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(3) Under the same conditions of acidity and concentration of reagents, the activity is not coprecipitated with ceric or zirconium iodates to as great an extent as are actinium, protactinium, and thorium, thus eliminating these last three elements and cerium.

(4) The activity can be partially separated from the rare earth yttrium subgroup by any one of three standard procedures: precipitation of the activity with lanthanum or praseodymium carrier from neutral to alkaline carbonate, oxalate, or formate solutions with yttrium, radolinium, or lutecium holdback carrier.

(5) Europium can be separated by reduction to the II oxidation state with zinc amalgam and precipitation of EuSO_4 . The activity is not coprecipitated with europium under these conditions.

(6) Fractional separation from the remaining elements (lanthanum, praseodymium, neodymium, element 61, and samarium) can be achieved by the use of fluosilicate ion in solution during a partial precipitation of rare earth fluoride as carrier.

Confirmation of the isotopic assignment of the five months alpha-activity of 4.75 cm range came from a study of its decay-product. A sample containing about 2×10^6 disintegrations per minute of 96^{242} (produced by neutron irradiation of Am^{241}) was allowed to decay for about a month and at the end of this time the plutonium fraction was isolated and was found to consist of an alpha-activity with range 4.05 cm which can be ascribed to Pu^{238} . (2) The amount of Pu^{238} which grew was quantitatively determined in another experiment by addition of Pu^{239} tracer to establish the chemical loss during separation of the plutonium. The details of this experiment were as follows: A sample containing 1.293×10^6 c/m of 96^{242} was very carefully purified of all plutonium, 1102 counts/minute of Pu^{239} was then added and the sample allowed to stand for 70 days. At

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