ABSTRACT

THE EFFECT OF METSULFURON-METHYL ON *Pangasius hypopthalmus* GILLS

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The Asian Catfish is one of important commodity in Indonesian freshwater. Catfish cultivated in former rice fields that could potentially exposed to chemical herbicides. Metsulfuron-methyl is active compounds in herbicide. The aims of this research was to know the effect of metsulfuron-methyl concentration on mortality and histology of catfish gills. The research consisted of decisive test of concentration range and definitive test. Result of decisive test of concentration range showed that metsulfuron-methyl has up-level limit concentration 100 mg/L and low-level limit concentration 1 mg/L. The lethal concentration (LC_{50}) value of metsulfuron-methyl was 51,4 mg/L for 96 h of exposure. Observation of histology on gills showed hyperplasia, desquamation, congestion, and hemorrhage. The result of this research showed that metsulfuron-methyl significantly affect to mortality and histology of catfish gills. The higher concentration, the higher the level of mortality and gills damage.

Key word: Metsulfuron-methyl; Catfish; Mortality; Gill; Concentration