

THE EARLY ISLAMIC GLASS FINDS FROM KHIRBAT EL-THAHIRIYA

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INTRODUCTION

Several hundred fragments of glass objects were found at Khirbat el-Thahiriya (see Kogan-Zehavi and Hadad, this volume); 61 of the best-preserved, diagnostic fragments were chosen for publication.¹

Most of the vessels were made of colorless, greenish or bluish glass, or combinations thereof, with a few exceptions in aquamarine and yellowish brown. The fragments were covered with black, silver or golden weathering, shiny iridescence and lime deposits, and were sometimes pitted. Various body fragments are presented here to demonstrate the variety of decorative techniques in use: applied horizontal, vertical and wavy trails, pinching, tonging, luster painting and mold blowing.

The vessels are presented in typological order and comprise bowls, wineglasses, bottles, jars, a jug, oil lamps, alembics, a spoon and windowpanes. This assemblage features the most common types of glass vessels from the Early Islamic period, i.e., the Umayyad and Abbasid–Fatimid periods, which continue the traditions of the late Byzantine period. Therefore, parallels are brought from late Byzantine to Abbasid–Fatimid sites throughout the country, in particular Ramla (Gorin-Rosen 1999; 2008; 2010; Gorin-Rosen and Katsnelson 2005; Pollak 2007; Jackson-Tal 2008) and Bet She'an (Hadad 2005), from which well-dated Umayyad and Abbasid–Fatimid assemblages have recently been extensively published. Other important sites are not always mentioned directly, as they are quoted in the latest publications.² Sites from neighboring countries include Busra (Wilson and Sa'd 1984) and Jerash (Meyer 1998).

TYOLOGY

Bowls and Beakers

Shallow Bowl with Rounded, Folded-In Rim (Fig. 1:1).— These bowls are characterized by their small dimensions and the shape of the rim. The wide, shallow shape of this bowl type is known from the Late Roman period, but its folded-in rim attests to a later date. Similar shallow bowls were found in Umayyad and Abbasid–Fatimid contexts at Bet She'an (Hadad 2005:21, 35, Pls. 2:30; 25:491) and Tiberias (Hadad 2008:167, Pl. 5.1:7, 9).

Bowls with Folded-Out Rims (Fig. 1:2–5).— These bowls are very common in the region throughout the Late Roman and Byzantine periods. The rim in Fig. 1:3 belongs to a shallow bowl or a windowpane. A similar bowl was found in an Umayyad context at Busra (Wilson and Sa'd 1984:75, 147, No. 561). The rims in Fig. 1:2 and 4, with out-splaying rims and rounded walls, could be bowls, although No. 4 could also belong to a windowpane. This type of bowl is known in the Late Roman period (Katsnelson 1999:68*–69*, Fig. 1:2, 3), as well as in later Byzantine and Umayyad contexts. Similar shallow bowls were found in Umayyad and Abbasid–Fatimid contexts at Bet She'an (Hadad 2005:21, 36–37, Pls. 3:55, 68; 28:559; 29:565).

The vessel in Fig. 1:5, with upright walls and a folded-out rim, could be defined as a deep bowl or an oil lamp. Similar vessels were found in late Byzantine–Umayyad contexts at Khirbat Ṭabaliya (Gorin-Rosen 2000b:89*–90*, Fig. 3:30), and in Abbasid–Fatimid contexts at Bet She'an (Hadad 2005:36, Pl. 28:561).

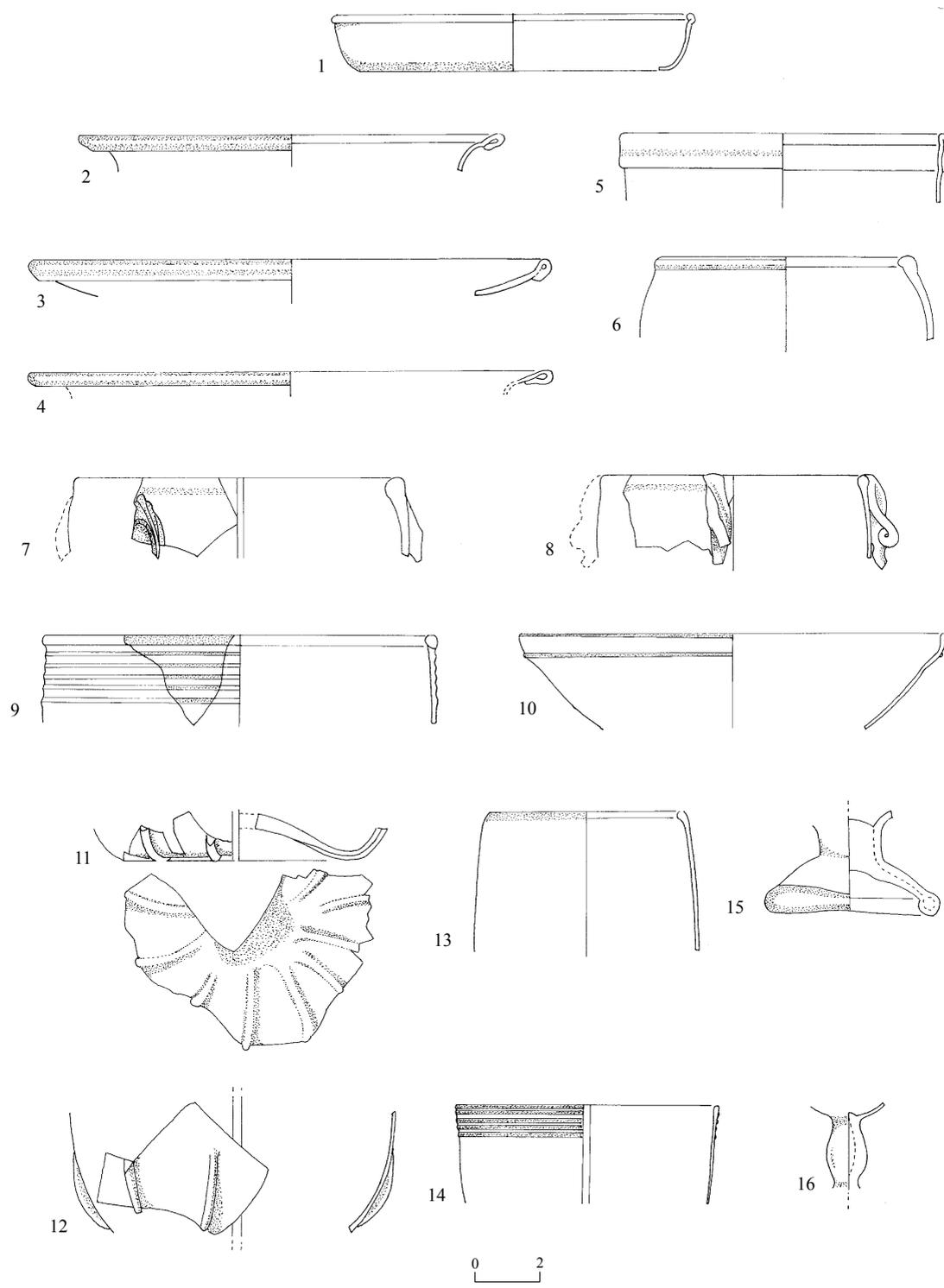


Fig. 1. Glass vessels: bowls, beakers and wineglasses.

◀ Fig. 1

No.	Object	Locus	Basket	Context	Description	Dimensions (cm)
1	Bowl	425	4615	Irrigation system	Light greenish glass; sand deposits; bubbles; black impurities; rounded, folded-in rim; thin rounded wall	D rim 11.0 D base 9.5
2	Bowl	421	4623	Irrigation system	Colorless glass with bluish tinge; silver iridescence; sand deposits; flaring, folded-out rim; concave wall	D rim 12.8
3	Bowl	437	4636, 4675	Irrigation system	Light greenish glass; silver iridescence; pitting; bubbly surface; flaring, folded-out rim	D rim 15.5
4	Bowl	431	4593	Building	Greenish glass; silver iridescence; sand deposits; out-splayed, folded-out rim; thin wall	D rim 15.7
5	Bowl	401	3494	Surface, north of Drainage Pit 430	Colorless glass with bluish tinge; silver iridescence; sand deposits; upright, folded-out rim; thin, upright wall	D rim 9.8
6	Bowl/ beaker	437	4634, 4675	Irrigation system	Aquamarine glass; golden and silver iridescence; severe pitting; sand deposits; curving-in, rounded, thickened rim, flattened on top; rounded wall	D rim 8.0
7	Bowl/ beaker	401	3494	Surface, north of Drainage Pit 430	Greenish glass with yellowish tinge; sand deposits; curving-in, rounded, thickened rim; wall decorated with a yellowish brown wavy trail applied vertically	D rim 8.0
8	Bowl/ beaker	314	3140	Fill in courtyard of building, above Pit 420	Bluish green glass; sand deposits; curving-in, rounded, thickened rim and rounded wall; decorated with the beginning of an applied yellowish brown trail probably applied vertically	D rim 9.7
9	Bowl/ beaker	385	-	Building	Light greenish glass; silver iridescence; pitting; curving-in, rounded, thickened rim; decorated with a fused-in, yellowish brown horizontal trail on rim's edge and wall	D rim 10.5
10	Bowl	456	4685	Building	Colorless glass with light greenish tinge; silver iridescence; pitting; upright, rounded rim; thin tapering wall; two thin, turquoise, fused-in trails applied on the edge of the rim and below it; delicate workmanship	D rim 12.5
11	Bowl/ beaker	385	-	Building	Greenish glass; slight iridescence; sand deposits; concave base and beginning of wall with mold-blown, spaced, protruding vertical ribs	D base 7.0
12	Bowl/ beaker	385	-	Building	Light greenish glass; some sand deposits; rounded wall with mold-blown or tooled, protruding ribs	
13	Wineglass	401	3494	Surface, north of Drainage Pit 430	Light, greenish blue glass; sand deposits; slight iridescence; curving-in, rounded rim and thin vertical wall	D rim 6.0
14	Wineglass	361	3479	Oil press	Light, bluish green glass with blue trails; silver iridescence; slight pitting; sand deposits; upright, rounded rim, decorated on the edge and below with applied, blue horizontal trails; thin, upright wall	D rim 7.6
15	Wineglass	150	1181	Oil press	Greenish blue glass; silver iridescence; sand deposits; tubular base-ring with concave bottom (pontil scar 1.5 cm); short, solid, cylindrical stem; uneven tooled base	D base 4.7
16	Wineglass	426	4627, 4620	Irrigation system	Greenish blue glass; slight iridescence; sand deposits; short, oval, solid stem and thin wall	

Bowls or Beakers with Thickened, Curving-In Rims (Fig. 1:6–9).— Bowls or beakers with curving-in rims are very common in contexts of the Umayyad to Abbasid–Fatimid periods. The vessels are undecorated (Fig. 1:6), or decorated with applied wavy vertical (Fig. 1:7, 8) or horizontal (Fig. 1:9) trails. Vessel fragment No. 6 is characterized by a strong aquamarine color and a thickened rim. Undecorated bowls of this type were found in Umayyad contexts at Ramla (Gorin-Rosen 1999:11, Fig. 1:1, 2) and Busra (Wilson and Sa‘d 1984:75, 147 No. 562), as well as wider versions in Umayyad and Abbasid contexts at Ramla (Gorin-Rosen and Katsnelson 2005:104, Fig. 2:12; Gorin-Rosen 2010:215, 218, Pl. 10.1:1) and an Umayyad context at Bet She‘an (Hadad 2005:21, Pl. 1:26). Applied, wavy vertical trails similar to those of Nos. 7 and 8 are known in Umayyad contexts at Ramla (Gorin-Rosen 2010:215, 222–223, Pls. 10.2:2; 10.3:1). This type of decoration was also common on other types of vessels during the Umayyad period, such as a small bottle from Ramla (Gorin-Rosen 1999:11, Fig. 1:17). A bowl with applied horizontal trails, similar to No. 9, was found in an Umayyad context at Busra (Wilson and Sa‘d 1984:75, 147, No. 550), and others were found in Abbasid–Fatimid contexts at Bet She‘an (Hadad 2005:679–680).

Bowl with Upright, Rounded Rim and Fused-In Turquoise Trails (Fig. 1:10).— This bowl is characterized by a thin wall and carefully applied trails in a contrasting color. Decorated bowls and wineglasses with applied trails were very common during the Byzantine period (Katsnelson 1999:70*–71*, Fig. 2:10, 11), peaking during the late Byzantine–Early Umayyad period. This general shape resembles the fine workmanship of Byzantine bowls, but its fabric attests to a later date. An undecorated bowl with a similar rim was found in a late Byzantine context at Jerash (Meyer 1998:196–198, Fig. 8:L), in an Abbasid–Fatimid context at Bet She‘an (Hadad 2005:35–36, Pl. 27:534) and in Umayyad to Abbasid–

Fatimid contexts at Tiberias (Hadad 2008:167, Pl. 5.2:15).

Bowls or Beakers with Mold-Blown Ribs (Fig. 1:11, 12).— Vessels, mainly bowls, with mold-blown decoration, have a long tradition in the Roman and Byzantine periods. However, they were also very common during the Islamic period, with specific stylistic characteristics. The fragments from Kh. el-Thahiriya are adorned with thick, widely spaced rib decoration. This decorative style can be attributed to the Umayyad or Abbasid–Fatimid periods, according to the fabric and shape. Similarly decorated vessels were found in Umayyad contexts at Ramla (Gorin-Rosen 2010:246–247, Pl. 10.9:1) and Bet She‘an (Hadad 2005:21–22, Pl. 4:82), and others were found in Abbasid–Fatimid contexts at Ramla South (Jackson-Tal 2008:167, Fig. 6.112:1, 2) and Bet She‘an (Hadad 2005:36–37, Pl. 31:604–606).

Wineglasses (Fig. 1:13–16).— Wineglasses are most common in Byzantine and Umayyad contexts, and were widely used during the seventh century CE. Later, during the Abbasid period, they became less common (Hadad 2005:28) and were probably replaced by beakers and bowls with rounded, curving-in rims. The vessel in Fig. 1:13 has a curving-in rim that indicates a date in the Umayyad period, like the bowls with curving-in rims discussed above. This rim fragment could belong to a beaker with a flat or concave base, or to a wineglass with a footed base. A similar vessel was found in an Umayyad context at Busra (Wilson and Sa‘d 1984:75, 147, No. 563). The vessel in Fig. 1:14, with applied trails, has numerous parallels in the Byzantine and Early Islamic periods, for example in a Byzantine context at Ashqelon (Katsnelson 1999:70*–71*, Fig. 2:10, 11), and in a late Byzantine–Early Islamic context at Ḥorbat Ḥermeshit (Winter 1998:174, Fig. 2:11). The bases and stems in Fig. 1:15 and 16 are variations of footed wineglasses: No. 15 is a large, crude, deformed specimen, while

No. 16 is a smaller, delicate example. No exact parallel was found for No. 15, although bases similar to No. 16 were recovered in Umayyad contexts at Bet She'an (Hadad 2005:28, Pl. 21:407–409), Tiberias (Hadad 2008:174, Pl. 5.7:118) and Busra (Wilson and Sa'd 1984:75, 147, Nos. 556, 557, 560).

Bottles, Jars and a Jug

The Umayyad and Abbasid–Fatimid periods are characterized by an abundance of small bottles, some plain but most decorated, in contrast to the Byzantine period, when the opposite was the case. Another characteristic of the Early Islamic period is the appearance of small jars with folded-in rims and rounded bodies.

Bottles with Folded-In Rims (Fig. 2:17–21).—

This type of bottle, with a folded-in, flattened rim and a rounded body, is especially characteristic of the Umayyad period, although it is also known in later periods (Hadad 2005:23). The bottles from Kh. el-Thahiriya vary in size and fabric. The bottle in Fig. 1:17, the only intact vessel recovered at the site, is a simple, miniature bottle with a folded-in rim and pear-shaped body. The rims in Fig. 1:18 and 19 belong to the same type, while Nos. 20–21 are of larger vessels with more pronounced, flattened rims.

Similar bottles were found in Umayyad contexts at Ramla (Gorin-Rosen 2010:223, Pl. 10.1:13), Ḥorbat Ḥermeshit (Winter 1998:176, Fig. 2:14, 15), Bet She'an (Hadad 2005:23, Pls. 9:182–184; 10:185–190; 11:194, 195), Ḥammāt Gader (Cohen 1997:427–428, Pl. IX:1–8) and Tel 'Ira (Lehrer-Jacobson 1999:442–444, Fig. 13.1:1, 2).

Bottles with Applied Trails (Fig. 2:22–27).—

Trailed bottles represent a strong, long-lasting tradition beginning in the Byzantine period and continuing through the Umayyad period (and even later). The fragments found at Kh. el-Thahiriya vary in size, rim design (vertical or funnel-shaped, narrow or wide) and trail

decoration (single wavy, single or multiple horizontal).

Similar bottles with an applied wavy trail wound around the neck, were found in Umayyad contexts, e.g., at Ramla (Gorin-Rosen 1999: Fig. 1:9; 2010:224, Pls. 10.1:14; 10.2:8, 12, with further parallels therein) and Bet She'an (Hadad 2005:25, Pl. 13:267, 268). Bottles with applied horizontal trails were recovered in Umayyad contexts at Bet She'an and are the most common decorated bottles in the Byzantine and Umayyad periods throughout the country and beyond (Hadad 2005:24–25, Pls. 12:223–230; 13:235–241, 254, with further parallels therein). Later examples from the Abbasid–Fatimid periods are also known, for example, at Ramla South (Jackson-Tal 2008:176, Fig. 6.118:7, 8, with further parallels therein).

Bottles with Ridged Necks (Fig. 2:28–30).—

These bottles are well known throughout the country, beginning in the Umayyad period and becoming very common in the Abbasid–Fatimid periods. They show stylistic variations in the number of ridges, the thickness of the wall and the glass fabric.

Similar bottles were uncovered in Umayyad, and particularly in Abbasid–Fatimid, contexts at Ramla (Gorin-Rosen 1999: Fig. 2:10, 11; 2010:233, 235, Pl. 10.6:7–10, with further parallels therein), Ramla South (Jackson-Tal 2008:175, Fig. 6.117:8–10) and Bet She'an (Hadad 2005:24–25, 40–41, Pls. 11:204; 13:269; 38:762–779).

Bottle with Upright, Folded-In Rim (Fig. 2:31).—

Bottles with upright, folded-in rims are known since the Byzantine period. A similarly shaped bottle with a rounded rim was found in an Umayyad context at Bet She'an (Hadad 2005:27–28, Pl. 18:338).

Cylindrical Bottle (Fig. 2:32).—

This bottle is characterized by its upright, rounded rim, thick walls, cylindrical body and flat, thickened base. This type is known from Abbasid–Fatimid

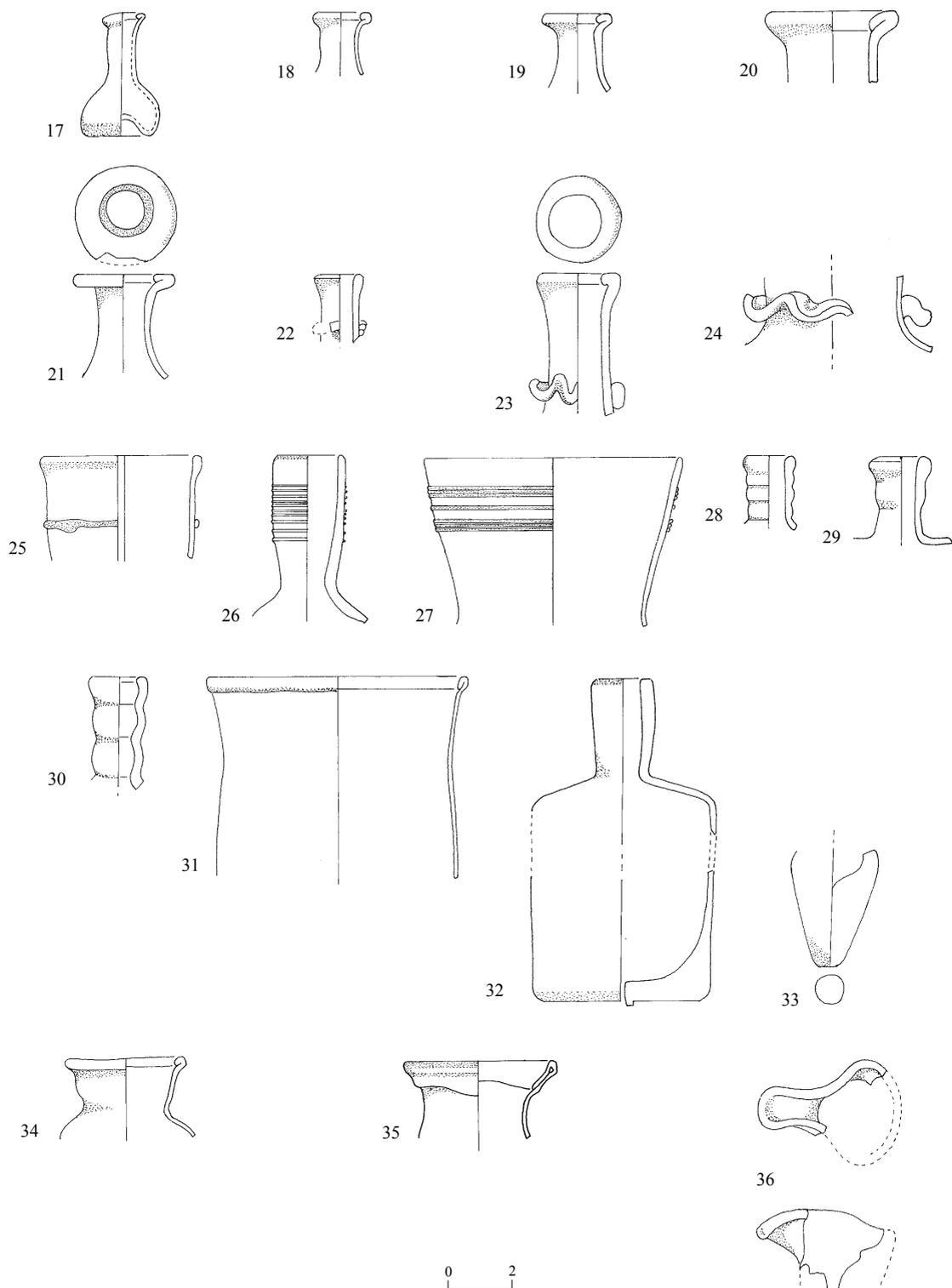


Fig. 2. Glass vessels: bottles, jars and a jug.

◀ Fig. 2

No.	Object	Locus	Basket	Context	Description	Dimensions (cm)
17	Bottle	459	4718	Building	Light greenish glass; thick layer of mud and silver iridescence; uneven, folded-in rim; cylindrical neck; small pear-shaped body; concave base	D rim 1.1 D base 2.0 H 3.7
18	Bottle	430	3570	Irrigation system	Light, greenish blue glass; slight lime and sand deposits; folded-in, flattened rim; cylindrical neck	D rim 1.7
19	Bottle	425	4615	Irrigation system	Bluish green glass; sand deposits; folded-in, flattened rim; short, cylindrical neck	D rim 2.0
20	Bottle	432	3578	Building	Greenish blue glass; sand deposits; uneven, folded-in rim; cylindrical neck; thick wall	D rim 4.0
21	Bottle	163	1276	Fill above Pit 183 in oil press	Bottle-green glass; sand deposits; bubbly; uneven, folded-in, flattened rim; cylindrical neck; thick wall	D rim 3.0
22	Bottle	437	4643, 4675	Irrigation system	Colorless glass with turquoise trail; black and silver crust; severe pitting; iridescence; sand deposits; upright, flattened rim; cylindrical neck with applied horizontal trail; poorly preserved	D rim 1.5
23	Bottle	394	3430	Oil press	Greenish blue glass; patches of enamel-like, rusty crust; iridescence; lime deposits; uneven, folded-in, flattened rim; cylindrical neck with applied, horizontal, wavy delicate trail	D rim 2.3
24	Bottle	401	3494	Surface, north of Drainage Pit 430	Bluish green glass; slight iridescence; sand deposits; cylindrical neck with applied, double, wavy horizontal trail; sloping shoulder	
25	Bottle	445	4650	Fill north of Drainage Pit 430, below L401	Light bluish glass with turquoise trail; iridescence; sand deposits; black impurities; blowing spirals; upright, rounded rim; cylindrical neck with applied horizontal turquoise trail	D rim 5.0
26	Bottle	445	4650	Fill north of Drainage Pit 430, below L401	Light bluish glass; iridescence; sand deposits; upright, rounded rim; cylindrical neck with thin, densely applied, horizontal turquoise trails; slight constriction in the lower neck; sloping shoulder; thick wall	D rim 2.0
27	Bottle	426	4627, 4620	Irrigation system	Light bluish glass with turquoise trails; silver iridescence; sand deposits; black impurities; upright, rounded rim; cylindrical neck with thin, sparsely applied, horizontal turquoise trails	D rim 8.0
28	Bottle	302	3045	Fill in courtyard of building	Light bluish glass; iridescence; pitting; sand deposits; upright, thick, rounded rim; short neck with four ridges	D rim 1.5
29	Bottle	459	4721	Building	Colorless glass; black and silver layers of crust; severe pitting; upright, thick, rounded rim; short, partially ridged neck and beginning of out-splayed shoulder; low-quality fabric, poorly preserved	D rim 2.0
30	Bottle	193	1317	Fill in oil press	Bluish green glass; iridescence; sand deposits; upright, thick, rounded rim; cylindrical neck with three wide ridges; thick wall	D rim 2.0

◀ Fig. 2 (cont.)

No.	Object	Locus	Basket	Context	Description	Dimensions (cm)
31	Bottle	425	3433, 3565	Irrigation system	Light bluish glass; slight iridescence; sand deposits; upright, wide, folded-in rim; wide, uneven, cylindrical neck	D rim 8.3
32	Bottle	459	4721	Building	Unidentifiable color due to thick weathering; thick, black, silver and rusty colored crust; iridescence; severe pitting; upright, thick, rounded rim; cylindrical neck; sloping shoulder; upright wall; thick, flat base thickened at perimeter with remains of crude pontil scar; fabric similar to No. 29	D rim 2.0 D base 5.5
33	Bottle	445	4650	Fill north of Drainage Pit 430, below L401	Greenish glass; thick black weathering; iridescence; pitting; broken, pear-shaped fragment, flattened on bottom side	
34	Jar	425	4615	Irrigation system	Light bluish glass; silver iridescence; sand deposits; funnel-shaped, folded-in rim; wide, short, curving-out neck	D rim 5.0
35	Jar	456	4685	Building	Yellowish brown glass; silver iridescence; pitting; folded-in, rounded rim; short, uneven, tapering neck; sloping shoulder	D rim 4.0
36	Jug	431	4593	Building	Light, greenish blue glass; silver iridescence; sand deposits; trefoil, folded-in rim (one complete tip); cylindrical neck	

contexts at Bet She'an (Hadad 2005:40, Pl. 36:705).

Conical Bottle (Fig. 2:33).—This fragment is too small to be further classified. However, it could be a small, pear-shaped bottle, like a similarly shaped bottle from an Abbasid–Fatimid context at Bet She'an (Hadad 2005:40–41, Pl. 38:765).

Jars with Folded-In Rims (Fig. 2:34, 35).—Jars with folded-in rims are known throughout a number of periods. The jars from Kh. el-Thahiriya are attributed to the Umayyad period based on their stratigraphy, shape (Hadad 2005:28, 45) and fabric. They represent two subtypes: No. 34 is characterized by a wide mouth and a deeply folded rim, while No. 35 is smaller, with a shorter neck that is folded at the edge of the rim.

Similar jars were recovered in Umayyad contexts at Kh. Ṭabaliya (Gorin-Rosen 2000b:87*–88*, Fig. 2:21), Bet She'an (Hadad 2005:28, Pl. 20:369–378) and Tiberias (Hadad

2008:173, Pl. 5.7:108, 109), and others in Abbasid–Fatimid contexts at Ramla (Gorin-Rosen 2010:237, 240–241, Pls. 10.6:13; 10.7:1a).

Trefoil-Rim Jug (Fig. 2:36).—Jugs with trefoil rims are known from the Roman through Islamic periods. The size of this fragment precludes any certain dating.

Decorated Vessels

Islamic glass vessels were decorated in various ways, including the application of trails, tooling, pinching, painting and mold blowing. Some of the decoration types present at the site are discussed below.

Applied Trail Decoration (Fig. 3:37).—Vessels decorated with applied trails were very common from the Roman to the Islamic periods. This fragment seems to represent a pinched, bifurcated pattern, also called 'spectacle' design, that was very common in the country

during the late Byzantine and Umayyad periods on a variety of vessels (Gorin-Rosen 2010:225). Vessels decorated with a similar design were recovered in Umayyad contexts at Ramla (Gorin-Rosen 2010:225–226, Pl. 10.2:13, 14), Kh. Ṭabaliya (Gorin-Rosen 2000b:88*, Fig. 2:22, with further parallels therein) and Bet She'an (Hadad 2005:25, Pl. 14:284, 285, 287).

Pinched Decoration (Fig. 3:38, 39).— This is a very common decoration on bowls, beakers, bottles and jars during the late Byzantine and Early Islamic periods. The two fragments of pinched vessels illustrated here present horizontal pinching (No. 38) and vertical pinching (No. 39), and can be attributed to the Umayyad period based on their fabric and parallels. Similarly decorated vessels were found in Umayyad contexts at Ramla (Gorin-Rosen 1999:11, Fig. 1:15, 16, 18), Kh. Ṭabaliya (Gorin-Rosen 2000b:86*, Fig. 2:12, 13), Ḥorbat Ḥermeshit (Winter 1998:176, Fig. 1:4, with further parallels therein) and Bet She'an (Hadad 2005:21, Pl. 4:78–81).

Tonged Decoration (Fig. 3:40).— This decoration was very common during the Abbasid–Fatimid periods, but is also known in Umayyad contexts (Pollak 2003:165, Fig. 1:15). A pair of tongs was used to decorate open vessels, creating a pattern on both sides of the wall. The fragment in Fig. 3:40 was decorated with vertical dotted lines and an alternating oval pattern, a very common design. Vessels with tonged decoration were uncovered in Abbasid–Fatimid contexts at many sites in Israel, especially Bet She'an (Hadad 2005:37, Pls. 31:608–622; 32:623–644; 33:645–648, with further references therein), Tiberias (Hadad 2008:168, Pl. 5.3:33, 34), Ramla (Gorin-Rosen and Katsnelson 2005:101, 103, Fig. 1:2; Gorin-Rosen 2008:49; 2010:242–243, Pl. 10.8:1–5) and Ramla South (Jackson-Tal 2008:167, Fig. 6.113:4).

Luster-Painted Decoration (Fig. 3:41).— The technique of luster painting on glass vessels, known from the Abbasid period and

popular throughout the Islamic world (Kröger 1995:114), makes use of pigments containing metals (silver and copper), which become metallic colorants when fired (for further details, see Lehrer-Jacobson 1993:87–88). The earliest vessel decorated with luster paint was discovered in Egypt, bearing an inscription from the second half of the eighth century CE. Examples of vessels decorated in this technique are known in Israel in Abbasid–Fatimid contexts, such as a complete beaker from Zur Natan (Lehrer-Jacobson 1993:83–90) and wall fragments from Ramla (Gorin-Rosen 2008:49, Color Pl. 6), Tiberias (Hadad 2008:169–170, Fig. 5.2, with further references therein) and Nessana (Harden 1962:79–80, Pl. 20:18, 19).

Mold-Blown Decoration (Fig. 3:42–44).— Mold-blown decoration, one of the most common techniques used to adorn glass vessels, was widely used during the Roman and Byzantine periods and continued into Islamic and medieval times. The fragments here probably belong to bottles of different shapes and sizes that were decorated with a very simple, vertical ribbed pattern. This type of decoration was extremely common during the Byzantine period (see Katsnelson 1999:75*–78*, Fig. 4:9–16), although similar mold-blown vessels were also found in Umayyad and Abbasid–Fatimid contexts at Ramla (Gorin-Rosen and Katsnelson 2005:111, Fig. 3:36; Gorin-Rosen 2010:232, Pl. 10.5:7, 8), Caesarea (Pollak 2003:165, Fig. 1:11), Bet She'an (Hadad 2005:27, 41–42, Pls. 16:320; 39:828, 829) and Tiberias (Hadad 2008:172, 174, Pls. 5.6:95, 96; 5.7:111).

Oil Lamps

Stemmed Lamps (Fig. 3:45–47).— These three fragments belong to the lower parts of stemmed lamps with hollow (No. 45), beaded (No. 46) or solid (No. 47) stems. Hollow-stemmed and beaded-stemmed types (Nos. 45, 46) are known throughout the country and are typical of the late Byzantine and Umayyad periods, but also continue into the Abbasid–Fatimid periods.

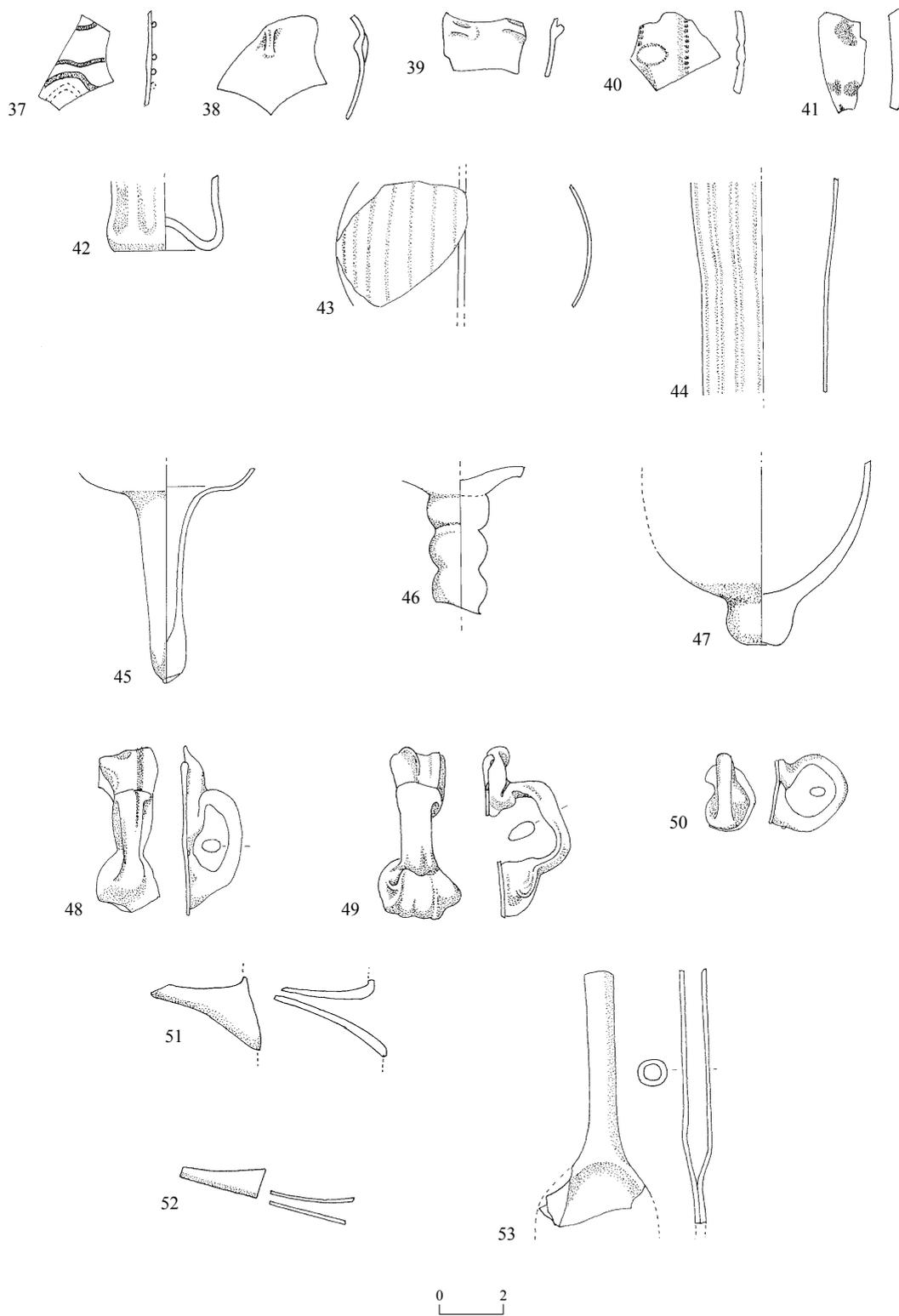


Fig. 3. Glass artifacts: decorated fragments, lamps, alembics and a spoon.

◀ Fig. 3

No.	Object	Locus	Basket	Context	Description	Dimensions (cm)
37	Applied trail decoration	437	4654	Irrigation system	Colorless glass with greenish blue tinge and turquoise trails; iridescence; sand deposits; upright wall with applied turquoise trails pinched to create a spectacle design	
38	Pinched decoration	401	3494	Surface, north of Drainage Pit 430	Light, greenish blue glass; iridescence; sand deposits; thin, rounded wall with horizontal pinching	
39	Pinched decoration	437	4654	Irrigation system	Light bluish glass; slight iridescence; sand deposits; thin, rounded wall with vertical pinching	
40	Tonged decoration	408	3492	Surface in oil press	Greenish blue glass; silver and shiny iridescence; slightly rounded wall; tonged decoration of circular design bordered by vertical dotted lines	
41	Luster-painted decoration	361	3345	Oil press	Greenish blue glass; sand deposits; crude fragment; slightly curving, uneven wall with brown luster painting that could be an inscription	
42	Mold-blown decoration	437	4654	Irrigation system	Light bluish glass; iridescence; sand deposits; concave, pushed-in with high kick base; upright wall decorated with shallow, mold-blown, vertical ribs	D base 3.2
43	Mold-blown decoration	456	5693	Building	Colorless glass with light bluish tinge; iridescence; thin, rounded wall decorated with shallow, mold-blown, vertical ribs that are more prominent on the inside, possibly due to secondary blowing	
44	Mold-blown decoration	504	5006, 5007	Building	Light bluish glass; silver iridescence; sand deposits; wide cylindrical neck decorated with shallow, mold-blown, vertical ribs; uneven with blowing spirals	
45	Lamp	468	4704	Floor of Room 459 in building	Bluish green glass; silver iridescence; sand deposits; hollow, cylindrical stem with knocked-off base (pontil 1 cm)	
46	Lamp	437	4646	Irrigation system	Bluish green glass; silver iridescence; sand deposits; pitting; solid, beaded, thick stem; beginning of thick, rounded bowl	
47	Lamp	120	1073	Refuse heap	Colorless glass with yellowish tinge; thick, black, rusty crust; iridescence; severe pitting; small, uneven knob base; rounded wall; low quality fabric	D base 2.0
48	Lamp handle	139	1172	Fill above quarry, south of refuse heap	Bluish green glass with red streaks; sand deposits; iridescence; pitting; upright, rounded rim; thin, upright wall; uneven, drawn and folded strap handle	
49	Lamp handle	504	5006, 5007	Building	Greenish blue glass with turquoise trails; silver iridescence; sand deposits; black impurities; pitting; flaring, rounded rim with applied, fused-in turquoise trails; thin vertical wall; uneven, drawn and folded strap handle	
50	Lamp handle	430	3570	Irrigation system	Light bluish glass; iridescence; sand deposits; small, delicate loop handle; thin, slightly rounded wall	

◀ Fig. 3 (cont.)

No.	Object	Locus	Basket	Context	Description	Dimensions (cm)
51	Alembic	437	4654	Irrigation system	Bluish green glass; iridescence; sand deposits; thin, uneven spout, thickening near the wall	
52	Alembic	388	3407	Oil press	Colorless glass with light bluish green tinge; iridescence; sand deposits; thin spout with small opening	
53	Spoon	387	3403	Building	Greenish blue glass; iridescence; sand deposits; hollow, cylindrical handle; beginning of flattened, pinched spoon	

Both types were found in a Byzantine context at Ashqelon (Katsnelson 1999:79*–80*, Fig. 5:5, 8, with further references therein), in Umayyad and Abbasid–Fatimid contexts at Ramla (Gorin-Rosen 2010:221–222, 252–253, Pl. 10.1:10) and Bet She’an (Hadad 2005:28–29, 46–47, Pls. 22:424–442; 23:443–452; 45:958–971), and in Abbasid–Fatimid contexts at Ramla South (Jackson-Tal 2008:181, Fig. 6.120:6, 9). Hollow-stemmed lamps were found in Umayyad contexts at Ḥorbat Ḥermeshit (Winter 1998:176, Fig. 2:9, 17), Kh. Ṭabaliya (Gorin-Rosen 2000b:91*–92*, Fig. 3:34–37) and Busra (Wilson and Sa’d 1984:75, 147, No. 573). Beaded-stemmed lamps were found in Umayyad to Abbasid–Fatimid contexts at Tiberias (Hadad 2008:174, Pl. 5.8:124, 125). Base No. 47, poorly preserved and badly pitted, probably belongs to a rare type of solid-stemmed oil lamp. Parallels were found in late Byzantine–Umayyad contexts at Ashqelon (Katsnelson 1999:80*, Fig. 5:6, 7) and Umm al-Rasas (Aliata 1991:400, Fig. 19:5, 6).

Suspended Lamp Handles (Fig. 3:48, 49).— These handles may have belonged to oil lamps that were suspended from the ceilings of public buildings or private dwellings. Such handles were found in Umayyad contexts at Bet She’an (Hadad 2005:28, Pl. 21:392). Uneven, folded handles like No. 49 are known from an Umayyad context at Kh. Ṭabaliya (Gorin-Rosen 2000b:89*, Fig. 3:27, 28).

Handle of Cup-Shaped Lamp (Fig. 3:50).— This rounded loop handle probably belonged to a cup-shaped, one-handled lamp. Similar handles are known from Umayyad and Abbasid–Fatimid contexts at Ramla (Gorin-Rosen and Katsnelson 2005:112, Fig. 4:40; Gorin-Rosen 2010:253, Pl. 10.11:4) and from Abbasid–Fatimid contexts at Bet She’an (Hadad 2005:46, Pl. 44:936–939, with further references therein).

Alembics (Fig. 3:51, 52)

These vessels are extremely common in the Islamic period, and were probably used for medicinal distillation, chemical functions or some uncertain domestic functions, perhaps to produce rose water or date wine (Kröger 1995:186, with a detailed discussion therein). Alembics are found throughout the country in Umayyad and Abbasid–Fatimid contexts. Similar fragments were found in Umayyad contexts at Ramla (Gorin-Rosen 1999:12, Fig. 1:19–21; 2008:47, Color Pl. 4; 2010:227, Pl. 10.2:18–21), in Umayyad and Abbasid–Fatimid contexts at Bet She’an (Hadad 2005:29, 47–48, Pls. 23:453–455; 46:979–981, with further references therein), and in Abbasid–Fatimid contexts at Ramla South (Jackson-Tal 2008:181, Fig. 6.120:14, 15).

Spoon (Fig. 3:53)

This spoon was blown to create a long-necked vessel, then tooled to create the spoon-bowl

and handle (for a detailed description, see Spaer 2001:266, No. 641, Roman example). Glass spoons are usually found in museum collections, of unknown provenance and assigned a general date within the Roman period (first–third centuries CE). A similar spoon was found in a Late Roman tomb at Tīrat Ha-Carmel (unpublished)³ and another is in the Dobkin Collection in the Israel Museum (Spaer 2001:266, No. 641, with further references therein). The spoon from Kh. el-Thahiriya is attributed to the Abbasid–Fatimid periods based on stratigraphic considerations.

Windowpanes

Windowpanes are known since the first century CE, although the earliest large assemblages date to the Byzantine period. Windowpanes were made in various techniques, such as blowing a cylinder or a globe, which was then cut and flattened (for a detailed discussion of techniques and chronology, see Meyer 1989).

The windowpanes from Kh. el-Thahiriya are divided, according to shape, into rounded windows (the so-called bull's-eye type, Fig. 4:54–59), and square windows (Fig. 4:60, 61). The rounded type predominated, showing a variety of diameters and rim designs (folded, curving-up, thickened), and the glass color is aquamarine or bluish green. The importance of the group from this site lies in its diversity, attesting to the common types used in the region, and the large number of colored windowpanes discovered at a site of this size, perhaps suggesting a local production center in the vicinity. Windowpanes of the Umayyad and Abbasid–Fatimid periods are characterized by a variety of colors, as opposed to the Byzantine period, when the dominant color was greenish-blue. At Kh. el-Thahiriya, several windows are aquamarine, but this is even more pronounced at Khirbat al-Mafjar, from the second half of the eighth century CE, where a large variety of colored glass was found, the most dominant colors being purple and greenish yellow, although turquoise and bottle-green were also present (Brosh 1988:247–248).

Rounded Windows (Fig. 4:54–59).— Rounded windows with folded rims (Nos. 54, 57–59) are the most common type in the country, found mainly in Byzantine contexts. Similar windowpanes were discovered in late Byzantine contexts at Kh. Ṭabaliya (Gorin-Rosen 2000b:93*, Fig. 3:40) and Yavne Yam (Vitto 1998:111–112, Fig. 4:1, 2, with further references therein), and another parallel was found in an Umayyad context at Bet She'an (Hadad 2005:30, Pl. 24:477, 478).

Windows with rounded rims (Nos. 55, 56) have not been widely published; however, they belong to the same group of rounded windows with folded rims and are similar in technique and date. Similar windows with rounded rims were recovered in Byzantine contexts in South Sinai (Gorin-Rosen 2000a:238–240, Fig. 3).

Square Windows (Fig. 4:60, 61).— Similar windowpanes in the region were found mainly in Byzantine contexts, for example in Jerusalem (Saller 1957:326), Kh. Ṭabaliya (Gorin-Rosen 2000b:92*, Fig. 3:38, 39), Caesarea (Peleg and Reich 1992:160) and Shave Ziyyon (Barag 1967:69–70). Thinner square windows were discovered in Umayyad and Abbasid–Fatimid contexts at Bet She'an (Hadad 2005:30, 49, Pls. 24:468–476; 49:1016–1019).

SUMMARY AND CONCLUSIONS

The glass vessels unearthed in this excavation represent well-known types of tableware, some plain and others decorated in various techniques. They are dated in accordance with the other archaeological finds to the late Byzantine, and mainly to the Early Islamic period (Umayyad and Abbasid–Fatimid periods). The predominant vessel types are bowls and bottles produced by free blowing. The simple vessel shapes and the considerable number of lamp bowls and windowpanes support the identification of this site as a rural public building (Kogan-Zehavi and Hadad, this volume).

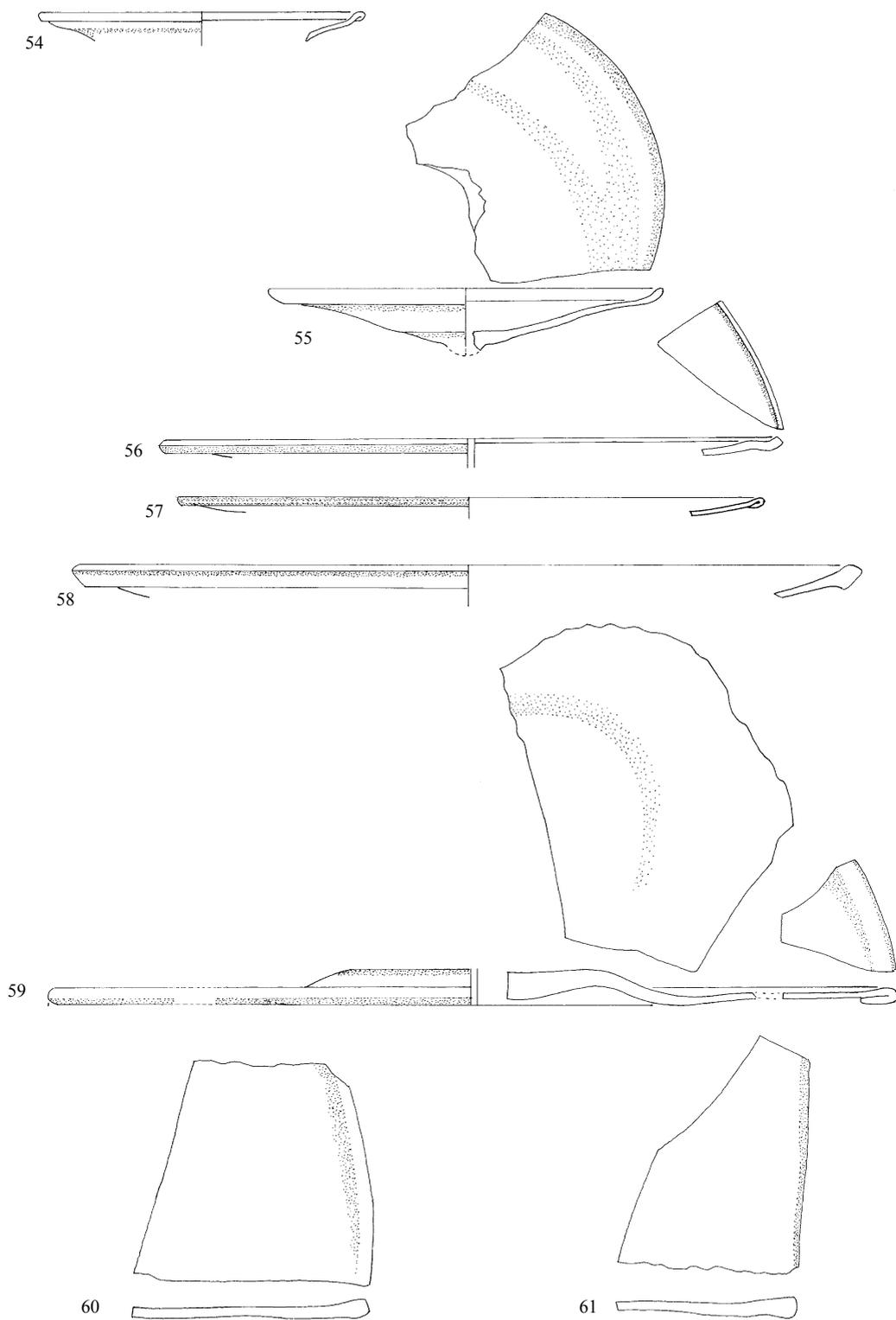


Fig. 4. Glass windowpanes.

◀ Fig. 4

No.	Object	Locus	Basket	Context	Description	Dimensions (cm)
54	Rounded window	397	3439	Surface, in building	Colorless glass with a greenish blue tinge; silver iridescence; sand deposits; rounded, folded-out rim and slightly slanting wall; could belong to either a very small shallow bowl or a small, rounded window	D 10.0
55	Rounded window	322	3129	Plastered surface	Bluish green glass with yellow streaks; silver shiny iridescence; sand deposits; bubbly; rounded, slightly curving rim and convex wall, thickened in the center and broken where there are pontil remains	D 12.1
56	Rounded window	340	3283	Plastered surface	Aquamarine glass; sand deposits; bubbly; black impurities; rounded, slightly curving rim and thin, flattened wall; this fragment probably belongs to an oval windowpane	D ~19.0
57	Rounded window	304	3053	Plastered surface	Colorless glass with a greenish blue tinge; silver iridescence; rounded, folded-out rim and thin, flattened wall	D 18.0
58	Rounded window	437	4643, 4675	Irrigation system	Aquamarine glass; silver, shiny iridescence; sand deposits; pitting; thickened, folded-out, pressed, triangular-shaped rim; flattened wall	D 24.0
59	Rounded window	340	3205	Plastered surface	Bluish green glass; sand deposits; bubbly; rounded, folded-out rim; thickened, concave wall fragment; tiny fragment with beginning of pontil scar	D 26.0
60	Square window	340	3205	Plastered surface	Bluish green glass; silver iridescence; sand deposits; black impurities; rounded, uneven edge and flattened wall	
61	Square window	304	3046	Plastered surface	Light bluish green glass; silver, shiny iridescence; sand deposits; rounded, uneven edge on one side, a broken edge on the other; flattened, uneven wall	

NOTES

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² These include Caesarea (Pollak 2000; 2003), Ḥammāt Gader (Cohen 1997; Lester 1997) and Tiberias (Lester 2004a; 2004b; Hadad 2008).

³ I wish to thank the excavator of Tīrat Ha-Carmel, Shalom Yankelevitch, for permission to mention this unpublished find.

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