"Gheorghe Asachi" Technical University of Iasi, Romania

RECOVERY OF NICOTINIC ACID FROM INDUSTRIAL EFFLUENTS BY FACILITATED PERTRACTION

Dan Caşcaval[1*], Anca-Irina Galaction[2]

[1] *"Gheorghe Asachi" Technical University of Iasi, Faculty of Chemical Engineering and Environmental Protection, Department of Organic and Biochemical Engineering, 73 Prof. Dr. Doc. Dimitrie Mangeron Street, 700050, Romania*
[2] *"Gr.T. Popa" University of Medicine and Pharmacy of Iasi, Faculty of Medical Bioengineering, Department of Biotechnologies, 9-13 M. Kogalniceanu Street, 700454, Iasi, Romania*

Abstract

The influences of the pH-gradient between the feed and stripping phases and of carrier concentration inside the membrane phase on the efficiency of facilitated pertraction of nicotinic acid with Amberlite LA-2 from aqueous solution have been analyzed. The experiments have been carried out using an U-shaped pertraction cell which allowed to easily maintaining the liquid membrane between the two aqueous phases. On the basis of the experimental data and theoretical investigation on pseudosteady-state regime, a model describing the acid accumulation inside the liquid membrane by means of the permeability factor has been developed. The proposed models offer good concordance with the experimental data and can be useful for facilitated pertraction optimization.

Key words: Amberlite LA-2, liquid membrane, mass flow, nicotinic acid, permeability factor, pertraction

---

[*] Author to whom all correspondence should be addressed: e-mail: dancasca@ch.tuiasi.ro