# THE INFLUENCE OF TERBUFOS CONTAMINATED WATER ON *Carassius auratus* Gibelio

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**ABSTRACT – The influence of terbufos contaminated water on Carassius auratus Gibelio**

In this study the effects of water contaminated with *Terbufos on* Crucian carp (*Carassius auratus* Gibelio) are presented. Terbufos is an organophosphate pesticide used in agriculture mostly as insecticide and nematocide which has high toxicity, especially for fish (EPA and WHO data). Terbufos toxicity on Crucian carp was studied experimentally under controlled laboratory conditions. For this purpose 40 fish (3 years old, mean body mass 114,68 g, mean fork length 15,54 cm) were randomly divided into 2 groups (20 individuals each) and situated into two identical aquaria (60 litters each) equipped with appropriate filters, heaters and aerators. In one of the aquaria terbufos was added in concentrations of 0,133 mg/l. This dose was previously experimentally determined as one third of $L_{50}$ after 40 hour exposure. Fish were treated for 15 days. During this period their behaviour was permanently recorded, and compared with untreated fish. At the end of experiment meristic characteristics were determined and blood was taken by heart puncture for the following analyses: haemoglobin concentration (Hb), Mean Corpuscular Haemoglobin (MCH) and Mean Corpuscular Haemoglobin Concentration MCHC. Terbufos treated fish showed uncontrolled swimming, increased breathing frequency and significantly higher Hb values and MCH. Our results proved that even extremely low concentrations of terbufos in waters have toxic effects on Crucian carp, which is known as fish with low susceptibility to water pollution.