

DEVELOPMENT OF FISH SAUCE USING SILVER CARPLET FISH

(*Wew salaya: Amblypharyngodon melattinus*)

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Main objective of this study was to produce cheap and palatable fish sauce using silver carplet (*Amblypharyngodon melattinus*) fish. Fish sauce was prepared according to accelerated fermentation techniques using pineapple or/and papaya juice. Equal weight of minced fish (50%) was mixed with fruit juice (30%), salt (20%) and allowed to ferment in an oven for 4 to 10 days. Effect of different juice concentrations (25, 50, 75, 100% v/w) of pineapple/papaya/their combinations (first study) and temperatures (40, 50 or 60°C: second study) for fermentation and fermentation periods (2, 4, 6, 8 and 10th day: third study) were tested by measuring residue weight and liquid yield in hydrolyzed mixtures. Experiments were laid on a completely randomized design with three replicates. According to first study, highest ($p < 0.05$) liquid yield of 55 ml (lowest residue weight=17.8 g) was recorded in 100% of papaya juice, whereas lowest liquid yield of 43.3 ml (highest residue weight=20.6 g) was recorded in 25% pineapple juice. Highest liquid yield of 56ml (lowest residue weight=9.63 g) was recorded at fermentation temperature of 60°C with 100% papaya juice whereas lowest liquid yield of 39 ml (highest residue weight=28.16 g) was recorded in 40°C with 100% papaya juice, concentration. According to third study, highest ($p < 0.05$) liquid yield of 56.67 ml (lowest residue weight=10.67 g) was observed on fourth day, whereas highest residue weight of 16.26 g (lowest liquid yield=48.33 ml) was recorded on second day. Results of the study revealed that 100% (v/w) papaya juice was the best juice concentration, 60 °C was the best fermentation temperature and four days was the optimum fermentation period for complete fermentation. Protein content of fish juice of the best combination was 7.56%. Material cost of production for 725 ml of silver carplet sauce was Rs.62.00; in contrast to the price of 725 ml of commercially available fish sauce is Rs.314.00. Hence, it can conclude that silver carplet can effectively utilize to produce fish sauce using 100% (v/w) papaya juice.

Key words: Accelerated fermentation, Fish sauce, Palatability, Silver carplet