ABSTRACT

MIRA SULISTIANINGRUM GINTING. Effectiveness of the Addition of Salt in Closed Transport Media, Containing Zeolite 20 g/l and Activated Carbon 10 g/l, Gurame Fish Osphronemus gouramy Lac. With High density. Supervised by EDDY SUPRIYONO and YUNI PUJI HASTUTI

Transporting fish is usually done with a high density so as to be efficient in transporting costs, moreover the more crowded the fish in a container, the more stressed the fish will be. These conditions will result in the increased fish physiological activity that can affect water quality, especially DO, CO$_2$, and NH$_3$. This study aimed to evaluate the effectiveness of the addition of salt to the media that has contained zeolite and activates carbon in maintaining the water quality the transport media, so as to minimize the death rate in a closed transport of gurame seeds with a size of ±4 cm. The research was conducted in a laboratory scale with a complete randomized design. Gurame (Osphronemus gouramy) tested in this study were given four different treatments with three replications. The treatments were A) 50 fish/ℓ + 20 g/ℓ zeolite + 10 g/ℓ activated carbon, 4 g/ℓ salt; B) 50 fish/ℓ + 20 g/ℓ zeolite + 10 g/ℓ activated carbon, 6 g/ℓ salt; C) 50 fish/ℓ + 20 g/ℓ zeolite + 10 g/ℓ activated carbon, 8 g/ℓ salt; dan D) 50 fish/ℓ + 20 g/ℓ zeolite + 10 g/ℓ activated carbon, 10 g/ℓ salt. The transportation was 72 hours. The result showed that the survival rates for treatments A, B, C, and D were respectively 86%, 35.33%, 16.67%, and 5.33%. The result of this study also showed treatment A gave the best result seen from the survival rate (SR) of 86%, which was related to the water quality of a good transport medium in which the content of total ammonia nitrogen (TAN) was 0.87±0.03, NH$_3$ 0.03535±0.005, DO 4.8033 mg/ℓ, and had the most daily growth rate of the 4.73%, and the survival rate during the post-transport raising process of 100%.

Keywords: Gurame seed, survival rate (SR), zeolites, salt, transport, and activated carbon.