



Recovery of palladium(II) from acidic chloride solution using kerosene containing tri-n-octyl/decyl amine (Alamine 336)

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ABSTRACT

This study employed a tri-n-octyl/decyl amine (Alamine 336) as an extractant dissolved in kerosene to extract palladium(II) from HCl solution at 25°C. The experiments of different stripping reagents such as HCl, NaCl, KCl, BaCl₂, AlCl₃, and thiourea were compared, respectively; and the optimal status was determined. The results showed that the extraction distribution ratios are proportional to the extractant concentration and disproportional to chloride ion concentration. By graphical analysis, the compositions of palladium complexes in organic phase and equilibrium constant of recovered extraction reaction were examined. Finally, the recovery efficiency of palladium(II) in acidic chloride solution was determined.

Keywords: Solvent extraction; Stripping; Alamine 336; Palladium

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