

## Measurements of Volatile Organic Compounds at Mangshan, suburban of Beijing

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Volatile organic compounds (VOC) were measured during Mangshan intensive campaign held in fall in 2007. Ambient air was sampled at Mangshan (40.15N, 116.17E) located at about 40 km from Beijing into the canisters which inner surface was coated for stable storage of sampled air. Air was sampled once a day during daytime (16:30), and total 24 samples were collected. After sending the canisters to Japan, the air was analyzed by GC-FID (HP6890) and GC-MS (HP5973). Most of anthropogenic VOCs showed similar concentration variation. They showed large concentration variation. When the concentrations were low, the concentration levels of VOCs were similar to the background level of East Asia region. Large concentration variation can be explained by the origin of the air mass. When air came from north, VOCs showed low concentration, but from other direction VOCs showed high concentration influenced by urban area of Beijing. There were some characters of the VOC at Mangshan: Acetylene and benzene showed high concentration, propylene / ethylene ratio showed small, aromatic hydrocarbons except benzene showed low concentration. Comparing to the results of Mt. Tai in 2006, the VOC concentrations were higher because the observatory is closer to the urban area. The ratios of VOCs were similar in both cases. But Methyl chloride showed clearly different concentration, and the ratio of methyl chloride / acetylene were smaller than that of Mt. Tai, reflecting the consumption ratio of biomass fuel and fossil fuel.