

Aging effect on the impedance behavior of poly(vinyl chloride) ion-selective electrodes. Abu Samrah, M. M.; Bitar, R. A.; Zihlif, A. M.; Jaber, A. M. Y.. Phys. Dep., Univ. Jordon, Amman, Jordan. Applied Physics Communications (1983), 3(3), 225-34. CODEN: APCODQ ISSN: 0277-9374. Journal written in English. CAN 100:104606 AN 1984:104606 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

The impedance behavior of PVC [9002-86-2] matrix ion-selective membrane electrodes, studied over 6 wks. showed that aging has a large effect on impedance and effective parameters such as elec. resistivity and relaxation time const. The influence of aging is attributed to complicated mechanisms operating simultaneously such as surface and bulk clustering effects, formation of multicharge resistive layers and diffusion of charge carriers or plasticizer from the membrane. These processes could perturb the conduction mechanism and cause membrane failure.