

Sample preparation using liquid membrane extraction techniques

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Abstract

A brief review is given of membrane extraction techniques that are seen as suitable for the extraction of various chemicals in water samples. Membrane-based extraction methods have now gained popularity as methods of choice in the extraction of both ionisable and non-ionisable molecules from different samples. The main attractive features for these techniques include the use of minimal organic solvents, high selectivity and clean-up efficiency, with high enrichment factors. In most cases the overall cost involved is low due to the simplicity of the techniques which normally involve relatively fewer steps and handling procedures as compared to many other sample-preparation techniques. The various forms and the configurations of membrane-based techniques are another attractive feature which allows the possibility of hyphenation with separation instruments such as gas/liquid chromatographs and even capillary electrophoresis.

Keywords: liquid membrane extraction techniques, sample preparation, water monitoring, organic and inorganic compounds