APPLICATION OF GC-FID AND GC-MS IN THE ANALYSIS OF RESIDUE LEVEL OF PHTHALATE ESTERS ALONG THE KLANG RIVER

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ABSTRACT

Abstract

"Phthalate Esters" ("PEs") are considered as major industrial wastes that can cause pollution in the river water. A study of determination of the PEs in the Klang River water by the application of "Gas Chromatography" ("GC") with "Flame-Ionisation Detector" ("FID") will be carried out in this project. "Mass-Selective Detector" ("GC-MSD") will be used in the identification of phthalates compound. A BP-5 non-polar capillary column will be used for the river water analysis. The river water will first be separated by a liquid-liquid extraction with an organic solvent. The extracts will then be subjected to a clean-up procedure to separate out all the other unwanted organic compounds in the samples. Temperature programming will carry out optimisation of the GC to obtain a good resolution of all the PEs. A spike-in technique will be introduced to the samples to calculate the percentage of recovery of PEs.

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