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Electrochemical analysis of lead by the modified carbon paste electrode: Application in real samples

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The modification of graphite carbon is made by adding a quantity of 2-Benzimidazole Thiol (BIT), the 10% BIT electrode is able to detect with great sensitivity the lead in the electrolyte solution containing 0.1 mol / L NaCl with a detection limit (DL, 3s) equal to 2,77.10-9 mol/l and quantification limit (QL, 10s) worth 9,24.10-9 mol/l. The behavior of Pb2+ is studied by three electrochemical methods: Square Wave Voltammetry (SWV), Cyclic voltammetry (CV) and Electrochemical Impedance Spectroscopy (EIS). The extract of the plant studied to give a better complexation of Pb2 +. The extract of Capparis spinosa L has shown great efficiency for the complexation of lead.

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