

Liquid phase Microextraction for preconcentration and extraction some metal ions

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In this research, a simple preconcentration method base on hollow fiber liquid phase microextraction (HF-LPME) was developed for preconcentration and determination of trace amount of copper in aqueous phase by UV-Vis spectrophotometry. The maximum extraction efficiency of copper was obtained at pH=6, Cyanex 301 0.2 mol L⁻¹, ionic strength 0.2 mol L⁻¹, stirring speed 200 rpm and time of extraction 25 min. The parameters affecting the extraction process were optimized using taguchi method. Under optimal conditions, the reasonable lineary was 0.9922. The experimental limit of quantitation(LOQ) was 0.1 mg L⁻¹ and the relative standard deviation (RSD%) was obtained as 2.4%. The result shows that this method is suitable to extract and preconcentrate trace amount of Copper ions aqueous solutions.

Keywords : Micro extraction, Copper, Hollow fiber, Double beam spectrophotometer

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