

**O 67. ELECTROCHEMICAL DETERMINATION OF CADMIUM AND LEAD ON
ZnFe₂O₄/rGO/GCE**

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ABSTRACT: Contamination of heavy metals (lead, cadmium, mercury, chromium, copper, nickel and zinc etc. possess serious problems to the environment and public health. Heavy metal ions are the main pollutant one of aqueous systems due to their solubility in water and non-biodegradable properties. Heavy metals taken in low concentrations can cause health problems. Serious and chronic illnesses are the worse effects associated with heavy metal ions poisoning even at low level exposure. (Kitt, et al., 2019). Stripping voltammetric methods are the most efficient electrochemical techniques for trace analysis due to their short response time, low cost, high sensitivity and selectivity for the detection of heavy metal ions in environmental samples. The performance of voltammetry is strongly influenced by the working electrode material. (Serran, et al., 2015). In this study, ZnFe₂O₄-rGO modified glassy carbon electrode has been used to detect lead (Pb (II)) and cadmium (Cd (II)) in industrial wastewaters. In addition operational parameters including pH, deposition potential and time has been optimized.

Keywords: Electrochemical detection, Heavy metal ions, Modified electrode, Stripping voltammetry.

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