

Augite Tempered Tufo Fabric

(Sample MC 2013/37 (Fig. 7))

Inclusions

30-32%. el & eq. a-r. < 8 mm. Single-spaced. Moderately to poorly sorted. Bimodal grain size distribution.

Coarse fraction
50-55%. 4.5-0.02 mm

Dominant: Clinopyroxene; eq. sa-sr. < 4.5 mm. Cleavage. Second-order birefringence, can have simple twinning. Augite.

Common: Sanidine; eq. sa. < 3 mm.

Common-few: Biotite; eq. a. < 5 mm. Brown. Perfect cleavage.

Common-few: Olivine eq. sa-sr. < 4 mm.

Common-Few: Leucite; eq. sa. < 4.5 mm.

Common-Few: Zeolite; eq & el r. < 4 mm. Euhedral microphenocrysts of leucite in an opaque groundmass.

Few-Absent: TFs; concentrations of clay-rich streaks. Brown in PPL, and reddish brown in XP.

Few-Absent: Chert; eq sa. < 2 mm.

Fine fraction
45-50%, 0.02-0.01 mm

Dominant: Biotite
Common: Sanidine
Common-Few: Augite

Matrix

60-65%

Brown in PPL, and reddish brown in XP. Overall quite homogeneous, but some heterogeneity caused by reddish clay streaks (TFs). Optically inactive.

Voids

2-10%. Consisting mainly of meso-vughs, and some planar voids. No alignment with margins.

Comments

Sample 37 is characterized by sand-sized augite, sanidine, leucite and zeolite, set in red base-clay with fine biotite. The coarse inclusions would appear to have been deliberately added. TFs in the matrix are caused by siliceous and clayey red streaks, which is suggestive of clay mixing. (If this is the case, this fabric bears important similarities to Fabric 8, the Clay Mixing Fabric.) The matrix is optically inactive, suggesting that the sample was fired at a high temperature and in oxidising atmosphere. This fabric comprises a tile, and it appears to have been imported to Forum Appii from the region of Satricum/Astura.

The clay used for this fabric bears important similarities to the Tufo Lionato clay, which outcrops near the site of Satricum and the Astura River valley. This clay appears to have been used as a base-clay in a number of local fabrics at the site of Satricum (Attema *et al.* 2001).

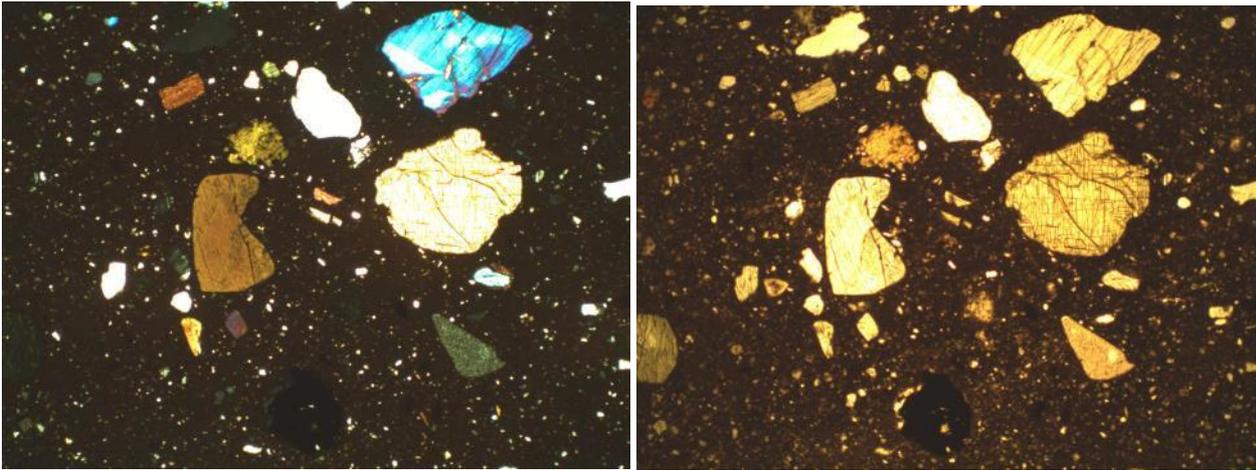


Fig. 7: Augite Tempered Tufo Fabric in XP (left) and PPL (right). Width of individual images = 5.8 mm.