

5th SEMESTER
FOOD TECHNOLOGY
(PROCESSING OF FRUITS AND VEGETABLES)
SKILL ENHANCEMENT COURSE (SEC)

PFV520S PROCESSING AND VALUE ADDITION OF FRUITS AND VEGETABLES - I

CREDITS: THEORY: 2, PRACTICAL: 2
MAX MARKS: THEORY: 30, PRACTICAL: 30
MIN MARKS: THEORY: 12, PRACTICAL: 12

THEORY (2 CREDITS)

UNIT-I

- Principles and methods of preservation: Processing & Preservation by application of heat (blanching, pasteurization and sterilization). Chemicals (class-I and class-II preservatives), drying, addition of sugar. Refrigeration and freezing.
- Food spoilage - causes.

UNIT-II

- Minimal processing of fruits and vegetables: Methods, packaging and storage of minimally processed products.
- Fruit juices: extraction, clarification, preservation and packaging.
- Types of fruit juice and beverages, their classification, viz juices, nectars, squashes, crushes, cordials, syrups.
- Methods of preparation, flow charts, packaging, storage, and spoilage of jams, marmalades, preserves, candies and crystallized fruits,
- Methods of preparation, flow charts, packaging, storage, and spoilage of pickles and
- Chutney / sauce.
- Methods of preparation, flow charts, packaging, storage and spoilage of tomato products- tomato juice, ketchup, paste, cocktail.
- Pickles-types of pickles, spoilage and packaging.

PRACTICALS AND DEMONSTRATIONS (2 CREDITS):

1. Identification, handling of various machinery and equipment used in food processing ' units.
2. Refractometer calibration and determination of TSS using refractometer.
3. Physico-chemical analysis of fruits and vegetables viz moisture, acidity, total and reducing sugars, vitamin C and ash
4. Preparation of RTS, nectar, squash, cordial and syrup
5. Preparation of jam, jelly, marmalade, fruit candies and preserves.
6. Preparation of Chutneys and sauces
7. Determination of adequacy of blanching
8. Preparation of various types of pickles
9. Preparation of tomato juice, puree and sauce.

SUGGESTED READINGS

1. Siddappa, G.S. and Tendon, G. L. (2009). Preservation of Fruits and Vegetables. ICAR, Publications, New Delhi.
2. Srivastava, R.P. and Kumar, Sanjeev (2019). Fruit and Vegetable Preservation- Principles and Practices. 3rd Ed. CBS, Publishers, New Delhi
3. Rehman, M. S. (2020). Handbook of Food Preservation. CRC Press
4. Vaclavic, V. A. and Christian, E.W., (2020). Essentials of Food Science, 4th Edition. Springer International Publishers, London.
5. Potter, N. N. and Hotchkiss, J. H. (2007). Food Science 5th Ed. CBS Publishers & Distributors Pvt. Ltd.