



Figure S4 Semi-quantitative mass balance estimates for reactive bulk system isolated by processing X-ray maps. The only biotite (panels a, b and e) and the biotite + amphibole + plagioclase + quartz (panels c, d and f) were considered as initial local reactive systems. Colors in panels a,b, d and e are relative intensity of the back scattered electron signal. Representative compositional analyses for biotite, amphibole and feldspar relicts of each samples (Tab 1) were used along with their estimated proportion (% of pixel) to reconstruct the initial bulk composition. The arrow next to Ca indicates that Ca is out of scale. Mn and Na estimates have low precision due to low concentrations in the analysed systems. Panel a corresponds to Figure 9a, panels b and c to Figure 5e,f and panels e and f to figure 4c in the main text.