INTRODUCTION
Organochlorine and organophosphorous pesticides are lipophilic compounds which tend to associate with organic matter and organisms. Their low chemical and biological degradation rates have led to their accumulation in biological tissues and subsequent magnification of concentrations in organisms progressing up the food chain.

A large number of multiresidues have been developed for this kind of compounds in solid samples.

As an alternative to conventional techniques we used Microwave Assisted Micellar Extraction (MAME) for the extraction of these compounds in different matrix using a non-ionic surfactant solutions as extractant.

In this work we present the implementation of MAME procedure using POLE as extractant in the extraction of organochlorine and organophosphorous pesticides in sediments, soils and vegetables prior to their determination by HPLC-UV.

EXPERIMENTAL
The samples were spiked with the mixture of organochlorine or organophosphorous pesticides.

MAME procedure
Spiked samples were introduced in Teflon vessels with the optimum volume of POLE solution, introduced in the microwave oven and irradiated at the optimized conditions. The surfactant extracts were then removed, filtrated and directly analysed in the HPLC/UV system.

RESULTS AND DISCUSSION

Optimized Variables
For the variables optimization was used a multiparametric analysis.

Analytical Applications

CONCLUSIONS

Microwave assisted extraction of pesticides using surfactant solutions is a procedure with several advantages: is an efficient method, less time consuming, green method, low cost and their compatibility with mobile phase used in HPLC.

The method has been applied in different types of soils and vegetables at different spiked times with satisfactory results for organochlorine and organophosphorous pesticides.

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References