



Analyze of some Volatile Organic Compounds in Air Samples from Tirana City by the Gas Chromatographic Technique

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Abstract: In this study biota samples and particle samples were analyzed for the determination of some volatile organic compounds (VOC) concentrations. The analyses of volatile organic pollutants in air samples are limited for some laboratories because of the lack of materials for the sampling of air samples. Other limitations of air sample data are the influence of vertical and horizontal air current, temperature, humidity, etc. Mosses, tree leaves, and lichens are probably the most widely used plant group in relation to the assessment of airborne organic compounds. Benzene, toluene, ethyl benzene and xylenes (known together as BTEX), some halogenated alkanes and chlorobenzenes were the analyzed VOC. The samples were collected, in December 2013 in nine stations in Tirana, Albania. The quantitative analysis of BTEX was performed by the gas chromatography method by using a flame ionization detector (FID). The column used was a VF-1ms capillary column (30 m x 0.33 mm x 0.25 μ m). The analysis of halogenated alkanes and chlorobenzenes were conducted by the gas chromatography method with electron capture detector (ECD). The column used was an Rtx-5 capillary column (30 m x 0.25 mm x 0.25 μ m). Benzene, toluene and Hexachlorbenzene were detected in higher levels than other studied VOC compounds in both samples.

Keywords: *Bio indicators; airborne pollution; BTEX; Halogenated Alkanes; Chlorobenzenes; Gas Chromatography.*

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