Novel Ion Selective Electrode for Determination of Pregabalin in Pharmaceutical Dosage Form and Plasma

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Abstract

Ion selective electrode technique was developed for determination of pregabalin. The key to construct such an electrode is to produce a sensitive and selective membrane that responds to a particular ionic species. Such membrane is usually prepared by in corporating an appropriate ion exchanger and solvent mediator into a poly (vinyl chloride) or (PVC) membrane matrix. The present work originates from the fact that pregabalin behaves as a cation in 0.1 N HCl solution and forms a precipitate with anionic potassium tetrakis p-chlorophenyl borate which used in fabrication of the membrane sensor. The potentiometric response was linear with constant slope over a drug concentration range of 10 -6 –10 -3 M with slope of 53±1 mV/decade . The developed method was applied successfully for the determination of pregabalin in the pure powder form, pharmaceutical formulation and in spiked human plasma without any interference.

Analytical and Bioanalytical Electrochemistry 10/2012; - 2012, December