



Evaluation of preparation methods in radiocarbon dating of old wood

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Radiocarbon analyses require pre-treatment of the material before proceeding with the isotopic analysis, both with counting of decay particles (conventional method) or ^{14}C atoms (AMS method). From the early days of the method the standard treatment involved removal of contamination by washes in acid (carbonates dissolved) and base (humic acid) dissolved (ABA). Modification of this method has been suggested, especially for old material, i.e. older than 20 ka. However the criticism of ABA and application of a more aggressive oxidizing method might be only needed in some special cases, for example of poor preservation (ABOX or separation of cellulose from wood).

As a part of studies focusing on chronology of late Pleistocene sedimentary processes in the Venetian-Friulian Plain and Carnic Alps (NE Italy), radiocarbon analyses were performed on old wood samples found in sedimentary deposits of pre-LGM age. Our results show that in most cases ABA method is sufficient to remove the contamination of naturally deposited wood independently of the age of the wood.