

عنوان مقاله:

Polymeric membrane electrode for citrate ion selective by potentiometry and Impedance technique

محل انتشار:

یازدهمین سمینار سالانه الکتروشیمی ایران (سال: 1394)

تعداد صفحات اصل مقاله: 3

نویسندگان:

Mohammad Mazloum-Ardakani - *Department of Chemistry, Faculty of Science, Yazd University, Yazd, Iran*

Farzaneh Hoseynidokht - *Department of Chemistry, Payame Noor University (PNU), Ardakan Center, Iran*

Rasool Vafazadeh - *Department of Chemistry, Faculty of Science, Yazd University, Yazd, Iran*

خلاصه مقاله:

A Citrate Ion-Selective polyvinyl chloride (PVC) membrane electrode based copper(II) complexes bearing salicylaldehydesemicarbazone tridentate Schiff bases ligand as a carrier for the Citrate anion is reported. In this work, a new strategy for optimizing membrane components by electrochemical impedance spectroscopy (EIS) is presented. The performance of this electrode was investigated using potentiometric and EIS techniques. The potentiometric results indicated that the prepared electrode had a Nernstian slope of -19.7 ± 0.3 mV in a linear concentrations range of 1.0×10^{-7} - 1.0×10^{-1} M, a detection limit of 6.3×10^{-6} M, an applied pH range of 5.03-11, and a response time of less than 15 s; while using the EIS technique, the linear concentrations range was 1.0×10^{-8} to 1.0×10^{-1} M and the pH range increased to 4.40-10.60

کلمات کلیدی:

Ion selective electrode, Potentiometric, Citrate, Membrane, Plasticizer, Additive. Impedance

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