

Ceramics from Ain el-Gedida (Dakhleh Oasis): preliminary results

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The excavations conducted at the site of Ain el-Gedida provided an abundant quantity of pottery fragments of a rather homogeneous chronological range, spanning the period from the end of the third to the beginning of the fifth century. In fact, the latest sherds consist of a few fragments of LRA 7 types coming from the Nile Valley and characteristic of the middle to second half of the fourth century, and certainly no later than the beginning of the fifth century. Moreover, we did not notice any pottery from Aswan, usually uncovered in fifth century contexts in Dakhleh.¹ We also observed, thanks to Colin Hope, many comparisons between Ain el-Gedida ceramics and the pottery found at Kellis.

The catalogue includes a large variety of shapes, mainly of a local or regional source (more than 98% of all the material), and rarely from the Nile Valley. No sherd from North Africa or Mediterranean countries has been identified. The major categories are storage jars, juglets and water jugs, cooking-pots, common wares to prepare and serve food, fine wares, and lamps.

After a short presentation of the main fabrics, I will discuss the ceramics coming from the church complex and the unfired pottery fragments found in a building located in the west edge of the main hill of the site.²

A. Presentation of the main fabrics

Identification of main fabrics found at Ain el-Gedida for the Byzantine Period is based on the *Dakhleh Oasis Fabric System*, developed by Colin

Hope. Moreover, as he mentioned, “many of the traditions of the Roman Period continued into the Byzantine Period. This is particularly evident in the use of the quartz-tempered fabrics and in the shapes of the large, necked storage jars (...), water kegs (...), some of the cooking pots (...) and, of course, the bowls. Both gray- or black-fired and brown-fired versions of these fabrics continued to be produced and they were still the dominant domestic fabrics.”³

- **A1/A2** are iron-rich fabrics, fired from a red or brown-reddish core (A1a/A2a) to a gray or black core (A1b/A2b); distinction between A1 and A2 is related to the texture, finest and more compact in A2 group. Inclusions consist mainly of quartz, few white calcareous particles and red inclusions. This group includes a vast majority of ceramics found in Ain el-Gedida and many shapes: storage jars, common wares and cooking pots.
- **A22** is a variant of A1; it has a brown-reddish core and contains many white calcareous particles. This fabric was used for large storage jars with painted decoration in red on a white slip and for some water jugs with a white slip.
- **A11** is a calcium-rich fabric, also known as *Christian Brittle Ware*, which appears during the third century.⁴ It is a fine, brittle fabric, fired gray to pink, with some red to black inclusions and a few white particles. Frequently, the surface is covered with a red slip, which fired gray. This fabric was mainly used for cooking pots, lids and bowls.
- **B10** is a calcium-rich fabric or marl clay with an open texture and a green core. It contains many quartz particles, as well as some red and black inclusions. This porous fabric was used almost exclusively for water jugs and juglets.

¹ Personal communication. Hope 1999, 236.

² Drawings have been made by Ashraf Senussi and inkings by the author. The study of pottery is still in progress, and some results of the “Estimated Vessels Equivalents” could be modified.

³ Hope 1999, 235.

⁴ Dunsmore 2002, 131.

- **A28** is a pre-Byzantine fabric, very little attested in Ain el-Gedida; it has a medium fine texture and a brown-reddish core; inclusions consist mainly of quartz, few white calcareous particles and red inclusions.
- **A27**, known as *Oasis Red Slip Wares*, is only characterized, at the site of Ain el-Gedida, by a very few fine wares with red and burnished slip; it is a red-orange fired fabric with a fine texture and contains mainly inclusions of shales. This fabric was mainly used for open-forms, predominantly handmade bowls, probably moulded, and for lamps.
- **B16**, mainly used for bowls and handled flasks, is a calcium-rich fabric of medium fine texture with an orange core; inclusions consist of quartz and shale.

B. Ceramics from the Church complex

The 2006 season mainly focused on the small church (room B5) and the excavations of this complex were continued during the 2007 season. 167 vessels (Estimated Vessel Equivalents) have been recorded (Plate 1); 60% of them are open forms and especially bowls or globular bowls. Just 1 lamp and 2 bowls illustrate Oasis red slip ware and, except for a body sherd of a flagon, no imported ceramics from Nile Valley or from Mediterranean countries were noticed. If we take into consideration cooking pots (that is 28 vessels), bowls, and plates with blackened surfaces (that is also 28 vessels), we have 56 ceramics used as cooking vessels (Plate 2). It is noticeable that the food was cooked in pots but also in individual bowls.

Despite the surface level (DSU 19), a moderate quantity of ceramics comes from the windblown sand (DSU 20), which covered room B5 and the apse. It includes 2 Oasis Red Slip Wares, 5 jars, 1 standing-pot, 2 basins, 4 large bowls and plates, 10 bowls, 1 cooking pot, and 1 lid (Plate 3). N° 1, an open bowl with a direct rim and a low ring base, is an imitation of North-African Sigillata; it could be dated to the fourth century⁵ and, more precisely in Douch, to the middle or the second part of the fourth century.⁶ The other Oasis red slip ware, which is not presented here, is an open bowl with a wide modelled rim.⁷ Jars, made of A2b fabric, have vertical or slightly concave neck, thickened and rounded rim with a ledge at the transition between the neck and the shoulder (n° 2–3). N° 6 (A1b) is a standing-pot and n° 3 could be dated, by comparison with pottery from Kellis, to the end of

the third and the beginning of the fourth century.⁸ The bowls are usually decorated with red dots, sometimes on a white band, on the rim. N° 10, made of A1a fabric, could also be dated before the fourth century.⁹ The globular bowl n° 11 (A1b) is more characteristic of the second part of the fourth and the beginning of the fifth century.¹⁰ The only cooking pot is made of A11 fabric and is characteristic of the second part of the fourth and the beginning of the fifth century.¹¹

After removing the windblown sand, a layer of the collapsed roof and wall was excavated; it revealed the function of room B5 as a small church with one semi-circular apse and a *pastophorion*. Ceramics coming from this level (DSU 22 in room B5 and DSU 23 in the apse) comprise 1 body sherd of a large jar with painted decoration, 1 water jug, 4 basins, 3 large bowls or plates, 6 bowls, 6 cooking pots, 1 lid and 1 pigeon-pot (Plate 4). The n° 6, made of A1a fabric, could be dated from the end of the third to the beginning of the fourth century¹² and n° 1 (in DSU 23) is frequently encountered in fourth century contexts.¹³ The bowl n° 3 (A1b), with a white slip, has similar examples dated before the fourth century in Kellis.¹⁴ N° 4 is a shallow and flared bowl with white band and red dots on the rim; it was made of A1a fabric and could also be dated before the fourth century.¹⁵ N° 5, a globular bowl, is decorated with red dots and was made of A28 fabric. These 3 bowls have a blackened surface and were used for cooking. In this layer were found 2 bronze coins dated from the beginning to the middle of the fourth century.

In the apse, DSU 24 is a matrix of mudricks and occupational debris, just above the floor. No sherd was recorded in this layer, but 4 bronze coins were found, which give a chronological range spanning from the middle to the end of the fourth century. Moreover, the filling of the pit F63 (DSU 26) in the apse contains 4 bronze coins, dated between 330 and the middle of the fourth century, and very few sherds (Plate 5): 1 keg, made of A1b fabric with a red slip, 1 strainer of a water jug (B16 with a red to grayish slip), 1 basin, 1 large bowl, 5 bowls (n° 3 is an hemispherical bowl with small slightly outturned rim and a white slip) and 1 plate used for cooking, made of A11 fabric.

⁸ Bowen et al. 2007, 29 and fig. 7, n° h.

⁹ Dunsmore 2002, 130, fig. 1, n° h–j. Hope 2003, 211, fig. 3.i. Hope et al. 2006, fig. 4, n° b.

¹⁰ Hope 1986, 81, fig. 6, n° fig. c.

¹¹ Hope 1986, 81, fig. 6, n° f.

¹² Hope et al. 2006, fig. 4, n° a.

¹³ Bowen et al. 2007, 29 and fig. 7, n° g.

¹⁴ Dunsmore 2002, 136, fig. 4, n° r.

¹⁵ Dunsmore 2002, 136, fig. 4, n° a.

⁵ Hope 1986, fig. 8, n° n.

⁶ Ballet 2004, fig. 219, n° 41.

⁷ Many examples in Hope 1986, fig. 9.

DSU 28 is a windblown sand deposit against the north wall in the central part of the room B5, just above DSU 22. The ceramics assemblage comprises 1 storage jar, made of A1b fabric and datable before the fourth century,¹⁶ 1 strainer of a water jug (A1b with a white slip), 1 basin, 2 plates, 6 bowls, 3 cooking vessels, and 1 lid (Plate 6). N° 2 is a globular bowl made of A1b fabric and decorated with white rim band and red dots. This shape is characteristic of the second part of the fourth and the beginning of the fifth century.¹⁷ N° 3 and n° 4 (A11) are decorated with red dots and a white band rim. N° 4 could be dated to the fourth century¹⁸ and n° 5 has a white rim band and was made of A1a fabric. Apart from ceramics, 3 bronze coins were found: 2 of the fourth century and 1 dated to the middle of the fourth century.

In DSU 29, which is a layer of mudbricks, rubble with ceramics, and organic debris, quantification of pottery revealed 20 vessels: 1 body sherd of a large jar with painted decoration in red (A22), 4 basins, 2 large bowls or plates, 10 bowls,¹⁹ 2 cooking pots and 1 lid (Plate 7). N° 3, made of A28 fabric, could be dated before the fourth century²⁰ as well as the n° 1. N° 2 (A1b) has an everted rim and a decoration of red waves on a white band on the internal part of the rim. This shape seems to be dated also earlier than the fourth century.²¹ N° 10, made of A11 fabric with a red to grayish slip, is characteristic of the fourth century.²² Apart from ceramics, 3 bronze coins, dated from 332 and the middle of the fourth century, were found.

DSU 31 is a cluster of mudbrick debris next to the north wall of room B5. The ceramics assemblage comprises 1 basin (A1b), 3 craters, made of A1a and A1b fabrics with red waves on white slip on the internal part of the rim, 1 bowl, 1 cooking pot, and 4 large bowls or plates of a same shape: convex base, everted sides, and simple rim (Plate 8).

DSU 32, which is a deposit of mudbrick debris, stones, and sandy soil, in front of the entrance of the apse, contains 11 vessels: 1 neck of a water jug (B10), 1 basin (A1b with a white slip), 4 bowls, 4 cooking pots and 1 lid (Plate 9). N° 1 is made of A2b and n° 2 of A1a fabrics. N° 3, dated to the fourth century,²³ and n° 4 are made of A11 fabric

and are decorated with red dots on the internal part of the rim. The lid (A11) has a red decoration on a white slip on the internal surface. Ten bronze coins were found in this layer; the chronological range spans from the last quarter of the third to the middle of the fourth century.

In DSU 33, which is a mix of mud dust and sand, rich in organic debris, quantification of ceramics revealed 2 storage jars, 3 large plates, 6 bowls, 3 cooking pots, and 1 lid. N° 2, made of A1b fabric, could be dated from the end of the third to the fourth century (Plate 10).²⁴ N° 1, made of an undefined fabric, is covered, on the external surface, by a white slip. In this layer, we noticed 1 body sherd of a flagon made of a Nile clay—the core is zoned, brown, red and gray, and contains few chaff and sandy quartz—and 1 fragment of B16 bottle with inside black residues, probably of resin. Two coins were also found: 1 dated to the second part of the fourth century and the other one from the last quarter of the fourth to the beginning of the fifth century.

In DSU 34, which is a layer of brown sand mixed with mudbrick dust and debris, the ceramics assemblage comprises 1 water jug, made of B10 fabric, 1 basin, 1 body sherd of a sieve, made of A2a fabric, 2 large plates, 3 bowls, 2 cooking pots, and 3 lids. N° 1, made of A2b fabric, is decorated with red dots on a white band rim and could be dated from the fourth century (Plate 11).²⁵

DSU 35 is a layer of packed dirt and mudbrick dust, debris, and sherds; it is located just beneath the preparation layer of the floor F67 (DSU 41) in the eastern part of room B5. Few small fragments of ceramics have been found in this layer; but it was just body sherds, 2 low ring bases and 1 rim of bowls, unfortunately eroded. 1 bronze coin, dated from the fourth century was also discovered.

DSU 36 is a layer of yellow sand with mud dust and organic particles and sherds; it separates the floor level debris DSU 35 from the mudbrick collapse DSU 31. The ceramics assemblage comprises 1 basin, made of A28 fabric, and which could be dated before the fourth century,²⁶ 2 plates, 2 bowls, and 3 cooking pots (Plate 12).

DSU 41 is a compact preparation layer for floor F67. It contains 2 lamps, 1 bowl, and 1 bronze coin of the fourth century. The n° 1 is an almost complete mold-made lamp, with a low ring base and a plain discus with the central filling hole; the lengthened nozzle has a round tip with the stick hole and is decorated with 1 volute on each side

¹⁶ Bowen et al. 2007, 26, fig. 4, n° o and fig. 5, n° c. .

¹⁷ Hope 1986, 81, fig. 6, n° fig. c.

¹⁸ Dunsmore 2002, 132, fig. 2, n° p. Hope 2003, p. 211, fig. 3, n° e.

¹⁹ Ballet 2004, fig. 220, n° 51.

²⁰ Dunsmore 2002, 136, fig. 4, n° aa.

²¹ Bowen et al. 2007, fig. 5, n° b.

²² Dunsmore 2002, 138, fig. 5, n° m.

²³ Hope 2003, 211, fig. 3, n° e.

²⁴ Bowen et al. 2007, 29, fig. 7, n° h.

²⁵ Hope 2003, 211, fig. 3, n° g-i.

²⁶ Dunsmore 2002, 138, fig. 5, n° a. Hope et al. 2006, fig. 4, n° a. Bowen et al. 2007, fig. 4, n° e.

(Plate 13a). This lamp was made of A1b fabric with a white slip. The n° 2 is an Oasis red slip lamp of the common frog type, usually dated from the third and fourth century; similar examples have been found in Kellis and Douch (Plate 13b).²⁷

DSU 43, which is the filling of the pit F69, contains just 1 bronze coin, dated between 330 and 337.

The cleaning of the surface layer of floor F67 has provided 3 vessels. N° 1 is a large jar with painted decoration in red on a white slip, which could be dated from the end of the third to the fourth century (Plate 14).²⁸ This kind of jar has a large ovoid body, short concave neck with a ledge at the transition between the neck and the body, a molding rim, and a shallow ring base. As Amanda Dunsmore observed, all of these jars have different rim shapes and decoration.²⁹ Here, the rim has red dots, and decoration on the neck could be wavy lines and a palm branch on the shoulder. The fabric is A22, a variant with many calcareous particles of A1 fabric.

Dating of the Church complex

According to the pottery study, we can suggest that the church was built approximately during the first third of the fourth century. It was probably in activity until the end of the fourth century and was abandoned no later than the beginning of the fifth century. It is quite noticeable that the range of ceramics is homogeneous in chronology as well as in shapes.

C. A potter's workshop in Ain el-Gedida: preliminary results from the ceramic study

During the 2006 excavation season, a brief surface survey was conducted in the southern part of the main hill (sector A on the map), and 6 anomalies were identified. Two more anomalies were noticed: one in the south-eastern kom and another one in the north of the main kom, more precisely in the north of rooms B1, B2 and B3. These anomalies could be, probably, some firing structures, maybe ovens or kilns for the firing of pottery.

Moreover, at the west edge of the main hill, a large building of 8 rooms was excavated during the 2008 season (Plate 15). In the northeast corner of the large room B19, a rectangular clay basin (F214) was erected on the latest floor. Inside was uncovered a half tray in baked clay with a central hole of a potter's wheel—the tray has a diameter of 22 cm and a hole of 2 cm (Plate 16). A baked clay bin (F221) was connected with the floor of the F214

basin in its southern part. Inside this bin was found some iron-rich pink clay mixed with grayish clay lumps. A second rectangular basin (F225) was excavated in the southeastern corner of room B19. Inside this basin, there was also a half tray in baked clay with a central hole of a potter's wheel (diameter smaller: 20 cm).

All the unbaked ceramics from Ain el-Gedida are turned with a kick-wheel and marks are clearly visible inside the vessels. The two trays correspond to a wheel turned by the potter with his hands or his feet and upon which is put down the lump of clay. Nevertheless, the wheel could be distinct from the tray upon which the potter turns ceramics; this kind of system is named a double-wheel.

The structures uncovered at Ain el-Gedida are very similar to the ones excavated at the site of El-Kab in Upper Egypt. Here, the Graeco-Roman village is located inside the large surrounding wall, in front and next to the mud-brick wall of the Nekhbet and the Sebekh-Thot temples.³⁰ The potter's workshops were set up against the sacred wall of Nekhbet temple, during the first half of the 2nd century CE. Some of the buildings contain the same kind of basins with pipes.

During the survey conducted by the DOP team, many kilns and some unfired pottery were found, for a chronological range spanning from the Old Kingdom to the Islamic period.³¹ But, as far as we know, no constructions used to prepare clays and to produce pots were discovered for the Byzantine period in the Dakhleh Oasis.

Despite the two trays and the clay lumps, charcoal, pieces of yellow to red ochre, and burnt bricks coming probably from kilns were found, as well as many unfired pottery fragments.

Ceramics quantification

2,301 unfired pottery fragments, which represent approximately 30 kg, have been discovered in 29 stratigraphic units. The quantification of sherds provided 253 vessels, the vast majority of which are rims (243); we noticed also 50 bases and 13 handles.

The contexts in which were found the majority of the sherds are located in area B and, more particular in rooms 19, 23 and 24.

Clays and shapes

The unbaked pottery has a buff and smooth surface; on some of the pieces, we noticed a white slip or white highlights, and sometimes red dots. Potters used to make decoration and slip before the firing

²⁷ Dunand et al. 1992, 171–77, pl. 72–3.

²⁸ Hope 2003, 215.

²⁹ Dunsmore 2002, 139.

³⁰ Hendrickx 1998, 1353.

³¹ Edwards et al. 1987. Hope 1999.

process. Two kinds of clays have been identified. In the first group, the clay has a medium fine to medium coarse texture and buff to grayish core; inclusions consist mainly of sandy quartz, usually of small size, a few white calcareous particles of different sizes and very few red inclusions of small size. In the second group, the clay has a fine and dense texture; few inclusions have been noticed, mainly white and red particles. This clay was used almost exclusively for cooking-pots. It would be tempting to match these two groups with the fabrics A1/A2 and A11 for the second one. Nevertheless, this hypothesis will need to be confirmed or invalidated by chemical and petrological analysis.

The unfired pottery catalogue comprises all the shapes encountered in the site of Ain el-Gedida in the fourth century (Plates 17 and 18): storage jars with a rounded and thickened rim with a ledge at the transition between the neck and the shoulder, water jugs (narrow neck with one handle attached on the rim), craters with everted rim, large and deep plates or bowls used to prepare and serve food, globular bowls, cooking pots, lids, and stoppers. It is quite noticeable that no kegs were produced in the workshop. It seems that ceramics produced at Ain el-Gedida were mainly used locally and not designed for long-distance exportation. However, storage jars and stoppers were produced in the same workshop; we can infer that the vessels were filled with a commodity and sealed with mud stoppers *in situ* before being placed in storerooms or sold abroad.

Ceramics discovered on the site of Ain el-Gedida tend to indicate that the community living here was self-sufficient, producing their own containers and rarely importing vessels from the Oasis and Nile Valley, none from Mediterranean countries.

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Figure 1 : Ceramics quantification of the Church complex

SHAPE	NMI
Kegs	2
Jars with painted decoration	3
Storage jars	9
Water jugs	7
Handle flask	1
Pigeon-pot	1
Flagon	1
ORSW bowls	2
ORSW lamp	1
Basins	16
Craters	3
Large plates	24
Sieve	1
Bowls	57
Cooking-pots	27
Lids	11
Lamp	1

Figure 2 : Ceramics quantification of the Church complex

SHAPE	NMI
ORSW	2
Closed-forms	24
Open-forms	72
Cooking-vessels	56
Lids	11
Lamps	2
TOTAL	167

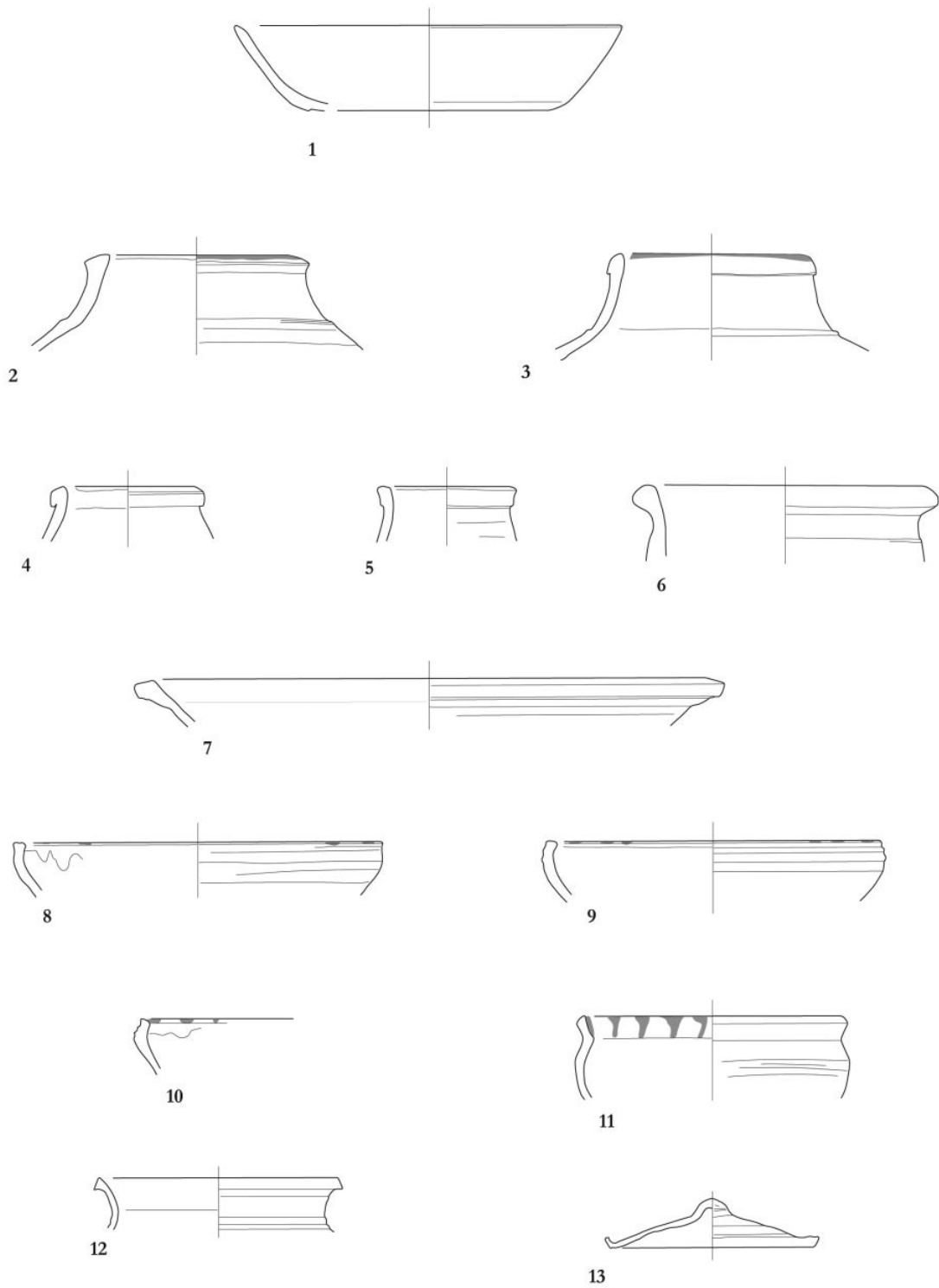


Figure 3: Ceramics from DSU 20

0 6 cm

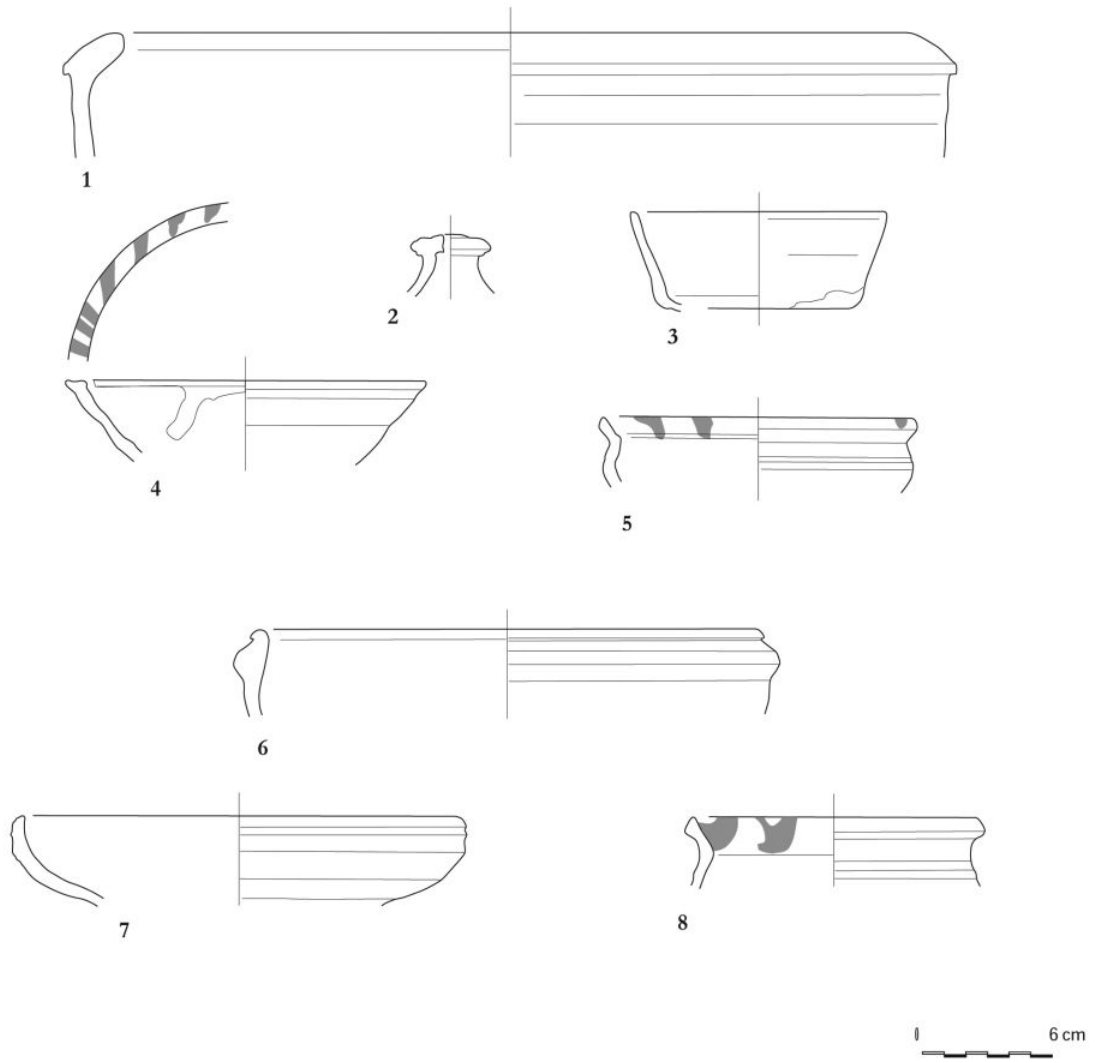


Figure 4: Ceramics from DSU 22 (n° 1-5) and DSU 23 (n° 6-8)

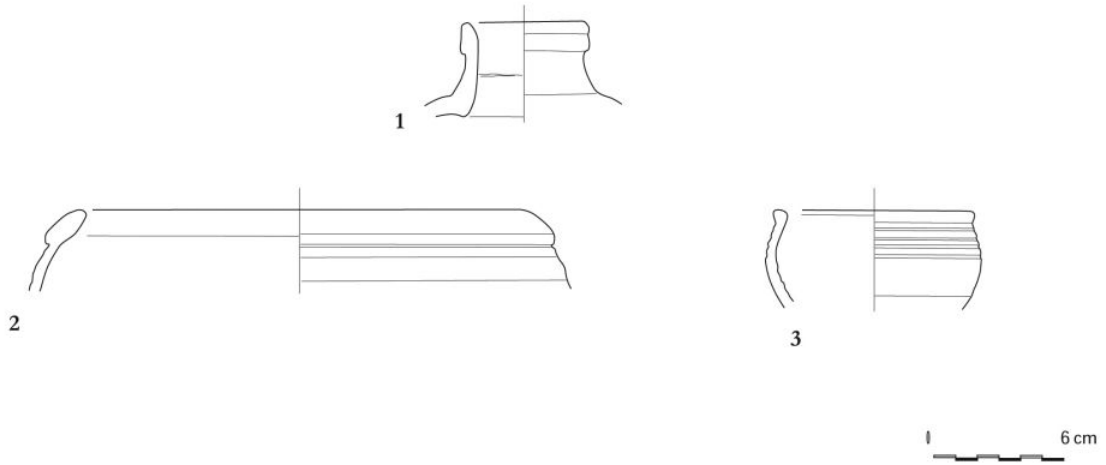


Figure 5: Ceramics from DSU 26

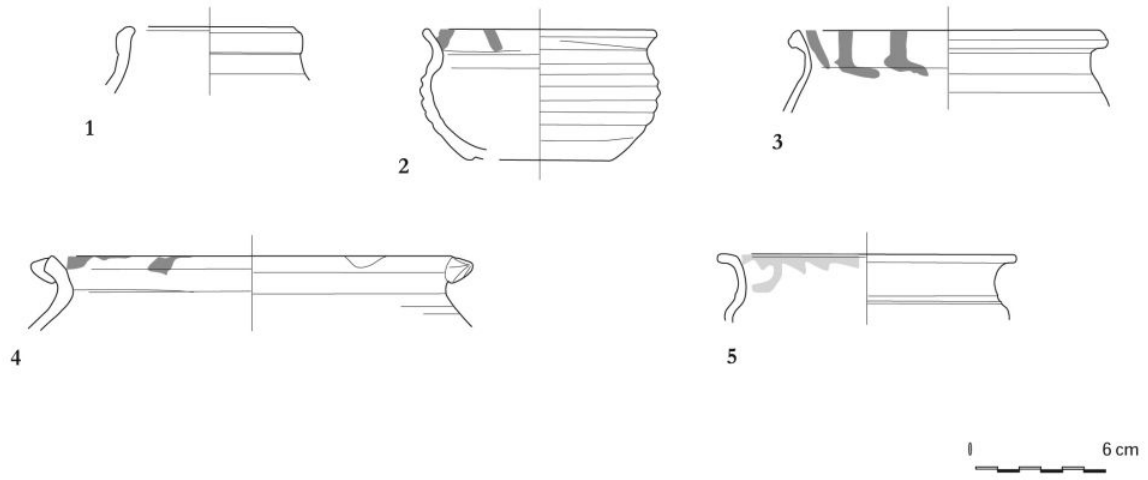


Figure 6: Ceramics from DSU 28

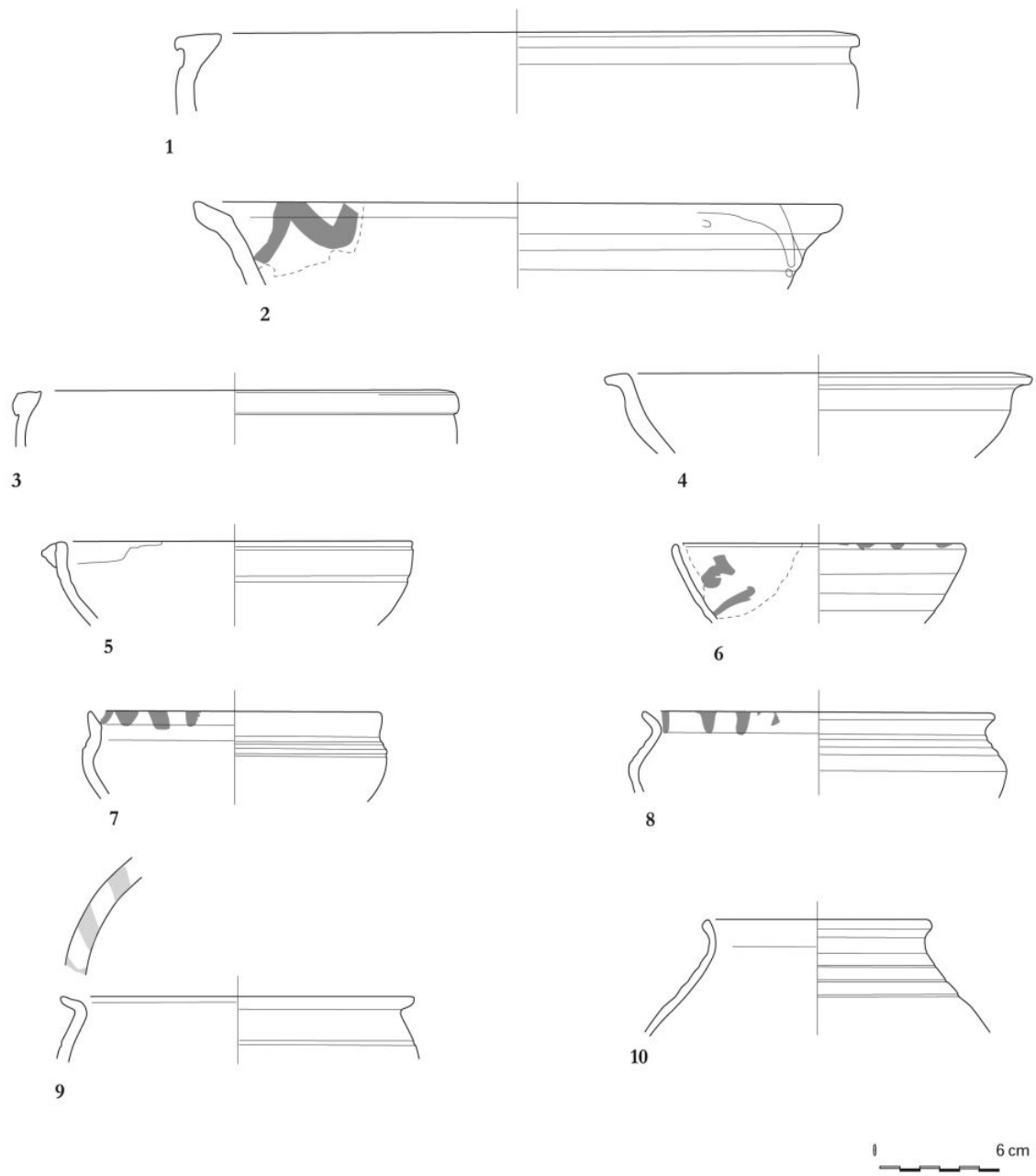
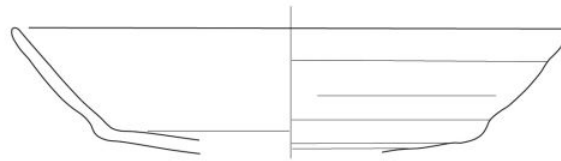


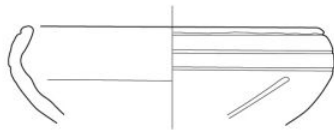
Figure 7: Ceramics from DSU 29



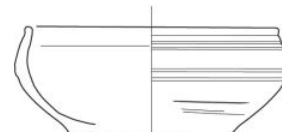
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Figure 8: Ceramic from DSU 31



1



2



3



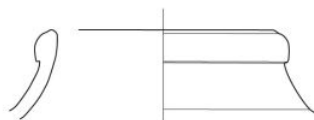
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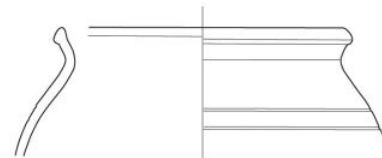
Figure 9: Ceramics from DSU 32



1



2



3



Figure 10: Ceramics from DSU 33

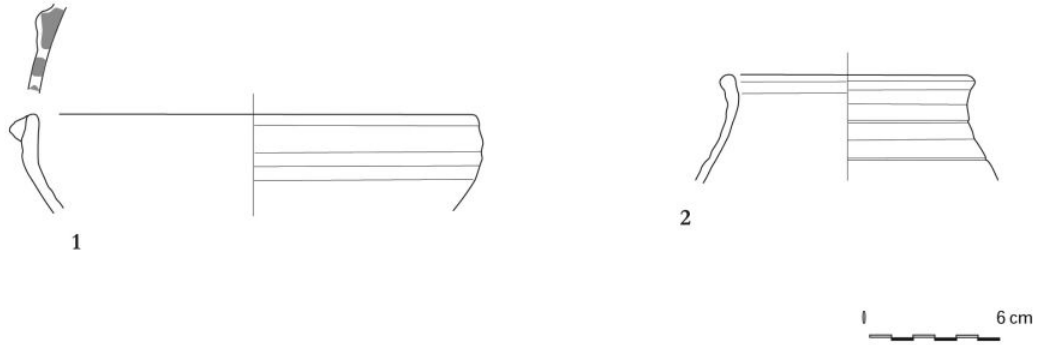


Figure 11: Ceramics from DSU 34

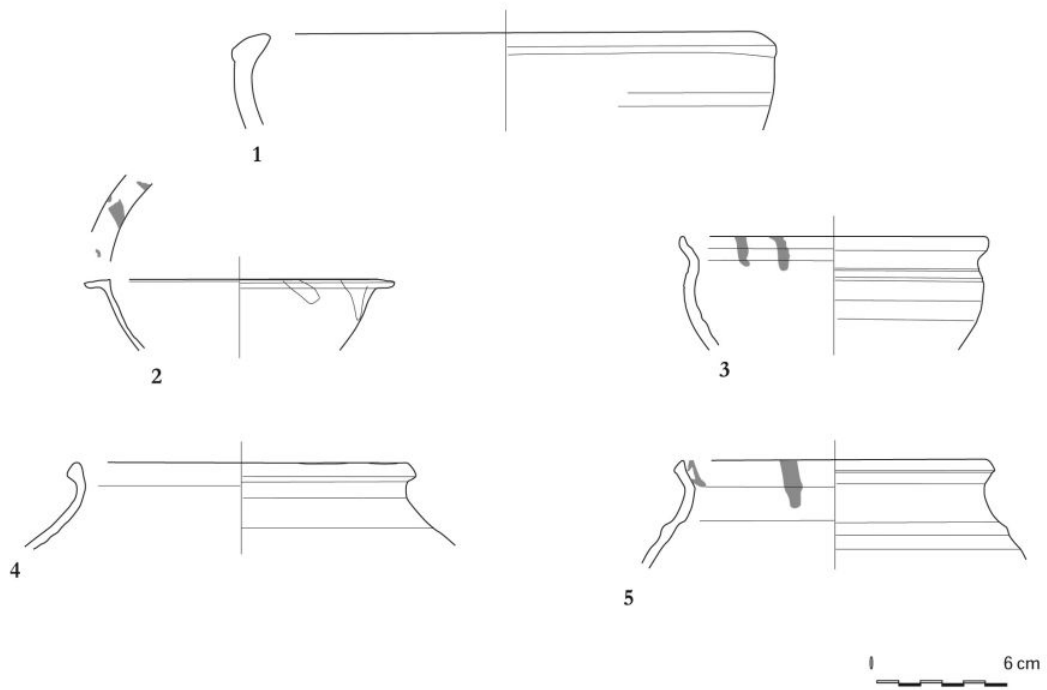


Figure 12: Ceramics from DSU 36



Figure 13a: Lamp from DSU 41
(photo: B. Bazzani)



Figure 13b: Photo of the lamp
(photo: B. Bazzani)

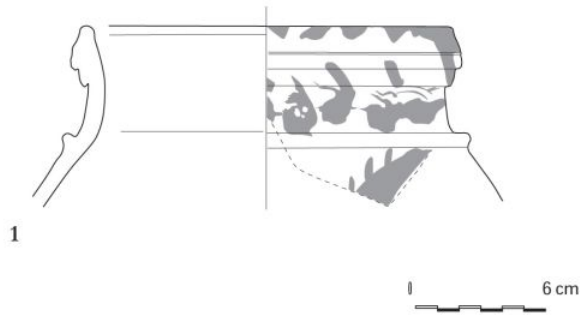
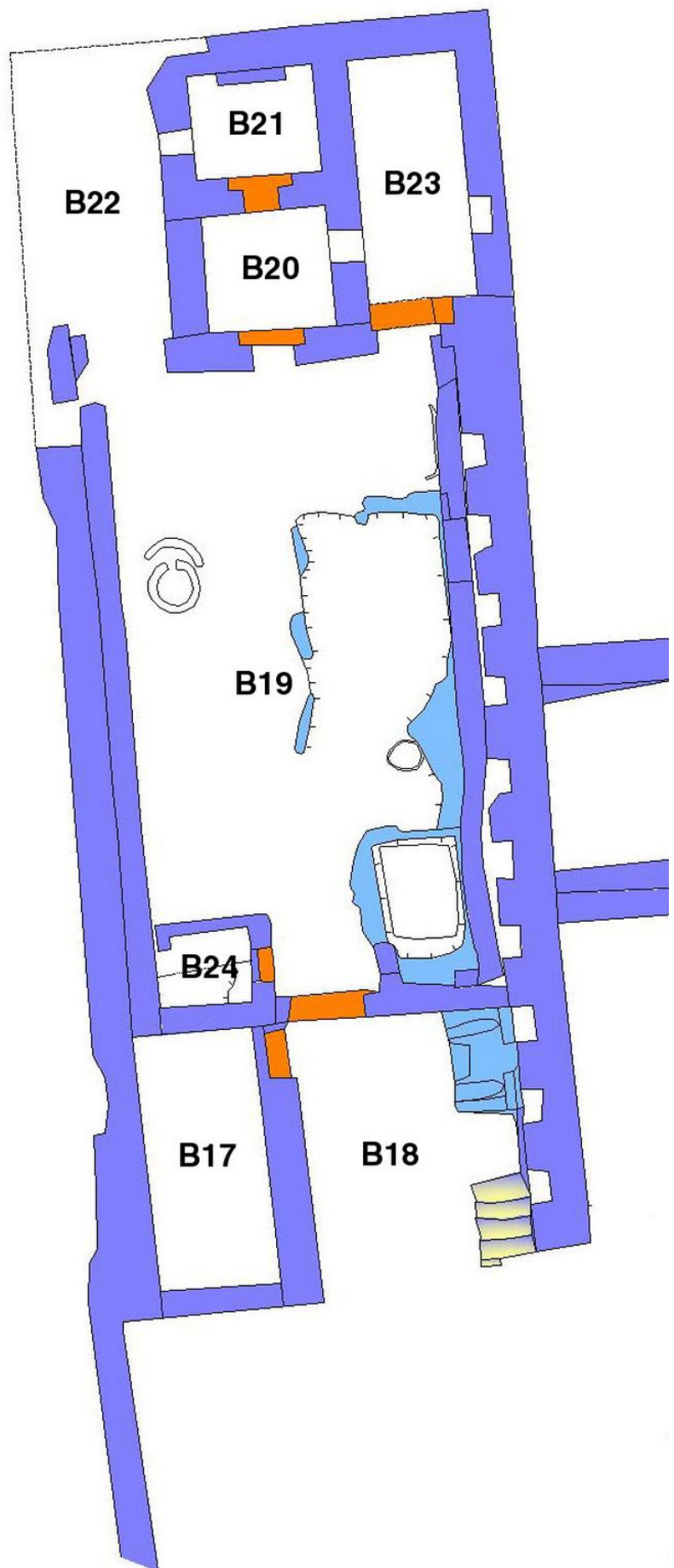
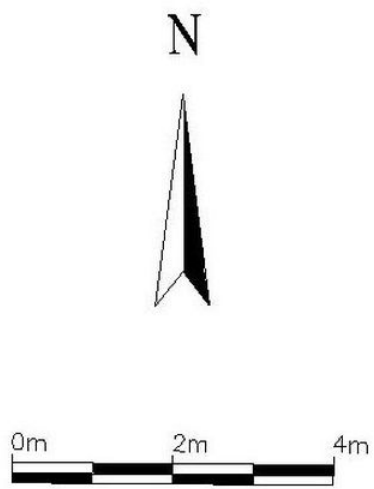


Figure 14: Ceramic from the cleaning of the
surface layer of floor F67



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Figure 17: Distribution of unbaked ceramics by shapes

SHAPE	NMI
Storage jars	41
Storage pots	1
Water Jugs	9
Basins	9
Craters	25
Large Plates	14
Bowls	92
Cooking Pots	27
Sieves	2
Lids and Stoppers	31