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Periophthalmus waltoni

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(*Periophthalmus waltoni*.)

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.(Abbaspoor,1999)

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.(Agah *et al.*, 2009)

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.(Pourang *et al.*, 2005)

.(Bellas *et al.*, 2005)

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.(Ashraf *et al.*, 2006)

.(Agusa *et al.*, 2007)

.(Cogun *et al.*, 2006)

.(Clark, 2000)

(Esmaili Sari, 2002)

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(Dugo *et al.*, 2006)

⁰C

(Ruangsomboom *et al.*, 2006)



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⁰C

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MOOPAM

UNEP

.(MOOPAM, 1999)

(Atomic Absorption Spectroscopy)

(VaCo 5)

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⁰C

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/ (Sartorius) /

Relative Standard deviation (RSD)

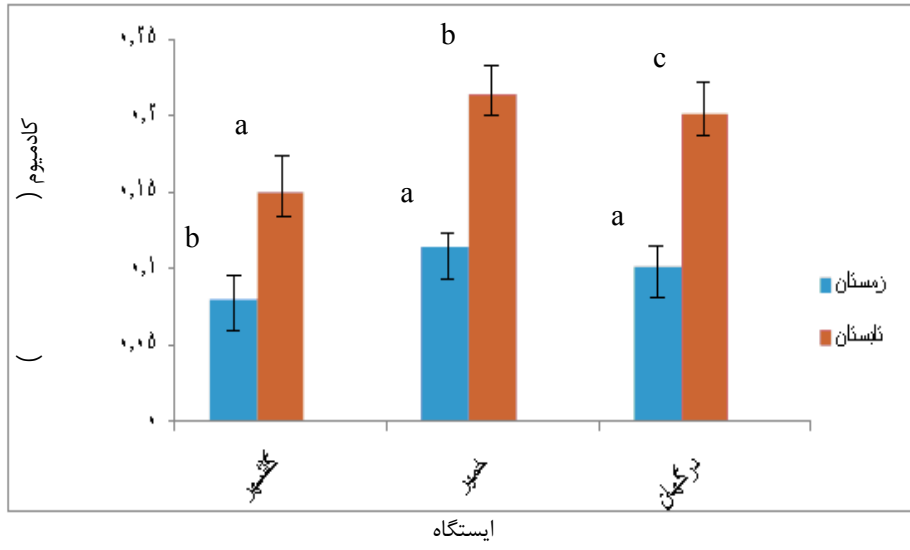
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(Up welling)

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Fabris *et al.*, (2006)

(Farkas *et al.*, (Canli *et al.*, 2003)

Turkmen *et al.*, (2005) .(2003)

H.

J. Edwardsis

P. bassenis

rubra

2002

Chen .

Bustamante *et al.*, (2003)

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Dural *et al.*, ()

(2007)

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;Fowler *et al.*, 2007)

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Romeo *et al.*, (1999). (Smith *et al.*, 2001

PH :

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Serranus

scriba

Sparus auratus

(Canli and Atli,

Al Maliki and Mhaisen, (1996) . (2003)

P.waltoni

.(Gaspic *et al.*, 2002)

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% / ()

% / % /

Fowler *et al.*, (2007)

(Rezai., 2003)

Cd, Pb, Cu, Fe, Ni, Cr, Zn

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.(Knanuer and Martin, 1980)

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Gaspic *et al.*, (2002)

Merluccius merluccius

Mullus barbatus

Hosseini *et al.*,(1994)

Pb, Zn,)

(Cu, Cd

Fabris *et .*

al., (2006)

H. J. Edwardsis

P. bassenis

rubra

.(Caran, 1943)

(Mendil *et al.*, 2010)

Farkas *et al.*, (2003)

(Abdoli., 2008)

(*Abramis brama*)

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Determination and Measurement of Cadmium Concentration in Muscle of *Periophthalmus waltoni* in Persian Gulf Region

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(Received: 01/05/2011 , Accepted: 25/11/2011)

Abstract

The concentration of cadmium in the muscle of *Periophthalmus waltoni* in Persian Gulf (Bandar Khamir, Dargahan and Golshahr) and the effects of two seasons (winter and summer), gender (male and female) on the accumulation rate of cadmium in these fishes was determined. A total of 180 samples of *Periophthalmus waltoni* (in each station and each season separately 30) in three above regions during both seasons of winter and summer were collected. Then the samples were transferred to the lab and after biometry (total length and total weight measurements) of samples, 2gr of muscle tissue excluding dermis was separated. After drying in the freeze-dryer for 8 hours. powdering the sample, 0.5 gr of the dried sample tissue for chemical digestion along with increasing acid nitric 65% and hydrogen peroxide 30% was put in microwave. Concentration rate of cadmium was measured by atomic absorption apparatus. The results indicated that the concentration of cadmium in the muscle tissue of *P. waltoni*, there is significant difference in the studied regions and seasons (winter and summer) ($P < 0.05$). In both seasons Bandar Khamir (summer: 0.214 ± 0.008 and winter: 0.115 ± 0.010) has the highest concentrations of cadmium comparing to Dargahan (summer: 0.201 ± 0.02 and winter: 0.102 ± 0.08) and Golshahr (summer: 0.150 ± 0.09 and winter: 0.011 ± 0.04). The concentration of cadmium between male and females of *P. waltoni* in the studied regions indicate no significant difference. Considering the results of this paper, it may be concluded that the pollutions due to oil, industrial and civil activities in different regions in Persian Gulf (Bandar Khamir, Dargahan and Golshahr) during different seasons influenced the accumulation trend of cadmium in *P. waltoni*.

Keywords: *Periophthalmus waltoni*, Persian Gulf, Marine pollution, cadmium,