

Thesis Title	Development of Intermediate Moisture Cured Fish	
Author	Miss Jitra Wara-Asawapati	
M.S.	Food Science and Technology	
Examining Committee:	Assistant Prof. Lakkana Rujanakraikarn	Chairman
	Assistant Prof. Dr. Pairote Wiriyacharee	Member
	Mrs. Jiamjit Boonsom	Member

Abstract

Intermediate moisture cured fish products are fish products made by using wet curing method. The study of suitable fresh water fish species among six of them showed that Thaisilvercarp (*Puntius gonionotus*) was the most acceptable quality in the production of products.

The study of the optimal formulation and process of traditional intermediate moisture cured fish showed that the developed traditional intermediate moisture cured fish formulation contained 5% salt, 40% sugar, 1.5% white pepper, 0.5% mixed spices and 53% soy sauce. All ingredients were then mixed thoroughly with one kilogram of fish. However, the optimal aging-time were 6 hours, before drying 50 degree celcius for 4 hours duration. The quality as a whole of the final product was good and also accepted by panelists.

The study of the optimal formulation and process of modern intermediate moisture cured fish showed that the developed modern intermediate moisture cured fish formulation contained 6.25% salt, 22.32% sugar, 22.32% glycerol, 1.34% white pepper, 0.45% mixed spices and 47.32% soy sauce. All ingredients were then mixed thoroughly with one kilogram of fish. However, the optimal aging-time of this product were 4 hours, the drying temperature period

were 50 degree celcius and 3 hours respectively. It was also found that the quality as a whole of this product was good and accepted by panelists.

The final traditional intermediate moisture cured fish product which was produced by suitable formulation and process had color in Hunter values socalled color-L, a* and b* were 47.93, 4.10 and 13.89 respectively, shear force 38.12 newtons and energy 5.08 Kcal/g. The product had 6.53pH, 0.823a_w, 29.58%moisture, 40.07%protein, 14.53%fat, 5.29%salt, 15.17%salt penetration, 8.19%sucrose, 8.19%total sugars, 21.69%sugars penetration and 4.77%ash. Additionally, total plate count was 9.55×10^4 cfu/g(log 4.98), but no yeast and mold were observed in 25 grams of sample.

The final modern intermediate moisture cured fish product which was produced by suitable formulation and process had color in Hunter values socalled color-L, a* and b* were 49.13, 4.99 and 12.37 respectively, shear force 25.11 newtons and energy 3.11 Kcal/g. The product had 6.48pH, 0.787a_w, 28.57%moisture, 40.19%protein, 13.37%fat, 5.09%salt, 15.13%salt penetration, 0.91%reducing-sugars, 3.33%sucrose, 4.24%total sugars, 12.93%sugars penetration and 5.09%ash. Additionally, total plate count was 4.25×10^4 cfu/g(log 4.63), but no yeast and mold were observed in 25 gram of sample.

The study of their keeping qualities at room temperature were also monitored. It had been shown that the former product had its shelf life of one week whereas the latter had three weeks.