

Anawat Keratithaweesuk 2014: Acute Toxicity of Ammonia and Metaldehyde in Snail Pellet Bait to Nile Tilapia (*Oreochromis niloticus*) and the Effect of Metaldehyde in Snail Pellet Bait on Acute Toxicity of Ammonia to Nile Tilapia (*Oreochromis niloticus*). Master of Science (Aquaculture), Major Field: Aquaculture, Department of Aquaculture. Thesis Advisor: Associate Professor Orapint Jintataporn, Ph.D. 59 pages.

The acute toxicity of ammonia and metaldehyde in snail pellet bait to Nile tilapia (*Oreochromis niloticus*) and the effect of metaldehyde in snail pellet bait on acute toxicity of ammonia to Nile tilapia (*Oreochromis niloticus*) was investigated on  $LC_{50}$  at 24, 48, and 96 hr. The research was studied in static bioassay and studied in Nile Tilapia with average weight of 0.25 g. The research was divided into 3 experiments. 1) Study on the acute toxicity of ammonia, the results showed that acute toxicity of ammonia ( $LC_{50}$ ) in Nile tilapia at 24 hr. was 42.78 (39.89-45.67) ppm. 2) Study on the acute toxicity of metaldehyde in Snail Pellet Bait, the results showed that the toxic level of metaldehyde in Nile tilapia was low because the high dose of  $LC_{50}$  at 48, 72 and 96 hr  $LC_{50}$  were 810.68 (575.79–1045.57), 345.85 (285.38–406.32) and 251.24 (207.35–295.13) ppm, respectively. 3) Study on the effect of metaldehyde in snail pellet bait on acute toxicity of ammonia by applying 4 ppm metaldehyde in snail pellet bait in Nile tilapia culture media incorporated with different level of ammonia, the results found that  $LC_{50}$  of Ammonia at 48, 72 and 96 hr were 99.62 (88.29–110.96), 96.20 (85.03 -107.36) and 96.20 (85.03-107.36) ppm, respectively. Therefore, there was no synergistic of ammonia and metaldehyde and metaldehyde, a molluscicide, showed low acute toxicity in Nile tilapia.

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Thesis Advisor's signature