

ELECTROSMOTIC PERMEABILITY OF ION-EXCHANGE MEMBRANES.

Gnusin N., Berezina N., Demina O.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The purpose of this work is to study the influence of the current density and of the concentration of the equilibrium solution on the rate of electroosmotic flow in the solution-membrane-solution system. Experimental evidence indicates that the volume flow rate increases in proportion to the current density, confirming that Widemann's law is also valid for ion-exchange membranes, and the electroosmotic permeability is independent of current density in the range studied, from 3 to 60 mA/cm². The form of the dependence of the electroosmotic permeability both of homogeneous and of heterogeneous membranes on concentration is determined by the water content in the ion-exchange material.
