

# **MONITORING THE REMOVAL OF CONSERVATION SUBSTANCES AND MATERIAL QUALITY FOR RADIOCARBON DATING USING INFRARED SPECTROSCOPY**

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Preservation of archaeological and historical objects buried for thousand years in the environment is essential for future studies and/or public exhibition. Substances which are not originally part of the material may have been introduced later into the sample either for preservation purposes or due to diagenesis in the environment. If radiocarbon dating of the object is required, in order to assure highest precision and accuracy it is essential that any exogenous material be removed from the original sample before dating is performed. This implies that the quality of the final material must be determined before the age measurement.

We use infrared spectroscopy analysis to determine the state of preservation of the material, possible presence of preservation substances and to monitor the removal of these additives after pre-treatment. These steps are important in order to decide which is initially the best sample for dating, the material pre-treatment strategy and its efficiency.