

V SEMESTER
Course No.: 15 - Fish Processing Technology
credits :3

Course outcomes

CO1: Understand the Principles of fish preservation

CO2: Learn about fundamental principles involved in chilling and freezing of fish and fishery products

CO3: Understand the methods of drying, smoking and freeze drying

CO4: Knowledge about packaging materials and the process of packing

CO5: gain Knowledge about the export of Fishery products from India

SYLLABUS

UNIT 1: Introduction

1.1 Principles of fish preservation.

1.2 Quality of water and ice in fish handling and processing.

1.3 Preparation of ice. Different types of ice used in the seafood industry and their merits.

UNIT 2: Freezing and Canning:

2.1 Fundamental principles involved in chilling and freezing of fish and fishery products.

2.2 Various freezing methods. Freezing of shrimps and fishes.

2.3 Changes during the cold storage of fish and fishery products.

2.4 Principles involved in canning of fish. Different types of containers.

UNIT 3: Drying, Smoking and Freeze-drying:

3.1 Different types of drying, Factors affecting drying.

3.2 Packing and storage of dried products. Spoilage of dried products. Preventive measures

3.3 Smoking of fish, Salting of fish

3.4 Principles of freeze drying. Accelerated freeze drying and packing of freeze dried products. Modern methods of preservation by irradiation and modified atmospheric storage.

UNIT 4: Packing, Cold Storage and Export of Fishery Products:

4.1 Functions of packing. Different types of packing materials and its quality evaluation.

4.2 Packing requirements for frozen and cured products.

4.3 Statutory requirements for packing.

4.4 Labeling requirements. Different types of cold storages, Insulated and refrigerated vehicles.

UNIT 5: Export of fishery products

5.1 Export of Fishery products from India - major countries, important products, export documents and procedures.

5.2 Prospects and constraints in export including tariff and non- tariff barriers, marine insurance, export incentives, registered exporters

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Experiments:

1. Determination of moisture content in fish and fishery products
2. General description –freezing
3. Processing shrimp
4. Filleting of fish 5. Drying of fish
6. Organoleptic analysis of fish
7. Preparation of fishery by products
8. Preparation of shark fin rays fish maws, chitin, fish wafer
9. Fish pickling
10. Value added fishery products, fish curry, cutlets fish finger.
11. Preparation of surimi

Filed visit:

1. Visit to sea food pre-processing plants
2. Visit to fish processing plants

Text books:

1. K.Gopakumar, Fish Processing Technology, ICAR, New Delhi
2. T.K. Govindan, Fish Processing Technology Oxford & IBH Publication Co.
3. K.K. Balachandran Fish Canning – Principles & Practices.
4. Borgstrom, G. Fish as Food.
5. K.K. Balachandran, Postharvest Technology in Fish and Fishery Products. 6. Moorjani, M.V. Fish Processing in India.
7. Connell, J.J. Advances in Fishery science and Technology.
8. CIFT. Manual of Quality Control in Fish and Fishery Products. 9. Gopakumar, K. Fish Packaging Technology

Reference Books:

1. A.M.Martin, Fisheries – Processing Chapman & Hall, Madras 2. Ed.G.M.Hall – Fish Processing Technology Chopra & Hall. Madras.