

Non-Destructive Investigation of Fragments of Mirrors (6th–3th Centuries BCE) from the Necropolis Volna 1 on the Taman Peninsula by Neutron Resonance Capture Analysis

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Neutron Resonance Capture Analysis (NRCA) is known as non-destructive method. The use of neutrons, a highly penetrating particle, with resonance energy, allows one to investigate archeological objects without damaging. NRCA is based on the registration of neutron resonances in radiative capture and the measurement of the yield of reaction products in these resonances [1].

We have applied the method for the analysis of several archeological objects from the necropolis Volna 1 [2]. In this paper, we concentrate on a study of fragments of mirrors.

The mirrors have high vertical ledges, presumably belong to the Borysthenitic type of mirrors. The handle is lost, the remains of the fastening are preserved on the mirror. The metal of the mirror is degraded to a large extent, it is not possible to restore the height of the side and the design of the fastening. Analysis of the elemental composition by the XRF method is difficult. In this regard, data on the elemental composition obtained by the NRCA method are of great importance.

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REFERENCES

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