

FOOD MICROBIOLOGY

Subject Code : FTC303

Full Marks : 100 (80+20)

L T P

3 – 2

RATIONALE

This subject is aimed to develop an understanding among the students on various micro flora associated with food products and their beneficial role as well as deleterious effect on processed food products

DETAILED CONTENTS

1. Introduction – Definition, historical developments in the food microbiology and its significance (06 hrs)
2. Microbiology of milk and milk products like cheese, butter, Ice-cream, milk Powder (06 hrs)
3. Microbiology of meat, fish, poultry and egg products (06 hrs)
4. Microbiology of fruits and vegetable products like jam, jelly, sauce, juice (06 hrs)
5. Microbiology of cereal and cereal products like bread, (06 hrs)
6. Microbial spoilage of foods – food borne pathogens, food poisoning, food infection and intoxication (10 hrs)
7. Concept of TDT, F, Z and D value (02 hrs)
8. Anti-microbial agents – physical and chemical agents – their mechanism of action (06 hrs)

FOOD MICROBIOLOGY LAB

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LIST OF PRACTICALS

1. Study of the microbiological quality of milk by MBR test
2. Estimation of total microbial bacterial plate count of food sample by direct microscopic and SPC method
3. Estimation of total microbial count of yeast and mould
4. Estimation of total microbial count of (a) milk products (b) fruits and vegetable products (c) meat, fish and poultry products (d) water (e) surface (f) air (g) workers (h) canned foods
5. Study of the growth curve of micro-organisms
6. Demonstration of effect of different anti-microbial agents i.e. (a) high and low temperature (b) UV radiation and (c) chemical preservatives on the growth of microbe

RECOMMENDED BOOKS

1. Essentials of Microbiology by KS Bilgrami; CBS
2. Food Microbiology by WC Frazier; Tata McGraw Hill
3. Modern Food Microbiology by James M Jay; CBS
4. Bacteriology by Sale
5. Standard Methods for Waste Water Analysis by APHA
6. Basic Food Microbiology: Bannett , Chapman and Hall
7. Food Microbiology by M.R. Adams
8. Hand Book of Microbiology by Bisen
9. Text Book of Fungi by Sharma

