

Utilization of croaker (*Johnius dussumieri*) to develop ready to eat puff snack product using extrusion technology

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An attempt was made to develop nutrient rich extruded product from underutilized protein rich fish flour Croaker (*Johnius dussumieri*) with mixture of cereal flours using twin screw extruder. Ready to eat snack was developed using fish flour (12%, 15%, 18% and 21 %) mixed with mixture of rice, corn and soybean flour and taste enhancer. Extrusion cooking formulation consisting of fish flour and cereals mixture were extruded at moisture content 15 per cent, screw speed 480 rpm, sectional barrel temperature of 30°, 60°, 130° and 160°C at four stages and 2 mm diameter of die. Extruded product was fried in edible oil. The resulting extruded was analyzed for physical characteristic, texture profile, proximate composition, microbiological analysis sensory acceptability. Among the different blends studied, the most acceptable were T₃ (with 18 % fish flour) with the best performance in terms of quality and acceptability. This research demonstrated that fish flour at 18 per cent can be successfully incorporated into mixture of cereal flours for extrusion and develop a 19.88 per cent protein rich ready to eat snack food with good storage stability at ambient temperature.

Key Words : Ready-to-eat snack, Extrusion cooking, Croaker fish flour, Quality characteristics

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