

## **Abstract**

investigation on sperm motility, especially the percent of motile sperms, could use as a key factor for study of success in fertilization (fertilization percent) and is one of the most important factors in evaluation of sperm quality. This study aimed to investigate the influence and the sensitivity of the sperm of grass carp fish (*Ctenopharyngodon idella*) was carried out after releasing in water environment and exposure to heavy metals such as copper, lead and manganese. Therefore 4 treatments and a control (no heavy metals) per each metal with 4 replications per each treatment, (a total of 15 treatments) were considered.. 4 fertile male fishes after the adaptation to the environment and the oavprim hormone injection, were selected for provide sperm samples To provide the desired treatment,, diluted suspension of manganese, lead and copper at the levels of 0, 0.1, 1, 10 and 100 mg/l were used and the parameters like motility period and the percent of motile sperms with control samples were compared. The results showed that the effectiveness grass carp sperm in contact with the metals have been impressive and significantly decrease in total duration and percentage of motile spermatozoa motility . The maximum intensity of the the effect of lead and copper, and manganese recorded so that at low concentrations (0.1, 1) a significant reduction in the duration of active and moving sperm percentage (10%, 40% and 80%) we saw (with the exception of 0.1 copper concentrations did not change significantly compared to the control group). At a concentration 100 mg/l of sperm motility were seen. The mean total duration of sperm motility in control group  $42.5 \pm 4.35$  seconds recorded. At  $12.25 \pm 1.89$  seconds 80%, in  $24.5 \pm 3.10$  seconds, 40% and  $35.25 \pm 4.11$  seconds had 10% of the sperm mobility.

**Keywords:** Grass carp, Sperm motility, Heavy metals, Successful fertilization, Spermatozoa



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**Effect of Lead(Pb), Copper (Cu) and Manganese (Mn)  
Metals on sperm motility parameters of *Ctenopharyngodon  
idella* (Grass Carp)**

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