

FACULTY OF MARINE SCIENCES**DEPARTMENT OF MARINE BIOLOGY****CMABVAC01 - Seafood Processing Technology****UNIT I**

Preservation and Processing Importance of preservation and processing of sea foods criteria for assessing freshness handling of fresh materials – on board handling, chilling methods, phenomena of rigor mortis, spoilage changes – causative factors (other than microbial).

UNIT II

Drying and irradiation Drying and dehydration – conventional and modern methods, relative merits and demerits. Quality changes during drying and storage – functional properties, sensory quality, nutritional value, quality indices, storage life. Salt curing, pickling and smoking – methods, merits and demerits – quality changes during processing and storage life – quality standards. Irradiation – source of radiation, methods, merits and demerits, quality changes during processing and storage - quality standards , minimal processing technologies.

UNIT III

Freezing Freezing and cold storage – process of freezing, types, quality changes during processing and storage. Canning – procedures, quality changes during processing and storage – quality standards. Role of preservatives in processing.

UNIT IV

Packing Packing – function of packaging, special needs in food packaging, packaging materials, types -1 handling fresh fish, retail packing, whole sale packaging, Block frozen packs, IQF, layered and shatter packs, modified atmospheric packaging, vacuum packaging, boil and bag type, cans and containers, air freight packaging, packaging standards for wet shipment and irradiated foods. Food contact substances – limits. Labeling – information to be included, labeling regulation.

UNIT V

Fishery by – products Fishery by – products of commerce – surimi, fish protein concentrate, meal and oil production, hydrolysis of fish protein. Cannery waste processing of fish stick water. Animal feeds, fish silage, fish liver preservation, fish gelatin, fish glue, leather from fish skin, chitin and chitosan, pearl essence, use of shells, fertilizer from fishery by products.

Reference books:

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Carison, V.R. and R.H Graves, 1996, Aseptic Processing and Packing of Food: A Food Industry Perspective, CRC Press.

Chandran, K.K., 2000 Post Harvest Technology of Fish and Fishery Products, Daya Publishing House, New Delhi.

Clucas, J and A.R. Ward., 1996. Post Harvest Fisheries Development; A guide to Handling preservation, processing and Quality. Publishing Manager Natural Resources Institute, Central Avenue, United Kingdom.

Gopakumar K., 1977. Tropical Fishery Products. Oxford & IBH Publication.

Kreuzer R., 1974. Fishery Products, FAO Fishing News (Books) Ltd., England.

Miller, M.D., 1990. Ciguatera Seafood Toxins, CRC Press.

Oliveira, F.A.R. and J.C Oliveira, 1999. Processing Foods: Quality Optimization and Process Assessment, CRC Press.

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