

ACCUMULATION OF MERCURY IN IKAN LAMPAM JAWA
(*Puntius gonionotus*)

MOHAMED PAUZI BIN ABDULLAH

FACULTY OF FISHERIES AND MARINE SCIENCE
UNIVERSITI PERTANIAN MALAYSIA
AUGUST 1983

ACCUMULATION OF MERCURY IN IKAN LAMPAM JAWA
(Puntius gonionotus)

(APPROVAL SHEET)

The undersigned certify that they have read, and they
concord to the Faculty of Fisheries and Marine Science,
for the acceptance, a research project report entitled:

BY:

MOHAMED PAUZI BIN ABDULLAH

ACCUMULATION OF MERCURY IN IKAN LAMPAM JAWA
(Puntius gonionotus)

Submitted by:

MOHAMED PAUZI BIN ABDULLAH

A Project Report Submitted in Partial Fulfilment
of the Requirement for the Degree of
Bachelor of Science (Fisheries)

the Degree of Bachelor of Science (Fisheries)

Dr. Fauzi bin Ahmad

(Supervisor)

FACULTY OF FISHERIES AND MARINE SCIENCE
UNIVERSITI PERTANIAN MALAYSIA

Chairman of Research Committee

AUGUST 1983

1000382367

UNIVERSITI PERTANIAN MALAYSIA
FACULTY OF FISHERIES AND MARINE SCIENCE

(APPROVAL SHEET)

The undersigned certify that they have read, and they commend to the Faculty of Fisheries and Marine Science, for the acceptance, a research project report entitled:

ACCUMULATION OF MERCURY IN IKAN LAMPAM JAWA
(Puntius gonionotus)

Submitted by:

MOHAMED PAUZI BIN ABDULLAH

in partial fulfilment of the requirement for
the Degree of Bachelor of Science (Fisheries)

Dr. Law Ah Theem

(Supervisor)

Chairman of Research Committee

Date: _____

ABSTRACT

ACKNOWLEDGEMENT

The author wishes to acknowledge his profound gratitude to Associate Professor Dr. Law Ah Theem for his guidance and encouragement in the completion of this project report. The author is very much indebted to Mr. Amargit Singh for his help in the Cold Vapour Atomic Spectrometry Analysis for mercury. Without his help it would be impossible for the author to complete this study.

Last but not the least, the author wishes to express his thanks to the technical staff of the Faculty of Fisheries and Marine Science, Universiti Pertanian Malaysia, who have in one form or another assisted or contributed toward the success of the project.

ABSTRACT

Eighty fishes, Puntius gonionotus, of weights ranging from 14.0 to 39.6 grams were used in the study. Twenty of them were exposed to low concentrations of mercury for three weeks in each tank containing 0 ppb (control), 0.36 ppb, 0.84 ppb, and 2.43 ppb Hg (as HgCl₂) respectively. The mercury content in the control fish were not detected at all times. The average amount of mercury accumulated in the fish tissue within 2 hours, 7 days, 14 days and 21 days were 3.03, 5.17, 8.0 and 4.38 ng/gram wet weight respectively. The average amount of mercury accumulated in the tissues of fish exposed to 0.36, 0.84, and 2.43 ppb Hg were 2.29, 4.30 and 8.85 ng/g wet weight respectively.

// for which Hg concⁿ in H₂O

The average water quality parameters of temperature, total alkalinity, pH and dissolved oxygen were 25°C, 1.26 meg/l, 7.1 and 7.2 ppm respectively. It was observed that the mercury content in the fish was positively correlated to the time of exposure and concentrations of mercury in the water. On the other hand, it was negatively related to the size of fish. The mercury content in the dead fish was about 8 - 70 times higher than that in the live fish.

meg.