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AMS sample preparation method for Cl in soil

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Cl is a ubiquitous element in the environment. ^{36}Cl half-life is 3.01×10^5 a. The dating range can be up to 3.01×10^6 a (10 times half-life), which covers the whole Quaternary period, has a unique advantage for the determination of Quaternary stratigraphy and Quaternary age. In recent years, with the continuous development of gas pedal mass spectrometry (AMS) technology, ^{36}Cl has been measured with high sensitivity, which makes ^{36}Cl dating technique more effective. With the development of accelerator mass spectrometry (AMS), ^{36}Cl can be measured with high sensitivity, which makes ^{36}Cl dating technology promising. In this paper, we introduce the current status and difficulties in the study of ^{36}Cl measurement by AMS. This paper introduces the current research status and research difficulties in the measurement of ^{36}Cl using AMS, for the extraction of ^{36}Cl in soil, and establishes a method for the preparation of ^{36}Cl -AMS samples in the AMS laboratory of Guangxi Normal University (GXNU). The AMS samples were measured by the University of Tsukuba, Japan. Based on the obtained experimental data, the distribution of chlorine in soil at different depths in the Haihe River Basin was analyzed.

Student Submission

Yes

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