

## **ABSTRACT**

### **THE EFFECTS OF METSULFURON – METHYL TO THE DESTRUCTION OF RED BLOOD CELLS *Pangasius hypopthalmus***

**By**

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Application of herbicide contain active compound of metsulfuron-methyl has potential as a poison to fish cultivated in polyculture system. Metsulfuron-methyl is systemic and selective only for paddy. The study was conducted to determine the effect of metsulfuron methyl to red blood cells and hematocrit percentage of Asian catfish (*Pangasius hypopthalmus*) which had weight  $2,16 \pm 0,24$  grams. The test results indicate that the determination of the concentration interval herbicide with the active ingredient metsulfuron methyl has a threshold of 100 ppm and below the 1 ppm threshold, which is used to determine the concentration of the definitive test (2.5 ppm, 6.25 ppm, 15.6 ppm; 39 ppm and 97.5 ppm). LC<sub>50</sub>-96 hour value of 51.4 mg/l basis of a definitive test. The results showed that fish exposed to metsulfuron methyl at a concentration of 15.6 ppm and 39 ppm, lipofuscin is formed in the cell nucleus and seroid that almost covered the surface of the cytoplasm and hematocrit values below 22% which indicates the fish are anemic.

*Key words : Pangasius hypopthalmus, Metsulfuron-Methyl, red blood cells, hematocrit*