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Amira M. El-Kosasy, Mona Hamdy Abdel Rahman, Sarah H. Abdelaal

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Amira M. El-Kosasy, Mona Hamdy Abdel Rahman, Sarah H. Abdelaal*

Department of Pharmaceutical Analytical Chemistry, Faculty of Pharmacy, Ain Shams University, Cairo, Egypt.

*Corresponding author: sarah.hamdy19@gmail.com

Abstract

Graphene is the "new star" material for electrochemical sensing. It has unique mechanical, thermal and electrical properties, in addition to its ultra light weight. In the present work we combine for the first time the special features offered by graphene and the advantages of ion selective potentiometric sensors in a single study. We propose two types of sensors, a graphene based carbon paste and a poly vinyl chloride (PVC) based membrane sensors for the analysis of Vilazodone hydrochloride in bulk, human plasma and formula milk samples. Electro active agent is an ion-association complex based on coupling of Vilazodone cationic cite with anionic cite of Molybdate ion in a ratio 1:1. Both sensors are evaluated according to the IUPAC recommendation data, revealing linear response in the concentration range 10^{-7}-10^{-3}