

P142. RAPID AND SENSITIVE DETERMINATION OF Hg (II) IN ORNAMENTAL PLANT CHLOROPHYTUM COMOSUM USING POLAROGRAPHIC TECHNIQUE

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The objective of this study was to describe a new and simple method for the determination of mercury II ions (Hg II) so that it can be used in various routine analyses. A differential pulse polarographic (DPP) method has been used for the indirect determination of Hg (II). With a known amount of cyanuric acid (CA) in polarography cell (BR buffer, pH 10.5) was added an unknown Hg (II) sample and the Hg (II) concentration is calculated simply from the decrease in the CA peak after reaction with Hg (II). The linear concentration range was between 20 μ M and 120 μ M and limit of detection was calculated to be 6.7 μ M. The proposed method was successfully applied to the determination of Hg (II) in the dried leave samples belong to C. comosum plant that watered with Hg (II) solution. The method was extended to the indirect determination of mercury II in C. comosum plant and results were in agreement with that obtained by a spectrometric comparison method (ICP-MS). The influences of some other commonly found inorganic and organic salts on the developed method for the determination of the trace Hg (II) ions were also investigated. The sufficiently good recoveries and low standard deviations of the data reflect the high accuracy and precision of the proposed differential pulse polarographic method.

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