

ABSTRACT

The thesis deals with the fabrication of new ion selective electrodes on the basis of plastic membranes and chemically modified carbon paste, investigation of their characteristic performance, and evaluation of their pharmaceutical and industrial applications. A novel PVC ion selective electrode was developed for determination of antihistamine H1 antagonist fexofenadine in its pharmaceutical preparations (*TELFAST*) based on the ion-pair of fexofenadine-reneickate. Coated-graphite PVC membrane cadmium-selective electrodes based on cetylpyridinium-tetraiodocadmte (I) and cetylpyridinium-tetrabromocadmte (II) ion-pairs have been also developed. The two electrodes were applied for the determination of cadmium in cadmium containing alloys, welding-wire, and polluted water.