



Supplement of

Appearance, study and a possible correction for boron: a phenomenon in ultra-soft X-ray measurements using a synthetic multilayer crystal and the EPMA

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apparent value [B wt %]-calibration with S10 Harvard Schörl													median	average	
B%	SRM610	0.38	0.40	0.39	0.39	0.38	0.40	0.44	0.39	0.38	0.39			0.39	0.39
	4001 glass	0.58	0.58	0.58	0.57	0.59	0.59	0.56	0.56	0.57	0.57	0.55	0.55	0.57	0.57
	BR_F2b glass	0.91	0.90	0.90	0.91	0.90	0.90	0.92	0.90	0.93	0.90	0.90		0.90	0.91
	Schorl	3.12	3.31	3.23	3.22	3.24	3.03	3.10	3.07	3.14	3.03	3.15	3.15	3.14	3.15

apparent value [B wt %]-calibration with BR_F2 glass													median	average	
B%	SRM610	0.12	0.12	0.37	0.11	0.19	0.17	0.19	0.09	0.13	0.13			0.13	0.16
	4001 glass	0.45	0.46	0.46	0.47	0.44	0.44	0.46	0.47	0.50	0.48	0.46	0.49	0.46	0.46
	BR_F2b glass	0.90	0.89	0.90	0.91	0.94	0.91	0.91	0.92	0.94	0.94	0.92		0.91	0.92
	Schorl	2.92	3.10	3.12	3.13	3.18	2.91	2.99	3.27	3.12	3.27	3.03	3.01	3.11	3.09

Supplementary Table S1: Apparent B-values of analysed phases. All other elements of these phases were set as "fixed" after representative quantitative analyses

apparent value [B wt%]	0.25	0.27	0.3	0.35	0.4	0.45	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6
true value [B wt%]	0	0.02	0.05	0.10	0.15	0.22	0.29	0.39	0.49	0.6	0.7	0.81	0.91	1.02	1.15	1.25	1.37	1.48	1.59	1.69	1.80	1.90	2.01	2.12	2.22	2.35	2.46	2.55
delta	0.25	0.25	0.25	0.25	0.25	0.23	0.21	0.21	0.21	0.2	0.2	0.19	0.19	0.18	0.15	0.15	0.13	0.12	0.11	0.11	0.1	0.1	0.09	0.08	0.08	0.05	0.04	0.05

Supplementary Table S2: Apparent and respective true boron values as extracted from the presented graph (Figure 3) and the delta.