

A CATALOGUE OF THE GLASS FINDS: SAGALASSOS 1990

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1. INTRODUCTION

All of the glass fragments recorded below came from the excavations that were conducted in three distinct areas of the ancient city – the potter’s quarter (F), the nymphaeum (N) and the Doric temple (DT). The present catalogue forms only a preliminary study. In very few cases was sufficient of the vessel surviving for the reconstruction of the entire profile to be made. Some of the attributions of shape and date may be revised in the light of further research and the finds in future seasons. Only diagnostic and decorated fragments were studied; small and non-descript body fragments were discarded. The catalogue, nevertheless, provides a good variety of vessel rims, bases and handles; shapes and types of decoration, however are limited. The techniques that are represented include (a) plain free-blown, (b) free-blown with cut decoration, (c) free-blown with trail decoration, (d) mould-blown, and (e) pattern-moulded. The colours most commonly found are blue-green, yellow-green, green and colourless; only one small body fragment of cobalt blue glass was found. In addition, the excavations produced a representative sample of window fragments and a number of glass tesserae, bracelets and miscellaneous items.

Including the 1990 season, the excavations have yet to produce any Hellenistic glass, either core-formed or cast. Without exception, the vessel fragments that were recovered and subsequently examined were made by blowing. All of the glass is, in fact, Roman, and a significant proportion of the recorded material can be attributed to the late Roman period, stretching as far as the sixth (and, possibly, the early seventh) century. The majority of the fragments belong to plain, utilitarian wares. A small group with cut decoration, however, attests to the presence of imported fine tablewares and offers the hope that in future seasons more finds of attractive, high quality glassware will be made at Sagalassos.

The format of the catalogue entries are as follows:

- Inventory number and date excavated
- Short description
- Date
- Colour
- Dimensions
- Shape and decoration
- State of preservation, weathering and quality of glass
- References to published parallels.

The abbreviations used in the catalogue entries are as follows:

- H.: Height
- L.: Length
- W.: Width
- D.: Diameter
- Th.: Thickness
- (est.): estimated
- (max.): maximum
- (min.): minimum.

Many of the glass finds were covered with a layer of weathering that von Saldern (1980: 3) has described as “dirty fire scum” (dfs). A considerable amount of the glass also showed the effects of fire, reheating, pitting and deformation.

2. CATALOGUE OF THE GLASS (Fig. 121-124)

2.1. *Dishes or bowls*

There is no great uniformity amongst the forms represented by the fragments of open vessels so far identified at Sagalassos. The first example (no 1) would appear to belong to an unusually large dish of uncertain date. Smaller dishes that have the same horizontal rim are known from Priene and are dated to the first or second century (Platz-Horster 1976, 78, nos. 150-152). No exact parallel has been found for the bowl decorated with a small protruding flange below the rim (no. 3). It is somewhat different from two dishes in the Royal Ontario Museum that have a small tooled moulding below the rim (Hayes 1975, 103, nos. 370-371 and fig. 10). Rather, the flange recalls similar but larger and more prominent flanges on silver bowls of the

second and third centuries. Glass bowls with inverted rims are unusual (nos. 4, 7 and 8). They may, however, be compared with vessels with incurved rims found in the sacristy of the church at el-Lejjun, dated 502-551 (Jones, 1987, 628, and fig. 135, 68). One fragment (no. 6), although identified here as a shallow dish or bowl, bears some resemblance to crown window panes with folded rims, known in the East from the fourth century onwards (Harden, 1978, 88-89, esp. nos. 77-79).

1. Inv. No. SA-90-N-161 (04-08-90)
Rim fragment, large dish
Colourless, with pake greenish tinge
D. (est.) 300 mm; Th. (rim) 2,5 mm
Rounded, almost horizontal rim
Iridescence and fine pitting; some tiny pin-prick bubbles
Isings Form 42
Compare Czurda-Ruth (1989) 130 and fig. 2,6 (from Ephesus)
2. Inv. No. SA-90-N-18
Rim fragment, shallow dish or bowl
Colourless
D. (est.) 200-190 mm
Rounded, thickened and outplayed rim
Creamy weathering, iridescence; quality of glass good
Compare Charlesworth (1985) 146, no. 10 and fig. 18
3. Inv. No. SA-90-N-5 (12-07-90)
Rim fragment, dish or bowl
Possibly 2nd-3rd century
Colourless
D. (est.) 170 mm
Vertical, rounded rim; below, rounded flange curving slightly downwards
Brown weathering (dfs); some surface pitting on flange
4. Inv. No. SA-90-N-61 (22-07-90)
Rim fragment, bowl
Colourless, with green tinge
D. (est.) 160 mm
Rounded, slightly thickened, and inverted rim
Black weathering, flaking off to leave brilliant iridescence and deep pitting; bubbles
5. Inv. No. SA-90-DT-31 (17-07-90)
Rim fragment, shallow bowl
Late 4th century
Light green; yellow-green streak running lengthwise trough glass
H. 9 mm; D. (est.) 140 mm
Broad, tubular collar, slightly concave inner side and thicker, convex outer side
Milky weathering, mostly flaked off to leave iridescence
Isings Form 118
Compare Harden (1949) 152, no. G.22, pl. XLIX, 2 and fig. 1,7; Hayes (1975) 12,, no. 468 and fig. 13; but also compare Jones (1987) 628 and fig. 136, 72 (large lamp with handles from el-Lejjun)
6. Inv. No. SA-90-N-109
Rim fragment, shallow dish or bowl
Colourless, with green tinge
D. (est.) 132 mm
Tubular rim folded out, down and under; thin-walled sides slanting sharply inwards
Broken in antiquity; brown weathering (dfs), flaking to leave dulling and faint iridescence; quality of glass uncertain

- Isings Form 97a
Compare Hayes (1975) 63, no. 177 and fig. 5 (probably 3rd century)
7. Inv. No. SA-90-DT-102 (08-08-90)
Rim fragment, bowl or cup
Blue-green
D. 62 mm
Rounded, inverted rim; thin-walled body
Broken edges weathered; slight milky weathering, flaking off to leave iridescence; many bubbles
 8. Inv. No. SA-90-DT-114 (11-08-90)
Rim fragment, bowl or cup
Blue-green
D. (est.) 54 mm
Rounded, inverted rim
Iridescence and slightly dulling; black impurities; many pin-prick and larger bubbles
Similar to no. 7 (above)
 9. Inv. No. SA-90-N-151 (02-08-90)
Base fragment, bowl
Colourless, with green tinge
D. (est.) 80 mm
Tubular base ring, integral to vessel
Brown staining; dulling and faint iridescence; some pin-prick bubbles
Compare Hayes (1976) 80, no. 297 and fig. 9 ("Palestinian" green ware; late 3rd-4th century); Matheson (1980) 71, no. 187 (2nd-3rd century)
 10. Inv. No. SA-90-N-87
Base fragment, bowl
Darkish green
D. 63 mm; Th. (max.) 5.3 mm
Splayed, high foot-ring
Brown surface scum (dfs); dulling; a few pin-prick bubbles
Compare Hayes (1975) 120, no. 473 and fig. 13 (4th or 5th century); von Saldern (1980a) 30, no. 188 and pl. 22 (found in a grave, apparently dating to the 3rd or early 4th century, in the Pactolus Noth area)

2.2. Vessels with cut decoration

Few vessels with cut decoration are as yet recorded from Asia Minor. The principal study is that of the Sardis finds (von Saldern, 1980a, 15-17). The Sagalassos material is, therefore, of considerable interest and importance. These half dozen fragments represent some of the finer glass tablewares that were in use at Sagalassos in the Roman period. They probably span the first three centuries AD. Parallels to the tall beaker or lamp (no. 13) have been attributed to the fourth century, but this dating may be too late. The fragment clearly belongs with the other vessels with wheel-abraded decoration (nos. 11-12). These would seem to be slightly earlier than the facet-cut pieces (nos. 14-16), for which general parallels would suggest a date in the second-third century (von Saldern, 1980a, 16-17). This group of decorated fragments is to be the subject of a separate, more detailed study, in which they will be compared with recent finds from other sites in Turkey.

11. Inv. No. SA-90-DT-39 (19-07-90)

- Rim fragment, cup
Late 1st-first half of 2nd century
?Colourless
D. (est.) 60 mm
Knocked off, unworked rim; short flaking mouth; sides tapering downwards; single band, 3 mm wide, of fine wheel-abraded lines running horizontally around body 15 mm below rim
Broken edges weathered; milky weathering, flaking off to leave iridescence; few bubbles
12. Inv. No. SA-90-N-24 (19-07-90)
Rim fragment, beaker
Second half of 1st-first half of 2nd century
Light green
D. (est.) 60 mm
Knocked off, unworked rim; slightly flaring mouth; sides tapering slightly towards bottom; two bands of wheel-abraded grooves; one 19 mm below rim, another 24 mm below rim, both 1 mm wide
Thin milky film, flaking off to leave iridescence and dulling; good quality of glass
For similar vessels, see Dusenbury (1971) 21, no. 30 and fig. 29; von Saldern (1980a) 14, no. 49 and pl. 20; and Lightfoot (1989) 27-8, nos. 12-14 and pl. 3/1-3
13. Inv. No. SA-90-N-47 (29-07-90)
Rim fragment, tall beaker (? or lamp)
Blue-green
D. (est.) 110-100 mm
Knocked off, unworked rim; slightly flaring mouth; straight sides tapering downwards; five bands of wheel-abraded decoration; from bottom to top: (1) 1.5 mm wide, 4.4 below rim; (2) 1.5 mm wide, 4.15 below rim; (3) 1 mm wide, 9.0 below rim; (4) 1 mm wide, 3.8 below rim; (5) 1 mm wide, 0.1 below rim
Broken edges weathered; fine milky film and iridescence on exterior; very few pin-prick bubbles
Compare Charlesworth (1971) 35, no. 7 and fig. 7 (tall beaker; Hayes (1975) 121, no. 477, fig. 11 and pl. 31 (conical beaker, dated ca. 350-400); Matheson (1980a) 98, no. 263 (conical lamp, 4th century)
14. Inv. No. SA-90-N-216 (12-08-90)
Body fragment, ?bowl
Late 2nd- early 3rd century
Colourless
Side sharply curved and decorated with two widely spaced oval cuts (6 mm long, 2 mm wide)
Iridescence, a few pin-prick bubbles
Compare von Saldern (1974) 185-6, no. 514
15. Inv. No. SA-90-N-122 (30-07-90)
Body fragment, ?large bottle
Green
H. 48.5 mm; W. 39 mm; Th. 1.5-3.0 mm
Wheel-cut decoration on exterior, comprising two groups of lines running perpendicularly to each other and super-imposed oval cuts
Creamy-brown weathering (dfs), flaking off to leave iridescence and dulling; pitting of wheel-cuts; good quality glass
16. Inv. No. SA-90-N-47 (29-07-90)
Body fragment, ?bowl
3rd century
Colourless, with yellow-greenish tinge
H. 23.5 mm; L. 19.5 mm; TH. 2.0-2.4 mm

Oval cut (15 x 10 mm) on exterior, with a horizontal cut line above and below; ?undercurve of bowl
Iridescent and pitted surfaces
Compare von Saldern (1980a) 18, nos. 70 and pl. 20

2.3. Goblets

Late Roman goblets are found throughout the East. Some examples in the Adana Regional Museum are illustrated by Stern (1989, fig. 18), others in the Hatay Museum, Antakya, by Yağci (1990, 34 and pl. 36). Fragments are known from Alahan, where the period of major construction and activity is placed from about the middle of the fifth century to about 491 (Martin Harrison in Gough, 1985, 33). Examples, including one base from a tomb (grave 5), have been recorded at Anemurium (Stern, 1985, 44-46 and fig. 3, left). Others have also been recovered during the excavations at Sardis, one of which is in a similar light blue glass to one of the Sagalassos examples (no. 21). It was found under the destruction level dated to the year 616 (von Saldern, 1980a, 80). Von Saldern also suggested that many of the plain rim fragments found on site may have belonged to early Byzantine goblets; he described them as “generally having a slightly thickened (fire polished) edge” and measuring between 6 and 8 cm in diameter (1980a, 79).

Numerous examples are also recorded in the Volo and Nea Anchialos Museums in Thessaly, Greece (Weinberg, 1962, 133). They are dated to the fourth century and later. Goblets are not, however, regarded as a common feature of the Cypriote glass repertoire (Vessberg, 1952, 124).

17. Inv. No. SA-90-DT-14 (16-07-90)
Rim fragment, deep bowl or goblet
Yellow-green
D. (est.) 106 mm
Rounded, thickened rim, with lip on inside of mouth; straight sides tapering downwards
Black, enamel-like weathering, flaking off to leave iridescence, pitting of surface bubbles
18. Inv. No. SA-90-DT-71 (26-07-90)
Rim fragment, deep bowl or goblet
Yellow-green
D. (est.) 98 mm
Rounded, thickened and slightly inverted rim; sides tapering downwards
Faint iridescence; pin-prick bubbles
Compare Charlesworth (1971) 34, no. 4 and fig. 4
19. Inv. No. SA-90-DT-20 (16-07-90)
Rim fragment, bowl or goblet
Colourless
D. (est.) 90 mm
Rounded, thickened rim; straight sides tapering downwards; thin-walled body
Thick white weathering, flaking off to leave iridescence; pitting of surface bubbles

20. Inv. No. SA-90-DT-137 (13-08-90)
Rim fragment, bowl or goblet
Pale green
D. (est.) 80 mm
Rounded vertical rim; pattern moulded ribbing on exterior, slanting downwards from left to right
Patches of brown weathering, flaking off to leave iridescence; many tiny pin-prick bubbles
See below, no. 32
Compare La Baume and Salomonson, n.d., 60-1, no. 200 and pl. 28,3; von Saldern (1974) 240 and 242, nos. 705-707; Thomas (1976) 31, no. 137
21. Inv. No. SA-90-DT-7 (15-07-90)
Rim fragment, goblet
5th-6th century
Light blue
D. (est.) 70 mm
Rounded, slightly thickened rim; straight sides tapering downwards
Milky weathering, flaking off to leave dulling and iridescence; good quality of glass
See below no. 101
Compare von Saldern (1980a) 81, nos. 587 and 589 (fabric 6)
22. Inv. No. SA-90-DT-26 (17-07-90)
Rim fragment, deep bowl or goblet
?Colourless
D. 60 mm
Rounded, thickened rim; straight sides tapering downwards; very thin-walled body
Thick creamy-brown weathering, flaking off to leave brilliant iridescence; pin-prick bubbles
23. Inv. No. SA-90-DT-1 (vv)
Base fragment, goblet
Blue-green
D. 60 mm
Tubular base ring; broad conical foot
Broken edges weathered; creamy weathering on bottom, flaking off to leave iridescence; blowing striations and swirls on upper surface; very bubbly
24. Inv. No. SA-90-DT-119 (12-08-90)
Base fragment, goblet
Colourless, with green tinge
D. 50-40 mm
Tubular base ring, oval in shape; thick conical foot
Milky weathering and iridescence; dulling and pitting; pin-prick bubbles
25. Inv. No. SA-90-DT-137 (13-08-90)
Base and stem, goblet
Blue-green
D. 44 mm
Tubular, slightly oval base-ring; hollow stem; trace of pontil scar at bottom of stem
Dulling and iridescence, very bubbly
Compare Hayes (1975) 105, nos. 382-383 (5th or 6th century)
26. Inv. No. SA-90-DT-3 (15-07-90)
Base fragment, goblet
Blue-green
D. (est.) 50 mm
Tubular base-ring
No weathering; pin-prick bubbles
Isings Form 111
Compare Weinberg (1962) 133 and pl. 28, fig. 16
27. Inv. No. SA-90-DT-59 (22-07-90)
Base, goblet
5th century or later
Dark green
D. 44 mm
Tubular base-ring
Dark brown weathering, flaking off to leave iridescence and dulling; few bubbles
Compare Auth (1976) 150, no. 195; Gough (1985) 53, no. 20 and fig. 10.20 ("wine-glass" lamp)
28. Inv. No. SA-90-DT-31 (17-07-90)
Base and pedestal, small goblet (?footed lamp)
Colourless, with greenish tinge
H. (as extant) 22.5 mm; D. 36-34 mm
Tubular base-ring, conical foot; low pedestal with knob in centre of bottom of cup
Broken, restored from four pieces
Thick creamy-brown weathering, flaking to leave brilliant iridescence, pin-prick bubbles
Compare von Saldern (1962) 10, no. 10d and pl. 9, 10d (= (1980a) 58, no. 351 and pl. 24, dated to the late 6th or 7th century); Czurda-Ruth (1989) 135 and fig. 5, 60-61 (numerous fragments from Ephesus)
29. Inv. No. SA-90-DT-7 (15-07-90)
Base fragment, goblet
Pale green
D. (est) 50 mm
Tubular base-ring; convex foot
Broken edges weathered
Black, enamel-like weathering, mostly flaked off; dulling and iridescence; a few pin-prick bubbles
Compare Gough (1985) 53, no. 18 and fig. 10.18 (called "wine-glass" lamp)
30. Inv. No. SA-90-DT-40 (20-07-90)
Base fragment, goblet
Blue-green
D. (est.) 44 mm
Tubular base-ring; high convex foot
Faint iridescence; blowing swirls and a few pin-prick bubbles
See above, no. 29

2.4. Lamps

Like goblets, lamps are commonly found in late Roman and Byzantine contexts throughout the eastern Mediterranean world. Fragments of hanging lamps are most frequently found in ecclesiastical surroundings. A plausible explanation for this phenomenon is that, since they were part of the sacred vessels of the church, they were carefully looked after and stored. Evidence from Khirbet al-Karak and Jerash in Jordan suggest that, even after they had been broken, hanging lamps were not discarded but were kept as sanctified objects (Delougaz and Haines, 1960, 49; Meyer, 1987). Similar lamp fragments have been found in the sacristy of the church at el-Lejjun; the deposit there may have been laid down as a result of an earthquake in 551 (Jones, 1987, 627-28 and fig. 135, 71, 136, 72-3). Examples from the excavations at Anemurium are illustrated by Stern (1985, 45, fig. 3, top right).

31. Inv. No. SA-90-DT-123 (12-08-90)
Four fragments of hanging lamp
5th century
Light blue
Rim D. (est.) 74 mm
Tubular rim folded in, over and out; handles dropped onto body, trailed up and applied to top of rim
(a) Fragment of rim with small handle
H. (of fragment, as extant) 30 mm; W. (at rim) 32 mm;
H. (of handle) 25 mm
(b) Another rim fragment with handle
H. 27.5 mm, W. 30.5 mm, H. (of handle) 29 mm
Larger pad at bottom of handle and higher loop turned down onto rim
(c) Two body fragments of paper-thin glass, tapering towards bottom
Milky weathering, flaking off to leave iridescence; blowing striations and some pin-prick bubbles
Isings Form 134
Compare Bauer (1938) fig. 20, no. 376 and Barag (1967) fig. 16, nos. 21-22 (see von Saldern (1980a) pl. 23); Roffia (1983) 214-15 and fig. 1 (group of vessels dated to the mid-6th century); Gough (1985) 53, no. 13 and fig. 10.13 ("mug")
32. Inv. No. SA-90-DT-137 (13-08-90)
Rim fragment, lamp
5th century or later
Blue-green
D. (est.) 60 mm
Tubular rim, inverted slightly and folded out and down; pattern moulded body with faint ribs on exterior, slanting downwards diagonally from left to right
Brown weathering, flaking off to leave faint iridescence; tiny pin-prick bubbles
For similar pattern-moulded decoration, see no. 20 above
Compare Auth (1976) 151, no. 197
33. Surface find above the nymphaeum (19-08-90)
Rim fragment, jar
Blue-green
D. (est.) 70 mm
Rounded, thickened and outplayed rim, joined directly to globular body of vessel
Broken edges weathered; milky weathering, flaking off to leave iridescence and pitting; many pin-prick bubbles
34. Inv. No. SA-90-N-47 (29-07-90)
Rim fragment, jar
Colourless, with light green tinge
D. (est.) 64 mm
Rounded, slightly thickened and outplayed rim; short concave neck; very thin-walled vessel
Brown weathering, mostly flaked off leaving iridescence; pin-prick bubbles
35. Inv. No. SA-90-DT-3 (15-07-90)
Rim fragments, jar
Colourless, with greenish tinge
D. 47 mm
Rounded, thickened and outplayed rim; short, concave neck
Two conjoining fragments; black enamel-like weathering, mostly flaked off; iridescence and slight dulling; many pin-prick bubbles
Isings Form 94
36. Inv. No. SA-90-DT-14 (16-07-90)
Rim fragment, jar
Green
D. (est.) 72 mm
Thickened rim, with bevelled edge and angled undercurve on exterior lip
Creamy-brown weathering, flaking off to leave iridescence; many pin-prick bubbles
37. Inv. No. SA-90-DT-3 (15-07-90)
Rim fragment, jar
4th century
Green
D. 48 mm
Rounded, thickened and slightly outplayed rim; sloping shoulder
Broken edges weathered; creamy-brown weathering; iridescence; pin-prick bubbles
38. Inv. No. SA-90-N-122 (30-07-90)
Rim fragment, jar
Pale green, with yellow tinge
D. (est.) 58 mm
Rounded, outplayed rim; short concave neck; body probably globular or bulbous
Dark brown weathering, flaking to leave faint iridescence; good quality of glass
39. Inv. No. SA-90-DT-73 (29-07-90)
Rim fragment, jar
4th-5th century
Yellow-green
D. (est.) 80 mm
Rounded, thickened and outplayed rim
Dulling and faint iridescence; many bubbles
40. Inv. No. SA-90-N-151 (02-08-90)
Rim fragment, jar
Yellow-green
D. (est.) 58 mm
Rounded, outplayed rim; short concave neck; sloping shoulder
Black weathering, flaking off to leave iridescence; some dulling and pitting
41. Inv. No. SA-90-N-122 (30-07-90)
Rim fragment, jar
Yellow-green
D. (est.) 56 mm

2.5. Jars

Many of the rim fragments in this group belong to sack-shaped vessels, probably used as containers for ointments and cosmetics. They are common throughout the eastern Mediterranean area. Several examples have been found in late Roman tombs in Syria-Palestine (Barag, 1978, 30), and they are abundantly represented in Cyprus (Aström, 1965, 126). Two similar fragments are recorded from the Sardis excavations (von Saldern, 1980a, 81, nos. 590-591 and pl. 27), one of which is said to be "probably datable to the very late fourth or early fifth century" (von Saldern, 1980a, 80). The closest parallels, however, are provided by a group of intact vessels in the collection of the Afyon Archaeological Museum (Lightfoot, 1989, 39-40).

- Rounded, outplayed rim; short concave neck
Black weathering, mostly flaked off leaving iridescence and dulling, pin-prick bubbles
42. Inv. No. SA-90-DT-3 (15-07-90)
Rim fragment, ?jar
4th-5th century
Yellow-green
D. (est.) 50 mm
Rounded, thickened and outplayed rim
Slight dulling and iridescence; no bubbles
Isings Form 96
Compare Lightfoot (1989) 40-1, no. 41 and pl. 6/1; 43, no. 51 and pl. 5/5 (both from Tatarlı tumulus, Dinar region)
43. Inv. No. SA-90-N-171 (06-08-90)
Rim fragment, jar
4th-5th century
Yellow-green
D. (est.) 50 mm
Outplayed rim, with angled outer lip; very short concave neck; sloping shoulder
Brown weathering, flaking off to leave faint iridescence; very few bubbles
44. Inv. No. SA-90-DT-3 (15-07-90)
Rim fragment, jar
Yellow-green
D. (est.) 60 mm
Rounded, outplayed rim; concave neck
No weathering or bubbles
Compare Auth (1976) 100, no. 110 (3rd century)
45. Inv. No. SA-90-N-109
Rim fragment, jar
Yellow-green
D. (est.) 56 mm
Rounded, outplayed rim; thickened rim and concave neck; body probably globular
Brown weathering (dfs) on most of surfaces; quality of glass uncertain

2.6. *Aryballos*

Oil-bottles are a common type of Roman glass vessel. Four intact examples are recorded in the Afyon Archaeological Museum (Lightfoot, 1989, 33-34, nos. 24-26; 37, no. 39). Others are known from collections from Istanbul (Akat, Firatlı and Kocabaş, 1984, 65, nos. 263-266 and illus. 117; Canav, 1985, 38, no. 22). For a discussion of the different types of glass aryballoi, based on examples from the northern Black Sea, see Sorokina, 1987.

46. Inv. No. SA-90-N-3 (vv)
Dolphin-type handle
2nd century
?Colourless
L. 23.5 mm; W. (top) 4.4 mm; W. (bottom) 7 mm
Brilliant iridescence, flaking off; heavily pitted on one side and underneath; many bubbles
Isings Form 61

2.7. *Bottles*

Many of the fragments identified as bottles come from the tomb excavated in the potter's quarter. They include an homogeneous group of seven small perfume bottles (nos. 51-57). It is probable that they were specially made as disposable containers either for scented liquids used during the burial ceremony or as cheap grave goods. Their quality is very poor, and they show obvious signs of hasty and careless manufacture. Another bottle fragment (no. 50) found in the tomb is of better quality. It may be compared with an example from Sardis, which von Saldern (1980a, 73) suggested as datable to the fifth or sixth century.

The well-formed rim of another small perfume bottle (no. 58) suggests a date in the mid-imperial period. A similar date can be assigned to the thick-walled bottom of another example (no. 60). A fragment from Doric temple site however, is even earlier. Despite its small size, the body fragment (no. 47) can be identified with confidence because it belongs a type of early Roman bottle that has a very distinctive shape. This particular fragment clearly belongs to a free-blown example; other bottles of this shape, however, are known to have been cast and mould-blown. The plain rim and flaring mouth of another fragment (no. 59) are also indicative of an early Roman date. Similar bottles from Priene can be dated to the beginning of the first century (Platz-Horster, 1979, 27).

Finally, two other groups of material (nos. 48-49) probably belong to square, mould-blown bottles. The yellow-green colour of the former suggests a late Roman (fourth century or later) date.

47. Inv. No. SA-90-DT-73 (29-07-90)
Body fragment, small bottle
1st century
Colourless, with greenish tinge
L. 27 mm; W. 21.5 mm; Th. 1-0.4 mm
Thin-walled fragment of carinated body
No weathering
Isings Form 7
Compare Platz-Horster (1976) 28, no. 30 (with refs.); Matheson (1980) 22, no. 57
48. Inv. No. SA-90-N-28
Five fragments, bottom of neck and shoulder of large bottle, probably square bodied
Yellow-green
L. (max.) 72 mm; W. 45 mm; Th. 1.9-1.5 mm
Creamy-brown weathering, flaking off to leave dulling and iridescence on exterior, patches of iridescence on interior
49. Inv. No. SA-90-N-18
Bottom fragment, (?mould-blown) bottle
2nd-3rd century
Blue-green
L. 23.6 mm, W. 19 mm
Slightly concave bottom; vertical sides; square or rectangular body

- Creamy-yellow weathering, flaking off to leave iridescence and pitting; surface pin prick bubbles
Isings Form 50a
Compare Hayes (1975) 58, no. 143 and pl. 10; 76-7, no. 273 and pl. 19
50. Inv. No. SA-90-F-23 (20-07-90)
Rim and part of neck of bottle
Colourless, with a green tinge
D. 36-34 mm
Tubular rim folded out, over and in; short concave neck, flaring at bottom to shoulder
Brown staining and flaking weathering; faint iridescence; a few pin prick bubbles
Compare von Saldern (1980a) 73, no. 506 and pl. 26
51. Inv. No. SA-90-F-26 (20-07-90)
Rim, neck and conjoining part of body of small perfume bottle
Colourless, with blue-green tinge; tooling indents on either side at top of neck
H. (est.) 80 mm; D. (rim) 19 mm
Poorly formed rim turned out, over and in; slender, concave neck; squat, conical body with slightly bulbous sides
On exterior, dark brown enamel-like weathering, flaking off in parts; iridescence; large, elongated bubbles in neck
52. Inv. No. SA-90-F-27 (20-07-90)
Rim, neck and top part of body of small perfume bottle
Colourless with green tinge
H. (as extant) 68 mm; D. (rim) 19 mm
Tubular rim, folded out, over and in; tall, slender, concave neck, tapering towards the base; narrow, vertical shoulder
Brown weathering on interior of neck, with accretion on one side, iridescent underneath; exterior dulled and slightly pitted; very bubbly with blowing striations
53. Inv. No. SA-90-F-74 (24-07-90)
Rim, neck and part of body of small perfume bottle, with two loose small fragments of body
Colourless, with greenish tinge
H. 90 mm; D. (rim) 18-17 mm
Tubular rim, folded out, over and in; irregular, oval shape to mouth; concave, slender neck; squat, conical body; tooling marks on either side at top of neck
Broken edges weathered; brown weathering covering most of surfaces; elongated bubbles in neck
54. Inv. No. SA-90-F-118 (17-07-90)0
Small perfume bottle
Colourless, with slight greenish tinge
H. 83.5 mm; D. (rim) 15 mm; D. (bottom) 32 mm
Rim folded out, over and in, flattened on top but poorly formed; slender, concave neck; squat, conical body; high kick in bottom; tooling marks on either side at top of neck
Intact, except for weathering holes in neck; brown, enamel-like weathering, flaking off to leave iridescence; deep pitting of surface bubbles
55. Inv. No. SA-90-F-52 (24-07-90)
Rim and upper part of neck of small perfume bottle
Colour uncertain
H. (as extant) 38 mm; D. (rim) 17 mm
Rim folded out, over and in, flattened on top; cylindrical neck; top of neck pushed in to either side from use of pincers
Broken edges weathered; milky weathering, brown underneath; iridescence; blowing striations
56. Inv. No. SA-90-F-52 (24-07-90)
Body and neck of small perfume bottle
Colour uncertain
H. (as extant) 64 mm; D. (bottom) 25 mm
- Tall, slender, cylindrical neck; squat, bulbous body; kick in bottom
Neck comprising four conjoining fragments
Brown weathering; iridescence
Compare von Saldern (1980a) 28, no. 167 and pl. 9 (undated)
57. Inv. No. SA-90-F-98 (26-07-90)
Small perfume bottle
Colourless, with blue-green tinge
H. 78 mm; D. (rim) 15-14 mm; D. (bottom) 33 mm
Rim folded out, over and in, shaped irregularly and flattened in mouth; slender, slight concave neck; squat, conical body; high kick in bottom; deeply indented tooling marks on either side at top of neck
Patches of brown weathering and iridescence; deep pitting of surface bubbles; impurities in glass, forming protrusions in surface of body and lower neck
58. Inv. No. SA-90-DT-56 (22-07-90)
Rim, small perfume bottle
2nd century
Blue-green
D. 22 mm
Well-formed tubular rim, folded out, over and in
No weathering; many pin prick bubbles
59. Inv. No. SA-90-N-215 (12-08-90)
Rim and mouth of perfume bottle
Colourless, with greenish tinge
D. 24 mm
Plain thin rim; flaring mouth; cylindrical neck
Thick brown weathering (dfs), flaking to leave iridescence
Compare Platz-Horster (1976) 66, no. 123
60. Inv. No. SA-90-N-83 (26-07-90)
Bottom, small perfume bottle
Pale blue-green
D. (est.) 15 mm, Th. 2.8 mm
Slight concave bottom
Whitish weathering, flaking off to leave dulling and iridescence; few bubbles

2.8. Jugs and flasks

The tomb in the potter's quarter contained at least two large jugs. Both vessels had been broken in antiquity and their remains scattered across the floor by ancient robbers who had entered and ransacked the tomb. One vessel (no. 61) can be partially restored since its rim, handle and base have all been preserved. It is comparable to the rim fragments labelled "Vessels with a heavy thread below rim" from Sardis (von Saldern, 1980a, 85, nos. 633-639). Although the Sardis fragments did not allow von Saldern to reconstruct the original vessels to which they belonged, he associated them with late Roman bottles that had strap handles (1980a, 28-9, nos. 177-184) and concluded that this group of rims "might be dated to the late fourth or fifth century" (1980a, 85). The other vessel (nos. 62-63) was decorated with vertical ribs. Both jugs were, therefore, attractive vessels, in marked contrast to the poor quality perfume bottles (nos. 51-57, above) that accompanied them.

Another rim fragment (no. 65) also belongs to a large, impressive container – either jug or flask. Clairmont (1963, 104–5) grouped together a number of fragments from Dura Europos under the heading “flask: rounded rim with cut-out roll underneath” and placed them in the mid-imperial period (late second–first half of third century). The present fragment should probably be placed alongside this group, both in style and date. The other two fragments (nos. 64 and 66) are both in yellow–green glass, suggesting a late Roman date. The rim, however, appears to be such a common plain shape that precise dating is difficult; it may be compared with other similar rims with funnel-shaped necks (nos. 50 and 75).

61. Inv. No. SA-90-F-19 (20-07-90)
Fragments of a large jug
4th century
Colourless with a greenish tinge; handle and trail in same colour glass; pontil scar on bottom
D. (rim) 80–77 mm, (base) 82–80 mm
Flaring, rounded rim, slightly oval in shape; slightly oval, solid ring-base; off-centre kick in bottom; strap handle with three crudely made ribs, dropped on to sloping shoulder, drawn up, turned in at an acute angle and up towards rim
Single trail on undercurve of mouth
Vessel apparently broken in antiquity since edges of remaining fragments are weathered; rim and handle in seven conjoining pieces; ring-base in one piece; two conjoining body fragments
Faint iridescence and dulling; brown staining on exterior, some pin prick and larger bubbles, the handle being very bubbly and pitted (as if from contact with fire)
See Isings Form 120b and 121a
Compare Vessberg (1952) 130 and pl. VI, 19; Thomas (1976) 25, no. 87; Matheson (1980) 90, no. 243; and, for the same type of rim, Ritcher (1956) 65–6, no. 46 and pl. XVIII, E
62. Inv. No. SA-90-F-19 (20-07-90)
Base of jug with vertical ribs
4th century
Pale green; pontil scar on bottom
D. 60 mm
Base-ring of slightly irregular shape applied as a separate coil to bottom of vessel
Vessel apparently broken in antiquity; flaking creamy-brown weathering; brown staining below; dulling and iridescence; few bubbles
Compare Platz-Horster (1976) 49, no. 81 (with refs.)
63. Inv. No. SA-90-F-21
Numerous body fragments of ribbed vessel(s), some probably belonging to no. 2 (above)
Ribs clearly extended from shoulder to undercurve of body
64. Inv. No. SA-90-DT-114 (11-08-90)
Rim and neck, ?small flask
Yellow-green
D. (est.) 40 mm
Rim folded out, over and in (uneven lip to rim); flaring neck
Dulled surfaces; few bubbles
Compare Caretta (1983) 219, no. 5 and pl. II, 5 (2nd–3rd century)

65. Inv. No. SA-90-N-5 (12-07-90)
Rim fragment, ?flask
3rd century
Pale green
D. (est.) 62 mm
Flaring mouth; folded out and up to vertical lip
No weathering
Compare Clairmont (1963) 106, nos. 500–502 and pl. XII; Canav (1985) 67, no. 98
66. Inv. No. SA-90-DT-20 (16-07-90)
Strap handle fragment
Yellow-green
W. 22–16.5 mm
Slight surface weathering, iridescence and dulling; very bubbly

2.9. *Trailed decoration on vessels of uncertain shape*

Only fragments of three vessels with trailede decoration have so far been recovered from the excavations. The first example (no. 67) would appear to be a large shallow dish of an unusual type. The second rim fragment (no. 68) resembles that of a bowl found at Housesteads fort on Hadrian’s Wall, dated to the second quarter of the second century (Charlesworth, 1971, 37), but it probably belongs to a type of trailede vessel that was not only common throughout the Roman world but was also produced over a prolonged period. The last fragment (no. 69), although small, is interesting because of the use of a different colour for the trail. It probably comes from a type of decorative perfume bottle known in museum collections and usually dated to the late first and second centuries.

67. Inv. No. SA-90-N-187 (08-09-90)
Rim fragment, ?dish
Green
D. (est.) 140 mm
Almost vertical rounded rim with thick, down-turned flange below, made up of a double trail
No weathering; some pin-prick bubbles
68. Inv. No. SA-90-DT-3 (15-07-90)
Rim fragment, ?bowl
Colourless, with green tinge
D. (est.) 90 mm
Thickened, rounded and slightly inverted rim
Fine trails on exterior rim below
Thick, creamy-brown weathering, flaking off to leave brilliant iridescence and pitting; quality of glass uncertain
Compare Charlesworth (1971) 34, no. 2 and fig. 2
69. Inv. No. SA-90-N-17
Bottom fragment, ?bottle
Pale blue, with cobalt blue trail
L. 22.5 mm; W. 22.2 mm; Th. 2.7–1.6 mm
Deep kick at centre of bottom
Unmarved trail underneath
Compare von Saldern (1974) 221, no. 645 (1st–2nd century); Kofler-Truniger (1985) 78, no. 127

2.10. Rims of vessels of uncertain shape

These fragments come from vessels of a variety of different shapes. None of them can be identified with any great confidence and, consequently, it is difficult to refer to parallels. It is likely, however, that the majority of them belong to examples of late Roman glassware.

70. Inv. No. SA-90-DT-62 (23-07-90)
Rim fragment
Light green
D. (est.) 156 mm
Solid rim, turned out and downwards
Apparently re-heated and rounded in fire on one side
Brown weathering (dfs) and brilliant iridescence
71. Inv. No. SA-90-N-18
Rim fragment, ?flask
Yellow-green
D. (est.) 90 mm
Rim folded out, over and in; lip bevelled flat into mouth
Deformed; brown weathering; dulling; very bubbly
72. Inv. No. SA-90-DT-137 (13-08-90)
Rim fragment, ?deep bowl or cup
Pale green
D. (est.) 80 mm
Rounded and thickened rim with inverted lip; slightly concave tapering downwards, thin-walled vessel
Brown staining and iridescence; a few pin-prick bubbles
73. Inv. No. SA-90-DT-62 (23-07-90)
Rim fragment, ?bowl or jar
Yellow-green
D. (est.) 80 mm
Rounded, thickened and slightly outplayed rim; short, concave neck
Creamy-brown weathering (dfs) covering most surfaces; patches of brilliant iridescence and deep pitting
74. Inv. No. SA-90-DT-73 (29-07-90)
Rim fragment
Light blue
D. (est.) 80 mm
Tubular rim, folded out and down
Many bubbles
75. Inv. No. SA-90-DT-137 (13-08-90)
Rim fragment, ?bottle
Yellow-green
D. (est.) 70 mm
Rim folded out, over and in; inner lip bevelled flat
Brown weathering, flaking off to leave dulling and iridescence; bubbles in rim
Compare Taton-Brown (1984) 198, no. 32 and fig. 66 (beaker: late 5th-early 6th century)
76. Inv. No. SA-90-N-18
Rim fragment, ?bottle
Blue-green
D. (est.) 58 mm
Rim folded out, over and in; flaring mouth
Black weathering, flaking off to leave iridescence; few bubbles
77. Inv. No. SA-90-N-109
Rim, ?bowl
Yellow-green
D. 60 mm

Rounded, thickened rim with everted lip; straight sides tapering downwards
Creamy-brown weathering (dfs), flaking off to leave iridescence; pin-prick bubbles

78. Inv. No. SA-90-N-87
Rim fragment, ?small cup
Colourless
D. 53 mm
Rim slightly outplayed, thickened and rounded with inner lip; thin-walled sides
Creamy-yellow weathering, flaking off to leave brilliant mother-of-pearl iridescence; many tiny pin-prick bubbles
79. Inv. No. SA-90-N-87
Rim fragment, ?small cup
Colourless
D. 52 mm
Very similar in shape and weathering to no. 78, but rim slightly more outplayed

2.11. Bottoms and bases of vessels of uncertain shape

Most of these fragments would seem to belong to late Roman vessels. Although it is impossible to determine the shape of the vessel to which the first bottom (no. 80) belongs, it is clear from the existence of the kick and pontil mark that the fragment is no earlier than the second century. The fragment of a flat-bottomed vessel (no. 87) may be compared with two bottles found at Samaria in sarcophagus D, together with a coin of Constantius II (337-361). The thick bottom fragment (no. 88) probably belongs to a beaker; a close parallel can be found amongst the finds from Dura Europos (Clairmont, 1963, 97, esp. no. 432 and pl. X), and examples are also known from Cyprus (Vessberg, 1952, 122-123, type BI). One base-ring (no. 92) is similar to a group of "pad-bases" from Dura-Europos attributed to deep bowls (Clairmont, 1963, 91 esp. nos. 406-413). This example, however, has a considerable larger diameter and may be more suited to a jug of typical late Roman shape (see, for example, von Saldern, 1980b, 64-65, no. 57; Yağcı, 1990, 34 and illus. 35). Two other fragments (nos. 93-94) would also appear to belong to large bottles or jugs, although similar can be seen on bowls from Cyprus (Vessberg, 1952, 117 and pl. II, nos. 12-18). Another similar but smaller base (no. 95) may be attributable to a number of different vessel forms, including bowls (Clairmont, 1963, 94 esp. no. 408 and pl. X), goblets (Lightfoot, 1989, 41, no. 43) and flasks (Lightfoot, 1989, 44-45, no. 56). The last example (no. 96) in the group of solid base-rings bears comparison with a type of base called by Clairmont "trailed-on coil base" and attributed to beakers (1963, 99-100, nos. 452-458). Von Saldern (1980a, 66) has suggested that "folded ring-bases" (similar to no. 98) could belong to footed bowls, but the present fragment is too small to allow a firm reconstruction of the original vessel. Other tubular base-rings (nos. 99-102) belong to a type of vessel that appears to be well represented at Sagalassos. Similar bases are commonly

found at early Byzantine sites in Palestine. They are variously dated between the fourth and the seventh century (Tatton-Brown, 1984, 197, no. 19, with discussion and references).

80. Inv. No. SA-90-DT-3 (15-07-90)
 Bottom fragment
 Green
 D. (est.) 60 mm
 Kick and pontil mark at centre
 Milky weathering and iridescence; pin-prick bubbles
81. Inv. No. SA-90-N-130 (31-07-90)
 Bottom fragment
 Pale yellow-green
 D. (min.) 60 mm
 Low kick and trace of pontil on bottom
 Brown weathering (dfs), flaking off to leave iridescence; pin-prick bubbles
82. Inv. No. SA-90-N-18
 Bottom fragment, ?jar
 Yellow-green
 D. (min.) 50 mm
 Low kick, covered by small pontil mark, sides ribbed
 Brown weathering and iridescence; a few pin-prick bubbles
 Compare Lightfoot (1989) 45, no. 58 and fig. 5/4
83. Inv. No. SA-90-N-128 (30-07-90)
 Bottom fragment
 Yellow-green
 D. (min.) 50 mm
 Small kick at centre; trace of pontil beside kick
 On interior, creamy-brown weathering flaking off to leave iridescence; on exterior, dulling and faint iridescence; very few pin-prick bubbles
84. Inv. No. SA-90-DT-102 (08-08-90)
 Bottom fragment
 Yellow-brown, with green tinge
 D. (min.) 50 mm
 Kick at centre
 On interior surfaces, creamy-brown weathering, flaking off to leave iridescence; no weathering on exterior
85. Inv. No. SA-90-DT-11 (12-08-90)
 Bottom fragment
 Green, with yellow tinge
 D. (min.) 50 mm
 Kick, with neat, round pontil scar on top
 Broken edges weathered; dulling and slight brown staining with iridescence on exterior; some weathering around edges of interior surfaces but not on kick; very bubbly
86. Inv. No. SA-90-N-74 (26-07-90)
 Bottom
 Pale green
 D. (min.) 50 mm
 Low kick to bottom
 Thick, creamy-brown weathering on exterior, with iridescence and pitting underneath; slight dulling and pitting on interior; pin-prick bubbles
87. Inv. No. SA-90-DT-7 (15-07-90)
 Bottom fragment, ?small bottle
 Colourless, with greenish tinge
 D. (est.) 40 mm
 Very slightly concave bottom; body probably cylindrical
 Black, enamel-like weathering, pitting and iridescence
 Possibly Isings Form 102
- Compare Hamilton (1939) 68 and fig. 2(a) and (b); Hayes (1975) 68, no. 209 and fig. 5 (first half of 2nd century)
88. Inv. No. SA-90-N-40 (vv)
 Bottom fragment, ?beaker
 Blue-green
 D. 32 mm
 Thick, slightly concave bottom
 Black weathering, mostly flaked off; faint iridescence on interior surfaces, dulling on exterior; pin-prick bubbles; good quality of glass
 Compare Hayes (1975) 104, nos. 375-377, fig. 10 and pl. 24 (mid-4th-early 5th century); von Saldern (1980a) 29, no. 185, pl. 22 (late 2nd-early 3rd century)
89. Inv. No. SA-90-N-109
 Bottom
 Colourless, with greenish tinge
 D. 42 mm; Th. of bottom 5.4-3.6 mm
 Solid, slightly concave bottom; undercurve to cylindrical body
 Whitish weathering, flaking off to leave brilliant iridescence and deep pitting; pin-prick bubbles
90. Inv. No. SA-90-N-216 (12-08-90)
 Bottom fragment
 Dark blue-green
 L. 36 mm; W. 31.5 mm; Max. Th. 4.8 mm
 Flat on exterior, with part of jagged pontil, convex at centre of interior
 Dulling and iridescence; some pin-prick bubbles
91. Inv. No. SA-90-DT-62 (23-07-90)
 Base fragment
 Light blue-green
 D. (est.) 90 mm
 High, conical base-ring; rounded and slightly thickened bottom edge
 Faint iridescence, pin-prick bubbles
92. Inv. No. SA-90-N-188
 Base fragment
 Light green
 D. (est.) 85 mm
 Splayed, solid base-ring; traces of tooling on outer surface
 Dulling and pitting of numerous surface bubbles
 Compare Clairmont (1963) 94, no. 409
93. Inv. No. SA-90-DT-14 (16-07-90)
 Base fragment, ?bowl
 Blue-green
 D. (est.) 80 mm
 Splayed, solid base-ring, with rounded bottom edge
 Broken edges weathered; black enamel-like weathering, flaking to leave iridescence; some bubbles
94. Inv. No. DA-90-DT-73 (29-07-90)
 Base fragments, ?bowl
 Green
 D. (est.) 66 mm
 Splayed, high base-ring, with rounded outer edge, slightly oval in shape
 Two pieces, not conjoining; surfaces dulled, pitted and iridescent; pin-prick bubbles
95. Inv. No. SA-90-DT-62 (23-07-90)
 Base fragment
 Yellow-brown
 D. (est.) 36 mm
 Rounded lower edge to base-ring; concave bottom; slightly oval in shape

- Dulling; large bubbles in edge, some pin-prick bubbles in bottom
Compare Lightfoot (1989) 47, no. 69 (3rd-4th century)
96. Inv. No. SA-90-N-87
Base fragment
Colourless with greenish tinge
D. 38 mm
Rounded, slightly outplayed solid base-ring; slightly concave bottom with pontil scar
Creamy-brown weathering covering most of surfaces; few bubbles
Compare Clairmont (1963) 100, no. 458 and pls. XI, XXXIII
97. Inv. No. SA-90-DT-62 (23-07-90)
Base fragment
Late 4th-5th century
Blue-green
D. (est.) 54 mm
Tubular base-ring, with high convex upper edge; low, spreading foot, curving up at sharp angle to broad (?) pedestal to vessel
Milky weathering, flaking off to leave brilliant iridescence and fine pitting of surfaces; few pin-prick bubbles
See above, no. 117
Compare Hayes (1976) 104, no. 379 and fig. 11 (beaker), 119, no. 466 and fig. 13 (dish); Tatton-Brown (1984) 207, nos. 98-99 and fig. 68 (bottles and jugs)
98. Inv. No. SA-90-DT-7 (15-07-90)
Base fragment
5th-6th century
Colourless, with greenish tinge
D. 38 mm
Tubular base-ring; kick and pontil mark on bottom
Thick brown weathering, mostly flaked off; brilliant iridescence; a few bubbles
Compare von Saldern (1980a) 67, no. 456 and pl. 25 (from the Byzantine shops, dated to the 5th century and later); Tatton-Brown (1984) 197, no. 21 and fig. 65 (late 5th-7th century); Jones (1987) 625 and fig. 128:26 (Stratum III, ca. 502-551)
99. Inv. No. SA-90-N-40 (vv)
Base fragment
Pale yellow-green
D. (est.) 52 mm
Tubular base-ring
Brown weathering (dfs), flaking to leave iridescence; pin-prick bubbles
Very similar to no 100, below
100. Inv. No. SA-90-N-24 (19-07-90)
Base fragment
4th century
Yellow-green
D. (est.) 40 mm
Tubular base-ring; high kick to bottom
Brilliant iridescence; a few pin-prick bubbles
Compare Jones (1987) 623 and fig. 126:8 (Stratum VB, ca. 324-363)
101. Inv. No. SA-90-N-216 (12-08-90)
Base fragment
Light blue
D. 38 mm
Tubular base-ring, slightly splayed; bottom very slightly concave at centre; part of jagged scar on bottom
- Iridescence on interior surfaces, dulling and fine pitting on exterior, very small pin-prick bubbles
See above, no. 21
Compare Harden (1949) 152, no. G.25, pl. XLIX,3 and fig. 1,6; Tatton-Brown (1984) 197, no. 19 and fig. 65
102. Inv. No. SA-90-N-5 (12-07-90)
Base fragment
Colourless, with greenish tinge
D. (est.) 40 mm
Tubular base-ring
Broken edges weathered, brown weathering, iridescence
103. Inv. No. SA-90-N-83 (26-07-90)
Base
Yellow-green
D. (est.) 4 cm
Solid, rounded base-ring; kick in bottom
Deformed; brown weathering (dfs) covering most of surfaces; quality of glass uncertain
104. Inv. No. SA-90-N-109
Base fragment
Yellow-green
D. (est.) 34 mm; Th. of bottom 5.4 mm
Flaring base-ring with rounded lower edge; ring-base and flattish, thick bottom
Brown weathering (dfs) covering most of surfaces; quality of glass uncertain
105. Inv. No. SA-90-DT-73 (29-07-90)
Block of glass
Yellow-green
L. 35 mm; W. 26.4 mm; Th. 13.5 mm
Part of a solid, thick bottom, probably of a large vessel
Pitting and faint iridescence

2.12. Miscellaneous

In addition to a number of decorated body fragments, this section includes a group of finds (nos. 11-113) that shows signs of having been deformed by fire (see also above, nos. 71 and 103). The purpose of the unusual eye-shaped piece of glass (no. 114) remains uncertain. The three bracelet fragments (nos. 115-117) were all found in related contexts at the nymphaeum. They are of types common throughout the Roman Empire from the third century onwards. One may note that examples of similar undecorated bracelets in blue glass, found at Sardis, are dated to the tenth century or later (von Saldern, 1980a, 100-101, nos. 776-779). Finally, the two tesserae (nos. 118-119) indicate the presence at Sagalassos of richly decorated mosaics.

106. Inv.No. SA-90-N-47 (29-07-90) \
- Fragments of ribbed glass
Yellow-green
H. 28 mm; W. 22.4 mm
Two conjoining pieces of lower section of body of vessel
Heavily pitted and covered in brown, iridescent weathering (dfs)
Compare Lightfoot (1989) 46, no. 65 (3rd-4th century)
107. Inv. No. SA-90-N-83 (26-07-90)
Body fragment of ribbed vessel
Pale yellow-green
H. 23.8 mm; W. 26 mm

- Brown, iridescent weathering (dfs)
Found with three other vessel fragments with the same weathering
See above, no. 106
108. Inv. No. SA-90-112
Small body fragment of mould-blown vessel
Blue-green
H. 24 mm; W. 14.5 mm; Th. 1.2 mm
Corner at right-angle, probably part of side of square bottle
Weathering, mostly flaked off to leave iridescence, some pin-prick bubbles
109. Inv. No. SA-90-N-104 (29-07-90)
Small fragment
Blue-green
H. 15 mm; W. 15.5 mm; Th. 3 mm
Body fragment, decorated with moulded line in relief (hollow on inside)
Dulling on exterior; no weathering; a few bubbles
110. Inv. No. SA-90-N-112
Fragment, ?bottom
Darkish blue-green
D. (est.) 56 mm; Th. of bottom (max.) 6.5 mm
Thick, concave pieces of glass, with raised side at outer edge, irregular hollows and edges at centre of interior as if a pontil scar
Thick creamy-brown weathering underneath, flaking off to leave iridescence; dulling on upper surface
111. Inv. No. SA-90-DT-7 (15-07-90)
Body fragment
Colourless, with greenish tinge
L. 33 mm; H. 29 mm; Th. 30-15 mm
Uneven surfaces and rounded edges, as if re-heated in fire
Creamy-brown weathering, flaking off to leave brilliant iridescence; quality of glass uncertain
112. Inv. No. SA-90-DT-49 (21-07-90)
Fragment, deformed by re-heating in fire
Colourless
Edges slightly rounded from effects of fire
Faint iridescence and deep pitting; some large and pin-prick bubbles
113. Inv. No. SA-90-N-5 (12-07-90)
Deformed body fragment
Colour uncertain
L. 22.4 mm; W. 25.75 mm; Th. 2.9-0.7 mm
Weathering (dfs);, iridescence and pitting of surface bubbles
114. Inv. No. SA-90-DT-3 (15-07-90)
Eye-shaped piece of flat glass
Colourless, with greenish tinge
L. 58 mm; H. 29 mm; Th. 2.5 mm
Thick enamel-like weathering; patches of brilliant iridescence; quality of glass uncertain
115. Inv. No. SA-90-N-187 (08-08-90)
Bracelet fragment
Blue
D. 68 mm; Th. 6.3-5.5 mm
Round in section
Whitish weathering film, flaking to leave dulled and iridescent surfaces
Compare Tatton-Brown (1984) 208, no. 166 and fig. 69; Canav (1985) 95, no. 168
116. Inv. No. SA-90-N-187 (08-08-90)
Bracelet fragment
Blue
D. 60 mm; H. 6 mm; Th. 4 mm

- Rectangular in section
Whitish weathering film, some uneven bumps in surface
117. Inv. No. SA-90-N-161 (04-08-90)
Bracelet fragment
Translucent dark blue
D. (est.) 62 mm; H. 7.4 mm; Th. 5.9 mm
Rod joint and tooling mark at one end; roughly squared in section
Fine weathering film and dulling; streaky glass
118. Inv. No. SA-90-N-56 (22-07-90)
Tessera
Opaque blue-green
H. 9.3 mm; L. 6.6 mm; W. 5.3 mm
Dulling and pitting
119. Inv. No. SA-90-N-187 (08-08-90)
Tessera fragment
Opaque blue-green
H. 7.9 mm; L. 7.6 mm; W. 5.5 mm
Triangular in section
Dulled and pitted

2.13. Window glass

All but three of the fragments come from the excavation of the Doric temple; the exceptions (W17 and W22-23) were found at the Nymphaem. No window glass was found during the excavations in the potter's quarter. There has been considerable debate over the question of how Roman window glass was made whether it was cast or blown. Harden (1959, esp. 14) argued that all Roman window glass, whether of the matt/glossy or of the double-glossy variety, was cylinder-blown. Boon (1966, 42-44), while admitting that thin panes (1-2 mm thick) of the double glossy type were blown, reverted to the earlier view that some Roman window glass was made in a mould. His examples, from Caerleon in Wales, were found in a number of stone buildings dated between ca. 130 and 296 and are all said to be of the thick (2 or 3 mm, occasionally more) glossy/matt variety (Boon, 1966, 41). By contrast, the earlier Byzantine window glass that was found in very large quantities at Sardis belongs to the blown type of window glass, using the so-called "muff-technique". The fragments have an average thickness of only 2 mm (von Saldern, 1980a, 91-92). Likewise, the window glass found at Anemurium, dated ca. 400-660, is no more than 3.5-2.0 mm thick, although different fragments were recognised as having been made both in moulds and from blown cylinders (Stern, 1985, 48-49). The majority of the Sagalassos examples are much thicker than any of the material described above, regardless of whether the latter were cast or blown. A fragment of a large pane, 5-6 mm thick, now in the Afyon Museum (Lightfoot, 1989, 28-29, no. 17 and pl. 2/3) provides by far the closest parallel to some of the Sagalassos pieces (W1-7). These fragments, because of their extreme thickness and surface condition, are here regarded as examples of cast panes of glass, although it may be wrong to think that they

were cast in moulds or trays. It may be preferable to suppose that panes of the matt/glossy type were made simply by rolling the molten glass out on a flat surface such as the marmor... Others, on the other hand, would appear to have been made by the muff-technique (W8-9). For a third group (W10-24) there is less evidence of how they were made, but it is probable that most of them were also produced from a blown cylinder. It would seem likely that much of the Sagalassos material belongs to an early stage in the production of window glass, when only thick panes could be manufactured. The colour and the fabric of many of the fragments also point to a date in the first three centuries A.D.

2.13.1. Cast in a tray

- W1 Inv. No. SA-90-DT-73 (29-07-90)
 Pane fragments, found with W10-12 and 18
 Light blue
 L. 50 mm; W. 32 mm; Th. 6.8-3.8 mm
 Matt-glossy type, flat on one side, uneven on the other
 In two conjoining pieces, one cracked; slight weathering; faint iridescence and dulling; many pin-prick bubbles
- W2 Inv. No. SA-90-DT-102 (08-08-90)
 Edge of pane, found with W3 and W6
 Light green
 L. 23 mm; W. 37 mm; Th. 6.3-3.8 mm
 Matt-glossy type, with rounded edge and slightly curved surfaces
 Many pin-prick and larger bubbles, all elongated
- W3 Inv. No. SA-90-DT-102 (08-08-90)
 Edge of pane, found with W2 and W6
 Blue-green
 L. 73 mm; W. 50 mm; Th. 5-3 mm
 Matt-glossy type, with rounded edge; uneven surfaces, one side glossy with numerous shallow tooling marks
 No weathering; many bubbles, some larger and shaped irregularly; round pin-prick bubbles towards centre, elongated towards the edge
- W4 Inv. No. SA-90-DT-49 (21-07-90)
 Edge of pane, found with W8, 15-16, 19 and 24
 Blue-green
 L. 27 mm; W. 25 mm; Th. (max.) 5 mm
 Matt-glossy type, with rounded edge; pane becoming thinner towards centre
 Broken edges weathered; faint iridescence; one larger and many small elongated bubbles
- W5 Inv. No. SA-90-DT-26 (17-07-90)
 Edge of pane, found with W7
 Green
 L. 23 mm; W. 13 mm; Th. 5 mm
 Matt-glossy type, with rounded edge; flat on one side, slightly uneven on the other
 Dulling, pitting and slight iridescence; many bubbles, some elongated
- W6 SA-90-DT-102 (08-08-90)
 Pane fragment, found with W2-3
 Pale yellow-green
 L. 44 mm; W. 40 mm; Th. 4.4-4.0 mm
 Matt-glossy type

- Broken edges weathered; faint iridescence; glossy side pitted, matt side with surface striations; very bubbly
- W7 SA-90-DT-26 (17-07-90)
 Pane fragment, found with W5
 Pale green
 L. 60 mm; W. 20 mm; Th. 4 mm
 Matt-glossy type, one surface being absolutely flat, the other slightly uneven
 Black enamel-like weathering, flaking off to leave brilliant iridescence and pitting; pin-prick bubbles

2.13.2. Blown as a cylinder

- W8 Inv. No. SA-90-DT-49 (21-07-90)
 ?Edge of pane, found with W4, 15-16, 19 and 24
 Light blue
 L. 42 mm; W. 18.5 mm; Th. 4 mm
 One edge cut and bevelled
 One side dulled, the other slightly weathered and iridescent; some larger and pin-prick bubbles
- W9 Inv. No. SA-90-DT-3 (15-07-90)
 Edge of pane
 Yellow-green
 L. (as extant) 35 mm; W. 17 mm; Th. 4 mm
 Double-glossy type with rounded edge
 Broken edges weathered; creamy weathering and iridescence on one side; dulling and iridescence on other; elongated bubbles

2.13.3. Uncertain, ?blown

- W10 Inv. No. SA-90-DT-73 (29-07-90)
 Pane fragment, found with W1, 11-12 and 18
 Light blue
 L. 25 mm; W. 21 mm; Th. 5.6-4.0 mm
 Possibly from same pane as W1
 Faint iridescence and dulling; many pin-prick bubbles
- W11 Inv. No. SA-90-DT-73 (29-07-90)
 Pane fragment, found with W1, 10, 12 and 18
 Light blue
 L. 140 mm; W. 109 mm; Th. 4.7-2.9 mm
 Slightly uneven, matt surfaces
 In two conjoining pieces; broken edges weathered; iridescence; some large and many pin-prick bubbles, all elongated and running in same direction
- W12 Inv. No. SA-90-DT-73 (29-07-90)
 Pane fragment, found with W1, 10-11 and 18
 Light blue
 L. 40 mm; W. 17 mm; Th. 4.4-3.5 mm
 One broken edge weathered; faint iridescence and dulling; pin-prick bubbles
- W13 Inv. No. SA-90-DT-114 (11-08-90)
 Edge of pane, found with W14 and 20-21
 Pale blue-green
 W. 47.5 mm; L. 23 mm; Th. 3.9-3.5 mm
 Rounded edge with tooling indent
 Broken edges weathered; brown enamel-like weathering; brilliant iridescence and pitting of surface bubbles; very bubbly
- W14 Inv. No. SA-90-DT-114 (11-08-90)
 Pane fragment, found with W13 and 20-21
 Blue-green
 L. 43 mm; W. 29 mm; Th. 3.3-2.1 mm

- Faint milky iridescence on one surface; the other glossy and more uneven; very few bubbles
- W15 Inv. No. SA-90-DT-49 (21-07-90)
 Pane fragment, found with W4, 8, 16, 19 and 24
 Blue-green
 L. 30 mm; W. 12 mm; Th. 3 mm
 Broken edges weathered; creamy-brown weathering; faint iridescence and dulling; pin-prick bubbles
- W16 Inv. No. SA-90-DT-49 (21-07-90)

Pane fragment, found with W4, 8, 15, 19 and 24

- Light blue-green
 L. 35 mm; W. 12 mm. Th. 3 mm
 Broken edges weathered; patch of creamy-brown weathering; faint iridescence and dulling; pin-prick bubbles
- W17 Inv. No. SA-90-N-44 (20-07-90)
 ?Pane fragment
 Green
 L. 46.6 mm, Ht. 28.9 mm; Th. 4.3-3.7 mm
 Some iridescence, but one surface very glossy; few bubbles
- W18 Inv. No. SA-90-DT-73 (29-07-90)
 Pane fragment, found with W1 and 10-12
 Green
 L. 52 mm; W. 32 mm; Th. 3.4-2.8 mm
 Thick, creamy weathering, flaking off to leave iridescence, dulling and pitting; many small elongated bubbles
- W19 Inv. No. SA-90-DT-49 (21-07-90)
 Pane fragment, found with W4, 8, 15-16 and 24
 Green
 L. 35.5 mm; W. 37.5 mm; Th. 3 mm
 Brown weathering film; iridescence and surface pitting; many bubbles

- W20 Inv. No. SA-90-DT-114 (11-08-90)
 Pane fragment, found with W13-14 and 21
 Colourless, with green tinge
 L. 34 mm; W. 13 mm; Th. 4.4 mm
 Brown weathering (dfs); pitting on one surface; more shiny on other but with striations; pin-prick bubbles
- W21 Inv. No. SA-90-DT-114 (11-08-90)
 Pane fragment, found with w13-14 and 20
 Colourless, with green tinge
 L. 46 mm; W. 14 mm; Th. 3 mm
 Broken edges weathered; brown weathering, iridescence and pitting, long scratches on surface, many small round bubbles
- W22 Inv. No. SA-90-N-83 (26-07-90)
 ?Pane fragment
 ?Colour
 L. 43 mm; W. 41 mm; Th. 3.8-3.5 mm
 On one surface small irregular raised areas; thick creamy-brown weathering, flaking off to leave brilliant iridescence and pitting; some pin-prick and larger bubbles
- W23 Inv. No. SA-90-N-151 (02-08-90)
 Edge of pane
 Yellow-green
 Angled edge
 L. (of edge) 9 mm; W. 36 mm; Th. 3.5 mm
 Brown weathering, flaking off to leave iridescence and dulling; some elongated bubbles
- W24 Inv. No. SA-90-DT-49 (21-07-90)
 Pane fragment, found with W4, 8, 15-16 and 19
 Light blue
 L. 51 mm; W. 27 mm; Th. 2.6 mm
 Very faint iridescence; elongated pin-prick bubbles

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5. INDEX OF PROVENANCES: SAGALASSOS 1990

5.1. Potter's quarter, Sector F

Bottles

50. SA-90-F-23 Rim and part of neck of bottle
51. SA-90-F-26 Rim and upper part of small perfume bottle
52. SA-90-F-27 Rim and upper part of small perfume bottle
53. SA-90-F-74 Rim and upper part of small perfume bottle
54. SA-90-F-118 Small perfume bottle
55. SA-90-F-52 Rim and upper part of small perfume bottle
56. SA-90-F-52 Body and neck of small perfume bottle
57. SA-90-F-98 Small perfume bottle Jugs and Flasks
61. SA-90-F-19 Fragments of a large jug
62. SA-90-F-19 Base of jug with vertical ribs
63. SA-90-F-21 Body fragments of ribbed vessel(s)

5.2. Doric temple, sector I

Dishes or bowls

5. SA-90-DT-31 Rim fragment, shallow bowl
7. SA-90-DT-102 Rim fragment, bowl or cup
8. SA-90-DT-114 Rim fragment, bowl or cup Vessels with cut decoration
11. SA-90-DT-39 Rim fragment, cup Goblets
17. SA-90-DT-14 Rim fragment, deep bowl or goblet
18. SA-90-DT-71 Rim fragment, deep bowl or goblet
19. SA-90-DT-20 Rim fragment, bowl or goblet
20. SA-90-DT-137 Rim fragment, bowl or goblet
21. SA-90-DT-7 Rim fragment, goblet
22. SA-90-DT-26 Rim fragment, deep bowl or goblet
23. SA-90-DT-1(vv) Base fragment, goblet
24. SA-90-DT-119 Base fragment, goblet
25. SA-90-DT-137 Base fragment, goblet
26. SA-90-DT-3 Base fragment, goblet
27. SA-90-DT-59 Base, goblet
28. SA-90-DT-31 Base and pedestal, small goblet (?or footed lamp)
29. SA-90-DT-7 Base fragment, goblet
30. SA-90-DT-40 Base fragment, goblet

Lamps

31. SA-90-DT-123 Four fragments of hanging lamp
32. SA-90-DT-137 Rim fragment, lamp

Jars

35. SA-90-DT-3 Rim fragment, jar
36. SA-90-DT-14 Rim fragment, jar
37. SA-90-DT-3 Rim fragment, jar
39. SA-90-DT-73 Rim fragment, jar
42. SA-90-DT-3 Rim fragment, ?jar
44. SA-90-DT-3 Rim fragment, jar

Bottles

47. SA-90-DT-73 Body fragment, small bottle
58. SA-90-DT-56 Rim, small perfume bottle
64. SA-90-DT-114 Rim and neck, ?small flask
66. SA-90-DT-20 Strap handle fragment

Trailed decoration on vessels of uncertain shape

68. SA-90-DT-3 Rim fragment, ?bowl Rims of vessels of uncertain shape
70. SA-90-DT-62 Rim fragment
72. SA-90-DT-137 Rim fragment, ?deep bowl or cup
73. SA-90-DT-62 Rim fragment, ?bowl or jar
74. SA-90-DT-73 Rim fragment
75. SA-90-DT-137 Rim fragment

Bottoms and bases of vessels of uncertain shape

80. SA-90-DT-3 Bottom fragment
84. SA-90-DT-102 Bottom fragment
85. SA-90-DT-119 Bottom fragment
87. SA-90-DT-3 Bottom fragment, ?small bottle
91. SA-90-DT-62 Base fragment
93. SA-90-DT-14 Base fragment, ?bowl
94. SA-90-DT-73 Base fragment, ?bowl
95. SA-90-DT-62 Base fragment
97. SA-90-DT-62 Base fragment
98. SA-90-DT-7 Base
105. SA-90-DT-73 Block of glass

Miscellaneous

111. SA-90-DT-7 Body fragment
112. SA-90-DT-49 Fragment, deformed by re-heating in fire
114. SA-90-DT-3 Eye-shaped piece of flat glass

Window glass fragments

- W1. SA-90-DT-73 Cast pane
- W2. SA-90-DT-102 Cast pane edge
- W3. SA-90-DT-102 Cast pane edge
- W4. SA-90-DT-49 Cast pane edge
- W5. SA-90-DT-26 Cast pane edge
- W6. SA-90-DT-102 Cast pane
- W7. SA-90-DT-26 Cast pane
- W8. SA-90-DT-49 Blown pane edge
- W9. SA-90-DT-3 Blown pane edge
- W10. SA-90-DT-73 Pane
- W11. SA-90-DT-73 Pane
- W12. SA-90-DT-73 Pane
- W13. SA-90-DT-114 Pane edge
- W14. SA-90-DT-114 Pane
- W15. SA-90-DT-49 Pane

- W16. SA-90-DT-49 Pane
- W17. SA-90-DT-73 Pane
- W18. SA-90-DT-73 Pane
- W19. SA-90-DT-49 Pane
- W20. SA-90-DT-114 Pane
- W21. SA-90-DT-114 Pane
- W22. SA-90-DT-49 Pane

5.3. Late Hellenistic *nymphaeum*

Dishes or bowls

1. SA-90-N-161 Rim fragment, large dish
2. SA-90-N-18 Rim fragment, shallow dish or bowl
3. SA-90-N-5 Rim fragment, bowl
4. SA-90-N-61 Rim fragment, bowl
6. SA-90-N-109 Tubular rim, shallow dish or bowl
9. SA-90-N-151 Base fragment, bowl
10. SA-90-N-87 Base fragment, bowl Vessels with cut decoration
12. SA-90-N-24 Rim fragment, beaker
13. SA-90-N-47 Rim fragment, tall beaker (?or lamp)
14. SA-90-N-216 Body fragment
15. SA-90-N-122 Body fragment, ?large bottle
16. SA-90-N-47 Body fragment, ?bowl

Jars

33. Surface find Rim fragment, jar
34. SA-90-N-47 Rim fragment, jar
38. SA-90-N-122 Rim fragment, jar
40. SA-90-N-151 Rim fragment, jar
41. SA-90-N-122 Rim fragment, jar
43. SA-90-N-171 Rim fragment, jar
45. SA-90-N-109 Rim fragment, jar

Aryballos

46. SA-90-N-3(vv) Dolphin-type handle

Bottles

48. SA-90-N-28 Fragments of large bottle
49. SA-90-N-18 Bottom fragment, (?mould-blown) bottle
59. SA-90-N-215 Rim and mouth of perfume bottle
60. SA-90-N-83 Bottom of small perfume bottle
65. SA-90-N-5 Rim fragment, ?flask

Trailed decoration on vessels of uncertain shape

67. SA-90-N-187 Rim fragment, ?dish
69. SA-90-N-17 Bottom fragment, ?bottle Rims of vessels of uncertain shape
71. SA-90-N-18 Rim fragment, ?flask
76. SA-90-N-18 Rim fragment, ?bottle
77. SA-90-N-109 Rim, ?bowl
78. SA-90-N-87 Rim fragment, ?small cup
79. SA-90-N-87 Rim fragment, ?small cup

Bottoms and bases of vessels of uncertain shape

81. SA-90-N-130 Bottom fragment

- 82. SA-90-N-18 Bottom fragment, ?jar
- 83. SA-90-N-128 Bottom fragment
- 86. SA-90-N-74 Bottom
- 88. SA-90-N-40(vv) Bottom fragment, ?beaker
- 89. SA-90-N-109 Bottom
- 90. SA-90-N-216 Bottom fragment
- 92. SA-90-N-188 Base fragment
- 96. SA-90-N-87 Base fragment
- 99. SA-90-N-40 (vv) Base fragment
- 100. SA-90-N-24 Base fragment
- 101. SA-90-N-216 Base fragment
- 102. SA-90-N-5 Base fragment
- 103. SA-90-N-83 Base
- 104. SA-90-N-109 Base fragment Miscellaneous
- 106. SA-90-N-47 Fragments of ribbed glass
- 107. SA-90-N-83 Body fragment of ribbed vessel
- 108. SA-90-N-212 Small body fragment of mould-blown vessel
- 109. SA-90-N-104 Small body fragment
- 110. SA-90-N-112 Small body fragment
- 113. SA-90-N-5 Deformed body fragment
- 115. SA-90-N-187 Bracelet fragment
- 116. SA-90-N-187 Bracelet fragment
- 117. SA-90-N-161 Bracelet fragment
- 118. SA-90-N-56 Tessera
- 119. SA-90-N-187 Tessera fragment

Window glass fragments

- W17. SA-90-N-44 ?Pane
- W22. SA-90-N-83 ?Pane
- W23. SA-90-N-151 Pane edge

6. INDEX OF DATES: SAGALASSOS 1990

1st century

- 47. SA-90-DT-73 Body fragment, small bottle
- 59. SA-90-N-215 Rim and mouth of perfume bottle

1st century-2nd century

- 11. SA-90-DT-39 Rim fragment, cup
- 12. SA-90-N-24 Rim fragment, beaker
- 13. SA-90-N-47 Rim fragment, tall beaker (?or lamp)
- 69. SA-90-N-17 Bottom fragment, ?bottle

2nd century

- 58. SA-90-DT-56 Rim, small perfume bottle
- 68. SA-90-DT-3 Rim fragment, ?bowl
 - 2. SA-90-N-18 Rim fragment, shallow dish or bowl
- 46. SA-90-N-3(vv) Dolphin-type handle
- 60. SA-90-N-83 Bottom of small perfume bottle

2nd century-3rd century

- 3. SA-90-N-5 Rim fragment, bowl
- 14. SA-90-N-216 Body fragment
- 15. SA-90-N-122 Body fragment, ?large bottle

- 49. SA-90-N-18 Bottom fragment, (?mould-blown) bottle

3rd century

- 6. SA-90-N-109 Tubular rim, shallow dish or bowl
- 9. SA-90-N-151 Base fragment, bowl
- 16. SA-90-N-47 Body fragment, ?bowl
- 65. SA-90-N-5 Rim fragment, ?flask
- 88. SA-90-N-40(vv) Bottom fragment, ?beaker

3rd century-4th century

- 95. SA-90-DT 62 Base fragment
- 10. SA-90-N-87 Base fragment, bowl
- 96. SA-90-N-87 Base fragment
- 106. SA-90-N-47 Fragments of ribbed glass
- 107. SA-90-N-83 Body fragment of ribbed vessel 4th century
- 51. SA-90-F-26 Rim and upper part of small perfume bottle
- 52. SA-90-F-27 Rim and upper part of small perfume bottle
- 53. SA-90-F-74 Rim and upper part of small perfume bottle
- 54. SA-90-F-118 Small perfume bottle
- 55. SA-90-F-52 Rim and upper part of small perfume bottle
- 56. SA-90-F-52 Body and neck of small perfume bottle
- 57. SA-90-F-98 Small perfume bottle
- 61. SA-90-F-19 Fragments of a large jug
- 62. SA-90-F-19 Base of jug with vertical ribs
- 63. SA-90-F-21 Body fragments of ribbed vessel(s)
 - 5. SA-90-DT-31 Rim fragment, shallow bowl
- 35. SA-90-DT-3 Rim fragment, jar
- 36. SA-90-DT-14 Rim fragment, jar
- 37. SA-90-DT-3 Rim fragment, jar
- 44. SA-90-DT-3 Rim fragment, jar
- 64. SA-90-DT-114 Rim and neck, ?small flask
- 66. SA-90-DT-20 Strap handle fragment
- 87. SA-90-DT-3 Bottom fragment, ?small bottle
- 93. SA-90-DT-14 Base fragment, ?bowl
- 94. SA-90-DT-73 Base fragment, ?bowl
- 105. SA-90-DT-73 Block of glass
- 33. Surface find Rim fragment, jar
- 34. SA-90-N-47 Rim fragment, jar
- 38. SA-90-N-122 Rim fragment, jar
- 40. SA-90-N-151 Rim fragment, jar
- 41. SA-90-N-122 Rim fragment, jar
- 48. SA-90-N-28 Fragments of large bottle
- 92. SA-90-N-188 Base fragment
- 99. SA-90-N-40 (vv) Base fragment
- 100. SA-90-N-24 Base fragment
- 102. SA-90-N-5 Base fragment
- 103. SA-90-N-83 Base
- 104. SA-90-N-109 Base fragment

4th century-5th century

- 17. SA-90-DT-14 Rim fragment, deep bowl or goblet
- 18. SA-90-DT-71 Rim fragment, deep bowl or goblet
- 19. SA-90-DT-20 Rim fragment, bowl or goblet
- 20. SA-90-DT-137 Rim fragment, bowl or goblet
- 24. SA-90-DT-119 Base fragment, goblet
- 26. SA-90-DT-3 Base fragment, goblet
- 39. SA-90-DT-73 Rim fragment, jar
- 42. SA-90-DT-3 Rim fragment, ?jar
- 97. SA-90-DT-62 Base fragment

43. SA-90-N-171 Rim fragment, jar
 45. SA-90-N-109 Rim fragment, jar

5th century

22. SA-90-DT-26 Rim fragment, deep bowl or goblet
 23. SA-90-DT-1(vv) Base fragment, goblet
 31. SA-90-DT-123 Four fragments of hanging lamp

5th century–6th century

50. SA-90-F-23 Rim and part of neck of bottle
 7. SA-90-DT-102 Rim fragment, bowl or cup
 8. SA-90-DT-114 Rim fragment, bowl or cup
 21. SA-90-DT-7 Rim fragment, goblet
 25. SA-90-DT-13 Base fragment, goblet
 27. SA-90-DT-59 Base, goblet
 28. SA-90-DT-31 Base and pedestal, small goblet (?or footed lamp)
 29. SA-90-DT-7 Base fragment, goblet
 30. SA-90-DT-40 Base fragment, goblet
 32. SA-90-DT-137 Rim fragment, lamp
 75. SA-90-DT-137 Rim fragment
 98. SA-90-DT-7 Base
 4. SA-90-N-61 Rim fragment, bowl
 101. SA-90-N-216 Base fragment

Uncertain

70. SA-90-DT-62 Rim fragment
 72. SA-90-DT-137 Rim fragment, ?deep bowl or cup
 73. SA-90-DT-62 Rim fragment, ?bowl or jar
 74. SA-90-DT-73 Rim fragment
 80. SA-90-DT-3 Bottom fragment
 84. SA-90-DT-102 Bottom fragment
 85. SA-90-DT-119 Bottom fragment
 91. SA-90-DT-62 Base fragment
 94. SA-90-DT-73 Base fragment, ?bowl
 111. SA-90-DT-7 Body fragment
 112. SA-90-DT-49 Fragment, deformed by re-heating in fire
 114. SA-90-DT-3 Eye-shaped piece of flat glass
 1. SA-90-N-161 Rim fragment, large dish
 67. SA-90-N-18 Rim fragment, ?dish
 71. SA-90-N-18 Rim fragment, ?flask
 76. SA-90-N-18 Rim fragment, ?bottle
 77. SA-90-N-109 Rim, ?bowl
 78. SA-90-N-87 Rim fragment, ?small cup
 79. SA-90-N-87 Rim fragment, ?small cup
 81. SA-90-N-130 Bottom fragment
 82. SA-90-N-18 Bottom fragment, ?jar
 83. SA-90-N-128 Bottom fragment
 86. SA-90-N-74 Bottom
 89. SA-90-N-109 Bottom
 90. SA-90-N-216 Bottom fragment
 108. SA-90-N-212 Small body fragment of mould-blown vessel
 109. SA-90-N-104 Small body fragment
 110. SA-90-N-112 Small body fragment
 113. SA-90-N-5 Deformed body fragment
 115. SA-90-N-187 Bracelet fragment
 116. SA-90-N-187 Bracelet fragment
 117. SA-90-N-161 Bracelet fragment
 118. SA-90-N-56 Tessera
 119. SA-90-N-187 Tessera fragment

7. INDEX OF COLOURS: SAGALASSOS 1990

7.1. Colourless

1st century

47. SA-90-DT-73 Body fragment, small bottle
 59. SA-90-N-215 Rim and mouth of perfume bottle

1st century–2nd century

11. SA-90-DT-39 Rim fragment, cup

2nd century

68. SA-90-DT-3 Rim fragment, ?bowl
 2. SA-90-N-18 Rim fragment, shallow dish or bowl
 46. SA-90-N-3(vv) Dolphin-type handle

2nd century–3rd century

3. SA-90-N-5 Rim fragment, bowl
 14. SA-90-N-216 Body fragment

3rd century

6. SA-90-N-109 Tubular rim, shallow dish or bowl
 9. SA-90-N-151 Base fragment, bowl
 16. SA-90-N-47 Body fragment, ?bowl

3rd century–4th century

96. SA-90-N-87 Base fragment

4th century

51. SA-90-F-26 Rim and upper part of small perfume bottle
 52. SA-90-F-27 Rim and upper part of small perfume bottle
 53. SA-90-F-74 Rim and upper part of small perfume bottle
 54. SA-90-F-118 Small perfume bottle
 55. SA-90-F-52 Rim and upper part of small perfume bottle
 56. SA-90-F-52 Body and neck of small perfume bottle
 57. SA-90-F-98 Small perfume bottle
 61. SA-90-F-19 Fragments of a large jug
 35. SA-90-DT-3 Rim fragment, jar
 87. SA-90-DT-3 Bottom fragment, ?small bottle
 34. SA-90-N-47 Rim fragment, jar
 102. SA-90-N-5 Base fragment

4th century–5th century

19. SA-90-DT-20 Rim fragment, bowl or goblet
 24. SA-90-DT-119 Base fragment, goblet

5th century

22. SA-90-DT-26 Rim fragment, deep bowl or goblet 5th century–6th century
 50. SA-90-F-23 Rim and part of neck of bottle

- 28. SA-90-DT-31 Base and pedestal, small goblet (?or footed lamp)
- 98. SA-90-DT-7 Base
 - 4. SA-90-N-61 Rim fragment, bowl Uncertain
- 111. SA-90-DT-7 Body fragment
- 112. SA-90-DT-49 Fragment, deformed by re-heating in fire
- 114. SA-90-DT-3 Eye-shaped piece of flat glass
 - 1. SA-90-N-161 Rim fragment, large dish
- 78. SA-90-N-87 Rim fragment, ?small cup
- 79. SA-90-N-87 Rim fragment, ?small cup
- 89. SA-90-N-109 Bottom

7.2. Pale green

3rd century

- 65. SA-90-N-5 Rim fragment, ?flask

4th century

- 62. SA-90-F-19 Base of jug with vertical ribs
- 63. SA-90-F-21 Body fragments of ribbed vessel(s)
- 38. SA-90-N-122 Rim fragment, jar

4th century-5th century

- 20. SA-90-DT-137 Rim fragment, bowl or goblet

5th century-6th century

- 29. SA-90-DT-7 Base fragment, goblet

Uncertain

- 72. SA-90-DT-137 Rim fragment, ?deep bowl or cup
- 86. SA-90-N-74 Bottom

7.3. Light green

1st century-2nd century

- 12. SA-90-N-24 Rim fragment, beaker

4th century

- 5. SA-90-DT-31 Rim fragment, shallow bowl
- 92. SA-90-N-188 Base fragment

Uncertain

- 70. SA-90-DT-62 Rim fragment

7.4. Green

2nd century-3rd century

- 15. SA-90-N-122 Body fragment, ?large bottle

4th century

- 36. SA-90-DT-14 Rim fragment, jar

- 37. SA-90-DT-3 Rim fragment, jar
- 94. SA-90-DT-73 Base fragments, ?bowl

Uncertain

- 80. SA-90-DT-3 Bottom fragment
- 85. SA-90-DT-119 Bottom fragment
- 67. SA-90-N-187 Rim fragment, ?dish

7.5. Dark green

3rd century-4th century

- 10. SA-90-N-87 Base fragment, bowl

5th century-6th century

- 27. SA-90-DT-59 Base, goblet

7.6. Yellow-green

3rd century-4th century

- 106. SA-90-N-47 Fragments of ribbed glass
- 107.. SA-90-N-83 Body fragment of ribbed vessel

4th century

- 64. SA-90-DT-114 Rim and neck, ?small flask
- 66. SA-90-DT-20 Strap handle fragment
- 105. SA-90-DT-73 Block of glass
- 40. SA-90-N-151 Rim fragment, jar
- 41. SA-90-N-122 Rim fragment, jar
- 48. SA-90-N-28 Fragments of large bottle
- 99. SA-90-N-40 (vv) Base fragment
- 100. SA-90-N-24 Base fragment
- 103. SA-90-N-83 Base
- 104. SA-90-N-109 Base fragment

4th century-5th century

- 17. SA-90-DT-14 Rim fragment, deep bowl or goblet
- 18. SA-90-DT-71 Rim fragment, deep bowl or goblet
- 19. SA-90-DT-20 Rim fragment, bowl or goblet
- 20. SA-90-DT-137 Rim fragment, bowl or goblet
- 24. SA-90-DT-119 Base fragment, goblet
- 26. SA-90-DT-3 Base fragment, goblet
- 39. SA-90-DT-73 Rim fragment, jar
- 42. SA-90-DT-3 Rim fragment, ?jar
- 43. SA-90-N-171 Rim fragment, jar
- 45. SA-90-N-109 Rim fragment, jar

5th century-6th century

- 75. SA-90-DT-137 Rim fragment

Uncertain

- 73. SA-90-DT-62 Rim fragment, ?bowl or jar
- 84. SA-90-DT-102 Bottom fragment
- 71. SA-90-N-18 Rim fragment, ?flask

77. SA-90-N-109 Rim, ?bowl
 81. SA-90-N-130 Bottom fragment
 82. SA-90-N-18 Bottom fragment, ?jar
 83. SA-90-N-128 Bottom fragment

7.7. Yellow-brown

3rd century-4th century

95. SA-90-DT-62 Base fragment

7.8. Blue-green

1st century-2nd century

13. SA-90-N-47 Rim fragment, tall beaker (?or lamp)

2nd century

58. SA-90-DT-56 Rim, small perfume bottle
 60. SA-90-N-83 Bottom of small perfume bottle

2nd century-3rd century

49. SA-90-N-18 Bottom fragment, (?mould-blown) bottle

3rd century

88. SA-90-N-40(vv) Bottom fragment, ?beaker

4th century

93. SA-90-DT-14 Base fragment, ?bowl
 33. Surface find, N Rim fragment, jar

4th century-5th century

26. SA-90-DT-3 Base fragment, goblet
 97. SA-90-DT-62 Base fragment

5th century

23. SA-90-DT-1 (vv) Base fragment, goblet

5th century-6th century

7. SA-90-DT-102 Rim fragment, bowl or cup
 8. SA-90-DT-114 Rim fragment, bowl or cup
 25. SA-90-DT-137 Base fragment, goblet
 30. SA-90-DT-40 Base fragment, goblet
 32. SA-90-DT-137 Rim fragment, lamp

Uncertain

91. SA-90-DT-62 Base fragment
 76. SA-90-N-18 Rim fragment, ?bottle
 90. SA-90-N-216 Bottom fragment
 108. SA-90-N-212 Small body fragment of mould-blown vessel
 109. SA-90-N-104 Small body fragment

110. SA-90-N-112 Small body fragment

7.9. Pale blue

1st century-2nd century

69. SA-90-N-17 Bottom fragment, ?bottle

7.10. Light blue

5th century

31. SA-90-DT-123 Four fragments of hanging lamp

5th century-6th century

21. SA-90-DT-7 Rim fragment, ?goblet
 101. SA-90-N-216 Base fragment

Uncertain

74. SA-90-DT-73 Rim fragment

7.11. Blue

Uncertain

115. SA-90-N-187 Bracelet fragment
 116. SA-90-N-187 Bracelet fragment
 117. SA-90-N-161 Bracelet fragment
 118. SA-90-N-56 Tessera

8. INDEX OF FIND-SPOTS AND DATES: SAGALASSOS 1990

8.1. Potter's quarter, sector F

F-19	4th century	61 and 62.
F-21	4th century	63.
F-23	5th-6th century	50.
F-26	4th century	51.
F-27	4th century	52.
F-52	4th century	55 and 56.
F-74	4th century	53.
F-98	4th century	57.
F-118	4th century	54.

8.2. Doric temple, sector I

DT-1	5th century	23.
DT-3	2nd century	68.
	4th century	35, 37, 44 and 87.
	4th-5th century	26 and 42.
	Uncertain	80 and 114.
	Window glass	W9.
DT-7	5th-6th century	21, 29 and 98
	Uncertain	111.
DT-14	4th century	36 and 93.
	4th-5th century	17.

DT-20	4th century	66.	N-18	2nd century	2.
	4th-5th century	19.		2nd-3rd century	49.
DT-26	5th century	22.		Uncertain	71, 76 and 82.
	Window glass	W5 and 7.	N-24	1st-2nd century	12.
DT-31	4th century	5.		4th century	100.
	5th-6th century	28.	N-28	4th century	48.
DT-39	1st-2nd century	11.	N-40	3rd century	88.
DT-40	5th-6th century	30.		4th century	99.
DT-49	Uncertain	112.	N-44	Window glass	W17.
	Window glass	W4, 8,15, 16, 19	N-47	1st-2nd century	13.
		24.		3rd century	16.
DT-56	2nd century	58.		3rd-4th century	106.
DT-59	5th-6th century	27.		4th century	34.
DT-62	3rd-4th century	95.	N-56	Uncertain	118.
	4th-5th century	97.	N-61	5th-6th century	4.
	Uncertain	70, 73 and 91.	N-74	Uncertain	86.
DT-71	4th-5th century	18.	N-83	2nd century	60.
DT-73	1st century	47.		3rd-4th century	107.
	4th century	94 and 105.		4th century	103.
	4th-5th century	39.		Window glass	W22.
	Uncertain	74 and 94.	N-87	3rd-4th century	10 and 96.
	Window glass	W1, 10, 12		Uncertain	78 and 79.
		and 18.	N-104	Uncertain	109.
DT-102	5th-6th century	7.	N-109	3rd century	6.
	Uncertain	84.		4th century	104.
	Window glass	W2, 3 and 6.		4th-5th century	45.
DT-114	4th century	64.		Uncertain	77 and 89.
	5th-6th century	8.	N-112	Uncertain	108 and 110.
	Window glass	W13-14	N-122	2nd-3rd century	15.
		and 20-21.		4th century	38 and 41.
DT-119	4th-5th century	24.	N-128	Uncertain	83.
	Uncertain	85.	N-130	Uncertain	81.
DT-123	5th century	31.	N-151	3rd century	9.
DT-137	4th-5th century	20.		4th century	40.
	5th-6th century	25, 32 and 75.		Window glass	W23.
	Uncertain	72.	N-161	Uncertain	1 and 117.
			N-171	4th-5th century	43.
			N-187	Uncertain	67, 115, 116 and 119.
				4th century	92.
N-3	2nd century	46.	N-188	1st century	59.
N-5	2nd-3rd century	3.	N-215	2nd-3rd century	14.
	3rd century	65.	N-216	5th-6th century	101.
	4th century	102.		Uncertain	90.
	Uncertain	113.			
N-17	1st-2nd century	69.			

8.3. Late Hellenistic nymphaeum

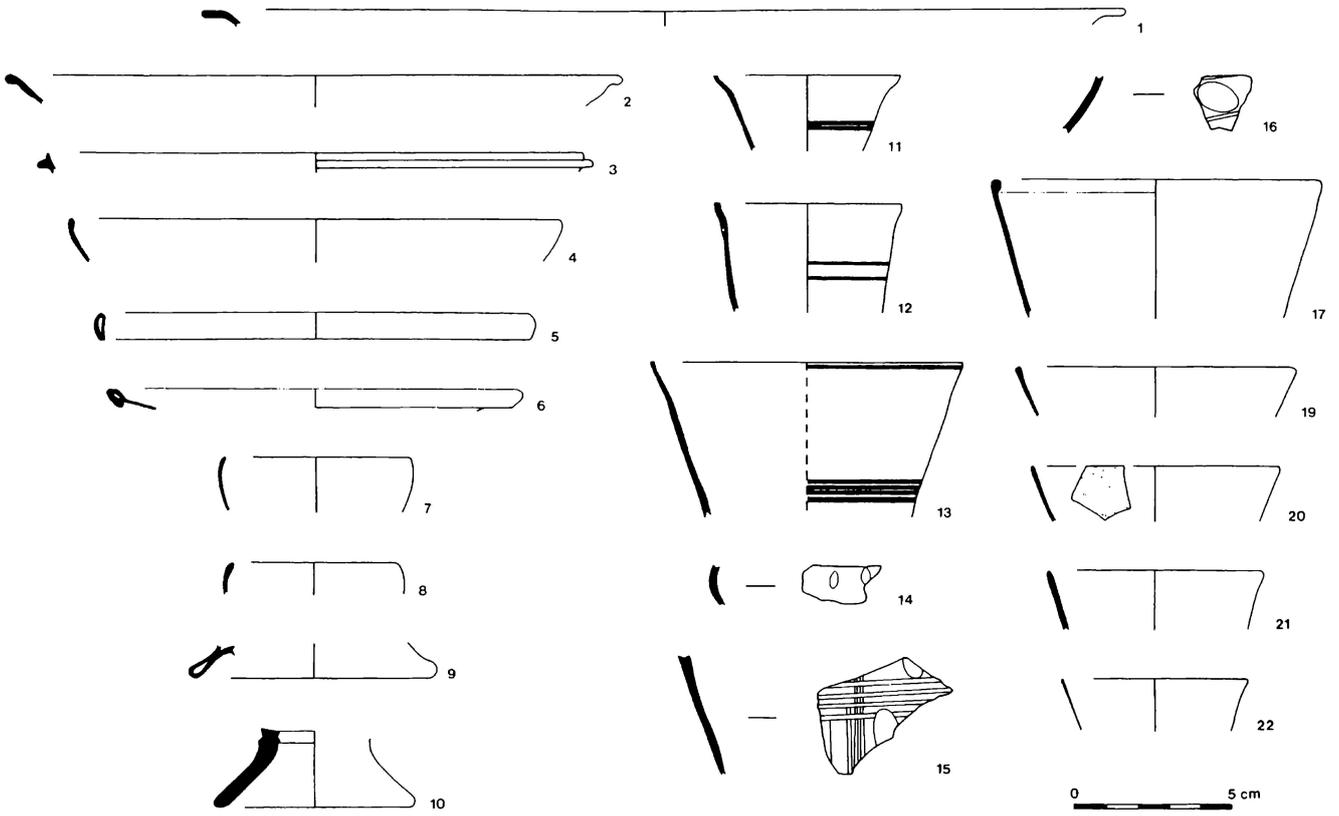


Fig. 121

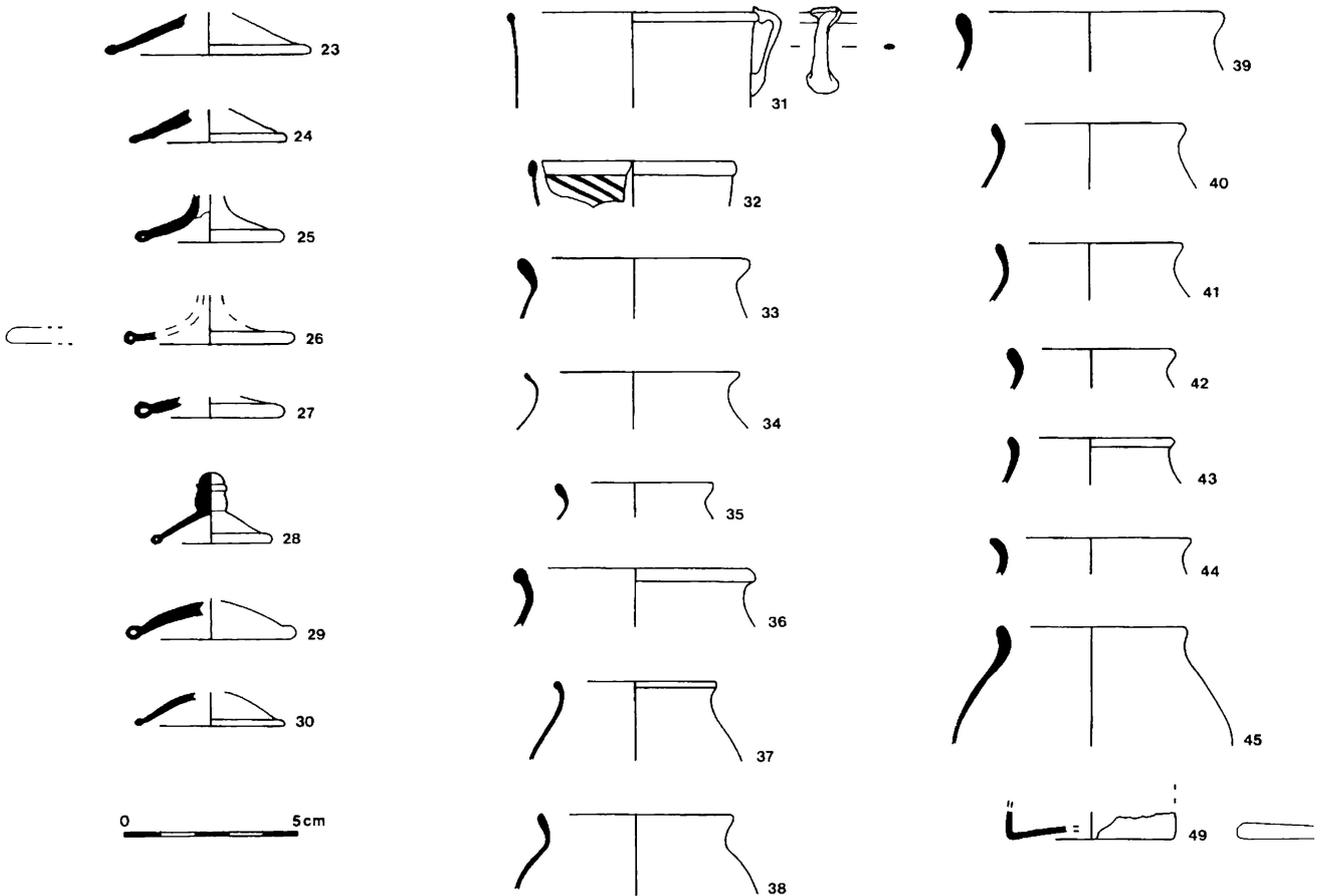


Fig. 122

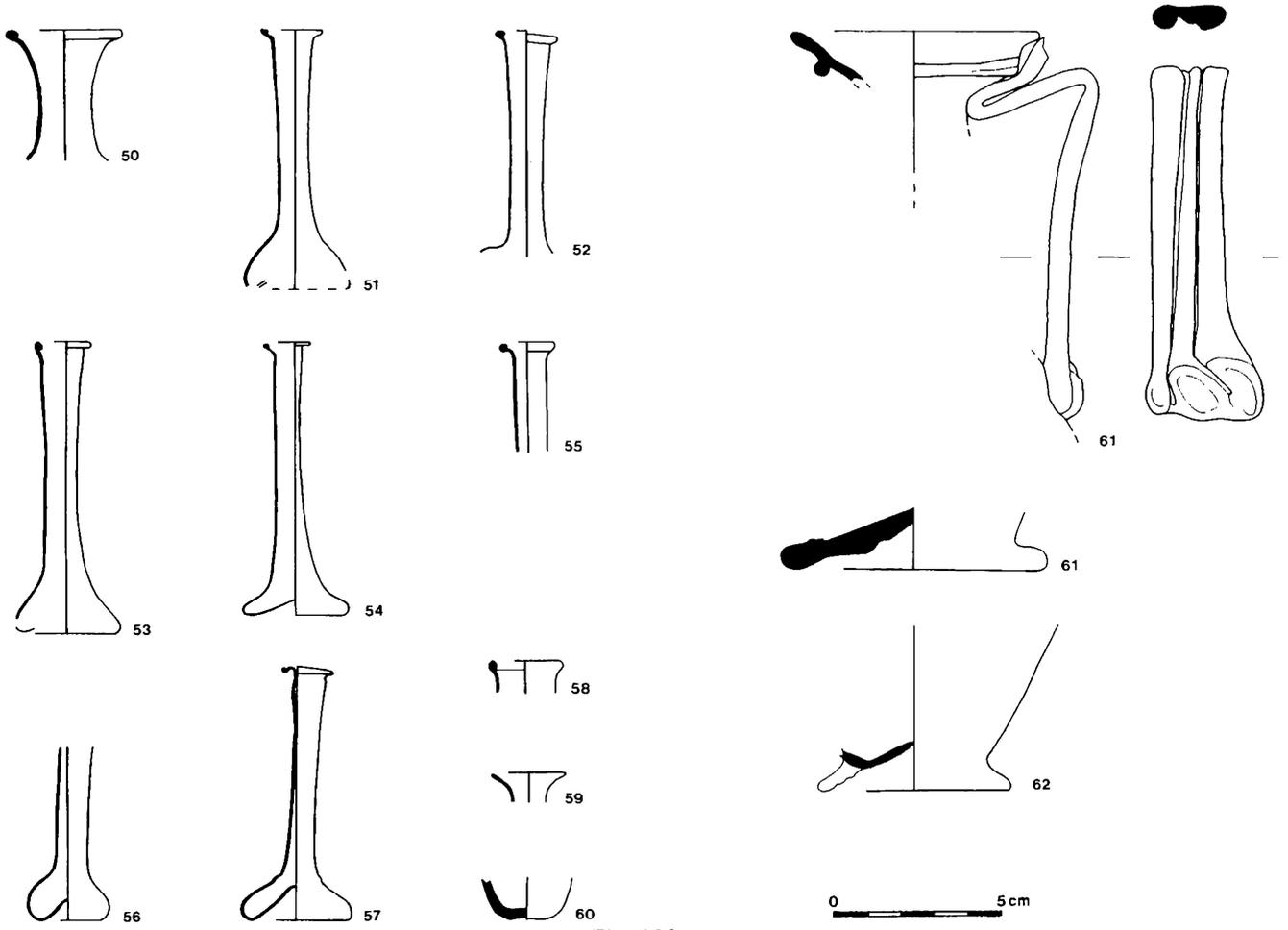


Fig. 123

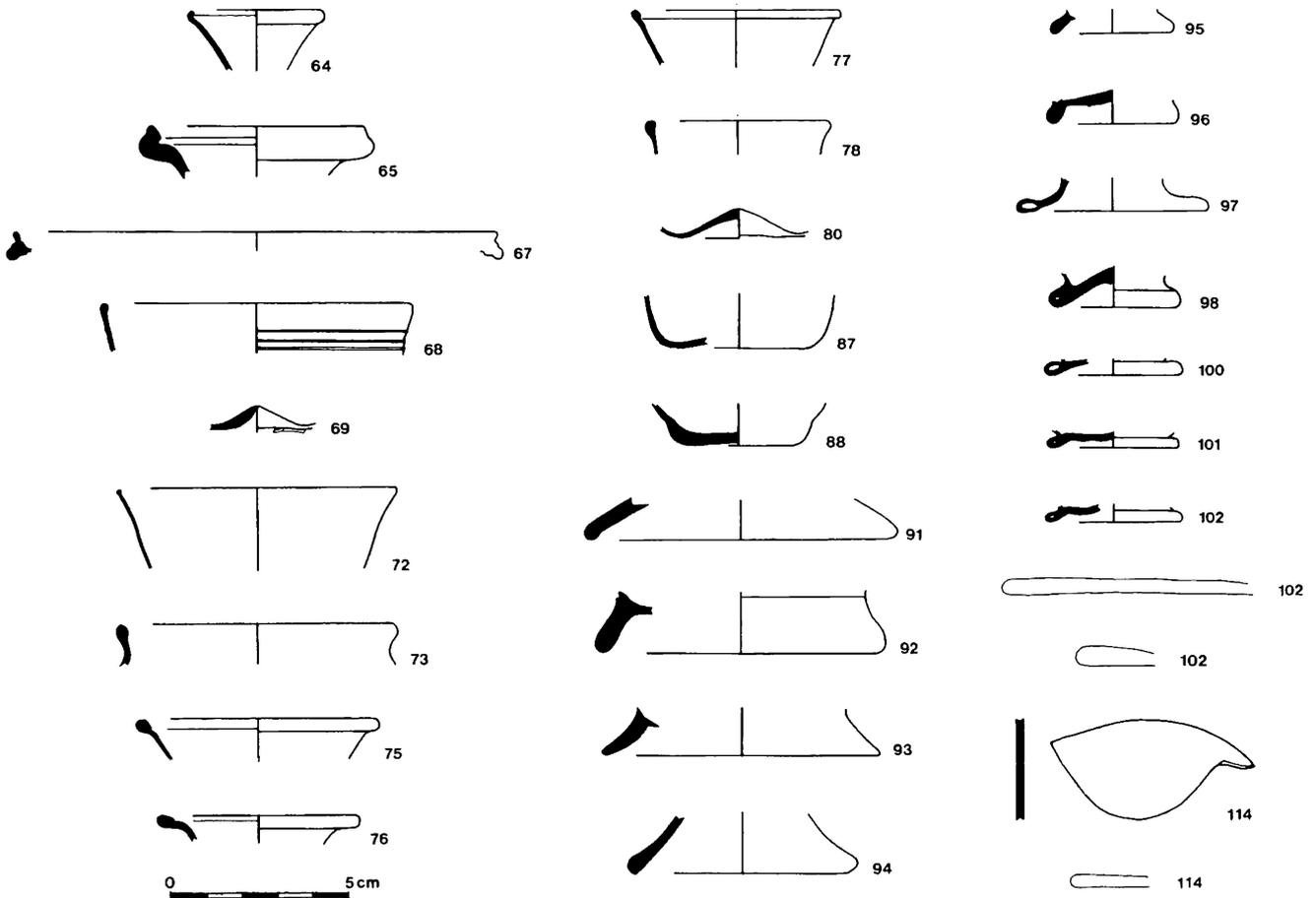


Fig. 124