

## **Production of simulated caviar using readily available freshwater fish species *Cirrhinus mrigala***

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Simulated caviar, also named as imitation caviar is defined as salted roe that comes from a fish other than the sturgeon, and can be classified as a caviar substitute. Fish roe is removed as a by-product and does not have a high demand at present. Therefore, it is important to add value to fish roe which is of low demand. As a commercially significant freshwater fish species in inland fishery sector, Mrigal (*Cirrhinus mrigala*) was selected as resource fish species for present study. In this study, intention was to investigate most suitable methodology for production of simulated caviar using Mrigal roe. Roe samples of Mrigal were subjected to “Dry salting” method and three different salt (g): fish roe (g) ratios as 0.05:1 (S1), 0.25:1 (S2) and 0.45:1 (S3) were used to determine the best ratio. Most appropriate treatment was assessed using sensory evaluation, proximate analysis, pH test and microbiological analysis. Protein level of S1 and lipid contents of S3 samples are significantly different from those of other two samples. But highest protein content is recorded for S2 treatment, while maximum lipid percentage is recorded for S1 treatment. Moreover, moisture content of three samples was statistically different when compared to each other. pH values of three treatments changed significantly with storage time. Total Plate Count (TPC) was not changed significantly only in S3 with the time. Highest sum of rank for four sensory parameters (Aroma, Salty taste, Mouth feel and Overall acceptability) were recorded for S2 treatment. Moreover, as this treatment requires the intermediate salt concentration, it relatively reduces the production cost of the product. As it preserves highest protein value in final product, moderate salt requirement and best sensory qualities, S2 treatment (0.25 salt: 1 fish roe) can be considered as the best treatment for preparation of simulated caviar using Mrigal roe, among all three treatments.

Key words: Dry salting, fish products, imitation caviar, roe, sensory evaluation

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