

A new separation technique for uranium and thorium from silicate rock samples using two extraction chromatographic resins

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We have developed a new technique for the separation of U and Th from silicate samples by combining extraction chromatographic resins, U/TEVA and TEVA. This method overcomes problems associated with conventional routines using AG1X8 or U/TEVA resins. Our method enables to separate U and Th irrespective of matrix chemical composition, from basic to acidic silicate samples. The recovery of U and Th were nearly 100%. Both U and Th fractions separated by this method can be directly used for the following TIMS analysis because other elements are negligible in these fractions and total blanks are so low as <10 pg for U and <19 pg for Th.