



Figure S1. Mapping of a representative quenched melt area of sample MA405. Fig. 2A shows the Mg-concentration. Red colors indicate high Mg-concentrations; green colors represent medium Mg-concentrations and blue colors low Mg-concentrations. Fig. 2B shows the Ca-concentration. Red colors indicate high Ca-concentrations green/yellow colors represent medium Ca-concentrations and blue colors low Ca-concentrations. Black is porosity.

Table S1. Comparison of the temperature derived by the geothermometer (GT) and the temperature measured by thermocouple (TC).

	Temperature GT [°C]	Temperature TC [°C]
1	1421 (11)	1400
2	1425 (7)	1425
3	1459 (19)	1400

Table S2. Composition of the standards used in for the microprobe analyses

	Dolomite wt.%	Wollastonite wt.%
CaO	21.84	34.17
MgO	13.30	0.01
MnO	-	0.49
Na <sub>2</sub> O <sub>3</sub>	-	0.01