

Application of Liquid Emulsion Membrane Technique for the Removal of Cadmium(II) from Aqueous Solutions Using Aliquat 336 as a Carrier

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Abstract : In the present work, emulsion liquid membrane (ELM) technique was applied for the extraction of cadmium(II) present in aqueous samples. Aliquat 336 (Chloride tri-N-octylmethylammonium) was used as carrier to extract cadmium(II). The main objective of this work is to investigate the influence of various parameters affected the ELM formation and its stability and testing the performance of the prepared ELM on removal of cadmium by using synthetic solution with different concentrations. Experiments were conducted to optimize pH of the feed solution and it was found that cadmium(II) can be extracted at pH 6.5. The influence of the carrier concentration and treat ratio on the extraction process was investigated. The obtained results showed that the optimal values are respectively 3% (Aliquat 336) and a ratio (feed: emulsion) equal to 1:1.

Keywords : cadmium, carrier, emulsion liquid membrane, surfactant

Conference Title : ICACEC 2017 : International Conference on Advanced Chemical Engineering and Crystallization

Conference Location : Kuala Lumpur, Malaysia

Conference Dates : February 12-13, 2017