

EMEP – 33rd 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	38.32	38.1	37.354	3.469	0.279	S
J2	NH ₃	46.32	48.12	46.542	5.902	-0.038	S
J4	NH ₃	15.2	15.04	14.28	1.145	0.804	S
J5	NH ₃	17.94	17.54	17.609	1.905	0.174	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.

¤ 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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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 – 33rd 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	36.24	38.1	37.354	3.469	-0.321	S
J2	NH ₃	44.74	48.12	46.542	5.902	-0.305	S
J4	NH ₃	14.2	15.04	14.28	1.145	-0.07	S
J5	NH ₃	16.46	17.54	17.609	1.905	-0.603	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	36.3	38.1	37.354	3.469	-0.304	S
J2	NH ₃	46.47	48.12	46.542	5.902	-0.012	S
J4	NH ₃	12.68	15.04	14.28	1.145	-1.398	S
J5	NH ₃	16.88	17.54	17.609	1.905	-0.382	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	38.3	38.1	37.354	3.469	0.273	S
J2	NH ₃	46.8	48.12	46.542	5.902	0.044	S
J4	NH ₃	16	15.04	14.28	1.145	1.503	S
J5	NH ₃	25	17.54	17.609	1.905	3.88	U

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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	40.65	38.1	37.354	3.469	0.95	S
J2	NH ₃	50.05	48.12	46.542	5.902	0.594	S
J4	NH ₃	14.65	15.04	14.28	1.145	0.323	S
J5	NH ₃	17.35	17.54	17.609	1.905	-0.136	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	39.34	38.1	37.354	3.469	0.572	S
J2	NH ₃	49.606	48.12	46.542	5.902	0.519	S
J4	NH ₃	15.073	15.04	14.28	1.145	0.693	S
J5	NH ₃	17.561	17.54	17.609	1.905	-0.025	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	41.5	38.1	37.354	3.469	1.195	S
J2	NH ₃	51.1	48.12	46.542	5.902	0.772	S
J4	NH ₃	15.02	15.04	14.28	1.145	0.646	S
J5	NH ₃	17.6	17.54	17.609	1.905	-0.004	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	37.485	38.1	37.354	3.469	0.038	S
J2	NH ₃	46.265	48.12	46.542	5.902	-0.047	S
J4	NH ₃	14.455	15.04	14.28	1.145	0.153	S
J5	NH ₃	16.755	17.54	17.609	1.905	-0.448	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	34.1	38.1	37.354	3.469	-0.938	S
J2	NH ₃	42.4	48.12	46.542	5.902	-0.702	S
J4	NH ₃	13	15.04	14.28	1.145	-1.119	S
J5	NH ₃	15.8	17.54	17.609	1.905	-0.949	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	35.54	38.1	37.354	3.469	-0.523	S
J2	NH ₃	50.34	48.12	46.542	5.902	0.644	S
J4	NH ₃	13.67	15.04	14.28	1.145	-0.533	S
J5	NH ₃	17.96	17.54	17.609	1.905	0.185	S

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EMEP – 33rd intercomparison of analytical methods

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	37.849	38.1	37.354	3.469	0.143	S
J2	NH ₃	47.349	48.12	46.542	5.902	0.137	S
J4	NH ₃	15.149	15.04	14.28	1.145	0.759	S
J5	NH ₃	17.349	17.54	17.609	1.905	-0.136	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 [¤]
J1	NH ₃	35.82	38.1	37.354	3.469	-0.442	S
J2	NH ₃	47.45	48.12	46.542	5.902	0.154	S
J4	NH ₃	12.55	15.04	14.28	1.145	-1.512	S
J5	NH ₃	16.05	17.54	17.609	1.905	-0.818	S

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EMEP – 33rd 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	37.85	38.1	37.354	3.469	0.143	S
J2	NH ₃	47.69	48.12	46.542	5.902	0.194	S
J4	NH ₃	13.84	15.04	14.28	1.145	-0.385	S
J5	NH ₃	17.89	17.54	17.609	1.905	0.148	S

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EMEP – 33rd intercomparison of analytical methods

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	40.264	38.1	37.354	3.469	0.839	S
J2	NH ₃	51.063	48.12	46.542	5.902	0.766	S
J4	NH ₃	14.719	15.04	14.28	1.145	0.383	S
J5	NH ₃	16.189	17.54	17.609	1.905	-0.745	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	25.456	38.1	37.354	3.469	-3.43	Q
J2	NH ₃	23.058	48.12	46.542	5.902	-3.979	U
J4	NH ₃	12.883	15.04	14.28	1.145	-1.22	S
J5	NH ₃	19.18	17.54	17.609	1.905	0.825	S

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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	37.145	38.1	37.354	3.469	-0.06	S
J2	NH ₃	47.005	48.12	46.542	5.902	0.078	S
J4	NH ₃	13.465	15.04	14.28	1.145	-0.712	S
J5	NH ₃	16.105	17.54	17.609	1.905	-0.789	S

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EMEP – 33rd 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	40.05	38.1	37.354	3.469	0.777	S
J2	NH ₃	50.12	48.12	46.542	5.902	0.606	S
J4	NH ₃	16.27	15.04	14.28	1.145	1.739	S
J5	NH ₃	18.87	17.54	17.609	1.905	0.662	S

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EMEP – 33rd 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	37.09	38.1	37.354	3.469	-0.076	S
J2	NH ₃	47.58	48.12	46.542	5.902	0.176	S
J4	NH ₃	13.08	15.04	14.28	1.145	-1.049	S
J5	NH ₃	16.81	17.54	17.609	1.905	-0.419	S

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EMEP – 33rd intercomparison of analytical methods

Laboratory 158, Acid Deposition and Oxidant Research Center ADOCRC, Niigata (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	34.779	38.1	37.354	3.469	-0.742	S
J2	NH ₃	43.88	48.12	46.542	5.902	-0.451	S
J4	NH ₃	13.18	15.04	14.28	1.145	-0.962	S
J5	NH ₃	17.279	17.54	17.609	1.905	-0.173	S

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EMEP – 33rd intercomparison of analytical methods

Laboratory 165, Institute of Meteorology and Hydrology, Ha Noi city (Vietnam)

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	42.15	38.1	37.354	3.469	1.383	S
J2	NH ₃	51.35	48.12	46.542	5.902	0.815	S
J4	NH ₃	15.95	15.04	14.28	1.145	1.459	S
J5	NH ₃	17.25	17.54	17.609	1.905	-0.188	S

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EMEP – 33rd intercomparison of analytical methods

Laboratory 178, Environmental Chemistry and EANET Monitoring Laboratory, Limnological Institute RAS/SB, Irkutsk (Russian Federation)

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	76.995	38.1	37.354	3.469	11.428	U
J2	NH ₃	115.985	48.12	46.542	5.902	11.767	U
J4	NH ₃	42.495	15.04	14.28	1.145	24.652	U
J5	NH ₃	51.175	17.54	17.609	1.905	17.619	U

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EMEP – 33rd 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	38.2	38.1	37.354	3.469	0.244	S
J2	NH ₃	46.75	48.12	46.542	5.902	0.035	S
J4	NH ₃	14.85	15.04	14.28	1.145	0.498	S
J5	NH ₃	17.5	17.54	17.609	1.905	-0.057	S

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