



RESEARCH ARTICLE.....

Development of fried masala shrimp (*Solenocera crassicornis*) and its economic analysis

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ABSTRACT..... Large quantities of tiny shrimps are discarded at sea because it is uneconomic to preserve and bring them ashore for marketing. But it offers an opportunity to add value and make this precious resource a valuable product of high acceptability in the market. Red tiny (*Solenocera crassicornis*) is one of such important fishery resource in Veraval coast which require attention. It is highly rich in protein, fat and minerals. Attempt was made to use this nutritional material for developing ready to eat fried masala shrimp as snack foods. Recipe and ingredients were standardized. Composition and economic value of the product were analyzed.

KEY WORDS..... *Solenocera crassicornis*, Masala fry shrimp, Economic evaluation

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INTRODUCTION.....

Coastal mud shrimp (*Solenocera crassicornis*) is a local variety of shrimp is used as food items in the coastal areas of Gujarat, India. It contains 20.83 per cent protein, 1.05 per cent fat, 77.20 per cent moisture, 1.53 per cent ash and a good amount of minerals (USDA, 2013). A large amount of coastal mud shrimp is wasted every year due to lack of proper preservation measures.

The demand for fishery products is expected to rise, particularly in developing countries, many of which rely on fish as their main source of protein (Venugopal, 1995). By this research we are trying finding ways for better utilization of shrimp fish species and providing protein-rich convenience foods and creating a new way for the women employment. However, the key to the success of this approach depends largely on the market

strategies.

Value addition is the most talked about word in the industry, particularly in fish processing industry, mainly because of the increased opportunities, the activity presents for earning foreign exchange (Balachandran, 2001). Besides, value addition is one of the possible approaches to raise the profitability and employment generation (Devadasan, 2003). This experiment is carried out during the experimental learning programme.

RESEARCH METHODS.....

Fresh shrimp from Veraval harbor, Gujarat was collected for experiment. The samples were iced 1:1 ratio and transported to the drying yard Bhidiya for the drying purpose. *Solenocera crassicornis* (Red tiny) 200-300 graded, 4 g weight and total length is 7 cm was used for

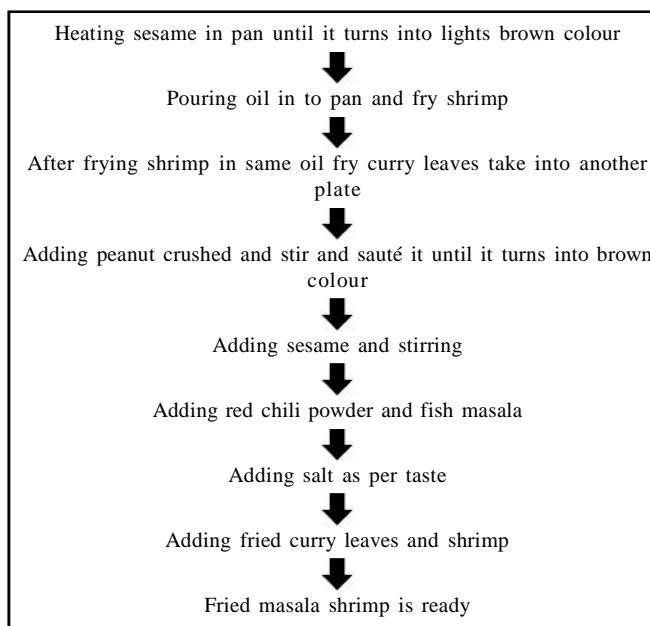
experiment. Then the shrimps were washed with cleaned water and peeled. After peeling it was again washed with potable water and mixed with salt 12 per cent and turmeric 6 per cent. Shrimp was dried on rack.

The proximate composition (protein, fat, moisture, and ash) of dried shrimp and fried masala shrimp was estimated (AOAC, 2006). The economic analysis of product was also evaluated.

Ingredients	Quantity
Oil	500 ml.
Sesame	100 g
Peanut (crushed)	150g
Fish masala	100 g
Red chili powder	150 g
Salt	(As per taste.)
Curry leaves	As per requirement
Shrimp (PD)	1 kg

Peanut and sesame was added in shrimp to increase the nutritive value and taste. The sesame was heated in fry pan till it turned into light brown colour. The dried shrimp was fried. Then curry leaves were fried in same oil and it was taken in to another plate. Peanut was

crushed and added in the oil and saute until it turned to brown colour sesame, red chilli powder, fish masala and salt were added and stirred it properly. At last fried curry leaves and shrimp were added. After cooling the fried masala shrimp was packed in LDPE pouch and stored in room temperature.



Raw material



Drying on rack



Cooking



Fina product



Marketing of product in veraval



RESEARCH FINDINGS AND ANALYSIS.....

The proximate composition of dried shrimp and masala fried shrimp was estimated it is given below in Table 1 and 2. The protein concentration of dried shrimp was 32 per cent whereas the protein concentration of masala fried shrimp was 38.80 per cent. So due to increase of protein in the product it considered as nutritionally based snack product.

Parameter	Mean value
Protein	32%
Fat	11%
Moisture	10%
Ash	1.3 %

Parameter	Mean value \pm SD
Protein (%)	38.80 \pm 3.6
Moisture (%)	2.92 \pm 0.24
Fat (%)	30 \pm 1.24
Ash	3.42 \pm 0.35

We purchased 18 kg raw material from that we made 150 pouches of 100 g. The production cost was Rs. 2138/- and the total selling price was Rs. 26660/-. So the profit we got Rs. 522/- .We marketed in Verval regions like Bhidiya market, Vervalchopati, Patan market and at college of fisheries Veraval. During the selling in

market we got good review and the consumer preference was more.

The present generation is directed towards product valorization within a pocket friendly price. This value added products of red tiny shrimp confronts a great scope in terms of enriched food and nutritional security with enhanced product development programme.

Table 3 : Economic analysis

Raw material price (18kg)	Rs.1720/-
Ingredients	Rs. 220/-
Ldpe pouch (60 nos.)	Rs. 150/-
Labelling (60 nos.)	Rs. 48/-
Total	Rs. 2138/-
Profit	Selling price (Rs. 26660) – total cost (Rs.2138) = Rs. 522/-
	Profit in percentage = 19.62%

Conclusion:

In Gujarat cost tiny shrimps are main resources but these species are discarded due to lack of preservation so our aim to convert this resource to a value addition and to make more nutritionally rich product for consumers and to provide a new scope of money generation to the women self-help group. We got a good response during marketing of the product.

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