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Title	Rapid anion exchange separation of fermium with mineral acid-methyl alcohol mixed media
Sub Title	
Author	臼田, 重和(Usuda, Shigekazu) 篠原, 伸夫(Shinohara, Nobuo) 吉川, 英樹(Yoshikawa, Hideki) 市川, 進一(Ichikawa, Shinichi) 鈴木, 敏夫(Suzuki, Toshio)
Publisher	共立薬科大学
Publication year	1988
Jtitle	共立薬科大学研究年報 (The annual report of the Kyoritsu College of Pharmacy). No.33 (1988.) ,p.174- 174
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000033-0174

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Rapid Anion Exchenge Separation of Fermium with Mineral Acid-Methyl Alcohol Mixed Media*

Shigekazu Usuda**, Nobuo Shinohara**, Hideki Yoshikawa, Shinichi Ichikawa**, Toshio Suzuki**

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Anion exchange separation of $^{250}\mathrm{Fm}$ (30 m) synthesized by the $^{12}\mathrm{C} + ^{242}\mathrm{Pu}$ and $^{16}\mathrm{O} + ^{238}\mathrm{U}$ reactions has been investigated with mineral acid-methyl alcohol mixed media at elevated temperature. Fermium was chromatographically separated from the other transplutonium elements, the target materials and an Al catcher foil by anion exchange with mixtures of nitric acid and methyl alcohol. By use of the mixed media of hydrochloric acid and methyl alcohol, Fm together with Cf was separated from Al, Am, Cm, Pu, U and major fission products. The separation systems are suitable for rapid separation and immediate alpha-counting source preparation of Fm.

^{*} 本報告は Journal of Radioanalytical and Nuclear Chemistry, Articles, 116 (1), 125-132 (1987) に発表.

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