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## TRANSPARENCY AT ITS BEST: NEUTRONS USED TO PROBE ARCHAEOLOGICAL GLASS FINDS FROM ROMANIA

*Wednesday, November 22, 2023 3:10 PM (20 minutes)*

This presentation demonstrates the applicability of Prompt Gamma Activation Analysis (PGAA) technique for determining the chemical composition of ancient glass finds. A sample set made of 50 Roman and Late Antique glass fragments discovered in several archaeological sites from Romania, most of them on the western shore of Black Sea, was measured with PGAA at the Budapest Neutron Centre (BNC-EK), Hungary, in the frame of the EU IPERION HS project.

Upon completion the experiment, the glass fragments were attributed to several well-established chemical types of Roman and Late Antique glass encountered in the archaeometric literature. The data enabled comparisons with coeval vitreous artefacts discovered in nearby and/or remote regions and allowed searching for correlations between various vessels forms and chemical composition. PGAA data provided information on the raw materials and manufacturing techniques; in particular cases, triggered speculations on the provenance of raw glass. Concluding, the compositional analyses of archaeological glass finds with this non-invasive analytical method brought some archaeometric proofs for the vivid commercial and cultural connections within the Roman Empire during the 1st-6th century AD.

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