

FOOD PRESERVATION

OBJECTIVES:

To enable students.

1. Understand the types of spoilages occurring in different foods.
2. Obtain knowledge on the various methods of preservation.
3. Gain experience in processing foods at home scale level.

UNIT-I:

- (a) **Food Spoilage**-Definition, causes, types of spoilage and methods of Preventing them.
- b) Review of the basic Principles behind food preservation: Asepsis, removal, anaerobic conditions.

UNIT - II:

- (a) Preservation of fruits as sugar concentrates, Jam, Jelly, marmalade, preserves, candies, Crystallized or glazed fruits. Factors affecting Jam and Jelly formation.
- (b) Preservation by use of low temperature:
 1. Refrigeration – Principle: working system: cold storage defects.
 2. Freezing -Principles of freezing – Methods of freezing- Advantages and disadvantages.

UNIT - III:

(a) **PRESERVATION BY DRYING AND DEHYDRATION:**

1. Principles involved.
2. Methods of drying and dehydration.
3. Pre-Treatment of foods.
4. Factors affecting.

(b) **PRESERVATION BY USE OF HIGH TEMPERATURES – CANNING.**

1. Canning Process
2. Principles involved.
3. Spoilages encountered
4. Aseptic Canning.

UNIT - IV :

(a) **PRESERVATION BY USING CHEMICALS:**

1. Mechanism of Microbial inhibition.
2. Inorganic & Organic preservatives.
3. Antibiotics.
4. Developed Preservatives.

(b) RADIATION METHOD OF PRESERVATION OF FOODS:

1. Principles involved.
2. Sources of radiation, Units of radiation.
3. Applications of irradiation.
4. Effect on food constituents
5. Micro wave heating.

(c) PICKLING:

Principles, types & spoilages encountered in pickles.

UNIT-V : FOOD PACKAGING:

1. Definition of packaging
2. Package functions
3. Packaging materials – Specific uses.
4. Requisites of good packages.
 - (i) Attractiveness (colour, label, printed literature)
 - (ii) Protective strength / durability.
 - (iii) Consumer convenience.

PRACTICAL:

1. Preparation of selected jams, Jellies, marmalades preserves.
2. Preparation of dehydrated products vathals, vadams, chutney powder – ders.

REFERENCES:

1. L.A.Siddappa G.B. & Tandon G.N.1967 Preservation of fruits and vegetables TCAR, New Delhi.
2. Dearosier, N.W.1975 The Technology of Food preservation AVI Publishing Co., West port, Connecticut.
3. Potter, N.N. 1973 Food science, the AVI Publishing Co., West port, Connecticut.
4. Peckham C.G. 1969 Foundation of Food preparation
5. Hughes, C. 1971 Introductory Foods.
6. Frazier, W.C. Food Microbiology.Tata Mc Graw Hill Book Company, New Delhi.