

## **A STUDY OF VOLATILE ORGANIC CARBON POLLUTION ON A UNIVERSITY CAMPUS DUE TO TRAFFIC**

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With the increasing number of vehicles in metropolitan areas of Turkey, the hydrocarbon levels have also increased in the city air especially at certain crowded streets. As far as the effects of hydrocarbons on humans are concerned, some of them are known to be carcinogenic. People living in crowded sections of the city are exposed to the exhaust fumes of the cars and busses. The same problem has started to be serious on the Middle East Technical University (METU) Campus in Ankara because of the excessive increase in the number of the cars entering the Campus. This is a big Campus where 20 000 students and about 1000 faculty members live. This study was performed to investigate the hydrocarbon pollution on the Middle East Technical University (METU) Campus due to traffic. The samples were collected at 11 locations on the campus, one of them being the control sample. The sampling has continued for 12 months and passive sampling with Orsa-5 tubes have been carried out. The samples were extracted first with CS<sub>2</sub> in the laboratory and then analyzed for their components by using Gas Chromatography especially for BTX components. The results of the study have shown that there is a considerable amount of hydrocarbon pollution on the Campus. The hydrocarbon levels in the ambient air at these sampling locations have also been compared to various standards. The concentration of benzene and toluene have been found to be high which is thought to be due to the gasoline formulation in Turkey.