

## APPLICATION OF GAS CHROMATOGRAPHY AND MASS SPECTROMETRY ON SEDIMENT SAMPLES: DETERMINATION OF ORGANOCHLORINE PESTICIDES

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**S**eventeen organochlorine pesticides (OCPs) were evaluated in 14 surface sediment samples from a dam lake in Northwestern Turkey. As analytical tool GC-Mass system; HP (Hewlett Packard) 6890 series gas chromatograph coupled with HP 5973 mass spectrometer was used. The HP 5 MS capillary column had 30 m length with 0.32 mm internal diameter. A 0.25 mm film thickness cross-linked with stationary phase of 5% phenyl methyl siloxane and ultra-pure helium gas was used as mobile phase. Ultrasonic bath extraction method was applied and cleaned up process were carried up with anhydrous Na<sub>2</sub>SO<sub>4</sub> and Florisil column. Total pesticides concentrations were ranged from 0.237-2.39 mg/kg for dry weight. Percent total organic carbon (TOC) were observed between 1 and 3%. Average total OCP concentrations was 58.00±45.44 mg/kg. The total concentrations of OCPs in sediment samples ranged from 12.9 to 169.9 mg/kg, with a mean value of 58.00 mg/kg. Although organochlorine pesticides have been banned in Turkey, the residues can still be seen in sediment samples indicating the use of prohibited pesticides in the country. Comparison of organochlorine pesticide concentrations in sediment samples with other lakes in Turkey implies higher concentration and therefore higher usage of synthetic chemicals.

### Biography

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