

Lalita Meekaew 2010: Vertical Distribution of Polycyclic Aromatic Hydrocarbons in Total Suspended Particulate. Master of Science (Environmental Science), Major Field: Environmental Science, College of Environment. Thesis Advisor: Assistant Professor Surat Bualert, Ph.D. 180 pages.

This study focuses on 15 Polycyclic Aromatic Hydrocarbons (PAHs) in Total Suspended Particulate (TSP) at three different height levels in Songkhla, Chiangmai and Bangkok (the above roughness length, the surface layer and the urban boundary layer), during sampling between december 2007 – february 2008. PAHs were analyzed by GC-MS/MS. The results indicated that the totally average concentrations of PAHs were highest at night time and the lowest concentrations of PAHs were found at day time for all three levels. Songkhla the total mean concentrations of particulate PAHs in the above roughness length, surface layer and urban boundary layer were 0.147, 0.131 and 0.179, respectively. Bangkok the total mean concentrations of particulate PAHs in the above roughness length, surface layer and urban boundary layer were 0.448, 0.306 and 0.484, respectively. Chiangmai the total mean concentrations of particulate PAHs in the above roughness length, surface layer and urban boundary layer were 0.797, 0.852 and 0.580, respectively. Furthermore, there are also other processes that influence the concentration of the PAHs for example, heterogeneous with ozone and photochemical degradation.

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Thesis Advisor's signature