ST.JOSEPH'S COLLEGE FOR WOMEN (AUTONOMOUS), VISAKHAPATNAM

V SEMESTER **ZOOLOGY** TIME: 3 HRS/WEEK

Z-E1-5504(3) **POST HARVEST TECHNOLOGY OF FISH & FISHERIES** Max MARKS: 100

w.e.f. 20AH Batch **SYLLABUS**

Objectives: To enable the students to

- Identify the traditional and advanced methods of fish preservation employed in Aquaculture.
- Gain knowledge about processing and preservation of fish and their by- products.
- Recognize the quality control and sanitation standards in maintaining the quality of sea food products.
- Identify hazards and suggest suitable good manufacturing practices in preventing hazards.
- Discuss the principles of HACCP

COURSE OUTCOMES: By the end of the course, students will be able to:-

CO1: Summarize the handling and principles of fish preservation.

CO2: Gain insight about the processing and preparation of commercially important products and by products of fish.

CO3: Choose the suitable processing methods in Aquaculture.

CO4: Establish Good laboratory practices, corrective procedures for sanitation in processing plants.

CO5: Recall the principles of HACCP and suggest corrective measures.

UNIT –I: Handling and Principles of fish Preservation:

1.1. Handling of fresh fish, storage and transport of fresh fish, postmortem changes (rigor mortis and spoil age), Microbial spoil age in marine fish and fresh water fish.

1.2. Principles of preservation–cleaning, lowering of temperature, rising of temperature, denudation, use of salt, use of fish preservatives, exposure to low radiation of gamma rays.

UNIT–II: Methods of fish Preservation:

2.1. Traditional methods- sun drying, salt curing, pickling and smoking.

2.2. Advanced methods – chilling or icing, refrigerated sea water, freezing, canning, irradiation and Accelerated Freeze drying (AFD).

UNIT –III: Processing and preservation of fish and fish by-products:

3.1 Fish products–fish minced meat, fish meal, fish oil, fish liquid(ensilage),fish protein concentrate, fish cake, fish sauce, fish salads, fish powder, pet food from trash fish, fish manure.

3.2 Fish by-products –fish glue, Isin glass, chitosan, pearl essence, shark fins, fish Leather and fish maws.

P.T.O.

UNIT–IV: Sanitation and Quality control:

4.1 Sanitationinprocessingplants-EnvironmentalhygieneandPersonalhygieneinprocessingplants.

4.2 Quality Control of fish and fishery products–pre-processing control, control during processing and control after processing. Traceability issues.

UNIT – V: Quality Assurance, Management and Certification:

5.1. Sea food Quality Assurance and Systems: Good Manufacturing Practices(GMPs); Good Laboratory Practices(GLPs); Standard Operating Procedures(SOPs); Concept of Hazard Analysis and Critical Control Points(HACCP) in sea food safety.

5.2 National and International standards–ISO9000:2000 Series of Quality Assurance System, *Codex Alimentarius*. FSSAI.

REFERENCES:

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2. Santharam R, N Sukumaran and P Natarajan1987. Amanual of aquaculture, Oxford-IBH New Delhi.
3. Gopakumar K. (Ed.). 2002. Text Book of Fish Processing Technology. ICAR.
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8. Safety and Quality issues in Fish Processing (Wood head Publishing Series in Food Science, Technology and Nutrition) by H A Bremner.
9. K.A Mahanthy, Innovations in Fishing and Fish Processing Technologies, January 2021.

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