

UCH721 FOOD TECHNOLOGY

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Introduction: Chemical composition of foods their properties and functions, Characteristic features of processed and natural food, Chemical and biochemical reactions in storage and handling of foods.

Unit operations in food processing: Evaporation, Drying, Size reduction, Filtration, Clarification, Freezing etc.

Methods for food preservation: Food spoilage-causes: mold, yeast, bacteria, enzymes, Food poisons: bacterial toxins, food borne illnesses, Food preservation by dehydration, concentration, fermentation, pickling and curdling, irradiation etc., Food preservation by adding preservatives, Classification and mode of action of food preservatives, Toxicity and safety of preservatives used in food.

Case studies of a few food processing sectors: Dairy/milk products, Fruits and vegetables, Poultry, Meat and fish, Confectionary and/or other sectors, Methods for utilization of byproducts and waste of food industries.

Food Packaging: Methods for packaging and storage of food materials, Modified atmosphere and controlled atmosphere storage, Canning, Aseptic packaging, Materials for food packaging, Test methods (Drop test etc.) for checking integrity of food packaging.

Food laws: Legislation, safety and quality control. MSDS for food industry.

Text Books:

1. Potter Norman N., Hotchkiss Joseph, Food science, CBS (2005).
2. Toledo Romeo, Fundamentals of Food Process Engineering, CBS (2007).

Reference Books:

1. Potty V.H. and Mulky, M.J., Food Processing, Oxford and IBH (1993).
2. Desrosier and Desrosier, Technology of Food Preservation, CBS publication (2006).
3. Frazier, Food Microbiology, Tata McGraw Hill, (2007).