# Hermit crab (*Clibanarius signatus*) as a biological indicator for Polycyclic Aromatic Hydrocarbons (PAHs) on the northern shores of Makoran Sea

**Mahmoud Sinaie**[1*]
**Mehran Loghmani**[2]
**Mehdi Bolouki**[3]

*1. Department of fisheries, Chabahar branch, Islamic Azad University, Chabahar, Iran*
*2. Marine biology Department, Marine Science Faculty, Chabahar Maritime University, Chabahar*
*3. Department of Environment, Tehran, Iran*

***Corresponding author:**
oceanography.sina@gmail.com

Received date: 2016.02.01
Reception date: 2018.06.02

**Abstract**

The presence of PAHs compounds in the marine ecosystem is of a great importance case study due to the effects of carcinogenesis and genetic mutations and fatal in organisms. Therefore, the accumulation of various polycyclic aromatic hydrocarbon compounds in the *Clibanarius Signatus* hepatopancreas tissue was studied at 10 stations in 2017 along the northern coast of Makoran Sea. Determination of the PAHs was performed by using HPLC. The concentration of total polycyclic aromatic hydrocarbon compounds in hepatopancreatic tissue was between 19.11-62.22 ng $g^{-1}$dw. The highest amount of contamination was observed in Chabahar Bay station and the lowest was in Pasabandar station. One-way analysis of variance showed a significant difference between stations ($p<0.05$). The results of this study indicated that the measured values of PAHs are lower than the international standard for NOAA for marine organisms. The presence of compounds with low number of rings indicates the presence of pollutants of petrogeneic origin. This study shows and confirms the use of *C. signatus* as a bioindicator of coastal pollution, especially polycyclic aromatic hydrocarbon compounds.

**Keywords:** PAHs, Makoran Sea, Hepatopancreatic, *Clibanarius signatus*.