

## Appendix 2

**Representative results of microchemical (EPMA) analyses (in wt.%) of chrysocolla (or related compounds)**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
sample:	BK1-1 <sup>1</sup>					BK2-1					BK3-1			BK3-2, type 1			BK3-2, type 2			
SO <sub>3</sub>																			0.27	
P <sub>2</sub> O <sub>5</sub>																			0.13	
SiO <sub>2</sub>	45.74	43.78	44.21	43.13	44.51	44.49	44.40	48.20	45.59	45.71	46.37	48.44	47.17	47.83	46.84	44.09	44.20	47.73	48.37	48.06
Al <sub>2</sub> O <sub>3</sub>	1.99	1.88	2.00	1.91	1.91	0.43	0.60	0.43	0.35	0.38	0.38	3.82	4.19	3.05	1.98	2.05	1.84	2.73	3.41	2.99
MgO												0.18	0.16	0.14	0.11					0.23
CuO	46.30	46.12	46.90	45.73	46.04	48.81	50.23	49.61	48.99	48.02	47.47	38.25	39.26	39.84	43.64	47.08	41.62	38.38	38.17	37.54
CaO	0.87	0.95	0.98	0.99	1.10	0.39	0.45	0.40	0.39	0.46	0.43	1.46	1.51	1.31	1.27	1.12	1.19	1.30	1.35	1.43
K <sub>2</sub> O												0.14	0.22						0.16	
Cl												0.07	0.06	0.06				0.08	0.06	0.09
Σ	94.91	92.73	94.09	91.76	93.64	94.12	95.68	98.64	95.32	94.57	94.65	92.35	92.57	92.23	94.61	94.92	89.37	90.84	92.56	90.61
H <sub>2</sub> O <sup>2</sup>	5.09	7.27	5.91	8.24	6.36	5.88	4.32	1.36	4.68	5.43	5.35	7.65	7.43	7.77	5.39	5.08	10.63	9.16	7.44	9.39
apfu (2 metal atoms basis)																				
S																			0.01	
Si	2.39	2.30	2.28	2.28	2.33	3.18	3.07	3.13	3.18	3.23	3.27	2.74	2.57	2.71	2.54	2.25	2.53	2.84	2.78	2.88
Al	0.12	0.12	0.12	0.12	0.12	0.03	0.04	0.03	0.02	0.02	0.02	0.25	0.27	0.20	0.13	0.12	0.12	0.19	0.23	0.21
Cu	1.83	1.83	1.82	1.82	1.82	1.95	1.94	1.95	1.96	1.95	1.95	1.63	1.61	1.70	1.79	1.82	1.80	1.73	1.66	1.70
Ca	0.05	0.05	0.05	0.06	0.06	0.02	0.02	0.02	0.02	0.03	0.03	0.09	0.09	0.08	0.07	0.06	0.07	0.08	0.08	0.09
K												0.01	0.02						0.01	
Cl												0.01	0.01	0.01						
OH <sup>3</sup>	3.69	3.31	3.23	3.23	3.44	3.44	3.11	4.06	3.66	3.85	4.12	5.19	4.53	5.04	4.31	3.15	4.26	5.56	5.33	5.79

<sup>1)</sup> Ti, V, Mn, Fe, and Zn were analyzed but not detected; empty cells denote values below detection limits; <sup>2)</sup> by difference (100-Σ); mpfu(H<sub>2</sub>O) not reported due to discrepancy related to sample destruction under the beam; <sup>3)</sup>excess related to calculation basis