Maryam Salimi, J Chromatogr Sep Tech 2018, Volume: 09
DOI: 10.4172/2157-7064-C2-044

Joint Event on

8th World Congress on Chromatography

&

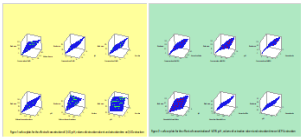
4th International Conference on

Polymer Science and Technology

September 13-14, 2018 | Prague, Czech Republic

Optimization of dispersive liquid-liquid microextraction (DLLME) method for determination of 2, 4-D and MCPA in water by HPLC with using Box-Behnken design

Maryam Salimi
Tehran Province Water and Wastewater Company, Iran



This paper describes the optimization of DLLME method for determination of Chlorophenoxy herbicides including 2, 4 D and MCPA by high-performance liquid chromatography (HPLC). For DLLME, a mixture of extraction solvent (Ethyl acetate, 0.35 ml for 2,4 D and 0.6 ml for MCPA) and dispersive solvent (acetonitrile, 0.65 ml for 2,4 D and 0.4 ml for MCPA), were rapidly injected into water sample for the formation of cloudy solution. The analysis was performed on a high-performance liquid chromatography (HPLC) system with a C18 column (250×4.6 mm, i.e.), and mobile phase contain of 0.05 M H3 PO4/acetonitrile (90:10) to 100 acetonitrile in 30 minutes. The flow rate was 1 mL min−1, and the chromatogram was monitored at a wavelength of 280 nm. In this study, the effects of concentration of sample, pH, volume of solvent extraction, extraction time in the distributed liquid-liquid extraction have been examined and optimal conditions were obtained using the Box-Behnken.

Biography

Maryam Salimi worked (2000-2006) as Analytical Chemist in QC Laboratory of Pharmaceuticals and worked (2006-2018) as a Researcher and Analytical Chemist in Organic Laboratory of Tehran Province Water and Wastewater Company.

la_info91@yahoo.com

Notes: