

## **ANALYTICAL METHODS IN THE FIRST AND SECOND DECADES OF ARCHEOMETRIAI MŰHELY**

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Application of analytical techniques in archaeology has become widespread in the past three decades. The solid, and most often natural material of archaeological finds, their burial history make them similar to geological samples, so the utilization of the experience of mineral sciences (mineralogy, petrology, solid state geochemistry) in archaeology seemed to be evident.

In this field analytical methods focus on three main types of information: 1) information on geometry (shape and size at single objects, texture formed by two or more objects), 2) information on chemical elemental composition (major, minor and trace elements, isotopes), 3) information on material structure (short range order, and – if present – long range order). However, with archaeological samples non-destructivity in terms of geology is an ultimate need. “Geological” non-destructivity means preserving not only the chemical compounds themselves (=non-destructivity in chemistry), but texture as well. As a result, several other methods, not typical in mineral sciences, but applied in physics for solid state materials have been tested with archaeological samples.

By the previous decade that duality of analytical equipment had stabilized. In several fields coherent analytical data sets started to form, reference databases have been set up.

For the coming decade the two key questions of the application of analytical methods in Hungarian archaeometry may be the following: 1) will there be any of the methods (if yes, which ones?!) backed by large scale comparative standardized databases 2) will there be sufficient effort, expertise and financial support to plan complex analytical work in archaeometry based rather on the archaeological problem and material themselves, than on the analytical equipment at hand.