Plastic Sensor for Losartan Potassium Determination based on Ferrocene and Ionic Liquid

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In this study, a potentiometric sensor based on a plastic-membrane was introduced for the determination of losartan potassium in pharmaceutical formulations. The sensing element contained an ion-pair, which was synthesized by the interaction of losartan potassium and 1,10 phenanthroline monohydrate. The best membrane sensor response was obtained by a membrane composed of 30.6% PVC, 61.4% *o*-NPOE, 7.5% ion-pair and 0.5% ionic liquid. The proposed method was successfully applied for the determination of losartan potassium in some formulations. The proposed sensor showed a linear dynamic range between 5.0×10^{-5} and 1.0×10^{-2} M of losartan potassium with a Nernstian slope of 62.0 ± 1.0 mV per decade and a lower detection limit of 3.5×10^{-5} M. It displayed a fast response time of about 10 s, and a lifetime of about three weeks without any significant loss in its performance.

Keywords: Losartan potassium, potentiometric sensor, PVC membrane electrode, ion-pair.

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