

Electronic Supplementary Materials

Table A2 - Summary of the data on biotite-hornblende tonalite (BHTnl) samples

Sample	Modal Classification	Modal opaques Vol%	Log MS (K)	SM population	Opaque phases in decreasing relative abundance from the left to the right			(FeOt/(FeOt + MgO) in whole rock	Fe/(Fe + Mg) in amphibole vs fO ₂ **	Fe/(Fe + Mg) in biotite vs granitic series*
LIF-17B	BHTnl	0.20	-3.07	Subpopulation B2	Py→ Gth	Mag→(Mrt)	Ilm (Exs Hem) +Ttn		Intermediate/High	Magnetite series
MDP-02E	BHTnl	0.05	-3.07	Subpopulation B2	Py→ Gth	Mag→(Mrt))		0.75	Intermediate	Magnetite series
LIF-17E	BHTnl	0.20	-2.99	Subpopulation B2	Py→ Gth	Mag→(Mrt)			Intermediate/High	Magnetite series
PFA-62***	BHTnl	0.30	-2.92	Subpopulation B2	Py→ Gth	Mag→(Mrt)	I Ilm	0.85	High	Magnetite series
MDP-02C***	HBTnl	0.55	-2.91	Subpopulation B2	Py→ Gth	Ilm (Ex Hem) +Tit		0.75	Intermediate	Magnetite series
PFA-63B	HBGd	1.10	-2.88	Subpopulation B2	Py→ Gth	Mag→(Mrt)	I Ilm		Intermediate	Magnetite series
AFD-11B	BHTnl	0.60	-2.87	Subpopulation B2	Py→ Gth	Mag→(Mrt)	Ilm (Exs Hem) +Ttn	0.75	Intermediate	Magnetite series
LIF-17D	BHTnl	0.30	-2.86	Subpopulation B2	Py→ Gth	Mag→(Mrt)			Intermediate	Magnetite series
MYF-40***	BHTnl	0.50	-1.78	Subpopulation C2	Mag→(Mrt)	Py→ Gth	Ilm (Exs Hem) +Ttn	0.76	High	Magnetite series

Abbreviations (according to Whitney and Evans 2010): Py→ Gth = Pyrite partial or intensely altered to goethite; Mag→(Mrt) = Magnetite partially altered to martite; I Ilm = Individual ilmenite crystals; Ilm (Exs Hem) + Ttn = ilmenite crystals with fine hematite-exsolution lamellae and associated titanite. BHTnl = biotite-hornblende tonalite; HBTnl= hornblende-biotite tonalite; HBGd = = hornblende-biotite granodiorite *[(Ilmenite series, Magnetite series and Transitional between magnetite and ilmenite series according to Anderson et al. (2008) and Dall'Agnol et al. (2017)]. Oxygen Fugacity: **Low, Intermediate and High according to Anderson and Smith (1995). Semiquantitative analyses by EDS under a scanning electron microscope (SEM) or ***quantitative chemical analyses by **WDS** in electron microprobe.