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Amphorae and Coarse Ware Fabrics of Lilybaion: Evidences for Local Production and Export*

Introduction

Like Panormos, Lilybaion¹ has been continuously inhabited from the Punic period to the present day, which has often prevented systematic archaeological research. Rescue excavations undertaken in the 1980's in the courtyard of the Baglio Anselmi, home of the local Archaeological Museum, have unearthed the remains of an Early Hellenistic industrial area (ch. 2).

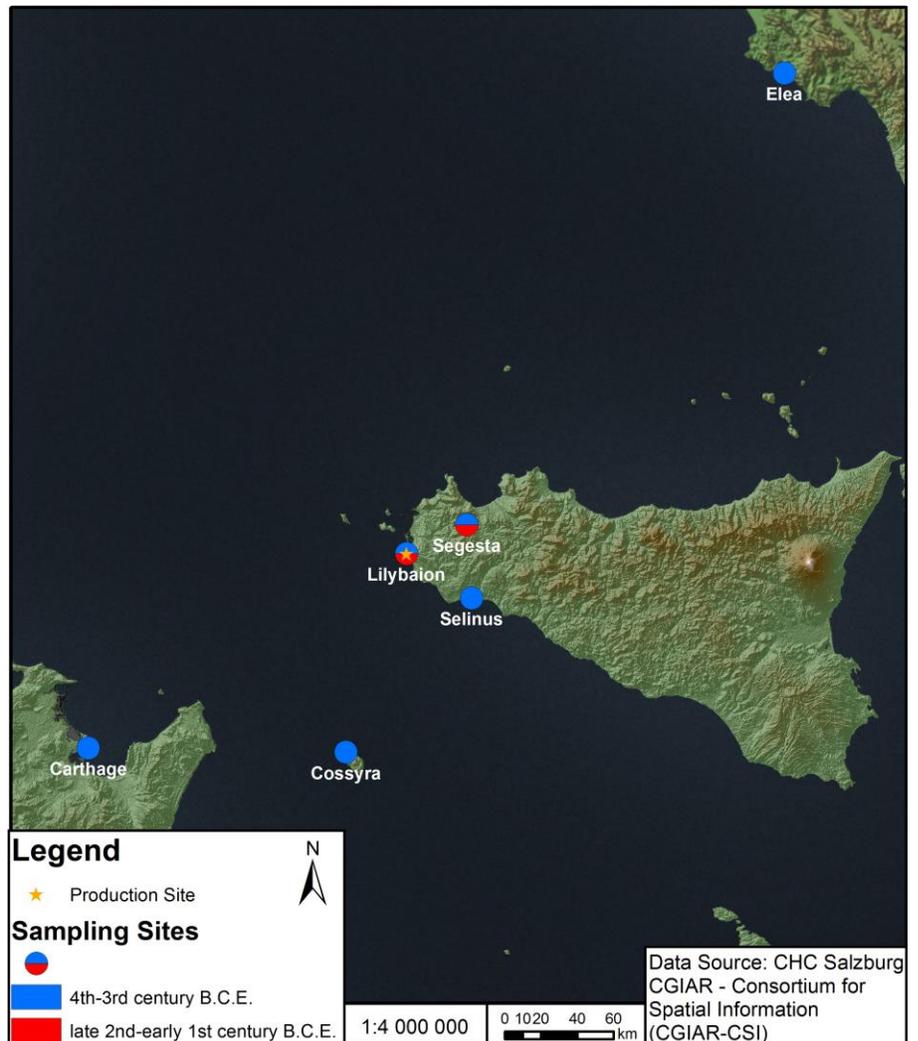


Fig. 1. The sampling Sites yielding amphorae from Lilybaion.

* Special thanks are due to S. Gallagher, University of Warwick, for his critical input during the correction phase of the English manuscript. Furthermore, I thank R. Lampl, University of Vienna, for the photographic documentation of the samples, the realisation of Figs. 1-2, the digitalisation of all amphorae drawings and the composition of Figs. 3-4.

¹ For the ceramic production of Punic Lilybaion, see previously Bechtold 2012, 3-6.

Part of the ceramic kiln debris² from one of the kilns in this area forms the starting point for both the archaeological and archaeometric research undertaken within the scope of the present project,³ which intends to expose, for the first time, an organic and systematic presentation of amphorae and coarse ware fabrics of Punic Lilybaion.

About 50 samples have been studied using binocular microscopy and digital photos of freshly broken surfaces (at x8, x16, and x25 magnification). These are mainly from Lilybaion itself,⁴ but also from Carthage,⁵ Cossyra (Pantelleria),⁶ Selinus,⁷ Segesta⁸ and Elea (Velia)⁹ in Lucania. Furthermore, about 25 items were selected from this assemblage for archaeometric analyses (see note 3). On the basis of these new evidences, ch. 3.1-2 discuss the local amphora and coarse ware repertoire. In ch. 4-5, we trace a preliminary distribution pattern of the class outside its production site, which is followed by a very short interpretation of the available data (ch. 6).

² The coarse ware fabrics LIL-C-1 and LIL-C-2 are almost exclusively composed of the fragmentary vessels found in the deposits US 38 and US 46 of the industrial area, see below, ch. 2.

³ G. Montana and L. Randazzo (both Università degli Studi di Palermo), in preparation. Laboratory methodologies applied in this study include thin-section petrography and chemical analyses (combination of Lithium Metaborate/Tetraborate fusion – ICP and ICP/MS).

⁴ The sample set of the coarse ware items from the kiln context mentioned in note 2 has been supplemented with nine Punic amphorae found in the necropolis (published in Bechtold 1999) which appeared to be almost identical to the presumably local coarse wares (on the basis of a first macroscopic examination). I am grateful to M.L. Famà (Museo archeologico regionale Lilibeo Marsala – Baglio Anselmi) for sampling permission.

⁵ I am indebted to B. Maraoui Telmini (University of Tunis) for allowing me to include in the present research one sample (M 92/93, see below) yielded by the Belgium-Tunisian excavations at the Bir Messaouda site at Carthage.

⁶ I thank Th. Schäfer (Universität Tübingen) and M. Osanna (then Scuola di Specializzazione di Matera), co-directors of the excavations on the acropolis of S. Teresa (2000-2011 campaigns), for the liberty to study selected materials yielded by their research. Furthermore, I owe my thanks to the authorities of the Soprintendenza BB.CC.AA. di Trapani for granting sampling permission. All the amphorae samples from Pantelleria have been assigned the FACEM site identification number 'M 119'.

⁷ Excavations (2006-2012 campaigns) of the New York University, Institute of Fine Arts, under the direction of C. Marconi, to whom I am very indebted for permission to study the Hellenistic finds. I am also indebted to C. Greco, then director of the Parco Archeologico di Selinunte e Cave di Cusa 'Vincenzo Tusa', for generous sampling permission. The amphorae samples from Selinus have been assigned the FACEM site identification number 'M 154'.

⁸ I am indebted to M. de Cesare (Università degli Studi di Palermo) and M. Quartararo (Pisa) for their generous permission to consider for the present research two samples yielded by the Grotta Vanella dump. The whole assemblage of Grotta Vanella is currently being prepared for publication by M. de Cesare. For an overview of the Punic amphorae from Grotta Vanella, see Quartararo 2015b. The samples from Segesta have been assigned the FACEM identification number 'M 165'.

⁹ One fabric formerly published as a Punic unidentified fabric (FACEM - <http://facem.at/ig-pun-a-5>) has now been assigned to the Lilybaion group (LIL-A-1).

1. Archaeometric research and the provenance of raw materials

Currently, the only archaeometric research focusing on the ceramic production of Lilybaion goes back to the early 90's. By means of neutron activation, A. Cesana and team analysed 32 presumably local coarse ware samples, in addition to 33 black glaze samples referring to both imported and local fabrics.¹⁰ As a result, the existence of several local groups has been stated.¹¹ The extremely preliminary presentation of this study does not permit, however, to relate it to the new research of the University of Palermo (see note 3).

G. Montana and team have begun initial attempts to localise possible deposits of raw materials used by the ancient potters of Lilybaion. In C. da Chitarra, about 18 km East of Marsala in the direction of Salemi, the team has found Terravecchia formations.¹² A further possible source for the extraction of raw materials is the alluvial deposits near the old fan of the Birgi river, already in use by the potters of Motya, and only about 10 km from the ancient settlement of Lilybaion (see Bechtold 2015a, ch. 2).

2. Industrial areas

In 1988, during restructuring operations undertaken in the courtyard of the Archaeological Museum 'Baglio Anselmi', located on the most western edge of Capo Boeo, the archaeological remains of an industrial area were discovered.¹³ Trench D yielded several irregularly-shaped cuts into the bedrock, one containing a dolium still *in situ* (US 33), another a pottery dump of misfired ceramic artefacts (US 38). Furthermore, a circular kiln with a central pillar (US 52) has been unearthed, which finds parallels in Punic North African kilns of the Hellenistic period¹⁴ and in kiln 1a of Motya (area K).¹⁵ The study of the vessel shapes yielded by the pottery dump US 38 and by the deposit US 46, found in direct contact with the bottom of the kiln, suggests for these ceramic finds and for the use of the related industrial

¹⁰ Cesana et al. 1993.

¹¹ Cesana et al. 1993, 56.

¹² Montana 2011, 67-74, 157-8, 181, 184, 188: five analysed samples.

¹³ Bechtold and Valente 1990.

¹⁴ For a description of the circular or sub-circular shaped Hellenistic kilns of Carthage, Utica and Kerkouane, built up in unfired bricks, see Falsone 1981, 50-4.

¹⁵ Falsone 1981, 29, fig. 3.

area a dating within the second quarter to mid-third century B.C.E.

Furthermore, just a few meters north-east from kiln US 52 and beneath the still-existing ficus tree, a second, still-unpublished kiln was discovered in 1985.¹⁶ The documentation of two pottery kilns and several other, related structures provides clear evidence of the existence of a Punic *kerameikos* on Capo Boeo. Since the exact alignment of the urban defences in this area is still unclear, we are not able to decide whether this ceramic quarter was located inside or outside the city walls.¹⁷

Finally, a 2nd century B.C.E. 'industrial area' has been individuated about 600m north-east of 'Baglio Anselmi' in the 'Isolato Egadi' area,¹⁸ in proximity to the ancient western harbour¹⁹ and immediately outside the Punic fortification.²⁰ According to C.D. Di Stefano, several amphorae of Ramon's T-7.6.2.1 have been associated with this archaeological context, some of which contain the remains of the original content, represented by olive oil (see below, ch. 3.1).

3. Fabrics and morphological repertoire: evidences from Lilybaion itself

3.1 Amphorae fabrics and repertoire

The present project has allowed us to add precision to earlier remarks on the amphora repertoire of Punic Lilybaion.²¹ Currently, we have defined two local amphora fabrics **LIL-A-1** (fig. 2,1) and **LIL-A-2** (fig. 2,2, for both see below, Schmidt). Both of these begin to appear at some point during the 4th century B.C.E., are best attested during the 3rd century B.C.E. and are still documented by single Late Punic amphorae of the later 2nd to 1st century B.C.E.

¹⁶ Bechtold and Valente 1990, 43, note 4.

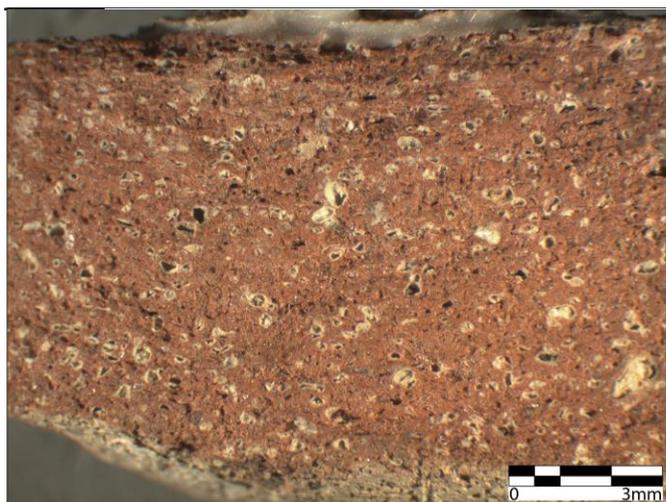
¹⁷ Bechtold and Valente 1990, 39; for a recent reconstruction of the whole fortification system of Punic Lilybaion see Caruso 2003, pls. XXII–XXIII, and esp. pl. XXV, where Capo Boeo seems to have been left outside of the alignment of the city wall. For a discussion of the so called 'Muro del Salinas' and a small city gate located north-east to the Baglio Anselmi area, see *ibidem*, 183–5.

¹⁸ Di Stefano 1993, 46; see also Bechtold 1999, 166, note 48.

¹⁹ For the most recent discussion of the topography of the ancient harbours of Lilybaion, see Caruso 2008, 72, 82-3.

²⁰ See Caruso 2008, 76-8, figs. 3-5.

²¹ Bechtold 2012, 4-5.



1



2



3



4

Fig. 2. Fabrics from Lilybaion (at x8 magnification). 1. LIL-A-1 (M 169/3). 2. LIL-A-2 (M 169/9). 3. LIL-C-1 (M 186/5). 4. LIL-C-2 (M 186/3).

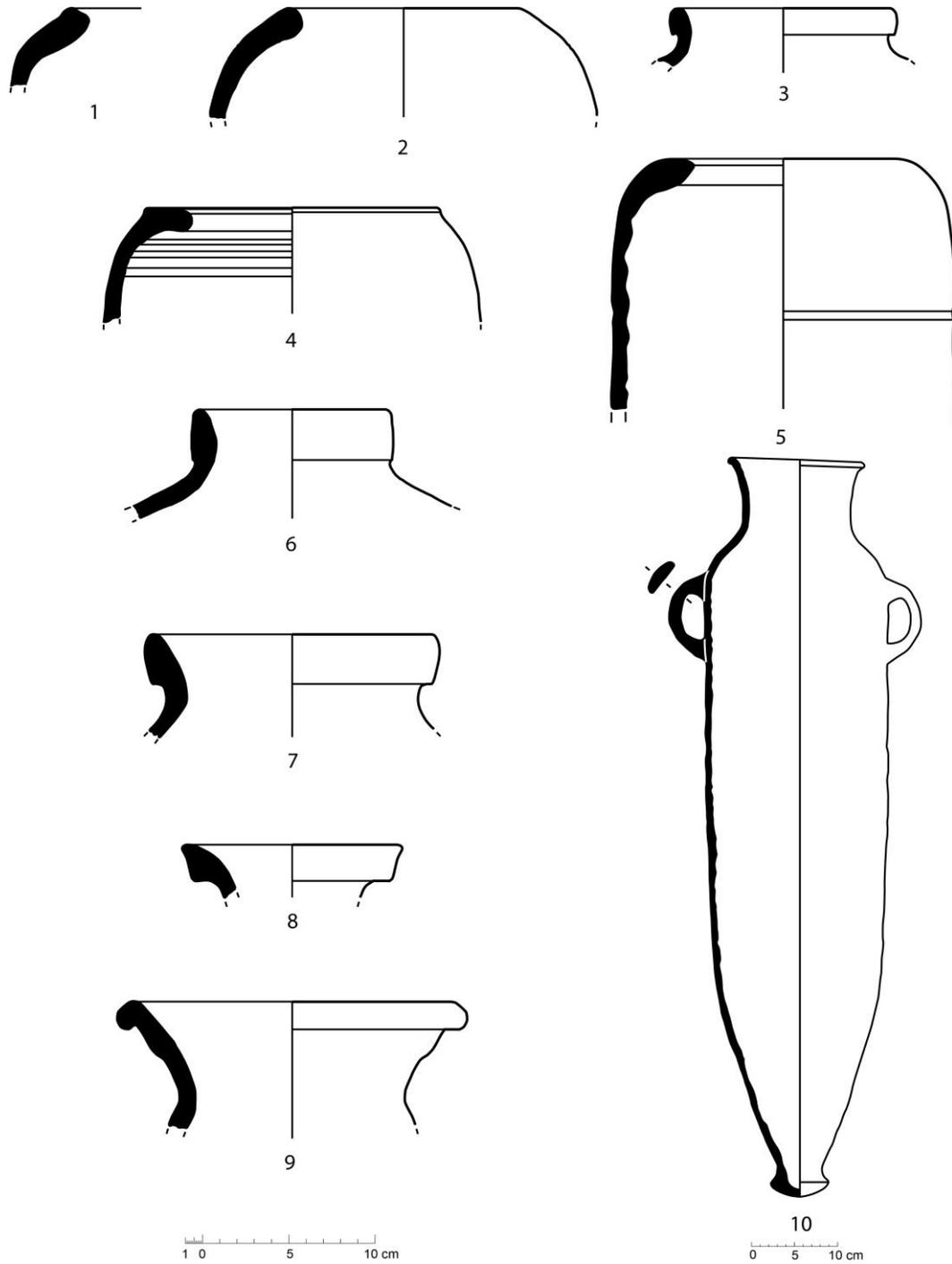


Fig. 3. The amphorae repertoire of Lilybaion (4th-2nd century B.C.E.): 1. Toti T18 2. Toti T19 3. Ramon T-2.2.1.2 4. Ramon T-4.2.1.5 5. Ramon T-4.2.3.1/5.2.3.2 6. Ramon T-6.1.1.3 7. Ramon T-6.1.2.1 8. Ramon T-7.2.1.1 9. Ramon T-7.5.3.2./7.6.2.1 10. Ramon T-7.6.2.1/Lilybaion AC 8.

The earliest evidence from Lilybaion itself is a fragment of Toti's T18 (fig. 3,1), the most frequent type of the late 5th to 4th century B.C.E. series of Motya,²² found in a second half of the 4th century B.C.E. burial in the Punic necropolis.²³ Better documented is Ramon's T-4.2.1.5 (for the type see fig. 3,4), highly characteristic of Carthage's amphorae production of the mid-4th to the mid-3rd century B.C.E.²⁴ and almost completely unknown among the north-western Sicilian series at the same time (Bechtold 2015b). Three items of this shape have been yielded by burials at the local cemetery, dated within the late 4th to the first third of the 3rd century B.C.E.²⁵

Finally, the archaeological deposit which covered the bottom of the kiln found in the courtyard of 'Baglio Anselmi' (see above, ch. 2) contained one rim of the intermediate shape Ramon T-4.2.1.3/5.2.3.2 (fig. 3,5)²⁶ with exact morphological parallels from the Roman destruction level of 250 B.C.E. in kiln 3 on the acropolis of Selinus.²⁷ The same layer (US 46) has yielded a large base fragment, typologically close to Ramon's T-5.2.3.1/2.²⁸ This could, perhaps, even be from the same vessel as the rim above. These two fragments currently represent the only examples of the amphorae issue of Punic Lilybaion during the First Punic War.

The latest local items from the second half of the 2nd to the 1st century B.C.E. graves refer to shape AC 8 of the Lilybaion classification,²⁹ an imitation of the North African type Ramon T-7.6.2.1 (fig. 3,10), which has already been attributed to the industrial issue of the Roman town of Lilybaion.³⁰

²² Toti 2002, 290-4, pls. 16-19.

²³ FACEM – <http://facem.at/m-169-9> in LIL-A-2.

²⁴ Bechtold 2012, 4 with earlier references.

²⁵ M 169/2 in LIL-A-1 (published in Bechtold 1999, 331-2, pl. XXXII,286, ipogeo 38/sotto lastroni of Crs. Gramsci 1990). M 169/11 in LIL-A-1 (published in Bechtold 1999, 340 from T. 54-1 of Via Cicerone). FACEM – <http://facem.at/m-169-12> in LIL-A-1.

²⁶ FACEM – <http://facem.at/m-169-6>, in LIL-A-2. A similar shape has been yielded by a mid 3rd century B.C.E. level excavated at Selinus, see below, note 55.

²⁷ Fourmont 2013, 20-1, figs. 20-2. For a detailed discussion of this archaeological context see Bechtold 2015c, ch. 8.

²⁸ M 169/5 (unpublished), in LIL-A-2.

²⁹ FACEM – <http://facem.at/m-169-7>. FACEM – <http://facem.at/m-169-4> both in LIL-A-1.

³⁰ Bechtold 1999, 162-3, pl. XXXIV,293 with further references for Lilybaion, especially for the unpublished discovery of several fragments of this shape in an industrial context of the 2nd century B.C.E. unearthed in the area of the 'isolato Egadi', see above, chap. 2.

3.2 Coarse ware fabrics and repertoire

The morphological repertoire of the coarse ware production has been analysed in detail within the framework of the study of the finds from the necropolis.³¹ Within the scope of the present project, and in order to gain a better understanding of the local fabrics, eleven fragmentary vessels yielded by the kiln area of Capo Boeo (see above, ch. 2) have been sampled. Among these materials we have distinguished the strongly tempered fabric **LIL-C-1** (fig. 2,3), identical to the amphora fabric LIL-A-1, and **LIL-C-2** (fig. 2,4) with less frequent tempering, similar to the amphora fabric LIL-A-2 (see below, Schmidt). The morphological types attested in the two 'industrial deposits' of US 38 and US 46 from Capo Boeo almost entirely correspond to the panorama outlined for phases Ib to Id of the necropolis (i.e. the last quarter of the 4th to mid-3rd century B.C.E.).³² We find bowls of the types³³ C 3A (fig. 4,1)³⁴ and C 4B (fig. 4,2),³⁵ together with jugs of the shapes BR 4 (fig. 4,3),³⁶ BR 5 (fig. 4,4)³⁷ and BR 6A (juglet, fig. 4,5)³⁸ and basins of Vegas' F. 52 (fig. 4,6).³⁹ Only the amphora lid (fig. 4,7) from the kiln context US 46⁴⁰ represents a novelty in relation to the presently known local repertoire. This particular shape was produced at Solus from the 4th century B.C.E. onwards and has been related to the amphora series Ramon T-4.2.2.6/7 and T-7.1.2.1. More comparisons (of unidentified fabrics) for this lid type from the second half of the 4th to the beginning of the 3rd century B.C.E. contexts come from Motya, Panormos, Eryx, Segesta and Lilybaion itself.⁴¹ Very recently, the production of this particular shape has also been ascertained for Selinus, where it has been found in kiln 3, with a context of the second quarter of the 3rd century B.C.E., together with amphorae of Ramon's T-4.2.1.3/5.2.3.2.⁴² This association also characterises the kiln deposit US 46 of 'Baglio Anselmi' (see above, ch. 2, 3.1).

³¹ Bechtold 1999, 188-91; previously Di Stefano 1993, 41-2.

³² Bechtold 1999, 189, fig. 50.

³³ For the typology of the coarse ware from Lilybaion see Bechtold 1999.

³⁴ FACEM – <http://facem.at/m-186-5> in LIL-C-1.

³⁵ FACEM – <http://facem.at/m-186-6> in LIL-C-1.

³⁶ FACEM – <http://facem.at/m-186-2> in LIL-C-1.

³⁷ FACEM – <http://facem.at/m-186-1>. FACEM – <http://facem.at/m-186-3> both in LIL-C-1.

³⁸ FACEM – <http://facem.at/m-186-7> in LIL-C-1.

³⁹ FACEM – <http://facem.at/m-186-9>. 186/10 (published in Bechtold and Valente 1990, 41, pl. 1, US 46-6 (not to scale), diam. orlo >40, h 13.7). Both in LIL-C-1. For a recent discussion of this originally Greek shape with special emphasis on its acceptance in western Sicily, and, later on, at Carthage see Bechtold 2013b, 11-3, fig. 2,1.

⁴⁰ FACEM – <http://facem.at/m-186-8> in LIL-C-2.

⁴¹ Bechtold (forthcoming), cat. 261 with full references.

⁴² Fourmont 2013, 16, fig. 16,1-2.

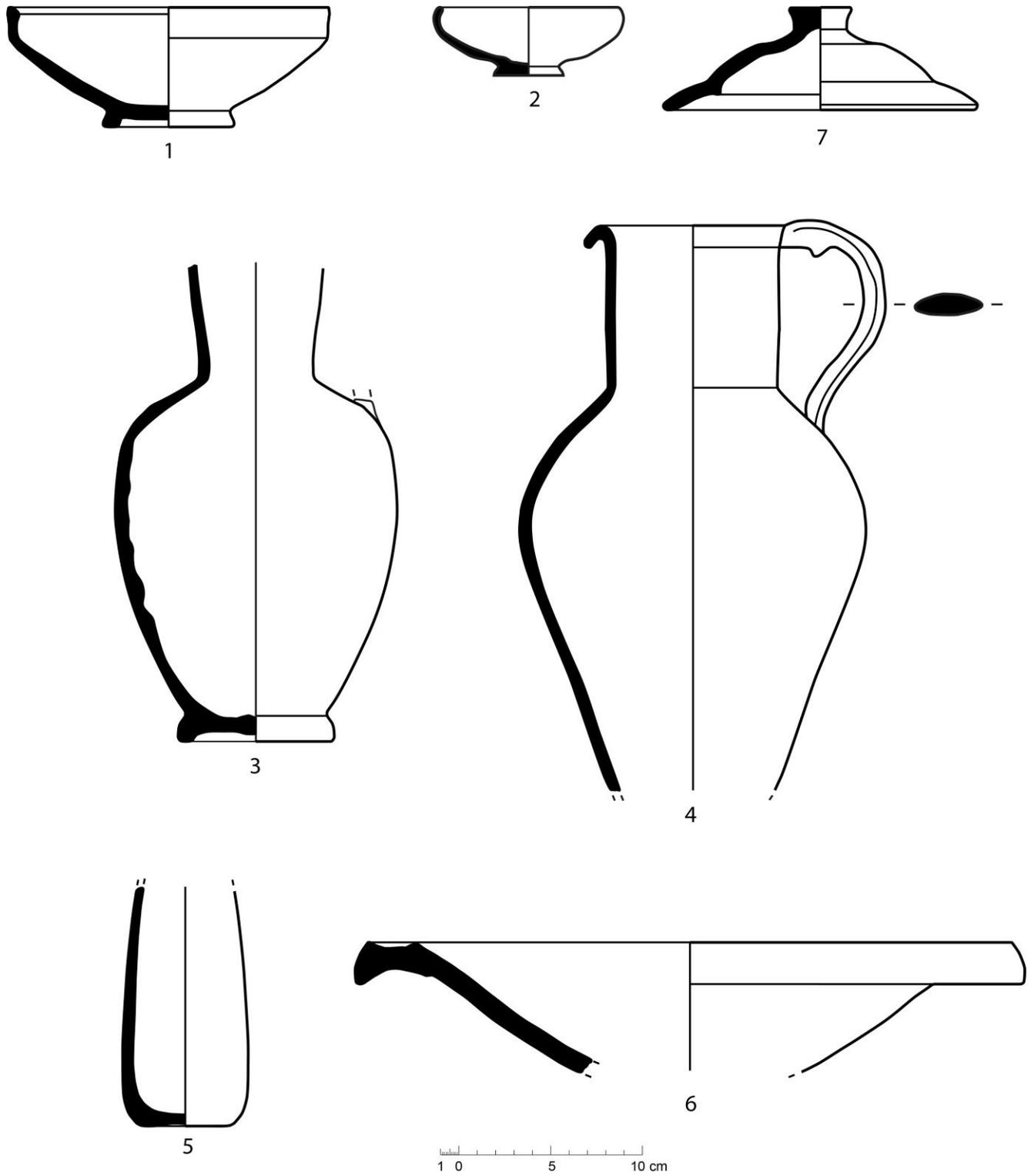


Fig. 4. Coarse Wares produced at Lilybaion (3rd century B.C.E.): 1. bowl Lilybaion C 3A 2. bowl Lilybaion C 4B 3. jug Lilybaion BR 4 4. jug Lilybaion BR 5 5. juglet Lilybaion BR 6A 6. basin Vegas F. 52 7. amphora lid.

4. Amphorae fabrics and morphological repertoire: evidences from other sites

Among the earliest items of the assemblage attributed to Lilybaion found outside the production site are three more fragments of Toti's T18 (for the type see fig. 3,1) from Segesta⁴³ and Selinus.⁴⁴ To Toti's 4th century B.C.E. type T19 (fig. 3,2) can be referred one item from Grotta Vanella (Segesta).⁴⁵ Two fragments from Selinus (fig. 3,3, from a late 4th to early 3rd century B.C.E. deposit)⁴⁶ and from Carthage (layer dated at about 300 B.C.E.)⁴⁷ match the central-Mediterranean type Ramon T-2.2.1.2, documented so far amongst the productions of Motya,⁴⁸ Panormos,⁴⁹ Solus,⁵⁰ Melite⁵¹ and Carthage.⁵² Ramon's T-4.2.1.5, best attested at Lilybaion itself, has also been found at Selinus (fig. 3,4), in deposits from the late 4th or early 3rd century B.C.E.⁵³ and second quarter of the 3rd century B.C.E.⁵⁴ Also from Selinus, from a mid-3rd century B.C.E. deposit, stems a large fragment of a Ramon's T-4.2.1.3 (for the type see fig. 3,5)⁵⁵ which, from a morphological point of view, is quite similar to the item from the kiln context of 'Baglio Anselmi' (see above, ch. 3.1, note 26).

Currently, the mid- to late 3rd century B.C.E. series of Lilybaion, characterised by Ramon's groups G-6.1, 7.1 and 7.2, have been identified among the amphorae materials from Cossyra, Segesta and Elea, but not at the production site itself. Ramon's T-6.1.1.3 has been found on Pantelleria (fig. 3,6).⁵⁶ One sample from Segesta can be paralleled with Ramon's T-6.1.2.1 (fig. 3,7).⁵⁷

⁴³ FACEM – <http://facem.at/m-165-2> in LIL-A-1 (surface find from the Northern Gate). FACEM – <http://facem.at/m-165-50> in LIL-A-1 (Grotta Vanella dump), to be considered a variant of Toti's T18, see Quartararo 2015b.

⁴⁴ M 154/69, unpublished, from the acropolis of Selinus (temple B): saggio E, US 0 fondo, P08.502.

⁴⁵ FACEM – <http://facem.at/m-165-52> in LIL-A-1, see Quartararo 2015b.

⁴⁶ FACEM – <http://facem.at/m-154-70> in LIL-A-1.

⁴⁷ M 92/93 in LIL-A-2, published in Maraoui Telmini 2012, cat. 188, fig. 170, here taken for a Carthaginian amphora.

⁴⁸ Bechtold 2015a, ch. 4, one item from Entella.

⁴⁹ Bechtold 2015d, ch. 4, one item from Cossyra.

⁵⁰ Bechtold 2015b, ch. 3-4, several items from Carthage, Motya and Himera.

⁵¹ FACEM – <http://facem.at/m-115-5> in MALTA-A-1.

⁵² Gassner (forthcoming), ch. V.A.5.2.2, inv. 313/97-2 in CAR-REG-A-2, from a deposit dated to the last third of the 4th century B.C.E..

⁵³ FACEM – <http://facem.at/m-154-18> in LIL-A-1.

⁵⁴ FACEM – <http://facem.at/m-154-94> in LIL-A-2 (published in Helas 2011, 346, pl. 46,2).

⁵⁵ FACEM – <http://facem.at/m-154-86> in LIL-A-2. For the discussion of the dating of the context of provenance, see Bechtold (forthcoming), ch. 1.4.3.

⁵⁶ FACEM – <http://facem.at/m-119-54> in LIL-A-2.

⁵⁷ M 165/44, from a late 2nd/early 1st century B.C.E. context excavated in area 15000: SG 96 SAS 15 US 1519-1, excavations by the Soprintendenza BB.CC.AA. di Trapani (unpublished).

The most common shape is represented by Ramon's T-7.2.1.1, which is attested at both Segesta (fig. 3,8)⁵⁸ and Elea.⁵⁹ The latest evidences from outside the production site for the amphora issue of Lilybaion currently consists of one fragment of Ramon's T-7.5.3.2 or T-7.6.2.1 from Segesta (fig. 3,9).⁶⁰

5. Coarse ware fabrics and morphological repertoire: evidences from other sites

So far, coarse ware produced at Lilybaion has been identified among the finds of the American excavations at temple B at Selinus: three ring bases of bowls⁶¹ (one decorated with painted, concentric lines)⁶² and a rim of a deep bowl.⁶³

6. Conclusions

6.1 Concluding remarks on Lilybaion's amphorae fabrics

The microscopic study of 32 amphorae and 15 coarse ware samples, combined with archaeometric analyses, has led to the distinction of two amphorae fabrics, LIL-A-1 and LIL-A-2, and two coarse ware fabrics, LIL-C-1 and LIL-C-2. These fabrics differ from one another in the packing and dimensions of the temper (see below, Schmidt). Both typological and archaeological data indicate a production range at least from the 4th to the late 2nd century B.C.E. for LIL-A-1 and LIL-A-2.

In relation to the local amphora repertoire, we might suspect that the earliest shapes of Ramon's T-2.2.1.2 (fig. 3,3) and especially Toti's T18 (fig. 3,1) and T19 (fig. 3,2) derive directly from the pottery tradition of Motya (see Bechtold 2015a, ch. 3-4), even if all these shapes are also attested in the Carthaginian series. As a result of the destruction of Motya in 397 B.C.E., part of the surviving population, some of whom may have been potters, moved to Capo Boeo,⁶⁴ bringing with them their technological knowledge of amphorae fabrication.

⁵⁸ FACEM – <http://facem.at/m-165-30>. FACEM – <http://facem.at/m-165-31>, both residuals and in LIL-A-1.

⁵⁹ FACEM – <http://facem.at/m-10-32> in LIL-A-1, previously published as FACEM – <http://facem.at/ig-pun-a-5>, here identified as Ramon's T-7.1.2.1, from a stratified deposit dated 225-150 B.C.E.

⁶⁰ FACEM – <http://facem.at/m-165-28> in LIL-A-1, from a context dated to the first half of the 1st century B.C.E.

⁶¹ M 167/4: TB, saggio E, US 1, P08.529 (unpublished), in LIL-C-2. FACEM – <http://facem.at/m-184/3> in LIL-C-2.

⁶² M 184/4 in LIL-C-2 (Bechtold (forthcoming), cat. 94).

⁶³ FACEM – <http://facem.at/m-167-3> in LIL-C-1.

⁶⁴ For a synthesis of the historical background, see Di Stefano 1993, 4-5; *Lilibeo* 1984, 15.

Probably towards the late 4th century B.C.E., a new shape makes its first appearance among the local repertoire: Ramon's T-4.2.1.5 (fig. 3,4), clearly an imitation of Carthaginian prototypes, which appear to be well-documented in the local necropolis.⁶⁵ The acceptance of this type definitively underlines the close political and cultural relation between Lilybaion and the North African metropolis.⁶⁶ Also highly significant in this light is the identification of two amphorae with in-turning, plain rims of Ramon's T-4.2.1.3/5.2.3.2 (fig. 3,5), almost identical in shape to several recently-published items from the Punic industrial area on the acropolis of Selinus (see above, ch. 2, 3.1). On the basis of clear chronological and archaeological congruences in the data from the kiln areas of Selinus and Lilybaion, we suggest that the production of the North Tunisian type Ramon T-4.2.1.3/5.2.3.2 – otherwise unknown among the north-western Sicilian series - at both sites should be interpreted as an indication of Carthage's control over the industrial activities of its two strongholds in south-western Sicily during the initial years of the First Punic War.

In parallel with the morphological repertoire identified for the amphorae series of Panormos (Bechtold 2015d), most probably beginning with the final years of the First Punic War, Lilybaion also begins to produce cylindrical vessels of Ramon's groups G-6.1, G-7.1. and G-7.2.

A late appendix to the local amphorae series is represented by AC 8 (fig. 3,10) of the classification of Lilybaion, an evident imitation of the Tunisian Late Punic types Ramon T-7.6.2.1, T-7.3.1.1, 7.4.2.1/3.1 and 7.5.3.2. From the point of view of the material culture, the production of these shapes shows that the town had a cultural sense of belonging to the Punic North African sphere of influence even during the Roman period.

6.2 Concluding remarks on Lilybaion's amphorae export

The still limited number of samples attributed to the amphorae series of Lilybaion does not permit a conclusive evaluation of the diachronic occurrence of this class outside the production site. Notwithstanding this constraint, on the basis of the available data, we can make a few, preliminary remarks. The earliest amphorae referred to the local production of Lilybaion (Ramon's T-2.2.1.2 and

⁶⁵ E.g. M 166/6 (published in Bechtold 1999, 339, pl. XXXIII,287, T. 38-1 of Via Cicerone 1990), now attributed to fabric FACEM - <http://facem.at/car-reg-a-3>.

⁶⁶ For the close relation between the two cities, see in detail Bechtold 1999, 26, 279-80.

Toti's T18-19), found at Carthage, Segesta and Selinus (see ch. 3.1), suggest a moderate regional distribution of these series within Carthage's *eparchia* from the very beginning of the local production. The evidences from Selinus might hint at a regular flux of ceramics made at Lilybaion (Ramon's T-4.2.1.5, T-4.2.1.3/5.2.3.2 and several coarse wares) during the late 4th and first half of the 3rd century B.C.E. along the south-western coast of Sicily. Relevant quantities of amphorae found in the stratigraphy of the Northern Gate at Segesta,⁶⁷ but also archaeological evidences from Selinus very clearly underline, however, that, during the period of Agatokles, the overwhelming majority of Punic amphorae attested at western Sicilian sites originates from the production area of Panormos and Solus.

The amphora evidences from Segesta and Cossyra show that on a regional scale, production from Lilybaion at the mid-second half of the 3rd century continues to be moderately attested. Interestingly, and in contrast with the production of Panormos (Bechtold 2015d), single amphorae from Lilybaion appear at Elea in Lucania no earlier than the middle of the 3rd century B.C.E. - probably during the years of the First Punic War - where this fabric continues to be documented at least until the Second Punic war.

As a preliminary conclusion, we might suppose that the amphora issue of Lilybaion never played a relevant role in the economy of western Sicily. The – admittedly, still scarce - presence of transport vessels in fabrics from Lilybaion at Elea from the mid-3rd century B.C.E. onwards might be linked to the prominent position assigned to the city by the Romans after the end of the First Punic war. Being the domicile of the *quaestor* from 227 B.C.E. onwards, the probable, precocious presence of Roman citizens should have supported commercial relations with the Lucanian-Campanian area.⁶⁸

6.3 Hypothesis on the content of the amphorae series produced at Lilybaion

At present, no archaeological indications for the content of the amphorae series from Lilybaion are available. An exception are the late 2nd and 1st century B.C.E. vessels of Ramon's T-7.6.2.1, which might have contained olive oil (see above, ch. 2-3).

⁶⁷ Bechtold 2008.

⁶⁸ For previous observations in this sense, see Bechtold 1999, 260-1; Bechtold 2007, 62-3.

Table of correspondence for the fragments illustrated in figs. 3-4.

Fig.	FACEM inv.-no.	Site inventory number	Published
3,1	M 169/9	Marsala, necropolis, V. Cicerone 1990, T. 65-1, MR 9955	FACEM – http://facem.at/m-169-9 Bechtold 1999, 342, tav. XXXIII,289
3,2	M 165/52	Segesta, Grotta Vanella dump, SG 10947	FACEM – http://facem.at/m-165-52 Quartararo 2015b
3,3	M 154/70	Selinunt, temple B, saggio H, US 3B, P09.94	FACEM – http://facem.at/m-154-70 Bechtold 2015e, fig. 2,2
3,4	M 154/18	Selinunt, temple B, saggio US 0, P08.499	FACEM – http://facem.at/m-154-18 Bechtold (forthcoming), cat. 49. Bechtold 2015e, fig. 2,4
3,5	M 169/6	Marsala, Baglio Anselmi, saggio D 1990, US 46-4, MR 9946	FACEM – http://facem.at/m-169-6 Bechtold 2012, 4, pl. 3.2 with earlier references. Bechtold 2015e, fig. 2,5
3,6	M 119/54	Pantelleria, acropolis, PN 02, ACR IV, 652-6	FACEM – http://facem.at/m-119-54 Bechtold 2013a, 467, cat. 61. Bechtold 2015e, fig. 2,6
3,7	M 165/44	Segesta, Hellenistic necropolis, SG 96 SAS 15 US 1519-1	Bechtold 2015e, fig. 2,7
3,8	M 165/31	Segesta, survey, SG 96 RIC UT 1.73	FACEM – http://facem.at/m-165-31 Bechtold 2015e, fig. 2,8
3,9	M 165/28	Segesta, Northern Gate, SG 93 SAS 7, US 5715-1	FACEM – http://facem.at/m-165-28 Bechtold 2008, 566, cat. 38
3,10	M 169/4	Marsala, necropolis, Crs. Gramsci 1989, sepoltura 2, US 2019-31, MR 173	FACEM – http://facem.at/m-169-4 Bechtold 1999, 327-328, pl. XXXIV,293
4,1	M 186/5	Marsala, Baglio Anselmi, saggio D 1990, US 38-3, MR 9944	FACEM – http://facem.at/m-186-5 Bechtold and Valente 1990, 41, pl. 1
4,2	M 186/6	Marsala, Baglio Anselmi, saggio D 1990, US 38-4, MR 9945	FACEM – http://facem.at/m-186-6 Bechtold and Valente 1990, 41, pl. 1
4,3	M 186/2	Marsala, Baglio Anselmi, saggio D 1990, US 46-2, MR 9940	FACEM – http://facem.at/m-186-1 Bechtold and Valente 1990, 43, pl. 2
4,4	M 186/1	Marsala, Baglio Anselmi, saggio D 1990, US 46-3, MR 9939	FACEM – http://facem.at/m-186-1 Bechtold and Valente 1990, 43, pl. 2
4,5	M 186/7	Marsala, Baglio Anselmi, saggio D 1990, US 46-8, MR 9949	FACEM – http://facem.at/m-186-7 Bechtold and Valente 1990, 43, pl. 2
4,6	M 186/9	Marsala, Baglio Anselmi, saggio D 1990, US 46-5, MR 9951	FACEM – http://facem.at/m-186-9 Bechtold and Valente 1990, 41, pl. 1
4,7	M 186/8	Marsala, Baglio Anselmi, saggio D 1990, US 46-9, MR 9950	FACEM – http://facem.at/m-186-8 Bechtold and Valente 1990, 41, pl. 1

KARIN SCHMIDT

Amphorae and Coarse Ware Fabrics of Lilybaion*

Introduction

The ceramic fabrics of Lilybaion are quite similar to those of Motya (see esp. MOT-A-2).¹ Both fabric groups show a high frequency of sand temper, with a predominance of calcareous inclusions. However, in general, the presence of smaller-sized quartz grains and calcium carbonate particles, as well as more regularly-shaped (very spherical to spherical) pseudomorphoses, distinguishes the fabrics of Lilybaion from those of Motya.

Transport amphorae (LIL-A-1 and LIL-A-2)

FABRIC DESCRIPTION

LIL-A-1 (M 10/32; M 154/18; M 165/2. 28.30. 31. 50. 52; M 169/3. 7. 12) Ref. M 169/3

LIL-A-1 (see above, fig. 2,1) is characterised by a poorly-sorted, very dense sand temper with a high percentage of white and yellowish calcium carbonate particles. The compact matrix is middle-fine to coarse, while the colour is red, reddish-brown, greyish-brown or red and grey. Spherical-shaped white and yellowish-white pseudomorphoses (0.04–0.6 mm, see M 10/32) are predominant and very frequent. The small- to medium-sized quartz grains are of clear, grey and sometimes white and brownish colour and are characteristically of spherical and rounded shape (0.04–0.4 mm, occasionally up to 0.5 mm). Some of the small-fractured clear quartz grains shine, while mica (white) appears to be rare. Red to reddish-brown and black inclusions are rare or infrequent (mainly <0.04–0.6 mm, seldom up to 0.6 mm, see M 165/31), but in some cases we find higher quantities (M 165/2). The packing is between 25% and 30% and the porosity varies between 7.5% and 12.5%.

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¹ Two identified deposits of clay material are not far from Lilybaion. One of them is located in the area of the old fan of the Birgi river and has already been used by potters of Motya, see Bechtold 2015a, ch. 2.

LIL-A-2 (M 119/54; M 154/70. 86. 94; M 169/4. 6. 9) Ref. 169/9

In comparison to LIL-A-1, the matrix of LIL-A-2 (see above, fig. 2,2) is slightly finer and the temper shows a lower frequency of large inclusions (rarely over 0.8 mm). The quantity of fine calcium carbonate particles and pseudomorphoses can be very high (up to 'riddled with', see M 119/54, M 154/70. 94; M 169/9). Alternatively, due to the firing temperature, the frequency of pseudomorphoses can also sometimes be quite low (M 169/4. 6; M 154/86). The colour of the matrix is light red to red, reddish-brown, greyish-brown, grey or, rarely, pale brown (M 169/6). Packing ranges between 20% and 30%, whilst the porosity varies between 7.5% and 10%.

Coarse wares (LIL-C-1 and LIL-C-2)

FABRIC DESCRIPTION

LIL-C-1 (M 167/3; M 186/1. 2. 4. 5. 7. 9) Ref. 186/5

LIL-C-1 (see above, fig. 2,3) is similar to the amphora fabric LIL-A-1. It is characterised by a poorly-sorted, very dense sand temper (grain sizes mainly up to 0.6 mm) with a high quantity of fine yellowish-white or white calcium carbonate inclusions and pseudomorphoses (0.04–1.0 mm). Quartz is present in high quantities (grey, clear, white, brownish, mainly 0.04–0.6 mm). Generally, red, reddish-brown and black particles are rare or infrequent (0.04–0.36 mm), but occasionally also frequent (M 167/3). Packing ranges between 17.5% and 25%, with porosity ranging between 7.5% and 10%. The compact middle-fine to coarse matrix is red, dark brown, dark grey, dark grey with red core or red with dark grey core. The identified morphological spectrum shows jugs, basins and bowls.

LIL-C-2 (M 184/3; 186/3. 8. 11) Ref. M 186/3

Fabric LIL-C-2 (see above, fig. 2,4) differs from LIL-C-1 in that it has a lower frequency of calcium carbonate particles and pseudomorphoses (infrequent to frequent). Packing ranges between 15% and 20%. Porosity ranges between 7.5% and 15%. The identified morphological spectrum shows jugs, basins, bowls and amphora lids.

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