



3rd Science for the Environment Conference
Aarhus Denmark 1-2 October 2015

EVALUATION OF POLYCYCLIC AROMATIC HYDROCARBON (PAH) LEVELS IN MUSSEL (*MYTILUS GALLOPROVINCIALIS*) SAMPLES IN HALIÇ (GOLDEN HORN), TURKEY

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ABSTRACT

The distributions of polycyclic aromatic hydrocarbons (PAHs) levels were investigated seasonally between winter 2013 and spring 2014 from four stations in mussel (*Mytilus galloprovincialis*) samples of Haliç (Golden Horn) estuary, Turkey. 16 PAH congeners which are declared as priority pollutant PAHs by the U.S. Environmental Protection Agency were investigated. The analyses were performed by gas chromatography equipped with flame ionization detector (FID) after clean-up procedure according to the EPA 8100. The study for PAH emission sources using diagnostic ratios should precede with the determination of the ratios for each emission source present in the area investigated. Diagnostic ratios were calculated for PAHs levels in mussels according to FLA/(FLA + PYR) ratio and PAHs were classified as petrogenic or pyrogenic. The sum of PAHs in mussels ranged between 24 and 295 ng/g dry wt. Based on calculations regarding to formula diagnostic ratios of PAHs in mussel tissue were differed for each stations seasonally. While, the origin of PAHs were defined as pyrogenic during winter, it was petrogenic during autumn for all stations.

"This research was funded by the Turkish Scientific and Technological Research Council (Grant No: TÜBİTAK 112Y060)"



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