

## ABSTRACT

### THE EFFECT OF STEROID EXTRACTS OF SEA CUCUMBER (*Holothuria scabra*) AND 17 $\alpha$ METHYLTESTOSTERONE AT DIFFERENT TEMPERATURE ON JUVENIL FRESH WATER CRAYFISH (*Cherax quadricarinatus*)

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Red claw (*Cherax quadricarinatus*) is one kind of fresh water cray fish with high economic value which encourages farmers to increase their production. However, there are several obstacles where the growth of female individuals is faster than male. To overcome this problem, it is important to undergo a monosex (single gender) cultivation. The aim of this research is to find out the effect of sea cucumber's steroid extract and 17 $\alpha$  methyltestosterone at different temperature to sex reversal to males on juvenile freshwater crayfish, *Cherax quadricarinatus*. This research was designed using Factorial Complete Random Design Method. The treatments were observed at temperatures of 27° C and 31°C as follows: 50 mg/kg of sea cucumber's steroid extracts at temperatures of 27°C and 31°C, and 50 mg/kg of 17 $\alpha$  methyltestosterone at temperatures of 27 ° C and 31 ° C. The results showed that the most effective use of steroid extracts of sea cucumber and 17 $\alpha$  methyltestosterone was at 27°C to increase the male percentage of 75.16% and 73.79% respectively and gave a significant effect on female genital decrease, total length, daily weight gain and biomass. While giving the steroid hormone did not make a significant effect on survival rate, intersex percentage and feed conversion of juvenile freshwater crayfish.

Keywords: sea cucumber, steroid, freshwater crayfish, 17 $\alpha$  methyltestosterone, temperature

## ABSTRAK

### **PENGARUH EKSTRAK STEROID TERIPANG PASIR (*Holothuria scabra*) DAN 17 $\alpha$ METILTESTOSTERON PADA SUHU BERBEDA TERHADAP PEMBALIKAN KELAMIN JUVENIL LOBSTER AIR TAWAR (*Cherax quadricarinatus*)**

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Lobster air tawar jenis *red claw* (*Cherax quadricarinatus*) memiliki nilai ekonomis yang tinggi sehingga mendorong pelaku pembudidaya untuk meningkatkan hasil produksinya. Namun terdapat kendala dimana pertumbuhan individu jantan lebih cepat dibandingkan betina. Untuk mengatasi hal ini pada lobster air tawar perlu dilakukan budidaya monoseks (kelamin tunggal). Penelitian ini bertujuan mengetahui pengaruh pemberian steroid teripang pasir dan 17 $\alpha$  metiltestosteron pada suhu berbeda terhadap pembalikan kelamin (*sex reversal*) menuju jantan pada juvenil lobster air tawar, *Cherax quadricarinatus*. Penelitian ini disusun dengan menggunakan Metode Rancangan Acak Lengkap Faktorial. Perlakuan yang diberikan yaitu kontrol suhu 27°C dan 31°C, 50 mg/kg steroid teripang pasir dengan suhu 27°C dan 31°C, dan 50 mg/kg 17 $\alpha$  metiltestosteron dengan suhu 27°C dan 31°C. Hasil penelitian menunjukkan bahwa pemberian hormon steroid teripang pasir dan 17 $\alpha$  metiltestosteron serta suhu 27°C efektif untuk meningkatkan persentase jantan yaitu sebesar 75,16 % dan 73,79 %, serta memberikan pengaruh yang signifikan terhadap penurunan persentase kelamin betina, panjang total, penambahan bobot harian dan biomassa. Sedangkan pemberian hormon steroid tersebut tidak memberikan pengaruh yang signifikan terhadap kelulushidupan, persentase kelamin interseks dan konversi pakan pada juvenil lobster air tawar.

**Kata kunci:** teripang pasir, steroid, lobster air tawar, 17 $\alpha$  metiltestosteron, suhu