
(Phalacrocorax carbo)

*

(// : // :)

(Phalacrocorax carbo)

Leco AMA254 Mercury Analyzer

/ mg/kg / / /

(p<0.01)

(r=0.547)

(p<0.05)

()

(*Phalacrocorax carbo*) ()

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)

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(

t (Mann-Whitney U)
(Pearson Correlation)

mg/kg / / /

() /
()
Kolmogrov-Smirnov

cm

(cm /
cm) /

Kruskal-Wallis

(p<0.01)
Mann-Whitney U

() ()

(n=) (n=)

(p<0.01)

(p<0.01)

(p>0.05)

:()

≈ > >

Mercury

Leco AMA254 Analyzer

mg/kg / / /

ppb

/ / / mg/kg /

SPSS
(Kruskal-Wallis)

()

t

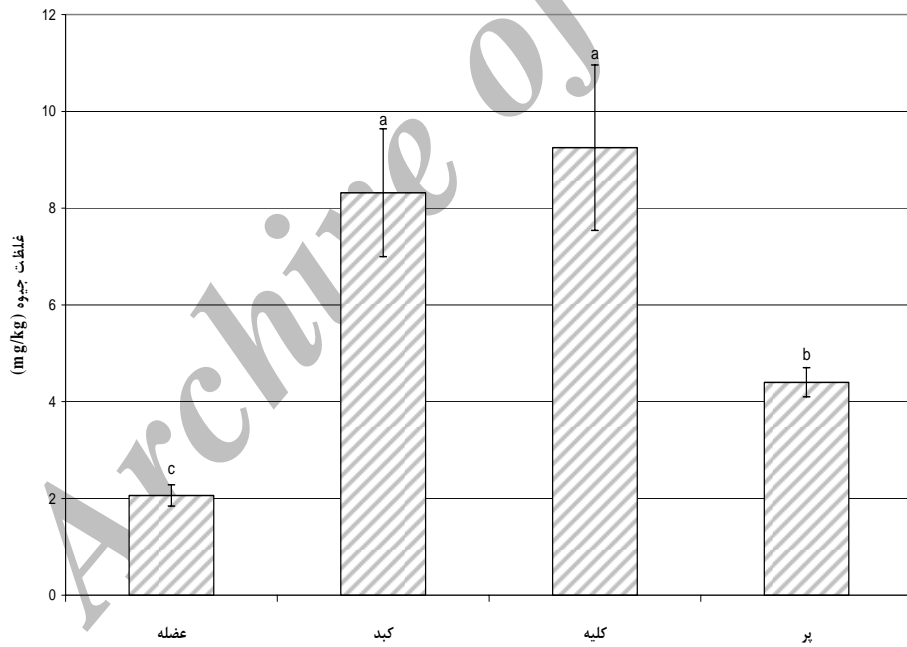
($p > 0.05$)

($p < 0.05$)

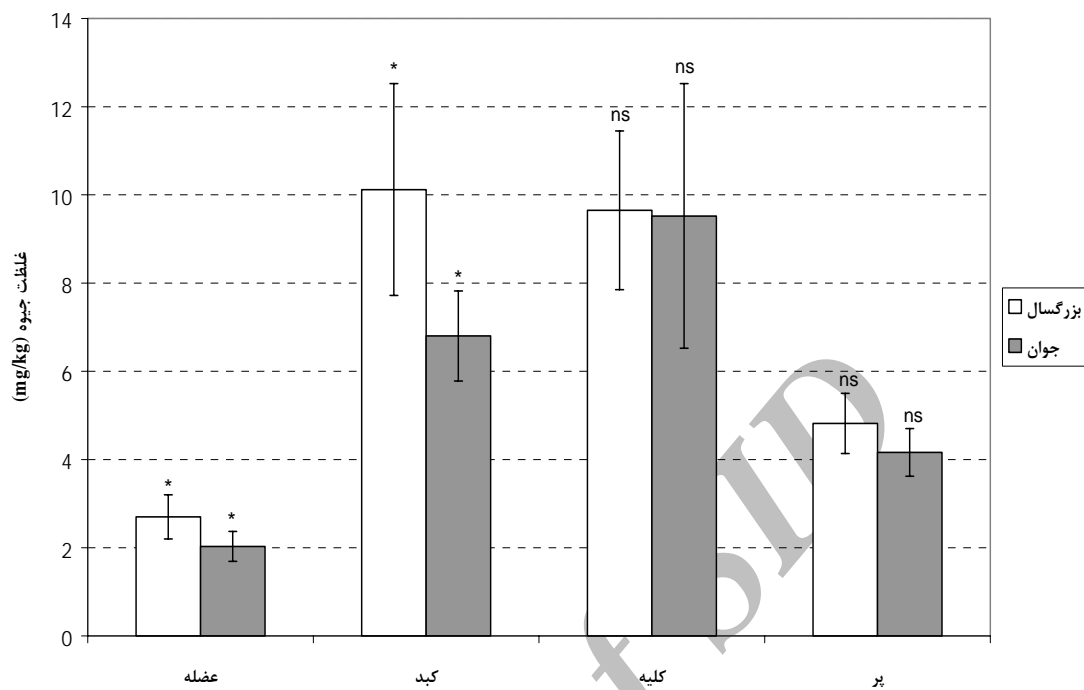
($r = 0.547$) %

(mg/kg)

/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	



%



%
% *
ns

(*Phalacrocorax carbo*)
Biwa

μg/g dry wt) (/ ± / μg/g dry wt)
(/ ± / μg/g dry wt) (/ ± /

...

() () (*Egretta alba* (*Milvus migrans*)
 / mg/kg () *modesta*)
 ()

mg/kg : < <
 ()
 mg/kg (*Phalacrocorax aurits*)
 (p<0.05)
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Archive of SID

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Determination of Mercury Concentration in Some Organs of Cormorant (*Phalacrocorax carbo*)

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Abstract

Mercury is one of the most poisonous elements in the environment and causes horrible damages to living creatures so that it has attracted most attention from among heavy metal pollutants. In order to determine mercury contamination of wild fish-eating birds and understand its biological effects, the concentration of Mercury in common cormorant (*Phalacrocorax carbo*), collected in Fereidoonkenar region in the north of Iran, was measured. For this purpose, 14 cormorants were captured with nets from three stations in the aforementioned region in the fall and winter 2004. The mercury concentration accumulated in the fishes' muscle, feather, liver and kidney was measured by the Mercury Analyzer, Leco AMA254. The average concentration of mercury in muscles, livers, kidney, and feather was measured 2.06, 8.32, 9.25 and 4.44 mg/kg. Mercury concentration was significantly higher in the kidney and liver ($p < 0.01$). Hg concentration in liver and muscle increased significantly with their growth from juvenile to adult ($p < 0.05$). Also, the Mercury concentration in feather indicated a significant positive correlation with the body length ($r = 0.547$).

Keywords: common cormorant, mercury, muscle, liver, kidney, feather.

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