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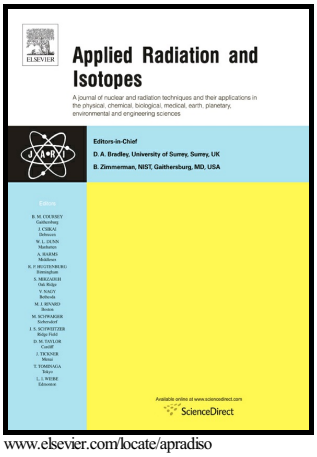

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Novel ion exchange chromatography method for nca arsenic separation

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Abstract

A high-performance liquid chromatography (HPLC) device equipped with an anion exchange column was used to isolate nca ^{77}As from reactor irradiated $^{nat}GeO_2$ targets. The oxidation states of the isotope ^{77}As during the process was verified by thin layer chromatography. The radionuclidic purity of the separated fractions was checked by gamma measurements and it was found to be 99.91 % for the As fraction. The elaborated method was applied to separate the isotope ^{74}As from cyclotron irradiated $^{nat}GeO_2$ targets too.

Keywords: HPLC – TLC, anion exchange chromatography, no carrier added (nca) ^{77}As and ^{74}As, natural germanium oxide (GeO_2) target, radiochemical separation, reactor and cyclotron production of arsenic isotopes.

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