Characterization of PAH contained in atmospheric particles and gases

V. Mugica[1], M. Torres[1], E. Ortiz[1], S. Hernández[1], A. García[1], A. De Vizcaya[2], R. García[2], A. Osornio[3], L. Molina[4].

[1]Universidad Autónoma Metropolitana-Azcapotzalco, Mexico D.F., Mexico. (vma@correo.azc.uam.mx)
[2]Centro de Investigación y de Estudios Avanzados, IPN, México D.F.
[3] Instituto Nacional de Cancerología, Programa Universitario de Medio Ambiente.
[4] Molina Center for Energy and Environment, San Diego.

The gas phase and particulate matter phase of polycyclic aromatic hydrocarbons in the atmosphere of the Northern of Mexico City were measured simultaneously with a Puff Tisch sampler and two high Vol Tisch samplers (PM10 and PM2.5) during 30 days in the frame of MILAGRO campaign. Gas chromatography coupled with mass spectrometer was used for analysis following EPA protocol TO-13. Naphtalene was the most abundant PAH with concentrations up to 480 ng/m^3 in the gas phase followed by phenantrene, whereas the heavy PAH such as benzo(a)pyrene, benzo(a)anthracene, Indene(123cd)pyrene and crysene were the more abundant in particulate phase.