

Liza abu

(Heckel,1843)

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96 (1ppm,0.5ppm)

Pandey . (2001 Sharma)

(1999)

Methomyle . aquatic ecosystem

.(1990 ,Laws Hayes) Insecticide 1966

Carbamates

Mc-

Cholinesterase

.(1983 Worthing 1979 Stephenson Ewen)

/ 3.4 Rainbow trout 96 LC50
gills (1983 Kidd Hartley) / 0.8 Bluegill sunfish

(1976 Perry Hughes 2004 Dhanapakiam)

toxic liver

.(1970,Konar) metabolic substances

Liza

(ppm) 1 0.5

.abu

. 2010 / 3 / 22

. 2010 / 5 / 2

12-9 / *Liza abu* 11.75-7
 0.4± 8.1 6 0.3 ± 7.8 °2±20
 24 acclimation
 ppm 1 0.5 96
 24
 embedding clearing dehydration
 Luna) - 7-5 (1972 Humason 1968
 primary filaments (1) secondary lamellae
 chloride cells
 .blood sinuses pillar cells
 atrophy 1ppm,0.5ppm
 degeneration
 . (2) hydropic degeneration
 (3) lymphocyte monocyte neutrophil
 (1ppm)
 erosion hemorrhage
 . (4) clubbing form
 .(5)proliferation of cells
 osmoregulation
 (2003 Fanta Machado)
 (1985) Mallatt
 necrosis
 Paul 1994 Pandey 1979 Dalela)

hyperplasia (1982) Kumaraguru .(1996 Banerjee

1996 Neskovic

Glyphosate

Ortiz 2003 Fanta Machado)(

(1985) Mallatt (2003

1ppm

Nile

(2002)

Jiraungkoorskul

.Roundup

tilapia *Oreochromis niloticus*

hepatocytes

sinuses

central vein

0.5ppm

(6)

vacoulation

swelling cells

necrosis

hyperemia

. (7 8)

karyolysis necrosis

.(9)

Detoxification

(1970)

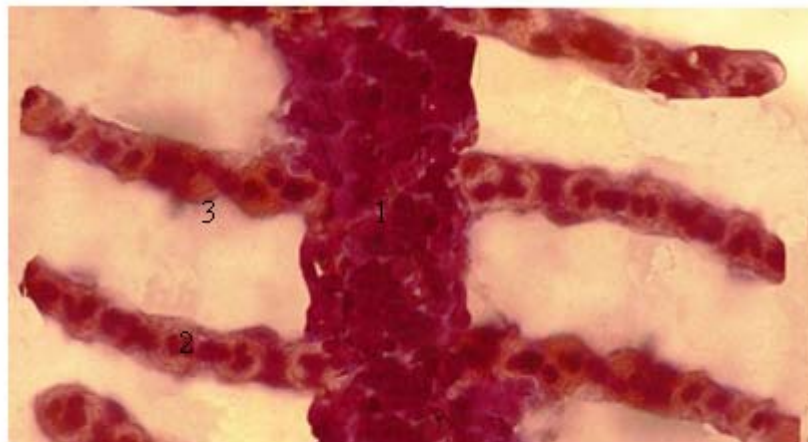
Metelev

Pandey 1979 Shah Dubale 1970 Konar)

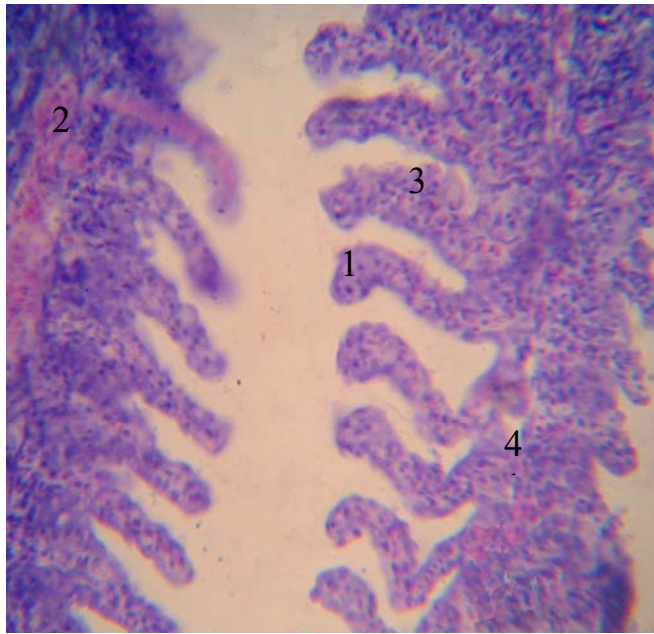
(1982) Gingerich

.(1997

. (1991 Ufodika Omoregie)



شكل 1 . مقطع طولي في نسيج الخلاصم من مجموعة السيطرة بين 1 ، الصفحة الأولى 2 ، الصفحة الثانية 3 الخلايا الطلائي (H&E) 400X

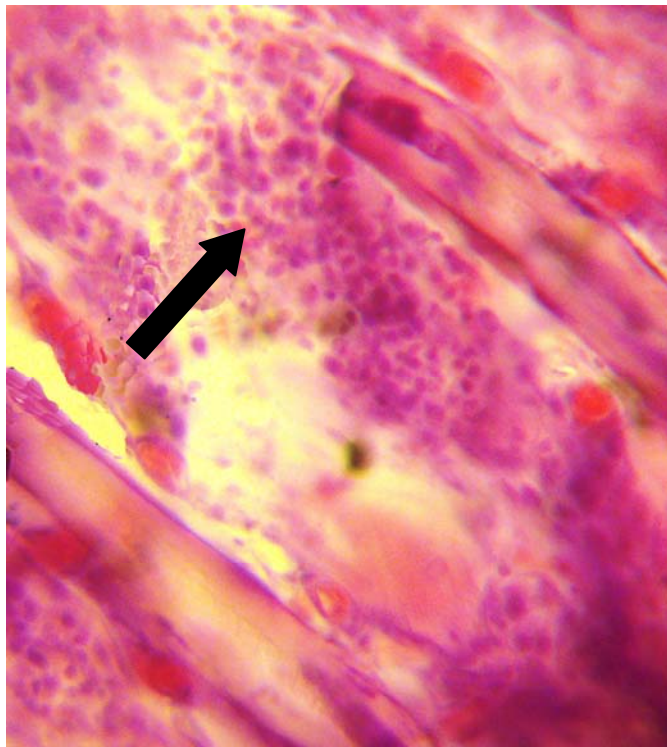


0.5 ppm
.2

.1
(H&E) 100X

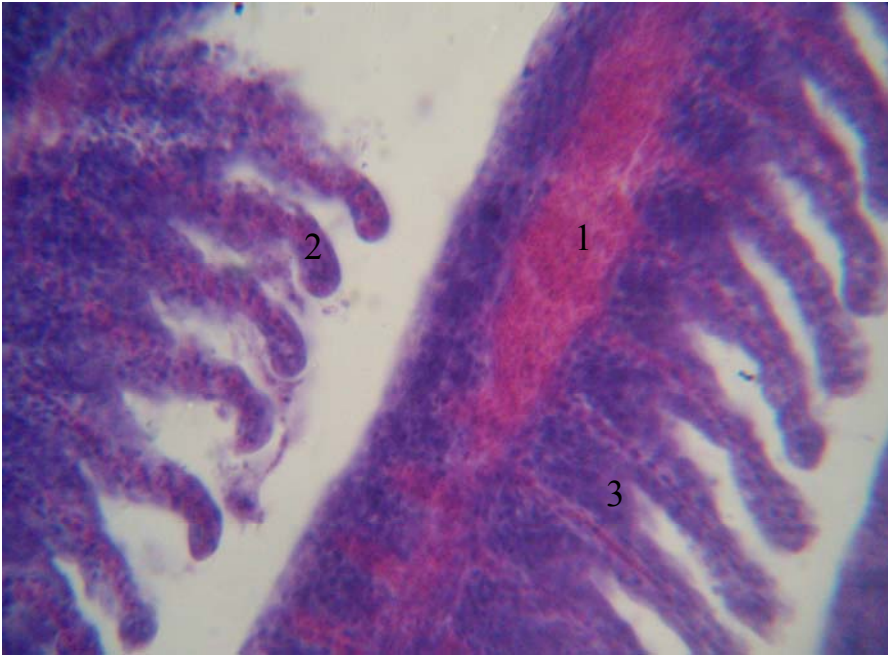
.4 96 .3

.2



0.5 ppm
(H&E) 400X (←)

.3
96



96
(H&E)

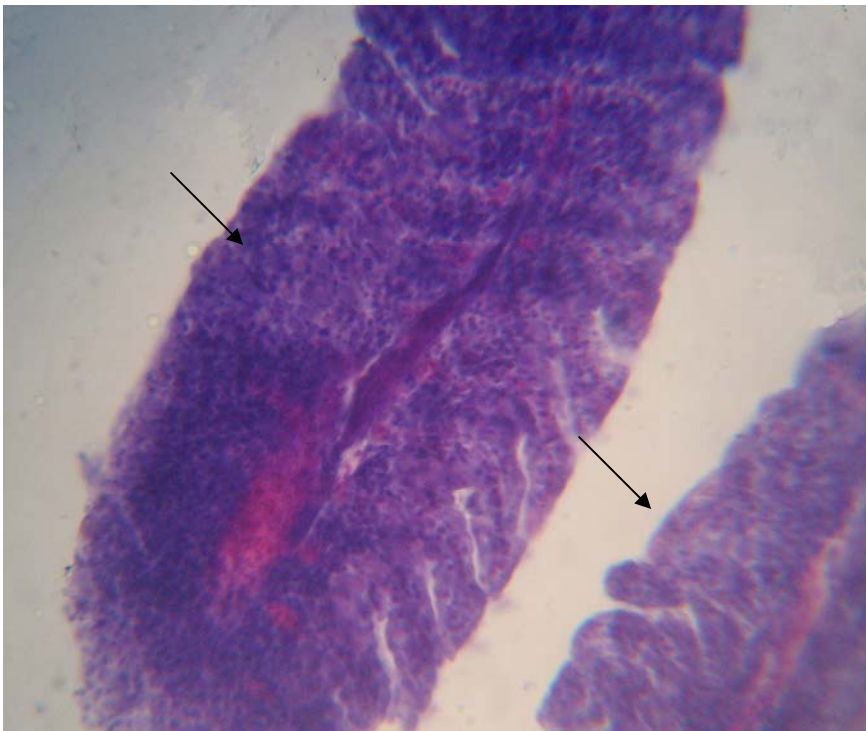
1ppm

.3
100X

.2

.1

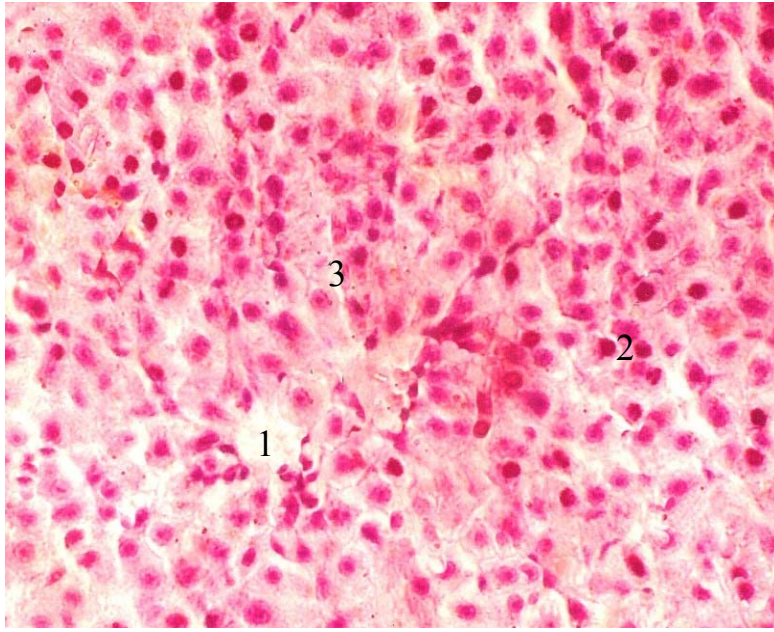
.4



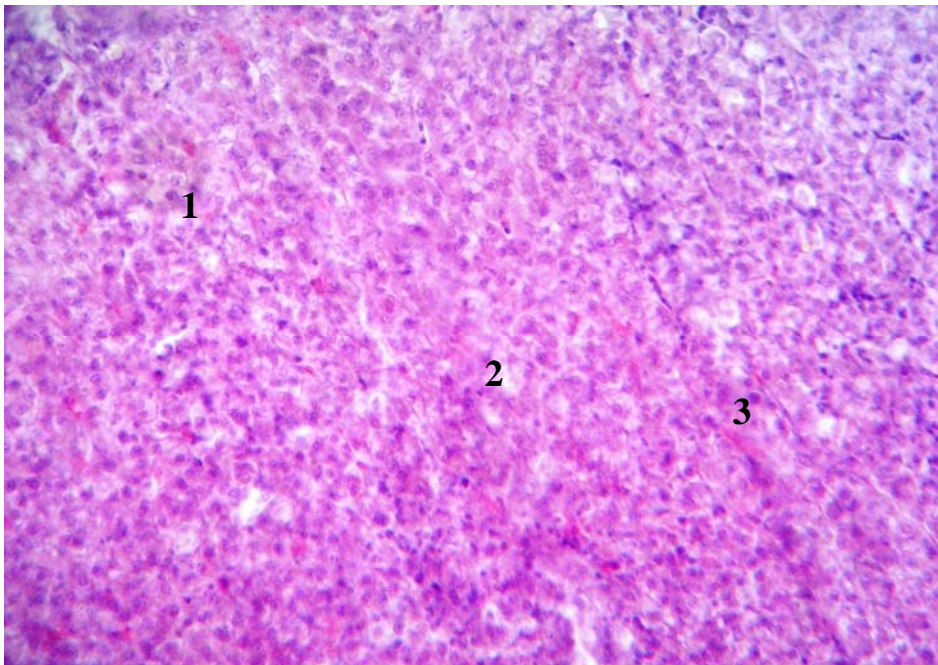
96

1ppm
(H&E) 40X (←)

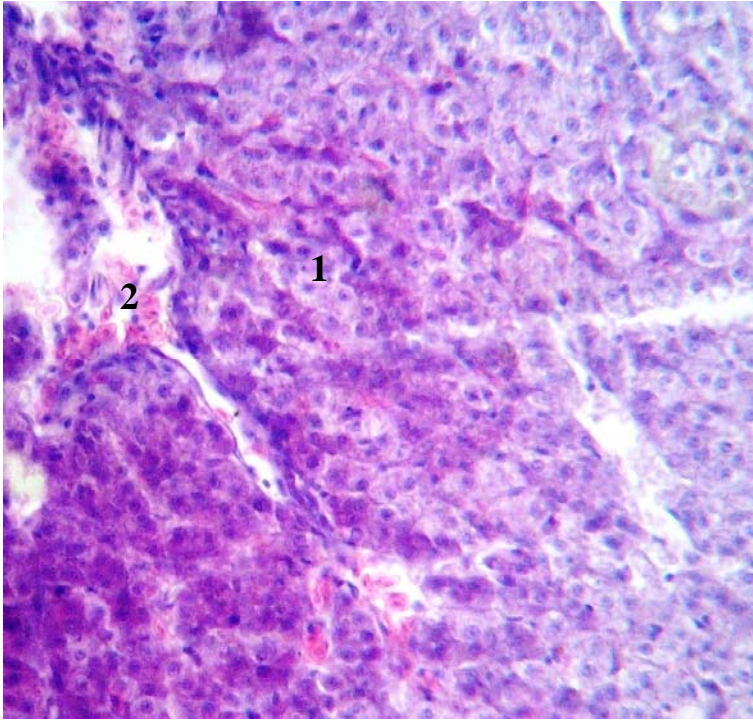
.5



.1 (H&E) 100X .3 .2 .6



96 0.5ppm (H&E) 100X .3 .2 .1 .7



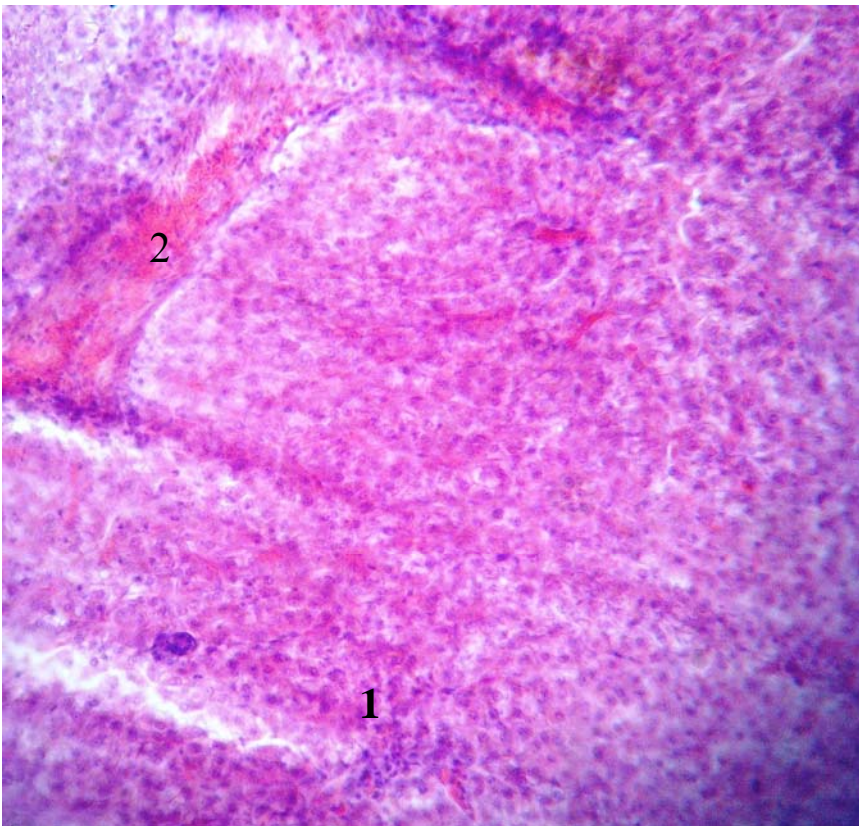
0.5ppm
(H&E) 100X

.2

.1

96

.8



1 ppm
(H&E) 100X

.2

.1

96

.9

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HISTOPATHOLOGICAL CHANGES IN GILLS AND LIVER OF *Liza abu* (HECKEL,1843) EXPOSED TO SUBLETHAL CONCENTRATIONS OF METHOMYLE

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ABSTRACT

Liza abu fishes were exposed to two sublethal concentrations of methomyle pesticide(0.5&1ppm) for 96 hr., for study the histopathological changes in gills and liver in treated fishes with this insecticide . Histopathological examination for both concentrations in gills showed degeneration of cells, epithelial separation, hemorrhage, necrosis fusion of adjacent lamellae, clubbing cells ,while in liver the changes showed swelling in cells which lost its normal shape, hemorrhaged area, vaculation necrosis & finally karyolysis.