

## EMEP – 43rd intercomparison of analytical methods - % deviation from expected value

Lab no	SO <sub>4</sub> <sup>2-</sup>				NH <sub>4</sub> <sup>+</sup>				NO <sub>3</sub> <sup>-</sup>				Na <sup>+</sup>				Mg <sup>2+</sup>				Cl <sup>-</sup>				Ca <sup>2+</sup>				K <sup>+</sup>				pH				Cond				
	% deviation from expected				% deviation from expected				% deviation from expected				% deviation from expected				% deviation from expected				% deviation from expected				% deviation from expected				% deviation from expected				% deviation from expected								
	G1	G2	G3	G4	G1	G2	G3	G4	G1	G2	G3	G4	G1	G2	G3	G4	G1	G2	G3	G4	G1	G2	G3	G4	G1	G2	G3	G4	G1	G2	G3	G4	G1	G2	G3	G4	G1	G2	G3	G4	
3	-1	-5	0	-2	23	23	-9	5	-1	0	-2	-2	-5	-4	1	3	-2	-1	1	-4	3	2	3	0	4	-6	-5	8	-3	1	4	-1	0.46	0.36	0.28	0.42	2	1	2	-2	
4	3	4	2	5	5	5	-2	5	-2	-1	-2	-1	-5	-4	-3	-2	-7	-12	-10	-12	0	0	1	1	-18	-14	-11	-11	10	-12	-2	-9	0.01	0.02	0.04	0.01	7	5	5	4	
5	-2	-2	-2	-3	4	5	6	14	-3	-3	-3	39	-3	-2	-1	-2	2	2	1	4	-1	-1	-1	-1	-3	-1	-4	10	-3	-1	0	2	0.00	0.04	-0.03	0.01	3	5	3	26	
6	-4	-6	-6	-6	-3	-3	-5	-5	-1	1	1	1	1	1	1	1	-4	-5	-4	-7	-7	-7	-3	-5	-7	-6	-5	-9	-3	-4	-5	-5	-0.02	0.03	0.09	0.16	6	3	5	4	
8	-2	-1	-2	-2	-3	-3	-2	-1	-5	-2	-3	-2	-3	-2	-1	-2	-2	-3	-1	-2	-2	-3	-2	-2	4	4	2	4	-8	-4	-7	-6	0.02	0.01	0.01	-0.01	6	3	1	2	
10	-4	-4	-4	-3	29	34	25	22	-8	-8	-8	-9	0	1	7	2	-7	-9	-8	-11	3	2	0	0	-4	4	0	0	-8	-5	-1	-3	-0.11	-0.14	-0.15	-0.01	11	9	7	8	
12	-3	-2	-4	-2	5	5	-2	2	-7	-1	-2	-1	-8	-6	-7	-7	-11	-10	-2	-2	-8	-6	-6	-6	-10	-6	-11	-11	10	-3	5	-4	0.07	0.08	0.04	0.06	4	1	1	2	
13	-2	-6	-2	5	3	5	-4	3	-2	-3	-4	34	-2	-1	0	-1	-1	-7	-6	-3	2	2	7	32	26	22	24	20	-8	-6	-8	-12	-0.23	-0.28	-0.31	-0.27	194	91	13	23	
15	0	0	-1	1	9	8	7	13	-3	-2	-1	14	1	0	2	0	-7	-3	4	2	-2	-1	2	-1	-1	-6	-2	-2	-39	4	8	6	0.02	0.02	0.02	0.14	3	-4	-1	4	
16	-1	-1	-1	-1	-2	-7	-6	-6	-4	-5	-6	-6	-1	3	0	1	1	-2	-2	-2	-5	-4	-4	-4	-2	1	0	3	-3	-5	-4	-5	0.06	0.08	0.02	0.06	3	4	1	3	
19	4	-1	-1	-1	9	6	-4	-8	9	-6	-4	-8	-11	-11	-10	-10	-5	-5	-5	-5	-3	-2	-6	-6	-10	-10	-8	-9	-16	-15	-14	-14	0.06	0.06	0.05	0.06	8	7	4	6	
20	0	0	-1	0	2	2	-2	-4	2	-1	0	1	-8	-6	-13	-11	-1	-2	-5	-4	1	1	1	1	-1	-1	-6	-3	-5	-4	-6	-3	0.01	0.02	0.02	0.04	6	5	2	4	
21	4	4	4	5	3	2	0	0	-2	-2	-1	2	0	2	2	2	4	3	3	2	-2	-1	-1	-2	0	1	1	4	-4	-2	-3	-1	0.03	0.04	0.03	0.02	3	3	0	1	
22	6	-2	-1	0	20	10	19	15	30	19	16	24	9	10	9	5	11	12	11	4	0	0	1	1	63	44	39	60	-6	5	-6	-2	-0.15	0.15	-0.06	-0.11	1	-6	5	31	
23	-9	-9	-9	-9	-16	-34	-24	-16	-10	-10	-9	-9	-8	-6	-6	-6	-15	-14	-14	-16	5	2	-4	-3	-3	-1	0	-1	123	41	16	12	0.00	0.00	0.01	0.00	4	3	0	2	
24	0	-3	0	0	-4	-5	-24	-3	-1	-5	-4	-4	0	-2	0	-1	-3	-3	-9	-6	0	1	2	-1	18	-7	6	-9	-6	-7	-2	-6	-0.09	-0.12	-0.16	-0.18	4	2	1	-2	
26	0	-1	-1	-1	1	-1	-21	0	-3	-1	-2	-2	0	0	-1	-1	1	0	0	0	-2	-1	-1	-1	-1	-1	2	-2	1	0	-2	-3	-0.01	-0.01	0.07	-0.03	3	1	2	0	
27	2	2	2	2	1	1	2	2	4	4	4	4	-7	-9	-8	-11	-1	4	4	4	-2	-2	1	0	-9	-7	-5	-6	-6	-8	-8	-9	0.05	0.07	0.06	0.01	3	2	-2	-1	
30	-3	-3	-3	-2	3	2	-5	9	1	-3	0	-2	1	1	2	1	3	4	3	0	-3	-3	1	0	3	6	2	-3	-5	2	-3	-1	-0.11	-0.08	-0.02	-0.06	5	1	-3	-1	
30	-3	-3	-3	-2	3	2	-5	9	1	-3	0	-2	1	1	2	4	-1	2	4	-1	-3	-3	1	0	-3	-3	1	0													
31	1	0	0	-1	10	12	12	12	1	-1	-2	-4	-1	-2	-1	-2	3	1	0	1	2	1	1	0	41	2	-1	5	1	-4	-1	2	0.00	0.00	0.21	0.07	6	5	9	5	
33	10	-3	-6	-5	2	-3	-4	-6	6	0	0	2	-4	-2	-5	-6	2	-2	6	18	3	-5	-3	-3	-10	9	14	27	14	0	9	4	0.00	0.00	0.00	-0.03	5	8	4	5	
34	-12	-11	-11	-11	-94	-91	-91	-90	-11	-10	-9	-10	-29	-29	-28	-29	-17	-8	5	7	17	16	-5	3	-54	-37	-16	-21	-91	-90	-91	-90	-0.10	-0.02	-0.31	0.03	248	81	200	285	
35	-3	-4	-3	-3	-9	-10	-12	-9	-6	-4	-4	-4	-1	-1	0	-1	0	-1	-1	1	1	-4	-3	-5	-4	-6	-5	-6	-3	-4	-3	-0.05	0.07	0.00	-0.01	16	7	5	3		
36	4	-3	-3	-3	4	3	4	3	-3	-2	-2	-2	0	-2	-1	-1	0	0	0	0	-2	-2	0	-1	15	1	2	5	-10	-8	-2	-5	0.00	-0.02	-0.05	-0.03	3	1	-2	0	
38	0	0	3	2	6	5	-8	-1	0	0	2	0	-3	-3	-3	-2	-6	15	30	16	0	1	3	1	53	43	45	1	-6	-11	4	-9	-0.04	0.01	0.04	-0.12	2	1	2	2	
39	-3	-2	-4	-5	5	5	7	9	-2	-4	-2	-1	-8	-1	-9	-2	-10	4	3	0	-3	-3	-2	-2	-6	5	-4	-8	4	4	1	-1	0.01	0.04	-0.03	0.00	-5	-5	-7	-8	
42	-3	-20	-8	-4	-7	-20	-10	-10	-7	-20	-10	-10	-3	-1	-19	-19	-3	-2	-4	-4	-7	-17	-9	-7	-1	3	3	-2	-7	-1	-7	-8	0.27	0.41	0.43	0.41	6	5	2	3	
45	0	0	0	1	4	5	4	1	-3	-1	-19	-19	-3	-2	-4	-4	0	-1	-1	-1	-9	-7	-3	-3	-9	-9	-10	-10	-7	-6	-3	-1	0.08	0.08	0.06	0.07	-5	-2	-2	-1	
46	-4	-3	-3	-3	10	1	3	-10	-11	-9	-9	-9	-5	-4	-4	-5	0	-1	-1	-1	111	113	98	85	25	-15	-15	20	3	6	3	4	0.18	0.15	0.13	0.14	7	6	4	5	
48	-17	-31	-18	-29	-5	-2	-4	-4	22	15	18	10	-3	-2	-3	-3	6	6	9	7	-1	0	1	1	-1	-3	-4	-4	-4	-11	-18	-6	-13	-0.13	-0.18	-0.48	-0.15	-1	-3	1	-6
49	-2	-2	-2	-2	8	23	24	12	-3	-2	-1	-2	2	2	0	0	1	2	1	0	-2	-1	0	-1	-13	-15	-4	-4	-8	-7	-5	-6									
50	-7	-7	-7	-8	11	14	10	14	-7	-5	-5	-4	-7	-7	-5	-6	-6	-9	-7	-9	-2	-1	0	-1	-13	-15	-4	-4	-8	-7	-5	-6									
54	-5	-3	0	-3	17	27	9	4	-4	-3	-1	-2	-14	-13	-11	-11	-3	-6	-3	-3	-5	-4	-1	-1	-7	-8	-7	-5	-14	-11	-9	-10	0.13	0.18	0.19	0.19	2	5	3	3	
110	-3	-9	-7	-7	-3	-1	-12	-2	-6	-8	-7	0	1	3	1	-1	0	1	0	-8	-12	-10	-10	-4	-4	-3	-4	11	8	8	3	-0.20	-0.02	-0.28	-0.08	-4	-7	-10	-7		
112	2	2	2	2	-3	-5	-5	-3	-3	-3	-2	5	3	2	2	5	3	6	4	1	1	-1	-1	-4	-3	-4	-4	-1	-1	1	-1	-0.10	-0.04	-0.05	0.03	-6	-7	-6	-1		
114	4	5	5	4	-2	-3	-3	-2	-4	-4	-4	-2	1	1	0	-1	2	-12	0	-1	-4	-3	-2	-2	64	73	61	63	19	1	5	2	-0.04	-0.04	-0.01	0.00	1	2	10	3	
115	-11	-11	-10	-9	4	-3	-3	-4	-12	-12	-10	-12	-3	-1	-3	-5	-6	0	-11	-7	-8	-9	-5	-6	-10	-1	-18	55	12	-7	-17	-2	-0.10	-0.04	-0.05	-0.09	-4	-5	-6	-6	
116	-5	-6	-7	-7	14	16	-5	6	-17	-15	-16	-15	4	8	9	12	2	6	10	10	-1	-4	-3	-3	12	8	21	25	1	6	5	12	0.84	0.24	0.22	0.12	-7	-6	-9	-10	
120	-9	-12	-10	-11	17	16	7	5	-12	-14	-10	-10	-7	-7	-7	-8	-6	-7	-9	-12	-9	-13	-8	-8	-10	-6	-9	-8	-22	-22	-22	-24	0.10	0.10	0.00	0.02	11	4	1	3	
121	-7	-15	-15	-25	-6	-7	7	-12	-1	-1	-1	-2	-10	-8	-11	-11	-3	-4	-3	-3	-7	-4	-2	-2	-3	-5	-5	-3	-10	-10	-9	-7	-0.23	-0.06	-0.02	-0.04	1	-2	-10	-9	
125	-2	-3	-2	-3	-13	-15	-13	-11	-6	-5	-5	-5	-9	-9	-6	-7	2	1	2	1	-4	-3	-2	-3	-10	-9	-7	-6	-9	-9	-9	-10	-0.19	-0.07	-0.01	0.01	4	3	1	1	
153	-6	-6	-7	-7	3	9	1	6	-7	-6	-7	-2	-10	-6	-5	-6	14	19	10	2	-6	-6	-4	-5	45	30	27	24	-8	-1	-4	-3	-0.12	-0.09	-0.06	-0.09	-8	-7	-7	-5	
155	-2	-2	-2	-4	-6	-5	-5	-5	-4	-2	-2	-2	-2	-2	-3	-2	2	0	1	1	-3	-2	-1	3	-9	-3	-4	-2	-6</												