

硝酸溶液中铌的溶剂萃取研究 V. 某些金属对TBP从硝酸中萃取铌的影响

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摘要 研究了在1~8mol/l HNO₃的水相中不同浓度的锆、钼和铈同时存在以及铀和镨等对TBP萃取铌的影响。结果表明:1.当 $1 \times 10^{-3} \text{ mol/l} < [\text{Zr}] < 5 \times 10^{-2} \text{ mol/l}$ 和 $[\text{HNO}_3] > 4 \text{ mol/l}$ 时,随着水相初始锆浓度增加, $D_{\text{(Nb)}}$ 增加;而 $[\text{HNO}_3] < 4 \text{ mol/l}$ HNO₃时,随着锆浓度增加, $D_{\text{(Nb)}}$ 减小。2.在水相中同时存在钼和铈会使 $D_{\text{(Nb)}}$ 增加。在钼和铈的浓度小于 $1 \times 10^{-2} \text{ mol/l}$ 的情况下,硝酸浓度为3mol/l时 $D_{\text{(Nb)}}$ 最小。

关键词 [铌](#) [锆](#) [钼](#) [TBP](#) [溶剂萃取](#)

分类号

A STUDY OF SOLVENT EXTRACTION OF NIOBIUM FROM NITRIC ACID SOLUTION V. AN EFFECT OF SOME METALS ON EXTRACTION OF NIOBIUM WITH TBP

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Abstract The paper deals with a behaviour of extraction of niobium with TBP in the presence of molybdenum and zirconium, uranium, or praseodymium in the aqueous phase. The dependence of extraction of niobium with TBP on the concentrations of zirconium in 1~8 mol/l HNO₃ is described. The results show: 1. In the concentrations of $1 \times 10^{-3} \text{ mol/l} < [\text{Zr}] < 5 \times 10^{-2} \text{ mol/l}$, due to the reaction of zirconium, $D_{\text{(Nb)}}$ is increased with increasing of Zr concentration when the concentration of nitric acid is higher than 4 mol/l, and $D_{\text{(Nb)}}$ is decreased with increasing of Zr concentration when the concentration of nitric acid is lower than 4 mol/l. 2. $D_{\text{(Nb)}}$ increases when molybdenum and zirconium are present simultaneously in aqueous phase. $D_{\text{(Nb)}}$ appears minimum when the concentration of molybdenum and zirconium are less than $1 \times 10^{-2} \text{ mol/l}$ and the concentration of nitric acid is at 3 mol/l.

Key words [Niobium](#) [Zirconium](#) [Molybdenum](#) [Uranium](#) [Praseodymium](#) [TBP](#) [Solvent extraction](#)

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