x) Conditions of thermodynamic modeling using MELTS

We modeled liquid lines of descent using the MELTS algorithm (Ghiorso and Sack, 1995; Asimow and Ghiorso, 1998). The utilized starting compositions were WR BAS I, GL BAS I, GL BAS II and GL TA. Minimum and maximum pressure, temperature and H_2O contents together with oxygen fugacities utilized in our experiments are reported in the table named "Starting conditions". Plots are shown in "supplementary xi" pdf-file.

Plots have been performed using the text driven interface Spyder[3] (Scientific PYthon Development EnviRonment), based on the programming language of Python 2.7, developed by Pierre Raybaut and Carlos Cordoba.

Table: Starting conditions

Starting melt	**WR BAS I**	**GL BAS I**	**GL BAS II**	**GL TA**
Pressure (kbar)	0.5 - 8	0.5 - 8	0.5 - 8	0.5 - 8
Water (wt%)	0.0 – 2.0	0.0 – 2.0	0.0 – 2.0	0.5 – 2.5
Temperature (°C)	900 – 1340	900 – 1340	900 – 1340	900 – 1340
fO_2 (buffer)	QMF, NNO	QMF, NNO	QMF, NNO	QMF, NNO
Element oxides	SiO_2, TiO_2, Al_2O_3, FeO, MnO, MgO, CaO, Na_2O, K_2O, P_2O_5	SiO_2, TiO_2, Al_2O_3, FeO, MnO, MgO, CaO, Na_2O, K_2O, P_2O_5	SiO_2, TiO_2, Al_2O_3, FeO, MnO, MgO, CaO, Na_2O, K_2O, P_2O_5	SiO_2, TiO_2, Al_2O_3, FeO, MnO, MgO, CaO, Na_2O, K_2O, P_2O_5
Mineral phases	Olivine, Clinopyroxene, Plagioclase, Spinel, Apatite	Olivine, Clinopyroxene, Plagioclase, Spinel, Apatite	Olivine, Clinopyroxene, Plagioclase, Spinel, Apatite	Olivine, Clinopyroxene, Plagioclase, Spinel, Apatite
pdf "xi" pages	1-8	9-16	17-24	25-32

References

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