

Pendugaan Umur Simpan Ikan Asap dalam Kaleng Metode ASLT dengan Pendekatan Arrhenius (*Estimation of Shelf Life of Canned Smoked Fish Using ASLT Method with Arrhenius Approach*)

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ABSTRACT

This study aims to (1) know any changes in the quality of canned smoked fish during storage and (2) determine the shelf life of canned smoked fish using the ASLT method with the Arrhenius approach. The temperature used in this research were 20°C, 30°C, and 50°C with testing intervals at 0, 1st, 2nd, 3rd, and 4th weeks. Data analysis was done using linear regression and correlation. The results showed that the sensory, chemical, and microbiological quality of canned smoked fish products decreased at various temperatures. Canned smoked fish product stored at 50°C exhibited the highest quality change compared to product stored at 20°C and 30°C. The constant rate (K value) of storage at 50°C for 28 days increased in the rate of microbial growth to 0.7326 CFU/g; the rate of increased in degree of acidity (pH) was 0.0094; The rate of increased in peroxide value was 0.000000290 meq/1000g; and the decreased in organoleptic properties in a texture was 0.0517; odor was 0.0372; taste was 0.0359; color was 0.0053; appearance was 0.0044; and protein content decreased by 0.00003144%. The shelf life of canned smoked fish product was determined by the activation energy of color, which was 804,83 kal/mol°K with R² was 99,21%. The shelf life of canned smoked fish product at 20°C was 250,98 days, 231,34 days at 30°C, and 198,11 days at 50°C.

Keywords: *Canned food, Shelf life, Smoked fish*