

MARIA TRAPICHLER

## Pottery Production in the Bay of Naples

### THE COARSE WARES

The *fabrics* established below result from several sites in the Bay of Naples. The denomination “Coarse Ware” comprises the traditional ware groups “ceramica commune depurata” and “ceramica commune grezza” as well as the coarser Banded Ware “ceramica a decorazione lineare”.<sup>1</sup>

A total of 40 samples of finer coarse wares (*ceramica commune depurata*) stem from the excavations of Piazza Nicola Amore, Naples, conducted by D. Giampaola from the Soprintendenza Speciale per i Beni Archeologici di Napoli e Pompei.<sup>2</sup> Of particular importance are 36 fragments that originate from a ceramic workshop area active from the mid of the third to the mid of the second century B.C.E. These samples could be divided into two groups which both belong to a secured local production and therefore enabled identifying the *fabrics* BNAP-C-1 to BNAP-C-7 with high probability as local products of Naples.<sup>3</sup>

74 samples stem from the site of Cuma. They originate from the excavations of the Università di Studi Federico II Napoli in the area of the Tempio con Portico (62 samples)<sup>4</sup> and from the excavations conducted by the Centre Jean Bérard in the Northern Suburban Sanctuary (12 samples).<sup>5</sup> They comprise a chronological range from the Archaic to the Hellenistic period.

#### FABRICS PROBABLY PRODUCED AT NAPLES: GROUP 1

The first group (BNAP-C-1 to BNAP-C-4) is characterized by a matrix, usually light brown, which is riddled by partly large carbonate-pseudomorph moulds.<sup>6</sup> Four variants have been distinguished which differ in sorting of temper or grain sizes. The last variant BNAP-C-4 shows a divergence of colour, which is probably due to firing at a very high temperature (near misfiring). The *fabrics* (BNAP-C-1 to BNAP-C-4) have been defined on the basis of the coarse ware pottery (Ceramica Comune depurate) from the contexts of the workshop area in Piazza N. Amore (Naples), dating to the first half of the third to the mid of the second century B.C.E. BNAP-C-3

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<sup>1</sup> For the definition of these wares, see the contributions of S. Febbraro, and D. Giampaolo, (Naples), as well as of G. Greco, B. Ferrara, and A. Tomeo, and P. Munzi (Cuma) in this edition of **FACEM**.

<sup>2</sup> For the site see D. Giampaolo, and S. Febbraro in this edition of **FACEM**.

<sup>3</sup> For the problem of what is meant by “local”, see the introduction by Gassner and Trapichler in this edition of **FACEM**. As we do not yet have the possibility to compare these products to local clays, this attribution remains a hypothesis.

<sup>4</sup> For the contexts and shapes, see A.Tomeo in this edition of **FACEM**.

<sup>5</sup> For the contexts, shapes and the chronology in the second half of the fourth century B.C.E. as well as the archaeometric analyses, see P. Munzi in this edition of **FACEM**.

<sup>6</sup> Carbonate-pseudomorphoses result from the burning of carbonates, leaving a reaction rim which is much broader than the original grain, leaving the impression of a much higher content of carbonates than originally contained.

found also among the material of the Archaic – Classical levels of the same site, indicating that the same sort of raw material was used already in that time.

A further indication for the localisation of these *fabrics* at Naples and in particular in the workshop of Piazza N. Amore is a sample (M 152/45; BNAP-WE-1) from a spacer which shows the same kind of matrix, densely riddled with carbonate-pseudomorph moulds and characteristic for our first group, especially BNAP-C-1.

### **BNAP-C-1**

*Reference-sample from Naples:* M 152/32; *further examples from Naples:* M 152/1, 2, 18, 19, 20, 21

*Matrix:* The *fabric* is light reddish brown (5YR6/3), the fracture surface granular. The matrix is riddled with yellowish white carbonate-pseudomorph moulds that sometimes may contain a yellow core. It contains a high amount of white and dark mica. Voids are relatively rare (estimated at 5%), mostly irregular in shape, and less frequently channel-shaped.

*Temper:* Inclusions are frequent (estimated at 15%) and unsorted, the grain sizes of the particles range from 0,01 to 1,7 mm. The temper is dominated by dark grey or black subangular to rounded, subspherical to spherical particles of various sizes (up to 1,7 mm) and frequent reddish brown inclusions of the same shape (probably iron oxide concretions). Yellowish white rounded, spherical to subspherical particles as well as white or clear quartz/feldspar, measuring up to 0,3 mm are infrequent. Individual but well distinguishable black glassy angular and subspherical volcanic particles and rounded and subspherical white foraminifera or shell remains, measuring 0,25 mm can be observed.

*Shapes:* crater?; situla, olla

*Chronology of contexts:* second century B.C.E.

### **BNAP-C-2**

*Reference sample:* M 152/36

*Fabric* BNAP-C-2 is distinguished from BNAP-C-1 by its coarser inclusions, with grain sizes up to 1,2 mm, the temper being at the same time less dense.

*Matrix:* The *fabric* is light brown (7.5YR6/2) to pinkish grey (7.5YR6/4), its surface fracture granular. Like in BNAP-C-1, the matrix is riddled with yellowish white carbonate-pseudomorph moulds that sometimes contain a yellow core (probably recrystallized calcite). White and dark mica are frequently included. Voids are more frequent and larger (estimated at 7,5%) than in BNAP-C-1, they are generally irregular in shape (vughy) and sometimes channel-shaped.

*Temper:* Inclusions are frequent, with grain sizes ranging from 0,01 to 1,2 mm. They are dominated by frequent subangular to rounded, subspherical to spherical black and rounded spherical to subspherical reddish brown particles (probably iron oxide concretions), which range in size from 0,07 to 1,2 mm. Grey or clear angular to subrounded, spherical to elongate

quartz/feldspar particles, measuring up to 0,45 mm also occur frequently. Yellowish white rounded and spherical to subspherical particles are infrequent. Individual angular and subspherical black glassy volcanic particles (0,3 mm) and a foraminifera or shell's remain, measuring 0,55 mm are distinguishable.

Shape: cup

*Chronology of context:* early second century B.C.E.

### **BNAP-C-3**

*Reference sample from Naples:* M 152/29; *further examples from Naples:* M 152/13, 22, 23

In BNAP-C-3 the dark grey/black particles are dominate among the temper being both denser and larger in average size (sorted?), whereas reddish brown particles are infrequently represented.

*Matrix:* The *fabric* is light brown (7.5YR6/3), the fracture surface granular. It shows a light reddish brown core (5YR7/4) and is riddled with yellowish white carbonate-pseudomorph moulds. White and dark mica are frequently included. Voids are comparatively frequent (estimated at 12,5%) and mostly of irregular shape.

*Temper:* Inclusions are frequent (estimated at approximately 20%), with the grain sizes ranging from 0,02 to 0,7 mm. They are dominated by frequent subangular to rounded, subspherical to spherical black particles, whereas rounded spherical to subspherical reddish brown particles are infrequently represented and smaller (probably iron oxide concretions). Grey or clear angular to subrounded, spherical to elongate quartz/feldspar particles, measuring up to 0,5 mm also frequently occur. Individual yet characteristic very angular, spherical black glassy volcanic particles and white subrounded, spherical foraminifera or shell remains are also distinguishable.

*Shapes:* saucer, bowl, jug

*Chronology of contexts:* early to mid second century B.C.E.

### **BNAP-C-4**

*Reference sample from Naples:* M 152/16

*Matrix:* The granular, light yellowish brown matrix (2.5Y6/3) is riddled with yellowish white carbonate-pseudomorphoses. White and dark mica are frequently included. Voids are comparatively rare (estimated at 5%), mostly irregular in shape, and sometimes chamber-shaped.

*Temper:* Inclusions are comparatively very frequent (estimated at 30%), the particles sizes ranging from 0,01 to 0,5 mm. They are dominated by very frequent subangular to rounded, subspherical to spherical black particles, whereas rounded spherical to subspherical reddish

brown particles are less frequent and smaller (probably iron oxide concretions). Very frequent in occurrence are also grey or clear angular to subrounded, spherical to elongated quartz/feldspar particles measuring up to 0,5 mm.

*Shape:* situla (misfired?)

*Chronology of context:* early second century B.C.E.

## **FABRICS PROBABLY PRODUCED AT NAPLES: GROUP 2**

The second group (BNAP-C-5 to BNAP-C-7) of the probable production at Naples is characterized by a matrix differing clearly from that of the first group: Though it contains also a more or less large amount of carbonate-pseudomorph moulds, these do not dominate the matrix. They show different sizes and normally are smaller than those of the first group. Within the second group three *fabrics* have been distinguished which differ in sorting of the temper or in grain sizes.

This second group displays good similarities with the *fabrics* BNAP-G-1 and BNAP-G-2 of the contemporary – Hellenistic Black Glaze Ware (Campana A), thus indicating that maybe the same kind of raw material was used. Some of the *fabrics* (BNAP-C-6 and BNAP-C-7) can be observed as well with samples from the Archaic strata of the site, indicating that the same raw material was used from Archaic times onwards.

### **B-Nap-C-5**

*Reference sample from Naples:* M 152/33; *further examples from Naples:* M 152/9, 17, 28, 30, 34

*Matrix:* The *fabric* is light reddish brown (5YR6/4), the fracture surface granular. It contains very frequent carbonate-pseudomorphoses of different sizes (0,02–0,12 mm). Voids are comparatively frequent (estimated at 10 to 15%) and mostly irregular in shape (vughy).

*Temper:* Inclusions are frequent (estimated between 15 and 20%) and moderately sorted with the size of the particles ranging from 0,1 to 0,9 mm. Reddish to dark brown subangular to subrounded and spherical to subelongate particles (iron-oxide-concretions) are very frequent. Also frequent in occurrence are clear and grey quartz/feldspar particles. Less frequent are rounded spherical to subspherical white particles (recrystallised calcite). Black glassy particles (probably obsidian) are rare but characteristic.

*Shapes:* saucer, situla, jug, lid, basin

*Chronology of contexts:* early third to mid of second century B.C.E.

### **BNAP-C-6**

*Reference sample from Naples:* M 152/3; *further examples from Naples:* M 152/4, 14, 15, 27

*Fabric* BNAP-C-6 is distinguished from BNAP-C-5 by the smaller grain sizes of its inclusions.

*Matrix:* The *fabric* is light reddish brown (7.5YR6/4), the fracture surface the matrix contains frequent carbonate-pseudomorph moulds of small sizes (0,02–0,1 mm). Voids are comparatively rare (estimated at 5%) and mostly irregular in shape.

*Temper:* Inclusions are comparatively less frequent (estimated at 10%) and small, the size of particles ranging from 0,1 to 0,55 mm. Reddish to dark brown rounded to subrounded and spherical to subspherical particles occur infrequently. Black rounded and spherical particles (probably iron-oxide-concretions) occur frequently. Rounded spherical to subspherical white particles (carbonates) are rarely observed. Black and green glassy angular subspherical and elongate (probably volcanic) particles, measuring 0,45 and 0,5 mm are also infrequent. Sample M 142/5 shows an exceedingly large subrounded black and glassy (volcanic?) particle.

*Shapes:* pot, bowl, jug, basin

*Chronology of contexts:* early fifth to the second century B.C.E.

### **BNAP-C-7**

*Reference sample:* M 152/5; *further examples from Naples:* M 152/10, 12, 24, 25, 35

*Matrix:* The light brown (7.5YR6/4) matrix contains a high amount of carbonate-pseudomorph moulds of small sizes (0,02–0,1 mm). Voids are comparatively rare (estimated at 5%) and mostly irregular in shape (vughy).

*Temper:* Inclusions are frequent (estimated between 10% and 15%) with the size of the particles ranging from 0,1 to 0,4 mm. Characteristic for the *fabric* are very frequent rounded to subangular, spherical to subspherical white particles (carbonates?). Reddish to dark brown rounded to subangular and spherical to subspherical particles are less frequent. Subrounded to subangular, spherical to subelongate black particles (iron-oxide-concretions) occur frequently. Only seldom visible but characteristic are subrounded to very angular, spherical black glassy particles, measuring 0,12 mm (probably obsidian): The reference sample M 152/5 shows an exceedingly large subrounded black and glassy particle.

*Shapes:* saucer, basin, olla, jug

*Chronology of contexts:* second century B.C.E.

### **FABRICS FROM NON-IDENTIFIED PRODUCTIONS IN THE BAY OF NAPLES**

The *fabric* BNAP-C-8 shows a matrix very similar to that of the first group found in Naples, which is light brown and riddled with carbonate-pseudomorph moulds. It differs, however, by its characteristic inclusions described below. Macroscopically it shows strong resemblances to archaeometrically investigated samples that stem from an architectural terracotta from Cuma

(M 17/4) and from a tile from Ischia (M 8/3, *fabric* ISC-CBM-2). As the archaeometric analyses of these samples proposed a provenance from Ischia,<sup>7</sup> an origin from Ischia might be suggested for the *fabric* BNAP-C-8 as well.

### ***Fabric* BNAP-C-8**

*Reference sample:* M20/13; *further examples from Naples:* M 136/15; *further examples from Cuma:* Coarse Banded Ware: M 143/144

*Matrix:* The *fabric* is light brown (7.5YR6/3), the matrix is riddled with fine carbonate-pseudomorph moulds (0,02–0,05 mm), and tiny white spots ranging in size mostly from 0,02 to 0,05 only sporadically up to 0,25. It contains predominantly dark and less white mica. Voids are rare (estimated at 5%), mostly irregular in shape (vughy) and less frequently channel-shaped.

*Temper:* Inclusions are comparatively less frequent (estimated at 7.5 to 10%) and unsorted. Large reddish brown or black “spongy” particles, rounded to subrounded, spherical to subspherical, ranging in size between 0,8 and 1 mm are most frequent. Brownish, glassy particles of rounded, subspherical shape are very characteristic but only visible individually.

*Shapes:* situla, pot, basin, cup, brazier

*Chronology of contexts:* Archaic period to fourth century B.C.E.

### **FABRICS FROM NON-IDENTIFIED PRODUCTIONS IN THE BAY OF NAPLES, POSSIBLY CUMA (?)**

The *fabrics* BNAP-C-9 to BNAP-C-12 were defined on the basis of archaeometrically investigated samples of Coarse Wares from Cuma from contexts of the second half of the fourth and the beginning of the third century B.C.E.

In contrast to the *fabrics* BNAP-C-1 to BNAP-C-8, for which a provenance from Naples was proposed, *fabrics* BNAP-C-9 to BNAP-C-12 contain a comparatively high amount of large inclusions. BNAP-C-9 and BNAP-C-10 are light reddish brown and differ in the appearance of the fracture surface; BNAP-C-11 is reddish brown and shows a “laminated” fracture surface. BNAP-C-9 to BNAP-C-12 are also observed with Archaic examples both from Cuma and from Naples.

### **BNAP-C-9**

*Reference sample from Cuma:* M 145/2; *further examples and variations from Cuma:* M 145/18; Coarse Banded Ware: M 143/87, M 143/140; *further examples from Naples:* M 136/1

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<sup>7</sup> Thin section and heavy mineral analyses of the samples M 17/4 from Cuma and the *fabric* ISC-CBM-2 for tiles of Ischia, undertaken by R. Sauer, Universität für Angewandte Kunst, Wien.

*Matrix:* The *fabric* is light reddish brown (5YR6/4) and mostly gray (5YR5/1) in the core, comparatively fine grained, the fracture surface is smooth. The matrix seems to be riddled with tiny white spots. Voids are rare (estimated between 2,5 and 5%), mostly irregular in shape (vughy), and less frequently channel-shaped. It contains white and dark mica, the later visible in its cross-sectioned elongated form within the gray part of the matrix, measuring up to 0,15 mm.

*Temper:* Inclusions are frequent (estimated at 15%) and unsorted, the grain sizes range between 0,02 and 1,5 mm. Black angular to subangular, spherical to subspherical particles (probably vulcanite) are characteristic and very frequent. Frequent in occurrence are angular to subangular, spherical to subspherical crystalline white and clear quartz-particles. Less frequent in occurrence are subangular and subspherical pinkish white inclusions (probably rock fragments) and reddish brown rounded, spherical to subspherical particles (probably iron-oxide- concretions), which range in size from 0,12 to 0,5 mm.

*Typology:* closed vessel, jug, basin, pot

*Chronology:* Archaic to Hellenistic periods

#### **BNAP-C-10**

*Reference Sample from Cuma:* M 145/4

*Matrix:* The *fabric* is brown (7.5YR5/4) and coarse-grained, the fracture surface irregular. The matrix contains fine white spots and a high amount of white mica, whereas cross-sectioned dark mica is less characteristic and fine, measuring up to 0,2 mm. Voids are comparatively frequent (estimated to 10%), mostly irregular in shape (vughy), and less frequently channel-shaped.

*Temper:* Inclusions are comparatively less frequent (estimated at 7,5%) and unsorted. Numerous black glassy particles, mostly angular and spherical to subspherical are characteristic. Frequent in occurrence are well rounded, spherical to sub-spherical white particles, ranging in size from 0,05 to 0,75 mm. Very angular and spherical quartz, some rounded spherical to subspherical reddish brown particles (probably iron-oxide-concretions) are less frequent yet characteristic. An individual well rounded and subspherical brown inclusion (probably rock fragment), measuring 1,25 mm was also observed.

*Shape:* mortar

*Chronology:* second quarter of the fourth, early third century B.C.E.

#### **BNAP-C-11**

*Reference sample:* M 145/3; *further examples and variations from Cuma:* M 145/13; from Naples: M 136/7, M 136/20

*Matrix:* The *fabric* is mostly reddish brown (5YR4/3) with a dark brown (5YR4/2) core, the fracture surface is laminated. It contains white and dark mica, which follows the direction of the voids in its cross-sectioned very elongated shape. Voids are frequent in occurrence (estimated at 10%), mostly channel-shaped, and less frequently irregular in shape.

*Temper:* Inclusions are frequent (estimated at 15–20%) and unsorted. Most characteristic among the many different sorts of particles are yellowish white, rounded and spherical to subspherical and partly very coarse grains, ranging in size from 0,08 to 2,5 mm. Angular, spherical dark grey to black, opaque particles, measuring up to 1,25 mm occur frequently. Well rounded, spherical to subspherical reddish brown inclusions are also frequent. Angular and spherical to subspherical transparent grey or clear quartz (or volcanic glass?) is very frequent. Very angular and elongated white particles (probably feldspar) are rare.

*Shapes:* cooking pot, klibanon, basin

*Chronology:* Archaic period to early third century B.C.E.

## **BNAP-C-12**

*Reference sample:* M 145/17; *further examples from Cuma:* M 143/81

*Matrix:* The *fabric* is reddish yellow (5YR6/6), and light brown (5YR6/4) at the rims, the two zones being occasionally divided by an irregular black line. It is fine grained, the fracture surface is smooth. The matrix is riddled with fine white spots and contains mica and cross-sectioned dark mica, measuring up to 0,25 mm. The percentage of the mostly vughy, and less frequently channel-shaped voids is low (estimated at 2,5%).

*Temper:* Inclusions are frequent (estimated at 10%) and unsorted with the size of the particles ranging between 0,02 mm to 2 mm. Angular, subspherical black glassy particles (probably obsidian) with observed sizes up to 0,25 mm are characteristic. Angular spherical to subelongated clear and grey particles (probably quartz) with sizes up to 2 mm occur infrequently. Yellowish rounded spherical to subspherical particles (tuff?) and grey subangular and subspherical crystalline particles are also characteristic. Frequent in occurrence are rounded spherical to subspherical rather small black particles (iron oxide concretions), measuring up to 0,25 mm.

*Typology:* closed vessel; cup

*Chronology:* sixth to early third century B.C.E.