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## **COMPARISON OF REMOVAL METHODS OF CONSERVATION SUBSTANCES LAID ON ARCHAEOLOGICAL BONE SAMPLES DEDICATED TO CARBON ISOTOPIC ANALYSES**

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Human- or animal-derived bone, teeth, ivory and antler archaeological finds have always been frequent samples submitted to radiocarbon laboratories. Nowadays, in excavation campaigns, increasing attention is devoted to the selection and handling of the most promising samples, also considering subsequent scientific analyses. However, in the past, this care was not in focus thus a lot of objects stored in museums had been chemically treated to preserve them for the future. For this purpose, a wide range of natural and artificially produced substances has been applied in archaeology so the analyses and dating of these objects are still laborious. At the Hertelendi Laboratory of Environmental Studies, we aimed to try to estimate the effect of some conservation substances to the actual age of a reference bone sample. A larger long bone was selected and split into fragments, which were then treated artificially by preservatives such as epoxy resin, superglue or paraffin. After drying, the surface of the samples was polished and the fragments were crushed. Regarding chemical pretreatment, a simple acid-base-acid (ABA) wash, a post-ABA ultrafiltration step and a complete Soxhlet-extraction, ABA and ultrafiltration protocol were selected for comparison. After gelatinization, the produced samples were measured by accelerator mass spectrometry and stable isotope ratio mass spectrometry and the results were evaluated and compared from a carbon isotopic aspect.

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### **Keywords**

bone, radiocarbon dating, stable isotopes, preservatives

### **Note/comment**