Abstract

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Title: Study of BTEX determination by microextraction in the Lab-in-syringe system coupled with gas chromatography

Benzene, toluene, ethylbenzene and xylenes are one of the major contaminants in the environmental water samples. Because these compounds are consider to be toxic to humans by World Health Organisation, their determination is critically important. The determination of BTEX using gas chromatography with flame ionisation detection combined with direct single drop microextraction using Lab-in-syringe system was studied. The effective paramateres such as microdroplet volume, extraction time, type and use of salt solution and chromatographic parameters were evaluated. The purpose of this work was automation of the entire process using 3D elements in the system.