BARBARA BORGERS*

Cooking Ware as Indicator for Regional Trade and Exchange. A View from 4th-1st centuries BC Central Mediterranean

To cite this article: Borgers 2026. "Cooking Ware as Indicator for Regional Trade and Exchange. A View from 4th-1st centuries BC Central Mediterranean". In FACEM (release 9: 03/2026)(https://doi.org/10.25365/phaidra.780)

Introduction

The ninth release of FACEM presents the main results of an interdisciplinary project with title "Cooking Ware as Indicator for Regional Trade and Exchange. A View from 4th-1st centuries BC Central Mediterranean", which was financially supported by the Austrian Science Fund.[1] The study was conducted by the author at the Department of Classical Archaeology, University of Vienna, between 2019 and 2024.

The overall aim of the project was to study the technology and provenance of coarse ware pottery from southern Lazio during the Middle and Late Republic (4th-1st centuries BC) —a period when Rome expanded its power over its colonies and the culture of *Magna Graecia* was prominent on the southern Italian peninsula. Adopting a multi-analytical approach, the composition of coarse ware was examined with the aim of reconstructing all the steps of the production process, including raw materials, paste recipes, and firing processes. Case study sites included various public or sacred places in ancient Rome (closed ritual deposit), Nemi (the temple of Diana) and *Satricum* (the temple of *Mater Matuta*), on the one hand, as well as rural sites in the suburbs of Rome and domestic buildings in the colonies of *Fregellae* and *Norba*, on the other.

Background

Southern Lazio, located south of Rome on the Tyrrhenian coast, is bordered by the Alban Hills to the north, and by limestone mountains to the east (Lepine Mountains) and south (Volsci Mountains). The study region therefore served as a natural corridor between Rome and Campania. In the 4th century BC, the area came under Roman rule, evidenced by the foundation of several colonies, including *Norba* (modern-day Norma), *Satricum* (present-day Borgo Faiti), and *Fregellae*. Further evidence of Roman rule can be found in the construction of the *via Appia* and the *via Latina*. During this time, the region was integrated into a new, broader sphere of influence, and played a significant role in the movement of people and objects throughout the area.

The first studies highlighting the potential of coarse ware in southern Lazio were published in the 1990s.[2] Besides constituting the largest group of preserved ceramic objects at archaeological sites, it was used in a wide range of contexts, including eating, drinking, and ritual

[1] The Austrian Science Fund (FWF) funded the project in the framework of the Hertha Firnberg Programme (FWF project number T-1085 G), with Barbara Borgers (PI) and Verena Gassner (co-applicant).

[2] Olcese 1990.

activities. The shapes are generally traditional, with little variation over time.[3] For their study, fabric analysis is particularly relevant. Coarse ware pottery is therefore highly suitable for research into technology and distribution – whether through trade or exchange – and provides essential data for understanding underlying economic patterns.

Some studies of coarse ware from sites dating from the Late Republic and Early Empire around Rome[4] and Ostia[5] have adopted petrographic or chemical analysis. These studies not only indicate a lively distribution of this pottery, but also demonstrates that its mobility within the Central Mediterranean increased from this period until the dawn of the new era. A pilot study of coarse ware from the Middle and Late Republic from two roadside settlements along the *via Appia* has demonstrated the value of such approaches as a means of mapping local and regional networks and their changes over time.[6] With these possiblities in mind, this project examined coarse ware from several sites in southern Lazio and adopted a multi-analytical approach to adress questions about technology and provenance.

Method and Materials

Coarse ware pottery from four sites in Rome, *Norba*, Nemi, and *Fregellae*, was studied typo-morphologically. This was followed by macroscopic observation, to identify broad groups based on the size, variability, sorting, and abundance of inclusions.[7] This was combined with recording the surface and core colour of the pottery,[8] a method also used in FACEM.[9]

The selected samples primarily comprised cooking pots and lids. However, a wide range of forms was found at *Fregellae*, not only those common to Roman-Latin traditions (including for instance, *ollae*, *testi*, *patinae*, and *mortaria*), but also those typical of *Magna Graecia*, such as *chytrae* and *lopades*.

The second stage of the study comprised the multi-analytical study of the selected samples, including thin section petrography, wavelength dispersive X-ray fluorescence, X-ray powder diffraction, and scanning electron microscopy.

Results

The results indicate that most, if not all, of the coarse ware pottery examined was produced with reddish clay and fired in an oxidising atmosphere – generally at temperatures between 750 and 900°C.[10] Further findings suggest that some of the coarse ware studied was locally produced, although this is not always supported by evidence for workshops. More specifically, direct evidence for workshops was found at *Satricum*, allowing the provenance of the coarse ware to be definitely established.[11] The multi-analytical approach allowed for the indication of indirect evidence of local production at the other archaeological sites investigated.

[3] Olcese 2009, 153-156.
[4] Bertoldi 2011; Olcese 2006; Thierrin-Michael 2003; Schuring 1986, 1987.
[5] Capelli 2016.
[6] Borgers et al. 2017.
[7] Orton et al. 1993, 133–135.
[8] Munsell 1994.
[9] http://facem.at/project/about.php#method.
[10] Borgers et al. 2023, 2026; Borgers and Fischetti 2023; Diosono et al. in press.
[11] Attema et al. 2003.

Differences exist in the paste recipes, however. A total of eight different fabrics were identified, each labelled with the three-part alphanumeric code "LAT", followed by the pottery ware "C" (referring to both coarse and cooking ware), and the fabric number, ranging from 1 to 8.

The results further point to a lively trade in coarse ware originating from the Alban Hills and the Tiber Valley, north of Rome. This suggests that the study region was integrated into trade that dominated southern Lazio between the 4th and 1st centuries BC. Changes in regional trade appear to have occurred when ceramic production in *Satricum* ceased in the 3rd century BC and potters began producing coarse ware in other regional settlements, including *Norba*.

References

Attema, P.A.J., M. Beijer, M. Kleibrink, A.J. Nijboer, and G.J.M. Van Oortmerssen 2003. "Pottery Classifications: Ceramics from *Satricum* and Lazio, Italy, 900 to 300 BC". *Palaeohistoria* 43/44:321–396.

Bertoldi, T. 2011. *Ceramiche Comuni dal Suburbio di Roma*. Roma: Aracne.

Borgers, B., F. Diosono, C. Ionescu, Á. Gál, and L. Barbu-Tudoran 2026. "Different Pots, Same Recipes? Cross-cultural Encounters in Roman Republican Fregellae, southern Lazio (Italy) ". *Archaeological and Anthropological Sciences*. DOI 10.1007/s12520-025-02395-0.

Borgers. B., and A.L. Fischetti 2023. "Reconstructing the Life Cycle of 3rd century BCE Cooking Jars: A Case Study from a Ritual Deposit at Ciampino, Rome (Italy)". *Mediterranean Archaeology and Archaeometry* 23(2): 159-173. DOI: 10.5281/zenodo.8179459.

Borgers, B., C. Ionescu, A. Gál, T. De Haas, and L. Barbu-Tudoran 2023. "Republican coarse ware from Norba, southern Lazio (Italy): a multi-analytical study of production technology and trade". *Archaeological and Anthropological Sciences* 15: 180. https://doi.org/10.1007/s12520-023-01883-5.

Borgers. B., G.W. Tol, and T. De Haas 2017. "Roman cooking vessels (ollae): a preliminary study of the material from the Pontine region, Central Italy". *STAR Science and Technology of Archaeological Research* 3(2): 314-325.

Capelli, C. 2016. "I gruppi mineralogici". In *Ceramiche da contesti repubblicani del territorio di Ostia,* edited by G. Olcese and C Coletti, 196–198. Immensa Aequora 4. Rome: Quasar.

Diosono, F., A. Bredy, C. G. Ferrari, A. Malatesta A, and B. Borgers in press. "Mid-Republican cooking ware in the sanctuary of Diana in Nemi: a diachronic analysis of shapes and technology". In *New Theories and Methods for Old Pottery: Innovating Perspectives on Hellenistic Ceramics*. Proceedings of the 6th IARPotHP Conference, Catania 9-12 October 2023, edited by D. Malfitana, J. Poblome, J. Lund, and A. Mazzaglia. Phoibos Verlag.

Munsell, A. 1994. *Munsell Soil Colour Charts. Munsell Colour*. New York: New Windsor.

Olcese, G. 1990. "Roman Coarse Ceramics from Albintimilium (Italy): an example of archaeometric and archaeological studies". In *International Symposium in Archaeometry*, edited by E. Pernicka and G.A. Wagner, 495-504. Heidelberg.

Olcese, G. 2006. "Ricerche archeologiche e archeometriche sulla ceramica romana. Alcune considerazioni e proposte di ricerca". In *Old pottery in a new century. Innovating perspectives on Roman pottery studies* (Atti del convegno internazionale di studi, Catania, 22-24 April, 2004, edited by D.J. Malfitana, J. Poblome, and J. Lund, 523-535.

Olcese, G. 2009. "Produzione e circolazione ceramica in area romana in età repubblicana: linee di ricerca, metodi di indagine e problemi aperti". In *Suburbium II: Il suburbio di Roma dalla fine dell'età monarchica alla nascita del sistema delle ville (V-II secolo a. C.)*, edited by V. Jolivet, C. Pavolini, M.A. Tomei, and R. Volpe, 143-156. Rome.

Olcese, G., and C. Coletti 2016. *Ceramiche da contesti repubblicani del territorio di Ostia*. Immensa Aequora 4. Roma: Quasar.

Orton, C., P. Tyers, and A. Vince 1993. *Pottery in Archaeology*. London: Cambridge Manuals in Archaeology.

Schuring, J.M. 1986. "The Roman, early Medieval and Medieval coarse kitchen wares of the San Sisto Vecchio in Rome: continuity and break in tradition". *BABesh* 61: 158-207.

Schuring, J.M. 1987. "Supplementary note to the Roman, early Medieval and Medieval coarse kitchen wares of the San Sisto Vecchio in Rome: the distribution of the fabrics". *BABesh* 62: 109-129.

Thierrin-Michael, G. 2003. "Petrographische Charakterisierung und Differentiation der römischen Produktion". In *Ceramiche Comuni a Roma e in area romana: produzione, circolazione e tecnologia (tarda età repubblicana – prima età imperiale*), edited by G. Olcese, 55-59. Mantova: Documenti di Archeologia 28.