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MODELING OF SELECTIVE PERTRACTION OF CARBOXYLIC ACIDS PRODUCED BY *Actinobacillus succinogenes* FERMENTATION

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Abstract

Formic and acetic acids could be selectively removed from the mixture with succinic acid by facilitated pertraction with tri-n-octylamine (TOA). The pertraction selectivity is positively influenced by increasing the pH-gradient between the feed and stripping phases and carrier concentration in liquid membrane up to 70 g/L, as well as by lowering the mixing intensity of the two aqueous phases, TOA concentration exhibiting the most important influence. The cumulated influences of the considered parameters have been included in a mathematical model describing the pertraction of these carboxylic acids by means of the selectivity factor. The proposed model offers a good concordance with the experimental values of selectivity factor, the average deviation being of ±5.22%.

Key words: carrier, liquid membranes, mass flow, selectivity, succinic acid fermentation

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