

Vortex assisted liquid-liquid microextraction based on hydrophobic eutectic solvent for extraction of pesticides from environmental waters

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In recent years, as a green and environmentally friendly solvent, the hydrophobic deep eutectic solvent (DES) has received extensive attention. In this study, we developed a vortex assisted liquid-liquid microextraction (LLME) procedure based on hydrophobic DES, which can quickly, efficiently and selectively determine common pesticides in water samples. Using terpenoids and fatty acids/alcohols as components, 12 new types of hydrophobic DESs were prepared, and DES with a recovery rate of the target was selected as the extraction solvent. The main parameters that may affect the extraction efficiency of vortex-assisted LLME were optimized, including the auxiliary method, the molar ratio of DES components, the volume of DES and the NaCl content, and finally a satisfactory extraction efficiency was obtained. The method of extracting pesticides using eddy current assisted LLME showed excellent accuracy, detection limit and quantification limit.