Polycyclic aromatic hydrocarbons

Literature, Russian Literature



The paper "Polycyclic Aromatic Hydrocarbons" is an exceptional example of an essay on environmental studies.

Polycyclic aromatic hydrocarbons refer to a group of hydrocarbons that contain more than a single aromatic ring in their structure (Acree, 1995). Polycyclic aromatic hydrocarbons are known not to carry any heteroatoms or even substituents, with phenyl benzene as the simplest of all the known Polycyclic Aromatic Hydrocarbons. Polycyclic Aromatic Hydrocarbons are known to be one of the greatest environmental pollutants with some already found to be carcinogenic (Gurjar, Molina and Ojha, 2010). The hydrocarbons have their occurrences in different deposits including those of oil and tar, and in other instances, they are obtained because of incomplete of hydrocarbon combustions, contributed to by the lack of sufficient oxygen for the support of full combustion.

Polycyclic Aromatic Hydrocarbons are lipophilic in nature and therefore, easily mix with both water and oil. PAHs are absorbed by through ingestion, inhalation, and through dermal contact. This clearly indicates that the absorbing organs are the mouth, the nose, and the skin (Gurjar, Molina and Ojha, 2010). Once metabolized, the PAHs cause various health effects, which are into two categories; the acute or short-term health effects and the chronic or long-term health effects, each of which is dependent on the period of exposure. The acute health effects include the allergic skin response while the chronic health effects include reduced immune function, cataracts, kidney and liver damage (Acree, 1995). Additionally, there are instances of breathing problems with asthma-like symptoms.

BaP refers to Benzo[a]pyrene, which is a type of PAHs found in that occurs in

coal tar. BaP is usually considered as the most moral compound in the group of Polycyclic Aromatic Hydrocarbons because of its ability to stimulate their own metabolic reactions upon their absorption (Gurjar, Molina and Ojha, 2010).