

MARIA TRAPICHLER

Pottery Production in the Southern Sector of the Bay of Salerno: the Fabrics of Paestum

Introductory Note

This paper shows the first results of studies carried out in the frame of the project “Ceramic Production in the plain of Paestum” (2016-2018)¹, which allowed the analyses of a large number of ceramic samples from the southern area of the Sele River plain including the town of Poseidonia/Paestum and minor sites in the territory. The samples have been studied by an interdisciplinary approach, combining archaeological fabric analysis and mineralogical-petrographic techniques and complement and enlarge in a decisive way the already existing fabric classification of Paestum, published in 2011².

The fabrics of the Coarse ware

Sampling basis

43 additional samples have been selected for fabric analysis of coarse ware, coming from the Heraion at the Sele River mouth³, the Necropolis in the site Laghetto⁴, the sanctuary in San Nicola Albanella and Capodifiume and a residential area in Fonte. According to the classification of the respective researchers they were addressed as belonging to *ceramica comune*, *ceramica comune depurata* and *ceramica comune grezza*. They date from the 6th to the first quarter of the 3rd c. BC and cover thus the Archaic and Classical periods of the Archaic Greek Polis Poseidonia, the Lucanian period and the first time of the Roman Colony founded in 273 BC.

State of research

In the first FACEM edition of 2011 we published already three coarse ware fabrics from Elea/Velia, which could be attributed to Paestum on the basis of archaeometric analyses by R. Sauer⁵. As the recent analyses evidenced, from these three fabrics, PAE-C-1 and PAE-C-2 were well attested in all of the investigated sites, while PAE-C-3 – rare also in the Velinian evidence – was not attested at all among the new samples. This is surprising as the percentage of imports from Paestum among the coarse wares at Velia is low and a greater variety of fabrics would have rather been expected at Paestum and the sites in the *chora* of Paestum.

Characteristics for the similar fabrics PAE-C-1 and PAE-C-2 are the reddish yellow colour and the presence of carbonate pseudomorphs, often to be identified as microfossils or foraminifers. As

¹ This research was funded by the Austrian Science Fund FWF in the framework of the Lise Meitner Programme (project number: M 1918-G25) and carried out by Alberto De Bonis (project leader) and Verena Gassner (co-applicant), see also De Bonis and Gassner 2018 in this edition of FACEM.

² See Gassner and Trapichler 2011

³ The samples were provided by Bianca Ferrara, see also Ferrara, Giacco, and Capece 2018 in this edition.

⁴ The samples were provided by Antonia Serritella.

⁵ See Gassner and Trapichler 2011. For a preliminary publication of the archaeometric research on the amphorae see also Gassner et al. 2003, pl. XLIII, group RVA003.

they are clearly visible macroscopically they provide a good possibility to distinguish Paestan from Velinian fabrics. PAE-C-2 differs from PAE-C-1 by its less regular sorting and by characteristic, partly very large reddish gray to dark gray rounded particles (identified as iron oxide concretions)⁶. The fabrics PAE-C-1 and PAE-C-2 were observed among the samples from the sanctuary of Hera at Foce del Sele (PAE-C-1: M26/23; M26/24; M26/32; PAE-C-2: M26/31; M26/33 in a coarser variety; M26/36), from the necropolis of Laghetto (M231/1), from the rural sanctuaries of San Nicola Albanella (PAE-C-1: M212/1, PAE-C-2: M212/5; M212/9; M212/13), Capodifiume (PAE-C-1: M220/1) and Fonte (PAE-C-2: M231/1, M231/2).

The newly defined Fabrics of Coarse Ware

Among the samples from the mentioned sites we found four new fabrics (PAE-REG-C-1 to PAE-REG-C-4) that are at the first sight well distinguishable from the fabrics PAE-C-1 and PAE-C-2, as they differ in colour (brown to grayish). In the fabrics PAE-REG-C-1 to PAE-REG-C-2 no or only very few carbonate inclusions are visible, while in the second group PAE-REG-C-3 to PAE-REG-C-4 carbonate particles are more frequent and of characteristic appearance, described below.

Methodologically it has to be remarked, that the number of samples available for the definition of these new fabrics was very limited and cannot be regarded as the result of a study of a larger number of pottery fragments, usually necessary for defining new fabrics. At the moment we can only observe that they were attested at most of the studied sites (see *infra*). It will be a point of further discussion if it will be possible to identify more fabrics on the basis of a more detailed fabric study of the investigated sites in the surroundings of Paestum. As their provenance from the centre of Paestum could not be proven, but a production in the territory of the town seems most probable, we have chosen the fabric code PAE-REG-C-x (for Paestum – Region – Coarse Ware).

PAE-REG-C-1

M26/28 (ref. sample from Foce del Sele); M26/25; M26/27 (Foce del Sele); M212/3; M212/6 (colour variation: gray); M212/7 (San Nicola Albanella) M219/2 (colour variation: gray, Fonte).

The fabric is reddish brown (5YR 5/3-4/3), the fracture surface irregular. The matrix contains a high amount of white mica. Voids are frequent (estimated to 10%) and mostly irregular in shape and less frequently channel shaped, ranging in size from 0.1 – 0.75 mm.

Temper: Inclusions are very frequent (estimated to 25%) and moderately sorted; the grain size of the particles ranges from 0.1 to 1.5 mm. The temper is dominated by white and clear quartz particles, spherical to subspherical and angular. Frequent are also black spherical to subspherical rounded particles (Iron oxide concretions), less frequent reddish brown inclusions. Sporadic but well distinguishable are small, black shining and very angular particles (crystals of volcanic origin).

The fabric is in its appearance very close to the Velinian fabric VEL-C-11.

⁶ See Gassner and Trapichler 2011.

PAE-REG-C-2*M26/30 (ref. sample Foce del Sele)**M212/2; M212/12 (San Nicola Albanella)**M220/5 (Capodifiume)*

The fabric is reddish brown, gray on the edges, the fracture surface is irregular. White mica is rarely visible.

Temper: Inclusions are frequent (estimated at 20%) and unsorted. The grain size ranges from 0.1 to 1 mm. The temper is dominated by frequent white and clear, spherical to subspherical and angular quartz particles. Frequent are reddish brown, subspherical to subelongate, rounded particles. Black rounded spherical to subspherical inclusions are infrequent.

A second group of brown fabrics (PAE-REG-C-3 to PAE-REG-C-4), is distinguished from the first group by the appearance of white, well rounded carbonate - inclusions:

PAE-REG-C-3*M26/34 (ref. sample Foce del Sele)**M220/2 (Capodifiume)*

The fabric is brown (7.5 YR5/3), the fracture surface granular. White mica is rarely visible.

Temper: Inclusions are very frequent (estimated to 25%) and moderately sorted. The grain size ranges from 0.12 to 0.75 mm. The temper is dominated by white and clear spherical to subspherical rounded quartz particles. Not frequent but characteristic are white to gray dark rimmed, well rounded carbonate particles, proposed to be of carbonatic consistence. Black and brown spherical to subspherical and rounded particles (iron oxide concretions) are rare. Sporadic but well distinguishable are spherical to subspherical angular black particles.

PAE-REG-C-4*M231/3 (ref. sample Paestum/Laghetto)**M231/4 (Paestum/Laghetto)**M219/1, M219/3, M219/5 (Fonte)*

The fabric is very similar to or a variation of PAE-C-2, with a higher grain size, especially with quartz particles (0.75 – 1.25 mm). In some cases it appears as “sandwich” fabric with alternating grayish and reddish layers.

The fabric is reddish brown (2.5YR 5/4-4/4), the fracture surface irregular. Voids are not frequent (estimated to 5%) and mostly irregular in shape, sometimes of channel shape, they range in size from 0.02 to 0.5 mm. White mica is frequent.

Temper: Inclusions are frequent (estimated to 15-20%) and unsorted. The grain size ranges from 0.05 to 1mm. The temper is dominated by clear and white, spherical to subspherical and angular quartz particles. Typical but not very frequent are white well rounded carbonate - particles with

dark rim as observed in the previous fabric and singular rectangular clear crystals of volcanic origin.

Bioclastic grains are individual but well distinguishable and very large with a grain size of 0.6 – 1 mm.

The Fabrics of Figural Terracotta

Sampling basis

The *Paestum Ceramic Production Project* provided 11 examples from the excavations in the Heraion of Foce del Sele (M25/4 – M25/15), nine from San Nicola Albanella (M213/1 – M213/9), five from Capodifiume and one from Licinella (M227/1).

State of research

Until now no fabrics of figural terracottas have been published on FACEM. The sampling in the frame of the project “Ceramic Production in the plain of Paestum” allowed the definition of a total of five fabrics of which PAE-FT-1 seems to belong to the production of Paestum because of its similarity to PAE-C-1, it was observed with statuettes from the Heraion of Foce del Sele and from the sanctuary at San Nicola di Albanella as well. The fabrics PAE-REG-FT-1 to PAE-REG-FT-3 show similarities with the region of Paestum, at the actual state of research however they cannot be attributed to a specific site. Though the fabrics PAE-REG-FT-2 and PAE-REG-FT-3 were observed only among finds from Capodifiume and PAE-REG-FT-4 only with statuettes from the Heraion the numbers of analysed samples are still much too small to draw wider conclusions.

PAE-FT-1

M25/2 (ref. sample Foce del Sele)

M25/15 (Foce del Sele)

M213/3; M213/6; 213/5; M213/7 (San Nicola Albanella)

The fabric is similar to the coarse ware fabric PAE-C-1. It is reddish yellow (5YR6/6), the fracture surface granular. The matrix is riddled with carbonate-pseudomorph moulds and contains some white mica.

Temper: Inclusions are frequent (estimated to 20%) and unsorted. The grain size ranges from 0.05 to 1 mm. The temper is dominated by clear and white, spherical to subspherical and angular quartz particles. Frequent and characteristic are white well rounded carbonate particles with dark rim and reddish brown, partly large rounded iron-oxide-concretions, black inclusions are infrequent.

PAE-REG-FT-1

M25/1 (ref. sample Foce del Sele)

M25/11, M25/14 (Foce del Sele)

M213/4 (San Nicola Albanella)

The fabric is reddish brown (5YR 5/4), the fracture surface irregular. Voids are frequent (estimated to 7.5%), and irregular in shape.

Temper: inclusions are very frequent (estimated to 20%) and unsorted, ranging in size from 0.1 to 2.2 mm. The temper is dominated by mostly clear spherical and angular quartz particles. Frequent and characteristic are partly large reddish brown iron oxide concretions. Sporadic are white angular subspherical to subelongate particles.

PAE-REG-FT-2

M222/1 (ref. sample Capodifiume)

The fabric is reddish brown (2.5YR 5/4) with a reddish gray core (2.5YR 4/1). The fracture surface is irregular. White mica is rare. Voids are comparably frequent (estimated to 7.5%) and mostly channel shaped, or sometimes irregular in shape; they range in size from 0.05 to 1.5 mm.

Temper: Inclusions are frequent (estimated to 20%) and moderately sorted. The grain size ranges from 0.05 to 1.5 mm. The temper is dominated by clear, spherical to subspherical and angular quartz particles. Not frequent are reddish brown, subspherical to subelongate, rounded particles; black rounded spherical to subspherical particles are rare (both iron oxide concretions). It strongly resembles the fabric PAE-REG-C-2.

PAE-REG-FT-3

M222/2 (ref. sample Capodifiume)

M222/3 (Capodifiume)

The fabric is reddish brown (2.5YR 4/4), the fracture surface granular. Voids are not frequent (estimated at 5%) and mostly irregular in shape, sometimes of channel shape, they range in size from 0.05 to 0.5 mm. White mica is frequent.

Temper: Inclusions are frequent (estimated to 20%) and moderately sorted. The grain size ranges from 0.05 to 2 mm. The temper is dominated by clear and white, spherical to subspherical and angular quartz particles. Individual but typical are gray subspherical and rounded carbonate - particles. Individual but prominent with a size up to 2 mm are spherical and rounded reddish brown to black particles (iron oxide concretions). The fabric strongly resembles PAE-REG-C-4.

PAE-REG-FT-4

M25/5 (ref. sample Foce del Sele)

M25/4, M25/7, M25/8 (Foce del Sele)

The fabric is brown (7.5YR 5/4), its core gray (7.5YR 6/1), the fracture surface is irregular. Voids are comparably frequent (estimated to 10%) and mostly channel shaped, they range in size from 0.05 to 0.75mm. White mica is not very frequent and mostly white, sometimes dark.

Temper: Inclusions are frequent (estimated to 10%) and rather unsorted. The grain size ranges from 0.025 to 1 mm. The temper is dominated by white spherical to subelongate, rounded carbonate-particles and clear or white, spherical to subspherical angular quartz particles. In contrast to the other Paestan fabrics it contains clear subspherical to subelongate and very

angular crystals of volcanic origin, ranging in size from 0.1 – 0.5 mm and also few black spherical to subspherical, angular particles may be of volcanic origin. Brown or black spherical to subspherical particles (iron oxide concretions) are rare.

The Fabrics of Glazed Wares

Sampling basis

The selected samples of glazed wares are represented by 13 samples of red and black figured pottery (*ceramica figurata*) and by 32 samples of black glazed ware (*ceramica a vernice nera*), including partially glazed wares and overpainted black glaze ware. The samples stem from excavations in the Heraion of Foce del Sele⁷, the Necropolis in the sites Laghetto and Andriuolo⁸, the site Lupata and a residential area in Fonte⁹. The chronology of the objects ranges from the 5th to the first half of the 3rd c. BC and represents thus production of black glaze ware and red figured pottery in Paestum from the Greek to the Lucanian period of the city.

State of research

In the FACEM edition of 2011 we have published eight fabrics of glazed ware, denominated with the fabric codes PAE-G-1 to PAE-G-8¹⁰. These samples stem to the greater part from the distribution site Velia and were established on the basis of the archaeometric analysis conducted, but not published by R. Sauer¹¹. The provenance of the established fabrics from Paestum has been confirmed by archaeometric analysis (thin section and heavy mineral analysis) conducted by Roman Sauer.

20 samples provided by the *Paestum Ceramic Production Project* could be attributed to these fabrics. Sometimes they show a very good correspondence with the reference sample; in other cases we observed minor variations. The fabrics PAE-G-5 and PAE-G-6 were often identified in the group of red figured pottery, attributed to Paestan vase - painters and thus confirm the attribution of the fabric to Paestum¹².

The fabrics

The following list indicates the occurrence of the fabrics in the new materials from Paestum.

PAE-G-5

M2/16 (ref. sample from Velia, published in Facem 2011)

M27/71, M27/72 (more carbonates), M27/73 (more black inclusions) (red figured pottery from Foce del Sele)

M228/6 (Laghetto)

M218/2, M218/5 (Fonte)

⁷ Samples provided by Bianca Ferrara, see also Ferrara, Giacco, and Capece 2018 in this edition.

⁸ Samples provided by Antonia Serritella.

⁹ Samples provided by Marina Cipriani, see also Cipriani, Rizzo and Serritella 2018 in this edition

¹⁰ Gassner and Trapichler 2011.

¹¹ For the archaeological contexts see Gassner 2003; Trapichler 2003; Gassner and Trapichler 2011.

¹² For the Paestan Painters see Trendall 1987

The newly presented specimens sometimes show minor variants of the fabric. In particular the samples of the red figured pottery M27/71 and M27/72 show more white carbonate particles, M27/73 a higher amount of black particles.

PAE-G-6

M2/137 (ref. sample from Velia, published in Facem 2011)

M228/2 (Laghetto),

M232/1 (Krater attributed to Asteas, Andriuolo)

M234/5 (Lupata)

The newly presented samples show variants in colour: The fabric of the Krater attributed to Asteas (M232/1) is reddish brown (5 YR 6/4) in the core with gray edges.

A second group of mostly reddish yellow fabrics contains less carbonate-pseudomorph moulds or calcareous particles. The group is represented by the previously established fabrics PAE-G-3 and PAE-G-8 and attested in the actual sampling with some variations.

PAE-G-3

M28/9 (ref. sample, Foce del Sele, published in Facem 2011)

M220/3 (Lekane lid, Capodifiume)

PAE-G-8

M28/9 (ref. sample, Foce del Sele, published in Facem 2011)

M27/74 (Lekane lid, Foce del Sele)

M237/3 (production indicator, Lupata)

The fabric is attested in the sampling with fragments of red figured pottery, with M237/3 being a production indicator, being a fragment of an artist's proof¹³.

References

- De Bonis, A., and V. Gassner. 2018. "Ceramic Production in the Plain of Paestum from the 7th -3rd c. BC – the Project (2016-2018)". In FACEM (version 06/12/2018) (<http://www.facem.at/project/papers.php>).
- Cipriani, M., Rizzo, M.L., and A. Serritella. 2018. "Poseidonia-Paestum. Santuari urbani e del territorio: contesti e produzioni artigianali." In FACEM (version 06/12/2018) (<http://facem.at/project/papers.php>).
- Ferrara, B., Giacco, M., and D. Capece. 2018. "Le produzioni locali nel Santuario di Hera alla foce del Sele." In FACEM (version 06/12/2018) (<http://facem.at/project/papers.php>).
- Gassner, V. 2003. *Materielle Kultur und kulturelle Identität in Elea in spätarchaisch-frühklassischer Zeit. Untersuchungen zur Gefäß- und Baukeramik aus der Unterstadt (Grabungen 1987-1993)*. Velia Studien 2. Wien: Verl. der Österr. Akad. der Wiss.
- Gassner, V., Greco, G., and R. Sauer. 2003. "Analisi archeometriche a Velia: ceramiche arcaiche e laterizi." In *Elea – Velia, le nuove ricerche, Atti del Convegno di studi, 14 dicembre 2001, Quaderni del Centro Studi Magna Grecia I*, edited by G. Greco, 199–205. Pozzuoli: Naus.
- Gassner, V., and M. Trapichler. 2011. "Fabrics of Paestum". In FACEM (version 06/06/2011) (<http://www.facem.at/projectpapers.php>).

¹³ Information provided by Marialucia Rizzo, who provided sample M 237/3 from Lupata.

- Gassner, V., Trapichler, M., and R. Sauer. 2014. "Pottery production at Velia: archaeometric analyses and the typological development of Glazed Ware, Common Wares and Transport amphorae". In *Archaeometry. Comparing experiences. Quaderni del Centro Studi Magna Grecia, 19*, edited by G. Greco and L. Cicala, 191-269. Pozzuoli: Naus.
- Trapichler, M. 2003. "Ceramica a vernice nera di età classica da Elea: produzione locale ed importazioni" In *Elea-Velia. Le nuove ricerche. Atti del Convegno di Studi, Napoli, 14 dicembre 2001*, edited by G. Greco, 199-210. Quaderni del Centro Studi Magna Grecia I. Pozzuoli: Naus.
- Trendall, A.D. 1987. *The Red Figured Vases of Paestum*, Rome: British School at Rome.

This article should be cited as: Trapichler, M. 2018. "Pottery Production in the Southern Sector of the Bay of Salerno: the Fabrics of Paestum." In FACEM (version 06/12/2018) (<http://www.facem.at/project-papers.php>).