Abstract

A mathematical model of the transport material through a membrane of finite thickness via the process of diffusion has been developed. We may consider a membrane in between a donor and a receptor compartment, the cause of an externally applied electric field and concurrent first-order chemical reaction of the diffusion species with sites in the membrane on the diffusion
state is examined via the formulation of a time dependant differential equation and its
subsequent solution by variational iteration method (VIM). A simple closed form of analytical
expression for the concentration profile is derived and compared with the previous results and
found to be in good agreement.

Reference

- Fakhari, A., Domairry, G.,Ebrahimpour: Approximate explicit solutions of nonlinear BBMB

Index Terms

Computer Science Applied Mathematics

Key words

Diffusion membranes Diffusion équations
Active diffusion

Iontophoresis