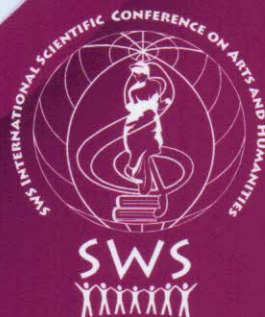


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ABOUT THE GOLDEN HORDE SILVER COINS OF KHAN SHADIBEK FROM THE IZMERI TREASURE (RUSSIA)

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ABSTRACT

This article presents the results of a study of silver coins with the name of Khan Shadibek from Izmeri treasure from the collection of the Tatarstan National Museum (Russia). This treasure is interesting in that it contains golden Horde coins minted in 1402-1419. With the advent of Khan Shadibek, the monetary reform of the Golden Horde was carried out, which resulted in relative order of money circulation in the state. In the same period, the work of the mint in the Bulgarian settlement was restored. Mint "Bolgat" on the coins was last mentioned in 1331-1335. The history of Izmer treasure has more than 50 years. It contains silver coins minted with the names of the 15th century Golden Horde khans: Shadibek, Pulad (Bulat), Timur, Jalal ad-Din, Kibak (Kubek), Chekre (Chokre), Dervish, Kadir-Birdi, Muhammad (Ulu-Muhammad), as well as anonymous coins. From this treasure, we studied the weight distribution of Khan Shadibek's 102 coins and conducted a preliminary study of the chemical composition of the coin's surface.

Keywords: silver coin, Golden Horde, Khan Shadibek, Izmer treasure, X-ray fluorescence analysis

INTRODUCTION

At the beginning of the 15th century, the political situation in the Golden Horde stabilized after several years of war and anarchy. Khan Shadibek (802-810 AH / 1399-1407AD) became the head of state. This historical moment was reflected in the circulation of money of the Golden Horde. A reform was carried out, as a result of which the frustrated monetary economy was put in relative order. One of the consequences of this reform was the resumption of the work of the Mint "Bolgat". Before that, in the 14th century, the toponym "Bulgat" was last found in pools of 736 AH during the reign of Khan Uzbek. These were the so-called "tamga in the triangle", produced with the hereditary tamga of the Mengu-Timur in 732-736 AH / 1331-1335 AD. After that, for 70 years the name "Bolgat" was not minted on the coins.

MATERIALS AND METHODS

To study the type and measurement features of the products of the Bulgar Mint of the first twentieth anniversary of the 15th century, we used materials from the treasure of coins stored in the funds of the Tatarstan National Museum (Russia) with inventory number 344410.

The treasure was found in April 1962. In the first publications, it was called "Semenovskiy", since it was discovered near the village of Semenovka, Kuibyshev district of the TASSR (USSR) [2, 7]. Later, the treasure became known as Izmerievsky [3]. In the literature of 1963 and 2003, the treasure is indicated "treasure from the village Izmeriy" [5,6].

The total number of coins of the Izmeri treasure varies depending on the time of publication of its composition:

- in the publication of 1963 [6] - 1981 pieces,
- in the publication of 1964 [3] - 2358 pieces,
- in the publication in 1974 [7] - 2317 pieces,
- in the monograph in 1983 [3] - 2358 pieces.

The hoard contained coins minted with the names of the 15th century Golden Horde khans: Shadibek, Pulad (Bulat), Timur, Jalal ad-Din, Kibak (Kubek), Chekre (Chokre), Dervish, Kadir-Birdi, Muhammad (Ulu-Muhammad), as well as anonymous coins. In the hoard two Old Russian coins are revealed - Prince Daniel of Nizhny Novgorod (1410-1415) and with the image of a rider with a spear. Thus, the coins deposited during 805-822 AH / 1402-1419 AD were deposited in the hoard.

In this paper, we consider the coins with the coinage of Khan Shadibek (802-810 AH). According to the latest inventory from the monograph by A.G. Muhamadiev [3], in the treasure, there were 109 pieces with the name Shadibek. But with the re-attribution of the treasure, only 103 pieces were revealed. The percentage of Shadibek coins from the total number is 4.62% (with 109 copies), and it must be taken into account that 453 coins are not attributed to the treasure, including Shadibek dirhams [3].

As established numismatist R. Yu. Reva, the first silver coins with the name of Shadibek are dated 805 AH (1402-1403 AD) [4].

The weight distribution of Shadibek's coins is presented in Figure 1.

Numismatic mode 0.76 ± 0.02 g, 39 pcs. (38.2% of all Shadibek's coins in Izmeri treasure).

A similar value was revealed when analyzing a treasure from the village of Nimich-Kasy (Russia) - 0.75 ± 0.02 g (85 pieces with the name of Shadibek) were counted. The mode of the Shadibek's coins from the Tetyush treasure was 0.73 ± 0.02 g (16 pieces were counted) [1]. Thus, depending on the time of the hoarding, the weight of the Shadibek's coins of the Bulgarian coinage ranges from $0.73-0.76 \pm 0.02$ g.

To study the chemical composition of the surface layer of Shadibek's dirhams, 10 coins of 805 AH were selected (Figure 2).

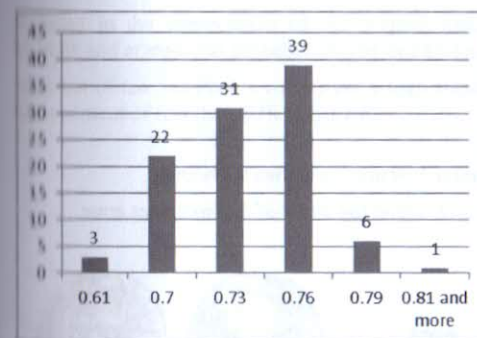


Figure 1. The dependence of the number of Shadibek coins of the value of their weight. Taken 102 pieces. Step 0.03 g. X-axis - weight in grams, Y-axis - quantity in pieces

The investigation of the chemical composition was carried out on the coin's surface. The estimated depth of 20 microns. The analysis was carried out on a portable X-ray fluorescence analyzer SI Turbo SD LE (Brucker, Germany), which allows determining the chemical composition without vacuum and helium purge in the range from Mg to U, including light chemical elements Mg, Al, with high speed and accuracy, Si, S and P in alloys based on Fe, Ni, Ti, Cu, Al, etc. The method accuracy is 0.01 wt.%.

RESULTS AND DISCUSSION

The result is presented in table 1.

Table 1. The chemical composition of the surface layer of Shadibek's coins from Izmeri treasure (wt.%).

| No. | Fe | Cu | Zn | Ag | Cd | Sn | Au | Pb | Bi |
|-----|------|-------|------|-------|------|------|------|------|------|
| 1 | 0,45 | 8,02 | 0,02 | 89,20 | 0,07 | 1,02 | 0,41 | 0,76 | 0,05 |
| 2 | 0,29 | 7,49 | 0,03 | 89,51 | 0,00 | 1,26 | 0,64 | 0,76 | 0,03 |
| 3 | 0,26 | 9,28 | 0,00 | 87,87 | 0,00 | 1,14 | 0,48 | 0,94 | 0,03 |
| 4 | 0,23 | 7,67 | 0,01 | 89,78 | 0,00 | 1,13 | 0,44 | 0,73 | 0,01 |
| 5 | 0,21 | 12,91 | 0,01 | 84,78 | 0,00 | 1,04 | 0,42 | 0,63 | 0,01 |
| 6 | 0,23 | 19,67 | 0,04 | 77,94 | 0,00 | 1,11 | 0,39 | 0,61 | 0,00 |
| 7 | 0,18 | 15,81 | 0,03 | 81,65 | 0,13 | 1,03 | 0,44 | 0,73 | 0,00 |
| 8 | 0,17 | 13,09 | 0,03 | 84,42 | 0,07 | 1,10 | 0,43 | 0,70 | 0,00 |
| 9 | 0,21 | 13,67 | 0,01 | 83,38 | 0,14 | 1,12 | 0,41 | 1,02 | 0,03 |
| 10 | 0,31 | 6,49 | 0,01 | 90,88 | 0,07 | 1,14 | 0,36 | 0,71 | 0,03 |

The average chemical composition of the Shadibek's coin according to the results of Table 1 (rounded to 0.1%):

- silver - 85.9%,
- copper - 11.4%,

- tin - 1.1%,
- lead - 0.8%,
- gold - 0.44%,
- iron - 0.25%.

The remaining elements - zinc, cadmium, bismuth - less than 0.1% each.

Arsenic was determined in only one coin within the limits of measurement error.



Figure 2. Studied Shadibek's coins from Izmary hoard

The relatively high content of iron on the surface is associated with rather long electrochemical processes in the soil, in which there was a treasure, this element is not

included in the composition of the original metal. The content of zinc, cadmium, bismuth and arsenic can probably also be due to degradation processes.

Nine out of ten Shadibek's coins have a high standard - from 81% to 91%. Coin No.6 has a content of less than 80% (Figure 3).

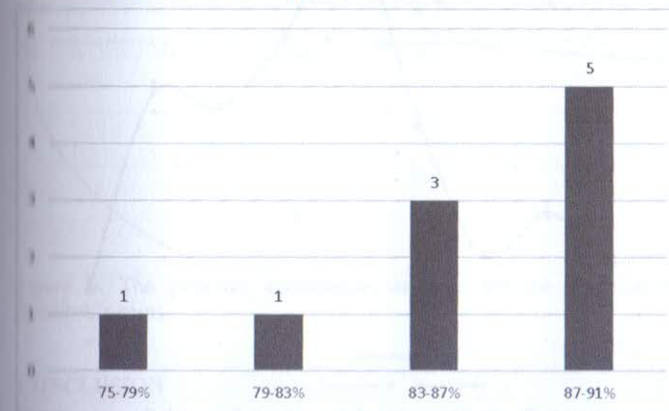


Figure 3. The histogram of the distribution of the studied Shadibek's coins silver content. X-axis - silver content in wt.%, Y-axis - quantity in pieces

Basically, the fluctuation of the copper content over the surface of the coins is less than 0.3%, which indicates possible etching of coins and good quality of the coin metal. However, in coins No.5, 6, 9, the metal quality is worse and the copper content varies from 0.3-0.8% (Figure 2). Consequently, in most of the coin's metal probably went through high-temperature smelting and completely melted. Such processes for when the copper content in silver is about 11-12% occur at temperatures above 850°C.

The tin content is unevenly distributed over the surface of the coins; this is due to the formation of a low-melting eutectic (183°C) tin-lead (approximately 2: 1).

The gold content in coins, as noted in [9], may indicate sources of silver for the miner. In the sample of ten Shadibek's coins for gold content in silver (Figure 5), 2 groups were found with gold content from 0.40% to 0.45% (coins No.5,7,8,9) and from 0.35 to 0.50% (coins No.1,3,4,10). Two coins are probably part of other lots of coins (coins No.2 and No.6).

The principal components analysis also confirmed the selection of coins No.2 and No.6 from the total sample (Figure 6) but also highlighted the peculiarities of the lead content in coins No.3 and No.9.

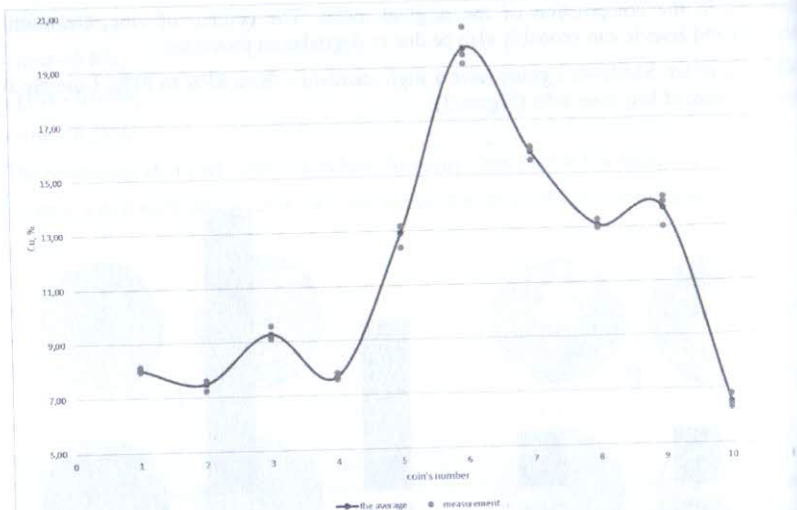


Figure 4. Copper content fluctuation over the coin surface relative to average concentration.

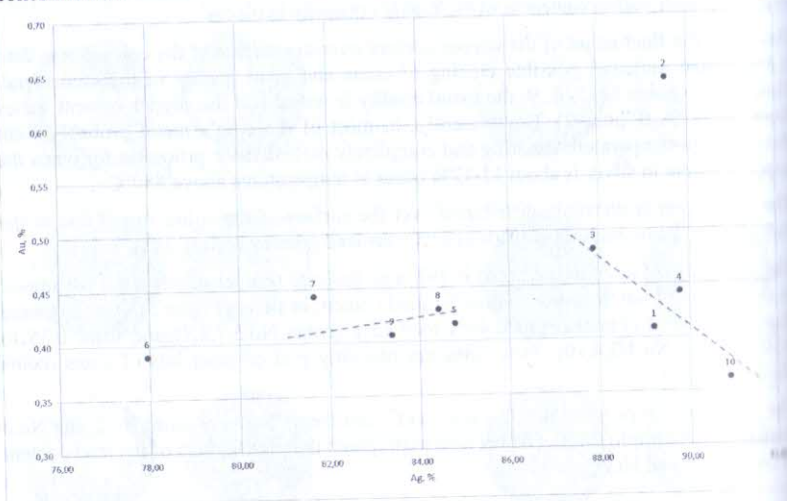


Figure 5. Correlation of gold content from silver content on the coin's surface

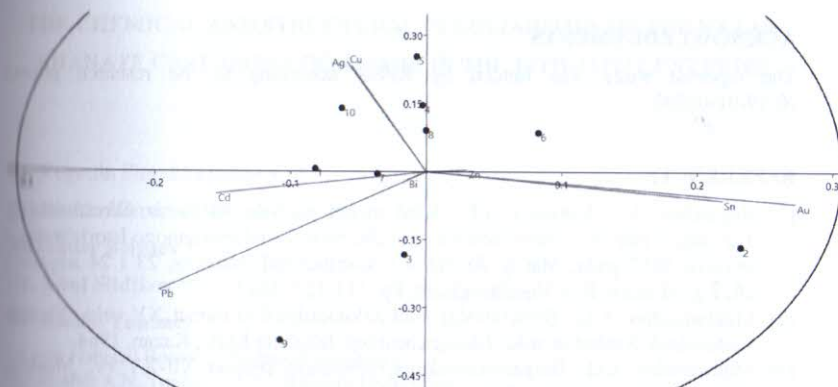


Figure 6. The principal components analysis for the chemical composition of Shadibek's coins

CONCLUSION

Thus, it can be assumed that during the rule of Khan Shadibek in the Golden Horde, Bulgarian coins were high-grade dirhams with silver content in the surface layer of 86%. Copper was used for ligatures by local money holders; its share averaged 11%.

For comparison: the amount of silver and copper in Shadibek's coins minted in the Crimean Khanate is from 93 to 98% silver and from 1 to 5% copper [8].

After this historical period, starting from Khan Pulad, the estimated weight of the Bulgarian silver coin gradually decreased, reaching a value of 0.57 g at Dervish [1]. That is, the Izmary treasure coins allow us to trace the stages of weight loss and changes in the percentage of the chemical composition of coins minted after the reign of Khan Shadibek to Khan Dervish and Khan Kadir -Birdi.

Of the total number of coins studied, two coins with an atypical gold content on the surface (No.2 and No.6), as well as two coins with a high lead content (No.3 and No.9) are distinguished, which may indicate other sources of silver for the miner. Coin number 6 also differs a lower standard from the other coins.

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REFERENCES

- [1] Bugarchev A.I., Kupecov A.E., Klad monet nachala XV v. iz okrestnostej g. Tetyushi (Tatarstan), Numizmaticheskie chteniya Gosudarstvennogo Istoricheskogo muzeya 2017 goda, Mat-ly dokladov i soobshchenij, Moskva, 23 i 24 noyabrya 2017 g, Moskva, RIA Vneshtorgizdat, Pp. 117-127, 2017.
- [2] Mukhamadiev A.G., Semenovskij klad zolotoordynskih monet XV veka, Sbornik studencheskih rabot istoriko-filologicheskogo fakulteta KGU, Kazan, 1964.
- [3] Muhamadiev A.G., Bulgaro-tatarskaya monetnaya sistema XII-XV vv., Moskva, Izd-vo «Nauka», 168 p., 1983.
- [4] Reva R.Yu., Poshtempel'nyj analiz bulgarskih monet SHadibeka (novyj vzglyad). Kul'turnoe nasledie Evrazii (s drevnosti do nashih dnei), Almaty, Institut arheologii im. A.H. Margulana, pp. 511 – 539, 2016.
- [5] Singatullina A.Z., Svodnyj ukazatel' opublikovannyh kladov, Fyodorov-Davydov G.A., Denezhnoe delo Zolotoj Ordy, Moskva, PALEOGRAF, 352 p., 2003.
- [6] Fyodorov-Davydov G.A., Nahodki dzhuchidskih monet, Numizmatika i epigrafika. T. IV, pp. 165-221, 1963.
- [7] Fyodorov-Davydov G.A., Nahodki kladov zolotoordynskih monet, Goroda Povolzh'ya v srednie veka, Moskva, pp. 176-182, 1974.
- [8] Hromov K.K., Sekrety masterov srednevekov'ya i nashego vremeni (korrektnost' v publikacijah i izmereniyah, Numizmaticheskie chteniya GIM 2017, Moskva, RIA Vneshtorgizdat, pp. 105-112, 2017.
- [9] Shaykhutdinova E.F., Bugarchev A.I., Petrov P.N., O himicheskom sostave poverhnostnogo sloya bulgarskih monet XV v., Numizmaticheskie chteniya Gosudarstvennogo Istoricheskogo muzeya 2018 goda, Moskva, 27 i 28 noyabrya 2018 goda, Materialy dokladov i soobshchenij, Moskva, OOO RPC «Vozrozhdenie», pp. 104-110, 2018.