

TABLE 2. Chemical composition of investigated tourmaline samples

	AT6	AT7	AT9	AT10	AT11	AT13	AT14	AT16	AT17	AT18	AT19	AT20	AT21	AT23	AT25	AT28	AT47
Na	0.401	0.370	0.576	0.512	0.558	0.508	0.431	0.298	0.420	0.207	0.255	0.192	0.208	0.222	0.550	0.604	0.276
K	---	---	---	---	---	---	0.004	0.002	0.002	0.002	0.004	0.002	0.002	0.004	0.004	---	0.004
Ca	0.342	0.542	0.022	---	0.049	0.421	0.240	0.617	0.485	0.719	0.633	0.750	0.695	0.714	0.158	0.022	0.600
Vacancy	0.257	0.088	0.402	0.488	0.393	0.071	0.325	0.083	0.093	0.072	0.108	0.056	0.095	0.060	0.288	0.374	0.120
Sum X	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Li	1.366	1.416	0.903	1.272	1.541	---	0.331	1.630	1.287	1.771	1.798	1.822	1.848	1.734	1.336	1.087	1.639
Mg	---	---	---	---	---	2.892	0.002	---	0.024	0.001	---	0.001	0.001	0.001	0.005	---	---
Ti ⁴⁺	---	---	---	---	---	0.118	0.002	---	0.033	---	---	---	---	---	---	---	0.001
V ³⁺	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Cr ³⁺	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn ²⁺	0.007	0.084	0.009	0.007	0.064	0.000	0.001	0.020	0.117	0.026	0.015	0.016	0.012	0.054	0.088	0.004	0.021
Fe ²⁺	0.005	0.211	0.003	---	0.013	0.009	0.006	0.005	0.179	0.001	---	---	0.001	0.012	0.016	---	0.011
Cu ²⁺	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Zn ²⁺	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Al	1.622	1.289	2.085	1.721	1.382	---	2.430	1.345	1.360	1.201	1.187	1.161	1.138	1.199	1.555	1.909	1.328
Sum Y	3.000	3.000	3.000	3.000	3.000	3.019	2.772	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000
Mg	---	---	---	---	---	0.119	---	---	---	---	---	---	---	---	---	---	---
Al	6.000	6.000	6.000	6.000	6.000	5.881	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000
Sum Z	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000
B	---	---	---	---	---	---	1.225	---	---	---	---	---	---	---	---	---	---
Al	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Si	5.915	5.918	5.800	6.010	6.126	5.873	4.871	5.938	5.868	5.978	6.021	5.989	6.027	5.969	5.977	5.883	5.955
Sum T	5.915	5.918	5.800	6.010	6.126	5.873	6.096	5.938	5.868	5.978	6.021	5.989	6.027	5.969	5.977	5.883	5.955
B	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000
OH	3.508	3.501	3.263	3.792	3.522	3.899	3.304	3.653	3.299	3.265	3.207	3.265	3.115	3.258	3.363	3.488	3.200
F	0.492	0.499	0.737	0.208	0.478	0.101	0.053	0.347	0.701	0.735	0.793	0.735	0.885	0.742	0.637	0.512	0.800</

TABLE 2. Continued[illegible]