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AMS measurements of tritium in graphite from a decommissioned reactor

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The measurement of tritium by accelerator mass spectrometry (AMS) is a precise technique for determining tritium content. This technology is characterized by small sampling, high accuracy, and selectivity, making it a favorable method for measuring tritium in solids. In the process of measuring tritium by AMS, it is necessary to prepare the tritium-containing sample into the chemical form of TiH_2 . This typically involves steps such as sample extraction, purification, and conversion into TiH_2 . The accuracy of tritium AMS measurements is influenced by the quality of sample preparation, the performance parameters of the instrument, and the operational precision during the measurement. In this study, the compact 200kV single-stage AMS (GXNU-AMS) of Guangxi Normal University was used to determine the concentrations of 3H and ^{14}C accumulated in irradiated graphite from a decommissioned reactor.

Student Submission

Yes

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