

**SPECTROFLUORIMETRIC DETERMINATION OF HUMIC
SUBSTANCES IN SOILS AFTER MICELLAR EXTRACTION BY
USING POLYOXYETHYLENE 10 LAURYL ETHER**

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Humic substances form the major organic component of soil. Their environmental importance is in their role like reserve matter of organic compounds in the carbon cycle and their capacity for sorption metals and different kinds of contaminants¹.

Traditionally, the most common method for the extraction consists in multi-step clean-up procedures with the use of NaOH as extractant and HCl/NaOH alternatively for the purification, which makes the method be too time consuming².

On the other hand, the use of surfactant as extractants represents an alternative method for the extraction of humic substances. The micellar systems have become an advantageous tool for the extraction due to their easy handling, biodegradability and one step procedure.

This procedure is based in the capacity of surfactants to trap the compounds with hydrophobic groups like humic substances³. Moreover, the surfactant improves the fluorescence intensity and peaks more defined are obtained.

In this work humic substances (humic and fulvic acids) have been determined in soil samples by fluorescence after their micellar extraction with the non-ionic surfactant polyoxyethylene 10 lauryl ether as extractant. Once the experimental conditions of the method have been optimised, the results obtained for the proposed method were compared with those found using the conventional extraction methodology for these compounds from soils.

References:

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