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Glazed ceramics of the Talas Valley
(based on the materials of the excavations in 2021)

The article presents the results of the analysis of fragmented glazed ceramics obtained during the expedition of the Margulan Institute of Archaeology in 2021 at the tortkuls of Talapty, Jargul-1–3, Arna. The monuments date back to the 10th – beginning of the 13th century. Irrigation ceramics are an important chrono-indicator. The development of ceramic production is directly related to technical achievements, economics, and trade. The tortkuls of the Talas Valley acted as a link on the route of the Great Silk Road. The pottery products of local craftsmen were the object of trade, both with the nearest regions and more distant ones.

Keywords: archaeology, Talas valley, tortkul, 11th-12th centuries, early Islamic period, pottery, glazed ceramics

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Талас өңірінің сырлы керамикасы
(2021 ж. қазба материалдары бойынша)

Мақалада Талапты, Жаргүл 1–3, Арна төрткүлдеріндегі Ә.Х. Марғұлан атындағы Археология институты экспедициясының 2021 ж. жұмысы барысында алынған сырлы керамика сынықтарының талдаулары нәтижелері берілді. Ескерткіштер X–XIII ғасырдың басымен мерзімделеді. Сырлы керамика маңызды хроноиндикатор болып табылады. Керамика өндірісінің дамуы техникалық жетістіктерге, экономикаға, саудаға тікелей байланысты. Талас өңірінің төрткүлдері Ұлы Жібек жолы трассасындағы байланыстырушы буын болды. Жергілікті шеберлердің көзе өндірісі тек жақындағы ғана емес, одан да алыстау аймақтармен сауда нысанына айналды.

Түйін сөздер: археология, Талас өңірі, төрткүлдер, XI-XII ғғ., ерте ислам кезеңі, көзе өндірісі, сырлы керамика

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Глазурованная керамика Таласской долины
(по материалам раскопок 2021 г.)

В статье представлены результаты анализа фрагментированной глазурованной керамики, полученной в ходе работ экспедиции Института археологии имени А.Х. Маргулана в 2021 г. на торткулях Талапты, Жаргуль-

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1–3, Арна. Памятники датируются X – нач. XIII в. Поливная керамика выступает важным хроноиндикатором. Развитие керамического производства напрямую связано с техническими достижениями, экономикой, торговлей. Торткули Таласской долины выступали связующим звеном на трассе Великого Шелкового пути. Гончарная продукция местных мастеров выступала объектом торговли, как с ближайшими регионами, так и с более отдаленными.

Ключевые слова: археология, Таласская долина, торткули, XI-XII вв., раннеисламский период, гончарное производство, глазурованная керамика

In 2021, the Talas detachment of the South Kazakhstan Integrated Archaeological Expedition of the Margulan Institute of Archaeology (head – Y. Akymbek) conducted research on the tortkuls of the Talas Valley. The monuments date back to the 10th-11th centuries (Talapty) and 11th-12th centuries (Jargul-2, Arna) [Akymbek et al. 2022a: 258].

Tortkul is one of the most unique types of medieval buildings in Kazakhstan. Such monuments vary in size; the similarities are shown in the following: 1) square or rectangular in plan; 2) surrounded by walls; 3) there are towers on both sides of the gate. Tortkuls are widespread in different regions of Kazakhstan, but especially in the valley of the Talas river. They existed mainly in the 9th – early 13th centuries [Akymbek et al. 2022b].

Tortkul Jargul is located in the Zhambyl region, 4 km south of the village of Tegistik, in the interfluve of Saryozek and Kosheney, 100 m from the left bank of the Talas river. The complex consists of three tortkuls separated from each other along the same line. The largest is Jargul-1. It is located in the western part of the complex. To the east are Jargul-2 and Jargul-3 [Akymbek et al. 2022a: 261].

Tortkul Arna is located 7 km west of the village of Sarybarak, north of the medieval settlement (Baizak district, Zhambyl region). 100 m to the east of the tortkul is the Karabakyr River, one of the old channels of the Talas River, still active to this day [Akymbek et al. 2022a: 261; 2022c].

Tortkul Talapty is located 4.5 km south-east of the village of Talapty, on the left side of the Taraz–Bostandyk highway, 1.5 km from the left bank of the Talas river (Talas district, Zhambyl region). 200 m from the monument flows the Karabakyr River, a tributary of the Talas River [Akymbek et al. 2022a: 261; 2022b].

More detailed information about the monuments is presented in a series of publications published earlier [Akymbek et al. 2022a–c]. In this article, we will focus on the results of a typological analysis of glazed ceramics from collections obtained from the above-mentioned sites.

According to the structure, the tableware has well-mixed impermeable fabric of orange-reddish color in the fracture, with admixtures of small sand particles and some voids. The surface treatment is white engobe, covered by a thin transparent glaze. The decoration was applied over the engobe, under the glaze, with paint in various shades of brown, green, olive, red, black, and white. Sometimes it is a drawn ornament in a geometric-floral style. Bowls and shallow saucers, plates on circular trays are highlighted in shape. The bowls have a hemispherical body with a rounded corolla, conically diverging walls, which have a slight, barely noticeable curve of the profile in the upper part. Plates of the same type with two fractures in the wall profile and with an annular tray, less often disc-shaped. The rims of the plates are wide and flat, almost horizontally turned outward, then sharply bent with a knee-shaped curve, transitioning to the bottom. The earliest of the pottery items are covered with alkaline cloudy-white glaze, with painting on the raw glaze.

1 Ceramic with a monochrome colored glaze on a white engobe

Tortkul Jargul 1. The fragment of the rim in cross section is rounded-pointed; the thickness of the rim is 0.5 cm, the walls are 0.6 cm. It has very well-mixed impermeable fabric of brick color with fine sand particles mixed in; voids may be due to burned-out limestone. The surface of the vessel was covered from the inside and outside with a thin layer of white engobe, over which a light green glaze with a pearlescent sheen was applied (Fig. 1, *2*).

Tortkul Arna. A fragment of a rim in a rounded-pointed cross section, the thickness of the rim is 0.5 cm,

the walls are 0.8 cm, the diameter is 20 cm. There are through holes on one of the fragments, probably made for repairing the product. It has a very well-mixed impermeable fabric of light brick color. Small sand particles, mica, chalk, and voids from burned-out organic matter are detected. The surface of the vessel from the inside and outside was covered with a thin layer of white engobe, over which an opaque glaze of a green shade with a pearlescent sheen was applied (Fig. 1, *3*).

2 Monochrome glaze with underglaze scratching on the engobe

Tortkul Jargul 2. A fragment of a rim (plate), rounded in shape, is oval in cross section; the thickness of the rim is 0.4 cm, the walls are 0.5 cm. It has well-mixed impermeable fabric of orange color, with admixtures of fine sand particles and cornelian (?). Burnt pores from organic matter are fixed. The surface of the vessel from the inside and outside was covered with opaque colorless glaze over a white impermeable engobe background. The ornamentation was made in a plant-geometric style with lines drawn under the glaze (Fig. 2, *6*).

Tortkul Jargul 2. Fragment of the side, wall thickness 0.7-0.8 cm; has well-mixed impermeable fabric of brick color with admixtures of fine particles of sand, lime. Voids from burnt organic matter are fixed. The surface of the vessel was covered with a white-pink impermeable engobe on the outside, an ornament in a plant-geometric style was drawn on the inside of the engobe, followed by the application of a transparent glaze (Fig. 2, *5*).

3 Monochrome colored glaze with underglaze scratching on the engobe

Tortkul Jargul 3. A fragment of the side part (several fragments), wall thickness 0.6–0.8 cm, has well-mixed impermeable fabric of brick color. Small particles of sand and voids from burnt organic matter are fixed. The surface of the vessel from the inside and outside was covered with a thin layer of white engobe, over which a transparent glaze was applied, under the glaze there is an ornamentation in a plant–geometric style, tracing along the base, and additionally light green paint was used (Fig. 1, *4*).

As in the previous period, colorless, transparent and lemon-yellow glazes continue to exist in the 12th century. Translucent glazes of green color and slightly illuminated ones are widely used: light green, light yellow, light bluish. The latter are usually used in combination with a scratched pattern [Drevnosti Tashkenta 1976: 107].

The scratched drawings were borrowed from Iran at the end of the 11th century, especially those painted in green [Mason 2004: 122]. In Central Asia, green carvings also became ubiquitous in the 12th century, which once again indicates that the glazing technique was transferred – often with some delay – from the Middle East through Iran and into Central Asia, even during the time of the Karakhanids [Henshaw 2010: 58].

4 Polychrome painting on white engobe under transparent glaze

Tortkul Jargul 2. A fragment of a rim (plate), rounded in shape, is oval in cross section; the thickness of the rim is 0.6 cm, the walls are 0.7 cm. It is made of a well-mixed impermeable fabric of orange color, with admixtures of fine particles of sand, feldspar, limestone (3%). Voids from burnt organic matter are fixed. The surface of the vessel from the inside and outside is covered with a transparent colorless glaze on dense white engobe background. The ornamentation was made in dark brown and red shades, in a vegetal-geometric style under the glaze (Fig. 2, *4*).

5 Painting with dark brown, yellow and green paints on white engobe under transparent glaze

Tortkul Talapty. A fragment of a bowl. The rim protrudes outward and has a cornice; the thickness of the rim is 0.5 cm; the walls are 0.5 cm. The vessel has well-mixed impermeable fabric of gray color with an admixture of fine sand particles (sanded). The surface of the bowl on the inside was covered with a thin layer of white engobe, over which a transparent colorless glaze was applied, under the glaze the ornamentation was painted in dark brown colors, along the contour of the vessel and spots (Fig. 2, *3*).

Tortkul Jargul 3. Fragment from the handle, diameter in section – 0.7 cm, height – 2.4 cm. The preserved length is 2 cm. The vessel has well-mixed impermeable fabric of red-brown color. Impurities: fine sand particles, feldspar; voids from burnt organic matter are fixed. The surface of the vessel was covered with a thin layer of white engobe from the inside and outside over which a light green glaze was applied. On one side, beneath the glaze, there is a stripe of greenish-brown paint, while a line was drawn in the central part (Fig. 1, *5*).

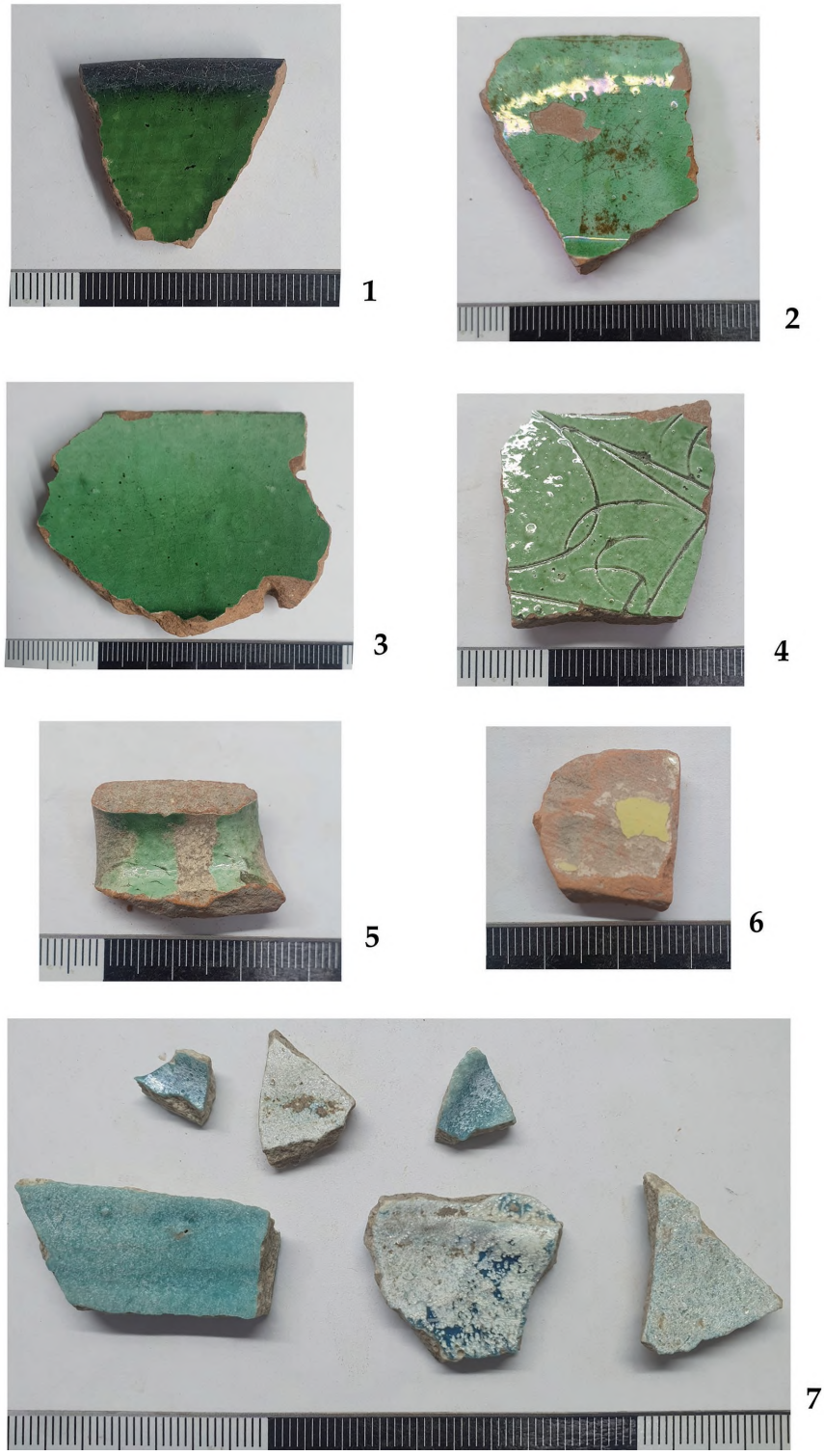


Fig. 1. Ceramic fragments from the Talas Valley archaeological sites
1-сур. Талас алқабы ескерткіштерінен алынған керамика фрагменттері
Рис. 1. Фрагменты керамики из памятников Таласской долины

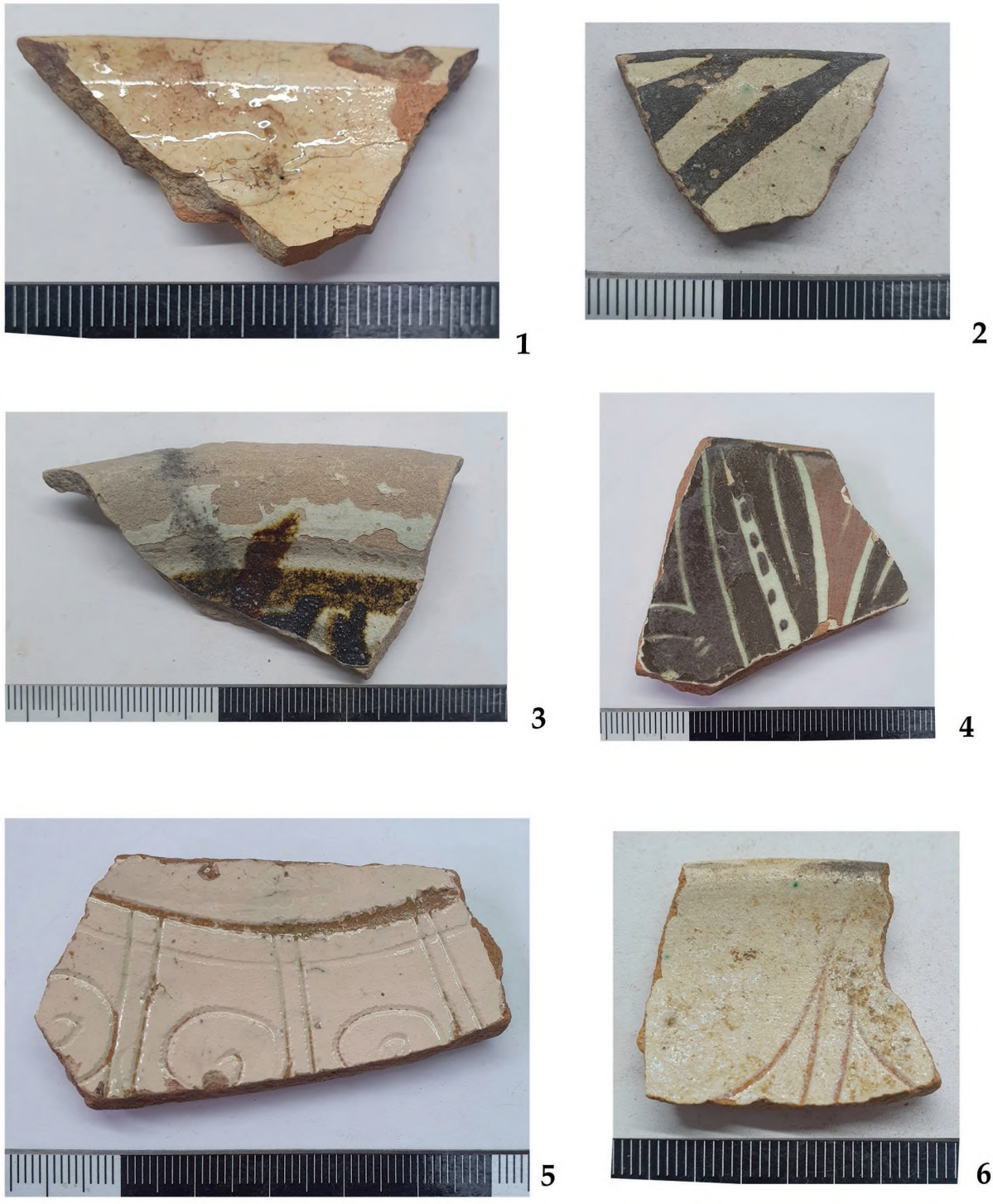


Fig. 2. Ceramic fragments from the Talas Valley archaeological sites
2-сур. Талас алқабы ескерткіштерінен алынған керамика фрагменттері
Рис. 2. Фрагменты керамики из памятников Таласской долины

Tortkul Jargul 3. Fragment of a bowl. The rim is rounded-pointed in cross–section; the thickness of the rim is 0.4 cm, the walls are 0.5 cm, the diameter is 14 cm. The vessel has very well-mixed impermeable fabric of brick-orange color (hardened clay). Impurities: fine sand particles, feldspar. The surface of the vessel from the inside and outside was covered with a thin layer of white engobe, over which a transparent colorless glaze with a pearl tint was applied, the contour of the rim was framed by a thin line in a light brown tone (Fig. 2, *1*).

Tortkul Arna. A fragment of the bowl. The rim is rounded in cross–section; the thickness of the rim is 0.5 cm, the walls are 0.6 cm, the diameter is 12 cm. The vessel has well-mixed impermeable fabric of light brick color. Impurities: fine sand particles, mica, limestone. Voids from burnt organic matter and limestone are fixed. The surface of the vessel from the inside and outside was covered with a thin layer of white engobe, over which an opaque glaze of a dark green shade with a pearl tint was applied, the contour of the rim was framed with a black glaze (Fig. 1, *1*).

Tortkul Talapty. A fragment of the side part, the wall thickness is 0.7 cm. The vessel is made of well-mixed impermeable clay of brick color. Impurities: fine sand particles. Burnt-out voids from organic matter are fixed; the dough is solid. The surface of the vessel from the inside and outside was covered with a thin layer of white engobe with a lemon-colored glaze (Fig. 1, *6*).

Similar dishes decorated with yellow glaze is widespread from the 2nd half of the 11th century and predominates until the end of the 12th century. Samples of such ceramics are presented in materials from the archaeological sites of Southern Kazakhstan and Semirechye* (*Zhetysu, Jetysu – The Land of seven rivers) [Ageeva, Patsevich 1958].

6 Stone-paste (Qashan) pottery with blue watering and lustering

Tortkul Jargul 3. Fragments of the side part (total 6 fr.), wall thickness – 0.4-0.5, 0.7 cm. Qashan ceramics. The surface of the vessel is covered with dark blue glaze from the inside and outside. The lustre effects is observed (Fig. 2, *7*).

The mass distribution of this ware began in the 12th century, when the secret of production was mastered by Iranian and Syrian potters. In the 13th century Qashan ware began to penetrate from Iran and Syria into Central Asia, and in the 14th century into the Golden Horde [Tuzbekov, Kamaleev 2021: 127; Mason 2004: 170]. Strong firing compared to pottery allowed the processing of alkaline glaze and became widely used for the manufacture of shiny products from alkaline glaze and other products in the Middle East since the beginning of the 11th century [Mason 2004: 78].

When discussing the ceramic complex of the 10th -11th centuries, it's worth noting that the fabric was prepared more carefully with minimal impurities. The color in the fracture is pink or cream, the glaze was applied over impermeable white engobe, which in turn was applied to the entire surface of the vessels. The decoration was done with paints under transparent colorless glaze, often in combination with a scratched ornament [Vishnevskaya 2001: 66]. Red, dark brown, olive, green and white shades were used to paint the vessels [Vishnevskaya 2001: 89].

Glazed ceramics are becoming a mass-produced material. In the 9th century, special attention was paid to the opaque alkaline glaze. This technology was presented as a genuine Islamic invention that came from Iraq, which can be considered an imitation of Chinese porcelain [Mason & Tite 1997]. In the 10th century, a new technique of using a higher-quality shiny transparent glaze made of lead is being mastered. Since the middle of the 11th century, they have been replaced by ceramics with olive painting under lemon-yellow transparent watering [Drevmosti Tashkenta 1976: 101].

In Kazakhstan, before the early Islamic period, glazing ceramics was not a local tradition. There is no evidence yet that the glaze appeared earlier. It can be said that the technology and design of the glaze were derived from methods developed in Iraq, which went through local production in Iran (which had "literally dozens of production centers, all with their own unique styles" [Mason 2004: 78]). The production of glazed ceramics in Kazakhstan dates back to the 9th century [Klesner et al. 2019]. An analysis of ceramic technology from Central Asia showed that it was derived from Western Islamic traditions and may have been introduced by immigrant craftsmen who were under the patronage of the emerging ruling elite in eastern cities such as Rai and Nishapur in Iran, Merv in Turkmenistan, Samarkand and Chach in Transoxiana. It was not far from Ferghana from here [Henshaw 2010].

By the 12th century, glaze technology in Central Asia was declining. There is a reduction in the production

of lustre and complex ceramic products, which are replaced by a simpler and monochrome style [Henshaw 2010]. According to A. Bershtam, Central Asia in the 10th–12th centuries was familiar with almost most of the Far Eastern ceramics, and the entire Semirechye region knew Central Asian ceramics [Senigova 1972]. There was also a local production of ceramics in the Talas Valley and an active exchange between the regions of Central Asia and Kazakhstan [Klesner et al. 2019].

Glazed ceramics of the Talas valley in the 10th–12th centuries are represented by technologies for making glazes both alkaline and lead. Products coated with lead glaze have their own characteristic features that contribute to the decoration of ceramics, taking into account new trends and styles, which makes it possible to clearly identify the ceramic production for this period. In conclusion, it should be noted that currently a small number of tortkuls have been studied in the Talas Valley and a small amount of material describing the glazed ceramics of the region has been published. There is a lot of work to be done to study the technological process of local pottery production, as well as material culture in general.

ӘДЕБИЕТ

Агеева Е.И., Пацевич Г.И. Из истории осёдлых поселений и городов Южного Казахстана // Тр. ИИАЭ АН КазССР. 1958. Т. V. Археология. С. 3–215.

Ақымбек Е.Ш., Шағырбаев М.С., Нұрғали Н.Б. 2021 ж. Талас өңіріндегі ортағасырлық төрткүлдерге жүргізілген далалық зерттеулер // Марғұлан оқулары–2022: халықар. ғыл.-тәжірибелік конф. м-ры (Алматы қ., 12-13 сәуір 2022 ж.). Алматы: Ә.Х. Марғұлан ат. Археология институты, 2022a. 255-263-бб.

Ақымбек Е.Ш., Шағырбаев М.С., Нұрғали Н.Б. Ортағасырлық Талапты төрткүлінің керамикасы. (2021 ж. қазба жұмыстары бойынша) // Еуразиялық далалық өркениет: адам және тарихи-мәдени орта. Еуразия даласы археологиясы V халықар. конгресінің м-ры (Түркістан қ., 11–14 қазан 2022 ж.). 5 томдық. 3-том. Алматы; Түркістан: Ә.Х. Марғұлан ат. Археология институты, 2022b. 157-168-бб.

Ақымбек Е.Ш., Шағырбаев М.С., Нұрғали Н.Б. Ортағасырлық Арна төрткүлі (2021 ж. жүргізілген зерттеулер бойынша) // «Орталық Азияның ежелгі және дәстүрлі қоғамдарының тарихи-мәдени мұрасы: жаңа ашылымдар мен пәнаралық зерттеулер» атты «XIV Оразбаев оқулары» халықар. ғыл.-әдіст. конф. м-ры / Жауапты ред. Р.С. Жуматаев. Алматы: Қазақ университеті, 2022c. 137-150-бб.

Вишневская Н.Ю. Ремесленные изделия Джигербента (IV в. до н.э. – начало XIII в. н.э.). М.: Восточная литература, 2001. 176 с.

Древности Ташкента / Отв. ред. Я.Г. Гулямов. Ташкент: Фан, 1976. 133 с.

Сенигова Т.Н. Средневековый Тараз. Алма-Ата: Наука, 1972. 218 с.

Тузбеков А.И., Камалеев Э.В. Поливная кашинная керамика XIII–XV вв. с территории Башкирского Приуралья // Проблемы истории, филологии, культуры. 2021. № 1. С. 126–139.

Klesner Catherine E., MacDonald Brandi L., Dussubieux Laure, Akymbek Yeraly, Vandiver Pamela B. Local production and long-distance trade of Islamic glazed ceramics in Central Asia: A compositional analyses of ceramics from Southern Kazakhstan by NAA and LA-ICP-MS // JAS: Report 26 (2019) 101905.

Henshaw C.M. Early Islamic ceramics and glazes of Akhsiket, Uzbekistan. Doctoral thesis, UCL. 2010. (University College London).

Mason R.B. Shine like the sun: lustre-painted and associated pottery from the medieval Middle East, Mazda Publishers, Costa Mesa, Calif. 2004. 266 p.

Mason R.B., Tite M.S. The beginnings of the tinopacification of pottery glazes // Archaeometry. 1997. 39 (1). Pp. 41–58.

REFERENCES

Ageeva, E. I., Patsevich, G. I. 1958. In: *Tr. IIAE AN KazSSR (Proceedings of the Institute of History, Archeology and Ethnography of the Kazakh SSR Academy of Sciences)*, 5, 3–215 (in Russian).

Akymbek, Y. S., Shagirbayev, M. S., Nurgali, N. B. 2022a. In: Onggaruly, A., Mamirov, T. B. (eds.). *Margulan oqulary–2022 (Margulan Readings–2022)*. Almaty: Margulan Institute of Archaeology, 255-263 (in Kazakh).

Akymbek, Y. S., Shagirbayev, M. S., Nurgali, N. B. 2022b. In: Onggaruly, A. et al. (eds.). *Euraziya dalasy arheologiyasy V halykaralyk kongresinin materialdary (Proceedings of the 5th International Congress of Archaeology of the Eurasian steppe).* In 5 vol. Vol. 3. Almaty; Turkistan: Margulan Institute of Archaeology, 157-168 (in Kazakh).

Akymbek, Y. S., Shagirbayev, M. S., Nurgali, N. B. 2022. In: Zhumatayev, R. S. (ed.). *XIV Orazbayev oqulary (14th Orazbayev readings).* Almaty: "Kazakh University" Publ., 137-150 (in Kazakh).

Vishnevskaya, N. Y. 2001. *Remeslennye izdeliya Jigerbenta (IV v. do n.e. – nachalo XIII v. n.e.) (Craft products of Jigerbent (4th century BC – early 13th century AD))*. Moscow: "Vostochnaya literature" Publ. (in Russian).

Gulyamov, Y. G. (ed.). 1976. *Drevnosti Tashkenta (Antiquities of Tashkent)*. Tashkent: "Fan" Publ. (in Russian).

Senigova, T. N. 1972. *Srednevekovyi Taraz (Medieval Taraz*). Alma-Ata: "Nauka" Publ. (in Russian).

Tuzbekov, A. I., Kamaleev, E. V. 2021. In: *Problemy istorii, filologii, kultury (Journal of Historical, Philological and Cultural Studies)*, 1, 126–139 (in Russian).

Klesner, C. E., MacDonald, B. L., Dussubieux, L., Akymbek, Y., Vandiver, P. B. 2019. In: *Journal of Archaeological Science*: Reports 26, 101905 (in English).

Henshaw, C. M. 2010. *Early Islamic ceramics and glazes of Akhsiket, Uzbekistan*: doctoral thesis, UCL. London: University College London (in English).

Mason, R. B. 2004. *Shine like the sun: lustre-painted and associated pottery from the medieval Middle East.* Costa Mesa, Calif.: Mazda Publishers (in English).

Mason, R. B., Tite, M. S. 1997. In: *Archaeometry*, 39(1), 41–58 (in English).