UNIVERSITI TEKNOLOGI MARA

THE EFFECT OF ABRUPT CHANGES IN SALINITY ON THE AVAILABILITY OF *Brachionus plicatilis*

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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulation of Universiti Teknologi Mara. It is original and is the result of my work. This thesis has not been submitted to any academic institution or non-academic institution for my degree or qualification.

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ABSTRACT

Brachionus plicatilis is a perfect zooplankton that gives a total supplement to angle hatchlings in marine ecosystem. The axenic culture of *B. plicatilis* is expected to create high production of marine fish. The parasite danger to *B.plicatilis* is known as ciliates that is likewise on one of the issue to marine fish culture. To produce axenic culture, the salinity of 30 psu of seawater need to be reduce slowly until *B. plicatilis* adapt at 20 psu concentration. After that, *B. plicatilis* undergoes a treatment where they are being shocked in a 0 psu concentration of distilled water that act as freshwater and also undergoes shock when increase the salinity slowly from 30 psu to 40 psu, but *B.plicatilis* still can adapt in higher salinity because they are marine rotifer.The result in doing this experiment shows that *B. plicatilis* instantaneous growth rate are higher in 10, 20 and 30 psu that are 0.066,0.341 and 0.314 respectively. In salinity 0 and 40 psu that are -0.284 and -0.650 respectively because many rotifers die due to transfer shock. Salinity 20 and 30 psu is the best salinity for development and reproduction because higher number of rotifer and instantaneous growth rate.

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