

Determination of Linuron in soil by anodic stripping voltammetry with a carbon fiber ultramicroelectrode

M.J. González de la Huebra, P. Hernández Hernández, Y. Ballesteros, L. Hernández Hernández

Abstract— A carbon fiber microelectrode was used for the electroanalytical determination of Linuron (LIN) in soil extracts. The microelectrode was subjected to an electrochemical pretreatment in order to improve the herbicide adsorption on the electrode surface. With this preconcentration step, detection limits of 80 ng ml⁻¹ and determination limits of 260 ng ml⁻¹ were reached. Optimal conditions with respect to accumulation time and potential, scan rate and pH were established. The LIN was determined in a soil sample with the method proposed and the results found were comparable to those obtained by HPLC.

Index Terms— Linuron; Microelectrodes; Soil samples

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