ABSTRACT

THE EFFECTS OF METSULFURON – METHYL TO THE DESTRUCTION OF RED BLOOD CELLS Pangasius hypophthalmus

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 hypophthalmus) which had weight 2,16 ± 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$_{50}$-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 hypophthalmus, Metsulfuron-Methyl, red blood cells, hematocrit