



**Supplementary Figure S1:** Measured (drift and IMF-uncorrected)  $^{18}\text{O}/^{16}\text{O}$  ratios from analyses of standards and samples, for the three analytical sessions in which samples were analysed, plotted in order to show the analytical protocol. The full uncorrected  $^{18}\text{O}/^{16}\text{O}$  data can be found in Electronic Appendix 2. Analyses on standards are indicated by the grey shaded areas; only those standards used for the IMF corrections are plotted; these have compositions of  $\text{An}_{3.7}$  ('AMEL'),  $\text{An}_{31.4}$  ('HAWK', also used for drift monitoring) and  $\text{An}_{89.6}$  ('SITT'). Plotted values are

the means of five repeat analyses for standards and three for samples, unless otherwise noted on the figure, and are plotted at the mean analysis number for each group of repeats. Error bars show the  $\pm 2$  s.e (standard error) range on the means. The samples analysed in each set (i.e. between bracketing by analyses of standards) are noted by their codes on the plot (e.g. B1). Note that all but three crystal compositional zones were analysed in the first session, and other plagioclase samples (not from the Borgarhraun flow, and hence not plotted) were analysed during session 2, hence the apparent gaps in the data.