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TITLE: Application of thorium hydroxide as a desorbent for carbonate separation of uranium

PERIODICAL: Referativnyy zhurnal, Khimiya, no. 2, 1962, 139-140, abstract 2D2; (Acta chim. Acad. scient hung., v. 29, nos. 1-3, 1961, 287-295)

TEXT: It is established that in the carbonate separation of uranium Th^{4+} added to the Fe-containing material reduces the U losses from adsorption on to the $\text{Fe}(\text{OH})_3$ precipitate. It is inferred that this is because of the preferential adsorption of $\text{Th}(\text{OH})_4$ on to the $\text{Fe}(\text{OH})_3$ compared with that of $\text{UO}_2(\text{OH})_2$. To reduce the interference of Th in subsequent fluorimetric determination of the U the dilution method, the method of known additions, or treatment of the precipitate with hot 0.1M solution of Na_2CO_3 are recommended. 1 g of the mineral is decomposed by boiling

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Application of thorium...

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with concentrated HCl and H_2O_2 , the solution is evaporated to dryness.

20 mg of Th are added, and the solution is diluted to 100 ml with a 0.1-0.5M solution of Na_2CO_3 . Part of the solution is filtered.

0.2-1 ml of the filtrate is mixed with NaF solution and evaporated to dryness. From the dry residue beads of about 55 mg are prepared by the usual method and the fluorescence of these is used to determine the U content. [Abstracter's note: Complete translation]



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