

GLASS FINDS FROM THE EARLY ISLAMIC-PERIOD RESIDENTIAL QUARTER NORTHWEST OF TEL LOD

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INTRODUCTION

The site yielded more than 2000 glass fragments that were retrieved during two seasons of salvage excavations (see Haddad, this volume).¹ The finds span a long period, from the fourth–fifth to the eleventh century CE; most of them date between the sixth–seventh and eleventh centuries CE, corresponding to the two main occupation levels at the site (Strata III–II; see Haddad, this volume). Unfortunately, no fragments were associated with the Crusader period (Stratum I). In addition, several Early Roman and Mamluk glass items were recovered, and large quantities of modern glass were scattered all around the area.

More than two-thirds of the corpus are small unidentified pieces; the rest are diagnostic fragments of blown glass vessels, small objects and glass-production remains. A total of 61 representative fragments are illustrated and discussed below in chronological-typological order, according to provenance: Area A (Figs. 1–3); Area B (Fig. 4) and Area C (Figs. 5, 6); Figure 7 illustrates fragments of raw glass, which originated from unstratified levels. Only very few fragments were unearthed in a proper building context, while most of the finds originated in construction fills or within Mamluk-period L678 excavated in Area C.

The material is poorly preserved; none of the vessels were complete or restored. The assemblage comprises simple everyday vessels of local types, alongside ornamented luxury specimens, possibly imported. Besides vessel fragments, part of a stirring rod (Fig. 2:15), a small trailed bead (Fig. 3:18) and gold-glass *tesserae* (Fig. 2:16) were found, along with small parts of rectangular, greenish blue windowpanes, which were associated with Stratum III, mainly based on their fabric (not illustrated). This is the first time that glass dated to the period between the two Jewish Revolts (Figs. 1:1; 5) was revealed in the vicinity of Tel Lod.

¹ I wish to thank the excavator, Elie Haddad, for inviting me to publish this glass material. Olga Shorr restored the glass vessels, Carmen Hersch drew them, and Clara Amit photographed them.

Comparable material for the Late Roman–Byzantine vessels is known from many nearby sites, including glass-production sites, such as Khirbat el-Ni‘ana (Gorin-Rosen and Katsnelson 2007) and el-Hirba (Katsnelson, forthcoming). The main types of this group are attributed to the third–early fifth centuries CE (e.g., Fig. 1:2, 3). It is interesting to note that no contemporary pottery has been allocated at the site (see Haddad, this volume).

Parallels for the late Byzantine–Early Islamic-period finds were documented at Khirbat es-Suyyagh—a monastery located between Lod and Bet Guvrin (Taxel 2009), as well as in the Jerusalem area, e.g., Khirbat ‘Adasa (Gorin-Rosen 2008a).

The Early Islamic corpus unearthed at the site has a wide range of parallels, especially from excavations at nearby Ramla (Gorin-Rosen and Katsnelson 2005; Pollak 2007; Gorin-Rosen 2008b; 2010), as well as in regions farther afield, such as Egypt (Shindo 2002), Syria (Lane 1938) and Serçe Limani (Bass et al. 2009).

THE GLASS FINDS

Area A

This area yielded one of the largest and richest vessel repertoires, dating from the Early Roman to the Early Islamic periods.

Early Roman Period

Beaker with Discus Base (Fig. 1:1).— Base No. 1 was either tooled, or more likely, made by folding the lower part of a glass parison. It might belong to a beaker or to a small hemispherical bowl. Similar bases dated to the Early Roman period were published from excavations in Jerusalem (Gorin-Rosen 2005:199, Fig. 1:7 and see further references therein) and at Tel Hevron (Jackson-Tal 2017: Fig. 12.2:13). Although this base fragment has been found within a building context, it is most likely intrusive due to its early date.

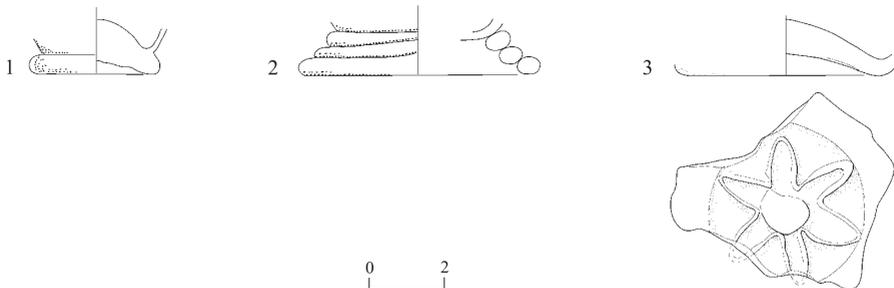


Fig. 1. Area A, glass vessels from the Early Roman (1) and Late Roman–Byzantine (2, 3) periods.

1. Beaker. L547, B3060 (Sq H-I/14), Building 1. Base and beginning of walls. Yellowish green. Black and white crust, iridescence. Base possibly folded with massive bulb inside. Large pontil mark with scar: D 1.5 cm. Walls curving upward. Base D 3.5 cm.

Late Roman–Byzantine Periods

Bowl/Jug with Trail-Wound Base (Fig. 1:2).— Base No. 2 may be identified as a bowl or a jug. A similar base dated to the fourth–fifth centuries CE was found at Khirbat Deiran, Rehovot (Gorin-Rosen 2007:145, Fig. 1:3). This type is one of the most distinctive local products, and dozens of similar fragments were found at Khirbat el-Ni‘ana (Gorin-Rosen and Katsnelson 2007:88–90, Fig. 7:3–5, and see further references therein), as well as at other Late Roman–early Byzantine sites in the region, e.g., Khirbat el-Fatuna (Jackson-Tal 2007: Fig. 3:6), Ras Abu Dahud (Katsnelson 2010: Fig. 6:8, 9), Ḥorbat ‘Illin (Katsnelson 2012: Fig. 1:3) and el-Ḥirba (Katsnelson, forthcoming).

2. Trail-wound base. L815, B5085 (Sq H15), between Buildings 1 and 2. Base and wall fragment. Bright greenish. Milky crust, iridescence, black impurities. Base tooled with three coils of a thick wound trail. Beginning of curving upward walls. Base D 6 cm.

Bottle with Decorated Base (Fig. 1:3).— Base No. 3 possibly belongs to a rectangular bottle. Such bottles, usually with one or two handles, were used as storage vessels rather than tableware. This type, with a molded base decorated with a rosette, first appeared in the first century CE. Such bottles are common both in the western and eastern provinces of the Roman Empire (Cabart, Foy and Nenna 2006:79–80, Pls. 14, 15, and see further references therein), but rarely occur in our region, e.g., a base from a tomb at Ashqelon assigned to the third century CE (Katsnelson 1999:75*, Fig. 4:7).

3. Mold-blown bottle. L412, B2489 (Sq G 12), Building 1. Part of base and beginning of wall. Bluish green. Iridescence. Thick concave base with mold-blown design in shallow relief underneath: rosette with six irregular petals within raised circle and pontil mark in center of pattern. Pontil mark D 1.2 cm, base D 5.5 cm.

Byzantine–Early Islamic Periods

Bowl-Shaped Oil Lamps (Fig. 2:1–3).— Several fragments excavated in Building 2 can be identified as vessels for lightening. Out-folded rim No. 1, short handle No. 2² and wick-tube No. 3 represent hanging lamps with three handles. This type was widely distributed during the Byzantine period, e.g., at Khirbat el-Ni‘ana (Gorin-Rosen and Katsnelson 2007:116–117, Fig. 22:1–5), and continued until the end of the eighth century CE, e.g.,

² Examples of similar handles were found also in Building 1 (L487, L869; not illustrated).

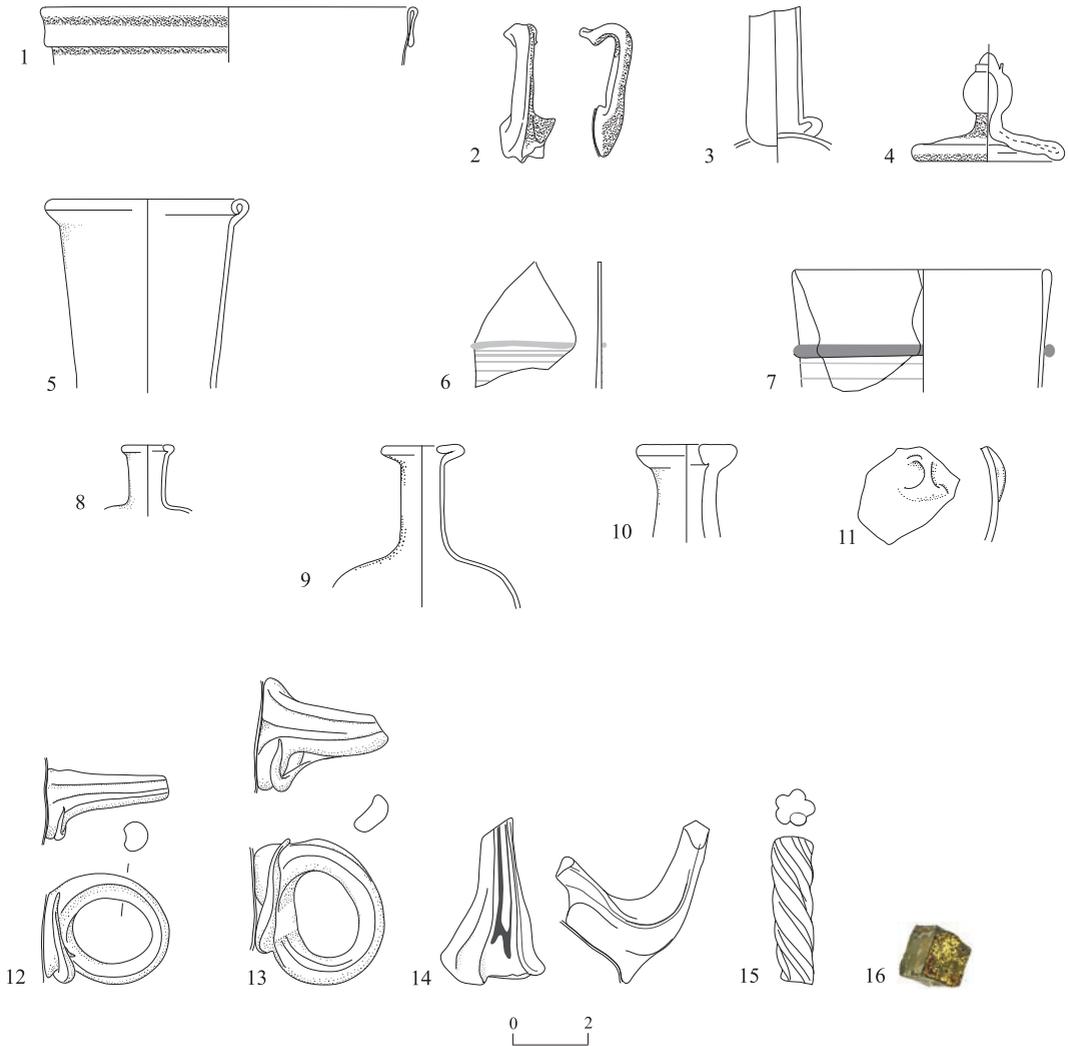


Fig. 2. Area A, glass finds from the Byzantine–Early Islamic periods.

in a late Byzantine–Umayyad context at Khirbat es-Suyyagh (Taxel 2009:151, Type 1, Fig. 4.2:2), in Umayyad levels at Bet She’an (Hadad 2005: Pl. 22:413–423, and see further references therein) and Ramla, dated to the Umayyad and early Abassid periods (Gorin-Rosen 2010: 252–253, Pl. 10.11:1–3, and see further references therein). Small fragments of another typical Byzantine lamp, with a hollow stem, were also revealed in unstratified contexts in Building 1.

1. Bowl/oil lamp. L360, B2115 (Sq D18), Building 2. Three rim and body fragments. Bluish green. Yellow patches of weathering, iridescence, soil deposit. Upward out-folded rim with narrow opening. Vertical walls. Rim D 10 cm.

2. Oil lamp. L360, B2115 (Sq D18), Building 2. Handle and small part of rim and body. Short handle made of uneven rounded trail. Bluish green. Yellow patches of weathering, iridescence and sand deposit.

3. Oil lamp. L8064, B6278 (Sq E18), Building 2. Wick tube and part of bottom. Greenish blue. Milky iridescence, sand deposit, black impurities, long vertical bubbles. Wide tube, rim unevenly cut-off or broken at edge, attached to concave base.

Wineglass (Fig. 2:4).— This specimen represents one of the most common forms of Byzantine wineglasses, which were possibly also used as a lightening device. The pushed-in end of the bubble, from which its base was tooled, protrudes through the hollow stem into the bottom of the goblet (not preserved). This type generally dates to the fifth–seventh centuries CE as, for example, the bases from Ras Abu Ma‘aruf, Jerusalem (Gorin-Rosen 1999:211, RAM25, and see further references therein) and Khirbat es-Suyyagh (Taxel 2009:145, Fig. 4.1:5, 6). Similar bases, with hollow, beaded or plain stems, were found (not illustrated) in unstratified fills in Buildings 1 and 2, indicating that the type was popular at the site.

4. Wineglass. L412, B2489, Building 1. Base and stem. Bluish green. Silver-milky crust, iridescence, sand deposit. Pushed-in base with hollow ring and short beaded stem with upper end forming domed bottom. Pontil mark D 0.8 cm, base D 4 cm.

Bottles (Fig. 2:5–10).— Bottles with up-turned rims and tall cylindrical necks (Nos. 5–7), as well as smaller bottles with characteristic flaring rims and short cylindrical necks (Nos. 8–10), comprise one of the most distinctive finds at the site. Plain and trailed versions (Nos. 5–7) are characteristic of the Byzantine period, occurring until the beginning of the Early Islamic period, e.g., at Ras Abu Ma‘aruf, Jerusalem (Gorin-Rosen 1999: RAM 11, 19) and Şarafand el-Kharab, Nes Ziyayona (Gorin-Rosen 2004:60, Fig. 1:3, and see further references therein to Shave Ziyayon and Bet She’an). Flattened rims resembling Nos. 8–10 appeared at the end of the Byzantine period, but were more common during the Umayyad period, e.g., at Khirbat es-Suyyagh (Taxel 2009:150, Type 7, Fig. 4.2:5) and Khirbat ‘Adasa (Gorin-Rosen 2008a:126, Fig. 2:10, 11). In Ramla, similar bottles occurred in levels dated to the eighth–ninth centuries CE (Pollak 2007: Fig. 10:61–62).

5. Bottle. L851, B5247, Building 2. Rim and neck fragment. Greenish. Patch of rusty-colored weathering at rim, iridescence, bubbly, blowing spirals at neck. Rim upward, infolded with large rounded hollow. Cylindrical neck, slightly tapering downward. Rim D 5.4 cm.

6. Bottle. L851, B5247, Building 2. Small fragment of neck. Almost colorless with greenish blue tinge. Bright greenish-blue trail. Iridescence, rounded and elongated bubbles. Vertical walls decorated with multi-wound trail (6 coils preserved).

7. Bottle. L559, B3080, Building 1. Rim and neck fragment. Almost colorless with greenish blue tinge. Dark yellow trail. Milky iridescence. Upward rounded, thickened rim. Cylindrical neck. Thick trail applied 20 mm below the rim, wound in threads along the neck (3 coils preserved). Rim D 7 cm.

8. Small bottle. L851, B5247, Building 2. Rim, neck and part of shoulders. Greenish. Iridescence, lime deposit. Rim folded inward and flattened at the top. Short cylindrical neck. Shoulders splaying outward, almost horizontal. Possibly globular body. Rim D 1.4 cm.

9. Bottle. L531, B3059, Building 1. Upper part. Greenish, milky iridescence, lime deposit. Bubbly, black impurities. Thickened rim, unevenly folded outward, inward and flattened at top. Cylindrical neck. Possibly globular body. Rim D 2.2 cm. Found together with small pinched fragment of a bottle similar to No. 11.

10. Bottle. L8088, B6379, Building 2. Part of rim and neck. Deep greenish blue. Thick crust of yellow grayish weathering, gold iridescence. Thick walls. Rim folded outward, inward and flattened at top, forming a small perforation. Cylindrical neck. Rim D 2.5 cm.

Vessel with Pinched Body (Fig. 2:11).— This small yellowish, horizontally pinched fragment possibly belonged to a globular bottle with a top similar to that of No. 9. It might also belong to a beaker. Pinched designs appeared on Byzantine vessels, but were especially common during the Umayyad period, e.g., at Khirbat Ṭabaliya, Jerusalem (Gorin-Rosen 2000:86*, Fig. 2:12) and Bet She'an (Hadad 2005: Pls. 4:78–81; 12:222, and see further references therein to Caesarea, Khirbat Siyar al-Ghanam, Khirbat el-Shubeika, Tiberias, Khirbat al-Karak, Jericho, Ḥorbat Liqit and Beirut).

11. Pinched bottle(?). L487, B2863, Building 1. Small body fragment. Yellowish. Milky patches of weathering. Quite thick, convex curving walls, pinched.

Loop-Shaped Handles (Fig. 2:12–14).— These handles, made of a thick trail, most likely belonged to a cup or a bowl, possibly used as oil lamps. Similar handles of various sizes were found at Ramla, dated from the eighth to the first half of the ninth centuries CE (Gorin-Rosen 2010:253, Pl. 10.11:4, 5).

Additional bluish green handles were found in unstratified contexts in Areas A (L429, B2557) and B (not illustrated). They have a characteristic pinch at the top, probably belonging to “the earlier group of the eighth century CE” (Gorin-Rosen and Katsnelson 2005:112, Fig. 4:40, and see further references therein to the earthquake layer of 749 CE from Bet She'an).

12. Loop handle. L851, B5263, Building 2. Bright greenish blue handle, almost colorless walls. Shiny fabric. Iridescence, bubbly, black impurities. Circular handle made of a trail, beginning with a thick blob and tapering to an unclosed edge. Small part of thin vertical walls. Handle D 3.3 cm.

13. Loop handle. L851, B5247, Building 2. Bright greenish blue handle and walls of a lighter hue. Silver iridescence, lime deposit, bubbly. Circular handle made of a thick uneven trail, beginning with a thick blob and tapering to an unclosed edge. Interior marks of tooling. Small part of thin vertical walls. Handle D 3.5 cm.

14. Loop handle. L8013, B6275, Building 2. Fragment of handle and small part of body. Deep greenish blue with red strikes. Milky iridescence, small bubbles, black impurities.

Stirring Rod (Fig. 2:15).— A small twisted rod fragment was found. An olive-green trail was applied to a melted greenish blue bar as a means of decoration; alternatively, it could be a strike in the glass. Stirring rods were apparently produced in the region, appearing in Early Islamic contexts at Ramla (Gorin-Rosen 2010:254, Pl. 10.11:7, 8, and see further discussion and references therein to Umayyad and Abbasid–Fatimid contexts at Bet She’an and Tiberias).

15. Twisted and trailed rod. L8061, B6255, Building 2. Rod fragment. Greenish blue. Iridescence, black impurity. Circular cross-section. Olive-green trail applied to twisted rod, or a strike. Rod D 12 mm.

Gold-Glass Tessera (Fig. 2:16).— A small glass *tessera* was found in an unstratified level in Area A. It is made of greenish translucent glass, with a thin layer of a gold foil on top. Such *tesserae* were used for decorating walls in late Byzantine churches and monasteries, alongside monochrome *tesserae* of various colors, such as the mosaic remains from Binyane Ha-‘Umma, Jerusalem (Gorin-Rosen 2005:208). This kind of decoration was used also in Umayyad-period installations, e.g., gold-and-blue mosaic glass from Bet She’an (Khamis 2001).

16. *Tessera*. L458, B2792, Building 1. Almost square. Thin layer of gold foil at the top, between two layers of greenish translucent glass. Small black and yellow patches, iridescence. Brown crust at the bottom, possibly the result of casting of glass into a sand mold. Lower glass, 0.7 × 0.5 cm, upper glass layer with gold leaf thickness c. 0.1 cm.

Early Islamic Period

This group of vessels demonstrates a rich repertoire of Early Islamic types, including fragments featuring a variety of impressed and mold-blown decorations.

Bowls with Impressed Design (Fig. 3:1, 2).— Two small hemispherical bowls decorated with medallions in relief were found. The design was impressed by metal tongs on one side, in contrast to the more common patterns, which were impressed on both sides of the vessel. Bowl No. 1 is decorated with concentric ovals, with a raised central boss, while bowl No. 2 has circular medallions and small rounded bosses, possibly petals of a rosette. Another

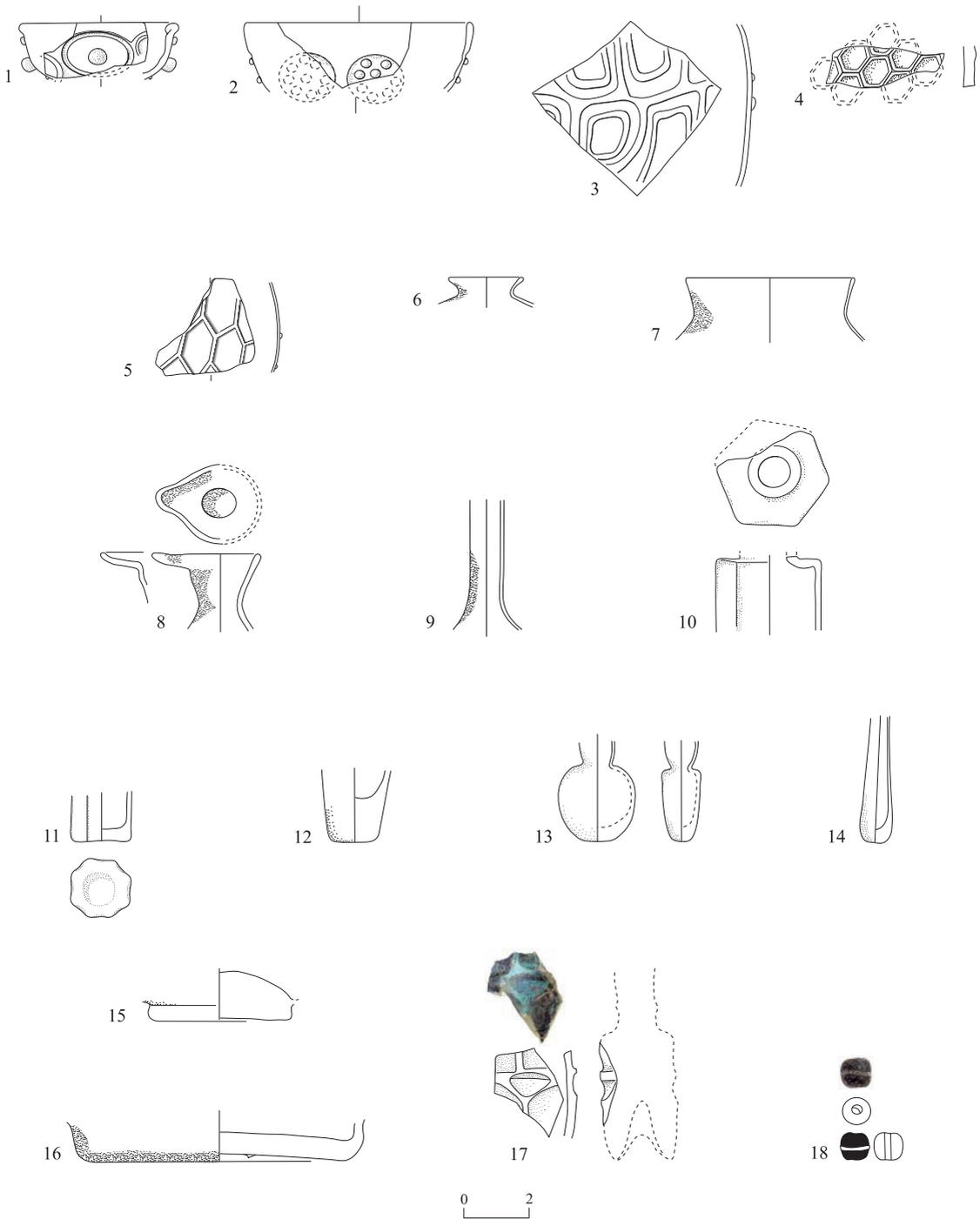


Fig. 3. Area A, glass finds from the Islamic period.

bowl, decorated with a similar rosette, was found in Area B (Fig. 4:3, see below). This kind of ornamentation is quite rare on fragments excavated in Israel, e.g., a small Abbasid bottle from Khirbat 'Adasa (Gorin-Rosen 2008a: Fig. 3.5). Many versions of the type, dated to

the ninth–tenth centuries CE, were published from al-Mina, Syria (Lane 1938: Fig. 11) and Fustat, Egypt (Shindo 2000:234, Fig. 6:2; 2002: Pl. 6-3:1–7). Similar richly ornamented small bowls are known also from collections (Brosh 2003:341, Cat. No. 444; Carboni 2001:284: Cat. No. 3.52a–d). However, the examples from Lod exhibit a workmanship of lesser quality, probably indicating a local manufacture.

1. Small bowl. L8002, B6026, Building 2. Small rim and body fragment. Colorless. Patches of black and silver weathering, iridescence, pitting. Rim folded inward. Convex curving walls, quite thick. Pattern of three preserved oval medallions in relief on the exterior: a central oval enclosed within a highly protruding rounded boss, and the beginning of two other ovals above and below. Rim D 5 cm.

2. Small bowl. L452, B2728, Building 1. Small rim and body fragment. Greenish blue. Crust of black and silver weathering, iridescence, soil deposit. Rounded rim. Convex curving walls. Pattern of circular medallions closely impressed on the exterior. One of two partly preserved medallions includes a rosette with four small rounded bosses. Rim D 7 cm.

Mold-Blown Vessels (Fig. 3:3–5).— Three mold-blown fragments of various hues of bluish green glass demonstrate variations of honeycomb motifs. The small sizes of the fragments make it difficult to reconstruct their original forms.

The alternating rectangles design of No. 3 was executed in high and low relief, forming a honeycomb design. No exact parallels were found for this fragment; however, it can be assigned to the Early Islamic period based on its fabric and style of decoration.

Vessel Nos. 4 and 5 exhibit the common variation of the honeycomb motif, consisting of sunken hexagons. This style of vessel decoration occurred throughout the Islamic period, but was especially popular in the Abbasid and Fatimid periods. Parallels for No. 4 include an Umayyad mold-blown lamp from Jerash (Meyer 1988:213, Fig. 13:Q), a ninth–tenth-century CE bottle from Ramla (Pollak 2007:123, Fig. 10:69) and finds from the Fatimid House of the Bronzes at Tiberias (Hadad 2008:172, Pl. 5.6:94, see further references therein to Bet She’an). The elongated shape of the hexagons on No. 5 may possibly indicate a later, Crusader period, resembling a fragment dated to the beginning of the twelfth century CE from Yoqne’am (Lester 1996:213–214, Fig. XVII.15:2).

3. Mold-blown bowl(?). L189, B1403, surface. Part of body. Colorless with greenish tinge. Patches of black, enamel-like weathering, iridescence, pitting, small bubbles and blowing spirals. Walls slightly convex. On body, friezes of irregular rectangles one inside the other, alternating in a high and low relief pattern.

4. Mold-blown vessel. L8013, B6275, Building 1. Small body fragment. Thick-walled. Deep greenish bluish. Iridescence, bubbly, small black impurities. Sunken hexagons set in honeycomb pattern.

5. Mold-blown vessel. L712, B1393, Building 2. Small body fragment. Thin-walled. Almost colorless with greenish blue tinge. Iridescence, severely pitted. Curving wall with rows of hexagons arranged in honeycomb pattern.

Jars (Fig. 3:6, 7).— These jars of colorless glass, with a rounded rim and a short carinated neck, occurred during the Abbasid and Fatimid periods. Tiny jar No. 6, with broad shoulders, seems to have a globular body, while the larger specimen, No. 7, might be bulbous. Similar jars are known from Rehovot (Gorin-Rosen 2007:147, Fig. 1:5) and Bet She'an (Hadad 2005:45, Pl. 43:889–890, and see further references therein to Tiberias and Fustat).

6. Small jar. L363, B2148, Building 1. Rim, neck and part of shoulders. Colorless. Thick crust of black weathering, iridescence, severely pitted, lime deposit. Funnel rim with rounded edge. Very short neck. Beginning of globular body. Rim D 2.4 cm.

7. Jar. L378, B2436 (Sq G13), Building 1. Small fragment of rim, neck and part of shoulders. Colorless with bluish tinge. Black and rusty crust of weathering, iridescence, severely pitted. Rounded rim, short funnel neck, beginning of possibly bulbous body. Rim D 5 cm.

Juglet with Pinched Mouth (Fig. 3:8).— The fragment belongs to a small vessel, probably a juglet with a beak-shaped rounded rim and a short funnel neck. This type, usually with a pear-shaped, plain or decorated body, was widely distributed from the second half of the eighth to the eleventh century CE. The nearest examples, including some with elaborate cut designs, come from Ramla (Gorin-Rosen 2010:239–240, Pl. 10.6:22, and see further references therein to excavations on Marcus Street and at 'Ofer Park).

8. Juglet. L378, B2436, Building 1. Fragment of rim, neck and part of shoulders. Almost colorless. White-grayish crust, iridescence. Pinched, beak-shaped mouth with rounded rim. Short funnel neck. Beginning of splaying shoulders of a possibly pear-shaped body. Rim L 3.5 cm.

Elongated Blue Bottle (Fig. 3:9).— The cylindrical neck belongs to a bottle with an elongated cylindrical body and a rounded base. These bottles have a distinguished blue color, uneven thin walls and unfinished rims. The type occurs in the region mainly in Abbasid-period contexts, appearing in numerous examples at Ramla (Gorin-Rosen 2008b:48–49, figure on the right; 2010:227–228, Pl. 10.1:19).

9. Bottle. L371, B2191, Building 2. Upper part, rim and neck partly missing. Cut-off upward rim, narrow cylindrical neck, beginning of body. Blue, crust of black weathering, iridescent film, pitting.

Polygonal Bottles (Fig. 3:10, 11).— Both fragments demonstrate close subtypes of colorless faceted bottles. Bottle No. 10 was possibly first blown into a mold and then cut to form

six longitudinal panels, and the smaller octagonal bottle No. 11 was only mold-blown. Cut versions from Israel are rare. They were mainly imported; however, there are published examples from our region, e.g., the colorless hexagonal bottle from Yoqne'am, dated to the late eighth–eleventh centuries CE (Lester 1996:210–211, Fig. XVII.10:2). Parallels are found at Fustat (Shindo 2002: Pl. 6–15:11) and from the eleventh-century CE shipwreck at Serçe Limani (Cullen 2009:240–241, Type IIIB2, Fig. 19-2: PF 41). Mold-blown bottles similar to No. 11 are known from various excavations at Ramla (Jackson-Tal 2008:180, Fig. 6.119:9; Gorin-Rosen 2010:247, Pl. 10.9:7, 8, and see discussion and further references therein).

10. Hexagonal bottle. L811, B5163, between Buildings 1 and 2. Beginning of neck and part of body. Colorless. Crust of black and white weathering, severely pitted, lime deposit on interior. Cylindrical neck. Blown into a mold and ground with six vertical panels. Width 3.2×3.5 cm.

11. Small octagonal bottle. L872, B5384, between Buildings 1 and 2. Fragment of lower body. Colorless with greenish tinge, crust of black weathering, silver iridescence. Flat thick base. Cylindrical body. Possibly mold-blown and then cut with eight elongated facets around the body. Circular pontil mark underneath. Base D 1.8 cm.

Small Cylindrical Bottle (Fig. 3:12).— This is a common type of plain perfume bottle characterized by a thick and flattened base. Square versions of this type appeared in our region from the late eighth century CE to the Mamluk period (Lester 2004:189–191, Fig. 7.9:103–105; Gorin-Rosen and Katsnelson 2005:112–113, Fig. 4:41).

12. Small bottle. L467, B2960, Building 1. Lower part. Colorless with greenish tinge. Patches of black weathering, iridescence. Cylindrical body with thick and flat base. Base D 1.4 cm.

Small Flasks (Fig. 3:13, 14).— Miniature lentoid-shaped and tubular flasks were found. They were possibly used for concentrated essences or medication. Vessel No. 13, with a rounded body, is a rare version of elongated lenticular *phials*, which occurred in the region from the eighth to the eleventh century CE (Pollak 2007:127, Fig. 11:73). A miniature glass tube similar to No. 14 was found in Abbasid levels at Ramla (Gorin-Rosen and Katsnelson 2005:103, Fig. 1:3, and see further references therein to Bet She'an and Tiberias).

13. Miniature flask. L445, B2734, Building 1. Rim and part of neck missing. Colorless? Thick crust of black and silver weathering, iridescence, pitting. Thick walls. Cylindrical neck, constricted at its base, lentil-shaped rounded body. Body D 4 cm.

14. Miniature tube. L834, B5241, Building 1. Lower part. Colorless with greenish tinge. Black and silver patches, iridescence, severe pitting, bubbly, black impurities. Elongated narrow body with thickened base, flattened by pontil. Body D above base 1 cm.

Vessel with Solid Base (Fig. 3:15).— Similar bases of beakers were common in the fourth century CE (see below, Area B). Solid domed bases such as No. 15 were manufactured also in the Early Islamic period, appearing on bowls, beakers and bottles. Most of the parallels from Ramla are likely dated to the Umayyad period (Gorin-Rosen 2010:220, Pl. 10.1:7, 8). A similar base attributed to a plain bottle was found in Abbasid–Fatimid levels at Bet She’an (Hadad 2005:40, Pl. 39:802).

15. Bottle(?). L8041, B6225, Building 2. Base and beginning of walls. Deep greenish blue, iridescence. Disc base, flat on exterior and domed on interior. Walls chipped around the base, possibly intentionally. Pontil scar D 1.4 cm, base D 4 cm.

Cylindrical Bowl with Thick Flat Base (Fig. 3:16).— This form of a simple deep bowl, with a thick flattened base, is characteristic of the Early Islamic period. Parallels from Ramla are dated to the eighth–ninth centuries CE (Sion 2004:85–86, Fig. 18:4, 5).

16. Bowl. L371, B2197, Building 2. Base and beginning of walls. Bluish green. Black and white patches, iridescence. Thick flat base. Upturned walls. Pontil scar L 2 cm; Base D 8 cm.

Faceted Flask or Molar (Fig. 3:17).— This small body fragment possibly belongs to a so-called ‘molar’ flask—a small toed cosmetic container attributed to the ninth–tenth centuries CE (Carboni 2001:99, Cat. No. 27:a–c). Parallels from Israel dated to the Abbasid–Fatimid periods include examples from Rehovot (Gorin-Rosen 2007:148, Fig. 1:8, and see discussion and further references therein to Bet She’an, Abu Gosh and Fustat) and Ramla (Jackson-Tal 2008:176, Fig. 6.118:5; Gorin-Rosen 2010:232–233, Pl. 10.5:9).

17. L485, B2899. Building 1. Small body. Colorless. Iridescence film, pitting. Geometric decoration wheel-cut in the shape of a triangular facet within an arch-like pattern on both sides.

Trialed Bead (Fig. 3:18).— A similar small bead made of blue glass was excavated at Ramla, north of the White Mosque (Gorin-Rosen 2010:255, Pl. 10.12:3, and see a further reference therein to a dark green bead from the Abbasid–Fatimid layers at Bet She’an).

19. Small bead. Unstratified, B6281. Possibly black. Milky weathering. Rounded. Cylindrical perforation. Uneven white trail horizontally applied to mid-body. H 0.8 cm; D 0.8 cm.

Area B

The glass assemblage from this area is relatively small, comprising vessels from the fourth to the eleventh century CE. The earliest fragments belong to beakers with a solid base, a type common in Israel in the late fourth century CE, e.g., at Khirbat el-Ni‘ana (Gorin-

Rosen and Katsnelson 2007:93, Fig. 8:3–9). Although these fragments are not directly associated with construction contexts and thus not illustrated, the type is worth mentioning as it appears also in Area C (L673) and in Area A, where a trailed rim of a similar beaker was also found.

Solid-Stem Wineglass (Fig. 4:1).— Wineglasses with solid-stem bases are characteristic types toward the end of the Byzantine period, appearing also in Umayyad-period contexts (Winter 2011:346, Fig. 12.1:8, 9, and see discussion and references therein). Fragment No. 1 is distinguished by its short stem, slightly constricted where it joins the body, and rough disc base, which was possibly pulled-out from the stem, or added. This fragment was found together with a bird-shaped Umayyad pottery figurine in Stratum III (see Haddad, this volume: Fig. 24:2). Another version of such a wineglass with a solid beaded stem was uncovered in the same area (L429, B2557; not illustrated).

1. Wineglass. L8057, B6242, building floor. Part of base and stem. Somewhat bluish. Milky crust, iridescence, lime deposit. Short solid stem, unevenly tooled pad base. Pontil mark 0.8 cm, base D 4.5 cm.

Bottle with Internal Threads (Fig. 4:2).— This small body fragment belonged to an unusual bottle. It demonstrates a thorn-shaped base of a thread on the internal wall, formed by piercing a bottle's body with a sharp tool while blowing. The function of bottles such as this one is unclear. They are considered a unique local phenomenon, occurring in our region in the sixth–seventh centuries CE (Gorin-Rosen and Winter 2010:175–176, Fig. 6, and see discussion and further references therein).

2. Bottle. L703, B3862, surface. Small body fragment. Greenish blue. Patches of milky yellow weathering, black impurities. Small fragment of wall indented with thorn.

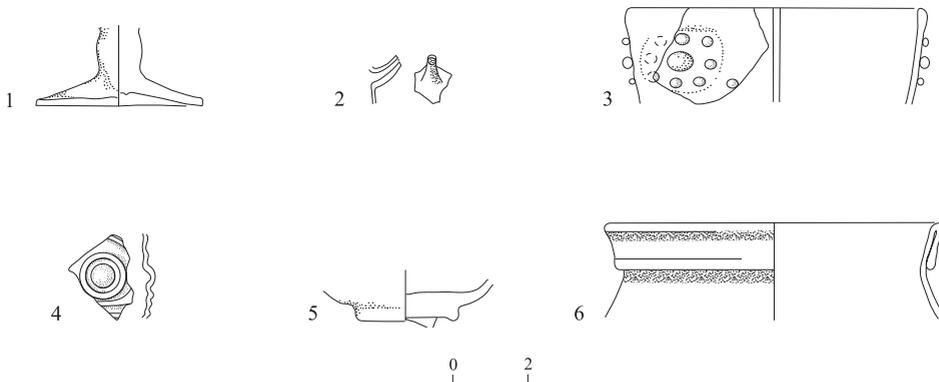


Fig. 4. Area B, glass finds from the fourth–eleventh centuries CE.

Bowl with Impressed Pattern (Fig. 4:3).— The fragment dates to the ninth–tenth centuries CE, representing a small ornamented bowl similar to the bowl in Fig. 3:2, discussed above. It was found together with a small chunk of raw glass incorporated in lime (see below, Fig. 7:7).

3. Bowl. L8044, B6235, installation. Small fragment of rim and body. Greenish blue. Patches of black weathering, iridescence, severe pitting. Rounded upward rim, stamped pattern of small concentric dots with a larger one in center. Rim D c. 8 cm.

Mold-Blown Vessel (Fig. 4:4).— This small fragment belongs to a decorated vessel with a relief pattern consisting of concentric circles, ellipses and a central dot. The fragment is distinguished by its high quality, thin-walled, almost colorless glass. Mold-blown vessels decorated with similar motifs appear in the region in the Abbasid and Fatimid periods, e.g., a bowl from Ramla (Jackson-Tal 2008:167, Fig. 6.112:4, and see further references therein to a Fatimid hoard from Caesarea, Yoqne‘am and Bet She’an).

4. Mold-blown vessel. L6186, B8045, installation. Small body fragment. Somewhat colorless with greenish blue tinge. Iridescence. Relief design of two circles with a dot in center, sunken on interior.

Disc Base (Fig. 4:5).— This fragment represents the lower part of a bottle(?) with a low pad base. The pad has the shape of an uneven disc, which seems to have been added to the exterior of the vessel’s body. It is of unusual purplish colorless color, resembling the mold-blown fragment from Area C (see below, Fig. 6:2). A trailed cup, with a similar base, dated from the eighth to the ninth century CE, was excavated at Ramla (Pollak 2007:110, Fig. 6:32); a similar example was found also in the eleventh-century CE shipwreck at Serçe Limani (Lledó and Matthews 2009:427, Fig. 41-5: Type BA518).

5. Bowl/bottle. L228, B1755, Building 3. Base and part of body. Purplish. Small black patches, strong gold iridescence. Low disc-base unevenly applied to base, beginning of walls curving upward, possibly mold-blown. Large pontil scar 1.2 cm, base D 3 cm.

Cylindrical Jar with Out-Folded Rim (Fig. 4:6).— The fragment exhibits one of the most common versions of large storage jars. Many similar fragments dated from the Abbasid–Fatimid periods onward are found throughout the country and in Ramla (Gorin-Rosen 2010:241–242, Pl. 10.7:4, see further references therein to other excavations in Ramla).

6. Large jar. L710, B1372. Fragment of rim, neck and part of shoulders. Greenish. Crust of grayish weathering, iridescence, pitting. Thick walls. Rim upward, out-folded. Short cylindrical neck, beginning of shoulders. Rim D 9 cm.

Area C

The majority of the fragments found in this area correspond to Stratum II, except for an Early Roman piece (Fig. 5:1), possibly intrusive, and two items (Fig. 6:3, 7) that came from a pit attributed by the excavator to the Mamluk period.

Early–Mid-Roman Period

Jug with Folded Rim (Fig. 5).— A jug with a characteristically folded ledged rim is one of the earliest fragments excavated in Area C. Similar jugs, but with a ribbed handle, were found in Samaritan Grave 900E in Pardes Ha-Gedud, Netanya, dated from the end of the first to the late third century CE (Jackson-Tal 2004:147, Fig. 15:2, see further references therein) and in the Judean Shephelah, e.g., the late first–early second-century *miqveh* at Ben Shemen (Katsnelson 2019:179, Fig. 2:2, 3).

1. Jug. L731, B4057. Upper part. Mended. Small missing part on rim; part of neck and handle are missing. Colorless. Black enamel-like weathering, iridescence, lime deposit. Rim rounded, folded down, up and out, forming an uneven fold around the neck and a ledge at the top. Short cylindrical neck, slightly constricted at the base. Splaying shoulders. Strip flat and plain handle, originally applied to upper body, drawn up and then folded in a straight angle, attached with a fold to rim and neck, above the fold. Beginning of shoulders. The missing body was probably globular or cylindrical. Rim D 4.5 cm.

Early Islamic Period

Bowl with Impressed Pattern (Fig. 6:1).— The design of concentric ovals seems to be the most favored motif on bowls from the site. In contrast to the bowl from Area B (Fig. 3:1, 2), which has a similar design, but only on the exterior, this bowl exhibits an impressed pattern, made by pincers, on both sides. The latter is more common on Early Islamic vessels

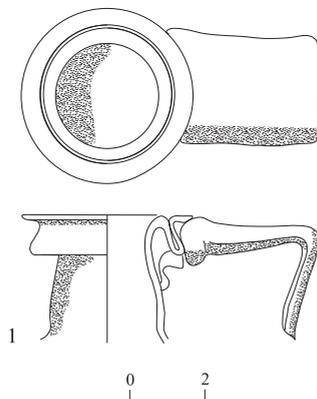


Fig. 5. Area C, glass jug from the Early Roman period.

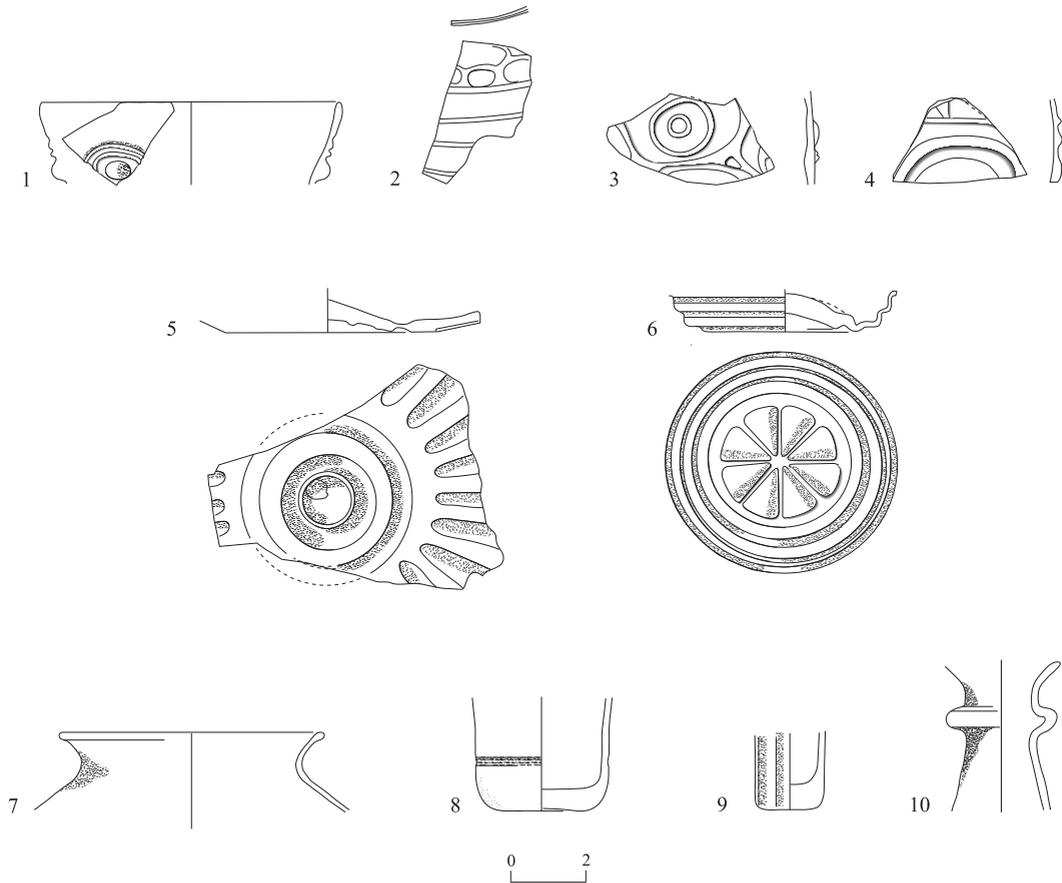


Fig. 6. Area C, glass finds from the Early Islamic period.

from Israel, including a small bowl from Ramla (Gorin-Rosen 2010:244, Pl. 10.8:2, and see therein a discussion of the technique and further references).

1. Bowl. L103, B1013, surface. Small fragment of rim and walls. Greenish blue. Patches of yellow-silver weathering, iridescence, black impurities. Rounded rim, sloping walls. Relief design impressed both on the exterior and the interior: two closely set ovals enclosing a small oval boss. Rim D 8 cm.

Mold-Blown Vessels (Fig. 6:2–6).— Five fragments featuring mold-blown designs were discovered in this area. They differ in patterns and sizes, but are mostly similar in the quality of their fabric and workmanship. In contrast to the mold-blown vessels from other areas, mostly of greenish blue hues, these are made of colorless or purple glass.

Vessel Nos. 2–4 are small fragments decorated with various motifs of ovals and circles. Thin-walled fragment No. 2 demonstrates a chain pattern of large and small ovals above horizontal lines. The pattern was possibly made of a purple trail, which was embedded into the surface, or by mixing colorless and purple glass. Fragments of mold-blown vessels resembling this pattern were found at Khirbat es-Suyyagh, in an Umayyad context and in a

mixed context with Abbasid pottery (Taxel 2009:150, Fig. 4.2:14, 15, no colors mentioned). However, the combination of colorless and purple glass may suggest a later, possibly medieval date, as is the colorless-purple bottle with a honeycomb pattern from the al-Sabah collection in Kuwait, assigned to the twelfth–early thirteenth centuries CE (Carboni 2001:257, Cat. No. 3.48).

Fragment No. 3 belongs to a purple vessel. Mold-blown vessels decorated with similar motifs appear in the region in the Abbasid and Fatimid periods, e.g., a bowl from Ramla (Jackson-Tal 2008:167, Fig. 6.112:4, see further references therein to a Fatimid hoard from Caesarea). A colorless fragment strongly resembling the design on No. 3 has been published from the Abbasid phase at Bet She'an (Winter 2011:355–356, Fig. 12.3:11). Fragment No. 3, distinguished by its purple glass and fine-quality mold, might be dated later, as it was discovered in a pit dated by pottery to the Crusader period.

The design on small colorless fragment No. 4 is less certain. Its geometric pattern and fabric resemble those of No. 3, and therefore, it could be assigned to the same period.

Concave base No. 5 belongs to a standard mold-blown vessel, possibly a bowl. It is decorated with concentric circles and pronounced ribs that rise to the body. A very similar fragment of a greenish blue bowl was found within an eighth-century CE group of glass vessels from Ramla (Gorin-Rosen 2011: Fig. 14:2). Other parallels from Ramla are dated to the Abbasid–Fatimid periods (Jackson-Tal 2008:171, Fig. 6.112:1, 2).

The lower part of vessel No. 6 exhibits a relief pattern of eight petals forming a rosette and two concentric circles on the body, above the base. The motif of mold-blown rosettes was common during the Abbasid–Fatimid periods (Pollak 2007:126, Fig. 7:69), a single close parallel, however with a less symmetrical design, comes from Alexandria (Kucharczyk 2005:35, 36, Fig. 4:2).

2. Mold-blown vessel. L100, B1008, surface. Small body fragment. Colorless. Patches of black weathering, iridescence, severely pitted. Curving thin wall decorated with geometric pattern of lines and ovals made of purple trails embedded into the surface.

3. Mold-blown vessel. L678, B3732, pit. Body fragment. Purple. Black enamel-like crust of weathering, iridescence. Thin vertical bowl. Mold-blown relief pattern of geometrical motifs consisting of lines, concentric ovals and dots.

4. Mold-blown vessel. L712, B1393. Small body fragment. Colorless. Small black and silver patches of weathering, iridescence. Vertical thin wall decorated with relief geometric motifs of relief ovals and lines.

5. Mold-blown bowl. L100, B1036, surface. Part of base and beginning of walls. Colorless with greenish tinge. Patches of black weathering, iridescence, pitting. Flat base thickened in the center

with an exterior dome. Mold-blown pattern in relief, comprising thick vertical ribs above two concentric circles around the pontil mark in the center. Base D c. 5.5 cm.

6. Mold-blown bottle(?). L371, B2197. Base and part of lower body. Colorless. Black and silver crust, iridescence, severe pitting. Decorative motif in relief consisting of two concentric circles above the base and one around a rosette with eight petals underneath. Base D 4 cm.

Globular Jar (Fig. 6:7).— Parallels for this jar, with a short flaring rim and a globular body, are dated from the ninth to the twelfth centuries CE. Many such vessels, varying in size and decoration, were found at Serçe Limani (Hentschel 2009:311–312, Fig. 27-2). The type seems to be common also at Lod (see above, Fig. 3:9). A rim of a similar colorless jar was found in Area A (L494, B2833; not illustrated).

7. Jar. L678, B3649, pit. Fragment of rim, neck and shoulders. Colorless. Crust of black, enamel-like weathering, iridescence. Rounded flaring rim, short funnel neck, beginning of globular body. Rim D 7 cm.

Beaker with Wheel-Cut Decoration (Fig. 6:8).— This fragment demonstrates an interesting local version of wheel-cut cylindrical beakers with a flat base and an unfinished rim, plausibly produced in the region during the Early Islamic period. Similar beakers decorated with cut and incised decoration were found at Ramla, in contexts dated from the ninth to the eleventh centuries CE (Pollak 2007:111, Fig. 6:35, 36, see further references therein to Caesarea and Serçe Limani).

8. Cylindrical beaker. L700, B3929. Base and part of body. Colorless with greenish tinge. Crust of black weathering, iridescence, severely pitted, lime deposit. Flat, thickened base. Cylindrical body. Band of horizontal incisions 12 mm above base. Uncertain pontil mark underneath. Base D 3 cm.

Small Bottle Decorated with Vertical Ribs (Fig. 6:9).— The poor preservation of the fabric of this cylindrical bottle makes it difficult to ascertain if its design was molded or cut. A small flask decorated with mold-blown ribbing was found at Yoqne'am, attributed to the ninth–twelfth centuries CE (Lester 1996:209, Fig. XVII.9:7). A few versions of perfume flasks with fluted bodies are known from the eleventh-century CE shipwreck at Serçe Limani, one of which has longitudinal facets cut on its body (Cullen 2009:240–241, Type IIIB1-2, Fig. 19-2: PF37, 41, see further references therein to Fustat). Another octagonal flask resembling No. 9 was found at the site in Area A (see above, Fig. 3:11).

9. Small bottle. L669, B3540, fill above floor. Lower part. Greenish blue. Iridescence, lime crust, severely pitted. Flat, thickened base. Cylindrical body. Eleven vertical ribs in relief with a sunken pattern in between. Base D 1.7 cm.

Bottle with Bulged Neck (Fig. 6:10).— This fragment is one of the latest types at the site. Bottles with a deep spherical bulge below the rim or on the lower neck occurred in our region mainly from the Fatimid to the Mamluk periods. Similar fragments were unearthed in the excavation in the north of the White Mosque and at other sites in Ramla (Gorin-Rosen 2010:238–239, Pl. 10.6:19, 20, see discussion and further references therein). Two similar, albeit smaller fragments of bluish green and purple bottles were found in the same area (L678, L685; not illustrated).

10. Bottle. L674, B3648. Part of neck and beginning of shoulder. Colorless with greenish tinge. Thick black crust of weathering, iridescence, lime deposit. Funnel mouth. Short neck with pronounced horizontal bulge. Sloping shoulder. Neck D 2.8 cm.

GLASS PRODUCTION

A few fragments of raw glass were found, mainly small chunks or glass wasters. It is difficult to ascertain the date of these fragments, as most of them originated in unstratified levels between Areas A, B and C. A few fragments of typical vessels, which were found alongside the production debris might perhaps point to glass production activities in the Byzantine and Early Islamic periods (Fig. 7:4–7).

Considering the small amount of production debris found at the site, it is hard to conclude that a glass workshop existed in this location. However, evidence for a late Byzantine glass workshop was found at nearby Ramla (South) (Tal, Jackson-Tal and Freestone 2008).

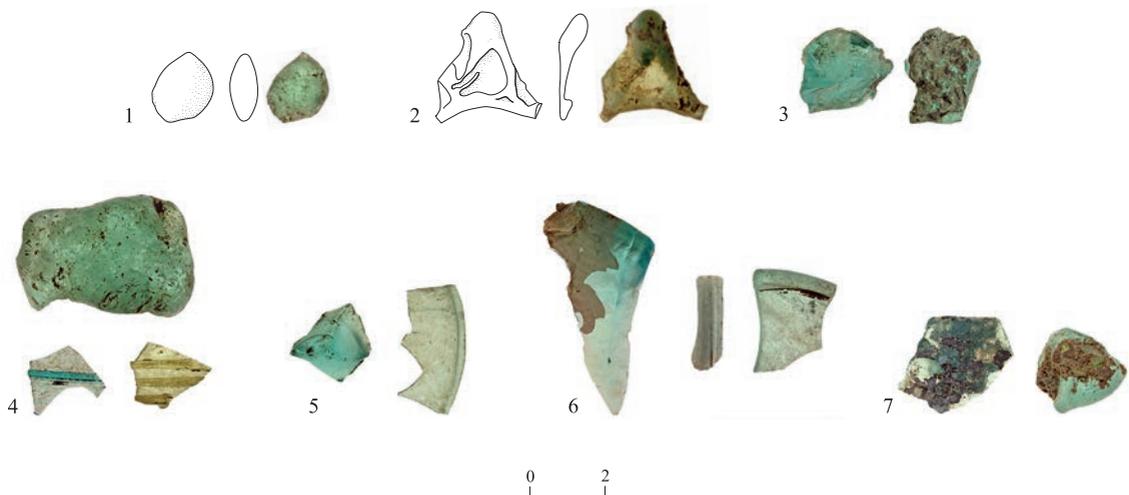


Fig. 7. Glass-production debris.

CONCLUSIONS

This report is among the first studies of Islamic glass vessels from excavations at Lod. Most of the represented types date from the eighth to the eleventh century CE, including types similar to those previously found in the nearby large Islamic city of Ramla. However, the finds from Lod demonstrate some new shapes and decorative motifs, such as a large range of mold-blown vessels, which are not common in local contexts, especially considering the agricultural character of the settlement (see Haddad, this volume). In addition, the earlier glass specimens retrieved from this excavation, dated from the first to the eighth century CE, are important for determining the early stages of occupation in the area. Some of the domestic ware described in this report definitely points to a local glass production in Lod.

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