DEPARTMENT OF ZOOLOGY

CERTIFICATE COURSE ON
FISHERY BY-PRODUCTS AND VALUE ADDITION
COURSE CODE: ZO 2301

CURRICULUM

Total - 30 Hrs.

Module 1: Nutritional importance of fish meal (10 Hrs)

1.1 Nutritional importance of fish meal and quality requirements (4 Hrs)

Raw material quality and changes during processing and storage. Production of fish meal - dry and wet process, control of the quality of products, packaging, and storage.

1.2.Fish body and liver oils. (4 Hrs)

Nutritional importance of fish oil and methods to impart stability to fish oils on storage, un saponifiable factors in fish liver oils. Enzyme hydrolysis of fish, fish hydrolysates, hydrolysates enriched food beverages.

1.3.Fish protein concentrate (2 Hrs)

Different methods of production, different types of FPC, Production of fish flour, quality, standards, and applications.

Module 2: Fish by-products (18 Hrs)

2.1. Miscellaneous by-products (8 Hrs)

Fish maws, shark liver oil, ambergris, shark skin, shark cartilage, isinglass, pearl essence, fertilizer, Bêche-de-mer, fish glue, agar-agar. Extraction of collagen from fish processing wastes, properties and application.

2.2. Value Added Products: (8 Hrs)

Present market trends, scope of value addition, and Important value-added products. Coated products – Principles and type of coating, Batter classification, Mechanical properties of batter, Bread crumbs, Flavourings, Seasonings and Hydrocolloids in coatings, Fat and oils in coated food, Application of batters and breading to seafood.

2.3. Present market trends of value-added products. (2 Hrs)

Value added products from fishes, Present market trends, scope of value addition, Types of value addition.

Module 3: HACCP Concept in Sea Food Industry (2 Hrs)

3.1. Introduction to the HACCP programme and HACCP evaluation: (2 Hrs)

Biological Hazards in Seafood, The seven Principles of HACCP, Good Manufacturing Practices, Good laboratory practices, Role of extension in the implementation.

References

1. Balachandran, K.K., Post Harvest Technology of fish and fish products.

2. Gopakumar K., Text Book of Fish Processing Technology.

3. Hall, G.M., Fish Processing Technology.

5. Sen D.P., Advances in Fish Processing Technology.

6. Wheaton& Lawson, Processing Aquatic Food Products.

7. Windsor, M.& Barlow, Introduction to Fishery Byproducts, Fishing.

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