

Table 1S - Amphibole inclusions averaged major element compositions

Sample	16OM07A	16OM07B	16OM08	16OM09A	16OM10	16OM11A	16OM12	16OM13	16OM14	16OM15A	16OM15B	16OM16A	16OM17	16OM18
Lithology	pure dunite	pure dunite	pure dunite	pure dunite	cpx-dunite	cpx-dunite	cpx-dunite	cpx-dunite	opx/pl/cpx dunite	pl/cpx-dunite	cpx dunite	opx/pl/cpx dunite	opx/pl/cpx dunite	amph-dunite (± pl/cpx)
Longitude	57.934897	57.934897	57.935311	57.935664	57.935957	57.936141	57.936430	57.936650	57.936904	57.937001	57.937001	57.937188	57.937362	57.937525
Latitude	23.128860	23.128860	23.129111	23.129051	23.128747	23.129032	23.129073	23.129234	23.129303	23.129323	23.129323	23.129348	23.129405	23.129352
Elevation (m)	814	814	828	837	849	854	867	884	900	906	906	918	931	940
n analyses	1	6	22	3	19	18	17	20	6	4	1	10	6	3
SiO ₂	40.92	41.89	42.05	42.95	41.96	43.27	43.71	44.46	44.23	43.93	43.89	44.06	44.30	44.36
TiO ₂	0.76	0.81	0.79	0.89	0.62	1.69	2.28	2.32	3.40	2.67	3.20	4.57	3.51	4.15
Al ₂ O ₃	14.58	13.47	13.40	11.95	13.69	11.88	11.75	10.85	10.34	11.10	10.93	10.93	10.59	10.62
Cr ₂ O ₃	2.61	2.78	2.35	2.30	2.07	2.81	2.55	2.57	2.40	2.30	2.26	2.57	2.28	2.98
FeO (tot)	4.82	3.93	4.32	3.67	4.73	3.60	3.68	3.63	4.15	5.07	4.82	3.44	3.69	3.40
MgO	17.22	17.77	17.80	17.82	17.35	17.87	17.85	18.40	17.47	17.67	17.24	17.63	18.20	17.61
MnO	0.06	0.03	0.04	0.04	0.03	0.05	0.06	0.07	0.08	0.08	0.06	0.08	0.07	0.06
NiO	0.12	0.09	0.09	0.11	0.18	0.10	0.09	0.08	0.08	0.08	0.11	0.07	0.11	0.10
CaO	12.78	12.59	12.89	13.93	13.13	12.56	12.36	11.99	12.24	11.93	12.49	11.76	12.15	11.37
Na ₂ O	3.01	3.63	3.62	2.90	3.45	3.26	3.46	3.21	3.10	2.98	2.88	3.10	2.88	3.42
K ₂ O	0.70	0.16	0.15	0.43	0.22	0.43	0.30	0.25	0.19	0.35	0.01	0.33	0.17	0.33
P ₂ O ₅	0.00	0.05	0.03	0.02	0.03	0.06	0.04	0.05	0.04	0.09	0.04	0.09	0.08	0.12
F	0.00	0.11	0.10	0.04	0.08	0.06	0.09	0.07	0.09	0.08	0.00	0.08	0.09	0.09
Cl	0.01	0.01	0.01	0.01	0.04	0.03	0.03	0.03	0.03	0.06	0.01	0.06	0.02	0.01
Total	97.59	97.32	97.64	97.06	97.58	97.67	98.25	97.98	97.84	98.39	97.94	98.73	98.14	98.62
XMg	86.43	88.95	88.00	89.67	86.71	89.84	89.64	90.04	88.24	86.11	86.44	90.13	89.79	90.22
XNa	86.77	97.50	97.28	91.57	96.06	91.94	94.62	95.05	97.30	94.55	99.84	93.97	97.26	98.35

$$\text{XMg} = 100 \times \text{Mg}/(\text{Mg} + \text{Fe}^{2+})$$

$$\text{XNa} = 100 \times \text{Na}/(\text{Na} + \text{K})$$

Sample	16OM19	16OM20	16OM21	16OM22	16OM24A	16OM25	16OM26	16OM27	16OM28	16OM29	16OM30	16OM31	16OM33
Lithology	amph- dunite (± pl/cpx)	opx/pl/cpx dunite	opx/pl/cpx dunite	amph- dunite (± pl/cpx)	amph-dunite (± opx/pl/cpx)	opx/pl/cpx dunite	opx/pl/cpx dunite	opx/pl/cpx dunite	opx/pl/cpx dunite	opx/pl/cpx dunite	amph- dunite (± pl/cpx)	cpx-dunite	pure dunite
Longitude	57.937619	57.937777	57.937908	57.938136	57.938480	57.938641	57.938836	57.939020	57.939176	57.939412	57.939619	57.939776	57.926974
Latitude	23.129312	23.129236	23.129206	23.129123	23.128933	23.128824	23.128677	23.128565	23.128442	23.128313	23.128173	23.128046	23.132670
Elevation (m)	945	955	962	978	1004	1016	1031	1046	1058	1065	1068	1072	688
n analyses	10	6	13	7	4	13	3	3	1	4	2	1	7
SiO ₂	44.04	43.74	44.11	43.14	44.72	43.92	44.66	44.80	42.85	43.88	44.21	43.94	43.15
TiO ₂	3.14	3.88	3.62	3.22	2.59	4.47	3.80	3.10	4.71	3.69	2.15	3.08	1.01
Al ₂ O ₃	10.54	11.07	10.56	11.55	10.37	10.60	10.52	10.81	10.24	10.42	11.14	11.61	12.81
Cr ₂ O ₃	2.72	2.45	2.77	2.98	3.20	2.86	2.49	1.78	2.56	2.23	1.76	2.14	2.71
FeO (tot)	3.85	3.80	3.97	3.97	4.12	4.50	4.27	5.07	4.43	4.43	4.91	4.53	3.53
MgO	17.97	17.32	17.95	17.73	18.33	17.15	17.93	17.99	17.21	18.04	18.25	17.59	18.67
MnO	0.07	0.06	0.09	0.06	0.08	0.09	0.11	0.11	0.06	0.08	0.11	0.06	0.03
NiO	0.10	0.10	0.07	0.08	0.09	0.07	0.03	0.07	0.07	0.06	0.05	0.08	0.09
CaO	12.09	12.50	11.09	12.10	11.30	11.06	11.16	11.29	12.20	11.97	11.56	12.52	12.51
Na ₂ O	3.30	2.94	3.36	2.85	3.37	3.65	3.10	3.00	2.98	2.89	3.45	3.18	3.79
K ₂ O	0.16	0.34	0.27	0.93	0.23	0.25	0.03	0.06	0.34	0.23	0.22	0.33	0.07
P ₂ O ₅	0.05	0.06	0.06	0.11	0.06	0.06	0.04	0.05	0.08	0.09	0.08	0.03	0.03
F	0.08	0.06	0.17	0.14	0.16	0.09	0.04	0.17	0.07	0.08	0.00	0.08	0.05
Cl	0.02	0.04	0.04	0.09	0.06	0.06	0.02	0.05	0.12	0.06	0.05	0.07	0.01
Total	98.13	98.36	98.13	98.95	98.57	98.83	98.20	98.35	97.92	98.15	97.94	99.24	98.46
XMg	89.30	89.04	89.01	88.81	88.79	87.21	88.22	86.35	87.37	87.86	86.89	87.37	90.41
XNa	97.20	92.88	95.34	86.20	95.64	95.62	99.25	98.75	93.08	95.00	95.98	93.54	98.81

$$\text{XMg} = 100 \times \text{Mg}/(\text{Mg} + \text{Fe}^{2+})$$

$$\text{XNa} = 100 \times \text{Na}/(\text{Na} + \text{K})$$

Sample	16OM35	16OM36	16OM37	16OM38A	16OM38B	16OM39	16OM41A	16OM41B	16OM41C	16OM43
Lithology	pure dunite	pure dunite	pure dunite	pure dunite	chromitite	pure dunite	pure dunite	pure dunite*	amph-dunite* (± cpx)	pure dunite
Longitude	57.928180	57.929952	57.930680	57.931841	57.931841	57.932391	57.933308	57.933308	57.933308	57.934188
Latitude	23.130736	23.131008	23.130369	23.129961	23.129961	23.129682	23.129253	23.129253	23.129253	23.129159
Elevation (m)	707	720	730	748	748	751	772	772	772	791
n analyses	2	9	2	12	13	19	2	21	5	2
SiO ₂	41.51	42.81	43.89	43.12	44.75	43.17	42.50	44.42	44.01	43.06
TiO ₂	1.01	0.94	1.09	1.23	1.42	1.11	0.90	1.60	1.55	0.97
Al ₂ O ₃	13.93	12.85	12.22	12.10	10.93	12.26	12.11	10.97	11.72	13.20
Cr ₂ O ₃	2.60	3.07	3.32	2.99	2.91	2.81	2.56	2.67	2.88	2.50
FeO (tot)	4.37	4.10	3.25	3.60	2.28	3.51	3.63	2.66	3.33	4.15
MgO	17.52	18.21	18.59	18.44	19.52	18.06	19.05	18.98	18.44	18.03
MnO	0.01	0.08	0.05	0.04	0.04	0.04	0.04	0.04	0.03	0.02
NiO	0.06	0.07	0.08	0.08	0.14	0.09	0.14	0.12	0.10	0.08
CaO	12.91	12.37	12.40	12.18	11.49	12.85	12.61	12.29	11.98	13.03
Na ₂ O	3.39	3.73	3.67	3.86	4.12	3.60	3.32	3.61	4.07	3.70
K ₂ O	0.38	0.13	0.15	0.07	0.07	0.16	0.35	0.17	0.13	0.11
P ₂ O ₅	0.03	0.01	0.05	0.03	0.02	0.02	0.03	0.05	0.02	0.03
F	0.07	0.10	0.05	0.10	0.08	0.14	0.10	0.11	0.07	0.14
Cl	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.01	0.03
Total	97.81	98.48	98.82	97.85	97.72	97.83	97.36	97.72	98.34	99.05
XMg	87.72	88.77	91.07	90.13	93.84	90.18	90.33	92.71	90.82	88.56
XNa	93.13	97.70	97.49	98.72	98.90	97.15	93.34	97.00	97.92	98.02

XMg = $100 \times \text{Mg}/(\text{Mg} + \text{Fe}^{2+})$

XNa = $100 \times \text{Na}/(\text{Na} + \text{K})$

* (with chromite schlieren)