

# **CARBON-14 DATING BY ACCELERATOR MASS SPECTROMETRY: THE COMING OF AGE**

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## **Abstract**

Carbon-14 dating by means of a tandem van-de-Graaff accelerator has recently reached a stage, where it may be performed as a routine operation as well at rebuilt nuclear-physics accelerators as at dedicated machines. The main principle will be outlined very briefly and the question of sample preparation dealt with in a somewhat more detailed manner. Through selected examples the sensitivity, speed, precision and accuracy of the method will be illustrated and the ability to work with very small samples be particularly emphasized.

Finally, the difficult question is addressed as to compare capital costs and running costs with carbon-14 dating based on conventional  $\beta$ -activity counting.