RINGSKASAN

MUHAMMAD FAUZI ZARKASI. Pengaruh Toksisitas *Sublethal* Pestisida Organofosfat Terhadap GI, GSI dan Histopatologi Ovarium Ikan Wader Pari (*Rasbora argyrotaenia*). Dosen Pembimbing Dr. Laksmi Sulmartiwi, S.Pi., M.P. dan Lailatul Lutfiyah., S.Pi., M.Si.

Salah satu bahan pencemar perairan yang mempunyai dampak yang cukup berbahaya bagi organisme perairan adalah pestisida. Pestisida merupakan bahan kimia yang umum digunakan pada lahan pertanian. Salah satu pestisida yang banyak digunakan yaitu jenis organofosfat. Pestisida organofosfat dapat menghambat aktivitas enzim asetilkolinesterase. Hambatan aktivitas enzim ini menyebabkan proses hidrolisis asetilkolin terhambat. Asetilkolin yang terakumulasi dalam celah sinap syaraf dapat menimbulkan gangguan fisiologis serta kematian.

Penelitian ini dilaksanakan di Kampus PSDKU Universitas Airlangga di Banyuwangi, pada bulan Februari 2019 hingga April 2019. Metode penelitian yang digunakan adalah dengan konsentrasi berbeda, yaitu perlakuan P0 (0 ppm), P1 (0,001 ppm), P2 (0,005 ppm), P3 (0,01 ppm), P4 (0,05 ppm) yang dilaksanakan selama 28 hari pemeliharaan. Masing-masing dari tiap perlakuan terdiri dari empat kali ulangan dengan menggunakan 15 ekor ikan per toples, Parameter yang diamati adalah nilai GI, nilai GSI dan gambaran histopatologi ovarium.

Hasil penelitian menunjukkan adanya kerusakan terhadap ovarium ikan wader (*Rasbora argyrotaenia*) dimana terdapat penurunan nilai GI dan GSI. Kerusakan histologi yang berupa Nekrosis, degenerasi lemak, *Folicle Lining*, *Vitellogenic Fluid*, dan *hydrated oocyte* dan *Large Nucleus*.

SUMMARY

MUHAMMAD FAUZI ZARKASI. Sublethal Effect of Organophospate Pesticides on GI, GSI and Histopathology Ovary of Silver Rasbora (Rasbora argyrotaenia). Supervisor : Dr. Laksmi Sulmartiwi, S.Pi., M.P. and Lailatul Lutfiyah, S.Pi., M.Si

One of pollutant that has a potential dangerous for the environment are pesticides. Pesticides are chemicals that commonly used on agricultural. One of the most widely used is organophosphate pesicides. Organophosphate pesticides can inhibit the activity of the acetylcholinesterase enzyme. Barriers to the activity of this enzyme cause the hydrolysis process of acetylcholine to be inhibited. Acetylcholine which accumulates in the nerve gap can cause physiological disorders as well as death.

This research was carried out at the PSDKU campus of Airlangga University in Banyuwangi, in February to April 2019. The research method used is an experimental method with a completely randomized design (CRD). The treatments used were different concentrations, namely treatments P0 (0 ppm), P1 (0.001 ppm), P2 (0.005 ppm), P3 (0.01 ppm), P4 (0.05 ppm) carried out for 28 days of maintenance. Each of the treatments consisted of four replications, using 15 fish per Jar. The parameters observed were Gonado Index, Gonado Somatic Index and Histophatology of ovary.

The results showed that organophosphate pesticide exposure could affect pesticides on Gonado Somatic index and Gonado Index that this pesticide can decrease both Gonado Somaic index and Gonado Index. The Histopathology of fish ovary also can found in this research, those damages that are found are Necrosis, degenerated oocyte, Folicle Lining, Vitellogenic Fluid, hydrated oocyte dan Large Nucleus.