

**OCCURRENCE OF ORGANIC POLLUTANTS: PAHs IN WATER BODIES
AROUND KELANITISSA AND KERAWALAPITIYA POWER PLANTS IN
SRI LANKA**

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ABSTRACT

Polycyclic aromatic hydrocarbons (PAHs) are a group of organic compounds with more than one benzene ring formed due to natural processes such as forest fires and anthropogenic activities. These ubiquitous contaminants have gathered an interest due to their toxicity and carcinogenic activity. Exposure to PAHs has also been linked with cancer, cardiovascular disease and poor fetal development. PAHs are considered as persistent organic pollutants because of their stable chemical structure and inherent resistance to decomposition.

In this study, the water bodies near two diesel fueled power plants in Sri Lanka i.e., Kerawalapitiya and Kelanitissa were selected to determine the presence of PAHs in surface water and its sediment. In the preliminary sampling rounds, the presence of PAHs were identified. With increased sample size, three sampling rounds were carried out. In addition to water and sediment from Hamilton canal and Sebastian canal, water samples from wells near both power plants were analyzed. PAHs in water samples were

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extracted to dichloromethane and analyzed by HPLC with UV-DAD (254 nm) and HPLC- FLD (excitation at 250 nm, emission at 410 nm). Sediment samples were pretreated before the analysis and then, PAHs were extracted to methanol by ultrasonication.

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