The Petrology of a possible Mid/late Saxon import from Minster Abbey, Kent

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Introduction

A boss-decorated, burnished jar from Minster Abbey, Kent, was submitted for petrological and chemical analysis and was thin-sectioned and a sub sample analysed using Inductively Coupled Plasma Spectroscopy at Royal Holloway College. The thin-section has been added to the author's reference collection under the code AG121. A copy of the ICPS results will be lodged with the Department for Scientific Research at the British Museum.

Aims and Objectives

The primary aim of the analysis was to test the possibility that this vessel was an import to Kent, specifically either from Suffolk (eg a variant of Ipswich ware) or from continental Europe. The secondary aim is to provide an accurate description of the ceramic petrology of the vessel so that further discoveries can be compared with it.

Description

In thin-section the principal inclusion is subangular quartz, forming a well-sorted fine sand with grains mainly in the 0.2 to 0.4mm range. Moderate altered glauconite was the second most common inclusion type, with brownish grains c.0.2mm across. Sparse fragments of a sandstone up to 0.5mm across were also present. This sandstone consisted of grains of subangular quartz between 0.1 and 0.2mm across with no obvious cementing material. Sparse rounded red clay pellets up to 1.0mm across were also present. Sparse rounded fragments of micrite up to 0.8mm across, composed of non-ferroan calcite and containing spherulitic fossils, were almost certainly chalk. The anisotropic clay matrix contained moderate angular quartz and sparse muscovite laths.

The chemical data was analysed using winBASP (the Bonn Archaeological Statistics Package for Windows) and compared with a dataset of Kentish Iron Age pottery. Using cluster analysis and principal components analysis the Minster sample falls between the main cluster, characterised by silty clay and quartzose sand temper, and the second most common fabric, characterised by abundant glauconite.

Conclusion

The petrological characteristics of the Minster in Sheppey vessel's fabric demonstrate that its raw materials were derived from Cretaceous rocks. Chalk rarely survives a cycle of erosion and detrital grains such as those in this sample are normally confined to sands close to the chalk outcrop, and certainly not Tertiary deposits such as those that underlie Ipswich. A continental origin can probably be discounted on technological grounds: those areas of northern France and southern Belgium which satisfy the geological requirements for the source of the vessel were producing wheelthrown vessels continuously from the Roman period onwards whereas those, such as Flanders and the Netherlands, where handmade vessels were being produced do not have access to sands which contain Cretaceous-derived rocks and minerals. In conclusion, it is likely that the vessel is a south-eastern English product, perhaps, but by no means certainly, a Kentish one.