A new method using a mix of non-ionic surfactant is applied for the microwave-assisted extraction of six organochlorine pesticides from culture soils. Organochlorine pesticides have been used around the world during decades, nowadays in several countries are banned, but these compounds are very persistent in the environment and are still found in agricultural soils.

EXPERIMENTAL

A 2 g (±5*10^-4) of soil sample was spiked with the pesticides mix with a final concentration of 300 ppb (DDTs) and 500 ppb (dieldrin and aldrin). For the extraction was added to the soils a micellar solution of a mix of 2 non-ionic surfactant (70% Polyoxyethylene 10 lauryl ether plus 30% Polyoxyethylene 10 Cetyl ether). The spiked samples were allowed to dry for 24 hours.

RESULTS AND DISCUSSION

Optimized Variables

For the variables optimization were done a multiparametric analysis.

CONCLUSIONS

Microwave assisted extraction of pesticides using surfactant solutions is a method with several advantages:

1. Efficient method
2. Easy and less time consuming
3. Green method
4. Low cost
5. Compatibility with mobile phase used in HPLC

REFERENCES