ANCIENT CERAMICS REFLECTED IN ANALYTICAL EQUIPMENT

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Pottery is one of the most common finds at archaeological excavations. Its great abundance distinguishes it from other archaeological materials, such as metal and glass. Among the bulk goods, however, exceptional, unique pieces and assemblages also occur. This duality of the finds is reflected in material tests and the applied analytical equipment, too.

Scientific investigation of archaeological ceramics in Hungary (as well) started with the analysis of the bulk goods. The most important questions to answer were – and still are –, What? Where? and How?, the latter referring to the building technique and firing procedure of pottery. To answer these questions we basically use the same methods as 30 years ago (thin section petrography, XRPD, INAA, XRF). Investigation of bulk goods only in few exceptional cases – mainly in the study of uniquely tempered (e.g. basaltic, graphitic or calcareous) ceramics – resulted in the successful application of new analytical methods (LA-ICP-MS, carbon stable isotope tests, CL).

A wider range of analytical methods and equipment (SEM, EPMA, μXRD, μXRF, Raman and FTIR spectroscopies, TL, CT) has been used in the study of exceptional, unique pottery finds. Besides the question of What? research focuses on When? and How?, here the latter referring to the identification of special production techniques, recipes and workshops.

The study of special, unique pottery, is probably more of a challenge for the analyst, and enhances the improvement of analytical equipment more effectively (need for non-destructive tests and analysis of artefacts of large size), however, offers less opportunity for large scale archaeological interpretation. The results primarily yield data on ancient technology, and help conservation and authenticity research. Contrarily, investigation of bulk goods provides opportunity for answering large scale archaeological problems: the long-range goal being the mapping of contemporary social and commercial exchange networks. To achieve this goal the establishment of analytical data bases is essential. In Hungary the setup of CERAMIS meant the starting point.