

Descriptions of Additional Supplementary Files

Supplementary Dataset 1

Description: Whole-rock major and trace element compositions of Wolf lavas erupted in 2015.

Supplementary Dataset 2

Description: Plagioclase compositions from the 2015 eruption of Wolf volcano. Data are separated into phenocrysts from lava samples, glomerocrysts from lava samples, synneusis aggregates from lava samples and crystals from tephra samples.

Supplementary Dataset 3

Description: Olivine compositions from the 2015 eruption of Wolf volcano. Data are separated into phenocrysts from lava samples, glomerocrysts from lava samples and crystals from tephra samples.

Supplementary Dataset 4

Description: Plagioclase compositions from nodules produced during the 1968 eruption of Fernandina volcano. Data are separated into independent grains surrounded by matrix material, inclusions within other crystals and crystals bounding microlitic cavities. MgO may be below detection limit (~ 0.018 wt%) but is included for comparison.

Supplementary Dataset 5

Description: Olivine compositions from nodules produced during the 1968 eruption of Fernandina volcano.

Supplementary Dataset 6

Description: Clinopyroxene compositions from nodules produced during the 1968 eruption of Fernandina volcano.

Supplementary Dataset 7

Description: Modelled liquid and plagioclase compositions during cooling and fractional crystallisation at Wolf (starting liquid - W9562) and Fernandina (starting liquid - D25C-2-34) volcanoes. Liquid and plagioclase major element compositions were calculated using Rhyolite-MELTS. Plagioclase Ti concentrations were determined using Rhyolite-MELTS outputs and DTi values calculated after Nielsen et al. (2017).

