

SEPARATION OF SAMARIUM AND EUROPIUM IN NITRIC ACID MEDIUM USING EXTRACTION CHROMATOGRAPHY RESIN

Miting Du and C. W. Alexander

ABSTRACT

The irradiation of highly enriched ^{144}Sm to produce ^{145}Sm results in highly radioactive europium impurities (primarily ^{155}Eu and ^{156}Eu). Extraction chromatographic techniques using Eichrom LN.Spec columns were developed to separate samarium and europium. Experimental results of tracer-level tests and full-scale runs validate the use of extraction chromatography for samarium/europium separations.