

عنوان مقاله:

Application of immobilized ionic liquids on inorganic nanostructures in microextraction methods for determination of pesticide in river water samples

محل انتشار:

نهمین سمینار ملی شیمی و محیط زیست ایران (سال: 1398)

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خلاصه مقاله:

Fungicides are a group of pesticides which are widely used and have negative effects on human health and the environment; Pesticide residues resulted from applying fungicides is a very important issue due to environmental pollution and human health risk and should be seriously considered. In order to achieve such insight summing up the dangers of pesticides is necessary so that attributes to predict social costs and benefits and monitor new policies applied. In this study, the possibility of extracting triazoles, organophosphors and pyrethroids a fungicide was evaluated by utilizing nanostructures, LDH/DABCO/PW, using solid phase microextraction methods. triazoles, organophosphors and pyrethroids pesticides is one of the most important pesticides with worldwide use for the protection of a variety of vegetables, fruits and grains and the destruction of many fungal pathogens because of its broad-spectrum and systemic properties. In this study, a new synthetic microextraction is used in which the LDH/DABCO/PW with nano-holes is applied for extraction and identification triazoles, organophosphors and pyrethroids; the high specific surface area, selectivity, shape and size are the main characteristics of these compounds leading to numerous catalytic applications, filtration, separation and extraction of pesticides. Under the optimized conditions, the linear response for the analytes was observed in the range from 0.001 to 100 $\mu\text{g L}^{-1}$ with the Correlation coefficients (R^2) ranging from 0.965 to 0.999 and the limits of detection (LOD) between 0.002 and 0.03 $\mu\text{g L}^{-1}$. The proposed fiber was successfully used for the determination of agriculture pesticides in spiked river water samples and RSD% values were obtained in the range of 4.9% - 11.1%. Also, the correlation coefficient was high ((0.999) and linear range was broad (0.001 to 200 ng/ml).

کلمات کلیدی:

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