

6th Asia-Pacific Pharma Congress

July 11-13, 2016 Kuala Lumpur, Malaysia

Sensitive and selective polyaniline nanofibre based voltammetric sensor for the quantification of Tinidazole

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Voltammetric sensor is an effective tool for pharmaceutical analysis due to its simplicity, specificity, sensitivity, fast, cost-effective and repetitive measurements. A highly sensitive and selective sensor is fabricated based on polyaniline modified glassy carbon electrode (PANI/GCE). It is demonstrated that this sensor can be used for determination of a pharmaceutically important compound tinidazole (TNZ) using square wave voltammetry (SWV), cyclic voltammetry (CV) and electrochemical impedance spectroscopy (EIS). The electrode surface was characterized by scanning electron microscopy (SEM). The developed sensor also exhibited good reproducibility and long-term stability. Polyaniline nanofibers are expected to be promising material for sensing applications because of the ease of fabrication, excellent electrochemical performance, and high electroactive surface area.

Biography

Priyanka Karolia has obtained her MSc in Environmental Chemistry in 2010. She is a recipient of Junior Research Fellowship from Department of Science and Technology, Government of India for excellent academic. She has published three papers in the journals of international repute. Presently, she is involved in research and teaching.

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