Coarse Sanidine and Augite Fabric Group

(Samples MC 2013/119, 123, 126, 127, 128, 130, 131, 132, 134, 135, 136, 137, 138, 149, 150, 155, 166, 167, 173) (Fig. 14)

Inclusions

30-32%. el & eq. a-r. < 3.2 mm. Close- to single-spaced, and well-aligned to margins of samples. Bimodal, moderately to poorly-sorted grain size distribution.

Coarse fraction
15-18%. < 2 mm

Dominant-Common: Sanidine; sa.-sr.< 3.2 mm

Dominant-Common: Clinopyroxene; < 2 mm cleavage. Second-order birefringence. Augite.

Common-Few: Iron-manganese inclusions; eq & el. r. > 2 mm. Discrete opaque inclusions with variable impregnation, varying from light-brown to deep-brown. Typically, they develop on volcanic soils (samples MC 2013/126, 130, 131, 132, 135, 136, 137, 138, 149, 150, 155, 167).

Few-Absent: Plagioclase; eq & el. a-sr. < 1.5 mm. Twinned.

Few-Absent: Biotite; el. a.-sa. < 2 mm

Few-Absent: Zeolite; eq & el r. < 2 mm. Euhedral microphenocrysts of leucite in an opaque groundmass (sample MC 2013/149).

Absent-Rare: Weathered igneous rock inclusion; eq. sa-sr. < 2 mm. Plagioclase feldspar inclusions in an opaque matrix. Basalt? (samples MC 2013/131, 155).

Absent-Rare: Micritic calcite, pore-fill (samples MC 2013/123, 127).

Fine fraction
82-85%. < 0.2 mm

Dominant: Sanidine
Common: Biotite
Few: Opaque inclusions

Matrix

58-60%. Brown in PPL, and reddish brown in XP (samples MC 2013/119, 128, 131, 136, 149, 166), or grey in both PPL and XP (samples MC 2013/130, 132, 134, 137, 167). Relatively homogeneous. Some samples are reddish brown throughout (samples MC 2013/119, 128, 131, 136, 166), whereas most have distinct firing horizons with core-margin differentiation (samples MC 2013/123, 127, 131, 135, 137, 138, 149, 150, 155, 173). Optically inactive (samples MC 2013/119, 123, 126, 128, 130, 132, 135, 137, 149, 155, 166, 167, 173), to moderately active (sample MC 2013/136).

Voids

10%. Consisting mainly of meso-vughs and channels (samples MC 2013/119, 135, 149, 166). Well aligned with margins of sections (samples MC 2013/149, 166).

Comments

This large heterogeneous fabric is defined by the presence of generally moderately to poorly-sorted inclusions of sanidine, augite and iron, set in a red base-clay with fine sanidine, biotite and iron inclusions. The coarse sanidine inclusions are sub-angular to sub-rounded, and show cracks. The principal mineral inclusions include sanidine and augite, plus occasionally plagioclase and partially bent biotite, and very rarely weathered igneous rock, composed of fine plagioclase inclusions in an opaque matrix, as well as zeolite. The coarse fraction, consisting predominantly of volcanic mineral inclusions, includes some compositional variation, with some samples that are characterised by a variable proportion of augite and/or biotite inclusions.

The samples in this fabric were made from a volcanic clay. Volcanic temper, consisting of a mixture of volcanic mineral inclusions, has been added. All the vessels were wheel thrown, and fired at a high temperature. Some samples were well fired in an oxidising atmosphere, but the atmospheric conditions appear to have varied within most sherds, as several samples were incompletely oxidised. Both olla type 2 and olla type 3a cooking jars occur in this Fabric. It is closely related to Fabric 16 (the Coarse Sanidine Fabric Group).

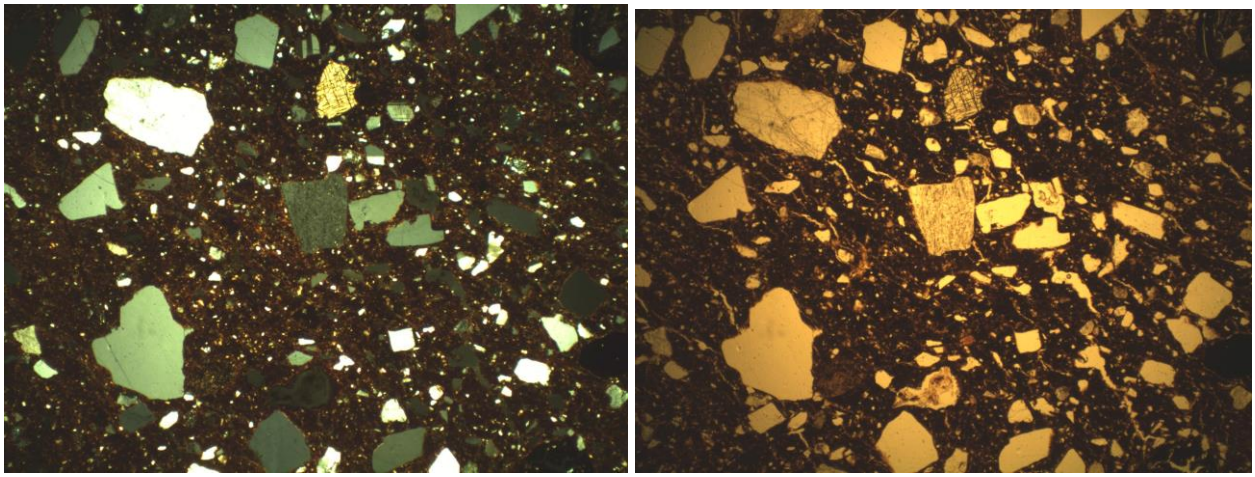

Fig. 14: Coarse Sanidine and Augite Fabric in XP (left) and PPL (right). Width of individual images = 5.8 mm.