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Lids in Palestine during the Mishnaic Period: From the Lived Religion Perspective

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1. Introduction and time frame for the study

This study[1] re-evaluates lids discovered at various sites in Palestine around the Roman periods (63 BCE–330 CE) by accessing into the people's mind through descriptions from the Mishnah, the authoritative collection of Jewish oral law. It aims to determine the significance of lids and their function in relation to the Jewish sense of clean and unclean.

The compulsion of Greek, then Roman customs on the Jewish society in Palestine spurred two wars against the Romans in the 1st and 2nd centuries (66–135 CE).[2] They were disastrous to the Jewish society, especially in the Judea region; the people lost their own country. After these two wars, Legislative and Judicial assembly called Sanhedrin as the centre of Judaism was moved from Judea to

1 This article based on author's previous papers in Japanese. K. Makino, "Analysis of Lids from the Hellenistic and Roman Periods," *Journal of West Asian Archaeology* 18 (2017, 89–98); K. Makino, "Associated Lids and Vessels from the Hellenistic and Roman Periods in Palestine," *Journal of West Asian Archaeology* 20 (2019, 85–96). Some revised figures and tables, as well as new data, are added.

2 S. Applebaum, *Judaea in Hellenistic and Roman Times* (Leiden: E. J. Brill, 1988); F. Josephus, *The Jewish War.* Revised edition, trans. G. A. Williamson (London: Clays Ltd, st Uves plc, 1984).

the Galilee region. In these autonomic communities, the Mishnah was edited and compiled by Rabbi Judah Ha Nasi to re-establish Jewish social and legal norms.[3] The Mishnah originally was the oral traditions and inherited as a written collection with substantial examples and regulations in the Jewish daily life with debate and judgement by rabbis. This is the beginning of the Mishnaic period and continues until around 200 CE. when the Rabbinic Judaism began in the city of Yavne by Rabbi Yochanan Ben Zakai. In the archaeological reports, materials in the Roman periods are generally categorized with the Roman influence in each region into ER (early Roman around 1st BCE–2nd CE), MR (middle Roman around 2nd – 3rd CE), and LR (late Roman around 3rd–4th CE). The research is done by analyzing lids recorded in the excavation reports of the 23 randomly selected archaeological sites in Palestine[4] (Figure 1, Table 1). Since the materials discovered are sorted by the strata, they do not always correspond to the chronology by the historical events shown above. Thus, the statistical analysis is considered not only during the Mishnaic period, but in a wider context from the end of Persian to the late

3 The sources used in this article are: Library of the Hungarian Academy of Science, "Mishnah MSA50, Italy, Late 11th– mid-12th c.," *David Kaufmann and his Medieval Hebrew manuscripts in the Oriental Collection of the Library of the Hungarian Academy of Science* (http://kaufmann.mtak.hu/en/ms50/ms50-coll1.htm) (accessed 20 November 2018) (in Hebrew with English title); Mechon Mamre, *Shisha Sidre Mishnah* (http://mechon-mamre.org/b/h/h0.htm) (accessed from 10 October 2013) (Hebrew); Sefaria, Inc, *Mishnah* (https://www.sefaria.org/texts/Mishnah) (accessed from 20 October 2022) (in Hebrew with English translation). English translations in this paper are from Sefaria, Inc. There is also a similar legal text, Tosefta, but the only written collection of the Mishnah will be used in this study to clarify the argument.

4 To get the general idea about the timeframe and distribution of the lids, the author chose the published excavation reports (see the refence at the end the paper followed by the column 'reference' in Table 1) of the ancient sites covering the whole Palestine region before and after the Mishnaic period as much as possible without bias. Abbreviation of the periods in the Table 1 follows the descriptions in the excavation reports. Data, not only from Dor and Qumran in the figure 1, but also from other sites will be added in near future.

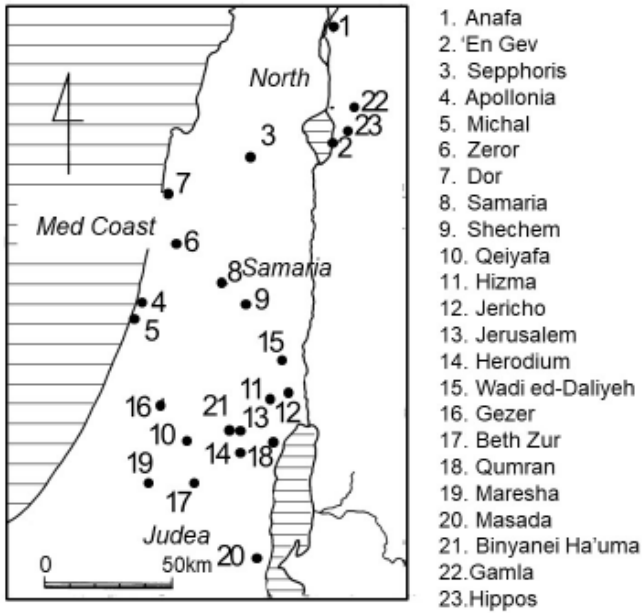


Figure 1 The sites mentioned in the text.

Roman periods.

The following chapters explain the lids described in the Mishnah and in archaeological finds. The author clarifies the terminology concern lids by their forms (Deep, shallow, and stopper) (Figure 2).

2. Variations of lids as described in the Mishnah

In the volume 'Tahorot' in the Mishnah, the Tractate 'Kelim' (means 'vessel') describes the importance of keeping vessels clean. Vessels are clean if they are *simple* (flat, פשוט), and unclean if they form a *receptacle* (מקבל; Kelim 2:1, 2:3), as 'Vessels of wood, vessels of leather, vessels of bone or vessels of glass: If they are simple they are clean If they form a receptacle they are unclean. If they were

Table 1 The sites and their strata from excavation reports.

	Period / Site (Num of lids/all sheds)	Early Hellenistic	Late Hellenistic	Early Roman	Middle Roman	Refernce
1	Anafa (41/1186)	Hell2C(98-75BCE)		ROM1A(end of 1st BCE)	ROM1B(Early 1st CE)	Herbert 1997
2	'En Gev (33/971)	III	II	I		Makino 2009, 2011, 2016
3	Sepphoris(39/545)		LH	ER1(1-70CE), ER2(70-135CE)	MR(135-300CE)	Meyers & Meyers 2013
4	Apollonia (2/119)	late 4th to mid-2nd/1st BCE				Roll & Tal 1999
5	Michal (0/54)	V	IV	II		Herzog et al. 1989
6	Zeror (1/263)	V	IV-I	ROM		Ohata et al. 1966-70
7	Dor	IVB(Ptolemaic)	IVA(Seleucid)	III(HEL-ROM)	ROM	Stern 1995
8	Samaria(1/552)	IV	LH(2nd -107BCE)	ROM (1&1a (1BCE-Early 1CE) 3a(3rd CE); 2a(Late 1CE- 2CE) 4a(Early 4th CE))		Reisner et al. 1924 Crowfoot et al. 1957
9	Shechem	IV(325-250)	IIIB, A II	I (150-110)		Lapp 2008
10	Qeiyafa (0/107)	III				Garfinkel & Ganor 2009
11	Hizma (0/61)			Cave1(1CE)		Magen 2002
12	Jericho (6/555)	Has1(100-95/85BCE) Has2(85/75-31BCE)		Hero3(6-48CE), (48/70-135CE) Hero1(31-15BCE),Hero2(15BCE-6CE)		Bar-Nathan 2002
13	Jerusalem (12/818)	X2-St.7		X2-St.6-4	A-St.6-4(1BCE&1CE)	Geva 2003, 2006
14	Herodium (2/157)			Phase 1(37BCE-48CE)	Phase II(48-70CE)	Porat et al. 2015
15	Wadi ed-Daliyeh (0/100)	Cave I Mainly The end of Per			Cave II Mainly ER/MR	Lapp & Lapp 1974
16	Gezer (5/431)	EH St III (mid 3rd BCE) St IIC(–mid 2nd BCE)	LH St IIB (mid 2nd BCE) St IIA(early 1st BCE)	ER St I (Late 1st – 3rd CE)		Gitin 1990
17	Beth Zur (0/249)	St III(some are the end of PER-EH)	St II(175-165BCE) St I(140-100BCE)			Sellers et al. 1968
18	Qumran			Phase B-D (Early 1BCE-31BCE)		Baillet et al. 1962
19	Maresha (4/176)		3rd/2nd BCE			Kloner 2003
20	Masada(60/764)	Hasmonean	EHBM & MHBP(31-15BCE) LHBP(15BCE-6CE)	Garrison(6-48 & 48-115CE)		Bar-Nathan 2006
21	Binyanei Ha'uma (26/648)	End of Iron-EH (Late 8-Early6BCE)		Late HEL(Has) to Early ROM(Hero) (mid 1BCE-70CE: Phase1-4)	ROM (-end of 3CE)	Arubas & Goldfus 2005
22	Gamla (5/350)			Area B/D (1BCE) Area A G M/T R S (1 CE) Area H (1BCE to 1CE)		Berlin 2006
23	Hippos (16/87)		LH (2nd & 1st BCE)	ER (end of 1st BCE to 1st CE)	LR (Mid 3rd to 4thCE) BIZ (6thCE-)	Eisenberg 2018

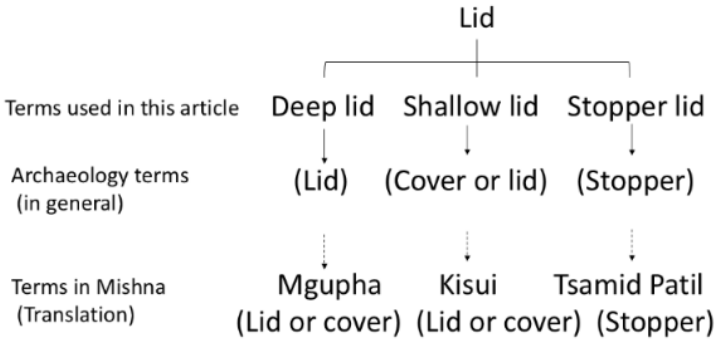


Figure 2 Terms for lids in this article, in general archaeology and in Mishna

broken, they become clean again... Earthen vessels and vessels of sodium carbonate are equal in respect of impurity: they contract and convey impurity through their air-space; they convey impurity through the outside but they do not become impure through their backs; and when broken they become clean' (Kelim 2:1). The last phrase indicates that the fragments broken enough are clean as they do not receive the contents any more. Similar phrase is also indicated that the repair of the broken vessels are unclean, as 'If a jar was about to be cracked but was strengthened with cattle dung, although the potsherds would fall apart were the dung to be removed, it is unclean, because the designation of vessel never ceased to apply. If it was broken and some of its pieces were stuck together again, or if he brought other pieces of clay from elsewhere, and it was also lined with cattle dung, even though the potsherds hold together when the dung is removed, it is clean, because the designation of vessel ceased to apply. If it contained one potsherd that could hold a quarter of a log, all its parts contract impurity by contact, but that potsherd contracts impurity through its air-space' (Kelim 3:4).

Receptacle forms are exposed to the danger of impurity and it is possible to be unclean from the time when they are baked in the furnace to the time when the manufactures are completed (Kelim 2:6, 4:4). Thus, potters should watch

the process so that anyone or anything unclean would not touch them. 'A potter who left his pots and went down to drink: the innermost pots remain clean but the outer ones are unclean. Rabbi Yose says: When is this so? When they are not tied together, but when they are tied together, all the pots are clean' (Tahorot 7:1).

The Mishnah indicates the regions suitable for clean pottery production, stating, 'From Modi'im inwards [the potters] are deemed credible with regard to [the purity of] earthenware vessels. From Modi'im and outwards they are not deemed credible.' (Chagigah 3:5). The location referred to as 'Modi'im inwards' is most likely the Judea region and the vicinity of Galilee. Several potters' workshops established in the early Roman period have been found or confirmed in Judea and the Galilee regions, including Binyanei Ha'uma[5] and Qumran[6] in Judea, and Kfar Hananya,[7] Yodefat,[8] and Shikhin[9] in the lower Galilee. Some petrographic analyses have shown that the vessels from these periods uncovered in Judea and the northern regions were produced in such workshops.[10] These workshops likely played a

5 A. M. Berlin, *Gamla I: The Pottery of the Second Temple Period*, IAA Reports 29 (Jerusalem: Israel Antiquities Authority, 2006).

6 Y. Magen and Y. Peleg, *The Qumran Excavations 1993–2004 Preliminary Report* (Jerusalem: Staff Officer of Archaeology. Civil Administration of Judea and Samaria, Jerusalem, 2007).

7 D. Adan-Bayewitz, *Common Pottery in Roman Galilee: A Study of Local Trade, Bar-Ilan Studies in Near Eastern Languages and Culture* (Ramat-Gan: Bar-Ilan University Press, 1993).

8 M. Aviam, "'Kefer Hananya Ware' made in Yodefat. Pottery production at Yodefat in the first century AD," in *Roman Pottery in the Near East. Local Production and Regional Trade. Proceedings of the Round Table held in Berlin*, eds. B. Fischer-Genz et al., *Roman and Late Antiquity Mediterranean Pottery 3* (Oxford: Archaeopress, 2014, 139–146).

9 R. J. Strange and M. Aviam, "Shiḥin Excavation Project: Oil Lamp Production at Ancient Shiḥin," in *Strata: Bulletin of the Anglo-Israel Archaeological Society*, ed. D. Milson (London: The Anglo-Israel Archaeological Society, 2017, 63–100).

10 D. Adan-Bayewitz and I. Perlman, "The Local Trade of Sepphoris in the Roman Period," *Israel Exploration Journal 40* (1990, 153–172); D. Adan-Bayewitz and M. Wieder, "Ceramics from Roman Galilee: A Comparison of Several Techniques for Fabric

Table 2 Some descriptions concerning lids from Mishnah.

Mgupha מגופה	Kisui כסוי	Tzamid patil צמיד פתיל
A person may break a barrel on Shabbat in order to eat dried figs from it, provided he does not intend to make a vessel. And one may not perforate the *plug* of a barrel to extract wine from it; rather, one must remove the *plug* entirely to avoid creating a new opening for the barrel. (Shabbat 22:3) The *plug* of a jar is not regarded as connected. (Kelim 3:6) If they (dough) are found in the *stopper* of a jar: If on the sides, they are unclean (Kelim 9:1) And similarly he used to rule concerning large stone jars in the *stoppers* of which appeared a hole. (Kelim 9:8) A *stopper* of a jar that is loose but does not fall out (Kelim 10:3) Water may not be poured from the sides of [broken] vessels or from the bottom of a ladle or from the *stopper* of a jar. (Yadaym 1:2)	All vessels that may be moved on Shabbat, their shards may be moved along with them, as long as they are suited for some purpose. Shards of a large bowl may be used to *cover* the mouth of a barrel. Shards of a glass vessel may be used to *cover* the mouth of a cruse. Rabbi Yehuda says: As long as they are suited for a purpose similar to their original use. (Shabbat 17:5) The *covers* of wine jars and oil jars and the *covers* of papyrus jars are not susceptible to impurity But if he adapted them for use as receptacles they are susceptible. The *cover* of a pot: When it has a hole or it has a point, it is not susceptible to impurity, But if it does not have a hole or a pointed top it is susceptible because she drains the vegetables into it. (Kelim 2:5) All *covers* are clean except that of a boiler. (Kelim 14:3) The *cover* of a box, the *cover* of a basket, ….(Kelim 16:7)	The following vessels protect their contents when they have *tightly fitting cover*. (Kelim 10:1) One may not make tightly fitting cover with tin or with lead because though it is a *covering* (פתיל), it is not *tightly fitting* (צמיד). (Kelim 10:2) One who left am haaretz in his house to guard him, if he can see those that enter and leave, only food and liquids and uncovered earthenware are unclean, but couches and seats and earthenware that have *tightly fitting covers* remain clean. (Tahorot 7:5) Because one may not draw, nor sanctify, nor sprinkle the water purification, not pour water over the hands except in a vessel. And only vessels closely covered with a *lid* protect [their contents from uncleanness]. (Yadaym 1:2)

role in producing clean and trustworthy pottery vessels in the surrounding areas.

During the use of vessels, the contents may be exposed to the danger of impurities, even though the vessels are kept clean. The importance of using lids as a means of avoiding impurity: 'The following vessels protect their contents when they have a tightly fitting cover: those made of cattle dung, of stone, of clay, of earthenware, of sodium carbonate, of the bones of a fish or of its skin, or of the bones of any animal of the sea or of its skin, and wooden vessels that are always clean' (Kelim 10:1), 'One who left am Haaretz in his house to guard him, if he can see those that enter and leave, only food and liquids and uncovered earthenware are unclean, but couches and seats and earthenware that have tightly fitting covers remain clean' (Tahorot 7:5). The three terms, *Mgupha* (מגופה), *Kisui* (כסוי), and *Tzamid patil* (צמיד פתיל), are those mainly described as lids in the Mishnah. They are translated as lids, covers, and stoppers, plugs, etc., regardless of the original

Characterization," *Journal of Field Archaeology 19* (1992, 189–205); Adan-Bayewitz, *Common Pottery*.

terms (Table 2).

Mgupha are lids mainly used for jars (חבית, *habit*; Kelim 3:6, 9:1, 10:3). According to the provision that 'Water may not be poured from the sides of [broken] vessels or from the bottom of a ladle or from the stopper of a jar' (Yadaym 1:2), *Mgupha* may resemble to a sherd of the body of a broken vessel, ladle, or a vessel for pouring water (wash-hand bowl). They cover the mouths of jars with a loose fit and are movable to the extent that they do not fall out (Kelim 3:6, 10:3). *Mgupha* sometimes has a hole, and there are some discussions among rabbis on the regulations concerning the size of the hole (Kelim 9:8; Shabbat 22:3).

Kisui are described as lids for jars (כד, *kad*) for wine and oil, jars of papyrus (חביות נירות) and pots (*lapas*, לפס; Kelim 2:5). It is also described as a cover for closets, boxes, boilers (Kelim 14:3, 16:7). The term *lapas* derives from a Greek word meaning 'shallow shell'; thus, *lapas* probably refers to shallow cooking pots, which are often called 'casseroles' in archaeology. *Kisui* for pots sometimes have a hole or a point on top, which is reasonable if they are for casseroles which need to let steam off. From the description in the Mishnah, this keeps the *Kisui* clean (Table 1-3): 'When it has a hole or it has a point, it is not susceptible because it cannot be used as vessel' (Kelim 2:5). Thus, *Kisui*, like *Mgupha,* cannot be used as a vessel because of its hole or pointed top.

Tzamid patil is used mainly for jars but is tightly fitted, unlike *Mgupha* which has a loose fit. *Tzamid-patil* have also been referenced for 'couches and seats and earthenware' (Tahorot 7:5, 6), 'ovens' (Tahorot 8:1; Kelim 9:7), 'leavening pots' (Kelim 8:6), 'jars with siphon' (Kelim 9:2), and so on. As some scholars have pointed out,[11] *Tzamid patil* is a term for simple, bowl-shaped stoppers used to seal containers tightly (e.g. Kelim 10:2).

11 R. Bar-Nathan, *Masada VII. The Yigal Yadin Excavations 1963–1965 Final Reports. The Pottery of Masada* (Jerusalem: Israel Exploration Society, 2006), 216; Y. Magen, *The Stone Vessel Industry in the Second Temple Period* (Jerusalem: Israel Exploration Society and Staff Officer of Archaeology, 2002), 138–139.

3. Statistical analysis of lids among the archaeological finds

The statistical data (as of May 2022) on 9,805 pottery sherds (Figure 3) is with 3.7% from the end of the Persian period, 45.3% dating to the Hellenistic period (most from the late Hellenistic period, with 21% from the early Hellenistic period), and 46.3% from the Roman period (0.01% possibly mixed with Byzantine, and 78.4% belonging to the early Roman period). The sherds originate mainly from the Judea region (39.0%) and north around the Galilee (39.8%), and about 21% come from other areas such as the Shephelah (2.9%), the north Mediterranean coast (4.4%), and the Samaria regions (13.8%).

Among the 512 pottery fragments which can be identified as deep and shallow lids from the excavation reports of 21 sites (The data from Dor and Qumran are excluded from the static analysis since they are still in input progress), more than half are reported as 'lids or bowls' or 'lids or plates'. Despite these data collection biases, the lids (569 sherds includes stoppers) were more concentrated in the Roman period, especially in the early Roman period. Most stoppers were from the early Roman period. Spatially, the lids and stoppers were concentrated in Judea (lids 57.4%, stopper lids 89.5%) and the northern regions around the Galilee (lids 31.4%, stopper lids 8.8%). These results indicate that the variations and number of lids increased from the end of the Hellenistic to the early and probably (as it might include the transitional phase) middle Roman period.

4. Typology and chronology of lids and the relationship with lower vessels

The author attempts to detail the typology and chronology of lids among the archaeological finds. The lid shapes can be divided into at least three categories: deep lids, shallow lids, and stopper lids. Their chronology can be provisionally

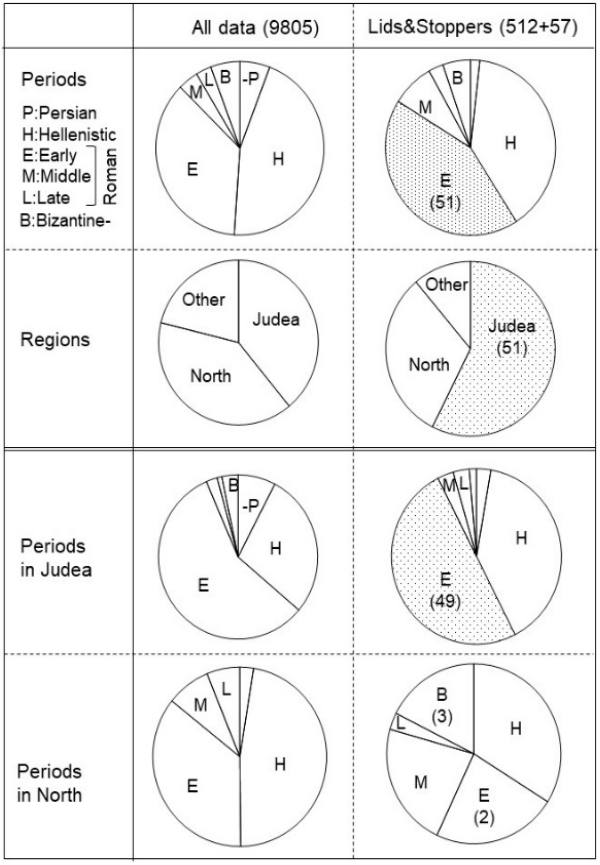
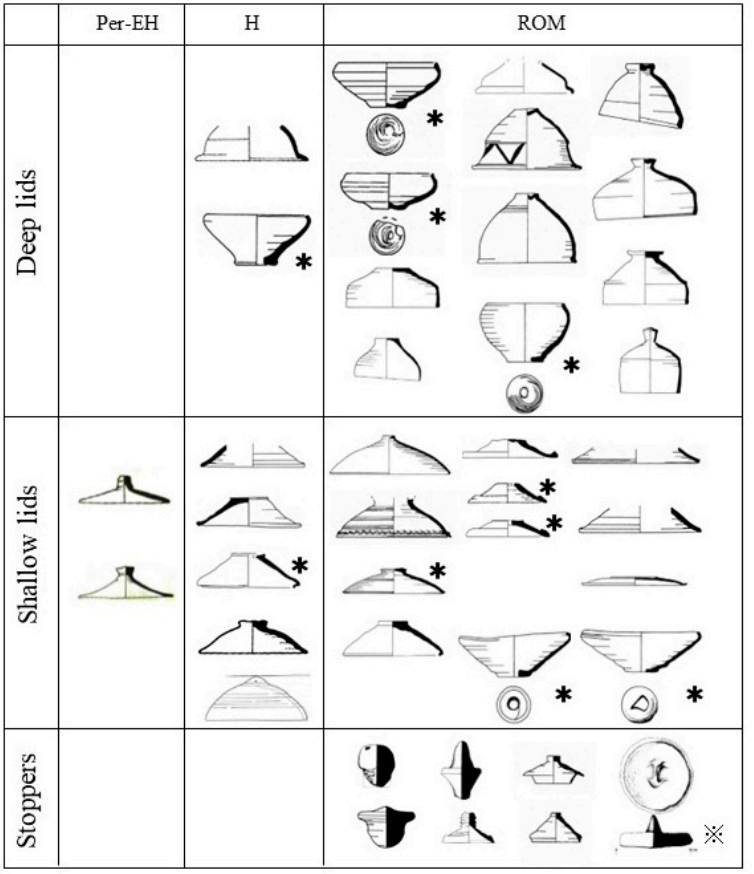


Figure 3 Results of analysis from the excavation reports of 21 random chosen sites

established based on the information given in the excavation reports that the author analyzed (Table 3).

The functions of lids are either to protect the contents of the vessels, or to prevent from leaking the contents to outside. To determine their functions, the manner in which they and the lower vessels were mated, is considered in this study

Table 3 Chronology of the lids and stoppers from the shape categories



by using both associated and non-associated findings.[12] This method places greater emphasis on the context of vessels and is useful for finding different functions, even among lids with similar shapes. The way the lids and vessels were mated can be classified into three types, Type A, B and C (Figure 4).

12 Lid and vessel discovered together in situ is called associated, whereas lid only discovered is called non-associated.

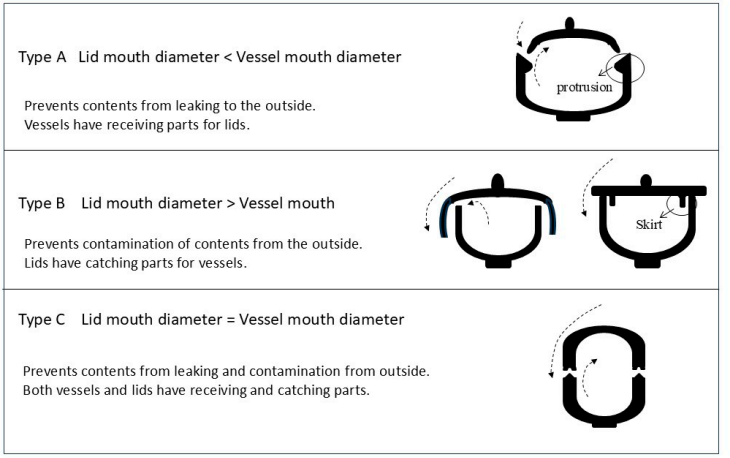


Figure 4 Relationships between lids and vessels.

The lids of type A fit inside parts (usually the rims or upper necks) of the vessels. This type was used to prevent the contents from leaking, as in hot pots during boiling or cooking. Therefore, the rims of type A vessels have receiving parts for the lids (such as a protrusion). However, this type could potentially allow the contents to be contaminated from the outside. The lids of type B cover the vessels. This type is used to protect the contents from contamination from the outside. However, this type does not always prevent leakage. For type B, the lids—mainly their rims and the lower part of the lid bodies—have parts that fit around the vessels (such as the 'skirt'). The lids of type C and vessels have an exact fit with the same diameter. This type combines the functions of the previous two types and closes tightly. For type C, the vessels and lids both have receiving and catching parts.

Thus, the relationship between the lids and vessels is based on a sense of cleanliness, whether it is more important to protect the contents from leaking or to protect the contents from outside contamination. These criteria can be used to understand the significance of lids in daily life. The following are the typologies

of the shapes with descriptions of associated and non-associated finds.

Deep lids (Table 4-1)

Deep lids are shaped like small deep bowls and cover the jar necks from the outside without gaps. Sometimes they have a carinated body in the middle, and small disk- or ring-like knobs protrude from or are attached to the top of the ceiling.[13]

Associated finds uncovered from Deir el-Medineh[14] in Ptolemaic Egypt reveal the custom of containing scrolls in covered jars during the Hellenistic period. An increasing number of deep lids of similar shape from the Roman period have been found; many examples have been reported from Qumran dating to the early 1st century CE.[15] These deep lids were placed on jars that contained scrolls.

The jars associated with lids found in Qumran have a cylindrical shape with heights ranging from approximately 45 to 70 cm and mouth diameters of approximately 14 to 18 cm. They sometimes have small loop handles on their shoulders, which were probably used to bind the lids with string. Despite these variations, they share several common features. Their necks are short (approximately 2.5 cm), and bear a simple, rounded rim. Most of them stand vertically from their shoulders, with some exceptions that bend slightly outward or inward. These common features of the neck shape are suitable for lids.

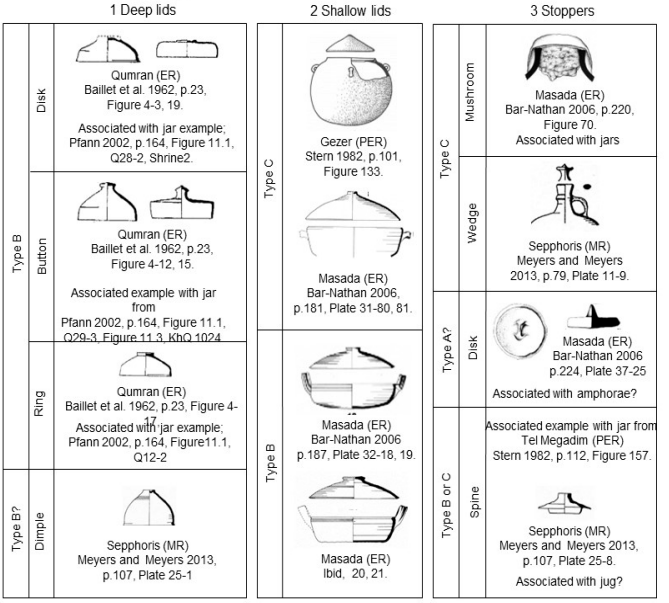
All these lids are shaped like small deep bowls and cover the jar necks from the outside (Type B relationship) without gaps. The heights range from 5 to 12 cm, whereas the outer diameter of the mouth is less varied, ranging from 19 to 23 cm

13 J. T. Baillet et al. *Les 'petites grottes' de Qumran. Discoveries in the Judaean Desert of Jordan: III* (Oxford: Clarendon Press, 1962).

14 S. J. Pfann, "Kelei Dema': Tithe Jars, Scroll Jars and Cookie Jars," in *Copper Scroll Studies*, eds. G. J Brooke and P. R. Davies, Journal for the Study of the Pseudepigrapha Supplement Series 40 (New York: Sheffield Academic Press, 2002, 163–179), 168, figure 11:4.

15 Pfann, "Kelei Dema'," 164, figure 11:1.

Table 4 The types of mating of lids and vessels (Upper: Schematic figures. Lower: Figures from the sites.)



(with an inner diameter approximately 16 to 20 cm). In some cases, the diameter surpasses the height, and the lids can then no longer be referred to as 'deep'. Common features include vertical or almost vertical lines (sometimes slightly curved inward or outward) approximately 3 to 5 cm in length on the lower body and simply rounded rims. The common feature in which the lower body of the lid fits firmly on the aforementioned jar, is a vertical short neck. Thus, the shape of the lower body of the deep lids is critical for distinguishing them from deep bowls. Deep lids have been found at sites such as Jerusalem, Gezer, and Beth-Zur.

Numerous complete deep lids have been reported from the middle Roman period in Sepphoris in the Galilee.[16] The lids share the same size and vertical shape in the lower body as those from Qumran. They are approximately 10 cm tall, with a mouth diameter of approximately 16 cm and a vertical line approximately 2 cm long on the lower body. Unique features include their size and shape, which are almost uniform, as opposed to those from the variations observed among the lids from Qumran, and a dimple knob on the ceiling. Furthermore, some are reported to have (though this is not shown in the figures in the excavation report) small holes piercing the rim, which are explained as holes through which to thread strings to bind the lids to the vessel.[17] Chemical analysis of the clay revealed that this type of deep lid with a dimple knob on the ceiling found at Sepphoris was produced at the nearby Shikhin site.[18] They were probably used with Shikhin jars.[19] A Shikhin jar has an elongated body with horizontal lines, a long neck with a slightly outward-turned rim, and a pair of handles on its shoulders.[20] The petrographic

16 M. Meyers and C. L. Meyers, eds., *Sepphoris I: The Pottery from Ancient Sepphoris* (Indiana: Eisenbrauns, 2013), 106, plate 25:1–6. At Sepphoris, Middle Roman period (MR) is reported as to belongs to 135–300 CE.

17 Meyers and Meyers, *Sepphoris I*, 52:LID3.

18 Adan-Bayewitz and Perlman, "The Local Trade of Sepphoris," figure 3-2; Adan-Bayewitz and Wieder, "Ceramics from Roman Galilee," 196, figure 5-2.

19 Meyers and Meyers, *Sepphoris I*, 38.

20 Meyers and Meyers, *Sepphoris I*, 91, plate 17:92; plate 18.

analysis conducted by Adan-Bayewitz and Perlman has shown that the Shikhin jar was produced in a nearby kiln at Shikhin,[21] and used in north especially around the Galilee region, including areas such as Hamat Tiberias, Tiberias, Capernaum, Horvat Hazon, Meiron, Nabratein, Sussita, Gamla, and 'En Nashut at Dabiyye. The deep lid covers the neck of the Shikhin jar with a space between them. It does not fit well with the jar neck, but the pair of handles on the Shikhin jar shoulders support to stabilize the deep lids. This condition is quite different from that of deep lid and jar cases from Qumran. Further information will be needed to obtain a clearer understanding of this example.

Shallow lids (Table 4-2)

Shallow lids have triangular or slightly rounded flat bodies and simple rounded or flared rims. They sometimes have a small knob on top that is intentionally pierced in the middle before firing.[22] They were mainly used for casseroles,[23] and the hole in the middle helped give off steam during cooking.

An associated example of a shallow lid was first found in Gezer and dates to the Persian period.[24] It was found with a neckless cooking pot with a rounded base and four loop handles (on the shoulders). This shallow lid has a slightly rounded body and a simple rounded rim that fits firmly into the grooved rim of the cooking pot. The diameters of both are almost the same, and their relationship is categorised into Type C. Similar shallow lids (non-associated examples) were

21 Adan-Bayewitz and Perlman, "The Local Trade of Sepphoris," figure 3-3; Adan-Bayewitz and Wieder, "Ceramics from Roman Galilee," 196, figure 5-5.

22 Bar-Nathan, *Masada VII*, 187, plate 32-19 (Photo 1), 21.

23 Casseroles originated in the 6th century BCE in Athens, Greece, and spread to the coastal regions and islands of the eastern Mediterranean area in the late 5th century BCE. A. M. Berlin, "The Plain Ware," in *Tel Anafa II, I*, ed. S. C. Herbert (Michigan: Kelsey Museum of the University of Michigan, 1997), 94

24 E. Stern, *Material Culture of the Land of the Bible in the Persian Period: 538–332 B.C.* (Jerusalem: Israel Exploration Society, 1982), 101, 133.

found in Samaria[25] and in Gezer in the early Hellenistic period.[26]

The associated examples with casseroles are reported only in the Roman period; however, the shapes of the outward-turned necks and flared rims of the casseroles from the late Hellenistic period are thought to be detailed works to fit for shallow lids. There are two main types of casseroles accompanied with shallow lid devices: one with a flared neck and rim with a sharp angle between them (examples from Sepphoris and Tel Zeror), and the other with no neck and an outward flare from the body to the rim with a slight intrusion inside (examples from Samaria and Gezer). The former has a pair of vertical loop handles that connect the rim to the middle of the body. The top of the handle is slightly higher than the casserole rim. It can be speculated that these casserole rims and handles were detailed works to fit for a Type A relationship that continued into the early Roman period. The slightly intruded rim of the latter type can be speculated to be a detailed work to fit for a Type A or C relationship

In the early Roman period, three associated finds were reported from Masada.[27] They are classified as pans by a flat base, rather than a round one as with the casseroles found in the previous period. Their body stands vertical to the rim without a neck. The associated lids are shallow, and each section resembles that of a flat triangle shape. The diameter and height of them are approximately 20 cm and 5 cm, respectively, and each outer rim ridge are slightly flared. It has a knob pierced with a small hole, approximately 1 cm in diameter, on the ceiling. The description in the Mishnah of 'the cover with a hole on top' (Kelim 2:5) fits well with these examples.

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25 J. W. Crowfoot, G. M. Crowfoot, and K. M. Kenyon, *The Objects from Samaria* (London: Palestine Exploration Fund, 1957), 133, figure 12a-4.

26 S. Gitin, *Gezer III: A Ceramic Typology of the late Iron II, Persian and Hellenistic Periods at Tell Gezer-Data Base and Plates* (Jerusalem: Hebrew Union College, 1990), plate 35:9.

27 Bar-Nathan, *Masada VII*, 187, plate 32.

Among these three associated examples, two pans have a pair of vertical handles on the rim. These handles stabilise the lids, whereas the pan's slightly incurved rim can be covered by lids.[28] The relationship between the cover and vessel testifies that they can be attributed to Type B. The third associated example[29] has different features from those of the first two examples. This pan has a pair of horizontal handles slightly under the rim, and its cover's edge is slightly notched. These features reveal its classification as Type C.

A new tradition of Type B relationships was introduced in the early Roman period. Casseroles or pans in the early Roman period are associated with shallow lids with rounded bodies and dimple-shaped knobs or flat disk-shaped handles on the ceiling, such as those found in both Types B and C. This unique feature differs from those recovered from the previous Hellenistic period. Similar shallow lids, such as those from Masada, are found at Hizma and other sites from the early Roman period as well, though they are not associated examples. After the middle Roman period, most casseroles or pans had no neck. Additionally, the vertical loop handles no longer attached the rim to the middle of the body and slightly exceeded the casserole rim; instead, a pair of horizontal or vertical handles that did not exceed the casserole rim became the dominant feature.[30] The horizontal handle has a slight depression in the middle and functioned to support the lid rim. Those with horizontal handles became the only type in the late Roman period.

Stopper lids (Table 4-3)

Stopper lids are screwed inside the vessel's mouth and used to pack the contents. Small knobs were occasionally placed on top of the stoppers. However, bowl-shaped stoppers are often destroyed when opened. The air inside the vessels

28 Bar-Nathan, *Masada VII*, 18&19, 20&21.

29 Bar-Nathan, *Masada VII*, 181, plate 31:80, 81.

30 For an example from Sepphoris: Meyers and Meyers, *Sepphoris I*, 83, plate 13:6-115, plate 29:6-9 (no. 10 is the lid).

is confined by the stoppers, most likely even when the air expands because of chemical reactions such as fermentation.

Mushroom- or bowl-shaped stoppers were handmade from clay. They were used since at least the Late Bronze Age, although the exact dates are not certain. It is possible that they were too simple to be included as records in the excavation reports.

During the Roman period, mushroom-shaped stoppers were common in the Judea region. Associated examples of storage jars were found from Masada dating to the late 1st century CE,[31] and possibly from Qumran.[32] The associated example from Masada shows that the stem part of the mushroom-shaped stopper screwed into the jar neck and cap of the mushroom-shaped stopper fit on the jar top, sealing the jar described as Type C. Non-associated examples were also found in Masada; these mushroom-shaped stoppers have caps with a diameter of approximately 7 to 14 cm, stems with a diameter of approximately 6 to 8 cm, and overall height varying from approximately 8 to 12 cm.[33] Bar-Nathan[34] explained that the mushroom-shaped stopper was used in the Galilee region and then spread to the Judea region, as it was used with a grain storage jar in the 10th to 9th centuries BCE at Horvat Rosh Zayit in lower Galilee.[35] Some stems and cap parts have also been found at the Hellenistic to early Roman site at Apollonia in the Mediterranean coastal region.[36]

A small juglet reported from the early Roman period (ER2: 70–135 CE) at

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31 Bar-Nathan, *Masada VII*, 220, figure 70.

32 Magen and Peleg, *The Qumran Excavations*, 16, plate 1-1: 46, plate 47.

33 Bar-Nathan, *Masada VII*, 224, plate 37, 31-37.

34 Bar-Nathan, *Masada VII*, 216.

35 Z. Gal, "Loom Weights or Jar Stoppers?" in *Israel Exploration Journal* 39 (Jerusalem: Israel Exploration Society, 1989, 281–283), figure 1.

36 I. Roll and O. Tal, eds., *Apollonia-Arsuf: Final Report of the Excavations*, Vol. 1 (Tel Aviv: Tel Aviv University, 1999), 247, figure 5:15–19.

Sepphoris[37] is an associated example of a wedge-shaped stopper. A fragment of a similar stopper was found in Gamla as well.[38] Additionally, a stone-made example associated with an unguentarium was found in Jericho.[39] They have heights of 3.5 to 6.0 cm, a thick and flat base, a cylindrical body with a slightly wider lower part, and a simple rounded rim. This type[40] appeared only in the 1st century CE in the Judea region. Non-associated examples have also been found in Masada[41] and Herodium,[42] and non-associated lithic stopper have been found in Jerusalem.[43] Wedge-shaped stoppers have a protuberance in the centre, the lower part of which connects it to the juglet, and the upper part functions as knob. They are extremely small and are often missed during excavation. The relationship between the stopper and vessel is of Type C, and all the above-mentioned stoppers are dated to the 1st century CE.

Disk-shaped stoppers are sometimes referred to as amphora stoppers because their diameters are almost the same as those of the amphora mouth. They may have been used for wine and olive oil amphorae since they are often found with Dressel 2-4 type and Lambogria 2 type amphorae[44] manufactured in Italy for transporting

37 Meyers and Meyers, *Sepphoris I*, 79, plate 11:9.

38 Berlin, *Gamla 1*, 113, figure 4:10-15.

39 R. Bar-Nathan, *Hasmonian and Herodian Palaces at Jericho: Final Reports of the 1973–1987 Excavations. Volume III: The Pottery* (Jerusalem: Israel Exploration Society, 2002), 167, I11-107.

40 Bar-Nathan, *Hasmonian and Herodian Palaces*, 167, J-UN3 type

41 Bar-Nathan, *Masada VII*, 224, plate 37:42-44.

42 R. Bar-Nathan, "Pottery and Stone Vessels of the Herodian Period," in *Greater Herodium*, ed. E. Netzer, Qedem 13 (Jerusalem: The Institute of Archaeology, The Hebrew University of Jerusalem, 1981, 54–70), 67, 124, I11. 95: 2, plate 8:9.

43 B. Mazar, "The Excavations in the Old City of Jerusalem Near the Temple Mount-Second Preliminary Report, 1969-1970 Seasons," *Eretz Israel 10* (Jerusalem: Israel Antiquities Authority, 1971, 1-34 in Hebrew), 18-19, figure 12; 18.

44 Defined by V. Maier-Maidl, *Stempel und Inschriften auf Amphoren vom Magdalensberg* (Klagenfurt: Kartnen Museumsschrifften 73, 1992).

these products, although there are no associated finds.[45] If this hypothesis is true, this type of stopper would have been simply placed on, not squeezed into, the flared neck and rim of the amphorae so that it could be easily opened and closed. Among the non-associated finds from the 1st century in Masada are thick ones (about 2 to 4 cm thick and 8 to 10 cm in diameter)[46] and thin ones (about 2 to 3 cm thick and 8 to 12 cm in diameter).[47] Both have small knobs on the top, and the thick type has a relief decoration around the knob. Similar finds have been reported in Samaria from the Hellenistic period[48] and from Jerusalem dating to the 1st century BCE.[49]

If the above explanation is applied, the disk-shaped stoppers have no devices to secure them to the vessel or amphorae. This means that the relationship between the stopper and vessel is not of Type B nor of C. The device for securing them is adapted only to the vessel side, rim, and neck because the shape of the stopper is simple, and there is no device to secure it. If the vessels are amphorae, the line from the neck to the rim should be out-curved to support the stopper. The mouth diameter should be wider than that of the stopper, whereas the neck diameter should be narrower than that of the stopper.

Spine-shaped stoppers have a fixed portion ("skirt" shown as in figure 3-Type A) slightly inside the rim. An earlier associated example of a storage jar was recovered from Tel Megadim dating to the Persian period.[50] The only information that the author could obtain about this example was a photo without a scale; however, it can be observed that the stopper associated with the jar has the following

45 Bar-Nathan, *Masada VII*, 214, 217.

46 Bar-Nathan, *Masada VII*, 223-4, plate 37:1-25.

47 Bar-Nathan, *Masada VII*, 223-4, plate 37:26-29.

48 A. R. Reisner, C. S. Fisher, and D. G. Lyon, *Harvard Excavations at Samaria 1908-1910* (Cambridge, Harvard University Press, 1924), vol. 1, 387; vol. 2, plate 68 c.

49 H. Geva, ed., *Jewish Quarter Excavations in the Old City of Jerusalem* (Jerusalem: Israel Exploration Society, 2003), 181, 242–243, plate 6.3: 35.

50 Stern, *Material Culture*, 112, 157.

features: a pair of basket handles connecting its shoulders to the rim, a pointed base, no neck, and a slightly outward-turned rim. The shape is a flat triangle, and the knob on the ceiling is almost half the width and height of the body. The fixed portion slightly inside the rim is related to the jar with a Type B or C relationship.

A non-associated example was found at Tel Maresha, dating to the Hellenistic period. The height is 4.5 cm, and its width is 9.5 cm. It has a short fixed portion inside the rim and a knob on the ceiling.[51] Similar examples are found dating from the early Roman period at Binyanei Ha'uma,[52] and from the early to middle Roman periods at Sepphoris.[53]

In Sepphoris, fixed portion was longer in the middle Roman period (MR: 135–300 CE). The section formed a flat triangle with a height of 3.5 to 4.5 cm. Knob diameter on the ceiling is 1 to 1.5 cm, and sometimes the knob has a tiny hole, which seems to have been, judging from the drawings in the report,[54] pierced before firing. The height of the fixed portion is 0.5 to 1 cm, and its outside diameter is about 5 cm, which is slightly shorter at the bottom. It is recorded as a stopper either for storage jar or for jug,[55] but it does not fit the Shikhin jar, which is one of the main jars found at the same site during the same period. The mouth diameter of the Shikhin jar is almost the same as the diameter of the fixed portion of the stopper, but it is not reasonable to assume that this type of stopper was used for the Shikhin jar. Instead, the SJ3b Type One handle jar, as classified in the report[56] and found in the same area as the spine-shaped stoppers, fits it well. The

51 A. Kloner, *Maresha Excavations Final Report I: Subterranean Complexes 21, 44, 70* (Jerusalem: Israel Antiquities Authority, 2003), 89, figures 6.4–62.

52 B. Arubas and H. Goldfus, eds., *Excavations of the Site of the Jerusalem International Convention Center (Binyanei Ha'uma)*, Journal of Roman Archaeology Supplement Series 60 (Ann Arbor, Cushing-Malloy, 2005), 119, figure 7–7.

53 Meyers and Meyers, *Sepphoris I*, 107, plate 25:7–14.

54 Meyers and Meyers, *Sepphoris I*, 8, 12, 14.

55 Meyers and Meyers, *Sepphoris I*, 52.

56 Meyers and Meyers, *Sepphoris I*, 99, plate 21:10–13.

outer diameter of SJ3b jar mouths is 7.5 to 8.5 cm, and the inner diameter of the narrowest points (neck) is about 5 cm. Since their size and outward rim fit well with the spine-shaped stoppers, the relationship between them can be attributed to Type C. Just as Shikhin jars, SJ3b jars are thought to have been produced in Sepphoris nearby Shikhin.[57]

Similar spine-shaped stoppers are found in Sepphoris dating to the early to middle Roman periods, but they have a very short fixed portion and button knob on the ceiling.[58] One of the spine-shaped stoppers has a small hole pierced in the button knob. The very short fixed portion might be applicable to the mouth of a jar or jug in a Type C relationship.

5. Conclusion

The descriptions in Mishnah well fit to the archaeological materials: *Mgupha* for deep lids, *Kisui* for shallow lids, and *Tzamid patil* for stopper lids. Statistical analysis as in chapter 3 shows the increasing numbers and variations of lids which place more importance on lids from slightly before the Mishnaic period, especially in the early Roman period. Spatially, the lids and stoppers were concentrated in Judea and the northern regions around the Galilee.

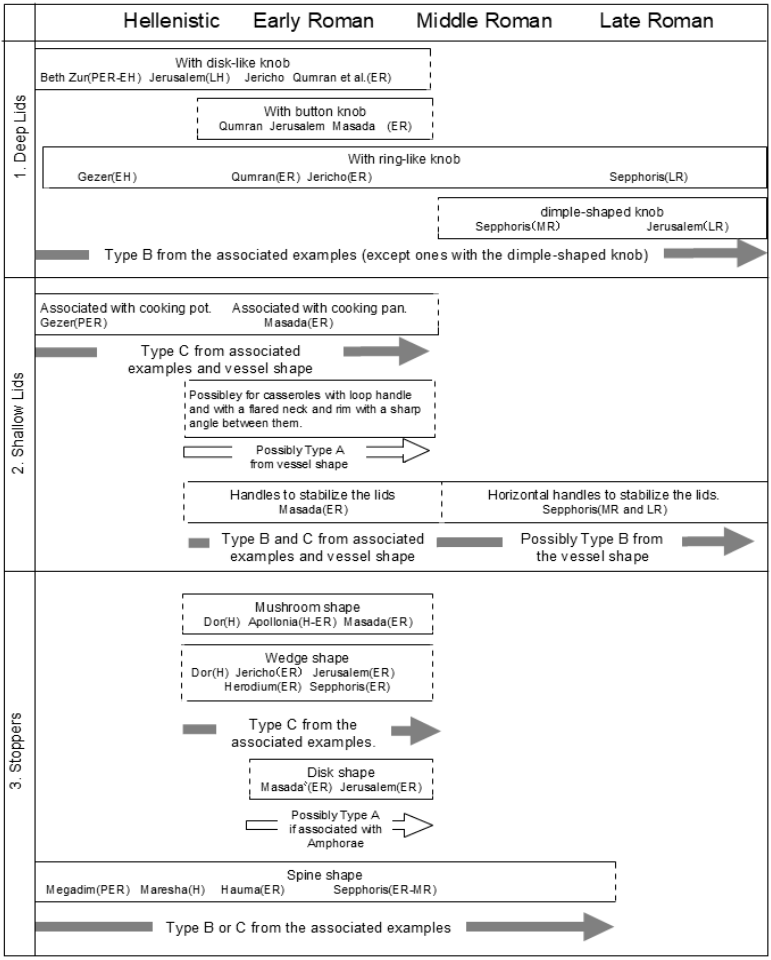
Additional to this phenomenon, the way the lids and vessels were mated has changed as shown in the previous chapter. Chronology of Type A, B and C of deep lids, shallow lids and stopper can be classified chronologically as follows;

1) The relationships between deep lids and vessels (Table 5−1) can be outlined as Type B dominates through the Hellenistic period and the Roman period.

57 Meyers and Meyers, *Sepphoris I*, 44.

58 Meyers and Meyers, *Sepphoris I*, 107, plate 25:15–16.

Table 5 Chronological changes in the relationships between lids and vessels.



2) The relationships between shallow lids and vessels (Table 5−2) can be outlined as Type A dominates the Hellenistic period, Types A, B, and C dominates the early Roman period, and Type B dominates the late Roman period.
3) The relationships between stopper and vessels (Table 5−3) can be outlined as Type B and C dominates before the late Roman period.

In total, the relationship between lids and vessels changed from early to middle Roman period that shows that people put more emphasis on the contamination of the vessels than their leaking. Please remind that these are the terms for Jewish people to resume their identification after two wars against Roman and beginning of diaspora.

Archaeologists tend to ignore lids, treating them as only supplementary to the vessels. They mainly are involved with establishing typology and chronology by using pottery which can be done without using lids. Thus, lids are out of the main subject of study for archaeologists. Opposed to this archaeologist's view, the Mishnah provides insights into ancient people's minds and allows us to understand the deeper meaning of lids. Lids are important and meaningful within the social group. It gives us broader perspectives to re-examine archaeological finds in explaining one of the aspects of the Jewish discipline as a lived religion.

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