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RESEARCH PAPER

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Functional properties of fish protein concentrate extracted from ribbon fish, *Lepturacanthus savala* by different methods

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SUMMARY :

Fish protein concentrate (FPC) is a healthy and highly nutritive product produced hygienically from fishes in which, protein and other nutrients are more concentrated than fresh fishes. In the present study an attempt was made to study the functional properties of FPC derived from ribbon fish, *Lepturacanthus savala* so as to know the quality of the FPC. The important findings are summarized as: The chemical analysis of ribbon fish meat was observed to be moisture 76.82 per cent, crude protein 17.75 per cent, fat 2.08 per cent and ash 3.35 per cent. The percentage yield of separated ribbon fish meat was found to be 38 per cent, based on the total weight of fish. The chemical analysis and yield of FPC extracted from ribbon fish by using five different methods *i.e.* British process, Lever brother process, Canadian process, Viobin process and Indian process were observed moisture content as 13.88, 11.77, 10.78, 12.52 and 12.36 per cent, respectively; crude protein content as 81.61, 84.63, 86.80, 84.39 and 84.54 per cent, respectively; fat content as 0.97, 0.87, 0.55, 0.65 and 0.64 per cent, respectively, ash content as 3.54, 2.73, 1.87, 2.44 and 2.46 per cent, respectively and also, the percentage yield of FPC were observed to be 17.54, 17.56, 19.94, 18.19 and 19.61 per cent, respectively. The functional properties of FPC extracted from ribbon fish by using five different methods *i.e.* British process, Lever brother process, Canadian process, Viobin process and Indian process were observed viscosity as 91.67, 92.33, 114.00, 104.00 and 97.00 cP, respectively; solubility as 81.40, 80.09, 88.92, 83.41 and 83.79 per cent, respectively, emulsification capacity as 53.86, 54.67, 67.66, 53.60 and 59.77 per cent, respectively; emulsification stability as 45.03, 46.55, 58.84, 47.76 and 49.75 per cent, respectively, foaming capacity as 28.93, 31.75, 42.50, 32.40 and 35.10 per cent, respectively, foaming stability as 18.37, 20.47, 26.50, 18.87 and 21.42 per cent, respectively and water holding capacity as 2.78, 2.79, 4.27, 3.11 and 3.13 ml/g, respectively.

KEY WORDS : Fish protein concentrate, Chemical analysis, Functional properties, Yield, Ribbon fish

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