COMPOSITION OF EXTRACTABLE ORAGANIC MATTER OF AIR PARTICLES IN URBAN ATMOSPHERES OF ALGERIA

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Abstract

Atmospheric particulate matter (PM10) was collected simultaneously at three sites in the north of Algeria, during an intensive campaign in July-August 2006. The particulate organic matter was extracted with solvents and characterised by gas chromatography and mass spectrometry (GC–MS). Most of the organic mass identified consists of *n*-alkanes, polycyclic aromatic hydrocarbons (PAHs), nitrated polycyclic aromatic hydrocarbons (NPAHs), *n*-alkanoic acids and polar compounds. The potential sources of pollutants were reconciled using carbon preference index (CPI) values of *n*-alkanes and diagnostic ratios of PAHs and NPAHs. Concentrations of the total *n*-alkanes varied from 51 to 99 ng.m^{-3}, while average concentration of the total PAHs varied from 1.8 to 3.5 ng m^{-3}. Concentrations of *n*-alkanoic acids and polar compounds (caffeine) presented the highest values of the total composition of organic aerosol at different urban areas.

Keywords: POM, CPI, PAHs, NPAHs, *n*-Alcanes, *n*-alkanoic acids.