

离心萃取装置中硝酸羟胺还原反萃钚的研究

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摘要 用十六级分离式混合—离心澄清萃取装置,在20-24℃,30-34℃,45-50℃等不同温度下进行了3B槽硝酸羟胺还原反萃钚的实验。结果表明,钚的收率均可达99.9%以上。在20-24℃时,有机相出口级附近几级的钚浓度较高,实验条件一旦波动,有可能造成钚的流失,且钚在萃取设备中有明显的积累。温度升高,14级反萃(停留时间约18min)时,钚的收率基本得到保证。

关键词 [16级混合-离心澄清器](#) [硝酸羟胺](#) [还原反萃](#)

分类号

REDUCTION STRIPPING OF PLUTONIUM(IV) WITH HYDROXYLAMINE NITRATE IN THE CENTRIFUGAL CONTACTOR

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Abstract Reduction stripping of Pu(IV) with hydroxylamine nitrate under conditions of Purex 3B contactor is carried out with 16-stage mixer-centrifugal settler in laboratory scale. Results show that the apparent recovery of Pu is more than 99.9%. But there is great difference in the concentration of plutonium of every stage in extraction equipment at different temperature. For example, plutonium concentrations in organic phase of several stages near the organic effluent at 45-50°C are lower than that at 20-24°C. Thus, recovery efficiency of plutonium can be assured only for the former. However, plutonium will probably be lost, if operating conditions are fluctuated. In addition, plutonium accumulated in the extraction equipment increased appreciably for the case of 20-24°C. Therefore, in order to ensure recovery efficiency of Pu, reduction stripping of Pu should be made at higher temperature.

Key words [16-stage mixer-centrifugal settler](#) [Hydroxylamine nitrate](#) [Redution stripping](#)

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扩展功能

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