

Sonja Willems & Barbara Borger

POTTERY WORKSHOPS AT *FANUM MARTIS* (NORTHERN FRANCE)**Analysis of pottery production and consumption**

With the collaboration of Raphaël Clotuche, Jennifer Clerget, Géraldine Teyssière, Anne Comont, Julie Donnadieu, Julie Flahaut and Nicolas Warmé

This article is an introduction to a wider and integrated approach to potters' techniques in the southern part of the *civitas nerviorum*. More precisely, it focuses on the Roman pottery production at the site of Famars, Valenciennes, where recently extensive excavations have yielded ten new pottery kilns, in addition to five known structures. The analysis of the Roman pottery production at Famars is part of a wider research framework in the south of the Nervian territory¹, which compares the local pottery production at Famars with other regional production sites at Bavay, Pont-sur-Sambre, Sains-du-Nord and the Cambrai region. In this research, an integrated approach is being adopted, using macroscopic, microscopic and chemical analyses², for the identification of potters' techniques, their movement or transfer of knowledge. A detailed article on the kiln structures and the methods used to analyse potters' techniques and choices will be published elsewhere in more detail.³ This article mainly focuses on the context of the Roman pottery production at Famars, and touches upon some of the themes that are being developed in depth in the post-excavation research and the wider research framework.

Localization of *Fanum Martis*

Famars (*Fanum Martis*) is located just south of Valenciennes in Northern France (fig. 1a). The town could be considered as the economical twin city of the administrative capital city of Bavay (*Bagacum*) from the Flavian period onwards, since the craft of pottery production at Bavay seems to have declined and transferred to Famars. The settlement is known for its extensive thermal building⁴ and late Roman fortress, which have been excavated by Berzu and Unverzagt⁵ during the First World War. However, it must have been an important religious centre as well, and this is not only suggested by its name in antiquity, but also by the excavations at La

Rhonelle carried out in 2008/2009.⁶ Between the 1970s and the 1990s, five pottery kilns were found scattered throughout the southern part of the Roman city.⁷ More recent excavations on the university-extension at Technopole (fig. 1b), between 2011–2014, yielded another ten kilns in the south-eastern part of the Roman town. The kilns are dispersed and mixed in the urban framework and other craft activities, including a tannery, a butcher, and production of glue and small bone objects.

Status of *Fanum Martis*

The fact that fifteen kilns are dispersed over a large area underlines the importance of pottery production at the site of Famars, and raises the question which status the craft would have had in the town. When the kilns are mapped, it can be seen that each kiln is situated on a separate land lot (fig. 2). This particular situation may indicate an organisation of *fundi*. According to this organisation of pottery production, owners would have extracted clay on their land and hired potters to produce the vessels, which were sold along with other products generated on their estates.⁸ Whilst the research is currently in progress, it can be said with some certainty that there is an evolution in the localization of the land lots, their orientation and the chronology of the associated buildings and kilns.

Kiln types

All the kilns are single-chamber updraft kilns: the lowest level features a firing pit and chamber. A tongue-support holds a raised oven-floor, and the dome is made of clay. Their diameter rarely exceeds 1.20 m and the flue is always very short (less than 30 cm), suggesting the need for a rather high dome to obtain a good draught.⁹ Some kilns are slightly oval in shape, whereas one is rectangular.¹⁰ It is thought that the rectangular-shaped kiln could be the oldest one, given

¹ S. WILLEMS, La céramique gallo-romaine chez les Ménapiens et Nerviens: dynamiques économiques et identités territoriales (PhD thesis, UMR 7041, Paris X Inrap).

² The petrographic and chemical analyses are carried out by Dr. Borger, post-doctoral researcher at the Rijksuniversiteit of Groningen.

³ WILLEMS ET AL. in prep.

⁴ BEAUSSART 1980.

⁵ BERSU/UNVERZAGT 1961; CLOTUCHE 2013a for a synthesis of the research at Famars.

⁶ CLOTUCHE in prep; ID. 2013b.

⁷ BEAUSSART 1976; VAN BRUGGHE 1986; ID. 1989; TUFFREAU-LIBRE/VAN BRUGGHE 1994; ROGER/HERBIN 2005.

⁸ FERDIÈRE 1999.

⁹ DUFAY/BARAT/RAUX 1997.

¹⁰ VAN BRUGGHE 1986; ID. 1989.

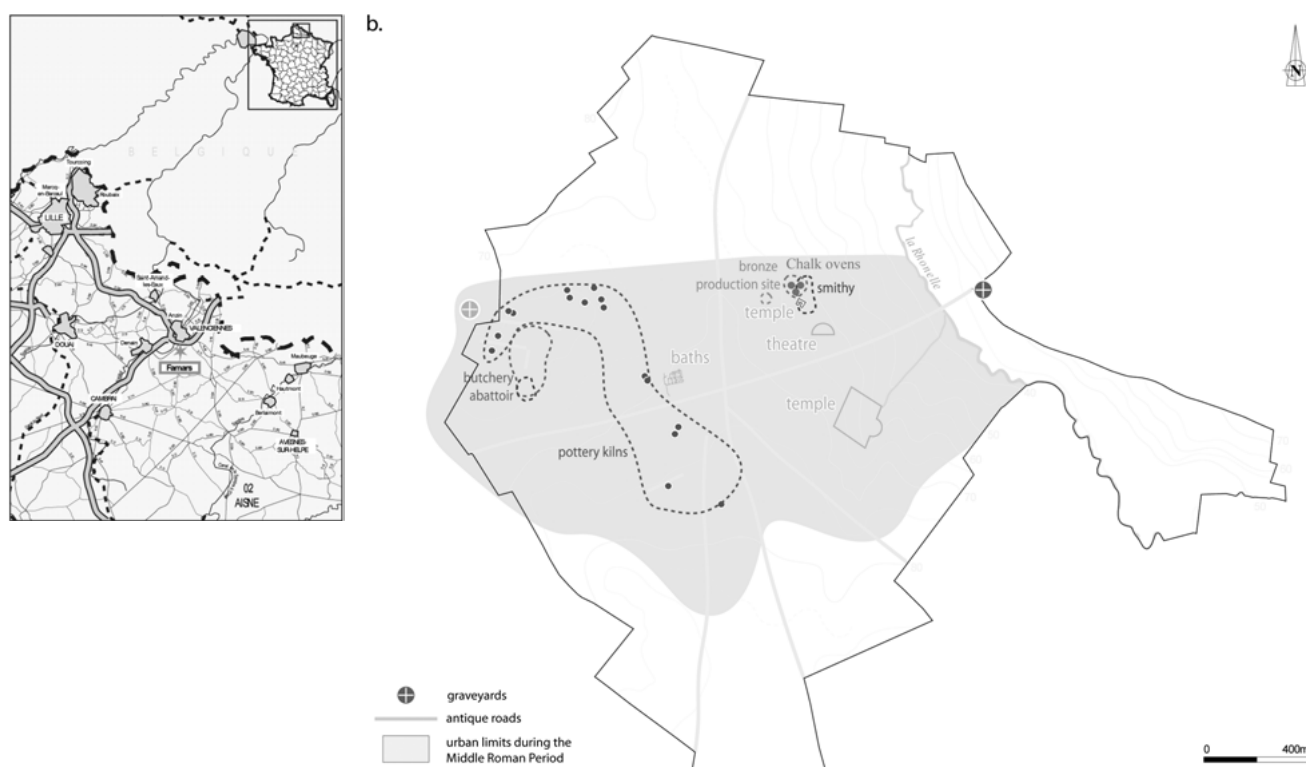


Fig. 1. **a** Localization of Famars; **b** localization of the pottery kilns (drawing: R. Kaddeche).

that it has been dated between 0–75 AD with archaeo-magnetic analysis¹¹, and that it might have been used for tile production.¹²

Different types of floor-supports have been identified: first is a central pillar, which supports a radial floor, second is a central rectangular base, supporting a pierced floor, and third is a (pierced?) floor, which is supported by two small rectangular tongues in the shape of coffee-beans (**fig. 3**). The three types co-exist throughout the entire production period. Different orientations of the flue have been noted, indicating that the wind does not seem to have played a role in the firing of the pottery or that the kilns were covered and protected.

Two kilns were accompanied by a small kiln, which measures 0.40–0.60 m in diameter. One of them was built in the upper part of a large *dolium*. The use of these small kilns remains unclear at present, given that no finds were associated with them. However, it should be noted that experiments have shown that numerous beakers can be stacked in such small-sized kilns.¹³ Moreover, other similar kilns have recently been found at the sites of Autun¹⁴ and Vignay¹⁵, but no beakers were found associated with them. The archaeologists at the sites of Autun and Vignay suggest that small associated objects were produced in these small kilns. In the case of Famars, their use remains unclear, as small beakers were found mixed with other vessels, including coarse ware and few associated elements have been found.

Exceptional is the presence of a storage door, which was preserved in the dome of kiln 6323 (**fig. 4**). It measures 50 by 24 cm, and is sufficiently large for a child to climb into the furnace chamber and pile up the pots. This means that the domes could have been closed, leaving only a small opening to regulate the firing process.

Few other structures related to pot-making activities have been found, except for one rectangular feature, which has been interpreted as clay preparation pit.¹⁶ At present, the more recent excavations at Technopole have not yielded any structures or buildings, which can be linked to the organisation of pottery production at the Roman town of Famars. Nevertheless, the research continues, and this interpretation might change.

Chronology of pottery production at the site of Famars

The pottery production at the town of Famars seems to have started some time between 0–75 AD, as is suggested by the archaeomagnetic dating of the rectangular kiln.¹⁷ Very few pottery wasters were found associated with this kiln, but pottery from early contexts on consumption sites suggests that it was rather sandy. The archaeomagnetic dating of the more recently identified kilns¹⁸, combined with the typo-chronological study of the waster vessels, suggests a chronology between the end of the 1st or the beginning of the 2nd century AD and the beginning of the 4th century AD,

¹¹ DELMAIRE 1996.

¹² PEACOCK 1982, 69.

¹³ P.-A. Capt, *ars cretariae*, pers. comm.

¹⁴ M. Joly, Paris 4, pers. comm.

¹⁵ FERDIÈRE/GUILLEMARD/LANOS 2012.

¹⁶ VAN BRUGGHE 1986; ID. 1989

¹⁷ ID. 1986; ID. 1989; DELMAIRE 1996,

¹⁸ The archaeomagnetic analysis is carried out by N. Warmé, Inrap.

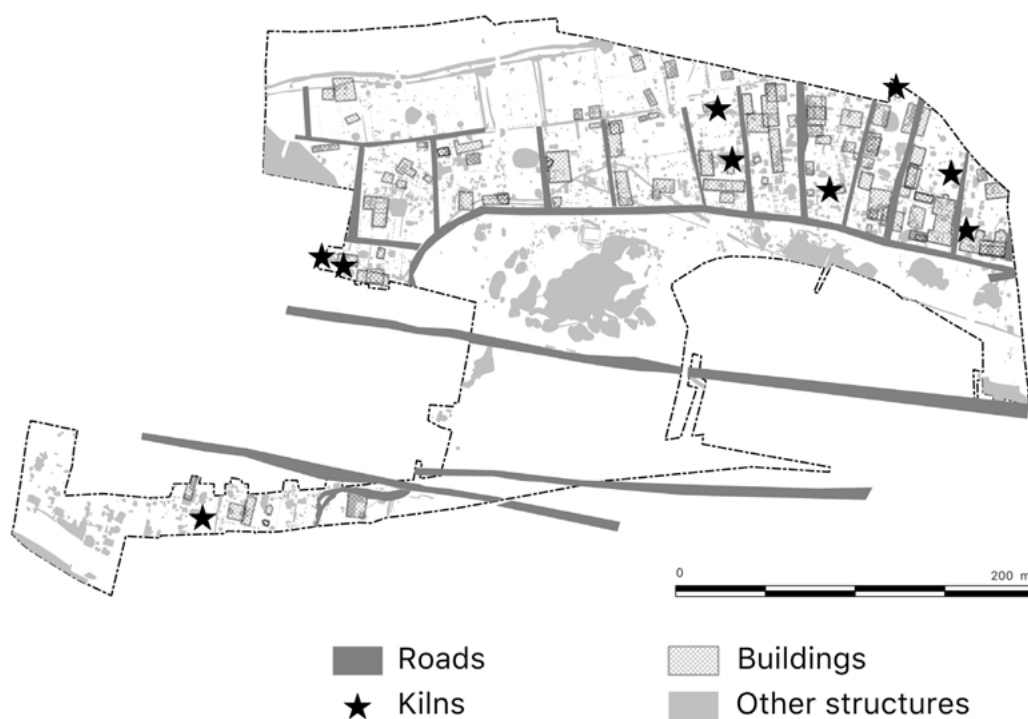


Fig. 2. Localization of the pottery kilns within the urban outlay, showing their position within separate land plots (northern part of the Technopole 2011–2014 excavations) (drawing: R. Clotuche).

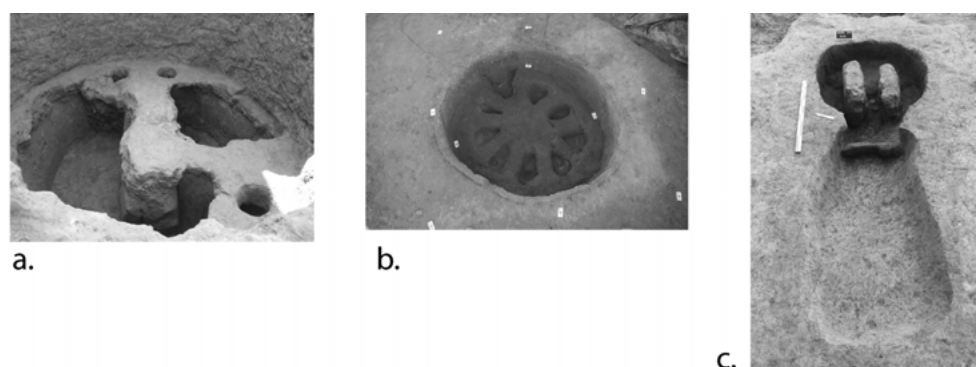


Fig. 3. **a** Kiln 1335 with central rectangular base and pierced floor; **b** kiln 2995 with central pillar and radial floor; **c** kiln 10111 with two tongue-supports (photos: Inrap and Service Archéologique de Valenciennes).

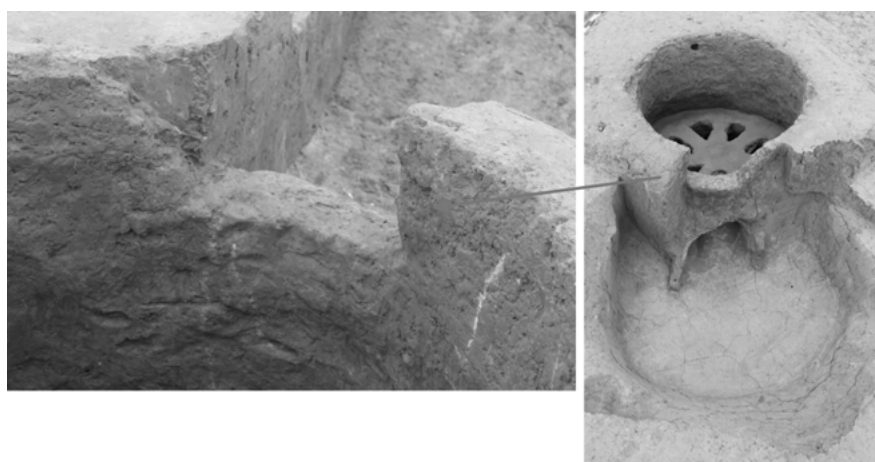


Fig. 4. Kiln 6323 with storage door (detail) (photo: Inrap/SA Valenciennes).

when the city was abandoned. Pottery production at the site seems to have flourished mainly during the 3rd century AD, and more precisely during the second half of this century, when pottery production at other regional sites, such as Bavay and Pont-sur-Sambre (25 and 35 km east from Famars) ceased. In addition, the archaeomagnetic dating shows that several kilns have been fired around the year 295 AD, which enables to date the pottery to the late 3rd or the beginning of the 4th century AD.

Characterization of categories and forms of pottery (figs. 5–6)

Three categories of pottery were produced in oxidising atmosphere, comprising *mortaria*, flagons and jars, whilst beakers, jars, plates, bowls were fired in reducing atmosphere, and fine beakers, jars and face pots were mica-dusted.

Relatively few *mortaria* have been found in association with the kilns and waster deposits. Their form, characterised by a high inner bead rim, as well as the associated finds, can be dated to the 3rd century AD (fig. 6,3–4). Their fabric is similar to the fine mica-dusted tableware, given that it is soft and soapy.

Flagons were typically produced with a sandy calcareous clay, and they have a simple rim and one handle. Also, large two-handled flagons are produced locally, and their volume is similar to that of small amphorae (fig. 5,12–14; 6,1).

A third form consists of different types of small two-handled storage jars, the so-called honey jars, which are characterised by a slightly carinated wall (fig. 5,10–11).

The variety of reduced kitchen- and tableware is very extensive. These wares are produced with a rather sandy clay. By the later periods, however, their fabric is finer and fired at a higher temperature. A wide range of plates, jars, bowls, lids and beakers are present, since the production period extends from the Flavian period until the early 4th century AD. It is interesting to note that some types are very popular. These include plates with small triangular rims (fig. 6,26), globular jars with short neck and everted rims in a range of different sizes (fig. 6,9,12–17), jars with straight walls and burnished lattice decoration (fig. 6,22), beakers with a long neck and high pedestal foot in various sizes (fig. 6,24–25), bowls with inverted rims and carinated bowls (fig. 6,5–6), which evolve into bulging necks in later periods (fig. 6,19,27,33).

The fine tableware is characterised by a fine saponaceous fabric (fig. 5,15–19). Most vessels in this category are fired in oxidizing atmosphere, but some small beakers are also fired in reducing atmosphere. Jars, bowls, beakers and the famous northern-Gaulish face pots are mica-dusted. The jars are globular with restricted bodies (fig. 5,15–17), or with flattened walls (fig. 5,20–21), the bowls have inverted rims and walls (fig. 6,18,26,29), and the beakers appear to be an imitation of the Niederbieber 33 with short neck (fig. 6,10).

Production of face pots

The face pots with moulded Mercury/Cernunnos heads are well known in Northern Gaul, and they are attested on several sites in Northern France, Belgium, the Netherlands and the Rhine zone. Until recently, it was thought that they were produced at the capital of Bavay.¹⁹ Certainly, a pottery industry must have existed, attested by examples found in the 1st century AD. However, no substantial proof, such as moulds or kilns, has been found at the site of Bavay. The Technopole excavations at the site of Famars identified substantial evidence for local production of face pots, yet it is dated to a considerably later period, being the 3rd or the beginning of the 4th century AD. First is the discovery of an incomplete mould for one of the Mercury/Cernunnos heads. It shows the upper part of the shoulder with the drapery of the gown, and fits exactly on one of the busts found on a face pot in a ritual context, dated to the beginning of the 4th century AD.²⁰ Second is kiln 1382, which was used for the firing of soft and soapy ware, and this is the characteristic fabric used for the production of face pots. Both types of evidence suggest that face pots were produced at the town of Famars. In particular, the mould is an exceptional find, as it is the first real evidence of such kind, given that for instance at Liberchies,²¹ the evidence comprised only moulds of castings.

Potters' tools

Even if relatively few structures could be related to pottery production at Famars, several interesting objects demonstrate the presence of potters at the site. A flint burnishing tool has been found during prospection, prior to the excavations at Technopole. Also, a wild boar's tooth has also been used as a polishing tool, bearing the inscription ADIICTI ("of whom has thrown"). Recently, other rare tools have come to light, namely two fragments of potters' mandrels and a potter's stamp, both manufactured in local clay.

The two fragments of mandrels are of the same type (fig. 7). They are cylindrically shaped with a central hole or unintentional break, and may have been used to manufacture plates or lids.²² This kind of support was used to finish the wheel-thrown pottery, and they are rare finds. Some examples are attested in the samian workshop at Montans,²³ but they do not have a central hole. It is not clear whether the central hole on the Famars example was an intentional adaption for the finishing of for example lid handles.

¹⁹ AMAND 1984.

²⁰ WILLEMS 2013; FLAHAUT/WILLEMS/BORGERS 2014

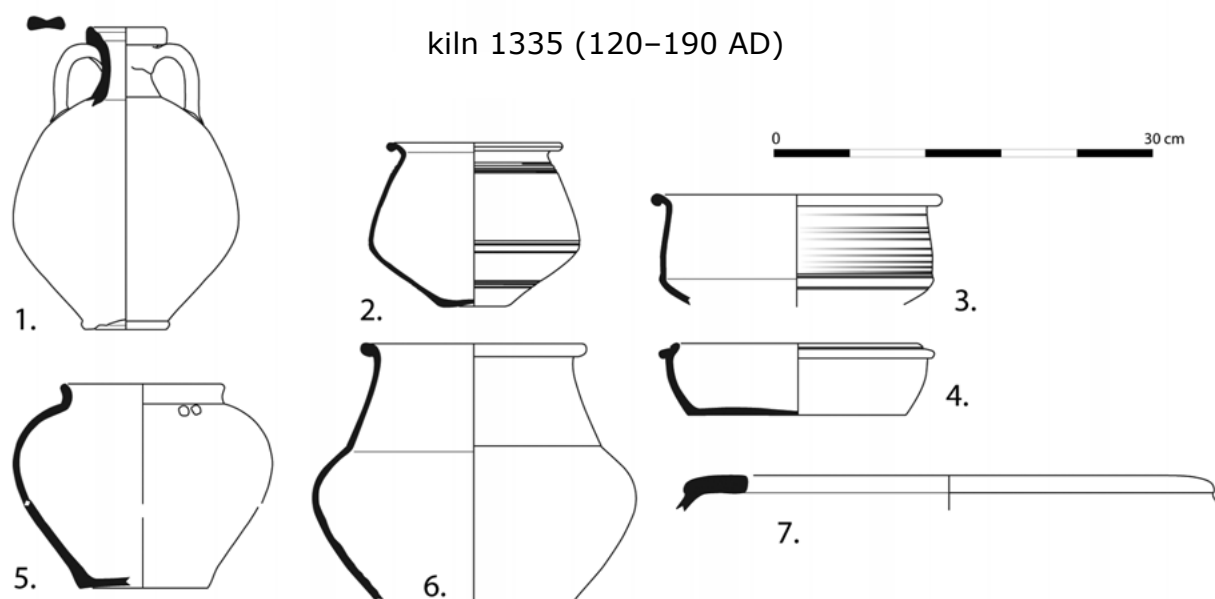
²¹ VILVORDER 2005.

²² P.-A. Capt, pers. comm. (*res cretariae*, <http://arscretariae-archeoceramique.blogspot.fr/>).

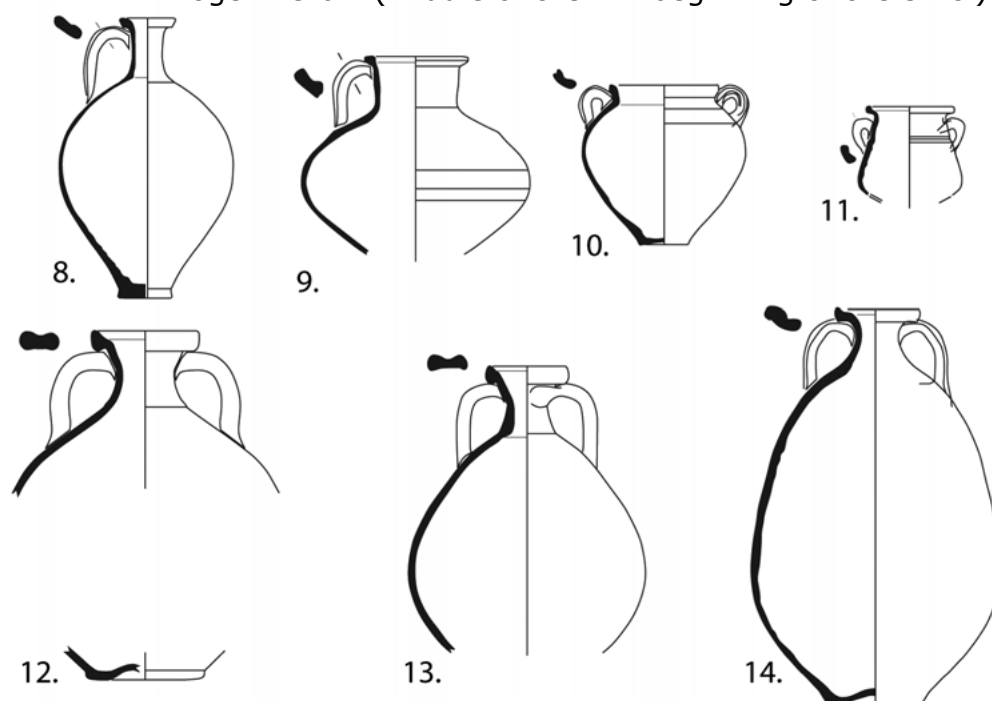
²³ MARTIN 1996.

Fig. 5. 2nd century AD productions: 1–7 mixed kiln wasters with common oxidised (1) and reduced sand and grog-tempered wares (2–7); 8–14 common oxidised calcareous flagons, storage jars and regional small amphorae; 15–21 soapy oxidised mica-dusted wares, with two variants, a fine washed calcareous clay used for the beakers (15–18) and a non-refined (?) sandy variant used for pots (19–21). – Scale 1:6 (drawings: A. Comont, J. Flahaut, J. Donnadiou).

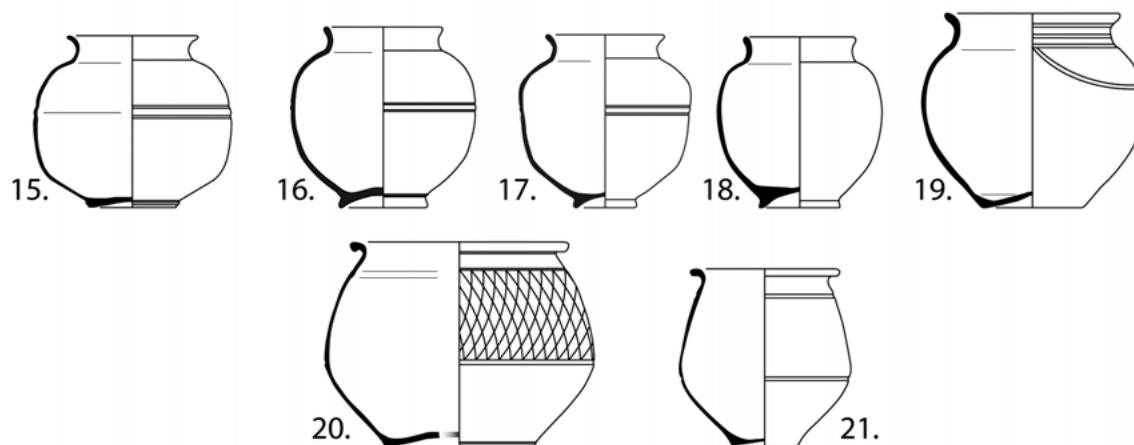
kiln 1335 (120–190 AD)



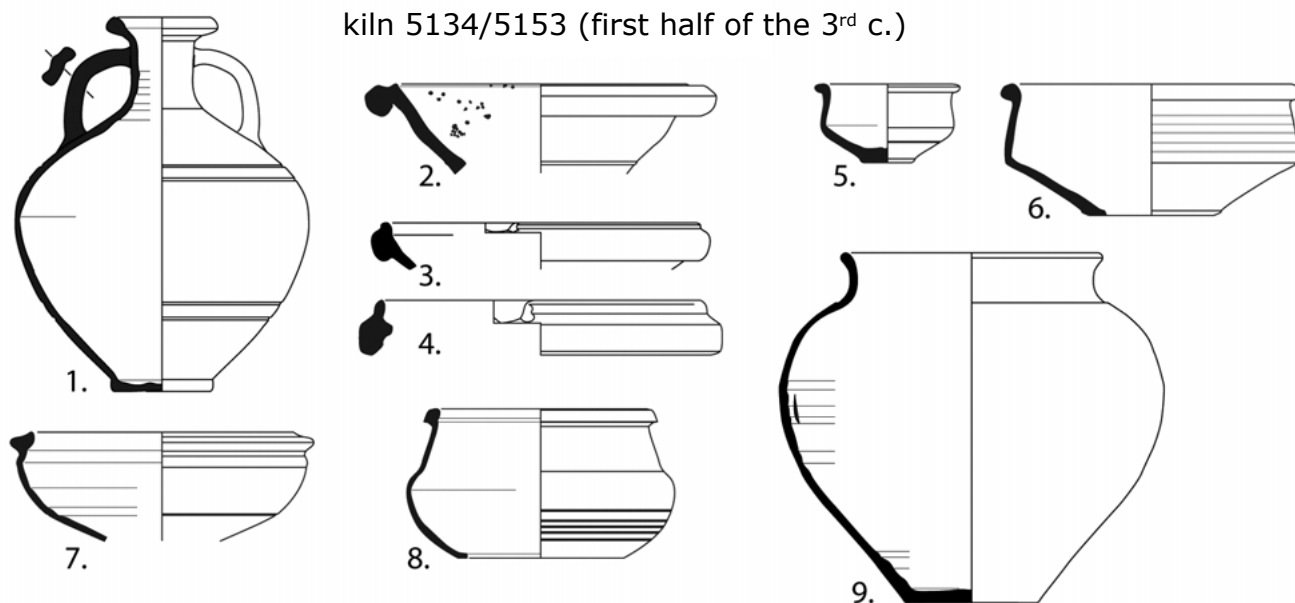
kiln Roger Herbin (middle of the 2nd–beginning of the 3rd c.)



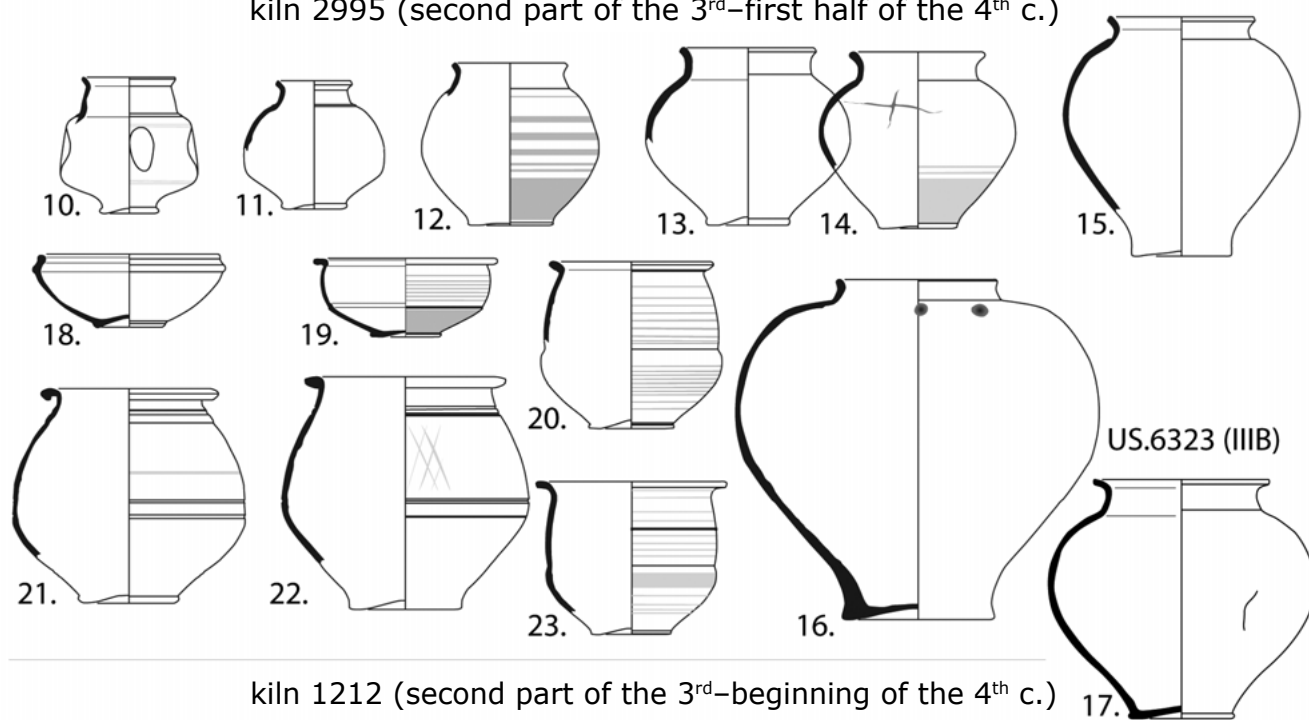
kiln 1382/1383 (second part of the 2nd c.)



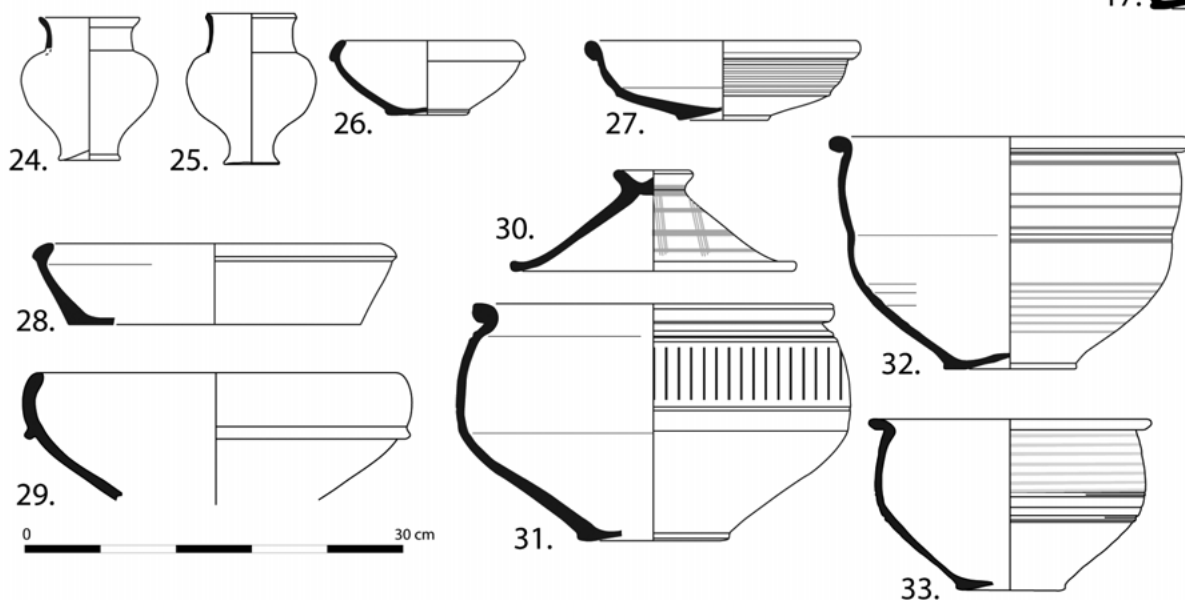
kiln 5134/5153 (first half of the 3rd c.)



kiln 2995 (second part of the 3rd–first half of the 4th c.)



kiln 1212 (second part of the 3rd–beginning of the 4th c.)



The second interesting object is a potter's stamp: NERICVSFE is written in retrograde on the upper small part, and his name is written in cursive script on the side (fig.8). Nericvs is a potter known for his *mortaria*, which were found on consumption sites at Bavay, and also on sites to the north, including Liberchies, Braives, Nouvelles, Nivelles, Namur, Tongres, Elewijt and Grobbendonk.²⁴ Since most of these stamped *mortaria* were found at Bavay, it has been suggested that this particular potter worked at the capital's pottery industry.²⁵ He seems to have worked at the end of the 1st or the beginning of the 2nd century AD, but closer analysis of the associated material could clarify its chronology. Interestingly, these particular *mortaria* were not encountered at Pont-sur-Sambre, the main production site of *mortaria*. This evidence sheds new light on Famars' pottery production, and the migration of potters, given that *mortarium* production during the 1st century is until now not known at the site of Famars. The potter Nericus may have moved from Bavay to Famars to produce flagons instead of *mortaria* and could, for this reason, have discarded the stamps.

Detailed Compositional Analysis

Petrographic and chemical analyses have shown that two kinds of clay deposits were used for pottery production: potters used calcareous clay for the manufacture of flagons, *mortaria*, honey jars and face pots. These types of vessels were generally fired in oxidising atmosphere. By contrast, potters used non-calcareous, siliceous clay for the manufacture of kitchenware, including jars, plates etc. These types of vessels were generally fired in reducing atmosphere. Hence, it would seem that the potters' choice of clay used for potting activities was determined by the function of the pottery. The evidence suggests that potters used consistently calcareous clay for the manufacture of fine ware throughout the entire production period. By contrast, a change in the technology of kitchenware has been noted. It would seem that potters used different clay deposits through time, and the vessels were fired at a higher temperature in later periods. In addition, some evidence for clay mixing has been noted. Comparison with clay sources, which have been collected in the region, will hopefully clarify this matter.

²⁴ See DUBOIS/SYMONDS/WILLEMS in prep. for the database of *mortarium* stamps; see DEGRYSE/BIESBROUCK 2013 for a distribution map of the stamp NERICI.

²⁵ WILLEMS 2005; DELMAIRE 2011.

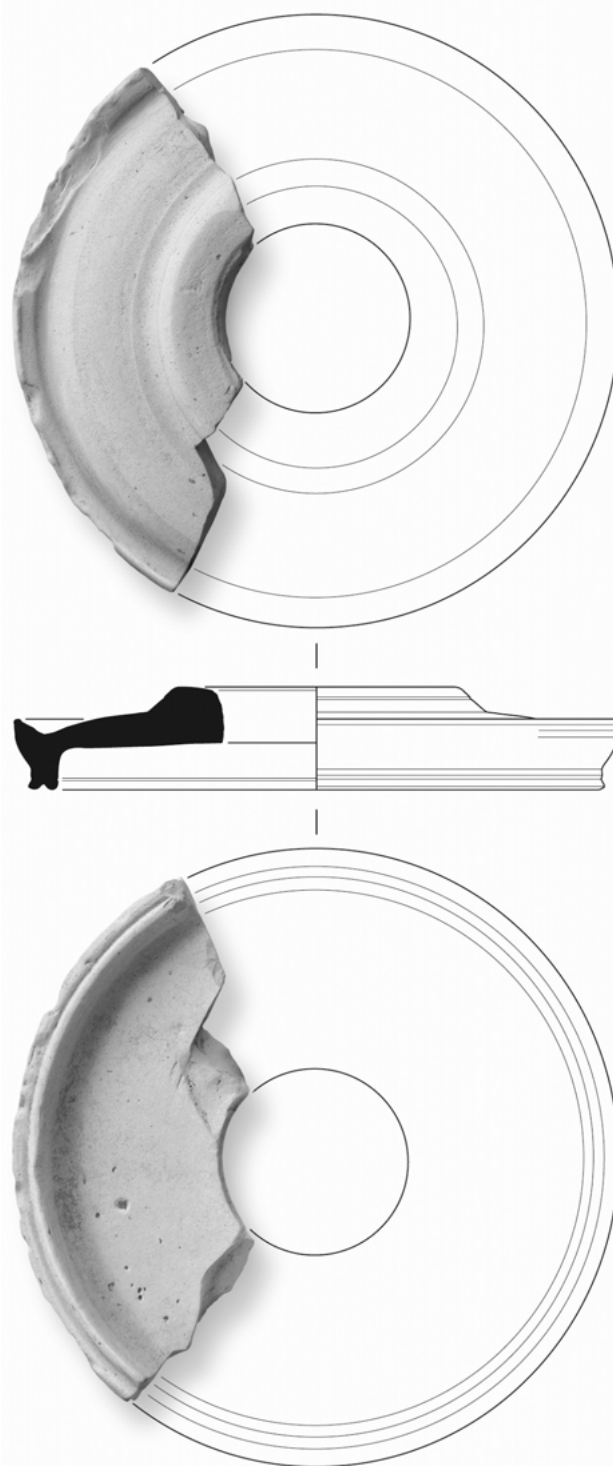


Fig. 7. Potter's mandrel of local production in calcareous clay, possibly used for the finishing of plates or lids (photo: S. Lancelot; drawing: A. Lanteri).

Fig. 6. 3rd century AD productions: 1–9 calcareous oxidised common wares, with common cooking ware forms in oxidised versions; 10–33 late 3rd–beginning 4th century reduced common wares and fine table wares (10–11, 24–25). – Scale 1:6 (drawings A. Comont, J. Flahaut, J. Donnadieu).



Fig. 8. Potter's stamp NERICVS known for his *mortarium* production. – Scale 1:1 (photo: S. Lancelot).

Distribution pattern and consumption

As mentioned, local pottery from Famars is distributed widely during the 3rd century AD, when its presence outnumbers the imports on local consumption sites in the region. This picture is rather different during the 1st century AD, when most pottery is imported from the region of Cambrai.

While the pottery from the Cambrai region is clearly present in higher quantities during the earliest period, the pottery from Famars conquers the regional market slowly but surely from the 2nd century AD onwards. It is very likely that the Famars pottery dominates the regional market by the late 3rd and early 4th century AD. This is suggested by *mortaria* and flagons, which were found at Tongeren, and *mortaria* and face pots, which were identified at Zeeland and Nijmegen, in the Netherlands, and at Cologne, Germany.²⁶ Hence, *mortaria*, flagons and face pots were the types of vessels which have known the furthest distribution, including the north-eastern part of Belgium, the Netherlands and the Rhine region by means of the Scheldt and Meuse River systems.

sonja.willems@inrap.fr (Inrap Nord-Picardie, UMR7041-Arscan/équipe Gama, pottery team coordinator)
 b.borgers@rug.nl (University of Groningen)
 raphael.clotuche@inrap.fr (Inrap Nord-Picardie, UMR 7041-Arscan/équipe Gama, Famars project coordinator)
 jennifer.clerget@inrap.fr (Inrap Nord-Picardie, Responsable of the Technopole excavation)
 geraldine.teysseire@inrap.fr (Inrap Nord-Picardie, Responsable of the Technopole excavation)
 anne.comont@inrap.fr (Inrap Nord-Picardie, pottery specialist)
 julie.donnadieu@inrap.fr (Inrap Nord-Picardie, pottery specialist)
 Julie.flahaut@inrap.fr (Inrap Nord-Picardie, UMR7041-Arscan/équipe Gama, pottery specialist)
 nicolas.warme@inrap.fr (Inrap Île-de-France, archaeo-magnetic analyses, Institut de physique du Globe at Saint-Maur)

²⁶ BRAITHWAITE 2007; AMAND 1984.

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