

Ministry of Higher Education and
Scientific Research
Babylon University
Local Environmental
Researches Centre



Abstracts
First Annual Scientific
Conference For Environmental
Researches
14 – 15 November , 2005

Conference Paper: Hair as a Biomarker for Monitoring Human Exposure to Environmental Pollutant

M. H. Matloob

Department of Chemistry

Faculty of Science for Women

University of Babylon

Babylon Iraq

Abstract

The determination of toxic metals in hair is an important clinical screening procedure. In this study, differential pulse anodic stripping voltammetry was used for the simultaneous determination of Cd and Pb in the hair of khat chewers and gas vending station workers. Hair samples were brought into solution by using a mixture of nitric and perchloric acids. The efficiency of the decomposition, and the accuracy and precision of the proposed procedure was studied using a human hair standard. The results indicated that the hair of heavy khat users had significantly higher concentrations of Cd and Pb than did normal controls but considerably lower than those observed in gas vending station workers. The possible connection of these elements with the etiology of disease is discussed. The results confirm the need for reducing the amount of khat currently digested and the immediate improvements of "khat sessions" ventilation.