



New Polymer Inclusion Membrane Containing Modified B-Cyclodextrin: Application to Molecular Facilitated Transport

Fathia Ibn El Haj Amor¹, Imen Iben Nasser¹, Zeineb Baatout¹, Safa Teka¹, Nejmeddine Jaballah¹, Laura Donato², Mustapha Majdoub¹ and Chedly Ahmed^{1*}

1. Laboratoire des Interfaces et Matériaux Avancés (LIMA), Université de Monastir, Faculté des Sciences de Monastir, Bd. de l'Environnement, 5019 Monastir, **TUNISIA**
2. Research Institute on Membrane Technology, ITM-CNR, c/o University of Calabria, Via P. Bucci, Cubo 17/C, 87030 Rende (CS), **ITALY**

Email: ahmedchedly10@gmail.com

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ABSTRACT

The current study presents the results concerning the first use of a polymer inclusion membrane (PIM) containing the modified β -cyclodextrin. The effective PIMs containing the Methyl-Beta-Cyclodextrin (β -CDMe) or Benzyl-Beta-cyclodextrin (β -CDBn) as the carrier, cellulose triacetate (CTA) as the base polymer and 2-Nitrophenyl octyl ether (2-NPOE) as a plasticizer were synthesized and characterized by different techniques. Several factors on the transport efficient have been studied. These factors include the nature and the concentration of the carrier, the type of plasticizer and the initial concentration on the feed phase. In order to acquire an efficient transport, the new β -Cyclodextrin-based membranes were investigated by ethylenediamine (EDA) and ammonia (NH_3).

Keywords: Polymer inclusion membrane, beta cyclodextrin modified, facilitated transport, Separation.
