

# Glass finds and other artifacts from excavations of Area FW at the Kom el-Dikka site in Alexandria in 2018



**Abstract:** Excavations in 2018 of the central part of the Kom el-Dikka site in Alexandria (Area FW) produced a collection of glass finds representing two broadly defined chronological horizons. The set from an early Roman house in the lower layers of the sector is representative of the early and mid-Roman period (1st–3rd centuries AD) and is significant in that it broadens the known repertoire of vessels forms from the site in general. Examination of the context has also provided further firm archaeological evidence of gold-in-glass bead manufacture at the site. The upper layers, associated with an extensive dumping of ashes from the nearby late antique bath and waste from the working of a complex of lime kilns situated in this area, yielded material typical of late Roman/early Byzantine glasses (4th–6th century AD) already known from the site and comprising mainly simple free-blown utilitarian wares with limited ornamentation.

**Keywords:** Alexandria, Kom el-Dikka, early/late Roman glass, early Byzantine glass, mosaic glass, gold-in-glass beads, agate cameo blanks

A fairly limited assemblage of glass finds came from the excavation of the western part of area FW at Kom el-Dikka in Alexandria in 2018 (for the location of the dig and other results of the season, see Majcherek 2019, in this volume; for the results of earlier excavations in the immediate area, see Majcherek 1995: 14–20; 1996: 13–20; 1997: 19–30; 1998: 25–30; 1999: 35–39; 2010: 35–42; 2011: 38–46). Nonetheless, the significance of this set, in the context of the material emerging from this area, as well as of glass from Kom el-Dikka in general, merits in-depth examination. The material will be discussed

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relevant to two broad chronological horizons: early through mid-Roman period, related to a residential context, and late Roman/Byzantine occupation, comprising extensive dumping of ashes from the

operation of the nearby late antique bath, which was part of the Alexandrian academy of learning, and the waste deposits from a complex of lime kilns situated in this sector of the ancient site.

## EARLY AND MID-ROMAN PERIOD

The residential context in Area FW comprises an early Roman house and the current work follows on earlier discoveries (for these, see Majcherek 2011: 43–46; 2012: 30–32). A small but significant assemblage of glass finds was collected to add to the set excavated earlier (see Kucharczyk 2011: 63–67), its significance lying in the identification of rare or otherwise unreported vessels in the general Kom el-Dikka context. The assemblage is composed of cast plates and bowls, free-blown bottles and toilet flasks, beakers, and a goblet, as well as beads and small objects made by non-blowing techniques, and some window-panes. It is also marked by evidence of gold-in-glass bead manufacture.

The glass of the vessels is predominantly colorless with a greenish tinge, as would be expected of glass from this period. There is also a small quantity of bluish-green glass, characterized by small, spherical and elongated bubbles; a silver and creamy/white enamel layer of weathering is noted on the surface with a shiny peacock iridescence and black spots and veins.

The general dating of these finds is from the 1st to the 3rd centuries AD.

### CAST PLATES AND BOWLS

The most exceptional pieces in the assemblage are cast plates and bowls, exemplified by differently-shaped horizontal flange rims of a variety of shapes with

thickened rounded edges and a single faint line near the edge and two spaced lines below [Fig. 1:1–2], and two different bases: a low ring base [Fig. 1:4] and a thick flat base [Fig. 1:3]. The latter are exceptional not only due to their truly colorless glass, but also because of the high quality of finishing and virtually no weathering.

Luxury colorless tableware of the end of the 1st–early 2nd century AD, attested at many Egyptian sites, has not been found in any quantity at Kom el-Dikka. Recently, a fragment of a bowl with overhung rim was recorded rather unexpectedly from Area US; it is the first of its kind ever found at the site (Kucharczyk 2016: 96–97, Fig. 6:2; for references to similar material from other sites in Egypt, including among others, Quseir al-Qadim and Berenike on the Red Sea coast, where they are one of the most common categories of glass finds, see Kucharczyk 2017a: 152–158, Figs 3:4–8, 4:1–5, 5:3–9). The source of fine colorless tableware in this period is uncertain. The distribution of findplaces—throughout the Near East, North Africa, Italy and Europe—suggests more than one center of production (Grose 1991: 12–16).

The last cast vessel in this group is a thick-walled hemispherical bowl with ground rim edge on the outside and a single, very narrow groove midway down the vessel wall [Fig. 1:5].

### BOTTLES AND FLASKS

Evidence of bottles and flasks is very limited and consists of fragments of toilet specimens made of colorless glass. Among them is a cylindrical neck, decorated with two faint grooves [Fig. 1:6], a deeply folded rim fragment [Fig. 1:7], a thickened base

with slightly raised ring around the edge [Fig. 1:8], a low ring [Fig. 1:9] and high pedestal bases [Fig. 1:11].

There was also a complete, miniature cosmetics flask made of green glass, featuring a short, slightly bulgy neck, constricted at the base, and infolded

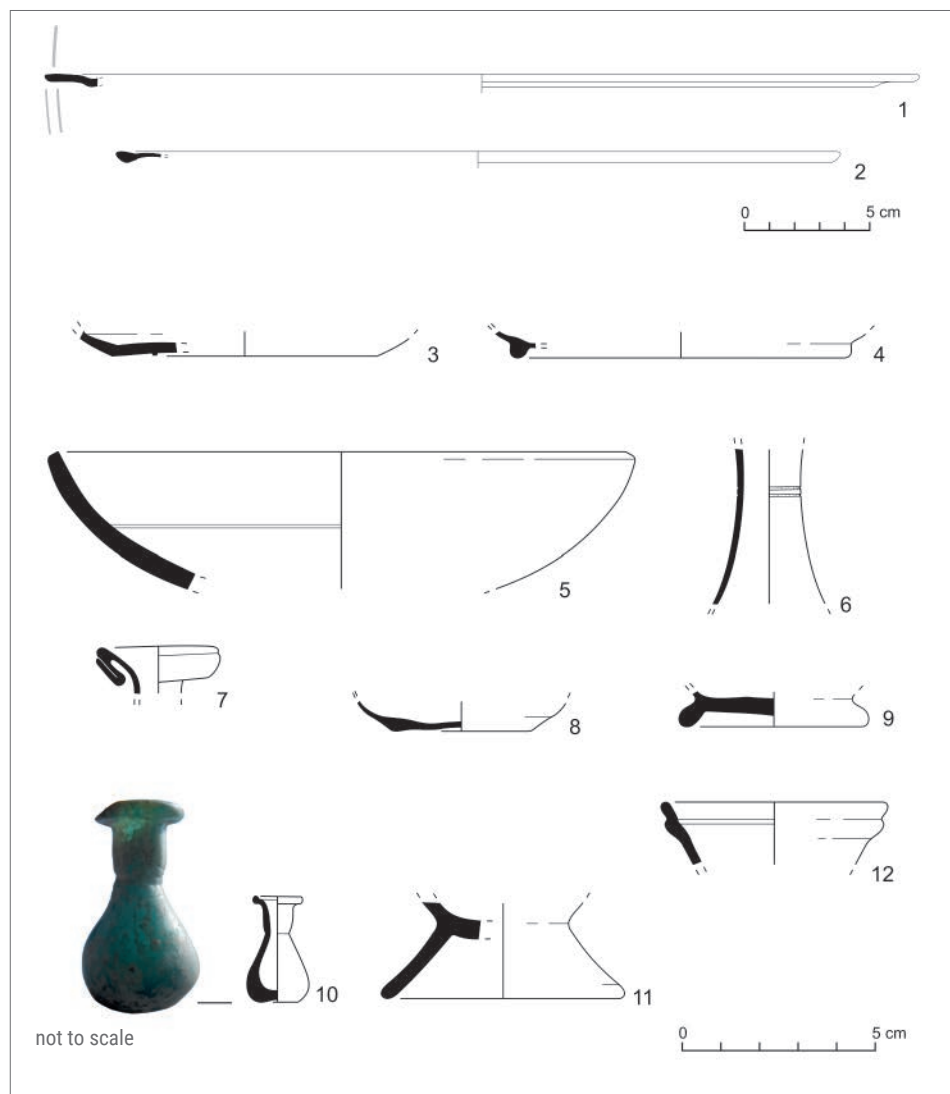


Fig. 1. Early to mid-Roman glass (1st to 3rd centuries AD): 1–5 – cast plates and bowls; 6–9, 11–12 – variously shaped bottles and bases; 10 – toilet flask (PCMA UW Alexandria Kom el-Dikka Project | drawing M. Momot, photo R. Kucharczyk)

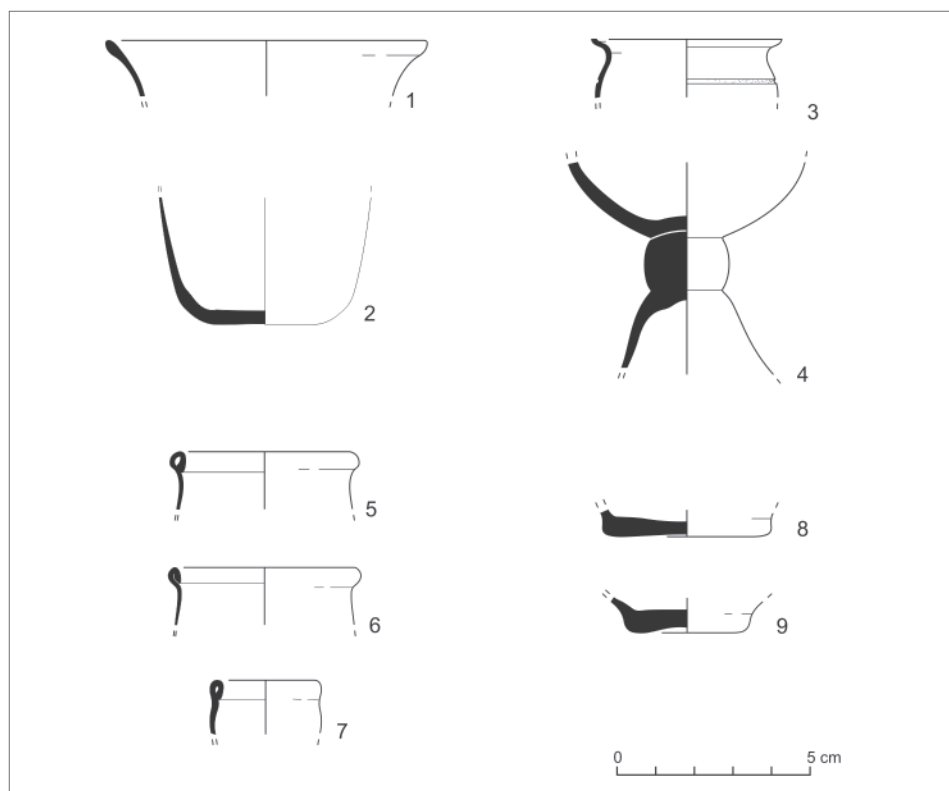


Fig. 2. Early to mid-Roman glass (1st to 3rd centuries AD): 1–2 – beakers; 3 – jar; 4 – goblet; late Roman glass (4th century AD): 5–9 – beakers (PCMA UW Alexandria Kom el-Dikka Project | drawing M. Momot)



Fig. 3. Fragment of wall revetment imitating *serpentine verde* (early to mid-Roman) (PCMA UW Alexandria Kom el-Dikka Project | photo R. Kucharczyk)

rim, rising from a piriform body set on a thickened and flattened base [Fig. 1:10]. It stands for a form typical of 2nd–3rd century AD Egyptian cosmetic containers. Its presence is worth mentioning, firstly, because intact vessels are extremely rare at Kom el-Dikka and, secondly, because of its color. Vessels made of dark glass, are almost entirely absent from contexts dated to this period at the site. Admittedly, this type of flask, although blown from colorless glass, had already been observed at the site (Kucharczyk 2010: 66, Fig. 7:4; 2011: 63–64; for similar flasks from Marina el-Alamein, see Kucharczyk 2005: 96, 98, Fig. 3:4–5).

Also found was a fragment of a bottle or jug with a funnel-shaped mouth and thick rounded rim with a tooled open ridge below it [Fig. 1:12]. This is hardly an isolated example of a neck fashioned in this manner from this area, *vide* an identical fragment dated to the 3rd century AD from the previous season (Majcherek 2018: 44, Fig. 9:6).

### DRINKING VESSELS

There is limited evidence of drinking vessels, including beakers and a goblet assigned to the 2nd–4th century AD. All are made of colorless glass with greenish tinge. Beakers of the 2nd–3rd century AD are represented by a specimen with straight flaring sides and rounded rim [Fig. 2:1] and the bottom part of a vessel with flat base and thin-walled, apparently cylindrical body [Fig. 2:2].

A goblet, a large fragment of which was found, is unparalleled in the material from the Kom el-Dikka site. The preserved fragment shows the lower part of a bowl of uncertain shape, and a tall,

conical, irregularly shaped, splayed foot with solid knob [Fig. 2:4]. The main feature of this type of drinking vessels is the disparity between the thin walls and massive bases. A horizontal trail around the upper part of the body, often contrasting with the main color of the body, is common. Beakers of this type were typical of the Syro-Palestinian region, mainly in the 4th century AD. They do not appear to have been produced in Egypt and were very rare in the West (Weinberg and Goldstein 1988: 60–61, Fig. 4-21).

A few rim fragments and two low, solid bases were also recorded. They came from beakers, which usually have rounded rims and straight walls, curving under and in towards a base [Fig. 2:5–9].

### JAR

A single example of a small jar was found. The well-preserved upper part of this vessel exhibits a short neck, widening towards a flaring fire-rounded rim, and a thin-walled globular body with a horizontal, lightly abraded line and cut groove, and most probably concave base [Fig. 2:3]. The jar is peculiar in its delicate workmanship and colorless glass of very high quality. Its wide mouth suggests an ointment or cosmetic substance rather than liquids as its content.

### MOSAIC GLASS

A handful of mosaic glass fragments from the excavation of the house included fragments of wall revetment with a surface imitating *serpentino verde* [Fig. 3] and two pieces of a composite mosaic bar, square in section (3 mm to the side) with a polychrome pattern of very finely detailed workmanship. The latter two finds are particularly important. Their presence



points to apparent mosaic glass manufacture at the site during the 2nd–3rd centuries AD.

### BEADS

The assemblage consists of gold-in-glass beads and individually shaped monochrome beads. All of the beads presented

here suggest that a glass workshop functioned in this area. They also support the view, based on other archaeological finds, that the building in its final phase was dedicated to artisanal activities, such as bead-making from glass, various stones, and coral. A few pieces of worked agate also came to light.



Fig. 4. Gold-in-glass beads, tubes and wasters of various shape from the early Roman house in Area FW (sets from 2017, inset, and 2018) (PCMA UW Alexandria Kom el-Dikka Project | photo R. Kucharczyk)

### Gold-in-glass beads

A significant quantity of beads represents various stages of fabrication: finished (most belong to the folded-beads category of rather low quality workmanship, small drawn and larger single segmented beads), semi-finished beads, colorless glass tubes, consisting of two layers of transparent glass and gold foil in between, and their wasters [Fig. 4].

A grooved soapstone mould was documented [Fig. 5 left], added to the complete specimen with two cut letters on the back, most probably the owner's initials, dated to the 2nd and 3rd century AD, which had been excavated together with gold-in-glass beads in House FB in 2007 (for the results of excavation at Fouse FB, see Majcherek 2011: 44–46; for

gold-in-glass beads and a stone mould with the owner's initials, see Kucharczyk 2011: 64–66, Fig. 8:1; Majcherek 2018: 45–46, Fig. 11) [Fig. 4 inset, 5 right]. Similar moulds, with hundreds of small beads (monochrome drawn, cut and rounded) and monochrome glass tubes of various colors, were also found in the debris of a workshop operating in the 5th–7th century AD in the artisan quarter east of street R4 (M. Rodziewicz 1984: 87, 241–243, Figs 83, 265 and 266, Pl. 72.359–367). Such impressive evidence of gold-in-glass bead-making is unique in Alexandria, not to mention Egypt (for the gold-in-glass beads, said to be produced in early Roman Elephantine most probably by glass workers from Alexandria, see M. Rodziewicz 2005: 27, 34–35).



Fig. 5. Stone moulds for shaping beads, frontal and side views: left, example from Area FW; right, example with owner's initials from House FB (early to mid-Roman) (PCMA UW Alexandria Kom el-Dikka Project | photo R. Kucharczyk)

### Faceted beads

Other finds meriting attention are the faceted beads, possibly made by rod-piercing. Special are six individually shaped, deep blue faceted beads, hexagonal in section, with a fairly large perforation (the shape is made up of four faceted lozenges framed by eight triangles) [Figs 6A:1–2; 6B, top row]. They represent a sophisticated version of faceted beads known as “cornerless” beads, typical of many Roman and post-Roman

sites. Their rarity lies in the shape, workmanship and color of the glass, which imitates lapis lazuli (see below). Also note a faceted hexagonal cylinder bead made of green glass [Fig. 6A:4] (for faceted beads from house FB, see Kucharczyk 2011: 65, Fig. 8:4–6; also 2016: 94–95, Fig. 5:2).

### Other glass beads

Among the recovered beads are two small specimens made of dark blue

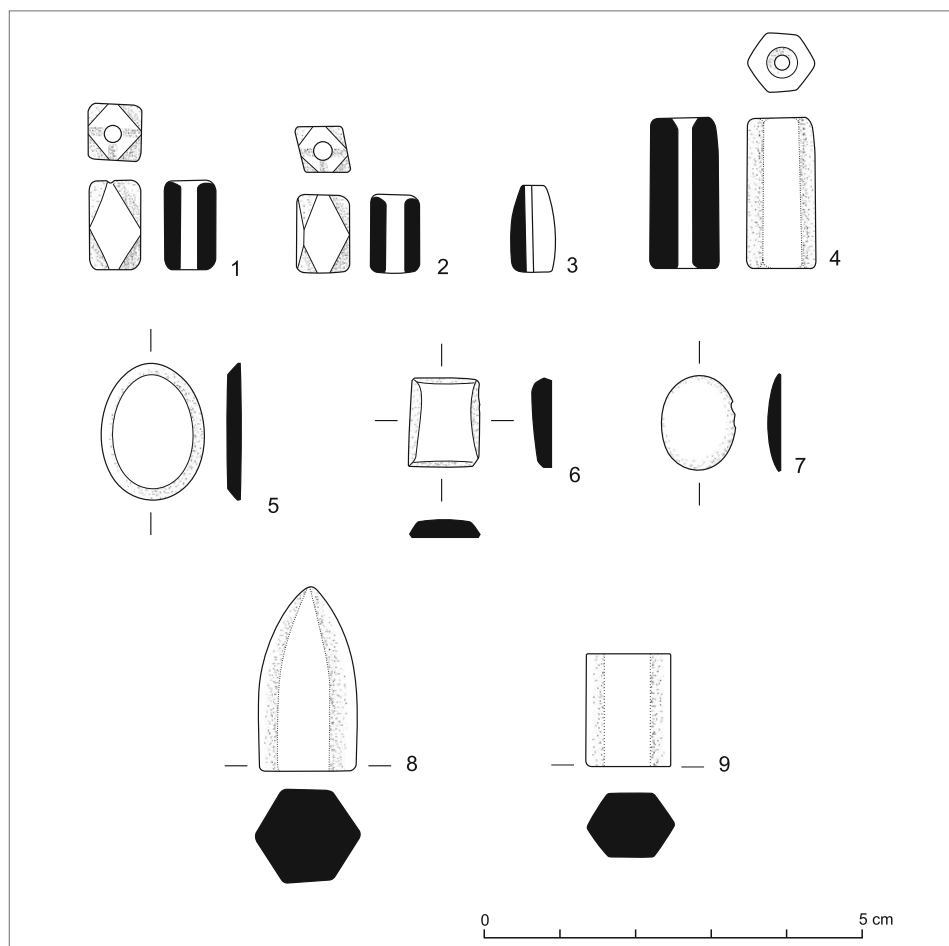


Fig. 6A. Glass beads from the 1st to 3rd centuries AD: 1–4 – faceted glass beads; 5–7 – glass inserts; 8–9 – stone game pieces (PCMA UW Alexandria Kom el-Dikka Project | drawing M. Momot)





Fig. 6B. Glass beads from the 1st to 3rd centuries AD: 1–6 – faceted glass beads imitating lapis lazuli; 7 – raw coral pieces; 8 – coral bead; 9, 10 – game pieces of lapis lazuli and marble; bottom row, ring inserts of glass (A, C–D) and carnelian (B) (PCMA UW Alexandria Kom el-Dikka Project | photo R. Kucharczyk)

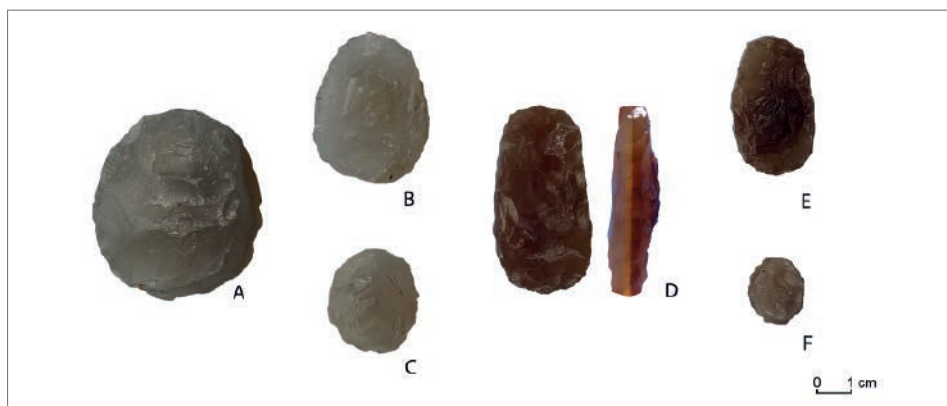


Fig. 7. Agate cameo blanks from the site: A–C – onyx; D–F – sardonyx (PCMA UW Alexandria Kom el-Dikka Project/photo R. Kucharczyk)

glass: a spherical bead with a fragment of original wire string and a conical bead [Fig. 6A:3] made by folding and piercing. It should be noted that beads of dark blue glass are extremely rare at Kom el-Dikka in the early and mid-Roman contexts.

### Coral beads

Two neatly made beads: rounded spherical, and narrow cylindrical in shape, as well as some pieces of raw corals were also found [Fig. 6B, center right]. Similar finds were also reported in earlier seasons of work in this sector. Mediterranean coral (*Corallium rubrum*) was one of the main products exported from Egypt, via the port of Berenike, to Arabia and India (PME 28; Francis 2002: 156).

### SMALL GLASS OBJECTS

The excavation produced also some glass objects made with the non-blowing technique, either very rare at Kom el-Dikka or not attested at all before this season. Among them is a pendant (amulet?) in the shape of a phallus, made of opaque, red and yellow glass (for similarly shaped objects made of mosaic glass, see Spaer 2001: 186–187, No. 426 Roman period, probably eastern Mediterranean; see also Christie's 1993: 56, Nos 171–175: 3rd century BC–1st century AD; not illustrated). Roman phallic amulets are more varied than their Hellenistic predecessors and mostly multi-colored.

Three glass ring insets made by casting/moulding were also found. The first, rectangular in shape, of uneven thickness, has a flat bottom and slightly convex upper surface [Figs 6A:6, 6B, bottom row, D], while the second was worked as an oval disc with perfectly flat surfaces and

bevelled edges [Figs 6A:5, 6B, bottom row, A]. High quality workmanship is noteworthy in this case, as is the green glass of which they were made, which, undoubtedly, was supposed to imitate emeralds, one of the most precious stones, a symbol of the highest social rank, widely used in jewellery during the Imperial period. (In Egypt low quality emeralds came from the mines in the Eastern Desert; for the evidence from Berenike, see Harrell 1998: 142–143). The third object was shaped into a small oval plano-convex disk [Figs 6A:7, 6B, bottom row, C]. The high quality of the clear-crystal glass, the workmanship and shiny polished surface is striking.

Other objects were made of colorless glass with a yellowish tinge and include a convex game piece, a ball and two cylindrical flat “buttons” with irregular perforations. One of the latter was made of an opaque red glass. They are fairly common in the Kom el-Dikka assemblages with pieces made of mosaic glass appearing next to monochrome examples (Kucharczyk 2010: 66–67, Fig. 7:2; 2011: 67, Fig. 9: 2–3). In this context, a roughly rounded, unfinished carnelian insert should also be noted [Fig. 6B, bottom row, B].

### OBJECTS MADE OF VARIOUS STONES

Cameo blanks are roughly formed oval and rounded disks with the surface worked to prepare it for cutting a raised image in relief. Of the six found earlier at Kom el-Dikka [Fig. 7], three are of onyx and three of sardonyx, three of these being new finds from Area FW [Fig. 7: D–F]. An onyx cameo blank, a fragment of a sardonyx plaque, and chunks of raw agate material were found previously in a 2nd–3rd century AD context in Area

FW (for appliqué made of agate, probably used to adorn the wooden base of a life-size chryselephantine statue, of which a few fragments came to light in a late Roman context at Kom el-Dikka, see Rodziewicz 2016: 95–96, Fig. 105, bottom row).

Banded agate, a highly prized, layered hard stone (agate with two-colored bands of white and black or gray is known as onyx, and agate with white combined with red or brown is known as sardonyx), from which expensive and ostentatiously luxury articles were carved during the early Imperial period, was imported from India, particularly from Barygaza (*PME* 49, 56) via Arikamedu or Pattanam (Francis 2004: 492, 503–504, Fig. 7.31). The agate reached Alexandria and then Rome via the two major ports of the Red Sea, Quseir al-Qadim and Berenike (for the agate, including roughly formed cubical blanks excavated at Berenike, see Zych 2017: 122, Figs 24 right and 25). The presence of a cameo blank at the site is hardly a surprise. Precious and semiprecious stones from India, Afghanistan, and also from Egypt (particularly from the Eastern Desert) had been worked in Alexandria, as attested by the evidence from Kom el-Dikka. This small, but very important assemblage includes: chunks of raw materials (agate, carnelian, emerald, rock crystal, amethyst) as well as finished and semi-finished objects. It should be kept in mind that Alexandria was considered as the birthplace and the principal manufacturing center for the highly prized gems under direct Ptolemaic patronage ever since the later Hellenistic period. Such gems, which

were used in ornamental jewellery, were valued not only for their extraordinary craftsmanship, but also for the beauty of their stones. They were worn as amulets, which were believed to have magical and mystical properties.

Two intact game pieces from the excavations are outstanding because of the exclusive material from which they were made as well as the find category represented. The first item is conical in shape with a hexagonal base [*Figs* 6A:8, 6B, center left], made of lapis lazuli, a highly valued, deep blue semi-precious stone, sometimes with twinkling golden reflections. This is the sole example of lapis lazuli from the excavation at Kom el-Dikka. Its only source for the Roman world was almost certainly the Kokscha Valley in Afghanistan, which is the only known ancient source for this mineral (*PME* 48–49 and 51). Together with other precious and semi-precious stones it was sent to Alexandria and Rome via Quseir al-Qadim and Berenike (for an unworked fragment of lapis lazuli from Berenike, see Harrell 1998: 144–145). During the Roman Empire, lapis lazuli was used not only for beads, jewellery, amulets, seals and small decorative objects. It was also believed to be a powerful aphrodisiac. Conical game pieces are not unique to Kom el-Dikka. A few examples made of mosaic glass (imitation of *serpentino verde*) have also been excavated in late Roman contexts. The second game piece, made of white marble(?), is in the shape of a faceted hexagonal cylinder [*Figs* 6A:9, 6B, center left]. The high quality of workmanship is notable. These game pieces were probably used for playing chess.

## LATE ROMAN/EARLY BYZANTINE PERIOD

Exploration of the upper layers in Area FW, associated with a dump of ashes from the late 4th and 5th century Imperial baths and accumulated deposits from the operation of a complex of lime kilns, yielded glass material of late Roman/early Byzantine date (4th–6th centuries AD). This assemblage includes free-blown vessels for displaying and serving liquids and foodstuffs, as well as for lighting, often carelessly manufactured. The decoration, when present, is very simple and limited to the application of self-colored glass trails. Glasses other than vessels are exemplified by personal adornments and evidence of window glazing. The fabric is mostly bluish-green and green, with

several exceptions in yellowish-green, characteristic of the glassware of this period at Kom el-Dikka. In general, it is of inferior quality, very often with countless spherical and elongated bubbles and blowing spirals. Some pieces reveal scars and glass remains from the pontil, as well as tool marks. Almost all of the recorded shards exhibit various degrees of weathering; a clear surface was observed in very few instances. Most of the finds from this season are not unique to Kom el-Dikka and have many parallels in the already published material from the site. Based on the quality and color of the material, workmanship, and forms, it seems that all the vessels were locally produced.

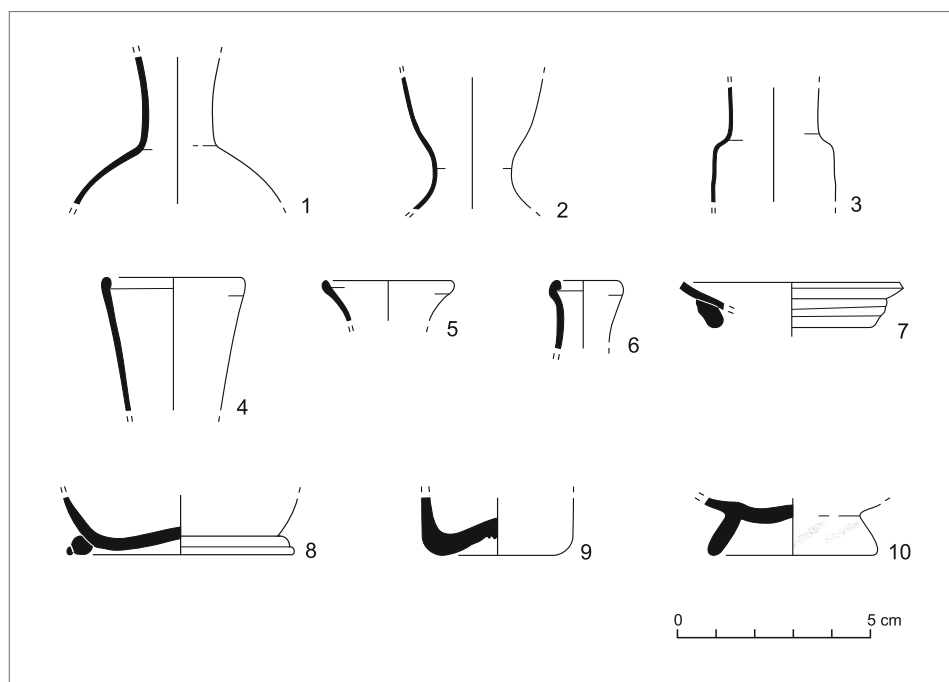


Fig. 8. Late Roman/early Byzantine glass (4th–6th centuries AD): 1–6 – bottles of various shape; 7 – jug; 8–10 – bases (PCMA UW Alexandria Kom el-Dikka Project | drawing M. Momot)

**BOTTLES**

Bottles are poorly represented. A few necks with remains of the shoulder (apparently with a globular or piriform body), bases and some small body pieces

constitute the assemblage. Among the recovered glasses one finds simply and carelessly shaped containers with cylindrical necks and rounded rims, necks with a funnel-shaped mouth, all made

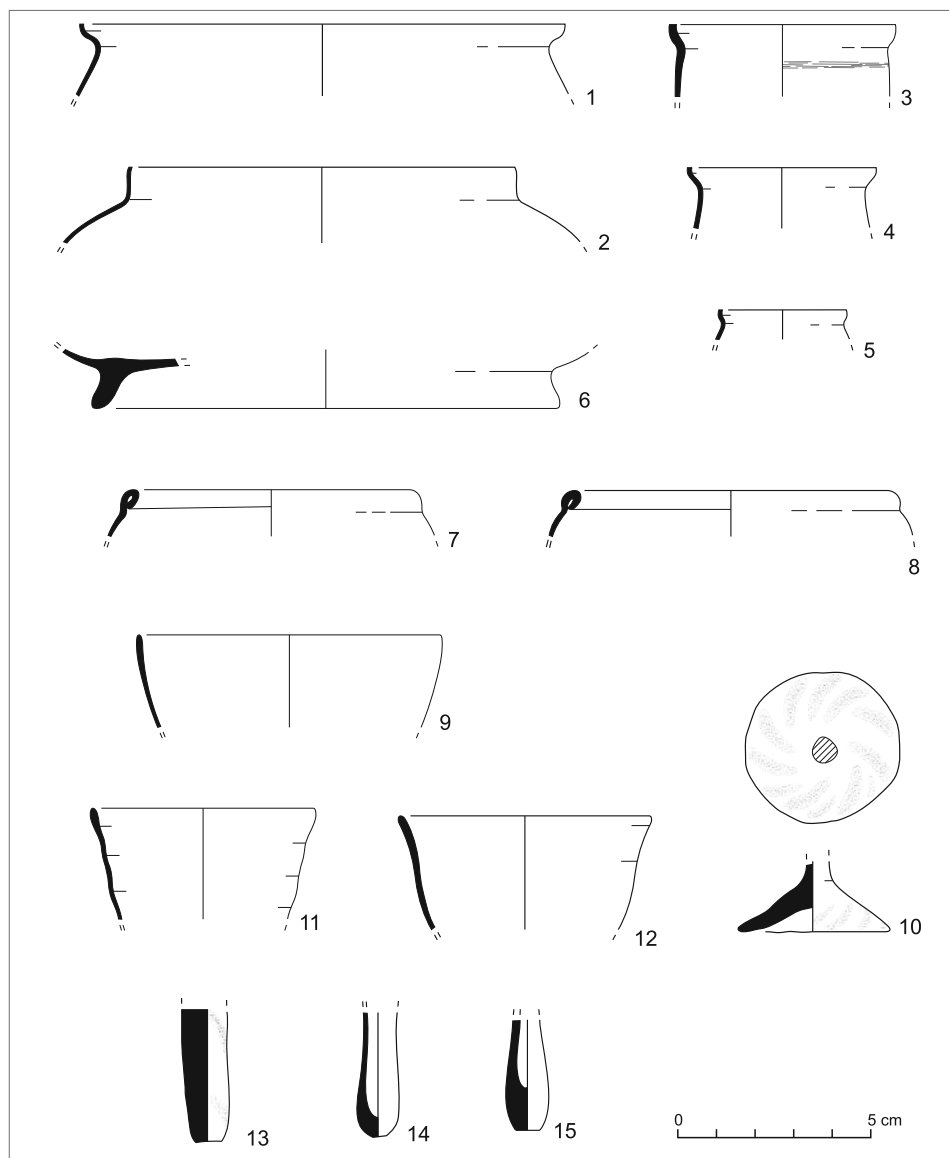


Fig. 9. Late Roman/early Byzantine glass (4th–6th centuries AD): 1–5 – vessels with cracked-off rim; 6–9 – bowls; 10 – wineglass; 11–15 – lamps (PCMA UW Alexandria Kom el-Dikka Project | drawing M. Momot)

from yellowish-green glass [Fig. 8:1, 3–6], a thin-walled funnel-neck bottle made of pale bluish glass, characteristic of the 5th–6th centuries AD [Fig. 8:2], a solid ring base, distinguished by diagonal tooling marks on exterior [Fig. 8:10], a thick-walled concave base with pronounced pontil scar [Fig. 8:9], a trail-wound base with two winds, where the vessel and coil are of yellowish-green glass [Fig. 8:8]. The latter is a standard base of the late 4th–early 5th century AD, quite well represented in the late Roman assemblage (Kucharczyk 2010: 57–58, Fig. 1:11–13; 2011: 57–58, Fig. 1:5–6). The same combination of colors is observed on a fragment of a flagon with cracked-off rim and trail applied below it [Fig. 8:7]. It should be kept in mind that variously shaped vessels, window-panes and small objects made of low quality, yellowish-green glass are typical of the 4th–5th century AD material from Kom el-Dikka.

#### VESSELS WITH CRACKED-OFF RIM

Several variations of open vessels with cut-off rims and S-shaped profile, distinctive of the 4th–5th centuries AD, were uncovered. Among them one may list a wide-bodied, hemispherical bowl [Fig. 9:1–2], cups/or beakers [Fig. 9:3–4], and a jar [Fig. 9:5] (Kucharczyk 2007: 49, Fig. 2:1–3; 2010: 60–61, Fig. 3:10–13). It is likely that wide-bodied vessels may have commonly been used as suspended lamps in the early Byzantine period. Two massive looped handles with a number of regularly spaced ridges in the lower part were registered this season. They were usually attached in groups of three at mid-height.

#### BOWLS

Bowls vary from deep to shallow. They belong to a local repertoire of 4th–6th century AD vessels. Bowls furnished with high ring bases were also recorded this season [Fig. 9:6]. Ring bases are common components of the late Roman assemblage from Kom el-Dikka, pointing to local glass-houses, where yellowish-green and various shades of green glass were preferred (Kucharczyk 2010: 60–61, Fig. 3:1–4; 2011: 59–60, Fig. 2:1–5). Rim fragments came from two specimens with delicate convex-curved bodies and infolded rims with small, diagonal hollows [Fig. 9:7–8]. Vessels were made of pale green glass with small bubbles. Rare though they are in the glass material from the site, they may stand for local manufacture (for similar finds, see Kucharczyk 2017b: 54–55, Fig. 15:1–2). A few body shards belong to vessels with a delicate, slightly curved wall and rounded rim. They could, nonetheless, represent either bowls or wineglasses [Fig. 9:9] (Kucharczyk 2016: 89–90, Fig. 2A:6–8).

#### GOBLET/WINEGLASS

An isolated example of a goblet/wineglass has a solid stem and thick splayed base with rounded, thickened edges, and swirled, delicate tooling marks, closely set around the stem, on the upper part [Fig. 9:10]. Various shaped bases with tooling impressions are characteristic of the glass material from late Roman contexts. Although usually connected with bowls (high ring bases), they also occur on bottles, wineglasses and small bowls. Bases fashioned in this way are regarded as an Egyptian specialty and are very well represented at Kom el-Dikka (Kucharczyk 2007: 51–52, Fig. 3:6–13).



## LAMPS

A few fragments of lamps fit into a type designed for suspension in a simple ring or as groups in *polycandela*, fashionable during the 6th century AD. They include both plain hollow stems with a thick bottom, either rounded or flattened at the base, and solid, cylindrical stems with faint, diagonal indentations. The bell-shaped bowl has a fire-rounded rim [Fig. 9:11–15]. Many similarly shaped stems, as well as their fragments, have already been attested site-wide (Kucharczyk 2010: 64–65, Fig. 5:14–16).

## WINDOWPANES

A rather small number of window fragments was collected. Thin-walled, yellowish-green shards represent panes executed in the cylinder process, based on free-blowing, typical of late antiquity. They have glossy/matt faces, occasionally with an uneven surface, with big and small elongated bubbles, running in parallel lines. They could have been part of the windows of the Imperial bath. Windowglass of this color belongs among the commonest finds on site, particularly in contexts dated to the late Roman period. Fragments of waste material (folded and wavy shards), present in assemblages studied earlier from the site, are direct evidence of local manufacture (Kucharczyk 2010: 66; 2011: 62–63).

## MOSAIC GLASS

Glass other than vessels is represented by fragments of mosaic plaques. They feature a combination of sections of opaque yellow canes, randomly encased in a green matrix. Such decoration is usually considered as imitation of *ser-*

*pentino verde*. It belongs to the commonest patterns, observed on mosaic glass, made during the early and late Roman periods. Available evidence from Kom el-Dikka, excavated in contexts dating to the 4th–beginning of the 5th century AD, suggest local production: vessels (bowls and bottles, including a jug with a trefoil mouth), inlays or wall revetments, and small objects (convex game pieces, beads, balls and flat cylindrical “buttons”), but most importantly, prefabricated mosaic canes (Kucharczyk 2010: 67, Fig. 7:2; 2011: 66–67, Fig. 9:3; 2016: 94; Majcherek and Kucharczyk 2014: 29). Similar finds of this date are rarely reported from sites outside Egypt. It seems that in this period, Egypt, and surely Alexandria, was the only center where mosaic glass craftsmanship was still quite lively.

## BAR-SHAPED INLAYS

A few cast/moulded bar-shaped inlays of aubergine glass were recorded this season. These narrow pieces of rectangular section, monochrome with long striations on the upper side, could have been inlaid on the edges or sides of wooden furniture, boxes or other objects with a flat surface. They could have also constituted borders in wall mosaic decoration (for similar finds, see Kucharczyk 2010: 65–66, Fig. 6:4–5; 2011: 62, Fig. 5:2; see also, Goldstein 1979: 247–248, monochrome and mosaic examples, 1st century BC–1st century AD).

## CONCLUSIONS

The significance of the glass finds and other artifacts from Area FB, however small the assemblage, is considerable. The collection includes examples of

vessel types of the early Roman period seldom attested on Kom el-Dikka. This, above all, applies to luxury cast colourless glass, characteristic of the Flavian–Trajanic period (bowls and plates), usually assigned to Alexandrian workshops. Interestingly enough, their quantity recorded during regular excavations in the city is still surprisingly small. Evidence from Kom el-Dikka is therefore even more valuable. A small green toilet flask is all the more noteworthy considering that complete vessels from the site are very rare.

Glass material of the late Roman/early Byzantine period (simply shaped, free-blown bottles, bowls, lamps, and cylinder-blown windowpanes) is not much different from that found in other similarly dated contexts at the site. The fabrics and shapes, as well as the workmanship, point to a local glass atelier.

The small finds are undoubtedly the most captivating in this set. There are hundreds of glass tubes and variously shaped gold-in-glass beads, stone moulds for their shaping, and wasters. The presence of six individually shaped faceted blue beads, imitating lapis lazuli, is particularly surprising. Worth mentioning are also two gaming pieces made of marble and lapis lazuli. The latter is the only object made of this semi precious stone ever found at Kom el-Dikka. Neither should one ignore the new evidence for mosaic glass production (polychrome canes, some with very tiny geometric motifs based on colored squares) and a sardonyx cameo blank. These finds, in combination with the ample evidence for gold-in-glass bead manufacture in House FB, reflect the functional change that occurred in the area in the late 3rd/early 4th century AD, from a residential quarter to artisanal production.

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## References

### Abbreviations

*PME* Casson, L. (1989). *The Periplus Maris Erythraei: Text with introduction, translation, and commentary*. Princeton, NJ: Princeton University Press

Christie's. (1993). *Ancient Egyptian glass and faience from the "Per-neb" Collection III* [auction catalogue]. London: Christie's, Manson & Woods

Francis Jr., P. (2002). *Asia's maritime bead trade: 300 B.C. to the present*. Honolulu: University of Hawai'i Press

- Francis Jr., P. (2004). Beads and selected small finds from the 1989–92 excavations. In V. Begley (ed.), *The ancient port of Arikamedu: New excavations and researches, 1989–1992*, II (=Mémoires archéologiques 22/2) (pp. 447–604). Paris: École française d'Extrême-Orient
- Goldstein, S.M. (1979). *Pre-Roman and early Roman glass in the Corning Museum of Glass*. Corning, NY: Corning Museum of Glass
- Grose, D.F. (1991). Early Imperial Roman cast glass: the translucent colored and colorless fine wares. In M. Newby and K.S. Painter (eds), *Roman glass: two centuries of art and invention* (=Society of Antiquaries of London Occasional Papers 13) (pp. 1–18). London: Society of Antiquaries of London
- Harrell, J.A. (1998). Geology. In S.E. Sidebotham and W.Z. Wendrich (eds), *Berenike 1996: Report of the 1996 excavations at Berenike (Egyptian Red Sea Coast) and the survey of the Eastern Desert* (pp. 121–148). Leiden: CNWS
- Kucharczyk, R. (2005). Early Roman glass from Marina el-Alamein. *PAM*, 16, 93–99
- Kucharczyk, R. (2007). Late Roman/early Byzantine glass from the auditoria on Kom el-Dikka in Alexandria. *PAM*, 17, 45–53
- Kucharczyk, R. (2010). Glass from Area F on Kom el-Dikka (Alexandria). *PAM*, 19, 56–70
- Kucharczyk, R. (2011). Glass from Area F on Kom el-Dikka (Alexandria). Excavations 2008. *PAM*, 20, 56–69
- Kucharczyk, R. (2016). Glass finds from areas U and G at the Kom el-Dikka site in Alexandria (excavations in 2012 and 2013). *PAM*, 25, 87–103
- Kucharczyk, R. (2017a). Come and dine with me... Early Roman luxury glass tableware from Berenike – new evidence from the harbor area and the trash dumps. In I. Zych (ed.), *Research on the Red Sea* (=PAM 26/2) (pp. 147–166). Warsaw: University of Warsaw Press
- Kucharczyk, R. (2017b). Glass from Area CV on Kom el-Dikka (Alexandria). Season 2016, appendix to: G. Majcherek, Alexandria, Kom el-Dikka. Season 2016. *PAM*, 26/1, 54–58
- Majcherek, G. (1995). Alexandria 1994: archaeological excavations. *PAM*, 6, 11–20
- Majcherek, G. (1996). Excavations at Kom el-Dikka 1995. *PAM*, 7, 13–22
- Majcherek, G. (1997). Kom el-Dikka excavations 1995–1996. *PAM*, 8, 17–31
- Majcherek, G. (1998). Kom el-Dikka excavations 1997. *PAM*, 9, 23–36
- Majcherek, G. (1999). Kom el-Dikka. Excavations, 1997/98. *PAM*, 10, 29–39
- Majcherek, G. (2010). Alexandria. Excavations and preservation work. Preliminary report 2006/2007. *PAM*, 19, 31–48
- Majcherek, G. (2011). Alexandria: Kom el-Dikka excavations and preservation work. Preliminary report 2007/2008. *PAM*, 20, 35–51
- Majcherek, G. (2012). Alexandria Kom el-Dikka: excavations and preservation work. Preliminary report 2008/2009. *PAM*, 21, 27–48
- Majcherek, G. (2018). Alexandria, Kom el-Dikka. Season 2017. *PAM*, 27/1, 35–56
- Majcherek, G. (2019). Alexandria Kom el-Dikka. Excavations and preservation work in the 2018 season. *PAM*, 28/2, 21–42

- Majcherek, G. and Kucharczyk, R. (2014). Alexandria. Excavations and preservation work on Kom el-Dikka. Season 2011. *PAM*, 23/1, 23–44
- Rodziewicz, E. (2016). *Ivory and bone sculpture in ancient Alexandria* (=Antiquités alexandrines 2). Alexandria: Centre d'Études Alexandrines
- Rodziewicz, M. (1984). *Les habitations romaines tardives d'Alexandrie à la lumière des fouilles polonaises à Kôm el-Dikka* (=Alexandrie 3). Warsaw: Éditions Scientifiques de Pologne
- Rodziewicz, M. (2005). *Elephantine XXVII. Early Roman industries on Elephantine* (=AV 107). Mainz am Rhein: Philipp von Zabern
- Spaer, M. (2001). *Ancient glass in the Israel Museum: beads and other small objects*. Jerusalem: Israel Museum
- Weinberg, G.D. and Goldstein, S.M. (1988). The glass vessels. In G.D. Weinberg, *Excavations at Jalame, site of a glass factory in Late Roman Palestine* (pp. 38–102). Columbia, MO: University of Missouri Press
- Zych, I. (2017). The harbor of early Roman “Imperial” Berenike: overview of excavations from 2009 to 2015. In I. Zych (ed.), *Research on the Red Sea* (=PAM 26/2) (pp. 93–132). Warsaw: University of Warsaw Press