

For immediate release
15 December 1995

HKUST RESEARCHERS FIND AIR POLLUTION HIGHEST IN MONG KOK

Traffic emissions, bacteria, carcinogenic hydrocarbons, and kitchen emissions from traditional Chinese stir frying--all these contribute to air pollution in Hong Kong, according to a team of researchers at the Hong Kong University of Science and Technology.

Results of a three-year study are based on the first chemical analysis of the organic component of air-polluting aerosols in Hong Kong.

"Aerosols are tiny particles or droplets of liquid suspended in the atmosphere. They are one of the major problems in Hong Kong as far as air pollution is concerned," says Dr Ming Fang, project manager at HKUST's Research Centre.

The research team also included Dr Terence Wan of the Department of Chemistry and Dr Joseph Kwan, director of the Safety and Environmental Protection Office.

Air samples were collected from six sites in Mong Kok, Kwai Chung, Kwun Tong, Central-Western, Tai Po Tsai (HKUST campus) and Hok Tsui during the winter months of 1993, a high aerosol loading season.

Mong Kok was found to be the most polluted area, with pollutant levels 15 times higher than those in Hok Tsui, where air quality was good. Exhaust emissions from traffic contributed the largest amount of man-made pollutants to aerosols in all six areas, accounting for 27-53%.

Over all, the concentration of organic pollutants in the aerosol samples was generally high.

The results of the study also show high levels of polycyclic aromatic hydrocarbons (PAH), ranging from a low of 0.8% of the total organics in Hok Tsui to a high of 1.3% in Mong Kok. PAHs have been reported to be carcinogenic in very high concentrations.

"The PAH concentration in Hong Kong's aerosols is comparable with that measured in Guangzhou, but is higher than in other major cities, such as Los Angeles," says Dr Fang.

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