

BYZANTINE- AND OTTOMAN-PERIOD POTTERY ASSEMBLAGES FROM RABBI YEHUDA ME-RAGUZA STREET, YAFO (JAFFA)

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INTRODUCTION

The excavations conducted on Rabbi Yehuda Me-Raguza Street, Yafo (see Arbel and Rauchberger, this volume), yielded mostly Ottoman-period material, alongside a fair amount of Byzantine-period ceramics.

THE FINDS

THE BYZANTINE PERIOD (Figs. 1, 2)

Mostly bowls, basins and storage jars were found. The bowls consisted of imported wares from North Africa, Turkey and Cyprus, while the basins and storage jars seem to have been locally produced with the exception of two amphorae.

Bowls

African Red Slip Ware

The most common group of North African Fine Wares is that of the African Red Slip bowl, which, according to Hayes (1972:13), was produced from the end of the first to the sixth century CE. While these bowls feature the characteristics of fine ware, they are coarser than the Sigillata Wares of the previous periods and their slip is not as glossy. African Red Slip wares were widely distributed throughout most of the Mediterranean region and were imitated in local workshops.

ARS Form 94 (Fig. 1:1).— This fragment belongs to a small- to medium-sized bowl with a rounded body and a short, everted flanged rim, flat on top and rolled below. Hayes classifies this type as ARS Form 94, remarking that it is uncommon and dates to the fifth–sixth centuries CE (Hayes 1972:148).

Late Roman C Ware

The second-most frequent group of fine wares in the Mediterranean region is Late Roman C (LRC) Ware, or Phocaean Ware, produced in Asia Minor. This ware is related to ARS; it too is a fine ware covered with a shiny slip, but the slip is thinner than that of the ARS ware. It was common in the area from the fifth to the seventh century CE and perhaps later (for a detailed discussion, see Hayes 1972:323–324). This ware comprises fewer forms in contrast to ARS ware.

LRC Form 3 (Fig. 1:2, 3).— This type, with a flanged vertical rim and a low or false foot, was the standard imported bowl form during the Byzantine period. The rim in Fig. 1:2 is triangular, the rim in Fig. 1:3—thickened, with a groove. The rim and flange come in a variety of shapes that do not necessarily have a chronological significance. Moreover, these bowls are usually decorated

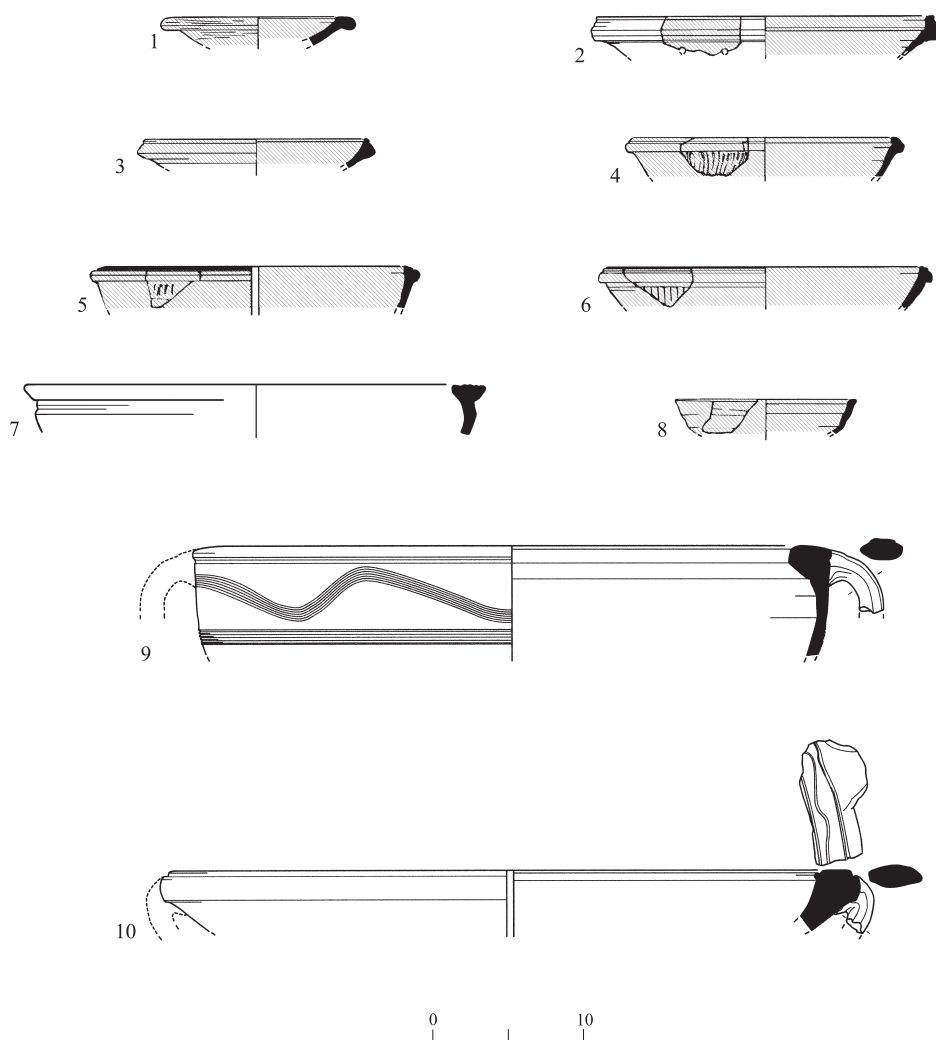


Fig. 1. Byzantine-period pottery: bowls and basins.

◀ Fig. 1

No.	Vessel (Type)	Locus	Basket	Dimensions (cm)	Description
1	Bowl (ARS BL)	434	4091/6	Diam. 14 Rim 17%	Reddish yellow to yellowish red ware (5YR 6/6–5/6) with very few very small round white inclusions; surface: slip 2.5YR 5/6 red
2	Bowl (LRC BL)	605	6035	Diam. 18 Rim 8%	Light brown ware (7.5YR 6/4) with many small round and angular white inclusions; surface: 5YR 6/4 light reddish brown
3	Bowl (LRC BL)	526	5173	Diam. 14 Rim 15%	Reddish yellow ware (5YR 6/6); surface: slip 5YR 5/6 yellowish red
4	Bowl (CRS BL)	386	3268	Diam: 16 Rim 7.5%	Light red ware (2.5YR 6/8); surface: slip 2.5YR 5/8 red
5	Bowl (CRS BL)	618	6143	Diam. 10 Rim 5%	Light red ware (2.5YR 6/6); surface: 7.5YR 6/4 light brown
6	Bowl (CRS BL)	617	6144	Diam. 18 Rim 7%	Reddish yellow ware (5YR 6/6) with few small angular black inclusions; surface: 5YR 5/6 yellowish red, burnished
7	Bowl (CRS BL)	526	5158	Diam. 30 Rim 6%	Reddish yellow ware (5YR 6/6); surface: 5YR 6/6 reddish yellow
8	Bowl (FBW BL)	520	5151	Diam. 12 Rim 8%	Light red ware (2.5YR 6/6) with thick gray core and few small angular white inclusions; surface: 2.5YR 7/6 light red, burnished
9	Basin (BAS)	128	1114	Diam. > 40 Rim c. 25%	Yellowish red ware (5YR 5/6) with few small angular white inclusions; surface: slip 5YR 7/6 reddish yellow
10	Basin (BAS)	429	4090	Diam. 38 Rim 6%	Reddish yellow ware (5YR 6/6) with few small angular white inclusions; surface: 5YR 7/6 reddish yellow

with stamps that often combine incised grooves and rouletting. This form replaced the previous, simpler LRC Form 1, with a simple round rim, and was in use from the fifth until at least the seventh century CE (for an extensive discussion, see Hayes 1972:329–338).

Cypriot Red Slip Ware (Fig. 1:4–7)

The third group of imported fine-ware bowls in the Eastern Mediterranean during the Byzantine period is the so-called Late Roman D Ware, or Cypriot Red Slip Ware (CRS), with production sites on the island of Cyprus. This ware was common from the fourth to the eighth century CE. This fine ware is well-fired and breaks cleanly, best characterized by the color of its clay, which ranges from yellow to orange to various shades of brown to dark brown and purple (for a detailed description, see Hayes 1972:371–372).

CRS Form 2 (Fig. 1:4–6).— This bowl has flaring walls decorated with rouletting and a round grooved rim. The base is usually flat. It corresponds to ARS Form 84 and is often found at sites in the Eastern Mediterranean. It can be dated to the late fifth–sixth centuries CE (Hayes 1972:373–376).

CRS Form 7 (Fig. 1:7).— This large bowl is a variant with a flat heavy triangular rim, deep grooves on its top and rouletting and nicks on the body. It corresponds to Hayes' CRS Form 7 and is dated to the second half of the sixth–early seventh centuries CE (Hayes 1972:378–379).

Fine Byzantine Ware (FBW)

Gichon (1974), who studied this ware, provided the name for this group of vessels. The bowls, and other vessels, such as jugs and juglets, are made of fine, thin ware, which is usually hard fired. The surfaces are frequently burnished and there is often an incised wavy line under the rim. Magness (1993:165–171), who studied the FBW from the Jerusalem area, proposed Jerusalem as its production center. Only few fragments of this ware have been found in Yafo.

FBW Form 1A (Fig. 1:8).— This common FBW bowl has a round body decorated with an incised wavy line and a simple round or slightly pinched rim. These bowls make their initial appearance in the mid-sixth century CE and continue into the late seventh–eighth centuries (for a discussion, see Magness 1993:193–195).

Basins

Large Basin with Thickened Round Rim (Fig. 1:9)

These basins feature a thickened round rim. The body is frequently decorated with combed wavy and/or straight lines and there are loop handles like our example here. They were common during the Byzantine and Umayyad periods in the south of the country and many have been found at Nesher-Ramla (see Vincenz 2010:158–159; 2018: Figs. 5.11:4; 5.14:9; 5.19:30–39; 5.26:4; 5.27:13; 5.29:12, 14; 5.31:7).

Large Basin with Flat Rim (Fig. 1:10)

This basin might well be a variation of the previous type, with a flat heavy rim and loop handles. The rim is decorated with an incised wavy line and two grooves. A dating to the late Byzantine or Umayyad period is suggested. A basin with a similar rim, likewise decorated with an incised line but with a deeper body, was found at Caesarea (Johnson 2008:162, No. 736).

Storage Jars and Amphorae

Bag-shaped and Gaza storage jars, as well as imported amphorae, were identified at the site.

Bag-Shaped Jars (Fig. 2:1–5)

All the jars of this type have a bag-shaped, usually ribbed body—sometimes with light ribbing and sometimes, deeper ribbing. All have loop handles, large or small, positioned

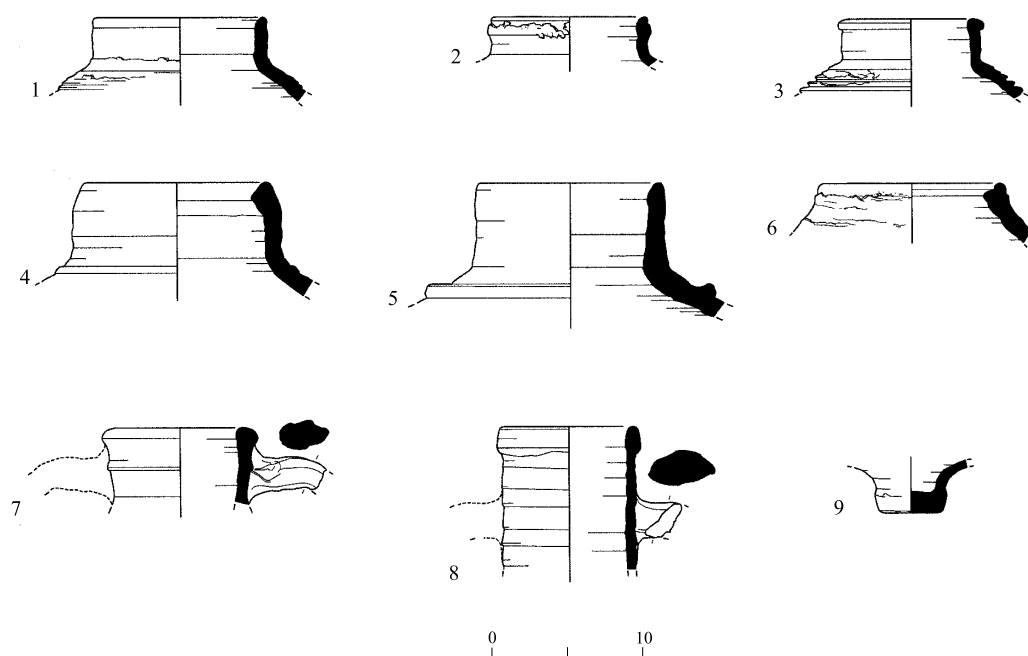


Fig. 2. Byzantine-period pottery: storage jars, amphorae and a stopper.

No.	Vessel (Type)	Locus	Basket	Dimensions (cm)	Description
1	Storage jar (SJ)	526	5158	Diam. 10 Rim 10%	Light red ware (2.5YR 6/6) with few medium-sized angular and round white inclusions; surface: 10YR 8/4 very pale brown
2	Storage jar (SJ)	526	5158/2	Diam. 10 Rim 15%	Light red ware (2.5YR 6/6) with few angular and round white inclusions; surface: 5YR 7/6–7/8 reddish yellow
3	Storage jar (SJ)	616	6150	Diam. 8 Rim 27%	Light red ware (2.5YR 6/6) with few small angular white inclusions; surface: 5YR 7/6 reddish yellow
4	Storage jar (SJ)	110	2062/2	Diam. 12 Rim 25%	Reddish yellow ware (5YR 6/6) with few small angular inclusions; surface: 7.5YR 7/6 reddish yellow
5	Storage jar (SJ)	108	1018	Diam. 12 Rim 25%	Pink ware (5YR 7/4) with few small round and angular white inclusions; surface: slip 10YR 7/4 very pale brown
6	Storage jar (Gaza SJ)	620	6134	Diam. 8 Rim 14%	Reddish yellow ware (5YR 6/6) with few small angular white inclusions; surface: 7.5YR 7/4–6/4 pink to light brown
7	Amphora (LR 1 AMP)	203	2000	Diam. 10 Rim 27%	Yellowish red ware (5YR 5/6) with few small round white inclusions; surface: 5YR 7/6 reddish yellow
8	Amphora (LR 1 AMP)	426	4172	Diam. 9 Rim 60%	Reddish yellow ware (5YR 6/6) with many small angular and round white and black inclusions; surface: 10YR 7/3 very pale brown
9	Stopper	429	4185	Base diam. 4 Base 100%	Brown ware (7.5YR 5/4) with few small round white inclusions; surface: 7.5YR 6/4 light brown

on the upper part of the body. The main differences in this jar type are manifested in the shapes of the neck and the rim. A common jar type (Fig. 2:1, 2) has a rather short neck with a slightly everted and pinched rim, often with clay accretions on the body or rim. Figure 2:1 has a ridge at the bottom of the neck. The type has been found in Byzantine contexts in Nesher-Ramla (Vincenz 2010: Pl. 8.3:4; 2018: Fig. 6.1.4:10, 11) and in Caesarea (Johnson 2008:178, Nos. 1033, 1034), and in late Byzantine contexts at Lod (Haddad 2013: Fig. 9:5). Another type, with a bulging neck, an externally thickened rim (Fig. 2:3), as well as clay accretions on the body, has been found in a late Byzantine context at Ramot Nof, Be'er Sheva' (Ustinova and Nahshoni 1994: Fig. 4:5) and at Lod (Haddad 2013: Fig. 9:7) and Nesher-Ramla (Vincenz 2018: Fig. 6.4.3:3). Two large jars with higher necks and a pronounced ridge at the bottom of the neck (Fig. 2:4, 5) were coil-made and probably served as permanent storage vessels. In Ramla, they were called *zir* (Arnon 2007:66, Fig. 13:5). They can be dated to the late Byzantine and Early Islamic periods.

Gaza Jar (Fig. 2:6)

Gaza jars are well-known and well-researched. They were studied by Mayerson (1994) and Majcherek (1995). Complete examples from various sites show that they have a cigar-shaped body with ribbing below the shoulders, two small loop handles and a pointed or rounded omphalos base. Many Gaza jars were found in a Byzantine warehouse near Ashqelon (Fabian and Goren 2001); analysis revealed that they indeed contained resined wine, thereby proving that they were used for the famous Gaza wine that was produced in the area of Gaza–Ashqelon during the Byzantine period (Fabian and Goren 2001:213). Thus, it seems that this warehouse was used for storing the jars prior to shipping them to places throughout the Mediterranean world. Pottery workshops that produced such jars were first discovered in the Ashqelon area by Israel (1995b). Later, large-scale excavations were conducted in that area and in the so-called 'wine-city' (Israel 1995a), where several large industrial winepresses were discovered next to large workshops.

Several fragments of Gaza jars were found in the Rabbi Yehuda Me-Raguza excavations. All are made of the characteristic coarse ware with clay accretions on the upper part of the body and the rim. They are neckless and the rim is beveled and grooved internally. Our example dates to the sixth–seventh centuries (see Majcherek 1995:168–169).

Imported Amphorae (Fig. 2:7, 8)

These amphora fragments belong to Type LRA 1, which was common during the Byzantine period, from the fourth to the seventh century CE (Alfen 1996:191; Tomber 1999:301, 313, 314). This amphora has a cylindrically shaped body, a long and rather narrow neck and an everted rounded rim. Two heavy handles drawn from mid-neck sometimes have grooves on the upper side. These amphorae were apparently produced in the region of Antioch and distributed throughout the Mediterranean (for a discussion and bibliography, see Johnson 2008:105). The rim profiles of our two examples are slightly different, but both find good

parallels at Caesarea (Johnson 2008: Nos. 1257, 1258, 1264). An amphora like No. 7 was found at Ramot Nof, Be'er Sheva' (Ustinova and Nahshoni 1994: Fig. 4:15, 16).

Lid (Fig. 2:9)

This lid fragment of coarse ware is shaped like a bowl. It is unclear how it was used; possibly, for permanent sealing, a cloth was wrapped around the base and inserted into the rim/neck of the jar and sealed with wax or bitumen. For temporary closing, the lid was placed upside-down on top of the jar rim, and thus could easily be removed. This type of lid was very common during the Byzantine and Early Islamic periods. It has been found at Nesher-Ramla (Vincenz 2010: Pl. 8.13:6), Shiqmona (Calderon 2010: Fig. 8:81) and Caesarea, where there are variations (Patrich and Abu Shaneb 2008:322, Nos. 194, 196–199, 204–206).

THE OTTOMAN PERIOD (Figs. 3–13)

The material presented here was studied using the methodology developed for other reports on Ottoman-period material from Yafo (see Vincenz, this volume). While studying the ceramic material from the excavations at the Military Compound in Yafo (the Qishle),¹ the author created a typology that was later expanded with additions of types from other excavations, for example, the French Hospital,² Ha-Zorfim Street,³ and the Harbor and related buildings.⁴ Much of this report is based on that typology and new types have been added where necessary.

Much of the research on the porcelain and hard-paste vessels was conducted with the help of on-line resources. Comparative pieces, in shape or in decoration, are mentioned. Since most of those items come from auctions or collectors' websites, the dating listed there is usually not considered. Instead, to date the material, the history of their manufacture was studied and, when available, resources such as excavation reports were used.

Glazed earthenware vessels from archaeological excavations in various parts of the former Ottoman Empire, such as Turkey, Greece and the Balkans have been studied. Black Gaza Ware was investigated by Israel (2006), who created a useful typology for many vessels; however, fine-tuning is necessary to date the various forms. This has been attempted by the author in the reports from Yafo, where the assemblages are very well-dated. Yafo also provides an opportunity to study Coarse Ware vessels, which rarely appear in excavation

¹ The excavation was directed by Yoav Arbel of the IAA (Permit No. A-5037); the report awaits publication.

² The excavations were directed by Amit Re'em and Yossi Elisha of the IAA (Permit Nos. A-5522, A-5170, A-5389); the pottery report awaits publication.

³ The excavation was directed by Yoav Arbel of the IAA (Permit Nos. A-5378, A-5577); the report is in preparation.

⁴ Excavations were directed by Elie Haddad and Alexander Glick of the IAA (Permit Nos. A-5198, A-5888); the report awaits publication.

reports and they have been included in the typology. As excavations are continuously conducted in Yafo, many new types continue to be added and with time, more research on coarse wares and their provenance and distribution will hopefully be done.

Gaza Ware

Although black or dark gray Gaza Ware is usually associated with Ottoman sites, its origin and first appearance are still under dispute. Gibson, Ibbs and Kloner (1991) ascribed the Gaza Ware from Saṭaf to the seventeenth century CE, but Rosen and Goodfriend (1993) push the date of its appearance back to the sixteenth century. Israel (2006) dates it from the seventeenth to the twentieth century. Gaza Ware vessels were found in the Qishle compound in Yafo and have been discussed at length (Vincenz, in press). Thus, only parallels and dates are mentioned here.

Basins or Kneading and Mixing Bowls (Fig. 3:1–3)

Large basins or kneading and mixing bowls are usually associated with the preparation of bread (Israel 2006:183). These bowls are deep, with a ledge- or arched-rim, ranging in diameter from around 30 to over 50 cm. They are usually undecorated but sometimes have incised decorations on the rim and body. These basins are very common, and their production probably began in the eighteenth century, continuing into the beginning of the twentieth century.

Type J-GAZA-BAS-1 (Fig. 3:1).— Large deep basin with a horizontal ledge rim with a groove, corresponding to Israel's Mixing Bowl Subtype 1 (Israel 2006: Fig. 184).

Type J-GAZA-BAS-1A (Fig. 3:2).— This smaller version, with a round ledge or arched rim, does not appear in Israel's typology. It is possibly a variant, with a diameter of 22 cm.

Type J-GAZA-BAS-1B (Fig. 3:3).— This large deep basin, with a short horizontal ledge rim and a narrow groove, corresponds to Israel's Mixing Bowl Subtype 2 (Israel 2006: Fig. 188).

Mortar

Type J-GAZA-MRT-1 (Fig. 3:4).— Pottery mortars were fashioned after brass or porcelain mortars, which were expensive and thus not available for the common household; they were also made of Gaza Ware. They were used for grinding coffee, spices and other substances. These mortars were found in the Qishle excavations (Vincenz, in press: Type J-GAZA-MRT).

This type has a round body and a hammerhead rim with characteristic flat vertical handles. Complete vessels have a ring base. They are rather small in diameter, from 16 cm on, and correspond to Israel's Mortar Subtype 3, which has eight handles (Israel 2006:198, Fig. 198) and appears from 1700 to 1950.

Jar for Carrying Water/Jarra

Type J-GAZA-JR 6 (Fig. 3:5).— This is the most common type of jar until today, used for carrying water from a well. These jars have a bag-shaped body with a short bulging neck, sometimes decorated with a thumb-impressed band. The rim is beveled with a ridge below and two band handles are drawn from the bottom of the neck upward and down to the upper shoulder. They correspond to Israel's *jarra* Subtype 7 (Israel 2006: Fig. 58).

Pouring Vessel/Kuz

Type J-GAZA-JUG-2A (Fig. 3:6).— The *kuz* is a one-handed jug with a narrow neck, flaring at the top, which was used for pouring liquids; this example has a triangular rim. These jugs have an ovoid body and a ring or a flat base. Some have spouts and others have a filter inside the neck, to keep out insects. They can be either decorated or undecorated. This type of *kuz* does not appear in Israel's typology but was found in Yafo in the Qishle excavations (Vincenz, in press: Fig. 5A4:4).

Pouring Jugs/Ibrik

The *brik* is a two-handed jug that was also used for pouring liquids. As the *kuz*, the flaring neck facilitated pouring. These jugs have an ovoid body and a ring or a flat base; usually two handles are drawn from the base of the neck to which a long spout is attached. They

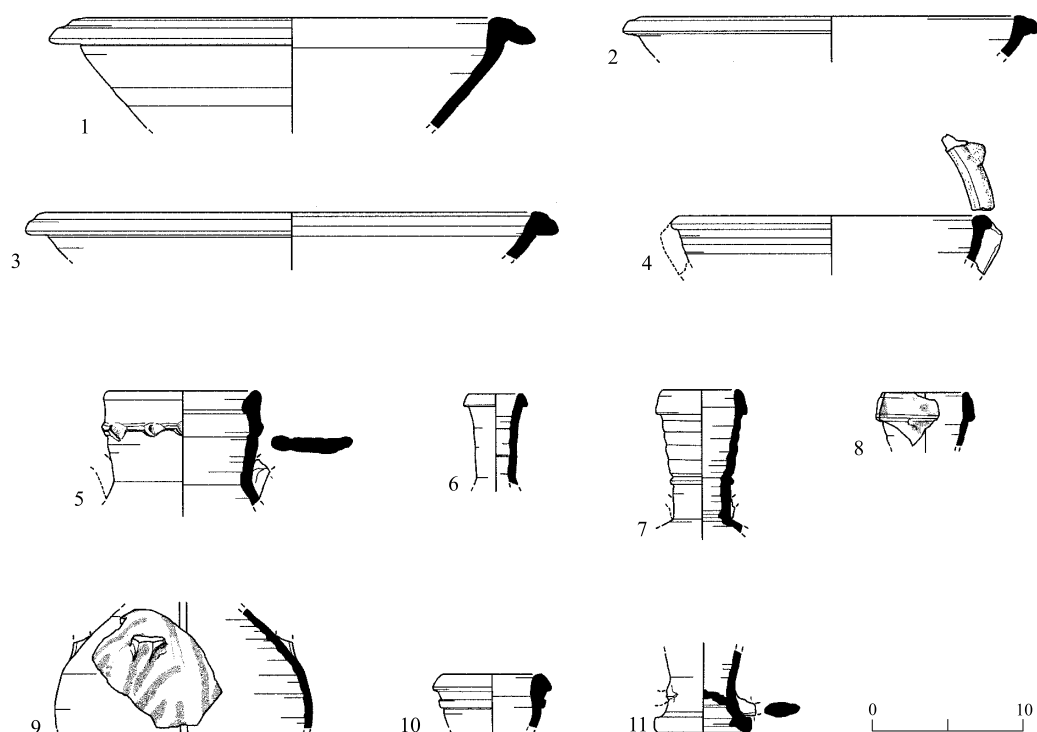


Fig. 3. Ottoman-period pottery: Black Gaza Ware.

◀ Fig. 3

No.	Vessel (Type)	Locus	Basket	Dimensions (cm)	Description
1	Basin (J-GAZA-BAS-1)	601	6019	Diam. 28 Rim 16%	Gray ware (2.5Y 5/1) with few small angular and round white inclusions; surface: 2.5Y 5/1 gray
2	Basin (J-GAZA-BAS-1A)	702	7003	Diam. 22 Rim 11%	Dark gray ware (10YR 4/1) with few small angular white inclusions; surface: 10YR 4/1 dark gray
3	Basin (J-GAZA-BAS-1B)	642	6186	Diam. 32 Rim 6%	Gray ware (5YR9 6/1) with few small angular white inclusions; surface: 10YR 5/1 gray
4	Mortar (J-GAZA-MRT-1)	601	6482	Diam. 16 Rim 10%	Gray ware 5YR 6/1 with few small round white inclusions; surface: 10YR 4/1 dark gray with lighter slip
5	Jar (J-GAZA-JR-6)	640	6769	Diam. 10 Rim 21%	Dark gray ware (10YR 4/1) with few small round white inclusions; surface: 2.5Y 4/1 dark gray
6	Jug (J-GAZA-JUG-2A)	912	9012	Diam. 3.5 Rim 100%	Gray ware (10YR 6/1) with few small round black inclusions
7	Jug (J-GAZA-JUG-5A)	501	5001	Diam. 6 Rim 15%	Gray ware (2.5Y 6/1) with few small round white inclusions; surface: 10YR 4/1 dark gray
8	Jug (J-GAZA-JUG-5B)	711	7030	Diam. 4 Rim 15%	Gray ware (10YR 5/1) with few small angular white inclusions; surface: 10YR 4/1 dark gray with bright pink painted decoration
9	Jug (J-GAZA-JUG-5B)	705	7023	n/a	Dark gray ware (10YR 4/1) with few large angular white inclusions; surface: 10YR 4/1 dark gray with white slip painted decoration with bright pink on top
10	Jug (J-GAZA-JUG-9B)	707	7019	Diam. 6 Rim 19%	Gray ware (10YR 6/1) with few very small round white inclusions; surface: 2.5Y 4/1 dark gray
11	Base of jug? (J-GAZA-?)	643	6187	Base diam. 6.5 Base 100%	Gray ware (2.5Y 5/1) with few small angular white inclusions; surface: 2.5Y 4/1 dark gray

often have a filter inside the neck to keep out insects. They are sometimes decorated with painted patterns.

Type J-GAZA-JUG-5A (Fig. 3:7).— Undecorated jug with a ribbed neck and a folded inverted round rim, corresponding to Israel's *ibrik* Subtype 8 (Israel 2006: Fig. 137). It dates from the eighteenth to the twentieth century.

Type J-GAZA-JUG-5B (Fig. 3:8, 9).— This jug is like the above example but is decorated with painted pink patterns. The pink painted decoration seems to indicate a later date,

probably in the early twentieth century, as it was found in the same contexts as other pieces from excavations in Yafo, from this time span.

Type J-GAZA-JUG-9B (Fig. 3:10).— This jug, also of the *ibrik* family, has a triangular rim, rounded on top, and a decorative ridge under the rim. Although no identical form exists in Israel's typology, it seems to be a variant of his *ibrik* Subtype 10 (Israel 2006: Fig. 139).

Type J-GAZA-? (Fig. 3:11).— This base appears to be part of a jug with a hollow base and two handles, attached from the base. Possibly part of an antilia jug, the handles would have served to tie the rope and hold it in place.

Coarse Ware

Not all vessels during the Ottoman period were made of Black Gaza Ware. Coarse Ware vessels, similar in shape to the Black Gaza Ware vessels, were produced from other clays as well. Research on these vessels is just beginning, and perhaps, because they are so common and come in a large variety of shapes, their study is more difficult and less appealing than that of other vessel classes. The large amount and variety of Coarse-Ware vessel forms in Yafo provided a unique opportunity to create a typology, encompassing vessels from the Qishle compound, Ha-Zorfim Street, Ruslan Street, the French Hospital, the Harbor and now, from Rabbi Yehuda Me-Raguza Street.

Bowl/Kashkul

Type J-BL-2 (Fig. 4:1).— This large bowl seems to be the most common Coarse Ware bowl during the Ottoman period. It has a deep body with a sharply inverted pinched rim. Small-sized examples have been made of Gaza Ware as well, as this type of Coarse Ware clay, for example at the Qishle compound (Vincenz, in press: Figs. 6A1:1, 6B1:1) and at Kefar Gabirol (Vincenz 2019: Fig. 4:1, 2).

Jars (Fig. 4:2, 3)

Although most of the jars produced in the coastal region were made of Black Gaza Ware, a variety of jars made from other, local clays, was also produced.

Type J-JR-3 (Fig. 4:2).— A common type in Yafo, this bag-shaped jar has a thick round rim, decorated below it with a band of thumb impressions (piecrust). This type has been found in the Qishle compound (Vincenz, in press: Fig. 6B1:4) and on Ha-Zorfim Street (Vincenz, forthcoming [b]: Fig. 20:3).

Type J-JR-6F (Fig. 4:3).— This jar or *jarra*, which served for carrying water from a well, has an everted round rim with a short external flange and a bulging neck and handles that start at the base of the neck. This well-known type, of Black Gaza Ware, is related to Israel's

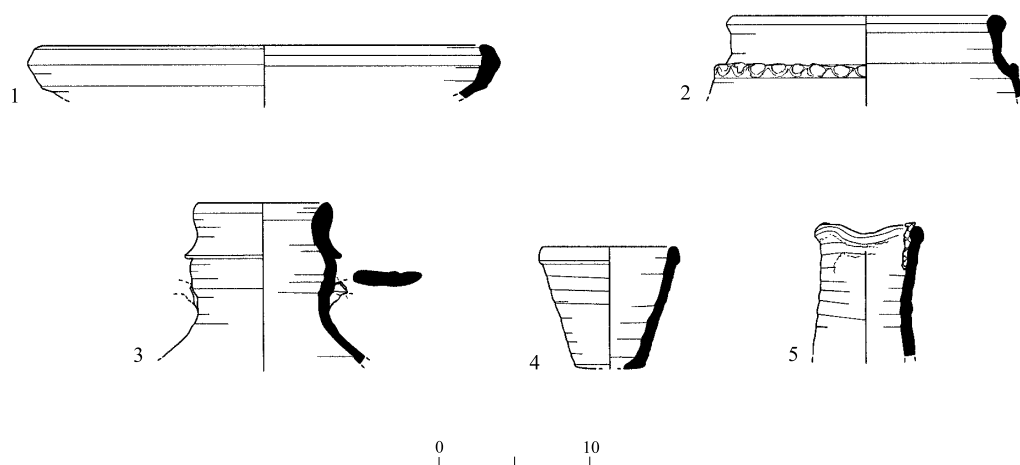


Fig. 4. Ottoman-period pottery: Coarse Ware.

No.	Vessel (Type)	Locus	Basket	Dimensions (cm)	Description
1	Bowl (J-BL-2)	643	6187	Diam. 28 Rim 11%	Light red ware (2.5YR 6/6) with thick gray core and few large angular white and few medium-sized angular white inclusions; surface: fired to buff 2.5Y 8/2–7/2 pale yellow to light gray
2	Jar (J-JR-3)	710	7029	Diam. 18 Rim 18%	Light red ware (2.5YR 6/6) with thick gray core and few small round and medium-sized angular white inclusions; surface: slip 7.5 YR7/3 pink
3	Jar (J-JR-6F)	830	8091	Diam. 9 Rim 100%	Light red ware (2.5YR 6/6) with thick gray core and few small round white inclusions
4	Flower pot	636	6168	Diam. 10 Rim 100% H 9	Reddish yellow ware (5YR 6/6) with few small round white inclusions; surface: 7.5YR 6/4 light brown
5	Tubular vessel	700	7001	Diam. c. 8 Rim 100%	Light red ware (2.5YR 6/6) with few small round white and occasional large angular white inclusions; surface: fired to buff 10YR 7/2–7/3 light gray to very pale brown

jarra Subtype 4 (Israel 2006: Fig. 55) and should probably be dated from the eighteenth to the beginning of the twentieth century.

Flowerpot (Fig. 4:4)

This cup-shaped vessel seems to be a fragment of a flowerpot, given the hole in the base. It has a round rim and a flat base. A similar vessel was discussed by Israel (2006: Fig. 295).

Tubular Vessel (Fig. 4:5)

This tubular vessel might have been a water pipe or used in the construction of parapets, in which case it was called *dshame*, as described by Israel (2006:294–307, Fig. 339). The rim is distorted, and it bears traces of iron.

Glazed Earthenware Vessels

In addition to Black Ware and various types of Coarse Wares are glazed earthenware vessels, found abundantly in Ottoman-period sites. Several types could be distinguished, their provenance traced to Turkey, Greece and Italy. Most of the vessels are tableware, but glazed cooking pots and utilitarian vessels have also been identified.

Çanakkale Wares (Fig. 5:1–5)

Çanakkale Ware has been found in abundance at Yafo. This group was produced on the Asian coast of the Dardanelles (or Hellespont), mainly by Greek-speaking potters, from the eighteenth century until their expulsion in 1922–1923 (Hayes 1992:268–270). Many examples of this ware were found at the Qishle excavations in Yafo (Vincenz, in press: Type J-ÇAN, and see therein for a detailed discussion of the type).

Type J-ÇAN-BL-3A (Fig. 5:1–3).— The most frequent bowl in this group is rather large and deep with an upturned everted hooked ledge rim. The decoration is applied on a white

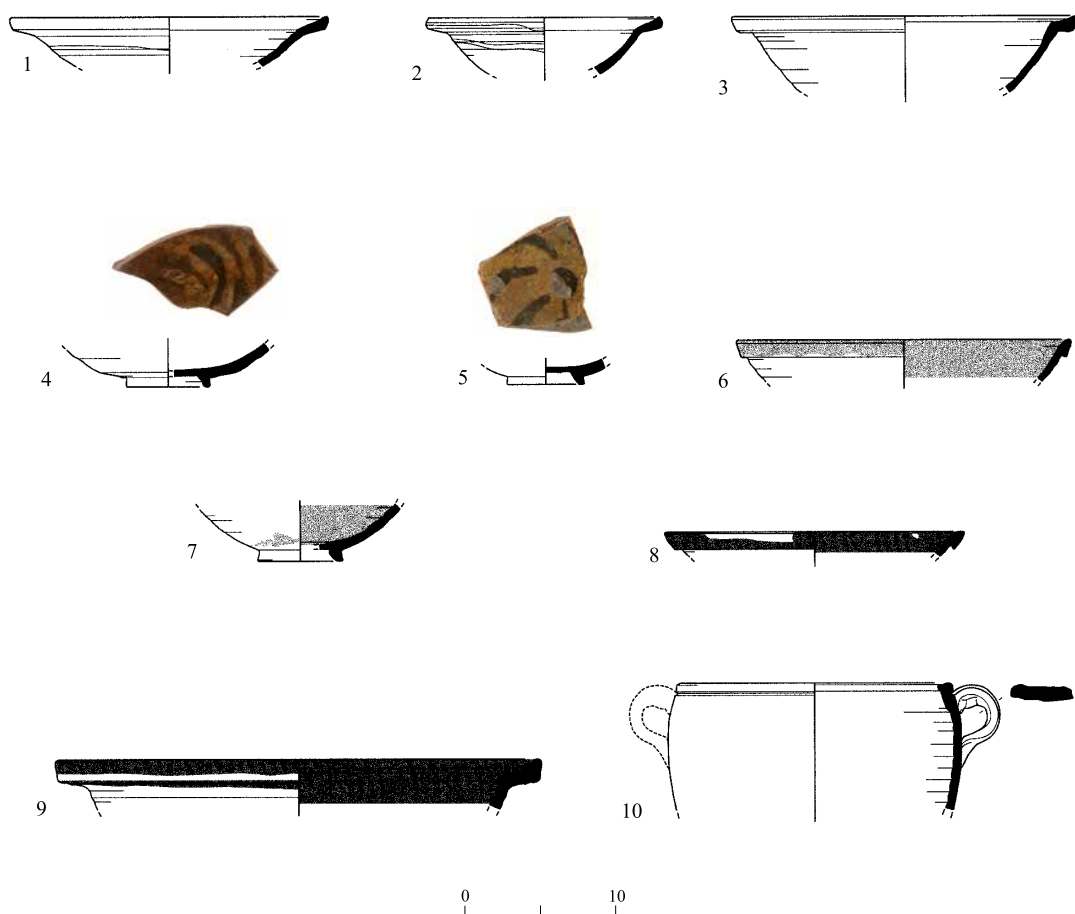


Fig. 5. Ottoman-period pottery: Glazed Wares.

◀ Fig. 5

No.	Vessel (Type)	Locus	Basket	Dimensions (cm)	Description
1	Bowl (J-ÇAN-BL-3A)	603	6035	Diam. 22 Rim 13%	Yellowish red ware (5YR 5/6) with few small round white inclusions; int. surface white-slipped with painted decorations in manganese under transparent glaze
2	Bowl (J-ÇAN-BL-3A)	630	6157	Diam. 20 Rim 9%	Yellowish red ware (5YR 5/6) with few small round white inclusions; int. surface white-slipped with painted decorations in manganese under transparent glaze
3	Bowl (J-ÇAN-BL-3A?)	640	6169	Diam. 24 Rim 26%	Light red ware (2.5YR 6/6) with few small angular white and black inclusions; int. surface white-slipped under transparent glaze
4	Bowl (J-ÇAN-BL-3B)	804	8014	Base diam. 5	Red ware (2.5YR 5/8) with few small angular white inclusions; int. surface white-slipped under transparent yellow glaze
5	Bowl (J-ÇAN-BL-3B)	TS	8000	Base diam. 5.5	Red ware (2.5YR 5/8) with few small angular and round white inclusions; int. surface white-slipped under transparent yellow glaze
6	Plate (J-DID-PL-1A)	638	6180	Diam. 22 Rim 8%	Light red ware (2.5YR 6/6) with few small round white inclusions; int. surface white-slipped with painted decoration under bright green transparent glaze
7	Plate (J-DID-PL-1)	629	6165	Base diam. 6 Base 27%	Light red ware (2.5YR 6/6) with few small angular white inclusions; int. surface white-slipped with painted decoration under bright green transparent glaze
8	Plate (J-DID-PL-2A)	629	6171	Diam. 22 Rim 9%	Light red ware (2.5YR 6/6) with few small angular white inclusions; int. surface white-slipped with painted decoration under bright yellow transparent glaze
9	Bowl (J-SLIP-BL-1B)	643	6187	Diam. 28 Rim 7%	Light red ware (2.5YR 6/6) with few small round white inclusions; int. surface white-slipped with painted under yellow transparent glaze
10	Cooking-pot (J-VAL-CP-4)	813	8043	Diam. 17 Rim 14%	Red ware (2.5YR 5/8) with many small angular and round white inclusions; int. and rim bright brown glaze

slip in black or manganese and consists of floral patterns. It is covered with a transparent colorless glaze. Parallels for these bowls can be found on the website of the Suna-Inan Kiraç Collection (*Suna Kiraç Museum: Çanakkale Wares*). They are dated to the first half of the nineteenth century (see, for example, Tekkök 2011:227, Fig. 3 left, with additional references therein).

Type J-ÇAN-BL-3B (Fig. 5:4, 5).— These bowls are basically the same shape as those above, but covered with a transparent yellow glaze. For parallels, see the website of the Suna-Inan Kiraç Collection (*Suna Kiraç Museum: Çanakkale Wares*). They are dated to the first half of the nineteenth century.

Drip-Painted Wares (Fig. 5:6–8)

These drip-painted and glazed vessels are common in Ottoman-period sites throughout the region. One of the production centers for this ware was at Didymoteicho, in Thrace (Megaw and Jones 1983:244–245, Pl. 29.3, 4). This city had a long pottery-production tradition, beginning in the thirteenth–fourteenth centuries CE until the twentieth century (François 1995:213; Vroom 2003:184). In 1980, Bakirtzis excavated several kilns that produced this ware (Bakirtzis 1980:150–152) and retrieved kiln wasters that he dated to the early nineteenth century. Another production site for this drip-painted ware, situated in the vicinity of Didymoteicho, was Ganos (Armstrong and Günsenin 1995). The same type was also produced at Çanakkale (Tekkök 2011: Figs. 2a; 2b). In the excavations in Istanbul of the Saraçhane Mosque, this type of ware was found together with Kütahya and Çanakkale wares and was dated by Hayes to 1860–1880 (Hayes 1992:271, 276, Pl. 51:h).

This group of vessels was found in large amounts at the Qishle excavations in Yafo and has been discussed at great length (Vincenz, in press: Type J-DRIP). Petrological analysis has shown that many of the Yafo vessels were not made in Didymoteicho, but in some not yet identified production center. This center mixed salt or brackish water into the clay and thus, was probably situated near the sea. A possible production center could thus have been Çanakkale, but further analysis is necessary to confirm this.⁵

Type J-DRIP-PL-1A (Fig. 5:6).— This plate has flaring walls and an externally folded rim creating a small flange. The interior is decorated with a white drip-painted decoration and covered with a bright green transparent glaze. Similar bowls made in Çanakkale were published by Tekkök (2011: Figs. 2a; 2b). Some were found at Kefar Gabirol (Vincenz 2019: Fig. 3:1, 2) and date to the end of the nineteenth century.

Type J-DRIP-PL-1 (Fig. 5:7).— This ring base belongs to a green-glazed bowl of the drip-painted type.

Type J-DRIP-PL-2A (Fig. 5:8).—As the plate in Fig. 5:6 above, this vessel has flaring walls and a folded rim, creating a small flange. It too is decorated with a drip-painted pattern in white slip covered with a transparent bright yellow glaze. Similar bowls have been published by François (1995: Pls. I–V, VI:1, 3–lower sherd, 4, 5). They were also found at Kefar Gabirol (Vincenz 2019: Fig. 3:3, 4). They date to the end of the nineteenth century.

⁵ Petrological investigation was carried out by Anastasia Shapiro of the IAA. The results were presented by the author at the 12th Congress AIECM3 on Medieval and Modern Period Mediterranean Ceramics held in Athens, October 21–27, 2018, and will be published in the proceedings of the congress.

Slip-Painted Bowl

Type J-SLIP-BL-1B (Fig. 5:9).— Slip-painted bowls of different shapes were found in the Qishle excavations (Vincenz, in press: Fig. 2D). They feature slip-painted decorations covered with a transparent colorless or colored glaze and seem to be related to the Drip-painted bowls—perhaps produced somewhere in the same region. This bowl has a thick everted ledge rim ending in a hook and is decorated with white slip-painted bands under a yellow transparent glaze.

Vallauris Cooking Pot

As mentioned above, even cooking pots were imported. The major production center was in southern France, in the village of Vallauris. A shipwreck off the coast of Dor carried a cargo of Vallauris cooking pots, which attests to the export of these vessels to this region (Kahanov, Cvikel and Wielinski 2012: Fig. 9). Several of these pots from Dor bear potters' stamps from Vallauris (Kahanov, Cvikel and Wielinski 2012: Fig. 10). A variety of Vallauris cooking pots were uncovered in the Qishle excavations (Vincenz, in press: Fig. 2E:1–4, and see therein an extensive discussion).

Type J-VAL-CP-4 (Fig. 5:10).— This fragment belongs to a cooking pot with a high body and wide handles and a thumb impression on top; in Vallauris, they are called *marmites hautes*. The interior and the rim are covered with a brown transparent lead glaze. The example here corresponds to No. 13 from Vallauris (see Petrucci 1999:308), with a diameter of 17 cm and a capacity of 4.5 liters. The largest cooking pots have four handles(!), all with a deep thumb impression. The vessels date to the end of the nineteenth–beginning of the twentieth centuries.

Porcelain and Hard-Paste Vessels

During the Ottoman period, particularly in the eighteenth and nineteenth centuries, porcelain and hard-paste vessels prevail. This is due to the discovery of the porcelain production technique by Ehrenfried Walter von Tschirnhaus and Johann Friedrich Böttger in 1708, allowing porcelain to be produced on a large scale at an affordable cost. Prior to that date, only the Chinese could produce porcelain, and thus they were luxury items affordable by the very wealthy. Initially, large quantities were produced in Germany for the courts and for nobility, but by the end of the eighteenth century, when additional countries discovered the production of 'real porcelain,' the markets were flooded with porcelain vessels that were exported throughout the world. Attempts were made to produce porcelain imitations using different ingredients than *kaolin*, resulting in the manufacture of cheaper vessels. In Europe, *kaolin* is found in Germany, France, England and in the Czech and Slovak republics, which were the main producers of such vessels. Porcelain vessels were produced mainly for tableware, such as dinner, coffee and tea sets, but *kaolin* was also used for the manufacture of figurines, decorative vases and other items.

Transfer Printed Wares (Fig. 6:1–12)

During the eighteenth century, Chinese Blue-on-White porcelain was fashionable, leading to the development of a technique that imitated it, called transfer print. Initially, the technique was used to produce vessels with blue decoration like the Chinese vessels. In 1753, an Irish engraver, John Brooks, invented a new technique for decorating vessels using an engraved copper plate (Savage and Newman 2000:296): a copper plate was filled with ink, which was then transferred to paper and pressed on the vessel. At first, mainly monochrome decorations were applied; later, in the nineteenth century, polychrome decorations also became common. Vessels with monochrome decorations were sometimes decorated with additional colors, even with gilding (Savage and Newman 2000:296). The decorations were inspired by Chinese decorations such as floral, vegetal, geometric and landscape motifs.

Transfer Ware Plate in Blue-on-White with Willow Pattern

Type J-TW-PL-1 (Fig. 6:1).— Ledge rim of large plate decorated with a cobalt blue Chinese pattern—the so-called Willow Pattern. The rim pattern shown here is of the Standard Willow Pattern (Rogers 2004:10). Many manufacturers produced vessels with this pattern, for example Copeland & Garrett at Spode Works in Stoke-on-Trent, Staffordshire (Rogers 2004:94). Plates decorated with the Willow Pattern and with the same rim patterns as those shown here were also produced by other manufacturers, for example by William Adams & Sons (Rogers 2004:16–18). The pattern on the rim dates it to the second half of the nineteenth century.

Transfer Ware Plate in Blue-on-White with Wild Rose Pattern

Type J-TW-BW-PL-1 (Fig. 6:2).— This ledge rim fragment, belonging to a large plate, was decorated with blue transfer pattern, the well-known Wild Rose Pattern, which was used in English factories during the first half of the nineteenth century. It was produced around 1825–1830 in Staffordshire factories such as one belonging to Thomas Fell of Newcastle-upon-Tyne. This decoration was so popular that it was produced by other manufactures, for example Dutch Petrus Regout of Maastricht and the Boch brothers in La Louvière, Belgium (Cosyns and Bragard 2008:20–21). A stamp related to this pattern appears in Fig. 10:6.

Transfer Ware Plate in Blue-on-White with Absalom's Pillar Pattern

Type J-TW-BW-PL-8 (Fig. 6:3).— This plate fragment consists of a low ring base decorated with a blue transfer pattern called Absalom's Pillar, also known as Absalom's Tomb, Corinth or Corinthian. It was created by Wedgwood in 1811, inspired by a painting by Luigi Mayer called 'The Sepulchre of Absalom' (*Blue and White Museum: Absalom's Pillar*; Neale 2005:61, bottom right).

Transfer Ware Plate in Blue-on-White Decorated in Flow Blue Technique (Fig. 6:4, 5)

Around 1820, English factories began producing Flow Blue, a transfer-printed ware with a blurred effect, achieved by adding a cup of lime or ammonia to the kiln during the firing

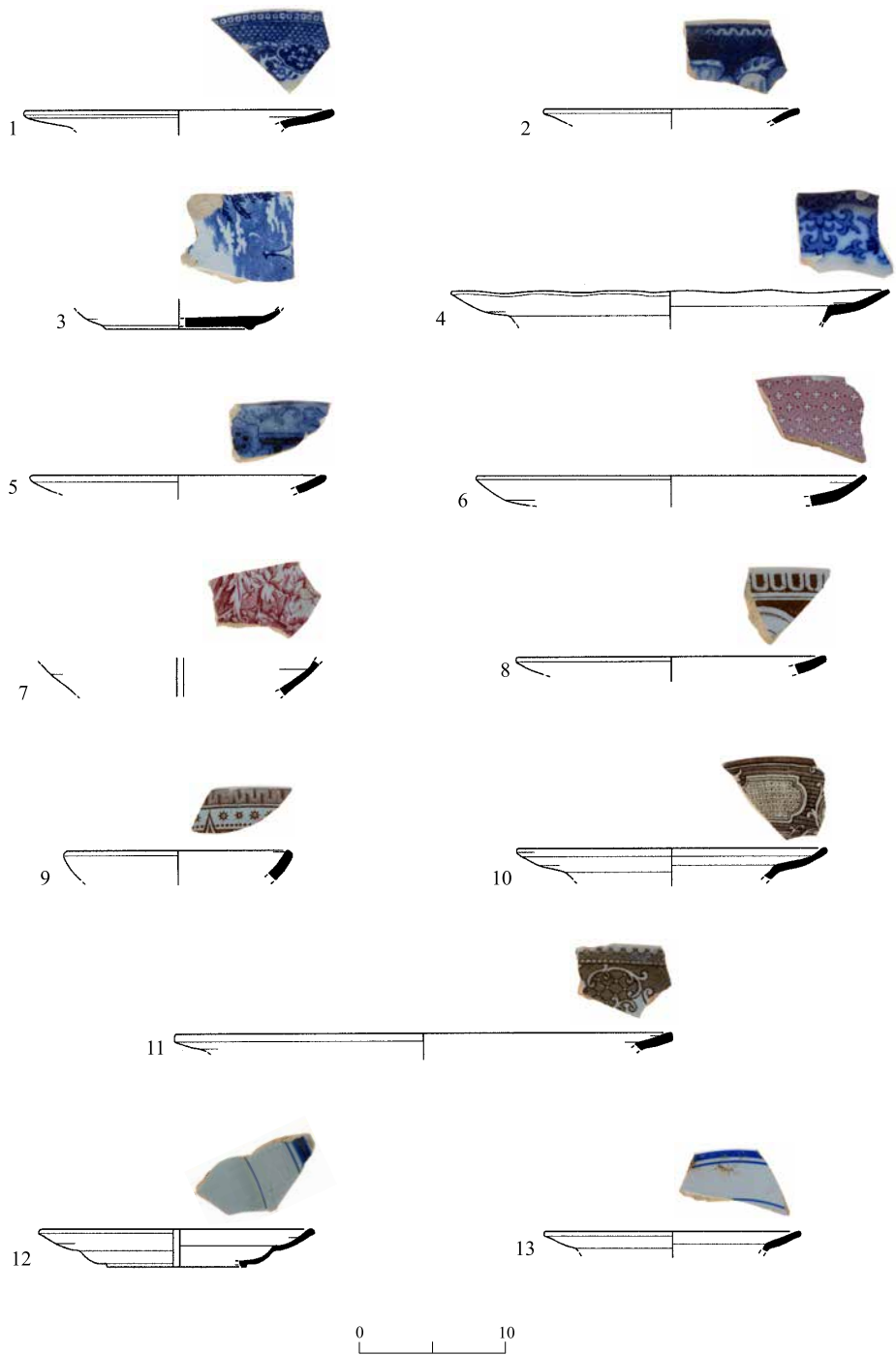


Fig. 6. Ottoman-period pottery: hard-paste plates and cup.

◀ Fig. 6

No.	Vessel Type	Locus	Basket	Dimensions (cm)	Description
1	J-TW-PL-1	705	7023/1	Diam. 22 Rim 7%	White hard-paste decorated in blue transfer Willow Pattern, intricate geometric and floral decoration
2	J-TW-BW-PL-1	638	6180/1	Diam. 22 Rim < 5%	White hard-paste decorated in blue transfer floral decoration Wild Rose Pattern
3	J-TW- BW-PL-8	643	6187/1	n/a	White hard-paste decorated in blue transfer Absalom's Pillar Pattern
4	J-TW-FB-PL-9	629	6171	Diam. 22 Rim 7%	White hard-paste with arabesque blue transfer decoration in Flow Blue technique
5	J-TW-FB-PL-5	504	5034/1	Diam. 22 Rim 5%	White hard-paste with arabesque and finely drawn floral decoration in blue transfer Flow Blue technique
6	J-TW-PL-2A	638	6180/2	Diam. 24 Rim 6%	White hard-paste decorated in red transfer with dotted background with white crosses
7	J-TW-PL-2A	638	6163	n/a	White hard-paste decorated in red transfer floral decoration
8	J-TW-PL-4A	710	7024	Diam. 20 Rim < 5 %	White hard-paste decorated in geometric brown transfer pattern
9	J-TW-CUP-4A	638	6180/3	Diam. 14 Rim 7%	White hard-paste decorated in brown transfer pattern with geometric designs and stars
10	J-TW-PL-5A	214	2043	Diam. 22 Rim 7%	White hard-paste decorated in black transfer pattern with medallions, dotted decorations and arabesques on rim
11	J-TW-PL-5A	705	7023/2	Diam. 26 Rim < 5%	White hard-paste decorated in black transfer pattern with medallions on rim and with arabesques
12	J-WCB-PL-1A	630	6157/1	Diam. 20 Rim < 5%	White hard-paste with thick and thin blue bands and one wide and one thin blue line on rim and one thin line between rim and body
13	J-WCB-PL-1A	820	8058	Diam. 20 Rim 5%	White hard-paste with thick and thin blue bands and one wide and one thin blue line on rim and one thin line between rim and body

process (Neale 2005:135). Later, Flow Blue was produced by other European manufactures, especially for the North American market (Neale 2005:174–175).

Type J-TW-FB-PL-9 (Fig. 6:4).— This fragment belongs to a plate with an undulating ledge rim and is decorated with an arabesque pattern. Many Flow Blue plates have undulated rims. The pattern could not be identified, but a date in the nineteenth century seems appropriate.

Type J-TW-FB-PL-5 (Fig. 6:5).— This small fragment belongs to a plate with a ledge rim decorated in Flow Blue technique with a pattern that combines an arabesque design with a finely outlined floral pattern. The pattern could not be identified, but the plate can be dated to the nineteenth century.

Transfer Ware Vessels in Red-on-White (Fig. 6:6, 7)

During the first third of the nineteenth century, blue was the dominant color; later, around 1830, other colors started entering the market, with red quickly becoming a favorite, although blue remained dominant (Neale 2005:17).

Type J-TW-PL-2A (Fig. 6:6).— This plate with an up-turned ledge rim is decorated with a sheet pattern. This is a transfer pattern technique, where the pattern is engraved on a drum instead of a flat copper plate, rotating on the vessel to produce a continuous pattern (Neale 2005:132). Here, the vessel is covered with a pattern of red dots into which white crosses are set. A plate with the same pattern in brown was found in the Qishle excavations (Vincenz, in press: Fig. 1B:5). A date in the mid-nineteenth century seems appropriate.

Type J-TW-PL-2A (Fig. 6:7).— A plate fragment decorated with a red floral transfer pattern. It dates to the mid-nineteenth century.

Transfer Ware Vessels in Brown-on-White (Fig. 6:8, 9)

Although blue and red were favored during the nineteenth century, the Spode factory began producing other colors in 1822 (*Spode Ceramics: Colors*).

Type J-TW-PL-4A (Fig. 6:8).— This ledge rim fragment belongs to a plate decorated with a band of arcades and possibly a floral pattern. It should be dated to mid- or end of the nineteenth century.

Type J-TW-CUP-4A (Fig. 6:9).— The rim fragment may belong to a teacup. It is decorated with a broken-and-straight meander band, stars and dots, and other geometric patterns. A date in mid- or end of the nineteenth century seems plausible.

Transfer Ware Vessels in Black-on-White

Black as a transfer color was used by manufacturers in Liverpool, who were expert in its production, from 1790 to 1815. Later, other manufactures in England and Europe decorated their vessels with various shades of black (Savage and Newman 2000:296).

Type J-TW-PL-5A (Fig. 6:10, 11).— Two fragments of large plates, with an up-turned ledge rim, are decorated with medallions and arabesques. The fragments are not stamped, so they cannot be assigned to a specific factory, but a date in the mid-nineteenth century seems appropriate.

White Glazed Wares with Colored Bands

These porcelain and hard-paste plates have two or more colored bands next to the rim and one at the junction of the rim and the body. The bands are underglaze-painted in different colors, mainly blue and red. Some of them have additional molded decorations. Plates,

saucers and bowls with colored bands were uncovered in the excavation at Broomielaw, Glasgow (Haggarty 2011: Ceramic Resources Disk 11: Box 2).

Type J-WCB-PL-1A (Fig. 6:12, 13).— Two plate fragments are decorated with colored bands in blue. These plates are extremely common; without a stamp, they cannot be identified. The type was produced in factories in England, France and other places in Europe throughout the nineteenth century.

Mocha/Banded Creamware Bowl

In England, around 1785, an unusual type of ware was produced, called Mocha Ware. The body was decorated with moss-like patterns that were made by dabbing the body with a brush containing a liquid pigment (Savage and Newman 2000:194). This name apparently derives from the Red Sea port of Mocha, which was known for the export of the mocha stone (*Mocha Ware*: Origin).

A variant of Mocha Ware is Banded Creamware, which is decorated with horizontal bands of various colors. It was originally produced in Staffordshire workshops and later, was also produced in France (Savage and Newman 2000:36).

Type J-MOCHA-BL-1 (Fig. 7:1).— This example is a Banded Creamware variant decorated with bands in pale blue and brown. It can be dated to the beginning and mid-nineteenth century.

Grand Déjeuner Bowls (Fig. 7:2–5)

The Grand Déjeuner was a breakfast set comprising a large bowl (*café-au-lait*) and saucer, and was part of the French breakfast culture. The bowl is large with a small ring base. Many factories in France produced these bowls, the most famous being the factory of Utzschneider in Sarreguemines, in the Alsace region close to the border with Germany. In Yafo, many stamps from this factory were unearthed in excavations, including the Me-Raguza excavation (Fig. 10:1, 2).

Type J-GD-BL-7 (Fig. 7:2–4).— These three bowl fragments are all decorated with painted flowers and leaves. Numbers 2 and 4 also have a black line under the rim and around the base. Multi-petalled flowers in red and/or blue with green leaves are a common decoration motif on these breakfast bowls (Gauvin and Becker 2007:67).

Type J-GD-BL-10 (Fig. 7:5).— This porcelain breakfast bowl is decorated with an overglaze-painted pattern in brown, red and green. French factories produced these porcelain bowls alongside the cheaper hard-paste bowls (*French Breakfast Bowl*: Porcelain).

Bowl Decorated in Sponge Technique

In the sponge technique, the shape to be produced was cut into a rubber stamp and fixed onto a roulette to produce on-going patterns, especially on plate rims (Gauvin and Becker 2007:27), but also on bowls.

Type J-SPONGE-BL-2 (Fig. 7:6).— The fragment here belongs to a bowl decorated with green leaves and red flowers. Bowls decorated in sponge technique were produced in many factories, probably the best known being Utzschneider in Sarreguemines (Gauvin and Becker 2007:26–27; *Sponge Technique: Sarreguemines*), but they were also produced in Scotland (*Sponge Technique: Scotland*). They are dated to the end of the nineteenth century.

Bowl Decorated in Flow Blue Technique

Type J-TW-FB-BL-1 (Fig. 7:7).— Flow Blue technique is described above (cf. Fig. 6:4, 5). This bowl with a rounded rim is decorated with a floral pattern in cobalt blue. It can be dated to the mid- or end of the nineteenth century.

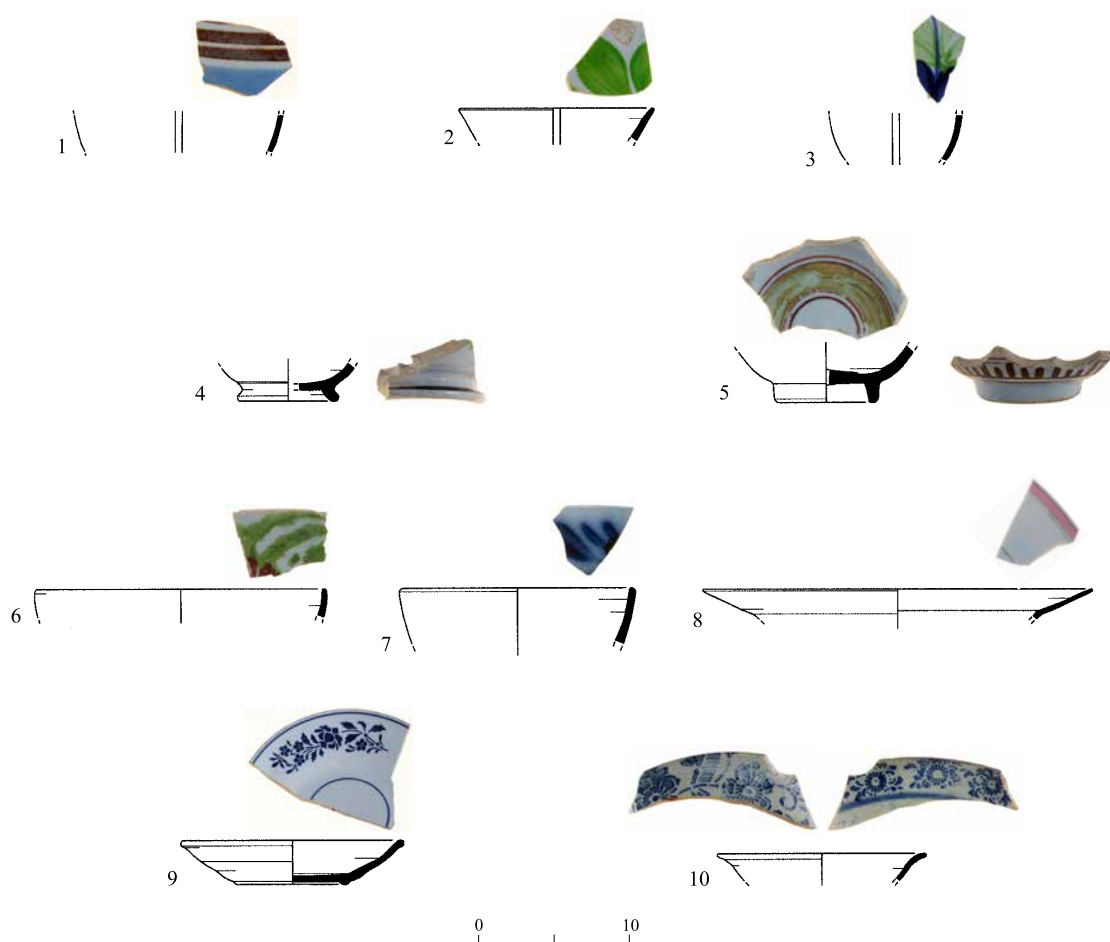


Fig. 7. Ottoman-period pottery: hard-paste and porcelain bowls and saucers.

◀ Fig. 7

No.	Vessel (Type)	Locus	Basket	Dimensions (cm) ⁱ	Description
1	Bowl (J-MOCHA-BL-1)	638	6180/4	n.a.	White hard-paste with pale blue and brown bands
2	Bowl (J-GD-BL-7)	630	6157/2	Diam. c. 14 Rim < 5%	White hard-paste with green painted decoration, green leaves on ext. and black line under rim
3	Bowl (J-GD-BL)	222	2027		White hard-paste with green and blue painted decoration, green leaves and blue flower
4	Bowl (J-GD-BL-7)	645	6187/2	Base diam. 7 Base 25%	White hard-paste with black painted line at edge of base and green painted leaf decoration
5	Bowl (J-GD-BL-10)	629	6165	Base diam. 7 Base 50%	White porcelain with overglaze brown, red and green paint; high ring base with lines on int. and pattern on ext.
6	Bowl (J-SPONGE-BL-2)	638	6180/5	Diam. 20 Rim 5%	White hard-paste with green and red decoration in sponge technique; on rim, green leaves(?) and red flowers
7	Bowl (J-TW-FB-BL-1)	TS	8000	Diam. 14 Rim 8%	White hard-paste decorated in cobalt blue floral design in Flow Blue technique
8	Saucer (J-P-SAU-12A)	700	7001	Diam. 22 Rim 5%	White porcelain with dark gray underglaze and pink underglaze paint, wide pink band between fine dark gray lines
9	Saucer (J-P-SAU-13)	504	5049	Diam. 16 Rim 11%	White porcelain decorated in blue transfer floral design
10	Saucer (J-STEN-SAU-1)	816	8060	Diam. 16 Rim 29%	White hard-paste with blue painted bands and blue stencil painted decoration

ⁱ n.a. = not available.

Porcelain Saucers (Fig. 7:8, 9)

The coffee- and tea-drinking culture was much in fashion during the nineteenth century. Porcelain factories were very busy producing luxury articles for that purpose. The variety and number of patterns and decorations are so extensive that it is very difficult to identify them when only small fragments are preserved, as is the case in archaeological excavations. In most cases, the stamp was not preserved and one can only guess the provenance.

Type J-P-SAU-12A (Fig. 7:8).— This shallow saucer fragment is decorated with fine gray lines and wide pink bands. A tentative dating to mid- to late nineteenth century is suggested (a possible parallel for this can be seen in *Tea Sets*: Victorian).

Type J-P-SAU-13 (Fig. 7:9).— This deep saucer with an everted round rim is decorated with a blue floral transfer pattern. It should probably be dated to the beginning to the mid-nineteenth century.

Saucer Decorated with Stencil-Painted Pattern

From 1845 on, the Utzschneider factory in Sarreguemines began to use the stencil technique (Gauvin and Becker 2007:29), which accelerated production, allowing more intricate patterns to be made far more quickly than in the past. The stencils were cut out of thin metal sheets that were positioned on the vessel and the cut-out decoration was filled with paint. Initially, only the central motif was stencil-painted while the surrounding patterns were hand-painted. Later, around 1870, when intricate landscapes became fashionable, the stencils became more complicated. Only one stencil could be used for each color (Gauvin and Becker 2007:29–33). This technique was long-lived, continuing for example in the Utzschneider factory until approximately World War II (Gauvin and Becker 2007:31–33).

Type J-STEN-SAU-1 (Fig. 7:10).— This deep saucer with a round rim has painted bands that were probably applied using a brush, which was held upright while turning the vessel on a slow lathe. The stencil decoration here is quite simple, possibly a cheaper variant.

Coffee Cups

As mentioned above, drinking coffee out of small Turkish coffee cups became fashionable during the nineteenth century and is associated with the Ottoman Empire. The fashion spread rapidly. Coffee cups were made of soft-paste, hard-paste and porcelain and were produced both in the Ottoman Empire and in Europe. A major production site for coffee cups was in Kütahya, in Western Turkey, while European imported vessels came mainly from German factories such as Meissen, KPM Berlin, Limbach, Nymphenburg and Frankenthal.

Kütahya Coffee Cups (Fig. 8:1, 2)

Kütahya coffee cups are made of thin frit ware, decorated with floral or vegetal patterns under a transparent glaze. The painted patterns are usually in blue, imitating Chinese vessels, but black, red and green are also used. At the beginning of the eighteenth century, yellow was introduced, while purple appears only in the second half of the eighteenth century (Carswell 1972:19). Parallels for the coffee cups in Fig. 8:1, 2 can be found in the Qishle excavations in Yafo (Vincenz, in press: Fig. 3A). While the vessels here were classified as Kütahya Ware, no clay analysis was conducted (for this problem, see Hayes 1992:266–267).

Type J-KÜT-CC-1A (Fig. 8:1).— This coffee cup has a slightly pinched rim and is decorated in Chinese fashion with two blue lines under the interior rim and a floral(?) decoration on the exterior. A date in the eighteenth century is suggested.

Type J-KÜT-CC-4B (Fig. 8:2).— This coffee cup base is decorated both inside and out with purple painted patterns: inside, with a small purple flower, and outside, with medallions. A similar coffee cup was found in the Qishle excavations (Vincenz, in press: Fig. 3A:10). The purple color of this cup dates it no earlier than the second half of the eighteenth century.

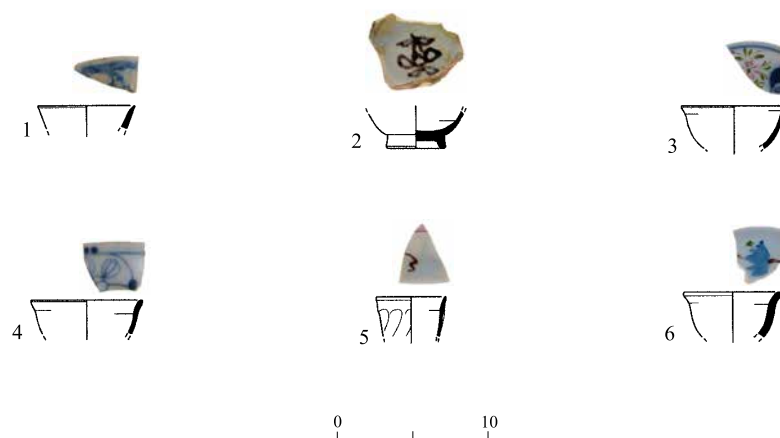


Fig. 8. Ottoman-period pottery: soft-paste, porcelain and hard-paste coffee cups.

No.	Vessel Type	Locus	Basket	Dimensions (cm)	Description
1	J- KÜT-CC-1A	820	8058	Diam. 7 Rim 15%	Soft-paste with blue painted (floral?) decoration on ext., two blue lines under rim on ext.
2	J- KÜT-CC-4B	429	4073	Base diam. 4.2 Base 80%	Soft-paste with purple painted decoration, purple flower on int. and medallions on ext.
3	J-M-CC-2B	501	5008/2	Diam. 8 Rim 15%	Porcelain with blue underglaze of flower and blue line under rim and overglaze of pink and green flowers and gold
4	J-P-CC-1A	638	6163/3	Diam. 7 Rim 14%	Hard-paste with blue underglaze decoration and blue line under rim on int. and medallions on ext.
5	J-P-CC-2J	504	5034/3	Diam. 5 Rim 15%	Porcelain with polychrome and gold overglaze painted decoration on int. and spiral molding on ext.
6	J-P-CC-2D	212	2010	Diam. 7 Rim 16%	Porcelain with polychrome and gold overglaze painted decoration, a gold line under the rim on int. and a blue flower, brown stem and green leaves on ext.

Meissen Coffee Cup

As the fashion of coffee drinking spread in Europe, and with a growing demand for porcelain coffee cups in the Ottoman Empire at the end of the eighteenth century, the German factory Meissen started producing massive quantities of *Türkenbecher* for the Turkish market, many of them with pseudo-Chinese signs on the cup bottom instead of the crossed-swords mark (Röntgen 1996:259), which some commercial agents requested to remove out of fear that it be mistaken as a Christian symbol (Röntgen 1996:259).

Identifying 'real' Meissen porcelain found in excavations is difficult, however, since the pieces are fragmentary, and the mark is not always preserved. Moreover, the marks were often faked (Röntgen 1996:287–300). Different shapes of coffee cups, produced around 1830, appear on a page from the factory archive (Röntgen 1996: Fig. 567).

Type J-M-CC-2B (Fig. 8:3).— This rim fragment belongs to a small Meissen coffee cup with blue underglaze on white decoration. The blue patterns are of a blue flower and a blue line under the rim and the overglaze consists of pink and green flowers and some gold additions. These cups apparently imitate the *Imari* style, which was fashionable in Europe in the eighteenth century and was imitated by many porcelain factories. A cup and saucer bearing this decoration are reported from the collection of Dr. Edmund Müller in Beromünster, Lucerne canton, Switzerland (Bösch 2004:29, Abb. 12). They were made by the Zürcher Porzellanmanufaktur, active from 1763 to 1790 (Bösch 2004:27–34). Recently, a fragment with a Meissen crossed-swords backstamp was discovered in the excavation on Ha-Zor'fim Street in Yafo (Vincenz, forthcoming [b]: Fig. 13:2). A date in the late eighteenth–beginning of the nineteenth century is suggested.

Blue-on-White Porcelain Coffee Cup

Coffee cups decorated with blue underglaze patterns are the most common finds among the coffee cups from excavation sites in Israel. They are made of rather thick porcelain and decorated with blue underglaze paint both inside and out, in the ‘Chinese’ manner, with a blue line around the inner and outer base and under the rim on the inside and floral patterns such as flowers in a medallion. The inside of the bowl usually has a flower in the center. Most of these cups do not have manufacture marks and are thus hard to identify. Such cups were found in the Qishle excavations in Yafo (Vincenz, in press: Fig. 3C).

Type J-P-CC-1A (Fig. 8:4).— This blue-on-white porcelain coffee cup with a round everted rim is of unknown manufacture.

Spiral Molded Coffee Cup

Type J-P-CC-2J (Fig. 8:5).— This coffee cup has a spiral-molded body decorated with overglaze-painted decoration in red, green and gold. Molded coffee cups were uncovered in the Qishle excavations in Yafo (Vincenz, in press: Fig. 3B:5) and a polychrome example, in the excavation on Ruslan Street, in Yafo (Vincenz, forthcoming [c]: Fig. 6:5). A date in the nineteenth century is suggested.

Thick-Walled Coffee Cup

Type J-P-CC-2D (Fig. 8:6).— This coffee cup of thick porcelain with an everted rim is decorated with overglaze-painted floral patterns. No satisfactory parallel was found, but the quality and the thickness of the porcelain suggest a date in the late nineteenth century.

Miscellaneous Porcelain and Stoneware Vessels

Porcelain Items

Figurine(?) (Fig. 9:1).— This porcelain fragment is decorated with light blue and gold overglaze paint. It may belong to a figurine, but its fragmentary state makes an identification impossible.

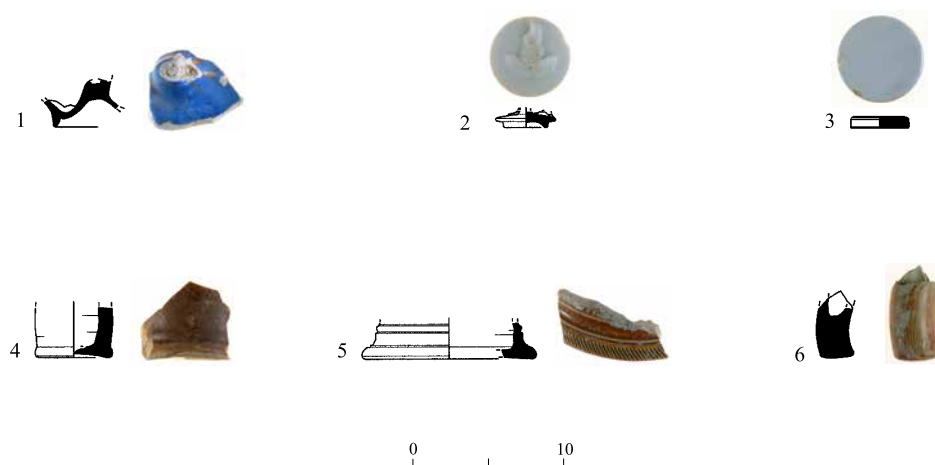


Fig. 9. Ottoman-period pottery: porcelain items and stoneware vessels.

No.	Vessel Type	Locus	Basket	Dimensions (cm)	Description
1	Figurine?	811	8022	5.6 × 4.8	White porcelain; light blue and gold painted surface
2	Lid (J-P-LID-1E)	630	6157	Diam. 4	Porcelain; molded leaf-shaped knob, broken
3	Disc (J-P-DISC)	640	6169	Diam. 3.6	Porcelain; complete
4	Bottle (J-STONE-BTL-2)	TS	8000	Base diam. 6	Gray stoneware with dark brown glaze
5	Tankard (J-STONE-TAN-1)	811	8022	Base diam. 11	Gray stoneware with stepped molded base and lines and pellets; brown glaze
6	Foot (of figurine?)	819	5057	Diam. 2.3 H 4.6	Gray stoneware with beige-brown striped glaze; hollow inside

Lid

Type J-P-LID-1E (Fig. 9:2).— This fragmentary porcelain lid, with a knob and an applied leaf next to it, may belong to a sugar bowl such as those produced by various German factories, e.g., Meissen (*Meissen*: Sugar Bowl). A date in the late nineteenth century is suggested.

Disc

Type J-P-DISC (Fig. 9:3).— This porcelain disc is complete. It might have been part of a piece of laboratory equipment. Such laboratory items were produced by most major manufactures (see, e.g., Röntgen 1996:222, Figs. 360, 361).

Stoneware Items

Stoneware, first introduced into England in the late seventeenth century by John Dwight, is made of clay and silica fired at around 1200°C so that it vitrifies partially, thereby becoming impervious to liquids. However, unlike porcelain, it is usually opaque and does not require a glaze (Savage and Newman 2000:275–276). Stoneware was used to produce bottles for whiskey, soda and the like. Stoneware bottles were also used for other liquids such as seltzer, vinegar and even ink. See below (Fig. 10:8) for discussion of a stamp on a stoneware vessel.

Type J-STONE-BTL-2 (Fig. 9:4).— This stoneware bottle fragment has a flat base and probably had a cylindrical body. It is covered unevenly with dark brown slip and covered with a transparent glaze except for the base. A similar bottle was found in the Qishle excavations in Yafo (Vincenz, in press: Fig. 4:3).

Type J-STONE-TAN-1 (Fig. 9:5).— This flat-based item is a tankard. Tankards, cylindrically shaped drinking vessels with a single handle and sometimes a lid (Savage and Newman 2000:284), were produced in Stoneware using a salt glaze. Some of them have the measure stamped or engraved on them. They were used for drinking beer and cider and produced in England and Germany. A tankard fragment was found in the Qishle excavations (Vincenz, in press: Fig. 4:6). Tankards were produced from the sixteenth century on, but a date in the late nineteenth century seems more reasonable.

Foot (Fig. 9:6).— This strangely shaped stoneware item is slipped or glazed a dark stripy brown. It may be part of a figurine.

Backstamps

A backstamp is an identifying mark that usually carried the name of the manufacturer, placed on the lower part of the vessel so as not to be immediately visible. It may be stamped, painted or incised. Some pieces carry more than one mark, which identifies the factory and the name of the artist.

The identification of the pieces discussed here by their backstamp contributes much to a deeper understanding of the commercial and cultural ties that existed in the region during the Ottoman Empire, specifically during the late eighteenth, the nineteenth and the early twentieth centuries. Many stamped fragments were retrieved from the Qishle excavations (Arbel, in press).⁶

⁶ The study of backstamps is a separate field of research with great quantities of literature. Collectors of antiques use the World Wide Web as a resource for identifying pieces.

Stamps from Sarreguemines (Fig. 10:1, 2)

The most common stamp found on vessels in Yafo is that of the Utzschneider factory in Sarreguemines. It comprises the shield of Lorraine surmounted by a crown and OPAQUE DE SARREGUEMINES written around the shield; it is usually stamped in black underglaze. The dimensions of the stamp vary but do not seem to have a chronological significance. The stamp was in use for a long time, from 1855 to 1920 (Gauvin and Becker 2007:49). Both fragments belong to plates (for a history of the Utzschneider factories, see Arbel, in press: 2.6–2.11; *InfoFaience*: Sarreguemines).

Stamps from Lunéville (Fig. 10:3, 4)

The first ceramic factory in Lunéville opened in 1728. Soon after, in 1749, it was awarded the status of *Manufacture Royale de Fayence*. In 1812, father and son-in-law Keller and Guérin founded the *Société KG*, which operated under this name until around 1920 (*InfoFaience*: Lunéville). Displayed in Fig. 10:3, 4 are green underglaze stamps of the *Lunéville* factory. The addition of the word ‘France’ on the backstamp indicates that it was produced after 1900. The stamp was used until 1920. The second stamp has only the word ‘France’ in green preserved. It is possibly from the same factory. Both stamps are preserved on the bases of plates.

Unidentified Stamp (Fig. 10:5)

The stamp is in green underglaze on the base of a plate. Unfortunately, only a very small fragment of the stamp is preserved, and it remains unidentifiable.

Stamp of Wild Rose Pattern (Fig. 10:6)

The stamp is applied in blue underglaze on the base of a plate with the same décor (for a discussion of this pattern, see Fig. 6:2). As observed above, this pattern was produced by various factories and most of them included the name of the pattern in the backstamp. The factory that produced this example remains unknown.

Retailer Stamp (Fig. 10:7)

This brown underglaze stamp contains the letters F.PRIMAV [.....] CAR [.....]. In the center of the stamp was a crown. It belonged to F. Primavesi & Sons from Cardiff. Primavesi & Sons were china merchants and had their office at 6 and 16 James Street on the Docks in Cardiff. They appear in the Cardiff directories of 1863 (*Cardiff Directory* 1863:25), 1887 (*Cardiff Directory* 1887:225, 309) and 1914 (*Cardiff Directory* 1914:336). Frequently, merchants or dealers added the stamp of their business next to the manufacture stamp. The stamp is on the base of a plate decorated with a brown transfer printed pattern showing sails. It probably represented the ‘Gondola’ pattern, which was produced by several manufactures, but the only one which fits chronologically is Davenport, active from 1794 to 1887 (see Kowalsky and Kowalsky 1999:166–169).

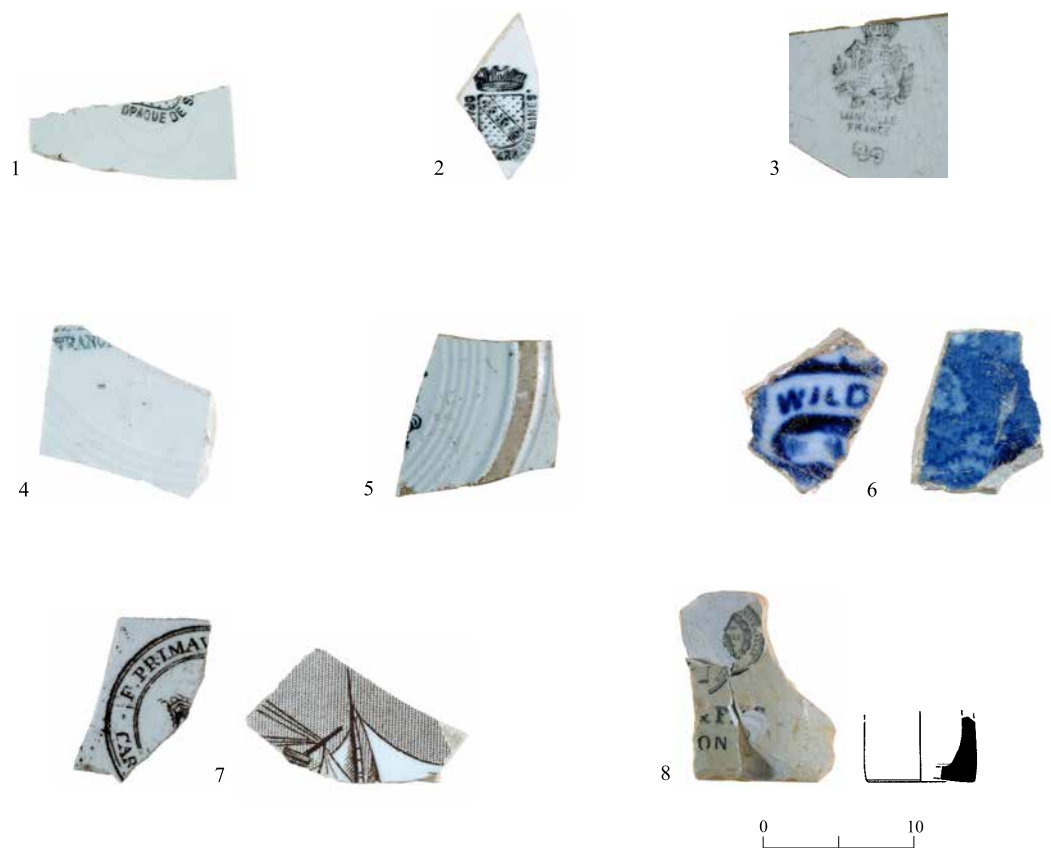


Fig. 10. Ottoman-period pottery: backstamps on hard-paste and stoneware vessels.

No.	Type	Locus	Basket	Dimensions (cm)	Description
1	J-PL-STAMP-1	702	7004	4.5 × 2.0	Base of plate with black underglaze backstamp reading OPAQUE DE S[ARREGUEMINES]
2	J-PL-STAMP-1	711	7034	4 × 2	Base of plate with black underglaze backstamp reading OPA[QUE DE S] ARREGUEMINES
3	J-PL-STAMP-2	707	7020	10.2 × 4.5	Base of plate with green underglaze stamp reading: LUNEVILLE FRANCE
4	J-PL-STAMP-2A	504	5044	4.0 × 2.4	Base of plate with green underglaze stamp reading: FRANCE
5	J-PL- STAMP-2B	602	6054	3.5 × 3.0	Base of plate with green underglaze stamp
6	J-TW-PL-STAMP-3	700	7026	2.0 × 1.8	Base with blue underglaze stamp: Wild Rose Pattern; on int. blue transfer décor
7	J-TW-PL-STAMP-4	643	6189	3.1 × 1.5	Base with brown underglaze stamp reading: F.PRIMAV[...] CAR[...]; on int. brown transfer pattern depicting boat(?)
8	J-STONE-BTL-1C	808	8045	Base diam. 8	Base of bottle with two green underglaze stamps, one reading UNIVERSELLE and below, & F[ILS] – ON

Stamp on Stoneware Bottle (Fig. 10:8)

This flat-based white-glazed bottle has two round stamps in green underglaze. One of them reads: UNIVERSELLE. Under the stamp in large letters is: & F[ILS] – ON. The stamps probably mentioned the content of the bottle, the producer and the production location. Unfortunately, it has not been identified.

Smoking Pipes (*Chibouks*) and Narghiles

By the mid-seventeenth century, pipe smoking was fashionable for both men and women regardless of age or social position. The pipes presented here follow the typology developed when studying the finds from the Qishle excavations in Yafo (see Vincenz, in press, with parallels and bibliography therein).

Eighteenth-Century Pipes (Fig. 11:1–5)

Type J-PIPE-18A (Fig. 11:1–3).— Among the pipes dated to the eighteenth century this group is very common. These large pipes with a round bowl and a short, stepped shank are usually red-slipped and burnished and bear stamped decorations. Rouletted bands are also common. Most of these pipes bear a pipe makers' mark on the shank, usually a rosette or half-moons. They have been found in large quantities in excavations in Yafo, such as Ha-Zorfim and Ruslan Streets (see Vincenz, in press: *Type J-PIPE-18A*, with further references therein).

Type J-PIPE-18F-1 (Fig. 11:4).— This pipe, with a round bowl, is decorated with incised vertical lines that meet at the keel. The shank is short and upturned. A similar pipe comes from Banias (Dekkel 2008: Fig. 4.9:49).

Type J-PIPE-18J (Fig. 11:5).— Another very common group in the eighteenth century has a small round bowl with a short, stepped shank. There are several subtypes, but all bear yellow and/or green glaze splashes on the bowl and the shank. Our fragment lacks the bowl and thus cannot be assigned to any type, but the shank bears remains of yellow glaze. This group is very common in Yafo and appears in almost every excavation conducted there (Qishle Compound: Vincenz, in press: Fig. 8.6B:30–36, *Type J-PIPE-18J*; Ruslan Street: Vincenz, forthcoming [c]: Fig. 24:9–11; Magen Avraham Compound: Vincenz, this volume: Fig. 17:5, 6; Harbor: Vincenz, forthcoming [a]: Fig. 14:5, 6). Pipes from the Belmont Castle bear green or mottled green glaze (Simpson 2000:152). Petrographic analysis has revealed that some of the pipes from Yafo were made of Moza marl; they could have been made in workshops in or around Jerusalem.⁷ Outside Israel, splash-glazed pipes of the *chibouk* type were found at Corinth (Robinson 1985:C 6–C 9). A completely green-glazed bowl with a

⁷ Petrographic analysis was undertaken by Nissim Golding and the results will be published elsewhere.



Fig. 11. Ottoman-period pottery: pipes and narghiles.

◀ Fig. 11

No.	Type	Locus	Basket	Dimensions (cm)	Description
1	J-PIPE-18A	605	6070	Shank length 3.7 Shank opening 1.4 Bowl diam. 3.3	Light gray ware with many small angular and round black and few small angular white inclusions; surface: slip 2.5YR 5/4 reddish brown, burnish Almost complete (rim chipped); round bowl with straight upper part; keel offset with rouletted bands and incised line decoration; short shank with stepped end; four-petalled rosette stamp
2	J-PIPE-18A	429	4073	Shank length 3.5 Shank opening 1.3 Bowl diam. 3.1	Dark gray ware with few small angular and round white inclusions; surface: slip 10R 4/3 light red, burnish Almost complete (rim chipped); large round bowl with straight upper part, lower part decorated with rouletted band and incised lines and circles; short shank with stepped end
3	J-PIPE-18A	642	6186	n/a	Dark gray ware with few small angular and round white inclusions; surface: slip 10R 4/3 weak red, burnish Fragmentary; large round bowl with straight upper part, lower part decorated with rouletted band and incised lines and circles
4	J-PIPE-18F-1	711	7030	Shank length 3.5 Shank opening 1.2 Bowl diam. 2.4	Dark gray ware with few small round white inclusions; surface: slip 10R 5/3 light red, burnish Almost complete (rim chipped); round bowl with vertical lines meeting at keel; upper part straight with rouletted bands; short shank with stepped end
5	J-PIPE-18J	502	5002	Shank length 3.5 Shank opening 1	Ware 10YR 7/3 very pale brown with few small angular white inclusions; surface: remains of yellow glaze Fragmentary; shank with stepped end
6	J-PIPE-19A-1	603	6021	Shank length 2.8 Shank opening 1.4 Bowl diam. 3.3	Ware 7.5YR 6/4 light brown with few small angular white inclusions; surface: slip 7.5YR 4/3 brown, burnish Almost complete (rim chipped); cone-shaped bowl on flat disc; rouletted band with herringbone pattern on bowl and lower part of disc; carved notches on disc edge; short petal-shaped shank protruding under disc
7	J-PIPE-19A-2	603	6002/1	Shank length 3.9 Shank opening 1.7 Bowl diam. 1.9	Ware 2.5YR 5/6 with few small angular white inclusions; surface: slip 10R 5/6 red, burnish Fragmentary; cone-shaped bowl on flat disc; rouletted bands and circles on bowl and on notched-edge disc; long petal-shaped shank protrudes under disc; rouletted lines within petals
8	J-PIPE-19C	501	5031	Shank length 6.2 Shank opening 1.7	Ware 10R 6/6 light red with few small angular white inclusions; surface: slip 7.5R 5/6 red, burnish Fragmentary; long shank with flaring round end with rouletted line; stamp: illegible "Arabic" letters

◀ Fig. 11. (cont.)

No.	Type	Locus	Basket	Dimensions (cm)	Description
9	J-PIPE-19K	607	6033	Shank length 5.3 Shank opening 1.6 Bowl diam. 3.9	Light gray ware with few small angular black inclusions; surface: slip 2.5YR 4/6 red, burnish Almost complete (rim chipped); tulip-shaped undecorated bowl; long shank with swollen end with triple-rouletted decoration; two incised lines at bottom of shank
10	J-PIPE-19K	501	5008/1	Shank length 5.3 Shank opening 1.6 Bowl diam. 2.2	Light gray ware with few small angular white inclusions; surface: slip 10R 4/3 light red, burnish Fragmentary; tulip-shaped undecorated bowl; shank with swollen end with rouletting; keel outlined with rouletting
11	J-PIPE-19L-1	603	6002/2	n/a	Ware 2.5YR 6/4 light reddish brown with few small round black and angular white inclusions; surface: slip 2.5YR 4/4 reddish brown, burnish. Fragmentary; shank piece with lower part of bowl; rouletted decoration and incised X, possibly the maker's mark
12	J-PIPE-19N-2	614	6079	n/a	Ware 10R 6/6 light red with few small round and angular black inclusions; surface: slip 10R 3/4 dusky red, burnish Fragmentary; long flaring bowl standing on flat base; lower part with vertical incised lines; on bowl molded leaf pattern
13	J-PIPE-19V-1	450	4130	Shank length 4.8 Shank opening 1.3 Bowl diam. 2.2	Ware 10R 6/6 light red with few small angular white inclusions; surface: slip 10R 5/6 red, burnish Fragmentary; tulip-shaped bowl, its lower part decorated with rouletting; rouletting on shank with swollen end; keel outlined with rouletting
14	J-PIPE-19X	8010	8021	Shank length n/a Shank opening 1.2	Ware 7.5YR 7/4 pink with many small angular white and round black inclusions; surface: slip 7.5YR 5/6 strong brown, burnish Fragmentary; flat bowl and oblique shank. Oblique incised lines on bowl and incised lines along shank; keel is outlined with two bands of rouletting
15	J-NAR-1C	805	8047	Height 5.6	Ware 5YR 5/1 gray with few small round white and black inclusions; surface: burnish Fragment; narghile head with short flange with incisions to form petal; stem with ridges for grip
16	J-NAR-2B	503	5003	Height 6.6	Ware 10YR 6/6 light red with many small round and angular white inclusions; surface: slip 10YR 6/8 light red, burnish Almost complete; narghile head with thickened rim with incisions; petal-shaped flange and ribbed stem for grip
17	J-NAR-2D	602	6039	n/a	Ware 5YR 7/4 pink with few small round white inclusions; surface: 5YR 7/4 pink Fragmentary; narghile head with rouletted bands on upper band; flange with incisions to form petal; stem with ridges for grip

molded decoration comes from the Archaeological Museum at Veliko Tarnovo, Bulgaria.⁸ Glazed *chibouk*-type pipes are quite common in Croatia (Milošević and Topić 2011:Sl. 44, 44a; Sl. 52, 52a) and the Czech Republic (Vyšohlíd 2014: Fig. 8:4). The earliest glazed *chibouk*-type pipes, dated to the sixteenth–seventeenth centuries, come from Hungary (Kovács and Rózsás 2014: Figs. 4:3; 5:2; 6:2; 7:4).

Nineteenth Century Pipes (Fig. 11:6–14)

Type J-PIPE-19A-1 (Fig. 11:6).— This complete example has only a minor chip on the rim. It has a flat disc, decorated with a herringbone-patterned band. Both the edge of the disc and the end of the shank are crenellated. The keel is flat and serves as a base for the pipe.

Type J-PIPE-19A-2 (Fig. 11:7).— This pipe is of the same type as that in Fig. 11:6, also with a flat disc. The disc is decorated with a beaded band framed by rouletted bands of hatched lines. The cone-shaped bowl is also decorated with this pattern, while the shank is decorated with rouletted lines and its end is carved. Pipes of this type were manufactured mainly in the Tophane pipe makers' quarter in Istanbul. They were exported throughout the Ottoman Empire, while more sophisticated pieces were used at the Sultans' court (for comparison with examples from Istanbul, see Hayes 1992: Pl. 50h; Dekkel 2008: Fig. 4.12:67). Many of these pipes are stamped with pipe makers' marks, and appear in the Qishle excavations (Vincenz, in press: Fig. 8.6B:55, 56, Type J-19A).

Type J-PIPE-19C (Fig. 11:8).— Another pipe fragment that may have been imported from Turkey has only the shank preserved. Its end is thickened and decorated with a triple rouletted band. There is also a pipe maker's mark on the shank in illegible Arabic letters, probably the pipe maker's name. The type seems to be like the examples bearing a makers' mark found at the Qishle (Vincenz, in press: Fig. 8.6B:24) and on Ha-Zorfim Street (Vincenz, forthcoming [b]: Fig. 26:2).

Type J-PIPE-19K (Fig. 11:9, 10).— This was one of the most common types during the nineteenth century. It has a tulip-shaped bowl, frequently not decorated except for fine lines on the keel. The long shank is often undecorated except for rouletted bands (for comparisons, see Simpson 2000: Fig. 13.6:125). This type and the type with a decorated tulip-shaped bowl were the most common nineteenth-century types found at the Qishle excavations (Vincenz, in press: Chart 3).

⁸ Some pipes from the Archaeological Museum in Veliko Tarnovo were first published by Ilčeva (1975), but the glazed one does not appear in the plates. All together, 75 pipes from the museum's collection have been studied and will be published by the author of this paper, among them the green glazed one.

Type J-PIPE-19L-1 (Fig. 11:11).— This bowl fragment with incised lines on the keel possibly had a tulip-shaped body.

Type J-PIPE-19N-2 (Fig. 11:12).— This pipe has a flat base and a high bowl, whose lower part is decorated with incised lines and the upper part has a stamped leaf pattern. This type of pipe, albeit with a less decorated bowl, was found in Yafo at the Qishle excavations (Vincenz, in press: Fig. 8.6B:89).

Type J-PIPE-19V-1 (Fig. 11:13).— This pipe seems to have a small tulip-shaped bowl decorated with incised lines and rouletting and a short shank with a rouletted end.

Type J-PIPE-19X (Fig. 11:14).— Pipes of this type with a flat-based sloping bowl and incised lines have been found in Yafo at the Qishle excavations (Vincenz, in press: Fig. 8.6B:117–120).

Narghile Pipe Heads (Fig. 11:15–17)

A special kind of tobacco called *shisha*, *tombac* or *tumbak* was introduced in Istanbul during the reign of Sultan Murat IV (Bakla 2007:362) and smoked in water pipes. They were as common as the *chibouk* and were used from the seventeenth century on. Many narghile heads were found in Yafo and are included in the Qishle excavation report (Vincenz, in press: Fig. 8.6D). Three narghile heads are shown here.

Type J-NAR-1C (Fig. 11:15).— Made of Black Gaza Ware, its flange is incised with lines and it has a ridged stem, for a better grip. This type of narghile head was found in Yafo at the Qishle (Vincenz, in press: Fig. 8.6D:141) and on Magen Avraham street (Vincenz, this volume: Fig. 18:2).

Type J-NAR-2B (Fig. 11:16).— This type has a long undecorated body and a spiral-shaped bowl. The flange is grooved and the stem is ridged. The entire narghile head is red-slipped and burnished. Similar unburnished examples were found at the Qishle excavations (Vincenz, in press: Fig. 8.6D:146).

Type J-NAR-2D (Fig. 11:17).— Made of pinkish ware, its flange is decorated with grooves (originally palmettes) and on the lower part of the body are rouletted bands; the stem is ridged. This heavy narghile head seems to have been locally made. Several variants exist, with differences in the stamped decoration on the body and the flange. They were found in Yafo at the Qishle excavations (Vincenz, in press: Fig. 8.6D:149) and on Magen Avraham Street (Vincenz, this volume: Fig. 18:3–5).

Roof and Floor Tiles

The Me-Raguza Street excavation yielded many roof tiles, a find that occurs at all major sites in Yafo; what is surprising is the large number of floor tiles. All the tiles were imported.

Marseille Roof Tiles (Fig. 12)

After their invention in 1841 by the Gilardoni brothers, the so-called heart-tile conquered the world in a very short time. The tiles were easy to use and their use reduced the weight of the roof, making them an immediate success. In late nineteenth–early twentieth-century Palestine they were used abundantly and thus were found in excavations. The tiles were produced from the mid-nineteenth into the twentieth century, and some of the factories still produce them. Marseille tiles are stamped with the name of the factory and the factory symbol, which can be an object, or an animal.

The tiles in Fig. 12:1–5 were produced in the *Frères Roux* factory, in St. Henri, a suburb of Marseille; they bear the heart symbol, and their production began in the mid-nineteenth century. The *Guichard Carvin* factory, in Seon-St. André, another suburb of Marseille, manufactured tiles stamped with the symbol of a bee (Fig. 12:6–8); they were produced from 1858 to 1914. In 1844, *Frères Martin* in Seon-St. André, bought the patent for the flat tile (Fig. 12:9, 10) and started producing it, using a butterfly as their symbol. *Usine La Plata*, also situated in St. Henri, stamped an arabesque on the tiles (Fig. 12:11). The fragment illustrated in Fig. 12:12 bears only the name Marseille, which can be assigned to any of the above-mentioned factories.

Fig. 12 ▶

No.	Locus	Basket	Factory	Description
1	624	6158/2	Frères Roux	Ware 5YR 6/6 reddish yellow; arabesque and ROUX FR
2	711	7030	Frères Roux	5YR 6/6 reddish yellow; large heart
3	608	6034	Frères Roux	5YR 6/6 reddish yellow; large heart
4	643	6187	Frères Roux	5YR 6/6 reddish yellow; large heart
5	504	5049	Frères Roux	5YR 6/6 reddish yellow; heart and ECAILLE P
6	705	7017	Guichard-Marseille	5YR 6/6 reddish yellow; bee and Cie
7	643	6191	Guichard-Marseille	5YR 6/6 reddish yellow; bee and GUICHARD-MARSEILLE
8	705	7017	Guichard-Marseille	5YR 6/6 reddish yellow; bee
9	833	8035	Frères Martin	5YR 6/6 reddish yellow; E and butterfly
10	707	7019	Frères Martin	5YR 6/6 reddish yellow; IN FRERES
11	624	6158/1	Usine La Plata	5YR 6/6 reddish yellow; arabesque and USIN
12	643	6187		5YR 6/6 reddish yellow; MARSEILLE



Fig. 12. Marseille roof tiles (not to scale).

Floor Tiles and Bricks (Fig. 13)

Many of the factories that produced roof tiles often produced floor tiles as well, and used the same symbol that they stamped on the roof tiles. Thus, *Pierre Sacoman* in St. Henri, Marseille, used the star symbol on their floor tiles (Fig. 13:1, 2); *Etienne Arnaud* in St. Henri produced floor tiles bearing a Maltese cross (Fig. 13:3–5); *Guichard* in Seon-St. André produced floor tiles stamped with the bee (Fig. 13: 6); *Carvin* the son produced floor tiles (Fig. 13:7, 8) with a central spiked star; and the factory *Rey* in St. André (Fig. 13:9) also manufactured floor tiles with *Poucel*, a factory in Aubagne, Marseille (Fig. 13:10). *Les fils de Jules Bonnet* produced bricks in Marseille (Fig. 13:11). The manufactures of the tiles and brick shown in Fig. 13:12–14 could not be identified.

Fig. 13 ▶

No.	Locus	Basket	Factory	Description
1	704	7012/2	Pierre Sacoman	5YR 6/6 reddish yellow; star and PIERRE ST HENRI MAR
2	704	7012/1	Pierre Sacoman	5YR 6/6 reddish yellow; star and PIERRE SACOMAN EILLE
3	705	7011/1	Arnaud Etienne & Cie St Henri Marseille	5YR 6/6 reddish yellow; Maltese cross and ARNAUD ETIENNE & CIE ST HENRI MARSEILLE QUALITE CARREAU
4	705	7011/2	Arnaud Etienne & Cie St Henri Marseille	5YR 6/6 reddish yellow; Maltese cross and ETIENNE & CIE FERRUGINEUX
5	705	7011/1	Arnaud Etienne & Cie St Henri Marseille	5YR 6/6 reddish yellow; Maltese cross and AUD ETIENNE RREAU FERRUGIN
6	810	8030	Guichard Marseille	5YR 6/6 reddish yellow; impressed bee
7	808	8058	Carvin Fils	5YR 6/6 reddish yellow; AUX CEMENTS PLATRES BR CARVIN FILS
8	824	8088	Carvin Fils	5YR 6/6 reddish yellow; MARSEILLE CHA
9	707	7025	Rey St.Andre, Marseille	5YR 6/6 reddish yellow; TERRE OCRE DU TUVE REY ST ANDRE RSEILLE
10	n/a		Rey & Poucel, Aubagne	5YR 6/6 reddish yellow; REY & POUCEL FABT AUBAGNE (BdR)
11	833	8105	Les fils de Jules Bonnet	5YR 6/6 reddish yellow; LES FILS DE JULES B LA VISTE MARS
12	629	6165		5YR 6/6 reddish yellow; impressed branch
13	704	7013		5YR 6/6 reddish yellow; USI
14	705	7016		5YR 6/6 reddish yellow



Fig. 13. Floor tiles (not to scale).

CONCLUSIONS

A fairly substantial stratum dated to the Byzantine period was unearthed in the Rabbi Yehuda Me-Raguza Street excavations, unlike other excavations in Yafo. The pottery associated with the Byzantine stratum is characteristic of that period. Imported fine-ware vessels from North Africa (Fig. 1:1), Phocaea (Fig. 1:2, 3) and Cyprus (Fig. 1:4–7) were unearthed in addition to fine-ware vessels from Jerusalem or its surroundings (Fig. 1:8). The ubiquitous bag-shaped storage jar (Fig. 2:1–3, 5, 6), as well as wine jars (Gaza jars; Fig. 2:4) and imported amphorae that probably also contained wine (Fig. 2:7, 8), were uncovered. The Byzantine material is characteristic of the late Byzantine and Early Islamic periods and should be dated to the sixth–eighth centuries CE.

The late Ottoman material is varied and includes both local and imported wares as is the case at most sites in Yafo. Most of the Coarse Ware is local, for example the Black Gaza Ware. Imported earthenware comes from Turkey and Greece, as well as from Italy and France. Tableware consists of both hard-paste and porcelain vessels, usually imported from Europe, England, France and Germany, which were the main exporters, but Belgium, Holland and Italy were also present on the market. Construction material such as roof tiles, floor tiles and bricks were imported from large factories in southern France, in the area around Marseille.

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