

THE EFFECT OF FISH TYPE, MARINATION AND SMOKE SOURCE ON THE QUALITY OF SMOKED FISH PRODUCT

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Smoking is an ancient technique that is commonly used in contribution with brining and curing. In industrialized countries, smoking of fish is done for enhancement of flavor and texture. It adds considerable value to the fish. Smoking provides partial protection against microbiological, enzymatic and chemical deterioration. Fish is a main seafood and acts as a protein rich source. Since smoking of fish acts as a value adding process and preservative measure, smoked fish products were developed to fulfill the requirements of producers and consumers.

Five fish types namely seer, mallet, lo-musso, trawley and shark were filleted and smoked after dipping into the standard brine solution (7ppm). Then samples were subjected to an untrained taste panel to select the best types for smoking. Sensory evaluation was conducted based on a 5-point Hedonic scale and the result was analyzed using Friedman test. Subsequently, selected fishes seer and mallet were dipped into different recipes of brines, soy source with white wine brine, honey cured brine, onion cheese spread, and mayonnaise and smoked. Through sensory analysis honey cured brine was selected as the best marination for seer fish and soy source with white wine brine was selected as the best marination for mallet fish. Thereafter seer fish which was marinated with honey cured brine and mallet fish which was marinated with soy source with white wine brine were smoked using different smoke sources such as cinnamon saw dust and clove leaves. Through sensory analysis the best product was selected.

Finally seer fish marinated with honey cured brine and smoked by cinnamon wood dust and saw dust combination (2:1) was selected as the best product. The overall acceptability was considered mainly to select the best treatment. Then the selected best product was packed in vacuum and normal packing and stored at the temperature of $4 \pm 2^{\circ}\text{C}$ and the quality of the product was checked weekly by measuring pH, color, water holding capacity, rancidity (TBA value), water activity and total plate count until 4 weeks of time.

Even though water activity was higher in the smoked seer fish, the microbial level was satisfactory (less than 10^5 CFU/g of smoked fish) for both packaging types up to 4th weeks of storage at $4 \pm 2^{\circ}\text{C}$. The pH, TBA value and water holding capacity were increased rapidly with storage period on smoked seer fish, which was packed under normal conditions than that packed under vacuum. This indicates vacuum packing was improved storage life of smoked fish product.