

## **Characterisation Studies of French Whitewares from Tewkesbury Abbey Meadow 1992**

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The 1992 excavations at Tewkesbury Abbey produced only two sherds of imported pottery. One of these (sample V3966) was the base of a lobed cup, in which the handle was attached at the base angle. This vessel was glazed with a mottled green glaze (coloured by copper) and had an incised floral design on the base. The second vessel (sample V3969) was part of the rim of a Bristol Type 192 jug with a devolved collar rim and traces of a strap handle (McCutcheon 2006, 96). Since neither of these types belonged to a common import type whose source was undisputed, samples were taken for thin section and chemical analysis.

### Thin Section Analysis

#### **BPT 192**

The fabric of this sample in thin section is fine-textured, containing few inclusions over 0.1mm across.

The following inclusion types were noted:

- Mudstone. Sparse rounded pellets of light-firing mudstone (slightly lighter in colour than the groundmass), up to 1.0mm long, containing abundant angular quartz and muscovite laths up to 0.1mm long. The fragments are laminated, reflecting bedding in the original rock.
- Opaque grains. Sparse elongated rounded pellets up to 1.0mm long. These contain quartz inclusions similar to those in the mudstone and groundmass.
- Muscovite. Moderate laths mainly up to 0.2mm but including some up to 0.5mm long.

The groundmass consists of light brown optically anisotropic baked clay minerals, abundant angular quartz and moderate muscovite laths up to 0.1mm long.

The mudstone and opaque grains are probably relicts from the parent clay used to make this fabric, indicating that the clay probably contained lenses of iron panning. The muscovite consists of thin laths with no evidence for fragments of the parent rock from which they were derived.

These characteristics are typical of the Tertiary kaolinitic clays which outcrop in more or less extensive patches throughout northern and western France. Large laths of muscovite are not a feature of the clays of the Paris basin or lower Seine but otherwise no close source can be suggested on the basis of the thin section.

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<http://www.avac.uklinux.net/potcat/pdfs/avac2006111.pdf>

## **Whiteware Lobed Cup**

The thin section of the lobed cup also has a very fine texture.

The following inclusion types were noted:

- Subangular quartz. Sparse grains up to 0.4mm across. Most are unstrained monocrystalline grains but one polycrystalline, strained grain was present.
- Voids. Sparse rounded voids up to 1.0 mm across were present. These show no signs of ever having contents and are probably air vesicles.

The groundmass consists of optically anisotropic light brown baked clay minerals with a high birefringence containing moderate, well-sorted angular quartz grains up to 0.05 mm across and fragments of dark brown to opaque grains up to 0.1mm across. Muscovite is lacking.

The complete lack of muscovite is an unusual feature in this fabric and is probably not explicable in terms of the muscovite having been altered by firing, since the high birefringence of the clay suggests a low firing temperature. The fabric is much finer than any known to the author from the Seine valley or southwest France.

## **Chemical Analysis**

The Tewkesbury samples were prepared by Peter Hill and submitted to Royal Holloway College, London, where they were analysed using inductively-coupled plasma spectroscopy under the supervision of Dr J N Walsh.

The resultant data consisted of the frequency, of a range of major elements, measured as percent oxides (App 1), and of a range of minor elements measured as parts per million (App 2).

The frequency of silica was estimated by subtraction of the measured oxides from 100% and the data were then normalised to aluminium and compared with a series of analyses of other French wares.

The comparanda come from a series of analyses carried out by the author and others. They include data from analyses carried out at the University of Caen where only the major elements were analysed (Deroeux et al. 1994); samples analysed by OMAC Laboratories, Loughrea, Co Galway using the same protocol as at Royal Holloway College, London (McCutcheon. Clare 2006) and samples analysed at Nantes using a slightly different protocol (2003).

Factor analysis found only one major factor in the dataset (with an eigenvalue of 1 or more) and the analysis was repeated with a lower threshold (eigenvalues of 0.3 or more). This found four factors. A plot of F1 against F2 found that the BPT sample had a high F1 score, distinguishing it from samples of Lower Seine wares, made in the vicinity of Rouen as well as

from most of the samples from production sites and consumer sites in the Loire valley analysed for Husi. The remaining samples consist of three BPT192 samples from Dublin, a sample of whiteware from Chinon, two miscellaneous French whiteware jugs from Dublin, a green-glazed chafing dish from Worcester, a sherd of probable Parthenay ware from Dublin, and sherds of mottled green-glazed Saintonge ware from Boston and Dublin. The majority of Saintonge wares, 12 samples, have higher F1 scores than the BPT192 vessels.

None of these comparative sherds can be securely provenanced but they are bounded by samples with lower F1 scores, from the Seine and Loire valleys, and samples with higher F1 scores, from SW France, and they include two pieces of probable SW French origin and one which is probably from Parthenay, probably exported through the port of La Rochelle.

Assuming that F1 is measuring a general trend in the composition of the Tertiary whiteware clays of the French littoral, it is likely, therefore, that BPT192 was also produced in the Charente maritime area. However, as Fig 1 shows, there are also some Saintonge sherds with lower F1 scores than BPT192 and therefore it is also possible that BPT192 was an early product of the Saintonge area, predating the mid 13<sup>th</sup>-century and later wares which have a whiter, finer, fabric.

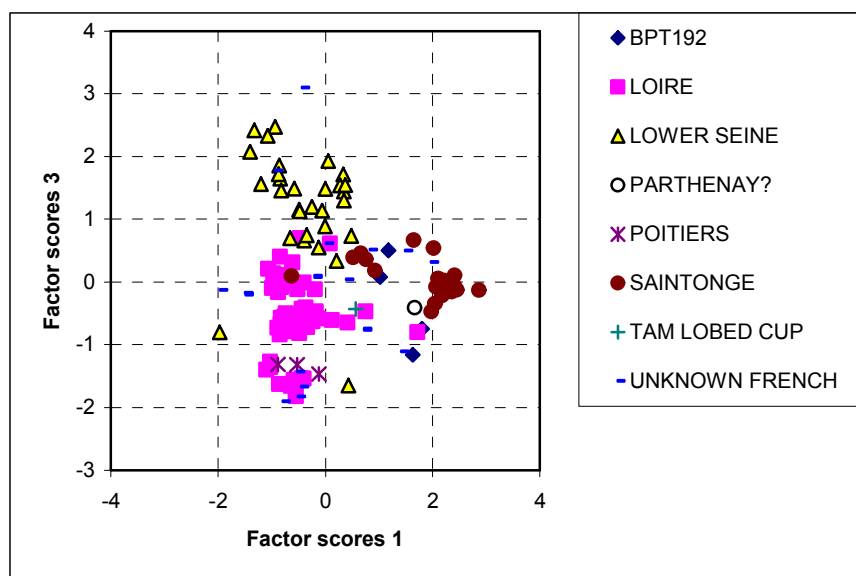


Figure 1

The lobed cup sample has similar factor scores to samples from the Loire valley, with the closest matches being with samples from Amboise and Angers.

### Conclusions

Both of the Tewkesbury French imports can be paralleled with material which probably originated in Western France. Neither is a common type but other examples of BPT192 have been recorded from Bristol, Dublin, Exeter and Southampton (as discussed by McCutcheon 2006, 96). The vessel might therefore have been imported through Bristol. The lobed cup, by

contrast, is a unique find for Britain and vessels of western French/Loire valley origin have rarely been identified in the British Isles. None of the Dublin finds sampled by McCutcheon are similar in composition. Given the unusual character of the two vessels it is possible that they arrived at Tewkesbury directly from Western France, as part of the personal belongings of a visitor to the abbey.

## Bibliography

- Deroeux, D., Dufournier, D., and Herteig, A. (1994) "French medieval ceramics from the Bryggen excavations in Bergen, Norway.", 161-208
- Husi, P. (2003) *La céramique médiévale et moderne du Centre-Ouest de la France (11e-17e siècle) : Chrono-typologie de la céramique et approvisionnement de la vallée de la Loire moyenne*, FERAC,
- McCutcheon, Clare (2006) *Medieval Pottery from Wood Quay, Dublin: The 1974-6 Waterfront Excavations*. Series B 7 Dublin, Royal Irish Academy
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## Appendix 1

TSNO	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO
V3966	19.53	1.79	0.46	0.69	0.21	1.63	1.12	0.16	0.01
V3969	15.48	3.76	0.82	0.49	0.2	1.59	0.73	0.07	0.013

## Appendix 2

TSNO	Ba	Cr	Cu	Li	Ni	Sc	Sr	V	Y	Zr*	La	Ce	Nd	Sm	Eu	Dy	Yb	Pb	Zn	Co
V3966	391	77	23	24	16	12	89	91	12	86	50	76	23	4	1	2	2	1,565	39	12
V3969	227	82	15	53	22	12	48	74	18	52	52	101	50	11	2	3	2	406	52	20