

IDENTIFICATION OF VOLATILE AND SEMI-VOLATILE COMPOUNDS IN OLIVE-OIL MILL WASTEWATER BY HEADSPACE SPME AND GC

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ABSTRACT

Olive-oil mills generate large quantities of toxic wastewater (OMW) posing a major environmental concern in the Mediterranean. This paper, deals with the development of a novel analytical method based on headspace Solid-Phase Microextraction (SPME) and Gas Chromatography and used for the identification of the main volatile and semi-volatile organic compounds in OMW samples. Optimization of the SPME method was achieved by controlling several parameters such as the SPME fiber and extraction temperature. Overall, the proposed technique proved to be an extremely fast, solvent-less and simple detection method for the analysis of complex environmental samples such as OMW.