

## Liquid extraction of noble metal ions with bis( $\alpha$ -aminophosphonates)

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### Abstract

Extraction of Au(III), Pt(IV), and Pd(II) ions from hydrochloric acid media with solutions of two bis(aminophosphonates), such as N,N- bis(dipentoxyphosphorylmethyl)octylamine and N,N'-bis[[di(octyloxyphosphoryl)methyl]butylamine], in chloroform and xylene was investigated. Both these extractants proved to be highly effective for Au(III) ions in a wide acidity range, which allows these ions to be separated from other noble metal ions with a high degree of selectivity. At the same time, Pt(IV) and Pd(II) ions cannot be separated from one another with the extractants studied. The selectivity of their separation from Fe(III), Cu(II), Co(II), and Ni(II) metal ions is, too, not high. The reasons for these results lie in the specific structural features of the extractants, which predetermine the extraction mechanism. © Pleiades Publishing, Inc., 2006.

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