

Comparison of extraction techniques on determination of PAHs in drinking water samples

Jonida Canaj

Department of Industrial Chemistry, Faculty of Natural Sciences UT, Albania

Abstract

The purpose of this study is to provide some data about the extraction techniques and comparison of them for quantification of toxic compounds as polycyclic aromatic hydrocarbons in drinking water samples. It is very important detecting and analyzing polycyclic aromatic hydrocarbons (PAHs) because of their toxicity and carcinogenicity to human. There are some techniques of extracting PAHs from different water matrices such as drinking water. The classical technique is liquid-liquid extraction (LLE). Different extraction techniques as solid-phase extraction (SPE), LLE, Automated SPE, used to release PAHs from water samples have been overviewed in different studies. The method used in this study about extraction of SPE technique is Environment Protection Agency (EPA) 8310 method. Recoveries have been obtained using this SPE method, but not all parameters have significant value of recovery. Maybe these low values of recovery come from losing PAHs during the evaporation or from solvent of extraction. The recovery of PAHs is more significant in the case of the concentration 100 µg/L of stock standard (table 1), this means that in very low concentration SPE technique is not the right one. The accuracy of SPE technique is not on very high level depending on the PAHs results. The conclusion of this study is using LLE technique is more detectable in drinking water samples.

Keywords: Polycyclic aromatic hydrocarbons PAHs, extraction technique, LLE, SPE.

Full Text: [PDF](#)



This work is licensed under [Creative Commons Attribution 4.0 License](https://creativecommons.org/licenses/by/4.0/).

Academic Journal of Business, Administration, Law and Social Sciences ISSN 2410-3918 (print)

ISSN 2410-8693 (online)

Copyright © IIPCCCL-International Institute for Private, Commercial and Competition law