

## EMEP – 33<sup>rd</sup> intercomparison of analytical methods

Laboratory 15, Norwegian Institute for Air Research NILU (Norway)

### Sulphur dioxide in absorbing solution (A-samples)

Sample name	Determinand	Reported value <sup>¥</sup>	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm <sup>¤</sup>
A1	SO <sub>2</sub>	0.247	0.24	0.201	0.061	0.756	S
A2	SO <sub>2</sub>	0.12	0.12	0.11	0.028	0.379	S
A4	SO <sub>2</sub>	0.507	0.481	0.42	0.131	0.663	S
A5	SO <sub>2</sub>	0.748	0.701	0.651	0.094	1.027	S

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

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## EMEP – 33<sup>rd</sup> intercomparison of analytical methods

Laboratory 19, Centro Nacional de Sanidad Ambiental (Spain)

### Sulphur dioxide in absorbing solution (A-samples)

Sample name	Determinand	Reported value <sup>¥</sup>	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm <sup>¤</sup>
A1	SO <sub>2</sub>	0.22	0.24	0.201	0.061	0.314	S
A2	SO <sub>2</sub>	0.13	0.12	0.11	0.028	0.742	S
A4	SO <sub>2</sub>	0.43	0.481	0.42	0.131	0.075	Q
A5	SO <sub>2</sub>	0.68	0.701	0.651	0.094	0.307	S

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## EMEP – 33<sup>rd</sup> intercomparison of analytical methods

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

### Sulphur dioxide in absorbing solution (A-samples)

Sample name	Determinand	Reported value <sup>¥</sup>	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm <sup>¤</sup>
A1	SO <sub>2</sub>	0.278	0.24	0.201	0.061	1.257	Q
A2	SO <sub>2</sub>	0.142	0.12	0.11	0.028	1.164	Q
A4	SO <sub>2</sub>	0.534	0.481	0.42	0.131	0.867	Q
A5	SO <sub>2</sub>	0.796	0.701	0.651	0.094	1.531	Q

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## EMEP – 33<sup>rd</sup> intercomparison of analytical methods

Laboratory 34, Ministry of Environment and Urbanisation (Turkey)

### Sulphur dioxide in absorbing solution (A-samples)

Sample name	Determinand	Reported value <sup>¥</sup>	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm <sup>¤</sup>
A1	SO <sub>2</sub>	0.117	0.24	0.201	0.061	-1.37	U
A2	SO <sub>2</sub>	0.057	0.12	0.11	0.028	-1.906	U
A4	SO <sub>2</sub>	0.267	0.481	0.42	0.131	-1.17	U
A5	SO <sub>2</sub>	0.417	0.701	0.651	0.094	-2.478	U

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## EMEP – 33<sup>rd</sup> intercomparison of analytical methods

Laboratory 173, Company Petrokemija d.d. (Croatia)

### Sulphur dioxide in absorbing solution (A-samples)

Sample name	Determinand	Reported value <sup>¥</sup>	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm <sup>¤</sup>
A1	SO <sub>2</sub>	0.23	0.24	0.201	0.061	0.478	S
A2	SO <sub>2</sub>	< 0.130	0.12	0.11	0.028		B
A4	SO <sub>2</sub>	0.36	0.481	0.42	0.131	-0.459	U
A5	SO <sub>2</sub>	0.58	0.701	0.651	0.094	-0.752	Q

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## EMEP – 33<sup>rd</sup> intercomparison of analytical methods

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

### Sulphur dioxide in absorbing solution (A-samples)

Sample name	Determinand	Reported value <sup>¥</sup>	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm <sup>¤</sup>
A1	SO <sub>2</sub>	0.22	0.24	0.201	0.061	0.314	S
A2	SO <sub>2</sub>	0.108	0.12	0.11	0.028	-0.056	S
A4	SO <sub>2</sub>	0.442	0.481	0.42	0.131	0.167	S
A5	SO <sub>2</sub>	0.664	0.701	0.651	0.094	0.138	S

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## EMEP – 33<sup>rd</sup> intercomparison of analytical methods

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

### Sulphur dioxide in absorbing solution (A-samples)

Sample name	Determinand	Reported value <sup>¥</sup>	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm <sup>¤</sup>
A1	SO <sub>2</sub>	3.887	0.24	0.201	0.061	60.282	U
A2	SO <sub>2</sub>	2.937	0.12	0.11	0.028	102.572	U
A4	SO <sub>2</sub>	5.366	0.481	0.42	0.131	37.768	U
A5	SO <sub>2</sub>	5.719	0.701	0.651	0.094	53.656	U

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## EMEP – 33<sup>rd</sup> intercomparison of analytical methods

Laboratory 183, Public health institute Uzice (Republic of Serbia)

### Sulphur dioxide in absorbing solution (A-samples)

Sample name	Determinand	Reported value <sup>¥</sup>	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm <sup>¤</sup>
A1	SO <sub>2</sub>	0.238	0.24	0.201	0.061	0.617	S
A2	SO <sub>2</sub>	0.117	0.12	0.11	0.028	0.288	S
A4	SO <sub>2</sub>	0.489	0.481	0.42	0.131	0.53	S
A5	SO <sub>2</sub>	0.718	0.701	0.651	0.094	0.704	S

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## EMEP – 33<sup>rd</sup> intercomparison of analytical methods

Laboratory 184, Institute for Public Health Pozarevac (Republic of Serbia)

### Sulphur dioxide in absorbing solution (A-samples)

Sample name	Determinand	Reported value <sup>¥</sup>	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm <sup>¤</sup>
A1	SO <sub>2</sub>	0.212	0.24	0.201	0.061	0.183	Q
A2	SO <sub>2</sub>	0.111	0.12	0.11	0.028	0.053	S
A4	SO <sub>2</sub>	0.496	0.481	0.42	0.131	0.579	S
A5	SO <sub>2</sub>	0.676	0.701	0.651	0.094	0.265	S

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## EMEP – 33<sup>rd</sup> intercomparison of analytical methods

Laboratory 187, Public Health Institute - Nis, Department for Sanitary Chemistry (Republic of Serbia)

### Sulphur dioxide in absorbing solution (A-samples)

Sample name	Determinand	Reported value <sup>¥</sup>	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm <sup>¤</sup>
A1	SO <sub>2</sub>	0.036	0.24	0.201	0.061	-2.695	U
A2	SO <sub>2</sub>	0.15	0.12	0.11	0.028	1.467	U
A4	SO <sub>2</sub>	0.035	0.481	0.42	0.131	-2.941	U
A5	SO <sub>2</sub>	0.55	0.701	0.651	0.094	-1.069	U

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## EMEP – 33<sup>rd</sup> intercomparison of analytical methods

Laboratory 188, Institute of Public Health - Krusevac (Republic of Serbia)

### Sulphur dioxide in absorbing solution (A-samples)

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A1	SO <sub>2</sub>	0.22	0.24	0.201	0.061	0.314	S
A2	SO <sub>2</sub>	0.114	0.12	0.11	0.028	0.161	S
A4	SO <sub>2</sub>	0.495	0.481	0.42	0.131	0.572	S
A5	SO <sub>2</sub>	0.678	0.701	0.651	0.094	0.286	S

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## EMEP – 33<sup>rd</sup> intercomparison of analytical methods

Laboratory 189, Institute of Public Health - Kikinda (Republic of Serbia)

### Sulphur dioxide in absorbing solution (A-samples)

Sample name	Determinand	Reported value <sup>¥</sup>	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm <sup>¤</sup>
A1	SO <sub>2</sub>	0.215	0.24	0.201	0.061	0.232	Q
A2	SO <sub>2</sub>	0.115	0.12	0.11	0.028	0.198	S
A4	SO <sub>2</sub>	0.491	0.481	0.42	0.131	0.541	S
A5	SO <sub>2</sub>	0.682	0.701	0.651	0.094	0.328	S

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

S – Satisfactory: Your result deviates less than ±10% of the expected value

Q – Questionable: Your result deviates between ±10-20% of the expected value

U – Unsatisfactory: Your result deviates more than ±20% 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 – 33<sup>rd</sup> intercomparison of analytical methods

Laboratory 192, The Public Health Institute Sabac (Republic of Serbia)

### Sulphur dioxide in absorbing solution (A-samples)

Sample name	Determinand	Reported value <sup>¥</sup>	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm <sup>¤</sup>
A1	SO <sub>2</sub>	0.23	0.24	0.201	0.061	0.478	S
A2	SO <sub>2</sub>	0.118	0.12	0.11	0.028	0.307	S
A4	SO <sub>2</sub>	0.493	0.481	0.42	0.131	0.556	S
A5	SO <sub>2</sub>	0.695	0.701	0.651	0.094	0.466	S

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## EMEP – 33<sup>rd</sup> intercomparison of analytical methods

Laboratory 193, Institute of Public Health of Vojvodina (Republic of Serbia)

### Sulphur dioxide in absorbing solution (A-samples)

Sample name	Determinand	Reported value <sup>¥</sup>	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm <sup>¤</sup>
A1	SO <sub>2</sub>	0.188	0.24	0.201	0.061	-0.209	U
A2	SO <sub>2</sub>	0.07	0.12	0.11	0.028	-1.435	U
A4	SO <sub>2</sub>	0.418	0.481	0.42	0.131	-0.016	Q
A5	SO <sub>2</sub>	0.657	0.701	0.651	0.094	0.063	S

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## EMEP – 33<sup>rd</sup> intercomparison of analytical methods

Laboratory 194, Institute of Public Health - Zrenjanin (Republic of Serbia)

### Sulphur dioxide in absorbing solution (A-samples)

Sample name	Determinand	Reported value <sup>¥</sup>	Expected value	Mean value	Standard deviation	Z score	EMEP quality norm <sup>¤</sup>
A1	SO <sub>2</sub>	0.16	0.24	0.201	0.061	-0.667	U
A2	SO <sub>2</sub>	0.072	0.12	0.11	0.028	-1.362	U
A4	SO <sub>2</sub>	0.425	0.481	0.42	0.131	0.037	Q
A5	SO <sub>2</sub>	0.574	0.701	0.651	0.094	-0.815	Q

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