INTERREGIONAL CULTURAL CONTACTS REFLECTED IN MEDIEVAL GLASSWARE FROM TASHKENT AND THE FERGHANA VALLEY (9TH–12TH CENTURIES)

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Abstract. *This thesis examines interregional cultural contacts between the Tashkent oasis and the Ferghana Valley during the ninth–twelfth centuries through the analysis of medieval glassware. The source base consists of published glass finds from Binkat-Tashkent, Kanka, Banokat-Shahrukhiya, Kavardan, Tunkat, Akhsikent and Kuva, compared against archaeological and archaeometric evidence from Samarkand, Bukhara, Paykend and Nishapur. Typological, morphological, technological, comparative and historical-contextual methods are applied to vessel rims, necks, bodies, handles and bases, together with manufacturing techniques, surface treatment, colour and decoration. Similarities are not treated automatically as proof of direct importation but are interpreted in relation to several mechanisms: circulation of finished vessels, movement of raw or semi-finished glass, mobility of craftspeople, transfer of technical knowledge and local imitation. The results show that both regions shared common functional and morphological groups — bottles, flasks, carafes, bowls, cups and goblets — indicating participation in a common Central Asian glassmaking and consumption tradition. However, formal parallels alone cannot prove direct trade in finished vessels. The medieval glass economy is best explained as a decentralised, multi-centred system combining local and regional production, interurban exchange, selective importation, recycling and the transfer of craft knowledge. Chemical and isotopic analysis of stratified assemblages is required to determine the precise provenance of the glass.*

Keywords: *medieval glassware, Tashkent oasis, Ferghana Valley, interregional contacts, Silk Roads.*

INTRODUCTION

During the ninth–twelfth centuries the urban centres of the Tashkent oasis and the Ferghana Valley developed within an interconnected economic and cultural environment linking Transoxiana, Eastern Turkestan, Khurasan, Iran and other territories of the medieval Islamic world. Among the specialised urban crafts attested archaeologically — pottery, metalworking, textile production and glassmaking — glassware is a particularly informative source for technological development, everyday life, commercial exchange and cultural interaction (Mirzaakhmedov, 2011).

The chemical-technological study of Central Asian glass was founded by Abdurazakov, Bezborodov and Zadneprovsky (1963), who systematised finds from across the region and analysed their forms, production techniques and composition, establishing glassware as evidence of technological knowledge rather than only a household commodity.

Glass finds recorded at Binkat-Tashkent, Kanka-Kharashkat, Banokat-Shahrukhiya, Kabarna-Kavardan and Tunkat-Imlak demonstrate that the Tashkent oasis (historically Chach/Shash-Ilak) possessed a developed glassmaking tradition (Normurodov, 2025), with the Binkat-Tashkent assemblage, dated mainly to the ninth–eleventh centuries, forming the principal dated corpus (Mirzaakhmedov, Ilyasova & Adylov, 1999). In the Ferghana Valley, excavations at Akhsikent's citadel (Papakhristu & Akhrarov, 1981) and the medieval glass goblets of Kuva (Akhrarov, 1960) attest to comparable urban glass traditions.

Comparative synthesis places Tashkent alongside Bukhara, Paykend, Samarkand, Akhsikent and Kuva within a single Central Asian craft environment (Mirzaakhmedov, 2011; Baypakov et al., 2011). Recent archaeometric research reinforces this picture: chemical analysis of glass from Kafir Kala and Cholaktepa near Samarkand identified compositional links with the Ferghana Valley (Chinni et al., 2023), while isotopic study of plant-ash glass from Shadyakh-Nishapur revealed raw-material sources spanning the Tigris–Euphrates basin, Central Asia and Iran, supporting a decentralised model of production (Lü, Basafa & Henderson, 2023).

Nevertheless, typological similarity alone cannot prove the importation of finished vessels; comparable forms may equally result from shared functional needs, craftsperson mobility, technological borrowing or local imitation.

Despite valuable site-specific publications, the glass assemblages of the Tashkent oasis and the Ferghana Valley have not been examined together as evidence of interregional contact. This thesis therefore compares the functional categories, morphology, manufacturing techniques and decoration of glass from Binkat-Tashkent, Akhsikent, Kuva and related sites against comparanda from Samarkand, Bukhara, Paykend and Nishapur, treating medieval glassware as evidence for the circulation of products, technologies and craft knowledge across Central Asia.

MATERIALS AND METHODS

The study applies a comparative archaeological approach based on published assemblages, excavation reports, catalogues and archaeometric investigations. The unit of analysis is an individual vessel, diagnostic fragment or item of glassworking waste attributable to a defined site and chronological context. The principal corpus comprises the Binkat-Tashkent assemblage (ninth–eleventh centuries; Mirzaakhmedov, Ilyasova & Adylov, 1999), supplemented by material from Kanka, Banokat-Shahrukhiya, Kavardan and Tunkat (Normurodov, 2025), and, for the Ferghana Valley, the Akhsikent citadel glass (Papakhristu & Akhrarov, 1981) and the Kuva goblets (Akhrarov, 1960). Published material from Bukhara, Paykend and Samarkand serves as regional comparanda (Mirzaakhmedov, 2011), while archaeometric studies of glass from Kafir Kala, Cholaktepa and Nishapur provide methodological rather than direct compositional comparanda (Chinni et al., 2023; Lü, Basafa & Henderson, 2023).

Analysis proceeds in four stages: selection of published assemblages; typological–morphological classification; comparative analysis of manufacturing and decorative technique; and interpretation of similarities within the framework of interregional contact. Objects are classified functionally (tableware; storage and pouring vessels; cosmetic/pharmaceutical containers; lighting; architectural glass; ornaments; production waste) and described according to diagnostic elements — rim, neck, body, handle and base — since fragmentary vessels are usually represented by a single component.

Manufacturing traces considered include free- and mould-blowing, applied and tooled elements, pontil scars, cutting, engraving and applied trails. Colour and transparency are recorded but not used independently to infer provenance, since both are affected by raw materials, furnace conditions, recycling and corrosion.

No new chemical or isotopic analyses were undertaken; published archaeometric results (Chinni et al., 2023; Schibille, Lankton & Gratuze, 2022; Schibille et al., 2024; Lü, Basafa & Henderson, 2023; Henderson, Ma & Evans, 2020) are used to build an interpretative framework distinguishing formal similarity from geochemical provenance. Chronological attribution follows the dating given in excavation publications, prioritising stratified contexts over general stylistic dating. An interregional parallel is evaluated through five converging lines of evidence — chronological, morphological, technological, decorative and archaeometric — and is assigned high confidence only when at least three independent categories correspond without chronological contradiction. The principal limitation is the uneven quality and inconsistent terminology of the published documentation, and the absence, for most objects from Binkat-Tashkent, Akhsikent and Kuva, of chemical or isotopic analysis; conclusions on actual provenance therefore remain provisional.

RESULTS

Published evidence shows that medieval glassware was widely represented in both regions, although documentation is uneven: Tashkent offers a broader geographical and functional corpus, while Ferghana evidence is concentrated in the Akhsikent and Kuva publications. Glass is attested across the Shash-Ilak urban network — Binkat-Tashkent, Kanka-Kharashkat, Banokat-Shahrukhiya, Kabarna-Kavardan and Tunkat-Imlak — with the Binkat assemblage providing the principal dated corpus, including tableware, storage vessels and pharmaceutical/cosmetic containers, and the regional synthesis identifying carafes and flasks as characteristic forms (Normurodov, 2025). This distribution indicates that glass use extended beyond the capital into a wider regional urban network, consistent with its inclusion among the major medieval glassmaking centres of Uzbekistan alongside Bukhara, Paykend and Samarkand (Mirzaakhmedov, 2011).

In the Ferghana Valley, the Akhsikent citadel assemblage documents general urban glass use through diagnostic rim, body and base fragments (Papakhristu & Akhrarov, 1981), while the Kuva material is best known through I. A. Akhrarov's (1960) publication of medieval glass goblets, evidencing specialised drinking vessels; later work situates Kuva within the broader study of medieval Uzbek glassmaking rather than limiting it to goblets alone (Mirzaakhmedov, 2011). Chemical analyses of glass from Kafir Kala and Cholaktepa near Samarkand identified compositional links with Ferghana material, indirectly supporting a genuine local glassmaking tradition there (Chinni et al., 2023).

Comparison of the two regions shows a strong shared repertoire of storage, pouring and drinking vessels — bottles, flasks, carafes, bowls, cups and goblets — that belong to a common medieval Islamic functional range and demonstrate participation in a shared cultural and technological sphere, but do not by themselves prove direct trade. Three levels of similarity emerge: (1) widespread functional forms, offering only low-level evidence of contact; (2) closer morphological correspondence in rim, base or proportion, suggesting transmission of vessel

models or technological knowledge; and (3) morphological similarity combined with matching chemical composition and secure chronology, which would constitute the strongest evidence but for which the current corpus provides only limited support, since no comprehensive chemical-analysis programme yet covers Binkat-Tashkent, Akhsikent and Kuva. Comparable regional patterns are documented at Bukhara, where local/regional compositional groups coexist with imported Mesopotamian glass (Schibille et al., 2024), and at Samarkand, where compositional links to Ferghana were identified (Chinni et al., 2023) — indicating that Central Asian cities combined local production with selective importation rather than depending on a single source.

DISCUSSION

The evidence does not support a simple opposition between local manufacture and imported glass. A more plausible model is a mixed system in which locally or regionally produced glassware circulated alongside selectively imported objects, with individual cities functioning simultaneously as sites of production, secondary working, consumption and redistribution (Mirzaakhmedov, 2011). Distinguishing primary production (furnaces, crucibles, raw-glass residues) from secondary glassworking (moils, droplets, cullet, pontil waste) is methodologically essential, since the presence of a diverse assemblage does not by itself prove primary manufacture at a site.

Shared vessel categories reflect comparable urban consumption practices but constitute only low-resolution evidence of contact, since simple forms could arise independently in separate workshops. Greater interpretative weight belongs to specific combinations of attributes — an unusual rim profile, distinctive body-to-neck proportion, base construction, handle attachment or complex applied decoration — especially when several such features co-occur within a consistent chronological context. Because vessel form reflects the requirements of the secondary workshop while chemical composition reflects raw materials used in primary production, archaeological form and geochemical origin record different stages of manufacture and distribution; the term "import" should therefore be reserved for cases supported by several independent, converging lines of evidence rather than by morphology alone.

Technological knowledge — raw-material selection, furnace control, blowing, moulding and finishing — could move independently of finished objects, through craftsperson mobility, apprenticeship or imitation. The compositional link between Samarkand-region glass and Ferghana material, combined with glassworking debris at Cholaktepa, illustrates how chemical connections and local workshop activity can coexist, cautioning against treating every non-local composition as a finished-vessel import (Chinni et al., 2023). Broader Silk Road archaeometry — Sr/Nd isotope analysis at Nishapur (Lü, Basafa & Henderson, 2023) and multi-element analysis of Iranian Islamic glass revealing several plant-ash production zones, with possible Central Asian material identified as far as al-Raqqa (Henderson, Ma & Evans, 2020; Schibille, Lankton & Gratuze, 2022) — situates Tashkent and Ferghana within overlapping local, regional and long-distance exchange networks rather than as endpoints of a single trade route. Beyond economics, shared drinking and serving vessels point to related practices of hospitality and status display, so glassware carries evidence of both technological and cultural transmission. The principal limitations remain the absence of a unified archaeometric programme for the Tashkent–Ferghana corpus, uneven publication quality, broad chronological attributions, and the complicating effect

of glass recycling on compositional signatures. Future work should prioritise a unified digital catalogue and targeted EPMA/LA-ICP-MS and Sr–Nd isotope analysis of securely stratified material (Meek, Simpson & Schibille, 2025).

CONCLUSION

The comparative examination of medieval glassware from the Tashkent oasis and the Ferghana Valley shows that both regions participated in an interconnected system of urban craft production, consumption and exchange during the ninth–twelfth centuries. Shared functional categories — bottles, flasks, carafes, bowls, cups and goblets — together with recurring rim, body, base and decorative correspondences indicate participation in a common Central Asian technological and artistic environment, but comparable vessel forms alone cannot prove direct importation of finished objects. The evidence is best explained by a mixed, decentralised system combining local and regional production, interurban exchange, selective importation, recycling and the mobility of craftspeople and technical knowledge. The broader published corpus from Tashkent compared with Ferghana reflects the uneven state of archaeological documentation rather than a real difference in medieval production. A unified catalogue and direct archaeometric investigation of stratified glass from Binkat-Tashkent, Akhsikent and Kuva are required to determine more precisely whether the observed connections resulted from shared production zones, the circulation of raw or finished glass, or the transfer of craft knowledge — networks that, together, contributed to the economic and cultural integration of medieval Central Asian cities along the Silk Roads.

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