

Measurements of VOCs in Mexico City during the MILAGRO campaign

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As part of MILAGRO we collected whole air canister samples at two Mexico City ground sites: the Instituto Mexicano del Petroleo, located in the city, northeast of the center, and the Universidad Technologica de Tecamac, a suburban site approximately 50 km northeast of the city center. Samples were also collected in various other locations throughout Mexico City. Over 300 whole air samples were collected and analyzed for a wide range of volatile organic compounds (VOCs) including methane, carbon monoxide, nonmethane hydrocarbons (NMHCs) and halocarbons. Propane was the most abundant NMHC at both the urban and suburban locations, with mixing ratios frequently in excess of 10 parts per billion at both locations. This is likely the result of the widespread use of liquefied petroleum gas (LPG) of which propane is a major component. For most species, median mixing ratios at the urban sites were significantly greater than at the suburban site. Here we compare results from both urban and suburban locations and also examine the influence of transport on the composition of outflow from Mexico City.