

Supplementary Table 5

Table S5. Selected microprobe analyses for amphibole of high-pressure granulites in this study.

Lithology		garnet pyroxenite													
Point	Amp ₁	Amp ₂₋₁					Amp ₂₋₂					Amp ₃			
SiO ₂	36.33	42.05	41.57	42.21	42.07	40.83	39.39	40.71	42.12	40.90	40.51	42.13	40.15	40.62	40.22
TiO ₂	3.18	2.45	2.42	2.53	2.36	2.42	2.39	2.37	2.37	2.37	2.36	2.29	2.25	2.38	2.15
Al ₂ O ₃	16.49	11.87	11.70	11.86	11.74	11.79	12.06	11.60	11.60	11.70	11.62	11.41	11.53	11.09	11.65
FeO	17.74	18.76	18.61	18.83	18.16	18.72	18.71	19.15	18.68	18.73	18.79	18.64	18.80	18.53	18.69
MnO	0.03	0.07	0.06	0.09	0.06	0.11	0.08	0.09	0.04	0.06	0.08	0.08	0.02	0.09	0.07
MgO	6.93	8.28	8.21	8.20	8.45	8.23	8.33	8.19	8.37	8.42	8.34	8.52	8.38	8.67	8.55
CaO	11.28	10.68	10.92	10.98	11.06	10.96	11.11	11.09	10.91	10.86	10.98	11.14	11.14	11.24	11.08
Na ₂ O	1.17	1.30	1.33	1.35	1.23	1.31	1.40	1.20	1.30	1.30	1.30	1.29	1.24	1.22	1.38
K ₂ O	2.81	1.67	1.71	1.68	1.68	1.65	1.68	1.67	1.62	1.64	1.63	1.55	1.65	1.60	1.65
Si	5.67	6.36	6.36	6.37	6.40	6.28	6.13	6.27	6.39	6.27	6.26	6.39	6.24	6.29	6.22
Al(IV)	2.33	1.64	1.64	1.63	1.60	1.72	1.87	1.73	1.61	1.73	1.74	1.61	1.76	1.71	1.78
Al(VI)	0.70	0.47	0.46	0.48	0.50	0.41	0.34	0.37	0.46	0.39	0.37	0.43	0.35	0.31	0.35
Ti	0.37	0.28	0.28	0.29	0.27	0.28	0.28	0.27	0.27	0.27	0.27	0.26	0.26	0.28	0.25
Fe ³⁺	0.21	0.45	0.32	0.31	0.28	0.43	0.51	0.47	0.37	0.51	0.48	0.35	0.47	0.43	0.51
Fe ²⁺	2.10	1.92	2.06	2.07	2.03	1.98	1.92	1.99	2.00	1.89	1.94	2.02	1.97	1.97	1.91
Mn	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01
Mg	1.61	1.87	1.87	1.85	1.91	1.89	1.93	1.88	1.89	1.93	1.92	1.93	1.94	2.00	1.97
Ca	1.88	1.73	1.79	1.78	1.80	1.81	1.85	1.83	1.77	1.79	1.82	1.81	1.86	1.86	1.84
Na	0.35	0.38	0.39	0.40	0.36	0.39	0.42	0.36	0.38	0.39	0.39	0.38	0.37	0.37	0.41
K	0.56	0.32	0.33	0.32	0.32	0.32	0.33	0.33	0.31	0.32	0.32	0.30	0.33	0.32	0.33
(Na+K) _A	0.80	0.43	0.52	0.50	0.49	0.52	0.61	0.51	0.47	0.49	0.53	0.49	0.56	0.55	0.57
X _{Mg}	0.43	0.49	0.48	0.47	0.48	0.49	0.50	0.49	0.49	0.50	0.50	0.49	0.50	0.50	0.51

Amp1: Amphibole inclusion in garnet-core; Amp2-1: Hypidiomorphic amphiboles together with plagioclase form the "white eyes" structure surround the garnet; Amp2-2: Hypidiomorphic amphiboles in the interior and sides of clinopyroxene; Amp3: Allotriomorphic amphiboles within the peak clinopyroxene.

Lithology	garnet two-pyroxene granulite		garnet-bearing-plagioclase amphibolite
Point	Amp ₁	Amp ₂	In matrix

SiO ₂	42.31	42.04	39.88	41.26	41.28	42.00	40.65	40.33	40.48	40.22	41.05	41.76	44.44	51.11	52.93	40.47	40.03	39.82	40.82	41.39	40.95
TiO ₂	1.78	1.83	2.06	1.60	2.08	1.88	1.93	2.41	2.36	2.15	1.83	1.79	1.10	0.04	0.09	2.12	2.23	1.88	1.75	1.50	1.96
Al ₂ O ₃	11.64	11.72	12.55	12.44	11.85	11.42	11.39	11.54	11.58	11.65	11.57	11.28	9.00	3.17	2.22	12.17	12.77	12.59	11.93	12.11	11.93
FeO	16.72	16.94	17.69	18.09	18.00	17.95	18.43	18.79	18.46	18.69	18.26	17.90	16.08	14.07	14.68	19.38	19.94	19.57	17.83	17.57	17.79
MnO	0.15	0.08	0.14	0.11	0.18	0.18	0.18	0.09	0.07	0.07	0.12	0.13	0.14	0.23	0.26	0.11	0.12	0.10	0.32	0.31	0.27
MgO	9.97	9.61	9.38	9.21	8.93	9.10	9.09	8.38	8.68	8.55	9.24	9.53	10.77	14.24	13.77	8.74	8.20	8.36	9.37	9.36	9.14
CaO	11.14	11.11	11.07	11.02	10.90	11.10	11.21	10.98	11.07	11.08	11.04	11.09	12.37	12.10	12.10	11.14	10.89	11.09	10.95	10.95	10.97
Na ₂ O	1.43	1.46	1.56	1.50	1.49	1.42	1.42	1.27	1.27	1.38	1.45	1.47	1.02	0.28	0.20	1.51	1.42	1.36	1.54	1.48	1.60
K ₂ O	1.04	1.01	1.17	1.12	1.10	1.07	1.06	1.58	1.64	1.65	1.02	1.03	0.69	0.05	0.04	1.81	1.83	1.82	1.13	1.14	1.19
Si	6.37	6.37	6.09	6.23	6.29	6.38	6.24	6.24	6.24	6.22	6.26	6.34	6.76	7.55	7.76	6.327	6.335	6.305	6.22	6.28	6.25
Al(IV)	1.63	1.63	1.91	1.77	1.71	1.62	1.76	1.76	1.76	1.78	1.74	1.66	1.24	0.45	0.24	1.673	1.665	1.695	1.78	1.72	1.75
Al(VI)	0.44	0.46	0.35	0.45	0.42	0.42	0.30	0.34	0.34	0.35	0.34	0.35	0.37	0.10	0.15	0.436	0.431	0.399	0.36	0.44	0.39
Ti	0.20	0.21	0.24	0.18	0.24	0.22	0.22	0.28	0.27	0.25	0.21	0.20	0.13	0.00	0.01	0.246	0.234	0.265	0.20	0.17	0.23
Fe ³⁺	0.58	0.52	0.77	0.74	0.60	0.53	0.69	0.52	0.51	0.51	0.74	0.66	0.16	0.43	0.21	0.000	0.017	0.000	0.77	0.72	0.62
Fe ²⁺	1.53	1.63	1.49	1.54	1.69	1.75	1.68	1.91	1.87	1.91	1.59	1.61	1.89	1.31	1.59	2.566	2.541	2.552	1.50	1.51	1.65
Mn	0.02	0.01	0.02	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.011	0.016	0.014	0.04	0.04	0.04
Mg	2.24	2.17	2.14	2.07	2.03	2.06	2.08	1.93	1.99	1.97	2.10	2.16	2.44	3.13	3.01	1.897	1.910	1.919	2.13	2.12	2.08
Ca	1.80	1.80	1.81	1.78	1.78	1.81	1.84	1.82	1.83	1.84	1.80	1.80	2.01	1.91	1.90	1.833	1.848	1.832	1.79	1.78	1.79
Na	0.42	0.43	0.46	0.44	0.44	0.42	0.42	0.38	0.38	0.41	0.43	0.43	0.30	0.08	0.06	0.411	0.407	0.420	0.46	0.44	0.47
K	0.20	0.20	0.23	0.21	0.21	0.21	0.21	0.31	0.32	0.33	0.20	0.20	0.13	0.01	0.01	0.341	0.338	0.368	0.22	0.22	0.23
(Na+K) _A	0.41	0.43	0.50	0.44	0.43	0.43	0.47	0.51	0.53	0.57	0.43	0.44	0.45	0.01	0.01	0.752	0.745	0.7877 88016	0.46	0.43	0.50
X _{Mg}	0.59	0.57	0.59	0.57	0.55	0.54	0.55	0.50	0.52	0.51	0.57	0.57	0.56	0.71	0.65	0.425	0.429	0.429	0.59	0.58	0.56

Amp1: Hypidiomorphic amphiboles with larger size located in the matrix as well as form the "white eye" structure around the garnet; Amp2: Allotri-
omorphous granoblastic amphibole with relict clinopyroxene inside.