

阳离子交换分离ICP-AES法测定高放废液中微量钌、铑、钯

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摘要 用盐酸及氯化钠处理后的高放废液试样,通过强酸性阳离子交换树脂柱,杂质元素被吸附在树脂上,Ru、Rh和Pd以氯络阴离子形式存在,流入淋洗液中。分离纯化后的试液用ICP-AES法测定其中Ru、Rh和Pd的含量。Ru含量在 $(35—230) \times 10^{-6}$ 范围内,重加回收率为90%,相对标准偏差(RSD)为6%;Rh含量在 $(2—20) \times 10^{-6}$ 时,重加回收为106%,RSD为10%;Pd含量小于 2×10^{-6} 时重加回收为72%。

关键词 [阳离子交换分离](#) [ICP-AES](#) [高放废液](#) [钌](#) [铑](#) [钯](#)

分类号

A DETERMINATION METHOD OF Ru, Rh AND Pd IN HIGH-LEVEL LIQUID WASTE (HLLW) BY CATIONEXCHANGE SEPARATION AND ICP-AES MEASUREMENT

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Abstract The paper describes a determination method of Ru, Rh and Pd in HLLW with cation-exchange separation and ICP-AES measurement. A sample of HLLW was treated with the hydrochloric acid containing enough sodium chloride, then passed through a strongly acidic cation-exchange resin column, the Ru, Rh and Pd as chloro-complexes go to the eluate while the interference elements are adsorbed on the resins in the column. The Ru, Rh and Pd are collected and determined by ICP-AES. The obtained results show that the recovery is 90% and the relative standard deviation is 6% as the Ru content within the range $(35—230) \times 10^{-6}$ the recovery is 106% and RSD is 10% as the Rh content within $(2—20) \times 10^{-6}$; and the recovery of Pd is 72% as its content less than 2×10^{-6} .

Key words [Cation-exchange separation](#) [ICP-AES measurement](#) [HLLW](#) [Ru](#) [Rh](#) [Pd](#).

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通讯作者

扩展功能

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