ABSTRACT

Ian Danarko (03420070015)

THE EFFECT OF DIFFERENT CMC CONCENTRATION AND INTERNAL TEMPERATURE TOWARD CHARACTERISTIC OF FISH SAUSAGE

(x + 156 pages : 26 tables; 21 figures; 20 appendices)

The addition of carboxymethyl cellulose (CMC) for making fish sausage affects the characteristic of fish sausage. The capability of CMC to bind water and form good emulsion can be used to increase the characteristic of fish sausage. There are five concentration of CMC (0.1%, 0.2%, 0.3%, 0.4%, and 0.5% (w/w) and there are two types of fish (Euthynnus affinis and Pangasius micronemus) in this research. Gel strength, color, protein, water holding capacity, moisture content, water activity, folding test, pH, sensory evaluation, and Gas Chromatography were observed in this research. Increasing the concentration of CMC showed significant difference (P<0.05) in gel strength, pH, water activity, protein content, and folding test for Euthynnus affinis. For Pangasius micronemus increasing concentration CMC showed significant difference (P<0.05) in gel strength, water holding capacity, pH, water activity, protein content, and folding test. The best concentration of CMC in the research is 0.5%. Internal temperature also play role in determine the characteristic of fish sausage. There are five internal temperatures (65^{o}C, 70^{o}C, 75^{o}C, 80^{o}C, 85^{o}C) for this research. Increasing the internal temperature gave significant difference (P<0.05) in gel strength, protein content, water holding capacity, color, sensory evaluation (pore uniformity, flavor, aroma, and overall) for Euthynnus affinis. For Pangasius micronemus, it showed significant difference (P<0.05) in gel strength, water holding capacity, and sensory evaluation (flavor, aroma, and overall). Analyses by gas chromatography (GC) shows that increasing internal temperature will decrease omega-3 content. The best internal temperature from this research was found at 70^{o}C and 65^{o}C for E. affinis and P. Micronemus respectively.

Keyword: *Euthynnus affinis, Pangasius micronemus, carboxymethyl cellulose, internal temperature, fish sausage, surimi.*

References: 61 (1981-2011)