

Polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) in sediments from the Mersey Estuary, U.K.

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Sediments from the Mersey Estuary were analysed for polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). Total PAH concentrations ranged from 626 to 3766 $\mu\text{g}/\text{kg}$ and total PCB concentrations ranged from 36 to 1409 $\mu\text{g}/\text{kg}$. These concentrations are intermediate in comparison to other U.K estuaries with similar histories of industrialisation and urbanisation. The distribution of individual PAHs were consistent throughout the Mersey estuary, this together with molecular indices suggests mainly pyrolytic inputs, augmented by a variety of industrial petrogenic sources. Comparison of tri-to-hepta PCB congeners revealed multiple sources and inputs throughout the estuary. A sediment core collected in close proximity to Garston Docks revealed the take-off, peak pollutant input and recent decline of PCB pollution. However, a second depth profile of sediments at Ellesmere Port showed little change in total or individual PCB concentrations due to extensive sediment reworking and mixing.

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