

Table 3. Chemical compositions of pyroxene.

Sample	MC77	MC77	MC77	MC77	MC77	MC77	MC77	MC77	MC70	MC70	MC70	MC81	MC70	MC70	MC70	MC70
An.#	53	58	60	63	61	62	98	112	140	141	142	211	157	158	159	139
Occurrence	Partly replaced by Am	Cpx core in zoned crystal	Cpx core in zoned crystal	Cpx rim in zoned crystal	Cpx core in zoned crystal	Cpx rim in zoned crystal	Partly replaced by Am	Partly replaced by Am	Partly replaced by Am	Partly replaced by Am	Partly replaced by Am	Acicular, metamorphic	Acicular, metamorphic	Acicular, metamorphic	Acicular, metamorphic	Acicular, metamorphic
Oxides (wt%)																
SiO ₂	51.33	53.42	52.05	52.08	51.52	50.25	53.23	52.89	52.37	49.86	53.32	53.87	53.51	53.65	52.87	51.46
TiO ₂	1.04	0.54	0.75	0.84	0.93	1.71	0.32	0.51	0.06	0.06	0	0.17	0.01	0.02	0.17	0.19
Al ₂ O ₃	3.85	2.64	3.1	3.07	4.39	4.37	1.84	1.13	3.48	7.36	3.03	3.79	3.98	4.04	2.03	5.81
Cr ₂ O ₃	0.03	0.39	0.12	0.01	0.16	0.03	0	0	0	0	0	0.03	0	0.01	0	0.01
FeO	8.02	6.05	6.09	7.78	6.15	9.04	12.57	11.94	18.8	17.84	18.16	16.32	9.04	8.95	13.69	10.73
MnO	0.23	0.15	0.17	0.32	0.14	0.29	0.33	0.38	0.59	0.33	0.39	0.16	0.3	0.27	0.63	0.46
MgO	13.9	17.53	16.3	14.13	15.58	13.43	10.54	12.19	11.92	12.73	13.84	6.14	10.71	10.51	8.77	10.79
CaO	20.98	19.81	20.93	21.2	21.01	20.46	19.69	21.34	11.54	10.2	10.15	12.37	22.31	22.73	23.2	19.88
Na ₂ O	1.02	0.41	0.47	0.86	0.47	0.88	2.31	0.74	0.59	1.26	0.68	6.9	1.55	1.46	0.55	1.25
K ₂ O	0	0.01	0.01	0	0.01	0	0	0	0.04	0.03	0.02	0	0	0	0	0.01
Total oxides	100.4	100.95	99.98	100.3	100.35	100.46	100.84	101.13	99.39	99.68	99.59	99.75	101.41	101.65	101.91	100.58
Si	1.899	1.934	1.934	1.887	1.868	1.926	1.996	1.976	1.989	1.88	2.003	2.051	1.967	1.967	1.982	1.912
Al	0.101	0.066	0.066	0.113	0.132	0.074	0.004	0.024	0.011	0.12	0	0	0.033	0.033	0.018	0.088
Al	0.067	0.047	0.047	0.076	0.059	0.06	0.077	0.026	0.145	0.206	0.137	0.221	0.139	0.142	0.072	0.167
Fe ⁽³⁺⁾	0.072	0.012	0.012	0.022	0.06	0.043	0.115	0.036	0	0.006	0	0.331	0.006	0	0	0.001
Cr	0.001	0.011	0.011	0.005	0.001	0	0	0	0	0	0	0.001	0	0	0	0
Ti	0.029	0.015	0.015	0.026	0.048	0.023	0.009	0.014	0.002	0.002	0	0.005	0	0.001	0.005	0.005
Fe ⁽²⁺⁾	0.175	0.171	0.171	0.166	0.22	0.196	0.276	0.336	0.604	0.556	0.577	0.174	0.271	0.275	0.43	0.333
Mn	0.007	0.005	0.005	0.004	0.009	0.01	0.011	0.012	0.019	0.011	0.012	0.005	0.009	0.008	0.02	0.014
Mg	0.767	0.946	0.946	0.851	0.744	0.779	0.589	0.679	0.675	0.715	0.775	0.348	0.587	0.575	0.49	0.598
Ca	0.832	0.768	0.768	0.824	0.815	0.84	0.791	0.854	0.47	0.412	0.409	0.505	0.878	0.893	0.932	0.792
Na	0.073	0.029	0.029	0.033	0.063	0.062	0.168	0.054	0.044	0.092	0.049	0.509	0.11	0.104	0.04	0.09
K	0	0	0	0	0	0	0	0	0.002	0.002	0.001	0	0	0	0	0
Total cations	4.023	4.004	4.004	4.007	4.019	4.014	4.035	4.011	3.961	4.002	3.961	4.099	4.002	3.997	3.989	4
Wo	43.19	39.791	42.43	43.512	43.376	42.633	40.582	40.582	25.926	22.985	22.416	26.94	47.159	48.153	48.72	43.312
En	39.819	48.999	45.983	40.357	44.76	38.942	30.229	30.229	37.265	39.919	42.533	18.61	31.503	30.983	25.629	32.713
Fs	13.186	9.721	9.868	12.945	10.119	15.114	20.573	20.573	34.397	31.949	32.338	27.26	15.409	15.267	23.547	19.03
Aeg	3.805	1.489	1.719	3.187	1.744	3.311	8.616	8.616	2.412	5.147	2.713	27.19	5.929	5.597	2.104	4.946