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Plaster façade decorations used at the turn of 20th century; micro-fabric and composition

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Cast decorations were widely used from the middle 19th to the early 20th century on decorated façades throughout Europe. The detailed study of specimens collected from diverse façades of the period and compilation of relevant data on material properties can reveal important information on architectural element conservation. The research presented here focused on the laboratory analysis of the specimens collected from sculptural and ornamental decorations of various façades from Budapest and from several smaller towns across Hungary. The textural and mineralogical characteristics of samples were analysed by plane polarized light microscopy and stereo microscopy. Micro-chemical tests were also carried out on selected zones of specimens using microscopic observations. Besides chemical analyses physical properties were also tested in order to help planning the conservation of these materials. This study has also been used to clarify the meaning of basic terms related to the word 'gypsum' that may turn up in various contexts. It explains the difference between gypsum mineral (exploited), plaster of Paris, burnt plaster and their modifications. It gives new insights on the factors and additives that alter the technological properties of the product. The results obtained from the study of these Hungarian samples can be used for the comparison of casts found in other European buildings. The research was realized with the support of the EU-funded project EFOP-3.6.1-16-2016-00021 and the ÚNKP-17-4-1-MKE-3 grant (Hungarian Academy of Fine Arts).