

Nutritionally balanced and Healthy, value added emulsion products from Fish—

1. *Fish ball in curry*, 2. *Fish sandwich*, 3. *Fish Chikuwa*,
4. *Fish steamed Wada* and 5. *Fish bhakarvadi*

Preamble:

The project entitled "*Pilot scale demonstration of fish ball in curry*" financially supported by Rajiv Gandhi Science and Technology Commission (RGSTC), Mumbai, Government of Maharashtra was successfully implemented by Dr. Vithal R. Joshi, Associate Professor, (College of Fisheries, Ratnagiri; Dr.B.S.K.K.V, Dapoli) with the development of value added products from low cost fish. The technology was demonstrated at various parts of Konkan where Acetes raw material is available in plenty. This technology is expected to provide better returns to the fishermen during the bumper season. This technology is now ready for transfer deployment at village levels. Preference would be given to business ventures that empower groups from economically weaker sections of the society duly supported via ICAR mode or other suitable relevant schemes of the Government.

Objectives of the project:

In Maharashtra state agriculture is the main income earning source followed by meat and fisheries. But, as far as Konkan area is concerned, fisheries come first as compared to other parts of state.

Fish is perishable in nature and requires appropriate technology of preservation for extended shelf life. About 30% of the marine catch is considered as low cost fish. Low priced fish do not fetch a worthwhile price. Value addition and conservation of these raw materials to fish ball in curry product will be of immense utility. Further extended shelf life for a short period or long period can be achieved by cook chill storage or cook frozen storage respectively. After retort pouch processing fish ball in curry, this product can be stored at room temperature for a long period.

1. Demonstration of the value added products fish ball in curry.
2. Acceptability trials of the value added products fish ball in curry.

3. Upgradation of technology as per public opinion.

Products developed under the project:

As per public opinion technology for the preparation of fish ball in curry was upgraded. Other products developed at college, steamed fish vada, fish Chikuwa, fish sandwich and fish bhakarvadi.

- **Fish meat emulsion products:**

1. These products are healthy and nutritionally balanced with proper combination of protein, fat and carbohydrate.
2. No added colour, preservatives and chemicals.

- **Product specification:**

Products developed under this project are safe for human consumption in compliance with the new food law in force as per FSSAI (FOOD SAFETY STANDARDS AUTHORITY OF INDIA).

Per 100 gm	Fish ball in curry	Fish sandwich
Energy (Kcal)		
Protein (gm)	7.56	11.44
Carbohydrate (gm)	7.21	14.71
Fat (gm)	6.96	3.05
Ash	0.15	0.16
Cholesterol (mg)		
Vitamin A (IU)		
Vitamin C (mg)		
Total dietary fiber		

- **Equipment required for plant set up and production:**

Shell separator, Strainer, Moisture separator, Bowl chopper, etc

- **Supporting equipments:**

Spray washer, slicer, shredder, peeler, blancher, food processor, Packing machine, sealing machine, Autoclave, etc.



Fish ball in curry in pouch



Fish ball in curry

