The comparison of heavy metals accumulation (Zn, Cu, Cd and Pb) in muscle and shell of *Metapenaeus affinis* and *Litopenaeus vannamei* in the north of the Persian Gulf

Jafar Ehsani[1*]
Laleh Roomiani[2]

1. Department of Fisheries, Abadan Branch, Islamic Azad University, Abadan, Iran
2. Department of Fisheries, Collage of Agriculture and Natural Resources, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran

[*]**Corresponding author:**
e.ehsani2@gmail.com

Receive date: 2013.08.19
Acceptant date: 2014.01.30

Abstract
This study was carried out to comparison heavy metals accumulation (Zn), (Cu), (Cd) and (Pb) in muscle and shell of *Litopenaeus vannamei* and *Metapenaeus affinis* in 2013. Thus, 6 kg *M. affinis* from coast of Bahrekan and 6 kg *L. vannamei* collected from site of Delvar in Bushehr Province. Preparation of samples was done and digested using nitric acid and Zn using flame system and Cu, Cd and Pb using graphite oven of absorption spectrophotometer were measured. Results of all heavy metals in muscle and shell in *M. affinis* were higher significantly ($P<0.05$) than in *L. vannamei* unlike to Pb ($P>0.05$). Metals in shell of two species were higher than muscle, thus showed significant difference ($P<0.05$) except for Pb ($P>0.05$). Results showed higher mean (± SD) concentrations of Zn were observed in shell and muscle of *M. affinis* (44.6±15.67 and 38.6±12.85 mg/kg) and in *L. vannamei* (40.6±13.66 and 34±9.52 mg/kg) and lower concentrations of Cd were observed. Sequence of concentration of heavy metals in two species and their organs followed the order of Zn> Cu> Pb> Cd.

Keywords: *Litopenaeus vannamei*, *Metapenaeus affinis*, Heavy metals, Persian Gulf.