	56.14	54.322	2.012	-2.595	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 µg N/filter	50.24	54.14	51.498	2.363	-0.532	S
J4		16.58	28.07	27.099	1.761	-5.975	U
J5		39.71	30.08	30.823	3.055	2.909	Q
J6		55.15	56.14	54.322	2.012	0.411	S

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Laboratory 20, Swedish Environmental Research Institute IVL, Gothenburg (Sweden)

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 µg N/filter	52.675	54.14	51.498	2.363	0.498	S
J4		26.605	28.07	27.099	1.761	-0.28	S
J5		30.205	30.08	30.823	3.055	-0.202	S
J6		54.645	56.14	54.322	2.012	0.161	S

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EMEP – 35th intercomparison of analytical methods

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 µg N/filter	49.49	54.14	51.498	2.363	-0.85	S
J4		29.27	28.07	27.099	1.761	1.233	S
J5		35.88	30.08	30.823	3.055	1.655	S
J6		54.32	56.14	54.322	2.012	-0.001	S

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EMEP – 35th intercomparison of analytical methods

Laboratory 32, Atmospheric Pollution Research Laboratory, Institute of Physics, Vilnius (Lithuania)

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 µg N/filter	54.07	54.14	51.498	2.363	1.088	S
J4		28.02	28.07	27.099	1.761	0.523	S
J5		32.63	30.08	30.823	3.055	0.591	S
J6		56.42	56.14	54.322	2.012	1.043	S

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Laboratory 33, Environmental Pollution Observ. 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 µg N/filter	52.696	54.14	51.498	2.363	0.507	S
J4		30.106	28.07	27.099	1.761	1.708	S
J5		27.206	30.08	30.823	3.055	-1.184	S
J6		55.726	56.14	54.322	2.012	0.698	S

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EMEP – 35th intercomparison of analytical methods

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 µg N/filter	15	54.14	51.498	2.363	-15.443	U
J4		23	28.07	27.099	1.761	-2.328	S
J5		3	30.08	30.823	3.055	-9.109	U
J6		2	56.14	54.322	2.012	-25.999	U

¥ 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 – 35th intercomparison of analytical methods

Laboratory 36, Hydrometeorological Institute of Slovenia (Slovenia)

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 µg N/filter	51.755	54.14	51.498	2.363	0.109	S
J4		26.255	28.07	27.099	1.761	-0.479	S
J5		29.155	30.08	30.823	3.055	-0.546	S
J6		54.255	56.14	54.322	2.012	-0.033	S

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EMEP – 35th intercomparison of analytical methods

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 µg N/filter	51.676	54.14	51.498	2.363	0.075	S
J4		29.666	28.07	27.099	1.761	1.458	S
J5		31.256	30.08	30.823	3.055	0.142	S
J6		54.467	56.14	54.322	2.012	0.072	S

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EMEP – 35th intercomparison of analytical methods

Laboratory 39, Environmental Monitoring Laboratory, Institute of Environmental Protection (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 µg N/filter	50.395	54.14	51.498	2.363	-0.467	S
J4		26.795	28.07	27.099	1.761	-0.173	S
J5		31.095	30.08	30.823	3.055	0.089	S
J6		52.795	56.14	54.322	2.012	-0.759	S

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EMEP – 35th intercomparison of analytical methods

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 µg N/filter	52.61	54.14	51.498	2.363	0.47	S
J4		27.17	28.07	27.099	1.761	0.04	S
J5		29.98	30.08	30.823	3.055	-0.276	S
J6		55.07	56.14	54.322	2.012	0.372	S

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EMEP – 35th intercomparison of analytical methods

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 µg N/filter	50.81	54.14	51.498	2.363	-0.291	S
J4		27.17	28.07	27.099	1.761	0.04	S
J5		30.15	30.08	30.823	3.055	-0.22	S
J6		53.88	56.14	54.322	2.012	-0.22	S

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