Characteristic of polycyclic aromatic hydrocarbons (PAHs) in the Liaohe River drainage basin, Northeast China

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Liaohe River is one of the important rivers in the northeast part of China, and suffers from severe contamination of PAHs in the past years. The total concentrations of 16 PAHs in surface water and suspended particulate matter (SPM) in the 20 major rivers of Liaohe River drainage basin were determined by GC/MS.

The total PAHs concentration ranges from 0.41 to 6.45μg/g (dry weight) in SPM, and 32.57 to 108.47ng/L in surface water, respectively. Two- and three-ring PAHs are predominated in water samples, the percentage of two-ring PAHs is highest with an average of 68.19% in dissolved PAHs, while the percentage of three-ring PAHs is highest with an average of 66.28% in SPM, respectively.

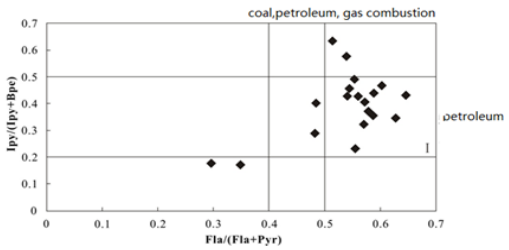

Fig1 Source of PAHs in SPM

The main sources (Fig.1) of PAHs in Liaohe River drainage basin are petroleum and fossil fuel combustion, which are related to complex energy structure of Liaoning province.

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