

## THE DETERMINATION OF SOME VOLATILE ORGANIC COMPOUNDS DEPOSED THROUGH PASSIVE INDICATORS USING THE GC/FID TECHNIQUE

Valbona Hoxha (Plaku)<sup>1</sup>, Aurel Nuro<sup>2</sup>

<sup>1</sup>General and Inorganic Chemistry Department, Polytechnic University of Tirana, Albania,  
E mail: bonahoxha@gmail.com

<sup>2</sup>Chemistry Department, Faculty of Natural Sciences, Tirana University, Albania,

### Abstract

This study presents data for a determination method of some volatile organic pollutants in particles near the main streets of Tirana. Monocyclic volatile pollutants such as benzene, toluene, ethylbenzene and xylene (collectively known as BTEX), chlorobenzenes and hydrochlorofluorocarbons, hydrofluorocarbons, chlorinated methane, were analyzed in nine samples. The sampling was performed in November 2013. The analysis of organic pollutants in air samples is limited for many laboratories because of the lack of materials for the sampling of air samples. Another limitation is that data obtained from air samples represents of the moment data because of vertical and horizontal air current, temperature, humidity, etc. The data found shows that for volatile organic compounds, in small particles, water condensation or rain could serve as an indicator of deposition. The analysis of the volatile organic compounds was performed by gas chromatography technique using flame ionization detector (GC/FID) with a VF-1ms capillary column (30m x 0.33mm x 0.25um). Benzene, toluene and chlorobenzenes were found in the higher concentrations than other volatile compounds for all samples of Tirana city because of gas discharges from automobilist transport.

**Keywords:** *BTEX, HCFC, Chlorinated methane, Chlorobenzenes, GC/FID*