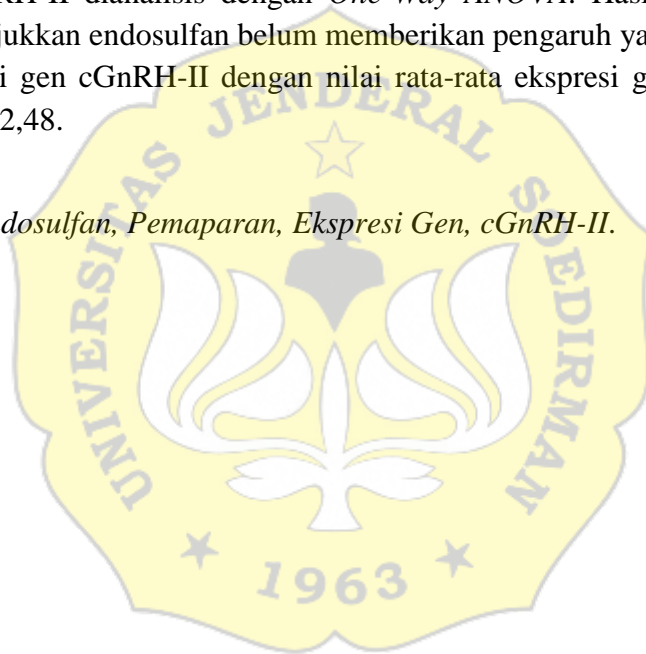


ABSTRAK

Endosulfan merupakan pestisida yang termasuk ke dalam golongan organoklorin dan banyak dipergunakan di Indonesia. Endosulfan yang masuk ke perairan akan terakumululasi pada biota perairan. Dampak yang ditimbulkan endosulfan yaitu mengganggu proses reproduksi melalui cGnRH-II yang berperan sebagai neuromodulator dan menstimulasi pelepasan hormon gonadotropin. Penelitian ini bertujuan untuk mengetahui konsentrasi dan lama waktu pemaparan endosulfan yang dapat mengganggu ekspresi gen cGnRH-II pada ikan nilam (*Osteochilus hasseltii* C.V.) betina. Metode yang digunakan adalah metode eksperimental Rancangan Acak Lengkap (RAL). Penelitian dilakukan dengan 4 tahap yaitu pengambilan hipotalamus, isolasi RNA, *DNase Treatment*, dan *Real-Time PCR*. Ikan nilam diberi 4 perlakuan selama 4 minggu dengan pengambilan sampel setiap 2 minggu sekali. Data kuantitatif berupa ekspresi gen penghasil cGnRH-II dianalisis dengan *One-Way ANOVA*. Hasil penelitian selama 4 minggu menunjukkan endosulfan belum memberikan pengaruh yang signifikan terhadap tingkat ekspresi gen cGnRH-II dengan nilai rata-rata ekspresi gen cGnRH-II berkisar antara 0,78 – 12,48.

Kata kunci: Endosulfan, Pemaparan, Ekspresi Gen, cGnRH-II.



ABSTRACT

Endosulfan is an organochlorine pesticide that widely used in Indonesia. Endosulfan that has entered in water column will accumulated in aquatic organisms. The impact of endosulfan for aquatic organisms is alter the reproduction process through cGnRH-II which play the role as neuromodulator and stimulate the gonadotropin hormones to release. The purpose of this study was to determine the concentration and exposure duration that can affect cGnRH-II gene expression in female *Osteochilus hasseltii* C.V. The method that used is experimental with Completely Randomize Design. The study was conducted with 4 stages, hypothalamus sampling, RNA isolation, DNase Treatment, and Real-Time PCR. *O. hasseltii* was given with four different treatments for four weeks, sampling was done for every two weeks. The quantitative data is in form as gene expression of cGnRH-II that has analyzed by One-Way ANOVA. The results of four weeks exposure showed that endosulfan has no significant effect to alter cGnRH-II gene expression with average range 0,78 – 12,48.

Keywords: *Endosulfan, Exposure, Gene Expression, cGnRH-II.*

