

研究报告

絮凝沉淀处理含盐量较高的铀、钚低放废水

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摘要 针对含盐量较高的低放废水开展了絮凝沉淀处理技术研究。结果表明, 钚在碱性条件下可被有效去除, 增大絮凝剂投加量及降低废水初始pH可以提高铀的絮凝效果。pH的控制是获得铀的高去除率的关键。当 Fe^{2+} 投加量为100 mg/L、废水初始pH为6时, 铀的去除率可达95.5%以上。采用两次絮凝沉淀的方法, 第二次沉淀时调节 $\text{pH}<7.0$, Fe^{2+} 投加量控制在80 mg/L左右, 可以使出水铀质量浓度降到10 $\mu\text{g/L}$ 以下。

关键词 [絮凝沉淀](#); [低放废水](#); [铀](#); [钚](#)

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Treatment of High Salinity Low Level Radioactive Wastewater Containing Uranium and Plutonium by Flocculation

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Abstract Treatment of low level radioactive wastewater with high salinity by flocculation was studied. The results show that plutonium can be removed effectively in alkaline condition, and that flocculation of uranium can be improved by increasing the dosage as well as decreasing the pH. The pH control is critical to obtaining high removal efficiency of uranium. The removal efficiency of uranium is over 95.5% by adjusting the pH to 6 and adding Fe^{2+} at a dosage of 100 mg/L. Two-step flocculation method was studied. The concentration of uranium after the second flocculation is lower than 10 $\mu\text{g/L}$ by adjusting the $\text{pH}<7.0$ and adding Fe^{2+} at a dosage of about 80 mg/L.

Key words [flocculation](#) _ [low](#) [level](#) [radioactive](#) [wastewater](#) _ [uranium](#) _ [plutonium](#)

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