

**Penentuan Umur Simpan Produk Ikan Lemuru Kaleng Dengan
Metode Arrhenius**

*Determination of Shelf Life of Canned Lemuru Fish Products Using
the Arrhenius Method*

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ABSTRACT

This study aims to (1) determine any changes in the quality of canned lemuru fish products during storage. (2) determine the shelf life of canned lemuru fish using the Arrhenius method. The research method used the Arrhenius method with temperature treatments of 35°C, 45°C and 55°C, as well as a long storage time of 35 days with test intervals at 0.1,2,3 and 4 weeks. Data processing with linear regression. Storage of canned lemuru fish products at various temperatures results in a decrease in chemical, organolaptic (taste, appearance and odor) and microbial quality. The results show that storage at a temperature of 55°C resulted in a high reduction reaction rate at a pH value of 0.5275, followed by appearance organolaptic 0.1683, odor organolaptic 0.1445, taste organolaptic 0.1068, protein content 0.0077% and the reaction rate also occurred. an increase in the total number of microbes to 42.437 cfu/ml and the peroxide number to 0.4192 meq/1000g. Determination of the shelf life of canned lemuru fish products using the Arrhenius method based on the total microbial value obtained a shelf life of 141.386 days at 55°C storage, 161.254 days at 45°C storage, 184.526 days at 35°C storage temperature.

Keywords: Lemuru fish, Organoleptic, Shelf life of Arrhenius method,
Microbiology