

Department of History and Archaeology
Faculty of Humanities and Social Sciences



The Development of glass production in Syria during Roman Period from an Archaeological
Perspective

Study case: Syrian Coastal Region “Latakia-Jable-Ṭarṭûs-Bānyās”

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor in
History and Archaeology

Academic Supervisors: **Dr. Vass Lóránt**

Submitted by **Sarah Hammoud**

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Notes on Transcription

Transcription of Arabic means rendering Arabic with Latin characters. Transcription is used in order to smoothly quote an Arabic word or expression in a text that is otherwise written in English or another language with Latin characters, especially if the intended readership does not master Arabic (general linguists, literary historians or critics). Transcription is also a clear way of stating the pronunciation if the Arabic original text is unvocalized. The concordances of the transcription which I used are summarized in the tables below:

أ	a	ط	ṭ
ب	b	ظ	ẓ
ت	t	ع	ʿ
ث	th	غ	gh
ج	j	ف	f
ح	ḥ	ق	q
خ	kh	ك	k
د	d	ل	l
ذ	dz	م	m
ر	r	ن	n
ز	z	ه	h
س	s	و	w
ش	sh	ي	y
ص	ṣ	ء	a
ض	ḍ	ة	A

Long vowels are indicated with a dash line.

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1- Introduction and Literature Review

1.1 Research Structure.

There is a significant shortage of information on burial and funerary sites in Syria generally, and within the Syrian Coastal Region in particular; although studying such sites and documenting them can provide immense insights into the various burial rituals and the many objects used for funerary purposes, including glass objects (the subject matter of this study).

This study introduces previously unexamined glass specimens recovered from sites along the Syrian Mediterranean coast (including Jable, Ṭarṭūs, and Bānyās.) Its objective is to document these artifacts with drawings and photographs of complete items.

The artifacts are held in the museums of Ṭarṭūs, Latakia, and Jable, where they remain in storage and have not undergone systematic scholarly analysis. Given the material's significance and the lack of prior research, this study provides the first comprehensive academic investigation of Roman glass in Syria, with emphasis on the coastal region. The sample consists mostly of complete or slightly damaged glass vessels, mainly recovered from cemetery and burial-site excavations and documented by the Directorate-General of Antiquities and Museums (DGAM). Additional specimens held in local museums, lacking provenance acquired through seizures, purchases, or private collections, were also examined.

Because the pieces were not precisely dated during initial documentation, the author compared them with similar artifacts from other regions to assist dating and description. The criteria used to establish similarities included manufacturing techniques, shape, color, and decoration methods. These criteria helped identify which Roman styles are the focus of this study. Therefore, this study includes items dated from the first century AD to the third century AD.

This comparative approach was necessary to produce a comprehensive survey of available glass types and styles, given the absence of contextual information about provenance or original find circumstances. All available information on these vessels comes from excavation reports produced during emergency excavations where the items were recovered.

Only vessels that were physically accessible to the author and could be examined and drawn were included. No further analyses of coloration, quality of production, style, ornamentation, etc., were possible. This posed a significant challenge to the study, given that classifying glass

vessels heavily relies on such analyses, without which no professional or accurate taxonomy can be produced; for simply having information about the general shape of glass vessels is not enough for classification purposes.

Glass study is multidisciplinary with archaeology, classics, art history, chemistry, physics, and the natural sciences all contributing. The material's artistic character arises from an ancient chemical technology that reflects long-standing human creativity.

In terms of the shapes and patterns of glass items used in funerary contexts and unearthed from Roman tombs, the evidence suggests that the shapes and forms varied based on the time period when these items were produced.

Roman glass from the 1st century BC to the 6th century AD shares a common chemical basis regardless of time or place; namely, a composition of silica, calcium oxide/lime, and soda/natron. The topic chosen for this study is the development of glass production in Syria during the Roman period from an archaeological perspective. The work included herein is based on research conducted on and the analysis of glass vessels produced during the Roman settlement of the coastal region of Syria, particularly at locations in Latakia, Jable, Ṭarṭûs, and Bānyās, to show the development of production in the coastal region.

There is no established naming convention or agreed technical terminology for glass vessels in Syrian scholarship; drawings and typologies vary, and published studies often fail to represent production techniques or technical details accurately.

The author excluded any vessels that could not be personally examined, since relying solely on photographic evidence is not sufficient for an accurate examination of artefacts, or to discern any particular details for any vessel. It is essential when producing technical drawings to ensure as close a match to the original object being drawn as possible, while showing as many of the intricacies and details present as possible.

The primary aim of this study is to conduct a detailed analysis of Roman-period glass vessels discovered at various sites in the Syrian Coastal Region. It seeks to classify these findings based on color, production quality, design elements, ornamentation, and style, utilizing modern and relevant research methods. The study addresses a gap in Arab scholarship on Roman glass and aims to aid the development of a comprehensive classification system for Syrian Roman glass.

The author also performed a geographic and chronological survey of glass finds in Syria, with focus on the Syrian Coastal Region, which allowed for raising a number of questions about the locations where glass vessels were found and distributed from in the Syrian Coastal Region during the Roman period; and about the locations of production furnaces pertaining to Roman glass industry.

Insisting on specimens with full excavation reports was not a prerequisite for inclusion. Any glass judged, with a considerable degree of certainty, to have been recovered from a tomb or cemetery of known location was included. This was due to the lack of professional practices on the part of the many directorates and departments of antiquities in Syria, and the inadequate excavation and documentation practices they employed. Therefore, the author saw it necessary to approach this matter based on the reality of archaeological practices in Syria. This way, the largest number of glass vessels could be included in the study, which is important for reaching a comprehensive classification of Roman glass vessels based on their form and function.

Glass finds from the Roman imperial peak indicate established trade routes and exchange of production techniques for both traditional and blown glass; evidence points to imports and skill transfer across East and West within the empire.

Roman glass is among the most common archaeological artefacts in Syria, but many fragments have been misplaced or lost. Most likely, glass items deemed noteworthy and/or of particular significance were transferred to any of the number of museums around the country. Such items were documented in the excavation reports at the time of their discovery.

During the 1990s, more intensive research and excavation work were conducted in Syria. This allowed for greater opportunities to uncover glass around the country in general, and in the coastal region in particular. Excavation missions during this time yielded a substantial number of finds and discoveries (including glass items), all of which were documented in the corresponding excavation reports. The sites at which these items were uncovered (including graves and burial structures) were identified, dated, and documented. All studied sites were dated back to Roman period. No additional information regarding the conditions of these finds and the exact dates of their production was provided. Over 236 samples of glass items originating from coastal Syria were analyzed for major and minor trace elements. These items were categorized into four main groups. The majority of these samples are blown glass items. They were organized based on the latest classification criteria defined in the literature.

1.2 Aim of the study

Identifying the different types of glass items is mainly based on the typology of the finds in accordance with the most important typologies, classifications, and methodologies adopted by established researchers in the field of Roman glass (such as the typologies presented by Beat Rütli and Isings)¹. The finds are organized into plates and groups, with documentation of form and manufacturing technique (shape and type).

The research examines chronological and geographical diversity of the glass types of specifically how glass objects were used, how individual workshops defined geographical areas, and how they compare to similar models found in other regions. It also investigates the development of form and function in Roman glass; thus, providing important information about the economic, cultural, and social life of the region.

This is achieved by documenting and presenting the changes in vessel forms and the technologies used to produce them. It will also be achieved by showing the evolution in glass making between the beginning and the end of the Roman period; and also, by discussing the new forms that appeared, and those that have been discontinued and have disappeared from the archaeological record.

Lastly, an additional aim for this study is to identify the original contents of the selected samples of glass vessels unearthed from various locations spanning the Roman Period up to the 3rd century AD. Although the contents of such vessels cannot be readily identified, the fact that these bottles have remained intact and in excellent condition does suggest that most of such items are retrieved from funerary/mortuary contexts rather than inhabited settlements.

The time period chosen for the purpose of this study represents the peak period of glass production. A remarkable number of vessels were manufactured, including whole series of each type (all colorful and diverse). As such, these vessels provided perfect subjects for analysis. This study aims to describe and analyze the stylistic elements of the chosen glass objects.

1.3 Research importance

This study is of significant importance stemming from its focus on delivering the following:

- Define the areas that had an impact of glassmaking in Syria.

¹ Rütli, 1991; Isings, 1957.

- Compare how glass was used in the various territories/locations with differing features and characteristics.

It is worth noting that one of the main issues in this study was to determine the typology and chronology of collected glass vessels, as well as cataloguing them, such that these samples could be set within the broader context of Roman glass.

The significance of this study lies in documenting glass vessels long recovered but not fully studied. As such, this research will allow researchers of Roman glass in general, and Arab researchers in particular, to develop and utilize a unified language and terminology when discussing Roman glass vessels, especially since comparable studies are rare.

This research focuses on the analysis of Roman glass production, conduct an analysis of the most representative glass samples, in addition to mapping and identifying glass production centers, workshops, and the manufacturing techniques employed.

Remains analysis is used to examine the function of these vessel forms, which has traditionally incorporated potentially confusing descriptive terminology that assumes function based on the vessels' presumed contents (e.g., Unguents or Balsamic).

An accurate investigation of the visual and material diversity of glass items in Roman Syria will be conducted. This research will attempt to explore what the main function of these glass items was.

A thorough investigation will be conducted into the visual and material diversity of glass pieces from the Roman period in Syria. This research will attempt to explore the primary functions of these glass items through a visual analysis of the samples, which will provide a comprehensive classification of the various types of glass vessels, the quality of materials, production techniques, and decoration methods, among other details. Additionally, accurate cataloguing of the pieces will be established. As previously mentioned, Arabic-language sources lack precise descriptions and standardized labels for these items, causing confusion and inaccuracies in excavation reports; inconsistent naming leads to incorrect descriptions and dating.

1.4 State of the Current Research.

1.4.1 General history of research

The evolution of glass studies reflects a gradual shift from descriptive typology toward analytical and contextual approaches that illuminate the technological and socioeconomic dimensions of ancient glass production. Modern scholarship now integrates archaeological excavation, physicochemical analysis, and experimental replication to reconstruct manufacturing processes and trade routes across the Roman world.

The body of research referenced and used throughout this study draws on the works of many leading and established researchers in the field of Roman glass and other related disciplines. These works, along with their authors are briefly presented below.

In *Glass, Its Origin, History, Chronology, Technique and Classification to the Sixteenth Century*, by **G. Eisen & F. Kouchakji**²; examples of Roman Era glassware from numerous private and public collections were examined. This study is of significant and monumental importance, focusing primarily on glass from the Roman period up until about the 5th century AD. Some samples originating from the period between the 6th and 16th centuries CE are also discussed by the study's authors.

Considered by some to be *father of research on ancient glass*, **D.B. Harden**'s³ work between 1930 and 1988 is of this significant importance in the field of Roman glass. His doctoral thesis on the glass of Karanis, Egypt (1936) set new standards for researches in the field during the 20th century CE. His essays on glass from prehistory to the Middle Ages focusing on regions spanning from Europe to Asia and Africa, provided an extensive contribution to the field.

The typological classification of glass artifacts presented in this study is partially based on the classification made by **C. Isings**⁴, a Dutch scholar who worked at the University of Utrecht and published from 1948 to 1984. Her focus was on glass of the Roman Empire, and her summarized book on Roman glass typology (1957) is an essential reference for all scholars to this day.

Among the most significant contributions to the study of ancient glass are those that have emerged from focused regional investigations, notably in Trier and Britannia. In her work on

² Eisen & Kouchakji, 1927.

³ Harden, 1936.

⁴ Isings, 1957.

Roman and Frankish glass from Trier, **K. Goethert-Polaschek**⁵ documented one of the largest and most diverse assemblages of glassware from the Roman provinces, emphasizing both local production and imported luxury vessels.

One of the more influential and prominent scholars in the field of glass was **D. Grose**⁶ (1945-2004). He is credited for his efforts to establish the chronology of the developments in the late Hellenistic and Early Imperial glass industries. In 1969, he began working on glass finds from Cosa, ensuring the documentation, and collection, of data from stratified contexts at Cosa, other sites in Italy, and elsewhere around the Mediterranean. This allowed him to produce three pivotal works on early Roman glass industries and the development and adoption of glass blowing. Two studies were published in *The Journal of Glass Studies* in 1977, and 1984; with third published in *Archaeology* in 1983.

A study conducted by the Hungarian archaeologist **L. Barkóczi**⁷, documents glass finds unearthed from the Pannonia region of Hungary. This study is limited in scope due to its restrictive focus on a particular geographical region; therefore, a comprehensive view of the glass industry and trade in the whole province cannot be reliably established. Gaps in the glass material belonging to the Transdanubia region remain unfulfilled. Once additional studies and investigations are completed, a better picture of the glass culture in this region can be developed.

Additionally, the work of Swiss researcher **B. Rütli**⁸, considered to be the most comprehensive and reliable typology of Roman glassware; is drawn upon for the typology presented in this study. Rütli's focus was on glass artifacts from August and Kaiseraugst during the Roman period.

Advanced technological surveys and investigation techniques have been increasingly utilized in archaeology in general, and the study of glass in particular. Using a technique called *inductively coupled plasma spectrometry*, **C. Jackson**⁹, has conducted compositional analysis of Roman and early post-Roman glass finds from locations around Britain. These finds include items kept in domestic collections and/or unearthed from glass-producing sites around the country. Jackson's investigation was thoroughly documented in her PhD dissertation.

⁵ Goethert-Polaschek, 1981.

⁶ Grose, 1977-1983.

⁷ Barkóczi, 1988.

⁸ Rütli, 1991.

⁹ Jackson, 1992.

During her tenure as a guest curator at the Toledo Museum of Art in Ohio, **M. Stern**¹⁰ published the mold-blown vessels housed in the museum's collection. She is considered to be a leading expert on ancient glass in the West and is a practicing glassblower. This has allowed her to experience first-hand how modern methods of glassblowing contribute to the understanding of ancient methods and how they are related or have evolved from them. Her work on mold-blown glassware helped in synthesizing the current research on glass from both the western and eastern parts of the Roman Empire in order to further develop a more concrete understanding of its origin and distribution patterns.

In his book *Roman Glass: Reflections on Cultural Change*, **S. Fleming**¹¹ adopted the historical, cultural, and social context in explaining the traditions of glass making. He also presented the status of glassware in daily life, considering it to be an essential part of life in the past. Fleming believed that glassware was manufactured in a large variety of forms, and its production was able to influence historical events leading to changes in tastes, manufacturing techniques and technology. In addition, Fleming notes that the changes in the shape and decoration of early Roman glassware were "conservative" throughout the 1st century CE, mainly consisting of "minor modifications" of some shapes, while the alterations of the second century CE were a gradual evolution in "two directions that modified the body's shape".

The annual publication of the *Journal of Glass Studies*, by the Corning Museum of Glass; the largest center for the study of glass in the world, has also sought to bring together research since the journal's beginning in 1959. These publications today provide the most important venues for updated research and scholarship in the field of glass.

D. Whitehouse¹² is considered the main scholar with full knowledge of glass history. He is the former executive director and curator of ancient and Islamic glass at the Corning Museum of Glass, the largest center for the study of glass in the world. He has published extensively on the Roman glass in his three-volume work titled *Roman Glass from the Corning Museum* (1997, 2001, and 2003). He is currently the editor of the *Journal of Glass Studies*.

J. Price¹³, from the Durham University in England, has worked on a large volume of eastern and western Roman glass, including analyses on the distribution patterns of mold-blown

¹⁰ Stern, 1995.

¹¹ Fleming, 1996; Fleming, 1999.

¹² Whitehouse, 1997; Whitehouse, 2015.

¹³ Price & Cottam, 2000.

glassware. Her study contributes heavily to the present analysis, in addition to the important work *Romano-British Glass Vessels*, co-authored by her and **S. Cottam**.

R. A. Grossmann's book¹⁴, *Ancient Glass. A Guide to the Yale Collection*, documents various glass objects and vessels originating from the Mediterranean region housed at the collection of classical antiquities at the Yale University Art Gallery. The collection includes an almost complete narrative of glassware objects illustrating the full range of technological, stylistic, and functional development of glass beginning from its early development in the Bronze Age, well into late antiquity.

S. Fünfschilling & M. Stern¹⁵ conducted a detailed analysis of glass finds from Augusta Raurica, focusing on mold-blown and free-blown forms to reconstruct workshop practices and stylistic evolution across the Empire. **C. Jackson**¹⁶ later advanced the field through compositional studies of Roman and later glass from Britain, identifying patterns of raw material importation, recycling, and technological adaptation. Together, these works mark the chronological and methodological development of glass studies—from early descriptive and typological catalogues to complex scientific and contextual analyses that define modern scholarship in the discipline.

In her master's these at Wisconsin University titled *The Implications of Content Analysis for the Interpretation of Unguentaria in Museum Collections*, **J. L. Mortensen**¹⁷, investigated the possible signifiers and social impact that the scents might have had on individuals participating in ancient rituals. Her work was based on the little-explored approach of sensory archaeology.

In her PhD dissertation entitled *Roman Glass from the Croatian part of the Province of Pannonia* (2015), the Croatian researcher **M. Leljak**¹⁸, based her work on the research and analysis of the glass vessels produced during the Roman period in what is now northern Croatia. Her analysis emphasized on the trade of glassware items and intended to establish the provenance of glass production in south Pannonia. In addition to her dissertation, she has published many works on the same topic.

¹⁴ Grossmann, 2002.

¹⁵ Fünfschilling & Stern, 2020; Fünfschilling, 2012-2015.

¹⁶ Jackson, 2005.

¹⁷ Mortensen, 2015.

¹⁸ Leljak, 2015.

1.4.2 State of art in the Middle East

Considering the Roman glassware in the Middle East, **B. Zihdī**¹⁹, who served as the Curator of the Damascus National Museum for 22 years, until 2003, authored many articles documenting items from the collections housed at the museum. Some of his work focused on Syrian glass items at the National Museum in Damascus, detailing the history of glass and its discovery, the academic theories, and viewpoints on its birthplace an origin as an industry, and the methods of manufacture. His work includes photographic documentation of the glass specimens and artifacts housed at the Museum.

In his doctoral dissertation, **D. Barag**²⁰, he focused on glass vessels of the Roman and Byzantine periods in Palestine. Considered to be one of the foremost authorities on glass, and a leading academic on glass in Historical Palestine, Barag published extensively on the connection between the Southern Levant and the rest of the Ancient Near East, as shown through the glass record. He has also created a synthesis of Mesopotamian glass from the 2nd and 1st millennia AD, which prior to his work had been largely unnoticed in academia.

In the 1976 issue of the *Syrian Arab Archaeological Annals*, **N. Şalibi**²¹ published a study documenting the ÝAzar cemeteries found in ȚartÛs, Syria. His careful description of the site included a documentation of the individual and mass tombs; with detailed plans of the structures, the site as a whole, and photos of the glass items uncovered there. These items included unguentaria, dishes, and many other glassware items.

The French researcher, **O. Dussart**²², who studied glass artifacts of southern Syria, discusses the glass products and production in Jordan and southern Syria, also from an archaeometric point of view. The study was characterized by the existence of many archaeological sites that revealed a large quantity of glass artifacts dating back to the time of the Romans. The researcher studies the sites of Bosra and SiÝ and relied on studying the methods used in manufacturing the ancient glass through provision of many explored new models divided into two groups: before and after blowing in various shapes and colors. This indicates the development of industry in that region and the extent of the experience of the makers in all glass techniques.

One should mention the contribution of **Y. Gorin-Rosen**²³, the head of the Ancient Glass Department of the Israel Antiquities Authority. She analyzed the glass finds from recent

¹⁹ Zihdī, 1960.

²⁰ Barag, 1962, Barag, 1970, Barag, 1982.

²¹ Şalibi, 1976.

²² Dussart, 1998.

²³ Gorin-Rosen, 2019; Freestone, Rosen, & Hughes, 2000.

excavations done by the Israel Antiquities Authority, as well as the glass material of Avigad's excavations in the Jewish Quarter of Jerusalem.

With respect to the Roman glassware found in the Middle East, the contributions of Gorin-Rosen cannot go unnoticed. Her work focuses on the analysis of glass finds unearthed during recent excavations throughout the Historical Palestine, in addition to the glass finds discovered in the Jewish Quarter of Jerusalem.

S. Jennings²⁴, her research was fundamental in how it systematically treated the glass finds during excavation works in Beirut (2006). Her analyses on glass provided an extensive and significant contribution to the field.

Many of the glass objects analyzed here were recovered during these expeditions, the archaeological reports of these excavations are limited. However, one such report on Syrian glass is an excavation report and articles authored by **M. Badawī**²⁵, including photographic documentation of the discoveries at the graves unearthed at the ÝArab al-Malik at the Jable and Jbeibat locations. However, Badawī (in Chronique, 2015) describes in full detail the site at ÝArab al-Malik and how the discovery was made. He also includes the plans, maps, and pictures associated with the site documenting all the discoveries made at the cemetery found at the site.

Many scholars have touched on the field of Late Hellenistic and Early Roman eastern glass studies. **I. Freestone**²⁶, and **H. E.M. Cool**²⁷ are leading researchers in the field of compositional analysis of ancient glass.

During a 2007 excavation season, glass artifacts unearthed from a western necropolis was documented and studied by **A. Saraçoğlu**²⁸. She works concluded that the findings were a type of unguentarium that had been commonly found in most of the Roman Mediterranean cities, both in terms of technique and form.

During excavation works in Damascus in 2009-2010, **H. SaÝd & Gh. Yaghy**²⁹, compiled their report that included only photos of the discoveries made, along with an indication of the grave at which each corresponding item was found. No further discussion of the finds was included.

²⁴ Jennings, 2006.

²⁵ Badawī 2007; Badawī, 2015.

²⁶ Freestone, 2023.

²⁷ Cool, Baxter, & Heyworth, 1990; Cool, Baxter, & Anderson, 2008.

²⁸ Saraçoğlu, 2007.

²⁹ SaÝd & Yaghy, 2011.

Researcher **M. Kelley**³⁰ studies contributed to the understanding of Late Hellenistic and Early Roman glass in the east. By extension, her work shed new light on the anthropological implications concerning population demographics, cultural perspectives, and economic status of the people, especially during the early centuries of the Roman Empire. She has studied 39 different sites located in various geographical regions where Late Hellenistic and Early Roman glass was found and analyzed.

J.D. Prior³¹, in his work entitled *The Impact of Glassblowing on the Early-Roman Glass Industry (circa 50 B.C. – 79 A.D.)*, has focused on primarily art-historical glass items and on select museum pieces. He explored the role of blown glass by comparing the percentages and forms produced by casting techniques in glass vessel collections originating from military and civilian sites, frontier settlements, and setting in the heart of the Roman World. His work identified emerging patterns in glass use across Roman society.

In their study on *Mediterranean Archaeology and Archaeometry*, **N. ‘Alī & R. ‘Abdallāh**³² presented a group of glass finds dating back to the period of the Roman Empire at the site of Sukhnah in Jordan. The results of their study correspond to sites dating back to the Roman period in the eastern basin of the Mediterranean. This study shed light on the patterns of glass production and formation, routes of import and (indirect) trade of Roman glass during the period (Jordan had been considered a trading center in the era of Roman Empire –known as *Gerasa*). Through comparative analysis, the finds were documented as per the technology of manufacturing and production, as well as on the basis of color and shape. The raw materials used in the production of the glass finds were determined through chemical analysis.

In 2015, during its excavation season, the Syrian National Expedition uncovered some tombs in Hama. Researcher **R. Sulaymān**³³, a member of the expedition, documented a total of nine tombs located at the site. His work accurately described the burial sites, with all the grave goods unearthed within. His report on the excavation included a documentation of the pieces of Roman glass placed within the tombs.

The works of **Ch. Lightfoot**³⁴ the Curator of the Department of Greek and Roman Art at the Metropolitan Museum of Art, are also worthy of note. Lightfoot’s published his work on the

³⁰ Kelley, 2012.

³¹ Prior, 2015.

³² ‘Alī & ‘Abdallāh, 2015.

³³ Sulaymān, 2015.

³⁴ Lightfoot, 2017.

topic in his study titled *The Cesnola Collection of Cypriot Art, Ancient Glass*, published by the Metropolitan Museum in 2017. In this research, he offered an excellent classification of glass material which became the standard form of our catalogue too.

A series of archaeological research conducted in Syria and published in biannual reports with the purpose of facilitating access to recent survey and excavation data and perspective is also referenced. Thirty such research projects, of which approximately half are presently active in Syria, are drawn upon. Moreover, many unpublished works are briefly summarized by the directors of their respective research and excavation projects. These summaries supplement the reports published in the *Annales Archaeologiques Arabes Syriennes (AAAS)*, the main outlet on archaeological research in Syria.³⁵

A series of unpublished, emergency rescue excavation reports conducted in 1994 at the Corniche al-Bāḥr, location, document how a number of Roman-Byzantine cemeteries were found distributed along the Corniche al-Bāḥr (a local waterfront project). These reports were authored by members of the National Excavation Team responsible for the site. Those are: **J. Ḥāidar**, **S. Ismāʿīl**, **Gh. Baddour**, and **S. Ḥawaṭ**. A total of ten burial sites were found and were accurately described with photographs, plans, and photos of the individual finds as well.

In 1995, an archaeological cemetery was discovered at the Mār tāqla location, near a local building (al-ʿYqār 1797/30000). The cemetery takes the form of a small chamber, with a number of burials on its sides. At first, only some glass unguents were found, but after during later excavations, additional discoveries were made

Also, in 1999, a report documenting an archaeological discovery in al-ʿYqār 1012 (local building) at al-shīkh ḍāḥir district was completed. The site consisted of a burial structure and was documented by **R. Ḥarfouch**, **Kh. Al Bāhloul**, **S. Ismāʿīl**, **Gh. Baddour**, **S. Al Ḍarf** and **Kh. Ḥāddād**. Many archaeological finds were unearthed, and the site was dated using the discovered pottery items found and it was established that it belonged to the Roman and Byzantine periods.³⁶

1.5 Context of the Study of the Origin of Roman glass production in Modern Times

The 1950s witnessed a significant development in these early studies by combining knowledge related to the composition, preparation, and development of ancient glass, which was based on studies dating back to the late 18th century. Scholars³⁷ from fields such as glass technology,

³⁵ *Annales Archéologiques Arabes Syriennes*.

³⁶ Archives of DGAM Report of the Directorate of Excavation and Archaeological Studies unpublished reports.

³⁷ Sayre & Smith, 1961; Turner, 1956; Ceglia, et al., 2013.

chemistry, and physics, were pioneers in this early work. This ancient (archaeological) glass sparked the interest of these scientists. They possessed knowledge of scientific techniques and saw the potential to apply their expertise in the field of archaeological endeavours. Driven by a technology-based approach, they explored the chemistry of early glass, often selecting materials that spanned large geographical areas and time periods, along with a variety of types and colors of glass from each era.³⁸

The results of this shift in compositional studies showed that early glass was made from simple, naturally occurring raw materials. In particular, the scholars demonstrated that Roman glass formed a coherent group, they noted that this "Roman glass" could be defined in terms of its mineral alkalinity, which contains low levels of potash and magnesium. They explained that glass was produced, as Pliny³⁹ suggested, using low-impurity sands and a type of evaporative salt referred to as "natron" known today as "natron" or more accurately "trona." It was observed that this composition was homogeneous throughout the Roman world and beyond for over six centuries.

Scientific studies established the initial descriptive and compositional framework for Roman glass in terms of its characteristics and suggested the raw materials used in its production. However, they left out the social and cultural interpretations responsible for the production and distribution of this material.⁴⁰

Until then, Roman glass was treated as a homogeneous category and analyzed as a single group regardless of color or form. Any minor compositional differences were attributed to the use of different colors rather than changes in production methods, raw materials, economic or political organization, or the organization of the glass industry. Thus, the integration of different patterns and colors in the compositional analysis obscured any subtle changes in composition. Scientific studies did not recognize that the transition from the strongly colored glass of the early Roman period, through the colorless glass of the late 1st to 3rd centuries, to the yellow and green glass of the 4th century, might be linked to economic, social, or political changes in the fabric of Roman glass production.

During the 1960s and 1970s, there was little development in the scientific analysis of Roman glass, except for a few studies that focused on exploring technological aspects such as color formation, furnace conditions, and unusual compositions. By this period, the chemical nature of the material was dismissed as something that would provide little usable information.

³⁸ Sayre & Smith, 1961, p 1824–1826.

³⁹ Plinius, *Naturalis Historiae* XXXVI, 190

⁴⁰ Jackson & Foster, 2009, p 189-190.

In the 1980s, a new wave of research emerged regarding the scientific analysis of Roman glass, driven by researchers who grew up alongside the development of archaeology as an interdisciplinary approach. Here, the research question became clearer, as compositional groups were sought within well-studied collections with secure contexts. Their pursuit was not limited to defining compositions with a broader range of elements; they also utilized contextual and stylistic information alongside chemical data to address archaeological issues.⁴¹

By the 1990s and early 2000s, it became evident that the study of glass needed more systematic and precise methods utilizing chemical analysis, as well as well-defined archaeological questions. This required the careful selection of materials and the appropriate application of analytical techniques. In each study, groups of vessels or glass waste, which were accurately dated and clearly defined, were chosen from glass manufacturing or recycling sites with known contexts. The selected glass samples allowed researchers to reflect social and technological developments through variations in composition.⁴²

Initial expectations held that glass waste from furnace sites would identify raw material sources. However, issues related to glass recycling, along with challenges in determining primary manufacturing and re-melting at each site, made it difficult to identify compositional groups. Furthermore, at the few sites that were studied, no clear compositional distinction was found between manufacturing groups, especially within blue glass. The only differences identified between blue-green glass and colorless glass were that the colorless glass contained a lower percentage of iron, indicating purer raw materials.⁴³

Research focused on colorless glass, which forms a coherent study group since this type is used to create higher-value items compared to blue and green glass. The ages of these glass patterns can be accurately determined as they are not linked to the other pieces.

Studies indicated that colorless glass was low in iron and other impurities associated with sand, reinforcing the assumption that it was produced from different and purer raw materials than blue-green glass. More importantly, these studies successfully demonstrated that within this broad category of "colors," precise but distinct compositional groups could be identified, which were not solely dependent on decolorizers like antimony or manganese.⁴⁴

However, it proved challenging to link these compositional groups to specific archaeological standards. This suggests that Roman glass was compositionally complex, with compositional

⁴¹ Freestone, 1987, p 210-213.

⁴² Jackson & Foster, 2009, p 190.

⁴³ Baxter, Cool, & Jackson, 2005, p 47-68.

⁴⁴ Jackson, 2005, p 763-780.

variation occurring both between and within glass groups, which cannot be simply explained by style, chronology, or context. Instead, it must be related to the organization of glass production (the manufacture of artifacts in one or more centers) within the Roman world. These findings highlighted the need to develop a model for glass production in the Roman world before we can truly understand the nature of compositional information.⁴⁵

1.6 Methodology

A comprehensive study of the Roman glass industry along the Syrian coast remains unfinished, so presenting Roman glass from burials and other contexts offers a valuable analytical opportunity. This research also considers burial objects and other finds from various sites along the Syrian coast, aiming to achieve a more accurate understanding of the use and diversity of glass in this region, which some scholars regard as the birthplace of the glass industry.

Access to museum collections was a major constraint; only vessels the author personally examined, described, and drew are included. Unfortunately, a detailed examination of aspects such as color, quality, edge design, decoration, and production techniques has not been possible due to the lack of established analytical technologies in Syria, particularly for material and archaeometric analysis. Additionally, researchers are prohibited from sending specimens for analysis outside of Syria or to privately-owned laboratories within the country, and the Directorate-General of Antiquities and Museums does not possess such facilities.

Recent research expands beyond typology to include manufacturing technique, vessel construction, functional identification, and consideration of color and size. However, no professional terminology has been developed to describe glassware to date; nor is it standardized in terms of coloring. Even the publications on this topic do not reflect the technical features and details.⁴⁶

For example, it is a convention within the Arabic academic circles to refer to *unguentarium* as tear bottles (*Lacrimarium*). However, this naming convention is highly inaccurate especially due to the lack of any substantial evidence that such items were used to house tears, instead, they were used to store perfumes or oils to use as funerary objects and to improve the scent within the burial chambers. This is further corroborated by findings of similar objects outside of Syria with evidence of their use as vessels to store oils, balsams and ointments, red and white

⁴⁵ Jackson, 2005, p 763-780; Jackson & Foster, 2009, p 194.

⁴⁶ Harden, 1936; Isings, 1957.

facial creams, and incense. Therefore, the term: tear bottles is an incorrect name for such items of glass.⁴⁷

The glass specimens examined for the purpose of this study were recovered from documented burial chambers and cemeteries (burial sites in Ṭarṭūs and Latakia will be discussed separately in the next chapter); in addition to all such items available at local museums (be it bought or confiscated). Further, excavation reports were key in gaining access to previous research and, as such, were considered to be an important source for this study.

Many factors beyond shape were considered, including production techniques and function, and each type is described accurately.

This study uses a qualitative approach to research with a focus on the analyzing and understanding of the different types of glass vessels and their usage, quantification, and classification. This study will be based on primary sources,⁴⁸ in addition to periodic excavation reports. Additionally, many sources will also be utilized for the purposes of this study including literature found in books, articles, documents, and internet web pages; also, data and items personally accessible to the author.

A number of challenges during the classification process presented themselves including the following:

Most specimens were not properly stored, leading to difficulty handling them.

- No accurate dating could be established with museum identification data not matching with scholarly dating results by experts in the field.
- Some glass objects were produced in forms that are completely local to their area making it challenging to find comparanda items to establish dating or origin information.
- No archaeological evidence exists as of yet for glass production or storage facilities on the Syrian Coast.
- Many specimens are recorded in displays but their place of origin or the context from which they were retrieved is unknown making it difficult to date them properly.

⁴⁷ Khairy, 1980, p 88.

⁴⁸ Plinius, *Naturalis Historiae* XXXVI.

The cataloguing entries include information pertaining to a vessel's style, shape, dimensions, cultural context, and date; followed by an analysis of its type. The analysis suggests that there were many possible uses for any class of vessels being examined.

The items included in this study were documented, counted, tabulated, and registered; locus and registration numbers are listed. No field statistical counts were attempted, and current statistical analysis is limited by restricted access to objects and reports and by imprecise dating with most excavation reports date from around 1993.

A statistical study correlating glass types with stratigraphic, ceramic, and architectural contexts can be undertaken later. All of the glass artifacts drawn are included in illustrations on plates and in catalogues. All raw data on color, weathering, inventory number, registration number, and other information are listed on said annex and labels.

This study follows a defined structure intended by the author to present a comprehensive and cohesive discussion of the thesis. *Chapter One* includes the *Introduction*, which consists of two parts:

- Part I: Introduction and Literature Review, which introduces the topic and the research purpose, structure, as well as aims of the research, along with the importance of the study.
- Part II: includes a review of the current literature about the topic of study and the general history of research, with the state of the art in the Middle East.

Besides the methodology adopted for the study, which focuses on the classification of the extracted glass vessels, and the forms and functions.

In *Chapter Two*, a demonstration of the historical and geographical framework of the Syrian coast is presented, in addition to archaeological contexts and chronology of the discussed sites. Also, a focus on establishing the importance of the strategic location of these sites on the Mediterranean coast and its significance for establishing a link between the East and the West, which provided the sites with a great economic, social, and technical importance.

Chapter Three presents the glass vessels: Types, Provenance, and Deposit Modes, and its problems and challenges of the study of glass in Syria. As well as terminology and the classification of the glass items.

An extremely detailed description of the Roman glass artifacts is presented in *Chapter Four*. These artifacts are studied given the context of how these items of glass were distributed *in-situ*, with a review of the production methods (cast vs. blown glass).

Chapter Five presents a detailed analysis of the Roman glass objects discovered at the sites considered for this study. This analysis includes a typological classification of the collected and defined glass vessels, as well as their archaeological contexts. Additionally, interpretation analysis of glass vessels is presented. In total, the typological classification of over 236 glass finds comprising the main results of the analysis is presented. The chronological and geographical backgrounds of the objects studied are summarized as follows:

Ointment bottles or toilet bottles were produced in large quantities, with the majority, as we will see in the catalogue, being devoid of decorations. Most of our collection belongs to this category. These bottles were typically found in graves dating to the early Roman period. It was common to place more than one perfume bottle in a single grave during the early Roman period, whereas in the late Roman period, it became more typical to find only one perfume bottle per grave.

The form itself can be derived from the Hellenistic ceramic unguentaria⁴⁹ Within the collections studied, bowls and dishes also dominate a large percentage, of the finds. However, as they were found only sporadically. As for drinking vessels also occur with less frequency in comparison to previous centuries, although they remain common in late Roman times.

The miscellaneous category includes objects that could not be classified into any of the above types, such as beads and bracelets where dominate a large percentage of the finds.

As well as the interpretations according to the order of the author's chosen typology, and to the categories based on function, where the tableware, the storage, and transport vessels. And the vessels with undefined functions.

The study concludes with *Chapter Six*, which presents the results, followed by *Chapter Seven*, containing the bibliography and appendices, including a catalogue of the artifacts.

Below is a list of resources and research activities that have aided in developing the terminology adopted herein:

- A comprehensive review of glass forms from the Roman western provinces based on dated discoveries as published by Clasina Isings (Isings, 1957).

⁴⁹ Dévai, 2013, p 201.

- A report on the large collection of glass artifacts discovered at various sites in Colchester between 1971 and 1985 (Cole and Price, 1995). In this report, the authors provide an overview of how glass was commonly used, and its decline over the lifespan of the Roman city between the 1st and the 4th centuries CE (Cole and Price, 1995, 211-223).
- “Roman British Glass Vessels: A Handbook” by Price and Cottam (1998), which was developed based on complete and fragmented examples from dated contexts.
- A report on glass finds from Augst and Kaiseraugst in Switzerland (Augusta Raurica) and an index of associated shape types (Rütti, 1991). This classification is widely used in continental Europe with most specific shapes being derived from complete finds; although many others rely on fragmented evidence.
- A review of glass shapes from specimens found in the south of France by Daniele Foy and Marie-Dominique Nenna (2003) which relies heavily on a collection of dated funerary collections.
- To date, the classification developed and put forth by Clasina Isings remains the most influential when it comes to Roman glass. The shapes and numbers she had established are used herein as a primary reference. The numbered list below is not intended to provide a system or classification; instead, it is merely used as a shorthand for referencing items in this specific study. A description of each shape is provided in the appendix.

Glass specimens recovered over the last century and held in the National Museums of Țartuș, Latakia, and Jable; were classified based on their forms/style and their usage. Each piece’s museum accession number, glass type, and excavation site were noted. Based on the year each individual object was found; corresponding data were recovered from the respective museum records and inventory lists. Following, a brief description of the glass specimen’s shape and characteristics was provided, including the diameter and height of the vessel, the thickness of the walls, the color of the glass, its opacity, and quality. Notes on bubbling were also recorded to indicate whether a given vessel contained many, few, or virtually no bubbles; notes on impurities, and/or streaking were also included. After recording the aforementioned data, the relevant glass pieces were drawn.

2 Geographical and Historical background.

2.1 Geographical Background.

Although ancient Syria has cleared and defined natural *geographical* bounds⁵⁰; no union in one *political* bloc was established within those bounds, despite how relatively clear and obvious these borders are.⁵¹ Regardless, Syria has always been of interest to many archaeologists for the opportunity it allows to study the long-term relationship between social and historical change⁵². All in addition to its location in southwest Asia, which has allowed its participation in the region's long cultural history.

Roman Syria as a distinct province within the Roman Empire was formally established by Pompey the Great after his victory over the Seleucid King Antiochus XIII ca. 64 BCE. Pompey re-organized the region corresponding to modern-day Syria, Lebanon, and a small section of Turkey into what became referred to by historians as Roman Syria; although the proper boundaries of this province and its political structure were not particularly stable nor easily traceable⁵³. The new political restructuring brought an end to the once-prominent Seleucid dynasty, and integrated the major cities like Antioch into the Roman administrative framework; making it the third city of the Roman empire behind Rome and Alexandria⁵⁴.

The new structure established Antioch as the administrative center of the province of Syria, which created a significantly improved and more efficient governance. The new framework placed the power into the hands of imperial Roman officials while simultaneously allowing for some local autonomy through municipal institutions⁵⁵.

Antioch's location at the Orontes River allowed it to become a regional center of Roman culture with its impressive architecture, theatres, temples, and public baths. Its population grew to an impressive half a million, with a vibrant economy and a well-established market which facilitated trade across the region.⁵⁶ The city acted as a bridge between the Hellenistic culture and the Roman governance, this contributed to its strategic importance for managing the relations with both Parthia and Armenia⁵⁷.

⁵⁰ Stretching from the borders of Egypt in the south, to the foothills of the Taurus Mountains in the north; and from the Mediterranean in the west, to the Euphrates in the east.

⁵¹ Dussaud, 2015, p 27.

⁵² al-Zin M. , 2005, p 260-263

⁵³ De Jong, 2017, p 13; Sarter, 2007, p 24-25; Hattī, 1981, p 308.

⁵⁴ Bowersock, 1990, p 4.

⁵⁵ Millar, 1993, p 27-30.

⁵⁶ Ibid, p 235–240; Downey, 1961, p 143.

⁵⁷ Millar, 1993, p 33-34.

Several Roman emperors further solidified the power of Antioch by using it as their main place of residence; and by extension bringing into the fold of the Roman empire the adjacent domains of Cilicia, Coele Syria, Phoenicia, Palestine; and all other regions bearing the Syrian name from the Euphrates to Egypt and the Mediterranean. As such, the major cities of Antioch, Palmyra, and Emesa became central hubs of commerce and culture.⁵⁸

These cities were connected by the Via Maris, or The Way of the Sea, one of Rome's crown jewels of its renowned road networks running north-south and linking the provinces of Egypt with Palestine and the Syrian coast⁵⁹ The key trade routes connecting the east and west allowed for the flow of goods like silk from China, spices from India, and grain from Egypt utilizing newly established roads such as the Via Nova Traiana, or The King's Highway, that linked Arabia to Damascus through the Gulf of 'Aqaba⁶⁰

The flow of wealth through the trade routes also contributed to the diversification of Antioch's economy and to the growth of a number of sectors ranging from textiles and pottery to metalwork. The new Via Nova Traiana also facilitated the exchange of goods between Arabia and the Mediterranean.

The Roman investment in infrastructure allowed Antioch to gain prominence in the new provinces. The city improved drastically under Roman rule with the construction of new roads, aqueducts, and public buildings allowing for urban life and commerce to thrive⁶¹

⁵⁸ al-Medānī 2010, p 39-42.

⁵⁹ Bryce, 2014, p 221-224.

⁶⁰ Warwick, 2000, p 45-47.

⁶¹ Bowersock, 1990, p 4.

2.2 The Historical Geography of the Coastal Region

The Syrian Coast covers an area where the historical record shows persistent and continued human settlement, political and military progress, and cultural evolution; that have all contributed to creating a distinct identity for the region across the ages. The natural geographical characteristics of the region played a crucial role in the cultural progress throughout history. The Syrian Coast's distinct location allowed it to become a major transit hub and cultural communication between the civilizations of Europe, Africa, and Asia; for the key ancient trading routes connecting Mesopotamia, Egypt, Asia Minor, and The Aegean passed directly through Canaan, East of The Jordan, Syria, and Lebanon.⁶²

The Roman Syrian Province under Augustus comprised three distinct regions, these were:

1. The Coastal Region extending from the north of Syria (including the port cities of Laodicea and Seleucia), through Antioch and to the Euphrates.
2. The Phoenician Coastal Region including the mountain ranges of Laodicea in the north, the Mount Lebanon in the south, all the way to the Galilean plateau.
3. The Inner Region including the Old City of Damascus, the Eastern Mountain Range of Lebanon, southward towards some of the cities comprising the Decapolis.

Evidence also shows that the province of Syria has stretched southwards to reach Mount Carmel, the coastal city of Tyre; with the area south of the river *Eleutherus*⁶³ mysteriously named *Coele-Syria*.⁶⁴

The term Coele-Syria was not officially used until the Seleucid period (200–64 BC), and its meaning varied throughout the ages from one source to another.⁶⁵ This continued until 194 AD, when Emperor Septimius Severus divided Syria into two provinces, with the northern province being the aforementioned Coele-Syria. Following this division, the southern province became known as Syria Phoenice⁶⁶. This new province encompassed the coastal regions from roughly Aradus in the north to Mount Carmel in the south, including major cities such as Tyre, Sidon, and Berytus (modern Beirut). Tyre served as its capital, reflecting the city's long-standing importance as a Phoenician center of commerce and culture. The administrative reorganization

⁶² Hattī, 1981, p 3- 309.

⁶³ Millar, 1993, p 236-237

⁶⁴ Bikerman, 1947, p 256-258; Cohen, 2006, p 37-40.

⁶⁵ Millar, 1993, p 120.

⁶⁶ Butcher, 2003, p 45.

under Severus was aimed at improving imperial control and limiting the power of provincial governors, aligning with broader Severan policies across the empire.⁶⁷

The central region of Phoenicia included a series of ancient cities extending along the coast facing Mount Lebanon. The main cities along this coast included, from north to south, the city of Arados, Tripolis, Byblos, Berytus, Sidon, and Tyre. As for the smaller cities located along this coast, such as Carnos, Antarados, Marathus, Simyra, and Orthosias-in-Phoenicia, not much is known about them. In the southern part of Phoenicia, prominent cities included Tyre and Acre.⁶⁸

Historically, Syria, at the time, comprised a number of provinces each with distinct geographical, historical, and cultural characteristics. These, according to the historical record are:

- The Northern part of the province: which included Antioch, Seleucia Pieria, Laodicea, Jabala, Apamea, Epiphany, Emesa, Heliopolis, and many other cities of inner Syria (Beroea, Germanica, Chalcis...etc.); and the Orontes River basin.
- Roman Phoenicia: which included Beirut, Sidon, Tyre ...etc.
- Southern Syria (The Decapolis): an alliance of four city-state in the South of Syria that included Bostra, Damascus, Qanatha, and Jerash which formed after Rome's conquering of the Nabataean Kingdom in 106 BCE the Roman Province of Arabia.
- South-East of the Euphrates: including Palmyra, Dura-Europos, and Sergiopolis.
- The Upper Euphrates: including Edessa, Nisibis, Manbij, and Zeugma.⁶⁹

⁶⁷ Sartre, 2001, p 78.

⁶⁸ Millar, 1993, p 270 -271; Cohen, 2006, p 201-226.

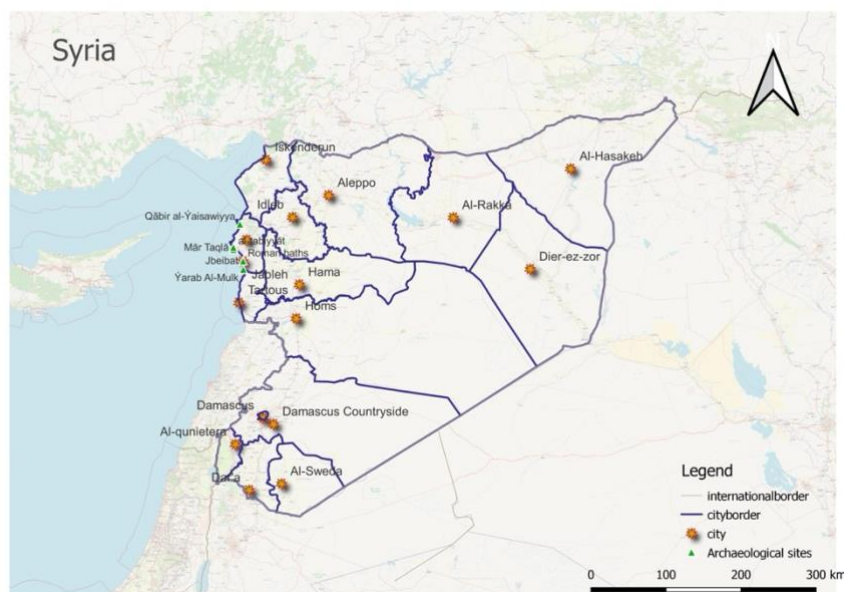
⁶⁹ Hattī, 1981, p 342; Al-Khatib, 2021, p 501.

2.3 Archaeological Contexts and Chronology of the discussed sites.

Most Roman-era glass vessels in Syria are recovered from ancient burial sites and tombs. Thus, investigating these sites allows for a better understanding of the glass material and their significance in their historical context.

Below is a summary of findings from as-yet-unpublished excavation reports by the DGAM Directorate in Ṭartūs and Latakia. The reports document a number of sites where both emergency and regular excavation efforts were carried out. Access to these reports was granted to the author of this study by the DGAM Directorate in Ṭartūs and Latakia and contains data that has not been published yet. The sites mentioned in these reports cover the span of both cities, with locations close to the Mediterranean and further away in the Coastal Mountains as well. They mainly document discoveries of tombs and cemeteries, while in some cases document the presence of large temples, residential and industrial structures (oil/wine presses) as well.

Most sites have suffered damage and looting as well. Further, some artifacts available at local museum collections that were recovered from these sites were not mentioned in the corresponding excavation reports. This posed a significant challenge to the author of this study in establishing clear timelines of their discovery. Museum records associated with recovered artifacts provide very little information about the context in which the artifacts were found, while the excavation reports did not provide any further information pertaining to these artifacts. (Fig.1)



*Figure 1: Map of Syria showing the distribution locations of the studied items.
(By Hamoudeh, M & Hammoud.S)*

2.3.1 Latakia

The Syrian coast hosted major maritime ports that likely played a key role both in importing raw materials for glassmaking and in exporting glass products. Also, they formed an established hub for the trade and export of all glass items of different styles, particularly those in the Syrian style of glass vessels which have been found all around the Roman Empire (date-shaped vessels, vessels with human-head forms, and double-bulge unguentaria. Notable finds with distinctive coastal characteristics have been recovered, especially in a number of beach-side sites in Latakia –namely at Mār Taqlā, al-shīkh dāhir, Hāydbā al-ṭabiyyāt, Kwrnīsh al-bāḥḍr, and Qābir al-Ŷaisawiyya Tombs. These finds, mostly from the classical period, include samples of jars, jugs, and bowls bearing the style and character of the Syrian coast.⁷⁰

A number of Roman glass items considered in this study were found at numerous sites dating back to the Roman period. Below, descriptions of these sites are provided with detailed information surrounding the cemeteries and burial chambers unearthed, as provided by the DGAM in Latakia. (Fig.2)

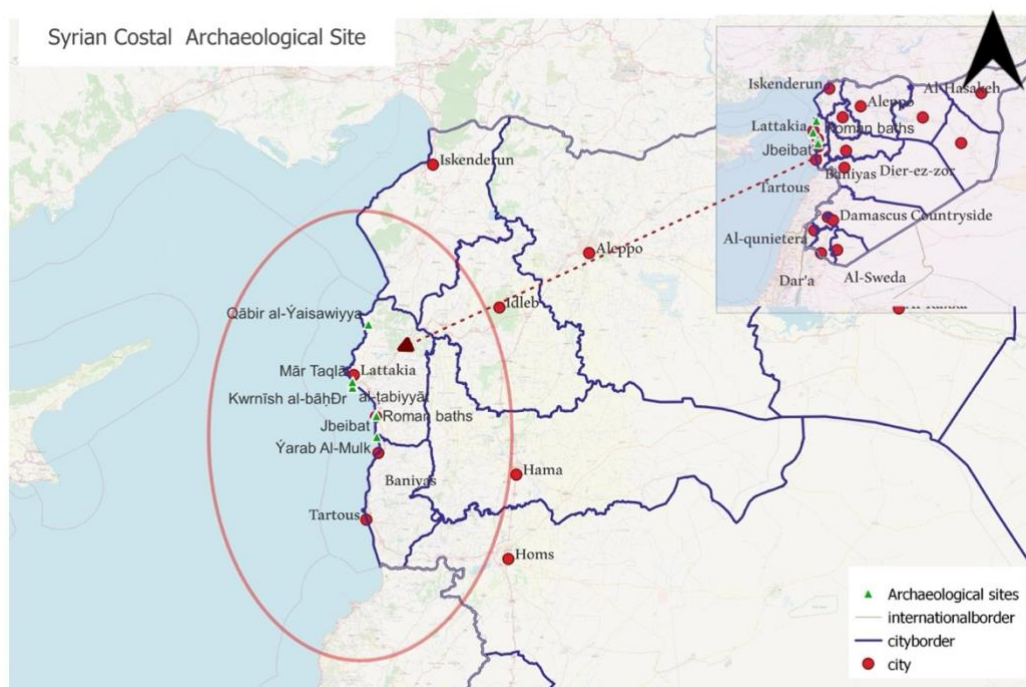


Figure 2: Map of the distribution of the sites in Latakia city. (By: Hamoudeh.M& Hammoud.S)

⁷⁰ DGAM, unpublished reports.

2.3.1.1 Ḥāiy al-sjn/ al-Maliyya Cemetery

Also known as the al-Maliyya Cemetery, is one of the modern neighborhoods in the city of Latakia. The neighborhood is located to the north of the Mār Taqlā neighborhood and al-shīkh ḍāhir. It is widely accepted that the area serves as an extension to the wider Roman funerary area unearthed in this part of Latakia that extends from the and al-shīkh ḍāhir, through Mār Taqlā, reaching to the al-Farous neighborhood. A number of family tombs dating back to the Roman period have been discovered behind the building of the Financial Directorate in Latakia as well.⁷¹

During excavations in the al-Maliyya Cemetery (Al-Sin neighborhood) in 2005, 14 pieces were found, ranging from a beaker (Cat. No. 3) to three flasks (Cat. Nos. 52-66-72) and various unguentaria pieces, including lentoid (Cat. No. 60) and piriform unguentaria (Cat. Nos. 122-133-134-135-136). Additionally, there was a collection of ring beads (Cat. No. 234), two trick bottles (Cat. Nos. 49-51), and finally a piece shaped like an amphora (Cat. No. 35). However, this piece, based on similar items from other sites, does not belong to the same time period attributed to this burial in the excavation reports. (Fig 3).

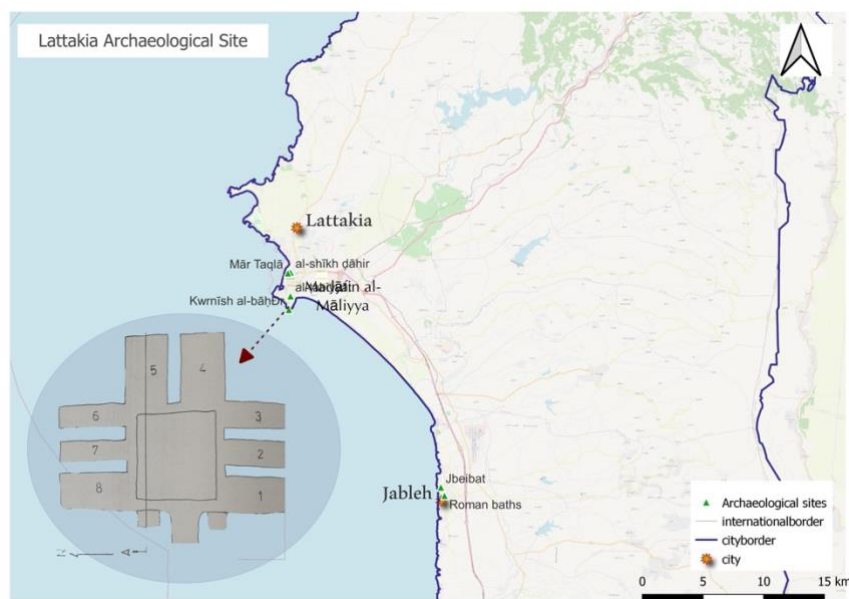


Figure 3: Plan of al-Maliyya cemetery. (By: Hamoudeh.M & Hammoud.S)

⁷¹ DGAM, unpublished reports.

2.3.1.2 al-ṭabiyyāt,

Is one of the old neighborhoods of the city of Latakia with its eastern part considered to be underprivileged with several alleys and side streets branching out from it including those leading to the more modern al-ṭabiyyāt district and the Quṣoor neighborhood.

al-ṭabiyyāt neighborhood extends for 2 kms, beginning from the Southern Corniche area to the al-Sakantouri neighborhood, and is surrounded by the al-ṣulaibā district. The neighborhood is considered one of the most elevated areas in Latakia second only to the Castle. It houses, according to the historical record, the Roman theater which sits on the slope of the West al-ṭabiyyāt plateau to ensure the stability of its structure and to minimize the construction costs involved. The theater remains were still visible until the beginning of the 21st century AD, when the municipal authorities poured a concrete wall over what was visible of the structure; thus, concealing its last remaining traces.⁷²

Among the finds discovered in this burial site, there is one piece of a trick bottle (Cat. no 50) that dates back to the second and third centuries AD.

2.3.1.3 Kwrnīsh al-bāḥḍr Cemeteries

In Latakia, archaeological finds routinely appear during construction and public-works projects; the many emergency excavation reports attest to this. One prime example is all the Roman cemeteries that had been discovered hewn into the rocky seaside cliffs during works on the Latakia Port expansion project. Further cemeteries and burial sites were also unearthed during one of the major public works projects to upgrade the sewage system all along the seaside (Kwrnīsh al-bāḥḍr). It was later established that all these findings indicate the presence of a significantly large burial grounds site spanning the distance between al-shīkh ḍāhir northward to Ḥāiy al-sjn, and from the seaside westward to the Mār Taqlā neighborhood. All of these cemeteries were found to be collective tombs (each belonging to one family) that were carved into the sandstone which forms the geological bedrock of the City of Latakia. The site was called Kwrnīsh al-bāḥḍr Cemeteries after their present-day location along the stretch of Latakia's seaside waterfront.

According to local oral historical tradition, most of these burial chambers and tombs could always be seen dotting the coastline up until the second half of the 20th century when all the major projects to modernize the city started to take place. That was when these cemeteries began to disappear and be eaten by the urban sprawl.

⁷² DGAM, unpublished reports.

During the 19th century AD, many western explorers visiting Latakia had mentioned these cemeteries and tombs in their journals.⁷³

The sites were also mentioned by the historian Elias Şaleḥ⁷⁴ in his major work documenting the history of Latakia. The last academic mention of these cemeteries was in 1976 by Professor Gibrael Sa'adeh⁷⁵ in his article *Archaeological Excavation in Latakia* published in the peer reviewed *Les Annales Archéologiques Arabes Syriennes*.

In 1994, during works being carried out to upgrade the public sewage system in Latakia, a cemetery dating back to the Roman and Byzantine periods was unearthed. The site consisted of various tombs each containing numerous loculi. Dating the site was done based on the number of artefacts that had been found in the rock-hewn tombs. The tombs were simple structures with no discernible ornamentation or inscriptions that could provide an accurate date for any of the structures. It is important to note as well that, like many other cemeteries and tombs around Syria, these tombs were largely already looted with any leftover finds or artefacts being too few to provide any reasonable narrative detailing their form, date, or context.⁷⁶

Three pieces from this burial site were found corresponding to cemeteries number 4 and 6. Below is a detailed description of these tombs:

Tomb 4: Contains 16 burial loculi with an additional individual tomb at the centre of the main chamber. The following items were recovered from this tomb: (Fig.4)

- a glass unguentarium in the shape of a disk, bulging at the base with a narrow body and a flared opening measuring 2.4 cm in length called Trick bottle/Jar, (Cat. No. 48)
- a glass vessel in the shape of a small cylindrical toilet bottle/Fusiform Unguentaria with a 1cm diameter and 4.1 cm in length, (Cat. No. 97)

⁷³ DGAM, unpublished reports.

⁷⁴ Şaleḥ, 1957.

⁷⁵ Sa'adeh, 1976.

⁷⁶ Haidar, 1994.

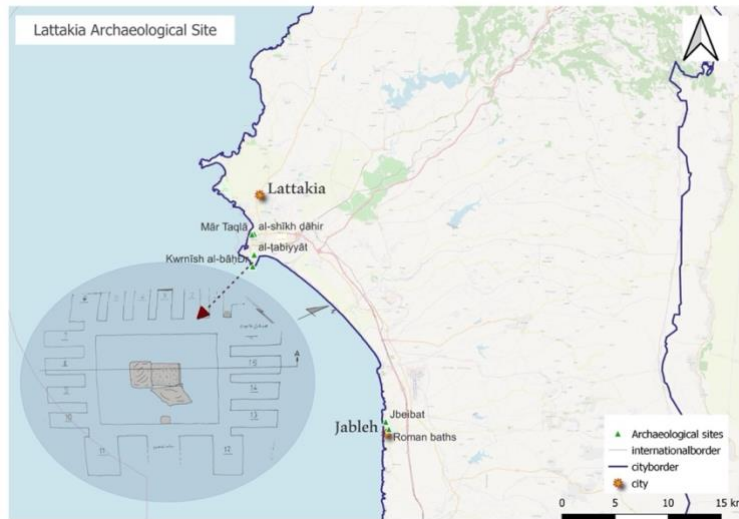


Figure 4: Plan of tomb 4 at the cemetery of Kwrnīsh al-bāḥDr. (By: Hamoudeh.M & Hammoud.S)

Tomb 6: Contains 6 loculi and many clay lanterns were recovered from this tomb. (Fig.5) Additionally, one coin and a single glass unguentarium were found. The unguentarium has a spherical body, narrowing at the point where the body connects to its tall neck and has a flared opening. The piece measures 8.9cm in length with a mouth 3.8cm in diameter. (Cat. No. 75)

Beginning in the year 1952, the city of Latakia became a large construction project as a major urban redevelopment project had been started by the authorities. The construction works around the city led to a number of major archaeological discoveries.⁷⁷

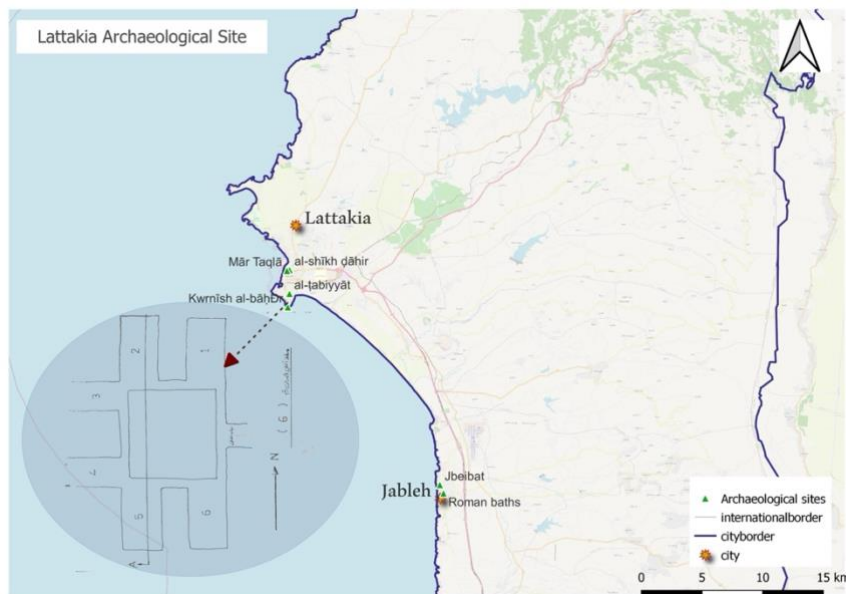


Figure 5: Plan of tomb 6 at the cemetery of Kwrnīsh al-bāḥDr. (By: Hamoudeh.M & Hammoud.S)

⁷⁷ Ḥaidar, 1994; DGAM, unpublished reports.

2.3.1.4 Mār Taqlā

This neighborhood was named after a small chapel dedicated to St. Taqlā that was discovered in this part of the city of Latakia. The chapel consists of a subterranean cavern accessible by a set of stairs and resembles a number of Roman funerary tombs that were discovered in this area. The discovery of the chapel to St. This neighborhood was named after a small chapel dedicated to St. Taqlā that was discovered in this part of the city of Latakia. The chapel consists of a subterranean cavern accessible by a set of stairs and resembles a number of Roman funerary tombs that were discovered in this area. The discovery of the chapel to St. This neighborhood was named after a small chapel dedicated to St. Taqlā that was discovered in this part of the city of Latakia. The chapel consists of a subterranean cavern accessible by a set of stairs and resembles a number of Roman funerary tombs that were discovered in this area. The discovery of the chapel to St. Taqlā gave the wider area its current name.⁷⁸

Mār Taqlā neighborhood covers the north-western part of Latakia and is home to many funerary structures dating back to the Roman period. Historically, the city is known to have two main cemeteries beyond its walls, one lies to the north: while the other lies east of the city with Mār Taqlā neighborhood comprising the south-west section of the northern cemetery. Many archaeologists and travelers who had visited Latakia during Ottoman times had documented the presence of this section of the cemetery, with some presuming it to be Phoenician in origin.⁷⁹

Mār Taqlā was largely undeveloped in the Ottoman period, allowing scholars then to observe several funerary structures. After World War II, the amount of construction works carried out in the neighborhood increased drastically and has been developed extensively today according to a major urban development plan. The Latakia Port Expansion and Waterfront Projects also contributed to the development of the neighborhood as well, with Kwrnīsh al-bāḥḍr separating it, and the other neighborhoods to its south, from the City's Waterfront. These projects resulted in the discovery of a considerable number of funerary tombs along the shoreline with the majority of which found to be dating back to the Roman Period.

In 1995, an ancient cemetery was uncovered on property 1797 within Mār Taqlā neighbourhood. The burial structure turned out to be carved into the sandstone in the form of a small burial chamber with various loculi carved into its walls. Not many artefacts were

⁷⁸ Sa'adeh, 1976, p 271.

⁷⁹ Sa'adeh, 1976, p 272; DGAM, unpublished reports.

recovered from this site except for one Toilet bottle in the Syrian model. (Cat. No. 185) which dates to the 1st and mid-2nd centuries AD.

It was difficult to access the excavation reports from 2006; however, through the museum records, we were able to identify three pieces of glass classified as toilet bottles, dated to the 1st and mid-2nd centuries AD. (Cat. Nos. 125-175-184)

In 2007, the Greek Orthodox Archdiocese of Latakia commissioned the restoration and revival of a prominent burial structure in the historic Mār Taqlā neighborhood that had been long venerated locally such that it becomes more presentable to visitors. This structure consists of an underground family crypt containing 13 individual loculi dating back to the Roman period. Within the crypt is the remnants of a small, old chapel carved into the bedrock and is thought to have been used by St. Th Taqlā aqla for her prayers. The crypt dates back to the 2nd century AD based on its architectural characteristics and style, in addition to an oil-lamp and other fragments dating back to the same period and were found within the structure. The loculi do not seem to be consistent in their dimensions with some loculi showing evidence of later work; for example, loculi 3 contained an addition of a tomb for a small child in its center measuring 113cm in length, 60cm in width, and 4cm in depth, 1st and mid-2nd c. AD. (Cat. Nos. 126-127)

In addition to the previous finds, two more Toilet bottles were discovered, with museum numbers 481 and 480, dated to the 1st century AD and the mid-2nd century AD.

Another chance discovery in 2021 revealed a burial structure during the construction of a private property. The discovery was made when an excavator punched through the eastern corner of the tomb. The tomb lies in north-western sector of the Mār Taqlā neighborhood where a number of rock-carved burial structures and tombs are found, with some having been excavated and documented while others are still in discovery. (Fig 6)

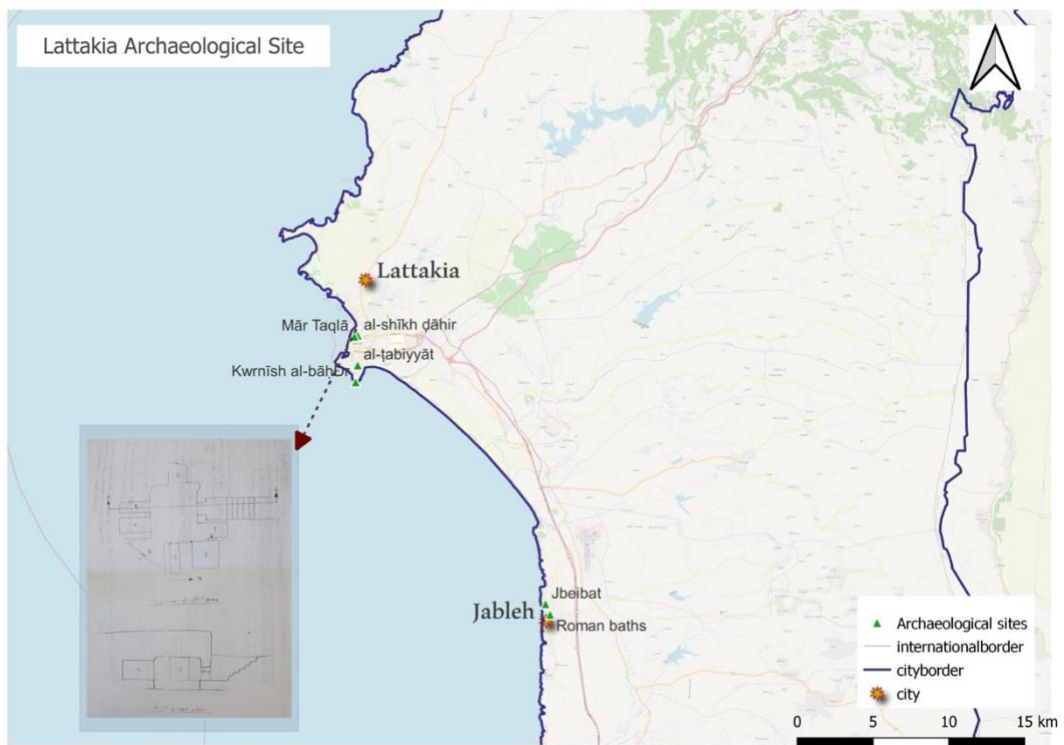
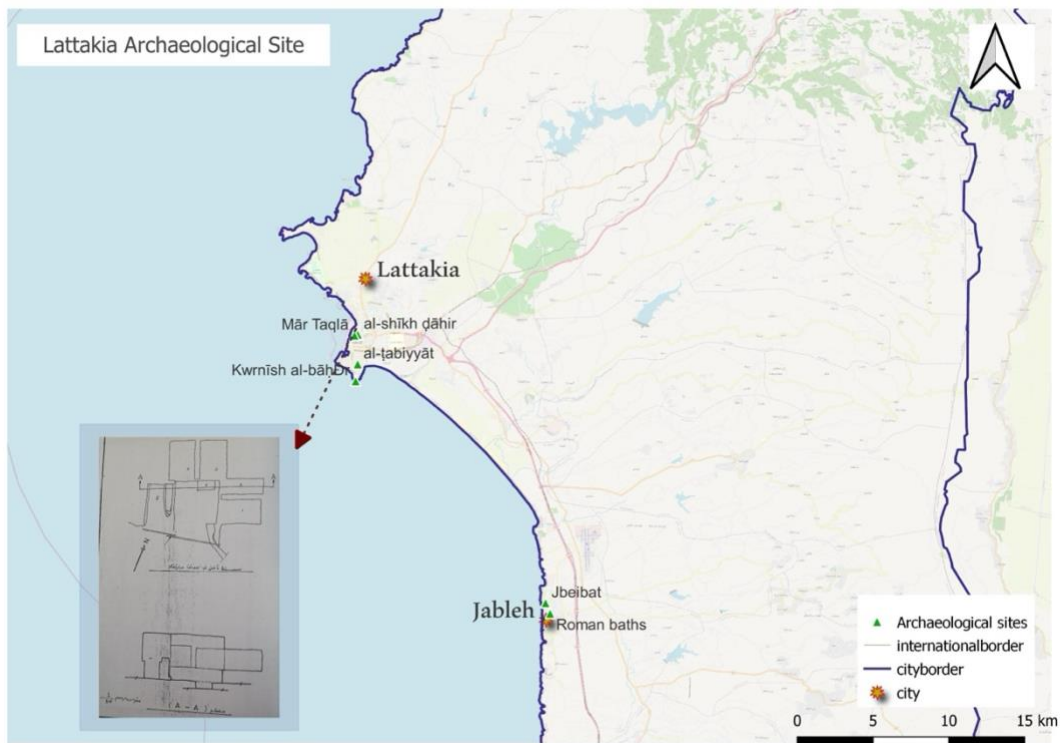


Figure 6: Plans of different tombs at Mār Taqlā cemetery. (By Hamoudeh.M & Hammoud.S)

2.3.1.5 al-shīkh dāhir

The neighborhood takes its name from al-shīkh dāhir Cemeteries, which was located where the Martyrs Square (or al-shīkh dāhir) is today. This cemetery was located outside the walls of the city of Latakia during the 17th century next to the Antioch Gate. As such, the road extending from the Cemetery to Ḥāiy al-sjn was dubbed the Shār'Ya Anṭāka.

Little documented information survives about the figure al-shīkh dāhir. Today the square occupies the neighborhood's center and is a major traffic node where nine principal streets converge. The square is considered a main artery of modern traffic in the city of Latakia with 9 main streets meeting at it. The square is surrounded by a large, historical high-school, two mosques, a number of hotels, cafés, restaurants, and a major parking lot.

Local folktales and oral traditions reveal a glimpse of its history during the end of the Ottoman period and the start of World War II, as they state that this area of the city was uninhabited and was dominated mainly by an Islamic cemetery. Where the nearby Joul Jammal High-school stands today, was a tell known locally as Tel al-Fākhār. During the early days of the French Mandate in Syria, the cemetery was relocated to the Farous neighborhood as the construction works on the high school began. A number of earlier tombs and cemeteries were found below the Islamic Cemetery level dating back to the 2nd century AD with 6 stone tombs adorned with animal head reliefs discovered. These discoveries were made ca. 1924, with later discoveries being made in 1934, 1961, and 1969 of a lion statue, various sarcophagi, and funerary structures containing sarcophagi.⁸⁰

This tomb located in the al-shīkh dāhir area in Latakia was discovered on plot 1012 in 1999 and, upon further inspection, was found to contain a family crypt carved into the limestone foundation underneath the property built atop plot 1012. The crypt consists of a main chamber carved into the rock with a total of 7 loculi carved into its walls. A significant number of artefacts were recovered from this site including a large collection of varying glass items (described in detail in the Catalogue). (Fig. 7)

The total number of glass pieces is approximately 25, consisting of various types and shapes, including:

- Stirring sticks: (Cat. No. 235)
- Deep bowls: (Cat Nos. 09-13)

⁸⁰ Sa'adeh, 1976, p 273; DGAM, unpublished reports.

- Drinking cups: (Cat. Nos. 05-06-07-08)
- Flasks: (Cat. Nos. 55- 61-62- 76)
- Beads: (Cat. No. 208)
- Lids: (Cat. No. 14)
- One-handle bottle: (Cat. No. 38)
- Two-handle flasks: (Cat. Nos. 40-41-45)
- Toilet bottles: (Cat. Nos. 122-124-128-129-130-131-132-138)



Figure 7: Map of the distribution of al-shīkh dāhir tomb (By: Hamoudeh.M & Hammoud.S)

2.3.1.6 al-Ýaisawiyya

The town of al-Ýaisawiyya is located on the al-Baseet Plateau 45km northwest of Latakia and lies around 350m above sea level. The town includes a number of ancient structures including remains of various churches and monasteries. Additionally, some remains were found to date back to the Phoenician and Byzantines periods. Some artefacts recovered from the town (One conical lamp (Cat. No. 236) was found in this burial site) had no further identifying information associated with them that could shed light on their context or the existence of any funerary structures that they could have been recovered from.

2.3.2 ȦrtÛs

It is worthy of note here that many artefacts housed at the National Museum in Latakia were delivered to the Museum. These artefacts are of unknown origin and have no associated information regarding their date or the location of their discovery. However, in the Catalogue developed for this study they have been dated by comparing them to similar objects.

With regards to the sites located within the ȦrtÛs Governorate, the following information have been garnered from reports and documents issued by DGAM. The information pertains to sites and locations dating back to the Roman period where glass fragments and/or objects were recovered and are described in detail in the Catalogue.

2.3.2.1 Ȧuŝn Suleiman

The ruins of Ȧuŝn Suleiman sit within an elevated valley (750m above sea level) on the Coastal Mountain Range approximately 50km east of the city of ȦrtÛs, 20km northwest of Ŝāfitā, and 15km from al-Duraykish. It was known in antiquity as Baitokaike based on the Greek and Latin inscriptions found within the main Temple dedicated to Zeus. The structure dates back to the Roman period towards the end of the 2nd century AD and the start of the 3rd century AD. The root *bait* in its ancient name relates to the religious context of the site as it means *the house of gods*. The site's modern name possibly dates back to the beginning of the Islamic period. Excavation works on the site were carried out in 1990-1991 by DGAM with many finds and Roman artefacts having been recovered from the site.⁸¹

Among the finds, there is one piece of glass, a small ring that is undated (Cat. No. 232)

⁸¹Kiwan, 2006-2007, p 13; Archives of DGAM Report of the Directorate of Excavation and Archaeological Studies; GIS Project at the National Museum of ȦrtÛs.

2.3.2.2 khirbet el libneh

This site lies 7km south of the city of Ṭarṭūs within the Ṭarṭūs Industrial Zone, the Milling District. Excavations at the site was conducted in 1997 the presence of a small church structure with two of its walls (northern and southern) being excavated, along with a mosaic flooring depicting geometric designs.

In addition to the church, a liquid collection reservoir was also discovered, along with a large, well-constructed industrial facility for olive oil production. The site dates back to the Byzantine period and includes around twenty rooms with walls built from uncarved, dressed stones arranged in two patterns: an inner and an outer layer, with small rough stones sandwiched in between. Most of these rooms have floors paved with finely crafted, hard stone tiles. The rooms contain ovens and canals for both fresh and salty water. Additional structures designated for the oil extraction process, where bases of oil presses, were found. (Fig.8)

Archaeological evidence suggests continuous settlement of the site starting from the Roman period and extending well into the Islamic period.

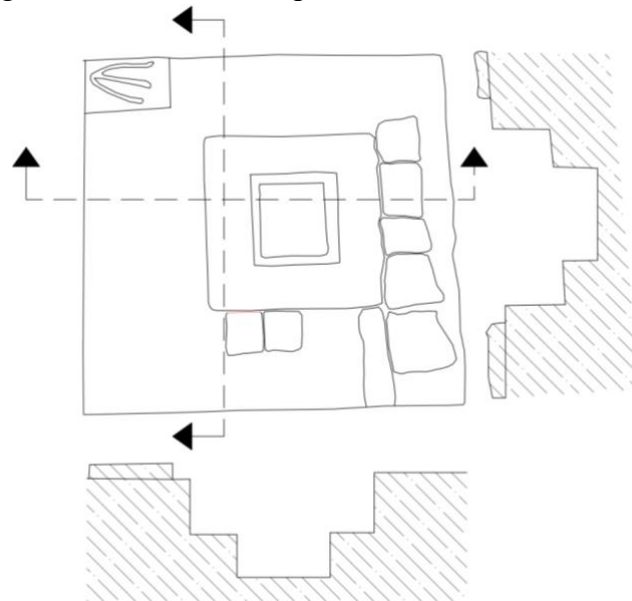


Figure 8: Plan of the tomb of khirbet el libne. (By: Hammoud.S)

Other artifacts recovered from the site include a number of glass specimens and fragments that were discarded at the end of the work. ⁸²

⁸² DGAM, unpublished reports.

The site was largely dated to the Roman period, however the presence of some artifacts with Egyptian inscriptions and styles raises questions as to how they came to be at the site.⁸⁴

Given its relatively large area, and having been used as a cemetery; this site revealed a substantial collection of glass finds compared to other locations (51 pieces in total), including:

- Bottle-Flasks: (Cat. No .18)
- Flasks: (Cat. Nos. 63-67-69-71-73-84)
- Toilet Bottles: (Cat. Nos. 88-90-106-107-108-117-118-119-120—123- 139-140- 151, 148, 149, 150, 151, 152, 153,157, 158, 159, 160, 161, 162,163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 176, 177, 183, 186)
- Beads: (Cat. Nos. 200-219)

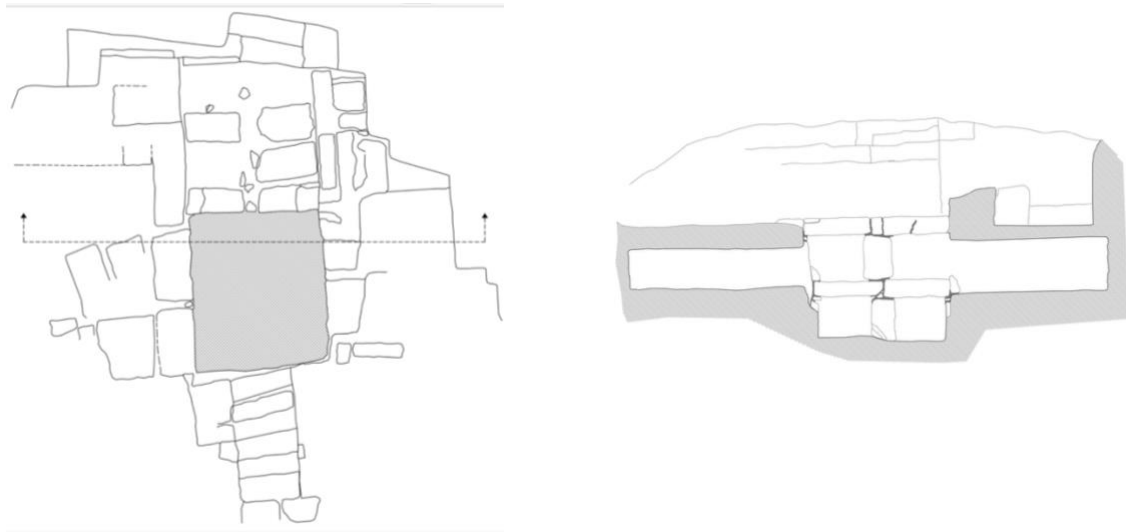


Figure 9: Plans of Maqabir ÝAzar (By: Hammoud.S)

2.3.3 Bānyās

The latest discovery in the city of Baniyas is the cemetery that was unearthed at the Baniyas Sports Complex 100m south of the Khreibat Road. The cemetery lies within the Sports Complex near the Mediterranean and in the southeast corner of the site. It consists of a mass burial crypt of a large number of loculi. A significant section of the cemetery was demolished, especially the northern section which was completely demolished; and parts of the loculi at the southern and eastern sections. The crypt measures an 8m x 8m structure with a height of 4.5m and is built from limestone. The structure can be accessed from a gate 130cm x 50cm situated

⁸⁴ Burns, 1992, p 44.

into the western wall of the tomb and leads into the main chamber which is surrounded by the loculi. Most loculi contained a number of Roman glass objects.⁸⁵

2.3.3.1 Rās al-Nabe'e

This site lies within the administrative bounds of the city of Bānyās in the Rās al-Nabe'e neighbourhood on the southern bank of the Baniyas River. The site is a Tel with a prominent mass of *blind stone* dipped in lime plaster. During some weeding and cleaning works at the site, a large hole in the ground was revealed containing evidence of ancient ruins which prompted the DGAM in Ṭarṭūs to conduct the necessary inspection of the site leading to the commencing of emergency excavation efforts. The site turned out to contain a mass tomb carved into the rock and housing a number of loculi containing Roman glass objects, and pottery fragments.⁸⁶

This burial site contained 32 glass pieces dating from the 2nd to the 3rd centuries AD, with the finds comprising a variety of forms, including:

- Bottle-Flasks: (Cat. Nos. 20-21-22- 23)
- Flasks: (Cat. Nos. 53-54-78-93-95- 96)
- Jars: (Cat. No. 47)
- Toilet Bottles: (Cat. Nos. 59, 70, 89, 94, 98, 109, 110, 111 ,116, 142, 143, 144, 145, 147, 155, 178, 179, 180)
- Two-Handled Flasks and Bottles: (Cat. No. 42)

2.3.3.2 al-mādenah al-readeah Tomb

This site lies within the Bānyās/ al-mādenah al-readeah on the south-east corner of the complex. It is a communal tomb structure containing a large number of loculi. A large section of the tomb was removed, including the entire northern section and parts of the south and eastern sections. The tomb contains a large central hall with stacked loculi carved into the surrounding walls. Some notable findings that were recovered from this tomb structure include an unguentaria that is missing its rim, a number of small flasks, a blackened glass ointment jar (probably originally white in color), the remains of a glass vessel containing a human tooth, a human skull, fragments of a pottery sarcophagus, and a part of a bronze earring.(Fig. 10)

⁸⁵ DGAM, unpublished reports.

⁸⁶ Hassan, 2009.

The total number of glass pieces found is 5, dating from the 2nd to the 3rd centuries AD, consisting of:

- Bottle-Flasks: (Cat. Nos. 24-25-26-27)
- Toilet Bottle: (Cat. No 181)



Figure 10: The tomb of al- al-mādenah al-readeah (Archives of DGAM Report of the Directorate of Excavation and Archaeological Studies unpublished reports)

2.3.4 Jable

Excavation work in Jable and the surrounding plain, however, only started in the 1930s and was carried out over three main phases: (Fig. 11)

Phase One: Began in the 1930s and continued throughout the 1960s. Although there was a long period between the completion of the initial works and the start of the second excavation season, they can be grouped within the same stage of the excavation record. This phase was characterized by archaeological, and survey works, and structural documentation conducted by a number of researchers and archaeologists. The most important works carried out during this phase include:

- Archaeological survey and excavation work at the Jable Amphitheatre by the National Syrian Archaeological Expedition in 1950 headed by M. G. Kalamkarian; and later by Naseeb Salibi in 1952 .

- Also, there were some of the Archaeological activities carried out: Archaeological survey of the ÝArab al-Malik Village site, a topographical survey of the City of Jable.⁸⁷

Phase Two: Began during the 1970s and continued till the end of the 20th Century AD. This phase was characterized by a largely active excavation season focused on verifying the names and locations of some of the ancient cities mentioned in the Ugarit Royal Archives, especially those within the hills adjacent to the City of Jable. Most notable of these works were :

- Excavation works conducted by Ramez Housh at the al-Jbeibat cemeteries in 1977 .
- Excavation works conducted at a funerary site within al- Jbeibat cemeteries in 1980 by French researchers Jacques and Elizabeth Lagarce.
- Other notable works carried out during this phase include excavation works at the al-Jbeibat cemeteries and the Jable Amphitheatre conducted by the archaeological Authority.

Phase Three: Began at the start of the 21st Century AD and was characterized by an increased archaeological activity encompassing the whole of the Jable region, most notable of which are :

- The National Syrian Archaeological Expedition's work at the al- Jbeibat cemeteries, headed by Masoud Badawi .Excavation and restoration work at Jable Amphitheatre conducted by the Jable Archaeological Authority.⁸⁸

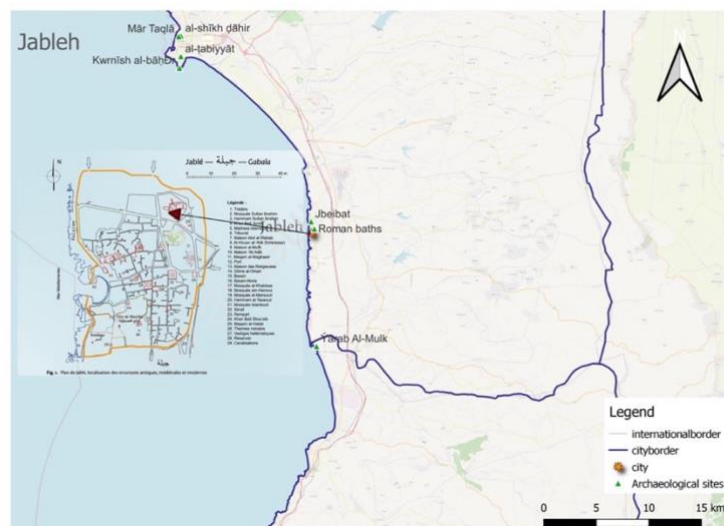


Figure 11: Map of distribution of the sites in Jable city.(By: Hamoudeh.M & Hammoud.S)

⁸⁷ Badawī, Jable, 2018, p 337.

⁸⁸ Badawī, 2018, p 337-38

For the purposes of this research, items from sites within the city of Jable, dating back to the Roman period, have been considered. These sites include:

2.3.4.1 Jbeibat

A total of 31 archaeological pieces were found at Jbeibat tombs.

Lies to the north-western side of the Old city parallel to the coastline, with a length of 1600 meters and a width of 200 meters. It was discovered during any major construction projects that would be carried out in the area (foundation works, sanitation works, road works). The tombs are comprised of both communal and individual tombs. Three burial patterns were identified based on the varying structural properties of the tombs. The first pattern is a shaft burial, the second a burial with a stairway, and the third resembles a single tomb.

The tombs are simple structures, hewn into the rock in a cave-like manner, with each communal tomb having its own floor plan that differs from the next in terms of the number of loculi, tombs, or the direction of the entrance. The bodies of the deceased were either interred in sarcophagi or laid directly on the tomb floor.

The rock-cut tombs face west and vary in sealing style; they lack ornamentation or inscriptions that would identify occupants or social status. They a considerable number of finds, mostly votive objects and/or items used in funerary rituals such as jugs, flasks, clay amphorae, balsamaria, glass vessels, spindle whorls, beads of varying materials; along with some gold, silver, and bronze coins as well as other items dating back to the Hellenistic and Roman periods. Excavations produced important results, especially Roman-period tombs, but precise dating is problematic because of the absence of inscriptions and because the cemeteries were reused over time. However, at least two of these tombs likely date to the 2nd century BC and were used subsequently. It was also evident that the cemeteries have been expanded in size during the Roman period and continued to be worked on to well within the 3rd century AD at the very least.

During excavations 500m north-west of the Roman theatre of Jable (Old Jable), in a place called Jbeibat, a Syrian archaeological team was able to discover eight tombs, dating from the Hellenistic period to the Roman era. The name of the geographical location comes from a local tradition denoting the many wells (*JU`b* in Arabic) that dot the surrounding area. All graves extend over 1,600 meters and have a width of about 200 meters.

The place had long been known as an ancient necropolis; some burials had in fact been cut into by the shore. It is from the edge of the water that a first overview of the tombs is possible. The discovery of the first hypogeum (A) dates from December 2000, following the widening of the

coastal road; the other discoveries were made all throughout the progress of the construction project. Eight tombs carved into the soft rock (Ramlé) (A, B, C, D, E, F, G and H) have been completely excavated. The group of hypogea E, F, G and H is located 360 m north of tomb A. Through one such excavation of a necropolis in Jbeibat conducted during the 2001 season by a Syrian team, eight graves have been discovered 500m north-west of the Roman theatre of Jable. Three types of burials (graves and single tombs) have been identified based on their entrances:

- I. Shaft burial: *Tomb A*.
- II. Burial with a stairway leading down: *Tombs C, D, E, F, G and H*.
- III. A single tomb: *Tomb B and chambers I to VII above Tomb G*.

All tombs are rock-cut and vary in form. None bear ornaments or inscriptions that would identify occupants or families, nor provide clues to social status.⁸⁹ This was in stark difference from the cemeteries and tomb structures at Palmyra dating back to the same historical period where they also differed in style and ornamentation.

Despite their bad state of conservation, the burials offered sufficient number of artefacts including pottery, glass, spindle-whirls, and a few beads of clay or glass. Some metal pieces were also unearthed, which helped date the site to between the Hellenistic and Roman periods.⁹⁰

The tombs of Jbeibat have been damaged both in antiquity and in modern times and not one single *loculus* has been found intact. Remains of a terracotta sarcophagus come from *loculus*/chamber 3 of tomb A, and another almost complete was discovered in chamber 1 of this same hypogeum. In contrast, in Tomb B another set of human remains was discovered having been buried in a large jar rather than being laid in a sarcophagus. We also know the type of closure of these graves. It is therefore possible to reconstruct, in many cases, the mode of burial of the former inhabitants of Jbeibat. Also, there are a number of parallels in Syria, particularly in Damascus at the site of Bab Srijeh.⁹¹

Tomb A:

Located 700m to the northwest of the Roman theatre at Jable, Tomb B shows defining features of a shaft burial type of structure, with its entrances, antechamber and loculi were more or less filled with soil. The entrance may have been covered with flagstones and is rectangular in shape

⁸⁹ Badawī 2018, p 338-339.

⁹⁰ Ibid, p 339; Badawi, 2007, p 186.

⁹¹ Óuwayr, 1970, p 61-66.

with a long side of 2.27m to the east-west direction, and a width of 73cm. The shaft itself widens near the passage to the antechamber until it becomes 1m in width. The floor of the hypogeum itself was located at a depth of 4.40m below the surface. An opening of 44cm x 70cm, possibly made recently by looters, was found on the western side of the structure. This opening was what led to the discovery of the hypogeum .(Fig.12)

Hypogeum A houses three differing types of burials :

- In *loculus* 3, the remains of a terracotta sarcophagus were discovered. Blocks of stone (ramlé) were found in front of loculi 1, 4, and 5 bricked into the ground, possibly serving to obstruct the opening .
- Chamber No. 1 was found to house a terracotta sarcophagus containing the remains of a skeleton. Underneath said sarcophagus, another body was unearthed possibly dating to an earlier period given the in-situ context indication around it. The filling of this pit gives credence to it having been reused. The sarcophagus was closed using stone slabs that have been recovered near Tomb A. A similar case was documented at site ‘ÝAzar, located to the south of Ȧrtūs⁹².
- A collective burial structure was uncovered within the two small funerary chambers. The human remains therein were laid out side by side, either in a shroud or a sarcophagus, similar to the remains found at Bab Srijeh in Damascus.⁹³

Other funerary objects recovered from this site include molten glass beads (Cat. Nos. 207 -212-213 -214 -218). From the Hypogeum A, a Roman period unguentarium was also recovered (Cat. Nos. 102-103) As well as a small bottle molded in the shape of a dried date (Cat. Nos. 83) resembles a similar item kept at the Oriental Antiquities room of the Louvre Museum originating from excavations conducted at Ýamrit.

In addition to a flask lid (Cat. No. 16) and a piece of a flask base in the shape of a human head (Cat. No. 81)

⁹² Šalibi, 1976, p 128.

⁹³ Óuwayr, 1970, p 61-66.

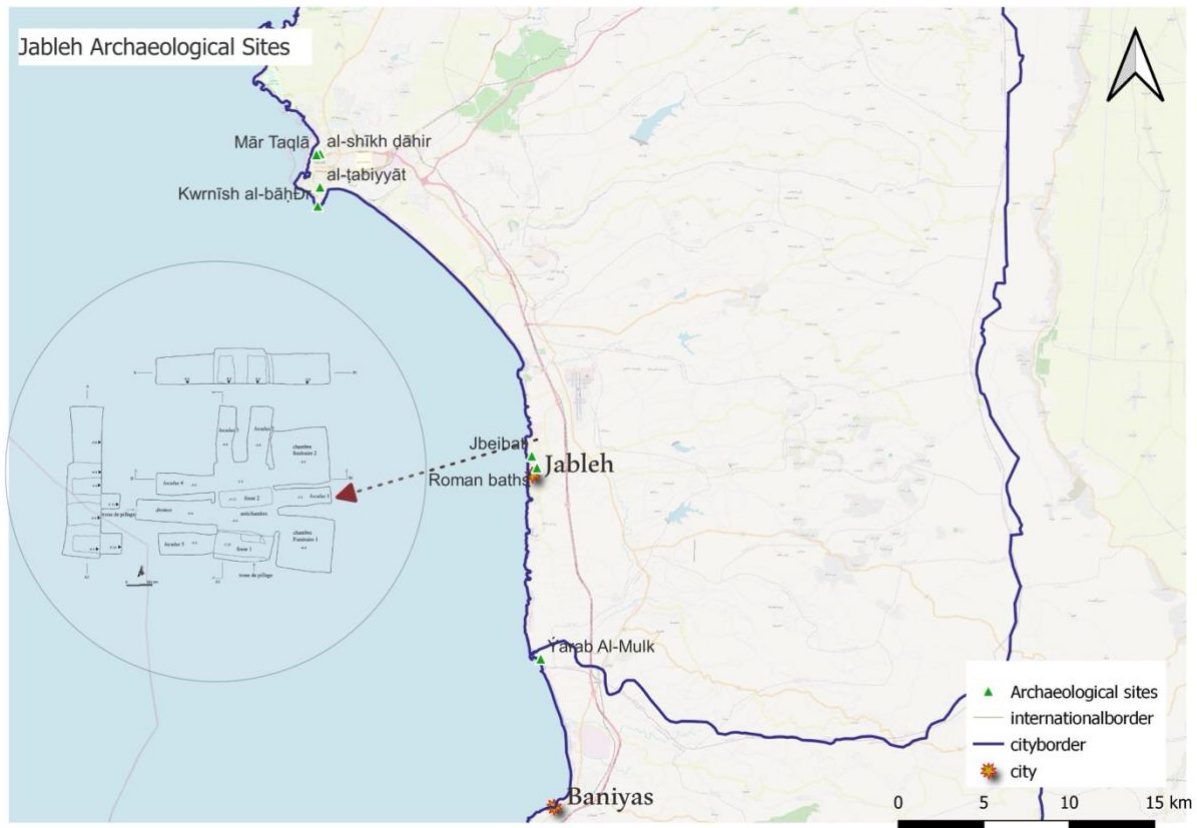


Figure 12: Plan of tomb A from Jbeibat tombs (By: Hamoudeh.M & Hammoud. S)

Tomb B:

Located 24m south of Hypogeum A, Tomb B is an individual burial structure dug into the rock. (Fig. 13). It had been covered with a roughly hewn stone slab. The burial structure is rectangular in shape and faces east-west. It is 2.11m in length, 58cm in width, and has a depth of 1.27m. It resembles other examples of tombs earlier discovered at Ṭāzar south of Ṭarṭūs⁹⁴. Within the tomb, a large jar housing a highly fragmented skeleton of an adolescent was discovered. The remains possibly belong to a young girl. Inside the jar were recovered a number of beads made of molten glass, (Cat. Nos. 215-216-227-233) Additionally, a bottle with two handles (Cat. No. 44) and a small bowl in blown glass were also recovered. (Cat. No. 01)

The presence of the aforementioned objects, and through stratigraphy, has led to the conclusion that this tomb had been used at least twice. The first time being at some point in the 1st century BC, and then again during the 1st century AD .

⁹⁴ Ṣalībī, 1976, p 128-129.

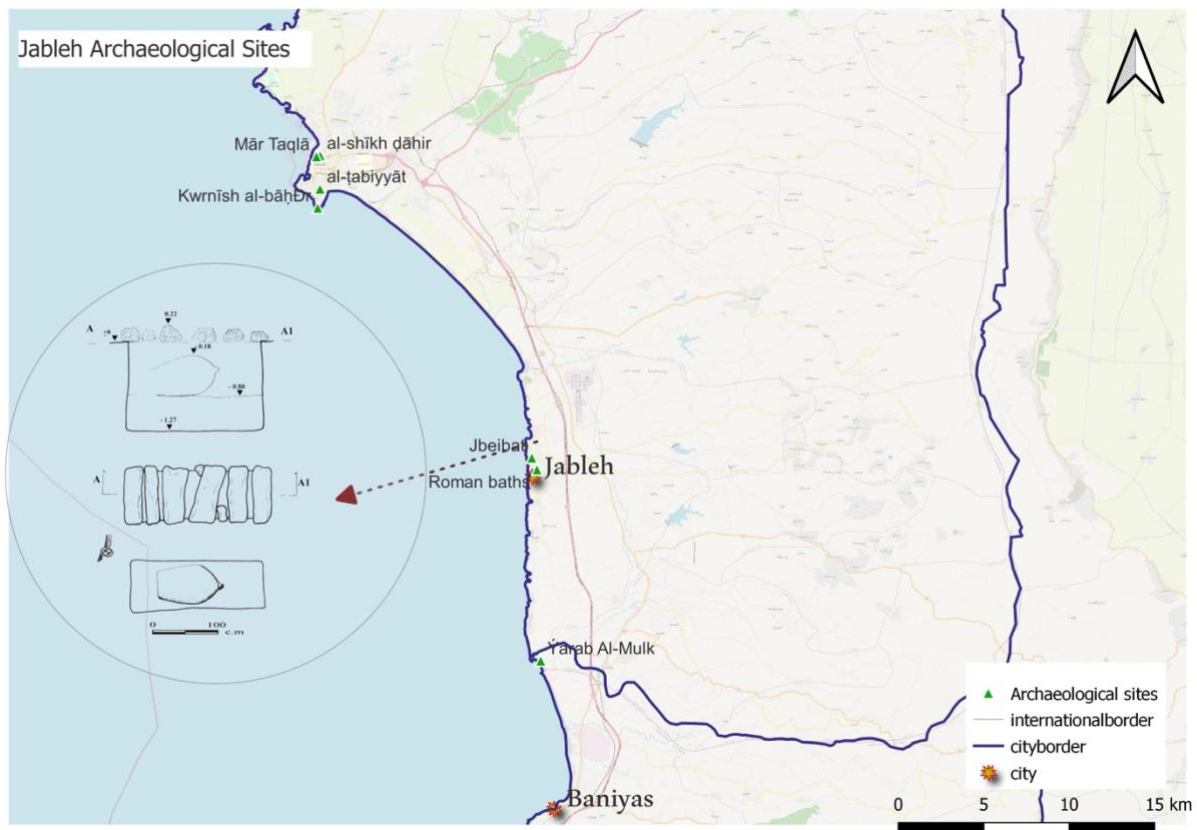


Figure 13: Plan of tomb B from Jbeibat tombs. (By: Hamoudeh.M & Hammoud. S)

In Tomb H, five glass unguentaria (Cat. Nos. 86-87-104-137-182)) and a blown glass flask from the Roman period were recovered (Cat. No. 77). These items resemble ones of the same type housed at the Bosra Museum.⁹⁵

In addition to 4 beads that were recovered from the same tomb (Cat. Nos 205-206-217-229). Dating this tomb proved to be somewhat challenging. The dating of the jar back to the Hellenistic period seems to be questionable, with it dating back to the beginning of the Roman period (the time when the tomb had been first used) to be more preferable. Glass material recovered from with the structure undoubtedly date back to the time the tomb had been in use between the beginning of the 1st century and the beginning of the 4th century AD. (Fig.14)

⁹⁵ Dussart, 1998, p 278, pl. 38, Groupe B X.213, pièce no 8.

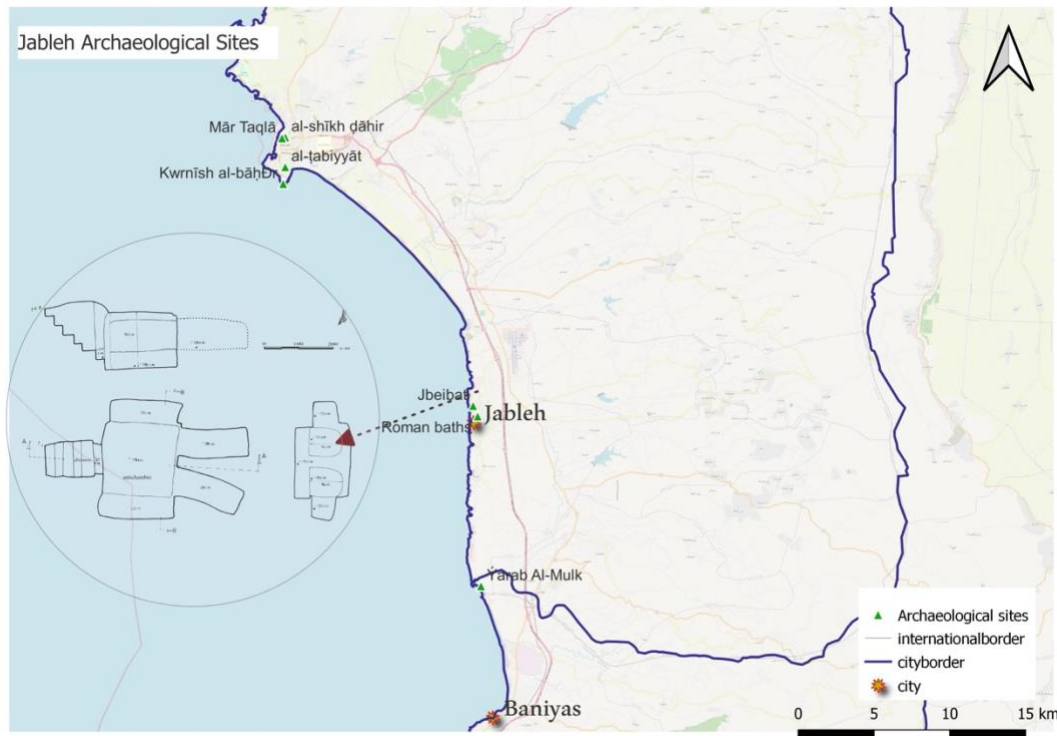


Figure 14: Plan of tomb H from Jbeibat tombs. (By: Hamoudeh. M& Hammoud. S)

In addition to the aforementioned finds, several glass pieces from different seasons were discovered in the city of Jable/al- Jbeibat during the excavation seasons of 2002 and 2003. However, the specific reports could not be accessed. These pieces include:

- Toilet Bottles: (Cat. Nos. 82, 156)
- Flask: (Cat. No. 57)
- Bead: (Cat. No. 225)

2.3.4.2 The Roman Bath of Jable

The Roman Bath of the city of Jable lies a few meters south-east of the Jable Amphitheater. It was unearthed in 2007 during the excavation works for a commercial project. Its foundations are well-preserved and was found to have been built using large sandstone slabs with a total area of 2000 sq. meters. The bath dates back to the second century AD (Roman period) and was used up until the 5th century AD (Byzantine period).

An archaeological survey of the structure of the bath allows for establishing the dates through which the structure has been used:

- The first period: The construction of the baths during the 2nd century AD. This has been gleaned from the classical arrangement of the heating system followed during the construction of the baths .

- The second period: between the third and fifth centuries AD and shows a number of major transformations to the structure .
- The third period: during the 5th century AD when the baths seem to have been fully abandoned.⁹⁶

Water channels were also found containing many finds, such as ceramics, and glass (Flask: Cat. No. 58) (Toilet bottle: Cat. Nos. 92-190) similar to those found in the Al-Jbeibat cemetery in Jable. Those have been dated back to the period between the 2nd and 4th centuries AD . (Fig.15)

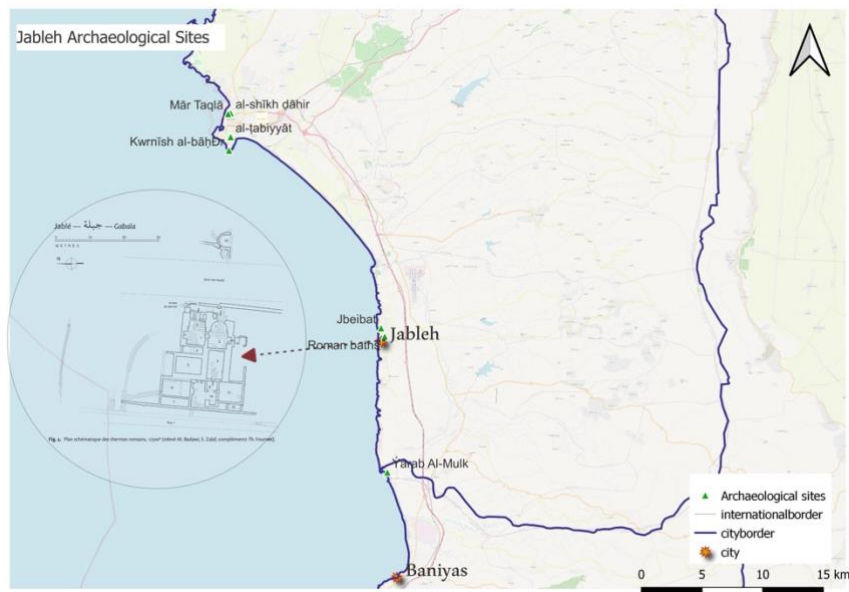


Figure 15: Plan of Roman bath of Jable. (By: Hamoudeh.M& Hammoud.S, Based on al- Badawī.M)

2.3.4.3 ÝArab al-Malik

Located 11km south of Jable, and 5km south of Tell Sukas, ÝArab al-Malik lies on the bank of the Sin River estuary. The river was known during the 2nd millennium BC as *Badas*, or *Baldas*, and was mentioned by Strabo⁹⁷ to have originated at the *Mount Sin al-Darb*.

This area has been settled since the 4th millennium BC in Tell Daruk with the current village being built on a site dating back to the Bronze and Iron Ages (1st & 2nd millennia BC). It has also continued to be settled all through to the classical periods when it was known by the name *Blatus*.

⁹⁶ Badawī, 2014, p 307-317.

⁹⁷ Strabo, 16.2

The cemeteries found at this location dated back to the Roman Age at the northern side of the village not far from the coastline. No archaeological work was conducted there, despite the existence of an open, destroyed communal cemetery that had stood for a long period of time. In 2012, a chance happened that led some workers to discover a communal cemetery hewn into the rock. The find was done during an operation to reclaim land north of the village. A machine used during the reclamation works was being lowered into a pit when it caused a collapse which revealed a burial chamber below. (Fig.16)



Figure 16: Plan of ĠArab al-Malik cemetery. (By: Hamoudeh.M& Hammoud.S, Based on al-Badawi.M)

The cemetery is located some 800 m to the north of the village. The field work was carried out from 4 May to 9 July, 2012. ⁹⁸

First, the archaeological mission responsible for excavating the site, surveyed the open shaft resulting from the collapse. The shaft measured 440cm east-west, and 280cm north-south. The survey found that the cemetery had been dug in the soft rock to take a cave-like form. It was free of any decorations similar to those found in al-Jbeibat and al-‘Ezi sites in Jable.

⁹⁸ DGAM, unpublished reports.

Some objects of archaeological interest were discovered including some pottery lamps, some glass objects, only one piece found at this tomb (Cat. No. 101), and other miscellaneous finds which all helped in the dating the cemetery.⁹⁹

One challenge in studying Syrian-museum collections is limited access to excavation reports or their complete absence. Additionally, some artifacts originated from emergency excavations due to the digging of foundations for residential buildings, water and sewage networks, or service facilities, or they were confiscated as a result of illegal excavations. Consequently, there have been no scientific studies on the archaeological layers, time frames, or accompanying artifacts from these items. We have:

- 5 pieces from Bshraeel (Cat. Nos. 195, 196, 197, 198, 199)
- 3 pieces from Bṭaba (Cat. Nos. 191, 194, 202)
- 1 piece from Al-Hadbah (Cat. No. 228)
- 9 pieces from Yaḥmour (Cat. Nos. 64-65-100-112-113-114-115-146-154)
- 10 pieces from the tombs of Bassel al-Assad (Cat. Nos. 201-203-204-210-211-220-221-222-223-224)
- 1 piece from the tombs of Latakia (Cat. No. 231)
- 2 pieces from the Tripoli-Ṭarṭūs road (Cat. Nos. 43, 74)
- 6 pieces from various locations (Cat. Nos. 28-29-30-31-36-230)
- 8 pieces from confiscations in Ṣāfitā (Cat. Nos. 2-4-32-33-37-192-193)
- 4 pieces stored in Jable and preserved in Ṭarṭūs (Cat. Nos. 19, 56, 91, 105)
- 9 pieces from between Latakia and Ṭarṭūs, referred to as Damascus pieces. (Cat. Nos. 10-11-12-15-17-39-46-80-85)

⁹⁹ Badawī, 2015, p 71-75.

3 Glass Vessels: Types, Provenance, and Deposit Modes.

3.1 Problems with the current study of glass in Syria.

A total of 236 glass items were examined for this study. Arguably, that is not the total number of items available at the National Museums at both Ȧrtũs and Latakia, but that is what the author was able to gain access to for this research. Many hindering factors contributed to the limited access to glass artefacts, including, but not limited to, the overall conditions and circumstances surrounding access to Museums. Additionally, many of the artifacts studied were very similar, and a considerable number of fragments were stored without any proper documentation, cataloguing, or dating. Noteworthy, as well, is that many mistakes were found within the Museum records themselves, such as double entry of the same pieces under different serial numbers, or the classification of a non-glass item as a glass item.

This study is based on visual examination only; no chemical, petrographic, or geological analyses were performed to identify raw materials or colorants. The absence of archaeological evidence for glass production furnaces suggests that the same pottery kilns may have been used for both industries; however, this possibility remains a hypothesis that requires further evidence. Unfortunately, the various directorates of antiquities in Syria have not provided significant assistance to shed more light on this issue.

Extensive work has been done concerning glass, its history, composition, techniques, development process, and it's spread around the world. Furthermore, scholars have approached the field from both scientific, and practical views. Research on glass had seen a strong collaboration between science and art. Both scientists and artists have worked tirelessly to understand this complex subject. However, most of the body of research has focused on glass from a western perspective. Eastern glass studies were largely ignored up until approximately 40 years ago.

The focus of this dissertation will be on the types of glass vessels found in the coastal region of Syria. The main purpose of the study is:

- To contribute to the form versus function debate with respect to the field of glass analysis; wherein function would be determined and explained based on form and naming. In other words, each form of a glass vessel type may have a number of differing functions based on evidence, especially since there is no one single name for any given vessel type. For example, a unguentarium specimen can be used as a funerary object or as a vessel storing oils and perfumes for daily use

The dissertation's glass corpus is comprehensive and non-selective, but precise dates and cultural contexts for individual vessels are limited; therefore this study will not be concerned with establishing any specific temporal or cultural contexts. Most of the vessels' forms are Roman type so that the analysis can be applied to functions and types even without exact cultural contextual information.

A principal limitation is the poor archaeological context: geographic and chronological data for most pieces are unreliable or absent. This is particularly evident for all specimens originating from sites in Latakia where the only information available is whether a vessel is in the classical period or the Roman style of glass.

Dating glass artifacts and establishing their provenance has always been a problematic endeavor. And for this particular study, most glass items discussed herein (excepting some items originating from Jable and documented by Dr. Massoud Badawi) do not have any particular information pertaining to their geographic or chronological contexts. Additionally, most such items have not been documented through any drawings or detailed photography.

Furthermore, there are a number of items that have been confiscated and returned to the possession of the authorities for which no provenance could be established. Some artifacts have also been recovered from tombs that had already been looted, which adds an extra layer of difficulty for establishing their origin, bar for any information available within the reports obtained from (DGAM) Directorate-General of Antiquities and Museums.

Notably, no archaeological evidence for local glass furnaces has been identified in the coastal region: published and unpublished reports contain no confirmed furnace remains or workshop tool assemblages, despite the region's role as a major ancient mercantile zone and the abundance of raw materials that would support glass production. The absence of furnace and tool evidence complicates arguments about local manufacture versus import, although some artifacts bear features suggestive of specific tools or molds.

A major challenge encountered in preparing this study was the absence of statistical data regarding the number of glass pieces in local museums, such as those in Jable and Ȧartŭs. This issue arises mainly from the documentation practices of local archaeologists, who deliver all items from excavation work each season without conducting significant studies, only providing a list in the corresponding excavation report. Furthermore, many items or fragments lack accurate dating because they were either confiscated, purchased, or brought in by site workers without consideration for their specific context or location. Additionally, there is no effort to separate artifacts from the same site.

According to one official at the Department of Antiquities in documenting any recovered artifacts is conducted in a manner that pays no regard to their accurate dating. Moreover, no drawing or photographic evidence is established for any particular recovered items. This is especially so for any works conducted during emergency or rescue excavations. Additionally, some recovered items were cataloged as belonging to, or recovered from, Damascus with no further identifying information. This is due to the fact that historically, and prior to establishing the Museum; recovered items in were sent to the National Museum in Damascus for documentation and preservation. After the Museum was established though, those same items were sent there without any documenting information.

3.2 Research Question and Hypothesis

The present study examines Roman glass from the Syrian coastal region, emphasizing undocumented and understudied assemblages. By analyzing typology, production techniques, and distribution patterns, it aims to clarify local manufacturing traditions and their connections to wider economic and cultural networks in Roman Syria.

Accordingly, the following research questions and hypotheses have been formulated to guide the analytical framework of this study.

	Research Question	Hypothesis
1	How can we systematically document and classify undocumented and previously unstudied Roman glass vessels from the Syrian coastal region, considering the lack of a clear archaeological context?	Even without stratigraphic and contextual data, these vessels can be systematically documented using detailed drawings, typological classification, and comparative analysis with established typologies, thus establishing a reliable framework for their study.
2	What do the typological, stylistic, and functional characteristics of these vessels tell us about the development of Roman glass production in Syria, including techniques, chronology, and usage patterns?	The analysis of form, style, and function will show a gradual evolution in Roman glass production in Syria, highlighting the adoption of new techniques (such as blowing and mold decoration) and regional variations that correspond with broader trends throughout the Roman Empire.
3	Despite their limitations, to what extent can the analysis of museum collections and excavation reports help differentiate local production from imported glass and enhance our understanding of the socio-economic role of glass in Roman Syria?	Although limited, the existing museum collections and excavation reports can still offer evidence to differentiate local production (based on workmanship, color, and typology) from imports. They can also shed light on the economic and cultural significance of glass in both funerary and daily life.

4	Were the cemeteries located on the Syrian coast, and dating back to the Hellenistic period, were they reused during the Roman and Byzantine periods, or were they built during the Roman period, and were being reused multiple times during that time?	We observed that 90% of the cemeteries on the coast date back to the Roman period and are not reused, except for the cemeteries from Jable where some of the findings are from the late Hellenistic and early Roman periods. This confirms the reuse of the burial site in later periods.
5	What were the primary and secondary sources of glass that could meet the glass needs of the Syrian coast?	In the absence of any archaeological evidence for the existence of glass furnaces in Syria in general, and specifically on the Syrian coast, the nearest areas with glass furnaces are Sidon, Tyre, Beirut, and Israel; it is probable that these sites used to meet the market demand for glasses.

3.3 Terminology

There is a clear need to standardize terminology for the limited set of tools used in glass production, since traces of these tools are often preserved on finished objects. Precisely identifying and documenting these tools during the analysis and description of glass vessels can yield valuable insights into the techniques and technologies applied during production. Moreover, the inventive use of simple tools in decorative procedures underscores the importance of accurately recognizing and naming them using consistent and scholarly terminology.

Developing unified naming conventions for glass vessels and for the tools that shape their final forms, is therefore essential. Additionally, an accurate designation for the simple tools used to decorate glassware is also important; especially since accurate knowledge of these materials and their role in glass production is essential. Variations in glass also reflect raw-material differences and the chemical and physical changes that occur with temperature during production; this complexity further justifies a standardized technical vocabulary to enable accurate, professional descriptions of glass artifact.¹⁰⁰

Understanding glass production methods (e.g., free blowing, mold or cast blowing -cast pieces are rare) is essential because manufacturing technique directly affects an object's final form and is critical for professional description and analysis. It is also important to name the exact description of the decorations for the same reason stated. The design of the different parts of a glass bowl can take different shapes.¹⁰¹

¹⁰⁰ Dévai, 2012, 16.

¹⁰¹ Dévai, 2012, p 16-18.

Thousands of Roman-era cemeteries have yielded glass vessels; this study considers only material from Roman contexts in and around the Syrian coast to present an archaeological picture of regional glass use. And considering the limited availability of information with regards to glass manufacturing or, even, dating said items; the author resorted to relying on relative dating techniques and comparative analysis with similar items recovered from outside the bounds of Roman Syria. Only items that demonstrated parallels with respect to style, manufacturing techniques, shape, coloration, and ornamentation were considered.

Final form depends on multiple factors, foremost the raw materials used in the production process. In addition, any supplementary materials or additives (such as pigments, bleaching agents, or opacifiers), have an impact on the coloration or look of the final object. A sufficient understanding of these materials and their effect on the glass-making process is essential for the analysis and study of said objects.)¹⁰²

Because this study focuses on Roman glass, it includes a discussion of Roman-period production techniques, principally free blowing and mold blowing along with some non-blown methods. Studying these techniques allows for a more comprehensive understanding of Roman glass and adds another layer to their analysis (beyond just presenting a descriptive analysis), including analysis of the quality of productions.

The non-crystal nature of glass's raw materials, along with their chemical and physical properties that change with temperature; and the variety of additive compounds, requires the development of clear terminology for accurately describing glass objects. Therefore, a standardized naming system for glass pieces and the materials used in their production is important, especially since these factors affect the finished products. Keeping an accurate record of these materials when describing glassware can also provide useful information about the production methods and techniques employed. Additionally, the innovative use of basic production tools during the various ornamentation processes makes it essential to know the specific names and types of these tools.¹⁰³

Glass has been extensively studied from scientific and artistic perspectives, but the literature is dominated by Western research,¹⁰⁴ with relatively little focus on Levantine material. Arab

¹⁰² Dussart, 1998, p V.

¹⁰³ Kurkjian & Prindle, 1998, p 805.

¹⁰⁴ Harden, 1936; Isings, 1957; Rütli, 1991.

scholarship on Roman glass remains limited and lacks agreed terminology for vessel types, tools, and production terms, hindering scientific classification and comparison.

Levantine glass studies are still a young field with few active specialists despite growing interest. Classification and analytical work remain sparse, hence this study seeks to advance understanding of Roman glass in its eastern context in general, and in Syria, especially; such that a new light is shed on what information can be gleaned with respect to the demographics, cultural perspectives, and economics of Roman Syria.

3.4 Classifications

No present attempt has been made to arrange and classify the glass vessels in any particular order; neither chronologically, nor according to their raw materials. Although often, vessels dating to the same period or made from the same raw material do end up grouped together when classified. Additionally, these classes are further subdivided according to the differences noted in the shape, technique, or decoration of the vessels.

Glassware has frequently been studied in isolation, though it appears among mixed-material assemblages (pottery, metal, wood, ivory). Researchers like Cool and Baxter¹⁰⁵ recommend that any attempt to interpret the patterns observed in glassware should take into account vessels made from other materials. However, there are methodological problems in comparing glass and pottery collections.

Archaeological discoveries indicate that social customs likely govern the use of many glass vessels in Roman times. A study of site collections has shown a recurring difference between urban and rural usage patterns, as well as differences between those used by civilians and military personnel. Cool and Baxter state, "Site collections are primitive tools for working with, as they pertain to groups rather than individuals. More detailed insights can be gathered by studying items believed to be suitable for placement in the graves of known individuals in terms of age and gender."

The glass vessel collections from the late first and second centuries show differences between those found in forts and those in cities. Cool and Baxter suggested that this may reflect a difference in diet, as urban residents used smaller quantities of the foodstuffs typically found

¹⁰⁵ Cool & Baxter, 1999.

in the bottles that characterize many military sites. To put glass vessels in the proper perspective.¹⁰⁶

This seems to indicate the existence of two types of late Roman glass: a cheaper variety and a more expensive one, representing a higher quality product.¹⁰⁷

Perhaps more relevant to illustrating the use of different types of glassware in late Roman homes is a legal text from the early third century AD. In his "Digest," Paulus states that "glass vessels for eating and drinking are considered household goods, just like pottery, not only the common types but also those that are more costly." This confirms the use of higher-quality glass tableware alongside the more common and usual glass vessels in late Roman homes.¹⁰⁸

Given the absence of any evidence for cabinets or boxes in the public rooms of these excavated sites, it appears that high-quality glass tableware may be because it served as a symbol of social status, indicating that glassware played an important role in the dining and social practices of late antiquity.

In any recovered glass collection, it is rarely possible to discern the overall form and shape of the found pieces. On the other hand, coloration and manufacturing techniques could be readily established even if in an approximate manner. The overall form and style of the vessel is seldom evident, unless clearly defining characteristics can be seen (rims, edges, handles, and/or bases). For the purposes of this study, a hierarchical system of classification was adopted as it pertains to the form of found glass specimens. This system is commonly used by specialists and experts in the field of glass when reporting on ancient glass finds.

The hierarchy is structured such that it creates a sequence of divisions that allow for discussing vessels in general, even when establishing any particular or specific form is not possible. The first step in the sequence is simple and defines whether the object can be classified as a container or a tableware piece; with further subdivisions associated with increased details, until the narrowest of which arrives at the specific shape which is often accompanied by a typological identifier such as a table number and piece number. (chapter 5)

¹⁰⁶ Cool & Baxter, 1999, p 93.

¹⁰⁷ Stern, 1999, p 479.

¹⁰⁸ Price, Jackson, & Keller, 2014.

Glass types considered for this study were classified into four main functional categories. These were further divided into a sub-category. Below is a brief description of these groups:

- **Group A: Tableware** – This main category contains all items used as tableware objects. It contains four sub-categories as follows: (Fig.17)
 - *A1 – Drinking Vessels* including beakers and goblets
 - *A2- Deep bowls*
 - *A3- Lids*
 - *A4- Plates*

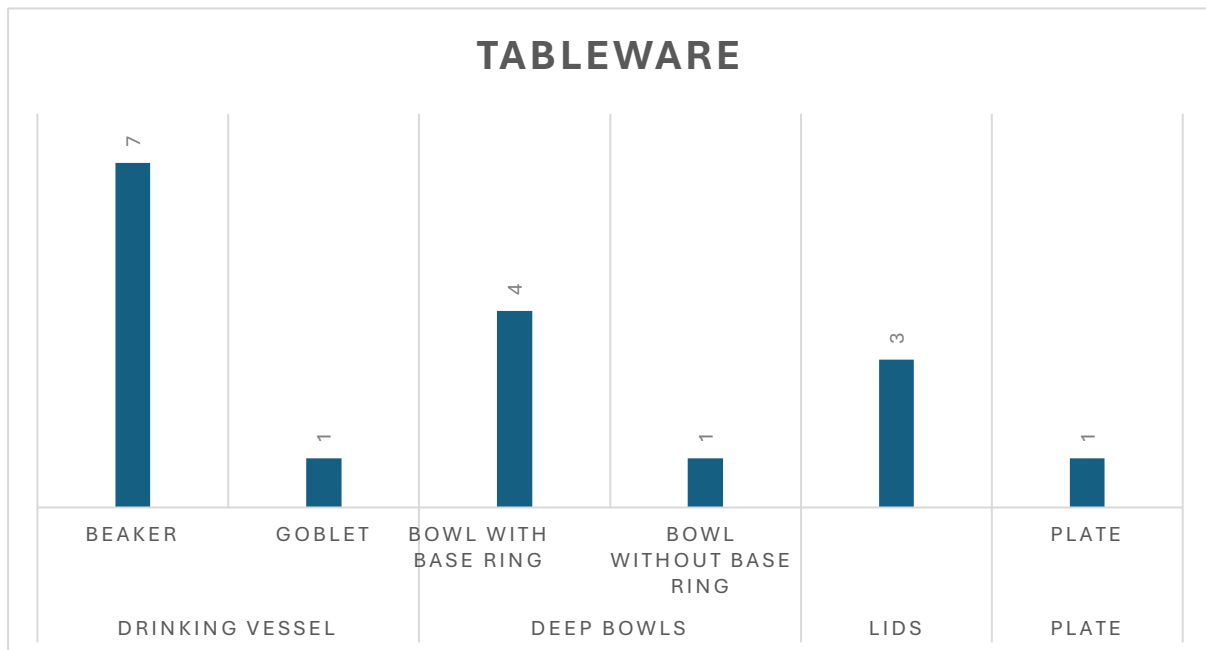


Figure 17: Classification of tableware.

- **Group B: Storage Containers** – This category groups all glass items that were used for storage or transport purposes including those used for funerary rituals. This category is further subdivided into the following: (Fig.18)
 - *B1 – Bottle flasks without handle*
 - *B2 – One handle flask.*
 - *B3- Two handles' flasks.*
 - *B4- Jars*
 - *B5- Flasks/Perfume bottles.*

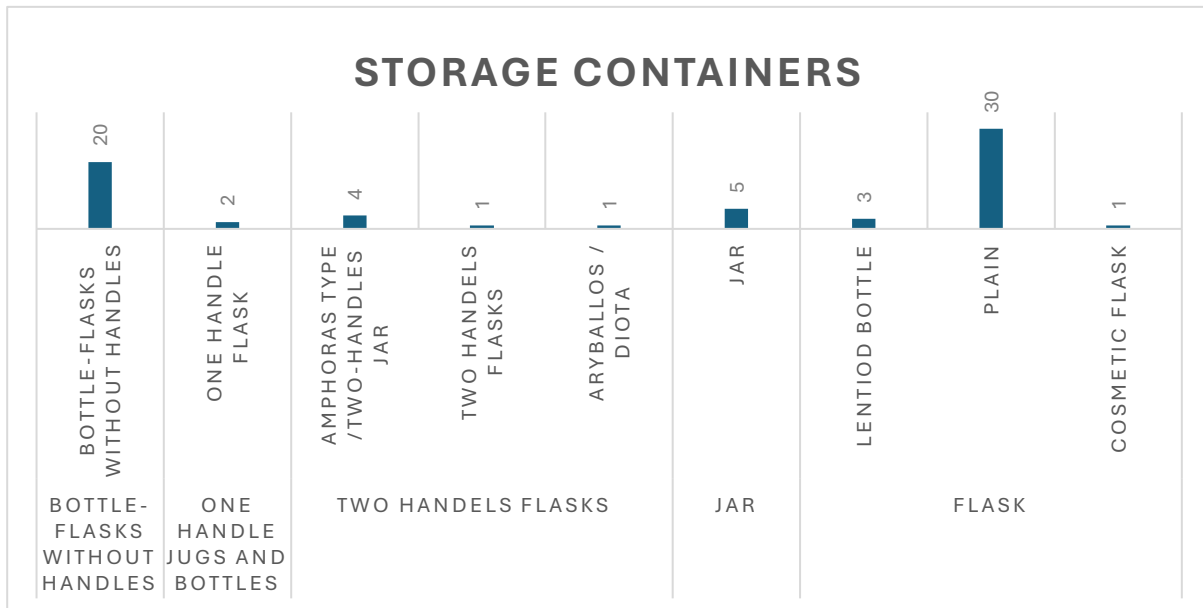


Figure 18: Distribution of storage containers by function.

- **Group C: Toilet Bottles/Unguentaria** – This category groups all unguentaria, and balsamaria used for the storage of personal care and/or cosmetic and medicinal ointments and other such products, which are divided into six sub-categories by their shape as follows: (Fig.19).
 - C1- Candlestick unguentaria
 - C2- Fusiform unguentaria
 - C3- Piriform unguentaria
 - C4- Bulbous unguentaria
 - C5- Double bulges unguentaria
 - C6-Test-tube unguentaria.

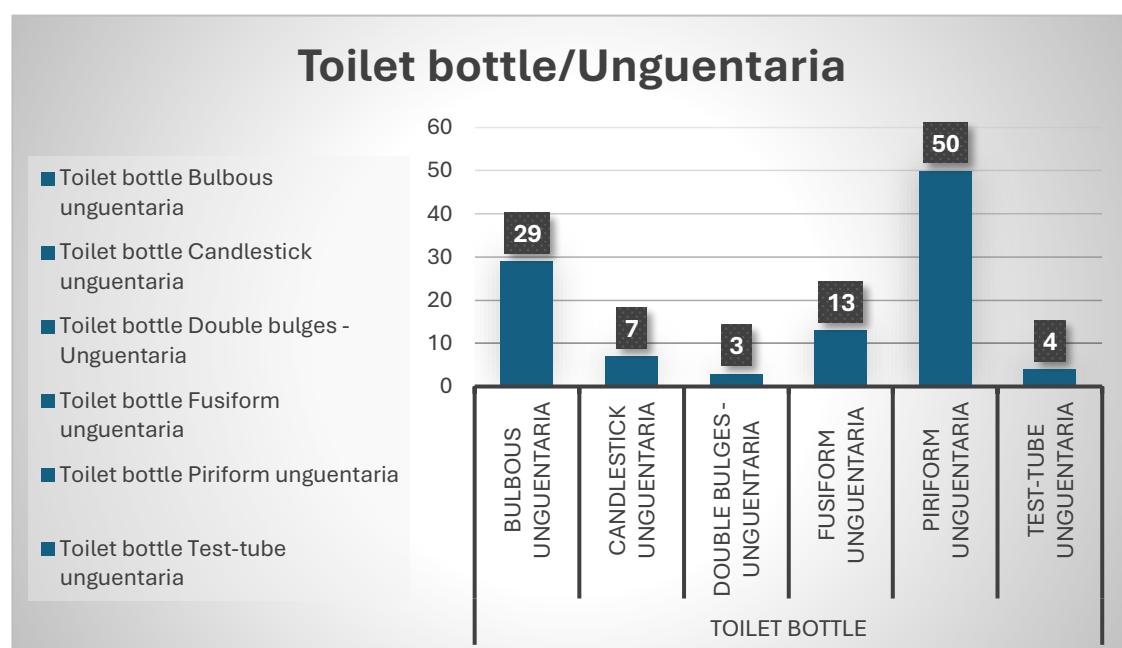


Figure 19: Classification of toilet bottle/Unguentaria, by shape.

- **Group D: Other objects-** It contains four sub-categories as follows: (Fig.20)
 - D1-Jewelry (Bracelets – Beads- Rings)
 - D2- Stirring stick.
 - D3- Conical lamps.

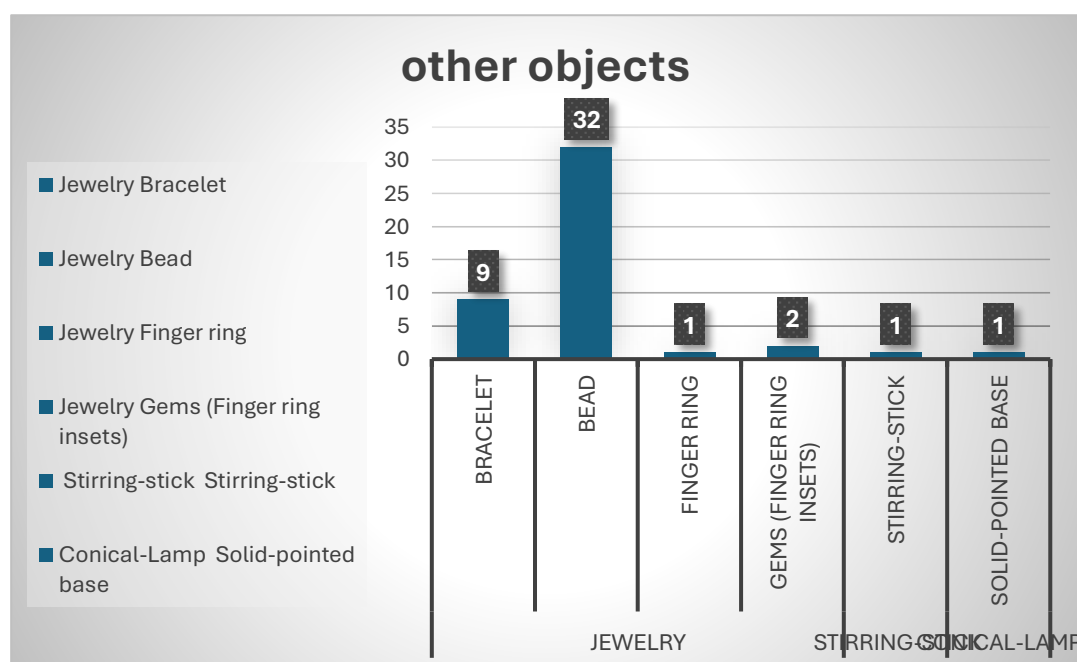


Figure 20: Classification of other objects of glass finds.

This classification was also adopted by B. Rütli when cataloguing handmade artifacts with a greater level of preservation and handling.¹⁰⁹

Functional taxonomy is often problematic because many items could belong to multiple categories, leading to cross-listing. This becomes especially more difficult when an item's purpose of function cannot be accurately established; for example, in the case of unguentaria, it is rather difficult to ascertain whether any vessel was used for storage purposes or for serving liquids. The same goes for some bowls and cups as it would be challenging to determine whether they had been used for offering drinks or offering food.

Additionally, there would always be the possibility that not all cups might have been used as drinking vessels, as is suggested by some established research. The theories, as presented in the literature, suggest that some drinking vessels might have been used as lanterns due to their conical shapes (such as those found at *Karanis*, for instance, where leftover oil was found inside the vessels and clear charring marks were present on the vessel itself)¹¹⁰.

Having said that, classification will be adopted such that a uniform grouping of vessels is presented and shall be based on a number of benchmark specimens where some would have an established provenance, while others have been recognized as having an unknown origin. This classification is based on the general description of the individual specimens examined for the purposes of this study. Firstly, color, state of preservation, raw materials used in production are listed. Followed by physical classification based on the dimensions of the object, the general description of shape, technique used, and decorations. Finally, a note will be made as to the fabric to which the vessel belongs.

Classification will further be conducted based on function. The specimens will be grouped based on whether they were used as cosmetic vessels, tableware, transport vessels, or storage vessels. Within these groupings, further classification into basic types based on shape, will be completed.

Furthermore, within the above basic types, the specimen will be classified into subtypes based on their shape and decoration.

¹⁰⁹ Rütli, 1991.

¹¹⁰ Harden, 1936, p 133-134.

As for their dimensions, every item has been drawn to scale in the catalogue and has been included in elaborate lists that include height (H), diameter (D), and average thickness (AT); unless the vessel shows peculiarity or inconsistency in some of its other dimensions. Variations from symmetry are only noted in extreme cases. Sometimes the measurements of the average thickness of the glass are at best approximated. Additionally, a very detailed description of such vessels is provided.¹¹¹

The classifications adopted in the catalogue is purely morphological. The glass is divided into four main categories and many sub-categories, as follows: (Fig.21).

To ensure consistency throughout this study, each glass type is assigned a typological code (A–F), with subtypes (e.g., A1, B2). These codes are systematically applied in the analysis, catalogue entries, and plates.

¹¹¹ Harden, 1936, p 5.

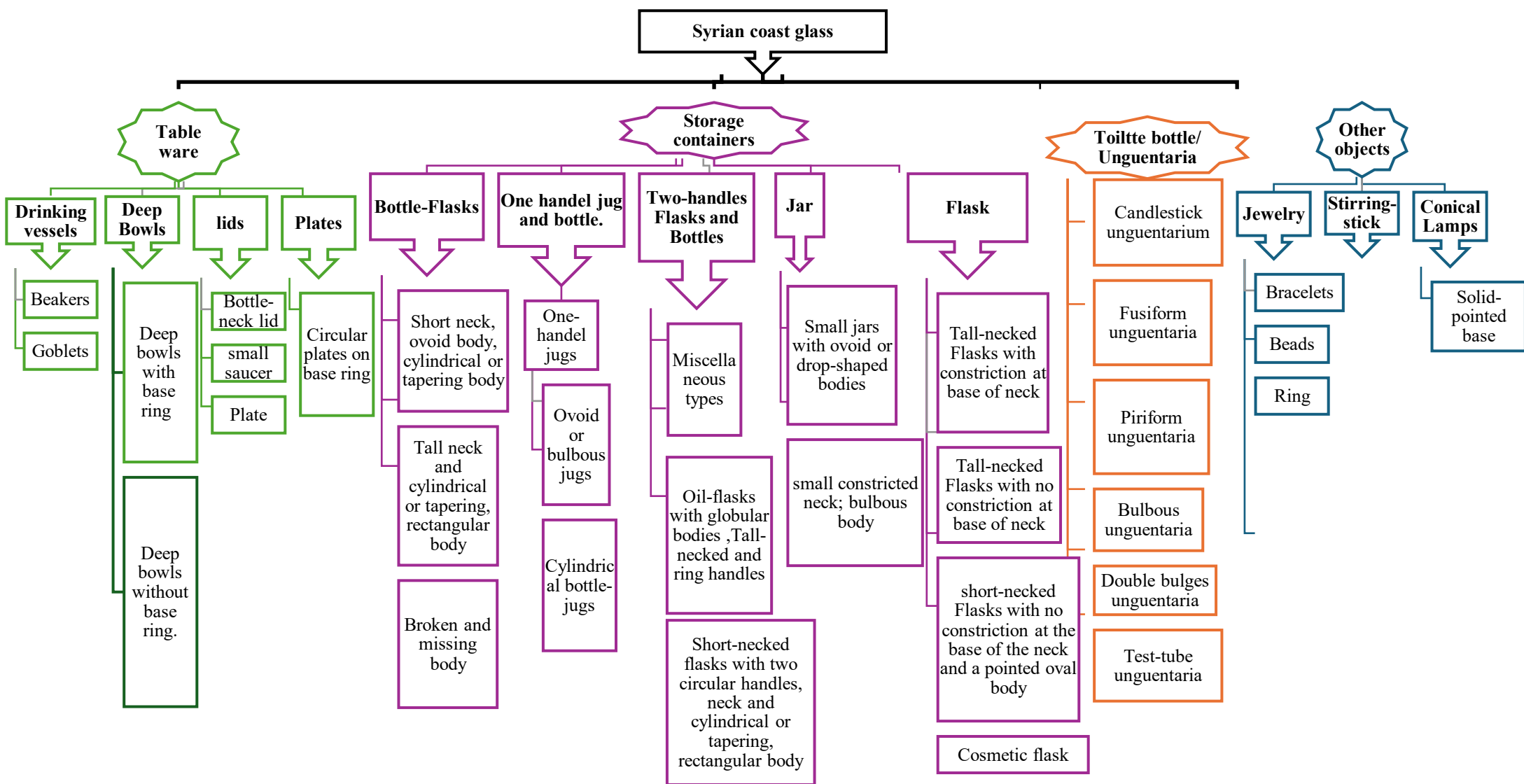


Figure 21: Detailed classification of all the material.

Blown glassware objects make up around 90% of Roman glass recovered from around the Syrian coast¹¹². By examining glassware objects that have been produced with the use of molds, this leads to the two main types of technology-based glass recovered from the Syrian coast not being of equal status. Contextual and geographical distribution patterns of blown glass around the Syrian coast is much wider than those for molded glass. Out of 236 specimens found, the majority of blown glass were recovered from funerary contexts, as is expected.

3.5 The Material Base

An extremely small fraction of the found glass specimens was mentioned in excavation reports. Most information showcased in this study, and most dating is established based on the analysis of comparanda objects.

This study intentionally did not rely on complete specimens; most fragmentary finds and glass fragments were not recorded in the excavation reports. Many small or seemingly “worthless” fragments were routinely discarded, so the number of pieces ignored or not retrieved during excavation is difficult to estimate. Failing to recover fragmentary finds was a common excavation practice throughout the past century and continues in Syria today.

Further subdivision would generally address decorative elements and patterns; an example of which is Oliver’s classification of colorless, faceted glass cups,¹¹³ or the categorization of mold-blown drinking glasses based on mold type.

Glass can also be classified based on the manufacturing methods and techniques employed. This level of detail in classification does not necessarily fit with the system described above, as it applies to glass forms in the general sense; especially that glass vessels (an cups in particular) are produced using a variety of techniques including blown- non-blown, and mold-blown methods.

Major categories into which glass vessels are classified pertain mainly to their perceived function, which is further complicated by the bias originating from modern-day assumptions about their use. Glass is rarely depicted in ancient art, which does not help in understanding its

¹¹² Stern, 1999, p 388.

¹¹³ Oliver, 1984, p 35–58

function in day-to-day life in antiquity; save for some wall paintings, mosaics, and funerary sculptures.¹¹⁴

Certain glass categories such as jars, flasks, and balsamaria pose their own specific challenges. For example, jars were produced in a variety of shapes and sizes; some are decorated in multicolored patterns or ornate ribbings. Some were most-likely designed as tableware, while others were mold-blown to resemble square-shape, and may have served as storage containers. It is also likely that other miniature jar, were designed as containers to store cosmetics and oils. Furthermore, flasks and ointment bottles were designed in a number of shapes and sizes; with smaller unguentaria being used for storing various oils and cosmetic products, whereas larger vessels may have had other more day-to- day uses such as tableware.

Bottles and unguentaria are additionally distinguished by size and form. Bottles are larger, closed containers with cylindrical necks and folded rims and lack handles. Unguentaria are closed containers without handles come in various shapes and hold small amounts of liquids. Bathing bottles are a separate category in their own regard that are spherical in shape with small ring handles.

The aim of grouping these vessels is not to produce a comprehensive guide to Roman glass from the western provinces, but to highlight the forms relevant to this study. Although terminology varies (for example, cup versus bowl, or small flask versus unguentarium), the inconsistencies are not significant enough to pose major problems. In reviewing literature from other authors, we made sure to accurately define the shape and size of each vessel through a careful examination of the catalogue and its accompanying illustrations. For data collection and presentation in this study, we have utilized terminology developed by the author throughout the research process.

3.6 Form and Function

Tableware tends to change with the fluctuations of fashion, and the most practical forms of containers do not remain the same over the centuries. Below is a definition of the shapes used in this study (referring to this dissertation). The following figure illustrates the distinct individual types of each shape:

¹¹⁴ Naumann-Steckner, 1991, p 86–98.

- **Drinking vessels:** These are open vessels with simple rims, typically either cracked or fire-rounded. The rim can be either vertical or slightly curved inward or outward. Their diameter rarely exceeds 100 mm, making them easy to hold with one hand.
- **Bowls:** These are open vessels that appear unsuitable for drinking based on their size, rim thickness, or shape. Some are clearly designed as dishes, while many are suitable for serving food. There is a question about whether the column-shaped bowl, which was very common in the first century AD, was regularly used as a drinking vessel. Some may have been, but others, such as wide shallow forms, were entirely impractical for this purpose, although this does not exclude the possibility. A similar ambiguity surrounds some fourth-century forms, such as the segmental bowl. Some are designed to display a drinking motif; however, it is worth noting that the placement of the engraving around the rim would make it invisible to any drinker. A drinker would appreciate the motif more if it were placed in the center of the base. If these large hemispherical or segmental bowls were used as drinking vessels, they would need to be held with both hands and consumed carefully, in contrast to cups and glass vessels that can be easily used with one hand.
- **Jars:** These are closed vessels with short necks and relatively wide openings. They were ideal for storing solid contents.
- **Flasks:** These are closed forms with long necks and no handles, used solely for containing liquids. The specific form of the bathing flask, with its short neck and handles, is included here, as it is likely that long-necked vessels, defined here as flasks, were used for similar purposes before they became common in the late first century AD.
- **Jugs:** These are closed forms with handles. They may have long necks and pouring spouts. Their bodies are usually conical, spherical, or oval in shape. They are also used only for liquids.
- **Bottles:** These are closed forms with short necks and handles. Their bodies are designed to maximize capacity relative to their height, so they are often cylindrical or prismatic. The narrow necks of many of them mean they can only hold liquids, but some large bottles from the first and second centuries AD had necks wide enough to contain solid materials.

Some vases were also used for bathing, as one vessel has been identified as a bathing flask, suggesting the possibility of pouring scented oil onto the burner. In one case the vessel could be recognized as a bath-flask, suggesting perfumed oil may have been poured on the pyre.

The results of archaeological discoveries across different periods indicate that certain items, such as jewelry and weapons, are part of burial rituals among various cultures and can signify the gender of the deceased. However, other types of material culture, such as glassware, are traditionally considered gender neutral.¹¹⁵

Moreover, the following is a brief highlight of the various tools and equipment used in glass production:

- **Blow Pipe:** It is a hollow pipe usually made of iron, less often of clay. It was used to blow glass.¹¹⁶
- **Support Tube (Pontil):** This tool is used to allow the rim of the glass vessel to be finished without any issues. It works by fixing the bottom of the vessel to the support rod with a small piece of hot glass and then separating the blowpipe by cooling and cracking the part nearer to the end of the pipe. A distinctly characteristic mark remains imprinted on the bottom of the vessel (usually ring-shaped). A small indentation is also created at the bottom of the pot when it is attached. Sometimes, another blowpipe could be used instead of a support rod, but usually a solid iron rod was used.¹¹⁷
- **Scroll Plate (Marver):** This was a plate, more often than not made of stone, with a smooth surface. The modern variation is a flat, polished iron sheet. It is used after immersion where the blowpipe is carefully placed on the rolling table, and the glass is then shaped by bending. Any additional decorations and ornamentation can then be added later using this surface as well (e.g., making marbled decorations).¹¹⁸
- **Melting Crucible:** This is a receptacle used for melting glass, as well as for remelting raw glass blocks. Its size is dependent on the size of the melting furnace and the quantity of glass to be melted. It can be made from ceramic or stone. Up until the 19th century,

¹¹⁵ Baxter & Cool, 1991, p 127.

¹¹⁶ Barton, 2005, P 197; Harden, 1936, p XVIII.

¹¹⁷ Whitehouse, 2015, p 57.

¹¹⁸ Dévai, 2013, p 87.

raw materials were mainly smelted using a melting crucible. Ancient pots generally resemble the shapes of earthenware pots.¹¹⁹

- **Furnaces:** In contrast with the huge amount of glass that survived from the Roman period, there is a lack of evidence regarding glass working and furnaces¹²⁰ Glass furnaces were built at ground level, or even raised above it, where both burning and blowing can be achieved. It was required for furnaces to have special specifications in order to withstand high melting degrees. These furnaces consisted of two chambers built and raised on a solid foundation of stone. Sometimes the walls were constructed of stone or brick that withstands high temperatures and maintains those temperatures for a prolonged time.¹²¹

¹¹⁹ Barton, 2005, P 197-198.

¹²⁰ Davison, 2008, p 141.

¹²¹ Dévai, 2013, p 87.

4 Roman Glass: evolution, raw materials, decorations

4.1 Definition of glass

The term "glass" derives from the Latin word *glaseum*, meaning a lustrous and transparent material.¹²² Glass is one of the oldest human-made materials, recognized for its durability, transparency, and luster by early civilizations.¹²³ The first glass objects, such as glazed stone beads, date back to around 12,000 BC.¹²⁴

Defining glass is complex due to the varying structural features and properties of its types. It is a solid artificial material produced by cooling molten glass into a shapeless solid state, primarily made from melting silica with oxide alloys like soda-silicate or soda-lime-silica.¹²⁵ The coastal regions of Syro-Palestine had silica-lime sands but lacked mineral natron, which is crucial for glass production.¹²⁶

Glass manufacturing involves a paste created by mixing fine quartz powder with sodium, potassium, and lime. Sand, along with lime and sodium, serves as the main raw material¹²⁷. During the Greco-Roman period, glass was predominantly soda-lime-silica, often using natron¹²⁸ A naturally occurring mixture of sodium compounds found in western Egypt. This material was exported to the Syrian coast primarily through Phoenician trade.¹²⁹

In addition to natron, another melting material used was sea plant ashes. These were collected and burned, and the resulting ash is utilized in the glass industry due to its high sodium content and lower levels of potassium compounds.

Wild plant ashes come from burning wild grasses in forests. These ashes are used in industry because they contain a significant percentage of both potassium and sodium.¹³⁰

4.2 Chemical composition

The chemical composition of ancient glass reveals important details about the production system, including raw material sources and technological choices made by producers. These aspects can indicate the geographical origins of materials and the socio-economic status of

¹²² Kilinc, 2016, p 7.

¹²³ ‘Abd al-Khāliq, 1976, p 36.

¹²⁴ Henderson, 1985, p 269-270.

¹²⁵ Kilinc, 2016, p 8-10.

¹²⁶ Larson, 2016, P 314; Doremus, 1973, p 11.

¹²⁷ al-Zuyūt, 2008, p 30-32; Davison, 2008, 176-177.

¹²⁸ Scott & Degryse, 2014, P 21.

¹²⁹ Jackson, Paynter, Nenna, & Degryse, 2016, p 1179-1180

¹³⁰ Jād al-Karḏm, 1995, p 4; Saguí, 2008, p 212.

consumers. Fine technical characteristics, such as the sources of lime, crushed shells, or calcareous sand, can also be identified.¹³¹

Impurities in the raw materials significantly influence the color of glass, prompting manufacturers to add colored oxides to counteract these effects¹³². Skilled artisans could create desired colors by using specific elements, such as copper oxide for green, iron oxide for amber, antimony acid for yellow, and tin oxide for white.¹³³ Historically, glass composition was largely limited to sodium and calcium silicate, as mineral dyes used in production were unaffected by weather changes or sunlight.¹³⁴

4.3 Raw Materials

Before examining the formation of raw materials for glass, it is essential to understand how the glass industry aligned with the development of ancient societies, particularly during the Roman period in Syria. The growth of the industry was facilitated by the availability of materials compatible with economic, industrial, and commercial advancements.¹³⁵

Key factors related to glass technology involve the distribution of melting furnaces and various manufacturing techniques. Glassmaking is a precise process that demands extensive knowledge and skill, especially regarding raw materials and production methods.¹³⁶

The primary raw materials used in glass manufacturing include glass ore, mainly composed of silica, calcium oxide, and potassium oxide.¹³⁷ The glass mixture consists of:

- Silica: The main structural component and fundamental to glazing technology.
- Calcium oxide (lime): A crucial stabilizer for glass.
- Soda or melting agents. ¹³⁸ (Fig. 22)

The sources of these raw materials vary, resulting in glass with different specifications. The quality of the produced glass largely depends on the purity of these materials.

Key sources include:

- Quartz sands: Preferred for their clear color and uniform granule size, with white sand being the finest and found in desert regions.¹³⁹

¹³¹ ‘Alī & ‘Abdallāh, 2015, p 40.

¹³² Davison, 2008, p 78.

¹³³ Jabrā, 2004, 258.

¹³⁴ Kā’ūim, 2014, 272.

¹³⁵ Henderson, 1985, p 267-268.

¹³⁶ al-Zuyūt, 2008, p 23.

¹³⁷ Baste, 1976, p 15.

¹³⁸ Davison, 2008, p 176-178.

¹³⁹ Henderson, 1985, p 270

- Yellow sand: Lower quality than white sand, containing higher levels of iron oxide (limonite), which imparts a greenish-yellow tint to glass and has several natural impurities.¹⁴⁰
- Red sand: Considered inferior due to its high iron oxide content (hematite) and impurities that significantly affect glass properties and quality.¹⁴¹

During the Greek-Roman period, glass was primarily made from soda-lime-silica, predominantly using soda ash (natron) as the main component. This type of glass, produced between the 5th century BCE and the 9th century CE, is characterized by low levels of magnesium and potassium and is known as LMLK glass.¹⁴²

It differs from another variety called HMK glass, which uses plant ash and has higher magnesium and potassium content. Roman natron glass can be identified by magnesium oxide (MgO) and potassium oxide (K₂O) concentrations of less than 1.5%.¹⁴³

Finding suitable sands for glassmaking is difficult as they need to be rich in silica and low in impurities.¹⁴⁴ They should also contain lime or have additional lime added. Beach sands, which include lime from crushed shells, were particularly effective for natron glass production.¹⁴⁵

Colorless glass gained popularity during this period, necessitating the use of low-iron, high-purity sand, especially for producing colorless glass. Optimal glassmaking sands are believed to be found in the Eastern Mediterranean, generally consisting of about 9% calcium oxide (CaO), 3-5% aluminum oxide (Al₂O₃), and less than 1% magnesium oxide (MgO).¹⁴⁶

¹⁴⁰ al-Zuyūt, 2008, p 25.

¹⁴¹ al-Zuyūt, 2008, p 24-25; ‘Abd Allāh, 1999, p 6.

¹⁴² Freestone, 2006; Henderson, 1985, 270-271

¹⁴³ Wedepohl, Simon, & Kronz, 2011, p 82-83.

¹⁴⁴ Silvestri, Molin, Salviulo, & Schievenin, 2006, p 415-417.

¹⁴⁵ Jackson, 2005, p 771.

¹⁴⁶ Ibid, p 763-764.

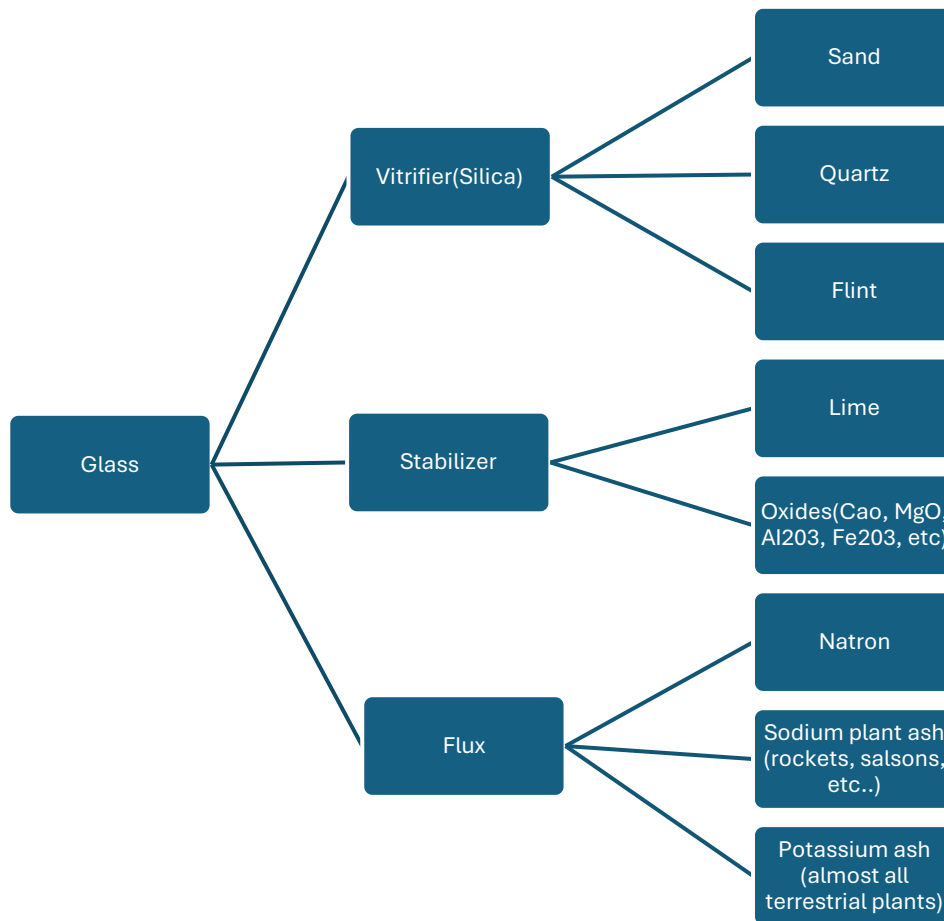


Figure 22: Representation method used to calculate the composition of glass.

The soda used in Roman glass was derived from natron, a mineral found in multi-phase evaporitic lake deposits that are rich in sodium carbonate.¹⁴⁷ Most of these deposits are primarily in the form of the mineral trona, but natron is rarely pure and usually contains significant amounts of chlorides or sulfates, which are undesirable due to their limited reactivity with silica in traditional glassmaking.¹⁴⁸

Roman glass typically contains between 5% and 10% lime (CaO) as a stabilizer, with calcium carbonate being the main source. This carbonate was intentionally added to the glass mixture or included accidentally from shell or limestone particles present in the sand.¹⁴⁹

Research has explored primary production centers for raw glass beyond those identified in archaeological sites in Syria, Palestine, and Egypt, extending to the western Mediterranean, including Italy, Gaul, and Spain, noted by ancient authors as significant glass producers.¹⁵⁰

¹⁴⁷ Jackson, 2005, p 764.

¹⁴⁸ Gorin-Rosen, 2019, p 115-116.

¹⁴⁹ Freestone, 2006, p 202.

¹⁵⁰ Silvestri, 2012, p 129-130.

Sampling from various remote geological areas revealed that suitable glassmaking sands are relatively rare.

The findings do not definitively confirm the existence of a Roman glass production industry in the western Mediterranean.¹⁵¹ However, they suggest that if such an industry existed, the identified areas could have supplied raw silica materials. Analyses indicate that glass factories in the eastern Mediterranean, and possibly Italy, were operational from the onset of natron glass production. While parallel production may have occurred in the western Mediterranean or North Africa, most glass seems to have originated from the eastern Mediterranean.¹⁵²

From the early Roman period through the 1st century AD to the first half of the 5th century AD, the primary production of natron glass can be traced back to both the western and eastern Mediterranean, as well as Italy. Investments were made in numerous glass production units throughout the empire, correlating with reforms initiated by Augustus that enhanced trade between Rome and its provinces. This period also saw the advent of glassblowing, making glass a widely used material.

From the late Roman period onward, starting in the 5th century AD, natron glass production became solely reliant on sites in the eastern Mediterranean, particularly in Syria, Palestine, and Egypt.¹⁵³

The recent discovery of natron deposits in Fazzan indicates that there may be many additional, undiscovered sources in this region of the Roman world. The presence and extraction of natron across North Africa could greatly enhance the supply of this raw material to major factories in Italy and the western provinces, even with land transport. Current findings suggest that Wadi Natron, and North Africa as a whole, is the most probable source of natron for Roman glass production.¹⁵⁴

¹⁵¹ Kahn, 2014, p 133.

¹⁵² Ibid, p 133-134.

¹⁵³ Scott & Degryse, 2014, p 114-117-119.

¹⁵⁴ Ibid, p 89.

4.4 Glass production techniques before the Roman period

The traditions of glassmaking in the Near East during the early first millennium have received limited study, leading to a lack of understanding about this significant phase in the development of the glass industry. This period serves as a crucial link between the glassmaking techniques of the Late Bronze Age in Egypt and Mesopotamia and the flourishing Greek-Roman heritage by the end of the first millennium.

Several key questions remain regarding this era, such as whether the Early Iron Age glass assemblage reflects a continuity of traditions or the onset of technological innovations, like the use of natron as a flux. Researchers also seek to determine if the exploitation of raw materials persisted into the second millennium and whether new sources for colorants, opacifiers, and silica were introduced. Additionally, the diversity of glass production and its extent warrant exploration.¹⁵⁵

Glass materials have been recognized in the Near East and Egypt since the 4th millennium BC, with faience gaining popularity in the 3rd millennium during the Dynastic Period.¹⁵⁶ Large-scale glass production began in the 2nd millennium BC.¹⁵⁷ Investigations of samples from the Near East revealed high-magnesium glass (HMG) dating back to the 19th century BC, found at locations such as Ain Ghazal in Jordan and Tel Dan in Israel. Similar compositions were identified at sites like Nuzi in Iraq, Uluburun in Turkey, and Tell al-Rimah in Iraq.¹⁵⁸

Ancient Egyptian HMG glass, produced during the 15th and 14th centuries BC, included blue copper frits/ quartz-ceramic¹⁵⁹, cobalt blue glass, and faience.¹⁶⁰ The earliest evidence of sodium-rich minerals for low-magnesium glass (LMG) production is found in glass from Pella, Jordan, dating to the 13th and 12th centuries BC. Other early LMG examples have been discovered at Tell Brak in Syria and Crete.¹⁶¹

In Late Bronze Age (Mycenaean) Greece, glass was predominantly used for making beads, with additional glass items including inlays, pins, seals, and game pieces.

Most glass vessels from this period are considered imports, with the exception of a small glass vessel from Kakophatos.¹⁶²

¹⁵⁵ Artioli, Bellintani, & Angelini, 2003, p 1175

¹⁵⁶ Shortland & Tite, 2003, 285.

¹⁵⁷ Henderson, 2000, p 52.

¹⁵⁸ Ibid, p 54-59.

¹⁵⁹ Höpken, 2003, 353-363

¹⁶⁰ Shortland & Tite, 2003, P 285-286.

¹⁶¹ Henderson R. , 2007, p 58-59.

¹⁶² Weinberg, 1992, p 135.

Glass was also used less commonly in the production of weapons and helmet components among the Mycenaean elite.¹⁶³ By the mid-1st century BC, it had evolved into a luxury commodity, prized for its beauty, transparency, color, and shape. During the late Hellenistic period, social practices, particularly those surrounding wine consumption, significantly influenced the development of the glass industry. This trend reflected a long-standing heritage of Greek and Eastern extravagance, notable for its extensive array of tools related to wine. Global museums exhibit many artifacts associated with wine, including Eastern and Greek ceramic and metal vessels for storage, transport, cooling, mixing, serving, and drinking, which certainly captivated onlookers.

Roman pottery continued this trend by producing Hellenistic-style cups, vessels, and goblets to serve similar functions. The appeal of drinking wine from glass vessels spurred technological advancements in glassmaking. Previously, the true color of wine was hard to discern; a pour onto a white cloth would leave a purple stain, while dark ceramic jugs concealed the liquid's hue. Alongside its aesthetic appeal, glass's ability to preserve food or drink without absorbing odors added to its value.

In the Hellenistic period, glass production involved casting techniques where molds were filled with crushed frit/ quartz-ceramic and heated in a furnace. By 37-4 BC, significant changes occurred in the glass market, transitioning from expensive Hellenistic luxury items to more moderately priced products accessible to a broader audience.

By the late Hellenistic period, casting was largely replaced by sagging techniques, wherein pre-formed disks were thermally shaped over inverted vessel molds. Originally ribbed and fluted vessels were made by casting but later manufactured using sagging/stretching methods. The advantage of these new techniques was that they simplified and expedited production, likely reducing costs and making glass items more accessible, which had a profound impact on a market that had been predominantly for the wealthy.¹⁶⁴

¹⁶³ Ibid, p 135.

¹⁶⁴ Kahn, 2014, p 130.

4.5 Stages of Glass Production

Glass furnaces in ancient Rome were built either at ground level or elevated, with those described by Pliny¹⁶⁵ (77 AD) likely being small, beehive-shaped structures featuring one or two chambers for annealing glass. The oldest known depiction of Roman glassmaking dates to the 1st century AD and shows two glassworkers at a furnace with multiple layers, including a firing opening illustrated as a filling hole on a clay lamp. (Fig .23)

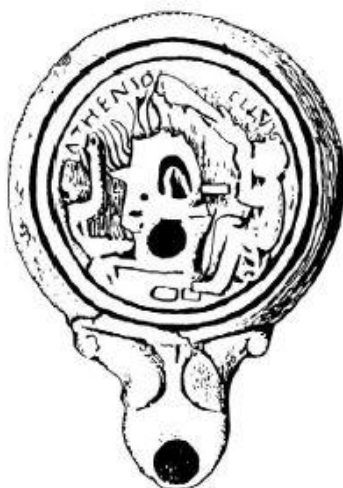


Figure 23: A scene on the discus of a lamp showing two glassworkers at a glass furnace. (By: Davison 2008: 141)

Complementing these archaeological and iconographic data, a geochemical study by P. Degryse et al., "Primary Glass Factories around the Mediterranean", sampled glass to identify the primary source of natron glass in the Hellenistic and Roman worlds. Glass fragments were obtained from consumption and secondary-production sites, shipwrecks, and primary glass factories across the Mediterranean and the Roman Empire. Approximately 350 samples from 30 archaeological sites underwent geochemical analysis and were compared with potential raw silica sources and known primary glass factories; chronologies were established by stratigraphic association. The samples derive from well-dated contexts between the 6th century BC and the 8th century AD, and all are natron-based glass.

The comparison aimed to reconstruct the long-term provenance of natron glass through the Hellenistic–Roman period into the early Byzantine/Islamic era and was limited to materials with known major- and trace-element compositions. Only a few regions with suitably pure silica sands for Greek–Roman natron glass had previously been identified: Israel and Egypt in

¹⁶⁵ Plinius, *Naturalis Historiae* XXXVI, 193.

the eastern Mediterranean; Spain, France, and Tuscany for the western Mediterranean; and Puglia and Basilicata for the central Mediterranean. Suitable sands also appear to exist in Libya, Tunisia, Syria, and Palestine.

The study's data indicate that, throughout the studied period (8th century BC to 8th century AD), the primary silica source was the eastern Mediterranean, implying continuous production of natron glass in Syria, Palestine, and Egypt for nearly 1,500 years, with extensive recycling of this glass throughout that time.¹⁶⁶

In the latter half of the 20th century, excavations in various countries that were once under Roman rule uncovered remnants of glass manufacturing processes. However, the extent of imported glass from Mediterranean production sites versus local manufacturing from raw materials is still being researched. Current investigations have identified locations for primary glass production, known as "main glass production workshops," as well as facilities for annealing and recycling glass, referred to as "secondary production workshops."¹⁶⁷

4.5.1 Main Glass Production Workshops (Main Furnaces)

The discoveries in Egypt, Syria, and Palestine indicate that during the 4th to 8th centuries AD, large quantities of glass were produced in a limited number of "primary" centers. These findings provided valuable insights into the stages of glass production and the cultural context in which the manufacturing process developed. The sites, such as Beit Eliezer, Apollonia, and the sites in the Wadi Natrun, led to the conclusion that the concept of glass production goes through two phases: primary glass workshops located in Egypt and Levant, and secondary workshops situated in various locations throughout the Roman Empire during the Greek and Roman antiquity.¹⁶⁸

Various shipwrecks from the Hellenistic and Roman periods (for example, the Sanguinaires A, dated to the 3rd century BCE; the Mjlet, from the late 1st century AD; and the Embiez, from the late 2nd to early 3rd century AD) have shown that raw glass was shipped during classical antiquity, representing the first phase of production. It is certain that glass coming from the East was used in secondary glass workshops in Central and Western Europe during the Hellenistic and early Roman periods in the western provinces.¹⁶⁹

Supporting this hypothesis, more than 70 workshops have been excavated in France and over 20 in Britain¹⁷⁰. Roman glass workshops in Western Europe are more common and often better

¹⁶⁶ Scott & Degryse, 2014, P 53–72.

¹⁶⁷ Davison, 2008, p 141.

¹⁶⁸ Nenna, Vichy, & Picon, 1997, p 81-87.

¹⁶⁹ Venclovà, 2009, p 211–218.

¹⁷⁰ Foy, Picon, Vichy, & Thirion-Merle, 2003, p125-147; Price, 2005, p 167.

documented than those in the Eastern Mediterranean. Even without the secondary workshops, there is strong evidence of glass production and trade.

Historical records mention the transfer of glassworkers from Syria and Israel to Rome.¹⁷¹ There is also archaeological evidence of the movement of glassworkers, manifested in the form of names and sometimes the origins of the workers recorded on the glass artifacts they produced. For example, glass tableware marked with "Cypriot" or "Sidon" is interpreted to indicate that the glassworker originally came from those regions. Another example provided by Price¹⁷² is a 3rd century tombstone found in Lyon, which records the death of Julius Alexander, a master of glass art; he was born in Africa and was a Carthaginian citizen.¹⁷³

During the reign of Augustus (27 BC - 14 AD), many skilled glassmakers from Syria and Judea were taken as slaves to Italy.¹⁷⁴ These Roman entrepreneurs employed these artisans in large workshops, enabling them to produce glass tableware in large quantities using the traditional Hellenistic casting technique on molds. The range of products from these workshops was initially very limited in terms of size and shape, indicating the application of a certain degree of standardization.¹⁷⁵

It is worth mentioning that although we have a huge number of Roman glass in Syria and the development of this industry there, we do not have enough information about the furnaces or their shape during that period.

¹⁷¹ Fleming & Swann, 1999, 622-623

¹⁷² Price, 2005, p 167-190.

¹⁷³ Ibid, p 167-190.

¹⁷⁴ Harden, 1981, p 17-21; Stern, 1999, p 445-447; Whitehouse, 1997, p 66-68.

¹⁷⁵ Fleming & Swann, 1999, p623.

4.5.1.1 Furnace in Damascus citadel

During the archaeological excavations starting the 1920s, DGAM uncovered pottery furnaces in Damascus Citadel. We do not have sufficient information about whether these furnaces were used for both pottery and glass production since archaeological expeditions did not find any evidence of individual glass furnaces or any tools used at the production. Furnace excavated at Damascus citadel is confirmed to have been used for pottery. An extensive layer of clay can be seen around the furnace. (Fig.24)



Figure 24: Pottery furnace in Damascus citadel. (Archives of DGAM, unpublished reports)

It is not yet known whether it is a furnace that dated back to the Roman period or not because the opinions of the researchers differed about the foundations of the castle and whether they belong to the Roman period.

Here Wulzinger and Watzinger¹⁷⁶ believed as a result of the presence of stones with classical motifs, that these remains were for a Roman fort in the castle dating back to the Diocletian era. Then this theory was confirmed by Sauvaget¹⁷⁷, but he later rejected it and affirmed that the blocks of stones used are reusable materials that may have come from the Jupiter temple, and emphasized that it was from the Seljuq period.

As for Hanisch¹⁷⁸, he emphasized the idea of a Roman fortress and that it dated back to the Roman period and was later abandoned for a period of time.¹⁷⁹

¹⁷⁶ Sauvaget, 1926, p 100-102

¹⁷⁷ Sauvaget, 1930, p 220.

¹⁷⁸ Hanisch, 1992, p 495.

¹⁷⁹ Umrān, 2001, p 93-95.

4.5.1.2 Bustan Sukkar furnace

Moreover, an archaeological survey in 2010 was conducted by DGAM and IFPO (Institute français du Proche-Orient) in Bustan Sukkar near Bāb Kisan Church in Damascus. The archaeological survey confirmed that it dates to the Roman period.¹⁸⁰ (Fig. 25)

They found a medium-sized glass block next to a large facility that has been functioned as a large furnace with two pottery channels . The existence of glass blocks indicates that the place is a furnace for the manufacture of glass which continued to be used until the Islamic period.¹⁸¹



*Figure 25: Remains of foundations and water canals, Bustan Sukkar.
(By: Sa'Yd Et Al 2012: 276)*

¹⁸⁰ Sa'Yd, Yaghy, & Benech, 2012, p 275.

¹⁸¹ Ibid, p 276.

4.5.1.3 Israel Furnaces/ Beit Eliezer

The archaeological discovery at Beit Eliezer in Israel in 1992, which included 17 tank furnaces. (Identified as primary glass production furnaces), indicates that the process of melting a mixture of sand and soda occurs in a single-phase operation in a reflective furnace. After cooling, the glass is then broken into pieces, which are subsequently transported to secondary glass workshops where various shapes are manufactured for use.¹⁸²

The furnaces at Beit Eliezer are divided into two sections: two triangular fire chambers (Or two chambers with separate openings) and a melting chamber (tank furnace) measuring 2x4 meters. All the furnace openings are oriented towards the southwest to take advantage of the monsoon winds for air circulation in the combustion chambers. In such furnaces, continuous air circulation was essential. The manufacturing process likely took about ten days to two weeks, with temperatures in the furnace reaching around 1100 degrees Celsius. No evidence of any open fire for preparing the initial stages of the frit/ quartz-ceramic was found, nor were any other prepared elements, such as charcoal. Researchers assume that each furnace was dismantled after firing to allow for the breaking of the glass sheet, which is why all the furnaces at the site were found to be destroyed.¹⁸³ (Fig. 26)

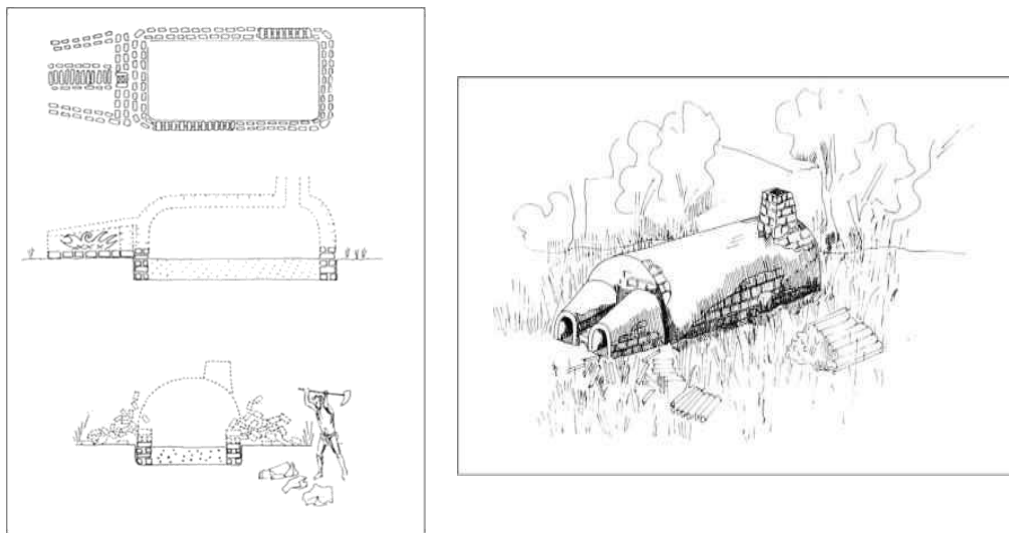


Figure 26: Bet Eli'ezer: Reconstitution of a furnace. (By: Gorin-Rosen 2000, 53)

¹⁸² Gorin-Rosen, 2020, p 49-63.

¹⁸³Freestone, Rosen, & Hughes, 2000, p 71-72.

Excavations in Apollonia, Israel, revealed the presence of four furnaces, similar in style to those found in Beit Eliezer, dating back to the 6th and 7th centuries AD.¹⁸⁴

Ben-Dor and Kahana described two glass facilities, one of which was found in a courtyard next to an olive press. This glass furnace measures 5.5 meters in length, with the remains of a melting chamber floor measuring 2.50 × 3.80 meters, covered by a thick layer of glass (0.25 meters). In the western part, remnants of a firing chamber were found, constructed from stones and tiles. To the east, another furnace was discovered, featuring a rectangular floor, surrounded by walls and covered by a thick layer of glass (0.25 meters). The combustion chamber located in the western part was made of brick, with remnants of glass and ash. A large quantity of ash, sand, and glass remnants was found near the furnaces.¹⁸⁵

Recently, evidence of both primary and secondary production was found at the site of Khirbat Biza, located about 7 kilometers east of Beit Eliezer, although the remains of the main glass furnace itself have not yet been discovered¹⁸⁶

4.5.1.4 Bani Salama Furnace/ Egypt.

Glass furnaces have been discovered on the shores of Lake Mariout, near Alexandria, Egypt, dating from the imperial period to the 8th century AD¹⁸⁷

At the site of Bani Salama in Egypt, discovered in 1996, which came to light later than the Beit Eliezer site in Israel, the furnaces consist of three main units: a combustion chamber, a tank, and a "clean" area paved with bricks outside the furnaces, connected by ramps for bringing raw materials. All combustion chambers and tanks are oriented in the same direction from northwest to southeast, open towards the prevailing winds coming from the northwest.

The internal dimensions of the tanks range between 6-7 to 2 meters for the furnace, with the height of the long walls reaching 1.80-1.90 meters, the back walls between 2-2.50 meters, and the northern wall connected to the combustion chamber approximately 0.40-0.50 meters. The remaining walls indicate that they were about one meter high and constructed from various types of bricks. There are small holes in the walls of the combustion chamber used for pouring the sand and soda mixture, as well as for controlling the temperature.¹⁸⁸

¹⁸⁴ Freestone, Jackson-Tal, & Tal, , 2008, p 67–80.

¹⁸⁵ Gorin-Rosen, 2019, p 54.

¹⁸⁶ Gorin Rosen, 2012, p 49-50.

¹⁸⁷ Nenna, Vichy, & Picon, 1997, 81-86.

¹⁸⁸ Nenna, 2015, p 3-15.

4.5.1.5 *Beirut furnaces – Site BEY015*

Archaeological findings reveal the existence of tank furnaces in Beirut, dating back to the early 1st century AD, which are believed to have been used for producing raw glass. These furnaces were capable of creating transparent glass in various colors. Analysis of glass from the main furnace complex in Beirut corresponds with findings presented by Henderson ¹⁸⁹ concerning the Levantine group. Additionally, evidence of glass vessel production, specifically ancient linear-cut and faceted vessels in dark yellow or amber, was uncovered at other sites in Beirut. It is likely that these vessels were made from locally produced primary glass.¹⁹⁰

The Syrian-Palestinian coast was significant in glass vessel production during the late Hellenistic and early Roman periods. The first indications of Beirut's involvement in this industry come from site BEY 002, where waste from an unidentified glass workshop was discovered, suggesting the production of longitudinally cut and ribbed vessels.¹⁹¹ Site BEY 015 provided definitive evidence of tank furnaces, indicating the use of primary raw materials for glass melting. This site yielded a large quantity of raw glass, found either still attached to fragments of the furnace floor or wall, or as small, irregular blocks. Some of these blocks appeared to be fragments pulled from larger shards, although the precise amount of raw glass remains unknown.

The glass production waste from the site BEY 015 includes rods and drawn threads, as well as perforated glass fragments. All the glass shards found were transparent. Their colors include: nearly colorless with a green tint (and purple streaks), pale green (blue), pale yellow-green, yellow-green (olive), light, medium, and deep blue, dark transparent purple, yellowish brown (honey color), and orange-brown (amber).

The lengths of the tanks range from 4.8 to 6.2 meters, while the height of the tanks is unknown. Additionally, the stones of these walls showed no signs of heat impact, and no evidence of a combustion chamber was found in the areas.

The vibrant colors indicate that the linear-cut vessels and contemporary vessels with irregular facets were among the products of this glass workshop. Gross ¹⁹² attributes the linear-cut and blown glass vessels, decorated with opaque white motifs, to the period between the late 1st century BC and the early 1st century AD.

¹⁸⁹ Kouwatli, et al., 2008, p 103-106.

¹⁹⁰ Freestone, Brems, & Degryse, 2005, p 43.

¹⁹¹ Jennings, 2006, p 778.

¹⁹² Grose, 1989, 247.

Based on the colors of the glass found on the furnace shards, the inferred production of linear-cut and faceted vessels, along with fragments of containers, it is possible to accurately identify the use of tank furnace complexes in the first half of the 1st century AD.¹⁹³

4.5.2 Furnace Capacity

The raw glass shards found during the survey or excavation in the fill layers (which may not be directly connected to these furnaces) indicate that three different types of glass were produced at Bani Salama: blue glass, green glass, and colorless glass that was decolorized with antimony¹⁹⁴, as well as colorless glass that was decolorized with manganese.

The capacity of the discovered tanks at Bani Salama is estimated to be between 13-20 tons per melting session, while at Beit Eliezer, the capacity is around 8 tons per melting session.¹⁹⁵

The raw materials for glass formation are sourced from locations near the furnaces, where sand and soda are available in the surrounding areas, and from Lake Fustat, which is no more than 50 meters away, where natron was extracted and separated from salt. Scholars estimate that the addition of sand and soda was gradual and extended throughout the long firing period. Workers would grind the sand and soda mixture in a clean area next to the furnace, as indicated by the presence of paved areas beside the tanks. The furnace was then loaded with materials through openings in the vault using paved platforms. As for the tools used in this process, there is no information available except for a sieve and various baskets found in the waste dump in the area.

Experts suggest that the fuel used in the furnaces was derived from locally available plants. In the case of Wadi Natrun, the prevalent plant was reeds, known for their high thermal energy and rapid growth, along with tamarisk and palm trees. In Israel and Lebanon, wood was used as fuel.¹⁹⁶

Regarding the duration deemed reasonable for glass production, it is believed that the firing period in Bani Salama was certainly very long and continuous, lasting 30 days or more, with an additional cooling period. Considering the manufacturing of building materials, the construction of the furnace, the preparation of raw materials and fuel, the firing and cooling processes, and the dismantling of part of the vault and one of the long walls to access the glass sheet, it is likely that the entire process could have taken several months.

¹⁹³ Jennings, 2006, p 767-777.

¹⁹⁴ Nenna, 2015, p 11.

¹⁹⁵ Freestone, Rosen, & Hughes, 2000, p 71.

¹⁹⁶ Nenna, 2024, p 295.

After the glass sheet was broken, it is likely that it was transported to Ternuthis on the Nile. According to archaeological observations in the area, temporary housing structures were found at the site, but no evidence of solid residential structures was discovered during the survey around Bani Salama. This suggests that the transport of natron and glass production was seasonal.¹⁹⁷

Natron is an unstable material that is difficult to transport, especially by sea, as it remains soluble in water and is highly corrosive when wet. This factor was crucial in the development of primary glass workshops in the Wadi Natrun area. Natron that was not used in local workshops was channeled from Wadi Natrun to Alexandria, and it is presumed that it could have reached glass workshops along the coast of Israel.¹⁹⁸

4.5.3 Local Production Facilities (Secondary Furnaces)

4.5.3.1 Glass vessel production Workshops in Beirut

Excavations in the Souks area of Beirut, Lebanon (sectors BEY 006, 007, and 045) revealed large quantities of glass artifacts dating from the mid-2nd century BC to the early 2nd century AD. Jennings classified and dated these artifacts, with the vast majority dating back to the first two centuries BC and AD.¹⁹⁹

All the analyzed vessels were monochromatic and are divided into several color categories: colorless, pale (including pale green, blue, and yellow), amber yellow, olive green, and purple. As Jennings noted, "colorless" is a subjective definition, and some "colorless" vessels have a very pale hue.²⁰⁰

The vast majority of the analyzed vessels are hemispherical bowls made using the mold technique (which involves producing a glass disc that is heated over a hemispherical mold and slowly shrinks to form a vessel), with a few blown glass pieces that were sourced from the missile collection dating to 60-70 AD.²⁰¹

4.5.3.2 Glass vessel production workshops in Israel

Excavations in Israel have revealed remnants of glass workshops, including traces of furnaces, pieces of raw glass brought for melting, and glass blowing remnants, such as cut-offs, droplets, excess blowing, and others. The workshop itself has not been found at other sites, but it can be

¹⁹⁷ Kahn, 2014, p 132.

¹⁹⁸ Ibid, p 132-133.

¹⁹⁹ Jennings, 2006, p 767-777.

²⁰⁰ Ibid, p 767-777.

²⁰¹ Freestone, Brems, & Degryse, 2005, p 41.

inferred from circumstantial evidence, such as the presence of large quantities of similar types of vessels, along with production waste.

- Jerusalem, Jewish Quarter: The discovery of a glass workshop waste dump in the Jewish Quarter of the Old City of Jerusalem is considered one of the most important pieces of evidence in the research stages of the history of glassmaking. During the excavations conducted in the area, a ritual bath (mikveh) filled with remnants of a glass workshop was uncovered. The bath contained a large quantity of glass rods, hollow glass tubes, glass pieces, distorted shards, cast vessels, and a few blown shards. The bath was filled before the entire area was closed off with large paving stones in the mid-1st century BC. This discovery represents the earliest evidence of glassblowing activities ever found and serves as a very good example of typical glass workshop debris, which includes remnants of the production process and a variety of recycled materials.²⁰²
- Jalama: A few kilometers northeast of Beit Sha'arim, a glass workshop dating to the second half of the 4th century AD was found. This important discovery is an example of a local workshop that was not very large but produced a significant quantity of vessels in various shapes. It appears that the vessels were produced in Jalama and represent types that were very common in Galilee during the late Roman period. The discovered pieces date back to the second half of the fourth century based on the coins found with them.²⁰³
- Kafr Yasif: Remains of a glass factory were found at a site west of the village of Kafr Yasif, which included quantities of furnace wall shards, burnt bricks, glass vessel fragments, some of which were distorted, glass droplets, threads, and others. The pottery and coins indicate that the site was in use during the 5th and 6th centuries AD.²⁰⁴
- Sepphoris Safouriyeh (Diocaesarea): A large collection of production waste, clearly resulting from glassblowing processes, was found in the acropolis, in one of the rooms of a large Roman villa from the late Roman period. Additionally, remnants of glass industries were discovered throughout the excavated area in the lower city. These include small to medium-sized pieces of raw glass and scattered furnace debris. Glass

²⁰² Weksler-Bdolah & Shor, 2025.

²⁰³ Freestone, Barford, Chen, Larson, & Gorin-Rosen, 2023, p 1-14.

²⁰⁴ Gorin-Rosen, 2000, 49-63.

waste remnants were also found in area five, and these materials have been dated to the late 6th and early 7th centuries.²⁰⁵

The tradition of glassmaking in Safouriyeh continued at least from the late Roman period until the early 7th century. When comparing the area of Safouriyeh with that of Jalama and considering the distance between them, it becomes clear that glassmaking was very common in the late Roman and Byzantine periods, both in major cities and in smaller settlements.²⁰⁶

The discoveries made so far have been extremely important for the overall history of glass technology. This includes the discoveries in She'arim and Jalame, as well as those in the Jewish Quarter, Caesarea, Tiberias, Jericho in Israel, Samaria, Kafr Yasif, Apollonia, and Jarash in Jordan. The new evidence accumulated from surveys and excavations over the past decade answers some questions: so far, it seems that the main reason for the distribution and location of glass industries is proximity to fuel. This reality led to glassmaking becoming somewhat of a nomadic activity, rather than a permanently fixed profession. The sites of raw glass production were mainly located on the slopes of hills or near wood resources, as well as close to raw materials (primarily sand)²⁰⁷. Glassmakers moved from place to place after using all the available wood nearby. The evidence is the quantity of glass production debris found in archaeological surveys in the area between the slopes of Samaria and the coast. These industrial sites were usually located outside cities and villages. As mentioned earlier, regarding Beit Eliezer, we assume that raw glass production was a seasonal activity, depending on the monsoon winds.²⁰⁸

Glass workshops were found in major cities and villages. In some places, they were part of industrial areas, such as Castra and Khirbat Na'aneh, while in others, they were an integral part of urban life, such as in Safouriyeh and Beit She'an. It now appears that local workshops were built in most cities, at least during the late Roman and Byzantine periods, to meet the daily needs for glass vessels, glass oil lamps, and windows. It is likely that in some locations, in addition to local workshops, there was a central or specialized glass workshop.²⁰⁹

Some studies discussing archaeological discoveries in various regions of the Roman Empire related to the finding of groups of vessels similar in shape and technique have concluded that such results are highly significant. They allow researchers to reconsider issues such as the

²⁰⁵ Gorin-Rosen, 2019, p 56- 57

²⁰⁶ Ibid, p 57.

²⁰⁷ Freestone 2023, p 1-2.

²⁰⁸ Gorin-Rosen, 2019, p 61-62.

²⁰⁹ Gorin-Rosen, 2019, p 62.

procurement of these materials, their availability during that period, and their uses. The interpretations suggest that when looking at a similar set of pieces as a single batch, one can conclude that the batch of raw glass melting to form the vessels or pieces may have occurred in a single container or small melting chamber. Thus, it is likely that this group of vessels was blown by a craftsman in a single production cycle over a very short period, possibly in one day, where it is suggested that they may have been obtained either by purchasing freshly made products from a market or glasshouse, or that the glass was blown on-site by a traveling glassblower, specifically to order.²¹⁰

Scholars²¹¹ hypothesize that rectangular furnaces, measuring two meters in length and one meter in width (smaller than primary production furnaces), were used solely for remelting broken glass, and possibly also for adding fresh raw glass. In contrast, the more common circular furnaces may have been used only for processing small quantities of glass pieces, mostly re-melted, and for producing vessels. They believe that there were two separate practical activities carried out in separate workshops: the glass produced in rectangular furnaces by remelting glass waste with fresh raw glass was delivered to workshops where artisans produced the pieces.

²¹⁰ Price, 2005, p 169-170.

²¹¹ Sagui & Lepri, 2015, p 168.

4.6 Processes of glass production

Glass production can be seen as an international cultural phenomenon that spread widely across the ancient world. In its earliest stages, glass was a new material and the methods of making it were still limited. Over time, techniques such as molding and pressing were introduced, improving the quality of vessels and containers.²¹²

The decisive breakthrough came with the invention of glassblowing in the 1st century BC, which completely transformed the manufacturing process and greatly expanded the variety and uses of glass. Thus, the history of ancient glassware can be divided into two main phases: before the invention of glassblowing and after it, each characterized by its own distinctive methods and techniques.²¹³

The invention of glassblowing in the 1st century BC marked a technological breakthrough that completely transformed the production of glass artifacts.

The manipulation of form and wall thickness in blown glass vessels was achieved through the use of the blowpipe, an iron tube approximately 1.5 meters in length, featuring a narrow mouthpiece at one end. Variations in pipe width were functionally significant, as broader tubes facilitated the production of heavier glassware. During the gathering process, a mass of molten glass was collected at the pipe's head, with the volume determined by several factors: the diameter of the pipe, the thermal condition of the glass, and the number of rotations applied to the blowpipe.²¹⁴

4.6.1 Core Molded Vessels

Core forming was the oldest of the methods and, in the Hellenistic era, primarily used for flasks, bottles for perfumes and cosmetics oil.²¹⁵ Where the small vessels shaped in this way were previously referred to as "sand vessels" after Petrie²¹⁶introduced this term, without providing evidence that sand was used to form the core.

In the 15th c. BC, the Egyptians learned this technique through contact with the inhabitants of western Asia, and between the end of the 6th c. BC, and the middle of the 4th c. BC, this

²¹² Meyer, 1992, p 15.

²¹³ Doremus, 1973, p 11

²¹⁴ Davison, 2008, 103-104.

²¹⁵ Zeitzer, 2018, p 5.

²¹⁶ Petrie, 1942.

technique took a new lease of life throughout the eastern Mediterranean. In the workshops of Rhodes and Syria, the glassmakers adopted forms of Greek ceramics such as amphoras.²¹⁷

Glassmakers in Mesopotamia have developed the core-forming technique, in which The core formed on the interior shape of the vessel is made from a soft yet solid material, such as a mixture of dung and sand, on the end of a wooden rod. A path of molten glass is wrapped around the core, and when a sufficient thickness of glass is formed, the glass and core are repeatedly reheated and smoothly rotated and rolled (marvered) on a flat stone surface. The glass can be reheated, and decorations can be added in the form of paths of colored molten glass. These paths can be combed into patterns such as braids and zigzags, and integrated into the surface of the glass through reheating and marvering. Additional parts, such as primitive handles, stems, and base rings, can also be added. Upon cooling, the rod is removed, and as much of the core as possible is taken out, after which the edges are shaped. The height of these vessels was typically around **80-120 mm**, although some larger models exist. Core-formed vessels were primarily produced in Egypt, but examples have been excavated in Mesopotamia, Cyprus, Syria, Crete, Rhodes, and the mainland of Greece. Stern²¹⁸ demonstrated that it is possible to apply finely ground glass onto a wet core by packing it onto the core with a damp brush, heating the powder to a temperature of **593°C** to vitrify it, followed by firing it at **816°C**.²¹⁹ Alternatively, crushed granular glass is applied to the core and heated until it melts. Core-formed vessels were generally small and used as containers for cosmetics, perfumes, and medicines.²²⁰

Four distinct types of core-formed vessels from the Late Egyptian period are recognized: **alabastron** (cylindrical or cigar-shaped), **amphoriskos** (pear-shaped), **aryballos** (spherical), and **oinochoe** (a jug with a single handle and a flat base). These vessels (unguentaria) appear to have been luxury items, used for ointments, perfumes, and cosmetics. The production of core-formed vessels continued throughout the Hellenistic period but gradually declined in favor of blown glass vessels and millefiori vessels.

4.6.2 Casting in Open or Closed Molds

This process received only limited use until the Hellenistic period. In spite of the early history of its invention, and the rise of molded glass to a more important place starting from the 3rd c. BC.²²¹

²¹⁷ Smith, 1957, p 21.

²¹⁸ Stern , 1999, p 441-444.

²¹⁹ Grossmann, 2002, p 7.

²²⁰ Rosenow , 2015, p 74.

²²¹ Grossmann, 2001, p 7

It means, melting glass in molds to give it the required shape, a method which encountered difficulty in the industry where the production of glass was slow. During this period began production of glass as a kind of social luxury and limited to a certain social class.²²²

This technique is summarized by covering a bind of molten glass around a mold made of sand and clay inside a metal pipe and then melting and heating several times. After that, the metal pipe in the mold is used to cool the glass slowly and remove the pipe gradually from the middle of the vessel. Then the mold is emptied from inside the pipe.²²³ (Fig.27)

The method of casting into the mold is done in different techniques:

Open sand mold: is the casting of molten glass in an open sand mold consisting of one piece. After that, they put the molten glass to take the form of the mold from the inside and leave it to cool. Finally, the mold around was broken the resulting desired shape.²²⁴

The two parts closed mold: A closed mold in the shape of a vessel, consisting of two parts, can be made from thermal clay; or by carving wooden pieces into the desired shape. When assembled, the wooden molds are lined with clay as a barrier. The mold pieces are then fitted together, leaving a gap that represents the thickness of the glass piece to be poured. The mold is then heated to 700 degrees Celsius, and as the temperature rises, the crushed or shattered glass is dropped through an opening at the top of the mold. The glass ultimately fills the mold (including the opening that forms the base of the vessel, which should be polished after the glass hardens). Once the melting temperature of 1000 degrees Celsius is reached, the furnace is left to cool for a long time, and then the mold is dismantled to extract the glass vessel.²²⁵

Between the end of the 3rd and the beginning of the 2nd c. BC, three cast techniques appeared such as the ribbon glass, ribbed glass, and the mosaic glass.²²⁶ Each technique involves three phases of manufacture: mold making; the manufacture of incrustation elements (platelets,

²²² Grossmann, 2001, p 7-8.

²²³ Zihdī, 1960, p 114.

²²⁴ al-Zuyūt, 2008, p 54.

²²⁵ al-Zuyūt, 2008, p 55

²²⁶ Price & Cottam, 1998, p 11.

sticks, monochrome or bichrome wires), and the final phase that is the manufacture of the object.²²⁷

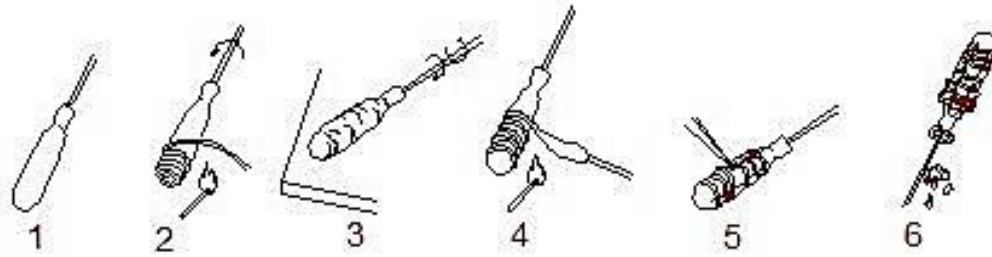


Figure 27: Illustration of wrapping glass in the core-forming technique. (By: al-Māṣrī 2013)

4.6.3 Mold pressing/ Lost wax process

Glass artifacts, such as intricately shaped sculptures with many undercuts, can be made using the lost wax process, this method involves turning the mixture of glass materials into a paste in the furnace. The desired object is formed or sculpted in wax. The model is then encased in a mold made of thermal material like clay, incorporating air vents and pouring openings at the base.²²⁸ The mold is heated and inverted, allowing the wax to drain out, after which crushed glass is introduced into the hot mold, which is reheated, thus melting the glass to form a solid artifact.

In this method glass vessels are formed in two different types using sand, clay or metal molds: First: Pouring the glass paste on the inner or outer surface of the mold prepared in the form of vessels. These vessels are used to manufacture and press liquid glass after it is poured into the mold on the dough.

The glass paste then takes the form of the mold and if the mold is decorated, the glass paste will also take the form of inscriptions and decorations of the mold. It is then pressed until the body of the vessels with an open structure is formed. The diameter of the rim is larger than the diameter of the base such as dishes, bowl.

The second type is used when the mold is composed of two pieces. The melted material is poured into the mold and left to cool. Then the mold is opened, and the glass artifacts are extracted from the mold.²²⁹

For example, if a hollow glass object is needed, such as a column-shaped cast vessel, an internal mold is made from wood or thermal clay and coated with hot wax applied with a brush. The

²²⁷ Jād al-Karīm, 1995, p 19-20.

²²⁸ ‘Abd al-Khāliq, 1976, p 43; al-Zuyūt, 2008, p 56.

²²⁹ al-Zuyūt, 2008, p 56.

wax is shaped using a mold or by building and carving the wax to form the outer shape of the object. Small metal rods embedded in the mold, protruding from the wax to the mold, kept the mold pieces separate during the pouring process. A hole is left in the base of the male mold for the molten wax to escape when heated. Thus, the internal cavity represented the shape of the glass piece to be cast. The crushed glass is then introduced into the mold and heated to melt it. After cooling, the molds are removed, resulting in a hollow glass piece.²³⁰

Moreover, the artifacts are decorated with specific features that were imprinted in the mold, and accessories were added such as handles and exterior decorations. They are applied by using sticky material, or by melt thread placed on the surface. We have examples with mold-pressed technique within the catalogue. (Fig. 28)

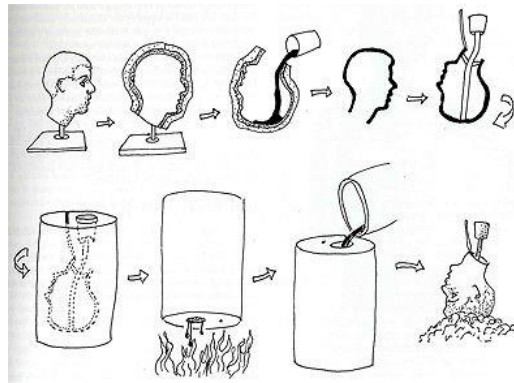


Figure 28: Mold casting Process. (<https://www.assignmentpoint.com/business/explain-lost-wax-casting-process-implementations.html/> Accessed 20/10/2025)

4.6.4 Glassblowing

The recent discovery of the ability to expand and shape glass through human breath has revolutionized the glass industry to the extent that 'glass blowing' has become the general term for all glasswork, whether the glass is blown or shaped using other techniques.

The invention of the blowpipe enabled the creation of hollow objects and vessels that previously required labor-intensive processes to be made much more quickly, reducing the amount of glass needed for each piece.

The invention of glassblowing marked a revolutionary milestone in the production of glass artifacts and is widely regarded as a pivotal development in the history of the industry. It enabled a significant increase in both the quantity and diversity of glass products, accelerated

²³⁰ al-Zuyūt, 2008, p 57; Zeitzer, 2018, p 120.

the pace of production, and made glassware more widely accessible to the general population.²³¹

Furthermore, blowing allowed for the production of new categories of products. The beginning of commercial glass blowing coincided almost with the rise of the Roman Empire.²³²

This discovery dates back to the beginning of the Roman period. Glassblowing itself was responsible for the sudden increase in the number of glass finds in the late Republic and early Empire and glass ceased to be a luxury material since scores of vessels could be blown in a day in contrast with the use of the hard core-forming process. Another advantage was the possibility of making artifacts thinner and lighter and thus more acceptable for daily use.²³³

It was one of the most important achievements of glass manufacturing, and therefore glassmaking history can be investigated as before and after the discovery of glass blowing.²³⁴

The technique of glassblowing developed in Phoenician coastal cities around the 1st c. BC. And glassmaking then extended throughout the Roman Empire, as well as it was used in Alexandria, which was considered as the greatest artistic, industrial, and commercial center in the ancient world.²³⁵

Glassblowing was a primary technique in the production of vessels during antiquity and later periods, requiring the use of specialized tools and controlled processes. A central implement was the pontil, a hollow iron rod usually measuring less than one and a half meters in length. This rod was attached to the base of the vessel, enabling the artisan to refine the rim or affix additional elements such as handles, spouts, or decorative attachments.²³⁶

The process began by gathering molten glass from the furnace onto the tip of a blowpipe. The artisan carefully assessed the size of the gather based on the intended vessel. Once the molten glass adhered to the blowpipe, air was introduced through the hollow shaft, causing the glass to inflate into a bubble. The form could then be shaped further either by free-blowing or by inflating it within a mold. During this stage, the blowpipe had to be rotated continuously to ensure symmetry, prevent collapse, and avoid the glass detaching from the tube.²³⁷

²³¹ Fleming, 1997, p 3; Shensone, 1913, p 1-3.

²³² Harden, 1969, p 45.

²³³ Davison, 2008, p 102.

²³⁴ Kilinc, 2016, p 7-8.

²³⁵ Domínguez, Giménez, De Soto, & Rucandio, 2014, p 222; Zeitzer, 2018, p 7.

²³⁶ Grose, 1989.

²³⁷ Price & Cottam, 1998, p 15; Stern E. , 1999, p 455-460.

When the pontil pipe was removed, it left a distinctive rough scar or pontil mark²³⁸ on the glass. Once the vessel was completed, it was placed in the annealing chamber of the furnace²³⁹. Sometimes, an additional disc of glass was added to the center of the base to minimize the risk of breakage during the removal of the pontil.²⁴⁰

The introduction of this method drastically reduced production times compared to earlier core-formed or cast-glass techniques, enabling the mass production of standardized yet refined vessels. This innovation not only expanded the functional uses of glassware but also contributed to its widespread accessibility across different strata of Roman society²⁴¹

While the initial discovery of the possibility of glass blowing occurred somewhere along the Syrian Palestinian coast, where the glass industry boasted a long-standing tradition spanning centuries, the technique was perfected in Italy. The diversity in quality and quantity of early blown glass produced in Italy and Western Europe far surpasses that of its counterpart from the eastern Mediterranean, in terms of the variety of shapes, decorative techniques, and functionality. In Egypt, where the tradition of glassmaking began in the Pharaonic era, artisans were notably slow to adopt the new blowing technique. The glass industry in Alexandria, which was renowned during the Hellenistic period, seems to have suffered a significant decline in the 1st century AD. Thebes appears to have been the main center for glass export in the first century. The political reality may have reinforced Egypt's traditional tendency to seek cultural and artistic sources domestically.²⁴²

Within half a century, the art of glass blowing transformed from a local Syrian Palestinian craft into a large-scale enterprise across the empire. By the mid-first century, glass blowing facilities began to appear throughout the empire and beyond, and it seems that many workshops produced glass used in making vessels and windowpanes. Additionally, glass beads and jewelry were almost always made in specialized workshops dedicated to this particular aspect of glass production.²⁴³

²³⁸ A pontil mark is a scar, where the pontil was broken from a work of blown glass. The presence of such a scar indicates that a glass object was blown freehand, while the absence of a pontil mark suggests either that the mark has been obliterated or that the work was mold-blown (Whitehouse, 2015, p 57-58)

²³⁹ Price & Cottam, 1998; 13; Jād al-KarĎm, 1995, p 19-20

²⁴⁰ Zeitzer, 2018, p 9.

²⁴¹ Ibid, p 9-10.

²⁴² Stern, 1999, p 444.

²⁴³ Ibid, p 443.

The early glass blowers practiced their craft on the Syrian Palestinian coast. It seems that northern Italy. According to Pliny²⁴⁴ glass blowing was a specialty that originated in Sidon (modern Sidon, in southern Lebanon). The unprecedented speed with which the new technique spread throughout the empire can be attributed to a combination of political, economic, and technical factors. Augustus's rule ended a century of civil strife in Italy and established a vast network of peaceful provinces, facilitating rapid communication between the edges of the empire. Additionally, Italy experienced an economic boom that attracted artisans and traders from across the empire, especially from the eastern Mediterranean. Most of the regions where glass blowers settled, such as Rome, Campania, and the northern Adriatic coast, had long-standing trade relations with Greece and the eastern Mediterranean. This may be because glass blowing did not require a massive investment in expensive new tools; all the early vessels could be blown using inexpensive blowpipes made by the glass blowers themselves.²⁴⁵

Many Sidonian glass blowers, drawn by the allure of high-quality artworks available in Rome, migrated to Italy and established shops in Rome, Campania, and Aquileia. Numerous glass handles marked with the names of Sidonians testify to their presence in Rome and other locations in the western Mediterranean. Glass blowers such as Ariston, Artas, Philippos, Nikion, Irenaeus, and their colleagues are credited with introducing the art of glass blowing to Rome and the West. Epigraphic and archaeological evidence indicates the existence of a glassmakers' quarter called "*vicus vetrarius*" near the Capena Gate in Rome.²⁴⁶ In Italy, the Sidonians were in close contact with the strong utilitarian character of Roman technology. Referring to the period before 7th BC, Strabo²⁴⁷ noted that many improvements in glassmaking were occurring in Rome "both in terms of coloring glass and facilitating production techniques, for example, making colorless glass resembling rock crystal" (*krystallophanes*). The interaction and exchange of ideas between the Sidonians and Romans provided the momentum for the innovations and improvements that led to the emergence of the great Roman glass industry. However, Gross²⁴⁸ concluded that discoveries made in Israel in 1961 and 1970 suggest that the invention of glassblowing took place sometime between 50 and 40 BC.²⁴⁹

Although there are no examples of blown glass before this date, an ancient Egyptian mural depicting workers blowing into pipes has been cited as evidence of glassblowing. The mural

²⁴⁴ Plinius, *Naturalis Historiae* XXXVI, 193.

²⁴⁵ Isings, 1957, p 1.

²⁴⁶ Stern, 1999, p 441-484.

²⁴⁷ Strabo, *Geography*, Book XVI.

²⁴⁸ Grose, 1977, p 34-35.

²⁴⁹ Davison, 2008, p 86-87.

actually shows Egyptian metalworkers blowing charcoal fire using reed pipes that end in clay nozzles. Harden²⁵⁰ suggested that solid metal rods had long been used to gather molten glass from crucibles to place it into molds, and that the use of a hollow tube for blowing glass into a mold was merely a short step. However, Schuler²⁵¹ believes that free blowing (without the use of hands) preceded mold blowing, as handling the blowing tube in the vertical position required for mold blowing demanded greater skill.²⁵²

Sidonian glassmakers exploited the glassblowing technique, migrating westward and northward to establish their workshops abroad. Blown glass by mold was being produced in Italy by the 1st century AD, and in the Alpine provinces and northwestern Europe by 40-50 AD. The workshops were established in the 1st century AD in Cologne, while those in northern Gaul and Belgium were likely in full production by the second century. Their freely blown and mold-blown products were directly related to the products of the central and eastern Roman Empire. Egyptian workers residing in Alexandria continued to specialize in glass cutting and the production of fine-colored vessels, such as mosaic bowls, and did not adopt the glassblowing technique until sometime after the 2nd century AD.²⁵³

After the invention of blown glass, the styles became largely simple and practical, and glass was used more for household purposes during the Roman era than at any other time or place until the nineteenth century. Glass containers were particularly valued as shipping and storage vessels because they were lightweight, transparent, reusable, and did not impart any taste to their contents. Cups were packed in straw to withstand long journeys by land and sea. Some containers were square-shaped to facilitate packing, alongside practical glass vessels.²⁵⁴

By the early 3rd century AD, there was evidence of strong and continuous connections between glassmakers in the Middle East and the West, largely formed as a result of the migration of workers, particularly from east to west. Contemporary literary sources mention Syrian glassmakers working in the Roman provinces, and neighborhoods for glassmakers were established in every major city.²⁵⁵

The processes of blowing glass vessels have never changed, at least in principle, so we can refer to illustrations of more recent practices to clarify the concept of producing blown glass. However, we still need to know where and when this new process began and how it was first

²⁵⁰ Harden, 1969, 55

²⁵¹ Schuler, 1959, p 10-11.

²⁵² Davison, 2008, p 102-105.

²⁵³ Ibid, p 106.

²⁵⁴ Harden, 1969, p 97-100.

²⁵⁵ Harden, 1969, p 55-56.

discovered. Here, it must be acknowledged that we are forced to speculate. There is no clear evidence, nor even a hint, from contemporary writers.

However, it must be acknowledged that the remains of Roman furnaces are rare, and what is known about them is so incomplete that it is impossible to provide an illustration that would in any way benefit the understanding of the method of blowing a glass vessel. While it requires exceptional skill and expertise, the process is fundamentally simple.

While we may form an idea of how early Roman glassblowers operated, we still need to know where and when they began this new process and how it was first discovered. Here, it must be acknowledged that we are forced to speculate. There is no clear evidence, nor even a hint, from contemporary writers. It would have been easy for Pliny the Elder²⁵⁶, who frequently discusses glass in his work "Natural History," to tell us the complete story of the invention and who invented it, as he was nearly contemporaneous with this unknown inventor. However, all he provides us with is a completely unconvincing tale about how the art of glassmaking—not glassblowing was invented by the Phoenicians, who lit a fire on a beach at the mouth of the Belus River near Acre, took blocks of rock salt from their cargo to place on their pots, and thus the sand and rock salt melted into a glass mass.²⁵⁷

4.6.4.1 *Free blown glass*

The blowing method is based on the principle of melting the glass and turning it into a flexible paste into the melting vessel and then blowing and by holding the blowpipe above or below his head. After that, handles will be composed by attaching hot melted glass that will take the final form after cooling.

If the glassworker was trying to make a vessel to a preconceived shape it required a higher degree of ability to reach it by free blowing than by the use of a mold to achieve the required shape of the artifacts. Achievements are completed by the free-blown glass :²⁵⁸

- The manufacture of glass unguentarium of several bulges, each on top of each other is one of the best examples created by the Syrian glass in the Roman period.
- Rings, bases, and bands are attached to glassware on its outer surface.

The discovery of the new method led to the beginning of the decoration of glass with glass threads and additions on the outside with the same color or different colors of the vessels. .²⁵⁹

²⁵⁶ Plinius, *Naturalis Historiae* XXXVI, 193.

²⁵⁷ Harden, 1969, 45-46.

²⁵⁸ Davison, 2008, p 104.

²⁵⁹ Zeitzer, 2018, p 60.

The free-blowing process required a constantly heated furnace. A mass of molten glass was gathered at the end of a pontil pipe. By blowing air through this pipe, the molten gather became a bubble of glass parison²⁶⁰ that could be manipulated with tools and reheated periodically for easier molding.(Fig. 29)

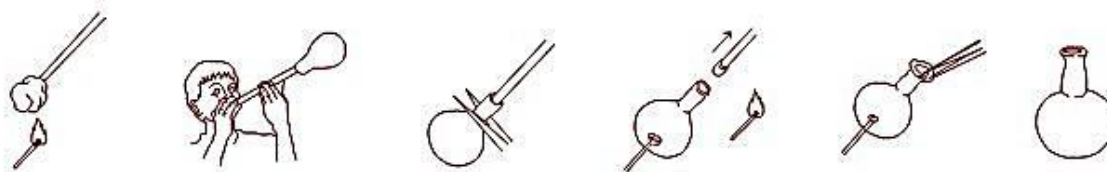


Figure 29:Free-blown glass. (By: al-Māṣrī 2013)

4.6.4.2 Mold Blowing

The practice of blowing glass in molds was prevalent from the invention of the blowing pipe in the 1st c. BC to the 5th c. AD.²⁶¹ They were using wooden molds to blow the glass mass to give it the shape of the mold.

Many scholars agree that the glass blowing in the mold was an eastern development and they exported this technology to the west²⁶². Note that the glass made in a mold has similar characteristics and the glass mold consists of several parts. Their different parts were allowing them to place many decorations covering the surface of the vessels to the top.²⁶³

It is likely that the technique of blowing glass into molds developed concurrently with the discovery of glassblowing. After removing a piece of glass from the furnace at the end of the blowing iron, it is shaped and blown into a small rectangular bulb, then placed into a two-part mold and blown to fill it. Even in modern times, molds were made from clay or wood (which was kept moist during use to prevent the wood from burning).²⁶⁴

Each mold consists of two or more sections showing the decoration on the inner surface of the mold. After blowing glass, this decoration appears on the outside of the vessel. The process of glass blowing into the mold is the following:

²⁶⁰ A rounded mass of molten glass formed by rolling the substance immediately after removal from the furnace.

²⁶¹ Richer, 1911, p 14.

²⁶² Lightfoot, 2015, p 103.

²⁶³ Price & Cottam, 1998, p 12.

²⁶⁴ Jackson, Price, & Lemke, 2009, p 154.

The liquid mass was selected to be blown into the mold at high temperatures. One or more makers then hold the mold to keep the sections properly so that the mold closes throughout the blowing period.

Then blown met glass slowly until the liquid glass takes all the space available to it within the mold. It must be the same thickness on all sides. The sections of the mold are usually arranged as soon as the glass mass is extended and cooled enough.

Most blown glass is a special product produced during the first three centuries of the Roman period. However, the popularity of this type of mold-blown glass is somewhat weak relative to the other one produced using other techniques.

It also seems to have declined in the early 2nd century but did not completely disappear. Blown vessels often have a simple background such as concentric circles or decoration with the mark at the bottom.(Fig. 30)

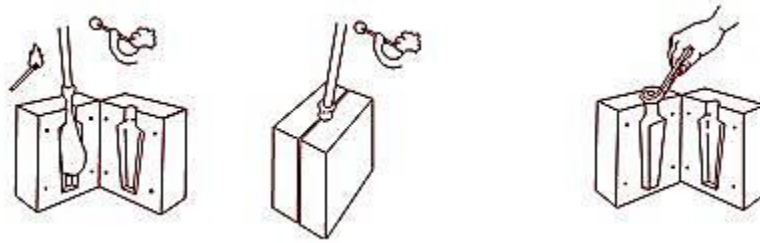


Figure 30: Mold-blown glass. (By: al-Māṣrī 2013)

4.7 Coloring Glass

The study presents two hypotheses about glass coloring. The first suggests that raw glass was transported to coloring sites, where specific metallic colorants from designated locations were added, leading to cohesive synthetic groups in the final product.

The second hypothesis, suggests that certain colors of glass were made at different primary glass manufacturing sites. This is exemplified by the emerald green glass made using an alkali from plant ash instead of a metallic alkali source. Both hypotheses are supported by the compositional similarity of different vessel patterns within the same color groups. However, the second hypothesis is more likely due to supporting evidence in the form of various colored glass pieces found in shipwreck debris around the Mediterranean, indicating the movement of colored raw glass.²⁶⁵

Glass artifacts of the 1st -2nd c. AD were almost made in blue/green glass, it was the most common color used to produce glass vessels.²⁶⁶

Most ancient glass fragments contain a small amount of iron oxide in the sands. This results in a green-blue tint. This iron was usually unintentionally introduced as impurities in the sand raw material. That means that blue/green tints were not brought about by addition of coloring agents to the mixture, but by the presence of iron oxide as a naturally occurring impurity in the sand used to make the glass, therefore it indicates that the color of the glass is natural, not created by addition or removal of coloring agents material.²⁶⁷ The true color of the glass depends on the chemical composition added to the glass paste and the working conditions of the furnaces.²⁶⁸

It is also known that an alternative method of producing colorless glass existed. it began to be produced in the late 1st c. AD. This discovery was due to Alexandrian workers. It was not until the 2nd c. AD, that the glassworkers discovered that a correct amount of manganese as a "decolorizer" that should be added to the paste.²⁶⁹

During the 2nd and 3rd c. AD, colorless glass was widely used for good quality tablewares. Colorless glass is rarely water-clear, as it often has a greenish or yellowish tinge.²⁷⁰

²⁶⁵ Jackson, Price, & Lemke, 2009, p 154.

²⁶⁶ Price & Cottam, 1998, p 15.

²⁶⁷ Ibid, p 15.

²⁶⁸ Hāmġd, 1985, p 345; Ismā'īl, 2000, 76.

²⁶⁹ 'Alī & 'Abdallāh, 2015, p 45.

²⁷⁰ Price & Cottam 1998, p 18.

An analysis of the colors of glass discovered along the Syrian coast reveals that transparent blue is the most prevalent, accounting for 33%. It is followed by transparent green at 21%, colored glass at 8%, and transparent yellow at 5%. (Fig. 31)

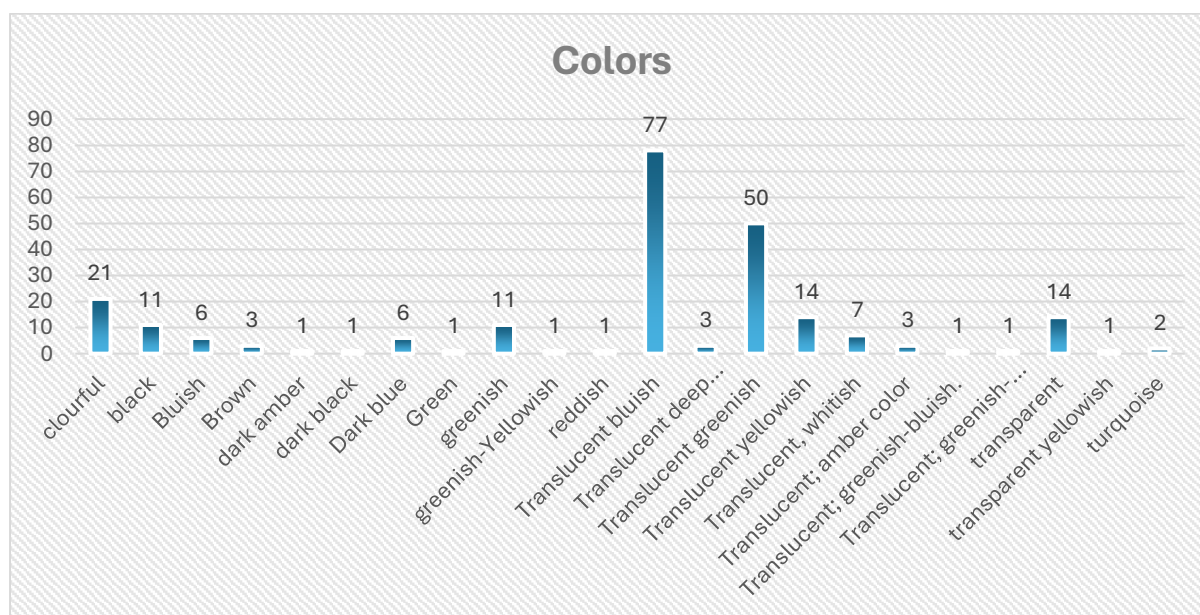


Figure 31: The diagram of the distribution and classification of glass colors among the analyzed samples.

4.8 Recycling Glass

In addition to imported raw glass, waste generated from glass forming and blowing can be used as raw materials, along with collected broken glass, known as cullet. The use of cullet has a technological advantage, as a certain amount of cullet mixed with raw glass lowers the melting temperature. Furthermore, cullet is relatively free from the impurities typically found in raw materials.

Glass is inherently well-suited for recycling. It is brittle and easily breaks into shards that are not useful for consumption, but it can be easily remelted, allowing artisans to reshape the glass into new objects.

From an archaeological perspective, the recycling process is difficult to detect. It has been noted in the context of metals that a successful recycling economy would be invisible, as the recycled materials would have disappeared back into the crucible. However, sufficient archaeological evidence has been found in the form of caches of broken glass from workshops, churches, and residences.

Daniel Keller²⁷¹ noted that recycling may not have been a uniform process; rather, the approach taken likely depended heavily on the context. For example, the recycling practices of the

²⁷¹ Keller, 2005, p 65-66.

Roman army were probably different from those of a middle-income family in terms of how glass was collected, stored, and returned to glassworkers. The glass recycling economy may have consisted of a complex network of individual consumers, institutions, intermediaries, and producers that provided a wide range of pathways for a broken piece to find its way back to the melting crucible.

5 Analysis of the discovered Roman glass from the discussed sites.

The glass found along the Syrian coast showcases a relatively wide variety of forms, including tableware, toilet containers, and household storage vessels. These pieces represent the only collection from the Syrian coast that spans from approximately the 1st century AD to the 3rd century AD, covering the Neronian to early Flavian periods, and are documented in museum records in Latakia-Jable-Ṭarṭûs-Bānyās.

Moreover, cast glass constitutes 4% of the glass vessels, followed by molded glass at 5%. The majority, 75%, consists of blown glass, which is divided into two categories: mold-blown glass and free-blown glass. Due to some overlapping characteristics, especially when examining square and cylindrical bottles that can be produced through either free blowing or mold blowing, it is not always possible to definitively determine the production method used based solely on the glass piece. For a comprehensive discussion of the forms, all bottles are addressed in the section dedicated to free blowing. (Fig. 32)

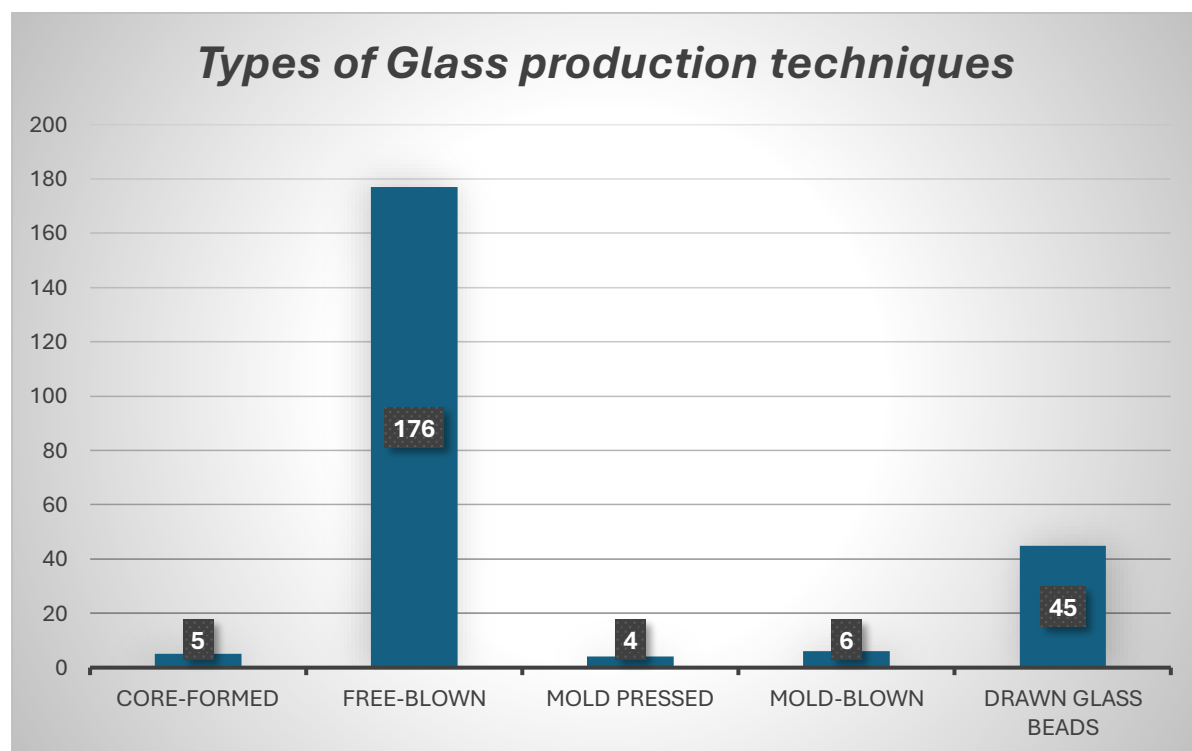


Figure 32: Types of Glass production techniques

- **Cast Glass**

An examination of the glass vessel collection clearly indicates that cast glass constitutes a small percentage, representing only 4% of the total glass collection. The cast vessels are represented by just three forms: lids, deep bowls, and plates. None of these items exhibit characteristics that suggest they are inherently luxurious. However, the elements of color and decoration might lead some to interpret a few of these pieces as exquisite due to their somewhat colorless nature, which ranges from slightly yellowish transparent to colored, transparent green, and bluish transparent.

This immediately highlights the complexities surrounding the assertion that cast glass was more expensive than blown glass.

- **Core-Formed Glass**

There are three types of core-formed glass: bottle flasks, two-handled flasks and bottles, and toilet bottles. Some evidence suggests the presence of ribbed decoration, but no other specific features can be identified. This vessel is primarily defined as being core-formed due to the clearly curved ribs, indicating a small closed-shaped vessel that cannot be removed from the internal mold.

These forms have not been dated by historians or excavators; however, compared to other examples discovered alongside them, they are dated to the late 1st to 2nd centuries AD, based on findings from the same tomb. Core forming is recognized as the earliest known method for producing glass vessels, and with the development of more advanced and efficient techniques, it is logical to expect its eventual decline. It is likely that these pieces were produced locally and may have been heirlooms, passed down from generation to generation.

- **Blown Glass**

The quantity of blown glass along the Syrian coast was substantial, accounting for nearly 75% of the total Roman glass discovered in the region. These findings provide examples of both main types of blown glass: mold-blown glass and free-blown glass.

Mold-Blown Vessels

The mold-blowing process is an intriguing method in any collection, as it can produce both the simplest practical vessels in large quantities and the most complex and decorative ones. Discoveries of glassware reveal details about the types of molds used to shape these items, showing layers of the mold and surface impurities. Some vessels utilize complex molds, while

others exhibit a smooth interior texture similar to free-blown glass but have a slightly textured exterior due to contact with the mold.

There is relatively little mold-blown glass found along the Syrian coast, constituting only 6.2% of the blown glass. Typically, the simple practical items produced through mold blowing are storage containers, such as cylindrical or prism-shaped bottles. Excluding these, there would only be a few remaining vessels. The number of discovered glass pieces along the Syrian coast indicates that there are only six pieces of mold-blown glass, represented by five flasks and one bottle flask.

Blown Vessels

The vast majority of glass from the Syrian coast is blown, as would be expected from a site dating from the mid-1st century to the 3rd century AD. The free-blowing technique produced nearly all the shapes presented in the collection. There is a considerable abundance of material, with blown vessels comprising approximately 77% of the total vessels.

Drawn Glass Beads

The other item, which is used either as jewelry or for various functional purposes such as hair pins, accounts for approximately 45% of the collection. These pieces are crafted using the drawn glass technique, which involves cutting rods of glass into small beads of diverse shapes and colors. All of these types have originated from burial sites.

Dating of Glass

The majority of the glass originates from the 1st century AD, accounting for 47%, while glass from the 2nd century AD represents 11%. Glass discovered from the 3rd century AD makes up 12% of the total, and 10% is dated to the 4th century AD.

The dating of these discovered vessels relies on comparisons using the Isings classification system. The pieces have been compared to similar finds from other locations in the West, prioritizing those uncovered in Syria regarding the origins of manufacturing, under the assumption that these vessels were initially produced along the Syrian coast before the production process spread westward or was exported through trade routes.

The percentages vary slightly between the 2nd and 3rd centuries AD due to the challenges of accurate dating. The initial dating was considered to begin in the East according to the Isings-AR comparisons.

Jewelry was not included in this statistical analysis because its dating does not lend itself to precise determination of production periods, as it could have been passed down through generations. Additionally, there are samples of beads that date back to the 1st century BC found alongside other pieces dated to the early centuries AD.

The classification of glass vessels in this study is based on formal and functional groups. The glass from the Syrian coast is divided into 13 formal groups and 4 functional groups (as shown in previous tables). This classification allows for the analysis of the Syrian coastal glass and facilitates comparisons of the findings from various locations along the coast with other sites throughout the Roman Empire.

Formal Groups

The formal groups include:

Drinking vessels, Bowls, Lids, Plates, Bottle flasks without handles, Two-handled flasks and bottles, Jars, Flasks, Toilet bottles, Jewelry, Stirring sticks, Conical lamps.

Functional Groups

The functional groups consist of:

- **Tableware:** This category includes drinking cups, vessels, plates, and lids, which are considered utensils for food and drink.
- **Storage Tools:** These were used for transporting and storing liquids and possibly for serving food. They also include drinking vessels and covered containers used in homes for food storage or jars in tombs.
- **Toilet Tools:** This includes bottles for ointments that contained perfumes, toilet powders, body care ointments/oils, and medicinal treatments.
- **Miscellaneous Items:** This group encompasses jewelry, hairpins, and lighting lamps.

Van Lith²⁷² emphasizes in her observations on the classification of glass vessels that ancient written sources provide little information regarding the various uses of glass vessels. Evidence about their functions can sometimes be inferred from images found on wall paintings and sculptures. In rare cases, remnants of the contents of glass vessels have been preserved, clarifying the intended use of these items. Therefore, the assignment to functional groups primarily depends on the shape of the glass vessels, which entails several uncertainties.

²⁷² Lith & Randsborg, 1985, p 415.

The challenges arise, on one hand, in distinguishing between tableware and storage tools, and on the other hand, in identifying glass forms for drinking and food vessels. While there is no doubt that plates and dishes served as food utensils, intended for serving food, storage vessels were used for a variety of purposes. For example, small vessels were employed to serve side dishes and sauces at the table as well as for drinking. Larger vessels were used for drinking or food presentation, such as fruit, and at times also for food storage. Consequently, the group classified as bowls cannot be exclusively designated for food or drink.

This analysis includes all glass vessels discovered along the Syrian coast up to the specified year, which could be approximately identified in form. However, undetermined glass fragments were not included, as they do not bear specific decorations or distinctive features.

The vessels and tools are categorized according to the innovative forms introduced in this chapter, ranging from Cat 1 to Cat 236. References to similar forms are generally limited to classifications from AR 1 to AR 180 (AR = Augusta Rauricum) and C. Isings (1957) from Isings 1 to Isings 134, establishing correspondence among them. This method serves as a practical tool to facilitate the analysis of glass pieces. Additionally, similar models from other regions within the Roman Empire are mentioned when available at the end of each analytical description for each glass form in the study, such as those by B. Rütli and K. Goethert-Polaschek. These comparisons are purely for reference purposes and do not represent the geographical distribution of the model.

For clarity, each object discussed in this chapter is assigned a typological code (e.g., Type A1, B2, C3), which corresponds to the classification system established in this study. These codes are used consistently throughout the analysis and can be cross-referenced with the catalogue entries and plates.

The catalogue entries correspond to the typological classification presented in this Chapter (5). Each catalogue number can be cross-referenced with its respective type in the analytical chapters.

5.1 Table ware - Type A:

The collection of tableware discovered at Syrian coastal sites comprising cups, bowls, lids, and plates, represents approximately 6-7% of the total glass findings. This provides valuable insights into daily life, ritual practices, and local production in the Eastern Roman Empire. The simplicity of the forms, the predominance of bluish-green Syrian glass, and the widespread use of free-blowing techniques indicate that most vessels were likely produced locally, probably in coastal workshops supplied with raw glass from Syrian/Palestinian production centers.

Comparative materials from Beirut, Apollonia-Arsuf, Tyre, and Jerash illustrate that these types were widely distributed throughout the Eastern Mediterranean between the 2nd and 5th centuries AD, often continuing to be used for a longer period in the East compared to the Western provinces²⁷³.

Functionally, these vessels served both domestic and funerary purposes ranging from everyday dining and service to rituals and offerings demonstrating the overlap between practical use and symbolic meaning in local cultural practices. Overall, the tableware from the Syrian coast reflects a blend of Roman stylistic influences and longstanding regional glassmaking traditions, underscoring Syria's role as an active participant in Mediterranean trade and a continuing center for glass manufacturing and consumption during both the Roman and Late Roman periods.²⁷⁴

In terms of their definition, this group includes open vessel forms whose rim diameter is greater than its height or at least 60% greater than the height of the bowl with a rim diameter²⁷⁵

Only 17 tableware from the material I have collected, out of about 236 objects (about 6.4% of all glass vessels are handed over). While the most common glass vessel attachments in the Roman graves are perfume bottles/Unguentaria and flasks for storing oil and liquids.

The percentage is exceedingly small and negligible in relation to the overall quantity and diversity of artifacts dating to the Roman period. The extant specimens are limited to rather simple forms, and it cannot be argued that they demonstrate sophisticated workmanship, whether in terms of manufacturing accuracy, the quality of the material employed, or the treatment of decorative elements.²⁷⁶

This category includes all glass specimens that are too deep to be classified as containers. However, they differ from jars due to their wide openings and the minimal presence of a neck, if any.

²⁷³ Israeli & Katsnelson, 2006, p 45-63.

²⁷⁴ Freestone, Jackson, & Paynter, 2015, p 130-135.

²⁷⁵ Lith & Randsborg, 1985, 417; Dévai, 2012, P 123.

²⁷⁶ Dévai, 2012, P 123.

This Category is divided into four groups:

- A- Drinking vessels (Beakers/Goblets)
- B- Bowls
- C- Lids
- D- Plate

5.1.1 Type A1: Drinking vessels (Beakers/Goblets)

Type A1 includes drinking vessels such as cups, beakers, and hemispherical goblets documented within the coastal Syrian assemblage. These vessels provide significant evidence for both local glass production and the adoption of Roman drinking traditions in the Eastern provinces.

The forms identified within this type (AR 34, 53, 60 = Isings 12, 85, 96) correspond to shapes widely attested in the Western Roman Empire. However, their chronological distribution in Syria and the broader Eastern Mediterranean differs considerably. While these forms appear in Western contexts as early as the 1st century AD, parallels from Apollonia-Arsuf, Caesarea, Tyre, Beirut, and Gerasa indicate their continued use into the 3rd–5th centuries AD.²⁷⁷

Type A1 vessels are typically characterized by thin walls, bluish-green glass, and manufacture by free-blowing technique. These features suggest that many examples were locally produced from raw glass rather than imported. Coastal Phoenician workshops, known for primary glass production since the early Imperial period, likely supplied such tableware to local consumers.²⁷⁸ The relatively simple design and limited morphological variation of Type A1 vessels reflect their practical function, most likely associated with the consumption of wine, water, or oil-based mixtures during daily activities or ritual practices.

Moreover, Type A1 vessels are frequently attested in funerary contexts, particularly in sites such as Jable, Latakia / Al-Māliyya Cemetery, and Şāfītā. Their presence in burials suggests a symbolic role consistent with wider Levantine practices, where drinking vessels represent the continuation of social and ritual life after death. The absence of elaborate decoration and the dominance of plain or folded rims further emphasize their functional and symbolic character rather than their association with luxury production.

²⁷⁷ Israeli & Katsnelson, 2006, p 45-63.

²⁷⁸ Freestone, Jackson, & Paynter, 2015, p 130-135.

Comparative evidence from Egypt (Bani Salama) and Jordan (Gerasa) indicates that similar forms remained in use longer in the Eastern provinces than in the West, reflecting a degree of regional conservatism alongside the adaptability of glassmaking traditions in the Eastern Roman Empire. Thus, Syrian drinking vessels represent a blend of Roman stylistic influences and local Eastern production, reflecting participation in Mediterranean cultural exchange and the continuity of local manufacturing practices.

Within Type A1, two sub-types can be distinguished based on morphology and function:

- **Type A1a – Beakers**
- **Type A1b – Goblets**

Most examples were primarily intended for drinking purposes. However, functional variation is evident, as some vessels, particularly within Type A1a, may have served secondary uses, such as toiletry containers (e.g., kohl vessels).

The subcategories are based on the technique of the rim and base. However, due to the limited number of samples found, these classifications should be considered provisional and may require reorganization with future discoveries.

All of them have vertical or nearly vertical sides, and they are usually slightly curved, but not to a great extent. Many of them exhibit a noticeable neck constriction just below a prominent rim. Others do not have a constriction, featuring only a rim that curves outward. Most of these cups are small in size. (Cat nos 1-7)

The pieces in this group are classified according to the following criteria:

5.1.1.1 Beakers/ Type A1a

This form includes spherical slice-shaped bowls and cups, which are the most numerous groups within the bowls, a total of 8 specimens can be classified here. They were made exclusively with cut rim design.

Type A1a vessels (Beakers) are highly homogeneous. The most notable variation is whether the shape of the rim is inward or outward, along with the presence of a cylindrical base or a flat base.

The hemispherical vessels described below can be referred to as cups and bowls. However, we know very little about their use. Most of these vessels have a prominent and often unworked

rim. Their bases are mostly round; however, some are concave. The vessels may be plain or un-decorated.

5.1.1.1.1 Folded Rim, Inward (Type A1a1)

Two pieces of this type of cup with inward-folded rims have been found: the first has a flat base, while the second has a tubular base.

5.1.1.1.1.1 Slightly concave bases: AR 60.1/1298 = Isings 96 a. (Type A1a1a)

This type was found in Jbeibat, specifically in Tomb B (Cat No. 1) and is dated by the excavators to the second and third centuries CE. It features a flat base with a slight upward curve towards the body of the cup.

The other example was found in Latakia / Al-Māliyya Cemetery (Cat No. 3). It has been dated by the excavators to the second century AD and features an inward-folded rim and a flat base, with no decorations.

This type is classified according to AR 53.2. It typically features grooves and fine, scattered grinding lines, and its walls are usually very thin. It is mostly colorless, with the possibility of a light natural hue. The body is pear-shaped and made using the blowing technique.²⁷⁹

5.1.1.1.1.2 Base ring: AR 98.1/1712 = Isings 85b. (Type A1 a1 b)

The provenance of this piece is unknown; it was confiscated in Şāfitā - (Cat No 2). It is dated to the first and second centuries AD and is currently located in Latakia. It features a tubular/cylindrical shape.

There is no clear evidence from the first half of the 2nd century to date. Similar rims from the 1st c. AD exist (though rarely), but they do not belong to this shape.

Other Dates

- This shape is one of the most common forms in Augusta Raurica, dated to approximately 2nd to 3rd c. AD, and sometimes later. According to Rütli, the dating ranges from the second quarter/mid-second century to around 3rd c. AD.²⁸⁰

The production center for the cups mentioned above is not yet known. However, due to the limited information available from all centers, we cannot be certain.

²⁷⁹ Rütli, 1991, p. 62. Catalog 1230-1236.

²⁸⁰ Rütli, 1991.

The dating proposed by Kurtz²⁸¹ for this Category of cups (2nd century) seems too early considering the discoveries that can be dated. Stylistically, these cups exhibit late characteristics: the densely drawn outlines on some of them remind us of other artworks from the late Roman period (such as wheel-cut glass; also compare with late Roman mosaics).²⁸²

5.1.1.1.2 Folded rim, outward and downward: AR 60 = Isings 96/a (Type A1 a2)

5.1.1.1.2.1 Flat or concave bases/ (Type A1 a2a)

Two hemispherical to oval glass cups (Cat. Nos. 4–5) with outward-curving rims were examined. One was recovered from Latakia / al-shīkh ḍāhir Cemeteries. the other is of unknown provenance (confiscation Ṣāfītā). Both have outward-and-downward folded rims, a flat base with slight concavity toward the upper sides and resemble the previously described forms. They were made using the free-blown technique.

As for example (Cat No 4). The first detailed analysis of chalices of Syrian origin in connection with the cologne product can be linked to the name of Barag²⁸³ in connection with the cologne product.

It is worth mentioning that Carchesia has been discovered throughout the entire Roman empire. It has been blown based on metal examples; however, it is unclear whether this form was referred to as Carchesium in antiquity.

After their short production period of a few decades, the production and use of the stemmed chalices themselves with a massive fused base part was already going on in the 4th century, and the type is known in the Eastern Empire, primarily in the Mediterranean region and in today's Central and Eastern Europe.²⁸⁴

AR 60 = Isings 96/a is a very common style from the late 3rd to 5th c. AD. Of course, small rim fragments can be confused with all other late forms, such as bowls and conical glass cups. Decoration can be crucial in determining a more precise dating for the vessel shape; in particular, glass cups with smooth, unadorned walls tend to date to the 4th and 5th centuries AD²⁸⁵

In rare cases, the chipped rim can be confused with glass cup forms from the first century AD; similar rims are particularly seen in AR 34. Therefore, in the context of multiple periods, precise attribution can sometimes be impossible. However, late vessels are typically

²⁸¹ Barag, 1962, p 208-210

²⁸² Harden, 1936, p103 and 124.

²⁸³ Barag, 1962, p 208-210.

²⁸⁴ Stern E. , 1999, p 279; Barag, 1982,

²⁸⁵ Isings, 1957, 143-144.

distinguished by their pitted glass mass and green color. Their rims are often rough and unpolished, which is uncommon in the early imperial period. No prominent decorations have been found here due to fragmentation.²⁸⁶

Other Dates

- The dating according to Rütli ranges from the mid-3rd century to the early 5th century.
- In contrast, similar vessels in Dura-Europos have been dated to before the 2nd century AD, while in Egypt, they appear to have already existed in the second half of the second century.²⁸⁷

Distribution

Throughout the empire; in the Mediterranean region and the East, it does not exhibit the same characteristics as in the West.²⁸⁸

5.1.1.1.3 Unworked rim: AR 60/1278 = Isings 96; AR 34/1055 = Isings 12. (Type A1a3)

In general, it can be observed that the outer surface is duller and duller, while the inner surface, which did not come into contact with the sample, has a glossier surface. After the rim was cracked, in most cases it was polished and polished afterwards, but on many vessels, it can be seen that the rim has a rough surface, there is no trace of subsequent processing. If the cut was not perfect, an uneven, sharply laced surface was created, but in spite of this, the processing of the edge cannot be detected in all cases.²⁸⁹

5.1.1.1.3.1 *Flat or concave bases (Type A1a3a)*

This type was found in the city of Latakia/ al-shīkh ḍāhir Cemeteries. The two specimens (Cat.Nos. 6-7) have unworked rims and flat bases, with no decorations on either shape. They are made using the free-blown technique and are transparent blue in color.

This shape AR 34/1055 = Isings 12 is clearly represented in the 1st c. AD and can be considered the dominant form during the Claudian period and around its midpoint. However, it is not always easy to identify, as the chipped rim and other features, such as ground grooves, can also

²⁸⁶ Dévai, 2012, P 123; Isings, 1957, 143-144.

²⁸⁷ Isings, 1957, 143-144.

²⁸⁸ Fünfschilling, 2015, p 330.

²⁸⁹ Jennings, 2006, p 84-85; Dévai, 2012, p124.

be found in later glass cups from the fourth century (especially AR 60). Therefore, the dating context should be clear when revealing the piece.

This vessel or cup is considered one of the most primitive forms of drinking vessels, made very early from pottery and metals, imitating glass. It is likely that the earliest glass cups of this type were produced using molds from the pre-Roman period.²⁹⁰

Other Date:

The dating according to Rütli ranges from the early Augustan period to the Trajanic era, sometimes extending later.

Distribution

Primarily in the western provinces; the type with the faceted rim is known in northern Italy; it is also present in the East, but less commonly than in the West.²⁹¹

5.1.1.2 Goblets-Type A1b

The other type of the drinking vessels was Goblet. **Type A1b vessels (Goblets)** are represented in the studied material by the example below, the so-called drinking horn. It is a crescent-shaped vessel that developed from the ancient Greek and Roman rhyton. Several examples made of Roman glass date back to the 1st century AD, with a few distinguished by the addition of a faun's²⁹² head at the tip.

This example of **Type A1b** was found in Latakia / al-shīkh ḍāhir Cemeteries (Cat. No. 8). It is the only specimen of this type discovered on the Syrian coast, and the excavators dated it to the 3rd to 4th c. AD. It is transparent blue in color and features a pointed base.

This shape is very similar to conical cups and cups with small bases (Isings 106 and 109). These elements may have influenced its form and decoration, but in all cases, the animal horn must be proposed as the type.

Regarding manufacturing, it is peculiar that **Type A1b** vessels have an unworked rim, even during a period when other glass vessels had rounded or folded rims. There is currently no

²⁹⁰ Isings, 1957, p 30-31.

²⁹¹ Harden, 1936, p 300.

²⁹² Is a half-human and half-goat mythological creature appearing in Greek and Roman mythology. Encyclopaedia Britannica. Retrieved 2025-09-29.

adequate explanation for this fact. It may have been inferred from the sharp edges of animal horns.²⁹³

5.1.2 Type A2- Bowls

The glass vessels extracted from the Syrian coastal sites exhibit a consistent simplicity in shape, characterized by semi-spherical or bell-shaped bodies with either plain or folded rims. These vessels, corresponding to Isings forms 87 and 85, as well as AR types 19 and 55, were widely distributed throughout the Eastern Mediterranean during the 2nd to 4th centuries AD. Comparative evidence from Egypt (Bani Salama, Wadi Natrun), Lebanon (Beirut), and Jordan (Gerasa, Jerash) indicates that **Type A2 vessels** remained in use longer in the East than in the Western provinces.²⁹⁴ Their preservation of simple forms and modest manufacturing suggests they were utilitarian vessels produced locally, intended for serving food, mixing liquids, or for everyday household uses.

Some examples, particularly those found in funerary contexts such as at Banias and Jbeibat, may hold ritual significance, potentially used as offerings or food vessels in burial assemblages, similar to practices observed in Palestine and Egypt. The prevalence of the free-blowing technique and the quality of the bluish-green Levantine glass supports the hypothesis of regional production, likely supplied by secondary coastal workshops utilizing raw glass from Syrian or Phoenician furnaces. Overall, these vessels embody the continuity of local glassmaking traditions and the adaptability of Roman styles within the social and economic framework of the Eastern provinces, where functional and cultural symbolism often intertwined.²⁹⁵

The **(Type A2) (B form)** is a group of bowls with indented sides, with a circular base and a rounded base and without base ring.

The truncated small bowls with depressed side walls were spread in the western half of the Roman Empire. Their characteristic feature is the curved, slightly protruding, cut-edge design. Their quality is not very good; they were usually made of raw material full of bubbles and stretches, often made of base glass interspersed with impurities. They were made of transparent glass without exception.²⁹⁶

This category divided into two main groups

²⁹³ Isings, 1957, p 142.

²⁹⁴ Jones, 2014, p 245-260

²⁹⁵ Nenna, 2015, p 1–22; Israeli & Katsnelson, 2006; Jones, 2014, p 245-260.

²⁹⁶ Dévai, 2012, 124.

5.1.2.1 Deep bowls with base ring.(Type A2a)

A total of four specimens is known from Syrian coast graves were classified primarily based on rim forming technique (Cat. Nos. 9-10-11-12), and secondarily on other differences in production techniques or decoration.

5.1.2.1.1 *Rounded rim with convex body and base ring. .(Type A2a1)*

This style was recovered from Latakia in the Al-shīkh ḍāhir area. (Cat. No 9), and it is classified as AR19/810 = Isings 87. The rim is rounded, forming a partially tubular circular rim for the mouth with an internal lip. The body is bulging and curves inward to form a low, integrated tubular base ring, with a flat bottom showing traces of a pontil and a slight kick. It is transparent with a yellowish-green hue.

Other Dates

- Dating according to Rützi Possibly from the Claudian to Severan periods. (End of the 2nd to 3rd c. AD).²⁹⁷

5.1.2.1.2 *Folded rim inward with Bell-Shaped body and base ring. .(Type A2a2)*

Cat. No. 10 was found in Ṭartūs, and is now in the National Museum, Damascus. Made by the blowing technique, it is a bowl with double-curved, bell-shaped walls and a flared rim folded outward. Classified as AR 6.2= Isings 87, it is dated by the excavation report to the second–third centuries AD. The glass is colorless or of natural hue. This type, with the high cut base ring, is rare. Scholars²⁹⁸ attribute similar vessels from France to production in the Eastern Mediterranean²⁹⁹

Other Dates

Uncertain, likely mostly dating to the third century.

- Dating according to Rützi generally long dating ranges, between 1st to 3rd c. AD³⁰⁰

5.1.2.1.3 *Folded Rim outward with Bell-Shaped Body and base ring. .(Type A2a3)*

Cat. Nos. 11–12 were recovered in Ṭartūs (precise findspots unknown) and are housed in the National Museum, Damascus. Made by the casting technique, each is a vessel with double-curved, bell-shaped walls and a flared rim folded outward. Classified as Isings 2, they are dated by the excavation report to the second–third centuries AD.

Dating according to Rützi: Not more precise than the 1st century AD; 10-30 AD.³⁰¹

²⁹⁷ Fünfschilling, 2015, p 284; Isings, 1957, p 104; Rützi, 1991, p 2, 39 cat. 810

²⁹⁸ Nenna, 2015, p 1–22.

²⁹⁹ Fünfschilling, 2015, p 362.

³⁰⁰ Foy, Picon, Vichy, & Thirion-Merle, 2003, p 276.

³⁰¹ Lightfoot, 2017, p 108; Dussart, 1998, p 246; Leljak, 2012, p 126; Harden, 1936, p 345; Fleming S., 1997, p 29; Smith, 1957, p 102; Rützi, 1991, p 729–733; Price & Cottam, 1998, p 193–196.

5.1.2.2 Deep bowls without base ring (Flat or concave ring) (Type A2b)

5.1.2.2.1 *Folded rim inward. (Type A2b1)*

This example (Cat. No. 13) classified under AR 55.1. A low body, often with a very large diameter, typically having a base that is slightly rounded or flat, with various decorative variations, making it difficult to distinguish from the AR 56 type. It is monochromatic, colorless, or pale yellowish-green to light olive green. It is free-blown, mold-blown, and then partially blown.

Other Dates

Dating according to Rütli: There are almost no contexts accurately dated; some materials date back to the early Middle Ages and the modern era. However, dating from other sites supports this.

Distribution: Primarily in the west; decorative carved models are common in Rome; less common in North Africa and the Eastern Mediterranean.³⁰²

They are also very rare in bronze or silver, as seen, for example, in the silver treasure of Kaiseraugst.

Decorative glass vessels were likely large, similar to silverware. Therefore, richly decorated vessels are commonly found, notably in Rome, Italy, and Trier, Germany. Occasionally, older vessels of the same shape, but undecorated, have been discovered.³⁰³

³⁰² Rütli, 1991/2, 64 Catalogue 1249-1253.

³⁰³ Goethert-Polaschek, 1981.

5.1.3 Type A3- Lids

The glass covers discovered along the Syrian coast are relatively rare but provide valuable evidence of the use of specialized vessels in both domestic and funerary contexts. Their shapes, resembling plates and concave discs, align with known forms throughout the Eastern Mediterranean during the 3rd to 5th centuries AD, particularly in Egypt, Cyprus, and southern Levant. These similarities suggest that **Type A3 vessels (Lids)** were used to protect small jars, ointment vessels, or cosmetic containers, safeguarding precious oils, perfumes, and ointments. While there are decorated or gilded examples in Cyprus and Israel (such as in the Nahariya necropolis), the undecorated Syrian models reflect local adaptations of these regional types. Their simple design, thin walls, and bluish-green color indicate local production in secondary workshops utilizing raw Syrian Palestinian glass. The presence of these covers in both household collections and burial contexts suggests a dual function practical storage and ritual use, consistent with prevalent practices in the Eastern Mediterranean.

Overall, **Type A3 vessels** highlight Syria's participation in the regional glass economy, where forms and functions spread widely while each province maintained distinctive local manufacturing characteristics and a temporal continuity that surpasses Western classifications.³⁰⁴

There are several types of covers used to place over the mouths of vessels, with the most common being the bowl-shaped covers, which are frequently found on swollen ash jars. Another type is a small plate-shaped cover that was used for deep vessels or cups. This latter type of cover is often decorated with designs painted on its underside. Only two examples of these covers have been found on the Syrian coast: the first is shaped like a glass neck, and the second is plate-shaped. No similar examples have been discovered in excavations at well-known sites such as Augusta Raurica or others. Most of the pieces found in museums are from the East or Egypt.³⁰⁵

These covers were either specifically made to fit over vessels or were repurposed from remnants of other vessels, for example, being used as covers or bases for cups or small plates.³⁰⁶

³⁰⁴ Nenna, 2015, p 1–22; Israeli & Katsnelson, 2006; Jones, 2014, p 245-260.

³⁰⁵ Whitehouse, 2001, p 264.

³⁰⁶ Fünfschilling, 2015, p 185.

5.1.3.1 Lid – Small Saucer/ (Type A3 a)

This type of cover was found in Latakia / Al-shīkh dāhir (Cat. No. 14), and is formed using the casting technique. It is transparent with a yellowish tint.

No classification for this type has been found in either AR or Isings, but the closest example is AR 27, which is a flat circular disc with a defined edge, believed to be a cover. It can be identified and has been determined to be a cover based on larger fragments, featuring a rounded, completely flat edge. It is monochromatic, molded, and has a cut groove.

There are covers of this type of Roman glass that are reverse-painted, which is the most common type. The decoration typically consists of a single figure painted in black and adorned with a mix of red, brown, green, yellow, and possibly blue. Among the figures are Venus, Luna (or Semele), Victory, Cupid holding a bunch of grapes and a sickle, and a woman carrying two bunches of grapes noted that covers of this shape, decorated or undecorated with reverse painting, have been found associated with vessels, cups, and jars. Most examples discovered in well-known locations are attributed to Cyprus. They are generally dated to the 2nd century, but similar covers, also decorated with reverse paintings, have been found made from materials dating to the mid-3rd to 4th centuries AD in a cemetery in Nahariya, near Acre, Israel³⁰⁷

Other Dates

The precise dating is uncertain.

- Dating according to Rützi: Possibly the 1st c. AD.

5.1.3.2 Bottle-Neck Lid/ / (Type A3 b)

This type of cover was found in Latakia (the exact location of its discovery is unknown—possibly confiscated) and is housed at the National Museum in Damascus. (Cat. No. 15). It is monochromatic, mostly natural in color, and formed using the blowing technique.

This shape is classified according to AR 180 = Isings 66b. This type of cover is common and has a bottle neck shape. The cover may be somewhat flat or conical, with a hollow, cylindrical handle that typically ends in a small opening at the top, featuring an inward-folded edge that is horizontally flat. The discoveries that can be dated come from:

Other Dates

No definitive dating is possible.

- Dating according to Rützi: From the Claudian/Neronian period to the 2nd century.

³⁰⁷ Barag, 1962, p 264.

- Trier/Germany: Late 1st century to early 4th century, 1917.³⁰⁸

Distribution

Similar to the distribution of corresponding vessels/jars.³⁰⁹

5.1.3.3 Lid – Shaped as a Plate/ / (Type A3 c)

This cover was found in Jable/Jbeibat, (Cat. No. 16). It is colorless with a greenish tint, featuring an inverted lip; a rounded edge; and a wide, concave top.

There is no classification for this type in Isings - AR. This type is dated to the mid-imperial period, specifically the 2nd and 3rd centuries AD. It was common for covers to feature designs typically depicting either a winged Eros or a recognizable female figure identified as Aphrodite; however, this cover retains no traces of any painting.

A few examples have been found at sites in northern Israel and in Hauran, Syria.³¹⁰

5.1.4 Type A4- Plate

Plates and flat vessels represent one of the least-represented categories within the Syrian coastal glass collection, yet they are essential for understanding table manners and production links throughout the Eastern Mediterranean. These vessels, typically made using molding or free-blowing techniques with slightly inverted rims and flat bases, correspond to AR 18 = Isings 5 and 18, which have been well-documented in the 1st to 3rd centuries AD in the Western Roman Empire.

However, similar examples from Alexandria, Apollonia-Arsuf, and Jerash indicate that **Type A4 vessels (Plates)** persisted in the East until the 4th and 5th centuries AD, reflecting temporal continuity and the preservation of Eastern Roman glassmaking traditions.³¹¹

The use of molding techniques and the transparent or light blue glass composition of Syrian samples closely align with Egyptian and Levantine production traditions, particularly workshops known along the Nile Delta and the Phoenician coast. Functionally, **Type A4 vessels** were likely used for serving food or displaying offerings, rather than for luxury or decorative purposes. The discovery of some examples in funerary collections suggests a symbolic role, possibly associated with providing food or drink for the deceased.

Overall, Syrian plates and flat vessels illustrate a blend of Roman stylistic influences with local Eastern manufacturing practices, emphasizing the region's integration into Mediterranean

³⁰⁸ Goethert-Polaschek, 1981.

³⁰⁹ Rütli, 1991, 185/2, Cat 449; Foy, Picon, Vichy, & Thirion-Merle, 2003, p 244.

³¹⁰ Lightfoot, 2017, p 292-296.

³¹¹ Israeli & Katsnelson, 2006; Jones, 2014, p 245-260; Whitehouse 2001, p 264 no. 859; Harden et al. 1987, 270 no. 148.

exchange networks and its active role in the production and consumption of glass during the Late Roman period.³¹²

Generally, **Type A4 vessels** are very uniform, and all have base rings and outplayed sides, more or less straight in the outer line. They have been subdivided primarily according to rim or base technique. Most of the dishes were made with mold pressed technique. Dishes were widely common, and it had sometimes very large dimensions, and comes in a variety of colors: green, blue, black, etc.

The term “dishes” encompasses all flat tableware that cannot be classified as containers. It is generally divided into two distinct groups:

- **Type A4a – Dish (Oval-shaped)**
- **Type A4b – Plate (Round-shaped)**

The popularity of these dishes is evident in the numerous fragments found in nearly every household from the period of Constantinople and beyond in Karani during the fourth and fifth centuries.³¹³

Only one example from our material, A dish was found in Țarțūs (Cat. No. 17), dated to the 2nd- 3rd centuries AD. It is colorless with a slight blue tint. The edge is a slightly inverted vertical round, short, and concave on the body side, transitioning into a long tubular ring with an integrated base. Its bottom is semi-flat, thick in the center, featuring a central bridge scar., Made with Mold-pressed technique.

This type is classified as AR 185 = Isings 5. Generally, this type of dish can be either a very small plate (approximately 10 cm in diameter) or a large plate (approximately 46 cm in diameter) with its base.

Most of these dishes are made using the casting technique.

Distribution

In the western provinces, Egypt, and Syria.³¹⁴

³¹²Nenna, 2015, p 1–22; Israeli & Katsnelson, 2006; Jones, 2014, p 245-260.

³¹³ Lightfoot, 2017, p 117; Dussart, 1998, p 244.

³¹⁴ Harden, 1936, p 49.

5.2 Storage containers – Type B

The collection of glass bottles extracted from Syrian coastal sites constitutes one of the most significant functional components of glassmaking, primarily associated with the storage, transport, and distribution of liquids such as oils, perfumes, and medical preparations. Formally, these vessels are characterized by cylindrical or pear-shaped bodies with narrow necks and slightly curved, simple rims, which align with production styles in the Eastern Mediterranean between the 2nd and 5th centuries AD. In contrast to similar Western models, which tend to cluster in the early imperial period,³¹⁵ comparative materials from Apollonia-Arsuf, Beirut, Tyre, and Jerash demonstrate a long continuity of these bottle forms in the East, reflecting a conservative regional market and stable consumption patterns³¹⁶

Analytical studies of the raw glass composition suggest that the Palestinian Syrian coast served as a major production area for natron-based primary glass, which was later distributed to nearby secondary workshops for vessel blowing.³¹⁷ The prevalence of bluish-green colors, the presence of small trapped air bubbles, and evidence of free-blowing techniques in the Syrian examples all support their attribution to regional secondary production rather than importation. Additionally, the frequent discovery of these bottles in burial sites indicates their symbolic role in offering perfumes and anointing oils during funerary rituals, a practice widely documented in burial customs across the Levant.

Overall, these glass bottles illustrate the integration of Syrian coastal workshops into a broader economic and cultural network in the Eastern Mediterranean, while also reflecting local technological continuity and distinctive regional consumption habits. Their persistence beyond Western temporal boundaries emphasizes the importance of evaluating Syrian glass within its specific chronological and cultural context in the Levant, rather than relying solely on classifications derived from Western regional materials.

Closed container forms serving liquids: The second group of material (**Type B**) is that of beverage serving and liquid bottles. This group includes jugs, jars, i.e. all closed forms of vessels with handles that were used as storage ware.

This group also includes vessels that are varied in size. While the larger forms may have served for serving drinks and wine, the smaller ones may have been containers for other liquids and oil. The distinction between the jug and the bottle is clearly the design of the spout, but it is

³¹⁵ Isings 1957.

³¹⁶ Israeli & Katsnelson, 2006; Jones, 2014, p 245-260.

³¹⁷ Freestone, Rosen, & Hughes, 2000, p 1141-1152.

more difficult to determine which of the vessels used for the storage of beverages in a closed form is called a jar and which form is called a bottle in the case of glass vessels.³¹⁸

The research included different types of bottles that seems to have a funeral function:

5.2.1 Bottle-Flasks without handles- Type B1

This Category includes all glass forms shaped like bottles, with bodies that are more elongated than flasks, but without handles, thus distinguishing them from single- and double-handled bottles.

The samples are very similar in their general type and are classified according to the shape of the neck and body based on their main design. They are then categorized according to the shape of the base and any decorations, if present. They have been divided according to the same principles that govern the classification of flasks.

5.2.1.1 Short neck, ovoid body, cylindrical or tapering body- Type B1a

5.2.1.1.1 Rounded or Pointed Base/Plain/ Type B1a1

A total of 17 pieces (Cat. Nos. 18–34) were recorded. All lack decoration and share a short neck, cylindrical body with convex sides, a sloping shoulder, and a round or pointed base that is centrally concave. Eight originated from Bānyās (Rās al-Nabe'e), one from Jbeilat, one from the Ḳazar necropolis in Ṭarṭūs, and seven from various sites (Ṭarṭūs and Latakia, likely confiscated).

Rims vary: horizontally folded, folded inward, or folded outward. Necks are short, cylindrical or funnel-shaped. The group corresponds to Isings type 102 and comprises two subtypes:

- A) Bottle rim folded outward then inward and flattened: (Cat. Nos. 18 -19 - 23 – 24- 25- 26- 27- 29- 30- 31)
- B) Bottle flask with a funnel-shaped mouth with an inward-folded or rounded rim, typically with a thick roll below the rim: (Cat. Nos. 20-21-22-28)

All of these previous forms have a round base and resemble the following three models, which have a pointed base and an oval body, in terms of glass quality, color, and manufacturing technique. They appear to be made using the same technique due to their significant similarities.

³¹⁸ Lith & Randsborg, 1985, p 424; Dévai, 2012, p 175.

5.2.1.2 Tall neck and cylindrical or tapering, rectangular body- Type B1b

Three examples of the type with a long neck and a cylindrical, pointed, or rectangular body were found. Two of them are of unknown origin from Țarțuș, and one is from the financial cemetery in Latakia.

- *Rounded or Pointed Base with thumb indents, vertical corrugations, or pinched ribs*

Cat. No. 35 is classified AR 205 = Isings 9. It has a pointed (beak-like) base and a narrow mouth. This type is defined by the pointed projection at the base; related variants include rectangular and bulbous forms without a projection. In some examples a small basal handle can resemble a dove's beak (AR 123 = Isings 111), but here the wall extending from the handle is irregular: the front is more bulging than the base of a bird's head. The handle's tip is positioned at the top of the vessel's body.

According to pieces similar to this one, it appears to date back to the early centuries, approximately 2nd c. BC. But they classified it as a Roman piece. This type is made using the core formed technique.

5.2.1.2.1 *Flat or concave base/ Type B1b1*

This bottle is classified according to AR 144 = Isings 84 (Cat. No. 36). The body is blown in a mold, while the neck and rim are designed freely (half mold). In most types, there are markings on the base, and side markings are rare.

These vessels are containers for specific liquids or solid materials.

This bottle is called a Mercury bottle, and its name derives from the frequent depiction of the god Mercury on its base, along with occasional representations of a ram, rooster, or turtle. Typically, there are initials in the four corners of the square base. The bottle may be made of thin-walled glass; however, most are thick-walled. Since most bottles are yellowish-green in color and their shape closely resembles the letter W, it is highly likely that they share a common center. They may have contained a special ointment or perfume. This bottle sometimes appears in contemporary sculptures, as seen in a prominent relief on a tomb in the J Sens Museum (number 116, Esprandieu 2797, hexagonal bottle).³¹⁹

Other Dates

Isings. Approximately 2nd- 3rd c. AD,

³¹⁹ Dévai, 2012, p 183.

Distribution

Primarily in the west, with regional variations (different trademarks).³²⁰

5.2.1.3 Broken and Missing Body- Type B1c

5.2.1.3.1 *Flat or concave base with corrugations on body/ Type B1c1*

This type of bottle was found in Şāfitā (Unknown source confiscations) (Cat. No.37). It has a broken and missing cylindrical body with a flat base, and the shape of the neck and rim is unknown.

There is no classification for it in either Isings or AR, but this type was mentioned by Harden in Karanis, Egypt, where it matches this type with a missing body as well.³²¹

5.2.2 One Handle Jug- Type B2

For it cannot be stated unequivocally that every bottle that has a handle is a jar and that does not have a bottle is a flask. In addition to the presence of handles, the neck and rim design must also be taken into account. It is enough to think of the prismatic bottles, which were registered as the most characteristic storage and transport vessels of the Romans, which, although they have handles, cannot be classified as jugs. So the situation is far from simple, but generally speaking, **Type B2 vessels** have a warmly rounded, inward folded, funnel-shaped rim design, and of course, they also have handles and usually a base ring.

The rim design of the bottles. Although there are also hot-rounded and cut rims, they are usually narrower, they do not have a base ring.

As scholars³²² have noted, the separation of the containers used for serving liquids and the containers for transports or storage the liquids is one of the most problematic tasks in the classification, since there is a great deal of permeability between the two groups³²³

There are only two examples of these One-Handle Jugs on the Syrian coast, and the findings indicate that **Type B2 vessels** was common in Roman Egypt as well as in other parts of the empire. It is likely that some varieties, with more elaborate shapes and vessels, served as wine or oil pitchers for the table, whereas the simpler forms were used to transport wine and other liquids from one location to another. The Category is divided into two main groups.

³²⁰ Harden, 1936, p 227-228.

³²¹ Harden, 1936, p 228.

³²² Lith & Randsborg, 1985, p 424- 430

³²³ Ibid, p 424- 430; Dévai, 2012, p 175.

A. Ovoid or bulbous jugs (**Type B2a**)

B. Cylindrical bottle-jugs (**Type B2b**)

These two main groups are generally further divided into subcategories based on minor variations in shape and manufacturing technique. Decoration is rare, limited mainly to raised threads and coils, except for some vessels in Group B (Cylindrical bottle-jugs) that display cut-away or scratched patterns on their bodies. (The Ovoid or bulbous jugs) of Group A resemble certain flasks in form and, in some cases, differ from them only by the presence of a handle.

In the case of the same shape, however, I did not classify the objects into separate types only because of their difference in size. While it is true that they were representative, and in addition to noting that both the smaller and larger jar molds were used to serve liquids, it is likely that only the larger ones were suitable as wine pourers, while the smaller ones were more likely to be used to hold oil, wine, or other liquids. The number of jugs and bottles increases again after their popularity in the 1st century, they become the glass symbol of the Roman blown for the late Roman period, so common finds. Their success rested on two pillars. On the one hand, the enormous craftsmanship and expertise possessed by the glassblowers, and on the other hand, the increased demand for vessels for the use of graceful wine.³²⁴

Aside from variations in neck shape, the primary differences in Group A types lie in the rim and the lip. The lip may be circular, trilobate, or funnel-shaped, while the edge can be folded or rounded.

5.2.2.1 Ovoid or bulbous jugs – Isings 58 (Type B2a1)

5.2.2.1.1 *Funnel neck- Folded rim, inward/ (Type B2a1a)*

Cat. No. 38 was found in Latakia /al-shīkh ḍāhir Cemeteries and dates to the 2nd century AD. It corresponds to Isings 58 and is colorless with a faint green-blue tint; the handle shares this color. The vessel has a wide, simple rounded rim with a thick beveled fold beneath; a broad, flaring mouth; a very short, slender neck; and a curved shoulder that merges smoothly into a large, bulging body. The base is concave. The strap-like handle is attached at the shoulder, pulled upward and outward, then turned horizontally inward, pulled upward again to form a

³²⁴ Dévai, 2012, p 176; Stern, 1999, 441.

pronounced pointed thumb-rest that projects backward at the top and continues along the rim and lower side of the mouth.

This shape, which is an oval-shaped pitcher with a wide mouth, is not very common. The neck and body are not separate; the neck tapers gradually into the body. It is known from:

- Specimens from Pompeii housed in the Naples Museum.
- Finds from Vaison recovered from an Antonine-period grave.³²⁵

5.2.2.2 Cylindrical bottle-jugs – Type B2b

5.2.2.2.1 *Plain with rounded rim/ Type B2b1*

Found in Ṭartūs (either confiscated or purchased), exact discovery site unknown. Now in the National Museum, Damascus (Cat. No. 39), dated to the 2nd–3rd century AD. Corresponds to Isings 126, a transparent green-blue ware; the handle shares the same color. The rim is folded outward, then downward, upward, and outward again, with an external rounded lip. The neck is short, cylindrical, and slightly convex; the shoulder is rounded and slopes downward. The body is mildly convex, tapering gradually toward the base, which is pressed inward and shows a central bridging scar. The strap-like handle is attached to the shoulder with large, widely spaced saddle pads; it is pulled upward, folded horizontally, and pressed against the lower rim and the top of the neck.

These jugs resemble the form of Isings 121, yet no classification for them exists in the AR. Their neck may be somewhat broad, and the handle is either faceted or rounded. They are often decorated with cut-away motifs on the wheels. Dated samples are rare, and the type appears to have originated in the late 3rd century.³²⁶

³²⁵ Isings, 1957, p 153; Price & Cottam, 1998, p 158.

³²⁶ Isings, 1957, p 93-94; Harden, 1936, p 234.

5.2.3 Two-Handles flasks and bottles- Type B3

There are lots of sizes for jugs. It was made with two handles attached to the rim and the shoulder. The function of these jugs is to contain liquid, such as oil, perfume or might be, they have the same function as unguentaria.

This Category is small, with only four specimens found on the Syrian coast. It includes an important type: the spherical oil jar (the German “Delfinische” jars) and long-necked, two-handled jars that also served as oil containers. The Egyptian examples of this type are relatively uniform and were used throughout the Roman world.

5.2.3.1 Amphoras Type- Type B3a

Two examples of this type were found in Latakia/al-shīkh ḡāhir Cemeteries. they have not been dated by Syrian scholars (Cat. Nos. 40–41). The vessels correspond to Isings 15, AR 165, and are identified as large two-handled bottles (amphorae). In this study we followed Harden’s classification, assigning them to broad typological groups based on overall shape and not pursuing finer distinctions because of limited information on these objects, their date, and precise provenance.

This large, two-handled bottle type (amphoras) was very common among tableware. It was often decorated with colored glass and ornamental motifs. The form originated in the Tiberian-Claudian period, spread widely during the Claudian-Neronian era, and remained in use until the end of the 1st c.AD.³²⁷

These jar types display various rim shapes, the most common being a rounded rim or one that folds inward.

The jars exhibit more complex rims that fold outward, then downward, upward, and outward again. The handle is typically triangular and may terminate in a serrated tip.

It typically features a piriform body with a narrow rim; it is usually solid and colored. Larger and smaller vessels exist, but their characteristics remain the same: a solid, often single-color hue, and colored. The ware is freely blown, applied, and blown; it may feature spots or bands, and can be decorated with mold-blown patterns. Handles in other colors are also possible.

Distribution: It is widespread in the western provinces at older sites, while in the eastern provinces it is rarely documented.³²⁸

³²⁷ Isings, 1957; Stern, 1977, p 84-85.

³²⁸ Price & Cottam, 1998, p 206; Rütli, 1991/2, 162 cat. 3726–3737

5.2.3.1.1 Rounded or pointed base/ With corrugations on body/ Type B3a1

Found in Bānyās / Ras el-Nba (Cat. No. 42) dated to the 2nd–3rd century AD. The rim is dark amber, inclined inward and finishing in a rounded lip turned upward. The neck is cylindrical and extends downward; the shoulder slopes and has a slightly serrated surface. The body is pear-shaped, with a base-mounted knob and two rod handles attached to pads on the shoulder. The pads are pulled vertically, then bent inward and downward and pressed against the neck just below the rim over a decorative groove with fourteen evenly spaced flat vertical channels encircling the vessel and terminating at mid-section. The glass is relatively thin.

Another example from Ṭarṭūs (Cat no 43), made by the core-formed technique, has a long ovoid body tapering to a pointed end with an applied base knob. Spirals at the upper and lower sections are plain; the sides are skillfully modelled into a consistent narrow festoon design.

The first analogue corresponds to AR 189.2 = Isings 91, a pseudo-amphora shaped like a bunch of grapes or shells; variants occur without handles, with a single handle, or with two handles. No exact counterpart for the shape of Cat. No. 43 appears in AR or Isings, but the closest analogues are two known examples dated by Rütli to the 2nd century–early 3rd century.³²⁹

5.2.3.2 Oil Flasks with globular bodies, tall-necked and ring handles- Type B3b

5.2.3.2.1 Without constriction at base of neck/ Type B3b1

Found in Jbeibat and is dated by Syrian scholars to 2nd–3rd c. AD, (Cat. No. 44). A transparent blue jug with two side handles of the same colour. The lip is double-folded outward, then downward, and finally inward, forming a double rim. The neck is medium-length, slender, cylindrical, and appears mounted on the spherical body. The body is a rounded sphere with a concave base. No exact comparandum exists in the AR or Isings corpora; the closest analogue is AR 165 = Isings 15, a Duota or spherical oil jar (German “Delfinische” type).

This bottle type resembles the two-handled Duota jug, which is distinct from the handle-less vessel classified as Isings 103. The Duota has a straight, broken rim; a tubular neck; a collar wrapped with broad threads; two circular handles attached by three bars; a folded-handle base; a spherical body; and a connecting thread ring.

³²⁹ Rütli 1991/2, 164.

The Duota was used throughout the 4th century AD. Typically found in simple, naturally transparent to colorless blue; freely blown. Cutting lines are possible. This type is rarely covered with threads or equipped with handles; the neck may be pressed.³³⁰

In Great Britain there is a variant with an inward-folded rim, handles with their plates are pressed at the base, and a base ring folded from the wall.

5.2.3.3 Aryballos / Diota- Type B3c

This piece (Cat. No. 45) is classified according to the model AR 151.1 = Isings 61 and is one of the most common types of vessels from the early imperial period.

The model is characterized by a low body instead of a spherical one, and it can only be identified using more complete samples.

In the AR151.1 type, the edge is folded and resembles a mushroom shape, whereas in our model, it has an unworked edge. The handle rests on the body, extending along the neck to the edge and then returning to the base of the body. Remnants of thread are often seen on the handle, resulting from the removal of the tool from the newly fixed handle. The end of the handle resting on the body can also be folded back; sometimes, it extends long and is pressed several times. In less common cases, the handle rests on the shoulder and is directed toward the neck without reaching the edge. Generally, the handle is shaped like an ear or an opening. Dolphin handles are primarily known in the northern provinces. In the Mediterranean region, the handles are also ring-shaped but are more delicate and often do not connect to the edge.

The base is usually round to slightly flat and often has thick walls, with a ring base rarely suggested. It is made using the free-blowing technique³³¹

Other Dates

- Dating according to Rützi: from the Claudian/Neronian period to the mid-3rd c. AD, occasionally extending beyond that.

5.2.4 Jars- Type B4

These are the vessels with narrower mouths compared to the maximum diameter of the container than those of bowls and cups, while their necks are shorter than those of bottles.

They can be divided into two groups:

G.1 Small jars with a short, constricted neck and a bulbous body; some of these may have been used as drinking vessels, but the majority were likely used as containers.

³³⁰ Mustafa, 2015, p 210.

³³¹ Stern, 1995, p 388-392; Isings, 1957, Form 61-63.

G.2 Small jars with ovoid or drop-shaped bodies; these were probably used to hold cosmetics. All small jars in this group have a folded edge, a narrow neck, and a drop-shaped body with tapered sides that extend downward.

5.2.4.1 Small constricted neck, bulbous body- Type B4a

This type (Cat.No.46) is present in the National Museum in Damascus, but their find location in Latakia is unknown. It is dated between the second and third centuries AD.

There is no classification for these pieces within AR-Isings,

Other Dates: Mid to late imperial period, from the third to the mid-fourth century AD.

5.2.4.2 Small jars with ovoid or drop-shaped bodies/ Trick bottle- Type B4b

Five examples (Cat. Nos. 47-51) were recovered from Bānyās Rās al-Nabe'e, Kwrnīsh al-Bāḥḍr cemeteies, al-Māliyya cemetery, and al-Ṭabiyyāt. Four are classified as AR 113/2132 = Isings 68, and one (from al-Māliyya cemetery) as AR 114(5).

These these are small, blown vessels with cylindrical walls that taper toward the rim and a slightly flattened base. The mouth is flared; while the typical form shows the edge folded back into a funnel-like profile, the examples in our assemblage have an unworked edge folded outward. The glass is usually natural-colored or colorless. Dating (Rütti): Claudian/Neronian period to the mid-3rd century.³³²

5.2.5 Flask- Type B5

The term *flask* refers to all bottles with long, narrow necks and bulbous bodies, but without handles. They are distinguished from jars by their taller necks and from bottle flasks by the width of their bodies. These vessels vary significantly in size; some examples measure less than three centimetres in height, while others exceed twenty-five centimetres, with many intermediate sizes existing within these limits.

It is likely that large flasks were primarily, if not exclusively, used as tableware for storing wine and other liquids. In contrast, the smaller flasks are so small that they could have been utilized for cosmetics. However, in principle, they do not form two distinct groups. The same shapes and techniques occur in both categories. Therefore, it was not deemed advisable to separate them based on size in the catalogue. All flasks feature narrow necks, with flasks spaced somewhat apart and bulbous bodies that range in shape from inverted pear to spherical. They have been divided into four main groups:

³³² Rütti, 1991/2, 107 f. catalogue 2111-2137.

- **Tall-necked flasks with a constriction at the base of the neck (Type B5a)**
- **Tall-necked flasks without a constriction at the base of the neck (Type B5b)**
- **Short-necked Flasks without constriction at the base of the neck and a pointed oval body (Type B5c)**
- **Cosmetic flask (Type B5d)**

The only difference between the first and second groups is the presence or absence of a constriction: in both groups, the neck is relatively long and is typically cylindrical for at least part of its height.

Within these groups, further subdivisions are made: first, based on the base technique; second, based on the mouth technique; and third, based on decoration.

5.2.5.1 Tall-necked flasks with a constriction at the base of the neck- Type B5a

- Plain base, usually more or less concave
- Rounded rim

5.2.5.1.1 Plain / Type B5a1

Six examples (Cat. Nos. 52–57) were recovered from Baniyas, Jable, and Latakia, they date to the 2nd–3rd century AD. These are long-necked flasks with a constriction at the base of the neck, a typically slightly concave standard base, and a rounded rim. One example (Cat. No. 57) has a rounded (pear-shaped) body.

The typical form (AR 141 = Isings 16) of the 1st century AD has a conical body with a constriction at the base of the neck (occasionally absent). The rim is folded outward and inward, then flattened to form a triangular or rounded lip. These flasks are often decorated with horizontal wheel-cut bands, range in height from about 6–8 cm and 14–23 cm, and are usually of relatively thick bluish-green glass. This type likely originated in the second quarter of the 1st century and continued in production through the end of that century.

The bulbous flask (Cat. No. 57; AR 148 = Isings 101) has a long neck and rounded rim; while it may appear conical in some instances and can display a constriction at the neck base, it first appears in the 3rd century and is mainly characteristic of the 4th century.

Other Dates

According to Rütli: the dating ranges from the late 1st century to the first half of the 2nd century (for the earlier type) and from the late 3rd century to the early 5th century (for the later type).

In other locations, such as Trier, Germany, the dating spans from the early 3rd century to the late 4th century.³³³

5.2.5.1.2 *Thumb-indented or flat-sided bodies/ Type B5a2*

A total of three lentoid bottles (Cat. Nos. 58-60) one from Jable, the other one from Bānyās Rās al-Nabe'e, and the last one from Latakia/ al-Māliyya cemetery, 2005

This lens-shaped flask is one of the rare forms found in archaeological discoveries, making it difficult to date, and this shape has not yet been documented in Augusta Raurica. According to Sylvia³³⁴, it has also been found in other Roman settlements or graves in Switzerland. If it dates from the late antiquity period, it is associated with goods imported from the Mediterranean region or the Rhineland.

Origin: primarily the Near East and Cyprus, with rarer occurrences in the western part of the Roman Empire.³³⁵

5.2.5.2 Tall-necked flasks without a constriction at the base of the neck- Type B5b

5.2.5.2.1 *Plain base, typically more or less concave/ Type B5b1*

A total of 15 pieces of this type of long-necked flasks without any constriction at the base of the neck have been found. They feature a standard base, which is usually somewhat concave. The variations among them are primarily in the rim, which can be either rounded, folded inward, or folded outward and downward. The distribution is as follows: 1 in Jable, 7 in Latakia, and 7 in Ṭartūs, dating to 2nd - 3rd c. AD. Of these, 14 have a plain body without any decorations, while 1 is adorned with a blown mold depicting a human face.

5.2.5.2.1.1 *Rounded Rim/ Plain- Type B5b1a*

AR 128.1

A total of 6 pieces (Cat. Nos. 61-66) classified as AR 128.1 have been found. These are long-necked flasks without any constriction at the base of the neck, featuring a standard base that is usually somewhat concave and a regular rounded rim.

³³³ Rütli, 1991/2, 125 cats, 2453-2457.

³³⁴ Fünfschilling, 2012, p 185.

³³⁵ Dussart, 1998, p 170; Whitehouse 1997, p. 128, no. 202.

These pieces are classified as AR 128.1 and do not have a counterpart in Isings. They feature a tubular body with a slightly flat base, a funnel-shaped mouth with a rounded rim, and walls that are thicker than those of AR 125 and 127. The neck is sometimes slightly ribbed and is without constriction. This type, which has a body that seamlessly merges into the neck, is considered more recent than other vessels that exhibit a clear constriction between the body and neck. They are crafted using the blowing technique.

Other Dates

Dating according to Rütli: from the early Augustan period to the Flavian period (up to Trajan).

Distribution

primarily in the west; frequently found in Pompeii, with similar forms found widely.³³⁶

AR 137

This style (Cat. Nos. 67–68) has a wide, flat body and a tubular neck with a curved rim folded inward. Many examples are sealed, though our specimen lacks a seal. Two variants occur: one with a neck roughly the same height as the body, and one with a long neck. It is smaller than the comparable AR 140 form.

Other Dates

Dating according to Rütli: late 1st – 2nd c. AD.³³⁷

AR 148

Three examples (Cat. Nos. 69–71) were found in Ṭartūs and Bāniyās. The mouth is funnel-shaped with a rounded, fire-polished rim (an earlier type). The body is spherical and lacks distinctive features, making it easily confused with other forms. Crafted by the blowing technique, it does not correspond to Isings 101, which has a folded rim.

Other Dates

Dating according to Rütli: from the late 1st century to the first half of the 2nd century (earlier type) and from the late 3rd century to the early 5th century (later type).³³⁸

AR 141

Catalogue items 72-83. The rim is either folded or folded and rounded, such that the fold is not visible. The body is bulbous, and the mouth may be slightly protruding. It typically has a uniform color, usually a natural marine blown glass.

³³⁶ Rütli, 1991/2, p. 114, catalogue 2259-2262; Whitehouse, 1997, p 128, no. 202.

³³⁷ Rütli, 1991/2, p. 120, catalogue 2380.

³³⁸ Rütli, 1991/2, 125 classification 2453-2457.

Other Dates

Dating according to Rütli: from the early Augustan to Flavian/Trajan periods.

5.2.5.2.1.2 *Rounded rim/ Mold blown decoration/ Human head shaped flask- Type B5b1b*

Many head-shaped bottles with curly hair are known, though few have a secure provenance. Scholars debate whether the head represents Medusa (the belt interpreted as a snake around the neck), Dionysus, or another mythological figure. The hairstyle has been read either as a common male style of the Antonine period or as the coiffure associated with Julia Domna and other elite women of the Severan dynasty; such features have been used to assist dating. A head-shaped flask from Ṭarṭūs (Cat. No. 74) is decorated with comparable barbotine motifs.³³⁹

5.2.5.2.1.3 *Folded Rim, Outward and Downward- Type B5b1c*

These piece (Cat. No. 75) is classified according to AR 128.1, and there is no equivalent in Isings. They have a tubular body, a slightly flat base, and a funnel-shaped mouth. This type features a folded edge that extends outward and downward, and it does not contain any decorations (plain).

5.2.5.2.1.4 *Folded Rim, Inward- Type B5b1d*

AR 148 /2453 = Isings 101

Cat. Nos. 76–77 are classified as AR 148 / 2453 = Isings 101. They are long-necked flasks without a constriction at the base of the neck, with a typically slightly concave standard base. The rim is folded inward, yielding a funnel-shaped mouth; examples with a rounded, fire-polished rim represent an earlier variant, while the folded rim is a later form. The body is spherical and unadorned, so these vessels are easily confused with other types. Made by the blowing technique. (Some variants of this type show a constriction at the neck base.)

Other Dates

Dating according to Rütli: from the late 1st century to the first half of the 2nd century (earlier type) and from the late 3rd century to the early 5th century (later type).

Dating in other sites: Trier/Germany: from the early 3rd century.³⁴⁰

The Isings 101 shape corresponds to a flask with a folded rim, similar to many examples cited by Isings.³⁴¹

³³⁹ Price-Cottam 1998: 36.

³⁴⁰ Rütli 1991/2, 125.

³⁴¹ Lightfoot, 2017, p 128-161-162; Whitehouse, 1997, p 120-121, no. 187 ; Stern E. , 1977, p 50, nos. 20 and 22.

AR123 = Isings 11

Cat. No. 78 is a pourer-flask classified per Isings. The spout is a small round bird's head with a short beak, formed of flake-thin glass; the long tubular tail is heavily fragmented and indistinct, the head occasionally mistaken for a feather. Examples range from relatively naturalistic bird forms to tiny bird-like vessels. Their extreme fragility makes them prone to breakage and often difficult to identify. The glass is monochromatic and was blown using marine techniques.

This piece's pointed tails were broken off to sprinkle the contents. They also contained white or red powder, dating from the same period. The oldest dated sample also comes from Locarno. It is likely that the same cosmetics factory used both birds and glass balls. Due to the abundance of these birds (18.5 cm) in the Piedmont region, the dating is approximately 10 AD to a maximum of 70/80 AD.

Other Dates

Dating according to Rütli: From the Augustan/Tiberian era to the Flavian period..³⁴²

The containers were filled and sealed, meaning they were hermetically closed. The "tail" was reheated and had to be broken before using its contents.

For a long time, the bird-shaped vessel, also known as the "dove," was considered a typical Western product. However, a significant number of these doves have been documented in Thessaloniki, Greece, where they were likely produced locally around 1592.³⁴³

5.2.5.2.1.5 Missing Rim- Type B5b1e

5.2.5.2.1.5.1 Plain/ Type B5b1e1

Two examples (Cat. 79 – 80) recovered from Tārtūs; missing rim.

5.2.5.2.1.5.2 Mold-Blown Decoration/ Human head shaped flask/ Type B5b1e2

Isings 78 a-b

Glassmakers manufactured head-shaped vessels in a variety of formats, they were used as grave goods in tombs. Human heads were common in the Roman period.³⁴⁴ Although it is often difficult to determine the specific identities of the heads represented by these vessels, common subjects included divinities, mythological characters, and anonymous men and women with recognizable ethnic features.³⁴⁵ Also, the use of the human head as a model for utilitarian

³⁴² Lightfoot, 2017, p 195.

³⁴³ Sa'Id & Yaghy, 2011, p 134; Badawi, 2007, p 191; Leljak M. , 2012, p 123; Óuwayr, 1970, Plate 11; Whitehouse, 1997, p 224.

³⁴⁴ Isings, 1957, 93-94.

³⁴⁵ Rathje & Stojanović, 1987, p 121-122.

objects extends back at least to the archaic period when head-shaped vessels were produced. These vessels probably served as prototypes for the glass head flasks popular in the Roman period.³⁴⁶

Cat. No. 81 is classified as Isings 78a. Human-head vessels principally date to the late period. This specimen is incomplete, lacking part of the body and other sections.³⁴⁷

This type typically comes with either one head or two heads, blown in a two-part mold, one of the faces is usually frowning, while the other is smiling.

5.2.5.3 Short-necked Flasks with no constriction at the base of the neck and a pointed oval body- Type B5c

Three pieces with a short neck and a pointed oval body were found (Cat. Nos. 82-84), two of which are from Jbeibat and one from Țartūs (Ýamrit). According to the excavators, they are dated between the second and third centuries AD.

5.2.5.3.1 Rounded or pointed base with thumb indents, vertical corrugations, or pinched ribs- Type B5c1

As for (Cat. No 82), this type was found in Jbeibat and is made of alabaster, with a long body.

It is classified as an **alabastron** (perfume bottle) and is dated to the late Hellenistic period, from the mid-2nd century BC to the mid-1st century BC.

The alabastrons belong to the Mediterranean region. They are decorated with feather patterns. There are at least eleven other known examples with the feather design from Cyprus, suggesting that they may have been produced there. However, they were widely exported, reaching Carthage, Sardinia, and Italy in the west, as well as Syria in the east, along with sites in the Black Sea region.³⁴⁸

Note: This is considered one of the earliest pieces from the earliest centuries, but according to museum records, it has been classified as being from the first three Roman centuries.

³⁴⁶ Price & Cottam, 1998, p 36.

³⁴⁷ Oliver, 1984, p 64, no. 61; Stern, 1995, p 232-233, no. 149; Harden, 1936, p. 214, nr. 629

³⁴⁸ Harden D. , 1981, p 65 no. 104.

There is an example of it made of blue glass with yellow traces that came from Hauran in Syria. The alabastron in the Yunwai collection presents another counterpart in decoration, if not in shape.³⁴⁹

5.2.5.3.2 Mold-Blown Decoration/ Date shaped flask Isings 78 d - Type B5c2

In the 1st–2nd century AD artisans began to take food as a model, producing glass vessels shaped like fruits and animals.³⁵⁰

Two examples of date-shaped perfume containers (Cat. Nos. 83–84) are present: one from Jable and one from Ýamrit-Ýazar. This form became widely distributed across the empire.

5.2.5.4 Cosmetic Flask- Type B5d

This type was found in Țartūs (Cat. No. 85) (Unknown provenance) and is preserved in Damascus. It is dated between the second and third centuries AD.

It is a double cosmetic tube with a basket handle—there is no classification for this model in Isings-AR.

It is a double tube, consisting of two tubes side by side, made from a single bubble of yellowish-green glass by vertically discing the sides to form a partition. The edge is folded upward and inward; the wall is straight, curving at the bottom; and it has a small, flat base. There is a pontil mark. The decoration consists of two bluish-green trails: a wavy trail that spirals once around the body just below the edge, and a spiral trail that wraps around the body nine times, surpassing the wavy trail. It is nearly complete, and the body is intact.³⁵¹

³⁴⁹ Zihdī, 1960, p 42.

³⁵⁰ Badawi, 2007, p 191; Zeitzer, 2018, p 56; Fleming S. , 1996, p 16; Grossmann R. , 2002, p 34; Richer, 1911, p 13; Dussart, 1998, p 299; SaÝd, Yaghy, & Benech, 2012, p 278; Stern E. M., 1995, p 92; Antonaras, 2010, p 242; Smith, 1957, p 133.

³⁵¹ Dussart, 1998, p 174, no. BXIII.2231; Fleming, 1999, p 106.

5.3 Toilet Bottle/ unguentaria- Type C

It was formerly believed that these small unguentaria were designed to be placed with corpses in tombs.³⁵² However, it seems that they have a double role in both life and death in the funerary contexts. They could be used as grave offerings or represent a part of libations conducted during funerary ceremonies- or related to commercial trade in perfumed oils.³⁵³

The *unguentarium*, more accurately a toilet bottle (since the Latin term *unguentarium* is relatively recent in its invention), is the most widespread and durable form of Roman glass. It has been found throughout the Roman Empire in dates ranging from the 1st century AD to the 5th century AD and beyond, and its general type remains unchanged: a bottle with a long cylindrical neck atop a somewhat elongated body.

The largest group from the assemblage can be characterized as containers of valuable liquids and unguents, such as perfumes or scented oils, creams, and make-up. This identification is primarily based on the shape: small and closed forms, such as bottles and unguentaria residue analyses of similar vessels found outside Syria confirm that they held oils, moisturizing creams or skin balms, white and reddish facial powders, ochre, and compounds associated with myrrh and incense. Therefore, the term "tear-bottles" is a misnomer³⁵⁴.

The contents of these vessels can, therefore, be interpreted as luxury substances and personal cosmetics. They may also have been related to ritual activities, as perfumed oils played a role in the anointment of the body that occurred after death.

The reasons for the presence of these items in a grave are rarely investigated. Adornment and embalmment of the body were directed at preservation, cosmetic beautification, purification, and possibly pacification of the spirit of the deceased. Maybe the bottles in the graves were the remnants of these activities. Perfumes could also be offered as part of the funeral.³⁵⁵

A comprehensive treatment of the Syrian parallel bottle types lies beyond the scope of this study; however, the diverse assemblage can be grouped into five principal categories:

- **Candlestick unguentaria (Type C1)**
- **Fusiform unguentaria/ No distinction between neck and body (Type C2)**
- **Piriform unguentaria (Type C3)**
- **Bulbous unguentaria (Type C4)**
- **Double Bulges-shaped unguent bottles (Type C5)**
- **Test-tube unguentaria (Type C6)**

³⁵² Khairy, 1980, p 88.

³⁵³ Rathje & Stojanović, 1987, 105.

³⁵⁴ Khairy, 1980, p 88.

³⁵⁵ De Jong, 2017, p 77-85.

5.3.1 Candlestick unguentaria – Type C1

AR 136 = Isings 82B2

The name derives from this type's characteristic long neck. They typically have a semi-spherical body. Generally, they are small indented globular *unguentaria* with a tall, tubular neck that expands slightly and is constricted at the bottom. The type has an irregularly flattened shape with convex sides to the body curving out and downward, a slightly concave bottom with spiral tooling grooves on the body. This type was more frequent than other types of the same category.

Two unguentaria displayed disproportionately wide mouths and dated back to as early as the first or second century AD ³⁵⁶ These vessels have mostly uneven bodies with necks often leaning in one direction Based on a strictly visual analysis, these *unguentaria* were typically made of glass of lower quality than other types, in a free-blown technique. This candlestick form of unguent bottles originated from the late first century AD as well and remained extremely popular for the two centuries thereafter,³⁵⁷ and was commonly used in the West as well.³⁵⁸

Five examples (Cat. Nos. 86–90) of **Type C1** unguentaria are the so-called candlestick unguentaria (Isings form 82 B2). They date to the 1st–3rd centuries AD and may have contained oil placed in tombs for the needs of the deceased.

This form is classified under Isings 82B2 is dated to the 1st – 2nd centuries AD.

The body is actually primitively developed, slightly widening just above the base, which gives a vague impression. The rim is folded and may also be simply rounded. It can often be confused with AR 135. These bottles are typically made of poor-quality glass and are crafted carelessly, often featuring a thick base. In the case of model Isings 82B2, the body is more pronounced, rather than barely noticeable. The bottom of the base may be stamped. The color is natural, and it is shaped using the blowing technique.

In the Isings 82B2 type, the body is more pronounced rather than barely present, and the lower part of the base can be sealed.

Other Dates

- According to Rütli 1991: from the second half of the 1st century AD to the third quarter of the 3rd century AD.³⁵⁹

³⁵⁶ Sa'Yd & Yaghy, 2011, p 131-134.

³⁵⁷ Fleming, 1996, p 34.

³⁵⁸ Fünfschilling, 2015, p 144-146.

³⁵⁹ Rütli, 1991/2, p. 119, vol. 2358-2370.

As for the piece with (Cat. No. 91), characterized by a "bell-shaped body, this form is classified under Isings 82A2 is dated to the 2nd- 3rd c. AD.

The edge is partially tubular, unevenly folded into a wide horizontal lip that is turned inward and compressed at the top of the mouth. The neck is cylindrical, extending downward and decorated around the base. The sides of the body are convex and sloping, with a concave bottom.

AR140.2 = Isings 82A2

This model (Cat. No.92), was found in Jable / the Roman baths, dated between the 2nd and 3rd centuries AD

The body is somewhat flat and has a low appearance; the edges are curved and folded. It features a uniform color, which is natural, ranging from all shades to colorless. It is made using free-blowing techniques.

Other Dates

A definitive dating cannot be established based on the designation of the shape.

Dating according to Rütli: from the Flavian period to the mid-4th century.³⁶⁰

5.3.2 Fusiform unguentaria/ No distinction between neck and body- Type C2

5.3.2.1 Flat base / AR 113/2132 = Isings 68- Type C2a

Referred to as spindle-shaped, or fusiform unguentaria, this the most common of all glass vessels. This type is generally found in sites dating back to the 1st century AD and were most probably used to store medicine and other powders and liquids. Other daily uses might have been to store cosmetics or used as grave goods. This form's main characteristic is its long, cylindrical neck which expands downward to join its fusiform body.³⁶¹

These objects occur in various shapes: some with long thin necks, others with a wide, turned lip decorated with incised lines and inscriptions. Their presence across diverse burial contexts and a broad geographic area indicates they were popular and widely available throughout the Roman provinces. Eight specimens (Cat. Nos. 93–100) were recovered from Bānyās (Rās al-Nabē'e), Latakia (Kwrnīsh al-Bāḥr cemeteries), and ÝAzar; all are dated to the 1st–2nd centuries AD.

³⁶⁰ Rütli 1991/2, 121, p 2402-2408, including AR 140.1: 2402-2404; AR 140.2: 2405 - 2407.

³⁶¹ Kelley, 2012; Isings, 1957; Rütli, 1991.

AR 130.2

This type was found in two locations: Two pieces in Jbeibat and one in ÝArab al-Malik (Cat. Nos. 101-103). All are dated to the 2nd century AD.

This form is classified under AR 130.2. In fact, it has no distinctive features; it represents variations of the two types AR 128 and 129, making it difficult to differentiate them. Generally, it is monochrome and a free-blown.

Other Dates

No Definitive dating is possible

According to Rütli, its chronology ranges from the Oghsian/Tabrian period to the Trajanic period; at times even later.³⁶²

AR 133 = Isings 82 B1

Found in Jbeibat (Cat. No. 104); dated to the 2nd–3rd centuries AD. Classified as AR 133 = Isings 82B1, this is a bottle with a pouch-shaped body and a folded rim; the rim in this group may be either folded or flat. In AR 133(1) a slight constriction occurs at the neck-to-body transition, but the form is defined from only two samples. It is difficult to distinguish AR 133 from AR 127, AR 128, and AR 130.1; AR 127 differs chiefly by a thinner profile.

Other Dates

According to Rütli, it spans from the Tabrian period to the Flavian/Trajani.³⁶³

Isings 107/ Spindle body

Found in ȚarȚūs (Jable warehouse) and held in the ȚarȚūs Museum (Cat. No. 105); dated to the 2nd–3rd centuries AD. Classified as Isings 107, this tubular toilet bottle has a wide midsection. The form was common in the 4th century AD, although few securely dated contextual examples survive.

³⁶² Rütli, 1991/2, p. 116, vol. 2308; 2309.

³⁶³ Rütli, 1991/2, p. 118, 2344; 2345.

5.3.3 Piriform unguentaria – Type C3

5.3.3.1 *Hollow body/ Rounded base – flat base/ Type C3a*

AR 129

33 examples of this tall, narrow unguentarium with a modelling mark about one-third to one-half of the way up (separating neck from body) were recovered along the Syrian coast (Cat. Nos. 106–138): 1 from Jbeibat, 4 from Yaḥmour, 7 from Ýamrit-ÝAzar, 4 from Bānyās (Rās al-Nabe'e), 5 from Latakia (al-Māliyya cemetery), 3 from Mār Taqlā, and 8 from al-shīkh ḍāhir cemeteries. All are dated to the 1st–3rd centuries AD.

Classified as AR 129, the form is a bottle with a drop-shaped body and a round, funnel-shaped mouth; the body is slightly wider than the neck, making it closely similar to AR 128. Made by the blowing technique.

Other Dates

It varies according to the classification. In general, approximately 20-70/80 AD, possibly extending to 100 AD.

Dating according to Rütli: Tiberius-Trajan, sometimes later.³⁶⁴

AR 130.1 = Isings 28a

A total of 11 pieces of this type were found (Cat. Nos. 139-149), including 4 in Ýamrit -ÝAzar, 6 in Bānyās (Rās al-Nabe'e), and 1 in Yaḥmour. They are dated between the second and third centuries AD.

This type is classified according to AR 130.1 = Isings 28a. It represents the earliest development of this type and is often made from thin-walled glass.

In fact, there are no distinctive characteristics; they are different forms of shapes AR 128 and AR 129, making it difficult to distinguish them from one another. They are made using the blowing technique.

Other Dates

A definitive dating cannot be established here; Isings 28 is generally dated to the 1st century AD.

Dating according to Rütli: From the Augustan/Claudius period to the Trajan period, occasionally later.³⁶⁵

³⁶⁴ Rütli, 1991/2, 115 vol., 2268-2270.

³⁶⁵ Rütli, 1991/2, 116, vol. 2308; 2309.

AR 130.2 = Isings 28b

Four pieces of this model were found in Ýamrit /ÝAzar (Cat. Nos. 150-153), dated between the 2nd and 3rd centuries AD. This shape is classified according to AR 130.2 = Isings 28b.

AR 135 = Isings 82B1

A piece of this model was found in Bānyās Rās al-Nabe'e /2 (Cat. No. 154) dated between the 2nd and 3rd centuries AD.

This shape is classified according to AR 135 = Isings 82B1. It has a distinct conical form, with a typically short body, and the transition to the wall is notable, often exhibiting irregular craftsmanship.

The neck is narrow, and the rim is typically cracked and rounded, and it may also be folded. The body is usually well-preserved, which allows it to be distinguished by its distinctive shape from the smoother forms of models AR 128 and 130. It can be confused with AR 136. The color is often natural, and it is shaped using the blowing technique.

Other Dates: Dating according to Rütli: Claudian/Neronian to the first half of the 3rd century, and sometimes later.³⁶⁶

5.3.4 Bulbous unguentaria- – Type C4

AR 142: 2414

This unguentarium type remained in production with minimal change over a considerable period.³⁶⁷ Dating its first appearance is difficult due to scant comparative data. The earliest examples (Cat. No. 155) date to the 1st century AD and are small (2–10 cm high).³⁶⁸

Classified as AR 142:2414, the vessel has a long neck with a slight constriction at the neck-to-body transition and lacks ribs (unlike the ribbed AR variant, which is applied and blown). It is typically monochromatic, natural in colour, and made by the blowing technique.

AR 143

They are distinguished by their slim, short, or long necks and a relatively low maximum diameter. **(Type C4)** Generally, these vessels were recovered from funerary contexts in locations around the Mediterranean cities dating to the 2nd century AD, a total of 26 pieces (Cat. Nos. 156-181) of this type were found.³⁶⁹

³⁶⁶ Rütli 1991/2, 119 Cat 2347- 2357.

³⁶⁷ Saraçoğlu, 2011, p 3-5.

³⁶⁸ Rotroff, 2006, p 154.

³⁶⁹ Saraçoğlu, 2011, p 7.

Other Dates

Dating according to Rützi: Likely from the Flavian period to the early 2nd century.³⁷⁰

These vessels are classified according to AR 143. They are unique pieces with a pear-shaped body and a long neck, featuring a constriction at the base of the neck. Generally, this type can only be identified based on as complete vessels as possible, resembling AR 146 but with a shorter neck. They are monochromatic, typically in a natural color, and made using the free-blowing technique.

The most likely characteristic here is the distinctive domed base, which is a common feature in the late period and later evolved into a pierced base. Pear-shaped bodies do exist in the 1st century AD, but the long neck is a crucial factor. Therefore, a largely complete vessel is necessary for accurate identification.

Other Dates

Dating according to Rützi: Late 2nd to 4th century.³⁷¹

AR140/2402 = Isings 82 A1

Cat. 182-183 found in Jbeibat and Y'Azar are classified as AR 140. One features a conical body, and a significant portion of it must have survived sufficiently to distinguish the wall features. It has a uniform color, which is natural, ranging from all shades to colorless. It is made using the free-blowing technique.

Other Dates

A definitive dating cannot be established based on the designation of the shape.

Dating according to Rützi: from the Flavian period to the mid-4th century.³⁷²

5.3.5 Double Bulges-shaped unguent bottles- – Type C5

This Cat.no is defined simply by a double bulged body. The shape could have been a local production since it seems to have spread only in the Syro-Palestine region.³⁷³ No similar examples or matching forms were found in the classification made by Isings or Rützi. The unguent bottles with double bulges of the same diameter arranged vertically and recovered from Damascus were dated back to first - second century AD,³⁷⁴. As shown by the examples, all *unguentarium* types in our sample were locally produced. Having no parallels in other

³⁷⁰ Rützi, 1991/2, 121 Cat. 2414.

³⁷¹ Rützi, 1991/2, 122, no. 2415.

³⁷² Rützi, 1991/2, 121 volume, pages 2402-2408; Including AR 140.1: 2402-2404; *AR 140.2: 2405 and 2407; unclear 2406 and 2408; Foi 2010, pages 167.

³⁷³ Kelley, 2012, p 441.

³⁷⁴ Sa'Id & Yaghy, 2011, p 134.

regions of the Roman Empire, and since this type originated from the Syro-Palestinian coast, it was presumably locally produced. The majority were not carefully made and were mostly made from naturally blue or green glass. These items were almost un-decorated, with free-blown technique, and with identifiable pontil marks on them. This type has a folded rim, with the same diameter as its base, a long cylindrical neck with double bulges one on top the other differing in diameter. In our material we have three items from this Syro-Palestinian types Two of them came from Mār Taqlā and one from ÝAzar. (Cat. Nos. 184-186)

5.3.6 Test- tube unguentaria - – Type C6

Four examples from khirbet el libneh, and one from the Roman Bath in Jable (Cat. 187-190) date back to the 2nd-3rd century AD. They are classified according to AR 138 = Isings 27 featuring a small tube where the body and neck merge continuously.

The rim is folded, and the vessel cannot stand upright. It has a uniform color, which is natural, ranging through all shades. It is made using the free-blowing technique.

Other Dates: Dating according to Rütli: from the Claudian period to the 4th century AD.

According to Isings, this type appeared from the Neronian-Flavian period onward and remained in use until the 4th century

Note: The Claudian dating refers to the thin-walled tubular version of AR 128.1 and 129 = Isings 27. This shape appears only in the 1st century AD, but it is not tubular like shape AR 138; rather, it consistently exhibits a slightly wider body and at least a hint of a constricted neck. This specimen features a trefoil mouth.³⁷⁵

³⁷⁵ Rütli, 1991/2, 120 cat. 2381–2399.

5.4 Other objects- Type D

5.4.1 Jewellery- Type D1

5.4.1.1 Bracelets / Type D1a

Since glass was used early as a substitute for colorful semiprecious stones, it may have even been invented for this purpose. Thus, products had to be cheap. Plain artifacts were created often as inexpensive and massively produced substitutes and handy solutions of adornment addressed to the wider, less wealthy social strata.³⁷⁶

The armillae, which were often worn on the wrist and occasionally on the ankle (periscelides), formed an essential part of women's jewellery. Glass armlets were accessible to all Roman women. However, they were also awarded to soldiers as military decorations (*dona militaria*), alongside military honors (*tocos*) and necklaces (*phalerae*), in recognition of their distinction³⁷⁷ Through archaeological discoveries across the Roman Empire, the contents of graves were mostly intact, while findings from settlements were limited to fragments. This indicates that broken and damaged armlets made from less valuable materials (bronze, glass, bone) were simply discarded. The small diameter of the armlets suggests they may have been used either as jewellery for children or for other purposes, such as hair adornments. Unfortunately, it is difficult to ascertain whether the settlement finds were always armlets, as is the case with grave contents.

All the glass armlets discovered along the Syrian coast are made from glass that appears black. In reality, they are dark olive-green glass, characterized by its exceptional color density, making it appear almost entirely black, with hues sometimes leaning towards olive green or shifting to a browner shade. The "black" glass can be shiny and "oily," but it is often dull on the surface. The iridescence frequently gives the surface a distinctive appearance.

The method of wearing armlets is known primarily from grave contents. Not only were there armlets for the wrists, but a type known as arm rings was also found on both the right and left forearms, although arm rings were rarely worn on the upper arm. The variety of shapes of arm rings indicates the popularity of "black" glass arm rings in the Roman Empire, which were likely produced as inexpensive jewellery and mass-produced goods for the poorer segments of the population during the Roman Imperial period. They also appear in discoveries from impoverished graves. This raises questions about the value of the material.

³⁷⁶ Antonaras, 2010, p 319.

³⁷⁷ Milovanović, 2018, p 129.

The manufacturing technique varies significantly. Armlets are made either from a single glass strip or a single glass rod. They are often open, and in the case of closed pieces, unlike non-welded glass armlets, the welding is sometimes visible. The decoration of armlets made from glass strips, which is directly linked to the La Tène tradition, consists of longitudinal ribs that are drawn into the glass strip before it is bent, along with transverse grooves that are pressed into these longitudinal ribs. The glass armlets, as evident from the pieces, are mostly closed. Several types of manufacturing can be distinguished:

- Closed band bracelets with raised notched bulges (Type D1a1): Only one piece of this type has been found, which is in the form of a slightly wide strip decorated on the outside with prominent longitudinal bulges featuring transverse grooves. This type was discovered in Bṭaba/Ṭartūs (Cat. No. 191) and dates back to the 2nd and 3rd centuries AD, with a black color.

It is worth to mention that due to the large circumference of the bracelet, it may have been used as an arm bangle instead of a wrist bracelet. Quite possibly uses as a votive object or as a funerary adornment, indicating a grave for a woman or a family. Black bracelet of irregular thickness.

Similar pieces are known in other regions of the Roman Empire, often being somewhat wide, open, and decorated on the outside with prominent longitudinal bulges featuring longitudinal and transverse grooves or rows of transverse holes. The decoration likely generally mimicked the appearance of hammered bronze sheet armlets. All pieces are individually adorned with carved patterns. Similar armlets are known from the Rhine region.

- Closed, round, ribbed (rolled) bracelets (Type D1a2): Only two pieces of this type have been found in Latakia (currently stored in the museum - source unknown) (Cat. nos 192-193). They date back to the 3rd century AD and are closed, circular, and finely ribbed (rolled) with a twisted design. They are made from transparent, monochromatic yellow glass.

Many similar pieces are known from other regions of the Roman Empire, and they are among the most widely spread types throughout the empire. In addition to being made from transparent yellow glass, other pieces are also crafted from black glass. The rolling process sometimes results in irregularities in the curvature, which may be due to unsuccessful semi-finished cuts. The threads of this type are made from monochromatic glass and sometimes from bicolored

glass. Similar samples are known from the Trier ³⁷⁸region and the Roman Museum of Augusta.³⁷⁹

- Black, smooth, round, closed glass bracelets (Type D1a3): Six pieces of this type have been found along the Syrian coast: one in Bṭaba/Ṭarṭūs (Cat no 194) and five in Bshraeel/Ṭarṭūs (Cat. Nos. 195-199). All date back to the 2nd and 3rd centuries AD. These armlets are closed, smooth, round black glass bracelets with a cross-section greater than 0.8 cm (either circular or D-shaped). Their cross-section is less than 0.5 cm, and their thin cross-section suggests the presence of closed arm rings. Only the two well-preserved graves provide us with specific information about the dimensions of these arm rings: their internal diameters are approximately 6.0 cm and 6.6 cm, respectively. The armlets of this type are made from a glass strip or rod with the ends welded together. In similar models found in other parts of the Roman Empire, there are pieces where the bracelet is open.

Arm rings of this type, closed and smooth, made from black glass, have been found in graves and settlements in the Rhine and Danube provinces, as well as in Portugal. They are notably prevalent in Augusta and Kaiserslautern³⁸⁰. The variety of shapes of these arm rings indicates the popularity of "black" glass arm rings in Augusta and Kaiserslautern. They were likely produced as inexpensive jewelry and mass-produced goods for the poorer segments of the population during the Roman Imperial period, as evidenced by their presence in poorer grave finds. This raises questions about the value of this material. Glass armlets have been found in both the Rhine and Danube provinces (Noricum, Pannonia, and Raetia³⁸¹). However, glass armlets are not particularly common as funerary goods.

³⁷⁸ Goethert-Polaschek, 1981.

³⁷⁹ Riha, 1990, p 64.

³⁸⁰ Riha, 1990, p 66.

³⁸¹ Keller, 2005, 78.

5.4.1.2 *Beads/ Type D1b*

5.4.1.2.1 Faceted beads / Melon beads (Melonenperlen)- Type D1b1

They are referred to in the scientific literature as melon beads (Melonenperlen) due to their shape resembling that of a watermelon, or as lotus beads (Lotosperlen), designed to mimic the blue Egyptian lotus bud. They were widely distributed and used over a long period. These beads were made from various materials, including pottery, glass, and even gold. They were typically strung into necklaces, but their use in other applications, such as bracelets or as decorative elements on pins, is not excluded. In the case of necklaces, there are examples of strands of beads of varying lengths, consisting solely of melon beads in different colors and sizes, or possibly mixed with other types of beads.

Melon beads made of frit/ quartz-ceramic: one piece was discovered in the tombs of Țartūs/ ÝAzar, (Cat. No. 200). It is blue and made of frit glass.

These beads were made from a material called frit, which is a mixture of silica granules, lime, soda, and colored mineral oxides, fused at relatively low temperatures ranging from 600 to 800 degrees Celsius. This granular material retains its natural pastel colors (bluish-green, turquoise, or Egyptian blue, light green) and was particularly suitable for making small objects, ornaments, or amulets. Due to their dense light blue color, they were used as amulets.³⁸²

Since these beads, thanks to their bright blue color, are considered a type of amulet to ward off the evil eye, it is not surprising that they were worn on strands of beads often as a single piece or a few pieces as shown by the funerary collections from graves at various sites. This may explain why only one bead of this type was discovered in the grave.

The custom of wearing blue beads to ward off the "evil eye" still exists in Egypt. The method of making this type of bead remains unclear.

However, analysis of beads from the Roman colony of Augusta Raurica³⁸³ indicates that they contain irregular grooves and semi-circular curved ribs. Their reduction suggests that they were not made in a mold but rather that their ribs were modeled later based on the shape of the bead. The original place of production was Egypt. They were very common in the western part of the Roman Empire during the 1st century, suggesting that workshops for their production also

³⁸² Riha, 1990, p 80-81.

³⁸³ Rütli, 1991.

existed in Western Europe³⁸⁴. They became more prevalent in the second half of the 1st century and the early 2nd century and were used throughout the Roman Empire until the 5th century³⁸⁵

5.4.1.2.2 Spherical/oval, annular and globular beads with applied horizontal trails- Type D1b2

The piece with (Cat. No. 201) dates to the 2nd and 3rd centuries AD and was discovered at the entrance of the tomb of the martyr Bassel al-Assad in ʿAṣṣad. It is circular in shape, blue in color, and features three white ring-like decorations (paths) with an opening in the center.

5.4.1.2.3 Cylindrical beads with featherlike ornament- Type D1b3

Three pieces have been found along the Syrian coast from different locations in ʿAṣṣad (Bṭaba and the entrance of the tomb of Bassel al-Assad) and in Latakia (Hāydbā 1993, cemetery II) (Cat. Nos. 202-203). They date between the 1st and 3rd centuries AD.

These beads are relatively large and are decorated with a motif known in the scientific literature as "Piuma di Occhiello" (feather), "Pettine" (like a comb), and "Venisio" (Phoenician)³⁸⁶ The body of the bead is dark cylindrical (black, dark brown, light green), while the decoration is in a lighter color (white, light blue, yellow).

Beads of this type were made using two methods. In the first method, strands of soft glass in alternating colors were wrapped around a metal rod and then melted after heating, resulting in the decoration appearing along the cross-section of the bead. The second method involved wrapping a strand of lighter-colored molten glass around the final cylindrical body of a dark bead (with its edges rounded by fire), and then the bead was rolled on a smooth, solid base to connect the lighter strand to the bead body³⁸⁷. In both manufacturing methods, the wrapped glass strand was sharply pulled into a V shape while hot by a metal body, three to four times on the bead body, creating a decoration resembling feathers.

5.4.1.2.4 Beads with 'specks' or 'coloured dots'- Type D1b4

It was found at the entrance of the tomb of Bassel al-Assad in ʿAṣṣad, with only one piece (Cat. No. 204) dating back to the 2nd and 3rd centuries AD.

It is a spherical bead decorated with "spots" or "colored dots," which are applied randomly.

The similar pieces discovered throughout the Roman Empire date from the 1st to the 4th century³⁸⁸

³⁸⁴ Riha, 1990, p 80.

³⁸⁵ Riha, 1990, p 80-82.

³⁸⁶ Panini, 2007, p 41.

³⁸⁷ Spaer, 2001, p 99-100.

³⁸⁸ Riha, 1990, p 84.

5.4.1.2.5 Eye beads- Type D1b5

The total number of pieces from our material is seven: three pieces from the Jbeibat tombs in Jable (Cat. Nos. 205-207), dating to the 2nd and 3rd centuries AD; one piece from Latakia/ al-shīkh ḍāhir Cemeteries (Cat. No. 208) (date unknown); one piece from Khirbet el Libne in Ṭarṭūs (Cat. No. 209), dating to the 2nd and 3rd centuries AD; and two pieces from the entrance of the tomb of the Bassel al-Assad in Ṭarṭūs (Cat. Nos. 210-211), dating to the 2nd and 3rd centuries AD.

These beads, adorned with "eye" motifs, symbolically represent the human face and are attributed with properties that repel envy. They have played a significant role in magical beliefs since prehistoric times, as they were thought to ward off the "evil eye." It was believed that eyes reflect envy and thus could be harmful.

In the early first millennium BC, the Phoenician city of Tyre became renowned for producing this type of bead, which was exported across the Mediterranean and the neighbouring Near East³⁸⁹ These beads gained immense popularity, leading to the emergence of various forms. Typically, the pupil of the eye consists of a dark part surrounded by one or more circles of a contrasting color relative to the body of the bead. However, there are different shapes in their manufacturing, similar to the variations found in other parts of the eye³⁹⁰

5.4.1.2.6 Monochrome, undecorated beads- Type D1b6

Eight glass pieces of this type were found along the Syrian coast, from Jbeibat tombs in Jable, dating to the second and third centuries AD (Cat. Nos. 212 - 219). The colors of these beads vary between blue, black, light yellow, and brown.

The earliest bead colors were monochromatic. Later, with the significant increase in glass production in the mid-second millennium BC, bead makers from Mesopotamia and Egypt began to create two-colored and multi-colored beads³⁹¹

5.4.1.2.7 Beads of mosaic glass- Type D1b7

Two pieces were found at the entrance of the tomb of Bassel al-Assad in Ṭarṭūs, dating to the second and third centuries AD (Cat. Nos. 220-221).

One of the beads is a round piece with intact yellow and white swirls, although it shows signs of weathering resembling enamel on its surface. The second bead is a flat piece with intact

³⁸⁹ Carter, 2022, p 40-45.

³⁹⁰ Spaer, 2001, p 77-98.

³⁹¹ Spaer, 2001, p 53-57.

yellow and white swirls, also exhibiting similar weathering effects resembling enamel on its body.

These beads generally come in various shapes (spherical, spherical/oval, tubular, flat, etc.) and feature diverse decorations made using mosaic techniques. They can be categorized based on their ornamentation (beads with checkerboard patterns, beads with checkerboard patterns and faces, flower beads, face beads, beads depicting the head of Medusa, beads with a dome in the center, etc.). They are likely to have been produced in Egypt or Syria.³⁹²

5.4.1.2.8 Prismatic seal with or without decorations - Type D1b8

Four pieces were found along the Syrian coast: three at the entrance of the tomb of Bassel al-Assad in Ṭarṭūs (Cat. Nos. 222-223-224), dating to the second and third centuries AD, and two in the Jbeibat tombs in Jable (Cat. No. 225). The colors of the pieces are translucent with a whitish tint or blackish-green.

All the shapes discovered along the Syrian coast are pyramidal, resembling a small pyramid not exceeding 2 cm, with a hole drilled through the center. The presence of an incised inscription at the base of one of the pieces (Cat. No. 222) indicates that this type was used as a personal seal for its owner. The lightweight nature of glass may have contributed to the shift in seal production from being made of raw materials or stone to glass, as it is easier to carry and hang around the owner's neck. The other pieces did not contain any inscriptions.

This peculiar type is believed to have emerged in the late Roman period. It primarily spread along the Syrian-Palestinian coast, indicating that its production center was likely in this region, possibly on the southern coast of the Levant, which served as its main area of distribution. These pendants are often discovered in tombs. Although jug necklaces are more concentrated in the eastern Mediterranean, they are also widely found in the western half of the empire.

Most of these pendants were made from opaque glass, with occasional transparent pieces, and were decorated with colored stripes, typically in yellow, white, or turquoise. The color of the jug itself ranges from dark blue to black. Similar to glass beads, the choice of color was likely not coincidental. Blue was probably selected due to the ancient belief in its magical powers; it was thought to ward off evil spirits and provide protection against malevolent spells. One reason for the popularity of certain types of jewellery, such as finger rings, bracelets, beads, and necklaces made in dark, opaque colors during the Roman period, is that they were

³⁹² Spaer, 2001, P 53.

considered a cheap imitation of jet, a mineral known as "black amber," which was believed to possess magical healing properties.³⁹³

5.4.1.2.9 Spindle-shaped beads- Type D1b9

This type was found in Khirbet el Libne/ ʿTartūs (Cat. No. 226), with a total of one-piece dating to the second and third centuries AD. It is a small bead with a spindle (cylindrical) shape, light blue in color, made from relatively thick glass, and has broken edges.

In general, this type of bead is very small, rectangular, and spindle-shaped, measuring approximately 10 mm in length and 3 to 4 mm in width. They were made from various materials, including gold, ivory, and both opaque and transparent glass. It is difficult to determine their place of production, but they are believed to date back to the first century AD

³⁹⁴

5.4.1.2.10 Group on unclassified beads- Type D1b10

A total of Five items (Cat. Nos. 227-231), which are a collection of beads. The beads are varied in shape, color, and size.

5.4.1.3 Ring - Type D1c

Only one finger ring from our material was discovered in ʿTartūs/ Ḥuṣn Suleiman (Cat. No. 232), dated to 2nd c. AD, based on its small size, it is most likely that the finger ring was intended for a young child.

5.4.1.3.1 Gems (Finger rings)

Cat. 233 found in Jbeibat, Jeble and Cat. 234 from al-Maliyya Cemeteries in Latakia.

5.4.2 Stirring Stick- Type D2

This piece (stirring stick) was found in Latakia, specifically in al-shīkh ḍāhir (Cat. No. 235), and it dates back to the second century according to the excavators' findings.

This piece is classified according to Isings 79. It is not made by blowing; rather, it is crafted from a small rod of molten glass.

Its use is unknown. The rod was found in all areas inhabited by the Romans. The rods often have flat ends, but there are also pointed rods or those made in other shapes. Most of them are twisted, although plain samples have also been found.³⁹⁵

³⁹³ Stern, 2001.

³⁹⁴ Riha, 1990, p 87, 1227-1231.

³⁹⁵ Weizinger, 1918, p 10.

5.4.3 Conical Lamps- Type D3

Conical lamps generally have unworked or polished or rounded edges, with sides that gradually taper down to a small, somewhat pointed base. The decoration, when present, is simple and consists of circular cuts or grooves, blue spots, and integrated threads or coils.

One piece of evidence for the use of this type as a lamp is that of the found fragments most have a greasy texture, and some contain burned and oily spots on the inside. This indicates that they were sometimes used for other purposes. One of the pieces, upon discovery, contained four dice. It was previously used as a dice box, but this usage must have been incidental and secondary. The number of pieces of this type that have been found rules out the idea that they were all dice boxes.

To use them as lamps, they were first filled with water up to almost the top, allowing oil and a wick to float on the surface. They would then be placed on a stand or hung from the ceiling in groups, resembling a holder or chandelier. This is a primitive type of lighting, but it is not much more advanced and is still used today to illuminate churches in Egypt. In this modern type, the only improvement made to the conical design is the addition of a small vertical glass tube that rises from the base, inside, to hold the wick.

The main classification is based on the shape of the base, while other sub-classifications depend on the edge technique and decoration.

This style was found in Latakia / Qābir al-Ŷaisawiyya, and is dated to the first and second centuries AD. (Cat. No. 236). It is a conical lamp, pale green and transparent with a bluish tint. It is unworked, uneven, with a cut rim; a narrow bulging collar at the bottom; and semi-straight sides that gradually taper to a pointed tip, with a thick base.

This type is classified according to AR 66.2 = Isings 106C. It is an example of a type of conical vessel, used either as a cup or a lamp, and is found throughout the Roman world in late antiquity. These vessels are typically decorated either with applied colored dots, cut decorations, or a combination of both.

Other Dates

Dating according to Rütli: Late 3rd to 4th century.³⁹⁶

³⁹⁶ Rütli, 1991/2, 74 cat. 1428–1430.

6 Conclusion

In the present study, a series of 236 Roman glass vessels from the Syrian coast is investigated to determine their typological, functional, and cultural attributes and to trace their position in the production and consumption networks of the Roman Mediterranean. The study has revealed that glass was a significant and lasting element in the everyday and ritual life of the people of Latakia, Jable, Ṭarṭûs, and Bānyās, where it served not only as a pragmatic material but as a medium of symbolic communication especially in burial situations. The vessels examined here thus exhibit a complex visual language of shape and surface treatment that unified the Syrian coast with the rest of the Roman world, but one that was also inflected by local traditions of ritual, aesthetic, and socioeconomic meanings.

Typologically, the assemblage is largely composed of unguentaria, the slender perfume and oil vessels typically linked to burial practices. The ubiquity of glass in the treatment of the dead attests to the close relationship between glass and mortuary care. These vessels were not simply containers; they were channels of sensory interaction—smell, feel, and recall—connecting the body and the afterlife. The fact that numerous unguentaria are found in many early Roman tombs is significant: scented oils and balms may have been used in purification rituals, anointing, or memorializing. The later restriction to one vessel per burial points to an increasingly formalised and simplified funerary tradition. Within the unguentaria assemblage, there are also bowls, beakers, goblets, and plates, all in limited numbers, that would be classified amongst the tableware. Their occurrence in funerary contexts suggests a cultural link between dining and collective memory, wherein the grave may have functioned as a place for the symbolic consumption or recollection of social identity. Jars and flasks of storage, albeit more mundane in purpose, confirm the domestic use of glass and demonstrate that quotidian items were mentally transformed in to objects suitable for the rituals of death.

The majority of the vessels are the result of free-blowing, with some examples of mould-blowing, technological innovations adopted with great haste in the first century AD throughout the Roman Empire. The ability to make thin-walled glass of well-proportioned form indicates the existence of skilled workmen as well as the availability of suitable materials. Yet no primary glass furnaces have been found on the Syrian coast. This lack does not mean that there was no glassworking at all, but that the littoral coast was at best a centre of secondary production and use, dependent upon either raw glass or half-worked material from large production centres such as Sidon, Tyre, Beirut, and northern Palestine. These areas are historically documented as centres of natron-based glass manufacture and their geographic closeness would have allowed for easy interaction.

This observation consistent with the economic importance of the Syrian coast and its role in controlling maritime routes across the Eastern Mediterranean. Archaeological evidence from the analyzed assemblage demonstrates that coastal cities such as Bānyās, Ṭartūs, and Latakia were closely integrated into regional and interregional trade networks linking inland Syria and Anatolia with the Mediterranean basin.

This diversity is not random, but reflects the intersection of trade connectivity, regional traditions, and local production practices along the Syrian coast, as evidenced by the variety of glass forms identified in the corpus. Several types correspond closely to widely distributed Roman forms, such as AR 34 = Isings 12 and AR 60 = Isings 96, which are known throughout the Roman Empire. Their presence in Syrian coastal contexts indicates participation in a shared repertoire of shapes and technological traditions facilitated by trade and cultural exchange.

At the same time, the assemblage reveals clear regional characteristics. In comparison to Western provinces, certain forms particularly drinking vessels and bowls show a longer chronological continuity in the Eastern Mediterranean, often extending into the 4th- 5th centuries AD. This suggests a degree of regional conservatism and adaptation in local consumption patterns.

Moreover, some vessel types can be considered local or regionally specific. These include, for example, the double-bulged unguentaria (Type C5), which lack clear parallels in Western typologies and appear to be concentrated in the Syro-Palestinian region, as well as certain simplified, undecorated forms produced in bluish-green glass that are characteristic of Levantine secondary workshops. The dominance of free-blown techniques, the prevalence of Levantine glass composition, and the relatively modest finishing of many vessels further support local production rather than large-scale importation.

The glass assemblage from the coastal cemeteries further supports this interpretation. Both in style and technology, the vessels conform in many respects with contemporary productions known from throughout the Roman world. This is clearly reflected in the typological distribution identified in this study, particularly in Types B5 (flasks) and C5 (double-bulged unguentaria), which illustrate both shared imperial forms and regionally specific developments.

There are, however, clear regional traits in the corpus. In Jable, local commemorative practice shows continuity, reflected in the successive Hellenistic and Roman reuse of burial plots, as

noted in Dr Badawi's earlier work. By contrast, Latakia and Ṭartūs display more overtly Romanized funerary material culture; archaeological finds and comparisons with similar objects from across the Roman Empire point to tighter cultural and political integration at the provincial level. The differing number and range of glass products recovered from cities and rural areas further illustrate the disparity in access to imported goods and luxury objects between urban and rural inhabitants.

Overall, the glass vessels studied in this article shed light on social, cultural, and symbolic life on the Roman Syrian coast. They show how something as fragile as glass could have durable significance over centuries in connecting domiciles, workshops, commercial networks, ritual acts, and ideas concerning the body and its remains. Although evidence for primary glass production has not yet been identified archaeologically in the region, we argue that the high-quality secondary production combined with the extensive distribution and cultural embedding of the products implies that the Syrian coast was perhaps a key player as the largest recipient and principal intermediary within the Roman glass economy; this remains a tentative proposition, and we leave this question open for future research to confirm or refute these assumptions.

This study offers a much-needed ideal-typical and cognitive model for understanding Roman glass in the Syrian coastal region. By placing the vessels in their archaeological, technological and ritual context, it enhances our understanding of how glass was used as a material in both the physical and expressive spheres. Additional investigation, especially through compositional analysis and site-specific excavation, is required to determine the source of the raw glass utilised in this region, as well as to enhance understanding of this region as a local community embedded within Mediterranean space on an even more inclusive level.

In the end, the glass repertoire of the Syrian coast encapsulates a topography of movement, exchange, memory, and ritual, where everyday objects become vehicles for representing and remembering. These vessels represent not just craft and economy, but how communities imagined life and death, and the unremitting presence of history.

7 Bibliography

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8 Appendix I/ Catalogue



Cat.01



Sec. 01



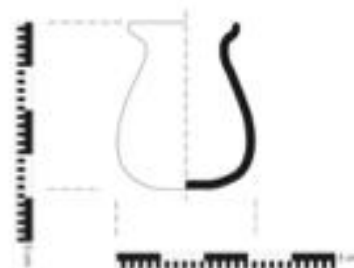
Cat.02



Sec. 02



Cat.03



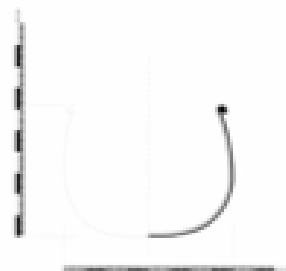
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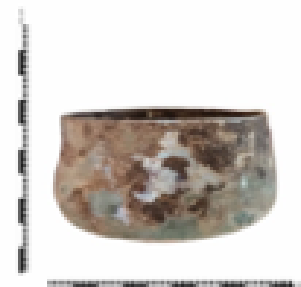
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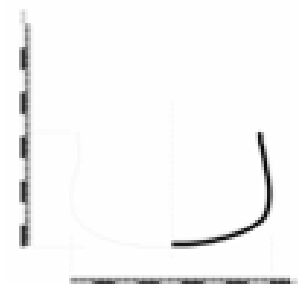
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Sec. 05



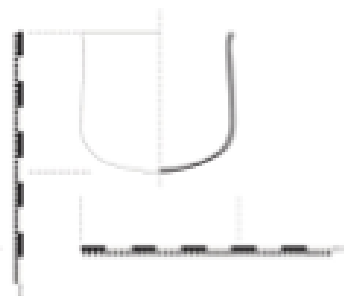
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Sec. 06



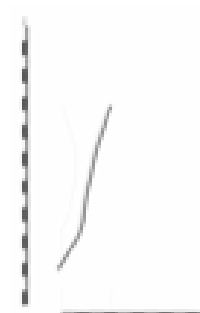
Cat.07



Sec. 07



Cat.08

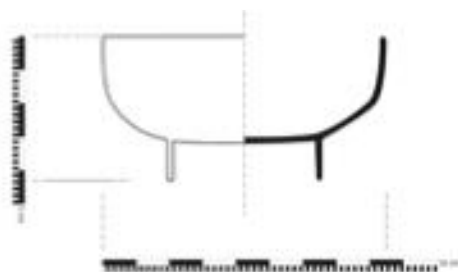


Sec. 08

Plate I/ Drinking vessels (Beakers/ Goblets)



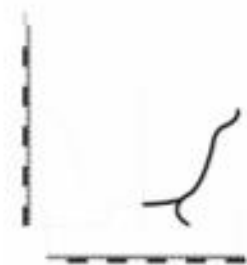
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Sec. 09



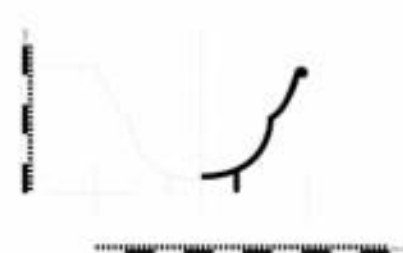
Cat.10



Sec. 10



Cat.11



Sec. 11



Cat.12



Sec. 12



Cat. 13



Sec. 13

Plate II/Bowls



Cat. 14



Sec. 14



Cat. 15



Sec. 15



Cat. 16

Plate III/Lids



Cat.17

Plate IV/Plate



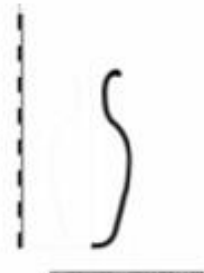
Cat.18



Sec.18



Cat.19



Sec.19



Cat.20



Sec.20



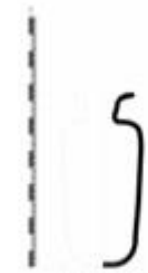
Cat. 21



Sec. 21



Cat. 22



Sec. 22



Cat. 23



Sec.23



Cat.24



Sec.24



Cat.25



Sec.25



Cat.26



Sec.26



Cat. 27



Sec. 27



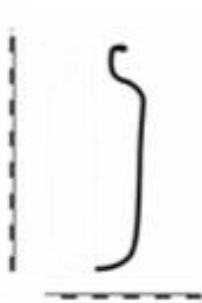
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Sec. 28



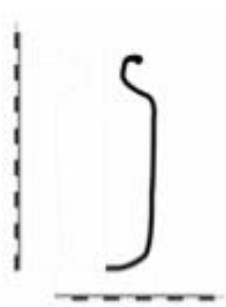
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Sec.29



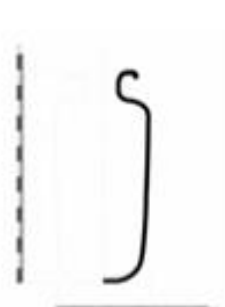
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Sec.30



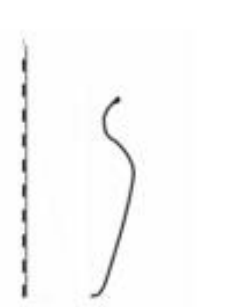
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Sec.31



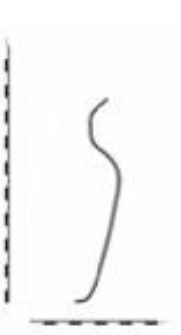
Cat.32



Sec.32



Cat. 33



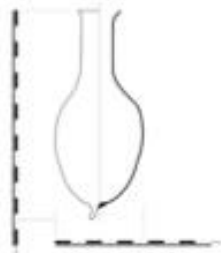
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Cat. 34



Cat. 35



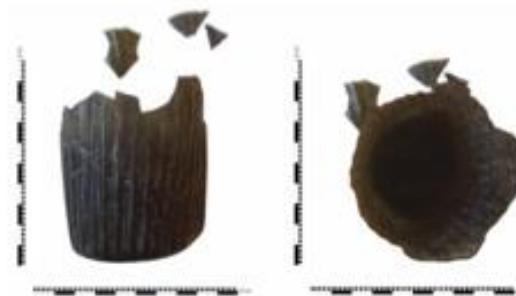
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Cat. 36



Sec. 36

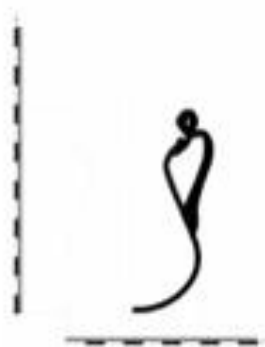


Cat. 37

Plate V/ Storage containers- Bottle-Flasks without handles



Cat. 38



Sec. 38



Cat. 39



Sec. 39

Plate VI/ Storage containers- One Handle Jug



Cat. 40



Sec. 40



Cat. 41



Sec. 41



Cat. 42



Sec. 42



Cat. 43



Sec. 43



Cat. 44



Sec. 44



Cat. 45



Sec. 45

Plate VII/ Storage containers- Two-Handles flasks and bottles

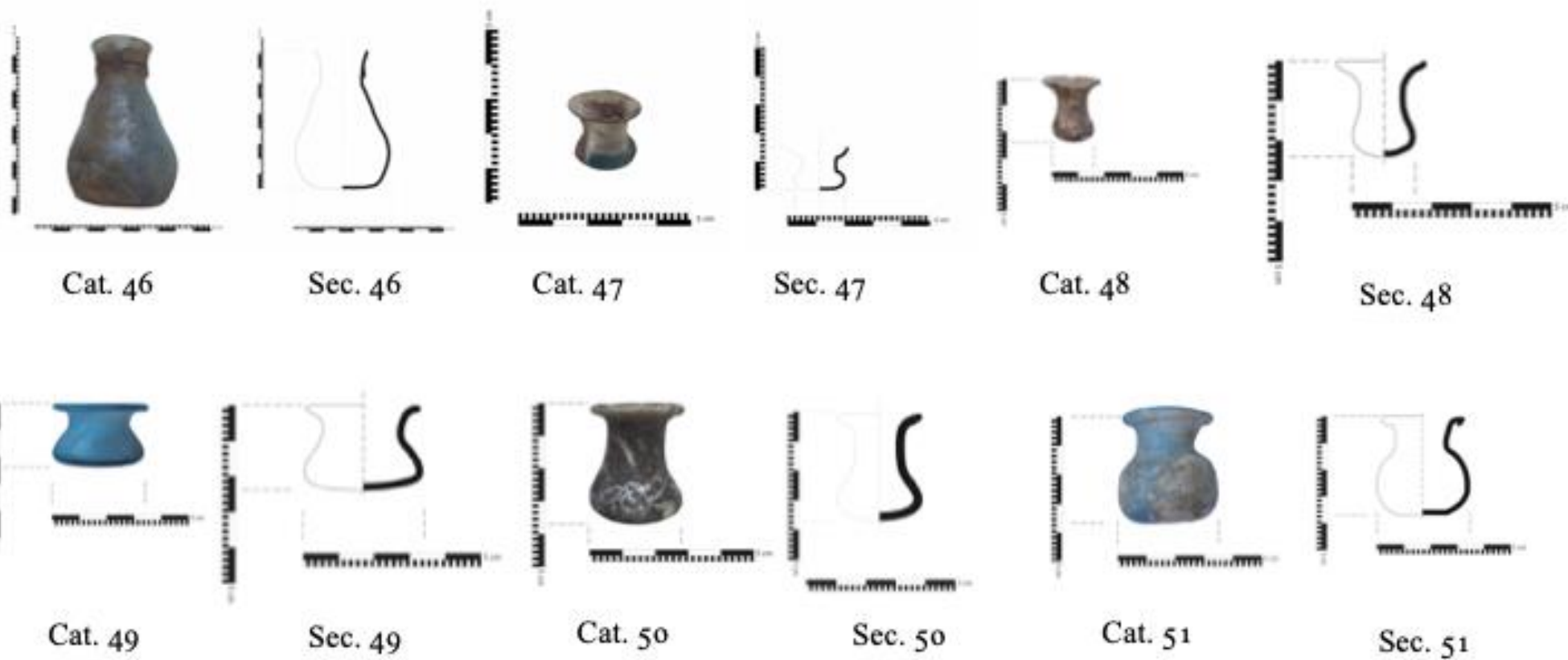
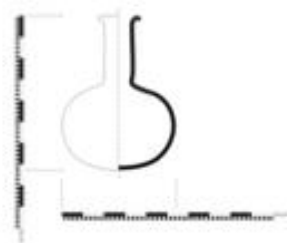


Plate VIII/ Storage containers- Jars/Trick bottles



Cat. 52



Sec. 52



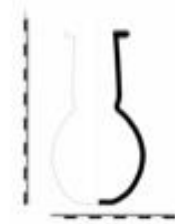
Cat. 53



Sec. 53



Cat. 54



Sec. 54



Cat. 55



Sec. 55



Cat. 56



Sec. 56



Cat. 57



Sec. 57



Cat. 58



Sec. 58



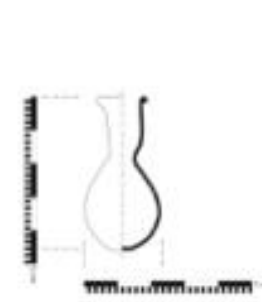
Cat. 59



Sec. 59



Cat. 60



Sec. 60



Cat. 61



Sec. 61



Cat. 62



Sec. 62



Cat. 63



Sec. 63



Cat. 64



Sec. 64



Cat.65



Sec.65



Cat.66



Sec.66



Cat.67



Sec.67



Cat.68



Sec.68



Cat.69



Sec.69



Cat. 70



Sec. 70



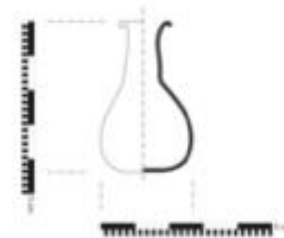
Cat. 71



Sec. 71



Cat. 72



Sec. 72



Cat. 73



Sec. 73



Cat. 74



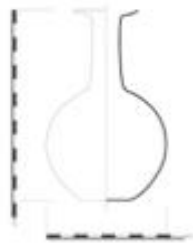
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Sec. 75



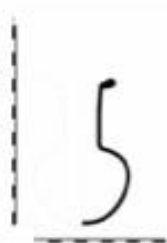
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Sec. 76



Cat. 77



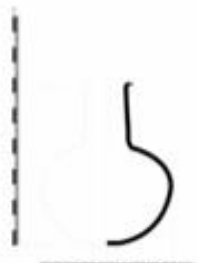
Sec. 77



Cat. 78



Cat. 79



Sec. 79



Cat. 80



Sec. 80



Cat. 81



Cat. 82



Sec. 82



Cat.83



Sec.83



Cat.84



Sec.84



Cat.85



Sec.85

Plate IX/ Storage containers- Flasks



Cat. 86



Sec. 86



Cat.87



Sec.87



Cat.88



Sec.88



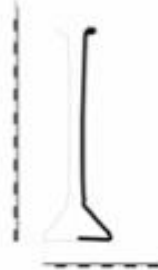
Cat.89



Sec.89



Cat.90



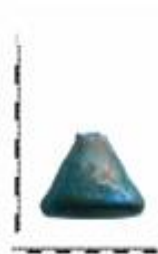
Sec.90



Cat.91



Sec.91



Cat.91



Sec.92

Plate X / Toilet bottles-Unguentaria/ Candlestick unguentaria



Cat. 93



Sec. 93



Cat. 94



Sec. 94



Cat. 95



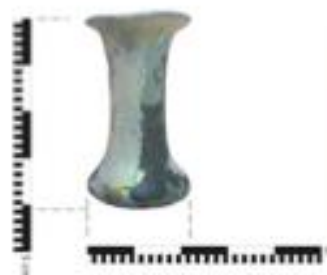
Sec. 95



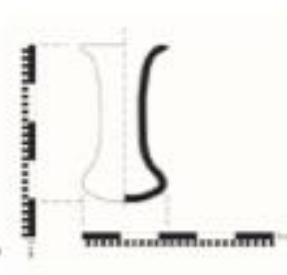
Cat. 96



Sec. 96



Cat. 97



Sec. 97



Cat. 98



Sec. 98

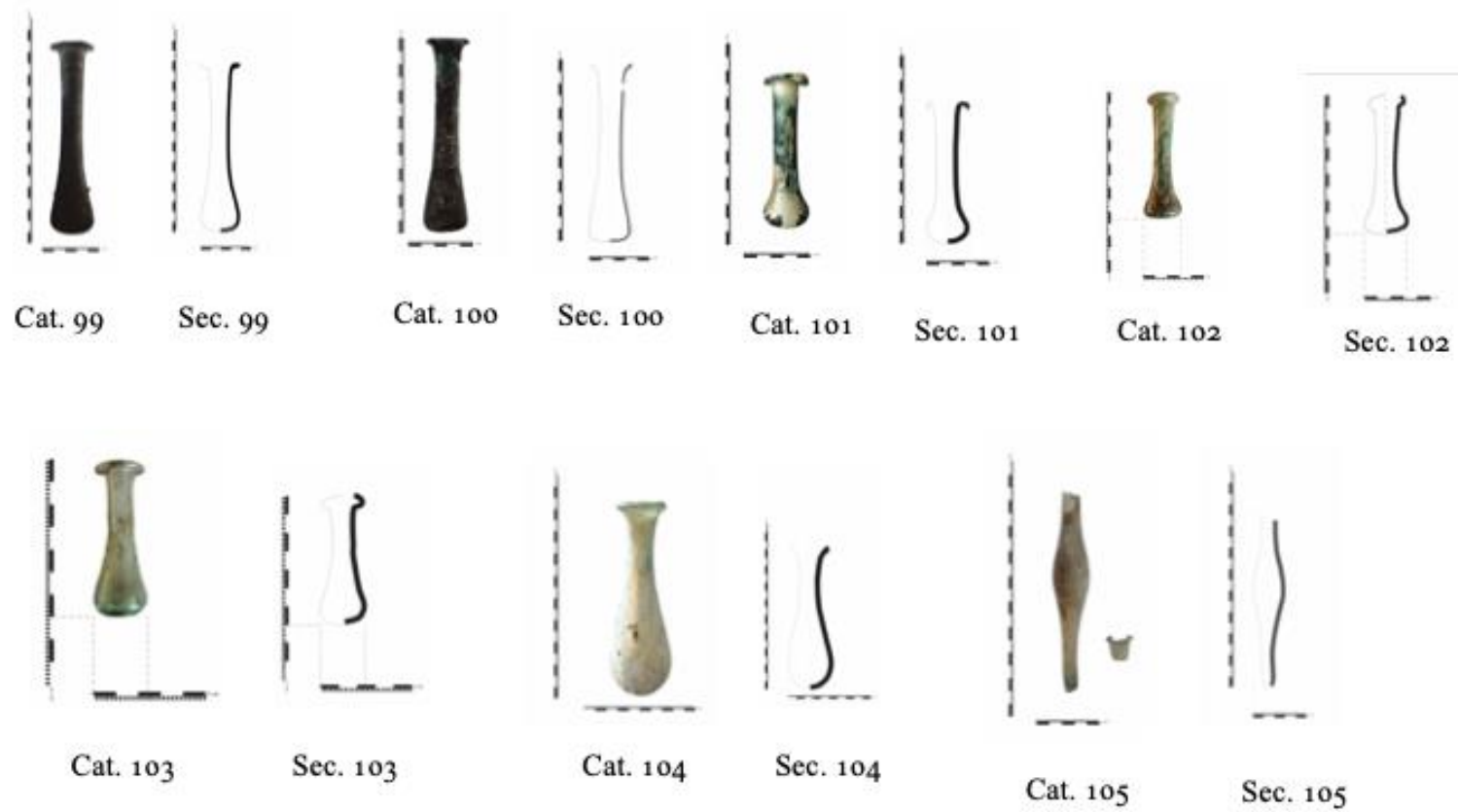


Plate XI / Toilet bottles-Unguentaria/ Fusiform unguentaria



Cat. 106



Sec. 106



Cat. 107



Sec. 107



Cat. 108



Sec. 108



Cat. 109



Sec. 109



Cat. 110



Sec. 110



Cat. 111



Sec. 111



Cat. 112



Sec. 112



Cat. 113



Sec. 113



Cat. 114



Sec. 114



Cat. 115



Sec. 115



Cat. 116



Sec. 116



Cat. 117



Sec. 117



Cat. 118



Sec. 118



Cat. 119



Sec. 119



Cat. 120



Sec. 120



Cat. 121



Sec. 121



Cat. 122



Sec. 122



Cat. 123



Sec. 123



Cat. 124



Sec. 124



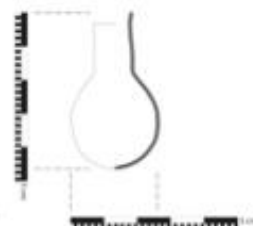
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Sec. 125



Cat. 126



Sec. 126



Cat. 127



Sec. 127



Cat. 128



Sec. 128



Cat. 129



Sec. 129



Cat. 130



Sec. 130



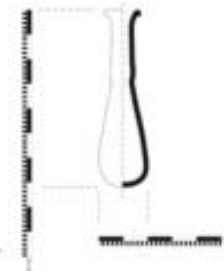
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Sec. 131



Cat. 132



Sec. 132



Cat. 133



Sec. 133



Cat. 134



Sec. 134



Cat. 135



Sec. 135



Cat. 136



Sec. 136



Cat. 137



Sec. 137



Cat. 138



Sec. 138



Cat. 139



Sec. 139



Cat. 140



Sec. 140



Cat. 141



Sec. 141



Cat. 142



Sec. 142



Cat. 143



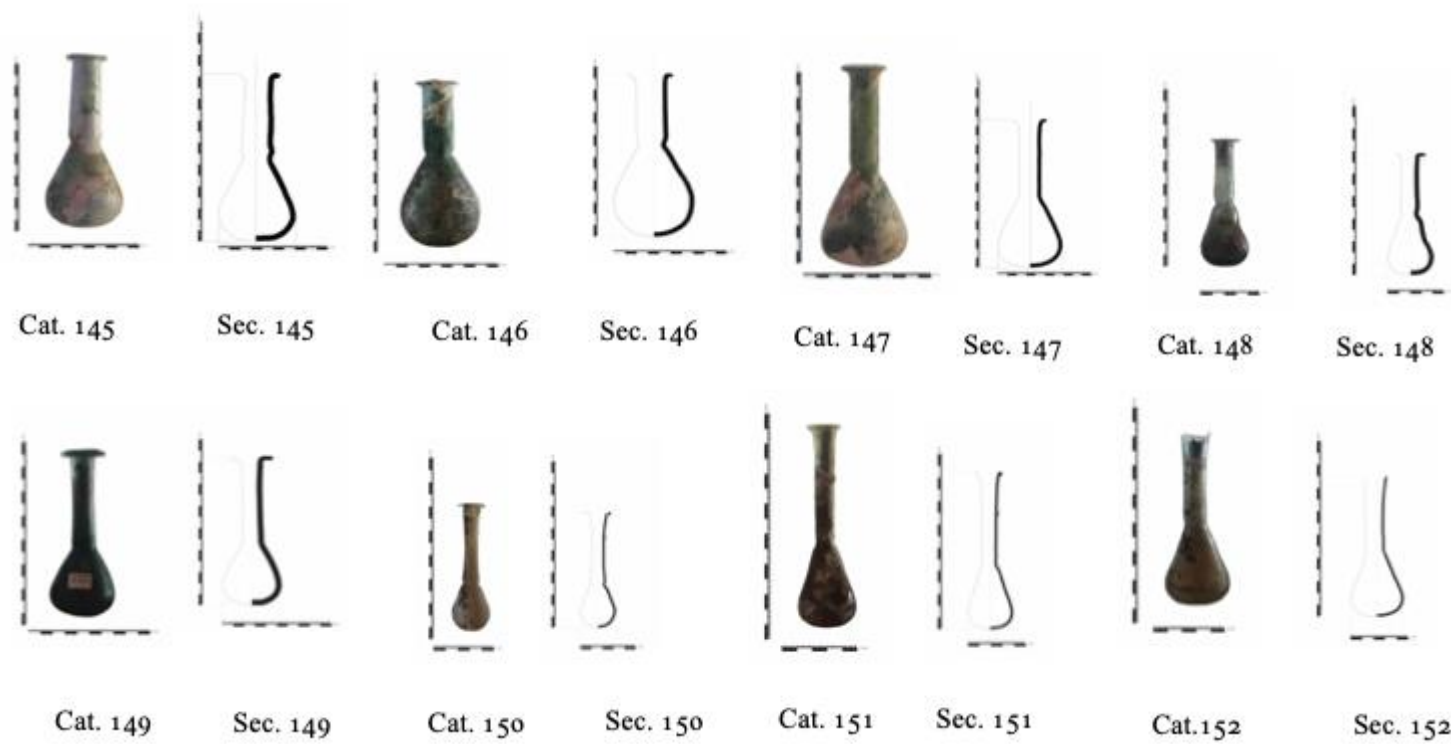
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Cat. 144



Sec. 144





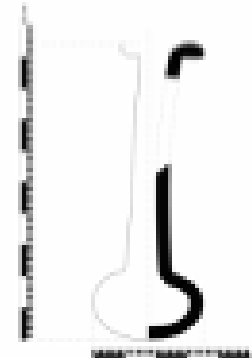
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Sec. 153



Cat. 154

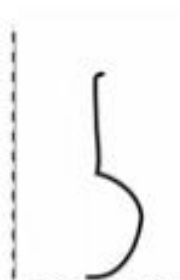


Sec. 154

Plate XII / Toilet bottles-Unguentaria/ Piriform unguentaria



Cat. 155



Sec. 155



Cat. 156



Sec. 156



Cat. 157



Sec. 157



Cat. 158



Sec. 158



Cat. 159



Sec. 159



Cat. 160



Sec. 160



Cat. 161



Sec. 161



Cat. 162



Sec. 162



Cat. 163



Sec. 163



Cat. 164



Sec. 164



Cat. 165



Sec. 165



Cat. 166



Sec. 166



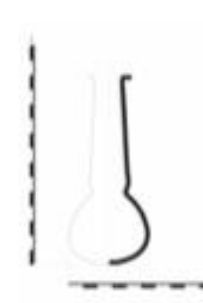
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Sec. 167



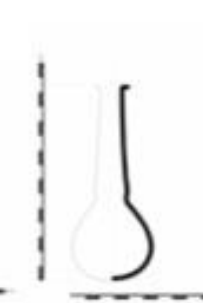
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Sec. 168



Cat. 169



Sec. 169



Cat. 170



Sec. 170



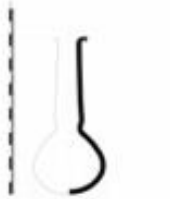
Cat. 171



Sec. 171



Cat. 172



Sec. 172



Cat. 173



Sec. 173



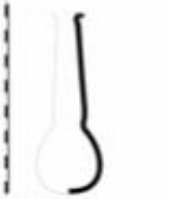
Cat. 174



Sec. 174



Cat. 175



Sec. 175



Cat. 176



Sec. 176



Cat. 177



Sec. 177



Cat. 178



Sec. 178

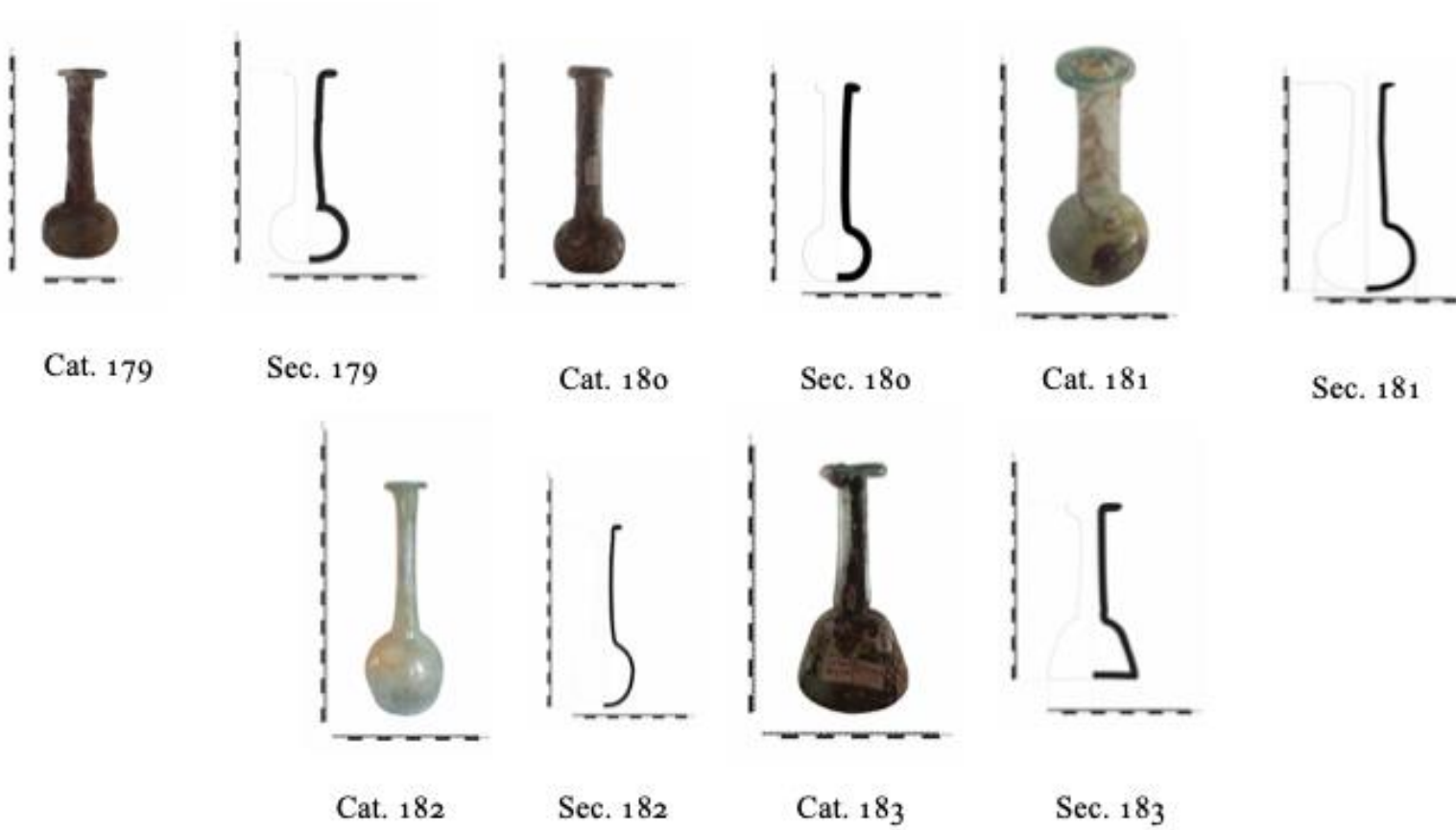


Plate XIII / Toilet bottles-Unguentaria/ Bulbous unguentaria

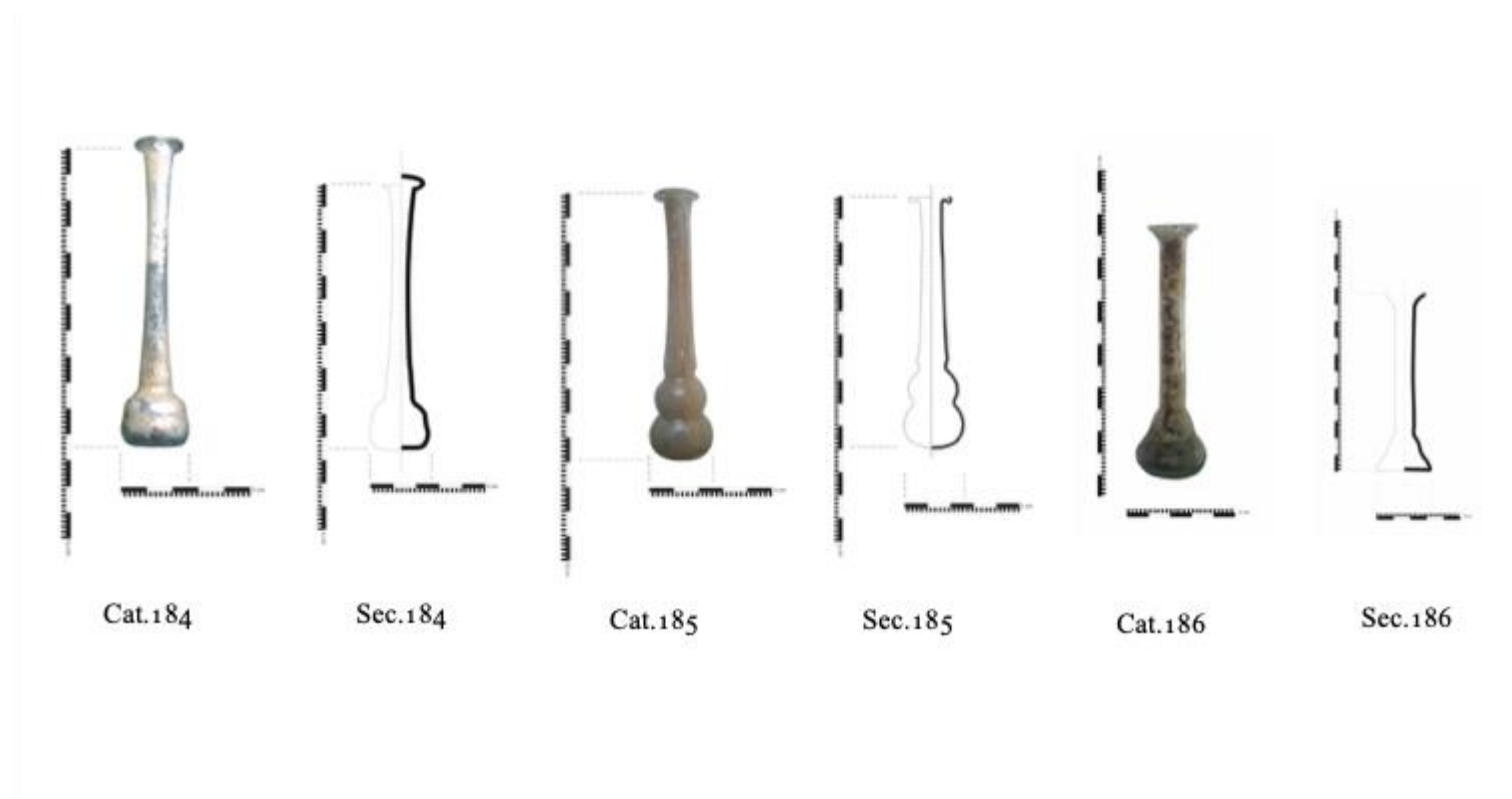


Plate XIV / Toilet bottles-Unguentaria/ Double Bulges-shaped

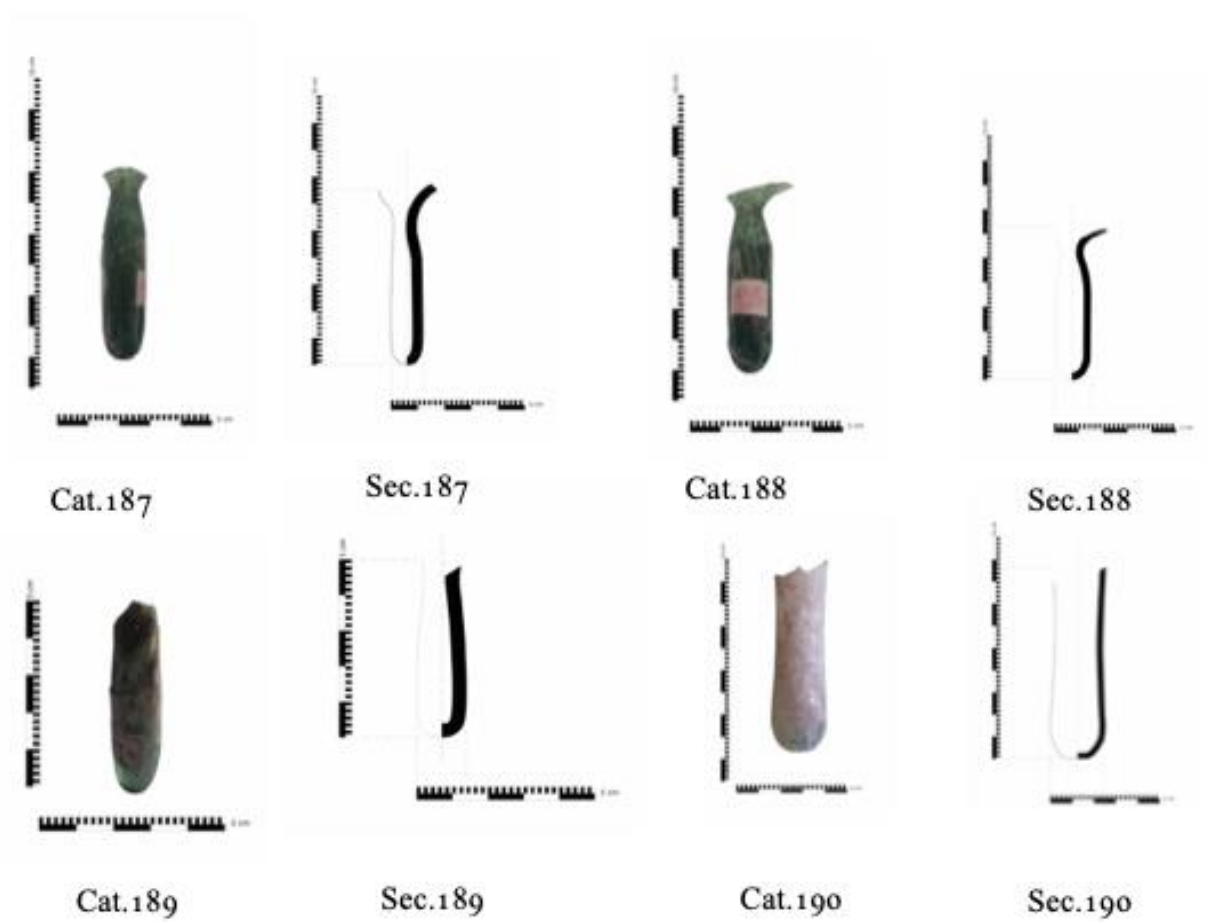


Plate XV / Toilet bottles-Unguentaria/ Test-tube unguentaria



Plate XVI / Other objects/ Bracelets



Cat. 200



Cat. 201



Cat. 202



Cat. 204



Cat. 205



Cat. 206



Cat. 207



Cat. 208



Cat. 209



Cat. 210



Cat. 211



Cat. 212



Cat. 213



Cat. 214



Cat. 215



Cat. 216



Cat. 217



Cat. 218



Cat. 219



Cat. 220



Cat. 221



Cat. 222



Cat. 223

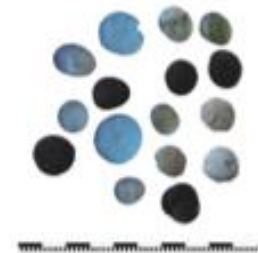




Cat.232



Cat.233



Cat.234



Cat.235



Cat. 236

Plate XVII / Other objects/ Beads-Stirring stick-conical lam

9 Appendix II/ Tables

Cat. No.		01			
Inv. No.		695			
Site, Year of Recovery		Jable/ Jbeibat 2001/ Tomb B			
Base		Slightly concave Base			
Rim		Folded Rim, Inward			
Decoration		Plain			
Color		Bluish			
Description		Knocked-off, uneven rim; slightly bulging collar below rim; side expanding downward, then angled in to join rounded bottom, slightly concave at bottom with off-center pontil mark Note: This style of small drinking vessels was widespread, and persistent for a long period of time. Evidence shows they first appeared mid-1st century AD and remained in use until the 2nd century AD			
Condition		Intact; few bubbles; dulling, faint pitting, iridescence, and patches of creamy weathering on the inside and outside.			
Dimensions					
Width (cm)	5.5	Height (cm)	3.6	Thickness (cm)	0.2

Cat. No.		02			
Inv. No.		5510			
Site, Year of Recovery		Latakia/ Unknown provenance; confiscation Șăfită			
Base		Base rings			
Rim		Folded Rim, Inward			
Decoration		Plain			
Color		Translucent pale blue-green.			
Description		Ground, horizontal rim; short, flaring neck; straight side expanding downward, then angled into to integral base ring; broad, flat bottom with small central kick; broad relief circle around projecting central knob on interior of bottom			
Condition		Intact; many pinprick bubbles; heavily weathered and pitted, with dulling and patches of brilliant iridescence; some soil encrustation and thick creamy weathering on interior.			
Dimensions					
Width (cm)	4	Height (cm)	8	Thickness (cm)	---

Cat. No.	03				
Inv. No.	1248/57				
Site, Year of Recovery	Latakia/ al-Māliyya Cemetery, 2005				
Base	Flat or Concave Base				
Rim	Folded Rim, Inward				
Decoration	Plain				
Color	Colorless with a pale blue-green tint;				
Description	Features a trail of the same glass. The rim is thick and round, leading to a flaring mouth; it has a short, concave neck; with a bulbous body, tapering into a small pushed-in bottom.				
Condition	Intact; features pinprick bubbles and areas of brilliant iridescence on the exterior; there is soil encrustation and limy weathering on the neck and body.				
Dimensions					
Width (cm)	3.6	Height (cm)	2.5	Thickness (cm)	0.1

Cat. No.	04				
Inv. No.	5506				

Site, Year of Recovery		Latakia/ Unknown provenance; confiscation Ṣāfitā			
Base		Base ring			
Rim		Folded Rim, Outward and Downward			
Decoration		Plain			
Color		Colorless transparent			
Description		Its body elongated in shape. The side wall curves sharply backward to form a slightly concave base. The bottom is pushed in to creat a tubular base ring. Rounded rim, and pontil scar.			
Condition		Intact; few bubbles; dulling, faint pitting, iridescence, and patches of creamy weathering on the inside and outside.			
Dimensions					
Width (cm)	5.5	Height (cm)	10	Thickness (cm)	0.3

Cat. No.		05			
Inv. No.		53/36			
Site, Year of Recovery		Latakia/ ShārYā Anṭāka. 2008/ al-shīkh dāhir Cemeteries/ Yāqār 1598/ anti chamber			
Base		Flat or Concave Base			
Rim		Folded Rim, Outward and Downward			
Decoration		Plain			
Color		Translucent pale yellow-green.			
Description		Features a rounded, slightly splayed-out rim; cylindrical body with slightly convex sides; rounded bottom with a small, deep kick at the center.			
Condition		Intact; contains pinprick bubbles and blowing striations; exhibits dulling and iridescence on the exterior, with creamy weathering present on most of the interior.			
Dimensions					
Width (cm)	8	Height (cm)	6.2	Thickness (cm)	0.1

Cat. No.	06				
Inv. No.	54				
Site, Year of Recovery	Latakia/ ShārYā Anṭāka. 2008/ al-shīkh dāhir Cemeteries/ Yāqār 1598/ chamber 7				
Base	Flat or Concave Base				
Rim	Unworked Rim				
Decoration	Plain				
Color	Translucent bluish in color.				
Description	Features a knocked-off, uneven rim; slightly bulging collar below the rim; sides expanding downward, then angling in to connect with a bottom that has an uneven pushed-in center. Stands at an angle on the base.				
Condition	Intact; features numerous pinprick bubbles; exhibits dulling, deep pitting, and brilliant iridescent weathering on the exterior; thick creamy weathering present on the interior.				
Dimensions					
Width (cm)	9.1	Height (cm)	5.2	Thickness (cm)	0.2

Cat. No.	07				
Inv. No.	5453/58				
Site, Year of Recovery	Latakia/ al-shīkh dāhir, 1994				
Base	Flat or Concave Base				
Rim	Unworked Rim				
Decoration	Plain				
Color	Colorless with a pale blue tint.				
Description	The rim is thin, rounded, and vertical with a slight inner lip; the straight sides expand slightly downward before turning in at a sharp angle to the bottom, which has an uneven, concave center.				

Condition		Intact, but with a break and a small section missing from the rim; features patches of enamel-like weathering.			
Dimensions					
Width (cm)	6.3	Height (cm)	5.6	Thickness (cm)	0.1

Cat. No.	08				
Inv. No.	52/36				
Site, Year of Recovery	Latakia/ ShārYā Anṭāka. 2008/ al-shīkh ḍāhir Cemeteries/ Yāqār 1598/ chamber 7				
Base	Pointed Base				
Rim	Drinking Horn				
Decoration	Features the shape of a bird's head at its end				
Color	Translucent, Bluish				
Description	A large blue transparent glass horn that appears to have been used as a wine drinking cup, although the possibility of it being a horn is unlikely (even though its shape resembles a horn). However, its closed end that is shaped like a bird confirms that it is not, in fact, a horn; and its unique form has very few similarities.				
Condition	There is a small broken section at the end, and it is unclear whether it is an open end or a broken end.				
Dimensions					
Width (cm)	3.6	Height (cm)	32	Thickness (cm)	0.1

Cat. No.	09				
Inv. No.	5454/59				
Site, Year of Recovery	Latakia/ al-shīkh dāhir, 1994				
Rim	Folded rim, outward				
Base	Base ring				
Decoration	-----				
Color	Colorless with a pale yellow-green tint.				
Description	The rim is rounded and vertical; the sides curve inward to a slightly uneven, flat bottom. The interior features decoration of horizontal wheel-cut grooves, consisting of a single broad groove below the rim and a band of two narrow grooves around the lower body. Note: flattened circular base, High ring base				
Condition	Intact; features many pinprick bubbles; there is dulling, pitting, and weathering, along with brilliant iridescence and some patches of the original polished surface.				
Dimensions					
Width (cm)	8.5	Height (cm)	4.3	Thickness (cm)	0.2

Cat. No.	10
Inv. No.	1371/80
Site, Year of Recovery	Tartūs / Damascus, N/A
Rim	Folded inward
Base	Base ring
Decoration	----
Color	Translucent, pale blue-green.
Description	Splayed-out, rounded rim; convex side tapering downward, then turned into flat bottom with pontil scar; added ring base with flaring side and thick, rounded edge Note: Based on its form, it resembles many roman bowls from around the Empire, but based on the coloration it seems to date to the late period (4th century onwards). No established provenance or dating is available.
Condition	Intact; pinprick bubbles; heavily weathered and pitted, with patches of brilliant iridescence and enamel-like weathering.
Dimensions	

Width (cm)	7.4	Height (cm)	5.9	Thickness (cm)	0.3
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Cat. No.	11
Inv. No.	1355/86
Site, Year of Recovery	Ṭarṭūs/ Damascus, N/A
Rim	Folded rim, outward
Base	Base ring
Decoration	----
Color	Dark, pale, blue-green.
Description	Splayed-out, rounded rim; convex side tapering downward, then turned into flat bottom with pontil scar; added ring base with flaring side and thick, rounded edge.
Condition	Intact; pinprick bubbles; heavily weathered and pitted, with patches of brilliant iridescence and black enamel-like weathering.

Dimensions					
Width (cm)	7.2	Height (cm)	4,3	Thickness (cm)	0.4

Cat. No.	12
Inv. No.	1357/87
Site, Year of Recovery	Ṭarṭūs/ Damascus, N/A
Rim	Folded rim, outward
Base	Base ring
Decoration	----
Color	Reddish
Description	Inverted, horizontal rim; with rounded outer lip curving into the integral tubular base ring. Note: Based on its form, it resembles many roman bowls from around the Empire, but based on the coloration it seems to date to the late period (4th century onwards). No established provenance or dating is available.
Condition	Intact; dulling; and pitting patches of iridescence weathering.

Dimensions					
Width (cm)	6.3	Height (cm)	3.8	Thickness (cm)	0.2

Cat. No.	13
Inv. No.	2250
Site, Year of Recovery	Latakia/ al-shīkh ḍāhir Cemeteries
Rim	Folded rim, Inward
Base	Flat or concave base, without ring
Decoration	----
Color	Translucent greenish
Description	A slightly thick, rounded rim forming a smooth and continuous curve transitioning to a neckless body. Hemispherical to slightly spherical body with a deep cavity indicating its use in holding liquids or semi-liquids. A flat, slightly concave bottom, providing stability. Base not decorated or ornamented, suggesting a more utilitarian context instead of a ceremonial one. Note: This rim treatment suggests a utilitarian function, designed to facilitate pouring or drinking without overflow. Lack of ornamentation, or any complex forms suggests a more modest and functional vessel rather than a decorative purpose. The relatively thick walls indicate durability for repeated household usage. The consistent curve from rime to bases emphasizes the practical and simple design; which is characteristic of coarse Roman pottery or small tableware items used in everyday life.

Condition		Intact; pinprick and a few larger bubbles and blowing striations; dulling, pitting, and brilliant iridescence, with limy encrustation and creamy weathering on interior.			
Dimensions					
Width (cm)	4	Height (cm)	4,3	Thickness (cm)	0.3

Cat. No.	14				
Inv. No.	5455/60				
Site, Year of Recovery	Latakia/ al-shīkh dāhir, 1994				
Color	Colorless with a yellowish tint.				
Description	The lip is knocked off and inverted; it has a rounded edge and a broad, concave top. Note: None of these retains any trace of painting, but it is clear that they belong to the same group adorned with reverse-painted figures. They typically depict either a winged Eros or a female figure identifiable as Aphrodite. This lid is associated with a spherical jar.				
Condition	mostly intact, some losses to part of the lip; features pinprick and large bubbles; there is deep weathering and brilliant iridescence, along with some red soil encrustation on the inside under the lip.				
Dimensions					
Width (cm)	10.4	Height (cm)	-	Thickness (cm)	0.2

Cat. No.		15			
Inv. No.		5265/48			
Site, Year of Recovery		Ṭartūs/ Damascus, N/A			
Rim		Bottle-Neck Lid			
Color		Translucent pale blue.			
Description		Thick rim, folded out, over, and inward, flattened on top, creating an uneven opening to the mouth; cylindrical neck that joins imperceptibly with the sloping sides of the body; conical body with straight sides; deep, pointed kick at the bottom featuring a large circular pontil scar.			
Condition		Intact; however, a small part is broken and missing from the base, featuring patches of enamel-like weathering.			
Dimensions					
Width (cm)	4.5	Height (cm)	10.1	Thickness (cm)	0.3

Cat. No.	16				
Inv. No.	666				
Site, Year of Recovery	Jable/ Jbeibat, 2001 - Tomb A, Chamber 3				
Rim	----				
Color	Colorless.				
Description	The lip is knocked off and inverted; it has a rounded edge and a broad, concave top. Note : None of these pieces shows any painting, yet they clearly belong to the same group characterized by reversepainted figures—usually a winged Eros or a female figure identifiable as Aphrodite. This lid is paired with a spherical jar)				
Condition	The rim is partially missing; the glass shows tiny pinpricks and larger bubbles, extensive weathering, vivid iridescence, and a layer of reddish soil encrustation on the interior beneath the rim.				
Dimensions					
Width (cm)	10.1	Height (cm)	0.7	Thickness (cm)	0.3

Cat. No.	17				
Inv. No.	1352/78				
Site, Year of Recovery	Ṭartūs/ Damascus				
Rim	Broad, moulded lip without overhang				
Base	Circular plate on base ring				
Decoration	Plain				
Color	Colorless with a faint blue tint;				
Description	The rim is slightly inverted, rounded, and vertical. The body has a short, concave side that transitions into a tall, tubular, integral base ring. The bottom is nearly flat, thickened at the centre, and bears a central pontil scar. Note: The plate is dated to the 2nd–3rd century, but comparison with similar pieces dating it to the 4th century.				
Condition	Intact, with straightblown striations, few bubbles, slight dulling, and creamcoloured weathered patches that show iridescence.				
Dimensions					
Width (cm)	20.4	Height (cm)	4.7	Thickness (cm)	0.5

Cat. No.	18				
Inv. No.	2529/932				
Site, Year of Recovery	Ṭartūs / Ṭazar				
Neck	Short neck, ovoid body, cylindrical or tapering body				
Base	Rounded or pointed base				
Decoration	Plain				
Color	Translucent pale green.				
Description	Rim folded over and into horizontal mouth; short, cylindrical neck, tooled in around base; cylindrical neck, tooled in around base; sloping shoulder				
Condition	Intact; pinprick bubbles, blowing striations, and a few glassy inclusions; dulling and faint iridescence on exterior; patches of creamy weathering and iridescence on interior.				
Dimensions					
Width (cm)	4.7	Height (cm)	10.5	Thickness (cm)	0.3

Cat. No.	19				
Inv. No.	1365/217				
Site, Year of Recovery	Ṭartūs/ Jable warehouse				
Neck	Short neck, ovoid body, cylindrical or tapering body				
Base	Rounded or pointed base				
Decoration	Plain				
Color	Translucent light blue-green.				
Description	Rounded rim, folded out, over, and in, and beveled inner lip; flaring mouth; cylindrical, slightly concave; broad, sloping shoulder; bulbous body, with side tapering downward, round, pushed-in bottom, with traces of pontil scar.				
Condition	Intact; pinprick and larger bubbles; faint weathering and iridescence, with some patches of soil encrustation.				
Dimensions					
Width (cm)	5.3	Height (cm)	11.5	Thickness (cm)	0.3

Cat. No.	20				
Inv. No.	2646/1707/3				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e				
Neck	Short neck, ovoid body, cylindrical or tapering body				
Base	Rounded or pointed base				
Decoration	Plain				
Color	Translucent greenish glass				

Description		Featuring a rounded rim that is slightly flared outward. It has a narrow cylindrical neck with slight tooling at the base, leading to a sharp shoulder that slopes into an elongated cylindrical body with convex walls. The flat base has a small central indentation and displays a pontil scar. Note: Made from relatively thin glass, the narrow mouth is finished with a small hole on the interior.			
Condition		Intact, but the body exhibits enamel-like weathering.			
Dimensions					
Width (cm)	4.4	Height (cm)	8.1	Thickness (cm)	0.3

Cat. No.	21				
Inv. No.	2652/1707/9				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e				
Neck	Short neck, ovoid body, cylindrical or tapering body				
Base	Rounded or pointed base				
Decoration	Plain				
Color	Translucent yellowish in color,				
Description	Featuring a slightly thickened, outward-folded rim. The short, narrow neck connects to a gently sloping shoulder, leading to a tall cylindrical body with smooth, even sides. The base is broad and flat, with a faint central dimple, indicating a pontil removal mark. Note: Made from relatively thin glass, the narrow mouth is finished with a small hole from the interior. This piece demonstrates fine control in free-blown glassmaking, with minimal tooling.				
Condition	Intact, but the body exhibits enamel-like weathering.				
Dimensions					
Width (cm)	4.5	Height (cm)	8.5	Thickness (cm)	0.5

Cat. No.	22				
Inv. No.	2651/1707/8				
Site, Year of Recovery	Bānyās/ Rās al-Nabe’e				
Neck	Short neck, ovoid body, cylindrical or tapering body				
Base	Rounded or pointed base				
Decoration	Plain				
Color	Semi-translucent greenish glass				
Description	The vessel has a subtly inverted rim and a narrow cylindrical neck that smoothly transitions into a sloped shoulder. The elongated body is vertically oriented with gently curving sides, ending in a flat base with a slight central depression. A pontil mark is visible, indicating it was made using the free-blown technique.				
Condition	Intact, but the body exhibits enamel-like weathering.				
Dimensions					
Width (cm)	4.8	Height (cm)	10.5	Thickness (cm)	0.5

Cat. No.	23				
Inv. No.	2647/1707/4				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e				
Neck	Short neck, ovoid body, cylindrical or tapering body				
Base	Rounded or pointed base				
Decoration	Plain				
Color	Translucent greenish.				
Description	Featuring a rounded rim that is slightly flared outward. It has a narrow cylindrical neck with slight tooling at the base, leading to a sharp shoulder that slopes into an elongated cylindrical body with convex walls. The flat base has a small central indentation and shows a pontil scar.				
Condition	Intact, but the body exhibits enamel-like weathering.				

Dimensions					
Width (cm)	4.3	Height (cm)	9.5	Thickness (cm)	0.5

Cat. No.	24
Inv. No.	2097/3434
Site, Year of Recovery	Bānyās/ al-mādenah al-raḍeah
Neck	Short neck, ovoid body, cylindrical or tapering body
Base	Rounded or pointed base
Decoration	Plain
Color	Translucent greenish.
Description	A rounded that is slightly flared outward; narrow cylindrical neck with slight tooling marks at its base; sharp shoulder sloping into an elongated cylindrical body; convex body walls; flat base with a small central indentation, featuring a pontil scar.
Condition	Intact; however, there is enamel-like weathering on the body. The body displays slight weathering and internal bubbling, indicative of ancient glassblowing techniques.

Dimensions					
Width (cm)	4.3	Height (cm)	8.4	Thickness (cm)	0.4

Cat. No.	25
Inv. No.	2096/3130
Site, Year of Recovery	Bānyās/ al-mādenah al-raḍeah
Neck	Short neck, ovoid body, cylindrical or tapering body
Base	Rounded or pointed base
Decoration	Plain
Color	Translucent pale blue.
Description	The rim is folded over and into a horizontal mouth; short cylindrical neck, tooled around the base; sloping shoulder; cylindrical body with convex sides; rounded bottom, concave at the center. Note: Made from relatively thin glass, the narrow mouth is finished with a small hole on the interior.
Condition	Intact; features pinprick bubbles, blowing striations, and a few glassy inclusions.

Dimensions					
Width (cm)	4.6	Height (cm)	7.3	Thickness (cm)	0.3

Cat. No.	26
Inv. No.	2095/3129
Site, Year of Recovery	Bānyās/ al-mādenah al-raḍeah
Neck	Short neck, ovoid body, cylindrical or tapering body
Base	Rounded or pointed base
Decoration	Plain
Color	Translucent pale blue.
Description	The rim is folded over and into a horizontal opening; short cylindrical neck, with tooling around the base; sloping shoulder; cylindrical body featuring convex sides; rounded bottom that is concave at the center.
Condition	Intact; contains pinprick bubbles, blowing striations, and several glassy inclusions.

Dimensions					
Width (cm)	5	Height (cm)	8.5	Thickness (cm)	0.4

Cat. No.	27				
Inv. No.	2094/3128				
Site, Year of Recovery	Bānyās/ al-mādenah al-readeah				
Neck	Short neck, ovoid body, cylindrical or tapering body				
Base	Rounded or pointed base				
Decoration	Plain				
Color	Translucent pale blue.				
Description	The rim is folded over and inward to form a horizontal mouth; short cylindrical neck, tooled at the base; sloping shoulder; cylindrical body with convex sides; rounded bottom that is concave in the center.				
Condition	Intact; features pinprick bubbles, blowing striations, and a handful of glassy inclusions.				
Dimensions					
Width (cm)	4.5	Height (cm)	8.8	Thickness (cm)	0.3

Cat. No.	28				
Inv. No.	1379/207				
Site, Year of Recovery	Ṭartūs / Different Locations				
Neck	Short neck, ovoid body, cylindrical or tapering body				
Base	Rounded or pointed base				
Decoration	Plain				
Color	Translucent pale green.				
Description	Rim folded out, down, and in, and into horizontal mouth; short, cylindrical neck, tooled in around base; sloping shoulder; cylindrical body, with convex sides; rounded bottom, concave at center.				
Condition	Intact; pinprick bubbles, blowing striations, and a few glassy inclusions; dulling and faint iridescence on exterior; patches of creamy weathering and iridescence on interior.				
Dimensions					
Width (cm)	5.8	Height (cm)	11.7	Thickness (cm)	0.5

Cat. No.	29				
Inv. No.	3918/704				
Site, Year of Recovery	Tartūs / Different Locations				
Neck	Short neck, ovoid body, cylindrical or tapering body				
Base	Rounded or pointed base				
Decoration	Plain				
Color	A translucent pale green				
Description	The rim is folded out, down, and in forming a horizontal mouth; neck is short and cylindrical in shape, tooled in around base with a sloping shoulder and a cylindrical body with convex sides; the bottom is round and concave at its center.				
Condition	Intact; pinprick bubbles, blowing striations, and a few glassy inclusions; dulling and faint iridescence on exterior; patches of creamy weathering and iridescence on interior.				
Dimensions					
Width (cm)	6.4	Height (cm)	14.5	Thickness (cm)	0.5

Cat. No.	30				
Inv. No.	3921/703				
Site, Year of Recovery	Ṭartūs / Different Locations				
Neck	Short neck, ovoid body, cylindrical or tapering body				
Base	Rounded or pointed base				

Decoration		Plain			
Color		Semi-translucent greenish glass with minor surface weathering.			
Description		The vessel has a subtly inverted rim and a narrow cylindrical neck that transitions smoothly into a sloped shoulder. The elongated body is vertically oriented with gently curving sides, ending in a flat base with a slight central depression. A pontil mark is visible, indicating it was made using the free-blown technique. Note: Made from relatively thin glass, featuring a narrow mouth that has a small hole from the interior.			
Condition		Intact, although the body shows enamel-like weathering.			
Dimensions					
Width (cm)	6.2	Height (cm)	13.6	Thickness (cm)	0.5

Cat. No.	31				
Inv. No.	3920/701				
Site, Year of Recovery	Ṭartūs / Different Locations				
Neck	Short neck, ovoid body, cylindrical or tapering body				
Base	Rounded or pointed base				
Decoration	Plain				
Color	Semi-translucent greenish glass with minor surface weathering.				
Description	The vessel has a subtly inverted rim and a narrow cylindrical neck that smoothly transitions into a sloped shoulder. The elongated body is vertically oriented with gently curving sides, ending in a flat base with a slight central depression. A pontil mark is visible, indicating it was made using the free-blown technique.				
Condition	Intact, but the body exhibits enamel-like weathering.				
Dimensions					
Width (cm)	6.2	Height (cm)	14	Thickness (cm)	0.5

Cat. No.	32				
Inv. No.	5507				
Site, Year of Recovery	Latakia/ Unknown provenance; confiscation Ṣāfitā				
Neck	Short neck, ovoid body, cylindrical or tapering body				
Base	Pointed base				
Decoration	Plain				
Color	Translucent greenish yellow.				
Description	Uneven rim folded out, around, and in connected to a cylindrical neck, the amphora is slightly tooled around base; with convex, curving body tapering to a solid, drawn- out knob base with tooling indent on one side.				
Condition	Intact; pinprick bubbles; dulling, deep pitting and weathering, leaving a brilliant iridescent surface on exterior.				
Dimensions					
Width (cm)	7.6	Height (cm)	16	Thickness (cm)	0.3

Cat. No.	33
Inv. No.	5508
Site, Year of Recovery	Latakia/Unknown provenance; confiscation Ṣāfitā
Neck	Short neck, ovoid body, cylindrical or tapering body
Base	Pointed base
Decoration	Plain
Color	Translucent greenish yellow.
Description	Uneven rim folded out, around, and in; cylindrical neck, slightly tooled in around base; body with convex curving side, tapering to solid, drawn- out knob base with tooling indent in one side.
Condition	Intact; pinprick bubbles; dulling, deep pitting and weathering, leaving a brilliant iridescent surface on exterior.
Dimensions	

Width (cm)	7	Height (cm)	16	Thickness (cm)	0.3
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Cat. No.	34
Inv. No.	5512
Site, Year of Recovery	Latakia/ Unknown provenance; confiscation Şāfitā
Rim	Uneven rim folded out, around, and in; cylindrical neck
Base	Pointed base
Decoration	Plain
Color	Translucent greenish yellow.
Description	Uneven rim folded out, around, and in; cylindrical neck, slightly tooled in around base; body with convex curving side, tapering to solid, drawn- out knob base with tooling indent in one side. Note: Description based on comparanda objects, and based on the availability of a complete set of top fragments and an intact base.
Condition	Fragmented; comprises 8 pieces but forms a complete, unrestored specimen.
Dimensions	
Width (cm)	-----
Height (cm)	----
Thickness (cm)	0.3

Cat. No.	35
Inv. No.	1252/61
Site, Year of Recovery	Latakia/ al-Māliyya Cemetery 2005
Neck	Tall neck and cylindrical or tapering, rectangular body
Base	Rounded or pointed base
Decoration	With thumb indents, vertical corrugations, or pinched ribs
Color	Translucent green in color; except for the base which is of uncertain color
Description	Features trails in opaque white. The inward-sloping rim-disk has an upward-rounded lip; the cylindrical neck expands downward; the shoulder slopes with an indented surface; the body is pear-shaped; there is an applied base-knob. A white trail is applied to the lip of the rim and then spirals down around the neck and shoulder to the body, where it is tooled into a festoon pattern with twenty-three upward strokes, continuing in a plain spiral around the lower part of the body and under the base-knob, trailing off upward on the side. Note: Many comparable pieces of this form are available but with handles.
Condition	Intact; features soil encrustation and limy weathering on the neck and body, with missing parts from the rim.
Dimensions	
Width (cm)	2.7
Height (cm)	13.4
Thickness (cm)	0.1

Cat. No.	36
Inv. No.	1377/196
Site, Year of Recovery	Ṭartūs /Different Locations
Neck	Tall neck and cylindrical or tapering, rectangular body
Base	Folded rim, outward and Rounded
Decoration	Mold-blown decoration
Color	Translucent, Amber Color
Description	Rim folded out, round, and in, forming slight constriction to neck; tall, cylindrical neck with slightly concave sides and tooling marks around base; small rounded shoulder; four indented rectangular sides to body; square, pushed-in bottom. Note: The narrow rim opening indicates its use for unguents in general and scented oils in particular.
Condition	Intact; bubbles and blowing striations; thick, creamy weathering, with patches of iridescence and dulling.
Dimensions	

Width (cm)	7.2	Height (cm)	16	Thickness (cm)	0.3
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Cat. No.	37
Inv. No.	5509
Site, Year of Recovery	Latakia/ Unknown provenance; confiscation Şāfitā
Neck	Tall neck and cylindrical or tapering, rectangular body
Base	Flat or concave base
Decoration	With corrugations on body
Color	Brown
Description	A broken brown flask in a wide cylindrical body with a flat base and 30 vertical indents of irregular length and depth. Note: Described based on comparanda items to provide details on missing top section and base features
Condition	Broken, unrestored cup, missing most of its parts with only 3 fragments remaining. The entire lip is missing.
Dimensions	
Width (cm)	6.8
Height (cm)	8
Thickness (cm)	0.2

Cat. No.	38
Inv. No.	56/40
Site, Year of Recovery	Latakia/ Shār'Ya Anṭāka. 2008/ al-shīkh ḍāhir Cemeteries/ 'Yaḡār 1598/ chamber 7
Neck	Funnel neck
Rim	Folded rim, inward
Decoration	---
Color	Colorless with pale blue-green tinge
Description	Plain rounded wide rim with thickened, beveled fold below; broad, flaring mouth; slender very short neck with tooling indent around middle and expanding downward below; horizontal shoulder curving to join imperceptibly with large bulbous body; concave bottom; strap handle applied to shoulder, drawn up and out, turned in horizontally, drawn up and tooled to form pointed backward projecting thumb rest above, and then trailed onto rim and underside of mouth.
Condition	Intact; pinprick bubbles; pitting, dulling, and milky weathering with iridescence.
Dimensions	
Width (cm)	6
Height (cm)	10.8
Thickness (cm)	0.3

Cat. No.	39
Inv. No.	1372/83
Site, Year of Recovery	Latakia/ Damascus
Rim	Rounded rim
Base	Plain, or with added coils only
Decoration	---
Color	Translucent blue-green; handle in same color.
Description	Collared rim folded out, down, up and out, with rounded outer lip; short, slightly convex cylindrical neck, rounded shoulder, sloping downward; slightly convex side tapering downward; pushed-in bottom with central pontil scar. strap handle applied in large splayed claw pads to shoulder, drawn up and turned in horizontally, and then pressed onto underside of rim and top of neck
Condition	Intact; many bubbles; deep pitting and iridescent weathering.
Dimensions	
Width (cm)	7
Height (cm)	14
Thickness (cm)	0.4

Cat. No.	40
Inv. No.	5457/62

Site, Year of Recovery	Latakia/ al-shīkh dāhir, 1994				
Rim	Miscellaneous types				
Bases	Amphora				
Decoration	---				
Color	Colorful with opaque white and yellow trails; handles of indeterminate color.				
Description	The rim-disk is uneven and coiled, featuring a rounded outer lip; the fusiform body has uneven, misshapen sides that expand downward before tapering to a pointed bottom. Two uneven lug handles are applied at the top of the body over the trail. A trail is applied unevenly around the rim and trails off below; another trail is attached near the bottom, drawn up in a spiral to the point of carination, tooled into an irregular feather pattern around the side with upward and downward strokes, and wound around again in a spiral ending below the rim. Features a flat, ring-shaped base. Note: Two handles extend from the rim to the body; the body is fusiform in shape, and the handles are asymmetrical. The body features color waves, and the handles are shaped like an "S."				
Condition	Complete. Broken and restored with deformation on its outer surface ornamentation.				
Dimensions					
Width (cm)	2.9	Height (cm)	11.8	Thickness (cm)	0.3

Cat. No.	41				
Inv. No.	5458/63				
Site, Year of Recovery	Latakia/ al-shīkh dāhir, 1994				
Rim	Miscellaneous types				
Bases	Amphora				
Decoration	---				
Color	Multi-colored amphora with two asymmetric handles with ornamental tracks in opaque, pale white-yellow coloration.				
Description	The handles are colorless; a base knob with purple streaks. Outward inverted, thick rim, with an uneven flat top, and a tooling indent underneath. A short, concave, cylindrical neck; a wide, sloping shoulder, and a piriform body. Large, spherical base knob, and two rod handles pressed into the shoulder, drawn upwards and in towards the rim, then looping inwards; attached to the neck over ornamental trails. A yellow trail wrapping around the rim lip, spiraling downwards around the neck, shoulder, and body; then down across upper body in a diagonal line. Another blue trail starts halfway down the neck over the yellow trail and spirals downwards. Both trails are tooled starting from the edge of the shoulder to undercurve of body in a festoon pattern with 26 upward strokes, then continues in plain spirals at the bottom, ending at the base knob.				
Condition	Intact; broken and previously restored, slightly abraded at the base and rim, soil encrustation, and limy weathering.				
Dimensions					
Width (cm)	3	Height (cm)	11	Thickness (cm)	0.3

Cat. No.	42				
Inv. No.	2194/1699				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e /2				
Rim	short-necked flasks with two circular handles, neck and cylindrical or tapering, rectangular body				
Bases	Rounded or pointed base				
Decoration	With corrugations on body				
Color	Dark amber				

Description		Featuring an inward-sloping rim-disk with an upward-rounded lip. It has a cylindrical neck that expands downward, leading to a sloping shoulder with an indented surface and a piriform body. The base has an applied knob, and two rod handles are applied in pads across the shoulder, drawn up vertically, then looped in and down, pressed onto the neck below the rim over trail decoration. There are 14 slanting vertical grooves placed evenly around the body, ending in the middle part of the body. Note: Made of relatively thin glass			
Condition		Broken, with one handle missing entirely, a hole is present in the side of the body; exhibits signs of dulling, deep pitting, and weathering, with brilliant iridescence.			
Dimensions					
Width (cm)	3.3	Height (cm)	6.5	Thickness (cm)	0.3

Cat. No.	43				
Inv. No.	3161/3122				
Site, Year of Recovery	Tartūs/ Tripoli Road				
Rim	Broken				
Bases	pointed base				
Decoration	With corrugations on body				
Color	Translucent light blue; opaque yellow and white trail.				
Description:	The handles, rim and part of the neck are missing. Inward- sloping rim disk; thick-walled neck, tapering slightly downward, then expanding to join sloping shoulder; elongated ovoid body, tapering in to a pointed bottom, with an attached base-knob; two strap handles connected to shoulder and upper part of neck. Trails around the rim, drawn down in a spiral around neck, across shoulder, down body and trailing off at bottom, with plain spiral at top and bottom; but tooled into an even narrow festoon pattern around sides.				
Condition:	Broken with weathered edges, missing rim, neck, bottom, and handles; dulling, pitting, and iridescent weathering. A thin coating on its interior.				
Dimensions					
Width (cm)	---	Height (cm)	---	Thickness (cm)	0.3

Cat. No.	44				
Inv. No.	694				
Site, Year of Recovery	Jable/ Jbeibat 2001/ Tomb B				
Rim	Tall-necked and ring handles				
Bases	Without constriction at base of neck				
Decoration	---				
Color	Blue, translucent jug with side handles of the same color.				
Description	A double-lip rim which folds outwards, down and inside to form a double collar. Slender, medium-height neck that seems attached to the bulbous body. A round, bulbous body with a slightly concave bottom with off-center pontil mark. The handles attached at the bottom of the rim and the top of body, creating a wide opening between the neck and the handle. Note: For a lack of comparanda of this style, we chose the closes example from the Isings catalogue				
Condition	Intact; but broken and missing small part from the body; with patches of enamel-like weathering, and brilliant iridescence on exterior; creamy weathering some soil encrustation around handles.				
Dimensions					
Width (cm)	6.4	Height (cm)	12.7	Thickness (cm)	0.3

Cat. No.	45				
Inv. No.	30/5				
Site, Year of Recovery	Latakia/ ShārYā Anṭāka. 2008/al-shīkh dāhir Cemeteries/ Yāqār 1598/ anti chamber				
Rim	rim is folded inward and flat horizontally, or folded outward and upward to form a triangular shape				
Bases	Rounded base				
Decoration	With corrugations on body				
Color	Translucent, whitish				
Description:	Slide-tooled indentation at the base/ring-shaped. This is among the most common types of toilet bottles, imitating bronze and pottery styles. The rim is folded inward and flat horizontally, or folded outward and upward to form a triangular shape, with a rounded edge; it has a short neck and two handles that do not occupy the entire space between the rim and the shoulder, starting somewhere in the middle of the neck; it features a thick-walled body, with the aryballoi being notable in the Flavian period. Note: Medium-length funnel shaped-neck; with a bulge at the end, rarely found in tombs.				
Condition:	Intact; but broken and missing small part from the handle and the body; with patches of enamel-like weathering.				
Dimensions					
Width (cm)	10.2	Height (cm)	7.5	Thickness (cm)	---

Cat. No.		46			
Inv. No		5268/51			
Site, Year of Recovery		Latakia/Damascus			
Rim		rounded rim; flaring neck			
Bases		Flat base			
Decoration		With corrugations on body			
Color		Translucent pale blue-green,			
Description:		Featuring a trail of the same color. Features a plain, rounded rim; flaring neck; conical body that is rounded at the base; with a kick at the bottom. A single horizontal trail wraps around the top of the body, extending onto the lower body and bottom.			
Condition:		Intact; broken and restored, exhibiting pinprick bubbles and blowing striations; features dulling, pitting, and patches of creamy weathering on its exterior; apparent soil encrustation with weathering and iridescence on interior.			
Dimensions					
Width (cm)	3.5	Height (cm)	9.2	Thickness (cm)	0.1

Cat.No.	47				
Inv. No.	2628/1709/1				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e				
Rim	Small jars with ovoid or drop-shaped bodies				
Bases	Flat base				
Decoration	-----				
Color	Translucent, bluish				
Description:	The rim is folded down, over, and inward, forming a slight inner lip, with a broad, uneven mouth. The cylindrical neck expands downward to join a squat bulbous body. The bottom is deeply pushed in, creating a hemispherical concavity with a pontil scar, and the piece stands at an angle. Note: very small body Ray W. Smith viewed these as trick vessels designed to hold wine and stoppered in a way that would mislead an unsuspecting drinker				

		into believing the glass was full, while the liquid remained unreachable within the walls of the cup. However, this deception would only work if the glass was transparent and the contents were visible, making it seem as though the cup was full. The deep color of this particular example eliminates the possibility of such a trick. Instead, the deception lies in the bottle's appearance of having a generous capacity, while in reality, the pushed-in funnel mouth limits its actual volume.			
Condition:		Intact; features pinprick bubbles; exhibits some pitting and iridescence, with one area of dullness where thick, enamel-like white weathering has flaked away.			
Dimensions					
Width (cm)	3.5	Height (cm)	3.8	Thickness (cm)	0.4

Cat. No.	48				
Inv. No.	5375/4.				
Site, Year of Recovery	Latakia/ Kwrnīsh al-bāḥḍr cemeteries, 1994				
Rim	Small jars with ovoid or drop-shaped bodies				
Bases	Flat base				
Decoration	-----				
Color	Brown				
Description:	The rim is rounded and slightly thickened, leading to a flaring mouth; it has a concave cylindrical neck and sloping shoulders with rounded corners; the body is roughly squared with deeply indented sides; the bottom is pushed in with a kick and features a pontil scar. Note: funnel shaped;				
Condition:	Intact; rim lightly broken and missing some parts; patches of enamel-like weathering present				
Dimensions					
Width (cm)	2.2	Height (cm)	2.4	Thickness (cm)	0.1

Cat. No.	49				
Inv. No.	1250/59				
Site, Year of Recovery	Latakia/ al-Māliyya Cemetery 2005				
Rim	Small jars with ovoid or drop-shaped bodies				
Bases	Flat base				
Decoration	-----				
Color	Translucent, bluish				
Description:	The rim is slightly thick and rounded; featuring a wide mouth with an opening approximately the same height as the piece itself; it has a concave, cylindrical neck; sloping shoulders and a nearly bulbous body; the bottom features a pontil mark. Note: Short, compressed body.				
Condition	Intact; with enamel-like weathering present on the body.				
Dimensions					
Width (cm)	2.4	Height (cm)	3.8	Thickness (cm)	0.2

Cat. No.	50				
Inv.No.	5500				
Site, Year of Recovery	Latakia/ al-ṭabiyyāt 1993				
Rim	Small jars with ovoid or drop-shaped bodies				
Bases	Flat base				
Decoration	-----				
Color	Translucent deep olive-green color, appearing black.				
Description	The rim is folded down, inward, and over, forming a slight inner lip; it has a broad, uneven mouth; a cylindrical neck that expands downward to join a squat bulbous body; the bottom is deeply				

		pushed in to create a hemispherical concavity. The piece stands at an angle.			
Condition		Intact, but features enamel-like weathering on the body.			
Dimensions					
Width (cm)	2.4	Height (cm)	2.8	Thickness (cm)	0.3

Cat. No.	51				
Inv. No.	1249/58				
Site, Year of Recovery	Latakia/ al-Māliyya Cemetery 2005				
Rim	Small jars with ovoid or drop-shaped bodies				
Bases	Flat base				
Decoration	-----				
Color	Colorless with a pale greenish tint				
Description:	The rim is rounded and slightly thick, leading to a flaring mouth; it has a concave cylindrical neck and sloping shoulders with rounded corners; roughly square-shaped body with deeply indented sides; the bottom is pushed in with a kick.				
Condition	Intact; features pinprick bubbles; minimal weathering on the exterior; areas of creamy weathering and iridescence present on the interior.				
Dimensions					
Width (cm)	3.5	Height (cm)	7.3	Thickness (cm)	0.1

Cat. No.	52				
Inv. No	1245/54				
Site, Year of Recovery	Latakia/ al-Māliyya Cemetery 2005				
Neck	Tall-necked Flasks with constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Translucent light blue				
Description	The rim is folded outward, inward, and over, featuring a raised inner lip; it has a funnel-shaped neck with slight tooling marks around the base; the body is squat and bulbous, with a concave bottom. Tooling lines are present around the upper body.				
Condition	Intact; features pinprick bubbles and areas of brilliant iridescence on the exterior; there is soil encrustation and limy weathering present on the neck and body.				
Dimensions					
Width (cm)	1.8	Height (cm)	7.2	Thickness (cm)	0.2

Cat.No.		53			
Inv. No.		2626/706			
Site, Year of Recovery		Bānyās / Rās al-Nabe'e			
Neck		Tall-necked Flasks with constriction at base of neck			
Base		Plain base, usually more or less concave			
Rim		Rounded Rim			
Decoration		Plain			
Color		Translucent greenish.			
Description		Uneven rim folded out, over, and in; flaring mouth; cylindrical neck, expanding slightly downward, with tooled indent around base; bulbous body; flat bottom, with pontil scar.			
Condition		Intact; pinprick and larger bubbles, with a few glassy inclusions; limy encrustation and iridescent weathering on interior.			
Dimensions					
Width (cm)	6.1	Height (cm)	12.4	Thickness (cm)	0.4

Cat. No.	54				
Inv. No.	2627/707				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e				
Neck	Tall-necked Flasks with constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Translucent, Greenish				
Description	Plain, rounded rim; flaring mouth; slightly convex neck, tooled in around base; globular body; flattened bottom with traces of a large, circular pontil mark in relief. Note: poorly produced with bubbles filling its surface; most probably belonging to a family of lower socio-economic status.				
Condition	Intact; many pinprick and small bubbles, with blowing striations, faint iridescence with small patches of pitting and weathering.				
Dimensions					
Width (cm)	7.6	Height (cm)	11	Thickness (cm)	0.5

Cat. No.	55				
Inv.No.	5452/57				
Site, Year of Recovery	Latakia/ al-shīkh dāhir, 1994				
Neck	Tall-necked Flasks with constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Translucent pale blue-green color.				
Description	The rim is folded outward, inward, and over, bevelled on top; it has a cylindrical neck with a tooled indent around the base; the body is broad and piriform; the bottom is slightly concave bottom.				
Condition	Intact, but with a break and a small section missing from the rim; features patches of enamel-like weathering.				
Dimensions					
Width (cm)	1.6	Height (cm)	6.5	Thickness (cm)	0.2

Cat. No.	56				
Inv. No.	1358/247				
Site, Year of Recovery	Tartūs/Jable Warehouse				
Neck	Tall-necked Flasks with constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Colorless with a pale blue tint.				
Description	Rim folded out, over, and inward; slightly flaring mouth; cylindrical neck, tooled around the base; piriform body; small, slightly concave bottom. A horizontal tooled indent encircles the upper part of the body. Note: Made from thick glass.				
Condition	Intact; features pinprick and larger bubbles along with blowing striations; slight dulling and pitting on the exterior around the rim; the interior displays brilliant silver-like iridescent weathering with some soil encrustation and one large, loose lump.				
Dimensions					
Width (cm)	6.2	Height (cm)	12.6	Thickness (cm)	0.4

Cat.No.		57			
Inv. No.		631/50			
Site, Year of Recovery		Jable/ Jebiebat, 2000 / Chamber 8			
Neck		Tall-necked Flasks with constriction at base of neck			
Base		Plain base, usually more or less concave			
Rim		Rounded Rim			
Decoration		Plain			
Color		Translucent yellow-green, with the handle in the same color.			
Description		The lopsided rim is folded outward, inward, and pressed into a flaring mouth, featuring uneven notches along the lip. It has a short cylindrical neck that expands at the base, merging imperceptibly with a squat bulbous body and a concave bottom. The strap handle may have been applied to the top of the body. Note: Features a rim in the form of a spout			
Condition		Intact, but with the handle broken and missing, along with a small section from the rim, exhibiting patches of enamel-like weathering.			
Dimensions					
Width (cm)	3.5	Height (cm)	4.4	Thickness (cm)	0.1

Cat. no.	58				
Inv. No.	0/18				
Site, Year of Recovery	Jable/ Roman Baths, 2007				
Neck	Tall-necked Flasks with constriction at base of neck				
Base	Thumb-indented or flat sided body				
Rim	Rounded Rim				
Decoration	---				
Color	Translucent, Bluish				
Description	Uneven, with a rounded rim and a small, flaring mouth; its neck is cylindrical and tooled in around base; globular, flattened body with a small, flattened pad featuring pontil marks on bottom. Note: According to the report of Țartūs Museum, this piece dates to the 3rd c.AD, while all that was found in the references was dated to the 4th c.AD. Does not have a fixed base, so it is suspended on a holder.				
Condition	Broken with its rim missing some parts, exhibits patches of enamel-like weathering.				
Dimensions					
Width (cm)	4.7	Height (cm)	11.4	Thickness (cm)	0.3

Cat. No.	59				
Inv. No.	2645/1707/2				
Site, Year of Recovery	Bānyās/ Rās al-Nabe’e				
Neck	Tall-necked Flasks with constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Dark Blue				
Description	Irregular, rounded rim with a small, flaring mouth; cylindrical neck that is tooled in at the base; globular, flattened body; and a small, flattened pad on the bottom featuring pontil marks. Note: As per the report from Țartūs Museum, this piece is dated to the 3rd century AD, whereas all references found indicate a date of the 4th century AD. It does not have a fixed base, so it is suspended on a holder.				
Condition	Intact; many bubbles; dulling, pitting, and iridescent weathering.				
Dimensions					
Width (cm)	3.4	Height (cm)	7	Thickness (cm)	0.3

Cat. No.	60				
Inv. No.	1251/60				
Site, Year of Recovery	Latakia/ al-Māliyya Cemetery al-Māliyya, 2005				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Translucent, Bluish				
Description	Uneven, rounded rim; small, flaring mouth; cylindrical neck with tooling around the base; globular, flattened body; small, flattened pad on the bottom featuring pontil marks. Note: According to the Ṭartūs Museum report accompanying this piece, it has been dated to the 3 rd century AD. However, all reference texts date the style to the 4 th c. AD.				
Condition	Intact; but enamel-like weathering on the body.				
Dimensions					
Width (cm)	2.8	Height (cm)	4.8	Thickness (cm)	0.2

Cat. No.	61				
Inv. No.	5451/56				
Site, Year of Recovery	Latakia/ al-shīkh dāhir, 1994				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Translucent, Bluish				
Description	The rim is folded outward, inward, and over, flattened around the mouth; it has a cylindrical neck with tooling around the base; the body is conical, curving inward to a flat bottom.				
Condition	Intact; with enamel-like weathering on the body.				
Dimensions					
Width (cm)	1.8	Height (cm)	5.4	Thickness (cm)	0.2

Cat. No.	62				
Inv. No.	55/38				
Site, Year of Recovery	Latakia/ ShārYā Anṭāka., 2008/al-shīkh ḏāhir Cemeteries/ Yāqār 1598/ chamber 7				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Colorless.				
Description	The rim is folded out and over, flattened on top but slanted toward the neck; cylindrical neck; bulbous body; slightly concave bottom. Note: This bottle is representative of a common type found throughout the Roman world and has been discovered in archaeological contexts dating from the first two centuries AD.				
Condition	Intact; however, a small part is broken and missing from the rim, featuring patches of enamel-like weathering.				
Dimensions					
Width (cm)	2.1	Height (cm)	7.5	Thickness (cm)	0.2

Cat. No.	63				
Inv. No.	3466/1605				
Site, Year of Recovery	Ṭartūs / Ṭazar				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Translucent pale blue-green				
Description	The rim is folded outward, inward, and over, creating a slightly funnel-shaped appearance. It features a cylindrical neck with faint tooling marks around the base, leading to a piriform body and a slightly convex bottom.				
Condition	Intact, but with a small section broken and missing from the rim, exhibiting patches of enamel-like weathering.				
Dimensions					
Width (cm)	5.9	Height (cm)	11.9	Thickness (cm)	0.5

Cat. No.	64				
Inv. No.	2071/2305				
Site, Year of Recovery	Tartūs/ Yaḥmour				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Translucent, blue				
Description	The rim is folded outward, inward, and over, featuring an irregularly flaring mouth. It has a cylindrical neck that expands downward, leading to an elongated piriform body with rounded sides that curve inward to a pushed-in bottom. Note: piriform type				
Condition	Intact, featuring numerous bubbles and blowing striations, along with creamy brown weathering and iridescence.				
Dimensions					
Width (cm)	3.4	Height (cm)	8.4	Thickness (cm)	0.3

Cat. No.	65				
Inv. No.	2069/2303				
Site, Year of Recovery	Ṭartūs / Yaḥmour				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Colorless with a yellowish tint				
Description	Featuring an uneven rim that is folded outward, inward, and over, with a beveled outer edge. It has a cylindrical neck with a tooled indent at the base and a double convex profile on the body, leading to a small, flattened bottom.				
Condition	Broken and missing sections of the body, exhibiting patches of weathering that resemble enamel.				
Dimensions					
Width (cm)	3.5	Height (cm)	8	Thickness (cm)	0.3

Cat. No.	66				
Inv. No.	1246/55				
Site, Year of Recovery	Latakia/ al-Māliyya Cemetery al-Māliyya, 2005				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim, inward				

Decoration		Plain			
Color		Pale bluish			
Description		A thick rim that is folded outward, inward, and flattened on top; it has a cylindrical neck featuring a band of tooling marks around the base; the body is bulbous, with a slightly concave base and a rough pontil mark. Note: Bulbous shape			
Condition		Intact, with small pressure fissures along its neck; light areas of iridescence are present, along with age-related surface wear and light earth deposits.			
Dimensions					
Width (cm)	1.8	Height (cm)	7	Thickness (cm)	0.1

Cat. No.		67			
Inv. No.		3477/1596			
Site, Year of Recovery		Ṭartūs/ Ṭamrit -Ṭazar, 2005			
Neck		Tall-necked Flasks with no constriction at base of neck			
Base		Plain base, usually more or less concave			
Rim		Rounded Rim			
Decoration		Plain			
Color		Translucent cobalt blue			
Description		Featuring a lopsided, splayed rim with a rounded lower edge and a beveled top. It has a cylindrical neck with some tooling ridges, a globular body, and a small, slightly flattened bottom. Note: white color ripples			
Condition		Intact, with some bubbles and blowing striations, exhibiting iridescent weathering along with patches of dulling and pitting.			
Dimensions					
Width (cm)	3.2	Height (cm)	4.3	Thickness (cm)	0.3

Cat. No.	68				
Inv. No.	2648/1707/5				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Pale green				
Description	The rim is folded outward, inward, and over, featuring a flaring mouth. It has a short, funnel-like neck with a tooled-in area around the base, a squat bulbous body, and a small, slightly concave bottom.				
Condition	Intact; features numerous bubbles and glassy inclusions on one side, along with dulling, faint iridescence, and areas of creamy weathering.				
Dimensions					
Width (cm)	5.4	Height (cm)	7.5	Thickness (cm)	0.6

Cat. No.	69				
Inv. No.	4244/5251				
Site, Year of Recovery	Ṭartūs / Ṭazar				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Colorless				

Description		A plain rounded rim and a flaring mouth. It features a cylindrical neck that is tooled around the base, leading to a squat bulbous body and a flattened bottom. Note: Made of relatively thick glass, with a bulbous body			
Condition		Intact, featuring numerous bubbles, deep pitting, and weathering, with brilliant iridescence along one side. There is soil encrustation blocking the inside of the neck.			
Dimensions					
Width (cm)	5.1	Height (cm)	10.4	Thickness (cm)	0.3

Cat. No.	70				
Inv. No.	2642/1723/6				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Translucent greenish and pale blue-green				
Description	The rim is folded outward, inward, and over, featuring a broad mouth and a slightly concave cylindrical neck, which is tooled around the base. The body has straight sides that taper downward, and the bottom is pushed in with a deep kick and a trace of a pontil scar.				
Condition	Intact, but with crack in body and across bottom; dulling, pitting, and weathering covering most of surfaces, with patches of brilliant iridescence.				
Dimensions					
Width (cm)	3.7	Height (cm)	7.3	Thickness (cm)	0.5

Cat. No.	71				
Inv. No.	2504/927				
Site, Year of Recovery	Ṭartūs / Ýazar				
Neck	No distinction between neck and body				
Base	Hollow base and thin walls				
Decoration	---				
Color	Colorless				
Description	A plain rounded rim and a flaring mouth. It features a cylindrical neck that is tooled in around the base, leading to a squat bulbous body and a flattened bottom. Note: Made from thick, heavy glass.				
Condition	Broken and repaired, exhibiting patches of weathering that resemble enamel.				
Dimensions					
Width (cm)	3.7	Height (cm)	6.6	Thickness (cm)	0.4

Cat. No.	72				
Inv. No.	1247/56				
Site, Year of Recovery	Latakia/ al-Māliyya Cemetery al-Māliyya, 2005				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Translucent, Bluish				
Description	Slanting rim folded outward, inward, and over, flattened on top, with an irregular opening to the mouth; cylindrical neck featuring tooling marks around the base; conical body that curves sharply into a slightly concave bottom.				

Condition		Complete, with small hairline cracks visible on the surface; otherwise, intact. The surface is covered with encrustation and iridescence.			
Dimensions					
Width (cm)	1.6	Height (cm)	4.6	Thickness (cm)	0.1

Cat. No.	73				
Inv. No.	2526/938				
Site, Year of Recovery	Tartūs / Ýazar				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim				
Decoration	Plain				
Color	Translucent, Bluish				
Description	Lopsided, splayed rim with rounded lower edge and beveled top; cylindrical neck, with some tooling ridges; globular body; small, slightly flattened bottom. Note: According to accompanying museum record, this specimen dates back to the 2nd and 3rd centuries CE; however, based on comparanda found around the Empire it is identical to the style of 1st century CE vessels.				
Condition	Intact, except for missing minor part in rim; pinprick bubbles and blowing striations; dulling, heavy pitting and weathering with patches of brilliant iridescence.				
Dimensions					
Width (cm)	4.9	Height (cm)	6.9	Thickness (cm)	0.2

Cat. No.	74				
Inv. No.	81/3240				
Site, Year of Recovery	Tartūs/ Tripoli Road / National Museum in Damascus				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Flaring mouth				
Decoration	Mould-blown decoration				
Color	greenish-Yellowish				
Description	A jug with two human faces connected by hair that resembles grapevine tendrils. From the head, a slender neck extends with a wide, flared lip, and the base is flat, featuring a greenish-yellow color. Flaring mouth; cylindrical neck that widens downward; globular body featuring a prominent seam extending from the neck down the sides; flat bottom. The piece was blown in a two-part negative mold, creating relief decoration on the body depicting two heads back to back with similar characteristics: hair styled around the face as evenly spaced knobs in three distinct tiers, a prominent arched brow line, almond-shaped eyes with recessed pupils, a narrow nose with flaring nostrils, a small mouth with straight, slightly parted lips, and plump cheeks; a strap collar is visible below the chin on both heads.				
Condition	Broken and restored, but with few bubbles, some dullness, and areas of creamy weathering exhibiting iridescence.				
Dimensions					
Width (cm)		Height (cm)	6	Thickness (cm)	0.3

Cat. No.	75				
Inv. No.	5390/19				
Site, Year of Recovery	Latakia/ Kwrnīsh al-bāḥḍr cemeteries, 1994				
Neck	Tall-necked Flasks with no constriction at base of neck				

Base		Plain base, usually more or less concave			
Rim		Folded rim, outward and downward			
Decoration		Plain			
Color		Translucent pale blue			
Description		The rim is folded outward, inward, and over, flattened on top; it has a cylindrical neck with a tooling indent around the base; the body is conical with sides rounded at the base; the bottom is flattened but slightly concave.			
Condition		Intact; features a few pinprick bubbles along with some large and elongated bubbles; there is dulling and creamy white weathering accompanied by iridescence.			
Dimensions					
Width (cm)	3.8	Height (cm)	8.9	Thickness (cm)	0.1

Cat. No.	76				
Inv. No.	5463/68				
Site, Year of Recovery	Latakia/ al-shīkh dāhir, 1994				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Rounded Rim, inward				
Decoration	Plain				
Color	Brown				
Description	Tubular rim folded over, inward, and pressed into the side of the neck, then tooled into a trefoil shape; cylindrical, funnel-shaped neck that slightly expands downward, with tooling around the base; the shoulder is slightly concave; the body is bulbous, with a small, concave bottom featuring a central pontil mark. Note: Trefoil rim				
Condition	Intact, but features enamel-like weathering on the body.				
Dimensions					
Width (cm)	3.6	Height (cm)	13.8	Thickness (cm)	0.2

Cat. No.	77				
Inv. No.	835				
Site, Year of Recovery	Jable/ Jbeibat 2002/ Tomb D/ Anti chamber				
Neck	cylindrical neck				
Base	Flat base				
Decoration	---				
Color	Colorless with a bluish tint				
Description	Featuring a rim that is folded outward, inward, and over, with a beveled upper surface. It has a cylindrical neck with slight tooling marks around the base, leading to a squat globular body and a slightly concave bottom. Note: Bulbous body; made from relatively heavy, thick glass.				
Condition	Intact, with some pinprick bubbles, along with dulling and iridescent weathering.				
Dimensions					
Width (cm)	4.2	Height (cm)	11	Thickness (cm)	0.3

Cat. No.	78				
Inv. No.	3332/3158				
Site, Year of Recovery	Ṭartūs, Tripoli Road / Bānyās				
Neck	Tall-necked Flasks with no constriction at base of neck				
Base	Plain base, usually more or less concave				
Rim	Folded rim				
Decoration	Plain				
Color	Translucent pale blue				

Description		The neck is cylindrical, flaring at the top and blending at the bottom into a rounded, stylized bird body that tapers to form a tail; the bottom is pushed in. Note The current condition of this bottle makes it uncertain whether it was originally closed at both ends (the head and tail) as seen in other intact bottles.			
Condition		Broken, with the head (possibly, the rim) damaged, several holes in the body, and a broken end up to the tail; numerous bubbles; dull appearance, with a faint luster and slight creamy weathering.			
Dimensions					
Width (cm)	----	Height (cm)	8.5	Thickness (cm)	0.2

Cat. No.		79			
Inv. No.		1362/194			
Site, Year of Recovery		Ṭartūs/ Coastal Area			
Neck		Tall-necked Flasks with no constriction at base of neck			
Base		Plain base, usually more or less concave			
Rim		Missing Rim			
Decoration		Plain			
Color		Colorless with a bluish tint.			
Description		Features a broken rim and a cylindrical neck, slight tooling marks can be seen around the base; squat globular body; with a slightly concave bottom featuring a pontil scar.			
Condition		Intact; however, a small part is missing from the rim; features patches of white and brown enamel-like weathering.			
Dimensions					
Width (cm)	2.9	Height (cm)	10.5	Thickness (cm)	0.3

Cat. No.		80			
Inv. No.		1722/374/2			
Site, Year of Recovery		Ṭartūs/ Damascus			
Neck		Tall-necked Flasks with no constriction at base of neck			
Base		Plain base, usually more or less concave			
Rim		Broken Neck			
Decoration		Plain			
Color		Translucent pale blue in colo			
Description:		Missing rim with a slightly funnel-shaped form, cylindrical neck with subtle tooling marks around its base; pear-shaped body; slightly convex bottom, featuring a pontil mark			
Condition		Broken, missing top half of body and rim; few bubbles; dulling and many patches of deep, iridescent weathering. Soil encrusted on interior.			
Dimensions					
Width (cm)	3	Height (cm)	7.3	Thickness (cm)	0.2

Cat. No.	81				
Inv. No.	665				
Site, Year of Recovery	Jable/ Jbeibat 2001/ Tomb A/ Chamber 3				
Neck					
Base	Plain base, usually more or less concave				
Rim	Broken				
Decoration	Mould-blown decoration				
Color	Dark blue				
Description	Missing rim and neck, and part of the body. Based on style, neck most probably medium-height and cylindrical. Flat base. Mold-				

		blown in two parts and highly ornamented. Carries a relief in the shape of a head with detailed features: partial hair details indicate coiffed, curly hair depiction, equally framing both sides of the face; narrow nose with wide nostrils; small mouth with slightly open thin lips; and full cheeks. A depiction of a belt with a buckle below the chin resembling the neck.			
Condition		Incomplete, partial body and base showing facial features, one hole in base, pinprick and elongated bubbles, slight weathering and soil encrustation on exterior, thick encrustation on parts of interior.			
Dimensions					
Width (cm)	4.4	Height (cm)	3.1	Thickness (cm)	

Cat. No.	82				
Inv. No.	837				
Site, Year of Recovery	Jable/ Jbeibat 2002/ Tomb D/ Chamber 1				
Neck	short-necked Flasks with no constriction at the base of the neck and a pointed oval body				
Base	Rounded or pointed base				
Rim	Broken				
Decoration	With thumb indents, vertical corrugations, or pinched ribs				
Color	Translucent light blue with a greenish tint				
Description	Featuring opaque white trails and handles of indeterminate color (possibly blue). It has an uneven, coiled rim-disk with a rounded outer lip and a fusiform body with uneven, misshapen sides that expand downward before tapering to a pointed bottom. Two uneven lug handles are applied at the top of the body over the trail, with horizontal tooling indents above and below. The trail is applied unevenly around the rim and trails off below, while another trail is attached near the bottom, spiraling up to the point of carination. This trail is tooled into an irregular feather pattern around the side, featuring six upward strokes and five downward strokes, and is wound around again in a spiral ending below the rim. Note: Piriform alabastra originate from around the Mediterranean and are typically decorated with trails in a feather pattern. At least eleven other known examples featuring this feather pattern are originated from Cyprus, possibly having been produced there. This form has been widely exported, reaching locations such as Carthage, Sardinia, and Italy in the West, as well as Syria in the East and sites in the Black Sea region.				
Condition	Part of the rim and the handle are broken and missing, exhibiting patches of weathering that resemble enamel.				
Dimensions					
Width (cm)	3	Height (cm)	10.7	Thickness (cm)	--

Cat. No.	83				
Inv. No.	664				
Site, Year of Recovery	Jable/ Jbeibat 2001/ Tomb A/ Chamber 3				
Neck	short-necked Flasks with no constriction at the base of the neck and a pointed oval body				
Base	Rounded or pointed base				
Rim					
Decoration	Mold-Blown Decoration				
Color	Translucent; amber color				
Description	A narrow circulation relative to its body diameter; the curly body resembles a date and has no base, ending in a pointed tip. Note: There are several models, including the Jable model (which is preserved in the Museum of France). The Syrian model has the same shape, with a narrow circulation relative to its body diameter.				

Condition		Intact, but with a part of the rim broken and missing, exhibiting patches of enamel-like weathering.			
Dimensions					
Width (cm)	2.8	Height (cm)	7.5	Thickness (cm)	0.3

Cat. No.	84				
Inv. No.	3468/1607				
Site, Year of Recovery	Ṭarṭūs/ Ḳamrit -Ḳazar 2005				
Neck	short-necked Flasks with no constriction at the base of the neck and a pointed oval body				
Base	Rounded or pointed base				
Rim					
Decoration	Mold-Blown Decoration				
Color	Translucent; amber color				
Description	A narrow circulation relative to its body diameter; the curly body looks like a date and has no base 'pointed'. Note: There are several models, including from Jable preserved at the Museum of France / the Syrian model /				
Condition	Intact; but broken and repaired; with patches of enamel-like weathering.				
Dimensions					
Width (cm)	3	Height (cm)	7	Thickness (cm)	---

Cat. No.	85				
Inv. No.	1381/88				
Site, Year of Recovery	Ṭarṭūs/ Damascus				
Neck	Double Cosmetic Tube with Handles				
Base	Rounded base				
Rim	----				
Decoration					
Color	Translucent greenish				
Description	The rim folded around and in with beveled outer edge; flaring lopsided mouth; tubular body; rod handle applied to shoulder in long crimped pads drawn up and around; pressed outer neck; handle is in two connected parts, the handle has two connected parts with the first fixed from the middle of the tubular plaster to the lip and the other is a holder connected from lip the to the tope; 12 threaded decorations along the body; circular foot; concave bottom with pontil mark at the center. Note: Used for storing cosmetics; or as grave good				
Condition	Intact; broken and repaired; pinprick bubbles; dulling; weathering with brilliant iridescence.				
Dimensions					
Width (cm)	-	Height (cm)	11.7	Thickness (cm)	0.3

Cat. No.	86				
Inv. No.	723				
Site, Year of Recovery	Jable/ Jbeibat 2001/ Tomb H/ Chamber 4				
Neck	Thin-walled vases with broad, flat bodies				
Base	---				
Decoration	Plain				
Color	Translucent, Greenish				
Description	The rim folded out, over, and inward; with a short, flaring mouth; slender, tall, slightly concave neck; horizontal shoulder; sides of the body expanding downward; pushed-in bottom; circular pontil scar at the center of the bottom.				
Condition	Intact; features some bubbles; exhibits deep pitting and iridescent weathering.				

Dimensions					
Width (cm)	3.3	Height (cm)	17.5	Thickness (cm)	0.4

Cat. No.	87
Inv. No.	724
Site, Year of Recovery	Jable/ Jbeibat 2001/ Tomb H/ Chamber 4
Neck	Thin-walled vases with broad, flat bodies
Base	---
Decoration	Plain
Color	Translucent deep-blue green.
Description	The tubular rim is folded outward, downward, over, and inward, featuring a beveled upper surface. It has a tall, slender, and slightly concave cylindrical neck with tooling marks around the base, leading to a conical body. The bottom is deeply pushed in, with a small circular pontil mark at the center.
Condition	Intact; bubbles; pitting and brilliant iridescence.

Dimensions					
Width (cm)	3.5	Height (cm)	7.5	Thickness (cm)	0.4

Cat. No.	88
Inv. No.	2507/929
Site, Year of Recovery	Ṭarṭūs / Ṭazar
Neck	Thin-walled vases with broad.
Base	flat bodies
Decoration	Plain
Color	Translucent, Greenish
Description	The rim is folded outward, inward, and over, featuring an uneven lip around the mouth. It has a cylindrical neck that expands downward into a bulbous body, and a slightly convex bottom with a pontil mark. Note: Made from thick, heavy glass.
Condition	Part of the rim is broken and missing, showing patches of weathering that resemble enamel.

Dimensions					
Width (cm)	3.4	Height (cm)	9.8	Thickness (cm)	0.3

Cat. No.	89
Inv. No.	2067/2301
Site, Year of Recovery	Ṭarṭūs / Yaḥmour
Neck	Tall cylindrical neck
Base	Flat base.
Decoration	Plain
Color	Translucent deep green
Description	Featuring a tubular rim that is folded outward, downward, inward, and over, with a beveled upper surface. It has a tall, slender, and slightly concave cylindrical neck with tooling marks around the base, leading to a conical body. The bottom is deeply pushed in, with a small circular pontil mark at the center. Note: Conical body and thin neck
Condition	Intact, featuring pinprick and elongated bubbles, along with deep pitting, dulling, and iridescence, accompanied by patches of thick, creamy brown, enamel-like weathering.

Dimensions					
Width (cm)	5.3	Height (cm)	13.6	Thickness (cm)	0.3

Cat. No.		90			
Inv. No.		2530/930			
Site, Year of Recovery		Tartûs / Yazar			
Neck		Thin-walled with tall cylindrical neck			
Base		flat bodies			
Decoration		Plain			
Color		Translucent, bluish			
Description		The tubular rim is folded outward, downward, inward, and over, featuring a beveled upper surface. It has a tall, slender, and slightly concave cylindrical neck with tooling marks around the base, leading to a conical body and a deep pushed-in bottom with a small circular pontil mark at the center.			
Condition		Intact, featuring pinprick and elongated bubbles, along with deep pitting, dulling, and iridescence, accompanied by patches of thick creamy brown, enamel-like weathering.			
Dimensions					
Width (cm)	6	Height (cm)	18.3	Thickness (cm)	0.5

Cat. No.	91				
Inv. No.	1354/245				
Site, Year of Recovery	Latakia/ Jable warehouse				
Neck	Thin-walled vases with broad				
Base	Flat				
Decoration	---				
Color	Translucent greenish				
Description	It is with a partially tubular rim, unevenly folded out into a broad, horizontal lip, turned in and pressed into the top of the mouth; cylindrical neck that expands downward and is tooled around the base; convex sloping sides leading to the body; pushed-in bottom. Note: bell-shaped				
Condition	Broken with a part of the rim missing; featuring patches of enamel-like weathering.				
Dimensions					
Width (cm)	----	Height (cm)	16.3	Thickness (cm)	0.3

Cat. No.	92				
Inv. No.	0/22				
Site, Year of Recovery	Jable/ Roman baths 2007				
Neck	Broken				
Base	Flat				
Decoration	---				
Color	Translucent bluish				
Description	Features a conical body; deep pushed-in bottom with a small circular pontil mark at the center.				
Condition	Completely broken, with only the lower conical body remaining.				
Dimensions					
Width (cm)	----	Height (cm)	6.2	Thickness (cm)	0.4

Cat. No.	93				
Inv. No.	2638/1723/2				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e				
Neck	No distinction between neck and body				
Base	Hollow base and thin walls				
Decoration	---				
Color	Translucent, Greenish				
Description	Inverted, rounded rim; conical, straight side; tubular integral base ring; pushed-in bottom with round pontil mark. Note: Made from thick glass				

Condition		Intact; pinprick and larger bubbles; patches of dulling and pitting, with creamy brown weathering and faint iridescence.			
Dimensions					
Width (cm)	4.1	Height (cm)	7.7	Thickness (cm)	0.6

Cat. No.		94			
Inv. No.		2639/1723/3			
Site, Year of Recovery		Bānyās / Rās al-Nabe'e			
Neck		No distinction between neck and body			
Base		Hollow base and thin walls			
Decoration		---			
Color		Translucent, greenish			
Description		Inverted, rounded rim; conical, straight side; tubular integral base ring; pushed-in bottom with round pontil mark. Note: Made from thick glass			
Condition		Intact; pinprick and larger bubbles; patches of dulling and pitting, with creamy brown weathering and faint iridescence.			
Dimensions					
Width (cm)	3.8	Height (cm)	8.4	Thickness (cm)	0.8

Cat.No.	95				
Inv. No.	2649/1707/6				
Site, Year of Recovery	Bānyās / Rās al-Nabe'e				
Neck	No distinction between neck and body				
Base	Hollow base and thin walls				
Decoration	---				
Color	Translucent greenish				
Description	An inverted, rounded rim; conical, straight sides; and a tubular integral base ring. The bottom is pushed in, featuring a round pontil mark. Note: Made from thick glass				
Condition	Intact; features pinprick and larger bubbles, along with patches of dulling and pitting, creamy brown weathering, and faint iridescence.				
Dimensions					
Width (cm)	3.9	Height (cm)	7.5	Thickness (cm)	0.5

Cat.No.	96				
Inv.No.	2196/1705				
Site, Year of Recovery	Bānyās / Rās al-Nabe'e/2				
Neck	No distinction between neck and body				
Base	Hollow base and thin walls				
Decoration	---				
Color	Greenish				
Description	The rim is folded outward, inward, and over, with the upper surface pressed flat. It features a slightly flaring mouth and a tall cylindrical neck with concave sides that expand downward, merging imperceptibly with an uneven conical body. The bottom is uneven and has a pontil scar.				
Condition	Intact, featuring pinprick and some large bubbles along with a few black impurities. There is dulling, lime incrustation, and faint weathering, as well as some soil encrustation on the interior.				
Dimensions					
Width (cm)	3.2	Height (cm)	7.3	Thickness (cm)	0.5

Cat.No.	97				
Inv. No.	5376/5				
Site, Year of Recovery	Latakia/ Kwrnīsh al-bāḥḍr cemeteries, 1994				
Neck	No distinction between neck and body				
Base	Hollow base and thin walls				
Decoration	---				
Color	Translucent, Bluish				
Description	A broad slanting rim that is folded outward and inward, flattened on top. It creates an irregular oval mouth, leading to an unevenly tall cylindrical neck and a low conical body, featuring a flattened bottom with a central deep kick and a pontil scar. Note: Heavy thick, walled bottle				
Condition	Intact, though there is a crack extending from the rim to the lower body; numerous bubbles and blowing striations are present; features pitting, dulling, and brilliant iridescence, along with areas of brown enamel-like weathering.				
Dimensions					
Width (cm)	2.3	Height (cm)	4.1	Thickness (cm)	0.2

Cat. No.	98				
Inv. No.	2640/1723/4				
Site, Year of Recovery	Bānyās / Rās al-Nabe’e				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent greenish				
Description	The rim is folded outward, inward, and over, with the upper surface flattened; it features a slightly flaring mouth and a tall cylindrical neck with concave sides that widen downward, merging seamlessly with an uneven conical body. The bottom is irregular, marked by a jagged pontil scar. Note: Made from thick glass				
Condition	Intact; pinprick and some large bubbles and a few black impurities; dulling, lime incrustation and faint weathering, with some soil encrustation on interior.				
Dimensions					
Width (cm)	3.7	Height (cm)	14.4	Thickness (cm)	1

Cat. No.	99				
Inv. No.	4243/5250				
Site, Year of Recovery	Ṭarṭūs / ÝAzar				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent greenish				
Description	The rim is folded outward, around, and inward, flattened on top with an irregular mouth. It has a concave cylindrical neck that expands at the base to form a small rounded body, and a thick, concave bottom. Note: Made of relatively thick glass, with a bulbous body				
Condition	Intact, featuring numerous bubbles, deep pitting, and weathering, along with brilliant iridescence on one side. The inside of the neck is blocked by soil encrustation.				
Dimensions					
Width (cm)	3.7	Height (cm)	14.4	Thickness (cm)	0.4

Cat. No.	100				
Inv. No.	2063/2295				
Site, Year of Recovery	Ṭartūs/ Yahmour				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	greenish				
Description	The rim is folded outward, inward, and over, with the upper surface pressed flat. It features a slightly flaring mouth and a tall cylindrical neck with concave sides that gradually expand downward, merging seamlessly with an uneven conical body. The bottom is uneven, marked by a jagged pontil scar.				
Condition	The body and rim are broken and missing parts, exhibiting patches of weathering that resemble enamel.				
Dimensions					
Width (cm)	3.4	Height (cm)	14.6	Thickness (cm)	1

Cat. No.	101				
Inv. No.	1801				
Site, Year of Recovery	Jable/ YArab al-Malik 2012/ Chamber 12				
Neck	No distinction between neck and body				
Base	Hollow base and thin walls				
Decoration	---				
Color	Greenish				
Description	Its rim is folded outward, around, and inward, flattened on top with an irregular mouth; concave cylindrical neck that expands at the base to form a small rounded body; thick, concave bottom.				
Condition	Intact; features numerous bubbles; exhibits deep pitting and weathering, with brilliant iridescence along one side; soil encrustation blocking the inside of the neck.				
Dimensions					
Width (cm)	3.4	Height (cm)	11.3	Thickness (cm)	0.4

Cat. No.		102			
Inv. No.		661			
Site, Year of Recovery		Jable/ Jbeibat 2001/ Tomb A/ Chamber 3			
Neck		No distinction between neck and body			
Base		Hollow base and thin walls			
Decoration		---			
Color		Translucent pale green			
Description		Features an uneven rounded rim; flaring mouth; long cylindrical neck that expands downward; squat conical body; slightly concave bottom. Made of thick, heavy glass, particularly at the bottom. Note: Made of relatively thick glass			
Condition		Intact; features pinprick bubbles; exhibits patches of pitting and iridescent weathering.			
Dimensions					
Width (cm)	3.2	Height (cm)	10.6	Thickness (cm)	0.5

Cat. No.	103				
Inv. No.	662				
Site, Year of Recovery	Jable/ Jbeibat 2001/ Tomb A/ Chamber 3				
Neck	No distinction between neck and body				
Base	Hollow base and thin walls				
Decoration	---				
Color	Translucent pale green				

Description		The rim is folded out, over, and inward, with the upper surface pressed flat; slightly flaring mouth; tall cylindrical neck with concave sides, expanding downward to join imperceptibly with an uneven conical body; uneven bottom featuring a jagged pontil scar. Note: Other examples of this type, known from Syria and Egypt, can be found in the Royal Ontario Museum in Toronto.			
Condition		Intact, featuring pinprick and elongated bubbles along with blowing striations; exhibits deep pitting, dulling, and patches of brilliant iridescence on the exterior, with soil encrustation and limy weathering present on the interior.			
Dimensions					
Width (cm)	2.4	Height (cm)	7	Thickness (cm)	0.3

Cat. No.		104			
Inv. No.		112			
Site, Year of Recovery		Jable/ Jbeibat 2001/ Tomb F			
Neck		No distinction between neck and body			
Base		Hollow base and thin walls			
Decoration		---			
Color		Translucent greenish			
Description		The rim is flaring and solid, with a rounded ridge along the outer edge; it features a concave neck that merges seamlessly with the sloping side of the body, and a concave bottom.			
Condition		Intact, except for a broken small section of its body; patches of iridescence and enamel-like weathering.			
Dimensions					
Width (cm)	5.5	Height (cm)	17.5	Thickness (cm)	0.5

Cat. No.	105				
Inv. No.	1363/204				
Site, Year of Recovery	Ṭartūs/ Jable warehouse				
Neck	No distinction between neck and body				
Base	Hollow base and thin walls				
Decoration	---				
Color	Colorless with pale greenish yellow tint				
Description	Fusiform body, curving inward then expanding slightly toward thick, rounded bottom.				
Condition	Abroken and restored fragment, missing top half of body and rim; showing a few bubbles; and featuring some dulling and a number of patches of deep, iridescent weathering. Soil encrusted on interior.				
Dimensions					
Width (cm)	3	Height (cm)	16	Thickness (cm)	0.3

Cat. No.	106				
Inv. No.	2532/937				
Site, Year of Recovery	Tartūs/ ÝAzar				
Neck	tall cylindrical neck				
Base	Flat base				
Decoration	-----				
Color	Translucent light blue in color,				
Description	Featuring an inverted rim that is folded upward and inward, with a beveled upper surface. It has a tall cylindrical neck that expands slightly downward and is tooled around the base, leading to a slender conical body and a small concave bottom with a pontil scar.				
Condition	Part of the body is broken and missing, exhibiting patches of weathering that resemble enamel.				

Dimensions					
Width (cm)	3.5	Height (cm)	12.8	Thickness (cm)	0.3

Cat. No.	107
Inv. No.	3470/1610
Site, Year of Recovery	Ṭarṭūs/ ÝAzar
Neck	Narrow cylindrical neck
Base	Uneven bottom
Decoration	-----
Color	Colorless with a very pale blue tint
Description	Featuring an uneven rim that is folded outward, inward, and over, with a flattened upper surface. It has a flaring mouth and a narrow cylindrical neck that tapers slightly downward, with a deep tooled indent around the base. The body is elongated and piriform, leading to a small, flattened but uneven bottom. Note: It is not flat; instead, it features a small bump.
Condition	Intact, with numerous pinprick bubbles and blowing striations, along with dulling, slight pitting, and vibrant iridescent weathering.

Dimensions					
Width (cm)	4.4	Height (cm)	16.5	Thickness (cm)	0.4

Cat. No.	108
Inv. No.	4231/5238
Site, Year of Recovery	Ṭarṭūs/ ÝAzar
Neck	cylindrical neck
Base	Flat base
Decoration	-----
Color	Transparent
Description	The rim missing; it features a cylindrical neck that is tooled around the base, leading to a slender, elongated piriform body and a thick, flattened bottom. Note: The piriform body, made of relatively thin glass, has no base and is pointed.
Condition	Part of the rim is broken and missing, exhibiting patches of weathering that resemble enamel.

Dimensions					
Width (cm)	2.4	Height (cm)	5.8	Thickness (cm)	0.2

Cat. No.	109
Inv. No.	2644/1707/1
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e
Neck	Tall cylindrical neck
Base	Uneven bottom
Decoration	-----
Color	Translucent bluish
Description	The rim is slanted, folded outward, inward, and pressed unevenly to one side; it has a tall cylindrical neck and a small, squat, globular body. The bottom is pushed in, showing traces of a pontil mark.
Condition	Intact piece; features pinprick bubbles; the exterior shows dulling, pitting, and areas of brilliant iridescent weathering, while the interior has soil encrustation and creamy brown weathering.

Dimensions					
Width (cm)	2.7	Height (cm)	11	Thickness (cm)	0.2

Cat. No.	110				
Inv. No.	1867/3356				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e/3				
Neck	cylindrical neck				
Base	Flat base				
Decoration	---				
Color	Blue-green translucent.				
Description	A folded out, fine rim that turns into a flaring mouth; tall cylindrical neck with tooled indents around its base; elongated piriform body connecting to a small, concave bottom with a pontil scar.				
Condition	Intact; but enamel-like weathering on the body.				
Dimensions					
Width (cm)	2.7	Height (cm)	10.9	Thickness (cm)	0.4

Cat. No.	111				
Inv. No.	1859/3319				
Site, Year of Recovery	Bānyās/ Rās al-Nabe’e				
Neck	cylindrical neck				
Base	Flat base				
Decoration	---				
Color	Translucent blue-green.				
Description	Fine rim folded out, over, and in; flaring mouth; cylindrical neck with tooled indent around base; elongated piriform body; small, concave bottom with traces of pontil scar.				
Condition	Intact; pinprick bubbles and blowing striations; dulling, pitting, and patches of iridescent weathering on exterior, soil encrustation and whitish enamel-like weathering on interior of neck.				
Dimensions					
Width (cm)	3.3	Height (cm)	12.5	Thickness (cm)	0.5

Cat. No.	112				
Inv. No.	2072/2306				
Site, Year of Recovery	Ṭarṭūs/ Yaḥmour				
Neck	Tall cylindrical neck				
Base	Flat base				
Decoration	---				
Color	Translucent light blue-green				
Description	It has an inverted rim that is folded upward and inward, with a beveled upper surface. The tall cylindrical neck expands slightly downward and is tooled around the base. The body is slender and conical, with a small concave bottom. It has thick walls. Note: Tubular form, two-thirds comprising the neck and one-third the body.				
Condition	Intact, with numerous bubbles, deep pitting, and striking iridescent weathering.				
Dimensions					
Width (cm)	2.4	Height (cm)	9.3	Thickness (cm)	0.4

Cat. No.	113
Inv. No.	2070/2304
Site, Year of Recovery	Ṭarṭūs/ Yaḥmour
Neck	Two-thirds comprising the neck and one-third the body.
Base	Flat base
Decoration	---
Color	Translucent light blue-green

Description		It has an inverted rim that is folded upward and inward, with a beveled upper surface. The tall cylindrical neck expands slightly downward and is tooled around the base. The body is slender and conical, with a small concave bottom. It has thick walls. Note: Two-thirds comprising the neck and one-third the body			
Condition		Intact, with numerous bubbles, deep pitting, and vibrant iridescent weathering.			
Dimensions					
Width (cm)	2.6	Height (cm)	11.3	Thickness (cm)	0.4

Cat. No.	114				
Inv. No.	2068/2302				
Site, Year of Recovery	Ṭarṭūs/ Yaḥmour				
Neck	tall cylindrical neck				
Base	Flat base				
Decoration	-----				
Color	Colorless with a pale blue-green tint				
Description	Featuring a lopsided rim that is folded outward, inward, and pressed flat. It has a slender cylindrical neck with a tooled indent at the base, leading to an elongated conical body and a concave bottom with a pontil mark at the center. Note: Not entirely flat; instead, features a small bump.				
Condition	Intact, but showing enamel-like weathering on the body				
Dimensions					
Width (cm)	4.3	Height (cm)	12.9	Thickness (cm)	0.3

Cat. No.	115				
Inv. No.	2073/2307				
Site, Year of Recovery	Ṭarṭūs/ Yaḥmour				
Neck	cylindrical neck				
Base	Rounded base				
Decoration	-----				
Color	Colorless				
Description	The rim is folded outward, inward, and over, with the upper surface pressed flat. It has a slightly flaring mouth and a tall cylindrical neck with concave sides that gradually expand downward, merging seamlessly with an uneven conical body. The bottom is uneven and features a jagged pontil scar.				
Condition	Intact, featuring numerous bubbles, deep pitting, and a brilliant iridescent weathering.				
Dimensions					
Width (cm)	2	Height (cm)	8.4	Thickness (cm)	0.3

Cat. No.	116				
Inv. No.	2650/1707/7				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e				
Neck	cylindrical neck				
Base	Uneven base				
Decoration	-----				
Color	Translucent greenish.				
Description	The rim is folded outward, inward, and over, with the upper surface pressed flat; it has a slightly flaring mouth and a long cylindrical neck with concave sides that gradually expand downward, merging seamlessly with an uneven conical body. The bottom is irregular, featuring a jagged pontil scar.				

		Note: Made from thick glass			
Condition		Intact; Features pinprick and some larger bubbles, along with a few black impurities; exhibits dulling, limy encrustation, and faint weathering, with some soil encrustation present on the interior			
Dimensions					
Width (cm)	3.7	Height (cm)	15.5	Thickness (cm)	0.8

Cat. No.	117				
Inv. No.	2793/4667				
Site, Year of Recovery	Ṭarṭūs/ Ýamrit -ÝAzar 2005/ Tomb 6				
Neck	Tall cylindrical neck				
Base	Flat base				
Decoration	-----				
Color	Translucent blue-green				
Description	Featuring a fine rim that is folded outward, inward, and over, with a flaring mouth. It has a cylindrical neck and an elongated piriform body, leading to a small concave bottom with traces of a pontil scar.				
Condition	Intact, with pinprick bubbles and blowing striations, along with dulling, pitting, and patches of iridescent weathering on the exterior. The interior of the neck has soil encrustation and whitish enamel-like weathering.				
Dimensions					
Width (cm)	2.9	Height (cm)	14.5	Thickness (cm)	0.3

Cat. No.	118				
Inv. No.	3480/1609				
Site, Year of Recovery	Ṭarṭūs / ÝAzar				
Neck	Tall cylindrical neck				
Base	Flat base				
Decoration	-----				
Color	Translucent with a pale green tinge				
Description	Featuring an uneven rim that is folded outward, inward, and over, flattened on the upper surface. It has a flaring mouth and a cylindrical neck that tapers slightly downward, with a deep tooled indent around the base. The body is elongated and piriform, leading to a small, flattened but uneven bottom. Note: Piriform body				
Condition	Intact, with some pinprick bubbles, dulling, iridescence, and faint weathering. The interior is encrusted with soil.				
Dimensions					
Width (cm)	3.6	Height (cm)	14.7	Thickness (cm)	0.4

Cat. No.	119				
Inv. No.	4233/5240				
Site, Year of Recovery	Ṭarṭūs / ÝAzar				
Neck	Tall cylindrical neck				
Base	Flat base				
Decoration	-----				
Color	Translucent light blue-green,				
Description	Featuring an inverted rim that is folded upward and inward, with a beveled upper surface. It has a tall cylindrical neck that expands slightly downward and is tooled around the base, leading to a slender conical body and a small concave bottom. The walls are thick. Note: The piriform body, made of relatively thin glass, has no base and is pointed				

Condition		Intact, featuring numerous bubbles, deep pitting, and vibrant iridescent weathering.			
Dimensions					
Width (cm)	5.3	Height (cm)	16.3	Thickness (cm)	0.3

Cat. No.	120				
Inv. No.	4232/5239				
Site, Year of Recovery	Ṭarṭūs / Ýazar				
Neck	Tall cylindrical neck				
Base	Rounded base				
Decoration	-----				
Color	colorless				
Description	Inverted rim, folded up and in, with beveled upper surface; tall, cylindrical neck, expanding slightly downward and tooled in around base; slender conical body; small, concave bottom, with pontil scar. Note: The piriform body, made of relatively thin glass, has no base and is pointed				
Condition	Intact, with numerous bubbles, deep pitting, and striking iridescent weathering.				
Dimensions					
Width (cm)	5.3	Height (cm)	15.3	Thickness (cm)	0.2

Cat. No.	121				
Inv. No.	1241/50				
Site, Year of Recovery	Latakia/ al-Māliyya Cemetery 2005				
Neck	Tall cylindrical neck				
Base	Flat base				
Decoration	-----				
Color	Pale deep blue				
Description	The rim is folded outward and inward, featuring a beveled upper surface; it has a cylindrical pinched neck with a tooled indent around the base; the body is piriform, curving into the bottom, which has a deep jagged pontil mark.				
Condition	Intact; features pinprick bubbles and blowing striations; there is deep pitting, dulling, and patches of brilliant iridescence on the exterior, along with soil encrustation and limy weathering on the inside of the neck and mouth.				
Dimensions					
Width (cm)	2.5	Height (cm)	9.6	Thickness (cm)	0.1

Cat. No.	122
Inv. No.	5446/51
Site, Year of Recovery	Latakia/ al-shīkh ḍāhir 1994
Neck	Tall cylindrical neck
Base	Flat base
Decoration	-----
Color	Translucent deep blue-green
Description	The rim is folded outward, inward, and over, featuring a beveled upper surface; it has a cylindrical neck with a tooling indent around the base; the body is piriform, curving into the bottom, which has a deep, jagged pontil scar.
Condition	Intact; features pinprick bubbles and blowing striations; there is deep pitting, dulling, and patches of brilliant iridescence on the exterior, along with soil encrustation and limy weathering on the inside of the neck and mouth.
Dimensions	

Width (cm)	1.7	Height (cm)	9.8	Thickness (cm)	0.2
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Cat. No.	123				
Inv. No.	4229/5236				
Site, Year of Recovery	Ṭarṭūs/ Ýamrit -ÝAzar				
Neck	Broken neck				
Base	Flat Base				
Decoration	---				
Color	Translucent;bluish.				
Description	The rim and part of the neck missing. It appears to have a cylindrical neck that expands downward, featuring tooling marks around the base, and an elongated piriform body with rounded sides that curve inward to a pushed-in bottom.				
Condition	Part of the rim is broken and missing, exhibiting patches of weathering that resemble enamel.				
Dimensions					
Width (cm)	5	Height (cm)	10	Thickness (cm)	0.2

Cat. No.	124				
Inv. No.	5449/54				
Site, Year of Recovery	Latakia/ al-shīkh ḍāhir 1994				
Neck	Tall cylindrical neck				
Base	Flat base				
Decoration	-----				
Color	Translucent yellow-green				
Description	The rim is folded outward, around, and inward; it has a cylindrical neck with tooling around the base; the body is slender and elongated in a piriform shape; the bottom is thick and flattened. Note: piriform type				
Condition	Intact; features many bubbles; there is deep pitting, brilliant iridescent weathering, and dulling. Color: translucent greenish.				
Dimensions					
Width (cm)	1.6	Height (cm)	8.8	Thickness (cm)	0.2

Cat. No.	125				
Inv. No.	448				
Site, Year of Recovery	Latakia/ Mār Taqlā II, 2006, Cemetery II, Anti chamber				
Neck	Tall cylindrical neck				
Base	Flat base				
Decoration	-----				
Color	Translucent greenish-blue				
Description	The rim is folded outward and inward, featuring a beveled upper surface; it has a tall, straight neck; the body has a double bulge, with the upper sections differing in diameter; the base is slightly concave.				
Condition	Intact; rim lightly broken and missing some parts; patches of enamel-like weathering present.				
Dimensions					
Width (cm)	2.5	Height (cm)	11.1	Thickness (cm)	0.2

Cat. No.	126
Inv. No.	480
Site, Year of Recovery	Latakia/ Mār Taqlā I, 2007, Cemetery I, Anti chamber
Neck	cylindrical neck
Base	Flat base
Decoration	-----

Color	Translucent greenish				
Description	Features a plain, knocked-off rim, a small flaring mouth, a cylindrical neck, a globular body, and a flattened bottom. Note: Squat globular body				
Condition	Broken around the rim, with patches of dulling, deep pitting, and iridescent weathering present.				
Dimensions					
Width (cm)	2.6	Height (cm)	4.6	Thickness (cm)	0.2

Cat. No.	127				
Inv. No.	481				
Site, Year of Recovery	Latakia/ Mār Taqlā II, 2007, Cemetery II, Gate/northeast corner				
Neck	cylindrical neck				
Base	Flat base				
Decoration	-----				
Color	Translucent greenish				
Description	The rim is folded outward, around, and inward; it has a cylindrical neck with tooling around the base; the body is slender and elongated in a piriform shape; the bottom is thick and flattened.				
Condition	Intact; features many bubbles; there is deep pitting, brilliant iridescent weathering, and dulling present.				
Dimensions					
Width (cm)	1.7	Height (cm)	9	Thickness (cm)	0.2

Cat. No.	128				
Inv. No.	5444/49				
Site, Year of Recovery	Latakia/ al-shikh ḍāhir 1994				
Neck	cylindrical neck				
Base	Flat base				
Decoration	-----				
Color	Translucent light blue,				
Description	A slanting rim folded outward, inward, and flattened on top, featuring an irregular opening to the mouth; it has a tall cylindrical neck that expands slightly downward and is tooled in around the base; the body is slender and conical, with a small, concave bottom and thick walls.				
Condition	Intact, featuring brilliant iridescent weathering.				
Dimensions					
Width (cm)	3.4	Height (cm)	11.4	Thickness (cm)	0.2

Cat. No.	129				
Inv. No.	5445/50				
Site, Year of Recovery	Latakia/ al-shīkh ḍāhir 1994				
Neck	cylindrical neck				
Base	Flat base				
Decoration	-----				
Color	Translucent light blue				
Description	Inverted rim, folded upward and inward, featuring a beveled upper surface; tall cylindrical neck that expands slightly downward and is tooled around the base; slender conical body; small concave bottom with a pontil scar.				
Condition	Intact; features numerous bubbles; exhibits deep pitting and brilliant iridescent weathering.				
Dimensions					
Width (cm)	2.8	Height (cm)	10.3	Thickness (cm)	0.2

Cat. No.	130				
Inv. No.	5447/52				
Site, Year of Recovery	Latakia/ al-shīkh ḡāhir 1994				
Neck	The neck comprises two-thirds of the body, lower body comprises one-third				
Base	Flat base				
Decoration	-----				
Color	Translucent blue-green				
Description	The fine rim is folded outward, inward, and over; it has a flaring mouth; a cylindrical neck with a tooled indent around the base; an elongated piriform body; and a small, concave bottom with traces of a pontil scar. The neck comprises two-thirds of the body, lower body comprises one-third.				
Condition	Intact; features pinprick bubbles and blowing striations; there is deep pitting and dulling around the mouth.				
Dimensions					
Width (cm)	2.2	Height (cm)	12.3	Thickness (cm)	0.2

Cat. No.	131				
Inv. No.	5448/53				
Site, Year of Recovery	Latakia/ al-shīkh ḡāhir 1994				
Neck	The neck comprises two-thirds of the body, lower body comprises one-third				
Base	Flat base				
Decoration	-----				
Color	Translucent bluish				
Description	The rim is rounded and flattened on the upper surface; it has a flaring mouth; a cylindrical neck that tapers downward, featuring a deep tooled indent around the base; an elongated piriform body; and a small, round bottom. Note: piriform type				
Condition	Intact; features pinprick bubbles and blowing striations; there is deep pitting and dulling around the mouth.				
Dimensions					
Width (cm)	1.6	Height (cm)	11.1	Thickness (cm)	0.2

Cat. No.	132				
Inv. No.	5450/55				
Site, Year of Recovery	Latakia/ al-shīkh ḡāhir 1994				
Neck	cylindrical neck				
Base	Rounded base				
Decoration	-----				
Color	Colorless with a blue tint.				
Description	The rim is plain and rounded, leading to a flaring mouth; it has a cylindrical neck that expands downward and features tooling around the base; the body is elongated and conical with convex sides; the bottom is flat.				
Condition	Intact; features some bubbles; there is dulling along with patches of pitting and iridescent weathering.				
Dimensions					
Width (cm)	1,5	Height (cm)	7.2	Thickness (cm)	0.2

Cat. No.	133				
Inv. No.	1240/49				

Site, Year of Recovery	Latakia/ al-Māliyya Cemetery 2005				
Neck	cylindrical neck				
Base	Flat base				
Decoration	-----				
Color	Translucent greenish				
Description	The fine rim is folded outward, inward, and flaring; it has a cylindrical neck with a tooled indent around the base; the elongated piriform body curves into the bottom, featuring a deep juggled pontil mark. The unguentarium increases in diameter as it descends from the neck, reaching a maximum size of 4.1 cm across.				
Condition	Intact; features pinprick bubbles and blowing striations; there is dulling, pitting, and patches of iridescent weathering on the exterior, along with soil encrustation and whitish enamel-like weathering on the interior of the neck.				
Dimensions					
Width (cm)	2	Height (cm)	10.3	Thickness (cm)	0.1

Cat. No.	134				
Inv. No.	1242/51				
Site, Year of Recovery	Latakia/ al-Māliyya Cemetery 2005				
Neck	cylindrical neck				
Base	Flat base				
Decoration	-----				
Color	Pale blue				
Description	An uneven rim that is folded outward, inward, and flattened on the upper surface; it has a flaring mouth and a cylindrical pinched neck that tapers slightly downward, featuring deep tooling around the base; the body is elongated and pear-shaped, with a small, flattened but uneven bottom.				
Condition	Complete and intact, featuring numerous pinprick bubbles and blowing striations; there is slight dull pitting and brilliant iridescent weathering present.				
Dimensions					
Width (cm)	1.7	Height (cm)	9.1	Thickness (cm)	0.1

Cat. No.	135				
Inv. No.	1243/52				
Site, Year of Recovery	Latakia/ al-Māliyya Cemetery 2005				
Neck	cylindrical neck				
Base	Rounded base				
Decoration	-----				
Color	Translucent bluish				
Description	Lopsided rim folded outward, inward, and pressed flat; slender cylindrical neck with a slight constriction where it meets the body; small concave bottom with traces of a pontil mark.				
Condition	Complete and intact, featuring pinprick bubbles and blowing striations; there is dull pitting and patches of iridescent weathering on the exterior, along with some cracks on the neck.				
Dimensions					
Width (cm)	1.9	Height (cm)	9.9	Thickness (cm)	0.1

Cat. No.	136				
Inv. No.	1244/53				
Site, Year of Recovery	Latakia/ al-Māliyya Cemetery 2005				
Neck	cylindrical neck				

Base		Rounded base			
Decoration		-----			
Color		Translucent pale blue			
Description		The rim is rounded, folded down and over; it has a broad, flaring mouth; a cylindrical neck that expands downward, featuring tooling marks around the base; a conical body; and a thick, pushed-in bottom with a central pontil scar.			
Condition		Intact, except for a broken small section of its rim; patches of iridescence and enamel-like weathering.			
Dimensions					
Width (cm)	1.5	Height (cm)	8.3	Thickness (cm)	0.1

Cat. No.	137				
Inv. No.	833				
Site, Year of Recovery	Jable/ Jbeibat 2002/ Tomb D/ Anti chamber				
Neck	cylindrical neck				
Base	Rounded base				
Decoration	-----				
Color	pale blue-green tinge				
Description	Uneven rim that is folded outward, inward, and over, with a flattened upper surface; features a flaring mouth and a cylindrical neck that tapers slightly downward, showcasing a deep tooled indent around the base. The body is elongated and piriform, with a small, flattened but uneven bottom. Note: Piriform body				
Condition	Complete except for a broken section of the upper rim; features numerous pinprick bubbles and blowing striations, along with dulling, pitting, and areas of brilliant iridescent weathering.				
Dimensions					
Width (cm)	2.2	Height (cm)	9.5	Thickness (cm)	0.3

Cat. No.	138				
Inv. No.	8				
Site, Year of Recovery	Latakia/ Shār'Ya Anṭāka. 2008/ al-shīkh ḏāhir Cemeteries/ Yāqār 1598/ anti chamber/eastern corner				
Neck	cylindrical neck				
Base	Rounded base				
Decoration	-----				
Color	Translucent pale yellow.				
Description	The rim is folded outward, inward, and over, featuring a beveled upper surface; it has a cylindrical neck that slightly expands downward and is tooled around the base; the body is slender and conical, with a small, concave bottom and thick walls, displaying a jagged pontil mark.				
Condition	Intact, and brilliant iridescent, with small patches of a creamy weathering.				
Dimensions					
Width (cm)	2.9	Height (cm)	8.4	Thickness (cm)	0.2

Cat. No.	139				
Inv. No.	2799/4653				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e/3				
Neck	Cylindrical neck				
Base	Flat Base				
Decoration	---				
Color	Translucent green				

Description		The rim is folded outward, inward, and over, flattened on top. It features a cylindrical neck with a tooling indent around the base, leading to a conical body with rounded sides at the base and a flattened but slightly concave bottom. Note: An important note for all pieces is that writing on the piece itself with a pen or attaching a sticker with a number directly on the piece has led to damage, as there is a lack of attention to the impact of these external factors on the piece itself.			
Condition		Intact; pinprick bubbles and enamel-like weathering on interior of neck.			
Dimensions					
Width (cm)	5.6	Height (cm)	11.3	Thickness(cm)	0.5

Cat. No.	140				
Inv. No.	2508/605				
Site, Year of Recovery	Ṭarṭūs / Ýazar				
Neck	Cylindrical neck				
Base	Flat Base				
Decoration	---				
Color	Translucent; greenish-bluish.				
Description	The rim is folded outward, inward, and over, flattened on top. It features a cylindrical neck with a tooling indent around the base, leading to a conical body with rounded sides at the base and a flattened but slightly concave bottom.				
Condition	Intact, but with a small section broken and missing from the neck, exhibiting patches of enamel-like weathering.				
Dimensions					
Width (cm)	3.5	Height (cm)	8.8	Thickness (cm)	0.3

Cat. No.	141				
Inv. No.	4226/5233				
Site, Year of Recovery	Ṭarṭūs / Ýazar				
Neck	Cylindrical neck				
Base	Flat Base				
Decoration	---				
Color	Translucent light blue				
Description	The rim is folded outward, inward, and over with a beveled top. It has a cylindrical neck that is tooled in at the base, leading to a conical body that curves inward to a small, flat bottom.				
Condition	Intact, featuring numerous pinprick bubbles, along with pitting, dulling, and significant iridescent weathering				
Dimensions					
Width (cm)	6.9	Height (cm)	15.9	Thickness (cm)	0.4

Cat. No.	142				
Inv. No.	2636/705				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e				
Neck	Cylindrical neck				
Base	Flat Base				
Decoration	---				
Color	Translucent bluish				
Description	Uneven, rounded rim, folded out, over, and in; cylindrical neck, expanding slightly near base, and tooling marks around base; bulbous body; flat bottom with rounded edge Note: poorly produced with bubbles filling its surface; most probably belonging to a family of lower socio-economic status.				

Condition		Intact; many bubbles and blowing striations; deep pitting and brilliant iridescent weathering			
Dimensions					
Width (cm)	5	Height (cm)	14	Thickness (cm)	0.6

Cat. No.	143				
Inv. No.	1863/3348				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e/ 3				
Neck	Cylindrical neck				
Base	Flat Base				
Decoration	---				
Color	Translucent; greenish-bluish.				
Description	Rim, folded out, over, and in, flattened on top and into mouth; cylindrical neck, tapering downward and tooled in around base; conical body, curving in to flat bottom. Note: Thick heavy glass.				
Condition	Intact; many bubbles; dulling, pitting, and iridescent weathering				
Dimensions					
Width (cm)	5.5	Height (cm)	11	Thickness (cm)	0.5

Cat. No.	144				
Inv. No.	1866/3336				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e /3				
Neck	Cylindrical neck				
Base	Flat Base				
Decoration	---				
Color	Translucent; greenish-bluish.				
Description	The rim is folded out, over, and in flattened on top forming the mouth; cylindrical neck, that tapers down; tooled in around the base with a conical body that curves in to form a flat bottom.				
Condition	Intact; many bubbles; dulling, pitting, and iridescent weathering				
Dimensions					
Width (cm)	6.9	Height (cm)	15.7	Thickness (cm)	0.5

Cat. No.	145				
Inv. No.	1858/3331				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e/3				
Neck	Cylindrical neck				
Base	Flat Base				
Decoration	---				
Color	Translucent; greenish-.				
Description	Rim folded out, over, and in, flattened on top; cylindrical neck with tooling indent around base; conical body with sides rounded at base; flattened but slightly concave bottom.				
Condition	Intact; a few pinprick and some large and elongated bubbles; dulling and creamy white weathering with iridescence				
Dimensions					
Width (cm)	7.1	Height (cm)	15.3	Thickness (cm)	0.5

Cat. No.	146				
Inv. No.	2065/2297				
Site, Year of Recovery	Ṭartūs / Yaḥmour				
Neck	Cylindrical neck				
Base	Flat Base				
Decoration	---				

Color		Translucent blue-green			
Description		The rim is folded outward, inward, and over, flattened on top and into the mouth. It features a cylindrical neck that tapers downward and is tooled around the base, leading to a conical body that curves inward to a flat bottom. Made of thick, heavy glass, it has a pontil mark. Note: made of relatively thin glass			
Condition		Intact, but with a broken and missing section from the base, exhibiting patches of enamel-like weathering.			
Dimensions					
Width (cm)	7.1	Height (cm)	14.4	Thickness (cm)	0.2

Cat. No.	147				
Inv. No.	1868/3363				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e/3				
Neck	Cylindrical neck				
Base	Flat Base				
Decoration	---				
Color	Translucent; greenish-bluish.				
Description	Afolded-out rim that forms a flat mouth; cylindrical neck that tapers down and connects to a conical body that curves into a flat base. Note: Tilted neck, tooled in at its base where it connects to body				
Condition	Intact; many bubbles; dulling, pitting, and iridescent weathering.				
Dimensions					
Width (cm)	5.9	Height (cm)	11.5	Thickness (cm)	0.5

Cat. No.	148				
Inv. No.	4235/5242				
Site, Year of Recovery	Ṭartūs / ÝAzar, tomb 11, 23				
Neck	Cylindrical neck				
Base	Flat Base				
Decoration	---				
Color	Colorless with a bluish tint				
Description	Featuring an uneven rim that is folded outward, inward, and over, with a beveled outer edge. It has a cylindrical neck with a tooled indent at the base, a double convex profile on the body, and a small flattened bottom with a pontil mark. Note: Made from thick, heavy glass				
Condition	Intact, featuring pinprick bubbles and blowing striations, along with dulling, pitting, and patches of brilliant iridescence and creamy brown weathering on the exterior. The interior has soil encrustation.				
Dimensions					
Width (cm)	4.1	Height (cm)	10.8	Thickness (cm)	0.4

Cat. No.	149				
Inv. No.	2801/4650				
Site, Year of Recovery	Ṭartūs / Ýamrit -ÝAzar 2005/Tomb 2				
Neck	Cylindrical neck				
Base	Flat Base				
Decoration	---				
Color	Translucent; green.				
Description	The rim is folded outward, inward, and over, flattened on top. It features a long cylindrical neck with a tooling indent around the base, leading to a conical body with rounded sides at the base and a flattened but slightly concave bottom.				
Condition	Part of the rim is broken and missing, exhibiting patches of weathering that resemble enamel.				

Dimensions					
Width (cm)	5.4	Height (cm)	13.5	Thickness (cm)	0.5

Cat. No.		150			
Inv. No.		3473/1608			
Site, Year of Recovery		Ṭarṭūs/ ÝAzar			
Neck		Tall cylindrical neck			
Base		Flat base.			
Decoration		---			
Color		Translucent light green			
Description		Featuring an inverted rim that is folded upward and inward, with a beveled upper surface. It has a tall cylindrical neck that expands slightly downward and is tooled around the base, leading to a slender piriform body and a small concave bottom with a pontil scar.			
Condition		Intact, but with a small part broken and missing from the rim, exhibiting patches of enamel-like weathering.			
Dimensions					
Width (cm)	3.2	Height (cm)	10.5	Thickness (cm)	0.2

Cat. No.		151			
Inv. No.		3475/1601			
Site, Year of Recovery		Ṭarṭūs / Ýamrit -ÝAzar 2005			
Neck		Tall cylindrical neck			
Base		Flat base.			
Decoration		---			
Color		Translucent pale yellow			
Description		Featuring a lopsided rim that is folded outward, inward, and pressed flat. It has a slender cylindrical neck that is tooled in around the base, leading to an elongated conical body and a concave bottom with a pontil scar. The neck comprises two-thirds of the length and the body the remaining one-third. Note: Conical body and thin neck			
Condition		Intact, with some pinprick bubbles, dulling, iridescence, and faint weathering. The interior is encrusted with soil.			
Dimensions					
Width (cm)	3.9	Height (cm)	13.5	Thickness (cm)	0.2

Cat. No.	152				
Inv. No.	3464/1611				
Site, Year of Recovery	Ṭarṭūs / ÝAzar				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent deep blue-green				
Description	The rim is folded outward, inward, and over, featuring a beveled upper surface. It has a cylindrical neck with a tooling indent around the base, leading to a piriform body that curves inward to the bottom, which has a deep, jagged pontil scar.				
Condition	Part of the rim is broken and missing, showing patches of weathering that resemble enamel.				
Dimensions					
Width (cm)	4.6	Height (cm)	12	Thickness (cm)	0.2

Cat. No.		153			
Inv. No.		4230/5237			
Site, Year of Recovery		Ṭarṭūs / Ýazar			
Neck		Tall cylindrical neck			
Base		Flat base.			
Decoration		---			
Color		Translucent bluish			
Description		Part of the rim appears to be folded outward, downward, around, and inward, featuring a broad, flaring mouth. It has a cylindrical neck with slightly convex sides and tooling marks around the base, leading to a small conical body and a thick, concave bottom with a jagged scar on one side. Note: Piriform body, made of relatively thin glass			
Condition		Part of the rim is broken and missing, showing patches of weathering that resemble enamel.			
Dimensions					
Width (cm)	2.1	Height (cm)	6.6	Thickness (cm)	0.2

Cat. No.		154			
Inv. No		2195/1700			
Site, Year of Recovery		Bānyās/ Rās al-Nabe'e /2			
Neck		Thin-walled vases with broad			
Base		Flat base.			
Decoration		---			
Color		Translucent, Greenish			
Description		An unguentarium with lopsided rim, folded out, over, and in, slightly flattened on top; tall, cylindrical neck; squat bulbous body; flat bottom with slight concavity at center, with pontil scar.			
Condition		Broken and missing part of the neck, with patches of enamel-like weathering.			
Dimensions					
Width (cm)	3.5	Height (cm)	9.4	Thickness (cm)	0.4

Cat. No.	155				
Inv. No.	1856/3329				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e /3				
Neck	No distinction between neck and body				
Base	Hollow base and thin walls				
Decoration	---				
Color	Colorless				
Description	The rim is folded out, over, and inward; cylindrical neck with an indentation on one side, expanding downward and tooled around the base; globular body; small, flat bottom featuring a pontil scar. Note: Bulbous body				
Condition	Intact; contains numerous bubbles; exhibits pitting and brilliant iridescent weathering.				
Dimensions					
Width (cm)	11.7	Height (cm)	21	Thickness (cm)	0.4

Cat. No.	156				
Inv. No.	36				
Site, Year of Recovery	Jable/ Jbeibat 2003				
Neck	Tall cylindrical neck				
Base	Rounded base.				
Decoration	---				

Color		Colorless			
Description		Featuring a thick, rounded rim that is folded outward, downward, inward, and over, with a fairly broad oval collar at the mouth. It has a cylindrical neck that expands downward and is tooled around the base, leading to a Bulbous body and a pushed-in bottom with a kick and a circular pontil scar			
Condition		Intact, featuring elongated and pinprick bubbles, along with deep pitting and vibrant iridescent weathering			
Dimensions					
Width (cm)	3.1	Height (cm)	16.3	Thickness (cm)	0.4

Cat. No.	157				
Inv. No.	2501/922				
Site, Year of Recovery	Ṭarṭūs / Ýazar				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent pale blue-green				
Description	The rim is folded outward, inward, and over, flattened on top and creating a slight constriction at the mouth. It features a cylindrical neck that expands slightly downward, with a tooled indent around the base, leading to a bulbous body and a flat bottom. Note: Made from thick, heavy glass				
Condition	Intact, with pinprick bubbles and blowing striations, along with dulling, pitting, and iridescent weathering, as well as soil encrustation on the interior.				
Dimensions					
Width (cm)	6.3	Height (cm)	14.9	Thickness (cm)	0.4

Cat. No.	158				
Inv. No.	2505/928				
Site, Year of Recovery	Ṭarṭūs / Ýazar				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Colorless				
Description	Featuring a thick, rounded rim that is folded outward, downward, inward, and over, with a fairly broad oval collar at the mouth. It has a cylindrical neck that expands downward and is tooled around the base, leading to a bulbous body and a pushed-in bottom with a kick and a circular pontil scar. Note: made from thick, heavy glass.				
Condition	Intact, featuring pinprick bubbles and blowing striations, along with dulling, pitting, and iridescent weathering, as well as soil encrustation on the interior.				
Dimensions					
Width (cm)	5.6	Height (cm)	16.6	Thickness (cm)	0.3

Cat. No.	159				
Inv. No.	2502/924				
Site, Year of Recovery	Ṭarṭūs / Ýazar				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent pale blue-green				

Description		The rim is folded outward, inward, and over, flattened on top and forming a slight constriction at the mouth. It features a cylindrical neck that expands slightly downward, with a tooled indent around the base, leading to a bulbous body and a flat bottom. Note: Made from thick, heavy glass.			
Condition		Part of the rim is broken and missing, showing patches of weathering that resemble enamel.			
Dimensions					
Width (cm)	5.8	Height (cm)	14.3	Thickness (cm)	0.2

Cat. No.	160				
Inv. No.	3484/1599				
Site, Year of Recovery	Ṭarṭūs/ Ýamrit -ÝAzar 2005				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent pale blue				
Description	The rim is folded outward, inward, and over, flattened on top and into the mouth. It features a cylindrical neck that expands downward and is tooled around the base, leading to a conical body with a convex lower side and a thick, rounded bottom. Note: Made of relatively thick glass				
Condition	Intact, featuring numerous bubbles, thick creamy weathering on the interior, and dulling along with iridescent weathering on the exterior.				
Dimensions					
Width (cm)	5.1	Height (cm)	15.3	Thickness (cm)	0.4

Cat. No.	161				
Inv. No.	3467/1594				
Site, Year of Recovery	Ṭarṭūs/ Ýamrit -ÝAzar 2005				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent pale blue-green				
Description	The rim is folded outward, inward, and over, flattened on top and into the mouth. It has a cylindrical neck that expands downward and is tooled around the base, leading to a conical body with a convex lower side and a thick, rounded bottom. The glass is fairly thick and heavy.				
Condition	Intact, with some pinprick bubbles, dulling, iridescence, and faint weathering. The interior is encrusted with soil.				
Dimensions					
Width (cm)	5.7	Height (cm)	13.3	Thickness (cm)	0.4

Cat. No.	162				
Inv. No.	3469/1602				
Site, Year of Recovery	Ṭarṭūs / ÝAzar				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent pale blue-green				
Description	The rim is folded outward, inward, and over, flattened on top and into the mouth. It features a cylindrical neck that expands downward and is tooled around the base, leading to a conical				

		body with a convex lower side and a thick, rounded bottom. The glass is fairly thick and heavy.			
Condition		Intact, with some pinprick bubbles, dulling, iridescence, and faint weathering. The interior has soil encrustation.			
Dimensions					
Width (cm)	5.9	Height (cm)	13.4	Thickness (cm)	0.4

Cat. No.	163				
Inv. No.	3462/1606				
Site, Year of Recovery	Ṭarṭūs / ÝAzar				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent greenish				
Description	The rim is folded outward, inward, and over, flattened on top and into the mouth. It features a cylindrical neck that expands downward and is tooled around the base, leading to a conical body with a convex lower side and a thick, rounded bottom. The glass is fairly thick and heavy.				
Condition	Intact, with some pinprick bubbles, dulling, iridescence, and faint weathering. The interior is encrusted with soil.				
Dimensions					
Width (cm)	5.6	Height (cm)	12.8	Thickness (cm)	0.4

Cat. No.		164			
Inv. No.		3472/1604			
Site, Year of Recovery		Ṭarṭūs / ÝAzar			
Neck		Tall cylindrical neck			
Base		Flat base.			
Decoration		---			
Color		Translucent pale blue-green			
Description		The rim is folded outward, inward, and over, flattened on top and into the mouth. It features a cylindrical neck that expands downward and is tooled around the base, leading to a conical body with a convex lower side and a thick, rounded bottom. The glass is fairly thick and heavy, with the neck being slightly narrower.			
Condition		Intact, but with a small section broken and missing from the rim, showing patches of enamel-like weathering.			
Dimensions					
Width (cm)	4.7	Height (cm)	11.5	Thickness (cm)	0.3

Cat. No.	165				
Inv. No.	3463/1593				
Site, Year of Recovery	Ṭarṭūs/ Ýamrit -ÝAzar 2005				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent pale blue-green				
Description	Featuring a flaring rim with a slight fold at the outer edge. It has a tall cylindrical neck that is tooled in at the base, leading to an uneven conical body that curves inward to a small, slightly concave bottom.				
Condition	Broken and repaired at the bottom of the neck				
Dimensions					
Width (cm)	5.8	Height (cm)	14.5	Thickness (cm)	0.3

Cat. No.	166				
Inv. No.	3474/1603				
Site, Year of Recovery	Ṭartūs/ Ýamrit -ÝAzar 2005				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent pale blue-green				
Description	The rim is folded outward, inward, and over, flattened on top and into the mouth. It features a cylindrical neck that expands downward and is tooled around the base, leading to a conical body with a convex lower side and a thick, rounded bottom. The glass is fairly thick and heavy				
Condition	Intact, with some pinprick bubbles, dulling, iridescence, and faint weathering. The interior has soil encrustation.				
Dimensions					
Width (cm)	5.9	Height (cm)	13.5	Thickness (cm)	0.4

Cat. No.	167				
Inv. No.	3471/1614				
Site, Year of Recovery	Ṭartūs/ Ýamrit -ÝAzar 2005				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent greenish				
Description	The rim is folded outward, inward, and over, flattened on top and into the mouth. It has a cylindrical neck that expands downward and is tooled around the base, leading to a conical body with a convex lower side and a thick, rounded bottom. The glass is fairly thick and heavy.				
Condition	Intact, with some pinprick bubbles, dulling, iridescence, and faint weathering. The interior is encrusted with soil.				
Dimensions					
Width (cm)	5.6	Height (cm)	13	Thickness (cm)	0.4

Cat. No.	168				
Inv. No.	3476/1595				
Site, Year of Recovery	Ṭartūs/ Ýamrit -ÝAzar 2005				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent pale blue-green				
Description	The rim is folded outward, inward, and over, flattened on top and into the mouth. It features a cylindrical neck that expands downward and is tooled around the base, leading to a conical body with a convex lower side and a thick, rounded bottom. The glass is fairly thick and heavy, with the neck being slightly narrower. Note: Bulbous body; with a tilted neck.				
Condition	Intact, but the body exhibits enamel-like weathering.				
Dimensions					
Width (cm)	5.7	Height (cm)	13.5	Thickness (cm)	0.3

Cat. No.	169				
Inv. No.	3483/1598				
Site, Year of Recovery	Ṭarṭūs/ Ýamrit -ÝAzar 2005				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent greenish				
Description	The rim is folded outward, inward, and over, flattened on top and into the mouth. It has a cylindrical neck that expands downward and is tooled around the base, leading to a conical body with a convex lower side and a thick, rounded bottom. Note: Bulbous body; with a tilted neck.				
Condition	Intact, with numerous bubbles, thick creamy weathering on the interior, and dulling along with iridescent weathering on the exterior.				
Dimensions					
Width (cm)	5.1	Height (cm)	14.2	Thickness (cm)	0.3

Cat. No.	170				
Inv. No.	3478/1612				
Site, Year of Recovery	Ṭarṭūs / ÝAzar				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent greenish				
Description	The the rim is folded outward, inward, and over, flattened on top and into the mouth. It features a cylindrical neck that expands downward and is tooled around the base, leading to a conical body with a convex lower side and a thick, rounded bottom. The glass is fairly thick and heavy, with the neck being slightly narrower. Note: Bulbous body; with a tilted neck				
Condition	Intact, although the body shows enamel-like weathering.				
Dimensions					
Width (cm)	5.6	Height (cm)	12.9	Thickness (cm)	0.4

Cat. No.	171				
Inv. No.	3482/1597				
Site, Year of Recovery	Ṭarṭūs/ Ýamrit -ÝAzar 2005				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent pale blue-green				
Description	The rim is folded outward, inward, and over, flattened on top and into the mouth. It features a cylindrical neck that expands downward and is tooled around the base, leading to a conical body with a convex lower side and a thick, rounded bottom. The glass is fairly thick and heavy, with the neck being slightly narrower. Note: Bulbous body; with a tilted neck.				
Condition	Intact, featuring numerous bubbles, thick creamy weathering on the interior, and dulling along with iridescent weathering on the exterior				
Dimensions					
Width (cm)	5.9	Height (cm)	12.7	Thickness (cm)	0.4

Cat. No.	172				
Inv. No.	4239/5246				
Site, Year of Recovery	Ṭarṭūs/ Ýamrit -ÝAzar 2005				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent pale blue-green				
Description	in color, the rim is folded outward, inward, and over, flattened on top and into the mouth. It features a cylindrical neck that expands downward and is tooled around the base, leading to a conical body with a convex lower side and a thick, rounded bottom. Note: Made of relatively thick glass, with a bulbous body				
Condition	Intact, although the body shows enamel-like weathering				
Dimensions					
Width (cm)	5.3	Height (cm)	14.3	Thickness (cm)	0.3

Cat. No.		173			
Inv. No.		4228/5235			
Site, Year of Recovery		Ṭarṭūs/ Ýamrit -ÝAzar 2005			
Neck		Tall cylindrical neck			
Base		Flat base.			
Decoration		---			
Color		Translucent greenish			
Description		Translucent light blue in color, the rim is folded outward, inward, and over with a beveled top. It features a cylindrical neck that is tooled in at the base, leading to a conical body that curves inward to a small, flat bottom.			
Condition		Part of the rim is broken and missing, showing patches of weathering that resemble enamel			
Dimensions					
Width (cm)	3.7	Height (cm)	8.5	Thickness (cm)	0.2

Cat. No.	174				
Inv. No.	4238/5245				
Site, Year of Recovery	Ṭarṭūs / ÝAzar				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent pale blue-green				
Description	The rim is folded outward, inward, and over, flattened on top and into the mouth. It has a cylindrical neck that expands downward and is tooled around the base, leading to a conical body with a convex lower side and a thick, rounded bottom. Note: Made of relatively thick glass, with a bulbous body				
Condition	Intact, but displaying enamel-like weathering on the body.				
Dimensions					
Width (cm)	5.3	Height (cm)	14.3	Thickness (cm)	0.4

Cat. No.	175				
Inv. No.	496				
Site, Year of Recovery	Latakia/ Mār Taqlā II, 2006,				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				

Color		A pale green			
Description		The rim is folded outward, inward, and over, featuring a beveled outer edge; it has a broad, flaring mouth and a tall cylindrical neck that expands slightly downward, with tooling marks around the base and on the small horizontal shoulder. The body is squat and sloping, with convex sides and a concave bottom.			
Condition		Intact, featuring pinprick bubbles and blowing striations; there is dulling, pitting, and patches of iridescent weathering on the exterior, along with soil encrustation			
Dimensions					
Width (cm)	3.5	Height (cm)	11.8	Thickness (cm)	0.3

Cat. No.	176				
Inv. No.	3481/1613				
Site, Year of Recovery	Ṭarṭūs / Ýazar				
Neck	cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent pale blue-green				
Description	The rim is folded outward, inward, and over, featuring an uneven lip around the mouth. It has a cylindrical neck that expands downward, leading to a bulbous body and a slightly convex bottom				
Condition	Intact, with numerous bubbles, thick creamy weathering on the interior, and dulling along with iridescent weathering on the exterior				
Dimensions					
Width (cm)	6.5	Height (cm)	14.7	Thickness (cm)	0.4

Cat. No.		177			
Inv. No.		4242/5249			
Site, Year of Recovery		Ṭarṭūs / Ýazar, tomb 6,			
Neck		cylindrical neck			
Base		Flat base.			
Decoration		---			
Color		Translucent pale blue-green			
Description		Featuring an uneven rim that is folded outward, around, and inward, pressed into a flaring mouth. It has a long cylindrical neck that expands downward and is tooled around the base, leading to a squat bulbous body with convex sides and a concave bottom. Note: Made of relatively thick glass, with a bulbous body			
Condition		Broken at the rim, but exhibiting enamel-like weathering on the body			
Dimensions					
Width (cm)	8	Height (cm)	10.8	Thickness (cm)	0.3

Cat. No.	178				
Inv. No.	2643/1723/7				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e				
Neck	cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent pale greenish-bluish.				

Description		Rim folded out, over, and in, flattened on top and into mouth; tall, cylindrical neck, expanding downward and tooled in around base; bulbous body; flat bottom.			
Condition		Intact, pinprick bubbles; dulling, with patches of pitting and iridescent weathering.			
Dimensions					
Width (cm)	9.1	Height (cm)	17.7	Thickness (cm)	0.5

Cat. No.	179				
Inv. No.	2641/1723/5				
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e				
Neck	cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent pale blue-green.				
Description	Fine tubular rim folded out, over, and in; flaring mouth; tall cylindrical neck, expanding downward with tooled indent around base; squat bulbous body, expanding downward, with slightly angular sides; shallow concave bottom with pontil scar. Note: poorly produced with bubbles filling its surface; most probably belonging to a family of lower socio-economic status.				
Condition	Intact; pinprick and elongated bubbles; dulling and faint iridescence on exterior; patches of soil encrustation and iridescent weathering on interior.				
Dimensions					
Width (cm)	5.4	Height (cm)	13.1	Thickness (cm)	0.5

Cat. No.	180					
Inv. No.	2637/1723/1					
Site, Year of Recovery	Bānyās/ Rās al-Nabe'e					
Neck	cylindrical neck					
Base	Flat base.					
Decoration	---					
Color	Translucent greenish					
Description	Rim folded out, over, and in; cylindrical, long neck, expanding downward; squat, bulbous body; flat bottom with a pontil scar. slightly near base, and tooling marks around base; bulbous body; flat bottom with rounded edge Note: Produced from thick glass, similar to No. 35, poorly produced with bubbles filling its surface; most probably belonging to a family of lower socio-economic status.					
Condition	Intact; pinprick and elongated bubbles; dulling and faint iridescence on exterior; patches of soil encrustation and iridescent weathering on interior					
Dimensions						
Width (cm)	5	Height (cm)	14.3	Thickness (cm)	0.7	

Cat. No.	181				
Inv. No.	2093/3127				
Site, Year of Recovery	Bānyās/ al madenah al readeah				
Neck	cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent bluish.				
Description	Rim folded out, over, and in; cylindrical neck, expanding downward; squat, bulbous body; flat bottom, with pontil scar				

Condition		Intact; pinprick bubbles and blowing striations; faint dulling, weathering, and brilliant iridescence			
Dimensions					
Width (cm)	7.1	Height (cm)	14.5	Thickness (cm)	0.4

Cat. No.	182				
Inv. No.	725				
Site, Year of Recovery	Jable/ Jbeibat 2001/ Tomb H/ Chamber 1				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Colorless				
Description	Featuring a rounded rim that is folded outward, inward, and over, pressed flat into a fairly broad collar at the mouth. It has a concave cylindrical neck that is tooled in around the base, leading to a slender, elongated piriform body and a pushed-in bottom with a shallow kick. Note: They are not used as tableware due to their small size.				
Condition	Intact, featuring elongated and pinprick bubbles, along with deep pitting and vibrant iridescent weathering				
Dimensions					
Width (cm)	4.6	Height (cm)	16	Thickness (cm)	0.3

Cat. No.	183				
Inv. No.	2797/4651				
Site, Year of Recovery	Ṭarṭūs / Ýamrit -ÝAzar 2005/Tomb 5				
Neck	Tall cylindrical neck				
Base	Flat base.				
Decoration	---				
Color	Translucent blue-green				
Description	A thick tubular rim that is folded outward, inward, and over. It has a cylindrical neck that expands downward and is tooled around the base, leading to a bulbous body with a convex curving side and a concave bottom.				
Condition	Intact, featuring pinprick bubbles and blowing striations, along with dulling, pitting, and patches of iridescent weathering on the exterior. The interior of the neck shows soil encrustation and whitish enamel-like weathering.				
Dimensions					
Width (cm)	6.3	Height (cm)	12.2	Thickness (cm)	0.4

Cat. No.		184			
Inv. No.		447			
Site, Year of Recovery		Latakia/ Mār Taqlā II, 2006,			
Neck		Tall cylindrical neck			
Base		Flat base.			
Decoration		---			
Color		Translucent greenish-blue color			
Description		The rim is folded outward, inward, and over, featuring a beveled upper surface; it has a high straight neck and a double bulge body, with the upper sections differing in diameter; the base is slightly concave. Note: Made of relatively thick glass			
Condition		Complete and intact, with iridescence covering the entire surface			
Dimensions					
Width (cm)	2	Height (cm)	11.5	Thickness (cm)	0.2

Cat. No.		185			
Inv. No.		5502			
Site, Year of Recovery		Latakia/ Mār Taqlā 1995			
Neck		Tall cylindrical neck			
Base		Flat base.			
Decoration		---			
Color		Translucent bluish			
Description		Featuring a tall, tubular neck that slightly widens toward the top, with a spreading rim folded over on top and a tooled angle at the bottom; it swells out to form a double-sphere body with differing diameters. The base is slightly pushed in, with a pontil scar, and is made of relatively thick glass. Note: Double bulges body; top of each other in the same diameter			
Condition		Intact, with some bubbles; the entire body is covered in dulling and earthen deposits			
Dimensions					
Width (cm)	1.8	Height (cm)	10.9	Thickness (cm)	0.2

Cat. No.		186			
Inv. No.		4246/5253			
Site, Year of Recovery		Ṭarṭūs/ ÝAzar			
Neck		Tall cylindrical neck			
Base		Flat base.			
Decoration		---			
Color		Translucent greenish			
Description		Featuring an uneven rim that is folded outward, inward, and over, with a beveled outer edge. It has a long cylindrical neck with a tooled indent at the base, a double convex profile on the body, and a small, flattened bottom with a pontil mark. Note: made of relatively thin glass			
Condition		Intact, featuring numerous pinprick bubbles, dulling, iridescence, and small patches of creamy weathering on the exterior. There is thicker creamy brown weathering on the inside of the mouth and neck, along with some soil encrustation in the interior.			
Dimensions					
Width (cm)	3.3	Height (cm)	10.7	Thickness (cm)	0.2

Cat. No.		187			
Inv. No.		N.R.2535/189			
Site, Year of Recovery		Ṭarṭūs / khirbet el libne			
Neck		cylindrical body			
Base		Rounded base.			
Decoration		---			
Color		Translucent greenish			
Description		The body is slightly elongated with a thin rim and a wide, flared mouth, with no separation between the rim and the body (a streamlined shape). Note: Does not have a fixed base, so it is suspended on a holder			
Condition		Broken and missing a portion of the rim, featuring patches of enamel-like weathering.			
Dimensions					
Width (cm)	1.6	Height (cm)	6.8	Thickness (cm)	0.2

Cat. No.		188			
Inv. No.		N.R.2535/2			
Site, Year of Recovery		Ṭarṭūs / khirbet el libne			
Neck		short cylindrical body			
Base		Rounded base.			
Decoration		---			
Color		Translucent greenish			
Description		A slightly elongated body with a thin rim and a wide, flaring mouth, with no separation between the rim and the body (streamlined shape). Note: Funnel shaped, does not have a fixed base, so it is suspended on a holder			
Condition		Broken and missing sections of the rim, showing patches of weathering that resemble enamel			
Dimensions					
Width (cm)	1.5	Height (cm)	6.3	Thickness (cm)	0.3

Cat. No.		189			
Inv. No.		N.R.2535/3			
Site, Year of Recovery		Ṭarṭūs / khirbet el libne			
Neck		short cylindrical body			
Base		Rounded base.			
Decoration		---			
Color		Translucent greenish			
Description		A slightly elongated body with a thin rim and a wide, flaring mouth, with no separation between the rim and the body (a streamlined shape). Note: funnel shaped; does not have a fixed base, so it is suspended on a holder.			
Condition		Broken and missing sections of the rim, featuring patches of weathering that resemble enamel			
Dimensions					
Width (cm)	1.4	Height (cm)	6.5	Thickness (cm)	0.2

Cat. No.	190				
Inv. No.	0/24				
Site, Year of Recovery	Jable/ Roman baths 2007				
Neck	short cylindrical body				
Base	Rounded base.				
Decoration	---				
Color	Translucent whitesh				
Description	Missing the rim and part of the body, slightly expanding downward to reveal a rounded bottom. Note: Published by Dr. Masoud Badawi in Syria Magazine in 2007				
Condition	Broken and lacking a portion of the rim, featuring patches of enamel-like weathering				
Dimensions					
Width (cm)	---	Height (cm)	---	Thickness (cm)	----

Cat. No.	191				
Inv. No.	2114/3502/2				
Site, Year of Recovery	Ṭarṭūs/ Bṭaba				
Decoration	raised notched bulges				
Color	Translucent dark blue, appearing opaque black.				

Description		Slightly oval band, wide and narrow on one side, thin and deep on the other; not visibly joined, with tooling marks visible on inner surface. The outer surface is adorned with 18 vertical or globular ribs. Irregular in shape.			
Condition		Mainly intact, except for a visible crack through band; some dulling and patches of iridescent weathering.			
Dimensions					
Width (cm)	6.6	Height (cm)	---	Thickness (cm)	----

Cat. No.		192			
Inv. No.		5573			
Site, Year of Recovery		Latakia/ Unknown provenance; confiscation Șăfită			
Decoration		---			
Color		Colorless with a yellowish-green tint.			
Description		The circular band is round in section but flattened into a square section where the ends of the rod have been pressed together, featuring irregular tooling marks. The rod is twisted into a spiral pattern.			
Condition		Intact; some dulling and creamy white weathering.			
Dimensions					
Width (cm)	6.5	Height (cm)	---	Thickness (cm)	----

Cat. No.		193			
Inv. No.		5574			
Site, Year of Recovery		Latakia/ Unknown provenance; confiscation Šāfitā			
Decoration		---			
Color		Colorless with a yellowish-green tint			
Description		The circular band is round in section but flattened into a square section where the ends of the rod have been pressed together, featuring irregular tooling marks. The rod is twisted into a spiral pattern.			
Condition		Intact; some dulling and creamy white weathering.			
Dimensions					
Width (cm)	6.6	Height (cm)	---	Thickness (cm)	----

Cat. No.		194			
Inv. No.		2113/3502/1			
Site, Year of Recovery		Țarțūs/ Bțaba			
Decoration		----			
Color		Black			
Description		Irregular oval band; semicircular in cross-section but distorted in areas where it was worked; no visible join. Note: Due to the large circumference of the bracelet, it may have been used as an arm bangle instead of a wrist bracelet. Quite possibly uses as a votive object or as a funerary adornment, indicating a grave for a woman or a family. Black bracelet of irregular thickness.			
Condition		Intact; elongated bubbles; signs of dulling, subtle iridescence, and areas of thick, creamy weathering.			
Dimensions					
Width (cm)	5.9	Height (cm)	---	Thickness (cm)	----

Cat. No.	195				
Inv. No.	2278/4458				
Site, Year of Recovery	Ṭarṭūs/ Bshraeel				
Decoration	----				
Color	Black				
Description	Irregular oval band; semicircular in cross-section but distorted in areas where it has been worked; no visible join. Note: Due to the large circumference of the bracelet, it may have been used as an arm bangle instead of a wrist bracelet. Quite possibly uses as a votive object or as a funerary adornment, indicating a grave for a woman or a family. Black bracelet of irregular thickness.				
Condition	Intact; visible elongated bubbles; some dulling, and faint iridescence, with areas of thick, creamy weathering.				
Dimensions					
Width (cm)	7.7	Height (cm)	---	Thickness (cm)	----

Cat. No.		196			
Inv. No.		2279/4459			
Site, Year of Recovery		Ṭarṭūs/ Bshraeel			
Decoration		----			
Color		Translucent very dark green, appearing black.			
Description		Circular band; round in cross-section but featuring a groove along the inner side; flattened into a square section where the ends of the rod have been pressed together, showing irregular tooling marks; small pontil scar on the outer edge of the opposite side. One side is broad and narrow in section, while the other side is thin and deep.			
Condition		Intact; visible elongated bubbles; some dulling, and faint iridescence, with patches of thick, creamy weathering.			
Dimensions					
Width (cm)	6.8	Height (cm)	---	Thickness (cm)	----

Cat. No.	197				
Inv. No.	2276/4456				
Site, Year of Recovery	Ṭarṭūs/ Bshraeel				
Decoration	----				
Color	Black				
Description	Irregular oval band; semicircular in cross-section but distorted in areas where it has been worked; no visible join				
Condition	Intact; with visible elongated bubbles; some dulling, and faint iridescence, with patches of thick, creamy weathering.				
Dimensions					
Width (cm)	7.5	Height (cm)	---	Thickness (cm)	----

Cat. No.		198			
Inv. No.		2275/4455			
Site, Year of Recovery		Ṭarṭūs/ Bshraeel			
Decoration		----			
Color		Translucent dark cobalt blue, appearing black			
Description		Irregular oval band; semicircular in cross-section but distorted in areas where it has been worked; features a visible join. Note Extremely thick.			
Condition		Mainly intact; some dulling and faint iridescence.			
Dimensions					
Width (cm)	6.7	Height (cm)	---	Thickness (cm)	----

Cat. No.		199			
Inv. No.		2277/4457			
Site, Year of Recovery		Ṭarṭūs/ Bshraeel			
Decoration		----			
Color		Dark black			
Description		Irregular oval band; semicircular in cross-section but distorted in areas where it has been worked; no visible join. Note: Irregular thickness.			
Condition		Intact; visible elongated bubbles; some dulling, and faint iridescence, with areas of thick, creamy weathering.			
Dimensions					
Width (cm)	7.1	Height (cm)	---	Thickness (cm)	----

Cat. No.		200			
Inv. No.		4240/5247			
Site, Year of Recovery		Ṭarṭūs/ ÝAzar/the intrance			
Decoration		13 grooves			
Color		Greenish			
Description		Blue bead featuring a total of 13 grooves and whole through its center. Note: Melon beads crafted from frit are composed of a substance known as frit/ quartz-ceramic, which is a blend of silica grains, lime, soda, and colored metal oxides, particularly copper, fused at relatively low temperatures ranging from 600 to 800°C (Spaer et al. 2001: 35). This granular material retains its natural pastel hues, including bluish-green, turquoise, Egyptian blue, and light green, making it especially suitable for creating small items, decorative pieces, or amulets.			
Condition		Intact; some dulling and pitting; slight iridescent weathering.			
Dimensions					
Width (cm)	---	Height (cm)	---	Thickness (cm)	----

Cat. No.		201			
Inv. No.		3826/2441			
Site, Year of Recovery		Ṭarṭūs/ Entry to Al Bassel Tomb			
Decoration		Decorated with three white rings, with an opening exactly at its center.			
Color		Bluish			
Description		Round bead in a blue color. Decorated with three white rings, with an opening exactly at its center. Note:			
Condition		Intact; some dulling and creamy weathering, with slight iridescence.			
Dimensions					
Width (cm)	---	Height (cm)	1.9	Thickness (cm)	----

Cat. No.	202				
Inv. No.	2119/3510				
Site, Year of Recovery	Ṭarṭūs/ Bṭaba				
Decoration	---				
Color	Brownish				
Description	Two beads: one is greenish, oval with narrow ends, featuring eroded tips and a longitudinal perforation with a small hole. The second bead is elongated and brown.				

Condition		Mainly intact, except for a visible crack through the band; some dulling and patches of iridescent weathering.			
Dimensions					
Width (cm)	---	Height (cm)	---	Thickness (cm)	----

Cat. No.	203				
Inv. No.	3822/2436				
Site, Year of Recovery	Ṭarṭūs/ Entry to Al Bassel Tomb				
Decoration	---				
Color	Bluish				
Description	Cylindrical in shape, with rounded edges at both ends; it is pierced lengthwise and features a body adorned with white trails arranged in a feather pattern. Note: According to the accompanying excavation reports, this bead dates back to the 2 nd and 3 rd centuries AD. However, taking comparanda specimens into consideration, it would date back to the Hellenistic period, ca. 330-70 BC or later				
Condition	Intact; some dulling and creamy weathering, with slight iridescence.				
Dimensions					
Width (cm)	---	Height (cm)	2.6	Thickness (cm)	----

Cat. No.		204						
Inv. No.		3825/2439						
Site, Year of Recovery		Ṭarṭūs/ Entry to Al Bassel Tomb						
Decoration		Decorated with white dots						
Color		Bluish						
Description		A heavily worn round bead with a large portion missing; its outer surface is decorated with irregularly shaped dots in white and yellow.						
Condition		broken, almost half of its side is missing.						
Dimensions								
Width (cm)		---	Height (cm)		---	Thickness (cm)		----

Cat. No.		205			
Inv. No.		728			
Site, Year of Recovery		Jable/ Jbeibat 2001/ Tomb H/ Anti chamber			
Decoration		Double eye			
Color		Turquoise blue			
Description		Two identical beads with two eyes on each side; turquoise blue with dark blue at the edges; dark blue eyes. Cylindrical in shape; featuring grooves around the middle; with edges rounded at both ends and feature a central hole of medium diameter.			
Condition		Intact; slight dulling and pitting.			
Dimensions					
Width (cm)	---	Height (cm)	---	Thickness (cm)	----

Cat. No.	206				
Inv. No.	801				
Site, Year of Recovery	Jable/ Jbeibat 2002/ Tomb D/ Chamber 1				
Decoration	Decorated with three yellow eyes and a black center				
Color	Turquoise blue				
Description	Turquoise; globular in shape; the sides are adorned with three opaque yellow eyes, each featuring a central blue dot.				
Condition	Intact; some dulling and pitting; slight iridescent weathering.				

Dimensions					
Width (cm)	---	Height (cm)	---	Thickness (cm)	----

Cat. No.	207				
Inv. No.	814				
Site, Year of Recovery	Jable/ Jbeibat 2001/ Tomb H/ Anti chamber				
Decoration	Decorated with three green eyes and a black center				
Color	Turquoise green				
Description	Indeterminate color (deep green); eyes in opaque white and dark blue. Slightly compressed spherical body with uneven edges surrounding a vertical, slightly off-center hole. Three eyes are irregularly positioned around the body, each featuring a solid central dot. Note: Eye bead with three green eyes and a black center.				
Condition	Intact; with some dulling and creamy weathering, and some slight iridescence.				
Dimensions					
Width (cm)	---	Height (cm)	---	Thickness (cm)	----

Cat. No.	208				
Inv. No.	2248				
Site, Year of Recovery	Latakia/ al-shīkh dāhir Cemeteries / Yāqār 1746/Cemetery IV, Chamber II				
Decoration	Decorated with eyes in yellow and dark blue.				
Color	Three beads, black, white, and turquoise blue				
Description	Three beads: one is black, one is white with three blue eyes, and one is blue with eyes in yellow and dark blue.				
Condition	Intact; minor dulling and pitting; with slight iridescent weathering.				
Dimensions					
Width (cm)	---	Height (cm)	---	Thickness (cm)	----

Cat. No.		209						
Inv. No.		1681/1932						
Site, Year of Recovery		Ṭarṭūs/ khirbet el libne 1999						
Decoration		Decorated with three opaque turquoise eyes with central dot.						
Color		Translucent deep blue						
Description		Translucent deep blue; adorned with trails of turquoise. Globular in shape; the sides feature three opaque turquoise eyes with a central dot, and features a wide hole						
Condition		Intact; some dulling and pitting; with slight iridescent weathering						
Dimensions								
Width (cm)		---	Height (cm)		---	Thickness (cm)		----

Cat. No.	210				
Inv. No.	3815/2429				
Site, Year of Recovery	Ṭarṭūs/ Entry to Al Bassel Tomb				
Decoration	Six eyes placed irregularly around body,				
Color	black bead with white eyes, possibly a deep purple color but appearing black; the eyes are opaque white.				
Description	It has a slightly compressed spherical body with uneven edges surrounding a vertical, slightly off-center hole. Six eyes are irregularly positioned around the body.				
Condition	Intact; dulling and creamy weathering, with slight iridescence.				
Dimensions					
Width (cm)	---	Height (cm)	---	Thickness (cm)	----

Cat. No.	211				
Inv. No.	3832/2447				
Site, Year of Recovery	Ṭarṭūs/ Entry to Al Bassel Tomb				
Decoration	Double eye bead, four sets of double eyes				
Color	Turquoise				
Description	Stratified double eye bead featuring four sets of double eyes; it is opaque turquoise blue with eyes in opaque white, each containing a circle and a central dot in dark blue. The bead is cylindrical with rounded edges on both sides and a central hole.				
Condition	Intact; some dulling and creamy weathering, with slight iridescence.				
Dimensions					
Width (cm)	---	Height (cm)	---	Thickness (cm)	----

Cat. No.		212			
Inv. No.		681			
Site, Year of Recovery		Jable/ Jbeibat 2001/ Tomb A/ Chamber 3			
Decoration		----			
Color		Dark green			
Description		Undiscernible color appearing dark green; features trails in opaque yellow and white. The bead is globular and has a large hole drilled through it. Most are without any decorative colors; only one bead is adorned in zig-zag trails on its sides. Note: Five small glass beads			
Condition		Intact; some dulling and faint iridescent weathering			
Dimensions					
Width (cm)	---	Height (cm)	1.2	Thickness (cm)	----

Cat. No.		213			
Inv. No.		682			
Site, Year of Recovery		Jable/ Jbeibat 2001/ Tomb A/ Anti chamber			
Decoration		----			
Color		Translucent blue-green			
Description		Two beads with uneven surfaces: one is round, and the other is slightly square and elongated, both in dark blue without any decorations, but their manufacturing method is not precise. Note: Two beads, one rectangular and one round			
Condition		Intact; some dulling and faint iridescent weathering.			
Dimensions					
Width (cm)	---	Height (cm)	1.8-1.3	Thickness (cm)	----

Cat. No.	214
Inv. No.	684
Site, Year of Recovery	Jable/ Jbeibat 2001/ Tomb A/ Chamber 2
Decoration	----
Color	uncertain color appearing green
Description	Indeterminate color that appears green, with a slightly compressed spherical body featuring uneven edges, both containing a large central thread hole. Note: wide hole bead
Condition	Intact; pinprick bubbles; signs of dullness, pitting, and small weathering patches.
Dimensions	

Width (cm)	0.8	Height (cm)	---	Thickness (cm)	----
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Cat. No.	215
Inv. No.	700
Site, Year of Recovery	Jable/ Jbeibat 2001/ Tomb B
Decoration	----
Color	Three glass beads (red-black)
Description	Three flat-surfaced beads: one in reddish brown, the second in dark green, and the last, which is smaller, is also green. All are round. All part of the same group, there are four round metal pieces (which may not belong to the same necklace but are placed together). Note: Three glass beads (red-black) of an elongated, circular shape, separated by four bronze square beads
Condition	Intact; some dulling and faint iridescent weathering
Dimensions	
Width (cm)	---
Height (cm)	---
Thickness (cm)	----

Cat. No.	216
Inv. No.	702
Site, Year of Recovery	Jable/ Jbeibat 2001/ Tomb B
Decoration	----
Color	Various colors.
Description	A group of colored glass beads in various shapes and sizes
Condition	Severely eroded and in poor condition due to external factors.
Dimensions	
Width (cm)	---
Height (cm)	---
Thickness (cm)	----

Cat. No.	217
Inv. No.	722
Site, Year of Recovery	Jable/ Jbeibat 2001/ Tomb B
Decoration	----
Color	Translucent blue-green
Description	Very Small spherical bead; undecorated; very small pinhole.
Condition	Intact; but enamel-like weathering on the body.
Dimensions	
Width (cm)	0.6
Height (cm)	0.5
Thickness (cm)	----

Cat. No.	218
Inv. No.	796
Site, Year of Recovery	Jable/ Jbeibat 2002/ Tomb A/ Chamber 4
Decoration	----
Color	Dark black
Description	Black. Small spherical bead; no discernable features or decorations. Note: Noticeably wide hole through the center of the bead.
Condition	Intact; pinprick bubbles; signs of dulling, pitting, and small patches of weathering.
Dimensions	
Width (cm)	---
Height (cm)	---
Thickness (cm)	----

Cat. No.	219
Inv. No.	1618/3671
Site, Year of Recovery	Jable/ Jbeibat 2002/ Tomb A/ Chamber 4
Decoration	----

Color		Ten beads: nine are blue; while one is l, black with gray and yellow coloration			
Description		Ten beads: nine are small and blue; while one is larger, black with gray and yellow coloration. The larger bead features a wide hole through its center.			
Condition		Intact; minor dulling and pitting; with slight iridescent weathering			
Dimensions					
Width (cm)	---	Height (cm)	---	Thickness (cm)	----

Cat. No.	220				
Inv. No.	3816/2430				
Site, Year of Recovery	Ṭartūs/ Entry to Al Bassel Tomb				
Decoration	----				
Color	Dark blue, with yellow and white ripples				
Description	A small round bead, dark blue in color. Decorated on the outside with white and yellow ripples. It features an opening exactly at its center. Note: rounded bead with yellow and white ripples				
Condition	Intact; dulling and creamy weathering, with slight iridescence.				
Dimensions					
Width (cm)	---	Height (cm)	1.1	Thickness (cm)	----

Cat. No.		221			
Inv. No.		3824/2438			
Site, Year of Recovery		Ṭartūs/ Entry to Al Bassel Tomb			
Decoration		Flat shape			
Color		Dark blue, with yellow and white ripples			
Description		A flat, glass bead with yellow and white ripples. Note: Flat and not round			
Condition		Intact; dulling and creamy weathering, with slight iridescence.			
Dimensions					
Width (cm)	---	Height (cm)	1.9	Thickness (cm)	----

Cat. No.		222			
Inv. No.		3806/2319			
Site, Year of Recovery		Ṭartūs/ Entry to Al Bassel Tomb			
Decoration		Pyramid with a decent-sized hole through its center.			
Color		Dark green, with an engraving of a bird at the bottom			
Description		Transparent white bead; in the shape of a pyramid with a decent-sized hole through its center. Features a hollow, uneven base with an engraving of a bird at the bottom Note: Bead with a hole through the center			
Condition		Intact; pinprick bubbles; with some dulling, pitting, and small patches of weathering.			
Dimensions					
Width (cm)	---	Height (cm)	1.3	Thickness (cm)	----

Cat. No.	223				
Inv. No.	3813/2427				
Site, Year of Recovery	Ṭartūs/ Entry to Al Bassel Tomb				
Decoration	Pyramid with a considerably-sized hole through its center				
Color	white bead				
Description	Translucent white bead shaped like a pyramid with a considerably-sized hole through its center. Note: Clear white bead, has a hole in the middle				

Condition		Intact; features pinprick bubbles, along with dulling, pitting, and small areas of weathering			
Dimensions					
Width (cm)	---	Height (cm)	1.7	Thickness (cm)	----

Cat. No.	224				
Inv. No.	3814/2428				
Site, Year of Recovery	Ṭarṭūs/ Entry to Al Bassel Tomb				
Decoration	Pyramid with a narrow whole through its top.				
Color	Green bead				
Description	Green glass bead, shaped as a pyramid with a narrow whole through its top. Note: Clear green bead, has a hole in the middle.				
Condition	Intact; features pinprick bubbles, along with dulling, pitting, and small patches of weathering.				
Dimensions					
Width (cm)	---	Height (cm)	1.7	Thickness (cm)	----

Cat. No.		225			
Inv. No.		632/52			
Site, Year of Recovery		Jable/ Jbeibat 2000/ Chamber 8			
Decoration		Pyramid with a narrow whole through its top.			
Color		Clear white bead			
Description		Translucent, white, pyramidal bead with a wide hole through the middle. Note: Clear white bead, has a hole in the middle			
Condition		Intact; visible pinprick bubbles; some dulling, pitting, and small patches of weathering.			
Dimensions					
Width (cm)	---	Height (cm)	1.5	Thickness (cm)	----

Cat. No.	226				
Inv. No.	1684/1933				
Site, Year of Recovery	Ṭarṭūs/ khirbet el libne 1999				
Decoration	---				
Color	Translucent bluish				
Description	An elongated cylindrical bead with a longitudinal hole from top to bottom in a light blue color. Note: Small blue cylindrical bead, made of relatively thick glass				
Condition	Broken				
Dimensions					
Width (cm)	---	Height (cm)	---	Thickness (cm)	----

Cat. No.	227				
Inv. No.	701				
Site, Year of Recovery	Jable/ Jbeibat 2001/ Tomb B				
Decoration	Four beads, two square pyramidal glass, red and light blue Various sizes, shapes and colors				
Color	Colorful				
Description	Four pieces of different sizes and colors: the first is a small transparent turquoise blue with a wide opening; the second has no specific shape (neither square nor round) and is dark green, also with a wide opening; the third is a small dark brown piece with a small opening; and the last is pyramid-shaped and green.				

		Note: Four beads, two square pyramidal glass, red and light blue; of various sizes, shapes and colors			
Condition		Intact; some dulling and faint iridescent weathering.			
Dimensions					
Width (cm)	--	Height (cm)	--	Thickness (cm)	---

Cat. No.	228				
Inv. No.	1166				
Site, Year of Recovery	Latakia/ Hāydbā 1993, cemetery II.				
Decoration	A group of eight beads that are not bundled in a single necklace and are not known to be one necklace or more				
Color	Dark blue				
Description	A set consisting of eight beads, two in a rectangular shape and the rest round with elongated eyes. The second elongated bead (slightly inflated) consists of twenty rows of white eyes with blue inside, with a wide opening. The round beads are in a chain consisting of six blue beads with white eyes. Predominantly blue, featuring opaque white trails; cylindrical with rounded edges on both ends; drilled lengthwise, each end adorned with an opaque red trail, while the body showcases white trails arranged in a feather-like pattern. The beads come in various shapes, sizes, and designs, all have large threading holes. The eye decoration consists of a blob of opaque white topped with a thin blue circle encircling a prominent blue spot. Note: A group of eight beads that are not bundled in a single necklace and are not known to be one necklace or more.				
Condition	All but one of the beads are intact; the exception has a chip on one side of the threading hole, along with slight dulling and deep pitting on some of the central blue spots.				
Dimensions					
Width (cm)	--	Height (cm)	--	Thickness (cm)	---

Cat. No.	229				
Inv. No.	729				
Site, Year of Recovery	Jable/ Jbeibat 2001/ Tomb H/ Anti chamber				
Decoration	Six beads of different sizes and colors				
Color	Dark blue and turquoise blue.				
Description	Two elongated, translucent bluish-green beads. A polyhedron-shaped bead comprising six squares and eight triangles; pierced longitudinally. Three translucent blue-green beads. A Very small spherical bead with no decoration and an extremely small hole; the last bead is entirely different than the rest. Note: Six beads of different sizes and colors				
Condition	Intact; pinprick bubbles; signs of dulling, pitting, and small patches of weathering.				
Dimensions					
Width (cm)	--	Height (cm)	--	Thickness (cm)	---

Cat. No.	230				
Inv. No.	4342/4349				
Site, Year of Recovery	Ṭarṭūs/ different locations				
Decoration	---				
Color	The beads are varied in shape, color, and size				
Description	A large collection of beads featuring 76 glass beads. The beads do not seem to belong to the same necklace. Possibly recovered from				

		a number of different locations and grouped together under one museum name.			
Condition		Intact; some dulling and creamy white weathering.			
Dimensions					
Width (cm)	--	Height (cm)	--	Thickness (cm)	---

Cat. No.	231				
Inv. No.	5493				
Site, Year of Recovery	Latakia/ al-lathqiyya Cemeteries 1986				
Decoration	---				
Color	The beads are varied in shape, color, and size				
Description	A large collection of beads featuring 24 glass beads. The beads do not seem to belong to the same necklace. Possibly recovered from a number of different locations and grouped together under one museum name.				
Condition	Intact; some dulling and creamy white weathering.				
Dimensions					
Width (cm)	--	Height (cm)	--	Thickness (cm)	---

Cat. No.		232			
Inv. No.		1980/3311			
Site, Year of Recovery		Ṭarṭūs/ Ḥuṣn Suleiman			
Decoration		----			
Color		Translucent yellowish			
Description		A translucent green-yellow glass hoop with a circular profile and a round finger opening; the slightly broader, flattened-oval bezel adorned with a protruding hemispherical knob. Made from a rod that shows a seam across the bezel.			
Condition		Intact; slight dulling and pitting.			
Dimensions					
Width (cm)	2	Height (cm)	--	Thickness (cm)	0.2

Cat. No.		233			
Inv. No.		703			
Site, Year of Recovery		Jable/ Jbeibat 2001/ Tomb B			
Decoration		Various sizes, shapes and colors. Might have been used as pieces in a game.			
Color		Transparant			
Description		Lens-shaped oval gems made out of translucent pale green, blown glass. Possibly ring stone insets that fit approximately into the concave face of the rings with the convex side facing outward.			
Condition		The gems are intact, feature numerous bubbles, and are covered in pitting and brilliant iridescence.			
Dimensions					
Width (cm)	--	Height (cm)	--	Thickness (cm)	---

Cat. No.	234				
Inv. No.	1253/62				
Site, Year of Recovery	Latakia/ al-Māliyya Cemetery 2005				
Decoration	16 pieces of raw glass of different sizes and shapes.				
Color	Transparant bluish- greenish				
Description	Lens-shaped oval gems made from translucent pale green, blown glass. Possibly ring insets that fit approximately into the concave face of rings with the convex side facing outward.				

Condition		The gems are intact, feature many bubbles, and are covered with pitting and brilliant iridescence			
Dimensions					
Width (cm)	--	Height (cm)	--	Thickness (cm)	---

Cat. No.	235				
Inv. No.	5462/67				
Site, Year of Recovery	Latakia/ al-shīkh dāhir 1994				
Rim	-----				
Base	-----				
Decoration	No Decoration				
Color	Greenish				
Description	Greenish color, with a solid cylindrical rod, slightly thick at both ends into small knobs. Note: Slender neck; broad; wrapped shaft tapering into a cylindrical shape with a pointed end. Many comparable artefacts of this form were recovered from sites in Turkey and Cyprus. No reliable function for these objects is found, but may have been used as applicators				
Condition	Intact, but with enamel-like weathering on the body				
Dimensions					
Width (cm)	0.7	Height (cm)	13.3	Thickness (cm)	---

Cat. No.	236				
Inv. No.	5494				
Site, Year of Recovery	Qābir al-Ŷaisawiyya, 1994				
Rim	Solid-pointed base				
Base	Unworked rim; no pontil technique				
Decoration	No Decoration				
Color	Translucent pale blue-green.				
Description	The rim is thickened, rounded, and vertical with an inner lip; the straight sides expand slightly downward before turning in at a sharp angle to the bottom, which features a pointed kick at the center. Note: Slightly concave bottom with an off-centre pontil mark				
Condition	Intact, but with a break and a small section missing from the rim; features patches of enamel-like weathering.				
Dimensions					
Width (cm)	6.3	Height (cm)	5.6	Thickness (cm)	0.3