

**DETERMINATION OF ORGANOPHOSPHORUS INSECTICIDES IN
ENVIRONMENTAL WATERS BY USING SPE AND SPME TECHNIQUES
WITH GAS CHROMATOGRAPHY**

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ABSTRACT

The aim in the determination of pesticides in environmental water samples is either to give a broad spectrum analysis identifying the largest possible number of known and unknown analytes at one time, or the determination of one or several target compounds. The determination of low concentrations of organophosphorus insecticides in water, by chromatographic techniques requires a previous concentration of the sample. Two procedures for the trace-level determination of 11 organophosphorus insecticides were developed by using solid phase extraction disks containing C₁₈ and SDB and solid phase microextraction fibres containing polyacrylate (PA) followed by gas chromatography with mass spectrometry detector and flame thermionic detector. The selected organophosphorus compounds are the more common insecticides used in the European Union and especially in the Mediterranean region.