

MARSH BULLETIN

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**Polycyclic Aromatic Hydrocarbons (PAHs) in Waters from Northern Part of Shatt Al-Arab River, Iraq**

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**ABSTRACT**

The concentrations of PAH compounds at northern part of Shatt al-Arab River were evaluated quarterly, Water samples were collected from five stations (Al-Qurnah, Al-Sharish, Al-Shafi, Al-Daier and Al-Hartha). The PAH compounds were analytically determined with Gas Chromatography (GC). The highest concentration of PAH compounds in water was (31.254 ng/L) during winter and the lowest concentration was (3.62 ng/L) during summer. Some physicochemical parameters of water samples were also determined such as temperature, salinity and chlorophyll (a). The concentrations of PAH compounds in water samples revealed a slight level of contamination in the study area. Hence, there is a need for adequate regulation and control of all activities that contribute to increasing levels of hydrocarbons in the aquatic environment for the safety of the population, aquatic and wild lives in the area.

**Key Words:** PAH compounds, Water pollution, Hydrocarbons, Shatt Al-Arab River

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**Introduction**

Large amounts of sewage, storm water, dredged spoils, and spilled oil, municipal and industrial wastes are discharged into the river with little or no measure of treatment, especially in the developing countries (Wu *et al.*, 2001; Muthukumar *et al.*, 2013).

Petroleum hydrocarbons (PHs) are one of the prominent organic pollutants present in organic wastes (R.H.B., 2004; Commendatore and Esteves, 2004). Reports indicate that oil spills from land-based sources (refineries, storage facilities, municipal and industrial wastes, river runoff etc.) and transportation activities (tanker oil