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Facilitated transport of copper through bulk liquid membrane containing di-2ethylhexyl phosphoric acid

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ABSTRACT

An experimental study is presented on facilitated transport of copper (II) cations through a bulk liquid membrane containing di(2-ethylhexyl) phosphoric acid (D2EHPA) in dichloromethane. The effects of different parameters on copper transport through the membrane such as the carrier concentration, pH of the product and feed phases, stirring speed and temperature were investigated. It was found that copper transport was greatly affected by stirring speed and the pH of both aqueous phases, while temperature influenced weakly the copper transport. The extraction of copper from ammoniacal solution was very fast reaching 100% after just 1 h while only 2% of copper remained into the membrane at the end of the operation.

Keywords: Facilitated transport; Bulk liquid membrane; D2EHPA; Ammoniacal solution of copper

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