

Title of Project The effect of the pre cooking treatment to the stability of the cod liver storage prior to canning

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Abstract

Canning is one of the oldest method known in preserving food especially in marine products like cod liver. The quality of the raw materials is very important to canning and it is the big challenge to the industry on how to keep the quality intact prior to canning. Even at frozen storage of cod liver there are studies shows that lipid hydrolysis and lipid oxidation continues to occur . Many studies pointed out that lipid degradation in marine products are due to internal and external factors which includes level of highly unsaturated lipid contents, enzymes, heme proteins, temperature, oxygen, water activity, time storage, processess and more. The adverse effects of lipid deteriorations contributed rancid odours and off flavours, decrease nutritional quality and safety (toxic).

The aim of this project is to increase the shelf life value of the stored cod livers prior to canning by evaluating the effect of the precooking treatment process and other internal and external factors known contributing to the lipid degradation through experiments.

The experiments are made by cooking the (A)fresh raw livers then stored in frozen (0,2,4,6 months) and (B)raw storage then cooked (4,6,9 months) in water bath at 90°C in 10 minutes. These livers are (i) April and July caught , (ii) bled and poor bled , (iii)stored in vacuum and non-vacuum at -25°C. The innercore of the sample are monitored by loggers and digital thermometer during cooking.The lipid hydrolysis and oxidation are evaluated by measuring the free fatty acid level and p-anisidine value - chemical method.