

Figure S1

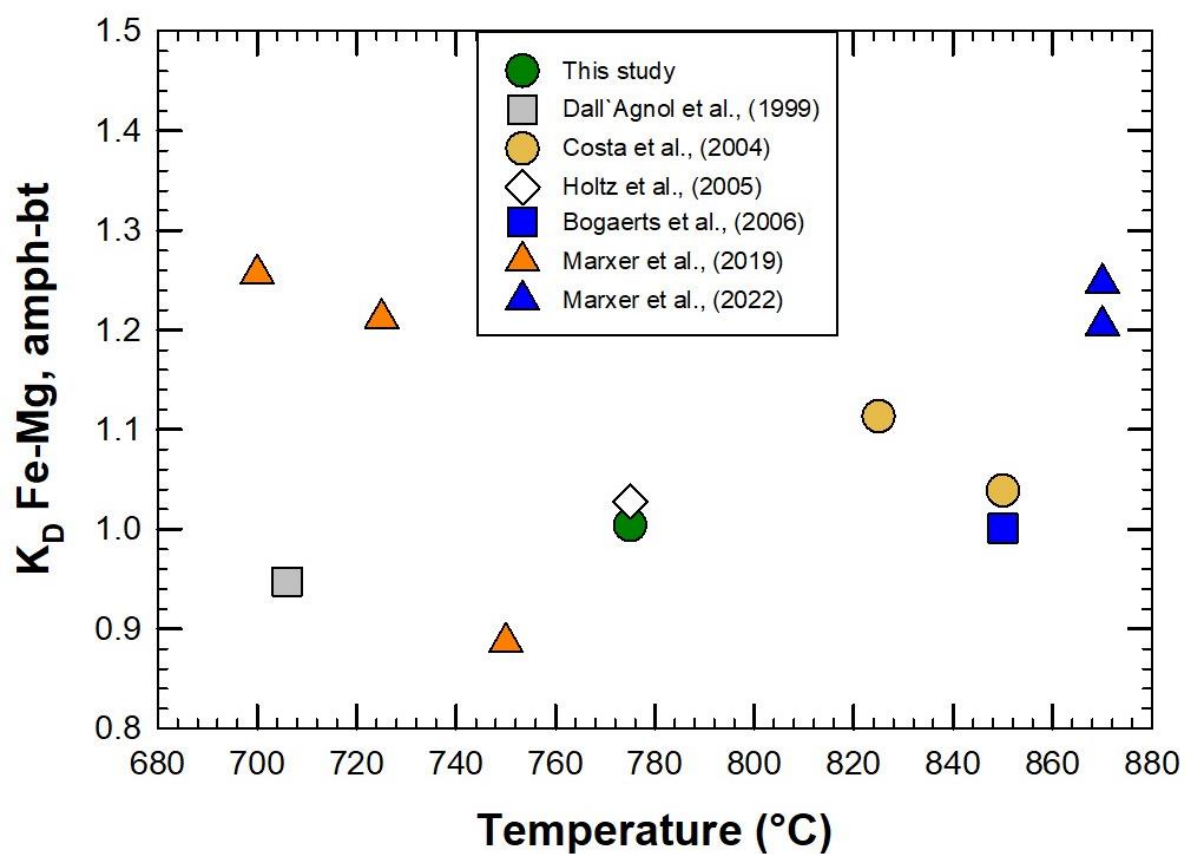


Figure S1: Literature and new data for amphibole–biotite Fe–Mg exchange partition coefficients. Note that at 775 °C $K_{D,Fe-Mg,amph-bt}$ is 1.00. Please refer to the main text for details.

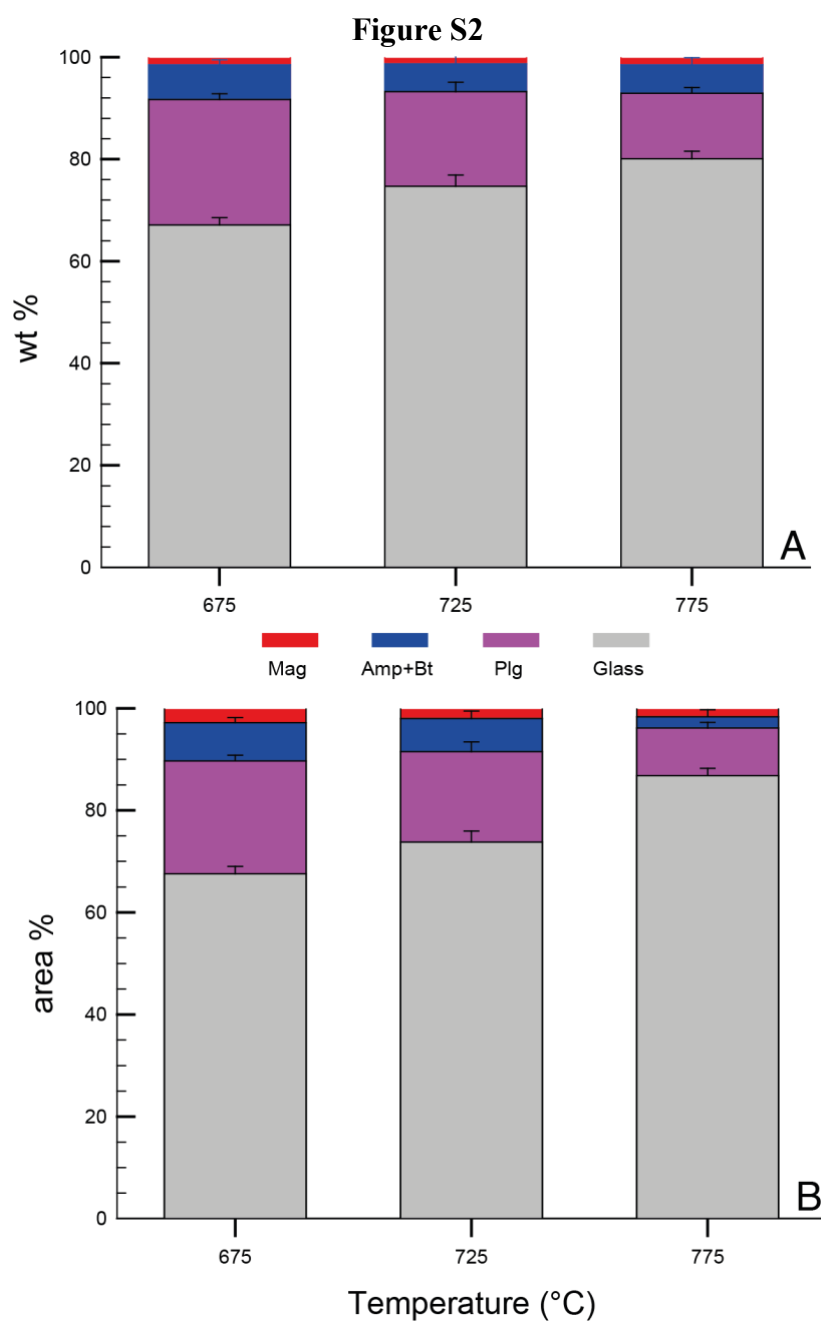
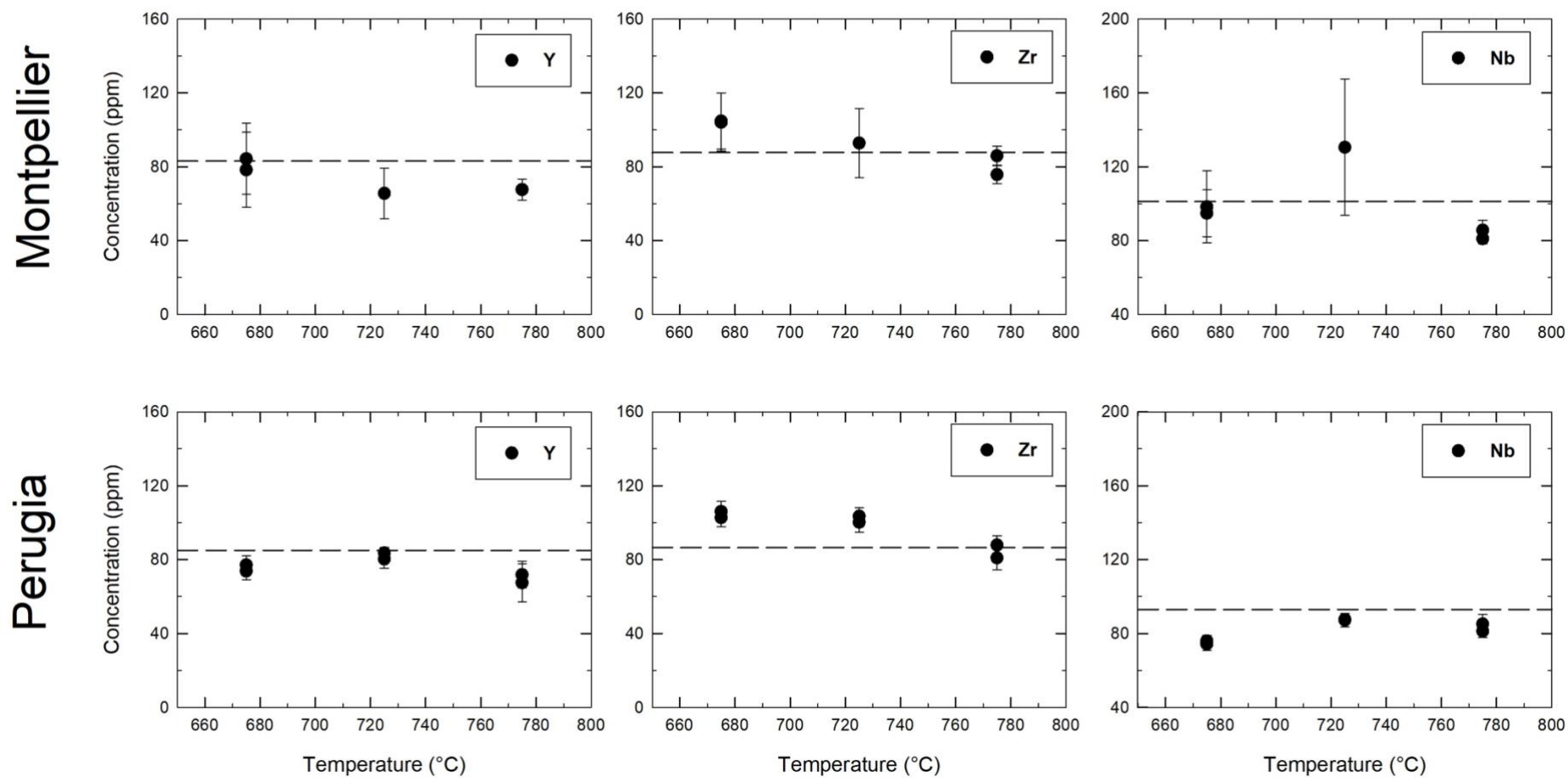
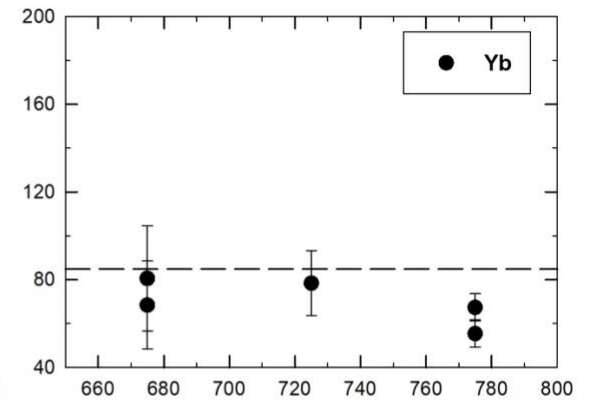
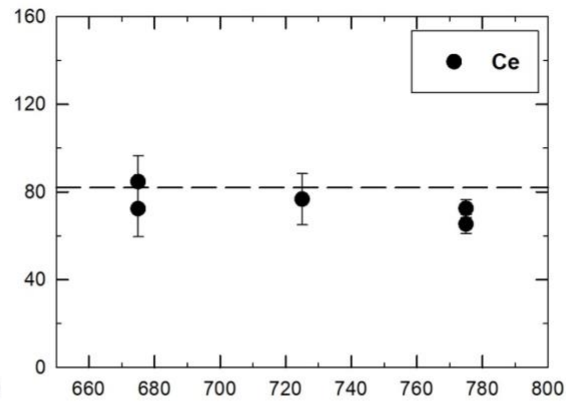
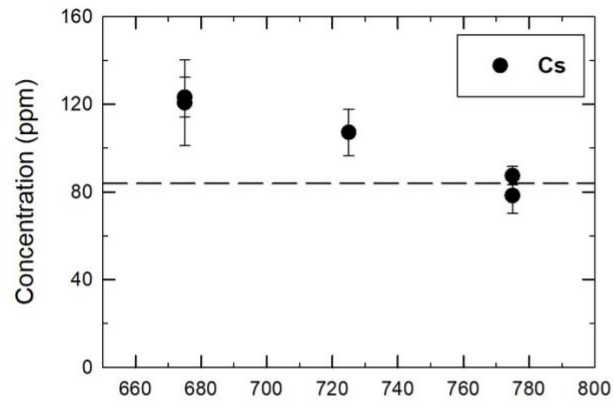


Figure S2. Phase proportions in experimental run products determined by mass balance (Fig. A, wt%) and by image analysis from BSE images (Fig. B, area%). Amphibole and biotite are not distinguishable in BSE images (same grey level) and are therefore plotted together in Figure 6B. Mag = magnetite, Amp = amphibole, Bt = biotite, Pl = plagioclase.

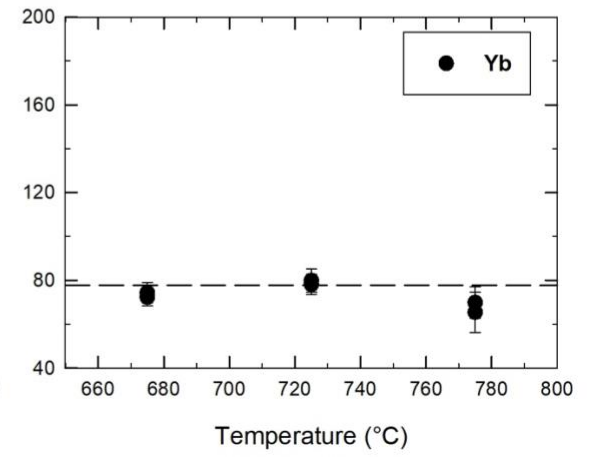
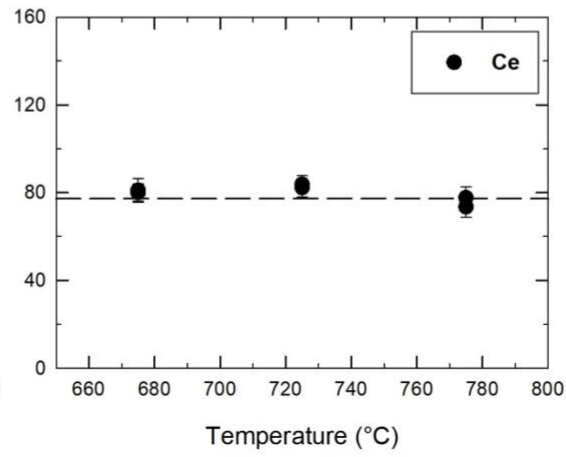
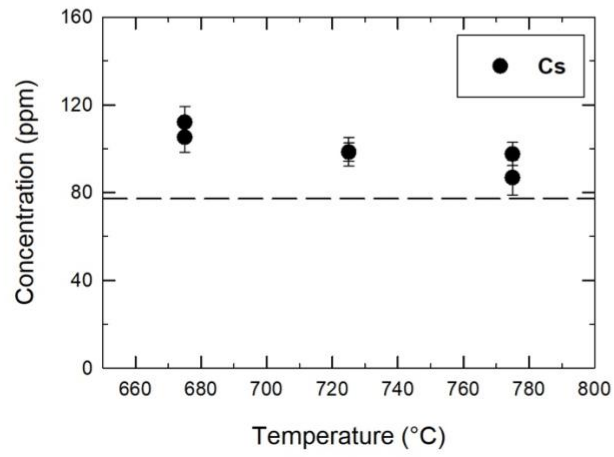
Figure S3



Montpellier



Perugia



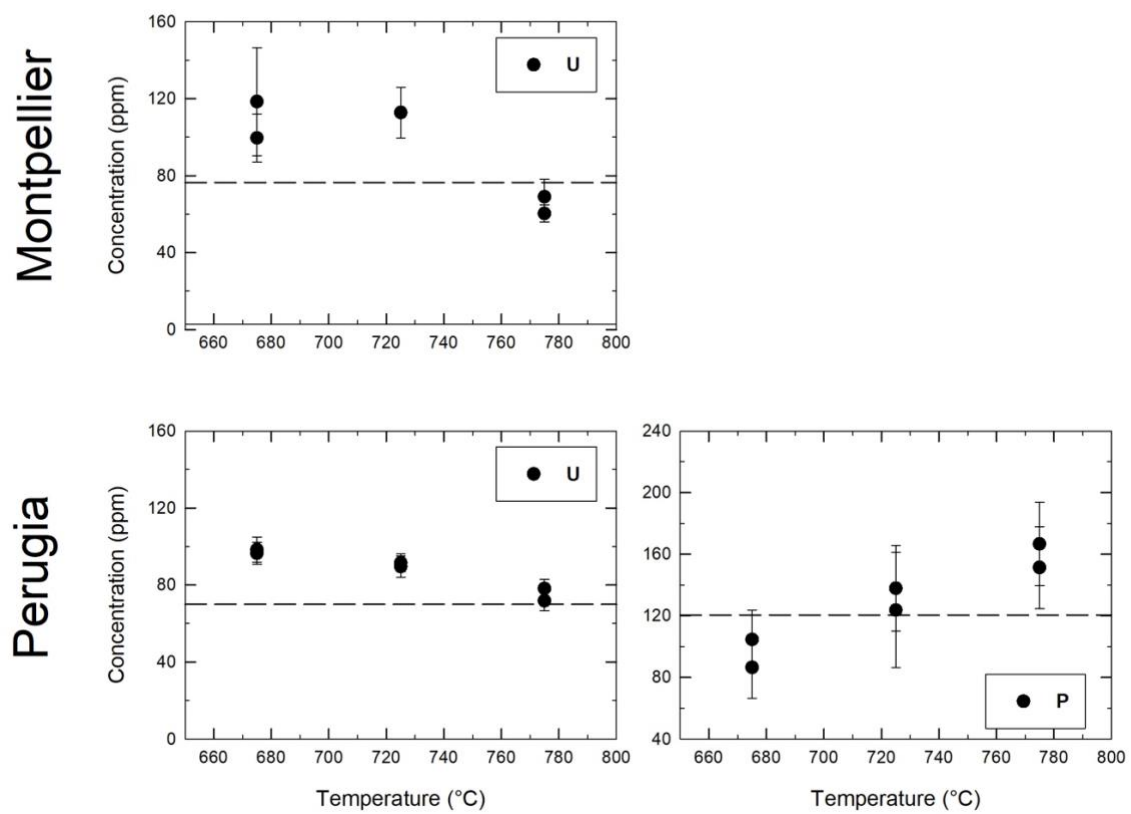


Figure S3. The trace element concentration in the glasses within the quartz traps (data obtained at Perugia and Montpellier labs). Please refer to main text for details.

Figure S4

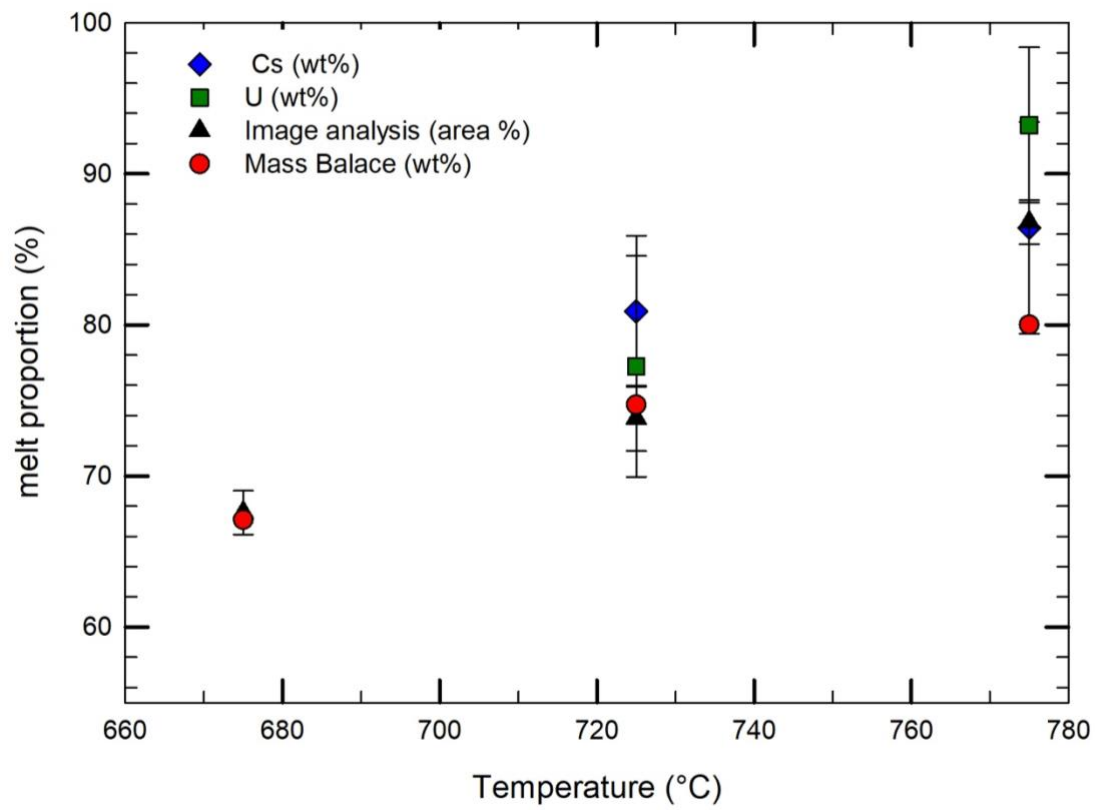


Figure S4: Melt proportion calculated via mass balance and image analysis and taking into account the U and Cs behaviour as strongly incompatible elements (see main text for details).