.

Fig(30): A photomicrograph of T.S. treated grass carp kidney with 10mg / L Sevin showing a smaller number of cells of the haemopoietic tissue undergoing division ana: anaphase (H X &E x 1250)	
Fig. (31): A photomicrograph of T.S. treated grass carp kidney with 13mg / L Sevin showing; ht.:haemopoietic tissue. d: distal convoluted segment. P: proximal convoluted segment. (H X &E x 500)	
Fig.(32) A photomicrograph of T.S. treated grass carp kidney with 13mg / L Sevin showing; ht.: haemopoietic tissue. de: degenerated cell. Kr: karyolysis Py: pyknotic nucleus (H X &E x 1250)	
Fig.(33): A photomicrograph of T.S of normal grass carp kidney showing the positive reaction of DNA with Feulgen P: intense reaction was observed in the nuclei of proximal tubules . d: submoderate reaction with distal tubule nuclei. ht: moderatly and densely stain of hemopoietic cell nuclei (Feulgen x 250)	
Fig. (34): A photomicrograph of T.S of normal grass carp kidney showing the positive reaction of DNA with Feulgen P: intense reaction with proximal tubule nuclei. d: submoderate reaction with distal tubule nuclei. ht: moderatly and densely stain of hemopoietic cell nuclei. (Feulgen x 500)	
Fig.(35): A photomicrograph of T.S of normal grass carp kidney showing the positive reaction of DNA with Feulgen P: intense reaction of proximal tubule nuclei especially the ellipsoid apical nuclei. ht: moderatly and densely stain of hemopoietic nuclei (Feulgen x 1250)	
Fig. (36): A photomicrograph of T.S of normal grass carp kidney showing the positive reaction of DNA with Feulgen stain d: submoderatly reaction with distal tubule nuclei . ht: moderatly and densely stain of hemopoietic nuclei . (Feulgen x 1250)	

Fig. (37): A photomicrograph of T.S of treated grass carp kidney with 10 mg/L Sevin showing the decreasing in stainability or the decreasing reaction with Feulgen. (Feulgen x 250).
Fig (38): A photomicrograph of T.S of treated grass carp kidney with 10 mg/L Sevin showing the decreasing in stainability or the decreasing reaction with Feulgen. (Feulgen x 500) 52
Fig. (39): A photomicrograph of T.S of treated grass carp kidney with 10 mg / L Sevin showing the decreasing reaction of Feulgen with DNA. (Feulgen x 1250)
Fig. (40): A photomicrograph of T.S of treated grass carp kidney with 13 mg/L Sevin to show the more decreasing reaction of Feulgen with DNA. (Feulgen x 500)
Fig.(41): A photomicrograph of T.S of treated grass carp kidney with 13 mg/L Sevin showing the decreasing reaction of Feulgen with DNA. (Feulgen x 1250)54
Fig. (42): A photomicrograph of T.S of normal grass carp kidney showing; G: traces of pyronin in the cytoplasm of the glomerular cells. P: moderate reaction in basal part of the proximal tubules and which gradually increased towards their apical borders .Ct:moderate reaction in the collecti tubules . ht: weak stainbility of heamopoietic cells . Bs: Blood sinuosoid. (Methyl green - pyronin x1250)
Fig.(43): A photomicrograph of T.S of normal grass carp kidney to show the RNA of the cytoplasm: P: moderate reaction in basal cells of the proximal tubules and gradually increased towards their apical borders. ht: weak stainbility of heamopoietic cells. Bs: Blood sinuosoid. (Methyl green - pyronin x1250)55

 Fig. (44): A photomicrograph of T.S of normal grass carp kidney stained by Methyl green - pyronin to show the concentration of cytoplasmic RNA; P: moderate reaction in basal cells of the proximal tubules and gradually increased towards their apical borders. d: The distal convoluted tubules exhibited a relative weaker reaction. ht: weak stainbility of heamopoietic cells. Bs: Blood sinuosoid (Methyl green - pyronin x1250). 	ϵ
Fig. (45): A photomicrograph of T.S. of treated grass carp kidney with 10 mg/L Sevin showing; pyronin stainability of kidney cells was higher in treated animal than control. (Methyl green - pyronin x500)	7
Fig. (46): A photomicrograph of T.S. of treated grass carp kidney with 10 mg/L Sevin showing; pyronin stainability of kidney cells was higher in treated animal than control. (Methyl green - pyronin x1250)	7
Fig.(47): A photomicrograph of T.S. of treated grass carp kidney with 13 mg/L Sevin showing; pyronin stainability of kidney cells was higher in treated animal than control. (Methyl green - pyronin x500).	8
Fig. (48): A photomicrograph of T.S. of treated grass carp kidney with 13 mg/L Sevin showing; pyronin stainability of kidney cells was higher in treated animal than control. (Methyl green - pyronin x1250).	8
Fig. (49, 50, 51): Sections in kidney (control, 10 and 13 mg/L Sevin) showing negative reaction with Turbull Blue method for iron (Turbull Blue x 500)	9
Fig. (52): DNA content of kidney control and treated fish	1
Fig. (53): Frequency distribution of DNA in kidney cells	2
Fig. (54): RNA content of kidney control and treated fish	3

VIII

Fig.(55): No.cells in mitosis per thousand cells of untreated control fish	. 65
Fig. (56):No.of cells in mitosis per thousand cells of control and kidney	. 66
Fig. (57): Kidney metaphase spread of a control (normal) grass carp to show the chromosome number and the types of chromosomes	67
Fig. (58): Karyotype of a normal cell prepared from Fig. (57)	67
Fig.(59): Kidney metaphase spread chromatid gap (G)	69
Fig. (60): Kidney metaphase spread showing chromatid gap(G) chromatid break (B) chromatid deletion (D)	69
Fig. (61): Kidney metaphase spread of grass carp showing chromatid (G) chromatid fragment (F)	70
Fig. (62): Kidney metaphase spread of grass carp to show advanced stage of chromosomal stickiness	70