

## ***ABSTRACT***

Septiani Nurcahyanti. 24020220140090. ***Estimation of the Shelf Life of Stingray Rice Crisps (Dasyatis pastinaca) Using the Arrhenius Model Accelerated Shelf-Life Test (ASLT) Method.*** Under the supervision of Arina Tri Lunggani dan Noer Layli.

Shelf life is an important criterion for food quality. *Rice crisps* are a food product that is easy to consume for breakfast. *Rice crisps* are a light, brownish-yellow food with a crunchy texture. The purpose of this study was to determine the shelf life of stingray *rice crisps* using the *Accelerated Shelf Life Test (ASLT)* method with the *Arrhenius* model. This study was conducted by determining the initial quality of stingray rice crispies stored in a *climatic chamber* at temperatures of 25°C, 40°C, and 60°C through observation and testing every seven days on the parameters of total plate count (TPC), color (L\*), texture, moisture content, and free fatty acids. The results showed that the initial quality of the stingray rice crispies consisted of a total plate count (TPC) of  $< 1 \times 10^2$  CFU/g, color L\* (*lightness*) of 70.36, texture of 2.906 g, moisture content of 29.87%, and free fatty acids of 0.58%. Meanwhile, the decline in quality of the stingray *rice crispy* product was obtained, namely a total plate count (TPC) of  $7.920 \times 10^3$  CFU/g, lightness or L\* (*lightness*) of 24.62, texture of 1,322 g, moisture content of 9.30%, and free fatty acids of 0.583%. The parameter used to determine shelf life is texture because it has the lowest quality damage, namely 1,105,745 cal/mol with a slope relationship  $\ln(K)$  with  $1/T$  of  $y = -556.77x - 2.4152$  with an  $R^2$  value of 0.8182. The shelf life of stingray rice crispies stored in a climatic chamber at 25°C is 30 days, at 40°C is 30 days, and at 60°C is 60 days.

Keywords: Arrhenius, *Accelerated Shelf-Life (ASLT)*, *Arrhenius*, *Rice Crispy Stingray*, *Shelf Life*.