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# Typology of glazed ceramics of the Kazan Khanate and analysis of its element composition

Sitdikov A., Khramchenkova R.
*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

## Abstract

© The authors. Studying on archaeological material the history of the Kazan Kremlin which was included in the list of UNESCO in 2000 is an actual problem because of the limited written sources remained. The aim of the work is to study the features of trade and craft traditions of the late Middle Ages Kazan on the example of ceramic artifacts. The authors applied a complex of analytic methods which included morphology and element composition of glaze: samples of glazed ceramics with green, brown and blue glaze. The chemical composition of glaze of three ceramics samples was determined in the article by two methods. They are the emission spectroscopy and the method of electron microscopy. The good comparability of analytical data of two independent methods is shown in the article. Both advantages and disadvantages of each type of the analysis are given. The data on a chemical composition in the article show that two samples of the glaze is lead, the third sample is lead-tin with an addition of ash (that is sodium and potassium). Results of the article revealed an optimal range of analytical procedures for the studying of glazed ceramics and may be useful as methodical material for archeometric researches.

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## Keywords

Archaeological ceramics, Chemical composition, Emission spectroscopy, Glaze, Kazan kremlin, X-ray