

عنوان مقاله:

Acidic pesticide residues assessment in edible oils; Application of solvent microextraction followed by high performance liquid chromatography–diode array detector

محل انتشار:

همایش بین المللی مطالعات میان رشته ای در صنایع غذایی و علوم تغذیه ایران (سال: 1398)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

Vortex assisted liquid-liquid extraction and dispersive liquid-liquid microextraction have been proposed for the isolation and concentration of three acidic herbicides including fenoxaprop, fluazifop, haloxyfop from edible oil samples. For this purpose, firstly, the analytes were extracted into sodium hydroxide solution by deprotonation of the analytes. This solution was used as a dispersive solvent in the followed microextraction procedure. Afterward, the obtained aqueous phase was mixed with acetic acid as a pH adjustment agent and co-disperser solvent. After adding dichloromethane as the extraction solvent to the above solution, it was quickly dispersed into deionized water. The validation parameters indicated that the method has low limits of detection and quantification in the range of 0.3-1.8 and 1.0-6.0 ng mL⁻¹, respectively. Relative standard deviations of the method were obtained in the range of 4.8-6.2% and 5.2-9.1% for intra- (n=6) and inter-day (n=5) precisions, respectively. Good enrichment factors ranging from 185 to 227 and extraction recoveries ranging from 74 to 91 were the other advantages of the method. These merits showed that the method is an efficient, inexpensive and successful procedure in the determination of the analytes

کلمات کلیدی:

Edible oil, Acidic pesticides, Solvent microextraction

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