

EMEP – 29th 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	17.07	16	15.758	1.214	1.081	S
J2	NH ₃	24.46	24.1	22.698	2.651	0.665	S
J5	NH ₃	29.95	31.5	31.288	2.301	-0.582	S
J6	NH ₃	8.9	9.52	8.162	1.97	0.375	S

¥ If your laboratory reported values for the blank samples, the average value is subtracted from the reported value.

If your laboratory reported the methods detection limit for the blank sample, ½ DL is subtracted from the reported value.

¤ EMEP quality norm; the letters in the column indicates:

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 Youden plots, updated expected values ect:
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PO Box 100
NO-2027 KJELLER, Norway
Phone: +47 63 89 80 00/Fax: +47 63 89 80 50
Besøk/visit: Instituttveien 18, 2007 Kjeller

NILU – Norsk institutt for luftforskning
Framsenteret / The Fram Centre
NO-9296 TROMSØ, Norway
Phone: +47 77 75 03 75/Fax: +47 77 75 03 76
Besøk/visit: Hjalmar Johansens gt. 14, 9007 Tromsø

e-mail: nilu@nilu.no
nilu-tromso@nilu.no
Internet: www.nilu.no
Bank: 5102.05.19030
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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	15.64	16	15.758	1.214	-0.097	S
J2	NH ₃	17.52	24.1	22.698	2.651	-1.953	Q
J5	NH ₃	32.48	31.5	31.288	2.301	0.518	S
J6	NH ₃	8.64	9.52	8.162	1.97	0.243	S

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NILU – Norsk institutt for luftforskning
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NO-9296 TROMSØ, Norway
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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	15.575	16	15.758	1.214	-0.151	S
J2	NH ₃	22.995	24.1	22.698	2.651	0.112	S
J5	NH ₃	31.025	31.5	31.288	2.301	-0.115	S
J6	NH ₃	8.595	9.52	8.162	1.97	0.22	S

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NO-9296 TROMSØ, Norway
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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	16.8	16	15.758	1.214	0.859	S
J2	NH ₃	25	24.1	22.698	2.651	0.868	S
J5	NH ₃	30.8	31.5	31.288	2.301	-0.212	S
J6	NH ₃	9.2	9.52	8.162	1.97	0.527	S

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NILU – Norsk institutt for luftforskning
Framsenteret / The Fram Centre
NO-9296 TROMSØ, Norway
Phone: +47 77 75 03 75/Fax: +47 77 75 03 76
Besøk/visit: Hjalmar Johansens gt. 14, 9007 Tromsø

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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	0.15	16	15.758	1.214	-12.861	U
J2	NH ₃	0.2	24.1	22.698	2.651	-8.485	U
J5	NH ₃	0.392	31.5	31.288	2.301	-13.428	U
J6	NH ₃	0.071	9.52	8.162	1.97	-4.107	U

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NO-9296 TROMSØ, Norway
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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	16.3	16	15.758	1.214	0.447	S
J2	NH ₃	23.3	24.1	22.698	2.651	0.227	S
J5	NH ₃	32.8	31.5	31.288	2.301	0.657	S
J6	NH ₃	9.1	9.52	8.162	1.97	0.476	S

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NO-9296 TROMSØ, Norway
Phone: +47 77 75 03 75/Fax: +47 77 75 03 76
Besøk/visit: Hjalmar Johansens gt. 14, 9007 Tromsø

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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	16.29	16	15.758	1.214	0.438	S
J2	NH ₃	21.97	24.1	22.698	2.651	-0.274	S
J5	NH ₃	32.51	31.5	31.288	2.301	0.531	S
J6	NH ₃	8.47	9.52	8.162	1.97	0.156	S

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NO-9296 TROMSØ, Norway
Phone: +47 77 75 03 75/Fax: +47 77 75 03 76
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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	15.035	16	15.758	1.214	-0.596	S
J2	NH ₃	24.335	24.1	22.698	2.651	0.618	S
J5	NH ₃	31.775	31.5	31.288	2.301	0.211	S
J6	NH ₃	7.785	9.52	8.162	1.97	-0.191	S

¥ If your laboratory reported values for the blank samples, the average value is subtracted from the reported value.

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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	17.36	16	15.758	1.214	1.32	S
J2	NH ₃	23.9	24.1	22.698	2.651	0.454	S
J5	NH ₃	32.83	31.5	31.288	2.301	0.67	S
J6	NH ₃	8.26	9.52	8.162	1.97	0.05	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	15.735	16	15.758	1.214	-0.019	S
J2	NH ₃	23.735	24.1	22.698	2.651	0.391	S
J5	NH ₃	29.735	31.5	31.288	2.301	-0.675	S
J6	NH ₃	8.835	9.52	8.162	1.97	0.342	S

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Laboratory 24, Serbian Environmental Protection Agency (Serbia)

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	25.34	16	15.758	1.214	7.896	U
J2	NH ₃	15.99	24.1	22.698	2.651	-2.53	Q
J5	NH ₃	32.74	31.5	31.288	2.301	0.631	S
J6	NH ₃	22.84	9.52	8.162	1.97	7.451	U

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NILU – Norsk institutt for luftforskning
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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	17.59	16	15.758	1.214	1.51	S
J2	NH ₃	25.06	24.1	22.698	2.651	0.891	S
J5	NH ₃	34.28	31.5	31.288	2.301	1.3	S
J6	NH ₃	10.67	9.52	8.162	1.97	1.273	S

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Besøk/visit: Hjalmar Johansens gt. 14, 9007 Tromsø

e-mail: nilu@nilu.no
nilu-tromso@nilu.no
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EMEP – 29th 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	14.8	16	15.758	1.214	-0.789	S
J2	NH ₃	23.87	24.1	22.698	2.651	0.442	S
J5	NH ₃	33.06	31.5	31.288	2.301	0.77	S
J6	NH ₃	9.22	9.52	8.162	1.97	0.537	S

¥ If your laboratory reported values for the blank samples, the average value is subtracted from the reported value.

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PO Box 100
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NILU – Norsk institutt for luftforskning
Framsenteret / The Fram Centre
NO-9296 TROMSØ, Norway
Phone: +47 77 75 03 75/Fax: +47 77 75 03 76
Besøk/visit: Hjalmar Johansens gt. 14, 9007 Tromsø

e-mail: nilu@nilu.no
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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	16.38	16	15.758	1.214	0.513	S
J2	NH ₃	25.83	24.1	22.698	2.651	1.181	S
J5	NH ₃	35.13	31.5	31.288	2.301	1.67	S
J6	NH ₃	8.57	9.52	8.162	1.97	0.207	S

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Framsenteret / The Fram Centre
NO-9296 TROMSØ, Norway
Phone: +47 77 75 03 75/Fax: +47 77 75 03 76
Besøk/visit: Hjalmar Johansens gt. 14, 9007 Tromsø

e-mail: nilu@nilu.no
nilu-tromso@nilu.no
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Laboratory 47, Jelenia Gora (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	0.896	16	15.758	1.214	-12.246	U
J2	NH ₃	1.162	24.1	22.698	2.651	-8.122	U
J5	NH ₃	1.742	31.5	31.288	2.301	-12.841	U
J6	NH ₃	0.457	9.52	8.162	1.97	-3.911	U

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PO Box 100
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Framsenteret / The Fram Centre
NO-9296 TROMSØ, Norway
Phone: +47 77 75 03 75/Fax: +47 77 75 03 76
Besøk/visit: Hjalmar Johansens gt. 14, 9007 Tromsø

e-mail: nilu@nilu.no
nilu-tromso@nilu.no
Internet: www.nilu.no
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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	14.555	16	15.758	1.214	-0.991	S
J2	NH ₃	22.055	24.1	22.698	2.651	-0.242	S
J5	NH ₃	28.355	31.5	31.288	2.301	-1.275	S
J6	NH ₃	8.205	9.52	8.162	1.97	0.022	S

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Framsenteret / The Fram Centre
NO-9296 TROMSØ, Norway
Phone: +47 77 75 03 75/Fax: +47 77 75 03 76
Besøk/visit: Hjalmar Johansens gt. 14, 9007 Tromsø

e-mail: nilu@nilu.no
nilu-tromso@nilu.no
Internet: www.nilu.no
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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	14.25	16	15.758	1.214	-1.243	S
J2	NH ₃	22.35	24.1	22.698	2.651	-0.131	S
J5	NH ₃	30.15	31.5	31.288	2.301	-0.495	S
J6	NH ₃	8.25	9.52	8.162	1.97	0.045	S

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Framsenteret / The Fram Centre
NO-9296 TROMSØ, Norway
Phone: +47 77 75 03 75/Fax: +47 77 75 03 76
Besøk/visit: Hjalmar Johansens gt. 14, 9007 Tromsø

e-mail: nilu@nilu.no
nilu-tromso@nilu.no
Internet: www.nilu.no
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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	13.3	16	15.758	1.214	-2.025	S
J2	NH ₃	19.39	24.1	22.698	2.651	-1.247	S
J5	NH ₃	25.36	31.5	31.288	2.301	-2.577	S
J6	NH ₃	7.67	9.52	8.162	1.97	-0.25	S

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NILU – Norsk institutt for luftforskning
Framsenteret / The Fram Centre
NO-9296 TROMSØ, Norway
Phone: +47 77 75 03 75/Fax: +47 77 75 03 76
Besøk/visit: Hjalmar Johansens gt. 14, 9007 Tromsø

e-mail: nilu@nilu.no
nilu-tromso@nilu.no
Internet: www.nilu.no
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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	14.55	16	15.758	1.214	-0.995	S
J2	NH ₃	24.35	24.1	22.698	2.651	0.623	S
J5	NH ₃	32.65	31.5	31.288	2.301	0.592	S
J6	NH ₃	8.15	9.52	8.162	1.97	-0.006	S

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Framsenteret / The Fram Centre
NO-9296 TROMSØ, Norway
Phone: +47 77 75 03 75/Fax: +47 77 75 03 76
Besøk/visit: Hjalmar Johansens gt. 14, 9007 Tromsø

e-mail: nilu@nilu.no
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Laboratory 172, UMR SAS INRA; Rennes (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	17.65	16	15.758	1.214	1.559	S
J2	NH ₃	25.65	24.1	22.698	2.651	1.114	S
J5	NH ₃	31.25	31.5	31.288	2.301	-0.017	S
J6	NH ₃	9.35	9.52	8.162	1.97	0.603	S

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Framsenteret / The Fram Centre
NO-9296 TROMSØ, Norway
Phone: +47 77 75 03 75/Fax: +47 77 75 03 76
Besøk/visit: Hjalmar Johansens gt. 14, 9007 Tromsø

e-mail: nilu@nilu.no
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Internet: www.nilu.no
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EMEP – 29th 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	15.38	16	15.758	1.214	-0.311	S
J2	NH ₃	20.01	24.1	22.698	2.651	-1.014	S
J5	NH ₃	27.77	31.5	31.288	2.301	-1.529	S
J6	NH ₃	7.96	9.52	8.162	1.97	-0.102	S

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Framsenteret / The Fram Centre
NO-9296 TROMSØ, Norway
Phone: +47 77 75 03 75/Fax: +47 77 75 03 76
Besøk/visit: Hjalmar Johansens gt. 14, 9007 Tromsø

e-mail: nilu@nilu.no
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EMEP – 29th intercomparison of analytical methods

Laboratory 180, vTI - Institut für Agrarrelevante Klimaforschung (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	15.14	16	15.758	1.214	-0.509	S
J2	NH ₃	22.18	24.1	22.698	2.651	-0.195	S
J5	NH ₃	31.12	31.5	31.288	2.301	-0.073	S
J6	NH ₃	6.95	9.52	8.162	1.97	-0.615	Q

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Framsenteret / The Fram Centre
NO-9296 TROMSØ, Norway
Phone: +47 77 75 03 75/Fax: +47 77 75 03 76
Besøk/visit: Hjalmar Johansens gt. 14, 9007 Tromsø

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