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*Staklo staroga vijeka  
iz Muzeja Mimara*

*Glass of Antiquity  
from the Mimara Museum*

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## Predgovor

Izložba „Staklo staroga vijeka iz Muzeja Mimara“ otvorena je 4. svibnja 2023. na 14. godišnjicu obilježavanja otvaranja MAS-a i predstavlja nastavak uspješne suradnje naših dvaju muzeja. Zadarski se muzej od prvih dana djelovanja predstavio kao istinska riznica preboga baštine staklenih uradaka koji bijahu dijelom kulture življenja davnih stoljeća na tlu ladera i okolnih mjesta. Muzej se, i u tome je također iskličan značaj njegova djelovanja, prezentiranjem bogatog fundusa kroz najsuvremenije odrednice muzejske djelatnosti pokazao od prvog dana živim izvorom svekolikih spoznaja o složenosti staklarstva (tvorbe staklene tvari, oblikovanja i urešavanja staklenih predmeta, višeznačja njihove uporabe). Njegova djelatnost impozantna je – bilo da se radi o stalnom postavu, izložbama u njegovim prostorima, gostovanjima fundusa na izložbama van Zadra, sudjelovanjima na skupnim izložbama, radu staklarskih radionica, pedagoškoj radionici i predavanjima o bujnoj međumuzejskoj djelatnosti – sve su to sjajni segmenti djelovanja Muzeja antičkog stakla u Zadru.

Spremnost svih djelatnika MAS-a na kolegijalnu, hvalevrijednu susretljivost i suradnju posebice je došla do izražaja u godinama nakon

## Foreword

The exhibition “Glass of Antiquity from the Mimara Museum” was opened on May 4, 2023, on the 14th anniversary of the opening of the Museum of Ancient Glass, and it represents a continuation of the successful cooperation between our two museums. From its first days, the Zadar Museum presented itself as a true treasure trove of rich heritage of glass artifacts that were part of the culture of living of centuries long gone in the area of lader and the surrounding places. From the first day, the museum has proved to be a living source of comprehensive knowledge about the complexity of glassmaking (glass formation, shaping and decorating glass objects, multiple meanings of their use), by presenting a rich collection through the most modern determinants of museum work which is another illustration of its significance. Its activity is impressive - whether it relates to the permanent exhibition, exhibitions in its premises, visiting exhibitions outside Zadar, participation in group exhibitions; organization of glass workshops; educational workshops and lectures, lively inter-museum activity - these are all outstanding segments of work of the Museum of Ancient Glass in Zadar.

The willingness of all the MAS employees for collegial, commendable solidarity and cooperation came to the fore especially in the years after the



potresa koji je pogodio Zagreb 22. ožujka 2020. Muzej Mimara teško je oštećen, oštećena su i neka od djela; neizvjesnost je ispunila svakidašnjicu i u dubokoj strepnji zatvorena su za javnost vrata Muzeja Mimara. Kolege iz zadarskog muzeja pružili su u tim trenucima nezaboravnu pomoć – oštećeni predmeti iz zbirke stakla preneseni su u Zadar i restaurirani u muzejskoj radionici.\*

Djelatnici Muzeja Mimara, nedaćama usprkos, nakon potresa su u kontinuitetu nastavili s radom – obrađuju se zbirke i publiciraju radovi, radi se kontinuirano na zaštiti i pohrani fundusa, intenzivirali smo u novoj situaciji našu prezentaciju na web stranici i Facebooku, Instagramu, pokrenut je blog itd. Priredili smo brojne značajne izložbe (dakako, u virtualnom obliku). I u tom važnom segmentu kolege iz MAS-a rado su se odazvali i potvrdili suradnju te je prezentirana izložba „Ljudi od stakla – Pregled umjetnika i izložbi suvremenog umjetničkog stakla u Muzeju antičkog stakla u Zadru od 2009. do 2021.“\*\*

Kako bi zadarskoj publici približili kako povijest Muzeja Mimara tako i teške trenutke kroz koje je prošao kroz protekle tri godine, ovom prigodom prezentirana je i izložba „Uspomene za budućnost ... o 35. obljetnici djelovanja Muzeja Mimara“. Izložba nas putem fotografija i arhivskih materijala prikazanih na eksplikativnim panoima vodi kroz sve navedene faze i uvodi u gusti preplet prošlosti, obnove i najava događanja kao potvrde sigurne budućnosti. Upravo o toj budućnosti govore ove dvije izložbe proživljujući se s ovim sjajnim prostorom, otvorenim stalno novim percepcijama posjetilaca i budućnosti prema kojoj sigurnim stazama idu zadarski i zagrebački muzej.

earthquake that hit Zagreb on March 22, 2020. The Mimara Museum was badly damaged, some of the works were also damaged; uncertainty filled everyday life and the doors of the Mimara Museum were apprehensively closed to the public. Colleagues from the Zadar museum provided much-needed help in those moments - damaged objects from the glass collection were transported to Zadar and restored in the museum workshop.\*

The staff of the Mimara Museum, despite the difficulties, continued to work after the earthquake. Work on the collections never stopped, papers were published; attention was paid to the protection and storage of the holdings. In the new situation, we intensified our presence on the website and FB, Instagram, a blog was launched, etc. We organized numerous noteworthy exhibitions (of course, in virtual form). In this important segment, colleagues from MAS were happy to respond and confirm cooperation, presenting the exhibition “Glass People - Overview of Artists and Exhibitions of Contemporary Art Glass in the Museum of Ancient Glass in Zadar from 2009 to 2021.”\*\*

In order to give an opportunity to the audience in Zadar to learn more both about the history of the Mimara Museum and the difficult moments it went through over the past 3 years, the exhibition “Memories for the future ... on the 35th anniversary of the Mimara Museum” was presented on this occasion. The exhibition, through photographs and archival materials displayed on explanatory panels, leads us through all the mentioned stages and introduces us to a dense interweaving of the past, renovations and announcements of events as a confirmation of a safe future. It is precisely this future that these two exhibitions present, intertwining with this magnificent space, open to constantly new perceptions of visitors and the future towards which the museums in Zadar and Zagreb are taking safe paths.

\* Kolega Šime Perović, konzervator-restaurator savjetnik i kustos u MAS Zadar, restaurirao je u potresu oštećene predmete prezentirane na ovoj izložbi (izložak br. 24 i izložak br. 67).

\*\* Virtualna izložba prezentirana je u razdoblju od 15. 11. 2021. – 15. 3. 2023. Autorica izložbe je kolegica Jadranka Belevski, muzejska savjetnica dokumentaristica u MAS Zadar.

\* Colleague Šime Perović, advisor conservator-restorer and curator at MAS Zadar, restored the earthquake-damaged items presented at this exhibition (exhibit no. 24 and exhibit no. 67).

\*\* The virtual exhibition was presented in the period from November 15, 2021 to March 15, 2023. The author of the exhibition is a colleague, Jadranka Belevski, museum advisor documentalist in MAS Zadar.



# Uvod

Zbirka stakla Muzeja Mimara, na temelju 600 cjelovitih eksponata i skupine od 450 fragmenata, slijedi razvojne faze staklarstva, upozorava na zadivljujuća dostignuća i predstavlja egzaktno izvorište saznanja o svim slojevima staklarstva – njegove povijesti, tehnologije, estetskih i stilskih obrata, sagledavanja različitosti oblika, prožimanju utjecaja pojedinih zemalja u vremenskom luku od II. tisućljeća pr. Kr. do kraja XIX. stoljeća itd. Zbirka stakla starog vijeka Muzeja Mimara zrcali upravo tu jedinstvenu sveobuhvatnost muzejske zbirke, a za ovu prezentaciju odabranih 70 predmeta potvrđuju sve njezine odlike istinskog pojmovnika starovjekovnog staklarstva. Egipatski balzamarij i perla izrađeni od staklene paste omatanjem oko zemljane jezgre iz II. tisućljeća pr. Kr., i grčki amforiski i enohoa iz V. i IV. st. svjedoče o punom zamahu grčkog staklarstva. Aleksandrijske zdjelice izrađene u I. st. svjedoče o usavršavanju stakla koje, dodavanjem probiranih kemijskih tvari, postaje sve prozirnije i postaje značajnom tvari izradbe luksuznih, još uvijek malobrojnih predmeta. Sirijske posude, šalice te djela nastala u Italiji i Porajnju u razdoblju od I. do IV. st. govore, pak, o istinskom bujanju staklarstva i njegovu zaživljavanju u svim segmentima života (i zagrobnog smiraja!) Rimskog Carstva.

# Introduction

The glass collection of the Mimara Museum, based on 600 complete exhibits and a group of 450 fragments, follows the development stages of glassmaking, points to amazing achievements and presents an exact source of knowledge about all segments of glassmaking - its history, technology, aesthetic and stylistic twists, observing the diversity of forms, permeating influences of individual countries in the time span from the 2nd millennium BC until the end of the 19th century, etc. The Mimara Museum's collection of ancient glass mirrors exactly this unique comprehensiveness of the museum collection, and the 70 artifacts selected for this presentation confirm all its features as a true glossary of ancient glassmaking. An Egyptian balsamarium and a bead made of glass paste by wrapping around a clay core dating to the 2nd millennium BC; Greek amphoriskoi and oenochae from the 5th and 4th centuries, testify to the full momentum of Greek glassmaking. Alexandrian cups made in the 1st century testify to perfecting of glass, which, by adding selected chemical substances, becomes more transparent and turns into an important material in the production of luxurious, still rare objects. Syrian vessels, cups and works created in Italy and the Rhineland in the period from the 1st to the 4th century on the other hand, speak of the true flourishing of glassmaking and its inclusion in all segments of life (and afterlife!) of the Roman Empire.

## Egipat, Grčka, Aleksandrija II. tisućljeće pr. Kr. – IV. st. po Kr.

## Egypt, Greece, Alexandria 2nd millennium BC – 4th c.AD

Počeci tvorbe i uporabe staklene materije sežu u daleko III. tisućljeće pr. Kr., kada se ona pojavila na području Mezopotamije i Egipta u tek malobrojnim oblicima i izražajima. Uvriježeno je mišljenje stručnjaka kako je baš Egipat postao već u II. tisućljeću pr. Kr. najznačajnijim područjem izrade predmeta od guste, pastozne neprozirne staklene smjese. S pravom se može reći kako će od II. tisućljeća pr. Kr. pa sve do pojave aleksandrijskih radionica na kraju IV. st. pr. Kr. posvemašnja ujednačenost oblića i izradbenih tehnika koje su zamijenile dotadašnju izradu predmeta od gorskog kristala i opsidijana odlikovati produkciju stakla kako u Egiptu tako i diljem Sredozemlja. Staklo je kroz sve to vrijeme smatrano, posebice u Egiptu, izuzetno vrijednim materijalom, gotovo ravnopravnim s dragim i poludragim kamenjem i bilo je dostupno samo faraonima i najvišim slojevima svećenika i velikodostojnika. Stvarano u malim količinama, upotrebljavano je za izradu amuleta, privjesaka, perla i, počevši od II. tisućljeća pr. Kr., malenih posudica – balzamarija – u kojima su se čuvali mirisi, ulja i pomasti. K tomu, staklo je upotrebljavano za izradu aplika i pločica koje su umetane u namještaj, drvo i kamene ploče. Staklo se dobivalo taljenjem i stapanjem natrijeva karbonata (sode), kalcijeva oksida (vapna) i silicijeva dioksida (kremenog pijeska) u gustu, pastoznu, mekanu masu kojoj se boja određivala dodavanjem metalnih oksida – kobalt se dodavao za plavu boju, bakar

The beginnings of creation and use of glass date back to the 2nd millennium BC, when it appeared in Mesopotamia and Egypt in only few forms and expressions. It is a longstanding opinion of experts that Egypt became the most important area for the production of objects made from thick, opaque glass paste as early as the 2nd millennium BC. It can be rightly said that the complete uniformity of appearance and production techniques that replaced previous manufacture of objects from rock crystal and obsidian characterized the production of glass both in Egypt and throughout the Mediterranean from the 2nd millennium BC until the appearance of the Alexandrian workshops in the 4th century BC. Throughout that time, glass was considered, especially in Egypt, an extremely valuable material, almost equal to precious and semi-precious stones, and was available only to pharaohs and high-ranking priests and dignitaries. Made in small quantities, it was used to make amulets, pendants, beads and, starting from the 2nd millennium BC, small containers - balsamaria - in which scents, oils and ointments were kept. In addition, glass was used to make appliques and tiles that were inlaid into furniture, wood and stone slabs. Glass was obtained by melting and fusing sodium carbonate (soda), calcium oxide (lime) and silicon dioxide (silica sand) into a thick, pasty, soft mass whose color was determined by adding metal oxides - (cobalt was added for blue, copper for turquoise, manganese for purple, silver for yellow color).



Balzamarij, XV. st. pr. Kr., Muzej Mimara  
Balsamarium, XV. century BC, Mimara Museum

za tirkiznu, mangan za ljubičastu boju, srebro za žutu boju.

Primjenjuju se dvije temeljne tehnike: a) tiještenje staklene smjese u kalup za izradu amuleta i sličnih predmeta i b) omatanje staklene smjese oko zemljane jezgre, koja će dominirati sve do I. st. pr. Kr., za izradu male-nih balzamarija koji predstavljaju najznačajnije i najbrojnije staklene izrađevine. Malena tijela urešavana su paralelnim nitima stakla posve utisnutim u površinu oblikujući motiv „arkada“, „pera“, „povijene girlande“ i motiv valovite linije. Alabastru, amforiskima, vrčici-enohe, perle itd. bijahu, dakle, proizvodima staklarskih radionica kao što nam pokazuje i skupina predmeta navedene tipologije nastalih u Egiptu u vremenu od VI. do III. st. pr. Kr. (izložak br. I – izložak br. 6).



Amforisk, XIV. st. pr. Kr., Muzej Mimara  
Amphoriskos, XIV. century BC, Mimara Museum

Two basic techniques were applied: a) pressing molten glass into a mold for making amulets and similar objects; b) wrapping molten glass around a clay core, which was dominant until the 1st century BC, for making small balsamaria as the most significant and numerous glass products. Their small bodies were decorated with parallel trails of glass pressed into the surface, forming the motif of arcades, feathers, bent garlands and the motif of wavy lines. Alabaster, amphoriskoi, oenochoe-jugs, beads, etc. were, therefore, products of glass workshops, as shown by the group of items of the mentioned typology created in Egypt in the time span from the 6th to 3rd century BC (exhibit no. 1 – exhibit no. 6).

On the other hand, the group of Greek products best exemplifies all the interweaving and fusion of the glass production of the time





Amforisk, V/IV. st. pr. Kr., Muzej Mimara  
Amphoriskos, V/IV. century BC, Mimara Museum



Enohoa, IV. st. pr. Kr., Muzej Mimara  
Oenochoe, IV. century BC, Mimara Museum

Skupina, pak, grčkih izrađevina ponajbolje opimjeruje svekoliku isprepletenost i stoljenost onovremene staklarske produkcije i istovjetnost oblića u svim radionicama Sredozemlja (izložak br. 7 – izložak br. 9).

Aleksandrija, osnovana 332. g. pr. Kr., pulsirajući centar svekolike helenističke kulture, bijaše i mjestom nastanka i pothvata staklara koji su u izradbi primarno luksuznih predmeta saželi i usavršili dotadašnja znanja i poznavanje oblikovnih mogućnosti staklene materije. Kontinuirano su, uporabom mangana, istraživali načine za poboljšanje i pročišćenje prozirnog stakla zadržavši, međutim, dominaciju plave i blijedozelene boje (izložak br. 13).

Istančan osjećaj za sklad boja, maštovitost motiva i sve to sjedinjeno, kroz savršeno tehnološko umijeće, u besprijekornu cjelinu dosegnut će potpuni izražaj u tvorbi predmeta tehnikom

and the uniform appearance of artifacts from all Mediterranean workshops (exhibit no. 7 – exhibit no. 9).

Alexandria, founded in 332 BC, a vibrant center of the Hellenistic culture, was also the place of origin and endeavors of glassmakers who, in the production of primarily luxury items, summarized and perfected the previous experience and knowledge of the modeling possibilities of glass. They used manganese to explore the ways to improve and purify transparent glass, maintaining, however, the predominance of blue and pale green colors (exhibit no. 13).

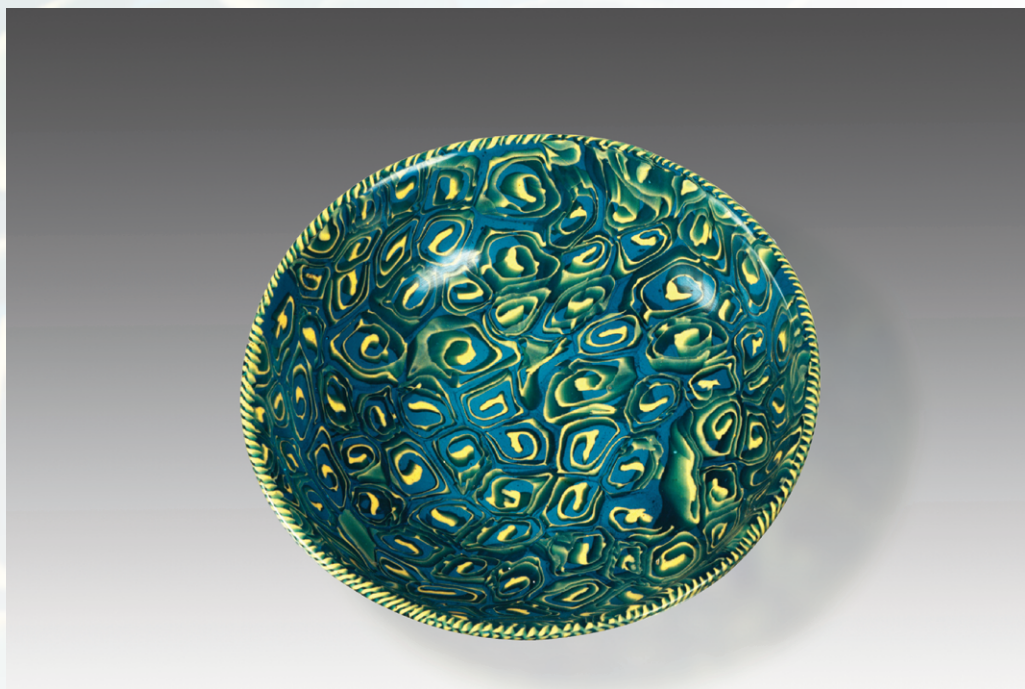
An exquisite sense of harmony of colors, imaginative motifs and all of that combined, through perfect technological skills, into a flawless whole will reach full expression in the creation of objects using the mosaic glass technique or the *millefiori* ("thousand flowers") technique

mozaičkog stakla ili (u renesansi ustanovljenim i do danas uvriježenim nazivom) tehnikom „tisuću cvjetova“. U najranijim izrađevinama slijedi se egipatska tehnika slaganja višestраниh ili ovalnih pločica raznobojnog stakla na glinenoj podlozi, koje se potom grijanjem spajalo u pločice raznolikih motiva koje su umetane u druge materijale ili su, pak, oblikovane u perle, razne aplikacije itd. Takve su pločice umetane i u namještaj, u stijenke sarkofaga te u vrata svetišta. U izradi zdjelica, šalica, tanjurića u razdoblju od I. st. pr. Kr. do II. st. po Kr. primjenjivana je složenija i tim minucioznija tehnika što pokazuje i izložena grupa predmeta (izložak br. 10 – izložak br. 12).

Aleksandrijsko će staklarstvo svoj neprijeporan značaj zadržati i u vremenu nakon 30. g. pr. Kr., kada Egipat postaje tek jednom od provincija Rimskog Carstva. Staklene su se izrađevine izvozile ne samo diljem Sredozemlja već su dospjele i do Engleske i daleke Skandinavije.<sup>1</sup>

(name coined in the Renaissance and still widely accepted). The earliest works follow the Egyptian technique of stacking polygonal or oval tiles of polychrome glass on a clay base, which were then heated to form tiles with various motifs that were inserted into other materials or were shaped into beads, various appliques, etc. Such tiles were also inlaid in furniture, sarcophagus sides and sanctuary doors. A more complex and thus more meticulous technique was applied in the production of small bowls, cups and saucers in the period from the 1st century BC to 2nd century AD which is also shown by the exhibited group of objects (exhibit no. 10 - exhibit no. 12).

Alexandrian glassmaking will retain its undeniable importance in the period after 30 BC, when Egypt became just one of the provinces of the Roman Empire. Glass products were exported not only throughout the Mediterranean, but also reached England and distant Scandinavia.<sup>1</sup>



Mozaična zdjelica, I. st. pr. Kr., Muzej Mimara / Mosaic bowl, 1st century BC, Mimara Museum

# Staklo Rimskog Carstva I. st. pr. Kr. – IV. st. po Kr.

Pronalazak puhaljke za staklo u I. st. pr. Kr. u Siriji (koja je dijelom Rimskog Carstva postala 64. g. pr. Kr.) nedvojbeno je prijelomni trenutak u povijesti staklarstva koji je označio početak nepregledne produkcije predmeta. Prozirno, sodno staklo, nazvano još i „mekanim“ zbog dužeg zadržavanja u rastaljenom stanju te tim podatnije za oblikovanje, najčešće svjetložućkasto i svjetlozelenkasto tonirano, bijaše osnovna materija od koje su izrađeni nebrojeni predmeti kojima će kružan stakleni mjehur biti polazištem. Rijeka Belus, bogata pijeskom, opskrbljivala je radionice primarnim sastojcima visoke kvalitete te ne čudi kako su u Siriji i okolnim područjima tijekom nekoliko sljedećih stoljeća nastali tako raznoliki predmeti mnogostrane namjene.

Sam proces izrade iziskivao je savršenu preciznost i vještinu majstora. Grumen rastaljenog stakla uzimao se na vršak puhaljke te je potom uz stalnu vrtnju i „zaglađivanje“ po tvrdoj podlozi upuhivanjem pretvaran u kružni mjehur. Nakon zagrijavanja dodavane su, prema potrebi, kliještima i drugim alatom ručke, podnožja ili je, pak, aplicirana željena dekoracija (najčešće u obliku raznoliko postavljenih tankih staklenih niti). Uz izradu predmeta od slobodno puhanog stakla, u Siriji se razvila i tehnika puhanja stakla u dvodijelne i trodijelne reljefno oblikovane, često poligonalne kalupe od zemlje i gline koji su se mogli više puta upotrijebiti. U Sidonu su od I. do III. st. izrađivani brojni predmeti, među kojima se

# Glass of the Roman Empire 1st c. BC – 4th c. AD

The invention of the blowpipe in the 1st century BC in Syria (which became part of the Roman Empire in 64 BC) was undoubtedly a turning point in the history of glassmaking that marked the beginning of massive production of objects. Transparent, soda glass, also called “soft” because it stays in the molten state longer and is all the more malleable, usually tinted light yellow and light green, was the basic material from which countless objects were made, which originated from a round glass bubble. The Belus river, rich in sand, supplied the workshops with primary ingredients of high quality, and it is not surprising that such a variety of multipurpose objects were created in Syria and the surrounding areas over the next few centuries.

The manufacturing process itself required perfect precision and skill of the craftsman. A wad of molten glass was taken to the tip of the blowpipe and then, with constant rotation and “smoothing” on a hard surface, it was blown into a circular bubble. After heating, handles and bases were added, as needed, with pliers and other tools, or the desired decoration was applied (most often in the form of variously placed thin glass trails). In addition to the production of free-blown glass objects, the technique of mold-blowing was developed in Syria. It involved blowing glass into two- and three-part relief-shaped, often polygonal molds made of earth and clay that could be used several times. In Sidon, from the 1st to 3rd century, numerous objects were made, with particularly prominent specific group



ističe specifična oblikovna skupina poligonalnih bočica i vrčica bogato reljefno obrađenih stijenki. Uz opisane predmete toj sidonskoj grupi pripadaju i bočice u obliku voća (najčešće datulja), boce i vrčevi u likovima životinja te u obliku glava izražajnih crta lica, a njihova izrada nastavit će se sve do V. st. Boce u obliku grozda ili one kojih su oplošja prekrivena reljefnim mrežama bit će također česta izrađevina sirijskih radionica (izložak br. 16 – izložak br. 19).

Množina tipova predmeta i njihovih oblika rast će tijekom II. i III. st. te će se boce, vrčevi, šalice postupno mijenjati kako na oblikovnoj ljestvi tako i u dekorativnim elementima, nastavljajući se u sve razrađenijoj izražajnosti i tijekom IV. st. Uz reljefne kalupe, aplicirane niti stakla (najčešće zelene ili plave boje) pokatkad će biti tek uresnim detaljem na oplošju ili vratu predmeta spiralno ih obavijajući, da bi kod vrčeva tijekom II. i III. st., primjerice, evoluirali u složene ručke (izložak br. 14 – izložak br. 37).

Sirijski su staklari podizali radionice diljem Rimskog Carstva – u Italiji, Galiji, Hispaniji te uz rijeku Rajnu, a te će radionice stoljećima nastaviti sa svojim djelovanjem (čak i za vrijeme Karolinga).<sup>2</sup>

Snažno preplitanje trgovine, utjecaja, migracije majstora bijahu odlikom žive i nezaustavljive staklarske produkcije koja se širila Sredozemljem. Ne čudi stoga što su u tom ozračju novi alat i tehnika stigli na italsko tlo već prije kraja I. st. pr. Kr. Kampanija i južna Italija već su u istom stoljeću imale staklarska središta, no najznačajnija su bila Pompeji i sam Rim. Na sjeveru je, praćeci u cijelosti intenzivan razvoj staklarstva Rima i okoline, glavno staklarsko središte bila Akvileja, koja je uz bogatu produkciju bila i snažan centar uvoza stakla iz istočnih provincija Rimskog Carstva. Stoga će u I. i II. st. tamošnji majstori u temelje snažnog procvata ugraditi mnogolika iskustva proizvodnje in situ i prenesenih znanja.

Nova će se znanja veoma brzo proširiti diljem rimskih provincija, te će već u 2. polovici I. st. niknuti radionice u Hispaniji, Galiji, Panoniji, a



Bočica u obliku dvije stopljene glave, II. st., Muzej Mimara  
Bottle in the form of two fused heads, II. century, Mimara Museum

of polygonal bottles and jugs with walls richly decorated in relief. In addition to the objects described, this Sidonian group also includes bottles in the shape of fruit (most often dates), bottles and jugs in the shape of animals or heads with expressive facial features, and their production will continue until the 5th century. Bottles in the shape of a bunch of grapes or specimens covered with relief nets will also be a frequent product of Syrian workshops. (exhibit no. 16 – exhibit no. 19).

The multitude of artifact types and their forms will grow in the 2nd and 3rd centuries, and bottles, jugs, and cups will gradually change both regarding form and decorative elements, continuing to develop during the 4th century. In addition to relief molds, applied glass trails (most often green or blue) will sometimes be just an incised detail on the surface or neck of the object, wrapping them



Bočica u obliku grozda, II.-III. st., Muzej Mimara  
 Bottle in the shape of a cluster, II.-III. century, Mimara Museum

utjecaji Akvileje slijevat će se niz jadransku obalu u centrima Istre i Dalmacije, ispunjajući novom materijom ljudsku svakodnevicu.

Staklari italskog područja te oni u samome Rimu učinit će sve kako bi usavršili postojeća znanja, poboljšali kakvoću stakla (radeći na pročišćavanju smjese) i dopunili znanu ljestvicu boja i oblika. Blago zelenkasto ili smečkasto tonirana smjesa bit će česta pri izradi predmeta, no uskoro im se pridružuju i prozirna stakla u plavoj, ljubičastoj, crvenoj boji itd. Unguentariji, bočice, boce, posude, zdjele, tanjuri, čaše, urne, uresi (narukvice, prstenje, ogrlice itd.) – tesserae – pločice kojima su izrađivani mozaici – sve su to izrađevine italskih radionica koje su već u II. st., a posebice u III. i IV. st. dostigle istinske razradbene vrhunce, kako to svjedoče i na ovoj izložbi prezentirani uradci (izložak br. 38 – izložak br. 61).

spirally, evolving, for example, into complex handles on jugs in the 2nd and 3rd centuries (exhibit no. 14 – exhibit no. 37).

Syrian glassmakers started workshops throughout the Roman Empire - in Italy, Gaul, Hispania and along the Rhine river, and these workshops would continue their activities for centuries (even during the Carolingian period).<sup>2</sup>

Intense interweaving of trade, influences, and migration of master glassmakers characterized lively and unstoppable glass production that spread across the Mediterranean. It is not surprising, therefore, that new tools and techniques reached Italian area before the end of the 1st century BC. Campania and southern Italy already had glassmaking centers in the same century, but the most important centers of glassmaking were Pompeii and Rome. In the north, following the intensive development of glassmaking in Rome and its surroundings, the main glassmaking center was Aquileia, which, in addition to its rich production, was also a strong center for the import of glass from the eastern provinces of the Roman Empire. Therefore, in the 1st and 2nd centuries, the Aquileian masters incorporated experiences of the local production and transferred knowledge into the foundations of great progress in this field.

New knowledge spread very quickly throughout the Roman provinces, and already in the second half of the 1st century, workshops emerged in Hispania, Gaul, Pannonia, and the influences of Aquileia flowed down the Adriatic coast in the centers of Istria and Dalmatia, enriching everyday life with a new material.

The glassmakers from the Italian region and those in Rome did everything to enrich the existing knowledge, improve the quality of glass (working on purifying the glass batch), and supplement the known scale of colors and shapes. A slightly greenish or brownish tinted batch was common in glass production, but soon there was transparent glass in blue, purple, red and other nuances. Unguentaria, flasks, bottles, vessels,

Tijekom III. i IV. st. ispreplitat će se najraznorodnija staklarska ostvarenja i u tom će razdoblju kako u Rimu i Italiji tako i diljem Rimskog Carstva biti dostignuti neprijeporni izvedbeni uzleti. Radionice uz Rajnu, posebice one u Kölnu i njegovoj blizini, bit će nezaobilaznim centrima dugostoljetne staklarske povijesti (izložak br. 62 – izložak br. 70).<sup>3</sup>

Iz svih navedenih odlika, tako zorno objedinjenih u predmetima iz fundusa MAS-a i na ovoj izložbi prezentiranim izlošcima iz Muzeja Mimara, jasnim i logičnim pokazuju se razlozi zbog kojih je kroz naredna stoljeća, i nakon razdoblja posustajanja u V. i VI. st., tkan kreativan, majstorstvom vođen i znanjem određen zadivljujuć svijet stakla kojemu su u temelju zauvijek ostala vrhunska ostvarenja starog vijeka.



Boca, IV. st., Muzej Mimara  
Bottle, IV. century, Mimara Museum

bowls, plates, glasses, urns, ornaments (bracelets, rings, necklaces, etc.) - *tesserae* - tiles used to make mosaics - all these are products of Italian workshops that reached the true pinnacle of development already in the 2nd century, and especially in the 3rd and 4th centuries, as evidenced by the works presented at this exhibition (exhibit no. 38 – exhibit no. 61).

In the 3rd and 4th centuries, the most diverse glass creations were made, and indisputable peaks of performance were reached in that period both in Rome and Italy, as well as throughout the Roman Empire. The workshops along the Rhine, especially those in Cologne and its vicinity, were prominent centers of centuries-old glass-making history (exhibit no. 62–exhibit no. 70).<sup>3</sup>

From all the mentioned features, so vividly united in the artifacts from the collection of the Museum of Ancient Glass and the exhibits from the Mimara Museum presented at this exhibition, we recognize clear and logical reasons for weaving the creative and astonishing world of glass, guided by excellent craftsmanship and determined by knowledge, through the following centuries, after the period of stagnation in the 5th and 6th centuries. The supreme achievements of antiquity remain forever in the foundations of this glass world.





Zdjelica, III.-IV. st., Muzej Mimara / Small bowl, III.-IV. century, Mimara Museum

#### Bilješke / Endnotes:

1. Vidjeti / See: **Bibl.:** *Katalog Muzeja Mimara* 1987., 272–275, 443–445; *Vodič po zbirkama Muzeja Mimara* 1988., 10–12; Ratković-Bukovčan 1990., 195; Ratković Bukovčan 2001.; Ratković Bukovčan 2004., 15–23; 43–45; 68–77; *Vodič Muzeja Mimara* 2003., 17–19; *Transparentna ljepota* 2013., 20–21, 24–25, 28; *Muzej Mimara: 30 godina djelovanja - 30 godina s vama* 2017., 99; *Ante Topić Mimara – donatorstvo kao sudbina* 2018., 48.  
**Lit.:** Kisa 1908., 9, 12, 28; Neuburg 1949., 12, fot. 15, 17, T. X, br. / no. 34, 16; Goldstein 1979., 14, 26–29, 40, 126, br. / no. 26 I, br. / no. 475.
2. Vidjeti / See: **Bibl.:** *Katalog Muzeja Mimara* 1987., 276–277, 445–446; *Vodič po zbirkama Muzeja Mimara* 1988., 12–13; *Vodič Muzeja Mimara* 2003., 20; Ratković Bukovčan 2004., 23–29, 82–95; *Transparentna ljepota* 2013., 75, 94, 97.  
**Lit.:** Kisa 1908., 9, 12, 28; Neuburg 1949., 24, 28–29; Whitehouse 1997., 67, 109; Whitehouse 2001., 15–16, 22–23, 36–37, 182–184; Fadić, Štefanac 2017., 136, 142, 145–149; Kunina 1997., 279, 323, 332, 335.
3. Vidjeti / See: **Bibl.:** *Katalog Muzeja Mimara* 1987., 278, 446–448; *Vodič po zbirkama Muzeja Mimara* 1988., 14–15; *Vodič Muzeja Mimara* 2003., 20–23; Ratković Bukovčan 2004., 30–37, 96–114; *Transparentna ljepota* 2013., 38–69, 100, 103; *Muzej Mimara: 30 godina djelovanja – 30 godina s vama* 2017, 100.  
**Lit.:** Calvi 1969., 15–21; Whitehouse 2001., 52, 67, 70, 85–88, 147–160; Saldern 1974., 132; Falke 1940., 197–199; Fremersdorf 1939., 27; Klein 1999., 55.

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## IZLOŽBA / EXHIBITION

Staklo staroga vijeka iz Muzeja Mimara /  
*Glass of Antiquity from the Mimara Museum*

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