

EMEP – 34th 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	22.42	24.06	22.744	2.07	-0.156	S
J2	NH ₃	24.98	26.07	25.238	1.515	-0.17	S
J3	NH ₃	38.26	40.10	39.184	5.618	-0.165	S
J4	NH ₃	43.69	46.12	43.379	5.16	0.06	S

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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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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	23.482	24.06	22.744	2.07	0.357	S
J2	NH ₃	25.282	26.07	25.238	1.515	0.029	S
J3	NH ₃	38.982	40.10	39.184	5.618	-0.036	S
J4	NH ₃	44.082	46.12	43.379	5.16	0.136	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	26.58	24.06	22.744	2.07	1.853	S
J2	NH ₃	27.39	26.07	25.238	1.515	1.421	S
J3	NH ₃	39.42	40.10	39.184	5.618	0.042	S
J4	NH ₃	44.72	46.12	43.379	5.16	0.26	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	24	24.06	22.744	2.07	0.607	S
J2	NH ₃	26.2	26.07	25.238	1.515	0.635	S
J3	NH ₃	62	40.10	39.184	5.618	4.061	U
J4	NH ₃	46.2	46.12	43.379	5.16	0.547	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	22.633	24.06	22.744	2.07	-0.053	S
J2	NH ₃	23.03	26.07	25.238	1.515	-1.458	S
J3	NH ₃	36.121	40.10	39.184	5.618	-0.545	S
J4	NH ₃	36.69	46.12	43.379	5.16	-1.296	Q

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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	29.9	24.06	22.744	2.07	3.457	Q
J2	NH ₃	33.2	26.07	25.238	1.515	5.256	Q
J3	NH ₃	50	40.10	39.184	5.618	1.925	Q
J4	NH ₃	58	46.12	43.379	5.16	2.833	Q

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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	25.145	24.06	22.744	2.07	1.16	S
J2	NH ₃	26.335	26.07	25.238	1.515	0.724	S
J3	NH ₃	47.945	40.10	39.184	5.618	1.559	S
J4	NH ₃	30.195	46.12	43.379	5.16	-2.555	Q

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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	20.3	24.06	22.744	2.07	-1.181	S
J2	NH ₃	23.2	26.07	25.238	1.515	-1.345	S
J3	NH ₃	34.5	40.10	39.184	5.618	-0.834	S
J4	NH ₃	39.9	46.12	43.379	5.16	-0.674	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	21.32	24.06	22.744	2.07	-0.688	S
J2	NH ₃	25.7	26.07	25.238	1.515	0.305	S
J3	NH ₃	38.09	40.10	39.184	5.618	-0.195	S
J4	NH ₃	45.21	46.12	43.379	5.16	0.355	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	23.023	24.06	22.744	2.07	0.135	S
J2	NH ₃	25.523	26.07	25.238	1.515	0.188	S
J3	NH ₃	38.623	40.10	39.184	5.618	-0.1	S
J4	NH ₃	44.623	46.12	43.379	5.16	0.241	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	18.05	24.06	22.744	2.07	-2.268	Q
J2	NH ₃	19.17	26.07	25.238	1.515	-4.006	Q
J3	NH ₃	25.77	40.10	39.184	5.618	-2.388	Q
J4	NH ₃	28.58	46.12	43.379	5.16	-2.868	Q

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

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Sample name	Determinand	Reported value [¥]	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm [¤]
J1	NH ₃	20.33	24.06	22.744	2.07	-1.166	S
J2	NH ₃	22.42	26.07	25.238	1.515	-1.86	S
J3	NH ₃	32.32	40.10	39.184	5.618	-1.222	S
J4	NH ₃	36.78	46.12	43.379	5.16	-1.279	Q

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EMEP – 34th 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	23.641	24.06	22.744	2.07	0.434	S
J2	NH ₃	25.541	26.07	25.238	1.515	0.2	S
J3	NH ₃	40.441	40.10	39.184	5.618	0.224	S
J4	NH ₃	47.041	46.12	43.379	5.16	0.71	S

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EMEP – 34th 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	21.355	24.06	22.744	2.07	-0.671	S
J2	NH ₃	23.355	26.07	25.238	1.515	-1.243	S
J3	NH ₃	38.355	40.10	39.184	5.618	-0.148	S
J4	NH ₃	43.555	46.12	43.379	5.16	0.034	S

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EMEP – 34th 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	25.352	24.06	22.744	2.07	1.26	S
J2	NH ₃	27.652	26.07	25.238	1.515	1.594	S
J3	NH ₃	41.062	40.10	39.184	5.618	0.334	S
J4	NH ₃	47.132	46.12	43.379	5.16	0.727	S

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EMEP – 34th 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	23.045	24.06	22.744	2.07	0.146	S
J2	NH ₃	25.445	26.07	25.238	1.515	0.137	S
J3	NH ₃	38.745	40.10	39.184	5.618	-0.078	S
J4	NH ₃	43.045	46.12	43.379	5.16	-0.065	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	22.705	24.06	22.744	2.07	-0.019	S
J2	NH ₃	25.845	26.07	25.238	1.515	0.401	S
J3	NH ₃	39.505	40.10	39.184	5.618	0.057	S
J4	NH ₃	45.985	46.12	43.379	5.16	0.505	S

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Laboratory 182, Research Institute for Analytical Instrumentation, ICIA (Romania)

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	31.1	24.06	22.744	2.07	4.037	Q
J2	NH ₃	32.8	26.07	25.238	1.515	4.992	Q
J3	NH ₃	47.9	40.10	39.184	5.618	1.551	S
J4	NH ₃	53.3	46.12	43.379	5.16	1.923	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	23.26	24.06	22.744	2.07	0.249	S
J2	NH ₃	25.91	26.07	25.238	1.515	0.444	S
J3	NH ₃	39.28	40.10	39.184	5.618	0.017	S
J4	NH ₃	45.3	46.12	43.379	5.16	0.372	S

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