

A simple methodology for voltammetric quantification of LSD in seized samples

Marcelo Firmino de Oliveira and Erica Naomi Oiye
University of São Paulo, Brazil

LSD is the abbreviation of Lysergic Acid Diethylamide, a hallucinogenic commonly found in blotter, whose numbers associated to its consumption are rising, mainly in internet market. Despite of various studies in the electrochemical detection for seized drugs, LSD has not been widely explored. Voltammetric determination provides specific and reliable results, with a simple experimental procedure. In the present study, we analyzed LSD by Cyclic Voltammetry, with a glassy carbon as working electrode without any surface modification, using ammonium perchlorate in methanol in the presence of water, composing the supporting electrolyte solution, in the proportion 95:5 v/v in a potential range from -0.5 V to 1.8 V. From this condition, it was possible to establish a linear relation between the oxidation peak and the concentration of LSD, with a Limit of Quantification equal to 1.64×10^{-6} mol L⁻¹, equivalent to a blotter with just 3.18 µg. After all validation process was applied, it was possible to obtain the quantification of LSD in a seized sample from the police laboratory. Voltammetric determination might be seen as a promissive alternative for drug analysis, with portability and quickness as some characteristics for its quantification. From the analytical point of view, the present methodology ensures trustful and specific results.

Biography

Marcelo Firmino de Oliveira has completed his PhD in Analytical Chemistry from Universidade Estadual Paulista– Instituto de Química, Brazil. He is a Professor of Analytical Chemistry at Universidade de São Paulo– Departamento de Química - FFCLRP, Brazil. He has published 51 papers in reputed journals. His research group– GEEQFOR– works with electrochemical analysis and the development of new sensors for illicit drugs.

marcelex@usp.br

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